

# 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

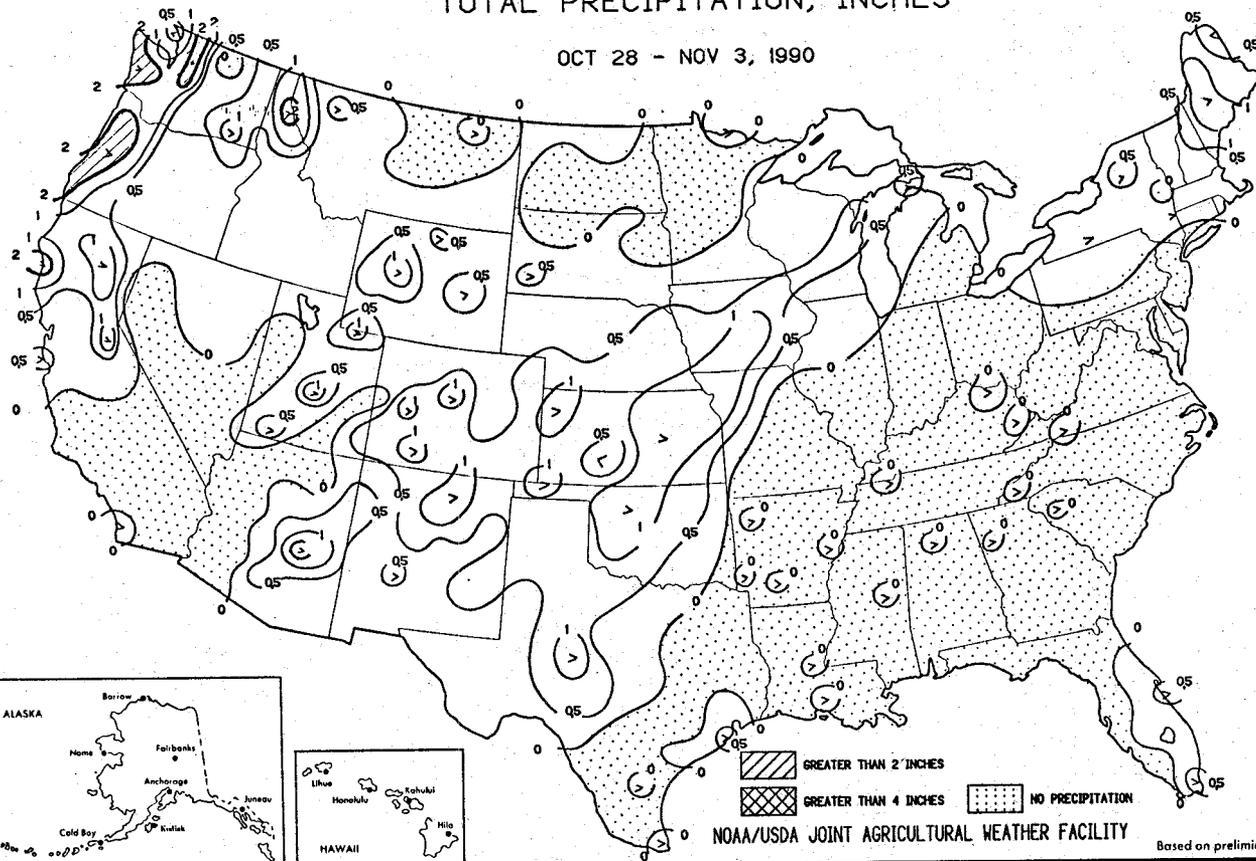
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November 6, 1990

## TOTAL PRECIPITATION, INCHES

OCT 28 - NOV 3, 1990



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY  
Based on preliminary reports

## HIGHLIGHTS

October 28-November 3, 1990

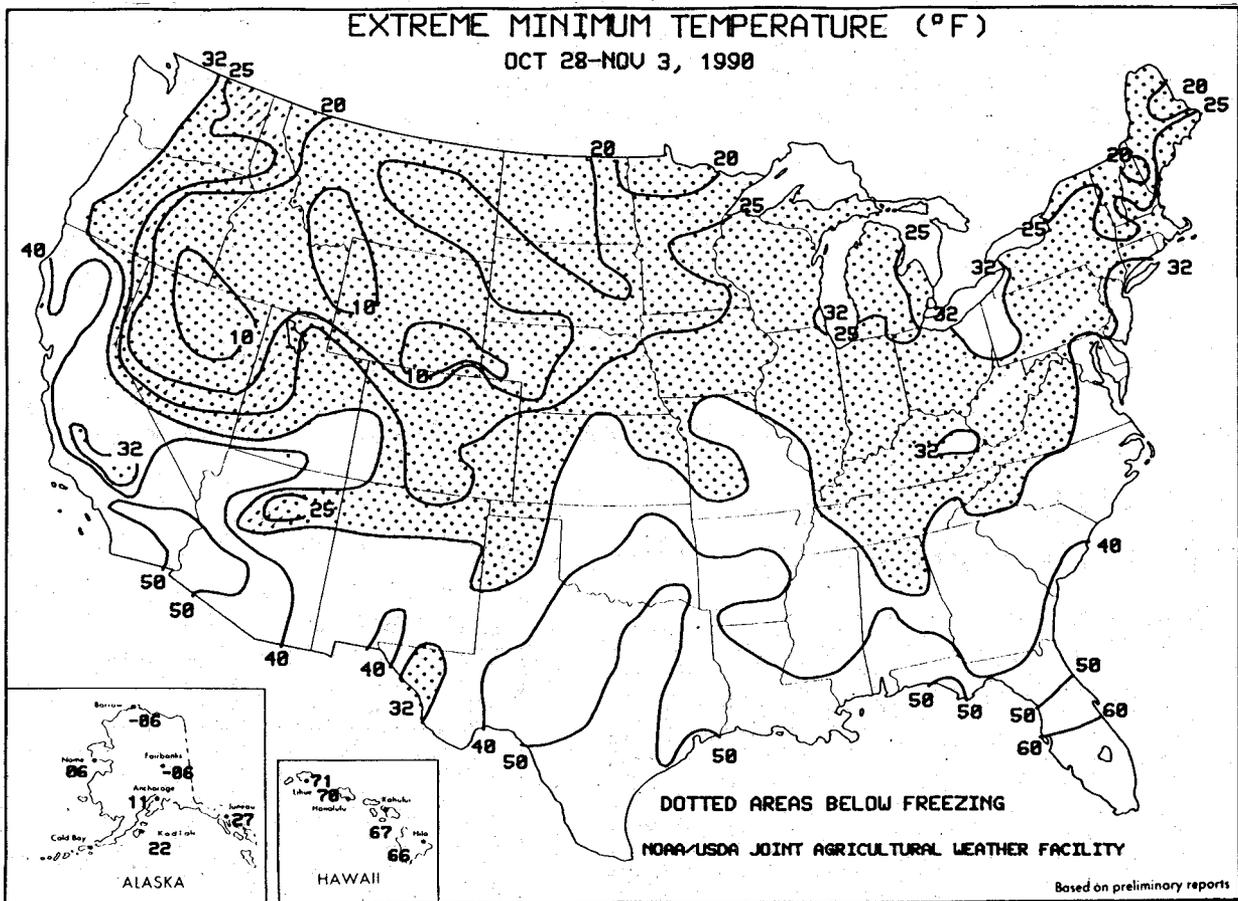
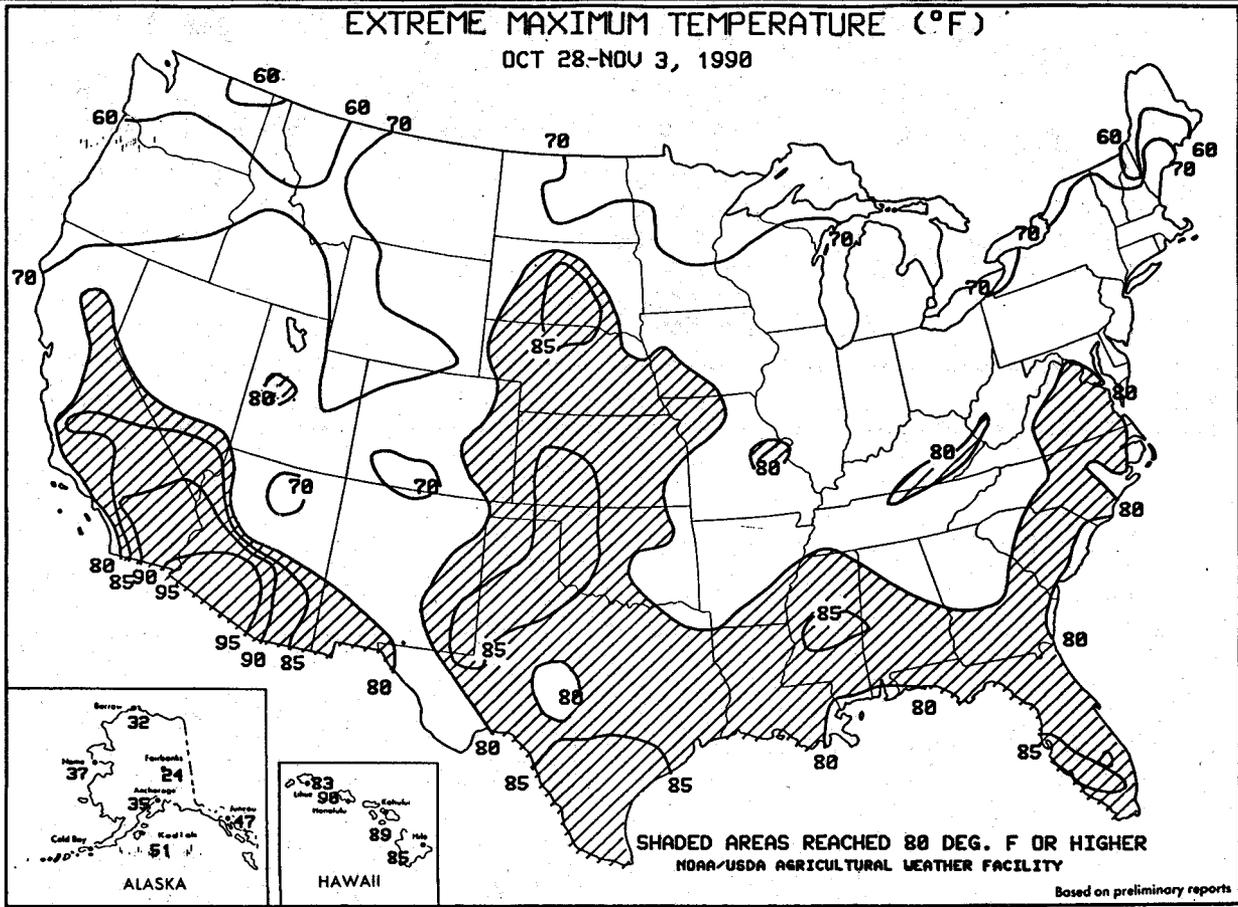
Dry harvest weather continued to prevail as a large high pressure system drifted eastward across the eastern half of the Nation. The system pulled abnormally cool air down the **eastern seaboard** early in the week while pumping unseasonable warmth into the **Central States** through the week. Record-high temperatures for the date shifted from the **Great Plains** at midweek to the **Atlantic Coast States** at week's end. A strong low pressure system, early in the week, brought rain and snow into **New England**, while a Pacific storm battered the **Northwest**. Heavy rains drenched the **northern Pacific coast** on Halloween. A major winter storm developed in the **Great Basin** on Thursday, and fueled by moisture from the remains of Pacific tropical systems Trudy and Vance, spread rain and snow across the **Rockies** into the **Plains** and **western Corn Belt**. Cold air plunged into the **Central**

**United States** behind the storm system as temperatures dropped into the teens across the **northern and central Rockies** and **northern Plains**.

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# National Weather Data for Selected Cities

## Weather Data for the Week Ending November 3, 1990

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
AL BIRMINGHAM	77	40	81	31	58	1	.0	-.6	.0	5.0	70	37.4	81	87	25	0	1	0	0	0	
MOBILE	78	48	81	43	63	0	.0	-.6	.0	3.9	41	49.0	88	88	29	0	0	0	0	0	
MONTGOMERY	78	38	82	34	58	-1	.0	-.5	.0	3.1	44	48.7	118	96	24	0	0	0	0	0	
AK ANCHORAGE	31	19	35	11	25	-3	.0	-.3	.0	7.2	170	15.2	118	92	66	0	7	7	0	0	
BARROW	23	5	32	-6	14	7	.0	.0	.0	1.1	91	4.4	107	95	81	0	7	7	0	0	
FAIRBANKS	17	7	24	-6	12	-2	.0	.0	.0	2.2	117	14.2	158	89	74	0	7	7	0	0	
JUNEAU	42	31	47	27	37	0	.0	-1.3	1.0	17.0	116	48.8	111	99	67	0	5	5	0	0	
KODIAK	44	29	51	22	37	-1	.0	-.3	1.0	15.6	113	59.9	120	89	54	0	5	5	0	0	
NOME	31	16	37	6	24	1	.0	.0	.0	4.4	119	19.7	151	93	74	0	7	7	0	0	
AZ PHOENIX	86	63	95	50	74	7	.0	.0	.0	1.3	98	7.2	128	49	20	4	4	0	0	0	0
PRESCOTT	68	38	78	30	53	4	.0	-.3	.0	2.4	84	14.9	93	56	19	0	1	1	0	0	
TUCSON	83	57	91	43	70	4	.0	-1.1	.0	2.3	103	13.2	138	54	18	3	3	0	0	0	0
YUMA	86	61	99	50	74	4	.0	-1.1	.0	1.0	186	2.2	114	37	16	3	3	0	0	0	0
AR FORT SMITH	78	46	81	39	62	6	.0	-.8	.0	8.4	124	52.6	156	93	37	0	0	0	0	0	0
LITTLE ROCK	73	51	76	46	62	5	.0	-.8	.0	11.1	150	52.4	128	62	38	0	0	0	0	0	0
CA BAKERSFIELD	72	47	83	39	60	-2	.0	-1.1	.0	.1	17	2.7	63	72	33	0	0	0	0	0	0
EUREKA	60	46	66	38	53	0	.0	-.2	.0	1.9	47	23.3	87	94	66	0	0	0	0	0	0
FRESNO	72	45	82	37	59	0	.0	-1.1	.0	.2	30	7.6	99	82	33	0	0	0	0	0	0
LOS ANGELES	73	56	78	50	65	0	.0	-.2	.0	T	0	5.1	57	81	41	0	0	0	0	0	0
REDDING	70	48	79	43	59	-1	.0	-.2	.0	2.0	57	23.4	81	71	31	0	0	0	0	0	0
SACRAMENTO	72	47	81	40	59	1	.0	-.3	.0	.1	7	11.6	97	80	30	0	0	0	0	0	0
SAN DIEGO	72	56	75	49	64	0	.0	-1.1	.0	T	3	6.0	83	87	48	0	0	0	0	0	0
SAN FRANCISCO	67	51	73	46	59	1	.0	-.2	.0	.4	28	8.3	60	80	43	0	0	0	0	0	0
CO DENVER	64	37	80	22	50	5	.0	-.3	.0	3.0	132	15.7	113	71	28	2	2	1	1	0	0
GRAND JUNCTION	63	41	72	32	52	5	.0	-.2	.0	2.2	132	6.8	101	67	30	0	0	0	0	0	0
PUEBLO	69	35	83	29	52	5	.0	-.3	.0	2.9	175	15.3	151	78	26	0	2	2	0	0	0
CT BRIDGEPORT	61	42	71	33	52	1	.0	-.8	.0	7.5	108	38.4	112	78	47	0	0	0	0	0	0
HARTFORD	62	34	78	27	48	0	.0	-.8	.0	9.8	125	44.6	123	83	37	0	4	4	0	0	0
DC WASHINGTON	69	45	79	36	57	3	.0	-.6	.0	4.2	66	33.9	103	86	36	0	0	0	0	0	0
FL APALACHICOLA	77	53	80	49	65	0	.0	-.5	.0	7.2	59	34.9	71	92	45	0	0	0	0	0	0
DAYTONA BEACH	80	60	82	51	70	1	.0	-.8	.0	7.5	65	35.0	80	91	46	0	0	0	0	0	0
JACKSONVILLE	78	53	82	45	66	0	.0	-.6	.0	7.1	68	28.0	59	97	46	0	0	0	0	0	0
KEY WEST	82	73	83	73	78	0	.0	-1.0	.0	10.4	90	32.2	93	81	58	0	0	0	0	0	0
MIAMI	82	70	83	66	76	0	.0	-.9	.0	8.6	55	49.3	92	82	52	0	0	0	0	0	0
ORLANDO	82	61	83	57	71	0	.0	-.2	.0	4.8	50	30.1	66	94	44	0	0	0	0	0	0
TALLAHASSEE	80	44	84	37	62	-1	.0	-.6	.0	7.4	75	40.8	79	97	33	0	0	0	0	0	0
TAMPA	83	61	85	54	72	1	.0	-.4	.0	5.1	58	33.6	97	93	40	0	0	0	0	0	0
WEST PALM BEACH	82	70	84	64	76	1	.0	-.9	.0	15.4	88	52.9	97	78	51	0	0	0	0	0	0
GA ATLANTA	73	46	77	39	59	2	.0	-.6	.0	9.1	153	53.3	130	80	27	0	0	0	0	0	0
AUGUSTA	76	39	81	35	57	-1	.0	-.4	.0	15.9	280	36.1	96	98	32	0	0	0	0	0	0
MACON	76	38	79	35	57	-3	.0	-.4	.0	8.2	149	31.1	81	97	31	0	0	0	0	0	0
SAVANNAH	76	47	80	41	61	-1	.0	-.4	.0	13.8	180	38.5	85	93	34	0	0	0	0	0	0
HI HILO	82	69	85	66	76	1	6.7	3.8	2.9	42.6	237	138.6	136	95	66	0	0	0	0	0	0
HONOLULU	88	73	90	70	80	2	T	-.6	T	1.3	48	11.7	69	81	49	2	0	0	0	0	0
KAHULUI	87	69	89	67	78	1	T	-.3	T	1.1	85	16.9	125	87	52	0	0	0	0	0	0
LIHUE	83	74	83	71	78	2	T	-1.2	T	3.1	43	24.3	73	83	62	0	0	0	0	0	0
ID BOISE	61	36	78	19	48	3	.1	-.2	.1	.9	66	10.5	116	80	26	0	2	2	0	0	0
LEWISTON	54	41	60	33	47	2	.2	-1.1	.2	1.2	63	9.6	91	78	51	0	0	0	0	0	0
POCATELLO	59	30	74	13	45	3	.1	-.2	.1	.7	41	8.2	92	75	28	0	4	4	0	0	0
IL CHICAGO	67	44	73	30	56	8	.1	-.3	.1	5.3	84	35.3	118	91	43	0	2	2	1	1	0
MOLINE	71	44	78	31	58	11	.1	-.4	.1	3.5	53	44.6	134	83	40	0	0	0	0	0	0
PEORIA	70	44	76	31	57	10	.1	-.5	.1	4.2	66	44.5	143	87	44	0	1	1	0	0	0
QUINCY	73	47	78	31	60	11	.1	-.6	.1	5.5	72	34.7	102	78	42	0	0	0	0	0	0
ROCKFORD	67	41	73	27	54	9	.2	-.4	.2	4.3	64	38.8	119	89	47	0	2	2	1	1	0
SPRINGFIELD	71	46	76	28	58	9	.1	-.5	.1	7.0	116	44.2	146	80	45	0	0	0	0	0	0
IN EVANSVILLE	73	37	78	29	55	4	.0	-.7	.0	7.3	135	42.2	120	93	29	0	1	1	0	0	0
FORT WAYNE	67	41	73	26	54	7	.0	-.6	.0	6.8	127	43.6	147	82	40	0	0	0	0	0	0
INDIANAPOLIS	68	41	74	29	55	6	.0	-.6	.0	7.3	133	39.6	119	81	39	0	2	2	0	0	0
SOUTH BEND	67	45	74	27	56	9	.1	-.7	.1	10.9	162	43.7	135	88	41	0	0	0	0	0	0
IA DES MOINES	68	44	77	29	56	9	1.3	.8	1.2	4.4	82	40.5	143	89	53	0	2	2	1	1	0
SIOUX CITY	66	38	80	26	52	7	.5	-.2	.5	2.9	66	23.5	99	88	43	0	2	2	1	1	0
WATERLOO	66	39	75	27	53	9	.8	-.4	.7	3.6	61	39.7	132	90	48	0	1	1	2	2	0
KS CONCORDIA	73	46	83	32	60	10	1.1	.8	1.1	3.4	68	24.9	98	76	38	0	1	1	1	1	0
DODGE CITY	75	43	85	32	59	9	.4	-.1	.3	2.0	82	20.3	106	77	33	0	2	2	2	2	0
GOODLAND	68	38	82	27	53	8	1.0	.8	.7	3.4	141	18.8	124	73	33	0	2	2	2	2	0
TOPEKA	77	50	82	30	63	13	1.5	.9	1.5	5.0	77	32.1	105	83	39	0	1	1	1	1	0
WICHITA	76	50	81	35	63	11	1.6	1.2	1.6	4.2	69	18.2	69	82	40	0	2	2	2	2	0
KY BOWLING GREEN	72	36	78	29	54	2	.0	-.7	.0	10.1	159	38.7	95	98	29	0	0	0	0	0	0
LEXINGTON	68	42	74	30	55	4	.0	-.6	.0	6.6	114	39.3	101	75	33	0	1	1	0	0	0
LOUISVILLE	72	40	78	32	56	5	.0	-.7	.0	6.5	105	46.4	126	86	27	0	0	0	0	0	0
LA ALEXANDRIA	79	47	83	41	63	1	.0	-.8	.0	7.1	112	48.6	111	95	36	0	0	0	0	0	0
BATON ROUGE	80	47	83	41	64	1	.0	-.7	.0	8.2	111	58.5	124	95	36	0	0	0	0	0	0
LAKE CHARLES	80	49	82	43	64	0	.0	-.8	.0	11.1	113	46.0	102	98	40	0	0	0	0	0	0
NEW ORLEANS	78	50	84	43	64	-1	.0	-.6	.0	6.9	79	48.2	95	98	40	0	0	0	0	0	0

Based on 1951-80 normals

Weather Data for the Week Ending November 3, 1990

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	01 INCH OR MORE		.50 INCH OR MORE	
																		01 INCH OR MORE	.50 INCH OR MORE		
SHREVEPORT	78	46	80	40	63	1	.0	.7	.0	7.3	116	52.9	145	97	39	0	0	0	0	0	0
ME CARIBOU	40	29	45	22	34	4	.1	.6	.1	12.5	181	36.7	121	88	67	0	5	1	0	0	0
PORTLAND	58	32	73	26	45	1	.6	.4	.6	10.6	141	37.3	108	92	43	0	6	2	1	1	1
MD BALTIMORE	68	41	79	32	55	3	.3	.7	.7	3.6	53	34.9	98	87	34	0	1	0	0	0	0
SALISBURY	68	38	78	28	53	1	.1	.8	.0	6.2	77	34.1	87	89	33	0	2	0	0	0	0
MA BOSTON	62	43	76	34	53	2	.3	.5	.3	9.0	127	41.9	119	72	34	0	0	1	0	0	0
CHATRAM	56	43	65	36	50	0	.3	.6	.3	5.7	73	37.3	99	84	60	0	0	1	0	0	0
MI ALPENA	58	33	75	22	45	3	.3	.4	.4	4.6	86	26.5	106	96	57	0	4	2	0	0	0
DETROIT	65	42	74	30	54	8	.0	.5	.0	10.2	225	35.7	137	83	41	0	1	0	0	0	0
FLINT	63	43	75	25	53	8	.0	.5	.0	7.1	153	26.3	106	84	47	0	1	0	0	0	0
GRAND RAPIDS	62	41	74	24	51	6	.6	.6	.6	9.3	150	32.5	114	92	50	0	2	0	0	0	0
HOUGHTON LAKE	58	34	70	22	46	5	.0	.5	.0	5.9	112	26.5	110	91	52	0	3	0	0	0	0
LANSING	63	42	73	22	53	8	.1	.5	.1	9.6	190	29.5	117	85	45	0	2	0	0	0	0
MARQUETTE	55	31	69	25	43	5	.1	.6	.1	10.1	134	30.1	94	93	58	0	5	2	0	0	0
MUSKOGON	60	40	68	22	50	4	.7	.7	.7	8.2	136	29.3	112	94	50	0	2	0	0	0	0
SAULT ST. MARIE	53	33	67	25	43	4	.4	.6	.1	7.8	110	28.8	103	97	60	0	4	1	0	0	0
MN ALEXANDRIA	55	34	69	25	45	6	.1	.4	.1	3.1	72	20.4	89	87	49	0	2	0	0	0	0
DULUTH	54	32	68	24	43	6	.6	.4	.6	10.0	179	32.3	121	91	46	0	4	1	0	0	0
INT'L FALLS	53	30	65	18	42	7	.3	.3	.3	2.6	52	18.4	83	90	46	0	5	1	0	0	0
MINNEAPOLIS	61	37	70	26	49	7	.3	.1	.3	3.4	76	31.7	131	86	49	0	2	1	0	0	0
ROCHESTER	60	37	70	23	49	7	.2	.2	.2	3.4	58	42.1	161	89	52	0	2	1	0	0	0
MS GREENWOOD	79	44	84	38	61	3	.0	.8	.0	7.4	113	42.0	97	88	28	0	0	0	0	0	0
JACKSON	81	40	86	34	60	1	.0	.6	.0	6.1	98	44.3	103	99	29	0	0	0	0	0	0
MERIDIAN	81	39	84	34	60	2	.0	.6	.0	2.5	38	53.8	121	94	25	0	0	0	0	0	0
MO CAPE GIRARDEAU	73	41	78	32	57	10	.0	.6	.0	7.0	108	42.0	112	89	35	0	1	0	0	0	0
COLUMBIA	75	46	79	33	61	10	.0	.6	.0	3.5	48	47.2	144	76	38	0	0	0	0	0	0
KANSAS CITY	75	51	82	31	63	11	1.2	.6	1.2	4.9	63	37.7	114	80	42	0	1	1	1	1	1
SAINT LOUIS	75	51	80	37	63	12	.0	.6	.0	5.7	109	35.3	120	63	32	0	0	0	0	0	0
SPRINGFIELD	75	49	78	31	62	10	.0	.7	.0	10.9	140	54.7	159	79	38	0	1	0	0	0	0
MT BILLINGS	60	35	76	20	48	5	.0	.2	.0	1.2	46	10.5	78	66	29	0	3	1	0	0	0
GLASGOW	59	32	78	19	45	7	.2	.2	.2	1.5	33	6.1	60	77	31	0	3	2	0	0	0
GREAT FALLS	56	32	72	12	44	3	.1	.1	.1	.2	12	12.6	93	73	29	0	3	2	0	0	0
HAVRE	54	26	73	11	40	1	.0	.1	.0	.1	4	5.5	51	77	37	0	6	0	0	0	0
HELENA	57	27	73	15	42	4	.1	.1	.0	.3	19	7.7	74	80	29	0	5	2	0	0	0
KALISPELL	46	29	55	19	38	1	.3	.0	.0	2.1	96	18.0	138	94	56	0	6	4	0	0	0
MILES CITY	59	33	76	22	46	5	.7	.2	.7	1.0	47	8.2	63	73	32	0	2	1	0	0	0
MISSOULA	48	27	58	17	38	0	.4	.2	.3	1.0	49	11.6	104	94	44	0	6	3	0	0	0
NE GRAND ISLAND	68	39	81	31	53	8	.6	.4	.6	2.2	62	25.7	118	86	38	0	2	2	1	1	1
LINCOLN	71	42	82	28	57	10	.7	.4	.7	2.9	61	25.3	100	81	39	0	1	1	1	1	1
NORFOLK	66	39	79	25	53	8	.6	.4	.6	3.1	88	25.7	115	87	39	0	2	1	1	1	1
NORTH PLATTE	67	32	84	23	50	7	.5	.3	.5	2.3	87	15.4	84	92	34	0	2	2	0	0	0
OMAHA	68	46	81	32	57	10	.7	.7	.7	3.6	62	22.8	81	72	50	0	1	1	1	1	1
SCOTTSBLUFF	65	29	83	13	47	4	.5	.3	.2	2.4	129	16.5	121	84	34	0	6	3	0	0	0
VALENTINE	68	33	85	19	51	9	.2	.0	.2	1.3	58	16.3	99	77	31	0	2	1	0	0	0
NV ELY	56	29	73	15	42	2	.1	.0	.1	1.4	107	8.2	107	66	27	0	4	1	0	0	0
LAS VEGAS	77	54	88	48	65	5	.1	.0	.1	.5	79	3.8	113	42	15	0	0	2	0	0	0
RENO	62	32	75	19	47	2	.0	.1	.0	.4	63	4.7	86	70	25	0	3	0	0	0	0
WINNEMUCCA	61	26	76	6	43	0	.0	.1	.0	.3	28	5.6	91	62	19	0	5	1	0	0	0
NH CONCORD	59	29	77	22	44	1	.2	.6	.2	7.2	110	33.9	114	92	36	0	6	1	0	0	0
NJ ATLANTIC CITY	66	38	78	25	52	1	.0	.8	.0	4.6	73	31.2	90	92	36	0	3	0	0	0	0
NM ALBUQUERQUE	68	41	75	34	55	4	.5	.4	.5	1.6	96	9.3	132	69	31	0	0	1	1	1	1
CLOVIS	74	45	81	31	60	7	1.2	.9	.8	5.5	147	12.8	79	83	35	0	1	2	1	1	1
ROSWELL	76	46	84	37	61	8	.5	.4	.3	2.3	82	7.2	73	70	31	0	0	2	0	0	0
NY ALBANY	58	31	75	24	45	0	.0	.7	.0	6.4	100	38.8	130	90	40	0	4	0	0	0	0
BINGHAMTON	57	39	69	27	48	4	.1	.6	.1	10.0	151	37.6	121	83	46	0	3	1	0	0	0
BUFFALO	59	43	70	29	51	4	.1	.6	.1	8.3	125	39.6	129	81	49	0	1	1	0	0	0
NEW YORK	64	49	78	40	56	4	.1	.8	.1	7.6	108	44.2	124	69	39	0	0	0	0	0	0
ROCHESTER	61	40	73	30	50	4	.1	.5	.1	7.7	141	33.7	128	90	49	0	2	1	0	0	0
SYRACUSE	60	36	73	29	48	1	.3	.5	.3	9.6	143	41.0	126	92	41	0	4	2	0	0	0
NC ASHVILLE	71	33	76	28	52	1	.0	.7	.0	14.0	194	53.6	142	97	21	0	3	0	0	0	0
CHARLOTTE	74	42	80	37	58	2	.0	.6	.0	16.5	252	43.7	118	89	24	0	0	0	0	0	0
GREENSBORO	72	39	78	33	55	2	.0	.6	.0	13.8	195	37.5	102	87	26	0	0	0	0	0	0
HAYTERAS	68	47	75	37	58	-3	.0	.0	.0	4.6	41	38.7	83	93	46	0	0	0	0	0	0
NEW BERN	73	42	81	36	58	-1	.0	.7	.0	6.6	70	44.9	96	92	30	0	0	0	0	0	0
RALEIGH	73	41	80	33	57	2	.0	.6	.0	6.0	96	33.0	92	90	28	0	0	0	0	0	0
WILMINGTON	74	41	81	36	58	2	.0	.6	.0	8.5	95	48.7	104	98	36	0	0	0	0	0	0
ND BISMARCK	57	26	69	9	42	4	.0	.1	.0	1.5	70	12.2	86	85	37	0	6	0	0	0	0
FARGO	59	32	74	24	45	7	.0	.2	.0	3.0	92	16.2	89	76	39	0	5	0	0	0	0
GRAND FORKS	54	30	66	21	42	6	.0	.2	.0	2.2	67	15.4	91	82	43	0	5	0	0	0	0
WILLISTON	57	30	75	13	44	6	.1	.1	.0	.5	21	8.8	70	81	33	0	4	2	0	0	0
OH AKRON-CANTON	64	42	71	33	53	6	.0	.5	.0	16.1	298	56.8	185	80	42	0	0	0	0	0	0
CINCINNATI	65	44	75	30	54	5	.0	.6	.0	9.2	162	47.4	139	79	36	0	1	0	0	0	0
CLEVELAND	68	44	74	35	55	7	.0	.6	.0	12.3	219	43.0	143	82	41	0	0	0	0	0	0
COLUMBUS	66	37	74	28	52	4	.0	.5	.0	10.3	211	44.2	139	92	38	0	3	0	0	0	0

Based on 1951-80 normals

Weather Data for the Week Ending November 3, 1990

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	.01 INCH OR MORE		.50 INCH OR MORE	
																		90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	65	42	73	28	54	5	.0	-1.5	.0	8.6	186	47.3	159	79	41	0	0	0	0	0	0
TOLEDO	66	40	75	24	53	7	.0	-1.5	.0	4.4	94	30.5	114	88	37	0	0	0	0	0	0
YOUNGSTOWN	65	44	73	34	55	9	.1	-1.6	.0	9.4	158	38.0	119	76	43	0	0	0	0	0	0
OK OKLAHOMA CITY	77	51	80	40	64	9	.6	-1.1	.6	9.2	145	38.1	135	88	38	0	0	0	0	1	1
TULSA	78	53	81	41	66	10	.9	-1.3	.9	7.3	90	34.5	100	80	39	0	0	0	0	0	0
OR ASTORIA	55	41	59	37	48	-1	1.7	-1.2	.9	9.4	92	56.6	116	98	73	0	0	0	0	6	6
BURNS	52	26	64	12	39	-3	.1	-1.1	.1	.4	32	4.3	57	83	32	0	0	0	0	2	2
MEDFORD	56	39	60	27	47	-1	.6	-1.1	.2	1.4	55	10.9	80	96	54	0	0	0	0	1	1
PENDLETON	55	37	65	29	46	0	.3	-1.0	.1	.9	52	7.8	86	88	49	0	0	0	0	2	2
FORTLAND	57	45	64	38	51	1	1.3	-1.3	.6	5.1	100	26.9	103	98	62	0	0	0	0	3	3
SALEM	57	42	63	34	49	1	2.3	-1.3	1.3	6.2	116	28.3	102	98	68	0	0	0	0	5	5
PA ALLENTOWN	64	38	77	30	51	3	.0	-1.7	.0	5.1	169	35.0	95	88	41	0	0	0	0	1	1
ERIE	64	46	76	34	55	8	.1	-1.7	.1	11.9	150	42.3	127	81	47	0	0	0	0	1	1
HARRISBURG	65	39	77	30	52	3	.0	-1.7	.0	6.6	99	35.3	107	91	38	0	0	0	0	1	1
PHILADELPHIA	66	43	80	32	55	3	.1	-1.7	.1	3.4	52	30.8	89	93	47	0	0	0	0	1	1
PITTSBURGH	65	43	72	29	54	7	.1	-1.6	.1	9.5	175	41.7	132	72	36	0	0	0	0	0	0
SCRANTON	61	39	74	26	50	3	.1	-1.6	.1	7.5	118	38.5	130	87	41	0	0	0	0	2	2
RI PROVIDENCE	63	38	78	29	51	2	.2	-1.7	.2	7.2	95	36.9	100	82	35	0	0	0	0	3	3
SC CHARLESTON	74	47	80	40	61	-1	.0	-1.5	.0	7.5	93	37.4	81	98	38	0	0	0	0	0	0
COLUMBIA	76	38	81	33	57	-1	.0	-1.5	.0	14.3	204	39.8	92	98	30	0	0	0	0	0	0
FLORENCE	75	43	81	38	59	0	.0	-1.5	.0	11.7	176	29.7	76	92	31	0	0	0	0	0	0
SD ABERDEEN	62	32	75	21	47	8	.1	-1.1	.1	3.6	139	20.5	123	86	36	0	0	0	0	4	4
HURON	64	32	79	19	48	7	.1	-1.1	.1	1.9	65	22.6	130	83	32	0	0	0	0	1	1
RAPID CITY	65	36	80	26	51	8	.2	-1.1	.2	3.3	178	16.0	105	72	31	0	0	0	0	2	2
STOIX FALLS	62	33	76	21	48	6	.3	-1.3	.3	2.6	59	18.3	82	90	41	0	0	0	0	2	2
TN CHATTANOOGA	73	37	78	33	55	1	.0	-1.7	.0	8.2	107	54.5	125	100	28	0	0	0	0	0	0
KNOXVILLE	71	38	76	33	54	0	.0	-1.7	.0	6.3	106	44.4	114	95	31	0	0	0	0	0	0
MEMPHIS	76	45	80	38	60	3	.0	-1.7	.0	9.6	152	45.7	107	80	28	0	0	0	0	0	0
NASHVILLE	74	38	80	31	56	2	.0	-1.6	.0	6.5	100	32.0	79	90	24	0	0	0	0	1	1
TX ABILENE	78	53	81	42	66	6	.4	-1.0	.4	6.9	125	28.7	135	83	42	0	0	0	0	0	0
AMARILLO	76	44	84	31	60	8	.5	-1.3	.5	3.7	117	17.3	96	76	31	0	0	0	0	1	1
AUSTIN	81	56	83	53	69	5	.1	-1.6	.1	9.1	71	23.9	87	95	43	0	0	0	0	0	0
BEAUMONT	80	53	83	47	67	2	.0	-1.8	.0	5.7	103	57.2	123	100	49	0	0	0	0	0	0
BROWNSVILLE	84	60	87	56	72	1	.1	-1.5	.1	6.2	70	18.0	78	94	49	0	0	0	0	0	0
CORPUS CHRISTI	83	60	86	56	71	2	.0	-1.4	.0	4.0	42	19.3	68	96	47	0	0	0	0	1	1
DEL RIO	81	58	84	51	70	4	.1	-1.3	.1	7.8	152	24.3	152	71	34	0	0	0	0	0	0
EL PASO	75	45	82	40	60	2	.4	-1.3	.3	4.4	209	11.6	167	83	32	0	0	0	0	2	2
FORT WORTH	81	55	82	51	68	7	.1	-1.6	.1	3.9	59	40.0	146	95	45	0	0	0	0	0	0
GALVESTON	76	65	79	60	70	2	.3	-1.2	.3	10.0	111	34.8	102	81	58	0	0	0	0	1	1
HOUSTON	81	53	82	45	67	2	.1	-1.7	.1	5.4	58	35.7	91	97	46	0	0	0	0	0	0
LUBBOCK	77	48	85	33	62	8	.4	-1.1	.4	3.6	91	14.6	88	78	34	0	0	0	0	2	2
MIDLAND	78	49	84	39	64	5	.1	-1.1	.1	4.4	125	12.8	102	85	35	0	0	0	0	1	1
SAN ANGELO	78	51	79	45	65	4	1.3	-1.9	1.3	9.9	190	27.3	165	90	44	0	0	0	0	1	1
SAN ANTONIO	81	54	84	50	68	3	.1	-1.6	.1	7.4	108	35.0	138	96	40	0	0	0	0	1	1
VICTORIA	83	56	86	52	70	3	.1	-1.5	.1	5.2	53	32.7	100	99	42	0	0	0	0	1	1
WACO	81	57	83	52	69	6	.1	-1.6	.1	11.1	171	33.6	125	97	46	0	0	0	0	0	0
WICHITA FALLS	81	51	84	43	66	8	.6	-1.1	.6	3.7	60	34.9	145	91	40	0	0	0	0	1	1
UT CEDAR CITY	59	39	75	27	49	3	.3	-1.1	.2	2.5	140	9.1	103	66	29	0	0	0	0	3	3
SALT LAKE CITY	64	43	79	31	53	7	.4	-1.1	.4	1.6	76	9.3	73	67	28	0	0	0	0	1	1
VT BURLINGTON	55	34	72	25	45	2	.1	-1.5	.1	8.0	128	34.1	119	89	45	0	0	0	0	4	4
VA NORFOLK	71	46	81	41	59	2	.0	-1.7	.0	4.7	59	41.2	105	87	32	0	0	0	0	0	0
RICHMOND	72	40	82	32	56	2	.0	-1.8	.0	5.8	77	37.7	100	88	28	0	0	0	0	2	2
ROANOKE	72	38	80	30	55	3	.0	-1.7	.0	11.8	171	38.8	115	87	25	0	0	0	0	1	1
WA QUILLAYUTE	52	38	54	31	45	-2	2.4	-2.2	1.1	17.2	97	78.8	102	100	73	0	0	0	0	1	1
SEATTLE-TACOMA	54	42	58	36	48	-1	1.8	-1.7	.9	6.1	103	30.7	114	98	65	0	0	0	0	6	6
SPokane	48	33	56	23	40	0	1.0	-1.6	.6	3.2	162	16.5	135	97	57	0	0	0	0	3	3
YAKIMA	54	31	63	22	43	-1	.3	-1.2	.2	.5	53	5.9	106	93	48	0	0	0	0	5	5
WV BECKLEY	65	37	72	27	51	5	.0	-1.6	.0	7.8	119	34.8	95	73	25	0	0	0	0	2	2
CHARLESTON	71	37	80	30	54	3	.0	-1.6	.0	7.8	132	35.0	96	93	28	0	0	0	0	2	2
HUNTINGTON	70	36	77	29	53	2	.0	-1.6	.0	8.8	158	41.4	118	85	26	0	0	0	0	2	2
PARKERSBURG	68	37	75	27	52	2	.0	-1.5	.0	7.4	135	41.8	127	91	32	0	0	0	0	3	3
WI GREEN BAY	60	38	72	29	49	7	.7	-1.3	.5	8.2	151	33.6	136	94	54	0	0	0	0	2	2
LACROSSE	63	41	70	31	52	8	.2	-1.2	.1	3.4	61	34.6	126	88	47	0	0	0	0	1	1
MADISON	64	39	72	27	52	8	.2	-1.3	.2	4.1	75	31.6	115	90	52	0	0	0	0	2	2
MILWAUKEE	64	44	74	34	54	9	.2	-1.2	.2	4.8	90	34.9	130	93	58	0	0	0	0	0	0
WAUSAU	59	35	70	29	47	7	.2	-1.2	.1	7.5	119	32.5	113	95	49	0	0	0	0	2	2
WY CASPER	58	31	75	15	45	5	.7	-1.5	.5	2.1	128	11.4	113	76	32	0	0	0	0	3	3
CHRYSTENNE	58	35	75	21	47	6	.3	-1.2	.2	2.4	135	18.8	151	69	34	0	0	0	0	2	2
LANDER	56	32	72	16	44	5	1.1	-1.8	.7	3.3	155	9.9	84	70	36	0	0	0	0	4	4
SHERIDAN	57	29	80	19	43	4	.2	-1.0	.2	2.3	94	12.3	91	88	38	0	0	0	0	6	6

Based on 1951-80 normals

## October Weather and Crop Summary

### WEATHER

Showers and thunderstorms formed along a series of slow moving frontal systems and spread moderate to heavy rain from the **Rio Grande Valley** to the **Great Lakes** and **Atlantic coast**. At the start of October, the first system, fueled with moisture from the remains of the Pacific's Tropical Storm Rachel, caused soaking rains and flash floods in the **Southwest**. Intense thunderstorms developed along the second frontal system and dumped torrential rains across **Arkansas** and drenching rains over the **eastern Corn Belt**. The front stalled along the **Atlantic seaboard** and combined with the remnants of Tropical Storm Marco and Hurricane Klaus to bring torrents of rain (8-14 inches) and widespread flooding to **Georgia**, the **Carolinas**, and **Virginia**. The third system, in mid-October, brought severe weather across the **Mississippi Valley** to the **Atlantic coast**, with tornadoes touching down in **Virginia** and **North Carolina**. The fourth frontal system, during the latter part of the month, brought amounts of more than 4 inches of rain and additional flooding to the **middle and southern Atlantic Coast States**. Toward the end of the month, a strong low pressure system formed off the **Atlantic coast** and caused high wind, mountain snows, and more heavy rain in the **Carolinas**.

Pacific storms battered the **Northwest** with heavy rain and brought heavy snow into the **northern and central Rockies**. Dry weather

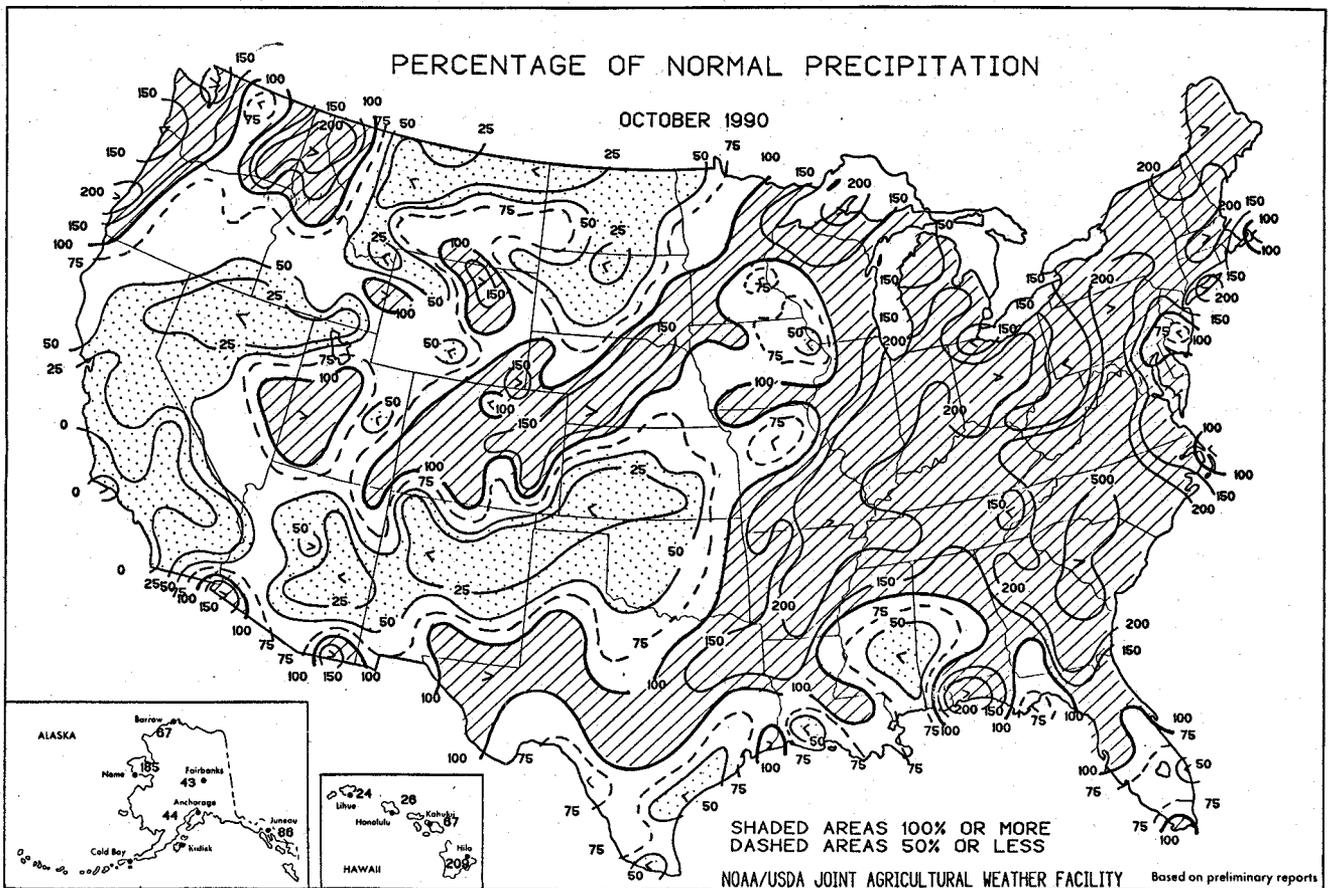
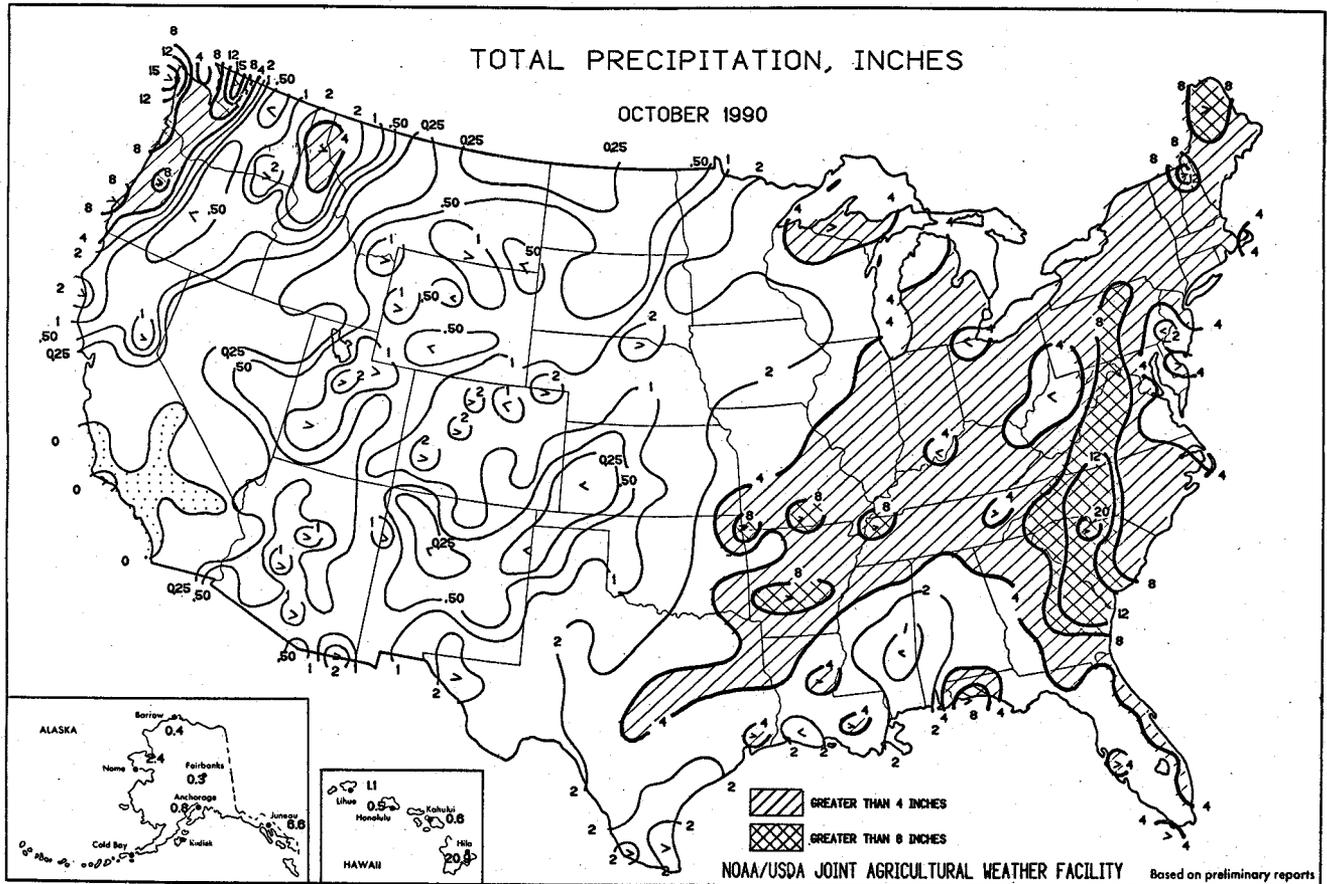
continued to prevail over the **northern Plains** and parts of the **central Plains**, **western Corn Belt**, **Southeast**, and the **West**.

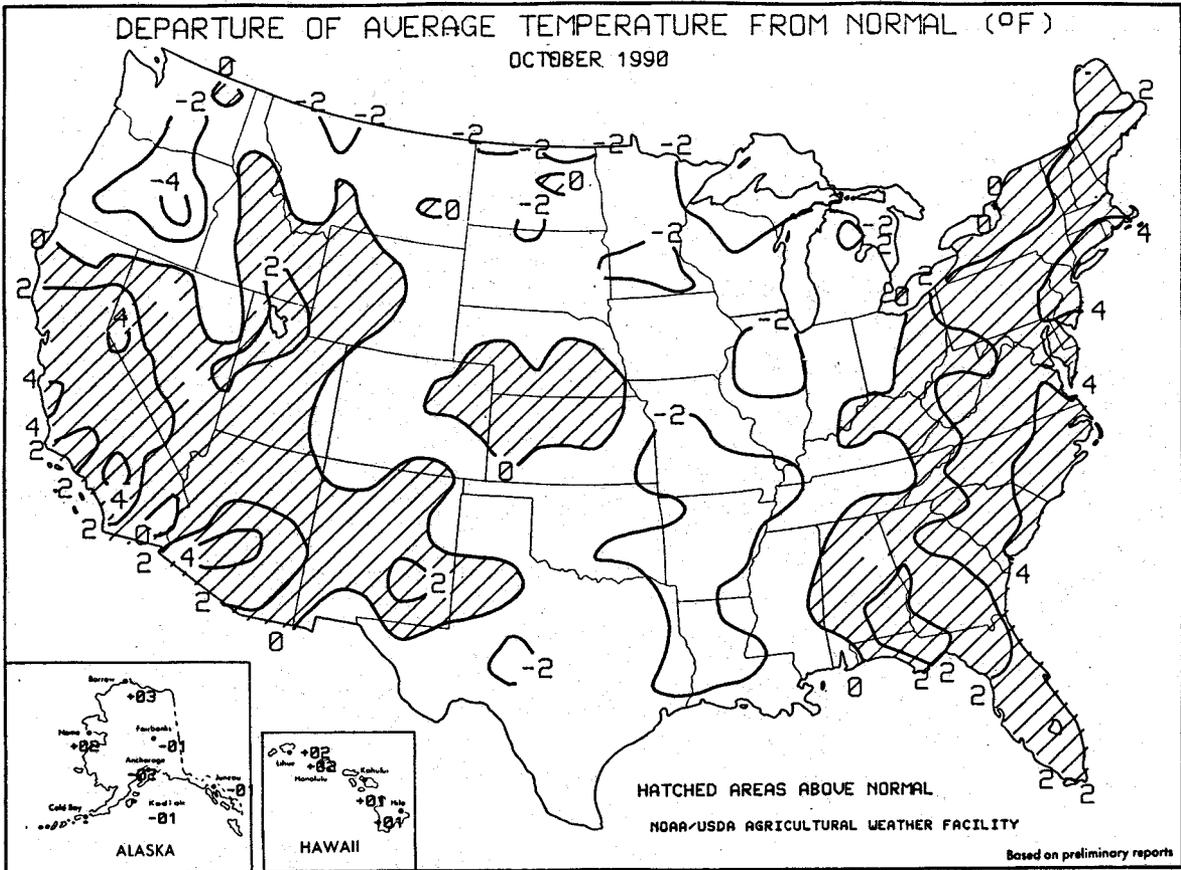
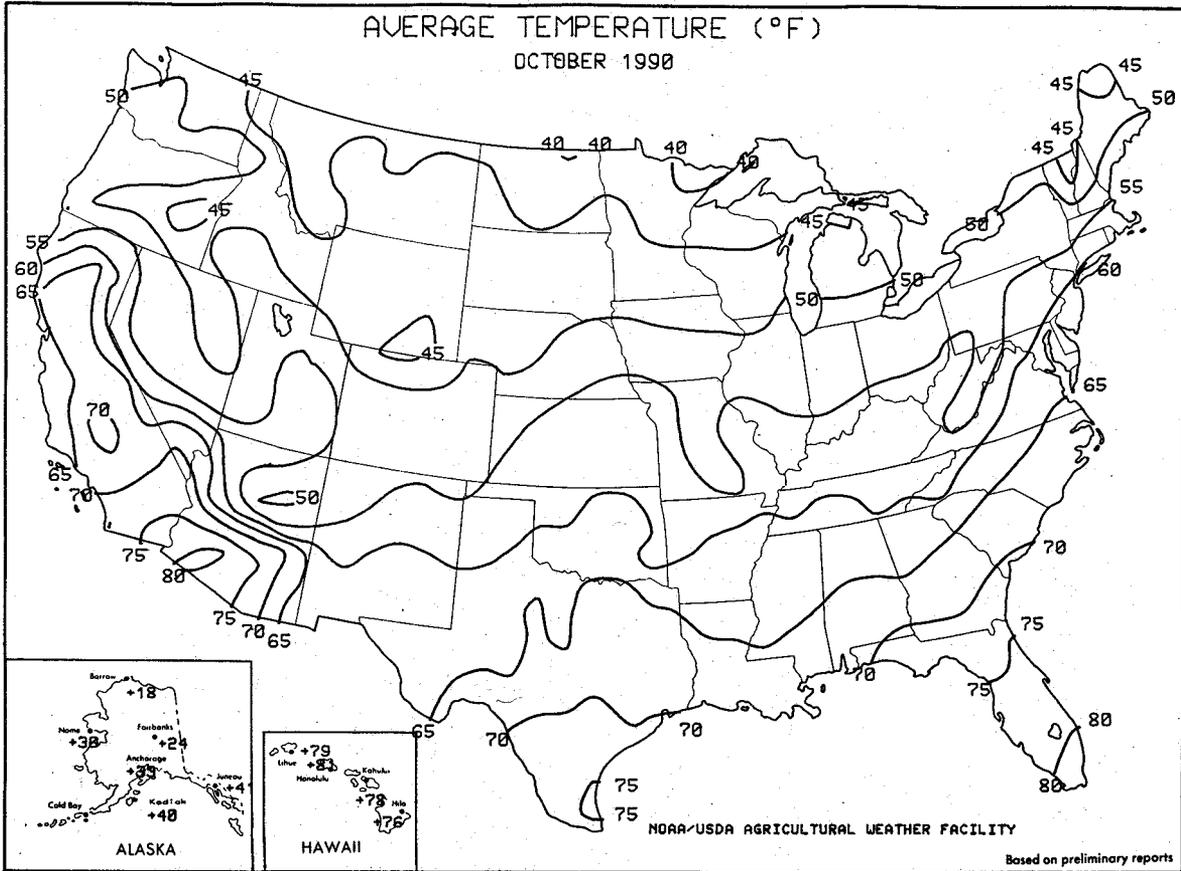
### WINTER WHEAT PLANTINGS

Weather was nearly ideal for winter wheat seedings early in October and favorable for growing wheat later in the month. Dry weather was prevalent early in the month, with favorable moisture later in the month. At the beginning of October, wheat planting was 60 percent (%) complete, 2 points below the 5-year average. Wheat emerged was 35%, 3 points below normal. Dry soil conditions in portions of the **Plains** slowed germination. By mid-October, planting progressed and was 71% complete, 1 point behind normal. Fifty-one percent of the crop was emerged, same as the average. Planting was over 90% complete in **Colorado**, **Idaho**, **Montana**, **Nebraska**, **South Dakota**, and **Washington**. High winds in **western Nebraska** caused erosion in some planted wheat fields.

By month's end, wheat was mostly good with 91% of the crop planted, 1 point ahead of normal. Seventy-nine percent of the crop was emerged, 1 point ahead of normal. Planting was 100% complete in **Colorado**, **Montana**, **Nebraska**, and **South Dakota**. Some **Kansas** acreage was planted dry but received sufficient rain and was 95% emerged, 10 points above normal. Planting in the **eastern Corn Belt** was delayed throughout the month due to wet conditions. **Ohio** wheat plantings were delayed to the point that not all intended acreage will be planted.

("October Weather in Historical Perspective" will appear in next week's issue.)





Temperature and Precipitation Data October 1990

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	64	2	3.0	0.4	LA PADUCAH	57	-2	4.5	1.9	DAYTON	53	-1	6.0	4.0
HUNTSVILLE	62	1	3.4	0.5	ALEXANDRIA	65	-2	3.6	0.6	MANSFIELD	53	0	5.7	3.8
MOBILE	68	-1	1.2	-1.4	BATON ROUGE	67	-2	3.1	0.5	TOLEDO	52	0	2.6	0.7
MONTGOMERY	67	1	2.1	-0.2	LAKE CHARLES	67	-2	1.5	-2.2	YOUNGSTOWN	53	2	4.2	1.6
AK ANCHORAGE	33	-2	0.8	-0.9	NEW ORLEANS	68	-1	2.4	-0.3	OK OKLAHOMA CITY	61	-1	1.3	-1.4
BARROW	18	3	0.4	-0.1	SHREVEPORT	65	-2	4.3	1.7	TULSA	61	-1	2.2	-1.2
FAIRBANKS	24	-1	0.3	-0.4	ME CARIBOU	45	1	8.7	5.6	OR ASTORIA	51	-1	8.4	2.2
JUNEAU	41	-1	6.6	-1.1	PORTLAND	52	4	7.5	3.6	BURNS	44	-4	0.5	-0.3
KODIAK	40	-1	5.4	-1.5	MD BALTIMORE	61	4	2.6	-0.5	MEDFORD	53	0	1.3	-0.4
NOME	30	2	2.4	1.1	SALISBURY	61	4	3.8	0.0	PENDLETON	51	-1	0.8	-0.2
AZ FLAGSTAFF	49	2	0.5	-1.0	MA BOSTON	58	3	7.4	4.0	PORTLAND	54	0	4.6	1.6
PHOENIX	79	5	T	-0.6	CHATHAM	58	4	3.4	-0.3	PA SALEM	52	-1	5.6	2.3
PRESCOTT	57	2	0.6	-0.3	MI ALPENA	45	-2	3.1	1.1	ALLENTOWN	58	4	3.1	0.1
TUCSON	73	3	0.6	-0.3	DETROIT	53	1	4.1	2.0	ERIE	55	2	4.2	0.5
WINSLOW	55	-2	0.2	-0.7	FLINT	50	-1	4.1	2.0	HARRISBURG	58	3	4.9	2.2
YUMA	78	3	1.0	0.7	GRAND RAPIDS	50	-2	5.0	2.4	PHILADELPHIA	62	5	1.7	-1.1
AR FORT SMITH	61	-2	3.5	0.3	HOUGHTON LAKE	45	-2	2.9	0.7	PITTSBURGH	55	2	3.5	1.0
LITTLE ROCK	62	-1	7.6	4.8	LANSING	50	-1	5.6	3.7	SCRANTON	55	3	4.3	1.5
CA BAKERSFIELD	70	2	T	-0.3	MARQUETTE	41	-3	5.3	2.0	WILLIAMSPORT	56	4	9.6	6.4
BISHOP	58	1	0.0	-0.2	MUSKEGON	49	-2	4.4	1.6	RI PROVIDENCE	59	5	5.0	1.2
EUREKA	54	0	1.7	-1.0	SAULT ST. MARIE	43	-2	3.8	0.9	SC CHARLESTON	71	4	7.3	4.4
FRESNO	68	3	T	-0.3	MN ALEXANDRIA	45	-1	1.6	-0.3	COLUMBIA	66	3	11.7	9.1
LOS ANGELES	70	3	0.0	-0.2	DULUTH	42	-2	3.5	1.3	FLORENCE	68	4	10.8	8.4
REDDING	65	-1	0.8	-1.2	INT'L FALLS	41	-2	1.4	-0.3	GREENVILLE	62	1	9.4	6.0
SACRAMENTO	67	3	0.1	-0.8	MINNEAPOLIS	48	-1	1.2	-0.6	SD ABERDEEN	46	-1	0.4	-0.6
SAN DIEGO	69	3	T	-0.5	ROCHESTER	47	-2	1.9	-0.5	HURON	47	-2	1.3	-0.1
SAN FRANCISCO	63	3	0.2	-0.9	ST. CLOUD	44	-3	2.7	0.6	RAPID CITY	48	-1	0.6	-0.2
STOCKTON	67	2	0.2	-0.4	MS GREENWOOD	63	-1	2.5	-0.4	SIoux FALLS	48	-1	1.8	0.3
ALAMOSA	44	0	0.7	0.0	JACKSON	64	-1	1.2	-1.1	TN BRISTOL	58	1	5.2	2.7
CO. SPRINGS	50	-1	1.5	0.7	MERIDIAN	64	1	0.7	-1.9	CHATTANOOGA	61	-1	4.4	1.5
DENVER	52	1	1.0	-0.4	TUPELO	62	-1	3.8	0.8	KNOXVILLE	60	0	3.6	0.9
GRAND JUNCTION	53	-2	1.0	0.1	MO CAPE GIRARDEAU	--	--	5.2	2.8	MEMPHIS	61	-2	4.4	2.0
PUEBLO	53	-1	0.6	-0.2	COLUMBIA	55	-2	2.6	-0.6	NASHVILLE	60	0	4.4	1.8
CT BRIDGEPORT	60	4	5.7	2.4	KANSAS CITY	57	-2	2.5	-0.8	TX ABILENE	65	-1	1.7	-0.6
HARTFORD	57	5	7.6	4.1	SAINT LOUIS	58	0	5.0	2.7	AMARILLO	58	-1	0.5	-0.9
DC WASHINGTON	63	3	3.3	0.4	SPRINGFIELD	56	-2	5.0	1.8	AUSTIN	70	0	3.4	0.0
FL APALACHICOLA	72	2	2.0	-1.2	MT BILLINGS	49	0	1.0	-0.1	BEAUMONT	68	-2	4.4	0.7
DAYTONA BEACH	76	3	5.9	1.3	GLASGOW	45	-1	0.1	-0.4	BROWNSVILLE	75	0	2.3	-1.2
FT. MYERS	80	3	2.5	-1.4	GREAT FALLS	46	-2	0.1	-0.7	CORPUS CHRISTI	73	-1	1.4	-1.3
JACKSONVILLE	73	2	4.5	0.7	HAVRE	44	-2	0.3	-0.3	DEL RIO	69	-1	1.5	-0.7
KEY WEST	81	1	5.1	0.2	HELENA	45	0	0.1	-0.5	EL PASO	63	0	0.6	-0.1
MIAMI	80	2	4.8	-2.3	KALISPELL	41	-1	2.1	1.1	FORT WORTH	66	-1	2.8	-0.2
ORLANDO	77	2	2.1	-0.9	MILES CITY	48	0	0.7	-0.2	GALVESTON	72	-1	2.5	-0.1
TALLAHASSEE	71	3	2.5	-0.6	MISSOULA	43	-1	0.8	0.0	HOUSTON	69	-2	3.8	0.0
TAMPA	78	3	2.6	0.3	NE GRAND ISLAND	54	1	0.9	-0.2	LAREDO	74	-1	1.9	-0.3
WEST PALM BEACH	80	2	3.4	-4.3	LINCOLN	55	1	1.5	-0.2	LUBBOCK	62	1	1.9	0.1
GA ATHEN	64	2	5.2	2.5	NORFOLK	52	0	1.5	0.2	MIDLAND	64	-1	1.5	0.1
ATLANTA	64	2	6.1	3.6	NORTH PLATTE	50	0	1.5	0.6	SAN ANGELO	64	-3	2.4	0.4
AUGUSTA	67	3	14.8	12.8	OMAHA	54	0	1.9	-0.2	SAN ANTONIO	69	-1	3.7	0.8
MACON	67	1	6.3	4.3	SCOTTSBLUFF	49	-1	1.0	0.2	VICTORIA	71	-1	1.6	-1.8
SAVANNAH	71	4	12.5	10.2	VALENTINE	49	0	0.5	-0.3	WACO	68	-1	4.5	1.4
HI HILO	76	1	20.9	11.0	NV ELKO	--	--	0.1	-0.5	WICHITA FALLS	64	-1	1.3	-1.3
HONOLULU	81	2	0.5	-1.4	ELY	48	2	0.7	0.1	UT BLANDING	--	--	1.8	0.3
KAHULUI	78	1	0.3	-0.6	LAS VEGAS	69	2	0.2	-0.1	CEDAR CITY	53	0	1.1	0.3
KAHULUI	78	1	0.6	-0.3	RENO	55	5	0.1	-0.3	SALT LAKE CITY	54	1	0.7	-0.4
LIHUE	79	2	1.1	-3.4	WINNEMUCCA	50	2	0.1	-0.5	VT BURLINGTON	49	1	6.0	3.2
ID BOISE	51	0	0.4	-0.3	NH CONCORD	52	4	4.9	1.8	VA LYNCHBURG	59	2	10.8	7.4
LEWISTON	53	2	1.2	0.2	NJ ATLANTIC CITY	59	3	2.6	-0.4	NORFOLK	66	4	3.7	0.3
POCATELLO	48	0	0.3	-0.6	NM ALBUQUERQUE	58	1	0.2	-0.7	RICHMOND	63	4	3.9	0.2
IL CAIRO	--	--	4.2	1.7	CLOVIS	59	0	0.5	-1.3	ROANOKE	59	2	9.9	6.4
CHICAGO	52	-2	4.1	2.1	ROSWELL	63	3	0.4	-0.7	WA COLVILLE	46	--	1.5	0.3
MOLINE	52	-2	2.4	-0.3	NY ALBANY	53	2	4.6	1.7	QUILLAYUTE	48	-2	15.8	5.4
PEORIA	52	-2	3.2	0.6	BINGHAMTON	52	2	7.2	4.2	SEATTLE-TACOMA	51	-1	5.8	2.4
QUINCY	54	-2	2.7	-0.6	BUFFALO	53	1	4.6	1.7	SPOKANE	45	-2	3.1	2.0
ROCKFORD	50	-2	3.3	0.4	NEW YORK	63	5	5.7	2.5	WALLA WALLA	--	--	3.5	2.4
SPRINGFIELD	53	-2	5.0	2.4	ROCHESTER	52	0	4.4	1.8	YAKIMA	47	-3	0.4	0.0
EVANSVILLE	56	-1	4.8	2.3	SYRACUSE	53	1	6.1	3.0	WV BECKLEY	55	3	5.9	3.2
FORT WAYNE	53	0	5.3	2.8	NC ASHEVILLE	58	-1	8.8	5.5	CHARLESTON	58	2	3.5	0.9
INDIANAPOLIS	54	-1	4.6	2.2	CHARLOTTE	64	3	14.7	12.0	ELKINS	52	2	3.3	0.3
SOUTH BEND	52	-1	7.1	3.9	GREENSBORO	61	3	12.6	9.4	HUNTINGTON	57	0	3.5	1.2
IA DES MOINES	52	-2	1.8	-0.4	HATTERAS	69	4	4.0	-0.9	PARKERSBURG	56	0	4.2	1.8
DUBUQUE	49	-2	1.4	-1.5	NEW BERN	68	4	5.2	1.8	WI GREEN BAY	47	-1	2.3	0.3
SIoux CITY	51	-1	1.5	-0.2	RALEIGH	64	4	5.7	3.0	LA CROSSE	50	-2	1.4	-0.6
WATERLOO	49	-2	1.4	-1.0	WILMINGTON	69	4	7.1	4.1	MADISON	48	-2	2.2	0.0
KS CONCORDIA	57	0	1.1	-0.8	ND BISMARCK	44	-2	0.3	-0.5	MILWAUKEE	51	0	2.6	0.4
DODGE CITY	57	0	0.2	-1.1	FARGO	46	-1	1.2	0.0	WAUSAU	45	-2	3.2	1.0
GOODLAND	54	1	0.9	0.0	GRAND FORKS	44	-1	0.3	-0.8	WY CASPER	46	-1	0.9	0.0
TOPEKA	57	-1	2.7	-0.1	WILLISTON	45	-1	0.1	-0.6	CHEYENNE	47	-1	1.4	0.7
WICHITA	58	-1	0.6	-1.8	OH AKRON-CANTON	53	1	7.1	4.9	LANDER	47	1	0.8	-0.4
KY BOWLING GREEN	58	0	4.6	1.8	CINCINNATI	56	0	5.1	2.6	SHERIDAN	46	-1	1.8	0.6
JACKSON	58	3	4.7	2.6	CLEVELAND	54	0	4.9	2.5	PR SAN JUAN	82	1	8.6	3.0
LEXINGTON	56	-1	4.5	2.2	COLUMBUS	55	1	5.0	3.2					
LOUISVILLE	59	1	4.0	1.4										

Based on 1951-80 normals.

## Heating Degree Days (Base 65°) For October 1990

States and Stations			States and Stations			States and Stations		
TOTAL	Depart Normal		TOTAL	Depart Normal		TOTAL	Depart Normal	
AL. Birmingham	113	-24	MD. Baltimore	195	-66	OK. Okla. City	169	24
AL. Mobile	58	8	MA. Boston	236	-93	OR. Tulsa	172	26
AK. Anchorage	92	6	MI. Chatham	247	-103	OR. Astoria	424	49
AK. Barrow	1487	-88	MI. Alpena	600	45	PA. Burns		
AK. Fairbanks	1261	21	MI. Detroit	380	-34	PA. Medford	351	16
AK. Nome	1066	-81	MI. Flint	469	14	PA. Pendleton	419	31
AZ. Flagstaff	494	-58	MI. Grand Rapids	475	32	PA. Portland	336	4
AZ. Phoenix	0	-13	MI. Houghton Lake	604	43	PA. Salem	419	47
AZ. Tucson	5	-25	MI. Lansing	484	32	PA. Allentown	269	-95
AZ. Winslow	317	47	MI. Marquette	726	84	PA. Erie	323	-97
AZ. Yuma	0	-8	MI. S. Ste. Marie	662	51	PA. Harrisburg	248	-72
AR. Fort Smith	182	39	MN. Duluth	700	55	PA. Philadelphia	171	-102
AR. Little Rock	163	31	MN. Internatl Falls	748	60	PA. Pittsburgh	314	-79
CA. Bakersfield	13	-37	MN. Minneapolis	516	28	PA. Scranton	320	-97
CA. Eureka	332	0	MN. Rochester	567	55	RI. Providence	242	-124
CA. Fresno	17	-71	MS. St. Cloud	642	78	SC. Charleston	65	-11
CA. Los Angeles	1	-54	MS. Jackson	145	47	SC. Columbia	95	-28
CA. Redding	50	-29	MS. Meridian	121	3	SC. Greenville	131	-31
CA. Stockton		-76	MO. Columbia	311	36	SD. Aberdeen	586	50
CA. San Diego	3	-29	MO. Kansas City	278	20	SD. Huron	543	38
CA. San Francisco	77	-71	MO. St. Louis	250	-8	SD. Rapid City	514	32
CO. Denver	388	-26	MO. Springfield	291	49	SD. Sioux Falls	527	38
CO. Pueblo	360	14	MT. Billings	500	13	TN. Chattanooga	154	-36
CO. Bridgeport	208	-77	MT. Glasgow	605	22	TN. Knoxville	182	-19
CO. Hartford	276	-115	MT. Great Falls	583	47	TN. Memphis	182	45
DC. Washington	153	-44	MT. Havre	629	37	TN. Nashville	195	2
FL. Apalachicola	32	8	MT. Helena	604	-13	TX. Abilene	104	13
FL. Jacksonville	29	8	MT. Kalispell	733	35	TX. Amarillo	234	19
FL. Key West	0	0	MT. Miles City	510	-5	TX. Austin	44	7
FL. Miami	0	0	MT. Missoula	682	34	TX. Beaumont	67	34
FL. Orlando	6	6	NE. Grand Island	360	-17	TX. Brownsville	3	3
FL. W. Palm Beach	2	-2	NE. Lincoln	319	-34	TX. Corpus Christi	15	4
FL. Tallahassee	58	20	NE. Norfolk	425	8	TX. Del Rio	36	9
FL. Tampa	7	7	NE. North Platte	457	-6	TX. El Paso	88	-8
GA. Atlanta	109	-21	NE. Omaha	334	-32	TX. Fort Worth	100	44
GA. Augusta	93	-14	NE. Valentine	501	15	TX. Galveston	19	9
GA. Macon	96	10	NV. Ely	521	-68	TX. Houston	61	25
GA. Savannah	55	-3	NV. Las Vegas	23	-40	TX. Lubbock	138	-19
ID. Boise	430	24	NV. Reno	313	-143	TX. Midland	101	7
ID. Lewiston	371	-38	NV. Winnemucca	468	-37	TX. San Angelo	124	49
ID. Pocatello	526	2	NH. Concord	409	-112	TX. San Antonio	50	9
IL. Chicago	425	57	NJ. Atlantic City	240	-58	TX. Victoria	32	12
IL. Moline	422	52	NM. Albuquerque	202	-40	TX. Waco	90	44
IL. Peoria	409	48	NY. Albany	388	-62	TX. Wichita Falls	120	15
IL. Rockford	475	63	NY. Binghamton	415	-78	UT. Salt Lake City	347	-30
IL. Springfield	360	53	NY. Buffalo	395	-28	VT. Burlington	480	-50
IL. Fort Wayne	389	5	NY. New York	145	-101	VA. Lynchburg	206	-52
IL. Indianapolis	348	18	NY. Rochester	406	-6	VA. Norfolk	102	-44
IL. South Bend	408	32	NY. Syracuse	386	-39	VA. Richmond	146	-75
IA. Des Moines	394	37	NC. Asheville	229	-57	VA. Roanoke	200	-67
IA. Dubuque	490	44	NC. Charlotte	109	-57	WA. Quillayute	510	57
IA. Souix City	431	33	NC. Greensboro	161	-60	WA. Seattle-Tacoma	419	31
KS. Concordia	265	-12	NC. Hatteras	70	-6	WA. Spokane	610	71
KS. Dodge City	258	7	NC. Raleigh	124	-63	WA. Walla Walla		
KS. Goodland	347	-47	NC. Wilmington	77	-17	WA. Yakima	558	90
KS. Topeka	276	0	ND. Bismark	649	63	WV Beckley	320	-78
KS. Wichita	238	19	ND. Fargo	594	14	WV Charleston	230	-71
KY. Lexington	288	8	ND. Williston	626	9	WV Huntington	261	-32
KY. Louisville	229	-21	OH. Akron-Canton	352	-42	WI. Green Bay	547	32
LA. Baton Rouge	94	46	OH. Cincinnati	296	-20	WI. La Crosse	474	26
LA. Lake Charles	80	35	OH. Cleveland	350	-21	WI. Madison	511	63
LA. New Orleans	62	31	OH. Columbus	310	-45	WI. Milwaukee	418	-26
ME. Shreveport	126	50	OH. Dayton	359	17	WY Casper	570	18
ME. Caribou	623	-56	OH. Toledo	415	-4	WY Cheyenne	558	15
ME. Portland	388	-127	OH. Youngstown	357	-66	WY Lander	545	-19
						WY Sheridan	585	27

Based on 1951-80 normals.

## National Agricultural Summary

October 29-November 4, 1990

**HIGHLIGHTS:** Ideal harvest weather prevailed over most of the Nation with harvest in the **Eastern Corn Belt** progressing rapidly. Portions of the **Central and Southern Plains** received moisture beneficial to growing crops and pastures. Soil moisture was in short supply in the **Northern Plains** and **Northern Mountain** areas.

Winter wheat was 91 percent (%) planted and 79% emerged, both 1 percentage point above the 5-year average. Corn harvest advanced 15 points to 79%, 1 point below normal. Soybean harvest was 84% complete, 4 points ahead of normal. Sixty-four percent of the cotton was harvested, 8 points ahead of normal. Sorghum harvest was 89% complete, 11 points ahead of normal.

**SMALL GRAINS:** Winter wheat was mostly good to fair with 91% of the crop planted and 79% emerged, both 1 point above normal. Planting was complete in Colorado, Montana, Nebraska, and South Dakota. Planting progressed 20 or more points in Arkansas, Illinois, and Ohio. Illinois had 48% of the crop emerged, 30 points below normal. Rain in the Central and Southern Plains benefited planted and emerged wheat fields. Wheat seeding in Arkansas was delayed due to late soybean harvest.

**CORN:** Corn harvest advanced 15 points to 79%, 1 point below normal. Harvest was complete in Georgia and Texas. Harvest advanced over 20 points in Colorado, Indiana, Minnesota, and Ohio. Kentucky and Michigan harvests were over 20 points below normal. Pennsylvania had 30% harvested, 19 points below normal. Corn harvest in western and southwestern Nebraska slowed due to harvest of other crops.

**SOYBEANS:** Soybean harvest was 84% complete, 4 points ahead of normal. Harvest was complete in Iowa, Nebraska, and South Dakota. Harvest advanced 30 points from last week in Michigan and Ohio. Kansas harvest was 96% complete, 26 points ahead of normal. Georgia, North Carolina, South Carolina, and Tennessee were less than 50% harvested. Soybean yields of early varieties in the Blacklands of Texas were lower than first expected, while late variety yields in the upper coast were fair to good.

**COTTON:** Cotton harvest was 64% complete, 8 points ahead of normal. Harvest progress was equal to or above average in all major producing States. California harvest advanced 20 points from last week. Texas yields were fair to excellent, with grades lower than expected. Harvest was active statewide. Producers in the Texas High Plains are waiting for a hard freeze to avoid use of defoliants.

**SORGHUM:** Sorghum harvest was 89% complete, 11 points ahead of normal. Harvest advanced 30 or more points in Illinois and Oklahoma. Colorado harvest at 46%, lagged 16 points behind normal. South Dakota was 100% harvested, 15 points ahead of normal. Texas and Kansas sorghum harvest neared

completion in many areas. Texas producers are waiting for a frost to complete harvest.

**OTHER FIELD CROPS:** Mississippi sweetpotatoes were 96% harvested, 8 points ahead of normal. Louisiana sugarcane was 100 percent planted, with mostly good to fair conditions. Sweetpotato harvest was 85% complete, 4 points below normal. Florida sugarcane harvest was active with all mills open. Pennsylvania had the fourth cutting of alfalfa hay, 74% complete with fair to good quality. Tennessee burley tobacco was 50% stripped, 3 points ahead of normal. Colorado sugarbeet harvest was 93% complete. North Dakota sunflowers were 99% harvested, 11 points above normal.

**FRUIT AND NUTS:** Texas pecan harvest was 14% complete, 9 points below normal. Louisiana pecan harvest was 24% complete, 4 points above average with mostly poor quality. Mississippi pecan harvest was 13% complete, 2 points below normal with poor to very poor quality. Oklahoma pecan harvest was 70% complete, 15 points ahead of normal. Virtually all the California raisin crop was picked and boxed. California kiwi fruit packing continued, with excellent quality and smaller size. Orange harvest continued with smaller size mandarin than expected. Early fruit harvest in Florida was advanced, with several processing plants open. New York apple harvest was nearly complete. Pennsylvania grape harvest was 100% complete, 6 points ahead of normal.

**VEGETABLES:** Arizona cantaloupe, green onion, mixed greens, cabbage, and kale harvests were complete. Texas green pepper yields lower than normal. California celery supplies seasonally heavy with variable quality. Lettuce harvest at peak in San Joaquin Valley with variable to good quality. Few New York late-season vegetables remained for harvest. Vegetable harvest neared completion in the west.

**PASTURES AND LIVESTOCK:** Pasture and range were in mostly good to fair condition. Livestock was in mostly good condition in all States. California and North Dakota range and pasture conditions were poor to very poor statewide. Kansas increased movement of cattle to wheat pastures.

GRAIN SORGHUM  
% HARVESTED

	1990	1989	AVG.
AR	96	99	99
CO	46	59	62
IL	58	85	85
KS	97	75	70
LA	99	100	100
MS	99	97	99
MO	81	90	83
NE	97	93	87
NM	55	NA	NA
OK	50	45	45
SD	100	100	85
TX	85	85	82

12 STATES 88 NA NA

EXCL. STATES WITH NA 89 82 78

THESE 12 STATES PRODUCED 98% OF THE 1989 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

COTTON  
% HARVESTED

	1990	1989	AVG.
AL	95	69	82
AZ	74	54	56
AR	87	73	85
CA	70	75	70
GA	84	59	68
LA	98	92	92
MS	93	73	86
MO	90	88	89
NM	33	40	32
NC	72	49	53
OK	35	10	20
SC	83	57	70
TN	86	78	86
TX	38	35	28

14 STATES 64 55 56

THESE 14 STATES PRODUCED 99% OF THE 1989 COTTON CROP.

WINTER WHEAT

% PLANTED

	1990	1989	AVG.
AR	44	69	61
CA	25	30	34
CO	100	100	100
GA	13	12	24
ID	98	100	98
IL	94	98	94
IN	87	91	92
KS	99	99	95
MI	95	100	90
MO	79	89	75
MT	100	100	100
NE	100	100	100
NC	35	35	41
OH	80	90	92
OK	96	97	90
OR	97	95	87
SD	100	100	100
TX	88	90	88
WA	99	99	98

19 STATES 91 93 90

THESE 19 STATES PRODUCED 91% OF THE 1990 WINTER WHEAT CROP.

Crop Progress

FOR WEEK ENDING NOVEMBER 4, 1990

CORN  
% HARVESTED

	1990	1989	AVG.
CO	59	71	72
GA	100	99	99
IL	79	95	91
IN	60	69	78
IA	92	97	82
KS	97	90	90
KY	73	86	94
MI	35	75	55
MN	87	98	80
MO	90	93	86
NE	90	90	77
NC	95	92	93
OH	49	43	62
PA	30	38	49
SD	93	94	73
TX	100	99	99
WI	46	74	65

17 STATES 79 87 80

THESE 17 STATES PRODUCED 95% OF THE 1989 CORN CROP.

SOYBEANS  
% HARVESTED

	1990	1989	AVG.
AL	66	55	55
AR	51	62	56
GA	42	32	43
IL	96	98	95
IN	88	88	90
IA	100	100	95
KS	96	85	70
KY	56	65	60
LA	86	90	69
MI	85	95	70
MN	99	99	96
MS	61	65	56
MO	82	88	72
NE	100	98	93
NC	24	22	20
OH	86	82	88
SC	22	15	19
SD	100	100	92
TN	42	68	61

19 STATES 84 85 80

THESE 19 STATES PRODUCED 95% OF THE 1989 SOYBEAN CROP.

Crop Condition  
PERCENT

FOR WEEK ENDING NOVEMBER 4, 1990

WINTER WHEAT

% EMERGED

	1990	1989	AVG.
AR	29	47	42
CA	5	10	9
CO	96	97	96
GA	9	7	15
ID	85	87	83
IL	48	83	78
IN	58	73	76
KS	95	90	85
MI	80	95	75
MO	53	74	61
MT	90	90	87
NE	100	100	100
NC	25	27	NA
OH	50	70	71
OK	75	80	70
OR	85	80	66
SD	100	97	100
TX	70	70	77
WA	93	94	87

19 STATES 78 81 NA

EXCL. STATES

WITH NA 79 82 78

THESE 19 STATES PRODUCED 91% OF THE 1990 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

WINTER WHEAT

STATE	VP	P	F	G	EX
AR	0	1	33	65	1
CA	0	0	10	85	5
CO	0	3	19	64	14
GA	0	8	51	41	0
ID	0	3	25	57	15
IL	0	0	30	67	3
IN	1	4	40	55	0
KS	0	0	26	54	20
MI	2	3	25	50	20
MO	0	3	60	36	1
MP	5	20	40	30	5
NE	0	9	39	52	0
NC	0	2	30	67	1
OH	0	2	31	56	11
OK	0	0	10	85	5
OR	0	0	53	46	1
SD	0	6	46	43	5
TX	0	4	52	41	3
WA	0	5	55	40	0
19 STATE	0	3	33	56	8
PREV WEEK	0	4	24	58	14
PREV YEAR	0	6	31	54	9

NA - NOT AVAILABLE 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:** No rain most areas; under 0.25 in. northwest. Temperatures 4 to 7° above normal.

Days suitable for fieldwork 6.6. Soil moisture 25% very short, 59% short, 16% adequate. Dry weather provided excellent conditions for row crop harvest; continued lack of moisture major problem many areas. Sorghum 99% harvested, 93% 1989, 92% avg. Cotton 95% harvested, 69% 1989, 82% avg. Soybeans 97% dropping leaves, 96% 1989, 95% avg.; 92% mature, 90% 1989, 87% avg.; 66% harvested, 55% 1989, 55% avg.; 25% very poor, 27% poor, 36% fair, 12% good. Winter wheat 43% seeded, 59% 1989, 51% avg. Pastures 25% very poor, 34% poor, 30% fair, 11% good. Livestock 10% poor, 64% fair, 26% good. Primary activities: Harvesting cotton, sorghum, soybeans, fall vegetables, pecans; destroying cotton stalks; overseeding, fertilizing pastures, hay fields; preparing land, seeding winter annuals; repairing fences; trimming Christmas trees; the routine care of livestock, poultry, catfish.

**ARIZONA:** Unseasonably warm, sunny through 30th; increased cloudiness, lower temperatures 31st through 3rd; scattered showers, thunderstorms 1st, 2nd, snow higher elevations; clear, cold 4th, morning temperatures teens to 20s mountains, 30s to 40s deserts. Temperatures 2 to 7° above normal. Precipitation none extreme west, southwest to 1.50 in. east central.

Cotton 74% harvested, 54% 1989, 56% avg.; defoliation light central, east; moderate to active elsewhere. Alfalfa harvest continued moderate to active; harvest neared completion; sheep moved on fields central, west. Lemon, grapefruit, navels, tangerines harvested west, central. Asparagus harvest continued west; mixed melon harvest continued west, central. Cantaloupe harvest completed central; fall lettuce harvest underway central; other crops harvested included green onions, mixed greens, cabbage, kale. Apple, fall lettuce harvested east. Cattle, calves fair to good; soil moisture short north, short to adequate central, south central, adequate east; ranges providing average feed supplies; sheep, lambs fair to good; insect damage mostly light to moderate.

**ARKANSAS:** Above normal temperatures, clear skies made ideal farming conditions. Scattered showers at weekend. Extremes 27°; 86°. Rainfall none to 0.16 in.

Days suitable for fieldwork 7.0. Soil moisture 26% short, 74% adequate. Main activities: Soybean, grain sorghum, rice, cotton harvest; bush hogging, disking cotton stalks, rice stubble; planting winter forages; conducting winter pasture management practices; baling hay; working cattle. Rice: 97% harvested, 100% 1989, 99% avg.; 86% fair, 14% good. Cotton: 87% harvested, 73% 1989, 85% avg.; 6% poor, 26% fair, 54% good, 14% excellent. Sorghum: 96% harvested, 99% 1989, 99% avg.; 90% fair, 10% good. Soybeans 51% harvested, 62% 1989, 56% avg.; 84% mature, 85% 1989, 80% avg.; 96% shedding, 95% 1989, 90% avg.; 13% poor, 70% fair, 17% good. Wheat 44% planted, 69% 1989, 61% avg.; 29% emerged, 47% 1989, 42% avg.; 1% poor, 33% fair, 65% good, 1% excellent. Oats 70% planted, 82% 1989, 65% avg. Pecan prospects poorest in years. Harvest scheduled to start soon. Pasture 5% poor, 79% fair, 6% good. Livestock good. Milling quality of late rice decreased. Wheat seeding delayed due to late soybean harvest.

**CALIFORNIA:** Weak frontal systems brought light rain to northern, central areas, the Sierra mountains. Light rains in southern areas were the remnants of Hurricane Trudy. Temperatures cooled to nearly normal, strong north winds blew.

Field activities progressed, despite light rain. Rice harvest winding down; stubble burning continued, favorable conditions. Cotton harvest active; shredding, disking following harvest. Some pre-irrigation next years crop. Corn, dry bean, sugarbeet harvests continued. Small grain seeding slowed, dry conditions. Alfalfa harvest normal progress. Granny Smith, Fuji apple harvest continued. Date, zutano avocado harvest progressed. Virtually all of the raisin crop picked up, boxed. Packing table grapes continued. Fumigating, weed control, treating vineyards for nematodes active. Packing Wonderful pomegranates progressed. Kiwifruit packing continued; excellent quality, smaller sizes. Persimmon harvest progressed. Walnut harvest winding down; pecan harvest started. Olive harvest progressed. Old crop valencia oranges harvested at low volume. Harvesting new crop navel oranges at slow pace. Satsuma mandarin harvest continued; smaller sizes. Packing desert lemons, grapefruit continued. Broccoli harvest, moderate, Salinas, Santa Maria, variable quality. Packing continued, westside area, while desert area crop in good condition. Cauliflower movement fairly light Salinas area, light Santa Maria area, variable quality. Harvest started Merced area, continued Modesto area. Celery supplies seasonally heavy Salinas area, moderate Santa Maria area, variable quality. Sweet corn harvest continued Kern Tulare area. Lettuce harvest at peak central San Joaquin Valley area, variable to good quality. Planting continued desert areas. Melon harvest continued Imperial Valley area. Onions for dehydration continued to be dug, westside area. Pepper harvesting on going, Delta area. Tomatoes for fresh market, Delta, westside areas being packed, processing tomato harvest moved toward completion. Livestock on supplemental feed, good condition. Range conditions poor to very poor statewide. North coast exception, condition fair. State received some rain this past week, adequate for long term range improvement.

**COLORADO:** Unseasonably warm, dry through 1st with colder weather, snow across the State on 2nd, 3rd. Snow accumulations 3 to 7 in. with generally less than 0.25 in. of moisture. Temperatures 7 to 14° above normal statewide.

Days suitable for fieldwork 5.6. Soil moisture 1% very short, 35% short, 63% adequate, 1% surplus. Grain corn, grain sorghum, sugarbeet harvests major field activities. Moisture content of grain slowing corn and sorghum harvests, now 59%, 46% complete, respectively. Sugarbeet harvest nearing completion at 93%. Winter wheat mostly good to excellent. Pasture, range feed condition 3% very poor, 11% poor, 36% fair, 44% good, 6% excellent. Livestock mostly good to excellent.

**FLORIDA:** No rain across northwestern State. Scattered showers confined mainly to eastern half Peninsula late week; totals mostly 0.50 in. or less. Temperatures 1 to 3° above normal; warmest readings low, mid 80s, few upper 80s, Peninsula. Coolest temperatures upper 30s to mid 40s

Panhandle, Big Bend, 50s remainder of north, central, interior south; mid 60s lower southeast coast.

Soil moisture Panhandle, northern Peninsula mostly short, elsewhere mostly adequate, becoming short, especially some higher, well drained areas. Soybean harvest active. Cotton harvest winding down. Sugarcane harvest active, all mills open. Planting small grains, sugarcane active. Pastures 5% very poor, 25% poor, 20% fair, 50% good. Cattle fair to good north; good, south. Citrus groves good. Rain needed, irrigation continued. New growth slowing. Early fruit well matured; harvest advanced, several processing plants open. Caretakers cutting cover crops, few spot sprays. Cool nights, warm days prevailed over vegetable producing areas. Rainfall continued limited. Fall crop supplies continued seasonal increase. Volume leaders: cucumbers, tomatoes, squash, peppers, sweet corn, eggplant, snap beans. First celery cut.

**GEORGIA:** Temperatures 1 to 4° above normal. Extreme highs upper 70s north, low 80s central, south. Coolest lows upper 20s colder mountain locations, mid 30s central, mid 40s extreme south, southeast. No significant rain.

Days suitable for fieldwork 6.2. Soil moisture 7% very short, 37% short, 53% adequate, 3% surplus. Cotton 12% very poor, 27% poor, 40% fair, 21% good; Dry week, harvest active. Sorghum 4% very poor, 29% poor, 54% fair, 13% good; 89% harvested for grain, 85% 1989, 83% avg. Peanuts 99% dug, 100% 1989, 99% avg. 98% threshed, 100% 1989, 96% avg. Soybeans 39% very poor, 38% poor, 19% fair, 4% good; Harvest very active. Rye 13% poor, 49% fair, 38% good; 72% planted, 76% 1989, 66% avg. Other small grains 46% planted, 50% 1989, 48% avg. Apples 99% harvested, 92% 1989, 98% avg. Pecans 4% very poor, 29% poor, 58% fair, 9% good; 27% harvested, 31% 1989, 26% avg. Pasture 2% very poor, 18% poor, 42% fair, 38% good. Cattle, hogs fair to mostly good. Main activities: Fall land preparation, planting of small grains.

**HAWAII:** Variable weather returned to islands. Warm, sunny days with scattered showers becoming heavy at times. Winds variable 5 to 25 mph with temperatures high 60s to upper 80s. Rainfall none to 8.20 in.

Days suitable for farm work 7.0. Papaya production on slight upswing. Sugar, pineapple harvest continuous.

**IDAHO:** Generally above normal temperatures statewide. Above normal precipitation north, below normal remainder of State.

Soil moisture varied across State. Adequate amounts north; very short south central, east. Activities: Fall plowing, ripping, marketing grain, repairing equipment. Winter wheat planting nearly complete; condition mostly good. Hay, roughage supplies adequate. Cattle moved off rangeland. Livestock in good to excellent condition.

**ILLINOIS:** Temperatures 8 to 12° above normal. Precipitation 1.00 to 2.25 in. north, central; less than 0.75 in. south.

Days suitable for fieldwork 7.00. Soil moisture 15% short, 85% adequate. Open weather advanced harvest. Livestock roughage requirements from pasture 60%, 52% 1989, 53% avg. Pasture 2% poor, 29% fair, 66% good, 3% excellent.

**INDIANA:** Temperatures 8 to 13° above normal. Lows upper 30s to upper 40s, highs upper 60s to mid 70s. Precipitation none to 1.80.

Days suitable for fieldwork 6.8. Topsoil 2% short, 94% adequate, 4% surplus. Subsoil 1% short, 88% adequate, 11% surplus. Spring cropland 28%

tilled, 30% 1989, 29% avg. Corn 21% moisture content, soybeans 12.6% moisture content. Apples 95% harvested. Pasture 2% very poor, 8% poor, 34% fair, 50% good, 6% excellent. Corn, soybean harvest advanced rapidly. Ideal conditions for field activities.

**IOWA:** Temperatures 6 to 11° above normal. Extremes 16°; 81°. Precipitation 0.20 to 1.82 in.; average 0.84 in.

Days suitable for fieldwork 6.8. Topsoil 44% short, 56% adequate. Subsoil 21% short, 79% adequate. Pasture 12% poor, 36% fair, 51% good, 1% excellent. 1991 row crop acreage 37% tilled, 41% 1989, 35% avg. 1991 row crop acreage 31% fertilizer applied, 33% 1989, 27% avg. Fertilizer supplies 93% adequate, 7% surplus. Livestock mostly good. Movement of cattle to stalk, stubble fields on the increase. Respiratory problems noted in some livestock.

**KANSAS:** Temperatures 7 to 11° above normal across State. No precipitation.

Days suitable for fieldwork 6.0. Surface moisture 89% short, 11% adequate. Subsurface moisture 66% short, 34% adequate. Wheat seeding nearly complete except few fields eastern districts. Recent moisture will help remaining fields germinate. Corn, sorghum, soybean harvest nearing completion. Range, pastures providing adequate grazing except few areas. Corn, sorghum stubble grazing continues. Movement livestock to wheat pastures increasing.

**KENTUCKY:** High temperatures unseasonably warm averaging low to mid 70s, 10° above normal. Low temperatures near normal, mid 30s east to around 40° west, central. High temperature 84° Buckhorn Lake, lowest 24° Grayson. No precipitation.

Days suitable for fieldwork 5.8. Soil moisture 8% short, 88% adequate, 4% surplus. Soybean harvest made rapid progress. Late bean yields generally good. Corn drying down, harvest steady. Moisture needed to bring tobacco into proper case for stripping. Burley 25% stripped, 24% 1989, 26% avg. Houseburn below average to average, quality mostly good. Wheat 67% seeded, 77% 1989, 73% avg. Condition of stands mostly good to fair. Pasture condition 1% poor, 10% fair, 76% good, 13% excellent.

**LOUISIANA:** Temperatures 1.2° below normal to .4° above normal. Extremes 33°; 84°. Rainfall none to 0.17 in.

Days suitable for fieldwork 6.6. Soil moisture 49% short, 41% adequate. Cotton harvested 98%, 92% 1989, 92% avg. Hay final cutting 98%, 100% 1989, 99% avg. Pecans harvested 24%, 28% 1989, 20% avg.; 31% very poor, 38% poor, 31% fair. Sorghum harvested 99%, 100% 1989, 100% avg. Soybeans shedding leaves 96%, 100% 1989, 97% avg.; harvested 86%, 90% 1989, 69% avg. Sugarcane planted 100%, 100% 1989, 98% avg.; harvested 11%, 36% 1989, 31% avg.; 13% poor, 49% fair, 38% good. Sweetpotatoes harvested 85%, 86% 1989, 89% avg. Wheat planted 26%, 40% 1989, 30% avg.; emerged 14%, 17% 1989, 17% avg.; 67% fair, 33% good. Livestock 3% poor, 36% fair, 61% good. Pasture 8% very poor, 25% poor, 52% fair, 15% good. Vegetable 3% very poor, 10% poor, 52% fair, 35% good.

**MARYLAND & DELAWARE:** **MARYLAND:** Precipitation none. Temperature 51°, normal 52°. Extremes 21°; 79°.

Days suitable for fieldwork 6.1. Topsoil 10% short, 85% adequate, 5% surplus. Subsoil 10% short, 85% adequate, 5% surplus. Corn good; grain 86% harvested, 77% 1989, 86% avg. Soybeans good; 54% harvested, 50% 1989, 51% avg. Small grains good. Wheat 72% seeded, 77% 1989, 77% avg. Oats 48% seeded, 25% 1989, 72% avg. Barley 93% seeded, 92%

1989, 93% avg. Rye 90% seeded, 77% 1989, 85% avg. Hay supplies adequate. Alfalfa hay fourth cut 96% complete, 80% 1989, 91% avg. Other hay third cut 94% complete, 77% 1989, NA% avg. Pasture good.  
**DELAWARE:** Precipitation none. Temperature 51°, normal 53°. Extremes 29°; 81°.

Days suitable for fieldwork 6.7. Topsoil 29% short, 71% adequate. Subsoil 43% short, 57% adequate. Corn good; grain 97% harvested, 95% 1989, 95% avg. Soybeans good; 69% harvested, 37% 1989, 48% avg. Small grains good. Wheat 68% seeded, 66% 1989, 64% avg. Barley 94% seeded, 81% 1989, 89% avg. Rye 88% seeded, 87% 1989, 78% avg. Hay supplies adequate. Pasture fair to good.

**MICHIGAN:** Temperatures 1 to 5° above normal. Extremes 18°; 76°. Precipitation none to 0.58 in. across State.

Days suitable for fieldwork 6.5. Soil moisture 15% adequate, 85% surplus. Corn 35% harvested, 75% 1989, 55% avg.; soybeans, 85% harvested, 95% 1989, 70% avg.; winter wheat 95% seeded, 100% 1989, 90% avg.; 80% emerged, 95% 1989, 75% avg.; 2% very poor, 3% poor, 25% fair, 50% good, 20% excellent. Major activities: Harvesting soybeans, corn, sugarbeets, drybeans, planting winter wheat, fall tillage.

**MINNESOTA:** Temperatures 5 to 7° above normal. Extremes 12°; 79°. Precipitation none to 0.20 in., greatest weekly total 0.35 in.

Days suitable for fieldwork 6.2. Topsoil 15% very short, 25% short, 58% adequate, 2% surplus. Corn 87% combined, 98% 1989, 80% avg. Field corn 66% plowed, tilled, 71% 1989, 55% avg. Soybeans 66% plowed, tilled, 73% 1989, 64% avg. Corn 20% moisture, 16% 1989, 19% avg.

**MISSISSIPPI:** Temperatures normal at 59°. Extremes 27°; 86°. Dry statewide. Rainfall none, 0.72 in. below normal. Soil temperatures 61°.

Days suitable for fieldwork 6.6, 6.2 1989, 4.6 avg. Soil moisture 37% very short, 31% short, 32% adequate. Cotton 93% harvested, 73% 1989, 86% avg.; 8% very poor, 1% poor, 49% fair, 29% good, 13% excellent. Corn 99% harvested, 93% 1989, 96% avg.; 5% poor, 19% fair, 70% good, 6% excellent. Rice 97% harvested, 98% 1989, 99% avg.; 22% poor, 22% fair, 38% good, 18% excellent. Soybeans 99% shedding leaves, 100% 1989, 100% avg.; 61% harvested, 65% 1989, 56% avg.; 14% very poor, 37% poor, 27% fair, 20% good, 2% excellent. Sorghum 99% harvested, 97% 1989, 99% avg.; 13% poor, 23% fair, 64% good. Hay 99% harvested, 99% 1989, 98% avg. Peanuts 99% harvested, 97% 1989, 98% avg. Sweetpotatoes 96% harvested, 79% 1989, 88% avg. Pecans 13% harvested, 9% 1989, 15% avg.; 49% very poor, 31% poor, 10% fair, 10% good. Wheat 55% planted, 62% 1989, 45% avg.; 34% emerged, 42% 1989, 11% poor, 63% fair, 26% good. Pasture, livestock fair to good.

**MISSOURI:** Temperatures normal over southeast district, 11° above normal elsewhere. Dry until late week when northwest received about 1.00 in.

Days suitable for fieldwork 6.6. Topsoil 59% short, 41% adequate. Northern, western districts mostly short. East central, southern third mostly adequate. Subsoil moisture 33% short, 67% adequate. Corn harvest ranges 79% east central, south central to 96% southeast. Soybeans nearly all mature northern two thirds. Southern third 85% to 90% mature. Soybeans harvested 44% southwest, 63% south central, southeast, ranges 74% to 94% elsewhere. Sorghum harvested least advanced southwest 44%, most advanced southeast 93%, ranges 64% to 88% elsewhere. Winter wheat seeded ranges 67% southeast to 87% north central. Winter wheat emerged ranges 48% north central to 65% south central. Pasture 12% poor, 57% fair, 30% good, 1%

excellent. Ground worked at least once for spring crops 34%, 36% 1989, 35% avg.

**MONTANA:** Temperatures 2 to 8° above normal. Precipitation locally heavy near mountains, southern areas, light over the plains.

Topsoil 60% short, 40% adequate. Subsoil 75% short, 25% adequate. All crop harvesting virtually complete. Crop, hay stubble providing livestock grazing.

**NEBRASKA:** Temperatures 1° above normal northwest up to 9° above normal east central. Extremes 8°; 84°. Precipitation occurred last two days of period, amounts averaging around a half inch.

Days suitable for fieldwork 7.0. Topsoil 89% short, 11% adequate. Subsoil 85% short, 15% adequate. High winds caused some field losses to corn, Panhandle. Corn harvest least advanced west, southwest, due to harvesting other crops. Sugarbeet harvest nearly complete, will allow corn harvest to go full swing. High drying costs delaying corn harvest somewhat, growers allowing crop to dry down in field. Sorghum harvest lagging north, southwest. Winter wheat growth, development slowed by dry conditions. Many fields have spotty stands, showing stress. Southeastern operators report fall seeded alfalfa fields lost due to heat, drought conditions. Many doing fall tillage operations, applying fertilizer after finishing harvest. Pasture, range 13% very poor, 39% poor, 34% fair, 14% good. Most cattle in harvested fields, dry lots. Calves being weaned, beginning to move to market.

**NEVADA:** Week began under strong high pressure with dry conditions, temperatures well above normal. Low pressure trough following brought scattered, mostly light precipitation. Cooler air brought snow to higher elevations. Extremes 1°; 91°.

Fifth, sixth cutting alfalfa hay about completed extreme south. Most garlic, winter wheat, barley planted for 1991 harvest where irrigation water available. Hard frosts reminder growing season about ended. Ranchers farmers preparing for usual winter chores.

**NEW ENGLAND:** Precipitation 0.10 to 1.20 in. Maine, none to 0.30 in. elsewhere. Temperatures mid 30s northern Maine, normal; elsewhere mid 40s to low 50s, 5° above normal.

Maine potato harvest over 90% complete. Major farm activities: Potato harvest, spreading manure, plowing fields, cutting fire wood, general repairs.

**NEW JERSEY:** Temperatures much above normal 51° south, 54° north, 56° coastal. Extremes 25°; 82°. Precipitation below normal none north, south, coastal. Heavy frost killed tender fall crops. Temperatures hit record highs weekend.

Soil moisture adequate. Hardy vegetable crop harvest continued. Soybean, corn for grain harvest active. Early seeded grain, cover crop germination, growth good. Limited pasture growth continued. Soil preparation, seeding of grains, cover crops continued following crop harvest.

**NEW MEXICO:** Temperatures above normal, dropping sharply over weekend. Snow in higher elevations, northeastern plains on 3rd.

Days suitable for fieldwork 6.6. Soil moisture 60% short, 40% adequate. Peanut harvest finishing, good yields reported. Cattle fair to excellent, sheep fair to good. Range 11% poor, 64% fair, 25% good.

**NEW YORK:** Seasonable weather, light rain early week. Temperatures climbed to above normal by mid week. By weekend temperatures were 15 to 20° above

normal. Extremes 19°; 78°. Precipitation very light, none to about 0.50 in.

Apple harvest nearly complete. Growers picking up drops, cleaning orchards. Grain corn harvest continued active. Silage corn harvest virtually finished. Few late season vegetables remain for harvest.

**NORTH CAROLINA:** Temperatures above normal across the State. Extremes 24°; 82°. Precipitation none.

Days suitable for fieldwork 5.4. Soil moisture 11% short, 83% adequate, 6% surplus. Pasture 4% poor, 34% fair, 58% good, 4% excellent. Livestock feed from pasture 72%. Harvested: corn for grain 95%; sorghum 82%; sweetpotatoes 96%; cotton 72%; peanuts dug 98%; peanuts threshed 87%; soybeans 24%. Soybeans dropping leaves 97%; Wheat emerged 25%. Planted: wheat 35%; oats 60%; barley 62%; rye 58%. Crop condition: Cotton 3% poor, 35% fair, 55% good, 7% excellent; soybeans 10% poor, 65% fair, 24% good, 1% excellent; wheat 2% poor, 30% fair, 67% good, 1% excellent; oats 2% poor, 27% fair, 70% good, 1% excellent; rye 24% fair, 72% good, 4% excellent; barley 29% fair, 69% good, 2% excellent. Major activities: Harvesting corn, cotton, peanuts, soybeans; planting small grains; land preparation. Other activities included: Seeding pastures; harvesting sorghum and soybeans; hay harvest; cutting wood; cutting, tagging Christmas trees; tending livestock; general farm maintenance.

**NORTH DAKOTA:** Temperatures 5 to 7° above normal. Precipitation less than 0.10 in. northern, west central, none in. other districts.

Days suitable for fieldwork 7.0. Topsoil 56% very short, 42% short, 2% adequate. Subsoil 62% very short, 38% short. Corn for grain 98% harvested, 98% 1989, 88% avg. Sunflower 99% harvested, 100% 1989, 88% avg. Pastures 26% very poor, 49% poor, 23% fair, 2% good. Stockwater supplies 12% very short, 46% short, 42% adequate.

**OHIO:** High temperatures upper 60s to low 70s; 10 to 14° above normal. Lows in 40s; 3 to 11° above normal. Almost no rainfall except northwest 0.15 to 0.50 in. Soil temperature upper 50s.

Days suitable for fieldwork 6.9. Soil moisture 50% adequate, 50% surplus. A good week to harvest a lot of acreage, plant winter wheat. Harvested corn tested 22% moisture. Soybeans tested 13% moisture. Winter wheat good. Pastures good. New alfalfa seedings growing well. Sugarbeet harvest 72% complete. Tobacco stripping continued.

**OKLAHOMA:** Temperatures 2° above normal south central to 6° above normal northeast. Precipitation 0.90 in. southeast to 2.20 in. west central.

Days suitable for fieldwork 6.9. Topsoil 25% short, 75% adequate. Subsoil 10% short, 90% adequate. Wheat 10% fair, 85% good, 5% excellent; 96% planted, 97% 1989, 90% avg.; 75% emerged, 80% 1989, 70% avg. Cotton 96% open bolls, 80% 1989, 90% avg; 35% harvested, 10% 1989, 20% avg. Sorghum 50% harvested, 45% 1989, 45% avg. Soybeans 40% harvested, 60% 1989, 40% avg. Peanuts 70% harvested, 70% 1989, 55% avg. Pastures 60% fair, 40% good. Cattle good; marketings stable, prices up from preceding week.

**OREGON:** Temperatures near normal coast, slightly above normal western interior. Readings just above normal east of Cascades; except along south central boarder slightly below. Westside precipitation over 1.00 in. Portland to near 6.00 in. along south coast. East amounts under 1.00 in.; north central, northeast wettest with over 0.50 in.

Soil moisture 49% short, 45% adequate, 6% surplus. Winter wheat 53% fair, 46% good, 1%

excellent; 97% planted, 95% 1989, 87% avg.; 85% emerged, 80% 1989, 66% avg. Perennial rye grass planted neared completion Willamette Valley. Some weed control applied in grains. Recent rain improved fall grains most areas. Pruning, tying caneberries near completion west. Hazelnut harvest winding down; orchards, some lime applied. Vegetable harvest about finished west. Livestock good to excellent. Gathering, weaning, shipping continued eastern range country. Range pasture 30% poor, 53% fair, 17% good. Growth very slow, especially east where frost occurs nightly.

**PENNSYLVANIA:** Indian summer weather, warm, dry. Temperature 50°, 3° above normal. Extremes 22°; 80°. Precipitation 0.03 in, 0.65 in below normal.

Days suitable for fieldwork 6. Soil moisture 78% adequate, 22% surplus. Corn 89% mature, 88% 1989, 94% avg.; 30% harvested, 38% 1989, 49% avg. Ensilage corn 85% harvested, 92% 1989, 97% avg. Corn 1% very poor, 6% poor, 22% fair, 45% good, 26% excellent. Soybean harvest 34% complete, 40% 1989, 48% avg.; 4% poor, 23% fair, 49% good, 24% excellent. Potato harvest 95% complete, 99% 1989, 98% avg. Fall plowing 86% complete, 90% 1989, 95% avg. Winter wheat 90% planted, 94% 1989, 95% avg. Barley 97% planted, 100% 1989, 99% avg. Third cutting alfalfa 95% complete, 99% 1989. Fourth cutting alfalfa 74% complete, 77% 1989. Quality of hay made during week mostly fair to good. Quality of feed being obtained from pasture 5% very poor, 11% poor, 47% fair, 37% good. Apple harvest 92% complete, 94% 1989. Grapes harvest 100% complete, 94% 1989. Activities: Harvesting hay, haylage, potatoes, fruit, corn, corn silage, soybeans; fall plowing, planting; maintaining machinery; caring for livestock.

**PUERTO RICO:** Rainfall 1.31 in. was 0.34 in. below normal. Highest rainfall 5.53 in. at Rio Blanco lower, 4.63 in. at Paraiso, 4.48 in. at Pico Del Este Luquillo. Highest 24 hour total 2.40 in. at Paraiso. Divisional temperature 80 to 81° on the coasts, 74 to 79° interior with mean station temperatures 67° at Pico Del Este Luquillo to 83° at Roosevelt Roads N.S., San Juan WSFO. Extremes 62°; 94°.

**SOUTH CAROLINA:** Temperatures 51° mountains to 59° south. Precipitation less than normal; none received.

Days suitable for fieldwork 5.2. Soil moisture 11% short, 87% adequate, 2% surplus. Cotton 2% very poor, 25% poor, 70% fair, 3% good; 83% harvested, 57% 1989, 70% avg. Soybeans 7% very poor, 12% poor, 65% fair, 16% good; 83% shedding leaves, 86% 1989, 87% avg.; 76% matured, 74% 1989, 75% avg.; 22% harvested, 15% 1989, 19% avg. Sorghum fair to good, 79% harvested, 61% 1989, 69% avg. Tobacco 95% stalks destroyed, 89% 1989, 92% avg. Peanuts fair, 85% harvested, 88% 1989, 85% avg. Pastures 10% poor, 33% fair, 57% good.

**SOUTH DAKOTA:** Temperatures 5 to 15° above normal. Extremes 6°; 86°. Precipitation generally less than 0.05 in. Maximum 0.71 in. Snow south half of State, late in week. Snowfall 3.00 to 6.00 in. Black Hills, less elsewhere. Harvest season precipitation below normal except Black Hills and northeast. Range 2.11 in. below to 1.90 in. above normal.

Days suitable for fieldwork 5.9. Subsoil 25% critically short, 57% short, 18% adequate. Topsoil 17% critically short, 57% short, 26% adequate. Range, pasture 6% very poor, 15% poor, 39% fair, 36% good, 4% excellent. Winter wheat 6% poor, 46% fair, 43% good, 5% excellent. Winter rye mostly good. Most row crops harvested. Aphid damage minimal. Some wheat streak mosaic in winter wheat.

Major activities: Combining, fieldwork, moving cattle.

**TENNESSEE:** High pressure prevailed all week with clear skies. Temperatures normal over Cumberland Plateau, above normal elsewhere. No rainfall recorded statewide.

Days suitable for fieldwork 5.9. Soil moisture 10% short, 90% adequate. Corn 100% harvested for grain, 100% 1989, 100% avg. Cotton 86% harvested, 78% 1989, 86% avg. Sorghum 100% harvested, 100% 1989, 100% avg. Soybeans 100% shedding leaves, 100% 1989, 100% avg., 82% mature, 92% 1989, 94% avg. Burley tobacco 50% stripped, 48% 1989, 47% avg. Pastures 3% poor, 25% fair, 68% good, 4% excellent. Cattle 1% poor, 15% fair, 80% good, 4% excellent. Harvesting, plowing, seeding progressed well.

**TEXAS:** Mild, dry weather persisted throughout much week until upper storm in Rockies pushed cold front across State. System set off showers statewide, some snow Panhandle. Despite widespread showers weekend, amounts not heavy. Rainfall below normal across most State. However, normal amounts Trans Pecos, above normal amounts High Plains. Temperatures near or below normal almost all reporting stations. East above normal readings, because last area affected by colder air.

**Crops:** Grain sorghum harvest winding down many areas. Harvest continued Plains, many producers want hard freeze before continuing harvest. Cotton harvest full swing Plains. Producers would like hard freeze, they would not have to use harvest aids. Yields fair to excellent, grades are lower than expected. Harvest activities full swing Trans Pecos. Yields, grades promising. Small grain plantings winding down throughout State, some producers still planting Plains, coastal areas. Seeded fields emerging well fair to good stands, moisture needed to sustain growth. Soybean harvest continued across State. Early variety yields Blacklands slightly lower than first expected. Late variety yields Upper Coast fair to good. Peanut yields fair to good across State. Producers Plains some pod rot, affected little acreage. Harvest continued central to east. Grades levelling off, yields good. Some below normal grades. Harvest underway south, expect good yields. Other field crops: Peanuts 53% harvested, 45% 1989, 51% avg. Pecans 14% harvested, 16% 1989, 23% avg. Soybeans harvested 61%, 77% 1989, 60% avg. Sugarbeets 33% harvested, 42% 1989, 37% avg. Sunflowers harvested 47%, 42% 1989, 59% avg. Oats planted 60%, 77% 1989, 76% avg.

**Commercial Vegetables:** Rio Grande Valley, most fall vegetables doing well. Reported yields green peppers lower than normal. San Antonio Winter Garden, fall gardens full swing. Cabbage harvest continued. Eastern areas sweetpotato harvest virtually complete. Fall crops look good. High Plains, fall harvest virtually complete, few carrot fields still remain. Trans Pecos, red chile pepper harvest underway. Onion planting slowed. Pecan harvest continued State. Producers northern part State reported good yields, light quality. Crops expected good central well developed nuts. Some shell sprouting evident. Southern areas producers good quality crop, few insect, disease problems.

**Range and Livestock:** Pastures, livestock good condition across most State. Cool, dry nighttime winds, warm daytime temperatures hampered winter pasture growth, stressed moisture levels. Some haying operations continued, majority complete. Range, pasture 3% very poor, 8% poor, 45% fair, 34% good, 10% excellent.

**UTAH:** Temperatures 9° above normal. Precipitation light to moderate, except for Dixie which was almost zero.

Showers during the week helped improve poor soil moisture in some areas. Minimal field activity. Major farm activities included cleanup, equipment maintenance, planning for the coming year.

**VIRGINIA:** Dry, sunny with temperatures about 1° below normal. No precipitation. Extremes 19°; 81°.

Days suitable for fieldwork 5.4. Topsoil 5% short, 95% adequate. Corn for grain 83% harvested, 82% 1989, 81% avg. Soybeans 40% harvested, 36% 1989, 26% avg. Wheat 54% seeded, 54% 1989, 49% avg. Barley 87% seeded, 91% 1989, 86% avg. Oats 86% seeded, 85% 1989, 86% avg. Winter grain 2% poor, 37% fair, 57% good, 4% excellent. Pasture 2% poor, 36% fair, 48% good, 14% excellent. Livestock 19% fair, 70% good, 11% excellent. Forage from pastures, winter grazing crops dairy cattle 25%, beef cattle 88%, sheep 90%. Peanut harvest virtually completed. Preparing burley tobacco for market, preparing tobacco plantbeds. Taking soil samples.

**WASHINGTON:** Temperatures 1° above normal to 2° below normal, east; 2° above normal to 2° below normal, west. Precipitation none to 0.96 in. east, 0.54 in. to 1.92 in. west.

Days suitable for fieldwork 4.5. Soil moisture 35% short, 65% adequate. Range, pasture 30% poor, 25% fair, 45% good. Hay, other roughage 1% short, 97% adequate, 2% surplus. Winter wheat planted 99%, 99% 1989, 98% avg. Winter wheat emerged 93%, 94% 1989, 87% avg. Potatoes harvested 97%, 100% 1989, 96% avg. Corn grain harvested 50%, 34% 1989, 60% avg. Emerged wheat 5% poor, 55% fair, 40% good. Barley 5% poor, 75% fair, 20% good. Rains during the week improved soil moisture conditions in many areas of the State. The apple harvest was nearing completion, orchard, vineyard clean up activities were underway, including final fall mowing, herbicide applications. Raspberry growers were pruning, tying canes. The cranberry harvest was nearly complete. Most cattle have been moved down from mountain ranges calves were being weaned marketed. Some pasture was still available in western areas, many producers have begun to feed hay.

**WEST VIRGINIA:** Temperature 52°, 1 to 6° above normal. Extremes 20°; 80°. No precipitation.

Days suitable for fieldwork 6.0. Soil moisture 17% short, 83% adequate. Pasture 22% fair, 73% good, 5% excellent. Cattle, sheep good. Corn 3% fair, 97% good; 88% mature, 50% harvested. Hay 32% fair, 68% good; third cutting 89% complete. Wheat 89% planted. Farm activities: Hay, corn harvesting, livestock marketing, mending fences, wheat seeding, stripping tobacco.

**WISCONSIN:** Temperature 50°, 10° above normal. Extremes 18°; 75°. Precipitation 0.10 in. to 0.80 in.

Days suitable for fieldwork 5.9. Soil moisture 9% short, 76% adequate, 15% surplus. Soybeans 88% harvested, 93% 1989, 77% avg. Corn for grain 46% harvested, 74% 1989, 65% avg. Fall tillage 33% complete, 42% 1989, 45% avg. Hay, feed supplies look good in most areas; 2% short, 54% adequate, 44% surplus.

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

Corn harvest continues. Most dry beans, sugarbeets harvested. Winter wheat fair to good. Additional moisture needed for good development. Livestock fair to mostly good. Movement to winter pastures, markets continues.

## International Weather and Crop Summary

October 1990

## HIGHLIGHTS

October 28-November 3, 1990

**WESTERN USSR** ... Winter grains enter dormancy in the north at near-normal dates. Winter grains continue to add on vegetative growth in the Ukraine and North Caucasus.

**NORTHWESTERN AFRICA** ... Dry weather covers most winter grain areas. Thus far, rainfall has not been sufficient enough for widespread planting.

**EUROPE** ... Rain benefits winter crops in the north and east.

**EASTERN ASIA** ... Light to moderate rain causes further delays in late-crop rice harvest across southern China.

**SOUTH ASIA** ... Inundating rains cause local crop damage in southern India. Winter wheat planting progresses in the north.

**SOUTHEAST ASIA** ... Drier weather covers northern Thailand. Widespread showers continue over Malaysia and the Philippines.

**SOUTH AFRICA** ... Rain improves planting conditions in the eastern Maize Triangle.

**SOUTH AMERICA** ... Heavy rain floods Argentina's newly planted cotton. Showers benefit summer crop growth elsewhere in Argentina. More rain falls in south-central Brazil, where soybean planting has begun.

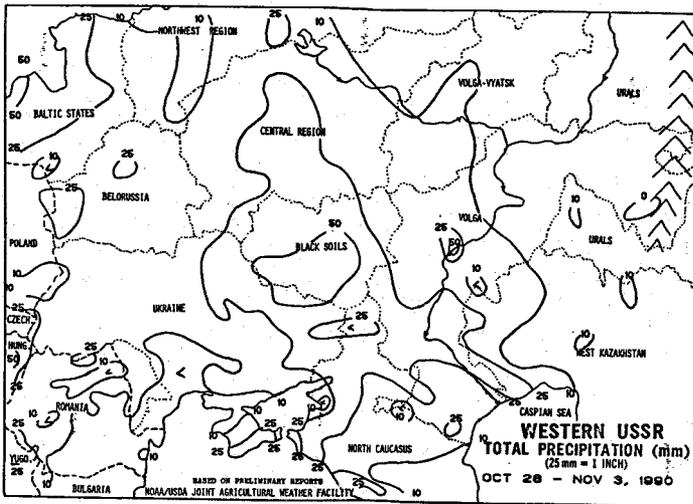
**AUSTRALIA** ... Hot and dry weather stresses winter grains in the southeast. Moderate to heavy rain favors winter crops in Western Australia.

**MEXICO** ... Tropical moisture helps emerging wheat in the northwest. Showers diminish in the Plateau corn belt.

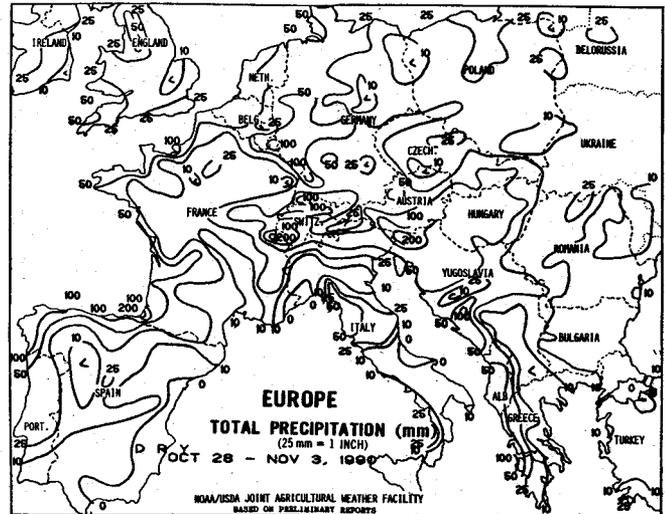
MONTHLY DATA FROM SELECTED FOREIGN CITIES  
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA  
\*\*\* = DATA NOT AVAILABLE

COUNTRY	CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
		AVG MAX	AVG MIN	HI	LO	AVG	DPART F/NRM	TOTAL	DPART F/NRM
NORWAY	OSLO	8	2	15	-8	5	0.5	62.1	-30.9
SWEDEN	STOCKHOLM	10	5	16	-4	7	-0.3	63.4	12.0
FINLND	HELSINKI	8	3	14	-6	6	0.0	78.8	12.5
U KING	GLASGOW	13	8	18	2	11	0.9	186.4	56.4
	EDINBURGH	13	8	18	1	11	1.0	126.2	68.9
	BIRMINGHAM	15	9	23	-1	12	2.1	69.2	17.5
	LONDON	16	9	23	0	13	1.9	83.2	21.5
IRELND	DUBLIN	14	10	18	3	12	1.0	147.4	79.1
ICELND	REYKJAVIK	7	3	11	-3	5	0.0	51.8	-43.4
DENMRK	COPENHAGEN	13	8	18	2	11	1.2	53.8	-5.1
LUXEMB	LUXEMBOURG	15	8	21	1	11	1.9	121.0	63.1
SWITZL	ZURICH	16	9	25	0	12	3.1	145.1	73.1
	GENEVA	16	9	22	2	13	2.8	128.4	56.6
FRANCE	PARIS	18	10	26	2	14	2.8	50.1	3.1
	STRASBOURG	17	8	25	-1	12	2.5	28.0	-10.2
	BOURGES	19	10	27	2	14	3.0	37.6	-20.5
	BORDEAUX	20	12	26	4	16	2.9	71.0	-11.2
	TOULOUSE	20	12	27	5	16	2.7	43.7	-6.4
	MARSEILLE	21	14	26	7	18	2.4	66.6	-17.4
SPAIN	VALLADOLID	18	10	25	5	14	1.2	40.6	-0.1
	MADRID	20	10	27	3	15	0.6	32.0	-21.3
	SEVILLE	25	15	32	11	20	0.5	97.8	29.5
E GRMY	LEIPZIG	16	7	25	-4	11	2.0	12.0	-31.2
	DRESDEN	15	8	24	-2	12	2.6	31.5	-20.5
W GRMY	HAMBURG	15	8	23	0	11	2.0	50.4	-7.8
	BERLIN	15	8	23	-1	11	1.6	11.4	-30.1
	DUSSELDORF	17	11	25	2	14	3.6	44.1	-8.0
	STUTTGART	16	6	24	-3	11	1.7	61.9	20.5
	NURNBERG	15	6	23	-1	11	2.2	43.4	-0.6
	MUNICH	16	6	24	-3	11	2.4	67.4	9.8
AUSTRI	VIENNA	15	6	26	-3	11	0.9	39.1	-10.9
	INNSBRUCK	18	7	26	0	13	3.8	74.2	14.1
CZECH	PRAGUE	14	4	22	-4	9	1.2	26.7	-10.9
POLAND	WARSAW	14	5	21	-4	9	1.2	13.9	-25.3
	LODZ	15	5	23	-7	10	1.9	25.3	-13.8
	KATOWICE	15	4	24	-7	9	1.4	25.3	-28.8
	PRZEMYSL	14	5	23	-4	10	1.0	27.9	-19.3
HUNGAR	BUDAPEST	16	7	23	-3	11	0.3	61.6	22.4
YUGOSL	SARAJEVO	19	7	27	-2	13	3.4	66.1	-63.9
ROMANI	BUCHAREST	19	4	31	-6	12	0.3	19.0	-10.7
BULGAR	SOFIA	18	7	28	-4	12	1.6	16.8	-10.0
ITALY	MILAN	18	11	26	4	15	2.1	154.1	40.4
	VERONA	19	11	26	0	15	1.8	128.6	54.4
	VENICE	19	12	24	3	15	1.7	236.3	158.2
	GENOA	21	16	26	10	18	0.6	245.3	73.3
	ROME	24	16	30	9	20	3.4	184.4	102.0
	NAPLES	24	16	31	9	20	4.1	178.1	55.3
GREECE	THESSALONIKA	21	12	28	4	16	0.2	39.3	-11.0
	LARISSA	23	10	31	3	17	0.4	32.3	-28.0
	ATHENS	24	16	29	12	20	0.3	19.0	-45.8
TURKEY	ISTANBUL	19	13	26	7	16	0.7	38.2	-25.8
	ANKARA	19	3	28	-4	11	-0.6	36.4	18.4
CYPRUS	LARNACA	28	17	32	13	23	1.0	1.0	-24.9
USSR	TALLINN	9	4	13	-4	6	0.0	87.2	28.7
	LENINGRAD	8	4	13	-4	6	0.6	48.8	-11.7
	KAUNAS	11	5	18	-2	8	0.9	75.8	27.4
	MINSK	11	4	20	-3	7	1.4	47.6	0.4
	KAZAN	5	1	12	-5	3	-0.5	70.9	27.7
	MOSCOW	8	3	17	-4	6	0.7	85.9	30.4
	SVERDLOVSK	4	-2	13	-14	1	0.0	60.5	23.8
	OMSK	6	-1	19	-16	3	1.1	42.0	12.0
	KUSTANAY	8	0	20	-8	4	1.3	36.0	10.3
	KRASNOYARSK	9	2	22	-12	5	4.2	34.9	0.4
	NOVOSIBIRSK	6	1	20	-14	4	2.8	48.9	18.4
	BARNAUL	8	1	23	-14	5	2.3	41.9	-3.2
	KHABAROVSK	13	2	19	-6	8	3.2	14.7	-27.8
	VLADIVOSTOK	14	8	21	1	11	3.0	41.1	-21.2
	KIEV	13	5	22	-4	9	1.2	22.0	-17.1
	LVOV	14	4	24	-7	9	1.3	45.9	-2.6
	KIROVOGRAD	14	4	26	-4	9	0.5	40.8	9.3

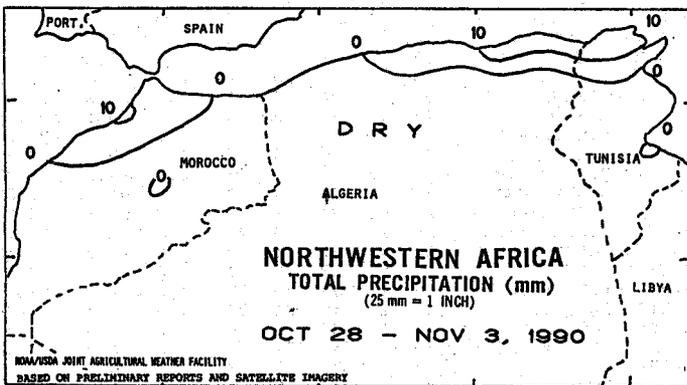
COUNTRY CITY		TEMPERATURE (C)					PRECIPITATION (MM)			COUNTRY CITY		TEMPERATURE (C)					PRECIPITATION (MM)		
October 1990		AVG	AVG	HI	LO	DPART	DPART	DPART	DPART	October 1990		AVG	AVG	HI	LO	DPART	DPART	DPART	DPART
		MAX	MIN	MAX	MIN	AVG	F/NRM	TOTAL	F/NRM			MAX	MIN	MAX	MIN	AVG	F/NRM	TOTAL	F/NRM
USSR	ODESSA	14	9	22	0	12	0.5	33.4	13.6	TANZAN	DAR ES SALAAM	31	20	33	18	26	0.3	27.0	-30.2
	YALTA	17	11	23	4	14	-0.8	45.6	-1.4	GABON	LIBREVILLE	28	24	30	22	26	0.0	364.1	-42.3
	VORONEZH	10	4	21	-2	7	1.3	57.1	17.5	TOGO	LOME	31	24	39	21	27	1.3	44.1	-54.1
	SARATOV	9	4	19	-8	7	1.7	20.4	-16.6	B FASO	OUAGADOUGOU	37	24	39	20	30	1.4	4.0	-35.2
	KHARKOV	12	5	21	-2	8	0.9	57.7	24.4	IVRY C	ABIDJAN	30	25	32	22	28	1.7	164.4	-3.8
	VOLGOGRAD	12	5	25	-3	8	0.6	13.6	-17.1	MOZAMB	MAPUTO	28	18	38	15	23	0.7	21.4	-39.2
	ROSTOV	13	6	24	-3	10	0.6	36.2	-0.4	ZAMBIA	KABWE	33	18	37	13	25	1.2	2.9	-18.4
	ASTRAKHAN	16	5	27	-4	11	1.4	5.0	-10.8	ZIMBAB	HARARE	29	16	33	11	22	1.0	0.5	-36.4
	KRASNODAR	16	6	28	0	11	0.1	70.3	34.7	S APRI	PRETORIA	27	15	33	7	21	1.4	76.0	4.9
	ORENBURG	8	2	19	-10	5	1.1	50.2	8.5		KROONSTAD	28	12	34	1	20	1.3	26.5	-39.5
	TSELINOGRAD	8	0	21	-9	4	0.9	26.1	8.5		JOHANNESBURG	25	11	29	2	18	0.5	46.1	-22.4
	KARAGANDA	8	-1	23	-10	4	0.9	45.3	17.2		BETHAL	25	10	31	2	18	0.4	35.5	-42.5
	TBILISI	20	10	29	4	15	1.5	19.3	-21.7		DURBAN	23	18	30	12	21	0.6	128.5	37.7
	TASHKENT	21	7	31	-4	14	1.1	61.2	28.5	CANADA	CAPE TOWN	21	11	30	6	16	0.7	3.1	-32.6
	ASHKHABAD	22	9	32	1	16	0.0	15.1	-2.7		TORONTO	15	4	26	-3	9	0.1	88.0	26.2
SYRIA	DAMASCUS	28	10	34	5	19	-0.3	10.1	0.4		MONTREAL	13	4	26	-6	9	-0.1	118.6	43.1
ISRAEL	JERUSALEM	26	15	32	9	21	0.3	0.3	-22.2		WINNIPEG	12	-1	24	-8	5	-0.9	8.9	-21.9
PAKIST	KARACHI	35	19	38	12	27	-0.8	0.1	0.1		REGINA	12	-4	23	-11	4	-1.4	12.1	-6.7
INDIA	AMRITSAR	31	15	34	10	23	-1.1	0.8	-24.0		SASKATOON	10	-4	20	-11	3	-1.7	6.0	-10.4
	NEW DELHI	32	19	34	13	25	-0.8	0.1	-35.3		LETHBRIDGE	13	-1	26	-9	6	-1.4	13.0	-4.9
	AHMEDABAD	35	22	36	17	28	-0.3	11.1	0.3		CALGARY	11	-3	22	-9	4	-1.4	13.3	-4.3
	INDORE	32	19	34	16	25	0.4	10.9	-24.7		EDMONTON	9	-1	18	-6	4	-1.9	22.3	5.7
	CALCUTTA	31	23	34	19	27	-0.7	50.3	-81.7		VANCOUVER	13	7	18	3	10	0.0	117.2	3.1
	VERAVAL	34	22	37	18	28	0.4	0.1	-26.5	MEXICO	GUADALAJARA	26	15	29	7	20	1.2	291.8	222.0
	BOMBAY	33	24	35	22	28	0.7	94.3	-22.7		MEXICO CITY	23	12	28	9	18	2.6	160.9	126.4
	POONA	30	19	32	14	25	-0.7	124.4	48.0		ACAPULCO	33	25	34	22	29	0.5	109.1	-50.7
	BEGAMPET	29	21	30	17	25	-0.3	93.9	4.9	BERMUD	ST. GEORGES	27	23	30	20	25	0.4	64.2	-97.1
	MADRAS	31	25	36	20	28	-0.2	460.7	182.0	BAHAMA	NASSAU	30	25	32	22	28	1.9	27.9	-178.7
	MANGALORE	32	24	36	22	28	0.8	292.7	86.7	CUBA	HAVANA	30	24	32	21	27	1.4	75.0	-101.6
H KONG	HONG KONG	27	24	30	20	25	0.4	101.3	-19.9	JAMAIC	KINGSTON	33	25	35	24	29	1.5	65.5	-112.7
N KREA	PYONGYANG	19	5	25	-1	12	0.2	3.1	-49.0	P RICO	SAN JUAN	32	24	33	22	28	0.5	218.0	77.4
S KREA	SEOUL	21	10	27	6	16	2.5	0.1	-48.9	GUADEL	RAIZET	31	24	34	22	28	1.4	89.3	-79.0
JAPAN	SAPPORO	18	9	22	4	13	2.7	90.0	-25.4	MARTIN	LAMENTIN	31	24	34	22	28	2.1	252.4	21.3
	NAGOYA	23	15	28	9	19	2.2	187.5	66.5	BARBAD	BRIDGETOWN	30	26	32	23	28	0.8	72.0	-95.8
	TOKYO	22	16	28	12	19	2.1	151.6	-29.5	TRINID	PORT OF SPAIN	32	24	36	22	28	2.0	84.4	-81.0
	YOKOHAMA	22	16	28	11	19	2.2	157.6	-29.1	COLOMB	BOGOTA	19	8	22	4	13	0.3	256.1	128.6
	KYOTO	22	15	27	7	19	2.1	150.5	26.1	VENEZU	CARACAS	33	26	38	25	29	2.0	121.3	76.8
	OSAKA	23	16	29	9	20	1.5	183.0	69.0	F GUIA	CAYENNE	32	23	34	22	28	1.4	2.0	-66.5
THAILN	PHETCHABUN	32	24	36	21	28	0.3	391.6	174.1	BRAZIL	FORTALEZA	29	24	30	23	27	-0.5	51.4	38.0
	BANGKOK	32	25	34	23	28	0.3	317.6	48.4	RECIFE		28	22	29	20	25	-0.4	64.4	18.0
MALAYS	KUALA LUMPUR	31	24	34	21	28	1.4	317.6	48.4	BELO HORIZONTE		28	19	33	16	23	1.3	49.3	-89.6
VIETNM	HANOI	28	23	32	21	26	0.7	123.6	24.5	CAMPO GRANDE		32	21	35	17	26	2.8	44.7	-117.4
CHINA	HARBIN	15	3	24	-5	9	4.1	8.1	-19.6	FRANCA		28	18	32	15	23	1.9	142.8	11.7
	HAMI	20	3	30	-5	12	1.8	4.0	2.4	RIO DE JANEIRO		26	22	30	17	24	0.8	63.7	-21.1
	LANCHOW	17	6	23	-1	11	1.9	32.5	7.8	LONDRINA		29	17	35	13	23	2.0	87.8	-93.1
	BEIJING	22	9	29	4	16	3.2	0.4	-23.7	SANTA MARIA		25	17	32	9	21	2.0	168.8	-8.2
	TIENTSIN	22	11	29	5	17	3.0	1.0	-23.9	PORTO ALEGRE		28	19	34	13	24	4.4	270.7	151.6
	LHASA	17	2	20	-4	10	0.7	6.0	-1.5	PERU	LIMA	21	16	23	15	18	1.1	3.8	1.5
	KUNMING	20	12	24	2	16	1.3	80.3	-3.5	BOLIVI	LA PAZ	14	3	18	-1	9	-1.4	38.4	1.0
	CHENGCHOW	23	10	30	2	17	1.7	2.6	-41.4	CHILE	SANTIAGO	22	6	28	1	14	0.1	17.8	7.0
	YEHCHANG	23	15	31	10	19	0.8	75.7	-1.4	ARGENT	IGUAZU	29	19	37	15	24	***	109.4	***
	HANKOW	23	14	29	6	19	1.4	44.1	-18.1		FORMOSA	29	20	36	15	24	2.2	92.0	-51.0
	CHINKIANG	22	14	29	7	18	0.0	135.8	38.7		CERES	27	15	34	7	21	1.6	136.2	59.5
	SHANGHAI	22	15	27	9	19	0.7	47.0	-3.3		CORDOBA	25	13	34	6	19	1.6	176.1	105.8
	NANCHANG	23	16	27	10	20	0.1	63.4	7.9		RIO CUARTO	23	13	33	5	18	2.0	67.9	-23.7
	TAIPEI	26	23	32	19	25	1.6	39.5	-82.4		ROSARIO	23	14	30	5	19	1.6	150.8	52.9
	CANTON	30	21	33	16	25	1.7	26.2	-42.6		BUENOS AIRES	23	13	28	4	18	2.2	94.3	0.7
	NANNING	29	21	31	16	25	1.4	97.3	28.2		SANTA ROSA	24	11	32	4	17	2.0	101.1	27.5
CNRY I	LAS PALMAS	27	21	30	18	24	1.6	1.1	-14.2		TRES ARROYOS	21	9	30	2	15	1.6	96.8	29.9
MOROCC	CASABLANCA	24	16	30	13	20	0.9	28.0	-9.5	MIDW I	MIDWAY ISLAND	28	23	31	19	25	1.3	243.7	61.2
	MARRAKECH	27	15	33	11	21	0.2	0.4	-21.2	N CALD	NOUMEA	27	19	31	14	23	0.8	22.6	-24.1
ALGERI	ALGER	27	15	35	11	21	2.3	50.6	-58.2	FIJI	NAUSORI	26	21	29	18	24	-0.3	142.6	-56.3
	BATNA	25	10	32	4	18	3.0	5.0	-24.0	SAMOA	PAGO PAGO	30	25	33	23	28	1.2	227.9	-52.8
TUNISI	TUNIS	29	19	34	11	24	4.3	25.7	-52.0	TAHITI	PAPEETE	30	23	32	21	27	1.3	73.1	-11.7
NIGER	NIAMEY	39	23	42	17	31	0.8	0.1	-15.8	N ZEAL	AUCKLAND	19	13	22	6	16	1.3	86.5	-4.3
MALI	TIMBUKTU	40	23	43	19	32	0.7	0.1	-2.3	PA N G	PORT MORESBY	30	24	31	22	27	-0.5	16.0	-17.0
	BAMAKO	36	23	38	20	29	1.8	7.1	-62.5	AUSTRL	DARWIN	33	25	35	23	29	0.0	6.4	-73.2
MAURIT	NOUAKCHOTT	38	25	44	21	32	2.9	0.1	-9.2		MOREE	27	12	34	6	19	-0.2	21.2	-27.7



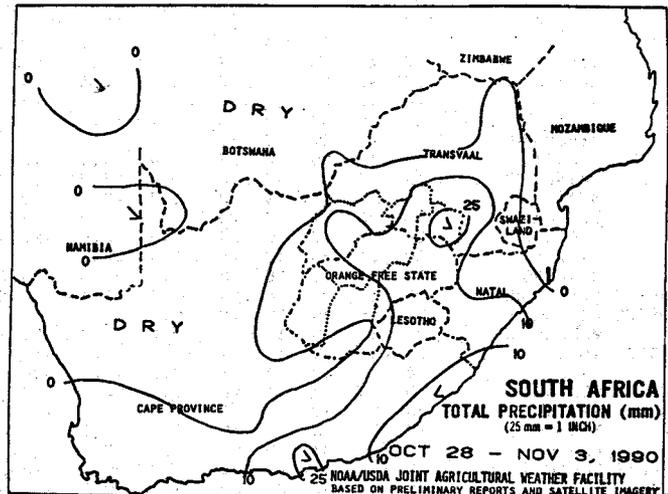
**WESTERN USSR ...** Widespread precipitation covered crop areas over most of the region. Greatest amounts of precipitation (25-50mm, with local amounts in excess of 50mm) fell over parts of the Central Region, the Black Soils Region, the eastern Ukraine, lower Volga, and the western North Caucasus. Although the rainfall benefited winter grains, it slowed late-summer crop harvesting in the Ukraine and North Caucasus. Winter grains were entering dormancy as far south as the northern Ukraine and the lower Volga, around near-normal dates. Winter grains in the Ukraine and North Caucasus continued to add on vegetative growth. Weekly average temperatures were near normal in the north and 1-3 degrees Celsius (C) above normal in the south.



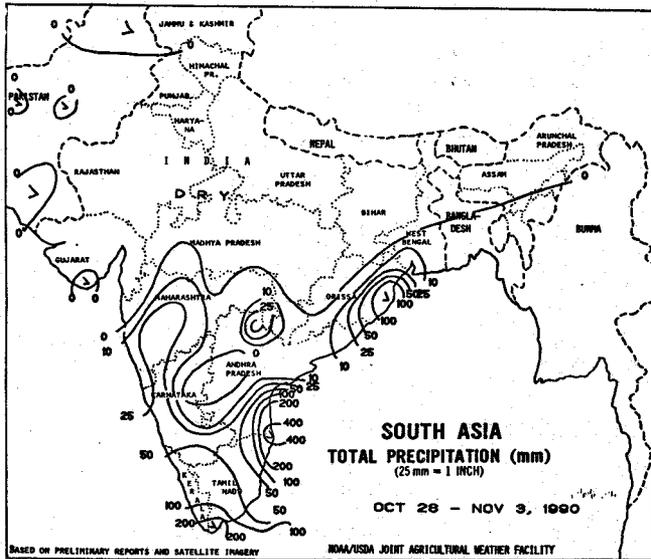
**EUROPE ...** Widespread rain (10-45mm, with isolated amounts greater than 45mm) continued over much of northern Europe, causing delays in late sugarbeet lifting but providing ample topsoil moisture for vegetative winter crops. However, seasonably cool temperatures (mean weekly temperatures 6-8 degrees C) slowed crop growth in northeastern growing areas. In the east, a slow-moving area of low pressure brought moderate to heavy rain (15-60mm, with scattered amounts up to 80mm) to Austria, Hungary, and much of the Balkans. Combined with much above-normal temperatures (4-6 degrees C above normal), the rain benefited recently planted winter crops. Isolated very heavy rain (100-260mm) likely caused flooding in sections of extreme northwestern Yugoslavia, western Greece, southwestern Germany, and northwestern Spain.



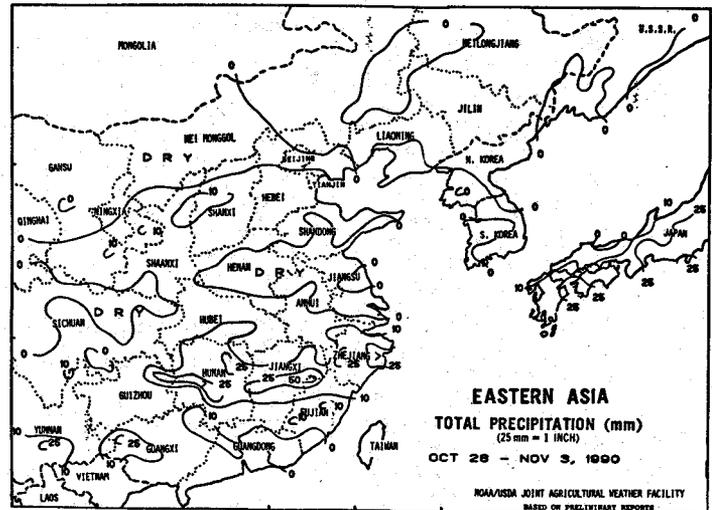
**NORTHWESTERN AFRICA ...** Dry weather covered winter grains over most of the region except for a narrow band of light showers (10-23mm) that fell along the coast of northeastern Algeria and northern Tunisia. Although light precipitation in recent weeks over the region helped to condition soils for pre-planting fieldwork, rainfall thus far has been below normal and insufficient to allow widespread planting. Since the bulk of winter grains are usually planted from mid-November to mid-December, substantial time remains for planting. Weekly average temperatures were 1-4 degrees C above normal over the region, causing further drying of topsoils.



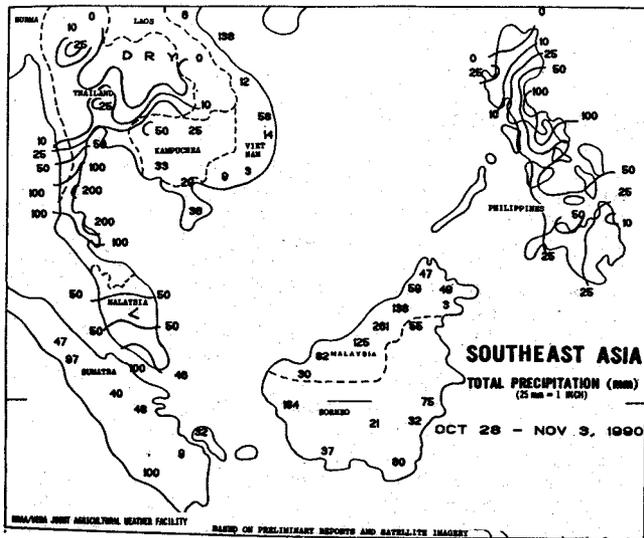
**SOUTH AFRICA ...** Beneficial showers (10-45mm) fell over primary corn regions of the central and eastern Maize Triangle, improving planting conditions. However, more rain is needed, especially in the western half of the triangle, before widespread planting can begin. Light to moderate rain (5-25mm) covered crop regions of the Cape Province, but mostly dry weather covered Natal's sugarcane regions. Weekly temperatures averaged 1-3 degrees C above normal across South Africa, benefiting late-maturing winter wheat and favoring corn emergence in the eastern Maize Triangle.



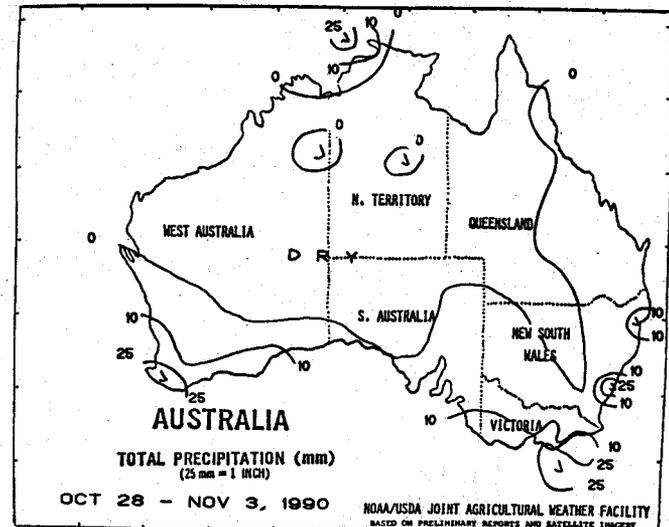
**SOUTH ASIA** ... A tropical cyclone brought inundating rains (200-247mm) for the second consecutive week to the southern Indian coast from southernmost Tamil Nadu to southern Andhra Pradesh, likely damaging unharvested rice. Rainfall tapered off from recent weeks elsewhere in southern India, but seasonal showers (10-25mm or more) continued in western Maharashtra, northern Karnataka, and the interior of Tamil Nadu. The rains benefited vegetative fall crops but continued to miss chronically dry areas of southern Karnataka. Dry, seasonably warm weather in the north and east benefited mature summer crops and favored winter wheat planting.



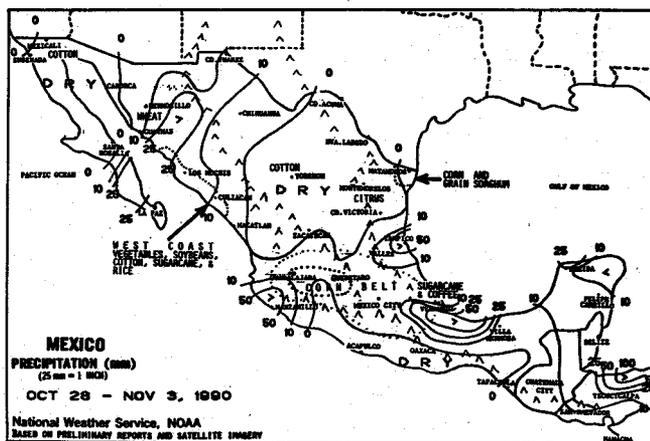
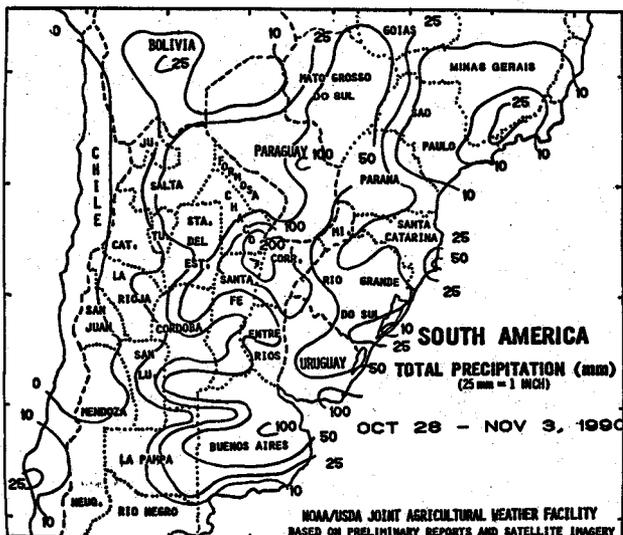
**EASTERN ASIA** ... Scattered light to moderate rain (5-20mm, with isolated amounts greater than 25mm) caused only minor delays in late-crop rice harvest across southern China. In the North China Plain, mostly dry and warm weather (mean temperatures 3-5 degrees C above normal) continued to favor late-fall crop harvest. Topsoil moisture remains short for some vegetative winter crops, however. Scattered rain (10-30mm, with isolated amounts greater than 30mm) in central and southern Japan caused continued delays in rice harvest. In Manchuria, mostly light rain and snow (less than 10mm) covered eastern crop areas while the west remained seasonably dry.



**SOUTHEAST ASIA** ... Seasonably drier weather benefited Thailand's maturing rice, but moderate to heavy showers (25-50mm or more) lingered near Bangkok and in local areas of the north. Further south, moderate to heavy showers (25-50mm or more) continued over the Malay Peninsula, with inundating rains (100-350mm) causing flooding in central peninsular Thailand. Rainfall also increased over Indonesia, with much of Java receiving 25mm or more. Rice planting usually begins in Java by late November. In the Philippines, moderate to heavy showers (25-50mm or more) raised reservoir levels from southern Luzon to northern Mindanao, but continued heavy rain (100-200mm) caused more flooding in southeastern Luzon.



**AUSTRALIA** ... Hot, dry weather (daily maximum temperatures 36-38 degrees C and mean weekly temperatures 4-6 degrees C above normal) stressed filling winter grains early in the week across growing areas of South Australia, northwestern Victoria, and southwestern New South Wales. A cool front brought lower temperatures and scattered light rain (less than 10mm) by week's end. Moderate to heavy rain (15-40mm) across crop areas of Western Australia maintained near optimal conditions for winter grains. In the east, warm, mostly dry weather (mean weekly temperatures 2-4 degrees C above normal) accelerated winter grain harvest in southeastern Queensland and extreme northern New South Wales. Scattered showers (5-25mm) along Queensland's eastern coast favored vegetative sugarcane.

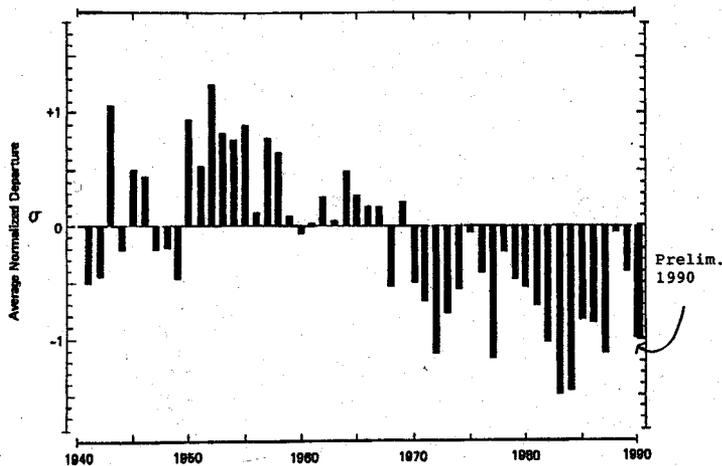


**SOUTH AMERICA** ... In Argentina, inundating rain (100-247mm) fell in northern cotton areas early in the week, drenching newly emerged cotton and likely causing some crop damage. Widespread showers benefited summer crop establishment and winter wheat filling in the primary growing areas, but slowed soybean planting. Weekly rainfall averaged 20-86mm in southern Cordoba, 11-50mm in southern Santa Fe, and 25-75mm (with isolated amounts up to 149mm) in Buenos Aires. In south-central Brazil, showers maintained adequate to abundant soil moisture for corn and soybean growth. Weekly amounts averaged 20-92mm in Rio Grande do Sul, 10-49mm in Parana, and 25-69mm in Mato Grosso do Sul. Light showers (less than 10mm) allowed soybean planting in Sao Paulo, while beneficial showers (10-47mm) favored flowering coffee trees in southeastern Minas Gerais. Weekly temperatures averaged near normal in Argentina and above normal in south-central Brazil.

**MEXICO** ... Two Pacific hurricanes, Vance and Trudy, dissipated off Mexico's west coast, but tropical moisture was carried into the northwest. Weekly rainfall averaged 10-45mm in northwestern wheat areas, benefiting newly sown crops, and along much of the west coast farming region, slowing crop harvests but helping immature vegetables. Dry weather prevailed throughout north-central and northeastern regions, and rainfall diminished throughout most of the Southern Plateau. Weekly rainfall averaged less than 10mm, causing little harvest delay, in all but far southwestern and southeastern fringes of the corn belt. Tropical showers (10-56mm) retreated to the southeast, bringing some beneficial rain for corn development.

**Sahel Rainy Season Summary**

**Figure 1**  
**Rainfall Index for Subsaharan West Africa**  
**1941 - 1990**

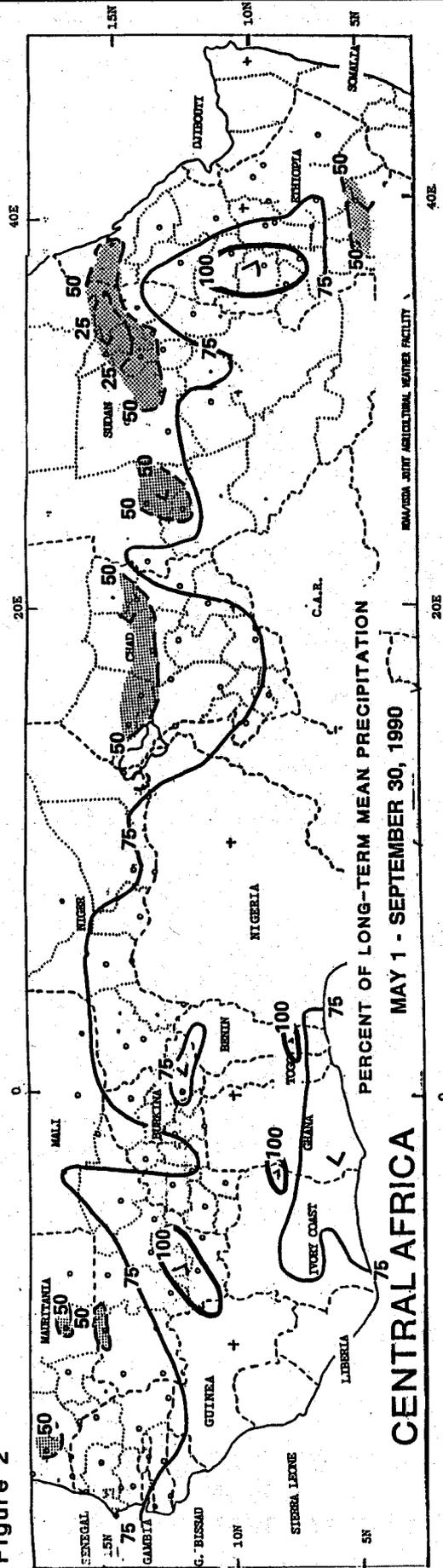


(Courtesy P. Lamb, Illinois State Water Survey)

Following 2 consecutive years of relatively ample rainfall, Sahel region rainfall for the 1990 growing season fell back to levels more typical of the drier years experienced during much of the 1970's and 1980's (figure 1). In the west, rainfall generally averaged 70-90 percent of the 1951-80 mean in Niger, Burkina Faso, and Mali (figure 2). Drier conditions hindered crop development in Mauritania and Senegal, where totals were mainly 60-75 percent of the mean. Below-normal rainfall also hurt crops to the south, as rainfall totaled less than 75 percent of the mean in southern parts of Ivory Coast and Ghana. The most damaging dryness occurred in the eastern Sahel zones. Drought likely decimated crops in northern rain-fed growing areas of Chad and Sudan, with severe drought having a potentially catastrophic impact on food supplies in Sudan. AID's Famine Early Warning System has reported that the severe drought in northern and eastern Sudan "could add at least another 4 to 5 million people to those needing immediate assistance." This is in addition to the 4 million to 6 million already at risk, largely due to the civil war. In neighboring Ethiopia, dryness in northern and eastern areas will continue food shortages in those areas. Drought has affected strife-torn Eritrea for the second consecutive year.

Douglas Le Comte

Figure 2



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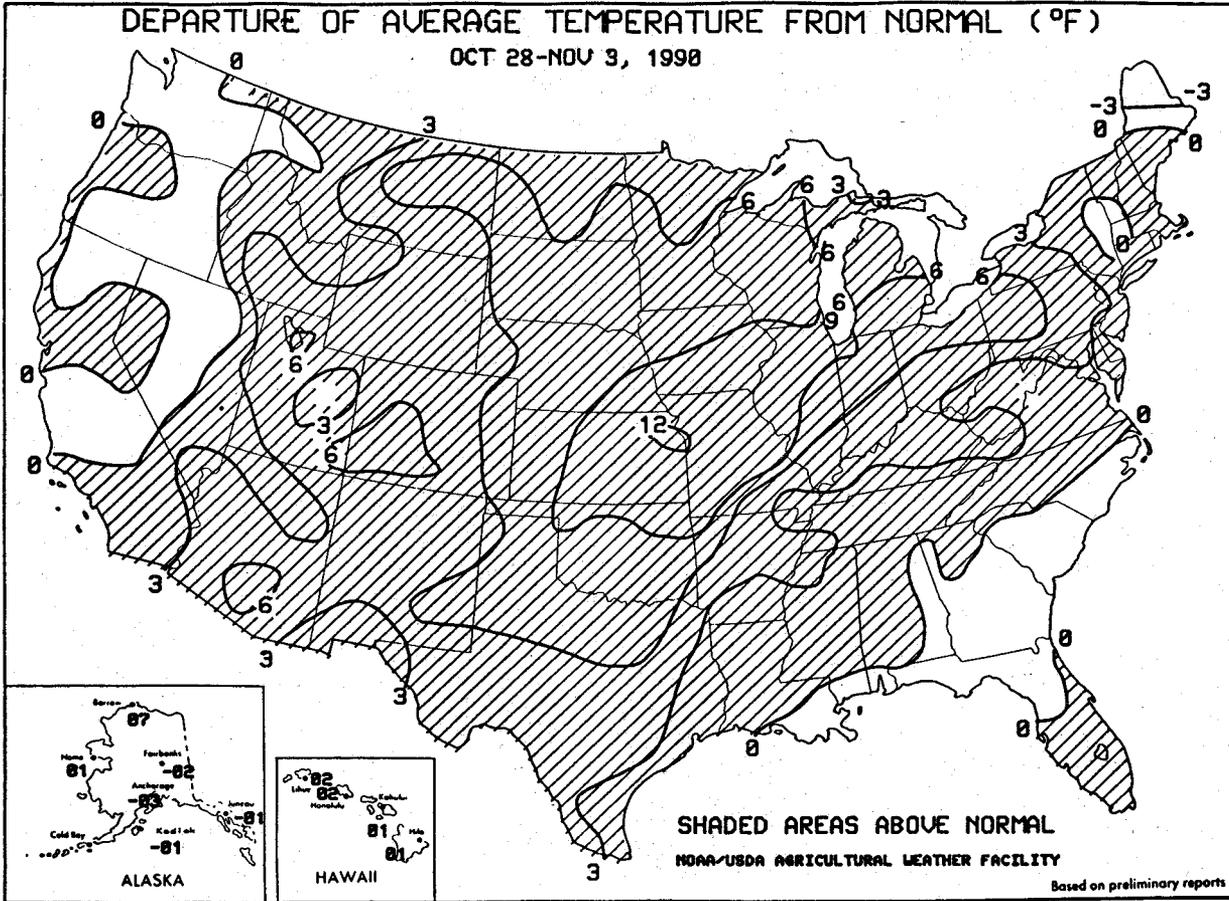
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