

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

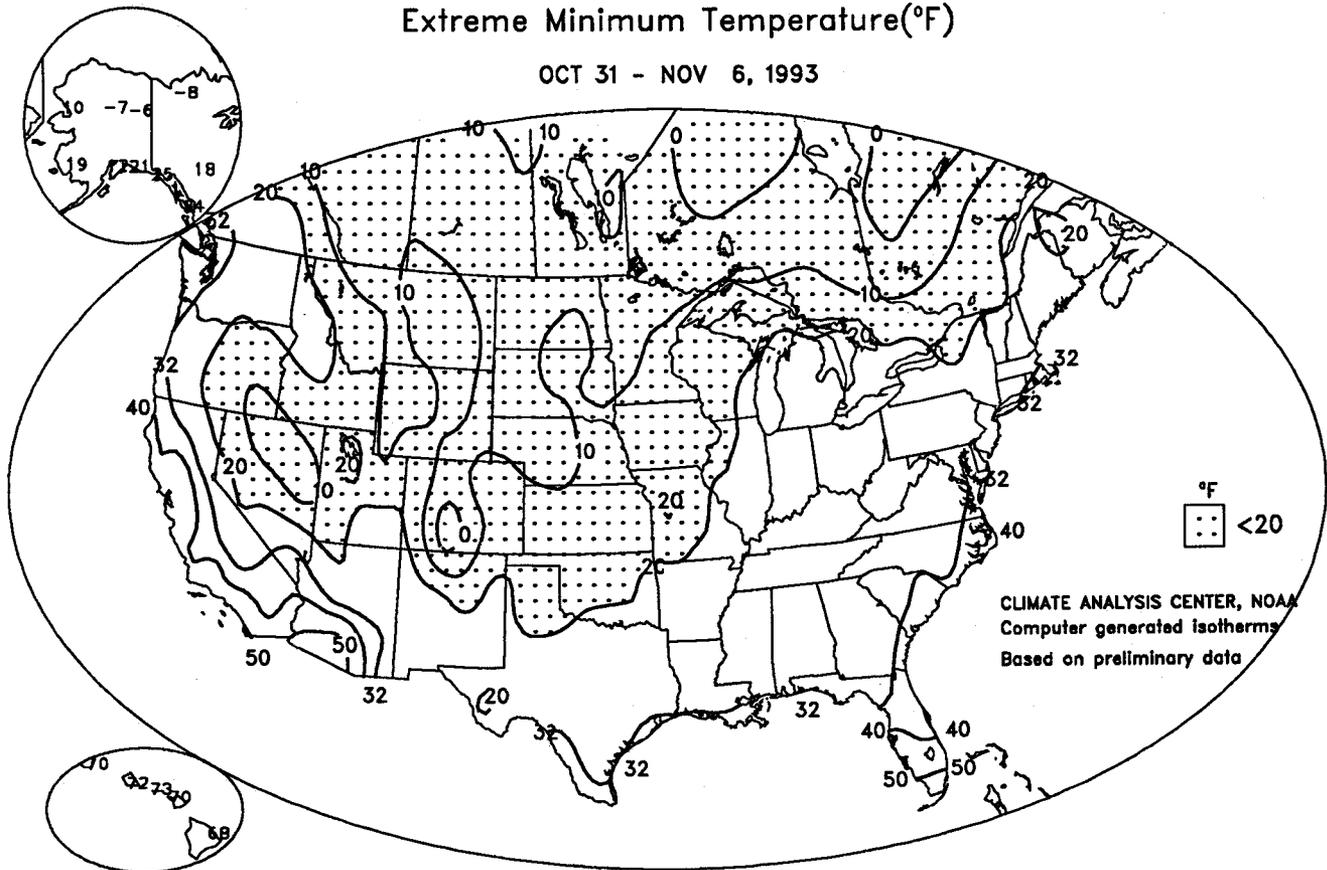
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Washington, D.C.

November 9, 1993

Extreme Minimum Temperature(°F)

OCT 31 - NOV 6, 1993



CLIMATE ANALYSIS CENTER, NOAA
Computer generated isotherms
Based on preliminary data

HIGHLIGHTS

October 31 - November 6, 1993

In the wake of an arctic front, sub-freezing temperatures reached areas as far south as the lower Rio Grande Valley, the Mississippi Delta, and northern Florida. Heavy, wet snow accumulated from the middle Ohio Valley to the St. Lawrence Seaway. A second cold front spent much of its chill on the central Plains, but also cooled the West late in the week. The Halloween 1993 cold blast produced more than 100 daily record lows, primarily from the central and southern Plains eastward. On Sunday, a low of 28°F in Corpus Christi, TX was not only a record for October, but was also lower than their November record (29°F). In Texas, San Antonio (27°F), Austin (30°F), and Victoria (31°F) reported below-freezing readings in October for the first time on record. On Monday morning in Florida, temperatures dipped to the freezing mark nearly to the Gulf of Mexico at Apalachicola, and to

(Continued to back cover)

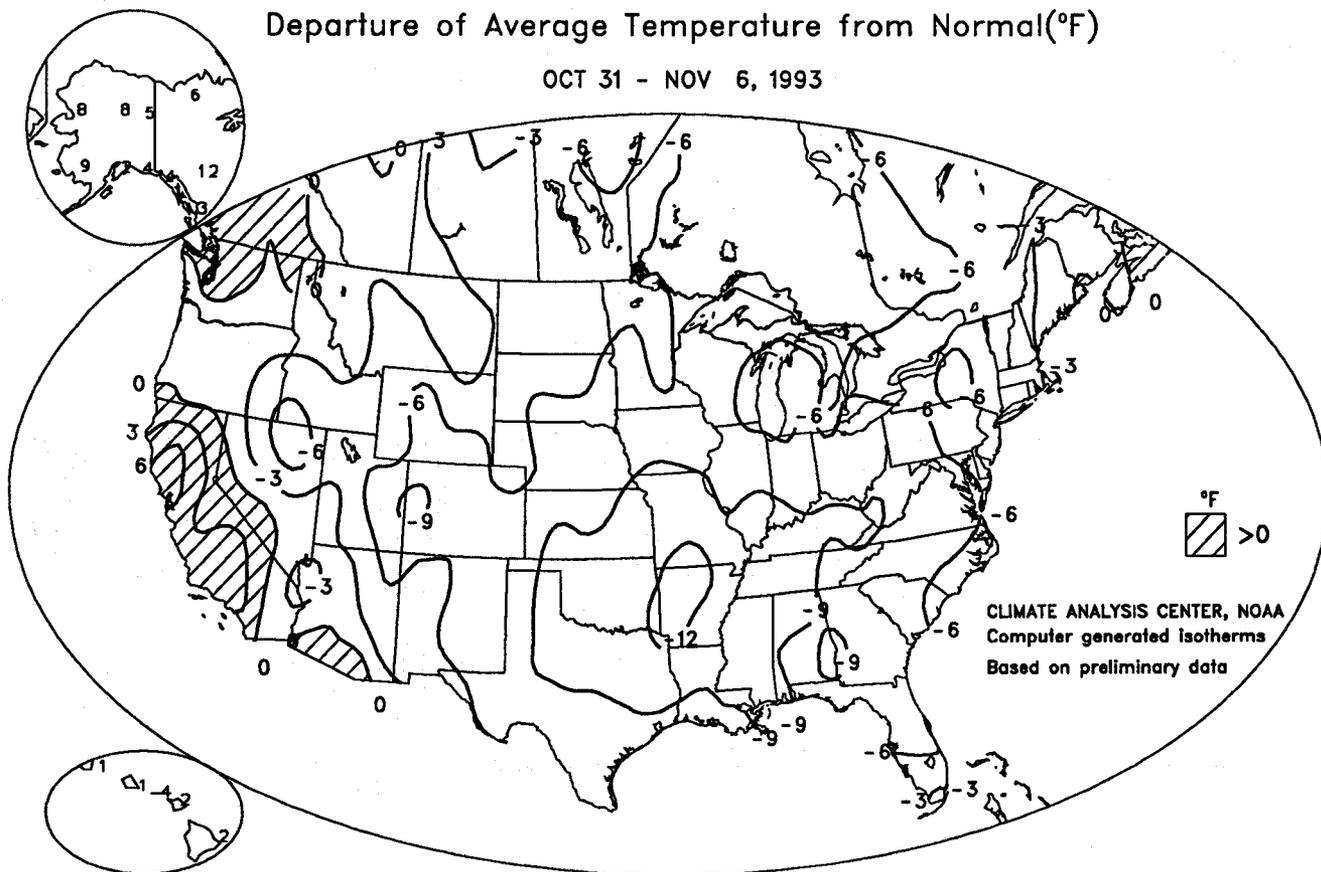
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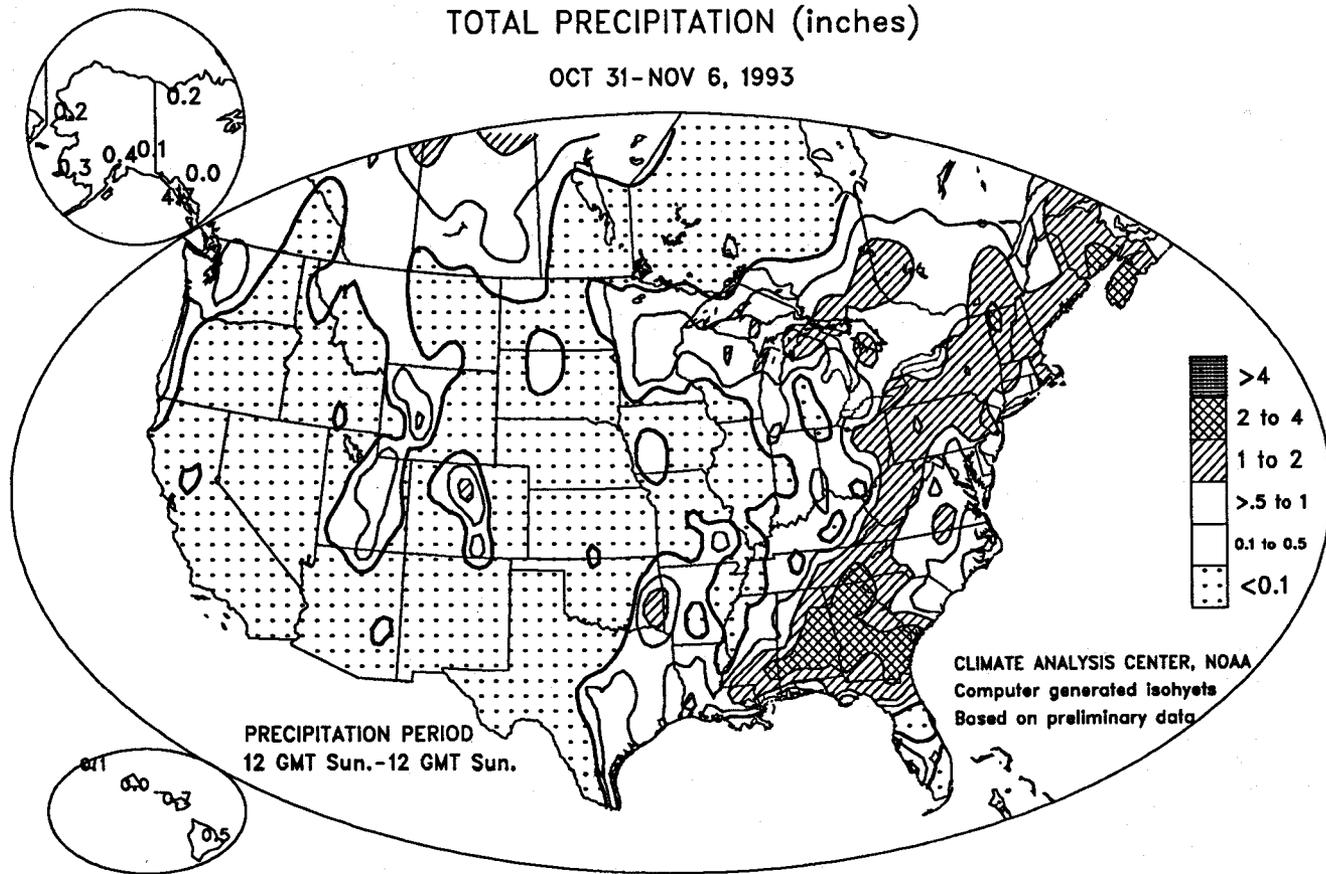
Departure of Average Temperature from Normal(°F)

OCT 31 - NOV 6, 1993



TOTAL PRECIPITATION (inches)

OCT 31 - NOV 6, 1993



National Weather Data for Selected Cities

Weather Data for the Week Ending November 6, 1993

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT	NUMBER OF DAYS						
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Sept 1	PCT. NORMAL SINCE Sept 1	TOTAL, IN., SINCE Jan 1		PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	AVERAGE MINIMUM	TEMP. °F		
													90 AND ABOVE					32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	58	38	80	25	48	-9	.8	-1.1	.5	8.6	115	33.6	73	88	45	0	2	2	0	
MOBILE	65	43	75	28	54	-9	4.4	-1.4	.4	9.1	95	54.2	98	91	52	0	2	2	0	
MONTGOMERY	63	39	76	26	51	-8	4.0	3.3	3.4	10.6	151	45.5	98	92	50	0	2	2	0	
AK ANCHORAGE	32	24	35	14	28	2	.5	.1	.3	6.6	132	15.0	108	93	71	0	7	2	0	
BARROW	26	12	31	-5	19	15	1.1	.0	.0	2.1	186	5.0	125	93	86	0	7	3	0	
FAIRBANKS	24	11	31	4	18	7	T	-2	T	3.3	166	10.0	107	88	78	0	7	3	0	
JUNEAU	46	35	60	27	41	5	1.2	-3.3	.4	16.2	103	47.8	104	97	75	0	3	5	0	
KODIAK	45	32	51	24	39	2	2.8	1.3	2.1	17.9	116	64.0	114	90	57	0	3	3	2	
NOME	33	25	39	5	29	9	1.2	-.9	.6	6.9	172	16.1	121	97	88	0	6	6	1	
AZ PHOENIX	79	54	84	52	67	0	.0	-1.1	.0	1.3	82	10.6	171	49	13	0	0	0	0	
PRESCOTT	65	32	72	24	49	0	.0	-3.0	.0	1.7	50	15.2	91	48	15	0	3	0	0	
TUCSON	79	50	82	43	64	1	.0	-2.0	.0	1.3	44	13.9	133	61	16	0	0	0	0	
YUMA	83	57	88	53	70	1	.0	-1.1	.0	.2	35	3.7	148	41	12	0	0	0	0	
AR FORT SMITH	55	33	75	24	44	-11	.5	-.5	.5	11.4	148	40.9	118	87	44	0	3	1	0	
LITTLE ROCK	53	36	66	27	45	-12	-1.1	-.9	-1.1	6.8	73	36.6	90	88	52	0	3	2	0	
CA BAKERSFIELD	79	50	82	45	64	4	.0	-1.1	.0	.2	30	6.8	150	44	24	0	0	0	0	
BUREKA	61	46	69	42	53	0	.0	-1.2	.0	.6	13	30.9	118	90	63	0	0	0	0	
FRESNO	77	47	79	44	62	4	.0	-3.0	.0	.1	12	11.6	145	82	31	0	0	0	0	
LOS ANGELES	77	56	91	51	67	3	.0	-3.0	.0	.1	9	18.5	209	85	47	1	0	0	0	
REDDING	77	48	81	37	62	6	.0	-1.0	.0	2.9	73	39.2	167	61	16	0	0	0	0	
SACRAMENTO	76	45	78	41	61	3	.0	-5.0	.0	.5	25	19.6	154	88	23	0	0	0	0	
SAN DIEGO	75	55	84	53	65	1	.0	-3.0	.0	.2	27	15.7	221	82	45	0	0	0	0	
SAN FRANCISCO	75	51	79	49	63	5	.0	-6.0	.0	.5	24	19.8	140	78	39	0	0	0	0	
CO DENVER	52	26	65	19	39	-5	.2	.0	.2	4.8	198	13.2	94	84	37	0	6	3	0	
GRAND JUNCTION	52	26	58	18	39	-9	.0	-2.0	.0	1.7	71	10.7	120	81	26	0	7	0	0	
PUEBLO	54	23	69	8	38	-8	.7	-1.1	T	1.2	77	13.5	130	89	37	0	6	1	0	
CT BRIDGEPORT	52	40	59	33	46	4	.7	-2.2	.4	11.0	159	31.6	90	89	54	0	0	2	0	
HARTFORD	50	33	58	28	42	-5	1.1	-.2	.5	10.1	124	38.3	104	95	60	0	3	4	0	
DC WASHINGTON	54	39	62	31	47	-7	.2	-.5	-1.1	6.4	92	32.4	98	95	64	0	1	4	0	
FL APALACHICOLA	68	43	78	32	56	-10	3.1	2.4	2.1	12.6	109	46.8	97	---	---	0	1	2	2	
DAYTONA BEACH	75	51	84	35	63	-6	.1	-7.7	-1.1	8.3	75	32.0	74	95	49	0	0	1	0	
JACKSONVILLE	71	47	80	33	59	-9	1.8	1.1	1.6	18.2	160	44.3	99	94	59	0	0	3	1	
KEY WEST	80	69	85	62	75	-3	.1	-7.7	-1.1	11.8	107	33.6	95	84	63	0	0	1	0	
MIAMI	81	63	87	52	72	-4	.1	-8.7	-1.1	19.8	142	54.4	104	83	52	0	0	1	0	
ORLANDO	75	53	83	37	64	-7	.1	-4.4	-1.1	10.0	112	43.6	99	88	54	0	0	1	0	
TALLAHASSEE	68	42	79	27	55	-9	1.2	-.5	-.9	8.3	91	48.6	85	91	55	0	3	2	1	
TAMPA	76	53	82	38	65	-6	.5	-1.5	-.5	10.9	131	36.1	90	88	56	0	0	2	0	
WEST PALM BEACH	80	60	86	45	70	-5	.2	-1.0	-.2	18.6	118	57.5	106	90	61	0	0	1	0	
GA ATLANTA	59	41	76	30	50	-7	1.8	1.0	1.6	9.5	133	43.3	100	89	52	0	1	2	1	
AUGUSTA	65	42	76	31	53	-5	.5	-1.1	.4	8.2	129	34.5	88	90	51	0	2	3	0	
MACON	63	40	74	29	51	-8	1.8	1.3	1.6	9.5	175	45.5	120	93	54	0	2	3	1	
SAVANNAH	66	45	77	32	56	-7	2.9	2.5	1.7	12.4	170	43.6	98	92	55	0	1	2	2	
HI HILO	84	70	87	68	77	2	.5	-2.6	.4	18.0	86	87.8	83	92	70	0	0	2	0	
HONOLULU	86	74	87	72	80	2	.2	-.6	T	1.7	48	5.2	33	80	62	0	0	0	0	
KAHULUI	86	73	89	70	80	3	.7	-.3	-.7	2.7	136	10.2	66	81	61	0	0	2	1	
LIHUE	82	73	84	70	78	1	.1	-1.1	-1.1	6.7	85	16.9	51	83	71	0	0	2	0	
ID BOISE	55	27	66	17	41	-4	T	-3.3	T	.5	26	11.4	119	80	29	0	5	0	0	
LEWISTON	54	36	62	28	45	0	T	-2.2	T	.8	39	11.6	112	67	36	0	2	1	0	
POCATELLO	50	23	59	13	37	-4	T	-2.2	T	1.3	66	16.7	166	85	31	0	6	1	0	
IL CHICAGO	47	30	59	20	39	-7	.1	-6.0	.0	6.8	99	42.5	137	88	56	0	4	3	0	
MOLINE	47	30	60	19	38	-7	T	-6.7	T	4.5	60	48.2	138	87	49	0	4	0	0	
PRORIA	47	31	60	20	39	-8	T	-6.6	T	10.0	142	50.7	160	90	56	0	4	2	0	
QUINCY	47	30	61	19	39	-9	T	-7.7	T	8.5	98	33.9	97	80	46	0	4	0	0	
ROCKFORD	45	29	56	19	37	-7	.1	-.5	-1.1	4.6	63	39.6	123	93	53	0	5	2	0	
SPRINGFIELD	48	31	61	19	39	-9	T	-5.7	T	9.0	140	43.5	143	90	54	0	4	1	0	
IN EVANSVILLE	51	34	62	25	43	-10	.4	-.5	-.3	9.7	140	36.8	95	89	53	0	4	4	0	
FORT WAYNE	49	34	57	27	41	-5	.3	-.3	-1.1	6.3	111	36.8	124	88	65	0	4	5	0	
INDIANAPOLIS	48	32	59	25	40	-8	.2	-.5	-1.1	8.1	133	40.5	119	94	67	0	4	3	0	
SOUTH BEND	47	34	57	28	41	-5	.3	-.5	-.2	12.2	166	43.0	130	89	63	0	4	4	0	
IA DES MOINES	48	27	63	20	38	-7	T	-.5	T	7.5	106	54.0	173	83	44	0	4	0	0	
SIOUX CITY	47	24	58	11	36	-7	.1	-.3	.0	3.2	63	30.9	128	87	45	0	5	3	0	
WATERLOO	47	26	60	16	37	-6	T	-.5	T	4.7	72	51.3	166	81	43	0	6	1	0	
KS CONCORDIA	52	27	73	14	40	-8	.0	-.3	.0	4.0	75	42.8	158	79	36	0	3	0	0	
DODGE CITY	54	24	70	10	39	-10	.0	-.2	.0	1.8	54	24.9	123	82	35	0	6	0	0	
GOODLAND	52	23	66	12	37	-7	.0	-.2	.0	2.3	87	19.3	113	88	37	0	6	0	0	
TOPEKA	52	26	69	18	39	-9	T	-.5	T	8.4	115	45.3	140	87	41	0	6	0	0	
WICHITA	54	28	69	18	41	-10	.0	-.6	.0	3.4	47	30.9	97	86	35	0	5	0	0	
KY BOWLING GREEN	51	33	61	25	42	-10	.1	-.8	-1.1	6.7	89	29.2	69	99	64	0	4	2	0	
LEXINGTON	48	33	63	28	41	-10	.3	-.4	-1.1	7.5	117	37.2	98	94	64	0	4	5	0	
LOUISVILLE	50	35	60	29	42	-9	.1	-.6	-1.1	8.1	123	41.7	111	93	59	0	3	3	0	
LA BATON ROUGE	64	43	79	28	53	-10	.6	-.3	-.4	7.4	82	54.4	105	93	58	0	2	2	0	
LAKE CHARLES	66	45	78	30	55	-9	.8	-.1	.5	5.9	57	50.8	110	90	58	0	2	3	1	
NEW ORLEANS	67	46	83	31	57	-8	.5	-.3	-.4	6.7	72	47.9	91	84	55	0	1	2	0	
SHREVEPORT	59	40	73	27	50	-9	.4	-.5	.4	8.3	99	51.3	124	93	54	0	2	1	0	

Based on 1961-90 normals.

Weather Data for the Week Ending November 6, 1993

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS								
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Sept 1	PCT. NORMAL SINCE Sept 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE		32 AND BELOW		.01 INCH OR MORE		.50 INCH OR MORE	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE				
ME CARIBOU	40	29	50	17	34	-2	1.4	-.6	-.7	10.9	150	34.4	113	91	72	0	5	5	1	1	0	0	
PORTLAND	49	33	57	26	41	-2	1.3	-.7	-.7	9.0	113	35.6	100	95	59	0	3	5	5	1	0	0	
MD BALTIMORE	53	36	61	30	45	-.6	.5	-.3	-.3	7.3	104	35.2	101	91	61	0	2	2	2	0	0	0	
SALISBURY	56	38	64	29	47	-.5	.7	-.1	-.3	8.4	109	42.0	107	96	58	0	3	3	3	0	0	0	
MA BOSTON	54	40	62	35	47	-.3	1.0	-.1	-.5	8.7	122	34.2	100	91	60	0	3	3	3	1	1	0	
CHATHAM	53	41	58	37	47	-.1	1.3	-.3	1.0	9.3	109	32.4	87	93	68	0	0	4	4	0	0	0	
MI ALPENA	42	29	51	21	35	-.6	1.3	-.8	-.7	4.8	84	24.2	97	92	59	0	5	4	1	1	0	0	
DETROIT	48	35	57	28	42	-.3	.3	-.3	-.1	6.6	121	28.4	103	87	60	0	3	4	4	0	0	0	
FLINT	44	31	51	25	38	-.7	.3	-.3	-.1	7.1	113	29.5	113	88	64	0	5	6	6	0	0	0	
GRAND RAPIDS	46	33	53	26	40	-.3	.4	-.3	-.2	12.9	168	43.3	142	84	60	0	3	5	4	0	0	0	
HOUGHTON LAKE	42	30	50	25	36	-.6	.4	-.1	-.3	4.3	71	24.8	101	90	63	0	5	5	5	0	0	0	
LANSING	45	32	52	23	38	-.6	.2	-.5	-.1	7.9	112	33.5	123	92	58	0	4	4	4	1	0	0	
MARQUETTE	35	23	47	10	29	-.7	1.4	-.7	-.8	9.1	109	30.2	99	88	60	0	7	4	4	1	0	0	
MUSKOGON	45	34	53	26	40	-.4	.4	-.3	-.4	6.6	91	33.5	124	94	74	0	4	1	1	0	0	0	
SAULT ST. MARIE	37	25	50	15	31	-.8	.6	-.2	-.3	9.5	125	29.5	103	94	64	0	6	3	0	0	0	0	
MN ALEXANDRIA	38	22	49	7	30	-.7	.3	-.1	-.3	2.5	48	24.8	103	86	54	0	7	1	0	0	0	0	
DULUTH	36	22	46	13	29	-.6	.8	-.4	-.7	3.2	47	29.3	107	85	54	0	7	3	1	0	0	0	
INT'L FALLS	34	21	44	7	28	-.5	.1	-.3	-.0	2.8	53	20.3	90	84	59	0	6	3	0	0	0	0	
MINNEAPOLIS	42	28	52	15	35	-.5	.5	-.0	-.3	3.3	63	30.6	118	92	51	0	4	3	0	0	0	0	
ROCHESTER	42	24	57	9	33	-.6	.2	-.3	-.1	3.8	61	36.9	135	92	52	0	5	2	0	0	0	0	
MS GREENWOOD	59	38	70	25	48	-.10	1.1	-.9	-.1	7.3	93	37.2	84	90	44	0	3	1	0	0	0	0	
JACKSON	59	37	73	24	48	-.11	.2	-.8	-.2	6.3	89	40.0	89	95	52	0	4	1	0	0	0	0	
MERIDIAN	61	39	77	25	50	-.9	.9	-.1	-.5	8.3	114	47.1	100	89	51	0	3	2	0	0	0	0	
MO CAPE GIRARDEAU	51	34	63	23	43	-.10	1.1	-.7	-.1	10.9	148	41.6	108	91	54	0	3	2	0	0	0	0	
COLUMBIA	49	29	63	17	39	-.10	.7	-.7	-.7	14.1	179	56.9	170	91	50	0	4	1	0	0	0	0	
KANSAS CITY	50	28	65	17	39	-.10	.0	-.5	-.0	9.4	109	48.3	140	92	42	0	4	1	0	0	0	0	
SAINT LOUIS	51	34	65	23	43	-.9	1.1	-.4	-.1	11.8	184	48.5	152	92	47	0	3	1	0	0	0	0	
SPRINGFIELD	49	30	67	18	40	-.11	1.1	-.8	-.1	19.0	206	50.3	132	98	49	0	4	1	0	0	0	0	
MT BILLINGS	48	27	65	16	38	-.3	1.1	-.1	-.1	4.0	147	15.4	132	80	45	0	5	2	1	0	0	0	
GLASGOW	46	22	62	12	34	-.2	.5	-.1	-.1	1.1	64	15.6	150	87	48	0	7	2	1	0	0	0	
GREAT FALLS	43	24	57	7	33	-.6	.5	-.4	-.3	3.4	156	22.4	162	85	54	0	6	3	0	0	0	0	
HAVRE	47	26	59	13	36	-.0	.2	-.1	-.1	2.2	22	12.8	124	83	49	0	6	3	0	0	0	0	
HELENA	46	27	56	20	36	-.2	.2	-.1	-.2	2.2	118	18.5	174	81	43	0	6	3	0	0	0	0	
KALISPELL	44	26	53	13	35	-.2	.2	-.1	-.1	2.6	111	20.6	151	89	55	0	5	1	0	0	0	0	
MILES CITY	50	24	67	14	37	-.2	.2	-.1	-.1	1.3	85	18.3	141	82	37	0	6	3	0	0	0	0	
MISSOULA	43	27	55	21	35	-.2	.2	-.0	-.1	2.4	119	13.3	114	97	62	0	6	3	0	0	0	0	
NE GRAND ISLAND	49	24	63	11	37	-.7	.7	-.3	-.1	3.0	68	31.8	136	92	38	0	6	0	0	0	0	0	
LINCOLN	50	25	64	13	38	-.8	.7	-.3	-.1	5.1	87	24.9	94	87	34	0	4	0	0	0	0	0	
NORFOLK	48	24	62	11	36	-.7	.7	-.3	-.1	4.6	107	33.1	140	83	40	0	6	0	0	0	0	0	
NORTH PLATTE	52	19	66	8	36	-.6	.6	-.2	-.1	2.3	85	24.7	135	89	37	0	7	0	0	0	0	0	
OMAHA	48	26	61	13	37	-.7	.7	-.4	-.1	5.1	79	40.7	148	84	45	0	4	0	0	0	0	0	
SCOTTSBLUFF	49	21	65	8	35	-.6	.0	-.2	-.0	4.5	224	22.1	156	81	27	0	6	0	0	0	0	0	
VALENTINE	49	16	65	1	33	-.10	.7	-.2	-.1	2.9	76	19.3	91	78	32	0	7	1	0	0	0	0	
NV RLY	55	13	65	3	34	-.5	.0	-.2	-.0	1.2	57	9.2	102	87	18	0	7	0	0	0	0	0	
LAS VEGAS	71	45	77	39	58	-.2	.0	-.1	-.0	.7	4	4.7	139	27	10	0	0	0	0	0	0	0	
RENO	63	31	70	25	47	-.3	.0	-.2	-.0	1.4	162	6.3	109	79	22	0	4	0	0	0	0	0	
WINNEMUCCA	57	20	67	8	39	-.4	.0	-.2	-.0	.6	49	6.8	103	85	21	0	7	0	0	0	0	0	
NH CONCORD	47	31	55	25	39	-.3	.9	-.1	-.3	8.2	121	25.1	83	96	56	0	3	4	0	0	0	0	
NJ ATLANTIC CITY	55	35	61	27	45	-.5	.5	-.2	-.2	6.9	107	33.7	99	95	65	0	4	3	0	0	0	0	
NM ALBUQUERQUE	60	31	69	24	45	-.4	.0	-.1	-.0	1.1	56	7.8	97	70	18	0	3	0	0	0	0	0	
CLOVIS	60	30	74	20	45	-.7	.0	-.2	-.0	1.9	50	13.7	83	73	21	0	4	0	0	0	0	0	
ROSWELL	63	30	79	21	46	-.9	.0	-.2	-.0	1.4	44	9.8	83	85	33	0	4	0	0	0	0	0	
NY ALBANY	47	34	56	27	40	-.4	.9	-.2	-.4	7.0	109	34.9	114	93	64	0	4	4	0	0	0	0	
BINGHAMTON	40	30	51	23	35	-.8	1.3	-.6	-.8	7.9	115	36.1	115	92	72	0	6	4	1	0	0	0	
BUFFALO	45	34	60	26	40	-.6	1.1	-.3	-.5	9.8	134	34.2	107	87	68	0	4	5	0	0	0	0	
NEW YORK	55	42	62	36	49	-.3	.9	-.1	-.5	9.8	137	37.9	106	87	58	0	0	2	0	0	0	0	
ROCHESTER	45	33	61	24	39	-.6	1.5	-.8	-.9	8.1	136	24.8	92	88	65	0	3	4	1	0	0	0	
SYRACUSE	44	33	57	23	39	-.6	1.0	-.1	-.4	12.8	165	43.2	132	92	69	0	5	4	1	0	0	0	
NC ASHEVILLE	53	33	68	24	43	-.8	.5	-.6	-.2	3.1	32	31.5	65	90	52	0	4	3	0	0	0	0	
CHARLOTTE	59	39	69	29	49	-.7	1.1	-.3	-.8	4.1	54	30.7	83	91	51	0	1	4	1	0	0	0	
GREENSBORO	56	35	68	29	46	-.7	1.2	-.5	-.9	5.3	69	37.7	102	92	55	0	3	4	1	0	0	0	
HATTERAS	66	51	71	45	58	-.2	.7	-.5	-.5	15.1	134	51.6	108	84	58	0	0	3	0	0	0	0	
NEW BERN	64	43	72	34	53	-.5	.8	-.1	-.4	9.0	103	42.0	88	97	59	0	0	3	1	0	0	0	
RALEIGH	58	38	68	28	48	-.7	.9	-.2	-.7	7.3	110	32.5	91	92	58	0	1	3	1	0	0	0	
WILMINGTON	65	43	72	32	54	-.5	.6	-.1	-.4	16.8	156	56.9	113	95	58	0	1	3	0	0	0	0	
MD BISMARCK	46	21	60	10	34	-.2	.1	-.1	-.0	.3	14	25.2	173	92	47	0	7	2	0	0	0	0	
FARGO	41	20	52	5	31	-.5	.4	-.2	-.4	1.1	28	19.5	106	87	50	0	7	2	0	0	0	0	
GRAND FORKS	39	19	54	4	29	-.5	.3	-.1	-.3	1.3	36	20.3	118	85	57	0	7	1	0	0	0	0	
WILLISTON	45	20	61	7	32	-.2	.2	-.1	-.1	.5	24	17.8	140	89	52	0	6	3	0	0	0	0	
OH AKRON-CANTON	43	33	61	24	38	-.8	1.1	-.5	-.7	8.8	141	33.0	105	95	73	0	3	5	1	0	0	0	
CINCINNATI	47	33	60	27	40	-.9	.3	-.5	-.1	5.6	87	32.1	91	91	62	0	4	5	0	0	0	0	
CLEVELAND	47	35	60	26	41	-.6	1.6																

Weather Data for the Week Ending November 6, 1993

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS							
	AVERAGE	MAXIMUM	MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN. SINCE Sept 1	PCT. NORMAL SINCE Sept 1	TOTAL, IN. SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	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
TOLEDO	47	33	56	24	40	-5	.1	-.5	.0	6.1	111	26.0	94	92	61	0	4	4	0	1	0	0
YOUNGSTOWN	44	33	62	27	39	-7	.8	-.1	.5	6.6	99	29.6	93	95	71	0	3	4	0	3	4	0
OK OKLAHOMA CITY	57	30	76	16	44	-11	.0	-.6	.0	3.8	50	30.3	99	88	35	0	5	0	0	0	0	0
TULSA	55	32	74	18	44	-12	.0	-.8	.0	8.0	89	35.7	99	91	40	0	4	0	0	0	0	0
OR ASTORIA	56	39	58	34	48	-2	.8	-1.2	.7	3.0	29	37.3	78	98	61	0	0	0	1	0	0	0
BURNS	53	19	60	11	36	-2	.0	-.3	.0	.4	26	8.4	107	92	30	0	7	2	0	0	0	0
MEDFORD	64	29	69	24	47	-2	.0	-.6	.0	.7	23	13.5	105	90	29	0	6	0	0	0	0	0
PENDLETON	58	33	66	25	46	0	.0	-.3	.0	.2	13	12.0	131	78	37	0	3	0	0	0	0	0
PORTLAND	59	38	63	32	49	-1	.4	-.6	.3	1.7	32	24.0	93	97	59	0	2	2	0	0	0	0
SALEM	60	35	65	29	48	0	.3	-.9	.3	1.2	22	26.6	98	90	54	0	3	2	2	0	0	0
PA ALLENTOWN	51	38	60	32	44	-3	.9	.0	.8	13.2	174	45.3	123	96	64	0	2	2	1	1	0	0
ERIE	47	36	62	33	41	-6	1.0	-.1	.4	9.4	105	31.6	91	85	60	0	0	5	0	0	0	
HARRISBURG	51	39	63	33	45	-4	.4	-.4	.3	10.8	152	40.4	118	88	61	0	0	3	0	0	0	
PHILADELPHIA	55	41	62	34	48	-2	.6	-.3	.3	9.6	119	36.6	94	92	62	0	0	2	0	0	0	
PITTSBURGH	45	33	65	28	39	-7	1.1	.5	.8	6.9	118	32.1	102	91	65	0	3	4	1	1	0	0
SCRANTON	47	36	57	33	42	-4	1.1	.4	.8	10.8	161	33.5	107	92	68	0	0	3	1	1	0	0
RI PROVIDENCE	54	36	59	31	45	-4	1.1	.1	.6	8.3	103	33.8	90	93	63	0	2	2	1	1	0	0
SC CHARLESTON	65	45	75	33	55	-6	2.0	1.4	1.1	10.0	123	48.7	105	91	51	0	0	3	2	2	0	0
COLUMBIA	63	41	72	29	52	-6	2.3	-.4	.2	8.5	117	35.0	79	92	53	0	2	3	0	0	0	0
FLORENCE	65	43	76	34	54	-5	.4	-.1	.2	6.2	96	30.6	79	96	50	0	0	2	0	0	0	0
GREENVILLE	59	35	69	26	47	-8	1.3	.4	1.0	5.0	58	33.9	77	91	48	0	4	3	1	1	0	0
SD ABERDEEN	46	22	58	13	34	-3	.1	-.1	.1	1.7	46	25.8	129	88	48	0	7	1	0	0	0	0
HURON	46	21	61	7	34	-5	.1	-.2	.1	2.4	71	27.6	145	86	48	0	5	1	0	0	0	0
RAPID CITY	51	22	67	7	36	-4	.0	-.2	.0	2.4	96	18.6	118	83	41	0	6	1	0	0	0	0
STOUK FALLS	45	22	58	9	34	-6	.0	-.3	.0	2.5	50	34.4	154	90	46	0	7	2	0	0	0	0
TN CHATTANOOGA	56	40	77	27	48	-7	1.1	.2	.9	4.6	56	32.6	73	86	54	0	2	2	1	1	0	0
KNOXVILLE	53	38	71	28	46	-7	1.1	.3	.5	8.0	122	35.7	90	89	63	0	2	3	1	1	0	0
MEMPHIS	55	38	68	27	47	-10	.1	-.9	.1	5.7	77	34.4	81	83	47	0	3	2	0	0	0	0
NASHVILLE	52	37	66	29	44	-10	.2	-.6	.1	5.3	78	35.2	89	85	51	0	4	3	0	0	0	0
TX ABILENE	61	37	80	23	49	-11	.0	-.4	.0	5.6	92	17.5	79	87	35	0	3	0	0	0	0	0
AMARILLO	58	27	72	17	42	-9	.0	-.2	.0	1.5	43	16.8	91	78	32	0	5	0	0	0	0	0
AUSTIN	66	45	81	30	56	-10	.4	-.2	.3	3.2	44	24.8	88	84	46	0	1	2	0	0	0	0
BRAUNTON	66	47	79	30	57	-8	.3	-.8	.2	8.6	75	60.1	124	93	57	0	1	3	0	0	0	0
BROWNVILLE	73	54	86	35	64	-8	.8	-.4	.7	7.4	81	24.5	101	90	56	0	0	3	1	1	0	0
CORPUS CHRISTI	72	50	83	28	61	-8	.3	-.2	.3	3.3	37	32.3	117	86	53	0	1	1	0	0	0	0
DEL RIO	67	47	78	28	57	-7	.0	-.4	.0	1.5	24	14.1	62	67	39	0	1	2	0	0	0	0
EL PASO	69	40	78	28	55	-2	.0	-.1	.0	1.5	58	8.4	106	73	23	0	2	0	0	0	0	0
FORT WORTH	61	40	84	29	50	-9	.3	-.4	.3	8.7	93	29.0	87	78	45	0	2	1	0	0	0	0
GALVESTON	67	53	76	38	60	-8	.3	-.4	.3	12.2	130	42.8	119	81	61	0	0	1	0	0	0	0
HOUSTON	66	46	76	29	56	-8	.3	-.9	.3	6.7	60	52.4	116	87	58	0	1	2	0	0	0	0
LUBBOCK	63	32	78	20	47	-7	.0	-.3	.0	.7	16	12.1	69	77	22	0	4	0	0	0	0	0
MIDLAND	64	34	81	24	49	-9	.0	-.2	.0	3.2	68	16.0	113	78	32	0	2	0	0	0	0	0
SAN ANGELO	65	40	83	26	53	-9	.0	-.4	.0	3.1	50	14.9	79	74	37	0	2	0	0	0	0	0
SAN ANTONIO	67	44	79	27	56	-9	.3	-.4	.2	3.9	54	31.2	113	83	46	0	2	2	0	0	0	0
VICTORIA	69	48	80	31	59	-8	.5	-.4	.4	4.8	42	46.7	118	83	52	0	1	2	0	0	0	0
WACO	62	41	83	25	52	-11	.4	-.2	.3	9.2	123	28.5	101	87	50	0	2	2	0	0	0	0
WICHITA FALLS	59	34	76	21	46	-11	.1	-.4	.1	5.3	68	26.1	90	88	36	0	4	1	0	0	0	0
UT CEDAR CITY	58	23	72	14	41	-4	.0	-.2	.0	1.2	54	9.1	91	65	18	0	7	0	0	0	0	0
SALT LAKE CITY	52	29	57	26	40	-6	.0	-.3	.0	3.0	100	17.5	126	84	38	0	5	0	0	0	0	0
VT BURLINGTON	44	32	54	22	38	-4	2.2	1.5	1.6	8.4	123	31.1	105	93	65	0	4	4	1	1	0	0
VA NORFOLK	59	42	66	35	51	-6	.5	-.2	.3	7.7	101	31.9	82	92	61	0	0	3	3	0	0	0
RICHMOND	58	36	67	28	47	-6	.8	-.1	.5	5.9	79	35.9	96	94	59	0	3	3	1	0	0	0
ROANOKE	54	35	70	25	45	-7	.3	-.5	.2	6.9	86	32.0	90	89	47	0	3	4	0	0	0	0
WA QUILLAYUTE	55	38	57	35	47	0	.9	-.2	.8	6.6	36	51.3	66	98	67	0	0	3	1	1	0	0
SEATTLE-TACOMA	56	42	58	38	49	1	.1	-1.0	.1	1.6	26	22.2	84	90	60	0	0	4	0	0	0	0
SPOKANE	51	29	58	18	40	0	.0	-.4	.0	.7	36	11.2	91	83	42	0	4	2	0	0	0	0
YAKIMA	57	27	61	19	42	-1	.0	-.2	.0	.5	53	5.2	90	89	38	0	5	0	0	0	0	0
WV BECKLEY	46	32	63	20	39	-8	1.0	.3	.6	7.7	114	33.5	95	91	68	0	4	1	1	0	0	0
CHARLESTON	50	33	65	28	41	-9	.9	-.2	.5	10.0	147	35.0	97	94	65	0	3	4	5	0	0	0
HUNTINGTON	50	33	67	24	41	-7	.5	-.3	.3	8.1	117	35.4	96	89	64	0	3	4	0	0	0	0
PARKERSBURG	48	33	67	25	41	-8	.7	-.1	.5	6.7	108	33.4	94	99	64	0	2	5	0	0	0	0
WI GREEN BAY	43	28	53	19	36	-5	.4	-.1	.3	5.5	90	32.2	126	88	58	0	6	2	0	0	0	0
LACROSSE	45	27	56	17	36	-6	.0	-.4	.0	2.7	43	39.5	141	87	44	0	5	0	0	0	0	0
MADISON	45	29	54	19	37	-5	.0	-.5	.0	4.7	71	41.5	144	91	53	0	4	2	0	0	0	0
MILWAUKEE	48	35	54	27	41	-2	.2	-.4	.1	4.5	71	34.4	120	85	54	0	3	2	0	0	0	0
NAUSAU	39	25	52	17	32	-7	.6	.0	.4	6.9	93	34.5	116	87	50	0	6	3	0	0	0	0
WY CASPER	45	26	59	18	35	-3	.2	.0	.1	2.3	112	14.5	129	81	47	0	5	4	0	0	0	0
CHEYENNE	45	22	57	10	33	-6	.1	.0	.0	5.1	240	17.5	129	76	37	0	6	3	0	0	0	0
LANDER	42	18	58	5	30	-7	.8	.5	.6	2.5	105	15.3	129	88	46	0	6	3	1	0	0	0
SHERIDAN	49	22	65	12	36	-3	.0	-.2	.0	2.5	92	16.4	125	92	45	0	6	1	0	0	0	0

Based on 1961-90 normals.

HEATING DEGREE DAYS (Base 65° F) October 31 - November 6, 1993

(Cumulative totals and departures from normal are for the period July 1 - November 6, 1993)

STATES AND STATIONS	WEEKLY		CUMULATIVE			STATES AND STATIONS	WEEKLY		CUMULATIVE			STATES AND STATIONS	WEEKLY		CUMULATIVE		
	TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP from '92		TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP from '92		TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP from '92
AL BIRMINGHAM	118	53	254	42	68	LA BATON ROUGE	86	57	145	72	91	TULSA	149	79	450	225	161
AL HUNTSVILLE	140	68	320	71	90	LA LAKE CHARLES	72	45	111	52	61	OR ASTORIA	121	10	984	5	03
AL MOBILE	84	55	122	45	63	LA NEW ORLEANS	70	44	90	37	51	OR EUGENE	133	21	594	-25	96
AL MONTGOMERY	104	62	183	55	88	LA SHERBOURNE	105	68	216	120	112	OR MEDFORD	129	10	445	-90	115
AK ANCHORAGE	257	-18	1792	-360	-622	ME BANGOR	175	14	1047	93	-54	OR NORTH BEND	103	13	889	-26	126
AK BARROW	320	-109	3958	-680	-775	ME PORTLAND	164	10	934	50	-50	OR PENDELTON	134	-1	601	-90	-5
AK BETHEL	234	-72	2268	-378	-619	MD BALTIMORE	141	42	472	81	04	OR PORTLAND	112	2	430	-156	-36
AK COLD BAY	176	-26	2066	-283	-388	MA BOSTON	123	15	592	100	-78	OR REDMOND	170	10	1174	79	208
AK FAIRBANKS	330	-53	2279	-264	-779	MI ALPENA	207	36	1258	189	-104	OR SALEM	120	0	533	-176	24
AK JUNEAU	169	-35	1540	-400	-412	MI DETROIT	162	21	707	32	-97	PA ALLENTOWN	144	20	662	92	-59
AK KING SALMON	239	-36	1959	-486	-655	MI FLINT	190	43	1006	238	63	PA BRADFORD	205	35	1130	-10	-61
AK KOTzebue	301	-62	2791	-276	-630	MI GRAND RAPIDS	176	20	959	182	05	PA ERIE	163	41	728	152	44
AK MCGRATH	313	-61	2345	-396	-757	MI LANSING	185	31	987	186	-58	PA PHILADELPHIA	119	17	362	-41	-80
AK NOME	249	-63	2695	-278	-700	MI MUSKEGON	176	29	935	184	06	PA PITTSBURGH	179	49	678	52	-34
AK ST PAUL ISLAND	190	-22	2330	-429	-466	MI TRAVERSE CITY	188	28	998	104	-91	PA SCRANTON	163	28	786	126	24
AK YAKUTAT	180	-32	1778	-375	-533	MN DULUTH	250	42	1581	239	-24	PA WILLIAMSPORT	167	34	747	109	32
AZ FLAGSTAFF	170	1	958	-71	69	MN INT'L FALLS	261	37	1687	273	26	RI PROVIDENCE	140	23	635	77	-10
AZ PHOENIX	0	-15	0	-30	-7	MN MINNEAPOLIS	208	34	1064	211	57	SC CHARLESTON	67	30	106	0	24
AZ TUCSON	9	-16	14	-35	-23	MN ROCHESTER	223	43	1168	250	-24	SC COLUMBIA	89	32	196	3	25
AR FORT SMITH	144	77	338	130	127	MS JACKSON	118	70	257	105	149	SC GREENVILLE	124	55	310	68	03
AR LITTLE ROCK	140	79	311	121	126	MS MERIDIAN	104	52	202	28	99	SD ABERDEEN	213	21	1094	140	-76
CA FRESNO	20	-28	31	-103	-10	MO COLUMBIA	180	71	640	208	117	SD HURON	215	35	1077	204	12
CA LOS ANGELES	4	-11	7	-64	06	MO KANSAS CITY	181	68	630	191	109	SD PIERRE	197	28	964	180	49
CA SACRAMENTO	29	-21	63	-75	22	MO SAINT LOUIS	155	59	476	135	92	SD RAPID CITY	199	28	1015	102	44
CA SAN DIEGO	6	-8	10	-35	10	MO SPRINGFIELD	175	76	551	173	124	SD SIOUX FALLS	219	42	1017	159	42
CA SAN FRANCISCO	15	-38	190	-230	39	MT BILLINGS	190	20	1093	152	159	TN BRISTOL	153	53	483	72	39
CO COLORADO SPRINGS	214	57	947	155	214	MT GLASGOW	215	16	1292	177	101	TN CHATTANOOGA	120	46	270	7	-17
CO DENVER	181	32	813	111	194	MT GREAT FALLS	219	41	1513	389	258	TN KNOXVILLE	134	46	382	50	68
CO GRAND JUNCTION	182	51	617	116	207	MT HAVRE	198	-2	1397	245	103	TN MEMPHIS	125	64	276	82	93
CT HARTFORD	161	31	751	140	-39	MT HELENA	199	5	1426	221	245	TN NASHVILLE	143	66	369	86	92
DE WILMINGTON	129	26	452	40	-52	MT KALISPELL	212	4	1554	67	163	TX ABILENE	113	67	273	152	171
DC WASHINGTON	126	48	362	85	-41	MT MISSOULA	208	13	1312	50	133	TX AMARILLO	157	59	505	168	164
FL DAYTONA BEACH	35	27	35	27	34	NE GRAND ISLAND	195	46	801	158	48	TX AUSTIN	69	50	118	84	70
FL FORT MYERS	14	14	14	14	14	NE NORTH PLATTE	203	37	931	144	77	TX BROWNSVILLE	35	32	55	52	36
FL JACKSONVILLE	50	30	54	5	28	NE OMAHA	193	55	783	199	102	TX CORPUS CHRISTI	41	33	63	55	30
FL KEY WEST	0	0	0	0	00	NE SCOTT'S BLUFF	205	42	1003	201	175	TX DALLAS FT WORTH	104	67	226	142	140
FL MIAMI	4	4	4	4	04	NV ELKO	219	50	1305	328	249	TX EL PASO	72	16	198	61	81
FL ORLANDO	31	25	31	25	31	NV RLY	215	32	1314	211	358	TX HOUSTON	66	41	120	67	68
FL PENSACOLA	74	47	84	21	48	NV LAS VEGAS	47	10	69	-25	12	TX LUBBOCK	123	50	342	107	147
FL TALLAHASSEE	75	47	96	23	39	NV RENO	123	-20	530	-245	92	TX LUFKIN	93	60	182	105	94
FL TAMPA	30	24	30	24	30	NV WINNEMUCCA	183	22	847	-34	102	TX MIDLAND ODESSA	111	51	289	121	165
FL WEST PALM BEACH	10	10	10	10	10	NH CONCORD	179	17	1012	91	-58	TX SAN ANGELO	88	46	235	121	130
GA ATHENS	111	49	237	43	52	NJ ATLANTIC CITY	140	32	567	97	-1	TX SAN ANTONIO	66	44	132	83	79
GA ATLANTA	108	45	215	11	52	NJ NEWARK	124	30	424	65	-2	TX VICTORIA	52	34	94	63	48
GA AUGUSTA	80	27	158	-17	25	NM ALBUQUERQUE	136	26	406	33	133	TX WACO	96	64	225	159	152
GA MACON	96	49	186	34	65	NY ALBANY	171	27	850	114	-80	TX WICHITA FALLS	128	71	327	167	185
GA SAVANNAH	66	34	100	9	41	NY BINGHAMTON	206	51	1046	179	-78	UT CEDAR CITY	169	25	684	9	152
ID BOISE	168	27	724	2	86	NY BUFFALO	176	36	859	155	-11	UT SALT LAKE CITY	172	39	637	41	142
ID FOCATELLO	196	27	1122	193	292	NY MASSENA	204	36	1009	17	-172	VT BURLINGTON	188	25	978	70	-71
IL CHICAGO	181	45	818	206	32	NY NEW YORK	112	18	405	43	-32	VA LYNCHBURG	143	48	427	43	34
IL MOLINE	185	49	739	165	-12	NY ROCHESTER	180	40	899	168	-51	VA NORFOLK	100	36	239	8	07
IL PEORIA	180	53	692	172	47	NY SYRACUSE	180	40	876	135	-43	VA RICHMOND	125	42	343	15	-31
IL ROCKFORD	194	47	874	206	02	NC ASHEVILLE	150	50	476	26	38	VA ROANOKE	141	44	472	66	26
IL SPRINGFIELD	177	60	644	177	127	NC CAPE HATTERAS	46	6	66	-59	-34	WA OLYMPIA	127	-12	830	-184	40
IN EVANSVILLE	154	54	478	92	101	NC CHARLOTTE	110	45	247	23	30	WA QUILLAYUTE	126	-4	1100	-93	10
IN FORT WAYNE	165	34	717	125	-3	NC GREENSBORO	131	48	371	57	05	WA SEATTLE TACOMA	112	-6	663	-96	57
IN INDIANAPOLIS	170	51	691	192	121	NC RALEIGH DURHAM	118	45	320	59	25	WA SPOKANE	176	-1	1037	26	98
IN SOUTH BEND	168	34	804	179	58	NC WILMINGTON	74	34	125	-12	-19	WA YAKIMA	159	6	833	7	61
IA DES MOINES	190	52	801	227	96	ND BISMARCK	216	13	1302	182	-5	WV BECKLEY	160	55	634	-20	30
IA MASON CITY	205	35	1037	208	01	ND FARGO	237	34	1220	140	-25	WV CHARLESTON	163	62	510	80	25
IA SIOUX CITY	201	49	886	222	47	ND MINOT	232	24	1400	217	59	WV HUNTINGTON	163	60	504	62	52
IA WATERLOO	197	38	845	73	-46	ND WILLISTON	226	14	1467	261	127	WV HAU CLAIRE	223	43	1164	230	87
KS CONCORDIA	174	53	642	194	44	OH AKRON CANTON	187	56	787	159	-34	WV GREEN BAY	203	30	1067	141	-12
KS DODGE CITY	179	67	640	250	131	OH CLEVELAND	168	42	706	100	-33	WV MADISON	193	27	952	91	06
KS GOOGLAND	191	44	849	203	145	OH COLUMBUS	166	42	601	40	-20	WV MILWAUKEE	164	11	725	-27	-114
KS RUSSELL	172	51	620	188	105	OH CINCINNATI	175	61	622	145	52	WV MORGANTHAU	206	19	999	-36	142
KS TOPEKA	178	64	612	174	101	OH DAYTON	175	52	687	147	57	WV CHEYENNE	220	44	1254	218	261
KS WICHITA	165	63	512	173	123	OH TOLEDO	174	32	767	83	-13	WV LANDER	243	50	1138	114	250
KY LEXINGTON	167	64	527	104	77	OH YOUNGSTOWN	184	46	838	125	-54	WV ROCK SPRINGS	232	27	1445	235	343
KY LOUISVILLE	156	60	474	101	134	OK OKLAHOMA CITY	147	74	412	196	173	WV SHERIDAN	204	17	1293	204	228

Based on 1961-90 normals.

October Weather and Crop Summary

Weather

The driest weather since October 1992 covered the upper and middle Mississippi Valley, while the axis of heaviest rain shifted southeastward across the Gulf Coast States. Northeastern Texas was inundated with as much as a foot of rain in 4 days between October 17 and 20, while the Florida Peninsula amassed 6- to 12-inch totals incrementally.

An amplified, meridional air flow kept the West warm and dry, but left the Plains and Midwest vulnerable to increasingly strong cold frontal passages. Temperatures averaged as much as 4°F above normal in the Pacific Northwest, but ranged up to 6°F below normal in Oklahoma.

The series of fronts systematically closed out the growing season from northwest to southeast across the primary Corn and Soybean Belt. The first cold front of the month delivered a killing freeze to eastern North Dakota, Minnesota, and northern Iowa on October 2, only 2 days after a freeze in Wisconsin. The remainder of the Corn Belt garnered another week of mild, generally dry weather before a strong storm brought heavy rain on October 8 and 9. Sub-freezing temperatures overspread all but the southern Corn Belt on the morning of October 10. Temperatures also dropped below 32°F as far south as southeastern Colorado, central Kansas, and southern Missouri.

In the central Plains, the progression of successively cooler frontal passages allowed the newly-planted winter wheat to emerge and adapt under favorable conditions. However, typical transitional weather abruptly yielded to winter at month's end, as a record-setting blast dropped temperatures to the freezing mark as far south as coastal Texas, southern Louisiana, and northern Florida. Brownsville, TX, whose temperature had reached 90°F or higher on 18 of the first 20 days of the month, recorded 35°F on October 31.

The Halloween 1993 arctic outbreak brought snow flurries to parts of Texas and the Southeast for the first time ever in October, and deposited heavy, wet snow from the middle Ohio River Valley to northern New England.

In contrast, areas west of the Rockies spent much of the month under a ridge of high pressure, keeping temperatures above normal and precipitation scarce. Eureka, on California's northern coast, set an all-time temperature record on October 26 when the mercury climbed to 87°F (records date back more than 100 years). Southern California paid a harsh price for the warm, dry weather, which in combination with a recent 5-year drought (1986-87 to 1990-91) and last year's wet winter, left the area prone to wildfires when gusty, easterly Santa Ana winds swept out of the mountains on October 27. Within 5 days, more than 250 square miles of land and more than 700 buildings had been consumed by flames.

Fieldwork

Cold weather in early October ended the growing season across the upper Midwest. By mid-month, killing frost had occurred over the central Plains and the middle Mississippi Valley. An arctic air mass at the end of the month brought freezing temperatures as far south as southern Texas and the Mississippi Delta.

The frost in early October damaged late-planted corn in the upper Midwest. Harvest across the Corn Belt advanced slowly the first part of the month as producers waited for the corn to dry down and field conditions to improve. Cooler, drier conditions by the end of the month allowed the corn harvest to make good gains across the Corn Belt. Harvest progress was ahead of last year but behind average. In the South and Southeast, the summer's hot, dry conditions allowed producers to harvest the corn crop ahead of last year and average.

The soybean harvest had just started in early October. Producers across the country took advantage of favorable harvesting conditions whenever possible and removed almost three-quarters of the Nation's crop.

Progress of the cotton harvest in early October was ahead of normal due to a fast-maturing crop. By mid-month, the harvests in Arizona and Texas experienced some rain delays, but conditions in other areas allowed the harvest to advance. Harvest progress at the end of October remained ahead of last year and average, even though low temperatures and rain slowed progress in Texas and the Mississippi Delta.

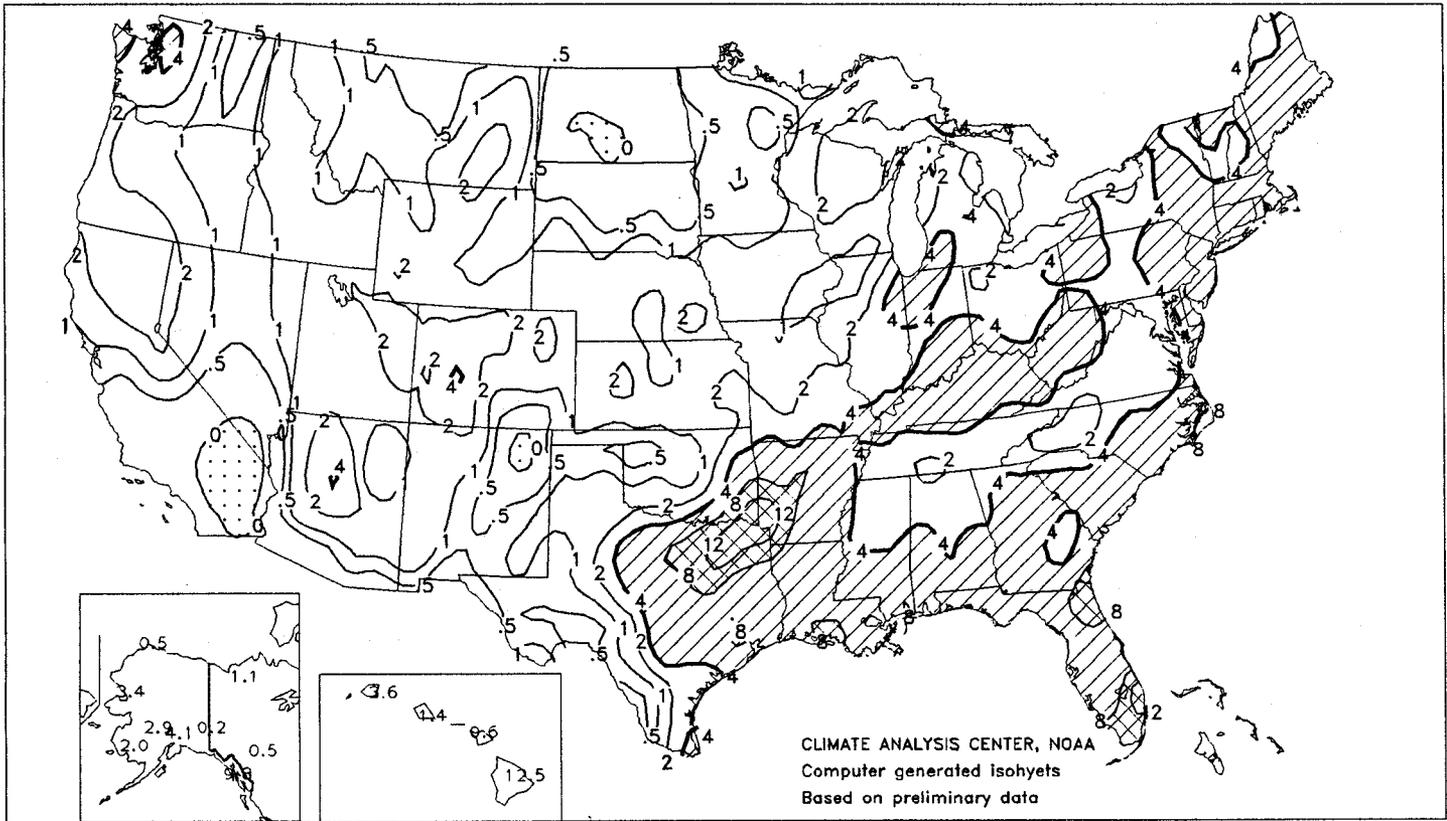
In early October, progress of the sorghum harvest was near last year's pace but behind average. Wet conditions and a slow maturing crop caused progress to fall even further behind normal by the end of October.

Progress of the rice harvest was behind last year and average at the beginning of October. The harvest was finished by the end of October, with no unusual weather delays encountered.

During the first half of October, harvest of the late-planted and slow maturing spring wheat crop was completed. Planting of the 1994 winter wheat crop was active and on time at the beginning of October. Rain delayed some plantings in the northern Great Plains during the first half of the month. Excessive dryness caused some delays in the Southeast during the middle of the month. By the end of October, producers had made up for the delays, and planting progress was equal to last year and average. Winter wheat emergence was slightly ahead of last year and equal to average. At the end of October, nearly three-quarters of the crop was rated good to excellent.

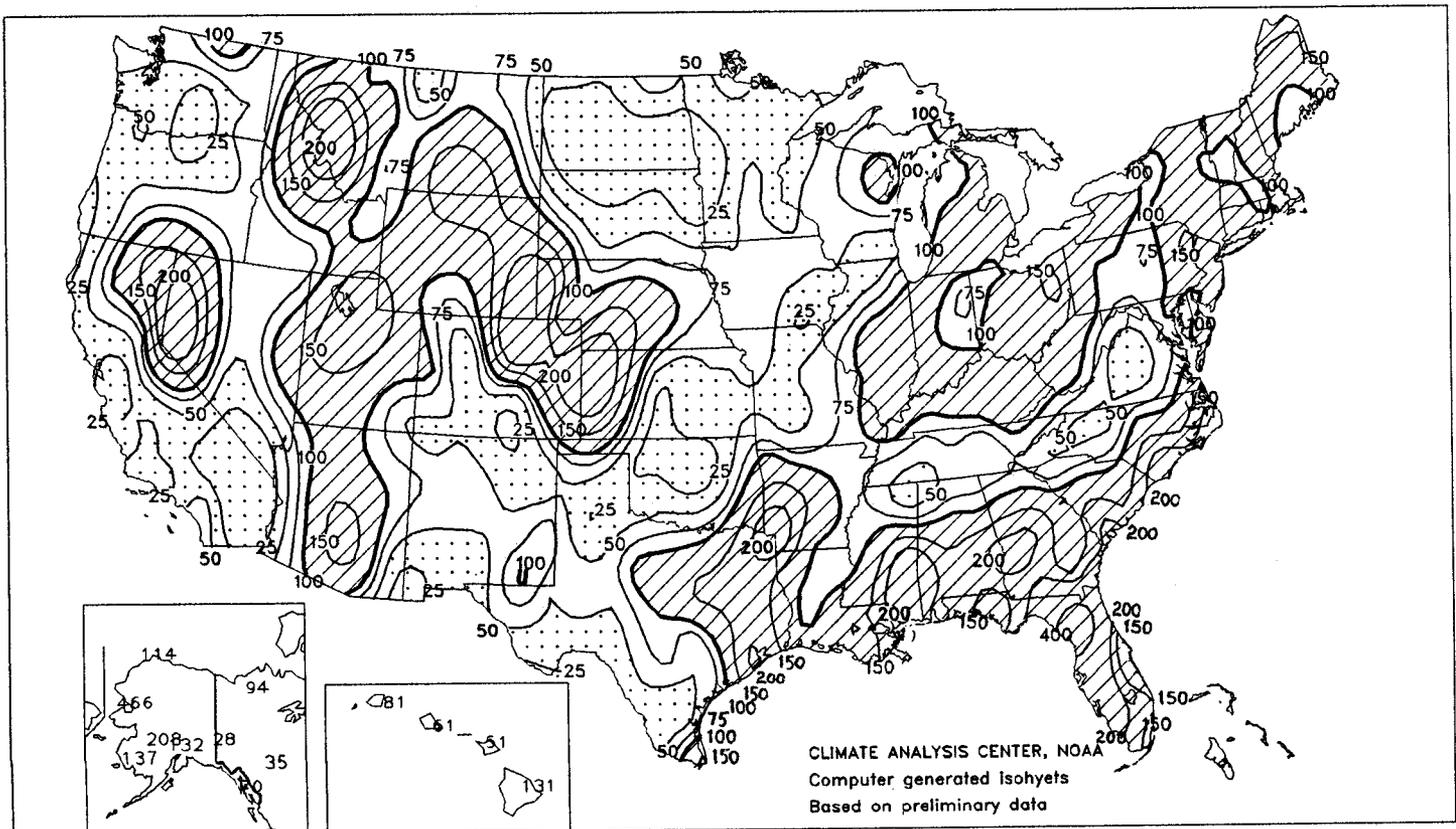
TOTAL PRECIPITATION (inches)

OCT 1993



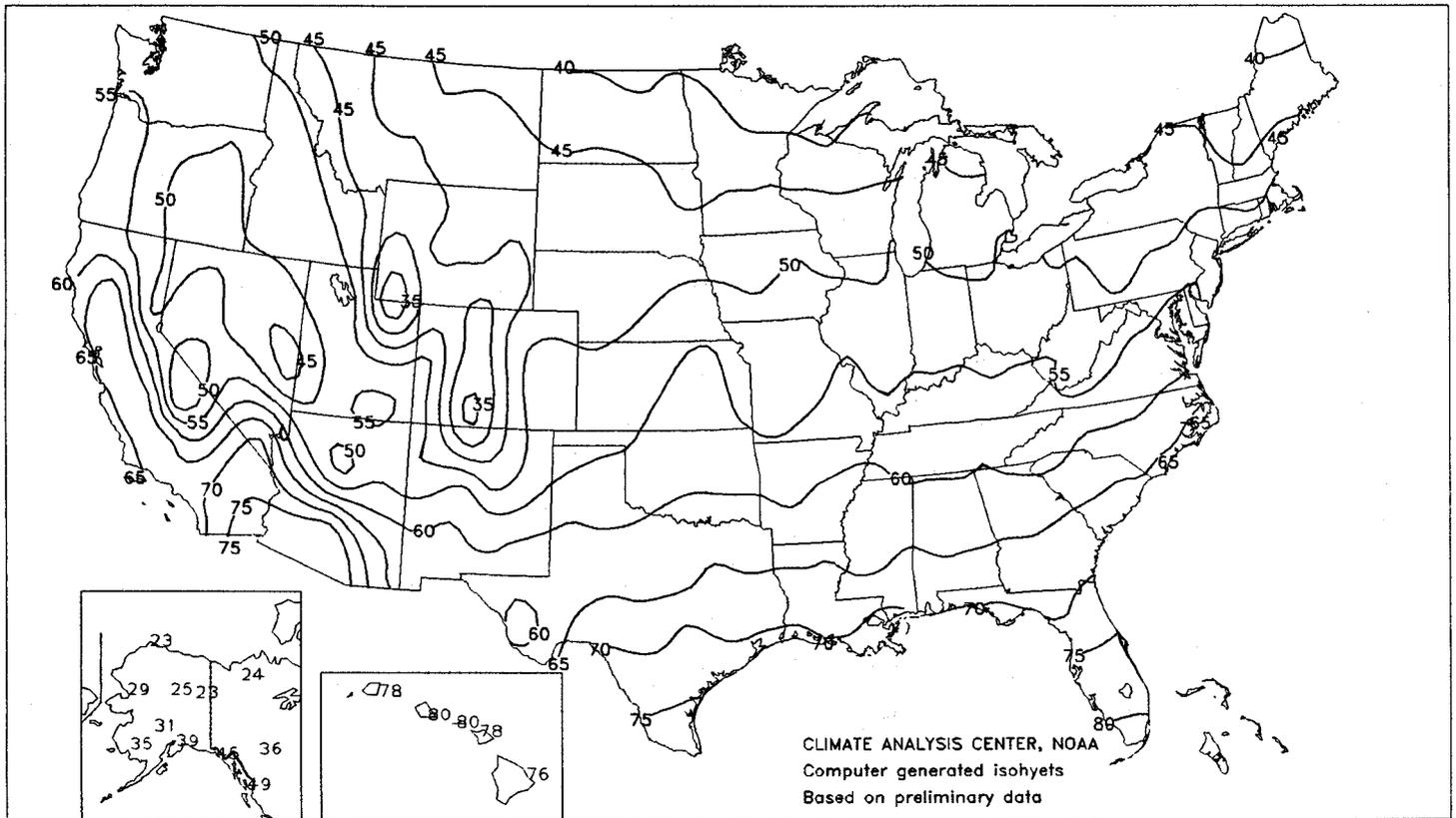
PERCENT OF NORMAL PRECIPITATION

OCT 1993



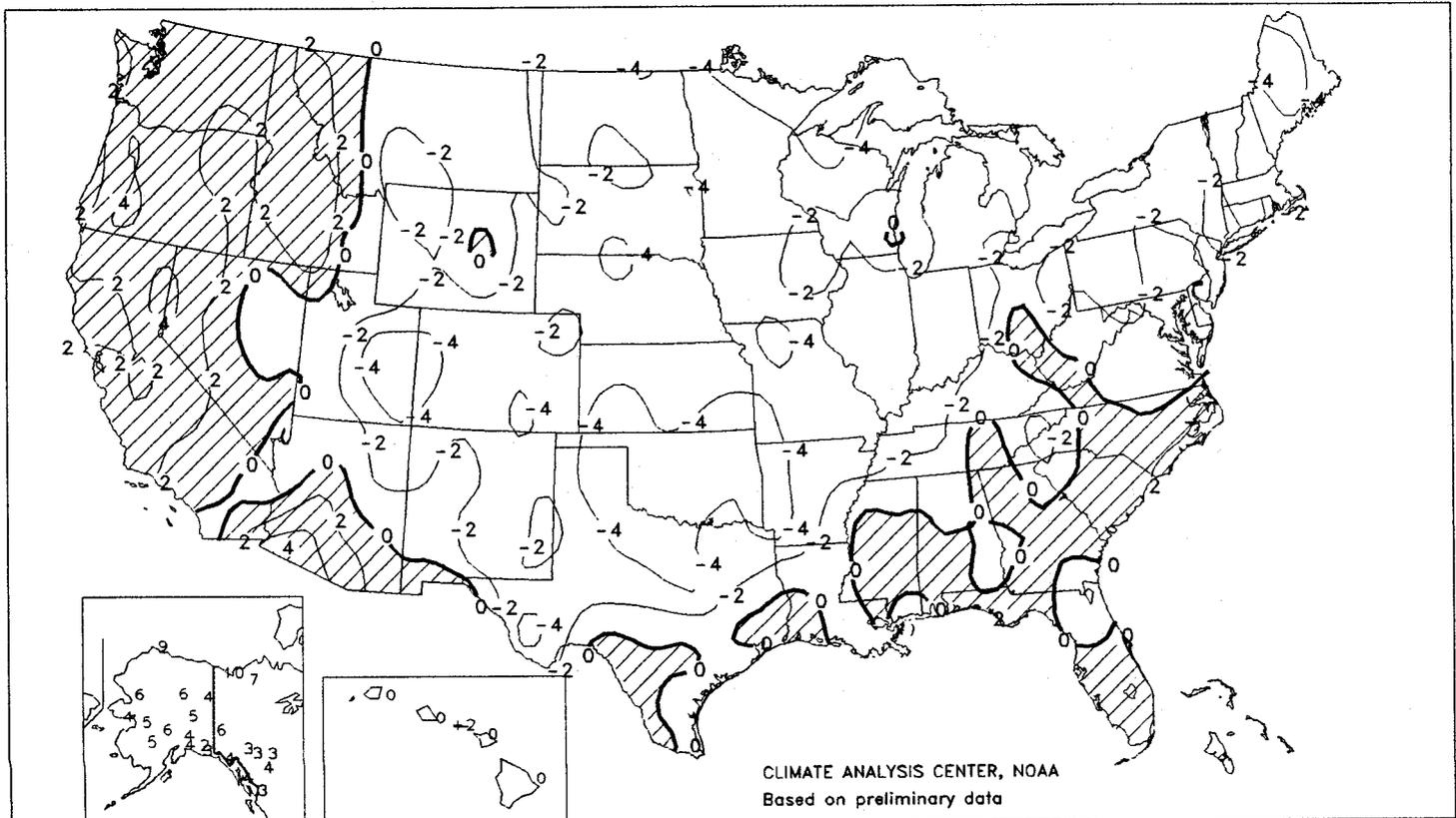
AVERAGE TEMPERATURE(°F)

OCT 1993



Departure of Average Temperature from Normal(°F)

OCT 1993



TEMPERATURE AND PRECIPITATION SUMMARY

October 1993

STATES AND STATIONS	Temp. °F		Precip.		STATES AND STATIONS	Temp. °F		Precip.		STATES AND STATIONS	Temp. °F		Precip.	
	AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE		AVERAGE	DEPARTURE	TOTAL	DEPARTURE
AL BIRMINGHAM	62	0	3.2	0.4	LA BATON ROUGE	67	-2	5.4	2.0	OK YOUNGSTOWN	49	-2	2.9	0.2
AL HUNTSVILLE	60	-1	1.8	-1.1	LA LAKE CHARLES	69	0	3.8	-0.1	OK OKLAHOMA CITY	57	-5	0.5	-2.9
AL MOBILE	68	0	5.3	2.4	LA NEW ORLEANS	70	1	3.7	0.6	OK TULSA	56	-6	1.1	-2.5
AK MONTGOMERY	65	1	4.1	1.4	ME SHREVEPORT	64	-2	4.4	0.7	OR ASTORIA	54	2	2.2	-3.5
AK ANCHORAGE	39	4	1.9	-0.1	ME CARIBOU	39	-4	4.3	1.2	OR BURNS	47	2	0.4	-0.3
AK BARROW	24	10	0.5	0.1	ME PORTLAND	46	-2	3.8	-0.1	OR MEDFORD	58	4	0.7	-0.8
AK FAIRBANKS	29	5	0.6	-0.3	MD BALTIMORE	56	-1	3.0	0.0	OR PENDLETON	55	3	0.2	-0.6
AK JUNEAU	46	3	8.9	1.0	MA SALISBURY	56	-2	4.5	1.1	OR PORTLAND	57	3	1.6	-1.1
AK KODIAK	43	2	9.8	2.6	MA BOSTON	52	-3	3.6	0.3	OR SALEM	56	4	1.1	-1.9
AK NOME	33	4	2.8	1.4	MA CHATHAM	52	-1	4.7	0.7	PA ALLENTOWN	52	-2	5.3	2.4
AZ FLAGSTAFF	47	0	3.3	1.8	MI ALPENA	44	-3	2.0	-0.1	PA ERIE	51	-2	4.4	0.6
AZ PHOENIX	77	2	1.3	0.6	MI DETROIT	52	0	2.2	0.1	PA HARRISBURG	54	-1	2.4	-0.5
AZ PRESCOTT	57	2	1.6	0.5	MI FLINT	47	-3	2.2	0.0	PA PHILADELPHIA	58	2	2.7	0.1
AZ TUCSON	73	2	0.8	-0.2	MI GRAND RAPIDS	48	-2	4.3	1.5	PA PITTSBURGH	52	-1	2.8	0.4
AZ WINSLOW	55	-2	1.1	0.2	MI HOUGHTON LAKE	45	-2	1.8	-0.4	PA SCRANTON	50	-2	4.0	1.2
AZ YUMA	80	4	0.1	-0.2	MI LANSING	48	-2	3.0	0.3	PA WILLIAMSPORT	50	-2	3.1	-0.2
AR FORT SMITH	59	-3	4.8	1.1	MI MARQUETTE	40	-3	3.3	-0.3	RI PROVIDENCE	51	-2	3.6	-0.1
AR LITTLE ROCK	61	-2	4.7	0.8	MI MUSKEGON	48	-3	1.7	-1.1	SC CHARLESTON	67	0	3.0	0.1
CA BAKERSFIELD	69	2	0.2	-0.1	MI SAULT ST. MARIE	41	-5	5.2	2.0	SC COLUMBIA	64	0	4.3	1.2
CA BISHOP	57	0	--	--	MI ALEXANDRIA	44	-3	0.4	-1.8	SC FLORENCE	65	2	3.3	0.7
CA BURKEA	57	2	0.6	-2.1	MI DULUTH	40	-4	0.6	-1.9	SC GREENVILLE	60	0	2.1	-1.9
CA FRESNO	68	3	0.1	-0.4	MI INT'L FALLS	37	-5	0.7	-1.2	SD ABERDEEN	46	-1	0.4	-1.1
CA LOS ANGELES	68	2	0.1	-0.2	MI MINNEAPOLIS	47	-2	0.8	-1.4	SD HURON	46	-3	0.6	-0.8
CA REDDING	65	2	2.9	0.7	MI ROCHESTER	46	-2	0.8	-1.5	SD RAPID CITY	48	0	0.9	-0.2
CA SACRAMENTO	65	1	0.5	-0.6	MI ST. CLOUD	43	-4	1.4	-0.7	SD SIOUX FALLS	47	-2	0.6	-1.2
CA SAN DIEGO	67	0	0.2	-0.2	MS GREENWOOD	64	0	3.4	-0.2	TN BRISTOL	55	-2	2.2	-0.3
CA SAN FRANCISCO	63	2	0.4	-0.8	MS JACKSON	62	-2	4.1	0.8	TN CHATTANOOGA	61	1	1.8	-1.4
CA STOCKTON	--	--	--	--	MS MERIDIAN	65	1	5.7	2.6	TN KNOXVILLE	58	-1	2.2	-0.6
CO ALAMOSA	41	-3	0.3	-0.4	MS TUPELO	60	-2	2.5	-1.0	TN MEMPHIS	62	-1	1.9	-1.1
CO CO. SPRINGS	48	-3	0.9	0.1	MO CAPE GIRARDEAU	56	-2	3.3	0.3	TX NASHVILLE	59	-2	2.2	-0.4
CO DENVER	49	-2	2.3	1.3	MO COLUMBIA	53	-3	2.0	-1.3	TX ABILENE	63	-4	3.2	0.7
CO GRAND JUNCTION	52	-3	1.3	0.4	MO KANSAS CITY	54	-3	1.8	-1.5	TX AMARILLO	55	-4	0.5	-0.8
CO PUEBLO	49	-4	0.5	0.0	MO SAINT LOUIS	56	-2	2.6	-0.1	TX AUSTIN	71	-1	2.4	-1.0
CT BRIDGEPORT	53	-2	4.0	0.9	MO SPRINGFIELD	54	-3	1.4	-2.3	TX BEAUMONT	70	0	6.0	1.7
CT HARTFORD	50	-2	4.2	0.6	MT BILLINGS	47	-1	2.1	1.0	TX BROWNSVILLE	75	-1	4.7	1.9
DC WASHINGTON	58	-2	2.6	-0.4	MT GLASGOW	45	-1	0.5	-0.1	TX CORPUS CHRISTI	73	-1	1.9	-1.1
FL APALACHICOLA	70	0	6.2	2.8	MT GREAT FALLS	46	-1	1.1	0.3	TX DEL RIO	71	1	0.7	-2.3
FL DAYTONA BEACH	74	0	5.5	1.4	MT HAVRE	46	0	T	-0.5	TX EL PASO	64	0	0.2	-0.6
FL FT. MYERS	78	1	6.9	3.0	MT HELENA	44	-1	0.7	0.1	TX FORT WORTH	64	-1	5.1	1.1
FL JACKSONVILLE	70	-3	8.8	5.0	MT KALISPELL	44	2	1.0	0.1	TX GALVESTON	72	0	7.1	4.2
FL KEY WEST	81	1	6.0	1.6	MT MILES CITY	47	-1	1.1	0.2	TX HOUSTON	69	0	5.3	0.8
FL MIAMI	81	2	7.2	1.6	MT MISSOULA	46	2	2.0	1.3	TX LAREDO	--	--	--	--
FL ORLANDO	75	0	4.6	2.2	NE GRAND ISLAND	51	-2	1.6	0.2	TX LUBBOCK	59	-2	0.5	-1.4
FL TALLAHASSEE	69	0	5.4	2.4	NE LINCOLN	50	-3	1.6	-0.6	TX MIDLAND	62	-3	1.1	-0.2
FL TAMPA	76	1	4.2	2.2	NE NORFOLK	50	-1	1.4	-0.2	TX SAN ANGELO	64	-2	1.1	-1.3
FL WEST PALM BEACH	79	1	12.0	4.4	NE NORTH PLATTE	49	-1	1.6	0.6	TX SAN ANTONIO	71	0	3.1	-0.1
GA ATHENS	62	0	3.9	1.2	NE OMAHA	51	-3	1.6	-0.8	TX VICTORIA	72	1	2.5	-1.9
GA ATLANTA	63	1	3.8	0.8	NE SCOTTSBLUFF	46	-3	2.4	1.5	TX WACO	65	-4	5.5	2.2
GA AUGUSTA	65	1	4.2	1.4	NE VALENTINE	47	-5	1.1	-0.1	TX WICHITA FALLS	60	-4	2.1	-1.0
GA MACON	64	0	6.4	4.2	NV ELKO	46	-2	T	-0.6	UT BLANDING	53	-1	0.6	-0.9
GA SAVANNAH	68	1	2.6	0.2	NV ELY	44	-2	1.0	0.1	UT CEDAR CITY	51	-1	1.1	0.1
HI HILO	76	0	12.8	3.2	NV LAS VEGAS	69	1	T	-0.2	UT SALT LAKE CITY	53	-1	2.8	1.3
HI HONOLULU	80	0	1.6	-0.7	NV RENO	55	4	1.4	1.0	VT BURLINGTON	46	-2	4.4	1.5
HI MAHULUI	78	0	0.6	-0.6	NV WINNEMUCCA	50	2	0.5	-0.1	VA LYNCHBURG	57	0	1.8	-1.6
HI LIHUE	78	0	4.8	0.4	NH CONCORD	45	-3	3.6	0.4	VA NORFOLK	61	0	3.4	0.2
ID BOISE	53	1	0.5	-0.3	NJ ATLANTIC CITY	53	-2	3.8	1.0	VA RICHMOND	59	0	2.2	-1.3
ID LEWISTON	54	2	0.7	-0.2	NM ALBUQUERQUE	56	-1	0.6	-0.2	VA ROANOKE	55	-1	2.2	-0.7
ID POCATELLO	47	-1	1.0	0.1	NM CLOVIS	57	-1	1.2	-0.1	VA COLVILLE	51	5	1.0	-0.2
IL CAIRO	--	--	--	--	NM ROSWELL	60	-3	0.6	-0.5	VA QUILLAYUTE	53	2	5.5	-5.1
IL CHICAGO	49	-3	2.2	-0.2	NY ALBANY	49	-2	3.3	0.5	VA SEATTLE-TACOMA	55	3	1.4	-1.8
IL MOLINE	51	-2	0.4	-2.6	NY BINGHAMTON	46	-3	3.4	0.5	VA SPOKANE	50	3	0.4	-0.6
IL PEORIA	52	-2	2.4	-0.2	NY BUFFALO	49	-2	3.7	0.6	VA WALLA WALLA	56	2	0.8	-0.6
IL QUINCY	52	-3	2.0	-1.4	NY NEW YORK	57	-1	4.1	1.0	VA YAKIMA	48	2	0.5	0.0
IL ROCKFORD	49	-2	0.7	-2.1	NY ROCHESTER	48	-3	3.2	0.8	WV BECKLEY	53	0	3.3	0.4
IL SPRINGFIELD	53	-3	2.9	0.3	NY SYRACUSE	48	-3	2.9	-0.3	WV CHARLESTON	55	-1	3.5	0.6
IN EVANSVILLE	56	-3	3.8	0.8	NC ASHEVILLE	55	-1	1.2	-3.3	WV ELKINS	50	-1	2.5	-0.6
IN FORT WAYNE	51	-2	1.2	-1.3	NC CHARLOTTE	62	1	2.3	-1.1	WV HUNTINGTON	55	1	3.5	0.5
IN INDIANAPOLIS	52	-3	2.2	-0.4	NC GREENSBORO	58	0	1.2	-2.2	WV PARKERSBURG	53	-2	3.5	0.8
IN SOUTH BEND	50	-2	4.1	1.0	NC HATTERAS	69	3	11.6	6.6	WI GREEN BAY	46	-2	2.3	0.1
IA DES MOINES	50	-2	1.7	-1.1	NC NEW BERN	65	1	4.4	1.4	WI LACROSSE	49	-2	0.9	-1.3
IA DUBUQUE	48	-3	1.6	-1.3	NC RALEIGH	60	-1	3.0	0.1	WI MADISON	48	-2	0.9	-1.5
IA SIOUX CITY	49	-2	1.8	-0.1	NC WILMINGTON	67	3	8.3	5.0	WI MILWAUKEE	51	1	0.4	-2.0
IA WATERLOO	50	0	1.8	-0.8	ND BISMARCK	44	-2	T	-0.9	WI WAUSAU	44	-2	2.3	-0.4
KS CONCORDIA	54	-3	0.9	-1.1	ND FARGO	44	-2	0.2	-1.5	WY CASPER	47	1	1.2	0.2
KS DODGE CITY	53	-5	1.0	-0.3	ND GRAND FORKS	42	-3	0.3	-1.0	WY CHEYENNE	44	-3	1.8	1.1
KS GOODLAND	50	-2	2.0	1.1	ND WILLISTON	42	-3	0.1	-0.7	WY LANDER	46	-1	1.3	0.2
KS TOPEKA	54	-2	1.4	-1.7	OH AKRON-CANTON	50	-3	4.4	2.1	WY SHERIDAN	45	-1	1.9	0.7
KY WICHITA	55	-4	1.6	-1.2	OH CINCINNATI	53	-2	2.6	-0.2	PR SAN JUAN	83	1	2.8	-2.9
KY BOWLING GREEN	56	-2	2.9	-0.1	OH CLEVELAND	51	-2	3.5	1.0					
KY JACKSON	56	-1	4.6	--	OH COLUMBUS	53	1	3.0	0.7					
KY LEXINGTON	55	-2	4.2	1.6	OH DAYTON	52	-3	3.1	0.6					
KY LOUISVILLE	56	-2	4.0	1.3	OH MANSFIELD	50	-3	3.2	0.9					
KY PADUCAH	56	-3	3.8	0.8	OH TOLEDO	50	-2	1.5	-0.6					

Based on 1961-90 normals.

October Weather in Historical Perspective

Six of nine climatic regions registered below-normal temperatures (table 1) as cool air repeatedly settled southward between the Rockies and the Appalachians. The South region (12th coldest October) ranked lowest, followed by the Northeast and East North Central regions (both 16th coldest). A strong sub-tropical jet stream blocked much of the cold from the Southeast until late in the month, resulting in near-normal temperatures (41st coldest). Farther west, the Northwest (26th warmest October) and West regions (30th warmest) spent much of the month underneath a ridge of high pressure. Nationally, October 1993 was the 21st coldest such month since 1895, with an average temperature of 53.2°F, 1.2°F below normal (fig. 1).

Monthly precipitation ranged from considerably below normal in the Northwest (18th driest October), to above normal in the

Southeast (24th wettest). In the West region (California and Nevada), monthly precipitation was less than 60 percent of normal, providing an ingredient for wildfires when Santa Ana winds struck southern California late in the month. Farther east, dry weather was welcomed in the upper Mississippi River basin, which notched its 25th driest October on record. For the Nation as a whole, the national standardized precipitation index ranked October 1993 as the 38th driest such month on record (fig. 2).

Precipitation in the primary Hard Red Winter Wheat (HRW) Belt averaged near normal (fig. 3), but was highly variable. HRW Belt precipitation totals ranged from more than 200 percent of normal in western Kansas and eastern Colorado to less than 25 percent of normal in north-central Oklahoma.

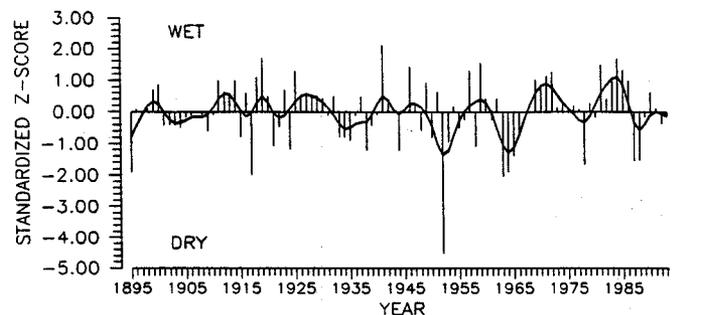
--Brad Rippey

Table 1. Temperature and precipitation rankings for October 1993, based on the period 1895-1993. 1 = Driest/Coldest, 99 = Wettest/Hottest.

Region	Precipitation	Temperature
Northeast	63	16
East North Central	26	16
Central	54	19
Southeast	76	41
West North Central	42	30
South	59	12
Southwest	57	27
Northwest	18	74
West	34	70
National	38	21

Figure 2

U.S. NATIONAL NORMALIZED PRECIPITATION INDEX OCTOBER, 1895-1993

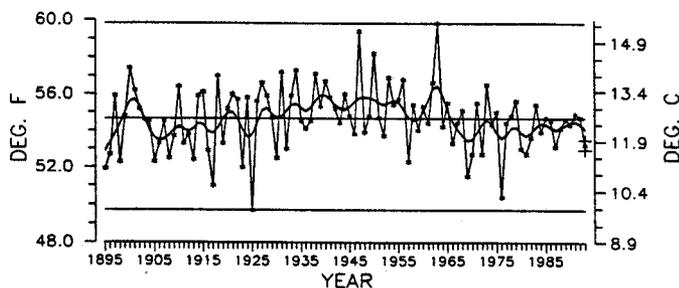


National Climatic Data Center, NOAA

THICK SMOOTH CURVE IS 9-POINT BINOMIAL FILTER.

Figure 1

U.S. NATIONAL TEMPERATURE OCTOBER, 1895-1993



National Climatic Data Center, NOAA

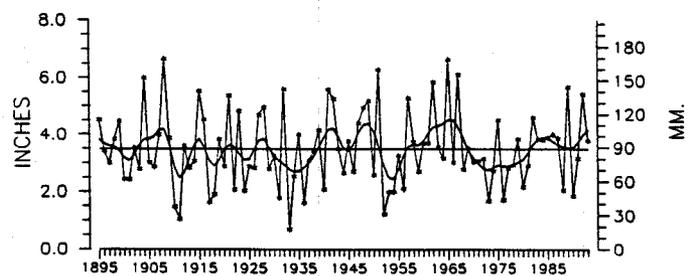
STRAIGHT HORIZONTAL LINES ARE: MAXIMUM VALUE (TOP), LONG-TERM AVERAGE (MIDDLE), MINIMUM VALUE (BOTTOM)

THICK SMOOTH CURVE IS 9-POINT BINOMIAL FILTER.

CONFIDENCE INTERVAL FOR CURRENT YEAR IS INDICATED BY *.

Figure 3

PRIMARY HARD RED WINTER WHEAT BELT PRECIPITATION OCTOBER, 1895-1993



National Climatic Data Center, NOAA

THICK SMOOTH CURVE IS 9-POINT BINOMIAL FILTER.

HEATING DEGREE DAYS (Base 65° F) October 1993

STATES AND STATIONS	TOTAL	DEP. FROM NORMAL	STATES AND STATIONS	TOTAL	DEP. FROM NORMAL	STATES AND STATIONS	TOTAL	DEP. FROM NORMAL
AL BIRMINGHAM	147	-1	PORTLAND	579	67	BRADFORD	605	35
AL HUNTSVILLE	187	14	MD BALTIMORE	298	22	ERIE	429	59
MOBILE	64	12	MA BOSTON	393	72	PHILADELPHIA	225	-58
AK ANCHORAGE	106	15	MI ALPENA	659	98	PITTSBURGH	412	12
AK BARROW	1278	-141	MI DETROIT	412	-23	SCRANTON	469	46
BETHEL	932	-172	MI FLINT	554	86	WILLIAMSPORT	459	51
COLD BAY	690	-97	MI GRAND RAPIDS	530	45	RI PROVIDENCE	412	53
FAIRBANKS	1087	-150	MI LANSING	543	56	SC CHARLESTON	52	-22
JUNEAU	589	-118	MI MUSKEGON	532	76	COLUMBIA	113	-25
KING SALMON	812	-199	MI TRAVERSE CITY	557	55	GREENVILLE	184	9
KOTZEBUE	1101	-204	MN DULUTH	769	109	SD ABERDEEN	602	53
MCCRATH	1041	-208	INT'L FALLS	845	144	HURON	593	81
WOME	1000	-147	MINNEAPOLIS	566	64	PIERRE	539	74
ST PAUL ISLAND	731	-112	ROCHESTER	605	75	RAPID CITY	513	8
YAKUTAT	612	-135	MS JACKSON	160	56	SIoux FALLS	557	49
AZ FLAGSTAFF	536	-16	MERIDIAN	125	2	TN BRISTOL	300	20
PHOENIX	0	-17	MO COLUMBIA	373	88	CHATTANOOGA	161	-29
TUCSON	5	-22	KANSAS CITY	365	86	KNOXVILLE	239	1
AR FORT SMITH	212	76	SAINT LOUIS	292	55	MEMPHIS	164	33
LITTLE ROCK	188	62	SPRINGFIELD	340	91	NASHVILLE	227	32
CA FRESNO	11	-73	MT BILLINGS	526	28	TX ABILENE	174	99
LOS ANGELES	3	-27	GLASGOW	614	28	AMARILLO	332	106
SACRAMENTO	30	-48	GREAT FALLS	572	29	AUSTIN	70	53
SAN DIEGO	4	-16	HAVRE	594	-1	BROWNSVILLE	36	36
SAN FRANCISCO	65	-70	HELENA	642	25	CORPUS CHRISTI	41	41
CO COLORADO SPRINGS	514	46	KALISPELL	629	-87	DALLAS FT WORTH	145	94
DENVER	480	51	MISSOULA	573	-72	EL PASO	145	57
GRAND JUNCTION	406	74	NE GRAND ISLAND	460	65	HOUSTON	76	45
CT HARTFORD	461	64	NORTH PLATTE	513	39	LUBBOCK	222	68
DE WILMINGTON	287	-1	OMAHA	454	91	LUFKIN	112	64
DC WASHINGTON	222	27	SCOTTSBLUFF	566	89	MIDLAND ODESSA	185	79
FL DAYTONA BEACH	12	12	NV ELKO	580	44	SAN ANGELO	159	88
FORT MYERS	0	0	ELY	634	39	SAN ANTONIO	85	55
JACKSONVILLE	19	-12	LAS VEGAS	31	-31	VICTORIA	61	46
KEY WEST	0	0	RENO	312	-128	WACO	155	117
MIAMI	0	0	WINNEMUCCA	441	-64	WICHITA FALLS	213	109
ORLANDO	10	10	NH CONCORD	603	70	UT CEDAR CITY	432	11
PENSACOLA	34	-5	NJ ATLANTIC CITY	358	34	SALT LAKE CITY	389	16
TALLAHASSEE	42	-6	NEWARK	271	19	VT BURLINGTON	586	53
TAMPA	7	7	NM ALBUQUERQUE	277	18	VA LYNCHBURG	272	2
WEST PALM BEACH	0	0	NY ALBANY	503	44	NORFOLK	143	-21
GA ATHENS	142	2	BINGHAMTON	579	77	RICHMOND	213	-20
ATLANTA	129	-9	BUFFALO	488	57	ROANOKE	304	21
AUGUSTA	91	-38	MASSENA	593	35	WA OLYMPIA	354	-120
MACON	110	4	NEW YORK	259	7	QUILLAYUTE	372	-81
SAVANNAH	50	-13	ROCHESTER	521	86	SEATTLE TACOMA	285	-93
ID BOISE	364	-50	SYRACUSE	519	76	SPOKANE	447	-102
POCATELLO	539	12	NC ASHEVILLE	310	15	YAKIMA	399	-69
IL CHICAGO	479	88	CAPE HATTERAS	22	-68	WV BECKLEY	387	-13
MOLINE	433	49	CHARLOTTE	144	-17	CHARLESTON	312	13
PEORIA	408	52	GREENSBORO	236	10	HUNTINGTON	314	14
ROCKFORD	496	69	RALEIGH DURHAM	203	14	WI EAU CLAIRE	605	62
SPRINGFIELD	382	68	WILMINGTON	58	-44	GREEN BAY	585	58
IN EVANSVILLE	296	30	ND BISMARCK	645	47	MADISON	523	24
FORT WAYNE	432	44	FARGO	652	54	MILWAUKEE	428	-28
INDIANAPOLIS	414	76	MINOT	677	63	CASPER	542	-35
SOUTH BEND	456	61	WILLISTON	704	78	WY CHEYENNE	634	76
IA DES MOINES	460	88	OH AKRON CANTON	462	63	LANDER	585	21
MASON CITY	560	64	CLEVELAND	424	37	ROCK SPRINGS	698	56
SIoux CITY	499	82	COLUMBUS	374	13	SHERIDAN	603	36
WATERLOO	472	2	CINCINNATI	373	46			
KS CONCORDIA	376	86	DAYTON	415	60			
DODGE CITY	392	139	TOLEDO	469	33			
GOODLAND	470	70	YOUNGSTOWN	484	49			
RUSSELL	378	98	OK OKLAHOMA CITY	269	132			
TOPEKA	358	75	TULSA	294	150			
WICHITA	321	100	OR ASTORIA	322	-62			
KY LEXINGTON	321	34	EUGENE	268	-70			
LOUISVILLE	296	42	MEDFORD	211	-109			
LA BATON ROUGE	84	36	NORTH BEND	286	-27			
LAKE CHARLES	62	27	PENDLETON	310	-81			
NEW ORLEANS	42	12	PORTLAND	225	-101			
SHREVEPORT	132	69	REDMOND	449	-69			
ME BANGOR	655	122	SALEM	254	-127			
			PA ALLENTOWN	410	37			

Based on 1961-90 normals.

National Agricultural Summary

November 1 - 7, 1993

HIGHLIGHTS: Cold weather dominated most of the country this week. A storm mid-week brought rain to the Southeast and Atlantic coast, and snow from parts of Montana to parts of New York. The rest of the Nation was dry. The cold temperatures stressed livestock and slowed the growth of pasture and fall-planted crops. Dry conditions across the central parts of the Midwest allowed the corn and sorghum harvests to advance rapidly. The moisture improved the planting prospects for small grains in the Southeast.

SMALL GRAINS: Winter wheat seeding in the 19 major producing States advanced to 94 percent (%) complete, compared with 92% at this time in 1992 and a 94% average. In Kansas, some rain-damaged fields were replanted. Dry conditions in southern Texas still delayed planting of some fields. Winter wheat emerged was at 84%, compared with 79% last year and an 83% average. Excessive dryness stressed wheat and small grains in parts of Washington, Texas, and South Dakota. Insects caused concern for growers in parts of Kansas and the Northwest, though the insect problems were not severe yet.

CORN: Corn harvest in the 17 major producing States reached 73% complete, compared with 49% last year and an 81% average. The dry conditions allowed the harvest to advance rapidly in the Corn Belt, with exceptional progress made in Minnesota and Iowa. Wet conditions limited harvest progress in Pennsylvania and New York.

SOYBEANS: In the 19 major producing States, soybean harvest moved to 88%, the same as last year and average. The cool, dry conditions allowed the harvest to advance briskly across the Great Lakes region, the Ohio Valley, and the lower Mississippi Valley. Although the Georgia harvest made good advances, progress in the Southeast lagged the average.

COTTON: Cotton harvest in the 14 producing States advanced to 77%, compared with 65% last year and a 67% average. Harvest progress in the South was ahead of normal in all States except Mississippi where rain hindered progress. Small boll size hindered the harvest in Tennessee. Frost damaged late-planted cotton in Georgia and aided cotton defoliation in Texas.

SORGHUM: In the 12 major producing States, harvest reached 86%, compared with 73% last year and an 88% average. Cool, dry conditions allowed good progress in the Great Plains. Nebraska and New Mexico each harvested at least 30% of their crops. Some grain moisture problems were reported in Kansas.

OTHER FIELD CROPS: The peanut harvest neared completion in the Southeast and South and continued in Oklahoma and Texas. Progress was generally behind average. Freezing temperatures damaged some peanuts in Georgia and Texas. Wetter conditions aided the sweetpotato harvest in Louisiana. The cranberry harvest neared completion in the Northwest and Northeast. The sugar cane harvest was active in Florida, while winds and heavy rain caused some lodging of sugar cane in Louisiana. The cool, dry conditions allowed the sunflower harvest in the northern Great Plains to exceed last year's progress but still lag normal.

FRUITS AND NUTS: The citrus harvests were active in Arizona, California, and Florida. The early orange harvest was active in Florida and the navel orange harvest was off to a slow start in California. Freezing temperatures in the Southeast damaged some of the remaining unharvested apples. The table grape harvest ended in California. In Washington, the grape harvest neared completion. Grape losses from previous cold weather were not severe. The California walnut, pistachio, and almond harvests slowed. The pecan crop was rated generally fair across the Nation. Harvest was active nationally. Some pecans in Texas suffered freeze damage.

VEGETABLES: Wind and wet weather damaged some vegetables in the southwest and west-central areas of Florida. Cold weather ended harvest of the remaining summer vegetables in Texas. The same cold conditions damaged vegetables planted in the Rio Grande Valley, the San Antonio Winter Garden, and east Texas; however, cabbage and onion crops were not generally affected. High winds caused topsoil erosion in the Riverside area of California.

PASTURE AND LIVESTOCK: Pasture feed conditions remained generally fair to good across the Nation. This week's cold weather set warm season grasses dormant across many areas. Cattle continued to move to corn stubble in the Midwest. Below-normal temperatures stressed livestock across much of the country. Nationally, livestock remained in generally good condition. Supplemental feeding continued where needed. Hay shortages remained in some areas of Texas.

Crop Progress

for the Week Ending November 7, 1993

SORGHUM (Percent Harvested)

	Current	Last Wk	1992	Avg.
AR	97	96	99	98
CO	52	25	37	57
IL	77	56	82	87
KS	80	60	45	90
LA	100	100	100	99
MS	100	98	100	100
MO	85	69	81	89
NE	86	54	70	89
NM	39	28	64	46
OK	59	41	61	58
SD	85	63	74	95
TX	93	90	89	89
12 States	86	72	73	88

These 12 States produced 99% of the 1992 grain sorghum crop.

COTTON (Percent Harvested)

	Current	Last Wk	1992	Avg.
AL	83	69	65	83
AZ	85	74	85	68
AR	82	70	77	84
CA	90	75	97	91
GA	84	74	54	67
LA	94	88	95	94
MS	83	75	89	89
MO	87	80	73	87
NM	58	39	31	30
NC	75	61	34	60
OK	51	35	27	25
SC	74	68	45	67
TN	88	80	70	80
TX	63	54	40	39
14 States	77	67	65	67

These 14 States produced 99% of the 1992 cotton crop.

CORN (Percent Harvested)

	Current	Last Wk	1992	Avg.
CO	58	37	63	70
GA	99	99	98	99
IL	86	67	65	89
IN	70	44	44	70
IA	75	45	42	85
KS	85	80	85	98
KY	89	84	86	87
MI	40	20	15	55
MN	67	28	39	84
MO	84	66	70	90
NE	69	46	45	85
NC	96	94	95	94
OH	73	52	28	57
PA	40	38	33	47
SD	54	30	30	82
TX	100	100	100	100
WI	55	26	22	64
17 States	73	50	49	81

These 17 States produced 94% of the 1992 corn crop.

WINTER WHEAT (Percent Planted)

	Current	Last Wk	1992	Avg.
AR	62	44	63	63
CA	25	15	15	24
CO	100	100	100	100
GA	24	12	15	16
ID	97	94	100	100
IL	87	76	95	97
IN	92	80	93	92
KS	99	98	98	99
MI	100	95	90	97
MO	81	64	80	86
MT	96	92	100	100
NE	100	100	100	100
NC	47	37	44	45
OH	99	94	93	93
OK	98	98	93	97
OR	96	93	99	93
SD	100	100	100	100
TX	90	85	86	90
WA	99	98	100	97
19 States	94	90	92	94

These 19 States produced 90% of the 1992 winter wheat crop.

SOYBEANS (Percent Harvested)

	Current	Last Wk	1992	Avg.
AL	67	52	55	61
AR	57	43	76	64
GA	42	22	42	44
IL	97	93	96	98
IN	94	85	91	92
IA	99	96	100	100
KS	95	80	90	95
KY	63	51	67	69
LA	88	82	84	81
MI	95	80	70	85
MN	97	95	99	99
MS	65	58	75	71
MO	85	66	88	88
NE	99	96	99	99
NC	17	14	21	27
OH	98	93	93	91
SC	17	12	17	23
SD	99	95	100	100
TN	59	43	58	64
19 States	88	80	88	88

These 19 States produced 95% of the 1992 soybean crop.

WINTER WHEAT (Percent Emerged)

	Current	Last Wk	1992	Avg.
AR	44	31	53	48
CA	8	5	5	5
CO	97	96	97	96
GA	16	7	14	11
ID	86	64	89	85
IL	67	53	85	84
IN	78	56	78	77
KS	95	90	90	90
MI	80	70	75	85
MO	54	38	64	70
MT	74	67	90	91
NE	100	100	100	100
NC	30	21	30	32
OH	88	75	76	73
OK	88	83	62	82
OR	88	68	86	74
SD	100	99	97	99
TX	75	71	64	76
WA	89	84	97	92
19 States	84	77	79	83

These 19 States produced 90% of the 1992 winter wheat crop.

Crop Condition (Percent)

for the Week Ending Nov. 7, 1993

WINTER WHEAT

State	VP	P	F	G	EX
AR	0	0	19	73	8
CA	0	0	10	85	5
CO	0	2	14	63	21
GA	0	3	60	37	0
ID	0	0	16	71	13
IL	0	11	45	38	6
IN	0	3	32	59	6
KS	0	0	11	44	45
MI	2	8	25	45	20
MO	2	3	53	40	2
MT	0	2	26	59	13
NE	0	1	8	77	14
NC	0	6	74	20	0
OH	1	4	20	58	17
OK	0	0	62	38	0
OR	0	0	21	70	9
SD	0	1	16	72	11
TX	1	8	42	44	5
WA	0	0	22	78	0
19 State	0	2	29	52	17
Prev Week	0	2	25	58	15
Prev Year	1	8	34	42	15

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

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service.

ALABAMA: Rainfall 0.14 to 2.18 in. north; 0.32 to 4.01 in. central; 0.40 to 3.59 in. south. Temperatures 6 to 11° below normal north; 5 to 10° below normal central; 4 to 9° below normal south. Lows 17 to 29° north; 20 to 30° central; 25 to 33° south. Highs 70 to 77° north; 72 to 78° central; 73 to 77° south.

Days suitable for fieldwork 4.3. Soil moisture 22% short, 78% adequate. Sorghum harvested 83%, 93% 1992, 94% avg. Peanuts dug 97%, 100% 1992, 100% avg.; combined 95%, 98% 1992, 99% avg. Wheat seeded 53%, 60% 1992, 54% avg. Pasture feed 4% very poor, 30% poor, 53% fair, 13% good. Primary activities: Harvesting sorghum, cotton, soybeans, land preparation for seeding small grains, general care of livestock, poultry, catfish.

ARIZONA: Cloudy statewide, 31st, 1st. Clear skies, cooler rest of period. Temperatures varied normal to 1° above normal. Extremes 16°; 75° higher elevations: 31°; 89° deserts.

Cotton harvest continued active; 85% harvested, 85% 1992, 68% avg. Stalk shredding, plow down moderate west, central, light east. Cotton 15% fair, 75% good, 10% excellent. Alfalfa good. Harvest light to moderate all areas. Lemons, grapefruits, naval oranges, harvested western, central areas. Central areas tangerines, tangelos, cantaloupe, honeydews, broccoli, mixed greens, parsley, green onions, radishes, spinach, beets, cilantro, dill, kale, leeks, swiss chard, pecans harvested. Apples, chilies, squash, cabbage, pumpkins, tomatoes harvested eastern production areas. Lettuce harvested western, central, eastern. Watermelons, sweet corn harvested eastern, central.

ARKANSAS: Cool week, temperatures well below normal. Light precipitation statewide middle of week. Extremes 11°; 78°. Rainfall 0.05 to 0.53 in.

Days suitable for fieldwork 6. Moderate rate of crop growth. Soil moisture supplies 3% short, 84% adequate, 13% surplus. Main farming activities: Wheat, oats seedbed preparation; shredding cotton stalks; harvesting rice, soybean, sorghum, peanuts; planting, fertilizing fall forages; working cattle. Cotton gins continued to run full time. Cotton classing office reported 755,496 bales had been classed as of November 4, 1993, compared to 853,976 bales as of November 5, 1992. Oats planted 81% current week, 74% 1992, 75% avg. Fruit crop good. Pastures above average feed to herds. Livestock good; harvested, 37% 1992, 33% avg. Pastures feed 8% very poor, 26% poor, 52% fair, 14% good. Cattle 3% poor, 58% fair, 39% good. Hogs 7% poor, 25% fair, 68% good.

CALIFORNIA: Dry, warm conditions entire State. Temperatures 5 to 9° above normal.

Planting winter wheat progressed many areas. Additional field preparation, herbicide application fall, winter small grains continued. Planting winter forage starting. Producers waiting additional precipitation before planting. Rice harvest finishing. Producers burn straw, stubble. Cotton harvest winding down. Corn grain, silage harvested some areas. Sugarbeets harvested, dry beans windrowed, combined. Alfalfa hay, green chop cut, good yields, quality reported. Milo harvest scattered areas. Table grape harvest, complete. Wine grape harvest nearly complete. Walnut, pistachio harvest lost momentum. Pecan harvest began. Fuji, Granny Smith apples, persimmons, pomegranates, dates, kiwifruit harvested, packed. Avocado harvest continued. Tulare County, olive harvest 90% complete. Desert valley grapefruit, lemons, tangerines harvested. Navel orange harvest slow start, variable maturity. Strawberry harvest continued. Broccoli harvest active San Joaquin Valley. Harvest cauliflower underway central valley. San Benito County celery harvest light. Harvest sweet corn continued Coachella Valley. Lettuce harvest started central valley

good quality. Palo Verde Valley melon harvest begun good quality. Onion harvest Merced County continued. Potato harvest continued Coachella Valley. Sweet potato harvest continued San Joaquin Valley. Fresh market tomatoes harvested San Joaquin Valley. Green tomatoes harvested Stanislaus County. Western Riverside County topsoil loss high winds. Ground work crops around State. Methyl Bromide applied fields preparation planting carrots. Other crops harvested: Eggplant, cucumbers, cabbage, snap beans, peppers, pumpkins, squash. Rangeland, pasture conditions remain dry. Overall conditions improved slightly supplemental feeding active. Calving, lambing active. Sheep moved to alfalfa pastures. Livestock good.

COLORADO: Little moisture fell in the State. Cooler than normal temperatures much of the week. Light rain, snow occurred on the 2nd, 3rd along with locally high winds mainly in the mountains, east. More snow fell in the southern mountains on the 4th, 5th moisture amounts at lower elevations were less than 0.25 in. Cool, dry weather predominated over the weekend. Temperatures mostly 8 to 12° below normal.

Days suitable for fieldwork 4.5. Soil moisture 2% very short, 18% short, 77% adequate, 3% surplus. Winter wheat emerged 97%, 97% 1992, 96% avg. Corn harvested 58%, 63% 1992, 70% avg. Sorghum harvested 52%, 37% 1992, 57% avg. Winter wheat 2% poor, 14% fair, 63% good, 21% excellent. Livestock good to excellent. Pasture, range feed mostly good.

FLORIDA: Temperatures 2 to 8° below normal. Lows; upper 20s to low 30s Panhandle, Big Bend, mid 30s to mid 40s northeast, central areas, 40s interior southern areas, 50s southeast coast. Highs; mid 70s Panhandle, upper 80s southern areas. Rain totals; north Florida 1.00 to 3.00 in. northeast areas, 1.00 in. or less, Peninsula mostly under 0.50 in.

Soil moisture short to adequate with scattered areas surplus. Cotton, soybean harvest active. Sugarcane harvest active. Small grain, sugarcane planting active. Hay making virtually complete. Citrus groves, trees, fruit very good condition. Very little rain, sub-surface moisture adequate. New growth slowing. Good natural fruit color. Early orange harvest active for fresh use. Seedless grapefruit moving to domestic, export markets. Early tangerine, K-Early Citrus Fruit harvest active most areas. Caretakers cutting cover crops, dirt banking young trees, placing heaters for cold protection. Skies mostly clear, little rain reported central, south. Damage noted on west central, southwest crops from wind, wet weather of previous weekend. Center of harvesting moving to southern areas. First of season strawberries reported picked Plant City area. Available; snap beans, sweet corn, cucumbers, eggplant, specialty lettuce, peppers, radishes, squash, tomatoes, cherry tomatoes, watermelons. Planting small grain pastures continues. Pasture feed 25% fair, 70% good, 5% excellent. Cattle herds fair to good.

GEORGIA: Dry, warming early, midweek. Rain, scattered thunderstorms Statewide late in week. Colder temperatures weekend. Rain 1.00 to 2.00 in. common, isolated totals 3.00 to 5.00 in. Temperatures near 70° northeast mountains, upper 70s southeast, extreme south. Freezing temperatures or frost November 7th, 8th. Coldest varied mostly upper teens to mid 20s mountains, above freezing southeast. Temperatures 3 to 8° below normal.

Days suitable for fieldwork 4.5. Soil moisture 1% very short, 21% short, 69% adequate, 9% surplus. Cotton 3% very poor, 17% poor, 57% fair, 23% good; 99% bolls open, 96% 1992, 97% avg.; frost damage late planted cotton south. Sorghum 1% very poor, 25% poor, 54% fair, 20% good; 93% harvested for grain, 80% 1992, 86% avg. Peanuts 99% dug, 100% 1992, 100% avg.; 97% threshed, 100%

1992, 99% avg.; freeze damage dug peanuts. Soybeans 27% very poor, 50% poor, 20% fair, 3% good; 100% dropping leaves, 100% 1992, 99% avg. Rye 73% planted, 72% 1992, 71% avg. Other small grains 8% poor, 60% fair, 32% good; 54% planted, 60% 1992, 50% avg. Onions 8% planted, 14% 1992, 14% avg. Other vegetables 22% very poor, 32% poor, 29% fair, 17% good. Apples 89% harvested, 95% 1992, 97% avg.; some freeze damage unharvested apples. Pecans 14% fair, 86% good; 17% harvested, 37% 1992, 33% avg. Pastures feed 8% very poor, 26% poor, 52% fair, 14% good. Cattle 3% poor, 58% fair, 39% good. Hogs 7% poor, 25% fair, 68% good.

HAWAII: Heavy rain soaking parts of Oahu highlighted week's weather. Frontal band stalling over Oahu brought flooding to low lying areas. Other islands experienced variable showers. Temperatures mid 60s to high 80s. Rainfall 0.10 to 8.10 in.

Minor damage to agriculture was reported in Waimanalo, Oahu since fields muddy, wet. Irrigation usage reduced with added showers. Banana output moderate. Papaya supply at high levels. Tomato harvesting increasing.

IDAHO: Temperatures 1° above to 7° below normal. Precipitation 0.03 to 0.40 in. north, none southwest, none south central, none to 0.02 in. east. Freezing temperatures throughout the State. Some snow eastern areas.

Soil moisture adequate. Hay, roughage supplies adequate. Activities: Harvesting sugarbeets, finishing other harvest, fall fieldwork. Livestock good to excellent. Majority of cattle off of summer range.

ILLINOIS: Surges of cold air from Canada produced colder, drier than normal weather last week. Highs mid 40s to lower 50s, which was 5 to 13° below normal. Lows upper 20s to lower 30s, which was 2 to 9° below normal. Extremes upper teens. Precipitation less than 0.15 in. north, less than 0.25 in. south. Drier than normal by an average of 0.60 in. across the State.

Days suitable for fieldwork 6.25. Corn, soybean acres harvested continued to progress last week, as both were right on track with average. Soil moisture continued to decrease slightly to 68% adequate, 32% surplus. Other farm activities: Harvesting sorghum, seeding wheat, fall tillage, applications of anhydrous ammonia, other fertilizers, some lime, nitrogen applications, hauling grain, tending livestock. Pasture feed 93% of normal.

INDIANA: Temperatures 4 to 10° below normal. High temperatures mid 40s to near 50°. Lows near 30° to the mid 30s. Rainfall totals, water equivalent, averaged around 0.25 in. or less with most totals at 0.10 in. or less.

Days suitable for fieldwork 5. Another good week of harvesting progress. Pastures 91% of normal, 89% last week. Topsoil 2% short, 81% adequate, 17% surplus. Subsoil 1% short, 81% adequate, 18% surplus. Moisture content of harvested corn 20%, soybeans 13%. Tobacco processed for sale 24%.

IOWA: Temperatures 4 to 6° below normal. Extremes 11°; 63°. Precipitation very light; trace most areas to 0.07 in. extreme southeast (normal 0.41 in.).

Days suitable for fieldwork 6.8. Topsoil 92% adequate, 8% surplus. Subsoil 48% adequate, 52% surplus. Field corn average moisture content 23%. Field corn moisture content now being harvested 21%. Grain storage availability 48% adequate, 52% surplus. 1994 Row crop acreage fall tilled 30%, 15% 1992, 37% normal. 1994 row acreage fall fertilizer 23%, 13% 1992, 30% normal. Pasture feed 2% very poor, 15% poor, 42% fair, 39% good, 2% excellent. Livestock continue to be mostly good; cold blast at weekend was hard on livestock.

KANSAS: Temperatures 7° below normal statewide. Precipitation below normal, 0.04 in. west central, 0.02 in. south central, none elsewhere.

Days suitable for fieldwork 6.5. Topsoil 31% short to very short, 69% adequate. Subsurface 3% short to very short, 90% adequate, 7% surplus. Soil moisture conditions continued to worsen southwest, south central. Cold weather continued across the State, fields were dry, farmers able to sow wheat. All wheat that remains to be seeded is in eastern third of State. Several eastern areas replanting due to heavy rains. Light, moderate infestations of green bugs causing concern central, south central; cold weather killed infestations northeast. Corn harvest made progress despite cold weather. Harvest north central made excellent progress. Northwest continues to lag behind the rest of the State with less than half the corn acreage harvested. Sorghum crop is having problems drying down western third of State. West central, southwest still able to make good harvest progress, northwest progressed slowly. Most cattle being moved to grain pasture, corn/sorghum stalks, market. Ranchers continue to cull herds, wean calves, address health problems. Pastures, ranges still being grazed are in good condition for this time of year.

KENTUCKY: Temperatures below normal, highs 40s 3rd. Highs upper 50s to 60s 4th, 5th, cooling into 40s to 30s weekend. Lows also below normal, 20s early week, 30s to 40s mid week, back to 20s on 7th. Precipitation below normal; snow flurries over the weekend.

Days suitable for fieldwork 3.1. Soil moisture 9% short, 85% adequate, 6% surplus. Shower activity slowed corn, soybean harvest, benefitted tobacco stripping, small grain development. Corn combining nearing completion in west, west central areas. Burley tobacco 27% stripped, 27% 1992, 29% avg. Stripped tobacco 1% poor, 15% fair, 73% good, 11% excellent. Winter wheat 76% seeded 79% 1992, 80% avg.; wheat 27% fair, 67% good, 6% excellent. Pastures still providing cattle much of their roughage requirements.

LOUISIANA: Temperatures 7.8 to 10.5° below normal. Extremes 23°; 83°. Rainfall 0.16 in. northeast to 0.72 in. east central.

Days suitable for fieldwork 3.2. Soil moisture 7% short, 46% adequate, 47% surplus. Hay 99% final cutting, 100% 1992, 99% avg. Slowed due to rain, cold temperatures. Pecans 26% harvested, 49% 1992, 32% avg. Soybeans 100% shedding leaves, 97% 1992, 98% avg. Harvest continued. Sweet potatoes 87% harvested, 83% 1992, 88% avg. Wetter conditions have helped harvest. Sugarcane 2% poor, 44% fair, 54% good; 39% harvested, 35% 1992, 34% avg. High winds, rain lodged taller cane. Wheat 36% planted, 41% 1992, 40% avg.; 27% emerged 32% 1992, 24% avg. Slowed due to wet conditions. Livestock 53% fair, 47% good. Winter herd management was active. Pastures 17% very poor, 5% poor, 13% fair, 65% good. Improved with the recent rain. Vegetables 23% poor, 56% fair, 21% good. Harvest active in Florida parishes of eastern areas.

MARYLAND & DELAWARE: MARYLAND: Precipitation 1.10 in., normal 0.75 in. Temperature 46.4°, normal 49.6°. Extremes 15°; 69°.

Days suitable for fieldwork 2.9. Topsoil 68% adequate, 32% surplus. Subsoil 27% short, 68% adequate, 5% surplus. Small grains good. Wheat 80% seeded, 66% 1992, 78% avg. Rye 87% seeded, 72% 1992, 83% avg. Field corn 88% harvested, 70% 1992, 84% avg. Soybeans poor to fair; 49% harvested, 52% 1992, 59% avg. Sorghum fair. Sorghum 40% harvested, 55% 1992, N/A avg. Tobacco 10% stripped, 11% 1992, 16% avg. Other hay fourth cut 83% complete, 79% 1992, 64% avg. Alfalfa fifth cut 56% complete, 54% 1992, 54% avg. Hay supplies short to adequate. Pasture feed excellent.

DELAWARE: Precipitation 1.11 in., normal 0.76 in. Temperature 44.8°, normal 50.3°. Extremes 28°; 65°.

Days suitable for fieldwork 3.9. Topsoil 100% adequate. Subsoil 100% adequate. Small grains good. Wheat 73% seeded, 58% 1992, 70% avg. Barley 95% seeded, 77% 1992, 89% avg. Rye 99% seeded, 77% 1992, 81% avg. Field corn 98% harvested for grain, 87% 1992, 96% avg. Soybeans poor to fair; 41% harvested, 48% 1992, 58% avg. Sorghum poor to fair; 26% harvested, 41% 1992, N/A avg. Other hay fourth cut 48% complete, 100% 1992, 40% avg. Alfalfa hay fifth cut 78% complete, 100% 1992, 75% avg. Hay supplies short. Pasture feed poor to fair.

MICHIGAN: Extremes 11°; 57°. Precipitation 0.11 to 1.46 in. Days suitable for fieldwork 6.0. Soil moisture 80% adequate, 20% surplus. Corn silage 100% harvested, 95% 1992, 98% avg. Potatoes 100% harvested, 100% 1992, 100% avg. Sugarbeets 100% harvested, 95% 1992, 95% avg. Pasture feed 80% of normal. Major activities included: Fall tillage, harvesting corn, soybeans, sugarbeets, making cider, cutting firewood.

MINNESOTA: Temperatures 5 to 6° below normal for the State. Extremes 1°; 60°. Precipitation 0.07 to 0.35 in. below normal for the southern third, northeast, west central, to 0.08 to 0.27 in. above normal elsewhere. Divisional precipitation 0.06 to 0.67 in. Greatest weekly precipitation 1.11 in. Snowfall 8 in. for the northeast, a trace to 5 in. elsewhere. Snow depth at weekend 7 in. for the northeast, a trace to 4 in. elsewhere.

Days suitable for fieldwork 5.6. Topsoil 1% very short, 5% short, 85% adequate, 9% surplus. Subsoil 3% short, 74% adequate, 23% surplus. Sunflowers 92% harvested, 86% 1992, 96% avg. Corn 67% combined, 39% 1992, 84% avg.; 28% moisture content, 27% 1992, 20% avg.; stubble 45% plowed, 17% 1992, 64% avg. Soybeans 97% combined, 99% 1992, 99% avg.; stubble 79% plowed, 56% 1992, 82% avg.

MISSISSIPPI: Temperature 49°, 9.7° below normal. Extremes 20°; 82°. Minimal amount of precipitation was received statewide. South central, southeast districts were the only districts to accumulate over an inch of rainfall. Rainfall 0.48 in., 0.46 in. below normal. Soil temperature 52°.

Days suitable for fieldwork 2.7, 2.0 1992, 4.2 avg. Soil moisture 45% adequate, 52% surplus, 3% excessive. Cotton 83% harvested, 89% 1992, 89% avg.; 7% very poor, 58% poor, 34% fair, 1% good. Rice 96% harvested, 100% 1992, 100% avg. Soybeans 99% shedding, 100% 1992, 100% avg.; 65% harvested, 75% 1992, 71% avg.; 21% poor, 57% fair, 22% good. Sweet potatoes 95% harvested, 90% 1992, 92% avg. Wheat 71% planted, 65% 1992, 67% avg.; 54% emerged, 54% 1992, 46% avg.; 29% fair, 71% good. Pecans 28% harvested, 30% 1992, 30% avg.; 4% very poor 28% poor, 53% fair, 13% good, 2% excellent. Livestock 14% fair, 78% good, 8% excellent. Pasture feed 80% of normal. Activities: Delayed harvest for most crops due to rain.

MISSOURI: Temperatures 8 to 12° below normal across the State. Coolest temperatures southwest. Precipitation 0.08 in., varying from none northeast, west central to 0.29 in. southwest.

Days suitable for fieldwork 5.8, ranging from 4.1 southeast to 6.6 northwest. Topsoil 1% short, 86% adequate, 13% surplus. Farmers made excellent fall harvesting progress. Corn harvested by districts 75% northeast to 100% southeast. Soybean harvest by district 71% southeast, 95% northeast. Sorghum harvest 74% east central to 100% southeast. Pasture 3% poor, 13% fair, 74% good, 10% excellent.

MONTANA: Temperatures slightly below normal. Precipitation light to moderate statewide.

Days suitable for fieldwork 4.5. Topsoil 16% short, 80% adequate, 4% surplus. Subsoil 17% short, 79% adequate, 4% surplus. Sugarbeets harvest 99% complete, 100% 1992, 100% avg. Dry beans harvest 94% complete, 100% 1992, 100% avg. Pasture, range feed 100% of normal, down 2 points from last week. Cattle, calves moved from summer ranges 81%, sheep, lambs moved from summer ranges 82%.

NEBRASKA: Temperatures 5 to 7° below normals. Only trace amounts of precipitation throughout the week.

Days suitable for fieldwork 6.8. Topsoil 4% short, 93% adequate, 3% surplus. Subsoil 1% short, 89% adequate, 10% surplus. Corn harvest 69%, 45% 1992, 85% avg. Sorghum harvest 86%, 70% 1992, 89% avg. Soybean harvest 99%, 99% 1992, 99% avg. Wheat 1% poor, 8% fair, 77% good, 14% excellent. Pasture, range feed 101% of normal.

NEVADA: Dry conditions prevailed statewide. Temperatures below normal most areas. Extremes 1°; 80°.

Hard frosts reminder growing season about ended. Farmers, ranchers preparing for winter, livestock feeding activities. Supplemental feeding started some areas. Mild, open weather easy on livestock.

NEW ENGLAND: Precipitation 0.63 to 1.79 in. region. Temperatures 34 to 42° north; 37 to 46° south. Maximum temperatures 46 to 58° north; 54 to 59° south. Minimum temperatures 17 to 27° north; 22 to 33° south.

Field corn 99% harvested, 100% 1992, 100% avg.; good to fair. Cranberries 99% harvested, size medium, good. Major activities: Harvesting cranberries. Chopping field corn. Preparing for winter.

NEW JERSEY: Temperatures much below normal. Extremes 17°; 66°. Rainfall 0.44 in. north, 0.48 in. central, 0.61 in. south. Heaviest 24 hour total 0.86 in. on 5th, 6th. Estimated soil moisture, in percent field capacity, averaged 100% north, 99% central, 99% south. Four inch soil temperatures averaged 42° north, 44° central, 46° south.

Pumpkins, apples in good volume. Cranberry harvest continues. Harvesting of corn for grain, soybeans active. Harvesting of sweet potatoes also continues.

NEW MEXICO: Cold dry weather prevailed. Temperatures nearly 7° below normal. Only two reporting stations in the north central mountains recorded any measurable precipitation, both under 0.10 in.

Days suitable for fieldwork 6.2. Soil moisture 65% short, 35% adequate. Crop conditions: Alfalfa harvest near end, last clip on the ground. Cotton 30% fair, 45% good, 25% excellent. Corn harvest nearly complete, remaining crop poor to good. Irrigated sorghum, 33% fair, 58% good, 9% excellent. Dryland sorghum 35% poor, 55% fair, 10% good. Irrigated wheat 11% poor, 39% fair, 50% good. Dryland wheat 67% poor, 22% fair, 11% good. Chile harvest continued; poor to excellent, mostly good. Lettuce mostly good, harvest declining. Pecans mostly good, some starting to fall. Cattle, sheep poor to excellent, over 75% in the good range. Range feed 70% of normal.

NEW YORK: Unseasonably cold, winter type weather arrived early in the week. A major snowstorm struck central, northern areas. Lighter snow fell in western areas. Mostly rain in southeast. Temperatures 6 to 9° below normal. Extremes 1°; 62°. On top of early week storm, rainfall moderate on 5th. Light several other days. Rainfall 1.00 to 1.50 Boonville, Utica 2.21 in.

Activities: Crop harvest slowed or halted by early snowstorm. Mostly readying barns for winter. Working on farm equipment. Packing for apples, late season vegetables. Tending livestock.

NORTH CAROLINA: Extremes 24° at Asheville; 72° at New Bern, Wilmington. Accumulated precipitation since September 1, 1993: 3.16 in. Asheville to 16.75 in. Wilmington.

Days suitable for fieldwork 4.6. Soil moisture 35% short, 50% adequate, 15% surplus. Crop condition: Pasture feed 15% poor, 66% fair, 19% good. Corn 11% very poor, 42% poor, 33% fair, 14% good; Cotton 11% poor, 63% fair, 23% good, 3% excellent. Peanuts 5% very poor, 21% poor, 63% fair, 11% good. Soybeans 9% poor, 70% fair, 21% good. Sweet potatoes 4% very poor, 4% poor, 35% fair, 53% good, 4% excellent. Apples 8% poor 42% fair, 50% good. Sorghum 23% poor, 45% fair, 32% good. Hay, roughage supplies 2% very short, 36% short, 56% adequate, 6% surplus. Feed grain supplies 23% short, 73% adequate, 4% surplus. Apples harvested 95%, 90% 1992, 100% avg. Corn for grain 96%, 95% 1992, 94% avg. Sorghum for grain 85%, 79% 1992, 79% avg. Sweet potatoes harvested 78%, 88% 1992, 91% avg. Cotton harvested 75%, 34% 1992, 60% avg. Peanuts dug 92%, 99% 1992, 97% avg.; threshed 82%, 90% 1992, 92% avg. Wheat emerged 30%, 30% 1992 32% avg. Major activities: Planting small grain; harvesting soybeans, peanuts, corn for grain, cotton, sweet potatoes. Other activities included: Land preparation; tending livestock; general farm maintenance.

NORTH DAKOTA: Season's first snowfall covered most of the State. Generally 1 to 2 in. with some heavier amounts of 3 to 4 in. Temperatures 1 to 2° below normal. Extremes 1° northeast, southwest; 63° southwest, south central.

Days suitable for fieldwork 3.6. Soil moisture supplies increased from last week, remained above avg. Topsoil 2% very short, 75% short, 22% adequate, 1% surplus. Subsoil 3% very short, 19% short, 76% adequate, 2% surplus. Corn for grain, sunflower harvest progress ahead of last year's slow pace, well behind avg. Corn for grain 79% harvested, 69% 1992, 93% avg. Sunflower 85% harvested, 81% 1992, 96% avg. Range, pasture feed 87% of normal.

OHIO: High temperatures in 40s were 8 to 12° below normal. Highest readings 60s central, south, 50s north. Lows mostly in the low 30s, 2 to 6° below normal. Lowest temperatures were in the low 20s with the coldest weather reported in the south at the end of the period. Precipitation was a fairly evenly distributed 0.30 to 0.50 in., below normal by 0.30 to 0.50 in. Rain fell on several days although the end of the period was mostly dry.

Days suitable for fieldwork 3.1. Topsoil 11% short, 76% adequate, 13% surplus. Short moisture mostly in northwest, west central. Surplus moisture mostly in northeast, southwest. Fall apples harvested 96%, 92% 1992, 94% avg. Sugarbeets harvested 92%; fall temperatures have been ideal for storage. Pasture feed 4% very poor, 12% poor, 38% fair, 41% good, 5% excellent. Harvested corn moisture 21%. Harvested soybean moisture 13%. Showers, wet snow limited fieldwork. Winter wheat emerging evenly.

OKLAHOMA: Temperatures 5° below normal southwest to 13° below normal south central. Precipitation none in most districts to 0.43 in. southeast.

Days suitable for fieldwork 6. Topsoil 55% short, 41% adequate, 4% surplus. Subsoil 26% short, 74% adequate. Soybeans 66% harvested, 54% 1992, 52% avg. Peanuts 10% poor, 70% fair, 20% good; 53% harvested, 82% 1992, 74% avg. Feeder cattle, calves \$1.00 to \$5.00 lower.

OREGON: Near normal temperatures, 3° above normal to 2° below normal. Light precipitation statewide. West of Cascades 0.33 in.; eastside mostly dry.

Soil moisture short to mostly adequate. 1994 winter wheat crop 96% planted; 88% emerged; 21% fair, 70% good, 9% excellent. Mild Russian wheat aphid infestation some spraying continued, Columbia Basin. Preseason mint work continues, central sections. Willamette Valley cole crops, pumpkin, squash, sweet corn harvests winding down. Hood River Valley winter pear harvest nearly complete, apple picking winding down. Willamette Valley apple, hazelnut, walnut harvests winding down; wine grape harvest continues; caneberry pruning continued. Cranberry harvest nearly complete, southern coast. Livestock good to excellent. Range, pasture mostly good. Weaning, processing cows, hauling calves to market continues; weaning weights above normal.

PENNSYLVANIA: Slow storm system kept cloudy skies, rain over the State. Snow in some areas. Temperature 43°, 4° below normal. Extremes 15°; 67°. Precipitation 0.87 in., 0.19 in. above normal.

Days suitable for fieldwork 3. Soil moisture 70% adequate, 30% surplus. Ensilage corn harvested 97% complete, 90% 1992. Corn 2% very poor, 9% poor, 33% fair, 46% good, 10% excellent. Soybean harvest 51% complete, 49% 1992; 3% very poor, 9% poor, 32% fair, 44% good, 12% excellent. Potato harvest 98% complete, 97% 1992. Fall plowing 89% complete, 83% 1992. Wheat planted 98% complete, 96% 1992. Barley planted 100% complete, 99% 1992. Third cutting alfalfa 100% complete, 97% 1992. Fourth-cutting alfalfa 82% complete, 84% 1992. Quality of hay made 42% poor, 45% fair, 13% good. Feed from pastures poor to fair. Apple harvest 93% complete, 91% 1992. Grapes harvest 100% complete, 97% 1992. Activities: Making hay, haylage; plowing; planting

wheat, barley; harvesting corn; harvesting soybeans; hauling manure; plowing snow; fixing fence; caring for livestock.

PUERTO RICO: Island rainfall of 0.38 in. was 1.16 in. below normal. Highest rainfall was 1.88 in. at Maricao 2SSW, 0.95 in. at Trujillo Alto 2SSW, 0.91 in. at Lajas Aes. Highest 24 total 0.84 in. at Ponce 4E on 4th. Island temperatures 76 to 79° on Coasts, 73 to 76° Interior with mean station temperature 81.9° at Roosevelt Roads to 71.6° at Adjuntas Aes. Extremes 56°; 94°.

SOUTH CAROLINA: After cool, dry conditions, rains, seasonal temperatures weekend. Temperatures 5 to 9° below normal. Rainfall 1.00 in.

Days suitable for fieldwork 5.1. Soil moisture 5% very short, 37% short, 58% adequate. Apples poor to fair; 95% harvested, 94% 1992, 98% avg. Barley fair; 65% planted, 62% 1992, 52% avg.; 45% emerged, 54% 1992, 39% avg. Oats fair; 69% planted, 61% 1992, 55% avg.; 53% emerged, 49% 1992, 40% avg. Rye fair; 75% planted, 62% 1992, 56% avg.; 60% emerged, 50% 1992, 41% avg. Wheat fair; 17% planted, 16% 1992, 19% avg.; 10% emerged, 8% 1992, 9% avg. Sorghum poor; 71% harvested, 81% 1992, 75% avg. Soybeans 6% very poor, 34% poor, 47% fair, 13% good; 87% dropping leaves, 83% 1992, 86% avg.; 70% mature, 69% 1992, 77% avg.; 17% harvested, 17% 1992, 23% avg. Cotton 2% very poor, 17% poor, 81% fair; 74% harvested, 45% 1992, 67% avg. Sweet potatoes poor to fair; 77% harvested, 74% 1992, 78% avg. Fall hay poor to fair; 93% harvested, 96% 1992, 94% avg. Pecans poor to fair. Pasture feed 14% very poor, 41% poor, 32% fair, 13% good. Winter grazing fair; 88% planted, 82% 1992, 80% avg.; 71% emerged, 72% 1992, 65% avg.

SOUTH DAKOTA: Temperatures 5 to 10° below normal last week. Extremes -2°; 69°. Precipitation was light. A cold front moved through State on 4th, brought 1 to 2 in. of snow over the central, north. Much of the snow melted with only a trace left by 7th. Maximum precipitation 0.74 in.

Days suitable for fieldwork 5.2. Topsoil 4% very short, 24% short, 65% adequate, 7% surplus. Subsoil 4% very short, 13% short, 68% adequate, 15% surplus. Corn 2% very poor, 17% poor, 51% fair, 25% good, 5% excellent. Winter rye 1% poor, 30% fair, 46% good, 23% excellent. Sunflowers 88% harvested, 83% 1992, 97% avg. Harvesting of row crops made significant progress last week. Corn moisture content was mostly in the twenties. Low test weight corn was reported. Winter wheat was showing stress from dry conditions in some areas. Livestock 2% fair, 78% good, 20% excellent. Pasture feed 86% of normal. Cold temperatures, dusty conditions continue to effect the health of calves.

TENNESSEE: Temperatures below normal by as much as 12°. Jackson had the coldest reading with 18° on 7th. Rainfall below normal. Chattanooga received the most rain with 1.14 in. With a few exceptions, the remainder of the State received less than 0.25 in.

Days suitable for fieldwork 4.2. Soil moisture 28% short, 71% adequate, 1% surplus. Corn 94% grain harvested, 91% 1992, 93% avg. Cotton 88% harvested, 70% 1992, 80% avg. Soybeans 98% mature, 94% 1992, 93% avg.; 59% harvested, 58% 1992, 64% avg. Tobacco 48% burley stripped, 53% 1992, 54% avg. Wheat 67% seeded, 68% 1992, 71% avg. Pastures 11% poor, 47% fair, 41% good, 1% excellent. Cattle 1% poor, 27% fair, 69% good, 3% excellent. Corn harvest was wrapped up in west, middle. East still working with a late maturing crop. Harvest of double-crop soybeans well underway. Cool, dry conditions good for harvest. Last week's snowfall delayed start of this week's activities; cotton growers resumed a good pace. Difficulty picking small bolls still being reported. Tobacco stripping conditions varied. Moisture from rainfall in east helped the process; dry weather held stripping back in middle. Most of the early crop is stripped, ready for opening of markets on 22nd. A good portion of tobacco in east is late, will not be ready for the opening date. Wheat seedings increased following replenished moisture, soybean harvest. Heavy frosts stopped growth on already-short pastures, majority of cattle producers are feeding hay. Heavy cattle movement continued.

TEXAS: For second weekend in a row, cold surge of air dropped into State, caused quite a temperature change in all growing areas. Latest cold air intrusion was not quite as severe as previous one. Low temperatures were in teens in Panhandle this past weekend while light freezes occurred again in some of Coastal sections of State. Not as much moist air was available when cold front arrived, system moved rapidly through State. As a result, rain amounts were light. Lower temperatures early, late in week. Temperatures all below normals. Departures -12° in Panhandle, South Plains to -2° below normal in South Central Texas. Rain short of usual totals, greatest departure along Upper Coastal sections with -0.49 in.

Crops: Cotton harvest should speed up in most areas on Plains as freeze last weekend killed remaining foliage. Some good yields were being reported in Northern High Plains where harvest was active. In Northern Low Plains, reported yields were variable. Harvest was almost completed in Blacklands. Statewide condition 75% normal, 78% 1992. Grain Sorghum freeze should increase speed of harvest in northern Plains areas of State where harvest is winding down. Harvest was virtually complete in southern Low Plains. Small grains cold, dry conditions hampered growth of small grains in some areas of Plains. Dry conditions in some areas of South, South Central Texas have slowed resumption of wheat planting. Wheat 72% normal, 51% 1992. Peanuts: some crop injury resulted from early freeze in many parts of State, tempo of harvest was picking up by end of week in most areas. Some quality loss also resulted where poor peanuts were being baled for hay. Statewide condition 63% normal, 81% 1992. Soybeans harvest continued across State as conditions allowed. In Cross Timbers, some of crop was harvested for hay.

Commercial Vegetables: In Rio Grande Valley, last week's cold temperatures damaged cucumber, pepper, tomato crops. Cabbage, onion crops for most part were not affected by cold. In San Antonio-Winter Garden area, many bell pepper, cucumber plants were lost due to freeze. Some small cabbage plants were also lost. In East Texas, freeze ended harvest of sweet potatoes, other warm season crops. Cole, greens made good progress. Cultivating land for winter crops was continued. In High Plains, some carrot acreage was harvested. For most part last week's freeze ended all remaining harvest of summer vegetables. In Trans-Pecos, producers were harvesting chilies, cucumbers. Some bell pepper acreage was lost. Pecans: Amount of freeze damage to crop is still unknown at this time. In Blacklands, harvest was delayed by rain.

Range and Livestock: Warm season grasses for most part have gone dormant, winter pastures made good progress. Supplemental feeding increased in many areas. Limited haying operations continued, majority was completed. Livestock remained in fair to good condition. Some areas remained in need of moisture.

UTAH: Temperature maximums 4° below normal, minimums 5° below normal. Precipitation was light across the northern mountains, Uinta Basin, none for the rest of the State.

Recent dry weather has allowed an increase in fall tillage activities. Major farm activities include: Winterizing equipment, irrigation systems, marketing onions, caring for livestock.

VIRGINIA: Temperatures well below normal. Extremes 18°; 69°. Precipitation above normal.

Days suitable for fieldwork 4.1. Topsoil 3% very short, 29% short, 58% adequate, 10% surplus. Pasture feed 2% very poor, 24% poor, 53% fair, 17% good, 4% excellent. Corn harvested for grain 89%, 82% 1992, 87% avg. Soybean 9% very poor, 53% poor, 36% fair, 2% good; harvested 35%, 35% 1992, 48% avg. Cotton harvesting 68% completed, 11% 1992, 41% avg. Peanuts dug 97%, 99% 1992, 99% avg.; combined 88%, 99% 1992, 99% avg. Fall apple harvest complete. Winter apples 92% harvested. Winter grains, grazing crops condition 3% very poor, 13% poor, 36% fair, 48% good. Winter wheat 56% seeded, 47% 1992, 61% avg. Oats 97% seeded, 90% 1992, 94% avg. Barley 91% seeded, 81% 1992, 89% avg. Forage from pastures, grazing crops dairy cattle 29%, beef cattle 71%, sheep 79%. Reseeding pastures, hayfields, fall

plowing, gassing tobacco plantbeds. Selling, buying, vaccinating cattle. Stripping, grading fire, burley tobacco. Harvesting peppers, cucumbers, snapbeans.

WASHINGTON: Temperatures 1° below normal to 3° above normal west; 1° below normal to 4° above normal east. Precipitation 0.12 to 0.45 in. west; none to 0.05 east. Freezing temperatures across all of eastern areas, a few stations in western area. No severe freeze damage.

Days suitable for fieldwork 6.9. Soil moisture 46% short, 54% adequate. Hay, other roughage supplies 13% short, 87% adequate. Range, pasture feed 36% poor, 53% fair, 11% good. Winter wheat dryland 25% fair, 75% good; irrigated 100% good. Barley dryland 30% fair, 70% good; irrigated 100% good. Corn 100% good. Winter grain planting was finished in most areas, 89% was emerged. Many fields were still showing moisture stress. A few aphid outbreaks have been reported, damage does not appear to be at economic injury levels. Potato harvest was winding down with 98% complete. Corn grain harvest continued. Grape harvest was winding down. Cold weather continued to cause grapes to fall off vines in many vineyards, losses were not severe. Cranberry harvest was nearly finished.

WEST VIRGINIA: Temperature 41°. Extremes 17°; 74°. Precipitation 0.39 in.

Days suitable for fieldwork 3.3. Soil moisture 13% short, 87% adequate. Pastures feed 17% poor, 46% fair, 37% good; 75% of normal. Cattle, 8% poor, 6% fair, 86% good. Sheep, 10% poor, 22% fair, 68% good. Corn, 81% harvested. Wheat, good; 82% sown. Barley, good. Soybeans, 82% harvested. Farm activities: Moving livestock, feeding livestock, stripping tobacco, chopping silage, harvesting corn, harvesting soybeans, sowing wheat, general maintenance.

WISCONSIN: Northern areas experienced their first significant snowfall of the season as much colder air overspread the region. Up to 9 in. of snow fell over some far northern locations with between 2 to 7 in. over the remainder of the north. Between 1 and 3 in. fell over many central areas as well. Temperature 34°; 6° below normal. Extremes 2°; 58°. Precipitation trace to 0.70 in.

Days suitable for fieldwork 4.9. Soil moisture 1% short, 83% adequate, 16% surplus. General condition of crops: 4% poor, 41% fair, 55% good. Corn 1% very poor, 15% poor, 38% fair, 46% good. Corn for grain 55% harvested, 22% 1992, 64% avg. Soybeans harvested 97%, 83% 1992, 90% avg. Fall tillage 53% complete, 34% 1992, 47% avg. Hay, roughage supplies 8% short, 79% adequate, 13% surplus. Although heavy snow fell late in the week in the northern part of the State, farmers had dry weather earlier in the week for fall activities. Farmers were busy plowing, harvesting corn, soybeans. Intended fall tillage slowed this past week as farmers tried to complete their harvesting. Farmers in the northern part of the State will have to wait until spring to complete their tillage now that the fields are covered with snow. Farmers took advantage of another good week for harvesting as they nearly completed their soybean crop. Combines were also kept busy as corn harvested for grain jumped 29 percentage points from last week. Corn yields were being reported as mixed; some areas of a field were good, other parts of the same field were poor. Winter wheat, rye, alfalfa were reported to be in good shape. There has been concern that there is not enough regrowth on some alfalfa fields that were harvested in late August, early September.

WYOMING: Temperatures across State 4 to 9° below normal for the week. Coldest spots were in the south central, southeastern parts of the State. Precipitation for last week was above normal for the central third of the State. Rest of the State was below normal.

Sugarbeets, dry bean, corn harvest was still in progress. Corn producers are waiting for the corn to dry to finish harvesting. Dry bean, sugarbeets producers are nearly finished. Cattle, calves, sheep, lambs are still being moved from summer ranges.

International Weather and Crop Summary

HIGHLIGHTS

October 31 - November 6, 1993

FSU: Unseasonably cold, dry weather helped late summer crop harvests but halted further vegetative growth of winter grains in southern areas.

EUROPE: Soaking rain fell in Italy's Po Valley and Portugal. Dry, cool weather promoted sugar beet harvesting across the north.

SOUTH ASIA: Generally dry, warm weather favored winter crop planting and summer crop harvests.

SOUTHEAST ASIA: Typhoon Ira crossed central Luzon. More rain is needed for Java's rice planting.

EASTERN ASIA: Dry weather aided summer crop harvesting across northern and central China, while late-week rains favored winter wheat. Rains from Tropical Storm Ira slowed sugarcane harvesting across extreme southern China.

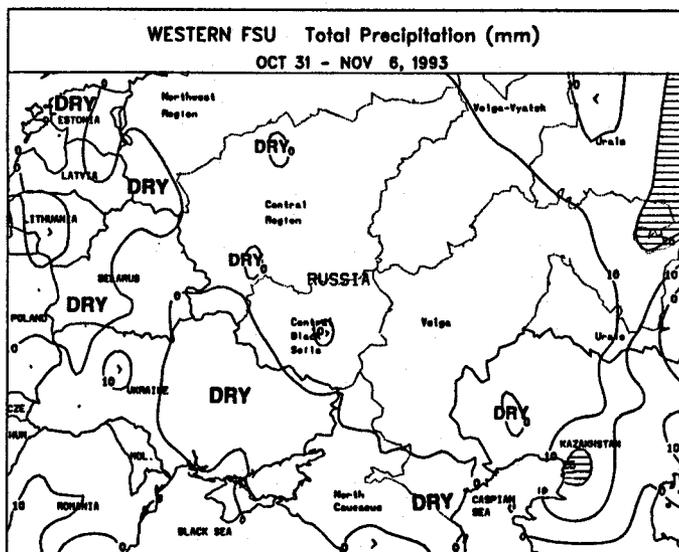
AUSTRALIA: Dryness favored filling to maturing wheat in eastern and western crop areas.

SOUTH AMERICA: Rain continued to benefit winter wheat and summer crops in Argentina. Across southern Brazil, somewhat drier weather allowed soybean planting to progress.

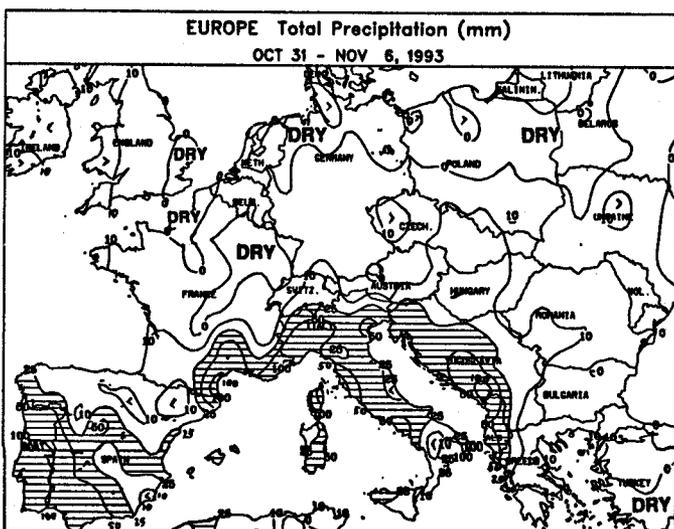
MEXICO: Dry weather favored maturing corn and fieldwork in the main corn belt.

NORTHWESTERN AFRICA: Soaking rain over Morocco provided adequate moisture for winter grain planting.

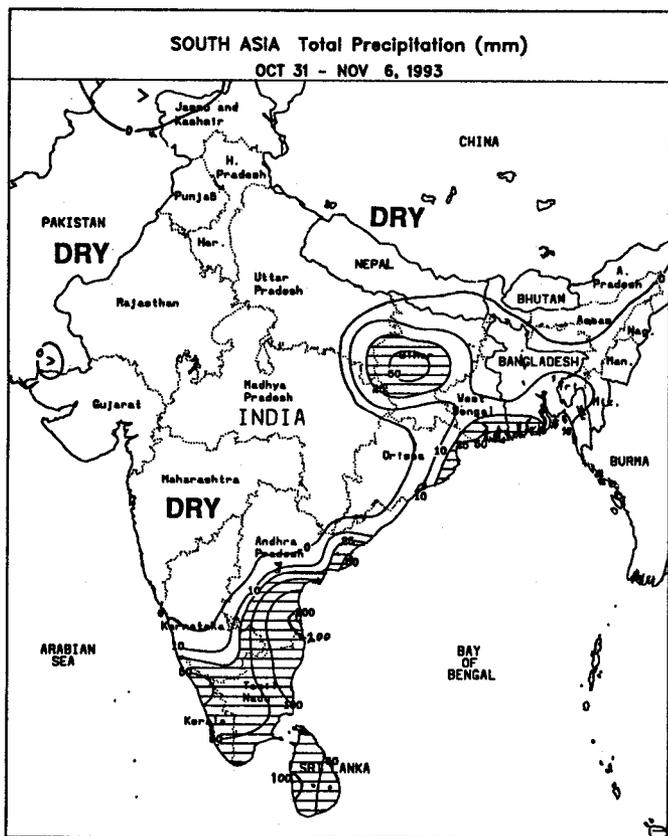
SOUTH AFRICA: Mostly dry weather promoted corn planting.



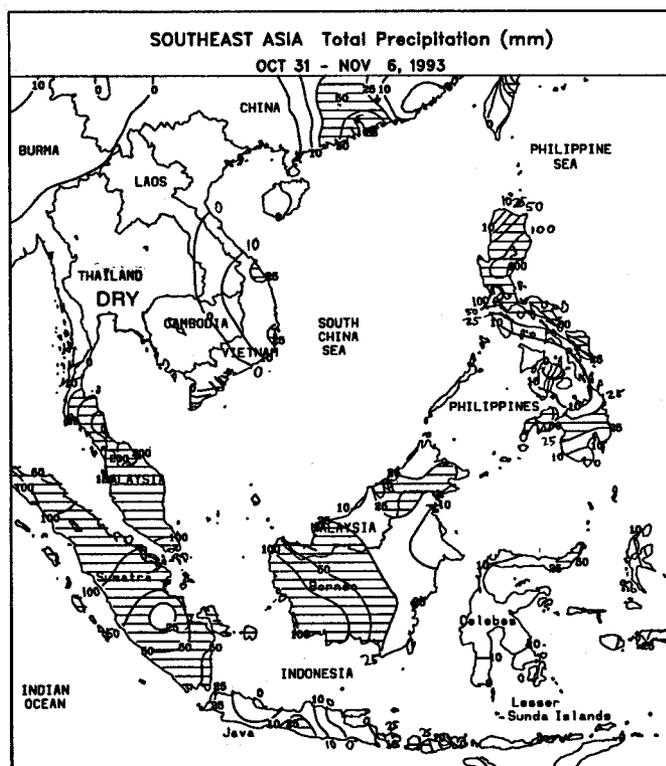
FSU-WESTERN: Unseasonably cold, dry weather continued over most of the region. Although the dryness helped late summer crop (sunflower, sugar beet, and corn) harvests, moisture remained limited for winter grain germination and establishment in southern Ukraine and parts of North Caucasus. Unseasonably cold weather kept winter grains dormant in the Baltic States, Belarus, and northern Russia (Northwest Region, Central Region, Volga Vyatsk, Black Soils Region, and Volga Valley). In Ukraine and North Caucasus, weekly average temperatures ranged from 2-4 degrees Celsius (C) below normal, preventing further vegetative growth in winter grains. Although extreme minimum temperatures in these areas ranged from -5 to -10 degrees C, temperatures did not fall low enough to cause damage to cold-hardened crops. Since winter grains in southern Ukraine and North Caucasus usually enter dormancy by the end of November, rain and milder weather are needed for crop establishment. In cotton growing areas of Central Asia, light to moderate precipitation (10-25 mm, with local amounts in excess of 40 mm) over eastern Uzbekistan, Kyrgyzstan, and Tajikistan, interrupted the cotton harvest.



EUROPE: Persistent daily showers kept southwestern portions of the Iberian peninsula very wet, with rainfall totals of 50-145 mm soaking crop areas and delaying early winter crop planting. Heavy showers (50-153 mm) also returned to Italy's Po Valley late in the week. Showers covered much of the Mediterranean region, but the scattered, mostly light rain in Greece provided little drought relief. Dryness prevailed in Bulgaria as well. Sugar beet harvesting progressed across northern Europe, with only light scattered showers from England to Poland. Minimum temperatures fell 1 to 6 degrees C below freezing over north-central and eastern Europe, but remained above freezing in the northwest. Winter crops are hardening prior to dormancy across the north, with average temperatures ranging from 2 to 6 degrees C from Germany to Romania and 6 to 9 degrees C in England and northern France.

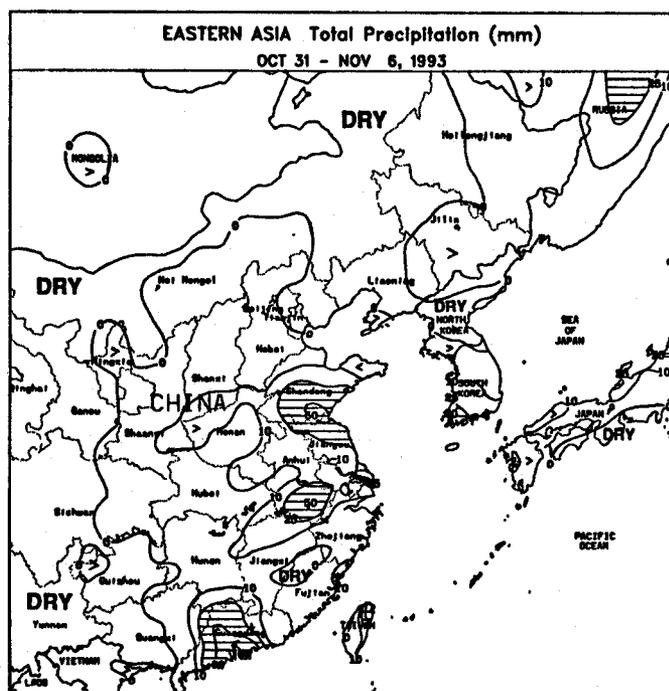


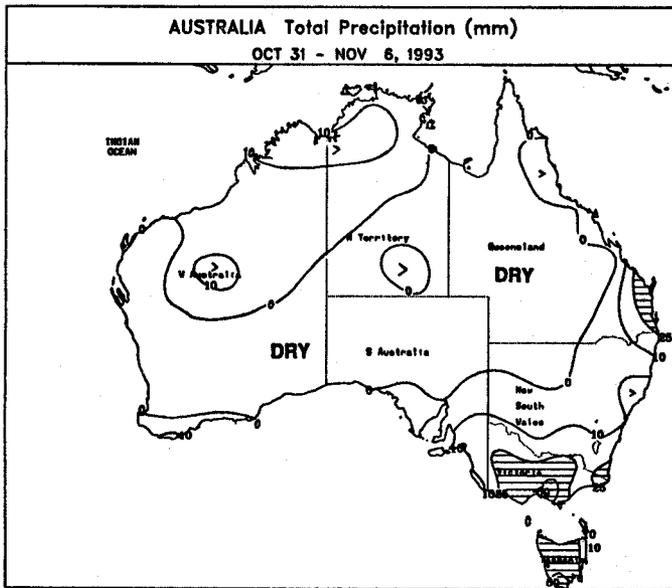
SOUTH ASIA: Dry, warm weather continued over central and northern India and Pakistan, aiding winter grain and oilseed planting and summer crop harvests. Moderate to heavy rain (25-100 mm or more) was concentrated over India's southern tip, boosting irrigation levels for winter crops but causing some coastal flooding. Rain (10-80 mm) in eastern India was limited to winter wheat and rice areas west of Bangladesh, increasing planting moisture but causing only minor harvest delays.



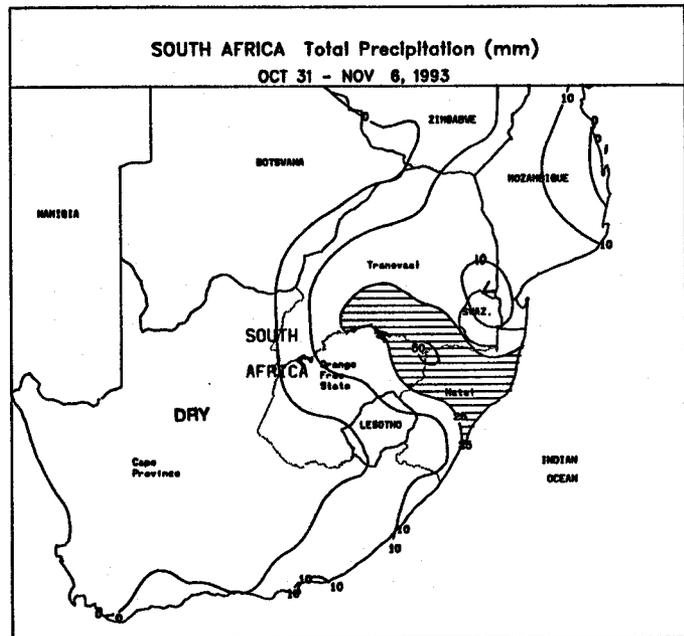
SOUTHEAST ASIA: Typhoon Ira hit east-central Luzon, Philippines on November 1, with sustained winds of about 100 knots and progressed rapidly westward, crossing the island in about 12 hours. Ira brought more inundating showers (50-200 mm) and wind damage to rice, corn, and sugarcane areas of central Luzon affected about a month ago by Typhoon Flo. Further west, seasonably drier conditions dominated most of Indochina, but heavy showers (50-150 mm) continued over the Malay Peninsula, including Malaysia's oil palm region. In Java, rainfall continued to be unseasonably light. Although, the rainy season is just underway, more rain will be needed soon to prevent planting delays.

EASTERN ASIA: Dry weather covered China for most of the week, favoring harvesting and late-maturing summer crops. Tropical Storm Ira made landfall in western Guangdong on November 4, with sustained winds of 45-60 mph. The storm quickly dissipated over land, but produced moderate showers across Guangdong (10-50 with isolated amounts greater than 100 mm), which slowed early sugarcane harvesting. Late in the week, the remnants of Ira produced light to moderate rain (10-50 mm) across the North China Plain, favoring emerging to vegetative winter wheat. Some late rice harvesting progressed across South Korea and Japan, despite scattered rain (5-40 mm).

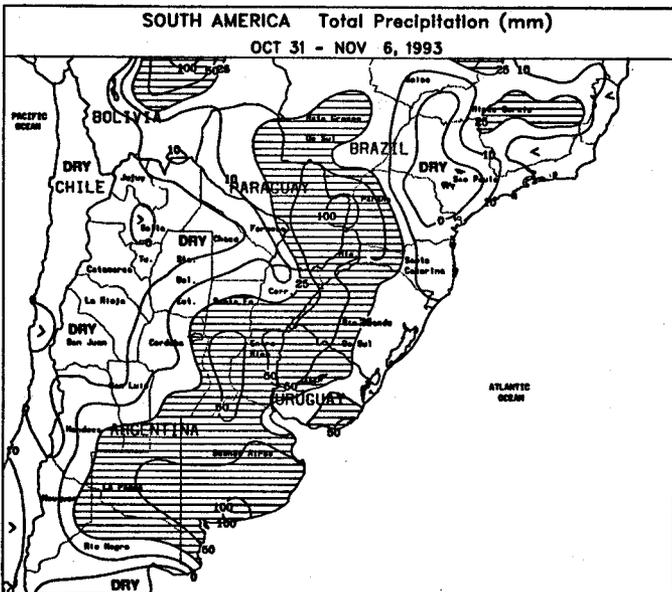




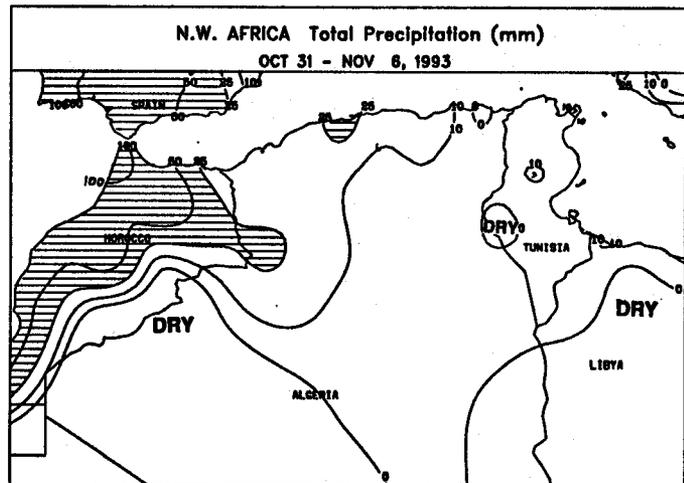
AUSTRALIA: Dry weather continued to favor maturing winter wheat across southern Queensland and northern New South Wales. Light to moderate rain (10-30 mm) aided reproductive to filling winter wheat in Victoria and southern New South Wales. Western Australia received little or no rain, continuing a drying trend that began in early October. While this region has received below normal rainfall the past several weeks, cool temperatures limited stress on reproductive to filling wheat. For the rest of the growing season, dry weather is needed for maturing wheat and grain quality across the west. Temperatures averaged 2-4 degrees below normal across the east and near normal across the west.



SOUTH AFRICA: Mostly dry weather across primary grain areas aided corn planting. However, light to moderate showers (5-25 mm or more) covered south-central Transvaal and northern Natal, slowing fieldwork. Dry pockets continued in southern Natal, accompanied by seasonably warm temperatures, further reducing moisture for sugarcane.

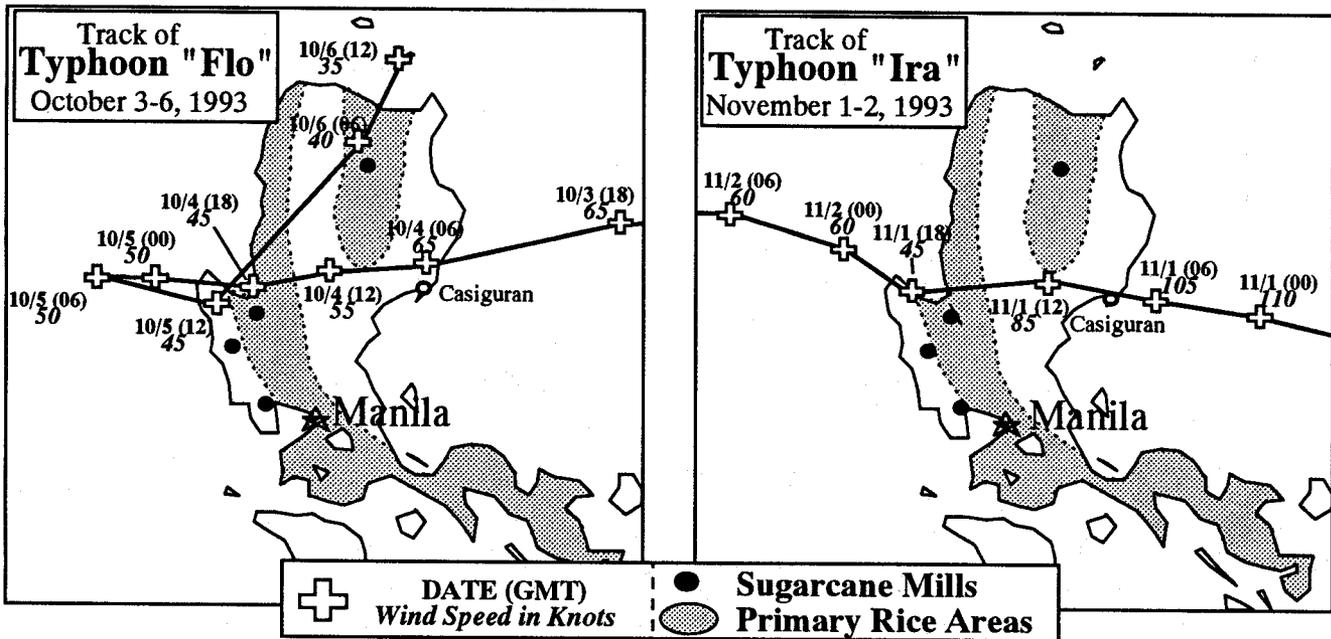


SOUTH AMERICA: In Argentina, moderate showers (20-70 mm) favored reproductive to filling winter wheat across most of Buenos Aires, Santa Fe, and southern Cordoba. The rains, while hampering fieldwork, also increased soil moisture for summer crops. Southern Brazil received scattered early-week rains (5-40 mm), but drier weather since then favored summer crop planting. However, late-week showers (25-60 mm) delayed fieldwork across Rio Grande do Sul, Santa Catarina, and southeastern Parana. Temperatures averaged 1-3 degrees C above normal across southern Brazil and near normal across Argentina.



NORTHWESTERN AFRICA: Soaking rain (25-70 mm, with local amounts in excess of 80 mm) covered winter grain areas in Morocco, providing adequate to abundant moisture for winter grain planting. The rain was highly beneficial, following 2 years of drought. Light showers (10-30 mm) in western and central Algeria increased topsoil moisture for planting. In extreme eastern Algeria and most of Tunisia, little, if any precipitation covered winter grain areas and significant rain is needed to promote widespread planting.

Another Typhoon Strikes Luzon

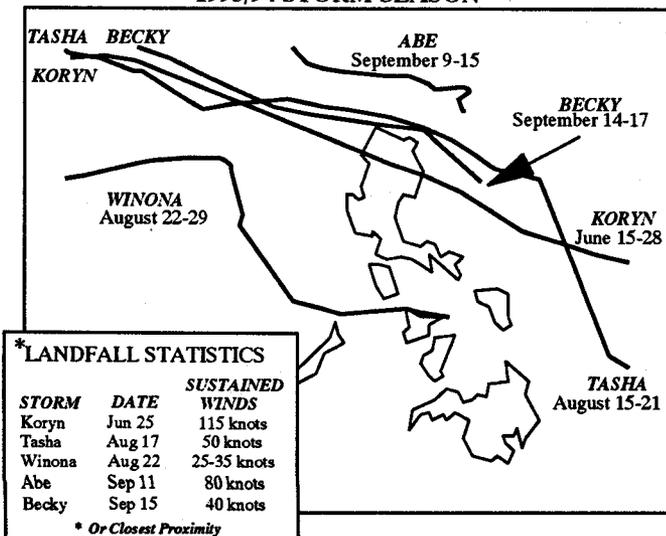


On October 4, Typhoon Flo hit eastern Luzon, Philippines near the town of Casiguran with sustained winds of 65 knots, and trekked slowly westward across the island. On the 5th, just a few hours after entering the South China Sea, the storm backtracked and struck Luzon's west coast before plowing northeastward toward the Cagayan Valley. Flo brought Luzon high winds and heavy rain (100-300 mm, many locations) for 3 days, resulting in flooding and crop damage. Much of Luzon's upland rice is harvested this time of year, and preparations for second crop rice and corn planting are usually underway. Sugarcane, sometimes salvageable when damaged by a typhoon, is usually not ready for harvest until November.

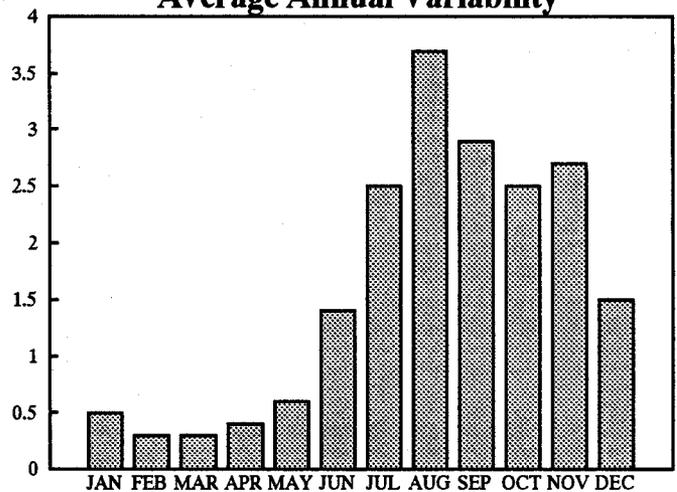
On November 1, Typhoon Ira struck Luzon in approximately the same location as Flo, but with sustained winds of about 100 knots. Ira mirrored Flo's westward track across Luzon but with generally higher sustained winds. However, Ira crossed the island in only 12 hours, as opposed to the 2 days Flo took to cross back and forth across Luzon, and headed directly toward the southern Chinese coast. More heavy rain (50-200 mm) fell over central Luzon's grain and sugarcane areas, but the area and the duration of the rain was somewhat less than experienced from Flo.

--Mark Brusberg

OTHER STORMS AFFECTING THE PHILIPPINES 1993/94 STORM SEASON



STORMS AFFECTING THE PHILIPPINES Average Annual Variability



SOURCE: WORLD SURVEY OF CLIMATOLOGY (Landsburg, 1969)

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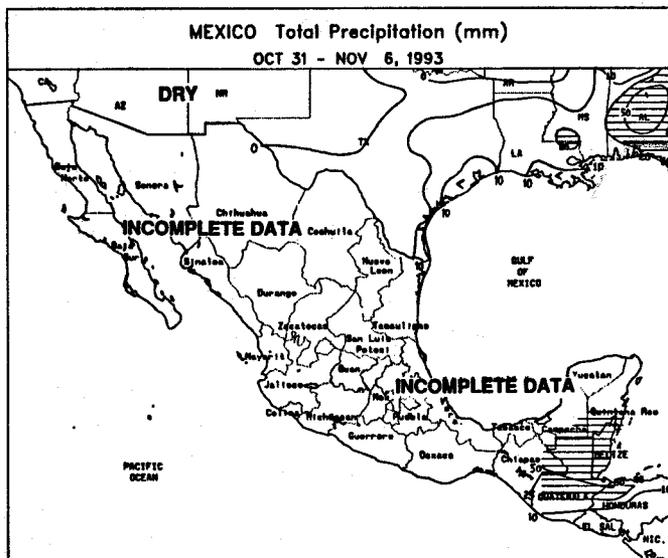
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(Continued from front cover)

well-below freezing inland at Tallahassee (27°F). Melbourne, FL, with a 37°F reading, broke its daily record low for November 1 by 15°F. Farther north, snow piled up to a depth of 13 inches by Monday morning in Binghamton, NY and Utica, NY. Snowfall totaled 6.2 inches in Cincinnati, OH, 8.4 inches in Pittsburgh, PA, and 9.0 inches in Burlington, VT. Meanwhile in southern California, Santa Ana winds returned on Tuesday. A new fire swept through the Santa Monica foothills near Malibu, consuming more than 50 square miles of land and at least 300 buildings. High winds spread across the northern and central Plains at midweek in advance of a cold front, with gusts reaching 90 miles per hour in the chinook zones of northwestern Montana. By Friday, colder air was in place, with snow depths reaching 5 inches in Great Falls, MT, and 3 inches in Grand Forks, ND. Snowfall intensified across the northern Great Lakes, where Marquette, MI reported 13 inches. Farther south, McAllen, TX recovered from an early-week low of 33°F to post a high of 92°F on Friday, while heavy rain spread across the Southeast. More than 3 inches of rain drenched Montgomery, AL and Beaufort, SC. Cold air plunged into the central Plains and the Great Basin on Saturday. Lows included 1°F in Valentine, NE, 8°F in Pueblo, CO, and 3°F in Ely, NV.



MEXICO: The following summary was based on satellite imagery and sporadic surface reports. Dryness aided maturing corn across the main growing area. Light to moderate showers increased irrigation reservoirs for wheat and vegetables across north-central Mexico (Durango, Zacatecas, and southern Coahuila).

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