

WEEKLY WEATHER AND CROP BULLETIN

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

U.S. DEPARTMENT OF AGRICULTURE
Statistical Reporting Service and World Agricultural Outlook Board

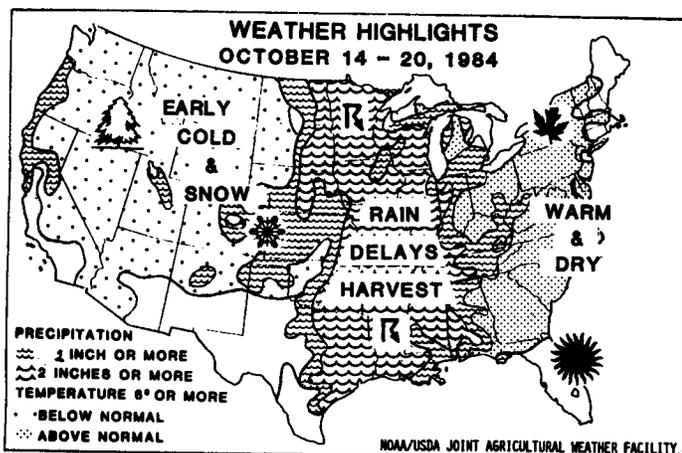
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Oct. 23, 1984

National Weather Summary

October 14 to 20



HIGHLIGHTS: Precipitation fell on nearly all of the Nation. Snow piled deep over the western Plateau and Mountains. Rainshowers covered the west coast. Thunderstorms produced heavy downpours on the southeastern Texas coast from eastern Oklahoma through Arkansas, to the upper Delta region, and in much of Minnesota. Most of the East Coast States had little or no rain. Temperatures were below normal from the Plains westward, and above normal to the east. Record low temperatures were recorded in parts of the Rockies and Plateau, while record high temperatures occurred in the Southeast.

SUNDAY... Warm, moist air from the Gulf of Mexico flowed northward, ahead of a cold front, and brought showers and thunderstorms to the central Plains and the Mississippi Valley. Moderate to heavy showers fell from Arkansas and eastern Oklahoma to Minnesota. Snow covered the northern and central Rockies as very cold air moved in. Hurricane Josephine continued to pound the central east coast with gales and high surf, but turned sharply eastward away from the coast, as the day ended.

MONDAY... Showers and thunderstorms covered the central and northern Plains and eastward through the Great Lakes, the Lake States, and to central Pennsylvania, Maryland, and Virginia. Snow covered the northern and central Rockies. Heavy snow piled up in eastern Colorado, western Kansas, and Nebraska. A few showers fell in the very dry area from the Florida Panhandle to the southern Appalachians.

TUESDAY... Another winter storm moved onto the western Plateau, spreading snow over the Plateau and showers through central and southern California. Thunderstorms spread showers through the central Plains and the Mississippi and Tennessee Valleys. Heavy snow continued in eastern Colorado.

WEDNESDAY... The winter storm spread snow through the Plateau from Idaho to New Mexico. A few showers fell along the west coast. Light showers were widespread through the lower Missouri Valley and through Iowa. Light showers fell from southeastern Texas to western New York. Freezing weather pushed over the High Plains and as far south as the Texas Panhandle.

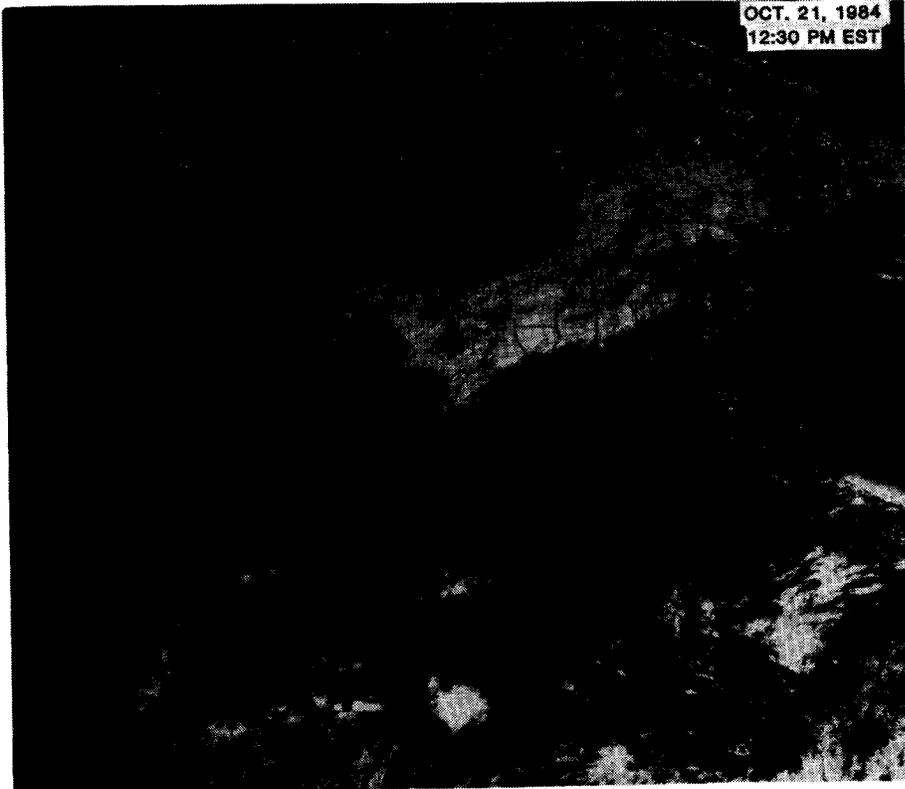
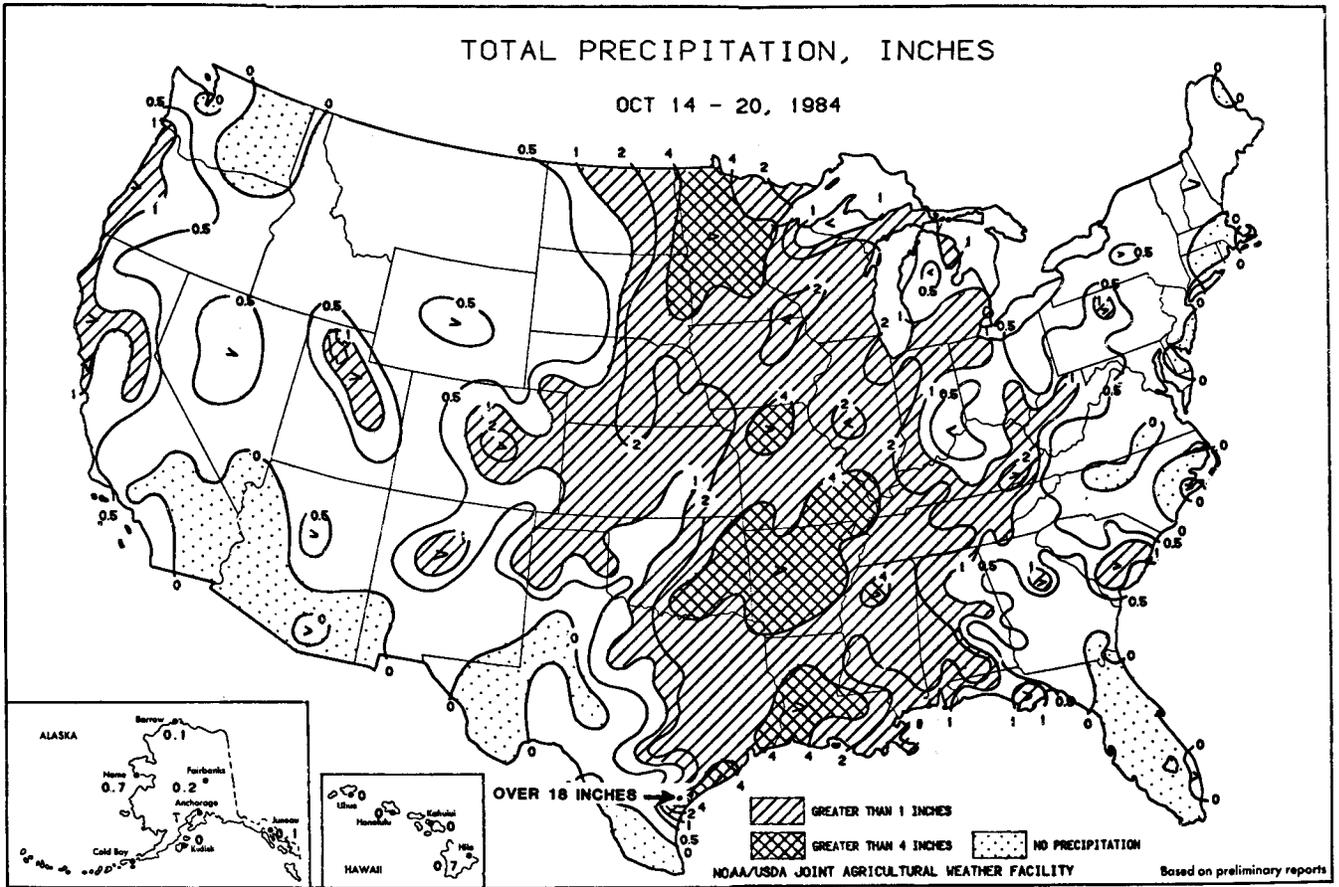
THURSDAY... Moderate to heavy thundershowers blanketed southeastern Texas to the central Great Lakes. Lighter showers fell through the Ohio Valley. Showers also fell from Nebraska through Minnesota. Rain fell along the Northwest coast, with snow inland at higher elevations.

FRIDAY... Thunderstorms produced some heavy downpours in southeastern Texas. Showers were moderate to heavy from eastern Oklahoma to western Kentucky. Lighter showers fell from the eastern part of the central and southern Plains, through New England. Severe local flooding occurred in Texas and Arkansas. Rainshowers fell all along the west coast, and snow covered the Plateau.

SATURDAY... Showers were widespread over most of the Nation from the Sierras to the Appalachians. Thunderstorms produced heavy showers from eastern Texas and Oklahoma to Michigan. Flooding and heavy rain caused severe damage from eastern Texas through Arkansas.

Contents

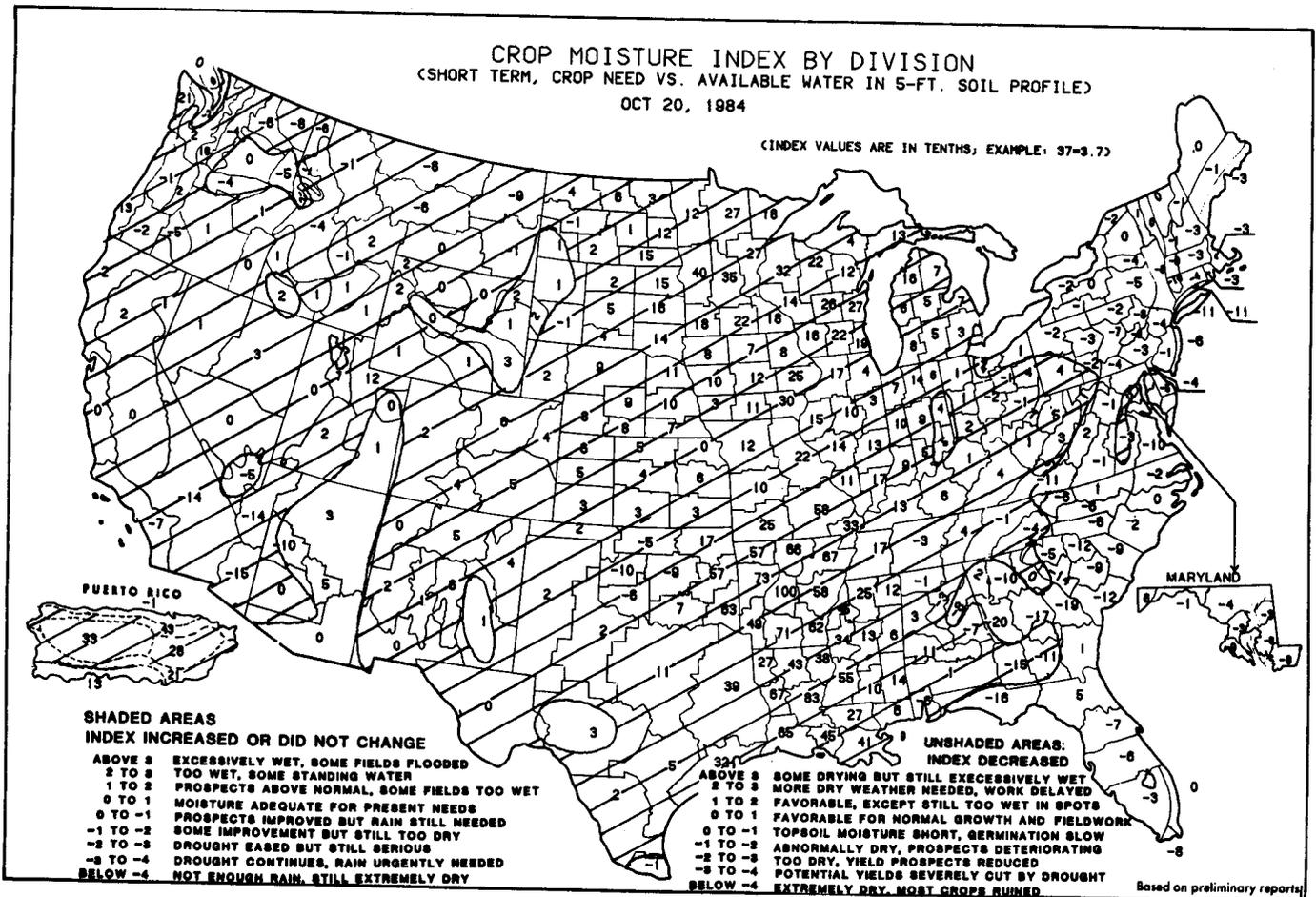
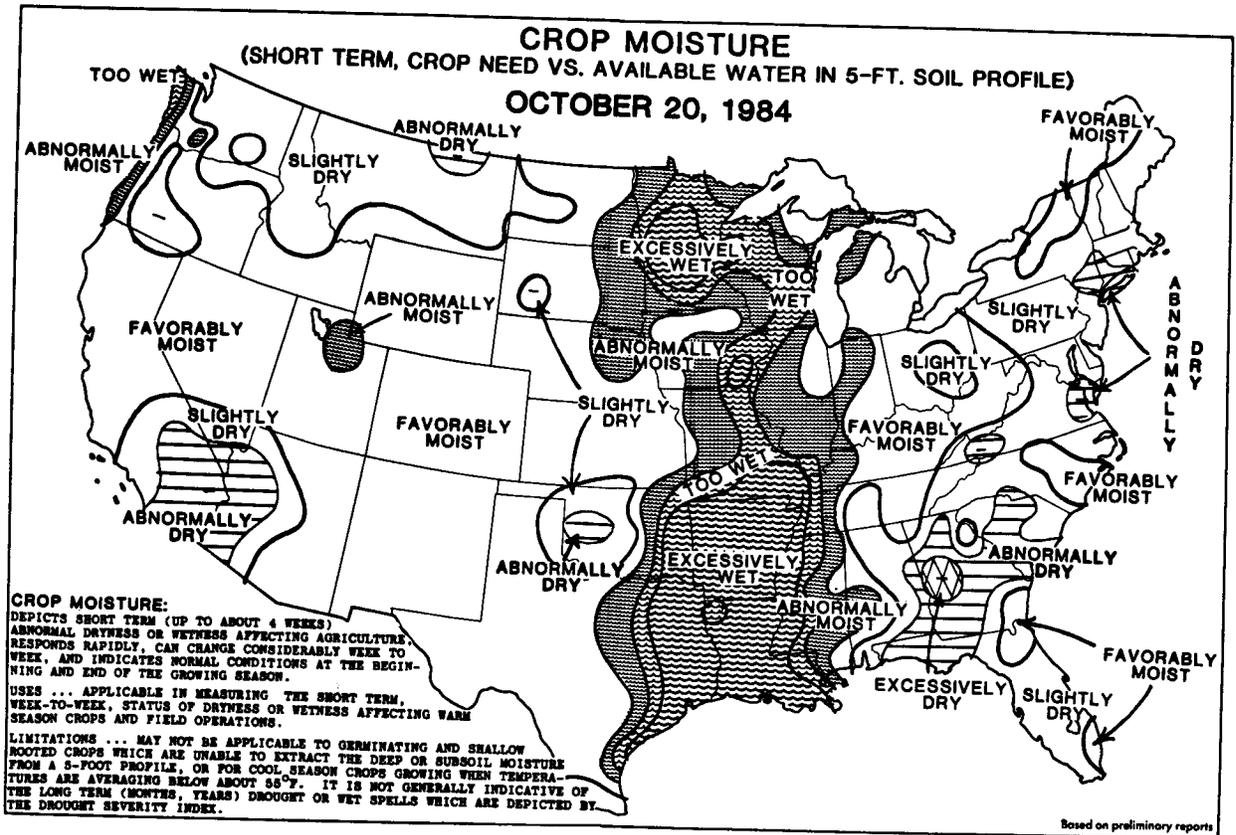
	Page
National Weather Summary	1
Precipitation & North America Satellite Photo.	2
Crop Moisture & Crop Moisture Index	3
Average Temperature & Departure	4
Extreme Minimum Temperature & Growing Degree Days	5
Weather Data for Selected Cities	6
Cooling Degree Days Table	9
Heating Degree Days Maps & The Home Heating Index	10
Climatological Summaries for 1900 Substations.	11
National Agricultural Summary	12
Crop Progress	13
State Summaries of Weather & Agriculture	14
International Weather & Crop Summary	21
Subscription & Mailing Permit Information	24

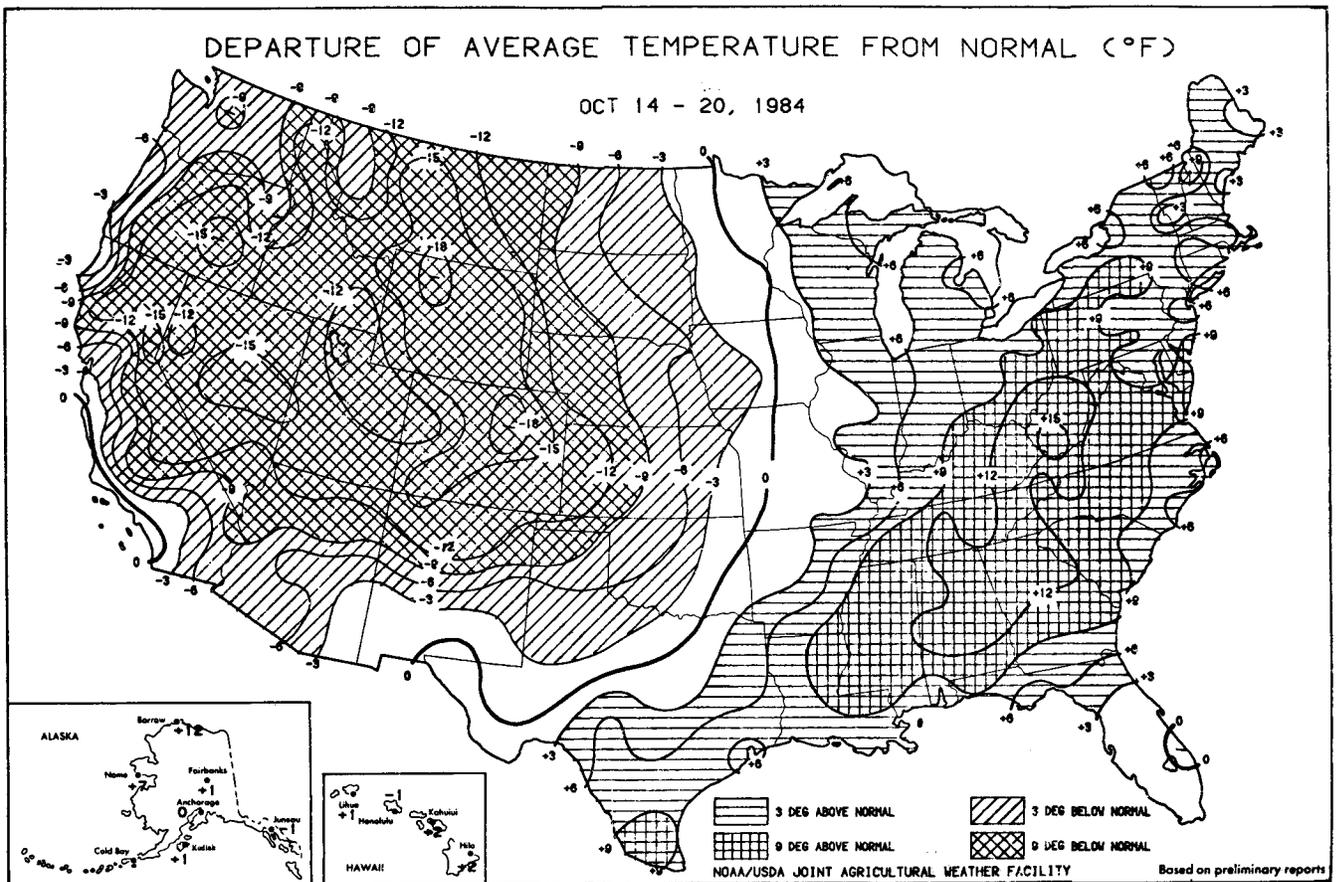
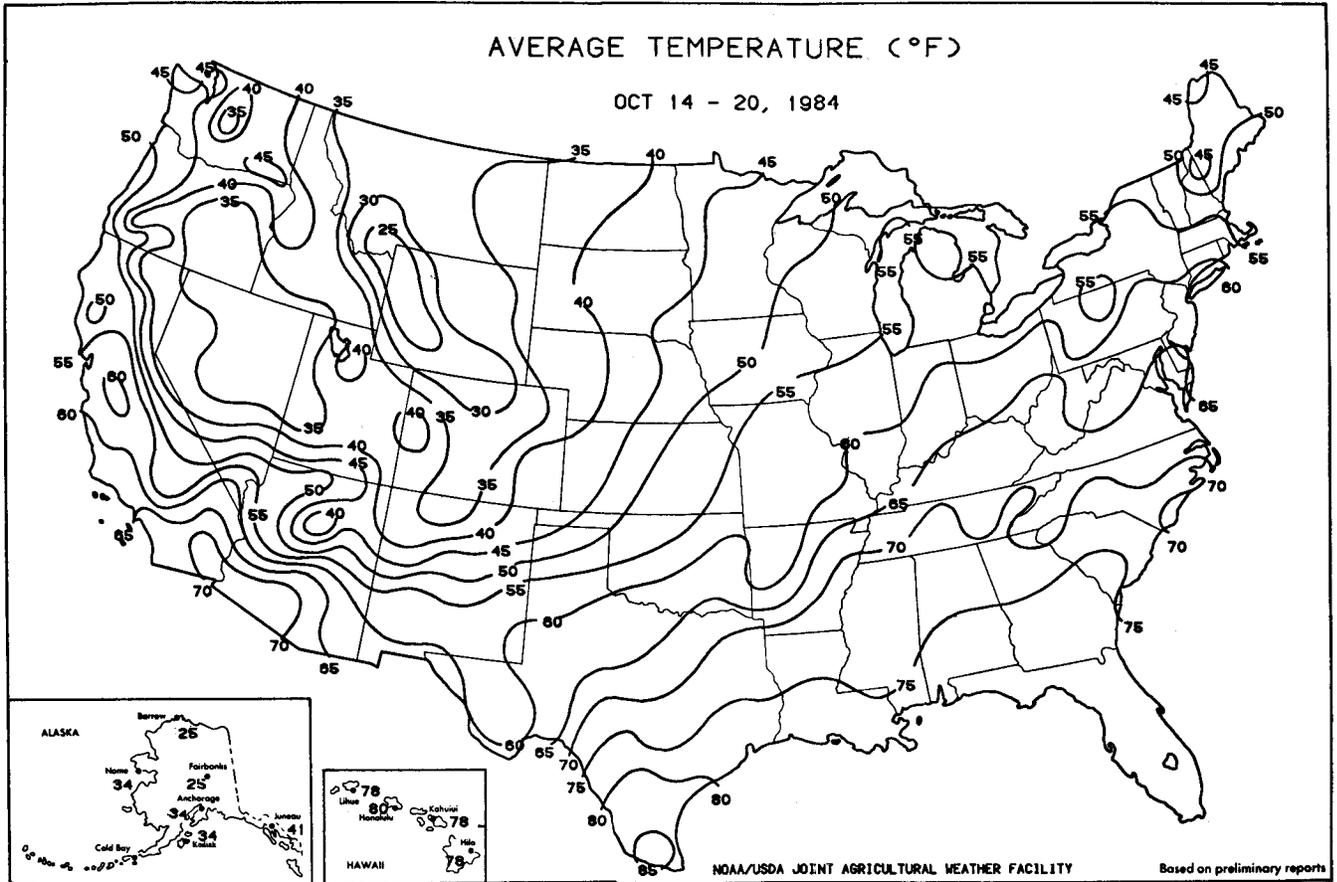


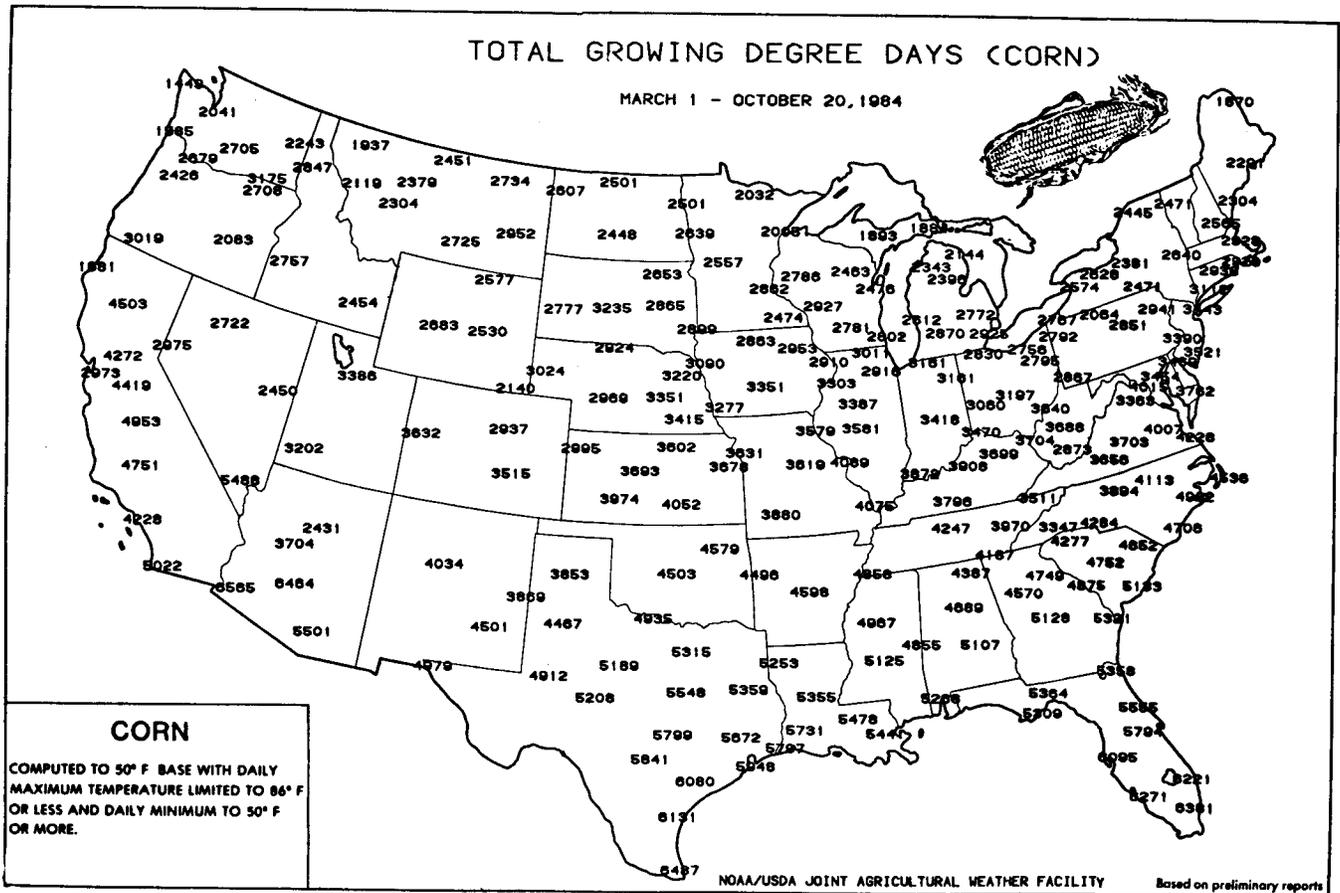
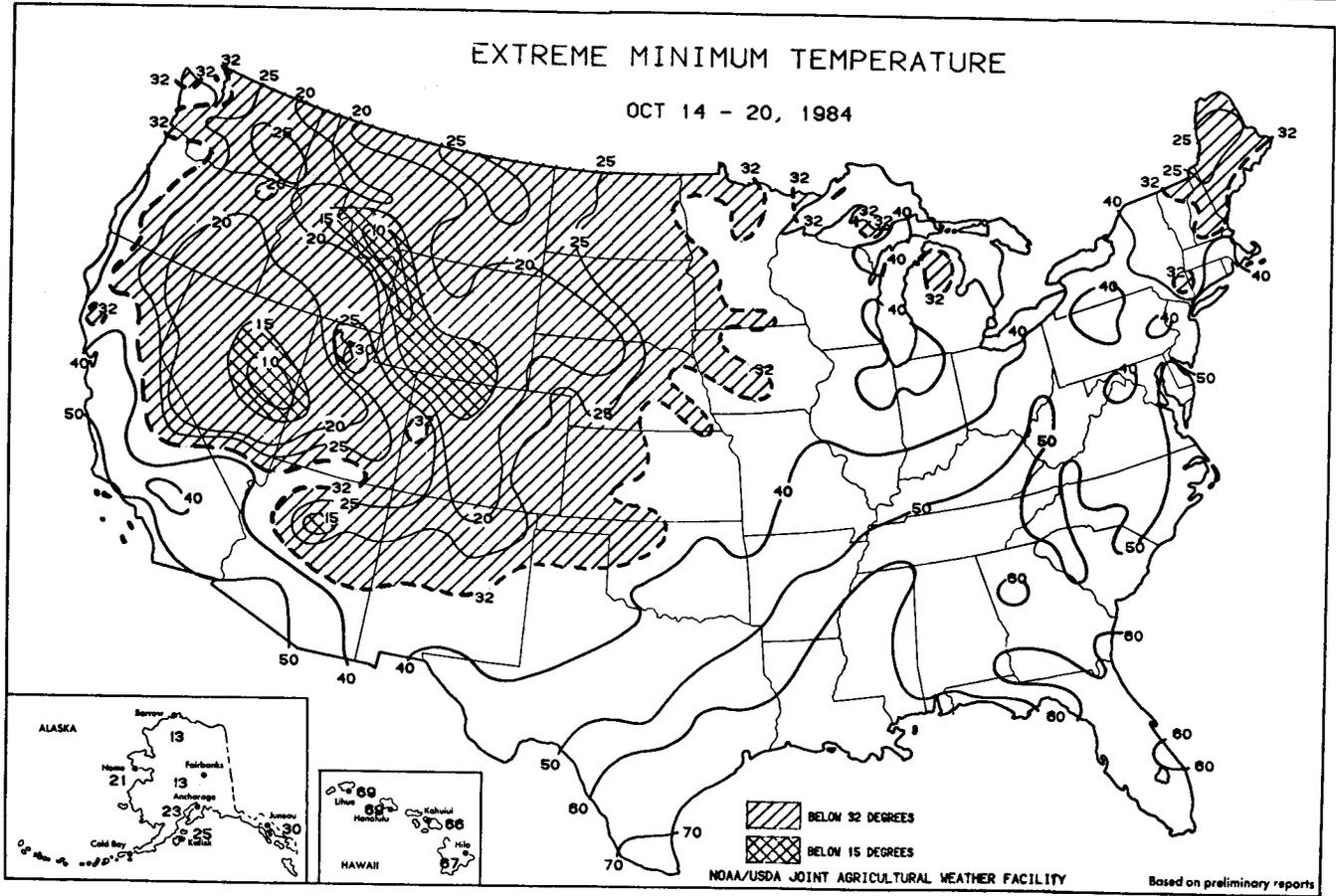
SHOWERS AND THUNDERSTORMS DEVELOP ALONG AND AHEAD OF A COLD FRONT WHICH STRETCHES FROM THE CENTRAL GREAT LAKES TO THE TEXAS PANHANDLE.

TROPICAL ACTIVITY, RECEDING SOUTHWARD, LEAVES CLEAR WEATHER OVER MEXICO, THE GULF, SOUTHEASTERN UNITED STATES, AND THE WESTERN CARIBBEAN.

TORRENTIAL RAIN IN SOUTHEASTERN TEXAS, AND FROM ARKANSAS INTO THE UPPER MISSISSIPPI DELTA, CAUSES FLOODING AND CROP DAMAGE.







Weather Data for the Week Ending October 23, 1984

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
AL BIRMINGHAM	84	65	87	57	75	13	.9	.3	.4	1.4	23	35.2	78	90	50	0	0	4	0
MOBILE	82	68	85	60	75	7	1.9	1.4	1.5	2.8	34	45.9	84	90	59	0	0	4	1
MONTGOMERY	86	66	90	59	76	12	.3	-.2	.2	1.4	22	41.1	101	91	50	1	0	2	0
AK ANCHORAGE	42	26	51	23	34	0	T	-.4	T	3.4	93	13.1	105	75	45	0	7	1	0
BARROW	30	20	38	13	25	12	.1	-.1	0	.4	36	3.6	88	98	76	6	6	3	0
FAIRBANKS	31	19	37	13	25	1	.2	.1	.1	.6	37	8.3	95	89	56	7	7	4	0
JUNEAU	47	35	49	30	41	-1	.1	-.7	.1	7.7	66	42.4	103	90	53	0	3	2	0
KODIAK	50	32	55	25	41	1	0	-2.3	0	10.8	76	57.2	98	86	44	0	4	2	0
NOME	38	29	42	21	34	7	.7	.4	.5	2.4	75	13.1	102	93	73	0	6	2	1
AZ PHOENIX	79	55	88	50	67	-5	T	-.1	T	3.7	356	11.3	204	51	18	0	0	0	0
PRESCOTT	60	36	68	29	48	-6	T	-.3	T	2.1	94	11.6	75	65	24	0	3	0	0
TUCSON	75	55	84	47	65	-4	.2	0	.2	2.4	123	11.6	124	56	20	0	0	1	0
YUMA	81	59	93	50	70	-6	0	-.1	0	.1	18	4.1	201	53	16	1	0	0	0
AR FORT SMITH	73	54	80	43	63	2	4.4	3.7	3.0	14.5	275	36.0	111	90	51	1	0	4	2
LITTLE ROCK	73	58	82	50	66	3	7.5	6.9	4.0	17.2	312	44.9	121	93	73	0	0	5	4
CA BAKERSFIELD	67	47	69	41	57	-11	T	0	T	.1	32	1.4	33	78	35	0	0	2	0
EUREKA	58	47	61	45	52	-2	1.1	.5	.5	3.9	167	20.7	82	86	71	0	0	5	0
FRESNO	66	48	69	39	57	-7	.3	.2	.3	.7	184	2.8	38	79	37	0	0	0	0
LOS ANGELES	72	58	76	54	65	-1	.3	.2	.3	.4	195	2.4	27	70	20	0	0	1	0
RED BLUFF	61	43	71	36	52	-12	.8	.6	.8	1.9	182	6.7	47	83	42	0	0	3	1
SACRAMENTO	66	49	75	39	58	-6	.5	.3	.5	1.0	141	4.0	34	71	33	0	0	2	0
SAN DIEGO	72	63	76	58	68	0	.2	.2	.2	.3	79	1.7	26	84	52	0	0	1	0
SAN FRANCISCO	65	49	68	45	57	-4	1.0	.8	1.0	1.9	252	6.1	46	85	47	0	0	2	1
CO DENVER	40	27	51	21	33	-18	1.6	1.4	.7	3.8	204	15.6	115	88	55	0	7	3	2
GRAND JUNCTION	50	36	57	33	43	-11	.3	.1	.2	2.6	209	10.4	160	83	43	0	0	3	0
PUEBLO	50	30	60	28	40	-13	1.3	1.1	.7	2.7	205	16.8	170	97	52	0	6	3	1
CT BRIDGEPORT	67	53	72	45	60	-5	0	0	0	2.1	40	35.6	108	91	66	0	0	0	0
HARTFORD	71	44	80	37	57	8	T	-.8	T	2.2	36	36.0	103	84	44	0	0	0	0
DC WASHINGTON	73	59	78	52	66	6	.1	-.5	.1	3.9	76	31.3	98	89	63	0	0	2	1
FL APALACHICOLA	83	66	86	61	75	5	1.2	.7	1.2	2.4	23	52.8	111	98	68	0	0	0	1
DAYTONA BEACH	86	65	87	62	75	2	0	-1.0	0	11.4	115	42.5	100	89	54	0	0	0	0
JACKSONVILLE	86	65	88	60	75	7	T	-.7	T	12.3	128	44.1	93	100	54	0	0	0	0
KEY WEST	84	77	86	74	81	1	T	-1.0	T	7.4	76	36.9	111	74	60	0	0	2	0
MIAMI	86	70	87	65	78	0	.1	-1.5	.1	11.6	89	54.2	106	86	48	0	0	0	0
ORLANDO	88	64	89	61	76	2	T	-.6	T	6.2	82	41.5	95	100	46	0	0	0	0
TALLAHASSEE	87	63	91	58	75	8	.3	-.3	.1	2.9	34	51.6	92	99	51	1	0	2	0
TAMPA	86	67	87	63	76	2	T	-.4	T	4.2	54	31.2	74	91	52	0	0	0	0
WEST PALM BEACH	83	69	86	61	76	-1	.1	-1.6	.1	8.5	58	53.4	103	90	57	0	0	1	0
GA ATLANTA	83	65	86	60	74	12	.2	-.4	.1	.3	7	48.5	121	89	50	0	0	3	0
AUGUSTA	89	60	91	50	75	12	.3	-.2	.3	.6	11	41.7	112	90	38	2	0	1	0
MACON	87	63	89	56	75	11	.4	0	.4	.8	17	40.3	107	93	45	0	0	2	0
SAVANNAH	85	66	88	54	76	10	T	-.4	T	7.3	108	46.0	103	93	50	0	0	0	0
HI HILO	84	70	86	67	77	2	.7	-1.6	.5	5.1	41	67.9	70	87	60	0	0	3	1
HONOLULU	87	70	89	69	78	-1	0	-.5	0	1.4	80	6.4	40	89	55	0	0	0	0
KAHULUI	92	68	95	66	80	2	0	-.2	0	T	0	6.8	47	86	47	7	0	0	0
LIHUE	85	71	86	69	78	1	0	-1.1	0	2.7	54	13.2	42	80	59	0	0	0	0
ID BOISE	47	28	49	22	38	-14	T	-.1	T	1.3	128	10.1	114	86	38	0	5	2	0
LEWISTON	51	31	54	26	41	-10	T	-.2	T	.4	31	8.4	85	85	42	0	0	0	0
POCATELLO	44	29	49	23	36	-11	.3	.1	.2	1.2	97	11.5	133	85	44	0	6	3	0
IL CHICAGO	66	46	72	38	56	3	1.9	1.4	.6	6.1	125	27.1	95	95	65	0	0	7	1
MOLINE	65	45	73	38	55	2	3.4	2.9	1.6	6.2	111	30.3	93	91	57	0	0	5	2
PEORIA	66	47	74	39	56	3	2.2	1.7	1.3	6.0	112	31.4	104	89	55	0	0	5	2
QUINCY	66	47	77	39	57	2	2.9	2.1	.9	6.5	101	31.7	96	93	59	0	0	5	3
ROCKFORD	65	44	72	34	54	3	3.0	2.3	1.7	5.0	88	24.6	78	98	63	0	0	4	2
SPRINGFIELD	66	49	77	36	58	3	1.4	-.9	.6	8.7	184	33.5	115	94	58	0	0	4	1
IN EVANSVILLE	76	53	83	43	64	8	1.4	-.8	.5	10.3	246	37.0	109	83	51	0	0	5	2
FORT WAYNE	70	50	77	37	60	8	1.7	1.1	.7	6.1	147	25.2	88	91	55	0	0	4	2
INDIANAPOLIS	73	52	78	38	62	8	.9	-.3	.7	6.9	159	32.0	99	93	52	0	0	3	1
SOUTH BEND	68	51	73	41	59	7	1.7	-.9	1.0	7.6	143	27.0	86	89	55	0	1	5	4
IA DES MOINES	58	43	69	31	50	-3	2.7	2.2	.9	7.3	162	36.5	132	93	66	0	0	5	4
SIoux CITY	55	38	65	29	47	-5	2.6	2.2	.8	5.1	138	30.6	132	88	59	0	2	4	4
WATERLOO	62	42	70	34	52	2	1.9	1.4	.7	5.2	106	29.2	99	91	60	0	0	4	2
KS CONCORDIA	58	41	70	33	49	-7	1.2	-.8	.6	5.6	132	25.8	104	98	65	0	0	6	1
DODGE CITY	58	38	75	32	48	-10	1.4	1.1	.7	3.0	109	16.1	85	92	52	0	1	5	1
GOODLAND	49	31	53	28	40	-12	1.2	1.0	.7	3.1	151	19.9	132	97	62	0	4	7	1
TOPEKA	63	44	75	33	53	-3	1.4	-.8	.6	7.1	133	33.8	114	98	60	0	0	6	0
WICHITA	62	43	72	33	52	-6	.6	0	.5	6.6	69	21.2	83	91	50	0	0	4	0
KY BOWLING GREEN	77	56	80	50	66	9	2.1	1.5	.9	6.1	123	45.4	114	98	60	0	0	4	2
LEXINGTON	76	58	81	48	67	11	.4	-.1	.3	2.1	46	29.1	77	90	62	0	0	3	0
LOUISVILLE	76	55	82	46	66	9	.4	-.1	.3	4.8	95	36.3	102	90	58	0	0	4	0
LA ALEXANDRIA	83	67	88	66	75	8	4.5	3.6	2.3	9.0	175	52.4	120	90	65	0	0	5	3
BATON ROUGE	82	69	87	67	76	8	4.1	3.6	2.5	10.3	169	38.2	83	94	65	0	0	5	2
LAKE CHARLES	82	70	86	64	76	7	4.9	4.1	2.5	17.3	231	53.4	124	97	75	0	0	4	3
NEW ORLEANS	83	70	87	66	76	8	1.8	1.3	.9	6.6	87	46.7	94	88	61	0	0	6	1

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

Weather Data for the Week Ending October 23, 1984

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
SHREVEPORT	83	65	90	61	74	8	3.1	2.5	2.6	10.5	213	36.9	104	97	61	1	0	0	1
ME CARIBOU	61	34	66	27	48	5	0	-7	0	2.9	52	29.9	102	92	45	0	0	0	0
PORTLAND	62	38	73	32	50	2	.1	-8	.1	2.9	51	39.8	121	93	51	0	0	0	0
MD BALTIMORE	72	56	77	47	64	8	8	-7	1	3.5	65	31.4	91	80	51	1	0	2	1
SALISBURY	75	57	84	53	66	9	9	-8	1	1.1	17	36.4	97	98	54	0	0	0	0
MA BOSTON	62	47	78	42	54	0	0	-8	1	4.9	89	44.1	130	92	55	0	0	0	0
CHATHAM	59	47	64	42	53	0	0	-8	1	6.1	100	43.8	121	11	1	0	2	2	
MI ALPENA	61	44	68	32	53	0	0	-5	.3	5.3	126	25.0	105	95	57	0	0	0	0
DETROIT	67	48	72	35	58	0	0	.7	.6	6.1	126	25.0	105	95	57	0	0	0	0
FLINT	67	48	72	38	57	7	7	1.1	.9	4.5	126	20.9	82	88	55	0	0	0	0
GRAND RAPIDS	66	49	73	37	58	7	7	.9	.5	4.6	124	23.0	95	95	57	0	0	0	0
GRAND LAKE	66	46	63	31	53	6	6	-3	.4	4.7	95	20.6	74	95	64	0	0	1	0
HOUGHTON LAKE	65	47	71	35	56	6	6	-1	.2	2.6	61	21.1	92	91	62	0	0	0	0
LANSING	60	47	71	35	56	6	6	.9	.5	4.7	120	21.7	89	93	62	0	0	0	0
MARQUETTE	59	40	64	29	50	6	6	0	.3	5.4	89	26.5	86	95	54	0	0	0	0
MUSKEGON	64	50	72	38	57	7	7	.7	.1	2.9	63	21.3	85	90	65	0	0	0	0
SAULT STE. MARIE	59	42	64	31	51	6	6	1.6	1.0	7.3	127	24.8	92	99	60	0	0	0	0
MN ALEXANDRIA	51	40	63	32	45	-1	7.5	7.0	2.6	9.7	277	30.7	139	98	74	0	0	1	1
DULUTH	52	41	68	34	47	3	4.2	3.7	1.3	8.3	177	23.5	90	92	66	0	0	0	0
INT'L FALLS	49	39	61	32	44	1	3.4	3.1	1.4	5.9	133	19.7	91	95	76	0	0	2	7
MINNEAPOLIS	55	42	62	36	48	-1	4.1	3.7	2.1	7.3	195	33.2	140	93	66	0	0	0	0
ROCHESTER	57	40	63	32	48	0	1.6	1.1	.7	5.0	112	23.5	92	91	65	0	0	0	0
MS GREENWOOD	82	66	88	62	74	11	2.5	1.9	1.4	8.9	176	40.4	96	100	64	0	0	0	0
JACKSON	82	66	89	64	74	10	1.4	.9	.9	3.7	72	36.2	86	100	62	0	0	0	0
MERIDIAN	84	66	91	58	75	12	3.0	2.4	1.7	4.1	78	39.0	90	95	58	0	0	0	0
MO CAPE GIRARDEAU	72	56	79	47	64	0	5.5	5.0	3.2	12.7	245	33.7	93	98	62	0	0	0	0
COLUMBIA	66	48	75	37	57	0	2.6	1.8	.7	9.1	153	40.8	131	94	56	0	0	0	0
KANSAS CITY	63	46	72	34	54	-2	3.3	2.6	1.1	7.2	114	31.7	101	94	54	0	0	0	0
SAINT LOUIS	60	51	81	43	61	3	2.8	2.3	1.2	15.2	363	40.5	143	98	58	0	0	0	0
SPRINGFIELD	76	50	75	39	58	1	3.9	3.2	1.7	9.4	146	33.0	99	98	58	0	0	0	0
MT BILLINGS	41	26	49	22	33	-16	1.1	-2	.1	1.6	75	8.6	65	85	46	0	0	0	0
GLASGOW	43	31	57	26	37	-9	2	.1	.2	1.0	80	5.6	52	77	53	0	0	0	0
GREAT FALLS	36	26	45	19	31	-16	2	0	.1	.8	50	9.6	71	94	59	0	0	0	0
HAVRE	38	29	53	26	34	-12	2	.1	.1	.9	72	5.3	52	84	56	0	0	0	0
HELENA	39	27	44	20	33	-12	2	.1	.1	1.1	88	7.8	78	78	48	0	0	0	0
KALISPELL	40	28	44	23	34	-8	1	0	0	2.5	148	11.5	91	89	50	0	0	0	0
MILES CITY	45	27	55	23	36	-12	1	0	0	.8	45	7.5	60	90	49	0	0	0	0
MISSOULA	42	27	48	20	35	-9	1	0	0	1.2	73	11.1	101	97	46	0	0	0	0
NE GRAND ISLAND	54	37	59	32	45	-7	2.1	1.9	.7	3.6	109	28.7	133	88	55	0	0	0	0
LINCOLN	58	40	71	31	49	-5	1.8	1.5	.7	4.8	117	32.5	131	93	58	0	0	0	0
NORFOLK	55	38	65	33	47	-5	1.9	1.6	.8	4.8	160	30.8	140	82	50	0	0	0	0
NORTH PLATTE	51	30	57	21	40	-10	1.1	.9	.5	2.7	114	19.6	107	93	44	0	0	0	0
OMAHA	56	41	66	34	48	-5	2.0	1.5	.8	7.0	147	31.9	117	86	66	0	0	0	0
SCOTTSDUFF	48	27	56	21	37	-12	3	.1	.2	1.3	82	12.1	91	79	35	0	0	0	0
VALENTINE	52	28	59	18	40	-9	4	.2	.3	1.0	52	18.4	114	81	39	0	0	0	0
NV ELY	42	20	49	5	31	-14	3	.2	.2	5.1	461	13.0	173	93	47	0	0	0	0
LAS VEGAS	68	48	75	42	58	-9	0	-1	0	.5	104	4.2	127	34	14	0	0	0	0
RENO	47	30	56	22	39	-11	4	-4	-4	.6	122	2.5	45	85	43	0	0	0	0
WINNEMUCCA	44	27	51	17	35	-13	1	0	0	2.3	327	10.7	176	83	49	0	0	0	0
NH CONCORD	68	36	74	30	52	5	0	-7	0	4.3	84	35.6	126	97	39	0	0	0	0
NJ ATLANTIC CITY	74	53	85	44	64	9	1.0	-7	0	2.0	42	33.9	101	88	53	0	0	0	0
NM ALBUQUERQUE	54	36	66	31	45	-12	1.5	1.3	1.3	3.8	265	9.8	140	90	42	0	0	0	0
CLOVIS	66	42	81	38	54	-4	4	0	-4	3.7	117	21.0	134	72	32	0	0	0	0
ROSWELL	73	42	82	36	58	-3	7	-2	0	1.6	66	14.2	160	70	23	0	0	0	0
NY ALBANY	71	42	75	36	57	7	3	-4	-3	2.8	54	31.1	108	100	48	0	0	0	0
BINGHAMTON	70	47	75	42	58	10	1	-5	.1	2.6	50	31.9	107	93	43	0	0	0	0
BUFFALO	68	48	75	46	58	7	1	-5	.1	4.3	84	30.7	105	96	56	0	0	0	0
NEW YORK	73	58	79	54	65	9	1	-7	.1	3.3	60	42.5	124	85	56	0	0	0	0
ROCHESTER	69	47	76	42	58	7	2	-4	.1	3.8	89	28.6	114	95	56	0	0	0	0
SYRACUSE	68	43	74	40	55	5	5	-3	.3	3.6	68	28.8	92	99	60	0	0	0	0
NC ASHEVILLE	79	52	82	44	66	10	8	-1	.5	1.0	16	39.9	100	100	50	0	0	0	0
CHARLOTTE	81	59	84	52	70	10	5	-1	.5	2.2	42	40.2	111	94	51	0	0	0	0
GREENSBORO	79	57	84	46	68	11	5	0	0	1.2	20	45.5	128	92	48	0	0	0	0
HATTERAS	75	61	80	53	68	4	0	-1	0	4.2	47	38.3	86	95	71	0	0	0	0
NEW BERN	82	59	88	47	71	8	0	-7	0	14.1	175	56.0	123	92	56	0	0	0	0
RALEIGH	79	57	85	45	68	9	0	0	0	2.6	52	41.8	120	95	55	0	0	0	0
WILMINGTON	81	56	85	48	69	5	0	-6	0	19.1	249	54.9	120	100	55	0	0	0	0
ND BISMARCK	46	35	57	30	41	-5	8	.6	.6	1.8	95	13.4	95	81	46	0	0	3	4
FARGO	48	38	58	32	43	-3	4.4	4.1	1.7	7.7	280	19.0	107	91	72	0	0	1	1
GRAND FORKS	49	38	60	33	44	-1	2.7	2.5	1.1	3.1	111	19.1	115	90	72	0	0	0	0
WILLISTON	42	28	58	23	35	-10	3	.2	.1	2.5	137	9.8	78	90	59	0	0	6	4
OH AKRON-CANTON	69	48	74	41	59	7	1	-4	.1	3.5	79	27.5	92	94	54	0	0	0	0
CINCINNATI	75	52	80	41	63	9	6	0	.4	4.9	110	29.2	88	90	57	0	0	0	0
CLEVELAND	68	49	74	38	59	6	3	-2	.2	3.1	70	32.3	111	84	53	0	0	0	0
COLUMBUS	73	50	79	40	62	9	8	-4	.6	3.1	79	24.7	80	89	51	0	0	0	0

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

Weather Data for the Week Ending October 23, 1984

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Sept. 1	PCT. NORMAL SINCE Sept. 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	72	49	76	39	60	7	-4	0	.2	4.3	119	26.3	91	85	49	0	0	4	0
TOLEDO	67	48	76	33	58	7	1.0	.6	.4	3.7	98	25.1	96	95	59	0	0	4	0
YOUNGSTOWN	69	50	76	44	60	9	.2	.2	.2	3.4	71	29.4	96	94	59	0	0	2	0
OK OKLAHOMA CITY	67	46	82	37	57	-5	1.6	1.0	.9	3.3	62	19.0	69	94	46	0	0	4	2
TULSA	70	50	84	41	60	-2	4.0	3.3	1.9	6.9	103	34.4	103	95	46	0	0	4	3
OR ASTORIA	53	38	55	31	46	-7	1.2	.5	.5	8.2	120	43.8	96	91	64	0	0	1	1
BURNS	41	24	45	18	32	-15	.5	.3	.2	.7	63	8.0	141	--	--	0	7	7	0
MEDFORD	53	39	60	35	46	-8	.7	.3	.2	1.9	109	9.5	74	100	73	0	0	5	0
PENDLETON	51	33	53	28	42	-10	0	0	.9	.9	81	9.4	108	82	39	0	4	0	0
PORTLAND	52	42	61	37	47	-7	.8	.1	.3	4.1	120	23.8	97	94	65	0	0	4	0
SALEM	52	39	56	34	46	-7	.9	.2	.4	4.4	125	27.7	106	99	78	0	0	5	0
PA ALLENTOWN	71	49	75	40	60	7	.3	.3	.4	2.3	39	44.5	125	90	49	0	0	1	0
ERIE	67	51	74	48	59	8	.5	.3	.4	6.1	101	29.2	93	89	61	0	0	2	0
HARRISBURG	71	55	77	48	63	9	.2	.4	.2	1.6	30	36.1	114	--	--	0	0	3	0
PHILADELPHIA	72	53	78	46	62	7	.1	.6	.1	2.9	56	38.3	114	91	52	0	0	0	0
PITTSBURGH	72	51	78	45	61	10	1.0	.4	.8	2.6	60	27.5	90	88	50	0	0	5	1
SCRANTON	72	50	75	43	61	10	.2	.4	.2	2.1	40	32.1	112	91	46	0	0	1	0
RI PROVIDENCE	68	48	79	41	58	5	T	T	T	3.6	60	41.1	116	82	43	0	0	0	0
SC CHARLESTON	83	62	85	54	73	8	.9	.2	.9	6.0	87	43.3	95	97	58	0	0	0	1
COLUMBIA	88	59	90	45	73	11	.1	.5	.1	.8	13	41.3	97	99	45	1	0	1	0
FLORENCE	84	60	86	48	72	9	.2	.3	.2	1.6	28	37.9	99	99	55	0	0	1	0
GREENVILLE	81	59	83	50	70	10	.1	.7	.1	1.4	21	51.3	121	87	50	0	1	0	0
SD ABERDEEN	49	37	62	32	43	-4	1.7	.5	.7	3.6	164	20.6	125	95	65	0	1	4	2
HURON	50	36	63	28	43	-5	2.1	1.8	1.5	4.3	186	29.0	170	92	61	0	1	4	2
RAPID CITY	50	27	56	19	39	-11	.1	.1	.1	1.4	88	14.4	95	75	29	0	6	1	0
SIoux FALLS	53	37	64	30	45	-4	2.5	2.2	.8	4.8	126	27.7	125	87	59	0	2	5	3
TN CHATTANOOGA	80	60	84	55	70	11	.9	.3	.7	4.8	78	40.4	95	94	56	0	0	0	1
KNOXVILLE	83	59	85	52	71	12	1.0	.4	.8	2.2	47	41.3	109	92	51	0	0	3	1
MEMPHIS	80	62	87	58	71	9	2.5	2.0	1.1	7.2	143	44.5	107	98	60	0	0	6	1
NASHVILLE	82	61	84	58	71	12	1.6	1.0	.6	3.0	56	44.0	111	91	53	0	0	4	2
TX ABILENE	74	53	85	45	64	-2	1.1	.6	1.1	5.9	127	14.4	70	75	31	0	0	1	1
AMARILLO	61	38	76	32	50	-9	.8	.5	.6	3.3	124	16.2	92	83	35	0	1	3	1
AUSTIN	84	64	89	57	74	5	1.9	1.1	1.0	8.0	136	18.1	69	91	47	0	0	3	2
BEAUMONT	82	71	86	66	77	7	7.3	6.6	3.7	17.4	205	49.8	117	97	73	0	0	5	3
BROWNSVILLE	89	77	90	76	83	8	T	T	T	19.5	250	36.7	167	92	62	3	0	0	0
CORPUS CHRISTI	87	73	92	64	80	7	1.6	1.0	1.6	8.4	100	18.5	70	98	69	1	0	1	0
DEL RIO	82	64	88	59	74	4	.1	.4	.1	4.5	102	10.6	69	87	38	0	0	1	0
EL PASO	76	52	82	42	64	1	T	.1	T	1.2	59	11.9	171	68	27	0	0	1	0
FORT WORTH	77	58	87	46	67	0	2.3	1.8	2.1	4.7	94	22.6	89	91	43	0	0	4	1
GALVESTON	80	72	82	65	76	4	3.2	2.7	1.4	9.6	126	25.9	79	95	82	0	0	4	2
HOUSTON	85	70	90	65	77	8	2.7	1.9	1.8	8.8	119	32.1	88	86	55	1	0	6	2
LUBBOCK	70	42	81	35	56	-4	T	T	T	1.1	32	10.7	66	86	28	0	0	0	0
MIDLAND	75	47	81	41	61	-3	T	.3	T	2.4	77	11.8	96	81	28	0	0	1	0
SAN ANGELO	78	53	86	46	66	-1	0	0	0	4.8	107	12.6	78	86	36	0	0	0	0
SAN ANTONIO	84	66	89	60	75	5	.8	.2	.6	5.7	100	18.2	74	88	44	0	0	4	1
VICTORIA	85	72	89	67	78	7	1.5	.9	.8	6.4	74	23.8	75	92	64	0	0	4	2
WACO	80	61	89	52	70	2	1.9	1.2	1.0	8.3	159	22.7	88	91	55	0	0	3	2
WICHITA FALLS	72	49	86	40	60	-4	1.2	.6	1.0	3.2	60	13.0	56	91	41	0	0	3	1
UT BLANDING	47	28	52	25	38	-14	.5	.1	.2	2.9	153	8.2	92	94	58	0	6	3	0
CEDAR CITY	48	29	53	21	39	-13	.6	.5	.4	1.4	101	11.6	139	93	38	0	5	3	0
SALT LAKE CITY	47	35	51	31	41	-11	1.9	1.6	1.3	3.0	306	18.7	152	85	48	0	2	4	2
VT BURLINGTON	63	39	67	36	51	4	.1	.6	.1	4.2	84	29.5	107	92	56	0	0	1	0
VA NORFOLK	76	60	87	55	68	8	T	.8	T	2.3	35	39.8	104	90	57	0	0	1	0
RICHMOND	80	56	89	48	68	10	.1	.8	.1	3.0	51	40.3	111	89	46	0	0	1	0
ROANOKE	77	55	82	47	66	10	.2	.6	.2	3.4	62	38.4	118	96	52	0	0	2	0
WA COLVILLE	48	24	51	17	36	-9	0	.3	0	1.0	67	18.2	147	87	47	0	7	0	0
QUILLAYUTE	53	32	57	27	43	-7	.3	.3	.3	14.4	122	80.5	115	99	62	0	3	3	0
SEATTLE-TACOMA	53	38	59	34	46	-6	T	.8	T	2.7	67	23.4	93	90	49	0	0	0	0
SPOKANE	47	22	51	15	35	-12	T	.2	T	.8	59	11.4	97	92	41	0	7	0	0
YAKIMA	56	28	60	22	42	-7	0	.1	0	.5	90	5.8	105	73	31	0	6	0	0
WV BECKLEY	75	54	79	44	65	13	.4	.2	.3	2.7	54	32.6	92	98	52	0	0	2	0
CHARLESTON	80	58	84	51	69	14	1.2	.6	.6	4.9	104	31.1	88	91	52	0	0	3	1
HUNTINGTON	77	56	81	50	67	11	1.2	.7	1.1	4.1	90	29.2	86	92	58	0	0	3	1
PARKERSBURG	76	58	80	51	67	13	.4	0	.3	2.3	56	23.7	67	93	55	0	0	3	0
WI GREEN BAY	60	46	67	38	53	5	2.8	2.4	2.1	9.5	207	31.1	128	92	63	0	0	5	1
LA CROSSE	61	43	69	36	52	2	1.6	1.2	.9	4.9	104	26.7	99	88	53	0	0	3	1
MADISON	63	44	70	35	54	5	3.8	3.3	2.8	7.0	156	27.7	103	95	67	0	0	3	2
MILWAUKEE	62	47	67	40	54	4	2.9	2.4	1.8	5.9	135	29.5	113	95	69	0	0	6	2
WAUSAU	58	43	64	36	51	4	2.1	1.6	.9	9.1	169	34.9	125	93	59	0	0	4	2
WY CASPER	39	23	44	18	31	-16	.5	.3	.2	1.1	79	11.8	118	97	49	0	7	6	0
CHEYENNE	39	22	50	18	30	-17	.3	.1	.1	2.1	141	17.0	140	96	54	0	7	4	0
LANDER	39	22	43	17	31	-16	.6	.3	.3	1.4	85	12.4	107	89	39	0	7	4	0
SHERIDAN	42	23	49	16	32	-14	.1	.2	.1	2.1	108	13.0	99	86	43	0	7	1	0
PR SAN JUAN	88	73	91	72	81	0	1.0	.3	.7	7.5	79	33.5	80	86	61	1	0	5	1

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

COOLING DEGREE DAY DATA WEEKLY SUMMARY
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NWS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 10-20-1984
ACCUMULATIONS ARE FROM JANUARY 1
** = NORMAL LESS THAN 100 CR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL WEEK, WEEK WEEK, CUM CUM, CUM CUM, CUM CUM, CUM CUM. It lists data for various cities including Birmingham, Mobile, Montgomery, Anchorage, Barrow, Fairbanks, Juneau, Kodiak, Nome, Flagstaff, Phoenix, Tucson, Yuma, Fort Smith, Little Rock, Bakersfield, Eureka, Fresno, Los Angeles, Red Bluff, San Diego, San Francisco, Stockton, Denver, Grand Junction, Pueblo, Bridgeport, Hartford, Wilmington, DC Washington, FL Apalachicola, Daytona Beach, Fort Meyer, Jacksonville, Key West, Miami, Orlando, Tallahassee, Tampa, West Palm Beach, Atlanta, Augusta, Macon, Savannah, HI Hilo-Hawaii, HI Honolulu-Oahu, HI Kahului-Maui, HI Lihue-Kauai, ID Boise, ID Lewiston, ID Pocatello, IL Chicago, IL Moline, IL Peoria, IL Rockford, IL Springfield, IN Evansville, IN Fort Wayne, IN Indianapolis, IN South Bend, IA Des Moines, IA Dubuque, IA Sioux City, KS Concordia, KS Dodge City, KS Goodland, KS Topeka, KS Wichita, KY Lexington, KY Louisville, LA Baton Rouge, LA Lake Charles, LA New Orleans, LA Shreveport, ME Caribou, ME Portland, MD Baltimore, MA Boston, MI Alpena, MI Detroit, MI Flint, MI Grand Rapids, MI Houghton Lake, MI Lansing, MI Marquette, MI Muskegon, MI Sault St Marie, MN Duluth, MN Int'l Falls, MN Minneapolis, MN Rochester, MN Saint Cloud, MS Jackson, MS Meridian, MS Columbia, MO Kansas City, MO Saint Louis, MO Springfield, MT Billings, MT Glasgow, MT Great Falls, MT Havre, MT Helena, MT Kalispell, MT Miles City, MT Missoula, NE Grand Island, NE Lincoln, NE Norfolk, NE North Platte, NE Omaha, NE Valentine, NV Ely, NV Las Vegas, NV Reno, NV Winnemucca, NH Concord, NJ Atlantic City, NM Albuquerque, NM Roswell, NY Albany, NY Binghamton, NY Buffalo, NY New York, NY Rochester, NY Syracuse, NC Asheville, NC Cape Hatteras, NC Charlotte, NC Greensboro, NC Raleigh Durham, ND Bismarck, ND Bismarck, ND Fargo, ND Williston, OH Akron-Canton, OH Cleveland, OH Columbus, OH Cincinnati, OH Dayton, OH Toledo, OH Youngstown, OK Oklahoma City, OK Tulsa, OR Astoria, OR Burns, OR Medford, OR Pendleton, OR Portland, OR Salem, PA Allentown, PA Erie, PA Harrisburg, PA Philadelphia, PA Pittsburgh, PA Scranton, RI Providence, SC Charleston, SC Columbia, SC Greenville, SD Aberdeen, SD Huron, SD Rapid City, SD Sioux Falls, TN Chattanooga, TN Knoxville, TN Memphis, TN Nashville, TX Abilene, TX Amarillo, TX Austin, TX Brownsville, TX Corpus Christi, TX Del Rio, TX El Paso, TX Fort Worth, TX Galveston, TX Houston, TX Lubbock, TX Midland Odessa, TX San Angelo, TX San Antonio, TX Victoria, TX Waco, TX Wichita Falls, UT Salt Lake City, UT Burlington, VA Lynchburg, VA Norfolk, VA Richmond, VA Roanoke, VA Sealtyle-Tacom, WA Walla Walla, WA Yakima, WY Beckley, WY Cheyenne, WY Casper, WY Cheyenne, WY Lander, WY Sheridan

THE HOME HEATING INDEX

E. ARLO RICHARDSON
CLIMATOLOGIST EMERITUS
DEPARTMENT OF SOILS AND
BIOMETEOROLOGY, UTAH STATE
UNIVERSITY, LOGAN, UT

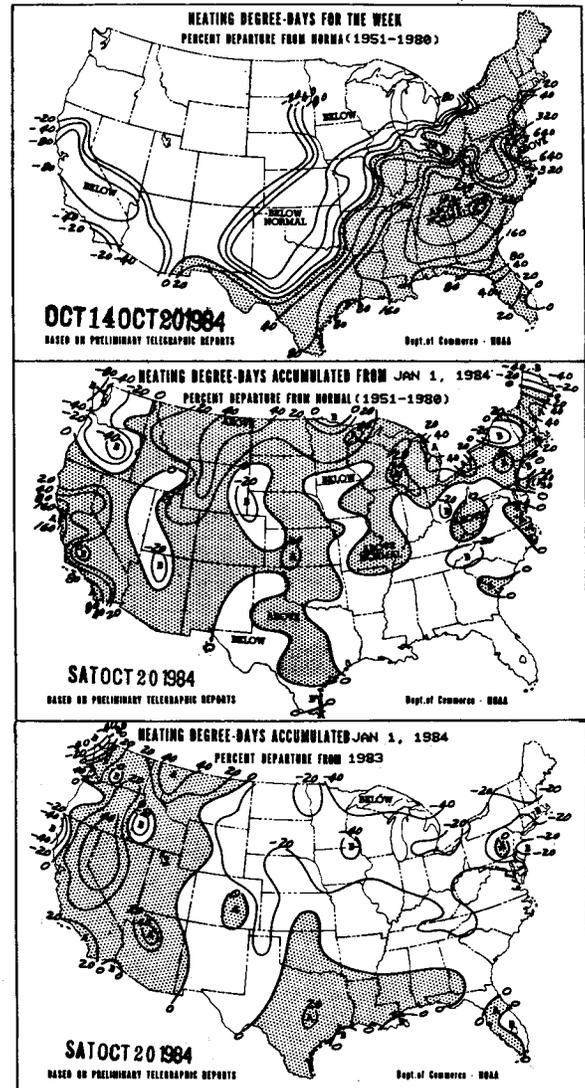
If you have been shocked by the change in your heating bills during the last winter season, now is the time to do something about them. The first step is to determine the efficiency of your home heating operations. A simple method of obtaining this information is called the "Home Heating Index." To calculate this, collect your heating bills for the past winter season: October through March will be adequate. Since most of us use natural gas for home heating, I will use this fuel as an example. A close look at your bill will reveal the meter readings of your gas meter. These are usually read in terms of hundreds of cubic feet of gas. Take the meter reading at the end of the heating season (the end of March) and subtract the meter reading at the end of October. From this difference, you will have the amount of fuel consumed during the winter period. If your October or March bills indicate that the reading was an estimate, then go back or forward an additional month so that the period covered is represented by actual consumption rather than estimated values.

A common method of relating climate conditions to fuel consumption used by engineers and heating specialists is to calculate the heating degree days for each month or period of fuel consumption. Heating degree days are calculated by adding the maximum and minimum temperatures together and dividing by two to obtain the average temperature for the day. Then subtract this average value from 65. If the difference is positive, the value is heating degree days; if the difference is negative, the value is cooling degree days. The accumulative of heating degree days for the heating period is then obtained by adding calculated daily values together for the period desired.

To obtain a heating index for your home, the fuel consumed during this period is then divided by the accumulation of heating degree days. This index should then be divided by your home's square foot area to obtain the number of cubic feet of fuel used for each heating degree day for each square foot of area. This index will indicate the energy efficiency of your home. If your home covers less than 1,000 square feet and the index is less than .15 feet of gas per heating degree day per square foot of space, your home is fairly efficient. That is, you are managing your heating program fairly well. If the index is less than .10 you are doing very well on a one-thousand square foot home. As the size of the home increases, the index should decrease slowly until, for a home of 30,000 or more square feet, the index for an efficiently operated home should be about .05 or less. If you do not have maximum and minimum temperatures from which to calculate the heating and cooling degree days for your vicinity, you might check with the State climatologist for information on how to obtain data representative of your community.

Variations in the index depends, of course, on how well the home is constructed, including such items as storm doors, storm windows, adequate wall and ceiling insulation, and cold air infiltration associated with openings around plumbing and/or electrical wiring.

However, one may have a very well-constructed home and yet have large fuel bills because of windows or doors being left open, which causes a great deal of heat to escape. If your home heating index is much higher than those indicated for your home size, the next step in fuel conservation is to look at the various methods through which heat energy may be lost from your home.



CLIMATOLOGICAL SUMMARIES

Just-Released 1951-80 Data for 1900 Substations

Now Includes: Heating, Cooling, and Growing Degree Days for Several Temperature-Base Values

CLIMATOGRAPHY OF THE UNITED STATES NO. 20
ARCADIA, FL

CLIMATOLOGICAL SUMMARY

PERIOD: 1951-80
ELEVATION: 63 FT

	MEANS		TEMPERATURE (F)										PRECIPITATION TOTALS (INCHES)															
	DAILY MAXIMUM	DAILY MINIMUM	MONTHLY	EXTREMES					MEAN NUMBER OF DAYS					DEGREE DAYS					PRECIPITATION									
				RECORD HIGHEST	YEAR	DAY	RECORD LOWEST	YEAR	DAY	90 AND ABOVE	32 AND BELOW	32 AND BELOW	0 AND BELOW	0 AND BELOW	HEATING BASE 65	COOLING BASE 65	MEAN	GREATEST MONTHLY	YEAR	GREATEST DAILY	YEAR	DAY	MEAN	MAXIMUM MONTHLY	YEAR	10 OR MORE	50 OR MORE	1.00 OR MORE
JAN	74.3	48.8	61.6	88*	74	1	20	71	21	0	0	3	0	0	0	179	74	2.17	7.93	58	4.00	61	13	0	0	3	1	1
FEB	75.7	49.3	62.5	92*	75	21	24*	71	15	0	0	2	0	0	0	149	78	2.64	7.10	64	2.48	66	23	0	0	4	2	1
MAR	80.8	54.2	67.5	94*	77	21	26*	80	3	2	0	0	0	0	58	136	2.69	7.10	58	3.63	72	31	0	0	4	2	1	
APR	85.5	57.8	71.7	98*	75	30	32*	71	8	7	0	0	0	0	0	204	2.13	8.00	51	5.10	63	07	0	0	4	2	1	
MAY	89.8	63.2	76.5	101*	53	27	43*	73	17	18	0	0	0	0	0	357	4.28	9.57	58	5.11	67	22	0	0	6	3	1	
JUN	91.2	68.2	79.7	99*	52	26	52*	61	2	23	0	0	0	0	0	441	7.76	17.40	62	6.26	68	04	0	0	10	5	2	
JUL	92.0	70.1	81.1	100*	61	31	61*	56	31	27	0	0	0	0	0	499	8.26	17.52	65	3.70	67	16	0	0	12	5	3	
AUG	92.1	70.9	81.5	99*	56	4	60*	63	20	29	0	0	0	0	0	512	7.30	17.41	67	4.11	67	12	0	0	11	5	2	
SEP	90.2	70.1	80.2	98*	52	2	56*	72	24	21	0	0	0	0	0	456	7.35	17.05	60	7.38	62	21	0	0	10	5	2	
OCT	85.3	63.5	74.4	98*	73	5	41*	57	28	5	0	0	0	0	0	291	3.95	13.98	52	7.38	53	09	0	0	5	3	1	
NOV	79.6	55.6	67.6	93*	59	6	23*	70	25	0	0	0	0	0	0	41	119	1.97	4.95	80	3.87	69	14	0	0	2	1	1
DEC	75.1	49.9	62.5	89*	72	6	18*	62	13	0	0	2	0	0	142	64	2.19	9.10	62	5.00	62	23	0	0	3	1	1	
YEAR	84.3	60.1	72.2	101	53	27	18	62	13	132	0	7	0	0	568	3231	52.69	17.52	65	7.38	62	21	0	0	73	34	17	

PERIOD 1951-80 NORMALS

* ESTIMATED VALUE BASED ON DATA FROM SURROUNDING STATIONS

* ALSO ON EARLIER DATES.

NEW

DEGREE DAYS TO SELECTED BASE TEMPERATURES (F)

BASE	HEATING DEGREE DAYS												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
BELOW													
65	179	148	58	0	0	0	0	0	0	0	41	142	568
60	99	78	16	0	0	0	0	0	0	0	9	64	266
57	60	45	7	0	0	0	0	0	0	0	0	33	145
55	41	31	0	0	0	0	0	0	0	0	0	20	92
50	14	11	0	0	0	0	0	0	0	0	0	5	30
ABOVE													
55	245	241	392	501	667	741	809	822	756	601	378	252	6405
57	202	199	333	441	605	681	747	760	696	539	321	203	5727
60	148	148	249	351	512	591	654	667	606	446	237	142	4751
65	74	78	136	204	357	441	499	512	456	291	119	64	3231
70	28	31	58	82	202	291	344	357	306	148	43	20	1910

GROWING DEGREE UNITS TO SELECTED BASE TEMPERATURES (F)

BASE	GROWING DEGREE UNITS												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
40	676	637	860	958	1139	1199	1281	1295	1212	1071	836	704	11868
45	524	498	705	808	984	1049	1126	1140	1062	916	686	551	10049
50	379	363	551	658	829	899	971	985	912	761	537	402	8247
55	250	241	401	508	674	749	816	830	762	606	392	267	6496
60	140	138	262	359	519	599	661	675	612	452	254	152	4823

M = MONTHLY DATA S = SUM OF MONTHLY DATA

GROWING DEGREE UNITS FOR CORN

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
M	437	418	572	641	765	819	878	889	846	743	557	458	8023
S	437	855	1427	2068	2833	3652	4530	5419	6265	7008	7565	8023	

NOTE: FOR CORN THE BASE IS 50, AND THE DEGREE UNITS ARE ADJUSTED FOR TEMPERATURES BELOW 50 AND ABOVE 86

PROBABILITY THAT THE MONTHLY PRECIPITATION WILL BE EQUAL TO OR LESS THAN THE INDICATED PRECIPITATION AMOUNT MONTHLY PRECIPITATION (INCHES)

PROBABILITY LEVELS	MONTHLY PRECIPITATION (INCHES)											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
.05	.08	.50	.18	.00	.55	2.78	2.53	3.61	2.42	.21	.17	.38
.10	.25	.74	.35	.07	.89	3.51	3.22	4.23	3.12	.43	.31	.58
.20	.57	1.13	.69	.33	1.50	4.57	4.49	5.07	4.14	.90	.57	.90
.30	.88	1.48	1.06	.63	2.10	5.45	5.49	5.75	5.01	1.43	.84	1.20
.40	1.23	1.85	1.47	.98	2.73	6.30	6.47	6.37	5.85	2.04	1.14	1.50
.50	1.62	2.24	1.95	1.40	3.42	7.17	7.48	7.00	6.72	2.76	1.49	1.83
.60	2.08	2.68	2.53	1.91	4.23	8.11	8.59	7.66	7.66	3.63	1.89	2.21
.70	2.67	3.21	3.26	2.58	5.23	9.21	9.90	8.41	8.77	4.76	2.40	2.67
.80	3.47	3.92	4.29	3.53	6.59	10.61	11.58	9.35	10.19	6.35	3.10	3.28
.90	4.81	5.06	6.02	5.16	8.80	12.77	14.21	10.77	12.40	9.04	4.28	4.26
.95	6.13	6.14	7.73	6.79	10.95	14.76	16.65	12.03	14.43	11.77	5.43	5.20

THESE VALUES WERE DETERMINED FROM THE INCOMPLETE GAMMA DISTRIBUTION.

FREEZE DATA

PROBABILITY OF LATER DATE IN SPRING (THRU JULY 31) THAN INDICATED*

TEMP (F)	SPRING FREEZE DATES (MO/DAY)									
	90	80	70	60	50	40	30	20	10	
36	1/29	2/09	2/17	2/24	3/02	3/08	3/15	3/23	4/03	
32	0/00	1/15	1/25	2/02	2/08	2/15	2/21	3/01	3/11	
28	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	2/23	
24	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	12/21	
20	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	

PROBABILITY OF EARLIER DATE IN FALL (BEGINNING AUG 1) THAN INDICATED*

TEMP (F)	FALL FREEZE DATES (MO/DAY)									
	10	20	30	40	50	60	70	80	90	
36	11/12	11/19	11/24	11/28	12/01	12/05	12/09	12/14	12/21	
32	11/22	12/03	12/11	12/18	12/24	12/31	1/08	1/22	0/00	
28	12/16	12/27	1/05	1/14	1/25	2/01	2/11	2/23	0/00	
24	12/18	1/06	0/00	0/00	0/00	0/00	0/00	0/00	0/00	
20	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	

PROBABILITY OF LONGER THAN INDICATED FREEZE FREE PERIOD (DAYS)

TEMP (F)	FREEZE FREE PERIOD									
	10	20	30	40	50	60	70	80	90	
36	.312	.299	.289	.281	.274	.266	.258	.248	.235	
32	.365	.365	.365	.365	.365	.365	.365	.365	.365	
28	.365	.365	.365	.365	.365	.365	.365	.365	.365	
24	.365	.365	.365	.365	.365	.365	.365	.365	.365	
20	.365	.365	.365	.365	.365	.365	.365	.365	.365	

* PROBABILITY OF OBSERVING A TEMPERATURE AS COLD, OR COLDER, LATER IN THE SPRING OR EARLIER IN THE FALL THAN THE INDICATED DATE. 0/00 INDICATES THAT THE PROBABILITY OF OCCURRENCE OF THRESHOLD TEMPERATURE IS LESS THAN INDICATED PROBABILITY.

TO OBTAIN INFORMATION ABOUT CLIMATOLOGICAL DATA AND RELATED PUBLICATIONS, CONTACT:

DIRECTOR
NATIONAL CLIMATIC DATA CENTER
FEDERAL BUILDING
ASHEVILLE, NC 28801-2696

(OR TELEPHONE: (704) 259-0682)

OTHER CLIMATOLOGICAL DATA ARE AVAILABLE IN A VARIETY OF SUMMARIES AND FORMATS, SUCH AS THE CLIMATOGRAPHY OF THE UNITED STATES; NO. 60 - CLIMATE OF STATES; NO. 81 - MONTHLY NORMALS; AND SUPPLEMENTS: ANNUAL DEGREE DAYS TO SELECTED BASES DERIVED FROM THE 1951-80 NORMALS; AND MONTHLY PRECIPITATION PROBABILITIES, SELECTED PROBABILITY LEVELS DERIVED FROM THE 1951-80 NORMALS; NO. 84 - DAILY NORMALS; NO. 85 - DIVISIONAL NORMALS. A VARIETY OF DATA IS AVAILABLE EITHER ON MAGNETIC TAPE, MICROFICHE, OR PAPER COPY.

National Agricultural Summary

October 15 to 21

HIGHLIGHTS: Heavy rain delayed row crop harvesting from the Plains to the Appalachians, but replenished soil moisture and benefited newly seeded small grains. Torrential rains from eastern Oklahoma through Arkansas into the upper Delta damaged some crops and eroded some fields. Small grains' reseeded may be required in some areas. Dry conditions continued to delay the small grains fall seeding and stressed late crops in much of the Southeast. Farmers had 5-7 days available for fieldwork, except the Nation's midsection had less than 4 days suitable. Soil moisture was very short to short in the Southeast, adequate to surplus from the eastern Plains to the Appalachians, and short to adequate elsewhere.

Winter wheat seeding reached 73% completion, and 52% of the acreage emerged. Corn harvesting slowly advanced to 34% completion, 13 points behind normal. Soybeans dropped leaves on 91% of the acreage and 41% was harvested, 15 points slower than normal. Cotton harvesting advanced to 25% completion, trailing the 34% average. Sorghum was 93% mature and 53% harvested. Rice harvesting was 86% finished, slightly behind schedule. Fall vegetable and apple harvesting declined seasonally in all areas except the Nation's midsection's weather conditions limited activity. Pastures and ranges were in poor to fair condition in the Southeast, but were fair to good and improving elsewhere. Heavy snow caught some livestock in the western Mountains higher elevations. Herd movement to winter grazing areas continued. Livestock were mostly good, but supplemental feeding was widespread.

SMALL GRAINS: Widespread rain across much of the Great Plains and Corn Belt aided winter wheat germination and improved growth. Heavy rainfall eroded some small grain stands from eastern Oklahoma through Arkansas into the northern Delta. Continued dry weather further delayed southeastern small grain seeding. In the 15 major winter wheat producing States, 73% of the 1985 acreage was seeded and 52% of the acreage emerged. Normally, 83% is planted and 61% emerged. Seeding was complete in Nebraska and South Dakota and nearly finished in Colorado. California seeding advanced to 15% finished, slightly ahead of schedule. Stands rated fair to mostly good in most areas. Some Texas High Plains dryland producers are awaiting additional moisture before planting.

CORN: Combining moved slowly ahead as rain delayed activities across most of the Nation's midsection. In the 17 major producing States, corn was 34% harvested, trailing last year's 69% and the 47% average. Progress was on schedule in the Southeast where dry conditions continued but lagged normal elsewhere in the Nation. During the week, Indiana farmers harvested 13% of their acreage, while those in Colorado combined 15%. In contrast, Georgia and Wisconsin producers combined only 1% of their acreage.

SOYBEANS: Soybeans dropped leaves on 91% of the acreage in the 18 major producing States, slightly behind both last year and the average. Wet weather across the Corn Belt and Delta States delayed harvesting. Combining was 41% complete, well behind the 56% average. Progress trailed the average in all regions except the Southeast where harvesting was slightly ahead of schedule. Combining was 40 points behind in Nebraska, 30 points in Missouri, and lagged normal by 29 points

in Illinois. Minnesota producers were 11 points ahead of schedule, and South Carolina growers were 9 points ahead of average.

COTTON: In the 14 major producing States, bolls opened on 81% of the acreage, 7 points ahead of the average. Harvesting was one-quarter finished, trailing the 34% for both last year and the average. Heavy rains caused some damage to cotton with open bolls from Texas through the Delta States. Harvesting progress ranged from 8% finished in New Mexico to 54% complete in Alabama. Cotton continued in fair to mostly good condition. Showers slowed harvesting across most of Texas. Activities neared completion in East Texas and gained momentum on the High Plains.

SORGHUM: Freezing temperatures lowered the sorghum's moisture content across the northern Plains and western portions of the central and southern Plains. In the 7 major producing States, sorghum was 93% mature and 53% harvested. Normally, 91% is mature and 59% is combined. Progress was behind in all States except Kansas, which was on schedule. Producers in South Dakota were 27 points behind schedule. Nebraska growers trailed their normal by 20 points.

OTHER CROPS: Rice was 85% harvested in the 5 major producing States, lagging last year's 93% and the 92% average. Harvesting ranged from 74% finished in Arkansas to complete in Texas. The California harvest was well advanced at 88% complete, normally 75% is combined.

Peanut digging and threshing continued active. Georgia's crop was 96% dug and 92% threshed. North Carolina producers threshed 70%, compared with the 57% average. Virginia's crop was 96% dug and 88% combined.

Tobacco producers continued curing, stripping, grading, and marketing.

VEGETABLES: Fall vegetable harvesting declined seasonally in the northern producing areas. Potato harvesting was nearly finished in Maine and 91% complete in Idaho. Florida growers increased irrigation to maintain moisture levels. Seeding and transplanting continued active. Harvesting of sweet corn, cucumber, eggplant, peppers, tomatoes, and squash gained momentum. Texas producers continued planting when the weather permitted. Cucumber, pepper, and sweetpotato harvesting continued. Light to moderate volumes of a wide variety of California vegetables were harvested.

FRUITS AND NUTS: Northern apple picking showed seasonal declines. Florida's citrus growers required increased irrigation but continued in very good condition. Early maturing fruit harvest was ahead of last year and the average. Lemon and grapefruit harvesting was active in Arizona. Growers picked small volumes of oranges. Rains affected the quality of some California fall table grapes. The desert grapefruit harvest got underway, while the lemon harvest remained active. Walnut and pistachio harvesting continued while the almond harvest was virtually complete.

PASTURES AND LIVESTOCK: Pastures and ranges rated fair to good and improving, except in the Southeast where dry conditions persisted. Livestock movement to lower elevations in the West was slowed by an early snowfall. Supplemental feeding continued in most areas and livestock continued in mostly good condition.

CROP PROGRESS
FOR WEEK ENDING OCT 21

	CORN % HARVESTED		
	1984	1983	AVG.
COLO	31	58	35
GA	98	95	95
ILL	42	82	60
IND	30	65	40
IOWA	35	82	48
KANS	70	75	65
KY	42	66	66
MICH	20	30	20
MINN	21	64	31
MO	60	86	67
NEBR	30	75	45
N C	88	89	88
OHIO	17	45	40
PA	16	26	30
S DAK	20	72	52
VA	64	68	70
WIS	18	27	19
17 STATES	34	69	47

THESE 17 STATES PRODUCED 90% OF THE 1983 CORN CROP.

	COTTON % BOLLS OPENING		
	1984	1983	AVG.
ALA	95	97	90
ARIZ	100	100	100
ARK	94	100	95
CALIF	100	100	100
GA	90	91	93
LA	97	100	97
MISS	100	100	100
MO	100	100	100
N MEX	100	94	83
N C	100	100	95
OKLA	98	80	85
S C	96	100	100
TENN	98	100	99
TEX	64	87	79
14 STATES	81	92	88

THESE 14 STATES PRODUCED 99% OF THE 1983 COTTON CROP.

	COTTON % HARVESTED		
	1984	1983	AVG.
ALA	54	58	52
ARIZ	25	15	25
ARK	18	71	54
CALIF	24	10	29
GA	35	29	52
LA	36	52	55
MISS	26	58	58
MO	31	84	64
N MEX	8	6	13
N C	34	60	48
OKLA	10	10	5
S C	44	79	66
TENN	25	82	57
TEX	24	28	26
14 STATES	25	34	34

THESE 14 STATES PRODUCED 99% OF THE 1983 COTTON CROP.

	SORGHUM % MATURE		
	1984	1983	AVG.
COLO	96	99	92
KANS	90	90	85
MO	94	100	88
NEBR	100	100	100
OKLA	95	90	90
S DAK	91	100	96
TEX	93	98	95
7 STATES	93	95	91

THESE 7 STATES PRODUCED 85% OF THE 1983 SORGHUM CROP.

	SORGHUM % HARVESTED		
	1984	1983	AVG.
COLO	24	73	37
KANS	40	60	40
MO	59	77	62
NEBR	35	80	55
OKLA	30	35	35
S DAK	35	77	62
TEX	76	82	81
7 STATES	53	72	59

THESE 7 STATES PRODUCED 85% OF THE 1983 SORGHUM CROP.

	RICE % HARVESTED		
	1984	1983	AVG.
ARK	74	95	92
CALIF	88	75	75
LA	98	98	99
MISS	92	88	88
TEX	100	100	100
5 STATES	86	93	92

THESE 5 STATES PRODUCED 98% OF THE 1983 RICE CROP.

	WINTER WHEAT % EMERGED		
	1984	1983	AVG.
CALIF	2	3	6
COLO	91	81	85
IDAHO	69	68	58
ILL	33	50	46
IND	55	65	45
KANS	55	60	70
MO	32	38	34
MONT	55	80	75
NEBR	100	97	99
OHIO	40	55	45
OKLA	20	55	40
OREG	35	40	38
S DAK	91	92	96
TEX	43	35	47
WASH	72	78	78
15 STATES	52	60	61

THESE 15 STATES PRODUCED 84% OF THE 1983 WINTER WHEAT CROP.

	WINTER WHEAT % PLANTED		
	1984	1983	AVG.
CALIF	15	10	14
COLO	97	97	97
IDAHO	93	91	88
ILL	42	80	79
IND	55	85	75
KANS	75	85	90
MO	41	65	60
MONT	90	95	95
NEBR	100	100	100
OHIO	65	80	80
OKLA	50	80	75
OREG	64	72	79
S DAK	100	100	100
TEX	78	63	69
WASH	84	96	91
15 STATES	73	82	83

THESE 15 STATES PRODUCED 84% OF THE 1983 WINTER WHEAT CROP.

	SOYBEANS % DROPPING LEAVES		
	1984	1983	AVG.
ALA	90	76	84
ARK	56	79	77
GA	92	84	84
ILL	100	100	100
IND	100	100	100
IOWA	100	100	100
KANS	100	95	90
KY	82	92	90
LA	84	85	83
MICH	100	100	100
MINN	100	100	100
MISS	96	100	97
MO	91	95	94
NEBR	100	100	100
N C	38	45	50
OHIO	100	100	100
S C	68	63	68
TENN	91	99	92
18 STATES	91	93	93

THESE 18 STATES PRODUCED 93% OF THE 1983 SOYBEAN CROP.

	SOYBEANS % HARVESTED		
	1984	1983	AVG.
ALA	32	24	36
ARK	6	22	20
GA	18	13	20
ILL	59	92	88
IND	48	90	70
IOWA	76	86	77
KANS	45	55	55
KY	15	30	35
LA	32	38	45
MICH	30	65	44
MINN	72	60	61
MISS	17	27	30
MO	27	65	57
NEBR	35	80	75
N C	11	8	13
OHIO	38	80	70
S C	16	3	7
TENN	7	22	22
18 STATES	41	60	56

THESE 18 STATES PRODUCED 93% OF THE 1983 SOYBEAN CROP.

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 SRS State Statistical Offices in cooperation with the National Weather Service.

ALABAMA: Temperatures 10 to 15° above normal. Rainfall 0.44 to 7.40 in. Most rainfall occurred over the weekend.

Soil moisture was very short to short southeast part of the State, short to adequate remainder of the State. Fieldwork: 4.5 days. Soybeans dropping leaves 90%, 76% 1983, 84% average. Soybeans mature 64%, 59% 1983, 67% average. Soybeans harvested 32%, 24% 1983, 36% average. Cotton bolls open 95%, 97% 1983, 90% average. Cotton harvested 54%, 58% 1983, 52% average. Sorghum harvested 81%, 75% 1983, 69% average. Wheat seeded 20%, 25% 1983, 37% average. Activities: Harvesting corn, sorghum, peanuts, cotton, soybeans, fall vegetables, and final cuttings of hay; planting land for winter grazing and small grains, and routine care of livestock and poultry. Conditions: Soybeans and wheat poor to mostly fair; cotton fair to mostly good; peanuts, sorghum, and livestock fair to good; pastures poor to fair.

ARIZONA: Precipitation limited to central basins, White Mountains northward; snow level reaching down to 7,000 ft. Higher elevations 1 to 3 in. of snow. Moisture amounts between 0.10 and 0.75 in. except locally over 1.50 in. in White Mountains. Southern, western sections received isolated light showers. Storms continued to feed cold air into State with average temperatures below normal, except 1° above in extreme southeast.

Cotton 25% picked, 15% last year, 25% average. Alfalfa harvest continued on limited scale. Many growers preparing seedbeds, seeding new stands, renovating present stands, some sheeping off. Sesame harvest active. Harvest of cantaloupes, honeydews active. Green onions, carrots, parsley, rapini picked in Salt River Valley. Lettuce, pumpkin harvests full swing in Willcox; cucumber, greens, cauliflower harvests winding down. Lemons, grapefruit harvest active. Small volume oranges picked.

ARKANSAS: A warmer than normal week with excessive rainfall reported from all stations. Temperatures averaged 10° below normal to 10° above normal. High 88°, low 38°. Most rainfall 11.75 in., least 2.98 in.

Soil moisture was rated a surplus. One day was available for fieldwork. Cotton condition fair; open bolls 94%, 100% 1983, 95% average; harvested 18%, 71% 1983, 54% average. Rice condition good; ripe 98%, 100% 1983 and average; harvested 74%, 95% 1983, 92% average. Soybean condition fair; yellowing 80%, 96% 1983, 92% average; shedding leaves 56%, 79% 1983, 77% average; harvested 6%, 22% 1983, 20% average. Corn condition good; harvested 86%, 96% 1983, 88% average. Sorghum condition fair; harvested 83%, 94% 1983, 93% average. Wheat seeding 16%, 29% 1983, 32% average. Pasture average in all areas. Livestock condition good.

CALIFORNIA: The week experienced a series of cold winter-type Pacific storms moving through State. As a result, all of the climate districts in the State reported below normal temperature averages except for the south coast and all of the districts recorded some precipitation except for the southeast

interior. Precipitation amounts were greater to the north, and because of the cold nature of these storm systems significant snowfalls were reported in the Sierra. Drier and warmer conditions are in store for the upcoming week as higher pressure moves over the State.

Rain slowed field activity. Cotton harvested 24%, 10% 1983, 29% average. Defoliation continues. Rice was 88% harvested, 75% last year and average. Varying yields reported. Winter wheat planting virtually stopped by rain remains at 15%, 10% last year, 14% average. Winter wheat emerged 2%, 3% last year and 6% average. Preparations for small grain planting continued. Milo, dry bean, sugarbeet, and corn harvests continued. Alfalfa cutting was slowed by rain. Apple harvest nears completion. Date harvest continues. Fall table grape harvest by rains. Reports of soft berries, decay, and slip skins in the grapes. Kiwi harvest continues, good quality and sizes. Persimmon harvest continues with higher gradeout than normal due to sunburn. Desert grapefruit has begun. Desert lemon harvest continues with excellent quality and demand. Navel orange harvest should start next week in the San Joaquin Valley. Sugar content very high. Almond harvest virtually complete. Walnut and pistachio harvest continue. Pecan harvest to start soon. Artichokes fairly light supply central coast, improving quality. Broccoli moderate supply, good quality Salinas-Watsonville while light supply good quality Santa Maria. Cantaloupe harvest complete San Joaquin Valley while Imperial Valley harvest not reached peak. Carrot supply fairly light Salinas-Watsonville good quality. Cauliflower supply light to moderate Salinas, Santa Maria quality variable. Celery variable quality moderate supply Salinas-Watsonville fairly heavy supply Santa Maria-Oceano area. Honeydew harvest complete San Joaquin Valley, very light activity desert. Lettuce supplies light Salinas, Santa Maria quality weight variable. Some shippers finished season. Fall lettuce harvest gaining momentum San Joaquin Valley, good quality. Harvest desert progressing well. Green peppers light supply both Salinas, Santa Maria. Harvest White Rose potatoes continues Perris-Hemet. Snow Tulelake-Butte Valley during week slowed harvest, 50% crop remains harvested. Sweetpotato harvest continues San Joaquin Valley. Sweet corn harvested Firebaugh. Few processing tomatoes remain to be harvested. Market tomato harvest getting underway southern San Joaquin Valley. Recent rains started fall green-up. Early snow high elevations worrying cattlemen. Sheep grazing grain stubble.

COLORADO: Winter storm 15th through 17th with up to 3 feet of snow east of the Continental Divide. Precipitation amounts from 0.50 to 1.50 in. Light snowfall and below normal temperatures rest of week. Average temperatures for period 9 to 15° below normal.

Winter wheat planting 97% complete; 1983 and average, 97%. Plant emergence at 91%, 1983 81%, average 85%. Corn 99% mature, 1983 96%, average 92%. Grain harvest 31% complete, 1983 58%, average 35%. Sorghum 96% mature, 1983 99%, average 92%. Grain harvest 24% complete, 1983 73%, average 37%. Sugarbeet harvest 17% complete, 1983 61%, average 42%. Dry beans 92% threshed, 1983 95%, average 93%. Summer potato harvest at 97%, 1983 and average, 98%.

Fall potato harvest 93% complete, 1983 87%, average 88%. Onion harvest 93% complete, 1983 99%, average 95%. Days suitable for fieldwork: 2.5.

FLORIDA: Fair, dry weather except for isolated light showers. Rainfall amounts ranged from near 0.25 in. Panhandle to generally less than 0.10 in. elsewhere. Temperatures well above normal north to slightly above normal Peninsula.

Soil moisture extremely short Panhandle, north, short most central areas, generally adequate south. Soybean harvest active, good yields on early beans, second crop prospects reduced by dry weather. Peanut harvest virtually complete. Cotton harvest active under ideal weather. Small grain plantings delayed from lack of moisture. Sugarcane good to excellent condition, harvest preparations being made. Many pastures under severe stress due to dry soils. Conditions mostly poor across Panhandle, northern Peninsula, generally good elsewhere. Cattle generally fair condition Panhandle, mostly good elsewhere. Commercial citrus groves very good condition, hot, dry weather requiring much irrigation. New growth slowing. Good fruit coloring. Early maturing fruit being harvested ahead of last year to date. Ideal weather prevailed over most vegetable producing areas. Little to no rainfall occurred. Moisture adequate but irrigation necessary. Seeding continues active snap beans, cucumbers, escarole, lettuce, radishes, squash, sweet corn planting underway Pompano. Transplanting increasing cabbage, celery, harvest gaining sweet corn, cucumbers, eggplant, peppers, tomatoes, squash. Most crops making good progress. Good volume expected November, December.

GEORGIA: Rainfall totals near 1.00 in. north with local totals near 2.00 in. Central and south less than 0.50 in. with some areas receiving under 0.10 in. Temperatures averaged 10 to 15° warmer than normal. Maximum temperatures reached 90° over most of the central and south.

Soil moisture 7% adequate, 23% short, 70% very short. Average days suitable for fieldwork: 5.9. Main activities harvesting row crops. Dry soils delaying fall planting. Corn harvested 98%, 95% last year and average. Cotton bolls 90% open, last year 91%, average 93%; harvested 35%, last year 29%, average 52%; condition 12% excellent, 39% good, 25% fair. Peanuts dug 96%, last year 94%, average 97%; threshed 92%, last year 86%, average 93%; condition 8% excellent, 63% good, 28% fair. Soybeans 92% dropping leaves, last year and average 84%; harvested 18%, last year 13%, average 20%; condition 10% good, 54% fair, 28% poor, 8% very poor. Wheat 10% planted, last year 19%, average 22%. Rye 27% planted, last year 53%, average 47%. Other small grains 23% planted, last year 39%, average 38%. Apples 96% harvested, same as last year, average 97%. Pecans 6% harvested, last year 1%, 9% average; condition 39% good, 53% fair, 6% poor. Fall hay condition 11% good, 39% fair, 40% poor, 10% very poor. Pastures 10% good, 33% fair, 45% poor and 12% very poor. Cattle 38% good, 32% fair, 8% poor. Hogs 51% good and 43% fair.

HAWAII: Continued hot, dry weather characterized conditions during the week.

Mandatory water restrictions remain in effect in the State's major vegetable growing areas. Insect and disease incidence was up and pesticide use has generally been heavy

on leafy vegetables and tomatoes. Head cabbage supplies remain moderate. Chinese cabbage production decreasing because of the drought and new plantings also down. Head lettuce supplies light to moderate with a heavy spray schedule to reduce insect and disease loss. Papaya production expected to remain at present levels.

IDAHO: A low pressure system brought snow and cold temperatures to the State last week. Temperatures averaged 10° below normal with night time lows below freezing. Above normal precipitation amounts were received in the south. The north received from 0.25 to 0.50 in. below normal amounts.

Wet cold weather delayed harvest at 4.5 days were suitable for fieldwork. Potatoes advanced to 91% harvested compared to 90% last year and 85% average. Winter wheat was 93% seeded compared to 91% a year ago and 88% average. The new crop was 69% emerged versus 68% in 1983 and average 68%. The third cutting of alfalfa hay was being wrapped up with 94% of the acreage harvested. Dry bean harvest was virtually finished with 99% of the crop in. Sugarbeets were 40% harvested compared to 41% last year and 31% average. Silage corn was nearing an end with 99% of the acreage harvested. Corn for grain advanced to 25% harvested compared to 20% a year ago. Cattle and sheep were 80% removed from summer ranges.

ILLINOIS: Temperatures 1 to 8° above normal. Precipitation 0.10 to 4.58 in.

Soil moisture 46% adequate, 10% short, 44% surplus. Corn harvested 42%, last year 82%, average 60%. Soybeans shedding leaves 100%, last year 100%, average 100%; harvested 59%, last year 92%, average 88%. Sorghum harvested 32%, last year 77%, average 62%. Winter wheat seeded 42%, last year 80%, average 79%; 33% emerged, last year 50%, average 46%; condition 23% excellent, 58% good, 14% fair and 5% poor. Fall tillage of 1985 intended corn and soybean acreage 15%, last year 37%, average 26%. Pasture condition 15% excellent, 68% good, 14% fair, 3% poor. Days suitable for fieldwork: 2.5.

INDIANA: Mild and wet week. Average high temperatures ranged from low 60's northwest to low 70's extreme south. Daily lows averaged from the low 40's to low 50's. Rain totals between 1.00 and 3.00 in. were common throughout the State.

Fieldwork averaged 2.9 days. Topsoil moisture mostly adequate to surplus. Subsoil moisture adequate. Corn 30% harvested, 1983 65%, average 40%. Corn moisture 26%, 1983 20%. Soybeans 48% harvested, 1983 90%, average 70%. Soybeans 100% dropping leaves, 1983 100%, average 100%. Wheat 55% seeded, 1983 85%, average 75%. Wheat 55% emerged, 1983 65%, average 45%. Wheat stands 1% poor, 10% fair, 70% good, 19% excellent. Rye 75% seeded, 1983 95%, average 85%.

IOWA: Temperatures averaged below seasonal normals in the west and near normal in the east. Precipitation in excess of normal statewide.

Days suitable for fieldwork: 1.5. Corn harvesting 35% complete; 82% last year, 48% normal. Corn lodging 57% none to light, 33% moderate, 10% heavy damage. Ear droppage 65% none to light, 31% moderate, 4% heavy. Soybean harvesting 76% complete, last year 86%, normal 77%. Soybean lodging damage 67% none to light, 29% moderate, 4% heavy. Soybean

shattering 69% none to light, 26% moderate, 5% heavy. Sorghum acreage harvested 45% complete, last year 79%, normal 50%. Winter wheat acreage seeding 89% complete, 89% last year, 92% normal. Fall tillage 12% complete, 30% last year, 17% normal. Fall fertilizer application 11% complete, 29% last year, 18% normal. Availability of grain storage 1% short, 68% adequate, 31% surplus. Topsoil moisture conditions 1% short, 47% adequate, 52% surplus. Subsoil moisture conditions 35% short, 61% adequate, 4% surplus. Livestock in fair to good condition.

KANSAS: Precipitation averaged 1.25 to 1.65 in. west and central, 1.90 to 2.20 in. east and local amounts of 3.00 to 4.00 in. Temperatures averaged 42° northwest to 55° southeast. These were 8 to 12° below normal west and central and 4 to 5° below normal east.

Sorghum mature 90%, 90% last year, 85% average; 40% harvested, 60% last year, 40% average. Soybeans 100% dropping leaves, 95% last year, 90% average; harvested 45%, 55% last year and average. Corn harvested 70%, 75% last year, 65% average. Wheat planted 75%, 85% last year, 90% average; emerged 55%, 60% last year, 70% average. Topsoil moisture mostly adequate. Wheat pasture and rangeland condition improving. Days suitable for fieldwork: 2.5.

KENTUCKY: Mild with high temperatures mid 80's most of State. Daily average temperatures 7 to 12° above normal. Precipitation amounts 1.00 to 2.50 in.

Soil moisture 37% short, 41% adequate, 22% surplus. Days suitable for fieldwork: 4.2. Burley tobacco 6% stripped, 8% last year, 10% average. Some houseburn in late housed tobacco. Corn for grain harvest 42% complete, 66% last year and average. Soybean harvest 15% complete, 30% year ago, 35% average. Shedding leaves or beyond 82%, 92% last year, 90% average. Winter wheat seeding 38% complete, 45% last year, 46% average. About 80% reporters say local hay supply adequate for feeding.

LOUISIANA: Rainfall amounts ranged from 1.24 to 9.44 in. Average temperatures ranged from 5 to 8° above normal. High 90°; low 54°.

Soil moisture surplus. Days suitable for fieldwork: 1.3. Field activities primarily limited to pecan harvest. Cotton harvest 36% 1984, 52% 1983, 55% average. Soybeans turning color 96% 1984, 96% 1983, 96% average; leaves shedding 84% 1984, 85% 1983, 83% average; harvested 32% 1984 38% 1983, 45% average; condition fair to good. Rice harvest 98% 1984, 98% 1983, 99% average. Winter wheat planting 17% 1984, 29% 1983, 28% average; emerged 11% 1984, 15% 1983, 13% average. Sweetpotato harvest 83% 1984, 83% 1983, 86% average. Sugarcane planting 96% 1984, 96% 1983, 96% average; harvested 2% 1984, 11% 1983, 10% average; condition fair. Vegetable condition fair. Hay final cutting 97% 1984, 95% 1983, 95% average. Pecans harvested 8% 1984, 7% 1983, 6% average. Pasture and livestock condition fair to good.

MARYLAND AND DELAWARE: Maryland: Temperatures averaged mostly 6 to 9° above normal with highs near 80, and lows in the mid 40's to mid 50's. Rainfall was less than 0.33 in. west and under 0.10 in. elsewhere.

Weather was warm and dry, enabling farmers to work an average 7.0 days. Field corn was all mature, equal to the past year and the average progress. Corn for grain 70% harvested,

75% 1983 and average. Soybeans 100% turned, equal to 1983 and average. Soybean harvest 20% complete. 1983 25%, average 30%. Barley seeding 75% complete, 85% 1983, average 90%. Wheat 50% seeded, 1983 60%, average 55%. Rye seeding 70%; 1983 and average 80%. Oats 60% planted, 1983 and average 65%. Fourth cutting of alfalfa hay 90%, last year 90%, average 95%. Other hay 95% cut four times. Apples 85% picked, 1983 90%, average 95%.

Delaware: The week was warm and dry. Temperatures averaged 6° above normal. Highs 75 to 80°, lows near 50°. No rain reported.

Seven days for fieldwork. Topsoil moisture adequate, subsoil moisture short. Corn harvest 75% complete, 85% last year, and average. Soybeans mostly fair condition. Soybeans all turned except a few fields. Soybean leaf shed 90%, last year 75%, average 85%. Harvest of soybeans 20% complete, equal to 1983, average 30% harvested. Barley seeding 55% done, 1983 75%, average 85%. Wheat 35% seeded, 20% 1983, average 35%. Rye 25% planted, 1983 and average 45%. Apples 65% picked, last year 100%, average 95%.

MICHIGAN: This was a warm fall week across the State. Temperatures averaged 7° above normal. Precipitation was moderate over the entire State. The ten zones averaged 1.5 in. of precipitation for the week.

Statewide 4.0 days were suitable for fieldwork. Corn for grain 20% harvested, 30% last year, 20% average. Soybeans 30% harvested, 65% last year, 44% average. Sugarbeets 25% harvested, 35% last year, 42% average. Winter wheat 90% planted, 90% last year, 86% average. Dry beans and corn silage harvest virtually complete in most areas of the State. Harvest of fall apples has started to wind down.

MINNESOTA: A cool and very wet week prevailed across the State. Temperatures averaged near normal to 5° below normal. High: 70°; low: 24°. Precipitation average 1.92 to 4.43 in. above normal. Greatest weekly total: 6.60 in.

Heavy rains and cloudy weather across the State slowed down fall fieldwork and harvest activity for the week. Above-average rainfall was received in most areas which softened hard, dry soils. Heavy soils became saturated, which made the ground too soft to get harvest equipment into the fields; many producers will now wait until the ground freezes. The humid conditions also increased moisture content of row crops. In a few areas, previously over-dry beans swelled out of the pods and dropped to the ground. Others sprouted in the pods. Sugarbeet harvest in the Red River Valley made progress despite the wet weather, when producers took advantage of a single day of sunshine. There was virtually no fall fieldwork accomplished. Days suitable for fieldwork: 1.1. Topsoil moisture: 23% adequate and 77% surplus. Field corn: Harvested 21%, 1983 64%, normal 31%; moisture content 26%, 1983 22%, normal 26%; stubble plowed or tilled 9%, 1983 31%, normal 13%. Soybeans: Harvested 72%, 1983 60%, normal 61%; moisture content 15%, 1983 15%, normal 13%; stubble plowed or tilled 29%, 1983 30%, normal 30%. Sunflowers: Harvested 52%, 1983 46%, normal 47%. Sugarbeets: Harvested 42%, 1983 68%, normal 68%. Potatoes: Harvested 96%, 1983 86%, normal 92%.

MISSISSIPPI: Rainfall averaged 2.00 to 11.00 in. Greatest 24-hour rainfall 8.48 in. Average temperatures 10 to 12° above normal, extremes 54 and 90°.

Soil moisture surplus. Fieldwork 2.0 days.

5.2 1983, 4.5 average. Virtually no harvesting due to wet weather. Soybean condition fair; 96% dropping leaves, 100% 1983, 97% average; 17% harvested, 27% 1983, 30% average. Cotton condition fair; 100% open bolls 1984, 1983 and average; 26% harvested, 58% 1983 and average. Rice 92% harvested, 88% 1983 and average. Sorghum 89% harvested, 90% 1983, 91% average. Corn 85% harvested, 86% 1983, 87% average. Sweetpotatoes 77% harvested; hay 96%; peanuts 88%; and pecans 14% harvested. Wheat condition fair; 16% planted, 31% 1983, 32% average. Pasture condition fair. Livestock condition fair to good.

MISSOURI: Temperatures ranged from 3° below normal in the northwest to 5° above normal in the southeast. Scattered rainfall fell throughout the week across almost all areas. Many places have received over the normal for the month. Some of the smaller streams in south central and southeast went over their banks during the week.

Days suitable for fieldwork: 0.7. Soybeans dropping leaves 91%, 95% last year, 94% normal. Soybeans mature 67%, 85% last year, 85% normal. Soybeans harvested 27%, 65% last year, 57% normal. Corn harvested 60%, 86% last year, 67% normal. Grain sorghum mature 94%, 100% last year, 88% normal. Grain sorghum harvested 59%, 77% last year, 62% normal. Cotton harvested 31% this year, 84% last year, 64% normal. Land tilled for spring crops 24%, 33% last year, 29% normal. Wheat planted 41%, 65% last year, 60% normal. Wheat emerged 32%, 38% last year, 34% normal. Condition of pasture 3% excellent, 49% good, 45% fair, 3% poor. Topsoil moisture supply 60% surplus, 38% adequate, 2% short.

MONTANA: Very cool week across State. Temperatures averaged 9 to 17° below normal. Coolest areas were southwest and south central. Precipitation fairly evenly distributed over all State with most areas receiving 0.10 to 0.30 in.

Topsoil and subsoil moisture mostly short. Fieldwork: days suitable 4.5. Crops percent harvested compared with last year and average: Dry beans 95, 100, 95; potatoes 90, 90, 75; sugarbeets 80, 60, 55. Winter wheat planted 90%, 1983 95%, average 95%; emerged 55%, 1983 80%, average 75%; condition fair to good. About 80% of cattle and 85% of sheep moved to winter ranges.

NEBRASKA: Wet and cold. Precipitation varied from 0.25 in. Panhandle to 3.00 in. east. Temperatures ranged from 6 to 15° below normal, statewide.

Soybeans dropped leaves 100%, 100% last year, 100% average. Soybeans harvested 35%, 80% last year, 75% average. Sorghum mature 100%, 100% last year, 100% average. Sorghum harvested 35%, 80% last year, 55% average. Corn harvested 30%, 75% last year, 45% average. Wheat condition rated 2% poor, 27% fair, 68% good, 3% excellent. Wheat planted 100%, 100% last year, 100% average. Wheat emerged 100%, 97% last year, 99% average. Topsoil moisture 3% short, 47% adequate, 50% surplus. Subsoil moisture 28% short, 64% adequate, 8% surplus.

NEVADA: Low pressure early in week persisted remainder of period resulting in cool, unsettled weather. Temperatures for week well below normal. Precipitation amounts well above normal as one storm after another moved across State. First major snow of season fell on 16th. South saw little or no rainfall entire week.

Harvesting activities light to minimal and

wind up stage most areas. Snow hampered fall seeding operations. Ranges, pastures good to excellent.

NEW ENGLAND: Temperatures averaged 5 to 8° above normal. High of 79° at many southern locations on the 20th, low of 21° in northern Maine on the 16th, 17th and 18th. Precipitation limited to showers on the 18th, 19th and 21st. Northern areas received the most, averaging 0.25 in.

Soil moisture supplies short. Grazing availability short to adequate. Cranberry, apple and silage corn harvest active. Maine potato harvest 99% complete. Growers spread manure, harrowed and seeded cover crops.

NEW JERSEY: Temperatures averaged 9° above normal. Extremes were 30° on the 17th and 85° on the 21st. Weekly rainfall averaged 0.11 in. north, 0.01 in. central and 0.03 in. south. The heaviest 24-hour total was 0.20 in. on the 19th and 20th. Estimated soil moisture, in percent of field capacity, averaged 65% north, 54% central and 40% south. Four inch soil temperatures averaged 56° north, 60° central and 61° south.

Fieldwork: 7.0 days suitable. The main farm activities included harvesting corn, soybeans, fall vegetables, apples and cranberries; and seeding fall grain crops. Most fall crop yields good. The topsoil moisture supply adequate over the State.

NEW MEXICO: Average temperatures well below normal statewide. Minimum temperature: 10° northern mountains. Maximum temperature: 82° southeastern plains. Entire State received precipitation. Precipitation totals between 0.01 and 2.44 in.

Soil moisture supplies adequate. Alfalfa fair to good; fifth cutting neared completion. Cotton fair to good. Corn good to excellent; grain harvest neared completion. Barley fair to excellent. Irrigated wheat good to excellent; dryland fair to good. Irrigated grain sorghum good to excellent; dryland good. Grain harvest continued. Pecans good; harvest expected to start December. Apples fair; harvest virtually completed, Chile fair; picking neared completion. Lettuce good; yields reported excellent. Cattle, sheep good to excellent; good gains reported. Range good, Cotton open bolls; 100%, last year 94%, average 83%; harvest: 8%, last year 6%, average 13%.

NEW YORK: In was another dry week with rainfall limited to spotty showers on 18th and more general but light showers on 19th and into night. It was also on the mild side, especially during the daytime hours. Readings reached the 70's several days. Nights were cool the first half of the week and readings were at moderate levels the remainder of the time.

Warm and dry weather enabled farmers to continue chopping corn silage, harvesting grain corn, cutting hay and planting wheat. Corn silage chopping reached 70% complete, behind the 84% reported last year and the 79% average. Grain corn harvesting inched along to 12% complete, compared with 21% a year ago and the average of 20%. Harvest of third cut alfalfa, at 87%, trails both the 92% average and last year's 95%. Apple harvest nearing completion. Western counties picking Golden Delicious, Ida Reds and Mutsu's. The Hudson Valley harvesting Romes and Ida Reds. The Concord harvest continues along Lake Erie. With the exception of a few late weather crops, the vegetable harvest complete.

NORTH CAROLINA: Temperatures averaged 11 to 13° above normal in mountains and Piedmont and 6 to 7° above in coastal plains. Precipitation spotty and mostly insignificant ranging from none to 0.50 in.

Soil moisture: 26% very short, 46% short and 28% adequate. Days suitable for fieldwork: 6.5. Condition: Cotton 8% fair, 92% good. Peanuts 27% fair, 73% good. Soybeans 13% poor, 29% fair, 58% good. Sorghum 19% fair, 78% good, 3% excellent. Sweetpotatoes 6% poor, 33% fair, 61% good. Phenological stages: Cotton open bolls 100%, 1983 100%, average 95%. Soybeans dropping leaves 38%, 1983 45%, average 50%. Harvest: Corn for grain 88%, 1983 89%, average 88%. Soybeans 11%, 1983 8%, average 13%. Sweetpotatoes 66%, 1983 59%, average 73%. Cotton 34%, 1983 60%, average 48%. Sorghum grain 64%, 1983 59%, average 67%. Apples 83%, 1983 75%, average 84%. Peanuts threshed 70%, 1983 21%, average 57%. Planted: Wheat 30%, 1983 25%, average 28%. Major farm activities: Combining corn and soybeans, digging and threshing peanuts, digging sweetpotatoes, picking cotton, sowing cover crops, harvesting apples and general farm maintenance.

NORTH DAKOTA: Wet week central and east. Significant rain and some snow occurred during week with precipitation averages ranging from over 4.00 in. east central to less than 0.25 in. southeast corner of State. Greatest amount was 5.22 Fargo. Up to 5 in. snow fell north central sections of State early in week. Temperatures were well below normal. Temperatures ranged from 9° below normal southwest to 2° below east central. Extremes ranged from 72° on the 14th to 12° on the 17th.

Heavy precipitation stopped or delayed harvest of States' late-season crops, but recharged poor topsoil and subsoil moisture supplies. Topsoil moisture supplies now 21% short, 77% adequate and 2% surplus. Average 35% short or very short, 59% adequate and 6% surplus. Subsoil now 67% short or very short and 33% adequate. Sunflower harvest progress average, soybeans and corn ahead, sugarbeets behind. Specifically, the percents harvested compared to last year and average are: Sunflower 39, 63, 40; soybeans 92, 78, 72; corn grain 56, 79, 49; sugarbeets 50, 78, 77. Considerable sunflower lodging occurred where strong winds hit heavy, wet heads with stalk problems. Rain delays and excessive moisture termed serious problems for sugarbeet crop.

OHIO: Precipitation totals between 0.60 and 0.80 in., 0.10 to 0.20 in. above normal. Temperatures were 6 to 10° above normal. Extremes from mid-30's to low 80's.

Rain and fog hindered harvest activities. Soil moisture 10% short, 70% adequate, 20% surplus, 4.5 days suitable for fieldwork. Corn harvested 17% 1984, 45% 1983, 40% average. Soybeans shedding leaves 100% 1984, 100% 1983, 100% average; harvested 38% 1984, 80% 1983, 70% average. Winter wheat planted 65% 1984, 80% 1983, 80% average; emerged 40% 1984, 55% 1983, 45% average; good condition. Pasture fair to good condition.

OKLAHOMA: Temperatures averaged below normal statewide. Averages ranged 2° below normal southeast to 10° below normal Panhandle. Average precipitation varied greatly ranging 0.61 in. west central to 5.86 in. east central with Tahina reporting greatest weekly total, 9.93 in.

Rains beneficial to wheat producers. Freezing Panhandle temperatures lowered sorghum moisture content aiding harvest. Peanuts dug waiting drying weather to thresh. Early cotton harvest reported good despite limited precipitation during growing season. Wheat planted: 50%, 80% 1983, 75% average. Wheat emerged: 20%, 55% 1983, 40% average. Sorghum mature: 95%, 90% 1983, 90% average. Sorghum harvested: 30%, 35% 1983, 35% average. Cotton open bolls: 98%, 80% 1983, 85% average. Cotton harvested: 10%, 10% 1983, 5% average.

OREGON: Heavy coastal rain of 1.00 to 2.00 in. fell during the week. Amounts up to 0.60 in. were recorded east of the mountains. Temperatures dropped to 4° below normal in western areas and 10° below normal in eastern areas.

Fall grain seedings behind normal. Winter wheat 64% seeded, last year 72%, average 79%. Emergence 35% this year, 40% last year and 48% on average. Wet weather causing most delays. Field corn harvest continues. Filbert harvest continues when weather permits. Problems exist with muddy orchards. Apple harvest continues. Some pears still being harvested in Hood River Valley. Cranberry harvest getting started. Condition and color good but sizes appear to be smaller. Hermiston potatoes nearing completion in Hermiston-Boardman and well along elsewhere. Onion harvest nearing completion. Sweet corn harvest about finished. Pastures fair to good. Livestock good. Cattle being moved from summer ranges. Fall feeder sales underway.

PENNSYLVANIA: The beginning of the week was warm, and cloudy to partly sunny with light showers scattered through the western part of the State. Midweek was even warmer and early morning fog was heavy in many areas. Cloudy skies and occasional rain showers were reported along with unseasonably high temperatures for the end of the week. The statewide average temperature was 60°, 11° above normal. Extremes were 82° at Altoona on the 20th, and 31° at Hawley on the 15th-17th. Average precipitation of 0.36 in. was 0.30 in. below normal.

Days suitable: 5.0. Moisture mostly short to adequate. Activities: Fall plowing; seeding small grains; making hay; harvesting green chop, ensilage, high moisture ground ear and shelled corn, corn for grain, potatoes, apples and grapes. Soybeans 20% harvested, last year 23%. Potato harvest virtually complete, last year 93%, corn silage 84% harvested, last year 94%. Corn for grain 16% harvested, last year 26%, average 30%. Fall plowing 92% complete, last year 89%, average 90%. Wheat 85% planted, last year 83%. Barley planting virtually complete, same as last year. Fourth crop alfalfa 66% harvested, last year 76%. Quality of hay made mostly fair to good. Feed from pastures average to below average.

PUERTO RICO: No report available.

SOUTH CAROLINA: Warm weather persisted across State throughout the week. High temperatures were mostly in the 80's to 90's, with low reading into the 60's. Humidity increased during week with widely scattered showers midweek to weekend.

Soil moisture very short to mostly short. Days available for fieldwork: 5.7. Soybean condition fair: 93% leaves turning, 89% last year, 89% average; 68% shedding leaves, 63% last year, 68% average; 30% mature, 16% last year, 31% average; 16% harvested, 3% last

year, 7% average. Cotton condition good; 96% bolls open, 100% last year, 100% average; 44% harvested, 79% last year, 66% average. Sorghum condition fair to good; 69% harvested, 73% last year, 69% average. Tobacco harvesting complete; 90% stalks destroyed, 90% last year. Apple harvest nearly complete; 91% harvested, 94% last year, 97% average. Small grain conditions for wheat, oats, rye are fair; barley, poor to fair; 5% wheat planted, 9% last year, 12% average; 24% oats planted, 32% last year, 29% average; rye 20% planted, 30% last year, 36% average; barley 27% planted, 33% last year, 33% average.

SOUTH DAKOTA: Average temperatures were 2 to 10° below normal. Extremes 76 and 5°. Outside the Black Hills the low was 11°. Precipitation fell almost every day over eastern third of State with most of the area receiving 2.00 in. or more. The west received less than 0.20 in. Snow also fell over most of the State, measurable amounts west and north, generally less than 0.10 in.

Days suitable for fieldwork: 2.0. Topsoil moisture supplies adequate over most of east half and the extreme west, surplus east central and southeast. Short supplies over most of the west, critically short south and central west. Winds combined with high grain moisture content caused stalk breakage in some corn, sunflowers, and sorghum fields. Dry-down and harvest were kept to a near standstill by the wet, cool weather. Corn, winter wheat, and winter rye were in good condition, other row crops fair to good condition. Range and pastures fair to good. Livestock good. Some supplemental feeding. Sorghum harvested 35%, 1983 77%, average 62%. Sorghum mature 91%, 1983 100%, average 96%. Corn harvested 20%, 1983 72%, average 52%. Winter wheat planted 100%, 1983 100%, average 100%. Winter wheat emerged 91%, 1983 92%, average 96%.

TENNESSEE: Fluctuating frontal zones resulted in a wet week for the entire State. Rainfall totals decreased from west to east and weekly amounts in excess of 3.00 in. in the west were common. Some areas in the east still remain very dry. Temperatures were well above normal statewide; weekly means were between 8 and 12° warmer than usual.

Farmers averaged 4.5 days of fieldwork. Soil moisture levels were rated: 20% surplus, 28% adequate, 31% short, 21% very short. Corn harvested 46%, 1983 66%, average 62%. Cotton harvested 25%, 1983 82%, average 57%. Soybeans shedding leaves: 91%, 1983 99%, average 92%; mature: 41%, 1983 70%, average 65%; harvested: 7%, 22%, 22%. Wheat seeded: 28%, 1983 38%, average 45%. Sorghum mature 92%, harvested 42%. Burley tobacco stripped: 17%, 1983 18%, average 29%. Pasture conditions mostly fair to good. Some supplemental feeding livestock feeding continues.

TEXAS: Wet week over most of State. Thunderstorms High Plains, along coast early part week, 16th, spread across most State. Midweek, rain heavy along Upper Coast. Cold front northern portion State. Cloudy skies accompanied series upper air disturbances that brought heavy rain Middle, Upper Coast through North and Northwest Texas, Hill Country. Flash flood watches generally east Wichita Falls to Del Rio line. Much of area received 2.00 to 4.00 in., severe storms traversing parts of area. Warmer than normal East, South Texas and cooler than normal West, North Texas. Precipitation greater than normal most of State

portion State during the week. Windy conditions accompanied rain High Plains, some lodging. Most fieldwork halted across State; Plains harvesting activities progress areas light rainfall. Recent showers benefitted early planted small grain fields. Pastures, ranges greening up. Cotton harvest little progress past week. Some stripping scattered areas southern High Plains, rainfall not as heavy. Showers caused minor damage open cotton. Harvest activities continue Low Plains under mild, windy conditions. Producers harvested most fields Blacklands. Harvest activities nearing completion East Texas, stalled by showers. Statewide condition 68% of normal compared with 52% a year ago. Current reported conditions 2% excellent, 50% good, 29% fair, 15% poor; and 4% failure. Intermittent showers delayed grain sorghum harvest High Plains. Producers scattered areas minor progress harvest activities. Harvest full swing within two weeks, conditions permit. Crop condition looks good at the present. Dryland, irrigated yields expected good. Harvest activities delayed Low Plains. Statewide condition 62% of normal. Current conditions 2% excellent; 40% good, 34% fair, 19% poor; and 5% failure. Corn harvesting little progress. Harvest winding down before showers, should be completed about on schedule, couple of weeks with favorable weather. Above average yields High Plains grain and silage. Some unharvested fields wind damage. Peanut harvesting some progress. Yields Cross Timbers, Low Plains better than expected. Rains too late South Texas dryland fields. Digging full swing most State as conditions permit. Early planted small grain fields benefitted recent rains. Some dryland producers High Plains await additional soil moisture before planting. Early fields good stands, showing good growth. Planting remains ahead of schedule. Most soybean fields ready for harvest Plains and along Coastal Bend. Activities gain momentum, soil conditions permit. Sugarbeet harvest delayed. Good yields High Plains.

Cotton open bolls 64%, 87% 1983, 79% average; harvested 24%, 28% 1983, 26% average. Sorghum turning color 100%, 100% 1983, 99% average; mature 93%, 98% 1983, 95% average; harvested for grain 76%, 82% 1983, 81% average. Wheat planted all purposes 78%, 63% 1983, 69% average; emerged 43%, 35% 1983, 47% average. Corn for grain harvested 94%, 99% 1983, 95% average. Peanuts harvested 38%, 42% 1983, 48% average. Soybeans harvested 46%, 21% 1983, 29% average. Sugarbeets harvested 50%, 22% 1983, 19% average. Pecans 5%, 4% 1983, 5% 1933. Sunflower harvested 47%, 71% 1983, 63% average. Oats planted for all purposes 71%, 56% 1983, 61% average.

Commercial vegetables: Rio Grande Valley, good progress planted crops. Cucumber harvest resumed good volume reported. Citrus groves good progress; bird, insect damage increase. San Antonio-Winter Garden, satisfactory progress planted fields. Some minor land preparation still being done. Small amount land idle until spring. East Texas, rain slowed harvest sweetpotatoes. Other vegetables good progress. Trans-Pecos, pepper harvest continues, good quality, quantity. Cabbage harvest begin soon. Pecan harvesting continues. Predators cause problems many groves. Harvest activities into Blacklands soon.

Range and livestock: Range, pasture condition improving statewide because recent rains. Both greening, growth advanced in pastures. Some producers may get additional hay cuttings. Livestock conditions good. Market slightly down. Stock tanks caught good amounts of water, up to good levels. Additional rain before

UTAH: Two frontal storms, one at beginning, one at end of week, deposited precipitation at all reporting stations. Amounts were heavy to very heavy over mountainous areas and generally moderate to heavy in other areas, except light to moderate in Uinta Basin. Maximum temperatures averaged 15° below normal, ranging from 2 to 24° below normal. Minimums averaged 4° below normal, ranging from 4° above to 1° below normal.

Winter wheat seeding nearing completion. Corn silage harvest winding down. Potato and onion harvest continued as weather permitted. Apple picking continued; sorting and marketing active. Most livestock on winter ranges. Winter range feed excellent most areas except southwest.

VIRGINIA: A cool front brought showers and a few thunderstorms to State 15th and 16th. Unseasonably warm airmass moved over State for rest of week and weekend with temperatures averaging as much as 15° above normal. A few scattered showers in mountains on 21st but rainfall amounts were 0.10 in. or less.

A generally dry week favored harvest but dry soil slowed small grain planting. Topsoil moisture rated 78% short, 20% adequate, 2% surplus. Days suitable for fieldwork averaged 6.1. Harvest of grain corn 64% complete, 68% last year, 70% average. Silage 98% cut. Soybean harvest 11% complete, 9% last year, 14% average. Soybean yields average or better so far. Peanut harvest winding down. Peanuts 96% dug, 49% last year, 75% average. Combining 88% complete, 29% last year, 61% average. Apple harvest 81% complete, 68% last year. Small grain planting slowing again with dry weather. Oats 71% seeded, 81% last year, 75% average. Barley 66% planted, 74% last year, 64% average. Wheat 32% seeded, 35% last year, 34% average. Sorghum 21% harvested, 12% last year, 18% average. Tobacco curing and marketing remains active. Some farmers still harvesting hay. Livestock in good to excellent condition. Normal fall farm activities in progress.

WASHINGTON: Winter wheat seeding continued but lagged average pace. Emergence was slowed by very cold temperatures. Potato, corn silage, and digging advanced. Apple harvest was sped up by cold temperatures. Golden harvest virtually complete while Reds and Granny Smith's were winding up. Cattle movement to winter pastures continued and feeder cattle were being marketed. Winter wheat seeded 84%, 96% 1983, 91% average. Winter wheat emerged 72%, 78% 1983, 78% average.

WEST VIRGINIA: Temperatures averaged 6 to 10° above normal during the week. The high of 84° was reported in Charleston, low of 33° was felt in Green Bank. Precipitation was above normal over most of the State. The most rainfall, 1.49 in., was in Clarksburg, the least 0.10 in., fell in Bluefield.

Soil moisture adequate to short. Days worked averaged 4.8. Harvest of third cut hay has been completed in most areas, crop quality was 88% of normal. Fall seeding of wheat 80% complete, barley plantings 88% complete. Corn in good condition with 100% mature and 50% harvested. Pasture in fair to good condition. Main activity was harvesting corn for grain and silage.

WISCONSIN: State experienced another cloudy week with frequent periods of rain. Precipitation averaged 2.00 to 3.00 in. Temperatures continued mild with highs generally in the 50's and 60's and lows in the 30's and 40's.

The week's rain brought harvest to a virtual halt. That which occurred took place on high or sandy soils. Drying down of crops was halted. Some hay cut 2 weeks ago still laid on the ground. Corn and soybeans still held much moisture. Silo filling was 86% complete, 81% last year, 80% average. Corn for grain was 18% harvested compared to 27% last year and 19% average. Soybeans were 30% harvested, 38% last year, 32% average. Fall plowing 23% finished, 26% last year, 20% average. Soil moisture was 0% dry, 35% adequate, 65% surplus. There was 1.0 day suitable for fieldwork.

WYOMING: Temperatures averaged 10.8° below normal. Precipitation below normal most areas.

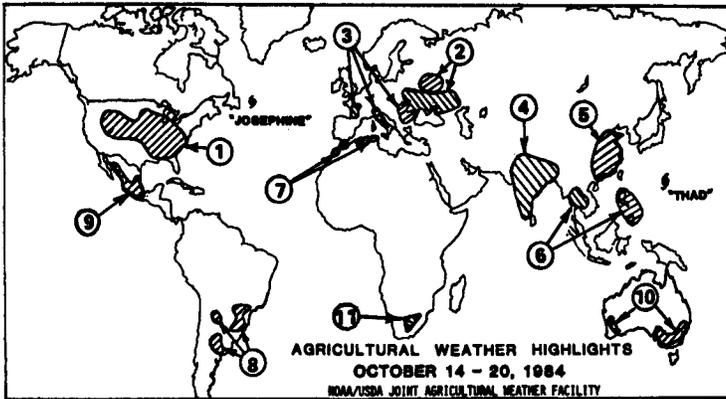
Topsoil moisture adequate 77% State. Subsoil moisture adequate 80% State. Days suitable for fieldwork: 5.0. Winter wheat fair to mostly good condition. Sugarbeets, 80% dug, average sugar content 15.2% normally, 46% dug. Corn for grain, 45% harvested. Normally, 22% corn for grain harvested. Dry beans 95% combined. Livestock mostly average condition. Livestock producers moving stock from summer pastures, pregnancy testing cattle, weaning.

International Weather and Crop Summary

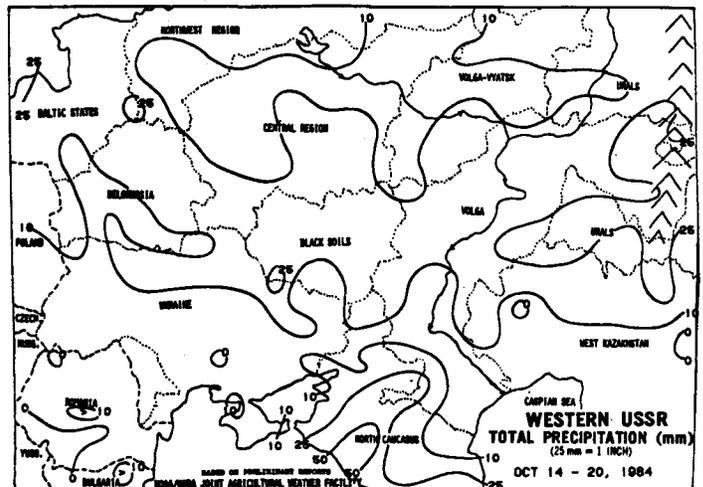
Oct. 14-20, 1984

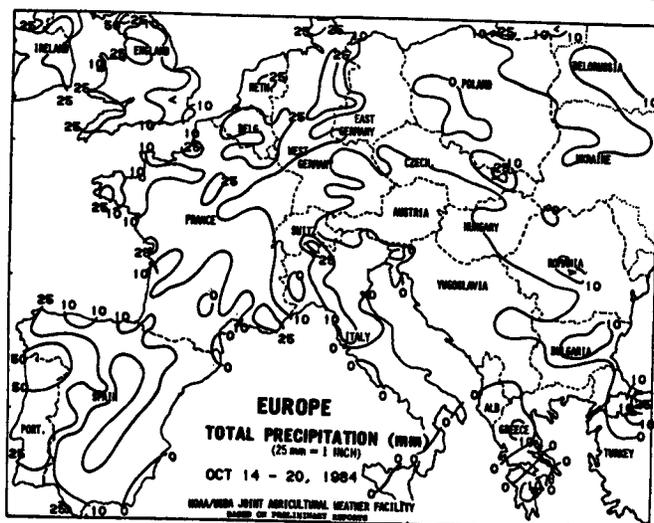
HIGHLIGHTS:

1. UNITED STATES ... Rain delays the Corn Belt and Delta crop harvests. Persistent, heavy downpours flood and damage some crops and lands in parts of the Delta. Southeastern dryness delays planting small grains but favors row crop harvesting. Abnormally early cold and snow stress some western livestock.
2. USSR ... The first significant snowfall of the season covers the Central Region. In general, southern area moisture supplies are favorable for winter wheat emergence and early growth.
3. EUROPE ... Dry weather in southern France, Italy, and the southeast favors corn harvesting.
4. SOUTH ASIA ... A tropical cyclone brings favorable rain to part of the winter rice region. Wheat planting continues with mostly favorable moisture.
5. EASTERN ASIA ... Dry and warm weather favors northern harvesting. Moderate rain in the south benefits late double-cropped rice.
6. SOUTHEAST ASIA ... Tropical Storm Susan causes floods in Vietnam and beneficial rain over much of Indochina. Precipitation also benefits rice in the Philippines.
7. NORTHWESTERN AFRICA ... Showers may promote winter grain planting in northeastern Algeria and northern Tunisia. Still waiting for planting rains in Morocco.
8. SOUTH AMERICA ... Showers cover most crop areas, aiding heading wheat in Argentina and grain filling in southern Brazil. Brazil's soybean planting is underway in western Parana, while Argentina's corn planting advances, especially in western areas.
9. MEXICO ... Dry, sunny, mild weather favors crop harvest and fall vegetable development.
10. AUSTRALIA ... Light rain falls over the wheat areas. Warmer weather occurs in the north but cooler than average weather prevails in the south. Wheat ranges from early heading to grain filling.
11. SOUTH AFRICA ... Drier weather covers most of the Maize Triangle, but planting conditions are mostly favorable.

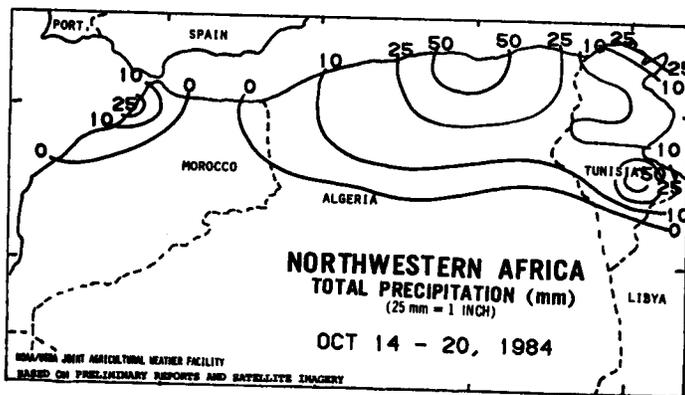


WESTERN USSR...Light precipitation covered most crop areas except the Baltic States, North Caucasus, and the Urals, which received greater rainfall. The Central Region precipitation occurred mainly as snow, and was the first significant snowfall of the season. Subfreezing minimum temperatures occurred for the first time this season as far south as the southern Ukraine, dropping temperatures below normal. In general, moisture supplies across the south are favorable for winter wheat emergence and early growth. Seasonal temperatures are needed to ensure winter grains will become well established before entering dormancy. Corn, sunflower, and sugar beet harvesting continued across the south, with only minor delays due to early week showers.

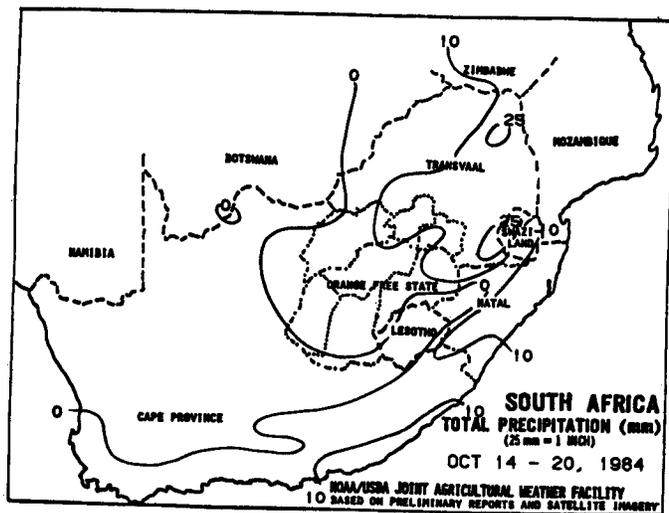




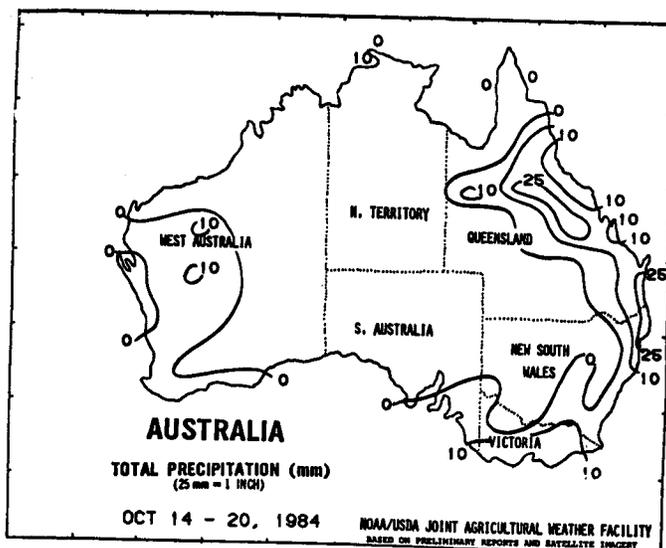
EUROPE...Wet weather in northern France and northern West Germany likely hampered late harvesting. Mostly dry weather in southern France, Italy, Hungary, eastern Yugoslavia, and Romania favored corn, sunflower, and sugar beet harvesting. Reports indicate as of October 13, Romania's corn harvest was 45 percent complete. The season's first subfreezing weather covered crop areas in the southeast on October 18, with minimum temperatures dropping to -2 to -5° C at many locations. However, nighttime temperatures rose to above freezing the following day, reducing the potentially adverse effects on exposed sugar beets. In the Iberian Peninsula, wet weather increased moisture supplies in Portugal, while light showers spilled over into Spain.



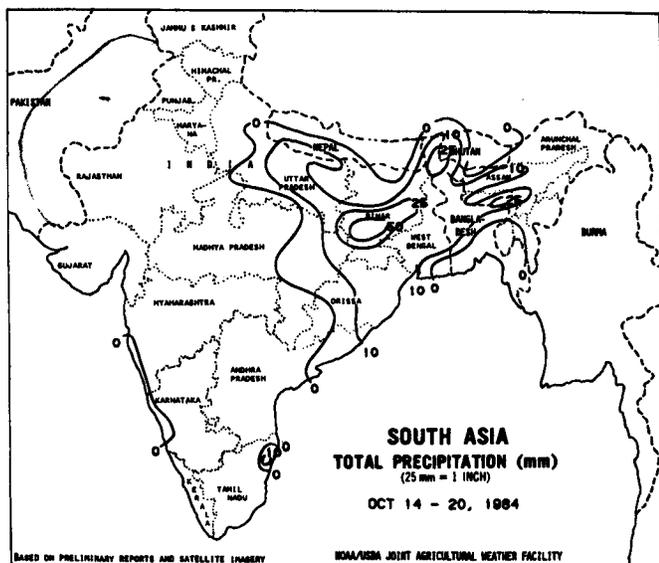
NORTHWESTERN AFRICA...Mostly dry weather covered winter grain areas in western Morocco and western Algeria, while wet weather (10-50 mm) covered crop areas in northeastern Algeria and northern Tunisia. In September, seasonably dry weather covered grain areas in Morocco and western Algeria. Crop areas in northeastern Algeria and northern Tunisia received above normal precipitation, which could promote early winter grain planting. Winter grain planting normally begins in November over most of the region, coinciding with the onset of the autumn rainy season.



SOUTH AFRICA...Drier weather returned to most of the Maize Triangle, following beneficial planting moisture last week. Only light showers (about 5 mm) fell in the Western Transvaal and the Northwestern Orange Free State, the two major producers. Topsoils remain favorable for planting and germination. Moderate rain (10-20 mm) favored eastern Maize Triangle planting conditions. The region's temperatures averaged near normal, remaining adequate for planting. Moderate rain (25-40 mm) fell in Natal, benefiting planting.



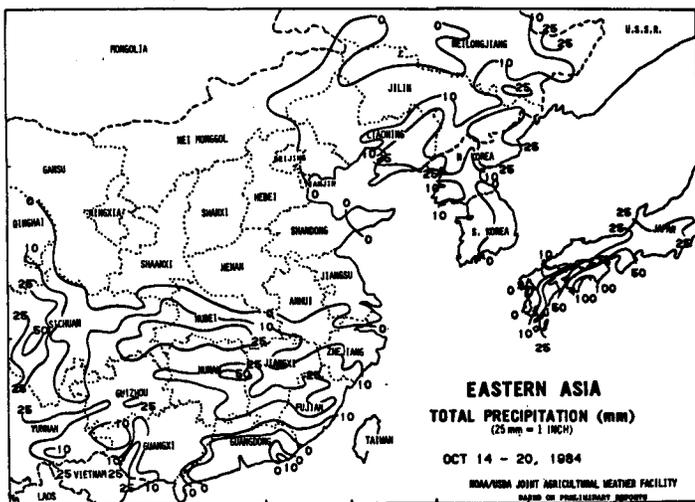
AUSTRALIA...Light rain (1-7 mm) fell over scattered portions of Australia's wheat belt. Heavier rain (11-39 mm) was confined to southern Victoria and the coastal areas of northeastern New South Wales and southeastern Queensland. Scattered tropical showers, indicative of the seasonal transition, also fell over northern Australia. In the wheat areas, average weekly temperatures ranged near normal in the north; but on several days, maximum temperatures reached into the low to mid 30's °C in northern New South Wales, and southeastern Queensland. Wheat development is more advanced in this area due to earlier planting with much of the crop filling grain. Sorghum planting is underway. Cooler weather prevailed across southern wheat areas, where crop development is unusually diverse due to the planting delays. Temperatures averaged 2-3° C below normal. Western Victoria and southwestern New South Wales need additional moisture to meet increasing crop demands.



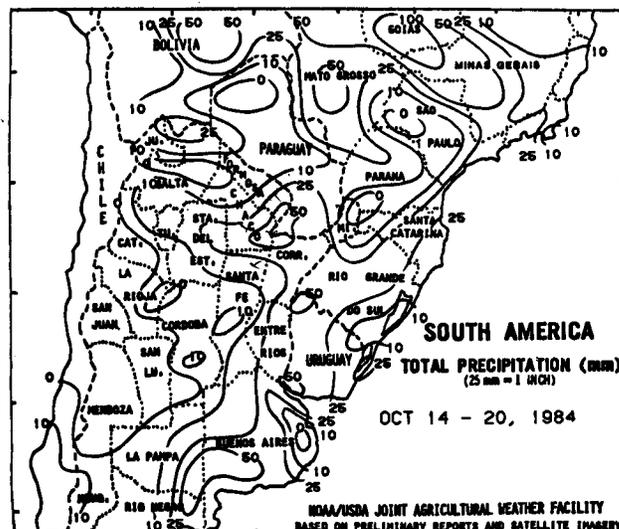
SOUTH ASIA... Early in the week, a tropical cyclone moved inland from the Bay of Bengal producing moderate rain in part of the winter rice region. The moisture was beneficial for southern Bihar rice in the filling stage, where as much as 75 mm of rain fell in localized areas. However, most of the region received only 10-20 mm of rain, and moisture supplies may be running low in some areas because of an early monsoon withdrawal. Moderate rain in eastern Uttar Pradesh benefited emerging wheat. Mostly dry weather covered the rest of India, favoring autumn rice and groundnut harvesting. More rain would benefit cotton in the boll formation stage.



MEXICO... Tropical weather was completely absent over the Nation. Most areas had no rain, but a few very light showers fell in parts of the eastern corn belt, the central Gulf coast, and a small area south of Mazatlan. Corn, beans, and sugarcane harvests proceeded without interruption. The north central area pastures are still very dry.



EASTERN ASIA... Dry weather covered nearly all of the North China Plain this week, favoring cotton and soybean harvesting. The North China Plain temperatures averaged above normal for the second week, favoring late cotton boll development. Moisture conditions for winter wheat planting and early growth remain favorable, except in nonirrigated areas of Hebei. Precipitation was mostly confined to areas south of the Yangtze River. The moisture was favorable for late double-cropped rice in the late filling stage. Mostly dry weather prevailed in Guangdong for the last several weeks, and moisture supplies may be low in some areas for late filling rice.



SOUTH AMERICA... Showers covered most Argentinean and Brazilian crop areas, with locally heavy rain (over 50 mm) falling over southern Buenos Aires, and southeastern portions of Chaco and Formosa, and across Brazil's northern soybean areas of Mato Grosso do Sul, Goias, northern Sao Paulo, and southern Minas Gerais. In Argentina, moisture is adequate for heading wheat and for summer crop planting. Rain slowed eastern corn planting, but some western progress was made, particularly in Cordoba and northern Santa Fe. Wetness hampered northeastern fieldwork again. In Brazil, western Parana soybean planting is underway, with recent rains aiding early crop germination. Light showers helped cotton planting in Sao Paulo. Heavier rain delayed fieldwork in northern soybean areas. More rain fell in Rio Grande do Sul. Frequent showers persist over southern Brazil where wheat is filling grain. Southern soybean planting will begin soon.

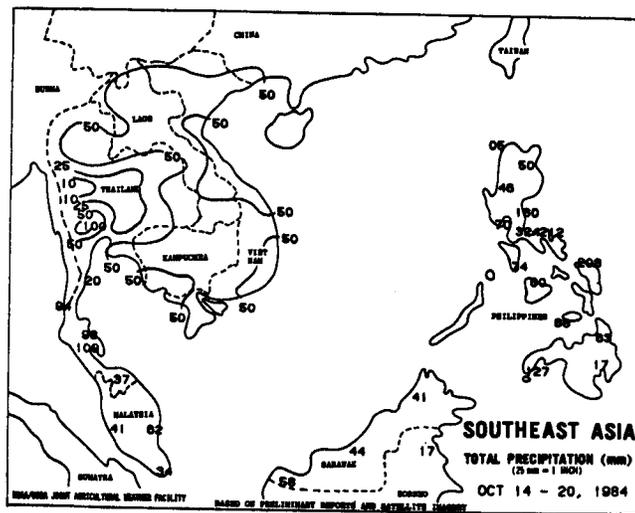
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(continued from p. 23)



SOUTHEAST ASIA...The early week Tropical Storm Susan remained in the region, producing heavy rain in central Vietnam. Flooding likely damaged coastal area rice. Moderate to heavy rain (50-100 mm) associated with the storm covered most of Indochina. Beneficial rain (25-85 mm) covered northern and eastern Thailand, favoring reproductive rice. Late-week, heavy rain fell in the southwest, and moderate amounts benefited the south central rice area. Drier weather (10-25 mm) covered central Thailand. Moderate to heavy rain in the Philippines benefited rice in the filling stage.

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