

# 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

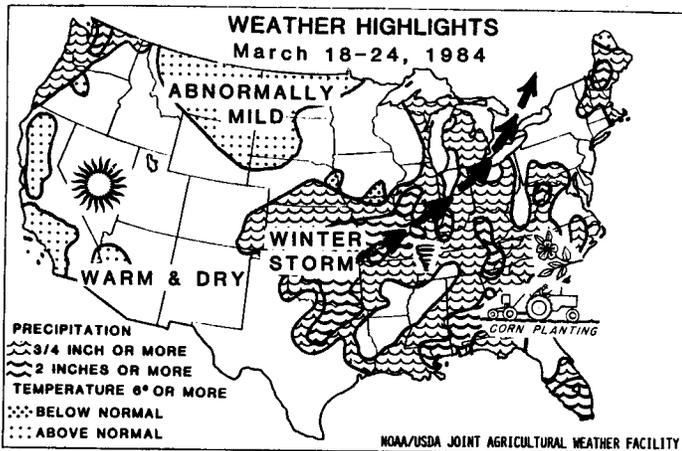
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## National Weather Summary

March 18 to 24



**TUESDAY...**Widespread precipitation moistened most of the eastern third of the Nation as the storm continued to deepen and move into the Midwest. Snow piled up from Iowa to Wisconsin, while severe thunderstorms produced heavy rain over much of the Southeast. This first day of spring brought 90 degrees readings into some of the southern California deserts as winter continued its grip on the western Great Lakes region and from the Midwest into New England.

**WEDNESDAY...**The strong storm slowly drifted into the upper Midwest, triggering widespread precipitation over the Northeast, and blustery winds from the Mississippi Valley eastward to the Atlantic Coast. Heavy snow and near blizzard conditions hung over parts of the Great Lakes region. Another wet, windy storm moved into the West.

**THURSDAY...**The northeastern storm continued the winter weather and near blizzard conditions over the Great Lakes into New England, and blustery winds southward through the Carolinas. The western storm intensified over the southern Rockies, bringing rain and snow to the central Rockies and west-central Plains wheatlands. Severe thunderstorms, with heavy rain and hail, developed over parts of southwestern Oklahoma and north-central Texas.

**FRIDAY...**Stormy weather continued over portions of the central and southern Plains, benefitting the drier, western wheatlands. Heavy rain and thunderstorms drenched the area from eastern Kansas into north-central Texas, while snow fell westward to the foothills of the Rockies. Strong, west and northwest winds from the dominating storm early in the week continued to rake the Northeast.

(continued on p. 19)

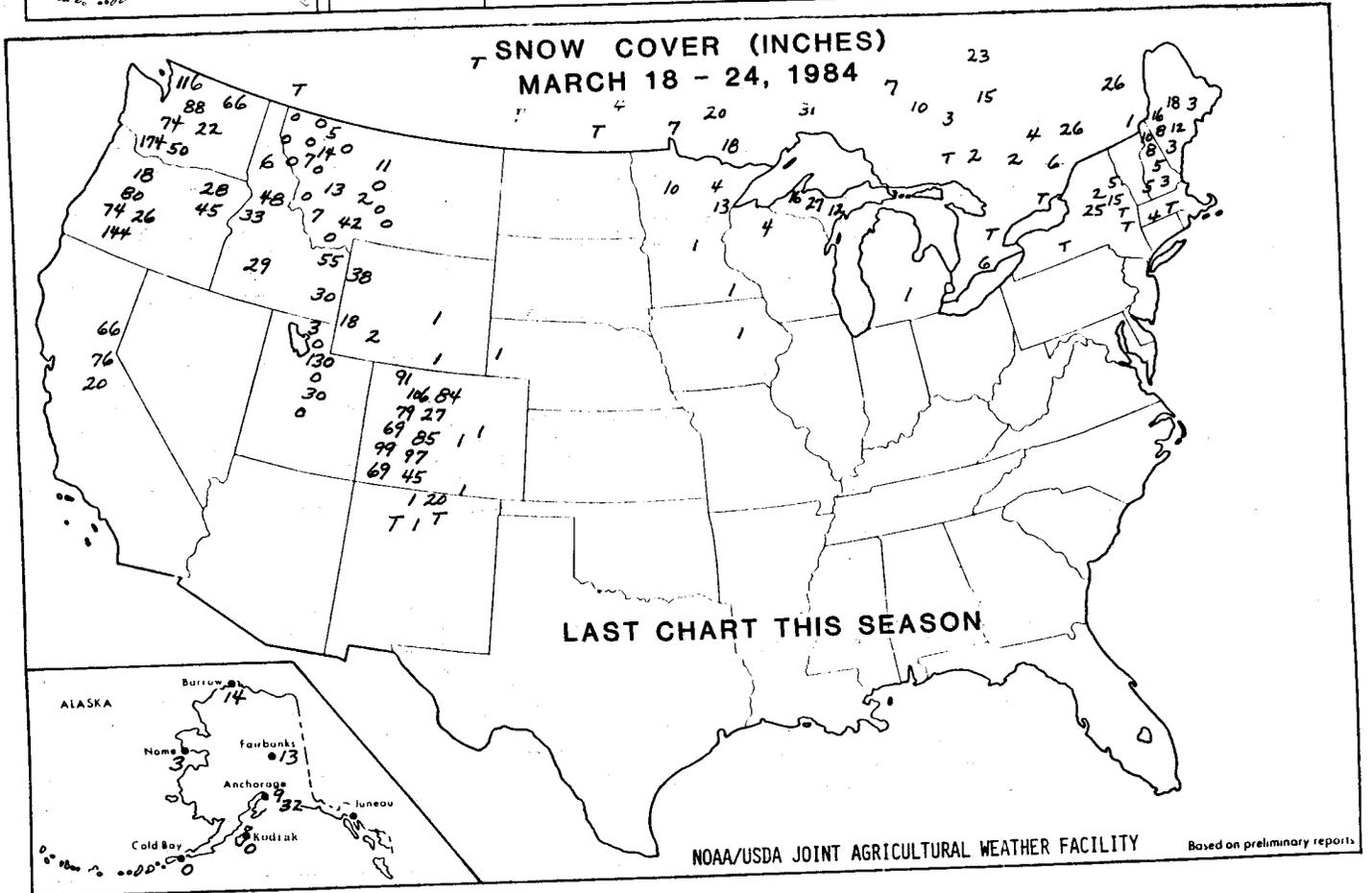
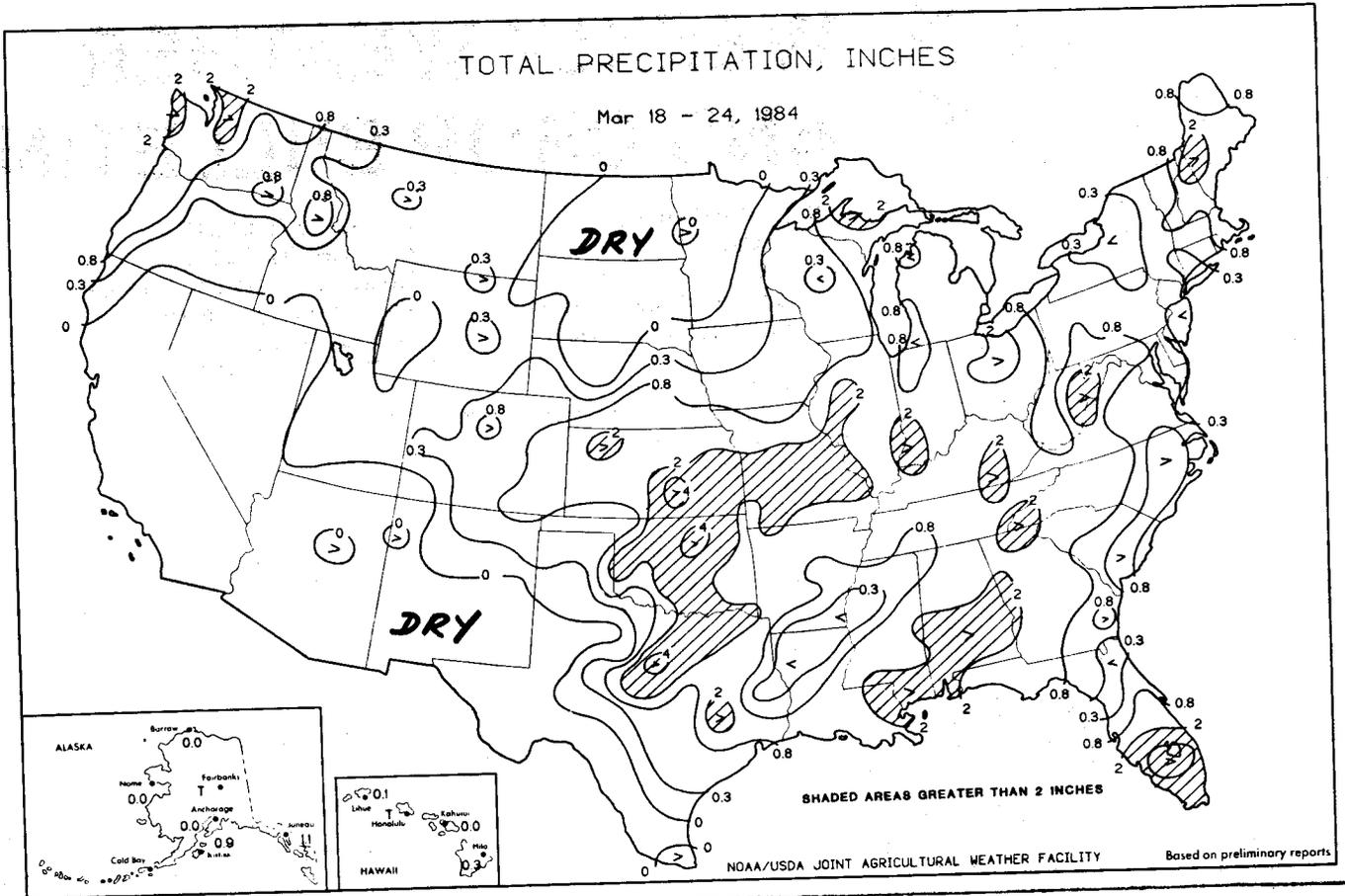
**HIGHLIGHTS:** Stormy weather dominated the area from the central and southern Plains into New England. Heavy rains were dumped from eastern Kansas to northeast Texas and northeastward into Missouri, while some deep snows piled up from eastern Colorado into parts of the Great Lakes region. Near blizzard conditions developed over the Great Lakes to New England, and strong northwesterly winds extended southward through the Carolinas. Sunny, dry weather remained over the Southwest; even the Pacific Northwest was drier than usual. It was cold over the central part of the Nation, and abnormally warm over the West and northern Plains.

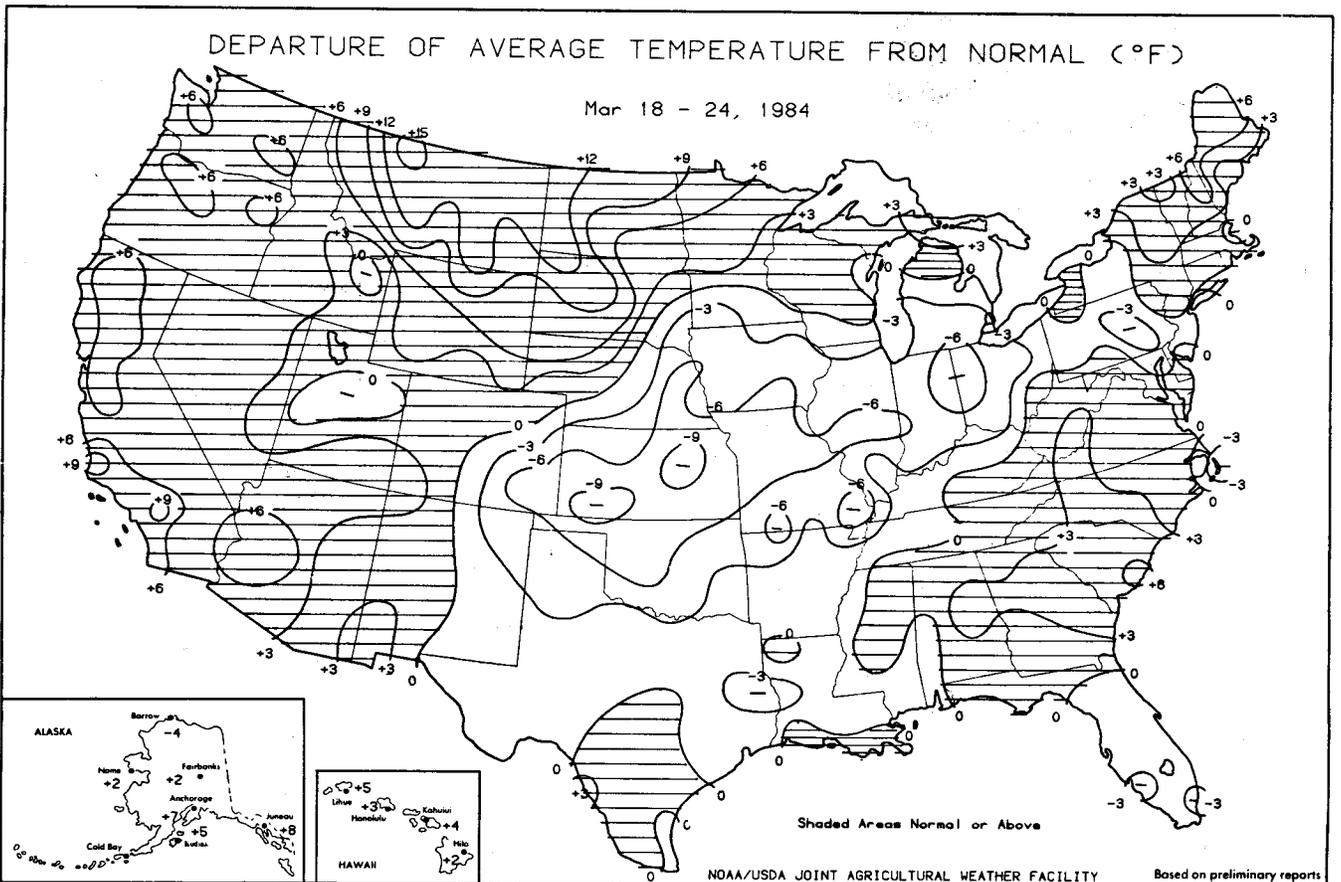
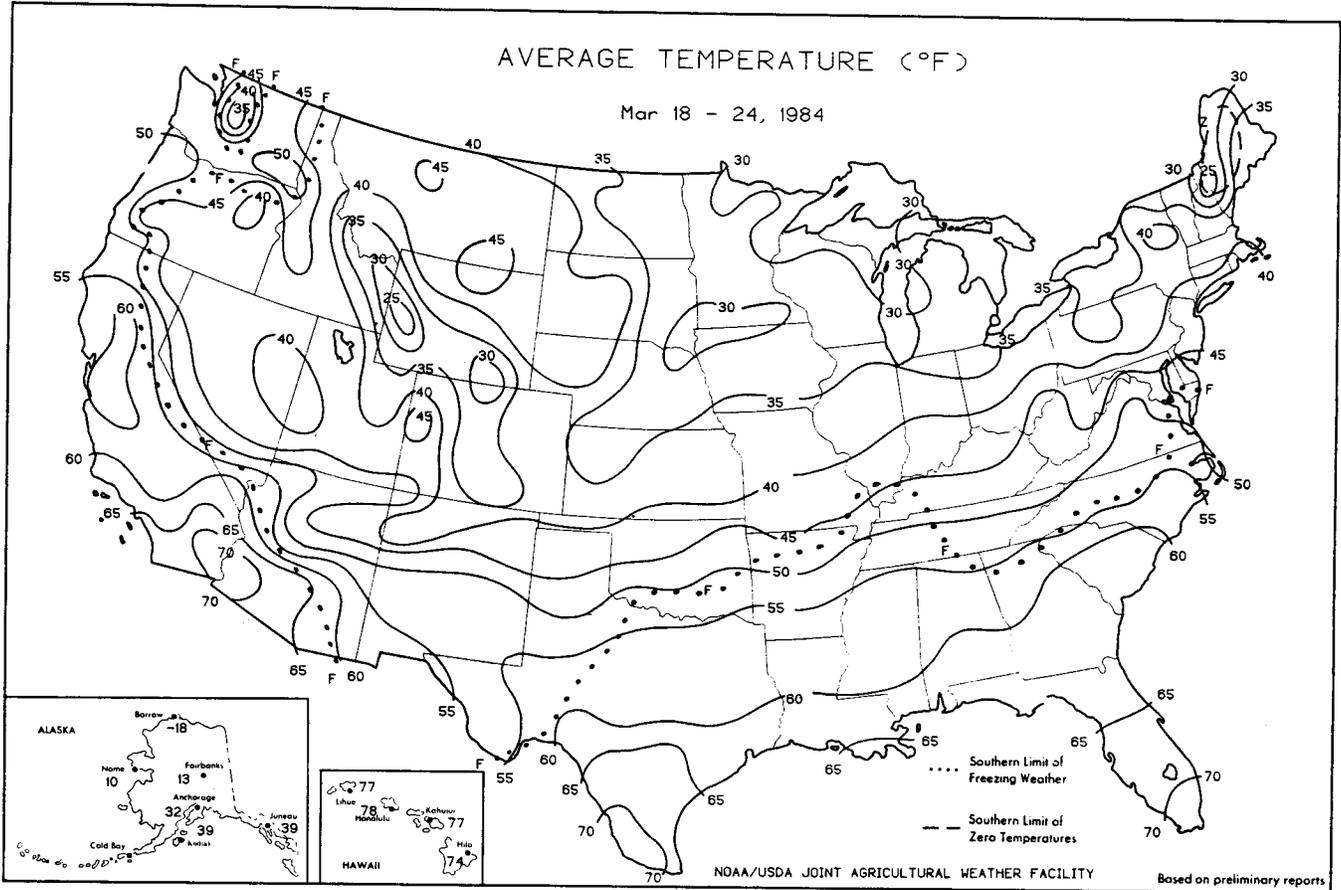
**SUNDAY...**A vigorous, late-season storm crossing the Texas Panhandle into Oklahoma battered much of the Plains. It produced widespread snow, sleet, freezing rain, and wind from Colorado to Illinois. Over a foot of snow was dumped on parts of the central Plains, while heavy rains deluged the area from central Missouri to northwest Arkansas. South of the storm, the mercury soared to 96 degrees at Cotulla in South Texas. Light precipitation fell from the Carolinas to Maine and along the Pacific Northwest coast.

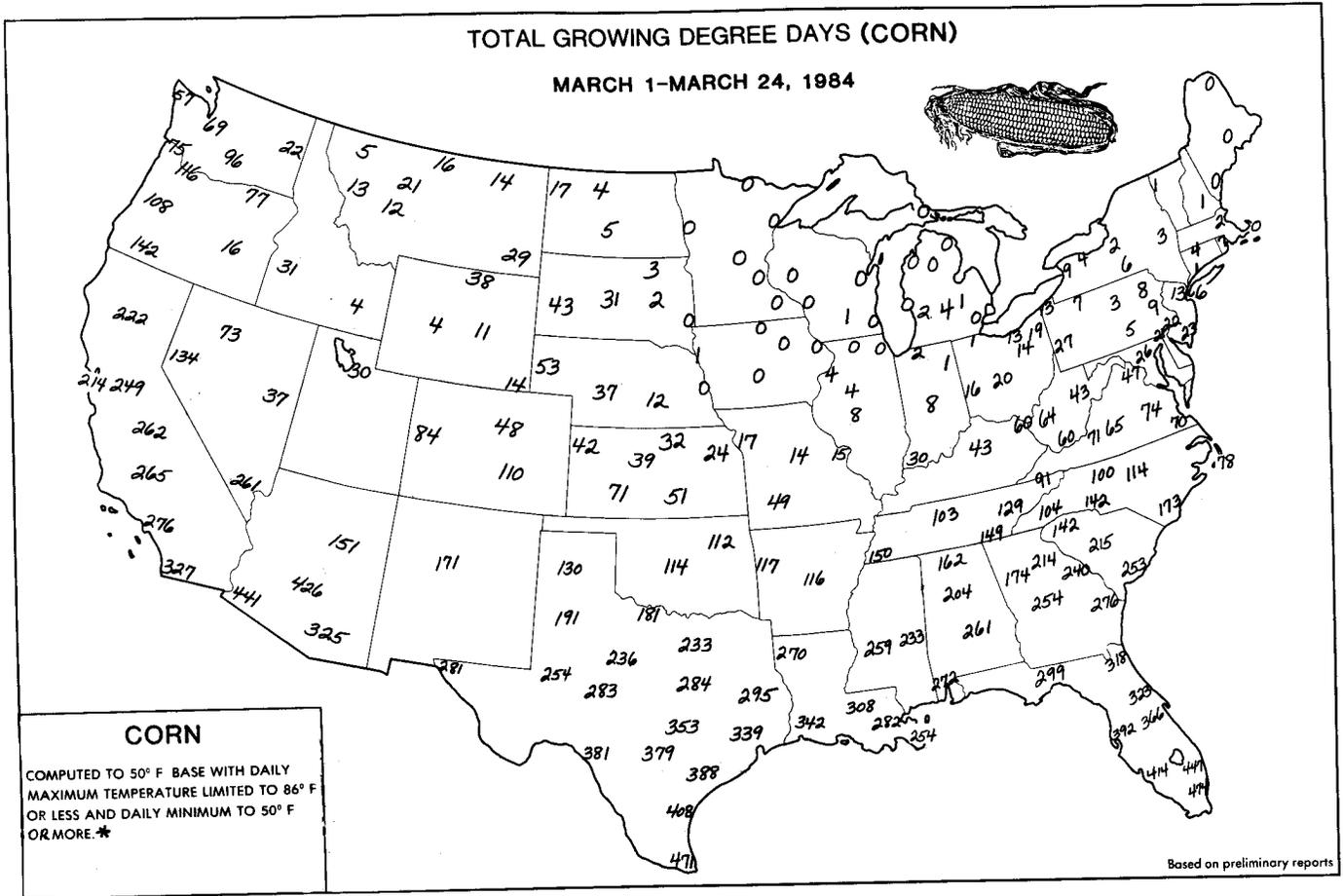
**MONDAY...**The storm slowly moved into the middle Mississippi Valley, producing freezing rain and snow from the east-central Plains to the Great Lakes, tornadoes around the Missouri Bootheel, and heavy rains southward to the central Gulf coast. Rains were scattered across New England and the Pacific Northwest.

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## Use of Growing Degree Units in Corn Production

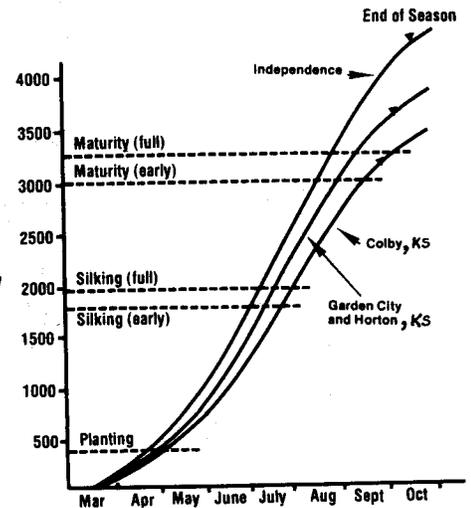
For years, the practice had been to label corn maturity in days. A 135 day variety would presumably reach maturity 135 days after it was planted. This system does not take into account the complicated physiological processes that control growth and development of corn. The number of days required to reach maturity depends on the location of the planting, and the weather that the plant is subjected to in a particular growing season. In most years, the period will be more or less than 135 days. It is hard to decide which maturity to plant to achieve maximum production. A delayed planting might not provide the required number of days for your variety to mature.

Each day does not contribute equally to the growth of plants. Growth is faster during the warm season than it is in cold weather. On the other hand, summer temperature can be too high for optimum growth. Although other factors than temperature enter into determining the rate of growth, there is now an acceptance among most seed producers to use the temperature based Growing Degree Units (GDU) concept to express maturity. There have been many of these "heat-unit" systems devised over the years. The one currently in use for corn is that initiated in 1969 by the staff of the Weekly Weather and Crop Bulletin and several state universities and seed companies.

Degree-day recorders and totalizers, which accumulate ongoing degree day measurements, are available from some meteorological equipment suppliers.

GDU's Required to Reach:

	Silking	Maturity
Early Season Variety	1390	2610
Full Season Variety	1560	2830

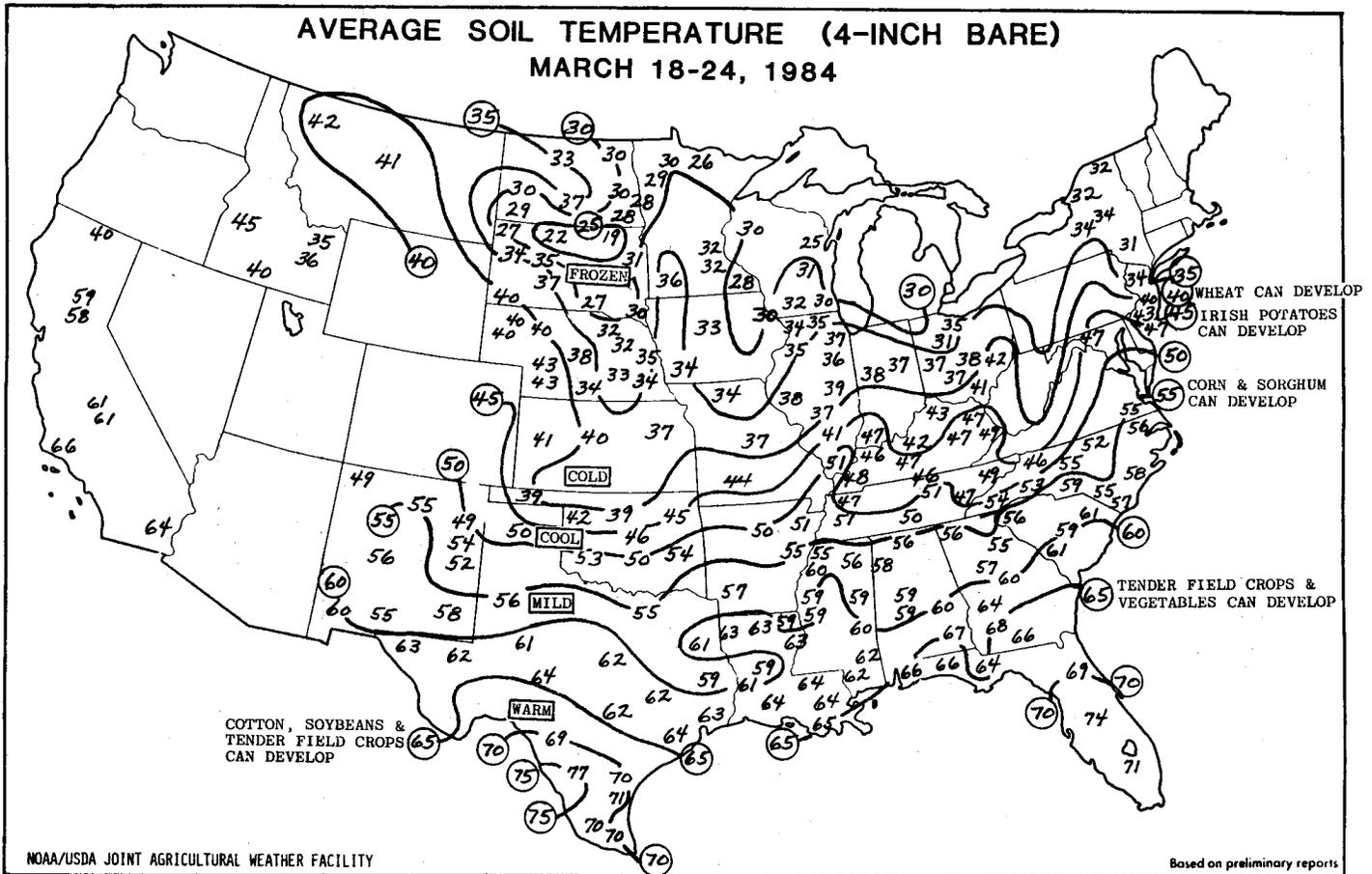


\* In this system, Growing Degree Units are calculated by subtracting a base temperature of 50° (F) from the average of the maximum and minimum temperatures for the day. Corn doesn't grow much at temperatures below 50°. As the temperature rises, corn grows faster if moisture is plentiful. However, at a temperature higher than 86° the roots have increasing difficulty taking in water fast enough to keep the plant growing at full speed. GDU are calculated by the following equation.

$$GDU = \frac{MaxTemp. + MinTemp. - 50°}{2}$$

NOTE: Minimum temperatures below 50° are counted as 50° and temperatures above 86° are counted as 86°.

For example a day with temperature extremes of 82° and 60° would have contributed 21 GDU. A day with a high temperature of 90° and a low of 48°, will be considered as one with temperatures of 86° and 50° for purposes of calculation. That day would have had 18 GDU.



Weather Data for the Week Ending MARCH 24, 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 MAR. 4	PCT. NORMAL SINCE MAR. 4	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMPERATURE °F		PRECIPITATION	
																		90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	71	44	81	34	58	2	1.1	-.5	.5	2.7	57	9.0	64	84	37	0	0	3	1		
AL MOBILE	73	49	79	37	61	0	2.3	-.8	1.3	4.7	107	15.7	106	91	49	0	0	3	2		
AL MONTGOMERY	77	46	83	37	61	3	2.8	1.4	1.4	3.6	84	12.9	94	88	41	0	0	2	2		
AK ANCHORAGE	42	22	44	19	32	7	0	-.1	0	.1	25	2.4	120	63	36	0	7	0	0		
AK BARROW	-14	-23	-8	-30	-18	-4	0	-.1	0	.1	50	.4	100	78	66	0	7	0	0		
AK FAIRBANKS	24	2	32	-3	13	2	0	-.1	0	0	0	1.6	123	70	47	0	7	1	0		
AK JUNEAU	44	35	47	29	39	8	1.1	-.4	.5	1.6	70	14.0	136	96	74	0	2	5	0		
AK KODIAK	45	34	49	26	39	5	.9	-.1	.4	8.1	289	25.3	140	88	64	0	3	4	0		
AK NOME	18	2	27	-5	10	2	0	-.1	0	.1	25	.9	50	56	42	0	7	0	0		
AZ PHOENIX	83	54	89	50	69	7	0	-.2	0	0	0	.3	17	33	12	0	0	0	0		
AZ PRESCOTT	65	37	71	31	51	7	0	-.3	0	0	0	0	41	13	0	3	0	0	0		
AZ TUCSON	76	45	85	38	61	2	0	-.1	0	0	0	.6	33	33	7	0	0	0	0		
AZ YUMA	84	56	91	52	70	4	0	0	0	0	0	.1	9	41	15	1	0	0	0		
AR FORT SMITH	58	40	67	33	49	-3	1.0	-.1	.6	3.5	135	6.9	93	86	54	0	0	3	1		
AR LITTLE ROCK	60	43	64	35	52	-2	.5	-.6	.4	3.8	115	9.1	81	82	52	0	0	3	0		
CA BAKERSFIELD	74	43	86	39	58	0	0	-.2	0	.3	50	.5	17	88	28	0	0	0	0		
CA EUREKA	61	46	66	42	53	5	.1	-1.0	.1	3.3	92	8.0	54	91	68	0	0	0	0		
CA FRESNO	74	46	83	41	60	5	0	-.4	0	.4	36	1.6	31	86	36	0	0	0	0		
CA LOS ANGELES	73	55	78	53	64	6	0	-.4	0	.1	8	.5	7	79	39	0	0	0	0		
CA RED BLUFF	73	47	80	42	60	6	0	-.5	0	1.2	75	3.5	35	77	37	0	0	0	0		
CA SACRAMENTO	74	50	78	46	62	8	0	-.4	0	.8	62	2.0	23	85	43	0	0	0	0		
CA SAN DIEGO	75	61	82	57	68	9	0	-.4	0	0	0	.6	12	73	39	0	0	0	0		
CA SAN FRANCISCO	68	48	75	45	58	5	.7	-.6	.7	1.2	67	3.1	30	84	53	0	0	0	0		
CO DENVER	50	27	62	26	39	0	.8	.5	.5	.9	113	1.9	100	84	47	0	7	3	1		
CO GRAND JUNCTION	58	35	67	30	46	2	.5	-.2	.2	.9	150	1.3	81	70	34	0	1	3	0		
CO PUEBLO	50	28	59	21	39	-3	.7	.5	.3	.8	160	1.1	92	89	53	0	6	3	0		
CT BRIDGEPORT	46	35	51	30	40	0	.2	-.7	.2	2.3	88	8.1	88	84	58	0	1	2	0		
CT HARTFORD	45	34	50	27	39	0	.6	-.4	.3	3.1	107	9.8	95	89	59	0	3	3	0		
DC WASHINGTON	59	40	64	32	50	1	.6	-.2	.6	2.0	83	7.1	89	75	42	0	1	1	1		
FL APALACHICOLA	70	48	73	37	59	-3	1.6	-.7	1.6	3.1	115	11.8	115	88	52	0	0	1	1		
FL DAYTONA BEACH	75	54	79	43	64	-1	.6	-.1	.6	.7	33	5.7	70	89	47	0	0	1	1		
FL JACKSONVILLE	78	50	84	43	64	2	.1	-.7	.1	1.8	72	8.6	89	91	41	0	0	2	1		
FL KEY WEST	79	67	81	61	73	-2	2.0	1.7	1.9	2.1	210	6.4	125	81	59	0	0	1	1		
FL MIAMI	79	62	83	53	70	-2	2.9	2.5	2.9	6.1	469	7.0	123	86	51	0	0	2	1		
FL ORLANDO	78	55	84	46	66	-1	1.0	-.3	1.0	1.4	64	6.2	82	98	48	0	0	2	1		
FL TALLAHASSEE	79	45	86	36	62	1	1.0	-.3	1.0	4.7	121	14.8	104	98	40	0	0	1	1		
FL TAMPA	78	57	84	51	68	0	.4	-.3	.4	1.2	50	6.1	76	96	51	0	0	1	0		
FL WEST PALM BEACH	77	62	82	49	69	-2	3.7	3.1	3.1	5.0	278	10.9	142	91	58	0	0	3	2		
GA ATLANTA	70	45	78	35	57	3	2.0	-.6	1.7	4.4	107	15.2	108	81	42	0	0	2	1		
GA AUGUSTA	77	45	84	40	61	5	.7	-.4	.6	2.5	74	10.8	89	85	35	0	0	2	1		
GA MACON	77	47	83	40	62	4	1.0	-.1	.7	3.0	86	11.7	89	86	38	0	0	3	1		
GA SAVANNAH	76	47	83	40	62	4	.8	-.1	.8	4.6	170	16.7	176	79	42	0	0	1	1		
HI HILO	82	65	83	63	74	2	.3	-2.6	.2	.6	7	20.2	59	85	51	0	0	3	0		
HI HONOLULU	85	70	86	65	78	3	.7	-.8	.7	0	0	1.3	14	78	46	0	0	0	0		
HI KAHULUI	87	67	89	62	77	4	0	-.6	0	.3	14	3.5	35	72	46	0	0	0	0		
HI LIHUE	82	71	83	65	77	5	.1	-.9	.1	.1	3	3.1	23	81	59	0	0	1	0		
ID BOISE	55	35	64	26	45	2	.1	-.2	.1	1.3	163	3.0	83	79	43	0	0	1	0		
ID LEWISTON	57	43	63	40	50	6	.7	-.5	.5	1.3	186	2.3	79	90	54	0	0	4	0		
ID POCATELLO	48	29	55	23	39	2	.1	-.1	.1	.6	100	3.2	123	84	49	0	5	2	0		
IL CHICAGO	38	27	49	25	33	-5	.7	.1	.4	2.4	141	5.0	102	91	65	0	7	4	0		
IL MOLINE	39	29	51	26	34	-4	.7	0	.5	3.3	183	5.0	100	82	61	0	7	2	0		
IL PEORIA	39	30	51	26	35	-5	2.1	1.4	1.8	3.5	175	6.4	121	89	69	0	6	3	1		
IL QUINCY	41	32	51	29	37	-5	1.3	.6	.9	3.7	185	5.9	116	83	66	0	5	5	1		
IL ROCKFORD	39	29	48	23	34	-2	.7	-.1	.5	2.0	125	4.0	89	94	71	0	6	3	1		
IL SPRINGFIELD	40	31	51	28	36	-7	2.0	1.2	1.3	3.7	168	6.3	109	94	73	0	6	3	2		
IN EVANSVILLE	51	36	64	30	44	-3	2.6	1.5	1.1	6.0	188	9.4	98	85	59	0	2	5	2		
IN FORT WAYNE	36	29	42	24	32	-7	.9	-.2	.6	2.9	145	5.6	89	94	76	0	6	5	1		
IN INDIANAPOLIS	43	32	50	30	37	-5	1.1	-.2	.4	2.8	108	7.0	88	87	65	0	4	5	0		
IN SOUTH BEND	38	29	44	23	34	-4	.7	-.1	.3	2.0	95	4.4	64	83	61	0	5	4	0		
IA DES MOINES	38	28	47	24	33	-5	.5	0	.3	1.4	100	3.3	87	83	62	0	7	2	0		
IA SIOUX CITY	37	25	51	17	31	-5	.1	-.4	.1	1.1	92	2.6	93	98	76	0	7	1	0		
IA WATERLOO	36	24	43	12	30	-4	.6	.1	.4	1.3	87	2.7	75	94	74	0	6	2	0		
KS CONCORDIA	41	29	50	20	35	-7	1.5	1.1	1.1	2.2	183	3.6	129	85	62	0	6	4	1		
KS DODGE CITY	43	27	54	20	35	-9	1.4	1.1	.8	2.1	233	3.1	129	90	60	0	7	3	2		
KS GOODLAND	41	27	55	23	34	-5	1.3	1.0	.9	1.3	163	3.6	212	94	67	0	7	4	1		
KS TOPEKA	42	31	47	23	37	-7	2.1	1.6	1.3	3.7	264	5.4	154	89	73	0	5	5	1		
KS WICHITA	45	31	55	20	38	-8	4.2	3.7	2.1	5.9	454	7.9	263	89	64	0	2	4	3		
KY BOWLING GREEN	58	39	75	31	48	0	1.6	.3	.9	4.1	108	10.1	78	96	57	0	2	4	1		
KY LEXINGTON	53	35	67	32	44	-2	1.4	.3	1.1	2.8	82	7.8	71	87	60	0	1	5	1		
KY LOUISVILLE	53	36	65	32	44	-3	1.4	.3	.8	3.2	97	5.7	55	81	55	0	1	5	1		
LA ALEXANDRIA	69	47	75	41	58	-3	.6	-.5	.4	3.2	91	17.8	124	77							

Weather Data for the Week Ending MARCH 24, 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 MAR. 4	PCT. NORMAL SINCE MAR. 4	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	52 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
ME SHREVEPORT	71	48	81	39	60	1	.2	-.7	-.2	3.4	136	11.1	106	80	40	0	0	2	0
ME CARIBOU	38	26	45	11	32	5	.4	-.2	-.2	2.4	150	7.8	120	88	63	0	5	5	0
ME PORTLAND	42	32	46	26	37	2	1.4	-.5	-.6	4.4	169	12.1	116	84	64	0	5	5	1
MD BALTIMORE	54	34	60	25	44	-1	.5	-.3	-.5	2.2	88	8.0	88	84	48	0	2	1	1
MD SALISBURY	60	38	69	28	49	3	.3	-.6	-.3	4.4	157	10.9	108	90	43	0	2	1	0
MA BOSTON	42	33	54	21	38	-3	1.4	-.4	-.8	4.4	152	14.7	131	91	70	0	4	4	1
MA CHATHAM	43	35	49	29	39	1	1.6	-.7	-.9	4.6	164	12.4	103	11	1	0	4	4	1
MI ALPENA	37	28	44	20	33	3	1.2	-.7	-.7	2.3	153	4.0	82	94	73	0	3	4	1
MI DETROIT	39	28	46	23	33	-4	1.9	1.3	-.9	3.2	178	5.4	95	83	61	0	7	3	2
MI FLINT	36	25	43	17	31	-3	1.4	-.9	-.8	2.9	207	4.0	83	92	70	0	7	3	1
MI GRAND RAPIDS	37	27	43	16	32	-4	.9	-.3	-.4	2.8	165	4.8	91	87	66	0	5	5	0
MI HOUGHTON LAKE	37	26	47	20	32	2	1.1	-.6	-.5	1.7	131	3.7	86	91	74	0	6	3	0
MI LANSING	37	26	43	13	32	-4	1.0	-.5	-.5	2.4	160	3.7	73	93	73	0	6	4	0
MI MARQUETTE	34	16	45	0	25	0	3.2	2.5	2.1	3.9	217	8.9	146	95	69	0	7	3	0
MI MUSKOGON	36	24	44	14	30	-5	.8	-.1	-.3	1.7	100	4.3	70	87	64	0	6	4	0
MI SAULT STE. MARIE	36	23	41	16	30	3	1.5	1.0	1.0	2.0	154	5.6	100	91	66	0	6	3	1
MN ALEXANDRIA	40	24	48	18	32	5	0	-.3	0	.9	113	2.5	104	93	62	0	7	0	0
MN DULUTH	34	19	40	10	27	1	.1	-.3	-.1	.6	46	2.0	56	93	59	0	7	1	0
MN INT'L FALLS	37	22	42	15	30	6	T	-.3	T	.7	25	1.2	48	77	49	0	6	0	0
MN MINNEAPOLIS	39	24	48	16	32	0	.1	-.3	-.1	1.4	117	3.8	131	81	48	0	7	1	0
MN ROCHESTER	35	23	45	16	29	-1	.3	-.1	-.2	1.0	91	3.2	114	88	65	0	7	2	0
MS GREENWOOD	68	50	79	42	59	2	.1	-1.4	-.1	4.7	109	12.6	86	77	40	0	0	2	0
MS JACKSON	72	46	83	36	59	1	1.1	-.2	-.8	4.3	108	11.9	83	93	44	0	0	2	1
MS MERIDIAN	72	42	80	32	57	0	1.8	-.3	-.8	3.9	85	11.6	77	100	48	0	2	3	2
MO CAPE GIRARDEAU	53	40	63	35	46	1	2.3	1.1	1.2	4.7	138	9.9	101	92	57	0	0	4	3
MO COLUMBIA	43	33	55	30	38	-6	2.1	1.3	.9	4.3	205	8.0	129	89	67	0	6	5	2
MO KANSAS CITY	40	31	49	24	36	-8	2.0	1.4	.8	4.1	256	6.2	159	92	77	0	4	5	2
MO SAINT LOUIS	45	34	53	30	39	-6	2.2	1.4	.9	4.4	191	8.9	131	96	72	0	1	3	2
MO SPRINGFIELD	50	36	58	30	43	-4	2.1	1.2	1.5	3.8	158	8.7	134	84	56	0	2	4	1
MT BILLINGS	54	33	62	30	44	9	.1	-.2	T	.5	63	2.2	92	74	32	0	2	4	0
MT GLASGOW	53	31	61	26	42	13	.2	-.1	-.1	.5	167	1.1	100	85	40	0	6	3	0
MT GREAT FALLS	55	35	60	29	45	13	.3	-.1	-.3	1.2	171	2.7	100	75	39	0	1	1	0
MT HAVRE	52	32	62	23	42	12	.1	0	-.1	.2	67	.9	75	94	43	0	4	2	0
MT HELENA	52	35	56	27	43	10	.1	0	-.1	.4	100	.8	50	79	38	0	1	1	0
MT KALISPELL	46	34	51	29	40	7	.4	-.2	-.3	1.0	200	2.5	74	81	53	0	1	1	0
MT MILES CITY	56	33	66	30	45	11	T	-.1	T	.2	50	.3	23	83	35	0	4	1	0
MT MISSOULA	49	35	57	26	42	6	.2	0	-.1	1.0	167	2.2	76	87	51	0	2	5	0
NE GRAND ISLAND	40	25	52	20	32	-6	1.2	-.8	.9	2.1	191	4.5	180	84	60	0	7	2	1
NE LINCOLN	42	27	53	19	34	-4	.7	-.2	.5	1.9	146	3.7	119	92	65	0	6	2	1
NE NORFOLK	38	23	49	18	30	-6	.4	0	.3	1.6	145	4.8	185	88	64	0	7	2	0
NE NORTH PLATTE	51	24	65	22	37	1	.2	-.1	-.1	.7	100	2.1	117	81	35	0	7	2	0
NE OMAHA	38	26	50	18	32	-6	.3	-.2	-.3	1.9	146	3.1	94	94	74	0	7	2	0
NE SCOTTSBLUFF	55	33	63	28	44	7	.6	-.3	.4	.7	88	1.6	94	77	36	0	2	2	0
NE VALENTINE	53	26	70	19	40	6	0	-.2	0	.6	100	1.4	100	82	33	0	6	0	0
NV ELY	52	21	61	15	37	2	T	-.2	T	.3	50	1.1	50	82	36	0	7	0	0
NV LAS VEGAS	73	46	82	43	60	3	0	-.1	0	0	0	0	0	34	11	0	0	0	0
NV RENO	62	29	71	24	46	5	0	-.1	0	.2	50	.8	29	72	24	0	5	0	0
NV WINNEMUCCA	58	27	68	21	42	3	T	-.1	T	.2	67	1.2	55	69	26	0	6	0	0
NH CONCORD	43	33	48	26	38	4	1.2	-.5	.6	2.5	132	9.8	131	89	61	0	3	5	1
NJ ATLANTIC CITY	52	33	56	24	42	-1	.1	-.9	-.1	3.5	125	9.5	94	87	44	0	3	2	0
NM ALBUQUERQUE	64	31	74	20	48	0	T	-.1	T	0	0	.3	25	64	16	0	4	2	0
NM CLOVIS	59	33	73	26	46	-2	T	-.1	T	.1	25	.5	36	70	32	0	3	0	0
NM ROSWELL	67	38	80	30	52	-2	T	0	T	.5	250	.5	56	56	18	0	1	0	0
NY ALBANY	44	33	51	24	39	3	.7	-.1	.3	2.5	119	6.2	86	81	55	0	4	4	0
NY BINGHAMTON	41	26	57	21	34	0	.3	-.5	.2	1.2	55	6.2	82	91	60	0	7	3	0
NY BUFFALO	42	29	54	23	36	0	.3	-.4	-.1	1.1	55	6.3	82	90	62	0	4	4	0
NY NEW YORK	49	35	56	31	42	-1	T	-1.0	T	3.0	103	8.8	92	87	56	0	2	1	0
NY ROCHESTER	40	28	52	23	34	-2	.3	-.3	-.1	1.4	82	6.5	98	89	67	0	5	4	0
NY SYRACUSE	41	27	49	19	34	-2	.2	-.5	-.1	.9	43	5.6	73	91	64	0	6	4	0
NC ASHEVILLE	63	38	77	29	50	2	1.9	-.7	1.6	3.2	89	12.0	105	96	53	0	1	4	1
NC CHARLOTTE	67	45	74	37	56	4	.8	-.3	.7	3.5	103	13.4	117	76	37	0	0	3	1
NC GREENSBORO	63	41	69	29	52	2	1.2	-.4	.5	3.4	126	12.2	120	80	44	0	1	3	1
NC HATTERAS	57	42	64	37	50	-3	.6	-.3	.3	1.9	68	7.7	63	86	56	0	0	3	0
NC NEW BERN	69	45	71	39	57	2	1.5	-.7	.9	4.2	168	12.7	113	88	43	0	0	2	2
NC RALEIGH	64	40	69	30	52	1	1.1	-.3	.6	3.4	131	13.9	138	84	44	0	1	3	1
NC WILMINGTON	70	48	75	42	59	3	.7	-.2	.7	2.6	90	10.1	95	90	49	0	0	1	1
ND BISMARCK	43	27	56	23	35	6	T	-.2	T	.8	160	1.5	115	87	60	0	7	0	0
ND FARGO	37	27	50	20	32	5	T	-.2	T	.6	120	2.5	156	87	69	0	7	1	0
ND GRAND FORKS	39	27	47	18	33	8	T	-.2	T	.2	40	1.3	76	92	71	0	7	0	0
ND WILLISTON	52	27	66	23	40	12	.1	-.1	.1	.4	100	1.3	87	87	46	0	7	1	0
OH AKRON-CANTON	44	28	70	22	36	-3	1.1	-.3	.6	2.1	91	6.1	82	84	65	0	6	6	1
OH CINCINNATI	46	32	57	30	39	-5	1.1	-.1	.8	2.8	100	6.0	65	86	64	0	6	4	1
OH CLEVELAND	46	28	68	22	37	-2	1.8	1.1	.8	2.9	153	7.7	107	92	62	0	6	5	2
OH COLUMBUS	45	32	63	25	38	-4	2.0	1.3	1.6	2.9	132	5.9	79	80	56	0	4	3	1

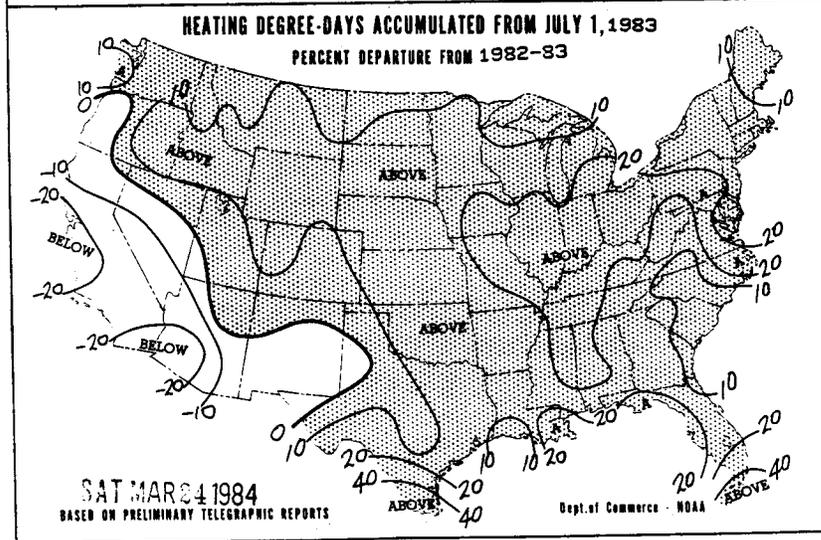
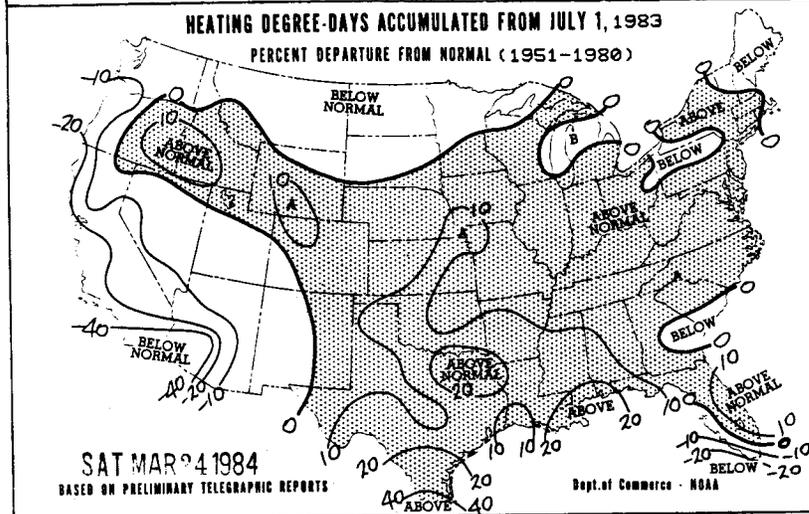
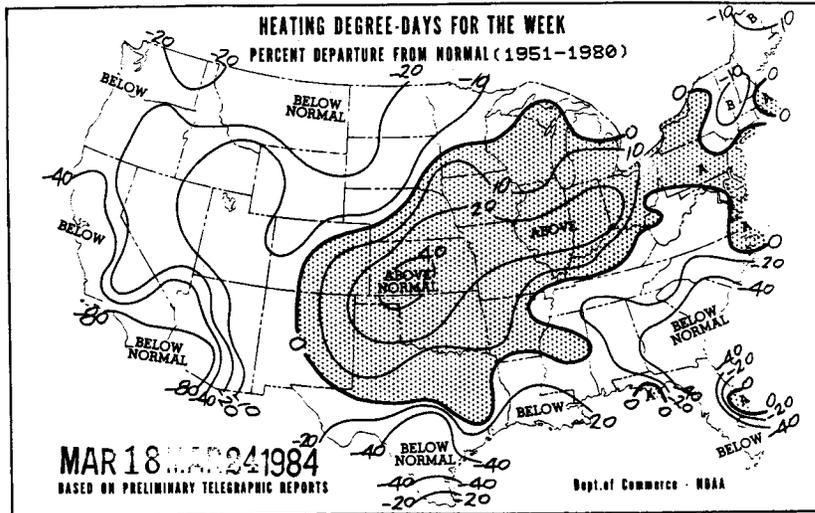
BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

Weather Data for the Week Ending MARCH 24, 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 MAR. 4	PCT. NORMAL SINCE MAR. 4	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	72 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	41	29	56	26	35	-7	1.1	.3	.7	2.5	119	6.4	80	81	61	0	7	4	1
TOLEDO	38	26	49	19	32	-6	1.1	.5	.7	2.7	159	4.9	83	93	72	0	7	4	1
YOUNGSTOWN	45	27	72	17	36	-2	.8	.1	.4	1.4	64	5.0	66	79	54	0	5	4	0
OK OKLAHOMA CITY	54	36	70	30	46	-5	2.8	2.4	2.4	3.9	300	5.5	141	83	54	0	2	4	1
TULSA	56	40	62	30	48	-3	3.5	2.8	1.8	4.8	240	8.1	153	85	54	0	1	3	2
OR ASTORIA	54	45	60	38	49	5	1.5	.1	.5	4.2	86	19.5	77	95	73	0	0	7	1
BURNS	50	31	57	27	41	3	.2	0	.1	1.2	400	2.2	200	83	53	0	4	3	0
MEDFORD	61	41	69	34	51	5	.4	.4	.4	.9	69	3.6	51	90	52	0	0	1	0
PENDLETON	55	41	59	38	48	3	.4	.2	.3	1.2	171	3.6	95	84	56	0	0	3	0
PORTLAND	57	45	61	43	51	5	.9	.1	.3	2.4	96	8.4	64	90	63	0	0	5	0
SALEM	59	45	62	37	52	7	1.0	.1	.3	3.2	110	10.9	72	96	65	0	0	5	0
PA ALLENTOWN	50	32	61	25	41	0	.3	.6	.3	1.9	73	7.1	75	77	45	0	3	3	0
ERIE	43	28	58	20	36	0	.4	.3	.1	1.1	52	5.1	71	83	60	0	4	4	0
HARRISBURG	47	31	55	26	39	-4	.5	.3	.4	1.9	79	7.4	86	84	46	0	4	3	0
PHILADELPHIA	53	33	60	25	43	-1	.2	.7	.2	3.7	137	8.6	93	82	43	0	2	2	0
PITTSBURGH	48	29	76	22	39	-2	.5	.4	.3	1.2	48	4.7	57	82	53	0	6	4	0
SCRANTON	47	31	62	25	39	0	.3	.3	.2	1.1	61	5.3	80	79	58	0	3	5	0
RI PROVIDENCE	45	35	55	31	40	1	1.1	.1	.6	4.1	137	13.4	117	82	57	0	3	3	1
SC CHARLESTON	75	53	84	44	64	5	.4	.6	.4	3.5	113	12.1	117	89	44	0	0	1	0
COLUMBIA	75	45	85	39	60	3	.7	.4	.7	2.6	74	11.6	91	85	35	0	0	2	1
FLORENCE	74	48	82	43	61	4	.5	.4	.5	2.4	83	9.7	94	87	33	0	0	1	1
GREENVILLE	66	42	79	34	54	2	1.1	.3	.8	3.4	81	13.6	99	81	40	0	0	3	1
SD ABERDEEN	42	29	55	26	35	5	0	.3	0	.8	114	2.2	116	93	72	0	6	0	0
HURON	42	28	53	24	35	3	0	.3	0	.5	63	2.1	100	94	70	0	6	0	0
RAPID CITY	54	29	70	22	42	7	.1	.2	.1	.5	71	.8	44	80	37	0	7	1	0
SIoux FALLS	35	21	43	15	28	-5	T	.4	T	.8	80	2.6	108	95	77	0	7	1	0
TN CHATTANOOGA	66	40	77	28	53	1	1.3	.1	1.1	2.6	59	10.3	68	88	45	0	1	3	1
KNOXVILLE	65	40	80	31	53	1	1.6	.4	1.3	2.5	66	9.3	69	91	52	0	1	4	1
MEMPHIS	64	44	73	39	54	0	.9	.4	.5	4.9	132	11.3	84	80	47	0	0	2	1
NASHVILLE	62	39	76	30	50	-1	1.3	.1	.7	3.3	87	7.5	57	87	49	0	1	4	1
TX ABILENE	71	41	83	33	56	-1	.1	.2	.1	.5	71	2.0	71	73	28	0	0	1	0
AMARILLO	57	28	69	23	43	-5	.2	0	-.1	.2	33	1.2	75	81	42	0	6	3	0
AUSTIN	76	51	83	44	64	2	.7	.4	.4	2.4	267	5.1	96	70	32	0	0	3	0
BEAUMONT	71	54	74	43	63	0	1.5	.9	.8	1.9	100	12.6	125	89	48	0	0	3	2
BROWNSVILLE	80	58	90	48	69	-1	-.1	0	.1	.1	33	5.4	169	94	42	1	0	1	0
CORPUS CHRISTI	77	56	81	44	67	-1	.1	.1	.1	.2	40	6.6	165	83	41	0	0	2	0
DEL RIO	77	53	83	44	65	0	0	.1	0	0	0	1.6	94	56	21	0	0	0	0
EL PASO	73	40	81	32	57	0	0	.1	0	.4	133	.7	64	40	12	0	1	0	0
FORT WORTH	68	44	79	36	56	-2	3.2	2.6	1.7	4.8	300	8.9	168	82	43	0	0	2	2
GALVESTON	69	55	73	45	62	-1	.6	.1	.5	1.4	93	5.6	80	94	60	0	0	2	1
HOUSTON	72	50	77	40	61	-2	1.6	1.1	1.4	2.4	141	10.6	123	83	44	0	0	2	1
LUBBOCK	66	33	80	29	49	-3	T	.2	T	.1	17	.3	20	67	26	0	4	0	0
MIDLAND	71	40	82	31	56	-1	0	.1	0	0	0	.6	43	55	17	0	1	0	0
SAN ANGELO	74	40	84	33	57	-2	.3	.1	.3	.5	100	3.5	175	74	24	0	0	1	0
SAN ANTONIO	79	51	89	40	65	1	.6	.3	.6	1.9	211	4.2	95	73	32	0	0	2	1
VICTORIA	76	55	80	43	65	0	.6	.3	.6	1.8	200	6.3	115	92	43	0	0	2	1
WACO	71	46	80	35	58	-2	.6	.2	.4	3.5	269	5.3	98	91	45	0	0	2	0
WICHITA FALLS	67	39	78	32	53	-2	.6	.2	.6	1.1	85	2.1	58	81	42	0	1	2	1
UT BLANDING	50	31	64	25	41	1	T	.1	T	.2	33	.9	28	65	30	0	4	0	0
CEDAR CITY	57	28	65	23	42	2	.1	.2	.1	.2	29	1.7	68	76	28	0	5	2	0
SALT LAKE CITY	52	34	57	31	43	1	.2	.2	.1	1.5	136	2.9	74	84	46	0	2	3	0
VT BURLINGTON	38	27	47	14	33	-1	.6	.1	.2	1.5	100	5.3	98	88	59	0	5	4	0
VA NORFOLK	58	40	66	35	49	-1	.2	.6	.2	2.4	92	10.0	98	78	43	0	0	1	0
RICHMOND	61	38	66	30	50	0	.5	.2	.5	3.5	140	11.6	123	85	40	0	1	1	1
ROANOKE	60	40	66	28	50	2	1.3	.5	.9	2.7	104	9.0	98	82	44	0	1	3	1
WA COLVILLE	50	38	53	33	44	6	1.4	1.1	.9	2.2	244	5.2	111	94	71	0	0	4	1
QUILLAYUTE	53	42	57	36	48	5	3.9	1.5	1.3	6.6	85	39.6	108	99	81	0	0	7	3
SEATTLE-TACOMA	54	44	60	42	49	5	1.3	.6	.8	3.0	125	10.5	81	91	62	0	0	6	1
SPOKANE	50	37	54	32	43	5	.3	.1	.2	1.0	125	3.5	70	91	65	0	1	5	0
YAKIMA	57	38	60	30	48	5	.5	.4	.5	.9	225	1.9	70	81	46	0	1	3	0
WV BECKLEY	57	35	69	26	46	3	.3	.6	.3	.7	25	6.3	62	82	54	0	4	4	0
CHARLESTON	58	35	73	26	47	0	.6	.4	.4	1.5	52	5.7	56	76	42	0	3	5	0
HUNTINGTON	57	37	72	30	47	0	1.0	0	.7	1.6	55	5.4	58	78	50	0	1	3	1
PARKERSBURG	55	37	75	28	46	1	1.0	.1	.4	1.5	54	4.2	40	93	59	0	2	3	0
WI GREPN BAY	35	24	44	17	29	-2	1.0	.6	.4	1.8	138	3.9	108	92	67	0	7	4	0
LA CROSSE	42	26	50	18	34	0	.4	.2	.3	1.9	136	2.9	85	92	54	0	6	3	0
MADISON	39	27	49	20	33	-1	.4	.1	.3	1.1	79	2.7	73	90	62	0	7	4	0
MILWAUKEE	39	29	44	24	34	0	.9	.2	.5	2.2	122	4.3	84	84	61	0	5	5	0
WAUSAU	39	27	50	19	33	3	.3	.2	.2	1.2	92	3.1	97	90	58	0	6	4	0
WY CASPER	49	29	60	24	39	6	.8	.6	.5	1.0	167	2.8	156	90	49	0	6	2	1
CHEYENNE	46	26	57	24	36	3	.5	.2	.3	.7	78	2.1	100	82	48	0	7	2	0
LANDER	46	27	52	21	37	3	T	.3	T	.2	29	2.5	139	73	42	0	7	0	0
SHERIDAN	57	33	65	29	45	12	.4	.2	.2	1.0	167	2.1	95	81	38	0	3	3	0
PR SAN JUAN	88	71	91	68	79	1	.3	.3	.2	.8	50	6.0	86	79	51	3	0	2	0

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS





## National Agricultural Summary

March 19 to 25

**HIGHLIGHTS:** Rain kept fields wet and activities at a minimum from eastern portions of the central and southern Plains through much of the East. Producers across the Corn Belt waited for drier weather so fieldwork could begin. Colder weather limited small grain and pasture growth from the central Plains into the southern Corn Belt. Fieldwork continued to lag in the Southeast where activities were limited to well-drained areas. Only 2 to 3 days were suitable for fieldwork in this region. Soil moisture supplies were rated adequate to surplus, except in the Southwest and West Texas where supplies were short.

Winter wheat was rated fair to good, except in western portions of the central and southern Plains and dryland stands in the Southwest where some poor conditions were reported. Wheat was greening in Montana and jointing from the central Plains through the Southeast. Some winterkill became evident as stands began growing. Corn planting was delayed by wet conditions across the South. Planting ranged from just starting in South Carolina to 44% finished in Texas. Progress lagged normal except in Texas. Sorghum planting reached 40% completion in Texas. Heavy rain delayed planting in some areas of the State. Rice planting was 9% complete in Texas and 10% finished in Louisiana. Cotton planting centered in Arizona and Texas. Tobacco seeding and transplanting gained momentum but lagged normal. Vegetable planting crept northward. Peaches were in full bloom from Texas to South Carolina. Cool temperatures limited pasture growth across much of the South. Livestock were in fair to good condition. Producers continued supplemental feeding because of excessive wet conditions in some areas.

**SMALL GRAINS:** Winter wheat was in fair to good condition, except in western portions of the southern and central Plains and dryland fields in the Southwest where dry conditions last fall and this spring left stands in poor condition. Some producers reported increased appearance of winterkill in some areas. Rain and wet fields restricted topdressing of small grains in most regions.

Kansas wheat producers reported some winterkill on terrace tops. Stands continued in fair to good condition with adequate soil moisture in the West and surplus moisture in the East. Light wind damage and disease infestations were reported. Farmers had planted 55% of the oats and barley. In Oklahoma, 15% of the winter wheat was jointing. Mild temperatures and additional rainfall provided good growing conditions for wheat and other small grains, except in the northern third of the State where cold weather limited growth. Producers sprayed to control weed and disease infestations in the North and West. Winter wheat was in mostly good condition. Small grains continued to improve in most areas of Texas. However, dryland wheat remained stressed on the Plains where soil moisture remains critical. Winter wheat began heading from the Blacklands through central and south Texas. Stands were rated mostly fair to good. Winter wheat began greening in Montana. The crop was in good condition with mostly adequate soil moisture and only light wind damage. Rain delayed small grain seeding and topdressing throughout the Corn Belt.

**OTHER CROPS:** Corn planting was further delayed by rain across much of the South. Planting crept as far north as South Carolina. Progress ranged from just beginning in South Carolina to 44% complete in Texas. Emerged plants were in good condition in Texas, however, few fields had emerged elsewhere.

Texas sorghum planting was 40% finished, compared to 44% last year and the average of 43%. Planting neared completion in central Texas and producers had good stands from the Coastal Bend to the Rio Grande Valley. Land preparation continued on the Plains.

Rice planting reached 9% and 10% completion in Texas and Louisiana, respectively. Good weather allowed active rice field preparation in California.

Tobacco transplanting started in South Carolina and was 8% finished in Georgia. Progress lagged in all States. Producers continued seeding plant beds further north. Maryland's tobacco auctions opened during the week with low prices reported.

Cotton planting was 2 weeks ahead of normal in Arizona. Seeding was 60% complete in Yuma County and underway in Maricopa and Pinal Counties. In Texas, planting was complete in the Coastal Bend area and the Rio Grande Valley. Growers were preparing to begin planting in central Texas and the Blackland. Statewide, 5% of the crop was planted, 2 percentage points behind normal. Planting was just beginning in California.

Maple syrup production gained momentum in northern areas.

**FRUITS AND NUTS:** Peaches were in full bloom from Texas to South Carolina. In Georgia, 95% of the trees were blooming. Peaches were in full bloom in South Carolina's Piedmont area and past full bloom in other areas. Producers reported no sign of cold damage to date. Peach trees were blooming across most of Texas and a good fruit set was expected Statewide.

Citrus trees in Florida had adequate moisture as the bloom continued. Fresh grapefruit picking was active, but Valencia orange harvesting slowed. Many citrus trees in the Rio Grande Valley of Texas began showing buds. Lemon, grapefruit, and Valencia orange harvesting continued with seasonal levels in Arizona. Some tangerines were picked in the Salt River Valley. Vineyards along California's north coast leafed out. Growers actively sprayed stone fruit to control diseases. Citrus harvesting continued active. Some granulation was reported in larger Navel oranges.

**VEGETABLES:** Cool, wet weather confined vegetable planting mainly to the extreme South. Florida's southern vegetable areas received heavy rain and gusty winds which caused some local damage. Total shipments rose 15% from the previous week. Snap beans, escarole, and endive volumes were steady, while celery, radishes, and squash declined in volume. The melon set and fruit sizing were very good. Strawberry picking neared peak levels.

Harvesting of cabbage, carrots, and spinach continued at a slower pace in Texas. Direct seeding and transplanting of onions got underway on the High Plains. Vegetable planting was widespread. Arizona's growers actively planted melon crops. A wide variety of vegetables was harvested in the Salt River Valley and Yuma area.

California growers harvested moderate to heavy volumes of broccoli and cauliflower from the Salinas-Watsonville and Santa Maria areas. Celery planting was active in both of these areas, while cutting continued active along the south coast. Lettuce harvesting was in full swing in the Desert and Kern District and should begin next week in central areas of the San Joaquin Valley. Strawberry picking was active along the south coast and near Santa Maria. Tomato planting advanced rapidly in the Sacramento and San Joaquin Valleys.

(continued on p. 19)

## 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 averaged 2 to 4° below normal north and south and 1 to 3° above normal central. Rainfall totals were 1.00 to 2.00 in. north and south and 2.00 to 4.00 in. central.

Soil moisture adequate to surplus. Fieldwork: 3.3 days. Activities: care of livestock and poultry, generally farm chores and machinery repairs. Spraying and pruning fruit and pecan trees. Planting corn and some vegetables, and applying nitrogen to wheat. Pasture and stored feed, mostly short. Fieldwork behind schedule. Plowing 34%. Conditions: Livestock and pasture mostly fair, wheat, fair to good.

**ARIZONA:** Cool front late 21st and early 22nd spread light rain, snow across Central Basin, White Mountains northward, 4 in. snow Holly Lake. Moisture ranged traces to 0.25 in. Warm, dry remainder of State, partly cloudy north, sunny south. Seventy-nine days without rain in Phoenix. Average temperatures varied 1° below normal Winslow to 8° above Phoenix.

Cotton planting 2 weeks ahead of normal, 60% complete Yuma, well underway Maricopa, Pinal Counties. Seeding expected to start Mohave, Pima Counties by 31st. Seedbed preparation, pre-irrigation active. Wheat, barley good condition, practically all acreage jointing or further advanced. Over 50% Yuma acreage headed, 20% turning color. Alfalfa average, some weed, insect controls applied. Second cutting underway in Yuma. Safflower average, stands established. Spring lettuce packing reached peak volumes Yuma, increased Parker-Poston areas. Volumes increased Salt River Valley, practically all shippers packing. Growers in Picacho area expected to start harvest by 31st. Mixed vegetable harvests active Salt River Valley with beets, broccoli, cabbage, carrots, cauliflower, escarole, greens, rapini, green onions, parsley, radishes, spinach, and turnips harvested. Cauliflower harvest past peak Yuma, moderate volumes. Some broccoli, asparagus, cabbage harvested. Planting cantaloups, watermelons, honeydews active Yuma, Parker-Poston areas. Honeydews seeding complete Mohave County. Earlier melon plantings Yuma area in good condition, normal growth. Pecan harvest winding down. Prospects indicated good crops apples, peaches this season Willcox area. Lemon, grapefruit, Valencia harvests continued seasonal levels. Some tangerines harvested Salt River Valley. Groves good condition.

**ARKANSAS:** Temperatures near or slightly below normal. Scattered showers on 19th and 22nd through 24th. Mostly dry rest of week. Highest temperature 78°, lowest 26°. Most rainfall 2.82 in., least rainfall 0.12 in.

Most counties completed second application of fertilizer on wheat, but wet soil condition hampering some counties. Soil moisture more than adequate. Pastures growing, but limited grazing due to excess soil moisture. Livestock good condition.

**CALIFORNIA:** Continued warm throughout the State and with less precipitation than the previous week. Weekly mean temperatures several degrees above normal. Central Valley highest temperatures into the middle eighties and no freezing temperatures reported. Most of the precipitation early in the week and greatest amounts in the middle of the Sacramento Valley.

Good weather allowed rice field preparation. Wet fields slowed work. Small grains heading, some green chopped. Irrigation, herbicide application, San Joaquin Valley. Sugarbeet growth normal, harvesting Sacramento Valley. Bean fields worked, planting underway. Planting field corn. Pre-irrigation cotton, first fields planted. Alfalfa weevil-treated, silage first cutting. Safflower progressing. Alfalfa hay damaged from rain while drying. Warm, dry weather aided crop development and fieldwork. Bacon avocados nearly harvested. Dates pollinated in Riverside County. Discing, furrowing, irrigating, and spraying common in grape vineyards. North coast vineyards leafing out. Kiwifruit showing new growth. Growers treated thrips in stone fruits. Early cling peaches reached jacket stage. Pears set a good crop, sprayed for psylla. Prunes sprayed for brown rot. Citrus harvest continues. Occasional granulation in large Navel oranges. Almonds breaking jacket stage. Male pistachios breaking dormancy. Walnut catkins developing. Asparagus cutting active Delta, Salinas Valley, San Joaquin Valley, harvest Desert, Orange County winding down. Broccoli, cauliflower supplies heavy Salinas-Watsonville area, quality good. Santa Maria area heavy supplies broccoli, moderate supplies cauliflower. Carrot harvest continued Desert. Cantaloup, mixed melon planting continued San Joaquin Valley, growth well Desert. Celery planting active Salinas-Watsonville, Santa Maria-Oceano areas. Harvest active along south coast. Desert lettuce harvest peak, fair quality demand. Cutting full swing Kern District, harvest expected begin next week central San Joaquin. Planting, harvesting potatoes continues Kern, Riverside. Excellent conditions prevail. Movement fall potatoes continues Tulelake-Butte Valley. Strawberry harvest active south coast, Santa Maria. Seeding sweetpotato hotbeds continued San Joaquin Valley. Direct seeding, transplanting market tomatoes active San Joaquin Valley. Seeding processing tomatoes heavy pace Sacramento, San Joaquin Valleys. Recent rains improved rangeland conditions, however, grasses southern California too mature to receive maximum benefit. Calving, lambing continue. Sheep shearing in progress San Joaquin Valley. Movement of livestock summer grazing areas beginning.

**COLORADO:** The 1984 winter wheat in good condition. Wind damage light to normal. Winter freeze damage average. Barley seedings outside San Luis Valley in very good condition with 22% seeded; last, 17%; average 12%. Spring wheat and oat seedings outside San Luis Valley 13% and 8% seeded, respectively. San Luis Valley growers not yet planting. Livestock in good condition, statewide.

Light snow showers on eastern plains the 19th. Early spring rain on the 22nd and 23rd brought on average of 1.00 in. of moisture to the eastern slope and Arkansas Basin. Elsewhere, 0.25 to 0.75 in. common. Another storm on the 25th left 0.50 in. of moisture in and near eastern foothills.

**FLORIDA:** Two cold fronts passed through the State. The first on the 20th with general rainfall of 0.50 in. or less. The second front on the 25th produced patchy rain over northwest. An upper level disturbance late, 23rd over central and south dropped rains of 3.00 to 4.00 in. from Fort Myers through the Lake Okeechobee area. Otherwise, sunny skies, mild to warm temperatures prevailed.

Soil moisture mostly adequate, but surplus in south, central Gulf Coast areas following heavy rains, 23rd; some flooding of low areas. Corn planting continues, delayed due to wet soils. Early corn coming up. Tobacco transplanting active, planting conditions good. Small grains good growth, wheat showing signs of nitrogen leaching due to heavy rains some areas. Sugarcane good growth. Pastures continue to make moderate improvement as springlike weather sets in. Conditions remain mostly fair north, Panhandle, central localities, generally good, south. Cattle mostly good condition statewide. Most citrus trees improved. Moisture adequate. Open bloom continues. Remaining Valencia's and grapefruit holding well. Valencia harvest slowing as processors and growers wait for higher ratios and pounds solids. Fresh grapefruit movement active. Warm days, mild nights prevailed most of week, vegetable farming areas. Rainfall up to 3.00 and 4.00 in. southern areas, 23rd. Winds gusty up to 50 m.p.h. some local damage expected. Overall vegetable shipments gained 15% over previous week. Crops gaining were cabbage, carrots, cauliflower, Chinese cabbage, sweet corn, cucumbers, lettuce, peppers, potatoes, strawberries, tomatoes. Crops with steady shipments were snap beans, escarole-endive. Celery, radishes, squash declined. Rains interrupted harvest. Strawberry picking nearing peak level. Cabbage cutting gaining but good volume expected mid-to-late April. Watermelons making very good progress. Melon set, sizing very good.

**GEORGIA:** Temperatures 3 to 5° above normal. Highest temperatures upper 70's north, 80's central and south. Warmest 86° at Dublin 19th. Rain 1.00 to 2.00 in., except east where totals mostly under 0.50 in. Rain on 2 to 3 days. Heaviest 24-hour rainfall 2.95 in. at Augusta.

Soil moisture 53% surplus, 47% adequate. Average days suitable for fieldwork 3.0. Wet fields delaying land preparation and planting. Small grain and pasture fertilization active where soil condition permitted. Corn 33% planted, last year 15%, average 39%, very little emerged. Tobacco 8% transplanted, 6% last year, 23% average; condition 50% good, 50% fair. Watermelons 34% planted, last year 15%, average 39%. Wheat 54% jointed, last year 62%; 12% booted, last year 15%; condition 55% good; 43% fair. Other small grains 45% good, 43% fair, 12% poor. Pastures 53% good, 38% fair, 7% poor. Peaches 95% blooming, 80% last year.

**HAWAII:** Mostly sunny skies prevailed over the Islands. Very little precipitation occurred over the crop growing areas and some signs of stress beginning to show on selected crops. Irrigation restrictions were also imposed in one area due to low reservoir levels. Daytime temperatures continued to average above normal levels, and a daily record high was established on 21st.

Production of head cabbage steady and of heavy volume. Head lettuce supplies will also remain relatively heavy, although a decrease is expected this week. Chinese cabbage continues to be shipped to the U.S. mainland as production currently very heavy. Papaya production on the decline, but will remain above a year ago.

**IDAHO:** A series of weather disturbances moved across the State during the week. Total precipitation ranged from trace amounts in the southeast to 1.31 in. at Orofino. Northern precipitation was generally 0.25 in. above normal, while the remainder of the State ranged from 0.25 in. below to 0.33 in. above normal. Temperatures were 2 to 3° above normal in the north with the southwest near normal and the southeast from near normal to 6° below normal.

Wet field conditions caused by scattered rain showers and melting snow prevented fieldwork. Farmers were busy preparing equipment and determining seed and fertilizer requirements. Calving was more than 50% complete. Feed supplies were generally adequate, with shortages reported in several areas.

**ILLINOIS:** Temperatures 1 to 6° below normal. Precipitation 0.50 to 2.55 in., heaviest east and south.

Wheat condition fair to good. Livestock condition mostly fair.

**INDIANA:** Wet, cool week with highs 5 to 12° below normal. Above normal precipitation. Totals generally over 1.00 in. Range from 0.60 in. north to 2.30 in. southwest.

Soils slow to warm. Growing degree days 15 to 25 below normal. Muddy conditions kept virtually all equipment off fields. Outside work mostly confined to cutting wood, mending fences, and usual chores. Pastures just beginning to green up in the north. Snow cover virtually all gone except for scattered patches on slopes.

**IOWA:** Cold and snowy early week. Temperatures moderated to near normal late week with considerable snowmelt. Soil temperatures 4 in. level at or near 30 to 33°. Weekly precipitation varied from less than 0.10 in. northwest to 0.50 in. east and south central.

Producers waiting for drier weather to firm up the soil so fieldwork can begin.

**KANSAS:** Major storms at beginning and end of week. Precipitation averaged 1.00 to 2.00 in. west and north, 2.00 to 3.00 in. southeast and over 4.00 in. parts of south central. Temperatures averaged 36 to 38° west and north, 43° southeast, ranging 8° below normal south central to 3 to 6° below normal elsewhere.

Wheat condition fair to good. About 55% oats and barley planted. Light wind damage southwest and central. Some winterkill on terrace tops. Light infestation of soil borne mosaic, tan spot, and speckled leaf blotch. A few cases of army cutworms. Adequate soil moisture west, surplus east. Ice storm damaged windbreaks and downed power lines. Loss of electricity made farm activities difficult. Some problems with calving and lambing due to ice and mud.

**KENTUCKY:** Temperatures varied widely. Highs average in 50's and lows in 30's. Rain most days with heaviest amounts of 0.50 to 1.00 in. occurring first of week. Rain totals generally from 1.25 to 3.00 in.

Farm activity continues to be primarily livestock care and feeding. Soil moisture adequate to surplus.

**LOUISIANA:** Rainfall amounts ranged from zero to 2.81 in. Average temperatures were normal to 3° below normal. High 81°, low 31°.

Soil moisture adequate. Days suitable for fieldwork: 3.7. Activities included fertilization of cropland, spring plowing, planting corn and rice, and spraying livestock. Spring plowing 29% 1984, 36% 1983, 42% average. Rice planted 10% 1984, 6% 1983, 11% average; condition fair. Corn planted 33% 1984, 28% 1983, 26% average; condition fair. Vegetables fair condition. Strawberry harvest beginning. Wheat headed 12% 1984, 5% 1983, condition fair to good. Pastures and livestock rated fair.

**MARYLAND AND DELAWARE:** Maryland: Temperatures were mostly 2 to 3° above normal. Maximum temperatures reached the low to mid 60's. Minimum temperatures were in the 20's in extreme

west to the low to mid 30's elsewhere. Precipitation averaged 1.35 in. in extreme west to 0.45 in. over the remainder of the State.

Planting of green peas beginning in south. Fertilization of small grains getting started on a limited basis as fields dried enough for machine application.

Delaware: Temperatures averaged 1 to 2° above normal. High temperatures were in the low to mid 60's and lows were in the low 30's. Precipitation averaged 0.40 in.

Green pea planting getting started in south as soil temperatures warmed up and dried out enough to permit machinery. Small grains were spring fertilized as field dried enough for machine application.

MICHIGAN: Temperatures averaged near normal across the State. Heavy amounts of snow fell over much of the upper Peninsula. Flooding occurred over a large portion of the lower Peninsula as a result of a slow moving low pressure system that dropped 1.00 to 1.50 in. of rain.

Winter wheat and fruit trees still dormant. Sap flow in maple trees picked up after being slowed by the previous weeks cold spell.

MINNESOTA: Temperatures averaged near normal to 2° below normal for the southern third of the State and 2 to 7° above normal elsewhere. High: 53°, low: 1°. Precipitation averaged 0.12 to 0.35 in. below normal. Greatest weekly total: 0.65 in. Snowfall averaged 2 to 5 in. for southeast and south central; elsewhere, zero to 1 in. snow depths at weeks end averaged 8 to 10 in. northeast and north central and zero to 2 in. elsewhere.

MISSISSIPPI: Temperatures near normal, extremes 29 and 85°. Tornadoes reported on the 19th and 24th. Greatest weekly rainfall 3.63 in.

Soil moisture was surplus in the northern half of the State and adequate in the southern half. Fieldwork: 2.7 days suitable, 2.0 1983, 2.7 average. Plowing 25% completed, 24% 1983, 38% average. Corn acreage 13% planted, 13% 1983. Watermelon acreage 9% planted. Wheat condition fair to good; 28% jointing, 28% 1983. Hay supplies remain short. Feed grain supplies short to adequate. Pasture and livestock condition fair.

MISSOURI: Temperatures remained cool averaging 5 to 8° below normal. Rainfall was abundant averaging over 1.00 in. across the State, except the Bootheel where the average was around 0.75 in. Over 4.00 in. fell in parts of west central plains and over 3.00 in. fell at Cape Girardeau.

Snow and rainfall have kept fields wet and activities at a minimum. Pastures have not started growing yet.

MONTANA: Very mild week with temperatures averaging 7 to 14° above normal. Many areas had maximum temperatures in the 60's with some 70's in eastern areas. Precipitation moderate over west and southwest, mostly light in eastern areas.

Winter wheat in good condition and greening in most areas. Wind damage light. Soil moisture mostly adequate. Calving and lambing about 45% complete.

NEBRASKA: Precipitation over last weekend heavy with around 0.40 in. over northwest increasing to 1.50 in. over south central and southeast. Temperatures ranged from 5° above normal northwest to 4° below normal southeast.

NEVADA: Mostly dry and warm. Only trace precipitation recorded one station. Average temperatures ranged from near normal to 10° above. Extremes: 82 and 2°. Highest wind gusts ever recorded occurred extreme south midweek.

Dry weather aiding seedbed preparation all areas. Good progress in potato producing areas. Winter grains greening southern half of State.

NEW ENGLAND: Temperatures average 1 to 3° above normal. Highest was 57° on the 21st at West Burke, VT. and at Woonsocket, RI on the 23rd. Lowest was 10° early morning at Aroostook County, ME. on the 19th. Over 1.00 in. of precipitation fell east of the Connecticut Valley, most in northern NH and over south and central ME. Greatest measurement was 3.15 in. at Waterville, ME. As much as 1 in. of snow fell very early in the week, mostly over the far north.

Farmers sugaring throughout the week. Maine growers shipping potatoes.

NEW JERSEY: Temperatures were slightly below normal. Extremes were 23° on the 24th and 63° on the 21st. Weekly rainfall averaged 0.44 in. north, 0.56 in. central and 0.83 in. south. The heaviest 24-hour total was 0.99 in. on the 25th to 26th. Estimated soil moisture, in percent of field capacity, averaged 100% north, 98% central and 95% south. Four inch soil temperatures averaged 36° north, 40° central and 43° south.

Soil moisture continues to be adequate to excessive. Soil preparation slow.

NEW MEXICO: Average temperatures slightly below normal in the northeast and near or slightly above normal elsewhere. Minimum temperature 13° in western mountain area, maximum 84° in southeastern plains. One storm system crossed the State at midweek and another on the weekend. Precipitation was light and generally confined to the northern half of the State where most locations received less than 0.50 in.

Irrigated wheat and barley fair to good condition, dryland mostly poor. Alfalfa fields greening up with warmer temperatures. Chile planting continues in Mesilla Valley. Lettuce and onion crops in good condition. Asparagus harvesting began during the week. Rangeland rated very poor to fair. Cattle and sheep in fair to good condition with continued supplemental feeding. Main activities include field preparation and vegetable planting.

NEW YORK: Cold at beginning, moderate by midweek. Average temperatures cooler than usual, mainly in 30's Upstate to low 40's on Long Island. Precipitation near normal in upper Hudson Valley, Champlain Valley and Adirondacks, below normal elsewhere.

Normal farm chores and maple sap gathering.

NORTH CAROLINA: Temperatures slightly above normal. Precipitation heaviest over the mountains and north central part of the State.

Soil moisture 33% adequate, 67% surplus. Days suitable for fieldwork; 2.4. Condition: Wheat 22% fair, 74% good, 4% excellent. Oats 3% poor, 33% fair, 61% good, 3% excellent. Barley 3% poor, 30% fair, 65% good, 2% excellent. Rye, 28% fair, 72% good. Pasture 7% poor, 35% fair, 58% good and tobacco beds 20% fair, and 80% good. Farm feed supplies: Hay and roughage 36% short, 62% adequate; feed grains 27% short, 73% adequate. Plantings: Irish potatoes 48%, 1983 30%, average 41%. Major farm activities: Topdressing small grains and pastures, preparing

and planting tobacco plant beds, general farm maintenance, land preparation for spring planting, tending livestock and planting spring potatoes.

**NORTH DAKOTA:** A hint of spring past week with above normal temperatures but below normal precipitation. District averages from 3.2° above normal southeast to 10.7° above northwest. Temperature extremes from 67° on the 24th to -8° on the 10th. Precipitation light and spotty. All districts well below average, many stations reporting no precipitation or just a trace. District averages from 0.06 to 0.18 in. below normal. Most precipitation was 0.30 in. on the 18th. Warmer temperatures nearly depleted remaining snow cover. Topsoil wet most areas, and still frozen under top few inches. Calving and lambing progress good during past week. Flooding of Red River Valley not considered likely under present conditions. Soil moisture statewide best in many years.

**OHIO:** Temperatures warm early week then colder. Lows close to normal, daytime highs as much as 9° below normal. Extreme readings from teens to 70's. Precipitation widespread and above normal. Totals from 1.00 to 2.59 in.

Excess field moisture over most of the State with some flooding reported. Cloud cover kept heating to a minimum. Soil temperatures 4 in. bare from upper 30's to lower 40's. Winter wheat fair condition.

**OKLAHOMA:** Temperatures averaged above normal across State, ranging from 1° above normal southeast to 8° above normal north central. Precipitation ranged from 1.30 in. southwest to 2.47 in. north central.

Mild temperatures and additional rainfall provided good growing conditions for wheat and other small grains except northern third where cold weather limited growth and development. Wet fields throughout State hindered topdressing. Weeds and soil borne mosaic problem in north and west with producers using control measures. Wheat in mostly good condition. Pastures greening but still in fair condition. Livestock in good to fair condition. Wheat jointing: 15%, 25% 1983, 20% average.

**OREGON:** Spring began with temperatures 4° above normal throughout the State. Up to 2.00 in. of precipitation fell west of the Cascades. Amounts ranging from 0.10 in. fell in the southeast with 0.90 in. in the central areas.

Soil moisture supply mostly surplus. Winter wheat in good condition, although some reseeding being done east of Cascades. In west, fertilizing and spraying nearing completion. Spring grain seeding continues. Potato planting also continuing in Hermiston-Boardman area. Extent of winter freeze damage to strawberries still not apparent. Pastures beginning to grow in west, need warmer weather in east. Livestock in good condition.

**PENNSYLVANIA:** Temperatures warmed up from the week before, but were still below seasonal normals. The average temperature of 37° was 3° below normal. Extremes were 76 and 15°. The average precipitation of 0.59 in. was 0.22 in. below normal. Heaviest amounts were in the south central sections during the middle of the week. Precipitation was mainly rain except during the later part of the week in the west and north where some snow fell.

Dairy farmers hoping that they can get cows out on pasture soon because feed and hay have been in short supply.

**PUERTO RICO:** Island average rainfall 0.65 in. or 0.16 in. above normal. Highest weekly total 3.38 in. Highest 24-hour total 2.80 in. Temperature averaged about 77 to 76° on coasts and 70 to 69° interior divisions. Mean station temperature ranged from 78.7 to 62.7°. Extremes 92 and 46°.

**SOUTH CAROLINA:** Temperatures averaged 2 to 4° warmer than usual. Quite warm beginning and end, cooler during midweek. Rainfall heavier than normal occurring early and over weekend. Some hail and wind damage east over weekend.

Soil moisture adequate to surplus. About 3 days suitable for fieldwork. Corn planting underway in southern and eastern counties; wet soils delaying land preparation and planting other areas. Watermelon planting underway in south, earliest plantings emerging. Tobacco plant beds in good condition, transplanting just starting. Wet fields delaying nitrogen applications to small grains, yellowing evident in low areas; some earlier cold damage showing up. Peaches in full bloom piedmont, past full bloom other areas. No sign of cold damage to date.

**SOUTH DAKOTA:** Average temperatures 10 above to 5° below normal. Extremes: 71 and 11°. The western 2/3 of the State continued to have below normal precipitation while the eastern 1/3 was near or above normal.

Calving in full swing across the State. Cold, wet weather keeping farmers out of the fields. Scattered reports of winterkill.

**TENNESSEE:** Two fronts passed across the State, the first on the 20th, the second on the 25th. Because of the two frontal passages, precipitation in the form of rainfall was plentiful. Amounts ranged from 1.00 in. in the west up to 2.00 in. in the east. Temperatures averaged near normal and ranged from 80° (Knoxville) to 28° (Bristol). Averages ranged from 50 to 55°.

Normal farm chores were the main farm activities.

**TEXAS:** First half week high pressure most State. On 22nd, 23rd upper level system northern portions, widespread rain north, southeast Texas. Mild weather 24th, 25th. Temperatures close normal most areas. Precipitation near normal southwestern, southern tip State; below normal east, north central Texas, High, Low Plains.

**Crops:** Varied amounts rain as early spring front through State late week. Moisture accumulations small; planted crops, ranges, pastures benefit. Some hail accompanied front, causing light damage budding fruit trees north central Texas, Cross-Timbers. High winds further depleted soil moisture Plains. Sorghum planting neared completion central Texas. Earlier planted sorghum up good stands. Some greenbugs untreated fields. Northern Blackland, heavy rains further delayed planting. Good stands from Coastal Bend to Rio Grande Valley. Land preparation Plains. Corn central, east, south Texas good growth, up good stands. Corn producers Plains virtually completed land preparation. Planting in area may begin early. Lack of adequate soil moisture continues to be a problem. Corn planting Blacklands virtually complete before rains. Remainder completed as soil dries. Central, south Texas fields good stands. Rio Grande valley making good progress. Fields hit by hail along upper coast good come back. Cotton planting complete Rio Grande Valley, Coastal Bend. Cotton good progress both areas. Herbicides applied Plains, Trans-Pecos.

Planting soon begin central Texas, Blacklands. Some fields already planted. Small grains continue improve most areas. Dryland wheat remains stressed Plains. Irrigated wheat looks good; pastures remain short. Blowing winds, sand some damage wheat fields. Soil moisture remains critical. Cattle moved off wheat fields Cross-Timbers allow grain production. Wheat Blacklands through central, south Texas heading out. Crop excellent growth warmer temperatures, small amounts rainfall. Oats good progress. Statewide wheat condition 67% of normal, compared with 83% year ago. Current conditions 6% excellent; 29% good; 53% fair; and 12% poor. Rice planting begun along Gulf Coast. Many fields too wet to plant. Planting run slightly behind this year unless open weather holds out. Planting sugarbeets begun Plains limited basis.

Cotton planted 5% 1984, 5% 1983, 7% average. Rice planted 9% 1984, 8% 1983, 15% average. Sorghum planted all purposes 40% 1984, 44% 1983, 43% average. Corn planted all purposes 44% 1984, 38% 1983, 32% average.

Commercial vegetables: Rio Grande Valley, vegetables good progress. Harvesting carrots, cabbage active. Many citrus trees budding out. San Antonio-Winter Garden, spinach, cabbage, carrot harvest continues, however, slower pace. Onions good progress. Harvest two or three weeks. East Texas, sweetpotato bedding continues. Watermelon, tomato planting begin soon. High Plains, direct seeding onions is proceeding, transplants get underway. Potato planting full swing. Trans-Pecos, chili planting beginning. Onions slightly moisture stressed; overall, good shape. Peach trees blooming most State. Some hail damage Cross-Timbers. Good fruit set expected statewide. Some spraying taking place. Pecan trees bud central, southern portions State. Northern sections, no bud break occurred. Some freeze damage younger trees.

Range and livestock: Ranges, pastures new growth, providing good grazing. Irrigated wheat fields grazing Plains, dryland fields not. Other grasses, weeds making good growth. Central Texas, Edwards Plateau, new pasture growth appearing, ranges continuing green up. Moisture still needed go into spring, summer good shape. Recent helped. Cattle remain good condition. Lambing nearing completion, smaller kids reported. Prices continue good. West Texas livestock fair to poor condition due severe drought conditions.

UTAH: Precipitation moderate to heavy in mountainous areas, light moderate rest of State. Temperatures average 2° below normal north, about normal south. Stations ranged 4° below to 3° above normal.

Most farmers waiting for land to dry out before moving onto it with heavy equipment. Land preparation for onions and hardy vegetables in progress. Last of potatoes an onions moving from storage. Few apples still remaining. Early season grasses on open ranges greening up, making little growth. Most livestock in good condition. Spring calves and lambs doing fine.

VIRGINIA: Wet across State. Central sections received over 3.00 in., amounts elsewhere around 0.50 to 2.00 in. Temperatures a few degrees above normal. Highs reached into 60's and 70's with overnight lows near or below freezing for

short period over extreme portions of north and west. Winds strong through middle and last portion of period.

Topsoil moisture increased to 44% adequate, 56% surplus. Days suitable for fieldwork increased to 2.0. Field activities still limited to well-drained areas. Overseeding pastures and hay, fertilizer and lime applications, herbicides applications and seeding grasses, spring grains and alfalfa progressing slowly. Fruit prospects still look good, pruning winding down. Potato seeding about 33% complete, 22% last year, 36% average. Tobacco plant bed seeding 76% complete.

WASHINGTON: Predominantly warm westerly flow aloft coupled with strong system during midweek produced above normal temperatures and precipitation. Rain fell nearly every day west of Cascades with greatest amounts recorded on 20th with passage of strong late winter storm. System also caused considerable rainfall late 20th through 21st east of Cascades.

Wet conditions prevailed western counties hindering field activities. Some fertilizing and spraying of raspberries in progress as weather permitted. Cattle being confined to feedlots due to excessively wet pastures. Eastern counties, planting spring wheat, barley and potatoes continued, weather permitting. Some aerial weed spraying in progress. In orchards, application of dormant sprays, fertilizers and herbicides and general cleanup main activities. Range conditions good. Calving and lambing continue.

WEST VIRGINIA: Temperatures averaged 2.5° above normal across the State except for the northwestern section where temperatures were nearly 1° below normal. The high temperature was 79° in Morgantown and the low 16° at Elkins. Precipitation averaged well above normal in the central, north central and northwestern areas of the State, while remaining portions were slightly below normal.

Soil moisture surplus to adequate. Days suitable for fieldwork averaged 1.5. Main activity: General maintenance. Feed supplies adequate to short.

WISCONSIN: A slow moving storm moved into the State on the 19th bringing a combination of snow, sleet, freezing rain and rain. A mixed combination of precipitation generally continued across the State before ending as snow in the southeast. Accumulations of new snow ranged from 1 to 5 in. The second half of the week was generally fair with temperatures slowly warming through the 24th and 25th.

Maple sap for syrup started flowing on the 21st in north central areas and earlier along the lakeshore. Cool nights and sunny days have facilitated the flow of sap.

WYOMING: Temperatures above normal. Precipitation much above normal in southeast quarter. Elsewhere, near or below normal.

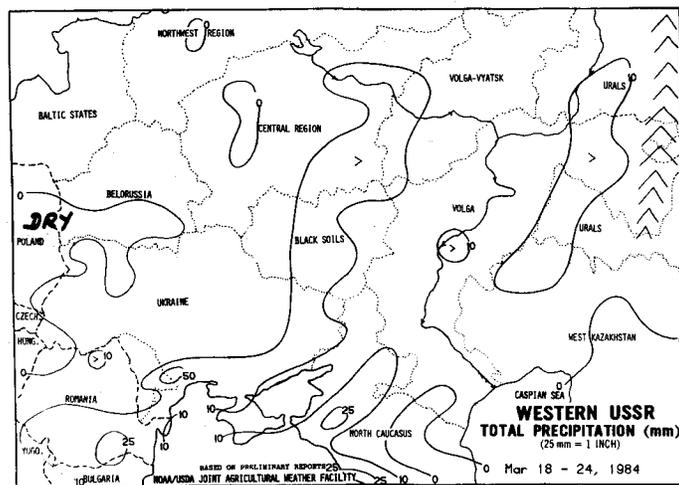
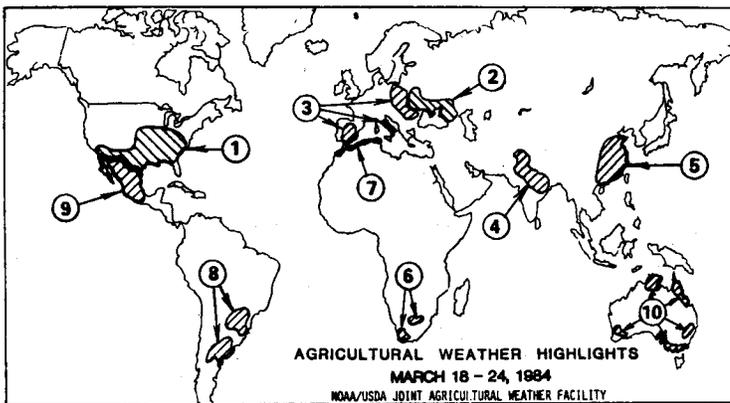
Winter wheat continues mostly good condition. Livestock mostly good condition. Supplemental feeding continuing in snow covered areas. Frequent snows and cold temperatures taking toll on calves, with scours and pneumonia reported. No high death loss of livestock experienced, however.

# International Weather and Crop Summary

March 18 to 24

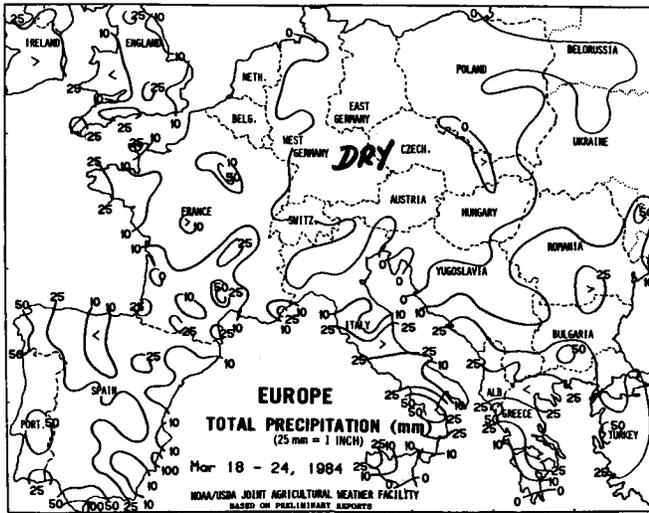
HIGHLIGHTS:

1. UNITED STATES ... Wetness from eastern parts of the central and southern Plains to the Atlantic Coast further delays corn planting and field preparation, while warm, dry conditions speed planting over the Southwest. Cold slows winter grain development from the central Plains into the Corn Belt.
2. WESTERN USSR ... A cold snap produces the potential for isolated winterkill across southern winter wheat areas. Moisture supplies increase in the eastern Ukraine and central Black Soils.
3. EUROPE ... Widespread showers benefit winter grains in Spain and southern Italy. Unseasonably cold air covered eastern winter grain areas early in the week.
4. SOUTH ASIA ... Moderate rain aids northern wheat areas. Dry weather favors maturing southern wheat.
5. EASTERN ASIA ... Moderate to heavy rain improves conditions for the early rice crop in the southeast. Winter wheat continues to break dormancy and would benefit from more rain.
6. SOUTH AFRICA ... Moderate rain delays early corn harvesting but increases soil moisture for wheat planting.
7. NORTHWESTERN AFRICA ... Widespread, timely rains benefit winter grains in the heading stage over much of the region.
8. SOUTH AMERICA ... Nearly a week of sunny, mild weather favors harvesting of Argentina's summer crops, but scattered showers and thunderstorms over the weekend cause additional harvest delays. Rain also interrupts soybean harvesting in southern Brazil, but only light showers in Sao Paulo allow cotton harvesting to continue.
9. MEXICO ... Temperatures, dropping to near seasonal levels, reduce plant stress in the north, while light showers fall on some southern croplands.
10. AUSTRALIA ... Favorably dry weather aids maturing and early harvesting of summer crops in eastern Australia. Showers over the weekend in southern and eastern wheat areas and during the week in the west improve pre-season moisture supplies. Tropical showers continue in the north, with generally light rain falling over sugarcane areas of eastern Queensland.

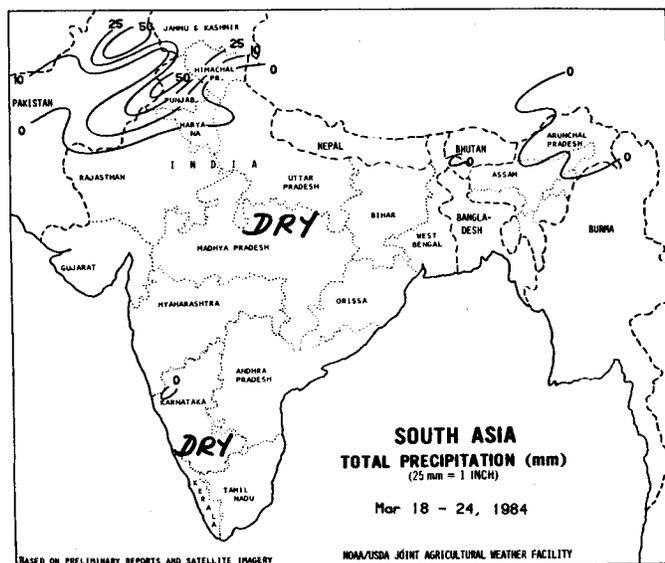


**WESTERN USSR...** Beneficial precipitation in the form of snow increased moisture supplies in a narrow band which stretched northward from the eastern Ukraine through the central Black Soils, and into the Central and Volga Vyatsk Regions. Light precipitation also benefited winter grain areas in the western portion of the North Caucasus. Most winter grains over the remainder of the region received little, if any, precipitation. A cold snap early in the week covered Belorussia and the western Ukraine. The cold weather then spread eastward across the

Ukraine with temperatures moderating to seasonable levels by week's end. Minimum temperatures around  $-15^{\circ}$  C covered the western Ukraine for 3 consecutive days, while in the central and eastern Ukraine minimum temperatures around  $-12^{\circ}$  C occurred for 2 consecutive days. Overall, the impact of the cold snap should have been minimal, as a protective snow cover probably existed in the western Ukraine, while the cold weather was not of sufficient duration to produce widespread winterkill in the eastern Ukraine. Isolated winterkill is possible and weather conditions produced the potential for frost heaving.

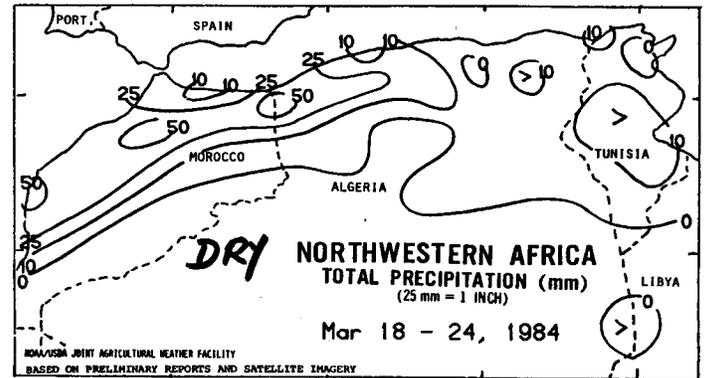


**EUROPE...**A series of storm systems moved eastward across the Mediterranean, producing widespread showers throughout the Iberian Peninsula, southern Italy, and southeastern Europe. The moisture was particularly beneficial to Spain, increasing low-moisture supplies. Showers also covered winter grains in France and England by week's end. The dry weather pattern, which has covered winter grain areas across the northern portion of the region since early March, continued. Moisture accumulations since December are near normal in West and East Germany but below- to well-below normal in Poland, Czechoslovakia, Austria, and Hungary. Unseasonably cold air pushed southward into winter wheat areas in eastern Europe early in the week. The cold snap followed a period of unseasonably warm weather in early March, which reduced snow cover over these areas and caused the dormant crop to begin to lose hardness. Temperatures over the area moderated by midweek, therefore, the cold spell was probably not of sufficient duration to produce widespread winterkill.

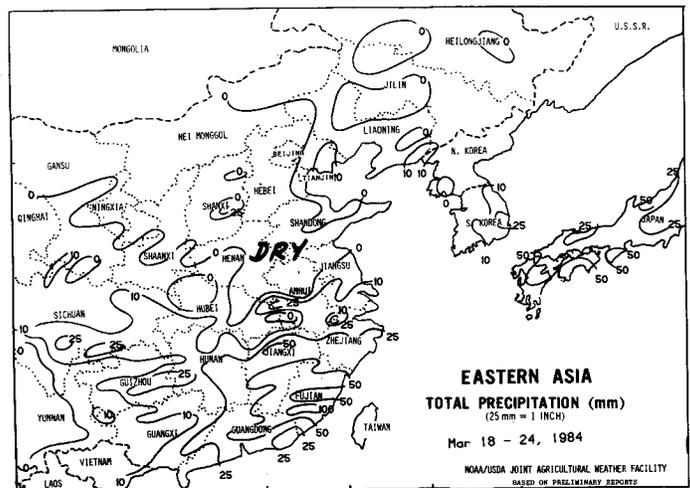


**SOUTH ASIA...**Seasonably dry weather covered most of India this week. However, moderate rain in northern Pakistan and India was beneficial for that portion of northern wheat which is in the late grain filling stage. Most wheat is maturing in central India and harvesting is beginning in southern minor wheat areas. Dry weather during

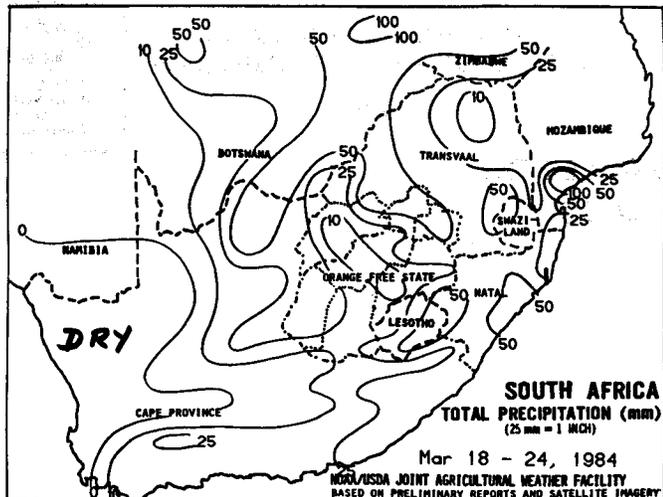
the past several weeks has favored the maturing wheat. Temperatures averaged slightly below normal in northern India this week, while the south was seasonably warm. Clear weather in southern peninsular India allowed soils to dry, following above-normal rains during February and early March. Summer rice is in the late heading and early grain filling stages in eastern India.



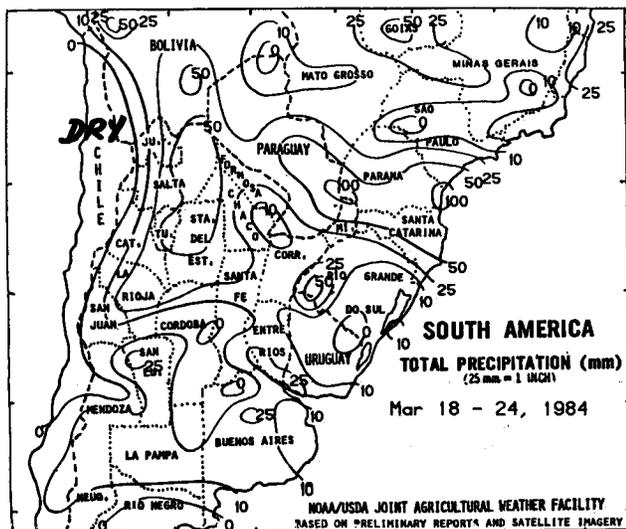
**NORTHWESTERN AFRICA...**Widespread showers and scattered thunderstorms covered winter grains on most days during the week. Precipitation amounts ranged from 25 to 50 mm over most crop areas, except those in eastern Algeria and northern Tunisia where rainfall amounts around 10 mm were reported. The rain was very timely because winter grains across the region are entering the moisture-sensitive heading stage. Continued timely rains will be needed through April to meet the crop's moisture demand.



**EASTERN ASIA...**Precipitation increased in southern China this week. The onshore flow of moist air from the South China Sea produced heavy rain (50 to 100 mm) in Fujian, Guangdong, and Jiangxi. Lighter showers covered most of the remaining rice areas, benefiting early vegetative growth of rice. Temperatures averaged near normal in the extreme south, but slightly cooler than normal in most of eastern China. Freezing temperatures south of the Yangtze River occurred at high elevations but had little impact on spring growth. Light showers in the Yangtze Valley aided early growth of winter wheat. Additional precipitation in northern winter wheat areas would be beneficial because the crop is breaking dormancy and will require more moisture.



**SOUTH AFRICA**...Moderate to heavy rain covered most of eastern and south-coastal South Africa this week. The rains began in the southwest early in the week and reached the Maize Triangle by midweek. The precipitation likely interrupted the early corn harvest, but greatly improved soil moisture for wheat planting which will begin in a few weeks. A relatively dry pocket, which received less than 5 mm of rain, extended through the northwestern Orange Free State, a major wheat region. More rain will be needed in this area to ensure adequate planting conditions. Precipitation in the southern Cape Province did not reach the far western wheat areas. Temperatures remained above normal for most of the week, but cooled late in the week with the arrival of precipitation.



**SOUTH AMERICA**...Sunny skies and slightly above-average temperatures for nearly a week allowed some harvesting of coarse grains and sunflowers in Argentina's major crop areas. However, scattered showers and thunderstorms returned to the area over the weekend causing additional interruptions in the rain-delayed harvest in central Buenos Aires, southern Santa Fe, and cotton areas of western Chaco and Formosa. Sunflowers have been damaged by persistent episodes of wetness, while quality reductions are likely in the mature coarse grain crops. The plentiful moisture aided soybean pod filling, but drier weather will be needed to mature the crop.

In Brazil, locally heavy showers fell throughout the soybean areas from Parana southward to western Rio Grande do Sul. The rain slowed soybean harvesting which is over 30-percent complete in Parana and delayed initial harvesting in the south where only about 5 percent of the crop has been harvested. Mostly dry weather in Sao Paulo and Mato Grosso do Sul aided cotton and soybean harvesting.



**MEXICO**...Temperatures dropped to near seasonal values over the north, somewhat reducing the stress on droughty rangeland grasses and rained field crops. Unsettled weather, with cloudiness and scattered, mostly light showers, developed across parts of the south during midweek. Rainfall was generally too light to significantly improve soil moisture except in isolated spots. Dryness generally continued over most of the country, benefiting harvesting and fieldwork, but increasing the need for frequent irrigation.

**National Weather Summary (continued from front cover)**

**SATURDAY**...The wetness moved eastward, covering the area from the Mississippi Valley to the Appalachians, ahead of a low-pressure frontal system. Light rain and snow also fell over parts of the Northwest. A high-pressure, fair-weather system finally moved into the Northeast after 3 days of storminess.

(continued from p. 11)

**PASTURES AND LIVESTOCK:** Cool temperatures slowed southern pasture growth and delayed growth in central regions. Excessively wet conditions forced livestock producers to continue supplemental feeding in many areas. Feed supplies were mostly adequate to short while hay supplies continued tight. Livestock were in fair to good condition. Calving and lambing continued. Some newborn death losses were reported due to the cold, wet weather in some areas.

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Managing Editor . . . . . Don Haddock  
Meteorologists . . . . . Jim Williams  
Ray McInturff  
Lyle Denny  
Wes Byrd  
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