

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
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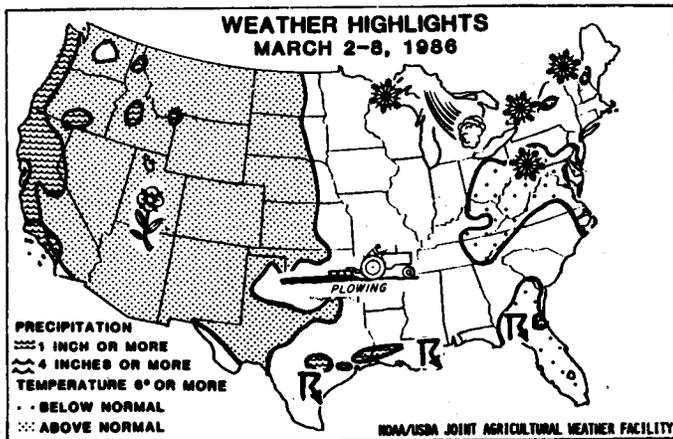
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March 2 to 8, 1986



HIGHLIGHTS: Freezing temperatures reached as far south as central Florida on the first day of the week. Later another cold outbreak pushed southward through the Plains as far as northern Texas, but the center of the cold air moved eastward. Strong winds accompanied snow that was heavy at times through the Great Lakes region. Moderate to heavy snow also fell from the central Appalachians to New England. Another Pacific storm developed off the west coast and brought moderate to heavy rain to the entire coast. Warm weather in the West supported occasional moderate rain in parts of the central and northern Plateau and northern Rockies. Heavy snow was confined to the higher elevations. Showers and thunderstorms covered the gulf coast and Florida.

SUNDAY...It was sunny and cold in the Southeast. Low temperatures dropped to near freezing as far south as central Florida. Colder-than-normal temperatures covered the East while the West was warmer than normal. A few snow showers fell in the Great Lakes region and from the upper Ohio Valley to New England. Widely scattered rainshowers fell west of the Rockies.

MONDAY...Temperatures were somewhat warmer in the East, and the unusually warm weather continued in the West. A mixture of rain and snow fell from the lower Great Lakes States to the mid-Atlantic States. Thunderstorms developed in central Texas and spread across the gulf coast to northern Florida. Some rain fell along the coast of the Pacific Northwest.

TUESDAY...Light rain was occasionally mixed with snow from the Great Lakes States to the mid-Atlantic States and northward to western New England. Light rain extended through the Tennessee Valley to South Carolina. Showers and a few

thunderstorms reached from southern Louisiana through Florida. A few showers fell in the northern Rockies and Plains.

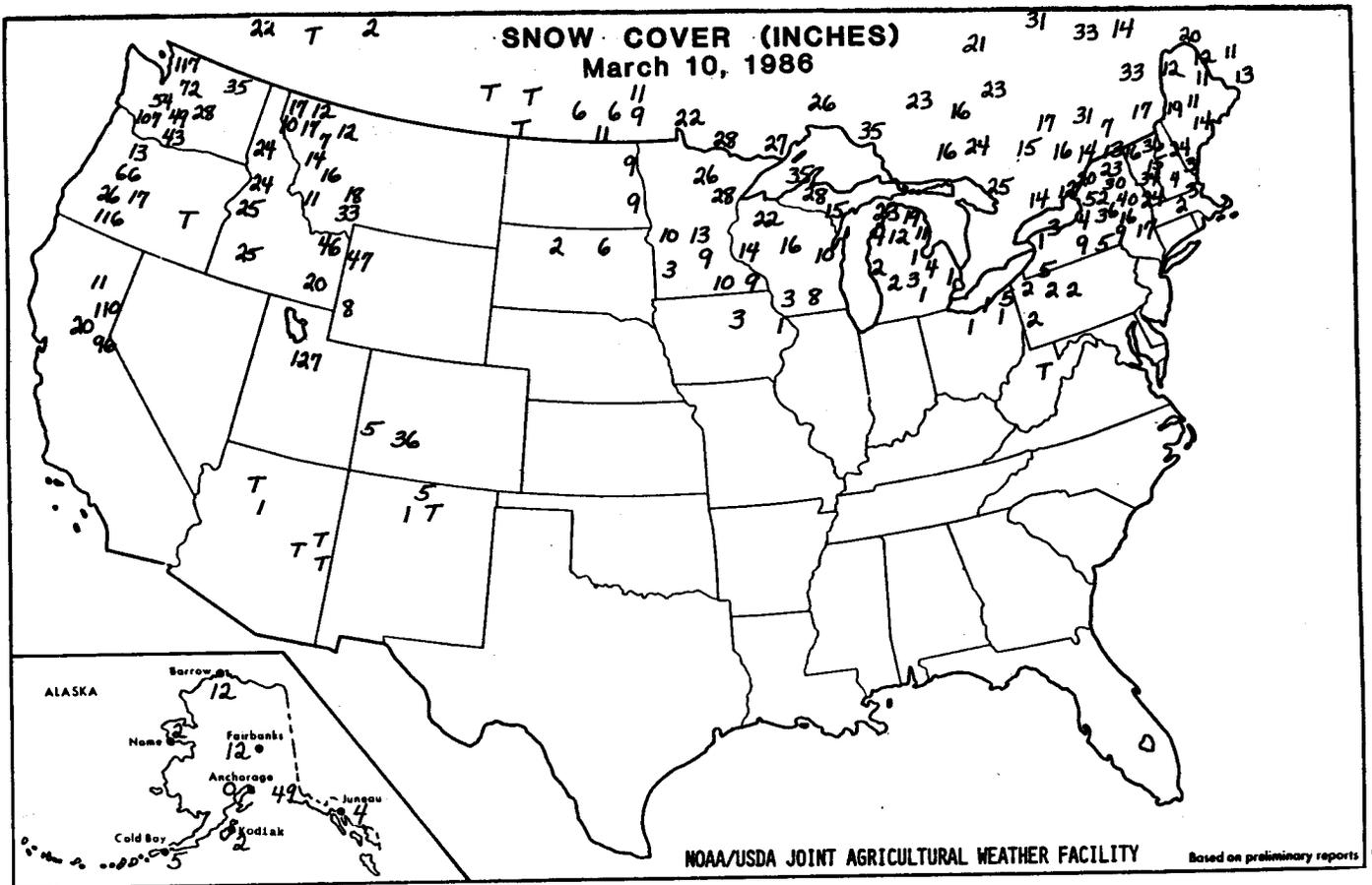
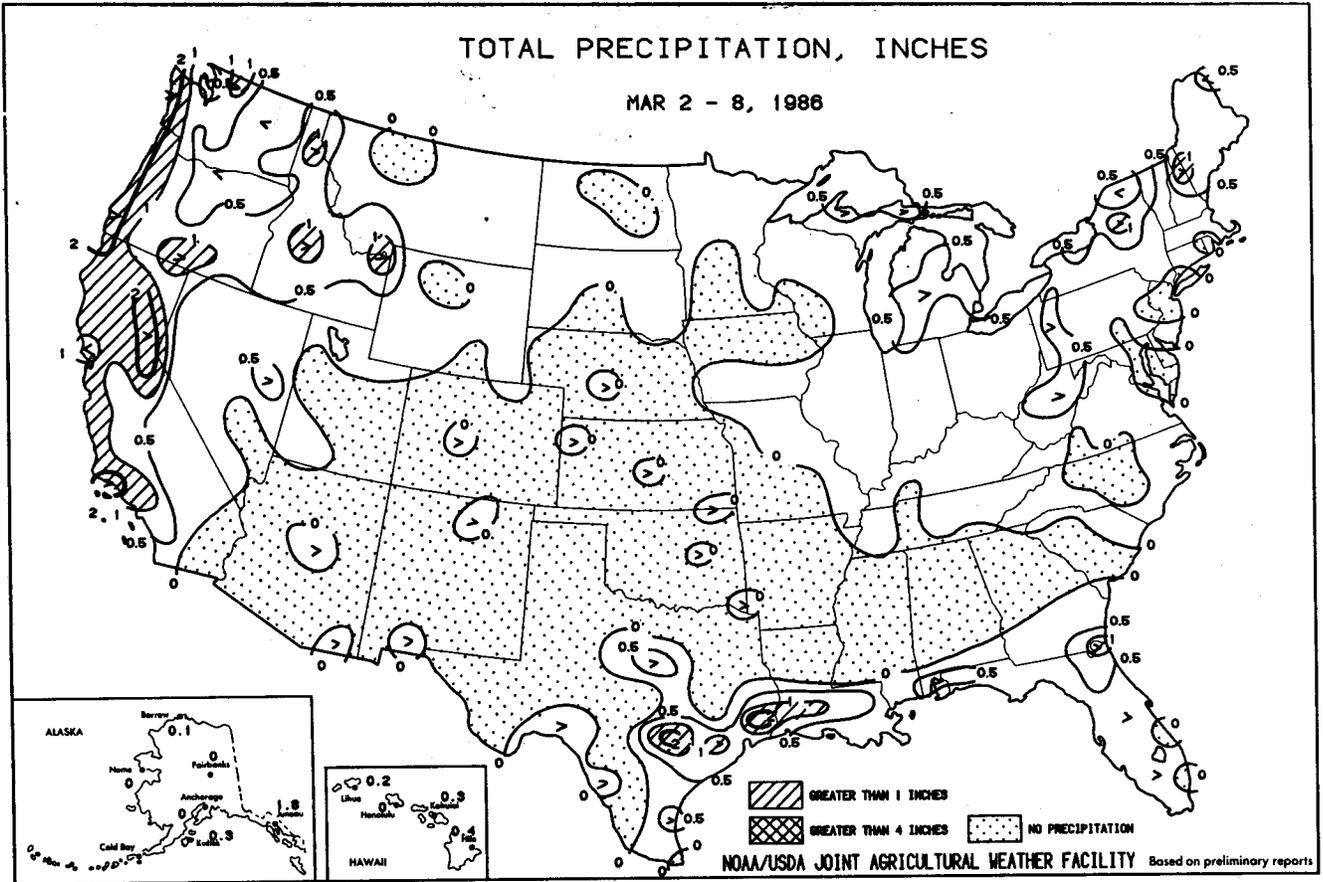
WEDNESDAY...Light rain covered the Tennessee and Ohio Valleys and the southern Appalachians. Gusty winds accompanied snow from the upper Mississippi Valley through the Great Lakes to western New York. Light snow also fell in the central and northern Appalachians. A few very light rain showers dotted the west coast.

THURSDAY...Cold arctic air was plunging southward and eastward. Snow and blowing snow prevailed across the Great Lakes and into New England. Snow also fell in the central Appalachians with light rain occasionally mixed with snow in the Ohio Valley and mid-Atlantic States. Moderate rain fell along the west coast from northern California northward and lighter amounts fell inland to the northern Rockies.

FRIDAY...Light snow showers continued from the central Appalachians through the Upper Ohio Valley, New York, and New England. The cold, arctic air pushed southward through Kansas and through the Appalachians into Alabama. A Pacific storm dumped showers throughout the West Coast States and into Idaho and the northern Rockies. Heavy snow covered the high elevations of the Sierras, the Cascades, and the Rockies. Isolated flooding occurred in parts of northern California and in Idaho.

SATURDAY...The cold air pushed as far south as northern Texas, but the center of the arctic air began moving more easterly and brought very cold weather to the mid-Atlantic and northeastern States. Light snow showers fell from the upper Great Lakes through the Northeast. Rain fell throughout the West from the middle and northern Rockies to the west coast. Moderate heavy amounts fell along the southern coast of California and the coast of Oregon. Snow continued in the high mountains.

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Picking a Safe Planting Date

It's that time of year again when colorful seed catalogs are in demand, and agriculturists are full of enthusiasm and expectation as the spring planting season approaches. Growers need all the weather and climatic information that is available to help reduce the risk of replanting which can be costly not only for loss of seed, labor, and soil moisture, but because it affects crop development schedules, yield, and price received.

Three primary ingredients are needed to obtain a good stand of seedlings---warm soil and air temperatures after planting, adequate soil moisture, and high quality seed.

To keep up with the status of spring soil temperatures and the speed that warming progresses northward, a soil temperature map will be published on a space-available basis. The 4-inch bare soil measurement was selected because of its widespread use across the Nation and as a compromise between the 2, 6, and 8-inch observations

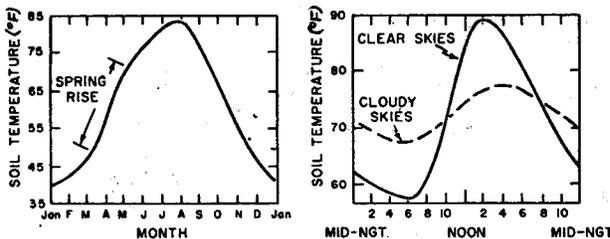


Figure 1--Average monthly 4-inch soil temperature near Northeast Arkansas. Figure 2--Hourly 4-inch soil temperature in May near Keiser, Arkansas with clear skies and cloudy skies.

From Soil Temperatures and Cotton Planting in the Mid-South by Riley, Newton, Messells, Downey and Hand. Miss. Ag. Exp. Sta. Bul. 678, Feb. 1964.

that are used in a few areas. The weekly average was selected as the best measure to represent the temperature regime. It is the mean of the daily maxima and minima. The soil temperature data is supplied by the National Weather Service, state universities, and USDA.

Four-inch soil temperatures vary throughout the year and follow a pattern similar to those of air temperatures but with a slight time lag. Figure 1 shows the month-to-month variation and the springtime rapid rise. Figure 2 indicates the hour-to-hour variations. The solid line depicts the diurnal (daily) changes under clear skies while the dashed line shows the smaller changes that occur under cloudy conditions. The average for the day can be ascertained from the 10 to 11 a.m. reading.

Location and depth of soil thermometers, time of observations, interpretation and planting rules vary considerably across the Nation. Even within a state variations can occur.

How warm must the soil be for seed germination? This depends upon the type of crop. It ranges from low for wheat and cabbage to moderate for corn and tomatoes to high for cotton and watermelon. Duration of temperature is also a controlling factor; more days are necessary for emergence at the cooler temperatures than when the optimum range is reached. Temperature-duration-crop germination data is contained in the accompanying tables 1, 2, and 3.

Crop planting rules differ greatly, although most appear to be based upon soil temperatures averaging between the minimum for germination and the lower value of the optimum range. Seed

quality is also a controlling factor. For example, a planting rule for cotton can be derived from the emergence data obtained under actual field conditions as depicted in figure 3. In other words, to get 50% field emergence from seed having 90% laboratory germination (high quality), cotton may

TABLE 1. CARDINAL TEMPERATURE POINTS FOR GERMINATION OF CERTAIN CROP SEEDS*

Crop	Cardinal Points in Degrees Fahrenheit			Days Required for Germination at Indicated Temperatures			
	Minimum	Optimum	Maximum	40°F	51°F	60°F	66°F
Red clover	34	86	90	7.5	3.0	1.75	1.0
Alfalfa	34	86	99	6.0	3.75	2.75	2.0
Hemp	34-36	95	115	5.0	2.0	1.0	1.0
Pens	34-36	86	95	5.0	3.0	1.75	1.75
Rye	34-36	77	86	4.0	2.5	1.0	1.0
Vetch	34-36	96	95	6.0	5.0	2.0	2.0
Flax	35-37	77	86	8.0	4.5	2.0	2.0
Timothy	37-39	79	86	—	6.5	3.25	3.0
Wheat	39-40	77	86-90	6.0	3.0	2.0	1.75
Barley	39-40	68	82-86	6.0	3.0	2.0	1.75
Oats	39-41	77	86	7.0	3.75	2.75	2.0
Carrot	39-41	77	86	—	6.75	4.25	3.25
Sugar beet	39-41	77	82-86	22.0	9.0	3.75	3.75
Lentils	39-41	86	97	6.0	4.0	2.0	1.75
Maize	40-50	89-95	104-111	—	11.25	3.25	3.0
Sorghum	40-50	89-95	104	—	11.25	4.75	4.0
Rice	50-55	86-90	97-101	—	—	—	—
Tobacco	55-57	82	95	—	—	9.0	6.25
Pumpkin	51	89-93	104	—	—	10.75	4.0
Melon	54-59	85	104	—	—	15.0	17.0

* Adapted from data by F. Haberlandt in *Grate Ernahrungsphysiologisches Practicum hoherer* From Crop Adaptation and Distribution by Carroll P. Wilsie. W. E. Freeman & Co. © 1962.

SOIL TEMPERATURE CONDITIONS FOR VEGETABLE SEED GERMINATION* TABLE 2

Crop	Minimum, °F.	Optimum Range, °F.	Optimum, °F.	Maximum, °F.
Asparagus	50	60-85	75	95
Bean	60	60-85	80	95
Bean, lima	60	65-85	85	85
Beet	40	50-85	85	95
Cabbage	40	45-95	85	100
Carrot	40	45-85	80	95
Cauliflower	40	45-85	80	100
Celery	40	60-70	70 ²	85 ²
Chard, Swiss	40	50-85	85	95
Corn	50	60-95	95	105
Cucumber	60	60-95	95	105
Eggplant	60	75-90	85	95
Lettuce	35	40-80	75	85
Muskmelon	60	75-95	90	100
Okra	60	70-95	95	105
Onion	35	50-95	75	95
Parsley	40	50-85	75	90
Parsnip	35	50-70	65	85
Pea	40	40-75	75	85
Pepper	60	65-95	85	95
Pumpkin	60	70-90	95	100
Radish	40	45-90	85	95
Spinach	35	45-75	70	85
Squash	60	70-95	95	100
Tomato	50	60-85	85	95
Turnip	40	60-105	85	105
Watermelon	60	70-95	95	105

¹ Compiled by J. F. Harrington, Dept. of Vegetable Crops, Univ. of Calif. at Davis.

² Daily fluctuation to 60° or lower at night is essential. From Handbook for Vegetable Growers by J. E. Knott. John Wiley & Sons, Inc. © 1957.

be planted when the soil temperature averages 66° For seed testing 80% (medium quality), plant at 70°, or if seed quality is 70% or less (low quality), wait until the soil temperature is above 75°. The temperature limits selected were 1/4, 1/2, and 3/4 of the 20° span between the minimum germinating temperature and the beginning

of the optimum range. The minimum is 60° and the beginning of the optimum range under field conditions is about 80°.

Applying the same technique to tomato and some corn varieties which have a minimum germinating temperature of 50° and an optimum threshold

TABLE 3
DAYS TO APPEARANCE OF SEEDLINGS AT VARIOUS SOIL TEMPERATURES FROM SEED PLANTED AT ONE-HALF INCH DEPTH¹

More days than shown below are needed at greater depths. Soil temperatures are slightly cooler there, and the seedlings have a greater distance to grow. The days from planting to emergence determine when a pre-emergence weed-control treatment can be used effectively.

Crop	Soil Temperature in Degrees Fahrenheit									
	32	41	50	59	68	77	86	95	104	
Asparagus	x	x	53	24	15	10	11	19	28	
Bean	x	x	x	16	11	8	6	6	x	
Bean, lima			x	30	18	6	6	x		
Beet		42	17	10	6	5	4	4		
Cabbage			15	9	6	4	3			
Carrot	x	51	17	10	7	6	6	8	x	
Cauliflower			19	10	6	5	4			
Celery	x	41	16	12	7	x	x	x		
Corn	x	x	22	12	7	4	4	3	x	
Cucumber	x	x	x	13	6	4	3	3		
Eggplant				13	8	5				
Lettuce	49	15	7	4	3	2	2	x	x	
Muskmelon				8	4	3				
Okra	x	x	x	27	17	12	7	6	6	
Onion	135	31	13	7	5	4	4	12	x	
Parsley			29	17	14	13	12			
Parsnip	171	57	27	19	14	15	32	x	x	
Pea		36	13	9	7	6	6			
Pepper	x	x	x	25	12	8	8	9	x	
Radish		29	11	6	4	3	3			
Spinach	62	22	12	7	6	5	6	x	x	
Tomato	x	x	x	43	14	8	6	6	9	x
Turnip	x	x	5	3	2	1	1	1	2	
Watermelon		x			12	5	4	3		

x = little or no germination.

... = not tested.

¹Data compiled by J. F. Harrington, Dept. of Vegetable Crops, Univ. of Calif. at Davis.

From Handbook for Vegetable Growers by J. E. Knott. John Wiley & Sons, Inc. © 1957.

beginning at 60° would result in the following rule: plant when soil temperatures average 53° for high quality seed, 55° for medium quality, and above 58° for the lower quality seed.

Cold temperatures may deal a crippling blow to tender young seedlings. So it is wise to delay

planting, not only until the soil is warm but until chances dwindle for a critically cold air mass hitting the region. The chart, Mean Date * of Last 32° Temperature in Spring, shows the dates on which the chance of the last freeze has fallen to 50%. This risk is rather high though

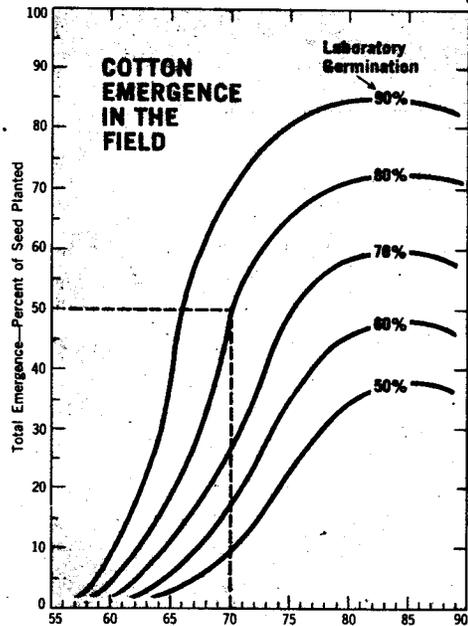
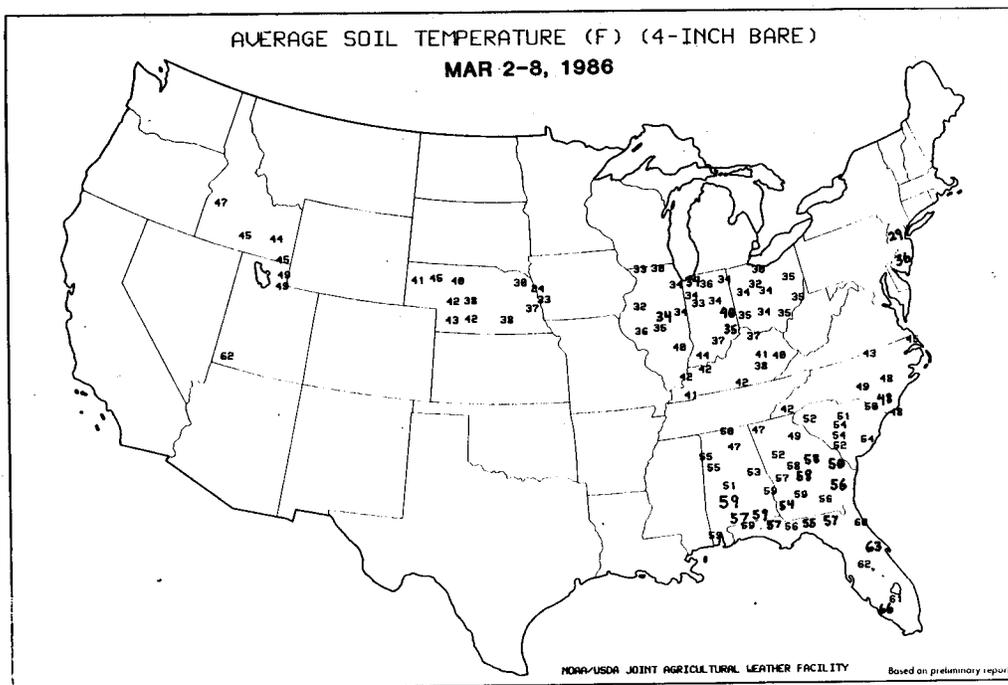


Figure 3. Mean Soil Temperature (°F) at 2-Inch Depth from Planting to Final Emergence. From Picking a Safe Cotton-Planting Date by Donald J. Haddock. The Progressive Farmer, Feb. 1967.

for tender crops, and would probably result in replanting about every other year. The risk is reduced to 10% (1 year in 10) by waiting about 18 days, and down to 5% risk (1 year in 20) by delaying about 23 days after the mean date on the chart.

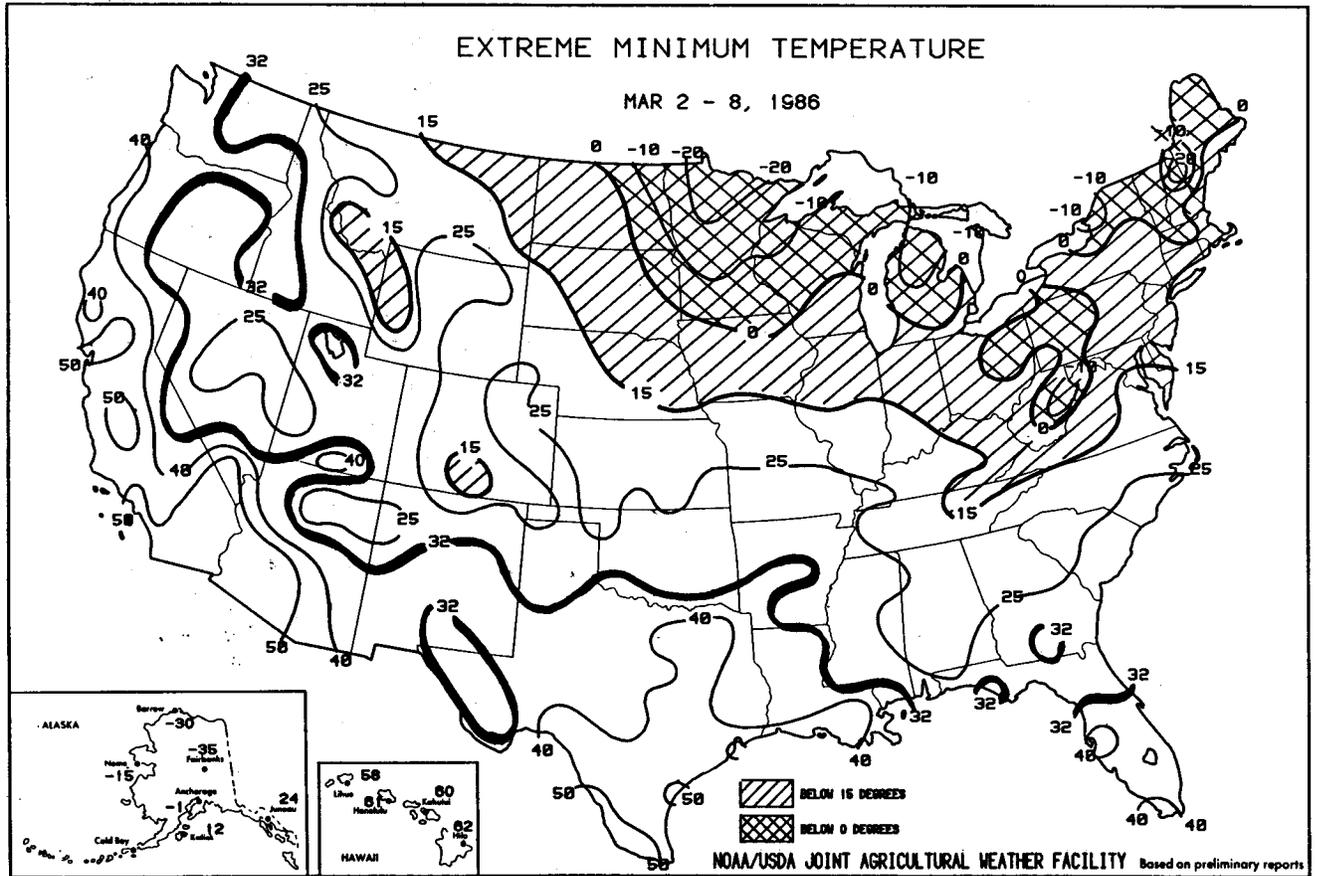
*See Weekly Weather and Crop Bulletin, February 11, 1986, Vol. 73, No. 6.

Don Haddock



NOAA-USA JOINT AGRICULTURAL LEATHER FACILITY

Based on preliminary reports



Weather Data for the Week Ending March 8, 1986

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. 1	PCT. NORMAL SINCE MAR. 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	64	32	70	21	48	-3	T	-1.5	T	T	0	3.0	26	82	25	0	3	0	0
MOBILE	69	41	74	29	55	-2	.6	-1.9	.4	.6	37	7.5	67	91	29	0	1	0	0
MONTGOMERY	67	36	72	23	52	-2	0	-1.3	0	0	0	7.2	71	74	25	0	3	0	0
AK ANCHORAGE	25	5	29	-1	15	-5	0	-2	0	0	0	.8	40	74	36	0	7	0	0
BARROW	-1	-22	18	-30	-12	7	.1	-.1	.1	.1	450	-4	100	82	67	0	7	3	0
FAIRBANKS	10	-26	19	-35	-8	2	0	-.1	0	0	0	.3	27	78	37	0	7	0	0
JUNEAU	36	29	44	24	32	2	1.8	1.0	2.5	259	12.8	152	96	61	0	0	0	6	1
KODIAK	35	24	36	12	29	-1	.3	-.8	.3	22	16.8	106	80	48	0	0	0	7	0
NOME	17	-6	26	-15	6	6	T	-.1	T	T	27	1.0	71	80	49	0	7	0	0
AZ PHOENIX	86	61	88	59	74	15	0	-.2	0	0	0	1.3	87	45	16	0	0	0	0
PRESCOTT	69	39	72	36	54	13	.3	-.1	.3	56	1.4	38	71	24	0	0	0	0	0
TUCSON	82	52	85	49	67	11	T	-.2	T	T	5	2.1	124	55	17	0	0	0	0
YUMA	89	59	94	57	74	12	0	-.1	0	0	0	.4	57	52	19	2	0	0	0
AR FORT SMITH	69	33	76	31	51	4	0	-.8	0	0	0	3.8	72	85	26	0	4	0	0
LITTLE ROCK	66	38	74	33	52	3	0	-1.1	0	0	0	3.6	42	52	33	0	0	0	0
CA BAKERSFIELD	74	51	77	48	62	7	.6	-.4	.6	258	6.6	109	59	54	0	0	0	1	1
EUREKA	59	51	63	49	55	6	1.8	.6	.9	1.8	126	19.0	140	88	79	0	0	3	2
FRESNO	74	54	78	50	64	11	.5	.1	.5	107	6.3	143	94	58	0	0	0	2	2
LOS ANGELES	63	56	67	54	59	2	.8	.3	.8	145	8.5	139	98	80	0	0	0	1	1
RED BLUFF	71	53	79	48	62	10	1.7	1.0	1.5	229	15.1	178	97	54	0	0	0	3	3
SACRAMENTO	70	52	74	50	61	9	1.3	.8	1.1	1.3	220	13.6	181	97	69	0	0	2	1
SAN DIEGO	65	57	67	51	61	2	.5	.1	.5	117	3.8	95	93	69	0	0	0	1	0
SAN FRANCISCO	64	51	67	49	57	5	1.2	-.6	.8	1.2	162	13.5	157	96	72	0	0	2	0
CO DENVER	66	32	72	26	49	13	0	-.2	0	0	0	.9	64	66	16	0	4	1	0
GRAND JUNCTION	67	37	69	30	52	13	0	-.1	0	0	0	.5	38	56	18	0	5	0	0
PUEBLO	67	28	75	22	48	10	0	-.1	0	0	0	.4	57	69	17	0	1	0	0
CT BRIDGEPORT	39	23	47	11	31	-4	T	-.8	T	T	3	6.0	83	70	39	0	7	0	0
HARTFORD	40	18	47	4	29	-4	T	-.9	T	T	1	8.4	109	80	37	0	5	0	0
DC WASHINGTON	43	27	51	14	35	-7	T	-.8	T	T	1	5.9	94	76	40	0	1	1	0
FL APALACHICOLA	64	41	70	29	53	-5	.3	-.6	.3	.3	29	9.5	116	92	51	0	1	0	0
DAYTONA BEACH	70	40	74	31	55	-7	.1	-.7	.1	.1	15	8.5	135	96	36	0	1	1	0
JACKSONVILLE	65	39	72	29	52	-7	1.0	-.1	1.0	1.3	125	10.2	134	92	45	0	0	1	0
KEY WEST	71	53	78	47	62	-10	T	-.3	T	T	.1	3.4	83	90	47	0	0	0	0
MIAMI	73	48	78	39	60	-10	T	-.4	T	T	6	6.8	148	88	34	0	1	0	0
ORLANDO	70	44	76	35	57	-8	.1	-.7	.1	.2	17	9.2	159	92	32	0	4	1	0
TALLAHASSEE	68	32	73	20	50	-8	.4	-1.0	.4	.4	24	12.6	113	96	31	0	4	0	0
TAMPA	70	45	78	35	58	-6	.1	-.8	.1	.2	23	3.9	63	90	37	0	1	0	0
WEST PALM BEACH	72	47	76	36	60	-9	0	-.6	0	.1	10	8.0	131	93	30	0	0	0	0
GA ATLANTA	59	33	65	20	46	-3	T	-1.3	T	T	0	3.3	31	77	26	0	0	0	0
AUGUSTA	63	32	70	21	47	-5	T	-1.1	T	T	0	4.0	43	79	23	0	2	0	0
MACON	65	36	72	26	50	-3	T	-1.3	T	T	0	5.7	55	78	21	0	2	0	0
SAVANNAH	62	38	71	28	50	-5	T	-.9	T	T	.2	16	7.5	103	80	31	0	1	0
HI HILO	84	66	87	62	75	4	.4	-.8	.4	.4	11	5.8	22	91	53	0	0	0	0
HONOLULU	85	68	87	61	76	2	T	-.8	T	T	0	1.6	22	90	56	0	0	0	0
KAHULUI	83	64	87	60	73	1	.3	-.5	.3	.3	36	2.6	31	96	59	0	0	1	0
LIHUE	83	64	88	58	74	2	.2	-.5	.1	.2	16	1.4	13	91	56	0	0	3	0
ID BOISE	60	38	67	35	49	10	.7	-.5	.5	.7	296	5.4	180	91	47	0	0	2	1
LEWISTON	58	40	62	34	49	8	.1	-.2	0	.1	21	3.2	128	86	52	0	0	2	0
POCATELLO	59	33	61	27	46	13	.4	-.2	.3	.4	167	4.1	186	93	40	0	0	1	0
IL CHICAGO	36	20	42	7	28	-4	.1	-.3	.1	.1	24	3.1	91	86	56	0	6	0	0
MOLINE	37	24	43	11	31	-1	.1	-.4	.1	.1	13	3.0	86	84	54	0	6	0	0
PEORIA	38	25	47	13	32	-1	.2	-.4	.2	.2	27	2.2	61	87	60	0	6	0	0
QUINCY	45	27	49	15	36	2	.1	-.5	.1	.1	15	2.3	66	86	58	0	6	0	0
ROCKFORD	35	22	41	7	28	-1	.1	-.4	.1	.1	13	3.2	103	86	63	0	6	0	0
SPRINGFIELD	43	28	54	17	35	0	.1	-.5	.1	.1	18	2.0	50	86	55	0	4	0	0
IN EVANSVILLE	47	27	58	19	37	-3	.1	-.9	.1	.1	6	7.0	99	89	50	0	6	0	0
FORT WAYNE	35	21	41	8	28	-4	.2	-.4	.1	.2	27	3.8	81	93	62	0	7	0	0
INDIANAPOLIS	40	24	49	12	32	-4	.2	-.6	.1	.2	21	3.8	63	90	57	0	6	0	0
SOUTH BEND	35	21	41	6	28	-3	.5	0	.4	.5	84	4.3	84	90	60	0	7	0	0
IA DES MOINES	41	24	51	7	32	2	.2	-.4	.2	.2	4	1.9	73	81	49	0	4	1	0
SIOUX CITY	43	22	53	7	33	4	T	-.4	T	T	0	.8	42	89	49	0	7	0	0
WATERLOO	33	20	39	0	27	0	T	-.4	T	T	0	2.8	122	86	64	0	7	0	0
KS CONCORDIA	57	30	67	17	43	7	0	-.4	0	0	0	1.3	68	74	26	0	4	0	0
DODGE CITY	62	31	74	20	46	8	T	-.3	T	T	0	.4	50	83	23	0	5	1	0
GOODLAND	61	27	72	21	44	10	.1	-.2	.1	.1	22	1.6	67	88	38	0	6	0	0
TOPEKA	54	27	64	18	41	3	0	-.4	0	0	0	1.6	65	77	26	0	4	0	0
WICHITA	62	30	69	22	46	6	0	-.4	0	0	0	1.3	65	77	26	0	4	0	0
KY BOWLING GREEN	50	29	55	20	39	-3	.1	-1.1	.1	.1	7	4.9	49	87	42	0	6	3	0
LEXINGTON	43	25	48	14	34	-6	.1	-1.0	.1	.1	4	3.1	39	87	45	0	6	3	0
LOUISVILLE	46	27	53	16	37	-4	.1	-.9	.1	.1	9	4.9	63	84	41	0	5	0	1
LA ALEXANDRIA	72	43	76	38	58	0	0	-1.2	0	0	0	3.3	29	81	32	0	0	0	0
BATON ROUGE	72	44	76	35	58	0	.7	-.4	.7	.7	57	5.9	55	91	40	0	0	1	1
LAKE CHARLES	71	45	74	39	58	0	.9	-.2	.9	.9	107	4.6	51	98	32	0	0	0	0
NEW ORLEANS	71	44	76	34	57	-1	.2	-1.0	.2	.2	16	6.7	58	91	36	0	0	0	0

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

Weather Data for the Week Ending March 8, 1986

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. 1	PCT. NORMAL SINCE MAR. 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F				
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
SHREVEPORT	74	41	78	34	57	3	0	-.8	0	0	0	3.9	46	83	26	0	0	0	0	
ME CARIBOU	27	6	40	1	17	-3	.5	0	.5	.5	80	6.5	127	84	44	0	0	2	0	
PORTLAND	39	18	46	8	28	0	.5	-.4	.5	.5	48	9.7	115	91	48	0	7	2	0	
MD BALTIMORE	42	24	48	12	33	-6	T	-.8	T	T	0	5.9	86	79	40	0	7	0	0	
SALISBURY	44	24	51	15	34	-7	T	-.9	T	T	0	8.0	103	86	38	0	7	0	0	
MA BOSTON	42	23	50	7	32	-3	T	-1.0	T	T	2	6.3	72	79	37	0	7	1	0	
GHATHAM	40	23	46	8	32	-3	T	-.8	T	T	10	5.7	59	91	1	0	7	1	0	
MI ALPENA	27	10	40	-11	19	-4	.5	-.1	.3	.3	109	2.6	76	94	58	0	7	4	0	
DETROIT	34	19	41	1	26	-5	.5	0	.2	.5	88	5.3	129	90	60	0	7	5	0	
FLINT	33	16	41	-6	24	-3	.5	-.1	.3	.3	104	3.4	97	93	59	0	7	4	0	
GRAND RAPIDS	33	17	40	-5	25	-3	.6	-.2	.4	.6	124	5.0	125	94	58	0	7	4	0	
HOUGHTON LAKE	28	11	39	-18	20	-3	.4	0	.2	.4	88	3.1	97	91	58	0	7	4	0	
LANSING	33	15	39	-10	24	-5	.4	0	.3	.4	88	3.9	103	93	68	0	7	4	0	
MARQUETTE	25	7	40	-12	16	-3	.9	-.3	.6	.9	141	5.1	113	95	65	0	7	5	0	
MUSKEGON	33	19	42	-1	26	-3	.6	-.1	.4	.6	100	4.2	91	93	58	0	7	4	0	
SAULT STE. MARIE	26	8	40	-9	17	-2	.5	-.1	.2	.5	108	3.2	73	95	63	0	7	3	0	
MN ALEXANDRIA	29	11	38	-13	20	1	T	-.2	T	T	0	2.1	117	95	66	0	7	0	0	
DULUTH	27	10	39	-17	19	1	.2	-.2	.2	.2	45	1.5	60	88	51	0	7	1	0	
INT'L FALLS	25	6	35	-24	16	1	.1	-.1	.1	.1	50	1.7	94	89	51	0	7	3	0	
MINNEAPOLIS	30	16	38	-5	23	-1	T	-.3	T	T	3	1.7	81	86	57	0	7	1	0	
ROCHESTER	29	15	35	-6	22	-1	T	-.3	T	T	6	1.2	67	90	65	0	7	1	0	
MS GREENWOOD	69	37	73	28	53	0	0	-1.3	0	0	0	2.0	18	77	27	1	0	0	0	
JACKSON	70	36	75	27	53	-1	0	-1.3	0	0	0	2.3	21	89	27	0	3	0	0	
MERIDIAN	69	34	74	22	52	-1	0	-1.4	0	0	0	3.4	30	88	26	0	3	0	0	
MO CAPE GIRARDEAU	52	29	62	24	40	1	T	-1.0	T	T	1	3.8	54	85	46	0	7	1	0	
COLUMBIA	50	28	59	20	39	2	T	-.6	T	T	1	4.2	102	83	41	0	6	0	0	
KANSAS CITY	50	26	60	17	38	1	.1	-.5	.1	.1	0	1.3	46	82	39	0	6	0	0	
SAINT LOUIS	49	30	63	21	40	1	.1	-.6	.1	.1	14	4.9	107	81	41	0	3	2	0	
SPRINGFIELD	57	30	64	26	44	3	0	-.7	0	0	0	2.0	44	77	34	0	2	0	0	
MT BILLINGS	58	33	64	24	46	14	.1	-.1	.1	.1	29	2.1	111	90	32	0	7	1	0	
GLASGOW	44	23	51	9	34	12	.1	-.1	.1	.1	163	1.0	111	95	62	0	6	3	0	
GREAT FALLS	58	30	65	21	44	15	T	-.2	T	T	0	1.3	65	87	29	0	4	0	0	
HAVRE	50	27	58	15	39	14	T	0	T	T	38	1.1	100	95	52	0	5	1	0	
HELENA	58	32	66	26	45	16	.1	0	.1	.1	63	1.6	123	82	33	0	3	2	0	
KALISPELL	50	27	53	22	38	9	.1	-.1	.1	.1	29	4.2	145	96	48	0	7	0	0	
MILES CITY	52	29	64	16	41	13	.1	0	.1	.1	62	1.2	92	90	52	0	4	1	0	
MISSOULA	54	31	57	25	42	11	T	-.1	T	T	25	3.1	129	99	53	0	4	2	0	
NE GRAND ISLAND	55	26	66	14	41	9	T	-.3	T	T	0	.5	29	81	31	0	5	0	0	
LINCOLN	51	24	60	11	37	5	T	-.4	T	T	0	.6	29	80	38	0	7	0	0	
NORFOLK	47	23	58	9	35	6	T	-.3	T	T	0	1.2	75	83	41	0	6	0	0	
NORTH PLATTE	58	26	68	19	42	11	T	-.2	T	T	8	1.2	100	83	26	0	7	1	0	
OMAHA	45	24	55	7	34	4	T	-.4	T	T	2	1.0	48	81	54	0	5	1	0	
SCOTTSBLUFF	63	28	71	23	46	13	T	-.2	T	T	0	2.0	200	86	24	0	5	0	0	
VALENTINE	57	24	77	14	40	12	T	-.1	T	T	0	.7	70	79	30	0	7	0	0	
NV ELY	60	29	64	25	45	13	.7	-.5	.7	.7	305	1.7	106	88	33	0	6	1	1	
LAS VEGAS	81	54	84	52	68	14	T	-.1	T	T	6	.4	36	48	20	0	0	1	0	
RENO	65	37	71	35	51	12	.6	-.4	.6	.6	254	5.9	246	86	34	0	2	1	0	
WINNEMUCCA	65	35	70	28	50	13	.1	0	.1	.1	63	1.3	76	83	30	0	4	1	0	
NH CONCORD	37	14	45	4	26	-2	.1	-.6	.1	.1	8	7.2	120	92	45	0	1	0	0	
NJ ATLANTIC CITY	43	21	50	14	32	-6	T	-.9	T	T	1	7.2	91	84	38	0	7	1	0	
NM ALBUQUERQUE	68	39	71	33	54	10	T	-.1	T	T	0	1.2	120	57	17	0	0	0	0	
CLOVIS	66	37	73	31	51	7	T	0	T	T	0	1.2	100	65	24	0	0	0	0	
ROSWELL	73	40	81	35	57	7	T	-.1	T	T	0	1.2	200	56	17	0	0	0	0	
NY ALBANY	36	16	45	1	26	-3	.1	-.5	.1	.1	13	6.3	117	86	50	0	2	0	0	
BINGHAMTON	31	17	41	2	24	-3	.2	-.5	.1	.2	22	6.3	113	87	52	0	7	5	0	
BUFFALO	32	18	42	2	25	-4	.4	-.3	.3	.4	53	5.3	87	93	61	0	7	5	0	
NEW YORK	42	27	49	14	35	-2	T	-.9	T	T	0	7.2	100	68	37	0	4	0	0	
ROCHESTER	33	17	44	3	25	-4	.6	0	.4	.6	88	4.7	89	92	59	0	7	2	0	
SYRACUSE	34	18	43	-1	26	-3	.3	-.5	.1	.3	31	4.9	80	93	64	0	7	5	0	
NC ASHEVILLE	51	25	58	21	38	-5	T	-.1	T	T	1	3.0	36	77	32	0	7	1	0	
CHARLOTTE	56	30	64	21	43	-4	.3	-.8	.3	.3	23	2.3	26	71	27	0	5	1	0	
GREENSBORO	53	27	62	18	40	-5	T	-.9	T	T	0	2.4	30	72	30	0	6	0	0	
HATTERAS	49	32	59	23	41	-8	.2	-.8	.2	.2	18	7.3	73	93	48	0	3	1	0	
NEW BERN	57	32	66	24	44	-5	.2	-.8	.2	.2	15	5.2	58	84	31	0	3	1	0	
RALEIGH	53	28	59	19	41	-5	.2	-.9	.2	.2	0	4.1	51	70	29	0	4	0	0	
WILMINGTON	61	36	69	26	48	-3	T	-.9	T	T	3	4.6	56	79	27	0	2	1	0	
ND BISMARCK	45	20	58	5	33	12	.1	-.1	.1	.1	40	.7	64	92	47	0	7	1	0	
FARGO	30	11	38	-12	20	2	T	-.1	T	T	20	1.2	109	91	69	0	7	2	0	
GRAND FORKS	29	9	39	-12	19	3	T	-.1	T	T	19	1.0	71	91	70	0	7	2	0	
WILLISTON	46	24	56	8	35	14	.2	-.1	.1	.2	190	1.2	100	93	54	0	7	4	0	
OH AKRON-CANTON	34	19	41	-2	27	-6	.4	-.3	.3	.4	52	4.9	89	95	63	0	7	4	0	
CINCINNATI	41	24	47	11	32	-5	.2	-.7	.1	.2	18	4.0	60	90	52	0	6	5	0	
CLEVELAND	34	20	42	4	27	-5	.3	-.3	.2	.3	42	5.6	104	88	60	0	7	4	0	
COLUMBUS	37	22	42	7	29	-7	.3	-.4	.2	.3	41	4.9	86	88	57	0	6	4	0	

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

Weather Data for the Week Ending March 8, 1986

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. 1	PCT. NORMAL SINCE Mar. 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	37	22	44	8	30	-6	.2	-.4	.1	.2	28	5.6	104	92	60	0	6	6	0	
TOLEDO	36	21	42	4	28	-3	.4	-.2	.1	.4	59	3.8	86	91	56	0	6	5	0	
YOUNGSTOWN	34	17	45	-7	26	-5	.2	-.5	.2	.2	29	3.3	58	91	61	0	7	1	0	
OK OKLAHOMA CITY	66	37	72	28	51	6	0	0	0	0	0	1.2	26	73	27	0	0	0	0	
TULSA	65	36	70	34	51	5	0	0	0	0	0	1.7	32	71	26	0	1	0	0	
OR ASTORIA	59	44	70	36	52	8	2.6	.8	1.3	2.6	127	22.7	108	97	70	0	0	4	2	
BURNS	59	32	67	29	45	10	.7	.7	.4	.7	913	5.0	500	71	26	0	0	2	0	
MEDFORD	67	43	75	38	55	11	.7	.2	.5	.7	125	7.9	130	96	61	0	0	3	0	
PENDLETON	59	41	65	38	50	8	.4	.4	.2	.4	131	4.7	147	95	50	0	0	3	0	
PORTLAND	62	42	67	36	52	7	.7	.2	.5	.7	87	10.7	96	99	61	0	0	3	0	
SALEM	62	40	66	33	51	7	1.0	.0	.8	1.0	70	15.5	121	98	59	0	0	1	0	
PA ALLENTOWN	38	21	47	10	30	-5	.5	-.8	.3	.3	0	8.6	118	77	37	0	7	0	0	
ERIE	33	20	42	3	27	-3	.3	-.3	.3	.3	41	5.3	100	90	62	0	7	2	0	
HARRISBURG	38	23	44	12	31	-6	.7	-.8	.7	.7	0	6.7	102	74	43	0	6	0	0	
PHILADELPHIA	42	23	48	12	33	-5	.7	-.8	.7	.7	0	7.5	109	76	36	0	7	0	0	
PITTSBURGH	35	19	42	0	27	-7	.4	-.4	.2	.4	46	6.3	103	85	54	0	7	4	0	
SCRANTON	34	20	44	7	27	-5	.7	-.5	.7	.7	3	5.2	104	84	45	0	7	2	0	
RI PROVIDENCE	42	20	50	7	31	-3	.7	-.1	.7	.7	0	9.0	101	79	34	0	7	0	0	
SC CHARLESTON	62	38	70	27	50	-4	.7	-.1	.7	.7	0	6.1	77	83	28	0	1	0	0	
COLUMBIA	61	32	69	20	46	-5	.0	-.2	.2	.0	0	2.5	26	77	22	0	4	0	0	
FLORENCE	63	34	71	28	49	-3	.4	-.6	.4	.4	37	2.6	33	80	25	0	2	0	0	
GREENVILLE	58	31	66	25	44	-3	.7	-.3	.7	.7	1	2.6	26	74	26	0	3	1	0	
SD ABERDEEN	36	17	43	-5	27	4	.1	-.1	.1	.1	33	1.1	85	95	65	0	7	2	0	
HURON	38	19	46	1	29	4	.7	-.2	.7	.7	8	.9	64	90	68	0	7	1	0	
RAPID CITY	56	29	68	17	43	13	.1	-.1	.1	.1	26	1.5	125	89	39	0	4	2	0	
SIoux FALLS	38	20	48	0	29	3	.7	-.3	.7	.7	3	.8	44	84	58	0	7	1	0	
TN CHATTANOOGA	55	29	61	19	42	-4	.7	-.4	.7	.7	0	4.7	41	83	32	0	5	0	0	
KNOXVILLE	49	24	53	16	37	-9	.7	-.2	.7	.7	1	4.9	48	87	38	0	6	1	0	
MEMPHIS	62	35	69	30	48	0	.7	-.2	.7	.7	0	3.0	29	67	32	0	5	0	0	
NASHVILLE	52	29	60	20	41	-5	.1	-.2	.1	.1	4	3.8	38	80	35	0	1	0	0	
TX ABILENE	75	42	83	34	59	6	.1	-.1	.1	.1	58	1.7	77	67	23	0	0	0	0	
AMARILLO	65	31	76	26	48	5	0	-.2	.0	.0	0	1.0	83	70	26	0	4	0	0	
AUSTIN	76	50	79	44	63	6	.7	-.4	.7	.7	0	1.6	35	81	35	0	0	0	0	
BEAUMONT	74	47	76	40	61	2	1.2	.5	1.2	1.2	150	4.1	47	97	40	0	0	1	1	
BROWNSVILLE	79	56	82	49	67	2	.2	-.2	.2	.2	0	1.3	43	96	48	0	0	0	0	
CORPUS CHRISTI	78	52	79	42	65	2	.2	-.1	.2	.2	62	2.9	85	95	42	0	0	1	0	
DEL RIO	80	53	84	48	66	6	.7	-.1	.7	.7	13	1.9	119	60	24	0	1	0	0	
EL PASO	74	42	79	33	58	6	0	0	0	0	0	-.4	44	56	17	0	0	0	0	
FORT WORTH	74	44	82	41	59	6	.7	-.5	.7	.7	0	2.5	61	72	28	0	0	0	0	
GALVESTON	69	55	72	51	62	4	.3	-.5	.3	.3	2	2.4	41	95	57	0	0	1	0	
HOUSTON	76	47	78	40	61	3	.5	-.1	.5	.5	70	4.0	56	88	38	0	1	0	0	
LUBBOCK	70	37	80	31	53	7	0	0	0	0	0	.9	75	63	20	0	0	0	0	
MIDLAND	77	40	86	34	59	6	0	-.1	0	0	0	.4	33	60	17	0	0	0	0	
SAN ANGELO	78	42	86	33	60	3	.7	-.2	.7	.7	0	.9	53	69	20	0	0	0	0	
SAN ANTONIO	77	47	80	39	62	3	.6	-.3	.6	.6	0	3.3	87	79	34	0	0	0	1	
VICTORIA	76	51	77	44	63	3	.6	.3	.6	.6	153	2.2	49	96	42	0	0	1	0	
WACO	73	44	79	38	58	4	.3	-.2	.3	.3	56	4.9	117	89	44	0	0	1	0	
WICHITA FALLS	73	38	79	32	55	6	0	-.4	0	0	0	1.1	48	71	27	0	1	0	0	
UT BLANDING	65	34	67	31	49	13	0	0	0	0	0	1.6	64	67	30	0	2	0	0	
CEDAR CITY	65	34	68	25	50	12	.2	0	.2	.2	100	1.0	59	88	31	0	3	0	0	
SALT LAKE CITY	62	38	66	35	50	12	.4	0	.4	.4	98	2.5	81	84	33	0	0	1	0	
VT BURLINGTON	32	14	43	-3	23	-1	.3	-.2	.3	.3	55	5.7	139	85	48	0	7	4	0	
VA NORFOLK	47	29	58	17	38	-7	.7	-.9	.7	.7	1	5.2	65	80	39	0	5	0	0	
RICHMOND	47	27	57	15	37	-6	.7	-.8	.7	.7	3	5.4	74	84	36	0	6	0	0	
ROANOKE	45	25	50	10	35	-8	.7	-.8	.7	.7	0	3.8	54	71	36	0	6	1	0	
WA COLVILLE	49	33	57	27	41	6	.4	-.2	.4	.4	138	5.8	145	96	76	0	3	1	0	
QUILLAYUTE	57	41	69	32	49	7	2.8	0	1.2	2.8	88	31.6	104	99	70	0	0	6	3	
SEATTLE-TACOMA	58	42	63	36	50	7	.7	-.2	.7	.7	66	13.6	120	92	59	0	0	2	0	
SPOKANE	53	34	55	25	43	6	.3	0	.3	.3	24	5.4	120	99	62	0	3	1	0	
YAKIMA	60	33	67	28	46	6	.1	0	.1	.1	68	3.2	133	99	51	0	4	2	0	
WV BECKLEY	37	20	42	0	29	-8	.3	-.7	.3	.3	24	4.4	57	94	53	0	7	5	0	
CHARLESTON	43	27	47	9	35	-6	.6	-.3	.6	.6	63	7.1	93	81	48	0	4	4	0	
HUNTINGTON	42	25	46	13	34	-7	.2	-.6	.2	.2	24	5.1	72	85	47	0	5	4	0	
PARKERSBURG	37	23	42	4	30	-9	.3	-.6	.3	.3	30	5.5	71	91	54	0	6	4	0	
WI GREEN BAY	31	15	41	0	23	-1	.2	-.2	.2	.2	50	1.6	62	86	55	0	7	2	0	
LA CROSSE	33	18	41	-1	26	0	.7	-.3	.7	.7	0	1.4	64	80	55	0	7	0	0	
MADISON	33	18	40	2	26	-1	.7	-.4	.7	.7	0	3.7	142	85	57	0	7	0	0	
MILWAUKEE	35	21	42	6	28	0	.7	-.5	.7	.7	2	4.9	140	83	54	0	7	1	0	
WAUSAU	31	14	40	-4	22	0	.3	-.1	.3	.3	77	1.7	74	81	48	0	7	2	0	
WY CASPER	60	30	64	24	45	16	.7	-.2	.7	.7	5	1.3	100	86	23	0	6	1	0	
CHEYENNE	60	30	66	25	45	15	.7	-.2	.7	.7	5	.6	60	74	20	0	6	0	0	
LANDER	60	33	64	30	46	17	.1	-.1	.1	.1	33	1.4	100	76	25	0	5	1	0	
SHERIDAN	57	31	68	28	44	15	.2	0	.2	.2	71	2.0	118	86	33	0	6	2	0	
PR SAN JUAN	86	68	88	67	77	0	.1	-.4	.1	.1	11	3.4	62	92	53	0	0	2	0	

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

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

LAST DATE OF DATA COLLECTION PERIOD IS 3-8-1986
ACCUMULATIONS ARE FROM JULY 1
** = NORMAL LESS THAN 10% OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK DEV, WEEK DEV, CUM TOTAL, CUM DEV, CUM DEV, CUM DEV, CUM DEV. Rows list various cities and their corresponding weather data points.

February Weather and Crop Summary

FEBRUARY WEATHER SUMMARY

HIGHLIGHTS: A series of Pacific storms battered the west coast with heavy rain, gusty winds, and mountain snow. After midmonth the heavy rain moved northward to affect only the Northwest. Hardest hit in California was the north central area where deluges of rain caused flooding and land erosion. After the storms, much warmer weather spread through California and then covered the southern half of the Nation. Early in the month snow fell through the Great Plains as far south as the Texas Panhandle and Oklahoma. Subsequent warming melted the snow. Snow also fell from the Great Lakes to the Tennessee Valley, through the Appalachians, and from the mid-Atlantic States northward. Later warming melted the snow south of the Great Lakes and Pennsylvania. Precipitation was well below normal from central Mississippi through the western Carolinas. Less extensive dry areas were in parts of southern Texas, the Southwest, and spotty areas in the Plains. Unusually warm weather promoted the greening of grasses and budding of fruit trees through the southern half of the Nation, but on the last day of the month, freezing weather reached into the lower Mississippi Valley and to western Georgia. Damage to blooms seemed to be minimal.

FIRST WEEK...Rain fell through the central and southern Plains, but later, snow fell as far south as Oklahoma and much of western Texas. Showers and thunderstorms caused some heavy rain from eastern Texas across the South and northeastward to the lower Ohio Valley. Rain covered most of the West with snow confined to the high elevations early in the week, but later, snow fell in nearly all areas except the coast. Snow was mixed with freezing rain across much of the lower Great Lakes States and parts of the mid-Atlantic States. Snow fell from the northern Plains through New England.

SECOND WEEK...A massive low-pressure system in the Pacific fed bands of weather onto the Pacific coast battering the area with strong winds, torrential rain, and mountain snow. Further east, snow fell from the southern Rockies through Oklahoma, to the Ohio Valley, and the mid-Atlantic States, and northward through the Great Lakes and the Northeast. Rain covered the area from southern Texas to Georgia and the Carolinas. Early-week freezing temperatures reached into the valleys of California and, subsequently, into northern Florida. Warming began in the West and spread across the southern half of the Nation.

THIRD WEEK...A succession of storms battered California with rain, gusty winds, and mountain snow. The north and central part of the State was hardest hit with floods and erosion. After midweek the rain shifted northward and gave some respite to California. Heavy snow fell at high elevations in the central and northern Rockies. Lighter snow fell from the northern Great Plains to New England. Record warm temperatures were reported first in Texas and then all across the South. The moisture laden air brought showers and thunderstorms to the East from the lower Mississippi Valley to Georgia and northward to Maryland.

FOURTH WEEK...Snow fell from the upper Mississippi Valley through the middle and upper Ohio Valley, to the Appalachians, and from the mid-Atlantic States through the Northeast. Light rain showers fell from the middle Mississippi Valley through the Tennessee Valley to the Southeast. Heavy rain fell along the Northwest Coast, and snow covered the high elevations of the Cascades and Rockies. Moderate

rain in Idaho, coupled with melting snow, caused extensive flooding. Temperatures were colder than normal east of the Mississippi River and warmer than normal in the West. Freezing temperatures reached into the lower Mississippi Valley and to western Georgia as the week ended.

FEBRUARY FIELDWORK

Land preparation progressed rapidly for spring planting in California and Arizona the first half of February. Heavy rain and flooding halted most field activity in northern and central California but fieldwork continued its fast pace in Arizona. By midmonth cotton seeding was underway in Arizona. Wetness slowed field activity in the Southeast the first half of the month. As soils dried, fieldwork picked up considerably. By month's end corn planting was 15 percent finished in Texas, compared with 3 percent normally. Seeding of corn was just underway in Georgia and 2 percent of Louisiana's acreage was in the ground. Sorghum seeding reached 4 percent completion in Texas. Fruit producers pruned and applied dormant sprays to orchards in the Northwest and in the South. Fruit trees had reached the bloom stage as far north as Utah by the end of February.

WINTER WHEAT

Winter wheat was mostly good to fair during February. Early in the month snow cover stretched as far south as Texas, but some wheat in the central Plains lacked proper protection from cold temperatures. Shortly thereafter, warmer temperatures melted snow from Kansas southward leaving wheat unprotected from cold weather the rest of the month, but warmer-than-normal temperatures kept damage to a minimum. Near the end of February, snow cover virtually vanished from wheat in the Pacific Northwest and the Rocky Mountain States. Producers were concerned with late freeze damage in these areas with wheat breaking dormancy earlier than normal. By month's end wheat was greening as far north as Oregon and jointing in Arizona, Oklahoma and Texas. In the central and southern Plains, warmth promoted growth but it was slowed somewhat by insufficient moisture.

CROP PRODUCTION HIGHLIGHTS

CITRUS production is forecast at 11.0 million tons, 7 percent more than last season.

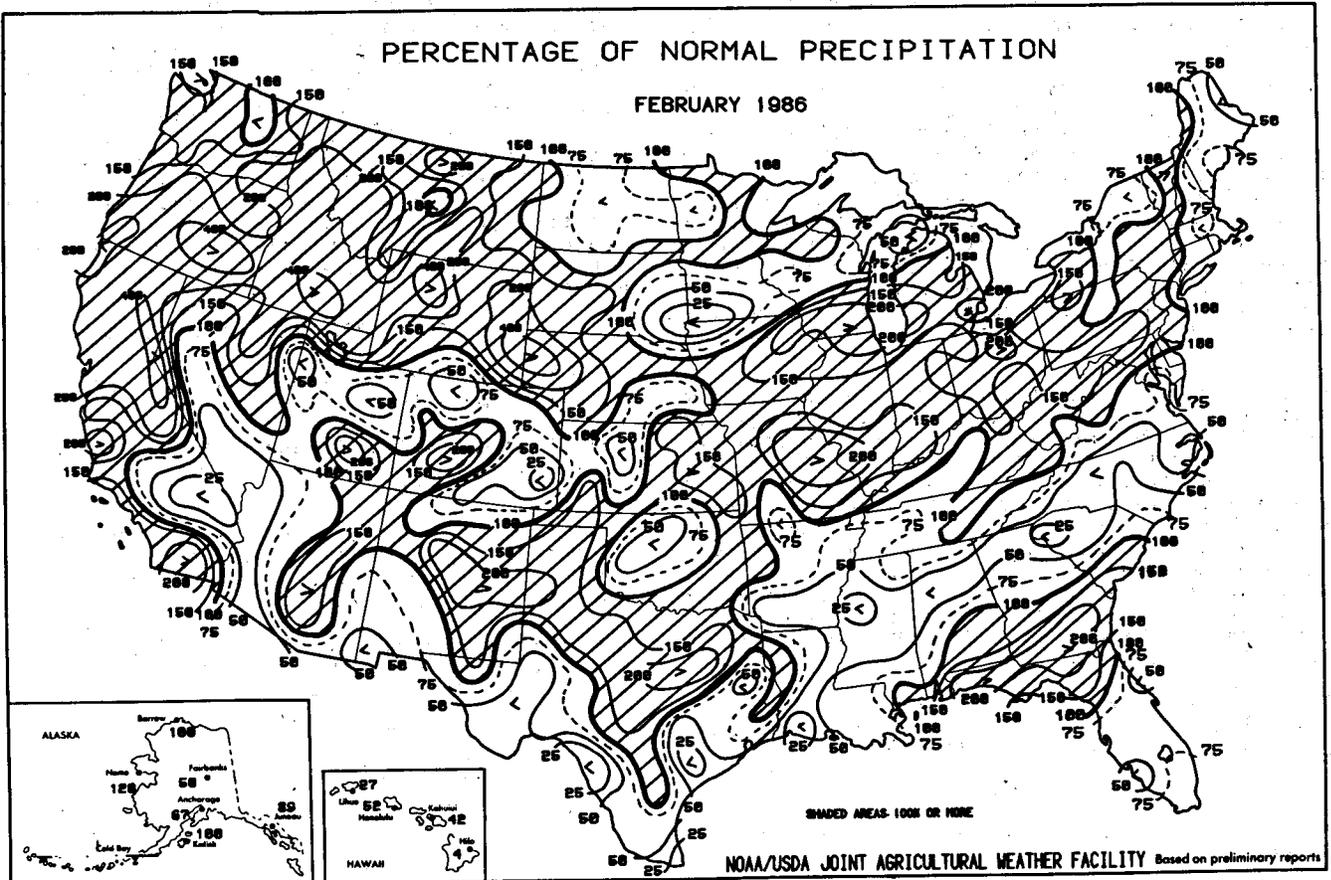
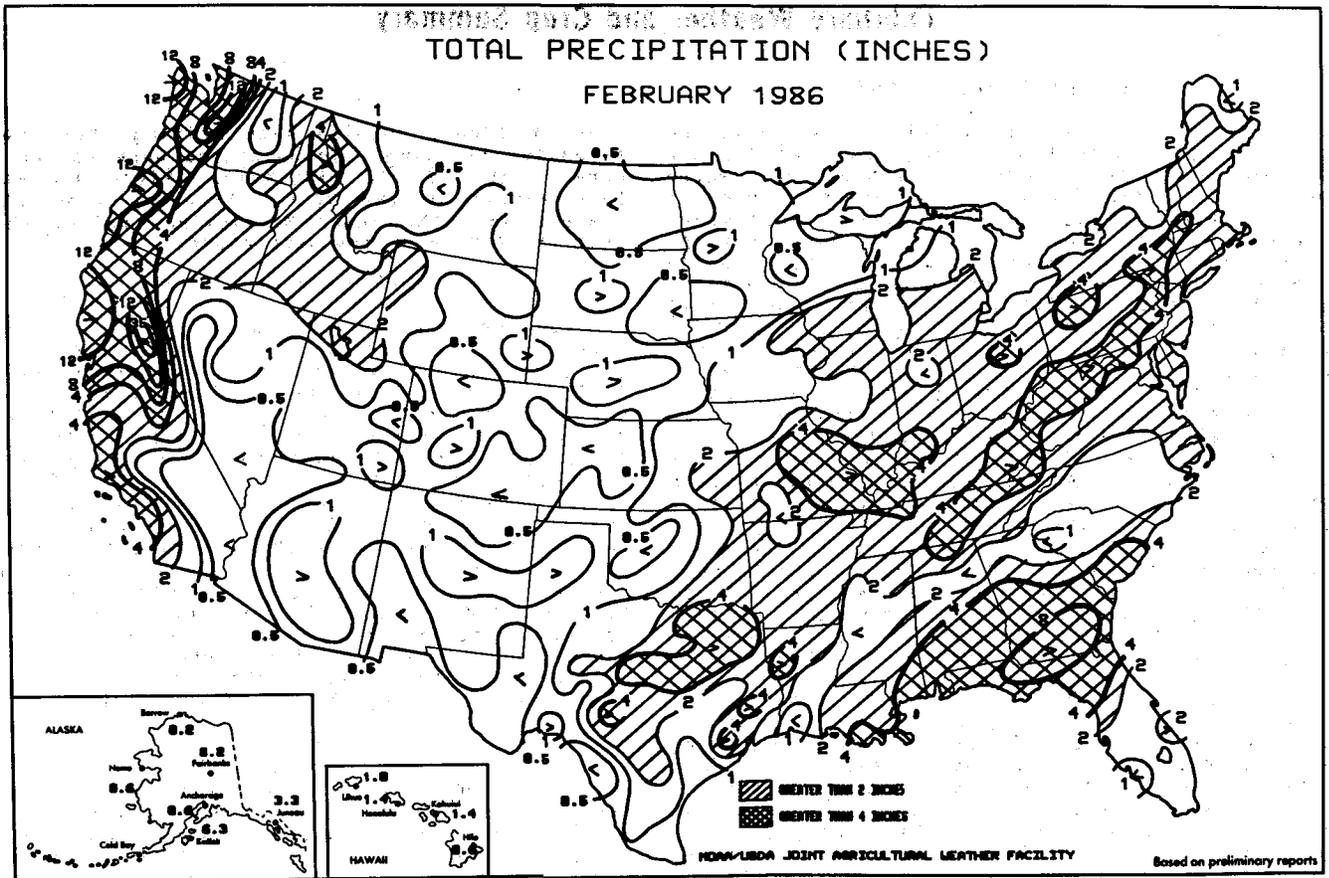
ORANGE production is forecast at 179 million boxes, 3 percent less than February 1 but 13 percent above the 1984-85 season.

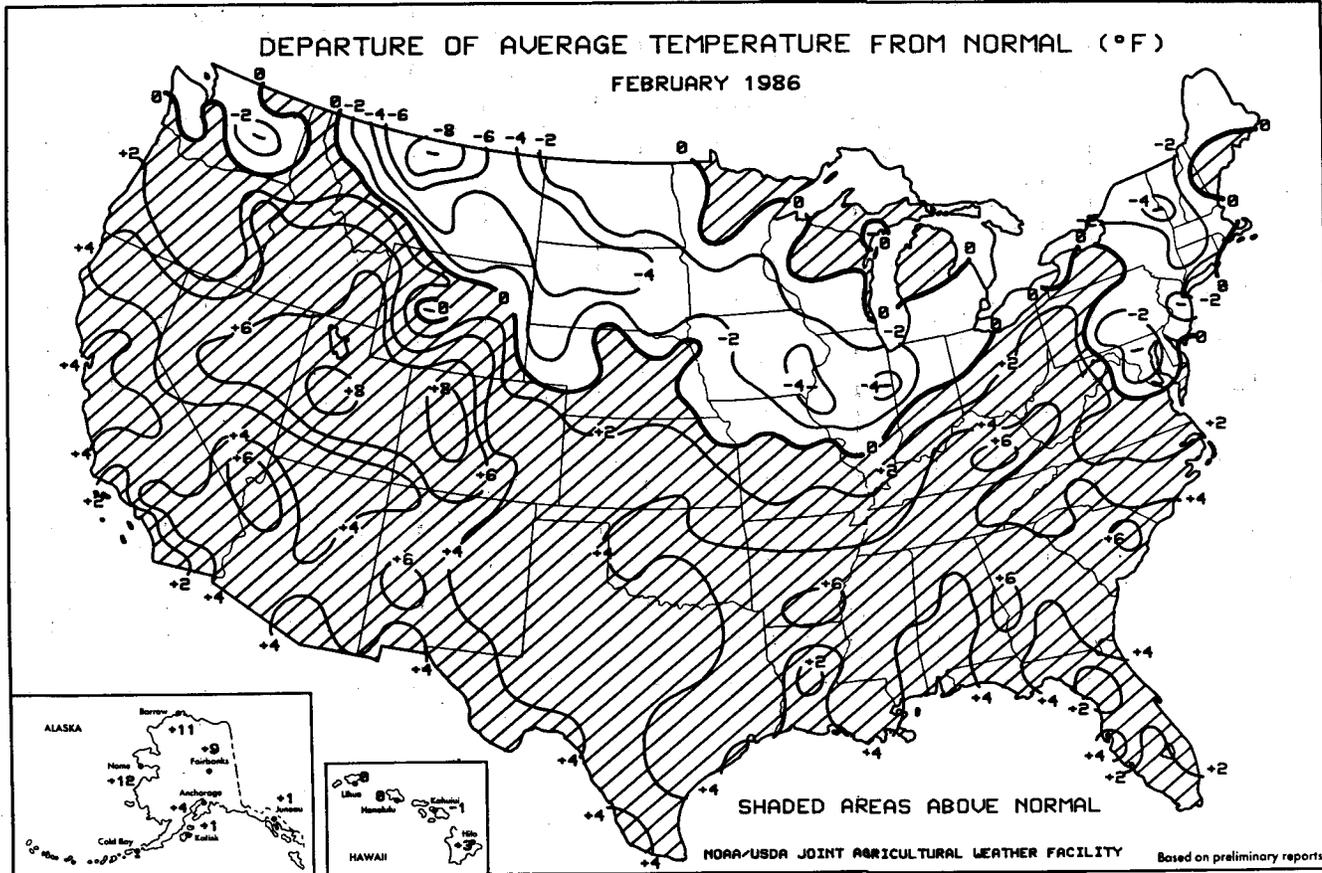
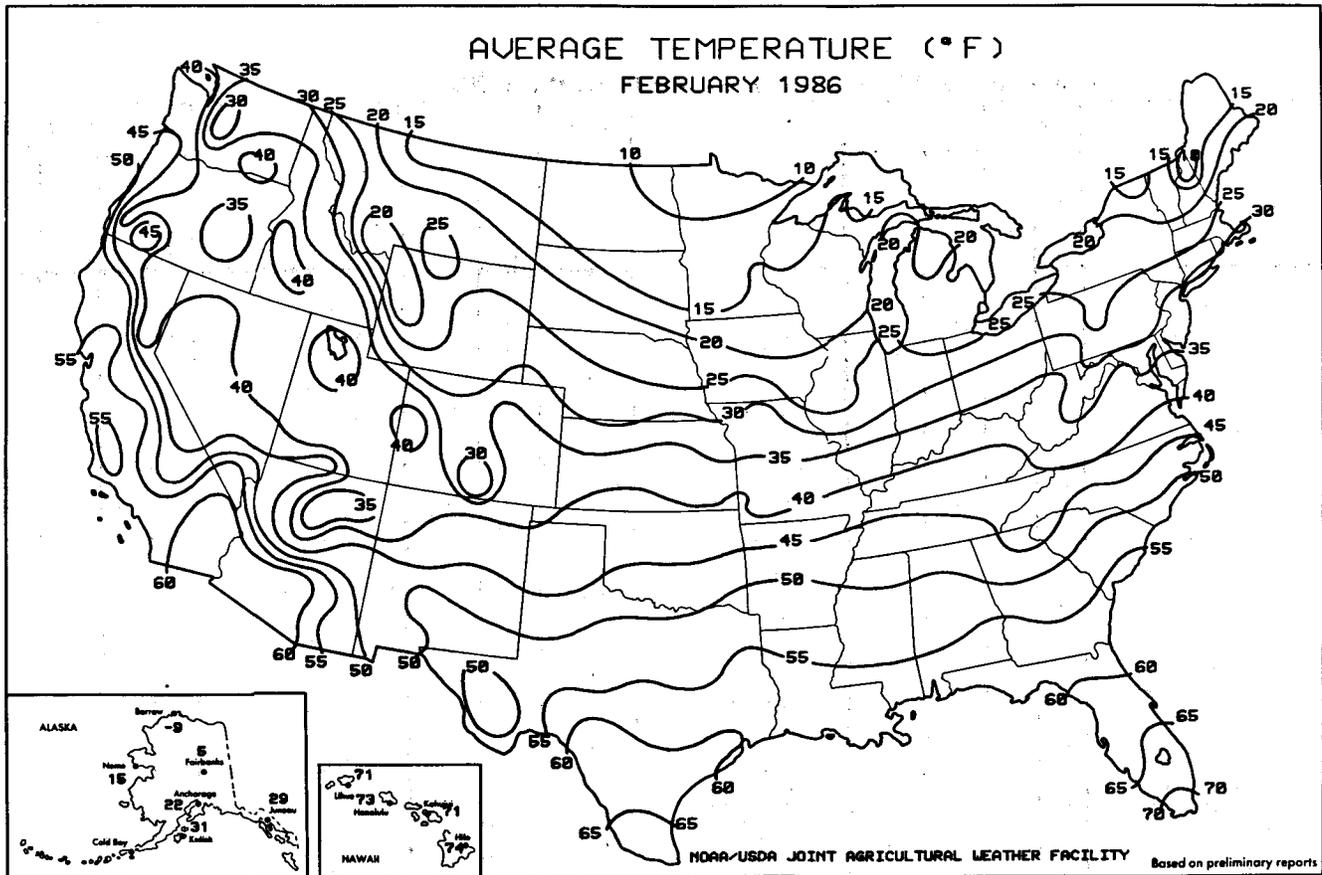
GRAPEFRUIT production, excluding the California "Other Areas" crop is forecast at 51.1 million boxes, unchanged from February 1 but 1 percent less than last season.

LEMON production, at 21.0 million boxes, is unchanged from February 1 but 19 percent less than last season's utilized production.

WINTER POTATO production is forecast at 2.84 million cwt, up 6 percent from last year and 8 percent above two years ago.

SPRING POTATO plantings cover an estimated 76.5 thousand acres, down 17 percent from last year and 13 percent below 1984.





Temperature and Precipitation Data for February 1986

States and Stations	Temperature Of		Precipitation Inches		States and Stations	Temperature Of		Precipitation Inches		States and Stations	Temperature Of		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	50	3	1.9	-2.7	BATON ROUGE	58	5	3.6	-1.4	COLUMBUS	33	3	3.0	0.8
MOBILE	56	3	4.2	-0.7	LAKE CHARLES	58	3	0.9	-3.0	DAYTON	31	2	3.7	1.5
MONTGOMERY	53	3	6.1	1.6	NEW ORLEANS	59	4	2.9	-2.3	TOLEDO	25	-1	2.5	0.7
AK ANCHORAGE	22	4	0.6	-0.4	SHREVEPORT	54	5	3.5	0.0	YOUNGSTOWN	28	2	2.2	0.0
BARROW	-8	11	0.2	0.0	ME CARIBOU	12	-1	1.2	-1.0	OK OKLAHOMA CITY	45	4	0.6	-0.7
FAIRBANKS	5	10	0.2	-0.2	MD BALTIMORE	23	0	2.6	-1.0	TULSA	43	2	1.2	-0.5
JUNEAU	29	1	3.3	-0.5	MA BOSTON	33	-2	3.7	0.8	OR ASTORIA	44	0	8.9	1.1
KODIAK	31	1	6.3	0.0	MA SALISBURY	37	0	3.2	-0.2	BURNS	34	0	3.5	3.2
NOME	15	12	0.6	0.1	BOSTON	29	-2	2.8	-0.9	MEDFORD	46	4	5.2	3.1
AZ FLAGSTAFF	34	3	1.8	-0.2	MI ALPENA	31	0	3.2	-1.0	PENDLETON	39	0	2.6	1.5
PHOENIX	61	5	1.2	0.6	MI FLINT	19	1	1.0	-0.3	PORTLAND	44	1	5.3	1.4
PRESOTT	44	5	1.1	-0.5	DETROIT	24	-1	3.3	1.6	SALEM	44	2	8.3	3.7
TUCSON	57	3	1.1	0.5	GRAND RAPIDS	21	-2	2.1	0.6	PA ALLENTOWN	28	-1	4.3	1.3
WINSLOW	43	5	0.8	0.3	HOUGHTON LAKE	22	-2	3.3	1.8	ERIE	26	1	2.7	0.6
YUMA	64	4	0.3	0.0	LANGING	19	1	1.7	0.4	HARRISBURG	30	-2	4.5	1.8
AR FORT SMITH	46	4	3.6	1.0	MARQUETTE	21	-3	2.6	1.0	PHILADELPHIA	32	-2	3.4	0.6
LITTLE ROCK	48	4	3.0	-0.7	MUSKOGON	15	0	1.2	-0.6	PITTSBURGH	32	3	3.4	1.0
CA BAKERSFIELD	55	2	0.8	-0.3	SAULT STE. MARI	24	0	2.7	1.0	RI PROVIDENCE	26	-1	2.6	0.5
EUREKA	53	4	10.0	4.8	MN ALEXANDRIA	15	1	1.0	-0.7	SC CHARLESTON	29	0	3.3	-0.4
FRESNO	56	5	3.7	1.8	DULUTH	12	0	1.1	0.4	COLUMBIA	55	6	4.3	0.9
LOS ANGELES	59	2	5.4	2.9	INT'L FALLS	11	-1	0.7	-0.2	FLORENCE	51	4	1.5	-2.5
RED BLUFF	54	4	8.3	5.0	MINNEAPOLIS	10	2	1.0	0.3	GREENVILLE	54	6	1.3	-2.1
SACRAMENTO	55	5	8.6	5.7	ROCHESTER	16	-2	0.8	0.0	SD ABERDEEN	47	4	1.5	-2.9
SAN DIEGO	59	1	2.6	1.2	ST. CLOUD	15	-2	0.6	-1.1	HURON	12	-4	0.7	0.1
SAN FRANCISCO	56	5	8.1	4.9	MS GREENWOOD	12	-2	0.8	0.0	RAPID CITY	15	-3	0.4	-0.3
DENVER	36	3	0.7	0.0	JACKSON	52	5	1.2	-3.4	SIoux FALLS	22	-4	1.0	0.3
GRAND JUNCTION	40	7	0.3	-0.2	MERIDIAN	53	4	1.5	-3.0	TN CHATTANOOGA	17	-2	0.1	-0.5
PUEBLO	39	4	0.1	-0.2	MO COLUMBIA	52	4	2.1	-2.4	KNOXVILLE	47	5	3.8	-0.9
CT BRIDGEPORT	29	-1	3.1	0.1	KANSAS CITY	33	0	4.0	2.2	MEMPHIS	44	2	3.9	-0.3
HARTFORD	26	-2	3.0	-0.2	SAINT LOUIS	30	-2	1.2	0.1	NASHVILLE	48	5	2.5	-1.8
DC WASHINGTON	35	-2	3.5	0.9	SPRINGFIELD	34	1	4.7	2.5	ABILENE	45	4	3.6	-0.5
FL APALACHICOLA	59	4	5.3	1.6	MT BILLINGS	38	1	1.9	-0.2	AUSTIN	51	3	1.5	0.6
DAYTONA BEACH	63	4	1.2	-1.9	GLASGOW	24	-4	1.7	1.0	AMARILLO	40	1	1.0	0.4
JACKSONVILLE	59	4	4.7	1.2	GREAT FALLS	10	-5	0.5	0.1	BEAUMONT	58	4	1.1	-1.4
KEY WEST	72	2	2.0	0.1	HAVRE	19	-8	0.7	0.0	BROWNSVILLE	60	5	1.1	-2.6
MIAMI	69	1	1.7	-0.3	HELENA	11	-8	0.8	0.4	CORPUS CHRISTI	66	3	0.2	-1.3
ORLANDO	64	3	1.8	-1.0	KALISPELL	22	-4	1.2	0.8	DEL RIO	62	3	1.1	-0.5
TALLAHASSEE	56	3	9.6	4.6	MILES CITY	24	-3	1.9	0.8	EL PASO	60	5	0.2	-0.7
TAMPA	65	4	1.5	-1.6	MISSOULA	20	-3	0.7	0.1	PORT WORTH	52	4	0.4	-0.1
WEST PALM BEACH	69	3	1.6	-1.0	NE GRAND ISLAND	29	1	2.2	1.4	GALVESTON	51	3	2.5	0.6
GA ATLANTA	50	5	2.5	-1.9	LINCOLN	28	1	0.5	-0.3	HOUSTON	59	3	1.1	-1.3
AUGUSTA	52	5	2.5	-1.5	NORFOLK	26	0	0.5	-0.5	LUBBOCK	60	5	2.7	-0.5
MACON	53	4	4.0	-0.5	NORTH PLATTE	24	0	1.1	0.3	MIDLAND	46	3	0.9	0.4
SAVANNAH	57	5	5.3	2.1	OMAHA	27	0	1.1	0.6	SAN ANGELO	51	4	0.2	-0.4
HI HILO	74	3	0.6	-12.9	SCOTT'S BLUFF	24	-1	1.0	0.0	SAN ANTONIO	53	3	0.6	-0.2
HONOLULU	73	0	1.4	-1.3	VALENTINE	28	-2	1.8	1.5	VICTORIA	58	4	2.5	0.7
KAHULUI	71	-1	1.4	-1.9	NV ELKO	25	1	0.5	0.0	WACO	61	4	0.5	-1.7
LIHUE	71	0	1.0	-2.7	ELY	38	7	1.9	1.1	WICHITA FALLS	53	2	4.5	2.5
ID BOISE	41	5	3.7	2.6	LAS VEGAS	35	7	0.8	0.1	UT BLANDING	48	2	1.1	0.1
LEWISTON	39	0	2.0	1.1	RENO	56	6	0.2	-0.3	CEDAR CITY	38	5	1.4	0.4
POCATELLO	35	6	2.6	1.7	WINNEMUCCA	43	5	4.8	3.9	MILFORD	38	4	0.6	-0.2
IL CAIRO	40	1	4.1	0.7	NH CONCORD	41	6	0.9	0.2	SALT LAKE CITY	38	6	0.6	-0.1
CHICAGO	24	-2	2.6	1.3	NJ ATLANTIC CITY	21	-1	2.2	-0.3	VT BURLINGTON	41	7	1.3	-0.1
MOLINE	23	-2	2.4	1.1	NM ALBUQUERQUE	32	-1	3.4	0.1	VA NORFOLK	42	1	2.7	-0.6
PEORIA	24	-3	1.8	0.4	ROSWELL	43	1	1.2	0.7	RICHMOND	39	0	2.7	-0.4
QUINCY	25	-4	2.1	0.7	ALBANY	47	1	0.5	0.2	ROANOKE	38	0	2.9	-0.3
ROCKFORD	22	-1	2.4	1.2	BINGHAMTON	23	-1	3.0	0.8	COLVILLE	31	0	2.4	0.9
SPRINGFIELD	27	-3	1.8	0.0	BUFFALO	22	-1	4.0	1.7	QUILLAYUTE	40	-1	12.8	0.7
IN EVANSVILLE	38	3	5.8	2.8	NEW YORK	24	0	2.6	0.2	SEATTLE-TACOMA	43	0	4.5	0.3
FORT WAYNE	25	-1	3.0	1.0	ROCHESTER	32	-2	2.7	-0.4	SPOKANE	32	-1	2.0	0.4
INDIANAPOLIS	31	1	2.9	0.4	STRACUSE	24	0	2.5	0.2	WALLA WALLA	41	0	3.7	2.3
SOUTH BEND	25	-2	2.5	0.5	ASHEVILLE	23	-1	2.2	-0.4	YAKIMA	35	-1	1.3	0.5
IA DES MOINES	22	-3	1.8	0.6	CHARLOTTE	42	3	1.9	-1.8	WV BECKLEY	36	3	2.7	-0.5
DUBUQUE	19	-2	2.3	1.0	GREENSBORO	47	4	1.0	-2.8	CHARLESTON	40	5	4.3	1.2
SIoux CITY	23	0	0.7	-0.3	HATTERAS	42	2	1.6	-1.8	HUNTINGTON	39	3	3.6	0.8
WATERLOO	17	-3	2.4	1.4	NEW BERN	49	3	1.4	-2.7	PARKERSBURG	35	2	3.9	1.0
KS CONCORDIA	33	2	1.3	0.4	RALEIGH	44	3	1.7	-1.8	WI GREEN BAY	18	0	0.8	-0.3
DODGE CITY	37	2	0.4	-0.1	WILMINGTON	51	4	2.5	-0.9	LA CROSSE	18	-1	0.7	-0.2
GOODLAND	34	2	0.4	0.1	BISMARCK	14	-1	0.3	-0.2	MADISON	19	-1	2.7	1.7
TOPEKA	32	0	1.6	0.5	FARGO	10	-1	0.3	-0.2	MILWAUKEE	23	0	3.9	2.6
WICHITA	38	3	1.3	0.4	GRAND FORKS	7	-2	0.4	-0.1	WAUSAU	17	1	0.8	-0.2
EY BOWLING GREEN	41	3	3.8	-0.2	WILLISTON	13	-1	0.6	0.1	CASPER	29	2	0.9	0.3
JACKSON	41	8	5.4	1.7	OH AKRON-CANTON	29	2	3.1	1.0	CHEYENNE	30	1	0.5	0.1
LEXINGTON	38	4	2.5	-0.8	CINCINNATI	35	3	2.9	0.2	LANDER	25	-1	1.0	0.4
LOUISVILLE	40	4	3.9	0.7	CLEVELAND	28	1	3.1	0.9	SHERIDAN	23	-4	1.5	0.7
PADUCAH	40	3	3.7	0.3					PR SAN JUAN	76	-1	1.2	-0.8	
LA ALEXANDRIA	56	1	1.4	-4.1										

Based on 1951-80 normals.

National Agricultural Summary

March 3 to 9, 1986

HIGHLIGHTS: Warm and mostly dry weather advanced land preparation throughout the Southeast, the Delta, and central and southern Great Plains. Wetness hampered fieldwork along the west coast and upper Corn Belt. Seeding gained momentum in the Southeast and in Texas. Soil moisture was becoming short in the Southeast and in most Plain States. The lack of moisture held down small grain growth.

Winter wheat was mostly good to fair. Early-week, extremely cold temperatures plunged through the Great Plains reaching as far south as northern Texas. Most small grains were without snow cover which left them vulnerable to winterkill. However, the cold temperatures were of short duration as temperatures were mostly above normal the rest of the week. Corn planting continued spreading with seeding now underway in Mississippi. A few fields of rice were planted in Louisiana. Cold weather swept across the Carolina's down into Georgia, but damage to peaches is expected to be minimal. Livestock was mostly good. Warm temperatures eased stress.

SMALL GRAINS: Warm temperatures provided ideal conditions for growth, but inadequate moisture was the main factor limiting growth in the central Plains and in the Southeast. Snow protection was nonexistent for most small grains except the upper Corn Belt in the Northeast. Spring barley and oat seeding continued in the central Plains. Topdressing and fertilization were active in most areas of the Nation.

In Texas, wheat was mostly fair to good. Small grains showed good growth, but more moisture is needed for progress to continue. Producers increased irrigation in the Plains. Spraying was underway to control greenbug infestations in the Plains and in Cross-Timbers. Moisture shortages slowed growth in central Texas and in Blacklands, but many fields had reached the jointing stage. Kansas' wheat was good to fair with light to moderate wind damage. Oklahoma wheat grew well. Alfalfa weevils and greenbugs infested southwestern fields, and strong winds damaged thin stands in the northwest. Wheat was mostly good. Fall seeded grains were generally good in North Dakota. Fifty-one percent (%) of the wheat was greening in Montana. Wind damage has been light with the crop in mostly fair to good condition. Despite the lack of precipitation, Colorado's wheat was mostly good. Arizona's wheat and barley were good to excellent. Sixty-five percent of the wheat acreage was jointing and early planted fields were heading in western and central Arizona. In California, warm weather promoted above-normal development with early wheat heading-out.

OTHER CROPS: Warm weather and the disappearance of snow allowed farmers to harvest 1985 corn in the northern Plains. Corn planting progressed rapidly in the Southeast. In Texas, 41% of the acreage was seeded compared with 10% normally.

Limited corn planting took place in central and south Georgia. Corn was 5 and 18% seeded in Mississippi and Louisiana, respectively. Sorghum seeding advanced to 24% completion in Texas. Cotton planting continued in western Arizona and began in Texas. Cotton seedbed preparation advanced in California, but none has been seeded.

Tobacco bed seeding progressed in the Carolina's and in Virginia. Tobacco transplanting was expected to begin this week in Florida. Georgia tobacco plants were good to excellent.

FRUIT AND NUTS: Pruning was drawing to a close in the Southeast but continued in the northern fruit producing areas. Cold temperatures caused very little damage to peaches in the Southeast. Some early fruit sets were damaged in eastern Texas. Peach tree blooming spread into Cross-Timbers and the Blacklands. In Utah, early-season fruit was close to bloom stage.

Florida's citrus groves were very good. Inadequate precipitation forced producers to irrigate. Bloom buds developed with a few young groves in full bloom. Early orange harvest slowed as supplies ran low. Grapefruit movement increased. In Texas, many citrus groves were irrigated. Blooming continued across the valley, and new growth was good in most groves. Arizona's citrus packing consisted of lemons, grapefruit, Valencia oranges, and Kinmore tangerines. Apples approached bloom in the southeast and Perlette grapes in Yuma. In California, grapes leafed out and bunches were thinned in the Coachella Valley. Stone fruit were sprayed for thrips and fungus. Early Valencia oranges were harvested in the desert and prunes approached full bloom.

VEGETABLES: Early-week frost and freezing temperatures hit Florida's vegetable producing areas. Tender crops suffered varying degrees of damage in all but the Pompano area. Plant growth and development slowed, but very little acreage was lost. Spring planting was nearly complete in all areas except west central Florida. Harvest is expected to increase rapidly in March. Total vegetable shipments increased because of higher volume of snap beans, carrots, celery, cucumbers, escarole, peppers, potatoes, and radishes. Vegetable harvest continued in Texas. Onion harvest began much earlier than normal. Some sweet corn was planted in east Texas, and onion and potato planting continued in the High Plains. A wide variety of mixed vegetables were harvested in Arizona. California vegetable harvest consisted of artichoke, asparagus, broccoli, carrots, cauliflower, celery, and lettuce. Strawberry picking was active along the south coast while plants began blooming in the central Valley.

PASTURES AND LIVESTOCK: Inadequate moisture slowed growth in most southern areas. Livestock was mostly good. Warm temperatures eased stress and supplemental feeding. In Texas, blackleg disease caused cattle losses in the Blacklands.

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: Most of State reported no rain. Temperatures averaged near normal. Soil moisture very short to short. Livestock, poultry generally good.

ARIZONA: Upper level low pressure system moved across State 2nd, 3rd with scattered light showers, thunderstorms. Mostly sunny, very warm 4th to 7th. Another disturbance 8th, 9th with strong winds, scattered showers over central, northern sections. Total moisture amounts 0.10 to 0.20 in. over central mountains, central basins with very little or none elsewhere. Average temperatures 7 to 15° above normal.

Wheat, barley good to excellent; 65% jointing. West, central areas early planted fields reached heading stage. Seedbed preparation for cotton continued; 55% of seedbeds prepared. Planting done west on limited scale. Pre-irrigation, herbicide applications took place. Alfalfa good to excellent. Fields sprayed for aphids, weevils. Weed infestations mostly light to moderate. Growers west began first cutting of hay. Sheep grazing slowed. Corn seedbed preparation advanced. Sorghum bed preparation very limited. Citrus packing consisted of lemons, grapefruit, Valencia oranges, Kinnow tangerines. Apple trees southeast, Perlette grapes Yuma approaching bloom. Lettuce packing gained momentum Parker-Poston, remained strong Yuma. Growers expected to begin harvesting Salt River Valley 11th. Lettuce Eloy-Marana District progressing nicely. Thinning, fertilizing took place. Yuma, Salt River Valley wide variety of mixed vegetables harvested. Broccoli packed Eloy-Marana District. Melon planting advanced. Potato planting finished central areas. Dry onions, other spring vegetable crops developing well.

ARKANSAS: Weather continued warm, dry with above normal temperatures and below normal rainfall. Temperature extremes 22°; 81°. Precipitation none to 0.17 in.

Preparation of land for spring planting very active as open weather allowed farmers in fields. Winter wheat, oats fertilized; good condition. Rainfall needed to stimulate fertilizer, improve condition.

CALIFORNIA: Ridge of high pressure that kept State dry, warm since 19th of February began to break down toward end of week with first major storm system bringing rain north 7th and 8th. Warm air that covered State early week brought record breaking temperatures to most southern areas, few places north. Temperature averages well above normal.

Field conditions remained wet northern districts. Small grains good. Warm weather promoted above normal development. Early wheat heading out. First cutting alfalfa for green chop underway San Joaquin Valley. Planting safflower. Field preparation continued for planting cotton. Mature sugarbeets harvested. Date pollination started. Grape vines leafed out, bunches thinned Coachella Valley. Prunes approached full bloom. Thrip, fungicide application stone fruit. Early walnut varieties set catkins. Early Valencia harvested desert. Puffiness, creasing Navels. Artichoke fairly heavy variable quality Salinas. Asparagus started Firebaugh, Delta Districts, while continued strong desert with some finished. Cullage heavy due to warm weather. Broccoli

moderate Salinas, fairly heavy Santa Maria variable quality. Harvest finished desert. Carrot active desert, Coachella Valley. Cauliflower fairly light Salinas, moderate Santa Maria quality variable. Volume desert very light as most shippers finished. Some flood damage Santa Clara County. Celery shipments very light Santa Maria. Lettuce Central Valley progressed well. Rapid growth may result earlier harvest. Harvest continued increase Palo Verde Valley demand strong. Harvest near peak Blythe, held back by restrictive market conditions. Harvest finished Imperial Valley. Movement fall potatoes Tulelake-Butte Valley continued full-time. Harvesting White Rose, Red varieties continued Parris Hemet average quality and fair demand. Growers busy planting spring crop Kern County. Strawberry picking active south coast, while plants beginning bloom Central Valley. Sweetpotato hotbeds being planted Merced. Tomatoes for fresh market, processing being planted Central Valley. Range pasture continued to improve, very good most areas. Water supplies above normal. Supplemental feeding continued. Calving continued northern area. Some dairy yards San Joaquin Valley remained wet. Sheep grazing alfalfa fields southern areas.

COLORADO: Temperatures averaged well above normal. Record high temperatures set several places 4th, 5th, 8th. Little or no precipitation reported through 8th. Light to moderate snow mountains 9th. Light to moderate rain western valleys and east had few light showers, strong winds.

Wheat mostly good despite lack of precipitation. Major farm activities included: Seedbed preparation for small grains, care and feeding of livestock with calving, lambing underway.

FLORIDA: Mild days rather cool nights reinforced on 5th, 7th with a new surge of cooler air. Rainfall amounts generally near 0.50 in. or less with only Canal Point, Perry, Jacksonville coming in with 1.00 in. or more on 5th. Cold front 7th relatively dry.

Soil moisture generally adequate. Corn planting active, neared completion few northern counties. Tobacco transplanting to begin this week, preparation active. Small grains good. Sugarcane declining seasonally. Cold front beginning of week set back growth of permanent pastures. Pastures fair to good Panhandle, poor to fair elsewhere. Cattle generally fair to good throughout State. Citrus groves very good. Some irrigation, very little rain. Bloom buds developing, only few young groves full open bloom. Early orange harvest continued to slow as supplies run low, grapefruit movement increasing. Tangelo harvest almost complete. Temple movement continued active. Frost, freezing temperatures early week followed by gradually moderating weather over vegetable producing areas. Temperatures in high 20s caused heavy frost southern areas at beginning of week slowly increasing to 40s by end of week. High winds early period contributed to damage most areas. Tender crops suffered varying degrees of damage in all but Pompano area. Plant growth, development slowed but very little acreage lost. Planting spring crop about completed in all but west central areas. Harvest expected to increase rapidly during March. Bulk of vegetable supplies

currently from Everglades, Pompano, Dade County with southwest area producing light volume. Increase in total shipments of vegetables due to higher volume of snap beans, carrots, celery, cucumbers, escarole, peppers, potatoes, radishes offsetting decreased shipment of cabbage, sweet corn, eggplant, lettuce, squash, strawberries, tomatoes.

GEORGIA: Temperatures averaged 1 to 30 below normal. Coldest temperatures near 200 northeast mountains to mid 30s over southeast. Warmest 9th maximum temperatures near 600 northeast mountains to upper 70s over central and south. Rainfall 0.33 to 0.50 in. across extreme south 11th. No significant rain over north and central.

Soil moisture short north, southeast; adequate central, southwest. Land preparation, small grain topdressing active; limited corn planting south and central; final peach tree pruning. Tobacco plants good to excellent. No transplanting yet. Small grains mostly fair to excellent, moisture needed north. Cattle fair to mostly good. Hogs good.

HAWAII: Crops continued to make fair progress under mostly sunny skies. Winds variable 5 to 20 mph. Light rainfall occurred over some areas as few shower bands passed near State. Year to date rainfall totals continue to lag behind long term median averages most rainfall reporting stations around State. East banana orchards still recovering from wind damages. Many papaya orchards active harvest. Vegetable output light to moderate.

IDAHO: Unseasonably dry, mild weather southern half early week. Northern areas some light rainfall. Temperatures averaged 10 to 150 above normal statewide.

Dry, warm conditions early week allowed fieldwork to begin south, southeast counties. Where possible, producers busy plowing, beginning fertilizer applications. Rain late week halted most activity. Livestock continued to benefit from mild temperatures, good to excellent condition with calving, lambing progressing well. Feed supplies short but have been adequate most areas. Frost damage to potato stocks still being assessed and sorting of seed potatoes continued with some being shipped.

ILLINOIS: Temperatures 20 above to 30 below normal. Temperature extremes 50; 80°. Precipitation range from none to 0.66 in., mostly north central.

Winter wheat mostly good. Livestock good.

INDIANA: Temperatures averaged 1 to 30 below normal. First of week cold, last of week mild. Rainfall averaged 0.05 to 0.20 in. Frost penetration of soils eliminated.

Wet fields continued to limit outside activities. Farmers mostly attending meetings buying seed and chemicals, readying equipment, making plans, caring for livestock, usual chores. Barnlots extremely muddy, manure disposal problem. Wheat generally average to good.

IOWA: Dry week; temperatures near normal east to 30 above normal west. Snow cover diminished during week. Weekend snow cover restricted to northeast with depths to 10 in. extreme northeast. Coldest 7th, -40 Algona and -20 Mason City. Warmest 2nd low 50s southwest to central. Livestock good. Farmers busy with general livestock care, normal winter chores. Calving began. Farmers planning spring fieldwork.

KANSAS: Few hundredths inch rain west, none central and east. Weekend showers 0.25 to 0.75 in. east. Temperatures averaged 45 to 500, ranging 7 to 90 above normal east and south, 10 to 130 above normal northeast.

Days suitable for fieldwork 5.5. Soil moisture 70% short, 27% adequate, 3% surplus. Wheat 2% very poor, 12% poor, 30% fair, 33% good, 23% excellent. Light to moderate damage from high winds. Oats 35% planted, barley 45% planted. Pasture good, need rain. Livestock good.

KENTUCKY: Several weather changes during week. Temperatures averaged 2 to 50 below normal. Precipitation 0.75 in. below normal. Temperatures normal until Arctic cold front sent readings plummeting. Cold air departed quickly and strong warming over weekend. Low temperatures in teens 7th, high reading on 9th reached upper 60s to mid 70s. Precipitation averaged 0.10 to 0.25 in. mainly during midweek. Some precipitation over northeast snow.

Wheat not greened much yet. Farmers still feeding hay. Burley markets closed. Farmers still sorting out government program provisions.

LOUISIANA: Temperatures averaged 20 below normal to 30 above normal. Temperature extremes 240; 790. Precipitation averaged none to 0.90 in.

Days suitable for fieldwork 6.2. Soil moisture 57% short, 43% adequate. Spring plowing 37% complete, 13% 1985, 19% avg. Corn 18% planted, 6% 1985, 6% avg. Rice 1% planted, none 1985, 1% avg. Winter wheat 1% headed; fair to good. Sugarcane, livestock fair to good; vegetables, pastures fair.

MARYLAND & DELAWARE: Maryland: Temperatures averaged 60 below normal over State; lowest temperature 150 Cumberland; highest temperature 550 Patuxent. Precipitation averaged 0.06 in., ranging from trace to 0.43 in.

Fieldwork 2.0 days suitable. Topsoil moisture surplus; subsoil moisture adequate. Small grains good. Main activities: Repairing equipment, topdressing small grains, hauling manure, planting peas.

Delaware: Temperatures averaged 50 below normal over State; lowest temperature 140 Wilmington; highest temperature 510 Milford. Precipitation averaged 0.02 in., ranging from none to 0.06 in.

Fieldwork 2.0 days suitable. Topsoil moisture surplus; subsoil moisture adequate. Small grains good. Main activities: Repairing equipment, topdressing small grains, hauling manure, and planting peas.

MICHIGAN: Cold, snowy winter week across State. Temperatures averaged 40 below normal with most areas having snowpacks increased.

Major farm activities hauling manure, marketing farm commodities, repairing equipment, pruning fruit trees and grape vines. Tapping for maple syrup continued. Calving, lambing continued. Feed supplies good. Snow continued to cover entire State. Small grains, hay good.

MINNESOTA: Dry southern portion of State. Temperatures averaged near normal to 30 above normal. Extremes 460; 250. Precipitation averaged near normal northern one-third State and west central and 0.25 in. below normal elsewhere. Snowfall averaged trace across southern one-third State and central and 1 to 4 in. elsewhere. Snow depth weekend averaged 2 in. southwest to 21 in. northeast.

MISSISSIPPI: Average temperatures ranged from 40° below to 40° above normal, extremes 230; 800. Rainfall below normal, greatest 24-hour total 0.52 in.

Fieldwork 6.4 days suitable, 2.2 1985, 2.7 avg. Soil moisture 36% very short, 48% short, 16% adequate. Land preparation ahead of schedule. Main activities breaking ground, fertilizing wheat. Corn planting 5% completed, 2% 1985. Watermelons 4% planted, 1% 1985. Wheat 22% jointing, 19% 1985, 10% avg; condition fair. Supplies of feed grains, hay adequate. Pasture fair; livestock good to fair.

MISSOURI: Temperatures 20° above normal across State except Bootheel temperature 20° below normal. Dry week with only rainfall reported along eastern side but totals less than 0.10 in.

Farmers beginning fieldwork with plowing and fertilizer application activities. Open, dry weather been beneficial to livestock.

MONTANA: Temperatures very mild, 100° above normal west and northeast; 13 to 180° above normal rest State. Precipitation confined to last of week; mostly light, around 0.10 in; some west and southwest areas 0.25 in.

Topsoil moisture 7% short, 77% adequate, 16% surplus. Subsoil moisture 48% short, 52% adequate. Winter wheat 60% fair, 40% good. Wind damage 76% light, 24% moderate. Winter wheat growth 49% dormant, 51% greening. Calving, lambing 30% complete. Hay, roughage 92% short, 8% adequate. Stockwater 11% short, 74% adequate, 15% surplus.

NEBRASKA: Mild, dry; average temperatures 5 to 130° above normal. Precipitation very light ranging trace to few hundredths of an inch.

Winter wheat mostly good to fair. Limited corn harvesting, tax preparation, planning and ordering supplies, soil testing, evaluating 1986 farm program, attending meetings and sales, machinery upkeep.

NEVADA: Week started with summer like weather, above normal temperatures all areas. By midweek high pressure system started to weaken opening door to pacific storm systems. By end of period, heavy rainfall amounts Sierras brought rivers in extreme west to near flood levels again. Cooler air accompanying storms lowered temperatures all areas. Gusty winds also extensive with changing systems.

Mild weather early period helped dry feeding areas but precipitation end of week again created problems west, north.

NEW ENGLAND: Temperatures averaged 1 to 40° below normal. Average temperatures ranged from mid to upper 200° across north and Berkshires of Massachusetts, only 170° across northern Maine. Remainder of region averaged between 30, 350. Precipitation (rainfall and melted water equivalent of snowfall) averaged none to 0.15 in. southern areas, between 0.20 to 0.80 in. northern areas.

Farmers tending to livestock, winter chores. Sugarmakers collecting sap, between freezing spells.

NEW JERSEY: Temperatures averaged 50° below normal. Extremes 40; 590. Rainfall averaged 0.02 in. north, 0.01 in. central, none south. Heaviest 24-hour total 0.04 in. on 6th, 7th. Estimated soil moisture in percent of field capacity averaged 89% north, 76% central, 70% south. Four inch soil temperatures averaged 290° north, 320° central, 340° south.

Some plowing done on lighter soils. Many fields too wet to work. Limited fruit pruning

completed. Farmers caring for livestock, repairing machinery.

NEW MEXICO: Average weekly temperatures well above normal. Temperatures 110° northern mountains to 830° southeastern plains. Precipitation none to 0.35 in. central valley, highlands.

Days suitable for fieldwork 6.9. Soil moisture 67% short, 33% adequate. Alfalfa 14% poor, 29% fair, 57% good. Barley 13% poor, 36% fair, 38% good, 13% excellent. Irrigated wheat 13% poor, 36% fair, 38% good, 13% excellent. Dryland wheat 25% poor, 50% fair, 25% excellent. Onions 100% good. Lettuce 100% fair. Cattle 42% fair, 58% good. Sheep 45% fair, 55% good. Range 25% poor, 75% fair.

NEW YORK: Temperatures averaged 2 to 100° below normal, mostly in 20s except low to mid 30s extreme southern sections. Extremes -150° Watertown and 490° New York City. Precipitation below normal, mostly 0.50 or less. Highest amounts north country.

Farm activities included tending livestock, repairing equipment, marketing crops from storage and routine farm chores. Some cows are starting to freshen.

NORTH CAROLINA: Temperatures averaged 4 to 70° below normal, statewide. Precipitation ranged from none to 0.30 in.

Days suitable for fieldwork 4.8. Soil moisture 28% short, 68% adequate, 4% surplus. Wheat 26% fair, 74% good. Oats 36% fair, 64% good. Barley 29% fair, 71% good. Rye 28% fair, 72% good. Pasture 16% poor, 42% fair, 42% good. Tobacco beds 28% fair, 72% good. Supplies: Feed grains 2% short, 87% adequate, 11% surplus. Hay and roughage 96% adequate, 4% surplus. Activities: Topdressing small grains, preparing and seeding tobacco beds, spreading lime, land preparation, pruning fruit trees, tending livestock, cutting firewood, planting Irish potatoes, planting cabbage, mowing, conservation work, machinery repair and other farm maintenance.

NORTH DAKOTA: Weather warm and relatively dry. Temperatures fell toward end of week but began to rebound on 8th. Temperatures averaged 9 to 130° above normal west, normal to 30° above normal east. Extremes ranged from 630° above south central 4th to 180° below northeast 7th. Precipitation below normal across State. Most areas received trace of precipitation.

Warmer weather great for spirit. Much of seasons snow melted or blown away. Fall seeded crops continued generally good. Warmer weather relieving stress on livestock.

OHIO: Temperatures slightly below normal starting bitterly cold early to balmy late period. Extremes subzero north 9th to 700° 10th. Precipitation widespread; water equivalent 0.10 to 0.30 in. Bare soil temperatures 4 in., low to upper 30°.

No snow cover remaining, all soil thawed. Fieldwork: Fertilizing and plowing.

OKLAHOMA: Temperatures averaged 20° above normal west central to 60° above normal Panhandle, southern third. Precipitation none most areas to 0.19 in. southeast.

Days suitable for fieldwork 6.7. Topsoil moisture 70% short, 30% adequate. Subsoil moisture 15% short, 85% adequate. Wheat 59% fair, 85% good, 10% excellent. Wheat 10% jointing, 2% 1985, 5% avg. Good wheat growth. Alfalfa weevils, greenbugs infest southwest fields. Strong winds damaged thin stands northwest. Row crop seedbed preparations well ahead average.

Pastures improved with warm days, mild nights. Livestock marketing up, prices down slightly.

OREGON: Temperatures 5 to 12° warmer than normal statewide; east of Cascades 7 to 11° above normal; west with 5 to 7° higher than normal except Medford 12° higher. Precipitation heaviest coast range and along coast; over 3.00 in. some locations. East of Cascades relatively dry except Klamath Falls 1.24 in.

Soil moisture adequate to surplus. Growing conditions have been excellent. Winter grains eastern areas good, show little winter damage, growth started most areas. Spring fieldwork began east. Western fields greening rapidly. Dormant spraying, pruning underway Hood River orchards; weed control Willamette Valley. Some early vegetables seeded, soil preparation ongoing. Livestock generally good. Calving continued east. Lower elevation ranges supporting livestock; mid-elevation rangeland greening up; highest areas still under snow. Hay stocks remain short, but good weather helped. Lambing continued west.

PENNSYLVANIA: Unseasonably cold, dry week across State. Average temperature 26°, 6° below normal. Average precipitation 0.19 in., 0.55 in. below normal.

Activities for week: Caring for livestock, normal winter chores.

PUERTO RICO: Island average rainfall 0.27 in., 0.27 in. below normal. Highest weekly total 1.20 in. Highest 24-hour total 1.05 in. Temperatures averaged about 76 to 77° on coasts, 70 to 73° interior divisions. Mean station temperatures ranged from 64 to 78°. Extremes 49°; 92°. Total rainfall 0.12 in., minus 0.37 in.

SOUTH CAROLINA: Temperatures averaged below normal. Rainfall 0.10 to 0.40 in. northeast, north central on 4th. Remainder of State rainless. Very low humidity, high winds caused sharp increase in forest fires.

Topdressing small grains continued. Cold, dry weather slowed growth. Good rain needed. Tobacco beds good. Fruit crop prospects remain good - adequate chilling hours received. Land preparation for spring planting continued - soil moisture short many locations.

SOUTH DAKOTA: Average temperatures ranged 1 to 15° above normal. Extremes -15°; 75°. Precipitation very light; trace or none. Snow depths averaged 3 to 12 in. north, little to none elsewhere.

Livestock good. Calving and lambing beginning. Major activities include planning spring planting, caring for livestock, attending farm meetings, harvesting late corn.

TENNESSEE: Temperatures averaged mid 30s northeast to near 50° west. Strong warming weekend; highs of 70° most State. Precipitation very light. Average amounts less than 0.10 in.

TEXAS: Week cold front, upper air disturbance triggered showers, thunderstorms on 3rd central, southeastern counties. Next front brought cool surge western sections midweek, very little rain. Edge Arctic air mass chilled High Plains, northern Rolling Plains 7th, rapid warming weekend. Gulf moisture plus weak disturbance triggered showers lower Rio Grande Valley, far south on 8th. Rainfall below normal all areas but upper coast, lower valley. Temperatures averaged above normal statewide.

Crops: Wheat 5% poor, 29% fair, 58% good, 8% excellent. Small grains continued show some growth; moisture becoming critical for continued

progress. Irrigation Plains increasing. Greenbug populations increased Plains, Cross-Timbers, spraying underway. Moisture shortage also slowing growth. Blacklands, central areas. Producers continuing topdressing, hoping rain. Many fields these areas jointing. Drying winds first two weeks month decreased soil moisture. Good general rain would greatly benefit conditions. Corn 41% planted, 5% 1985, 10% avg. Grain sorghum 24% planted, 3% 1985, 9% avg. Planting corn, grain sorghum continued central, eastern portions, started in earnest Blacklands. Soil moisture conditions decreasing under dry, windy conditions. Some early planted fields emerging east, portions south. Land preparations continued Plains, corn planting begin soon. Soil temperatures warming up under warm daytime temperatures. Good rain benefit emergence planted fields. Cotton 3% planted, none 1985, 1% avg. Planting underway Rio Grande Valley, some areas Coastal Bend.

Commerical Vegetables: Rio Grande Valley harvest cabbage, carrots, other greens continued. All melons good progress. Onion harvest beginning much earlier than normal because crop maturing rapidly under good growing conditions. Irrigation many citrus groves underway. Blooming continued across valley. New growth good most groves. San Antonio - Winter Garden harvest spinach, carrots, some cabbage continued. Dry conditions affected quality slightly. Watermelon stands look good, some damage from high winds. Onions good progress. East land preparation sweetpotatoes, other vegetables continued. Some planting sweet corn, watermelons underway. High Plains onion, potato planting in progress. Land preparation continued some areas. Trans-Pecos, land preparation continued cantaloups, chilies. Planted fields cantaloupe, onions irrigated because lack of moisture. Peach tree blooming spread into Cross-Timbers, Blacklands. Some spraying underway. Some early fruit sets damaged by cold weather eastern portion State.

Range and Livestock: Ranges, pastures some greening; lack of moisture limited growth. Small grains providing good grazing, cattle making good gains. Supplemental feeding continued because slow pasture growth. Most pastures could use good rain. Cattle pulled of small grain fields for grain. Livestock good. Calving increasing many areas. Some producers Blacklands reporting cattle losses from blackleg. Goat, sheep shearing increasing.

UTAH: Maximum temperatures 17° above normal all divisions. Minimums 8 to 11° above normal. Three stations reported very light precipitation. Remainder of State dry.

Dry sunny weather allowed farmers to begin limited fieldwork. Fall seeded grains began to grow. Wind, light moisture weekend got temperatures back to normal. Early season fruit close to bloom stage. Hay, grain movement slow. Most livestock had an easy winter; good shape.

VIRGINIA: Unsettled cold weather. Average temperatures 5° below normal. Record lows reported some areas 7th. Precipitation averaged only 0.05 in.

Days suitable for fieldwork increased from last week to 2.4. Topsoil moisture 77% adequate, 23% surplus. Small grain topdressing gained momentum after rain delay. Small grains good to excellent. Livestock care dominating farm activities. Limited fieldwork reported. Livestock good to excellent. Pasture, hay good to excellent. Cool weather keeping fruit trees from blooming early. Flue tobacco seeding got underway. Routine farm chores, farm meetings, tax preparation common.

WASHINGTON: Early week limited rainfall confined mainly to coast, western slopes of Cascades. By weekend widespread rain across State.

Days suitable for fieldwork less than 4.0. Soil moisture 60% adequate, 40% good. Range, pasture 70% short, 30% adequate. Hay supplies 50% short, 40% adequate, 10% good. Some field preparation, seeding underway. Pruning complete most areas. Lambing, calving continued.

WEST VIRGINIA: Temperatures averaged 3 to 70 below normal. Low -13° Elkins, high 78° Creston. Average temperature 32°. Precipitation below normal over State with exception of northern mountains precipitation above or near normal. Average precipitation 0.36 in.

Days worked 0.4. Feed supplies adequate to short. Soil moisture surplus to adequate.

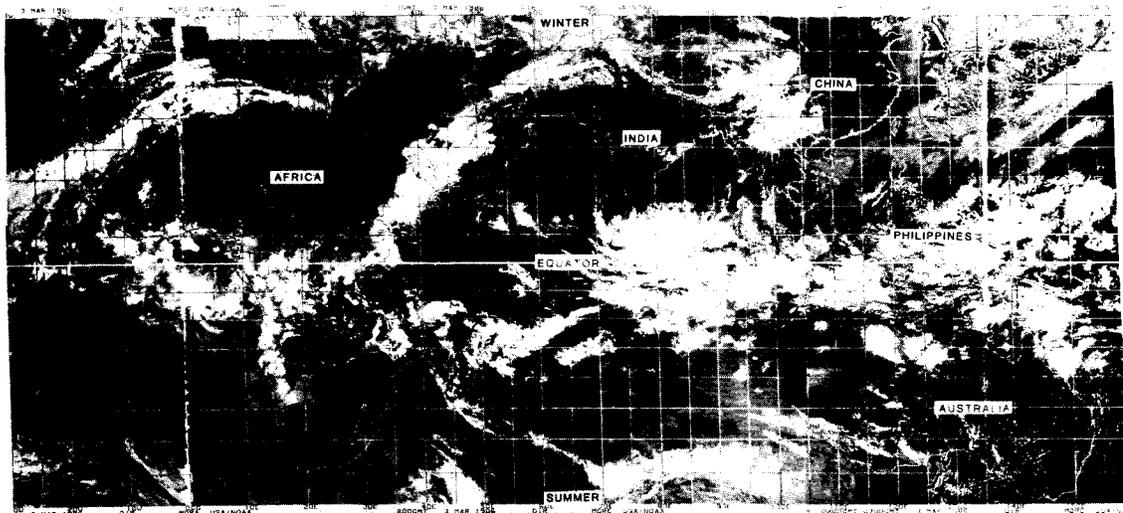
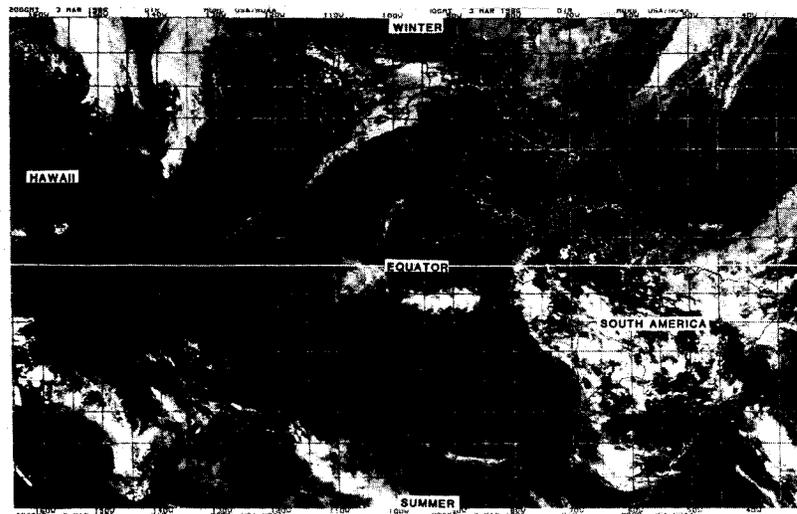
WISCONSIN: Temperatures mild early week; very cold midweek with warming trend over weekend. Snow 1 to 6 in. wet heavy snow northern part State 5th. Rain or freezing drizzle north 9th. Farm activity limited by muddy yards.

WYOMING: Temperatures averaged 8 to 16° above normal. Very dry, northeast 0.10 in. precipitation.

Winter wheat mostly good, some winterkill evident northeastern areas, some wind damage southeastern areas. Land preparation underway for spring planting. Livestock mostly good. Calving, lambing, shearing underway. Supplemental feeding continued.

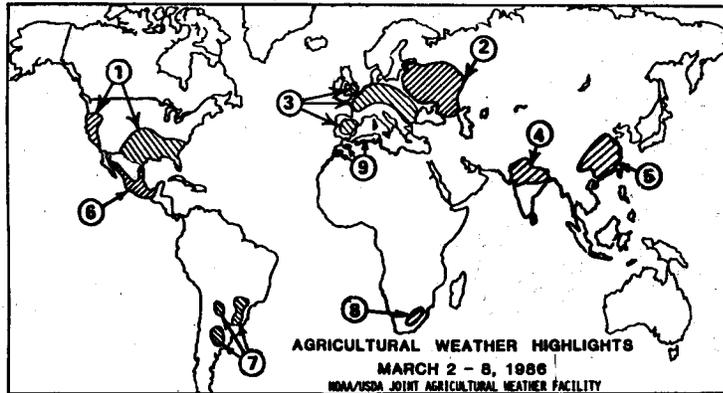
GLOBAL WEATHER SATELLITE IMAGE

MARCH 3, 1986



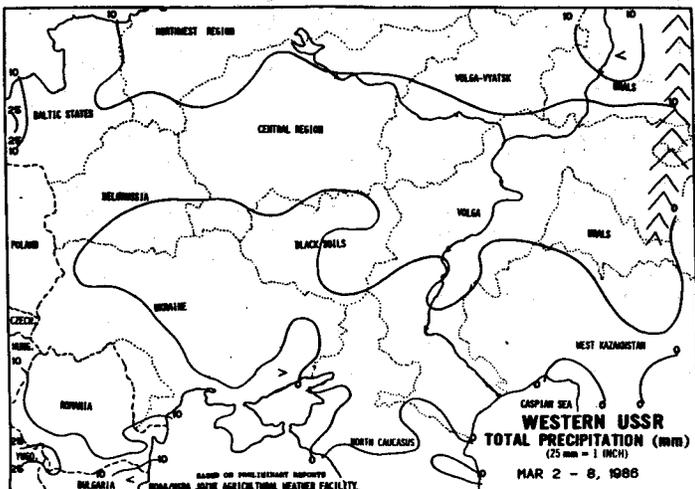
International Weather and Crop Summary

March 2-8, 1986

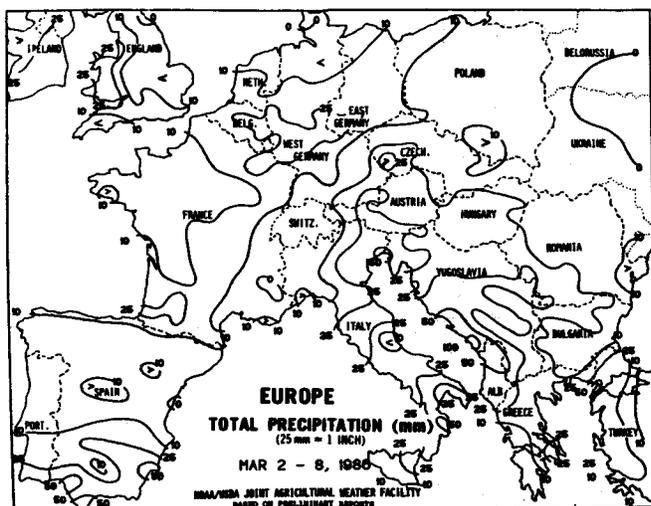


HIGHLIGHTS:

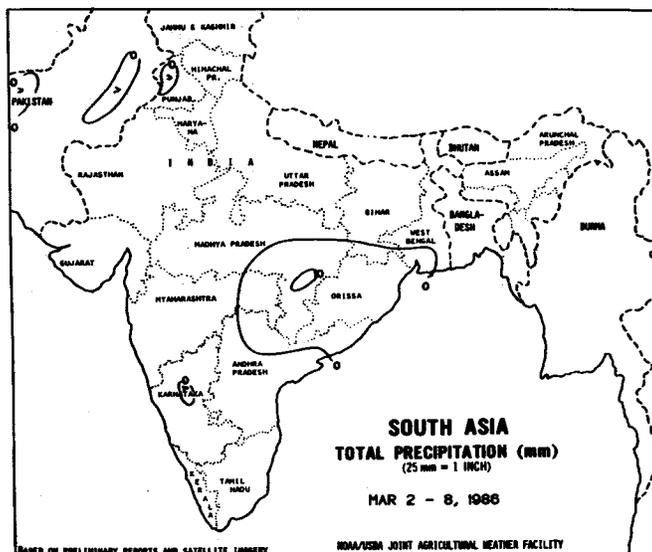
1. **UNITED STATES** ... Warm and mostly dry weather advances land preparation throughout the Southeast, the Delta, and central and southern Great Plains. Wetness hampers fieldwork along the west coast and upper Corn Belt.
2. **WESTERN U.S.S.R.** ... Gradual warming in the south melts snow cover.
3. **EUROPE** ... Winter grains in the north and east remain dormant under favorable weather conditions. Showers in Mediterranean areas benefit winter grains in the vegetative stage.
4. **SOUTH ASIA** ... Irrigation supplies adequate moisture for northern wheat in the filling stage.
5. **EASTERN ASIA** ... Warm weather favors wheat in the North China Plain. Cool, dry weather slows rice planting in the south.
6. **MEXICO** ... Scattered showers moisten topsoils in the east for early corn planting while generally dry, mild weather promotes fieldwork elsewhere.
7. **SOUTH AMERICA** ... Heavy rain falls in northern soybean areas of Brazil while light rain falls in the south. Variable rainfall covers Argentina's crop areas. Summer crops are maturing.
8. **SOUTH AFRICA** ... Light showers and cooler weather late in the week stabilize declining corn yields.
9. **NORTHWESTERN AFRICA** ... Showers in most areas benefit winter grains in the late vegetative stage.



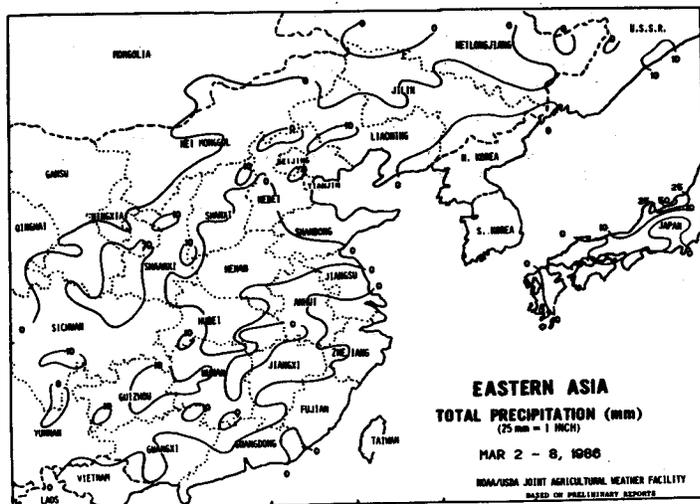
WESTERN U.S.S.R. ... A gradual warming trend occurred during the week, accompanied by generally dry weather. By midweek, temperatures across southern winter grain areas rose to above freezing, melting snow. Normally, the southward extent of the early March snow cover lies from the central Ukraine through the lower Volga. Across the north, occasional light snow early in the week changed to light rain by week's end. Weekly temperatures were above-normal across the north and near-to-below normal across the south.



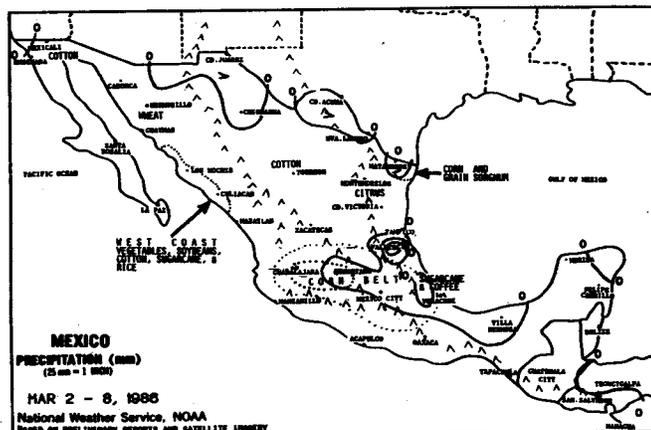
EUROPE ... Temperatures moderated across much of northern Europe, with rain occurring at many locations. Heaviest amounts of rain (10 to 25mm) covered West Germany and East Germany. Rain continued over Mediterranean winter grain areas, with precipitation amounts ranging from 8 to 44mm. Weekly temperatures were near normal over most of the region, except for Eastern Europe, where temperatures were below normal. Winter grains remained dormant everywhere except in Mediterranean areas where vegetative growth occurred.



SOUTH ASIA ... Dry weather covered most wheat areas for the second week. However, moisture supplies likely remain adequate for northern wheat in the filling stage. In the central and southern areas, wheat is maturing. Most of India's wheat production, about 80 percent, comes from irrigated areas. Temperatures averaged favorably below normal in the north, reducing evaporation. Light showers (1 to 10mm) fell in Orissa and eastern Madhya Pradesh. Most of southern India was dry.



EASTERN ASIA ... A significant warming trend occurred in the North China Plain this week. Temperatures averaged 2 to 5 degrees C above normal. The warmer weather induced wheat growth in southern crop areas near the Yangtze River. Light showers (1 to 10mm) moistened topsoils in Hebei and Shandong, but more rain is needed following a drier-than-normal winter. Temperatures increased to near normal in the rice region, but rainfall has decreased in the last 2 weeks. This week, dry weather covered coastal areas while light rain (5 to 15mm) fell in Guizhou, Hunan, Jiangxi, and Hubei. Rice planting is making slow progress due to the earlier cool and now drier weather.



MEXICO ... Some very light rain (less than 5mm) fell in the extreme north-central plateau. Locally heavier showers (10 to 25mm) occurred at scattered locations along the east-coast sugarcane area, causing only minor harvest delays. The showers moistened topsoils for early corn planting in the east. Elsewhere, mostly sunny skies, and seasonal temperatures favored crop plantings which become widespread during March. Mild weather in the northwest promoted wheat development. The wheat calendar likely ranges from late vegetative growth to early grain filling. Dry, warm weather continued over west-coast vegetable areas.

