

# WEEKLY WEATHER AND CROP BULLETIN

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

U.S. DEPARTMENT OF AGRICULTURE  
National Agricultural Statistics Service and World Agricultural Outlook Board

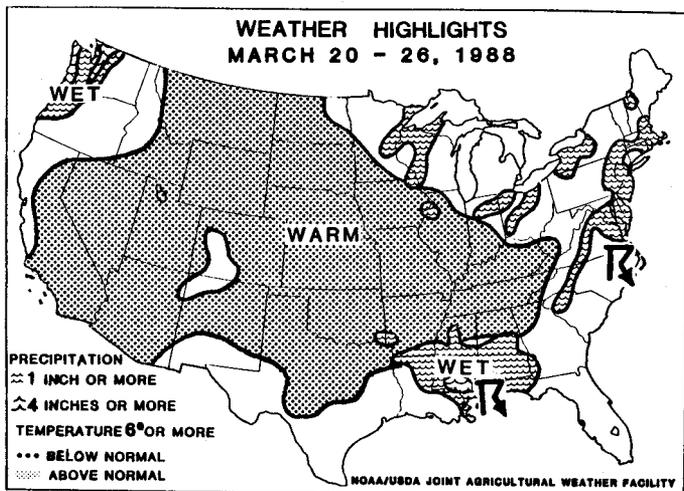
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## National Weather Summary

March 20 - 26, 1988



**HIGHLIGHTS:** Unseasonably warm weather replaced the cold pattern of the previous week. A major spring storm brought beneficial rains to the eastern third of the Nation, while another storm produced copious rainfall in parts of the Pacific Northwest.

**SUNDAY...** Snow and falling temperatures accompanied a cold front as it moved through the Northeast. Midday temperatures were only in the teens and twenties from central North Dakota across the Great Lakes region into northern New England. Snow showers were scattered along the shore of Lake Ontario in New York. Snow also fell in north-eastern Maine. Elsewhere, most of the Nation experienced a marked warming trend.

**MONDAY...** Cold Canadian air continued to pour into the Northeast, while warm, dry weather prevailed in the southern and western sections of the Nation. Midday temperatures were mostly in the seventies over the southern third of the country. Rain was scattered across the Pacific Northwest. Light snow flurries occurred in the Middle Atlantic region.

**TUESDAY...** Strong winds accompanied an eastward-moving frontal system in the Pacific Northwest. Strong southerly winds reached from central Texas across eastern Kansas and western and northern Missouri into southeastern Iowa and northern Illinois. Unseasonably warm weather extended across the southern third of the country and the central Plains, with midday temperatures mostly in the seventies and low eighties.

**WEDNESDAY...** Isolated thunderstorms developed in northeastern Oklahoma. Also, a few rain showers occurred over east Texas. Much of the western half of the Nation experienced strong, gusty winds, especially over the Plateau region and the central

High Plains. Thunderstorms, rain showers, and mountain snow showers were scattered from the northern Pacific coast across the northern and central Rockies. Showers and thunderstorms were scattered over the lower Mississippi Valley, and from northeastern Missouri to southeastern lower Michigan.

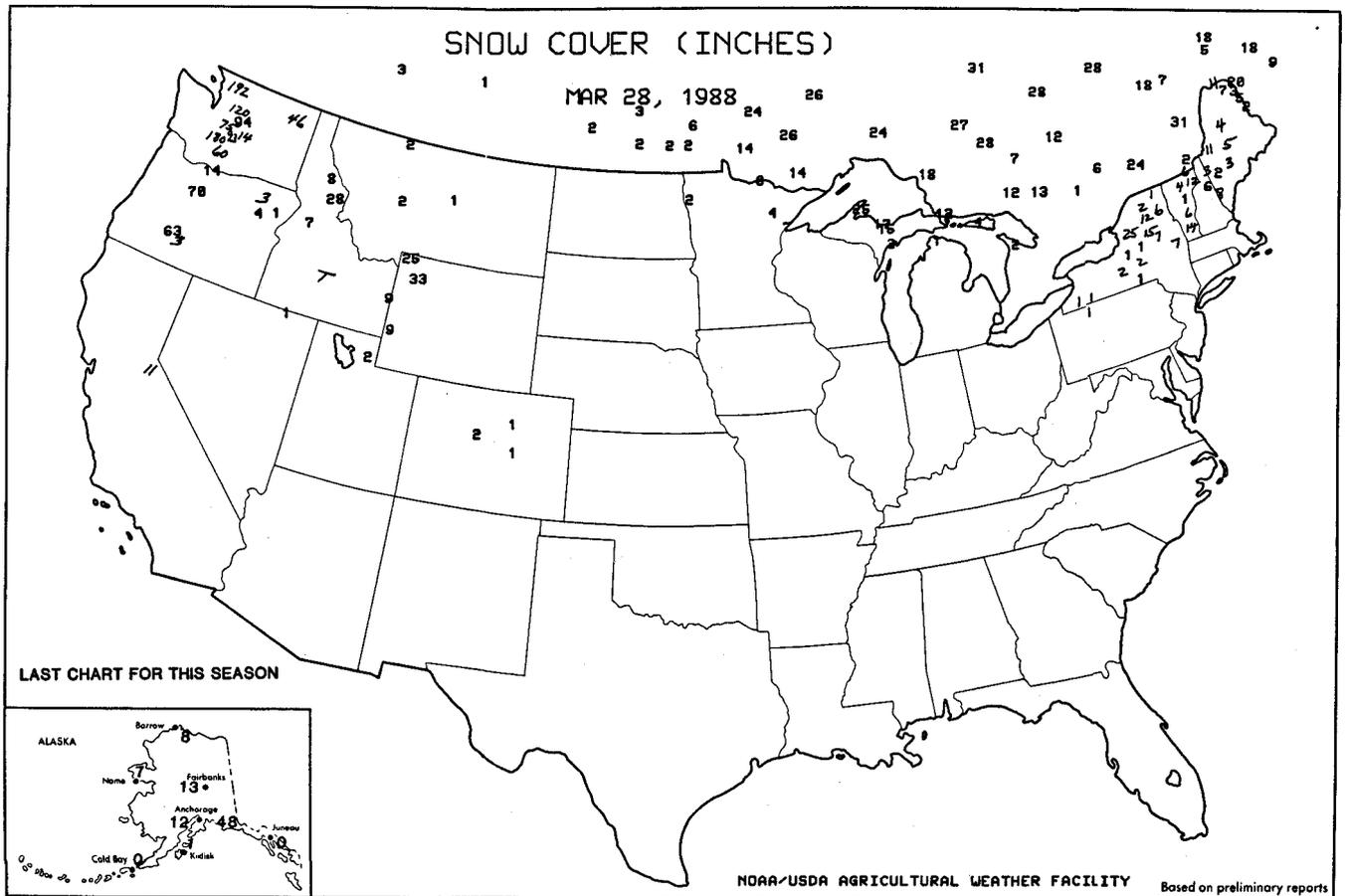
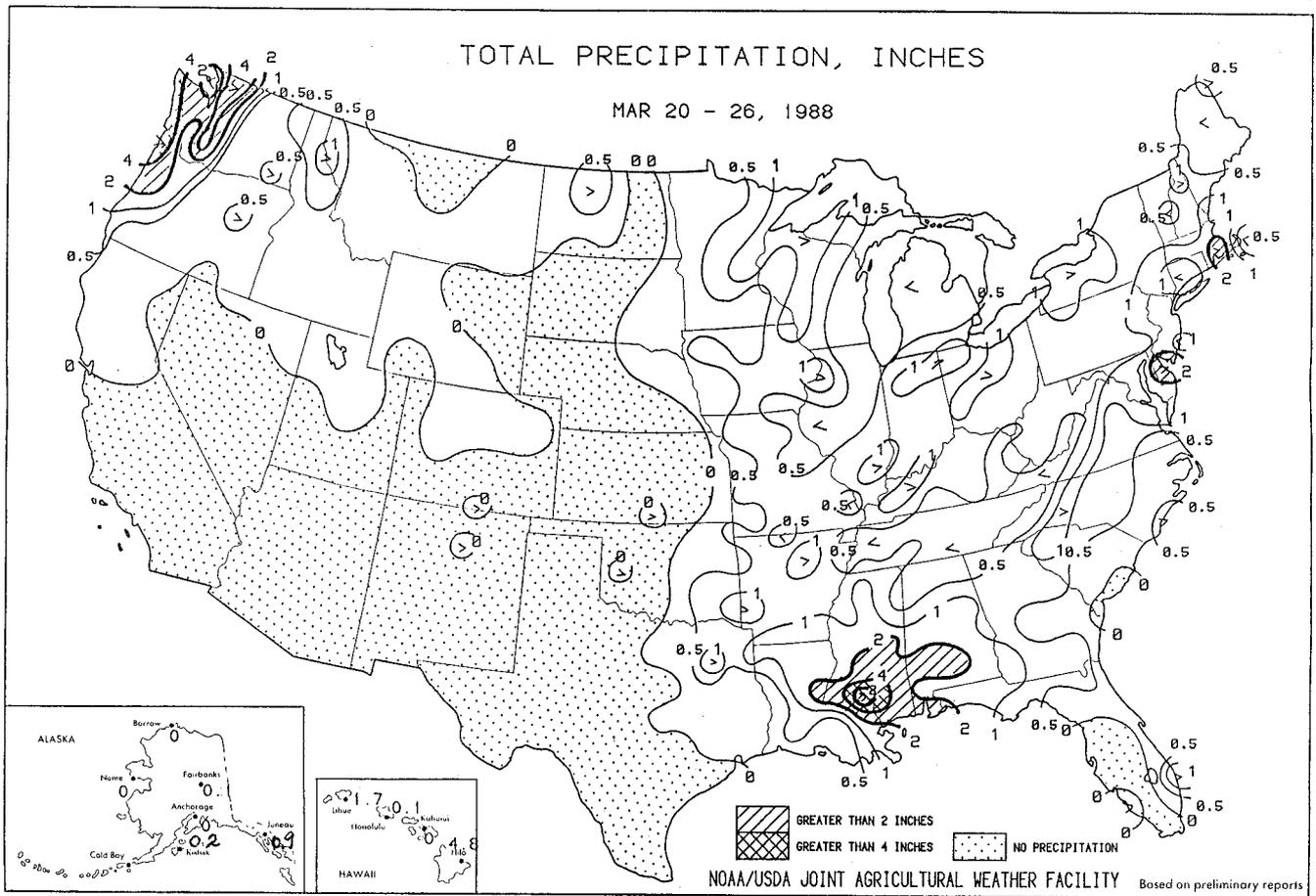
**THURSDAY...** A fast moving cold front produced strong winds in South Dakota, Wyoming, and Colorado. Rain showers occurred over Minnesota and the lower Great Lakes region. Rain extended from the lower Great Lakes across east-central New York. A line of severe thunderstorms developed in the afternoon over parts of the Plains and Midwest. Stations in Iowa, Kansas, Missouri, and Minnesota reported tornadoes. Hail fell in Kansas, Arkansas, and Iowa. The two largest cities in the Nation reported record highs for this date: New York's Central Park had 73 degrees, and Los Angeles, 94 degrees.

**FRIDAY...** Locally severe weather accompanied showers and thunderstorms in Arkansas, Louisiana, and Mississippi. Showers and thunderstorms were scattered along a cold front stretching from a storm center in eastern Canada through the Great Lakes region to the lower Mississippi Valley. Wet snow fell in Minnesota and North Dakota. Thunderstorms produced heavy rain along the central and eastern gulf coast, in northern Georgia, and in the Carolinas. Record heat continued in the Southwest.

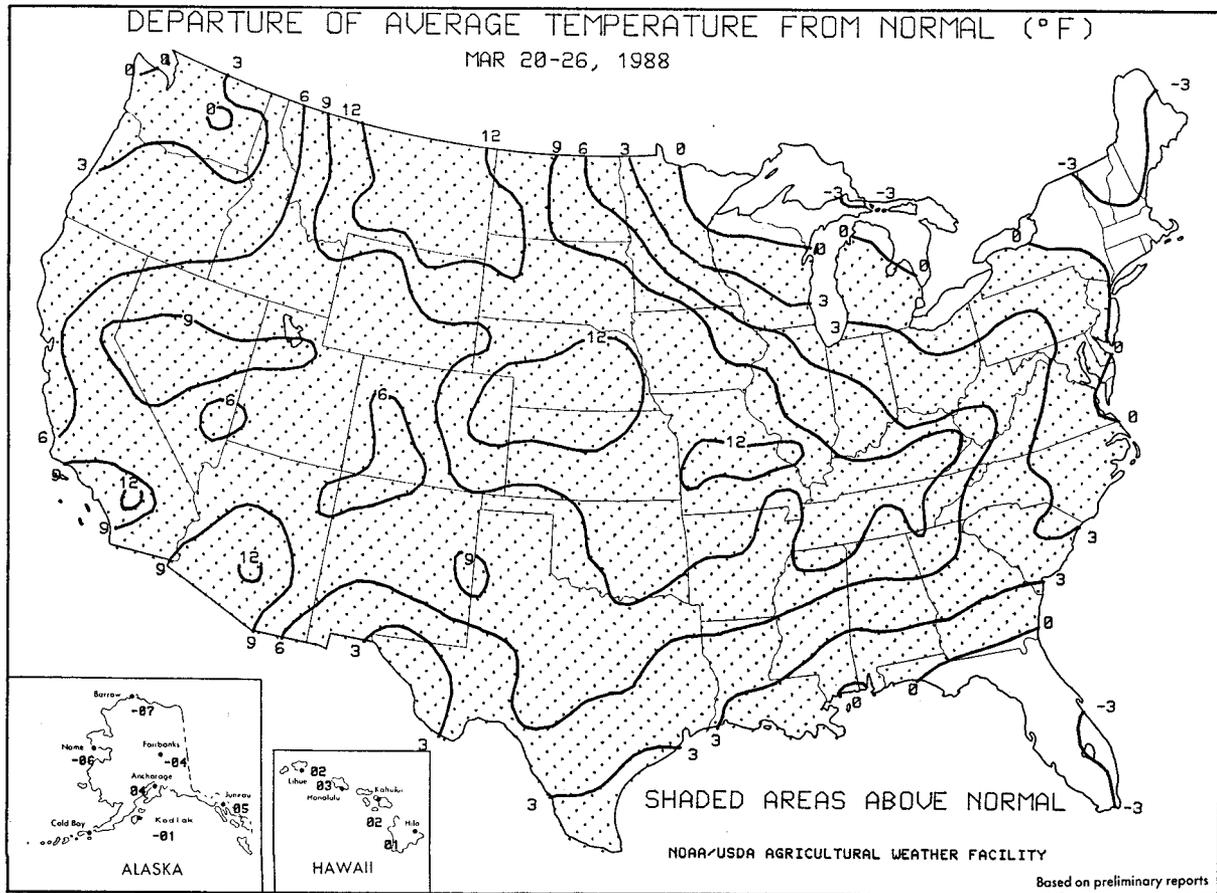
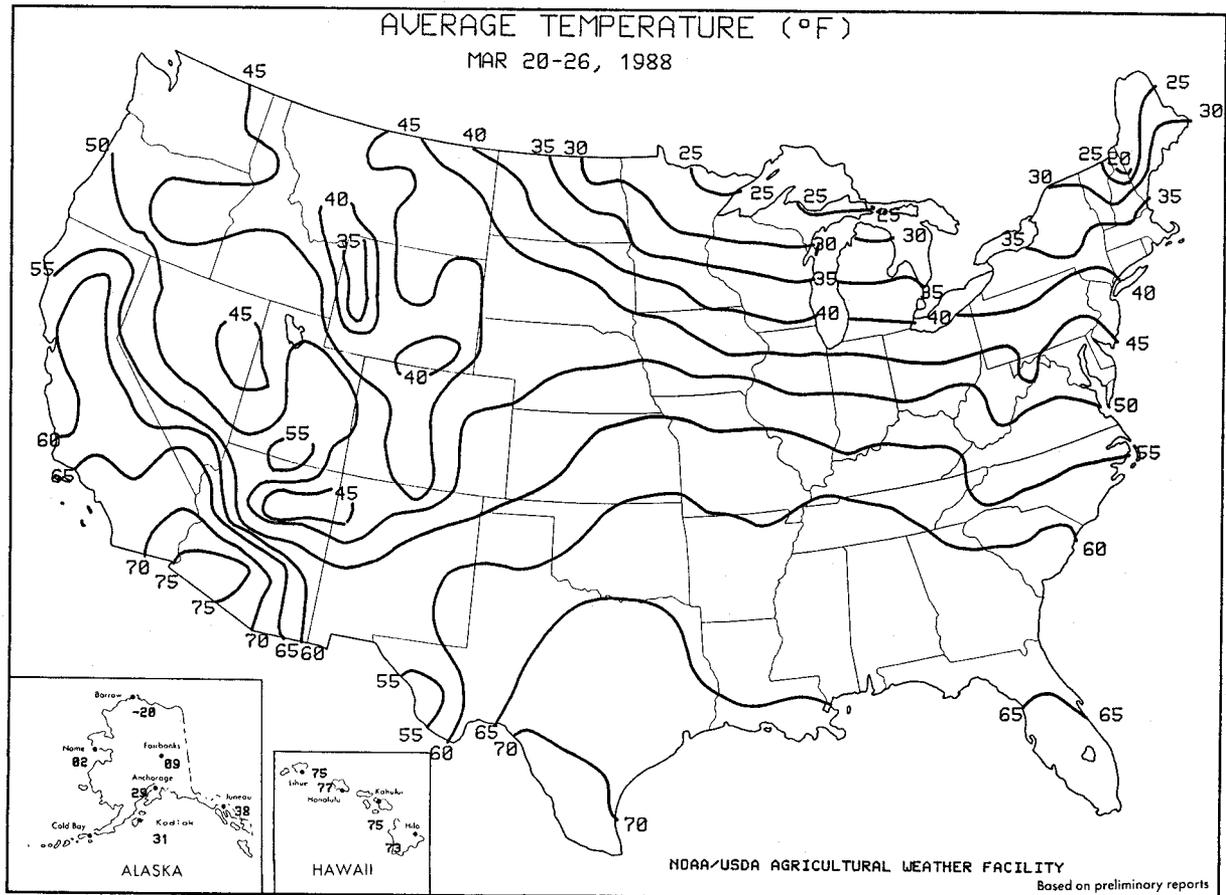
**SATURDAY...** Rain showers and thunderstorms were scattered from New England and the upper Ohio Valley through the Middle Atlantic States, the central Appalachians, the Carolinas, and the Middle Mississippi Valley. Scattered snow showers continued in the upper Mississippi Valley. Hail and a few tornadoes accompanied severe thunderstorms in the Middle Atlantic States. Hail also fell in the Ohio Valley. More record-high temperatures were set in the Southwest, while beneficial rains fell in dry areas of the Pacific Northwest.

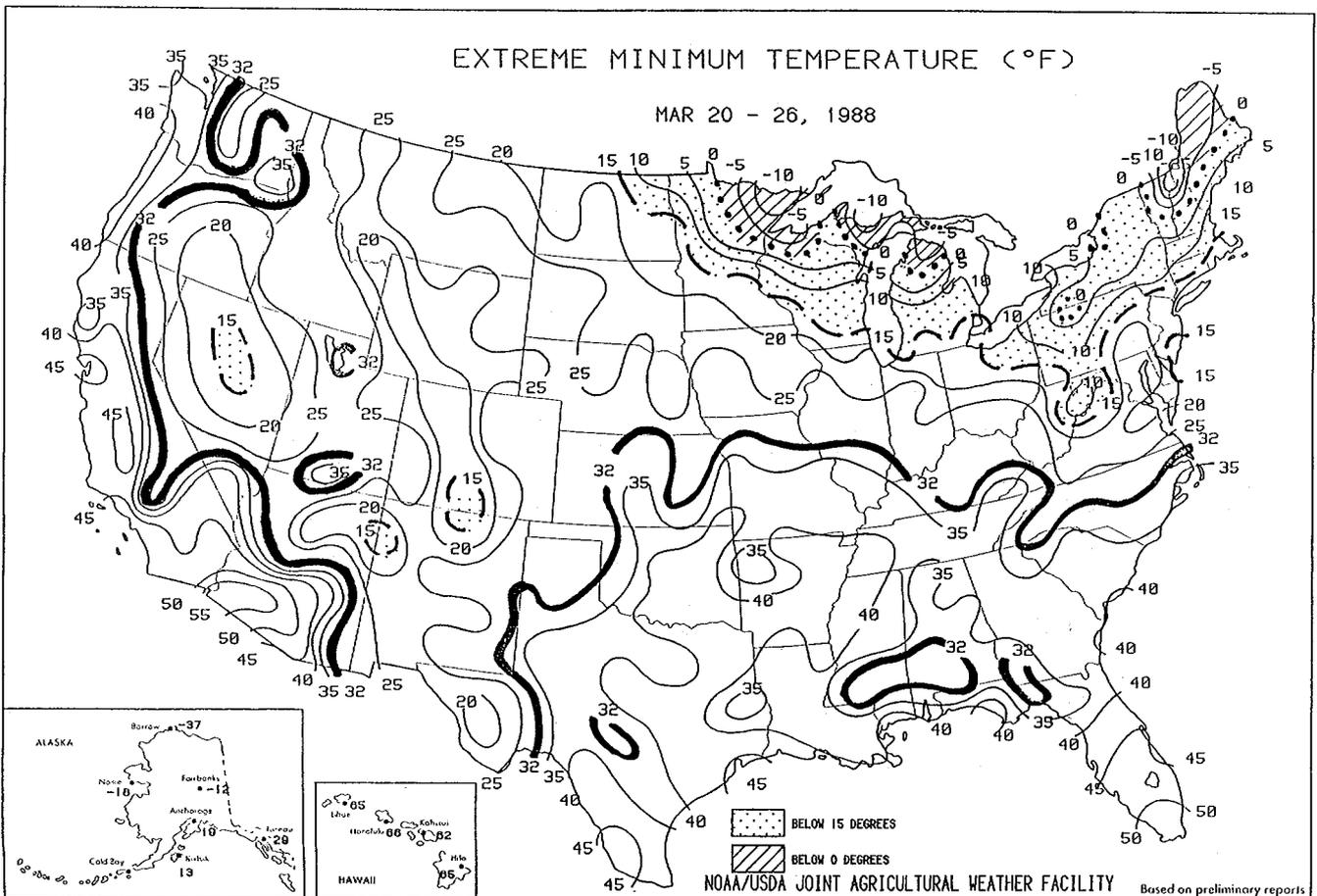
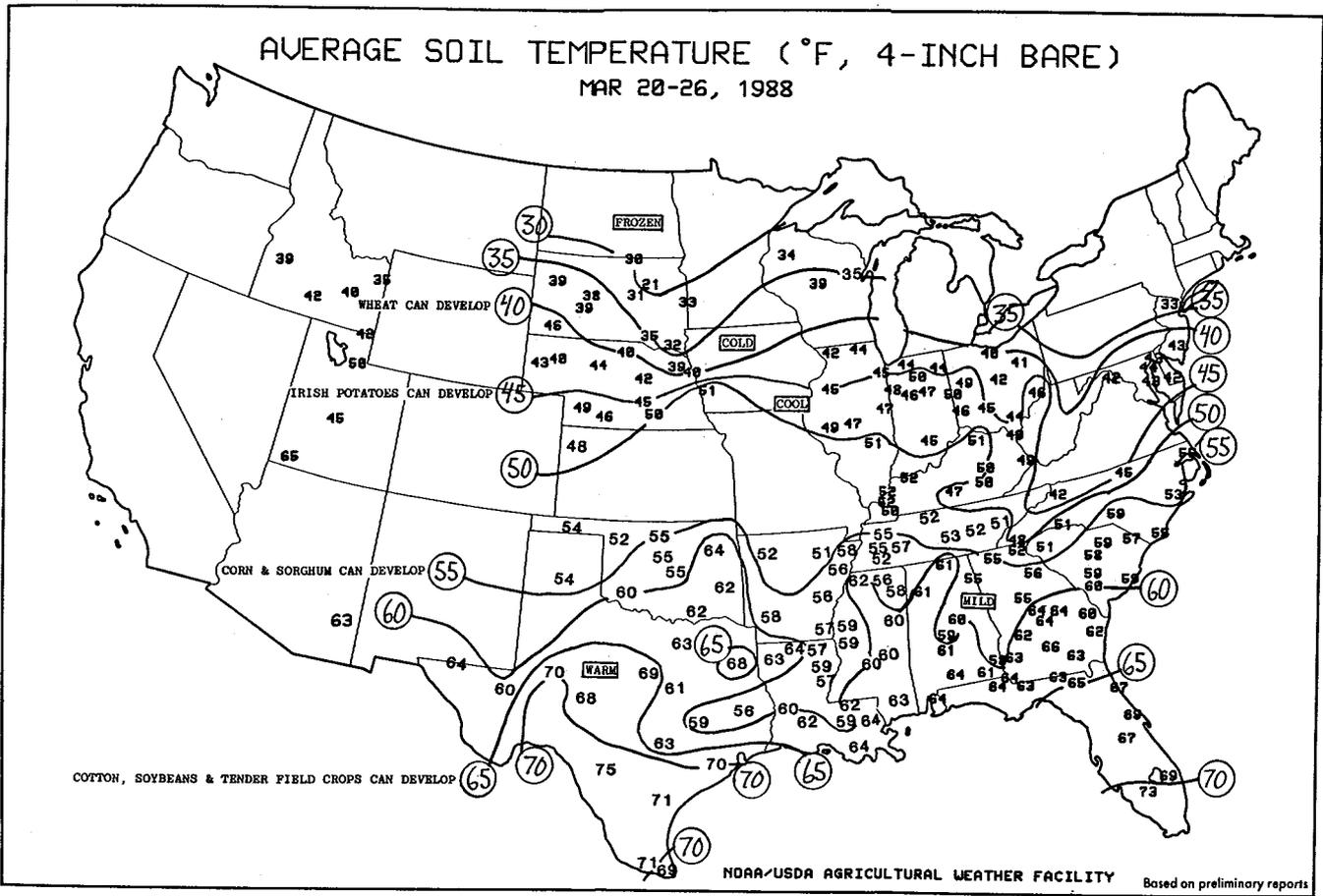
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LAST CHART FOR THIS SEASON





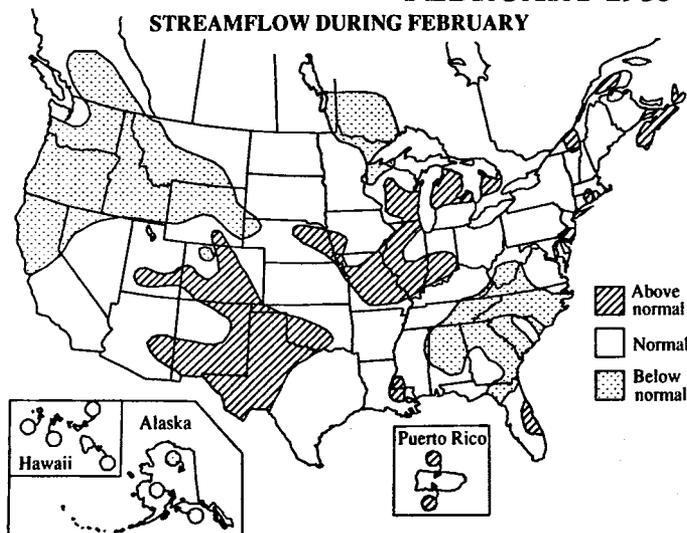
# National Water Conditions

UNITED STATES  
Department of the Interior  
Geological Survey

CANADA  
Department of the Environment  
Water Resources Branch

## FEBRUARY 1988

### STREAMFLOW DURING FEBRUARY



Low streamflow persisted in the Pacific Northwest for the 11th consecutive month as most of the West had an unusually dry February. Monthly mean flows were in the below-normal range at 15 of the 17 index streamflow stations in Montana, Idaho, Washington, and Oregon. Streamflow was in the normal to above-normal range at 75 percent of the 190 reporting index stations in southern Canada, the United States, and Puerto Rico, about the same as the 74 percent of 191 reporting stations in those ranges for January. Below-normal streamflow persisted in a large area from southern British Columbia to northwestern Nebraska. Above-normal streamflow persisted in areas centered on western Texas, western Iowa, and Lake Michigan. Mean February elevations at the four master gages on the Great Lakes (provisional National Ocean Service data) were in the normal range except on Lake Erie, which rose into the above-normal range. The level of Utah's Great Salt Lake was 4,209.55 feet above National Geodetic Vertical Datum of 1929 on February 29. The combined flow of the three largest rivers in the lower 48 States (Mississippi, St. Lawrence, and Columbia) was in the normal range during February, after decrease by 4 percent from January to February. Contents of 74 percent of reporting reservoirs were near or above average for the end of February, about the same as for the end of January (75 percent).

## New Publication, Freeze/Frost Data

A new publication, Freeze/Frost Data, is now available from the National Climatic Data Center. This publication consists of a freeze/frost occurrence probability table and maps described in the publication's text.

The table lists 3,106 locations by State. The table also includes dates of probable first and last occurrence, during the year beginning August 1 and ending July 31, of freeze-related temperatures; probable durations (in days) where the temperature exceeds certain freeze-related values; and the probability of experiencing a given temperature, or less, during the year period August 1 through July 31. For the fall and spring dates of occurrence, and freeze-free period, probabilities are given for three temperatures (36, 32, and 28° F) at three probability levels (10, 50, and 90 percent).

The maps contain six analyses of national calendar data related to the probability of occurrence of a freeze at the 32- and 28-degree F thresholds. The publication's map of the probability of spring freeze occurrence of 32° F on a given date is shown on pages 5 and 6 of this issue.

The classification of freeze temperatures is based on their effect on plants, with the following commonly accepted classification:

**Light Freeze:** 29° F to 32° F - tender plants killed, with little destructive effect on other vegetation.

**Moderate Freeze:** 25° F to 28° F - widely destructive effect on most vegetation with heavy damage to fruit blossoms, tender and semi-hardy plants.

**Severe Freeze:** 24° F and less - heavy damage to most plants. At these temperatures, the ground freezes solid, with the depth of the frozen ground dependent on the duration and severity of the freeze, soil moisture, and soil type.

Copies of Freeze/Frost Data are \$20 each. The six loose maps are available at \$1 each or the set of six for \$5. To obtain this publication, write to:

Director  
National Climatic Data Center  
Federal Building  
Asheville, NC 28801-2695

or telephone: (704) 259-0682

and request:

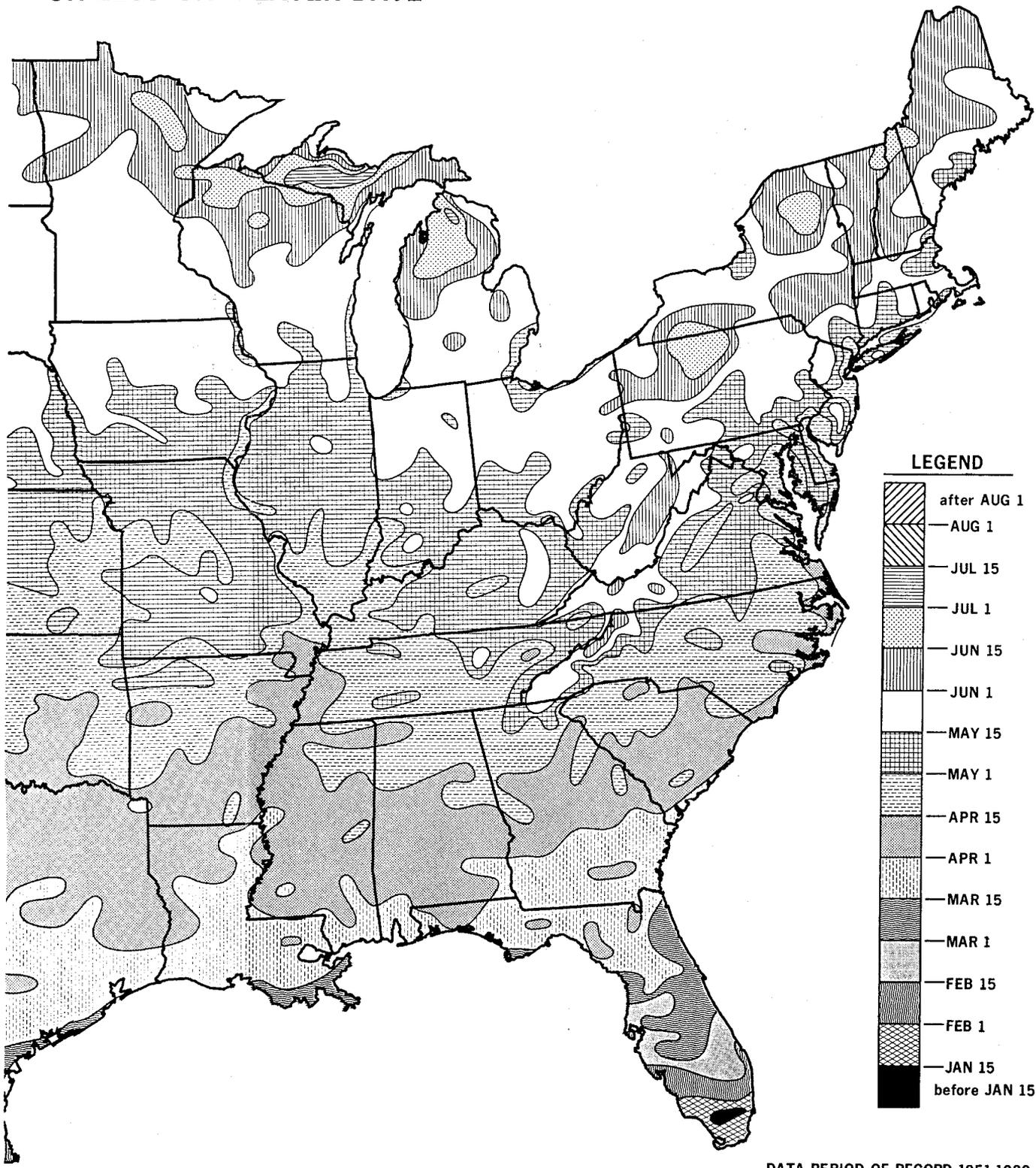
Climatology of the U.S., No. 20, Supplement No. 1: Freeze/Frost Data. U.S. Department of Commerce, National Climatic Data Center, Asheville, NC; 1988; 186 pp.

# SPRING FREEZE

10% PROBABILITY OF 32°F



# OCCURRENCE OR LESS ON A LATER DATE



### LEGEND

- after AUG 1
- AUG 1
- JUL 15
- JUL 1
- JUN 15
- JUN 1
- MAY 15
- MAY 1
- APR 15
- APR 1
- MAR 15
- MAR 1
- FEB 15
- FEB 1
- JAN 15
- before JAN 15

DATA PERIOD OF RECORD 1951-1980

WJK

# National Weather Data for Selected Cities

Weather Data for the Week Ending March 26, 1988

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		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	75	49	80	36	62	6	.8	-.7	.8	3.0	54	10.6	67	83	34	0	0	1	1
MOBILE	74	51	82	35	62	0	2.9	1.4	2.8	7.5	138	18.4	96	50	0	0	0	2	2
MONTGOMERY	78	48	82	35	63	4	1.6	-.3	1.0	5.2	103	16.6	120	93	39	0	0	2	2
AK ANCHORAGE	35	23	41	19	29	-4	1.6	-.1	1.0	5.2	103	16.6	120	93	39	0	0	2	2
BARROW	-12	-28	-3	-37	-20	-7	1.6	-.1	1.0	5.2	103	16.6	120	93	39	0	0	2	2
FAIRBANKS	18	-1	22	-12	9	-4	1.6	0	1.0	5.2	103	16.6	120	93	39	0	0	2	2
JUNEAU	44	32	47	29	38	5	1.6	0	1.0	5.2	103	16.6	120	93	39	0	0	2	2
KODIAK	39	24	46	13	31	-1	1.6	-.7	1.0	5.2	103	16.6	120	93	39	0	0	2	2
NOME	12	-7	20	-16	2	-6	1.6	-.1	1.0	5.2	103	16.6	120	93	39	0	0	2	2
AZ PHOENIX	91	58	100	53	75	13	0	0	0	0	0	0	0	0	0	0	0	0	0
PRESCOTT	74	33	81	26	54	10	0	0	0	0	0	0	0	0	0	0	0	0	0
TUCSON	90	50	99	47	70	11	0	0	0	0	0	0	0	0	0	0	0	0	0
YUMA	92	61	98	56	77	11	0	0	0	0	0	0	0	0	0	0	0	0	0
AR FORT SMITH	79	45	84	34	62	9	0	0	0	0	0	0	0	0	0	0	0	0	0
LITTLE ROCK	74	52	79	43	63	9	0	0	0	0	0	0	0	0	0	0	0	0	0
CA BAKERSFIELD	81	47	87	43	64	6	0	0	0	0	0	0	0	0	0	0	0	0	0
EUREKA	58	45	61	39	52	4	0	0	0	0	0	0	0	0	0	0	0	0	0
FRESNO	78	46	87	44	62	7	0	0	0	0	0	0	0	0	0	0	0	0	0
LOS ANGELES	80	56	95	51	68	10	0	0	0	0	0	0	0	0	0	0	0	0	0
REDDING	76	46	85	36	61	5	0	0	0	0	0	0	0	0	0	0	0	0	0
SACRAMENTO	78	48	88	44	63	9	0	0	0	0	0	0	0	0	0	0	0	0	0
SAN DIEGO	79	55	93	52	67	8	0	0	0	0	0	0	0	0	0	0	0	0	0
SAN FRANCISCO	68	49	77	45	59	5	0	0	0	0	0	0	0	0	0	0	0	0	0
CO DENVER	67	35	74	30	51	11	0	0	0	0	0	0	0	0	0	0	0	0	0
GRAND JUNCTION	66	34	71	27	50	6	0	0	0	0	0	0	0	0	0	0	0	0	0
PUEBLO	73	30	79	22	51	9	0	0	0	0	0	0	0	0	0	0	0	0	0
CT BRIDGEPORT	49	30	66	17	39	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
HARTFORD	50	28	74	12	39	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
DC WASHINGTON	59	39	77	25	49	1	0	0	0	0	0	0	0	0	0	0	0	0	0
FL APALACHICOLA	70	51	73	38	61	-2	0	0	0	0	0	0	0	0	0	0	0	0	0
DAYTONA BEACH	77	52	86	41	64	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
JACKSONVILLE	76	49	82	36	63	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
KEY WEST	76	66	81	56	71	-4	0	0	0	0	0	0	0	0	0	0	0	0	0
MIAMI	76	63	82	50	70	-3	0	0	0	0	0	0	0	0	0	0	0	0	0
ORLANDO	78	55	86	44	67	-2	0	0	0	0	0	0	0	0	0	0	0	0	0
TALLAHASSEE	76	44	81	28	60	-2	0	0	0	0	0	0	0	0	0	0	0	0	0
TAMPA	78	55	84	43	66	-1	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST PALM BEACH	76	60	81	47	68	-3	0	0	0	0	0	0	0	0	0	0	0	0	0
GA ATLANTA	73	49	78	38	61	6	0	0	0	0	0	0	0	0	0	0	0	0	0
AUGUSTA	76	46	81	37	61	4	0	0	0	0	0	0	0	0	0	0	0	0	0
MACON	75	49	79	38	62	3	0	0	0	0	0	0	0	0	0	0	0	0	0
SAVANNAH	75	51	80	38	63	2	0	0	0	0	0	0	0	0	0	0	0	0	0
HI HILO	80	66	82	65	73	1	0	0	0	0	0	0	0	0	0	0	0	0	0
HONOLULU	85	69	86	66	77	3	0	0	0	0	0	0	0	0	0	0	0	0	0
KAHULUI	84	66	85	62	75	2	0	0	0	0	0	0	0	0	0	0	0	0	0
LIHUE	80	69	82	65	75	2	0	0	0	0	0	0	0	0	0	0	0	0	0
ID BOISE	60	36	77	27	48	5	0	0	0	0	0	0	0	0	0	0	0	0	0
LEWISTON	54	41	64	36	48	4	0	0	0	0	0	0	0	0	0	0	0	0	0
POCATELLO	56	35	68	30	46	4	0	0	0	0	0	0	0	0	0	0	0	0	0
IL CHICAGO	55	34	71	20	44	4	0	0	0	0	0	0	0	0	0	0	0	0	0
MOLINE	59	35	74	26	47	8	0	0	0	0	0	0	0	0	0	0	0	0	0
PEORIA	61	36	74	26	48	8	0	0	0	0	0	0	0	0	0	0	0	0	0
QUINCY	68	39	81	29	53	11	0	0	0	0	0	0	0	0	0	0	0	0	0
ROCKFORD	54	29	68	19	42	5	0	0	0	0	0	0	0	0	0	0	0	0	0
SPRINGFIELD	63	40	73	29	52	8	0	0	0	0	0	0	0	0	0	0	0	0	0
IN EVANSVILLE	69	41	80	32	55	8	0	0	0	0	0	0	0	0	0	0	0	0	0
FORT WAYNE	55	33	74	19	44	4	0	0	0	0	0	0	0	0	0	0	0	0	0
INDIANAPOLIS	61	38	74	25	49	6	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH BEND	54	32	70	14	43	4	0	0	0	0	0	0	0	0	0	0	0	0	0
IA DES MOINES	64	34	84	27	49	10	0	0	0	0	0	0	0	0	0	0	0	0	0
SIoux CITY	64	33	79	25	48	11	0	0	0	0	0	0	0	0	0	0	0	0	0
WATERLOO	56	30	73	22	43	8	0	0	0	0	0	0	0	0	0	0	0	0	0
KS CONCORDIA	72	38	82	35	55	12	0	0	0	0	0	0	0	0	0	0	0	0	0
DODGE CITY	75	36	83	32	55	11	0	0	0	0	0	0	0	0	0	0	0	0	0
GOODLAND	69	34	80	27	52	12	0	0	0	0	0	0	0	0	0	0	0	0	0
TOPEKA	74	38	84	30	56	11	0	0	0	0	0	0	0	0	0	0	0	0	0
WICHITA	73	41	81	32	57	10	0	0	0	0	0	0	0	0	0	0	0	0	0
KY BOWLING GREEN	72	44	77	32	58	9	0	0	0	0	0	0	0	0	0	0	0	0	0
LEXINGTON	65	40	76	28	52	6	0	0	0	0	0	0	0	0	0	0	0	0	0
LOUISVILLE	68	42	77	30	55	7	0	0	0	0	0	0	0	0	0	0	0	0	0
LA ALEXANDRIA	75	53	80	39	64	4	0	0	0	0	0	0	0	0	0	0	0	0	0
BATON ROUGE	76	54	84	37	65	3	0	0	0	0	0	0	0	0	0	0	0	0	0
LAKE CHARLES	75	55	85	40	65	2	0	0	0	0	0	0	0	0	0	0	0	0	0
NEW ORLEANS	75	55	81	37	65	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Based on 1951-80 normals

Weather Data for the Week Ending March 26, 1988

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	TEMPERA- TURE °F		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	78	52	82	41	65	6	.7	-.2	.5	2.7	88	8.4	78	89	38	0	0	2	0
ME CARIBOU	34	14	46	-4	24	-4	.6	0	.5	.8	40	6.2	95	90	45	0	6	2	0
PORTLAND	42	22	60	5	32	-3	1.0	.1	.8	1.2	35	6.5	60	82	40	0	4	4	1
MD BALTIMORE	59	38	79	23	48	3	1.5	.7	1.5	2.4	75	8.8	96	76	36	0	4	2	1
SALISBURY	58	35	74	16	46	0	2.3	1.3	2.3	3.4	98	11.5	111	89	37	0	4	1	1
MA BOSTON	49	29	69	12	39	-1	1.9	1.0	1.7	3.0	87	9.4	84	79	42	0	4	3	1
CHATHAM	44	30	49	18	37	0	.3	-.6	.2	1.9	57	9.8	82	77	55	0	4	4	0
MI ALPENA	41	17	61	-5	29	-2	.3	-.2	.2	1.2	76	3.7	81	91	48	0	6	3	0
DETROIT	50	29	73	16	39	1	.4	-.3	.3	.8	40	4.2	74	84	40	0	5	5	0
FLINT	47	26	70	11	37	1	.3	-.3	.2	1.2	70	4.0	84	86	45	0	4	4	0
GRAND RAPIDS	47	27	63	12	37	1	.3	-.4	.3	1.0	47	4.5	80	87	47	0	5	0	0
HOUGHTON LAKE	42	20	55	0	31	0	.1	-.4	.1	.7	47	3.6	82	87	45	0	6	1	0
LANSING	48	27	69	12	38	1	.2	-.4	.2	1.0	48	3.6	71	87	42	0	5	1	0
MARQUETTE	37	12	51	-15	24	-6	.5	0	.2	3.5	200	8.4	167	95	53	0	6	3	0
MUSKEGON	47	27	58	13	37	1	.1	-.5	.1	.6	27	5.1	84	85	48	0	5	2	0
SAULT ST. MARIE	33	15	50	-9	24	-3	.3	-.2	.2	1.9	114	5.9	107	87	46	0	6	4	0
MN ALEXANDRIA	41	23	49	12	32	4	.6	.2	.5	2.2	224	3.4	133	94	55	0	6	3	1
DULUTH	34	17	48	-9	25	-2	1.1	.7	1.1	2.4	165	3.3	93	87	53	0	7	3	1
INT'L FALLS	33	16	50	-5	25	0	.4	.1	.2	1.2	134	1.8	72	88	52	0	7	4	0
MINNEAPOLIS	45	27	55	18	36	3	.4	0	.4	1.0	71	2.7	87	83	48	0	5	2	0
ROCHESTER	48	27	57	17	37	5	.5	.1	.5	1.1	78	2.5	84	87	47	0	5	1	1
MS GREENWOOD	76	52	81	40	64	7	.8	-.6	.8	3.1	59	7.5	49	86	35	0	0	1	1
JACKSON	77	48	82	35	63	4	2.2	.9	1.7	4.5	96	10.6	76	94	36	0	0	2	2
MERIDIAN	77	45	81	31	61	3	1.5	-.1	1.4	3.6	65	10.6	69	97	35	0	1	2	1
MO CAPE GIRARDEAU	72	45	77	35	58	1	.1	-1.1	.1	2.1	50	7.4	72	83	35	0	0	1	0
COLUMBIA	69	42	83	35	56	10	.4	-.4	.4	2.1	76	5.9	91	79	30	0	0	2	0
KANSAS CITY	71	41	84	32	56	10	.5	-.2	.5	.8	37	2.9	63	78	26	0	1	1	1
SAIN'T LOUIS	68	45	82	36	57	10	.5	-.3	.4	3.2	116	8.7	131	80	32	0	0	2	0
SPRINGFIELD	72	44	80	36	58	11	.1	-.7	.1	3.1	108	6.6	99	77	28	0	0	2	0
MT BILLINGS	60	38	71	31	49	13	.3	0	.3	.6	73	1.8	71	57	22	0	1	2	0
GLASGOW	59	30	67	24	44	13	.1	0	0	.2	83	.9	99	68	26	0	5	3	0
GREAT FALLS	55	36	69	30	46	12	.1	-.2	.1	.3	42	1.5	63	65	24	0	1	1	0
HAVRE	57	33	67	28	45	13	.1	-.1	.1	.6	10	.6	38	63	23	0	4	0	0
HELENA	55	32	70	29	43	9	.1	-.1	0	.2	36	1.0	57	72	28	0	4	3	0
KALISPELL	49	35	55	26	42	8	.1	-.1	0	.6	85	2.4	71	80	41	0	2	2	0
MILES CITY	62	34	70	28	48	14	.1	0	.1	.2	51	.6	38	59	22	0	3	2	0
MISSOULA	53	34	66	31	44	7	.5	.3	.4	.9	133	2.2	77	79	39	0	2	3	0
NE GRAND ISLAND	71	33	83	27	52	13	.1	-.4	.1	.8	8	1.6	61	76	17	0	4	0	0
LINCOLN	70	34	80	24	52	12	0	-.5	0	.1	3	.7	20	77	20	0	4	0	0
NORFOLK	66	33	77	24	49	12	.1	-.3	.1	.2	17	1.4	55	82	24	0	3	1	0
NORTH PLATTE	69	30	81	25	50	12	.1	-.3	.1	.3	37	1.1	59	84	17	0	5	0	0
OMAHA	66	36	79	29	51	11	.1	-.5	.1	.3	16	.9	27	64	36	0	2	1	0
SCOTT'S BLUFF	64	29	75	21	46	9	.1	-.3	.1	1.0	127	1.9	116	73	20	0	5	0	0
VALENTINE	64	29	75	24	47	11	.1	-.2	.1	.2	25	1.6	118	78	22	0	5	0	0
NV ELY	63	25	70	16	44	9	0	-.2	0	.3	44	1.7	76	66	17	0	7	0	0
LAS VEGAS	81	49	86	42	65	8	0	-.1	0	0	0	.9	71	36	12	0	0	0	0
RENO	69	33	77	25	51	9	0	-.1	0	T	0	.5	19	65	15	0	5	0	0
WINNEMUCCA	66	29	74	15	47	7	0	-.2	0	T	6	1.4	70	63	17	0	5	0	0
NH CONCORD	43	21	65	4	32	-3	.7	0	.6	1.1	43	5.3	68	84	45	0	5	4	1
NJ ATLANTIC CITY	54	32	73	11	43	-1	1.7	.8	1.7	2.2	65	9.0	87	81	42	0	4	1	1
NM ALBUQUERQUE	73	38	76	30	56	7	0	-.1	0	.2	39	.4	32	29	9	0	1	0	0
CLOVIS	82	41	83	34	62	13	0	-.1	0	.2	36	.7	48	35	11	0	0	0	0
ROSWELL	82	37	85	20	60	7	0	-.1	0	T	10	1.7	152	45	11	0	2	0	0
NY ALBANY	47	25	67	7	36	-1	.8	.2	.7	1.4	56	6.4	88	87	39	0	4	3	1
BINGHAMTON	46	25	72	3	36	1	.8	.1	.3	1.5	63	6.9	94	88	38	0	4	4	0
BUFFALO	49	27	73	9	38	2	1.9	1.2	.8	2.9	118	8.6	108	89	40	0	4	6	2
NEW YORK	52	33	74	19	42	-1	1.1	.1	1.0	2.0	58	8.0	83	75	43	0	4	2	1
ROCHESTER	50	26	77	8	38	2	1.4	.8	.8	1.5	71	4.4	64	87	42	0	4	4	1
SYRACUSE	48	22	78	0	35	-1	1.1	.4	.5	1.6	61	5.2	66	86	37	0	4	4	1
NC ASHEVILLE	67	38	73	29	52	4	.4	-.7	.4	1.3	33	5.9	56	87	40	0	2	1	0
CHARLOTTE	71	44	77	34	58	5	.9	-.2	.6	3.3	81	7.8	66	83	38	0	0	2	1
GREENSBORO	66	39	75	28	53	2	.7	-.2	.5	1.9	57	5.5	54	87	42	0	3	2	1
HATTERAS	62	48	74	37	55	2	.2	-.7	.2	2.9	88	12.7	103	84	55	0	0	1	0
NEW BERN	67	44	75	34	56	1	.5	-.3	.5	3.3	106	10.5	94	89	48	0	0	1	0
RALEIGH	68	41	77	28	54	3	.6	-.2	.6	1.7	56	7.3	72	89	40	0	3	1	1
WILMINGTON	70	45	77	34	58	2	.5	-.4	.5	3.6	104	11.0	103	89	49	0	0	1	0
ND BISMARCK	47	27	59	22	37	7	.1	-.1	.1	.9	170	2.0	134	89	46	0	6	1	0
FARGO	41	26	51	18	34	5	.1	-.2	.1	.9	146	2.8	176	91	61	0	5	2	0
GRAND FORKS	39	23	48	13	31	5	.1	-.1	0	.8	119	1.6	82	92	68	0	6	2	0
WILLISTON	54	27	67	19	40	11	.3	.1	.1	.6	134	1.6	115	92	35	0	6	3	0
OH AKRON-CANTON	53	30	72	12	42	2	.9	.1	.5	2.1	76	6.0	79	82	40	0	3	3	0
CINCINNATI	61	39	76	26	50	5	.9	0	.9	3.3	99	10.9	119	72	34	0	3	2	1
CLEVELAND	52	31	73	13	41	2	1.4	.7	.9	2.2	90	6.1	85	82	44	0	3	4	1
COLUMBUS	57	35	76	22	46	3	.9	.1	.8	2.5	94	8.9	116	79	38	0	3	3	1

Based on 1961-80 normals

Weather Data for the Week Ending March 26, 1988

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	TEMPERA- TURE °F		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	58	36	75	24	47	5	1.5	.7	1.4	2.9	113	8.1	112	75	39	0	3	4	1
TOLEDO	52	31	73	16	41	3	1.1	.4	.8	1.6	75	4.1	69	89	44	0	3	3	1
YOUNGSTOWN	52	28	72	6	40	2	.7	-.1	.4	1.6	60	5.3	69	86	43	0	3	4	0
OK OKLAHOMA CITY	77	48	83	44	62	10	0	-.6	0	3.6	211	5.3	131	68	25	0	0	0	0
TULSA	77	49	83	41	63	11	.2	-.2	.2	4.1	158	6.2	109	71	28	0	0	1	7
OR ASTORIA	55	42	54	40	47	2	4.8	3.2	1.7	7.0	114	17.1	69	95	69	0	0	0	0
BURNS	55	29	69	21	42	4	.2	0	.1	.6	64	1.9	48	88	39	0	2	0	0
MEDFORD	63	37	72	31	50	4	.2	-.2	.1	.6	39	3.3	47	80	49	0	0	6	4
PENDLETON	57	40	63	35	48	3	.2	-.1	.1	.6	62	2.5	67	88	39	0	2	3	0
FORTLAND	55	44	59	38	50	3	1.4	.6	.7	2.7	90	8.9	78	80	49	0	0	3	3
SALEM	55	42	61	37	49	3	1.8	.9	.7	3.0	90	8.9	67	91	64	0	0	6	6
PA ALLENTOWN	56	31	78	15	44	2	1.3	.4	1.3	10.6	83	6.9	92	62	62	0	0	7	2
ERIE	51	27	74	8	39	2	1.0	.3	.6	2.5	79	8.6	89	78	30	0	4	2	1
HARRISBURG	57	32	78	19	45	1	.8	-.1	.7	2.2	94	6.2	90	85	41	0	4	4	1
PHILADELPHIA	57	34	77	19	46	1	1.4	.5	1.4	1.9	66	7.4	85	78	32	0	4	3	1
PITTSBURGH	57	33	75	14	45	3	.8	-.1	.5	2.5	84	7.5	90	85	37	0	3	3	1
SCRANTON	52	30	75	11	41	2	1.0	.3	1.0	1.9	89	5.7	87	79	30	0	4	2	1
RI PROVIDENCE	48	29	66	15	39	-1	2.7	1.7	2.5	3.7	103	11.7	102	81	44	0	4	3	1
SC CHARLESTON	74	51	79	37	62	4	T	-1.0	T	1.8	48	6.9	66	91	47	0	0	0	0
COLUMBIA	75	45	81	38	60	3	.4	-.8	.2	1.7	38	7.8	60	88	35	0	0	2	0
FLORENCE	75	46	81	34	61	4	.2	-.8	.2	2.7	76	6.7	64	87	37	0	0	1	1
GREENVILLE	71	44	79	34	58	4	1.5	.1	1.5	3.7	72	9.4	67	87	39	0	0	1	1
SD ABERDEEN	53	27	60	18	40	9	T	-.3	T	.4	45	1.0	53	88	38	0	6	0	0
HURON	57	30	61	24	44	11	.1	-.3	T	.9	89	1.8	82	88	38	0	5	1	0
RAPID CITY	62	32	73	28	47	12	T	-.3	T	.3	36	.8	44	72	24	0	4	0	0
SIOUX FALLS	59	30	76	23	44	10	.3	-.1	.3	.4	34	2.2	81	88	32	0	5	1	0
TN CHATTANOOGA	74	48	78	39	61	9	.1	-1.3	.1	1.6	30	10.6	69	80	34	0	0	1	0
KNOXVILLE	74	44	79	37	59	7	.1	-1.1	.1	2.3	49	9.5	70	79	34	0	0	0	0
MEMPHIS	77	52	79	42	64	10	.4	-.9	.4	2.6	57	10.3	76	78	31	0	0	2	0
TX NASHVILLE	73	46	80	37	60	8	.3	-1.0	.2	1.7	36	7.4	56	76	30	0	1	0	0
ABILENE	83	49	93	40	66	8	0	-.3	0	.5	61	1.0	33	61	15	1	0	0	0
AMARILLO	76	36	82	30	56	7	0	-.2	0	1.2	162	1.5	86	60	13	0	1	0	0
AUSTIN	79	56	86	41	68	5	T	-.4	T	2.5	182	3.1	56	89	47	0	0	0	0
BEAUMONT	76	57	85	42	66	4	T	-.7	T	4.2	165	12.5	114	96	55	0	0	1	0
BROWNSVILLE	80	61	87	42	71	0	0	-.1	0	.4	97	5.9	185	95	53	0	0	0	0
CORPUS CHRISTI	80	57	85	38	69	1	T	-.2	T	.5	70	2.4	65	98	50	0	0	0	0
DEL RIO	86	56	91	40	71	6	T	-.2	T	.1	17	.3	17	70	22	2	0	0	0
EL PASO	81	36	87	23	58	1	0	-.1	0	1.1	38	1.1	97	28	6	0	2	0	0
FORT WORTH	79	52	83	38	66	7	T	-.6	T	1.3	68	3.4	62	78	32	0	0	1	0
GALVESTON	72	60	79	50	66	3	T	-.5	T	2.9	168	6.8	95	95	68	0	0	0	0
HOUSTON	78	57	85	42	68	4	T	-.6	T	3.1	143	5.7	63	95	51	0	0	1	0
LUBBOCK	82	39	87	33	61	8	0	-.2	0	.3	41	1.0	58	44	11	0	0	0	0
MIDLAND	84	41	91	36	63	5	0	-.1	0	.2	44	.6	46	42	8	1	0	0	0
SAN ANGELO	85	47	93	37	66	6	0	-.2	0	.7	113	1.1	54	68	15	1	0	0	0
SAN ANTONIO	80	56	88	32	68	4	T	-.3	T	.8	72	2.1	47	90	43	0	1	0	0
VICTORIA	80	57	84	43	69	3	T	-.3	T	1.3	123	4.1	79	98	50	0	0	0	0
WACO	80	54	86	40	67	7	0	-.5	0	2.3	144	4.4	83	86	37	0	0	0	0
WICHITA FALLS	83	47	93	40	65	9	0	-.5	0	4.5	309	6.3	185	73	18	2	0	0	0
UT BLANDING	65	34	70	29	50	9	0	-.2	0	T	4	2.6	85	63	27	0	2	0	0
CEDAR CITY	66	30	72	24	48	7	0	-.3	0	.8	84	2.4	100	66	17	0	5	0	0
SALT LAKE CITY	63	39	71	33	51	9	.1	-.3	.1	.8	58	2.0	49	70	24	0	0	1	0
VT BURLINGTON	41	18	59	2	30	-3	.7	.2	.6	1.3	71	3.7	68	85	38	0	6	3	1
VA NORFOLK	61	40	76	25	51	0	.6	-.3	.6	1.9	59	7.7	75	85	43	0	2	1	1
RICHMOND	62	38	78	19	50	0	1.0	-.2	1.0	2.0	66	7.6	80	91	43	0	4	1	1
ROANOKE	66	37	77	22	52	3	.4	-.4	.4	.8	27	3.8	41	85	35	0	3	1	0
WA QUILLAYUTE	49	38	52	34	43	0	6.3	3.8	1.6	11.4	111	29.0	78	98	75	0	0	7	5
SEATTLE-TACOMA	51	40	55	27	46	1	2.6	1.8	1.1	3.4	113	8.2	61	98	66	0	0	7	1
SPOKANE	49	35	54	29	42	3	.6	.3	.2	1.4	126	3.6	68	85	49	0	3	5	0
YAKIMA	58	32	65	25	45	1	.1	0	.1	.2	37	.9	33	83	36	0	4	1	0
WV BECKLEY	63	38	73	27	50	7	.6	-.3	.4	1.6	49	5.6	55	78	30	0	3	3	0
CHARLESTON	66	41	80	26	54	6	.6	-.3	.5	2.7	80	6.8	68	71	28	0	2	2	1
HUNTINGTON	65	42	79	28	54	5	.4	-.5	.4	2.8	84	7.2	76	72	31	0	2	2	0
PARKERSBURG	62	38	78	24	50	4	.8	0	.7	3.6	122	6.4	75	77	30	0	3	3	1
WI GREEN BAY	42	25	58	12	34	1	.1	-.4	.1	.4	27	2.9	78	90	51	0	6	1	0
LACROSSE	50	27	60	18	39	4	1.0	.5	1.0	1.1	72	2.2	66	84	43	0	5	1	1
MADISON	50	26	63	13	38	3	.2	-.3	.2	.4	25	2.7	70	86	45	0	6	2	0
MILWAUKEE	48	30	64	15	39	4	.1	-.6	0	.3	15	4.9	95	89	50	0	5	3	0
WAUSAU	42	23	55	9	32	2	.8	-.3	.8	1.2	76	1.6	47	89	50	0	6	1	1
WY CASPER	57	32	64	26	44	10	T	-.3	T	.7	89	1.8	97	69	26	0	3	0	0
CHEYENNE	56	33	65	29	45	11	T	-.3	T	1.1	140	2.3	144	63	21	0	3	0	0
LANDER	55	29	63	22	42	8	T	-.3	T	1.3	146	1.7	85	63	25	0	5	1	0
SHERIDAN	61	32	70	22	47	13	T	-.3	T	.5	52	1.9	80	64	22	0	4	0	0
PR SAN JUAN	84	72	85	70	78	1	.8	.3	.6	.8	46	6.9	100	83	68	0	0	4	1

Based on 1951-80 normals



## National Agricultural Summary

March 21 to 27, 1988

**HIGHLIGHTS:** Rain slowed fieldwork in the Delta, Southeast, and Corn Belt. Above-normal temperatures promoted small grain growth and greening throughout the Nation. Soil moisture was adequate in the Corn Belt, Delta, Northeast, and Southeast. Topsoil moisture remained short in the central and northern Great Plains and Pacific Northwest. Despite rains, farmers were able to work nearly 6 days in the Southeast.

Corn planting continued lagging behind normal in most Southeast States. Cotton planting gained momentum in California, Arizona, and Texas. Rice planting trailed behind normal in Louisiana and Texas. Tobacco transplanting continued in Florida and Georgia and began in South Carolina. The cold weather damaged peaches in Georgia, South Carolina, and Texas, but the damage was not as extensive as thought originally. Livestock was mostly good.

**SMALL GRAINS:** Above-normal temperatures promoted small grains and winter wheat growth throughout the Nation. Dry conditions hampered growth in the northern Great Plains and caused concern for seeding spring grain crops. Winter wheat was mostly good in the Southeast and Corn Belt. Crop condition was mostly fair to good elsewhere, except in Oregon and North Dakota where condition was fair to poor.

In Texas, small grain condition improved with milder weather. The lack of rainfall stressed small grains in some areas. The dry conditions helped control aphids. Many fields reached the jointing stage and some began heading in south Texas and at Coastal Bend. Warm weather enhanced growth in Oklahoma. Weeds appeared in north-central areas and Russian wheat aphids increased in the Panhandle. Rain is needed in southwest Oklahoma to avert damage.

Kansas wheat was good to fair. Wind damage was apparent in some areas. Aphids were light, but wheat curl mites were light to severe, depending on location within the State. Rain is needed to control soil blowing and give small grains a boost. Warm weather encouraged oat seeding in Nebraska. Winter wheat was greening in most areas. Russian wheat aphid infestation caused concern in South Dakota. Winter wheat was fair to good. Montana's wheat was mostly greening, but 28 percent (%) of acreage remained dormant. Wind damage was light to moderate. Spring small grain seeding was underway in Colorado.

Winter wheat stands were thinner than normal in the Columbia Basin area of Oregon. Washington's dryland wheat was fair to poor, but irrigated wheat was fair to good. Winter barley was reseeded in Whitman County, but most growers were waiting to see how stands develop before making final reseeding plans. Small grains grew well in California. Most fields were in the boot or heading stage. Dryland small grains continued showing signs of moisture stress. Wheat and barley began turning color, but most fields were entering the heading stage in Arizona. In southern Arizona, fields were sprayed for aphids. Spring wheat and barley seeding were underway in Idaho.

Wheat development lagged behind normal in the Southeast. Sixty-four percent of Georgia's wheat was jointing, compared with 69% normally. Jointing was 10 percentage points behind normal in Mississippi. Heading was underway in Alabama and Louisiana but trailed the normal pace in both States.

**OTHER CROPS:** Rain slowed fieldwork in the Delta, Southeast, and portion of the Corn Belt. In Indiana, late-week rain halted plowing. Iowa farmers were waiting on warmer weather and drier soil to begin fieldwork in the northern half of the State. Soils were too wet to work fields in Michigan. Farmers were able to turn soils in southern and central Ohio.

Corn planting was limited mostly to the Delta and Southeast. Seeding continued lagging behind normal except in Alabama and Texas. Texas seeding was 14 points ahead of normal at 60% completion. Seeding was 44% finished in Alabama, 13 points ahead of the 31% 5-year average. Georgia and Louisiana were 9 and 13 points behind normal, respectively.

Ideal weather rapidly increased cotton seeding in California. Favorable temperatures encouraged emergence and normal progression of early seeded cotton in Arizona. Planting was 15% finished in central areas and less than 10% seeded in south-central Arizona. Cotton planting increased in the Blacklands and central Texas. Frost caused some replanting at Coastal Bend. In Texas, seeding exceeded the 5-year average by 3 points. Cotton seedbed preparation progressed ahead of normal in Oklahoma.

Texas' rice seedings were running half the normal pace at 7% completion. In Louisiana, 4% of the acreage was seeded and 2% was emerged.

Texas sorghum planting reached 43% completion, 4 points above normal. Frost caused some damage to emerged fields. Planting is expected to begin soon in the Plains. Sorghum seedbed preparation lagged 15 points behind normal in Oklahoma.

Georgia's tobacco transplanting increased to 9% completion but was still 11 points behind normal. Transplanting was just beginning in South Carolina and continued in Florida. Tobacco bed seeding and preparation advanced in Kentucky.

**FRUITS AND NUTS:** Georgia's peaches were blooming heavily with little freeze damage thus far. Some early variety peaches were severely hurt by cold weather. Damage was not as extensive as thought originally. Peach and other fruit growers surveyed freeze damage to budding trees in Texas. Damage varied from location to location.

Florida's citrus trees reached full open bloom. Growing conditions were near ideal with adequate moisture. Temple orange and honey tangerine harvests slowed. Valencia orange harvest increased and grapefruit movement was active. Most orchards were in full bloom in California. Early variety peaches and prunes were in the petal drop stage. Frost damaged some cling peaches and prunes along the Feather River and in Butte County. Kiwifruit leafed out. Grapefruit, lemons, and navel oranges were packed. Early valencia oranges were tested for harvest.

**VEGETABLES:** In Florida, spring planting neared completion for most vegetable crops. Watermelon planting was underway in Georgia, Mississippi, and South Carolina. In the Rio Grande Valley, some melon fields were replanted because of the February freeze. Spring vegetable planting continued in east Texas. Winter vegetable harvest was nearly completed in San Antonio-Winter Garden area. Despite above-normal water demands, planting and growth of vegetables progressed well in California.

**PASTURES AND LIVESTOCK:** Pastures were mostly fair to good. Pastures showed some improvement in most areas with warmer temperatures. Livestock was mostly good.

## State Summaries of Weather and Agriculture

**ALABAMA:** Rainfall totals mostly 0.50 in. or less north, 1.00 to 3.00 in. south. Temperatures averaged 5 to 7° above normal.

Days suitable for fieldwork 5.8. Soil moisture 38% short, 58% adequate, 4% surplus. Fieldwork progress 75% normal, 25% behind normal. Acreage intended for spring planting 46% prepared, 37% 1987. Corn 44% planted, 43% 1987, 31% avg. Winter wheat 9% headed, 11% 1987; 51% fair, 49% good. Livestock fair to good; pastures poor to fair. Pasture feed supply 61% short, 39% adequate. Primary activities: Land preparation; planting corn, watermelons, potatoes, other vegetables; applying fertilizer, lime to cropland, pastures; spraying fruit trees; building fish ponds; topdressing small grains; routine care of livestock, poultry.

**ARIZONA:** Sunny, very warm weather 20th to 23rd. Dry cool front 24th. Heat wave prevailed 25th, 26th; record breaking temperatures. Phoenix 100° 26th set record for date, month, earliest ever 100° temperature. Prolonged period warm, sunny weather result of slow moving strong high pressure system. Average temperatures 5 to 13° above normal.

Cotton plantings continued west. Favorable temperatures encouraged emergence, normal progression early plantings. Cotton 15% planted central; less than 10% planted south central. Plantings expected to increase. Seedbed preparation, pre-irrigation continued other areas. Alfalfa hay harvest continued west. Curing conditions remained favorable. Stand renovations light, few new stands established. Sheeping-off, central. Cold weather froze new growth back to crowns east central. Statewide small grains good. Approximately 20% wheat, barley acreage reached heading stage west; 5% began to turn color. Irrigation applied as needed. South central 10% heading stage. Fields sprayed for Russian wheat aphids. Aphids also problem Pima, Maricopa Counties. Irrigation continued other areas. Corn planting underway south central. Corn 30% planted central. Seedbed preparation continued southeast. Western area head lettuce harvest, shipping major crop activity, along with leaf, romaine lettuce, cauliflower shipments. Other mixed vegetables also shipped. Head lettuce harvest expected to be complete Parker area later in week. Melons continued to progress. Central area head lettuce harvest, shipping continued Harquahala and Salt River Valleys, Maricopa, Eloy-Marana areas. Mixed vegetables also harvested Salt River Valley. Harvest shipping valencia oranges, grapefruit continued. Kinnow tangerine harvest should be completed this week.

**ARKANSAS:** Warm temperatures throughout week. Temperature extremes 28°; 85°. Weak frontal system brought scattered rainfall midweek. Rainfall totals 0.22 to 1.24 in.

Soil moisture adequate. Land preparation full swing. Most wheat fertilized, good condition. Fruit good, little freeze damage. Pastures recovering from recent cold weather. Livestock good.

**CALIFORNIA:** High pressure brought very warm week to State, above normal temperatures every station. Corona, Hunting Lake both as much as 13° above normal. Very weak system did pass over State about 22nd, brought very little rain.

Continued warm, dry weather, rapid progress field activities. Small grains good growth. Most fields boot or heading. Dryland low-moisture stress. Harvesting early fields green-chop, silage. Preparation rice, corn fields active. Cotton seeding increased rapidly, ideal weather. Thinning new sugarbeets, harvest overwintered active.

Weevil controls alfalfa. Harvest hay, green-chop increased. Fertilizing, weed control, fungicide application, thinning, pesticide application, irrigation. Most orchards full bloom. Apple bloom sporadic Sebastopol area. Apple, asian pears treated to reduce blight. Hass avocados harvested. Coachella Valley pollination of dates, thinning of table grapes. Kiwifruit leafing out. Thrip control early variety nectarines. Early variety peaches, prunes in petal drop stage. Frost on 11th to 12th along Feather River, Butte County caused some damage to cling peaches, prunes near petal fall stage. Butte County almonds sizing well, very heavy set. Early variety walnuts full bloom, leaf growth of 4 to 6 in. Grapefruit, lemons, navel oranges, tangelos packed. Earliest varieties valencia oranges tested in preparation for upcoming harvest. Though water demand above normal, planting, growth harvest of vegetables progressed well. Artichoke movement fairly heavy variable quality Salinas. Asparagus slowed south, increased lower Westside, Sacramento Valley, Delta. Broccoli supplies light Salinas, Merced-Atwater, moderate Santa-Maria. Quality good. Cauliflower light, good to variable Salinas, Santa Maria. Carrots planted Westside, dug lower Westside. Celery harvest south coast. Lettuce light Huron Blythe, increased central San Joaquin Valley. Melon fields seeded Sacramento Valley, growing well lower Westside. Early ground work potatoes Tulelake, growers started planting spring potatoes Hemet. Strawberry harvest approached peak south coast, increased central coast. Fresh market tomato planting Westside. Tomato growers Merced-Atwater direct seeding, transplanting. Range, pasture fair to poor. Lack moisture, warm weather rapid deterioration, continued supplemental feeding. Water supplies light. Livestock movement light, moderate.

**COLORADO:** Mostly dry, warm weather; precipitation none to 0.10 in. Average temperature 4 to 10° above normal. Windy conditions caused localized erosion.

Days suitable for fieldwork 4.0. Soil moisture 3% very short, 21% short, 68% adequate, 8% surplus. Winter wheat good. Spring small grain seedings underway. Onions 4% planted, 2% 1987, 13% avg. Livestock good, 49% cows calved, 43% ewes lambled, since January 1st. Stored feed supplies adequate.

**FLORIDA:** Cold front 20th, moved across State; cloudiness, showers, temperatures 4 to 6° below normal. Skies cleared 21st, temperatures at, above 80° to week's end. Rain 1.00 to 2.00 in. Peninsula, less than 0.50 in. Panhandle.

Soil moisture mostly adequate throughout State; scattered areas surplus moisture. Corn planting underway, tobacco transplanting continued. Small grains continued good. Oats, rye being cut for hay. Sugarcane harvest near complete. Northern Peninsula, Panhandle pastures recovering from earlier frost. Warming temperatures beneficial all areas. Pastures good southern Peninsula, fair to good elsewhere. Supplemental feeding continued some areas. Cattle remained fair to good. Citrus full open bloom this week, near ideal growing conditions. Moisture generally adequate, few are irrigating. Early orange harvest all but complete; valencia harvest increased; grapefruit movement very active; temple, honey tangerine harvest slowing. Caretakers busy with spring grove care practices. Midweek warmth beneficial vegetable producing areas. Rainfall limited, irrigation active. Spring planting near complete most crops. Harvest active. Volume leaders: Tomatoes, celery, cabbage, potatoes, peppers, strawberries. Also

available: Cucumbers, carrots, lettuce, squash, sweet corn, snap beans, radishes, escarole, endive.

**GEORGIA:** Temperatures 4 to 6° above normal north, 2 to 4° above normal south. Warmest temperatures mid 70s to low 80s. Coolest mid 30s to low 40s except mid 20s to low 30s mountains. Rain 26th to 27th mostly 0.25 to 0.75 in. Local 1.00 to 2.00 in. southwest. Mean 4.00 in. soil temperatures mid 50s north to mid 60s elsewhere.

Days suitable for fieldwork 5.7. Soil moisture 4% very short, 36% short, 59% adequate, 1% surplus. Corn planting active statewide, good conditions for seed germination. Corn 2% poor, 41% fair, 55% good, 2% excellent; 34% planted, 27% 1987, 43% avg. Tobacco transplanting pace picked up; 54% fair, 46% good; 9% transplanted, 6% 1987, 20% avg. Watermelon conditions improved significantly, planting active. Small grains remained good. Wheat 10% fair, 70% good, 20% excellent; 64% jointing, 63% 1987, 69% avg.; 8% boot, 11% 1987, 22% avg. Apples good; just beginning to bloom. Peaches heavy blooming, little freeze damage so far; 20% fair, 69% good, 11% excellent; 76% blooming, 93% 1987, 89% avg. Pasture improved, fertilization active. Cattle, hogs mostly good.

**HAWAII:** Variable weather. Mostly sunny leeward areas. Cloudy, showery windward areas. Unstable weather weekend. Increased rainfall, some flooding, washouts. Temperatures upper 60s to upper 80s. Rainfall none to 6.50 in. Variable winds 5 to 30 mph.

Days suitable for fieldwork 7.0. Papaya production light. Banana production steady. Head cabbage output heavy, good quality. Chinese cabbage production moderate to heavy, good quality. Shipments to west coast continued. Ginger root harvesting temporarily halted due to wet weather. Head lettuce yields improved. Farming activity slowed, losses light.

**IDAHO:** Temperatures near normal. Precipitation below normal most of State, despite several weather disturbances.

Days suitable for fieldwork 4.0. Soil moisture short. Irrigation water supply fair. Spring wheat 12% seeded, 9% 1987, 10% avg. Winter wheat good. Barley 10% seeded, 6% 1987, 6% avg. Sugarbeets 24% planted, 12% 1987, 20% avg. Onions 38% planted, 22% 1987, 22% avg. Dry pea, potato seeding barely underway. Hay, roughage supplies good, excellent. Livestock good. Calving, lambing 69%, 87% complete, respectively. Calving 63% 1987, 72% avg. Lambing 80% 1987, 82% avg.

**ILLINOIS:** Temperatures average 3 to 5° above normal north; 6 to 11° central, south. Temperatures range 20s to 80s. Precipitation averaged 1.00 to 2.00 in. north central, 0.50 in. rest of State except Quincy with over 3.00 in. Precipitation still around 0.30 to 0.40 in. below normal most sections.

Winter wheat good; starting to green. Livestock good.

**INDIANA:** Temperatures averaged 5 to 10° above normal. Lows in 20s, highs in 70s. Rainfall totaled 1.00 to 1.50 in. north, to 0.60 to 0.70 in. south.

Spring fieldwork off to slow start. Tilling of fields halted by rains late week. Activities included: Limited tilling of fields, hauling manure, spreading fertilizer, topdressing wheat, preparing equipment, hauling grain, purchasing supplies, attending meetings, caring of livestock. Hay supplies adequate. Livestock good. Wheat mostly good, starting to green up.

**IOWA:** Mild week with temperatures averaging 8° above normal northeast to 14° above normal

southwest. First significant precipitation in over 5 weeks on 23rd to 25th with amounts generally between 0.25 to 0.75 in. over eastern two-thirds of State.

Farmers planting oats southern areas of State, while northern half waiting on warmer, dryer soil conditions. Livestock mostly good. Lambing, calving continued, very little weather stress experienced.

**KANSAS:** Temperatures above normal, middle 50s to low 60s; 12 to 16° above normal. Rainfall little to none, only significant amount southeast 0.20 in. average.

Days suitable for fieldwork 5.0. Topsoil moisture 57% short, 34% adequate, 9% surplus. Subsoil 31% short, 60% adequate, 9% surplus. Warm, windy condition depleted soil moisture. Wheat 19% poor, 25% fair, 36% good, 20% excellent. Wind damage apparent, light to moderate western third. About 1% of crop jointed. Russian wheat aphid light levels, wheat curl mite light to severe, depending on location. Wheat streak mosaic present much of State, mostly light levels. Soil borne mosaic, leaf rust present also. Rain would be welcome, control blowing soil, give boost to small grains. Oat 80% seeded, barley 85% seeded. Preparing ground for spring planting where moisture conditions permit. Range, pasture good to excellent except poor western third. Pastures northwest area on verge of drought. Calving active. Feed supply adequate.

**KENTUCKY:** Mostly clear, warm. Temperatures averaged 8 to 10° above normal, daily highs often in 70s. Rainfall 25th to 26th, amounts 0.25 to 1.00 in. Some areas close to 1.00 in. below normal.

Topsoil dried then rain replenished moisture many areas. Land preparation underway on better drained soils. Tobacco bed preparation, seeding advancing. Winter wheat green, showing new growth. Cattle, calves satisfactory condition; feeder calf prices excellent.

**LOUISIANA:** Temperatures normal to 6° above normal. Temperature extremes 30°; 85°. Rainfall averaged 0.25 to 1.31 in.

Days suitable for fieldwork 3.4. Soil moisture 30% adequate, 70% surplus. Spring plowing 30%, 16% 1987, 39% avg. Corn 16% planted, 7% 1987, 39% avg.; 6% emerged, 2% 1987, 23% avg. Rice 4% planted, 10% 1987, 12% avg.; 2% emerged, 5% 1987, 5% avg. Winter wheat fair to good; 4% headed, 7% 1987, 13% avg. Pastures, livestock fair to good. Sugarcane, vegetables fair. Strawberry harvest underway. Main activities: Spring plowing; topdressing pastures, wheat; harvesting crawfish; water leveling rice fields; planting corn, rice. Wet field conditions limited amount of fieldwork again.

**MARYLAND & DELAWARE:** Maryland: Average temperature 46°, normal 46°. Lowest temperature 3°, highest temperature 80°.

Precipitation averaged 0.04 in. through 25th. Most areas short soil moisture, but helped by weekend rains which averaged 1.00 in. Some fruit buds received below freezing temperatures, no widespread damage known. Main farm activities caring for livestock, preparing for fieldwork.

Delaware: Average temperature 44°, normal 46°. Precipitation averaged 0.01 in. through 25th. Many areas short soil moisture, but helped by weekend rains. Main farm activities caring for livestock, preparing for fieldwork.

**MICHIGAN:** Temperatures ranged 4 to 7° below normal. Temperature extremes -4°; 43°. Precipitation ranged 0.11 to 1.49 in. across State.

Major winter storm early week resulted in blizzard conditions upper Peninsula, northern lower area. Light to moderate snowfall occurred other areas of lower area. Most of new snow cover gone by weekend. Warmer temperatures would benefit winter wheat.

Soil too wet for fieldwork. Activities: Marketing crops, livestock; pruning fruit trees, producing maple syrup, preparing farm machinery. Livestock very good. Feed supplies adequate. Hay supplies plentiful. Calving, lambing increased. Winter favorable for livestock.

**MINNESOTA:** Temperatures averaged 2 to 10° above normal for State. Extremes -9°; 75°. Precipitation averaged 0.10 in. below normal west central, near normal to 0.32 in. above normal elsewhere. Precipitation totals averaged 0.27 to 0.73 in. Greatest weekly total 1.08 in. Snowfall averaged 3 in. north central, less than 1 in. elsewhere. Snow depth weeks end averaged 3 to 7 in. north central, northeast; trace or less elsewhere.

Precipitation received statewide. Soil moisture should improve. Livestock remained good.

**MISSISSIPPI:** Average temperatures 8 to 10° above normal; extremes 29°; 86°. Warm, dry northern counties; warm, wet south. Greatest 24-hour total rainfall 3.80 in. Greatest weekly total rainfall 3.86 in.

Days suitable for fieldwork 4.4, 3.0 1987, 3.3 avg. Soil moisture down slightly from last week, still adequate. Corn 17% planted, 14% 1987, 20% avg. Wheat good; 45% jointing, 67% 1987, 55% avg. Hay, feed grain supplies slightly less than adequate. Pastures improved; fair to good. Livestock improved; mostly good. Watermelons 14% planted, 15% 1987, 13% avg.

**MISSOURI:** Temperatures averaged 10° above normal except Bootheel 5° above normal. Widespread showers less than 0.50 in. Some severe weather with wind damage.

Farmers spreading fertilizer, started tillage mostly on high grounds. Winter wheat fair to good.

**MONTANA:** Temperatures above normal statewide 8° above normal west, 10 to 16° above normal east of divide. Very windy. Rain west, southwest, central, south central midweek. Northwest mountains received 1.50 in. moisture weekend. North central dry. Scattered light showers east.

Topsoil moisture supplies 79% short, 21% adequate. Subsoil moisture supplies 57% short, 43% adequate. Winter wheat 3% poor, 56% fair, 41% good. Wind damage to winter wheat fields 50% light, 50% moderate. Winter wheat 28% dormant, 70% greening, 2% green and growing. Field tillage work progress 55% none, 40% just started, 5% well underway. Calving 64%. Lambing 57%.

**NEBRASKA:** Warm, dry conditions. Average temperatures ranged 8 to 14° above normal. Extremes 21°; 85°. Precipitation light, scattered, no measurable amounts except northeast.

Farm activities still center around preparation for spring planting. Fair, warm weather encouraged some oats seeding, general tillage operations. Winter wheat unchanged, greening up most areas. Soil moisture average or above in most areas. Southeast, east soil moisture below normal. Range, pasture grasses declining, demand for hay increased. Supplies adequate.

**NEVADA:** Persistent high pressure ridge produced mostly warm, dry weather. Fast moving cold front did drop temperatures briefly, windy weather midweek all areas. Only significant precipitation extreme northeast. Average temperatures ranged 5

to 12° above seasonal normals. Temperature extremes 6°; 88°.

Fieldwork progress delayed briefly midweek by high winds. Rest of period excellent with warm, dry weather. Winter grains started to show growth.

**NEW ENGLAND:** Precipitation averaged 2.00 to 3.00 in. Rhode Island, coastal Massachusetts, 0.50 to 1.00 in. northern Maine, 1.00 to 2.00 in. remainder. Average temperatures ranged mid 20° near Canadian border to near 40° southern coast. Temperatures near normal.

Major farm activities: Sugaring, tending livestock, machinery repair.

**NEW JERSEY:** Temperatures averaged above normal north, near normal central, south. Extremes 8°; 80°. Rainfall averaged 1.14 in. north, 1.44 in. central, 1.58 in. south. Heaviest 24-hour total 2.00 in. on 26th, 27th. Estimated soil moisture percent field capacity averaged 99% north, 94% central, 93% south. Four inch soil temperatures averaged 35° north, 41° central, 42° south.

Preparation, planting of early crops increased. Fruit buds swelling. Fertilizer, lime, manure spreading active. Pastures greening.

**NEW MEXICO:** Average weekly temperatures 10° above normal northeast, 5° above rest of State; no precipitation.

Days suitable for fieldwork 7.0. Soil moisture 73% short, 27% adequate. Field preparation for cotton, corn, milo planting continued; chile planting activity very high. Barley 33% fair, 67% good. Wheat 20% poor, 40% fair, 40% good. Onions 25% fair, 75% good; lettuce 100% fair. Cattle 70% fair, 30% good. Sheep 57% fair, 43% good. Range 11% very poor, 78% fair, 11% good.

**NEW YORK:** Temperatures early week unseasonably cold. Lows many areas well below zero, highs 20s. By midweek temperatures in 70s. Precipitation widespread heavy on 25th.

Producers gearing up for coming growing season.

**NORTH CAROLINA:** Temperatures averaged 3 to 6° above normal across State. Temperature extremes 20°; 79°. Precipitation ranged 0.01 to 1.29 in. across State.

Days suitable for fieldwork 5.6. Soil moisture 4% very short, 27% short, 67% adequate, 2% surplus. Wheat 19% fair, 76% good, 5% excellent. Oats 24% fair, 74% good, 4% excellent. Barley 1% poor, 25% fair, 70% good, 4% excellent. Rye 4% poor, 26% fair, 68% good, 2% excellent. Pasture 5% very poor, 8% poor, 36% fair, 51% good. Hay and roughage supplies 7% short, 89% adequate, 4% surplus. Feed grains supplies 8% short, 88% adequate, 4% surplus. Tobacco plantbeds 4% poor, 28% fair, 67% good, 1% excellent. Irish potatoes 87% planted, 67% 1987, 66% avg. Irish potatoes 8% poor, 25% fair, 67% good. Major farm activities: Preparing land for spring planting; sidedressing small grains; care of tobacco plantbeds; transplanting cabbage; planting potatoes; pruning fruit trees, ornamentals; applying lime; feeding livestock; frost protection measures on strawberry plants; general farm maintenance.

**NORTH DAKOTA:** Temperatures averaged 5° above normal northeast to 12° above normal northwest, southwest. Extremes 7° north central; 70° southwest. Precipitation variable, below normal southern one-third to above normal northern two-thirds. Amounts ranged 0.01 in. southeast to 0.83 in. north central.

Soil moisture below normal. Dry conditions caused concern for spring seeding, pasture growth. Winter grains fair to poor. Livestock good, received supplemental feed. Lambing, calving continued. Feed supplies adequate. Main activities: Young livestock care, farm program sign-up.

**OHIO:** Lows ranged 30° north to mid 40s along Ohio River; 3 to 8° above normal. High temperatures ranged mid 50s north to lower 60s south; 3 to 6° above normal. Precipitation below normal south, east; above normal central, northwest ranging 0.50 to 1.50 in.

Soil temperatures moderated greening up some pastures, wheat. Wheat topdressing about finished. Plowing south, drier central areas. Tobacco beds being sown southern area.

**OKLAHOMA:** Temperatures averaged 9° above normal south central to 13° above normal northeast. Precipitation averaged none Panhandle, north central, west central, central, southwest to 0.54 in. east central.

Days suitable for fieldwork 4.7. Topsoil moisture 2% short, 70% adequate, 28% surplus. Subsoil moisture 100% adequate. Wheat 5% fair, 85% good, 10% excellent; 15% jointing, 35% 1987, 30% avg. Recent warm weather enhanced growth. Weeds appearing north central. Russian wheat aphids increased Panhandle. Rain needed southwest to avert damage. Sorghum 15% seedbed prepared, 5% 1987, 30% avg. Cotton 40% seedbed prepared, 5% 1987, 25% avg. Pastures greening. Cattle marketings mostly average, feeder prices down from preceding week.

**OREGON:** Temperatures 2 to 3° above normal, except south central, southwestern areas 4 to 6° above normal. Daytime highs ranged mid 50s to upper 70s, warmest reading 78° Ontario on 26th. Overnight lows mostly in 30s to low 40s, coldest reading 19° Klamath Falls on 24th. Precipitation welcomed across State. Heaviest precipitation 3.50 in. north Cascades. Coast, southwest averaged 3.00 in.; although Astoria wettest spot State 4.80 in. Nearly 2.00 in. Willamette Valley, south Cascades. Less than 0.40 in. north central section. Throughout remaining eastern area 0.10 in. or less.

Soil moisture mostly short east of Cascades, except adequate Klamath Basin; short to adequate west. If normal rainfall received for remainder of growing season, most grain crops will be about average. Winter wheat stands thinner than normal in Columbia Basin area due to late seeding. Grain, grass seeds good west. Blossom sprays applied to stone fruits. Filbert emergence expected this week. Early vegetable planting continued Willamette Valley. Still too early for farming activities eastern high country. Livestock good. Calving, lambing continued eastern mountains, some difficulties caused by snow, hail isolated areas. Range, pasture condition varies from poor to good. Lower elevation range in east is very dry; highest elevation just beginning to green up, cattlemen still feeding hay.

**PENNSYLVANIA:** Week started cold, winter-like; ended warm, wet. Average temperature 42°, 5° above normal. Temperature extremes -1°, 79°. Average precipitation 0.77 in., 0.04 in. below normal.

Activities: Early spring activities; hauling manure; machinery maintenance; caring for livestock.

**PUERTO RICO:** Island average rainfall 0.30 in., 0.30 in. below normal. Highest weekly total rainfall 1.81 in. Pico Del Este-Luquillo, 0.86 in. Corozal Aes, 0.86 in. San Lorenzo. Highest 24-hour total 1.00 in. Pico Del Este-Luquillo. San Juan WSFO mean temperature 80°, 2° above normal. Divisional temperature averaged about 77° on coasts, 74 to 75° interior divisions; mean station temperature ranged 64° Pico Del Este-Luquillo to 80° Roosevelt Roads. Lowest minimum temperature 54° Arecibo Observatory. Highest maximum temperature 93° San Sebastian.

**SOUTH CAROLINA:** Temperatures 4 to 6° above normal. Rainfall totaled 0.75 in. over northwest

part of State; trace to none over east, southeast.

Days available for fieldwork 5.7. Soil moisture 46% short, 54% adequate. Corn fair to good; 24% planted, 7% 1987. Tobacco good; 1% planted, none 1987. Watermelons fair; 33% planted, 22% 1987. Cantaloups fair; 10% planted, 7% 1987. Spring cukes fair; 12% planted, 23% 1987. Tomatoes good; 40% planted, 63% 1987. Peaches fair to good. Some early varieties severely hurt by cold.

**SOUTH DAKOTA:** Average temperatures 5 to 12° above normal. Extremes 10°, 78°. Precipitation below normal except for east central, southeast. Most of State below normal for year also. No snow cover left.

Winter wheat fair to good. Some concerns of future problems with Russian wheat aphid infestation on small grains. Livestock good. Strong winds blew some dry soil off.

**TENNESSEE:** High pressure dominated through 23rd. Cold front crossed State late week brought thundershowers. High pressure prevailed again 27th. Temperatures ranged 5° above normal on Cumberland Plateau to more than 10° above normal west. Extremes 31°, 82°. Precipitation below normal. Generally 0.50 in. rainfall statewide late week. Main activities: Plowing, applying fertilizer, corn planting, tobacco transplanting, small grain topdressing. Peaches blooming. Tobacco, corn, other small grains mostly good. Pastures fair. Cattle fair to good; hogs mostly good.

**TEXAS:** Week started very dry, settled note. High pressure keeping skies clear cutting off moisture from Gulf. Some light rain weekend. Temperatures above normal warmest areas Panhandle, north central. Rainfall below normal except Trans-Pecos.

**Crops:** Small grain improvement with milder temperatures. Lack rainfall some areas fields stressed situation. Dry conditions Plains helped aphids. Rust low. Growth fields Blacklands, central fair to good; moisture needed soon to continue improvement. Many fields jointing stage. Fields began heading south, Coastal Bend. Conditions dry these areas. Most corn planting completed Blacklands to Valley. Some fields burned by frost began to recover. Growth slowed by frost. Dry winds hurting plants Blacklands. Most land prepared Plains, planting to begin soon. Corn 60% planted, 43% 1987, 46% avg. Grain sorghum planting winding down many areas Blacklands, central. Dry winds depleting soil moisture. Frost 2 weeks ago slowed emergence. Some frost damage occurred. Planting to begin soon Plains. Sorghum 43% planted, 28% 1987, 39% avg. Cotton planting increased Blacklands, central. Pre-watering, herbicide applications increased Plains, Trans-Pecos. Some replanting Coastal Bend because late frost. Progress most planted fields good. Cotton 9% planted, 7% 1987, 6% avg. Rice planting increased Upper Coast. Rice 7% planted, 11% 1987, 14% avg.

**Commercial Vegetables:** Rio Grande Valley harvest carrots, cabbage, onions continued. Seed stem problems early onion varieties. Many melon fields replanted because freeze late February. Recent cooler weather not seem to hurt late planted fields. San Antonio-Winter Garden harvest many vegetables winding down. Carrots still coming off good amounts. Planting continued summer season crops, melons. High Plains transplanting onions continued. Irrigation necessary because dry conditions. Potato planting continued. East spring planting continued. Some tomatoes burned by late frost. Trans-Pecos most onion transplanting completed. Producers watering fields. Cool weather slowed melon germination. Peach producers Hill Country, other fruit growers

northeast survey freeze damage to budding trees. Damage vary location to location.

Range and Pasture: Range, pasture grasses greening with warmer temperatures, rain received 2 weeks ago. Many pastures remained very dry. Producers west irrigating alfalfa pastures. Livestock fairly steady. Feeding remained steady many areas. Markets good present.

UTAH: Precipitation light north central, northern mountains. Dry rest of State. Temperatures 2 to 6° above normal.

Livestock good. Calving, lambing continued. Feed adequate. Major farm activities: Planning spring work, purchasing seed, supplies, equipment maintenance and repair, lambing, calving, care of livestock, farm tax records.

VIRGINIA: Normal temperatures. Deviations 3° above normal. Beginning period wet cold, middle dry, ending wet, warm. Precipitation averaged 0.25 to 0.50 in. mostly eastern part of State.

Days suitable for fieldwork 5.7. Topsoil moisture 63% short, 37% adequate. Mostly good to excellent conditions pastures, small grain, fruit, tobacco plantbeds. Land preparation active. Pastures, hayland overseeded, topdressed. Tobacco bed seeding neared completion. Potatoes 80% planted. Lambing, calving, active.

WASHINGTON: High pressure dominated weather early week. Later several strong disturbances brought above normal precipitation to west State, lighter amounts to central, eastern area. Temperatures generally above normal, few exceptions.

Scattered showers, gusty winds did little to alleviate moisture deficits east of Cascades. Soil moisture continued short eastern area, improved to adequate west side. Spring cultivation continued. Dryland wheat 39% poor, 40% fair, 21% good. Irrigated wheat 54% fair, 46% good. Some winter barley reseeding underway Whitman County. Most

growers that area waiting to see how wheat, barley stands look before making reseeding decisions. Majority expected to go with less than ideal stand rather than replanting. Growers anticipate asparagus first cutting to begin 1st week of April. Onions came through winter good Walla Walla County. Early fruit areas showed rapid bud development Chelan County. Yakima apricots now full bloom, peaches early bloom. Most livestock still on feed. Range areas continued spring regrowth.

WEST VIRGINIA: Temperature 49°, 3 to 7° above normal. Extremes 84° Creston, 10° Elkins. Precipitation averaged 0.63 in.; below normal.

Days suitable for fieldwork 5.4. Soil moisture 22% very short, 22% short, 56% adequate. Feed supplies adequate to short. Wheat, barley good. Cows calved 76%; ewes lambed 78%. Farm activities: Plowing, general farm maintenance.

WISCONSIN: Temperatures averaged 36°, near normal. Extremes -15°; 69°. Precipitation 0.11 to 0.84 in. Snow trace to 1 in. 25th to 26th. Average snow cover 0.9 in., snow northern acres only. Average frost depth 6.9 in.

WYOMING: Temperatures above normal. Precipitation below normal.

Days suitable for fieldwork 3.0. Topsoil moisture 37% short, 54% adequate, 9% surplus. Subsoil moisture 37% short, 61% adequate, 2% surplus. Spring wheat small amount planted, 5% avg. Oats none planted, 5% avg. Barley 15% planted, 5% 1987, 15% avg. Winter wheat fair to good. Light to moderate wind, freeze damage. Livestock mostly good. Spring calves born 45%, 35% 1987, 40% avg. Death losses light to normal. Farm flock: Ewes lambed 55%, 40% 1987, 45% avg.; shorn 50%, 45% 1987, 40% avg. Range flock: Ewes lambed 25%, 15% 1987, 15% avg.; shorn 30%, 15% 1987, 20% avg. Death losses light to normal. Range, pasture fair to good. Supplemental feeding continued as needed.

## International Weather and Crop Summary

March 20-26, 1988

### HIGHLIGHTS:

UNITED STATES ... Rain slows fieldwork in the Delta, Southeast, and Corn Belt. Above-normal temperatures promote small growth and greening throughout the Nation.

WESTERN U.S.S.R. ... A gradual warming trend melts snow and causes winter grains to break dormancy in the south at near normal dates.

EUROPE ... Heavy rain continues across northern growing areas, likely causing flooding. Persistent dry weather covers the southwest.

SOUTH ASIA ... Dry, hot weather stresses early filling wheat in north-central India and heading coastal rice.

NORTHWESTERN AFRICA ... Three consecutive weeks of mostly dry weather in Morocco reduces moisture for winter grains in the reproductive

to filling stages. Mostly light showers cover Algeria and Tunisia.

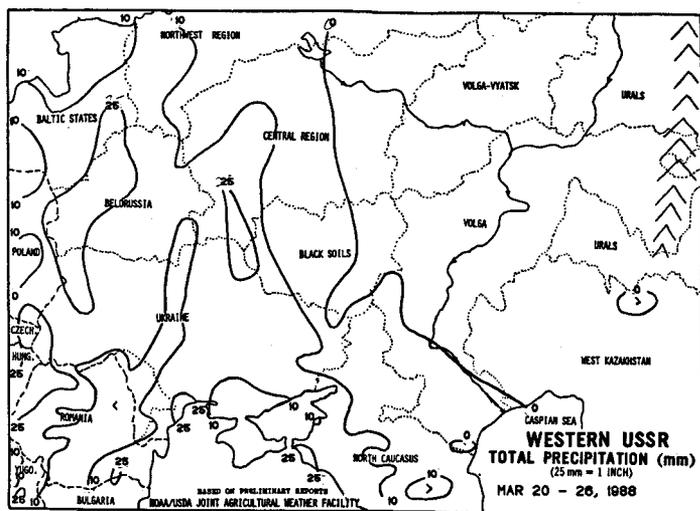
SOUTH AFRICA ... Mostly dry, warm weather benefits maturing corn.

SOUTHEAST ASIA ... Widespread showers cover Indonesia and most of Malaysia, likely causing local flooding.

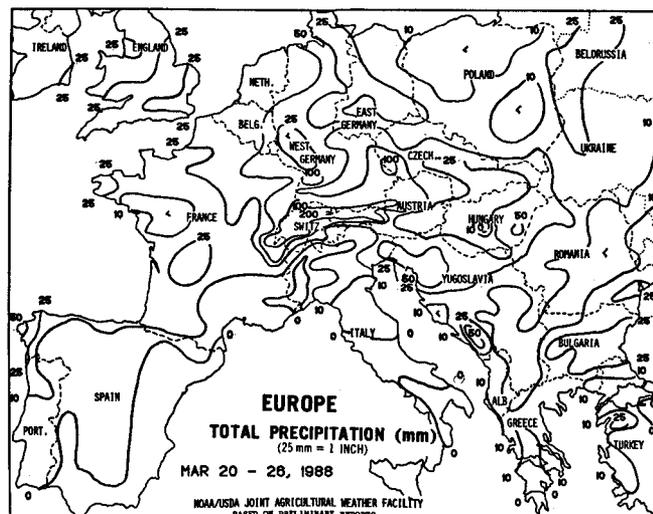
EASTERN ASIA ... Heavy rain continues across southeastern China. Below-normal temperatures slow growth of vegetative winter grains.

SOUTH AMERICA ... Hot, dry weather stresses late maturing crops in southern Brazil. Locally heavy thunderstorms disrupt harvesting in eastern Argentina and Uruguay.

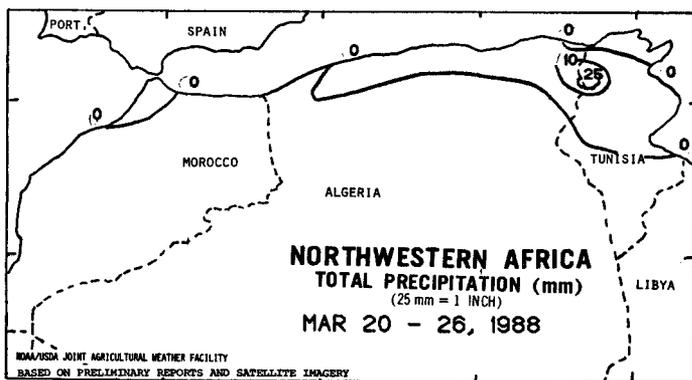
AUSTRALIA ... Scattered showers favor sugarcane and summer crop areas. Rain in Western Australia benefits pre-season moisture levels.



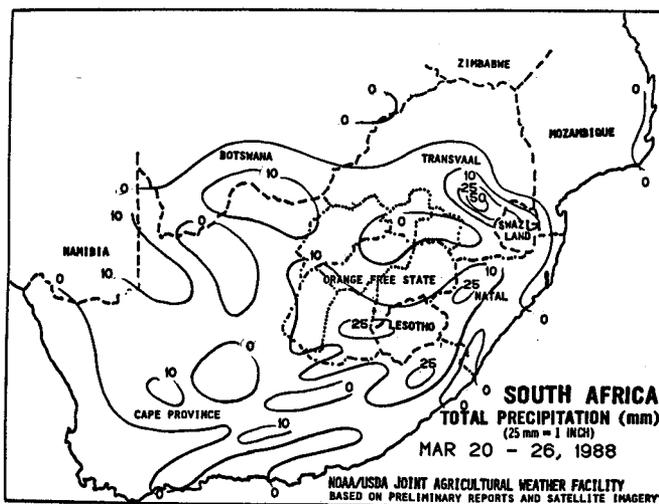
**WESTERN U.S.S.R** ... Widespread precipitation (10-41mm) in the form of rain and some snow covered the Baltic States, Belorussia, the Ukraine and eastern North Caucasus, increasing moisture for the upcoming growing season. Precipitation diminished rapidly to the east as high pressure, centered over the southern Urals, remained stationary during the week, keeping winter grain areas in the Volga and the Volga Vyatsk mostly dry. Gradual warming occurred over the region, and by week's end, maximum temperatures over major winter wheat areas of the Ukraine and North Caucasus ranged from 7 to 9 degrees Celsius (C). Winter grains in these areas were without snow cover. The weather was warm enough to cause winter grains in the southern Ukraine and North Caucasus to break dormancy.



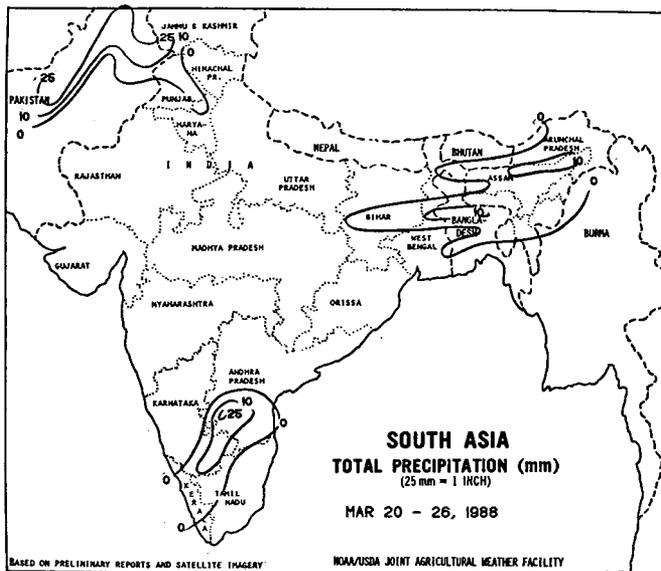
**EUROPE** ... Heavy rain (greater than 25mm) continued across the United Kingdom, northern France, the Low Countries, and West and East Germany, likely causing flooding and keeping soils saturated. Widespread precipitation also continued over eastern Europe, bringing some previously dry soils in southeastern growing areas up to near-normal moisture levels. In contrast, southwestern Europe remained mostly dry. Some winter grain areas in Spain and northern Italy have been drier than normal for several consecutive weeks, with moisture becoming short for some crops. Above-normal temperatures covered much of Europe, favoring vegetative growth and spring establishment of winter crops in all but northeastern growing areas.



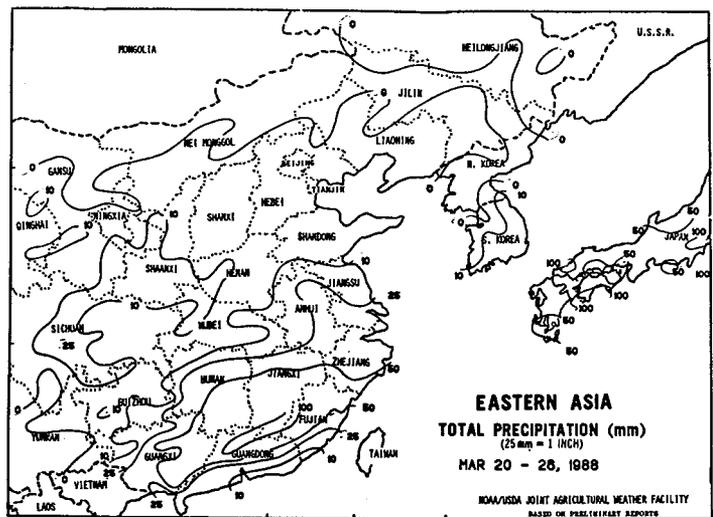
**NORTHWESTERN AFRICA** ... Mostly dry weather continued over Moroccan winter grain areas for the third consecutive week. Very light showers (5mm or less) were confined to the northwest coast. Moisture is becoming limited for reproductive to filling winter grains. Persistent dryness has increased stress on winter crops during weather-sensitive growth phases. In Algeria and Tunisia, light showers (1-7mm) covered most winter grain areas, bringing minimal if any relief to the dry areas. An isolated area along the Algerian-Tunisian border received 25-29mm of highly beneficial rainfall. Persistent dryness in southernmost crop areas during much of the growing season has likely caused a significant reduction in yield prospects.



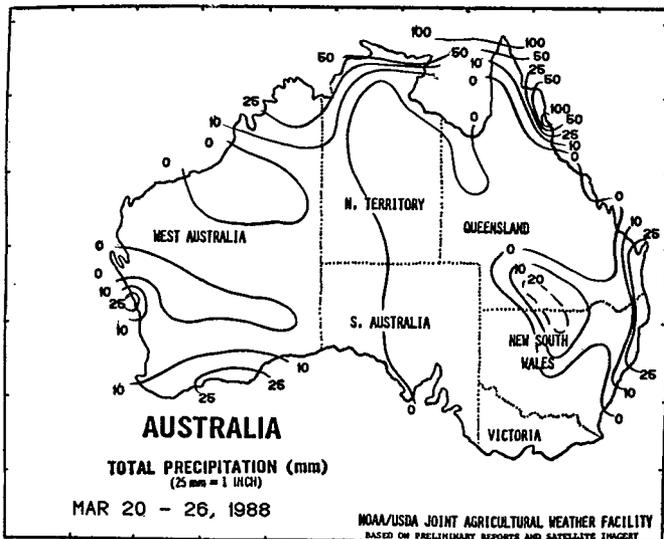
**SOUTH AFRICA** ... Generally dry, warm weather benefited maturing corn and allowed early harvesting to progress though periodic rain caused delays in the western and southern Maize Triangle. Usually, harvesting takes place from April to July, but this season's above-normal temperatures increased the growth rate of the crop and much of it is currently maturing. However, corn is still filling in parts of the eastern Maize Triangle due to the unusually wet weather during much of the normal planting period.



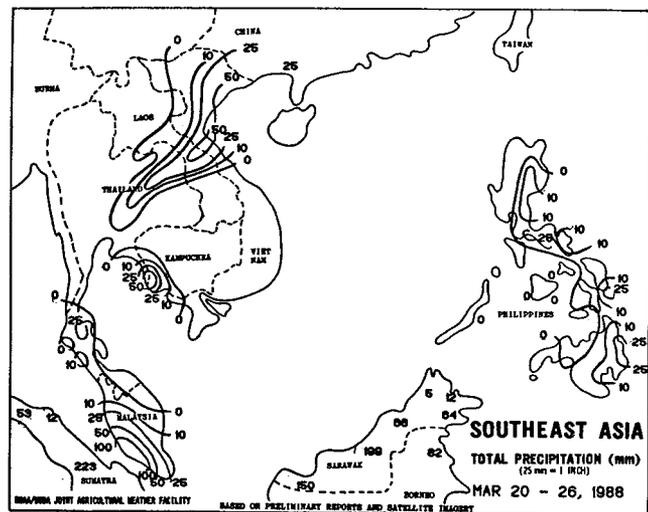
**SOUTH ASIA** ... Dry, warm weather continued across India's winter grain regions, benefiting maturing crops. However, temperatures reached the low to middle thirties C in north-central India, stressing late planted crops in early filling. Light to moderate rain (1-18mm) covered grain regions of northern Pakistan, but dry, hot weather continued to the south. Dry, hot weather covered all but southernmost rice regions, stressing heading rice.



**EASTERN ASIA** ... Heavy rain (greater than 25mm) continued across much of southeastern China, causing rice planting delays. Very heavy rain (greater than 100mm) on saturated soils in northern Guangdong, southern Jiangxi, and western Fujian possibly caused flooding. Widespread heavy rain also fell over much of southern Japan. Mostly light rain and snow (less than 10mm) fell over the North China Plain and Korean Peninsula, improving soil moisture levels in growing areas of Shanxi, Hebei, and Shandong which have been abnormally dry through the winter. Average temperatures for the week were much below normal in all but extreme southwestern growing areas, where they were above normal. The cooler weather slowed growth of vegetative winter grains across central and southern growing areas.



**AUSTRALIA** ... Scattered showers fell over coastal sugarcane growing areas and summer crop areas, although area coverage was low. In the 4 weeks following Tropical Cyclone Charlie, rainfall has trended below normal in many sugarcane areas. Rain will be needed soon due to the high water requirements of the vegetative crop. Showers in summer crop areas caused delays in sorghum harvesting but benefited late planted crops in New South Wales. Other wheat areas were mostly dry except for Western Australia, where widespread light to moderate rain (up to 40mm) increased pre-season soil moisture levels. Weekly average temperatures were much above normal across most southern and western wheat areas, and normal to below normal in Queensland wheat and sugarcane growing areas.



**SOUTHEAST ASIA** ... Moderate to heavy rain (32-100mm or more) continued throughout Indonesia and most of Malaysia. Heaviest rain (100-275mm) was over crop regions of eastern Malaysia and from southern Java eastward, possibly causing local flooding. Drier-than-normal weather (less than 25mm) continued along the east coast of western Malaysia. Moderate showers (10-51mm) continued over rice regions of northern Vietnam, with local showers over central Laos, northeastern Thailand, and western Kampuchea. Most areas of peninsular Thailand were dry. Dry weather covered all but east-coastal crop regions of the Philippines.

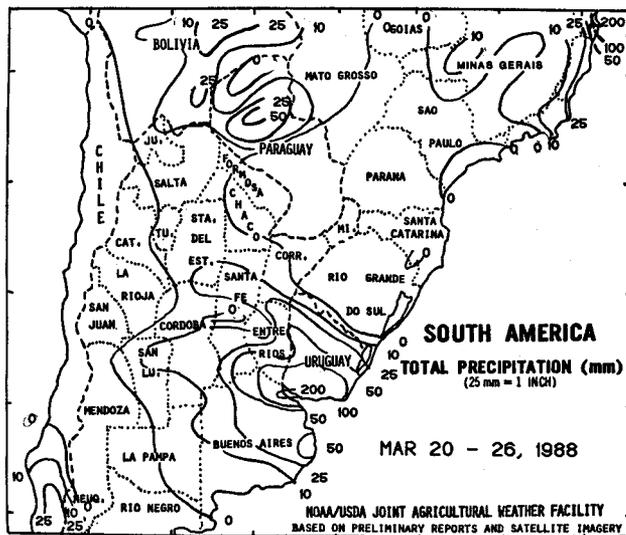
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**SOUTH AMERICA** ... Weather extremes dominated the region. In southern Brazil, dryness persisted over Rio Grande do Sul, where rainfall has been substantially below normal since mid-February. Weekly temperatures averaged 4-6 degrees C above normal with daytime highs reaching 35-38 degrees C. While the mostly dry weather throughout Brazil's soybean areas favored early harvesting, the heat and dryness in the south severely stressed late planted pod filling soybeans. In contrast, just to the south, heavy showers and thunderstorms produced 50-212mm of weekly rainfall in extreme southeastern Santa Fe, northeastern Buenos Aires, and southern Uruguay, disrupting crop harvests and causing some flooding. Weekly rainfall generally averaged 10-50mm over the remainder of Argentina's primary summer crop areas, slowing harvesting. Mostly dry weather favored maturing cotton in northern growing areas.

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