

# 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

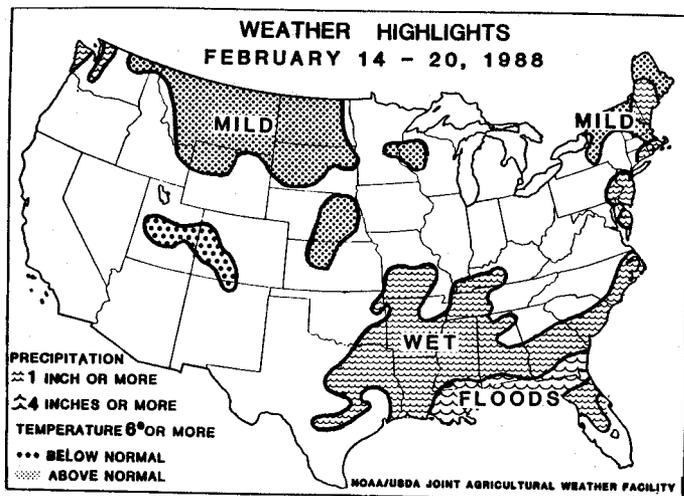
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## National Weather Summary

February 14 - 20, 1988



**HIGHLIGHTS:** Heavy rain caused local flooding in the Gulf States. Strong winds raked the Southwest, particularly southern California. Most of the Nation was warmer than normal.

**SUNDAY...**A cold front swept across the central Plains, followed by strong northerly winds and sharply falling temperatures. Blowing and drifting snow was common in the northern Plains. Snow showers were scattered across upstate New York, and rain showers were scattered across western Washington. Rain and occasional thunderstorms extended from Louisiana across Mississippi, western Tennessee, eastern Missouri, Illinois, western Kentucky, Indiana, and lower Michigan. Snow was scattered over upper Michigan, Wisconsin, Minnesota, Iowa, and Missouri.

**MONDAY...**A low pressure system over lower Michigan produced light snow from the middle Mississippi Valley to the upper Great Lakes. Rain fell in the lower Great Lakes region, with freezing rain in parts of Pennsylvania and New York. At midday, rain was scattered from the upper Ohio Valley to Georgia and Alabama. A line of thunderstorms stretched across the Florida Panhandle. Rain showers and snow showers were scattered from the northern Pacific coast to the northern Rockies. Late-day snow fell in Maine, upstate New York, Ohio, Indiana, Michigan, Kentucky, Tennessee, northern Alabama, and northwestern Georgia. Rain fell over southern Maine and over the Atlantic Coast States through the Virginias and North Carolina.

**TUESDAY...**Mostly pleasant weather prevailed across the Nation, as a weak frontal system swept through the northern Plains. Snow was scattered from southeastern Minnesota and northeastern Iowa into

central and eastern Wisconsin. Freezing rain mixed with snow in South Dakota and Iowa. Snow fell in Colorado and New Mexico. Snow was also scattered across the lower Great Lakes and upper Ohio Valley into northern New York. Strong Santa Ana winds raked southern California.

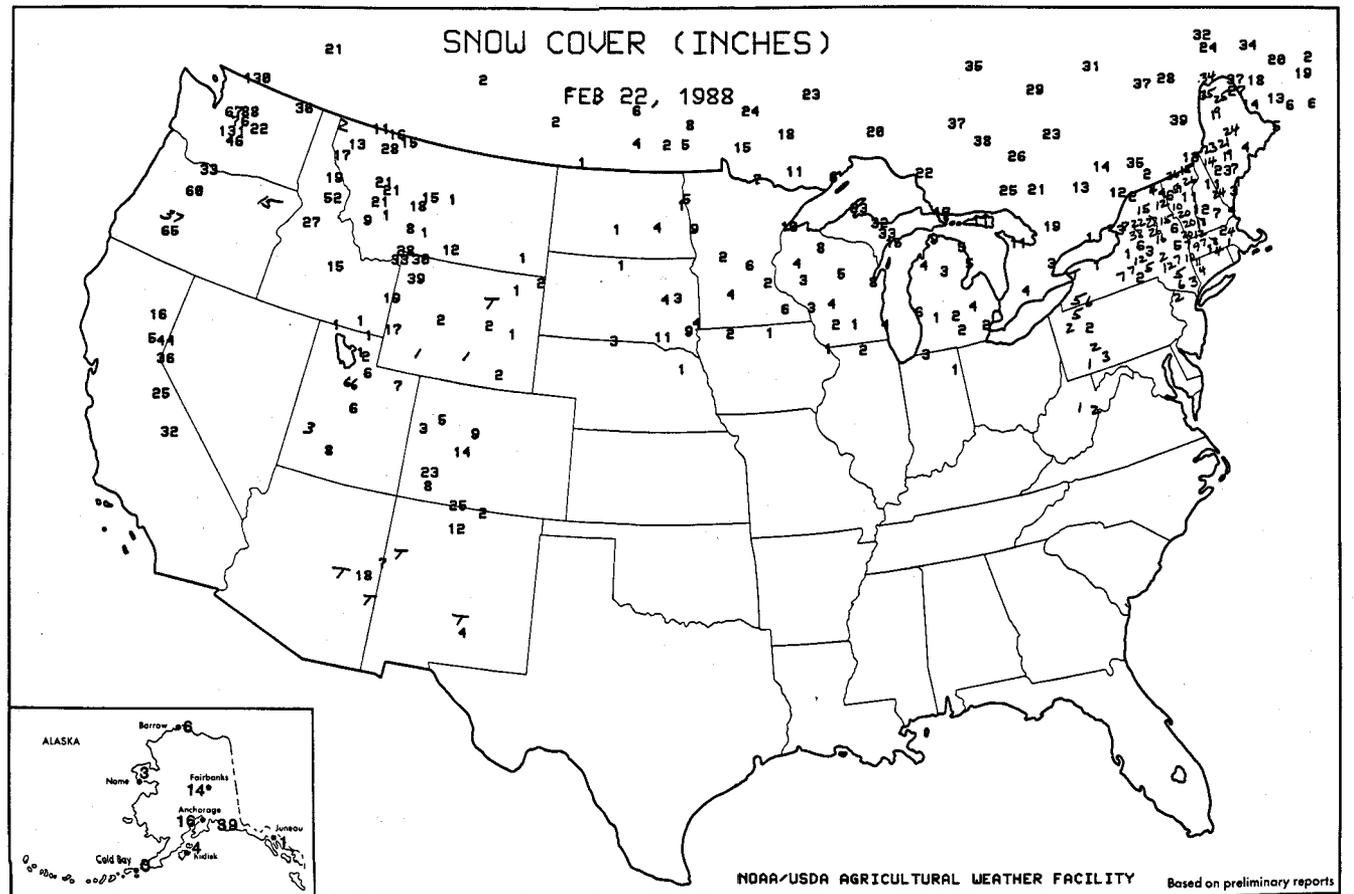
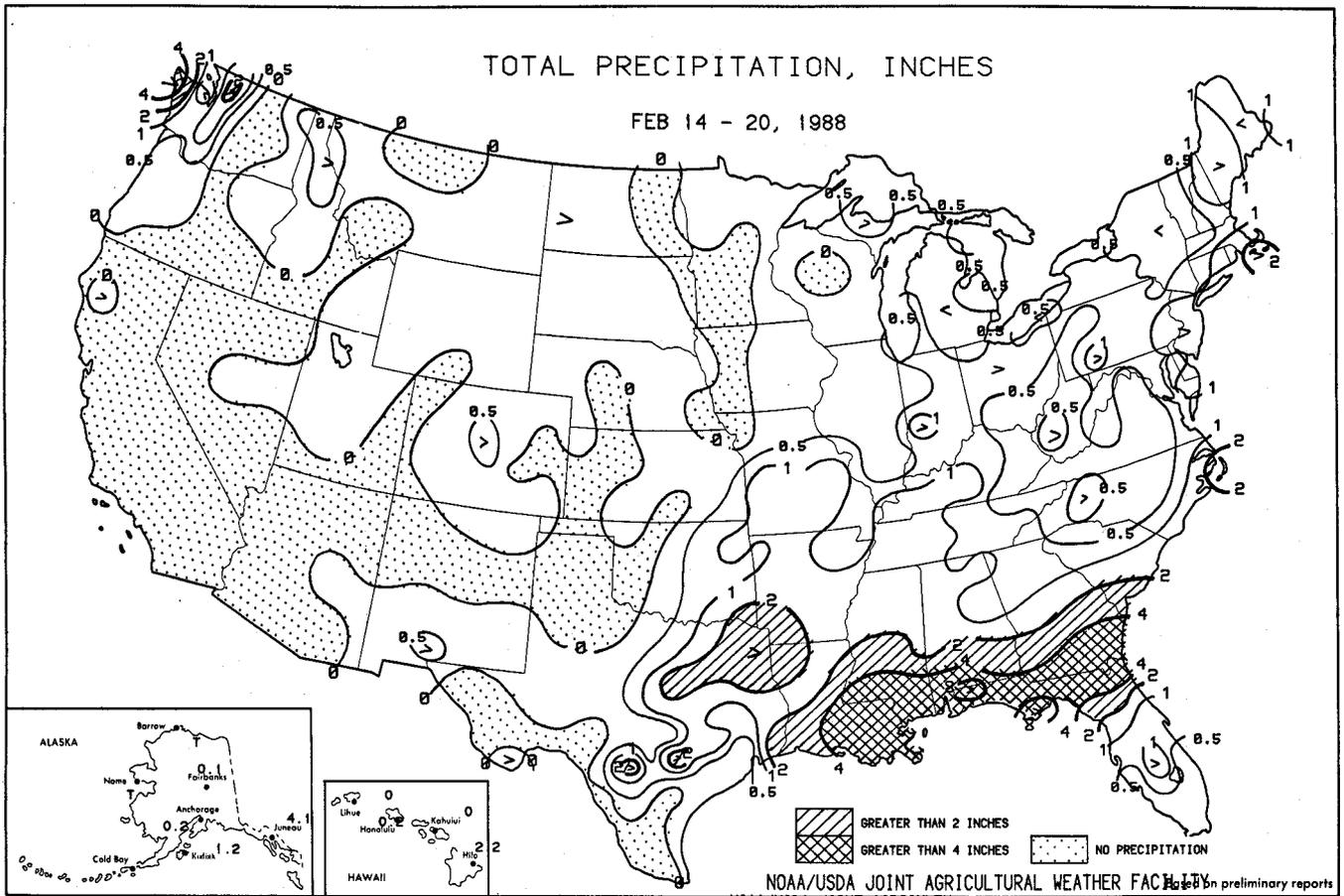
**WEDNESDAY...**Snowfall gradually ended in Colorado but persisted in New Mexico. Strong gusty winds increased during the day in southern California, bringing cooler air into the region. Rain and occasional thundershowers extended over eastern and north-central Texas. Rain also fell in eastern Oklahoma, northwestern Arkansas, southern Missouri, and southern Illinois. Snow mixed with rain over southern Missouri. Rain also extended along the northern Pacific coast. Snow scattered over northeastern New Mexico, and from northwestern Montana across the Idaho Panhandle.

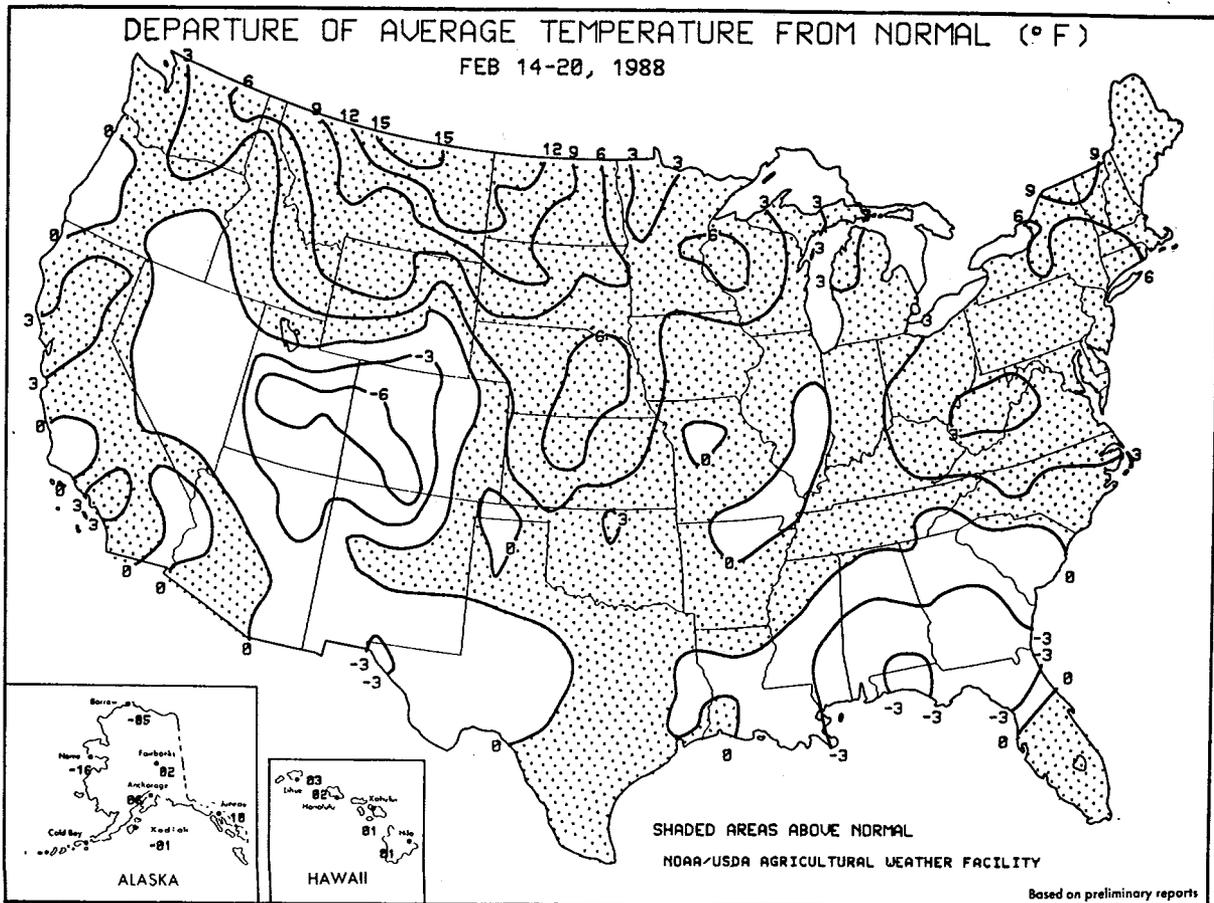
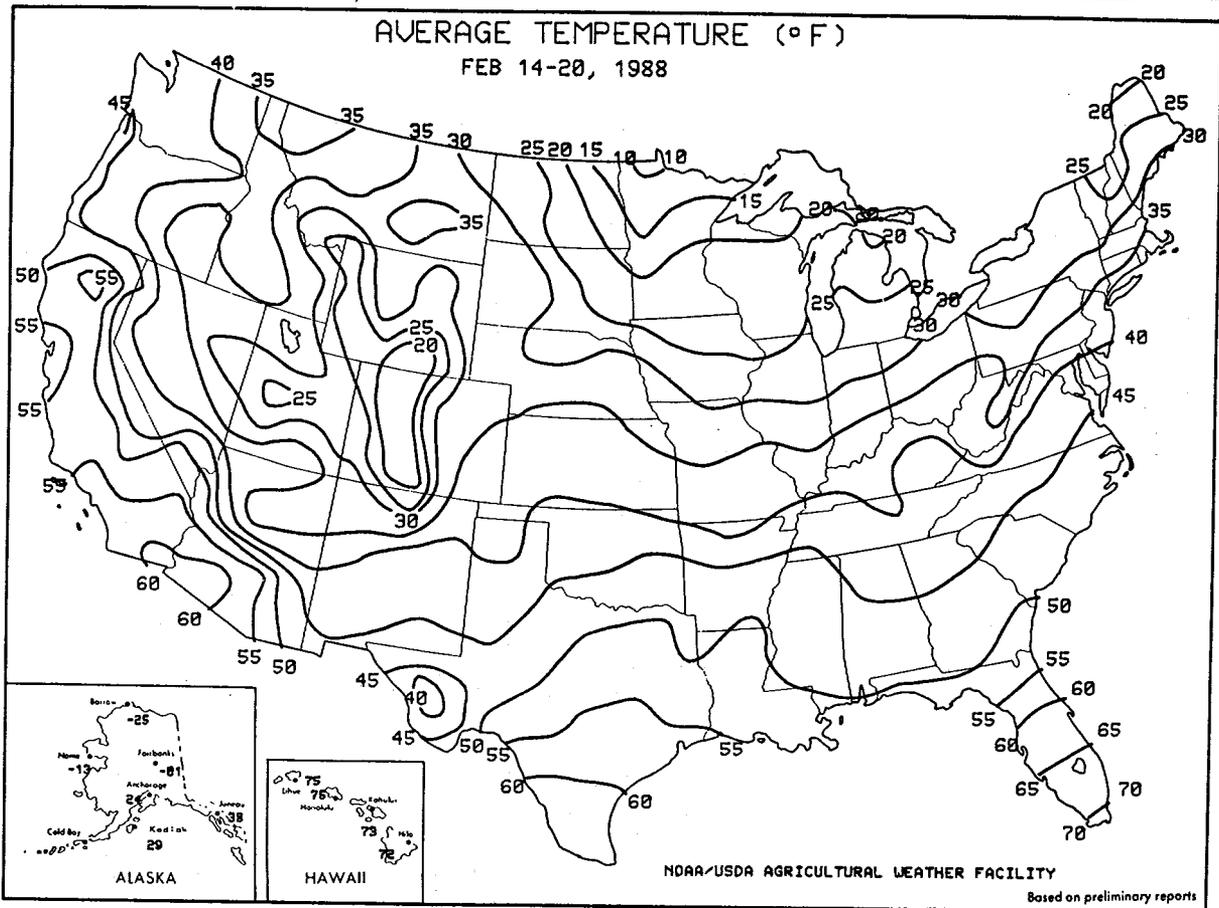
**THURSDAY...**Heavy rains continued in Louisiana and eastern Texas, causing local flooding. Hail accompanied some severe thunderstorms in Texas. An area of snow moved into western Texas in the morning. Snow at midday extended from western Wyoming across parts of Utah to eastern Nevada. Santa Ana winds continued to gust across southern California and southern Nevada, causing sandstorms at some locations. Light rain showers were scattered from eastern areas of the southern Plains across Arkansas into southern and central Missouri. Some sleet and snow mixed with the light rain.

**FRIDAY...**Wettest conditions shifted to the eastern Gulf coast. Heavy rain accompanied thunderstorms over northern Florida and southern Georgia. Flooding continued on some Louisiana rivers. Light to moderate snow fell across parts of Missouri and Illinois. Freezing rain and sleet fell in Indiana and Ohio. Winds diminished in the Southwest but increased in the northern Plains.

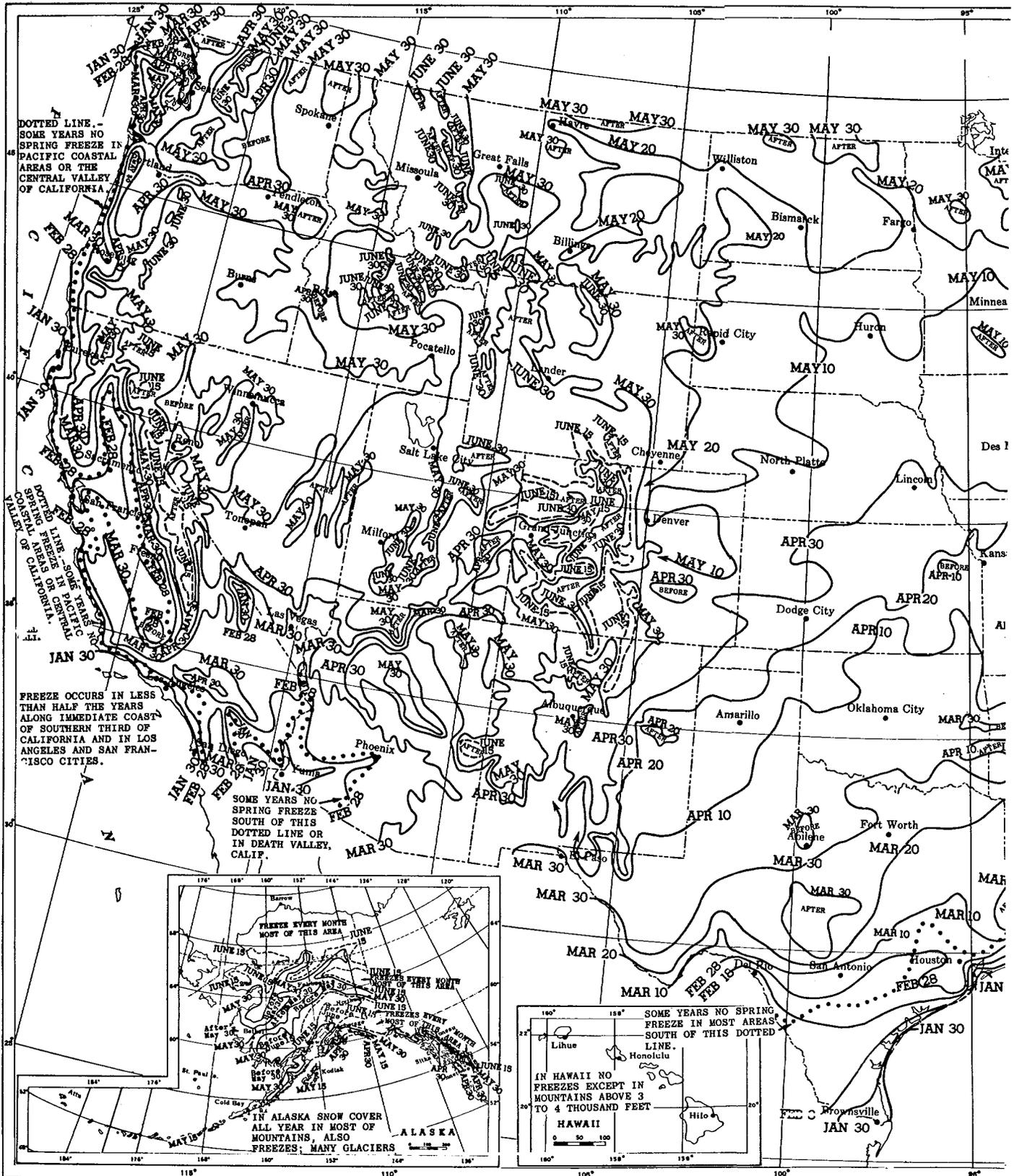
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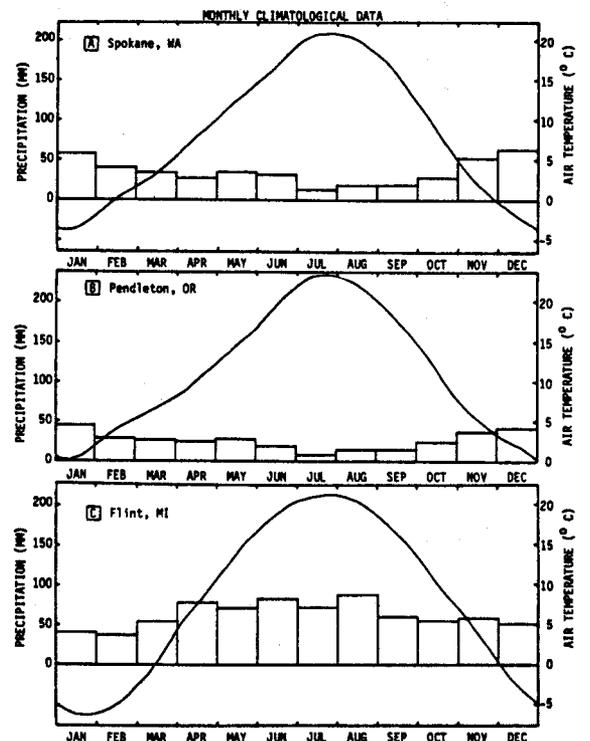
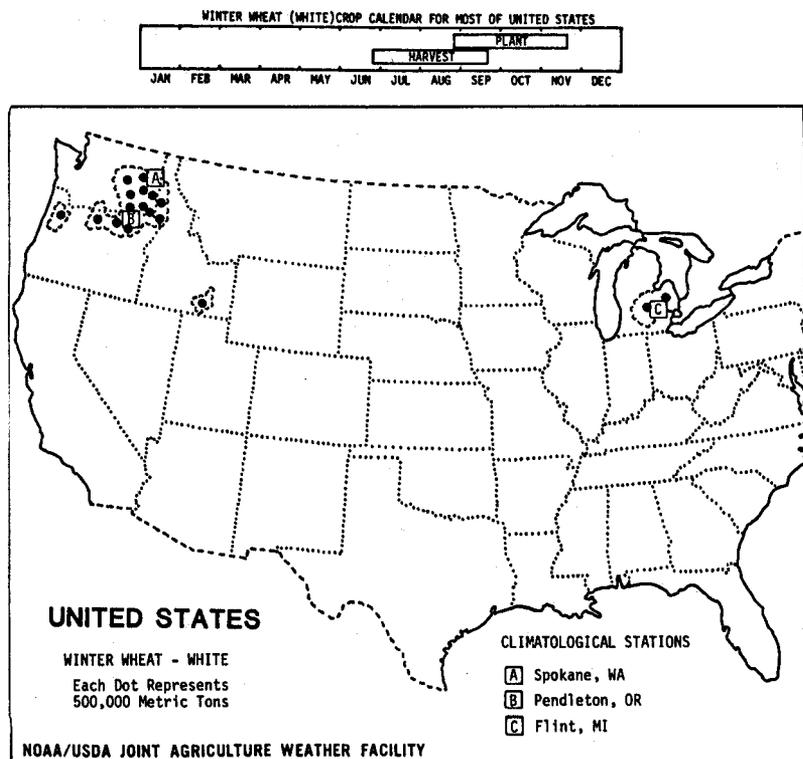
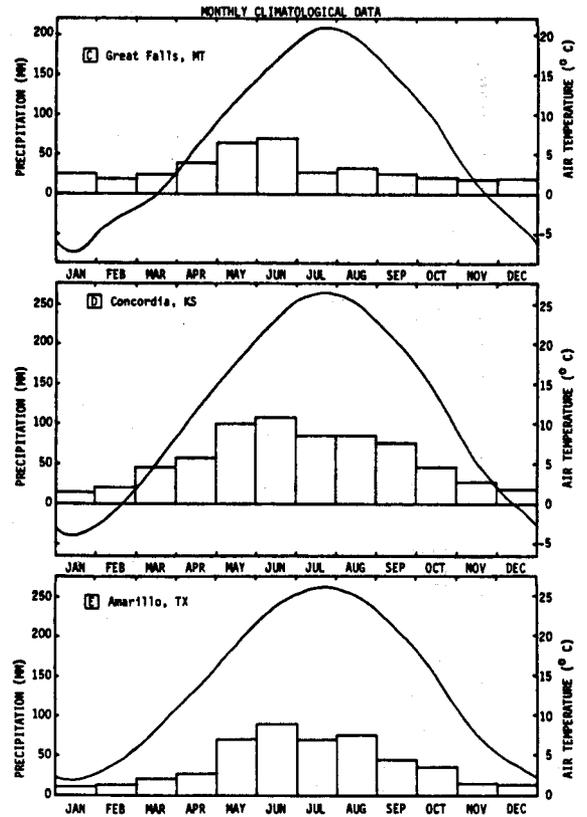
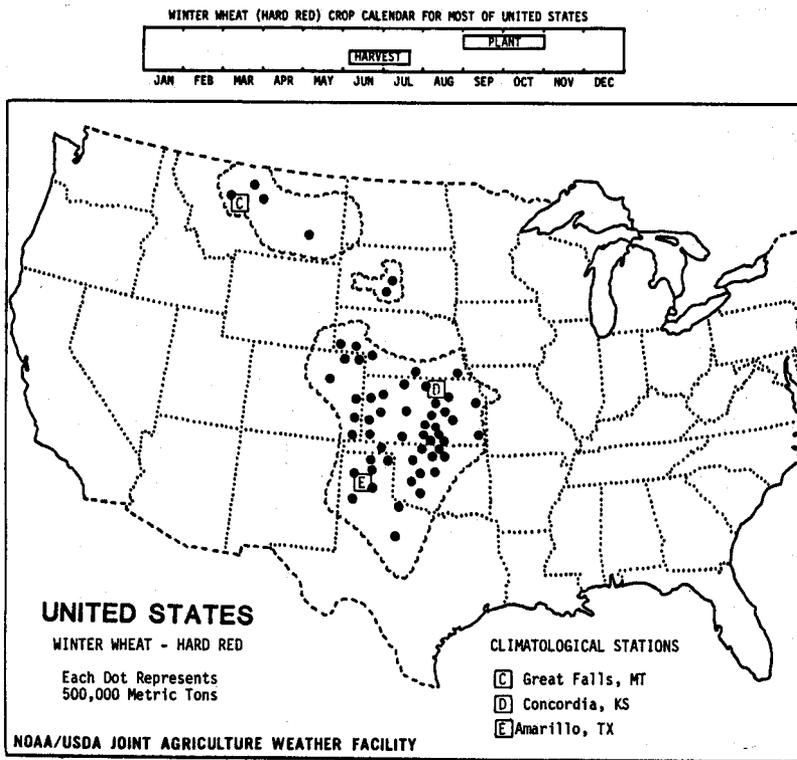
### MEAN DATE OF LAST 32°(F.)



# TEMPERATURE IN SPRING



# WINTER WHEAT AREAS AND CLIMATIC PROFILES



# National Weather Data for Selected Cities

Weather Data for the Week Ending February 20, 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 DEC. 1	PCT. NORMAL SINCE DEC. 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
AL BIRMINGHAM	56	32	65	22	44	-3	.9	-.2	.8	10.7	80	7.7	91	91	44	0	4	4	1
MOBILE	58	40	70	29	49	-5	4.4	3.2	2.4	14.3	107	10.7	135	96	57	0	2	6	2
AK ANCHORAGE	32	17	44	2	25	-4	1.7	.6	1.0	15.7	131	11.4	158	93	47	0	3	3	2
BARROW	-18	-32	-9	-41	-25	6	.2	T	.1	1.7	71	.6	46	95	54	0	7	5	0
FAIRBANKS	9	-12	21	-20	-1	2	.1	T	.1	1.0	.2	T	3	75	64	0	7	1	0
JUNEAU	41	36	44	33	38	10	4.1	3.2	2.5	13.2	120	7.9	124	99	81	0	7	7	0
KODIAK	36	23	41	8	29	-1	1.2	0	.7	14.8	99	12.5	132	91	57	0	6	7	1
NOME	-5	-21	5	-27	-13	-16	T	T	T	1.9	105	.7	58	74	54	0	5	5	1
AZ PHOENIX	72	46	78	44	59	3	0	0	0	2.7	142	1.1	100	49	16	0	7	2	0
PRESCOTT	58	24	66	20	41	1	0	0	0	2.5	55	1.8	63	68	23	0	7	0	0
TUCSON	71	40	79	35	56	2	0	0	0	1.1	117	1.0	83	58	17	0	7	0	0
YUMA	73	49	81	38	61	0	0	0	0	1.0	115	4	69	36	13	0	0	0	0
AR FORT SMITH	58	33	69	25	46	3	1.3	.7	1.0	11.8	188	3.7	107	92	50	0	3	3	1
LITTLE ROCK	55	37	65	30	46	2	1.2	.3	.7	19.8	184	6.1	92	78	54	0	1	3	2
CA BAKERSFIELD	70	38	76	34	54	0	0	0	0	1.7	70	.8	48	79	31	0	0	0	0
EUREKA	57	41	65	38	49	1	T	T	-1.3	18.2	107	7.2	67	86	69	0	0	0	0
FRESNO	68	35	72	32	52	1	0	0	0	2.7	55	1.5	45	94	31	0	1	0	0
LOS ANGELES	72	50	78	46	61	4	0	0	0	4.2	65	2.4	50	73	26	0	0	0	0
REDDING	71	44	80	40	57	6	0	0	0	16.3	81	7.3	55	60	19	0	0	0	0
SACRAMENTO	67	43	71	37	55	4	0	0	0	5.8	64	2.6	43	77	36	0	0	0	0
SAN DIEGO	70	49	76	47	59	2	0	0	0	4.9	95	2.2	66	87	33	0	0	0	0
SAN FRANCISCO	67	44	70	43	56	4	0	0	0	8.4	80	3.9	56	84	34	0	0	0	0
CO DENVER	46	23	59	11	34	0	.3	.1	.3	2.3	155	1.0	105	85	33	0	6	1	0
GRAND JUNCTION	40	13	45	9	27	-8	T	T	-1.1	2.1	134	1.3	128	81	43	0	7	0	0
PUEBLO	50	21	65	13	36	0	T	T	-1.1	1.2	167	.7	183	99	37	0	7	0	0
CT BRIDGEPORT	42	28	48	21	35	4	.8	.1	.3	7.9	88	5.8	110	85	50	0	6	3	0
HARTFORD	43	23	51	16	33	5	1.0	.2	.6	8.9	90	7.3	128	85	45	0	6	4	1
DC WASHINGTON	49	33	56	20	41	3	.7	.1	.4	8.2	106	5.6	123	88	41	0	2	3	0
FL APALACHICOLA	61	42	68	32	51	-4	8.3	7.4	4.5	12.3	128	11.3	186	98	67	0	1	4	4
DAYTONA BEACH	72	46	85	33	59	0	.6	-.2	.3	7.0	103	6.7	147	97	53	0	2	0	0
JACKSONVILLE	63	41	70	28	52	-4	5.0	4.1	2.9	12.3	155	12.2	222	97	57	0	0	2	2
KEY WEST	77	65	83	55	71	1	T	T	-5	7.9	162	5.2	163	89	69	0	0	0	0
MIAMI	79	61	87	48	70	2	T	T	-5	6.6	122	2.3	65	86	54	0	0	0	0
ORLANDO	76	50	89	38	63	2	.5	-.3	.5	5.1	82	4.6	106	94	45	0	0	1	1
TALLAHASSEE	62	37	70	25	50	-4	6.6	5.4	4.7	11.6	92	10.6	131	97	54	0	3	4	4
TAMPA	73	50	80	38	61	0	.5	-.3	.5	4.4	69	3.9	93	94	54	0	0	2	0
WEST PALM BEACH	77	58	90	44	68	0	.3	-.4	.2	6.3	93	4.9	106	90	56	1	0	2	0
GA ATLANTA	55	35	63	29	45	0	.5	-.6	.2	12.1	99	7.9	100	85	39	0	4	3	0
AUGUSTA	59	34	64	22	46	-2	.5	-.6	.3	8.3	84	7.0	103	95	48	0	4	4	0
MACON	58	35	65	25	46	-3	1.8	.6	.9	9.7	85	7.9	107	94	46	0	3	4	1
SAVANNAH	61	39	66	28	50	-2	3.7	2.9	1.7	8.9	110	7.5	141	92	54	0	2	4	3
HI HILO	79	65	80	63	72	1	2.2	-1.3	.8	37.4	118	15.2	81	92	62	0	0	6	2
HONOLULU	82	67	83	62	75	2	.2	-.5	.2	20.5	226	3.2	57	87	54	0	0	1	0
KAHULUI	82	64	84	61	73	1	T	-7	T	13.3	149	7.8	125	84	54	0	0	0	0
LIHUE	80	70	81	64	75	3	T	-9	T	21.3	148	10.4	117	84	64	0	0	0	0
ID BOISE	48	27	57	24	37	1	T	-2	T	2.6	71	1.6	66	89	37	0	7	1	0
LEWISTON	49	32	54	28	41	1	T	-2	T	1.8	55	1.0	50	77	42	0	5	1	0
POCATELLO	42	25	48	22	34	3	.1	-1	.1	2.4	91	1.2	70	85	47	0	7	1	0
IL CHICAGO	39	17	44	8	28	2	.4	-.2	.3	7.0	148	3.2	137	95	57	0	7	4	0
MOLINE	38	16	43	7	27	1	.2	-1	.2	7.3	167	2.8	116	94	62	0	7	1	0
PEORIA	38	20	44	13	29	2	.1	-2	.1	6.9	151	2.7	107	95	63	0	7	1	0
QUINCY	40	21	46	13	31	1	T	-4	T	5.4	135	1.6	71	88	56	0	6	1	0
ROCKFORD	35	13	40	6	24	0	.2	-1	.1	7.0	172	2.9	136	94	63	0	7	3	0
SPRINGFIELD	39	23	45	17	31	2	.4	0	.4	8.6	180	3.6	135	95	64	0	6	3	0
IN EVANSVILLE	47	28	56	21	37	2	.6	-1	.3	12.9	152	7.2	142	92	61	0	5	3	0
FORT WAYNE	39	18	43	-2	28	1	.6	.2	.4	7.0	119	3.5	104	93	64	0	7	4	0
INDIANAPOLIS	43	23	47	14	33	2	1.0	.3	.7	10.1	139	5.4	124	91	55	0	6	4	1
SOUTH BEND	38	17	43	9	27	0	.6	-.2	.3	8.4	124	4.2	111	98	67	0	7	4	0
IA DES MOINES	38	18	47	4	28	3	-1	-.2	0	3.5	129	.9	55	89	59	0	7	2	0
SIoux CITY	40	18	52	-2	29	5	T	-2	T	1.6	84	1.2	95	90	58	0	7	1	0
WATERLOO	34	14	43	3	24	3	T	-2	T	2.9	117	1.1	80	94	66	0	7	1	0
KS CONCORDIA	47	27	53	16	37	5	T	-2	T	2.1	116	1.3	119	86	47	0	6	1	0
DODGE CITY	53	26	60	22	40	4	.1	0	.1	1.7	140	1.0	140	84	34	0	6	1	0
GOODLAND	47	26	59	21	37	4	T	-1	T	2.3	241	1.8	321	90	42	0	7	1	0
TOPEKA	49	27	55	17	37	3	T	-2	T	4.1	146	2.3	144	89	49	0	6	1	0
WICHITA	47	25	60	20	37	2	T	-2	T	2.9	137	.7	58	88	47	0	7	0	0
KY BOWLING GREEN	51	28	60	15	40	2	1.3	.3	.8	14.1	119	7.1	97	96	52	0	5	4	1
LEXINGTON	49	28	58	16	38	3	.6	-.2	.3	12.0	126	5.8	101	88	50	0	5	3	0
LOUISVILLE	50	28	57	15	39	2	.8	0	.3	12.1	134	7.4	133	87	52	0	5	3	0
LA ALEXANDRIA	62	44	71	33	53	-1	1.3	.2	.8	12.9	102	5.1	66	84	55	0	0	3	1
BATON ROUGE	61	44	70	31	53	-1	5.2	4.0	4.1	19.4	147	15.5	191	93	51	0	1	3	2
LAKE CHARLES	63	46	69	33	55	1	2.4	1.6	1.6	13.0	107	8.1	114	92	59	0	0	3	1
NEW ORLEANS	61	45	70	33	53	-2	5.8	4.4	3.8	17.5	126	14.6	169	95	62	0	0	5	3

Based on 1951-80 normals.

Weather Data for the Week Ending February 20, 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 DEC. 1	PCT. NORMAL SINCE DEC. 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
SHREVEPORT	60	40	70	28	50	0	3.1	2.2	2.5	13.8	133	5.7	87	91	52	0	2	3	1
ME CARIBOU	29	11	40	2	20	7	.5	0	.4	7.8	112	5.3	138	91	63	0	7	3	0
PORTLAND	41	22	50	12	31	8	1.2	.3	1.0	7.2	66	5.1	82	83	48	0	6	4	1
MD BALTIMORE	49	29	54	17	39	4	.8	0	.6	8.4	100	6.4	126	82	42	0	5	3	1
SALISBURY	54	31	60	22	43	6	1.1	.2	.4	11.1	118	7.9	139	88	43	0	5	3	0
MA BOSTON	44	29	50	17	37	6	.7	.2	.3	8.2	74	6.1	93	84	47	0	5	3	0
CHATHAM	45	31	46	20	38	7	1.2	.1	.5	12.1	98	7.8	107	92	72	0	4	3	0
MI ALPENA	34	3	46	-6	19	0	.5	.2	.4	4.5	98	2.4	89	94	60	0	7	4	0
DETROIT	38	17	42	0	28	1	.5	.1	.4	7.8	143	3.3	109	89	63	0	7	3	0
FLINT	37	14	41	4	26	2	.5	.2	.3	5.3	116	2.7	107	92	62	0	7	3	0
GRAND RAPIDS	37	15	40	5	26	1	.4	.1	.3	6.7	121	3.5	114	98	65	0	7	5	0
HOUGHTON LAKE	33	9	42	-3	21	3	1.1	.1	.1	4.9	115	2.4	103	93	63	0	7	2	0
LANSING	37	14	41	4	26	3	.4	.1	.2	5.9	118	2.5	99	97	64	0	7	4	0
MARQUETTE	31	8	46	-12	20	2	.7	.3	.4	8.4	173	4.9	174	95	60	0	7	4	0
MUSKEGON	37	16	39	9	20	2	.6	.2	.4	8.8	144	4.6	131	96	65	0	7	3	0
SAULT ST. MARIE	31	6	43	-6	19	4	.3	.2	.2	6.8	115	3.7	110	83	53	0	7	5	0
MN ALEXANDRIA	29	3	39	-10	16	3	T	T	T	1.9	91	1.2	91	92	65	0	7	0	0
DULUTH	26	8	41	-9	17	4	1	.2	.1	1.5	51	.9	51	87	57	0	7	1	0
INT'L FALLS	25	-2	43	-15	12	3	1	.1	.1	.8	35	.6	43	87	58	0	7	3	0
MINNEAPOLIS	30	15	39	3	23	4	T	T	T	2.9	133	1.6	123	83	62	0	7	2	0
ROCHESTER	29	14	36	0	22	4	T	T	T	3.1	146	1.4	109	92	71	0	7	1	0
MS GREENWOOD	58	39	67	28	48	1	1.1	0	.6	8.8	64	4.4	53	89	48	0	2	3	1
JACKSON	59	37	68	26	48	-1	2.5	1.4	1.3	9.4	71	5.9	74	96	54	0	2	3	2
MERIDIAN	59	34	67	23	47	-3	1.8	.7	.9	11.5	83	7.0	86	97	50	0	3	4	2
MO CAPE GIRARDEAU	48	29	56	22	39	-1	.9	.1	.4	13.5	155	5.3	108	91	57	0	5	4	0
COLUMBIA	43	24	55	16	33	0	.8	.3	.5	9.2	185	3.7	124	90	58	0	6	3	0
KANSAS CITY	44	24	52	12	34	0	T	T	T	4.2	122	2.1	108	93	52	0	6	0	0
SAINT LOUIS	44	27	59	20	36	1	.8	.3	.6	13.0	244	5.6	177	87	53	0	6	3	1
SPRINGFIELD	47	28	60	22	37	1	1.4	.9	.9	11.0	199	3.5	118	90	56	0	6	4	1
MT BILLINGS	44	30	55	22	37	8	1	.1	0	1.5	66	1.2	80	74	40	0	5	2	0
GLASGOW	39	24	49	9	31	15	T	0	T	.7	80	.7	119	92	61	0	6	2	0
GREAT FALLS	47	29	60	22	38	10	T	.2	T	1.6	70	1.4	91	71	34	0	6	0	0
HAVRE	49	28	62	17	38	17	0	.1	0	.5	37	.5	52	84	38	0	5	0	0
HELENA	43	32	53	30	38	10	T	.1	T	1.1	71	.7	71	74	42	0	6	1	0
KALISPELL	40	29	48	23	34	7	1	.2	.1	3.3	83	1.7	72	89	60	0	5	2	0
MILES CITY	44	29	51	17	36	13	T	.1	T	.5	29	.4	38	78	46	0	5	1	0
MISSOULA	42	28	53	26	35	6	1	.1	.1	2.4	77	1.3	67	92	54	0	6	3	0
NE GRAND ISLAND	45	23	51	10	34	6	1	.1	.1	2.3	139	1.5	148	91	52	0	7	1	0
LINCOLN	46	22	54	10	34	7	T	.3	T	1.3	64	.5	41	89	44	0	7	0	0
NORFOLK	42	21	50	6	32	7	1	.1	.1	2.0	124	1.2	121	93	52	0	7	3	0
NORTH PLATTE	44	22	50	13	33	5	T	.1	T	1.6	141	.8	107	93	54	0	7	0	0
OMAHA	43	21	51	5	32	4	T	.2	T	1.4	69	.7	50	86	51	0	7	1	0
SCOTTSBLUFF	46	23	57	16	34	4	T	.1	T	1.9	163	.9	129	91	38	0	6	1	0
VALENTINE	39	15	42	3	27	3	.3	.2	.3	3.0	379	1.2	221	92	63	0	7	2	0
NV ELY	41	17	51	13	29	0	T	.1	T	2.0	103	1.3	110	84	43	0	7	1	0
LAS VEGAS	63	39	70	35	51	1	T	.1	T	1.8	161	.9	109	44	18	0	0	0	0
RENO	55	20	64	16	38	0	0	.2	0	1.1	35	.5	26	77	23	0	7	0	0
WINNEMOCCA	48	22	57	16	35	-1	0	.2	0	1.9	85	1.2	89	85	34	0	7	0	0
NH CONCORD	41	18	48	11	30	7	.8	.2	.6	5.7	72	4.2	93	87	48	0	7	3	1
NJ ATLANTIC CITY	49	28	54	20	39	5	1.4	.6	.5	8.8	93	6.6	114	93	51	0	6	3	1
NM ALBUQUERQUE	53	28	63	21	41	0	0	.1	0	.5	45	.2	25	60	24	0	6	0	0
CLOVIS	56	28	68	20	42	0	T	.1	T	2.3	167	.5	64	74	33	0	6	0	0
ROSWELL	58	29	71	23	44	-1	T	.1	T	3.1	292	1.7	249	73	27	0	4	1	0
NY ALBANY	39	20	45	13	30	6	.3	.3	.2	6.5	95	4.9	125	83	50	0	6	3	0
BINGHAMTON	37	21	42	14	29	6	.4	.1	.4	7.0	100	4.8	117	87	47	0	7	3	0
BUFFALO	41	23	46	14	32	6	.9	.3	.5	7.5	92	4.7	100	90	52	0	7	3	0
NEW YORK	47	33	53	25	40	6	1.0	.2	.3	8.2	93	5.9	114	81	42	0	5	4	0
ROCHESTER	40	21	44	13	30	5	.5	.1	.3	4.3	66	2.3	59	88	49	0	7	3	0
SYRACUSE	40	23	45	17	32	7	.3	.3	.2	5.3	69	3.3	75	86	48	0	7	4	0
NC ASHEVILLE	53	26	61	14	39	0	.3	.5	.2	6.8	80	4.5	84	94	34	0	5	2	0
CHARLOTTE	57	35	63	23	46	3	.4	.5	.3	7.9	81	4.5	71	88	37	0	2	3	0
GREENSBORO	55	32	64	16	44	4	.3	.5	.2	6.9	75	3.5	60	88	37	0	3	2	0
HATTERAS	57	38	66	29	47	2	3.0	2.0	1.8	12.0	99	9.8	126	98	60	0	3	4	2
NEW BERN	61	36	67	25	49	2	1.1	.1	.4	10.8	102	7.2	105	92	46	0	2	3	0
RALEIGH	56	33	65	15	45	3	.3	.6	.2	8.5	94	5.5	92	91	42	0	4	2	0
WILMINGTON	60	36	65	21	48	1	1.5	.7	.6	9.0	94	7.6	125	95	48	0	2	4	2
ND BISMARCK	38	9	45	-7	24	8	1	0	.1	1.2	93	1.1	134	89	63	0	7	2	0
FARGO	26	3	37	-12	15	3	.1	0	.1	2.5	178	1.8	228	91	67	0	7	2	0
GRAND FORKS	28	2	39	-16	15	5	T	.1	T	1.2	68	.8	72	90	67	0	7	1	0
WILLISTON	37	19	42	7	28	12	.1	0	.1	1.1	82	1.0	122	93	65	0	7	3	0
OH AKRON-CANTON	42	22	48	4	32	5	.6	.1	.4	5.9	89	3.6	90	88	54	0	6	4	0
CINCINNATI	46	26	53	14	36	3	.6	.1	.4	10.8	136	7.4	148	84	49	0	5	3	0
CLEVELAND	41	20	45	2	31	3	.5	.1	.4	6.3	94	3.3	84	93	57	0	7	5	0
COLUMBUS	45	24	50	6	35	4	.6	0	.5	9.1	133	6.2	146	85	51	0	6	4	0

Based on 1951-80 normals.

Weather Data for the Week Ending February 20, 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 DEC. 1	PCT. NORMAL SINCE DEC. 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	
DAYTON	43	23	48	6	33	3	.6	.1	.4	8.1	125	5.1	127	88	61	0	6	4	0	0
TOLEDO	39	16	43	-3	28	1	.4	0	.4	6.2	107	2.4	75	96	68	0	7	2	0	0
YOUNGSTOWN	42	21	47	2	31	5	.5	0	.3	6.1	88	3.4	81	91	52	0	7	4	0	0
OK OKLAHOMA CITY	54	34	66	26	44	3	.3	-.1	.2	5.4	181	1.7	91	79	42	0	3	2	0	0
TULSA	52	33	66	22	43	1	.9	-.5	.8	8.0	188	2.1	87	82	45	0	1	4	1	0
OR ASTORIA	53	38	60	33	45	1	.9	-.1	.4	18.7	67	9.9	60	96	66	0	0	4	0	0
BURNS	43	23	53	17	33	1	T	-.3	T	3.3	76	1.2	45	***	***	0	7	0	0	0
MEDFORD	58	28	71	25	43	0	0	0	0	6.5	77	2.7	55	94	37	0	6	0	0	0
PENDLETON	52	34	60	31	43	3	.1	-.2	.1	3.2	77	2.0	78	82	44	0	2	2	0	0
PORTLAND	52	37	57	33	45	1	.3	-.7	.1	13.9	90	5.9	65	96	65	0	0	4	0	0
SALEM	50	34	53	30	42	-1	.1	-.9	.1	18.4	105	7.5	72	96	63	0	2	2	0	0
PA ALLENTOWN	42	24	47	16	33	3	1.1	-.3	.6	7.2	79	5.7	106	89	49	0	6	2	1	0
ERIE	41	21	45	6	31	6	.4	-.2	.2	6.4	91	3.0	80	90	53	0	7	3	0	0
HARRISBURG	45	25	51	16	35	3	.3	-.9	.2	7.2	88	5.3	109	89	44	0	6	2	1	1
PHILADELPHIA	47	29	53	20	38	5	1.2	-.5	.8	8.4	99	6.8	133	88	47	0	6	4	1	1
PITTSBURGH	45	25	50	5	35	5	.3	-.3	.2	7.1	101	4.7	104	88	49	0	6	4	0	0
SCRANTON	40	25	45	18	33	5	.4	-.1	.3	4.5	73	3.5	96	79	45	0	6	3	0	0
RI PROVIDENCE	46	27	54	18	36	7	1.6	-.7	.6	10.1	91	7.9	119	91	47	0	6	4	2	2
SC CHARLESTON	61	38	68	26	50	0	2.0	1.1	.9	6.7	77	5.1	91	93	52	0	2	4	2	2
COLUMBIA	58	32	64	20	45	-2	.6	-.4	.5	7.7	72	6.2	86	96	46	0	4	4	1	1
FLORENCE	60	35	66	22	48	0	.7	-.2	.4	6.5	73	4.1	69	95	45	0	3	3	0	0
GREENVILLE	55	33	61	22	44	0	.5	-.6	.3	10.3	91	5.7	78	92	39	0	4	2	0	0
SD ABERDEEN	34	9	46	-11	22	6	T	-.2	T	.7	51	.6	69	95	59	0	7	1	0	0
HURON	34	12	39	-9	23	4	.1	-.1	0	2.2	156	.9	100	95	69	0	7	2	0	0
RAPID CITY	48	21	58	17	35	8	.3	-.1	.2	.8	66	.5	63	84	35	0	7	3	0	0
SIOUX FALLS	35	12	44	-8	23	3	T	-.2	T	3.1	174	1.7	159	91	65	0	7	1	0	0
TN CHATTANOOGA	55	30	62	21	43	0	.9	-.2	.6	12.2	90	9.0	106	93	38	0	5	2	1	1
KNOXVILLE	54	29	60	18	41	0	.7	-.4	.4	11.2	92	7.7	102	95	45	0	5	2	0	0
MEMPHIS	54	36	64	27	45	1	1.2	-.1	.6	19.1	153	7.7	101	87	55	0	2	3	1	1
NASHVILLE	55	30	65	19	42	1	.7	-.3	.4	11.1	93	5.6	77	90	44	0	5	3	0	0
TX ABILENE	61	35	75	25	48	0	.2	-.1	.2	5.0	195	.4	26	75	34	0	3	1	0	0
AMARILLO	55	24	64	19	40	0	0	-.1	0	2.1	158	.4	44	77	30	0	6	0	0	0
AUSTIN	67	46	76	36	56	3	.2	-.4	.2	1.9	35	.6	17	81	41	0	0	1	0	0
BEAUMONT	64	47	68	36	55	0	2.3	1.3	1.0	14.9	123	8.7	121	92	58	0	0	3	3	3
BROWNSVILLE	71	55	78	45	63	0	T	-.4	T	5.9	169	5.5	230	93	60	0	0	1	0	0
CORPUS CHRISTI	70	51	78	42	61	2	T	-.4	T	3.0	77	2.1	77	92	47	0	0	1	0	0
DEL RIO	67	45	75	37	56	0	0	-.2	0	.9	52	.3	25	66	24	0	0	0	0	0
EL PASO	60	31	71	22	45	-4	.2	0	.2	3.8	364	1.0	140	71	26	0	4	1	0	0
FORT WORTH	61	41	74	33	51	2	.9	.4	.5	5.0	105	2.1	68	81	42	0	0	2	0	0
GALVESTON	61	51	64	46	56	0	.7	-.2	.6	5.8	70	4.0	85	90	63	0	0	2	1	0
HOUSTON	64	47	70	38	55	0	.4	-.4	.3	7.1	74	2.6	43	90	52	0	0	3	0	0
LUBBOCK	59	28	72	20	43	0	0	-.1	0	1.8	163	.7	96	78	30	0	4	0	0	0
MIDLAND	62	30	78	22	46	-2	.4	-.3	.4	.9	70	.5	61	78	27	0	4	1	0	0
SAN ANGELO	65	34	78	25	50	-1	.1	-.1	.1	2.5	132	.4	33	83	29	0	3	1	0	0
SAN ANTONIO	68	45	80	36	57	2	.5	0	.4	3.5	83	1.3	46	85	40	0	0	2	0	0
VICTORIA	68	46	75	40	57	1	T	-.5	T	2.4	42	.5	15	96	49	0	0	3	0	0
WACO	63	42	75	37	53	2	1.5	1.0	.9	5.4	108	2.1	68	85	47	0	0	2	2	2
WICHITA FALLS	59	34	71	27	47	1	T	-.2	T	6.6	241	1.8	114	81	37	0	3	1	0	0
UT BLANDING	43	19	51	16	31	-2	0	-.2	0	3.3	98	2.5	121	84	51	0	7	0	0	0
CEDAR CITY	42	22	57	18	32	-3	T	-.2	T	2.5	138	1.5	125	91	48	0	7	0	0	0
SALT LAKE CITY	43	26	50	20	34	-1	T	-.3	T	2.3	64	1.2	53	86	43	0	7	2	0	0
VT BURLINGTON	38	21	43	14	30	11	.3	-.1	.2	3.5	64	2.3	76	79	49	0	6	2	0	0
VA NORFOLK	58	36	66	24	47	5	.6	-.2	.4	8.0	88	5.7	95	87	47	0	2	3	0	0
RICHMOND	55	31	63	17	43	4	.3	-.5	.2	8.4	95	5.5	102	89	42	0	4	3	0	0
ROANOKE	53	31	63	15	42	4	.3	-.5	.3	5.2	66	3.0	60	81	36	0	4	2	0	0
WA QUILLAYUTE	50	39	58	33	45	2	4.3	1.3	3.0	29.3	72	17.6	76	99	79	0	0	5	2	2
SEATTLE-TACOMA	49	38	53	34	44	0	.2	-.9	.1	11.0	71	4.8	53	95	68	0	0	2	0	0
SPOKANE	42	28	47	25	35	2	.1	-.3	.1	7.1	115	2.1	58	95	68	0	7	2	0	0
YAKIMA	55	28	61	24	42	5	T	-.2	T	4.0	122	.7	35	88	38	0	6	0	0	0
WV BECKLEY	47	25	55	5	36	3	.4	-.4	.2	7.9	90	3.6	64	86	44	0	6	3	0	0
CHARLESTON	50	26	57	7	38	2	.6	-.2	.4	8.0	90	3.8	68	93	45	0	6	4	0	0
HUNTINGTON	50	28	58	10	39	3	.2	-.5	.2	8.8	106	4.0	78	90	46	0	5	2	0	0
PARKERSBURG	49	27	55	6	38	4	.1	-.6	.1	5.9	80	2.7	58	83	44	0	5	2	0	0
WI GREEN BAY	31	12	39	-3	21	3	.4	.1	.2	4.6	140	2.5	137	96	64	0	7	4	0	0
LACROSSE	33	17	44	4	25	4	.1	-.1	.1	3.0	116	1.2	79	86	58	0	7	2	0	0
MADISON	34	13	42	4	24	2	.2	-.1	.1	6.4	195	2.3	130	93	58	0	7	4	0	0
MILWAUKEE	35	15	42	6	25	1	.5	.2	.2	10.0	220	4.5	181	100	63	0	7	1	0	0
WAUSAU	30	13	44	0	22	5	T	-.2	T	1.9	68	.4	28	84	59	0	6	0	0	0
WY CASPER	38	18	48	11	28	0	.1	0	.1	1.5	115	.9	107	89	50	0	7	2	0	0
CHEYENNE	38	19	47	8	28	-1	.1	0	0	2.0	200	1.1	182	79	44	0	7	2	0	0
LANDER	42	21	53	14	31	5	.1	-.1	.1	1.0	71	.3	31	77	35	0	7	1	0	0
SHERIDAN	40	21	48	13	30	3	.2	0	.2	1.6	78	1.2	97	83	51	0	7	1	0	0
PR SAN JUAN	40	69	87	67	77	0	.6	.1	.4	13.3	150	5.6	124	93	80	0	0	5	0	0

Based on 1951-80 normals.

(Continued from front cover)  
SATURDAY...A winter storm brought snow and sharply falling temperatures to the Great Lakes region. Rain was widespread from the eastern Carolinas across southern Georgia and northern Florida, with some local flooding. New England had generally

mild weather. Snow fell over Nebraska and the Dakotas, with heaviest snowfall in South Dakota. Temperatures increased into the eighties on the Florida peninsula. Strong, gusty winds returned to the eastern slopes of the Rockies.

Heating Degree Days Summary

CLIMATE ANALYSIS CENTER-NHC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NWS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 2-20-1988
ACCUMULATIONS ARE FROM JULY 1
\*\* = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK DEV, WEEK FROM, CUM TOTAL, CUM FROM, CUM FROM, CUM FROM, CUM FROM, CUM FROM. Lists 100+ cities and their heating degree day data.

## National Agricultural Summary

February 15 to 21, 1988

**HIGHLIGHTS:** Warm temperatures promoted small grains and winter wheat growths in the southern Great Plains and Southwestern States. Precipitation restricted field work in the Delta and Southeast. Fruit and nut trees bloomed in California. Citrus trees began blooming in Florida. Livestock was mostly good. Warmer weather eased stress.

**SMALL GRAINS:** Small grains were mostly good to fair. Warm temperatures depleted most snow cover protection in the northern Great Plains, Rocky Mountain States, and Corn Belt. The lack of snow cover left wheat susceptible to freeze damage in Kansas. Montana's wheat was fair to good. Wind damage was light to moderate, with snow cover protection fair to good. North Dakota's winter grains were fair to poor. Small grains lacked moisture in some areas of South Dakota. Oklahoma's small grains began recovering from dormancy. Growers continued applying nitrogen and herbicides. Warm temperatures promoted growth and greening in the Texas High Plains, but moisture is needed to improve overall condition. Moisture and nitrogen improved growth in the Blacklands and central areas. Greenbugs began increasing with dry conditions. Oregon's wheat growers began weed control treatments in western areas. Winter wheat reseeding began in Adams County, Washington. Above-normal temperatures provided good small grain growth in California. Dryland small grains showed signs of moisture stress. Small grains were irrigated where possible. Favorable temperatures contributed to good small grain progress in western Arizona. All fields were up to stand and 60 percent (%) reached the jointing stage. Growers applied second applications of fertilizer in west-central Arizona. Small grains were topdressed in Georgia and North Carolina. Winter wheat was good, but cool weather and the lack of moisture inhibited growth in Idaho. In Mississippi, wetness delayed wheat fertilization. In Wisconsin, frost threatened small grains because of minimal snow cover. Wyoming's wheat was fair to good, but additional moisture is needed for proper development.

**OTHER CROPS:** Low soil temperatures and wind slowed cotton preplant activities in western Arizona. Dry weather pushed land preparation ahead of normal in California.

A few early corn and safflower fields were seeded in California. Sugarbeet harvest progressed well. Corn planting progressed slowly as fields dried in the Rio Grande Valley and at Coastal Bend. Sugarcane harvest gained momentum as fields dried in the Rio Grande Valley. Cold, wet conditions slowed land preparation in Georgia. Precipitation restricted fieldwork in the Delta.

Georgia's tobacco plants were fair to good. Tobacco plantbed seeding continued in North Carolina and Virginia.

**FRUITS AND NUTS:** Florida's citrus trees were good to excellent. Pinhead bloom buds continued emerging along with new growth. Fruit size improved and excessive droppage has not been a problem thus far. Early orange harvest progressed normally, but tangelo harvest slowed. Grapefruit movement was steady. Temple oranges were actively harvested for fresh and processing. Warmer weather increased citrus tree new growth in Texas. In California, almond blooms were extended, but high winds hindered pollination. Early stone fruit bloomed, and bees were moved into stone fruit and nut orchards. Navel orange harvest slowed in the desert but neared 50% completion in the Central Valley. Lemons and grapefruit harvests began in the desert. Maturity plagued minneola tangelo harvest. Arizona's citrus groves were good. Grapefruit, lemons, valencia oranges, and kinnow tangerines were shipped from central areas.

Fruit tree pruning continued in the Southeast. Pruning was active in Michigan and Ohio. Blueberry pruning and caneberry training continued in Oregon's Willamette Valley. Early season sprays for pear psylla began in Yakima County, Washington. Warmer temperatures are needed for spraying to begin in other areas of the State.

**VEGETABLES:** Cold winds caused some leaf burn to vegetables in southwest and central Florida. Cabbage and strawberry volumes are expected to increase, while most other vegetables held steady. Melon planting increased, and celery, cabbage, and carrot harvests continued in the Rio Grande Valley. Cool, damp weather slowed onion progress slightly. Land preparation continued in the High Plains and east Texas. Potato seeding was underway in the Knox-Haskell area. Wet weather slowed spinach, carrot, and cabbage harvests in the San Antonio-Winter Garden area. Persistent dry weather hastened vegetable fieldwork but triggered irrigation. Vegetable movement slowed and consisted mostly of broccoli, asparagus, cauliflower, celery, and carrots. Melons began emerging in the desert. Processing tomatoes were planted in Fresno, Sacramento Valley, Cutler-Drosi, Gustine, and lower Westside. Melon growers continued preparation for planting in western Arizona. Vegetable harvest consisted mostly of lettuce, broccoli, cauliflower, and mixed vegetables. In North Carolina, vegetable producers transplanted potatoes and cabbage. Land preparation was underway for vegetables in Washington.

**PASTURES AND LIVESTOCK:** Pastures were mostly fair to good. Livestock was mostly good. Warmer weather eased stress and supplemental feeding. Livestock was moved from wheat that will be harvested for grain in Texas.

## State Summaries of Weather and Agriculture

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

**ALABAMA:** Rainfall totals under 0.50 in. north; 1.00 to 2.00 in. south; 3.00 to 4.00 in. extreme south. Temperatures averaged 2 to 5° below normal.

Soil moisture mostly adequate. Primary activities: Routine care of livestock, poultry; pruning fruit trees; soil testing; fieldwork, when weather permits.

**ARIZONA:** Sunny, mild weather 14th to 16th. Fast moving cold pressure system early morning 17th; lowered temperatures 6 to 14°. Snowfall trace to 3 in. over northeast quarter. Cold upper level low late afternoon 18th. Moisture southeast varied 0.10 to 0.75 in.; snow level 4,000 ft. Sunny skies, high pressure 20th. Average temperatures varied from 3° below normal to 2° above.

Cotton planting west slowed by low soil temperatures, winds, cool temperatures. Growers initiated final seedbed preparations. Field preparations dominated week's activities in other cotton growing counties. Alfalfa west good, light stand renovation, few new stands established. Weed, insect, disease infestation light; heavy sheepling-off. Strong winds, low temperatures created unfavorable harvest conditions. Some alfalfa weevil infestation west central. Central areas warm weather, few insect problems led to good progress; growers irrigating, fertilizing. Favorable temperatures contributed to good small grain progress west. All stands established, 60% jointing stage. Fertilizer applied for second time west central. All stands established; not reached jointing stage south, southeast. Western areas shipped lettuce, broccoli, cauliflower, other mixed vegetables. Preparation for planting melons progressed. Central areas packed lettuce, mixed vegetables. No vegetable activity eastern areas. Packing, shipping of grapefruit, lemons, valencia oranges, kinnow tangerines central, western areas. Groves good.

**ARKANSAS:** Cold weather early week warming trend by weekend. Temperature extremes 16°; 69°. Light to moderate precipitation all sections. Rainfall totals 0.51 to 2.00 in.

Wheat made slight progress. No land preparation yet. Livestock good, being fed.

**CALIFORNIA:** Strong ridge west coast pushed storms north. Precipitation mountains running less normal. No rain central valley, 5° above normal.

Warm, dry weather permitted rapid progress field activities. Rice stubble burned. Some wild rice seeded. Small grains irrigated where possible. Growth good, above normal temperatures. Dryland grain low moisture stress. Land preparation rapid, ahead of normal. Few early corn, safflower fields seeded. Desert alfalfa hay harvest underway. Some treatment aphids, weevils. Sugarbeet harvest progressed. Pruning neared completion. Almond bloom extended. High winds hindered pollination. Early stone fruit bloomed. Bees moved into stone fruit, nut orchards. Hass avocados harvested. Navel orange harvest winding down desert, near 50% complete Central Valley. Desert grapefruit, lemons picked. Desert valencia orange harvest began. Maturity problems plagued minneola tangelo harvest. Persistent dry weather hastened fieldwork, triggered irrigation. Vegetable movement slow. Asparagus harvest continued Riverside. Broccoli harvested Riverside. Cauliflower movement continued Riverside, Fresno. Carrots harvested Riverside, Sacramento Valley. Celery movement

continued Riverside, lettuce harvest also. Desert melons emerging. Processing tomato fields planted Fresno, Sacramento Valley, Cutler-Orosi, Gustine, lower Westside. Livestock good statewide. Livestock Redding poor shape, sparse range condition. Supplemental feeding heavy Redding, slowed down other areas. Range, pasture grasses stressed dry weather, winds. Movement to market very light, Redding. Many herds Tulelake-Butte Valley culled heavily higher cattle prices. Fresno feedlots 75% capacity. Water supplies low or empty most areas. Calving, lambing helped, warm, dry weather.

**COLORADO:** Snow early week, 0.10 in. of moisture. Warmer weather remainder of week with high winds. Average temperatures 3 to 6° below normal west of Continental Divide, San Luis Valley; 2 to 5° above normal rest of State.

Snow cover on eastern Plains varied. Melting snow in some areas caused soil erosion, filled low spots with water. Major activities included caring, feeding of livestock.

**FLORIDA:** Mostly cloudy, cold; rains little over 6.00 in. portions of Panhandle, Big Bend areas. Rains early, late week elsewhere up to 2.00 in. north, central; lesser amounts south. Overall cool week central, south but very warm 19th, 20th with near record highs.

Soil moisture mostly adequate. Small grains continued generally good. Low soil temperature limited plantings northern Peninsula, Panhandle. Land preparation spring crops continued, weather permitting. Sugarcane harvest remained active. Winter pastures continued good progress, providing most of grazing central, northern areas. Below normal temperatures, frosts delayed new growth permanent pastures. Grazing poor to fair, Panhandle, northern Peninsula; poor to good elsewhere. Cattle mostly fair; few localities lower southern, upper northern Peninsula good. Citrus trees very good to excellent, moisture adequate, new growth, pinhead bloom buds emerging. Excessive fruit drop no problem to date. Sizes improving. Early orange harvest continued active. Tangelo harvest slowed. Temples for fresh, processing active. Grapefruit movement steady. Cold winds early week caused some leaf burn to vegetable crops southwest, central portions major producing areas. Increased supplies cabbage, strawberries expected coming week. Steady supplies available most other vegetables.

**GEORGIA:** Temperatures 2 to 4° above normal, coldest weather prevailed over weekend. Minimum temperatures morning of 21st in teens, ranged 2° Blairsville to mid 20s along coast. Cold outbreak preceded by much above normal temperatures. South areas maximum temperatures upper 70s to low 80s 16th to 18th. Mixture rain, sleet, snow across portions south 19th early 20th. Rain 1.00 to 2.00 in., except less than 1.00 in. portions central. Few areas north over 2.00 in. rain.

Soil moisture adequate. Land preparation slowed by cold, wet conditions. Other activities: Small grain topdressing, pruning peach trees, caring for livestock, poultry. Tobacco plants fair to good, also wheat, rye, other small grains. Pastures poor to good mostly fair, cattle mostly fair to good, hogs fair to mostly good.

**HAWAII:** Favorable weather. Warm, sunny days, cool nights. Temperatures mid 60s to low 80s.

Rainfall none to 1.70 in. Variable winds 5 to 20 mph.

Days suitable for fieldwork 7.0. Irrigation moderate to heavy. Pesticide spraying increased. Crops improved growth; mostly good. Papaya production on seasonal decline. Banana production steady. Head cabbage output heavy, good quality. Chinese cabbage supplies heavy, good yields and quality. Shipments to west coast expected to continue. Head lettuce production higher, improved crop conditions. Ginger root harvesting heavy. Mainland shipments steady. Field preparation for next season underway.

**IDAHO:** Temperatures ranged 8° above normal. Precipitation below normal. Heavy showers north.

Winter wheat remained good, some areas near 100% emergence. Cool weather in areas, lack of moisture inhibited growth. Little to no snow covered winter wheat. No fieldwork. Farm activities included caring for livestock, attending seminars, marketing products, general machinery maintenance. Livestock remained good, some excellent. Calving, lambing full swing. Hay, roughage supplies adequate, some surplus.

**ILLINOIS:** Temperatures averaged -3 to 3° of normal. Precipitation averaged none to 0.20 in. north (0.25 to 0.50 in. below normal), 0.50 to 0.75 in. south (0.10 to 0.25 in. above normal).

Soil moisture 10% short, 72% adequate, 18% surplus. Winter wheat 2% poor, 16% fair, 76% good, 6% excellent. Livestock good. Extreme temperature changes caused problems with mud and stress.

**INDIANA:** Temperatures averaged near normal. Lows near zero north, teens south. Highs 40s north, 50s south. Precipitation moderate. Totals 0.25 to 0.75 in.

Snow, muddy conditions limited field activities. Activities included: Hauling grain, spreading manure, topdressing wheat, machinery repair, tax preparation, attending meetings, purchasing seed and chemicals, feeding and care of livestock. Hay supplies adequate. Livestock good. Wheat good most areas.

**IOWA:** Mild week, temperatures averaged near normal east to 8° above normal west. Precipitation totaled less than 0.10 in. across State. Small area of north central, north east 0.20 to 0.30 in. rain, snow 16th.

Livestock generally good, average to heavy movement. Available hay, roughage supplies mostly adequate. Grain movement around State mostly average.

**KANSAS:** Temperatures above normal. Average temperatures near 40° across State. Readings ranged 3° above normal southeast, 8° above northwest, north central, central. Precipitation continued light. Southeast area 0.38 in., east central 0.15 in., elsewhere less 0.10 in. Northwest, west central no measurable precipitation.

Wheat again susceptible to freeze damage as no snow cover. Warm temperature, breezes allowed soils east to dry some from over-saturated conditions. Farmers busy lining up seed supplies, preparing machinery spring planting. Calving, lambing progressing under good conditions, milder temperatures, limited precipitation.

**KENTUCKY:** Temperatures near normal, mean highs near 50° and lows around 30°. Precipitation above normal most western areas, below normal elsewhere. Totals 0.10 to 1.00 in.

Soil moisture ample. Winter wheat generally good. Several spring-like days, early bird farmers anxious to start in fields. Livestock satisfactory.

**LOUISIANA:** Temperatures normal to 2° below normal. Temperature extremes 24°; 72°. Rainfall averaged 1.54 to 6.30 in.

Main activities: Harvesting crawfish, caring for livestock, routine maintenance.

**MARYLAND & DELAWARE:** Maryland: Average temperature 36°, normal 35°. Lowest temperature 3°, highest temperature 60°. Precipitation averaged 0.46 in.

Soil moisture remained adequate. No snow cover. Main farm activity caring for livestock.

Delaware: Average temperature 36°, normal 36°. Precipitation averaged 1.02 in.

Soil moisture remained adequate. No snow cover. Main farm activity caring for livestock.

**MICHIGAN:** Temperatures ranged 2 to 7° above normal. Temperature extremes -13°; 46°. Precipitation ranged 0.12 to 0.72 in. across State. Extreme changes in weather occurred. Blizzard conditions Upper Peninsula. Mild temperatures midweek gave way to high winds, sub-zero readings weekend. Snow cover reduced many areas.

Activities: Pruning fruit trees, attending farm meetings, auctions; marketing crops, livestock; cutting wood, routine farm maintenance. Feed supplies remained adequate. Livestock very good. Livestock enjoyed milder temperatures.

**MINNESOTA:** Temperatures averaged 1 to 5° above normal for State. Extremes -23°; 50°. Precipitation averaged 0.05 to 0.23 in. below normal. Precipitation totals averaged none to 0.05 in. Greatest weekly total 0.12 in. Snowfall averaged trace to 2 in. Snow depth weekend averaged 12 in. northeast, 3 to 9 in. elsewhere.

Few days of warmer temperatures gave welcome relief to livestock. No serious problems.

**MISSISSIPPI:** Temperatures 2° below normal; extremes 13°; 71°. Cold, wet; above average rainfall everywhere except north. Greatest weekly rainfall 6.25 in. Greatest 24-hour rainfall 3.61 in.

Days suitable for fieldwork 2.0, 0.4 1987, 1.6 avg. Soil moisture adequate to surplus. Supply of hay, feed grains adequate. Livestock, pasture, wheat fair. Farm work limited to tending livestock, repairing machinery, planning for planting season. Too wet to fertilize wheat.

**MISSOURI:** Temperatures 1° above normal. Precipitation averaged 1.00 in. southern one-third, 0.50 in. northeast, non-existent northwest.

Farm activities mainly livestock, barnyard work. Snow cover for wheat mostly gone.

**MONTANA:** Temperatures well above normal. West, southwest 4 to 7° above normal. Central, east 8 to 17° above normal. West received 0.20 in. rain or snow early week. Extreme east received 0.10 to 0.25 in. rain or snow late week.

Winter wheat fair to good. Wind damage to winter wheat fields mostly light to moderate. Snow cover protection for winter wheat fields fair to good. Livestock good. All livestock received supplemental feed. Grazing is mostly difficult. Livestock losses average. Stockwater supply mostly adequate.

**NEBRASKA:** Week mild, light scattered showers. Average temperatures 5 to 12° above normal. Extremes 2°; 63°. Precipitation ranged trace to 0.25 in.

Farm, ranch activities centered around grain handling, livestock management, general farm chores. Winter wheat unchanged. Calving, lambing continued.

**NEVADA:** Strong ridge high pressure persisted throughout period, producing mostly dry, mild weather. Two weak cold fronts spread windy, cooler weather midweek. Light snow showers accompanied fronts central, east.

Warm, dry weather easy on newborn calves, lambs. Winter grains starting to show growth prematurely. Marketing potatoes steady.

**NEW ENGLAND:** Average precipitation (rainfall, water equivalent of snow) ranged 0.35 to 1.25 in. north, 0.75 to 1.50 in. south. Temperatures ranged low 20s northern Maine to upper 30s southern coast.

Major farm activities: Tending livestock, repairing machinery.

**NEW JERSEY:** Temperatures normal north, above normal south, coastal, averaged 31° north, 37° south, 39° coastal. Extremes 11°; 59°. Precipitation above normal, averaged 1.14 in. north, 1.24 in. south, 0.98 in. coastal. Heaviest 24-hour total 0.99 in. on 19th, 20th. Depth of snow on ground 22nd 1 to 2 in. extreme north.

Farmers caring for livestock, tending to normal winter chores.

**NEW MEXICO:** Light amounts of rain, snow over State. Temperatures ranged 77° southeastern plains to 2° below zero northern mountains.

Days suitable for fieldwork 5.6. Soil moisture 40% short, 60% adequate. Barley 40% fair, 60% good. Wheat 30% poor, 50% fair, 20% good. Cattle 47% fair, 53% good. Sheep 38% fair, 62% good. Range 7% poor, 73% fair, 20% good. Onions 100% good. Lettuce 50% fair, 50% good.

**NEW YORK:** After cool start early week temperatures reached 40s midweek. Precipitation varied with heaviest amounts Lake Ontario region.

Producers busy tending livestock.

**NORTH CAROLINA:** Temperatures averaged near normal across State. Temperature extremes 12°; 68°. Precipitation ranged 0.08 to 2.81 in. across State.

Days suitable for fieldwork 3.4. Soil moisture 2% short, 71% adequate, 27% surplus. Wheat 1% poor, 29% fair, 69% good, 1% excellent. Oats 1% poor, 33% fair, 66% good. Barley 2% poor, 25% fair, 71% good, 2% excellent. Rye 3% poor, 26% fair, 71% good. Pasture 6% very poor, 13% poor, 39% fair, 41% good, 1% excellent. Hay and roughage supplies 10% short, 83% adequate, 7% surplus. Feed grains supplies 9% short, 89% adequate, 2% surplus. Tobacco plantbeds 2% very poor, 2% poor, 32% fair, 64% good. Major farm activities: Equipment repair, maintenance; tending livestock; preparing, seeding tobacco plantbeds; transplanting cabbage, potatoes; pruning fruit trees, ornamentals; breaking ground; sidedressing small grains; soil sampling; general farm maintenance.

**NORTH DAKOTA:** Temperatures average 6° above normal east central to 14° above normal northwest. Extremes -18° northeast; 47° west central, south central. Precipitation light, heaviest 0.31 in southwest.

Soil moisture below normal. Winter grains fair to poor. Livestock good; lambing, calving progressed. Feed supplies adequate. Main activities: Winter meetings, spring preparation.

**OHIO:** Temperatures averaged near normal; midweek mild, weekend cold. Temperature extremes single digits to 50s. Precipitation 0.40 to 0.70 in. north, 0.30 to 0.50 in. south.

Topsoil wet, no snow cover. Fruit trees, grape vines being pruned.

**OKLAHOMA:** Temperatures averaged 3° above normal southeast to 6° above normal west central.

Precipitation averaged none western third to 1.07 in. east central.

Winter grains recovering from dormancy. Fast growth depends on intermittent mild spells. Topdressing, weed control main farm activities. Cattle good. Warm weather reduced supplemental feeding.

**OREGON:** Average temperature near normal all areas; exceptions south coast up to 6° above normal, northeast up to 8° above normal. Precipitation heaviest on coast, north coastal range; coast 0.39 to 0.90 in., coast range up to 0.84 in. Northeast received from 0.18 to 0.33 in. Most other areas less than 0.10 in.

Soil moisture mostly adequate. Some weed control treatments on western grain, alfalfa fields. Eastern high country still frozen. Blueberry pruning, caneberry training continued Willamette Valley. Livestock mostly good; range, pasture mostly fair to good. Winter moisture, mountain snowpack continued below normal.

**PENNSYLVANIA:** Week started, ended cool, moist with touch of spring during midweek. Average temperature 32°, 6° above normal. Temperature extremes -2°; 56°. Average precipitation 0.61 in., 0.02 in. above normal.

Activities: Hauling manure; grading potatoes; machinery maintenance; caring for livestock; cutting firewood.

**PUERTO RICO:** Island average rainfall 0.67 in., 0.10 in. above normal. Highest weekly total rainfall 2.86 in. Pico Del Este-Luquillo, 2.21 in. Lajas, 2.02 in. Fajardo. Highest 24-hour total 2.13 in. Lajas. San Juan WSFO mean temperature 77°, 1° below normal. Total rainfall 0.57 in., 0.10 in. above normal. Divisional temperature averaged 76 to 77° on coasts, 69 to 71° interior with mean station temperature ranging 60° Pico Del Este-Luquillo to 79° Roosevelt Roads. Lowest minimum temperature 47° Adjuntas. Highest maximum temperature 88° several places.

**SOUTH CAROLINA:** Temperatures averaged slightly below normal. Rainfall averaged less than 1.00 in. across State except in south about 2.00 in. with some stations over 3.50 in.

Farm activities included pruning fruit trees, caring for livestock and poultry, equipment maintenance, preparing tax records.

**SOUTH DAKOTA:** Average temperatures 1 to 12° above normal. Extremes -17°; 62°. Precipitation below normal east, above normal west, 0.50 to 1.13 in. west.

Winter wheat condition much the same. Areas with snow cover benefited from melted precipitation. However, many areas still dry, wide open with no snow cover. Livestock good.

**TENNESSEE:** Rainfall east 15th followed by showers statewide 18th, 19th. Cooler, dryer statewide 21st. Temperatures near normal. Precipitation continued below normal. Rainfall averaged 0.50 to 0.75 in. across State.

Planning spring fieldwork, farm chores main activities. Livestock satisfactory. Feed supplies adequate.

**TEXAS:** Week began fair skies. Cloudiness increased midweek upper level disturbance southwest combined with cold front. Scattered showers, few thunderstorms central, eastern sections. Some showers heavy, flash flood watches eastern. Temperatures generally near or above normal. Below normal southern High Plains, Rolling Plains, Trans-Pecos, Lower Valley. Despite rainfall, precipitation near normal.

Crops: Small grains High Plains some growth, greening with warmer temperatures; rainfall needed to improve overall condition. Moisture, along with nitrogen already applied, improve growth Blacklands, central. Greenbugs building with dry conditions. Oat prospects improved with moisture. Grazing conditions Plains improved slightly. Overall, crops across State need additional moisture. Corn planting Rio Grande Valley progressed slowly as fields dried from last week's rain. Planting Coastal Bend slow. Rainfall Blacklands, central beneficial for planting moisture. Sugarcane harvest increased as conditions dried Rio Grande Valley.

Commercial Vegetables: Rio Grande Valley harvest carrots, cabbage, celery continued. Melon planting increased. Recent cool, damp weather slowed onion progress slightly. Citrus harvest increased. New growth citrus trees increasing with warmer weather. San Antonio-Winter Garden spinach, cabbage, carrot harvest slowed slightly by wet weather. Quality good, except spinach. Trans-Pecos cabbage, onions progressed well. High Plains land preparation continued, potato planting underway Knox-Haskell area. Land preparation also continued east.

Range and Pasture: Range conditions improved little where rained. Warmer temperatures promoted growth. Grasses west very dry, poor quality. Range fires remained constant danger unless rains come soon. Many pastures very weedy. Livestock remained good with supplemental feeding. Livestock moved off wheat for grain Hill Country areas. Lambing continued.

UTAH: Precipitation light north, south central. Dry southeast, extreme southwest. Temperatures 4° below west, to normal northern mountains.

Snow cover fall seeded grains none to light. Feeding livestock on some ranges. Feed adequate. Livestock good. Farm flocks starting to lamb. Major farm activities: Care of livestock, marketing cattle, machinery repair, maintenance; hauling manure, farm records, purchasing seed, supplies.

VIRGINIA: Normal, slightly cool period. Temperatures averaged 3° below normal. Precipitation normal, mostly rain with some sleet, snow flurries. Temperatures range 4 to 66°.

Days suitable for fieldwork 1.4. Topsoil moisture 62% adequate, 38% surplus. Winter grains, pastures good to excellent. Topdressing with nitrogen continued where possible. Tobacco seeded preparation. Other chores: Meetings, tax preparation, spring planning.

WASHINGTON: Weather disturbances passed through region early week, large high pressure ridge followed. Light, moderate rainfall occurred over western half of State with greatest amounts along coast, Cascade west slopes. Cascade rainshadow kept east side of State mostly dry. Some moisture southeast corner, temperatures remained mild due to west, southwest flow off ocean.

Soil moisture 40% short, 60% adequate. Snow cover depleted most areas. Winter wheat reseeding in progress some areas Adams County. Fieldwork limited other areas. Early season sprays for pear psylla began Yakima County, other areas waiting for warmer temperatures. Field preparation for vegetable crops underway, Yakima County. Calving, lambing season continued. Hay, roughage feed supplies continued adequate, surplus.

WEST VIRGINIA: Average temperature 36°; 3° below normal. Extremes 6° Terra Alta, White Sulphur Springs; 64° Gary. Precipitation averaged 0.46 in. below normal.

Days suitable for fieldwork 3.4. Soil moisture 83% adequate, 17% surplus. Feed supplies adequate to short. Wheat, barley good. Cows calved 33%; ewes lambed 46%.

WISCONSIN: Variable temperatures, average 22°. Extremes -23°; 52°. Precipitation trace to 0.40 in. Light snow south, east on 15th, 16th. Heavier amounts east central.

Minimal snow cover south caused frost threat hay, winter wheat.

WYOMING: Temperatures mostly above normal. Precipitation generally below normal.

Winter wheat fair to good. Additional moisture needed for good development. Warmer weather melting snow cover. Livestock fair to good. Early calving, lambing, shearing underway. Supplemental feeding underway in areas with snow cover or short winter pasture. Feed supplies adequate.

## International Weather and Crop Summary

February 14-20, 1988

### HIGHLIGHTS:

**UNITED STATES** ... Warm temperatures promote growth of small grains and winter wheat in the southern Great Plains and Southwestern States. Precipitation restricts field work in the Delta and Southeast.

**U.S.S.R.** ... Overwintering conditions continue favorable for winter grains.

**EUROPE** ... Dry weather benefits previously wet France. Rain and snow continue across much of northern Europe.

**SOUTH ASIA** ... Light to moderate rain benefits heading to filling wheat in the north and improves irrigation reserves for coastal rice.

**SOUTHEAST ASIA** ... Widespread showers continue throughout Malaysia and Indonesia. Moderate to heavy rain covers Philippine grains.

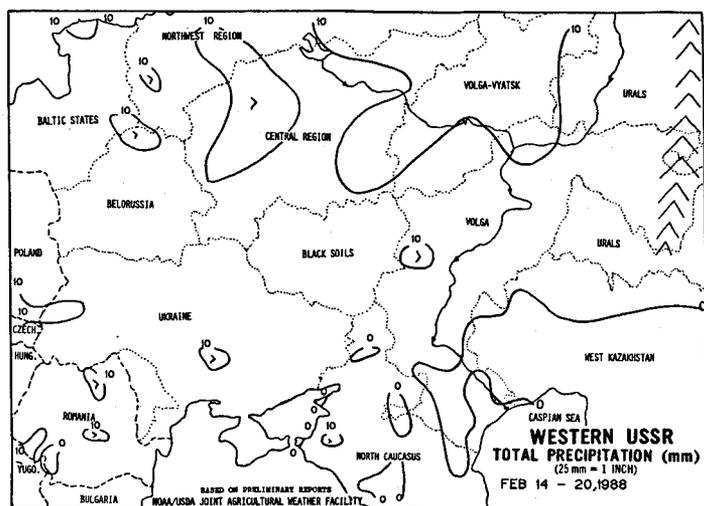
**EASTERN ASIA** ... Cold temperatures stress winter grains in the north. Rain causes some delays in rice planting in the south.

**SOUTH AMERICA** ... Substantial rain falls over most of Brazil's soybean areas and Argentina's northern cotton. Dryness prevails over western Rio Grande do Sul and Argentina's primary corn areas.

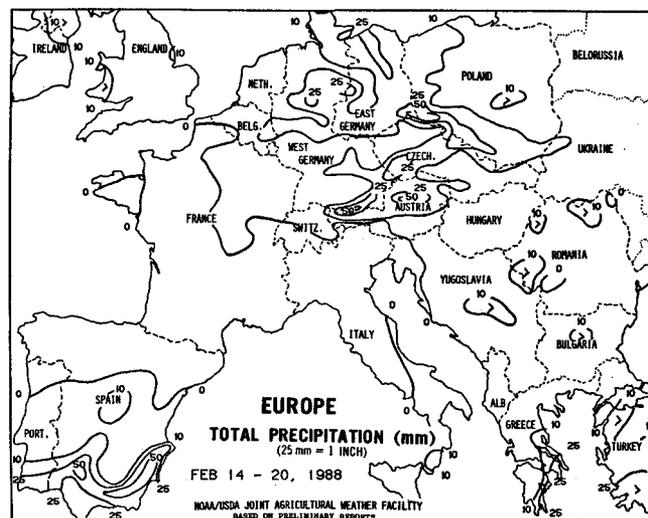
**AUSTRALIA** ... Showers benefit some sugarcane areas in Queensland. Interior summer crop areas remain mostly dry.

**NORTHWESTERN AFRICA** ... Drought intensifies in Algeria and Tunisia.

**SOUTH AFRICA** ... Moderate to heavy rain continues over most corn regions, benefiting reproductive to filling crops but causing local flooding and crop damage.



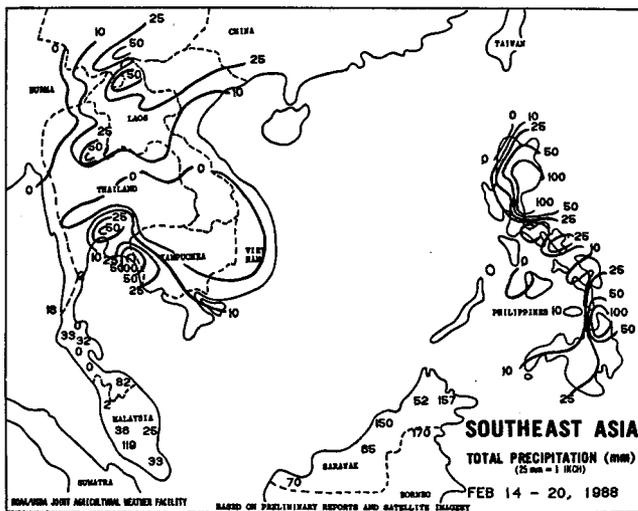
**WESTERN U.S.S.R.** ... Light snow accompanied a cooling trend in the Baltic States, Belorussia, and the western Ukraine, increasing snow cover. Dry weather covered the eastern Ukraine, Black Soils Region, North Caucasus, and the lower Volga. Extreme cold weather (temperatures less than  $-15$  degrees C) was confined to winter grain areas in the northern North Caucasus, the lower Volga, the eastern Baltic States, and eastern Belorussia, where snow cover provided adequate protection. Although winter grains in the southern Ukraine lacked a protective snow cover, weekly temperatures averaged from 1 to 3 degrees C above normal, posing no threat to the crop.



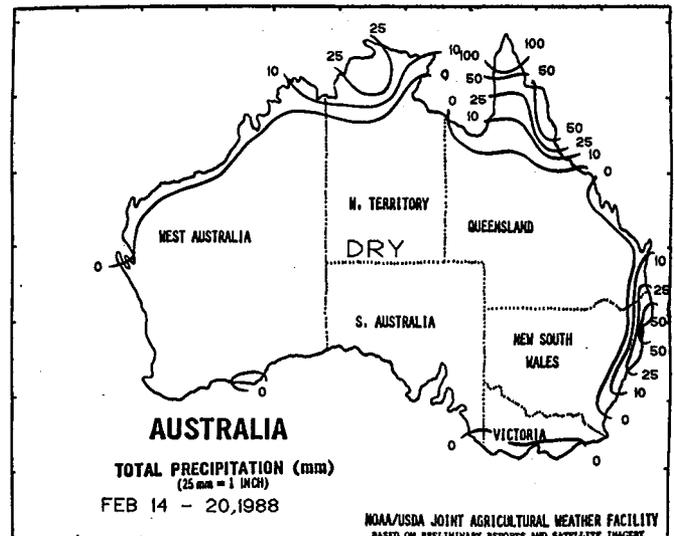
**CORRECTION:** Vol. 75, No. 7, Feb. 17, 1988 issue. Europe Jan. Average Temperature map should have been labeled Departure of Average Temperature from Normal and vice versa.

**EUROPE** ... Widespread light to moderate rain (generally less than 25mm) continued over the United Kingdom, the Low Countries, and West Germany, keeping soils unfavorably wet. Beneficial dry weather developed in France, allowing soils to begin drying out after several consecutive weeks of above-normal rainfall. Light to moderate snow and rain fell over eastern Europe, providing some protective snow cover for dormant winter grains in Poland. Elsewhere, mostly dry weather covered southwestern Europe except for southern Spain, where heavy rain (up to 57mm) fell. Temperatures across Europe were cooler, although still above normal except in the east and south, where they were near normal. Persistent warm weather since December has caused winter grains to become vegetative earlier than normal across southern Europe.

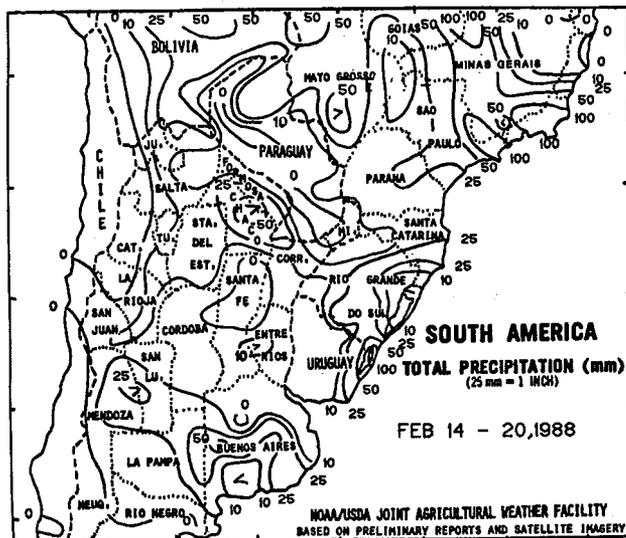




**SOUTHEAST ASIA** ... Moderate to heavy rain (25-100mm or more) continued throughout Indonesia and Malaysia, and returned to central crop regions of peninsular Thailand, maintaining mostly favorable irrigation water levels. However, light rain (less than 25mm) persisted in rice regions of southern Java. Unseasonable rain (10-88mm) continued in Thailand from Bangkok northward. In the Philippines, moderate to heavy showers (25-100mm) continued over the eastern half of the islands, including grain regions of northern Luzon.



**AUSTRALIA** ... Scattered rain continued along Queensland's northeast coast, although amounts over most sugarcane growing areas were light. Rainy season precipitation, which normally exceeds 60mm per week in most sugarcane areas during February, has been light, and some areas are in need of more rain. Scattered showers (as much as 70mm) also fell along coastal New South Wales, while interior summer crop areas remained dry. Cooler-than-normal temperatures over summer crop areas favored sorghum, which is mostly in the filling stage. Normal-to-above normal temperatures in eastern Queensland may have stressed some of the sugarcane crop, especially in areas missed by rainfall over the previous 2 weeks.

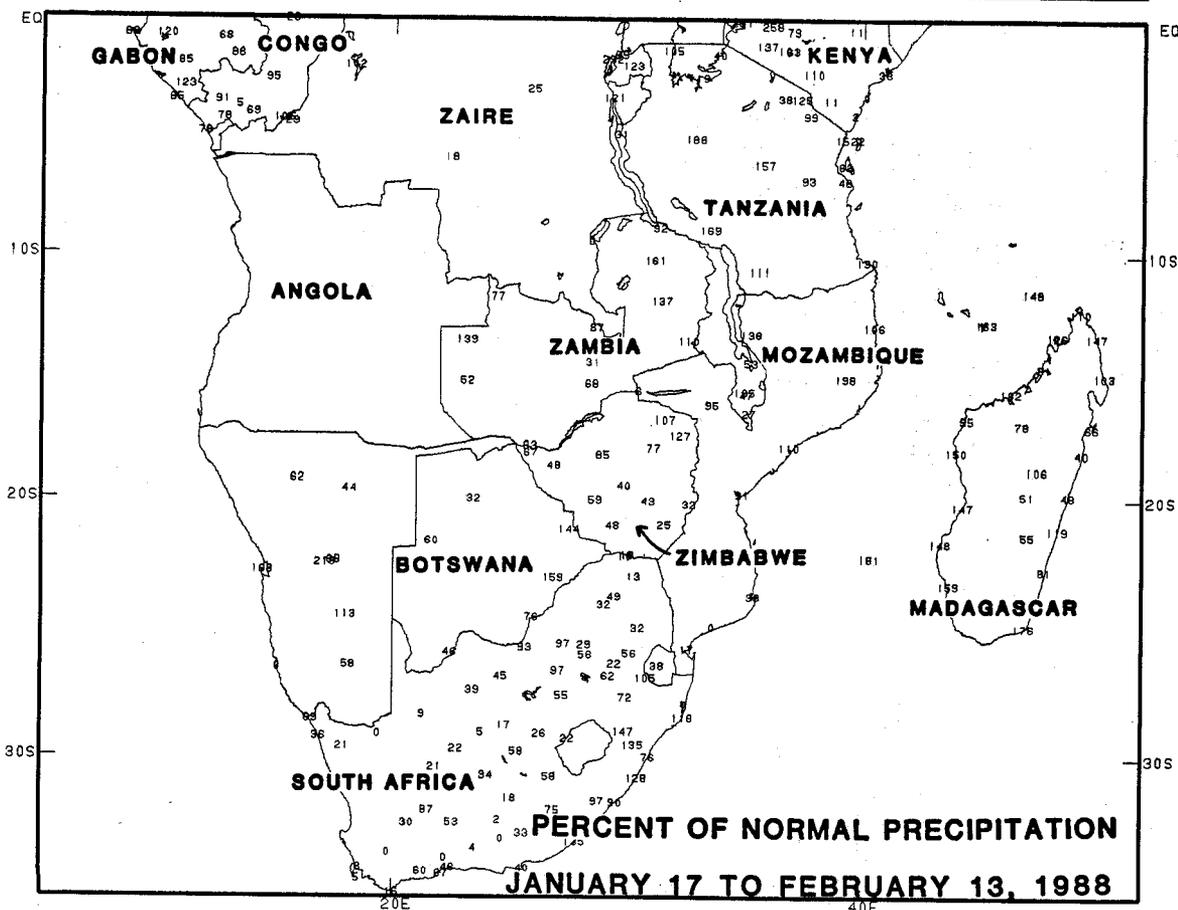
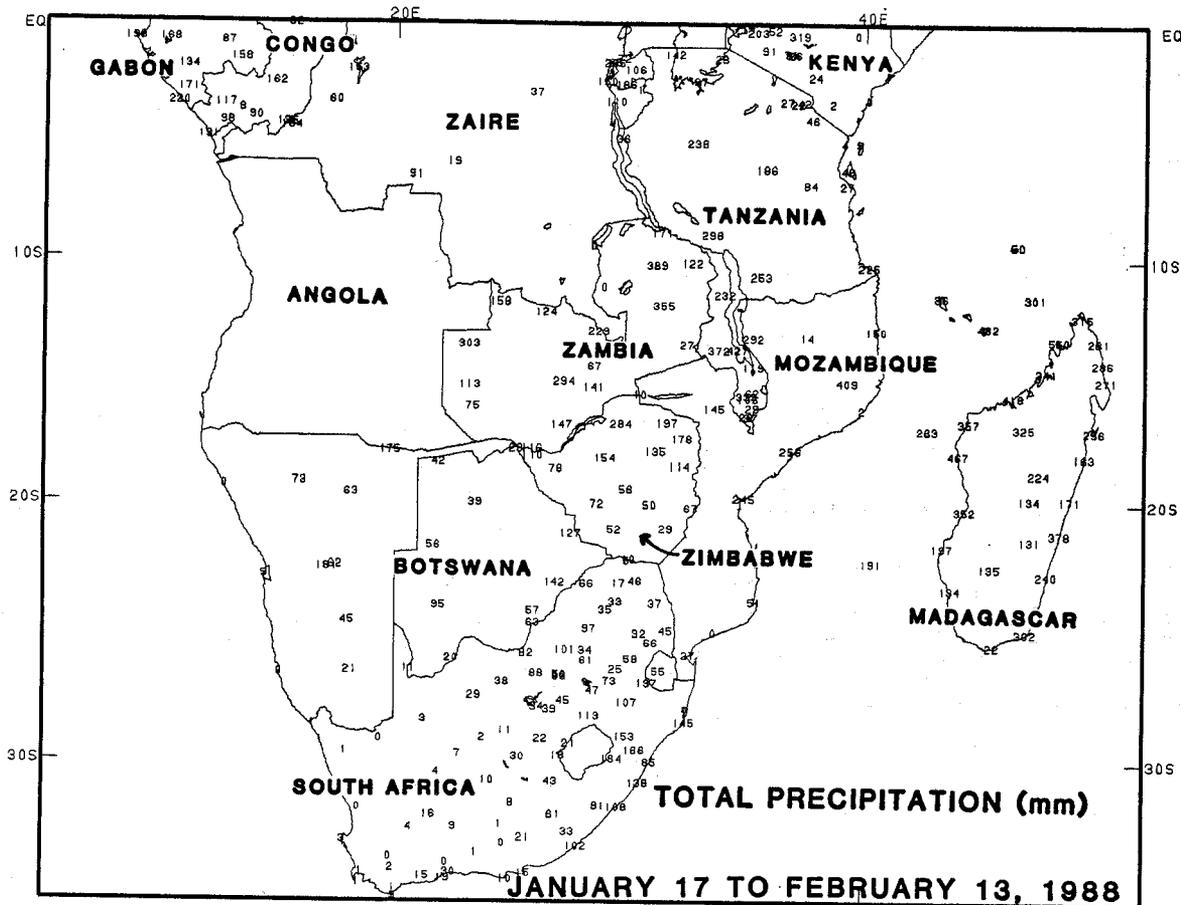


**SOUTH AMERICA** ... In south-central Brazil, generally light rain (1-16mm) fell in western Rio Grande do Sul, where moisture is becoming limited again for developing soybeans. Substantial rain (10-68mm) fell over most other soybean areas, including Santa Catarina, Parana, and Mato Grosso do Sul, where moisture is generally adequate. A dry pocket persisted from extreme eastern Mato Grosso do Sul to western Sao Paulo. However, locally inundating rain (50-176mm) fell from southern Goias southeastward, through southern Minas Gerais, eastern Sao Paulo, and along the coast of Rio de Janeiro where heavy rain fell the previous week. In Argentina, mostly light showers (1-11mm) covered the primary corn and soybean areas where corn is grain filling and soybeans are podding. Moisture may be limited in northern Buenos Aires, but summer crops are mostly progressing into latter stages of development. Substantial showers (25-55mm) benefited cotton development in Chaco.

### African Agricultural Weather Summary

In southern Africa, warm, drier-than-normal weather covered southern Zimbabwe and southern Mozambique crop areas during most of January and early February, stressing late planted, reproductive to filling crops. Light rain persisted in central and northern Mozambique until late-January, when Tropical Cyclone Doaza brought widespread, locally heavy rain to most crop areas, possibly causing some crop damage. The rainfall in northeastern Mozambique was the heaviest of

this season, possibly allowing late plantings in areas which, until recently, had been too dry to plant. Conditions since early January have been favorable for reproductive to filling crops in northern Zimbabwe, Zambia, and western Tanzania. Late-January showers brought relief to reproductive to filling crops in eastern Tanzania, following chronically dry weather since early December which reduced soil moisture levels for normal crop development.



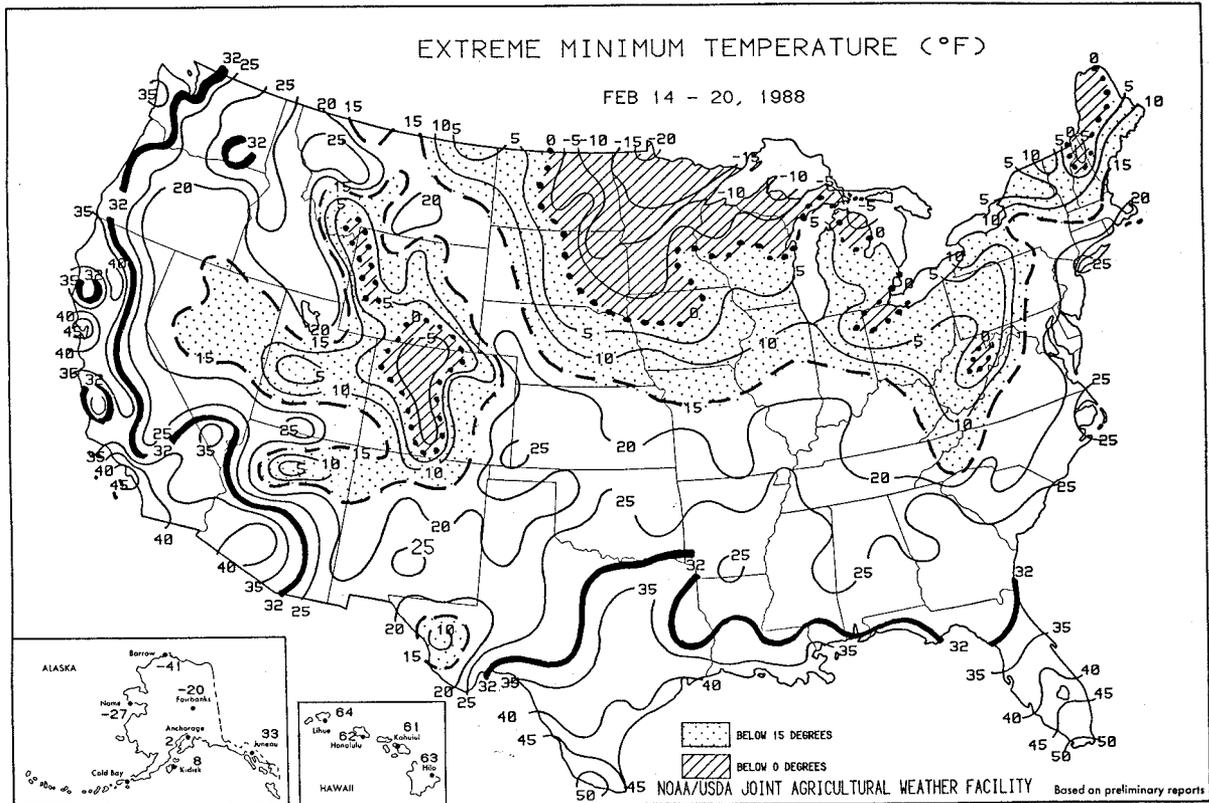
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