

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

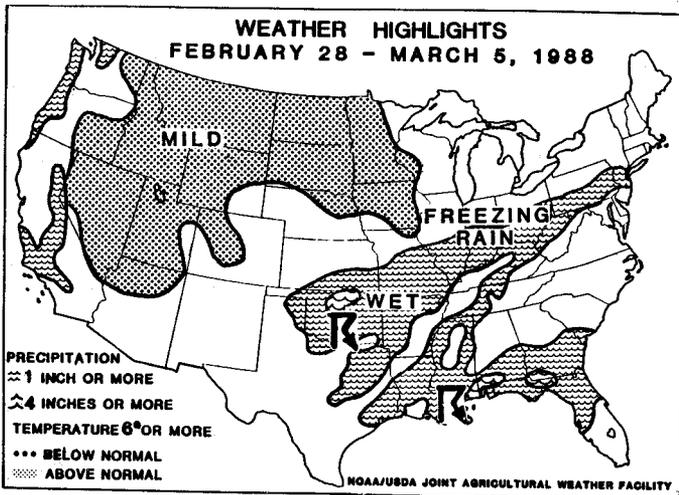
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Mar. 8, 1988

National Weather Summary

February 28 - March 5, 1988



WEDNESDAY...Texas experienced a great variety of weather: snow in the Panhandle, thunderstorms with torrential rains in the East, and high temperatures in the Southwest. Heavy rain and some snow also fell in Oklahoma and Arkansas. Thunderstorms developed in Arizona. Light rain extended from the lower Mississippi Valley across Missouri, the Ohio Valley, and West Virginia. Cold weather prevailed from the Great Lakes to the northern and central Plains. The West remained warm.

THURSDAY...A storm system moved from the lower Mississippi Valley to the Ohio Valley, producing a mixture of snow, sleet, and freezing rain from Missouri to New York. A band of showers and severe thunderstorms extended along and ahead of a cold front across Tennessee, Mississippi, and Louisiana. Strong winds, hail, and a few tornadoes accompanied the thunderstorms. Thunderstorms were also scattered across Alabama, Georgia, and Florida.

FRIDAY...Snow and freezing rain plagued the Ohio Valley and the Northeastern United States. Showers and thunderstorms occurred in West Virginia, the Carolinas, Georgia, and Florida. Snow developed in the central Plains. A storm moved ashore in the Pacific Northwest, bringing rain and strong winds to western Washington and western Oregon.

SATURDAY...Snow fell in parts of Oklahoma and Kansas. Rainshowers developed in Florida along a stationary front. Temperatures were below freezing in eastern New York and New England. Rain and snow with high winds continued in the Pacific Northwest.

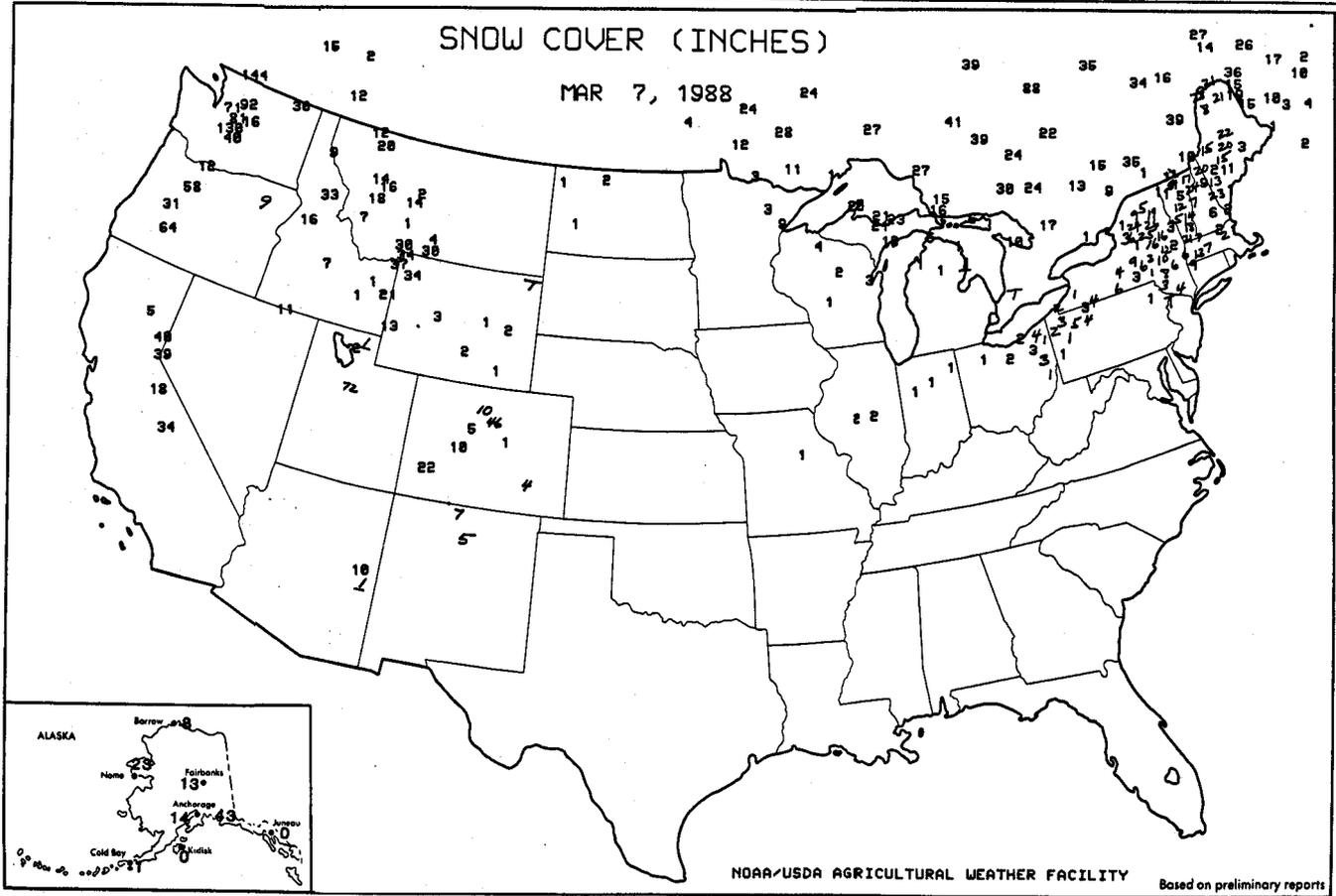
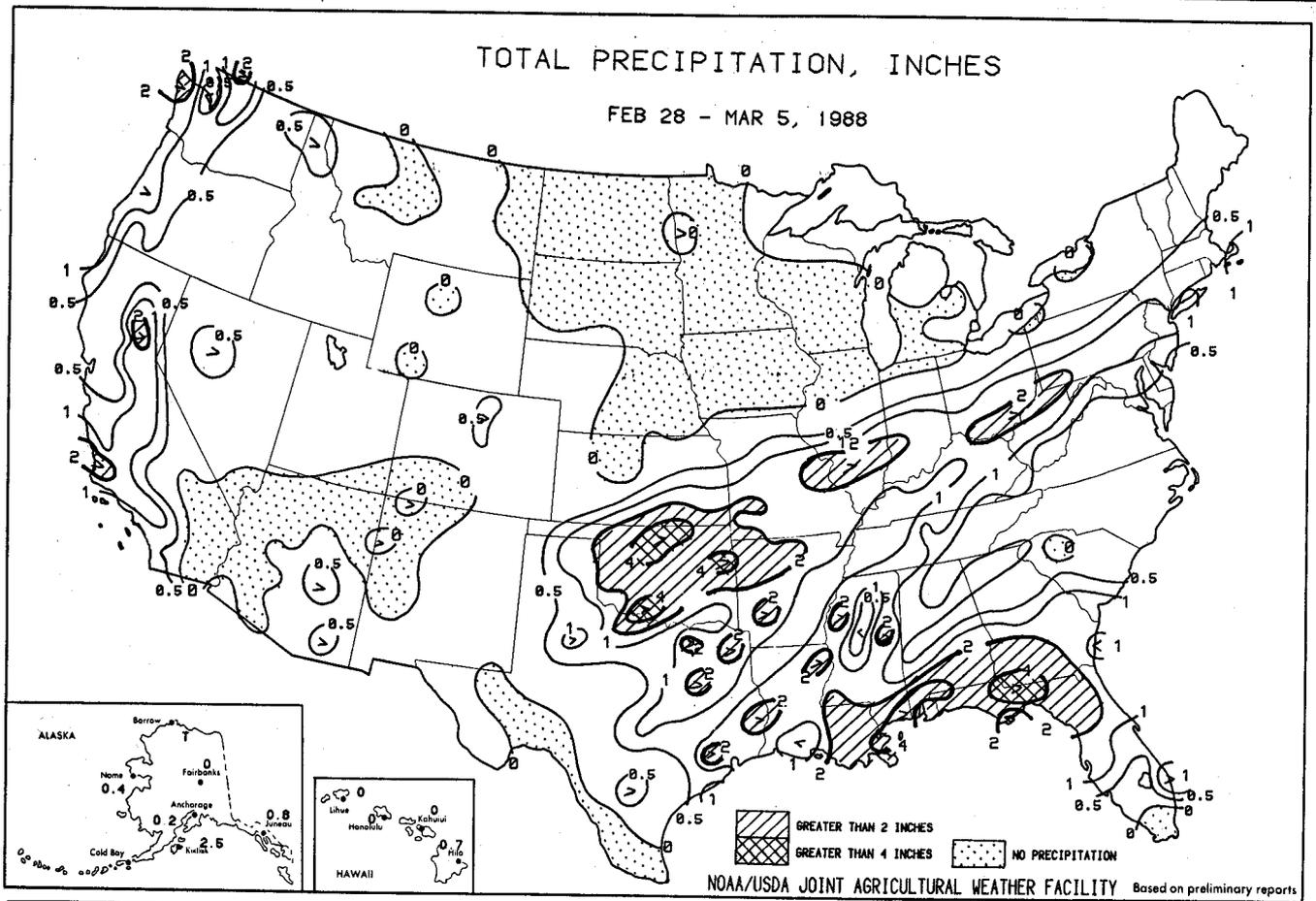
HIGHLIGHTS: Temperatures averaged above normal across virtually the entire Nation, most notable exceptions being the Ohio Valley and the Northeast, where snow and freezing rain fell late in the week. Wettest areas included Oklahoma, east Texas, the lower Mississippi Valley, the Gulf coastal States, and the Ohio Valley.

SUNDAY...An anomalously warm air mass covered the Northwest, from northern California to Washington and Montana. In the northern tier of States from Minnesota eastward, temperatures were below normal. Thunderstorms, accompanied by strong winds and heavy rains, battered California.

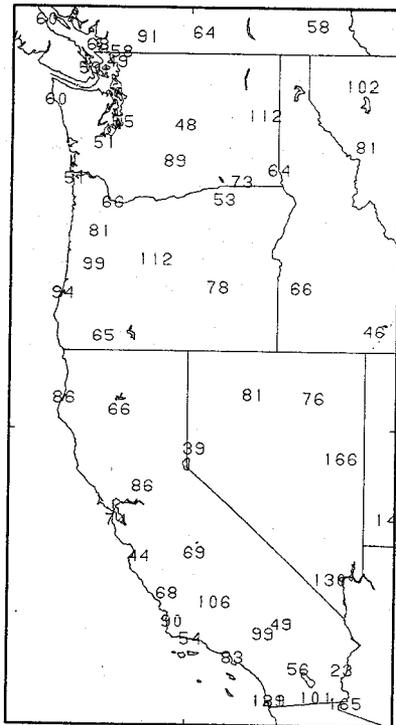
MONDAY...Cool air pushed southward and eastward from the upper Mississippi Valley to the mid-Atlantic coast. Above-normal temperatures persisted in the West. Rain continued in California, with some diminution, and more thunderstorms developed in Texas.

TUESDAY...Large hail and tornadoes accompanied severe thunderstorms in Oklahoma and Texas. Thunderstorms were also scattered across central California. Snow fell in the central Rockies, the central Intermountain West, upper Michigan, and northern Minnesota. Temperatures remained below normal in New York and Michigan. Mild weather prevailed across most of the Nation.

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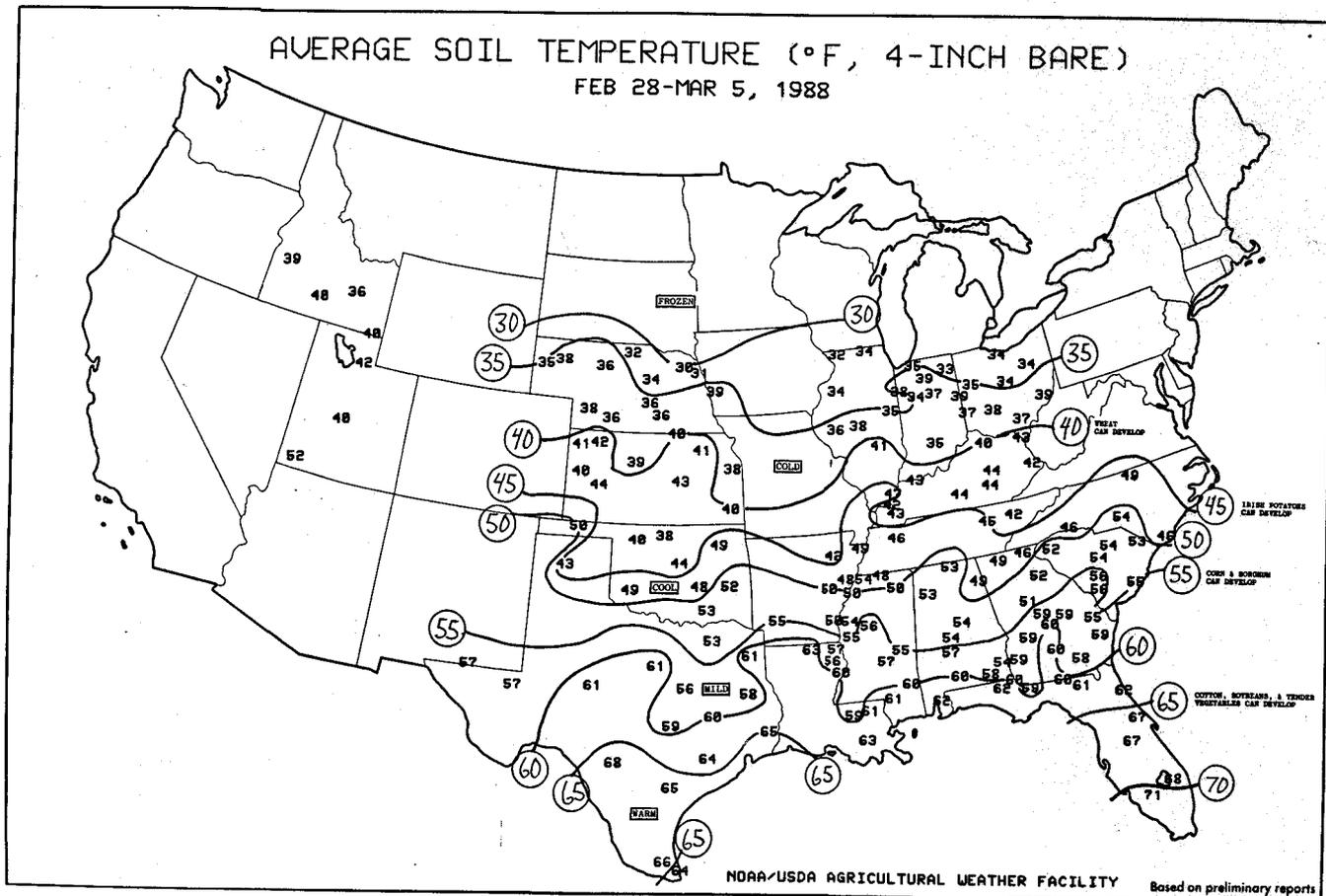


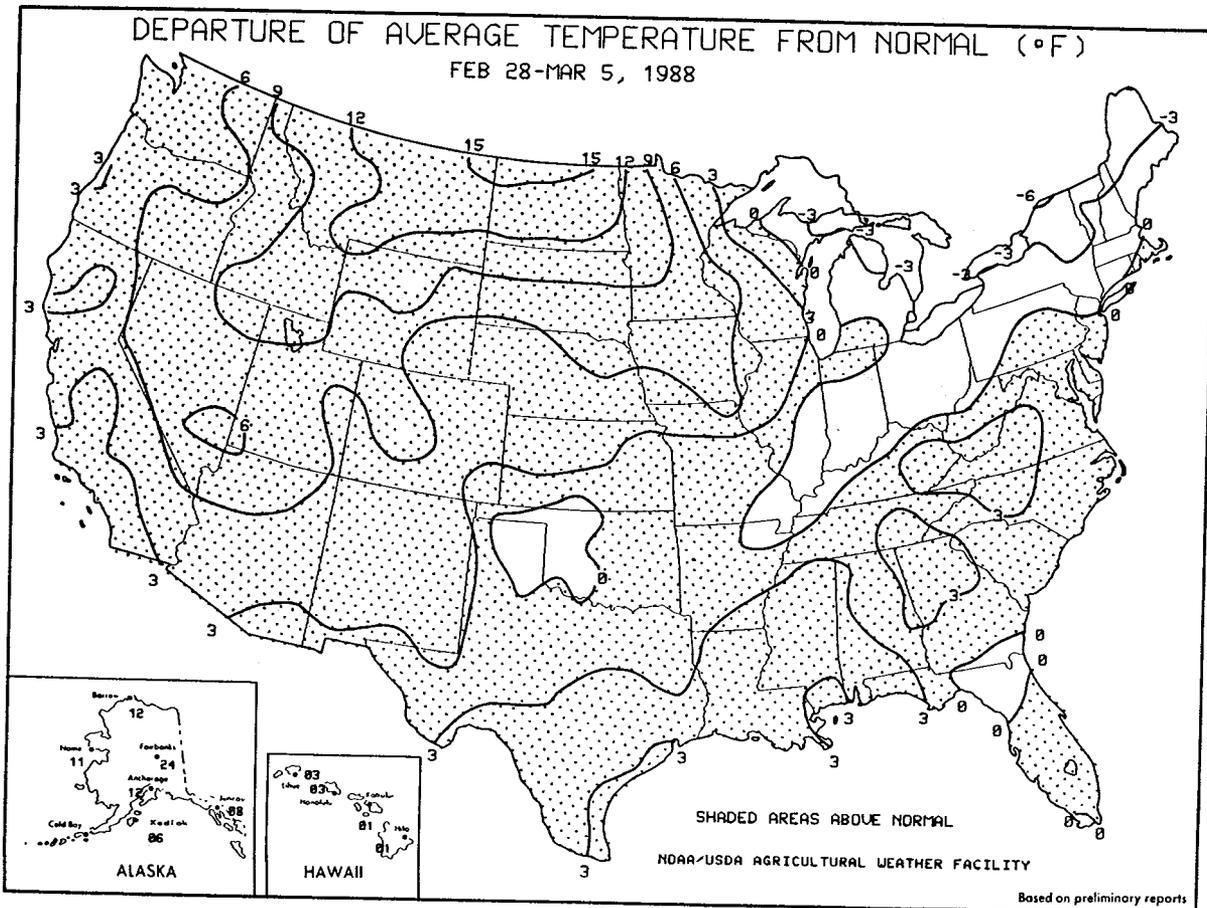
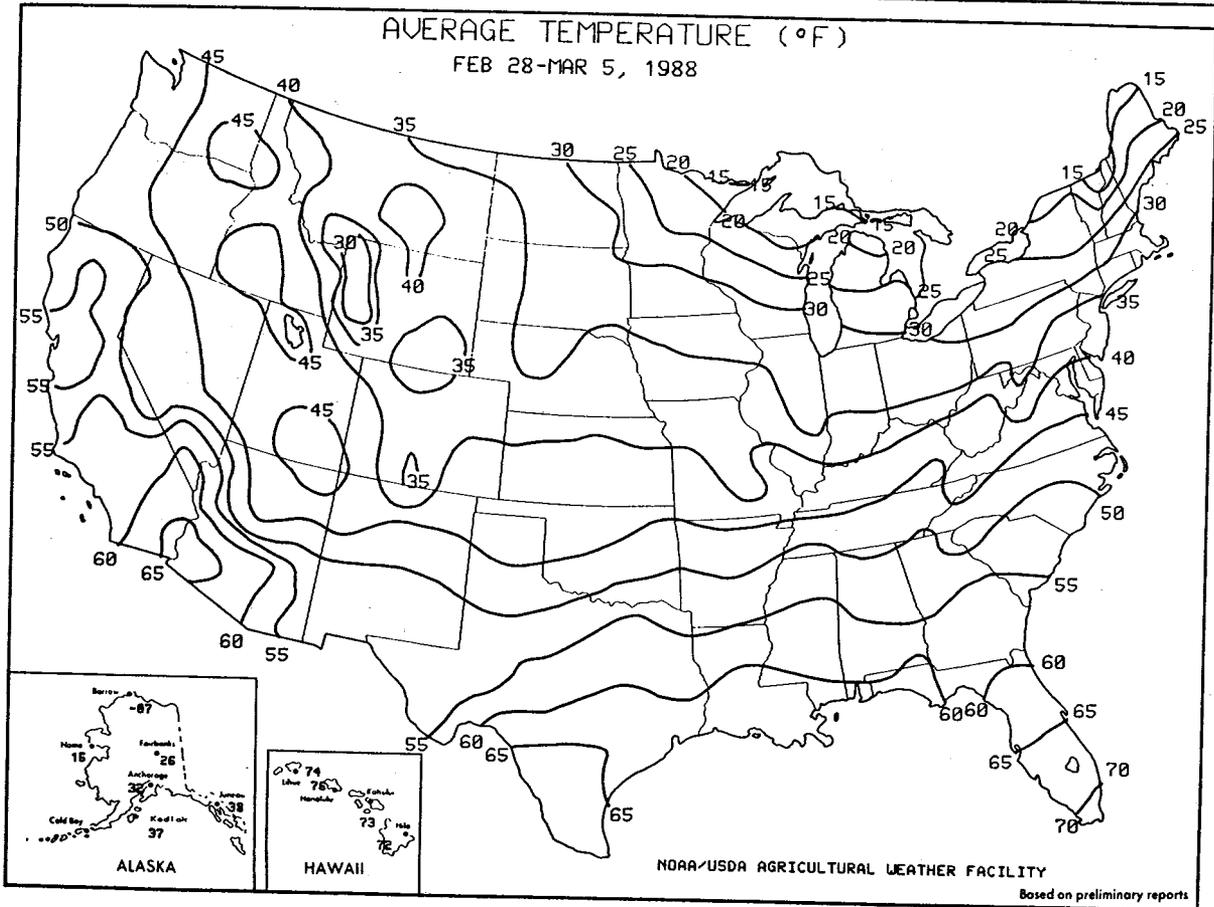
**WARM, DRY WEATHER IN THE WEST
CREATES PROBLEMS FOR AGRICULTURE**



Abnormally warm, dry weather has persisted in the Pacific Northwest and northern California since last summer. During the autumn of 1987, moisture was mostly inadequate for germination of winter grains. (See the *Weekly Weather and Crop Bulletin*, Vol. 74, No. 43, for a brief account of the 1987 drought in the Pacific Northwest; and Vol. 75, No. 8, for winter wheat areas and climatic profiles for the United States.) Now that warm weather is stimulating growth, rain is urgently needed for both autumn-planted and spring-planted crops.

The accompanying map shows percent of normal precipitation between July 1, 1987, and March 5, 1988.





National Weather Data for Selected Cities

Weather Data for the Week Ending March 5, 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 °F		PRECIPITATION		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
AL BIRMINGHAM	66	37	73	28	52	2	.4	-1.0	.3	.4	39	8.0	72	86	28	0	3	2	0	
MOBILE	70	51	78	46	61	4	3.5	2.1	2.8	3.5	349	14.4	135	98	53	0	0	3	2	
MONTGOMERY	69	42	77	34	56	2	1.6	.3	1.5	1.6	166	13.0	133	86	34	0	0	2	1	
AK ANCHORAGE	38	26	42	20	32	12	.2	0	.1	.2	167	.9	52	90	56	0	0	3	1	
BARROW	0	-13	6	-30	-7	12	.4	0	T	T	150	.1	17	84	68	0	7	0	0	
FAIRBANKS	38	13	41	9	26	24	.4	-1	T	T	0	.5	42	86	44	0	7	0	0	
JUNEAU	44	31	48	26	38	8	.8	0	.3	.5	89	9.6	118	99	59	0	4	4	0	
KODIAK	44	34	42	31	37	6	2.5	1.5	1.1	1.4	204	18.6	159	94	63	0	1	6	2	
NOME	24	6	30	-16	15	11	.4	.3	.2	.3	363	2.1	155	92	63	0	7	4	0	
AZ PHOENIX	76	54	84	50	65	7	.2	.3	.2	.2	121	1.3	90	71	26	0	0	1	0	
PRESCOTT	62	31	68	29	47	6	.3	-1	.3	.3	107	2.1	59	79	27	0	5	1	0	
TUCSON	73	46	85	44	60	4	.4	.2	.4	.4	292	1.3	83	80	29	0	0	1	0	
YUMA	77	54	82	49	66	3	.1	0	.1	.1	200	.5	68	75	27	0	0	1	0	
AR FORT SMITH	61	38	73	35	49	3	3.2	2.4	2.3	3.2	568	6.9	138	94	53	0	0	4	2	
LITTLE ROCK	58	40	66	35	49	1	1.0	0	1.0	1.0	139	7.1	84	72	46	0	0	1	1	
CA BAKERSFIELD	69	48	74	42	58	3	.6	.4	.4	.4	267	1.6	71	95	44	0	0	3	0	
EUREKA	61	47	70	41	54	6	1.0	-2	.7	1.0	114	8.7	66	88	65	0	0	4	1	
FRESNO	64	44	71	38	54	1	1.1	.7	.6	.3	96	2.6	62	99	61	0	0	3	1	
LOS ANGELES	64	53	66	48	59	1	.9	.5	.6	.1	39	3.5	60	94	65	0	0	4	1	
REDDING	65	45	73	39	55	2	.5	-8	.3	.4	43	7.8	49	90	51	0	0	4	0	
SACRAMENTO	66	47	71	41	57	5	1.0	.5	.6	.2	43	4.7	64	97	60	0	0	3	1	
SAN DIEGO	64	55	68	49	60	2	.7	.3	.4	.6	200	2.9	71	93	66	0	0	4	0	
SAN FRANCISCO	62	50	68	48	56	4	.4	-2	.3	.1	13	4.4	52	94	64	0	0	3	0	
CO DENVER	51	27	62	20	39	3	.4	.2	.3	.4	238	1.4	102	89	40	0	2	2	0	
GRAND JUNCTION	55	33	61	28	44	6	.2	.1	.2	.2	200	1.5	116	85	39	0	7	1	0	
PUEBLO	57	24	69	12	41	3	.1	-1	0	0	63	1.0	169	94	32	0	6	2	0	
CT BRIDGEPORT	42	26	51	18	34	0	.8	0	.8	.8	139	6.7	97	80	47	0	5	1	1	
HARTFORD	41	20	49	9	31	-2	.7	.2	.6	.7	111	8.0	108	83	37	0	6	2	1	
DC WASHINGTON	52	32	62	28	42	1	.8	0	.7	.7	137	6.4	107	91	41	0	5	3	1	
FL APALACHICOLA	68	53	71	48	60	3	1.5	.6	1.3	1.5	234	12.9	162	100	67	0	0	3	1	
DAVONA BEACH	75	51	81	39	63	1	1.4	.6	1.1	1.4	263	8.4	138	96	48	0	0	2	1	
JACKSONVILLE	71	47	75	34	59	0	1.4	.5	1.1	1.4	234	13.8	190	97	49	0	0	2	1	
KEY WEST	76	65	81	57	71	-2	0	0	0	0	0	5.2	132	94	64	0	0	0	0	
MIAMI	79	62	84	53	71	1	0	0	0	0	0	2.5	56	91	50	0	0	0	0	
ORLANDO	76	53	81	45	65	0	1.1	.3	1.0	1.1	186	5.6	93	97	44	0	0	2	1	
TALLAHASSEE	71	44	77	34	57	0	5.6	4.3	3.7	5.6	599	16.2	150	98	50	0	0	2	1	
TAMPA	75	53	80	42	64	0	1.6	.8	1.4	1.6	278	5.8	99	96	53	0	0	2	1	
WEST PALM BEACH	79	60	84	52	69	1	1.5	.9	1.5	1.5	347	7.9	136	93	53	0	0	2	1	
GA ATLANTA	66	42	71	36	54	5	.5	-1.1	.1	.2	23	8.2	78	70	30	0	0	2	1	
AUGUSTA	69	39	74	27	54	3	.6	.5	.5	.5	68	8.1	91	89	34	0	2	2	1	
Macon	69	41	73	30	55	2	1.0	-3	.6	1.0	112	8.8	91	91	34	0	1	2	1	
SAVANNAH	69	45	74	33	57	2	1.5	.6	1.4	1.5	235	9.0	128	92	39	0	0	2	1	
HI HILO	80	64	82	62	72	1	.7	-2.4	.4	.1	6	20.4	80	89	49	0	0	5	0	
HONOLULU	83	69	84	68	76	3	T	T	T	T	0	4.3	60	77	43	0	0	0	0	
KAHULUI	82	63	83	57	73	1	0	0	0	0	0	8.5	112	80	44	0	0	0	0	
LIHUE	80	69	80	64	74	3	T	T	T	T	0	11.3	106	81	57	0	0	0	0	
ID BOISE	60	35	66	25	48	9	.4	.2	.2	.2	144	2.0	69	91	40	0	2	4	0	
LEWISTON	58	37	62	28	47	7	T	T	T	T	13	1.2	46	78	40	0	1	1	0	
POCATELLO	52	29	59	23	41	8	.3	.2	.1	.3	179	1.5	73	98	55	0	6	5	0	
IL CHICAGO	43	25	52	17	34	2	.5	-1	.3	.3	0	3.2	101	87	45	0	7	0	0	
MOLINE	46	25	56	19	36	5	.5	0	0	0	0	2.8	86	89	43	0	7	0	0	
PEORIA	47	25	56	19	36	3	T	T	T	T	0	2.7	78	93	40	0	7	0	0	
QUINCY	49	27	60	20	38	4	.2	.4	.2	.2	43	1.8	54	88	41	0	6	2	0	
ROCKFORD	43	24	50	16	33	5	T	T	T	T	0	3.0	103	89	45	0	7	0	0	
SPRINGFIELD	46	26	56	15	36	2	.5	-1	.3	.5	120	4.1	109	91	51	0	6	3	0	
IN EVANSVILLE	50	29	58	23	39	0	1.2	.3	.7	1.2	174	8.4	123	97	55	0	5	2	2	
FORT WAYNE	42	21	51	7	32	0	.3	-2	.3	.3	80	3.8	85	90	50	0	7	2	0	
INDIANAPOLIS	43	25	54	19	34	-1	1.3	.5	.9	1.3	244	6.7	117	91	54	0	6	3	1	
SOUTH BEND	41	22	47	15	32	0	T	T	T	T	0	4.2	86	89	43	0	7	0	0	
IA DES MOINES	48	25	62	18	36	7	0	0	0	0	0	1.0	40	81	32	0	7	0	0	
STOUC CITY	47	24	61	19	35	7	0	0	0	0	0	1.2	63	86	35	0	7	0	0	
WATFLOO	43	23	54	16	33	7	0	0	0	0	0	1.1	54	92	45	0	7	0	0	
KS (OM) OMAHA	51	28	70	19	40	4	T	T	T	T	8	1.4	78	77	36	0	5	1	0	
LUDGE CITY	54	28	69	20	41	3	.3	0	.2	.3	142	1.3	110	82	37	0	6	2	0	
GOODLAND	52	26	65	18	39	5	T	T	T	T	7	1.8	209	89	36	0	7	1	0	
TOPEKA	51	28	68	22	39	2	.1	-3	.1	.1	39	2.6	116	90	38	0	6	2	0	
WICHITA	51	28	72	21	40	0	1.4	1.0	.7	1.4	500	2.1	114	93	50	0	6	2	2	
KY BOWLING GREEN	55	31	68	24	43	1	.7	-5	.5	.7	77	7.9	82	93	45	0	5	2	0	
LEXINGTON	51	29	64	23	40	1	1.0	-1	.5	1.0	132	7.0	90	87	45	0	6	2	0	
LOUISVILLE	51	30	58	22	40	0	1.3	.4	.7	1.3	189	8.9	120	88	46	0	4	3	1	
LA ALEXANDRIA	70	51	77	43	61	5	1.5	.4	1.5	1.5	188	6.5	65	89	52	0	0	1	1	
BATON ROUGE	71	52	78	47	61	4	2.6	1.6	1.9	2.6	356	19.1	183	96	56	0	0	2	2	
LAKE CHARLES	70	53	77	43	61	4	.9	.2	.9	.9	192	9.2	108	98	67	0	0	1	1	
NEW ORLEANS	70	53	73	50	62	3	3.5	2.4	3.0	3.5	441	18.5	167	98	66	0	0	2	2	

Based on 1951-80 normals.

Weather Data for the Week Ending March 5, 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	90 AND ABOVE	32 AND BELOW	PRECIPITATION		
																		.01 INCH OR MORE	.50 INCH OR MORE	
SHREVEPORT	69	45	80	37	57	3														
ME CARIBOU	27	6	33	-6	16	-3														
PORTLAND	38	18	46	9	28	0														
MD BALTIMORE	51	30	62	24	40	1														
SALISBURY	54	30	63	22	42	1														
MA BOSTON	43	25	53	17	34	0														
CHATHAM	42	28	49	20	35	1														
MI ALPENA	32	4	43	-7	18	1														
DETROIT	39	21	51	16	30	1														
FLINT	37	17	44	13	27	1														
GRAND RAPIDS	39	18	43	14	28	0														
HOUGHTON LAKE	33	6	39	-9	19	0														
LANSING	37	18	43	14	28	0														
MARQUETTE	30	-3	42	-14	13	-10														
MUSKEGON	38	18	43	14	28	0														
SAULT ST. MARIE	27	2	38	-10	15	-4														
MN ALEXANDRIA	38	19	45	9	28	10														
DULUTH	34	10	42	-12	22	4														
INT'L FALLS	32	7	42	-14	19	5														
MINNEAPOLIS	41	21	48	13	31	8														
ROCHESTER	37	20	45	10	29	6														
MS GREENWOOD	68	41	76	32	54	3														
JACKSON	71	44	80	36	57	5														
MERIDIAN	71	42	78	37	57	4														
MO CAPE GIRARDEAU	52	31	59	24	41	1														
COLUMBIA	50	26	66	18	38	0														
KANSAS CITY	51	27	66	20	39	1														
SAINT LOUIS	50	30	62	22	40	1														
SPRINGFIELD	53	29	67	24	41	1														
MT BILLINGS	54	32	64	26	43	12														
GLASGOW	47	26	59	19	36	14														
GREAT FALLS	52	27	64	20	40	11														
HAVRE	50	24	62	15	37	12														
HELENA	51	26	59	22	39	10														
KALISPELL	48	31	57	25	40	10														
MILES CITY	52	27	64	23	39	12														
MISSOULA	51	29	59	25	40	9														
NE GRAND ISLAND	49	24	63	18	36	5														
LINCOLN	51	22	66	12	36	5														
NORFOLK	48	23	61	16	35	7														
NORTH PLATTE	49	22	62	16	36	5														
OMAHA	49	26	65	18	37	5														
SCOTTSBLUFF	50	24	63	18	37	4														
VALENTINE	45	21	56	15	33	5														
NV ELY	51	29	56	23	40	9														
LAS VEGAS	71	48	75	47	60	7														
RENO	60	34	66	27	47	8														
WINNEMUCCA	57	35	61	28	46	9														
NH CONCORD	37	14	44	7	26	-2														
NJ ATLANTIC CITY	61	35	61	18	38	3														
NM ALBUQUERQUE	63	35	69	32	49	9														
CLOVIS	63	35	75	29	49	6														
ROSWELL	67	35	77	27	51	3														
NY ALBANY	36	15	44	3	25	-3														
BINGHAMTON	34	16	46	8	25	-3														
BUFFALO	34	18	51	9	26	-3														
NEW YORK	45	30	52	25	38	0														
ROCHESTER	35	16	55	5	26	-3														
SYRACUSE	36	16	51	5	26	-3														
NC ASHVILLE	60	31	65	22	46	3														
CHARLOTTE	62	39	69	31	51	4														
GREENSBORO	60	35	66	24	47	3														
HAYTERAS	57	39	67	26	48	0														
NEW BERN	65	36	70	26	50	1														
RALEIGH	60	37	66	28	49	3														
WILMINGTON	64	38	69	27	51	0														
ND BISMARCK	46	20	61	14	33	12														
FARGO	37	21	51	12	29	11														
GRAND FORKS	38	18	51	9	28	13														
WILLISTON	46	25	57	20	36	15														
OH AKRON-CANTON	39	23	45	11	31	-1														
CINCINNATI	45	24	54	17	35	-3														
CLEVELAND	38	23	49	9	31	-2														
COLUMBUS	43	23	51	14	33	-2														

Based on 1951-80 normals.

Weather Data for the Week Ending March 5, 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	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	42	24	52	13	33	-2	.8	.2	.6	.8	180	6.1	117	90	54	0	6	3	1
TOLEDO	41	21	51	13	31	0	.8	.5	.8	0	0	2.5	59	89	45	0	7	0	0
YOUNGSTOWN	38	20	49	9	29	-1	.2	.4	.2	.2	49	3.9	71	96	51	0	7	3	0
OK OKLAHOMA CITY	56	36	74	26	46	1	3.0	2.6	2.0	3.0	4.7	179	89	51	0	2	2	2	0
TULSA	55	35	72	27	45	0	3.3	2.8	2.1	3.3	793	5.5	153	92	55	0	3	4	2
OR ASTORIA	55	42	65	34	49	4	1.7	-1	.6	1.4	114	11.6	58	95	62	0	3	4	2
BURNS	54	30	57	23	42	7	.4	.2	.3	.4	194	1.7	53	95	59	0	5	5	2
MDFORD	56	41	70	32	49	4	.3	.2	.3	.3	94	3.0	52	95	59	0	1	2	2
PENDLETON	56	36	62	32	46	4	.1	.2	.2	.1	44	2.1	68	89	51	0	1	2	0
PORTLAND	57	42	71	35	49	5	.8	0	.4	.6	95	6.7	62	89	58	0	7	7	0
SALEM	56	39	67	34	47	4	.5	.5	.3	.5	65	8.0	64	98	63	0	0	6	0
PA ALLENTOWN	44	24	56	20	34	0	1.1	.3	.8	1.1	195	7.2	102	89	46	0	6	2	1
ERRIS	36	19	52	13	28	-2	.8	.6	.8	0	0	4.0	81	88	54	0	7	0	0
HARRISBURG	48	28	60	21	38	2	1.1	.3	.7	1.1	194	6.5	103	87	40	0	6	2	1
PHILADELPHIA	49	29	58	24	39	1	.8	0	.8	.8	136	7.6	115	82	44	0	6	2	1
PITTSBURGH	42	24	54	12	33	-1	1.0	.3	.5	1.0	188	5.9	102	92	55	0	7	3	1
SCRANTON	40	21	53	14	30	-1	.8	.2	.6	.8	197	4.5	95	85	44	0	7	7	1
RI PROVIDENCE	43	24	53	16	34	0	.7	.2	.6	.7	104	8.7	102	86	39	0	6	2	1
SC CHARLESTON	67	44	71	33	55	2	.4	.6	.4	.4	57	5.6	74	97	44	0	0	1	0
COLUMBIA	68	38	74	28	53	2	.1	-1.1	.1	.1	6	6.2	66	89	32	0	4	1	0
FLORENCE	68	40	74	30	54	3	.1	-.9	.1	.1	7	4.1	53	88	33	0	2	1	0
GREENVILLE	62	36	69	26	49	2	.8	-1.3	.1	.1	0	5.7	58	83	33	0	3	0	0
SD ABERDEEN	44	18	54	9	31	10	0	-.2	0	0	0	.7	53	93	36	0	7	0	0
HURON	44	22	51	14	33	9	0	-.2	0	0	0	.9	69	91	41	0	7	0	0
RAPID CITY	51	22	63	16	37	7	.8	-.2	0	0	0	.5	45	81	33	0	6	0	0
SIOUX FALLS	42	22	49	15	32	7	0	-.3	0	0	0	1.8	107	88	48	0	7	0	0
TN CHATTANOOGA	65	34	71	26	49	3	.2	-1.1	.2	.2	23	9.2	83	88	33	0	4	2	1
KNOXVILLE	64	30	72	21	47	2	.1	-1.1	.1	.1	11	7.3	75	88	33	0	4	4	0
MEMPHIS	60	39	72	31	50	2	.6	-.6	.3	.6	69	8.3	84	86	41	0	1	2	0
NASHVILLE	61	33	71	25	47	2	.6	-.6	.4	.6	74	6.4	67	86	39	0	3	2	0
TX ABILENE	68	38	83	27	53	1	.1	-.1	.1	.1	86	.5	25	78	32	0	2	1	0
AMARILLO	56	28	72	21	42	-1	.6	.4	.5	.6	446	1.0	80	94	47	0	5	2	1
AUSTIN	74	51	85	39	62	5	.5	.1	.4	.5	189	1.1	25	88	45	0	0	3	0
BRAUNMONT	71	54	79	43	62	5	1.6	.8	1.6	1.6	306	9.9	111	96	61	0	0	1	1
BROWNSVILLE	76	60	82	52	68	2	.1	-.2	.1	.1	38	2.0	63	96	55	0	0	1	0
CORPUS CHRISTI	73	54	81	40	64	1	.1	-.2	.1	.1	0	5.5	191	94	60	0	0	0	0
DEL RIO	78	50	87	38	64	5	.1	-.1	.1	.1	38	2.0	63	96	55	0	0	1	0
EL PASO	68	39	78	33	54	2	.1	0	.1	.1	0	.3	22	74	24	0	0	0	0
FORT WORTH	67	42	79	33	54	2	.8	.3	.7	.8	167	1.1	119	74	23	0	0	1	0
GALVESTON	66	55	76	46	61	2	.9	.4	.9	.9	279	4.8	83	95	71	0	0	1	1
HOUSTON	72	53	82	42	62	4	1.2	.6	1.2	1.2	281	3.8	52	97	52	0	0	2	1
LUBBOCK	64	32	78	24	48	1	.2	0	.1	.2	138	.9	79	85	37	0	4	2	0
MIDLAND	70	35	83	26	53	1	.2	.1	.1	.2	225	.6	61	87	29	0	2	2	0
SAN ANGELO	73	38	85	26	55	2	.2	0	.1	.2	150	.6	37	86	27	0	1	2	0
SAN ANTONIO	76	51	85	38	64	5	.1	-.2	.1	.1	55	1.4	40	90	41	0	0	1	0
VICTORIA	74	55	82	41	64	4	.3	-.1	.3	.3	113	.8	18	97	53	0	0	1	0
WACO	70	45	80	35	57	3	1.1	.7	1.0	1.1	379	3.2	79	88	50	0	0	2	1
WICHITA FALLS	63	36	80	29	50	0	4.3	4.0	3.6	4.3	6.1	280	91	47	0	3	2	2	2
UT BLANDING	56	32	60	28	45	9	.8	-.2	.8	0	2.5	102	95	66	0	1	0	0	0
CEDAR CITY	55	32	60	26	43	7	.2	0	.1	.2	138	1.8	112	95	43	0	2	2	0
SALT LAKE CITY	57	36	64	31	47	9	.8	-.3	.8	.8	17	1.2	42	81	40	0	2	2	0
VT BURLINGTON	31	10	38	2	21	-3	.1	-.4	0	.1	16	2.4	62	85	42	0	7	3	0
VA NORFOLK	56	34	68	27	45	0	.1	-.8	.1	.1	6	5.9	76	92	43	0	4	2	0
RICHARMOND	57	32	66	26	45	2	.1	-.7	.1	.1	21	5.7	82	86	36	0	4	1	0
ROANOKE	58	32	65	24	45	3	.3	-.6	.2	.3	46	3.2	48	77	33	0	4	2	0
WA QUILLAYUTE	55	41	67	37	48	5	3.0	.1	1.6	3.0	147	20.7	71	97	60	0	0	5	3
SEATTLE-TACOMA	54	42	62	36	48	4	.4	-.4	.2	.4	61	5.2	47	97	63	0	0	4	3
SPOKANE	53	34	60	27	43	8	.6	.3	.4	.6	242	2.7	62	92	48	0	2	3	0
YAKIMA	57	31	65	22	44	4	.8	-.1	.8	.8	20	.7	31	91	43	0	5	1	0
WV BECKLEY	53	30	62	22	41	5	.4	-.5	.3	.4	58	4.3	58	77	34	0	6	2	0
CHARLESTON	53	30	61	24	42	1	1.2	.3	1.2	1.2	190	5.3	73	87	41	0	5	2	1
HUNTINGTON	52	29	58	23	41	0	1.9	1.0	1.5	1.9	303	6.2	92	85	45	0	6	2	1
PARKERSBURG	46	25	58	19	36	-3	2.1	1.3	1.2	2.1	383	4.9	80	85	41	0	6	3	2
WI GREEN BAY	36	14	39	8	25	2	.8	-.3	.8	.8	0	2.5	102	92	52	0	7	0	0
LACROSSE	41	22	46	12	31	6	.8	-.3	.8	.8	0	1.1	55	83	40	0	7	0	0
MADISON	41	20	46	11	31	4	.4	0	0	0	0	2.3	94	89	43	0	7	0	0
MILWAUKEE	40	24	45	18	32	4	.8	-.5	.8	.8	0	4.5	136	91	56	0	7	0	0
WAUSAU	37	15	42	6	26	4	.8	-.3	.8	.8	0	.4	20	79	49	0	7	0	0
WY CASPER	47	26	57	23	36	7	.1	-.1	.1	.1	92	1.2	101	91	42	0	7	3	0
CHEYENNE	44	25	57	15	35	5	.5	-.3	.4	.5	377	1.7	178	89	43	0	6	3	0
LANDER	48	27	53	23	37	8	.1	-.1	.1	.1	38	.5	37	84	41	0	7	1	0
SHERIDAN	51	27	60	23	39	7	.1	-.1	.1	.1	50	1.5	92	93	37	0	7	1	0
PR SAN JUAN	83	69	83	67	76	-1	.8	-.4	.8	.8	3	6.1	113	78	64	0	0	1	0

Based on 1951-80 normals.

Heating Degree Days Summary Table

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

LAST DATE OF DATA COLLECTION PERIOD IS 3-5-1988 ACCUMULATIONS ARE FROM JULY

** = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL WEEK, WEEK TOTAL, WEEK DEV, WEEK DEV FROM NORM, CUM TOTAL, CUM DEV, CUM DEV FROM NORM, CUM DEV FROM L YR, CUM DEV FROM NORM, CUM DEV FROM L YR. Rows list various cities and their corresponding heating degree day data.

February Weather and Crop Summary

Weather Summary

HIGHLIGHTS: The temperature pattern of February resembled that of January, but positive temperature anomalies in the West were greater, and the area affected was much larger. Relatively cold weather persisted in the eastern half of the Nation, except for areas along the east coast from North Carolina to New England. Wettest areas, with respect to normal, were the Gulf coastal States, the Rocky Mountain States, the desert Southwest, the Northeast, and the middle and lower Mississippi Valley.

FEBRUARY 1 - 6...The period began extraordinarily warm in the East and ended cold and windy. Winter storms brought protective snow cover to the northern and central Plains, and heavy rains to the Mississippi and Ohio Valleys and parts of the Southeast.

FEBRUARY 7 - 13...A winter storm swept through the northern Plains and Great Lakes region the first half of the week. A second winter storm developed over the southern Plains on Wednesday. During the remainder of the week, this storm spread snow, sleet, rain, and freezing rain across most of the Nation east of the Rockies. The eastern two-thirds of the Nation was quite cold, while the western third was warmer than normal.

FEBRUARY 14 - 20...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.

FEBRUARY 21 - 27...Mild, dry weather prevailed most of the week in the western two-thirds of the Nation. Strong, gusty winds plagued many areas, particularly the Great Plains. Snow fell over the upper Great Lakes, and lake-effect snow showers occurred in western New York, Pennsylvania, and Ohio.

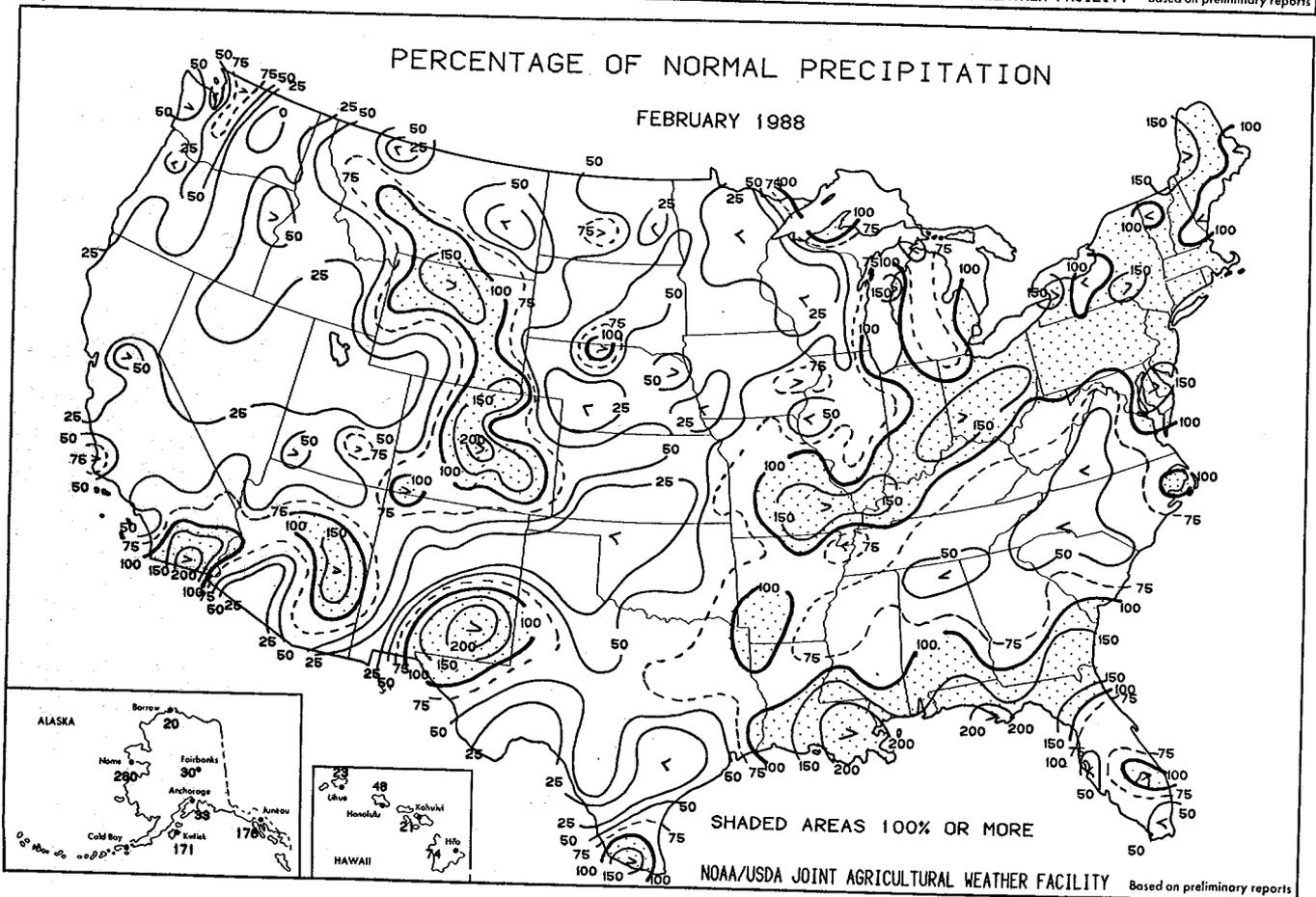
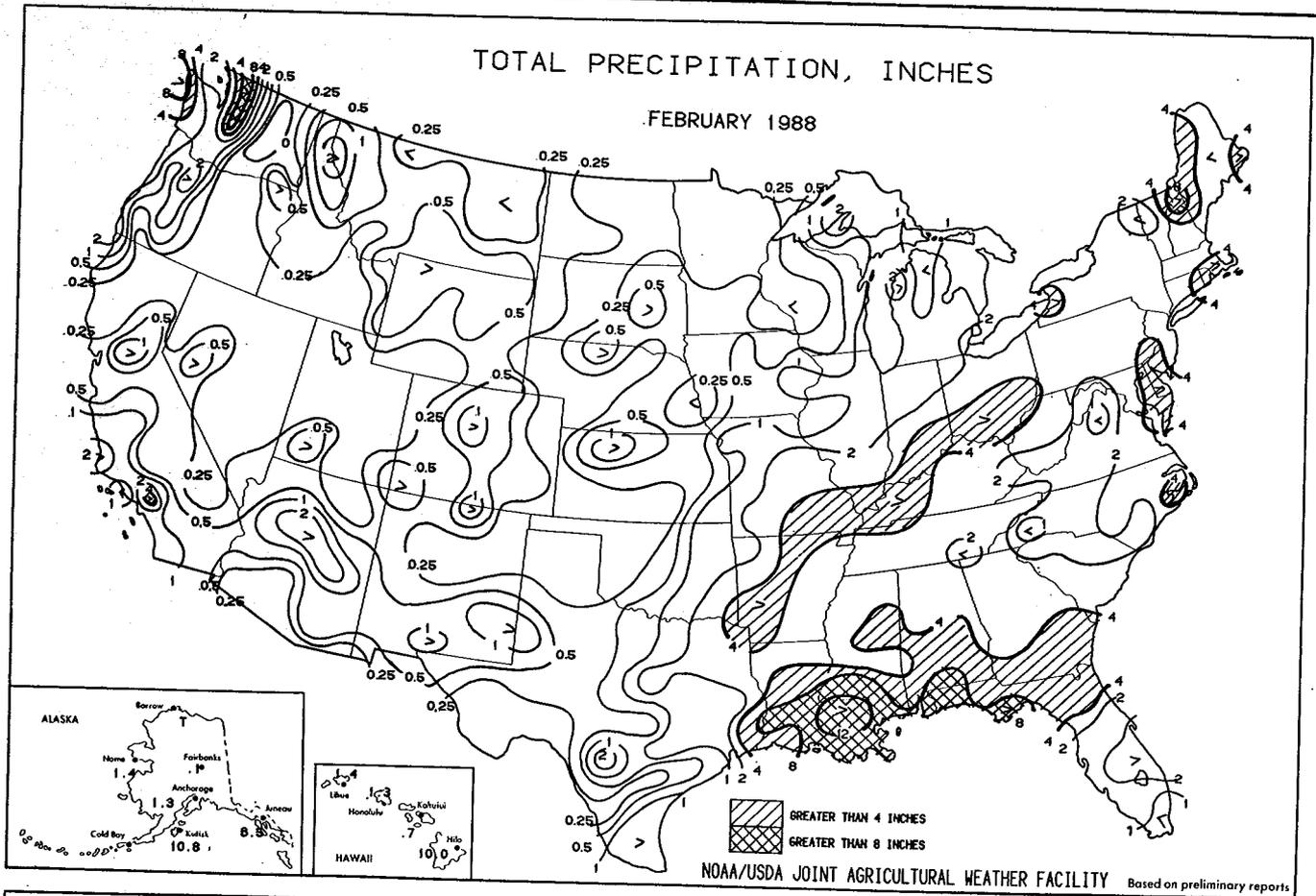
FEBRUARY 28 - 29...Anomalously warm weather persisted in the Northeast and much of the Great Basin, but cold air moved southward and eastward from the upper Mississippi Valley to the mid-Atlantic region. Strong winds and heavy rain accompanied thunderstorms in California. Thunderstorms also developed in Texas.

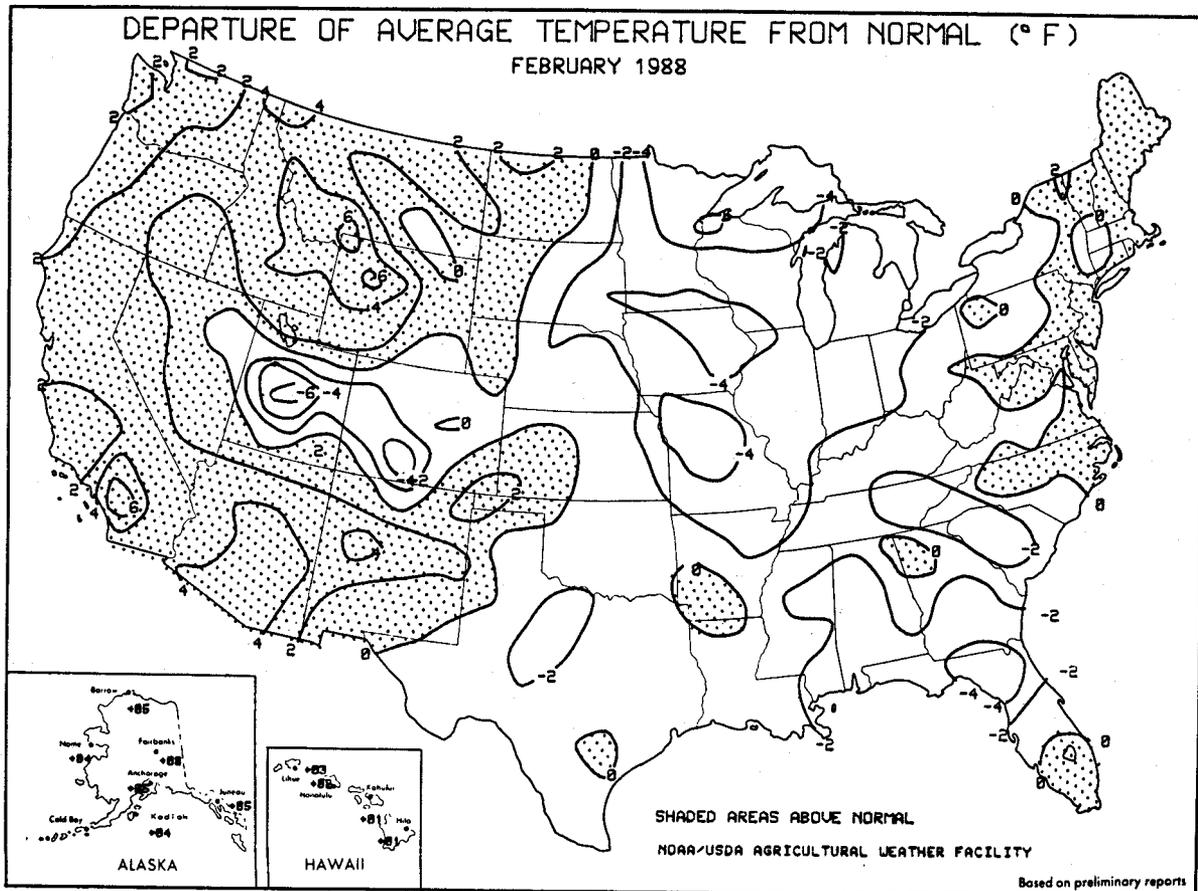
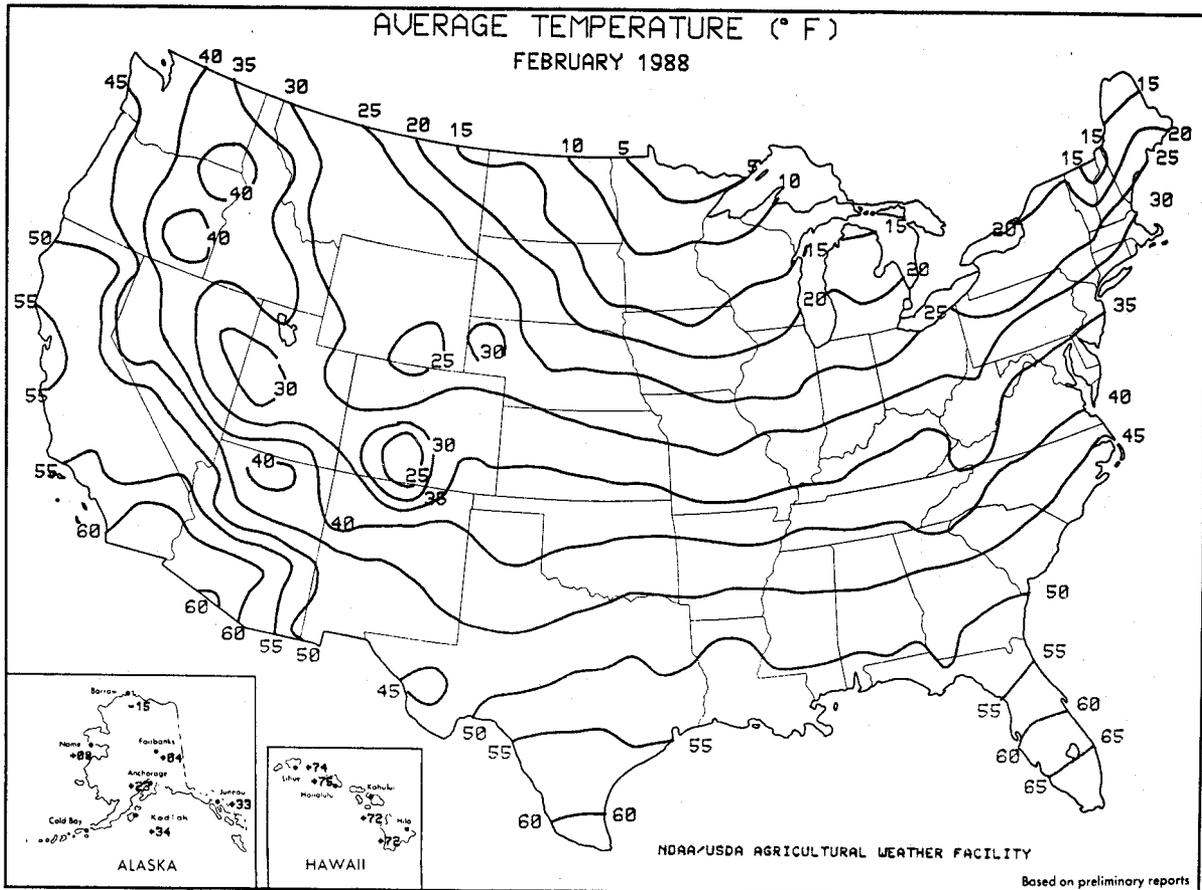
Fieldwork

Oklahoma's cotton harvest extended into February but neared completion the first week of the month. Cotton land preparation progressed rapidly in California and Arizona. By the end of the month cotton planting was underway in Arizona. Snow followed by quick melt-down restricted fieldwork in the eastern half of the Nation during the first half of February. Rain continued hampering fieldwork most of the month in the Southeast and Delta. The last week of the month, warm, windy weather dried soils, opening the door for spring field activity to begin in the eastern half of the Nation. By midmonth corn planting was underway in California and Texas. Seeding reached 7 percent completion in Texas as the month drew to a close. Sorghum planting was underway in the Coastal Bend and Rio Grande Valley areas of Texas. Fieldwork was limited mostly to spreading fertilizer in the Corn Belt during February.

Winter Wheat

Winter wheat was mostly good to fair during February. However, crop condition was mostly fair to good in the northern and central Great Plains and Rocky Mountain States during most of the month. Outbursts of extremely cold temperatures surged across the eastern half of the Nation the first half of the month, but adequate snow cover protection kept damage at a minimum. Snow cover vanished the second half of the month but temperatures were warm enough to prevent serious damage. The cold weather stifled growth until midmonth but by month's end wheat broke dormancy as far north as Missouri. The warm temperatures promoted growth from Oklahoma southward. During February, dryness plagued wheat development in the northern Great Plains, especially in South Dakota. In Arizona, wheat reached the heading stage in western areas. Wheat grew well in California but began showing signs of moisture stress in dryland areas. Topdressing was active in the Southeast, Pacific Northwest, Corn Belt, northern and central Great Plains and Delta as the month ended.





Temperature and Precipitation Data for February 1988

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	43	-3	2.6	-2.1	BAITON ROUGE	52	-1	12.5	7.5	DAYTON	27	-3	3.8	1.7
MOBILE	51	-3	6.3	1.4	LAKE CHARLES	53	0	5.5	2.2	TOLEDO	23	-3	1.3	-0.5
MONTGOMERY	48	-2	5.5	1.1	NEW ORLEANS	53	-1	11.3	6.1	YOUNGSTOWN	25	-1	2.6	0.4
AK ANCHORAGE	23	5	0.3	-0.6	SHREVEPORT	49	-1	3.6	0.2	OK OKLAHOMA CITY	40	-1	0.4	-0.9
BARRROW	-14	5	T	-0.1	ME CARIBOU	14	0	2.6	0.5	TULSA	39	-1	1.0	-0.7
FAIRBANKS	4	8	0.1	-0.3	PORTLAND	25	2	3.3	-0.2	OR ASTORIA	46	2	3.6	-4.1
JUNEAU	33	5	6.5	2.8	MD BALTIMORE	36	1	3.3	0.3	BURNS	33	-1	0.2	-0.8
KODIAK	34	4	10.8	5.7	MA SALSIBURY	38	1	4.6	1.3	MEDFORD	45	3	0.2	-1.9
NOME	8	4	1.4	0.9	MA BOSTON	32	2	3.9	0.3	PENDLETON	41	2	0.1	-1.0
AZ FLAGSTAFF	34	3	2.3	0.3	MI CHATHAM	34	3	5.0	0.8	PORTLAND	45	2	1.2	-2.7
PHOENIX	63	6	0.2	-0.3	MI ALPENA	15	-4	1.0	-0.3	SALEM	44	1	0.8	-3.8
PRESCOTT	44	4	1.1	-0.4	MI DETROIT	23	-3	2.0	0.4	PA ALLENTOWN	30	0	3.3	0.3
TUCSON	59	6	0.5	-0.1	MI FLINT	20	-3	1.5	0.1	ERIE	25	0	2.5	0.4
YUMA	64	4	T	-0.2	MI GRAND RAPIDS	21	-4	1.1	-0.4	HARRISBURG	32	0	3.3	0.5
WINSLOW	41	3	0.8	0.3	HOUGHTON LAKE	17	-1	0.8	-0.6	PHILADELPHIA	34	1	4.1	1.3
AR FORT SMITH	42	0	2.1	-0.4	LANSING	20	-2	1.1	-0.2	PITTSBURGH	29	0	3.5	1.1
LITTLE ROCK	43	-1	3.2	-0.6	MARQUETTE	10	-9	1.0	-0.6	SCRANTON	27	0	2.3	0.3
CA BAKERSFIELD	54	1	0.4	-0.7	MUSKOGON	22	-2	1.7	0.0	RI PROVIDENCE	32	2	5.3	1.6
EUREKA	50	2	0.5	-4.6	SAULT ST. MARIE	12	-3	0.9	-0.7	SC CHARLESTON	49	-1	2.4	-1.0
FRESNO	52	2	0.8	-1.0	MN ALEXANDRIA	9	-3	0.1	-0.6	COLUMBIA	45	-2	2.0	-2.0
LOS ANGELES	61	3	1.8	-0.7	DULUTH	6	-6	0.1	-0.8	FLORENCE	46	-1	1.4	-2.0
REDDING	54	3	0.1	-6.1	INT'L FALLS	2	-5	0.1	-0.5	GREENVILLE	42	-2	1.8	-2.6
SACRAMENTO	54	4	1.9	-0.9	MINNEAPOLIS	14	-4	0.3	-0.5	SD ABERDEEN	15	-1	0.3	-0.3
SAN DIEGO	60	3	1.4	-0.3	ROCHESTER	12	-4	0.2	-0.5	HURON	15	-3	0.5	-0.2
SAN FRANCISCO	55	3	0.4	-2.8	ST. CLOUD	10	-4	0.2	-0.6	RAPID CITY	27	1	0.3	-0.3
STOCKTON	52	2	0.3	-1.7	MS GREENWOOD	45	-2	2.4	-2.2	SIoux FALLS	15	-4	0.3	-0.7
CO DENVER	34	0	0.6	-0.1	JACKSON	48	-1	3.9	-0.4	TN BRISTAL	37	-1	3.2	-0.2
GRAND JUNCTION	29	-4	0.2	-0.3	MERIDIAN	47	-2	3.8	-0.8	CHATTAHOOGA	41	-1	1.9	-2.8
PUEBLO	34	-1	0.4	0.1	MO COLUMBIA	28	-5	2.2	0.3	KNOXVILLE	39	-2	2.9	-1.2
CT BRIDGEPORT	32	1	3.6	0.7	KANSAS CITY	28	-6	0.7	-0.5	MEMPHIS	42	-1	3.5	-0.8
HARTFORD	28	0	4.0	0.8	SAINT LOUIS	31	-3	2.3	0.2	NASHVILLE	39	-2	2.0	-2.0
DC WASHINGTON	37	-1	2.5	-0.1	SPRINGFIELD	32	-4	2.2	0.1	TX ABILENE	45	-3	0.4	-0.6
FL APALACHICOLA	52	-3	8.5	4.8	MT BILLINGS	28	0	0.7	0.0	AMARILLO	38	-1	T	-0.5
DAYTONA BEACH	57	-2	1.7	-1.4	GLASGOW	18	3	0.2	0.0	AUSTIN	53	0	0.3	-2.2
FT. MYERS	64	0	1.5	-0.6	GREAT FALLS	29	2	0.5	-0.3	BEAUMONT	54	-1	5.1	1.4
JACKSONVILLE	52	-4	6.1	2.5	HAVRE	23	3	0.3	-0.2	BROWNSVILLE	61	-1	1.5	0.0
KEY WEST	68	-2	0.5	-1.5	HELENA	29	3	0.5	0.0	CORPUS CHRISTI	58	0	1.1	-0.3
MIAMI	68	0	0.6	-1.4	KALISPELL	30	4	0.8	-0.2	DEL RIO	54	-2	0.2	-0.7
ORLANDO	60	-1	1.4	-1.7	MILES CITY	24	2	0.1	-0.4	EL PASO	49	0	0.7	0.3
TALLAHASSEE	49	-4	7.1	2.1	MISSOULA	32	4	0.6	-0.2	FORT WORTH	47	-1	1.2	-0.6
TAMPA	59	-2	1.4	-1.6	NE GRAND ISLAND	27	-1	0.3	-0.5	GALVESTON	55	-1	1.0	-1.4
WEST PALM BEACH	66	0	3.0	0.4	LINCOLN	26	0	0.1	-0.9	HOUSTON	54	-1	1.3	-2.0
GA ATLANTA	45	0	3.3	-1.1	NORFOLK	23	-1	0.5	-0.3	LUBBOCK	43	0	0.5	-0.1
AUGUSTA	46	-2	3.3	-0.7	NORTH PLATTE	27	-1	T	-0.5	MIDLAND	46	-1	0.4	-0.1
MACON	47	-2	2.4	-2.0	OMAHA	24	-3	0.2	-0.7	SAN ANGELO	48	-2	0.4	-0.4
SAVANNAH	50	-2	4.1	0.9	SCOTTSBLUFF	31	0	0.1	-0.3	SAN ANTONIO	54	0	0.9	-0.9
HI HILO	72	1	10.0	-3.5	VALENTINE	22	-2	0.7	0.2	VICTORIA	56	0	0.2	-2.0
HONOLULU	75	2	1.3	-1.4	NV ELKO	29	-2	0.1	-0.7	WACO	49	-1	1.7	-0.3
KAHULUI	72	1	0.7	-2.2	ELY	31	2	0.1	-0.6	WICHITA FALLS	43	-2	0.6	-0.4
LIHUE	74	3	1.4	-2.3	LAS VEGAS	53	3	0.3	-0.2	BLANDING	35	2	0.5	-0.5
ID BOISE	38	2	0.4	-0.6	RENO	40	3	T	-0.9	CEDAR CITY	34	0	0.5	-0.3
LEWISTON	41	3	0.2	-0.7	WINNEMUCCA	37	2	0.2	-0.5	MILFORD	27	-5	0.2	-0.5
POCAHONTO	33	3	0.2	-0.6	NH CONCORD	23	1	2.2	-0.2	SALT LAKE CITY	35	1	0.1	-1.2
IL CAIRO	-	-	4.5	1.1	NJ ATLANTIC CITY	34	1	3.8	0.5	VT BURLINGTON	21	3	1.7	0.0
CHICAGO	23	-2	1.3	0.2	NM ALBUQUERQUE	44	4	0.1	-0.3	VA LYNCHBURG	38	1	1.3	-1.6
MOLINE	22	-4	1.1	-0.2	CLOVIS	44	2	0.4	-0.1	NORFOLK	42	1	2.7	-0.6
PEORIA	24	-3	0.7	-0.7	ROSWELL	45	1	1.5	1.0	RICHMOND	39	0	3.1	0.0
QUINCY	25	-4	0.3	-1.2	ALBANY	24	1	3.0	0.8	ROANOKE	38	0	1.1	-2.1
ROCKFORD	20	-4	0.5	-0.6	BINGHAMTON	23	0	3.8	1.5	WA QUILLAYUTE	45	3	8.5	-3.7
SPRINGFIELD	26	-4	1.4	-0.3	BUFFALO	24	-1	4.1	1.7	SEATTLE-TACOMA	45	2	0.7	-3.5
IN EVANSVILLE	33	-2	3.9	0.9	NEW YORK	35	1	3.4	0.4	SPOKANE	36	3	0.4	-1.2
FORT WAYNE	23	-3	2.0	0.0	ROCHESTER	23	-1	2.2	-0.1	WALLA WALLA	41	0	0.6	-0.8
INDIANAPOLIS	27	-3	3.0	0.6	SYRACUSE	25	0	2.1	-0.5	YAKIMA	38	2	T	-0.7
IA DES MOINES	23	-4	2.0	0.0	NC ASHEVILLE	37	-2	0.9	-2.4	CHARLESTON	32	0	1.8	-1.4
DUBUQUE	18	-3	0.7	-0.6	CHARLOTTE	43	0	1.1	-2.7	ELKINS	35	-1	2.5	-0.6
SIoux CITY	21	-2	0.4	-0.5	GREENSBORO	40	0	1.3	-2.1	HUNTINGTON	35	-1	2.4	-0.4
WATERLOO	16	-4	0.4	-0.6	HATTERAS	46	0	4.0	-0.1	PARKERSBURG	33	-1	1.7	-0.9
KS CONCORDIA	30	-2	0.6	-0.2	NEW BERN	46	1	2.5	-1.5	GREEN BAY	15	-3	0.7	-0.3
DODGE CITY	35	0	0.1	-0.4	RALEIGH	42	0	2.4	-1.0	LACROSSE	16	-4	0.2	-0.7
GOODLAND	32	0	0.2	-0.1	WILMINGTON	47	-1	2.0	-1.4	MADISON	17	-3	0.5	-0.5
TOPEKA	31	-2	0.5	-0.6	ND BISMARCK	15	0	0.4	0.0	MILWAUKEE	20	-3	1.3	0.0
WICHITA	34	-1	0.2	-0.7	FARGO	9	-2	0.2	-0.2	WAUSAU	13	-3	0.1	-0.9
KY BOWLING GREEN	36	-1	3.9	-0.1	GRAND FORKS	8	-1	0.2	-0.4	CASPER	27	0	0.8	0.3
JACKSON	36	3	2.0	-1.7	WILLISTON	15	0	0.3	-0.2	CHEYENNE	28	-1	0.7	0.3
LEXINGTON	34	-1	3.1	-0.2	OH AKRON-CANTON	26	-1	2.7	0.5	LANDER	30	4	0.4	-0.2
LOUISVILLE	35	-1	3.6	0.4	CINCINNATI	30	-2	4.9	2.2	SHERIDAN	26	0	0.8	0.0
LA ALEXANDRIA	52	-1	3.3	-1.3	CLEVELAND	26	-2	2.8	0.7	SAN JUAN	77	0	2.3	0.2
					COLUMBUS	29	-1	4.3	2.1					

Based on 1951-80 normals.

Heating Degree Days (Base 65° F.)

February 1988

ALA. Birmingham	589	MAINE, Caribou	1485	OKLA. Okla. City	712
Mobile	421	Portland	1130	Tulsa	739
Montgomery	503	MD. Baltimore	838	OREG. Astoria	552
ALASKA, Anchorage	1223	MASS. Boston	945	Burns	933
Barrow	2305	Chatham	899	Medford	579
Fairbanks	1766	MICH. Alpena	1433	Pendleton	689
Nome	1665	Detroit	1201	Portland	581
ARIZ. Flagstaff	885	Flint	1295	Salem	622
Phoenix	100	Grand Rapids	1277	PA. Allentown	1016
Tucson	171	Houghton Lake	1405	Erie	1128
Winslow	681	Lansing	1301	Harrisburg	961
Yuma	70	Marquette	1569	Philadelphia	876
ARK. Fort Smith	656	S. Ste. Marie	1525	Pittsburgh	1040
Little Rock	639	MINN. Duluth	1704	Scranton	1082
CALIF. Bakersfield	308	Internatl Falls	1828	R.I. Providence	954
Eureka	426	Minneapolis	1479	S.C. Charleston	458
Fresno	365	Rochester	1527	Columbia	579
Los Angeles	137	St. Cloud	1585	Greenville	660
Redding	315	MISS. Jackson	502	S. DAK. Aberdeen	1461
Stockton	365	Meridian	517	Huron	1449
San Diego	147	MO. Columbia	1064	Rapid City	1103
San Francisco	296	Kansas City	1069	Sioux Falls	1448
COLO. Denver	889	St. Louis	995	TENN. Chattanooga	688
Grand Junction	1031	Springfield	944	Knoxville	734
Pueblo	903	MONT. Billings	1047	Memphis	657
CONN. Bridgeport	974	Glasgow	1353	Nashville	756
Hartford	1057	Great Falls	1039	TEX. Abilene	565
D.C. Washington	796	Havre	1147	Amarillo	765
FLA. Apalachicola	363	Helena	1034	Austin	357
Ft. Myers	--	Kalispell	994	Beaumont	329
Jacksonville	374	Miles City	1184	Brownsville	170
Key West	20	Missoula	938	Corpus Christi	225
Miami	38	NEBR. Grand Island	1109	Del Rio	307
Orlando	169	Lincoln	1115	El Paso	474
W. Palm Beach	180	Norfolk	1218	Fort Worth	512
Tallahassee	439	North Platte	1109	Galveston	286
Tampa	195	Omaha	1172	Houston	331
GA. Atlanta	559	Valentine	1270	Lubbock	638
Augusta	545	NEV. Ely	973	Midland	540
Macon	515	Las Vegas	357	San Angelo	491
Savannah	426	Reno	714	San Antonio	323
IDAHO, Boise	780	Winnemucca	803	Victoria	288
Lewiston	681	N.H. Concord	1194	Waco	451
Pocatello	926	N.J. Atlantic City	885	Wichita Falls	630
ILL. Cairo	--	N. MEX. Albuquerque	605	UTAH, Milford	1100
Chicago	1221	N.Y. Albany	1181	Salt Lake City	870
Moline	1250	Binghamton	1212	VT. Burlington	1260
Peoria	1198	Buffalo	1174	VA. Lynchburg	782
Rockford	1308	New York	862	Norfolk	649
Springfield	1139	Rochester	1192	Richmond	746
IND. Evansville	917	Syracuse	1167	Roanoke	778
Fort Wayne	1192	N.C. Asheville	802	WASH. Colville	--
Indianapolis	1090	Charlotte	621	Quillayute	574
South Bend	1220	Greensboro	705	Seattle-Tacoma	590
IOWA, Des Moines	1254	Hatteras	544	Spokane	850
Dubuque	1361	Raleigh	665	Walla Walla	--
Soux City	1276	Wilmington	536	Yakima	770
KANS. Concordia	1014	N. DAK. Bismarck	1454	W. VA. Beckley	943
Dodge City	861	Fargo	1614	Charleston	859
Goodland	966	Williston	1444	Huntington	858
Topeka	988	OHIO. Akron-Canton	1103	WIS. Green Bay	1447
Wichita	891	Cincinnati	991	Madison	1349
KY. Lexington	901	Cleveland	1129	Milwaukee	1294
Louisville	872	Columbus	1029	WYO. Casper	1084
LA. Baton Rouge	378	Dayton	1091	Cheyenne	1056
Lake Charles	347	Toledo	1202	Lander	1018
New Orleans	351	Youngstown	1123	Sheridan	1114
Shreveport	453				

National Agricultural Summary

February 29 to March 6, 1988

HIGHLIGHTS: Snow protected winter wheat and small grains during periods of low temperatures from Texas through the central Great Plains and southern Corn Belt. Warm temperatures promoted greening as far North as Colorado. Corn planting was underway in Texas, Louisiana, Mississippi, Georgia, Alabama, South Carolina, and Arizona. Cotton planting moved into Texas. Sorghum seeding reached 5 percent completion in Texas. Wetness hampered fieldwork in the Delta, Corn Belt, and Southeast. Livestock was mostly good.

SMALL GRAINS: Winter wheat and small grains were mostly good to fair except in the northern Great Plains, Delta, and Rocky Mountain States, where condition was fair to good. Snow cover was virtually nonexistent in the central and northern Great Plains and Rocky Mountain States, but mild temperatures kept damage at a minimum. Snow, preceding freezing temperatures, prevented severe winter damage to small grains in eastern Kansas, northern Oklahoma, Illinois, Missouri, Indiana, and Ohio. Crop development ranged from greening in Colorado to jointing in Mississippi and Oklahoma, and heading in Arizona.

In Texas, small grain growth progressed well until inclement weather. The snow provided additional moisture but slowed growth until milder temperatures returned near the end of the week. Recent showers and warmer temperatures boosted growth in Oklahoma. The cold winter reduced greenbug populations. Kansas wheat began greening but had not reached the jointing stage. Wheat streak mosaic disease level was light in the eastern one-third of the State. Russian wheat aphids were concentrated mostly in western areas of Kansas but posed no serious threat thus far. The warming trend improved wheat in Idaho. Winter damage began showing in isolated areas. Spring grain seeding was underway in the Columbia Basin in Oregon. Inadequate moisture stressed small grains in central and southeastern Washington. Spring grain planting began in Adams and Lincoln Counties. California's early wheat began tillering and barley was jointing. Dryland small grains progressed well with more moisture. Arizona's wheat and barley were good. Most wheat reached the jointing stage in northwestern Arizona. Topdressing of small grains continued in the Corn Belt, Delta, and Southeast.

OTHER CROPS: Land preparation for seeding cotton was underway in southern New Mexico. Cotton planting increased in western Arizona as soil and air temperatures rose. Most growers completed seedbed preparation and will begin planting soon. In Texas, cotton planting was underway at Coastal Bend and in the Rio Grande Valley.

Corn planting began spreading across the South from Texas to South Carolina. Seeding was just beginning in Louisiana, Mississippi, Georgia, and South Carolina. In Texas, corn planting reached 22 percent (%) completion, 10 percentage points ahead of the 5-year average. Corn planting moved

into central Arizona. Sorghum planting advanced to 5% completion in Texas, compared with 7% normally. Planting was underway in the Blackland and central areas. Wetness hampered soil preparation in the Delta, southern Corn Belt, and portions of the Southeast.

In Florida, land was ready for transplanting tobacco. Georgia's tobacco plants were fair to good. Tobacco bed preparation and some seeding were underway in Kentucky. Tobacco bed seeding continued in North Carolina and Virginia.

FRUITS AND NUTS: Early peach varieties bloomed in Georgia. South Carolina's peach buds began swelling. East Texas peach trees bloomed and spraying continued in many areas. Pruning was active in the Southeast but was nearing completion. Fruit tree pruning and spraying continued in Oregon.

Rain improved citrus groves in Florida. New growth and blooms developed in all areas. Early orange harvest slowed but grapefruit movement increased. Texas early orange harvest was virtually complete but valencia harvest was underway. Grapefruit quality was good and harvest continued. Storms caused light to moderate damage in California's almond orchards. High winds uprooted some trees and caused heavy petal loss. Stone fruit continued blooming along with orchard weed control. Vineyards were pruned and fertilized, and some were treated for dead arm and Spanish measles. Early grape varieties and kiwifruit showed bud swell. Coachella Valley date palms were dethorned and pollen was collected. Desert grapefruit, valencia and navel oranges, lemons, and tangelos were picked. Pruning of fruit and nut trees continued in eastern Arizona. Noncitrus fruit trees were in blossom in many areas. Valencia oranges, grapefruit, tangerines, and lemons were shipped from central and western areas.

VEGETABLES: Limited rain activated irrigation in Florida's vegetable producing areas. Planting and harvesting were active. Tomatoes, cabbage, pepper, celery, potato, lettuce, carrot, sweet corn, squash, and snap bean volumes were good. Lesser but steady volumes of strawberries, radishes, escarole, and eggplant were available. Vegetable harvest progressed as weather permitted in the Rio Grande Valley. Wetness slowed vegetable harvest, minimally in the San Antonio-Winter Garden area of Texas. Lettuce was sprayed, thinned, and weeded at Westside, California. Sweet corn was planted in the Sacramento Valley, and fresh tomatoes were planted in the Huron District. Strawberry harvest continued at Riverside and in southern coastal areas. Vegetable harvest consisted mostly of asparagus, broccoli, cauliflower, carrots, and lettuce.

PASTURES AND LIVESTOCK: Livestock was mostly good and pastures were mostly fair.

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 mostly under 0.50 in. northern two-thirds; 2.00 to 4.00 in. southern third. Temperatures averaged 2 to 5° above normal. Soil moisture adequate. Livestock mostly good. Primary activities: Land preparation for spring planting, when weather permits; topdressing small grains; pruning fruit trees; soil testing; general care of livestock, poultry.

ARIZONA: Sunny, warm weather brought February to a close, except for isolated showers, thunderstorms, east 28th; northeast plateau 29th. Low moved southeast producing precipitation statewide 2nd. Strong thunderstorms, strong gusty winds, pea size hail Maricopa County. Low pressure moved eastward 3rd. Sunny, warmer conditions prevailed 4th, 5th, except isolated cloud buildups over mountains. Precipitation amounts ranged traces to 1.75 in. Average temperatures 1 to 7° above normal.

Cotton planting increased to 5% west as soil, air temperatures increased. Most growers completed seedbed preparation; planting soon. Planting other areas not yet begun. Seedbed formation begun, nematicide applied central. Statewide alfalfa good. Hay harvest increased as sheeping-off decreased west. Fertilizer, herbicide applications central. East crop irrigated, light weed, insect, disease infestations. Wheat, barley stands good statewide. Crops continued good progress west; many fields in stem elongation stage. Most field stands established; 80% jointing stage, 5% heading stage. Northwest, most acreage jointing stage. Nearly all stands established south central. Corn planting just underway central. Central area harvest, shipping of greens, broccoli, rapini, carrots continued on large scale. Other mixed vegetables also shipped. Western area major activities included harvest, shipping of leaf lettuce, romaine, boston lettuce, broccoli, cauliflower. Stand establishment early planted melons progressed normally. Some acreage remained to be seeded weekend. Eastern area pruning fruit, nut trees continued. Non-citrus trees in blossom stage many areas. Citrus packing continued central, western area valencia oranges, grapefruit, tangerines, lemons shipped.

ARKANSAS: Mild, light to moderate showers statewide midweek. Temperature extremes 20°; 76°. Rainfall totals 0.22 to 3.25 in.

Wheat crop good, fertilizer being applied. Land preparation advanced in eastern areas. Early spring pastures provided limited grazing, some being fertilized. Fruit trees being pruned. Cattle good, feeding continued.

CALIFORNIA: An upper level low brought mild temperatures, occasional showers beginning week. By midweek low moved inland, high pressure brought cooler temperatures that were still above normal.

Rain early interrupted field activity that increased as soils dried. Dryland grain good progress. Early wheat tillering. Barley jointing. Winter forage, early barley green-chopped. Rain stopped rice stubble burning. Planting, harvesting sugarbeets good progress. Spring crop preplant activities increased weekend. Alfalfa weevil controls underway. Orchard weed control on going as stone fruit trees bloom. Storms caused light to moderate damage to almond crop. Some trees uprooted, heavy petal loss due to high winds. Pruning, fertilizing, vine tying in vineyards as

some treated for dead arm, Spanish measles. Early grape varieties, kiwifruit showed bud swell. Coachella Valley date palms, dethorned, pollen collected. Hass, pinkerton avocados harvested. Desert grapefruit, valencia, navel oranges, lemons, tangelos picked and packed. Asparagus harvest continued Sacramento Valley, Riverside. Broccoli, cauliflower light Riverside, continued Westside. Carrots harvested Riverside. Lettuce sprayed, weeded, thinned Westside, peak quality production Riverside. Potato sheds active Tulelake. Sweet corn planted Sacramento Valley. Fresh tomatoes planted Huron. Strawberry picking fields continued Riverside, southern coastal areas. Livestock fair to good, statewide. Supplemental feeding heavy northern areas, decreased southern areas as warm weather rain improved grazing conditions. Movement to market continued with heavy cullage, favorable prices. Range, pasture grass production improved after receiving rainfall. Calving, lambing continued.

COLORADO: Snow in mountains, rain Eastern Plains. Precipitation none San Luis Valley to 0.67 in. Fort Collins; 0.10 in. precipitation Eastern Plains. Average temperature 3 to 8° above normal.

Snow cover Eastern Plains continued to diminish. Winter wheat greening up, beginning to grow. Major activities assisting livestock with calving and lambing, readying machinery for spring planting.

FLORIDA: Dry, cool air mass prevailed statewide 29th through 2nd. Patchy frost occurred north, 29th. Strong cold front spread showers, thunderstorms across north 3rd, 4th. Rain spreading southward into Peninsula 5th, 6th averaged 3.00 to 4.00 in. Panhandle, 1.00 to 2.00 in. elsewhere except less than 0.25 in. extreme south. Temperatures averaged 1 to 3° below normal except near normal south.

Soil moisture generally adequate except few Panhandle, northern Peninsula areas with surplus; some upper east coast areas short supplies. Small grains continued generally good. Land ready for tobacco transplants. Sugarcane harvest remained active. Late week rains stimulated pasture greening, growth from lower central Peninsula northward. Some east coast, lower southern Peninsula pastures need rain. Grazing poor to excellent, most winter annual pastures provided good forage yields. Cattle fair to good depending mostly on adequacy of grazing, supplemental feeding. Weekend rains improved dry citrus grove conditions. New growth, bloom developed all areas. Good fruit sizes. Early orange harvest slowed, grapefruit movement increased. Temple harvest very active. Warmer temperatures benefited vegetable producing areas. Rainfall limited; irrigation active. Planting, harvest active. Good volume tomatoes, cabbage, peppers, celery, potatoes, lettuce, carrots, sweet corn, squash, snap beans. Lesser but steady volume strawberries, radishes, escarole, eggplant. West central strawberry harvest gained rapidly.

GEORGIA: Warm. Temperatures averaging 2 to 5° above normal. Warmest mid 60s mountains to upper 70s south. Coldest near 20° mountains to near 40° extreme south. Rain totals under 0.50 in. northern half. Rain totals exceeded 1.00 in. south half totals 2.00 to 4.00 in. common south central, southwest. Rain late 3rd into morning of 5th.

Soil moisture short to surplus, mostly adequate. Rain during latter part slowed field operations central. Main activities: Corn planting, land

preparation, small grain topdressing, pruning peaches. Early peach varieties blooming. Tobacco plants, wheat, rye, other small grains fair to good; pastures poor to mostly fair; cattle mostly fair to good; hogs fair to mostly good.

HAWAII: Favorable weather. Warm, sunny days. Cool nights. Temperatures high 60s to mid 80s. Rainfall none to 0.80 in. Variable winds 5 to 25 mph.

Days suitable for fieldwork 7.0. Irrigation moderate to heavy. Pesticide spraying moderate. Crops mostly good. Papaya production low. Overall banana production steady, increase Brazilian variety. Head cabbage output heavy, good quality. Chinese cabbage supplies heavy, good yields and quality. Shipments to West Coast expected to continue. Head lettuce improved. Ginger root harvesting steady, heavy. Mainland shipments steady. Field preparation for next season continued.

IDAHO: Most areas had precipitation, accumulations below normal. Temperatures 6 to 11° above normal.

Warming trend improved winter wheat. Isolated areas had damage to winter wheat due to winter weather. Fieldwork initiated in many areas. Farmers began spreading fertilizer, preparing spring grain fields, planting crops. Other activities included feeding, caring for livestock, attending seminars, shopwork, marketing products, repairing fences. Sheep shearing some areas. Livestock good, some excellent. Calving, lambing neared completion most areas, began other areas. Hay, roughage supplies adequate, some surplus.

ILLINOIS: Temperatures averaged 2 to 5° above normal north, none to 2° below normal south. Precipitation mostly less than 0.25 in. north, 0.25 to 0.75 in. central, greater than 1.00 in. south. Central hit by snow storm end of week while north stayed generally dry.

Winter wheat good. Livestock good.

INDIANA: Temperatures above normal north, below normal south. Lows teens north to near 30s south. Highs averaged low 40s north, near 50s south. Precipitation totaled none extreme north, 1.00 in. central, 1.50 in. south.

Snow, rain slowed fieldwork. Activities included: Hauling manure, spreading fertilizer, topdressing wheat, seeding clover, machinery repair, purchasing supplies, record keeping, care of livestock. Livestock good. Hay supplies adequate. Wheat mostly good, winter damage some fields.

IOWA: Mild, temperatures 5° above normal east to 9° above normal west. No measurable precipitation. Northeast still 1 to 2 in. snow cover remaining on 6th.

Good weather making for good to excellent livestock conditions. Farmers getting spring tillage and planting machinery ready for fieldwork in next few weeks, hoping no more snowstorms will arrive.

KANSAS: Precipitation none northwest, 1.10 in. south central, 1.72 in. southeast. Temperatures close to 40°; 5° above normal northwest to 1° below normal south central.

Days suitable for fieldwork 4.0. Topsoil moisture 38% short, 52% adequate, 10% surplus. Wheat 9% poor, 23% fair, 41% good, 27% excellent. Western third fair, good to excellent elsewhere. Western two-thirds light levels Russian wheat aphid, no other insect problems. Light levels wheat streak mosaic eastern third, potential exists for considerable damage. Wheat began to "green up", no jointing yet. Range and pastures fair

west, good central, mostly excellent east. Hay, forage, feed grains adequate. Calving underway; fertilizing wheat, weed control.

KENTUCKY: Temperatures relatively mild. Daytime highs in 50s, rose into 60s, low 70s. Cold front 4th dropped temperatures to below normal. Precipitation non-existent until cold front approached midweek; rain began over north, west. Total precipitation mostly 0.75 to 1.25 in.

Soil moisture mostly adequate. Field activity increased. Spreading fertilizer, preparing tobacco beds, some tobacco bed seeding, plowing for corn primary activities. Livestock satisfactory.

LOUISIANA: Temperatures 11 to 13° above normal. Temperature extremes 35°, 80°. Rainfall averaged 0.46 to 3.34 in.

Spring plowing 4% complete, 4% 1987, 13% avg. Corn 1% planted, 0% 1987, 4% avg. Winter wheat, sugarcane, vegetables, livestock fair to good. Pastures fair. Main activities: Spring plowing; topdressing pastures, wheat; harvesting crawfish; water leveling rice fields.

MARYLAND & DELAWARE: **Maryland:** Average temperature 41°, normal 39°. Lowest temperature low to mid 20s. Highest temperature low to mid 60s. Precipitation 0.54 in.

Soil moisture adequate. Main farm activities caring for livestock, income tax preparation.

Delaware: Average temperature 41°, normal 39°. Lowest temperatures in low 20s. Highest temperatures reached high 50s to low 60s. Precipitation averaged 0.45 in.

Soil moisture adequate. Main farm activities caring for livestock, tax preparation.

MICHIGAN: Temperatures ranged 3° below to 1° above normal. Temperature extremes -13°; 51°. Precipitation ranged none to 0.23 in. across State. Most areas little or no precipitation. Snow cover continued to shrink.

Most wheat fields no snow cover. Temperatures cold enough to hurt wheat. Activities: Marketing crops and livestock, pruning fruit trees, attending farm auctions, purchasing commercial fertilizer and seed, collecting sap from maple trees for syrup production. Feed supplies mostly excellent. Hay supplies getting short some areas. Livestock normal. Calving, lambing increased.

MINNESOTA: Temperatures averaged 5 to 11° above normal for State. Extremes -14°; 55°. Precipitation averaged near normal northwest, 0.15 to 0.27 in. below normal elsewhere. Precipitation totals averaged 0.11 in. northwest, trace elsewhere. Greatest weekly total 0.29 in. Snowfall averaged trace or less. Snow depth weeks end averaged 7 in. northeast, trace or less elsewhere.

Warm weather melting snow but still too early to do any spring fieldwork. Livestock remained good.

MISSISSIPPI: Temperatures 10° above normal; extremes 22°; 80°. Greatest weekly rainfall 4.85 in. Greatest 24-hour rainfall 3.30 in.

Days suitable for fieldwork 3.3, 2.0 1987, 2.6 avg. Soil moisture adequate to surplus. Recent dry weather allowed farmers to begin planting corn. Wheat 9% jointing; fair to good. Activities: Tillage, topdressing small grains, limited planting.

MISSOURI: Temperatures averaged 2 to 3° above normal north and central, near normal south. Precipitation 1.00 to 2.00 in., except extreme north 0.25 in or less.

Snow cover virtually gone. No fieldwork, soils wet.

MONTANA: Warm, temperatures 10 to 12° above normal. Western, south central 0.20 in. precipitation. Southwest, central 0.10 in. Elsewhere dry.

Winter wheat fair to good. Wind damage to winter wheat mostly light to moderate. Snow cover protection for winter wheat poor. Livestock good. Calving, lambing about 25% complete. Grazing open. Livestock losses average.

NEBRASKA: Temperatures averaged 7° above normal across State. Extremes 7°; 66°. Precipitation 0.10 in. northwest, zero to trace remainder of State.

Winter wheat condition unchanged. No snow cover, but temperatures mild. Calving, lambing continued, conditions favorable. Other activities: Hauling grain, machine maintenance, buying production inputs, attending meetings, general farm chores.

NEVADA: High pressure ridge broke down enough to allow weak storm systems to brush some areas with light precipitation. Rainfall mostly light, but locally heavy central localities. Cold upper level disturbance midweek dropped scattered snow showers most northern, central section, up to 1 ft. snow higher elevations Sierras. Storm also brought lower temperatures. Remainder week mostly dry, partly cloudy skies north.

Scattered showers, gusty winds delayed fieldwork midweek. Lack of significant precipitation caused concern.

NEW ENGLAND: Dry week. Average precipitation less than 0.25 in. North, 0.25 to 0.90 in. South. Average temperatures ranged mid teens northern Maine to mid 30s southern coast. Temperatures 1 to 4° below normal.

Major farm activities: Tending livestock, repairing machinery, working in sugar bush.

NEW JERSEY: Temperatures below normal, averaged 32° north, 37° south, 39° coastal. Extremes 10°; 62°. Precipitation above normal, north and south near normal averaged 1.08 in. north, 0.93 in. south, 0.58 in. coastal. Heaviest 24-hour total 1.09 in. on 4th, 5th. Heaviest 24-hour snowfall 2 in. on 4th, 5th.

Some soil preparation underway on lighter soils for planting of onions, peas, spinach. Soil moisture excessive in some areas, fruit pruning resuming. Machinery repair active. Farmers caring for livestock.

NEW MEXICO: Temperatures remained above normal. Light precipitation scattered locations.

Days suitable for fieldwork 5.8. Soil moisture 33% short, 56% adequate, 11% surplus. Barley 25% poor, 25% fair, 50% good. Wheat 10% poor, 70% fair, 20% good. Spring planting underway for chile, potatoes; field preparation for cotton underway southern areas. Cattle 44% fair, 56% good. Sheep 56% fair, 44% good. Range 11% very poor, 89% fair. Onions, lettuce 100% good.

NEW YORK: Temperatures near normal. Highs in 20s north of Hudson Valley, 30s and 40s rest of State. Precipitation variable. Amounts under 0.25 in. west, central areas. Approaching 1.00 in. along lakes. Southern areas snow midweek.

Producers busy tending livestock, repairing machinery.

NORTH CAROLINA: Temperatures averaged normal to 4° above normal across State. Temperature extremes 11°; 75°. Precipitation ranged none to 0.78 in. across State.

Days suitable for fieldwork 5.3. Soil moisture 1% very short, 25% short, 72% adequate, 2% surplus. Wheat 22% fair, 75% good, 3% excellent. Oats 24% fair, 74% good, 2% excellent. Barley 23% fair, 73%

good, 4% excellent. Rye 3% poor, 25% fair, 71% good, 1% excellent. Pasture 6% very poor, 8% poor, 38% fair, 47% good, 1% excellent. Hay and roughage supplies 8% short, 88% adequate, 4% surplus. Feed grains supplies 8% short, 92% adequate. Tobacco plantbeds 26% fair, 74% good. Irish potatoes 25% planted, 0% 1987, 15% avg. Major farm activities: Preparing land for spring planting; sidedressing small grains; seeding tobacco plantbeds; transplanting cabbage; planting potatoes; pruning fruit trees, ornamentals; applying lime; feeding livestock; general farm maintenance.

NORTH DAKOTA: Mild, dry statewide. Temperatures averaged 10° above normal southwest to 16° above normal northwest. Extremes 5° northeast; 63° north central. Precipitation light, scattered statewide.

Soil moisture below normal. Winter wheat 9% sufficient snow cover, alfalfa 16%. Winter wheat 28% very poor to poor, 57% fair, 15% good. Winter rye 20%, 67%, 13%. Insect infestations in stored grain. Livestock good to excellent, calving 15% complete, lambing 37%, shearing 45%. Feed supplies remained adequate. Pastures open for grazing 81%. Main activities: Preparation for spring planting, marketing grain.

OHIO: Mild early, late period; late winter storm midweek. Average high temperatures 40s; average lows 20s. Temperatures 1 to 2° subnormal. Precipitation 0.50 in. north as snow, 1.00 to 2.00 in. south as rain.

Very little snow cover remained from midweek storm. Soil temperature generally just above freezing. Some plowing started south before rain made soils too wet again.

OKLAHOMA: Temperatures averaged 4° below normal north central to 2° above normal southeast. Precipitation averaged 0.93 in. southeast to 3.10 in. west central.

Topsoil moisture 15% short, 45% adequate, 40% surplus. Subsoil moisture 100% adequate. Wheat 3% fair, 90% good, 7% excellent. Recent showers, warm temperatures boosted growth. Under 2% jointing. Cold winter reduced greenbug populations. Cattle marketings average. Lice infestations southeast.

OREGON: Warmer than normal temperatures statewide. Maximum temperatures low 70s over much of western interior; mid to upper 60s portions of northeast. Fairly significant rainfall over most of State. Precipitation ranged 0.50 to 1.75 in. Willamette Valley; lesser amounts southwest; over 3.00 in. along north coast. East of Cascades, most areas received between 0.10 to 0.40 in. of precipitation; far eastern border region received less than 0.10 in.

Soil moisture mostly adequate west, mainly short east. Spring fieldwork, grain seeding underway Columbia Basin. Pruning, spraying continued in fruit trees, caneberries. Livestock good; ranges, pastures mostly fair. Calving continued in eastern range country with good weather, few losses. Snow pack below normal caused concern for stock water this summer.

PENNSYLVANIA: Warmer, wetter than normal. Average temperature 32°, 30° above normal. Temperature extremes 6°; 60°. Average precipitation 0.76 in., 0.09 in. above normal.

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

PUERTO RICO: Island average rainfall 0.64 in., 0.10 in. above normal. Highest weekly total rainfall 1.76 in. Jayuya, 1.75 in. Pico Del Este-Luquillo, 1.50 in. Gurabo. Highest 24-hour total 1.45 in. Gurabo. San Juan WSFO mean temperature 76°, 1° below normal. Total rainfall 0.20 in.,

0.29 in. below normal. Divisional temperature averaged about 75 to 76° on coasts, 66 to 69° interior divisions mean station temperature 58° Pico De Este-Luquillo to 77° San Juan City. Lowest minimum temperature 50° several places. Highest maximum temperature 89° several places.

SOUTH CAROLINA: Temperatures averaged above normal. Rainfall averaged below normal. Mostly less than 0.10 in. somewhat higher near coast.

Small grains responding well to topdressing, additional rainfall needed. Farmers busy plowing land, laying plastic for vegetable planting. Some early corn, watermelon planting underway southern counties. Tobacco plantbeds good. Some peach buds began to swell. Other farm activities included final pruning of fruit trees, tending livestock, general farm maintenance.

SOUTH DAKOTA: Average temperature 5 to 14° above normal. Extremes 4°; 70°. Very little precipitation except small amount in Black Hills. Most snow melted, very little snow cover left throughout State.

Winter wheat condition remained unchanged mostly fair to good. Livestock good.

TENNESSEE: Widespread rainfall midweek. Scattered light rain over weekend. Precipitation averaged 0.25 in. east; 0.67 in. middle; 0.75 in. west. Temperatures averaged 1 to 5° above normal. Extremes 25°; 74°.

Farm chores, topdressing wheat, limited cropland tillage main activities. Livestock satisfactory.

TEXAS: Weather mild overall. Skies fair, clear early, midweek moisture entered State, touched off scattered showers. Approaching disturbance set off heavier showers, thunderstorms. High pressure good weather weekend, southwest wind warmer temperatures. Temperatures few degrees above normal most State; portions Rolling Plains slightly below normal. Precipitation widespread, half State above normal totals. Western, southern areas drier than normal.

Crops: Small grains began making progress growth, greening Plains before inclement weather. Snow provide moisture needed for continued progress. Snow melted rapidly weekend milder temperatures. Topdressing Cross-Timbers. Growth better remainder area. Added moisture boost for progress. Grazing conditions should improve fields not for grain. Corn planting very active Blacklands, central, east, south until rains delayed activities. Land preparations Plains active early week. Corn 22% planted, 4% 1987, 12% avg. Grain sorghum planting active southern areas until late week. Planting began central, little planted Blacklands. Rains help planting moisture. Sorghum 5% planted, 3% 1987, 7% avg. Cotton planting underway Coastal Bend. Rio Grande Valley.

Commercial Vegetables: Rio Grande Valley vegetable harvest proceeded weather permitted. Melon planting continued, planted fields good progress. Harvest early oranges virtually complete, Valencia harvest began. Harvest grapefruit continued. Quality good. San Antonio-Winter Garden vegetable harvest proceeded minimal delays. Onions good progress. High Plains, land preparations underway before snow. Onion planting to begin soon. Peach trees began to bloom east. Spraying continued many areas.

Range and Pasture: Range, pasture grasses benefited from recent moisture, showed signs greening, some growth. West Hill Country dry. Forage poor quality. Livestock High Plains suffered from recent bad weather. Supplemental feeding remained steady across State. Livestock good overall. Markets good.

UTAH: Precipitation moderate extreme southwest, light rest of State. Temperatures 6 to 9° above normal.

Snow cover fall seeded grains none to very light. Some tillage south. Winter ranges poor to fair. Supplemental feeding necessary some areas. Feed supplies adequate. Livestock good. Farm flocks lambing. Major farm activities: Livestock chores, machinery repair and maintenance, hauling manure, purchasing seed and supplies, bookkeeping.

VIRGINIA: Normal temperatures, below normal precipitation. Rainfall averaged 0.25 in. or less most areas.

Days suitable for fieldwork 5.1. Topsoil moisture 40% short, 55% adequate, 5% surplus. Spring fieldwork increased. Plowed, fertilized, planted potatoes, peas, spring oats, overseeded pastures, hayland. Tobacco plantbed 50% seeded. Topdressed small grains, sprayed herbicides, condition good to excellent. Fruit tree pruning active. Pastures, hayland, peaches, tobacco plantbeds good to excellent.

WASHINGTON: Strong high pressure early week brought considerable sunshine, warm temperatures around State. Ridge gradually moved inland, by midweek westerly flow developed over region. Several disturbances moved through State brought moderate rain to west side, also light snows to mountains. Cascade rain shadow kept all but extreme eastern half of State dry. Temperatures returned to normal by weekend.

Subsoil moisture inadequate central, southeast area. Grain crops same areas stressed by drought. Tillage, spring grain planting underway Adams, Lincoln Counties. Early potato planting underway Franklin County. Caneberries began to bud warm locations Snohomish County. Forced rhubarb harvest continued King, Pierce Counties. Early grazing began Klickitat County. Precipitation needed to support plant growth for prolonged grazing. Lambing season winding down.

WEST VIRGINIA: Averaged temperature 39°, 2° above normal. Precipitation averaged 0.99 in.; 0.16 in. below northeast, 1.04 in. above northwest.

Days suitable for fieldwork 3.6. Soil moisture 13% very short, 27% short, 60% adequate. Feed supplies adequate to short. Wheat, barley good to fair. Cows calved 51%; ewes lambed 62%. Farm activities: General farm maintenance, livestock care, plowing.

WISCONSIN: Dry, sunny week. Temperatures averaged 27°. Extremes -16°; 57°. Precipitation none to trace. Snowfall trace.

WYOMING: Temperatures above normal. Precipitation below normal, except southeast.

Winter wheat fair to good. Livestock fair to good. Warmer temperatures reduced stress. Early calving, lambing, shearing underway. Supplemental feeding continued as needed. Feed supplies adequate.

International Weather and Crop Summary

February 28-March 5, 1988

February 1988
MONTHLY DATA FROM SELECTED FOREIGN CITIES
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
*** = DATA NOT AVAILABLE

HIGHLIGHTS:

UNITED STATES ... Snow protects winter wheat and small grains during periods of low temperatures from Texas through the Great Plains and southern Corn Belt. Corn planting is underway in Texas, Louisiana, Mississippi, Georgia, Alabama, South Carolina, and Arizona. Cotton planting moves into Texas.

WESTERN U.S.S.R. ... Widespread precipitation covers winter grains in major southern producing areas. A warming trend melts snow in the south.

EUROPE ... Cold weather slows growth of vegetative winter grains in the south. Beneficial precipitation continues in the southeast.

SOUTH ASIA ... Rain benefits filling wheat in the north and jointing to heading rice in the south and east.

NORTHWESTERN AFRICA ... Soaking rains benefit Moroccan winter grains. Drought continues over much of Algeria and Tunisia.

SOUTH AFRICA ... Showers benefit filling corn in the central and eastern Maize Triangle, but heavy rains linger to the south, damaging crops and worsening flood conditions.

SOUTHEAST ASIA ... Widespread showers cover most crop regions of Malaysia and western Indonesia, including southern Java.

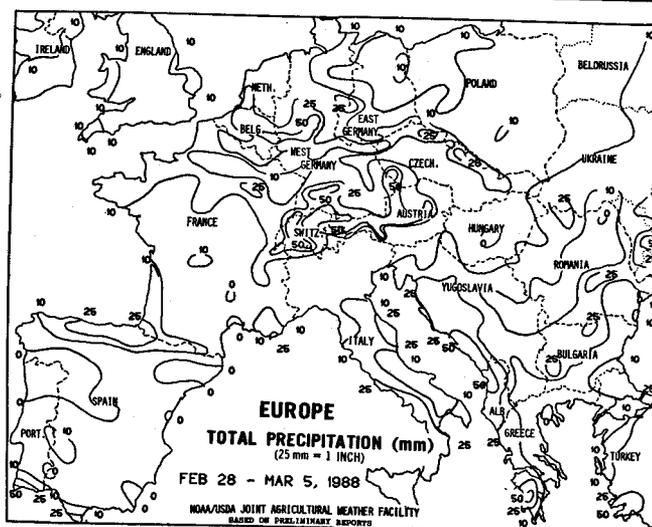
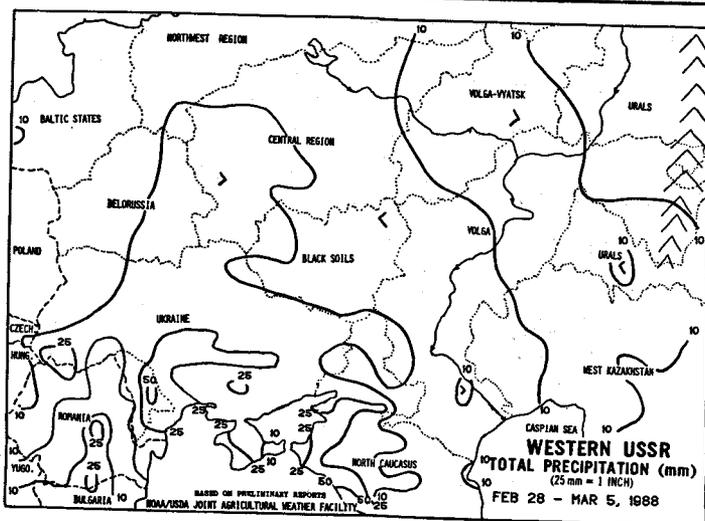
EASTERN ASIA ... Heavy rains continue over the southeast. Colder weather covers most winter grain areas.

SOUTH AMERICA ... Widespread rain in Brazil's northern soybean areas and Argentina's western crop areas delays early harvesting but benefits late developing crops.

AUSTRALIA ... Remnants of Tropical Cyclone Charlie continue to cause heavy rain over eastern Queensland, benefiting most sugarcane areas.

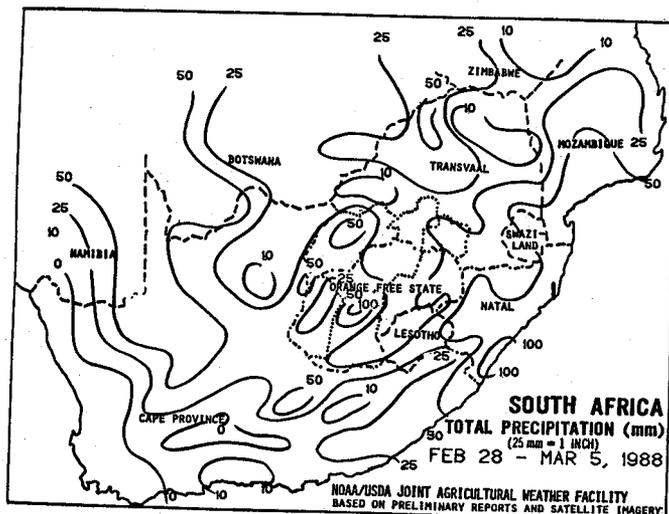
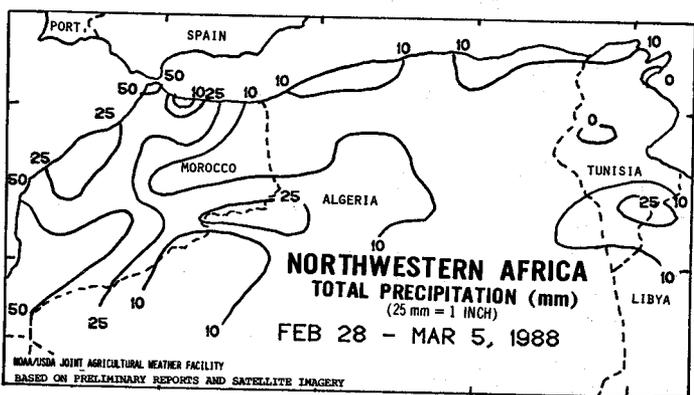
COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
	AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	DPART F/NRM	
NORWAY OSLO	-2	-5	3	-19	-3	4.3	114.5	67.6
SWEDEN STOCKHOLM	1	-2	5	-9	0	2.9	54.5	25.5
FINLND HELSINKI	-3	-6	2	-19	-4	2.5	59.4	25.5
U KING GLASGOW	7	2	12	-2	5	0.5	103.1	15.0
EDINBURGH	7	2	12	-3	5	1.5	41.9	0.8
BIRMINGHAM	8	2	13	-6	5	1.2	57.5	8.9
LONDON	8	2	14	-3	5	0.9	66.7	14.0
IRELND DUBLIN	8	3	11	-1	5	0.5	37.1	-14.1
ICELND REYKJAVIK	0	-3	7	-11	-2	-2.1	73.4	2.3
DENMRK COPENHAGEN	4	1	9	-5	2	2.5	40.9	1.8
LUXEMB LUXEMBOURG	5	0	9	-4	2	0.7	117.7	57.7
SWITZL ZURICH	5	-1	10	-5	2	1.2	50.8	-29.0
GENEVA	7	0	13	-4	3	0.9	82.3	2.2
FRANCE PARIS	9	2	13	-2	5	1.1	61.5	15.7
STRASBOURG	7	1	11	-4	4	2.0	36.5	1.1
BOURGES	9	2	15	-4	5	0.9	73.0	15.1
BORDEAUX	12	5	16	-1	8	1.8	110.2	24.1
TOULOUSE	11	3	18	-2	7	1.3	51.8	-0.4
MARSEILLE	12	3	16	-3	8	0.4	10.5	-44.6
SPAIN VALLADOLID	11	1	17	-5	6	0.7	15.2	-21.3
MADRID	13	2	18	-4	7	0.8	18.9	-31.5
SEVILLE	17	7	22	2	12	0.4	64.2	-18.9
E GRMY LEIPZIG	5	1	10	-3	3	2.4	42.1	10.8
DRESDEN	5	1	13	-6	3	3.5	69.2	33.2
W GRMY HAMBURG	6	1	10	-2	3	2.8	80.7	40.5
BERLIN	6	1	12	-2	3	2.9	73.8	40.7
DUSSELDORF	7	3	11	-1	5	2.7	80.7	27.6
STUTTGART	5	-1	13	-6	2	1.6	58.2	11.4
NURNBERG	5	0	11	-5	2	1.9	59.7	20.0
MUNICH	5	-2	14	-7	1	1.7	65.7	11.2
AUSTRI VIENNA	7	0	14	-5	3	2.8	47.1	17.1
INNSBRUCK	6	-3	12	-9	1	0.9	28.8	-12.0
CZECH PRAGUE	4	-1	13	-8	2	2.8	25.3	4.4
POLAND WARSAW	3	-2	7	-12	1	2.9	33.6	9.0
LODZ	4	-1	11	-7	2	3.3	33.6	2.6
KATOWICE	4	-1	13	-10	2	3.6	59.8	23.7
PRZEMYSL	3	-2	13	-11	1	2.7	32.7	1.0
HUNGAR BUDAPEST	6	1	14	-5	3	2.7	59.4	27.6
YUGOSL SARAJEVO	8	-1	16	-12	3	4.7	54.7	-11.3
ROMANI BUCHAREST	7	-3	14	-16	2	2.6	28.8	-8.6
BULGAR SOFIA	6	-1	13	-8	3	0.9	45.3	7.2
ITALY MILAN	10	1	14	-4	6	2.0	14.5	-52.2
VERONA	10	1	13	-2	6	1.3	48.0	-2.6
VENICE	10	2	15	-1	6	0.9	33.4	-23.9
GENOA	14	7	17	2	10	1.7	35.0	-55.9
ROME	14	5	17	-1	9	0.4	58.2	-11.3
NAPLES	14	5	17	0	9	0.5	80.6	-13.2
GREECE THESSALONIKA	11	3	16	-4	7	0.2	36.1	-1.0
LARISSA	11	1	14	-6	6	-1.0	20.0	-18.1
ATHENS	14	7	18	2	10	-0.8	132.0	96.0
TURKEY ISTANBUL	9	4	14	-3	6	0.9	37.3	-32.7
ANKARA	7	-4	13	-13	2	0.9	37.6	7.6
CYPRUS LARNACA	16	8	19	2	12	0.2	80.7	19.7
USSR TALLINN	-1	-5	3	-15	-3	2.8	42.9	18.1
LENINGRAD	-3	-6	4	-20	-4	3.5	24.9	-6.3
KAUNAS	0	-4	4	-15	-2	2.7	22.5	-8.7
MINSK	-2	-6	3	-18	-4	2.3	48.8	16.9
KAZAN	-8	-13	-3	-26	-11	2.0	25.6	0.9
MOSCOW	-4	-8	1	-24	-6	2.2	61.0	24.9
SVERDLOVSK	-6	-19	1	-24	-13	0.5	9.8	-10.2
OMSK	-15	-24	-5	-34	-20	-1.9	5.7	-5.8
KUSTANAY	-11	-23	-3	-29	-17	-0.6	1.9	-10.7
KRASNOYARSK	-13	-24	-5	-38	-18	-2.5	8.2	-4.4
NOVOSIBIRSK	-15	-22	-7	-35	-19	-0.9	6.2	-9.0
BARNAUL	-15	-22	-4	-36	-18	-2.6	9.3	-12.7
KHABAROVSK	-15	-25	-7	-31	-20	-2.4	9.0	-1.7
VLADIVOSTOK	-8	-15	-1	-21	-11	-0.4	8.6	-11.1
KIEV	-1	-6	6	-17	-3	1.3	18.8	-25.6
LVOV	2	-3	9	-16	-1	2.5	33.7	-12.5
KIROVOGRAD	-1	-5	7	-19	-3	1.5	39.6	9.2

COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)			COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)				
	February 1988		AVG	HI	LO	DPART	TOTAL	DPART		February 1988		AVG	HI	LO	DPART	TOTAL	DPART		
	MAX	MIN	MAX	MIN	AVG	F/NRM				F/NRM	MAX	MIN	AVG	F/NRM	F/NRM				
USSR	ODESSA	2	-3	7	-11	0	0.9	14.8	-26.0	TANZAN	DAR ES SALAAM	33	23	35	14	28	0.4	19.9	-49.2
	YALTA	7	2	12	-3	4	0.3	41.7	-18.2	GABON	LIBREVILLE	31	25	32	23	28	0.7	136.4	-135.5
	VORONEZH	-5	-11	-1	-28	-8	0.9	43.2	13.6	TOGO	LOME	33	25	36	21	29	1.6	14.5	-17.8
	SARATOV	-9	-14	-1	-26	-11	0.2	11.3	-13.7	B FASO	OUAGADOUGOU	36	19	40	13	28	-0.2	0.1	-1.8
	KHARKOV	-3	-8	2	-21	-6	0.5	30.3	-4.3	IVRY C	ABIDJAN	33	26	35	23	30	2.2	24.0	-34.9
	VOLGOGRAD	-7	-13	2	-26	-10	-0.9	25.2	-2.7	MOZAMB	MAPUTO	32	23	35	19	28	1.7	56.0	-84.0
	ROSTOV	-3	-8	3	-21	-5	-1.4	39.9	-25.3	ZAMBIA	KABWE	25	17	27	17	20	-0.8	32.1	-174.0
	ASTRAKHAN	-3	-11	5	-25	-7	-1.7	15.1	5.5	ZIMBAB	HARARE	26	17	28	14	21	1.1	106.4	-51.3
	KRASNODAR	3	-6	9	-17	-2	-1.5	30.4	-24.1	S AFRI	PRETORIA	29	19	35	16	24	2.6	42.2	-43.5
	ORENBURG	-10	-19	-3	-32	-15	-0.9	2.0	-20.6		KROONSTAD	29	17	36	14	23	0.9	90.0	9.0
	TSELINOGRAD	-13	-24	-4	-33	-18	-1.3	10.1	3.8		JOHANNESBURG	26	16	32	13	21	2.0	72.4	-24.0
	KARAGANDA	-12	-22	-4	-32	-17	-2.8	8.1	-9.1		BETHAL	26	15	32	12	20	1.0	22.3	-76.8
	TBILISI	6	-2	17	-8	2	-1.3	36.1	13.1		DURBAN	28	23	33	17	26	1.5	102.4	-7.0
	TASHKENT	8	-1	16	-8	4	1.5	11.3	-40.1		CAPE TOWN	27	17	37	11	22	1.9	0.1	-16.7
	ASHKHABAD	7	-2	21	-12	3	-1.5	33.3	6.0	CANADA	TORONTO	-2	-12	9	-19	-7	-1.0	64.8	18.9
SYRIA	DAMASCUS	12	3	20	-3	7	-1.1	26.2	-6.2		MONTREAL	-3	-13	11	-26	-8	1.0	74.7	9.4
ISRAEL	JERUSALEM	12	5	22	0	9	-1.5	183.8	66.0		WINNIPEG	-10	-21	6	-31	-16	-0.4	11.1	-6.3
PAKIST	KARACHI	29	16	32	10	22	1.9	0.1	-8.5		REGINA	-6	-20	11	-38	-13	0.7	10.0	-6.1
INDIA	AMRITSAR	24	6	27	0	15	0.3	19.2	-2.6		SASKATOON	-7	-20	7	-38	-14	1.0	9.7	-6.2
	NEW DELHI	26	12	29	8	19	1.6	20.0	5.3		LEATHERIDGE	4	-11	19	-31	-3	1.8	10.4	-8.6
	AHMEDABAD	32	18	35	7	25	2.4	0.1	-0.9		CALGARY	3	-11	18	-30	-4	3.0	4.1	-11.4
	INDORE	32	13	38	11	23	2.1	0.1	-1.6		EDMONTON	-2	-13	14	-29	-8	1.8	17.4	-1.5
	CALCUTTA	30	17	33	12	24	0.8	41.0	29.1		VANCOUVER	9	3	14	-8	6	1.0	67.5	-47.2
	VERAVAL	30	18	36	14	24	1.6	0.1	-1.4	MEXICO	GUADALAJARA	28	8	33	3	18	1.2	0.1	-6.7
	BOMBAY	31	19	35	15	25	0.9	0.1	-0.8		MEXICO CITY	24	9	29	4	16	2.5	21.7	15.6
	POONA	33	13	35	9	23	0.5	0.1	0.1		ACAPULCO	33	22	36	19	28	1.2	0.1	0.1
	BEGAMPET	33	20	36	15	26	1.8	68.1	63.2		BERMUD ST. GEORGES	20	16	23	10	18	0.6	96.5	-10.9
	MADRAS	31	22	33	18	27	0.9	0.1	-3.6		BAHAMA NASSAU	26	19	32	12	22	1.3	5.1	-36.2
	MANGALORE	34	23	36	20	28	1.2	0.1	-1.9		CUBA HAVANA	25	19	31	14	22	0.0	58.2	5.9
H KONG	HONG KONG	18	15	24	10	17	0.7	12.3	-29.5		JAMAIC KINGSTON	32	23	33	16	27	1.4	2.1	-18.2
N KREA	PYONGYANG	0	-11	8	-20	-5	-0.2	16.0	5.1		P RICO SAN JUAN	29	21	31	19	25	0.1	58.9	3.9
S KREA	SEOUL	3	-5	12	-13	-1	1.0	5.3	-15.8		GUADEL RAIZET	29	21	31	18	25	0.9	22.6	-26.1
JAPAN	SAPPORO	-2	-8	4	-14	-5	-1.2	112.0	20.0		MARTINQ LAMENTIN	29	23	30	18	26	2.1	58.3	-29.6
	NAGOYA	8	0	12	-4	4	-0.3	44.0	-17.5		BARBAD BRIDGETOWN	29	24	30	21	26	0.7	33.9	-13.9
	TOKYO	9	2	20	-2	5	-0.2	19.0	-44.5		TRINID PORT OF SPAIN	32	22	33	18	27	1.8	13.2	-34.5
	YOKOHAMA	9	2	19	-3	5	-0.1	18.9	-52.9		COLOMB BOGOTA	20	7	22	1	13	0.5	39.6	1.8
	KYOTO	8	2	13	-2	5	1.2	26.8	-38.7		VENEZU CARACAS	29	22	30	20	26	1.0	4.8	-24.9
	OSAKA	9	2	15	-1	6	0.0	28.0	-31.6		F GUIA CAYENNE	**	24	***	23	**	***	38.0	-329.6
THAILN	PHETCHABUN	35	22	38	16	28	2.4	6.4	-19.3		BRAZIL FORTALEZA	30	24	31	22	27	0.1	160.6	-64.2
	BANGKOK	33	25	36	21	29	1.0	97.9	72.6		RECIFE	31	24	36	21	28	0.7	71.1	-35.5
MALAYS	KUALA LUMPUR	32	23	35	21	28	1.4	298.4	141.2		BELO HORIZONTE	29	20	34	17	24	1.3	297.0	80.6
VIETNM	HANOI	19	18	26	12	19	2.2	39.2	11.3		CAMPO GRANDE	29	20	32	17	25	0.4	156.8	-42.1
CHINA	HARBIN	-10	-22	-2	-29	-16	-0.6	4.5	-0.4		FRANCA	27	18	29	16	22	0.9	301.0	81.0
	HAMI	-2	-13	5	-22	-7	-2.0	10.3	10.3		RIO DE JANEIRO	30	24	33	22	27	0.3	406.8	255.7
	LANCHOW	4	-7	13	-14	-2	0.7	4.6	2.3		LONDRINA	28	19	31	16	24	-0.4	121.0	-77.1
	BEIJING	4	-6	10	-13	-1	0.8	1.1	-6.3		SANTA MARIA	29	18	36	12	24	-0.7	88.0	-53.0
	TIENTSIN	4	-5	9	-11	-1	0.6	1.3	-4.8		PERU LIMA	28	20	33	19	24	1.7	1.7	1.7
	LHASA	11	-5	15	-10	3	1.5	0.1	-3.3		BOLIVI LA PAZ	15	3	20	-1	9	0.1	61.3	-42.9
	KUNMING	19	4	22	1	12	2.4	19.0	7.7		CHILE SANTIAGO	30	12	34	10	21	1.3	0.1	0.1
	CHENGCHOW	7	-3	21	-8	2	-0.2	8.5	-4.0		ARGENT IGUAZU	29	19	34	8	24	***	151.0	****
	YEHCHANG	8	3	22	-1	6	-1.0	52.6	24.5		FORMOSA	32	20	39	15	26	-1.1	77.0	-59.0
	HANKOW	8	1	19	-4	5	-0.2	96.0	36.8		CERES	31	18	35	11	24	-0.7	12.6	-91.4
	CHIHKIANG	8	3	21	-3	6	-0.6	61.2	12.5		CORDOBA	28	16	32	10	22	-0.3	151.7	41.1
	SHANGHAI	8	2	17	-5	5	0.6	82.7	20.0		RIO CUARTO	28	17	34	11	22	0.3	151.1	65.3
	NANCHANG	7	3	18	-1	5	-1.2	190.0	94.8		ROSARIO	29	17	33	11	23	-0.1	75.5	-32.6
	TAIPEI	19	15	25	11	17	1.9	83.5	-52.4		BUENOS AIRES	28	17	33	10	22	0.1	46.4	-51.3
	CANTON	17	12	28	5	14	0.6	33.1	-20.8		SANIA ROSA	30	16	40	9	23	0.5	33.6	-38.5
	NANNING	14	11	27	4	12	-1.2	65.9	29.4		TRES ARROYOS	27	15	34	6	21	0.5	49.0	-14.5
CNRY I	LAS PALMAS	20	15	26	12	18	0.4	52.7	30.7		MIDW I MIDWAY ISLAND	22	17	24	13	19	0.5	207.1	96.5
MOROCC	CASABLANCA	18	10	27	4	14	0.4	63.4	3.1		N CALD NOUMEA	29	23	32	22	26	0.3	148.8	40.9
	MARRAKECH	18	9	25	4	13	0.2	45.7	9.9		FLJI NAUSORI	31	25	33	23	28	1.4	384.9	54.2
ALGERI	ALGER	17	6	25	-2	11	0.1	42.7	-44.8		SAMOA PAGO PAGO	31	25	32	24	28	1.1	228.8	-93.2
	BATNA	12	1	19	-4	7	0.7	4.8	-25.2		TAHITI PAPEETE	31	24	33	22	28	0.9	205.5	-19.7
TUNISI	TUNIS	17	7	22	3	12	0.7	27.5	-30.1		N ZEAL AUCKLAND	24	17	27	15	21	0.7	95.5	2.9
NIGER	NIAMEY	35	20	41	15	28	0.4	0.1	0.1		WELLINGTON	21	14	29	6	17	0.8	77.0	3.8
MALI	TIMBUKTU	32	17	39	8	24	-0.1	0.1	0.1		PA N G PORT MORESBY	30	25	34	22	27	-0.1	82.9	-124.1
	BAMAKO	35	23	40	16	29	0.9	0.1	0.1		AUSTRL DARWIN	32	27	33	24	29	1.1	258.4	-103.8
MAURIT	NOUAKCHOTT	29	18	37	13	24	1.0	17.0	15.1		MOREE	29	19	34	14	24	-1.9	53.6	-16.0
SENEGL	DAKAR	24	16	31	15	20	-0.7	11.4	10.1		BRISBANE	27	20	30	18	24	-1.3	104.8	-70.7



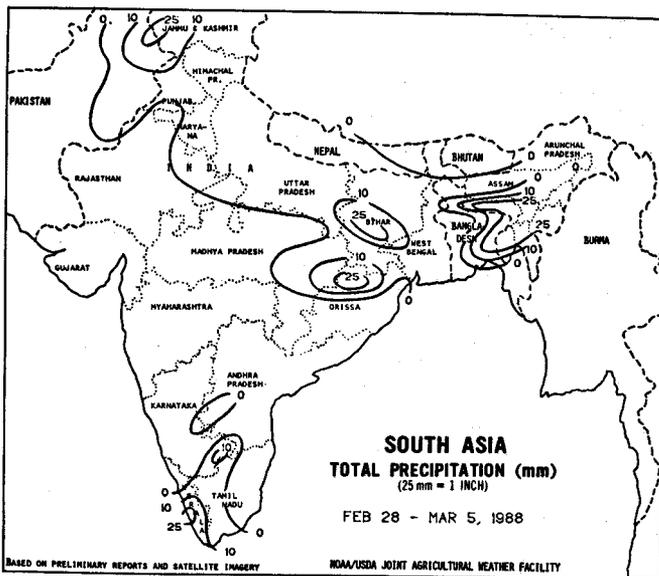
WESTERN U.S.S.R ... Two storm systems moved eastward across the region, spreading widespread precipitation over major winter wheat producing areas of the Ukraine, North Caucasus, and the lower Volga. Precipitation amounts, mostly in the form of snow, ranged from 12 to 30mm, with localized areas along the Black Sea receiving precipitation amounts greater than 30mm. Mixed rain and snow covered the southern Ukraine and the western North Caucasus. Weekly average temperatures were near normal in the west and 2-4 degrees C above normal in the east. By week's end, maximum temperatures in the southern Ukraine and the southern half of the North Caucasus ranged from 5 to 8 degrees Celcius (C), melting much of the snow cover. Usually, snow cover begins to retreat northward during March in the major winter wheat areas.

EUROPE ... Cold weather covered Europe, with below normal average weekly temperatures over all of the continent except for the northeast. Subfreezing minimum temperatures during the week extended as far south as interior sections of southern Spain and Italy. The cold weather slowed growth of vegetative winter grains throughout southern growing areas. Widespread rain and snow (generally less than 20mm) covered northern Europe, with scattered heavy amounts (up to 96mm) keeping soils unfavorably wet in the Low Countries and western West Germany. An active storm track through southeastern Europe brought much needed light to moderate precipitation from southern Italy eastward to the Balkans, improving soil moisture levels for the second straight week.

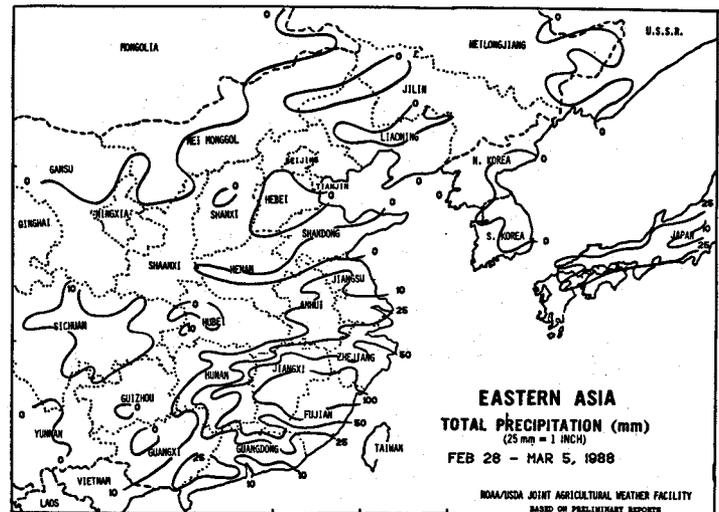


NORTHWESTERN AFRICA ... Soaking rain covered Morocco, benefiting winter grains approaching the heading stage. Rainfall ranged from 20 to 50mm, with greatest amounts of precipitation covering southern crop areas. In Algeria and Tunisia, northernmost winter grain areas near the Mediterranean coast continued to receive light, beneficial showers (10-16mm). Major winter grain areas further inland remained adversely dry. Scattered frost occurred over southernmost winter grain areas in Algeria on February 28 and 29, when minimum temperatures dropped to around -3 degrees C. The frost may have caused localized damage to winter grains approaching the highly weather sensitive reproductive phase of development.

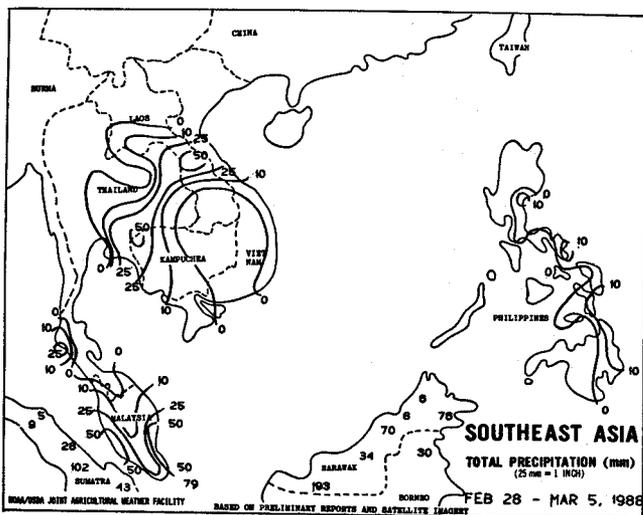
SOUTH AFRICA ... Moderate to heavy rain (18-50mm or more) benefited reproductive to filling corn over primary corn regions of the central and eastern Maize Triangle and to the north over central Transvaal. The rainfall in the eastern Triangle and Transvaal eased temperatures and improved soil conditions following a drying trend, which had persisted since late January. Drier weather (13-19mm) returned to flooded regions of the western Maize Triangle, but heavy rain (50-149mm) lingered over minor corn regions of the southern Maize Triangle and Natal, causing local crop damage and worsening flood conditions for the third week.



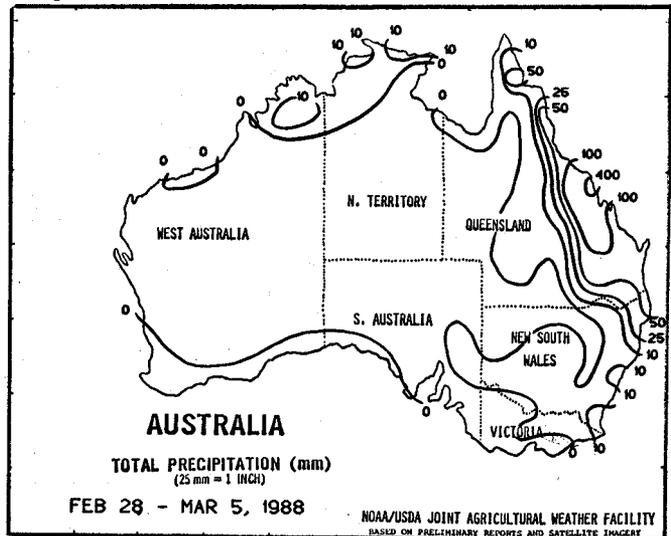
SOUTH ASIA ... Generally light rain (less than 10mm) covered filling wheat across northern India, with pockets of heavier rain over northern Bihar and northern Pakistan. Most central wheat regions remained dry. Light to moderate rain (3-36mm) continued from northern Orissa eastward and developed over the tip of southern India, benefiting rice in the jointing to heading stages of development.



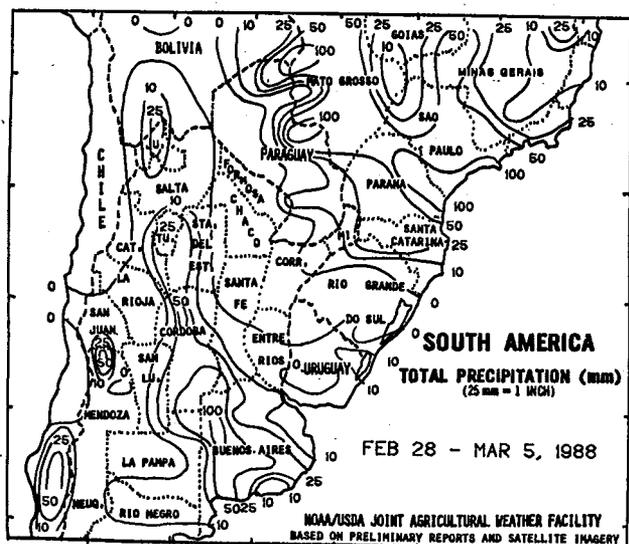
EASTERN ASIA ... Moderate to heavy rain (greater than 25mm) continued over southeastern China, causing further delays in early rice planting. Very heavy rain (up to 157mm) fell in Jiangxi, Fujian, and Zhejiang for the second straight week, likely causing flooding in some areas. Colder weather covered much of China, with weekly average temperatures more than 5.0 degrees C below normal over the southern winter grains growing areas. Scattered, light, freezing precipitation (generally less than 10mm) covered winter grain growing areas as far south as the Yangtze River Valley. The cold weather also slowed growth of winter grains, which have become vegetative across southern crop areas.



SOUTHEAST ASIA ... Widespread, moderate to heavy showers (25-100mm or more) covered most crop regions of Malaysia and western Indonesia, including chronically dry rice regions of southern Java where rainfall averaged over 50mm. However, minimal rainfall persisted over southern Indonesia east of Java. Dry weather covered crop regions of peninsular Thailand, but unseasonable rain (10-50mm or more) fell to the north from central Thailand and Kampuchea northward. Rainfall diminished over the Philippines, where most regions were dry except for east coastal crop areas which received only light rain (1-16mm).

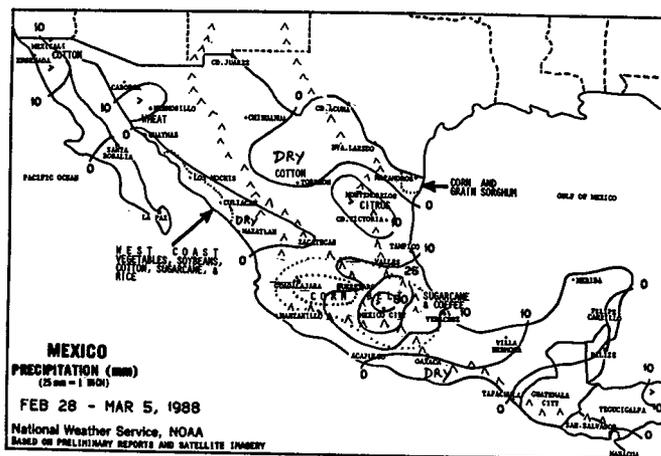


AUSTRALIA ... Very heavy rain (up to 495mm) continued over eastern Queensland early in the week due to the remnants of Tropical Cyclone Charlie. While winds with the storm reportedly caused localized damage to sugarcane in central sugarcane growing areas, widespread heavy rainfall during the storm brought relief to much of the vegetative crop after several consecutive weeks of persistent dryness. Rainfall with the storm also extended into northern summer crop areas, favoring previously dry crops, but causing some delays in sorghum harvesting. Elsewhere, scattered light rain (less than 10mm) fell over southern areas, while interior wheat production areas remained dry. Temperatures in most growing areas remained near normal with the exception of New South Wales, which continued warmer than normal.



SOUTH AMERICA ... Substantial rain covered much of Brazil's northern soybean areas, producing widespread rainfall of 25-70mm and locally inundative amounts of 70-130mm. Saturated field conditions may delay early soybean harvesting in northern Parana, Mato Grosso do Sul, and Sao Paulo. The rain benefited late developing crops, but with sufficient soil moisture available, drier weather will be needed for crop maturation. In contrast, dry weather prevailed over Rio Grande do Sul, favoring the maturing early planted crop. Maximum temperatures, averaging in the low to middle thirties (C), reduced moisture for the late planted crop, however. In Argentina, widespread heavy showers (25-110mm) covered western Buenos Aires, Cordoba, and extreme southwestern Santa Fe. Rainfall diminished further east, but most of northeastern Buenos Aires received 10-25mm of rain. The rain delayed early crop harvesting in the west, but benefited late soybean development. Maximum temperatures persistently averaged in the low to middle thirties (C) throughout the week. Dry weather prevailed in northern cotton areas.

SPECIAL MEXICO WEATHER SUMMARY



Early season March rains fell over the Northwest (3-20 mm) and over the eastern Corn Belt (11-64 mm). The rains will be beneficial for the upcoming spring planting. Early corn planting normally begins in March.

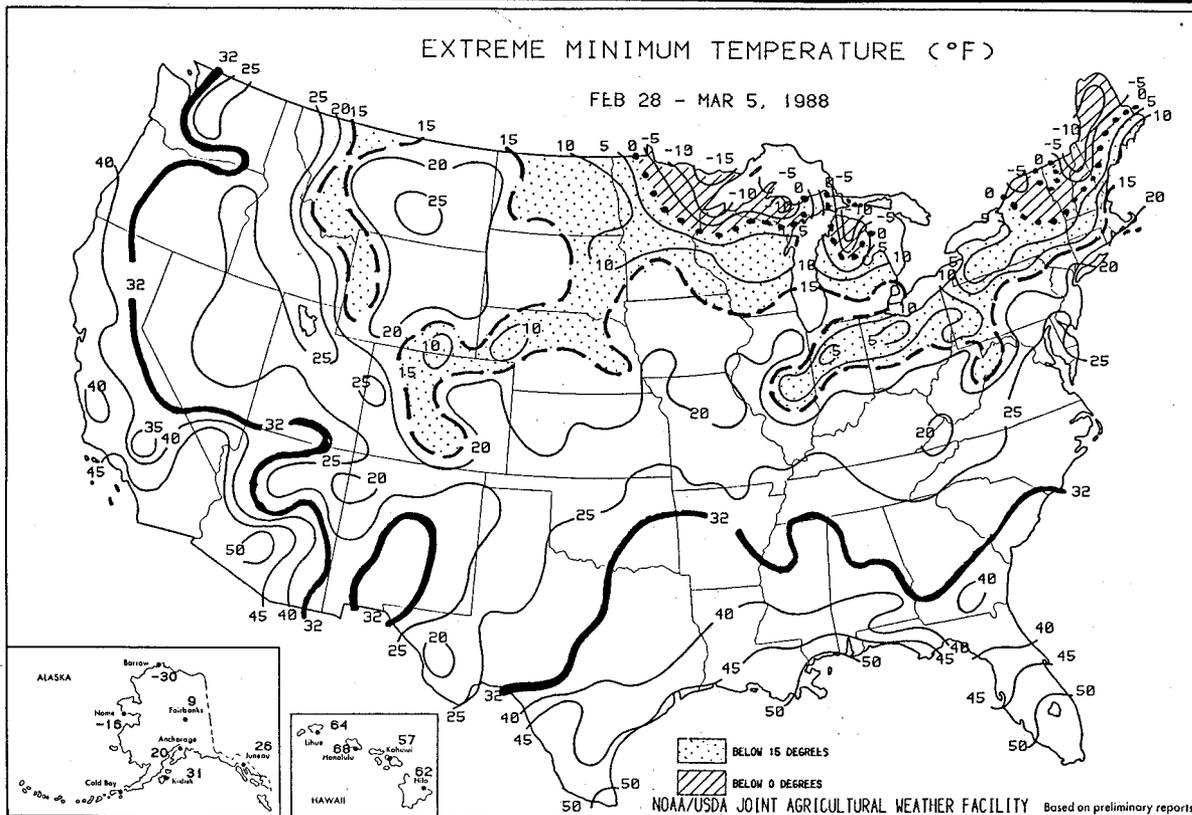
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