

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

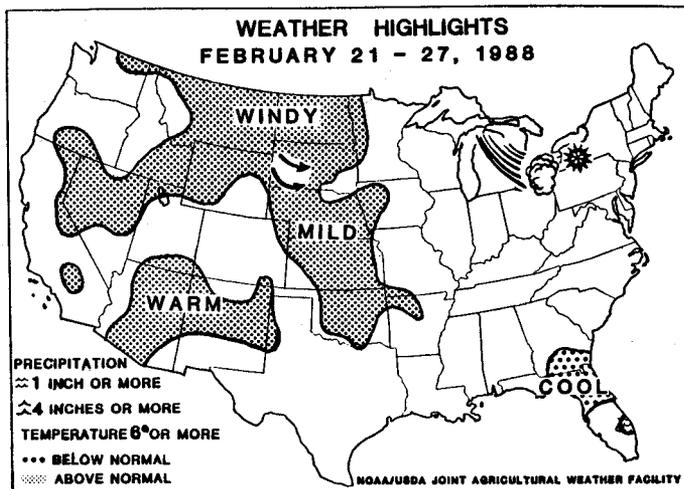
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National Weather Summary

February 21 - 27, 1988



HIGHLIGHTS: 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.

SUNDAY...High winds swept into the northern and central Great Plains. Winds gusted to over 70 miles per hour in eastern Montana, causing widespread damage. Strong winds in the Great Lakes region continued to usher cold arctic air into the Northern United States. Lake-effect snow showers occurred in western New York. Temperatures were mostly above normal west of the Mississippi River and below normal in the East.

MONDAY...Strong winds blew across much of the Nation, most notably the Great Plains, the Ohio Valley, and the Great Lakes. Temperatures remained above normal in the West. Cold air continued to invade the northern Plains and the East.

TUESDAY...Snow fell in Michigan, and snow showers were scattered on the lee side of the Great Lakes. Rains were scattered along a cold front stretching

from New England through the central Appalachians into the lower Mississippi Valley. The far West remained relatively warm, but colder air settled into the Plains and the Mississippi Valley.

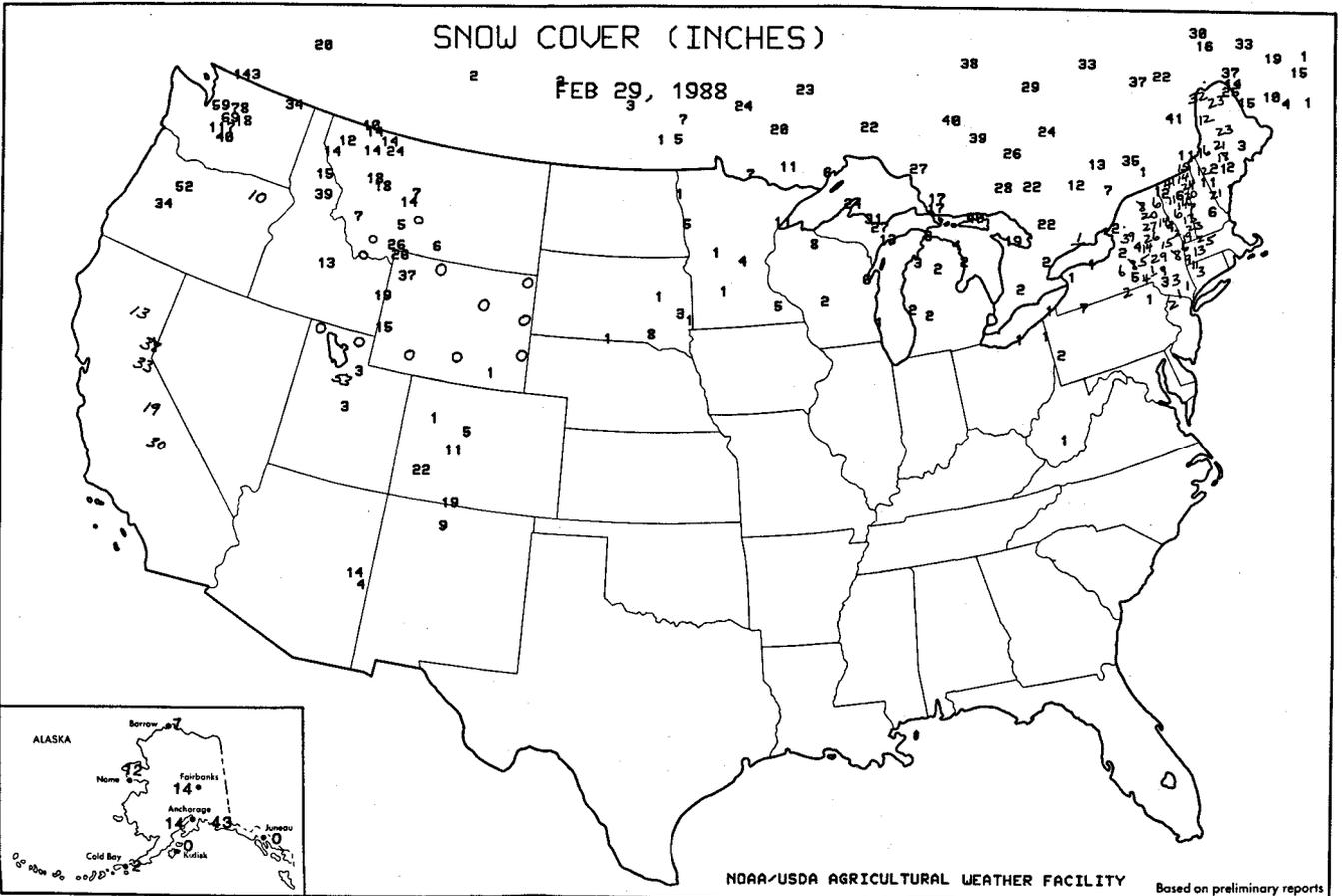
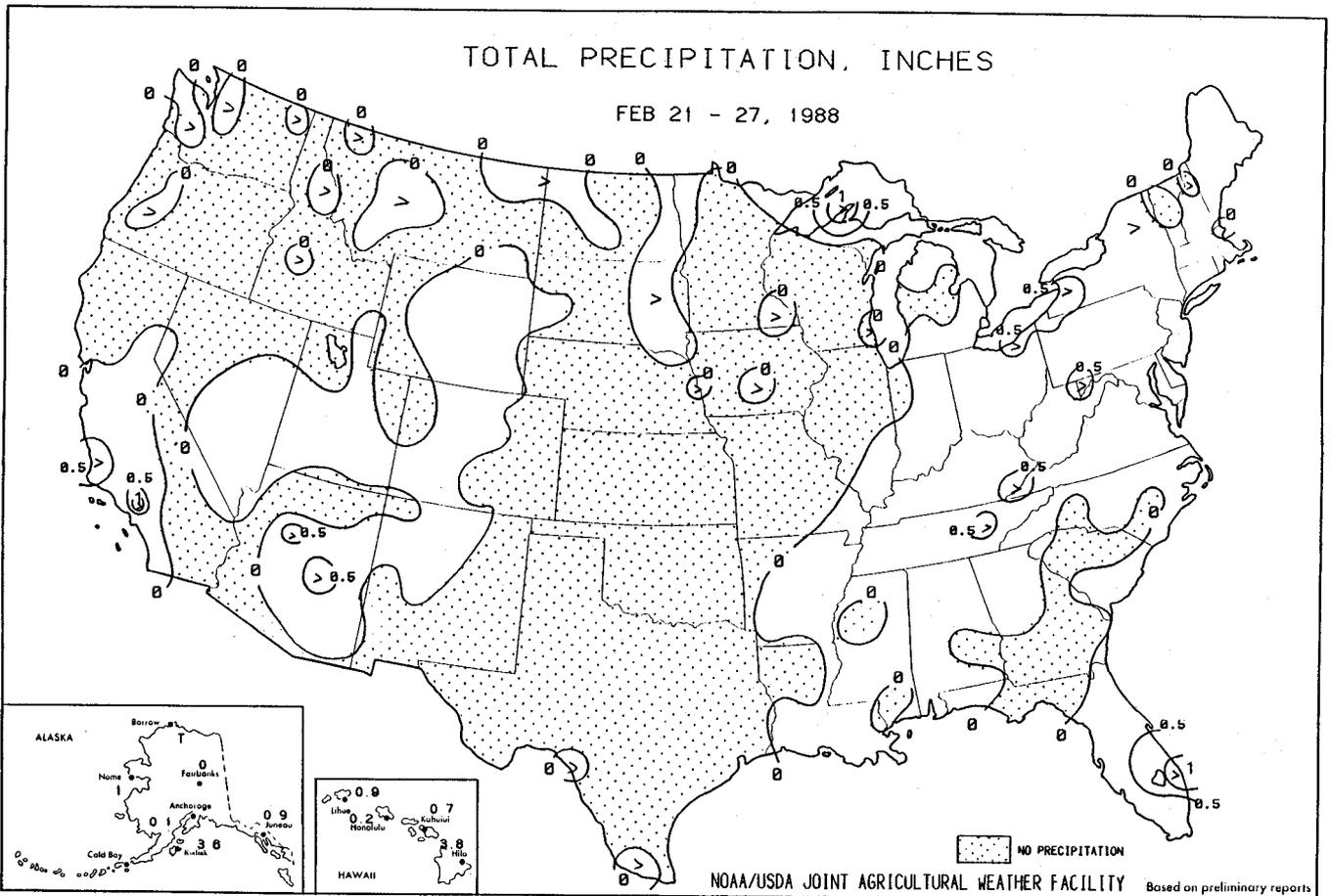
WEDNESDAY...Lake-effect snow continued to fall in lower Michigan, northern Ohio, northwestern Pennsylvania, and western New York. Most of the Nation's remaining snow cover was over the upper Mississippi Valley and the Great Lakes region, and the lowest temperatures occurred in these regions. Temperatures were again above normal in much of the West, particularly in the desert Southwest.

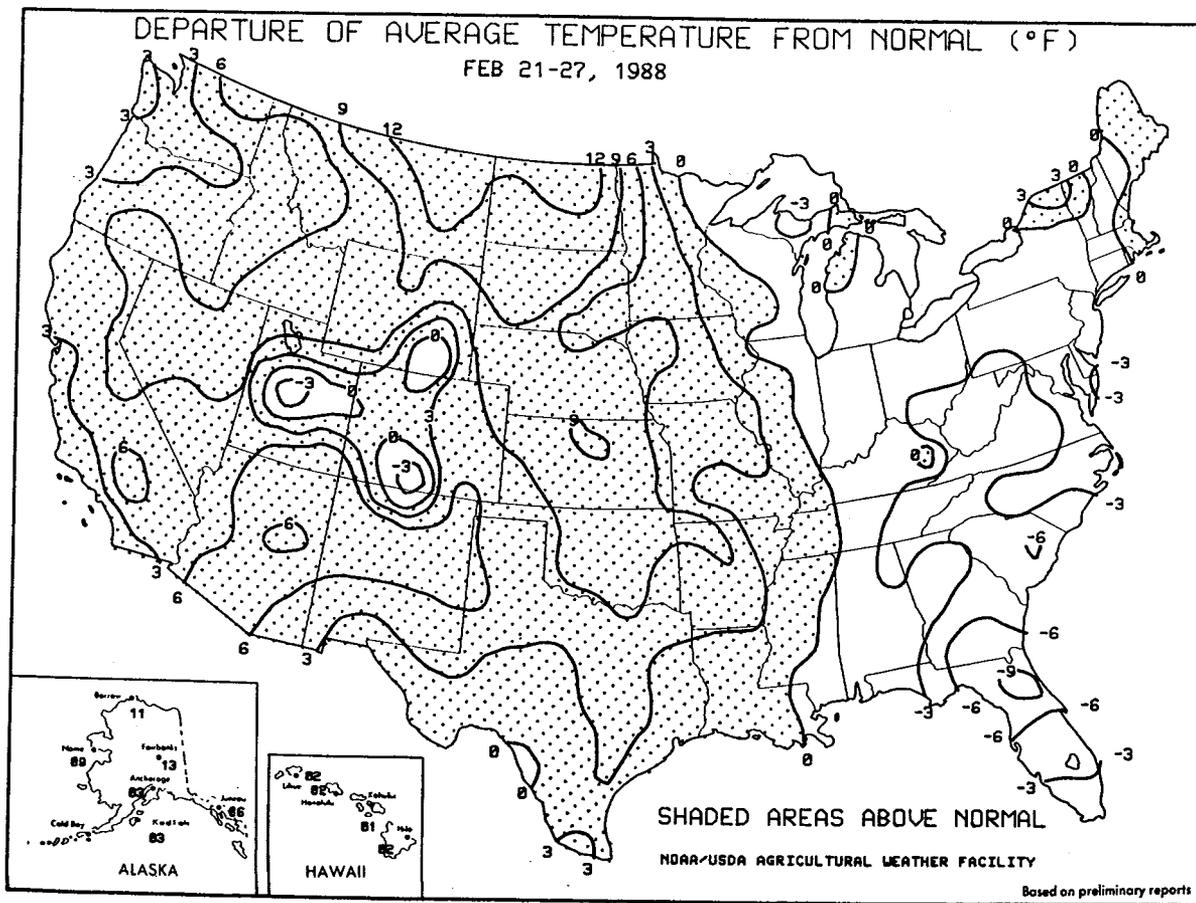
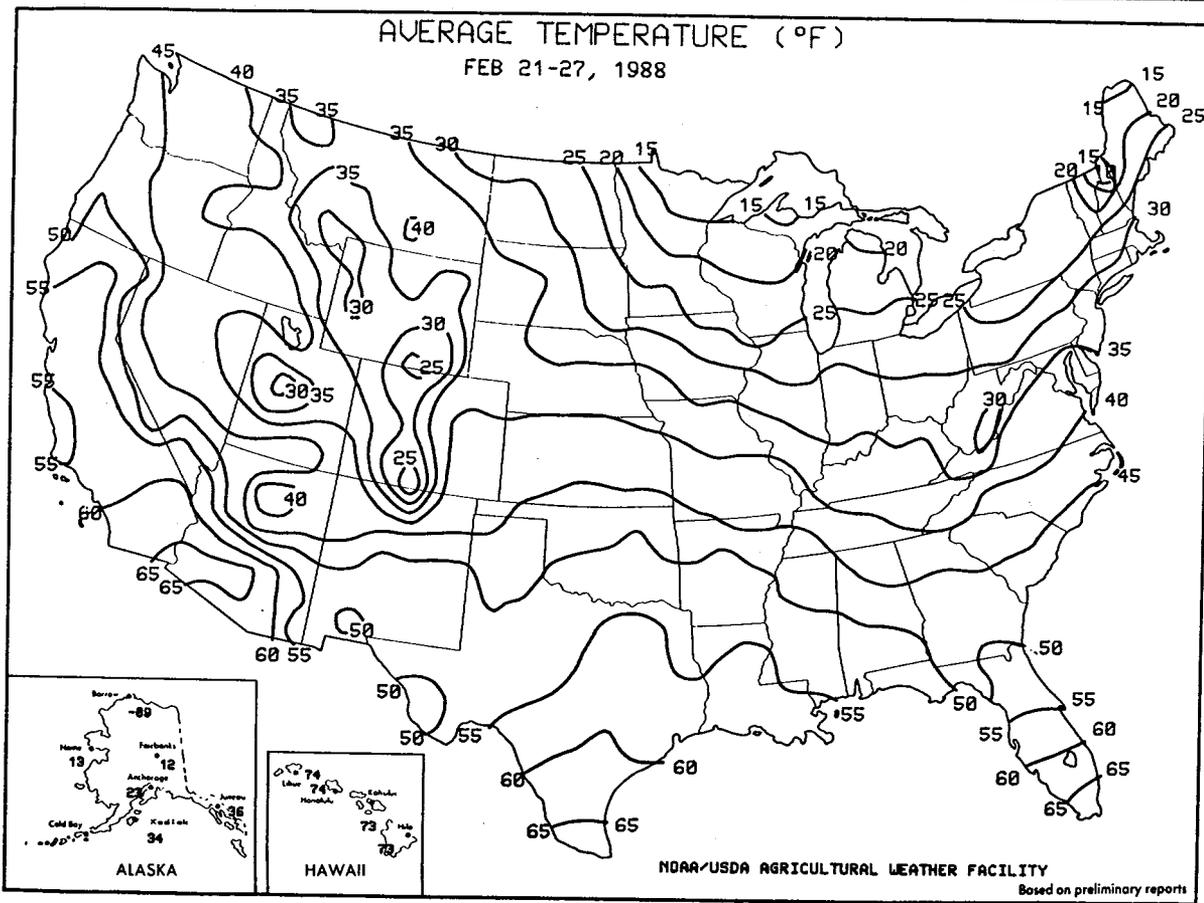
THURSDAY...A huge high-pressure system brought dry and warmer-than-normal weather to all the Nation except the East. Scattered snow showers in the Northeast accompanied cold northwesterly winds.

FRIDAY...The eastern third of the Nation remained relatively cold, while warm weather continued west of the Mississippi River. Rain showers were widely scattered near the border between southern California and central Arizona. Snow showers occurred again in areas affected by windflow over the Great Lakes in Pennsylvania, New York, and Ohio. Afternoon temperatures were only in the twenties in New England and New York.

SATURDAY...Rain showers and thunderstorms were scattered across the South and the desert Southwest, and snow showers were scattered across the Northeast. Southern California experienced strong, gusty winds. Above-normal temperatures persisted west of the Mississippi River.

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National Weather Data for Selected Cities

Weather Data for the Week Ending February 27, 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	90 AND ABOVE	32 AND BELOW	PRECIPITATION	
																		.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	61	30	73	25	46	-3	.1	-1.2	.1	10.8	74	7.8	80	89	33	0	5	1	0
MOBILE	67	40	72	31	54	-2	.1	-1.3	.1	14.4	98	10.8	116	96	34	0	1	2	0
MONTGOMERY	66	35	73	28	50	-1	T	-1.2	T	15.7	119	11.4	135	90	28	0	3	0	0
AK ANCHORAGE	30	16	40	-5	23	3	.1	-1.1	.1	1.8	68	.7	45	91	58	0	7	1	0
BARROW	0	-18	20	-42	-9	11	T	0	T	.2	47	T	11	84	71	0	7	2	0
FAIRBANKS	25	-1	42	-31	12	13	T	-1.1	T	1.0	57	.5	47	87	50	0	7	0	1
JUNEAU	40	32	46	26	36	6	.9	0	.9	14.1	118	8.8	121	96	64	0	4	0	1
KODIAK	39	29	42	7	34	3	3.6	2.4	1.6	18.4	114	16.1	151	95	66	0	2	7	2
NOME	20	5	36	-17	13	3	1.0	.9	.4	2.9	153	1.7	135	92	69	0	7	6	0
AZ PHOENIX	81	53	85	47	67	9	T	-1.1	T	2.8	133	1.1	90	56	17	0	0	0	0
PRESCOTT	65	31	68	24	48	8	T	-1.4	T	2.5	51	1.8	56	69	24	0	5	0	0
TUCSON	79	47	83	40	63	8	T	-1.2	T	2.5	109	1.0	74	55	16	0	0	1	0
YUMA	81	53	85	49	67	6	T	-1.1	T	1.0	108	.4	63	52	16	0	0	0	0
AR FORT SMITH	68	31	79	23	49	5	0	-1.7	0	11.8	168	3.7	88	91	24	0	5	0	0
LITTLE ROCK	66	39	75	32	52	6	.1	-1.9	.1	19.9	169	6.2	82	58	35	0	1	1	0
CA BAKERSFIELD	76	44	79	38	60	5	.1	-1.2	.1	1.8	67	.9	47	79	29	0	0	1	0
EUREKA	57	46	67	43	52	3	0	-1.2	0	18.2	100	7.2	60	89	76	0	0	0	0
FRESNO	74	42	80	35	58	6	T	-1.4	T	2.8	51	1.6	41	91	34	0	0	1	0
LOS ANGELES	69	51	79	47	60	3	.1	-1.4	.1	4.3	62	2.6	47	94	52	0	0	1	0
REDDING	75	39	80	33	57	4	0	-1.4	0	16.3	76	7.3	50	88	26	0	0	0	0
SACRAMENTO	72	43	76	38	58	6	T	-1.6	T	5.8	60	2.6	39	93	41	0	0	0	0
SAN DIEGO	69	53	73	49	61	3	T	-1.4	T	4.9	89	2.2	60	89	46	0	0	1	0
SAN FRANCISCO	62	48	72	44	55	3	.1	-1.6	.1	8.5	75	4.0	51	93	62	0	0	1	0
CO DENVER	56	25	67	20	40	5	T	-1.2	T	2.3	139	1.0	89	87	27	0	7	1	0
GRAND JUNCTION	51	23	54	16	37	0	0	-1.1	0	2.1	123	1.3	112	85	33	0	7	0	0
PUEBLO	60	22	70	16	41	4	0	-1.1	0	1.2	147	.7	152	86	21	0	7	0	0
CT BRIDGEPORT	39	25	55	20	32	-1	.1	-1.7	0	8.0	81	5.9	97	74	43	0	6	2	0
HARTFORD	39	18	51	12	29	-1	T	-1.8	T	8.9	83	7.4	112	77	38	0	6	1	0
DC WASHINGTON	47	28	66	21	37	-2	.1	-1.6	-1	8.2	98	5.7	108	76	32	0	6	2	0
FL APALACHICOLA	65	41	69	36	53	-3	0	-1.9	0	12.3	116	11.3	161	97	38	0	0	0	0
DAYTONA BEACH	65	39	73	32	52	-8	.4	-1.5	.4	7.3	97	7.1	132	95	37	0	1	1	0
JACKSONVILLE	64	37	75	33	50	-7	.2	-1.8	.2	12.5	141	12.3	193	93	31	0	0	1	0
KEY WEST	73	61	80	53	67	-4	.1	-1.4	.1	8.0	149	5.2	144	86	58	0	0	1	0
MIAMI	75	57	82	49	66	-3	.2	-1.3	.2	6.8	116	2.5	62	85	49	0	0	1	0
ORLANDO	69	45	77	37	57	-5	.3	-1.6	.3	5.3	76	4.8	94	89	35	0	0	2	0
TALLAHASSEE	66	29	74	26	48	-8	0	-1.3	0	11.6	83	10.6	113	94	27	0	6	0	0
TAMPA	69	44	76	37	57	-5	.3	-1.5	.3	4.7	65	4.2	83	92	35	0	0	1	0
WEST PALM BEACH	73	54	79	47	64	-3	1.6	.9	.7	7.9	106	6.4	123	90	51	0	0	3	2
GA ATLANTA	59	34	71	27	47	0	T	-1.2	T	12.1	91	8.0	87	68	25	0	4	1	0
AUGUSTA	62	27	76	22	45	-5	T	-1.0	T	8.4	76	7.0	89	86	21	0	7	1	0
MACON	62	31	73	24	47	-4	T	-1.1	T	9.8	78	7.9	92	85	25	0	4	1	0
SAVANNAH	62	35	74	30	48	-5	T	-1.8	T	8.9	100	7.5	122	78	22	0	3	0	0
HI HILO	80	67	84	63	73	2	3.8	.3	2.6	41.3	117	19.1	85	94	67	0	0	4	3
HONOLULU	62	68	83	65	75	2	.2	-1.5	.1	20.7	212	3.4	54	91	59	0	0	3	0
KAHULUI	81	64	83	59	73	1	.7	0	.4	14.0	146	8.5	123	91	55	0	0	3	0
LIHUE	79	68	84	65	74	2	.9	.1	.9	22.2	146	11.3	116	92	65	0	0	2	1
ID BOISE	58	29	62	23	44	6	0	-1.2	0	2.6	67	1.6	60	75	27	0	7	0	0
LEWISTON	58	32	64	25	45	4	0	-1.2	0	1.8	52	1.0	45	69	29	0	4	0	0
POCATELLO	53	22	61	18	37	6	0	-1.2	0	2.4	85	1.2	63	91	30	0	7	0	0
IL CHICAGO	38	18	58	1	28	0	0	-1.4	T	7.0	138	3.2	119	77	46	0	7	0	0
MOLINE	39	21	56	6	30	1	T	-1.4	T	7.3	154	2.8	100	77	46	0	7	0	0
PEORIA	42	20	60	6	31	1	T	-1.4	T	6.9	138	2.7	92	82	41	0	7	0	0
QUINCY	46	24	62	16	35	4	0	-1.5	0	5.4	121	1.6	59	73	39	0	7	0	0
ROCKFORD	35	16	50	-1	26	-1	T	-1.4	T	7.0	159	2.9	118	81	48	0	6	0	0
SPRINGFIELD	44	24	62	13	34	2	T	-1.5	T	8.6	163	3.6	114	79	43	0	7	0	0
IN EVANSVILLE	47	25	69	18	36	3	T	-1.8	T	12.9	138	7.2	122	86	39	0	6	2	0
FORT WAYNE	38	19	55	3	28	-1	.1	-1.5	.1	7.1	111	3.6	92	83	49	0	7	1	0
INDIANAPOLIS	41	22	63	8	32	-1	T	-1.6	T	10.2	128	5.4	108	79	44	0	7	1	0
SOUTH BEND	37	18	52	2	27	-2	.1	-1.5	0	8.4	116	4.3	99	84	48	0	7	3	0
IA DES MOINES	45	21	65	13	33	5	T	-1.3	T	3.6	116	1.0	48	81	35	0	7	2	0
SIOUX CITY	46	20	56	13	33	7	T	-1.3	T	1.6	73	1.2	77	85	37	0	7	0	0
WATERLOO	37	17	50	4	27	3	0	-1.3	0	2.9	104	1.1	66	82	52	0	7	0	0
KS CONCORDIA	55	28	69	20	41	7	0	-1.3	0	2.1	101	1.3	95	75	27	0	6	0	0
DODGE CITY	61	27	73	18	44	7	0	-1.2	0	1.7	122	1.0	111	72	21	0	5	0	0
GOODLAND	56	25	67	18	40	7	T	-1.1	T	2.3	212	1.8	261	82	24	0	6	0	0
TOPEKA	55	28	73	22	42	6	T	-1.3	T	4.1	131	2.3	119	83	31	0	6	0	0
WICHITA	59	28	72	19	44	6	0	-1.3	0	2.9	121	.7	47	80	26	0	6	0	0
KY BOWLING GREEN	52	25	69	19	39	-1	.1	-1.0	.1	14.2	110	7.2	85	81	34	0	6	1	0
LEXINGTON	47	22	67	14	34	-2	.2	-1.7	.2	12.2	116	6.0	90	72	35	0	7	1	0
LOUISVILLE	48	25	69	17	37	-2	.1	-1.8	.1	12.1	123	7.4	116	76	34	0	6	1	0
LA ALEXANDRIA	70	44	74	36	57	2	T	-1.2	T	12.9	93	5.1	57	78	39	0	6	0	0
BATON ROUGE	70	42	76	35	56	0	.3	-1.9	.3	19.7	137	15.8	169	89	31	0	0	1	0
LAKE CHARLES	69	45	75	38	57	1	.1	-1.6	.1	13.1	102	6.2	105	94	45	0	0	1	0
NEW ORLEANS	68	45	74	37	56	0	0	-1.3	0	17.5	115	14.6	147	93	39	0	0	0	0

Based on 1951-80 normals.

Weather Data for the Week Ending February 27, 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 °F			
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	70	40	78	32	55	3	F	F	13.8	123	5.7	77	86	30	0	1	0	0	
ME CARIBOU	30	3	37	-9	17	1	F	F	7.9	105	5.4	123	95	53	0	0	1	0	
PORTLAND	37	16	48	10	27	1	F	F	7.3	62	5.3	73	84	38	0	6	1	0	
MD BALTIMORE	45	25	64	17	35	2	F	F	8.5	93	6.5	111	78	31	0	6	2	0	
SALISBURY	47	24	64	16	36	3	F	F	11.3	110	8.1	123	86	34	0	6	2	0	
MA BOSTON	41	24	59	16	33	1	F	F	8.2	68	6.1	81	68	35	0	6	0	0	
CHATHAM	39	25	47	17	32	0	F	F	12.2	92	8.0	96	83	53	0	6	2	0	
MI ALPENA	28	8	43	-12	18	2	F	F	4.6	92	2.4	81	91	48	0	7	0	0	
DETROIT	36	18	52	3	27	1	F	F	7.9	133	3.3	97	81	46	0	7	2	0	
FLINT	33	14	48	-3	23	2	F	F	5.3	108	2.8	95	85	52	0	7	3	0	
GRAND RAPIDS	33	16	45	2	24	2	F	F	6.8	114	3.5	103	88	53	0	7	1	0	
HOUGHTON LAKE	28	10	40	-4	19	1	F	F	4.9	107	2.5	92	88	56	0	7	2	0	
LANSING	35	14	47	-4	25	0	F	F	5.9	110	2.5	86	86	50	0	7	3	0	
MARQUETTE	26	3	40	-16	15	7	F	F	8.4	160	4.9	152	92	53	0	7	1	0	
MUSKEGON	33	18	40	4	25	1	F	F	8.8	135	4.6	116	81	48	0	7	0	0	
SALT ST. MARIE	25	5	40	-11	15	1	F	F	7.0	110	3.9	104	90	55	0	7	6	0	
MN ALEXANDRIA	32	9	40	-3	21	5	F	F	1.9	84	1.2	80	90	56	0	7	0	0	
DULUTH	29	1	42	-10	15	1	F	F	1.5	47	.9	44	83	42	0	7	0	0	
INT'L FALLS	28	-6	40	-16	11	1	F	F	.8	33	.6	39	87	46	0	7	1	0	
MINNEAPOLIS	34	13	47	0	24	3	F	F	2.9	118	1.6	103	79	48	0	7	0	0	
ROCHESTER	30	11	42	-4	21	1	F	F	3.1	132	1.4	94	88	63	0	7	1	0	
MS GREENWOOD	65	35	74	28	50	5	F	F	8.8	59	4.4	46	86	31	0	3	0	0	
JACKSON	68	36	74	28	52	1	F	F	9.7	67	6.2	68	94	35	0	1	1	0	
MERIDIAN	67	33	73	26	50	1	F	F	11.6	77	7.1	75	96	30	0	5	2	0	
MO CAPE GIRARDEAU	54	27	68	20	41	2	F	F	13.5	141	5.3	92	80	36	0	5	1	0	
COLUMBIA	50	27	67	20	38	2	F	F	9.2	166	3.7	105	71	37	0	6	0	0	
KANSAS CITY	52	26	73	18	39	3	F	F	4.2	109	2.1	90	72	29	0	5	0	0	
SAINT LOUIS	50	27	72	18	39	2	F	F	13.0	219	5.6	148	69	33	0	5	0	0	
SPRINGFIELD	56	26	70	19	41	3	F	F	11.0	178	3.5	97	78	31	0	5	0	0	
MT BILLINGS	53	27	65	18	40	9	F	F	1.5	62	1.2	72	66	24	0	5	0	0	
GLASGOW	47	20	66	2	33	14	F	F	.7	76	.7	109	79	33	0	7	1	0	
GREAT FALLS	51	25	67	12	38	9	F	F	1.6	67	1.4	84	78	30	0	5	2	0	
HAVRE	51	22	66	7	36	12	F	F	.5	34	.5	46	74	27	0	6	0	0	
HELENA	49	18	59	12	34	5	F	F	1.2	68	.7	67	96	33	0	7	1	0	
KALISPELL	48	21	53	18	34	5	F	F	3.3	80	1.8	67	89	34	0	7	1	0	
MILES CITY	53	22	67	5	38	12	F	F	.5	26	.4	33	64	23	0	7	0	0	
MISSOULA	50	22	56	18	36	5	F	F	2.4	73	1.3	61	87	32	0	7	0	0	
NE GRAND ISLAND	52	23	67	15	38	8	F	F	2.3	121	1.5	119	84	30	0	7	0	0	
LINCOLN	53	22	71	12	37	8	F	F	1.3	55	.5	33	82	27	0	7	0	0	
NORFOLK	48	21	58	14	35	8	F	F	2.0	108	1.2	98	83	35	0	7	0	0	
NORTH PLATTE	54	22	66	14	38	8	F	F	1.6	124	.8	87	86	27	0	6	0	0	
OMAHA	50	23	67	14	37	6	F	F	1.4	61	.7	42	73	39	0	6	1	0	
SCOTTSSBLUFF	56	22	68	15	39	7	F	F	1.9	147	.9	110	77	20	0	7	0	0	
VALENTINE	46	18	59	3	32	6	F	F	3.0	325	1.2	177	80	40	0	7	0	0	
NV ELY	57	22	63	18	39	9	F	F	2.0	95	1.3	97	85	25	0	7	1	0	
LAS VEGAS	72	42	75	37	57	5	F	F	1.8	150	.9	100	60	19	0	6	1	0	
RENO	66	25	69	20	45	6	F	F	1.1	33	.5	24	79	16	0	6	1	0	
WINNEMUCCA	62	24	66	20	43	6	F	F	1.9	80	1.2	79	85	23	0	6	0	0	
NH CONCORD	37	11	48	3	24	0	F	F	5.8	67	4.2	82	88	34	0	7	1	0	
NJ ATLANTIC CITY	44	22	63	10	33	2	F	F	8.9	87	6.7	102	87	37	0	5	2	0	
NM ALBUQUERQUE	64	35	68	28	50	8	F	F	.6	46	.2	30	56	17	0	3	1	0	
CLOVIS	67	35	74	27	51	5	F	F	2.3	155	.5	56	56	17	0	4	0	0	
ROSWELL	69	34	75	25	51	5	F	F	3.1	265	1.7	214	71	21	0	4	0	0	
NY ALBANY	34	14	42	4	24	-2	F	F	6.6	88	4.9	109	85	44	0	7	1	0	
BINGHAMTON	30	15	42	7	23	-2	F	F	7.4	98	5.2	111	86	51	0	7	4	0	
BUFFALO	32	16	55	6	24	-3	F	F	8.4	97	5.6	106	88	56	0	7	6	1	
NEW YORK	43	29	62	23	36	0	F	F	8.3	86	6.1	101	68	37	0	6	2	0	
ROCHESTER	32	15	53	7	23	-3	F	F	4.6	65	2.7	58	86	53	0	7	5	0	
SYRACUSE	33	18	48	7	26	-1	F	F	5.6	67	3.6	70	85	47	0	7	4	0	
NC ASHEVILLE	50	21	65	15	36	-5	F	F	6.9	73	4.6	73	77	28	0	6	1	0	
CHARLOTTE	56	29	70	23	43	-2	F	F	7.9	74	4.5	61	65	24	0	6	0	0	
GREENSBORO	52	25	66	19	39	-3	F	F	7.0	69	3.6	54	73	25	0	6	1	0	
HAUTERAS	54	35	63	26	44	-3	F	F	12.0	92	9.8	113	84	39	0	3	1	0	
NEW BERN	59	31	71	25	45	-2	F	F	10.8	94	7.3	93	75	26	0	4	1	0	
RALEIGH	54	27	69	19	40	-3	F	F	8.6	86	5.6	82	78	26	0	5	1	0	
WILMINGTON	58	32	70	26	45	-4	F	F	9.0	87	7.7	110	80	28	0	4	1	0	
ND BISMARCK	44	15	63	5	30	11	F	F	1.2	87	1.1	120	84	35	0	7	1	0	
FARGO	35	10	44	1	23	7	F	F	2.5	166	1.8	202	90	62	0	7	1	0	
GRAND FORKS	35	10	43	0	23	9	F	F	1.2	64	.8	66	85	56	0	7	1	0	
WILLISTON	43	16	61	-1	30	11	F	F	1.1	76	1.0	110	82	36	0	7	1	0	
OH AKRON-CANTON	36	17	58	6	27	-3	F	F	6.2	85	3.8	83	88	50	0	7	4	0	
CINCINNATI	42	21	65	9	31	-3	F	F	11.1	128	7.7	134	80	41	0	7	1	0	
CLEVELAND	37	19	59	10	28	-2	F	F	6.9	94	3.9	86	84	50	0	7	5	0	
COLUMBUS	40	20	61	10	30	-2	F	F	9.3	126	6.4	133	81	45	0	7	1	0	

Based on 1951-80 normals.

Weather Data for the Week Ending February 27, 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 °F			
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	40	20	63	8	30	-2	.2	-.4	.1	8.3	117	5.3	115	86	47	0	7	3	0
TOLEDO	38	17	58	4	27	-1	.1	-.4	.1	6.3	99	2.5	67	81	46	0	7	2	0
YOUNGSTOWN	36	16	57	6	26	-2	.3	-.3	.2	6.4	85	3.7	77	86	51	0	7	4	0
OK OKLAHOMA CITY	65	36	71	31	51	7	0	-.4	0	5.4	161	1.7	76	68	25	0	7	0	0
TULSA	65	36	73	29	50	7	0	-.5	0	8.0	167	2.1	72	71	21	0	7	0	0
OR ASTORIA	60	36	67	29	48	3	0	-1.8	0	18.7	63	9.9	54	95	55	0	2	0	0
BURNS	55	26	58	22	40	6	0	-.2	0	3.4	73	1.2	42	***	***	0	6	1	0
MEDFORD	69	33	70	28	51	7	0	-.5	0	6.5	73	2.7	50	86	27	0	5	0	0
PENDLETON	56	30	69	27	43	2	0	-.3	0	3.2	72	2.0	71	79	33	0	5	0	0
PORTLAND	59	34	67	29	47	2	0	-.9	0	13.9	85	5.9	59	94	41	0	5	0	0
SALEM	61	31	66	25	46	2	0	-1.0	0	18.4	100	7.5	66	95	44	0	5	0	0
PA ALLENTOWN	38	22	49	15	30	-1	.3	-.5	.2	7.5	76	6.0	97	83	44	0	6	0	0
ERIE	36	18	56	8	27	0	.8	.3	.4	7.3	95	3.9	89	88	52	0	7	3	0
HARRISBURG	40	24	50	14	32	-2	.2	-.6	.1	7.3	83	5.5	98	80	38	0	6	4	0
PHILADELPHIA	44	25	61	19	35	-1	.1	-.7	.2	8.5	92	6.8	117	76	36	0	6	2	0
PITTSBURGH	38	18	58	9	28	-3	.3	-.4	.0	7.4	96	4.9	97	86	45	0	7	3	0
SCRANTON	35	19	47	12	27	-2	.2	-.3	.1	4.7	71	3.7	89	88	47	0	7	5	0
RI PROVIDENCE	42	22	57	14	32	1	0	-.9	0	10.2	84	8.0	105	77	33	0	6	1	0
SC CHARLESTON	62	35	74	28	48	-3	0	-.9	0	6.7	70	5.1	79	84	26	0	3	1	0
COLUMBIA	61	27	75	20	44	-5	0	-1.1	0	7.7	65	6.2	75	82	21	0	5	0	0
FLORENCE	61	29	77	24	45	-4	0	-.9	0	6.5	67	4.1	60	80	21	0	6	0	0
GREENVILLE	57	27	71	20	42	-3	0	-1.2	0	10.3	82	5.7	67	71	25	0	5	0	0
SD ABERDEEN	45	12	58	-1	28	9	0	-.1	0	.8	48	.7	61	87	36	0	7	1	0
HURON	39	16	55	7	28	6	0	-.2	0	2.2	136	.9	83	88	52	0	7	1	0
RAPID CITY	55	23	75	5	39	11	0	-.2	0	.8	59	.5	53	65	20	0	5	1	0
SIOUX FALLS	37	16	46	8	26	4	0	-.3	0	3.2	151	1.8	127	84	55	0	7	1	0
TN CHATTANOOGA	57	25	70	20	41	-3	0	-1.2	0	12.2	82	9.0	92	89	29	0	7	1	0
KNOXVILLE	54	24	66	15	39	-5	.3	-.9	.3	11.4	87	7.9	92	84	31	0	6	1	0
MEMPHIS	62	35	72	28	48	2	0	-1.0	.2	19.3	142	7.8	90	69	29	0	4	1	0
NASHVILLE	56	26	70	17	41	-2	.2	-.9	.2	11.2	87	5.8	69	77	27	0	6	1	0
TX ABILENE	68	38	80	28	53	3	0	-.3	0	5.0	178	.4	22	71	24	0	1	0	0
AMARILLO	63	28	70	19	46	4	0	-.2	0	2.1	141	.4	37	68	19	0	5	0	0
AUSTIN	72	47	81	41	60	4	0	-.6	0	1.9	31	.6	14	71	32	0	0	0	0
BEAUMONT	70	46	77	39	58	2	0	-1.0	0	14.9	114	8.7	106	93	41	0	0	0	0
BROWNSVILLE	77	55	83	41	66	2	0	-.3	0	5.9	154	5.5	203	92	54	0	0	0	0
CORPUS CHRISTI	75	52	82	38	63	3	0	-.3	0	3.0	71	2.1	69	91	46	0	0	0	0
DEL RIO	69	47	77	37	58	0	0	-.2	0	.9	48	.3	24	66	34	0	0	1	0
EL PASO	71	36	75	26	54	3	0	-.1	0	3.8	329	1.0	120	72	19	0	2	0	0
FORT WORTH	70	41	76	32	56	5	0	-.5	0	5.0	95	2.1	59	72	28	0	1	0	0
GALVESTON	66	54	72	47	60	3	0	-.5	0	5.8	66	4.0	77	86	55	0	0	0	0
HOUSTON	72	46	76	36	59	2	0	-.8	0	7.1	68	2.6	38	90	36	0	0	0	0
LUBBOCK	68	33	75	24	50	6	0	-.2	0	1.8	141	.7	78	74	22	0	4	0	0
MIDLAND	68	37	79	28	53	3	0	-.1	0	.9	63	.5	52	76	27	0	3	0	0
SAN ANGELO	70	38	82	25	54	2	0	-.2	0	2.5	119	.4	28	74	30	0	2	0	0
SAN ANTONIO	72	46	77	37	59	2	0	-.4	0	3.5	75	1.3	40	74	35	0	0	0	0
VICTORIA	74	48	79	38	61	3	0	-.5	0	2.4	39	.5	13	92	43	0	0	0	0
WACO	70	42	80	34	56	4	0	-.5	0	5.4	99	2.1	59	82	28	0	0	0	0
WICHITA FALLS	69	37	81	25	53	5	0	-.3	0	6.6	218	1.8	96	77	23	0	2	0	0
UT BLANDING	56	28	60	22	42	7	0	-.2	0	3.3	93	2.5	111	83	39	0	5	1	0
CEDAR CITY	58	25	60	20	41	5	0	-.1	.1	2.7	130	1.6	114	90	27	0	6	1	0
SALT LAKE CITY	54	27	57	25	41	4	0	-.3	0	2.3	58	1.2	46	82	32	0	7	0	0
VT BURLINGTON	33	14	41	4	24	3	0	-.5	0	3.5	59	2.3	66	79	41	0	7	0	0
VA NORFOLK	53	31	70	22	42	-1	.1	-.8	0	8.1	81	5.8	84	77	33	0	5	3	0
RICHMOND	52	25	68	19	38	-3	.1	-.7	.1	8.5	88	5.6	90	82	27	0	6	2	0
ROANOKE	48	26	57	18	37	-3	0	-.8	0	5.2	59	3.0	51	61	27	0	5	1	0
WA QUILLAYUTE	57	35	67	31	46	3	0	-3.0	0	29.3	67	17.6	68	97	55	0	3	2	0
SEATTLE-TACOMA	56	37	61	35	47	3	0	-1.0	0	11.0	67	4.8	48	97	50	0	7	0	0
SPOKANE	51	27	58	22	39	5	0	-.4	0	7.1	109	2.1	53	81	33	0	0	0	0
YAKIMA	58	25	68	21	42	3	0	-.1	0	4.0	117	.7	32	88	27	0	7	0	0
WV BECKLEY	40	20	55	13	30	-4	.3	-.5	.3	8.2	85	3.9	60	80	38	0	7	2	0
CHARLESTON	44	23	61	16	34	-4	.4	-.4	.4	8.3	86	4.2	65	75	33	0	7	1	0
HUNTINGTON	46	23	63	14	34	-3	.1	-.4	.3	9.2	101	4.4	73	77	35	0	7	1	0
PARKERSBURG	42	20	61	12	31	-5	.3	-.6	.1	6.0	74	2.8	52	77	36	0	7	2	0
WI GREEN BAY	30	11	44	-8	21	0	0	-.3	0	4.6	129	2.5	119	86	48	0	7	0	0
LACROSSE	34	14	49	0	24	0	0	-.3	0	3.0	105	1.2	67	81	48	0	7	0	0
MADISON	34	15	51	1	24	0	0	-.3	0	6.4	178	2.3	111	80	46	0	7	0	0
MILWAUKEE	33	16	49	0	25	-1	0	-.4	0	10.0	203	4.5	158	86	52	0	7	1	0
WAUSAU	29	7	45	-7	18	-1	0	-.3	0	1.9	62	.4	24	81	45	0	7	0	0
WY CASPER	44	21	56	7	32	4	0	-.2	0	1.7	115	1.1	107	75	37	0	7	2	0
CHEYENNE	49	21	61	8	35	5	0	-.1	0	2.0	181	1.2	157	78	26	0	7	2	0
LANDER	49	20	58	12	35	7	0	0	.1	1.2	72	.4	40	82	29	0	7	1	0
SHERIDAN	51	23	67	8	37	8	0	-.1	.1	1.7	75	1.3	89	82	32	0	6	1	0
PR SAN JUAN	84	70	86	68	77	0	.6	-.1	.2	13.9	149	6.2	123	90	76	0	0	4	0

Based on 1951-80 normals.

National Agricultural Summary

February 22 to 28, 1988

HIGHLIGHTS: Vanishing snow cover left wheat vulnerable to freeze damage in the major wheat producing region. Warm temperatures promoted growth from Oklahoma southward, and wheat broke dormancy as far north as Missouri. Sorghum seeding began in Texas. Corn planting was underway in Texas. Cotton was seeded in Arizona. Warmer, windy weather dried soils, opening the door for spring field activity to begin in the eastern half of the Nation. Livestock was mostly good. Warmer temperatures eased stress.

SMALL GRAINS: Small grains and winter wheat were mostly good to fair except in the Delta, Southeast, and Rocky Mountain States, where condition was mostly fair to good. North Dakota's winter wheat was fair to poor. Winter wheat remained bare, dry, and vulnerable to freeze damage in South Dakota. Despite high winds, damage remained light in Montana. Snow cover protection was poor in most fields. Warm temperatures diminished snow cover in Nebraska's wheat regions. Winterkill has been light thus far, but growers began monitoring Russian wheat aphid population. Unseasonably warm temperatures benefited wheat growth in Oklahoma. Small grains continued greening in the Texas Plains. Dryland fields need moisture, but moisture increased growth in the Blacklands. The lack of moisture slowed small grain growth in central Texas. Idaho's winter wheat was good despite insect infestation, frost heaving, effects of dry weather, and late germination. Isolated planting of spring wheat and barley was underway. Winter wheat began breaking dormancy in Missouri. Some winter damage was evident in Indiana. Oregon small grains began growing. Producers applied nitrogen in western areas. Small grain planting was underway in southern Adams County, Washington. Warm weather promoted small grain growth in California. Dryland small grains began showing signs of moisture stress. Arizona's small grains were good. Irrigation and fertilizer applications continued in all areas. Some acreage entered the heading stage in western areas. In south-central and eastern Arizona, early boot was the most advanced stage of development. Topdressing was active in the Southeast and Delta.

OTHER CROPS: Cotton planting began in western Arizona. However, most growers were completing final seedbed preparation.

Field activities progressed ahead of normal in most areas of California. Some rice fields were prepared for seeding. Wild rice was seeded in some areas. Sugarbeet seeding progressed well in California. In Texas, corn planting increased at Coastal Bend, along the Upper Coast and in southern areas. Planting was underway in eastern and central areas and was just beginning in the Blacklands. Grain sorghum was seeded at Coastal Bend and in the Rio Grande Valley. Cold, wet conditions slowed land preparation in Georgia.

Georgia's tobacco plants were fair to good. Plantbed seeding continued in North Carolina.

FRUIT AND NUTS: Cool weather slowed new growth and bloom bud development in Florida's citrus groves. Citrus groves were near excellent with very little irrigation needed. Early orange harvest slowed, but grapefruit movement was active along the lower east coast. Caretakers were busy cultivating and hedging harvested groves. Texas citrus quality was good. Peach trees reached the bud break stage in east Texas. In California, orchard cleaning was active. Growers irrigated to combat dryness. Early almonds leafed, and stone fruit blooming neared 50 percent completion. Kiwifruit buds swelled and prunes reached the green tip stage. Date plums were dethorned and pollen collected. Navel and valencia orange harvests continued. Lemons and minneola tangelos were picked. Rain is needed to increase lemon size. Citrus harvest continued in western Arizona with heavy shipments of valencia oranges, grapefruit, and lemons. Valencia oranges, kinnow tangerines, grapefruit, and lemons were shipped in central areas. Fruit tree pruning was active in the Southeast. Winter orchard care and pruning were active in Oregon and Washington.

VEGETABLES: Strong winds burned some young vegetables in Florida. Winter vegetable harvest was active. Tomato, cabbage, celery, pepper, lettuce, snap bean, carrot, squash, and sweet corn volumes were good. Winter cucumber harvest began in the Pompano area. Warmer weather increased cabbage, carrot, and celery harvests in the Rio Grande Valley. Replanting of freeze-damaged vegetables was underway in the San Antonio-Winter Garden area. Onions and potatoes were planted in the Knox-Haskell area. In east Texas, land preparation continued. Head lettuce was thinned, weeded, and sprayed at Westside, California. Sweet corn was planted in the Coachella Valley. Processing tomatoes were direct-seeded in the Delta area of California while tomatoes were put under hot-caps in Cutler-Orosi. Vegetable harvest consisted mostly of asparagus, broccoli, cauliflower, carrots, celery, and lettuce. Lettuce, cauliflower, broccoli, and other mixed vegetables were harvested in Arizona. Early planted melons were up to stand. Cabbage transplanting and potato seeding were underway in North Carolina. In Washington, vegetable growers continued field preparations for spring planting. In Oregon, green pea seeding is scheduled to start March 1 in the Willamette Valley.

PASTURES AND LIVESTOCK: Pastures were mostly fair. Additional moisture and warmth are needed to improve growth in the Delta and Southeast. Pasture growth improved in the southern Great Plains. Livestock was mostly good. Supplemental feeding and stress eased with warmer temperatures.

State Summaries of Weather and Agriculture

ALABAMA: Rainfall totals mostly under 0.10 in. Temperatures averaged mostly within 1 or 2° of normal.

Wheat fair to good. Pastures fair to poor. Livestock mostly good. Fieldwork progress 79% normal, 21% behind normal. Acreage intended for spring planting now prepared 14%. Primary activities: General care, feeding of livestock, poultry; spraying, fertilizing, pruning fruit trees; maintenance, repair of equipment; soil testing; topdressing small grains; building fish

ponds; working farm records; other routine farm chores.

ARIZONA: Sunny, dry, mild conditions 21st to 24th. Cloudiness increased 25th, 26th. Scattered showers developed 26th, 27th. Rain amounts ranged from traces to 0.50 in. Daytime temperatures remained warm with mid 50s high country, upper 60s 5,000 ft., mid 80s lower deserts. Temperatures for period averaged 3 to 10° above normal.

Soil moisture adequate north; short lower areas. Cotton planting begun west, less than 5% planted.

Growers completing final seedbed preparation. Tillage, seedbed preparation moderately active central. Listing, pre-plant herbicide application south central. Alfalfa good west; light stand renovation, very few new stands established. Cutting, curing, baling begun; curing conditions improved. Crop good south central. Light stand renovation, few new stands established, harvest progress moderate. In east, fields irrigated, some Egyptian alfalfa weevils present. Fields irrigated, clipped, central. Small grains good west, nearly all stands established, 70% jointing. Some acreage entered heading stage. Irrigation, fertilizer applications continued. In south central, east, crop good; all stands established. Irrigation, fertilizer applications continued central; crop good, in early boot stage. Western area vegetable producers continued harvest, shipping head lettuce, cauliflower, broccoli. Limited shipments of leaf lettuce, romaine, boston lettuce. Other assorted vegetables shipped. Stands established early planted melons. Central area growers packed romaine, leaf lettuce, other mixed vegetables. Citrus harvest continued west; heavy shipments valencia oranges, packing grapefruit, lemons. Central area shipped valencia oranges, kinnow tangerines, grapefruit, lemons. Groves good. Cattle, calves fair to mostly good. Some calving, northeast. Ranges provided average feeding conditions throughout State. Warmer weather, moisture initiated early growth noxious plants; no severe losses. Ranges 85% of normal desert, mid-levels; 90% of normal higher elevations. Stock water mostly adequate.

ARKANSAS: Warm, relatively dry week with temperatures above normal and only light showers. Temperature extremes 16°; 81°. Rainfall totals none to 0.22 in.

Land preparation in isolated areas of eastern area where soil moisture is not excessive. Limited growth by pastures, winter grasses. Cattle good, still being fed.

CALIFORNIA: High pressure continued; dry, mild weather. High broke 27th allowing some rain. Temperatures above normal, 15° above Blue Canyon. February very dry.

Continued dry weather allowed rapid progress field activities, ahead normal most areas. Small grains good growth warm weather. Irrigating where possible. Dryland, low moisture stress. Some oats, barley green-chopped. Some rice fields prepared for seeding. Stubble burn slow, poor smoke abatement weather. Some wild rice seeded. Sugarbeet seeding progressed. Harvest overwintered beets. Some aphid buildup. Alfalfa weevil controls. Desert alfalfa cut hay, good quality. Other areas greenchopping, sheeping-off continued. Orchard clean-up active. Growers irrigated. Early almonds leafed out. Stone fruit near 50% bloom. Date palms dethorned, pollen collected. Kiwifruit buds swelled. Prunes in green tip stage. Hass avocados harvested. Navel orange, valencia orange harvests continued. Lemons, minneola tangelos picked. Rain needed to size lemons. Asparagus harvested Delta, Riverside. Broccoli moved Westside, Riverside. Cauliflower harvested Westside. Carrot, celery harvested Riverside. Head lettuce thinned, weeded, sprayed, Westside. Lettuce volume expected to increase Riverside, good quality. Sweet corn planted Coachella Valley. Processing tomatoes irrigated Sacramento Valley, Westside. Processing tomatoes direct-seeded Delta, under hot caps, Cutler-Orosi. Livestock fair to good statewide. Supplemental feeding heavy Redding, continued active other areas. Range, pasture grasses poor, lack moisture. Movement to market very light Redding. Sheep grazed alfalfa fields central valley. Water supplies low or empty most areas. Calving, lambing continued.

COLORADO: Snow northern mountains midweek. Dry, clear conditions prevailed most of week. Average temperatures 9 to 16° below normal Rio Grande Basin; none to 10° below normal elsewhere. Snow cover on eastern Plains depleting.

Major activities included assisting with calving, lambing.

FLORIDA: Cold front cleared early week; secondary front midweek produced only measurable rain for period. Amounts less than 0.25 in. Latter part of period cool, scattered frost into northern Everglades before warming trend, weekend. Temperatures averaged about 4° below normal north, near normal central, south.

Soil moisture generally adequate except surplus few northern Peninsula areas. Small grains continued generally good. Wet soils delayed land preparation, planting of field crops. Sugarcane harvest remained active. Late winter forages, permanent pastures showed some growth, particularly in response to mild weekend. Grazing mostly fair to good Panhandle, lower southern Peninsula; elsewhere, varied widely from poor to fair. Cattle condition improved; mostly good Panhandle, fair northern, central Peninsula, fair to good south. Calving continued. Citrus groves near excellent. Moisture adequate, very little irrigation. Cool weather held back new growth, bloom bud development. Early orange harvest slowed; white, colored grapefruit movement active lower east Coast. Caretakers cultivating, hedging harvested groves. Temperatures slightly below normal vegetable producing areas. Limited rainfall. Strong winds burned some young crops. Harvest winter crops active. Good volume available tomatoes, cabbage, celery, peppers, lettuce, snap beans, carrots, squash, sweet corn. Lesser supply escarole, endive, radishes, strawberries, eggplant. First Pompano winter cukes picked.

GEORGIA: Temperatures 2 to 4° above normal, coldest weather prevailed over weekend. Minimum temperatures morning of 28th in teens, ranged 2° Blairsville to mid 20s along coast. Cold outbreak preceded by much above normal temperatures. South area maximum temperatures upper 70s to low 80s 23rd through 25th. Mixture rain, sleet, snow across portions south 26th, early 27th. 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 and 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: Weather generally favorable. Scattered rain over most of State mid to late week. Gusty trade winds latter part of week. Northerly winds 10 to 20 mph beginning of week turning to gusty northeast trades weekend. Temperatures mid 60s to mid 80s. Rainfall none to 6.80 in.

Days suitable for fieldwork 7.0. Cool season leafy vegetables made good progress. Intermittent showers hampered ginger root harvesting operations. Sugarcane, pineapple harvesting gained momentum. Papaya production declined.

IDAHO: Temperatures above normal. No precipitation.

Spring-like weather allowed farmers to begin fieldwork. Isolated tillage, topdressing, planting spring wheat, barley. Winter wheat good; despite insect infestation, frost heaving, effects of dry weather, late germination. Most areas no snow cover winter wheat. Other activities included feeding, caring for livestock, marketing products, shopwork. Livestock good. Calving, lambing neared

completion some areas, just began in others. Hay, roughage supplies adequate, some surplus.

ILLINOIS: Temperature lows averaged 1 to 4° below normal south, highs averaged 1 to 6° above normal; 1 to 5° above normal north, central. Precipitation none except 0.10 in. or less extreme south. Little or no snow cover remained across State.

Winter wheat good. Livestock good.

INDIANA: Temperatures averaged near normal. Lows mid teens, highs 50s to mid 60s. Precipitation less than 0.10 in. statewide. Snow cover virtually eliminated.

Outside activities limited by light snow cover, wet muddy conditions. Activities included: Hauling manure, topdressing wheat, moving grain, clover seeding, spreading fertilizer, cleaning barns, feeding and care of livestock. Hay supplies adequate. Livestock mostly good. Wheat mostly good but some winter damage evident due to lack of snow cover, ponding in low areas.

IOWA: Dry, sunny week temperatures 3° above normal northeast to 8° above normal southwest. Mild weather melted much remaining snow cover northern areas where only few locations still with measurable snow cover month's end.

Livestock mostly good. Farmers thinking about spring tilling, planting.

KANSAS: Temperatures well above normal. Averages ranged 41° northwest, 46° southeast. Averages 7 to 8° above normal. Precipitation sparse zero, trace amounts quite common. Only significant precipitation 0.04 in. southeast.

Warm weather, winds dried soils making possible some field activity to begin. Farmers busy applying fertilizer, weed control measures as field conditions permitted. Grass fires problem many areas due grass being extremely dry. Calving, lambing continued active ideal weather conditions. Feedlots drying out.

KENTUCKY: Temperatures averaged above normal early, then below normal; weekly readings near normal. Lows 25 to 30°, highs 45 to 50°. Precipitation 0.05 to 0.40 in. Rain first of week, then dry.

Soil moisture adequate; topsoil began to dry, early fieldwork could begin soon. Winter grains good most areas. Livestock satisfactory.

LOUISIANA: Temperatures 1° below to 3° above normal. Temperature extremes 28°; 78°. Rainfall averaged none to 0.18 in.

Main activities: Harvesting crawfish, caring for livestock, some spring plowing.

MARYLAND & DELAWARE: Maryland: Average temperature 37°, normal 37°. Lowest temperature 10°, highest temperature 66°. Precipitation averaged 0.34 in.

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

Delaware: Average temperature 38°, normal 38°. Precipitation averaged 0.32 in.

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

MICHIGAN: Temperatures ranged 2° below to 2° above normal. Temperature extremes -2°; 52°. Precipitation ranged none to 0.64 in. across State. Most areas little or no precipitation. Light snow showers occurred several days. Snow cover reduced to virtually nothing most areas of southern area. Ice on wheat fields caused some concern.

Activities: Marketing crops and livestock, pruning fruit trees, attending farm meetings, fertilizer spreading, preparing machinery for

spring work. Feed supplies still good. Livestock excellent. Spring calving started.

MINNESOTA: Temperatures averaged 1 to 8° above normal for State. Extremes -17°; 56°. Precipitation averaged 0.07 to 0.27 in. below normal. Precipitation totals averaged trace to 0.02 in. Greatest weekly total 0.07 in. Snowfall averaged trace. Snow depth weekend averaged 7 to 10 in. northeast, north central; 1 to 4 in. elsewhere.

Warmer temperatures relieved stress on livestock. Farmers making plans for spring activities.

MISSISSIPPI: Temperatures 2° below normal north, average central, 2° below normal south; extremes 20°; 77°. Greatest weekly rainfall 0.27 in. Greatest 24-hour rainfall 0.27 in.

Days suitable for fieldwork 3.1, 0.0 1987, 1.8 avg. Soil moisture adequate. Supply of hay, feed grains adequate. Livestock, wheat fair to good; pastures fair. Farm work included livestock feeding, fencing, topdressing small grains, planning for 1988.

MISSOURI: Temperatures averaged 3° above normal except Bootheel 3° below normal. Less than 0.10 in. rain Bootheel, none elsewhere.

Topsoil moisture 74% adequate, 26% surplus. Wheat 6% poor, 43% fair, 47% good, 4% excellent; coming out of dormancy. Some legume seeding being done, too wet for most other fieldwork. Supply of hay and roughage 11% short, 80% adequate, 9% surplus. Livestock 1% poor, 30% fair, 67% good, 2% excellent.

MONTANA: Temperatures 5 to 10° above normal. North central, northeastern 10 to 15° above normal. South central averaged 0.10 in. precipitation. Dry conditions elsewhere.

Winter wheat 5% poor, 65% fair, 30% good. Wind damage to winter wheat fields 1% none, 69% light, 29% moderate, 1% heavy. Snow cover protection for winter wheat fields 78% poor, 22% fair. Cattle and calves generally 80% good, 20% excellent. Sheep and lambs generally 74% good, 26% excellent. Calving 22% completed. Lambing 20% completed. Grazing 96% open, 4% difficult. Cattle losses compared with average 33% lighter, 67% same. Sheep losses 36% lighter, 64% same.

NEBRASKA: Mild dry, average temperatures range 6 to 8° above normal. Extremes 3°; 71°. Light precipitation early week.

Warm temperatures diminished snow cover in wheat regions. Winterkill light. Russian wheat aphid population monitored. Wheat 4% poor, 20% fair, 76% good. Melting snow boosts soil moisture, gets feedlots, farm yards muddy. Feed supplies adequate. Range, pasture grasses normal. Supplemental feeding necessary due to mud, ice. Calving 17% complete, losses light. Overall cattle 21% fair, 74% good, 5% excellent.

NEVADA: High pressure system produced dry conditions, above normal temperatures for third consecutive week. Low pressure system end of period caused scattered, light showers most areas.

Good progress fieldwork due dry, warm conditions. Spring-like weather favorable newborn lambs, calves. Livestock feeding requirements normal due mild weather. Winter grains continued to show premature growth.

NEW ENGLAND: Dry, average precipitation (rain, water equivalent of snow) less than 0.20 in. Average temperatures ranged mid to upper teens north to lower 30s southern coast. Temperatures near normal.

Major farm activities: Repairing machinery, tending livestock.

NEW JERSEY: Temperatures below normal, averaged 29° north, 33° south, 35° coastal. Extremes 9°; 64°. Precipitation below normal, averaged 0.28 in. north, 0.21 in. south, 0.16 in. coastal. Heaviest 24-hour total 0.32 in. on 27th, 28th. Heaviest 24-hour snowfall 2 in. on 27th, 28th. Depth of snow on ground 29th ranged 1 to 3 in. extreme north.

Farmers caring for livestock, tending to normal winter chores.

NEW MEXICO: Weekly temperatures well above normal throughout week. Some precipitation mountainous areas.

Days suitable for fieldwork 6.4. Soil moisture 38% short, 56% adequate, 6% surplus. Barley 33% fair, 67% good. Wheat 5% poor, 70% fair, 25% good. Cattle 47% fair, 53% good. Sheep 38% fair, 62% good. Range 13% very poor, 7% poor, 60% fair, 20% good. Onions 100% good. Lettuce 100% fair.

NEW YORK: Normal temperatures statewide. Precipitation below normal most areas with less than 0.50 in.

Producers did winter chores, cared for livestock.

NORTH CAROLINA: Temperatures averaged 2 to 5° below normal across State. Temperature extremes 11°; 73°. Precipitation ranged 0.01 to 0.43 in.

Days suitable for fieldwork 4.2. Soil moisture 5% short, 86% adequate, 9% surplus. Wheat 1% poor, 25% fair, 72% good, 2% excellent. Oats 1% poor, 31% fair, 68% good. Barley 1% poor, 26% fair, 72% good, 1% excellent. Rye 3% poor, 25% fair, 72% good. Pasture 8% very poor, 11% poor, 38% fair, 43% good. Hay and roughage supplies 4% short, 92% adequate, 4% surplus. Feed grains supplies 8% short, 89% adequate, 3% surplus. Tobacco plantbeds 1% very poor, 3% poor, 29% fair, 67% good. Irish potatoes 7% transplanted, 0% 1987, 5% avg. Major farm activities: Equipment repair, maintenance; tending livestock; preparing, seeding tobacco plantbeds; transplanting cabbage, potatoes; pruning fruit trees, ornamentals; breaking ground; sidedressing small grains; general farm maintenance.

NORTH DAKOTA: Mild, dry statewide early week; windy, cold midweek. Temperatures averaged 8° above normal northeast, east central to 13° above normal northwest. Extremes -14° northeast, 65° northwest, south central. Precipitation averaged none east central, southeast to 0.03 in. western third. Precipitation heaviest 0.08 in. northwest.

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

OHIO: Average low temperatures in 20s; normal to 6° subnormal. Average high temperatures upper 30s to mid 40s; normal to 5° subnormal. Precipitation 0.10 in. northwest, 0.20 to 0.50 in. elsewhere.

No snow cover in major winter wheat areas. Soil temperature low to mid 30s. No stress to livestock. Maple syrup gathering.

OKLAHOMA: Temperatures averaged 4° above normal southeast to 6° above normal south central. No precipitation across State.

Unseasonably warm temperatures benefited wheat growth. Additional moisture needed for spring crop seedbed preparation. Farmers continued applying fertilizer, weed control. Cattle good.

OREGON: Average temperatures above normal statewide. No precipitation. Warmest temperatures south; averages 6 to 8° above normal. Elsewhere temperatures averaged 1 to 4° above normal.

Soil moisture mostly adequate, with low rainfall totals drier than normal. Growth started on grain,

grass seed most areas; fair to good. Western growers applied nitrogen fertilizer. Caneberry training continued. Pruning, other winter care on fruit trees. First sowing of green peas Willamette Valley planned for March 1st. Livestock good to excellent. Ranges, pastures fair to good. Winter calving continued east.

PENNSYLVANIA: Dry, near normal precipitation. Precipitation mostly in form of snow northern half of State. Average temperature 27°, 1° below normal. Temperature extremes 3°; 61°. Average precipitation 0.21 in., 0.44 in. below normal.

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

PUERTO RICO: Island average rainfall 0.34 in., 0.22 in. below normal. Highest weekly total rainfall 2.22 in. Pico Del Este-Luquillo, 1.26 in. Maunabo, 0.82 in. San Lorenzo. Highest 24-hour total 1.00 in. Pico Del Este-Luquillo. San Juan WSFO mean temperature 77°, 1° above normal. Total rainfall 0.42 in., 0.07 in. below normal. Divisional temperature averaged 77° on coasts, 72 to 73° interior divisions with mean station temperature ranging 68° Adjuntas to 80° Roosevelt Roads. Lowest minimum temperature 51° Adjuntas. Highest maximum temperature 90° San Sebastian.

SOUTH CAROLINA: Temperatures averaged slightly below normal; no significant rainfall except for few scattered showers.

Farm activities included topdressing small grains, farm maintenance, preparing tax records.

SOUTH DAKOTA: Temperatures averaged well above normal. Extremes -3°; 75°. Precipitation scarce, less than 0.12 in. statewide. Since January 1st, precipitation ranges 30% of normal northwest to slightly above normal southeast, but averages below normal statewide. No snow cover exists except for partial coverage southeast corner.

Winter wheat remained bare, dry, vulnerable. Livestock good.

TENNESSEE: Mostly fair statewide. Some cloudiness, rain 23rd. Rainfall averaged 1.00 in. below normal across State. Temperatures averaged above normal west; below normal middle, east. Extremes 13°; 72°.

Pastures fair. Farm chores, meetings main activities.

TEXAS: High pressure dominated weather. Breezy, slightly cool conditions started week northern, central areas. As high pressure expanded, temperatures increased late week through weekend. Rainfall light, scattered. Temperatures above normal. Rainfall below normal.

Crops: Small grains continued to green-up Plains because warmer weather. Winds dried soils, dryland fields need moisture. Growth increased Blacklands following rain two weeks ago. Diseases increased slightly. Topdressing nitrogen portions Plains, northeast. Growth central slow because lack of rainfall. Overall conditions improve with rain. Corn planting increased Coastal Bend, Upper Coast, south. Planting increased Valley as soils dried from previous rains. Planting underway east, central. Planting activities began Blacklands. Land preparation active Plains. Corn 7% planted, 2% 1987, 3% avg. Grain sorghum planting started Coastal Bend, Rio Grande Valley. Land preparation underway other areas.

Commercial Vegetables: Rio Grande Valley harvest carrots, cabbage, celery increased with warmer, open weather. Onion progress improved. Melon planting increased. Citrus quality good. San Antonio-Winter Garden some replanting freeze-damaged crops underway. Harvest other crops

increased. Trans-Pecos onions continued to be transplanted. Onions, potatoes planted Knox-Haskell area, other areas not far behind. Land preparation East continued. Peach trees began breaking buds east. Prospects Hill Country good because favorable weather, ground conditions.

Range and Pasture: Moisture conditions favorable east, growth many pastures. Most other areas need rain. Grass fires increased west. Quality forage down, hay, supplemental feeding protein. Cattle weight loss. Lambing, calving increased. Market prices good.

UTAH: Precipitation 0.02 in. south central, none rest of State. Temperatures 1 to 6° below normal.

Winter wheat mostly good. Feed adequate, livestock good. Seeding alfalfa, land preparation extreme southwest. Winter range varies widely. Major farm activities: Care of livestock, machinery repair, maintenance, hauling manure, purchasing seed and supplies, preparing farm records.

VIRGINIA: Temperatures, precipitation below normal. Temperatures averaged 4° below normal, range 10 to 70°. Scattered light rain, snow mid period. Precipitation range 0.02 to 0.40 in.

Days suitable for fieldwork 2.6. Topsoil moisture 88% adequate, 12% surplus. Fieldwork activities increased. Topdressed small grains, seeded tobacco plantbeds. Also, some plowing, fertilizing, liming. Some overseeded pastures, pruned fruit trees, sampled soil. Land prepared for potato planting. Pastures, small grains good to excellent. Fed livestock. Feed tight few areas. Normal February meetings, tax work, supply acquisitions.

WASHINGTON: High pressure dominated weather pattern. Northwest area received State's only precipitation. Dry unseasonably mild weather prevailed across State.

Soil moisture conditions continued dry, southeast, central areas. Farmers continued early spring tillage, fertilization Grant, Adams Counties. Small grains, CRP planting continued southern Adams County. Pruning of fruit trees, caneberries continued western area. First pear psylla area released for control measures Wenatchee Valley. Vegetable growers continued field preparation for spring planting. Calving season continued. Spring pasture growth began warmer areas.

WEST VIRGINIA: Average temperature 33°; 1 to 2° below normal. Extremes 2° Greenbank, 66° Creston. Precipitation averaged 0.27 in.; 0.40 in. below normal.

Days suitable for fieldwork 3.6. Soil moisture 27% short, 73% adequate. Feed supplies short to adequate. Wheat, barley good to fair. Cows calved 46%; ewes lambed 55%. Farm activities: General farm maintenance, livestock care.

WISCONSIN: Variable temperatures, average 23°. Extremes -15°; 54°. Precipitation trace. Snowfall trace. Frost depth 19.2 in., 17.1 in. avg.; snow depth 6.9 in., 9.6 in. avg.

WYOMING: Temperatures above normal. Precipitation mostly below normal.

Winter wheat fair to good. Warmer temperatures melting snow cover. Livestock fair to good. Warm open weather reduced stress. Early calving, lambing, shearing continued. Supplemental feeding underway in areas with snow cover or short winter pastures. Feed supplies adequate.

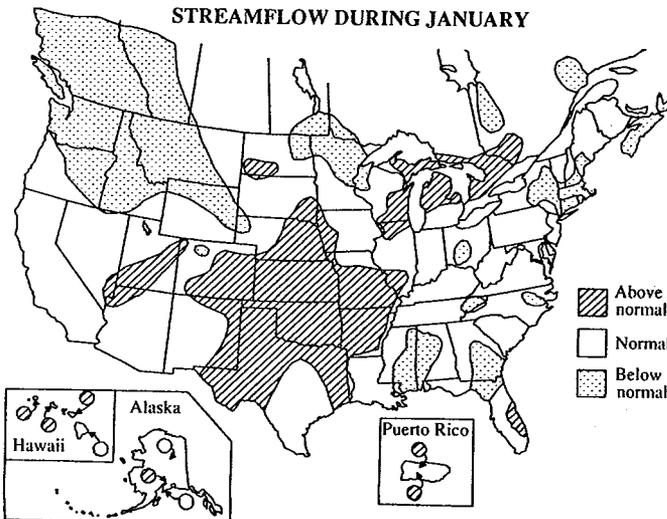
National Water Conditions

JANUARY 1988

STREAMFLOW DURING JANUARY

UNITED STATES
Department of the Interior
Geological Survey

CANADA
Department of the Environment
Water Resources Branch



Streamflow was in the normal to above-normal range at 72 percent of the 191 reporting index stations in southern Canada, the United States, and Puerto Rico, compared with the 75 percent in those ranges for December 1987. Below-normal streamflow persisted in a large area from southern British Columbia to northwestern Nebraska. Above-normal streamflow persisted in the central United States and a smaller area around Lake Michigan. Mean January elevations at the four master gages on the Great Lakes (provisional National Ocean Service data) were in the normal range at all four gages for the first time since October 1982. Levels declined from those for last month at all four gages and were also lower than those for January 1987 at all four gages. The level of Utah's Great Salt Lake rose 0.05 foot during the month and was at 4,209.50 feet above National Geodetic Vertical Datum of 1929 on January 31, 1.90 feet lower than on January 31, 1987. The three largest rivers (Mississippi, St. Lawrence, and Columbia) averaged an above-normal combined flow of 1,214,800 cubic feet per second (about 22 percent above median) during January, an increase of about 51 percent from December to January. Mean flow of the Columbia River at The Dalles, Oregon, was in the below-normal range for the eighth consecutive month after decreasing by about 2 percent from December to January. Contents of 74 percent of reporting reservoirs were near or above average for the end of January, compared with 75 percent for the end of December.

International Weather and Crop Summary

February 21-27, 1988

HIGHLIGHTS:

UNITED STATES ... Snow cover vanishes, leaving wheat vulnerable to freeze damage in the major producing areas. Warm temperatures promote wheat growth from Oklahoma southward. Cotton seeding begins in Arizona.

WESTERN U.S.S.R. ... Overwintering conditions continue mostly favorable for dormant winter grains.

EUROPE ... Much needed rain and snow benefit preseason soil moisture levels in the southeast. Moderate to heavy snow falls over sections of the north and east.

SOUTH ASIA ... Rain boosts irrigation supplies for eastern rice nearing reproduction and filling wheat in parts of northern India and Pakistan.

NORTHWESTERN AFRICA ... Rain benefits Moroccan winter grains approaching the heading stage. Rain eases drought in Algeria and Tunisia, but subfreezing temperatures in Algeria may have hurt winter grains.

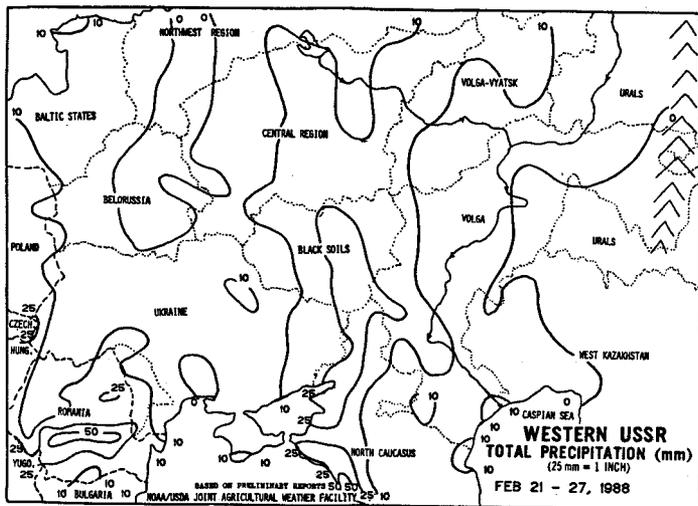
SOUTH AFRICA ... Inundating rains continue for the second week, causing flooding and crop damage in Natal and minor corn areas of the Maize Triangle.

SOUTHEAST ASIA ... Pockets of moderate to heavy rain continue over northern Java, western Malaysia, and the eastern Philippines, but rainfall is generally light elsewhere.

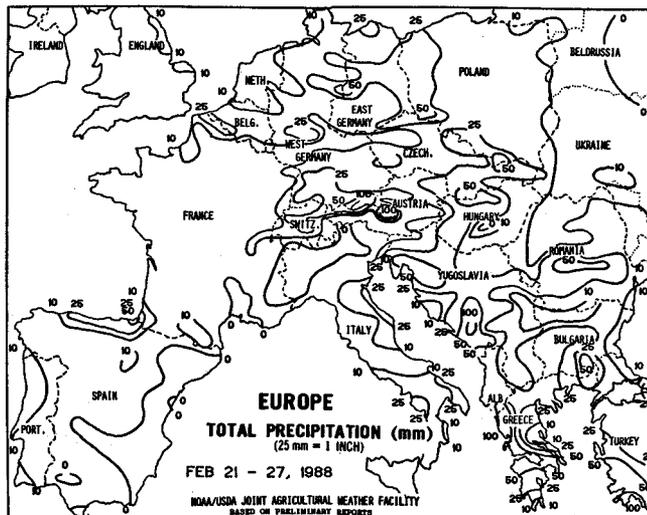
EASTERN ASIA ... Widespread heavy rain in southeastern China causes delays in early-crop rice planting.

SOUTH AMERICA ... Widespread rain favors late developing crops. Early harvesting has begun.

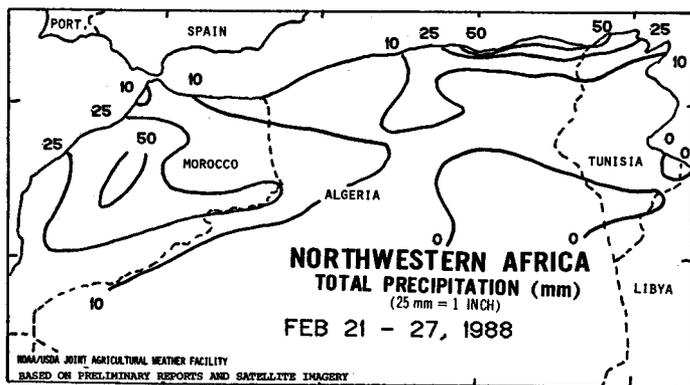
AUSTRALIA ... Tropical Cyclone Charlie brings beneficial heavy rain to sugarcane areas. Scattered showers favor northern summer crop areas.



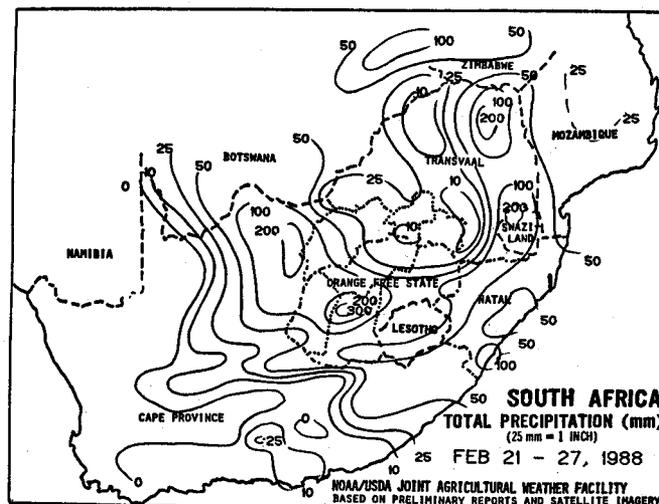
WESTERN U.S.S.R ... Moderate to heavy snow covered the eastern half of the Central Region, the Black Soils Region, the eastern Ukraine, northern North Caucasus, and the western edge of the Volga, increasing snow cover. Precipitation amounts in these areas generally ranged from 10 to 30mm, with isolated locations receiving precipitation greater than 30mm. Rain (10-32mm) changed to snow in the western North Caucasus. Elsewhere, scattered light snow covered the Baltic States, Belorussia, and the western Ukraine, where precipitation amounts were generally less than 7mm. Weekly average temperatures were 1-3 degrees C below normal in western areas and 1-3 degrees C above normal in the east. Extreme cold (minimum temperatures less than -20 degrees C) was confined to winter grain areas in eastern Belorussia and the western edge of the Central Region where snow cover provided adequate protection.



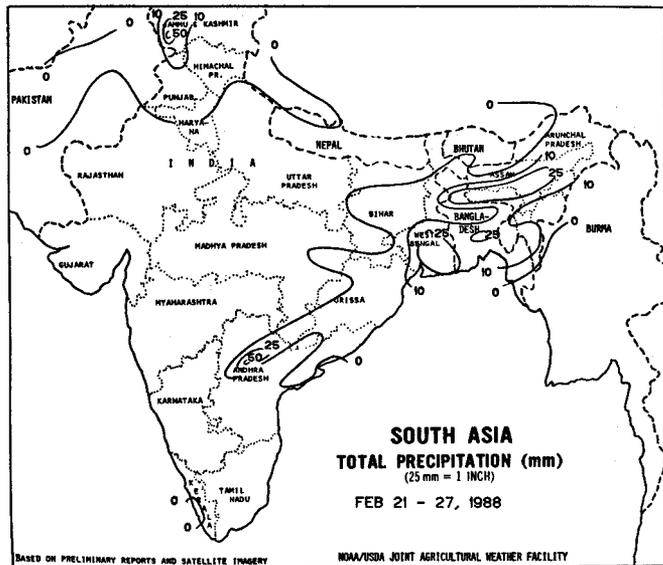
EUROPE ... A changing pattern over Europe brought colder air to much of the continent, with widespread precipitation in the east and mostly dry weather in the west. Much needed rain and snow fell over many southeastern growing areas, benefiting soil moisture levels for winter grains. Area coverage was scattered, however, and more precipitation is needed for the crop, which is becoming vegetative in southern areas. Beneficial dry and cool weather continued for the second straight week over much of Spain, France, and the United Kingdom, allowing for soils to dry. Rain changed to snow early in the period over northeastern Europe, with moderate to heavy snowfall by week's end from West Germany to Poland. Snow cover offered adequate protection for winter grains against subfreezing temperatures, which fell to near normal levels for the first time in nearly 2 months.



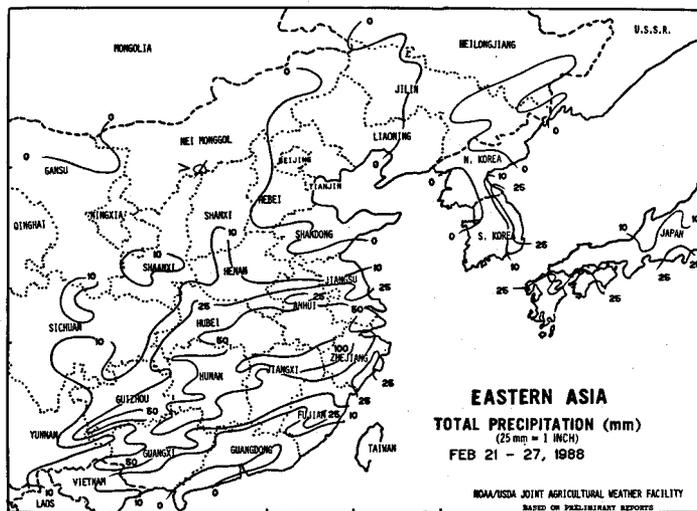
NORTHWESTERN AFRICA ... Widespread precipitation (14-50mm) covered Morocco, benefiting winter grains approaching the heading stage. Significant precipitation (25-50mm) over northernmost winter grain areas in eastern Algeria and Tunisia eased drought conditions. However, southernmost crop areas continued adversely dry. Subfreezing temperatures occurred over much of central and eastern Algeria on February 27. Minimum temperatures ranged from -1 to -4 degrees C, which may have caused some damage to winter grains approaching the weather sensitive heading stage.



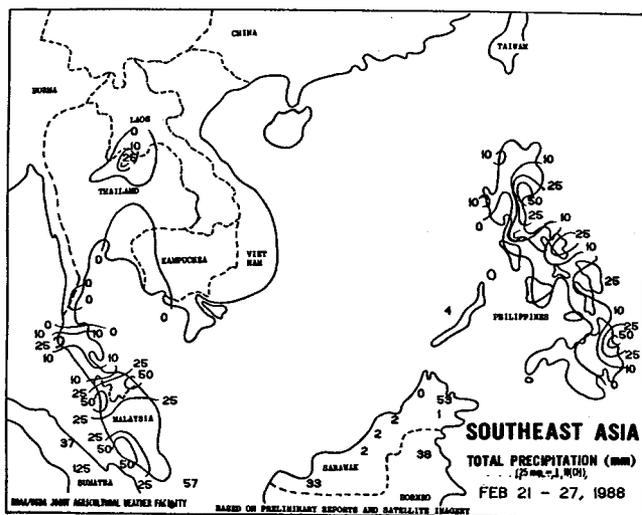
SOUTH AFRICA ... Inundating rain (100-300mm or more) persisted over crop areas of the southern and western Maize Triangle, Natal, and eastern Transvaal, causing flooding and crop damage for the second week. Rainfall was heavier than last week, and coverage was greater, affecting filling corn over an area which normally accounts for about 15 percent of South Africa's total production. Moderate to heavy showers (25-100mm) spread into primary corn areas of western Transvaal and north-central Orange Free State, leaving many areas too wet following last week's heavy rain and possibly causing some lodging of immature corn. Drier weather (less than 25mm) returned to north-central Transvaal and continued in the eastern Triangle, where moisture continued limited in some areas for reproductive to filling corn.



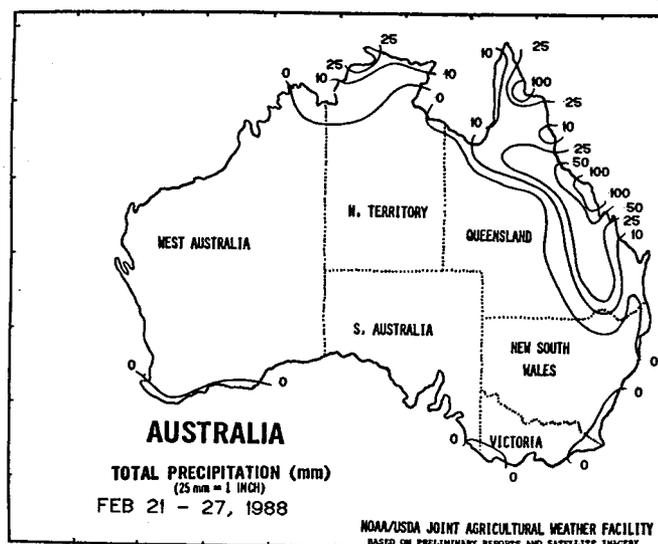
SOUTH ASIA ... Light to moderate rain (1-35mm) fell from eastern Andhra Pradesh through Bangladesh to the eastern states, boosting irrigation levels for coastal rice nearing reproduction and filling wheat in northern Bihar. Light rain (less than 10mm) covered northern Pakistan and India's Punjab state, but wheat regions elsewhere were dry.



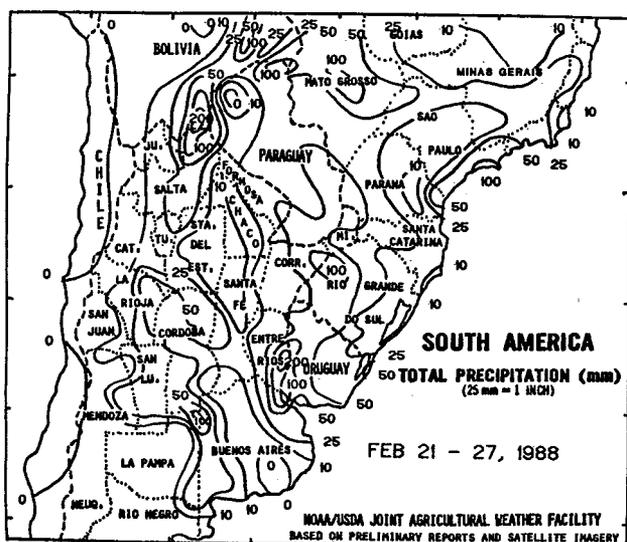
EASTERN ASIA ... Widespread heavy rain (greater than 25mm) fell over much of southeastern China, causing delays in the planting of early-crop rice, but benefiting pre-season irrigation reserves. Very heavy rain (as much as 126mm) in Hunan, Jiangxi, Anhui, and Zhejiang may have caused some flooding. Heavy rain and snow also fell over the eastern Korean Peninsula and southern Japan. In contrast, northern Chinese winter grain areas remained mostly dry. Below-normal precipitation and above-normal temperatures in the North China Plain for much of the winter have caused some areas to become abnormally dry. Average temperatures during the week ranged from normal to below normal in the north to above normal in the far south.



SOUTHEAST ASIA ... Pockets of moderate to heavy rain (25-50mm or more) continued over crop areas of north-central Java and most of western Malaysia, maintaining irrigation reserves. However, the Intertropical Convergence Zone weakened considerably, leaving most other areas with rainfall well below normal. Most notably, minimal rain (less than 10mm) covered rice regions of northwestern Java and continued from southern Java eastward. In the Philippines, dry weather covered all but east-central crop areas, including most grain areas of northern Luzon and Mindanao.



AUSTRALIA ... Tropical Cyclone Charlie caused heavy rain (up to 196mm) and possible flooding over much of the northern and central sugarcane growing areas in Queensland as it moved southwestward from the Coral Sea late in the week. The rain provided much needed relief to vegetative sugarcane in east-central Queensland, although some southern cane areas still remain too dry. Scattered showers favored northern sections of the summer crop areas, while southern sections remained dry. Scattered light showers also fell over southern coastal areas, with seasonably dry weather over most wheat areas. Temperatures during the week were normal to slightly above normal over eastern summer crop areas, benefiting reproductive to filling crops.



SOUTH AMERICA ... Significant rain (25-116mm) covered most soybean areas of south-central Brazil, maintaining adequate moisture for pod development in the north and improving moisture supplies in the south. Early soybean harvesting has begun in some northern crop areas, but the majority of the crop is pod filling. The heavier rain in western Rio Grande do Sul and Mato Grosso do Sul alleviated dry pockets and greatly benefited late maturing soybeans. In Argentina, substantial showers (10-40mm) covered the major crop areas of southern Cordoba, southern Santa Fe, northeastern Buenos Aires, and northern cotton areas. Light rain (1-8mm) fell over north-central Buenos Aires, but heavier showers were scattered over far western Buenos Aires. In general, moisture is adequate for late crop development. Early harvesting of corn, sunflowers, and sorghum has begun in scattered areas.

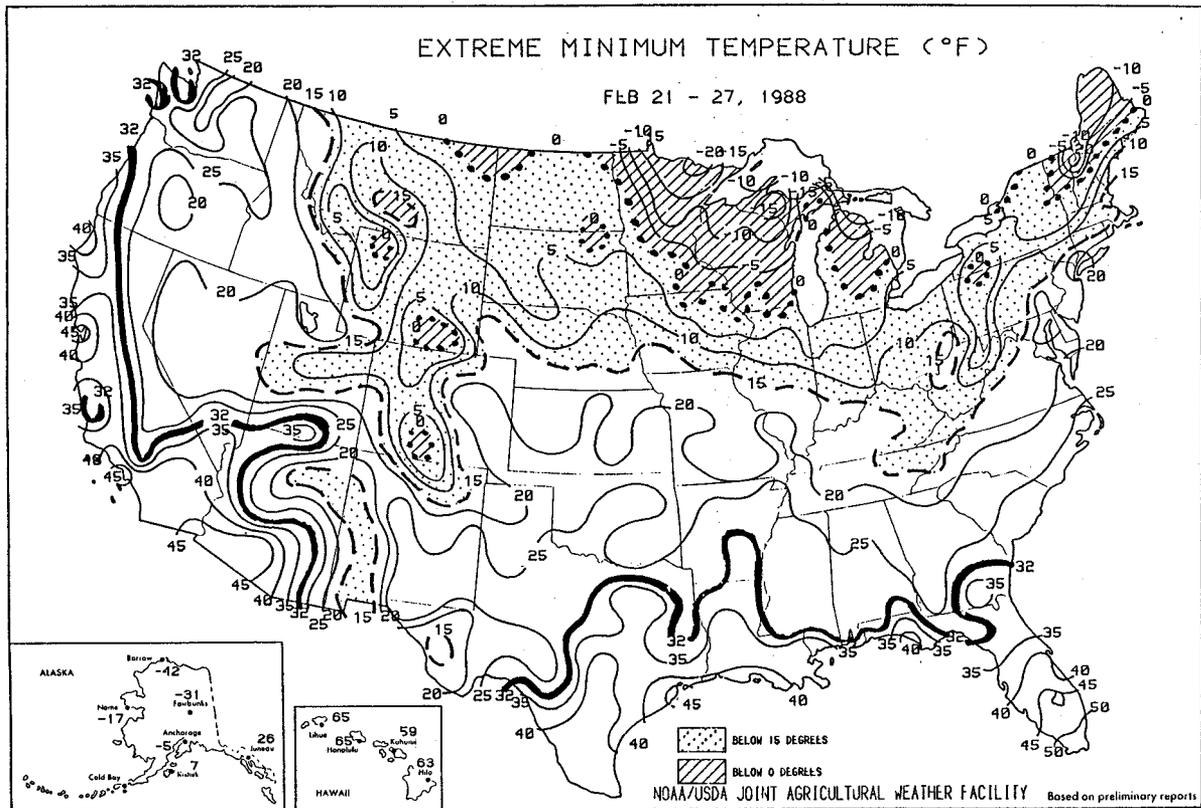
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