

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

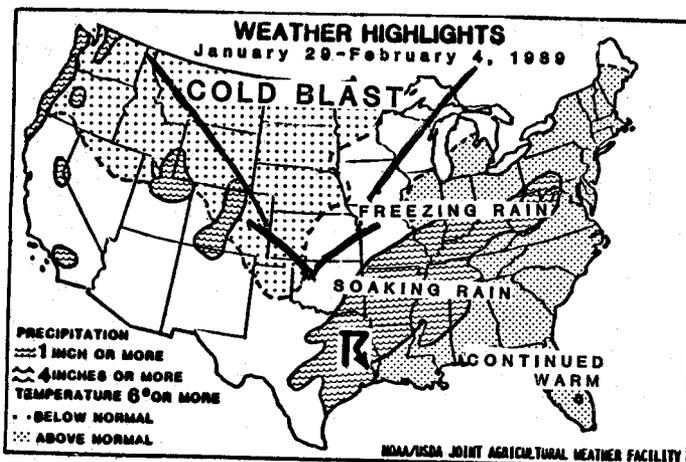
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National Weather Summary

January 29-February 4, 1989



HIGHLIGHTS: A huge frigid arctic high pressure system over Alaska strengthened and reached the highest recorded pressure in North America of 31.85 inches of mercury at Northway, Alaska. The extreme cold air plunged into the lower 48 States and spread over much of the Nation by week's end, replacing the record warm weather south of the cold front. Heavy rain reached from eastern Texas to the upper Ohio valley along and behind the front as it moved slowly to the Southeast. Widespread snow, sleet, and freezing rain fell over the shallow cold air across most of the northern half of the country. Only Florida remained warm and dry.

SUNDAY: A frontal system spread rain from southern Texas into New England. Thunderstorms produced severe weather and heavy rain over eastern Texas and northern Louisiana. A large high pressure system over the Great Basin caused Santa Ana winds across southern California. Strong winds were also along the eastern slopes of the northern Rockies. Mild weather remained over much of the Nation except in Alaska, where bitter polar air continued to grip that State.

MONDAY: Rain continued as the frontal system crossed the Atlantic seaboard. A gigantic high pressure area kept northern and central Alaska in a deep freeze for the 15th straight day. The cold arctic air plunged southward over Canada's Prairie Provinces to the American border. Snow and high wind occurred around the edge of cold air. Winds in Montana were in excess of 100 mph. In contrast to the frigid air, many high temperature records were broken over the central and eastern portions of the country.

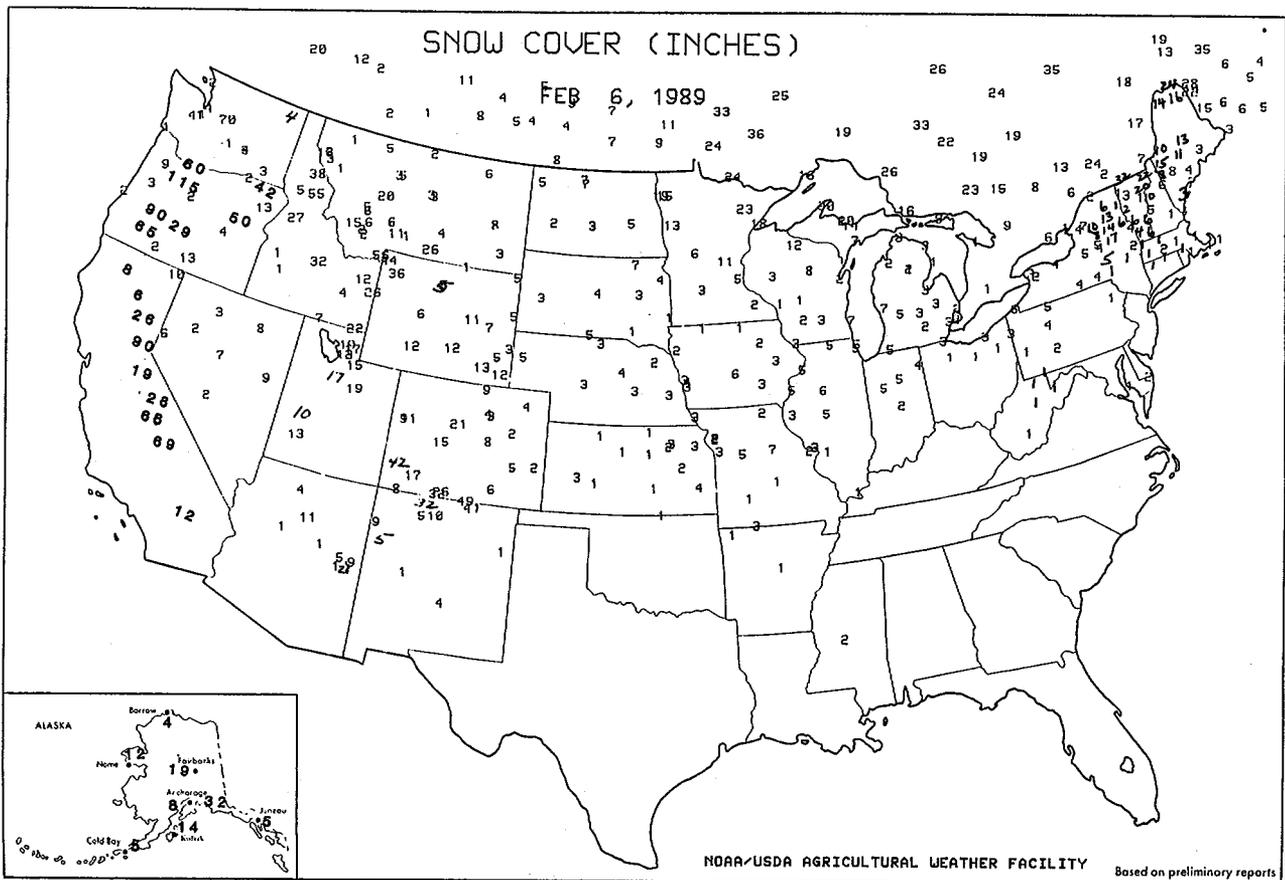
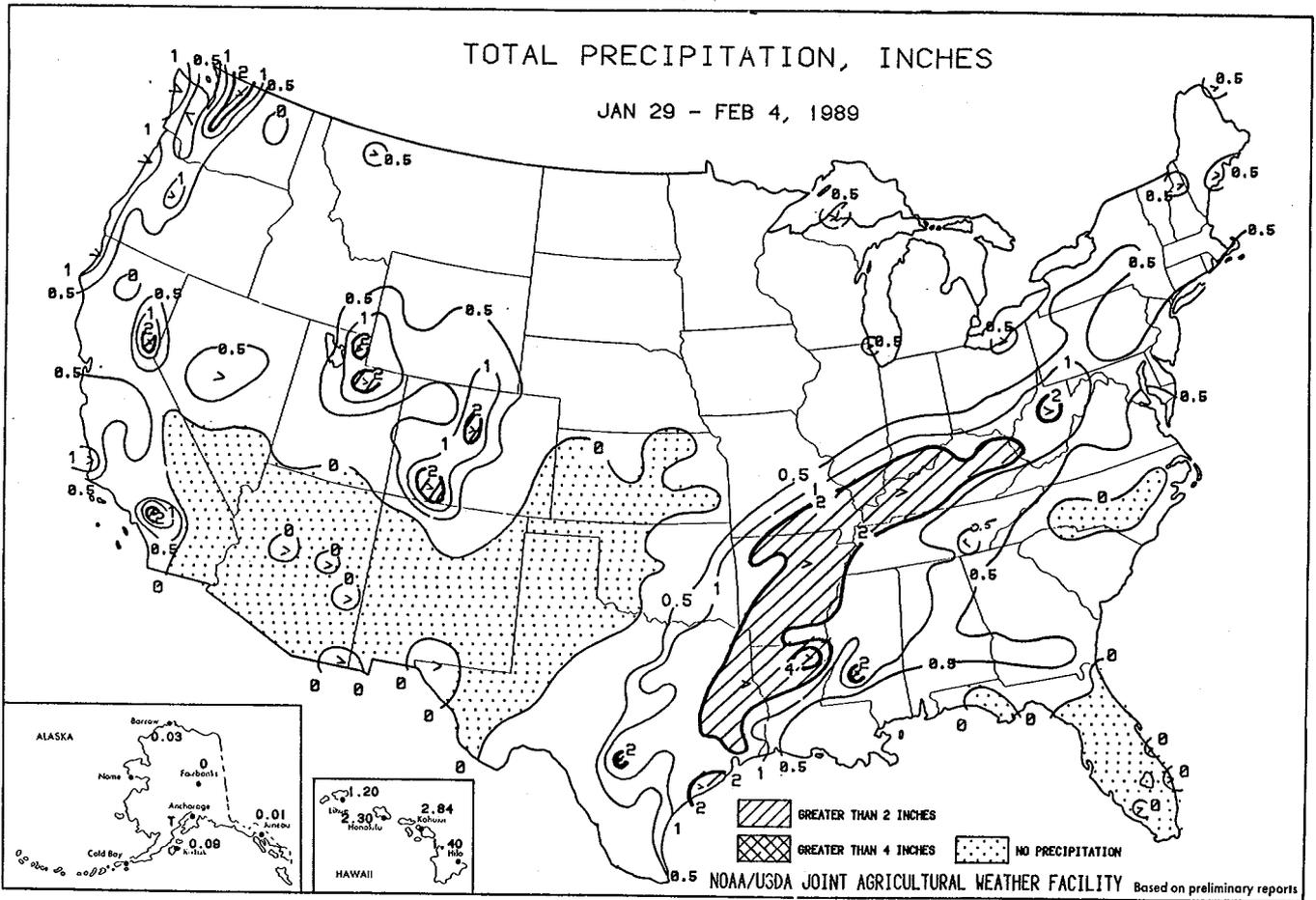
TUESDAY: The high pressure system over Alaska strengthened and reached the highest ever recorded pressure in North America of 31.85 inches of mercury at Northway, Alaska. The severe arctic air dropped into the northern Rockies and northern Plains. The temperature plunged 48 degrees within 3 hours after the cold front passed through Great Falls, Montana. Rain and snow fell from the Northwest to the upper Great Lakes. Sunny and dry weather prevailed over the remainder of the Nation. Over 60 high temperature records were broken in the warm air south of the front in the central United States.

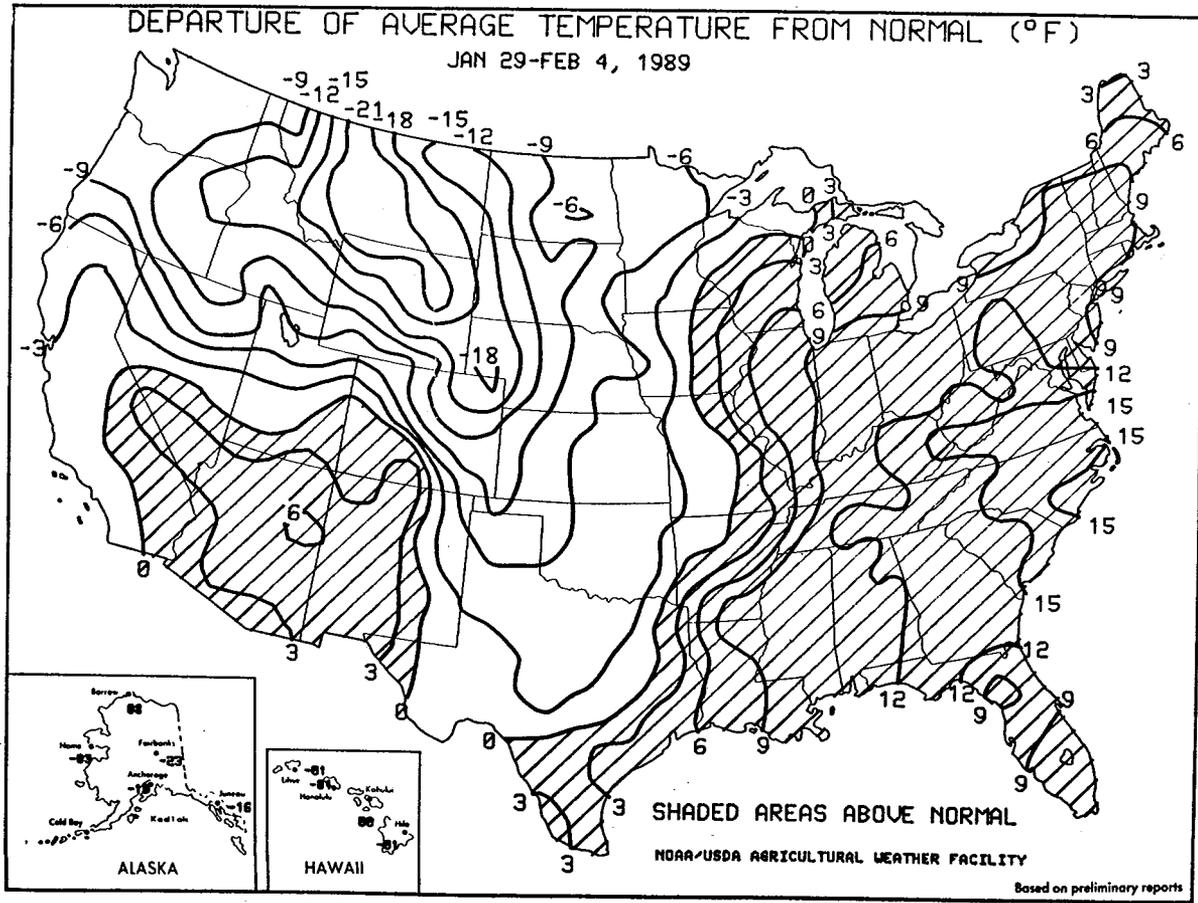
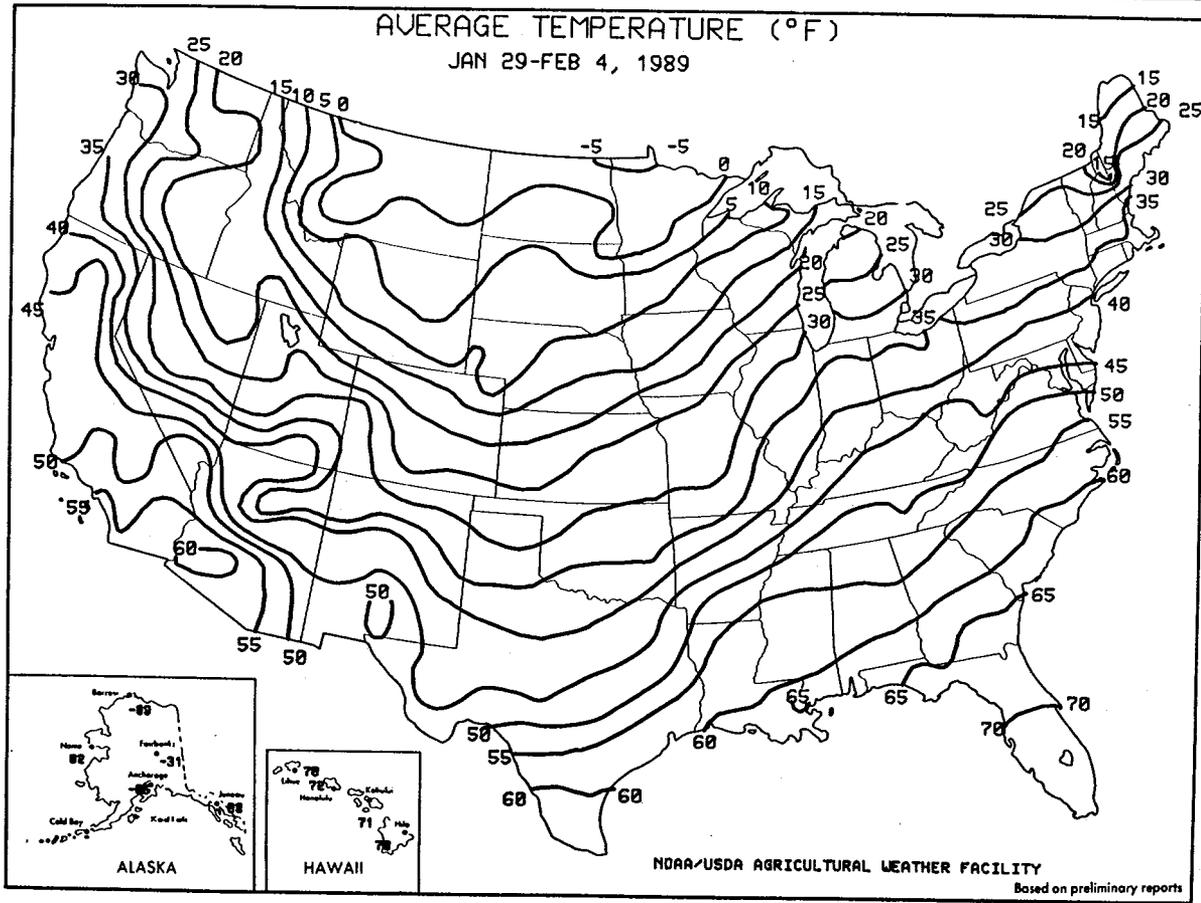
WEDNESDAY: The frigid air poured into the central portions of the country as the cold front pushed into northern Texas. The morning temperature at Russel, Kansas, was 12 degrees after having the national high temperature of 84 degrees the previous afternoon. Temperatures dropped 18 degrees in 1 hour at Ardmore, Oklahoma. Snow and blustery winds extended from the northern Pacific coast to the Great Lakes. A band of freezing rain fell south of the snow across the southern Corn Belt. Numerous high temperature records were again broken in the mild air south of the front.

THURSDAY: The severe arctic air sagged south-eastward. Showers were scattered along the cold front from the Rio Grande Valley to New England. Thunderstorms produced heavy rain from northeast Texas into the Ohio Valley. Sleet and freezing rain fell to the north of the rain. Snow was wide-

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National Weather Data for Selected Cities

Weather Data for the Week Ending February 4 1989

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	TEMPERATURE			
																		°F	°F	°F	°F
AL BIRMINGHAM	66	44	77	35	55	12	.9	-.3	.7	7.8	72	4.4	75	93	54	0	0	3	1	0	
MOBILE	73	51	82	42	62	10	.1	-1.0	.1	3.9	37	2.1	41	99	59	0	0	1	1	0	
MONTGOMERY	72	46	82	34	59	11	.5	-.4	.5	6.5	68	2.1	43	97	51	0	0	2	0	1	
AK ANCHORAGE	5	-14	10	-30	-5	-19	T	-.2	T	1.8	91	.3	31	71	49	0	0	7	7	0	
BARROW	0	-17	30	-48	-9	8	T	0	T	.3	76	T	14	84	71	0	0	7	1	0	
FAIRBANKS	-22	-40	-8	-51	-31	-22	0	-.1	0	1.0	76	.5	86	69	55	0	0	7	7	0	
JUNEAU	17	0	29	-5	8	-16	.1	-.8	.1	11.6	132	6.5	161	83	46	0	0	2	2	0	
KODIAK	26	14	35	-14	20	-10	.1	-1.2	.1	13.5	112	2.5	39	80	53	0	0	6	6	0	
NOME	10	-6	30	-37	2	-3	.3	.1	.2	2.4	165	1.1	126	82	62	0	0	7	3	0	
AZ PHOENIX	70	48	73	40	59	5	0	-.1	0	1.3	83	1.2	153	72	26	0	0	7	0	0	
PRESCOTT	53	30	62	20	41	4	.1	-.3	.1	2.1	59	1.5	77	74	34	0	3	1	0	0	
TUCSON	69	40	72	30	55	3	0	-.2	0	1.0	55	1.0	107	69	21	0	0	1	0	0	
YUMA	71	48	74	44	60	2	0	-.1	0	.7	93	.6	146	59	24	0	0	4	3	1	
AR FORT SMITH	49	27	77	11	38	-1	1.2	.8	1.2	7.3	148	5.6	265	92	55	0	0	2	4	2	
LITTLE ROCK	53	34	80	13	44	3	2.1	1.2	1.1	7.9	92	4.8	108	88	59	0	2	4	2	0	
CA BAKERSFIELD	62	39	75	33	51	0	.5	.2	.5	1.5	82	.6	57	86	45	0	0	2	0	0	
EUREKA	49	36	61	32	43	-6	1.1	-.3	.4	12.1	86	5.8	75	90	66	0	1	3	4	1	
FRESNO	57	36	70	32	47	-1	.7	.2	.5	3.7	93	1.2	52	98	55	0	0	3	0	0	
LOS ANGELES	61	47	75	41	54	-2	.4	-.3	.2	3.5	69	1.0	28	98	55	0	2	0	0	0	
REDDING	56	36	78	29	46	-3	T	-1.8	T	5.8	35	2.1	22	78	33	0	1	1	0	0	
SACRAMENTO	55	36	65	31	46	-2	.4	-.5	.4	4.1	55	1.1	24	94	53	0	0	1	0	0	
SAN DIEGO	63	48	73	42	55	-1	.3	-.1	.2	2.9	69	.7	31	88	51	0	0	2	4	0	
SAN FRANCISCO	55	41	66	37	48	-2	.4	-.6	.2	5.3	61	1.7	32	94	58	0	0	4	0	0	
CO DENVER	29	6	64	-17	17	-14	.2	.1	.2	2.4	221	1.4	240	81	43	0	6	4	1	0	
GRAND JUNCTION	42	19	52	8	30	1	.9	.8	.6	2.1	168	1.9	277	94	56	0	6	2	0	0	
PUEBLO	35	8	75	-9	22	-10	.1	0	0	1.0	182	.4	150	95	44	0	7	0	0	0	
CT BRIDGEPORT	44	33	57	21	38	9	.2	-.5	.2	3.1	42	1.5	41	77	58	0	2	2	0	0	
HARTFORD	45	30	67	16	37	12	.4	-.4	.3	2.5	31	1.2	30	82	50	0	4	2	0	0	
DC WASHINGTON	55	37	68	25	46	10	.8	.2	.6	4.4	70	3.1	99	88	50	0	1	3	1	0	
FL APALACHICOLA	75	58	78	49	66	13	0	-.9	0	2.4	32	1.2	31	100	73	0	0	0	0	0	
DAYTONA BEACH	79	56	84	49	67	10	0	-.7	0	7.8	156	6.8	244	98	52	0	0	0	0	0	
JACKSONVILLE	80	54	84	48	67	13	T	-.8	T	2.9	48	1.7	51	99	50	0	0	0	0	0	
KEY WEST	80	69	81	63	74	5	0	-.5	0	.6	17	.4	22	90	65	0	0	0	0	0	
MIAMI	82	65	84	62	74	7	0	-.5	0	.8	19	.7	29	93	51	0	0	0	0	0	
ORLANDO	82	58	84	54	70	10	0	-.6	0	4.8	108	3.8	150	99	46	0	0	0	0	0	
TALLAHASSEE	79	52	83	39	66	14	.1	-1.0	.1	1.5	15	.5	9	99	53	0	0	1	0	0	
TAMPA	80	59	82	57	70	10	0	-.6	0	3.2	68	1.5	61	98	50	0	0	0	0	0	
WEST PALM BEACH	81	62	83	59	72	7	T	-.6	T	2.9	54	1.0	31	97	56	0	0	1	0	0	
GA ATLANTA	67	47	75	40	57	14	.2	-.9	.1	3.9	40	2.6	48	92	55	0	0	2	0	0	
AUGUSTA	73	43	84	32	58	13	.1	-.9	.1	2.8	37	1.5	33	97	50	0	1	1	0	0	
MACON	73	48	80	36	60	13	.3	-.7	.3	4.1	46	1.9	38	96	57	0	0	1	0	0	
SAVANNAH	76	54	83	46	65	15	.2	-.5	.2	1.4	23	.5	13	97	52	0	0	3	1	0	
HI HILO	78	63	84	61	70	-1	1.4	-1.3	.7	42.3	177	28.8	259	95	66	0	0	3	2	2	
HONOLULU	80	64	82	58	72	-1	2.3	1.6	1.1	11.0	144	4.3	102	90	51	0	0	3	3	0	
KAHULUI	78	65	83	59	71	0	2.8	2.0	1.6	14.1	193	3.9	86	95	64	0	0	3	2	0	
LITHUE	77	63	79	57	70	-1	1.2	.1	.6	14.6	118	7.7	112	89	58	0	0	2	2	0	
ID BOISE	27	9	46	-13	18	-15	.1	-.3	.1	2.0	65	1.2	66	91	61	0	7	2	0	0	
LEWISTON	27	12	52	-10	20	-15	.1	-.2	.1	2.2	78	1.7	109	79	52	0	6	3	0	0	
FOCATELLO	22	4	42	-12	13	-13	.5	.2	.3	2.2	103	1.0	87	64	60	0	4	6	0	0	
IL CHICAGO	37	24	65	1	31	9	.3	0	.1	3.4	83	1.0	56	91	60	0	4	6	0	0	
MOLINE	35	21	69	-2	28	7	.5	.2	.3	3.1	84	1.5	87	89	62	0	4	4	0	0	
PEORIA	39	23	70	1	31	8	.3	0	.2	3.4	91	1.2	68	92	63	0	4	4	0	0	
QUINCY	38	21	72	-1	30	5	.3	0	.1	2.6	81	.7	49	91	63	0	4	5	0	0	
ROCKFORD	34	21	63	-2	27	7	.2	-.1	.1	2.6	76	.9	55	91	67	0	4	2	0	0	
SPRINGFIELD	40	26	69	2	33	8	.3	-.1	.1	4.4	112	1.2	65	90	67	0	4	4	0	0	
IN EVANSVILLE	51	35	68	17	43	11	2.3	1.6	1.7	8.3	121	5.5	163	94	66	0	2	3	1	0	
FORT WAYNE	40	29	61	18	34	11	.2	-.2	.1	4.7	97	2.2	93	93	68	0	4	4	0	0	
INDIANAPOLIS	45	31	64	20	38	11	.4	-.2	.3	4.7	79	2.2	73	93	65	0	3	2	0	0	
SOUTH BEND	40	28	64	16	34	10	.3	-.2	.1	4.6	82	1.7	62	92	60	0	4	3	0	0	
IA DES MOINES	28	11	65	-15	19	-1	.2	0	.1	2.4	110	1.5	137	87	56	0	6	5	0	0	
SIOUX CITY	22	4	57	-17	13	-6	.1	0	.1	1.6	110	1.0	144	82	53	0	7	3	0	0	
WATERLOO	26	12	57	-16	19	3	.2	.1	.2	1.7	82	1.1	127	90	66	0	6	3	0	0	
KS CONCORDIA	31	11	74	-11	21	-6	T	-.1	T	1.2	86	.6	81	75	43	0	5	0	0	0	
DODGE CITY	37	11	80	-13	24	-8	T	-.1	T	.4	36	.3	54	77	36	0	6	0	0	0	
GOODLAND	30	7	75	-16	18	-11	T	-.1	T	.7	90	.2	58	80	39	0	7	0	0	0	
TOPEKA	36	17	71	-8	26	-5	T	-.2	T	2.1	94	1.3	125	81	48	0	4	1	0	0	
WICHITA	37	16	68	-7	26	-5	T	-.1	T	1.3	76	.8	107	79	45	0	4	0	0	0	
KY BOWLING GREEN	53	38	68	29	46	11	3.0	2.1	2.1	14.9	154	8.7	169	97	69	0	2	4	2	2	
LEXINGTON	52	37	65	24	45	13	1.6	.9	.9	9.2	118	5.5	139	94	62	0	2	4	2	2	
LOUISVILLE	52	38	67	26	45	12	2.2	1.5	1.3	9.3	128	5.8	154	92	61	0	2	3	1	0	
LA ALEXANDRIA	67	49	79	30	58	8	1.0	-.1	.7	13.4	135	7.6	149	91	59	0	1	4	1	0	
BATON ROUGE	70	51	81	34	61	9	T	-.1	T	12.2	119	4.0	76	99	67	0	0	1	0	0	
LAKE CHARLES	68	52	78	32	60	9	.5	-.5	.2	9.6	94	4.8	93	98	71	0	1	4	0	0	
NEW ORLEANS	73	55	81	43	64	11	T	-1.2	T	6.4	59	2.5	44	99	70	0	0	2	0	0	

Based on 1951-80 normals

Weather Data for the Week Ending February 4, 1989

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS						
	AVERAGE	MAXIMUM	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	MINIMUM	TEMPERATURE °F		PRECIPITATION	
																		90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	63	41	82	23	52	5	2.9	2.0	2.2	12.7	150	7.9	175	96	64	0	0	2	2	4	2
ME CARIBOU	23	5	41	-13	14	4	.5	0	.2	3.2	56	2.3	86	91	66	0	0	7	4	4	0
PORTLAND	38	23	63	9	31	9	.4	-.5	.3	2.7	31	1.5	35	82	45	0	0	6	2	2	0
MD BALTIMORE	54	34	71	23	44	11	1.0	-.3	.6	4.7	69	3.7	109	91	52	0	0	3	2	2	1
SALISBURY	57	36	68	24	46	11	.5	-.3	.3	2.5	33	1.8	48	91	44	0	0	2	2	2	0
MA BOSTON	45	32	66	16	39	10	.3	-.6	.2	1.8	21	.8	18	77	47	0	0	3	3	3	0
CHATHAM	43	33	49	20	38	8	.6	-.4	.4	3.2	32	1.8	37	87	68	0	0	2	2	3	0
MI ALPENA	30	16	50	2	23	6	.1	-.3	.1	2.7	70	1.5	77	91	53	0	0	7	3	3	0
DETROIT	38	26	60	14	32	8	.3	-.3	-.1	3.3	73	1.4	66	92	62	0	0	5	4	4	0
FLINT	36	22	59	11	29	8	.2	-.2	.1	2.6	70	1.4	78	90	54	0	0	6	3	3	0
GRAND RAPIDS	35	23	57	9	29	7	.3	-.1	.2	3.0	62	1.1	48	90	64	0	0	4	4	4	0
Houghton Lake	27	16	45	-2	22	5	.1	-.3	.1	2.8	80	1.0	59	86	63	0	0	6	3	3	0
LANSING	36	23	61	10	30	10	.2	-.1	.1	2.5	59	1.2	68	90	59	0	0	4	2	2	0
MARQUETTE	20	1	40	-20	10	-2	.4	-.1	.3	4.5	97	2.2	96	94	61	0	0	7	5	3	0
MUSKEGON	32	23	48	10	28	5	.2	-.2	.2	4.5	87	1.7	65	91	61	0	0	5	4	4	0
SAULT ST. MARIE	23	8	40	-9	16	3	.3	-.2	.1	6.1	122	2.5	101	89	58	0	0	7	7	6	0
MN ALEXANDRIA	8	-9	40	-33	-1	-8	.2	0	.2	1.1	64	.7	74	85	70	0	0	7	1	1	0
DULUTH	13	-9	42	-30	2	-6	.1	-.2	.1	3.0	118	1.9	148	80	51	0	0	7	2	2	0
INT'L FALLS	8	-15	37	-38	-3	-6	.1	-.2	.1	2.2	118	1.4	149	85	53	0	0	7	2	2	0
MINNEAPOLIS	19	2	48	-24	11	-2	.3	.2	.2	1.5	87	.8	94	81	53	0	0	7	2	2	0
ROCHESTER	21	5	48	-23	13	1	.1	0	.1	1.6	91	.5	56	86	65	0	0	6	3	3	0
MS GREENWOOD	65	47	78	27	56	11	1.3	.2	.5	11.7	105	6.4	111	91	55	0	0	2	4	4	0
JACKSON	68	46	80	31	57	10	1.2	.2	.6	9.5	87	4.7	85	100	62	0	0	2	4	4	1
MERIDIAN	69	45	80	34	57	10	1.2	.1	.8	11.8	106	4.3	77	96	58	0	0	2	3	3	1
MO CAPE GIRARDEAU	47	32	65	12	40	-	3.3	2.6	2.7	10.2	146	7.3	225	95	66	0	0	2	3	3	1
COLUMBIA	39	19	74	-2	29	-1	.3	-.1	.3	5.1	128	1.6	83	93	60	0	0	5	5	5	0
KANSAS CITY	34	18	68	-7	26	-3	.1	-.2	.1	1.9	67	1.0	76	92	60	0	0	5	2	2	0
SAINT LOUIS	44	28	74	4	36	6	.5	.1	.3	6.3	150	3.0	153	88	58	0	0	3	4	4	0
SPRINGFIELD	40	20	73	-3	30	-2	.4	0	.3	5.0	116	1.9	106	90	59	0	0	4	3	3	0
MT BILLINGS	14	-6	52	-28	4	-21	.3	.2	.2	2.1	114	1.5	144	65	43	0	0	6	4	4	0
GLASGOW	8	-14	47	-30	-3	-13	.1	-.1	.1	1.1	142	.6	154	78	53	0	0	7	1	1	0
GREAT FALLS	14	-10	62	-35	2	-21	.2	-.1	.1	1.1	142	.6	154	78	53	0	0	7	1	1	0
HAVRE	7	-13	57	-30	-3	-18	.1	-.1	.1	2.0	108	1.1	96	71	42	0	0	5	3	3	0
HELENA	10	-13	58	-33	-2	-24	.3	.2	.2	1.9	139	1.6	211	82	50	0	0	7	3	3	0
KALISPELL	17	-1	51	-21	8	-15	.3	-.1	.2	3.7	111	1.4	78	71	42	0	0	6	3	3	0
MILES CITY	9	-12	45	-33	-1	-18	.1	0	.1	1.6	125	1.0	148	62	43	0	0	7	2	2	0
MISSOULA	20	-3	56	-23	8	-16	.1	-.2	.1	1.5	55	.8	50	73	34	0	0	6	2	2	0
NE GRAND ISLAND	26	6	72	-14	16	-7	.1	-.1	0	1.1	87	.8	137	78	47	0	0	7	3	3	0
LINCOLN	28	8	72	-12	18	-4	.1	-.1	0	1.8	127	1.2	160	82	50	0	0	7	3	3	0
NORFOLK	23	2	65	-18	12	-7	.2	.1	.2	2.3	195	1.4	251	81	49	0	0	7	3	3	0
NORTH PLATTE	23	1	68	-17	12	-12	.1	0	0	1.0	122	.6	142	79	46	0	0	7	2	2	0
OMAHA	23	7	65	-16	15	-8	.1	-.1	.1	1.7	110	.9	112	75	54	0	0	7	2	2	0
SCOTTSBLUFF	24	-4	67	-21	10	-17	.2	.1	.2	.8	64	.2	45	76	32	0	0	7	3	3	0
VALENTINE	23	-6	70	-26	9	-11	.1	0	.1	.3	46	.1	27	68	32	0	0	7	1	1	0
NV ELY	37	10	45	1	24	-3	.2	.1	.2	1.4	92	.6	73	84	50	0	0	7	2	2	0
LAS VEGAS	62	39	68	30	51	4	.1	-.1	.1	.6	71	.5	94	52	22	0	0	1	0	0	0
RENO	43	20	63	1	32	-3	.5	.2	.3	1.5	59	.7	51	87	45	0	0	7	2	2	0
WINNEMUCCA	37	9	54	0	23	-10	.3	.1	.1	1.0	57	.5	53	92	50	0	0	7	3	3	0
NH CONCORD	39	23	62	9	31	11	.3	-.3	.3	2.1	32	1.0	33	87	50	0	0	6	4	4	0
NJ ATLANTIC CITY	52	31	69	18	41	9	.6	-.2	.3	3.3	45	2.7	69	91	51	0	0	4	2	2	0
NM ALBUQUERQUE	55	30	60	22	42	5	0	-.1	0	.6	65	.6	133	76	28	0	0	4	0	0	0
CLOVIS	48	19	66	1	33	-5	.1	-.1	.1	1.7	152	.2	43	77	30	0	0	6	0	0	0
ROSWELL	57	26	76	9	42	1	.1	-.1	.1	.8	101	.3	72	73	28	0	0	6	0	0	0
NY ALBANY	41	25	65	9	33	12	.4	-.1	.4	1.9	33	.9	32	87	54	0	0	5	4	4	0
BINGHAMTON	38	24	58	6	31	10	.6	0	.3	3.2	55	2.0	70	90	64	0	0	5	5	5	0
BUFFALO	38	25	59	12	31	8	.3	-.4	.1	4.1	80	1.9	57	91	60	0	0	4	6	6	0
NEW YORK	47	37	66	23	42	10	.7	0	.5	3.9	54	2.7	77	77	52	0	0	2	2	2	1
ROCHESTER	37	24	57	11	31	8	.2	-.3	.1	2.4	46	1.3	49	91	58	0	0	5	3	3	0
SYRACUSE	39	24	59	4	32	9	.4	-.2	.3	3.3	55	1.4	48	91	58	0	0	4	5	5	0
NC ASHEVILLE	67	35	77	29	51	14	.1	-.7	.1	3.1	46	1.7	47	92	37	0	0	3	1	1	0
CHARLOTTE	71	46	81	34	58	17	.1	-.9	.1	3.2	42	1.6	38	88	42	0	0	0	0	0	0
GREENSBORO	67	39	79	32	53	15	.1	-.8	.1	2.2	29	1.0	24	89	43	0	0	0	0	0	0
HATTERAS	65	50	74	39	58	13	.1	-.9	.1	5.1	51	4.3	79	93	61	0	0	0	2	2	0
NEW BERN	71	46	83	35	59	14	.1	-.9	.1	3.5	42	2.5	54	94	46	0	0	0	1	1	0
RALEIGH	69	42	83	32	55	16	.1	-.8	.1	2.4	34	1.4	35	87	40	0	0	1	2	2	0
WILMINGTON	73	48	82	36	61	15	.1	-.8	.1	2.2	29	1.6	39	95	49	0	0	0	1	1	0
ND BISMARCK	13	-7	50	-25	3	-7	.1	0	.1	1.3	128	.6	113	76	54	0	0	7	3	3	0
FARGO	9	-12	40	-33	-2	-8	.1	-.1	.1	3.0	245	1.9	308	81	65	0	0	7	1	1	0
GRAND FORKS	7	-13	37	-33	-3	-7	.4	-.2	.3	3.6	253	1.7	209	80	57	0	0	7	3	3	0
WILLISTON	8	-13	42	-32	-3	-12	.1	-.1	0	1.8	171	1.0	179	78	55	0	0	7	2	2	0
OH AKRON-CANTON	42	28	61	13	35	10	.3	-.2	.2	4.3	77	2.4	86	94	63	0	0	3	4	4	0
CINCINNATI	48	33	66	21	41	11	.8	-.1	.4	6.7	104	3.9	112	95	62	0	0	3	3	3	0
CLEVELAND	43	30	62	20	36	11	.6	0	.2	4.9	90	2.4	89	95	56	0	0	4	5	5	0
COLUMBUS	46	29	66	17	38	10	.4	-.2	.3	4.8	85	2.3	76	93	62	0	0	4	3	3	0

Weather Data for the Week Ending February 4, 1989

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	45	30	64	18	37	10	.4	-.1	.3	5.7	108	3.1	108	92	64	0	3	3	0
TOLEDO	41	27	62	15	34	10	.4	-.0	.4	3.8	79	1.9	83	92	62	0	4	3	0
YOUNGSTOWN	42	28	60	15	35	11	.4	-.2	.2	4.2	73	2.2	74	95	63	0	4	3	0
OK OKLAHOMA CITY	43	22	73	0	32	-5	T	-.3	T	2.6	111	1.2	104	77	40	0	4	0	0
TULSA	43	22	76	1	33	-4	.1	-.2	.1	4.8	146	3.0	195	83	49	0	4	1	0
OR ASTORIA	36	26	52	11	31	-11	.7	-1.4	.4	15.6	66	8.3	69	87	61	0	5	5	0
BURNS	24	2	43	-17	13	-18	T	-.4	T	1.0	32	.3	19	83	53	0	7	0	0
MEDFORD	44	25	57	18	34	-6	T	-.3	T	3.8	52	2.5	66	94	55	0	7	3	0
PENDLETON	30	11	61	-13	20	-15	T	-.2	T	2.5	69	2.1	110	86	60	0	5	4	0
PORTLAND	37	23	56	9	30	-11	.3	-.9	.1	5.7	43	3.4	49	76	49	0	4	3	0
SALEM	38	22	60	3	30	-11	.8	-.6	.5	7.5	50	4.3	55	88	58	0	4	3	0
PA ALLENTOWN	48	29	65	16	38	11	.2	-.5	.1	2.9	39	1.9	50	87	50	0	3	3	0
ERIE	40	28	58	17	34	10	1.0	.5	.6	5.5	93	2.9	108	91	56	0	4	5	0
HARRISBURG	51	31	70	15	41	11	.3	-.4	.2	3.3	50	2.4	71	92	46	0	4	5	1
PHILADELPHIA	51	32	66	19	42	10	.7	0	.4	3.8	54	2.8	79	89	52	0	4	2	0
PITTSBURGH	46	30	64	12	38	11	.5	-.1	.3	4.6	80	2.4	76	89	61	0	3	2	0
SCRANTON	45	30	63	13	37	12	.2	-.3	.1	2.2	45	1.2	46	85	53	0	2	3	0
RI PROVIDENCE	45	30	64	18	38	9	.2	-.7	.1	2.2	45	1.2	46	85	53	0	3	4	0
SC CHARLESTON	76	53	84	45	64	16	.1	-.7	.1	2.3	25	1.2	27	86	49	0	3	2	0
COLUMBIA	73	46	84	34	59	14	T	-.9	T	3.0	44	2.3	62	97	53	0	0	1	0
FLORENCE	74	48	85	37	61	16	T	-.8	T	2.7	32	1.9	39	97	53	0	0	2	0
GREENVILLE	68	42	78	31	55	13	T	-.1	T	2.7	38	1.9	48	92	46	0	0	1	0
SD ABERDEEN	11	-11	42	-26	0	-10	.1	0	.1	3.4	38	1.5	31	93	49	0	1	1	0
HURON	18	-6	59	-23	6	-7	.3	.1	.2	2.0	188	.6	109	82	63	0	7	2	0
RAPID CITY	20	-6	72	-24	7	-16	.2	0	.1	1.1	116	.5	98	79	49	0	7	2	0
SIOUX FALLS	20	-1	58	-21	9	-5	.1	-.1	.1	.6	72	.2	39	74	38	0	7	2	0
TN CHATTANOOGA	64	40	74	31	52	13	.3	-.1	.3	.7	52	.3	51	77	50	0	7	2	0
KNOXVILLE	63	39	74	30	51	12	.8	-.8	.1	8.9	80	5.3	91	94	52	0	1	3	0
MEMPHIS	58	41	75	20	49	9	.8	-.2	.5	9.2	94	5.3	101	95	59	0	1	3	1
NASHVILLE	60	41	77	31	50	13	.8	-.2	.5	15.1	150	9.2	176	94	63	0	2	4	2
TX ABILENE	50	29	82	7	39	-5	.1	-.2	.1	8.7	90	4.8	95	95	62	0	2	4	1
AMARILLO	44	15	77	-5	30	-7	T	-.1	T	1.4	70	.6	53	78	41	0	3	1	0
AUSTIN	59	39	77	19	49	-1	1.3	.8	.9	.3	32	.2	29	72	29	0	6	0	0
BEAUMONT	67	50	78	29	58	5	1.1	.1	.6	5.3	135	4.2	219	95	60	0	2	2	1
BROWNSVILLE	70	54	82	32	62	1	1.1	.1	.6	12.6	131	6.8	144	99	74	0	2	2	1
CORPUS CHRISTI	69	50	83	28	60	4	.4	0	.4	2.0	78	2.0	133	99	76	0	1	4	0
DEL RIO	63	41	75	25	52	0	T	-.8	T	3.8	122	2.8	150	95	64	0	1	3	1
EL PASO	65	36	71	28	50	4	.1	-.1	0	1.4	114	1.0	151	83	44	0	2	1	0
FORT WORTH	62	30	84	14	41	-4	.5	-.1	.5	.6	74	.2	37	87	28	0	4	2	0
GALVESTON	64	51	74	29	58	4	.7	0	.4	5.5	149	3.0	154	90	50	0	3	2	0
HOUSTON	68	47	82	23	58	5	1.6	.7	1.3	9.1	132	6.3	187	99	75	0	2	2	0
LUBBOCK	51	22	75	3	37	-3	T	-.1	T	6.4	82	5.1	128	96	60	0	2	2	1
MIDLAND	57	27	77	8	42	-3	T	-.1	T	1.1	133	.5	116	70	28	0	5	0	0
SAN ANGELO	58	31	80	12	44	-3	.1	-.1	.1	.8	84	.3	53	79	32	0	5	0	0
SAN ANTONIO	62	42	79	22	52	1	1.0	.6	1.0	1.6	115	.8	107	89	42	0	3	1	0
VICTORIA	66	49	80	25	58	5	1.7	1.1	.9	3.6	116	3.0	165	93	55	0	2	2	1
WACO	54	35	77	17	45	-3	.6	-.1	.4	6.9	158	4.6	211	95	64	0	2	4	1
WICHITA FALLS	48	25	78	6	37	-5	T	-.2	T	4.8	126	2.8	145	96	61	0	2	3	0
UT CEDAR CITY	41	21	45	4	31	-1	.2	-.1	.2	2.2	97	1.0	101	75	37	0	4	0	0
SALT LAKE CITY	33	12	47	2	23	-8	.8	.5	.3	1.9	139	1.2	164	87	52	0	4	1	0
VT BURLINGTON	33	18	48	1	26	10	.1	-.3	.1	2.0	69	1.3	88	96	58	0	7	4	0
VA NORFOLK	67	43	81	33	55	16	.2	-.6	.1	3.4	46	2.7	65	85	54	0	7	4	0
RICHMOND	66	38	78	29	52	15	.4	-.3	.4	3.1	44	2.3	63	89	41	0	2	2	0
ROANOKE	66	39	76	27	53	17	.1	-.6	0	4.4	44	1.4	44	84	39	0	2	4	0
WA QUILLAYUTE	34	24	52	11	29	-11	1.2	-.9	.6	2.7	44	1.4	44	84	39	0	1	4	0
SEATTLE-TACOMA	35	23	52	7	29	-12	.7	-.6	.5	27.8	83	15.7	97	93	70	0	5	3	1
SPOKANE	25	8	50	-4	22	-10	T	-.5	T	6.8	52	3.3	49	78	54	0	5	3	1
YAKIMA	31	12	64	-4	22	-10	.2	-.1	.2	2.6	49	.8	30	80	47	0	6	1	0
WV BECKLEY	56	36	68	23	46	15	1.2	.5	.9	1.0	37	.4	23	76	41	0	7	1	0
CHARLESTON	58	37	71	22	47	13	1.7	.9	1.0	6.1	87	3.9	101	85	53	0	2	4	1
HUNTINGTON	55	37	71	22	46	12	1.4	.7	1.0	6.7	94	4.1	104	89	52	0	2	4	1
PARKERSBURG	52	35	68	19	44	12	1.1	.4	.5	8.0	118	4.8	133	86	52	0	2	4	1
WI GREEN BAY	26	12	48	-11	19	4	.1	-.1	.1	6.7	113	4.2	131	90	54	0	2	4	0
LACROSSE	26	9	52	-16	17	2	.1	-.1	.1	4.2	49	.5	38	89	61	0	7	2	0
MADISON	30	16	56	-8	23	6	.2	-.1	.1	1.2	57	.4	40	85	60	0	6	2	0
MILWAUKEE	33	20	58	-2	26	6	.2	-.1	.1	2.3	83	.7	57	89	63	0	6	4	0
WAUSAU	23	6	45	-21	15	3	.2	0	.1	2.4	64	1.0	56	92	61	0	6	4	0
WY CASPER	13	-7	57	-29	3	-22	.7	.6	.4	2.4	104	1.0	96	89	56	0	7	2	0
CHEYENNE	19	2	58	-24	11	-17	.8	.8	.4	1.4	135	.9	162	71	44	0	6	4	0
LANDER	18	-5	60	-24	7	-15	.4	.2	.3	1.6	206	1.1	268	80	54	0	5	4	0
SHERIDAN	17	-9	61	-32	4	-19	T	-.2	T	1.1	107	.4	74	76	40	0	7	3	0
PR SAN JUAN	82	69	83	67	76	-1	.5	-.1	.4	.6	38	.4	44	76	43	0	6	1	0
										7.2	95	3.1	97	85	61	0	0	3	0

Heating Degree Days Summary

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

LAST DATE OF DATA COLLECTION PERIOD IS 2-4-1989
ACCUMULATIONS ARE FROM JULY 1
** - NORMAL LESS THAN 100 OR RATIO INCALCULABLE

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

January Weather and Crop Summary

HIGHLIGHTS: Mild weather dominated much of the Nation, particularly the Corn Belt. Temperatures were unusually high in the Northwest and eastern two-thirds of the country during the latter part of the month. In contrast, abnormally cold weather settled over the Great Basin and in Alaska where a gigantic frigid air mass covered the northern and central portions of the State. Northway, Alaska, had the highest pressure ever recorded in North America of 31.85 inches of mercury. At month's end, the severe cold plunged across Canada's Prairie Provinces to the American border. Beneficial rain fell over the eastern portions of the winter wheat in the central and southern Great Plains, while the western portions received little precipitation. Except for an intense low pressure system which drenched central Florida with heavy rain, dry weather continued along the Atlantic seaboard. South Florida had the least amount of rainfall on record for the September to January period.

JANUARY 1-7: A major winter storm with blizzard conditions developed late in the week and dumped very heavy snow across the North Central States. Severe weather occurred in the warm, moist air ahead of the system in the middle Mississippi and Ohio Valleys. Several fast moving systems spread snow and light to moderate rain across the eastern half of the Nation earlier in the week. Dry weather persisted over Florida and much of winter wheat areas in the central and southern Great Plains. Mild weather prevailed over much of the country except for the Northeast, the Great Basin, and California.

JANUARY 8-14: Substantial rain fell from eastern Texas into the middle Atlantic Coast States. The persistent rains caused flooding in the lower Mississippi and Tennessee Valleys. Wet weather also covered much of the Pacific Northwest and northern Rockies. The central Great Plains, Florida, and much of the western Corn Belt again received little or no precipitation. Mild weather continued in the East, middle Mississippi Valley, and central Plains, while the Great Basin and Southwest remained cold.

JANUARY 15-21: Dry and mild weather prevailed over much of the Nation, including the winter wheat regions in the Great Plains. Frontal systems brought rain and snow into the Pacific Northwest and northern Rockies, while much needed rain soaked the western Gulf coast and Florida during the latter half of the week. In contrast

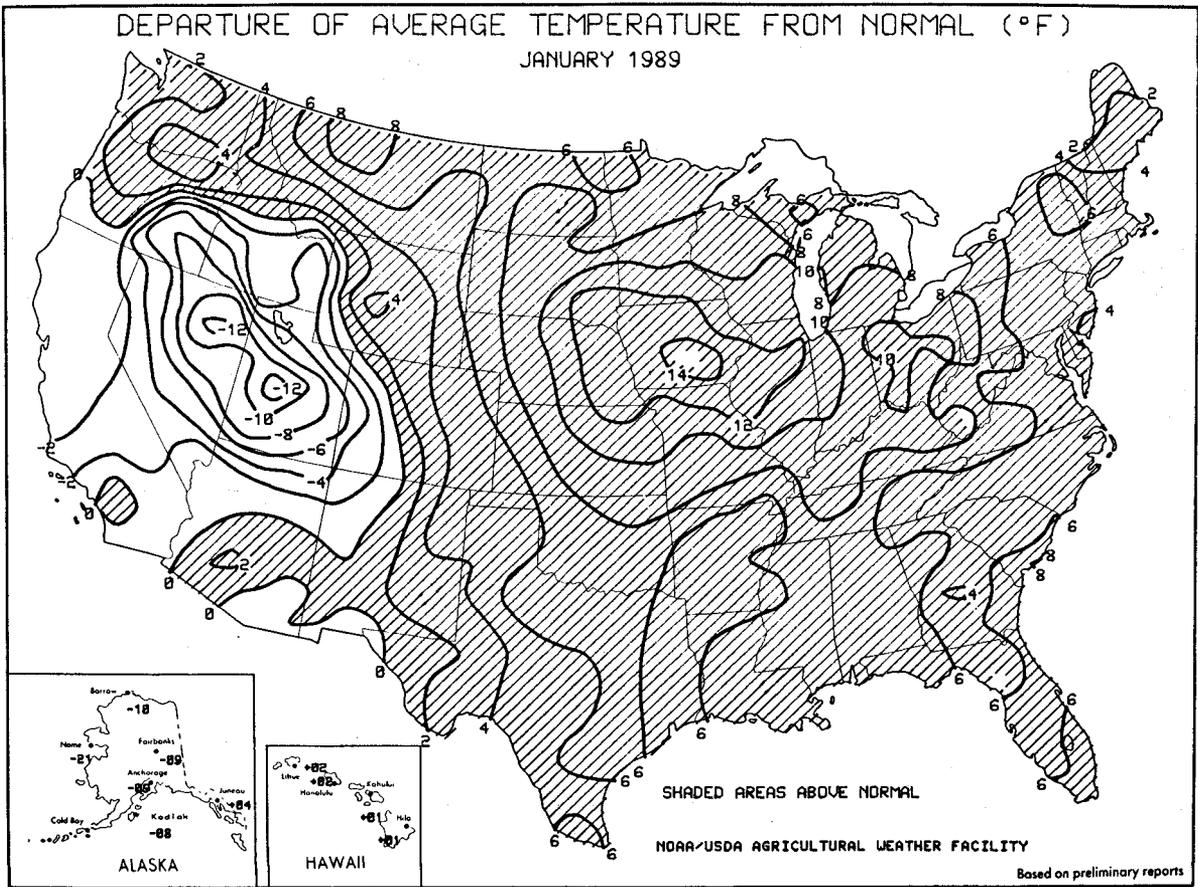
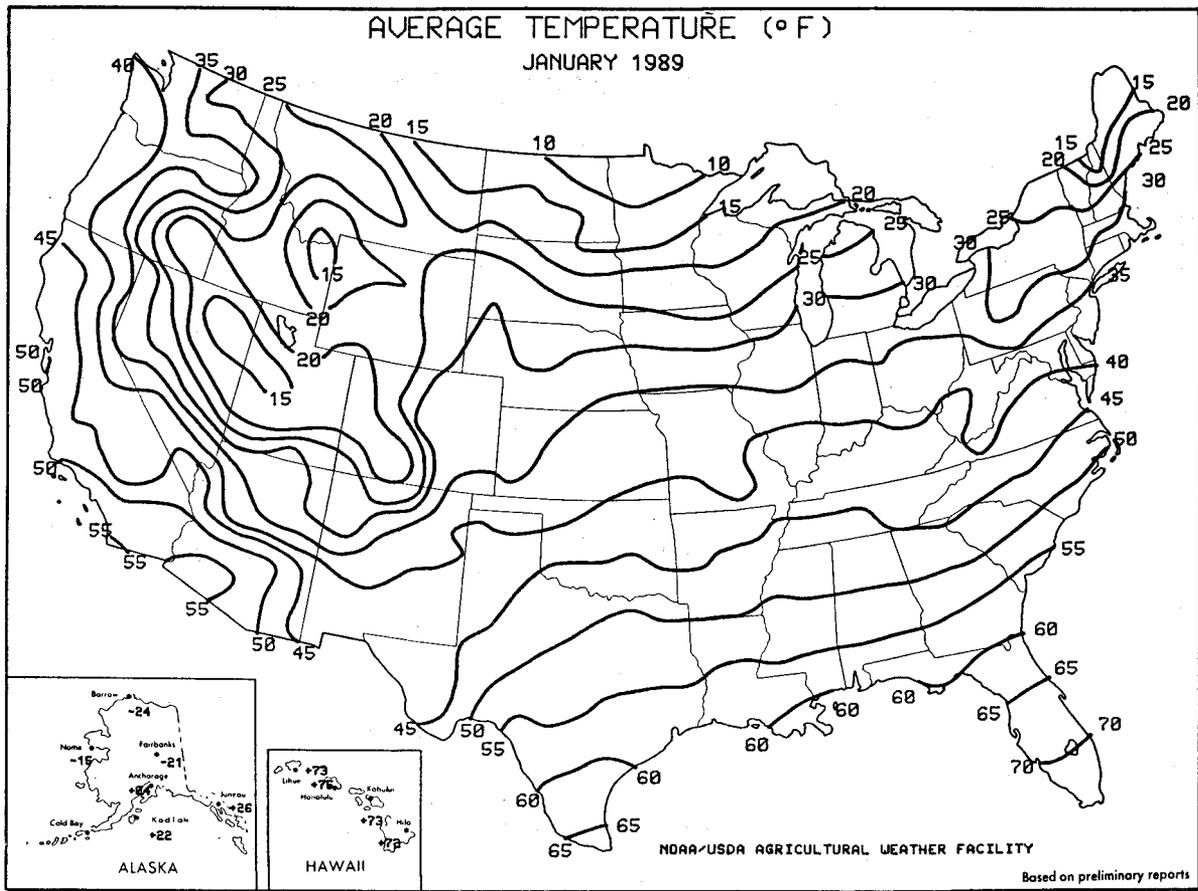
to the above-normal temperatures across most of the country, bitter cold weather remained in the Great Basin, central Rockies, and Alaska.

JANUARY 22-28: A couple of frontal systems during the latter half of the week brought much needed moisture into the winter wheat areas of the central and southern Great Plains. Heavy rain reached from south-central Texas into the middle Mississippi Valley. Early in the week, an intense low-pressure system caused drenching rain over much of Florida. Unusually mild weather continued over the Nation, except for the Great Basin and Alaska where all-time record-low temperatures were broken.

JANUARY 29-31: A cold front spread precipitation over much of the eastern half of the Nation. Alaska remained under a huge arctic high pressure system. The extreme cold air plunged into the North Central United States at month's end. In contrast, stations in central and eastern portions of the Nation broke numerous high temperature records.

Winter Wheat

Lack of moisture stressed winter wheat in the central and southern Plains during most of January. In the second week of the month, rain brought some relief to winter wheat in portions of eastern Texas. Snowfall provided needed moisture and protection in portions of central Oklahoma. In the third week of January, rain improved winter wheat conditions in central and eastern Texas, but the Plains and Cross Timbers area remained dry. In the last week of the month, rain brought some relief in portions of the central and southern Plains but additional moisture was needed. Greenbug damage was a continuing problem due to above-normal temperatures. In the northern Plains, snow cover was mostly adequate early in the month. By month's end, snow cover was needed except in Montana and North Dakota, where it was still mostly adequate. Winter wheat was mostly good to fair in the Corn Belt but lacked snow cover. In the Delta and Southeast, winter wheat was mostly good. Seeding was complete by mid-month in Georgia. Seeding continued in California during January. In Arizona, rain slowed seeding early in the month but by month's end, seeding was nearly complete. The emerged crop condition was good.



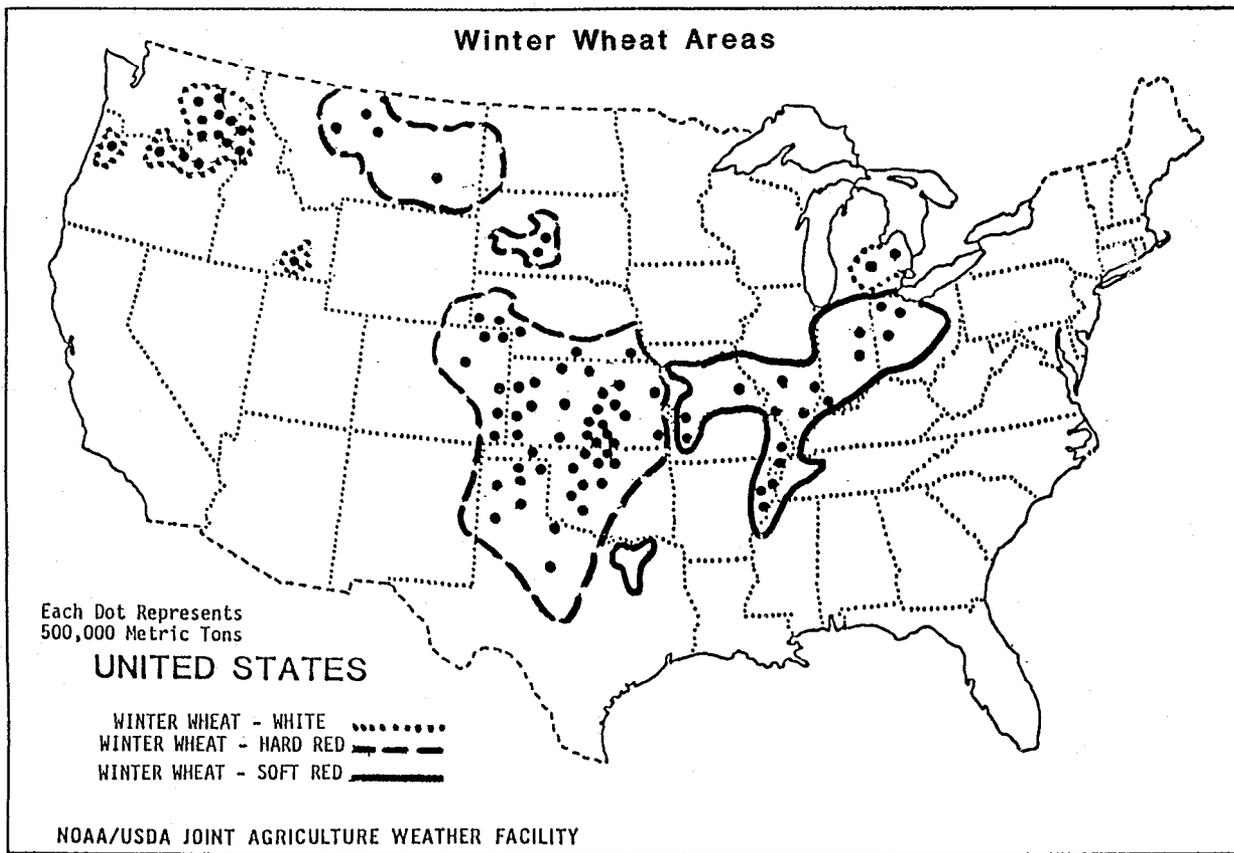
Heating Degree Days (Base 65°) For January 1989

States and Stations	TOTAL	Depart.	States and Stations	TOTAL	Depart.	States and Stations	TOTAL	Depart.
AL. Birmingham . . .	484	-201	MD. Baltimore . . .	834	-167	OK. Okla. City . . .	679	679
AL. Mobile . . .	254	-215	MA. Boston . . .	938	-159	OK. Tulsa . . .	663	-261
AK. Montgomery . . .	375	-205	MI. Chatham . . .	938	-113	OR. Astoria . . .	703	-38
AK. Anchorage . . .	1908	296	MI. Alpena . . .	1211	-265	OR. Burns . . .	1441	278
AK. Barrow . . .	2763	302	MI. Detroit . . .	991	-299	OR. Medford . . .	837	-12
AK. Fairbanks . . .	2676	264	MI. Flint . . .	1053	-302	OR. Pendleton . . .	821	-177
AK. Nome . . .	2487	652	MI. Grand Rapids . . .	1062	-271	OR. Portland . . .	699	-110
AZ. Flagstaff . . .	1196	55	MI. Houghton Lake . . .	1236	-252	OR. Salem . . .	716	-81
AZ. Phoenix . . .	321	-73	MI. Lansing . . .	1049	-296	PA. Allentown . . .	974	-198
AZ. Tucson . . .	461	30	MI. Marquette . . .	1379	-261	PA. Erie . . .	972	-284
AZ. Winslow . . .	1005	-18	MI. S. Ste. Marie . . .	1403	-200	PA. Harrisburg . . .	931	-173
AZ. Yuma . . .	279	-11	MN. Duluth . . .	1567	-253	PA. Philadelphia . . .	876	-172
AR. Fort Smith . . .	688	-165	MN. Internatl Falls . . .	1765	-247	PA. Pittsburgh . . .	905	-282
AR. Little Rock . . .	575	-203	MN. Minneapolis . . .	1353	-315	PA. Scranton . . .	1037	-197
CA. Bakersfield . . .	614	93	NY. Rochester . . .	1335	-345	RI. Providence . . .	960	-181
CA. Eureka . . .	582	33	NY. St. Cloud . . .	1513	-285	SC. Charleston . . .	285	-258
CA. Fresno . . .	679	74	MS. Jackson . . .	392	-219	SC. Columbia . . .	469	-168
CA. Los Angeles . . .	294	8	MO. Meridian . . .	401	-215	SC. Greenville . . .	589	-152
CA. Redding . . .	628	54	MO. Columbia . . .	828	-335	SD. Aberdeen . . .	1527	-231
CA. Stockton . . .	656	42	MO. Kansas City . . .	836	-376	SD. Huron . . .	1283	-385
CA. San Diego . . .	313	55	MO. St. Louis . . .	730	-392	SD. Rapid City . . .	1120	-250
CA. San Francisco . . .	511	-1	MO. Springfield . . .	780	-259	SD. Sioux Falls . . .	1219	-412
CO. Denver . . .	969	-132	MT. Billings . . .	1168	-199	TN. Chattanooga . . .	602	-213
CO. Pueblo . . .	980	-111	MT. Glasgow . . .	1570	-191	TN. Knoxville . . .	681	-150
CO. Bridgeport . . .	957	-144	MT. Great Falls . . .	1140	-295	TN. Memphis . . .	533	-254
CO. Hartford . . .	1054	-180	MT. Havre . . .	1364	-310	TN. Nashville . . .	618	-247
DC. Washington . . .	771	-153	MT. Helena . . .	1251	-203	TX. Abilene . . .	477	-196
FL. Apalachicola . . .	156	-245	MT. Kalispell . . .	1182	-235	TX. Amarillo . . .	747	-171
FL. Jacksonville . . .	162	-234	MT. Miles City . . .	1441	-137	TX. Austin . . .	307	-198
FL. Key West . . .	0	-49	MT. Missoula . . .	1180	-175	TX. Beaumont . . .	255	-176
FL. Miami . . .	1	-75	NE. Grand Island . . .	994	-382	TX. Brownsville . . .	100	-116
FL. Orlando . . .	32	-180	NE. Lincoln . . .	968	-436	TX. Corpus Christi . . .	168	-142
FL. W. Palm Beach . . .	7	-85	NE. Norfolk . . .	1063	-413	TX. Del Rio . . .	299	-151
FL. Tallahassee . . .	218	-223	NE. North Platte . . .	1072	-283	TX. El Paso . . .	661	16
FL. Tampa . . .	41	-187	NE. Omaha . . .	984	-451	TX. Fort Worth . . .	460	-191
GA. Atlanta . . .	468	-248	NE. Valentine . . .	1144	-291	TX. Galveston . . .	204	-172
GA. Augusta . . .	443	-183	NV. Ely . . .	1466	207	TX. Houston . . .	260	-182
GA. Macon . . .	407	-173	NV. Las Vegas . . .	647	15	TX. Lubbock . . .	620	-192
GA. Savannah . . .	268	-239	NV. Reno . . .	1049	32	TX. Midland . . .	586	-74
ID. Boise . . .	1242	154	NV. Winnemucca . . .	1328	237	TX. San Angelo . . .	449	-156
ID. Lewiston . . .	884	-136	NH. Concord . . .	1211	-187	TX. San Antonio . . .	292	-171
ID. Pocatello . . .	1408	131	NJ. Atlantic City . . .	883	-146	TX. Victoria . . .	211	-175
IL. Chicago . . .	1003	-349	NM. Albuquerque . . .	909	-27	TX. Waco . . .	403	-188
IL. Moline . . .	998	-413	NY. Albany . . .	1146	-215	TX. Wichita Falls . . .	568	-198
IL. Peoria . . .	958	-391	NY. Binghamton . . .	1164	-194	UT. Milford . . .	1509	312
IL. Rockford . . .	1081	-367	NY. Buffalo . . .	1038	-249	UT. Salt Lake City . . .	1318	190
IL. Springfield . . .	890	-362	NY. New York . . .	844	-185	VT. Burlington . . .	1273	-227
IL. Fort Wayne . . .	978	-315	NY. Rochester . . .	1070	-213	VA. Lynchburg . . .	732	-195
IL. Indianapolis . . .	882	-327	NY. Syracuse . . .	1120	-188	VA. Norfolk . . .	602	-176
IL. South Bend . . .	972	-324	NC. Asheville . . .	701	-173	VA. Richmond . . .	696	-184
IA. Des Moines . . .	1002	-436	NC. Charlotte . . .	558	-202	VA. Roanoke . . .	725	-190
IA. Dubuque . . .	1160	-371	NC. Greensboro . . .	702	-151	WA. Quillayute . . .	783	-473
IA. Souix City . . .	1083	-430	NC. Hatteras . . .	432	-185	WA. Seattle-Tacoma . . .	749	-54
KS. Concordia . . .	857	-386	NC. Raleigh . . .	619	-168	WA. Spokane . . .	1113	-105
KS. Dodge City . . .	847	-254	NC. Wilmington . . .	406	-201	WA. Walla Walla . . .		
KS. Goodland . . .	953	-219	ND. Bismark . . .	1513	-294	WA. Yakima . . .	963	-178
KS. Topeka . . .	832	-374	ND. Fargo . . .	1658	-224	WV. Beckley . . .	812	-270
KS. Wichita . . .	817	-280	OH. Williston . . .	1613	-197	WV. Charleston . . .	735	-260
KY. Lexington . . .	750	-289	OH. Akron-Canton . . .	949	-288	WV. Huntington . . .	745	-253
KY. Louisville . . .	720	-288	OH. Cincinnati . . .	811	-308	WI. Green Bay . . .	1216	-365
LA. Baton Rouge . . .	230	-236	OH. Cleveland . . .	922	-303	WI. Madison . . .	1153	-378
LA. Lake Charles . . .	249	-193	OH. Columbus . . .	873	-302	WI. Milwaukee . . .	1065	-370
LA. New Orleans . . .	186	-237	OH. Dayton . . .	881	-309	WY. Casper . . .	1201	-126
LA. Shreveport . . .	418	-179	OH. Toledo . . .	978	-321	WY. Cheyenne . . .	1075	-131
ME. Caribou . . .	1627	-59	OH. Youngstown . . .	983	-282	WY. Lander . . .	1239	-168
ME. Portland . . .	1174	-175				WY. Sheridan . . .	1209	-202

Temperature and Precipitation Data for January 1989

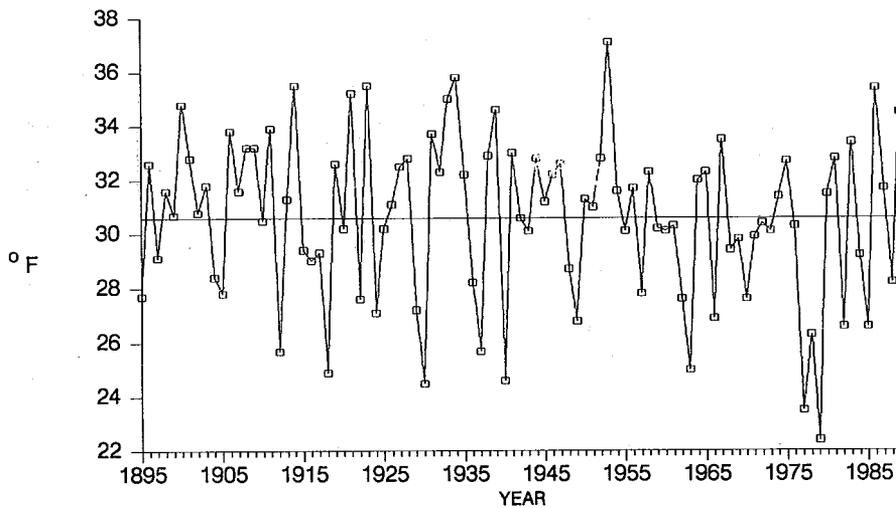
States and Stations				States and Stations				States and Stations						
Temperature °F		Precipitation Inches		Temperature °F		Precipitation Inches		Temperature °F		Precipitation Inches				
Average	Departure	Total	Departure	Average	Departure	Total	Departure	Average	Departure	Total	Departure			
AL BIRMINGHAM	49	6	4.2	-1.0	LA ALEXANDRIA	56	7	7.4	2.9	COLUMBUS	37	9	2.0	-0.8
MOBILE	57	6	2.1	-2.4	BATON ROUGE	59	8	4.0	-0.6	DAYTON	36	9	2.7	0.2
MONTGOMERY	53	6	2.0	-2.2	LAKE CHARLES	58	7	4.6	0.0	TOLEDO	33	10	1.8	-0.2
AK ANCHORAGE	4	-9	0.3	-0.5	NEW ORLEANS	60	8	2.5	-2.5	YOUNGSTOWN	33	9	2.0	-0.7
BARROW	-24	-10	0.0	-0.2	SHREVEPORT	52	5	7.2	3.2	OK OKLAHOMA CITY	43	7	1.2	0.2
FAIRBANKS	-21	-9	0.5	0.0	ME CARIBOU	12	1	1.9	-0.5	TULSA	43	8	2.9	1.6
JUNEAU	26	4	6.7	3.0	PORTLAND	27	5	1.2	-2.6	OR ASTORIA	42	1	8.2	-2.5
KODIAK	22	-8	2.5	-3.2	MD BALTIMORE	38	5	3.1	0.1	BURNS	17	-11	0.6	-1.0
NOME	-15	-21	0.8	0.1	MA SALISBURY	40	5	1.6	-1.8	MEDFORD	38	0	2.3	-1.1
AZ FLAGSTAFF	26	-2	1.8	-0.3	MA BOSTON	34	5	0.6	-3.4	PENDLETON	38	6	1.9	0.2
PHOENIX	54	2	1.2	0.5	CHATHAM	34	3	1.6	-2.7	PORTLAND	42	3	3.3	-2.9
PRESCOTT	36	0	1.4	-0.4	MI ALPENA	25	7	1.4	-0.3	SALEM	42	3	3.6	-3.5
TUCSON	50	-1	1.0	0.2	DETROIT	33	9	1.3	-0.6	PA ALLENTOWN	33	6	1.8	-1.5
WINSLOW	32	0	0.6	0.2	FLINT	31	9	1.3	-0.3	ERIE	33	8	1.9	-0.4
YUMA	36	0	0.6	0.2	GRAND RAPIDS	30	8	1.0	-1.0	HARRISBURG	35	6	2.3	-0.7
AR FORT SMITH	43	5	4.4	2.6	HOUGHTON LAKE	24	7	1.0	-0.5	PHILADELPHIA	37	5	2.4	-0.8
LITTLE ROCK	46	6	2.8	-1.1	LANSGING	31	10	1.2	-0.5	PITTSBURGH	35	8	2.0	-0.8
CA BAKERSFIELD	45	-3	0.2	-0.8	MUSQUETTE	19	7	1.8	-0.2	SCRANTON	31	6	1.0	-1.2
EUREKA	46	-1	4.7	-2.3	SAULT ST. MARIE	31	8	1.6	-0.7	RI PROVIDENCE	34	5	1.2	-2.9
FRESNO	43	-2	0.5	-1.6	MN ALEXANDRIA	14	9	0.5	-0.3	SC CHARLESTON	56	8	2.3	-1.0
LOS ANGELES	55	-1	0.6	-2.5	DULUTH	14	8	1.9	0.7	COLUMBIA	50	5	1.9	-2.5
REDDING	45	-2	2.1	-6.4	INT'L FALLS	8	8	1.4	0.6	FLORENCE	50	5	1.9	-1.6
SACRAMENTO	44	-1	0.7	-3.3	MINNEAPOLIS	21	10	0.5	-0.3	GREENVEEN	46	4	1.5	-2.7
SAN DIEGO	55	-1	0.4	-1.7	ROCHESTER	22	12	0.4	-0.4	HURON	16	8	0.5	0.0
SAN FRANCISCO	48	0	1.3	-3.4	ST. CLOUD	16	9	0.9	0.1	SD RAPID CITY	29	8	T	-0.4
STOCKTON	44	-1	0.4	-2.6	MS GREENWOOD	50	6	6.0	0.9	SIoux FALLS	26	13	0.2	-0.3
CO DENVER	34	4	1.1	0.7	JACKSON	52	7	4.4	-0.6	TN CHATTANOOGA	29	8	T	-0.4
GRAND JUNCTION	20	-5	1.0	0.4	MERIDIAN	52	7	3.9	-1.0	BRISTAL	45	6	5.3	0.1
PUEBLO	33	3	0.4	0.1	MO COLUMBIA	38	10	1.3	-0.4	KNOXVILLE	43	5	5.0	0.3
CT BRIDGEPORT	34	4	1.4	-1.8	KANSAS CITY	38	10	1.0	-0.2	MEMPHIS	47	8	7.9	3.3
HARTFORD	31	5	0.9	-2.6	SAINT LOUIS	41	12	2.6	0.9	NASHVILLE	45	8	4.5	0.1
DC WASHINGTON	40	4	2.5	-0.3	SPRINGFIELD	40	8	1.6	0.0	ABILENE	49	6	0.5	-0.4
FL APALACHICOLA	60	8	1.2	-2.3	MT BILLINGS	27	6	1.3	0.3	AMARILLO	41	5	0.2	-0.3
FT. MYERS	70	7	1.7	-0.2	GLASGOW	14	6	0.6	0.3	AUSTIN	55	6	3.8	2.2
DAYTONA BEACH	65	7	6.8	4.5	GREAT FALLS	28	9	1.0	0.0	BEAUMONT	57	5	6.8	2.7
JACKSONVILLE	61	7	1.7	-1.2	HAVRE	21	9	0.5	-0.1	BROWNSVILLE	66	6	1.9	0.7
KEY WEST	74	4	0.4	-1.3	HELENA	24	6	1.4	0.8	CORPUS CHRISTI	62	7	2.0	0.4
MIAMI	73	6	0.7	-1.4	KALISPELL	27	7	1.4	-0.2	DEL RIO	55	4	1.1	0.6
ORLANDO	67	7	3.8	1.7	MILES CITY	18	4	0.9	0.4	EL PASO	44	-1	0.1	-0.3
TALLAHASSEE	58	6	0.5	-4.2	MISSOULA	27	5	0.8	-0.6	FORT WORTH	50	6	2.6	0.9
TAMPA	67	7	1.5	-0.6	NE GRAND ISLAND	33	12	0.7	0.2	GALVESTON	59	5	6.3	3.3
WEST PALM BEACH	71	6	1.0	-1.7	LINCOLN	34	14	1.1	0.5	HOUSTON	58	5	4.8	1.3
GA ATLANTA	50	8	2.5	-2.4	NORFOLK	31	13	1.2	0.7	LUBBOCK	45	6	0.5	0.1
AUGUSTA	50	5	1.5	-2.5	NORTH PLATTE	30	9	0.6	0.2	MIDLAND	46	2	0.3	-0.2
MACON	52	5	1.9	-2.4	OMAHA	33	12	0.9	0.2	SAN ANGELO	50	5	0.7	0.1
SAVANNAH	56	7	0.5	-2.6	SCOTTSSBLUFF	31	7	T	-0.4	SAN ANTONIO	56	6	3.0	1.4
HI HILO	72	1	27.4	18.0	VALENTINE	28	10	T	-0.3	VICTORIA	59	7	3.9	2.0
HONOLULU	75	2	2.1	-1.7	NV ELKO	12	-13	0.5	-0.7	WACO	52	6	2.5	0.8
KAHULUI	72	1	1.6	-2.6	ELY	17	-7	0.4	-0.4	WICHITA FALLS	46	6	1.0	0.1
LIHUE	73	2	7.1	0.9	LAS VEGAS	44	-1	0.5	0.0	UT CEDAR CITY	21	-9	1.0	0.3
ID BOISE	25	-5	1.1	-0.5	RENO	31	-1	0.2	-1.0	MILFORD	16	-10	0.7	0.0
LEWISTON	36	4	1.6	0.2	WINNEMUCCA	23	-7	0.2	-0.7	SALT LAKE CITY	22	-6	0.6	-0.8
POCATELLO	20	-4	0.6	-0.5	NH CONCORD	26	5	0.7	-2.0	VT BURLINGTON	24	7	0.4	-1.4
IL CAIRO	-	-	4.4	0.9	NJ ATLANTIC CITY	36	4	2.4	-1.0	VA LYNCHBURG	41	6	1.4	-1.7
CHICAGO	32	12	0.8	-0.8	NM ALBUQUERQUE	36	1	0.6	0.2	NORFOLK	45	5	2.6	-1.1
MOLINE	33	13	1.2	-0.4	CLOVIS	40	3	0.2	-0.2	RICHMOND	42	5	1.9	-1.3
PEORIA	34	12	1.0	-0.6	ROSWELL	43	4	0.3	-0.1	ROANOKE	41	6	1.3	-1.5
QUINCY	37	13	0.6	-0.8	ALBANY	28	6	0.5	-1.9	WA COLEVILLE	25	0	0.8	-1.4
ROCKFORD	30	11	0.8	-0.6	BINGHAMTON	27	6	1.5	-1.0	QUILLAYUTE	40	1	15.7	1.3
SPRINGFIELD	36	12	0.9	-0.7	BUFFALO	31	7	1.8	-1.2	SEATTLE-TACOMA	41	2	2.8	-3.2
IN EVANSVILLE	40	9	3.4	0.4	NEW YORK	37	5	2.5	-0.6	SPOKANE	29	3	0.8	-1.6
FORT WAYNE	33	9	2.0	-0.1	ROCHESTER	30	6	1.2	-1.1	YAKIMA	34	6	0.2	-1.2
INDIANAPOLIS	36	10	1.8	-0.9	SYRACUSE	28	5	1.1	-1.5	WV BECKLEY	39	8	3.0	-0.4
SOUTH BEND	33	10	1.6	-0.9	ASHEVILLE	42	5	1.7	-1.5	CHARLESTON	41	8	2.9	-0.5
IA DES MOINES	32	14	1.3	0.3	CHARLOTTE	47	6	1.6	-2.2	ELKINS	36	8	3.8	0.4
DUBUQUE	27	11	0.9	-0.5	GREENSBORO	42	4	0.9	-2.6	HUNTINGTON	41	7	3.6	0.4
SIoux CITY	30	13	1.0	0.4	HATTIESAS	51	5	4.3	-0.5	PARKERSBURG	39	7	3.5	0.6
WATERLOO	27	13	1.1	0.3	NEW BERN	49	5	2.5	-1.5	WI GREEN BAY	26	11	0.4	-0.8
KS CONCORDIA	37	12	0.6	-0.1	RALEIGH	45	5	1.4	-2.2	LACROSSE	24	10	0.4	-0.5
DOEGE CITY	37	8	0.3	-0.2	WILMINGTON	51	6	1.6	-2.0	MADISON	28	12	0.6	-0.5
GOODLAND	34	7	0.2	-0.1	ND BISMARCK	16	9	0.6	0.1	MILWAUKEE	30	11	0.9	-0.8
TOPEKA	38	12	1.2	0.4	FARGO	11	7	1.9	1.3	WAUSAU	21	9	0.8	-0.1
WICHITA	39	9	0.8	0.1	GRAND FORKS	7	5	1.6	0.9	WY CASPER	26	4	0.2	-0.3
KY BOWLING GREEN	42	7	5.9	1.3	WILLISTON	13	6	1.0	0.5	CHEYENNE	31	5	0.3	-0.2
JACKSON	43	12	3.5	-0.4	OH AKRON-CANTON	34	9	2.2	-0.3	LANDER	25	5	T	-0.4
LEXINGTON	40	9	4.0	0.4	CINCINNATI	39	9	3.2	0.1	SHERIDAN	26	6	0.4	-0.4
LOUISVILLE	41	9	3.7	0.3	CLEVELAND	35	9	2.1	-0.4	PR SAN JUAN	76	0	3.0	0.0

Based on 1961-80 normals.



NATIONAL TEMPERATURE

JANUARY, 1895-1989



National Climatic Data Center, NOAA

Nationally, January 1989 was warm and dry. Preliminary data indicate that temperature averages across the contiguous United States were well above the long-term mean. January 1989 was the 10th warmest January in the 95-year record and the second warmest January in the last 35 years. In the Great Lakes region and Ohio Valley, monthly temperatures averaging 8-14° above normal made this the 4th warmest January of record.

National Agricultural Summary

January 30-February 5, 1989

HIGHLIGHTS: Cold temperatures and lack of snow cover may have damaged winter wheat in portions of the central and southern Plains. In the northern Plains, snow cover may have protected winter wheat from serious damage. Winter wheat received needed snow cover in the Corn Belt. Small grains were mostly good in the Delta and good to fair in the Southeast. Rain was needed in Florida's fruit and vegetable producing areas. California's vegetable crops suffered no major damage from cold temperatures. It was too early to assess damage to the citrus crop. Frigid temperatures combined with wind stressed livestock in the Plains and Pacific Northwest.

SMALL GRAINS: Cold temperatures may have damaged winter wheat in portions of the central and southern Plains. In Kansas, winter wheat was mostly poor to fair. Extreme cold temperatures late in the week may have caused widespread winter kill, but the extent of the damage was still unknown. Cold temperatures greatly reduced greenbug activity in Oklahoma. Possible winter kill was a concern, especially in the west. Lack of moisture continued to stress small grains in the Plains area of Texas. Small grain growth was good in the east and Blacklands area. Cold temperatures may have damaged some fields with poorly developed root systems. In the northern Plains, snow may have protected winter wheat from serious cold weather damage. Wind caused some damage prior to the snowfall in central South Dakota. Winter wheat was mostly fair in Montana. Snow cover melted or blew away early in the week but has been replenished. Cold temperatures and limited snow cover may have caused some winter kill in Oregon and Washington. Cold temperatures reduced Russian wheat aphid activity in Oregon. Winter wheat received needed snow cover in the Corn Belt. Winter wheat was mostly good in Illinois. Small grains were mostly good to fair in the Southeast. Producers were fertilizing small grains. In Georgia, mild temperatures have caused some premature development in winter wheat. Winter wheat was mostly good in the Delta. Freezing temperatures may have caused some damage in Mississippi. Small grain seeding continued in California and was nearly complete in Arizona.

OTHER FIELD CROPS: Snow and cold temperatures limited plowing and fertilizing in the Plains and Corn Belt. Land preparation for spring planting continued in the Southeast but was limited by rain in portions of the Delta. Land preparation for the 1989 cotton crop continued in Arizona and California.

Tobacco plant bed preparation and seeding continued in the Southeast. Georgia's tobacco plants were mostly good. Plant bed preparation was underway in Virginia.

FRUIT AND NUTS: Rain was needed in Florida's citrus producing areas. Groves have abundant new foliage and bloom buds. Early orange harvest was very active. Grapefruit shipments for processing increased. Dancy tangerine and Orlando tangelo harvests slowed. Grapefruit and tangerine harvests continued in central and western Arizona. Pecan shipment out of storage continued. Citrus harvest continued in Texas. Cold temperatures may have damaged some early blooming peach trees in the east. In California, it was still too early to assess damage from cold temperatures. Citrus harvest consisted mostly of grapefruit, lemons, royal mandarins, navel oranges, and minneola tangelos. Almond blooms are expected in 2 weeks.

VEGETABLES: Abnormally warm, dry weather continued throughout Florida's major vegetable producing areas. Plant development was ahead of normal. Spring crop planting was active. Winter crop harvest continued. Volume leaders were tomatoes, cabbage, peppers, celery, lettuce, and squash. Good supplies of snap beans, carrots, radishes, sweet corn, strawberries, eggplant, and endive were available. First winter potatoes were dug. Winter vegetable harvest continued in western Arizona. Near freezing temperatures caused little or no damage to vegetable crops in Texas. California's major vegetable producing areas suffered no major damage from cold temperatures late in the week. If the cold trend continues, more damage could occur. Cold weather slowed vegetable activities in the Salinas and Santa Maria areas. Cold weather reduced the quality of the asparagus crop in the Coachella Valley. Lettuce growers continued to thin and cultivate fields in the Kingsburg-Dinuba area. Potato harvest was active in the Perris-Hemet area. Quality of the crop was good.

PASTURES AND LIVESTOCK: Cold temperatures stressed livestock in the Northwest and the Great Plains. Low temperatures and wind were especially hard on newborn calves and lambs. Above-normal losses were expected in some areas. Minnesota producers had difficulty in supplying livestock water due to frozen water lines. Pastures were mostly fair to good in the South. Livestock was mostly good.

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 1.00 to 2.00 in. north, under 0.50 in extreme northwest; mostly under 0.80 in. central; none to less than 0.50 in. south. Temperatures 7 to 11° above normal north; 8 to 16° above normal central, south.

Winter wheat mostly good; disease problems extreme south. Livestock good to excellent. Pastures fair to good. Hay, roughage for remainder of season 4% short, 87% adequate, 9% surplus. Primary activities: Repairing fences; maintenance of equipment; pruning, spraying fruit trees; planting early vegetable crops; destruction of cotton stalks; soil testing; harvesting catfish; working on farm records; general care of livestock, poultry.

ARIZONA: Mostly sunny 29th to 1st. Sunny, mild conditions 2nd. Gusty winds 35 to 45 mph, light rain, snow showers north 3rd. Cold Arctic air, strong winds, light to heavy snow northwest 4th. Temperatures 1 to 7° above normal.

Cotton field preparation underway including seedbed preparation, furrowing, pre-irrigation, preplant herbicide applications. Wheat, barley seedings virtually complete, except eastern areas; 99% stands established, 15% jointing. Earlier plantings boot stage; later seedings jointing stage. Alfalfa fields grazed by sheep. Milder temperatures reduced frost protection. West, central harvest grapefruit, few lemons, tangerines continued. Head lettuce, broccoli, cauliflower, boston, leaf, romaine lettuce; cabbage, kale, napa, escarole, bok choy, endive, asparagus, celery, greens, carrot harvest west. Mandarins, mineolas, few navels, Arizona sweets harvested central. Pecans shipped out of storage statewide.

ARKANSAS: Extreme cold latter part week ended 3 weeks of unseasonably warm weather. Heavy showers over most State; light snow, freezing rain after temperatures dropped. Temperature extremes 1°; 83°. Rainfall 1.19 to 3.32 in.

No fieldwork, tending livestock only. Possibility of freeze damage on fruit. No damage to wheat expected. Adequate soil moisture. Cattle good.

CALIFORNIA: High pressure weakened, by weekend low pressure trough developed along coast. Dry conditions replaced by rain, showers with snow in mountains.

Good progress field activities. Winter grain seedings good. Early fields good stands. Seeded some alfalfa. Sheep grazed mature alfalfa. Preparation spring crops progressed. Weed control, irrigation, fertilization active grain, alfalfa, cotton. Green-chop harvest continued southern areas. Season practices continued. Hives moved into almond orchards, buds swelled, bloom in 2 weeks. Deciduous orchards irrigated. Cold temperatures expected 5 to 7th. Citrus, avocado damage assessed next week. Harvest ongoing grapefruit, lemons, royal mandarins, navel oranges, minneola tangelos. Vegetable activity Salinas, Santa Maria slowed due cold weather. Cold weather affected quality artichoke, supplies Salinas basically no effect current vegetable crops being harvested or earlier planted crops. Broccoli Santa Maria moderate, heavy supply, good quality. Harvest Salinas-Watsonville almost complete. While harvest Kingsburg-Dinuba continued full swing. Potato sheds Tulelake-Butte Valley continued to operate. Harvest Perris-Hemet full swing good crop

quality demand. Asparagus quality Coachella Valley suffered result recent weather. Lettuce growers Kingsburg-Dinuba continued thin cultivate fields, harvest slowed Palo Verde Valley. Field preparation spring vegetable planting continued Cutler-Orosi; melons, tomatoes plantings Palo Verde Valley ongoing. Harvest packing green onions, napa, bok choy, diakon, leaf lettuce continued Kingsburg-Dinuba. Early major vegetable producing areas indicate no major damage from cold snap late week. If cold trend continues, some damage could occur. Livestock fair to good statewide. Lower elevations, dry, cold weather caused poor range pasture conditions. Heavy grazing some areas diminished feed gained from earlier warm weather. Conditions Foothills good for this time of year. Supplemental feeding increased most areas. Water supplies very low. Livestock movement light. Lambing, calving continued few areas, some cold weather loss newborn calves.

COLORADO: Early week dominated by high pressure, westerly flow aloft; temperatures above normal, especially east. Later week strong Arctic system brought bitter cold, temperatures fell well below normal east. Temperatures remained slightly above normal elsewhere. Snow spread over State, localized heavy amounts west Slope, central mountains, lighter amounts elsewhere. Temperatures 4° above normal to 13° below normal. Precipitation none to 0.50 in. Record low temperatures recorded some areas, current cold temperatures expected to last for awhile.

Wheat areas northeast have 3 to 6 in. snow cover, southeast only 1 to 3 in.

FLORIDA: Another mostly warm, dry week. Temperatures 10 to 15° above normal, except 7 to 10° above along lower southeast coast. All areas reached at least 80°. Lowest temperatures mostly 40s north, 50s elsewhere. Rain limited to Panhandle, extreme north; mostly under 0.25 in., maximum 0.60 in. Chipley.

Soil moisture short except few widely scattered areas adequate. Warm weather caused small grains to start tillering 2 weeks ahead of normal. Growers worked ground for spring sown crops, cared for tobacco beds, harvested sugarcane. Dry conditions continued to slow growth winter grazing crops Panhandle, Big Bend; conditions very poor to fair. Warm temperatures stimulated growth Peninsula; sufficient moisture grazing seasonally good to excellent. Elsewhere Peninsula, conditions poor to mostly fair. Cattle, calves generally fair to good, warm weather favorable for calving. Citrus groves warm, dry; rain needed. Abundant new foliage, bloom buds. Fruit droppage not excessive. Early orange harvest very active. Grapefruit movement for processing increased. Dancy tangerine, orlando tangelo harvest slowed. Temple harvest slow due to lagging maturity. Abnormally warm, dry weather continued throughout major vegetable producing areas. Plant development, many crops, ahead of schedule. Planting active most spring crops. Harvest winter crops active. Volume leaders: Tomatoes, cabbage, peppers, celery, lettuce, squash. Good supply also available snap beans, carrots, radishes, sweet corn, strawberries, eggplant, escarole, endive. First winter potatoes dug.

GEORGIA: Cold across nation remained north. Temperatures 10 to 12° above normal north, 12 to 18° central, south. Lows 30° mountains, upper 30s

central, low 40s south. Highs low, mid 70s north; low 80s central, mid 80s extreme south, southeast. Rain 3 to 4 days northern half, 1 to 2 days central, south; 1.00 to 2.00 in. mountains, under 0.50 in. elsewhere north. Rain much less central, south; under 0.50 in.

Soil moisture short north, southwest, southeast; adequate elsewhere. Much concern with unseasonably warm temperatures caused premature peach blooming, premature wheat jointing, head formation. Main activities: Tobacco bed preparation, land preparation, nitrogen application, small grain topdressing, peach tree pruning. Tobacco plants good. Small grains fair to mostly good. Pastures poor to good, mostly fair. Cattle, hogs fair to good.

HAWAII: Variable weather. Mostly sunny, chilly nights first half week. Eastward moving cold front brought heavy rains to State beginning on 2nd. Minor flooding occurred. Temperatures upper 50s to low 80s. Rainfall 0.02 to 7.20 in. Winds variable 5 to 25 mph, 40 mph gusts.

Days suitable for fieldwork 7.0. For most part, crops suffered little damage due to previous dry weather affording good drainage. Mostly sunny remainder week aided field activities. Head cabbage output steady, good quality. Chinese cabbage production moderate, shipments to mainland continued. Overall tomato production light. Banana production seasonal decline. Papaya production also seasonal low, spraying for disease heavy. Ginger root shipments increased, harvesting very active.

IDAHO: Temperatures low 50s first of week dropped to well below zero by weekend as Arctic front moved through State. Light amounts of snowfall, but all areas well below normal precipitation.

Arctic air virtually halted farming activities, especially outdoor work. Farmers' activities revolved around planning next cropping season, preparing taxes, attending conferences, workshops. Outdoor work included general livestock care, marketing, shipping products; equipment maintenance. Bitter cold added stress to calving, lambing activities. Some calves lost due to weather. Overall, livestock good. Hay, roughage remained adequate, supplies short some areas.

ILLINOIS: Temperature lows 2 to 5° above normal east, south; normal to 2° below west. Highs 2 to 6° below normal west; normal east. Record highs 60s, 70s 31st across State. Precipitation 0.25 to 0.50 in. central, north; 1.00 to 2.50 in. south.

Winter wheat mostly good. New snow cover 3 to 6 in. north, central provided some protection for winter wheat. Hay mostly adequate. Livestock good to excellent.

INDIANA: Temperatures 2 to 7° above normal. Lows none to single digits, highs 50s to low 60s. Precipitation below normal, 0.20 in. north to 2.00 in. extreme south.

Field activities minimal. Plowing, spreading fertilizer, manure where conditions permitted. Other activities: Hauling grain, cutting wood, processing tobacco, repairing machinery, tax preparation, purchasing supplies, attending meetings, farm program sign-up, care of livestock. Livestock mostly good. Hay short to adequate.

IOWA: Week began exceptionally mild but turned severely cold midweek. Temperatures 11° below normal west to 1° above normal east; extremes 71° 31st Albia, Ottumwa to -24° 3rd Sibley. Below normal precipitation; totals 0.05 to 0.45 in., average 0.15 in.

Extreme temperatures caused considerable livestock stress. Feed consumption up, livestock

gains down. Snow weekend also adding to increased hay utilization.

KANSAS: Temperatures well below normal 11°, 15 to 20° east. Readings 17° below normal northwest, 8° below northeast. Rain 0.50 to 1.00 in. east. Western two-thirds barely measurable to 0.25 in.

Topsoil 66% short, 26% adequate, 8% surplus. Subsoil 86% short, 12% adequate, 2% surplus. Wheat 9% very poor, 78% poor to fair, 13% good to excellent. All areas except southeast poor to fair. Southeast good to excellent. Crops extremely vulnerable freeze damage due mild temperatures. Extreme cold weekend may cause widespread winterkill, too early determine damage. Cold temperatures stressed livestock; newborn calves, lambs vulnerable low temperatures.

KENTUCKY: Mild early, high temperatures 60s, lower 70s 31st, 1st. Strong cold front weekend dropped temperatures to near normal. Afternoon temperatures 40 to 45°, 1 to 3° above normal. Significant rain weekend 1.00 to 3.00 in.

January temperatures Louisville 9° above normal, mild temperatures generally favored agriculture. Some concern for fall seedings, fruit buds as cold weather returned. Most areas good soil moisture, little or no snow cover. Burley quotas 24% above 1988. Livestock satisfactory. Quite few early calves.

LOUISIANA: Temperatures 5 to 12° above normal. Extremes 22°; 83°. Rainfall trace to 2.70 in.

Main activities: Caring for livestock, routine chores, limited fieldwork.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 0.54 in. Temperature 47°, normal 32°. Temperature extremes 20°; 74°. Temperatures hit record highs many areas 1st.

Main farm activities caring for livestock, maintaining machinery.

DELAWARE: Precipitation 0.52 in. Temperature 46°, normal 33°. Temperature extremes 23°; 68°. Temperatures hit record highs many areas 1st.

Main farm activities caring for livestock, maintaining machinery.

MICHIGAN: Temperatures 2° below to 9° above normal. Temperature extremes -19°; 64°. Precipitation 0.04 to 0.35 in. Warm weather early week depleted snow cover, little added snow late week.

Activities: Farmers preparing taxes, marketing crops, livestock. Livestock good. Feed adequate.

MINNESOTA: Temperatures 3 to 11° below normal. Extremes -40°; 55°. Precipitation near normal to 0.18 in. below normal, average 0.01 to 0.22 in. Greatest weekly precipitation 0.35 in. Snowfall 1 to 5 in. Snow depth weekend 14 to 27 in. northern third State and 2 to 11 in. elsewhere.

Bitter cold weather weekend caused great hardships. An increase in feed, bedding requirements. Maintaining ample water supplies to livestock great problem due to frozen water pipes.

MISSISSIPPI: Warm, dry changed to cold, wet. Temperature 55°; 10° below normal. Extremes 20°; 85°. Rainfall 1.02 in., 0.14 below normal. Maximum weekly rainfall 2.86 in.

Days suitable for fieldwork 2.0, 0.3 1988, 0.8 avg. Soil moisture adequate to surplus. Wheat good to excellent; worried about effects of hard freeze. Pastures fair to excellent. Livestock good. Feed grains mostly adequate. Hay short to adequate.

MISSOURI: Record setting high temperatures through 28th turned to first sub-zero temperatures of season. Snow northern half, less than 0.25 in. precipitation. Heavy rains south, up to 3.00 in. Bootheel.

Topsoil moisture 48% short, 41% adequate, 11% surplus. Subsoil moisture 67% short, 28% adequate, 5% surplus. Wheat 9% poor, 47% fair, 40% good, 4% excellent. Hay 6% very short, 42% short, 52% adequate, worst shortage northern counties. Livestock 1% poor, 18% fair, 73% good, 8% excellent.

MONTANA: Temperatures 12° below normal northeast to 26° below normal southwest. Precipitation 0.10 to 0.30 in. most south central.

Topsoil moisture 55% short, 45% adequate. Subsoil moisture 85% short, 15% adequate. Winter wheat 20% poor, 45% fair, 35% good. Snow cover protection 20% poor, 35% fair, 40% good, 5% excellent. Most snow cover blown away or melted prior to bitter cold, but since replenished. Grazing 25% open, 50% difficult, 25% closed. Forage limited. Calving very difficult with frozen ears, tails common. All livestock receiving supplemental feed. General livestock care major problem.

NEBRASKA: Week started spring-like with many record high temperatures upper 60s to mid 70s; 1st bitterly cold Arctic air mass plummeted temperatures to below zero with lows around 15 to 25° below. Winds forced wind chills 55 to 75° below zero bringing hazards to people, livestock. State finally received some moisture, snow cover with Arctic blast. Snow 5 in. common Panhandle, northwest while 2 to 3 in. over rest of State. Amounts of water in snowfall 0.10 to 1.00 in. Temperatures 9° to 24° below normal. Extremes -26°; 72°.

NEVADA: Mostly clear, sunny skies early. Siberian air mass dropped temperatures dramatically midweek, spreading clouds, gusty winds, snow showers all areas. As much as 18 in. new snow northern valleys, much larger amounts higher elevations.

Cold, windy, snowy weather hard on newborn calves, lambs, livestock in general. Chopping ice problem all areas. Marketing potatoes delayed by below zero temperatures.

NEW ENGLAND: Precipitation (rainfall, water equivalent of snow) 0.25 to 0.50 in., except for few northern areas less than 0.25 in. Temperatures single digits near Canadian border to upper 30s southern coast. Temperatures 10° above normal south, few degrees above normal north.

Major farm activities: Tending livestock, machinery repair, pruning.

NEW JERSEY: Temperatures above normal, 34° north, 37° south, 41° coastal. Extremes 10°; 71°. Precipitation below normal north, near normal south, coastal; 0.28 in. north, 0.82 in. south, 0.72 in. coastal. Heaviest 24-hour total 0.73 in. on 3rd, 4th. Heaviest 24-hour snowfall 1 in. on 4th, 5th.

Farmers caring for livestock, tending to normal winter chores.

NEW MEXICO: Large amounts of snow (4 to 8 in. lower elevations, over 1 ft. high mountain) over northwest, north central areas of State. Frigid Arctic air lowered temperatures eastern plain to as much as 16° below normal. Temperatures -12 to 79°.

NEW YORK: Very mild weather. High temperatures 40s to 50s on 29th, 30th, 31st. Readings reached record highs for date in much of State on 1st as

mercury climbed to mid 60s central, south eastern areas. Overnight lows 30s upstate, 40s New York City. Few showers through 1st. Most areas only trace to 0.10 in. New York City, Long Island brief heavy showers 30th gave them 0.50 in. rain. Colder air moved south east on 1st and 2nd. High temperatures single numbers St. Lawrence Valley to 50s New York City. Temperatures near normal through rest of week. Highs 5° north country, upper 20s to 30s south eastern areas.

Major activities: Caring for livestock, machinery repair, winter chores, attend meetings. Mild weather this time of year made activities easier. Lack of significant snow cover caused concern.

NORTH CAROLINA: Temperatures 12 to 16° above normal across State. Temperature extremes 22°; 84°. Precipitation none to 0.52 in.

Days suitable for fieldwork 6.2. Soil moisture 9% very short, 60% short, 30% adequate, 1% surplus. Pasture 6% very poor, 11% poor, 36% fair, 47% good. Oats 3% poor, 18% fair, 79% good. Barley 3% poor, 21% fair, 76% good. Rye 1% poor, 22% fair, 77% good. Wheat 1% poor, 19% fair, 79% good, 1% excellent. Feed grains 1% very short, 6% short, 92% adequate, 1% surplus. Hay, roughage 5% short, 92% adequate, 3% surplus. Major farm activities: Preparing land for spring planting; tending livestock; preparing, seeding tobacco plantbeds; topdressing small grains. Other activities: Repairing equipment; pruning fruit trees; planting cabbage; general farm maintenance.

NORTH DAKOTA: Temperatures 5 to 12° below normal. Extremes -39° north central 2nd, 53° south central 30th. Precipitation variable statewide, 0.02 in. central to 0.08 in. north central, southwest.

Soil moisture below normal. Snow depth 2 in. south central to 17 in. northeast. Winter seedings 71% sufficient snow cover protection winter wheat, 74% rye, 67% alfalfa. Livestock mostly fair to good, calving 3%, lambing 6%, shearing 12%. Feed remained mostly adequate.

OHIO: Temperatures 4 to 8° above normal despite late week chill. Extremes lows in single digits to high 60s to near 70s; teens as Arctic air settled in for weekend. Precipitation 0.10 to 0.20 in. north, 0.50 to 1.00 in. south. Most precipitation north as snow leaving 1 to 3 in. snow cover.

Soil temperatures back to freezing mark 4 in. depth all but southern areas.

OKLAHOMA: Temperatures 15° below normal Panhandle to 8° below normal east central. Precipitation none north central, west central, southwest to 0.94 in. east central.

Topsoil moisture 30% short, 55% adequate, 15% surplus. Subsoil moisture 40% short, 60% adequate. Frigid temperatures placed crops in dormancy, greatly reduced greenbug activity. Some western producers concerned with winterkill. Cattle removed in northwest to permit additional wheat pasture growth. Cattle good; marketings average, prices up slightly from last week.

OREGON: Temperatures nearly 10° below normal west, 10 to 20° below normal east. Precipitation mostly snow; north coast, coast range water equivalents 1.00 to 2.60 in.; Willamette Valley up to 0.67 in.; amounts east of Cascades less than 0.33 in.

Soil moisture short to adequate east, mostly adequate west. Fieldwork halted by extreme cold all areas. Russian wheat aphid disappearing. Some damage expected to grains from below 0° temperatures because snow cover very limited. Some areas crops growing before cold snap. Pruning fruits, berries delayed until after freezing weather. Livestock fair to good. Extreme cold,

wind took toll on calving, lambing. Hay supplies dwindling. Range, pasture fair to good except where snow covered eastern high country.

PENNSYLVANIA: Mild to warm over State first 4 days, back down to normal by weekend. Temperature 37°, 10° above normal. Temperature extremes 5°; 71°. Precipitation 0.46 in., 0.16 in. below normal.

Activities: Hauling manure; caring for livestock; maintaining machinery; fixing fences; grading potatoes; cutting firewood.

PUERTO RICO: Island rainfall 0.38 in., 0.23 in. below normal. Highest weekly rainfall 3.30 in. Pico Del Este-Luquillo, 0.99 in. Canovanas, 0.69 in. Fajardo. Highest 24-hour total 0.84 in. Pico Del Este-Luquillo. Total since January 1st 2.97 in., 12% below normal. San Juan WSFO temperature 76°, 1° below normal. Total rainfall 0.46 in., 0.10 in. below normal. Divisional temperature 76° on coasts, 68 to 73° interior. Station temperature 60° Pico Del Este-Luquillo to 78° San Juan City. Lowest minimum temperature 55° Cayey. Highest maximum temperature 93° Coloso.

SOUTH CAROLINA: Temperatures 12 to 17° above normal. Lowest 25° upper Greenville County on 31st. Highest 86° Cades in Williamsburg County on 3rd. Rainfall less than 0.25 in.

Main activities: Tobacco seedbed preparation, planting; equipment maintenance, routine chores.

SOUTH DAKOTA: Temperatures 2 to 18° below normal. Extremes -38°; 72°. Precipitation 1 to 6 in. northwest, 8 in. central, 1 to 2 in. south. Snow cover 1 to 2 in. southeast, 2 to 10 in. rest of State.

Some wind damage to winter grains occurred central part of State before snowfall.

TENNESSEE: Cold front across Appalachians early week produced scattered rainfall northeast. Major Arctic cold front crossed State late week, brought very cold air west half, widespread rain, sleet, freezing drizzle. Temperatures 6° above normal west, 13° above normal east. Lows 30s. Highs 48° west, 62° east. Precipitation above normal statewide.

Primary activities: Caring for livestock, attending meetings, spring planning.

TEXAS: Mild to warm southwesterly winds brought high temperatures to State early, midweek. Abrupt change to colder weather as Arctic front dropped north 2nd triggering scattered showers as moved southward. Front reached Brownsville 3rd, powered by gusty, northerly winds that caused severe wind chills. Freezing drizzle all way to Lower Valley. Temperatures well below normal. Rainfall light, totals below normal.

Crops: Small grains may be affected by coldest weather of season. Until late week growth improved some with milder temperatures. Many dryland fields Plains suffering from lack of moisture. Aphid populations beginning to increase. Fields Blacklands, east wet, showing good growth. Drying conditions needed east. With colder weather producers concerned that poor root development many fields, along with the low temperatures, could severely hurt crops, especially oats.

Commercial Vegetables: Rio Grande Valley producers hoping that colder temperatures do not arrive. Until now, temperatures hovered around freezing, not harmed many fields. Some melons not

germinated may need replanting, emerged fields enough ground warmth to reduce damage. Other leafy vegetables not severely hurt. Onion progress slowed, may have been needed. Citrus not hurt, crews busy picking many groves. Some early blooms could be lost, nothing serious. San Antonio-Winter Garden normal progress occurred until late week. Spinach quality suffering. Land preparations Plains, halted midweek. Peach trees blooming early east could be hurt by cold; trees not as far along could benefit from chilling hours.

Range and Livestock: Producers busy trying to keep enough hay, protein supplements available to livestock as cold weather arrived. Some losses expected, especially newborn calves. Producers breaking ice many tanks, water troughs. Small grain grazing remained short Plains. Fields Blacklands east providing good grazing. Some greening native pastures south occurred with milder temperatures early week.

UTAH: Precipitation none south, heavy north. Temperatures normal to 9° below normal.

Snow cover good on fall seeded grains. Winter range feeds generally fair. Scattered supplemental feeding. Major farm activities; livestock chores, equipment maintenance, summarizing tax records, attending farm meetings.

VIRGINIA: Temperatures record highs most week. Cold Arctic air arrived end of period. Range 23 to 81°. Precipitation range 0.10 to 0.90 in. Sleet, freezing rain, snow over wide range.

Days suitable for fieldwork 6.0. Topsoil moisture 18% very short, 77% short, 5% adequate. Winter grains, grazing crops 4% very poor, 25% poor, 54% fair, 17% good. Excellent weather for calving, lambing, plowing, topdressing small grains, fertilizing, liming, preparing tobacco seedbeds.

WASHINGTON: Temperatures 3 to 9° below normal west; 2 to 12° below normal east. Precipitation 0.34 to 2.39 in. west; none to 0.88 in. east.

Days suitable for fieldwork less than 1.0. Soil moisture 40% short, 60% adequate. Range, pasture 50% short, 50% adequate. Hay, other roughage 65% adequate, 35% surplus. Probable crop damage several counties due to frigid temperatures, lack of snow cover. Winter livestock feeding underway across State.

WEST VIRGINIA: Temperature 42°, 9 to 15° above normal. Extremes 9° Terra Alta; 75° Moorefield, Romney. Precipitation 1.15 in., 0.02 in. below normal northeast, 0.30 to 0.92 in. above normal elsewhere.

Days suitable for fieldwork 4.4. Soil moisture 78% short, 11% adequate, 11% surplus. Wheat, barley mostly fair. Livestock mostly good. Feed 33% short, 67% adequate. Farm activities: Feeding livestock, general farm maintenance, hauling manure.

WISCONSIN: Mild to frigid 14°. Extremes -32°; 61°. Precipitation 0.10 to 0.20 in. Snow flurries 2nd; 1 to 8 in. 5th, most southeast.

WYOMING: Temperatures below normal. Precipitation generally above normal.

Snow cover over most winter wheat growing area helped protect crop from bitter cold temperatures. Livestock fair to good with supplemental feeding. Early calving, lambing, shearing starting. No unusual losses thus far.

International Weather and Crop Summary

January 29 - February 4, 1989

January 1989

MONTHLY DATA FROM SELECTED FOREIGN CITIES
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA

*** = DATA NOT AVAILABLE

HIGHLIGHTS

WESTERN USSR ... Continued mild weather causes winter grains to lose winter hardiness, making them more susceptible to potential winterkill conditions.

EUROPE ... Abnormally dry weather continues over much of the continent.

SOUTH ASIA ... Dry, warmer weather benefits reproductive winter wheat and vegetative to heading rice.

EASTERN ASIA ... Moderate to heavy rain falls across sections of southern China, Taiwan, and Japan.

SOUTHEAST ASIA ... Rainfall tapers off over Indonesia and Malaysia, bringing some relief to flooded regions. Excessive showers persist over the central Philippines.

SOUTH AMERICA ... In Argentina, widespread rain in corn and soybean areas helps to ease persistent dryness. In Brazil, adequate to abundant moisture conditions continue for summer crop growth.

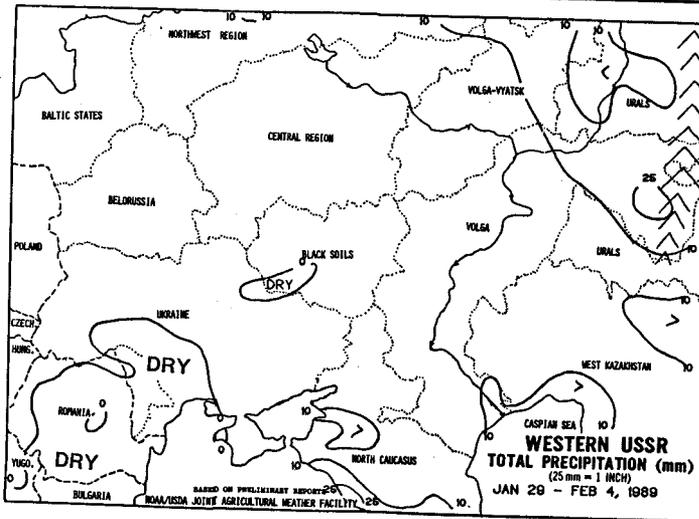
AUSTRALIA ... Light to moderate rainfall helps reduce dryness in summer crop areas. Torrential rainfall causes possible flooding in sections of the northeast.

SOUTH AFRICA ... Widespread showers and seasonable temperatures benefit reproductive to filling corn over most regions.

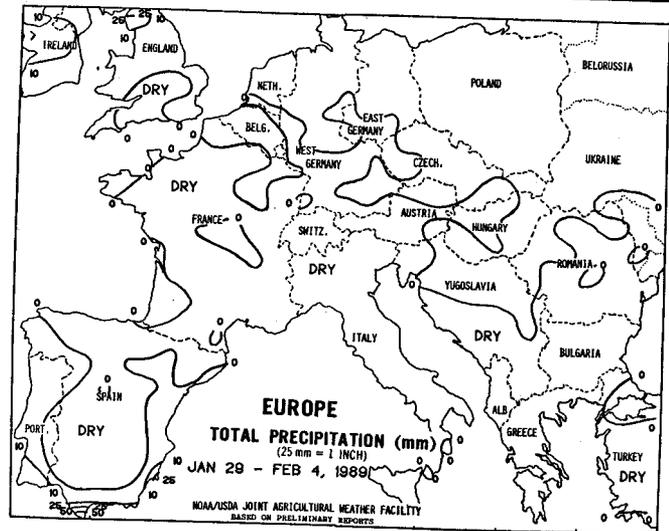
NORTHWESTERN AFRICA ... Dry weather returns to winter grain areas in Morocco, Algeria, and Tunisia.

COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
	AVG MAX	AVG MIN	HI	LO	DPART	F/NRM	DPART	
NORWAY OSLO	3	-2	10	-12	1	7.9	14.9	-42.9
SWEDEN STOCKHOLM	5	1	10	-7	3	5.1	6.1	-33.3
FINLND HELSINKI	2	-2	5	-22	0	5.8	39.1	-5.1
U KING GLASGOW	9	6	13	-1	8	4.1	140.0	7.7
EDINBURGH	9	6	13	0	7	4.2	51.6	2.6
BIRMINGHAM	9	4	12	-4	6	2.8	28.0	-30.5
LONDON	9	3	11	-5	6	2.5	31.8	-43.9
IRELND DUBLIN	10	6	13	1	8	3.0	27.8	-39.8
ICELND REYKJAVIK	2	-2	9	-9	0	0.6	131.9	57.0
DENMRK COPENHAGEN	6	3	10	-2	4	4.2	6.3	-42.7
LUXEMB LUXEMBOURG	4	0	10	-5	2	1.5	22.0	-42.8
SWITZL ZURICH	3	0	9	-4	1	1.7	7.5	-61.0
GENEVA	5	-1	11	-5	2	1.1	8.5	-67.9
FRANCE PARIS	7	2	13	-3	5	1.3	27.1	-23.3
STRASBOURG	5	0	12	-4	3	1.7	4.0	-31.3
BOURGES	7	1	13	-4	4	0.7	14.6	-45.8
BORDEAUX	10	1	16	-3	5	0.1	29.2	-70.6
TOULOUSE	11	1	15	-4	6	1.4	19.3	-37.2
MARSEILLE	13	2	16	-3	7	1.2	7.0	-37.7
SPAIN VALLADOLID	8	-2	13	-7	3	-0.6	7.1	-41.3
MADRID	12	-2	17	-7	5	-0.2	2.4	-48.2
SEVILLE	17	6	19	3	11	0.4	27.0	-58.7
E GRMY LEIPZIG	6	1	11	-4	3	3.6	26.0	-7.8
DRESDEN	5	1	12	-4	3	4.1	34.4	-3.6
W GRMY HAMBURG	7	3	10	-4	5	4.2	19.2	-36.4
BERLIN	6	2	11	-4	4	4.0	10.7	-29.9
DUSSELDORF	8	3	11	-1	5	3.5	36.8	-26.2
STUTTGART	6	-2	11	-9	2	2.6	9.0	-39.8
NURNBERG	4	0	9	-4	2	2.5	24.4	-18.5
MUNICH	4	-2	11	-8	1	2.7	21.4	-30.8
AUSTRI VIENNA	3	-2	11	-7	1	2.0	6.9	-21.0
INNSBRUCK	6	-5	11	-9	1	2.4	26.6	-24.8
CZECH PRAGUE	3	-2	7	-8	1	2.8	8.2	-13.9
POLAND WARSAW	4	0	10	-8	2	5.2	14.4	-8.4
LODZ	3	-1	8	-5	1	3.8	17.4	-20.7
KATOWICE	4	-2	8	-8	1	3.7	18.7	-23.2
PRZEMYSL	3	-1	8	-7	1	4.2	10.1	-22.2
HUNGAR BUDAPEST	1	-3	8	-8	-1	1.1	8.1	-23.5
YUGOSL SARAJEVO	1	-5	5	-15	-2	-0.5	12.0	-59.1
ROMANI BUCHAREST	5	-4	10	-10	0	2.6	5.1	-41.5
BULGAR SOFIA	4	-4	10	-9	0	2.5	0.5	-26.7
ITALY MILAN	5	-2	14	-6	1	0.2	2.4	-62.3
VERONA	5	-4	14	-9	1	-0.9	0.1	-51.5
VENICE	7	-2	16	-11	3	-0.2	0.1	-54.7
GENOA	14	9	18	5	11	3.6	10.1	-79.1
ROME	13	1	16	-3	7	-0.9	38.0	-40.7
NAPLES	14	3	17	0	9	0.6	9.1	-103.8
GREECE THESSALONIKA	9	-1	15	-5	4	-1.0	2.0	-44.2
LARISSA	9	-2	15	-7	4	-1.8	1.5	-38.5
ATHENS	12	5	16	0	9	-1.7	3.0	-47.9
TURKEY ISTANBUL	7	2	11	-4	5	-0.6	31.4	-54.6
ANKARA	2	-9	8	-16	-4	-4.0	3.7	-28.3
CYPRUS LARNACA	15	5	17	1	10	-2.0	65.2	-28.8
USSR TALLINN	3	0	6	-10	1	6.3	45.5	8.3
LENINGRAD	1	-2	6	-23	-1	7.1	42.0	5.3
KAUNAS	4	1	9	-8	2	7.0	26.4	-7.8
MINSK	2	-1	7	-17	1	7.5	37.9	3.5
KAZAN	-8	-13	1	-31	-11	2.8	29.2	1.9
MOSCOW	-1	-4	3	-22	-2	7.2	49.3	7.8
SVERDLOVSK	-14	-20	-1	-40	-17	-1.7	23.9	1.4
OMSK	-13	-19	-2	-33	-16	2.5	31.8	15.9
KUSTANAY	-11	-18	-2	-32	-15	3.0	41.6	27.6
KRASNOYARSK	-8	-14	-1	-29	-11	4.9	6.7	-9.5
NOVOSIBIRSK	-10	-15	0	-28	-12	7.1	17.8	-2.5
BARNAUL	-9	-14	-1	-25	-11	4.7	25.1	1.5
KHABAROVSK	-14	-22	-6	-31	-18	3.6	7.8	-2.2
VLADIVOSTOK	-6	-12	0	-21	-9	4.4	2.9	-12.0
KIEV	2	-1	7	-15	1	5.8	13.8	-29.5
LVOV	2	-2	7	-8	0	4.3	18.1	-19.7
KIROVOGRAD	1	-3	6	-19	-1	4.6	15.7	-19.2

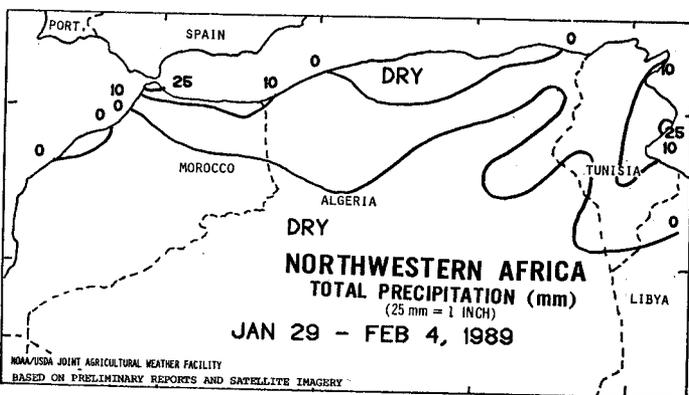
COUNTRY CITY		TEMPERATURE (C)					PRECIPITATION (MM)			COUNTRY CITY		TEMPERATURE (C)					PRECIPITATION (MM)			
January 1989		AVG	AVG	HI	LO	DPART	DPART			January 1933		AVG	AVG	HI	LO	DPART	DPART			
		MAX	MIN	MAX	MIN	AVG	F/NRM	TOTAL	F/NRM			MAX	MIN	MAX	MIN	AVG	F/NRM	TOTAL	F/NRM	
USSR	ODESSA	4	0	11	-13	2	3.4	3.3	-40.2	TANZAN	DAR ES SALAAM	30	23	32	15	26	-1.2	258.1	190.6	
	YALTA	6	2	13	-8	4	0.1	34.4	-31.6	GABON	LIBREVILLE	29	24	31	20	27	-0.1	246.8	-40.2	
	VORONEZH	-1	-5	2	-24	-3	6.1	31.6	-4.9	TOGO	LOME	32	21	34	17	26	-0.4	0.1	-14.1	
	SARATOV	-4	-8	2	-27	-6	5.1	41.3	6.7	B FASO	OUAGADOUGOU	32	15	34	10	23	-1.7	0.1	0.1	
	KHARKOV	0	-3	3	-19	-2	5.4	19.8	-21.9	IVRY C	ABIDJAN	31	23	33	18	27	0.5	36.0	14.1	
	VOLGOGRAD	-3	-7	1	-24	-5	3.5	31.1	-4.3	MOZAMB	MAPUTO	30	22	32	20	26	0.0	31.7	-141.1	
	ROSTOV	0	-3	3	-19	-2	3.0	36.1	-11.0	ZAMBIA	KABWE	25	18	29	15	22	0.6	195.2	-44.8	
	ASTRAKHAN	-1	-5	3	-19	-3	3.1	26.3	12.2	ZIMBAB	HARARE	26	16	29	15	21	0.8	152.9	-46.0	
	KRASNODAR	3	-2	7	-20	1	0.6	47.7	-18.3	S AFRI	PRETORIA	28	18	31	16	23	1.4	78.1	-70.4	
	ORENBURG	-8	-14	0	-31	-11	2.9	40.7	16.3		KROONSTAD	27	16	33	14	22	-0.9	137.0	44.0	
	TSELINGRAD	-10	-15	-1	-25	-13	4.6	22.1	15.1		JOHANNESBURG	25	15	28	11	20	0.6	108.2	-19.2	
	KARAGANDA	-9	-14	0	-24	-11	2.7	29.9	13.1		BETHAL	25	13	28	9	19	-0.6	129.8	-4.3	
	TBILISI	5	-2	8	-7	2	-0.2	1.2	-18.8		DURBAN	27	22	31	20	25	0.9	51.3	-75.0	
	TASHKENT	4	-4	13	-11	0	-1.1	28.4	-22.2		CAPE TOWN	27	16	33	12	22	1.3	1.1	-10.4	
	ASHKhabAD	5	-3	15	-10	1	-0.7	17.2	-7.8	CANADA	TORONTO	2	-6	11	-23	-2	4.2	26.2	-24.2	
SYRIA	DAMASCUS	9	-1	18	-7	4	-2.8	20.3	-23.8		MONTREAL	-2	-13	8	-28	-7	2.6	64.8	-7.3	
ISRAEL	JERUSALEM	10	1	16	-3	6	-3.5	85.4	-36.5		WINNIPEG	-10	-22	2	-36	-16	3.1	52.7	31.3	
PAKIST	KARACHI	26	13	29	8	19	1.0	7.4	-0.8		REGINA	-8	-20	3	-36	-14	3.7	22.7	6.0	
INDIA	AMRITSAR	19	3	21	-3	11	-1.0	23.9	-4.1		SASKATOON	-9	-20	3	-37	-14	5.0	18.3	1.0	
	NEW DELHI	20	7	25	3	13	-1.1	79.0	59.3		LETHBRIDGE	0	-12	13	-38	-6	4.0	23.8	0.2	
	AHMEDABAD	26	11	31	8	19	-1.3	2.0	-0.5		CALGARY	-1	-14	12	-34	-7	4.6	23.9	7.7	
	INDORE	27	9	33	4	18	-0.3	1.0	-8.1		EDMONTON	-3	-14	11	-34	-8	6.3	42.5	18.0	
	CALCUTTA	25	12	29	8	18	-1.4	0.1	-11.3		VANCOUVER	6	1	12	-5	4	1.1	149.2	-4.6	
	VERAVAL	27	13	31	9	20	-1.2	6.1	5.5	MEXICO	GUADALAJARA	26	7	28	4	17	1.1	0.1	-11.9	
	BOMBAY	31	17	36	15	24	0.1	2.0	1.8		MEXICO CITY	23	8	25	6	16	3.5	0.6	-4.7	
	POONA	30	11	33	9	20	-0.5	0.1	0.1		ACAPULCO	32	21	33	20	26	-0.2	0.1	-9.8	
	BEGAMPET	29	16	31	6	23	1.0	0.1	-2.9		BERMUD ST. GEORGES	22	17	24	8	20	1.9	102.3	-22.2	
	MADRAS	29	21	31	18	25	0.1	15.5	-5.2		BAHAMA NASSAU	27	17	29	14	22	1.2	19.3	-24.5	
	MANGALORE	32	21	35	19	27	0.0	0.1	-5.0		CUBA HAVANA	27	20	31	16	24	1.8	14.8	-47.2	
H KONG	HONG KONG	18	14	23	8	16	0.4	22.8	-4.2		JAMAIC KINGSTON	31	22	33	21	26	0.7	78.3	59.9	
N KREA	PYONGYANG	1	-7	9	-19	-3	5.7	27.9	19.0		P RICO SAN JUAN	28	21	30	19	25	-0.2	74.5	1.2	
S KREA	SEOUL	4	-2	11	-11	1	6.0	48.7	31.7		GUADEL RAIZET	29	20	29	17	24	0.8	53.3	-14.9	
JAPAN	SAPORO	1	-5	6	-10	-2	2.6	57.6	-56.2		MARTNQ LAMENTIN	28	23	30	20	25	1.7	60.3	-54.2	
	NAGOYA	11	3	16	-2	7	3.4	108.5	58.3		BARBAD BRIDGETOWN	29	23	29	15	26	0.3	18.4	-42.7	
	TOKYO	11	5	19	1	8	3.5	97.0	43.0		TRINID PORT OF SPAIN	30	22	31	20	26	1.2	40.7	-32.8	
	YOKOHAMA	11	5	19	0	8	3.3	89.5	28.3		COLOMB BOGOTA	19	8	21	0	13	0.4	3.9	-29.9	
	KYOTO	10	4	16	-1	7	4.1	124.0	72.8		VENEZU CARACAS	28	21	29	20	24	-0.6	1.0	-42.1	
	OSAKA	11	5	17	0	8	3.2	124.0	72.6		F GUIA CAYENNE	28	23	31	21	26	0.1	507.7	84.6	
THAILN	PHETCHABUN	33	19	36	14	26	3.5	7.1	-2.0		BRAZIL FORTALEZA	29	24	31	23	27	-0.9	175.1	37.1	
	BANGKOK	33	24	35	20	28	1.8	28.8	18.5		RECIFE	29	23	32	20	26	-0.9	114.0	46.6	
MALAYS	KUALA LUMPUR	32	23	34	21	28	1.4	151.5	-16.4		BELO HORIZONTE	30	20	32	18	25	2.1	121.6	-162.9	
VIETNM	HANOI	17	14	28	9	15	-1.4	120.3	102.5		CAMPO GRANDE	28	21	32	18	24	0.1	399.2	170.1	
CHINA	HARBIN	-11	-22	-2	-33	-16	4.2	5.0	1.3		FRANCA	27	17	30	15	22	0.1	334.0	84.1	
	HAMI	-1	-14	2	-18	-8	3.7	0.1	-1.8		RIO DE JANEIRO	30	24	34	20	27	0.4	62.4	-84.5	
	LANCHOW	1	-10	6	-16	-5	2.1	4.1	2.8		LONDRINA	28	20	31	18	24	0.1	359.2	125.3	
	BEIJING	3	-6	8	-11	-2	3.0	8.4	5.4		SANTA MARIA	30	20	34	16	25	-0.4	109.8	-31.2	
	TIENTSIN	3	-5	8	-10	-1	2.5	1.7	-1.5		PORTO ALEGRE	**	19	**	19	**	**	0.0	-119.1	
	LHASA	9	-8	16	-18	0	1.8	0.1	0.1	PERU	LIMA	27	19	28	15	23	3.0	0.9	0.1	0.1
	KUNMING	15	2	19	-2	9	1.1	0.8	-10.9	BOLIVI	LA PAZ	14	3	17	1	8	-0.8	92.0	-51.2	
	CHENGCHOW	4	-4	11	-11	0	-0.2	55.8	47.1	CHILE	SANTIAGO	31	13	34	9	22	0.8	0.1	-0.5	
	YEHCHANG	7	3	14	-2	5	0.0	37.4	17.3	ARGENT	IGUAZU	28	20	33	17	24	**	186.1	****	
	HANKOW	7	1	12	-4	4	1.1	74.7	39.7		FORMOSA	33	22	38	19	27	-0.4	80.2	-43.8	
	CHIHKIANG	6	2	11	-5	4	-0.7	48.1	10.8		CERES	34	20	39	14	27	1.0	91.0	-35.3	
	SHANGHAI	8	3	18	-3	6	2.1	65.1	21.1		CORDOBA	32	19	38	14	26	2.2	110.8	-6.3	
	NANCHANG	8	3	18	-2	6	0.6	170.6	112.3		RIO CUARTO	32	19	38	14	26	2.5	36.3	-77.8	
	TAIPEI	19	15	27	9	17	2.2	43.0	-46.9		ROSARIO	33	19	39	12	26	2.0	73.4	-54.7	
	CANTON	16	11	27	5	14	0.5	137.2	100.1		BUENOS AIRES	33	19	38	12	26	3.0	6.2	-105.0	
	NANNING	15	10	28	4	12	-0.3	81.9	43.9		SANTA ROSA	33	17	40	9	25	1.4	32.0	-35.2	
CNRY I	LAS PALMAS	21	15	23	10	18	0.5	7.1	-12.5		TRES ARROYOS	30	17	39	9	23	1.9	40.5	-11.4	
MOROCC	CASABLANCA	17	7	21	4	12	-0.5	39.2	-34.6	MIDW I	MIDWAY ISLAND	23	19	27	14	21	2.4	110.0	-74.0	
	MARRAKECH	18	5	22	1	11	-0.2	21.3	-7.4	N CALD	NOUMEA	29	23	33	22	26	0.8	326.4	212.5	
ALGERI	ALGER	17	5	23	0	11	0.0	43.7	-54.0	FIJI	NAUSORI	30	23	32	22	27	0.5	155.3	-180.7	
	BATNA	11	-2	17	-5	5	-0.3	15.1	-24.8	SAMOA	PAGO PAGO	30	24	31	21	27	-0.3	511.1	189.2	
TUNISI	TUNIS	16	6	20	1	11	0.0	14.1	-49.3	TAHITI	PAPEETE	31	24	33	22	27	0.6	153.5	-189.2	
NIGER	NIAMEY	30	16	33	13	23	-1.2	0.1	0.1	N ZEAL	AUCKLAND	24	17	26	13	20	0.9	163.7	102.4	
MALI	TIMBUKTU	29	13	37	6	21	-0.5	0.1	0.1	PA N G	PORT MORESBY	31	24	33	22	28	0.2	80.7	-123.3	
	BAMAKO	32	19	35	15	25	0.1	0.1	0.1	AUSTRL	DARWIN	32	25	34	23	29	0.5	302.8	-107.0	
MAURIT	NOUAKCHOTT	29	16	35	8	22	1.1	0.1	-1.0		MOREE	31	18	37	14	25	-1.7	36.0	-46.4	
	SENEGL DAKAR	25	18	33	17	21	0.3	0.1	0.1		BRISBANE	28	20	31						



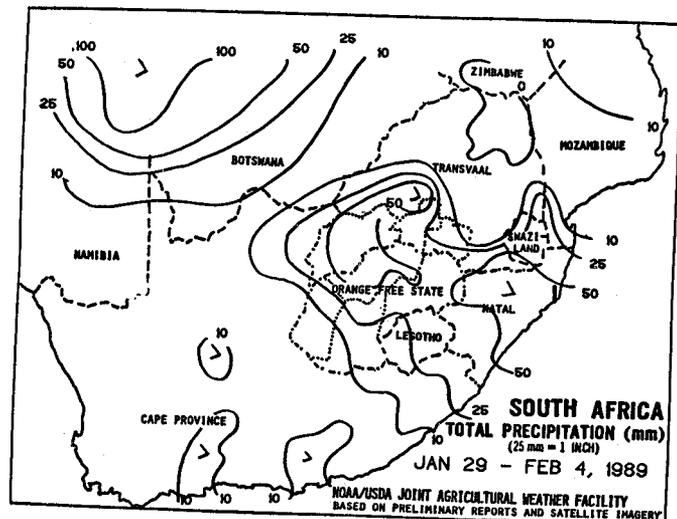
WESTERN USSR ... The seventh consecutive week of unseasonably warm weather covered most of the region. Weekly average temperatures were 8-11 degrees Celsius (C) above normal over the northern two-thirds of the region and 2-5 degrees C above normal in the south. The continued mild weather pattern has caused winter grains to lose hardiness, making them more susceptible to potential winterkill conditions. Highest weekly temperatures ranged from 5-10 degrees C in the west and south, and 2-4 degrees C in the east. Extreme cold was confined to crop areas in the Volga Vyatsk and the upper Volga where lowest weekly temperatures ranged from -15 to -18 degrees C. Light precipitation (less than 10mm) covered most of the region, except for crop areas in the western North Caucasus and the western Urals where precipitation ranged from 10-25mm. Winter grain areas in the Baltic States, Belorussia, the Ukraine, and the western North Caucasus remained snow free. A moderate to deep snow cover blanketed crop areas in the Central Region, Black Soils Region, Volga Vyatsk Region, and the upper Volga.



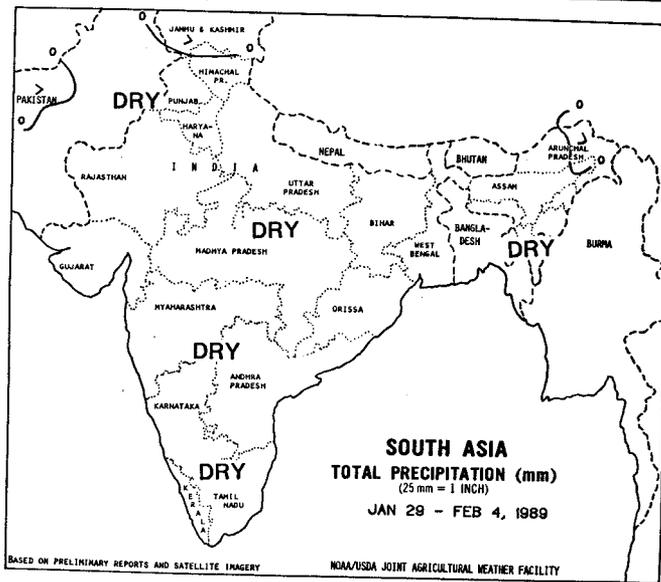
EUROPE ... Abnormally dry weather continued over much of the continent. Scattered mostly light rain (1-10mm, with isolated rainfall greater than 25mm) fell across sections of Portugal, extreme southwestern France, and southern and eastern Spain, while much of the remainder of the south was dry. Unfavorably dry conditions continued in much of northern Spain and the northern two-thirds of Italy, where precipitation has been below normal since last November. In the north, mostly dry weather persisted for the third straight week, although very light rain (less than 10mm) fell over extreme northern and eastern crop areas. Mean temperatures ranged from much above normal in the northeast to below normal over France.



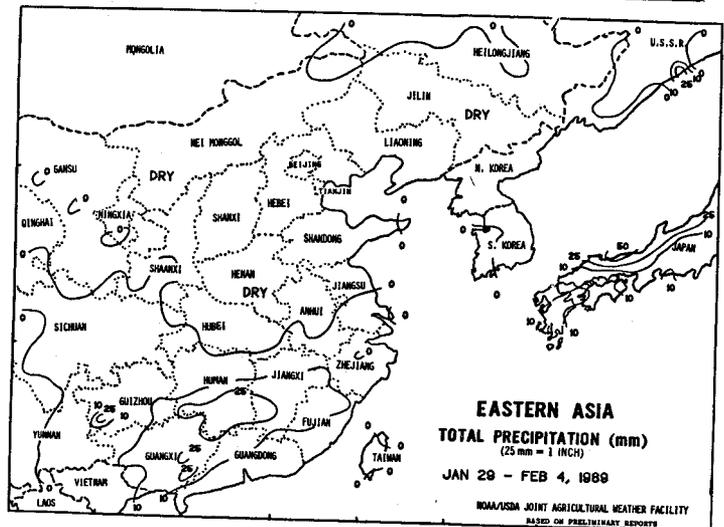
NORTHWESTERN AFRICA ... Mostly dry weather covered winter grain areas in Morocco, Algeria, and Tunisia. Cumulative precipitation since the beginning of November has been well below normal over all crop areas. Well-below-normal precipitation (less than 50 percent of normal) has covered northern Morocco, western Algeria, and parts of northern Tunisia. The continued dryness over the region has placed increasing stress on winter grains in the jointing stage and has reduced soil moisture reserves to critically low levels. Widespread soaking rain is needed in upcoming weeks as the moisture demands of crops increase.



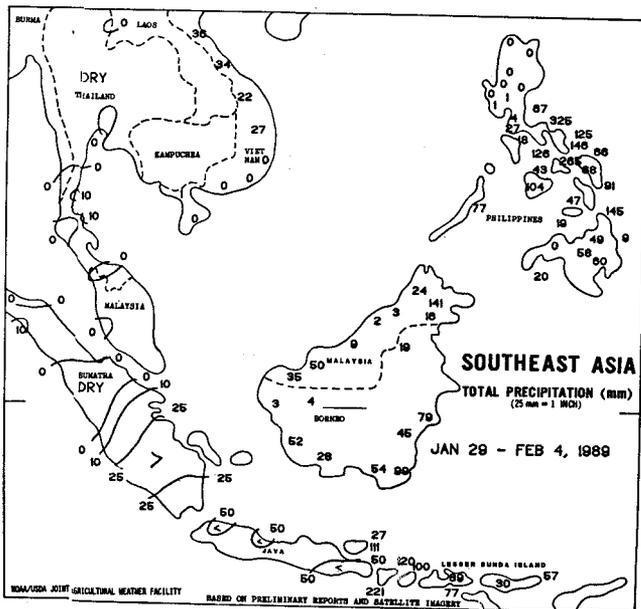
SOUTH AFRICA ... Moderate to heavy showers (17-50mm or more) covered the central and western Maize Triangle, Natal, and parts of the Cape Province, benefiting reproductive to filling corn. A dry pocket, however, covered eastern areas of the Maize Triangle and a large portion of the northern Transvaal. Temperatures continued near normal in most areas, with highest maximum temperatures ranging from 29-33 degrees C across the Maize Triangle.



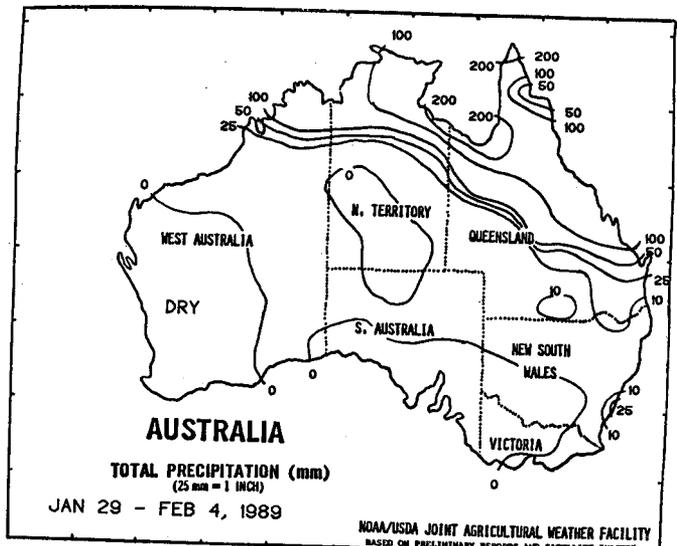
SOUTH ASIA ... Dry weather continued across the region, but temperatures were warmer than in recent weeks, averaging up to 2 degrees C above normal in most northern areas. The warmer weather stimulated growth of winter wheat advancing through reproduction. To the south, temperatures were near to slightly below normal, favoring growth of vegetative to heading rice.



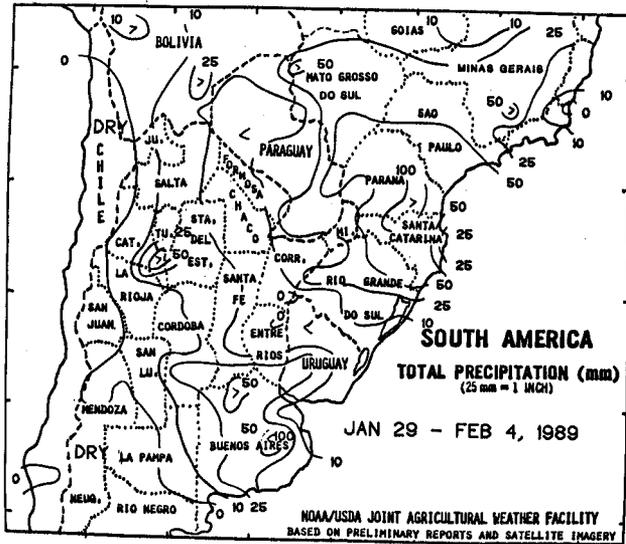
EASTERN ASIA ... Moderate to heavy rain (15-40mm) fell across sections of Guizhou, Guangxi, Hunan, Jiangxi, Fujian, and Taiwan, continuing to improve pre-season soil and irrigation reservoir levels. Lighter rain (less than 10mm) covered the remainder of southern China and sections of the Yangtze Valley. Scattered heavy rain (20-50mm, with isolated amounts greater than 50mm) also fell over western sections of Honshu in Japan. Growing areas in northern China and the Korean Peninsula were mostly dry. Winter crops in eastern growing areas remained dormant. Mean temperatures were below normal in western and southern sections, and near normal to above normal in the north and east.



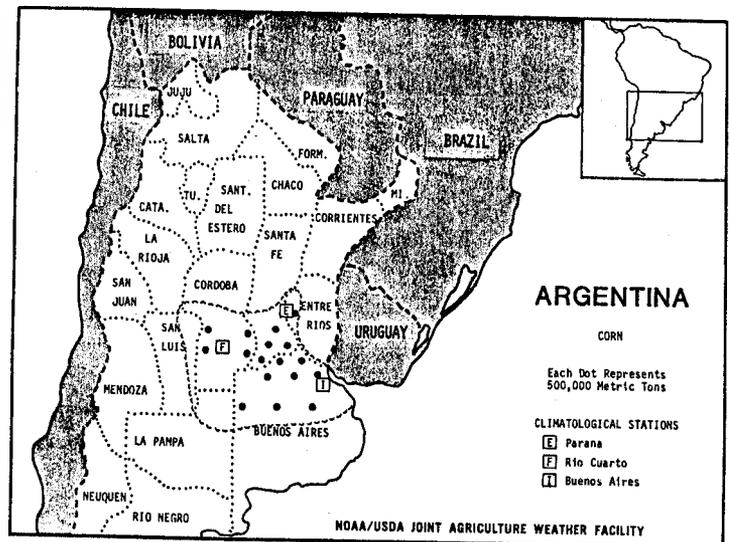
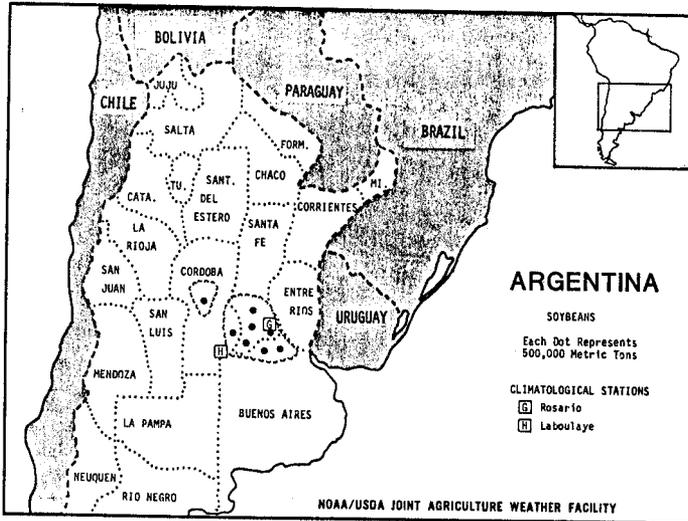
SOUTHEAST ASIA ... Rainfall tapered off over western Indonesia and Malaysia, with recently flooded areas of Sumatra and eastern Malaysia receiving only 35-50mm. Moderate showers (25-50mm or more) continued over Java, maintaining irrigation reserves, as heavy showers (100-221mm) persisted over islands east of Java, likely causing flooding. Minimal rain (less than 10mm) fell over most of the Malay Peninsula with dry weather returning to Thailand's irrigated rice regions. In the Philippines, a large area of inundating showers (100-200mm or more) from the remnants of a tropical low persisted over the central islands and expanded northward to include southeastern Luzon.



AUSTRALIA ... Late-week light to moderate rain (5-20mm) helped ease unfavorable dryness for reproductive non-irrigated summer crops across southeastern Queensland and extreme northeastern New South Wales. Residual tropical moisture from the Coral Sea caused torrential rains (100-200mm, with isolated rainfall in excess of 200mm) and possible flooding in northern sections of Northern Territory and Queensland, as well as eastern coastal Queensland and New South Wales. Seasonal rainfall in sugarcane growing areas of eastern Queensland normally peaks in late January or early February. In the south, most crop areas were seasonably dry. Mean temperatures ranged from below normal in the east to above normal in the west.



SOUTH AMERICA ... In Argentina, widespread rain and somewhat lower temperatures than last week helped ease stress on soybeans ranging from flowering to pod setting and stabilize conditions for filling corn. Precipitation amounts averaged 25-59mm in crop areas of southern Cordoba, Buenos Aires, and the extreme southern tip of Santa Fe. Lighter amounts of rain (5-16mm) fell further north in central Cordoba, central Santa Fe, and Entre Rios. In Brazil, widespread rain continued to provide adequate to abundant moisture for summer crops throughout south-central Brazil. Precipitation amounts in Sao Paulo, Mato Grosso do Sul, western Parana, western Santa Catarina, and Rio Grande do Sul generally averaged 38-77mm. Heavy rain (amounts greater than 100mm) over central Parana and central Santa Catarina fell east of the major summer crop area.



(Continue from front cover)

spread from the northern Pacific coast to the northern Appalachians. Record-low temperatures were set in the northern Rockies while record highs were broken in the middle Atlantic Coast States.

FRIDAY: The arctic air blasted into the Northeast and Texas and crept slowly to the Southeast. Rain, freezing rain, sleet, and snow fell behind the edge of cold air from the lower Mississippi Valley to the northern and middle Atlantic coast. Snow was widespread from the Great

Lakes and Midwest to the Sierra Mountains and northern Pacific coast. Record-low temperatures were set in the shallow cold air mass over the North Central States in contrast to the record highs in the Southeast ahead of the cold front.

SATURDAY: Precipitation was again widespread in the East behind the cold front which reached from the Atlantic across southern Georgia into the Gulf. Snow extended from the Corn Belt across the Plains into the Central Rockies. Rain covered much of California. A major winter storm developed over the Great Basin and caused heavy snow.

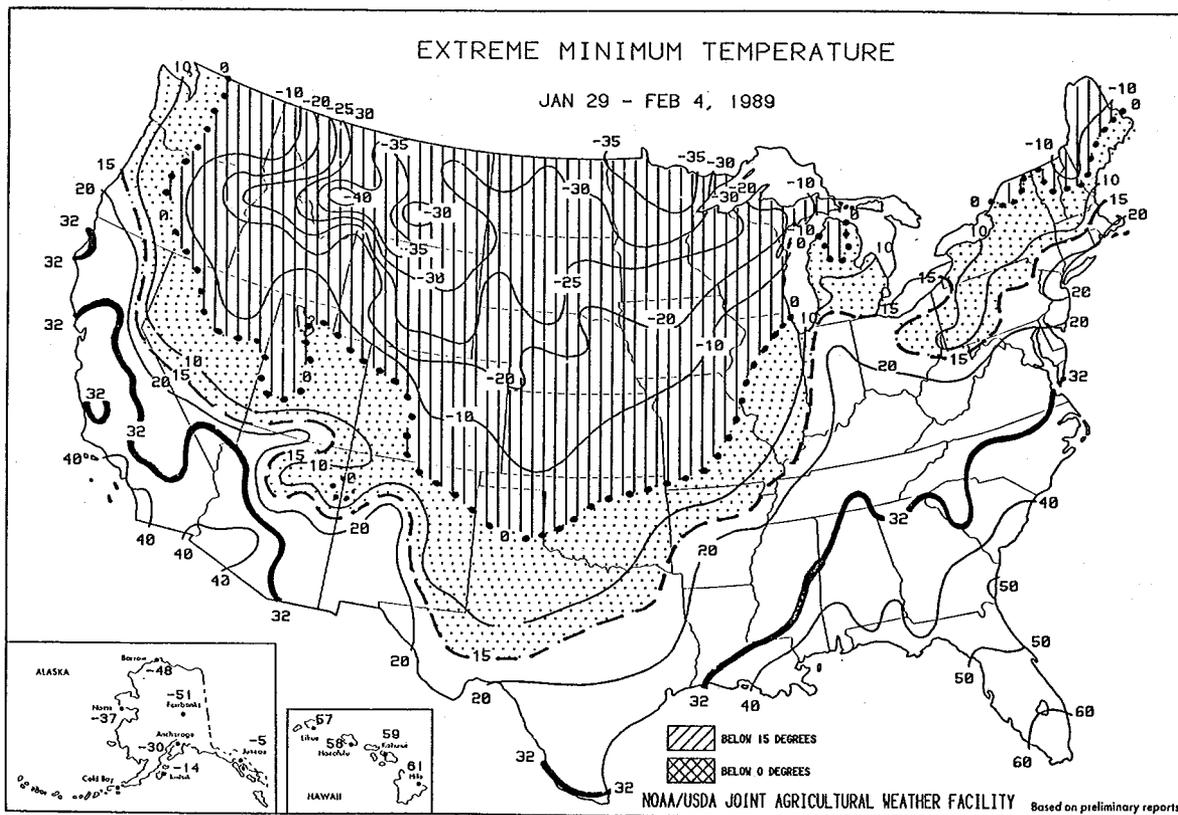
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