

# 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

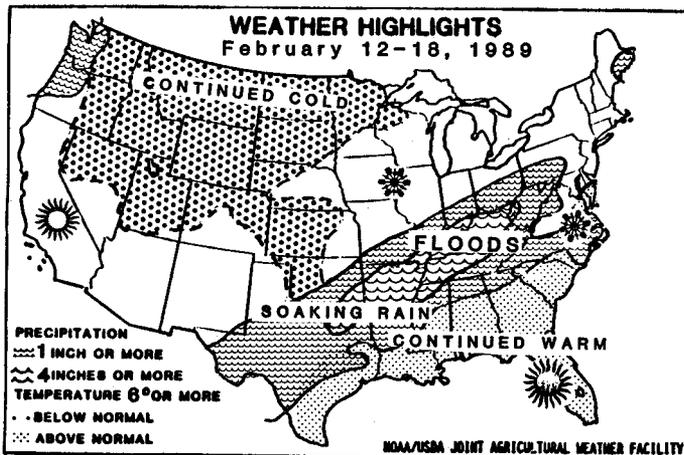
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## National Weather Summary

February 12-18, 1989



**TUESDAY:** Southerly winds continued to cause soaking rain from central Texas to the mid-Atlantic coast on Valentine's Day. Freezing rain, sleet, and snow fell north of the heavy rain from Kansas into New England. High temperature records were set across the Southeast.

**WEDNESDAY:** Rain was again widespread from Texas to the mid-Atlantic coast and snow from the eastern Corn Belt to New England. Heavy rain brought continued flooding across Kentucky. The Southeast remained warm.

**THURSDAY:** Rain continued across the southern Plains to the mid-Atlantic coast. Widespread precipitation covered the Pacific Northwest to the upper Mississippi Valley. Heavy rain fell along the northern Pacific coast. Record-high temperatures were broken again across the Southeast, while a blast of cold arctic air covered the North Central States.

**HIGHLIGHTS:** Steady, heavy rains soaked central Texas to the upper Ohio Valley and caused severe flooding in the Tennessee and lower Ohio Valleys. Little or no precipitation fell in the central Plains and along the South Atlantic coast. At week's end, storms brought widespread precipitation into the Pacific Northwest and heavy snow across southern Virginia and North Carolina. Record-high temperatures continued to be set across the Southeast, while a cold blast of arctic air settled over the North Central States.

**SUNDAY:** Moist, southerly winds from the Gulf brought widespread precipitation into the Mississippi Valley and eastern Great Plains. Heavy snow covered eastern Iowa and northwestern Illinois. Snow was scattered in the Northeast and northern and central Rockies. Temperatures climbed above freezing in Fairbanks, AK.

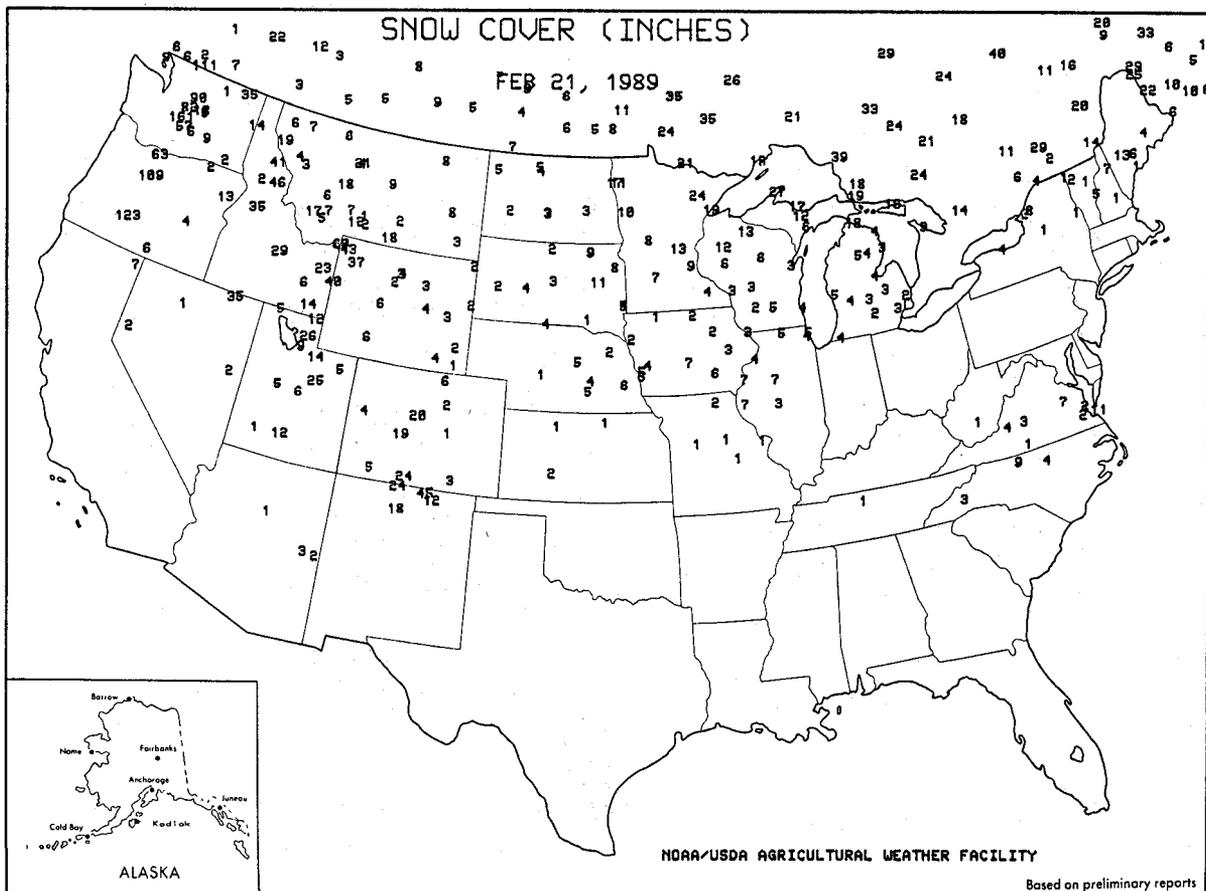
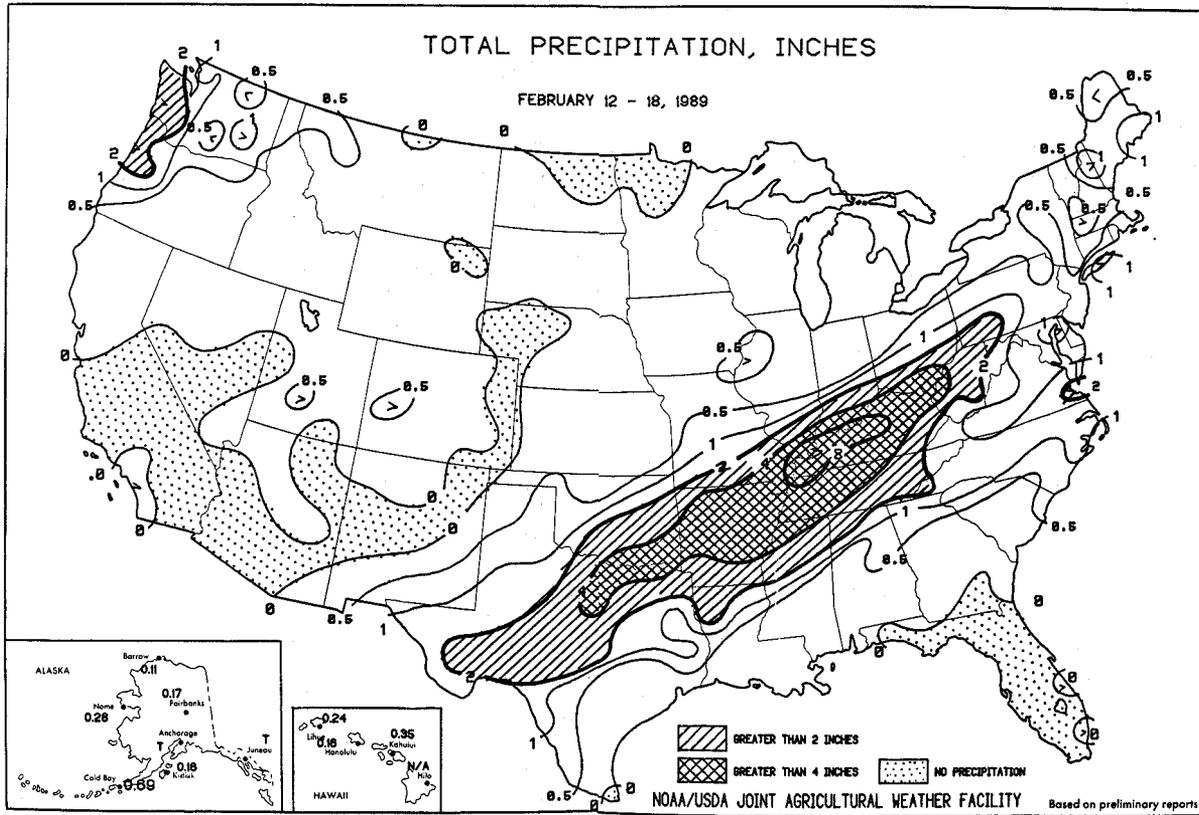
**MONDAY:** The northward flow of Gulf moisture over shallow, cold air produced drenching rain from eastern Oklahoma into the upper Ohio Valley. The steady rain caused widespread flooding in the Tennessee and Ohio Valleys. Snow was scattered over the northern and central Rockies, northern High Plains, Great Lakes, and central Appalachians.

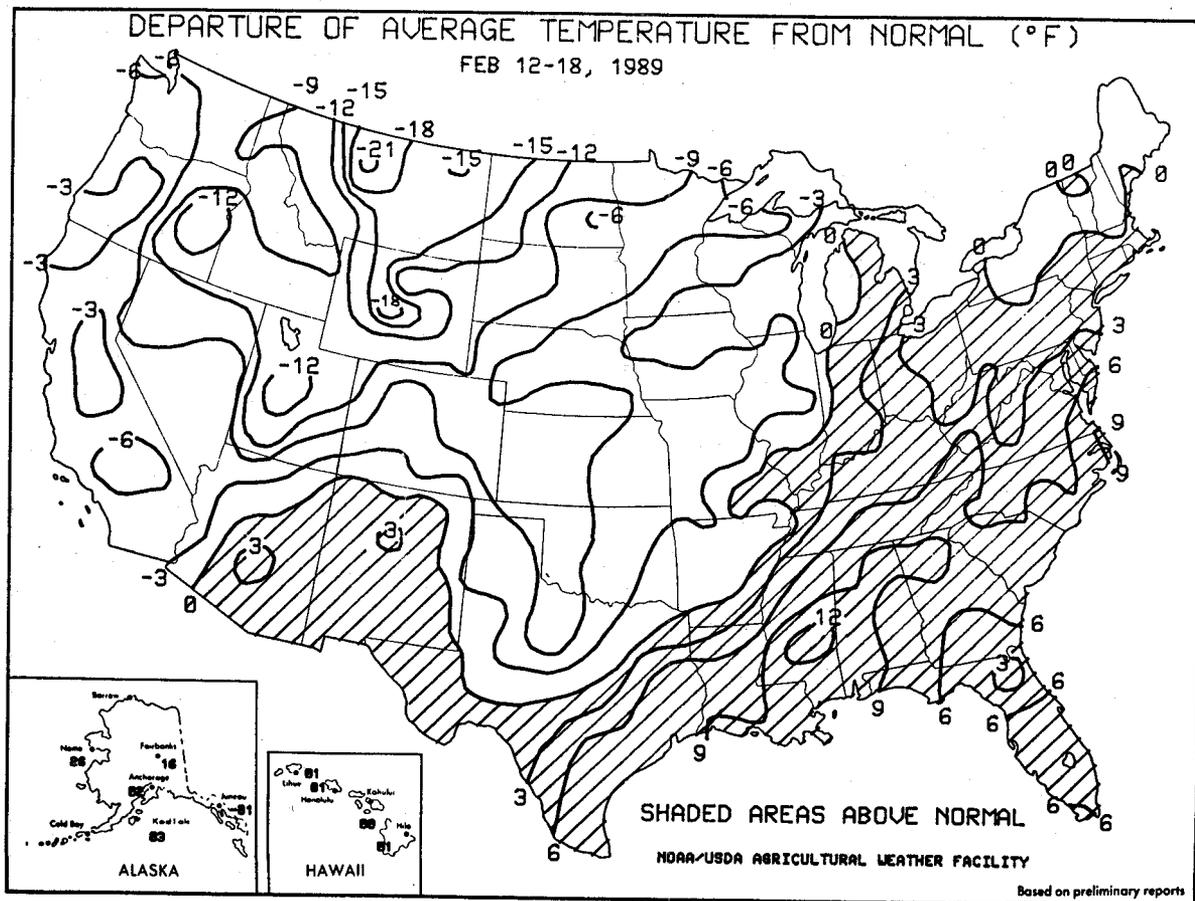
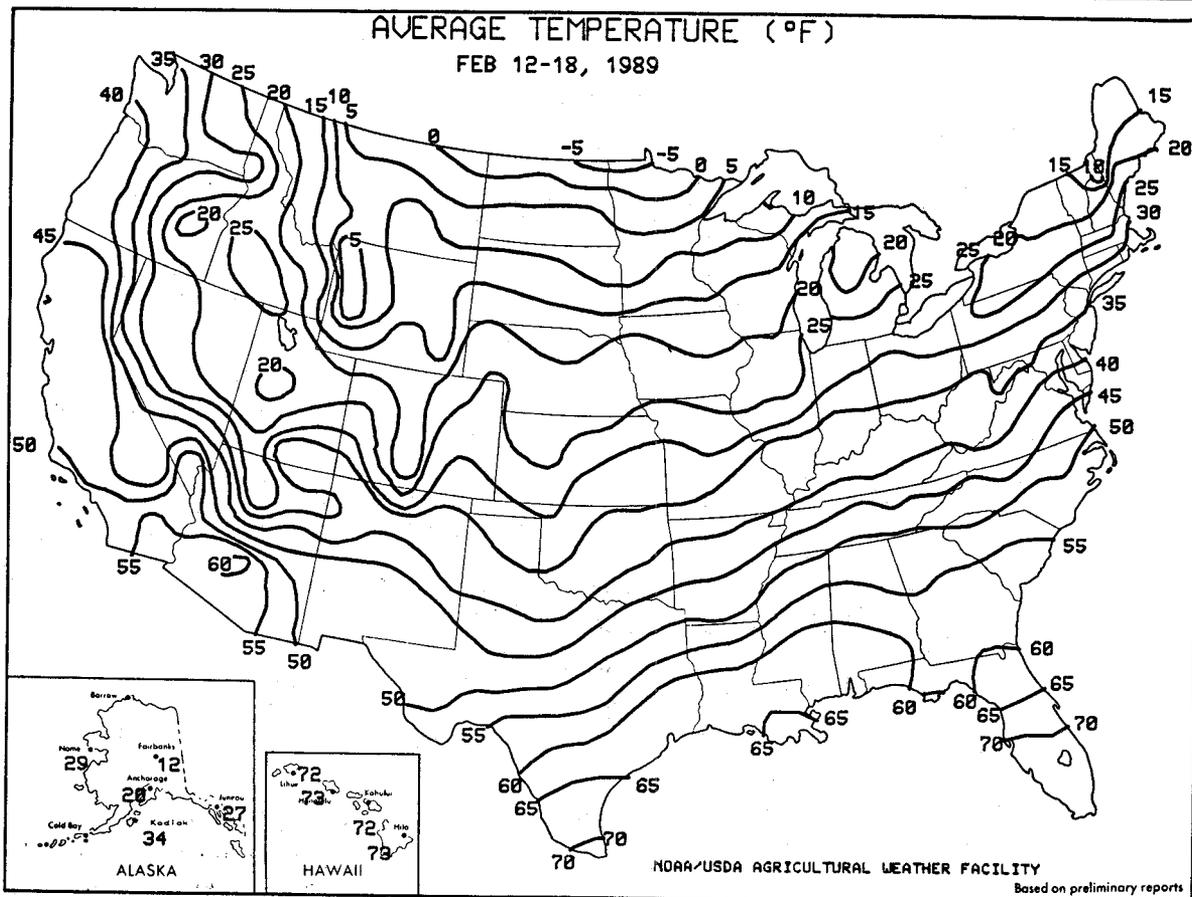
**FRIDAY:** Rain was again widespread across the southern Plains and the Southeast. Rain and snow covered the Pacific Northwest to the northern and central Plains. A winter storm left a band of heavy snow across Virginia and North Carolina.

**SATURDAY:** Heavy snow continued into the morning across southern Virginia and North Carolina. Up to 18 inches of snow was reported. Freezing rain spread across South Carolina and northern Georgia. Rain continued along the northern Pacific coast and snow across the inland portions of the Northwest and the northern Intermountain region. Cold, arctic air remained over the northern Plains.

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# National Weather Data for Selected Cities

Weather Data for the Week Ending February 18, 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		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	64	46	80	33	55	9	.3	-.8	.3	9.2	70	5.7	70	88	56	0	0	1	0
MOBILE	74	54	82	36	64	10	.2	-1.0	.1	4.3	32	2.4	31	97	60	0	0	2	0
MONTGOMERY	69	46	84	34	58	8	.4	-.7	.3	7.2	62	2.8	41	94	57	0	0	2	0
AK ANCHORAGE	27	13	30	4	20	2	T	-.2	T	1.8	77	.3	23	94	84	0	0	7	0
BARROW	25	11	29	-3	18	38	.1	.1	.1	.5	98	.2	56	94	84	0	0	7	0
FAIRBANKS	22	2	35	-9	12	16	.2	.1	.2	1.4	93	.9	116	94	78	0	0	7	0
JUNEAU	35	19	40	10	27	-1	T	-.9	T	11.6	109	6.8	112	97	56	0	0	7	0
KODIAK	38	29	42	23	34	3	.2	-1.1	.1	14.2	97	3.2	35	97	75	0	0	4	3
NOME	32	25	33	22	29	25	.3	.2	.1	3.2	187	1.9	169	97	76	0	0	7	4
AZ PHOENIX	73	48	82	42	60	4	0	-.1	0	1.3	71	1.2	112	55	22	0	0	0	0
PRESCOTT	56	23	66	19	40	0	T	-.4	T	2.3	52	1.7	61	79	27	0	0	7	0
TUCSON	71	41	79	34	56	2	0	-.1	0	1.2	58	1.2	99	62	18	0	0	0	0
YUMA	73	44	82	40	58	-2	0	-.1	0	.7	80	.6	113	55	17	0	0	0	0
AR FORT SMITH	46	36	51	28	41	-1	4.1	3.4	1.7	11.4	186	9.7	294	98	70	0	2	6	3
LITTLE ROCK	48	38	66	32	43	-1	4.8	3.8	2.0	12.7	121	9.6	152	91	72	0	1	6	4
CA BAKERSFIELD	61	34	67	29	48	-6	T	-.3	T	1.5	64	.7	40	90	42	0	3	0	0
EUREKA	52	41	59	35	47	-2	.2	-1.0	.2	12.5	75	6.2	60	82	67	0	0	2	0
FRESNO	60	37	66	32	49	-2	0	-.5	0	4.1	84	1.7	51	94	44	0	2	0	0
LOS ANGELES	59	43	64	39	51	-6	.2	-.4	.2	4.8	76	2.3	48	92	49	0	0	1	0
REDDING	58	37	63	28	47	-4	.7	-.8	.7	6.8	34	3.1	24	82	37	0	2	1	1
SACRAMENTO	59	37	64	31	48	-2	.1	-.6	.1	4.7	53	1.7	28	95	44	0	3	1	0
SAN DIEGO	60	45	68	44	53	-4	.1	-.4	.1	3.3	65	1.1	35	90	54	0	0	1	0
SAN FRANCISCO	57	41	59	37	49	-3	T	-.8	T	6.2	60	2.5	37	92	61	0	0	0	0
CO DENVER	32	19	38	13	26	-8	T	-.1	T	2.5	181	1.5	174	97	66	0	7	1	0
GRAND JUNCTION	36	16	43	10	26	-8	.3	.1	.3	2.4	158	2.2	231	98	65	0	7	1	0
PUEBLO	39	20	46	14	29	-6	T	0	T	1.2	184	.6	162	99	62	0	7	1	0
CT BRIDGEPORT	37	27	48	16	32	1	.2	-.6	.2	3.3	37	1.7	32	72	52	0	5	1	0
HARTFORD	37	21	52	7	29	1	.4	-.4	.3	3.0	32	1.7	31	82	42	0	5	3	0
DC WASHINGTON	47	33	65	26	40	2	.7	0	.2	5.1	68	3.8	87	88	49	0	4	4	0
FL APALACHICOLA	71	51	76	40	61	6	T	-.9	T	2.5	27	1.3	23	98	62	0	0	0	0
DAYTONA BEACH	75	53	81	40	64	5	T	-.8	T	7.8	119	6.8	158	95	53	0	0	0	0
JACKSONVILLE	73	47	84	34	60	4	T	-.9	T	2.9	37	1.7	33	96	55	0	0	0	0
KEY WEST	79	68	81	58	73	3	T	-.5	T	.7	14	.5	15	84	60	0	0	0	0
MIAMI	81	67	84	52	74	6	.1	-.5	.1	.9	16	.7	21	80	48	0	0	1	0
ORLANDO	79	57	84	49	68	7	0	-.8	0	4.8	80	3.8	94	95	45	0	0	0	0
TALLAHASSEE	73	43	85	28	58	5	T	-1.2	T	1.7	14	.6	8	97	47	0	1	0	0
TAMPA	81	58	86	45	69	9	0	-.8	0	3.2	52	1.5	39	91	42	0	0	0	0
WEST PALM BEACH	80	66	81	49	73	7	T	-.7	T	2.9	43	1.0	22	80	52	0	0	0	0
GA ATLANTA	66	46	80	33	56	11	.3	-.8	.2	5.1	43	3.9	51	81	47	0	0	2	0
AUGUSTA	69	42	85	34	56	8	.1	-.9	.1	3.2	33	1.9	29	93	47	0	0	1	0
MACON	70	43	85	32	56	7	.1	-1.0	.1	4.4	39	2.1	30	96	48	0	1	2	0
SAVANNAH	71	46	86	37	58	7	T	-.8	T	1.5	19	.5	9	92	51	0	0	1	0
HI HILO	82	63	87	63	73	1	.3	-3.1	.3	44.7	147	31.3	176	93	58	0	0	1	0
HONOLULU	82	64	84	62	73	1	.2	-.5	.2	14.2	159	7.5	137	93	60	0	0	1	0
KAHULUI	82	62	83	60	72	0	.4	-.4	.4	15.0	171	4.8	80	94	60	0	0	1	0
LIHUE	79	65	80	60	72	1	.2	-.6	.2	15.3	108	8.5	98	93	66	0	0	1	0
ID BOISE	35	19	41	10	27	-9	.6	.4	.5	2.7	72	1.8	78	90	62	0	5	2	1
LEWISTON	39	28	43	21	34	-5	.1	-.1	.1	2.3	70	1.8	89	86	56	0	5	1	0
POCATELLO	28	11	40	-10	20	-10	.4	.2	.1	2.7	104	1.5	92	91	70	0	7	5	0
IL CHICAGO	31	17	37	8	24	-1	.4	.1	.2	3.9	84	1.4	63	85	50	0	7	3	0
MOLINE	30	14	38	5	22	-4	.6	.3	.4	3.8	90	2.3	97	87	55	0	7	2	0
PEORIA	31	17	37	11	24	-3	.5	.2	.3	4.0	91	1.8	75	91	57	0	7	2	0
QUINCY	32	17	37	8	25	-4	.3	0	.1	3.0	78	1.1	53	98	64	0	7	3	0
ROCKFORD	29	10	35	0	20	-4	.3	0	.3	2.9	74	1.2	57	92	50	0	7	1	0
SPRINGFIELD	32	19	38	7	26	-3	.4	0	.2	5.0	107	1.8	69	91	63	0	6	4	0
IN EVANSVILLE	44	31	49	20	38	3	4.1	3.3	2.6	12.3	149	9.6	199	91	55	0	3	3	2
FORT WAYNE	35	23	43	13	29	2	.2	-.3	.2	5.1	89	2.6	80	90	58	0	7	2	0
INDIANAPOLIS	39	27	44	19	33	3	.2	-.4	.2	5.1	71	2.5	61	88	56	0	7	2	0
SOUTH BEND	34	21	40	10	27	1	.2	-.2	.2	5.1	77	2.2	58	89	55	0	7	2	0
IA DES MOINES	30	12	37	5	21	-4	.5	.3	.4	2.9	111	2.1	129	86	52	0	7	3	0
SIoux CITY	30	13	35	4	22	-2	.1	-.2	.1	1.8	94	1.2	103	88	54	0	7	2	0
WATERLOO	29	8	35	-1	18	-2	.2	-.1	.1	1.8	76	1.3	102	93	57	0	7	3	0
KS CONCORDIA	32	17	36	10	24	-8	.2	0	.2	1.5	86	.9	82	95	65	0	7	1	0
DOLGE CITY	36	17	44	10	26	-9	.1	0	.1	.5	43	.4	60	98	54	0	7	2	0
GOODLAND	34	14	45	12	24	-8	T	-.1	T	.8	82	.3	52	94	51	0	7	1	0
TOPEKA	37	21	42	15	29	-3	.1	-.2	.1	2.4	86	1.5	102	90	53	0	7	2	0
WICHITA	39	25	44	21	32	-3	.2	0	.1	1.6	76	1.1	96	90	59	0	7	3	0
KY BOWLING GREEN	46	34	55	23	40	3	6.4	5.4	2.9	21.3	184	15.1	214	97	68	0	3	5	3
LEXINGTON	44	31	51	19	37	3	7.1	6.4	3.3	16.3	175	12.7	228	90	59	0	4	4	3
LOUISVILLE	45	32	48	23	38	2	5.7	4.9	2.9	14.9	170	11.5	216	89	55	0	3	4	3
LA ALEXANDRIA	66	55	82	43	61	7	T	-1.0	T	14.0	114	8.2	111	90	68	0	0	2	0
BATON ROUGE	73	55	85	45	64	11	T	-1.2	T	13.0	101	4.8	62	97	64	0	0	1	0
LAKE CHARLES	69	56	79	46	62	9	.1	-.8	0	10.0	84	5.2	76	97	75	0	0	3	0
NEW ORLEANS	74	57	82	42	66	11	T	-1.3	T	6.5	48	2.5	31	99	65	0	0	1	0

Based on 1951-80 normals

Weather Data for the Week Ending February 18, 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	TEMPERA- TURE °F		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	58	47	73	37	53	3	3.3	2.4	1.5	15.9	157	11.2	179	100	83	0	0	6	3
ME CARIBOU	21	1	37	-18	11	-2	.4	-.2	.2	3.7	54	2.7	73	92	59	0	0	7	4
PORTLAND	33	16	48	1	24	1	.8	-.1	.6	3.6	34	2.4	40	77	41	0	0	6	3
MD BALTIMORE	46	31	63	19	38	4	1.2	.4	.5	5.9	72	4.9	102	87	53	0	0	6	4
SALISBURY	52	32	76	19	42	6	.5	-.3	.2	3.4	37	2.7	50	86	50	0	0	4	3
MA BOSTON	38	22	54	10	30	0	.4	-.5	.4	2.3	21	1.3	20	75	40	0	0	5	2
CHATHAM	37	25	47	16	31	0	.7	-.3	.4	4.1	34	2.8	40	79	59	0	0	5	3
MI ALPENA	28	9	36	-9	18	0	.7	-.3	.4	2.8	62	1.5	60	87	46	0	0	7	0
DETROIT	35	22	44	13	29	3	.1	-.3	.1	3.6	68	1.7	58	86	50	0	0	7	1
FLINT	32	18	40	6	25	2	.1	-.3	.1	2.8	63	1.5	62	85	50	0	0	7	1
GRAND RAPIDS	30	15	36	0	23	-2	.3	-.1	.2	3.6	66	1.7	58	89	50	0	0	7	2
HOUGHTON LAKE	27	8	34	-14	18	0	.1	-.2	.1	3.2	76	1.3	57	88	49	0	0	7	2
LANSING	31	17	38	4	24	2	.1	-.3	.1	2.7	55	1.4	58	87	52	0	0	7	1
MARQUETTE	21	-5	32	-22	8	-6	.1	-.4	.1	5.0	90	2.6	84	92	55	0	0	7	2
MUSKEGON	31	16	36	1	23	-1	.3	-.1	.3	5.1	86	2.3	68	89	53	0	0	7	3
SAULT ST. MARIE	22	4	32	-9	13	-1	.1	-.3	.1	7.1	122	3.5	106	86	51	0	0	7	1
MN ALEXANDRIA	16	-4	33	-11	6	-6	.1	-.1	.1	1.2	57	.8	60	87	60	0	0	7	2
DULUTH	18	-7	31	-23	5	-7	.1	-.1	.1	3.1	105	2.0	117	78	44	0	0	7	1
INT'L FALLS	12	-16	34	-35	-2	-9	.1	-.2	.1	2.2	101	1.5	115	86	47	0	0	7	0
MINNEAPOLIS	23	4	34	-1	13	-4	.5	.3	.2	2.1	99	1.4	112	90	47	0	0	7	5
ROCHESTER	24	4	33	-3	14	-2	.2	.1	.1	1.9	90	.8	63	86	60	0	0	7	2
MS GREENWOOD	62	46	79	39	54	7	3.0	1.9	1.3	15.1	112	9.7	122	93	68	0	0	5	2
JACKSON	69	52	85	35	60	11	.1	-.9	.1	10.2	78	5.4	70	99	63	0	0	3	0
MERIDIAN	71	51	84	37	61	12	.1	-1.1	.1	12.7	94	5.2	67	91	53	0	0	1	0
MO CAPE GIRARDEAU	44	33	49	23	39	--	4.9	4.1	2.7	15.1	179	12.2	261	93	61	0	0	3	3
COLUMBIA	36	22	41	16	29	-4	.6	.2	.2	6.0	125	2.6	91	96	62	0	0	7	4
KANSAS CITY	36	22	41	16	29	-5	.2	-.1	.2	6.2	67	1.4	73	93	59	0	0	7	4
SAINT LOUIS	40	28	43	22	34	0	.6	.1	.2	6.9	134	3.7	124	89	51	0	0	6	4
SPRINGFIELD	42	27	47	21	34	-2	1.1	.6	.3	6.2	115	3.1	108	92	56	0	0	6	4
MT BILLINGS	20	5	38	-9	13	-16	.1	-.1	.1	2.2	102	1.7	118	77	53	0	0	7	3
GLASGOW	9	-6	28	-22	1	-14	.2	.1	.1	1.3	140	.8	146	86	66	0	0	7	4
GREAT FALLS	14	-1	33	-11	7	-21	.4	.3	.2	2.6	116	1.6	111	88	61	0	0	7	6
HAVRE	11	-5	30	-17	3	-18	T	-.1	T	.6	43	.1	15	81	60	0	0	7	0
HELENA	17	-1	32	-7	8	-18	T	.1	T	2.2	140	1.9	196	88	66	0	0	7	5
KALISPELL	23	8	32	2	16	-11	.9	.6	.3	4.6	117	2.3	97	89	61	0	0	7	6
MILES CITY	13	-1	32	-10	6	-16	.1	0	.1	1.8	112	1.2	121	76	56	0	0	7	2
MISSOULA	25	12	35	5	19	-10	.2	0	.1	1.7	54	.9	48	95	61	0	0	7	3
NE GRAND ISLAND	29	14	34	11	21	-6	.1	-.1	.1	1.2	77	1.0	103	91	64	0	0	7	1
LINCOLN	32	9	39	2	21	-6	.4	-.1	.4	2.2	116	1.6	131	93	61	0	0	7	1
NORFOLK	28	14	36	9	21	-3	.1	-.1	.1	2.5	165	1.7	178	91	62	0	0	7	2
NORTH PLATTE	31	13	39	7	22	-6	.1	-.1	.1	1.2	111	.8	119	95	58	0	0	7	2
OMAHA	31	17	35	13	24	-4	.3	.1	.2	2.1	108	1.3	107	79	60	0	0	7	2
SCOTTSDLUFF	35	12	48	4	23	-7	T	-.1	T	.8	68	.4	57	87	44	0	0	7	0
VALENTINE	30	6	42	-1	18	-6	T	-.1	T	.3	46	.2	33	75	45	0	0	7	0
NV ELY	41	7	49	-8	24	-5	T	-.2	T	1.6	86	.8	69	83	40	0	0	7	0
LAS VEGAS	60	32	71	28	46	-4	0	-.1	0	.7	61	.6	75	66	23	0	0	4	0
RENO	42	18	54	6	30	-7	T	-.2	T	1.7	56	.9	48	91	44	0	0	7	1
WINNEMUCCA	39	17	45	0	28	-8	T	-.1	T	1.1	49	.5	42	93	56	0	0	7	4
NH CONCORD	31	12	39	-1	21	-1	.5	-.1	.4	2.8	35	1.7	39	88	51	0	0	7	3
NJ ATLANTIC CITY	45	28	65	13	36	3	.5	-.3	.3	4.0	44	3.4	61	86	52	0	0	5	4
NM ALBUQUERQUE	54	31	58	25	43	3	0	-.1	0	.9	84	.9	148	73	26	0	0	4	0
CLOVIS	46	27	55	21	37	-4	.4	.3	.3	2.1	158	.6	88	92	56	0	0	6	2
ROSWELL	56	36	63	29	46	2	.3	.2	.3	1.2	121	.7	112	84	43	0	0	2	2
NY ALBANY	33	16	44	4	24	1	.4	-.2	.3	2.4	36	1.4	37	86	51	0	0	6	3
BINGHAMTON	29	15	40	5	22	0	.4	-.2	.3	3.7	54	2.5	63	92	58	0	0	7	2
BUFFALO	33	17	42	7	25	0	.3	-.3	.1	5.4	68	3.2	71	91	55	0	0	7	5
NEW YORK	41	29	53	20	35	2	.6	-.1	.3	4.6	53	3.4	68	74	45	0	0	5	3
ROCHESTER	32	15	40	3	24	-1	.3	-.3	.1	3.0	47	1.9	50	90	56	0	0	7	3
SYRACUSE	32	13	40	1	22	-2	.4	-.3	.2	4.0	54	2.1	49	93	58	0	0	7	4
NC ASHEVILLE	54	35	74	22	45	6	1.4	.6	.7	5.0	60	3.6	70	89	56	0	0	4	3
CHARLOTTE	60	38	80	28	49	6	1.2	.2	.7	5.0	52	3.3	55	85	49	0	0	3	2
NEW BERN	62	43	78	29	52	7	1.8	.8	.9	5.5	54	4.6	69	93	56	0	0	1	2
RALEIGH	57	36	82	25	46	5	1.8	1.0	1.1	5.1	58	4.1	72	88	54	0	0	3	2
WILMINGTON	64	43	80	33	54	6	.9	0	.5	3.5	38	3.0	51	93	53	0	0	2	1
ND BISMARCK	15	-2	42	-15	7	-8	T	-.1	T	1.4	111	.7	90	85	55	0	0	7	1
FARGO	14	-7	35	-19	4	-8	T	-.1	T	3.0	220	1.9	249	78	59	0	0	7	1
GRAND FORKS	10	-13	33	-27	-1	-11	T	-.1	T	3.6	217	1.7	160	78	53	0	0	7	0
WILLISTON	8	-9	30	-20	-1	-16	T	-.1	T	1.9	150	1.2	146	81	59	0	0	7	2
OH AKRON-CANTON	36	21	44	12	29	2	.5	-.1	.4	4.9	74	3.0	79	93	57	0	0	6	3
CINCINNATI	42	28	47	18	35	3	2.6	2.0	1.4	9.3	120	6.5	136	94	57	0	0	5	3
CLEVELAND	36	22	43	14	29	1	.5	0	.2	5.6	86	3.1	82	90	54	0	0	5	3
COLUMBUS	40	26	46	19	33	3	1.3	.8	.7	6.1	92	3.7	89	87	55	0	0	5	3

Weather Data for the Week Ending February 18, 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	TEMPERA- TURE		PRECIPI- TATION	
																90 AND ABOVE	52 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	39	26	47	18	33	3	1.1	-.6	.6	6.9	109	4.2	110	90	60	0	5	3	1
TOLEDO	35	22	44	14	28	1	.2	-.3	.2	4.2	73	2.2	71	90	52	0	6	2	0
YOUNGSTOWN	35	20	43	10	27	1	.5	0	.3	4.8	71	2.0	72	94	54	0	7	3	0
OK OKLAHOMA CITY	40	32	48	30	36	5	2.0	1.7	.8	4.5	156	3.1	182	95	76	0	4	5	1
TULSA	41	31	49	28	36	4	1.6	1.2	.7	6.5	157	4.7	199	93	63	0	5	5	1
OR ASTORIA	46	35	50	24	41	4	3.7	1.8	2.1	19.5	71	12.1	78	97	71	0	2	4	2
BURNS	31	11	39	-3	21	-13	.1	-.1	.1	1.2	30	.4	20	84	67	0	7	2	0
MEDFORD	49	31	53	22	40	5	.3	-.2	.2	4.1	49	2.8	58	93	54	0	4	3	0
PENDLETON	37	26	43	22	32	8	.7	.5	.3	3.2	77	2.8	114	90	67	0	7	3	0
PORTLAND	46	33	50	24	40	4	2.0	1.1	1.0	7.8	52	5.5	62	90	60	0	2	3	2
SALEM	46	35	50	23	41	2	1.5	.4	.7	9.1	53	5.8	58	96	73	0	1	2	1
PA ALLENTOWN	39	22	49	15	31	1	.6	-.1	.3	3.6	40	2.6	49	83	45	0	5	3	0
ERIE	34	20	42	11	27	2	.3	-.2	.2	6.1	89	3.5	96	89	56	0	7	2	0
HARRISBURG	39	25	48	18	32	1	.7	0	.3	4.0	51	3.1	67	87	49	0	5	3	0
PHILADELPHIA	43	29	53	21	36	3	1.0	.3	.6	4.8	56	3.8	78	80	47	0	5	3	1
PITTSBURGH	37	23	45	15	30	1	1.5	.9	1.2	6.1	89	3.9	91	90	56	0	5	3	1
SCRANTON	35	21	44	11	28	1	.4	-.1	.4	2.7	45	1.6	45	83	50	0	5	1	0
RI PROVIDENCE	38	23	50	13	30	1	.6	-.3	.3	2.9	27	1.9	29	80	39	0	5	2	0
SC CHARLESTON	70	46	87	36	58	8	.1	-.7	.1	3.1	37	2.4	45	93	53	0	1	2	0
COLUMBIA	68	42	84	30	55	8	.2	-.8	.1	3.1	30	2.4	34	97	49	0	1	2	0
FLORENCE	67	42	83	30	54	7	.1	-.8	.1	3.4	39	2.6	46	89	50	0	2	1	0
GREENVILLE	60	38	75	29	49	6	1.3	.2	.8	5.3	49	3.5	50	90	56	0	3	2	2
SD ABERDEEN	15	0	36	-10	7	8	.1	0	0	2.1	156	.7	86	87	70	0	7	4	0
HURON	22	0	40	-18	11	7	.5	.3	.2	1.6	122	1.0	114	91	65	0	7	6	0
RAPID CITY	28	5	47	-11	16	-11	.1	0	0	.8	64	.3	40	89	52	0	7	3	0
SIOUX FALLS	26	2	37	-12	14	-5	.3	.1	.1	1.0	59	.6	63	88	61	0	7	4	0
TN CHATTANOOGA	60	40	79	27	50	8	1.4	.3	.6	12.3	93	8.8	108	96	59	0	1	5	2
KNOXVILLE	59	37	76	22	48	7	2.0	.9	1.3	13.0	110	9.0	125	95	57	0	2	5	3
MEMPHIS	54	41	71	34	47	4	6.0	5.0	4.1	21.1	174	15.2	208	91	75	0	0	6	3
NASHVILLE	55	37	73	28	46	6	6.2	5.2	4.7	14.9	129	11.0	158	93	62	0	3	6	2
TX ABILENE	45	37	63	33	41	-7	3.0	2.8	1.5	4.4	177	3.6	223	100	84	0	0	5	2
AMARILLO	43	26	52	19	34	-5	.5	.4	.5	.9	68	.7	89	97	63	0	7	2	1
AUSTIN	60	50	77	43	55	2	.4	-.2	.3	5.8	110	4.6	145	98	82	0	0	4	0
BEAUMONT	68	56	79	45	62	7	.1	-1.0	.1	12.7	108	6.9	100	98	79	0	0	2	0
BROWNSVILLE	78	64	84	50	71	8	T	-.4	T	2.1	62	2.0	89	98	66	0	0	3	0
CORPUS CHRISTI	74	60	85	46	67	8	.1	-.3	.1	3.9	102	2.9	111	98	70	0	0	3	0
DEL RIO	63	51	81	43	57	2	1.0	.8	.6	2.4	145	2.0	183	88	65	0	0	5	1
EL PASO	58	41	72	39	49	1	1.7	.6	.7	1.3	124	.8	128	75	39	0	0	1	1
FORT WORTH	51	42	72	39	47	-2	3.2	2.8	1.6	8.7	190	6.2	218	97	85	0	0	5	3
GALVESTON	66	57	72	47	61	6	.1	-.5	.1	9.3	114	6.4	141	99	85	0	0	2	0
HOUSTON	69	57	82	45	63	8	.3	-.6	.1	6.7	71	5.4	96	98	73	0	0	7	0
LUBBOCK	47	33	67	30	40	-3	1.0	.9	.6	2.1	199	1.5	222	98	71	0	3	4	1
MIDLAND	52	38	71	33	45	-2	1.3	1.1	1.1	2.0	170	1.5	200	96	58	0	0	3	1
SAN ANGELO	53	41	78	36	47	-3	2.7	2.5	1.3	4.3	236	3.5	293	99	70	0	0	4	2
SAN ANTONIO	65	54	81	45	60	5	.2	-.2	.1	3.9	96	3.2	118	96	71	0	0	3	0
VICTORIA	70	57	82	45	63	8	T	-.5	T	7.0	127	4.7	141	96	73	0	0	2	0
WACO	55	46	75	41	51	0	1.8	1.3	.9	6.6	136	4.6	155	98	85	0	0	4	2
WICHITA FALLS	42	36	48	34	39	-6	3.4	3.2	1.7	5.6	209	4.5	299	99	81	0	0	6	2
UT CEDAR CITY	39	7	52	-2	23	-11	.1	-.1	.1	2.0	111	1.3	114	99	54	0	7	1	0
SALT LAKE CITY	34	14	36	4	24	-11	.1	-.2	.1	2.2	63	1.6	73	94	57	0	7	2	0
VT BURLINGTON	29	8	44	-10	19	0	.3	-.2	.2	1.8	35	1.0	33	86	45	0	7	3	0
VA NORFOLK	59	40	80	29	50	9	1.5	.7	1.3	5.9	66	5.2	90	88	54	0	3	3	1
RICHMOND	55	33	82	22	44	5	.8	-.1	.6	4.7	55	3.9	75	89	49	0	4	3	1
ROANOKE	49	30	79	23	40	2	.6	-.2	.2	3.6	47	2.3	48	93	48	0	5	4	0
WA QUILLAYUTE	43	28	46	21	35	-7	2.8	-.3	1.5	30.5	77	18.4	83	98	70	0	5	4	2
SEATTLE-TACOMA	44	32	50	25	38	-5	1.5	.5	.7	8.3	55	4.8	54	94	59	0	3	3	2
SPOKANE	30	14	35	9	22	-10	.8	.4	.3	3.3	55	1.6	45	97	66	0	7	3	0
YAKIMA	39	20	46	10	30	-6	.4	.2	.3	1.4	45	.7	39	94	57	0	7	3	0
WV BECKLEY	46	31	69	23	39	6	1.0	.2	.4	7.3	86	5.1	95	90	54	0	5	5	0
CHARLESTON	46	31	57	23	38	3	3.4	2.6	1.4	10.1	116	7.4	138	90	62	0	5	4	2
HUNTINGTON	45	32	54	25	38	2	5.5	4.8	2.7	13.4	165	10.3	206	89	57	0	5	4	3
PARKERSBURG	41	29	47	23	35	1	2.5	1.9	1.7	9.2	128	6.7	150	87	54	0	5	4	1
WI GREEN BAY	25	6	34	-6	16	-2	.2	0	.2	1.5	49	.7	41	86	52	0	7	1	0
LACROSSE	27	7	38	-3	17	-3	.2	0	.2	1.5	60	.7	50	87	50	0	7	2	0
MADISON	28	8	35	-1	18	-3	.3	.1	.2	2.7	83	1.1	65	84	49	0	7	2	0
MILWAUKEE	29	15	36	7	22	-1	.3	0	.3	2.9	65	1.5	60	81	46	0	7	3	0
WAUSAU	25	2	32	-9	14	-2	.1	-.2	.1	2.5	94	1.2	80	86	43	0	7	1	0
WY CASPER	25	1	38	-8	13	-14	.2	0	.1	1.7	131	1.2	149	89	63	0	7	4	0
CHEYENNE	30	10	39	4	20	-10	.1	0	.1	1.7	181	1.2	207	99	59	0	7	3	0
LANDER	18	-1	26	-9	9	-18	.1	-.1	.1	1.3	97	.6	71	89	57	0	7	1	0
SHERIDAN	22	2	38	-3	12	-14	T	-.2	T	.6	31	.4	30	87	55	0	7	0	0
PR SAN JUAN	-999	71	-999	68	-999	-	0	-.5	0	7.2	83	3.1	73	87	66	0	0	0	0

Heating Degree Days Summary

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

LAST DATE OF DATA COLLECTION PERIOD IS 2-18-1989
ACCUMULATIONS ARE FROM JULY 1
\*\* = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

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

## National Agricultural Summary

February 13-19, 1989

**HIGHLIGHTS:** Rain benefited winter wheat in portions of the southern Plains. Snow cover was mostly adequate in the northern Plains. Small grains were mostly good in the Southeast. Some flooding occurred in portions of Arkansas, Illinois, Kentucky, and Tennessee. Florida's citrus and vegetable producing areas remained dry. Cold, damp weather slowed citrus harvest in Texas. Light freeze damage to navel oranges was evident in California. Higher temperatures eased livestock stress in the Corn Belt, Plains, and the West.

**SMALL GRAINS:** Rain benefited winter wheat in Oklahoma and portions of Texas. Lack of moisture still stressed small grains in the High Plains area of Texas. Rain improved small grain condition in the Low Plains, Cross Timbers, and central areas. Some freeze damage was evident, especially to oats. In Kansas, winter wheat needed snow cover and moisture. Snow cover was mostly adequate in the northern Plains. Additional snow improved cold weather protection in Michigan. Winter wheat was mostly good to fair in Illinois. Some flooding occurred in the south. In Washington, freeze damage to fall seeded small grains was still unknown but was expected to be substantial in some areas. Wind damage was light in Colorado and Montana. Moisture was needed in Colorado to prevent wind erosion damage to winter wheat. Producers in the Southeast continued to fertilize small grains. Small grains were mostly good. Heavy rains submerged some small grains in low lying areas of western Kentucky. Rain caused some flooding in central and western Tennessee.

**OTHER FIELD CROPS:** Cotton field preparation continued in Arizona and California. Corn planting began in Florida, Georgia, and portions of Texas. Land preparation for spring planting continued in the Southeast. Rain limited fieldwork in the Tennessee and Ohio Valleys and portions of the southern Plains and Middle Atlantic Coast.

Tobacco plant bed preparation and seeding continued in the Southeast. Tobacco plants were mostly good in Georgia and South Carolina and good to fair in North Carolina.

**FRUIT AND NUTS:** Florida's citrus groves remained dry. Irrigation was active in all areas. Continued warm temperatures promoted new foliage growth. Fruit drop was less than average. Early orange harvest slowed but grapefruit movement was active. Temple orange harvest increased, mostly for processing. Citrus harvest was active in central and western Arizona. Citrus harvest was active in the Rio Grande Valley of Texas. Cold, damp weather slowed harvest in the San Antonio-Winter Garden area. Some freeze damage was evident. Peach producers resumed pruning activities in east Texas. Some early variety peaches were beginning to bloom. Desert nectarine and peaches began blooming in California. Almonds were in heavy bud swell. Some light freeze damage to navel oranges was evident. Grapefruit and lemon harvests continued and royal mandarin orange harvest was completed. Desert valencia orange harvest began. In Oregon and Washington, the amount of damage to berries from the earlier cold weather was still unknown.

**VEGETABLES:** Florida's vegetable producing areas remained dry. Spring planting and winter crop harvest were active. Harvest volume leaders were tomatoes, cabbage, celery, peppers, lettuce, squash, snap beans, carrots, and potatoes. Watermelon planting was underway in the northern area. Vegetable harvest continued in central and western Arizona. Watermelon planting progressed well in the west. Melon planting resumed in the Rio Grande Valley of Texas. Winter crop harvest increased. Land preparation for spring planting continued in the High Plains and Trans-Pecos. Some freeze damage to early planted spring crops was evident in east Texas. Cold temperatures slowed desert asparagus harvest in California. Broccoli supplies were light to moderate and of varying quality in the central coast area. Harvest was active in the westside area. Celery harvest was active in Ventura County. Strawberry picking began. In Washington, cold weather damaged winter cabbage for seed and fresh market cauliflower crops.

**PASTURES AND LIVESTOCK:** Pastures were mostly fair in the Southeast. Livestock was mostly good. In western Kentucky and Tennessee, flooding in low areas caused some problems in caring for livestock. In the Corn Belt, Plains, and the West, warmer temperatures reduced livestock stress. Rain improved pastures in portions of Oklahoma and Texas. In Florida, pastures were mostly poor to fair due to lack of moisture. Cold,

## 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 2 to 4.00 in. northwest; 0.50 in. or less southeast half. Temperatures 6 to 10° above normal.

Soil moisture adequate to short. Primary activities: General care of livestock, poultry; soil testing; fieldwork, as weather permits.

**ARIZONA:** Sunny skies, cooling south; windy, colder, isolated showers northwest 12th. Cold, dry air 13th, 14th. Sunny, milder weather 15th. Cloudy skies, isolated showers, warming trend 16th. Warmer temperatures 17th, 18th. Temperatures 4° below to 4° above normal.

Cotton field preparation continued with preliminary seedbed preparation including furrowing, preplant herbicide, pesticide applications. Wheat, barley stands 100% established; 20% jointing stage. West crops past stem elongation, boot stage; currently heading stage. First cuttings alfalfa west, harvest light to moderate. Citrus harvested west; valencia oranges, grapefruit, tangerines, few lemons. Harvest, shipping head lettuce, broccoli, cauliflower, boston, leaf, romaine, lettuce; cabbage, kale, napa, escarole, bok choy, endive, celery, spinach, anise, asparagus west. Melon planting west progressed. Harvest grapefruit, kinnow tangerines, mineolas, Arizona sweets central. Greens, leaf lettuce, broccoli, cabbage, bok choy, rapini, green onions, parsley, cauliflower, beets, turnips, spinach, leeks, carrots limited harvest central.

**ARKANSAS:** Warmer temperatures east, south cold elsewhere. Temperature extremes 23°; 82°. Heavy rainfall statewide, 2.24 to 8.71 in.

Soil moisture surplus. Possible freeze damage few wheat fields southwest. No farming activities due to constant rains. Some flooding low lying areas. Livestock good. Feed adequate.

**CALIFORNIA:** Strong low pressure beginning week brought precipitation. Midweek low pressure over Washington State sent south extremely cold Alaska air, setting record lows over much State. By weekend flow of equatorial Pacific moist air warmed temperatures, brought some precipitation.

Late plantings small grains continued as weather, soil conditions permitted. Earlier planted winter wheat fields growing well due to favorable conditions; emerged grains expected to need more rainfall for continued growth. Soil bed preparations cotton, sugarbeets ongoing. Weed control alfalfa fields progressed, mature fields westside being sheeped-off. Alfalfa green-chop harvest continued south. Pruning, orchard floor clean-up continued. Desert nectarines, peaches began blooming. Almonds heavy bud swell. Light damage appeared navel oranges. Fruit drop limited, some fruit culled prior to packing. Grapefruit, lemons, harvest continued. Royal mandarin harvest completed. Desert valencia harvest began. Desert asparagus harvest slowed due to cold temperatures. Broccoli light, moderate supplies, varying quality central coast; harvest active westside. Planting desert melons continued. Processing tomato planting active. Celery harvest active Ventura County. Strawberry picking started Ventura County. Livestock fair to good statewide. Rainfall improved range, pastures significantly some areas; forage supply, moisture conditions below normal most. Livestock movement very light. Supplemental feeding necessary most areas. Water low.

**COLORADO:** Generally dry, gradual warm-up following record cold during first half month. Although warmer than last 2 weeks, temperatures remained below normal statewide. Generally 5° on cold side. Exception scattered mountain snow showers, State dry through week. Generally below 0.50 in. with numerous areas less than 0.10 in.

Top growth on wheat frozen back early month where plants not protected by snow cover but producers indicate plants still alive below ground level. Without top growth, crop becomes more vulnerable to wind erosion unless moisture received to keep topsoils from blowing. Warmer weather welcomed by stockmen to relieve some stress, particularly to young stock, from bitter cold.

**FLORIDA:** Another warm, dry week. No rain most areas; only few 0.10 to 0.20 in. Temperatures 7 to 10° warmer than normal. Most State highs low to mid 80s. Coldest temperatures 40s north, 50s central, 60s south.

Soil moisture short except few widely scattered areas adequate. Lack of moisture critical for small grains beginning to tiller 2 weeks ahead of normal. Corn planting underway. Growers worked ground for spring sown crops, cared for tobacco beds, harvested sugarcane. Warm temperatures favored forage growth, recovery from frosts north, late previous week. Dry soils, however, kept both temporary, permanent pastures short, particularly lower southern Peninsula, parts of Panhandle. Grazing mostly poor to fair except few low ground areas, mostly along upper east coast, good to excellent. Cattle, calves continued fair to good. Citrus groves dry, irrigation continued. High temperatures producing new growth, bloom buds. Fruit drop generally less than average. Early orange harvest slowed. Grapefruit movement active, temple harvest increased, mostly for processing. Warm days, mild nights, limited precipitation major vegetable producing areas. Spring planting, harvest winter crops active. Volume leaders: Tomatoes, cabbage, celery, peppers, lettuce, squash, snap beans, carrots, potatoes. Also available: Sweet corn, radishes, strawberries, escarole, endive, eggplant. Planting watermelons, underway north.

**GEORGIA:** Temperatures 5 to 10° above normal west, southeast; 3 to 6° above normal elsewhere. Warmest mid 70s north, low and mid 80s central, south. Coldest mostly 30s. Rain 1.00 to 2.00 in. extreme north, 0.50 in. remainder north, west central. Very little rain elsewhere. Freezing rain north early weekend.

Soil moisture very short to short before rain on 20th. Tobacco plants good. Small grains fair to mostly good, growing well but potential for cold damage still concern. Pastures poor to good, light showers weekend, but more needed to replenish soil moisture. Onion diseases showing up. Corn planting beginning. Cattle, hogs fair to mostly good. Main activities: Land preparation, small grain fertilizing, livestock maintenance.

**HAWAII:** Good weather. Mostly sunny, some afternoon cloudiness. Rainfall none to 2.50 in. Winds light 5 to 15 mph. Temperatures low 60s to mid 80s.

Days suitable for fieldwork 7.0. Planting, spraying, routine field maintenance activities increased effort to catch up after adverse weather of last weeks. Most crops improved growth. Irrigation increased due to above normal

temperatures, light rains. Head cabbage output steady, good quality. Chinese cabbage production moderate, shipments to mainland continued. Overall tomato production light. Banana production seasonal decline. Papaya production light. Ginger root harvesting very active.

**IDAHO:** Temperatures 4 to 15° below normal. Some southwest, east above normal precipitation; other areas below normal precipitation.

Farmers, ranchers cleaning up aftermath of Arctic blizzard. Livestock problems included frozen udders, hooves, pneumonia. Calving, lambing continued with improved conditions. Cold weather may have stressed winter wheat. Other farm activities included marketing farm products, maintenance, attending workshops, planning spring plantings. Hay, roughage short to adequate.

**ILLINOIS:** Temperature highs 3 to 8° below normal, lows 1 to 7° below normal north, normal central; 2 to 6° above normal south. Precipitation 2.00 to 8.00 in. south; 0.15 to 0.50 in. central, north; 0.10 to 0.30 in. below normal north, central; 1.00 to 7.00 in. above normal south.

Soil moisture 58% short, 25% adequate, 17% surplus. Flooding south, west, central severe shortage. Winter wheat 2% poor, 24% fair, 70% good, 4% excellent. Good snow cover northern two-thirds State, flooding south. Hay 2% very short, 29% short, 63% adequate, 6% surplus. Plenty low quality hay available, short good dairy hay. Livestock good to excellent. Variable weather conditions, temperatures continued to cause stress on livestock.

**INDIANA:** Temperatures none to 3° above normal. Lows teens to 20s, highs mid 30s to low 40s. Precipitation 0.10 in. north to several inches south.

Muddy soils limited field activities. Other activities: Hauling grain, spreading manure, topdressing wheat, processing tobacco, attending meetings, farm program sign-up, tax preparation, repairing equipment, building fence, care of livestock. Livestock mostly good. Hay short to adequate.

**IOWA:** Temperatures 4° below normal; extremes -9° 19th Mason City; 38° 13th Ottumwa, Burlington. Precipitation below normal except extreme south; 0.06 to 0.42 in., average 0.14 in.

Livestock mostly good. Main activities consist of machine maintenance, bookkeeping, planning for spring planting.

**KANSAS:** Temperatures 25° northwest, north central to 33° southeast; 5 to 7° below normal over western third, north central, 2 to 4° below normal rest.

Snow, ice many areas made farm, ranch activities difficult, much needed moisture will improve topsoil moisture, reduce susceptibility wheat to wind erosion. Wheat remained vulnerable freeze damage due lack snow cover. Increased supplemental feeding necessary due ice, snow covering pastures last half week.

**KENTUCKY:** Mild, wet. Rainfall above average; near 2.00 in. east, 12.00 in. west. Deviations from normal +1.00 east, +11.00 west. Daytime temperatures near normal, highs mid 40s. Lows lower to mid 30s.

Soil moisture adequate to surplus. Heavy rain caused extensive flooding of low lying areas submerging some fall seeded grains, driving livestock to higher ground. Many rural roads closed due to flooding. Only 3 burley markets remained open.

**LOUISIANA:** Temperatures 4 to 11° above normal. Extremes 28°; 86°. Rainfall trace to 2.80 in.

Main activities: Caring for livestock, routine chores, land preparation for spring planting.

**MARYLAND & DELAWARE; MARYLAND:** Precipitation 0.87 in. Temperature 39°, normal 34°. Temperature extremes 9°; 79°.

Main farm activities caring for livestock, maintaining machinery.

**DELAWARE:** Precipitation 0.71 in. Temperature 41°, normal 36°. Temperature extremes 26°; 74°.

Main farm activities caring for livestock, maintaining machinery.

**MICHIGAN:** Temperatures 5° below to 2° above normal. Temperature extremes -15°; 44°. Precipitation none to 0.32 in. across State.

Additional snowfall improved snow cover for winter wheat. Activities: Snow, cold slowed outdoor farm activities. Livestock good, feed adequate. Normal winter chores, attending farm meetings, marketing livestock, crops.

**MINNESOTA:** Temperature 4 to 12° below normal. Extremes -37°; 40°. Precipitation 0.06 to 0.13 in. below normal, trace to 0.32 in. Greatest weekly total 0.68 in. Snow depth 20 to 27 in. north, 3 to 10 in. elsewhere.

Cold temperatures put more pressure on tight hay supplies.

**MISSISSIPPI:** Warm, wet north; very warm, dry south. Temperature 8° above normal; extremes 23°; 86°. Rainfall 0.44 in. above normal. Maximum weekly precipitation 5.97 in.

Days suitable for fieldwork 2.5, 2.0 1988, 1.6 avg. Soil moisture adequate to surplus. Wheat, pastures good to excellent. Livestock good. Hay mostly adequate. Feed grains adequate to short.

**MISSOURI:** Temperatures near normal southeast to 7° below normal west central. Heavy rain along southern border, over 8.00 in. parts of Bootheel. Rain, snow north, precipitation light.

Weather preventing field activities. Farmers doing chores, planning for new crop.

**MONTANA:** Temperatures much below normal statewide. West 9 to 11° below normal while central 18 to 20° below normal. Snow across State. Greatest amounts west, southwest. Least moisture southeast.

Soil moisture prospects improved with recent snows. Winter wheat mostly fair to good, some poor. Wind damage light except on exposed, light soils. Snow cover protection mostly fair. Calving started. Feed requirements heavy with barley supplementing hay on many ranches.

**NEBRASKA:** Temperatures 6° below normal across State. Precipitation beginning, weekend 0.10 in. Panhandle up to 0.30 in. east central. Extremes -1°; 48°.

**NEVADA:** Much warmer westerly flow of air entire week. Temperatures warmed 20° north, over 10° south. Many overnight lows dropped below freezing early. Temperatures weekend 72° extreme south. Precipitation generally light, confined to north.

Warmer weather easier on newborn calves, lambs. Movement potatoes to market accelerated by milder weather. Snow cover gone some winter grain fields.

**NEW ENGLAND:** Precipitation (rainfall, water equivalent of snow) 0.25 to 0.75 in. over area, except southern Maine, amounts 0.75 to 1.00 in. Temperatures teens near Canadian border to low 30s along south coast, near normal for season.

Major farm activities: Tending livestock, machinery repair.

**NEW JERSEY:** Temperatures near normal, 30° north, 35° south, 38° coastal. Extremes 80°; 66°. Precipitation below normal north, near normal south, coastal, 0.55 in. north, 0.92 in. south, 0.84 in. coastal. Heaviest 24-hour total 0.63 in. 13th, 14th.

Farmers caring for livestock, tending to normal winter chores.

**NEW MEXICO:** Extensive cloudiness kept temperatures below normal over east central, southeast plains; elsewhere temperatures slightly above normal. Heaviest precipitation south towards weekend.

**NEW YORK:** Weather changeable through week; temperatures, precipitation close to normal. Rainfall quite variable, most areas 0.25 to 0.75 in. Massena, Ellenburg Depot 0.10 in.; 1.40 in. Boonesville. Week started cold, scattered snow 12th. Warmed 14th to 15th more snow, freezing rain, rain. Weather got colder as week progressed, dry weather, snow. Temperatures 17th to 18th morning 20 to 30° below zero Adirondacks.

Major activities: Caring for livestock, hauling manure, machinery repair, winter chores, attend meetings.

**NORTH CAROLINA:** Temperatures 3 to 5° above normal across State. Temperature extremes 140°; 84°. Precipitation 0.44 to 2.00 in.

Days suitable for fieldwork 5.3. Soil moisture 5% very short, 65% short, 30% adequate. Pasture 4% very poor, 12% poor, 45% fair, 39% good. Oats 4% poor, 36% fair, 59% good, 1% excellent. Barley 3% poor, 35% fair, 59% good, 3% excellent. Rye 3% poor, 29% fair, 66% good, 2% excellent. Wheat 3% poor, 33% fair, 63% good, 1% excellent. Tobacco plant beds 2% poor, 32% fair, 66% good. Feed grains 2% very short, 7% short, 90% adequate, 1% surplus. Hay, roughage 1% very short, 4% short, 92% adequate, 3% surplus. Major farm activities: Preparing land for spring planting; topdressing small grains; preparing, seeding tobacco plant beds. Other activities: Tending livestock; pruning fruit trees; planting spring potatoes; repairing equipment, general farm maintenance.

**NORTH DAKOTA:** Temperatures 7 to 14° below normal. Extremes -35° north central; 43° south central. Light precipitation none to 0.06 in.

Soil moisture short. Snow cover protection mostly adequate for winter seeded crops. Livestock good, ranchers caring for young calves, lambs. Hay, roughage short to adequate. Main activities: Attending information meetings, farm management planning.

**OHIO:** Temperatures 3° above normal. Clouds, precipitation suppressed daytime highs, elevated overnight lows. Precipitation 1.00 to 3.00 in. south, above normal; 0.10 to 0.50 in. elsewhere, normal to subnormal.

Soil temperatures 4 in. depth near freezing. Rainfall helped recharge stream flows, soil moisture, ponds except north. Very little outside work because of wet soils, rain.

**OKLAHOMA:** Temperatures 6° below normal north central, southwest to 1° below normal southeast. Precipitation 0.34 in. north central to 3.81 in. east central.

Slow, soaking rain helped small grain, pastures. Sunshine, warmer temperatures needed to produce growth. Cattle good, prices lower than last week.

**OREGON:** Temperatures 3° below normal west, 8° below normal east. Temperatures warmed significantly

midweek. Abundant precipitation across State, mostly last half week; 2.50 in. coast, 2.00 in. western valleys, 0.60 in. southwest area; up to 4.00 in. some coastal, north Cascades. Precipitation 0.30 in. south central, 0.80 in. extreme east.

Soil moisture mostly adequate east, adequate to surplus west except southwest short. Little fieldwork, Willamette Valley grass seed fields applications of nitrogen. Extent of cold damage not yet known. Western wheat, grass seed fields show some yellow patches, little permanent damage expected. Tree fruits, berries, nursery may have some damage, extent not yet assessed. Livestock mostly good; calving, lambing difficult by extreme weather. Range, pasture mainly poor to fair; much eastern rangeland snow covered. Snowpack improved water supplies, although central, southwest still may be short for irrigation next summer.

**PENNSYLVANIA:** Mild, wet; temperature 29°, 30° above normal. Temperature extremes 2°; 58°. Precipitation 0.85 in., 0.22 in. above normal.

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

**PUERTO RICO:** NO DATA AVAILABLE.

**SOUTH CAROLINA:** Temperatures 5 to 7° below normal; 16th 84° Columbia tied highest temperature ever in February past 100 years. Precipitation trace some areas 1.30 in. Tigerville in upper Greenville County.

Farm activities included topdressing wheat with nitrogen, equipment maintenance. Tobacco beds good.

**SOUTH DAKOTA:** Temperatures 2 to 10° below normal. Extremes -18°; 47°. Precipitation greatest central, east central 0.50 in. Snow cover less than 1 in. along western border, 2 to 5 in. central, 5 to 10 in. east.

**TENNESSEE:** Warm, humid, unstable air moved into State 13th before slow moving cold front pushed through 14th to 15th. Cold air surface combined with warm air aloft to produce very wet week with extensive flooding west, middle. Temperatures well above normal. Generally 5 to 10° above normal. Lows mid 30s to lower 40s. Highs upper 40s to upper 50s. Rainfall west, middle 6.00 in., 5.00 in. above normal. Less east, Plateau; 1.00 to 2.00 in.

Some minor flooding wheat. Main concerns fertilizer leaching, need for nitrogen application soon. Stands good. Herds stressed flood areas. Major activities: Flood control, care of livestock, meetings, tax preparation.

**TEXAS:** Belt significant rain stretched far west to east. Some precipitation all areas, southern half not received normal amount. No additional cold snaps hit, general weather pattern only allowed slight warming. Below normal temperatures Rolling Plains, High Plains, west central, Trans-Pecos. Precipitation Rolling Plains, Edwards Plateau, north, west central above normal. Central 1.63 in. above normal. Precipitation below normal southern half.

**Crops:** Small grains trying to recover, moisture Low Plains, Cross-Timber, central should help. Many fields High Plains remained stressed, some losses evident. Producers giving consideration alternative grazing crops. Prospects improved wetter areas; top kill heavy after freeze. Damage oats heaviest. Warmer weather improved statewide conditions. Small grains damaged east, wet fields limited grazing. Corn planting underway valley,

drier Coastal Bend. Activity increased as fields dry.

**Commercial Vegetables:** Rio Grande Valley melon planting, replanting resumed. Onion progress good. Cold temperatures little adverse effect most fields. Harvest other vegetables increased. Harvest valencia oranges, grapefruit continued. San Antonio-Winter Garden harvest remained slow. Some freeze damage showed up. East freeze damage evident early planted fields. Land preparations continued High Plains. Trans-Pecos conditions allowed. Peach producers resumed pruning activities. Some early peaches beginning to bloom.

**Range and Livestock:** Ranges, pastures Trans-Pecos, Hill Country very beneficial rainfall. Milder temperatures, grasses should recover from dry, cold conditions. Small grains High Plains little grazing. Livestock feeding remained steady, cold, damp conditions stressed animals. Losses newborn lambs Hill Country. Stock tanks beginning to fill up run-off occurred. Sheep, goat shearing continued.

**UTAH:** Precipitation light south, moderate northern mountains. Temperatures 9° below normal.

Snow cover fall seeded grains moderate to heavy. Conditions ideal for snow mold north. Winter range feeds poor to fair. Scattered supplemental livestock feeding. Farm flocks starting to lamb. Calving beginning. Major farm activities include tax summarization, equipment maintenance, snow removal, livestock chores.

**VIRGINIA:** Above normal temperatures, light to moderate precipitation. Temperature 10 to 82°. Precipitation 0.10 to 0.75 in. Some freezing rain, snow.

Days suitable for fieldwork 3.5. Topsoil moisture 6% very short, 30% short, 58% adequate, 6% surplus. Winter grains, grazing crops, 2% very

poor, 19% poor, 46% fair, 33% good. Feeding, caring for livestock, topdressing small grains, pruning orchards, land preparation good progress.

**WASHINGTON:** Temperatures 3 to 6° below normal west; none to 11° below normal east. Precipitation 0.26 to 1.87 in. west; none to 0.59 in. east.

Days suitable for fieldwork less than 1.0. Soil moisture 40% short, 60% adequate. Range, pasture 42% short, 58% adequate. Hay, other roughage 20% short, 80% adequate. Field activities limited. Pruning continued Benton, Yakima Counties. Assessment of berry damage awaits warmer temperatures. Winter cabbage for seed, fresh market cauliflower suffered considerable loss due to cold. Winter cereal damage not fully assessed, but expected to be substantial some areas. Spring wheat seed short supply some counties.

**WEST VIRGINIA:** Temperature 37°, 2 to 6° above normal. Extremes 11° Elkins; 71° White Sulphur Springs. Precipitation 2.16 in., 0.30 to 2.50 in. above normal.

Days suitable for fieldwork 1.6. Soil moisture 17% short, 33% adequate, 50% surplus. Wheat mostly good to fair. Barley mostly fair. Livestock mostly good to fair. Feed 37% short, 63% adequate. Farm activities: General farm maintenance, livestock care, pruning, fertilizing fruit trees.

**WISCONSIN:** Temperatures 15°. Extremes -23°; 40°. Precipitation 0.10 to 0.30 in. Snow 1 to 5 in., 13th, most southeast. Snow flurries 18th to 19th.

**WYOMING:** Temperatures below normal. Precipitation generally below normal.

Snow cover over much winter wheat area helped protect crop from sub zero temperatures. Livestock fair to good with supplemental feeding. Calving, lambing, shearing underway. Sub zero temperatures, snow increased death loss new born lambs, calves.

## International Weather and Crop Summary

February 12-18, 1989

### HIGHLIGHTS

**WESTERN USSR** ... Temperatures are unseasonably warm for the ninth consecutive week, but winter grains remain dormant.

**EUROPE** ... Moderate to heavy rain returns to much of the northwest. Unfavorable dryness continues across the southwest.

**SOUTH ASIA** ... Light rain and cool weather continue across the north, slowing growth of heading to filling winter wheat.

**EASTERN ASIA** ... Heavy rain saturates soils and causes possible flooding across sections of the Yangtze Valley, South Korea, and Japan.

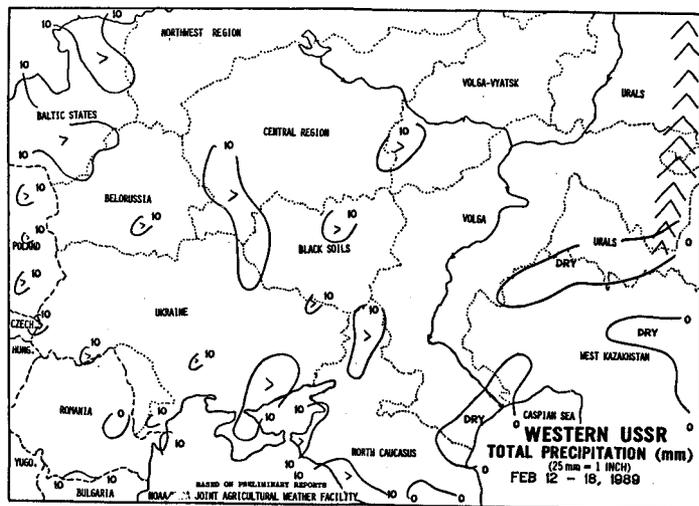
**SOUTHEAST ASIA** ... Heavy showers over Java boost irrigation reserves but likely cause local flooding.

**SOUTH AMERICA** ... Showers cover Argentina's crop areas but warm weather persists. Substantial rain falls over Brazil's south-central crop region.

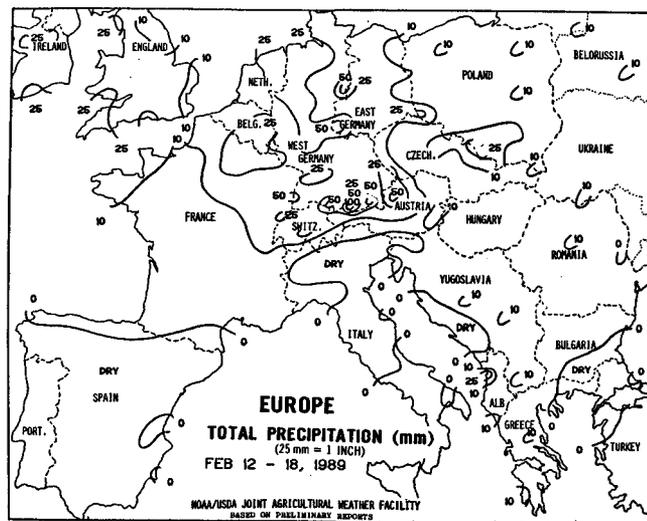
**AUSTRALIA** ... Dry weather returns to most summer crop areas.

**SOUTH AFRICA** ... Widespread, moderate to heavy showers sweep across the primary growing regions, causing local flooding. Corn is mostly in the filling stage of development.

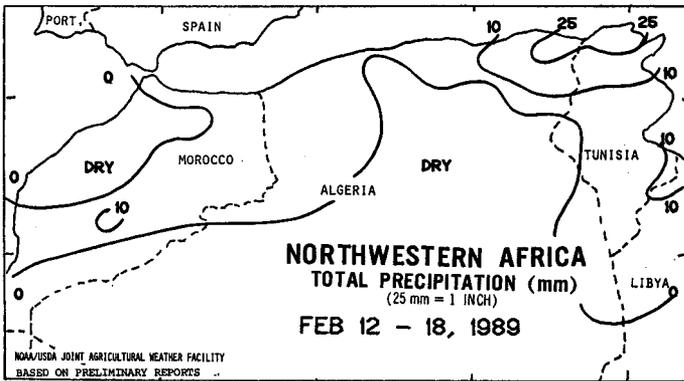
**NORTHWESTERN AFRICA** ... Dry weather returns to winter grains in Morocco and western Algeria. Showers bring temporary relief to winter grains in eastern Algeria and Tunisia.



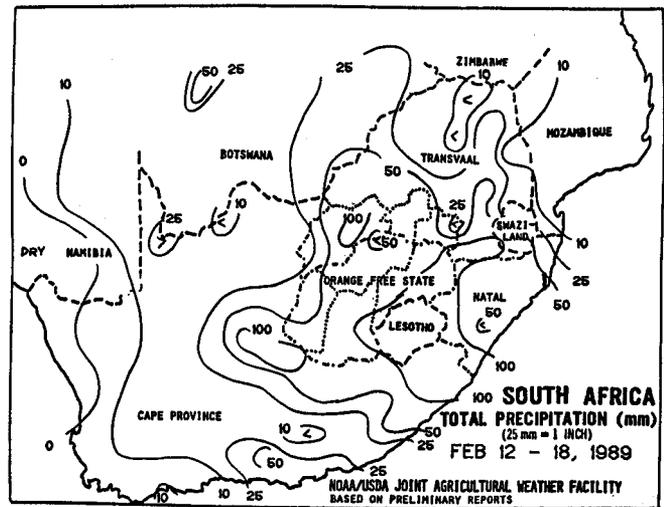
**WESTERN USSR** ... The ninth consecutive week of unseasonable warm weather covered most of the region. Weekly average temperatures were 5-8 degrees Celsius (C) above normal over the northern two-thirds of the region and 2-5 degrees C above normal in the south. Despite the mild weather pattern, temperatures remained low enough to keep winter grains dormant. Precipitation was light and widespread (about 10mm) falling mainly as snow in the north and mixed rain and snow in the south. Winter grain areas in the Baltic States, Belorussia, the Ukraine, North Caucasus, and lower Volga continued to lack a protective snow cover, leaving the crop vulnerable to potential winterkill conditions.



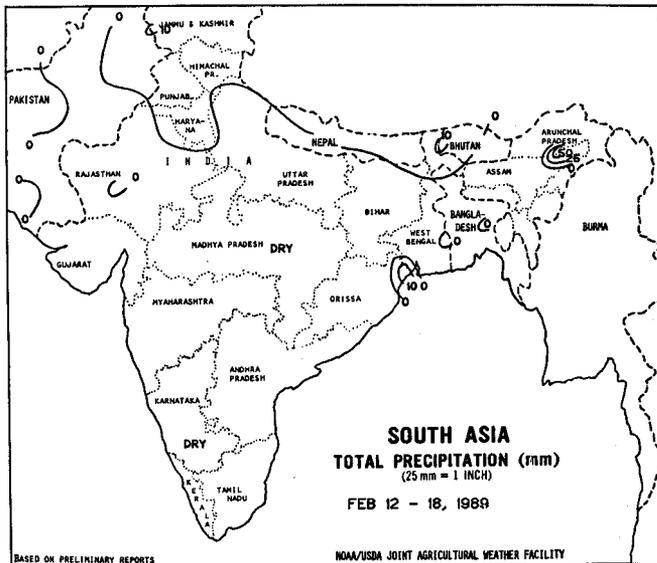
**EUROPE** ... Moderate to heavy rain (15-30mm, with scattered rainfall greater than 30mm) fell across sections of the United Kingdom, France, Benelux, and West Germany, returning soil moisture to favorable levels. Widespread light to moderate rain and snow (5-20mm) also fell over northeastern crop areas. In the south, unfavorable dryness continued across most of the southwest, while scattered mostly light rain (less than 10mm) offered limited relief to sections of the Balkans and southern Italy. Soil moisture losses in most southern growing areas were accelerated by above-normal temperatures and by transpiration of winter crops, which are becoming vegetative in some areas. Mean temperatures in the north were above normal, continuing a warmer-than-normal trend since early December.



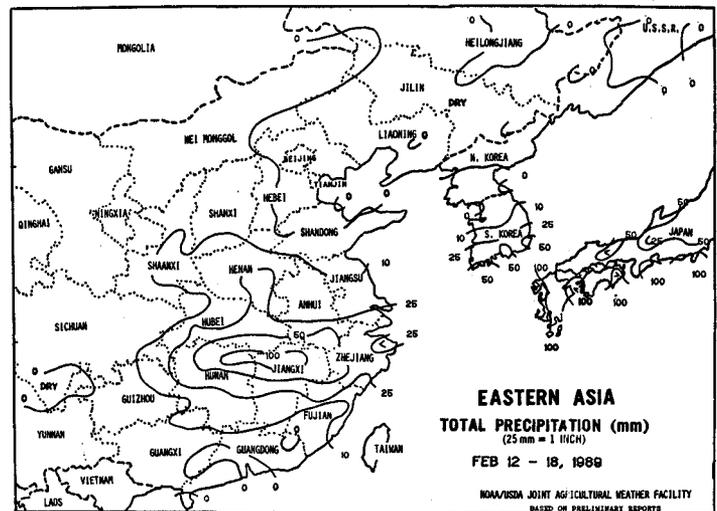
**NORTHWESTERN AFRICA** ... Above-normal temperatures and dry weather returned to winter grain areas in Morocco and western Algeria. Minimal rain over winter grain areas in central Algeria continued a below-normal rainfall pattern which has covered crops since mid-December. Beneficial showers (10-37mm) over crop areas in eastern Algeria and Tunisia brought temporary relief from prolonged dryness. Most winter grains were in the jointing stage, a time in the growth cycle when crop-moisture use increases, reaching its peak during reproduction. Usually, winter grains begin to enter reproduction in mid-March. Since sub-soil moisture reserves are unfavorably low throughout most of the region, timely rains will be needed in upcoming weeks to prevent significant declines in crop yield potential.



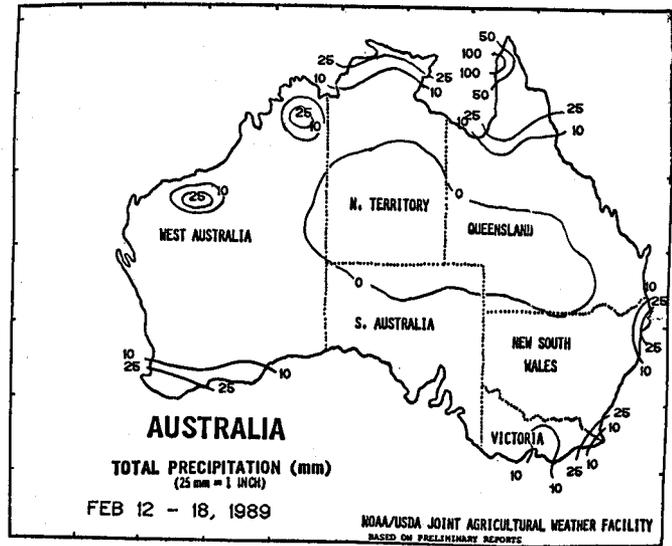
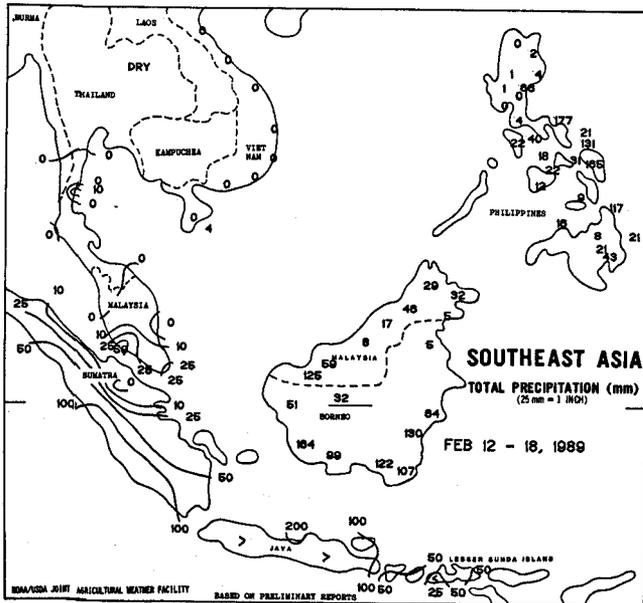
**SOUTH AFRICA** ... Widespread, moderate to heavy showers (25-50mm or more) covered the major crop regions, increasing moisture reserves but likely causing local flooding. Rainfall exceeded 50mm over most of the Maize Triangle, and excessive rain (100-186mm) occurred over large areas of southern Transvaal, southeastern Orange Free State, southern Natal, and the eastern Cape Province, possibly causing local crop damage. Temperatures continued cooler than normal, slowing evaporation rates. Corn is mostly in the filling stage of development, necessitating warmer, drier weather as the crop matures.



**SOUTH ASIA** ... Scattered light rain (1-6mm) fell over winter wheat regions of northern Pakistan and north-central India. Temperatures continued to average 1-3 degrees below normal, slowing the development of heading to filling wheat. In the east, scattered, mostly light rain (2-10mm) fell over coastal areas of West Bengal and Bangladesh, while a locally heavy shower (83mm) persisted over far eastern India. Dry, seasonably warm weather continued across southern India, with high temperatures reaching 35 degrees C over a large area from Maharashtra southward. Rice is mostly in or nearing the heading stage.

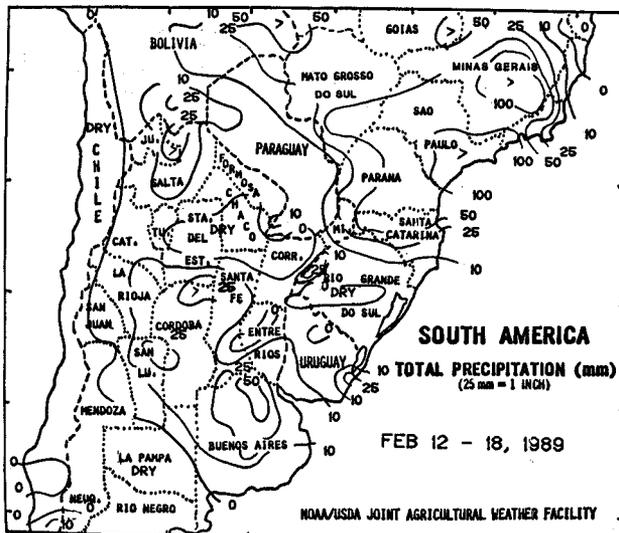


**EASTERN ASIA** ... A slow moving frontal system brought heavy rain (25-75mm, with scattered rainfall in excess of 75mm) to much of the Yangtze Valley, southern South Korea, and Japan, bringing soils to near saturation. Very heavy rain (100-189mm) in sections of northern Hunan, Jiangxi, and southern Japan may have caused localized flooding. Elsewhere, light to moderate rain and snow (5-20mm) fell across southern sections of the North China Plain, while extreme southern Chinese and Manchurian crop areas remained mostly dry. Mean temperatures were much warmer than normal (10 degrees C above normal in sections of southern Jilin) in Manchuria, the Korean Peninsula, and Japan, and normal to above normal elsewhere.



**SOUTHEAST ASIA** ... Highly variable showers covered Malaysia and Indonesia, with heaviest rainfall (100-200mm) concentrated over Java, maintaining ample irrigation reserves but causing some flooding. Locally heavy showers (100-169mm) fell over previously flooded regions of southwestern Sumatra and eastern Malaysia, but light to moderate rain (8-59mm) covered most other growing areas. Light to moderate rain (10-50mm or more) covered portions of western Malaysia but only scattered; light rain fell elsewhere over the Malay Peninsula. In the Philippines, heavy showers (100-177mm) returned to previously flooded regions of the east from southern Luzon to northeastern Mindanao. Lighter rain (1-25mm) fell elsewhere over the islands.

**AUSTRALIA** ... Dry weather returned to summer crop areas of Queensland, allowing early harvest of the main sorghum crop, and completion of planting of the late crop, which is normally harvested in April and May. Elsewhere, scattered mostly light rain (less than 10mm) fell over growing areas of southern New South Wales, Victoria, and southern South and Western Australia. Sugarcane areas in northeastern Queensland were mostly dry. Above-normal mean temperatures covered nearly all crop areas, increasing evapotranspiration losses and crop growth and development rates.



**SOUTH AMERICA** ... In Argentina, showers fell over most of the major corn and soybean areas, providing some moisture for late flowering to pod filling soybeans. Weekly rainfall averaged 10-50mm in Buenos Aires, with heavier amounts (50-94mm) in east-central portions of the province and 10-40mm in Cordoba and Santa Fe, except less than 10mm in southeastern Santa Fe. While the rain eased moisture stress, maximum temperatures ranged from the low 30's (C) early in the week to the mid-upper 30's (C) by week's end. Weekly temperatures averaged 3-4 degrees C above normal, maintaining a high rate of moisture loss. In south-central Brazil, substantial rain (25-88mm) continued to provide sufficient moisture for soybean development throughout the region, except in southern Rio Grande do Sul where only light showers (3mm or less) fell. Locally heavier rain (100-139mm) soaked coastal areas of Parana and Sao Paulo, and southeastern coffee areas of Minas Gerais.

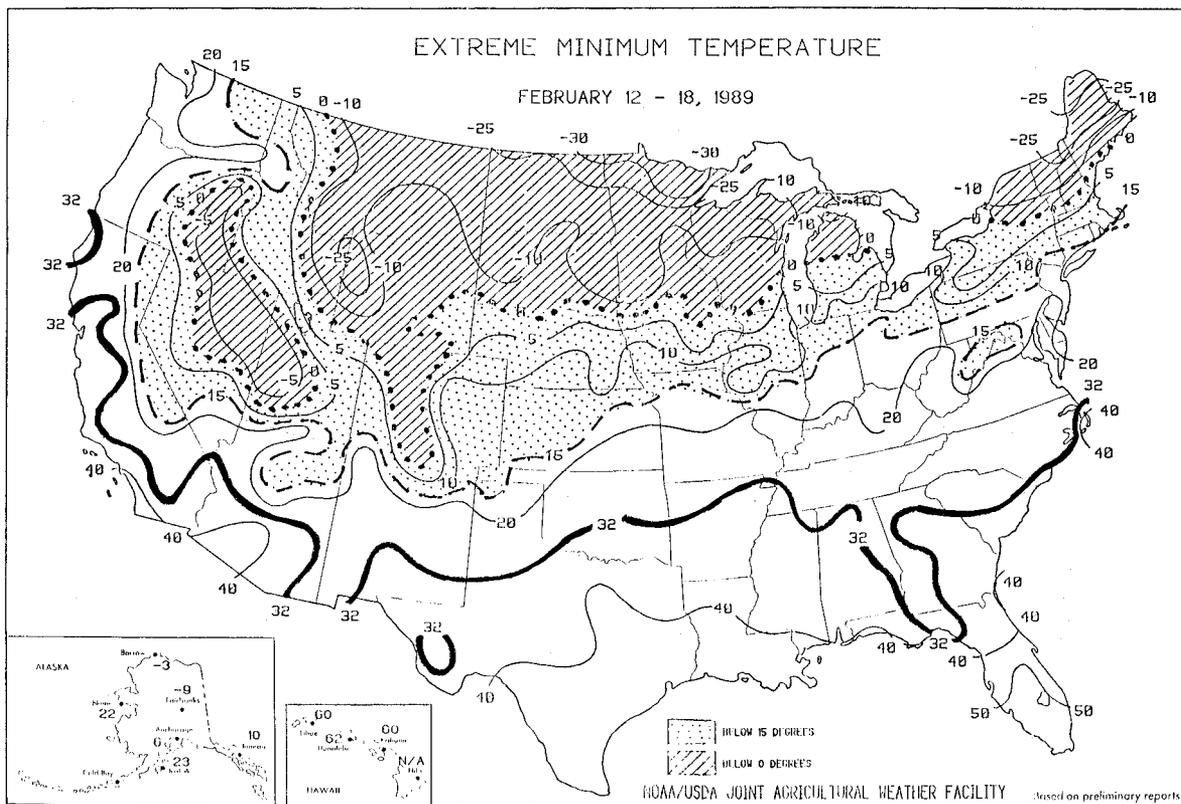
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