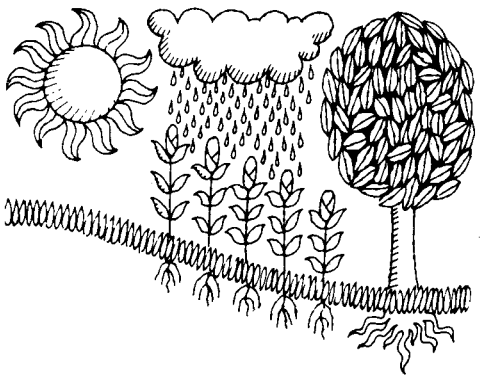


WEEKLY WEATHER AND CROP BULLETIN

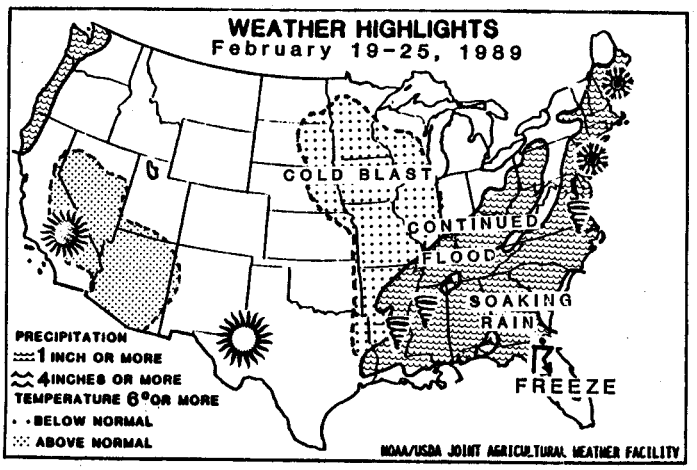
U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration, National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service and World Agricultural Outlook Board

Volume 76, No. 8 | Washington, D.C. | Feb. 28, 1989

National Weather Summary

February 19-25, 1989



HIGHLIGHTS: Severe weather and soaking rain covered the Southeast early in the week. Heavy rain added to the severe flooding in the Tennessee and Ohio Valleys. A large high pressure system pulled very cold Canadian air into the eastern half of the Nation. During the last 3 days of the week, freezing temperatures reached into central Florida, while a deep low pressure system dumped heavy snow along the middle and northern Atlantic coast. Warm air moved into the Plains at week's end.

SUNDAY: Light to moderate precipitation was widespread over the northwestern, central, and south-central portions of the country. Freezing drizzle covered the central Plains. Clear and cold conditions prevailed across the northern Plains, while the South Atlantic coast remained warm and dry.

MONDAY: Intense thunderstorms brought heavy rain and spawned tornadoes across the central Gulf Coast States. Heavy rain added to the flooding in the Tennessee and Ohio Valleys. Precipitation covered most of the eastern half of the Nation.

TUESDAY: Severe thunderstorms produced tornadoes across the southern Atlantic Coast States. Beneficial rains soaked most of the eastern seaboard. Rain showers were scattered across the Pacific Northwest, while snow was scattered over the Great Lakes. Record-high temperatures along the Atlantic coast contrasted with the arctic air pouring into the Mississippi Valley.

WEDNESDAY: High pressure, centered over the northern Plains, pulled cold Canadian air into the East. Snow spread from the Great Lakes and Northeast into the Southeast. Scattered light to moderate rain fell along the Atlantic seaboard. A Pacific frontal system brought widespread rain showers into the Northwest.

THURSDAY: The cold arctic air spread into the deep South. The 34 degrees at Orlando, FL was lower than the 37 degrees at Minot, ND. Numerous low-temperature records were broken across the Corn Belt. A low pressure system developed off the Carolinas coast during the evening and produced snow across northern Georgia into Virginia. Rain showers were scattered along the northern Pacific coast.

FRIDAY: The intense low pressure system moved up the Atlantic seaboard and continued to dump heavy snow along the coast from the Carolinas into southern New England. Cold arctic air remained over the East, as freezing temperatures reached into central Florida. Light rain and snow were scattered over the Northwest.

SATURDAY: The deep low pressure area moved to the northeast into the Atlantic, leaving heavy snow across New England. Cold air remained along the eastern seaboard. Numerous stations in Florida had record-low temperatures for this date. Unseasonably warm weather covered the Plains. By evening, a frontal system brought scattered snow across the North Central States.

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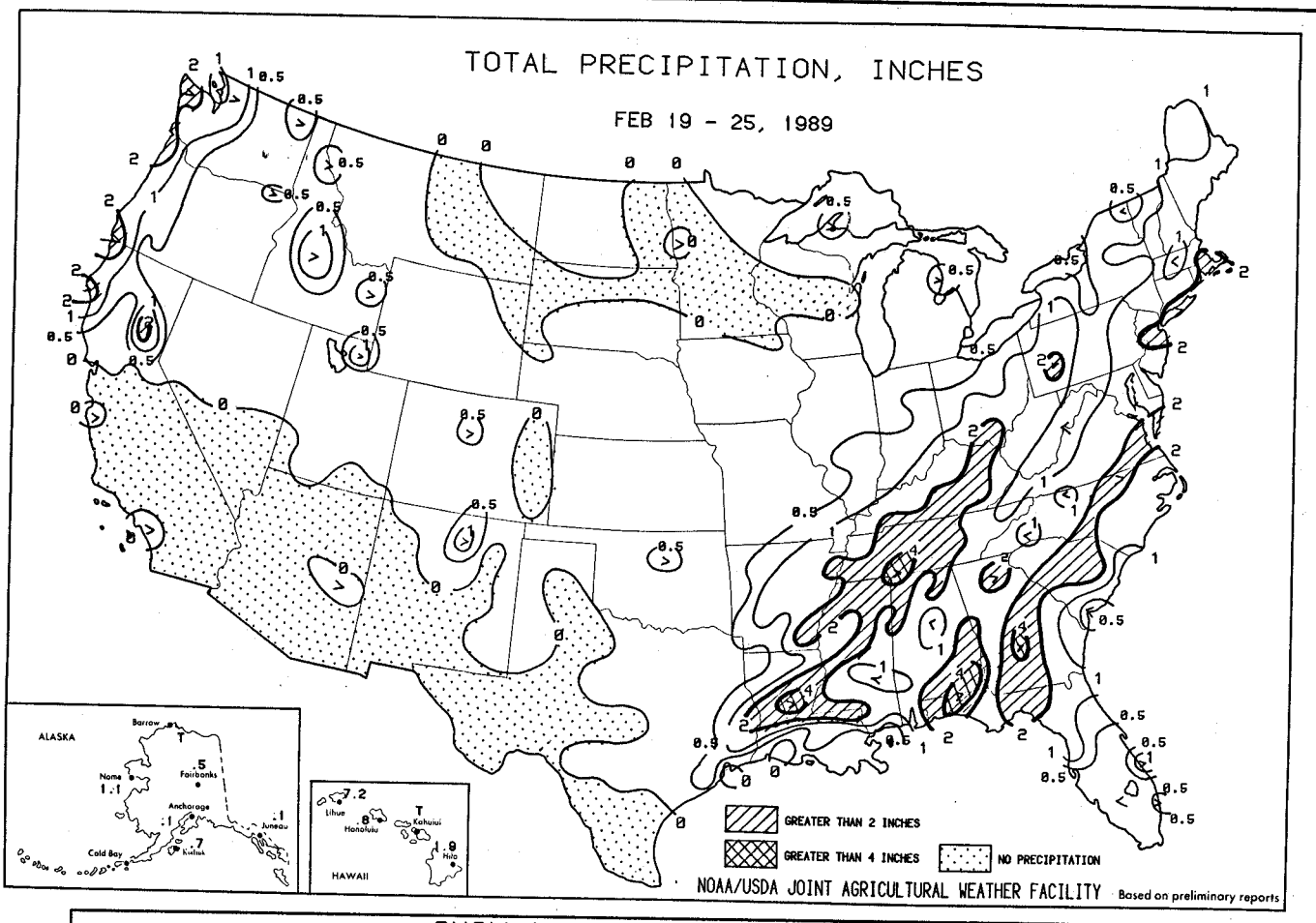
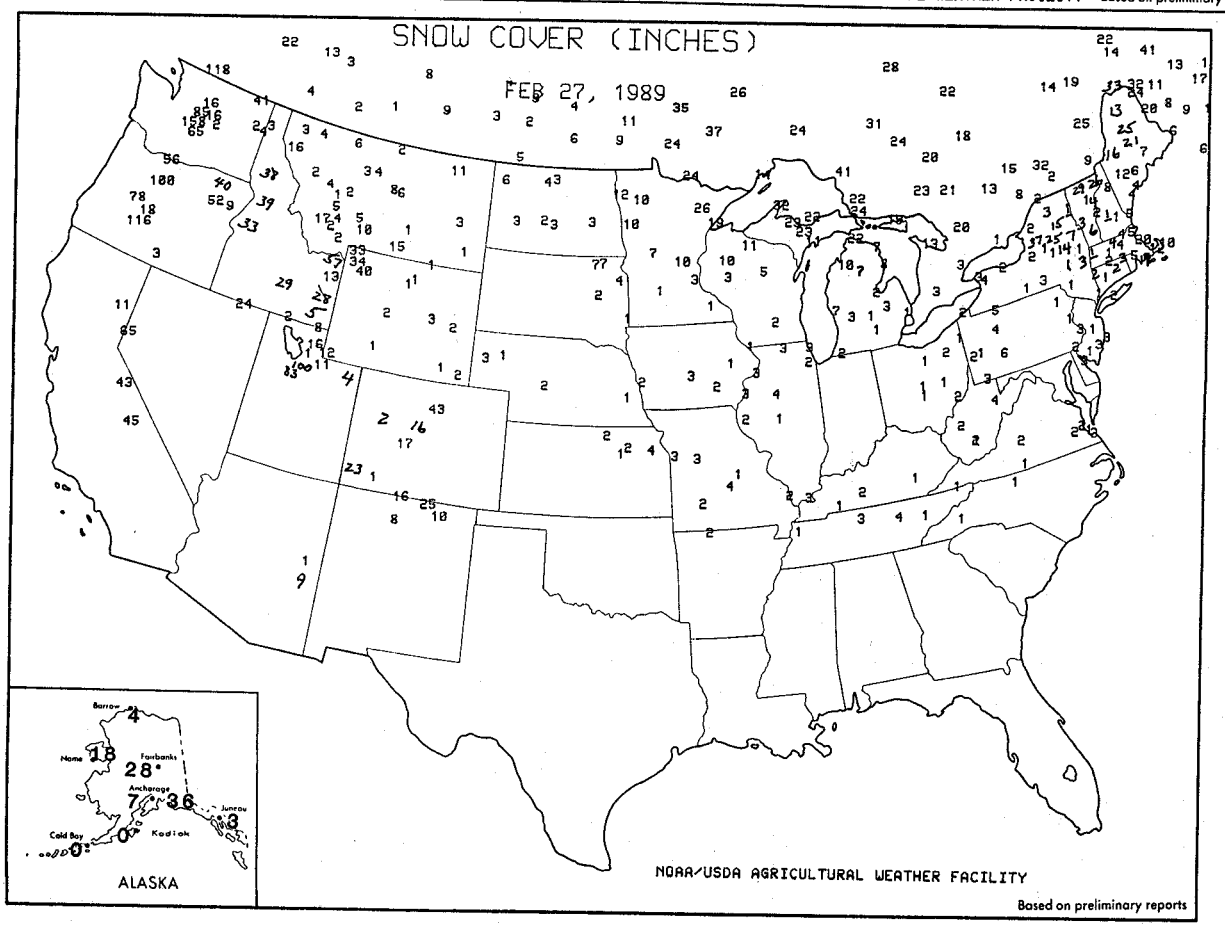
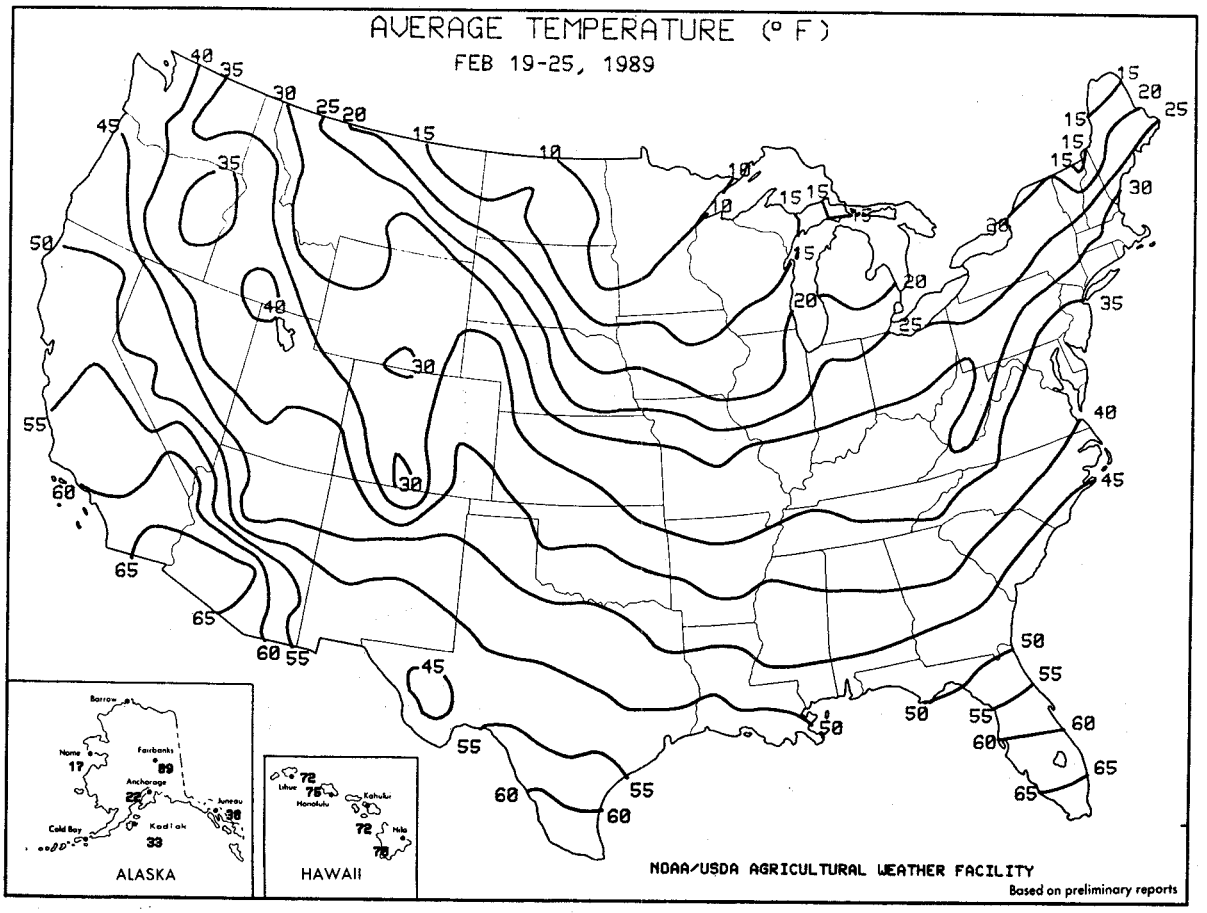
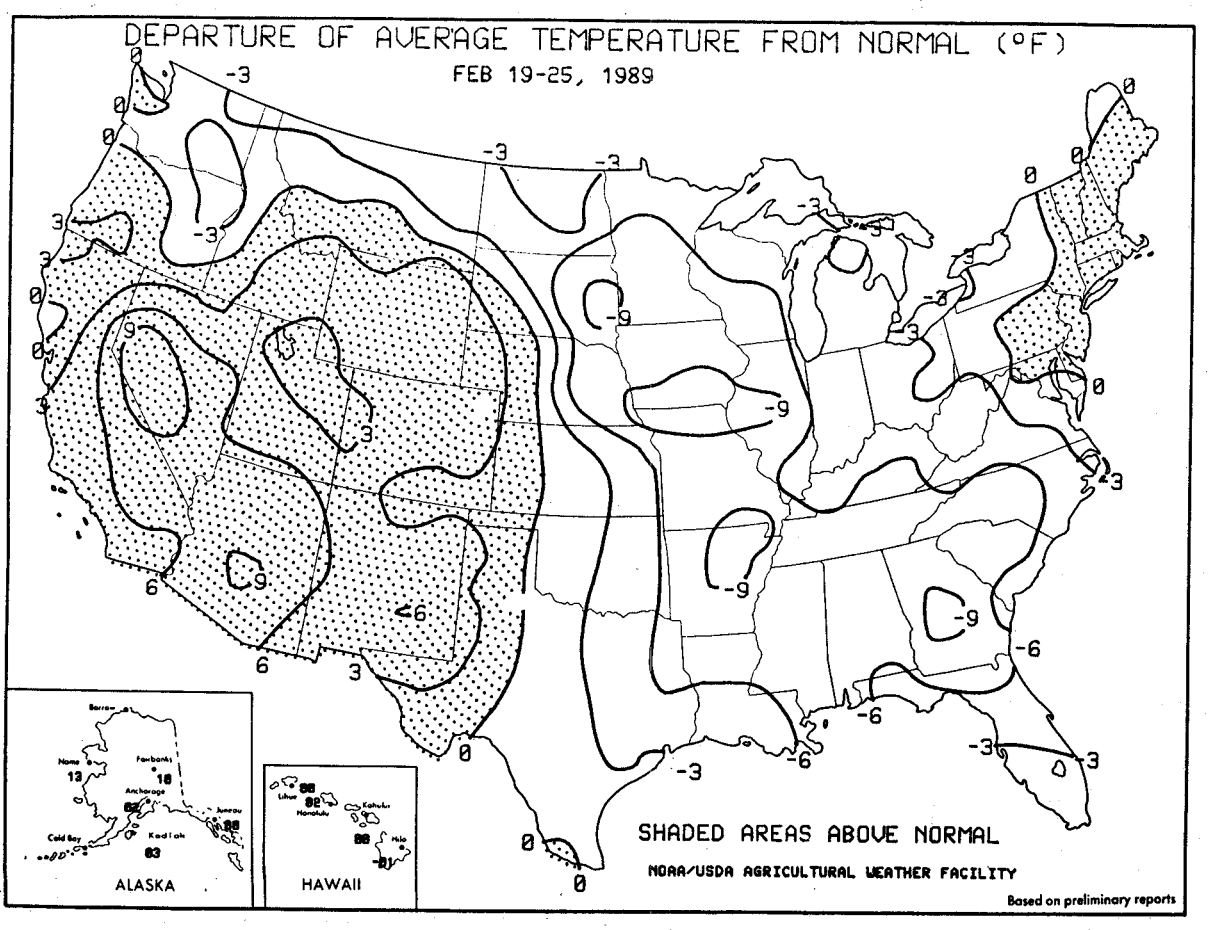

TOTAL PRECIPITATION, INCHES
FEB 19 - 25, 1989
ALASKA
Barrow
Nome
Fairbanks
Anchorage
Juneau
Cold Bay
Kodiak
HAWAII
Lihue
Honolulu
Kahului
Hilo
GREATER THAN 2 INCHES
GREATER THAN 4 INCHES
NO PRECIPITATION
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


SNOW COVER (INCHES)
FEB 27, 1989
ALASKA
Barrow
Nome
Fairbanks
Anchorage
Juneau
Cold Bay
Kodiak
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


AVERAGE TEMPERATURE (° F)
FEB 19-25, 1989
ALASKA
HAWAII
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
FEB 19-25, 1989
SHADED AREAS ABOVE NORMAL
ALASKA
HAWAII
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

National Weather Data for Selected Cities

Weather Data for the Week Ending February 25, 1989

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	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	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	49	30	62	16	39	-9	1.0	-.3	.7	10.1	71	6.7	72	88	50	0	4	3	1
MOBILE	57	36	76	19	47	-8	1.2	-.1	.9	5.4	37	3.6	40	85	49	0	3	2	1
MONTGOMERY	53	33	69	20	43	-8	1.4	.2	1.3	8.7	67	4.2	52	81	51	0	3	2	1
AK ANCHORAGE	29	14	36	5	22	2	.1	-.1	.1	2.0	75	.4	29	89	60	0	7	2	0
BARROW	8	-13	29	-31	-2	18	T	0	T	.5	100	.2	62	88	68	0	7	1	0
FAIRBANKS	22	-4	37	-16	9	10	.5	.4	.4	2.0	119	1.5	159	92	67	0	7	3	0
JUNEAU	37	23	40	12	30	0	.1	-.9	.1	11.7	101	6.8	98	98	69	0	7	1	0
KODIAK	39	28	45	21	33	3	.7	-.5	.4	14.9	94	3.9	38	91	63	0	6	2	0
NOME	25	8	35	-12	17	13	1.1	.9	.4	4.3	233	2.9	239	93	68	0	7	6	0
AZ PHOENIX	82	53	89	49	67	10	0	-.2	0	1.3	66	1.2	98	42	13	0	0	0	0
PRESCOTT	67	32	76	24	49	9	0	-.4	0	2.3	48	1.7	54	60	15	0	4	0	0
TUCSON	81	44	89	36	63	8	0	-.1	0	1.2	54	1.2	89	41	9	0	0	0	0
YUMA	85	52	94	48	69	7	0	-.1	0	.7	75	.6	102	45	14	3	0	0	0
AR FORT SMITH	47	28	64	15	38	-6	.3	-.5	.3	11.6	171	10.0	249	85	50	0	5	1	0
LITTLE ROCK	44	29	58	14	36	-10	1.0	0	1.0	13.7	120	10.6	146	81	53	0	3	1	1
CA BAKERSFIELD	72	45	87	40	58	4	0	-.3	0	1.5	58	.7	34	90	43	0	0	0	0
EUREKA	58	45	68	37	52	3	1.3	.1	1.3	13.8	77	7.6	65	91	63	0	0	5	1
FRESNO	69	47	78	40	58	6	T	-.4	T	4.1	77	1.7	45	94	49	0	0	0	0
LOS ANGELES	72	53	84	47	62	5	T	-.5	T	4.8	70	2.3	44	85	46	0	0	1	0
REDDING	62	43	64	34	53	0	T	-1.4	T	6.8	32	3.1	22	94	48	0	0	1	0
SACRAMENTO	64	44	71	38	54	3	T	-.6	T	4.7	50	1.7	26	95	52	0	0	0	0
SAN DIEGO	74	54	81	49	64	6	T	-.4	T	3.3	60	1.1	31	80	37	0	0	0	0
SAN FRANCISCO	61	47	68	42	54	2	T	-.7	T	6.2	56	2.5	34	92	56	0	0	0	0
CO DENVER	51	27	70	17	39	4	.2	0	.2	2.8	173	1.7	161	88	41	0	5	1	0
GRAND JUNCTION	47	28	56	23	38	2	.1	0	.1	2.5	151	2.3	212	94	54	0	6	2	0
PUEBLO	54	25	76	19	40	3	.3	.2	.3	1.5	200	.9	196	98	45	0	7	1	0
CT BRIDGEPORT	40	27	52	14	34	2	1.0	.2	.9	4.3	45	2.7	45	76	53	0	5	2	1
HARTFORD	40	24	57	14	32	2	.8	0	.6	3.9	37	2.5	40	82	50	0	6	3	1
DC WASHINGTON	45	29	54	20	37	-2	1.3	.6	.9	6.4	78	5.1	102	87	43	0	5	4	1
FL APALACHICOLA	60	41	75	25	50	-5	1.9	.9	1.9	4.4	42	3.2	47	81	47	0	3	1	1
DAYTONA BEACH	66	46	87	29	56	-4	.6	-.2	.3	8.4	114	7.5	145	83	46	0	3	2	1
JACKSONVILLE	62	40	84	24	51	-6	1.8	.8	1.6	4.6	54	3.5	57	89	46	0	3	2	1
KEY WEST	75	64	85	51	69	-1	.2	-.3	.1	.9	16	.7	19	82	59	0	0	4	0
MIAMI	75	56	86	37	66	-3	.3	-.2	.3	1.1	20	1.0	26	83	46	0	0	1	0
ORLANDO	69	47	88	30	58	-4	.1	-.8	.1	4.9	71	3.9	79	85	40	0	2	1	0
TALLAHASSEE	59	38	71	18	48	-7	2.8	1.5	2.7	4.4	33	3.4	37	85	45	0	3	2	1
TAMPA	69	49	85	31	59	-3	.4	-.4	.4	3.6	52	2.0	41	86	48	0	1	2	0
WEST PALM BEACH	74	54	87	32	64	-3	.1	-.6	0	2.9	40	1.1	21	82	47	0	1	2	0
GA ATLANTA	47	30	65	17	38	-8	2.0	.9	1.6	7.1	55	5.9	67	80	51	0	4	3	1
AUGUSTA	50	33	60	20	41	-8	1.8	.8	1.2	5.0	47	3.7	49	93	57	0	3	4	1
MACON	50	33	60	19	41	-9	3.8	2.6	3.8	8.2	67	5.9	72	89	55	0	3	3	1
SAVANNAH	58	37	79	22	47	-6	.4	-.5	.3	1.8	21	.8	14	93	47	0	3	3	0
HI HILO	78	63	80	58	70	-1	1.9	-1.7	.9	46.6	137	33.1	155	94	59	0	0	3	2
HONOLULU	82	69	83	67	75	2	.8	.1	.7	15.0	156	8.3	134	85	54	0	0	2	1
KAHULUI	80	64	82	60	72	0	T	-.7	T	15.0	159	4.8	71	88	54	0	0	0	0
LIHUE	75	68	78	66	72	0	7.2	6.4	2.4	22.5	150	15.7	164	92	71	0	0	7	6
ID BOISE	46	29	53	25	38	0	.5	.2	.3	3.1	80	2.3	90	96	66	0	6	2	0
LEWISTON	45	33	52	29	39	-1	.1	-.2	.1	2.4	67	1.8	82	93	67	0	4	1	0
POCATELLO	41	27	47	23	34	3	.5	.3	.3	3.2	114	2.0	108	93	64	0	6	4	0
IL CHICAGO	29	14	39	4	22	-6	.2	-.2	.1	4.0	81	1.6	61	86	57	0	7	2	0
MOLINE	28	11	39	-5	20	-8	.2	-.2	.1	4.0	86	2.4	90	85	62	0	7	3	0
PEORIA	28	12	38	-5	20	-10	.4	-.1	.3	4.4	91	2.2	77	89	62	0	7	3	0
QUINCY	30	10	43	-6	20	-11	.2	-.3	.1	3.2	74	1.3	51	93	63	0	7	2	0
ROCKFORD	27	9	37	-7	18	-8	.1	-.2	.1	3.0	71	1.3	53	86	57	0	7	1	0
SPRINGFIELD	31	15	44	-3	23	-8	.4	-.1	.3	5.4	104	2.1	71	89	59	0	7	2	0
IN EVANSVILLE	41	25	50	13	33	-4	.7	-.1	.6	13.0	144	10.3	183	86	54	0	5	3	1
FORT WAYNE	32	18	45	6	25	-3	.5	-.1	.3	5.6	89	3.1	81	88	60	0	7	5	0
INDIANAPOLIS	35	21	47	8	28	-4	.5	-.2	.4	5.5	71	3.0	63	85	56	0	7	4	0
SOUTH BEND	30	16	36	1	23	-5	.4	-.2	.2	5.4	76	2.5	60	87	58	0	7	3	0
IA DES MOINES	27	9	47	-10	18	-9	.2	-.1	.1	3.2	107	2.3	120	86	57	0	7	3	0
SIOUX CITY	29	8	50	-8	19	-7	.1	-.1	.1	1.9	88	1.3	92	91	55	0	7	2	0
WATERLOO	24	3	41	-12	13	-10	T	-.3	T	1.9	69	1.3	85	88	59	0	7	1	0
KS CONCORDIA	39	19	67	3	29	-5	.1	-.2	.1	1.6	79	1.0	72	83	49	0	6	2	0
DODGE CITY	50	25	80	12	37	1	.1	-.1	0	.6	42	.5	55	87	48	0	6	2	0
GOODLAND	50	23	75	16	36	3	T	-.1	T	.8	73	.3	44	87	47	0	6	1	0
TOPEKA	41	20	72	1	31	-4	.1	-.2	.1	2.5	82	1.6	92	87	48	0	7	2	0
WICHITA	45	24	71	7	35	-3	.1	-.1	.1	1.7	73	1.2	87	89	44	0	6	2	0
KY BOWLING GREEN	41	25	53	14	33	-6	1.9	.9	1.8	23.3	184	17.0	210	95	62	0	5	3	1
LEXINGTON	39	22	51	8	31	-5	1.5	.6	1.0	17.7	174	14.1	220	88	59	0	5	4	1
LOUISVILLE	42	25	51	13	33	-5	1.2	.3	.9	16.1	167	12.7	205	86	53	0	5	3	1
LA ALEXANDRIA	57	41	69	29	49	-6	6.0	4.8	6.0	20.0	149	14.2	166	76	47	0	2	1	1
BATON ROUGE	61	39	82	23	50	-5	.7	-.6	.4	13.6	97	5.4	60	85	45	0	2	2	0
LAKE CHARLES	61	42	76	28	52	-3	T	-.8	T	10.0	79	5.2	68	84	41	0	2	0	0
NEW ORLEANS	60	41	80	28	51	-5	.1	-1.2	.1	6.6	44	2.6	27	82	48	0	3	1	0

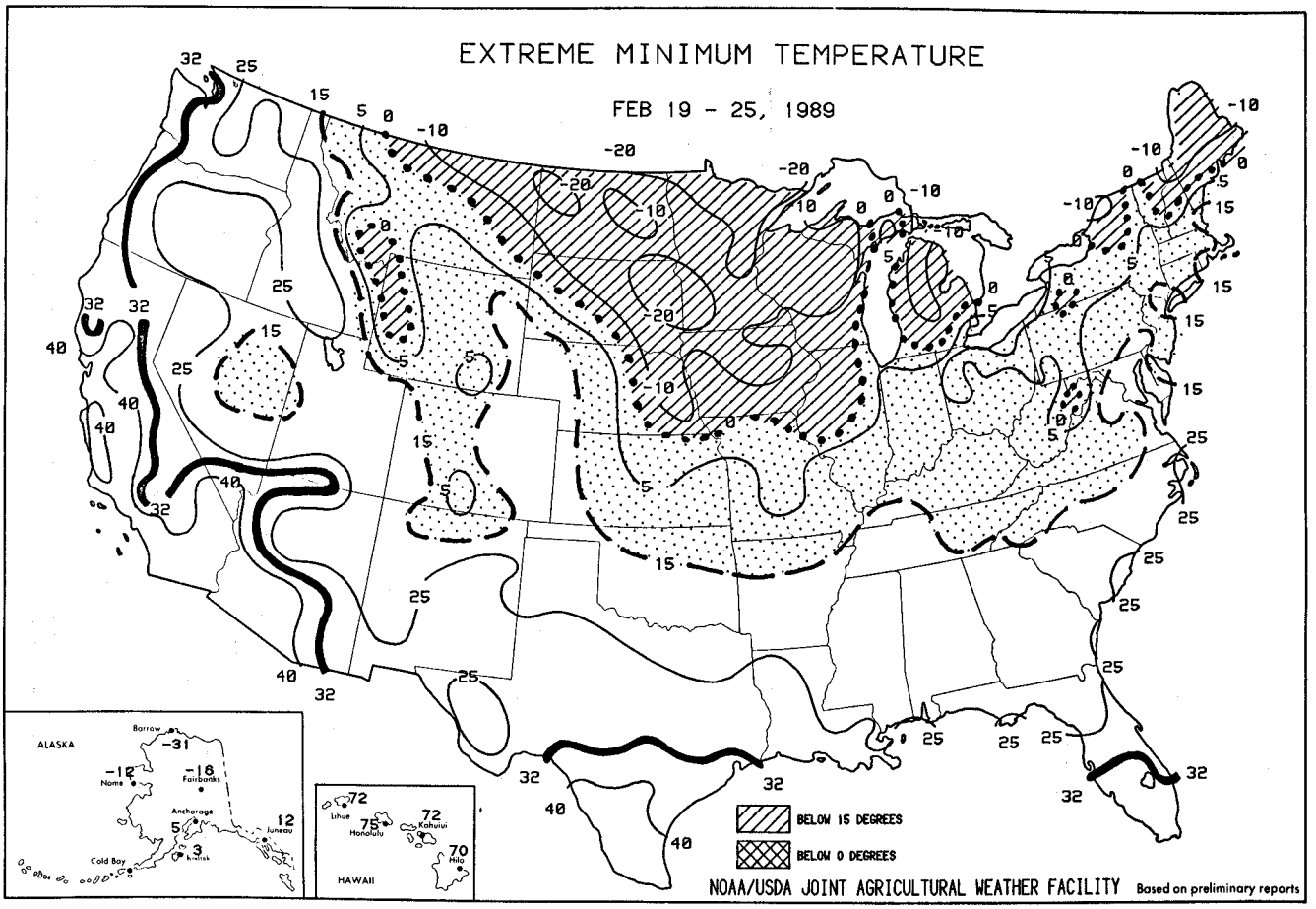
Based on 1951-80 normals

Weather Data for the Week Ending February 25, 1989

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	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	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	54	36	68	25	45	-6	.1	-.8	0	16.0	145	11.3	158	88	47	0	2	2	0
ME CARIBOU	23	6	36	-14	15	0	.6	.1	.5	4.3	59	3.3	79	90	64	0	7	4	1
PORTLAND	36	19	48	9	28	3	1.1	.2	.8	4.7	41	3.5	50	88	53	0	5	3	1
MD BALTIMORE	45	29	54	18	37	1	1.3	.6	.9	7.2	80	6.3	112	82	48	0	5	3	1
SALISBURY	46	29	69	15	38	0	1.7	.9	.8	5.1	51	4.4	70	90	56	0	4	5	2
MA BOSTON	43	27	61	17	35	3	1.5	.6	1.1	3.8	33	2.8	39	87	54	0	5	5	1
CHATHAM	39	29	56	19	34	2	1.9	.9	.7	6.1	46	4.7	58	92	76	0	5	6	1
MI ALPENA	28	7	36	-9	17	-3	.1	-.2	.1	2.9	60	1.6	57	93	52	0	7	2	0
DETROIT	31	16	39	5	24	-4	.4	-.1	.2	4.0	69	2.0	62	89	59	0	7	2	0
FLINT	29	11	36	-7	20	-5	.3	-.1	.2	3.1	64	1.8	64	91	55	0	7	3	0
GRAND RAPIDS	28	10	34	-9	19	-6	.2	-.2	.1	3.8	65	1.9	58	92	60	0	7	2	0
HOUGHTON LAKE	27	6	34	-14	17	-2	.2	-.1	.2	3.4	76	1.5	59	88	53	0	7	3	0
LANSING	29	10	35	-10	20	-4	.2	-.2	.1	2.8	54	1.6	56	89	57	0	7	2	0
MARQUETTE	23	-1	29	-14	11	-5	.4	-.1	.2	5.4	89	3.0	83	94	55	0	7	4	0
MUSKEGON	30	13	37	-3	22	-4	.2	-.2	.1	5.3	83	2.5	65	92	56	0	7	4	0
SAULT ST. MARIE	25	2	30	-14	13	-3	.3	-.1	.3	7.4	119	3.7	102	90	52	0	7	2	0
MN ALEXANDRIA	19	-3	38	-16	8	-7	T	-.2	T	1.2	52	.8	52	86	64	0	7	0	0
DULUTH	22	-1	34	-13	10	-5	.1	-.1	.1	3.2	100	2.1	109	83	45	0	7	1	0
INT'L FALLS	20	-6	30	-20	7	-4	.2	0	.1	2.4	103	1.7	115	89	47	0	7	2	0
MINNEAPOLIS	22	2	38	-13	12	-8	T	-.2	T	2.1	89	1.4	94	87	54	0	7	0	0
ROCHESTER	21	1	37	-13	11	-8	T	-.2	T	1.9	82	.8	54	90	59	0	7	0	0
MS GREENWOOD	50	33	72	18	42	-7	1.8	.6	1.8	16.8	116	11.5	126	86	54	0	4	1	1
JACKSON	52	34	73	19	43	-7	1.0	-.1	1.0	11.2	79	6.4	73	90	55	0	4	2	1
MERIDIAN	53	33	74	18	43	-7	1.2	0	.7	13.9	95	6.4	71	89	47	0	4	3	2
MO CAPE GIRARDEAU	41	25	50	13	33	—	.9	0	.9	16.0	172	13.1	236	89	58	0	5	1	1
COLUMBIA	38	19	60	2	28	-7	.3	-.3	.2	6.3	117	2.9	85	86	53	0	7	2	0
KANSAS CITY	37	19	63	2	28	-8	.1	-.2	.1	2.4	64	1.5	68	84	53	0	7	2	0
SAINT LOUIS	39	22	59	7	31	-5	.3	-.3	.3	7.3	126	4.0	113	80	50	0	5	2	0
SPRINGFIELD	41	20	62	5	31	-7	.3	-.4	.3	6.4	108	3.3	97	87	51	0	7	1	0
MT BILLINGS	40	23	51	9	32	1	T	-.2	T	2.2	94	1.7	105	79	46	0	6	0	0
GLASGOW	24	4	41	-18	14	-4	.3	.2	.2	1.5	161	1.1	176	89	69	0	7	2	0
GREAT FALLS	37	17	51	1	27	-2	.1	-.1	.1	2.7	111	1.7	105	92	59	0	7	2	0
HAVRE	30	8	41	-10	19	-4	T	-.1	T	.6	40	.1	13	89	64	0	7	0	0
HELENA	38	16	45	6	27	-2	.1	0	.1	2.3	137	2.0	185	92	59	0	7	3	0
KALISPELL	38	15	46	5	27	-2	.2	0	.1	4.8	116	2.5	96	94	58	0	7	3	0
MILES CITY	31	13	41	-4	22	-3	T	-.1	T	1.8	103	1.2	105	77	53	0	7	0	0
MISSOULA	39	21	45	16	30	0	.2	0	.1	1.9	57	1.1	53	98	61	0	7	4	0
NE GRAND ISLAND	33	11	56	-5	22	-8	.4	.2	.4	1.6	89	1.4	115	89	61	0	7	2	0
LINCOLN	31	8	49	-16	20	-9	.2	-.1	.2	2.4	110	1.8	120	90	60	0	7	2	0
NORFOLK	30	8	51	-13	19	-7	.2	0	.1	2.8	156	1.9	162	90	58	0	7	2	0
NORTH PLATTE	42	18	67	13	30	1	.2	.1	.2	1.4	117	1.0	127	94	51	0	7	2	0
OMAHA	29	13	47	-3	21	-9	.3	.1	.2	2.4	110	1.7	111	85	58	0	7	2	0
SCOTTSBLUFF	51	24	64	20	38	6	.1	0	.1	.9	67	.5	58	86	40	0	7	1	0
VALENTINE	39	13	56	6	26	0	.1	0	.1	.4	51	.3	43	75	49	0	7	2	0
NV ELY	51	26	63	11	39	8	.2	0	.2	1.8	87	1.0	73	83	41	0	6	2	0
LAS VEGAS	74	46	83	40	60	9	0	-.1	0	.7	56	.6	66	46	17	0	0	0	0
RENO	60	36	67	29	48	9	.1	-.1	.1	1.8	56	1.0	48	73	32	0	2	2	0
WINNEMUCCA	56	30	65	27	43	6	T	-.2	T	1.1	46	.6	38	93	47	0	5	1	0
NH CONCORD	36	16	49	5	26	2	1.0	.4	.9	3.8	45	2.7	55	90	51	0	6	3	1
NJ ATLANTIC CITY	43	27	58	11	35	0	2.1	1.3	1.2	6.1	61	5.5	86	89	53	0	5	3	2
NM ALBUQUERQUE	60	31	75	25	46	4	T	-.1	T	1.0	80	.9	131	71	24	0	4	1	0
CLOVIS	59	31	78	24	45	2	.1	-.1	.1	2.1	150	.7	82	90	34	0	4	1	0
ROSWELL	69	35	85	27	52	6	T	-.1	T	1.2	110	.7	97	78	19	0	2	1	0
NY ALBANY	35	18	48	6	27	1	.6	0	.5	3.0	42	2.0	46	80	47	0	6	2	0
BINGHAMTON	31	15	47	1	23	-1	.8	.2	.7	4.4	60	3.3	72	89	57	0	7	4	1
BUFFALO	29	15	41	5	22	-4	.9	.3	.6	6.3	74	4.1	80	89	64	0	7	5	1
NEW YORK	42	29	58	17	36	1	1.8	1.0	1.5	6.4	68	5.2	90	72	48	0	4	2	1
ROCHESTER	31	14	45	3	23	-3	.6	0	.3	3.6	51	2.5	56	90	57	0	6	2	0
SYRACUSE	33	15	49	2	24	-1	.6	-.1	.6	4.6	57	2.7	55	84	50	0	6	2	1
NC ASHEVILLE	41	25	61	13	33	-8	.7	-.2	.6	5.7	62	4.2	71	87	59	0	6	4	1
CHARLOTTE	45	30	57	16	37	-7	1.5	.6	.7	6.5	62	4.9	69	94	61	0	4	5	1
GREENSBORO	43	26	52	12	35	-7	.9	0	.4	4.8	49	3.6	56	92	59	0	5	5	0
HATTERAS	54	41	75	28	48	1	1.0	0	.4	7.1	55	6.4	75	92	67	0	2	4	0
NEW BERN	52	35	75	20	44	-4	1.7	.7	1.0	7.2	64	6.2	83	95	64	0	2	5	1
RALEIGH	46	28	68	12	37	-6	2.2	1.4	1.0	7.3	76	6.3	96	95	66	0	5	5	1
WILMINGTON	54	36	76	22	45	-4	1.2	.3	.5	4.7	46	4.1	62	94	67	0	3	5	0
ND BISMARCK	26	2	45	-17	14	-4	T	-.1	T	1.4	104	.7	81	87	63	0	7	1	0
FARGO	19	-3	37	-14	8	-6	T	-.1	T	3.0	204	1.9	220	85	66	0	7	1	0
GRAND FORKS	19	-5	37	-17	7	-5	T	-.1	T	3.6	202	1.7	144	83	62	0	7	0	0
WILLISTON	24	0	42	-20	12	-6	.1	0	.1	2.0	145	1.2	138	87	66	0	7	1	0
OH AKRON-CANTON	34	18	47	5	26	-3	1.1	.5	.6	5.9	83	4.1	93	92	62	0	7	4	1
CINCINNATI	38	22	49	9	30	-4	1.2	.5	.6	10.5	124	7.7	140	88	59	0	6	6	1
CLEVELAND	33	19	43	9	26	-3	.5	0	.3	6.2	86	3.7	84	89	59	0	5	3	0
COLUMBUS	36	21	50	10	29	-3	1.1	.5	.6	7.2	100	4.7	102	85	53	0	7	2	1

Weather Data for the Week Ending February 25, 1989

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	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	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	34	20	44	3	27	-5	1.0	.4	.5	7.8	114	5.2	118	86	60	0	6	5	0
TOLEDO	34	18	43	5	26	-2	.3	-.2	.2	4.5	73	2.5	71	87	55	0	7	3	0
YOUNGSTOWN	34	16	49	3	25	-2	.8	.3	.6	5.7	77	3.7	81	92	61	0	7	2	1
OK OKLAHOMA CITY	49	30	69	15	40	-3	.1	-.2	.1	4.6	143	3.3	156	87	54	0	4	2	0
TULSA	46	28	61	13	37	-6	.3	-.2	.3	6.8	146	4.9	175	85	51	0	4	1	0
OR ASTORIA	50	38	54	33	44	-1	2.5	.7	.9	22.0	75	14.7	83	97	74	0	0	7	2
BURNS	42	24	46	18	33	-2	.1	-.1	.1	1.3	31	.6	23	83	59	0	7	1	0
MEDFORD	58	36	63	26	47	4	.3	-.2	.3	4.4	50	3.1	59	94	44	0	1	3	0
PENDLETON	45	30	55	27	38	-3	.5	.2	.3	3.6	83	3.3	120	95	68	0	6	3	0
PORTLAND	51	37	54	32	44	-1	.7	-.2	.3	8.5	53	6.1	63	96	66	0	1	6	0
SALEM	53	37	57	29	45	1	.5	-.5	.2	9.6	53	6.4	57	97	65	0	1	5	0
PA ALLENTOWN	41	24	48	11	32	1	1.2	.5	.9	4.8	49	3.8	63	80	49	0	5	3	1
ERIE	31	17	42	9	24	-2	.6	.1	.5	6.7	91	4.1	98	87	60	0	7	4	0
HARRISBURG	42	25	51	13	33	0	1.0	.3	.5	5.0	58	4.1	77	78	49	0	5	4	0
PHILADELPHIA	44	28	55	14	36	1	1.5	.8	1.0	6.3	70	5.3	95	77	48	0	5	3	1
PITTSBURGH	37	19	54	5	28	-2	1.2	.6	.6	7.3	97	5.1	104	88	54	0	6	4	2
SCRANTON	37	20	50	6	29	0	1.0	.5	.7	3.7	57	2.6	65	80	52	0	6	3	1
RI PHOVIDENCE	42	27	60	17	35	4	1.6	.7	1.4	4.5	38	3.5	48	93	56	0	5	3	1
SC CHARLESTON	54	38	74	27	46	-5	1.0	.1	.6	4.1	44	3.4	54	93	57	0	3	4	1
COLUMBIA	49	34	69	19	41	-7	2.3	1.3	1.2	5.4	47	4.7	59	97	66	0	3	5	1
FLORENCE	51	34	73	17	42	-6	1.7	.8	.6	5.1	53	4.3	66	94	61	0	4	4	2
GREENVILLE	45	30	58	22	38	-7	1.0	-.1	.5	6.4	52	4.5	55	87	57	0	4	4	1
SD ABERDEEN	21	-1	41	-24	10	-8	T	-.2	T	2.1	139	.7	72	86	65	0	7	0	0
HURON	24	-1	46	-24	12	-9	.1	-.2	0	1.7	108	1.0	95	89	66	0	7	2	0
RAPID CITY	42	18	58	6	30	2	T	-.2	T	.8	58	.3	36	85	47	0	7	2	0
SIOUX FALLS	25	-1	42	-20	12	-10	.1	-.2	.1	1.1	56	.7	57	90	63	0	7	2	0
TN CHATTANOOGA	47	28	66	15	38	-6	1.2	0	.9	13.5	93	10.0	107	85	52	0	4	2	1
KNOXVILLE	43	28	65	14	36	-7	1.0	-.1	.8	14.0	109	10.0	121	92	57	0	4	4	1
MEMPHIS	46	30	57	17	38	-7	1.9	.8	1.9	23.0	174	17.1	203	85	51	0	4	1	1
NASHVILLE	44	27	56	16	36	-7	3.4	2.4	2.4	18.3	145	14.4	180	89	54	0	4	4	2
TX ABILENE	61	37	75	27	49	-1	T	-.2	T	4.4	161	3.6	194	85	39	0	2	1	0
AMARILLO	58	30	78	22	44	3	T	-.2	T	.9	61	.7	75	92	38	0	4	0	0
AUSTIN	63	43	75	32	53	-2	T	-.6	T	5.8	99	4.7	122	81	40	0	1	2	0
BEAUMONT	61	42	75	31	51	-5	T	-1.0	T	12.7	99	6.9	88	86	46	0	2	1	0
BROWNSVILLE	75	51	84	43	63	-1	T	-.4	T	2.1	56	2.0	77	92	44	0	0	0	0
CORPUS CHRISTI	68	49	81	36	58	-2	0	-.3	0	3.9	94	2.9	99	91	46	0	0	0	0
DEL RIO	67	45	78	37	56	-2	T	-.2	T	2.4	128	2.0	152	77	37	0	0	0	0
EL PASO	71	36	82	29	53	3	0	-.1	0	1.3	112	.8	109	71	16	0	2	0	0
FORT WORTH	57	37	71	23	47	-4	T	-.5	T	8.7	173	6.2	187	79	45	0	2	1	0
GALVESTON	61	49	71	36	55	-2	T	-.6	T	9.3	107	6.4	126	87	54	0	0	0	0
HOUSTON	61	42	69	32	52	-5	.3	-.5	.3	7.0	68	5.7	88	90	54	0	1	3	0
LUBBOCK	62	32	86	25	47	3	T	-.2	T	2.1	174	1.5	183	92	39	0	4	1	0
MIDLAND	70	33	83	27	51	2	T	-.1	T	2.0	152	1.5	169	95	26	0	3	0	0
SAN ANGELO	65	37	77	29	51	-1	0	-.2	0	4.3	213	3.5	251	92	40	0	2	0	0
SAN ANTONIO	66	43	79	36	55	-1	T	-.4	T	3.9	87	3.2	102	83	35	0	0	1	0
VICTORIA	65	46	75	37	55	-2	T	-.5	T	7.0	116	4.7	122	88	42	0	0	1	0
WACO	58	39	73	27	49	-4	.1	-.4	.1	6.7	125	4.7	135	85	50	0	1	2	0
WICHITA FALLS	56	33	76	21	44	-3	T	-.3	T	5.6	189	4.5	255	91	51	0	3	1	0
UT CEDAR CITY	54	28	66	18	41	5	T	-.2	T	2.0	99	1.3	95	91	40	0	4	0	0
SALT LAKE CITY	45	28	52	24	37	1	.3	0	.3	2.5	66	1.9	76	94	58	0	6	1	0
VT BURLINGTON	31	14	46	2	22	2	.1	-.3	.1	2.0	34	1.1	33	84	60	0	6	2	0
VA NORFOLK	48	32	76	21	40	-2	2.1	1.2	1.0	7.9	81	7.3	110	92	61	0	4	6	1
RICHMOND	45	28	63	13	36	-4	2.0	1.2	1.2	6.7	71	5.9	98	95	60	0	5	5	1
ROANOKE	45	25	62	17	35	-4	.6	-.3	.4	4.2	49	2.9	51	88	52	0	5	3	0
WA QUILLAYUTE	50	37	52	32	44	1	3.0	0	1.5	33.6	79	21.4	85	99	76	0	2	7	3
SEATTLE-TACOMA	50	38	52	30	44	0	1.4	.4	.4	9.6	60	6.2	63	98	66	0	1	7	0
SPOKANE	38	27	47	20	33	-1	.4	0	.4	3.7	58	2.0	51	99	73	0	6	3	0
YAKIMA	42	28	48	24	35	-3	.1	0	.1	1.5	46	.9	41	99	69	0	7	2	0
WV BECKLEY	38	20	57	7	29	-5	1.0	.2	.6	8.3	89	6.1	98	93	59	0	6	5	1
CHARLESTON	43	23	60	12	33	-4	1.3	.5	.8	11.4	120	8.7	140	92	53	0	6	4	1
HUNTINGTON	42	23	57	11	33	-5	1.9	1.2	1.1	15.3	173	12.2	213	88	52	0	5	4	2
PARKERSBURG	40	23	54	11	32	-4	1.1	.4	.7	10.3	131	7.8	152	87	50	0	6	2	1
WI GREEN BAY	24	4	39	-8	14	-6	T	-.3	T	1.5	45	.7	35	82	50	0	7	0	0
LACROSSE	25	4	41	-8	14	-8	.2	0	.2	1.7	62	.9	55	83	49	0	7	1	0
MADISON	26	5	41	-9	16	-7	T	-.3	T	2.7	77	1.1	56	83	49	0	7	1	0
MILWAUKEE	28	13	41	4	20	-5	.1	-.3	0	3.0	62	1.5	55	81	52	0	7	3	0
WAUSAU	25	1	38	-12	13	-5	T	-.3	T	2.5	85	1.2	67	82	49	0	7	0	0
WY CASPER	42	24	52	12	33	4	T	-.1	T	1.7	120	1.2	128	86	56	0	7	2	0
CHEYENNE	44	27	56	22	36	5	.1	0	.1	1.8	169	1.3	185	91	53	0	7	2	0
LANDER	42	19	54	11	31	3	.1	-.1	.1	1.4	90	.7	64	85	44	0	6	1	0
SHERIDAN	43	22	56	12	33	5	.1	-.1	.1	.7	30	.4	30	89	49	0	7	1	0
PR SAN JUAN	84	72	84	69	77	0	T	-.5	T	7.2	79	3.2	65	91	71	0	0	1	0

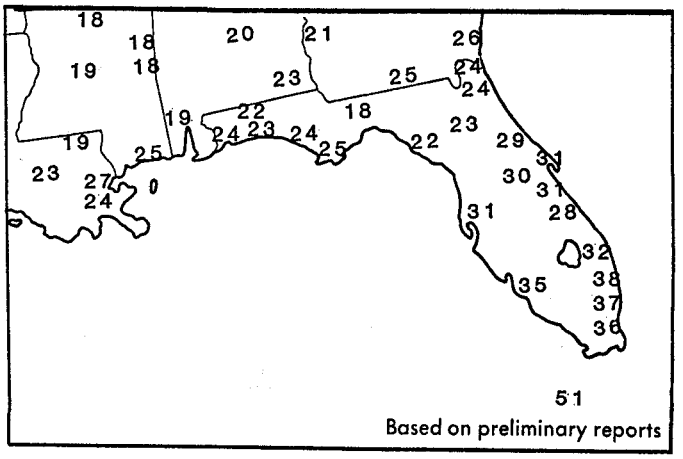


FREEZING TEMPERATURES IN THE SOUTHEAST

The coldest weather of the season in the Southeast occurred on February 23-26. Temperatures dropped below freezing across northern Florida for three consecutive days. The mornings of the 24th and 25th were the coldest in Florida, with nearly all stations reporting record-low temperatures for the date. (See the National Agricultural and State Summaries in this Bulletin for reports on crop damage.)

EXTREME MINIMUM TEMPERATURE (F)

FEBRUARY 23-26, 1989



National Agricultural Summary

February 20-26, 1989

HIGHLIGHTS: Cool temperatures slowed winter wheat growth in the southern Plains. Additional snow cover and moisture were needed in the northern Plains. Freezing temperatures damaged small grains in portions of the Delta and Southeast. Winter wheat was good in the Corn Belt and good to fair in the Southeast. Precipitation limited fieldwork in most of the East. Cold temperatures caused only minimal damage to Florida's citrus crop. Damage to the vegetable crops varied by crop and area. Above-normal temperatures reduced livestock stress in the West.

SMALL GRAINS: Cool temperatures slowed winter wheat growth in the southern Plains. Freezing temperatures caused light to moderate damage to oats in the Blacklands, central, and Cross Timbers areas of Texas. No damage to winter wheat was evident. Light showers improved conditions in the High Plains, but more moisture was needed. Lack of moisture continued to stress winter wheat in central and western Kansas. Additional moisture and snow cover were needed in the northern Plains. Winter wheat was mostly fair in Nebraska. Snow cover was mostly short to adequate in North Dakota. Most of South Dakota needed snow cover. Winter wheat was mostly fair to good in Montana. Snow cover was fair and wind damage remained light. Warmer temperatures improved winter wheat condition in Colorado. Winter wheat was mostly good in the Corn Belt. Snow cover protected winter wheat from sub-zero temperatures in northern Illinois. Freezing temperatures damaged small grains in Alabama and Arkansas. The extent of the damage was unknown. Small grains were mostly good to fair in the Southeast. Cold weather damage to winter wheat was still unknown in Georgia.

OTHER FIELD CROPS: Cotton field preparation continued in Arizona and California. Corn planting activity increased in the Lower Valley, Coastal Bend, and Upper Coast areas of Texas. Sorghum planting was expected to begin soon. First cuttings of alfalfa continued in western Arizona. Precipitation limited fieldwork in most of the East and the Delta.

Georgia's tobacco plants were mostly good and North Carolina's were good to fair. Cold weather damaged the top leaves of tobacco in Florida.

FRUIT AND NUTS: Late in the week, cold temperatures caused minimal damage to citrus crops in Florida. Some bloom damage occurred in low lying areas. Early orange harvest slowed, but grapefruit movement was active in the east. Temple orange harvest increased. Grapefruit and valencia orange harvests continued in the Rio Grande Valley of Texas. Peach trees continued to bloom in east Texas. No serious freeze damage was evident. Valencia oranges and grapefruit were harvested in western Arizona. Grapefruit, kinnow tangerines, minneolas, and Arizona sweets were harvested in the central area. In California, the early February freeze may have damaged 1-year-old grape plantings. Damage to lemons was heavier than expected in the San Joaquin Valley. Primary harvest activities consisted of minneola tangelos, lemons, and navel oranges. Cold temperatures may have damaged peaches in Georgia. The extent of the damage was unknown. Freezing temperatures damaged fruit in Alabama. Earlier cold temperatures caused only minimal damage to fruit, berry, and nut crops in the Willamette Valley of Oregon.

VEGETABLES: Cold weather damaged vegetable crops in Florida. Damage was varied by crop and area. Cucumbers and squash suffered the most damage. Planting activity was slow, but harvest remained active. Volume leaders were tomatoes, cabbage, peppers, celery, lettuce, potatoes, squash, and snap beans. Harvest was active in the Rio Grande Valley of Texas. Spring onion harvest was expected to begin soon. Melon planting continued. Vegetable crops suffered freeze damage in east Texas. Potato and onion plantings were expected to begin soon in the High Plains. Lettuce, cauliflower, broccoli, and other mixed vegetables were harvested in Arizona. In California, broccoli supplies were moderate and of good quality in the Salinas area. Cauliflower and artichoke supplies were moderate in the Santa Maria area. Cabbage and potato seedings were underway in North Carolina. Cold temperatures early in the month may have damaged vegetable crops in the Willamette Valley of Oregon. The extent of the damage was still unknown.

PASTURES & LIVESTOCK: Above-normal temperatures reduced livestock stress in the West. Pastures were mostly fair to good in the Southeast. Livestock was in mostly good condition.

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 3.00 in. north; 0.50 to 2.00 in. central, south; over 4.00 in. isolated areas. Snow 1 in. northeast. Temperatures 6 to 11° below normal.

Freezing temperatures damaged fruits, vegetables, winter wheat; growers currently assessing extent of losses. Primary activities: Routine care of livestock, poultry; providing supplemental feed to cattle; taking precautionary measures to protect fruits, vegetables from freeze.

ARIZONA: Weak upper level low pressure system, cloudy skies, gusty winds, cooling 19th. Sunny, cooler 20th. Sunshine, unseasonably warm 21st to 25th. Temperatures 4 to 10° above normal.

Cotton field preparation very active with furrowing, preplant herbicide, pesticide applications, pre-irrigation. Wheat, barley stands 100% established, except east; 40% jointing; 5% heading. Fields monitored for Russian wheat aphids. No infestation. First cuttings alfalfa continued west, ideal curing conditions. Alfalfa weevil control applied, light infestations. Valencia oranges, grapefruit harvest west. Harvest, shipping head lettuce, broccoli, cauliflower, boston, leaf, romaine lettuce; cabbage, kale, napa, escarole, bok choy, endive, celery, spinach, anise, asparagus continued west. Grapefruit, kinnow tangerines, minneolas, Arizona sweets harvested central. Mixed vegetables including greens, leaf lettuce, broccoli, cabbage, bok choy, rapini, green onions, parsley, cauliflower, beets, turnips, spinach, leeks, carrots harvested Salt River Valley. Spring lettuce harvested central. Cattle, calves fair to good statewide. New calves beginning to drop. Ranges providing average to above average feed supplies.

ARKANSAS: Scattered showers first of week. Very cold midweek, temperatures well below normal. Temperature extremes 6°; 72°. Dry middle, latter part. Rainfall 0.02 to 3.75 in.

Soil moisture adequate to surplus, some flooding low areas. Too early to determine extent of freeze damage to winter wheat. Livestock good, adequate feed available.

CALIFORNIA: Rain 18th and 22nd, only northern half of State. Statewide rainfall well below normal. Temperatures continued slightly below normal.

Plantings small grains continued; most earlier planted fields, growing well. Few areas rain needed. Seedbed preparation progressed well. Herbicide applications small grain, alfalfa. Alfalfa green-chop continued south. Routine cultural practices ongoing. One year old grape plantings may have been damaged by early February freeze. Early plums, almonds bloomed. Minneola tangelos, lemons picked. Freeze damage heavier San Joaquin Valley lemons than anticipated. Navel oranges harvested. Light fruit drop, external damage. Broccoli moderate Salinas, good quality. Cauliflower moderate Santa Maria, good quality. Artichokes moderate, improved quality. Strawberry volume increased, south coast superb quality. Livestock fair to good statewide. Range, pasture fair to poor most areas due to lack of rain. Grass growth further reduced by recent cold temperatures. Supplemental feeding continued. Livestock movement light. Water well below normal.

COLORADO: Warm-up of last 2 weeks continued. First time in February, many areas above normal temperatures; -2 to +5° away from seasonal normals. Much of State received early rain or snow, amounts light. Rio Grande Valley more general precipitation with isolated sites almost 1.00 in. Elsewhere generally less than 0.33 in.

Wheat condition remained uncertain. However, limited precipitation, warmer temperatures beneficial. Calving, lambing underway, keeping livestock producers busy.

FLORIDA: Freezing temperatures, frost occurred over nearly areas late week, weekend. Coldest upper teens to low 20s extreme north, mid 20s to low 30s, central, interior south, to mid, upper 30s along immediate southeast Atlantic Coast. Freezing temperatures 3 nights common north. Beneficial rains early week; 2.00 to 4.00 in., northwest; mostly smaller, variable amounts elsewhere.

Soil moisture continued short except few widely scattered areas adequate. Rain Panhandle helped. Freezing temperatures, started 23rd, damaged winter wheat; extent of damage not yet determined. Tobacco some leaf burn on top leaves. Some leaf burn on sugarcane, but should not affect crop. Some sugarcane mills completed harvest, closed for season. From Orlando northward, blueberry damage extensive to portion of crop normally maturing before July 1st. Strong winds severely limited cold protection for growers having overhead irrigation. Rain Panhandle, some Peninsula benefited pastures; however, late week cold lowered condition very poor, few upper northern Peninsula; elsewhere, poor to fair. Cattle good to mostly fair, stressed somewhat by record cold snap. Freezing temperatures 24th, 25th caused minimal citrus damage; high winds, temperatures not low enough, long enough to cause serious tree, fruit damage. Low areas, cold pockets had new growth, some bloom damage. Orange harvest slowed, east coast grapefruit movement very active. Temple harvest increased. Damaging cold blanketed major vegetable producing areas. Cucumbers, squash suffered most. Planting slowed. Harvest active. Volume leaders: Tomatoes, cabbage, peppers, celery, lettuce, potatoes, squash, snap beans. Also available: Carrots, strawberries, sweet corn, radishes, escarole, endive, eggplant, cucumbers. Harvest late plant city strawberries underway.

GEORGIA: Cold, low teens to Florida border. Temperatures 5 to 10° below normal. Extreme cold temperatures north 9° Blairsville to 19° Toccoa. Central counties extreme lows 18° Midville, Plains; 21° Columbus, Claxton, Hawkinsville. South extreme lows upper teens. Late weekend temperatures high 60s north to 70s south. Rain 2 to 3 days. Snow 2 to 5 in. northeast, east central. Water mostly over 1.00 in. northern half, 1.00 to 3.00 in. central, south.

Soil moisture short to adequate statewide. Tobacco beds good. Small grains fair to mostly good. Cold weather damaged wheat at jointing stage, extent unknown. Pastures poor to mostly fair. Cattle mostly fair to good. Hogs fair to mostly good. Strawberries, blueberries damaged by frigid temperatures. Also probable peach damage, extent unknown. Main activities: Some land preparation, small grain topdressing as weather permitted, care of livestock.

HAWAII: Showery, windy. Cloud bank stationary over island. Light to heavy rains, continuous

some areas. Temperatures low 60s to low 80s. Rainfall none to 10.80 in. Trade winds 15 to 30 mph.

Days suitable for fieldwork 7.0. Fieldwork slowed. Gusty winds reduced effectiveness of irrigation, pesticide spraying; caused bruising of crops exposed areas. Head cabbage output steady, good quality. Chinese cabbage production moderate, shipments to mainland continued. Overall tomato production higher. Head lettuce production very light, disease plagued fields. Banana output seasonally light, many trees suffered leaf shredding due to gusty winds. Papaya production seasonally low. Ginger root harvesting remained very active.

IDAHO: Panhandle temperatures 1 to 3° below normal. Extreme southwest up to 5° below normal, rest 2 to 8° above normal. Precipitation southwest well above normal; rest near, slightly below normal.

Milder weather caused muddy conditions many areas. Main farming activities continued to revolve around livestock feeding, milking, general care. Lambing, calving continued. Most livestock good. Other activities included machinery maintenance in preparation for spring planting, marketing farm products, attending meetings, preparing taxes. Only limited supply of seed potatoes remained uncommitted. Hay, roughage short to adequate.

ILLINOIS: Temperature lows 7 to 14° below normal north, west central; 3 to 10° below normal east central, south; highs 6 to 12° below normal. Precipitation less than 0.10 in. northwest; 0.15 to 0.50 in. north, central; 0.50 to 1.25 in. south; 0.15 to 0.30 in. below normal north, central; 0.40 in. above normal south.

Winter wheat mostly good. Snow cover over parts west central, north provided some insulation from sub-zero temperatures. Livestock good to excellent.

INDIANA: Temperatures 3 to 8° below normal. Lows none to mid teens, highs mid to upper 30s. Precipitation 0.30 to 0.70 in. most areas.

Field activities limited. Other activities: Topdressing wheat, hauling manure, spreading lime, spreading fertilizer, hauling corn, soybeans, mending fence, attending meetings, tax preparation, purchasing supplies, farm program sign-up, repairing equipment, care of livestock. Livestock good. Wheat mostly good. Hay short to adequate.

IOWA: Temperatures 5 to 9° below normal; extremes -15° 23rd Ames to 50° 25th Sioux City. Very light precipitation trace to 0.15 in.

Livestock mostly good. Mild winter conditions allowing good feed efficiency, good weight gains across State. Soil erosion minimal, light rains, very little wind.

KANSAS: Temperatures few degrees above normal west, 3 to 5° below normal east. Temperature 31° north central, northeast to 39° southeast. Most areas 0.10 in. moisture. Southeast received most, 0.30 to 0.40 in. south of line from Paola to Arkansas City. Light snow occurred early week east but melted by midweek.

Shortage snow cover most areas except few counties north central, left wheat vulnerable to freeze damage. Central, west need additional precipitation to relieve moisture deficits. Heavier feeding livestock necessary early week where snow covered pastures.

KENTUCKY: Cold, wet. Rainfall above average, 1.00 to 2.00 in. Daytime temperatures below normal, lows 25°, near normal; highs 40°, 5 to 10° below normal.

Water flooding lowland mostly receded. Soil moisture mostly ample to surplus. Ponds, dams full. Field activity minimal. Early plans for preparation tobacco seedbeds. Wheat generally green, could be drowned out low spots. Livestock satisfactory.

LOUISIANA: Temperatures 5 to 7° below normal. Extremes 19°; 82°. Rainfall 0.19 to 2.85 in.

Main activities: Caring for livestock, routine chores, spring plowing.

MARYLAND & DELAWARE: MARYLAND: Precipitation 1.48 in. Temperature 37°, normal 36°. Temperature extremes 5°; 70°.

Main farm activities caring for livestock, maintaining machinery.

DELAWARE: Precipitation 1.67 in. Temperature 38°, normal 37°. Temperature extremes 20°; 70°. Record high temperatures central, southern areas 21st.

Main farm activities caring for livestock, maintaining machinery.

MICHIGAN: Temperatures 2 to 5° below normal. Temperature extremes -14°; 43°. Precipitation 0.08 to 0.50 in.

Additional snowfall benefited winter wheat. Activities: Extreme cold minimized fieldwork. Livestock good. Feed adequate to short. Farm meetings, planning crops, tax work, marketing livestock, crops.

MINNESOTA: Temperatures 3 to 8° below normal. Extremes -24°; 46°. Precipitation 0.05 to 0.26 in. below normal. Precipitation trace to 0.16 in. Greatest weekly total 0.22 in. Snowfall trace to 2 in. Snow depth weekend 1 to 2 in. south, 22 to 27 in. north.

Dry conditions continued across State. Heavy spring rains will be necessary to replenish topsoil moisture. High hay prices common.

MISSISSIPPI: Wet, cool early week; fair, cold late. Temperature 7° below normal. Extremes 11°; 81°. Rainfall 1.82 in., 0.58 in. above normal. Greatest weekly precipitation 3.85 in.

Days suitable for fieldwork 0.5, 3.1 1988, 2.1 avg. Soil moisture adequate to surplus; some excessive. Wheat fair to good; beginning to worry about too much water. Livestock good. Pastures good. Hay adequate. Feed grain adequate to short. Main activities: Haying cattle, some topdressing of small grains.

MISSOURI: Temperatures 7° below normal northwest to 10° below normal Bootheel. Precipitation less than 0.50 in. except Bootheel 1.50 in.

No snow cover. Some continuing concern over effects of cold weather early February on wheat. Main activities care of livestock, preparation of machinery for spring work.

MONTANA: Temperatures mostly below normal; east 5° below normal while southwest, south central 2° above normal. Precipitation 0.10 to 0.20 in. common west, southwest, northeast. Remainder dry.

Soil moisture 50% short, 45% adequate, 5% surplus. Subsoil moisture 80% short, 20% adequate. Winter wheat 20% poor, 50% fair, 30% good. Snow cover 20% poor, 50% fair, 20% good, 10% excellent. Wind damage to winter wheat 60% light, 30% moderate, 10% heavy. Livestock receiving supplemental feed.

NEBRASKA: Temperatures 2° above normal west, 6° below normal remainder of State. Extremes -16°; 70°. Precipitation occurred beginning, weekend amounts trace to 0.4 in.

Snow cover over State except southwest, Panhandle; scattered patches. Winter wheat 19% poor, 76% fair, 5% good. Too early to estimate damage from cold weather that occurred before snow cover. Much concern about lack of soil moisture. Feed grain, hay forage adequate. Pasture, range feed short to adequate. Cows calved 11%. Most problems, losses of calves and lambs caused by cold weather first week of February.

NEVADA: Daytime temperatures began near normal but rose to well above normal weekend. Warm, southwest flow from sub tropics weekend produced only light, scattered precipitation north. No rain south central, extreme south.

Good progress fieldwork south central, extreme south due dry, sunny conditions. Spring like weather favorable newborn calves, lambs. Livestock feeding requirements eased due mild weather. Winter grains starting to show premature growth.

NEW ENGLAND: Precipitation (rainfall, water equivalent of snow) 0.50 to 1.00 in. northern Maine, northern New Hampshire, northern Vermont, 1.00 to 1.50 in. remainder. Temperatures teens near Canadian border to low 30s south coast. Temperatures near normal.

Major farm activities: Tending livestock, machinery repair.

NEW JERSEY: Temperatures below normal north, south; near normal coastal, 30° north, 34° south, 36° coastal. Extremes 3°; 67°. Precipitation above normal, 1.56 in. north, 2.02 in. south, 1.92 in. coastal. Heaviest 24-hour total 1.30 in. on 21st, 22nd. Heaviest 24-hour snowfall 12 in. on 24th, 25th. Snow depth 27th 6 in. extreme south, 1 in. elsewhere.

Farmers caring for livestock, tending to normal winter chores, plowing snow.

NEW MEXICO: Above normal temperatures. Measurable precipitation confined to northern counties.

NEW YORK: Temperatures colder than normal. Coldest areas northeast, west. St. Lawrence Valley greatest departure 8°. Great Lakes, Central Lakes, Western Plateau second shortfall 6°. Southeastern areas warmest. Coastal, Mohawk Valley 2° below average, Hudson Valley, Eastern Plateau 3° below normal. Overnight low -19 Newcomb 18th to daytime high 58° New York City 21st. Precipitation trends similar. St. Lawrence Valley, Central Lakes slight deficit 0.10 in. Heaviest rainfall Hudson Valley 1.22 in., coastal area 1.70 in. New York City greatest amount 1.84 in., Ellenburg Depot 0.15 in. High pressure lay over east on 20th soon moved out to sea. Storm Ohio Valley crossed west into Quebec 21st. Cold front stalled along Atlantic seaboard rest of week. Storms moved along front but most part systems not much effect.

Major activities: Caring for livestock, machinery repair, winter chores, attending meetings.

NORTH CAROLINA: Temperatures 5 to 9° below normal across State. Temperature extremes 0°; 76°. Precipitation 0.69 to 4.05 in.

Days suitable for fieldwork 1.3. Soil moisture 9% short, 66% adequate, 25% surplus. Pasture 3% very poor, 20% poor, 23% fair, 53% good, 1% excellent. Oats 3% poor, 22% fair, 73% good, 2% excellent. Barley 20% fair, 76% good, 4% excellent. Rye 4% poor, 16% fair, 75% good, 5% excellent. Wheat 2% poor, 18% fair, 79% good, 1% excellent. Tobacco plant beds 5% poor, 29% fair, 66% good. Feed grains 1% very short, 9% short, 90% adequate. Hay, roughage 2% very short, 4% short, 94% adequate. Irish potatoes 6% planted, 5% 1988, 5% avg. Cabbage 11% planted, 11% 1988. Major farm activities: General maintenance; equipment repair, tending livestock. Other activities: Preparing land for planting; topdressing small grains; pruning fruit trees.

NORTH DAKOTA: Temperatures 3 to 6° below normal. Extremes -29° northeast; 49° south central. Low pressure system late week brought scattered snowfall to southern half State. Statewide precipitation none to 0.08 in.

Soil moisture short. Snow cover for alfalfa, fall seedings reduced; generally short to adequate. Hay, feed short to adequate. Lambing, calving progressed. Limited farm activity included planning for spring planting.

OHIO: Temperatures 3° subnormal. Lows upper teens to mid 20s, highs mid to upper 30s. Precipitation 1.00 to 2.00 in. south; 0.30 to 1.00 in. north.

Soil temperatures 4 in. depth low to mid 30s. Virtually no snow cover anywhere until light dusting weekend. Soil moisture building up. Fields soft south; firmer north with frost in soil.

OKLAHOMA: Temperatures 5° below normal southeast to 1° above normal Panhandle. Precipitation none southwest third to 0.24 in. southeast.

Growth hindered by cool weather. Sunshine, warmer temperatures needed for small grains, pasture. Strong winds hindered chemical spraying. Cattle good, prices continued to decline slightly.

OREGON: Temperatures slightly above normal west. East side temperatures 3° below normal, near normal south central. Precipitation slightly above 2.00 in. coastal, 1.00 in. western valleys. Some areas southwest less than 0.33 in. East precipitation 0.20 to 0.30 in., extreme eastern areas 0.60 in.

Soil moisture adequate most State. Field crop activity minimal. Winter wheat fields severe cold temperatures Umatilla County. Shallow seeded fields Hermiston vulnerable to winterkill. Northeast wheat snow covered. Mid Columbia Basin western wheat farmers waiting to determine any freeze damage. Fruit, berry, nut crops survived cold weather Willamette Valley. Damage thought to be minimal. Overwintering vegetables hurt by freeze, extent unknown now. Livestock fair to good west side of Cascades; more variable east. Ranchers lost more calves during cold snap. Hay supplies tight. Eastern ranges still snow covered, melting off. Most ranges poor to fair.

PENNSYLVANIA: Wet, near normal temperatures. Temperature 29°, 1° above normal. Temperature extremes -1°; 57°. Precipitation 0.97 in., 0.32 in. above normal.

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

PUERTO RICO: Island rainfall 1.02 in., 0.46 in. above normal. Highest weekly rainfall 5.38 in. Cidra, 3.61 in. Pico Del Este-Luquillo, 2.36 in. Cerro Maravilla. Highest 24-hour total 3.90 in. Cidra. Total rainfall since January 1st 6.26 in., 23% above normal. San Juan temperature 76°, 1° below normal. Rainfall 0.06 in., 0.43 in. below normal. Divisional temperature 75 to 76° on coasts, 70° interior. Station temperature 57° Cerro Maravilla to 78° Roosevelt Roads. Lowest minimum temperature 46° Adjuntas Aes. Highest maximum temperature 92° San Sebastian.

SOUTH CAROLINA: Precipitation heavy; 2.00 in. over State. Winter storm left 1 to 6 in. snow 23rd. Temperatures 1 to 3° above normal.

Farm activities: Farmers continued topdressing wheat with nitrogen, preparing land for corn planting, general farm chores.

SOUTH DAKOTA: Temperatures mostly below normal, 4° above to 14° below normal. Extremes -29°; 60°. Precipitation southeast up to 0.21 in. Traces of snow cover south, west; 2 to 8 in. northeast.

TENNESSEE: Cold fronts moved through State 21st, 22nd, 26th producing rain or snow. Front on 22nd followed by bitter cold air mass that caused low temperatures to plunge into single digits. Temperatures below normal. Coldest over Plateau 10° below normal. Memphis record breaking lows. Week wet over most State, although east, Plateau below normal precipitation. Nashville greatest precipitation 2.44 in. Bristol least 0.61 in.

Farm chores, meetings, record keeping main activities. Cattle mostly good.

TEXAS: Cold air mass early week lowered temperatures, dried out most of State. Some frost north, south central midweek. Gulf opened up weekend, rapid warming. Temperatures below normal southeast, Coastal Plains, Lower Rio Grande Valley. Elsewhere at or above normal. Precipitation below normal.

Crops: Winter wheat healthy signs of recovery many parts Blacklands, central, Cross-Timbers. Recent moisture some open weather benefited these areas. Oats not doing well; freezing temperatures caused light to moderate damage, some losses. Fields east remained wet; some sunshine helped dry fields. Light showers High Plains helped moisture conditions, many fields continued to look bad. Insect problems slowed, recent cold weather. Grazing capacity continued low. Corn planting increased conditions dried Valley, Coastal Bend, Upper Coast. Producers completing land preparations many other areas, planting time neared. Corn 1% planted, 7% 1988, 4% avg. Grain sorghum planting should begin Valley, Coastal Bend very soon. Sorghum none planted, 1% 1988, 1% avg.

Commercial Vegetables: Rio Grande Valley harvest increased most vegetables conditions improved. Spring onion harvest to begin soon. Melon planting, replanting continued. Grapefruit, valencia orange harvest continued. San Antonio-Winter Garden harvest resumed. Light damage occurred from earlier freezing weather. East freeze damage many fields heavy. Some planting as conditions allowed. High Plains land preparations onions, potatoes winding down, planting to begin soon. Peach trees continued bloom east no apparent serious damage from cold. Pruning operations continued many areas.

Range and Livestock: Ranges, pastures signs of improvement many areas as result recent moisture. Calving, lambing active. Some producers had drop in milk production during cold snap. Markets strong.

UTAH: Precipitation none to light. Temperatures 1 to 6° below normal.

Snow cover on fall seeded grains light to moderate. Winter range feedings vary widely. Scattered supplemental livestock feeding on winter ranges. Major farm activities: Tax summarization, livestock chores, equipment maintenance, farm meetings.

VIRGINIA: Cloudy, cool, wet. Rain, sleet, snow, heavy some areas. Precipitation 0.50 to 4.50 in. Temperatures 5° below normal, ranged 8 to 76°.

Days suitable for fieldwork 0.8. Topsoil moisture 11% short, 38% adequate, 51% surplus. Fieldwork halted, feeding care of livestock major activities. Winter grains, grazing crops 3% very poor, 15% poor, 50% fair, 32% good.

WASHINGTON: Temperatures none to 2° above normal west, 8° below to 4° above normal east. Precipitation 0.11 to 1.28 in. west; 1.13 to 3.34 in. east.

Days suitable for fieldwork 1.0. Soil moisture 40% short, 60% adequate. Range, pastures 59% short, 41% adequate. Hay, other roughage 70% adequate, 30% surplus. Field activities limited many areas due to frozen ground. Growers concerned about run off. Moisture in soil may reduce winter wheat freeze some areas. Producers still assessing winter crop damage. Caneberry damage likely some counties. Livestock on winter feed most areas. Calving, lambing continued.

WEST VIRGINIA: Temperature 31°, 1 to 4° below normal. Extremes 0° Elkins; 65° Gary. Precipitation 1.24 in. Greatest precipitation 2.10 in. Terra Alta, least precipitation 0.34 in. Moorefield.

Days suitable for fieldwork 1.8. Soil moisture 6% very short, 18% short, 41% adequate, 35% surplus. Wheat barley mostly good to fair. Livestock mostly good. Feed 32% short, 64% adequate, 4% surplus. Farm activities: General farm maintenance, livestock care.

WISCONSIN: Temperatures cold 17°. Extremes -28°; 47°. Precipitation none to 0.10 in. Snowfall northwest 3 to 8 in. 25th.

Frost depth 26.8 in., normal 17.2 in. Snow cover 6 in., normal 10 in. Subsoil dry below frost.

WYOMING: Temperatures below normal northern third, above normal elsewhere. Precipitation generally below normal.

Snow cover decreased over much winter wheat growing areas. Livestock fair to good with supplemental feeding. Calving, lambing, shearing underway. Moderating temperatures decreased stress on newborn calves, lambs.

International Weather and Crop Summary

February 19-25, 1989

HIGHLIGHTS

WESTERN USSR ... The tenth consecutive week of unseasonably warm weather covers dormant winter grains.

EUROPE ... Much needed precipitation helps reduce dryness in the southwest and south-central. Late-week heavy rain and high winds batter the west.

SOUTH ASIA ... Dry weather covers most crop regions although scattered showers cover much of the northeast. Winter wheat is reproductive to filling.

EASTERN ASIA ... Heavy rain continues over central and eastern crop areas. Drier weather favors preplanting fieldwork in the south.

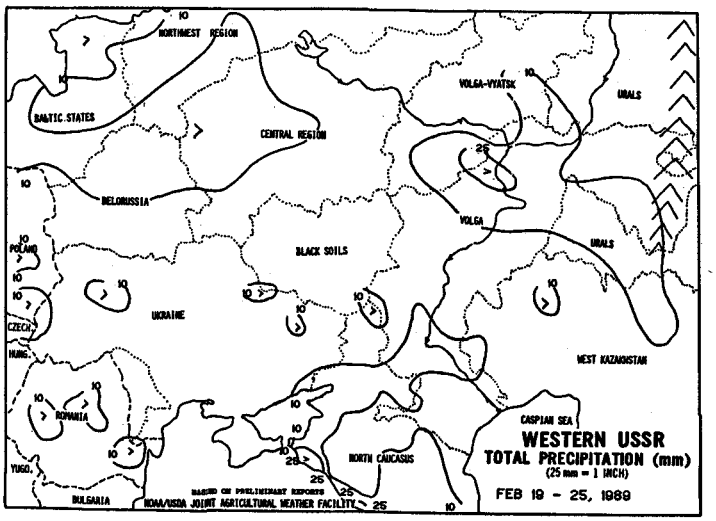
SOUTHEAST ASIA ... Shower activity increases over the Philippines, Indonesia, and Malaysia, likely causing more flooding.

SOUTH AMERICA ... Periodic showers ease Argentina's prolonged drought, benefiting immature soybeans but coming too late for maturing crops. Rain continues to moisten Brazil's soybean areas.

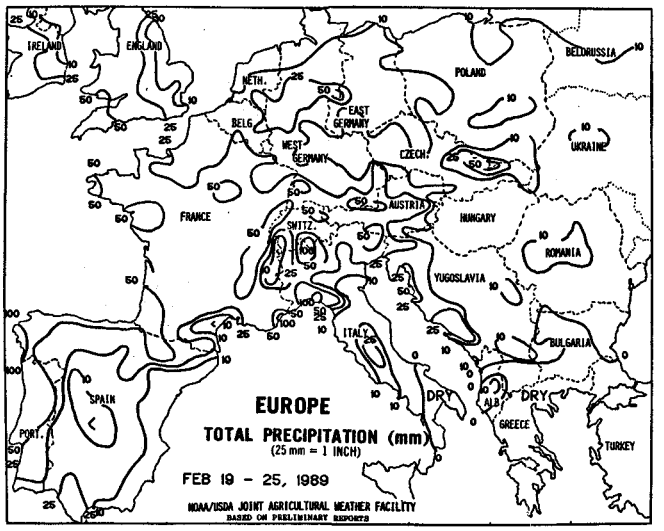
AUSTRALIA ... Scattered showers continue mostly favorable conditions for sugarcane in the northeast. Mostly dry weather covers summer crop areas.

SOUTH AFRICA ... Widespread rains continue across the region, possibly causing local flooding in southern Transvaal. Corn is filling to maturing.

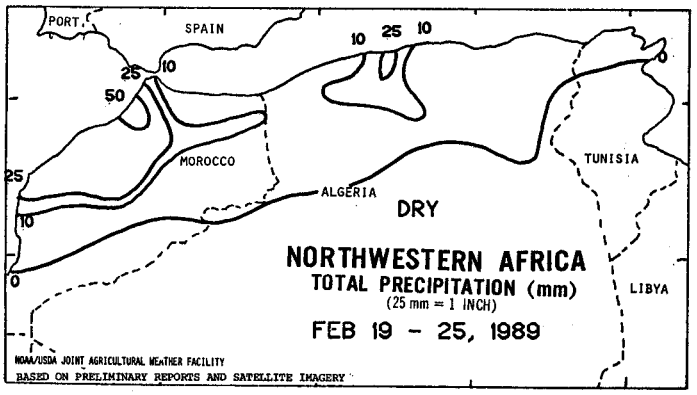
NORTHWESTERN AFRICA ... Beneficial rain covers Moroccan winter grain areas. Dry weather returns to crop areas in eastern Algeria and Tunisia.



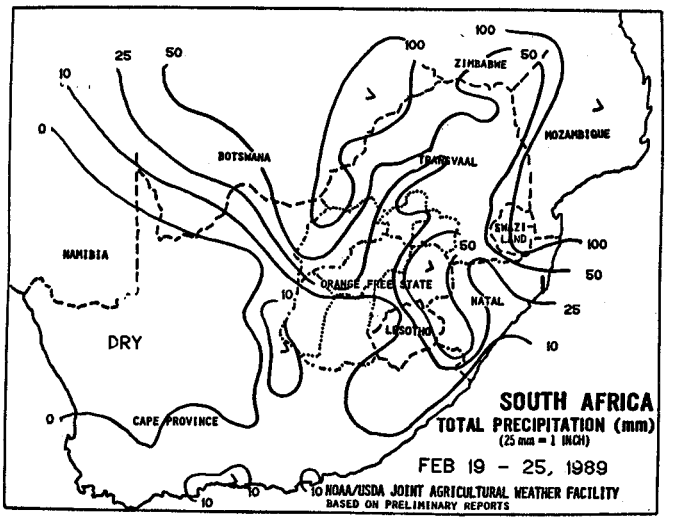
WESTERN USSR ... The tenth consecutive week of unseasonably warm weather covered most of the region. Weekly average temperatures ranged from 5 to 7 degrees Celsius (C) above normal. Precipitation continued light (around 10mm) and was widespread. The precipitation which covered the Baltic States, Belorussia, the Ukraine, the North Caucasus, and the lower Volga began as early-week snow which changed to rain by mid-week. Even though most of the major winter wheat producing areas have been without a protective snow cover during most of the winter, continued mild weather has diminished the potential for significant winterkill due to extreme cold. However, the mild weather has likely caused winter grains to lose winter hardiness, with possible greening taking place in the extreme south.



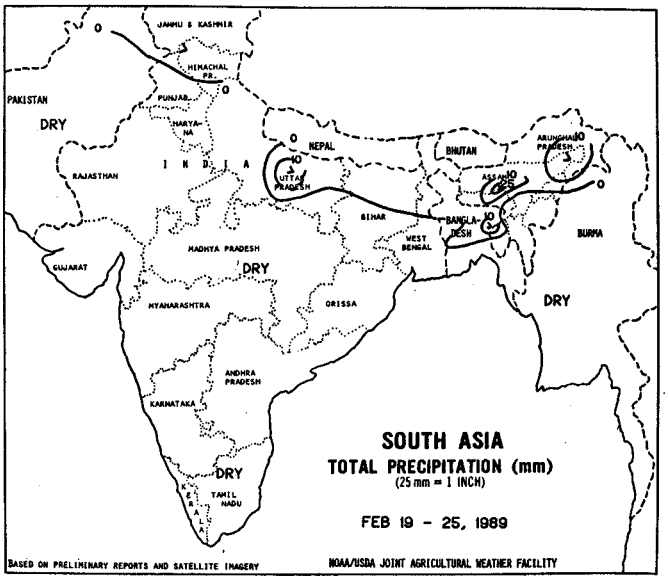
EUROPE ... A slow moving center of low pressure brought much needed rain and snow (10-50mm, with isolated amounts in excess of 100mm) to sections of northern Spain, southern France, and northern and central Italy. The precipitation, which was the first in sections of northern Italy since late November, greatly benefited irrigation reservoir levels and improved soil moisture for vegetative winter grains. On the 24th and 25th, a strong frontal system brought high winds and heavy rain (25-75mm, with isolated rainfall in excess of 100mm) to western coastal sections of Portugal and Spain, western and central France, the United Kingdom, and Ireland. Elsewhere, light to moderate rain (5-20mm) covered much of northeastern Europe and scattered sections of the Balkans. Mean temperatures ranged from much above normal in the east to near normal in the northwest.



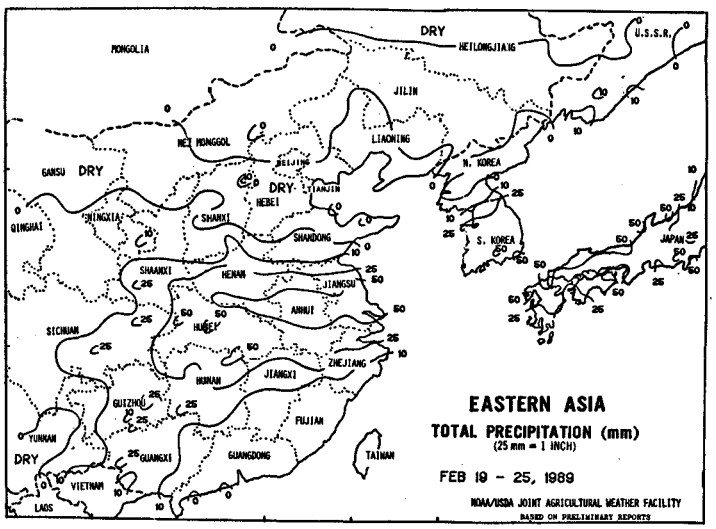
NORTHWESTERN AFRICA ... Widespread rain covered Moroccan winter grain areas. Precipitation amounts generally ranged from 25 to 50mm, benefiting winter grains in the jointing stage. Dry weather returned to winter grain areas in eastern Algeria and Tunisia. Localized showers (10-25mm) benefited winter grains in parts of central and western Algeria. Widespread rain is needed over the entire region in upcoming weeks as winter grains enter reproduction.



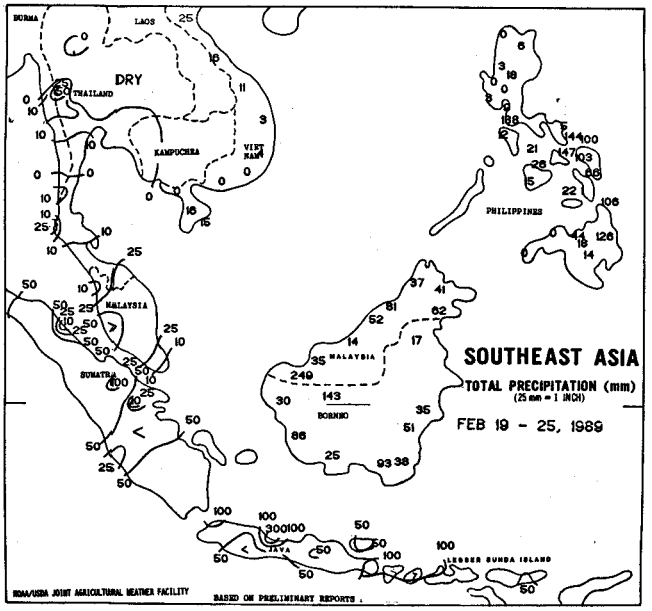
SOUTH AFRICA ... Variable showers continued across the Maize Triangle, with heaviest rainfall (25-50mm or more) covering large areas of the central and northwestern Triangle. Local areas in the northern Triangle received less than 25mm, and much of the southern Triangle received less than 10mm, bringing some relief to areas hit by last week's excessive rainfall. Locally heavy rain (100mm or more) fell over far western Transvaal, and large areas of heavy rain (102-188mm) covered eastern Transvaal, possibly causing local flooding. Light to moderate rain (1-32mm) fell over crop regions in eastern Cape Province and Natal. Temperatures averaged near normal over most crop areas, but warmer, drier weather is now needed for crop maturation.



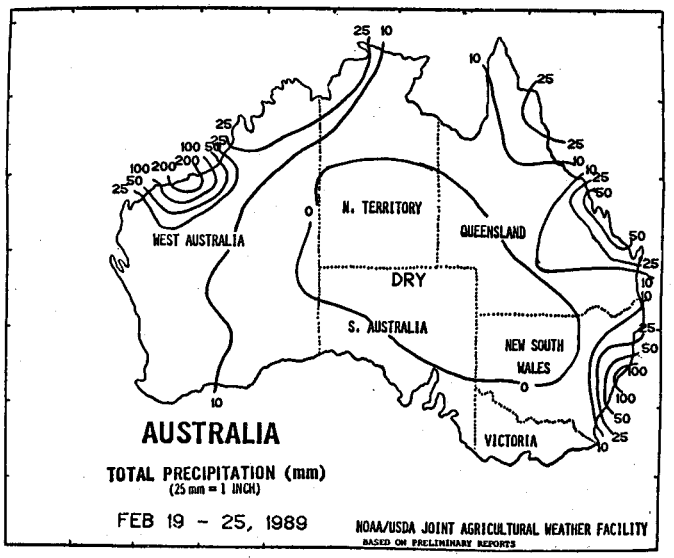
SOUTH ASIA ... Mostly dry weather continued over most winter wheat regions, although some scattered showers (1-12mm) occurred over eastern Uttar Pradesh and northern Bihar. Temperatures averaged 1-4 degrees below normal over most areas, continuing the cooler-than-normal weather trend that has prevailed for most of the season. Winter wheat ranges from the reproductive to filling stages of development. Scattered showers (1-25mm or more) continued to the east from Bangladesh through Assam, but dry weather continued across southern India. Maximum temperatures ranged from 35 to 38 degrees C from southern Pakistan to India's southern tip.



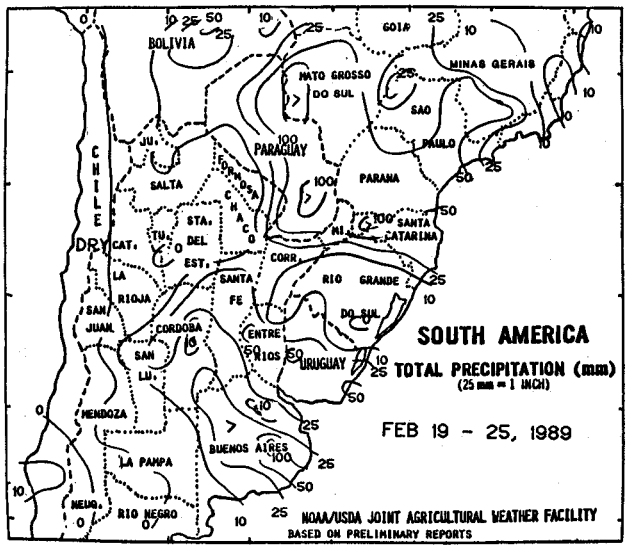
EASTERN ASIA ... Heavy rain (25-50mm, with scattered amounts greater than 50mm) continued for the second consecutive week across sections of Hubei, Henan, Anhui, Jiangsu, Hunan, Jiangxi, and Zhejiang. Above-normal rainfall over much of eastern China during the past 2 months has brought preseason soil moisture to adequate or surplus levels. Heavy rain (25-80mm) also continued over southern sections of South Korea and over much of Japan. Mostly dry weather favored progress in preplanting fieldwork in extreme southern China and Taiwan. In the north, scattered light snow blanketed sections of Jilin and North Korea, while northwestern crop areas were seasonably dry. Mean temperatures ranged from above normal in the northeast and south to below normal in central and western sections.



SOUTHEAST ASIA ... Locally heavy rain (100mm or more) continued over northern Java and eastern Malaysia, improving rice irrigation levels but promoting more flooding. Rainfall ranged from 33 to 50mm or more elsewhere in Java. Shower activity increased from the previous week over much of western Indonesia and Malaysia, with moderate rain (24-86mm) over recently dry areas of western Malaysia. Scattered, light to moderate rain (1-43mm) fell over much of peninsular Thailand as light rain (1-10mm) fell over rice regions near Bangkok. In the Philippines, heavy rain (100-147mm) persisted in the east from southern Luzon to northern Mindanao, likely causing more flooding. Moderate rain (10-26mm) covered most west-central growing regions.



AUSTRALIA ... Mostly dry weather covered eastern summer crop areas, favoring progress of early sorghum harvesting in some growing areas of southeastern Queensland. Scattered, variable showers (5-80mm) fell along Queensland's eastern coast, continuing mostly favorable conditions for vegetative sugarcane. In the south, mostly dry weather covered crop areas in South Australia, Victoria, and southern New South Wales, while light to moderate rain (5-20mm) fell over growing areas of southern Western Australia. A weak tropical disturbance moved onshore in northern Western Australia early in the week, spreading gusty winds, very heavy rain (50-200mm, with isolated amounts in excess of 200mm), and possible flooding to some coastal areas. Mean temperatures were normal to below normal in most crop areas.



SOUTH AMERICA ... In Argentina, periodic showers continued to moisten topsoils throughout the summer crop areas, easing the prolonged drought but coming too late for improvement in the yield potential of maturing summer crops. Weekly rainfall averaged 15-35mm in much of Buenos Aires, which has benefited the most from recent rains. Isolated heavy rain (50-144mm) fell in southeastern Buenos Aires. Variable rainfall amounts were reported in Cordoba and Santa Fe, ranging from 3mm in southeastern Cordoba to 39mm or more in west-central Cordoba and central Santa Fe. Light rain (less than 10mm) fell in most of Argentina's northern cotton areas. However, heavy rain (50-130mm) soaked topsoils in extreme northeastern Argentina, Paraguay, and in Brazil from northwestern Rio Grande do Sul through most of Parana to western Mato Grosso do Sul. Rainfall amounts gradually diminished in more northern soybean and coffee areas. Light rain (2-6mm) also fell over the remainder of Rio Grande do Sul. Soybeans range from the pod setting to maturing stages.

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