

# 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

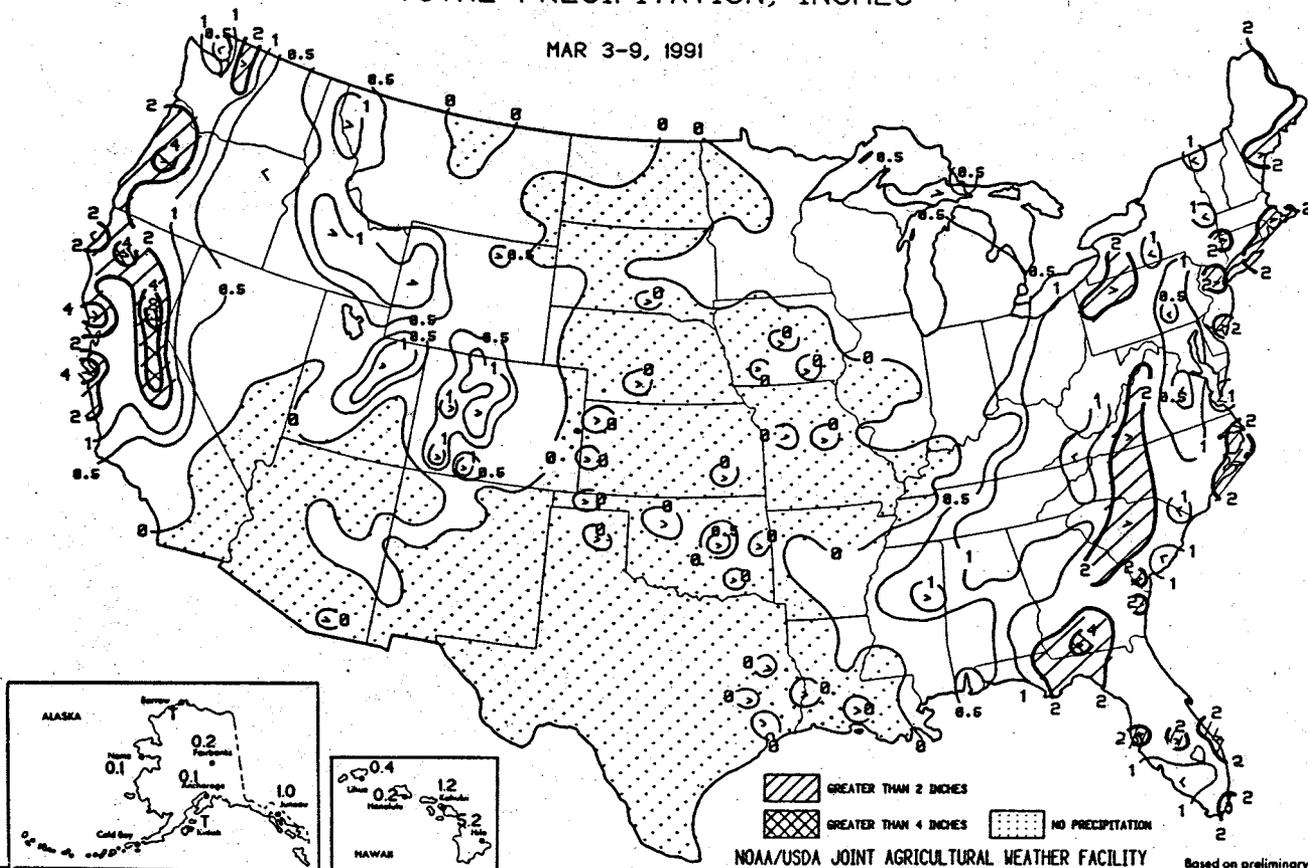
Volume 78, No. 10

Washington, D.C.

March 12, 1991

## TOTAL PRECIPITATION, INCHES

MAR 3-9, 1991



## HIGHLIGHTS

March 3 - 9, 1991

A very stormy weather pattern continued along both coasts early in the week. Another 2 days of torrential rain in northern California added up to 8 inches to the 6-day storm totals. Statewide, the storm accounted for 25 percent of the total normal annual precipitation. High winds buffeted much of the West, including gusts to 125 miles per hour in the Sierra Nevada of California. Up to 2 feet of snow buried the mountains from the central Rockies northward. In the East, rain soaked areas from the Appalachians to the coast. Over 4 inches deluged Fort Stewart, GA. Farther north, a major ice storm glazed surfaces from Ohio to New England. By Tuesday, a Canadian airmass lowered temperatures and produced light snow from Washington to the northern Plains. Meanwhile, an early-season heat wave built northward from Texas. The Nation's first 100° F reading of the spring (Continued to p. 27)

## WINTER WEATHER REVIEW

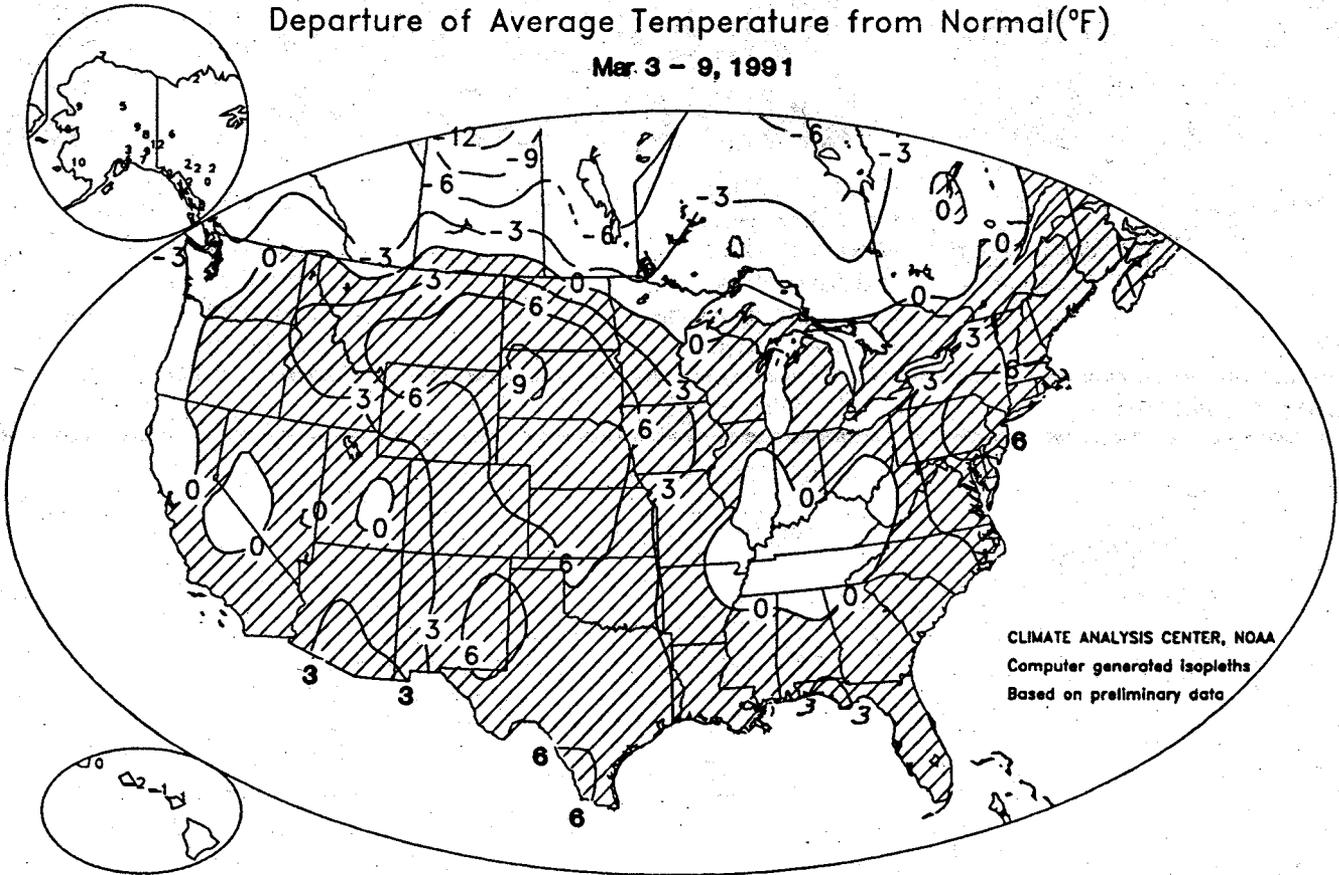
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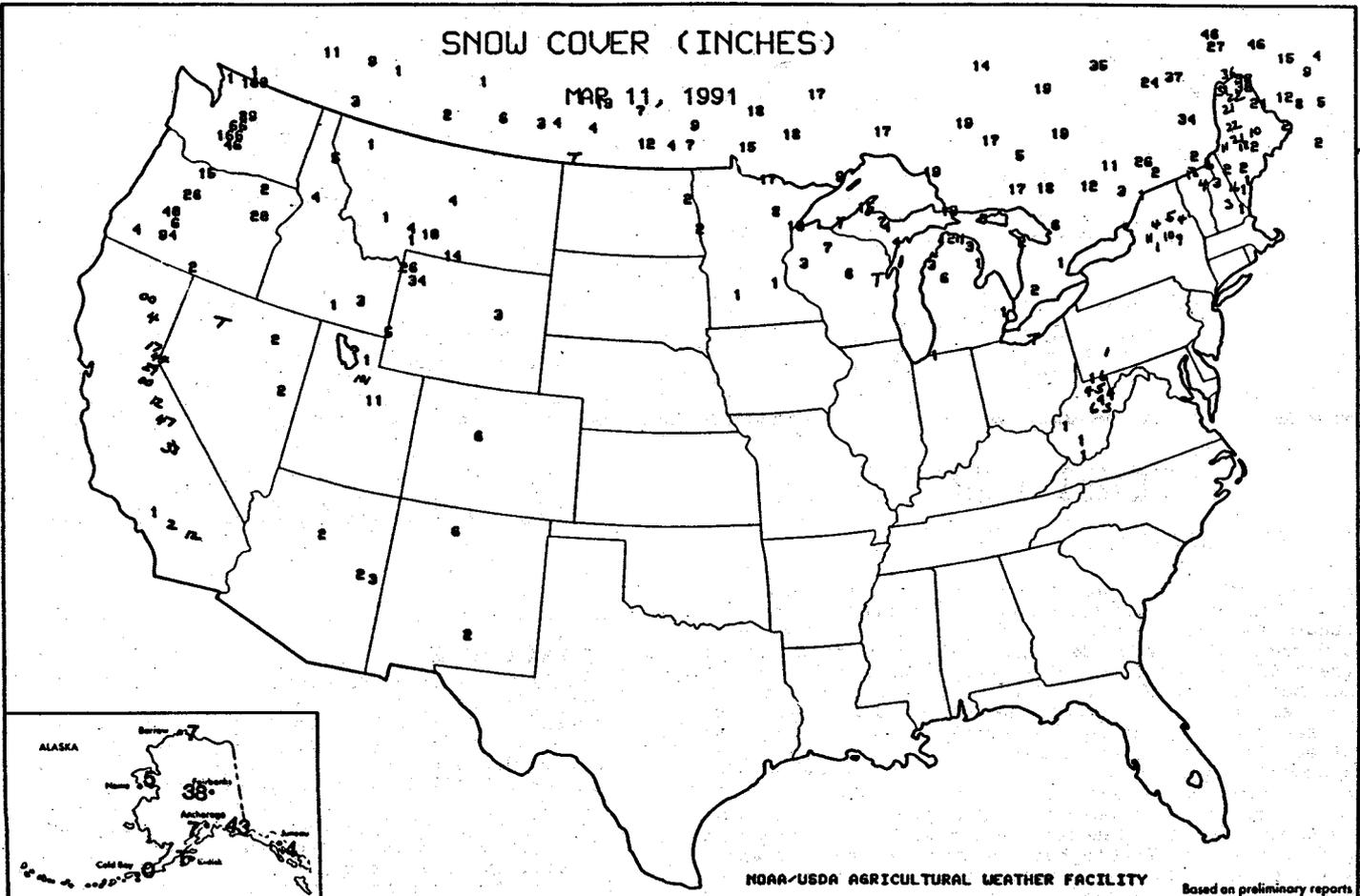
Departure of Average Temperature from Normal(°F)

Mar 3 - 9, 1991



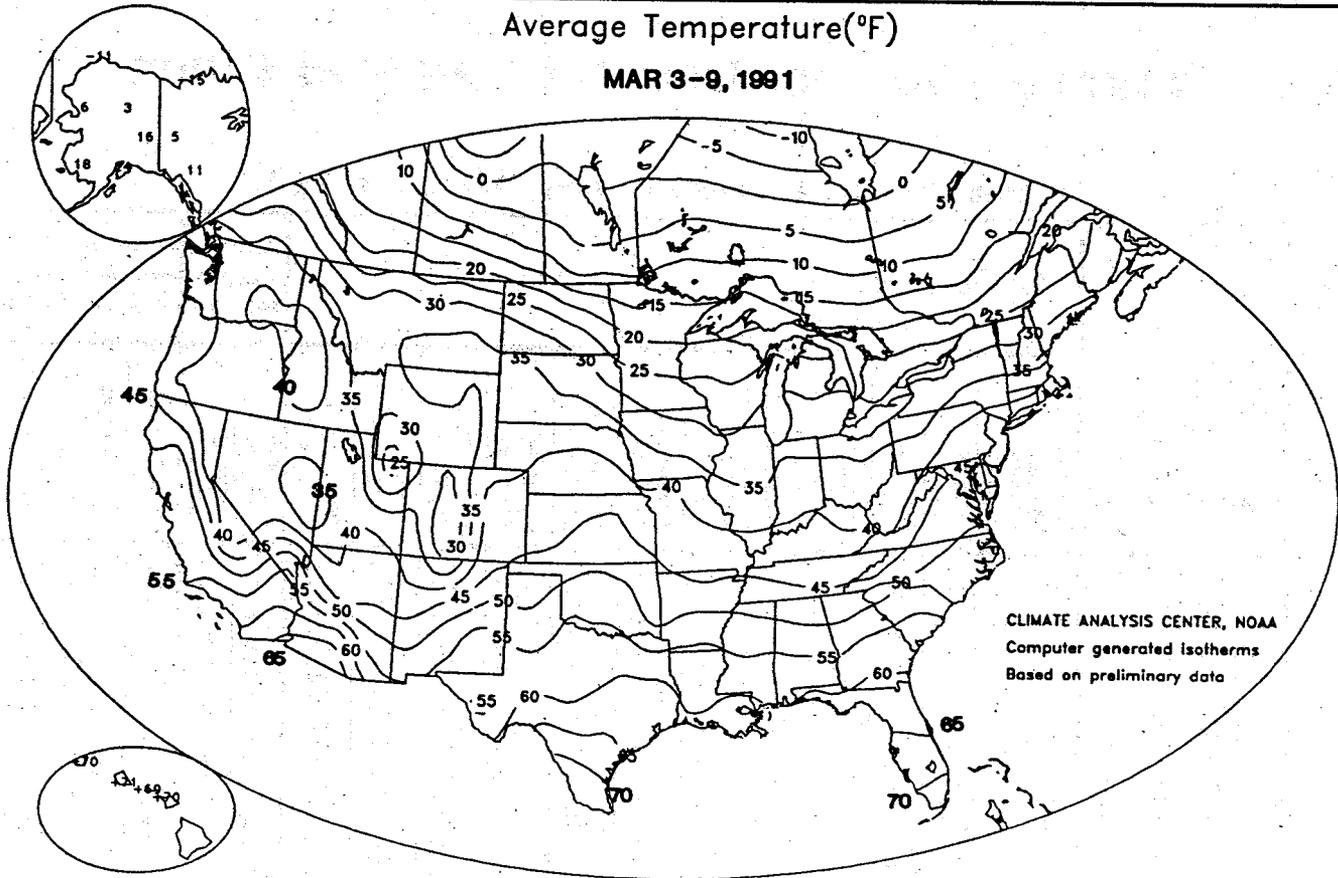
SNOW COVER (INCHES)

MAR 11, 1991



Average Temperature(°F)

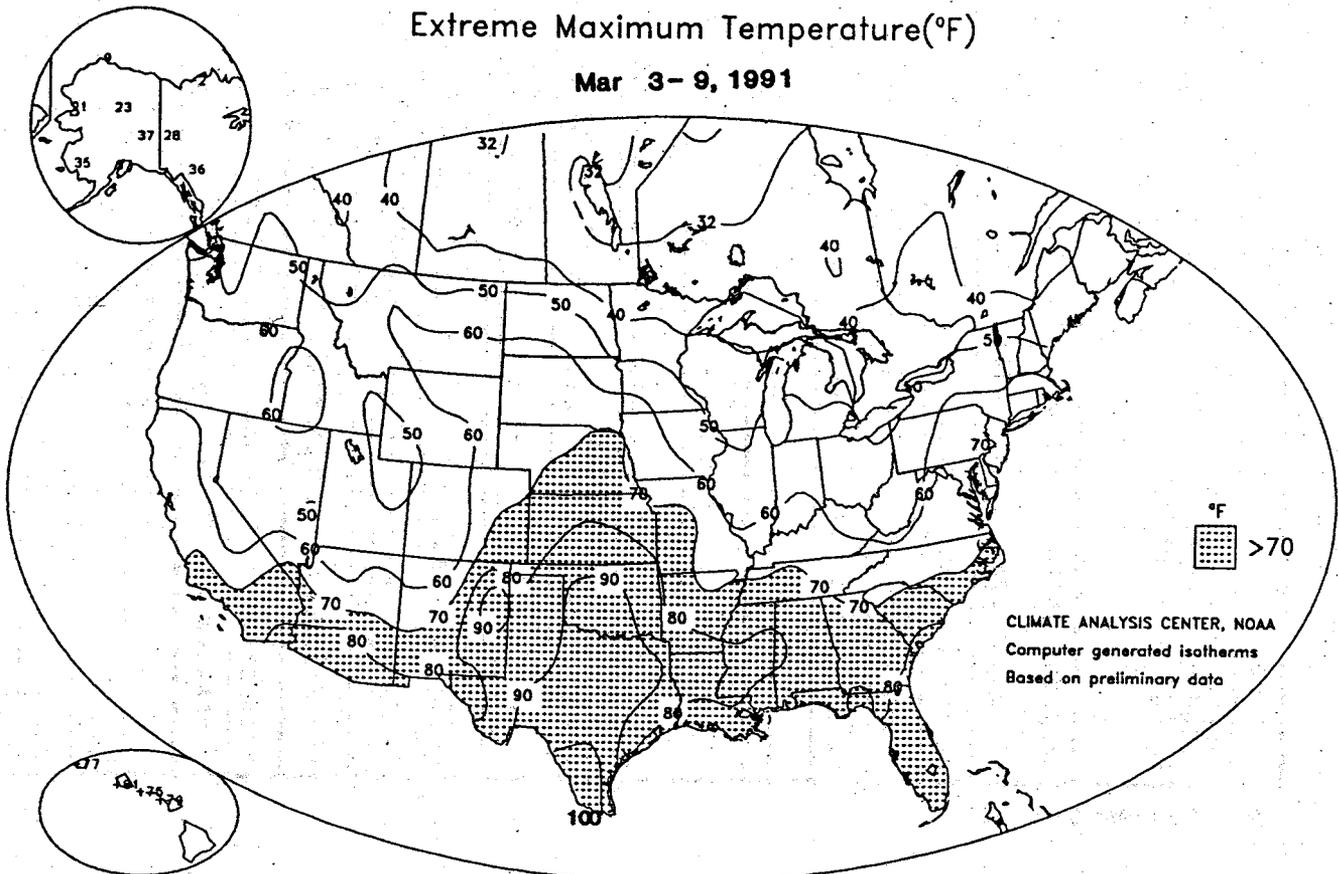
MAR 3-9, 1991



CLIMATE ANALYSIS CENTER, NOAA  
Computer generated isotherms  
Based on preliminary data

Extreme Maximum Temperature(°F)

Mar 3-9, 1991



°F  
[Grid Pattern] >70

CLIMATE ANALYSIS CENTER, NOAA  
Computer generated isotherms  
Based on preliminary data

# National Weather Data for Selected Cities

Weather Data for the Week Ending March 9, 1991

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT			NUMBER OF DAYS						
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE		.50 INCH OR MORE	
																			.01 INCH OR MORE	.50 INCH OR MORE		
AL BIRMINGHAM	63	39	77	29	51	0	1.0	-.5	.7	2.7	144	10.2	87	89	45	0	0	0	2	2	1	1
MOBILE	68	49	76	41	58	1	1.7	-.5	.7	3.2	177	22.7	201	91	51	0	0	0	0	1	1	1
MONTGOMERY	66	44	76	35	55	1	1.6	-.6	.7	3.1	161	14.1	136	88	45	0	0	0	2	2	1	1
AK ANCHORAGE	35	20	39	13	27	7	1.1	1.1	1.1	0	0	0	0	0	0	0	0	0	0	0	0	0
BARROW	24	-19	9	-24	-12	10	2.2	0.0	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0
FAIRBANKS	24	2	35	-9	15	10	2.2	0.0	1.1	0	0	0	0	0	0	0	0	0	0	0	0	0
JUNEAU	37	27	40	18	32	3	1.0	1.2	1.4	1.0	99	12.4	148	94	67	0	0	0	0	0	0	0
KODIAK	40	28	43	25	34	3	1.0	1.0	1.0	1	1	20.8	172	78	48	0	0	0	0	0	0	0
HOME	21	9	26	-4	15	10	1.1	1.1	1.1	1	71	1.7	118	88	69	0	0	0	0	0	0	0
AZ PHOENIX	77	51	85	46	64	5	1.0	1.0	1.0	1.2	60	1.3	88	60	18	0	0	0	0	0	0	0
PRESCOTT	60	30	67	21	45	4	1.0	1.4	1.0	1.6	338	3.8	101	72	22	0	0	0	0	0	0	0
TUCSON	78	53	85	49	66	3	1.0	1.1	1.0	1.3	129	2.3	143	71	17	0	0	0	0	0	0	0
YUMA	78	53	85	49	66	3	1.0	1.1	1.0	1.3	450	1.3	199	54	18	0	0	0	0	0	0	0
AR FORT SMITH	63	36	84	29	50	2	1.0	1.1	1.0	1.5	146	4.5	85	80	32	0	0	0	0	0	0	0
LITTLE ROCK	61	40	74	33	51	1	1.0	1.0	1.0	1.0	82	9.3	103	66	41	0	0	0	0	0	0	0
CA BAKERSFIELD	66	45	72	38	55	1	1.3	1.1	1.3	1.1	119	1.1	47	91	41	0	0	0	0	0	0	0
EUREKA	56	43	63	37	50	1	1.3	1.1	1.6	2.0	131	6.4	47	88	63	0	0	0	0	0	0	0
FRESNO	62	43	68	35	52	-1	1.3	1.9	1.7	2.4	488	3.6	82	92	48	0	0	0	0	0	0	0
LOS ANGELES	67	51	71	48	59	1	1.1	1.4	1.1	1.0	176	4.9	81	82	38	0	0	0	0	0	0	0
REDDING	61	40	70	32	51	-2	2.2	1.0	1.4	4.4	276	9.3	57	89	44	0	0	0	0	0	0	0
SACRAMENTO	63	43	67	36	53	1	1.9	1.4	1.5	1.7	248	5.1	68	91	44	0	0	0	0	0	0	0
SAN DIEGO	68	52	72	48	60	2	1.0	1.4	1.0	1.2	226	4.4	104	80	40	0	0	0	0	0	0	0
SAN FRANCISCO	61	46	66	40	54	1	1.0	1.4	1.7	1.7	210	5.8	66	89	52	0	0	0	0	0	0	0
CO DENVER	54	30	68	24	42	6	1.0	1.3	1.3	1.3	97	1.1	77	68	19	0	0	0	0	0	0	0
GRAND JUNCTION	50	29	58	24	40	1	1.0	1.2	1.2	1.2	85	1.2	90	73	29	0	0	0	0	0	0	0
PUEBLO	59	28	75	15	44	6	1.4	1.2	1.4	1.4	233	4	69	79	22	0	0	0	0	0	0	0
CT BRIDGEPORT	51	35	58	25	43	8	1.6	1.1	1.1	2.2	202	6.8	93	74	46	0	0	0	0	0	0	0
HARTFORD	50	30	63	22	40	6	1.6	1.7	1.8	2.1	181	6.3	80	80	45	0	0	0	0	0	0	0
DC WASHINGTON	57	39	65	30	48	5	1.6	1.2	1.3	1.7	67	4.4	70	80	42	0	0	0	0	0	0	0
FL APALACHICOLA	71	54	79	41	63	4	2.2	1.3	1.6	5.8	491	30.0	359	96	56	0	0	0	0	0	0	0
DAYTONA BEACH	76	51	87	41	64	3	1.7	1.9	1.0	1.7	181	5.6	87	97	46	0	0	0	0	0	0	0
JACKSONVILLE	74	52	82	40	63	1	1.0	1.2	1.6	4.3	412	16.0	211	91	43	0	0	0	0	0	0	0
KEY WEST	81	67	85	59	74	1	1.9	1.6	1.9	1.9	456	4.4	107	93	60	0	0	0	0	0	0	0
MIAMI	82	61	88	55	72	1	1.3	1.9	1.2	1.3	253	4.9	107	92	47	0	0	0	0	0	0	0
ORLANDO	77	52	87	45	65	0	1.6	1.8	1.6	1.6	160	5.0	79	96	49	0	0	0	0	0	0	0
TALLAHASSEE	73	47	82	34	60	2	2.9	1.6	2.9	9.4	564	29.2	259	95	47	0	0	0	0	0	0	0
TAMPA	75	57	81	47	66	1	2.1	1.3	1.4	2.1	199	4.9	79	96	64	0	0	0	0	0	0	0
WEST PALM BEACH	82	57	88	51	70	1	2.2	1.6	2.1	2.2	279	17.0	279	95	43	0	0	0	0	0	0	0
CA ATLANTA	60	41	74	32	51	1	1.6	1.7	1.5	2.5	146	10.2	93	95	46	0	0	0	0	0	0	0
AUGUSTA	67	42	77	34	54	2	3.8	2.6	3.7	5.2	360	14.7	155	88	41	0	0	0	0	0	0	0
MACON	66	46	77	36	56	3	1.7	1.5	1.7	5.1	328	17.7	172	93	46	0	0	0	0	0	0	0
SAVANNAH	69	49	80	37	59	3	1.9	1.0	1.9	4.2	372	13.4	181	88	42	0	0	0	0	0	0	0
HI HILO	76	64	79	60	70	-1	5.2	2.2	4.4	5.2	132	18.4	69	90	61	0	0	0	0	0	0	0
HONOLULU	78	64	81	58	71	-2	2.2	1.7	1.1	2	14	3.0	40	81	47	0	0	0	0	0	0	0
KAHULUI	77	64	79	58	71	-2	1.2	1.5	1.8	1.2	139	6.1	78	85	57	0	0	0	0	0	0	0
LIHUE	76	66	77	62	71	-1	1.4	1.6	1.3	1.4	33	2.7	24	80	55	0	0	0	0	0	0	0
ID BOISE	53	31	65	24	42	2	1.1	1.2	1.0	1.2	68	1.6	54	84	37	0	0	0	0	0	0	0
LEWISTON	54	38	60	34	46	5	1.2	1.0	1.2	1.5	186	1.0	38	62	35	0	0	0	0	0	0	0
POCATELLO	43	25	51	12	34	1	1.2	1.0	1.8	1.9	748	2.9	132	85	48	0	0	0	0	0	0	0
IL CHICAGO	42	23	52	19	32	0	1.0	1.0	1.0	1.6	97	2.6	78	86	47	0	0	0	0	0	0	0
MOLINE	44	24	54	18	34	2	1.1	1.5	1.1	1.6	260	3.3	92	85	48	0	0	0	0	0	0	0
PEORIA	44	23	54	19	34	0	1.0	1.5	1.0	1.6	81	2.3	63	91	50	0	0	0	0	0	0	0
QUINCY	45	27	57	21	36	1	1.0	1.6	1.0	1.6	82	1.5	41	79	42	0	0	0	0	0	0	0
ROCKFORD	40	22	48	18	31	1	1.0	1.4	1.0	1.0	175	2.6	82	86	52	0	0	0	0	0	0	0
SPRINGFIELD	45	26	57	21	36	0	1.0	1.4	1.0	1.4	47	2.4	59	87	50	0	0	0	0	0	0	0
IN EVANSVILLE	51	29	64	23	40	0	1.0	1.0	1.0	1.5	36	6.5	89	90	45	0	0	0	0	0	0	0
FORT WAYNE	44	26	55	19	35	3	1.1	1.5	1.1	1.4	57	3.5	73	88	49	0	0	0	0	0	0	0
INDIANAPOLIS	47	27	61	20	37	1	1.1	1.7	1.1	1.4	40	3.9	65	87	47	0	0	0	0	0	0	0
SOUTH BEND	42	25	54	18	34	1	1.2	1.4	1.1	1.8	103	4.2	81	85	49	0	0	0	0	0	0	0
IA DES MOINES	45	24	61	15	35	4	1.0	1.4	1.0	1.3	257	2.4	94	81	43	0	0	0	0	0	0	0
SIoux CITY	53	22	74	14	37	8	1.0	1.3	1.0	1.1	12	1.9	45	83	33	0	0	0	0	0	0	0
WATERLOO	40	22	54	14	31	4	1.0	1.4	1.0	1.9	182	2.0	90	89	55	0	0	0	0	0	0	0
KS CONCORDIA	59	28	77	18	43	7	1.0	1.4	1.0	1.3	70	1.1	55	73	24	0	0	0	0	0	0	0
DODGE CITY	63	27	81	18	45	6	1.0	1.3	1.0	1.0	0	1.1	24	70	19	0	0	0	0	0	0	0
GOODLAND	56	27	71	20	42	7	1.1	1.1	1.1	1.1	38	1.5	47	75	26	0	0	0	0	0	0	0
TOPEKA	57	27	75	20	42	4	1.0	1.4	1.0	1.7	137	1.5	61	84	28	0	0	0	0	0	0	0
WICHITA	63	31	84	20	47	7	1.0	1.4	1.0	1.4	2	1.6	28	66	22	0	0	0	0	0	0	0
KY BOWLING GREEN	53	31	67	24	42	-1	1.1	1.1	1.1	1.4	23	10.9	108	89	50	0	0	0	0	0	0	0
LEXINGTON	50	29	59	24	40	-1	1.1	1.1	1.1	1.6	44	7.1	86	83	44	0	0	0	0	0	0	0
LOUISVILLE	52	31	63	27	42	0	1.0	1.6	1.0	1.8	61	7.8	99	81	40	0	0	0	0	0	0	0
LA ALEXANDRIA	69	47	82	38	58	2	1.0	1.1	1.0	2.3	165	16.2	155	87	46	0	0	0				

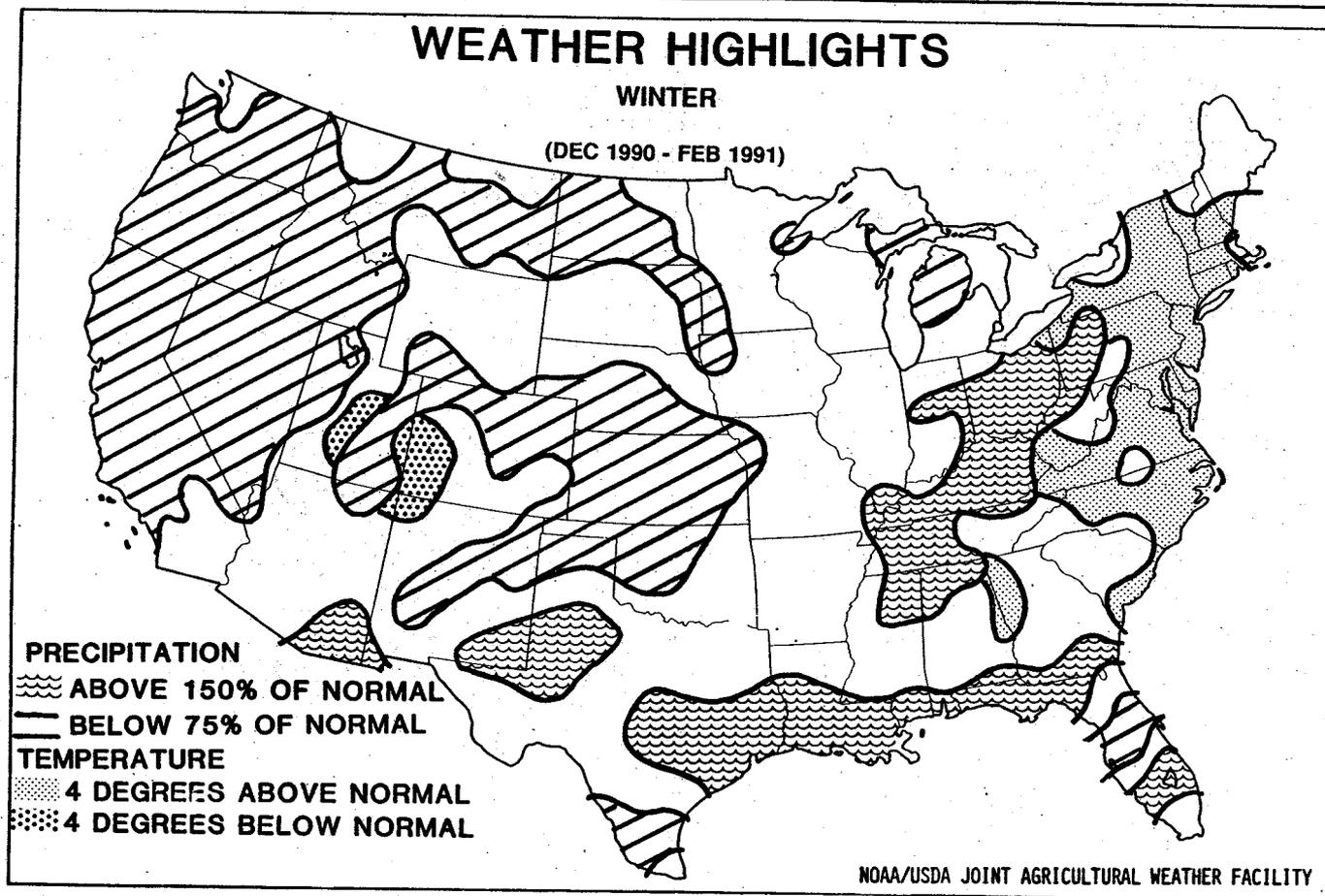
Weather Data for the Week Ending March 9, 1991

STATES  AND  STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS								
	AVERAGE	MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																				.01 INCH OR MORE	.50 INCH OR MORE	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	71	44	86	33	57	3	T	-0.8	T	1.1	109	14.0	164	82	32	0	0	0	0	0	0	0	
ME CARIBOU	28	17	36	11	23	2	1.8	1.3	0.8	2.4	360	5.6	109	91	73	0	0	0	0	0	0	0	
PORTLAND	42	27	50	20	35	2	2.4	1.6	1.2	2.9	255	7.6	90	85	58	0	0	0	0	0	0	0	
MD BALTIMORE	55	35	63	24	45	2	.7	-1.1	1.4	.8	75	5.1	72	81	40	0	0	0	0	0	0	0	
SALISBURY	57	36	70	27	47	2	1.7	-0.7	1.5	2.1	176	9.0	114	90	42	0	0	0	0	0	0	0	
MA BOSTON	49	32	60	24	41	2	1.9	1.0	2.2	186	7.0	79	82	52	0	0	0	0	0	0	0	0	
CEATHAM	47	34	54	26	40	2	1.2	-0.3	1.4	119	6.7	70	80	59	0	0	0	0	0	0	0	0	
MI ALPENA	35	17	45	8	26	2	.6	-0.3	1.4	300	2.8	81	90	51	0	0	0	0	0	0	0	0	
DETROIT	43	25	57	19	34	2	.2	-0.4	1.1	.5	84	2.9	71	84	46	0	0	0	0	0	0	0	
FLINT	40	22	51	16	31	2	.4	-0.1	1.2	.8	156	3.0	85	87	53	0	0	0	0	0	0	0	
GRAND RAPIDS	40	22	51	15	31	2	.3	-0.2	1.1	1.2	190	3.1	76	93	55	0	0	0	0	0	0	0	
HOUGHTON LAKE	37	18	45	10	27	2	.4	-0.0	1.1	1.4	291	3.2	99	89	52	0	0	0	0	0	0	0	
LANSING	40	22	50	17	31	2	.4	-0.1	1.2	1.7	288	3.8	105	89	52	0	0	0	0	0	0	0	
MARQUETTE	31	9	40	1	20	1	.7	-0.1	1.5	1.2	173	3.9	86	91	72	0	0	0	0	0	0	0	
MUSKEGON	42	22	54	15	32	3	.2	-0.3	1.1	1.1	176	3.2	70	91	51	0	0	0	0	0	0	0	
SAULT ST. MARIE	29	8	37	0	19	-1	.4	-0.1	1.3	1.4	254	3.5	80	89	54	0	0	0	0	0	0	0	
MN ALEXANDRIA	36	9	50	-3	23	3	T	-0.2	T	T	0	1.5	82	85	54	0	0	0	0	0	0	0	
DULUTH	28	5	36	-9	17	-3	.2	-0.1	1.2	.2	52	1.3	53	90	52	0	0	0	0	0	0	0	
INT'L FALLS	29	1	39	-20	15	-1	.4	-0.2	1.3	.6	204	2.2	124	83	49	0	0	0	0	0	0	0	
MINNEAPOLIS	37	15	54	4	26	2	.4	-0.2	1.2	.4	98	1.9	93	88	45	0	0	0	0	0	0	0	
ROCHESTER	34	17	47	6	26	2	.1	-0.2	1.1	.5	115	1.6	84	90	56	0	0	0	0	0	0	0	
MS GREENWOOD	64	41	78	31	52	1	1.0	-0.4	1.0	2.5	148	15.5	136	90	44	0	0	0	0	0	0	0	
JACKSON	68	44	81	33	56	2	.1	-1.1	1.1	1.9	124	12.1	113	90	44	0	0	0	0	0	0	0	
MERIDIAN	68	43	80	34	56	2	.4	-1.0	1.4	3.0	163	16.2	142	89	40	0	0	0	0	0	0	0	
MO CAPE GIRARDEAU	53	32	62	28	42	2	.0	-1.1	1.0	.5	37	6.6	91	89	46	0	0	0	0	0	0	0	
COLUMBIA	53	27	73	21	40	1	.0	-0.7	1.3	.3	40	2.0	45	77	32	0	0	0	0	0	0	0	
KANSAS CITY	53	27	69	21	40	1	.0	-0.5	1.0	1.56	2.6	84	80	36	0	0	0	0	0	0	0	0	
SAINT LOUIS	50	30	59	24	40	1	.1	-0.6	1.1	.4	44	2.9	61	79	36	0	0	0	0	0	0	0	
SPRINGFIELD	56	28	76	20	42	1	.1	-0.7	1.3	.3	31	4.2	91	83	32	0	0	0	0	0	0	0	
MT BILLINGS	48	27	63	19	38	6	T	0	1.1	.2	78	1.5	79	74	33	0	0	0	0	0	0	0	
GLASGOW	41	19	54	13	30	7	T	0	1.1	.1	143	.6	85	88	47	0	0	0	0	0	0	0	
GREAT FALLS	46	21	61	9	34	4	T	-0.1	1.2	.2	70	1.0	53	76	30	0	0	0	0	0	0	0	
HAVER	40	17	52	10	28	2	T	-0.1	1.1	.1	91	.6	53	87	51	0	0	0	0	0	0	0	
HELENA	47	25	60	17	36	7	.1	0	1.1	.2	124	.5	40	78	30	0	0	0	0	0	0	0	
KALISPELL	38	24	42	16	31	1	.6	.4	1.4	.6	256	2.8	98	94	55	0	0	0	0	0	0	0	
MILES CITY	50	25	62	19	38	10	T	-0.1	1.1	T	21	1.0	78	84	38	0	0	0	0	0	0	0	
MISSOULA	45	26	55	19	36	4	.8	.6	1.5	.9	419	1.7	71	92	44	0	0	0	0	0	0	0	
NE GRAND ISLAND	57	24	72	17	40	8	T	-0.3	1.3	.3	91	.9	55	81	28	0	0	0	0	0	0	0	
LINCOLN	57	24	73	18	41	8	T	-0.4	1.4	.6	135	1.7	78	80	29	0	0	0	0	0	0	0	
NORFOLK	55	23	72	14	39	10	.0	-0.3	1.0	T	0	1.3	81	79	27	0	0	0	0	0	0	0	
NORTH PLATTE	58	23	71	17	41	9	T	-0.2	1.1	T	0	.6	48	83	20	0	0	0	0	0	0	0	
OMAHA	51	25	64	16	38	5	T	-0.4	1.3	1.3	302	2.7	132	72	43	0	0	0	0	0	0	0	
SCOTTSDUFF	54	24	68	12	39	6	.1	-0.1	1.1	.1	35	.9	88	87	24	0	0	0	0	0	0	0	
VALENTINE	54	20	65	14	37	8	T	-0.1	1.1	T	0	.7	76	82	27	0	0	0	0	0	0	0	
NV ELY	46	19	52	6	33	1	.1	-0.1	1.1	.3	116	.6	35	81	32	0	0	0	0	0	0	0	
LAS VEGAS	67	45	74	36	56	3	T	-0.1	1.1	.3	221	1.1	100	55	21	0	0	0	0	0	0	0	
RENO	52	29	59	21	40	1	.8	.6	1.4	.9	358	1.1	45	90	34	0	0	0	0	0	0	0	
WINNEMUCCA	50	28	59	18	39	1	.5	.3	1.4	.5	294	1.2	71	83	44	0	0	0	0	0	0	0	
NE CONCORD	43	25	55	17	34	6	1.2	.6	1.7	1.4	177	4.7	78	86	52	0	0	0	0	0	0	0	
NJ ATLANTIC CITY	54	32	65	20	43	5	1.8	.9	1.3	2.7	229	9.0	113	87	45	0	0	0	0	0	0	0	
NM ALBUQUERQUE	60	33	67	21	47	3	T	-0.1	1.1	.1	36	.7	80	56	17	0	0	0	0	0	0	0	
CLOVIS	68	36	79	26	52	8	.0	-0.1	1.0	.0	0	.7	64	66	20	0	0	0	0	0	0	0	
ROSWELL	73	43	83	31	58	9	.0	-0.1	1.0	.0	0	.5	58	43	13	0	0	0	0	0	0	0	
NY ALBANY	44	24	57	18	34	5	1.0	.3	1.5	1.0	127	4.9	90	85	49	0	0	0	0	0	0	0	
BINGHAMTON	43	26	56	17	35	7	1.0	.4	1.6	1.6	194	5.8	104	91	57	0	0	0	0	0	0	0	
BUFFALO	38	25	53	19	32	2	1.8	1.1	1.7	2.9	358	7.0	113	93	63	0	0	0	0	0	0	0	
NEW YORK	52	36	59	29	44	6	1.9	1.0	1.5	2.2	193	7.1	98	76	45	0	0	0	0	0	0	0	
ROCHESTER	41	24	55	17	33	3	1.4	.9	1.8	1.8	248	4.6	86	95	62	0	0	0	0	0	0	0	
SYRACUSE	45	26	61	17	35	6	1.5	.8	1.8	1.8	207	5.7	95	90	58	0	0	0	0	0	0	0	
NC ASHEVILLE	53	34	64	22	43	0	.9	-0.2	1.5	.5	1.7	124	6.6	85	96	50	0	0	0	0	0	0	
CHARLOTTE	60	41	69	30	51	3	3.1	2.0	2.3	3.7	261	11.0	123	90	40	0	0	0	0	0	0	0	
GREENSBORO	57	39	63	29	48	3	2.5	1.6	2.4	3.0	264	8.6	108	86	42	0	0	0	0	0	0	0	
HATTERAS	64	47	77	40	56	7	3.2	2.2	2.9	3.9	322	17.4	173	87	52	0	0	0	0	0	0	0	
NEW BERN	64	42	73	30	53	3	1.4	.5	1.3	2.1	183	11.3	124	95	44	0	0	0	0	0	0	0	
RALEIGH	60	39	68	26	50	4	1.3	.4	1.8	1.9	175	6.7	84	90	38	0	0	0	0	0	0	0	
WILMINGTON	65	43	75	31	54	2	1.9	.9	1.7	3.0	250	14.8	179	94	43	0	0	0	0	0	0	0	
ND BISMARCK	46	14	60	6	30	9	T	-0.1	1.1	T	14	.4	40	87	36	0	0	0	0	0	0	0	
FARGO	34	9	42	-2	22	3	T	-0.1	1.1	T	.2	1.7	162	83	60	0	0	0	0	0	0	0	
GRAND FORKS	32	5	41	-2	18	1	T	-0.1	1.1	T	.1	28	78	89	60	0	0	0	0	0	0	0	
WILLISTON	41	17	54	6	29	7	.1	0	1.2	.2	142	.7	67	89	49	0	0	0	0	0	0	0	
OH AKRON-CANTON	43	27	50	22	35	2	1.6	.9	1.6	1.6	180	6.0	108	93	61	0	0	0	0	0	0	0	
CINCINNATI	49	28	59	21	38	0	.6	-0.3	1.6	.8	72	7.6	110	83	43	0	0	0	0	0	0	0	
CLEVELAND	40	26	50	19	33	0	1.6	1.0	1.7	1.7	214	6.2	114	8									

Weather Data for the Week Ending March 9, 1991

STATES  AND  STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS						
	AVERAGE	MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	TEMP. °F		PRECIP.	
																		90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	46	26	56	21	36	0	.4	-.2	.4	.6	78	5.7	105	90	47	0	0	0	0	0	
TOLEDO	45	24	55	14	34	0	.1	-.4	.1	.3	51	3.2	71	88	47	0	0	6	2	0	
YOUNGSTOWN	42	25	52	19	34	0	.7	1.0	.8	1.9	215	5.5	95	94	63	0	0	6	2	0	
OK OKLAHOMA CITY	67	37	91	29	52	0	.0	T	.0	.1	25	1.1	38	70	24	1	1	2	0	0	
TULSA	65	37	88	30	51	0	.0	T	.0	.2	31	2.1	54	72	26	0	0	0	0	0	
OR ASTORIA	48	36	54	31	42	0	2.0	1.2	1.4	3.2	144	18.5	90	97	66	0	0	2	2	0	
BURNS	47	23	57	12	35	0	.1	-.1	.1	.1	43	1.2	41	85	36	0	0	0	0	0	
MEDFORD	55	35	62	27	45	0	1.3	-.9	.7	1.6	279	4.9	80	99	52	0	0	2	3	0	
PENDLETON	52	35	66	32	44	0	1.8	-.1	.1	.6	172	2.1	57	77	41	1	1	1	1	0	
PORTLAND	52	39	57	34	45	0	1.1	1.0	.9	2.5	229	8.7	78	88	59	0	0	0	0	0	
SALEM	51	35	57	34	43	0	2.4	1.3	.6	3.6	270	9.7	75	95	64	0	0	2	2	0	
PA ALLENTOWN	54	32	71	23	43	0	1.5	-.7	.7	1.6	154	5.5	75	88	46	0	0	4	4	0	
ERIE	39	26	49	21	33	0	1.3	-.7	.6	1.5	208	5.3	102	93	64	0	0	6	6	0	
HARRISBURG	54	33	68	25	44	0	.5	-.3	.2	.8	79	4.7	71	83	40	0	0	4	4	0	
PHILADELPHIA	56	35	73	27	46	0	1.2	-.4	.9	1.2	117	6.1	87	90	46	0	0	2	3	0	
PITTSBURGH	45	28	54	27	37	0	1.5	-.8	.8	1.7	176	6.2	100	89	51	0	0	5	4	0	
SCRANTON	50	30	70	20	40	0	.9	-.4	.6	1.0	149	3.9	79	83	47	0	0	5	4	0	
RI PROVIDENCE	52	32	63	23	42	0	2.1	1.1	.9	2.6	214	8.3	93	82	45	0	0	4	4	0	
SC CHARLESTON	67	47	82	38	57	0	.6	-.4	.6	1.7	128	10.4	131	92	40	0	0	0	2	0	
COLUMBIA	67	42	76	30	54	0	2.2	1.0	2.0	3.0	201	10.4	105	91	35	0	0	2	3	0	
FLORENCE	64	42	75	32	53	0	1.4	-.5	1.3	2.6	214	9.2	114	89	39	0	0	1	1	0	
GREENVILLE	59	38	69	28	49	0	1.6	-.3	.9	2.3	136	9.3	90	93	45	0	0	3	5	0	
SD ABERDEEN	44	17	58	2	31	0	T	-.2	T	T	0	.8	61	87	44	0	0	7	0	0	
HURON	47	20	61	9	34	0	.1	-.1	.1	.1	31	1.1	77	86	40	0	0	7	1	0	
RAPID CITY	53	24	66	16	38	0	T	-.2	T	.1	27	1.2	95	80	27	0	0	6	1	0	
STOUK FALLS	50	18	66	6	34	0	T	-.3	T	T	3	.6	32	84	33	0	0	7	1	0	
TN CHATTANOOGA	60	35	72	28	48	0	1.8	-.3	1.1	3.0	167	13.9	118	91	42	0	0	2	4	0	
KNOXVILLE	55	34	65	27	45	0	1.5	-.2	1.2	1.8	115	11.3	109	91	47	0	0	3	3	0	
MEMPHIS	58	39	75	32	49	0	.1	-.1	.1	1.0	66	10.3	100	81	44	0	0	2	1	0	
NASHVILLE	56	33	72	26	44	0	.5	-.8	.5	1.0	63	9.4	93	85	43	0	0	3	1	0	
TX ABILENE	73	41	93	29	57	0	.0	-.2	.0	T	16	2.9	131	62	22	1	1	0	0	0	
AMARILLO	66	30	82	23	48	0	.0	-.2	.0	T	0	.9	68	69	18	0	0	5	0	0	
AUSTIN	79	48	96	44	64	0	.0	-.4	.0	.1	10	12.2	270	69	24	3	0	0	0	0	
BRAUNSVILLE	71	52	77	40	61	0	T	-.7	T	1.2	134	20.6	224	92	55	0	0	0	0	0	
BROWNSVILLE	83	58	95	48	71	0	.0	-.1	.0	.0	0	3.0	103	93	36	1	0	0	0	0	
CORPUS CHRISTI	84	53	99	43	68	0	.0	-.2	.0	T	13	3.8	115	83	28	2	0	0	0	0	
DEL RIO	85	49	99	43	67	0	.0	-.1	.0	.0	0	1.3	86	52	15	3	0	0	0	0	
EL PASO	71	41	80	29	56	0	.0	-.1	.0	.1	91	1.6	174	50	15	0	0	2	0	0	
FORT WORTH	73	42	96	35	57	0	.0	-.4	.0	.1	11	5.4	131	75	30	1	0	0	0	0	
GALVESTON	69	56	73	47	63	0	.0	-.5	.0	.2	35	17.3	291	87	57	0	0	0	0	0	
HOUSTON	75	52	86	39	63	0	T	-.6	T	T	4	15.6	206	87	37	0	0	1	0	0	
LUBBOCK	71	36	83	27	53	0	.0	-.2	.0	T	0	1.7	146	59	19	0	0	2	0	0	
MIDLAND	75	39	89	29	57	0	.0	-.1	.0	.0	0	2.1	189	61	16	0	0	3	0	0	
SAN ANGELO	76	39	91	31	58	0	.0	-.1	.0	T	11	2.4	145	69	19	1	2	0	0	0	
SAN ANTONIO	82	48	100	43	65	0	.0	-.3	.0	.1	22	7.5	202	70	21	2	0	0	0	0	
VICTORIA	79	51	91	44	65	0	.0	-.3	.0	T	7	10.9	241	84	34	1	0	0	0	0	
WACO	77	43	97	37	60	0	.0	-.4	.0	.4	76	5.0	118	75	25	2	0	0	0	0	
WICHITA FALLS	71	38	95	30	55	0	.0	-.3	.0	T	5	2.7	116	67	22	1	2	0	0	0	
UT CEDAR LAKE	51	25	57	16	38	0	T	-.2	T	.2	52	1.2	71	78	26	0	0	5	1	0	
SALT LAKE CITY	50	31	58	22	41	0	.1	-.3	.1	.7	159	2.4	79	78	34	0	0	4	2	0	
VT BURLINGTON	39	20	51	13	29	0	1.0	-.5	.8	1.3	219	3.4	83	89	59	0	0	7	4	0	
VA NORFOLK	59	42	69	31	50	0	.9	-.0	.8	1.2	106	6.8	84	92	46	0	0	1	3	0	
RICHMOND	59	38	65	27	49	0	.4	-.5	.3	1.0	95	5.7	77	89	47	0	0	2	3	0	
ROANOKE	55	36	62	23	45	0	2.0	1.2	1.8	2.7	250	8.3	118	81	39	0	0	1	2	0	
WA QUILLAYUTE	46	33	49	26	39	0	1.8	-.1	.9	4.6	124	33.9	112	100	69	0	0	3	6	0	
SEATTLE-TACOMA	47	36	50	31	42	0	1.7	-.8	.9	3.3	294	12.4	109	99	66	0	0	1	6	0	
SPOKANE	44	27	49	23	36	0	.7	-.4	.4	1.6	365	4.1	91	94	53	0	0	6	2	0	
YAKIMA	52	27	56	22	40	0	.4	-.3	.4	.7	372	1.2	54	89	41	0	0	6	2	0	
WV BECKLEY	47	28	57	19	37	0	.8	-.0	.4	1.4	125	8.1	105	90	49	0	0	6	4	0	
CHARLESTON	49	29	58	20	39	0	1.0	-.2	.5	1.1	101	6.8	88	91	46	0	0	6	4	0	
HUNTINGTON	50	30	57	22	40	0	1.7	-.8	.8	1.9	167	7.5	105	92	46	0	0	6	4	0	
PARKERSBURG	47	30	55	23	38	0	1.7	-.9	1.0	1.7	171	7.1	111	92	52	0	0	5	4	0	
WI GREEN BAY	34	16	42	8	25	0	.2	-.1	.1	1.4	309	2.4	89	89	56	0	0	7	3	0	
LACROSSE	38	20	52	10	29	0	.4	-.4	.4	.4	81	1.7	79	81	42	0	0	7	1	0	
MADISON	39	19	48	14	29	0	T	-.4	T	1.8	365	3.4	130	84	52	0	0	7	3	0	
MILWAUKEE	41	23	51	18	32	0	T	-.5	T	1.0	159	2.9	82	82	45	0	0	7	1	0	
WAUSAU	35	12	43	2	23	0	.4	-.1	.4	.8	170	2.0	87	91	55	0	0	7	3	0	
WY CASPER	46	24	60	15	35	0	.2	-.1	.1	.2	87	1.1	90	78	31	0	0	5	2	0	
CHEYENNE	46	25	62	15	36	0	.1	-.1	.1	.2	71	.7	64	71	25	0	0	5	1	0	
LANDER	45	25	53	17	35	0	.2	-.0	.1	.2	96	1.4	102	68	24	0	0	5	2	0	
SHERIDAN	48	22	66	8	35	0	.5	-.3	.5	.5	217	2.0	112	75	29	0	0	6	1	0	

Based on 1951-80 normals



Winter Weather Review

December 1990 - February 1991

**HIGHLIGHTS:** All areas east of the Mississippi River savored unusual warmth during the winter. Even individual monthly temperatures were above normal in most Eastern locations, owing to cold snaps that were brief and not too severe. Mild weather also prevailed in the northern Plains and the Southwest, as a balmy February offset a frigid second-half of December. The December cold blast severely damaged citrus and ground crops in California, and the winter wheat crop in Washington. Persistent high pressure systems in the central Rockies provided the chill for the winter's most anomalous cold.

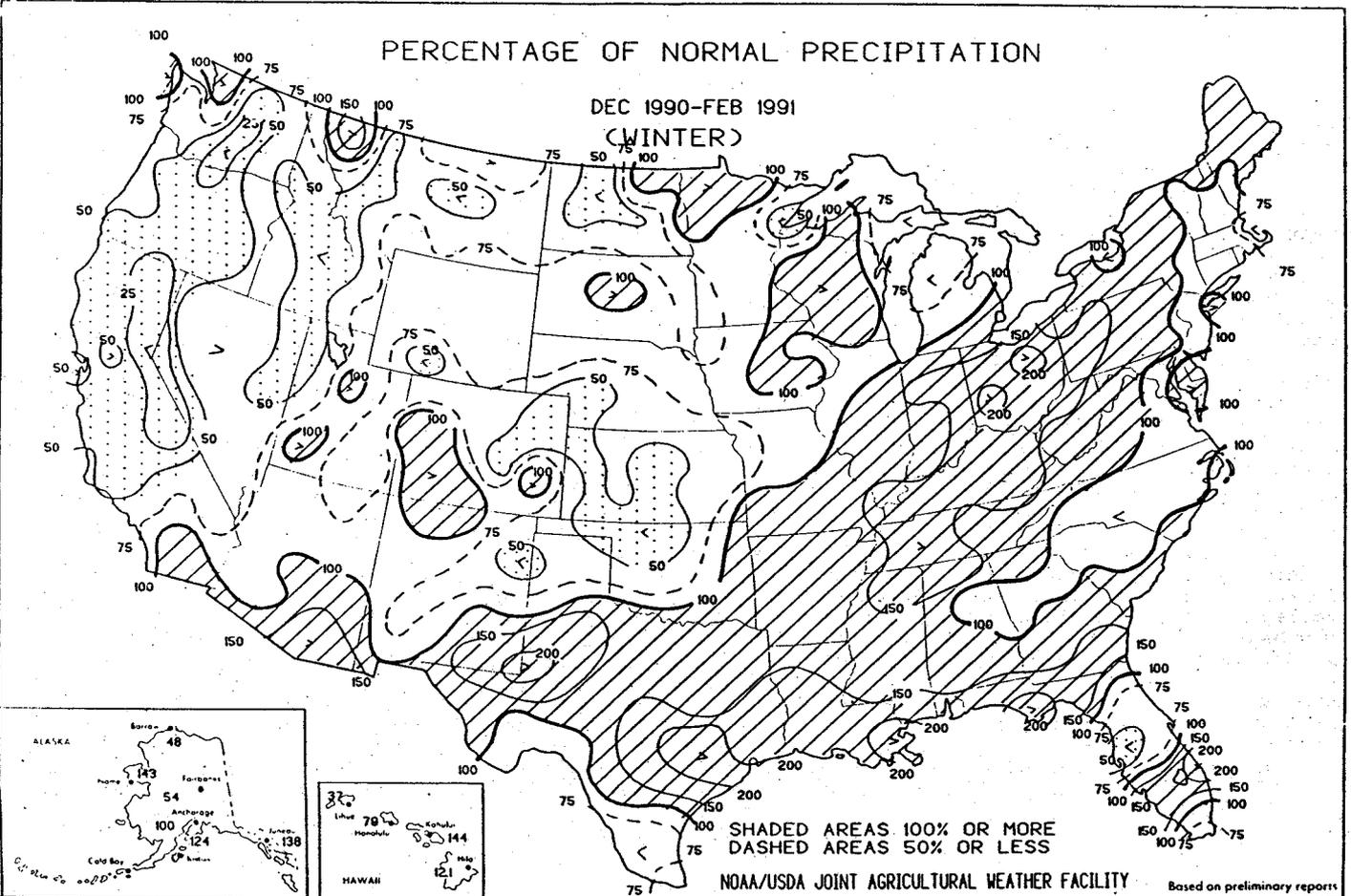
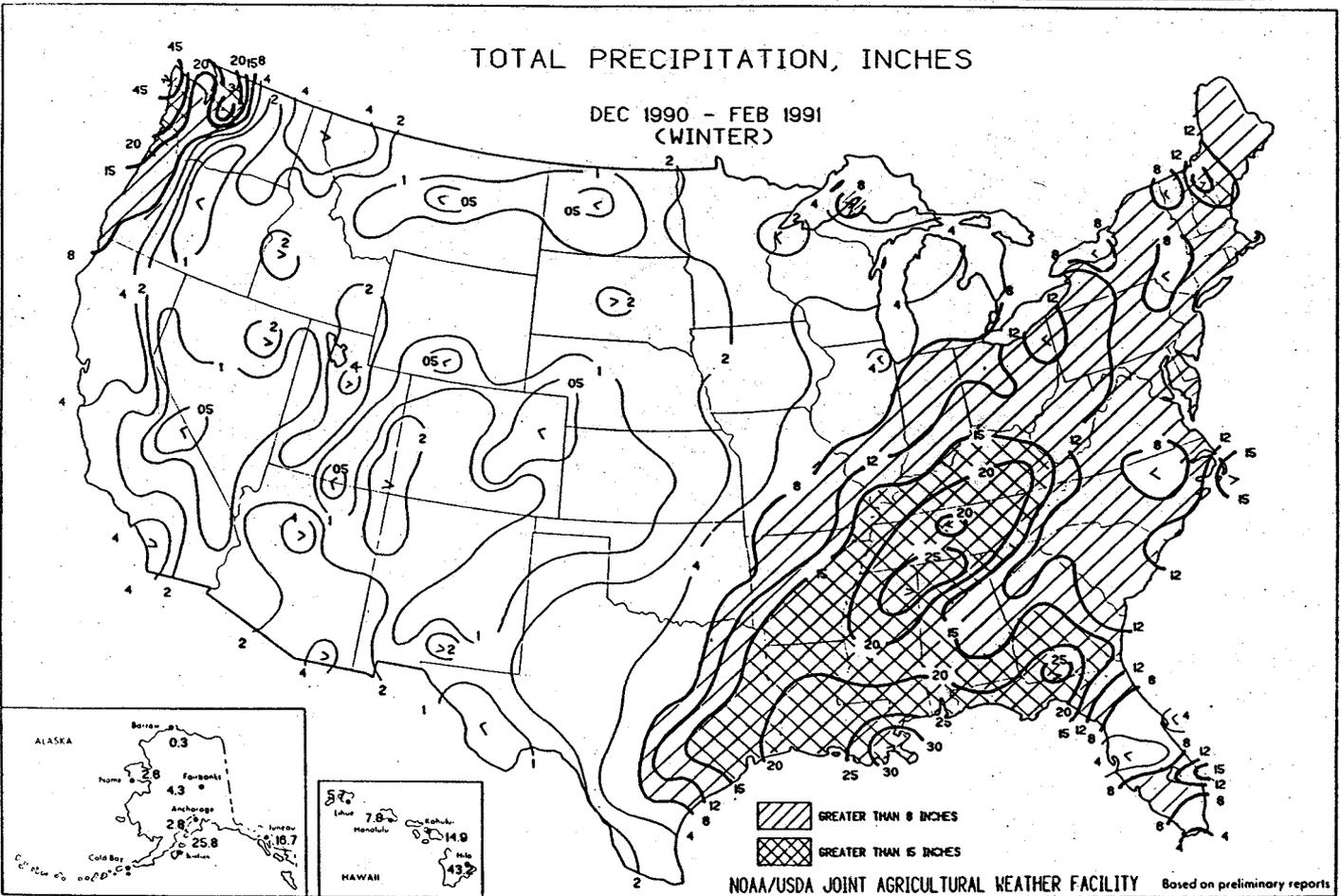
Portions of the central Plains, including much of Kansas and Nebraska, became very dry during the winter, while the northern Plains remained drier than normal. California suffered through a miserably dry winter until the final 2 days of February. Frequent, soaking rain pommelled the Ohio Valley in December, shifting southward to the Gulf coast in January. Stormy, wet weather continued in February from the Western Gulf States to the Ohio Valley. Much of last year's drought in the Southeast was vanquished, with the exception of lingering dryness in peninsular Florida.

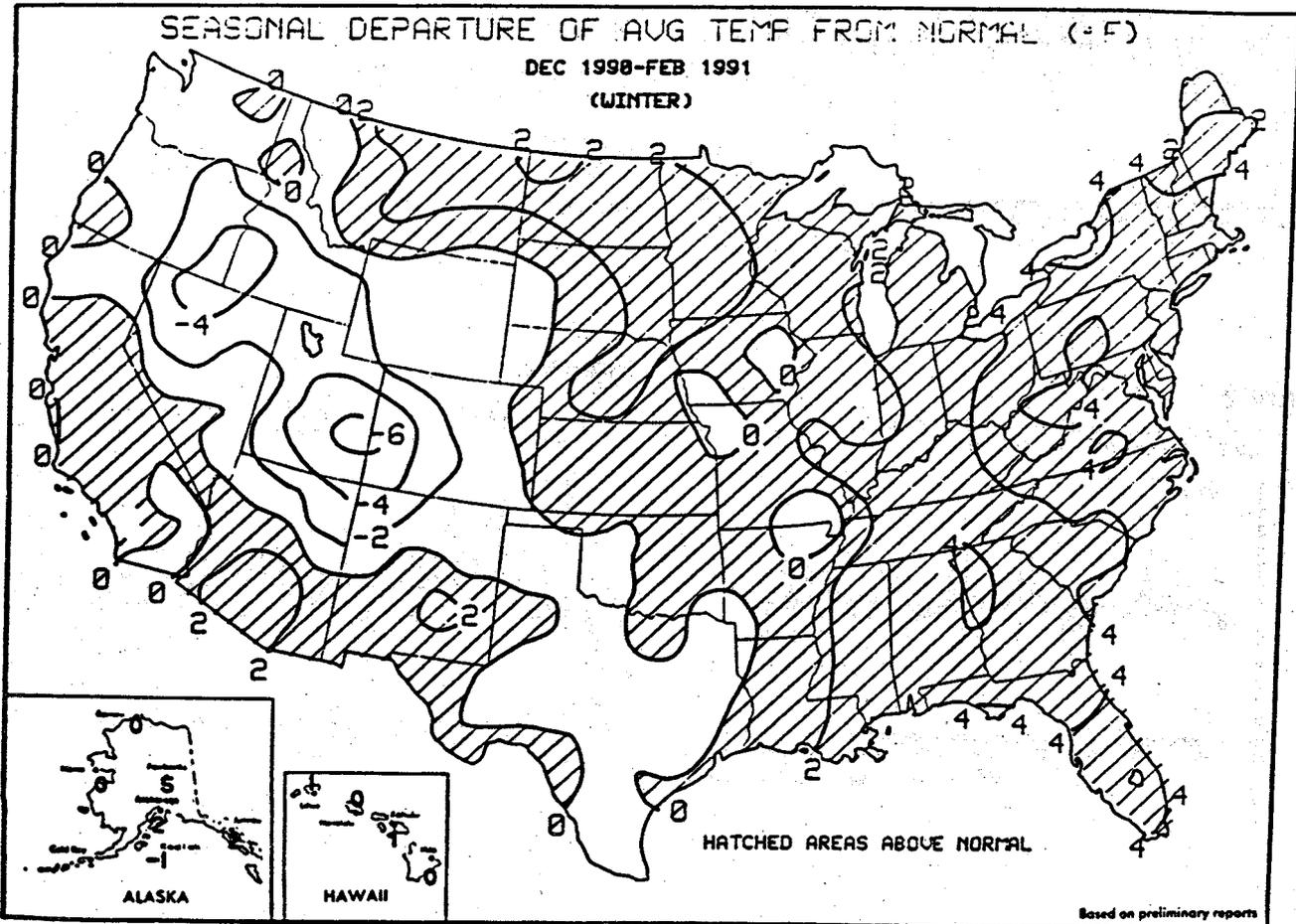
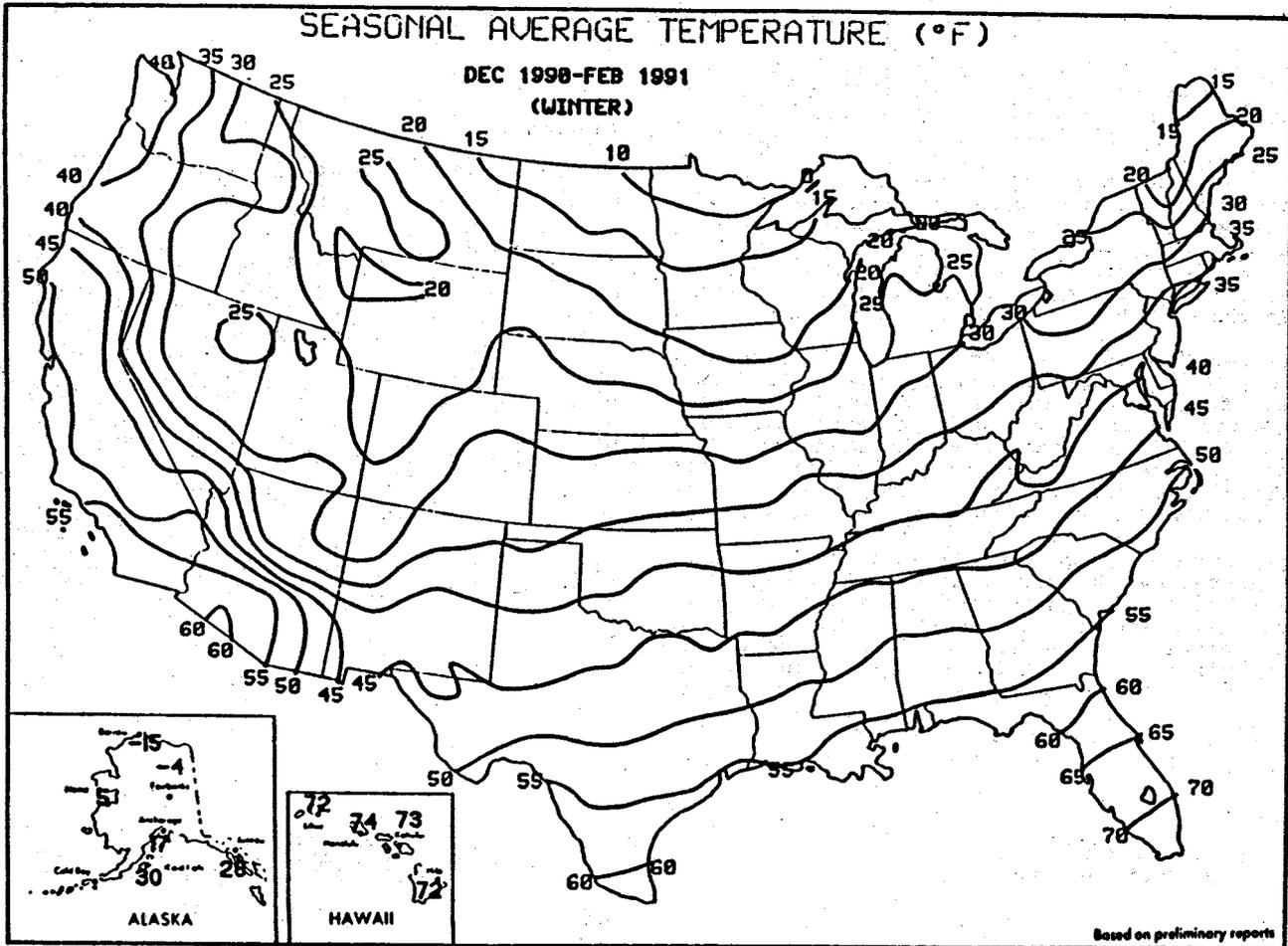
**DECEMBER:** After a few days of heavy rain and snow from the Plains eastward, a quiet, mild pattern took hold until mid-month. Brutal cold poured into the western two-thirds of the Nation beginning on the 18th, remaining entrenched until month's end. A -57° F reading was dutifully noted by an observer in Middle Sink, UT. Minimum temperatures sagged

into the upper teens or lower 20's for 5 consecutive mornings in the citrus-producing southern San Joaquin Valley of California. The arctic front dumped heavy snow in the Rockies. The contrast between bitter cold and record warmth in the East fueled frequent heavy rain and initiated widespread flooding in the Ohio and Tennessee Valleys.

**JANUARY:** Heavy rain pounded the Gulf coast at regular intervals, while the northwestern quarter of the Nation was extremely dry. Flooding slowly eased in the Ohio Valley as the wetness shifted southward. Except for a chilly spell in the East after the 22nd, no sustained cold gripped the Nation. Monthly rainfall exceeded 20 inches along parts of the Gulf coast but was less than 10 percent of normal in central California.

**FEBRUARY:** Warm air was plentiful from coast to coast, with especially mild conditions during the first 10 days. A short-lived cold shot sent minimum temperatures to the freezing mark in central Florida on the 16th. But precipitation highlighted the weather. More heavy rain fell from the Gulf coast to the Ohio Valley. During a 6-day spate of rain in the Southeast ending on the 22nd, 6 to 12 inches drenched a wide area from Louisiana to Tennessee. Northern California had a period of rain early in the month, but statewide, drought-easing precipitation did not arrive until the 27th. Toward the end of the month, several snowstorms brought beneficial moisture and snowpack to the Dakotas.





Winter 1990-91 in Historical Perspective

Temperatures for the winter averaged above the long-term mean across the contiguous United States, ranking as the 31st warmest winter since 1895-96 (fig. 1). The filtered curve, which identifies longer-term trends, shows a gradual winter warming trend since the frigid winters of the late 1970's. Areally averaged precipitation was near normal nationwide (44th driest). However, areally weighted precipitation, which more accurately reflects how precipitation compares with the local normal climate, indicates that the winter of 1990-91 was the 15th driest on record (fig. 2).

The temperature and precipitation rankings for the nine climatically homogeneous regions in the United States (fig. 3) are listed in table 1. Greater than 60 percent of the Nation experienced a warmer-than-normal winter, including the Northeast (9th warmest on record), and the Southeast (13th warmest). The three western regions ranked within the coldest 40 percent of their historical winters.

A sharp contrast appears in the precipitation data, as near-record dryness plagued the West (3rd driest), Northwest (6th driest), and West North Central (6th driest) regions (fig. 4). Each of these regions has endured five consecutive drier-than-normal winters. The Central region slogged through its 6th wettest winter, and the Southeast, South, and Northeast regions had winters within the wettest third of historical rankings.

Figure 3

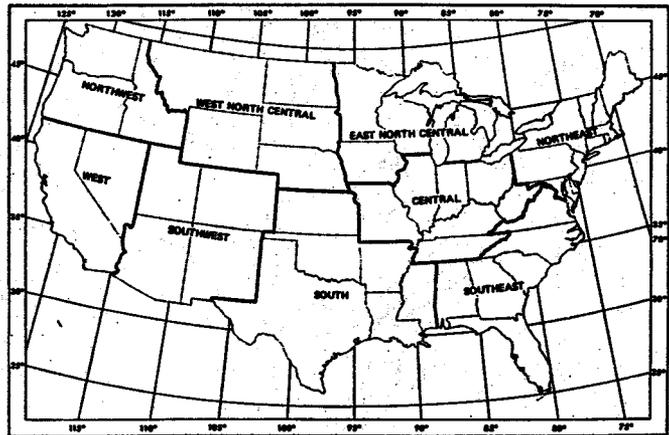


Figure 1

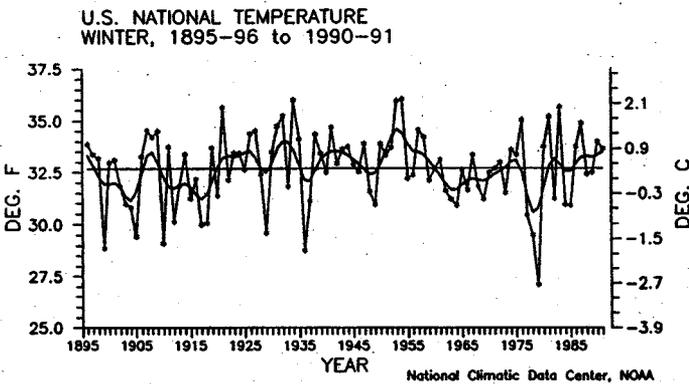


TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR DEC 1990-FEB 1991, BASED ON THE PERIOD 1895-96 TO 1990-91. 1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	67	88
EAST NORTH CENTRAL	29	63
CENTRAL	91	75
SOUTHEAST	69	84
WEST NORTH CENTRAL	6	62
SOUTH	72	59
SOUTHWEST	50	35
NORTHWEST	6	35
WEST	3	37
NATIONAL	44	66

Figure 2

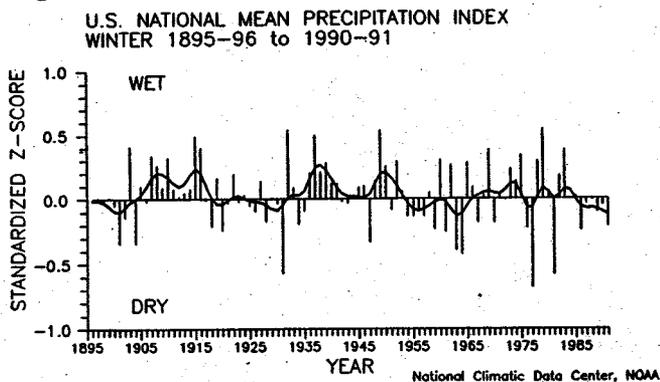
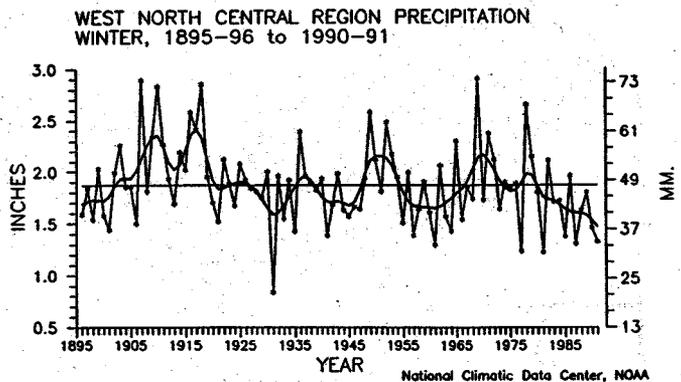


Figure 4



## National Agricultural Summary

March 4 - 10, 1991

**HIGHLIGHTS:** Beneficial rains again fell on the **West Coast**. Drought-stressed small grain fields were partially revived by the much needed moisture. A major ice storm in **northern New York** caused damage to greenhouse grown crops due to loss of electricity. Insect activity increased in wheat fields in the **Plains** and portions of the **Northwest**.

**SMALL GRAINS:** Winter wheat was in mostly good condition, with topdressing continuing in most areas. The winter wheat crop was greening in parts of Kansas and Indiana. Army cutworms were active in most areas of Kansas and northwest Oklahoma. Arizona winter wheat was 7 percent (%) headed, 11 percent behind the 5-year average. Recent rains in Washington have helped revive some drought-stressed winter wheat. Powdery mildew was evident in some fields in Virginia. Dryland wheat in the Texas High Plains suffered from lack of moisture, insects, and high winds. Greenbug spraying began in the Cross Timbers, and some winter kill wheat fields were plowed under in the Blacklands.

**OTHER FIELD CROPS:** Corn planting continued in some most Southern States. Sorghum and cotton planting began in south Texas. Arizona alfalfa was in mostly good condition, with the first cuttings reported in the central and western areas. Florida tobacco was being transplanted and sugarcane harvest continued. Georgia tobacco plant beds were in fair to poor condition. Irish potato planting and cabbage transplanting in North Carolina were 25 and 24% complete, respectively. The maple syrup season began in most areas of New York. Rice planting began in Louisiana.

**FRUIT AND NUTS:** A severe ice storm in northern New York may have caused damage to fruit trees. Plants in many greenhouses were damaged because of the loss of electricity used to heat the houses. Arizona grapefruit, lemon, and Valencia orange harvests continued. Florida orange and

grapefruit harvests continued. California citrus harvest was complete in the Central Valley but still active in the south and the desert. Georgia and Texas' early variety peach trees were in full bloom. Virginia peach bud development was ahead of normal. Oregon pears and hazelnuts were budding in the Willamette Valley. The sweet cherry crop was severely damaged by the cold winter.

**VEGETABLES:** Vegetable harvest continued in Arizona. Florida winter vegetable harvest continued. The Georgia onion crop was in mostly good condition. Watermelon planting in Mississippi was 1% complete, 5 percentage points behind last year. Melon progress, in the Rio Grande Valley of Texas, was slowed due to high temperatures. The early onion harvest began, with good yield expectations. Spinach and carrot harvests continued, but most other harvests were slowed in the San Antonio Winter Garden area. Rain in most of California slowed the vegetable harvest. However, asparagus, broccoli, and cauliflower harvests continued active with variable quality. Strawberries were in light supply with variable quality. New Jersey had limited planting of peas, onions, spinach, and white potatoes.

**PASTURES AND LIVESTOCK:** Pasture conditions improved in most areas due to the warmer weather. Livestock was in mostly good to fair condition. Lambing and calving continued in most areas. Hay supplies were mostly short in Mississippi. Sheep shearing continued in Wyoming.

## 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 0.35 in. north, 0.75 in. isolated areas; 0.20 in. central, south. Temperatures 2 to 4° below normal.

Wet conditions continued to limit field activities. Some land preparation, planting corn latter part of week south. Primary activities: Equipment preparation; disking, fertilization; purchasing seed; general care of livestock, poultry, catfish.

**ARIZONA:** Sunny 3rd, 4th; increased cloudiness, cooler 5th, light precipitation northeast. Cooling continued through 8th. Warmer 9th. Precipitation none to traces north central, northeast. Temperatures 1° below to 5° above. Extremes 36°; 85° deserts, 7°; 83° higher elevations.

Cotton field preparations continued. Small grains jointed 56%, 85% 1990, 68% avg.; headed 7%, 18% 1990, 10% avg.; crop good. Alfalfa mostly good; first cuttings began central, west; harvest moderate to light. Grapefruit, valencia oranges, spring lettuce, mixed vegetables harvested central, west. Lemons harvested west.

**ARKANSAS:** Temperatures near normal. Only scattered showers. Extremes 17°; 87°. Rainfall none to 0.13 in.

Wheat; 60% fertilized in east, 25% fertilized in west; good. Fieldwork limited by moisture. Cold nights kept fruits dormant. Pasture condition good, easing hay situation. Livestock good.

**CALIFORNIA:** Storms continued providing rain northern two thirds of the State, snow in the mountains. Rain ended at most locations by the middle of the week. Temperatures remained mild in the extreme south while the north was cool.

Rain early week slowed field activities most areas. Growth small grains, forage crops progressed. Herbicide spraying broadleaf weeds continued. Some fields received fertilizer applications. Alfalfa sprayed, weevil control. Rain halted green chopping. Ground preparation, pre irrigation cotton, sugarbeets continued. Seed alfalfa, newly planted sugarbeets responded well additional moisture. Wet ground slowed activities. Almond bloom nearly complete. Stone fruit bloom active. Fungicides used to control brown rot. Hail in Tulare County knocked blooms, buds off. Citrus harvest complete in central valley, active in southern California. Desert Valencia orange harvest active. asparagus harvest active. Broccoli moderate supply, variable quality. Cauliflower light supply, variable quality. Winter potato harvest continued Hemet San Jacinto area. Strawberries light supply Santa Maria area, variable quality. South coast strawberry harvest increasing. Sweet potato hotbed preparation continued. Tomato planting delayed by wet conditions. Recent precipitation improved pastures statewide. Conditions very poor to fair southern two thirds, poor to good northern third. Water supplies improved.

**COLORADO:** A rapidly moving storm covered mountains with 1 to 2 feet of snow, brought 0.10 in. to 0.30 in. of moisture to lower elevations.

Most of the State had cleared by 7th giving way to high winds through the weekend. Temperatures 2 to 4° above normal except in the southeast where temperatures 4 to 7° above normal.

**FLORIDA:** Temperatures near normal, varying lows below freezing over north to highs, upper 80s central, southern areas. Rain heaviest central areas, 1.00 to 2.00 in.; under 0.50 in. elsewhere.

Soil moisture Panhandle, northern Peninsula adequate to surplus; central Peninsula, short to adequate; southern Peninsula, adequate. Some flooding Panhandle. Tobacco growers transplanting tobacco. Farmers actively making preparation for spring seeded crops. Sugarcane harvest, corn planting continued active. Pastures rated 15% poor, 30% fair, 40% good, 15% excellent. Cattle fair to good. Citrus grove condition very good, rain, wind, high temperatures midweek, cool late week. Bloom progressing all areas, some bloom well mixed. Valencia harvest increasing. Grapefruit going fresh, processing. Temple harvest active. Caretakers cutting cover crops, removing cold protection from young trees. Mild weather, most of week over major vegetable producing areas followed by cool, breezy weekend. Crop conditions variable, recovering from prior week windstorms. Spring planting active. Harvest winter crops continued active. Volume leaders: Tomatoes, cabbage, peppers, potatoes, celery, sweet corn, squash, carrots, snap beans. Also available eggplant, escarole, lettuce, radishes.

**GEORGIA:** Temperatures 1 to 3° below normal during week. Highs mid to upper 60s northeast mountains; low to mid 70s elsewhere north; around 80 south, southeast. Light rain north, less than 0.50 in. Few isolated areas over 1.00 in. Scattered showers central, south, amounts under 0.25 in.

Soil moisture adequate north, southeast, surplus elsewhere. Fair weather provided some relief to extreme wet soil conditions but field activities still limited. Onions fair to mostly good. Wheat and other small grains fair to mostly good, top dressing applications of nitrogen active. Tobacco plant beds fair to poor. Corn planting continued, southwest. Peach trees coming into full bloom, central. Pastures mostly fair to good. Cattle and hogs fair to mostly good.

**HAWAII:** Weather variable during the week. Sunny, warm early in week favorable to crop development. Strong high pressure system north of the islands caused gusty winds, showers over all islands second half. Cool temperatures, with record low for date on 4th. Winds gusty 15 to 30 mph. Temperatures high 50s to low 80s. Rainfall 0.01 to 15.50 in.

Days suitable for fieldwork 7.0. Cool season crops made good progress. Beneficial showers major papaya areas; however production remained low. Sunny weather aided new field preparation for ginger root.

**IDAHO:** Temperatures were above normal except for selected areas of north. Moisture in form of snow, rain was received over most of State.

Soil moisture was adequate in north, short throughout rest of State. Farm, ranch activities included meetings, attending schools, care, feeding of livestock, shop work, ordering seed. Livestock good. Hay, roughage supplies remained adequate.

**ILLINOIS:** Temperatures 1 to 4° above normal. Precipitation generally less than 0.10 in. throughout the State.

Soil moisture mostly adequate. Winter wheat fair to good.

**INDIANA:** Temperatures average close to normal. Lows teens to low 20s, highs 50s to mid 60s. Precipitation none to 0.20 in.

Fields wet, most areas. Other activities: Spreading lime, top dressing wheat, applying fertilizer, seeding clover, plowing, selling grain, hauling manure, mending fences, attending farm auctions, machinery maintenance, purchasing supplies, attending meetings, tax preparation, care of livestock. Hay supplies adequate. Livestock mostly good condition. Wheat greening up.

**IOWA:** Temperatures 3 to 11° above normal. Extremes 7°; 74°. Precipitation none to 0.08 in.; average trace. Livestock mostly good. Fertilizer application at a brisk pace. Farmers preparing tillage, planting equipment, getting ready for fieldwork as spring is approaching.

**KANSAS:** Temperatures 5° above normal west, central areas, 3° above normal eastern third. Precipitation recorded all areas, highest average 0.69 in. northeast. Most of State 0.10 in. or less.

Days suitable for fieldwork 6.0. Topsoil moisture 83% short, 17% adequate. Subsoil moisture 75% short, 25% adequate. Wheat spurred by warm weather continues to break dormancy; green up. Some moisture stress noted central, western areas. Diseases more visible, mostly central, eastern areas. Army cutworm active most areas; heaviest central area where some control measures necessary. Feed grain, forage supplies adequate; range, pasture short. Feedlots current. Lambing, calving, farrowing excellent progress under near ideal weather.

**KENTUCKY:** Temperatures near or little below normal; mild weather early, cooler late. High temperatures in 60s, lows in 20s. Precipitation zero west to around 1.00 in. east. Ashland measured 1.18 in. State maximum, far west locations no rain. Rainfall 0.50 in, 0.50 in. below normal.

Soil moisture adequate. Well drained soils being worked. Fertilizing wheat, preparing tobacco beds primary activities. Hay and other feed supplies adequate. Grasses are beginning to green. Livestock satisfactory condition.

**LOUISIANA:** Temperatures 0.1° above normal to 3.2° above normal. Extremes 31°; 86°. Rainfall none to 0.01 in. south.

Days suitable for fieldwork 2.0. Soil moisture supplies 31% adequate, 69% surplus. Spring plowing 6%, 9% 1990, 15% avg. Most fields remained fairly wet. Corn planted 1%, 3% 1990, 6% avg.; emerged 1%, 1% 1990, 1% avg. Rice planted 1%, 1% 1990, 1% avg. Wheat 8% poor, 54% fair, 38% good; headed 1%, 1% 1990, 1%

avg. Excessive soil moisture caused some fields to yellow. Sugarcane 57% fair, 43% good. Livestock 4% poor, 55% fair, 41% good. Vegetables 5% very poor, 15% poor, 60% fair, 20% good. Pasture 21% poor, 54% fair, 25% good. Crawfishing continued, quantities remain low.

**MARYLAND & DELAWARE:** **MARYLAND:** Precipitation 1.11 in. Temperature 50.1°, normal 39.7°. Extremes 22°; 75°.

Activities for the week: Repairing fence; hauling manure; spreading fertilizer; maintaining machinery; tax preparation; caring for livestock.

**DELAWARE:** Precipitation 1.93 in. Temperature 50.8°, normal 40.3°. Extremes 26°; 71°.

Activities for the week: Repairing fence; hauling manure; spreading fertilizer; maintaining machinery; tax preparation; caring for livestock.

**MICHIGAN:** Temperatures 1 to 5° above normal. Extremes 1°; 57°. Precipitation 0.04 to 0.66 in. across State. Seasonal temperatures prevalent throughout most of the week.

Overall, normal conditions enabled farmers to engage in some outdoor activities. Livestock is in good shape, a few reports of calves born this week. Ice in the barnyard area has some farmers concerned about livestock injury. Feed supplies are in good shape. Major activities included: Fruit tree pruning, cleaning orchards, hauling manure, tax preparation, selling, purchasing seed for spring planting, caring for and marketing livestock.

**MINNESOTA:** Temperatures 2 to 10° above normal for the State. Extremes 20° at International Falls; 66° at Worthington. Precipitation was below normal except for scattered areas in Northern areas, Twin Cities area. Greatest precipitation for the week was 0.59 in. at Itasca.

**MISSISSIPPI:** Temperatures 0.3° above normal. Extremes 25°; 85°. Mostly dry statewide with some scattered showers north. State 0.20 in., 1.14 in. below normal. Soil temperatures 54°.

Days suitable for fieldwork 1.3, 1.6 1990, 2.8 avg. Soil moisture 13% adequate, 58% surplus, 19% excessive. Pasture 6% poor, 23% poor, 40% fair, 28% good, 3% excellent. Wheat 4% very poor, 10% poor, 74% fair, 12% good, 13% jointing, 29% 1990. Hay supply 66% short, 31% adequate, 3% surplus. Watermelons 1% planted, 6% 1990. Livestock 4% very poor, 51% fair, 40% good, 5% excellent. Feed grain 27% short, 70% adequate, 3% surplus. Activities: Farm planning, fertilizing wheat, corn planting just under way, feeding cattle.

**MISSOURI:** Temperatures 2° above normal. Virtually no rainfall.

Farmers studying farm programs. Nitrogen being applied to wheat. Pastures, wheat turning green. Some early tillage done.

**MONTANA:** Warm week. All stations above normal temperatures. Precipitation reported all locations. Amounts light except for western areas where over 1.5 in. in a few locations. Amounts in eastern areas mostly less than 0.05 in.

Winter wheat condition 5% very poor, 32% poor, 40% fair, 20% good, 3% excellent. Winter wheat still dormant 85%, greening 15%. Winter freeze damage to winter 33% none, 40% light, 25%

moderate, 2% heavy. Grazing mostly open. About 95% livestock receiving supplemental feed. Calving 28% complete, lambing 23%.

**NEBRASKA:** Temperatures 7° above normal northwest to 12° above northeast. Trace of precipitation throughout the week.

**NEVADA:** Temperatures above normal. Extremes 6°; 74°. Precipitation trace to 1.12.

A major winter storm resulted in damaging winds, precipitation across the State. Uprooted trees, downed power lines, damage to building roofs were the main damage. Major farm ranch activity include caring for livestock, building maintenance, repair.

**NEW ENGLAND:** Precipitation 0.75 to 3.31 in. Temperatures 18° northern Maine; low 20s to mid 30s elsewhere north, mid 30s to low 40s south. Maximum temperatures mid 30s north to mid 60s south; minimum temperatures -1° north to 25° south.

Major farm activities: General repairs, maintenance, tending livestock, moving crops from storage. Cool temperatures limited maple sugaring in the north.

**NEW JERSEY:** Temperatures near normal 18°; 64°. Rainfall 0.66 in. north, 0.84 in. central, 2.10 in. south. Heaviest 24 hour total 2.33 in. on 4th, 5th. Estimated soil moisture percent field capacity, 100% north, central, 99% south. Four inch soil temperature 40° north, 42° central, 45° south.

Limited planting peas, onions, spinach, white potatoes completed. Soil preparation spring crop advanced as soil conditions permitted. Lime, fertilizer spreading active. Fruit pruning advanced; buds swelling southern areas. Current cooler temperatures beneficial for delaying development to more seasonal time.

**NEW MEXICO:** Temperatures generally 2 to 8° above normal. Chama 2° below normal, Roswell 10° above. Precipitation scant except northern mountains, southern highlands.

Days suitable for fieldwork 5.4. Soil moisture 63% short, 37% adequate. General crop fair to good. Cattle 4% poor, 54% fair, 42% good. Sheep 8% poor, 59% fair, 33% good. Range 46% poor, 46% fair, 8% good.

**NEW YORK:** Significant ice storm affected Great Lakes, St. Lawrence Valley, northern third of the Northern Plateau from night of 3rd into morning of the 4th. Rain fell elsewhere. Spring like warmth resumed on the 6th with high temperatures in the 50s. Colder air moved in on 7th returning temperatures to more seasonable levels, yielding light rain. The 8th was the coldest day of the week. In the Northern Plateau temperatures dipped to 0°. The 9th was seasonable, dry. Freezing rain on night of 3rd, morning of 4th produced significant amounts of ice throughout areas of western, northern areas. As a result of the storm, 18 counties were declared to be in a State of emergency.

Many of these counties are major fruit producers, there is much concern about damage to orchards. In some cases, greenhouse operators were without oil to maintain heat as deliveries were difficult due to downed trees blocking roads. Some dairy farmers were cut off, could

not ship milk. Others had no electricity to keep milk cold, to milk herds. Maple season began in most areas.

**NORTH CAROLINA:** Temperatures 1° below normal in the Mountains, 2° above in the Piedmont, 4° above at the Coast. Precipitation 0.84 to 3.34 in.

Days suitable for fieldwork 2.7. Soil moisture 2% short, 60% adequate, 38% surplus. Pasture 11% poor, 25% fair, 63% good, 1% excellent. Crop condition: Wheat 17% fair, 81% good, 2% excellent; oats 15% fair, 82% good, 3% excellent; barley 15% fair, 82% good, 3% excellent; rye 22% fair, 75% good, 3% excellent; Irish potatoes 19% fair, 81% good. Tobacco plant beds 16% fair, 84% good. Irish potatoes planted 25%; cabbage transplanted 24%. Hay and roughage supplies 1% very short, 13% short, 80% adequate, 6% surplus. Feed grain supplies 1% very short, 6% short, 92% adequate, 1% surplus. Activities: tending livestock; preparing, seeding tobacco plant beds; cutting wood; pruning trees; equipment repair; top dressing small grains and pastures; land preparation; planting Irish potatoes, cabbage; general farm maintenance.

**NORTH DAKOTA:** Temperatures 2° below normal northeast to 7° above normal south central. Extremes -13°; 63°. Precipitation below 0.10 in. statewide.

Snow cover below 2.00 in. Soil moisture short to very short. Livestock in mostly good condition. Feed supplies adequate.

**OHIO:** Temperatures 1 to 4° above normal northwest to 1 to 5° below normal south, southeast. Highs were generally in the 40s, average lows were mostly in the mid to upper 20s. Extremes teens to the 50s. Precipitation under 0.10 in. to over 1.00 in. Northwest areas were the driest.

Soil temperatures mid 30s to the low 40s with the lower readings under grass, the higher readings under bare soils. Rains interrupted plowing activities in central, parts of southern State. Winter wheat began greening. Grain marketing continued.

**OKLAHOMA:** Temperatures 4° above normal south central to 8° above normal Panhandle, central.

Days suitable for fieldwork 6.4. Topsoil 75% short, 24% adequate, 1% surplus. Subsoil 55% short, 45% adequate. Wheat 5% poor, 70% fair, 25% good; 10% jointing, 15% 1990, 5% avg. High winds sapped moisture. Rain needed for development. Army cutworms west with heaviest infestations northwest. Western cattlemen removing stockers from wheat pasture. Corn plantings underway central, east central. Pastures 20% poor, 75% fair, 5% good. Cattle good; marketings average, prices stable to slightly below preceding week.

**OREGON:** Temperatures 1° below normal west, near normal to slightly above east. Abundant precipitation 3.00 to 5.00 in. along coast, mountains west; 2.50 in. western interior; 0.40 to 0.60 in. north central, northeast; elsewhere 0.10 to 0.30 in.

Soil moisture mostly surplus west, adequate northeast, remained short elsewhere east of Cascades. Field activity not yet underway in most parts of east; most winter barley reseeding, some winter wheat reseeding completed mid Columbia region. Fertilizer, sprays applied to

grains, grass seeds west. Mint showing winter damage Jefferson Co. Pears, hazelnuts budding out, apricots blooming Willamette Valley. Buds swelling southwest. Sweet cherries severely hurt by cold winter Union Co. Livestock mostly good. Lambing winding down, calving continued eastern mountain. Range, pasture fair to excellent west, fair to good east. Stockwater remains short. Drought conditions still likely over much of east; reservoir storage will probably last, stream flows will be down.

**PENNSYLVANIA:** Warm, wet ended up cold, dry. Temperature 37°; 5° above normal. Extremes 14°; 73°. Precipitation 1.14 in., 0.67 in. above normal.

Activities: Spreading manure; maintaining machinery; caring for livestock.

**PUERTO RICO:** Rainfall 0.65 in. was 0.11 in. above normal. Rainfall 1.94 in. at Pico Del Este Luquillo, 1.91 in. at Rio Blanco Lower, 1.38 in. at Vieques. Highest 24 hour total was 1.00 in. at Barceloneta. Divisional temperature 77° on the Coasts, 71 to 74° in the Interior with mean station temperature 62.5° at Pico Del Este Luquillo to 79.9° at Roosevelt Roads N.S. Extremes 52°; 92°.

**SOUTH CAROLINA:** Temperatures 1° below normal Upstate to 1° above normal along coast. Rainfall less than 0.50 in. throughout the State. Largest 24 hour amount was 2.35 in. at Orangeburg on 4th.

Farm Activities: Applying nitrogen top dressing to small grains; showing good growth, condition. Tobacco plant beds, good condition. Corn planting underway. Peach growers continue pruning, some concerns on potential cold damage to blooms. Pastures, livestock good.

**SOUTH DAKOTA:** Temperatures 5 to 10° above normal statewide. Extremes -7°; 74°. Precipitation was light, widespread. No snow cover on the Plains, spotty snow cover in the Black Hills. Extension agents report winter wheat in mostly fair to good condition. Some reports of up to 50% winter kill. Rye reported in fair to good. Livestock in good to excellent. Feed supplies mostly adequate. Stockwater supplies adequate to very short.

**TENNESSEE:** Cool, damp early week; low pressure brought northerly winds. Warm, sunny midweek. Return to colder, wet conditions late week. Temperatures below normal all sections except west. Extremes 22°; 75°. Precipitation below normal. Most precipitation fell east. Generally 0.20 in. to 0.60 in. Moderate sleet, snow along southern border, eastern mountains.

Soil moisture adequate to mostly surplus. Spring planting preparation continues some areas on limited scale. Primary activities: Equipment maintenance; fence building; farm planning; tax preparation; disking; applying nitrogen to wheat; soil testing; restocking catfish; general care, feeding of livestock, poultry.

**TEXAS:** Some relief for wet eastern growing areas occurred past week. Record heat recorded in several locations around State. At same time, humidities extremely low, winds strengthened at times. Disturbances moved west

to east. Rain very limited in amount, area. Light rains fell in Coastal Plains, High Plains. Dry winds tapped precious soil moisture reserves in deep south. Temperature departures all above normal. Largest departures from normal occurred across all west, north central areas 7° above normal. Departures for other areas 4 to 6° above normal. Overall rainfall none all districts except High Plains 0.02 in. Rainfall departure 0.75 in. east. Drying greatly needed for spring land preparations.

**Crops:** Small grains greatly improved with warmer temperatures. Dryland wheat fields on Plains really suffering lack of moisture, insects, high winds. Some controlled spraying greenbugs reported in Cross Timbers. Some wheat fields in Blacklands plowed up due winter kill damage. Spring planted oats central areas showing good growth as approaching boot stage. Oats in southern areas holding own, but suffer from heat, wind stress. Statewide wheat condition is rated at 63% of normal compared with 56% 1990. Corn, sorghum planting full swing southern, coastal regions. Expanded to areas in central areas, Blacklands. Producers southern areas like to see some rainfall to promote emergence. Corn planted: 18% 1991, 8% 1990, 21% avg. Sorghum planted: 8% 1991, 3% 1990, 11% avg. Cotton planting begun full stride southern areas. Producers like more soil moisture to promote emergence. High winds on Plains slightly delayed some herbicide applications, land preparations continued steady pace. Cotton planted: 2% 1991, 3% 1990, 2% avg. Early variety peach trees in full bloom. Blooms on later variety trees increasing. Pruning, dormant spraying virtually complete for most part.

**Commercial Vegetables:** Rio Grande Valley, melon progress slowed due high temperatures. Disease problems increased. Some early onion fields harvested. Yield expectations good. Cole crop harvest continued. San Antonio Winter Garden, activity generally slow. Spinach, carrot harvest continued. Onion crop making good progress. Eastern areas, land preparation resumed on limited basis. Potato, onion, English pea planting started. High Plains, onion, potato planting winding down as well as other land, herbicide applications. Producers desperately need moisture for continued progress. Trans Pecos, land preparations continued at normal pace. Potato planting resumed. Onion crop progressing well.

**Range and Livestock:** Grazing potential increased across State as warmer temperatures encouraged growth on winter pastures, spring grasses. Dry ranges on Plains, portions western areas, plagued by isolated wildfires. Those area ranchers really need moisture. Livestock generally remained fair, good shaped. Calving continued full swing. Supplemental feeding decreased most areas as range grasses became more abundant.

**UTAH:** Precipitation moderate to heavy in mountains, extreme southwest, light elsewhere. Temperature maximums normal, minimums 6° above normal. Calving, lambing continues. Some tillage, delayed by cool, wet soil conditions. Major farm activities: Maintenance of farm equipment, care of livestock, purchasing seed, fertilizer, hauling manure, attending producer meetings, farm records.

(Continued to back cover)

## International Weather and Crop Summary

### HIGHLIGHTS

March 3 - 9, 1991

**WESTERN USSR** ... Light precipitation favors dormant winter grains.

**NORTHWESTERN AFRICA** ... Showers continue to benefit Moroccan winter grains in the jointing stage.

**EUROPE** ... Continued unusually warm weather causes winter grains in England, France, and northern Italy to break dormancy earlier than usual.

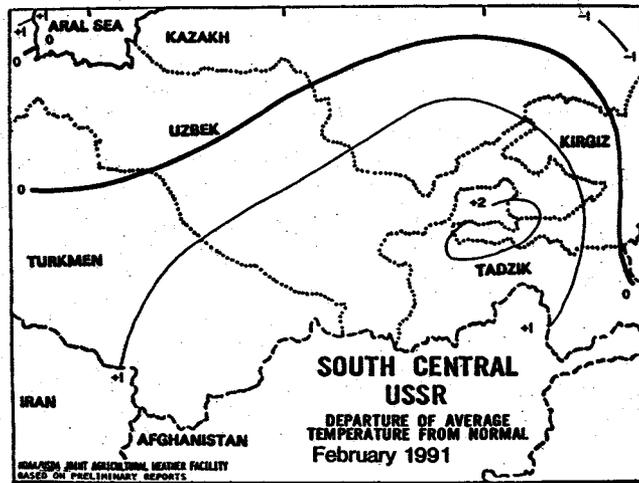
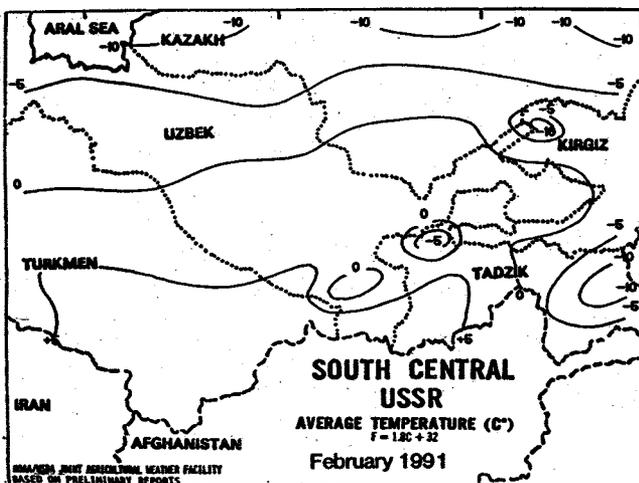
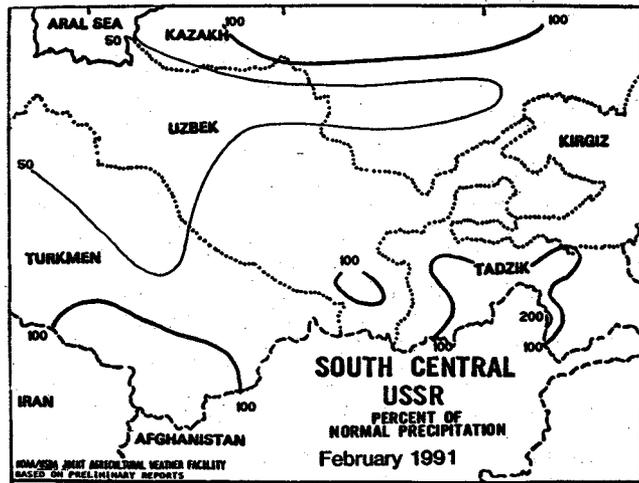
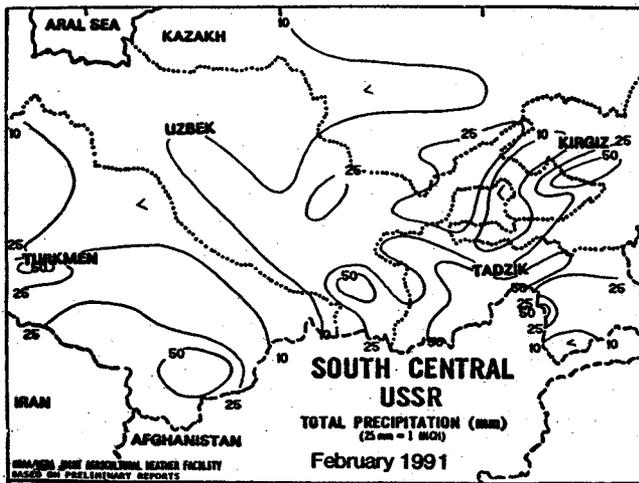
**EASTERN ASIA** ... Timely rain benefits winter wheat breaking dormancy. Widespread showers continue in most southern crop regions.

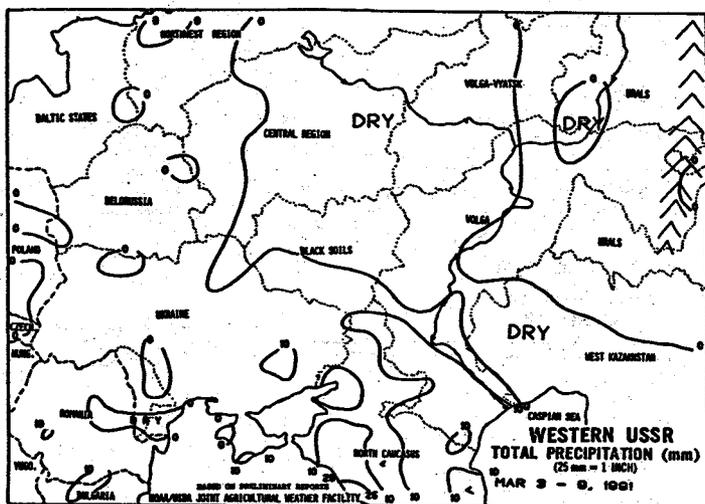
**SOUTHEAST ASIA** ... A seasonal drying trend develops over Indonesia and Malaysia. Unseasonable dryness returns to the Philippines.

**SOUTH AFRICA** ... Scattered showers and seasonable temperatures benefit late-planted immature corn.

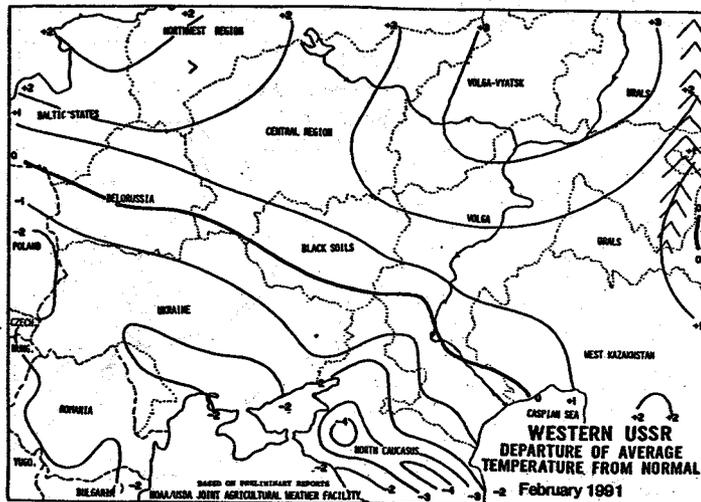
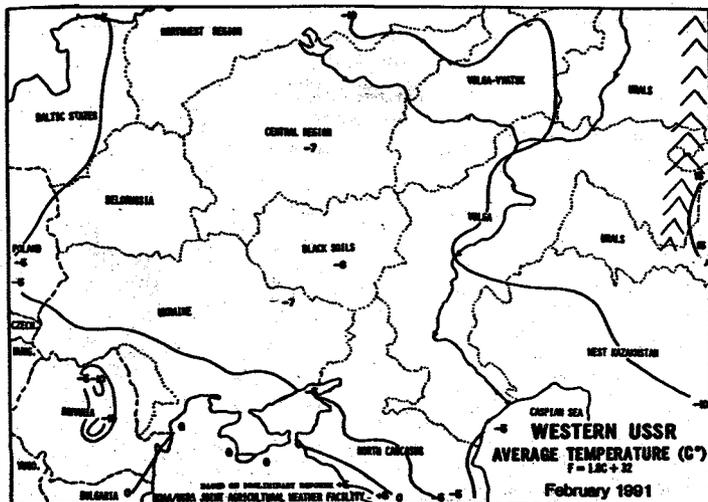
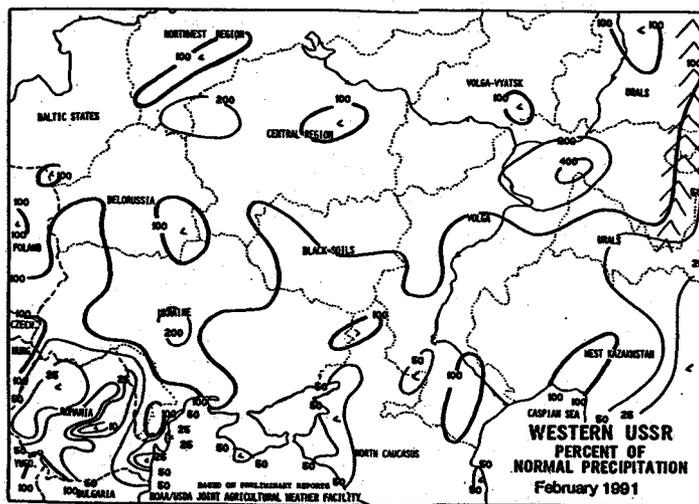
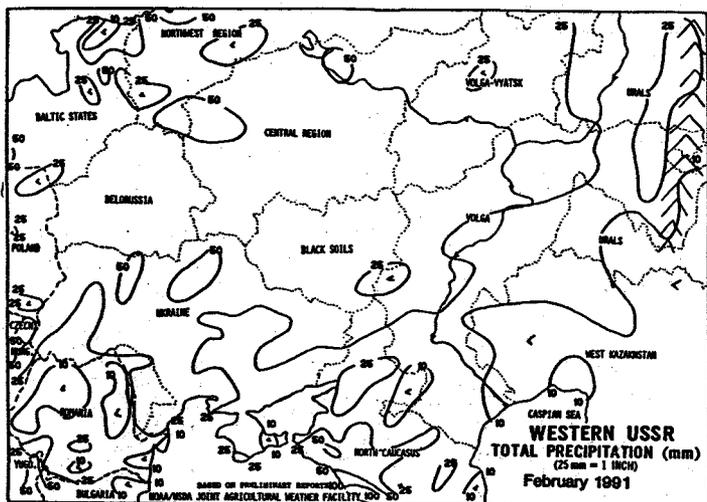
**SOUTH AMERICA** ... In south-central Brazil, mostly light showers in the south contrast with soaking rain in northern soybean areas. Beneficial rain falls in Argentina.

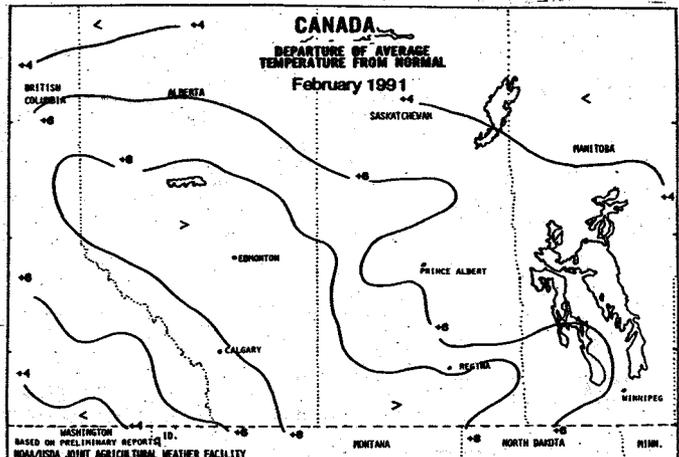
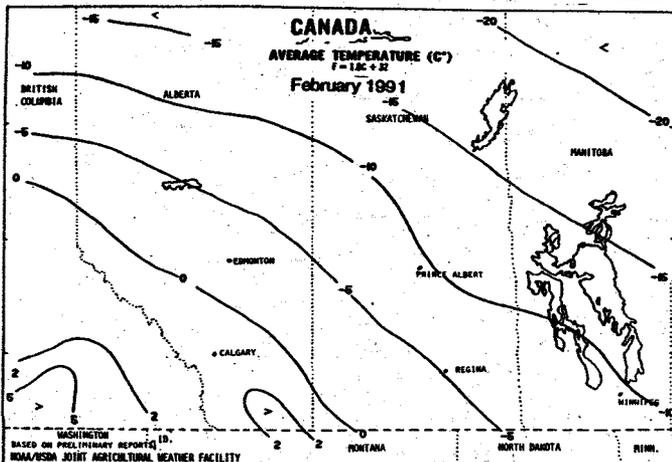
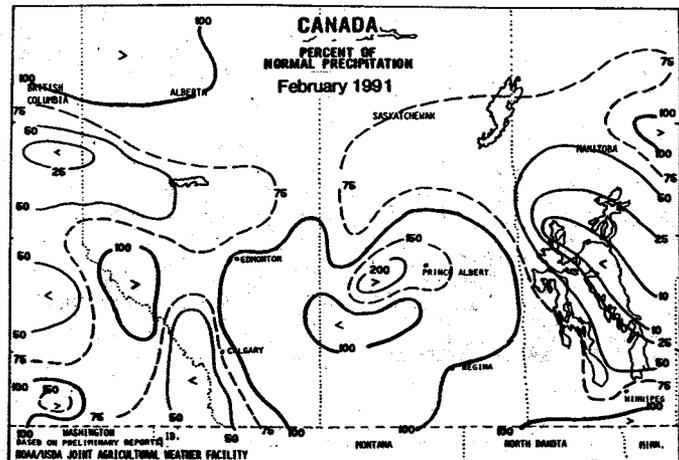
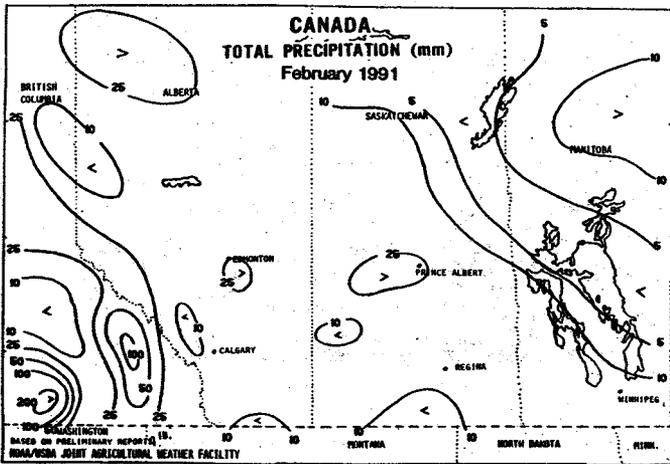
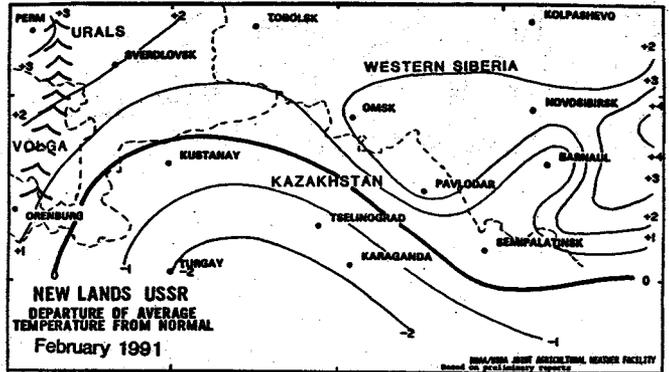
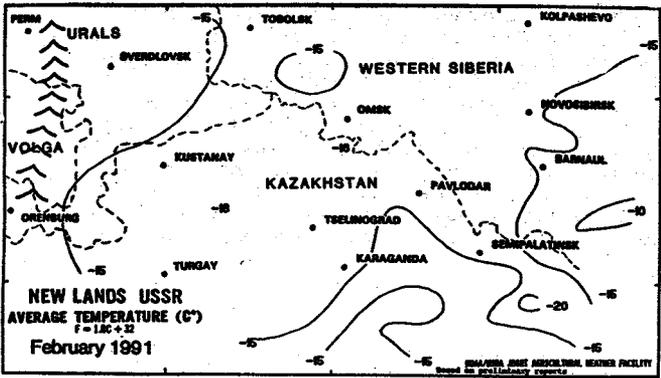
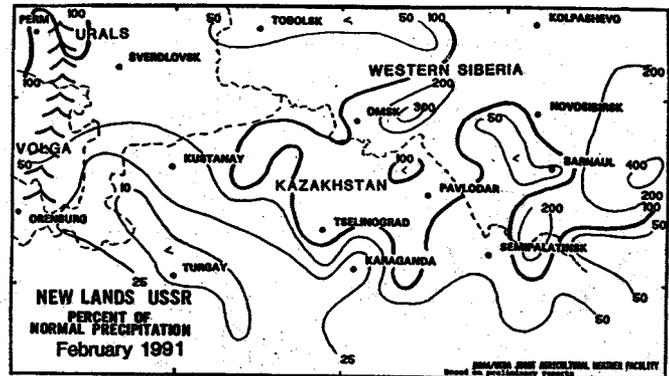
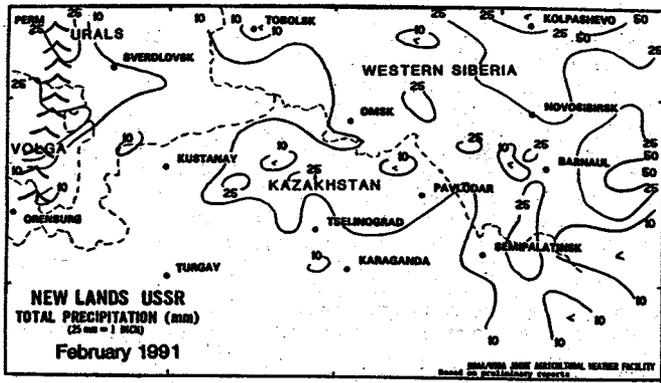
**AUSTRALIA** ... Mostly dry weather prevails across the country.

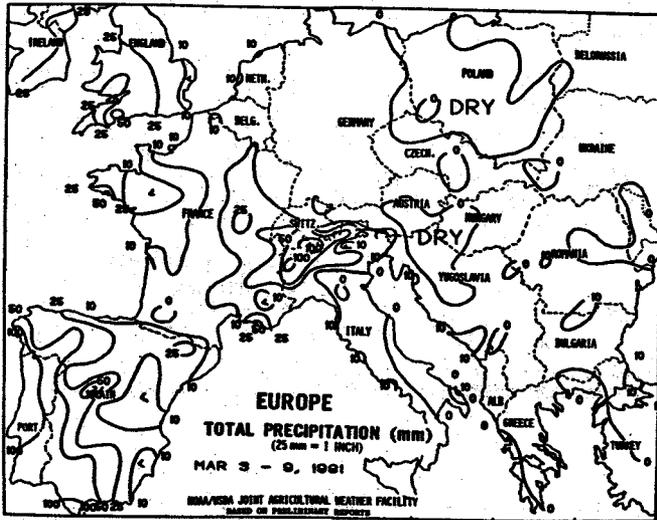




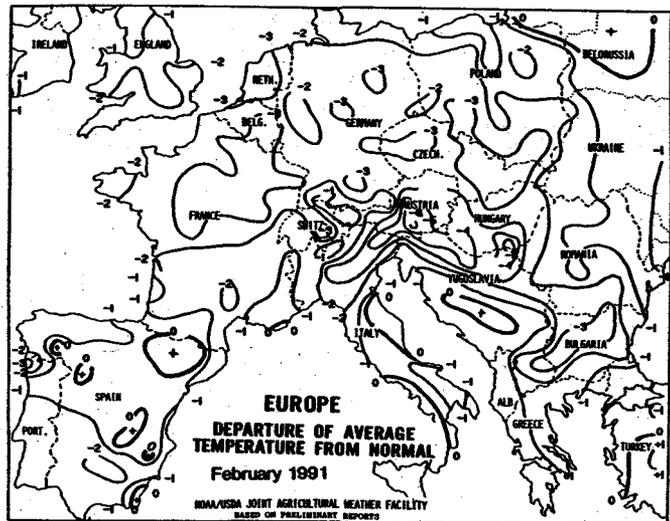
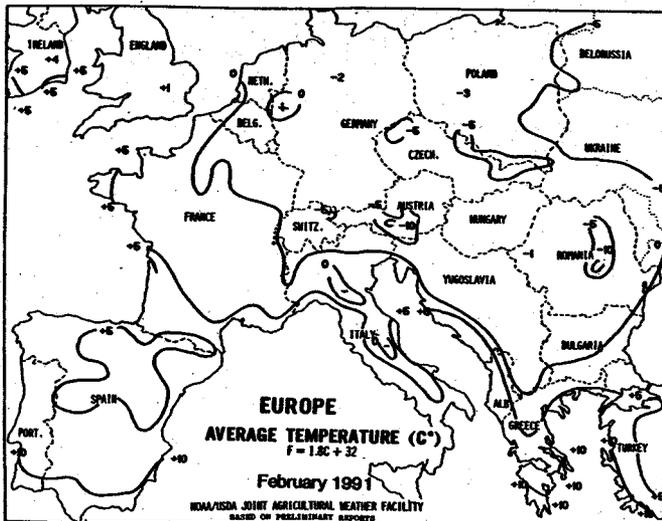
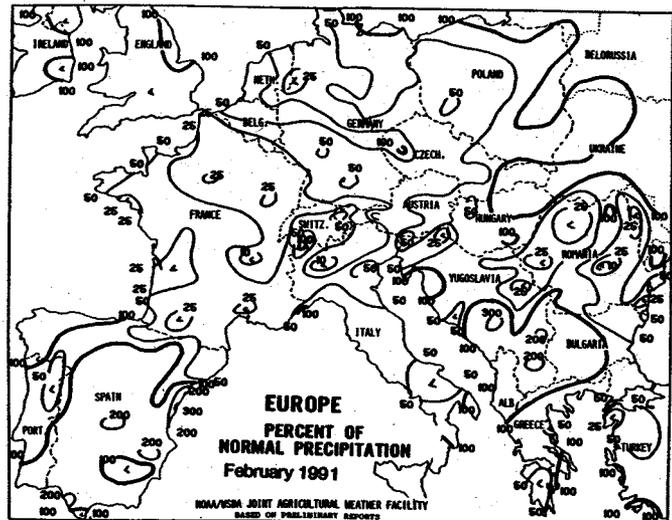
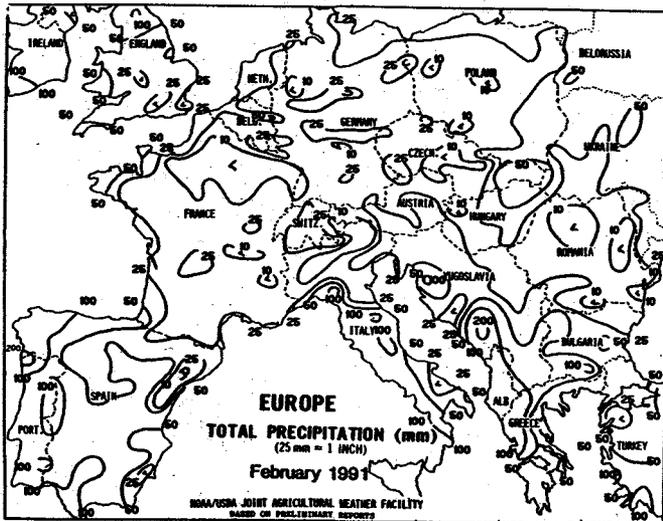
**WESTERN USSR ...** Precipitation was generally light over most winter grain areas. Greatest amounts of moisture (10-20mm) fell mainly as snow over the eastern Ukraine and North Caucasus. Dry weather covered most of the Central Region, Volga Vyatsk Region, Black Soils Region, and the upper Volga. Weekly average temperatures were below freezing over most of the region and were 2-3 degrees Celsius (C) above normal in the extreme west and 3-6 degrees C below normal in the east. Winter grain areas in the western Baltic States, western Belorussia, and the southwestern Ukraine remained snow free. The southward extent of snow cover usually retreats north and eastward during March, with winter grain areas in the Baltic States, Belorussia, the Ukraine, Black Soils Region, and North Caucasus snow free by month's end. In February, above-normal precipitation covered the Baltic States, Belorussia, the central Ukraine, the Central Region, Volga Vyatsk, and the upper Volga. February precipitation was near- to below-normal over the eastern Ukraine, lower Volga, and the North Caucasus. A brief period of bitter cold weather in early February may have caused some local damage to winter grains, especially in Belorussia where snow cover was shallow. Temperatures rose to above normal around February 10 and continued above average throughout the month.



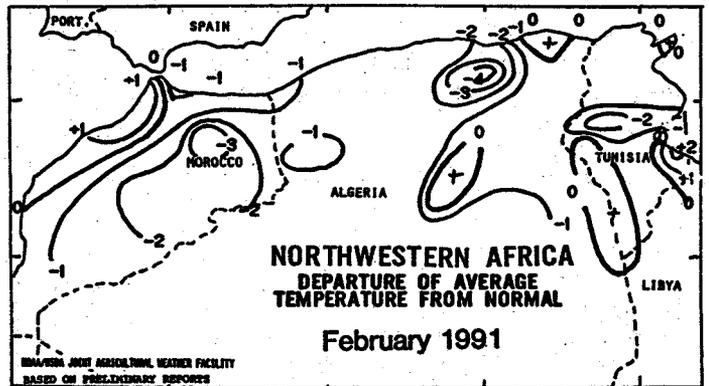
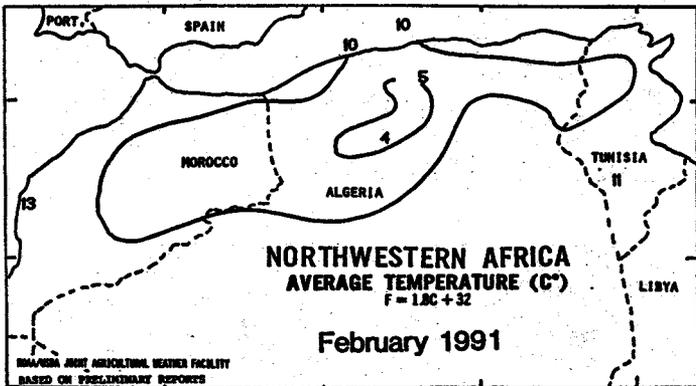
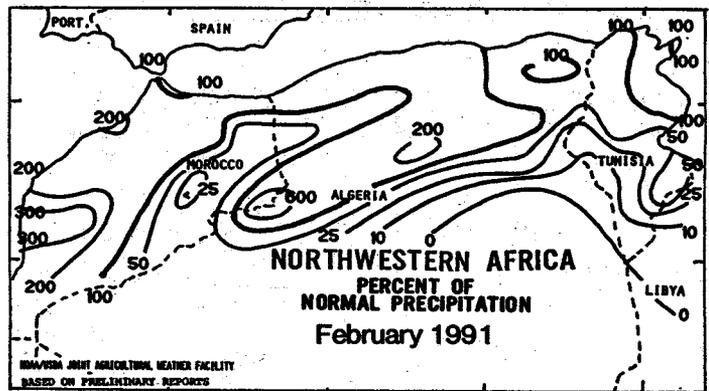
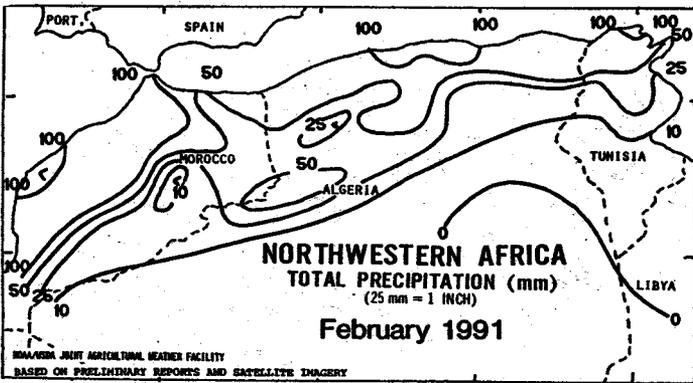
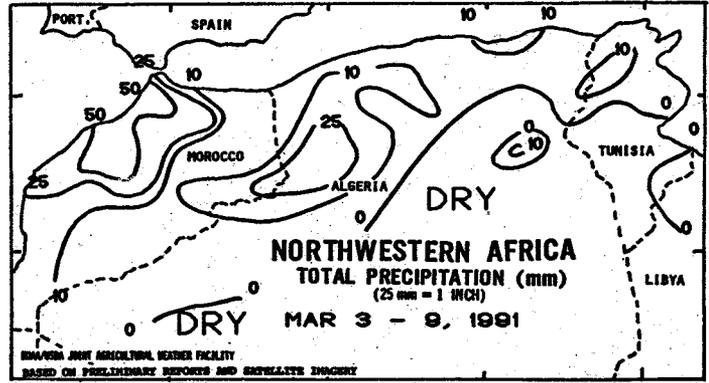


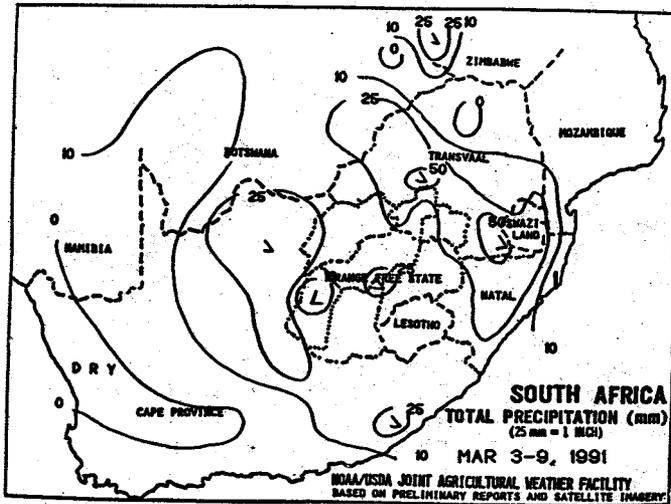


**EUROPE** ... Unseasonably warm weather continued over most of the region. Weekly average temperatures in England, France, Germany, and northern Italy ranged from 7 to 11 degrees C above freezing. Winter grains in England, France, and northern Italy were breaking dormancy about 2 weeks earlier than usual. Winter grains in Germany were losing hardiness. Usually, winter grains break dormancy in early April. Widespread light precipitation (around 10mm) over France continued February's below-normal precipitation pattern. In fact, cumulative precipitation since early September 1990 has been about 45 percent of normal. A similar unfavorable moisture situation exists in Romania and southern Germany. In February, well below-normal precipitation covered northern and Eastern Europe, limiting moisture recharge. Above-normal February precipitation over southern Spain improved moisture conditions for winter grains in the vegetative stage.

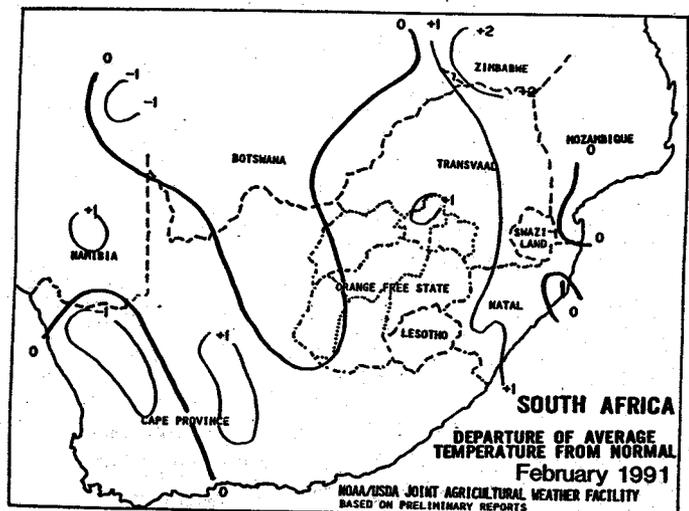
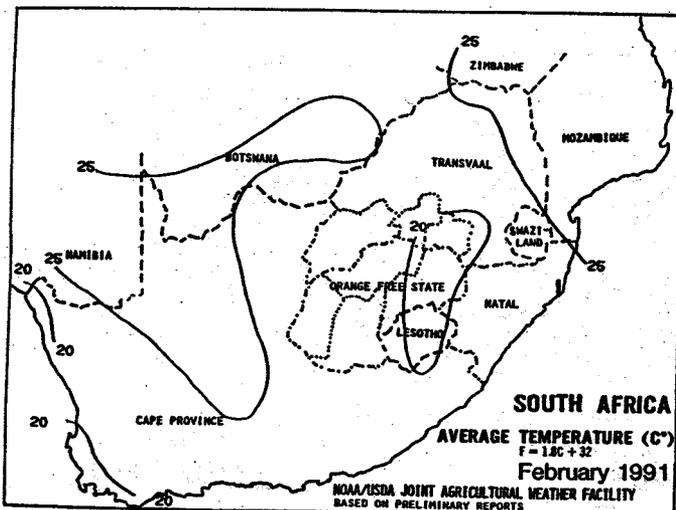
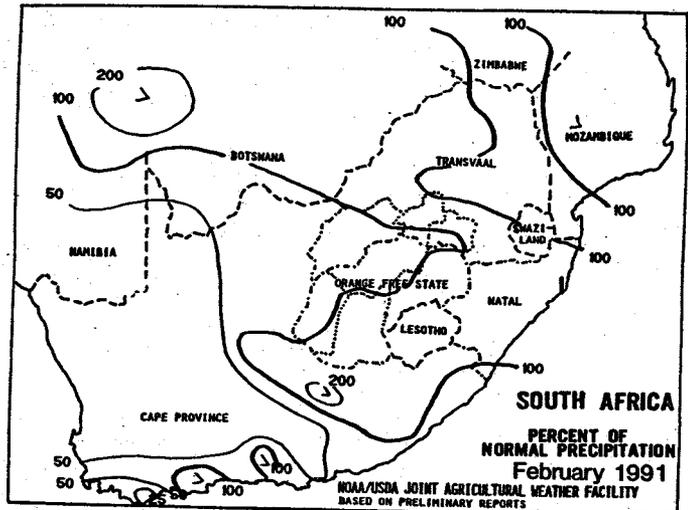
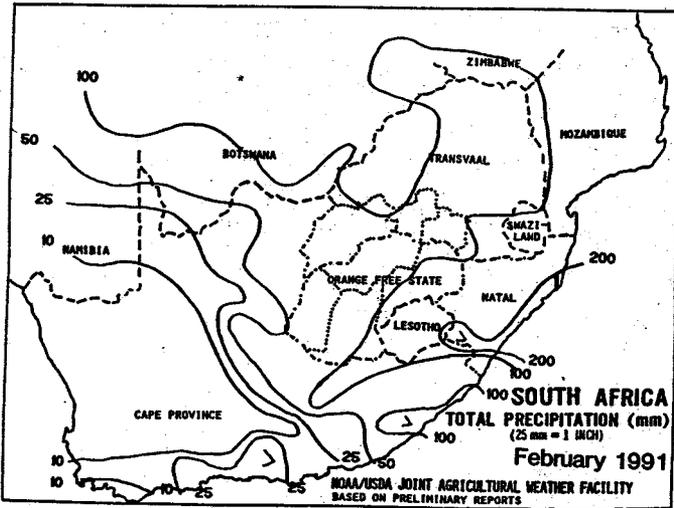


**NORTHWESTERN AFRICA** ... Winter grains were in the jointing stage over the region. Wet weather (22-50mm, with local rainfall in excess of 50mm) continued to benefit Moroccan winter grains. Generally light precipitation (around 10mm) over Algeria and Tunisia helped to maintain favorable moisture conditions for crops. In February, above-normal precipitation covered most winter grain areas in Morocco, Algeria, and Tunisia. The moisture maintained favorable growing conditions for crops in Algeria and Tunisia and reversed January's below-normal rainfall pattern in Morocco. Winter grains over the region usually advance through the highly moisture sensitive reproductive phase in late March and early April when timely rains will be needed to maintain the current favorable outlook for crops in Morocco, Algeria, and Tunisia.

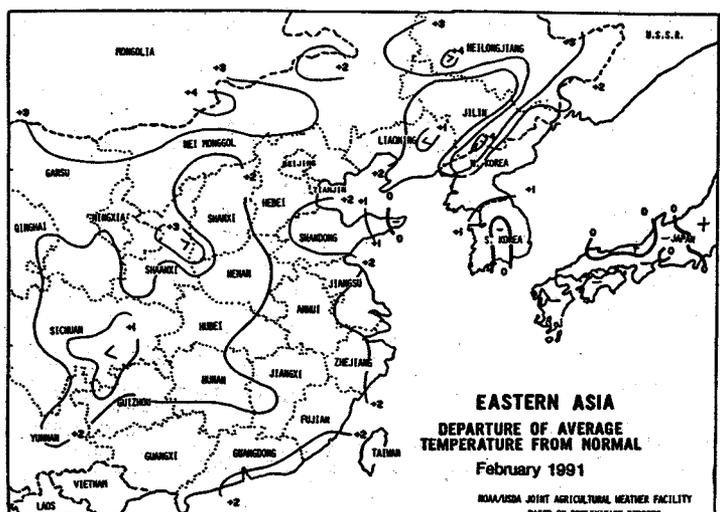
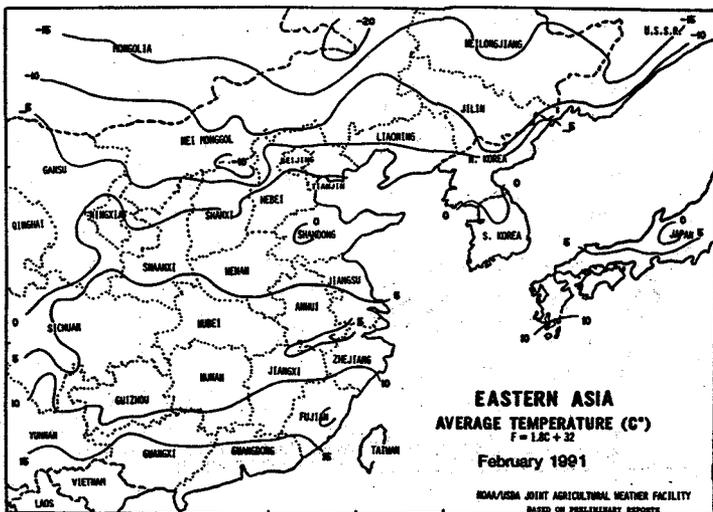
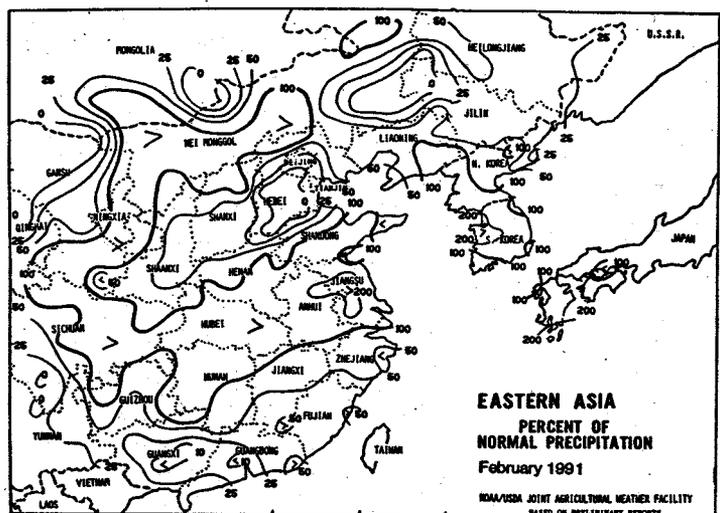
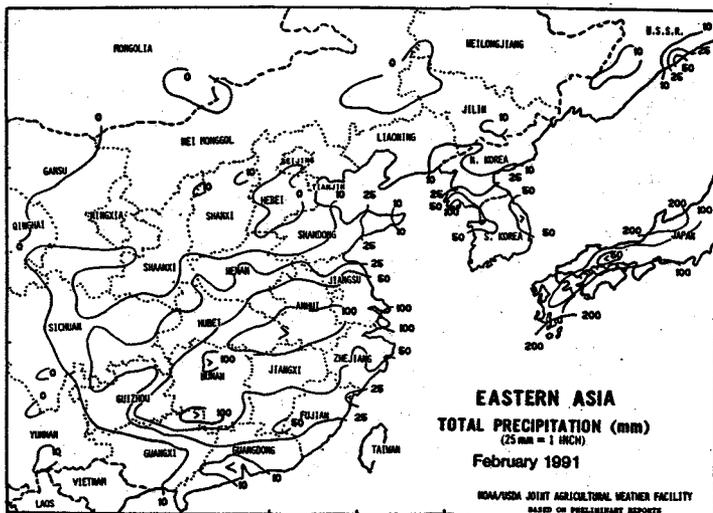
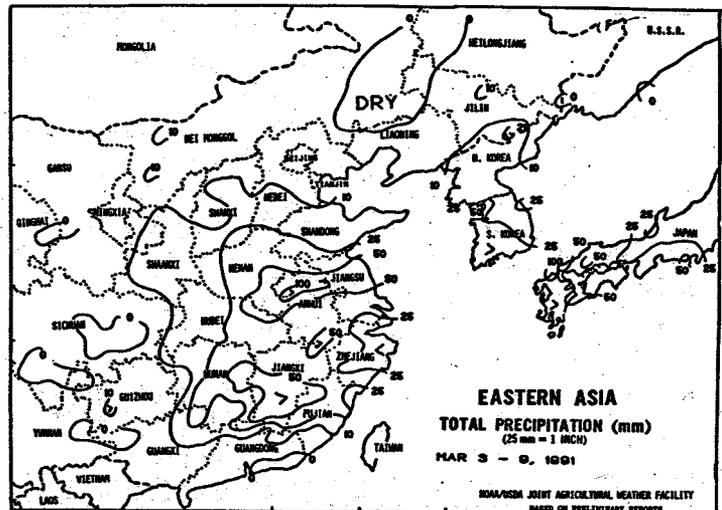


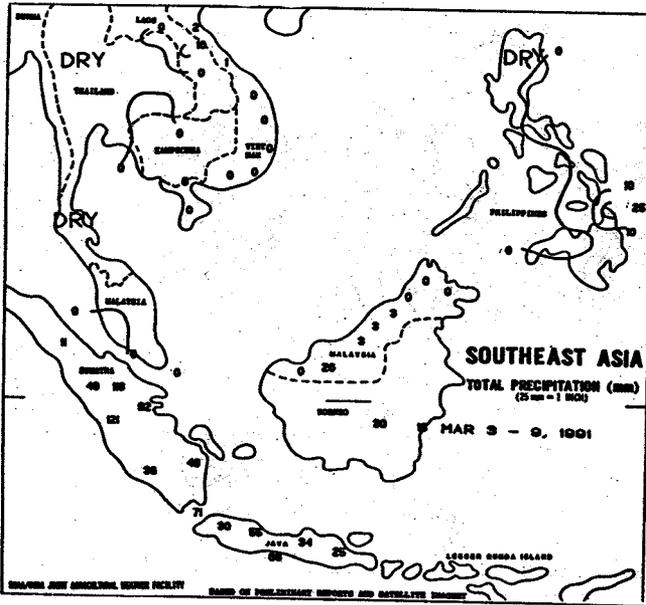


**SOUTH AFRICA** ... Scattered showers continued across the Maize Triangle, with rainfall ranging from 7 to 30mm over the western two-thirds of the region and 33 to 89mm in the east. Weekly temperatures averaged slightly above normal, favoring growth of immature corn. During February, rainfall totaled near to above normal across the region, maintaining generally favorable moisture conditions for late-planted reproductive corn. February temperatures averaged near normal, although periods of cool, wet weather in mid-February slowed crop growth. A continuation of seasonable rainfall and temperatures in the remainder of the season is vital for maturation of late-planted corn, some of which was planted as late as January.

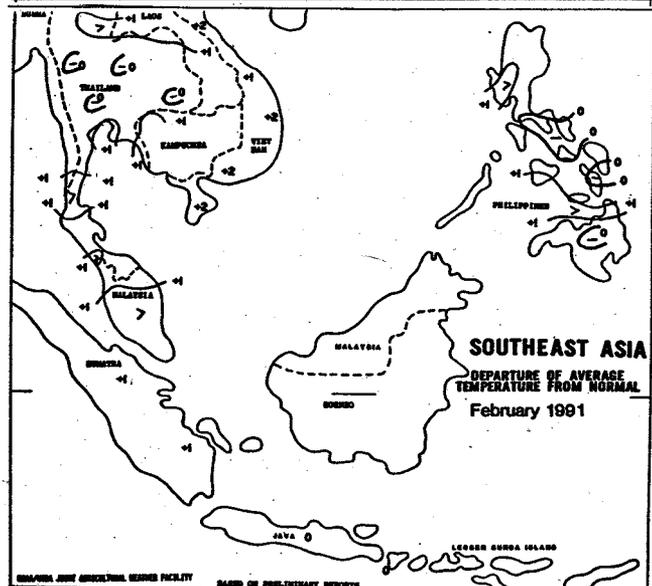
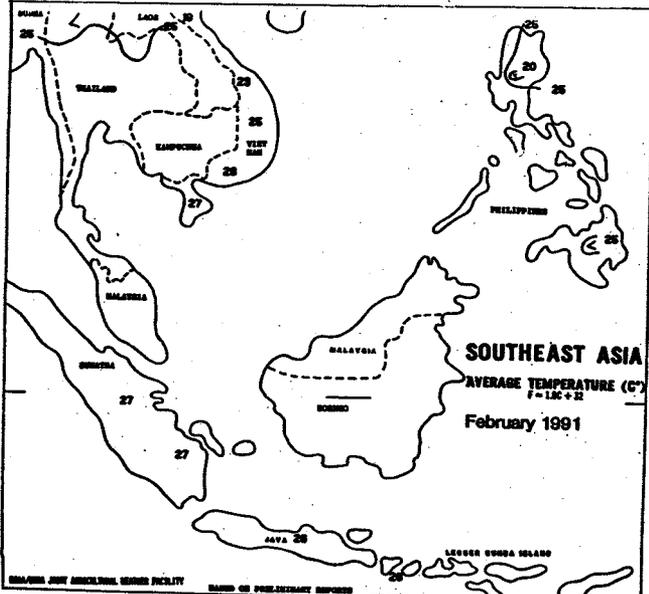
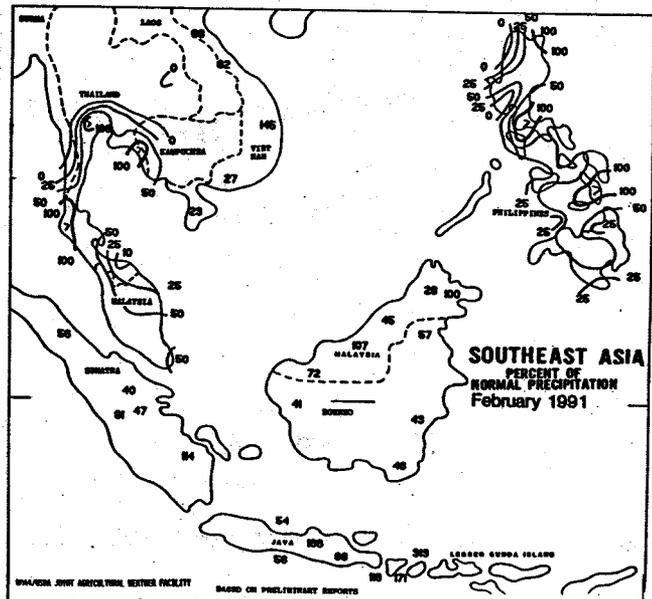
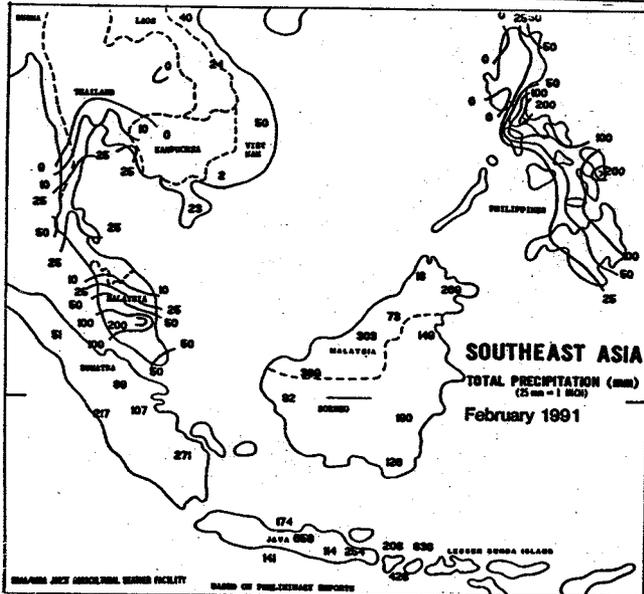


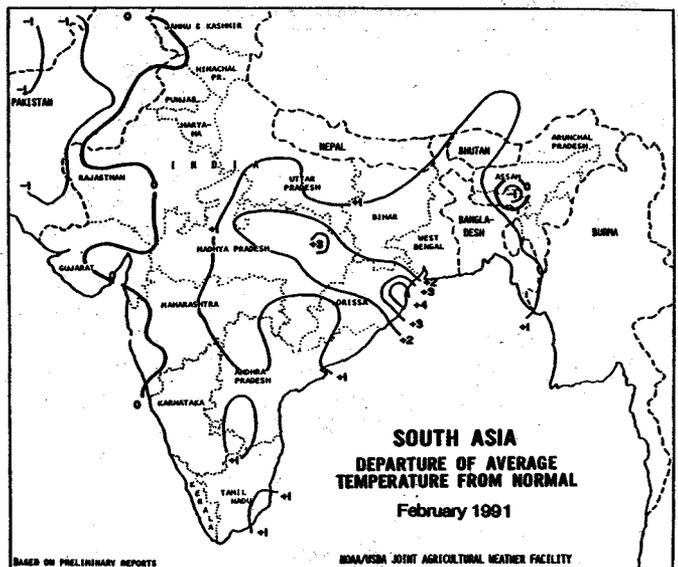
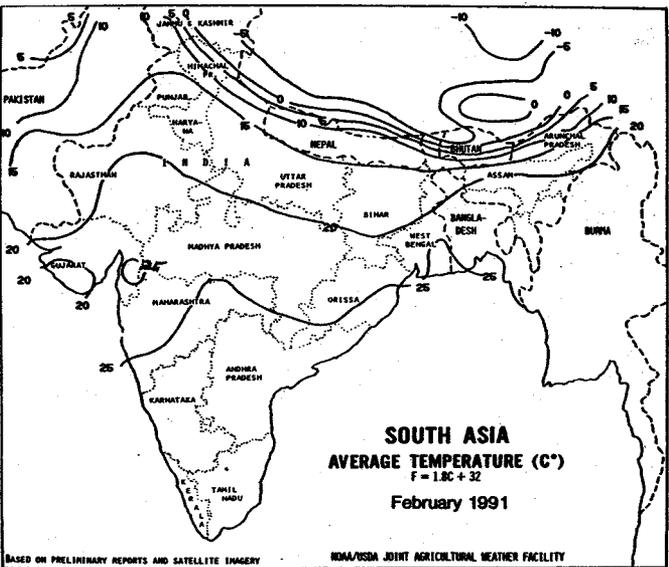
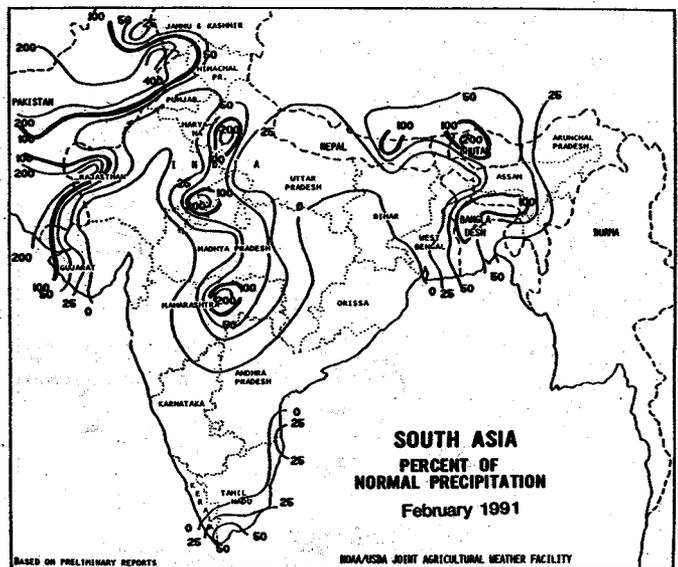
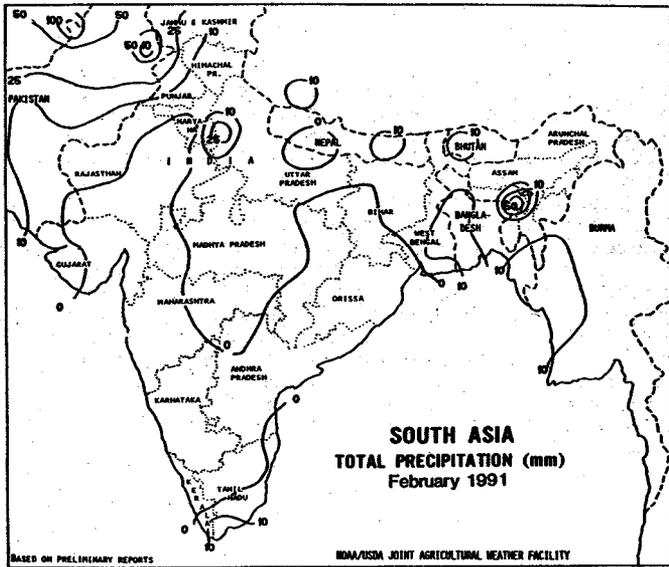
**EASTERN ASIA** ... Highly beneficial precipitation accompanied milder than usual weather in primary winter wheat regions of the North China Plain, with amounts of 10-35mm stretching from Shaanxi to Shandong. Heavier rainfall (50-139mm) was concentrated over wheat regions from southern Henan to Jiangsu. The moisture was timely for crops breaking dormancy in that region following months of seasonably dry weather. Further south, moderate to heavy showers (10-50mm or more) maintained generally favorable preplanting conditions in all but the southernmost summer crop areas. In February, continued unseasonably mild weather allowed some winter wheat to break dormancy earlier than normal. However, a cold weather outbreak late in the month likely burned back the new growth. In the south, beneficial rains improved spring planting prospects in most areas. South coastal rice areas, however, need more rain before March planting can proceed.

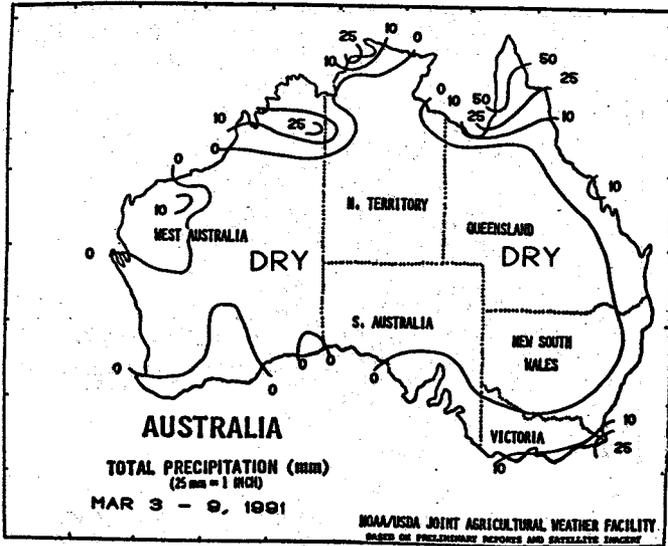




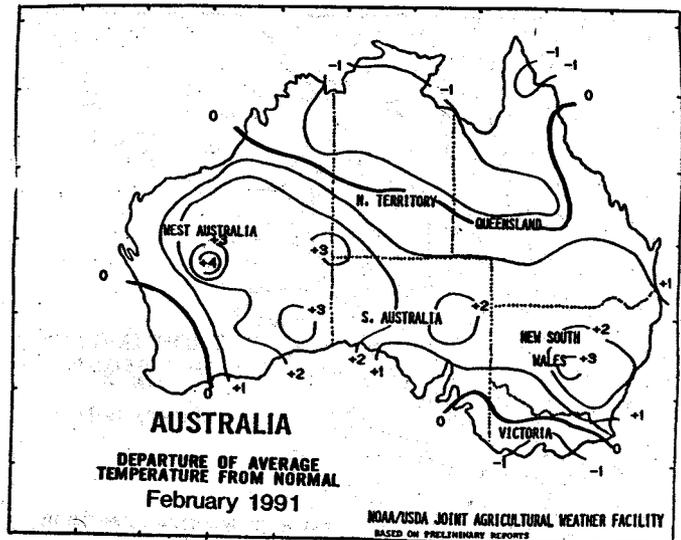
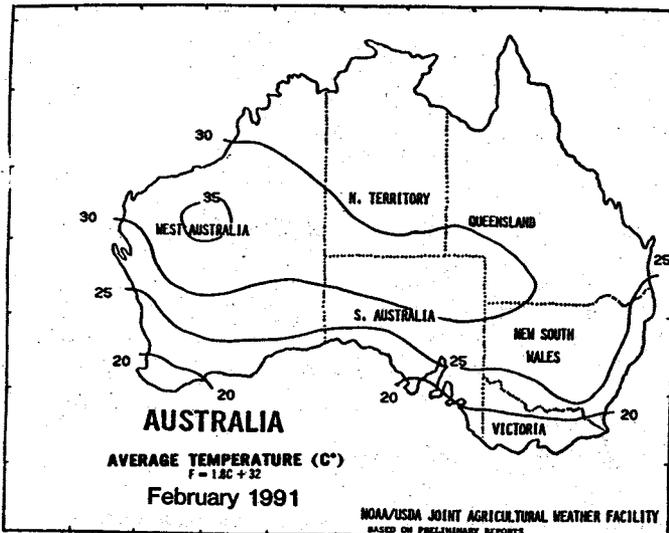
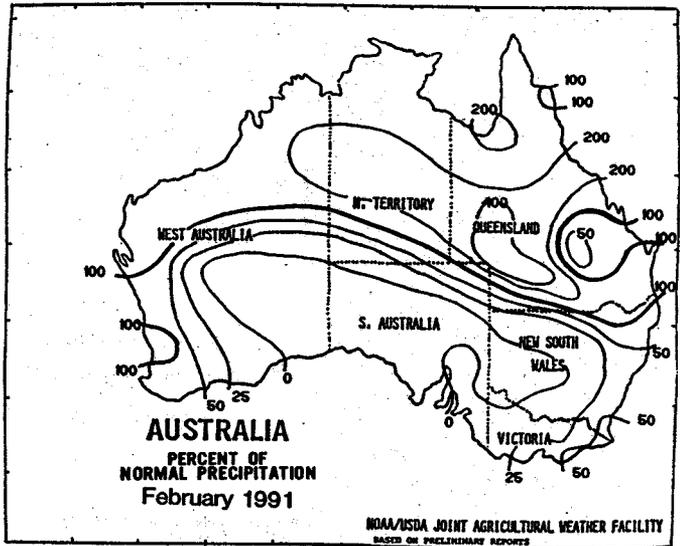
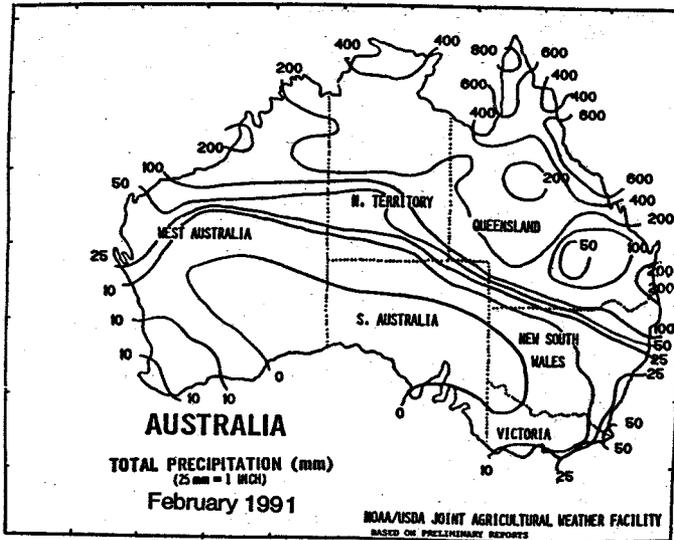
**SOUTHEAST ASIA** ... Rainfall continued to taper off across Indonesia and Malaysia, with only local areas of Java and Sumatra receiving more than 50mm. Primary crop regions of Malaysia received less than 10mm. Dry weather also returned to the Philippines, with nearly all locations reporting less than 10mm. In February, frequent, widespread showers maintained favorable irrigation reserves for Indonesia's rice. In contrast, the rainfall pattern was irregular over Malaysia and most primary crop regions received below-normal rainfall. In the Philippines, rainfall continued below normal during February in most crop regions. Although late-month showers helped moisture conditions in some east-coast crop regions, they came too late for maturing fall grains.



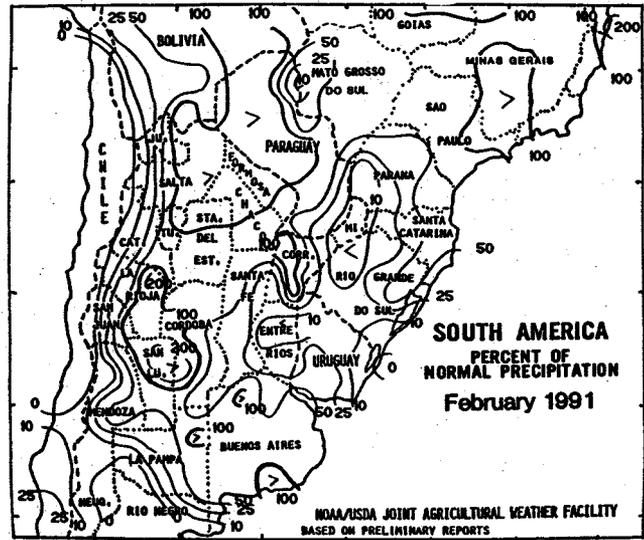
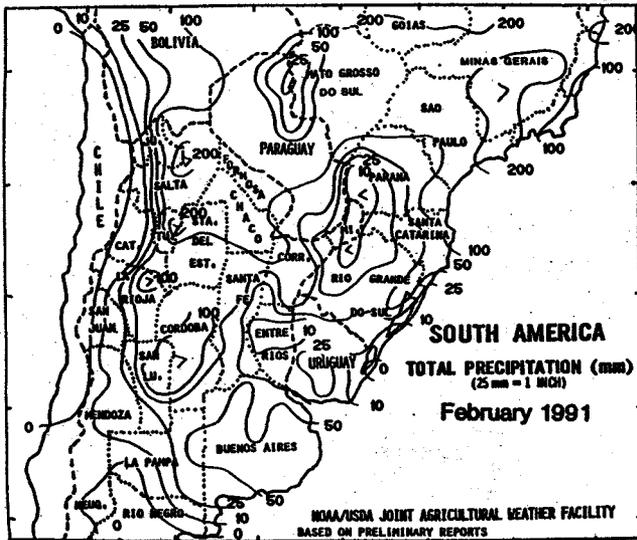
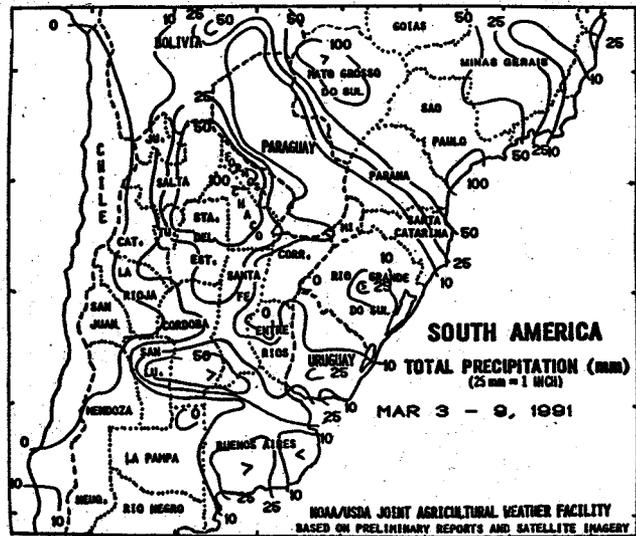


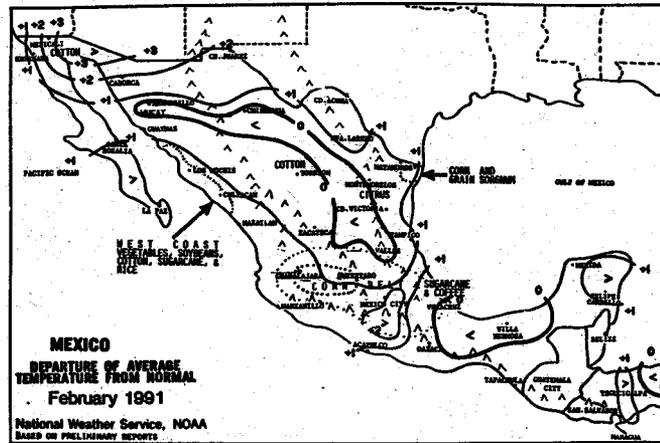
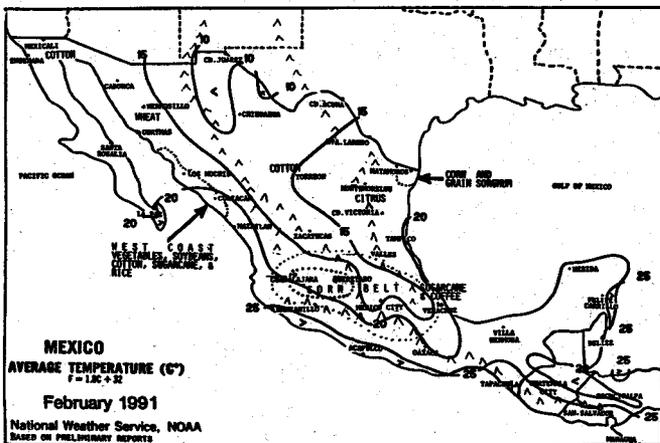
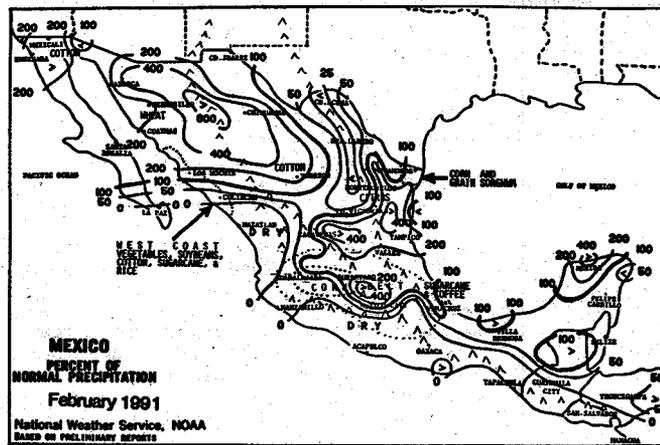
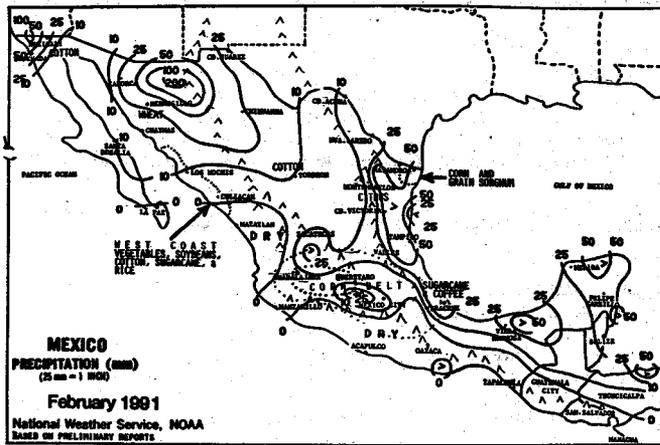


**AUSTRALIA** ... Significant shower activity was confined mostly to the far northern coasts of Queensland and the Northern Territory. Light showers (1-12mm) fell all along coastal fringes of the country, but winter wheat areas, where planting begins in May, were dry. February rainfall was near to above normal across the northern half of the country, with much above-normal rain soaking southwestern Queensland. The near-normal February rainfall in southeastern Queensland and northern New South Wales benefited summer crop development. Little or no rain fell across the south during February.



**SOUTH AMERICA** ... In south-central Brazil, light, scattered showers (mostly less than 10mm) provided little relief for drought-stressed soybeans from southwestern Parana to Rio Grande do Sul. An isolated area of east-central Rio Grande do Sul received 15-38mm of beneficial moisture this past week. Well below-normal February rainfall severely stressed Brazil's southern soybean crop. Further north, where seasonal rainfall since late December favored crop development, near-normal February rainfall and last week's soaking rain (50-115mm) maintained adequate moisture for immature crops. Early harvesting gets underway in March. In Argentina, significant rainfall this past week (22-93mm) in northern Buenos Aires, southern Cordoba, southern Santa Fe, and northern cotton areas favored immature crops. Near-average February rainfall, except in southern Santa Fe, provided sufficient moisture for reproductive to filling crops. A drying trend during February in Santa Fe reduced moisture reserves, but this past week's rain improved growing conditions for late-planted soybeans.





(Continued from front cover)  
was reported in **Laredo, TX** on the 5th, followed by a 105° F scorcher on the 6th. Nearly 3 dozen record highs were established throughout the **Plains**, including 91° F as far north as **Oklahoma City, OK**. The heat worsened already dry conditions in the **central and southern Plains**. Much cooler air spread southward toward the end of the week, helping to produce snowflakes in **Tupelo, MS**, and 3 inches of snow in **Asheville, NC**. During the latter half of the week, a pair of minor storms dropped rain and snow on the **Great Lakes** and the **Northeast**. Snow accumulations reached 10 inches in portions of **northern lower Michigan** and 8 inches in **northern Maine**. By Saturday, thunderstorms flared over the **Florida peninsula**, while an approaching storm spread rain and snow into the **Pacific Northwest**.

**CORRECTION:** Vol. 78, No. 9, March 5, 1991, p. 11. The heating degree days at Huntington, WV should read -136.

The Weekly Weather and Crop Bulletin (ISSN 0043-1974) is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the Weekly Weather Chronicle. It is issued under general authority of the Act of January 12, 1895 (44-usc 213), 53d Congress, 3d Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

Annual subscriptions: domestic second class \$35, first class \$50, foreign \$50 (in U.S. funds by international money order or check drawn on U.S. bank) payable to U.S. Department of Commerce, NOAA. POSTMASTER: Send address changes to Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, D.C. 20250. Order subscriptions from the office and address listed above. Second class postage paid at Washington, D.C. and additional mailing offices.

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(Continued from p. 15)

**VIRGINIA:** Temperatures above normal at beginning of period, below normal last half. Extremes 24°; 75°. Precipitation below normal central, east, above normal west. Rainfall 0.47 to 3.42 in.

Days suitable for fieldwork 2.6. Topsoil 4% short, 69% adequate, 27% surplus. Winter wheat 4% poor, 38% fair, 50% good, 8% excellent. Some powdery mildew appearing in wheat. Barley 1% poor, 47% fair, 43% good, 9% excellent. Oats 2% poor, 61% fair, 34% good, 3% excellent. Tobacco plantbeds seeded 58%. Tobacco plantbed 67% fair, 33% good. Potatoes planted 19%. Peach 7% very poor, 7% poor, 43% fair, 36% good, 7% excellent. Peach bud development ahead of schedule. Alfalfa 3% poor, 55% fair, 33% good, 9% excellent. Pasture 10% poor, 42% fair, 39% good, 9% excellent. Activities included fertilizing, overseeding pastures, top dressing, weed control for small grains, preparing land for spring planting, potato planting in full swing. Seeding tobacco plantbeds.

**WASHINGTON:** Temperatures 4° below normal to 1° above normal, east; 4° below normal to 1° above normal, west. Precipitation 1.01 to 2.64 in. east; 0.11 to 1.47 in. west.

Days suitable for fieldwork 3.1. Soil moisture 73% short, 26% adequate, 1% surplus. Range, pasture 14% very poor, 23% poor, 20% fair, 43% good. Hay, other roughage 2% short, 98% adequate. Winter wheat 92% very poor, 6% fair, 2% good. Winter barley 95% very poor, 2% poor, 1% fair, 2% good. Potatoes planted 1%. Spring wheat planted 12%. Temperatures were slightly below normal. Varying amounts of rain fell in all areas of the State. Initial tillage operations have started for spring planting of field crops. Recent rains have helped revive winter wheat showing drought stress. Russian wheat aphid have been detected in southeast areas winter wheat fields. Subsoil moisture is

still short in eastern areas. Dormant spraying for pear psylla has started in most pear orchards. Pruning of fruit, canberries continue. Raspberries are sending green tissue. Forced rhubarb harvest is in progress and flowers are being harvested from early bulb crops. Conditions have been above normal for calving and lambing. Ranges are dry and show little growth east of the Cascade Mountains.

**WEST VIRGINIA:** Temperature 37°. Extremes 14°; 63°. Precipitation 0.79.

Days suitable for fieldwork 1.9. Soil moisture 52% adequate, 48% surplus. Wheat, barley good. Cattle, sheep good. Calving 46% complete. Lambing 53% complete. Hay supplies 58% adequate, 42% surplus. Other feed 90% adequate, 10% surplus. Farm activities: General maintenance, feeding livestock, calving, lambing.

**WISCONSIN:** Temperature 28°. Extremes -8°; 53°. Good moisture levels are reported by grave diggers. Snow on the 5th with accumulations of 1.00 to 4.00 in. central, northern parts of the State. On the 8th, northern, central, eastern areas received 1.00 to 3.00 in. of snow. During the rest of the week, light snow, rain fell across portions of the State, with accumulations less than an inch.

Frost depth as of 8th, 13.5 in.; 29 year avg. 16.3 in. Mid March snow depth, 2.9 in.; 29 year avg. 7.7.

**WYOMING:** Temperatures above normal. Precipitation above normal northwest. Below normal elsewhere. Winter wheat fair to good. Drought stress. Spring fieldwork, ground preparation beginning. Livestock mostly good. Some supplemental feeding. Calving, lambing, shearing continuing.

NOAA/USDA Joint Agricultural  
Weather Facility  
Room 5844 USDA South Building  
Washington, D.C. 20250

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ISSN 0043 1974

OFFICIAL BUSINESS  
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