

# WEEKLY WEATHER AND CROP BULLETIN

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

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

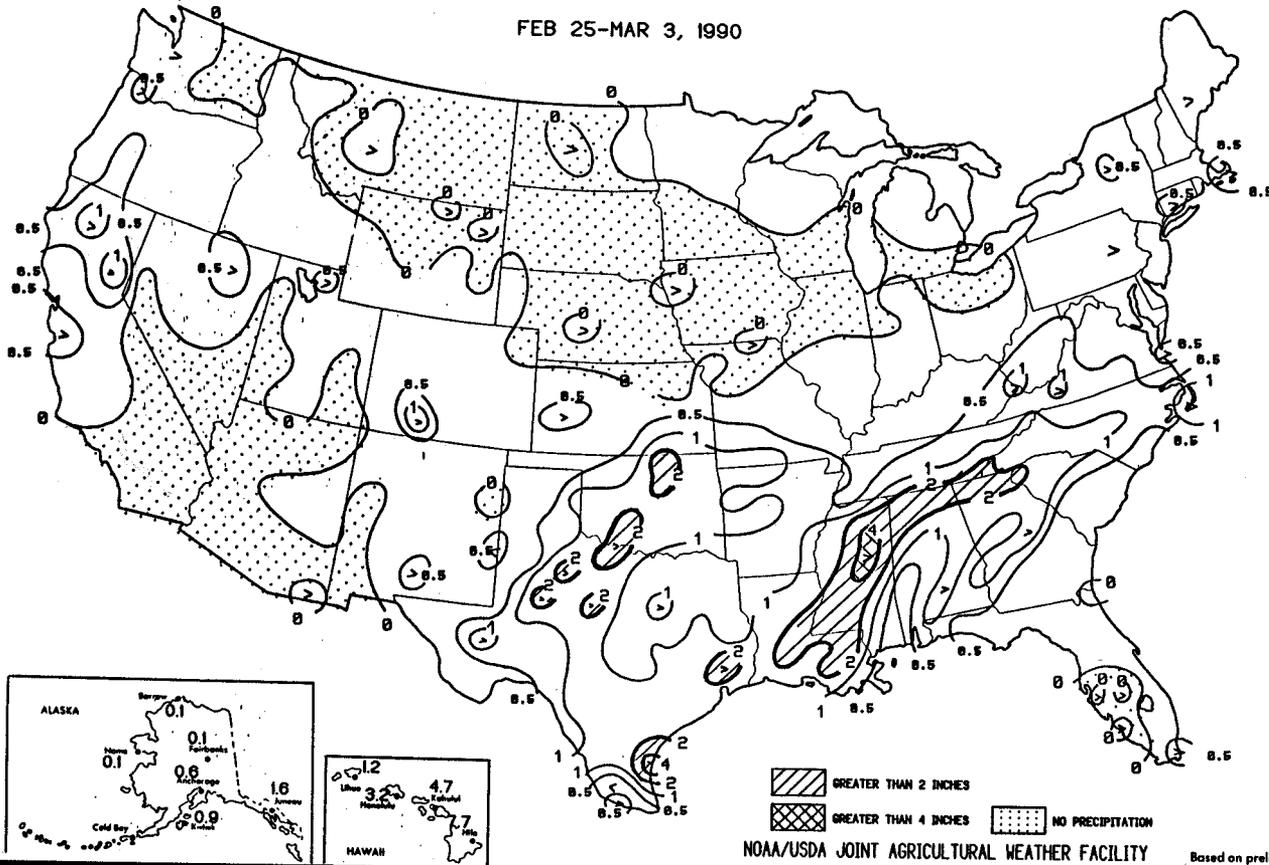
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March 6, 1990

## TOTAL PRECIPITATION, INCHES

FEB 25-MAR 3, 1990



Based on preliminary reports

## HIGHLIGHTS

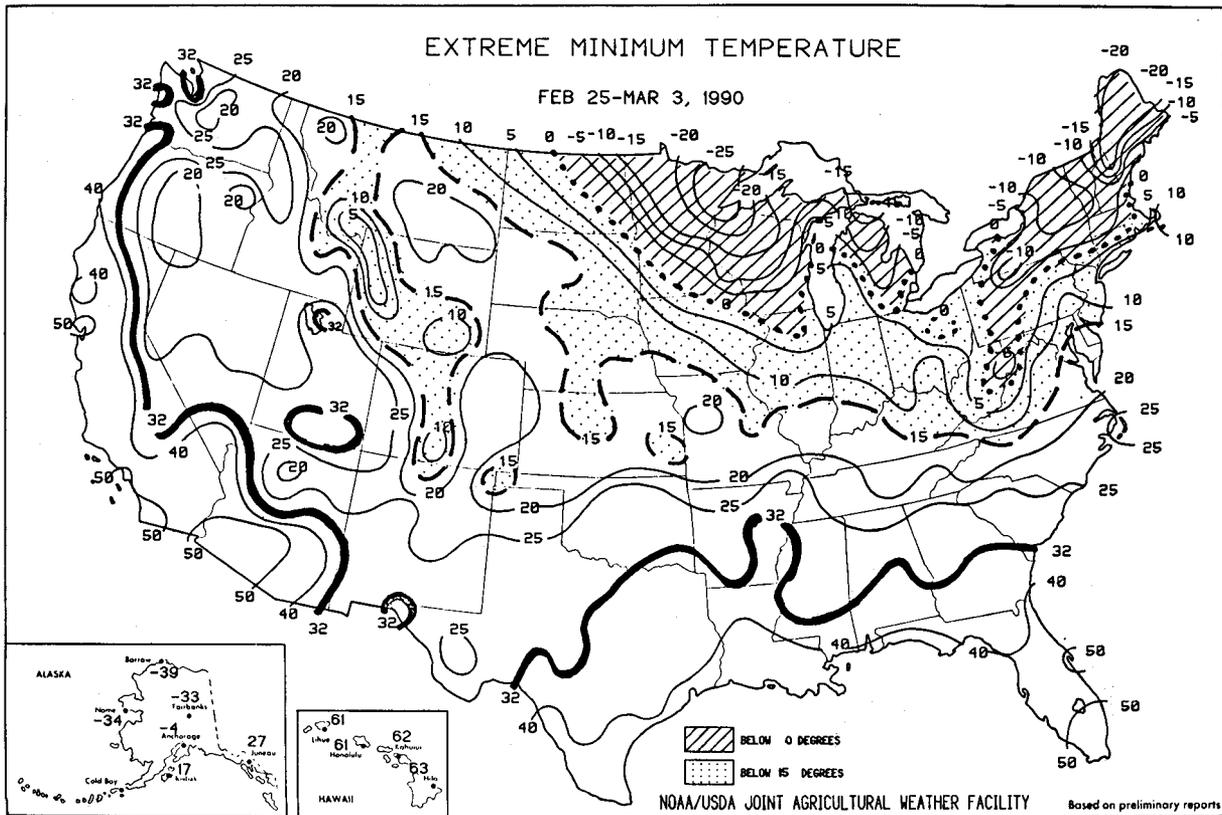
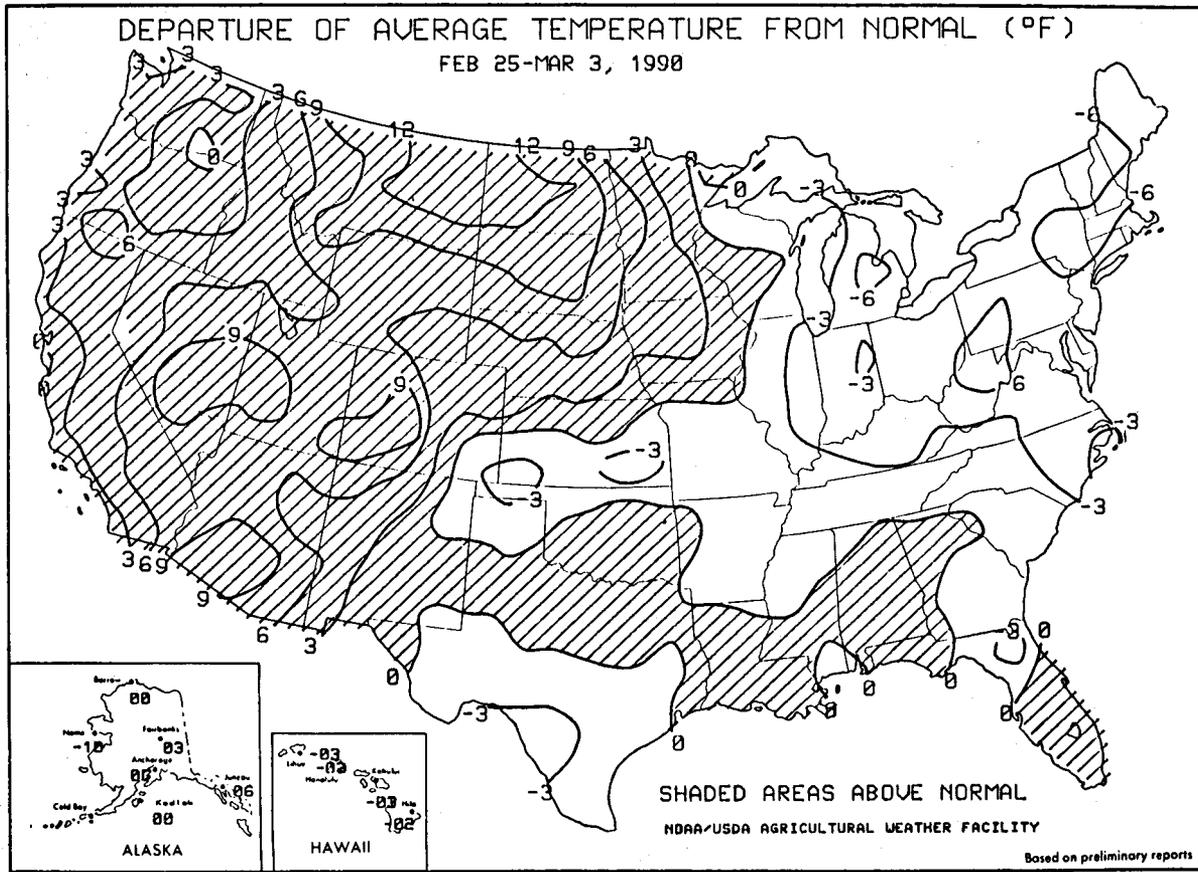
### February 25-March 3, 1990

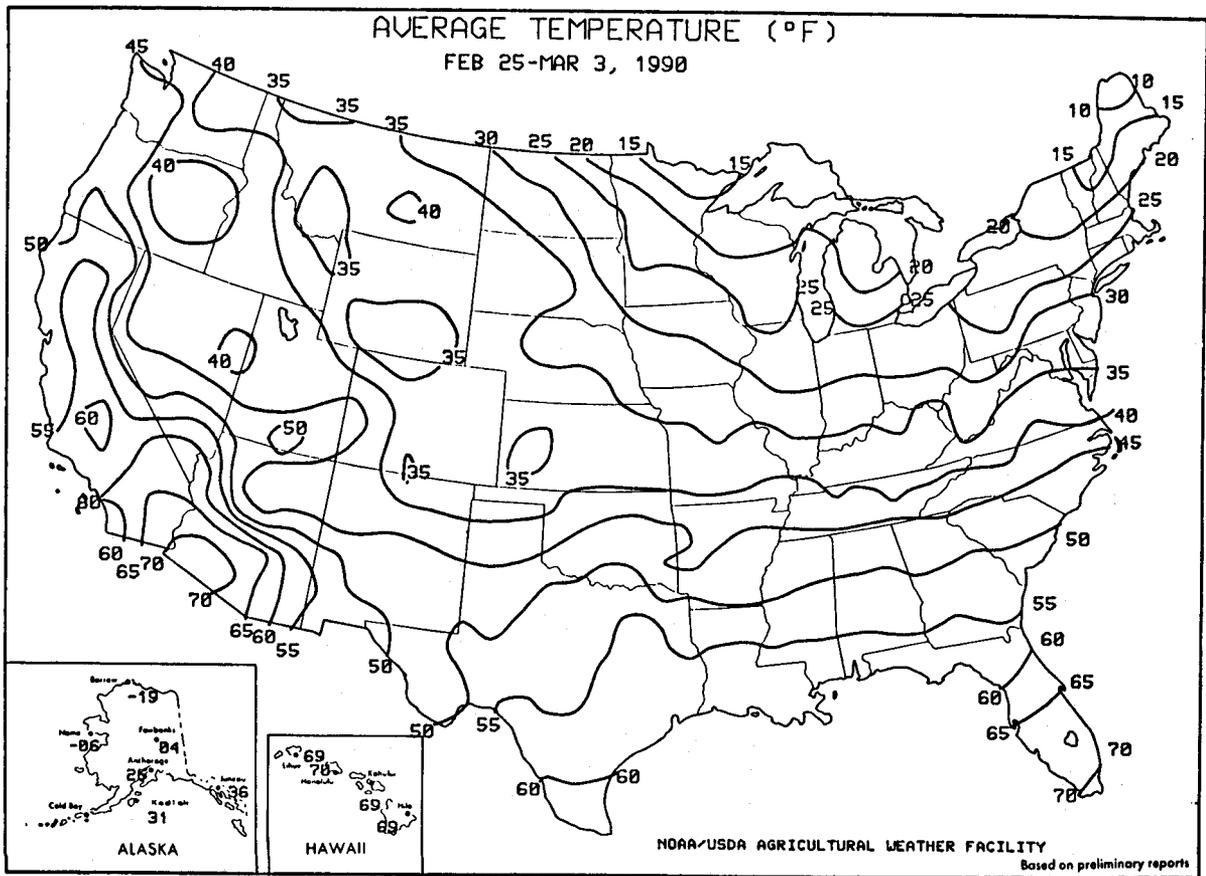
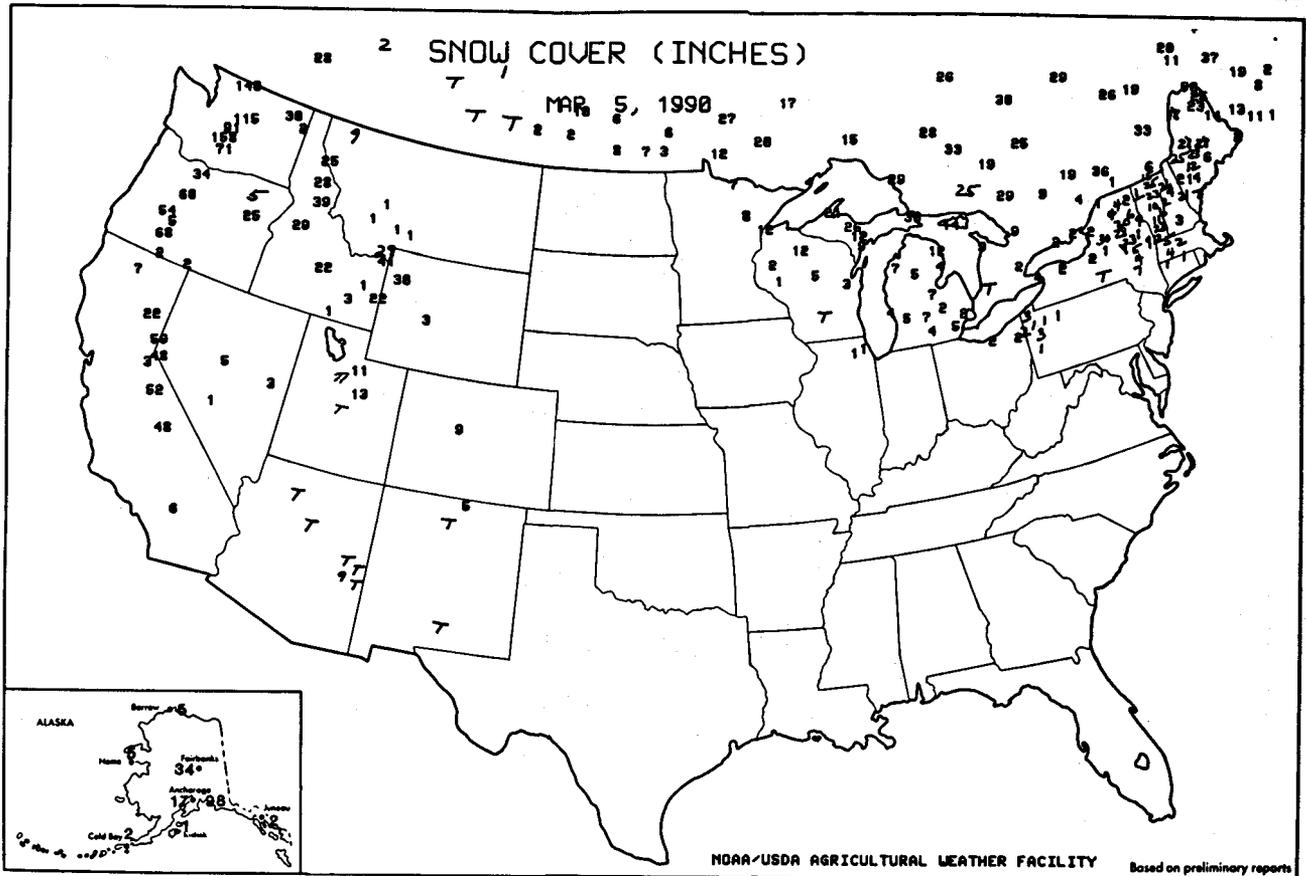
Early in the week, arctic air settled across the **Northeast**, as 13 stations reported record-low temperatures for the date. Temperatures dropped into the teens and low 20's F across **North Carolina** and dropped below freezing as far south as **central Alabama** and **central Georgia**. Gusty winds and subzero temperatures combined to create dangerous wind chill readings of -20° F to -50° F in the **Northeast**. At midweek, a winter storm moved out of the **southern Rockies** into the **central and southern Plains**, bringing beneficial moisture for the hard red winter wheat. The storm system moved slowly eastward during the remainder of the week, spreading heavy rain across the **lower Mississippi Valley** to the **mid-Atlantic coast**. Warm and dry weather continued to prevail over the **North Central States** and **southern Florida**.

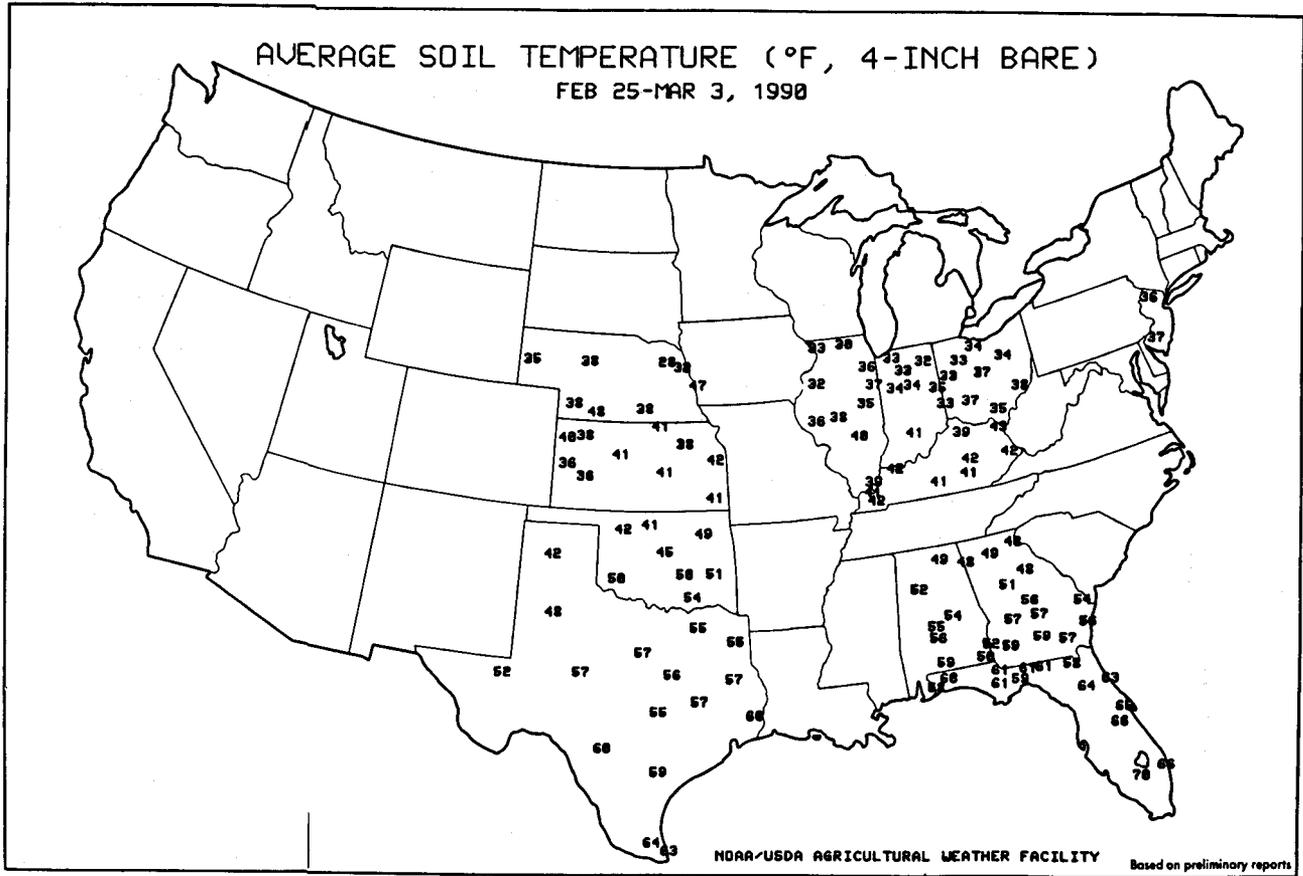
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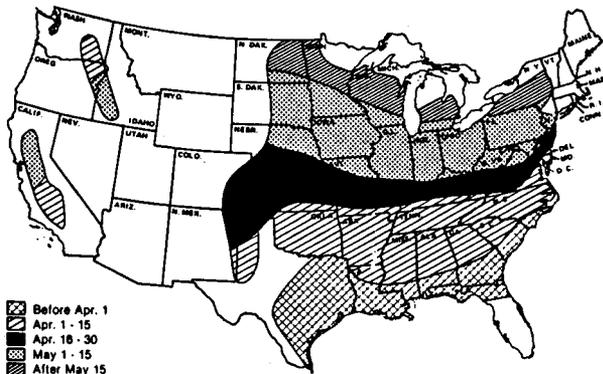
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**Corn for Grain**  
Usual Start of Planting, Principal Areas in the United States



**Cotton**  
Usual Start of Planting, Principal Areas in the United States



# National Weather Data for Selected Cities

## Weather Data for the Week Ending March 3, 1990

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	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		.01 INCH OR MORE	.50 INCH OR MORE		
AL BIRMINGHAM	62	39	70	28	50	1	.6	-.7	.6	.6	103	15.6	148	90	50	0	2	2	1	1	
MOBILE	67	45	73	39	56	1	.3	-1.1	.3	.3	54	15.8	157	85	40	0	0	2	2	0	
MONTGOMERY	65	39	71	30	52	1	.7	-.6	.7	.7	124	18.5	200	85	39	0	1	1	1	0	
AK ANCHORAGE	35	15	43	-4	25	0	.6	-.4	.6	.6	300	3.1	181	95	60	0	6	4	4	0	
BARRON	-12	-27	2	-39	-19	0	.0	0.0	.0	.0	200	.1	28	82	68	0	7	1	0	0	
FAIRBANKS	16	-8	43	-33	4	0	.1	0.0	.1	.1	0	1.2	120	91	68	0	7	2	0	0	
JUNEAU	39	32	41	27	36	0	1.7	0.0	1.7	1.7	0	1.2	120	91	68	0	7	2	0	0	
KODIAK	37	26	40	17	31	0	.9	-.2	.9	.9	147	8.6	111	98	75	0	3	4	7	1	
NOME	3	-15	14	-34	-6	-10	.1	-.2	.1	.1	72	9.8	87	94	59	0	5	4	7	1	
AZ PHOENIX	81	59	85	55	70	12	.1	-.2	.1	.1	40	1.4	108	85	64	0	6	3	0	0	
PRESCOTT	63	35	68	30	49	8	.7	-.4	.7	.7	0	1.5	110	48	19	0	0	0	0	0	
TUCSON	80	51	86	47	65	10	.7	-.2	.7	.7	0	2.5	74	68	23	0	3	1	0	0	
YUMA	86	58	89	54	72	10	.0	-.2	.0	.0	0	1.7	113	53	16	0	0	0	0	0	
AR FORT SMITH	60	35	73	29	47	2	.9	-.1	.9	.9	0	.1	238	41	16	0	0	0	0	0	
LITTLE ROCK	56	35	69	28	46	-2	.9	-.1	.9	.9	4	9.7	120	71	43	0	2	2	1	1	
CA BAKERSFIELD	71	48	74	44	60	4	.4	-.2	.4	.4	22	1.9	89	97	52	0	2	0	1	1	
EUREKA	54	47	62	45	51	2	.7	-.8	.7	.7	81	12.2	96	94	80	0	0	0	0	0	
FRESNO	69	47	74	44	58	6	.1	-.3	.1	.1	65	4.3	105	97	53	0	0	2	0	0	
LOS ANGELES	64	53	73	50	59	1	.0	-.5	.0	.0	0	3.8	66	99	68	0	0	0	0	0	
REDDING	69	43	76	37	56	3	1.4	-.1	1.2	1.4	259	10.9	71	93	50	0	0	3	1	0	
SACRAMENTO	67	46	73	43	56	3	.2	-.4	.2	.2	78	8.1	114	96	55	0	0	1	0	0	
SAN DIEGO	65	54	73	51	59	0	.0	-.4	.0	.0	0	3.6	93	86	49	0	0	0	0	0	
SAN FRANCISCO	57	48	62	46	53	0	.3	-.3	.3	.3	121	5.7	70	95	72	0	0	1	0	0	
CO DENVER	51	28	61	20	39	4	.1	-.1	.1	.1	0	1.2	95	83	36	0	6	2	0	0	
GRAND JUNCTION	57	32	63	27	45	7	.1	-.1	.1	.1	17	1.1	93	69	29	0	5	1	1	0	
PUEBLO	53	25	64	20	39	1	.1	0.0	.1	.1	0	1.3	239	94	38	0	7	1	1	0	
CT BRIDGEPORT	35	20	50	5	28	-1	.7	-.1	.7	.7	0	5.8	89	78	46	0	6	2	1	1	
HARTFORD	36	13	54	-4	25	-1	.4	-.5	.4	.4	0	7.4	104	77	38	0	7	1	1	0	
DC WASHINGTON	45	26	61	14	36	-5	.1	-.7	.1	.1	19	4.2	75	78	36	0	5	3	0	0	
FL APALACHICOLA	67	48	69	40	57	0	.2	-.7	.2	.2	62	6.6	87	84	51	0	0	1	1	0	
DAYTONA BEACH	72	53	80	47	63	0	.2	-.8	.2	.2	0	7.0	120	92	48	0	0	1	1	0	
JACKSONVILLE	69	45	76	37	57	-2	.0	-.9	.0	.0	0	5.9	86	96	45	0	0	0	0	0	
KEY WEST	78	66	82	64	72	0	.2	-.2	.2	.2	153	1.2	31	85	56	0	0	1	0	0	
MIAMI	74	53	80	47	64	0	.3	-.2	.3	.3	150	1.7	40	83	48	0	0	3	0	0	
ORLANDO	78	63	83	52	70	1	.1	-.2	.1	.1	6	5.1	91	93	40	0	0	2	0	0	
TALLAHASSEE	70	43	78	35	57	0	.1	-.3	.1	.1	4	9.9	97	92	41	0	0	1	1	0	
TAMPA	75	53	79	47	64	1	.1	-.8	.1	.1	0	5.1	93	92	42	0	0	0	0	0	
WEST PALM BEACH	78	62	82	50	70	2	.5	-.1	.4	.5	188	3.1	55	80	48	0	0	2	0	0	
CA ATLANTA	60	40	69	28	50	2	1.2	-.1	1.2	1.2	211	19.3	196	70	35	0	3	2	1	1	
AUGUSTA	63	38	75	28	50	0	.3	-.8	.3	.3	55	5.7	67	84	37	0	2	2	0	0	
MACON	64	39	72	32	51	-1	1.0	-.2	1.0	1.0	202	9.1	98	80	38	0	2	1	1	0	
SAVANNAH	64	42	74	33	53	-1	.7	-.9	.7	.7	0	7.1	107	81	41	0	0	0	0	0	
HI HILO	73	66	78	63	70	-2	7.7	4.3	3.3	4.5	339	39.9	165	95	76	0	0	7	4	1	
HONOLULU	75	64	78	61	70	-3	3.2	2.5	2.8	.1	41	8.5	125	83	57	0	0	4	1	4	
KAHULUI	73	64	81	62	69	-3	4.7	4.0	1.3	1.0	327	9.7	133	96	73	0	0	6	4	1	
LIHUE	73	64	75	61	69	-3	1.2	.3	.8	.4	93	10.9	106	87	56	0	0	3	1	4	
ID BOISE	54	31	58	24	43	4	.3	-.1	.3	.3	311	1.9	68	92	44	0	4	3	0	0	
LEWISTON	57	33	61	28	45	4	.7	-.2	.7	.7	0	.6	24	74	38	0	4	0	0	0	
FOCATELLO	50	22	52	16	36	4	.2	0.0	.2	.2	275	1.0	49	95	42	0	6	2	0	0	
IL CHICAGO	35	19	47	2	27	-3	.0	-.4	.0	.0	0	4.5	152	76	42	0	7	0	0	0	
MOLINE	38	20	54	7	29	-1	.0	-.4	.0	.0	0	3.8	123	84	41	0	7	0	0	0	
PEORIA	38	19	55	6	29	-2	.0	-.5	.0	.0	0	5.3	165	86	43	0	7	0	0	0	
QUINCY	42	24	60	12	33	0	.7	-.5	.7	.7	0	4.9	161	79	40	0	7	1	0	0	
ROCKFORD	34	16	51	0	25	-3	.0	-.4	.0	.0	0	3.0	108	79	41	0	7	0	0	0	
SPRINGFIELD	42	22	59	10	32	-2	.1	-.5	.1	.1	0	6.4	183	85	44	0	7	1	0	0	
IN EVANSVILLE	44	28	56	18	36	-3	.1	-.8	.1	.1	0	9.8	153	85	42	0	6	1	0	0	
FORT WAYNE	37	20	52	9	28	-2	.7	-.6	.7	.7	0	9.1	213	86	50	0	7	1	0	0	
INDIANAPOLIS	40	21	53	7	31	-3	.1	-.6	.1	.1	0	6.8	127	84	46	0	7	1	0	0	
SOUTH BEND	34	18	47	6	26	-4	.7	-.5	.7	.7	0	6.2	132	80	46	0	7	1	0	0	
IA DES MOINES	45	20	59	11	33	4	.0	-.4	.0	.0	0	2.3	104	69	35	0	7	0	0	0	
SIOUX CITY	47	17	59	11	32	4	.7	-.3	.7	.7	0	.6	36	79	28	0	7	1	0	0	
WATERLOO	40	17	56	1	29	3	.0	-.3	.0	.0	0	.8	44	79	33	0	7	0	0	0	
KS CONCORDIA	50	24	62	17	37	2	.0	-.3	.0	.0	0	.7	43	74	29	0	7	0	0	0	
DODGE CITY	46	24	59	17	35	-2	.4	-.2	.3	.3	0	2.9	269	92	47	0	7	2	0	0	
GOODLAND	49	25	62	23	37	3	.7	-.1	.7	.7	0	1.1	143	92	42	0	7	1	0	0	
TOPEKA	47	22	60	15	35	-2	.0	-.4	.0	.0	0	3.5	168	86	35	0	7	0	0	0	
WICHITA	46	24	59	11	35	-4	.4	0.0	.3	.3	0	3.9	236	86	49	0	6	2	0	0	
KY BOWLING GREEN	46	30	58	18	38	-3	.4	-.7	.2	.1	24	12.5	137	91	49	0	4	4	0	0	
LEXINGTON	43	25	54	10	34	-4	.2	-.7	.1	.1	16	7.7	106	87	40	0	6	4	0	0	
LOUISVILLE	46	27	57	15	36	-3	.2	-.8	.1	.1	14	10.7	153	82	35	0	5	4	0	0	
LA ALEXANDRIA	68	48	74	43	58	3	1.0	-.1	.9	.9	185	18.4	192	77	45	0	0	2	1	1	
BATON ROUGE	69	47	76	43	58	2	1.7	.6	1.6	1.7	384	20.1	202	90	46	0	0	2	1	1	
LAKE CHARLES	66	47	73	43	57	0	1.2	.5	1.1	1.2	383	14.6	177	98	61	0	0	4	1	1	
NEW ORLEANS	69	50	74	43	60	2	1.1	-.2	.9	1.1	221	20.1	189	91	54	0	0	2	1	1	

Based on 1951-80 normals

Weather Data for the Week Ending March 3, 1990

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	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		01 INCH OR MORE	.50 INCH OR MORE		
SHREVEPORT	65	42	74	35	54	-1	.7	-1.1	.3	.4	115	17.3	221	92	49	0	0	3	0	0	
ME CARIBOU	20	-2	46	-15	9	-9	.1	-1.1	.1	0	5.3	113	72	43	0	0	1	1	0	0	
PORTLAND	31	11	52	-3	21	-6	.1	-1.1	.1	0	5.7	74	78	38	0	0	7	7	0	0	
MD BALTIMORE	43	24	60	13	34	-4	.1	-1.1	.1	18	4.9	78	80	44	6	6	2	1	1	0	
SALLSBURY	43	25	51	15	34	-5	.4	-1.5	.3	110	6.5	91	86	55	6	6	2	2	0	0	
MA BOSTON	36	19	53	3	27	-6	.2	-1.7	.3	0	7.2	89	80	43	5	5	2	2	0	0	
CHATHAM	35	22	44	12	29	-5	.7	-1.3	.7	0	9.4	106	87	62	5	5	2	2	0	1	
MI ALPENA	29	5	48	-12	17	-5	.5	-1.3	.5	0	3.5	109	80	37	7	7	2	2	0	0	
DETROIT	33	16	47	3	25	-3	.5	-1.5	.5	0	6.7	182	86	55	7	7	0	0	0	0	
FLINT	30	11	44	-2	21	-6	.5	-1.4	.5	0	4.2	133	81	47	7	7	1	1	0	0	
GRAND RAPIDS	31	13	44	-1	22	-5	.5	-1.4	.5	0	4.5	121	82	45	7	7	0	0	0	0	
HOUGHTON LAKE	29	3	44	-10	16	-5	.5	-1.3	.5	0	2.4	81	82	42	7	7	1	1	0	0	
LANSING	31	8	43	-7	20	-7	.7	-1.4	.7	0	3.8	120	83	46	7	7	0	0	0	0	
MARQUETTE	29	3	49	-13	16	-2	.2	-1.3	.1	70	3.8	93	91	50	7	7	4	4	0	0	
MUSKOGON	33	17	45	8	25	-5	.5	-1.5	.5	0	4.0	96	78	51	7	7	0	0	0	0	
SAULT ST. MARIE	25	1	41	-19	13	-5	.5	-1.1	.3	0	4.5	113	88	53	7	7	3	3	0	0	
MN ALEXANDRIA	36	11	56	-12	24	0	.2	-1.2	.2	0	.5	29	83	50	7	7	0	0	0	0	
DULUTH	30	4	48	-26	17	4	.1	-1.2	.1	14	1.0	47	73	36	7	7	3	3	0	0	
INT'L FALLS	27	1	44	-22	14	1	.3	-1.1	.3	38	1.0	60	77	42	7	7	2	2	0	0	
MINNEAPOLIS	38	15	59	-7	26	4	.4	-1.3	.4	0	.9	49	69	35	7	7	0	0	0	0	
ROCHESTER	35	13	51	-11	24	2	.2	-1.3	.2	0	1.3	77	75	44	7	7	0	0	0	0	
MS GREENWOOD	61	38	70	31	50	-1	1.1	-1.2	1.1	196	14.7	144	82	45	1	1	1	1	1	1	
JACKSON	65	40	75	31	52	2	2.1	-1.9	1.4	418	22.5	232	88	45	1	1	3	3	2	2	
MERIDIAN	67	40	76	31	54	9	.9	-1.5	.6	146	27.8	274	91	39	1	2	1	1	1	1	
MO CAPE GIRARDEAU	47	30	55	20	39	-1	.4	-1.6	.3	0	13.5	211	88	51	6	6	3	3	0	0	
COLUMBIA	44	25	57	17	35	-2	.2	-1.4	.1	0	5.7	146	86	40	6	6	3	3	0	0	
KANSAS CITY	46	23	60	19	34	-3	.4	-1.4	.4	0	3.3	126	81	33	7	7	1	1	0	0	
SAINT LOUIS	46	28	60	17	37	-1	.1	-1.6	.1	0	5.0	120	73	32	7	7	1	1	0	0	
SPRINGFIELD	51	26	66	17	38	-1	.8	-1.2	.6	0	10.9	273	85	46	6	6	2	2	1	1	
MT BILLINGS	54	29	61	24	41	10	.1	-1.2	.1	0	.8	46	76	27	6	6	0	0	0	0	
GLASGOW	48	20	54	12	34	13	0	-1.1	0	0	.4	61	87	41	7	7	0	0	0	0	
GREAT FALLS	53	22	60	15	38	9	.1	-1.1	.1	0	.5	26	74	22	7	7	1	1	0	0	
HAVRE	50	20	58	15	35	10	0	-1.1	0	0	.4	4	91	40	7	7	0	0	0	0	
HELENA	49	20	57	11	35	6	.1	0	.1	0	.6	51	86	32	6	6	1	1	0	0	
KALISPELL	47	24	50	21	36	7	0	-1.2	0	0	2.7	97	89	38	7	7	0	0	0	0	
MILES CITY	52	26	60	20	39	13	.1	-1.1	.1	0	.1	11	84	35	7	7	0	0	0	0	
MISSOULA	50	23	56	18	37	5	0	-1.2	.2	0	1.2	54	93	36	7	7	0	0	0	0	
NE GRAND ISLAND	50	21	63	18	36	5	0	-1.3	0	0	.8	59	83	30	7	7	0	0	0	0	
LINCOLN	49	19	66	15	34	4	0	-1.3	0	0	.7	37	78	27	7	7	0	0	0	0	
NORFOLK	48	20	57	14	34	6	.3	-1.3	.3	0	1.1	81	83	30	7	7	0	0	0	0	
NORTH PLATTE	51	20	63	16	35	5	.1	-1.1	.1	0	.5	46	94	34	7	7	1	1	0	0	
OMAHA	45	23	59	18	34	3	.3	-1.3	.3	0	1.1	60	65	36	7	7	0	0	0	0	
SCOTTSBLUFF	51	25	63	19	38	5	.5	-1.1	.5	0	1.3	143	91	38	7	7	1	1	0	0	
VALENTINE	51	18	58	13	34	7	.7	-1.2	.7	0	.3	35	80	32	6	6	0	0	0	0	
NV ELY	54	26	60	20	40	9	.1	-1.1	0	38	1.9	131	89	37	6	6	3	3	0	0	
LAS VEGAS	73	50	76	45	61	9	.9	-1.1	.9	0	1.6	160	56	21	0	0	0	0	0	0	
RENO	55	29	60	23	42	3	.3	-1.2	.3	0	1.9	84	89	44	5	5	0	0	0	0	
WINNEMUCCA	57	31	60	24	44	7	.5	-1.3	.4	750	1.4	86	91	36	0	0	5	2	0	0	
NE CONCORD	32	5	51	-9	18	-8	-1	-1.6	.1	0	5.5	99	87	37	7	7	1	1	0	0	
NJ ATLANTIC CITY	42	19	55	9	31	-6	.1	-1.8	.1	18	3.6	50	90	36	6	6	2	2	0	0	
NM ALBUQUERQUE	58	34	66	30	46	3	.3	-1.1	.3	0	.7	90	74	29	2	2	1	1	0	0	
CLOVIS	59	32	74	29	45	2	.4	-1.3	.4	0	2.2	233	82	33	4	4	2	2	0	0	
ROSWELL	62	34	78	29	48	1	.2	-1.1	.2	0	.7	85	71	31	0	0	2	1	0	0	
NY ALBANY	33	8	52	-7	21	-7	.3	-1.3	.3	0	7.7	159	84	38	7	7	2	2	0	0	
BINGHAMTON	31	9	51	-6	20	-6	-1	-1.5	.1	0	6.6	130	80	44	7	7	1	1	0	0	
BUFFALO	30	16	41	2	23	-5	.1	-1.5	.1	0	8.6	153	80	46	7	7	2	2	0	0	
NEW YORK	39	24	51	9	31	-5	-1	-1.7	.1	0	5.5	85	73	37	5	5	1	1	0	0	
ROCHESTER	30	14	45	0	22	-6	.3	-1.3	.2	0	5.4	111	81	49	6	6	3	3	0	0	
SYRACUSE	33	12	53	-10	22	-5	.4	-1.3	.2	.1	21	6.1	112	85	45	7	7	5	5	0	0
NC ASHEVILLE	49	29	64	18	39	-3	1.0	0	.6	1.0	235	12.4	181	82	43	3	3	3	1	1	
CHARLOTTE	54	36	65	21	45	-1	1.4	-.4	.9	1.4	309	11.0	137	70	35	3	3	2	2	2	2
GREENSBORO	49	32	58	15	40	-3	.8	-1.1	.5	.8	203	8.8	122	74	36	0	0	3	2	0	0
HATTERAS	53	39	68	29	46	-2	1.3	-.4	.6	1.3	325	10.1	109	82	53	0	0	2	3	2	2
NEW BERN	56	35	71	22	46	-3	.8	-1.1	.4	.8	221	6.3	75	80	38	0	0	3	3	0	0
RALEIGH	51	33	59	17	42	-2	.7	-1.2	.6	.7	184	7.5	103	71	37	0	0	3	2	1	1
WILMINGTON	58	36	73	23	47	-3	.2	-1.7	.2	54	4.6	62	82	40	3	3	2	2	0	0	
ND BISMARCK	47	17	62	7	32	12	.9	-1.1	.9	0	.5	50	85	32	7	7	1	1	0	0	
FARGO	39	12	58	-11	26	9	.7	-1.1	.7	0	.7	73	82	42	7	7	1	1	0	0	
GRAND FORKS	34	10	48	-14	22	8	.8	-1.1	.8	0	.4	32	81	45	7	7	1	1	0	0	
WILLISTON	47	18	55	7	32	13	.7	-1.1	.7	0	.4	41	87	39	7	7	0	0	0	0	
OH AKRON-CANTON	35	15	52	1	25	-6	-1	-1.6	.2	0	6.9	140	83	41	7	7	0	0	0	0	
CINCINNATI	43	24	55	9	34	-3	.2	-1.5	.2	0	8.4	137	78	38	5	5	2	2	0	0	
CLEVELAND	36	17	53	2	27	-4	.4	-1.6	.4	0	7.0	144	80	44	7	7	0	0	0	0	
COLUMBUS	38	19	51	5	29	-5	.5	-1.4	.5	0	7.6	147	88	40	7	7	2	2	0	0	

Based on 1951-80 normals

Weather Data for the Week Ending March 3, 1990

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	AVERAGE MINIMUM	TEMP. °F		PRECIP.			
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE		
DAYTON	38	20	52	9	29	-4	.1	-.5	.1	0	0	8.1	164	82	45	0	7	2	0	0	
TOLEDO	35	17	50	3	26	0	0	-.5	0	0	0	7.5	187	84	47	0	7	0	0	0	
YOUNGSTOWN	35	14	52	0	24	T	T	-.6	T	T	T	6.7	131	82	40	0	7	1	0	0	
OK OKLAHOMA CITY	59	35	71	28	47	3	1.6	1.2	1.0	T	0	6.5	267	83	45	0	2	2	2	2	
TULSA	57	33	71	27	45	1	1.6	1.1	1.4	0	0	7.0	211	81	44	0	4	2	1	1	
OR ASTORIA	60	37	67	30	49	4	.4	-1.3	.4	.4	59	28.2	147	89	46	0	2	2	0	0	
BURNS	51	24	57	21	38	2	.3	0	.3	.3	278	1.1	43	95	36	0	7	1	1	0	
MEDFORD	68	36	75	31	52	8	.4	-1.1	.4	.4	200	4.4	77	92	37	0	1	2	0	0	
PENDLETON	53	30	57	27	41	-1	-.1	-1.1	-.1	-.1	127	1.2	41	88	46	0	5	1	0	0	
PORTLAND	62	37	64	32	50	5	.5	-4.5	.5	.5	135	11.8	114	94	38	0	2	1	1	1	
SALEM	63	33	68	27	48	4	.2	-.8	-.2	-.2	53	14.0	117	88	41	0	3	2	0	0	
PA ALLENTOWN	38	17	57	5	28	-5	-.5	-.8	T	T	T	7.0	104	79	35	0	7	1	0	0	
ERIE	33	18	50	4	25	-3	T	-.5	T	T	T	7.8	167	83	43	0	6	1	0	0	
HARRISBURG	40	20	57	9	30	-5	T	-.7	T	T	T	6.6	109	77	31	0	7	1	0	0	
PHILADELPHIA	41	23	58	10	32	-5	.1	-.7	.1	0	0	5.4	86	80	37	0	6	1	0	0	
PITTSBURGH	37	16	52	0	27	-6	-.1	-.6	-.1	0	0	6.4	116	80	38	0	7	2	0	0	
SCRANTON	34	15	52	2	24	-6	.1	-.5	-.1	T	0	6.5	145	77	41	0	7	1	0	0	
RI PROVIDENCE	36	17	50	4	26	-6	.2	-.8	.2	T	0	7.8	96	85	44	0	6	2	0	0	
SC CHARLESTON	63	41	72	29	52	-1	.1	-.9	-.1	.1	14	5.6	79	82	41	0	1	1	0	0	
COLUMBIA	60	37	73	26	49	-1	.4	-.7	.3	.4	78	5.4	61	81	38	0	3	2	0	0	
FLORENCE	60	37	73	24	49	-1	.2	-.7	.2	.2	45	3.0	41	86	41	0	3	1	0	0	
GREENVILLE	55	35	69	22	45	-2	1.4	-.1	1.3	1.4	245	11.1	120	75	36	0	3	2	1	1	
SD ABERDEEN	44	16	64	8	30	10	T	-.2	T	T	0	.5	44	87	38	0	7	0	0	0	
HURON	46	19	62	14	33	10	0	-.2	0	0	0	.6	51	81	32	0	7	0	0	0	
RAPID CITY	51	22	61	19	36	8	0	-.2	0	0	0	.6	55	87	34	0	7	0	0	0	
SIOUX FALLS	44	15	59	10	30	6	T	-.3	T	T	0	.4	25	81	31	0	7	0	0	0	
TN CHATTANOOGA	56	37	68	24	46	1	1.9	-.6	1.7	1.9	333	19.1	182	83	44	0	3	3	1	1	
KNOXVILLE	50	34	64	21	42	-3	1.0	-.2	.8	1.0	198	13.9	149	83	46	0	3	3	1	1	
MEMPHIS	57	35	69	29	46	-1	.2	-.9	-.2	.1	15	13.0	139	80	43	0	3	3	0	0	
NASHVILLE	51	34	70	20	43	-1	.6	-.5	.5	.6	126	8.1	90	75	44	0	3	2	0	0	
TX ABILENE	63	41	75	29	52	0	1.5	1.3	.8	0	0	4.2	206	87	47	0	1	2	2	2	
AMARILLO	56	26	71	21	41	-1	.2	0	.2	0	0	2.8	255	94	40	0	7	2	0	0	
AUSTIN	66	45	75	39	56	-1	.8	-.3	.5	.2	141	5.1	121	93	52	0	0	2	1	1	
BEAUMONT	68	51	74	44	59	2	1.7	-.9	1.4	1.5	456	17.5	203	95	59	0	0	3	1	1	
BROWNSVILLE	75	54	82	46	65	-1	.4	-.2	.4	.4	571	1.6	55	95	53	0	0	2	0	0	
CORPUS CHRISTI	70	50	77	41	60	-1	3.0	2.7	2.1	.9	9	5.3	167	99	61	0	0	2	2	2	
DEL RIO	65	46	74	35	56	-3	.8	-.6	.6	.1	140	2.1	147	79	48	0	0	3	1	1	
EL PASO	68	40	78	33	54	2	.1	0	.1	T	0	.4	51	64	23	0	0	1	0	0	
FORT WORTH	64	44	76	35	54	2	.5	-.1	.5	T	0	9.2	248	88	47	0	0	1	1	1	
GALVESTON	65	53	71	46	59	1	1.6	1.1	.8	.8	380	7.9	143	94	65	0	0	2	2	2	
HOUSTON	67	47	76	39	57	-1	2.1	1.4	1.4	.8	300	9.2	131	97	56	0	0	2	2	2	
LUBBOCK	60	34	76	29	47	1	.3	-.1	.3	T	0	2.5	254	81	39	0	4	1	0	0	
MIDLAND	63	37	78	26	50	-1	.6	-.5	.6	0	0	1.4	138	90	40	0	3	2	1	1	
SAN ANGELO	64	42	75	31	53	0	1.3	1.1	.7	0	0	3.3	214	86	47	0	1	2	2	2	
SAN ANTONIO	66	43	75	36	55	-3	1.4	1.1	.9	.9	733	4.7	136	94	54	0	0	3	1	1	
VICTORIA	67	47	75	39	57	-2	1.4	1.0	1.0	1.0	687	4.8	114	97	59	0	0	2	1	1	
WACO	66	43	77	34	55	1	.6	-.1	.6	T	0	5.5	143	93	49	0	0	1	1	1	
WICHITA FALLS	62	38	76	30	50	1	2.3	2.0	1.2	0	0	7.3	363	92	49	0	1	2	2	2	
UT CEDAR CITY	57	33	60	26	45	9	0	-.2	0	0	0	2.8	184	93	41	0	4	0	0	0	
SALT LAKE CITY	55	32	57	26	44	7	.1	-.3	.1	.1	57	1.0	36	85	42	0	4	1	0	0	
VT BURLINGTON	28	11	49	-3	20	-3	T	-.4	T	T	T	5.2	139	76	44	0	7	2	0	0	
VA NORFOLK	47	29	60	19	38	-6	.6	-.2	.5	.6	170	6.7	92	84	45	0	4	2	0	0	
RICHMOND	47	28	56	16	38	-4	.4	-.5	.3	.4	103	5.5	83	79	39	0	4	2	0	0	
ROANOKE	49	29	62	9	39	-2	.6	-.3	.5	.6	157	5.7	90	78	29	0	3	3	1	1	
WA QUILLAYUTE	61	33	66	29	47	5	.4	-2.6	.4	.4	30	33.2	120	92	35	0	5	1	0	0	
SEATTLE-TACOMA	59	37	65	32	48	5	T	-.9	T	T	T	11	13.4	126	85	36	0	1	1	0	0
SPOKANE	50	26	51	23	38	3	.1	-.3	-.1	.1	36	3.5	83	87	40	0	7	1	0	0	
YAKIMA	56	23	59	20	40	0	0	-.1	0	0	0	1.6	72	92	34	0	7	0	0	0	
WV BECKLEY	41	21	51	1	31	-4	.8	0	.4	.4	114	8.1	116	91	41	0	6	4	0	0	
CHARLESTON	45	25	54	6	35	-5	.6	-.3	.3	.2	64	6.8	98	92	35	0	5	4	0	0	
HUNTINGTON	44	26	55	10	35	-5	.4	-.4	.2	.1	19	6.6	102	86	34	0	6	4	0	0	
PARKERSBURG	41	21	52	7	31	-6	-.1	-.7	-.1	T	T	6.4	112	87	34	0	7	1	0	0	
WI GREEN BAY	32	12	46	-5	22	0	0	-.3	0	0	0	1.2	52	77	40	0	7	0	0	0	
LACROSSE	36	15	53	-6	26	1	0	-.3	0	0	0	1.4	71	77	36	0	7	0	0	0	
MADISON	34	14	52	-4	24	-1	T	-.3	T	T	T	2.6	115	73	38	0	7	0	0	0	
MILWAUKEE	36	17	53	1	27	0	0	-.4	T	T	T	4.4	141	69	36	0	7	0	0	0	
WAUSAU	33	8	49	-12	20	0	0	-.3	T	T	T	1.5	76	77	49	0	7	1	0	0	
WY CASPER	48	23	57	15	35	6	0	-.2	T	T	T	1.0	90	84	32	0	7	1	0	0	
CHEYENNE	46	25	54	16	35	5	.1	-.1	.1	T	T	1.0	124	93	46	0	7	2	0	0	
LANDER	49	21	58	15	35	7	T	-.2	T	T	T	.1	8	67	25	0	7	0	0	0	
SHERIDAN	50	24	57	19	37	8	T	-.2	T	T	T	1.2	78	83	29	0	7	1	0	0	

Based on 1951-80 normals

## February Weather and Crop Summary

**HIGHLIGHTS:** Storm systems spread much above-normal precipitation from the central and southern Plains to the Appalachians and Piedmont. These storms gave needed moisture to much of the hard red winter wheat but, during the middle of the month, caused severe weather, tornadoes, and local flooding across the Gulf Coast States. Heavy snows also brought needed moisture to portions of the Intermountain Plateau and Rockies. Dry weather continued to plague much of the North Central States and southern Florida. Unseasonably warm weather prevailed over much of the eastern two-thirds of the Nation for the second month in a row. Blasts of arctic air, however, plunged into the Central States in mid-February and into the Eastern States at month's end. Temperatures dropped below freezing across central Alabama and central Georgia on the 26th.

**FEBRUARY 1-3:** A frontal system caused moderate to heavy rain from eastern Texas, across the Mississippi Valley, and into the Northeast and spread snow across the central Plains into the upper Great Lakes. Winter storms battered the Pacific Northwest with strong wind and precipitation, and brought heavy snow to the southwest.

**FEBRUARY 4-10:** Unseasonable warmth persisted over the eastern two-thirds of the Nation, where temperatures ranged from 6 to 18° Fahrenheit (F) above normal. Record-high temperatures for the date were broken from the Dakotas to the Atlantic coast. Near- to below-normal temperatures remained in the Great Basin and Southwest, while bitter polar air settled over interior Alaska. Temperatures dropped to -45° F degrees at Fairbanks and -58° F at Fort Yukon. Wet and windy weather continued throughout the week across the Pacific Northwest. During the latter part of the week, a strong frontal system brought severe weather to the Southeast as thunderstorms spawned at least 13 tornadoes. The system spread heavy rain from the lower Mississippi Valley to the northern and middle Atlantic coast. Dry conditions prevailed over the Great Plains and western Corn Belt.

**FEBRUARY 11-17:** Winter returned to the northern and central Plains, as arctic air plunged south and reversed the warm spell of the last 2 months. The week started with above-normal temperatures throughout most of the country and heavy rains across portions of Florida. The cold air spread southward into the central Plains on Wednesday and spawned widespread precipitation across the Mississippi Valley. The Plains received 2-8 inches of snow, with higher amounts in northern Illinois. The snow cover protected much of the Plains' winter wheat from the subsequent low temperatures. Even Arizona and California remained unscathed as freezing temperatures were reported throughout that area.

San Francisco reported light snow on Wednesday. Though the snow immediately melted, it was the first there since 1976. The temperature at Fresno, CA, on Thursday morning was 24° F, a record-low temperature for the date. Warm air overrunning the cold air produced a band of freezing rain from Kansas to New England on Thursday. Severe weather,

heavy rain, and local flooding affected portions of the lower Mississippi Valley and the Southeast on Friday. Beneficial rain of 1-2 inches fell across southern California on Saturday.

**FEBRUARY 18-24:** Early in the week, heavy rain fell across the Delta and Southeast, while a winter storm spread snow over the central and southern Plateau, Rockies, and into the High Plains. At midweek, showers gave beneficial precipitation to the hard red winter wheat region in the central and southern Plains. Frontal systems then spread substantial rain and snow across the lower and middle Mississippi Valley to the Atlantic seaboard. Heavy rain caused local flooding in the Gulf Coast States and snow blanketed the Great Lakes, eastern Corn Belt, and Northeast. Record-low temperatures for the date were reported along the Pacific Coast States early in the week, while record-high temperatures occurred along the Atlantic Coast States during the latter part of the week. By Saturday, however, cold arctic air moved into the eastern half of the Nation, dumping heavy snow on much of the Northeast and bringing the lowest temperatures since December into the region.

**FEBRUARY 25-28:** Cold arctic air continued to invade the Atlantic seaboard as freezing temperatures dipped into central Georgia and 13 stations reported record-low temperatures on the 26th. At month's end, a winter storm moved out of the southern Rockies and brought heavy rain and snow to much of the hard red winter wheat in the central and southern Plains.

### FIELDWORK

Land preparation for the 1990 cotton crop was active in Arizona and California during February. By the end of the month, cotton planting was underway in Arizona. Rain and wet field conditions slowed land preparation in the Delta, Southeast, and eastern Corn Belt during February. By the end of February, corn planting was underway in Florida, Georgia, and Texas. Sorghum planting began in portions of Texas near the end of the month. Tobacco bed preparation and seeding were active, as weather permitted, in the Southeast during the month.

### WINTER WHEAT

Precipitation and above-normal temperatures promoted winter wheat growth in the central and southern Great Plains during February. The northern Great Plains remained dry during most of the month. Lack of snow cover concerned producers. In Montana, winter wheat was fair to good. About mid-February, blowing soil caused some damage. Greenbugs caused some problems in the Blacklands and central Texas. In the Corn Belt and Southeast, winter wheat was mostly good. Periodic snows protected the crop from cold weather in Michigan. In western Oregon and Washington, winter wheat was good to excellent, but the eastern areas needed additional moisture. Cool weather slowed winter wheat growth in California late in the month.

## February Weather in Historical Perspective

February 1990 was mild and wet across much of the country. National temperatures about 3° F degrees above normal made this the 15th warmest February on record, according to preliminary data. (fig.1) The precipitation index places this February as the 23rd wettest on record (fig. 2). Regional rankings show the unusual warmth across the eastern half of the country and unusual cold in the West (table 1). February 1990 ranked as the third warmest February on record in the Southeast. The South had the third wettest February on record, while the West North Central region had the third driest February.

The year so far has been unusually mild. The January-February mean temperature ranks 1990 as the

warmest January-February period on record (fig. 3). This follows the fourth coldest December. The smooth line in figure 3 is a nine-point binomial filter that averages the year-to-year fluctuations and shows the longer term variations. It indicates that the last 10 years have seen a slow warming since the extreme cold of the late 1970's.

The last 2 months have been unusually wet across much of the primary hard red winter wheat region. Though this has lessened the moisture shortfall during the current season, the extreme dryness of October-December 1989 makes the combined October-February precipitation still well below the long-term average (fig. 4).

Figure 1

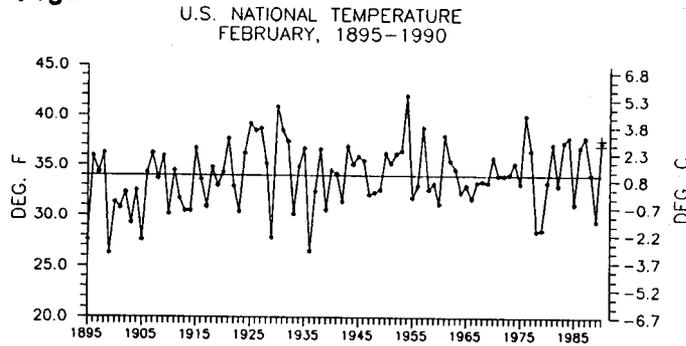


Figure 2

U.S. NATIONAL MEAN PRECIP INDEX  
FEBRUARY, 1895-1990

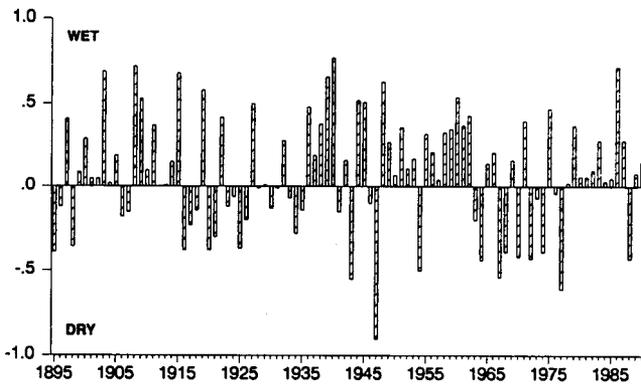


TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR FEB 1990, BASED ON THE PERIOD 1895-1990.  
1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	49	86
EAST NORTH CENTRAL	41	80
CENTRAL	91	90
SOUTHEAST	69	94
WEST NORTH CENTRAL	3	74
SOUTH	94	85
SOUTHWEST	45	48
NORTHWEST	25	36
WEST	37	18

Figure 3

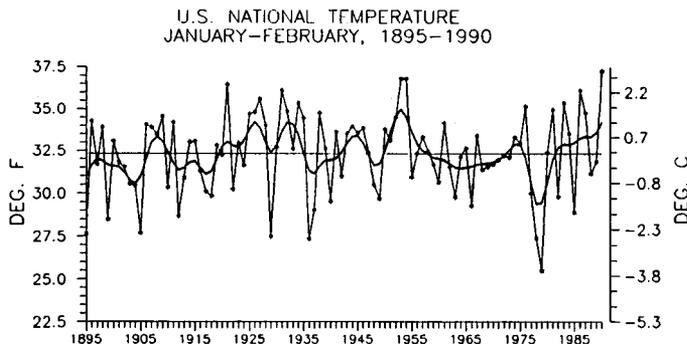
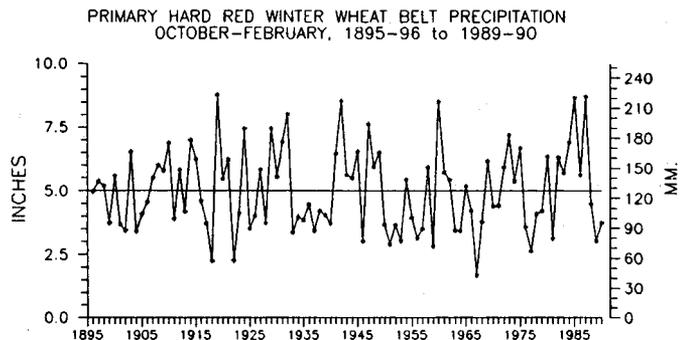
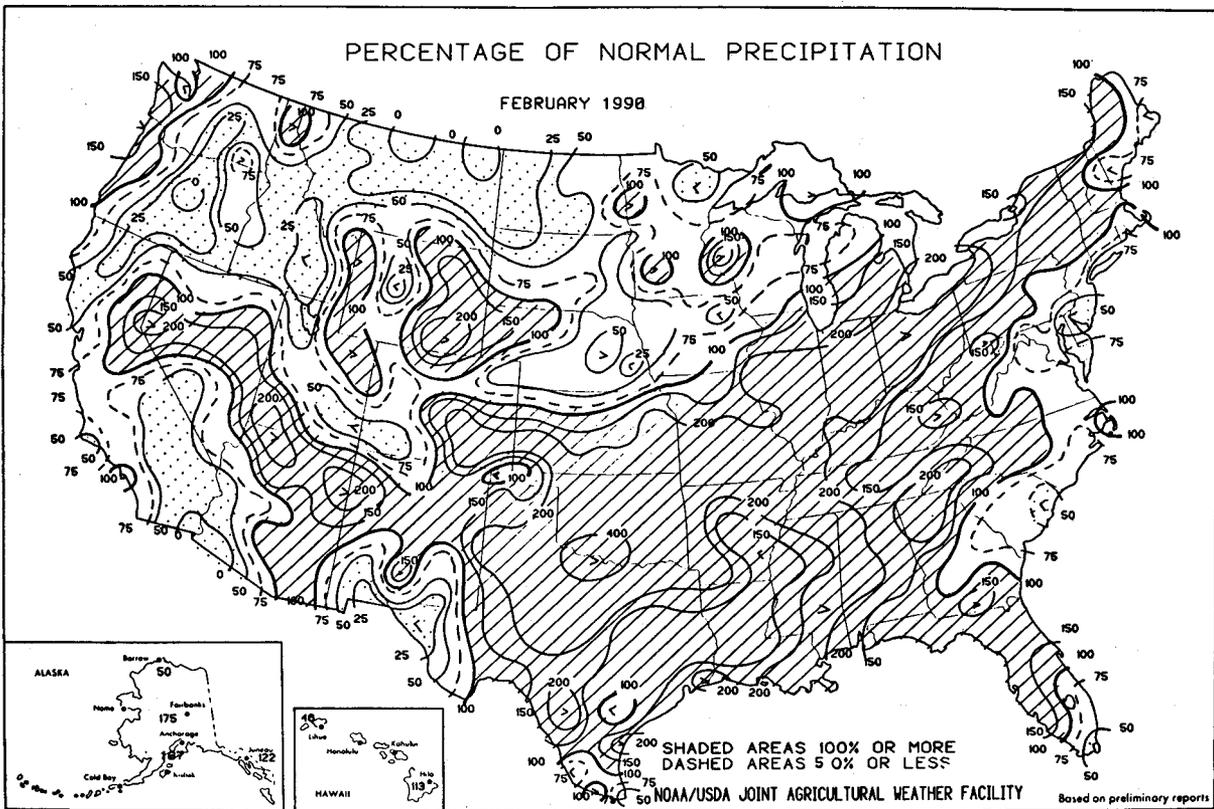
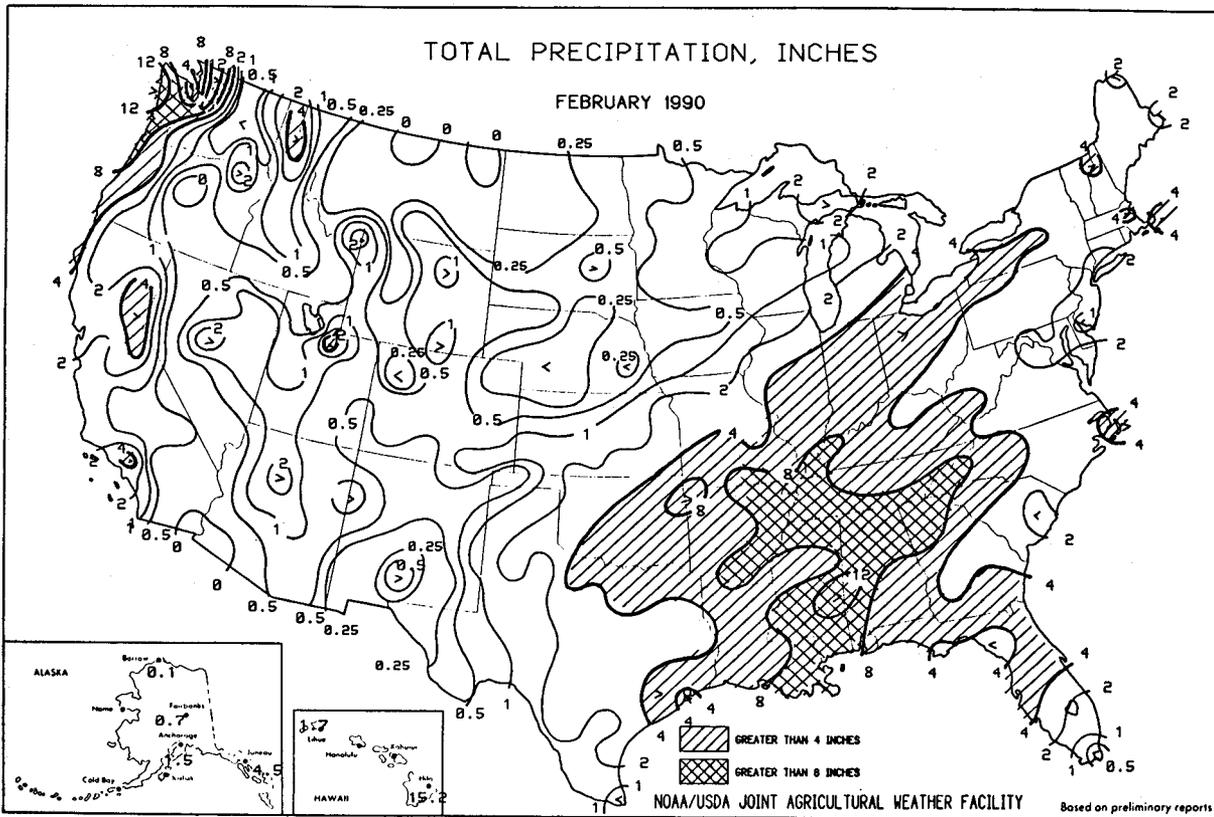
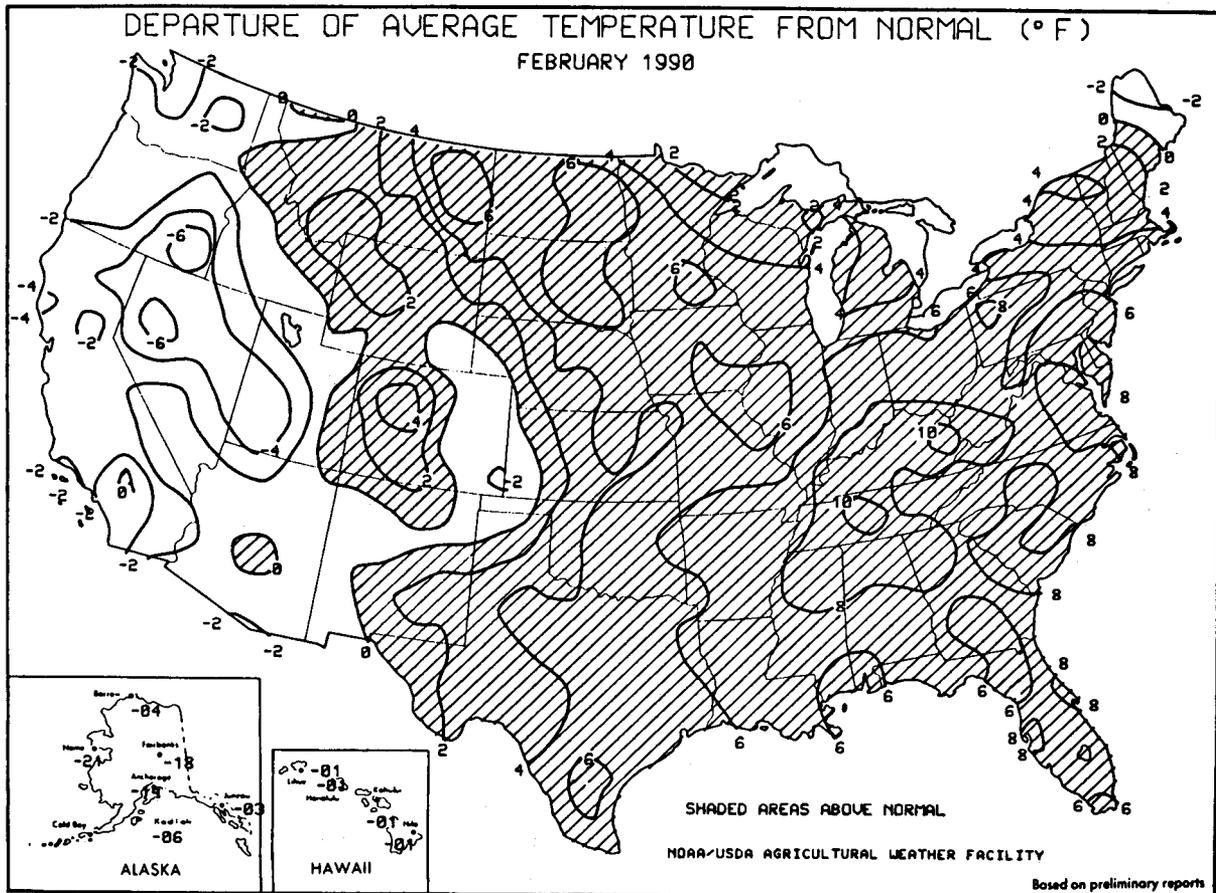
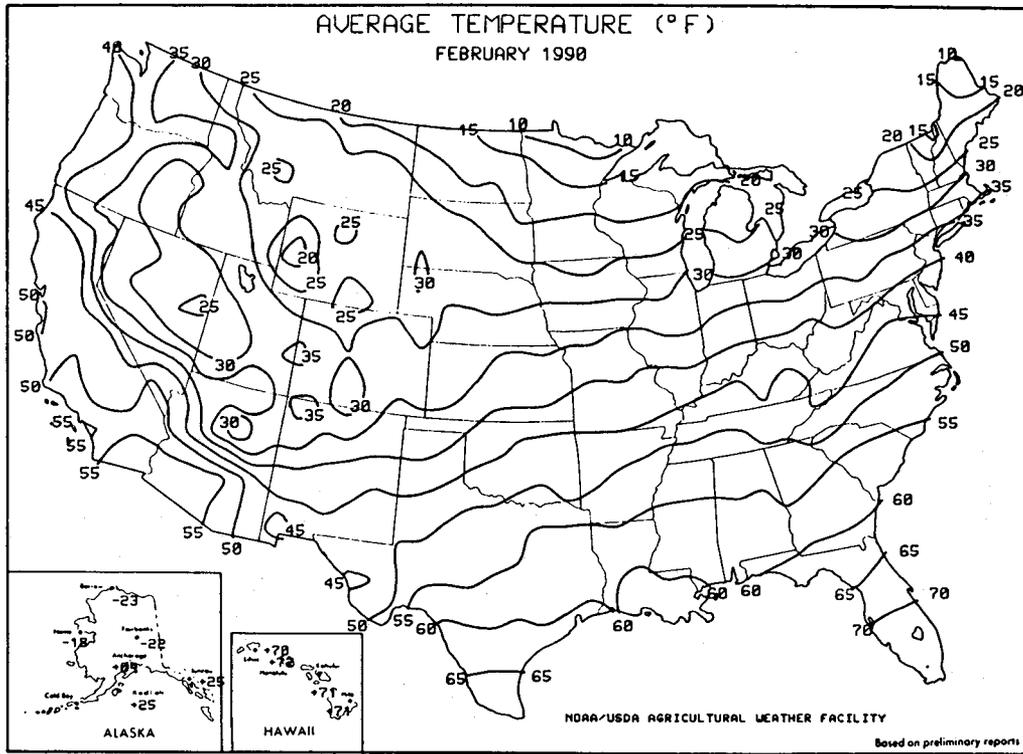


Figure 4







Temperature and Precipitation Data for February 1990

States and Stations	Temperature OF		Precipitation Inches		States and Stations	Temperature OF		Precipitation Inches		States and Stations	Temperature OF		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	54	8	6.8	2.2	KY PADUCAH	46	9	9.1	5.7	OH DAYTON	37	7	5.8	3.7
HUNTSVILLE	52	8	9.3	4.5	LA ALEXANDRIA	60	7	4.5	-0.1	MANSFIELD	34	7	4.7	2.8
MOBILE	59	5	8.1	3.2	BATON ROUGE	61	7	7.9	2.9	TOLEDO	32	6	5.4	3.6
MONTGOMERY	56	6	7.6	3.1	LAKE CHARLES	59	6	5.1	1.2	YOUNGSTOWN	34	8	4.6	2.4
AK ANCHORAGE	4	-14	1.5	0.6	NEW ORLEANS	61	7	11.5	6.3	OK OKLAHOMA CITY	46	5	4.6	3.3
BARROW	-23	-4	0.1	-0.1	SHREVEPORT	56	7	6.9	3.5	TULSA	46	5	4.1	2.4
FAIRBANKS	-22	-18	0.7	0.3	ME CARIBOU	11	-2	1.8	-0.3	OR ASTORIA	43	-1	11.8	4.1
JUNEAU	25	-3	4.5	0.8	PORTLAND	25	2	2.5	-1.1	BURNS	28	-6	0.2	-0.8
KODIAK	25	-6	2.9	-2.1	MD BALTIMORE	42	7	1.5	-1.5	EUGENE	42	-2	6.3	1.2
NOME	-18	-21	0.5	0.0	SALISBURY	43	7	2.6	-0.8	MEDFORD	41	-1	1.1	-1.0
AZ FLAGSTAFF	29	-3	3.2	1.2	MA BOSTON	34	3	3.6	-0.1	PENDLETON	38	-1	0.3	-0.8
PHOENIX	57	1	0.7	0.1	CHATHAM	35	4	4.2	0.0	PORTLAND	42	-1	3.4	-0.5
PRESCOTT	40	0	1.0	-0.5	MI ALPENA	22	3	1.2	-0.1	SALEM	41	-1	5.3	0.7
TUCSON	53	-1	0.7	0.1	DETROIT	31	4	5.0	3.3	PA ALLENTOWN	36	6	2.4	-0.6
WINSLOW	38	0	0.7	0.2	FLINT	27	3	2.6	1.1	ERIE	32	7	5.7	3.6
YUMA	59	-1	T	-0.2	GRAND RAPIDS	28	4	2.1	0.6	HARRISBURG	38	1	2.7	0.0
AR FORT SMITH	48	6	6.0	3.4	HUGHTON LAKE	21	3	1.1	-0.2	PHILADELPHIA	41	8	1.4	-1.4
LITTLE ROCK	50	6	4.0	0.2	LANSING	26	4	2.7	1.1	PITTSBURGH	37	7	3.3	0.9
CA BAKERSFIELD	49	-4	0.9	-0.2	MARQUETTE	17	2	2.0	0.1	SCRANTON	33	6	2.7	0.7
BISHOP	39	-3	0.5	-0.5	MUSKEGON	28	4	1.7	0.1	WILLIAMSPORT	34	6	2.4	-0.5
EUREKA	46	-3	4.5	-0.7	SAULT ST. MARIE	18	3	2.0	0.4	RI PROVIDENCE	34	5	2.9	-0.8
FRESNO	48	-2	1.3	-0.5	MN ALEXANDRIA	18	6	0.4	-0.3	SC CHARLESTON	59	9	1.7	-1.7
LOS ANGELES	55	-2	2.6	0.1	DULUTH	15	2	0.5	-0.4	COLUMBIA	56	9	2.6	-1.4
REDDING	46	-5	1.4	-4.8	INT'L FALLS	10	2	0.5	-0.2	FLORENCE	56	8	0.8	-2.6
SACRAMENTO	49	-2	2.9	0.0	MINNEAPOLIS	24	6	0.8	-0.1	GREENVILLE	51	7	6.0	1.6
SAN DIEGO	56	-1	1.1	-0.5	ROCHESTER	22	6	0.7	0.0	SD ABERDEEN	21	5	0.4	-0.2
SAN FRANCISCO	49	-2	2.3	-0.9	ST. CLOUD	19	5	0.7	-0.1	HURON	24	6	0.6	-0.2
STOCKTON	47	-3	1.3	-0.7	MS GREENWOOD	55	8	6.4	1.9	RAPID CITY	29	3	0.4	-0.2
CO ALAMOSA	26	3	0.2	-0.1	JACKSON	56	7	8.3	4.1	SIOUX FALLS	25	6	0.3	-0.6
CO. SPRINGS	32	-1	0.6	0.3	MERIDIAN	57	8	16.0	11.4	TN BRISTOL	45	7	5.1	1.7
DENVER	34	0	0.6	0.1	MO CAPE GIRARDEAU	44	-	7.8	4.7	CHATTANOOGA	51	9	9.7	5.0
GRAND JUNCTION	36	2	0.6	0.1	COLUMBIA	38	5	3.9	2.0	KNOXVILLE	49	8	6.9	2.7
PUEBLO	33	-2	0.7	0.4	KANSAS CITY	36	3	2.1	0.9	MEMPHIS	52	8	9.0	4.7
TX BRIDGEPORT	35	4	1.9	-1.0	SAINT LOUIS	41	8	3.5	1.4	NASHVILLE	50	9	4.7	0.7
HARTFORD	32	5	3.4	0.2	SPRINGFIELD	42	6	5.7	3.5	TX ABILENE	53	5	2.4	1.4
DC WASHINGTON	45	7	1.3	-1.3	MT BILLINGS	29	1	0.5	-0.2	AMARILLO	41	1	1.8	1.1
FL APALACHICOLA	61	7	3.9	0.3	GLASGOW	23	7	0.1	-0.2	AUSTIN	59	6	3.6	1.1
DAYTONA BEACH	67	9	5.6	2.5	GREAT FALLS	29	1	0.2	-0.6	BEAUMONT	60	5	7.7	4.0
FT. MYERS	72	7	3.4	1.3	HAVRE	24	3	T	-0.4	BROWNSVILLE	67	4	0.6	-1.0
JACKSONVILLE	63	7	4.1	0.5	HELENA	27	1	0.1	-0.3	CORPUS CHRISTI	64	6	4.0	2.5
KEY WEST	75	5	1.1	-0.8	KALISPELL	26	-1	1.0	-0.1	DEL RIO	59	3	1.3	0.4
MIAMI	74	6	1.2	-0.8	MILES CITY	29	7	T	-0.5	EL PASO	49	1	0.1	-0.3
ORLANDO	69	8	4.1	1.3	MISSOULA	30	1	0.3	-0.5	PORT WORTH	54	5	4.7	2.9
TALLAHASSEE	61	7	7.3	2.3	NE GRAND ISLAND	31	4	0.5	-0.3	GALVESTON	61	5	3.8	1.5
TAMPA	69	8	4.6	1.6	LINCOLN	32	5	0.2	-0.8	HOUSTON	59	4	4.5	1.2
GA WEST PALM BEACH	74	8	1.4	-1.2	NORFOLK	29	5	0.5	-0.3	LAREDO	65	5	1.6	0.5
ATHEN	53	8	7.5	3.3	NORTH PLATTE	31	3	0.2	-0.4	LUBBOCK	47	4	2.1	1.6
ATLANTA	54	9	9.8	5.3	OMAHA	31	4	0.4	-0.5	MIDLAND	51	3	1.1	0.5
AUGUSTA	57	9	2.7	-1.3	SCOTT'S BLUFF	30	0	0.7	0.3	SAN ANGELO	53	4	1.7	0.8
MACON	56	7	3.5	-1.0	VALENTINE	28	4	0.5	0.0	SAN ANTONIO	59	5	2.7	0.8
SAVANNAH	60	8	3.1	-0.1	NV ELKO	27	-4	0.8	0.0	VICTORIA	61	5	2.0	-0.2
HI HILO	71	-1	15.2	1.7	ELY	24	-5	1.3	0.7	WACO	55	4	2.8	0.8
HONOLULU	72	-1	4.1	1.4	LAS VEGAS	49	-1	0.4	-0.1	WICHITA FALLS	49	4	4.6	3.6
KAHULUI	71	-1	4.6	1.7	RENO	32	-6	2.0	1.0	BLANDING	-	-	0.4	0.6
LIHUE	70	-1	1.7	-2.0	WINNEMUCCA	30	-5	0.5	-0.2	CEDAR CITY	29	-5	1.8	1.0
ID BOISE	34	-2	0.8	-0.3	NH CONCORD	24	2	2.6	0.2	SALT LAKE CITY	33	-1	0.4	-1.0
LEWISTON	40	1	0.3	-0.6	NJ ATLANTIC CITY	40	7	1.0	-2.3	VT BURLINGTON	23	5	2.8	1.1
FOCATELLO	29	-1	0.2	-0.6	NM ALBUQUERQUE	39	-1	0.5	0.1	VA LYNCHBURG	46	9	3.2	0.3
IL CAIRO	-	-	7.4	4.0	CLOVIS	43	2	1.2	0.7	NORFOLK	50	8	2.9	-0.4
CHICAGO	31	6	2.3	1.1	ROSWELL	47	3	0.2	-0.2	RICHMOND	48	9	2.4	-0.7
MOLINE	31	6	2.0	0.7	NY ALBANY	28	4	3.9	1.7	ROANOKE	46	8	2.8	-0.3
PEORIA	34	7	3.6	2.2	BINGHAMTON	28	6	3.2	1.0	WA COLVILLE	26	-5	1.1	-0.4
QUINCY	37	8	3.9	2.4	BUFFALO	29	4	5.9	3.5	QUILLAYUTE	40	-2	15.9	3.7
ROCKFORD	28	4	1.2	0.0	NEW YORK	40	6	1.6	-1.5	SEATTLE-TACOMA	40	-3	3.7	-0.5
SPRINGFIELD	36	7	4.9	3.2	ROCHESTER	29	4	3.9	1.6	SPOKANE	30	-2	1.0	-0.6
IN EVANSVILLE	43	8	5.6	2.5	SYRACUSE	29	5	4.0	1.3	WALLA WALLA	-	-	1.3	-0.1
PORT WAYNE	34	7	6.8	4.8	NC ASHEVILLE	45	6	8.1	4.8	YAKIMA	35	-1	0.1	-0.6
INDIANAPOLIS	37	7	5.0	2.5	CHARLOTTE	52	9	5.7	1.9	WV BECKLEY	41	9	4.7	1.5
SOUTH BEND	31	5	3.7	1.7	GREENSBORO	48	8	4.3	0.9	CHARLESTON	45	9	3.7	0.7
IA DES MOINES	31	6	0.9	-0.2	HATTERAS	54	8	4.1	0.1	ELKINS	38	7	2.9	0.1
DUBUQUE	27	6	1.1	-0.2	NEW BERN	53	7	2.7	-1.2	HUNTINGTON	44	8	3.4	0.5
SIoux CITY	28	5	0.3	-0.6	RALEIGH	51	9	3.8	0.4	PARKERSBURG	40	6	3.2	0.6
WATERLOO	27	6	0.4	-0.6	WILMINGTON	55	7	2.3	-1.1	WI GREEN BAY	22	4	0.6	-0.4
KS CONCORDIA	36	4	0.4	-0.4	ND BISMARCK	20	5	0.2	-0.2	LA CROSSE	26	6	0.7	-0.2
DODGE CITY	36	1	1.2	0.4	FARGO	18	6	0.5	0.1	MADISON	26	5	1.0	0.0
GOODLAND	32	0	0.4	0.1	GRAND FORKS	16	7	0.2	-0.3	MILWAUKEE	29	6	1.9	0.6
TOPEKA	36	4	2.3	1.3	WILLISTON	21	5	T	-0.4	WAUSAU	20	4	0.6	-0.4
WICHITA	39	4	2.2	1.4	OH AKRON-CANTON	34	7	5.0	2.8	WY CASPER	28	1	0.7	0.2
KY JACKSON	46	13	6.3	2.6	CINCINNATI	41	9	5.8	3.1	CHEYENNE	29	-1	0.7	0.3
BOWLING GREEN	46	9	7.2	3.2	CLEVELAND	34	6	4.7	2.5	LANDER	29	3	0.1	-0.5
LEXINGTON	43	8	3.4	0.2	COLUMBUS	37	7	5.2	3.0	SHERIDAN	26	0	0.9	0.1
LOUISVILLE	44	8	6.7	3.5					PR SAN JUAN	76	-1	3.0	1.0	

Based on 1951-80 normals.

## Heating Degree Days (Base 65°) For February 1990

States and Stations			States and Stations			States and Stations		
TOTAL	Depart Normal		TOTAL	Depart Normal		TOTAL	Depart Normal	
AL. Birmingham	298	-234	MD. Baltimore	631	-217	OK. Okla. City	525	-153
Mobile	186	-156	MA. Boston	857	-103	Tulsa	527	-153
Montgomery	259	-180	Chatham	843	-106	OR. Astoria	606	15
AK. Anchorage	1715	396	MI. Alpena	1194	-122	Burns	1040	158
Barrow	2477	108	Detroit	955	-143	Medford	663	30
Fairbanks	2433	501	Flint	1061	-107	Pendleton	752	35
Nome	2308	580	Grand Rapids	1026	-130	Portland	641	31
AZ. Flagstaff	996	36	Houghton Lake	1216	-100	Salem	658	34
Phoenix	253	-16	Lansing	1062	-106	PA. Allentown	800	-200
Tucson	340	53	Marquette	1308	-112	Erie	879	-241
Winslow	756	11	S. Ste. Marie	1317	-103	Harrisburg	744	-194
Yuma	210	34	MN. Duluth	1398	-86	Philadelphia	662	-231
AR. Fort Smith	464	-169	Internatl Falls	1548	-65	Pittsburg	781	-233
Little Rock	407	-178	Minneapolis	1151	-179	Scranton	881	-189
CA. Bakersfield	432	97	Rochester	1196	-148	RI. Providence	854	-146
Eureka	541	85	St. Cloud	1281	-155	SC. Charleston	189	-245
Fresno	470	64	MS. Jackson	261	-201	Columbia	265	-243
Los Angeles	275	42	Meridian	255	-209	Greenville	375	-224
Redding	531	122	MO. Columbia	740	-171	SD. Aberdeen	1221	-159
Stockton	487	75	Kansas City	800	-121	Huron	1138	-175
San Diego	268	72	St. Louis	657	-217	Rapid City	1004	-88
San Francisco	437	62	Springfield	639	-167	Sioux Falls	1117	-168
CO. Denver	882	3	MT. Billings	1002	-23	TN. Chattanooga	371	-273
Pueblo	877	43	Glasgow	1186	-189	Knoxville	443	-215
CT. Bridgeport	836	-127	Great Falls	1031	-41	Memphis	362	-240
Hartford	890	-157	Havre	1139	-132	Nashville	422	-267
DC. Washington	550	-220	Helena	1058	-34	TX. Abilene	334	-145
FL. Apalachicola	109	-202	Kalispell	1086	2	Amarillo	672	-39
Jacksonville	117	-185	Miles City	1013	-188	Austin	171	-176
Key West	0	-37	Missoula	947	-86	Beaumont	151	-155
Miami	4	-58	NE. Grand Island	988	-70	Brownsville	45	-90
Orlando	34	-138	Lincoln	923	-155	Corpus Christi	250	41
W. Palm Beach	7	-79	Norfolk	1002	-152	Del Rio	169	-113
Tallahassee	128	-213	North Platte	948	-108	El Paso	439	-26
Tampa	32	-154	Omaha	938	-174	Fort Worth	306	-163
GA. Atlanta	297	-266	Valentine	1025	-117	Galveston	116	-166
Augusta	244	-251	NV. Ely	1150	136	Houston	177	-137
Macon	250	-202	Las Vegas	449	32	Lubbock	500	-127
Savannah	175	-212	Reno	954	181	Midland	401	-83
ID. Boise	858	49	Winnemucca	986	166	San Angelo	324	-104
Lewiston	703	-39	NH. Concord	1121	-77	San Antonio	190	-129
Pocatello	1022	28	NJ. Atlantic City	680	-210	Victoria	133	-135
IL. Chicago	938	-154	NM. Albuquerque	735	18	Waco	287	-128
Moline	937	-180	NY. Albany	1026	-139	Wichita Falls	428	-124
Peoria	871	-199	Binghamton	1013	-180	UT. Salt Lake City	895	30
Rockford	1026	-139	Buffalo	995	-139	VT. Burlington	1156	-157
Springfield	803	-191	New York	698	-190	VA. Lynchburg	536	-237
Fort Wayne	858	-223	Rochester	993	-144	Norfolk	417	-252
Indianapolis	760	-223	Syracuse	1001	-147	Richmond	472	-259
South Bend	936	-145	NC. Asheville	535	-190	Roanoke	528	-231
IA. Des Moines	943	-191	Charlotte	350	-269	WA. Quillayute	698	46
Dubuque	1063	-161	Greensboro	458	-245	Seattle-Tacoma	696	74
Souix City	1018	-152	Hatteras	300	-243	Spokane	968	55
KS. Concordia	813	-142	Raleigh	390	-265	Walla Walla		
Dodge City	795	-45	Wilmington	282	-216	Yakima	827	18
Goodland	928	1	ND. Bismark	1256	-158	WV Beckley	648	-268
Topeka	801	-109	Fargo	1324	-188	Charleston	549	-274
Wichita	728	-109	Williston	1241	-170	Huntington	585	-233
KY. Lexington	608	-243	OH. Akron-Canton	856	-202	WI. Green Bay	1191	-131
Louisville	574	-241	Cincinnati	671	-250	La Crosse	1102	-166
LA. Baton Rouge	153	-189	Cleveland	858	-195	Madison	1092	-154
Lake Charles	173	-151	Columbus	766	-220	Milwaukee	1004	-172
New Orleans	136	-182	Dayton	772	-219	WY Casper	1032	-35
Shreveport	242	-196	Toledo	907	-191	Cheyenne	1012	12
ME. Caribou	1490	34	Youngstown	863	-232	Lander	1011	-89
Portland	1093	-83			Sheridan	1070	-19	

## National Agricultural Summary

February 26-March 4, 1990

**HIGHLIGHTS:** Beneficial rains improved winter wheat in the central and southern Great Plains, but the northern Great Plains remained dry. Rain again slowed fieldwork in the Delta, where soil moisture was adequate to surplus. In the eastern Corn Belt and Southeast, soil moisture was adequate. Irrigation resumed in Florida's citrus producing areas.

**SMALL GRAIN:** Rain and above-normal temperatures continued to improve winter wheat condition in the central and southern Great Plains. In Kansas, crop condition was good except in the central and north-central area, where soil moisture was still short. Insect and disease problems were very light. Fields continued to break dormancy in the southern area. Warm weather and ample moisture supplies accelerated winter wheat growth in Oklahoma. Crop condition was good in Arkansas and fair to good in Missouri. Rain improved small grain growth in Texas. The northern Great Plains remained dry. In Nebraska, winter wheat was fair to poor. Wind damaged fields in the northern and western areas. Fields were breaking dormancy in the eastern and southeastern areas but were stressed by lack of moisture. In Montana, winter wheat was fair to good. Growth was good in California. Russian wheat aphid populations continued to increase in the Sacramento Valley. Producers were applying insecticides. Crop condition was good to fair in Washington. In Oregon, crop condition was fair in the east and good to excellent in the west. In the Corn Belt and Southeast, winter wheat was fair to good with adequate moisture supplies. The crop was breaking dormancy in portions of the Corn Belt.

**OTHER FIELD CROPS:** Rain again slowed fieldwork in the Delta. Corn planting began in southern Alabama and Mississippi. In Texas, corn and sorghum planting was slowed by rain. Cotton planting continued in Arizona. Tobacco bed preparation and seeding continued in the Southeast. Tobacco bed condition was excellent in Georgia and good to fair in North Carolina.

**FRUIT AND NUTS:** Irrigation resumed in Florida's citrus producing areas. The early bloom cycle was nearly complete. Early orange harvest was nearly complete. Low temperatures damaged some peaches in Virginia. Pruning operations continued in Texas citrus groves. Frost damaged a few peaches in the Low Plains area. Citrus harvests continued in Arizona and California. Some avocado drop occurred in California. Desert Valencia orange harvest began.

**VEGETABLES:** Some wind damage occurred throughout Florida's major vegetable producing areas. Snap bean, squash, and strawberry harvests were active. Plant City's strawberry harvest was at its peak. Harvest volumes of lettuce, eggplant, and escarole increased. In North Carolina, Irish potato planting was 16 percent complete. Early vegetable planting was underway in Alabama. In Texas, scattered showers slowed vegetable harvests in the Rio Grande Valley and San Antonio-Winter Garden area. Insect populations were heavy in portions of the Rio Grande Valley. Planting resumed in east Texas but was delayed by wet field conditions in the High Plains. In California, the quality of artichokes, broccoli, and cauliflower harvested was variable. Asparagus beds were being prepared for harvest in the central coast area.

**PASTURES AND LIVESTOCK:** Pastures were mostly fair to good in the Delta and East. Rain improved grazing prospects in the central and southern Great Plains. Range conditions continued to improve in California.

## 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 0.50 in.; 1.00 to 2.00 in. north, 3.00 to 4.00 in. isolated areas. Temperatures near normal to 2° above normal.

Acreage intended for spring planting 11% prepared, 20% 1989. Fieldwork progress 73% behind normal, 1 to 3 weeks; 27% on schedule. Few fields corn planted south. Winter wheat 11% poor, 43% fair, 46% good. Pastures 2% very poor, 15% poor, 46% fair, 37% good. Livestock 48% fair, 52% good. Hay, roughage supplies for remainder of feeding season 14% short, 80% adequate, 6% surplus. Primary activities: Routine care of livestock, poultry, catfish; maintenance, repair of equipment; planting spring potatoes, early vegetable crops, as weather permitted; top dressing winter annuals, cool season grasses; soil testing; preparing tax forms; farm planning.

**ARIZONA:** Unseasonably warm, scattered clouds; precipitation none to 0.15 in. Temperatures 47 to 85° low elevations, 20 to 78° upper elevations; 5 to 12° above normal.

Cotton fieldwork continued, applying pre plant fertilizers, herbicides, listing, pre irrigation; planting underway southwest, less than 5% statewide. Alfalfa harvest activity mostly light; controls for Egyptian alfalfa weevil applied west; 78% good, 21% fair; crop remained dormant southeast. Small grains 75% jointing, 52% 1989, 51% avg.; heading 16%, 5% 1989, 3% avg.; 75% good, 25% excellent. Mixed vegetables, valencia oranges, grapefruit harvests continued. Cattle, calves mostly fair; higher elevation ranges received some moisture, mid elevations received little to none; supplemental feeding continued; stockwater supplies short most areas; sheep, lambs good.

**ARKANSAS:** Temperatures continued near normal. Widespread rain statewide middle of week. Extremes 20°; 74°. Rainfall 0.27 to 1.63 in.

Soil moisture adequate to surplus. Very little land preparation. Wheat good, some fertilizer applied. Fruit potentials good. Pastures growing. Livestock good.

**CALIFORNIA:** Warm temperatures due to high pressure gave way to cooling as warm low pressure approached coast bringing rainfall northern, central portions State. Very light precipitation southern most parts.

General rains north, central weeks end interrupted field activities. Small grains good growth, most fields good. Russian wheat aphid building large numbers Sacramento Valley, southern Monterey County, Lancaster area. Controls being applied. Land preparations cotton, other spring crops active. Seeding sugarbeets, safflower increased. Rodent control underway sugarbeets, alfalfa. Normal cultural work active. Almonds, deciduous tree fruit blooming. Avocado drop. Grapefruit, lemon, navel orange harvests active. Desert valencia orange picking begun. Artichokes moderate supply, variable quality. Broccoli heavy supply central coast, variable quality. Cauliflower light to heavy supply, variable quality. Asparagus beds being prepared harvest. Planting processing tomatoes greater westside. Replanting vegetables desert. Livestock good statewide. Range, pasture conditions, water supplies continued improvement due to recent rainfall. Supplemental feeding necessary. Sheep graze on crop residues.

**COLORADO:** On 30th light snow, drizzle fell across the eastern plains, foothills with 1.00 to 3.00 in. of new snow in the northern, central mountains. Precipitation occurred 31st with moisture trace to 1.00 in. Some mountain locations received up to 5.00 in. of new snow during the remainder of the week. Temperatures 4 to 6° above normal in the southeast, 8 to 10° above normal in the northeast 10 to 15° above normal in the west, San Luis Valley.

Calving, lambing is progressing favorably, very limited amount of fieldwork has been completed in preparation for seeding spring grains. Recent moisture has eased some earlier concern about the condition of the winter wheat.

**FLORIDA:** Temperatures 1 to 3° above normal most areas. Warmest temperatures mid or upper 70s across north to low 80s central, south. Lows mid 30s interior Panhandle, 40s northeast, central Peninsula, upper 50s southeast coast. Rain across State late week, mostly under 0.50 in.

Soil moisture Panhandle varied adequate to surplus; Peninsula mostly adequate. Dry weather welcomed Panhandle, wet areas of northern Peninsula. Tobacco transplanting underway. Corn planting, land preparation spring seeded crops active. Sugarcane harvest continued active. Pasture improved, heavier soils, low lying areas Panhandle as soils dried. Elsewhere, progress good; however, many areas need more rain to promote growth. Panhandle pastures generally fair to good; Peninsula mostly fair to good, few dry pockets remained poor. Cattle, calves fair to mostly good. Windy weather with few showers, irrigation all citrus areas, abundant new growth, early bloom cycle almost complete. Early orange harvest nearly over, salvage harvest freeze damaged valencias continues. Tangelo, Honey tangerine harvest almost complete. Temple harvest slowing few good groves remain. Limited wind damage throughout major vegetable producing areas. Rain late week, beneficial. Harvest continued active snap beans, squash, strawberries. Also good volume available cabbage, carrots, celery, peppers, radishes. Increased volume lettuce, eggplant, escarole also available. Plant City strawberry harvest at peak.

**GEORGIA:** Temperatures above normal. Freezing temperatures north, east central 27th, mountains over weekend. Coldest lows, mid 20s mountains, mid, upper 30s southeast. Warmest mid, upper 60s north, upper 70s extreme southwest. Rainfall heaviest northern half 1.00 to 2.00 in. Local 3.00 in. mountains, under 0.50 in. south, southeast less than 0.10 in.

Soil moisture adequate to mostly surplus. Increased land preparation, small grain top dressing. Heavy rains weekend saturated fields. Small grains fair to good. Bacterial soft rot in onions. Tobacco plants excellent. Corn planting continued, southwest. Pastures poor to good; mostly fair. Livestock fair to good.

**HAWAII:** Heavy rainfall over windward, mountain areas throughout island chain. Gusty northeast winds 15 to 25 mph, overcast skies kept temperatures low. Temperatures low 60s to high 70s. Rainfall none to 17.3 in.

Days suitable for farm work 7.0. Papaya production continue in seasonal decline. Ginger

root planting, harvesting operations hampered by wet field conditions. Pineapple harvesting steady.

**IDAHO:** Temperatures near normal. Precipitation above normal in the southwest, south central, east.

Calving, lambing in full swing, progressing well across the State. Livestock good to excellent. Hay, roughage supplies short to adequate areas of north. Adequate elsewhere. Some onion, sugarbeet field preparation southwest, general fieldwork north. Fertilizer, manure application south central, east. Some marketing grain, potatoes.

**ILLINOIS:** Temperatures near normal across State. Rainfall 0.20 in. or less south, scattered showers elsewhere.

Livestock good to excellent.

**INDIANA:** Temperatures 1 to 2° below normal. Lows upper 20s, highs upper 30s to low 40s. Precipitation up to 0.30 in. Dryness eased flooding of low lying areas.

Fields remain wet most areas. Other activities: Top dressing wheat, hauling manure, plowing, spreading fertilizer, machinery repair, tax preparation, purchasing supplies, processing tobacco, selling grain, attending meetings, care of livestock. Wheat fair to good. Hay supplies adequate. Livestock mostly good.

**IOWA:** Temperatures 12 to 18° above normal. Extremes 7°; 65°. No precipitation across State.

Livestock mostly good. Fertilizer being applied some areas. Tending livestock, repairing machinery, bookkeeping, main activities.

**KANSAS:** Temperatures 4 to 6° above normal northern third, 3 to 4° above normal central, near normal southern third. Precipitation light to non existent central, northern areas, 0.31 to 0.88 in. southern counties.

Days suitable for fieldwork 2.0. Topsoil 18% short, 64% adequate, 18% surplus. Subsurface 47% short, 53% adequate. Wheat generally good except central, north central where soil moisture short to very short. Stands southern areas breaking dormancy, showing growth. Insect, disease problems very light. Range, pasture on short side; hay, forage supplies generally adequate. Lambing, calving full swing; very few problems. Farmers top dressing wheat, applying herbicides.

**KENTUCKY:** Week began with lows in teens, highs 30s on 26th. Warmer temperatures rest of week. Readings near seasonal normals. Precipitation below normal, 0.25 in. west, north to 0.70 in. southeast. Rain fell mid week, 2nd. Sunny, dry weekend.

Return of cold temperatures caused limited stress to winter wheat, fruit damage unknown. Soil moisture adequate to surplus. Burley tobacco markets held final sales. Tobacco seedbeds will be prepared as condition permit. Cold, wet weather stressed newborn calves.

**LOUISIANA:** Temperatures normal. Extremes 30°; 79°. Rainfall 0.84 to 1.69 in.

Days suitable for fieldwork 1.7. Soil moisture 8% adequate, 92% surplus. Spring Plowing 8%, 9% 1989, 10% avg. Corn planted 0%, 0% 1989, 2% avg. Much too wet to plant. Wheat 22% poor, 45% fair, 33% good. Warm weather caused rapid development, a problem if a freeze occurs. Livestock 43% fair, 57% good. Pasture 31% poor, 58% fair, 11% good. Top dressing very limited due to wet fields. Vegetables 19% very poor, 48% poor, 33% fair.

**MARYLAND & DELAWARE:** **MARYLAND:** Precipitation 0.16 in. Temperature 32°, normal 37°. Extremes 7°; 64°.

**DELAWARE:** Precipitation 0.32 in. Temperature 33°, normal 38°. Extremes 8°; 67°.

**MICHIGAN:** Temperatures 6° below to 1° above normal. Extremes -12°; 52°. Precipitation none to 0.70 in. across State. Cold, dry conditions with lots of sunshine.

Adequate snowcover most areas. Major activities: Repairing equipment, attending auctions, plowing snow, marketing hay, caring for livestock, purchasing seed, chemicals, fertilizer needed for spring planting. Livestock good. Feed supplies adequate. Calving, lambing activity increasing.

**MINNESOTA:** Temperatures near normal to 9° above normal. Extremes 29°; 61°. Precipitation trace to 0.18 in. Greatest weekly total 0.46 in.

**MISSISSIPPI:** Temperatures near normal. Extremes 24°; 78°. Dry north, south. Wet central. Rainfall 1.48 in., 0.19 above normal.

Days suitable for fieldwork 1.4. 0.7 1989. 2.9 avg. Soil moisture 15% adequate, 30% surplus, 55% excessive. Wheat 1% very poor, 10% poor, 50% fair, 36% good, 3% excellent; 22% jointing. Aerial spraying of wheat approaching completion. Livestock 5% poor, 50% fair, 45% good. Pastures 5% very poor, 15% poor, 50% fair, 30% good. Hay supplies 25% short, 75% adequate. Feed supplies 30% short, 70% adequate. Corn, watermelon planting starting in southern counties. Activities: Limited tillage north, shopwork statewide, wheat fertilizing Delta counties.

**MISSOURI:** Temperatures 3° below normal southern areas, near normal elsewhere. Precipitation less than 0.25 in. north, around 0.50 in. south.

Topsoil 18% short, 63% adequate, 19% surplus. Subsoil 60% short, 32% adequate, 8% surplus. Moisture shortages worst northern third, main surplus southeast. Winter wheat 11% poor, 61% fair, 28% good. Some uneven wheat stands, acreage losses from winter freeze considered minor. Showers generally preventing field activities. Livestock 14% fair, 78% good, 8% excellent. Damp weather contributing to pneumonia problems, mostly minor. Hay 5% short, 77% adequate, 18% surplus. Livestock water supply 5% critically short, 21% short, 74% adequate, main shortages northern counties.

**MONTANA:** Temperatures statewide much above normal. Southwest had 0.01 to 0.11 in. precipitation. Dry in all other areas.

Winter wheat 1% very poor, 14% poor, 41% fair, 39% good, 5% excellent. Snowcover protection 92% poor, 7% fair, 1% good. Wind damage to winter wheat 32% none, 40% light, 21% moderate, 7% heavy. Cattle, sheep receiving supplemental feed 96%. Grazing 96% open, 2% difficult, 2% closed. Calving 38% complete, lambing 14%.

**NEBRASKA:** Temperatures 6 to 9° above normal. Extremes 11°; 68°. Precipitation traces up to 0.10 in.

Winter wheat 26% poor, 64% fair, 10% good. Some starting to green up in east, southeast, suffering from dry conditions. Blowing soil caused damage to some fields in west, north. Feed grain supplies average; hay, forage average, to below average; pasture, range below average. The open winter helped stretch short hay supplies as cattle in some areas still grazing stalks. Hay being moved from storage areas to feedlots, calving areas. Cattle good condition, making excellent gains. Calving considered to be 21% complete,

excellent condition. Lambing also well underway. Main activities: Equipment maintenance, calving, lambing, attending educational meetings, tax preparations. Some fieldwork done in southern half of State, consisting mainly of cutting, shredding stalks, disking, fertilizer application. Most areas too dry for fieldwork. Some oats planted in southeast. No snowcover.

**NEVADA:** High pressure ridge dominated weather pattern most of period, weak low pressure system brought precipitation, cooler temperatures north weekend, while south remained dry, warm. Temperatures above normal all areas. Light, scattered showers, gusty winds delayed fieldwork. Light precipitation not adding significantly to yearly water supply.

**NEW ENGLAND:** Precipitation (rainfall, water equivalent of snow) less than 0.25 in. for north, 0.25 to 0.50 in. south, extreme 1.10 in. Wigwam, Connecticut. Temperatures single digits near Canadian border to mid 20s along south coast. Temperatures below normal. Major farm activities: Repairing machinery, tending livestock, moving crops from storage, maple sugaring.

**NEW JERSEY:** Temperatures much below normal, 28° north, 31° south, 35° coastal. Extremes 4°; 58°. Precipitation much below normal; 0.01 in. north, 0.02 in. south, 0.09 in. coastal. Heaviest 24 hour total 0.11 in. on 3rd, 4th.

Farmers performed machinery maintenance, repair; livestock tending; normal winter chores.

**NEW MEXICO:** Weather disturbance brought rain/snow early in the week to the higher elevations, northeastern plains. Extremes 11; 78°.

**NEW YORK:** Week began with temperatures well below normal. Numerous low temperatures below zero, highs only in the teens. Temperatures moderated mid week, warming trend until weekend. Highs 50s. Extremes -21° Stillwater, 59° Jamestown. Snow fell early week in much of area south of Adirondacks, heaviest in Hudson Valley, Catskills. Rest of week precipitation was sparse. Major Activities: Tending livestock, moving crops from storage, machinery repair, attending meetings. Producers tapping trees, readying for upcoming maple syrup season. An early sap run during the week as temperatures warmed to unseasonable levels.

**NORTH CAROLINA:** Temperatures 1 to 2° below normal across State. Precipitation 0.13 to 2.84 in.

Days suitable for fieldwork 3.5. Soil moisture 69% adequate, 31% surplus. Pasture 1% very poor, 6% poor, 45% fair, 47% good, 1% excellent. Livestock feed from pasture 32%. Crop condition: Wheat, 26% fair, 72% good, 2% excellent; oats 1% poor, 30% fair, 68% good, 1% excellent; barley 27% fair, 71% good, 2% excellent; rye 23% fair, 74% good, 3% excellent; tobacco plant beds 2% poor, 35% fair, 58% good, 5% excellent. Irish potatoes planted 16%; cabbage transplanted 22%. Hay, roughage supplies 2% short, 91% adequate, 7% surplus. Feed grain supplies 1% very short, 8% short, 88% adequate, 3% surplus. Major activities: Tobacco bed preparation, seeding, topdressing small grains, tending livestock. Other activities included: Land preparation, fertilizing pastures, general farm maintenance.

**NORTH DAKOTA:** Mild, dry statewide. Temperatures 5° above normal northeast to 13° above normal

northwest. Precipitation none southern one third to 0.04 in. northeast.

Soil moisture below normal. Snow depth 0.10 in. Snowcover protection: rye 1% sufficient, winter wheat none, alfalfa 6%. Winter wheat 8% very poor, 42% poor, 48% fair, 2% good; rye 9%, 43%, 48%, none. Livestock good, calving 15% completed, lambing 32%, shearing 38%. Feed supplies remained mostly adequate. Pastures open for grazing 86%. Roads open, dry.

**OHIO:** Temperatures few degrees subnormal. Highs mid 30s to mid 40s. Lows upper teens to mid 20s. Very little precipitation; mostly less than 0.25 in.

Dry weather helped fields recover from February soakings. Soil temperatures normal; mid to upper 30s. Winter wheat in southern areas greening.

**OKLAHOMA:** Temperatures 1° above normal west central to 9° above normal southeast. Precipitation 0.37 in. Panhandle to 1.54 in. central.

Days suitable for fieldwork 4.7. Topsoil 5% short, 75% adequate, 20% surplus. Subsoil 7% short, 93% adequate. Wheat 5% fair, 94% good, 1% excellent. Condition improved significantly during February. Warm temperatures, ample moisture supplies produced upsurge in growth. About 5% acreage jointing. Wet fields hampered soil preparation for row crop planting. Cattle good; marketing stable, prices down from preceding week.

**OREGON:** Coast, central area temperatures above normal. All other areas were below normal, especially extreme south central section where Klamath Falls -8°, Lakeview -4°. Little precipitation recorded southwest valleys. High plateau 0.80 to 1.00 in. Coast 0.50 in. Elsewhere 0.20 to 0.30 in., except far east less than 0.10.

Soil moisture mostly short east, mostly adequate west. Winter wheat fair east, good to excellent west. Grass seed fields fertilized, sprayed with herbicides Willamette Valley. Spraying, training trellis crops west. Field preparations underway for green peas Willamette Valley. Livestock mostly good. Range, pastures fair to good.

**PENNSYLVANIA:** Commonwealth experienced a cold, dry week with a warming trend at weekend. Temperature 25°, 4° below normal. Extremes -10; 58°. Precipitation 0.05 in., 0.62 in. below normal.

Activities: Spreading manure, caring for livestock, maintaining machinery, fixing fence, cutting fire wood.

**PUERTO RICO:** Rainfall 0.69 in., 0.15 in. above normal. Highest weekly total 3.17 in. Pico Del Este Luquillo, 2.10 in. Maunabo 2SE, 1.43 in. Quebradillas. Highest 24 hour total 1.74 in. Pico Del Este Luquillo. Temperatures 76 to 77° on coast, 69 to 71° Interior. Extremes 46; 89°.

**SOUTH CAROLINA:** Temperatures varied from normal to 3° above normal. Precipitation over 2.00 in. mountains to none along the coast.

Farm activities: Concern over tobacco beds due to cold weather, land preparation for spring planting.

**SOUTH DAKOTA:** Temperatures 1 to 13° above normal. Extremes -2°; 66°. Slight precipitation 2 locations for past week with all other locations no precipitation. Yearly precipitation below normal all but one location. Range 0.18 in. above normal to 1.31 in. below normal. Snowcover in protected areas of the Black Hills.

**TENNESSEE:** High pressure dominated early week. At mid week a developing weather system in Louisiana spread rain into State through 3rd. On 4th fair, cool conditions returned to State. Temperatures above normal west, slightly below normal east; 4° above normal Memphis, 3° below normal Crossville. Extremes 16°, 70°. Precipitation below normal statewide. Representative amounts: 0.27 in. Jackson, 1.98 in. Chattanooga. Departure for week 0.50 in. below normal.

Soil moisture short to adequate west, mostly adequate east. Primary activities: Tobacco bed preparation, seeding, tending livestock, land preparation, general farm maintenance.

**TEXAS:** Most areas received moisture. Significant rains occurred. Temperatures below normal around mid week much State. Warm conditions started week, warming trend occurred over last weekend. The Lower Valley showed greatest departure from normal temperatures with minus 4. Over southern area off normal by minus 1. The Rolling Plains slightly cool. Rest of State average temperatures. Rainfall above normal all divisions. Rainfall departures greatest southern areas nearly +0.90 in.

**Crops:** Small grain continued benefit from good moisture conditions in Blacklands, Central Texas. Many fields the Low Plains, Cross Timbers showing improved growth, greening. Limited amount top dressing occurred in Blacklands. Fields planted for grazing beginning provide more forage. Isolated fields showing increased armyworm problems. Corn, grain sorghum planting minor delays Valley, Coastal Bend because scattered showers. Producers in central areas, Blacklands ready to begin as fields dry. Most pre plant operations completed. Land preparation in Plains slowed by wet conditions. Pre watering operations curtailed some. Corn 1% planted, 5% 1989, 11% avg. Sorghum 0% planted, 3% 1989, 6% avg.

**Commercial Vegetables:** In the Rio Grande Valley, scattered showers limited harvest some areas for cabbage, celery, lettuce. Cantaloupe, peppers showing varied stands. Insect populations heavy some fields. Pruning operations continued citrus groves. San Antonio Winter Garden harvesting cabbage, spinach slowed by rain. Onions making good progress; some stands think. Eastern areas planting resumed. High Plains onion planting delayed some fields because cold, wet conditions. In the Trans Pecos, onions continued set out. Peaches continued to bloom across State. Some isolated damage occurred Low Plains due frost on early blooming trees.

**Range and Livestock:** Improvement in range pasture condition continued with additional moisture. Much needed rain fell many areas parched southern areas. Growth greening many grasses increased. Calving, lambing activities continued steady. Both crops look good. Feeding activity steady.

**UTAH:** Light to moderate precipitation extreme northwestern corner, few sprinkles elsewhere.

Temperatures 6° above normal except Uinta Basin, fog produced maximums 7° below normal, minimums 1° below.

Warm temperatures further depleted snowcover for field crops, decreased the mountain snow pack. Light rains near the end of the week helped replenish the low soil moisture levels in northern areas. Major farm activities include: Calving, lambing, farm maintenance.

**VIRGINIA:** Weather conditions were relatively dry, cool with temperatures about 5° below normal. Extremes -4°; 68°. Precipitation sparse with most areas receiving 0.25 in. or less. Western areas 0.50 in. or more.

Days suitable for fieldwork 3.2. Topsoil 20% surplus, 80% adequate. Pasture 10% excellent, 51% good, 21% fair, 13% poor, 5% very poor. Alfalfa 4% excellent, 58% good, 19% fair, 16% poor, 3% very poor. Barley 5% excellent, 47% good, 42% fair, 6% poor. Wheat 11% excellent, 45% good, 37% fair, 7% poor. Peach 8% good, 33% fair, 44% poor, 15% very poor. Tobacco planted 44% good, 56% fair. Maple syrup production, topdressing small grains continue. Tobacco planted seeding more active, pruning fruit trees, planting potatoes, plowing. Peach tree damage from the cold spell range from no damage to extensive damage.

**WASHINGTON:** Temperatures normal to 6° above normal, east; 1 to 7° above normal, west. Precipitation none to 0.01 in., east; none to 0.21 in., west.

Days suitable for fieldwork 4.1. Soil moisture 20% short, 70% adequate, 10% surplus. Range, pasture 65% short, 35% adequate. Hay, other roughage 25% very short, 15% short, 55% adequate, 5% surplus. Field activities increased where soil moisture levels permitted planting, fertilizer application, weed control. Wheat 5% poor, 30% fair, 65% good. Pruning of caneberrries, fruit trees continued. The daffodil harvest was beginning, while the rhubarb harvest was tapering off. Calving, lambing continued, pastures were beginning to green up in western areas.

**WEST VIRGINIA:** Temperature 33°, 1 to 4° below normal. Extremes -13°; 59°. Precipitation 0.45 in., also below normal.

Days suitable for fieldwork 3.1. Soil moisture 9% short, 56% adequate, 35% surplus. Livestock good to excellent. Calving 39% complete; lambing 38% complete. Feed supplies adequate. Wheat, barley fair to good. Farm activities: Calving, lambing, feeding cattle, plowing.

**WISCONSIN:** Temperature 23°. Extremes -18°; 56°. Precipitation trace to 0.10. Snowfall trace to 1.00 in. north 26th; 1.50 in. north 3rd; 1.00 to 3.00 in. northeast 4th.

**WYOMING:** Temperatures above normal. Precipitation well below normal.

Winter wheat fair to good. Livestock mostly good, with supplemental feeding continuing. Calving, lambing, shearing becoming more active. Warmer weather reducing stress.

## International Weather and Crop Summary

### HIGHLIGHTS

February 25-March 3, 1990

**WESTERN USSR** ... The eighth consecutive week of unseasonably warm weather covers winter grains over the region.

**NORTHWESTERN AFRICA** ... Continued unseasonably warm, dry weather stresses winter grains in or nearing reproduction.

**EUROPE** ... A late-winter storm brings high winds and heavy rain to much of the north. Unfavorable dryness continues in Italy.

**SOUTH ASIA** ... Continuing unseasonable rain across the north increases irrigation reserves but causes local flooding and crop damage.

**EASTERN ASIA** ... Heavy rain persists across the south. Abnormally cool temperatures halt growth of crops in the southeast.

**SOUTHEAST ASIA** ... Heavy rain covers southern Indonesia. Unseasonably heavy rain continues over Indochina.

**SOUTH AFRICA** ... Light to moderate rain covers the area. Corn is filling to maturing.

**SOUTH AMERICA** ... Variable showers fall over south-central Brazil and Argentina. Early summer crop harvesting is underway.

**AUSTRALIA** ... Much needed heavy rain helps alleviate dryness for sugarcane in the northeast.

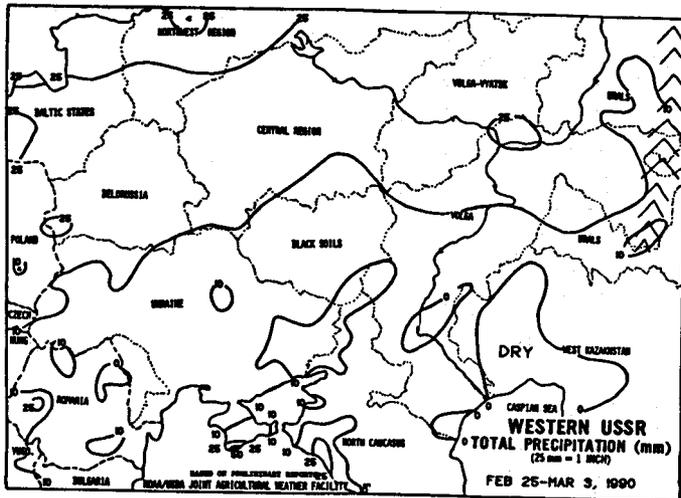
## FEBRUARY 1990

MONTHLY DATA FROM SELECTED FOREIGN CITIES  
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA  
\*\*\* = DATA NOT AVAILABLE

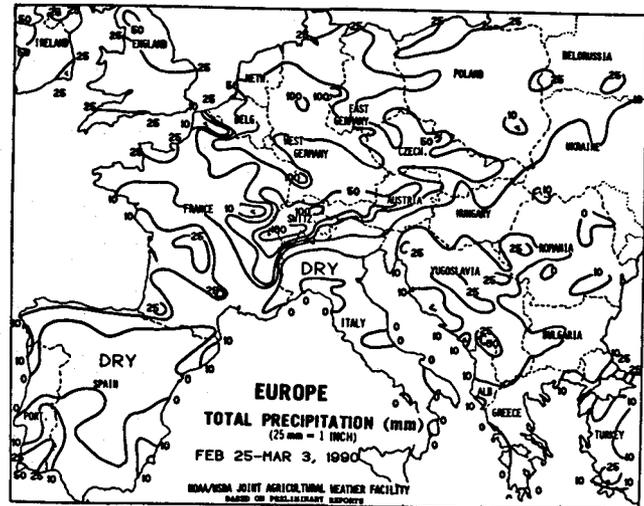
COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
	AVG MAX	AVG MIN	HI	LO	AVG	DPART F/NRM	TOTAL	DPART F/NRM
NORWAY OSLO	4	0	11	-10	2	9.9	93.5	46.6
SWEDEN STOCKHOLM	6	2	13	-5	4	7.3	71.3	42.3
FINLND HELSINKI	3	-1	10	-9	1	7.8	115.1	81.2
U KING GLASGOW	9	4	13	-1	6	2.1	205.0	116.9
EDINBURGH	9	4	14	-2	6	2.8	110.8	69.7
BIRMINGHAM	11	5	18	0	8	4.2	105.0	56.4
LONDON	11	6	17	0	8	4.1	133.0	80.3
IRELND DUBLIN	10	5	15	0	7	2.4	114.8	63.6
ICELND REYKJAVIK	0	-3	3	-12	-2	-2.0	21.3	-49.8
DENMRK COPENHAGEN	8	3	13	-4	5	5.4	36.8	-2.3
LUXEMB LUXEMBOURG	10	3	17	-2	6	4.9	140.6	80.6
SWITZL ZURICH	11	4	18	-1	7	6.5	143.2	63.4
GENEVA	12	3	19	-3	7	5.0	157.3	77.2
FRANCE PARIS	13	6	20	1	10	5.5	33.5	-12.3
STRASBOURG	13	3	21	-4	8	5.6	70.6	35.2
BOURGES	14	5	23	-1	10	5.3	81.3	23.4
BORDEAUX	16	9	25	3	12	6.1	45.0	-41.1
TOULOUSE	16	8	22	0	12	5.6	51.4	-0.8
MARSEILLE	17	9	22	3	13	5.3	40.8	-14.3
SPAIN VALLADOLID	14	5	21	1	10	4.1	10.1	-26.4
MADRID	17	4	22	1	10	3.9	1.3	-49.1
SEVILLE	21	9	24	4	14	2.6	0.1	-83.0
E GRMY LEIPZIG	11	4	19	-1	7	6.9	33.7	2.4
DRESDEN	11	4	20	0	7	8.0	46.8	10.8
W GRMY HAMBURG	10	4	17	-1	7	6.7	70.5	30.3
BERLIN	11	4	19	0	7	6.8	51.5	18.4
DUSSELDORF	12	6	19	1	9	6.5	86.4	33.3
STUTTGART	12	1	21	-6	6	5.7	68.0	21.2
NURNBERG	10	1	19	-5	6	5.1	74.7	35.0
MUNICH	11	0	21	-6	6	5.9	100.3	45.8
AUSTRI VIENNA	11	1	18	-4	6	5.3	37.3	7.3
INNSBRUCK	10	-1	18	-8	5	4.0	193.0	152.2
CZECH PRAGUE	9	1	18	-5	5	6.0	26.3	5.4
POLAND WARSAW	9	1	17	-4	5	7.4	19.3	-5.3
LODZ	9	2	18	-5	5	6.8	28.6	-2.4
KATOWICE	10	1	19	-3	5	7.4	37.1	1.0
PRZEMYSL	9	2	18	-2	5	7.2	39.2	7.5
HUNGAR BUDAPEST	11	1	19	-3	6	5.2	16.7	-15.1
YUGOSL SARAJEVO	13	-2	21	-7	6	6.8	9.1	-56.9
ROMANI BUCHAREST	9	0	21	-5	5	5.0	17.5	-19.9
BULGAR SOFIA	10	0	20	-6	5	3.1	21.3	-16.8
ITALY MILAN	13	3	24	-1	8	4.4	9.1	-57.6
VERONA	13	3	22	-3	8	3.6	14.9	-35.7
VENICE	11	3	21	-2	7	2.3	16.2	-41.1
GENOA	16	10	22	4	13	3.9	17.8	-73.1
ROME	16	5	21	1	11	1.6	33.2	-36.3
NAPLES	17	6	23	-1	11	2.6	12.4	-81.4
GREECE THESSALONIKA	14	3	20	-2	8	1.3	1.2	-35.9
LARISSA	14	1	21	-6	8	0.5	7.4	-30.7
ATHENS	15	8	22	2	11	0.0	11.9	-24.1
TURKEY ISTANBUL	9	4	15	0	7	1.2	62.5	-7.5
ANKARA	6	-4	14	-8	1	0.2	12.4	-17.6
CYPRUS LARNACA	16	8	19	3	12	0.0	68.2	7.2
USSR TALLINN	4	1	10	-9	2	8.3	99.1	74.3
LENINGRAD	3	0	7	-8	2	9.1	88.6	57.4
KAUNAS	7	2	15	-3	4	9.0	27.6	-3.6
MINSK	5	1	14	-3	3	9.1	29.7	-2.2
KAZAN	-2	-6	4	-20	-4	8.6	36.6	11.9
MOSCOW	2	-1	7	-11	1	8.9	67.1	31.0
SVERDLOVSK	-4	-13	6	-31	-9	4.2	9.4	-10.6
OMSK	-9	-15	1	-26	-12	5.6	24.6	13.1
KUSTANAY	-8	-16	1	-27	-12	4.4	15.8	3.2
KRASNOYARSK	-8	-16	6	-33	-12	4.0	21.3	8.7
NOVOSIBIRSK	-10	-17	1	-29	-13	4.2	25.4	10.2
BARNAUL	-9	-15	1	-28	-12	3.6	36.1	14.1
KHABAROVSK	-10	-20	0	-28	-15	2.2	29.3	18.6
VLADIVOSTOK	-2	-9	4	-22	-6	5.1	26.2	6.5
KIEV	5	0	17	-4	3	7.4	54.4	10.0
LVOV	7	0	18	-5	4	7.1	41.3	-4.9
KIROVOGRAD	5	-1	19	-6	2	6.8	35.8	5.4

BASED ON PRELIMINARY REPORTS

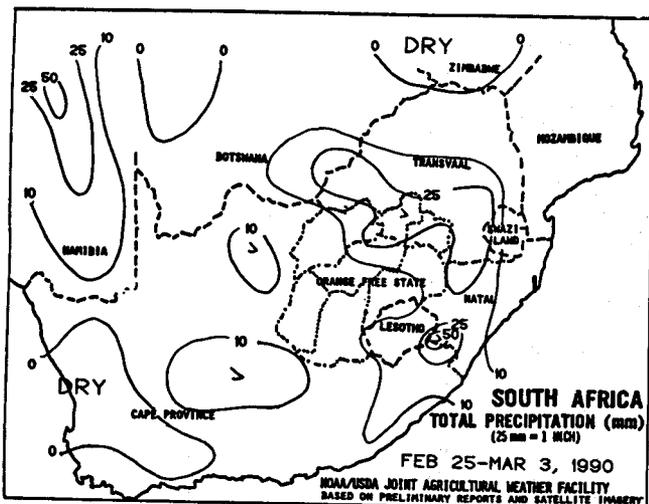




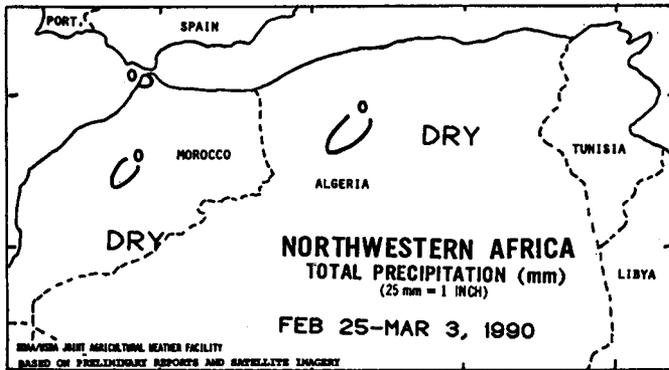
**WESTERN USSR** ... The eighth consecutive week of unseasonably warm weather covered the region. Weekly average temperatures ranged from 8 to 12 degrees Celsius (C) above normal. Highest weekly temperatures ranged from 16 to 20 degrees C in the Ukraine and North Caucasus and 5-10 degrees C in the Central region, Volga Vyatsk region, and the Volga. Precipitation continued light (3-10mm, with isolated amounts in excess of 20mm) and was widespread. Even though most of the major winter wheat 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. The mild weather, however, has caused winter grains to lose winter hardiness, and some reports indicate the crop is greening in the extreme west and south.



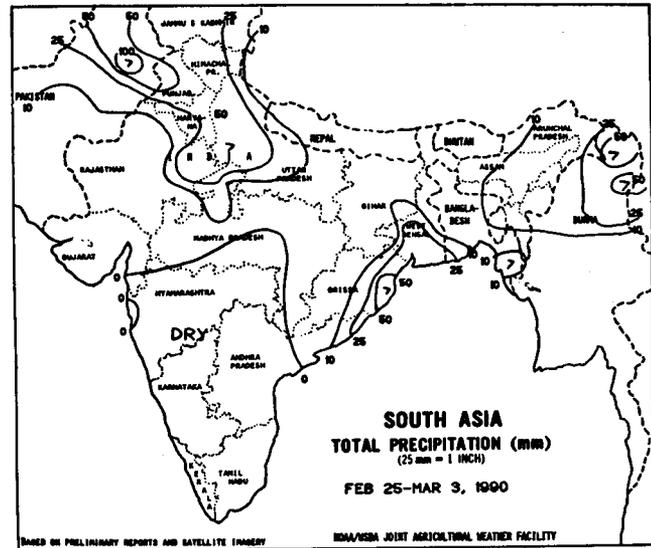
**EUROPE** ... An intense, late-winter storm affected much of northern Europe, beginning in the extreme northwest on the 25th and ending on the 1st in the northeast. The storm brought winds in excess of 100km per hour, moderate to heavy rain and snow (15-40mm, with scattered amounts in excess of 60mm), and extensive property damage to much of the region, especially to northwestern areas. Winter grains in the region remain largely unaffected by the storm, although above-normal precipitation associated with a string of storms since late January has left most northwestern soils at or near saturation prior to the beginning of active vegetative growth. In the south, light to moderate rain (5-20mm, with isolated amounts in excess of 25mm) helped reduce dryness in sections of the Balkans and scattered heavy rain (25-50mm, with isolated amounts greater than 50mm) fell in extreme western and southern sections of the Iberian Peninsula. Much of Italy remained unfavorably dry. Mild temperatures continued (3-8 degrees C above normal) in most crop areas, although colder, more seasonable temperatures returned to western and northern Europe by week's end.



**SOUTH AFRICA** ... Light to moderate rain (5-25mm) swept across South Africa's primary crop regions, with pockets of heavier rain (25-46mm) occurring in the northern Maize Triangle and fringe areas north and east of the Triangle. Temperatures across the region averaged near normal, with highs ranging from the mid-20's to low 30's C. Recent weeks of drier weather in the west have favored corn maturation, while in the east, moisture reserves are generally favorable for late-planted, immature corn. Rainfall was light (3-17mm) over Natal's sugar region. Dry weather returned to the Cape Province, following last week's beneficial rain.

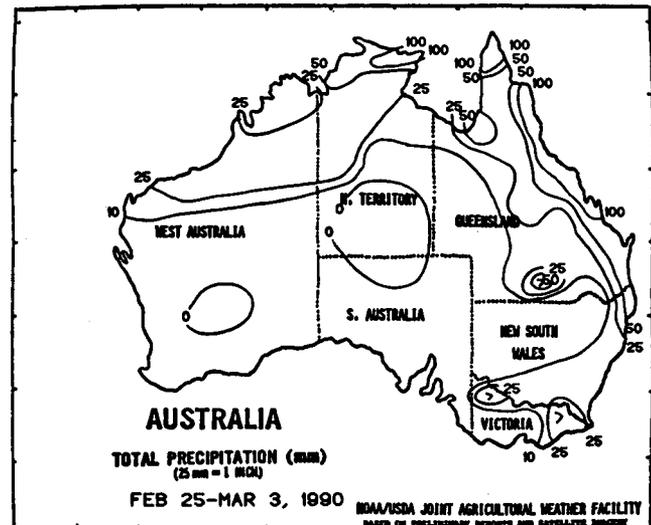


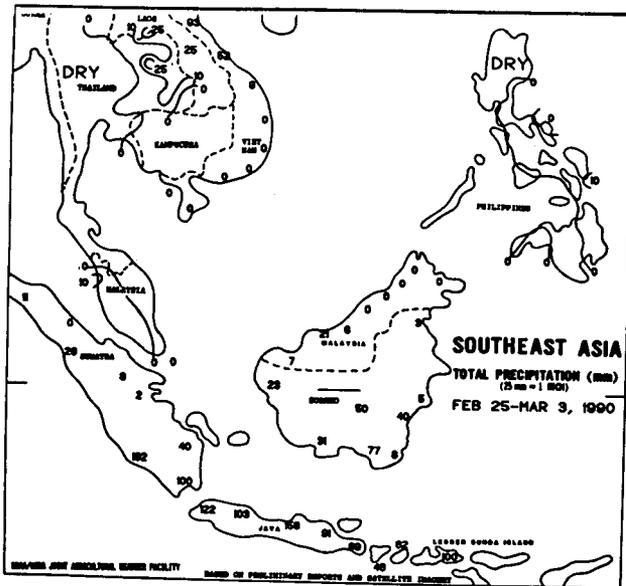
**NORTHWESTERN AFRICA** ... The fourth consecutive week of unseasonably warm, dry weather covered winter grains in Morocco, Algeria, and Tunisia, as dry conditions continued to intensify. Weekly average temperatures were 3-5 degrees C above normal, with the highest weekly temperatures ranging from 23 to 29 degrees C. The continued unfavorably dry weather over the region has reduced yield prospects for winter grains in or nearing reproduction. In Algeria, insufficient moisture in central and eastern areas since the beginning of the growing season has likely stunted plant growth and accelerated crop development. Rain is needed soon to prevent further declines in yield.



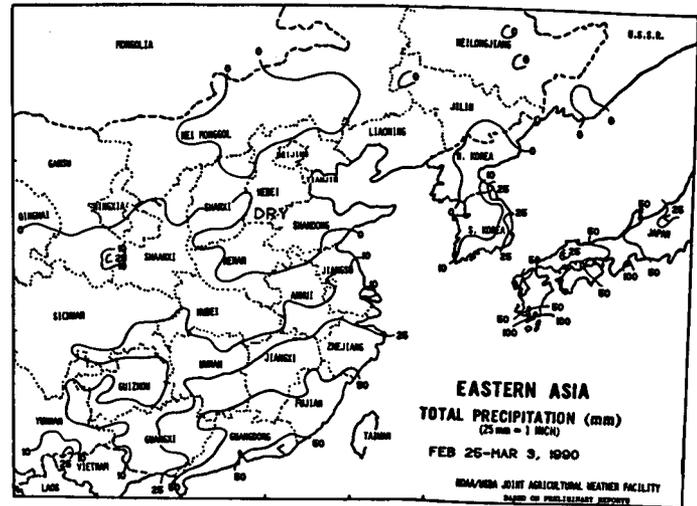
**SOUTH ASIA** ... Moderate to heavy rain (25-50mm or more) fell over winter wheat areas from northern Pakistan to western Uttar Pradesh, continuing the recent trend of unseasonable rainfall that has greatly increased irrigation reserves. Excessive rain (50-147mm), however, in Pakistan and in India from Haryana to western Uttar Pradesh likely caused local flooding and crop damage. Winter wheat is filling to maturing across most areas, necessitating drier and warmer weather for crop drydown and harvesting, which is usually well underway by the end of March. Elsewhere, variable rain (10-52mm) continued to benefit immature rice in the east as dry weather again dominated India's cotton region, favoring late harvesting. Weekly temperatures averaged above normal over southeastern India but 1-4 degrees C below normal elsewhere, reflecting last week's temperature pattern.

**AUSTRALIA** ... Remnants of Tropical Cyclone Greg brought much needed heavy rain (50-100mm, with scattered amounts in excess of 100mm) to nearly all of coastal eastern Queensland, helping to alleviate dryness for vegetative sugarcane. The precipitation was the heaviest to fall in the region since last November. Further inland, moderate to heavy rain (10-40mm) benefited late-planted summer crops but slowed drydown and maturation of cotton and corn across interior eastern Queensland. Summer crop areas of New South Wales remained mostly dry. In the south, scattered rain (5-15mm, with isolated amounts greater than 15mm) fell in most crop areas. Mean temperatures were above normal in the south and near normal in the east.

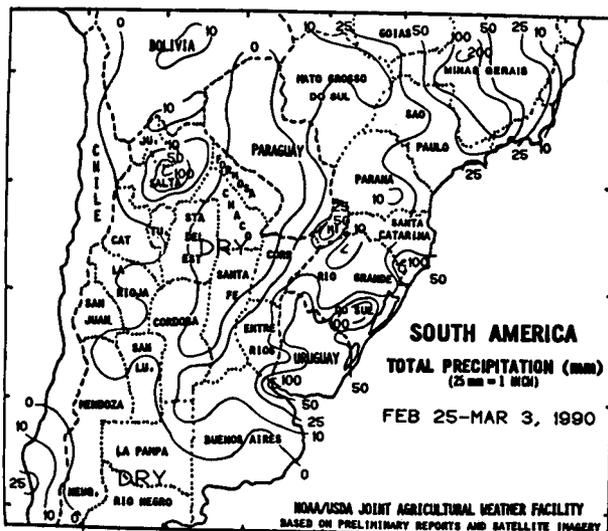




**SOUTHEAST ASIA** ... Variable, unseasonably heavy rain (10-50mm or more) continued for the third consecutive week from eastern Thailand to northern Vietnam, improving moisture reserves. Weekly temperatures averaged below normal over the affected area, but by week's end, seasonably hot weather (highs in the low to mid-30's C) returned to eastern Thailand. Dry weather persisted over peninsular Thailand. Only light rain (25mm or less) covered Malaysia and the northern half of Indonesia, but heavy rain (50-100mm or more) covered southern Indonesia. Excessive rain (100-192mm) continued in southern Sumatra and extended eastward across Java, causing more local flooding. In the Philippines, mostly dry weather covered the islands. Temperatures averaged near to above normal, with highs in the low to mid-30's C, maintaining high evaporative losses.



**EASTERN ASIA** ... Moderate to heavy rain (15-50mm, with isolated amounts in excess of 70mm) continued across much of southern China, Taiwan, and the lower Yangtze Valley, keeping soils near saturation. Much below-normal temperatures (3-7 degrees C below normal) halted growth of recently transplanted early rice in the extreme south and winter grains in southern growing areas in Yangtze Valley. Elsewhere, heavy rain (20-60mm, with isolated amounts greater than 60mm) fell in sections of central and southern Japan and in eastern sections of the Korean Peninsula. Northern Chinese crop areas were mostly dry. Milder-than-normal temperatures (1-3 degrees C above normal) continued across northern growing areas for the fourth consecutive week.



**SOUTH AMERICA** ... In south-central Brazil, locally heavy showers (50-100mm, with scattered amounts of 100-200mm) fell in southern Minas Gerais and Goias in the far northern soybean areas, and in extreme eastern Rio Grande do Sul in the south. In the primary soybean areas, light to moderate showers (1-25mm) spread over western portions of Rio Grande do Sul, Parana, and Sao Paulo, and over most of Mato Grosso do Sul. Moisture is generally adequate for filling soybeans, but recent warm weather hastened soil moisture loss. Early soybean harvesting has begun. In Argentina, showers (10-24mm) benefited immature crops in northern Buenos Aires and extreme southern Santa Fe. Dry weather prevailed again further north, with rainfall averaging 6mm or less throughout Cordoba, most of Santa Fe, and northern cotton areas. The dryness favored early summer crop harvesting. Hot weather late in the week in the north increased stress on immature crops.

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U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service/Climate Analysis Center  
Managing Editor . . . . . Douglas Le Comte  
Meteorologists . . . . . Tom Heddinghaus (202) 382-1444  
Vilhelm Bjerknes, Bob Stefanski, Wes Byrd, and Bob Nester

Subscriptions (202) 447-7917 . . . Joyce Houston

U.S. DEPARTMENT OF AGRICULTURE  
Economics Management Staff  
Editor . . . . . Sharon Lee  
National Agricultural Statistics Service  
Agricultural Statistician . . . Tom Kurtz (202) 447-2157  
World Agricultural Outlook Board  
Agricultural Weather Analysts. . Ray Motha (202) 447-5716  
Tom Puterbaugh, Mark Brusberg, and Jeff Andresen

NOAA/USDA Joint Agricultural  
Weather Facility  
Room 5844 USDA South Building  
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