

# 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

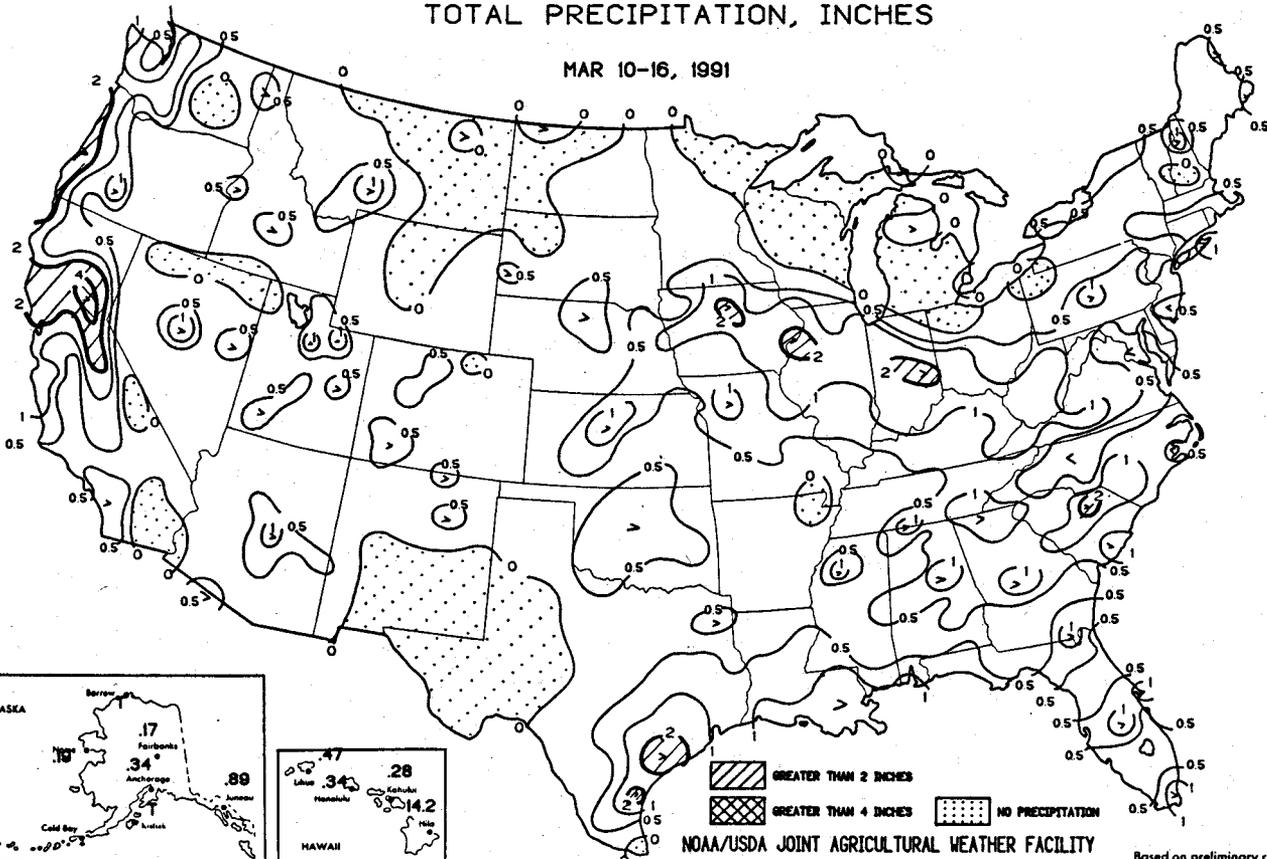
Volume 78, No. 11

Washington, D.C.

March 19, 1991

## TOTAL PRECIPITATION, INCHES

MAR 10-16, 1991



Based on preliminary reports

## HIGHLIGHTS

March 10 - 16, 1991

Weather conditions ran the gamut from snowy to tornadic as a pair of vigorous spring storms and several weaker disturbances sliced across the Nation. To start the week, a front crossing the **central Appalachians** produced up to 6 inches of snow and flashes of lightning. A disturbance traversing the **northern Rockies** dumped heavy snow in and near **West Yellowstone, MT**. **Northern New England** was plagued by the windy, snowy backlash of a stalled storm off the coast. Cool air covered the **East**, resulting in a half dozen record lows in **Florida**. **Tallahassee, FL** reported a minimum of 27° F. A powerful storm entered **California** on Sunday, dropping rain, snow, and small hail. High wind swept through the **Southwest** into the **central and southern Plains**. On Tuesday, howling northwesterly winds combined with topsoil dryness to spawn a major dust storm from **Nebraska** to northern

(Continued to back cover)

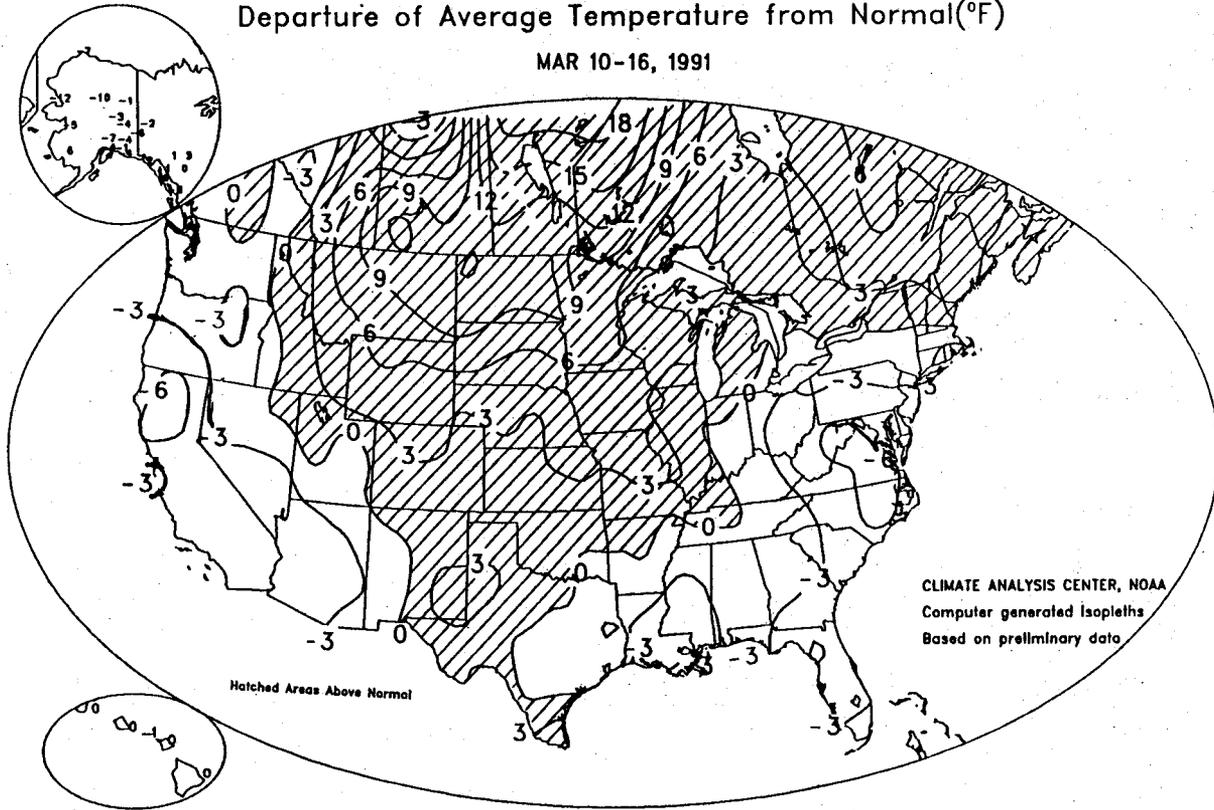
### Contents

Page

Highlights & Total Precipitation .....	1
Temperature Departure & Snow Cover Maps .....	2
Average & Extreme Minimum Temperature Maps ...	3
National Weather Data for Selected Cities ....	4
National Agricultural Summary .....	7
State Summaries of Weather and Agriculture ...	8
International Weather and Crop Summary .....	13
Subscription and Mailing Permit Information ...	16

Departure of Average Temperature from Normal(°F)

MAR 10-16, 1991

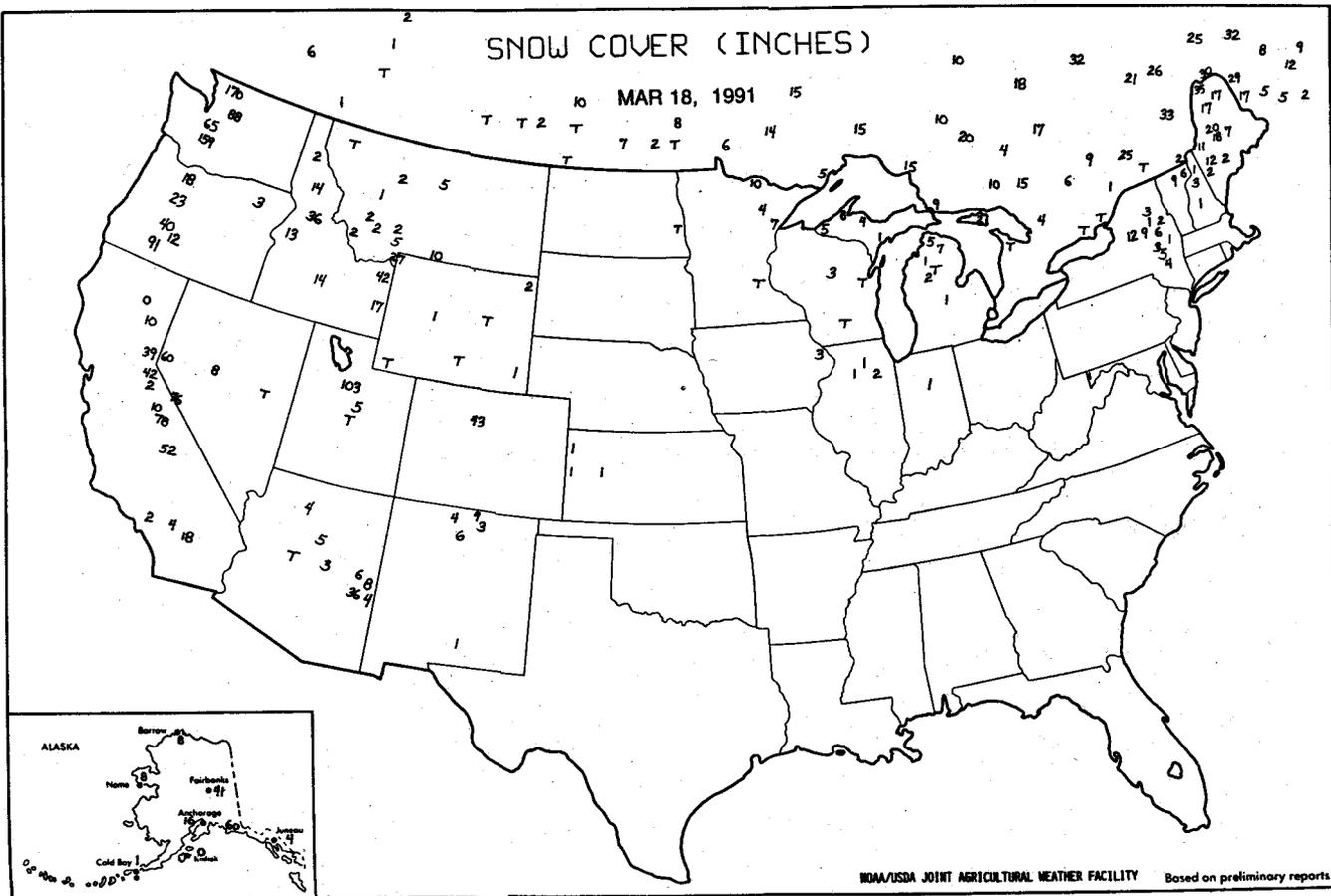


CLIMATE ANALYSIS CENTER, NOAA  
Computer generated isopleths  
Based on preliminary data

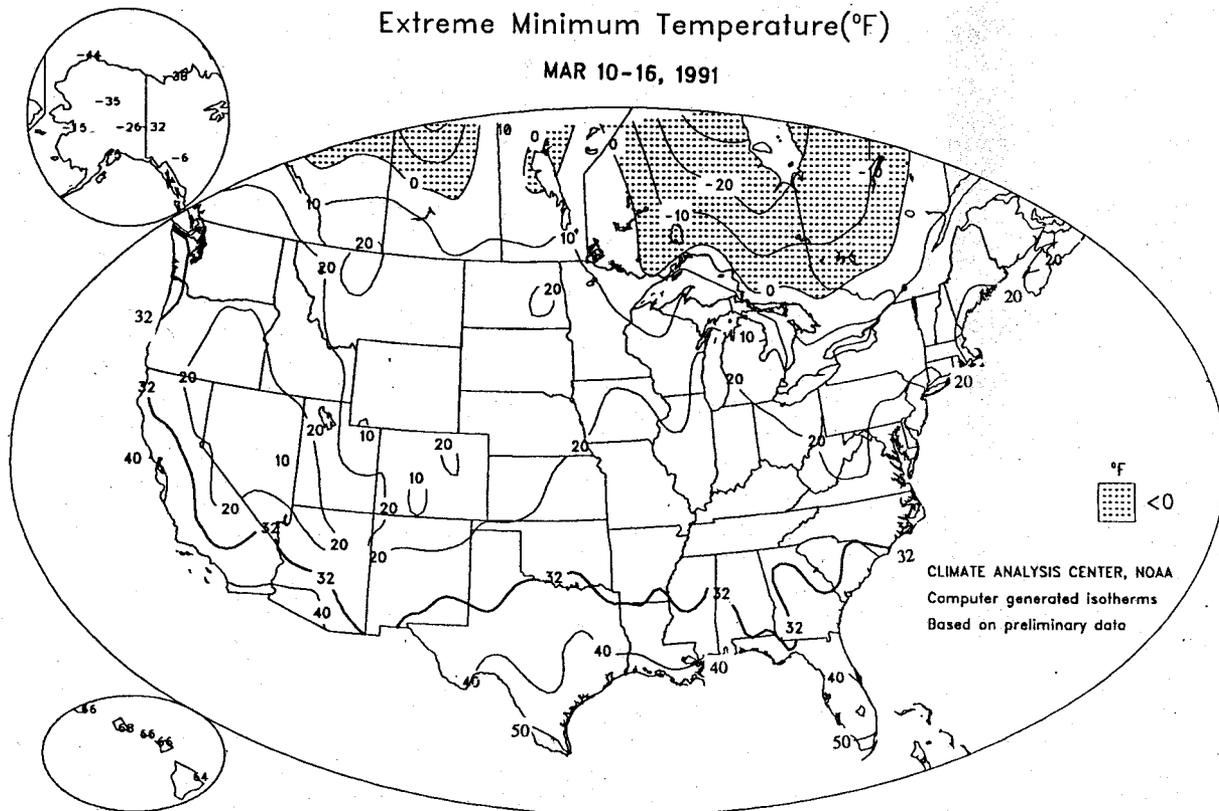
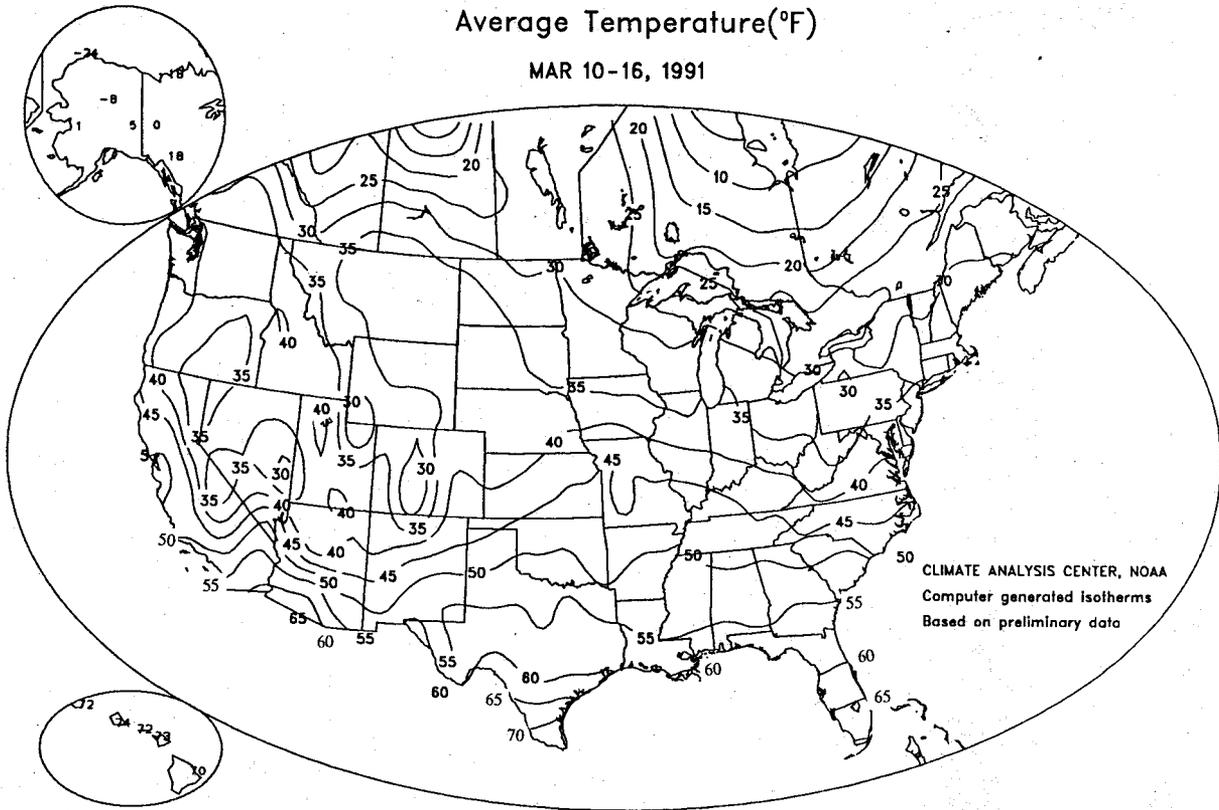
Hatched Areas Above Normal

SNOW COVER (INCHES)

MAR 18, 1991



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports



# National Weather Data for Selected Cities

Weather Data for the Week Ending March 16, 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	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		.01 INCH OR MORE	.50 INCH OR MORE		
AL BIRMINGHAM	62	40	68	29	51	-2	.3	-1.2	.3	3.0	88	10.6	79	81	34	0	2	1	0	0	
MOBILE	67	45	80	38	56	-3	1.0	-.5	.7	4.2	128	23.7	185	88	38	0	0	4	1	0	
MONTGOMERY	66	40	77	27	53	-3	.4	-.9	.4	3.5	114	14.6	124	87	34	0	1	2	0	0	
AK ANCHORAGE	25	10	34	2	18	-5	.3	.2	.1	.4	120	1.5	73	94	61	0	7	5	0	0	
BARROW	-17	-32	-9	-44	-25	-8	T	T	T	T	33	.2	41	75	51	0	7	1	0	0	
FAIRBANKS	19	-13	33	-27	3	-3	1.2	.1	.1	.3	139	1.7	138	89	57	0	7	5	0	0	
JUNEAU	36	29	39	17	32	1	1.2	.4	.9	2.2	122	13.6	148	97	73	0	3	3	1	0	
KODIAK	41	26	49	15	34	2	T	T	T	T	1	20.8	161	81	46	0	6	1	0	0	
NOME	10	-5	20	-25	2	-4	.2	.1	.1	.3	112	1.9	122	83	58	0	7	2	0	0	
AZ PHOENIX	68	49	78	41	59	-1	.5	.3	.5	.6	141	1.8	105	57	20	0	0	1	0	0	
PRESCOTT	49	28	62	23	39	-3	.3	.3	2.1	248	4.2	103	74	33	0	6	3	0	0	0	
TUCSON	68	40	87	34	54	-3	.2	.0	T	.4	116	2.5	140	56	16	0	0	2	0	0	
YUMA	70	51	77	41	61	-3	T	T	T	T	300	1.3	190	49	20	0	0	0	0	0	
AR FORT SMITH	61	39	74	26	50	1	.1	-.8	.1	1.6	82	4.6	74	74	39	0	2	1	0	0	
LITTLE ROCK	60	44	77	37	52	0	T	T	-1.0	T	1.1	46	9.3	93	63	46	0	2	0	0	
CA BAKERSFIELD	59	40	69	35	49	-7	.6	.4	.5	.9	193	1.6	66	89	40	0	0	2	0	0	
EUREKA	52	40	58	35	46	-2	1.9	.8	.8	4.0	146	8.4	56	86	61	0	0	5	2	0	
FRESNO	58	40	64	35	49	-5	.8	.5	.4	3.3	380	4.4	93	92	45	0	0	5	0	0	
LOS ANGELES	59	47	63	40	53	-5	.2	-.3	.1	1.2	120	5.1	78	82	46	0	0	2	0	0	
REDDING	53	36	61	32	44	-9	1.9	.7	.9	6.3	229	11.2	64	96	54	0	2	5	2	1	
SACRAMENTO	57	40	59	32	49	-4	1.3	.8	.6	3.0	260	6.4	80	95	51	0	1	6	0	0	
SAN DIEGO	61	49	64	42	55	-3	.6	.2	.3	1.8	190	5.0	107	84	47	0	0	3	0	0	
SAN FRANCISCO	57	45	59	42	51	-2	1.1	.5	.6	2.9	198	6.9	74	81	54	0	0	5	1	0	
CO DENVER	52	30	68	25	41	4	T	T	.3	.3	53	1.1	66	73	27	0	5	1	0	0	
GRAND JUNCTION	51	31	59	24	41	0	.1	-.1	.0	.2	59	1.3	82	84	31	0	3	2	0	0	
PUEBLO	54	26	69	18	40	1	.3	.2	.3	.7	246	.8	100	78	30	0	6	1	0	0	
CT BRIDGEPORT	43	29	54	25	36	-5	.5	-.4	.3	2.6	134	7.3	89	67	38	0	5	2	0	0	
HARTFORD	43	27	50	20	35	-1	.7	-.2	.4	2.8	134	7.0	80	69	37	0	6	2	0	0	
DC WASHINGTON	47	33	57	28	40	-5	.4	-.4	.2	1.1	61	4.8	68	77	43	0	1	2	0	0	
FL APALACHICOLA	66	49	76	38	57	-3	.5	-.4	.5	6.4	301	30.6	329	96	47	0	0	3	0	0	
DAYTONA BEACH	70	49	83	37	60	-4	.3	-.4	.3	2.0	121	5.9	83	92	38	0	0	2	0	0	
JACKSONVILLE	69	47	78	35	58	-4	.3	-.5	.2	4.5	248	16.3	194	89	36	0	0	2	0	0	
KEY WEST	78	66	83	56	72	-2	.9	.6	.9	2.8	400	5.3	120	89	56	0	0	1	1	0	
MIAMI	77	61	82	50	69	-2	.5	-.1	.5	1.8	198	5.4	109	83	42	0	0	3	0	0	
ORLANDO	71	52	82	43	62	-4	.7	-.1	.5	2.3	127	5.6	80	91	42	0	0	3	0	0	
TALLAHASSEE	69	42	81	27	56	-4	-.2	-.1	.2	9.6	326	29.5	234	88	30	0	3	2	0	0	
TAMPA	70	52	77	40	61	-5	.7	-.1	.5	2.8	151	5.7	80	93	48	0	0	3	1	0	
WEST PALM BEACH	77	58	87	47	67	-2	.2	-.4	.2	2.4	172	17.2	257	86	39	0	0	2	0	0	
CA ATLANTA	62	42	73	34	52	0	.5	-.8	.5	3.0	98	10.7	87	77	33	0	0	2	0	0	
AUGUSTA	64	39	72	28	52	-3	1.1	-.1	1.0	6.2	241	15.7	149	87	35	0	1	2	1	0	
MACON	66	41	78	31	54	-2	.3	-.9	.3	5.4	196	18.0	157	88	33	0	1	1	0	0	
SAVANNAH	66	44	73	32	55	-3	T	-.9	T	4.2	210	13.4	162	82	31	0	1	1	0	0	
HI HILO	75	66	78	64	71	0	14.2	11.2	4.3	19.5	277	32.6	109	96	72	0	0	7	6	0	
HONOLULU	80	69	81	68	74	1	.3	-.5	.2	.5	26	3.4	40	77	52	0	0	2	0	0	
KAHULUI	78	68	80	67	73	1	.3	-.4	.2	1.5	97	6.4	76	85	58	0	0	3	0	0	
LIHUE	76	69	77	67	72	1	.5	-.6	.2	.9	38	3.2	26	83	61	0	0	3	0	0	
ID BOISE	49	30	55	22	40	-1	.1	-.1	.1	.3	56	1.7	54	88	36	0	4	2	0	0	
LEWISTON	52	35	57	32	44	1	.2	-.1	.1	.7	134	1.1	40	70	38	0	1	2	0	0	
POCATELLO	46	30	55	22	38	3	.3	.1	.3	2.2	495	3.2	133	80	43	0	5	1	0	0	
IL CHICAGO	43	28	52	23	35	0	1.9	1.3	1.8	2.5	207	4.5	114	92	50	0	7	3	1	1	
MOLINE	45	27	54	19	36	2	2.4	1.8	2.0	4.1	332	5.7	137	92	52	0	6	2	1	0	
PEORIA	46	29	56	19	38	2	1.7	1.1	1.1	2.3	176	4.1	94	89	56	0	4	3	2	1	
QUINCY	50	33	60	24	41	4	1.5	.8	1.3	2.1	145	3.0	69	81	52	0	4	2	1	1	
ROCKFORD	43	26	49	18	35	2	.6	.0	.5	1.5	140	3.1	85	89	50	0	6	2	1	0	
SPRINGFIELD	49	32	57	22	41	2	1.0	.3	.7	1.3	94	3.3	72	93	59	0	4	3	1	0	
IN EVANSVILLE	54	34	63	26	44	1	.8	-.3	.4	1.2	53	7.2	87	91	54	0	3	3	0	0	
FORT WAYNE	44	26	53	24	35	0	.2	-.5	.1	.6	44	3.7	68	89	44	0	7	2	0	0	
INDIANAPOLIS	46	30	55	27	38	-1	2.3	1.5	1.5	2.7	152	6.2	90	89	55	0	6	4	2	0	
SOUTH BEND	46	28	54	25	37	2	.1	-.5	.1	.9	65	4.4	75	83	37	0	7	2	0	0	
IA DES MOINES	48	30	63	24	39	5	.6	.2	.5	1.9	198	3.1	100	84	52	0	5	4	0	0	
SIOUX CITY	48	27	65	13	37	5	.2	-.2	.2	.3	32	1.1	47	89	50	0	5	4	0	0	
WATERLOO	43	27	52	19	35	5	.8	.4	.8	1.7	180	2.8	105	93	57	0	6	3	1	0	
KS CONCORDIA	52	32	80	20	42	3	1.0	.6	.7	1.3	151	2.1	88	83	47	0	3	4	1	1	
DODGE CITY	54	31	78	18	42	1	.9	.6	.6	.9	139	1.2	77	80	42	0	4	4	1	0	
GOODLAND	50	26	76	10	38	2	.2	.0	.2	.3	69	2.0	58	82	43	0	6	2	0	0	
TOPEKA	54	34	70	26	44	3	.5	.0	.3	1.2	120	2.0	68	87	46	0	4	3	0	0	
WICHITA	55	35	69	27	45	2	.5	.0	.4	.5	48	1.0	41	79	44	0	3	2	0	0	
KY BOWLING GREEN	55	35	65	27	45	0	.7	-.6	.4	1.1	37	11.6	102	92	52	0	3	3	0	1	
LEXINGTON	50	32	61	28	41	-1	.7	-.5	.6	1.2	51	7.7	83	87	51	0	4	2	0	0	
LOUISVILLE	53	34	65	29	44	0	1.1	.0	.8	1.9	76	8.9	100	88	50	0	3	3	1	1	
LA ALEXANDRIA	63	46	72	36	54	-3	.9	-.2	.9	3.2	129	17.1	148	87	46	0	0	2	1	0	
BATON ROUGE	66	46	78	36	56	-4	1.2	.2	1.1	2.7	115	20.2	170	86	42	0	0	3	1	1	
LAKE CHARLES	65	49	75	43	57	-3	1.2	.5	1.0	1.9	122	18.8	198	92	52	0	0	2	1	1	
NEW ORLEANS	66	51	79	39	59	-2	1.3	.2	1.2	5.7	229	30.4	241	85	46	0	0	3	1	1	

Based on 1951-80 normals

Weather Data for the Week Ending March 16, 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	AVERAGE MINIMUM	TEMP. °F		PRECIP.
													90 AND ABOVE				32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	66	43	80	33	55	-1	.2	-.6	.2	1.3	70	14.1	151	80	37	0	0	2	0
ME CARIBOU	35	22	39	12	29	6	.2	-.4	.1	2.6	211	5.8	102	83	57	0	7	2	0
PORTLAND	42	28	50	22	35	4	.4	-.9	.1	2.9	144	7.7	82	72	39	0	6	1	0
MD BALTIMORE	45	30	56	28	38	-4	.6	-.2	.3	1.4	74	5.7	73	79	42	0	5	2	0
SALLSBURY	45	30	54	25	38	-6	.5	-.4	.3	2.6	124	9.5	108	90	49	0	5	2	0
MA BOSTON	43	29	51	23	36	-1	.4	-.6	.2	2.5	120	7.3	75	81	43	0	6	4	0
CHATHAM	40	31	44	27	35	-1	.8	-.1	.5	2.2	104	7.5	71	85	57	0	4	4	0
MI ALPENA	37	13	52	2	25	-1	.1	-.4	.4	1.4	159	2.8	73	91	47	0	7	0	0
DETROIT	43	25	52	17	34	0	.4	-.6	.4	.5	45	2.9	62	84	41	0	7	1	0
FLINT	42	22	53	15	32	0	.0	-.5	.8	.8	84	3.0	75	89	43	0	7	0	0
GRAND RAPIDS	43	24	53	20	33	1	.0	-.6	.0	1.2	99	3.1	67	89	46	0	7	0	0
HOUGHTON LAKE	41	19	51	11	30	4	.4	-.4	.4	1.4	159	3.2	88	87	40	0	7	1	0
LANSING	43	22	53	15	32	0	.0	-.5	.4	.7	152	3.8	92	88	44	0	7	0	0
MARQUETTE	36	11	47	7	23	2	.0	-.6	.0	1.2	92	3.9	75	87	53	0	7	0	0
MUSKOGON	45	24	54	20	34	3	.0	-.6	.0	1.1	93	3.2	62	86	40	0	7	0	0
SAULT ST. MARIE	37	13	50	7	25	2	.4	-.4	.4	1.4	143	3.5	73	85	39	0	7	1	0
MN ALEXANDRIA	39	25	42	15	32	9	.1	-.2	.1	.1	19	1.6	77	86	51	0	7	2	0
DULUTH	34	16	44	7	25	3	.4	-.4	.4	.2	28	1.3	45	90	49	0	7	0	0
INT'L FALLS	41	14	47	7	28	9	.4	-.2	.4	.6	110	2.2	110	78	32	0	7	0	0
MINNEAPOLIS	42	27	46	22	35	7	.2	-.2	.1	.6	72	2.1	86	82	46	0	6	2	0
ROCHESTER	39	26	45	19	32	5	.3	.0	.3	.8	103	1.9	84	86	57	0	6	2	0
MS GREENWOOD	61	40	70	30	51	-3	.4	-.4	.4	2.5	81	15.5	121	87	40	0	2	0	0
JACKSON	64	40	72	32	52	-3	.5	-.8	.3	2.3	84	12.6	105	92	41	0	2	2	0
MERIDIAN	65	40	76	31	53	-2	.7	-.8	.5	3.7	111	16.9	131	87	37	0	1	2	0
MO CAPE GIRARDEAU	56	39	66	25	48	-1	.2	-.9	.1	.7	28	6.8	81	87	50	0	1	3	0
COLUMBIA	57	35	70	25	46	4	.5	-.2	.4	.9	56	2.6	49	78	48	0	4	4	0
KANSAS CITY	53	35	69	25	44	2	.4	-.2	.2	1.4	112	2.9	80	88	51	0	3	4	0
SAINT LOUIS	55	36	69	29	46	4	.7	-.1	.5	1.0	66	3.6	66	80	47	0	3	3	1
SPRINGFIELD	54	34	69	28	44	1	.3	-.5	.3	.6	35	4.5	84	83	45	0	3	2	0
MT BILLINGS	52	27	61	20	40	7	.1	-.2	.1	.2	55	1.5	74	80	29	0	6	1	0
GLASGOW	52	23	59	7	37	11	.1	-.0	.1	.2	138	.7	91	86	39	0	7	1	0
GREAT FALLS	48	28	57	25	38	8	.4	-.2	.4	.2	45	1.1	50	79	33	0	7	2	0
HAVRE	51	24	60	19	37	9	.0	-.1	.0	.1	48	.6	48	89	35	0	7	0	0
HELENA	48	27	58	21	37	6	.2	-.0	.2	.4	119	.7	48	83	38	0	7	1	0
KALISPELL	41	25	44	21	33	2	.1	-.1	.1	.7	168	2.9	95	96	47	0	7	0	0
MILES CITY	54	26	65	20	40	10	.0	-.1	.0	.7	12	1.0	72	76	30	0	7	0	0
MISSOULA	45	27	48	20	36	2	.1	-.1	.1	1.0	254	1.8	71	89	44	0	6	1	0
NE GRAND ISLAND	48	25	70	12	37	2	.4	-.0	.2	.7	100	1.3	65	88	51	0	7	3	0
LINCOLN	52	29	75	18	41	6	.6	-.2	.4	1.3	142	2.3	90	85	52	0	4	3	0
NORFOLK	48	25	70	14	36	4	.7	-.3	.4	.7	96	2.0	102	87	55	0	6	4	0
NORTH PLATTE	50	25	73	15	38	4	.3	.0	.1	.3	51	.8	58	87	47	0	7	3	0
OMAHA	48	30	68	18	39	3	.7	-.3	.4	2.1	244	3.5	141	79	57	0	4	4	0
SCOTTSBLUFF	50	23	70	15	37	2	.1	-.1	.1	.2	41	1.0	83	80	33	0	7	2	0
VALENTINE	47	22	72	11	35	4	.9	-.7	.9	.9	243	1.6	139	88	52	0	7	1	1
NV ELY	43	18	54	5	31	-2	.7	-.5	.4	.9	214	1.2	67	85	41	0	7	3	0
LAS VEGAS	60	42	69	31	51	-3	.4	-.1	.3	1.55	1.1	96	58	22	0	1	3	0	0
RENO	47	29	52	21	38	-2	.1	-.0	.1	1.0	241	1.2	47	83	31	0	5	1	0
WINNEMUCCA	47	28	55	19	37	-1	.3	-.2	.8	2.68	1.5	83	85	42	0	7	3	0	0
NH CONCORD	41	23	49	18	32	1	.4	-.7	.4	1.4	97	4.7	70	76	36	0	7	0	0
NJ ATLANTIC CITY	45	26	54	20	35	-5	.3	-.7	.2	2.9	141	9.3	105	81	44	0	6	3	0
NM ALBUQUERQUE	58	32	69	25	45	-1	.6	-.4	.5	.6	240	1.3	126	52	18	0	4	2	1
CLOVIS	64	35	76	27	50	4	.4	-.1	.4	.0	.7	58	60	22	0	3	0	0	0
ROSWELL	69	41	78	32	55	5	.0	-.1	.0	.0	.5	53	47	13	0	1	0	0	0
NY ALBANY	41	23	50	20	32	0	.3	-.4	.2	1.4	91	5.2	85	80	40	0	7	2	0
BINGHAMTON	35	21	44	13	28	-2	.4	-.2	.3	2.0	137	6.2	100	90	45	0	7	2	0
BUFFALO	37	23	42	18	30	-2	.4	-.7	.4	2.9	197	7.0	102	88	46	0	7	1	0
NEW YORK	43	32	53	26	38	-2	.2	-.7	.1	2.4	117	7.4	90	70	37	0	4	2	0
ROCHESTER	37	22	48	16	29	-3	.1	-.5	.0	1.8	144	4.7	80	90	46	0	7	2	0
SYRACUSE	38	22	51	15	30	-2	.2	-.5	.1	1.9	124	5.9	87	89	41	0	7	2	0
NC ASHEVILLE	54	33	63	27	44	-2	.2	-.9	.1	1.9	76	6.8	77	90	44	0	3	2	0
CHARLOTTE	55	38	62	30	47	-3	.6	-.6	.5	4.2	167	11.6	115	79	38	0	1	2	1
GREENSBORO	52	33	60	27	43	-4	.2	-.6	.2	3.2	160	8.9	100	85	40	0	3	1	0
HATTERAS	53	41	62	35	47	-3	.5	-.4	.3	4.4	208	17.9	163	81	49	0	0	2	0
NEW BERN	56	35	60	30	46	-6	.5	-.3	.3	2.6	131	11.8	119	93	39	0	4	2	0
RALEIGH	53	32	60	25	43	-6	.6	-.3	.6	2.5	128	7.3	82	86	38	0	4	2	1
WILMINGTON	58	39	68	32	48	-5	.7	-.2	.7	3.7	173	15.6	169	90	39	0	1	1	1
ND BISMARCK	45	24	53	17	34	10	.5	-.3	.4	.5	171	.9	73	95	48	0	7	2	0
FARGO	40	26	46	20	33	11	.2	-.0	.2	.3	106	1.9	153	88	54	0	7	1	0
GRAND FORKS	40	24	45	18	32	12	.2	-.0	.2	.2	65	1.3	81	93	54	0	7	1	0
WILLISTON	50	24	59	20	37	13	.4	-.1	.4	.2	74	.7	60	89	34	0	7	0	0
OH AKRON-CANTON	42	25	53	18	34	-2	.4	-.7	.4	1.6	99	6.0	95	91	49	0	4	1	0
CINCINNATI	46	31	56	27	39	-2	1.7	-.8	.9	2.4	123	9.3	119	89	52	0	4	3	2
CLEVELAND	38	25	45	17	32	-4	.1	-.6	.1	1.8	122	6.2	103	90	54	0	7	1	0
COLUMBUS	44	27	54	23	36	-3	.6	-.1	.4	2.0	127	6.3	97	92	49	0	7	3	0

Based on 1951-80 normals

Weather Data for the Week Ending March 16, 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	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		.01 INCH OR MORE	.50 INCH OR MORE		
DAYTON	42	28	53	24	35	-4	1.3	.6	.9	1.9	128	7.0	114	91	55	0	7	4	1	0	
TOLDO	42	24	51	17	33	-2	T	.6	T	.3	27	3.2	63	90	45	0	7	0	0	0	
YOUNGSTOWN	41	22	52	13	32	-2	T	.7	T	.9	116	5.5	85	92	46	0	7	0	0	0	
OK OKLAHOMA CITY	59	39	72	28	49	1	.9	.5	.9	1.0	105	2.0	61	76	37	0	1	2	1	0	
TULSA	58	40	72	33	49	1	.4	.3	.3	.6	42	2.4	54	74	40	0	0	2	0	0	
OR ASTORIA	49	36	53	33	43	-2	1.9	.2	1.0	5.1	131	20.4	91	97	64	0	0	6	1	0	
BURNS	42	24	49	13	33	-3	1.1	.1	.1	.2	41	1.3	41	87	41	0	7	2	0	0	
MEDFORD	50	34	54	29	42	-3	.5	.0	.2	2.1	203	5.3	82	97	52	0	2	3	0	0	
FENDLETON	49	31	55	27	40	-3	1.1	.2	.0	.6	111	2.2	65	85	38	0	6	3	0	0	
PORTLAND	52	37	61	33	44	-1	.4	.5	.2	2.9	150	9.1	76	89	52	0	0	4	0	0	
SALEM	52	34	58	31	43	-2	.6	.5	.3	4.2	177	10.3	74	93	53	0	3	4	0	0	
PA ALLENTOWN	43	27	54	20	35	-2	.4	.5	.3	2.0	104	5.9	72	83	38	0	5	3	0	0	
ERIE	37	24	44	16	30	-2	T	.6	T	1.5	113	5.3	91	87	54	0	7	0	0	0	
HARRISBURG	44	28	54	22	36	-4	.5	.3	.4	1.3	72	5.3	70	79	41	0	7	2	0	0	
PHILADELPHIA	44	31	53	25	38	-3	.6	.3	.5	1.8	94	6.7	84	76	38	0	4	3	0	0	
PITTSBURGH	42	26	54	16	34	-4	.3	.6	.2	2.0	110	6.4	92	87	44	0	7	2	0	0	
SCRANTON	39	25	48	19	32	-3	.5	.1	.3	1.6	122	4.4	80	79	44	0	7	3	0	0	
RI PROVIDENCE	43	27	50	23	35	-1	.6	.4	.5	3.2	146	8.9	90	73	42	0	6	2	1	0	
SC CHARLESTON	62	44	71	33	53	-3	1.5	.4	1.5	3.1	134	11.9	132	85	35	0	0	1	1	1	
COLUMBIA	63	38	70	29	50	-3	1.0	.3	1.0	4.0	147	11.3	102	93	35	0	1	2	1	0	
FLORENCE	60	41	67	34	50	-3	1.0	.1	1.0	3.6	166	10.2	113	86	35	0	0	1	1	1	
GREENVILLE	57	38	61	31	47	-3	.5	.9	.5	2.8	92	9.8	84	81	38	0	1	2	1	0	
SD ABERDEEN	42	23	55	18	33	7	1.1	.1	.1	.1	31	.9	61	94	57	0	7	2	0	0	
HURON	44	23	62	14	33	5	.4	.1	.2	.5	85	1.5	88	97	56	0	7	2	0	0	
RAPID CITY	52	24	68	17	38	7	1.1	.1	.2	.2	42	1.3	90	87	31	0	7	2	0	0	
SIoux FALLS	45	24	62	16	34	5	.3	.1	.2	.3	40	.9	40	92	51	0	7	4	0	0	
TN CHATTANOOGA	61	39	68	30	50	1	1.2	.3	.8	4.2	129	15.1	114	82	38	0	2	2	1	0	
KNOXVILLE	57	36	68	28	47	-2	.5	.7	.3	2.3	82	11.9	102	86	43	0	2	2	0	0	
MEMPHIS	60	41	69	30	51	0	1.1	.1	.1	1.1	39	10.4	90	79	42	0	1	1	0	0	
NASHVILLE	59	39	70	31	49	1	.3	.0	.3	1.3	44	9.6	85	82	37	0	1	1	0	0	
TX ABILENE	67	45	81	38	56	1	T	.2	T	.1	15	2.9	121	71	35	0	0	1	0	0	
AMARILLO	60	33	77	25	47	1	1.1	.1	.1	.1	33	1.0	68	66	24	0	3	1	0	0	
AUSTIN	67	49	81	40	58	-2	.7	.3	.4	.7	86	12.9	264	78	41	0	0	2	0	0	
BEAUMONT	67	49	74	44	58	-1	.9	.3	.6	2.2	135	21.6	218	94	53	0	0	2	1	0	
BROWNSVILLE	82	64	91	47	73	5	T	.1	T	T	0	3.0	100	92	49	1	0	0	0	0	
CORPUS CHRISTI	77	57	87	41	67	2	1.4	1.2	1.2	1.4	367	5.2	150	93	52	0	0	2	1	0	
DEL RIO	73	53	85	48	63	1	T	.1	T	T	12	1.4	82	65	30	0	0	1	0	0	
EL PASO	68	42	79	37	55	1	T	.1	T	.1	53	1.6	158	50	14	0	0	0	0	0	
FORT WORTH	66	46	78	36	56	1	.3	.2	.1	.3	29	5.6	122	79	41	0	0	2	0	0	
GALVESTON	67	57	74	51	62	2	.9	.4	.6	1.1	101	18.1	283	85	60	0	0	2	1	0	
HOUSTON	67	47	80	39	57	-4	1.0	.4	.6	1.0	77	16.6	204	88	45	0	0	3	1	0	
LUBBOCK	66	38	79	30	52	3	T	.2	T	T	0	1.7	125	60	17	0	2	0	0	0	
MIDLAND	71	40	83	33	56	2	.0	.1	.0	.0	0	2.0	169	60	18	0	0	0	0	0	
SAN ANGELO	69	43	81	36	56	0	T	.2	T	T	6	2.4	132	73	33	0	0	0	0	0	
SAN ANTONIO	69	48	84	38	58	-2	.6	.4	.4	.7	114	8.2	204	80	40	0	0	3	0	0	
VICTORIA	71	51	84	43	61	-2	2.8	2.5	2.9	4.1	413	13.7	287	90	48	0	0	2	1	0	
WACO	66	46	80	35	56	-1	.3	.1	.3	.7	78	5.3	115	81	40	0	0	2	0	0	
WICHITA FALLS	66	40	81	30	53	1	.5	.2	.5	.6	69	3.2	119	74	35	0	1	2	1	0	
UT CEDAR CITY	47	26	56	19	37	-2	T	.2	T	.2	33	1.3	64	83	34	0	6	3	0	0	
SALT LAKE CITY	52	33	61	25	42	2	.2	.2	.1	.9	107	2.6	75	81	36	0	4	3	0	0	
VT BURLINGTON	37	21	47	15	29	1	T	.5	T	1.3	118	3.4	74	88	46	0	7	0	0	0	
VA NORFOLK	48	36	50	30	42	-5	.5	.4	.4	1.7	86	7.3	81	87	56	0	1	3	0	0	
RICHMOND	49	32	57	25	40	-6	.7	.1	.4	1.7	92	6.5	79	88	55	0	4	2	0	0	
ROANOKE	49	31	61	24	40	-5	.9	.1	.4	3.6	188	9.2	117	80	45	0	4	3	0	0	
WA QUILLAYUTE	47	34	57	31	41	-2	1.3	-1.5	.5	5.9	91	35.2	107	100	70	0	2	6	0	0	
SEATTLE-TACOMA	50	36	57	33	43	-1	.8	.0	.4	4.1	208	13.2	108	96	56	0	0	3	0	0	
SPOKANE	44	27	48	22	35	-2	.5	.2	.3	2.1	288	4.6	97	97	52	0	7	3	0	0	
YAKIMA	52	24	56	19	38	-3	T	.1	T	.7	216	1.2	51	90	33	0	7	0	0	1	
WV BECKLEY	43	27	57	22	35	-5	1.2	.3	.6	2.6	126	9.2	107	93	56	0	6	3	1	0	
CHARLESTON	48	30	66	25	39	-5	1.3	.4	1.0	2.4	121	8.1	94	92	47	0	5	3	1	0	
HUNTINGTON	48	31	59	27	40	-5	1.1	.2	.6	2.9	145	8.6	107	92	51	0	6	4	1	0	
PARKERSBURG	45	28	57	22	36	-6	.6	.2	.6	2.3	129	7.7	107	88	47	0	5	3	1	0	
WI GREEN BAY	38	24	46	23	31	4	.0	.4	.0	1.4	164	2.4	77	88	53	0	7	0	0	0	
LACROSSE	43	27	48	19	35	5	.1	.3	.1	.4	53	1.8	70	80	40	0	5	2	0	0	
MADISON	42	24	48	16	33	3	.1	.4	.0	1.8	191	3.4	111	88	51	0	6	2	0	0	
MILWAUKEE	39	29	48	25	34	3	.0	.6	.0	1.0	84	2.9	71	89	57	0	6	0	0	0	
WAUSAU	40	19	45	10	29	4	T	.4	T	.8	88	2.0	74	90	46	0	7	0	0	0	
WY CASPER	49	22	57	14	35	4	.1	.2	.0	.3	57	1.2	80	83	31	0	6	2	0	0	
CHEYENNE	44	24	59	19	34	3	.2	.0	.1	.4	78	.8	68	85	39	0	7	3	0	0	
LANDER	49	26	55	22	37	6	.1	.2	.1	.3	63	1.4	92	72	28	-0	7	1	0	0	
SHERIDAN	51	24	61	20	37	6	T	.2	T	.5	113	2.0	101	85	31	0	7	0	0	0	

Based on 1951-80 normals

# National Agricultural Summary

March 11 - 17, 1991

**HIGHLIGHTS:** Rains in California interrupted field activities as one weather system after another brought welcomed moisture. Pastures and growing crops benefited greatly from these weather systems. Winter wheat in the Plains States was in mostly good condition, despite army cutworm activity. Washington winter wheat showed improvement with the recent rains. Spring rowcrop planting continued active in most Southern States.

**SMALL GRAINS:** Kansas winter wheat was in mostly fair condition, despite army cutworm activity in most areas. Army cutworm infestation was also prevalent in western Oklahoma. Montana winter wheat was still mostly dormant, with considerable germination reported due to last fall's drought. Winter wheat in Alabama was 8 percent(%) headed, 1 percentage point ahead of the 5-year average. Mississippi winter wheat was 20% jointed, 23 points behind normal. New Mexico irrigated winter wheat was poor to good, and the dryland wheat was very poor to fair. Winter wheat in Utah was in mostly fair condition. Small grains in California showed good growth due to the recent rains.

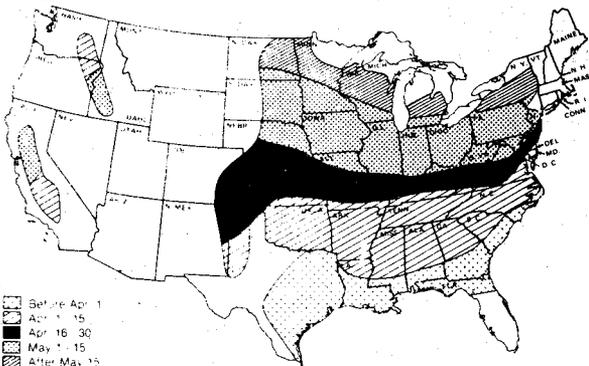
**OTHER FIELD CROPS:** Alabama corn planting was 17% complete, 6 points behind normal. Arizona cotton was 2% planted. Precipitation and low temperatures slowed seeding. Arkansas rice planting began. Louisiana rice was 4% planted and 1% emerged. Blackbirds were a problem in newly planted rice fields. Corn and sugarcane planting and tobacco transplanting continued in Florida. Georgia corn was 8% planted, compared to 22% for the average. South Carolina corn planting continued but was slowed by rain. Iowa had the wettest week in nearly 2 months, halting all fieldwork. Alfalfa in California received weevil and weed treatments. Limited alfalfa greenchopping continued in the southern counties. Safflower planting was underway.

**FRUIT AND NUTS:** Arizona Valencia orange and grapefruit harvests continued in the west and central areas. Fruit harvests in Florida were delayed by rain. Southern California citrus harvests remained active. Arkansas and Georgia peach trees were blooming. Rain in Hawaii was beneficial to banana orchards, but muddy fields halted sugar harvest.

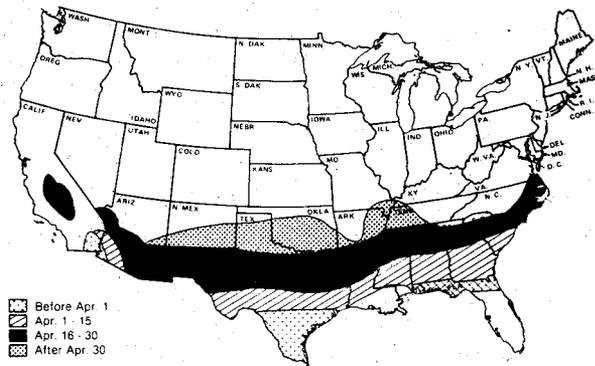
**VEGETABLES:** Arizona mixed vegetables and spring lettuce harvests continued. Florida spring planting was about complete in southern areas and active in the central and north. Harvest of winter crops remained active. Plant City strawberry harvest was at its peak. Georgia watermelon planting was behind normal, and the emerged fields were stressed due to the wet and cool weather. New Mexico lettuce and onion crops were in fair to good condition. Oregon onion, green pea, and potato plantings were complete in the Hermiston-Boardman area. California's asparagus harvest was slowed by the cool temperatures. The strawberry harvest was slowed in most areas due to rain.

**PASTURES AND LIVESTOCK:** Pasture and livestock were in mostly good to fair condition. Precipitation in California and Nevada benefited pasture and hay acres. Pasture condition in most areas of California improved to good or fair. Mississippi hay supplies were mostly short. Topdressing was active in Louisiana pastures. Montana calving was 33% complete.

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



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



## 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 mostly 0.50 to 1.00 in.; 1.00 to 2.00 in. northeast, south. Temperatures 2° below normal.

Days suitable for fieldwork 3.6. Soil moisture 49% adequate, 51% surplus. Acreage intended for spring planting 30% prepared, 30% 1990, 32% avg. Fieldwork progress 48% behind, 52% on schedule. Corn 17% planted, 31% 1990, 23% avg. Winter wheat 8% headed, 16% 1990, 7% avg.; 35% fair, 62% good, 3% excellent. Pastures 29% poor, 33% fair, 35% good, 3% excellent. Livestock 5% poor, 40% fair, 55% good. Primary activities: Preparing land for spring planting; applying fertilizers, herbicides; planting corn; planting pine trees; breeding livestock; general care, feeding of livestock, poultry, catfish.

**ARIZONA:** Cloudy, mild early in period. Colder 11th to 16th; scattered rainfall deserts, snow higher elevations. Temperatures normal to 7° below normal. Extremes 34°; 78° deserts; 12°; 87° higher elevations. Rainfall traces southwest to 1.08 in. northwest.

Cotton planted 2%, 4% 1990; precipitation, low temperatures delayed seeding. Small grains jointed 62%, 91% 1990, 82% avg.; headed 8%, 22% 1990, 15% avg.; progress slow; crop good. Alfalfa mostly good. Harvest moderate to active. Mixed vegetables, spring lettuce, valencia oranges, grapefruit harvested west, central.

**ARKANSAS:** Temperatures continued near normal, scattered showers weekend. Extremes 27°; 79°. Rainfall 0.06 to 1.00 in.

Land preparation in full swing for row crops. First rice planted. Wheat crop excellent. Pastures light, starting to grow. Cattle good. Fruit potential excellent as long as weather holds. Peaches blooming.

**CALIFORNIA:** Rain fell across the State as one system after another brought welcome moisture. Each system was followed by shower, thundershower activity producing spotty large amounts. Some areas received hail, heavy rains. Temperatures cooled off later in the week.

Rains throughout week interrupted field activities. Small grain, forage crops showed good growth. Broadleaf herbicides, fertilizer applied some areas. Alfalfa received weevil, weed treatments. Limited green chopping progressed southern counties. Corn, cotton, sugarbeet fields pre irrigated. New alfalfa growth excellent. Safflower planting underway. Wet ground slowed cultural activities. Cherry, walnut blooms began. Stonefruit bloom active. Orchards treated for brown rot, thrip control. Prunes blossoming. Southern areas citrus harvest active. Central valley citrus trees showing growth. Asparagus harvest slowed, cool temperatures, excellent quality. 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. Harvest most areas slowed by rain. Sweet potato hotbed preparation continued. Tomato planting delayed, wet conditions. Recent precipitation improved pastures statewide. Conditions good to fair most areas. Poor condition selected areas. Water supplies improved.

**COLORADO:** A rapidly moving system on Monday brought a variety of weather to the State. Winds up to 55 MPH in the east lowered visibility to near zero at times. Moisture at lower elevations was mostly 0.10 to 0.30 in. with a few locations reporting nearly half an in. Mountains new snow mostly 6.00 to 9.00 in., up to 20.0 in. Storm moved out on 12th, next couple of days saw windy conditions, only a few snow showers in the mountains. On 14th, again on 16th new storm systems brought precipitation mostly to the southern portion of the State. Temperatures for the period were mostly 3 to 5° above normal in all River Basins.

**FLORIDA:** Temperatures 2 to 5° below normal north, central; 1° to 2° above normal south. Coldest lows, lower 30s Panhandle, Big Bend area. Rain totals 1.00 to 4.00 in. north, central; generally under 0.50 in. south.

Soil moisture adequate to surplus Panhandle, northern Peninsula; short to adequate central Peninsula; mostly adequate southern Peninsula. Corn planting, tobacco transplanting active. Farmers making preparations for cotton, peanut planting. Sugarcane harvest active. Pastures rate 10% poor, 30% fair, 45% good, and 15% excellent. Cattle fair to good. Rain all areas, soil moisture levels greatly improved. Bloom cycle continues, petal drop on some young tree groves, some new crop fruit set. All harvest slowed by rain, caretakers cutting cover crops, storing heaters, spraying. Cool, dry weather over major vegetable areas turned wet over weekend, northern, central areas. Spring planting near complete south, active central, northern areas. Harvest winter crops active. Volume leaders: Tomatoes, cabbage, peppers, potatoes, strawberries, cucumbers, celery, squash, sweet corn, carrots. Plant City strawberry harvest at peak.

**GEORGIA:** Rain 0.50 to 1.50 in. local near 2.00 in. extreme north extreme south. Temperatures near normal to couple degrees cooler. Warmest low and mid 60s in Northeast Mountains near 80° Southwest. Coldest generally mid 30s. Ranged from upper 20s Mountains to low 40s extreme southeast.

Days suitable for fieldwork 3.1. Soil moisture 53% adequate, 47% surplus. Corn 2% poor, 68% fair, 30% good, 8% planted, 33% 1990, 22% avg.; Tobacco 18% poor, 54% fair, 28% good, 3% transplanted, 12% 1990, 6% avg.; watermelon planting far behind normal, emerged fields stressed by wet, cool weather; wheat 2% poor, 25% fair, 68% good, 5% excellent, 56% jointing, 76% 1990, 63% avg.; 13% boot, 14% 1990, 10% avg., no insects, disease problems; other small grains fair to mostly good. Peaches 16% fair, 48% good, 36% excellent, 34% blooming, 100% 1990, 74% avg. Onions good; pastures fair to mostly good; cattle, hogs good; Activities: Land preparation, fertilizing wheat, fertilizing, spraying pastures, hay fields, planting corn, watermelons, transplanting tobacco.

**HAWAII:** High pressure system north of the Islands caused gusty winds, rain for second consecutive week. Weather generally unfavorable for agriculture. Seasonally cool temperatures continued, slowing crop development. Winds mostly 15 to 30 mph, some gusts 40 to 50 mph.

Temperatures low 60s to low 80s. Rainfall 0.02 to 28.20 in.

Days suitable for fieldwork 7.0. Inclement weather interrupted many farm activities during week, caused wind damage to crops exposed areas. Minor flooding, silting vegetable crops. Rain beneficial banana orchards raising soil moisture levels. Papaya output low. Muddy fields slowed or halted sugar harvesting.

**IDAHO:** Temperatures were below normal except for selected areas of east. Entire State received precipitation, overall below normal levels.

Soil moisture was adequate to surplus in north, remainder of State was short. Rain, snow were welcomed, however, in some cases it was bad for calving. Lambs and calves were subject to more stress because of rain, snow. Generally, livestock were in good condition. Major farm activities included: Meetings, machinery repair, livestock care, completing taxes, ordering seed, some planting of crops. Hay, roughage supplies remained adequate.

**ILLINOIS:** Temperatures 1 to 5° above normal. Precipitation generally 0.50 in to 2.50 in throughout the State.

Soil moisture mostly adequate. Winter wheat fair to good.

**INDIANA:** Temperatures 2 to 4° below normal. Lows mid to upper 20s, highs low 40s to 50s. Precipitation 0.75 to 4.00 in.

Plowing, seeding oats, few fields. Other activities: Spreading lime, top dressing wheat, applying fertilizer, seeding clover, selling grain, hauling manure, mending fences, attending farm auctions, machinery maintenance, purchasing supplies, attending meetings, tobacco bed preparation, care of livestock. Hay supplies adequate. Livestock mostly good condition. Wheat greening up. Mid week snow, rain, ice storm halted fieldwork.

**IOWA:** Temperatures 3 to 6° above normal. Extremes 11 to 71°. Precipitation 0.23 to 2.93 in.; average 1.39 in. Wettest week in nearly seven months.

Standing water in fields virtually halted any fieldwork. Livestock mostly good. Feed lots very muddy.

**KANSAS:** Temperatures 3° above normal south, 5° above central, north. Precipitation recorded most areas; average 0.10 to 0.30 in. except northwest at 0.04 in.

Days suitable for fieldwork 5.5. Surface moisture 90% short, 10% adequate. Subsurface moisture 80% short, 20% adequate. High winds caused damage scattered areas. Army cutworms active most areas require control measures central areas. Wheat 26% good to excellent, 45% fair, 29% poor. Short surface moisture causing some stress. Most stands fair to good root system. Wheat diseases becoming more apparent as green up progresses; some winter kill evident. Range, pasture short, wheat grazing continues. Feed grain, forage supplies adequate. Calving, lambing good progress.

**KENTUCKY:** Slightly above normal temperatures, near normal rainfall. Daytime highs averaged mid 50s, near normal; lows upper 30s, 3 to 5° above norm. Precipitation averaged 1.25 in., slightly above normal.

Soil moisture ample. Field activity minimal. Tobacco beds being prepared, some seeding. Wheat making new growth, generally good condition. Pastures becoming green, limited growth early season grasses.

**LOUISIANA:** Temperatures 1.5 to 5.1° below normal. Extremes 29°; 80°. Rainfall 0.22 in. northwest to 1.96 in. southeast.

Days suitable for fieldwork 5.3. Soil moisture 91% adequate, 9% surplus. Spring plowing 20%, 15% 1990, 23% avg. Corn planted 25%, 18% 1990, 16% avg.; emerged 2%, 4% 1990, 4% avg. Planting progressed rapidly. Rice planted 4%, 4% 1990, 4% avg.; emerged 1%, 1% 1990, 1% avg. Blackbird problem in newly planted fields, south. Wheat 3% poor, 43% fair, 50% good, 4% excellent; headed 6%, 8% 1990, 4% avg. Diseases present in some fields, south. Fungicides were being applied. Sugarcane 36% fair, 57% good, 7% excellent. Off barring, shaving, spraying, fertilizing, active. Vegetables 17% poor, 60% fair, 23% good. Pasture 13% poor, 57% fair, 30% good. Top dressing active. Livestock 2% poor, 49% fair, 49% good. Crawfishing continued, quantities remain low.

**MARYLAND & DELAWARE:** **MARYLAND:** Precipitation 0.41 in. Temperature 36.4°, normal 42.2°. Extremes 3°; 51°.

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

**DELAWARE:** Precipitation 0.72 in. Temperature 36.8°, normal 42.7°. Extremes 24°; 51°.

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

**MICHIGAN:** Temperatures 4° above to 1° below normal. Extremes 4°; 53°. Precipitation none to 0.14 in. across the State. Seasonal temperatures, little precipitation were prevalent throughout most of the week.

Conditions enabled farmers to engage in some outdoor activities. Livestock in good shape, there are more reports of calves, lambs born this week. Reports of robin sightings, freely running sap have hopes high for an early spring. Feed supplies are in good shape. Major activities included: Purchasing seed for spring planting, repairing fences, turning up equipment, looking after newborn, draining fields, caring for and marketing livestock.

**MINNESOTA:** Temperatures across the State were mild last week with temperatures 2 to 13° above normal. Extremes 4° Warroad; 56° Pipestone. Precipitation was variable with southern areas of the State receiving as much as 0.41 in. above normal while precipitation in northern areas was light. Greatest precipitation for the week was 0.70 in. at Montevideo.

**MISSISSIPPI:** Temperatures 3.2° below normal. Extremes 23°; 79°. Mostly dry statewide with some scattered showers. State 0.54 in., 0.84 in. below normal. Soil temperature 53°.

Days suitable for fieldwork 3.3, 1.5 1990, 1.7 avg. Soil moisture 74% adequate, 23% surplus, 3% excessive. Pasture 7% very poor, 11% poor, 46% fair, 30% good, 6% excellent. Wheat 2% very poor, 7% poor, 77% fair, 13% good, 1% excellent. Wheat jointing 20%, 59% 1990, 43% avg. Hay supply 63% short, 37% adequate. Watermelons 10% planted, 7% 1990, 6% avg. Livestock 5% very poor, 13% poor, 40% fair, 36% good, 6% excellent. Feed grain 26% short, 74% adequate. Corn planted 5%, 8% 1990, 8% avg, emerged 1%. Activities: Farm planning, fertilizing wheat, rye grass, feeding cattle, land preparation for row crops.

**MISSOURI:** Temperatures 5° above normal except for southwest, southeast near normal. Rainfall less

than 0.50 in. southeast to nearly 2.00 in. northeast, most areas around 1.00 in.

Rain stopped early fieldwork. Wheat stands looking normal. Livestock good condition, calving in progress.

**MONTANA:** Temperatures above normal statewide. More than 10° above north central. Southwest over 0.50 in. precipitation. Other areas mostly dry. Eastern division, north central division were mostly dry.

Winter wheat 5% very poor, 35% poor, 40% fair, 20% good. Winter wheat still dormant 70%, greening 30%. Considerable winter wheat still germinating because of last falls drought. Many brown patches evident in or near green fields, kill damage still cannot be determined with accuracy. Grazing open, new grass growth has not started. Most livestock receiving supplemental feed. Calving over 33% done with weather conditions ideal.

**NEBRASKA:** Temperatures 1 to 4° above normal. Precipitation 0.10 in. northwest to 1.40 in. east central.

**NEVADA:** Temperatures below normal. Extremes 5°; 74°. Precipitation trace to 1.99.

Series of winter storms brought precipitation to northeast, south central, western areas. Pastures, hay acreage benefitted from moisture. Calving, lambing activities continue with no unusual problems. Major activities include caring for livestock, preparing for spring planting.

**NEW ENGLAND:** Precipitation none to 0.90 in. Temperatures high 20s to mid 30s. Maximum temperatures high 30s north to mid 50s south; minimum temperatures 3° north to 25° south.

Major farm activities: General repairs, maintenance, tending livestock, moving crops from storage.

**NEW JERSEY:** Temperatures below normal. Extremes 18°; 64°. Rainfall 0.70 in. north, 0.65 in. central, 0.83 in. south. Heaviest 24 hour total 0.63 in. on 14th, 15th. Estimated soil moisture percent field capacity, averaged 100% north, 98% central, 100% south. Four inch soil temperature averaged 34° north, 37° central, 38° south.

Wet, colder weather halted most fieldwork. Northern areas received a significant snow on the night of the 21st.

**NEW MEXICO:** Temperatures much cooler overall than week before. Temperatures 1 to 4° below normal across west, north, 2 to 5° above normal across southeast. Precipitation heavy across north, especially northern mountains, light to scant elsewhere.

Days suitable for fieldwork 5.6 Soil moisture 64% short, 36% adequate. Irrigated wheat poor to good, dryland wheat very poor to fair. Lettuce, onion conditions fair to good. Cattle 12% poor, 55% fair, 33% good. Sheep 14% poor, 50% fair, 36% good. Range 44% poor, 44% fair, 12% good.

**NEW YORK:** It was a dry week across much of State with much of the area from the Finger Lakes to west, north of the Mohawk Valley receiving little or no precipitation. The only precipitation that did fall occurred 14th to 15th over the southeast. Totals were generally less than 0.50 in. much of this was in the form of a heavy wet snow. Snowfall accumulations varied widely with elevation. Heaviest accumulations 12.0 in. in the northern Catskills, Helderbergs. High temperatures showed little range statewide with a modest warm up at the

end of the week. Highest 57° on the 16th. Lows single digits to the 20s first half of week then 20s to 30s 14th to 15th.

Major activities included: General farm maintenance, purchasing seed, gearing up for the planting season.

**NORTH CAROLINA:** Temperatures 4° below normal in the Mountains, 3° below in the Piedmont 1° below at the Coast. Precipitation 0.01 to 1.24 in.

Days suitable for fieldwork 3.1. Soil moisture 3% short, 61% adequate, 36% surplus. Pasture 12% poor, 29% fair, 58% good, 1% excellent. Crop condition: Wheat 1% poor, 12% fair, 85% good, 2% excellent; oats 1% poor, 13% fair, 85% good, 1% excellent; barley 1% poor, 14% fair, 84% good, 1% excellent; rye 1% poor, 16% fair, 81% good, 2% excellent; Irish potatoes 46% fair, 50% good. Tobacco plant beds 20% fair, 79% good, 1% excellent. Irish potatoes planted 46%; cabbage transplanted 44%. Hay, roughage supplies 2% very short, 11% short, 84% adequate, 3% surplus. Feed grain supplies 8% short, 91% adequate, 1% surplus. Activities: Tending livestock; preparing, seeding tobacco plant beds; cutting wood; pruning trees; equipment repair; topdressing small grains, pastures; land preparation; planting Irish potatoes, cabbage; general farm maintenance.

**NORTH DAKOTA:** Temperatures 7° above normal southeast to 12° above normal northwest, north central. Precipitation 0.01 in. northwest, southwest to 0.23 in. central.

Soil moisture continues to be short. Livestock good. Hay supplies mostly adequate.

**OHIO:** Wintry weather gripped most of the State during the first part of the period. Strong low pressure systems brought wind, freezing rain, sleet, snow. High temperatures low 40s to low 50s; 1 to 6° subnormal. Lows averaged from the 20s to mid 30s; 1 to 4° above normal. Precipitation as water equivalent 0.20 to 2.00 in. with most falling in the central, south accumulating above normal moisture, least in the north which registered below normal accumulations.

Snow, ice cover melted by the end of the period. Soil temperatures at the four inch depth under bare soils averaged from the mid to upper 30s. Spring fieldwork did not resume in areas with heavier precipitation.

**OKLAHOMA:** Temperatures 2° below normal south central to 1° above normal east central. Precipitation 0.29 in. southeast to 0.85 in. central.

Days suitable for fieldwork 6.6. Topsoil 75% short, 25% adequate. Subsoil 55% short, 45% adequate. Wheat 15% poor, 80% fair, 5% good; 15% jointing, 25% 1990, 10% avg. Growth should improve due to measurable precipitation during weekend. Army cutworms infesting west. Row crop field preparation made favorable progress. Corn 75% seedbed prepared, 25% 1990, 50% avg. Sorghum 25% seedbed prepared, 30% 1990, 20% avg. Soybeans 25% seedbed prepared, 15% 1990, 15% avg. Peanuts 15% seedbed prepared, 10% 1990, 15% avg. Cotton 55% seedbed prepared, 35% 1990, 15% avg. Pastures 25% poor, 60% fair, 15% good. Cattle good; marketings average, prices mixed from preceding week.

**OREGON:** Cool, wet across State. Temperatures 2 to 5° below normal. Overnight lows in teens 12th to 16th northeast, south central. All areas received rainfall; up to 3.25 in. along coast, north Cascades, high Plateau; up to 1.90 in. western valleys; trace to 0.30 in. east except 1.17 in. fell at Ukiah in southern Umatilla Co.

Soil moisture adequate to surplus west, mostly short east, except northeast mountains surplus. Fall grain looks good, except where winter damage is being replanted Columbia Basin counties. Spring nitrogen applications made on wheat grass seed fields; both look good Willamette Valley. Freeze damage assessments in tree fruits await further bud, blossom development most areas. Onions, green peas, potatoes planted Herminston Boardman area. Livestock good; range, pasture poor to fair. New grass growth started Columbia Basin.

**PENNSYLVANIA:** Below normal temperatures with mid week snowfall, most of State drier than normal. Temperature 32°, 2° below normal. Extremes 7°; 55°. Precipitation 0.36 in, 0.41 in. below normal.

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

**PUERTO RICO:** Rainfall 0.23 in., 0.34 in. below normal. Highest weekly total rainfall was 0.93 in. at Pico Del Este Luquillo, 0.65 in. Borinquen Airport, 0.60 in. at Arecibo Ionospheric Observatory. Highest 24 hour total was 0.60 in. at Arecibo Ionospheric Observatory. Divisional temperature 77° on the Coasts, 69 to 73° in the Interior with Mean Station Temperature 63.1° at Pico del Este Luquillo to 79° Rio Piedras Aes, Guayama. Extremes 49°; 92°.

**SOUTH CAROLINA:** Temperatures 2 to 3° below normal. Rainfall 0.90 in. Statewide. The largest 24 hour amount was less than 2.00 in. at Wateree Dam on 14th.

Farm Activities: Small grains look very good. Tobacco plant beds, good condition. Corn planting continued, slowed due to rainfall. Pastures, livestock good condition.

**SOUTH DAKOTA:** Temperatures 2 to 7° above normal. Extremes -2°; 72°. Precipitation none to over 1.00 in. Up to 8.00 in. of snow in parts of south central. For the year, east below normal precipitation; central, south central above normal; rest of State, mixed pattern of above or below normal.

**TENNESSEE:** Low pressure systems moved through State midweek, weekend with rain. Temperatures 3° above normal west, middle; 3° below normal plateau; normal east. Precipitation below normal statewide.

Soil moisture mostly adequate. Land preparation continues. Routine chores, livestock care, soil testing, equipment preparation main activities.

**TEXAS:** Week started out very warm, dry. Strong winds tapped moisture many of growing areas. Temperatures returned near normal levels by midweek, showers remained limited. Winds continued to plague entire State as disturbances tracked eastward close to State. After cooler air edged way into State 14th, 15th, gulf moisture started to move north, ride over air mass. Result was light, steady rain for southern areas. Some embedded, heavy thunderstorms brought excessive totals to few areas of coastal plains 16th. Widely scattered, light amounts also reported in High Plains at same time. Data reflects weekend moisture in southern areas, dryness over rest of State. For rainfall, totals all below normal for west, north as shown by negative departures for areas. Departures -0.07 in south Plains to overall departure of -0.39, eastern areas. Southern areas, on other hand, above normal rainfall totals. Departures from normal rainfall in southern areas, Coastal Plains, Lower Valley 0.02 in Lower Valley to 0.74 in. southern areas. Only area of state with below normal temperatures

overall for week was in south Plains. Rest of State had overall averages near or above normal. Greatest departures from normal +5° in Lower Valley.

**Crops:** Small grains continued good progress despite need of moisture. Wheat producers on Plains still battling greenbug, army worm infestations, along with depleting soil moisture from strong dry winds. Some producers started irrigating wheat fields. Wheat producers Cross Timbers, Blacklands began top dressing fertilizer. Controlled spraying also continued when winds diminished. Many wheat fields approaching joint stage. Oat fields in southern areas continued fair condition, heat, wind stress continued to be problem. Wheat 67% of normal compared with 56% 1990. Corn planting continued in full swing Blacklands, central areas, increased in eastern areas. Plant emergence common in southern areas, coastal regions. Producers still like to see some rainfall to activate herbicides, stimulate root growth. Corn planted: 34% 1991, 14% 1990, 35% avg. Sorghum planting continued full swing in Blacklands, central areas, underway in eastern areas. Planting in southern areas beginning to slow as producers await rainfall. Sorghum producers in Trans Pecos began pre irrigation some fields, as land preparations continued. Sorghum planted: 20% 1991, 6% 1990, 22% avg. Cotton planting in Southern areas continued strong, moisture still needed to promote emergence. Cotton producers on Plains, Trans Pecos continued land preparation, pre emerge herbicide applications. Pre irrigation also started some areas. Cotton planted: 4% 1991, 3% 1990, 3% avg. Rice planting off to slow start some areas of Upper Coast. Light showers, wet fields hampered continued progress. Rice planted: 1% 1991, 1% 1990, 1% avg. Peach trees in full bloom across state. Early variety trees began to show signs of fruit. Heavy crop expected, producers in north concerned about possible late frost.

**Commercial Vegetables:** Rio Grande Valley, Cole crop harvest continued at seasonal pace. Onion harvest continued light, yield expectations remained high. Melon crop continued to progress well spite of warm, windy temperatures. San Antonio Winter Garden, Cabbage, carrot, asparagus harvest in full swing. Onions continued good progress. Eastern areas, land preparation in full swing. Potato, onion, English pea planting in full swing. Cole crop planting started. High Plains, herbicide, fertilize applications continued on watermelon fields. Onion sets doing good. Some cool season vegetable planting started. Trans Pecos, onions making good growth. Potato planting continued. Cool season planting, transplanting started.

**Range and Livestock:** Livestock remained fair, good shape last week. Open weather continued encouraged growth on winter pastures, spring grasses. Range fires remained threat to northern, western ranchers. Some fertilize applications administered eastern pastures. Coastal sprigging common east, central areas. Calving continued most areas. Range, pasture conditions: 10% poor, 58% fair, 28% good, 4% excellent.

**UTAH:** Moderate to heavy precipitation in all divisions of State. Temperature maximums 1° below normal, minimums 1° above normal throughout the State.

Fall seeded wheat in mostly fair condition. Winter range feed is in poor to fair condition. Cattle, sheep are in fair to good condition. Calving, lambing beginning in most areas. Early tillage has begun in some areas, with a few fields being planted.

**VIRGINIA:** Near normal precipitation, temperatures 7° below normal. Extremes 17°; 67°.

Days suitable for fieldwork 2.9. Topsoil moisture 6% short, 66% adequate, 28% surplus. Pasture 3% very poor, 5% poor, 45% fair, 44% good, 3% excellent. Alfalfa mostly fair to good. Barley 1% poor, 22% fair, 61% good, 16% excellent. Wheat 3% poor, 24% fair, 61% good, 12% excellent. Potatoes nearly 60% planted. Tobacco plantbeds over 75% seeded. Plantbed 13% very poor, 4% poor, 38% fair, 45% good. Top dressing small grains, overseeding hay, pasture land. Land preparation for spring planting. Peach bud development slowed by cooler weather.

**WASHINGTON:** Temperatures 1 to 4° below normal east; 1 to 3° below normal west. Precipitation none to 0.30 in. east; 0.66 to 1.43 in. west.

Days suitable for fieldwork 2.9. Soil moisture 60% short, 37% adequate, 3% surplus. Range, pasture 3% very poor, 34% poor, 20% fair, 43% good. Hay, other roughage 6% short, 94% adequate. Winter wheat 74% very poor, 13% poor, 11% fair, 2% good. Winter barley 80% very poor, 12% poor, 6% fair, 2% good. Potatoes planted 1%. Spring wheat planted 27%. Spring barley planted 7%. Dry peas planted 2%. Temperatures below normal across the State. Field preparation, fertilizing is in progress. Dry pea, spring wheat, spring barley planting are underway. Some fruit tree grafting is in progress. Pruning continues. Potato seed cutting is beginning in preparation for planting. Russian wheat aphids are active in the central Ferry area.

Pastures are beginning to grow, but most livestock are still on winter feeding programs. Conditions have been good for calving, lambing. Daffodil harvest has started in Thurston County.

**WEST VIRGINIA:** Temperature 37°. Extremes 7°, 72°. Precipitation 1.34 in.

Days suitable for fieldwork 1.9. Soil moisture 44% adequate, 56% surplus. Wheat, barley condition, good. Cattle and sheep condition, good. Calving 57% complete. Lambing 59% complete. Hay supplies 76% adequate, 24% surplus. Other feed 95% adequate, 5% surplus. Farm activities: General maintenance, feeding livestock, calving, lambing, plowing, fieldwork preparation.

**WISCONSIN:** Temperature 32°. Extremes -2°; 54°. Patchy, light rain, snow showers across southern State on the 11th. On the morning of the 12th, southwestern areas received up to 10.0 in. of snow. Light rain, drizzle over western, northern areas on the 16th. Rain, drizzle 0.10 to 0.60 in. overspread southern areas on 17th. On the night of the 17th, a few areas in south picked up an inch of wet snow.

**WYOMING:** Temperatures above normal. Precipitation above normal southeast, below normal elsewhere.

Winter wheat fair to good. Additional moisture needed. Spring fieldwork beginning. Livestock mostly good. Calving, lambing, shearing continuing.

### International Weather and Crop Summary

March 10 - 16, 1991

#### HIGHLIGHTS

**WESTERN USSR** ... Generally dry weather covers dormant winter grains. Unseasonably warm weather diminishes snow cover in the west and south.

**SOUTHEAST ASIA** ... A tropical storm brings much needed rain to the central Philippines. Heavy rains resurge over Indonesia.

**NORTHWESTERN AFRICA** ... Moisture is adequate to abundant for winter grains nearing reproduction.

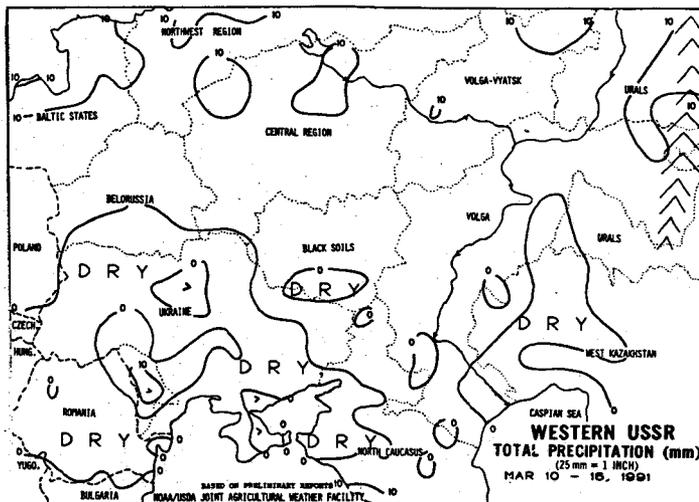
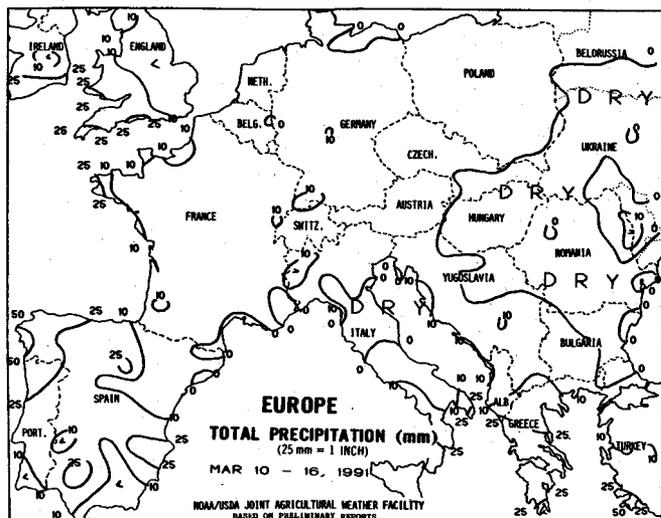
**SOUTH AFRICA** ... Showers and seasonable temperatures benefit late-planted corn.

**EUROPE** ... Mild weather continues over most of the continent, prompting greening in winter grains at earlier-than-usual dates. Dry weather favors early season fieldwork.

**SOUTH AMERICA** ... Widespread showers in southern Brazil ease drought stress but come too late for maturing crops. In Argentina, generally dry weather favors early summer crop harvesting, but rain slows northern cotton harvest.

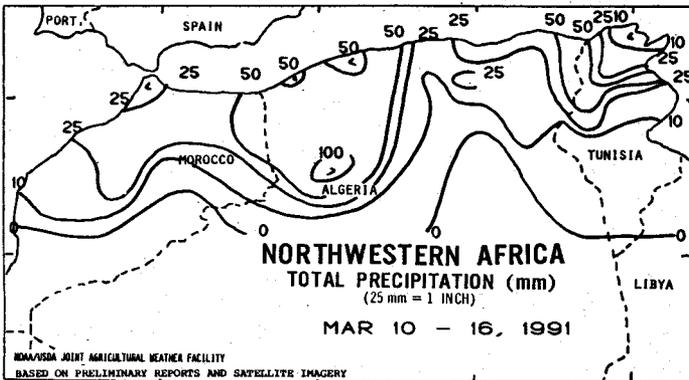
**EASTERN ASIA** ... Beneficial showers continue over China's winter wheat regions. Dry weather persists over rice areas of the southern coast.

**AUSTRALIA** ... Dry weather promotes early cotton harvesting.

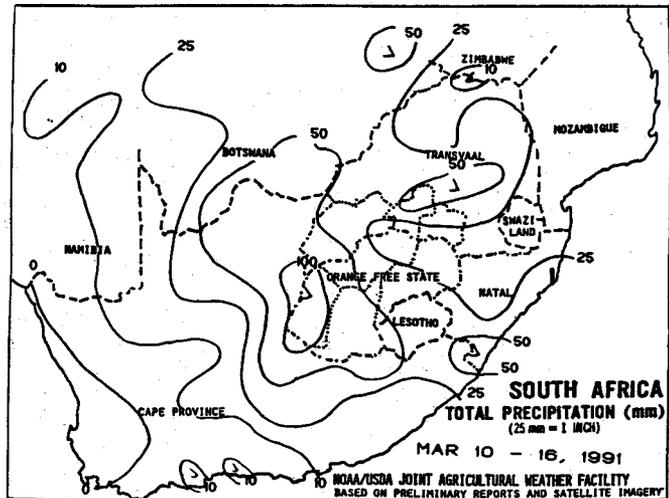


**EUROPE** ... Dry weather covered most crop areas except for western England, the Iberian Peninsula, and Greece, where light to moderate precipitation (10-50mm) fell. Weekly temperatures were high enough to cause winter grains to continue breaking dormancy and greening at earlier-than-usual dates throughout most areas. In addition, the mild, dry weather favored early season fieldwork. Winter grains in Mediterranean areas were jointing. Weekly average temperatures ranged from 3 to 7 degrees C above normal over the region. Moisture remains limited in parts of northern and southeastern Europe, where rain will be of increasing importance in upcoming weeks as crop moisture demands increase.

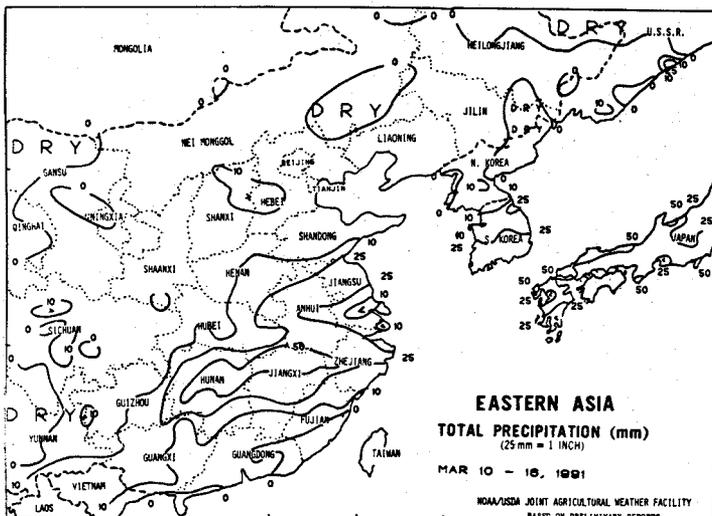
**WESTERN USSR** ... Winter grains remained dormant during the week but were losing winter hardiness. Most winter grain areas experienced generally dry weather (precipitation less than 5mm) during the week except for crop areas in Moldavia and in the extreme north, where rainfall ranged from 10 to 25mm. Weekly average temperatures, ranging from 2 to 6 degrees Celsius (C) above normal, diminished snow cover in the Baltic States, Belorussia, the Ukraine, and the North Caucasus. A moderate to deep snow cover remained over winter grains in the Central Region, Black Soils Region, the Volga Vyatsk Region, and the Volga. Favorable soil conditions may have prompted early spring fieldwork in the southern Ukraine and the western North Caucasus.



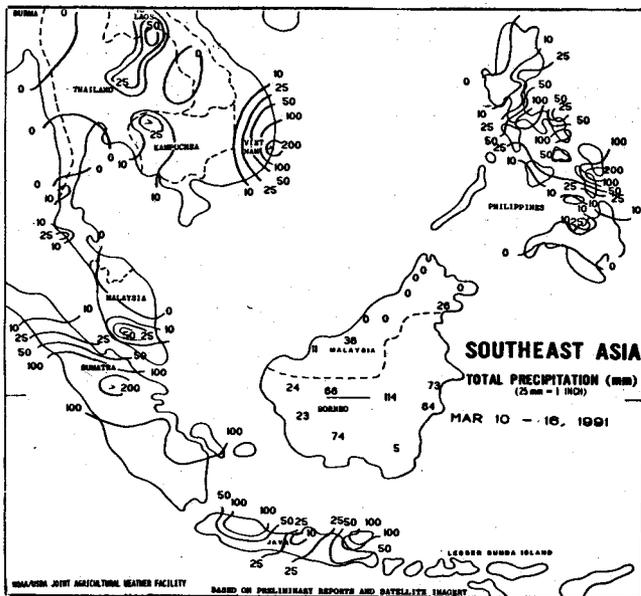
**NORTHWESTERN AFRICA** ... Widespread rain covered winter grain areas in Morocco, Algeria, and Tunisia. Greatest amounts of rain (50-100mm) soaked western growing areas in both Algeria and Tunisia. Precipitation over the remainder of the region generally ranged from 13 to 45mm. Beneficial rain in recent weeks over most areas has provided adequate to abundant moisture conditions for crops approaching the highly weather sensitive reproductive period. Although a favorable outlook exists for this year's winter grain crops, continued beneficial rain will be needed in upcoming weeks to prevent the development of crop stress.



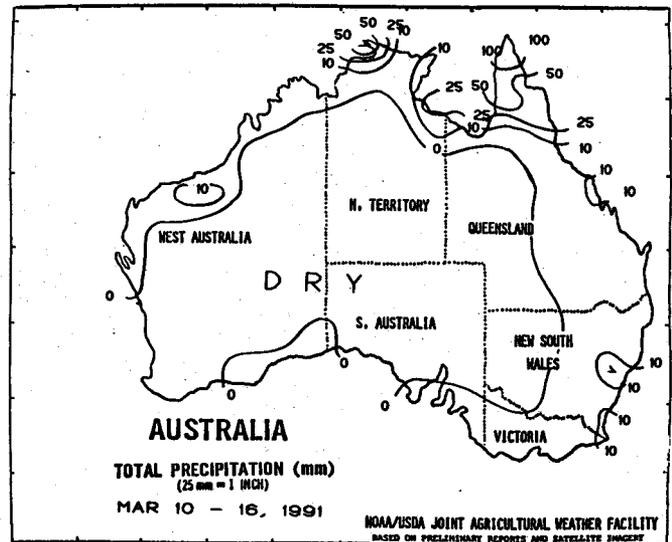
**SOUTH AFRICA** ... Moderate to heavy showers (25-65mm) covered much of the eastern and western Maize Triangle, although pockets of light rain (4-13mm) covered central corn areas. Temperatures averaged near normal, favoring growth of immature corn. Conditions since early January have been highly beneficial for normal corn development across the region, especially in the western Maize Triangle, where much of the crop was planted past the optimal period. However, seasonably cooler and drier weather by mid-April will likely slow crop growth, necessitating a continuation of optimal weather in upcoming weeks to ensure normal development. Elsewhere, beneficial showers (15-50mm or more) covered crop regions of the eastern Cape Province and Natal.



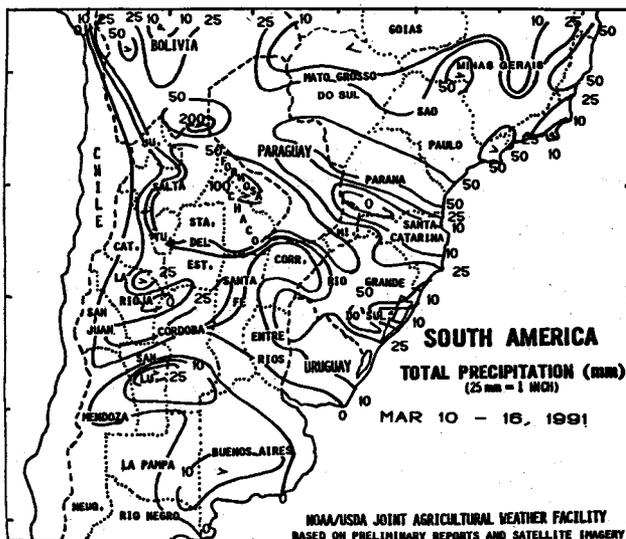
**EASTERN ASIA** ... Precipitation continued across China's primary winter wheat areas, providing timely moisture for crops breaking, or about to break, dormancy. Total accumulations ranged from 5 to 10mm in crop areas from Shandong northward and 10-40mm south of Shandong. Weekly temperatures averaged 1-4 degrees C below normal, but lowest minimum temperatures (-1 to -10 degrees C) from Shandong northward had little impact on crops that had lost some hardiness in recent weeks. Further south, widespread showers (10-50mm or more) continued along the Yangtze Valley, but dry weather persisted along the southern coast, hampering rice plantings. In the northeast, moderate to heavy precipitation (10-77mm) continued over South Korea and much of Japan.



**SOUTHEAST ASIA** ... Tropical Storm Sharon rolled through the central Philippines with sustained winds of about 35 knots, bringing much needed rainfall but possibly causing local damage to mature grain. Rainfall averaged 25-100mm or more from southern Luzon to northernmost Mindanao, but isolated accumulations exceeded 300mm. Late in the week, Sharon brought heavy showers (50-219mm) to southern Vietnam, likely causing some local flooding. Heavy showers (100-258mm) also caused local flooding in parts of western and southern Indonesia. In contrast, drier weather (10mm or less) again dominated most crop regions of Malaysia. Further north, local showers (10-67mm) dotted the Thai Peninsula and covered some central and northeastern rice areas. However, temperatures remained unseasonably hot over Thailand's rainfed rice areas, maintaining high evaporative losses. Thai rice and corn planting usually takes place in April and May.



**AUSTRALIA** ... Mostly dry weather prevailed over eastern summer crop areas, favoring early harvesting of sorghum and cotton. Northern New South Wales and southeastern Queensland account for nearly all major cotton production. Light, scattered showers fell in Victoria and east-coastal New South Wales. Dry weather prevailed across South Australia and Western Australia. Tropical showers were again confined mostly to extreme northern coasts of the Northern Territory and Queensland.



**SOUTH AMERICA** ... In south-central Brazil, substantial rain (18-58mm) fell in western Rio Grande do Sul, but the much needed topsoil moisture came too late for early maturing crops suffering from prolonged dryness. The widespread showers eased stress on immature soybeans, stabilizing conditions for late development. Weekly rainfall averaged 50-85mm in northern Parana and southern Mato Grosso do Sul, maintaining adequate moisture for late growth but slowing early soybean harvesting, which was about 15 percent complete in Parana. Widespread showers also covered Brazil's northern soybean areas. In Argentina, locally heavy showers (50-116mm) were confined to northern cotton areas, hampering early harvest activities. Mostly dry weather prevailed in northern Buenos Aires and Santa Fe provinces, where moisture is mostly favorable for crop development. The dryness favored early summer crop harvesting. Showers (16-22mm) fell again in southern Cordoba, maintaining ample crop moisture.

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.

**U.S. DEPARTMENT OF COMMERCE**

National Oceanic and Atmospheric Administration  
National Weather Service/Climate Analysis Center  
Managing Editor . . . . . **Douglas Le Comte**  
Meteorologists . . . . . **Brad Rippey** (202) 382-1444  
**Vilhelm Bjerknes, Bob Stefanski, Wes Byrd and Eyad Atallah.**

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

**U.S. DEPARTMENT OF AGRICULTURE**

Economics Management Staff  
Editor . . . . . **Sharon Lee**  
National Agricultural Statistics Service  
Agricultural Statistician . . . **Dave Abbe** (202) 447-2157  
World Agricultural Outlook Board  
Agricultural Weather Analysts . . **Ray Motha** (202) 447-5716  
**Tom Puterbaugh, and Mark Brusberg.**

(Continued from front cover)  
**Texas.** To the north, a band of heavy snow fell from **eastern Nebraska** to **Indiana**. Ten inches blanketed **Dubuque, IA**. An inch of ice topped 6 inches of snow in **Alexandria, IN**. Farther south, a tornado touched down near **Glasgow, MO**. By midweek heavy snow spread into the mountains of the **Northeast**, while a new storm surged ashore in the **West**. Hail was again reported in **California** and high winds raked the **Southwest**. Up to a foot of snow blanketed the **Great Basin** and the **mountains of the Southwest**. Cold air behind the storm dropped the mercury to a record-low 35° F in **Bakersfield, CA**. Heavy rain and severe weather broke out in **eastern Texas** at week's end, including large hail and a possible tornado. To the north, beneficial rain and wet snow eased the effects of 8 dry weeks and a drier-than-normal winter in **Kansas** and **Oklahoma**.

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

SECOND CLASS MAIL  
POSTAGE AND FEES PAID  
NOAA PERMIT NO.  
ISSN 0043 1974

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USA, \$300

**WEEKLY NEWS BULLETIN  
SECOND CLASS**