

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

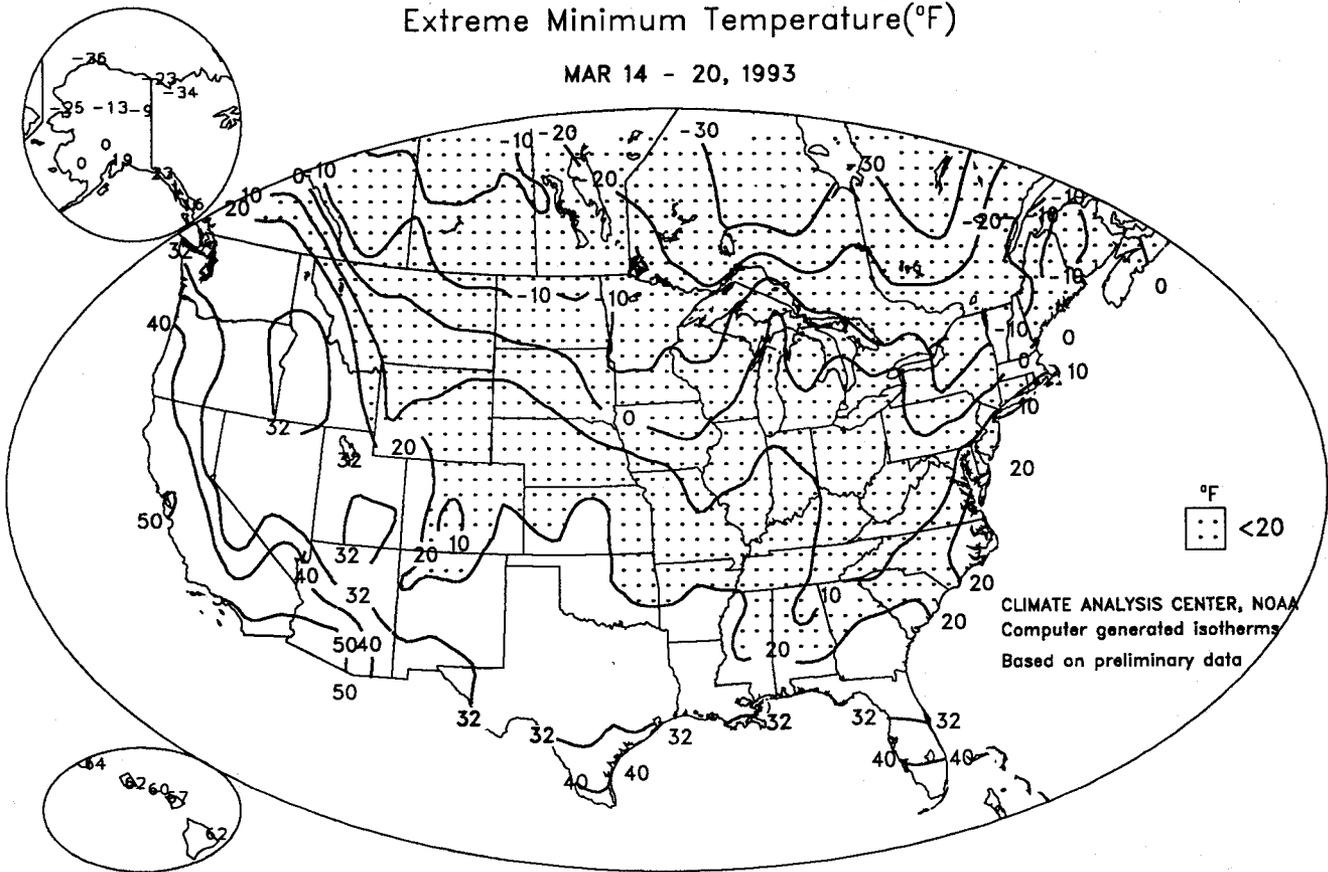
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Washington, D.C.

March 23, 1993

Extreme Minimum Temperature(°F)

MAR 14 - 20, 1993



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

HIGHLIGHTS

March 14 - 20, 1993

Record-setting cold swept into the East in the wake of last weekend's epic snowstorm, damaging peaches and ground crops in the Southeast. Elsewhere, moisture spread into the Northwest, combining with warmth and snowmelt to cause local flooding. Heavy rainfall was also scattered across the Southern and Eastern States. On Sunday morning, nearly 70 daily record lows were set in the eastern half of the Nation. Temperatures plunged to the freezing mark into south-central Texas, coastal Louisiana, and northern Peninsular Florida. Mobile, AL, registered 21°F to set an all-time March record. Other notable readings across the South included 2°F in Birmingham, AL, 27°F in San Antonio, TX, and 31°F in Daytona Beach, FL. According to State agricultural reports, more than 50 percent of Georgia's peaches were blooming, and were subjected to 20 to 40 hours of

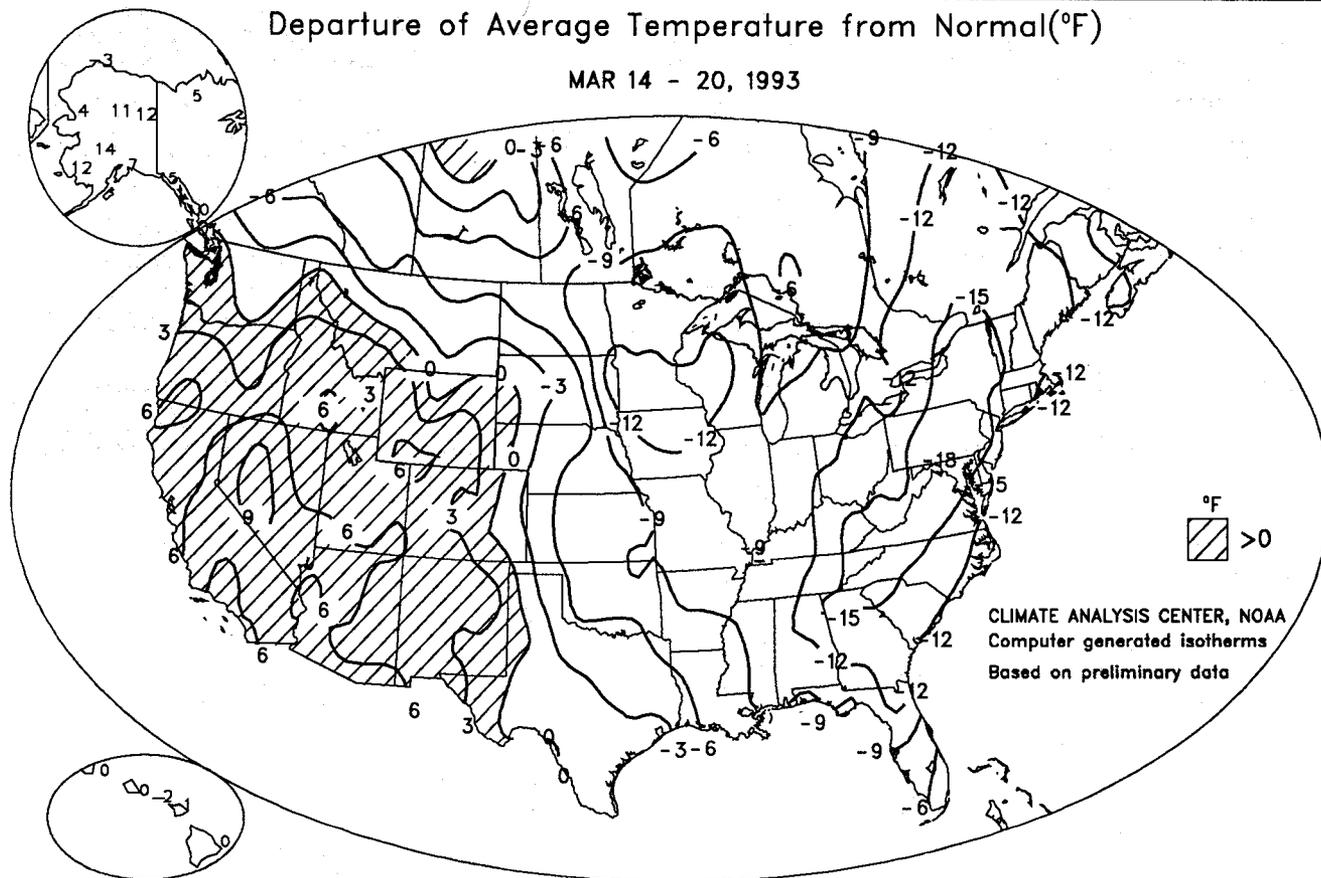
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Contents

	Page
Highlights & Minimum Temperature Map	1
Temperature Departure & Total Precipitation ..	2
Snow Cover and Soil Temperature Maps	3
National Weather Data for Selected Cities	4
Weekly Heating Degree Day Table	7
National Agricultural Summary	8
State Summaries of Weather and Agriculture ...	9
Corn and Cotton Planting Date Maps	14
Spring Wheat and Sorghum Planting Date Maps ..	15
International Weather and Crop Summary	16
Subscription and Mailing Permit Information ..	20

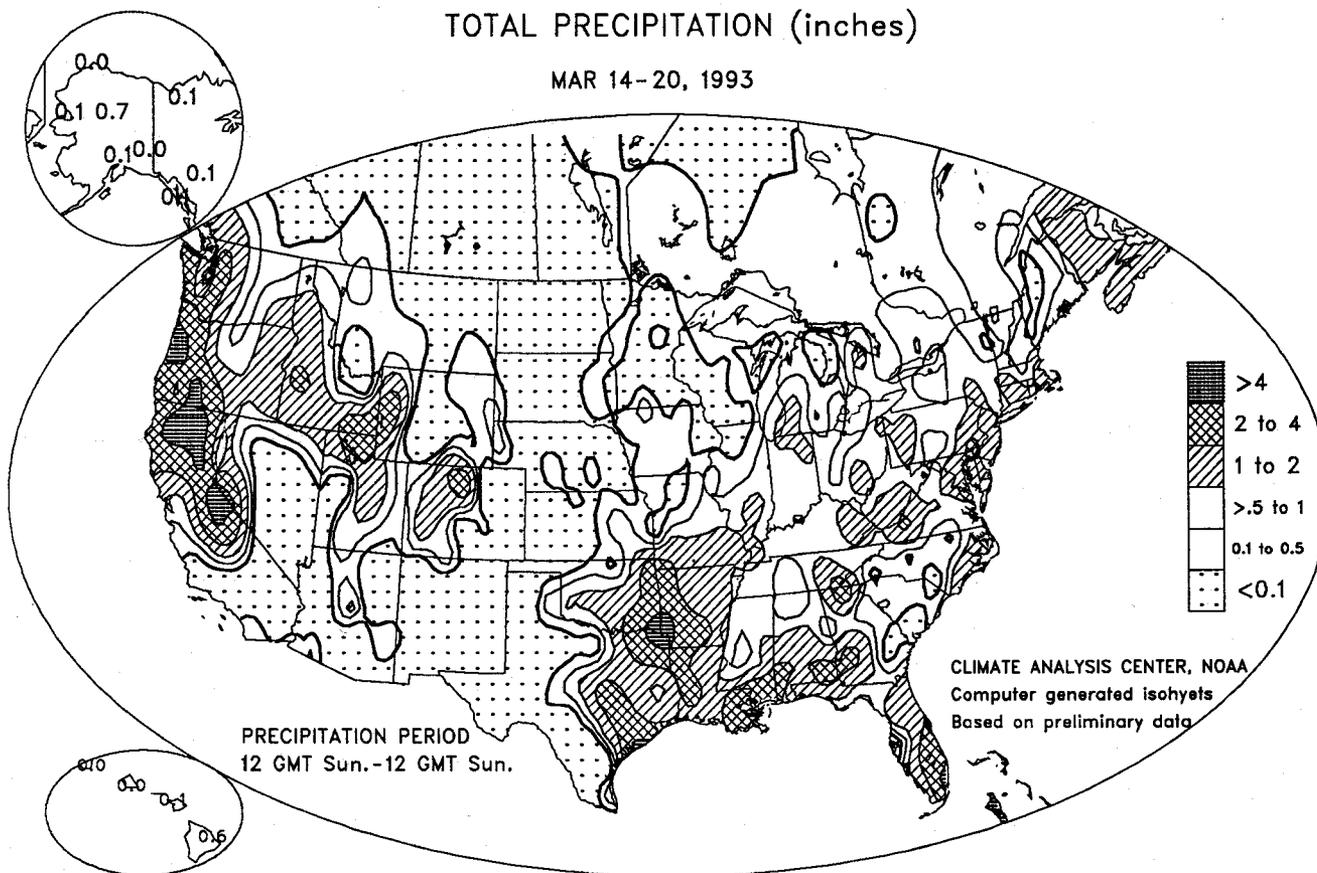
Departure of Average Temperature from Normal(°F)

MAR 14 - 20, 1993

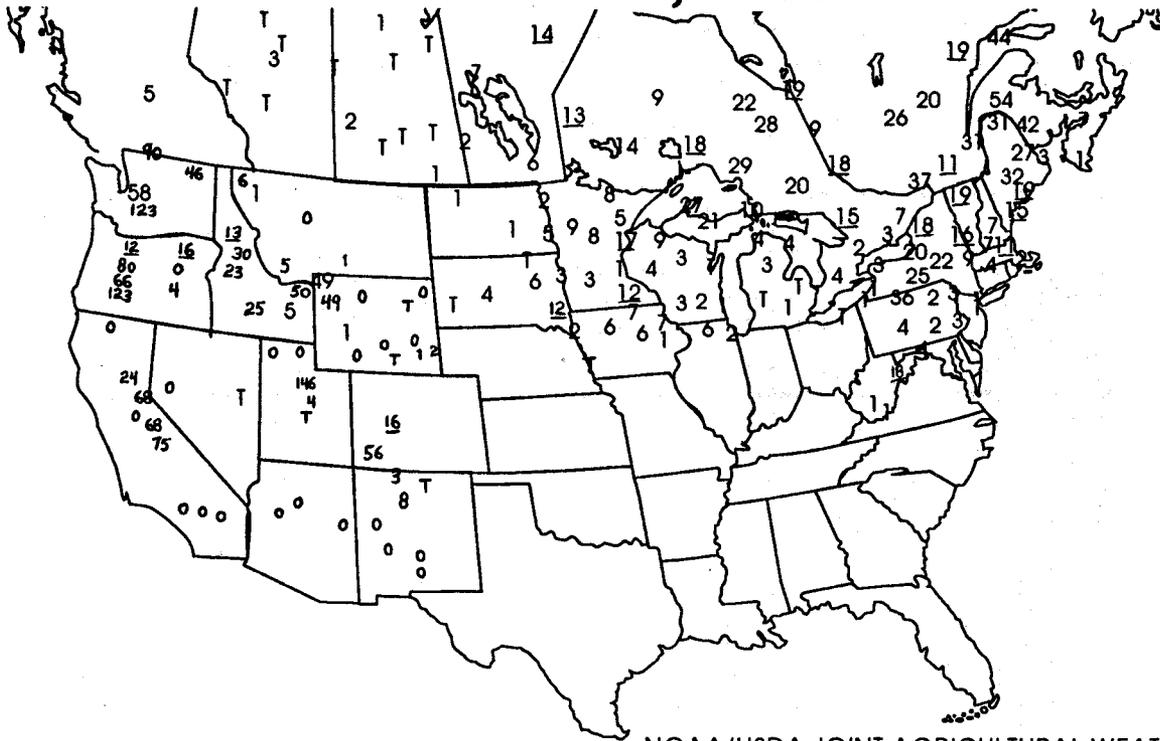


TOTAL PRECIPITATION (inches)

MAR 14-20, 1993



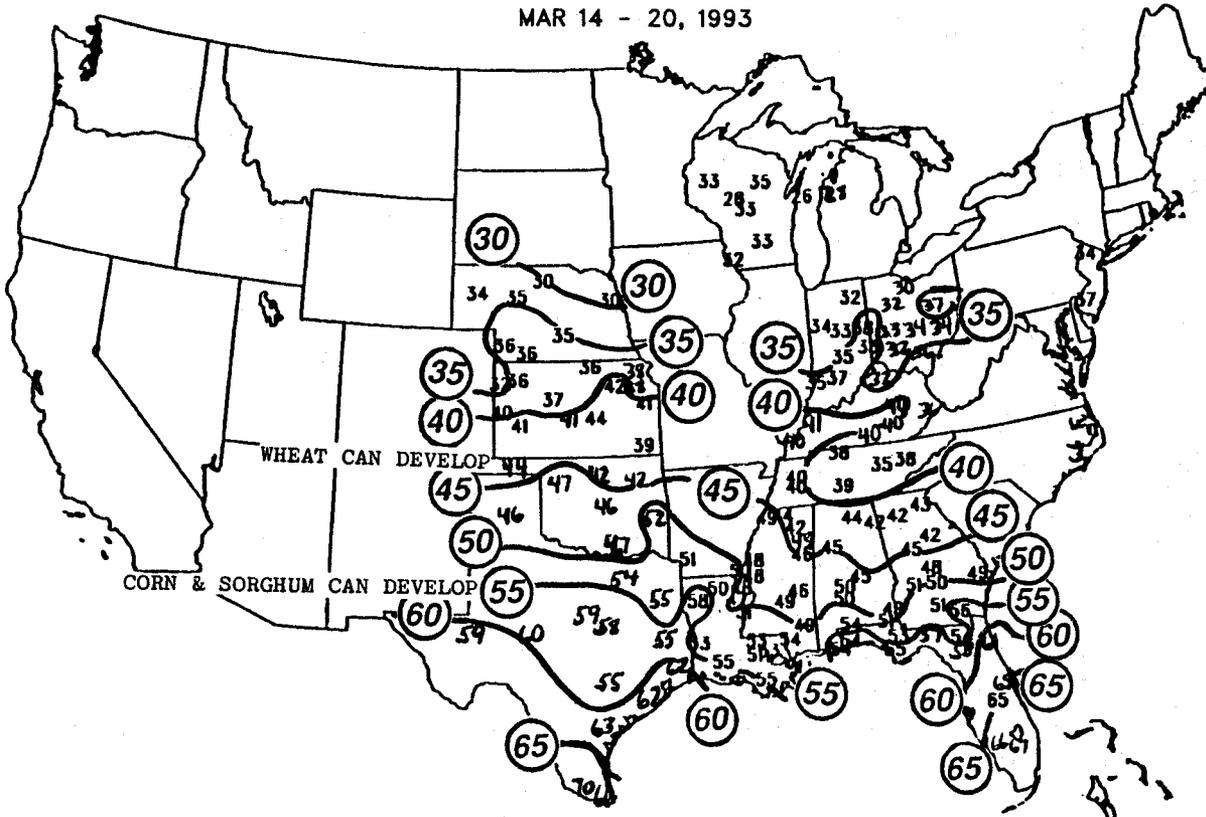
Total Snow Cover (Inches) March 22, 1993



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

Average Soil Temperature (°F 4-Inch Bare)

MAR 14 - 20, 1993



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

National Weather Data for Selected Cities

Weather Data for the Week Ending March 20, 1993

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT			NUMBER OF DAYS						
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	90 AND ABOVE		32 AND BELOW			
																	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE		
AL BIRMINGHAM	52	30	61	2	41	-13	.4	-1.0	.3	2.7	68	11.0	80	78	38	0	0	3	2	0	2	
MOBILE	60	41	67	21	51	-10	2.3	.8	1.4	5.9	140	18.4	128	90	51	0	0	2	3	0	2	
MONTGOMERY	58	36	67	17	47	-9	1.2	.3	.7	5.7	140	15.4	107	80	39	0	0	2	2	1	1	
AK ANCHORAGE	35	17	40	10	26	0	0	0	0	0	36	2.3	113	83	47	0	0	7	7	1	1	
BARROW	-9	-23	5	-28	-16	0	0	0	0	0	62	.7	213	77	71	0	0	7	7	2	0	
FAIRBANKS	31	2	39	-13	16	0	0	0	0	0	67	2.9	250	81	42	0	0	7	7	1	1	
JUNEAU	38	24	43	16	31	-2	2	.2	.1	1.6	73	19.8	189	84	50	0	0	7	7	1	1	
KODIAK	41	31	47	25	36	3	7	.9	.1	5.2	171	15.5	99	90	62	0	0	5	5	2	1	
NOME	24	8	28	1	16	7	7	1.1	1.0	1.1	368	3.4	201	86	70	0	0	7	7	4	0	
AZ PHOENIX	80	57	83	53	68	6	6	0	0	0	0	7.0	354	66	30	0	0	0	0	0	0	
PRESCOTT	64	38	71	33	51	9	9	.3	.2	.3	21	8.7	202	81	33	0	0	0	0	1	0	
TUCSON	81	49	85	46	65	6	9	.2	.2	0	2	6.3	313	63	20	0	0	0	0	0	0	
YUMA	87	61	89	59	74	9	9	.1	.1	0	0	2.9	404	44	16	0	0	0	0	0	0	
AR FORT SMITH	54	35	64	17	44	-8	1.7	.8	1.0	1.9	75	9.0	129	90	51	0	0	2	0	5	1	
LITTLE ROCK	53	37	60	24	45	-9	1.4	.2	.8	2.1	68	9.1	94	76	49	0	0	2	4	1	1	
CA BAKERSFIELD	73	52	78	47	62	5	5	.3	.1	.3	49	4.7	179	73	46	0	0	0	2	4	0	
BURKHA	60	53	63	51	56	7	7	1.8	.6	.5	2.5	70	15.6	109	90	72	0	0	0	2	0	
FRESNO	71	52	74	48	62	7	4	.4	.1	.2	.4	32	8.0	161	91	50	0	0	7	0	0	
LOS ANGELES	68	56	73	53	62	4	4	.5	.5	0	15.9	252	89	66	0	0	0	0	2	0	0	
REDDING	64	51	72	45	58	6	6	3.4	2.4	2.2	3.5	118	21.4	159	96	62	0	0	0	3	2	
SACRAMENTO	68	52	70	47	60	6	6	.7	.1	.5	.8	47	14.5	173	98	63	0	0	0	2	0	0
SAN DIEGO	69	58	71	53	63	4	4	.7	.4	0	1	13.8	305	88	64	0	0	0	0	0	0	0
SAN FRANCISCO	65	54	68	49	59	6	6	.7	.0	.4	.8	39	16.8	174	88	70	0	0	0	5	0	0
CO DENVER	56	29	61	24	42	3	3	0	.3	.3	33	1.6	86	81	33	0	0	5	0	0	0	
GRAND JUNCTION	61	36	64	30	48	3	3	.3	.1	.2	.5	68	2.9	167	82	33	0	1	3	0	0	
PUEBLO	56	25	68	12	40	-1	1	0	.2	.9	196	1.5	139	76	33	0	0	6	0	0	0	
CT BRIDGEPORT	35	18	45	12	27	-12	9	.0	.9	5.0	209	10.2	118	77	50	0	0	7	2	1	1	
HARTFORD	34	12	45	5	23	-15	9	.0	.9	4.4	191	9.9	111	81	41	0	0	7	7	1	1	
DC WASHINGTON	38	23	46	15	31	-17	1.0	.2	.9	4.9	241	10.1	135	76	45	0	0	7	2	1	1	
FL APALACHICOLA	62	43	73	30	53	-8	0	-1.0	0	3.7	132	14.1	134	76	45	0	0	2	0	0	0	
DAYTONA BEACH	64	51	74	31	58	-7	1.2	.5	.8	3.7	187	11.0	140	90	58	0	0	2	4	1	1	
JACKSONVILLE	56	42	66	27	49	-13	7	.1	.1	3.0	124	9.8	103	83	64	0	0	2	2	4	1	
KEY WEST	72	62	78	53	67	-6	2	.2	.1	1.2	106	9.5	191	80	68	0	0	0	2	0	0	
MIAMI	73	60	80	44	67	-5	4.3	3.0	.8	5.6	367	12.8	227	83	57	0	0	0	3	2	2	
ORLANDO	66	50	75	33	58	-9	9	.1	.8	3.2	144	9.5	127	81	58	0	0	0	4	1	1	
TALLAHASSEE	63	41	70	25	52	-9	2	-1.2	.2	4.9	118	19.1	131	77	45	0	0	2	1	0	0	
TAMPA	68	49	75	35	58	-8	1	-0.6	.1	3.2	153	9.2	128	81	55	0	0	0	2	0	0	
WEST PALM BEACH	72	59	78	41	65	-6	1.6	1.0	.7	2.4	125	12.5	170	83	60	0	0	0	5	2	2	
GA ATLANTA	52	31	60	18	42	-12	1	-1.2	.1	3.1	81	11.5	86	81	45	0	0	2	3	0	0	
AUGUSTA	55	33	68	19	44	-11	1	-1.0	.1	3.3	106	12.5	109	70	40	0	0	4	2	0	0	
MACON	54	34	64	20	44	-13	1.0	.1	1.0	6.1	191	15.8	126	74	44	0	0	3	1	1	1	
SAVANNAH	57	38	66	25	47	-12	4	-0.5	.2	2.6	105	11.4	123	77	48	0	0	2	2	0	0	
HI HILO	78	64	80	60	71	-1	6	-2.6	.3	11.1	129	16.0	56	92	62	0	0	0	4	0	0	
HONOLULU	81	62	85	56	71	-3	0	-0.5	0	0	1.1	15	83	47	0	0	0	0	0	0	0	
KARULUI	79	58	85	55	68	-5	1	-0.6	.1	1.2	65	3.6	40	89	54	0	0	0	1	0	0	
LIHUE	78	62	80	56	70	-3	0	-1.0	0	2	8	1.4	12	79	51	0	0	0	0	0	0	
ID BOISE	53	39	59	34	46	4	1.6	1.3	.8	1.8	217	4.4	132	92	58	0	0	0	6	1	1	
LEWISTON	55	41	60	36	48	4	4	.1	.2	.4	62	1.9	66	79	42	0	0	0	4	0	0	
POCATELLO	47	34	53	24	40	4	1.0	.7	.8	1.1	136	5.4	197	86	66	0	0	1	4	1	1	
IL CHICAGO	35	19	47	7	27	-11	3	-0.3	.2	1.2	77	5.9	131	85	47	0	0	7	3	0	0	
MOLINE	37	17	55	5	27	-11	2	-0.5	.2	2.0	111	4.9	108	84	47	0	0	7	3	0	0	
PEORIA	37	20	53	6	28	-11	5	-0.2	.4	1.9	109	7.1	152	86	51	0	0	7	4	0	0	
QUINCY	37	21	57	7	29	-12	3	-0.5	.2	.8	39	4.1	86	85	55	0	0	6	2	0	0	
ROCKFORD	34	16	47	5	25	-10	2	-0.4	.1	.5	37	3.8	99	87	52	0	0	7	3	0	0	
SPRINGFIELD	39	24	54	10	31	-10	3	-0.4	.2	1.6	83	7.1	135	87	53	0	0	6	3	0	0	
IN EVANSVILLE	46	28	55	16	37	-11	8	-0.3	.6	1.9	59	8.0	84	86	36	0	0	5	4	1	1	
FORT WAYNE	35	20	44	7	27	-11	1.0	.3	.7	1.9	107	9.0	161	89	50	0	0	5	3	1	1	
INDIANAPOLIS	39	23	51	11	31	-11	4	-0.5	.3	2.2	92	7.8	109	88	47	0	0	5	3	0	0	
SOUTH BEND	35	18	45	7	26	-11	7	.0	.4	1.3	72	6.9	114	87	47	0	0	5	4	0	0	
IA DES MOINES	36	18	56	7	27	-11	4	-0.2	.3	1.4	110	4.5	140	82	44	0	0	7	3	0	0	
SIOUX CITY	33	17	44	6	25	-11	1	-0.4	.1	1	10	2.9	120	89	49	0	0	7	1	0	0	
WATERLOO	33	13	46	-5	23	-12	1	-0.4	.1	1.2	88	3.1	95	87	53	0	0	7	3	0	0	
KS CONCORDIA	41	26	53	20	34	-8	1	-0.4	.1	.7	51	3.3	122	84	56	0	0	6	1	0	0	
DODGE CITY	49	26	64	19	38	-6	0	-0.4	0	.9	95	4.7	232	86	50	0	0	6	0	0	0	
GOODLAND	48	24	65	18	36	-3	0	-0.3	0	.8	56	1.8	125	85	49	0	0	6	0	0	0	
TOPEKA	44	27	58	16	36	-8	3	-0.3	.2	.8	56	4.3	125	85	49	0	0	5	2	0	0	
WICHITA	47	30	56	20	39	-8	1	-0.5	.1	.8	48	3.6	102	87	50	0	0	3	2	0	0	
KY BOWLING GREEN	47	28	58	13	37	-10	8	-0.4	.5	2.0	61	7.0	70	90	40	0	0	5	3	0	0	
LEXINGTON	41	23	49	11	32	-14	5	-0.5	.3	2.3	82	8.9	100	82	43	0	0	5	3	0	0	
LOUISVILLE	44	26	53	14	35	-11	5	-0.5	.3	3.0	100	10.7	117	88	42	0	0	5	4	0	0	
LA BATON ROUGE	64	43	71	25	54	-8	1.7	.7	1.0	4.6	149	20.8	153	93	54	0	0	1	3	2	2	
LAKE CHARLES	65	47	73	27	56	-5	1.3	.6	.9	3.5	160	14.6	142	94	62	0	0	1	3	1	1	
NEW ORLEANS	62	45	68	31	53	-9	2.5	1.4	1.6	5.2	159	13.8	96	87	54	0	0	2	2	2	2	
SHREVEPORT	61	43	65	22	52	-6	2.0	1.1	1.0	5.4	203	14.8	134	89	58	0	0	1	4	1	1	

Based on 1961-90 normals.

Weather Data for the Week Ending March 20, 1993

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		
													90 AND ABOVE				32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
ME CARIBOU	27	1	43	-12	14	-11	.4	-.1	.3	1.5	101	5.8	98	74	44	0	7	2	0
PORTLAND	32	8	44	0	20	-14	.8	-.1	.6	4.3	185	10.9	119	83	41	0	7	3	1
MD BALTIMORE	36	20	46	10	28	-17	1.2	-.4	1.2	5.9	269	11.4	136	76	42	0	7	3	1
SALISBURY	41	23	65	18	32	-13	.7	-.3	.7	6.3	231	12.8	130	86	42	0	7	3	1
MA BOSTON	38	18	52	12	28	-11	1.0	-.2	.8	4.2	179	11.3	118	78	44	0	7	3	1
CHATHAM	37	23	45	15	30	-7	.7	-.1	.5	3.9	157	9.9	98	88	55	0	6	2	1
MI ALPENA	28	7	40	-6	18	-11	.1	-.4	.0	.3	25	2.5	59	89	45	0	7	4	0
DETROIT	34	18	40	5	26	-10	.6	.0	.2	1.8	112	7.0	137	83	48	0	5	4	0
FLINT	33	16	41	5	25	-10	.5	.0	.2	1.0	76	4.9	125	90	47	0	7	3	0
GRAND RAPIDS	34	16	44	5	25	-10	1.3	.7	1.0	1.7	112	7.1	147	92	48	0	7	4	1
HOUGHTON LAKE	31	8	37	-8	19	-9	.5	.1	.1	.7	59	3.4	86	93	47	0	7	5	0
LANSING	35	16	42	2	25	-8	.5	.0	.2	1.1	86	5.5	139	88	49	0	6	5	0
MARQUETTE	26	2	33	-12	14	-10	.2	-.4	.2	.9	51	4.0	70	87	47	0	7	3	0
MUSKEGON	33	16	42	8	25	-9	.6	.0	.5	1.0	65	4.4	82	84	50	0	7	4	0
SAULT ST. MARIE	27	6	38	-6	17	-8	.2	-.3	.2	.4	24	2.8	50	91	43	0	7	3	0
MN ALEXANDRIA	30	3	39	-10	17	-10	.2	-.2	.2	.6	71	1.6	67	91	63	0	7	1	0
DULUTH	26	5	33	-9	16	-9	.2	-.3	.1	.3	30	2.6	81	84	43	0	7	4	0
INT'L FALLS	25	-1	29	-19	12	-11	.1	-.1	.1	.2	37	1.0	48	86	46	0	7	4	0
MINNEAPOLIS	30	10	39	-3	20	-12	.1	-.4	.0	.5	43	2.2	72	81	43	0	7	3	0
ROCHESTER	26	4	37	-11	15	-15	T	-.4	T	.3	32	2.3	91	86	47	0	7	1	0
MS GREENWOOD	57	37	67	20	47	-9	.2	-1.1	.2	.8	20	6.5	49	85	39	0	2	2	0
JACKSON	59	38	68	19	49	-7	.2	-1.2	.2	1.8	48	9.9	70	82	47	0	2	2	0
MERIDIAN	57	36	64	17	46	-11	2.4	.8	1.6	4.4	102	18.9	127	82	42	0	2	2	2
MO CAPE GIRARDEAU	48	30	57	15	39	-9	1.2	-.1	.9	2.2	69	10.9	115	84	48	0	4	4	1
COLUMBIA	41	23	58	9	32	-10	.6	-.1	.3	1.4	73	5.7	111	84	59	0	7	4	0
KANSAS CITY	43	25	59	13	34	-9	.2	-.4	.1	.7	45	3.9	106	85	48	0	6	3	0
SAINT LOUIS	43	26	59	13	35	-11	.7	-.1	.5	1.9	85	8.2	133	82	51	0	5	3	0
SPRINGFIELD	43	29	60	12	36	-10	1.8	.9	.9	2.1	91	7.6	127	92	62	0	5	4	1
MT BILLINGS	46	21	64	9	34	-2	.3	.0	.1	.3	41	1.1	48	82	39	0	7	4	0
GLASGOW	41	16	61	4	29	-1	T	-.1	T	.8	8	.6	65	84	49	0	7	0	0
GREAT FALLS	41	17	56	-1	29	-5	.5	.2	.3	.5	73	2.4	109	81	55	0	7	4	0
HAVRE	39	14	58	0	26	-5	T	-.2	T	T	0	.6	50	85	50	0	7	0	0
HELENA	45	22	55	6	33	0	.2	.1	.1	.2	50	2.0	138	85	48	0	7	4	0
KALISPELL	40	24	50	15	32	-2	.4	-.1	.2	.4	66	2.7	83	85	57	0	7	3	0
MILES CITY	45	16	61	2	31	-3	.3	.1	.2	.6	179	1.5	116	95	54	0	7	2	0
MISSOULA	46	30	56	27	38	2	.2	.0	.1	.3	40	1.8	66	90	54	0	5	4	0
NE GRAND ISLAND	40	23	53	15	32	-6	.1	-.4	.0	.6	51	3.2	138	87	51	0	7	3	0
LINCOLN	38	23	52	13	31	-8	.1	-.4	.1	.9	76	2.2	87	90	48	0	7	1	0
NORFOLK	37	20	47	9	28	-8	.2	-.2	.2	.2	20	3.2	134	84	44	0	7	2	0
NORTH PLATTE	44	22	64	13	33	-4	.3	.1	.1	.5	65	2.6	174	91	49	0	6	5	0
OMAHA	37	21	50	10	29	-9	.2	-.3	.1	.7	56	2.6	94	81	45	0	7	2	0
SCOTTSBLUFF	48	24	58	16	36	0	.8	.5	.6	.9	139	3.0	187	92	51	0	5	3	1
VALENTINE	45	19	61	12	32	-5	T	-.3	T	.3	35	1.5	80	86	42	0	7	1	0
NV ELY	49	27	58	20	38	4	.1	-.2	.1	.2	35	3.7	187	77	41	0	5	1	0
LAS VEGAS	75	53	79	49	64	8	.0	-.1	.0	.0	0	4.1	336	55	24	0	0	0	0
RENO	62	38	67	31	50	7	T	-.2	T	T	2	3.7	143	70	32	0	1	1	0
WINNEMUCCA	58	41	63	31	50	9	.3	.1	.1	.5	112	3.1	166	75	45	0	1	4	0
NH CONCORD	34	5	47	-6	19	-13	.4	-.2	.3	1.4	83	4.6	67	80	35	0	7	2	0
NJ ATLANTIC CITY	37	19	52	14	28	-13	.6	-.2	.6	5.9	256	10.9	124	81	49	0	7	2	1
NM ALBUQUERQUE	66	35	69	27	51	4	T	-.1	T	T	6	2.8	222	60	20	0	2	0	0
CLOVIS	66	33	73	22	50	2	.1	-.1	.1	.1	26	1.0	78	83	23	0	3	1	0
ROSWELL	72	38	84	26	55	3	T	-.1	T	T	12	1.0	92	71	19	0	1	0	0
NY ALBANY	31	8	43	-6	20	-15	.4	-.3	.2	2.3	126	7.3	113	74	43	0	7	2	0
BINGHAMTON	27	5	39	-7	16	-17	.4	-.2	.2	2.2	127	7.1	109	77	44	0	7	3	0
BUFFALO	33	12	46	-1	22	-12	.8	.2	.3	2.5	149	8.8	131	79	41	0	7	4	0
NEW YORK	34	20	46	14	27	-15	.8	.0	.7	4.5	201	10.9	133	79	49	0	7	2	1
ROCHESTER	32	11	51	-4	22	-13	.4	-.2	.3	2.0	136	5.8	104	85	47	0	7	3	0
SYRACUSE	31	7	46	-11	19	-15	.8	.1	.5	2.7	157	8.2	132	75	40	0	7	4	1
NC ASHEVILLE	41	22	48	2	31	-17	.1	-1.2	.1	2.8	75	8.7	72	81	44	0	6	2	0
CHARLOTTE	50	28	62	16	39	-13	.5	-.6	.4	4.3	145	13.2	125	72	35	0	6	2	0
GREENSBORO	44	22	58	8	33	-16	.5	-.4	.4	5.0	205	12.0	134	77	38	0	6	2	0
HATTERAS	51	35	72	25	43	-9	.8	-.2	.8	4.9	173	15.9	130	77	53	0	3	2	1
NEW BERN	52	31	68	24	41	-12	1.3	.4	1.3	4.0	153	12.9	116	87	38	0	6	2	1
RALEIGH	48	26	58	14	37	-14	.2	-.7	.4	4.5	175	11.2	115	78	40	0	6	2	0
WILMINGTON	54	31	66	22	43	-10	1.5	.5	1.5	4.7	158	13.5	112	82	36	0	6	1	1
ND BISMARCK	37	10	57	-2	23	-5	T	-.2	T	.2	44	.8	61	86	46	0	7	1	0
FARGO	25	5	35	-9	15	-11	T	-.2	T	.4	68	1.4	80	85	58	0	7	0	0
GRAND FORKS	25	5	34	-7	15	-9	.1	-.2	.1	.3	57	.7	40	87	64	0	7	2	0
WILLISTON	38	11	54	-4	25	-4	.2	.0	.1	.3	74	.8	55	83	49	0	7	1	0
OH AKRON-CANTON	34	16	44	4	25	-13	.6	-.2	.3	2.8	133	8.7	134	86	46	0	5	4	0
CINCINNATI	39	22	48	10	30	-13	.7	-.3	.3	2.3	87	9.6	121	87	48	0	5	4	0
CLEVELAND	34	16	43	3	25	-12	.8	.1	.3	2.5	136	9.5	157	84	47	0	5	4	0
COLUMBUS	38	19	45	4	29	-10	.6	-.1	.3	2.3	118	8.3	135	82	44	0	5	5	0
DAYTON	37	19	46	5	28	-13	.6	-.2	.2	2.6	122	9.3	144	85	47	0	5	5	0

Based on 1961-90 normals.

Weather Data for the Week Ending March 20, 1993

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	.01 INCH OR MORE	.50 INCH OR MORE
TOLEDO	34	17	40	3	26	-11	.4	-.2	.2	2.0	124	6.9	135	90	52	0	0	5	4	0	0	
YOUNGSTOWN	33	12	46	3	23	-14	.3	-.4	.2	3.2	165	8.9	145	87	42	0	0	7	3	2	0	
OK OKLAHOMA CITY	54	34	72	20	44	7	.1	-.5	.1	.4	24	4.9	113	86	52	0	0	3	2	3	1	
TULSA	49	34	71	19	42	-9	.7	-.1	.5	.9	42	5.8	103	92	54	0	0	3	3	3	1	
OR ASTORIA	51	42	55	35	47	1	2.8	1.2	.7	4.4	93	12.0	54	98	71	0	0	0	7	3	3	
BURNS	43	32	47	29	38	1	.9	.6	.4	1.2	172	3.6	146	88	71	0	0	3	6	0	0	
MEDFORD	61	47	65	40	54	7	.5	.1	.3	.7	55	4.7	80	98	68	0	0	0	5	0	0	
PENDLETON	53	39	57	34	46	1	.5	.2	.2	.9	113	3.5	101	87	64	0	0	0	6	0	0	
PORTLAND	54	43	60	42	49	1	1.6	.8	.5	2.6	110	6.4	55	96	72	0	0	0	6	0	0	
SALEM	56	44	61	39	50	4	2.3	1.3	.7	3.2	113	9.6	72	89	74	0	0	0	7	3	3	
PA ALLENTOWN	33	12	42	6	23	-17	1.1	.4	1.1	4.5	216	9.3	113	77	42	0	0	7	2	1	1	
ERIE	35	15	47	5	25	-11	.8	-.1	.3	2.6	137	7.9	125	86	45	0	0	6	4	0	0	
HARRISBURG	33	18	46	7	25	-16	T	-.7	T	3.2	152	7.1	90	75	39	0	0	7	0	0	0	
PHILADELPHIA	36	19	46	11	28	-14	1.1	-.3	1.0	4.7	212	9.7	111	77	45	0	0	7	2	1	1	
PITTSBURGH	36	14	53	1	25	-15	.7	-.1	.4	2.4	112	8.3	118	80	39	0	0	6	4	0	0	
SCRANTON	32	11	43	-3	21	-16	.8	-.2	.7	2.9	184	5.9	101	77	42	0	0	7	4	1	1	
RI PROVIDENCE	36	16	50	11	26	-12	.9	.0	.7	4.7	180	12.2	121	83	44	0	0	7	3	1	1	
SC CHARLESTON	56	36	65	25	46	-12	.7	-.3	.6	3.0	105	15.0	156	74	44	0	0	3	2	1	1	
COLUMBIA	53	31	64	18	42	-14	.3	-.8	.3	3.3	102	14.0	119	74	42	0	0	4	2	0	0	
FLORENCE	54	32	66	19	43	-13	.1	-.9	.1	1.8	68	10.9	115	74	34	0	0	4	1	0	0	
GREENVILLE	47	26	56	11	37	-15	.1	-1.2	.0	4.8	135	15.5	129	73	36	0	0	6	2	0	0	
SD ABERDEEN	36	12	50	-1	24	-5	T	-.2	T	.1	17	1.2	65	83	42	0	0	7	1	0	0	
HURON	38	13	51	0	26	-7	T	-.4	T	.1	7	.9	46	87	41	0	0	7	0	0	0	
RAPID CITY	48	22	62	12	35	1	.1	-.2	.1	.1	19	1.4	97	87	41	0	0	6	2	0	0	
SIoux FALLS	32	12	45	-4	22	-11	T	-.4	T	T	4	1.6	75	85	44	0	0	7	1	0	0	
TN CHATTANOOGA	48	30	54	11	39	-12	.5	-.9	.3	3.4	87	12.3	90	77	40	0	0	2	3	0	0	
KNOXVILLE	43	26	52	6	35	-15	.4	-.8	.3	3.3	100	9.6	83	89	57	0	0	5	5	0	0	
MEMPHIS	54	35	65	20	45	-9	.5	-.7	.5	1.3	37	7.3	64	75	35	0	0	3	2	0	0	
NASHVILLE	48	31	56	18	39	-11	.5	-.6	.4	2.2	69	8.0	76	82	40	0	0	4	3	0	0	
TX ABILENE	66	42	80	30	54	-2	.1	-.2	.1	.6	69	2.7	90	81	46	0	0	1	1	0	0	
AMARILLO	61	31	71	23	46	-1	T	-.2	T	.4	66	1.5	89	83	39	0	0	4	1	0	0	
AUSTIN	68	49	80	28	59	-3	.9	.5	.8	1.4	120	8.0	158	94	55	0	0	1	3	1	1	
BEAUMONT	67	50	74	27	59	-3	2.3	1.6	1.2	4.2	197	18.2	177	95	63	0	0	1	3	3	3	
BROWNSVILLE	77	57	84	40	67	-2	.2	-.1	.2	1.2	359	5.8	198	93	57	0	0	0	1	0	0	
CORPUS CHRISTI	74	55	84	39	65	-1	T	-.2	T	2.6	411	4.7	110	92	61	0	0	0	1	0	0	
DEL RIO	77	53	90	35	65	3	T	-.2	T	T	3	1.4	44	76	46	1	0	0	0	0	0	
EL PASO	76	49	81	34	63	8	T	-.1	T	T	0	1.7	163	46	17	0	0	0	0	0	0	
FORT WORTH	60	46	74	30	53	-2	.5	-.2	.4	1.6	86	9.1	149	90	61	0	0	1	2	0	0	
GALVESTON	66	56	71	39	61	-1	2.8	2.3	1.3	4.2	295	17.2	248	86	66	0	0	0	3	3	3	
HOUSTON	68	50	77	29	59	-2	.6	-.1	.3	4.6	222	13.0	138	91	60	0	0	1	4	0	0	
LUBBOCK	67	36	79	29	52	0	T	-.2	T	.2	31	1.6	99	73	35	0	0	2	1	0	0	
MIDLAND	71	40	82	28	55	-1	T	-.1	T	.2	71	2.3	173	71	33	0	0	1	0	0	0	
SAN ANGELO	70	43	84	25	57	-2	.1	-.1	.1	.2	31	1.9	80	79	42	0	0	1	1	0	0	
SAN ANTONIO	70	51	81	27	61	-1	.2	-.1	.1	1.2	124	6.2	139	88	52	0	0	1	3	0	0	
VICTORIA	70	53	79	33	62	-1	.7	-.2	.5	2.7	182	9.5	124	92	61	0	0	0	2	1	1	
WACO	62	48	77	29	55	-4	1.5	-.9	1.2	3.5	242	9.8	189	92	60	0	0	1	3	1	1	
WICHITA FALLS	60	39	75	21	50	-4	.4	-.1	.4	1.8	116	6.3	131	85	46	0	0	1	1	0	0	
UT CEDAR CITY	61	34	63	27	47	7	.1	-.2	.1	.2	24	4.6	186	83	28	0	0	3	1	0	0	
SALT LAKE CITY	60	43	65	39	51	9	.5	-.1	.3	.7	60	5.3	149	86	49	0	0	0	5	0	0	
VT BURLINGTON	28	4	41	-12	16	-15	.2	-.3	.1	.8	61	4.9	102	76	42	0	0	7	2	0	0	
VA NORFOLK	45	29	68	23	37	-12	1.0	-.2	.9	5.1	210	12.4	128	71	45	0	0	5	2	1	1	
RICHMOND	45	25	57	17	35	-13	.7	-.1	.7	5.2	220	12.6	143	80	42	0	0	6	3	1	1	
ROANOKE	40	21	51	9	30	-17	.5	-.3	.5	5.3	235	12.5	158	75	39	0	0	6	2	1	1	
WA QUILLAYUTE	50	38	51	29	44	0	2.9	-.2	.9	7.0	91	15.7	45	96	77	0	0	1	6	4	0	
SEATTLE-TACOMA	53	41	55	33	47	1	1.2	.4	.4	2.3	98	6.8	58	92	58	0	0	0	7	0	0	
SPOKANE	45	32	50	25	38	0	.6	-.2	.4	.7	66	2.9	66	90	51	0	0	3	4	0	0	
YAKIMA	53	32	62	26	42	-1	.3	-.2	.3	.6	133	2.2	91	91	42	0	0	3	2	0	0	
WV BECKLEY	37	17	49	3	27	-15	.4	-.4	.2	4.3	200	8.8	109	84	40	0	0	7	4	0	0	
CHARLESTON	41	20	57	5	31	-16	.6	-.2	.4	3.5	147	8.3	100	79	34	0	0	6	4	0	0	
HUNTINGTON	41	20	54	2	31	-13	.6	-.2	.3	3.7	164	9.6	115	82	36	0	0	6	3	0	0	
PARKERSBURG	39	18	55	5	29	-14	.8	-.1	.4	4.9	200	9.3	110	80	34	0	0	6	4	0	0	
WI GREEN BAY	30	12	39	2	21	-11	.1	-.3	.1	.4	34	2.2	64	84	44	0	0	7	2	0	0	
LACROSSE	31	10	42	-6	21	-12	.1	-.4	.0	.2	19	2.6	87	84	47	0	0	7	3	0	0	
MADISON	33	13	43	-1	23	-11	.3	-.3	.1	.6	48	3.4	98	84	44	0	0	7	3	0	0	
MILWAUKEE	33	17	43	3	25	-9	.2	-.3	.2	.8	52	4.4	96	80	50	0	0	7	3	0	0	
HAUSAU	28	5	40	-8	17	-13	.1	-.4	.0	.4	35	2.2	75	91	59	0	0	7	2	0	0	
WY CASPER	51	26	58	12	38	5	.2	-.1	.1	.3	56	2.0	119	81	48	0	0	5	2	0	0	
CHEYENNE	46	25	54	15	36	2	.1	-.1	.1	.4	62	1.6	112	77	45	0	0	6	2	0	0	
LANDER	48	22	54	12	35	1	T	-.3	T	.3	52	1.7	98	88	41	0	0	6	0	0	0	
SHERIDAN	47	20	59	7	34	-1	.1	-.1	.1	.5	89	1.4	70	88	48	0	0	6	2	0	0	

Based on 1961-90 normals.

HEATING DEGREE DAYS (Base 65° F) March 14 - 20, 1993

(Cumulative totals and departures from normal are for the period July 1, 1992 - March 20, 1993)

STATES AND STATIONS	WEEKLY		CUMULATIVE		STATES AND STATIONS	WEEKLY		CUMULATIVE		STATES AND STATIONS	WEEKLY		CUMULATIVE				
	TOTAL	DEPARTURE	TOTAL	DEPARTURE		TOTAL	DEPARTURE	TOTAL	DEPARTURE		TOTAL	DEPARTURE	TOTAL	DEPARTURE			
AL BIRMINGHAM	166	83	2603	-11	306	SHREVEPORT	91	29	2158	38	356	DAYTON	256	80	4930	67	497
MOBILE	99	59	1484	-121	-45	ME CARIBOU	356	74	8055	279	253	TOLEDO	272	66	5286	-211	396
MONTGOMERY	123	60	2038	-86	88	PORTLAND	316	88	6197	170	492	YOUNGSTOWN	293	87	5408	-27	485
AK ANCHORAGE	271	-18	8342	-268	264	MD BALTIMORE	259	110	4099	42	218	OK OKLAHOMA CITY	145	32	3477	115	747
BARROW	559	-8	14683	-448	-583	MA SALISBURY	226	82	3822	44	322	TULSA	161	50	3622	243	1007
FAIRBANKS	339	-57	11444	-510	-47	MA BOSTON	258	74	4848	243	374	OR ASTORIA	126	-21	3951	93	544
JUNEAU	237	-3	6616	-416	611	MA CHATHAM	244	48	4664	37	282	BURNS	188	-13	6914	1425	1733
KODIAK	201	-24	6580	23	258	MI ALPENA	330	64	6827	88	500	MEDFORD	74	-62	3360	-464	279
NOME	343	-66	11078	231	749	DETROIT	271	62	5343	-135	388	PENDLETON	134	-14	5013	700	1191
AZ FLAGSTAFF	152	-62	5236	-339	161	FLINT	282	52	5812	-18	374	PORTLAND	113	-20	3628	-45	741
PHOENIX	0	-42	878	-458	113	GRAND RAPIDS	278	56	5809	68	454	SALEM	105	-35	3664	-146	594
PRESCOTT	95	-61	3540	-402	16	HOUGHTON LAKE	320	59	6680	-66	457	PA ALLENTOWN	294	111	4961	45	550
TUCSON	4	-54	1352	-218	42	LANSING	275	53	5938	142	421	ERIE	278	59	5068	-388	341
WINSLOW	105	-35	4142	0	-154	MARQUETTE	356	64	7777	148	402	HARRISBURG	275	107	4633	69	491
YUMA	0	-21	685	-236	210	MUSKOGON	281	57	5702	42	463	PHILADELPHIA	259	98	4021	-220	295
AR FORT SMITH	142	41	3164	0	553	SAULT ST MARIE	337	51	7541	137	406	PITTSBURGH	276	93	4868	-156	374
LITTLE ROCK	139	43	2967	72	533	MN ALEXANDRIA	338	53	7751	43	825	SCRANTON	305	105	5218	-90	289
CA BAKERSFIELD	17	-39	1701	-169	-143	DULUTH	344	51	7899	-154	292	RI PROVIDENCE	271	80	4903	44	509
EUREKA	59	-60	2879	-488	135	INT'L FALLS	370	60	8659	-117	583	SC CHARLESTON	130	68	1752	-245	177
FRESNO	20	-56	1914	-383	-55	MINNEAPOLIS	315	65	6861	42	498	COLUMBIA	161	82	2504	77	379
LOS ANGELES	19	-37	901	-284	159	MINNEAPOLIS	347	89	7298	320	724	FLORENCE	152	75	2197	-163	226
REDDING	44	-39	2226	-48	179	SAINTE CLOUD	350	75	7593	47	663	GREENVILLE	196	95	3169	247	610
SACRAMENTO	34	-49	2121	-198	66	MS GREENWOOD	123	46	2337	-178	213	SD ABERDEEN	286	25	7495	243	1305
SAN DIEGO	8	-34	795	-187	161	JACKSON	112	45	2045	-181	128	HURON	274	25	7061	188	1238
SAN FRANCISCO	37	-47	1803	-556	05	MERIDIAN	129	60	2064	-233	126	RAPID CITY	208	-19	6670	697	1671
STOCKTON	27	-52	2035	-263	-36	MO CAPE GIRARDEAU	182	49	3954	19	673	SIoux FALLS	301	59	6988	285	1119
CO DENVER	156	-34	5229	341	630	COLUMBIA	228	66	4749	204	804	TN CHATTANOOGA	179	69	3021	-196	239
GRAND JCT.	117	43	4605	-287	-248	KANSAS CITY	216	52	4913	283	885	KNOXVILLE	213	102	3397	116	380
PUEBLO	171	-1	5236	616	763	SAINTE LOUIS	212	60	4287	-56	769	MEMPHIS	141	42	2836	-101	386
CT BRIDGEPORT	266	79	4601	91	362	SPRINGFIELD	202	56	4139	67	690	NASHVILLE	179	62	3305	-68	379
HARTFORD	292	97	5401	198	547	MT BILLINGS	217	-3	6215	356	1501	TX ABILENE	75	4	2420	0	70
DE WILMINGTON	254	93	4169	-87	363	GLASGOW	253	-18	7731	281	1813	AMARILLO	129	-1	4122	429	622
DC WASHINGTON	240	107	3791	165	506	GREAT FALLS	251	14	6821	572	1789	AUSTIN	49	5	1507	-163	167
FL APALACHICOLA	90	53	1010	-331	-189	HAVRE	270	13	7620	454	1913	BEAUMONT	43	5	1232	-183	16
DAYTONA BEACH	51	26	630	-231	-81	HELENA	219	-16	7179	603	1406	BROWNSVILLE	12	3	433	-168	-135
FORT MYERS	30	24	152	-284	-56	KALISPELL	231	-2	7092	374	1324	CORPUS CHRISTI	19	-2	763	-181	-17
JACKSONVILLE	108	70	1174	-172	-22	MILES CITY	238	2	7003	396	1863	DEL RIO	18	-13	1229	-232	-8
KEY WEST	12	12	20	-96	06	MISSOULA	186	-31	6847	530	1388	EL PASO	19	-50	2190	-291	-126
MIAMI	21	18	46	-151	-15	NE GRAND ISLAND	232	28	6159	577	1512	FORT WORTH	80	16	2157	6	264
ORLANDO	49	35	439	-208	-39	LINCOLN	238	38	5914	379	1372	GALVESTON	30	-5	906	-291	-67
TALLAHASSEE	91	51	1263	-292	-196	NORFOLK	255	35	6280	252	1269	HOUSTON	44	4	1270	-207	-18
TAMPA	49	31	440	-282	-81	NORTH PLATTE	221	9	6333	533	1500	LUBBOCK	91	-12	3112	-52	190
W. PALM BEACH	25	23	105	-158	-48	OMAHA	250	56	5847	445	1076	MIDLAND-ODESSA	67	-7	2496	35	-47
GA ATLANTA	162	71	2627	-105	437	SCOTTSBLUFF	201	-6	6384	853	1497	SAN ANGELO	59	0	2155	-10	46
AUGUSTA	144	68	2283	-87	167	VALENTINE	232	-1	6626	478	1297	SAN ANTONIO	35	-3	1381	-153	94
MACON	146	81	2204	68	281	NV ELY	184	-37	6411	420	950	VICTORIA	30	-1	1042	-183	46
SAVANNAH	124	72	1625	-191	145	LAS VEGAS	11	-59	2124	-162	159	WACO	70	16	1976	-13	296
ID BOISE	130	-35	5291	555	1044	RENO	104	-67	4516	-249	646	WICHITA FALLS	107	19	2773	0	376
LEWISTON	117	-39	4667	204	837	WINNEMUCCA	106	-79	5345	261	854	UT BLANDING	103	-79	4584	-446	197
POCATELLO	172	-35	6411	673	1197	NH CONCORD	318	90	6429	275	635	CEDAR CITY	122	-58	4807	-36	242
IL CHICAGO	265	63	5541	108	499	NJ ATLANTIC CITY	254	88	4328	81	293	SALT LAKE CITY	92	-77	5104	289	605
MOLINE	263	59	5647	57	716	NM ALBUQUERQUE	98	-32	3626	-227	-30	VT BURLINGTON	341	94	6617	68	262
PEORIA	255	62	5269	-93	552	CLOVIS	105	-21	3581	20	94	VA LYNCHBURG	234	101	3729	-53	398
QUINCY	249	67	5231	208	820	ROSWELL	66	-19	2856	-13	-149	NORFOLK	193	79	2950	-77	297
ROCKFORD	277	60	5936	34	646	NY ALBANY	317	100	5920	134	451	RICHMOND	207	84	3451	-61	427
SPRINGFIELD	234	58	4797	-109	498	BINGHAMTON	340	106	6330	325	832	ROANOKE	240	109	3878	113	593
IN EVANSVILLE	196	51	4017	-157	373	BUFFALO	296	73	5633	70	401	WA COVILLE	186	-7	6262	448	1222
FORT WAYNE	262	66	5305	-34	503	NEW YORK	263	97	4199	54	517	QUILLAYUTE	148	-13	4307	-86	602
INDIANAPOLIS	237	64	4807	-56	622	ROCHESTER	302	82	5899	370	515	SEATTLE-TACOMA	125	-22	3677	-253	557
SOUTH BEND	268	67	5352	5	473	SYRACUSE	319	99	5899	300	480	SPOKANE	185	-7	6016	467	1283
IA DES MOINES	265	57	5854	186	901	NC ASHEVILLE	234	106	3714	13	476	YAKIMA	156	-5	5479	511	1249
DUBUQUE	285	56	6408	152	712	CAPE HATTERAS	153	50	2056	-278	184	WV BECKLEY	265	99	-----	-----	-----
SIoux CITY	276	58	6377	366	1159	CHARLOTTE	183	80	2879	-131	530	CHARLESTON	239	100	3985	-91	436
WATERLOO	291	57	6384	-53	681	GREENSBORO	219	98	3558	122	660	HUNTINGTON	240	103	4006	-56	421
KS CONCORDIA	219	44	5444	582	1409	NEW BERN	164	74	2383	-200	246	PARKERSBURG	250	99	4360	87	336
DODGE CITY	190	29	5226	850	1383	RALEIGH-DURHAM	196	81	3115	-46	462	WI GREEN BAY	305	51	6583	-158	431
GOODLAND	200	4	5862	783	1398	WILMINGTON	155	74	2201	-70	212	LA CROSSE	309	71	6500	63	531
TOPEKA	205	44	4814	150	983	ND BISMARCK	289	17	7783	184	1378	MADISON	293	58	6218	-198	481
WICHITA	181	30	4474	245	993	FARGO	347	62	8023	151	1072	MILWAUKEE	282	53	5688	-295	478
KY BOWLING GREEN	193	58	3781	-43	444	GRAND FORKS	348	49	8228	-36	933	WAUSAU	337	73	7146	8	395
LEXINGTON	228	79	4116	-69	446	WILLISTON	281	3	8040	323	1658	WY CASPER	186	-46	6181	80	834
LOUISVILLE	206	63	3817	-165	508	OH AKRON-CANTON	278	82	5273	63	448	CHEYENNE	202	-31	5938	196	735
LA BATON ROUGE	77	36	1396	-200	54	CLEVELAND	276	80	5074	-61	431	LANDER	210	-20	7196	815	1233
LAKE CHARLES	62	20	1353	-155	77	COLUMBUS	253	81	4704	-144	433	SHERIDAN	219	-14	6874	561	1597
NEW ORLEANS	81	43	1192	-234	-110	CINCINNATI	241	81	4572	42	593						

Based on 1961-90 normals.

National Agricultural Summary

March 15 - 21, 1993

HIGHLIGHTS: Record-setting temperatures and above-average precipitation caused damage to peach and ground crops early in the week. Areas affected most were in the Southeastern and Northern States. Temperatures were 15 degrees F or more below normal from northern Georgia to New York. Mild to very warm weather prevailed in the Southwest and Western States, causing considerable snow melt in the mountains. The heavy precipitation which fell over portions of Texas and the Pacific Northwest caused flooding. Farm activities centered around feeding livestock and land preparation for spring planting. Some repair to farm buildings in the Southeast was necessary as a result of the storm that occurred the previous week.

SMALL GRAINS: The winter wheat crop across the upper Midwest and northern Plains benefited from adequate snow cover. The crops in those areas were rated in fair to good condition. In Kansas, 95 percent (%) of the crop rated good to excellent. Growth continued to progress but was hampered by low temperatures in some areas. Texas wheat was rated 72% of normal, compared with 84% this time last year. Russian wheat aphids caused problems to part of the crop in the High Plains. Central Texas' small grain fields had some problems with rust and powdery mildew. The seeding of other small grains lagged behind last year because of wet fields. In Kansas, 10% of the oats were planted, compared with 70% for the 5-year average.

COTTON: Cotton field preparation progressed well in Arizona, California, and Oklahoma. In Arizona, 5% of the acreage was planted, compared with 7% at this time in 1992. Oklahoma farmers had 42% of their seedbeds prepared, compared with 17% a year ago. Cotton planting in the Rio Grande Valley was delayed by heavy rains. Planting in other areas were limited by wet conditions and cool weather. Land preparation has begun in the Plains.

OTHER FIELD CROPS: Alfalfa harvest was moderate to heavy in all areas of Arizona except the southeast. Infestation of weeds and insects was considered moderate to heavy. In California, alfalfa and oats were being cut for greenchop. Onion transplanting was nearly complete in New Mexico, with conditions reported as mostly good. In the High Plains of Texas, onions and potatoes were planted as conditions allowed. Chile planting was active in New Mexico. Freezing temperatures killed some newly planted tobacco fields in Florida and Georgia. Some growers will replant as plants become available. Plantbeds were also affected by cold weather and high winds. Freezing temperatures that hit Louisiana's sugarcane caused limited damage. The crop was rated in mostly fair to good condition. Sugarcane harvest was winding down in Florida. Corn planting continued in central Texas as weather permitted. Some replanting occurred in the southern parts as a result of damage from high winds and heavy rains. Sorghum planting began in the Low Plains.

FRUIT AND NUTS: Peach crops in the Southeast were adversely affected by freezing temperatures. Early varieties in South Carolina and Georgia suffered most. In Georgia, the crops were subjected to 20 to 40 hours of sub-freezing

temperatures resulting in 28% of the crop in poor to very poor condition. In Texas, where peaches were in full bloom, producers reported some damage but had not fully assessed the impact on the crop. Citrus trees in Florida were reported in good condition. Frost over northern areas caused limited damage. Harvesting activities of Valencia oranges increased. The movement of Grapefruit increased as additional labor became available. In Arizona, citrus harvest continued mostly in the central and western areas. Valencia oranges, lemons, grapefruit, tangerines, and tangelos were available in both areas. California Valencia orange harvest was active in the desert and soon to begin in the Central Valley. Navel oranges were 60% harvested. Stonefruit orchards were in petal fall and leafing out. Apple, pears, and prunes are in full bloom. Almonds leafed out and were sprayed for shot hole fungus.

VEGETABLES: As a result of the storm that hit the previous week, Florida growers replanted some fields. Planting continued in central and northern areas. Harvest was active for tomatoes, peppers, cabbage, celery, and potatoes. In east Texas, some tomatoes were killed by cold weather despite growers' efforts to protect the crop. In Arizona, vegetable harvest continued in western and central portions of the State. Major crops harvested included broccoli, cauliflower, and lettuce. In western parts, anise, artichokes, asparagus, bok choy, celery, escarole, and endive were available. In central areas, beets, dill, cabbage, and green onions were available. Land preparation for spring planting was underway in California. Some Sacramento Valley fields were too wet. Fresh market tomatoes were planted under hot caps in most areas. Broccoli harvest in the central coast was moderate to heavy. Westside lettuce was thinned and sprayed. Harvest is expected to begin next week. Pea, spinach, and lettuce plantings were underway in Washington. Cabbage and broccoli planting was active in North Carolina.

PASTURE AND LIVESTOCK: Recent cold weather caused stress and even death to livestock in the Southeast and the Central States. Increased feeding was necessary in areas with heavy snow cover. In Georgia, some cattle deaths were reported. Major cattle- and hog- producing States reported newborns stressed from cold weather. Texas reported supplemental feeding tapering off. Hay supplies were short or non-existent in some areas. In several areas of Texas, cattle were moved from small grain pastures to native pastures. Nationally, pastures and livestock were in fair to good condition.

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service.

ALABAMA: Rainfall 0.08 to 0.89 in. north; 0.24 to 1.98 in. central; 1.15 in. to 2.32 in. south. Temperatures 4 to 10° below normal north; 3 to 9° below normal central; 4 to 8° below normal south. Lows 16 to 36 north; 18 to 39° central; 26 to 42° south. Highs 63 to 71° north; 69 to 75° central; 72 to 76° south.

Activities: Harvesting timber; land preparation for spring planting; planting corn, spring vegetables; applying fertilizer; marketing cattle; land-use planning, management; repairing damage from winter storm; care of livestock, poultry, catfish.

ARIZONA: Sunny, warm most of the period with light scattered showers 14th; showers, thunderstorms 18th; north, north central, east. Temperatures 3 to 8° above normal. Extremes 24°; 86° higher elevations, 37°; 89° deserts.

Cotton field preparations continued; planting continued 5%, 7% 1992, 8% avg. Alfalfa condition good. Harvest activities moderate to heavy, all areas except southeastern Arizona where activities were light. Weed infestations moderate to heavy; insects moderate with insecticide controls being applied, disease light. Small grains jointing 75%, 69% 1992, 84% avg. Heading 20%, 25% 1992, 22% avg. Fields in good condition. Vegetable harvest active. broccoli, broccoflower, cauliflower, lettuce, kale, spinach, available western, central areas. Also available west: anise, artichokes, asparagus, bok choy, celery, escarole, endive. Leeks, beets, cabbage, dill, rapini, mixed greens, green onions, parsley, radishes, rutabagas, turnips available, central. Citrus harvest continued central, western areas. Valencia oranges, lemons, grapefruit, tangerines, tangelos available both areas. Tomatoes harvested eastern areas.

ARKANSAS: Cool, wet week, temperatures averaging below normal. Scattered showers statewide throughout week; heaviest showers occurring in southwest region. Extremes 14°; 71°. Rainfall 0.50 to 3.25 in.

Soil moisture supplies adequate to surplus. Wheat condition fair to good, needs sunshine and dry weather. Farmers fertilized wheat with nitrogen, first part of week. No signs of rust. Rice levees knocked down, some fields dry enough for light discing. Fuel needed to heat poultry houses decreased due to warmer temperatures. Fescue had limited growth. Livestock good. Producers feeding hay, supplies adequate. Pasture good.

CALIFORNIA: Wet system during the middle of the week brought some significant rain to northern, central portions of State. South remained fairly dry, warm.

Midweek rainfall slowed progress field activities northern counties. Elsewhere, good progress fieldwork. Small grains excellent growth, many fields heading. Seeding still underway higher elevations. Applications fertilizer, broadleaf herbicides ongoing. Rice stubble fields burned where conditions, air quality regulations allowed. Sugarbeets treated aphids, mites. Established alfalfa sprayed weevils. Corn, cotton, safflower, sugarbeet, sunflower fields prepared planting, sprayed herbicides. Limited planting corn underway southern areas.

Safflower planting gained momentum; early seeded fields good germination, emergence. Cotton planting increased desert areas, not started San Joaquin Valley. Alfalfa, oats, winter forages cut hay, green-chopped. Stonefruit orchards in petal fall, leafing out. Apples, pears, prunes in bloom. Grapevines leafed out, treated for mildew. Bud swell began on some varieties. Almonds leafed out, sprayed for shot hole fungus. Kiwifruit leafing. Blight prevention active for walnuts. Lemon harvest active south coast. Navel oranges 60% picked. Valencia orange harvest active in desert, began in central valley. Planting preparations spring, summer vegetables active most areas. Some Sacramento Valley fields too wet. Broccoli harvest central coast moderate to heavy. Harvest San Joaquin Valley, westside, Riverside Desert active. Westside lettuce thinned, sprayed. Harvest expected next week. Head leaf lettuce harvest continued Palo Verde, Coachella Valleys. Asparagus harvest active westside, San Joaquin Delta, good quality. Cauliflower harvest light to moderately active, variable quality, Santa Maria, Salinas-Watsonville. Fresh market tomatoes being planted under hot caps, most areas. Onions, garlic, early planted tomatoes making good progress. Other crops harvested included turnips, processing spinach, carrots, green onions, Chinese vegetables. Rangeland grasses growing well, warmer temperatures. Overall condition very good. Cattle showing good weight gain, limited supplemental feeding higher elevations. Calving active, sheep, lambs good condition.

COLORADO: On the 17th a system brought in snow, blowing snow to the higher elevations, dense fog, light rain to the eastern plains. By the 18th partly cloudy skies, warming temperatures, had returned, remained in most sections of the State through the 21st. Temperatures were generally 3 to 6° above normal for the week except in the eastern plains where cloudy conditions, cold air intrusions from the north kept temperatures between 6 to 9° below normal, especially near the Kansas border.

Days suitable for fieldwork 1.6. Soil moisture 8% short, 65% adequate, 27% surplus. Spring barley seeded 3%, 13% 1992, 8% avg. Oats seeded 1%, 7% 1992, 5% avg. Dry onions planted 4%, 23% 1992, 9% avg. Winter wheat 1% poor, 11% fair, 70% good, 18% excellent. Cows calved 54% 53% 1992, 44% avg.; ewes lambed 58%, 56% 1992, 50% avg. Livestock mostly good. Pasture, range feed condition good.

FLORIDA: Temperatures 5 to 10° below normal north, 1 to 5° below normal central, south. Highs; low to mid 70s north, mid to upper 70s central, inland south, low 80s southern coasts. Lows, excluding 15th, low to mid 30s north, upper 30s to mid 40s central, upper 40s to low 50s south except low 60s southeast coast. Precipitation highly variable. Heaviest rains occurred over east central, southeast coasts, amounts 2.00 to 9.25 in. Rain recorded 1 to 3 days north, 2 to 5 days central, south, 5 to 7 days along east coast.

Soil moisture adequate to surplus Panhandle, northern Peninsula, adequate central, southern Peninsula. Tobacco growers transplanting, resetting lost fields if plants available. Corn planting

active. Sugarcane harvest winding down. Citrus groves, trees very good condition. Frost northern areas very limited damage. High winds, rain most counties. Bloom progressing all areas. Early-mid orange harvest slowing. Valencia harvest increasing as maturity levels improve. Grapefruit movement increasing with additional available labor. Tangelo harvest almost complete. Temple, Honey tangerine harvest slowing as supplies run low. Cloudy skies, cool weather, rain helping plants recover from March 13th, 14th storm. Growers replanting some fields. Planting continues central, northern areas. Volume leaders: Tomatoes, peppers, cabbage, celery, potatoes. Also available: Snap beans, carrots, chinese cabbage, sweet corn, cucumbers, eggplant, escarole, romaine lettuce, specialty lettuces, radishes, squash, strawberries, cherry tomatoes. State's pastures poor to good. Pasture 5% poor, 45% fair, 50% good. State's cattle herds fair to good.

GEORGIA: Colder than normal week, temperatures 5 to 10° below normal. Coldest temperatures, excluding minimums 15th morning, mid to upper 20s mountains, mostly mid to upper 30s south. Warmest from near 60° northeast mountains, to mid to upper 70s extreme southwest. Rain heaviest over southwestern areas 1.00 to 2.00 in. common. Elsewhere, rain totals generally under 0.50 in., local totals near 1.00 in.

Days suitable for fieldwork 1.6. Soil moisture 21% adequate, 79% surplus. Corn 24% very poor, 20% poor, 45% fair, 11% good; 10% planted, 26% 1992, 20% avg.; heavy damage to emerged plants due to freezing temperatures, wind. Some fields will be replanted. Wheat 1% poor, 65% fair, 34% good; 44% jointing, 69% 1992, 72% avg.; 7% boot, 11% 1992, 15% avg.; cold slowed development, too early to assess damage, thought to be light. Other small grains 3% poor, 70% fair, 27% good. Onions 68% fair, 32% good. Watermelons 24% very poor, 40% poor, 36% fair; 5% planted, 9% 1992, 18% avg.; most emerged plants lost due freeze, wind. Young tender vegetable crops heavily damaged by freezing temperatures, wind. Apples 1% very poor, 7% fair, 92% good; 1% blooming, 12% 1992, 13% avg.; some freeze damage, also wind, snow damage to limbs. Peaches 13% very poor, 15% poor, 68% fair, 4% good; 64% blooming, 92% 1992, 75% avg.; early blooming varieties heavy damage, later blooming varieties light damage. Tobacco 21% very poor, 69% poor, 10% fair; 1% transplanted, 6% 1992, 7% avg.; tobacco beds condition down sharply. Most transplanted fields young plants killed. Pasture 2% very poor, 20% poor, 44% fair, 34% good; cold, wet slowing development. Cattle 39% fair, 59% good, 2% excellent; some deaths reported in heavy snow areas, hay feeding required. Some dairies forced to dump milk in snowy areas when milk couldn't be picked up. Hogs 24% fair, 73% good, 3% excellent; fair to mostly good. Power outages biggest problem. Farmers busy digging out, repairing damage. Damage to poultry houses all localities of State with heaviest north snow area. Damage to blueberries heavy.

HAWAII: Weather chilly early in the week, warming at weekend with return of trade winds. Low pressure system from previous week lingered causing daily record low temperatures. Shower activity variable. Temperatures mid 50s to mid 80s. Rainfall none to 1.30 in.

Cool weather continued to slow crop maturity. Showers were beneficial to most plantings, irrigation still essential for crop development some areas. Banana, papaya production continued

at normal levels. Rainfall beneficial to coffee, macadamia nut plantings Hawaii island.

IDAHO: Temperatures in State 2° below normal to 7° above normal. Precipitation was reported across the State.

Soil moisture adequate across most of the State. Activities: Planning spring field activities, beginning to spray weeds, repairing farm machinery. Wet conditions are hampering fieldwork. Hay, roughage supplies short to adequate. Livestock activities: Calving, lambing still in progress. Livestock fair to good. Several counties report higher than normal calf death losses due to wet weather, scours.

ILLINOIS: Winter weather continued as temperatures ran 5 to 8° below normal, and precipitation was near normal. Highs mid 30s to 50°. Lows upper teens to mid 30s. Precipitation 0.75 in.

Farm activities were slowed in many areas due to muddy feed lots, poor road conditions, as farmers tended, marketed livestock, hauled grain, spread fertilizer, planted few oats. Weather has affected calving, weight gains of livestock throughout the State.

INDIANA: Temperatures 6 to 12° below normal. Highs were from the mid to upper 30s north to the 40s south. Lows from the 20s north to the mid 20s to mid 30s south. Precipitation, liquid equivalent, 0.30 to 0.80 in. across the State. Snowcover is limited to the far north where 2 in. is reported on the ground.

Poor field conditions continue to halt progress of most fieldwork. Operators were able to top dress wheat fields, apply herbicides in some areas of the State. Machinery preparation continues to be the main activities of most grain farmers. Livestock conditions are improving as weather starts to warm. Wheat remains good. Hay supplies are beginning to tighten up.

IOWA: Temperatures 6 to 8° below normal. Extremes -8°, Sibley (northwest), 17th; 59° Keosauqua (southeast), 15th. Precipitation 0.19 in. southwest to 1.48 in. east central: average 0.58 in. (normal 0.45 in.). Snowcover 5 to 19 in. north one-third of State; no snowcover south one-half. Snow melt flood potential remains very high.

Cold weather is hard on newborn calves and their mothers, as well as young pigs farrowed in unheated buildings. Some farmers started preparing seedbed, applying dry fertilizer.

KANSAS: Temperatures 5 to 8° below normal over State. Light precipitation received central, eastern districts. Little or no precipitation western districts.

Days suitable for fieldwork 1; fields still muddy. Topsoil moisture 47% adequate, 53% surplus. Subsurface moisture 61% adequate, 39% surplus. Soil moisture adequate, surplus all districts. Wheat good shape. Condition 95% good to excellent, 4% fair, 1% poor. Wheat continuing to grow, progress hampered cold weather. Trace of State's wheat acreage jointed compared to 5% avg. Planting oats, spring barley delayed by wet field conditions. Oats 10% planted compared 70% avg. Stockmen fighting mud to tend livestock. Livestock stress, sickness high because adverse weather. Weather stress causing abnormally high calving losses, limited rates of gain. Some shortages hay because high usage.

KENTUCKY: High temperatures 50s to lower 60s, near normal. Low temperatures first part of week well below normal, dropping below 10° in some locations. Temperatures lower 40s, 5° below normal. Rainfall 0.25 in. southeast to nearly 1.00 in. west.

Cold, wet weather continued to limit fieldwork, stress livestock. Producers increased feed for livestock, newborns especially stressed. Continued cold weather has minimized early budding of fruit crops. Soil moisture ample.

LOUISIANA: Temperatures 5.8° to 9.8° below normal. Extremes 18°; 73°. Rainfall 1.13 in. central to 3.06 in. east central.

Days suitable for fieldwork 1.2. Soil moisture 15% adequate, 85% surplus. Corn 27% planted, 31% 1992, 26% avg.; 5% emerged, 13% 1992, 8% avg. Planting progressed slowly. Rice 3% planted, 10% 1992, 7% avg.; 0% emerged, 5% 1992, 3% avg. Water leveling of fields continued. Wheat 4% very poor, 12% poor, 55% fair, 29% good; 4% headed, 11% 1992, 11% avg. Some crop damage from freeze, severity unknown. Spring plowing 30% plowed, 25% 1992, 24% avg. Wet conditions hampering field operations. Sugarcane 1% poor, 60% fair, 29% good, 10% excellent. Herbicide application, off-barring continued. Livestock 5% poor, 46% fair, 49% good. Pastures 1% very poor, 21% poor, 16% fair, 62% good. Growth slow due to cool, wet conditions. Vegetables 8% very poor, 46% poor, 38% fair, 8% good. Freeze damage moderate to severe on strawberry crop.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 3.44 in. Temperature 30.1°, normal 44.8°. Extremes -3°; 64°.

Hay supplies adequate. Clearing snow from roads, feedlots, paths. Cutting firewood, feeding hay, caring for livestock. Small grains good. Tax preparation. Making plans for spring planting. Tobacco auction active.

DELAWARE: Precipitation 3.11 in. Temperature 32.1°, normal 45.1°. Extremes 13°; 62°.

Removing snow from storm. Hay supplies adequate. Pastures, livestock mostly excellent. Small grains good. Tax preparation. Making plans for spring planting.

MICHIGAN: Extremes -12°; 45°. Precipitation none to 1.28 in. Temperature swings occurred with readings in the 40s then near zero or below the next day. A snow storm moved through by the weekend.

Corn harvested remains at 95%. Most livestock are in good condition. Feed supplies remained adequate to short. Major activities: Caring for livestock, hauling manure, marketing crops, preparing tax returns, repairing machinery, cleanup; pruning; spreading manure; caring for livestock.

MINNESOTA: Temperatures 8 to 13° below normal. Extremes -22°; 44°. Precipitation 0.11 to 0.48 in. below normal. Snowfall 1 to 5 in. Snow depth at weekend averaged 1 to 12 in.

A return to winter conditions this week with subzero temperatures, snow. Calving going well, most areas reporting livestock good condition. Some corn still standing in many areas. Quality hay is in short supply. Alfalfa had good snowcover this winter, should come through in good shape.

MISSISSIPPI: Temperatures 46°, 10.1° below normal. Extremes 12°; 70°. Southern third received 1.00 to 3.00 in. of rainfall; rest of the State received less than 1.00 in. State avg.; 1.12 in., 0.25 in. below normal. Soil temperature 47°.

Days suitable for fieldwork 1.3, 2.2 1992, 3.4 avg. Soil moisture 26% adequate, 63% surplus, 11% excessive. Corn 6% planted, 16% 1992, 14% avg. Watermelons 3% planted, 3% 1992, 9% avg. Wheat 32% jointing, 55% 1992, 57% avg.; 2%

very poor, 1% poor, 82% fair, 15% good. Hay supply 4% very short 26% short, 70% adequate. Feed grain 14% short, 86% adequate. Livestock 1% poor, 30% fair, 69% good. Pasture 84% or normal. Activities: Land preparation, feeding cattle.

MISSOURI: Temperatures 8 to 12° below normal. Precipitation averaged 0.83 in., ranging from around 0.50 in. northern districts to 1.50 in. southwest, south central.

Most areas too wet for early field activity. Dry weather needed to alleviate muddy conditions in barn lots as well as fields.

MONTANA: Temperatures near to above normal. Precipitation most areas, generally 0.10 to 0.33 in., some over 0.50 in.

Snowcover receding as weather warms. However, cool temperatures kept most winter wheat dormant. Most livestock receiving supplemental feed. Calving, lambing progressing under mild weather conditions.

NEBRASKA: Temperatures near normal west; 5 to 9° below normal east. Precipitation occurred throughout the week varying from 0.10 in. east to 0.80 in. west.

Farm activities: Livestock care, crop year planning, equipment maintenance, monitoring farm stored grain, general chores.

NEVADA: Storm from west on 15th spread light rain showers over north, central areas into midweek. System was accompanied by strong gusty winds. High pressure built over State again on 19th with clearing skies, slightly cooler temperatures. Temperatures 8 to 9° above normal. Extremes 19°; 81°. Farmers closely analyzing planting options trying to obtain good cash flow situation with normal irrigation water supplies this year. Preparation for spring planting continues. Calving losses high some areas due to wet conditions causing pneumonia, scours. Main farm/ranch activities: Irrigation maintenance, preparing for spring planting, care, feeding of livestock.

NEW ENGLAND: Precipitation 0.16 to 0.75 in. north; 0.47 to 1.18 in. south. Temperatures 11° to mid 20s. Maximum temperatures low 40s to low 50s. Minimum temperatures minus 20 to 0° north; minus 12 to 12° south.

Major farm activities: General repairs, maintenance, tending livestock and moving crops from storage. Maple sugaring delayed due to cold temperatures.

NEW JERSEY: Temperatures much below normal. Extremes 4°; 57°. Rainfall 1.10 in. north, 0.81 in. central; 0.90 in. south. Heaviest 24 hour total 1.08 in. on 17th, 18th. Estimated soil moisture, in percent field capacity, averaged 100% north, 100% central, 100% south. Four inch soil temperatures averaged 34° north, 35° central, 37° south. Heaviest 24 hour snowfall 2 in. on 13th, 14th. Depth of snow on ground 22nd 2 to 8 in.

Farmers caring for livestock; repairing equipment; preparing for spring planting, plowing snow.

NEW MEXICO: Unseasonably warm, dry weather prevailed. One west-central area reported over 0.50 in. of precipitation with the remainder of the State getting little to none. Temperatures 6 to 7° above normal statewide. Extremes 17°; 86°.

Days suitable for fieldwork 6.6. Soil moisture 41% short, 56% adequate, 3% surplus. Crop conditions: Alfalfa 52% fair, 48% good. Irrigated wheat 21% fair, 79% good. Dryland wheat was 31% poor, 61% fair, 8% good. Livestock being pulled off of

wheat pasture. Onions reported mostly good; transplanting nearly complete. Lettuce poor to good. Chile planting active. Cattle, sheep fair to excellent. Lambing, calving, shearing, supplemental feeding active. Range, pasture 81% of normal.

NEW YORK: Temperatures well below normal for week. Quite cold 14th, 15th as record-setting blizzard moved out to sea. High temperatures in 10s to 20s. Lows 10° below to 10° above zero. Weather warmed up briefly during midweek with highs in 40s; lows 30s. However turned cold again latter part of week as low temperatures plunged well below zero in north country 18th, 19th mornings. Highs in teens 18th.

Precipitation on the light side for the week as most stations reported between 0.25 to 0.50 in. Precipitation around 0.75 in. on Long Island, around 1.00 in. eastern Lake Ontario counties. Precipitation fell as mostly snow although a period of rainfall reported. Major farm activities: Collecting maple syrup. Planting activity very limited due to heavy snow slow to melt. Farmers readying machinery for planting.

NORTH CAROLINA: Temperatures 9 to 17° below normal. Precipitation 0.02 in. at West Jefferson to 2.34 in. at New Bern.

Days suitable for fieldwork 1.2. Soil moisture 24% adequate, 76% surplus. Crop condition: Pasture 5% very poor, 15% poor, 45% fair, 35% good. Winter wheat 40% fair, 58% good, 2% excellent. Oats 2% poor, 29% fair, 68% good, 1% excellent. Barley 2% poor, 23% fair, 73% good, 2% excellent. Rye 3% poor, 26% fair, 69% good, 2% excellent. Hay, roughage supplies 5% very short, 21% short, 71% adequate, 3% surplus. Irish potatoes planted 45%, 73% 1992, 58% avg. Cabbage transplanted 38%, 69% 1992, 49% avg. Feed grain supplies 5% short, 94% adequate, 1% surplus. Major activities: Snow removal; winter storm damage repair; tobacco plant bed maintenance, equipment repair. Other activities: Land preparation; planting potatoes, cabbage, broccoli; topdressing small grains; tending livestock; general farm maintenance.

NORTH DAKOTA: Temperatures 13° below normal in the northeast, east central to 4° below normal northwest, west central, southwest, south central. Extremes -23° north central; 61° west central. Precipitation none south central to 0.13 in. north central.

Snowcover was completely diminished in some western areas. Livestock condition was good, calving was progressing well with few problems reported. Supplemental feed supplies were mostly adequate. Farmers were busy cleaning seed, preparing for planting.

OHIO: It was another cool week. A cold front pushed across the State at midweek ushering in cooler air for a rather un-spring like start to Spring on 20th. It was a damp week, although precipitation generally totaled below normal. Most of the precipitation fell 16th ahead of the cold front. Temperatures 5 to 12° below normal. Highs were in the mid 30s in the north to the mid 40s in the far south. Lows upper teens in the northeast to the 20s over most of the State, near 30° in parts of the south. Precipitation (water equivalent) totaled 0.35 to 0.75 in. most places. Mansfield reported 1.12 in. Snowcover that covered much of the State at the start of the week had melted by 19th, lingered longest in northeast areas.

Snowcover at the beginning of the week was adequate to insulate winter wheat. Livestock access to summer pastures has

been restricted due to soggy ground, so farmers are continuing to feed more hay than usual for this time of year.

OKLAHOMA: Temperatures 5° below normal central to normal Panhandle. Precipitation 0.14 in Panhandle to 2.54 in southeast.

Days suitable for fieldwork 3.7. Topsoil 55% adequate, 45% surplus. Subsoil moisture 100% adequate. Wheat 45% fair, 55% good; 23% jointing, 68% 1992, 19% avg. Oats 39% jointing, 34% 1992, 12% avg. Barley 31% jointing, 33% 1992, 15% avg. Corn 18% seedbed prepared, 72% 1992, 61% avg.; 5% planted, 2% 1992, 4% avg. Sorghum 5% seedbed prepared, 17% 1992, 22% avg. Soybeans 4% seedbed prepared, 34% 1992, 18% avg. Peanuts 28% seedbed prepared, 22% 1992, 19% avg. Cotton 42% seedbed prepared, 17% 1992, 30% avg. Pastures 94% of normal. Livestock 5% poor, 44% fair, 51% good. Prices for feeder steers, heifers steady. Marketings were average.

OREGON: Temperatures above normal statewide. Willamette Valley, coastal, southwestern valleys 4 to 6° above normal; central, eastern areas 3 to 6° above normal. Precipitation above normal, statewide. Western locations 1.50 to 8.00 in.; eastern, central locations 0.50 to 1.50 in. High river flow, flooding eastern areas due to heavy rainfall, melting snowpack.

Soil moisture mostly adequate to surplus, statewide. Snow packs normal to above normal, rains, warm temperatures have caused heavy melting. Winter wheat, pastures showing growth western areas. Warming trend in eastern areas, the snow continues melting, field work still delayed. Fruit, nut orchard activities continue with delayed dormant sprays going on, fruit tree buds swelling in western areas. Nurseries busy digging, bailing trees, shrubs for retail sale. Livestock good. Lambing, calving continues, with some calving, scour problems reported in eastern areas caused by muddy conditions.

PENNSYLVANIA: Below normal temperatures, precipitation. Temperature 25°, 9° below normal. Coldest week of the season. Many record lows, record low highs. Extremes -17°; 58°. Precipitation 0.65 in., 0.12 in. below normal.

Activities: Hauling manure; maintaining machinery; fixing fence; caring for livestock.

PUERTO RICO: Island rainfall 0.75 in. was 0.15 in. above normal. Highest rainfall 2.43 in. at Pico Del Este Luquillo, 2.11 in. at San Sebastian 2WNW, 1.79 in. at Manati 2E. Highest 24 hour total 1.73 in. at San Sebastian 2WNW. Island temperatures 78° on coasts, 69 to 72° in the interior with mean station temperatures 81.1° at Guayama to 62.5° at Pico Del Este Luquillo. Extremes 54°; 93°.

SOUTH CAROLINA: Temperatures 15° below normal. Average precipitation 0.30 in. statewide.

Farm activities: Land preparation for corn, other crops continued; cold damage to early planted wheat, early variety peaches; some tobacco plant damage from cold temperatures, covers blowing off; pastures average; livestock fair to good.

SOUTH DAKOTA: Two winter storms moved through last week. The first storm dropped snow in the west, north parts of the State. Late-week storm dropped snow in the southeast, central parts of the State. Precipitation for the week and year-to-date was below normal. Temperatures generally 5 to 10° below normal for the week. Extremes -13°; 65°.

Farm activities included: Monitoring calving, lambing, livestock care, preparing equipment for planting, routine chores.

TENNESSEE: It was a very cool week in most areas. Temperatures averaged around 10° below normal in east with readings around 5° below normal in west, middle. It was also relatively dry with precipitation amounts 0.75 to 1.00 in. below normal across the State. While rainfall was widespread but light on the 16th, 17th, 20th, as most stations averaged about 0.50 in.

Wheat is in mostly good condition. Main activities included preparation for row crop planting, routine livestock chores.

TEXAS: Mild and damp summed up the State's weather. Temperatures rebounded from recent cold snap, with winter ending on quiet note. Gulf moisture fueled disturbances over Upper Coast, East Texas, bringing heavy showers, leaving areas water-logged. Average temperature departures positive except Southern High Plains where averaged 2° below normal. Averages ranged 1° above normal along Upper Coast, 6° above normal far West Texas. Weekly rainfall totals behind normal West Texas, Rio Grande Valley, on target Southern High Plains, above average elsewhere.

Crops: Corn planting continued Blacklands, Central Texas conditions allowing. Planting East Texas delayed wet conditions. Some replanting South Texas, where high winds, heavy rains had caused damage. Sorghum planting began limited basis Low Plains, well underway Blacklands, Central Texas. Some early planted fields South Texas, freeze damaged over previous weekend, were replanted. Germination early planted fields slowed by cooler temperatures. Cotton planting Rio Grande Valley delayed by heavy rains. Planting other areas State limited by wet conditions, cooler temperatures. Land preparation began Plains. Small grains set back by earlier freezing temperatures, but responding well warmer temperatures that followed. Russian wheat aphid infestation remained problem High Plains, rust, powdery mildew problem Central Texas, Blacklands. Several wheat fields Blacklands suffering moisture stress, some oats browning from excess water. Statewide wheat condition 72% normal, 84% 1992.

Commercial Vegetables: Rio Grande Valley, melons progressing well, some minor insect problems occurring. Some spraying insects took place. High Plains, some onions, potatoes planted, conditions allowed. East Texas, some tomatoes killed by freeze. Producers tried protect early planted vegetables from freezing temperatures. Trans-Pecos, onions planted. Pre-irrigation chile pepper planting underway. Peaches again blooming in several areas of State. Damage from freeze, early blooming varieties, expected severe. Producers hoped damage to other trees was minor, only serve to thin crop. Along Upper Coast most varieties full bloom, several already setting fruit.

Range and Livestock: Supplemental feeding tapered off most areas. Hay supplies short, almost non-existent, some areas. Winter pastures set back by freeze, seemed to recover as temperatures rose. Cattle Plains pulled off small grain pastures, sent market, onto native pastures. Lice infestations remained problem Plains, Hill Country, East Texas. Shearing Angora goats winding down. Overall livestock condition remained fair, good.

UTAH: Temperature maximums 3° above normal, minimums approximately 6° above normal. Precipitation heavy in the north to moderate in the central portion of the State to light in the south, except for Dixie where none was reported.

Major farm, ranch activities were machinery repair, cleaning corrals, calving, lambing. Many areas are working to control heavy spring runoff caused by warmer daytime temperatures.

VIRGINIA: Temperatures 15 to 20° below normal at the beginning of the week, returned to near normal by weekend. Extreme low -11°. Precipitation was generally less than 1.00 in.

Days suitable for fieldwork 0.2. Topsoil moisture was 21% adequate, 79% surplus. Pasture 21% poor, 60% fair, 19% good. Wheat 6% poor, 66% fair, 28% good. Barley 7% poor, 51% fair, 42% good. Alfalfa 11% poor, 66% fair, 23% good. Peach 19% poor, 56% fair, 25% good. Apple 6% poor, 44% fair, 44% good, 6% excellent. Tobacco plantbed 26% very poor, 13% poor, 47% fair, 14% good. Tobacco plantbeds 72% seeded. Wet field conditions delayed topdressing. Extreme cold, blizzard in western, southwestern areas caused problems with calving, lambing, made feeding difficult. Removing snow, repairing fences. Some early planted potatoes may have rotted. Maple syrup production nearing completion with average yields.

WASHINGTON: Temperatures 5° above normal to 1° above normal west; 6° above normal to 2° above normal, east. Precipitation none to 1.83 in. west; none to 0.77 in. east.

Days suitable for fieldwork 4.6. Soil moisture 26% short, 74% adequate. Hay, other roughage 32% very short, 6% short, 52% adequate, 9% surplus. Range, pasture 30% very poor, 41% poor, 12% fair, 17% good. Winter wheat dryland 30% fair, 70% good; irrigated 5% fair, 95% good. Barley dryland 40% fair, 60% good; irrigated 5% fair, 95% good. Above normal temperatures, precipitation statewide. Field preparations further delayed, 2 to 3 weeks behind schedule in most areas. Pea planting advanced, potato planting began between rains west. Orchard pruning neared completion, some early potatoes planted east. Calving advanced in muddy conditions; hay supplies very short east as snowcover slowly recedes.

WEST VIRGINIA: Temperature 32°. Extremes -6°; 60°. Precipitation 0.64 in.

Hay feed supplies adequate. Other feed supplies adequate. Cattle good. Sheep good. Wheat condition good. Farm activities: General maintenance, feeding livestock, calving, lambing.

WISCONSIN: Temperature 23°. Extremes -22°; 48°. There were many days with light snow, below normal temperatures this week. On the 15th, 16th, most areas received 1 to 2 in. of snow. Late on the 21st, heavy snow began to fall across the southwest.

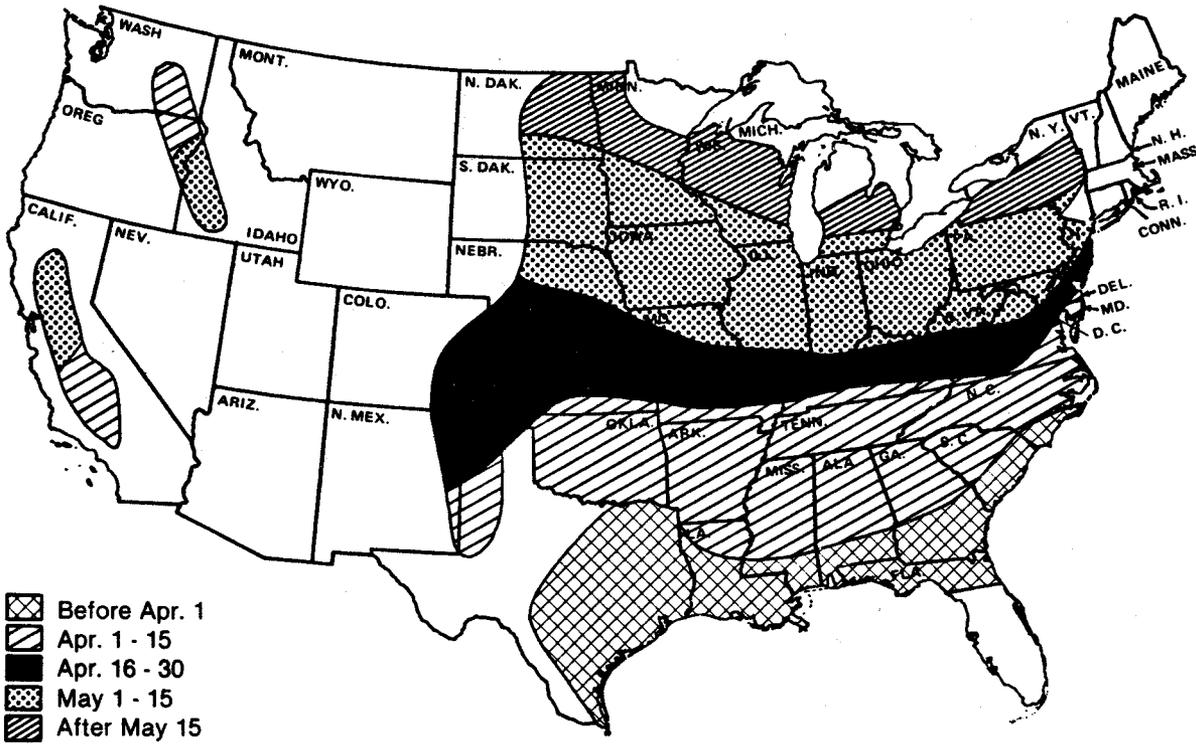
Late March snow depth 4.0 in., 1.1 in. 1992, 4.1 in. 31-year avg. Frost depth for state 17.4 in., 4.0 in. 1992, 10.4 in. avg. Data on snow, frost depths relate to 19th.

WYOMING: Temperatures 2 to 10° above normal across most of the State. The exception was in the northeast where temperatures were 1 to 5° below normal. Precipitation was above normal in the northwest. Rest of the State had below normal precipitation except for isolated areas.

1993 Winter wheat crop fair to good. Supplemental feeding continuing. Hay supplies are short in several regions. Farm, ranch activities include: Feeding, caring for livestock, preparing machinery for spring planting. Producers are calving, lambing, shearing. Some farm flocks in the southeast are already done lambing. Higher than normal calving, lambing losses reported in some areas.

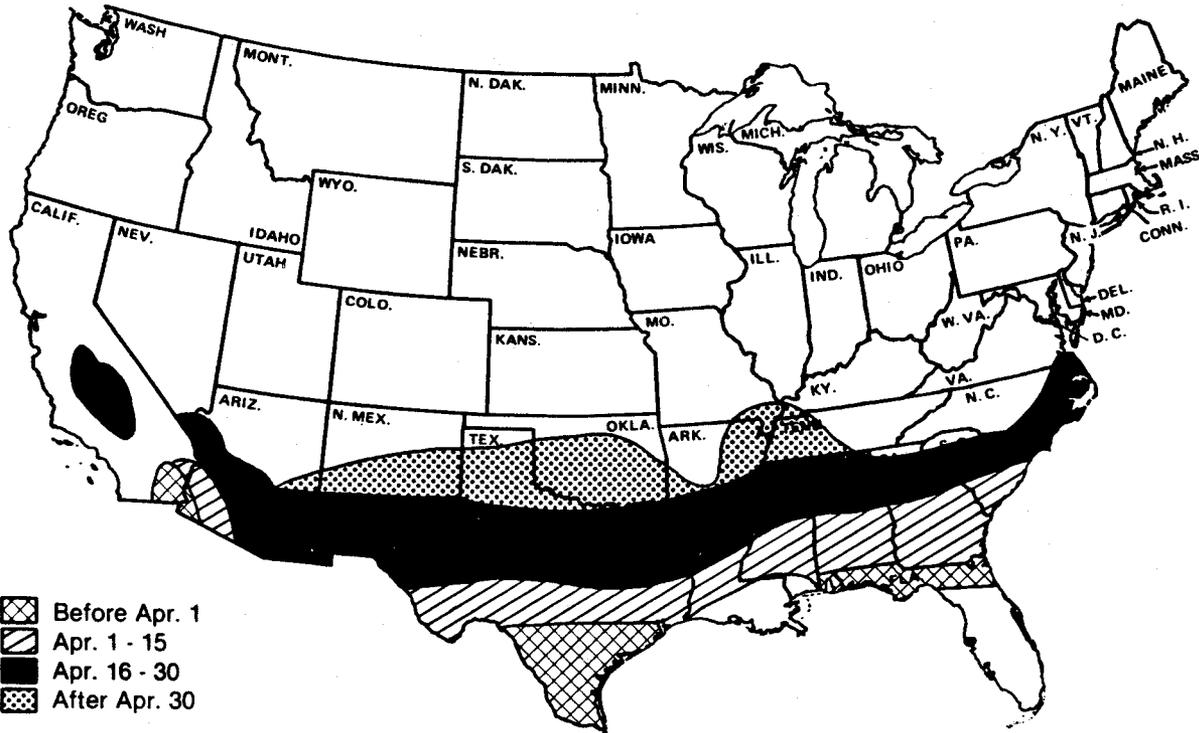
Corn for Grain

Usual Start of Planting, Principal Areas in the United States



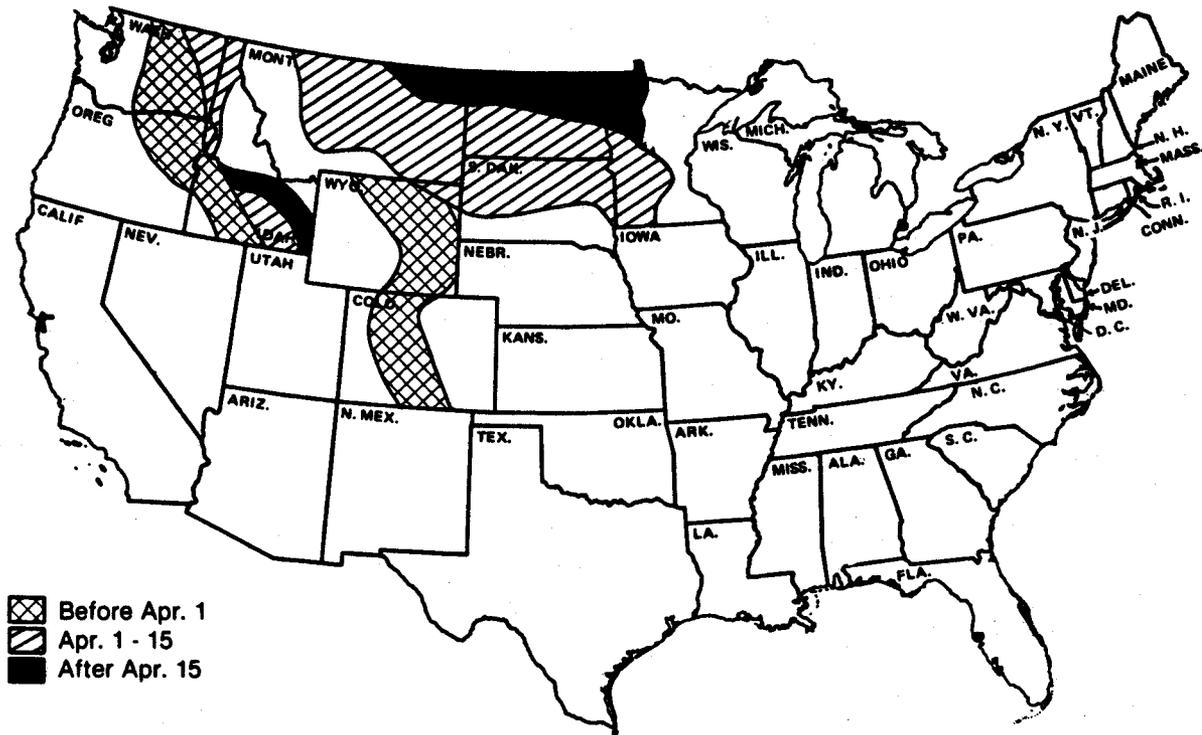
Cotton

Usual Start of Planting, Principal Areas in the United States



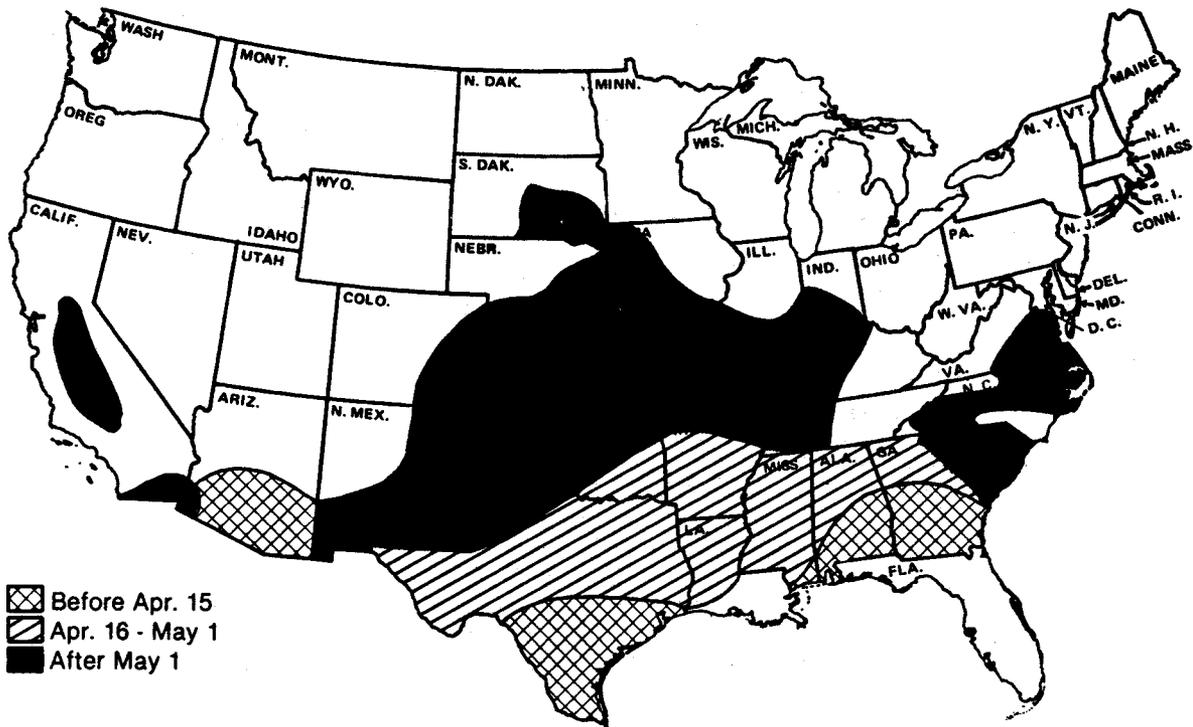
Spring Wheat

Usual Start of Planting, Principal Areas in the United States



Grain Sorghum

Usual Start of Planting, Principal Areas in the United States



International Weather and Crop Summary HIGHLIGHTS

March 14 - 20, 1993

FSU-WESTERN: Unseasonably warm weather melted snow cover and may have allowed early-season fieldwork in the west and south.

EUROPE: Milder weather promoted early-spring growth. Some beneficial rain fell in Spain.

NORTHWESTERN AFRICA: Unseasonably warm weather covered winter grains in Morocco and western Algeria. Drier weather returned to crop areas in eastern Algeria and northern Tunisia.

SOUTH AFRICA: Scattered showers benefited sugarcane and late-planted grains.

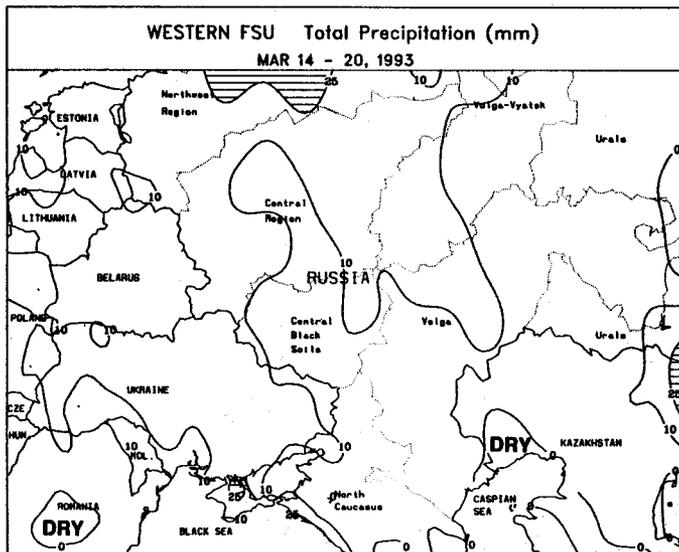
SOUTH ASIA: Rain benefited immature northern winter crops as harvests elsewhere progressed.

SOUTHEAST ASIA: Seasonable rains fell from Java to central Indochina, boosting moisture reserves for current and upcoming rice crops.

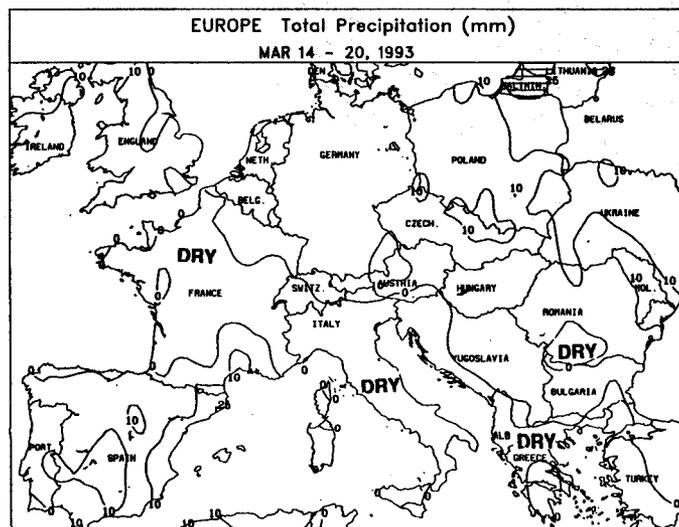
EASTERN ASIA: Adequate moisture exists for winter wheat except for portions of the north. Widespread rains favored southern reservoirs.

AUSTRALIA: Favorable harvest weather prevailed for eastern summer crops.

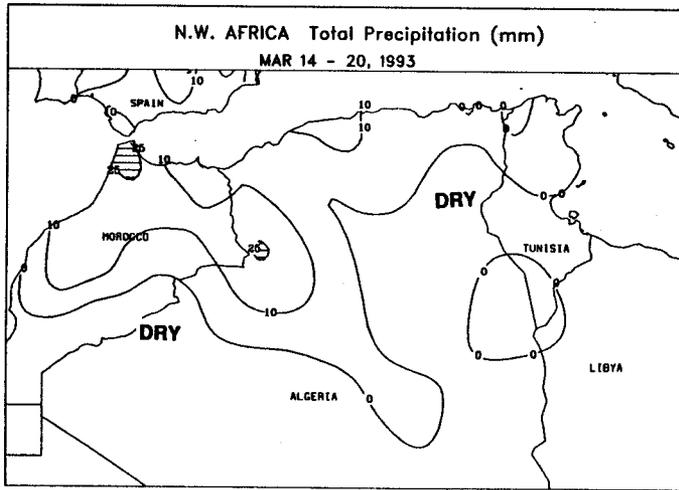
SOUTH AMERICA: Showers benefited double-crop soybeans in Argentina, but continued to delay northern cotton harvesting. Across southern Brazil, showers caused some harvest delays.



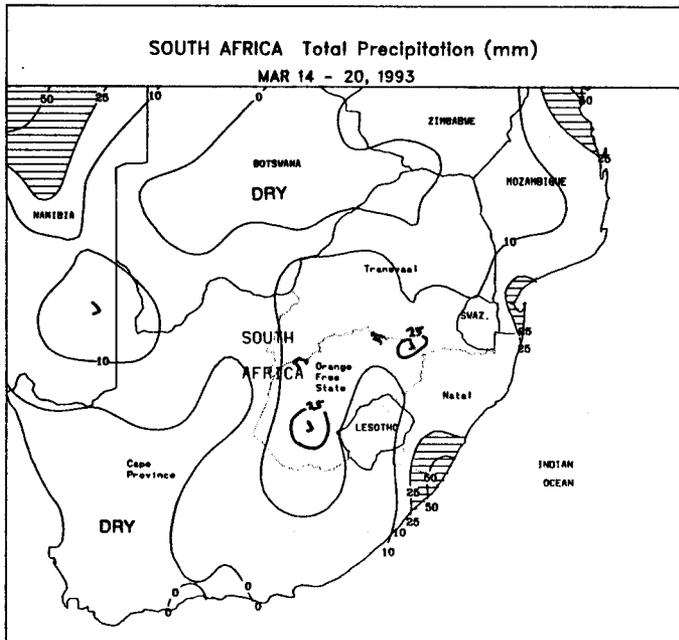
FSU-WESTERN: Unseasonably warm weather covered most winter grain areas, melting snow cover, and prompting some early-season fieldwork in the west and south. Extreme maximum temperatures in the Baltic States, Belarus, Ukraine, and North Caucasus ranged from 9 to 14 degrees Celsius (C), diminishing most of the snow cover in these areas. Elsewhere, extreme maximum temperatures ranged from 4 to 8 degrees C in Central Region, Volga Vyatsk, Black Soils Region, and upper Volga Valley, where winter grain areas remained covered with snow. Light to moderate precipitation (10-25 mm) covered the Baltic States, Belarus, Central Region, Volga Vyatsk, and Ukraine, while lesser amounts of moisture (less than 10 mm) fell over Black Soils Region, Volga Valley, and North Caucasus. Average temperatures were 5-7 degrees C above normal in the north, and 2-4 degrees C above normal in the south. Winter grains remained dormant over the region. Winter grains usually break dormancy in Ukraine and North Caucasus in early April.



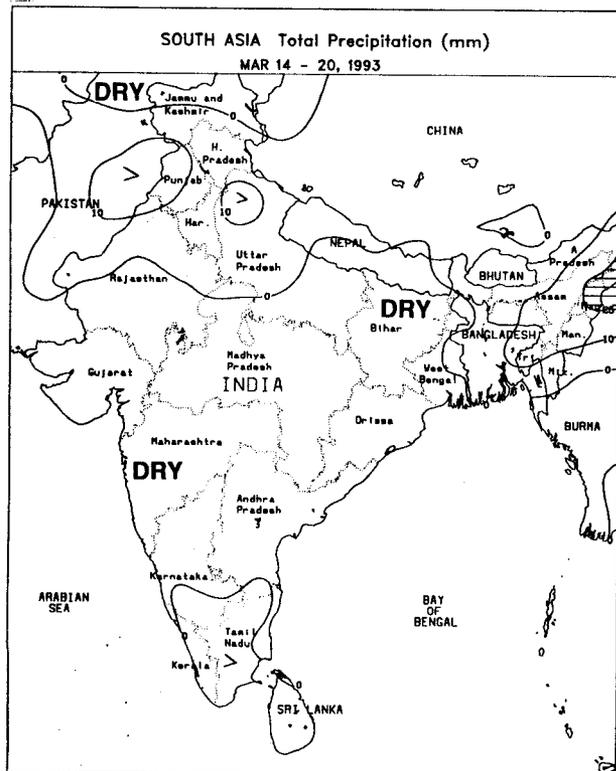
EUROPE: Milder weather and scattered light rain covered nearly all of Europe. Some beneficial showers (10-15 mm) fell in drought-stricken Spain. Variable rainfall in the northeast helped winter crops which are nearing spring growth. Dry weather prevailed from France across Italy to portions of Greece and southern Romania. Temperatures averaged 10-14 degrees C in France and Italy (3-6 degrees C above normal), promoting fieldwork. However, topsoil moisture is low in southern France and Italy's Po Valley, necessitating rain for winter crop growth and spring-sown crop establishment. The above-average temperatures across the north continued to promote spring growth, but the accompanying drying trend limited topsoil moisture.



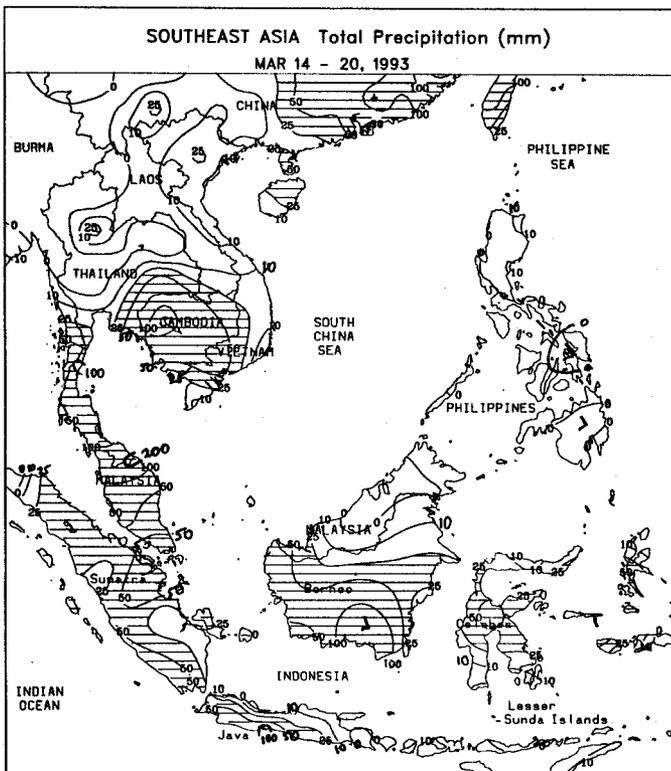
NORTHWESTERN AFRICA: Unseasonably warm weather and light precipitation prevailed over winter grain areas in Morocco and western Algeria. Extreme maximum temperatures ranged from 27 to 32 degrees C in Morocco and 22 to 27 degrees C in western Algeria, increasing crop-water use. Although light precipitation (10-20 mm) covered most of these areas, rainfall amounts were insufficient to meet the increasing crop-moisture requirements of winter grains in or nearing the reproductive phase of development. Further east, drier weather (less than 10 mm) returned to winter grain areas in eastern Algeria and Tunisia, accompanied by near-normal temperatures. Winter grains in coastal areas of Algeria and Tunisia were likely in or nearing the heading stage, while crops further inland remained in the vegetative stage.



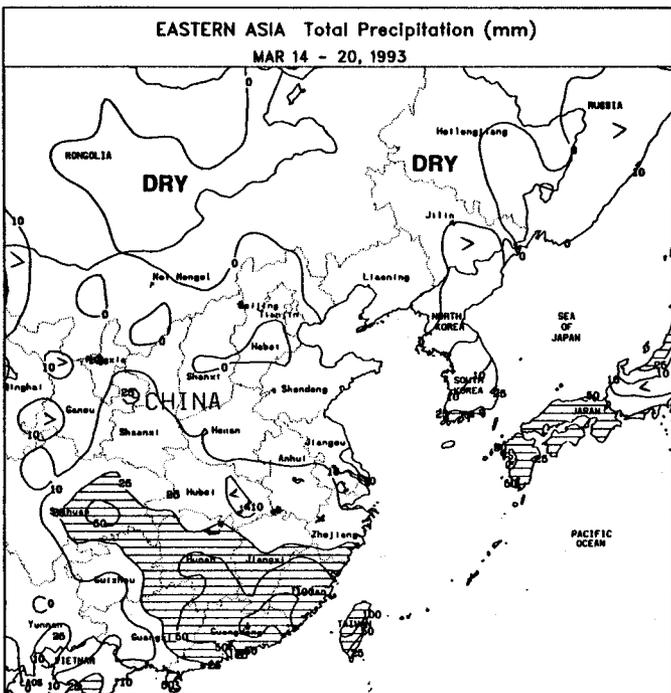
SOUTH AFRICA: Scattered showers fell throughout the primary corn areas, but only a few locations received more than 25 mm. Rain at this point of the season would only benefit late-planted summer grains, as crops are mostly in late-filling to mature stages of development. Isolated heavy rain (88 mm) fell over Natal's southern sugarcane areas, with light rain (18-24 mm) falling further north. Temperatures were seasonable across the primary summer crop areas, with highs ranging in the mid to upper 20's C.



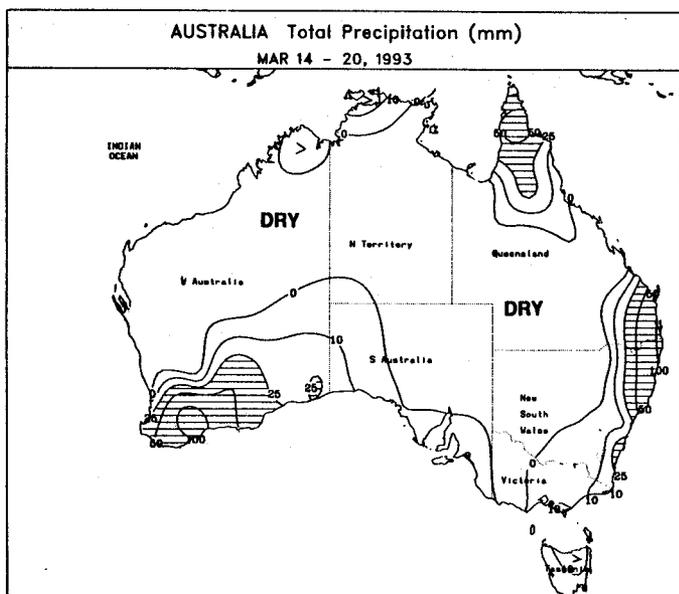
SOUTH ASIA: Light to moderate showers (4-27 mm) fell over winter grain and oilseed areas of northern Pakistan and north-central India, benefiting immature crops. Dry, warm weather over India's southern and eastern winter crop areas favored drydown and harvests. However, unseasonably hot weather (average temperatures 1-2 degrees C above normal, with highs approaching 40 degrees C) continued over southern India, increasing irrigation demands of rice and other crops.



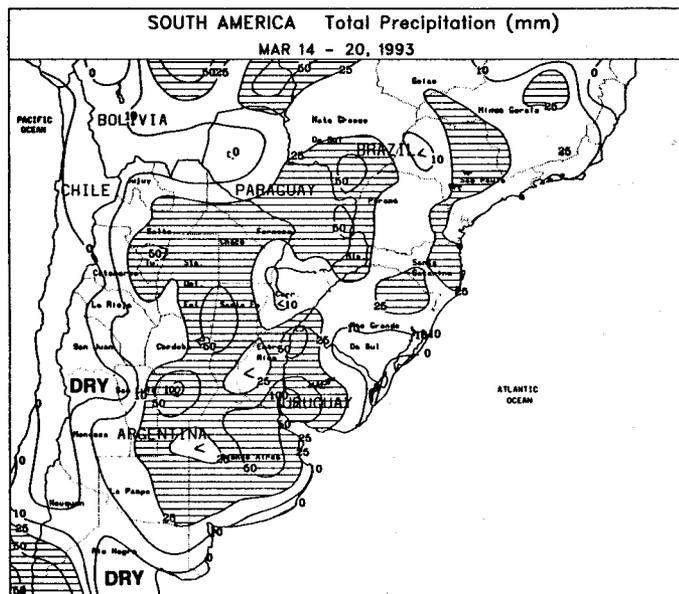
SOUTHEAST ASIA: Variable showers (25-100 mm or more) continued over Indonesia and western Malaysia, boosting moisture reserves for oil palm and secondary rice crops. The rain extended northward to eastern Thailand, with moderate to heavy showers (25-50 mm or more) covering large areas of Cambodia and southern Vietnam. Main season planting of rice and corn, especially in rainfed areas, typically begins in April as rainfall increases and temperatures cool. In the Philippines, mostly dry weather continued for the second week, reducing moisture for secondary rice. As with most of Southeast Asia, April is a transition month for the Philippines, with showery weather shifting to the western side of the islands for the duration of the Northern Hemisphere summer. Tropical cyclone activity, a major factor in Philippine weather, typically increases in the western Pacific during April and May.



EASTERN ASIA: Little or no rain fell across the northern wheat belt (Hebei, Shanxi, and Shandong) with light rain (3-15 mm) benefiting vegetative wheat across the southern portions (Henan, Anhui, and Jiangsu). While rainfall has been seasonable across most of the region, a drying trend has developed across the north. Rainfall typically increases significantly across the region during mid-April to mid-May. Temperatures averaged 1-2 degrees C below normal, after being unseasonably warm the last several weeks. Widespread showers (20-85 mm) covered west-central (Sichuan) and southern China, benefiting reservoirs and soil moisture for rainfed grains.



AUSTRALIA: Dryness continued across eastern Australia, favoring summer crop harvesting. However, due to the drought, rain is needed to replenish reservoirs and soil moisture reserves for winter crops, where planting begins in April and May. Moderate rains (10-40 mm, with isolated amounts greater than 100 mm) fell across Western Australia, increasing subsoil moisture reserves. Dryness covered most of Queensland's main sugarcane region, where rainfall has been below normal since early February. The coastal regions of southern Queensland and northern New South Wales received moderate to heavy showers (50-100 mm), partly from Tropical Cyclone Roger which brushed the region. Temperatures averaged 2-4 degrees C above normal across the eastern summer crop region.



SOUTH AMERICA: Moderate showers (15-75 mm, with isolated amounts greater than 100 mm) continued to benefit double-crop soybeans across central Argentina. The rain was especially timely since temperatures averaged 2-4 degrees C above normal across the region. The moisture should ensure favorable to excellent soybean yield prospects. However, the moisture delayed sunflowerseed harvesting and early corn and sorghum harvesting. While dry and warm (maximum temperatures ranged from 35 to 40 degrees C) weather aided cotton maturation and harvesting, late-week rain (20-45 mm) caused additional harvesting delays. Across southern Brazil, scattered light to moderate showers (10-35 mm) covered the main summer crop areas, slowing soybean and corn harvesting. However, heavy rain (40-75 mm) fell across western Parana and southern Mato Grosso, delaying harvesting. The rains favored soil moisture for upcoming winter wheat planting across eastern Parana and Rio Grande do Sul. Northeastern Brazil has experienced below-normal rainfall since January, possibly impacting cocoa, cotton, and grains.

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(Continued from front cover)

sub-freezing temperatures during the cold snap. An additional 75 daily records were smashed on Monday morning. Sub-zero readings were noted as far south as **West Virginia**, and sub-freezing temperatures again reached the **central Gulf coast**. Several stations had temperatures more than 10°F lower than their previous record for March 15, including **Asheville, NC (2°F)**, and **Greenville-Spartanburg, SC (11°F)**. Meanwhile, moisture streamed into the **Northwest**, and thunderstorms developed in the **western Gulf Coast States**. By Tuesday morning, snowfall reached 16 inches at **Browning, MT**, while rainfall exceeded 2 inches in **Eugene, OR**, and **Galveston, TX**. By late Tuesday, heavy rain spread southward into **northern California** and eastward across the **central Gulf coast**, causing some flash flooding in both areas. Rainfall topped 3 inches in **Blue Canyon, CA**, and in **New Orleans, LA**. In the **West**, the combination of rainfall and snowmelt caused local flooding problems in many areas, including **eastern Oregon**, **northern Nevada**, and **southern Idaho**. Farther east, another shot of arctic air spilled southward. On Friday morning, temperatures fell to 32°F as far south as **northern Georgia**, but the core of the cold remained farther north, where lows reached -9°F in **Eau Claire, WI**, and -23°F in **Watertown, NY**. Late in the week, a light mixture of rain and snow spread quickly across the **Northern States**, while thunderstorms erupted across the **South**. Rainfall topped 2 inches at **Killeen, TX**, **Leesville, LA**, and **Vero Beach, FL**.

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