

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
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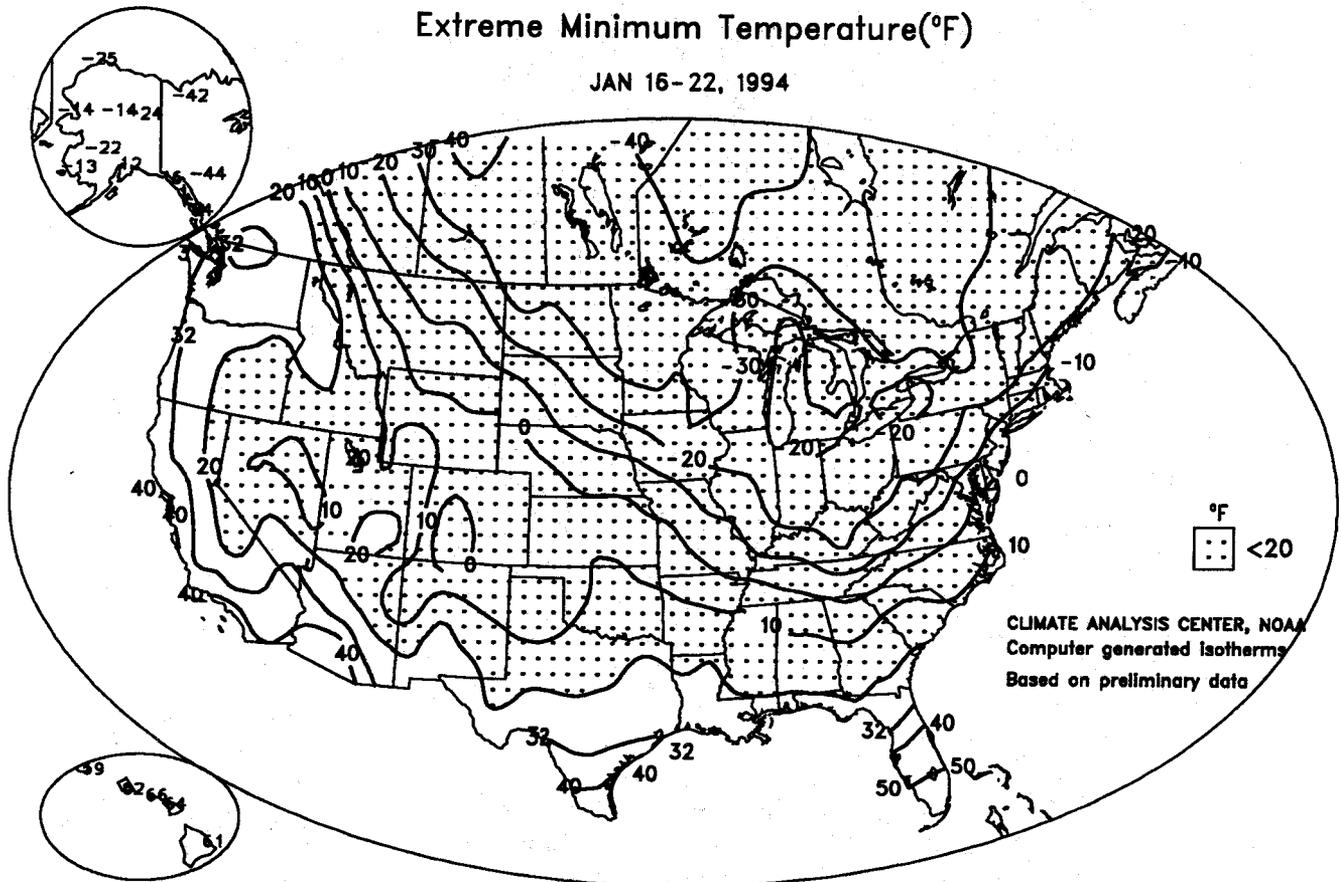
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Washington, D.C.

January 25, 1994

Extreme Minimum Temperature(°F)

JAN 16-22, 1994



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

HIGHLIGHTS

January 16 - 22, 1994

One of the most brutally cold airmasses on record surged through the Nation's northeastern quadrant, rivalling recent memorable arctic blasts such as those in January 1985, December 1983, January 1982, and January 1977. Although slightly less severe arctic outbreaks in past years have damaged citrus and vegetables in Texas and Florida (most recently in December 1989), this year's jet stream trajectory allowed the arctic express to expend its fury on the Midwestern, Great Lakes, and Northeastern States.

Early in the week, a cold, but penultimate arctic high pressure system settled across the Middle Atlantic region. Two dozen locations across the northeastern quarter of the Nation notched daily record lows on Sunday, including Elkins, WV (-18°F), and Syracuse, NY (-21°F). Alpena, MI (-28°F) and
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(Continued from front cover)

Rochester, NY (-17°F) set January records. As the arctic high drifted offshore, abundant moisture streamed northward in advance of a storm lifting through the Great Lakes States. Heavy snow buried areas from the Ozark Plateau through the Ohio Valley into the Northeast, while ice glazed the Middle Atlantic States. Snowfall included 16 inches in Louisville, KY (its highest single-storm total on record), 18 inches in Parkersburg, WV, and 14 inches in Harrisburg, PA. A 16-inch total in Scranton, PA, pushed their monthly snowfall to a January-record 37 inches. Sleet and freezing rain accumulations totaled more than 1 inch in locations such as Baltimore, MD and Washington, DC. Farther south, rainfall topped 1 inch across the central Gulf Coast States. In Hawaii, significant rain fell for the first time in a month. Hilo, HI reported 6.52 inches during the week. Late-week rain was also welcomed in south-central Texas, where Del Rio received 2.19 inches. Prior to this week, less than 2 inches of rain had fallen in Del Rio since September 1, 1993. But from the northern Texas Plains northwestward into the northern Rockies and westward to the Pacific coast, warm, dry weather persisted. About three dozen daily record highs were set during the week, including four in a row (Tuesday through Friday) in Ely, NV. Santa Barbara, CA attained 80°F on Tuesday, and Riverside, CA reached 83°F on Saturday. Even in western Montana, temperatures climbed as high as 57°F in Great Falls on Friday.

But farther east, ferociously cold air encompassed areas from Minnesota to the Middle Atlantic States from Tuesday until late in the week. More than 100 daily record lows were established between Tuesday and Friday, along with more than a dozen each January-record and all-time record lows. On Wednesday, a reading of -36°F in New Whiteland, IN set a new Indiana record. Lows of -22°F in Pittsburgh, PA and -22°F in Columbus, OH broke all-time records that had stood since February 10, 1899. Most of the other all-time records that were tied or broken across the Ohio Valley and Great Lakes States had been established during the cold waves of January 1985 and February 1934. Late in the week, a slow moderation of temperatures from the Midwest to the Middle Atlantic States was accompanied by light snow. Snow spread into New England at week's end as the arctic front receded to near the Canadian border.

The January 1994 Arctic Outbreak Selected Records

All-Time Lowest Temperature (°F)

Location	New Record	Former Record
Indiana	-36 on 1/19	-35 on 2/02/1951
Akron, OH	-25 on 1/19	-24 on 1/21/1985
Allentown, PA	-15 on 1/21	-12 on 1/22/1961
Clarksburg, WV	-25 on 1/19	-23 on 2/28/1934
Cleveland, OH	-20 on 1/19	-19 on 1/24/1963
Columbus, OH	-22 on 1/19	-20 on 2/10/1899
Erie, PA	-18 on 1/19	-17 on 2/11/1979
Harrisburg, PA	-22 on 1/21	-14 on 1/14/1912
Indianapolis, IN	-27 on 1/19	-25 on 1/05/1884
Jackson, KY	-18 on 1/19*	-18 on 1/21/1985
Mansfield, OH	-22 on 1/19*	-22 on 1/20/1985
Pittsburgh, PA	-22 on 1/19	-20 on 2/10/1899
Scranton, PA	-21 on 1/21	-19 on 2/09/1934
State College, PA	-20 on 1/19*	-20 (date N/A)
Williamsport, PA	-20 on 1/21	-18 on 2/28/1934
Youngstown, OH	-22 on 1/19	-20 on 1/21/1985
Zanesville, OH	-25 on 1/19	-19 (date N/A)

* indicates previous record tied

Nation's Lowest Temperature (°F), By Day

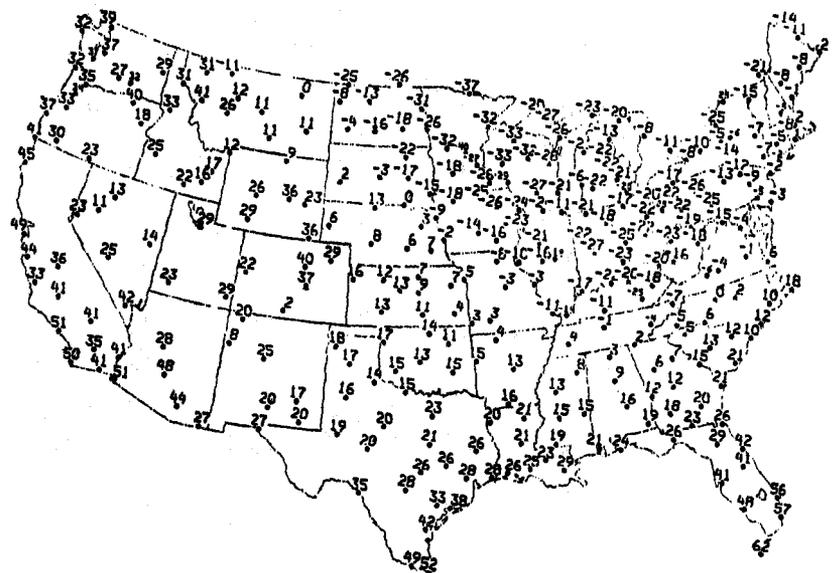
Date	Location	Temperature
Jan. 16	Watertown, NY	-43
Jan. 17	Garrison, MN	-32
Jan. 18	Tyler, MN	-44
Jan. 19	Amasa, MI	-52
Jan. 20	Rangely, ME	-45
Jan. 21	Grafton, NH	-40
	Livermore Falls, ME	-40
Jan. 22	Gunnison, CO	-11

Longest Period of Sub-Zero Temperatures (Hours)

Location	Duration/Dates	Former Record/Dates
Duluth, MN	186 (01/12-20)	159 (01/17-24/1963)
St. Cloud, MN	181 (01/13-20)	175 (winter 1911-12)
Cleveland, OH	56 (01/18-20)	55 (01/16-18/1977)
Pittsburgh, PA	52 (01/18-20)	51 (12/24-26/1983)

Minimum Temperatures (°F) through 7 a.m. EST Wednesday, January 19, 1994

NOTE: In some cases, actual minimum temperatures for January 19, 1994, were lower due to additional cooling after 7 a.m. EST.



National Weather Data for Selected Cities

Weather Data for the Week Ending January 22, 1994

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 Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																			.01 INCH OR MORE	.50 INCH OR MORE	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	41	17	56	9	29	-12	.9	-.2	.9	7.7	88	3.7	101	75	33	0	0	7	1	1	1	
MOBILE	54	30	65	21	42	-6	.7	-.3	.7	6.7	77	3.0	88	70	30	0	0	5	1	1	1	
MONTGOMERY	48	24	58	15	36	-6	1.4	1.4	1.4	7.3	84	2.6	75	69	29	0	0	6	1	1	1	
AK ANCHORAGE	26	19	28	12	22	5	.2	.0	.1	.8	46	.5	82	84	77	0	0	7	4	0	0	
BARROW	-4	-14	7	-25	-9	5	.4	.0	.4	.1	57	.0	0	79	72	0	0	7	7	4	0	
FAIRBANKS	13	-1	15	-22	6	16	.5	.4	.9	.7	74	.5	129	82	65	0	0	7	7	4	0	
JUNEAU	31	22	36	17	26	2	2.2	1.1	1.3	10.4	134	4.4	135	97	85	0	0	7	7	5	2	
KODIAK	39	30	41	19	35	5	3.6	1.9	2.3	17.7	145	6.9	129	94	82	0	0	4	7	5	2	
NOME	15	-2	24	-15	6	-1	.3	-.1	.2	2.3	162	.4	73	88	77	0	0	7	7	0	0	
AZ PHOENIX	76	46	80	43	61	7	.0	-.1	.0	.0	1	.0	0	49	13	0	0	0	0	0	0	
PRESCOTT	65	26	69	23	45	9	.0	-.3	.0	.5	17	.0	0	60	15	0	0	7	7	0	0	
TUCSON	76	40	79	34	58	7	.0	-.2	.0	.1	8	.0	0	41	11	0	0	0	0	0	0	
YUMA	79	49	81	46	64	7	.0	-.1	.0	.0	0	.0	0	37	13	0	0	0	0	0	0	
AR FORT SMITH	34	21	41	14	28	-9	.8	.4	.8	4.2	95	1.3	96	88	64	0	0	7	1	1	1	
LITTLE ROCK	34	18	45	12	26	-13	1.8	1.2	1.4	7.3	107	3.0	137	76	48	0	0	7	2	1	1	
CA BAKERSFIELD	70	38	75	35	54	6	.0	-.2	.0	.6	52	.0	0	56	16	0	0	0	0	0	0	
BUREKA	62	45	66	40	53	5	.5	-.9	.4	9.1	87	1.9	44	89	68	0	0	3	0	0	0	
FRESNO	68	35	72	33	52	6	.0	-.5	.0	1.1	40	.1	7	96	16	0	0	0	0	0	0	
LOS ANGELES	70	50	82	48	60	3	.0	-.6	.0	1.0	30	.0	0	95	22	0	0	0	0	0	0	
REDDING	67	40	77	29	53	7	.3	-1.0	.2	4.1	41	.9	21	81	39	0	0	3	2	0	0	
SACRAMENTO	64	37	66	34	50	5	.1	-.7	.1	2.0	39	.3	11	100	55	0	0	0	1	0	0	
SAN DIEGO	69	48	77	46	59	1	.0	-.4	.0	.8	27	.0	0	88	25	0	0	0	0	0	0	
SAN FRANCISCO	63	47	67	43	55	6	.1	-1.0	.1	2.3	38	.1	5	88	36	0	0	0	1	0	0	
CO DENVER	53	20	62	10	36	7	.1	-.1	.1	.5	49	.1	20	69	22	0	0	7	1	0	0	
GRAND JUNCTION	48	19	52	16	34	6	.0	-.1	.0	.6	54	.0	0	80	29	0	0	7	0	0	0	
PUEBLO	51	10	69	4	31	1	.0	-.1	.0	.0	0	.0	0	86	31	0	0	7	0	0	0	
CT BRIDGEPORT	24	4	46	-2	14	-15	1.2	.4	1.0	7.9	135	3.3	142	72	44	0	0	7	2	1	1	
HARTFORD	22	-2	45	-10	10	-14	1.7	.9	1.3	8.4	132	4.2	172	79	47	0	0	7	2	1	1	
DC WASHINGTON	26	6	41	-4	16	-18	1.2	.6	1.1	7.9	155	3.5	177	82	45	0	0	7	3	1	1	
FL APALACHICOLA	56	35	66	28	46	-6	.7	-.2	.7	5.9	86	3.1	113	95	60	0	0	3	1	1	1	
DAYTONA BEACH	61	45	73	41	53	-4	.6	-.1	.3	4.6	103	2.8	145	95	60	0	0	0	2	0	0	
JACKSONVILLE	53	31	71	26	42	-12	1.0	.3	1.0	5.3	106	3.5	160	88	50	0	0	4	1	1	1	
KEY WEST	72	64	77	61	68	-2	.1	-.4	.1	4.6	131	2.3	160	85	67	0	0	0	1	0	0	
MIAMI	75	60	77	54	67	0	.1	-.3	.1	3.6	110	3.1	221	82	54	0	0	0	1	0	0	
ORLANDO	66	45	76	41	55	-4	1.1	.6	.9	3.9	103	3.1	197	89	58	0	0	0	2	1	1	
TALLAHASSEE	54	29	62	18	42	-9	1.8	.7	1.8	8.1	96	5.1	151	83	39	0	0	5	1	1	1	
TAMPA	67	44	77	40	56	-4	1.1	.7	.8	4.0	114	2.7	201	88	53	0	0	0	2	1	1	
WEST PALM BEACH	72	59	76	50	66	-1	.4	-.2	.2	4.8	120	4.0	230	91	60	0	0	0	4	0	0	
GA ATLANTA	40	18	55	6	29	-12	.8	-.3	.8	6.2	81	3.7	109	70	33	0	0	7	1	1	1	
AUGUSTA	45	19	57	15	32	-11	.6	-.4	.6	5.9	95	3.2	112	75	28	0	0	7	1	1	1	
MACON	46	20	59	12	33	-12	.7	-.4	.7	5.0	67	2.2	69	77	30	0	0	7	1	1	1	
SAVANNAH	49	26	68	21	37	-11	.6	-.2	.6	4.4	79	2.2	86	76	34	0	0	6	0	1	1	
HI HILO	74	64	81	61	69	-3	6.5	4.3	2.4	23.2	121	7.1	100	93	76	0	0	6	6	5	5	
HONOLULU	77	65	81	62	71	-1	.1	-.7	.1	.4	6	.1	4	81	53	0	0	0	0	0	0	
KAHULUI	76	66	78	65	71	-6	.6	-.3	.3	1.2	19	.6	21	85	66	0	0	0	0	0	0	
LIHUE	74	64	76	59	69	-3	1.2	.3	.3	4.6	49	1.9	43	80	62	0	0	0	0	0	0	
ID BOISE	32	24	38	22	28	-1	.0	-.3	.0	2.2	91	1.2	114	99	88	0	0	7	5	0	0	
LEWISTON	48	33	56	28	41	7	.0	-.3	.0	1.4	64	.6	63	76	50	0	0	4	0	0	0	
POCATELLO	46	19	50	14	32	9	.0	-.2	.0	1.0	54	.3	43	87	55	0	0	7	0	0	0	
IL CHICAGO	12	-10	36	-21	1	-20	.2	-.2	.1	1.7	47	.7	62	79	54	0	0	7	2	0	0	
MOLINE	14	-15	38	-23	-1	-20	.1	-.2	.1	1.9	55	.8	64	79	57	0	0	7	2	0	0	
PEORIA	15	-10	39	-21	2	-19	.1	-.2	.1	1.7	48	.5	46	82	58	0	0	7	2	0	0	
QUINCY	18	-2	41	-14	8	-16	.1	-.2	.1	1.2	36	.3	29	84	64	0	0	7	2	0	0	
ROCKFORD	17	-17	34	-24	-4	-22	.1	-.2	.1	1.7	56	.5	47	88	61	0	0	7	2	0	0	
SPRINGFIELD	9	-5	39	-16	6	-18	.2	-.1	.2	1.6	40	.5	42	81	53	0	0	7	2	0	0	
IN EVANSVILLE	21	-3	39	-17	9	-23	.8	-.1	.5	4.1	69	1.4	67	84	58	0	0	7	2	0	0	
FORT WAYNE	13	-8	31	-18	3	-20	.2	-.2	.2	2.2	52	.8	55	83	62	0	0	7	3	0	0	
INDIANAPOLIS	15	-12	35	-27	2	-24	.6	-.1	.3	3.0	59	.8	48	81	55	0	0	7	4	0	0	
SOUTH BEND	10	-10	30	-21	0	-22	.2	-.3	.2	2.7	54	1.2	71	84	63	0	0	7	3	0	0	
IA DES MOINES	16	-7	42	-16	5	-15	.1	-.1	.1	1.3	64	.5	68	79	57	0	0	7	2	0	0	
SIOUX CITY	18	-3	41	-15	7	-10	.0	-.1	.0	.9	79	.4	98	78	59	0	0	7	1	0	0	
WATERLOO	6	-18	27	-33	-6	-20	.2	.0	.1	1.4	74	.6	110	85	65	0	0	7	2	0	0	
KS CONCORDIA	30	11	52	3	21	-5	.0	-.1	.0	1.2	96	.1	21	81	55	0	0	7	1	0	0	
DODGE CITY	40	13	59	5	26	-3	.0	-.1	.0	1.0	102	.0	0	82	41	0	0	7	0	0	0	
GOODLAND	41	13	62	5	27	-1	.0	-.1	.0	.0	6	.0	11	84	40	0	0	7	0	0	0	
TOPEKA	33	10	59	2	21	-5	.0	-.2	.0	1.0	48	.1	19	80	43	0	0	7	0	0	0	
WICHITA	37	15	59	7	26	-4	.0	-.2	.0	.4	18	.0	2	80	44	0	0	7	0	0	0	
KY BOWLING GREEN	23	-1	39	-11	11	-22	1.1	.3	.9	9.1	117	2.9	104	95	65	0	0	7	2	1	1	
LEXINGTON	20	-6	35	-20	7	-24	1.2	.6	1.0	5.9	98	2.6	127	83	60	0	0	7	3	1	1	
LOUISVILLE	20	-5	34	-22	8	-24	2.0	1.4	1.4	5.2	91	2.6	128	85	59	0	0	7	3	2	2	
LA BATON ROUGE	55	32	65	22	44	-6	1.4	.3	1.4	5.3	58	2.0	57	79	44	0	0	3	1	1	1	
LAKE CHARLES	56	35	66	25	46	-4	1.7	.7	1.3	5.0	60	2.5	77	85	51	0	0	2	2	1	1	
NEW ORLEANS	56	36	68	28	46	-5	.9	-.3	.9	4.8	51	1.9	53	79	38	0	0	1	1	1	1	
SREVEPORT	50	31	61	20	40	-5	.3	-.6	.2	2.8	35	1.3	43	79	47	0	0	3	2	0	0	

Based on 1961-90 normals.

Weather Data for the Week Ending January 22, 1994

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 Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE		.50 INCH OR MORE	
																			TEMP. °F	PRECIP.		
ME CARIBOU	6	-15	18	-28	-5	-13	1.3	.8	.8	6.8	136	2.8	158	74	54	0	7	3	1	1		
PORTLAND	19	-5	33	-11	7	-13	1.9	1.1	1.0	9.2	129	3.8	147	77	52	0	7	3	2	1		
MD BALTIMORE	24	3	37	-5	13	-18	1.2	.5	1.1	7.9	141	3.4	156	79	45	0	7	2	1	1		
SALISBURY	28	5	53	0	17	-17	.9	.1	.8	7.7	123	3.0	115	89	53	0	7	2	1	1		
MA BOSTON	25	3	47	-4	14	-14	1.2	.4	1.0	10.8	164	4.2	161	68	45	0	7	3	1	1		
CHATHAM	25	7	43	-1	16	-14	1.7	.9	.9	13.0	180	5.3	197	78	48	0	7	2	2	0		
MI ALPENA	12	-7	25	-28	2	-15	.1	.3	1.1	1.2	38	.8	68	85	58	0	7	1	0	0		
DETROIT	13	-7	30	-20	3	-19	1.0	.6	.8	2.7	64	1.9	143	77	56	0	7	2	1	0		
FLINT	10	-7	28	-21	2	-20	.2	.1	1.1	1.0	32	.5	46	85	60	0	7	2	0	0		
GRAND RAPIDS	13	-5	33	-22	4	-17	.4	.0	.2	2.5	59	1.0	74	87	71	0	7	6	0	0		
HOUGHTON LAKE	10	-8	24	-22	1	-15	.1	.2	1.1	1.5	49	.8	68	84	61	0	7	2	0	0		
LANSING	12	-4	33	-18	4	-16	.1	.1	1.1	1.4	44	.7	61	86	59	0	7	1	0	0		
MARQUETTE	4	-13	24	-27	-4	-16	.1	.4	.0	2.4	57	1.1	69	80	39	0	7	2	0	0		
MUSKOGON	15	3	32	-7	9	-14	.7	.1	.3	2.8	58	1.7	95	86	65	0	7	4	0	0		
SAULT ST. MARIE	8	-13	21	-26	-2	-15	.7	.1	.3	4.3	93	1.8	99	81	54	0	7	6	0	0		
MN ALEXANDRIA	0	-17	27	-35	-9	-15	.1	.1	.1	1.0	74	.3	49	81	63	0	7	1	0	0		
DULUTH	0	-18	23	-33	-9	-16	.1	.2	.1	2.2	100	.9	93	72	39	0	7	2	0	0		
INT'L FALLS	-1	-22	19	-37	-11	-12	.1	.1	.1	.9	60	.5	69	75	56	0	7	4	0	0		
MINNEAPOLIS	5	-14	28	-27	-4	-16	.3	.1	.3	1.3	71	.7	101	77	51	0	7	2	0	0		
ROCHESTER	4	-16	26	-29	-6	-17	.2	.0	.1	1.4	85	.6	109	82	69	0	7	2	2	0		
MS GREENWOOD	43	20	54	13	32	-11	2.2	.9	.2	4.0	43	1.0	28	80	39	0	7	1	1	0		
JACKSON	46	22	56	14	34	-9	2.2	.9	.2	6.4	63	3.6	88	75	38	0	7	1	1	1		
MERIDIAN	48	22	57	14	35	-9	1.7	.5	1.7	6.3	64	3.0	81	74	32	0	7	1	1	1		
MO CAPT GIRARDEAU	25	1	36	-8	13	-19	1.1	.4	.8	4.4	68	1.7	78	86	52	0	7	2	1	0		
COLUMBIA	26	4	45	-7	15	-11	.2	.1	.2	2.0	54	.5	44	85	57	0	7	1	0	0		
KANSAS CITY	30	10	56	-1	20	-6	.7	.2	.2	1.3	52	.1	17	75	42	0	7	1	1	0		
SAINT LOUIS	22	5	44	-8	14	-15	.6	.2	.6	2.5	58	1.0	78	76	55	0	7	1	1	1		
SPRINGFIELD	31	12	49	3	21	-9	.7	.4	.7	2.6	67	1.0	81	84	56	0	7	3	1	1		
MT BILLINGS	34	10	53	-6	22	-1	.3	.1	.1	.5	35	.3	46	76	56	0	6	3	0	0		
GLASGOW	7	-6	27	-12	1	-10	.2	.1	.1	.7	111	.6	219	82	66	0	7	4	0	0		
GREAT FALLS	35	11	57	-6	23	2	.1	.1	.1	.5	36	.2	35	74	54	0	5	3	0	0		
HAVER	12	-2	41	-12	6	-9	.7	.1	.1	.7	0	.2	0	87	76	0	7	0	0	0		
HELENA	40	13	49	2	27	7	.7	.1	.1	.2	22	.1	20	79	51	0	7	1	0	0		
KALISPELL	42	25	49	17	33	13	.7	.3	.3	2.4	85	.9	75	84	66	0	6	0	0	0		
MILES CITY	19	4	42	-7	12	-4	.1	.0	.1	.7	69	.6	149	87	66	0	7	3	0	0		
MISSOULA	46	28	56	19	37	15	.7	.3	.3	1.6	29	.2	22	83	51	0	5	0	0	0		
NE GRAND ISLAND	27	6	58	-5	17	-5	.7	.1	.1	.5	44	.7	11	79	59	0	7	1	0	0		
LINCOLN	27	5	57	-5	16	-5	.7	.1	.1	.5	36	.1	13	79	45	0	7	0	0	0		
NORFOLK	26	2	56	-9	14	-5	.7	.1	.1	.5	45	.1	19	75	53	0	7	1	0	0		
NORTH PLATTE	29	7	50	1	18	-4	.7	.0	.0	.5	75	.3	119	89	63	0	7	2	0	0		
OMAHA	35	12	55	4	24	-1	.2	.1	.2	1.1	120	.5	149	89	61	0	7	2	0	0		
SCOTTSDUFF	29	1	55	-10	15	-8	.7	.1	.1	.5	65	.7	7	80	47	0	7	0	0	0		
VALENTINE	55	14	58	10	34	10	.0	.2	.0	.3	21	.1	19	78	16	0	7	0	0	0		
NV ELY	68	39	71	37	53	8	.0	.1	.0	.2	30	.0	0	35	14	0	0	0	0	0		
LAS VEGAS	60	23	61	20	41	8	.0	.3	.0	.2	10	.7	0	76	15	0	7	0	0	0		
RENO	55	12	57	9	33	4	.0	.2	.0	.5	35	.2	30	88	25	0	7	0	0	0		
WINNEMUCA	17	-14	28	-28	1	-17	1.2	.6	.8	5.7	115	2.4	130	82	50	0	7	2	1	0		
NJ CONCORD	26	3	51	-3	15	-16	1.2	.4	1.0	7.1	122	2.9	116	82	46	0	7	3	1	0		
NM ATLANTIC CITY	57	24	61	20	41	7	.0	.1	.0	.7	4	.0	0	48	15	0	7	0	0	0		
NM ALBUQUERQUE	52	20	65	11	36	-1	.7	.1	.1	.5	64	.7	12	88	29	0	7	1	0	0		
CLOVIS	56	22	69	16	39	0	.0	.1	.0	.1	15	.0	0	87	36	0	7	0	0	0		
ROSWELL	15	-8	26	-19	4	-17	.7	.1	.7	5.6	120	2.5	146	77	42	0	7	2	1	0		
NY ALBANY	11	-7	25	-15	2	-19	.3	.2	.3	5.5	116	2.2	125	78	51	0	7	2	0	0		
BINGHAMTON	15	1	28	-10	8	-15	.6	.0	.5	5.5	97	1.9	96	80	51	0	7	6	0	0		
BUFFALO	24	5	45	-3	15	-16	1.4	.7	1.3	7.2	129	2.8	126	74	48	0	7	2	1	0		
NEW YORK	14	-5	29	-17	5	-18	.1	.3	.1	3.5	82	1.9	124	80	49	0	7	3	0	0		
ROCHESTER	15	-4	30	-21	5	-17	.1	.4	.1	4.9	99	1.7	98	75	52	0	7	1	0	0		
SYRACUSE	33	8	48	-5	21	-16	1.1	.3	1.1	7.3	101	3.7	133	84	39	0	7	1	1	1		
NC ASHEVILLE	37	15	58	6	26	-14	.5	.4	.5	5.9	97	2.6	98	72	30	0	7	1	1	1		
CHARLOTTE	33	9	52	-1	21	-15	.7	.0	.7	6.2	109	2.9	128	79	36	0	7	1	1	1		
GREENSBORO	42	23	66	16	33	-12	1.1	.1	.7	8.5	102	4.4	115	78	47	0	7	2	1	1		
HATTERAS	42	16	64	10	29	-14	1.2	.2	1.1	6.1	91	4.5	149	86	33	0	7	2	1	1		
NEW BERN	36	10	55	2	23	-16	.6	.2	.6	6.5	114	2.7	111	80	37	0	7	1	1	1		
RALEIGH	44	19	65	10	31	-12	.6	.4	.6	5.7	76	3.0	90	76	34	0	7	2	1	1		
WILMINGTON	7	-11	31	-25	-2	-11	.7	.1	.1	1.4	167	.6	160	87	60	0	7	1	0	0		
ND BISMARCK	0	-18	21	-33	-9	-15	.1	.0	.1	1.6	143	.6	128	76	59	0	7	1	0	0		
FARGO	0	-20	22	-33	-10	-14	.2	.0	.2	1.2	104	.8	146	80	63	0	7	1	0	0		
GRAND FORKS	8	-12	37	-29	-2	-10	.7	.1	.1	1.2	119	.8	203	80	60	0	7	1	0	0		
WILLISTON	12	-9	27	-25	1	-23	.4	.1	.4	4.3	94	1.5	96	82	57	0	7	2	0	0		
OH AKRON-CANTON	17	-8	33	-24	5	-23	.5	.1	.3	4.0	80	1.5	81	82	58	0	7	3	0	0		
CINCINNATI	14	-6	28	-20	4	-20	.2	.2	.2	3.5	76	1.3	84	77	52	0	7	2	0	0		
CLEVELAND	14	-9	28	-22	3	-21	.7	.3	.4	3.7	83	1.5	106	84	54	0	7	4	0	0		
COLUMBUS	13	-10	31	-25	1	-24	.9	.4	.6	4.1	92	1.3	85	82	59	0	7	4	1	1		
DAYTON																						

Based on 1961-90 normals.

HEATING DEGREE DAYS (Base 65° F) January 16 - 22, 1994

(Cumulative totals and departures from normal are for the period July 1, 1993 - January 22, 1994)

STATES AND STATIONS	WEEKLY		CUMULATIVE			STATES AND STATIONS	WEEKLY		CUMULATIVE			STATES AND STATIONS	WEEKLY		CUMULATIVE		
	TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP fm 92-93		TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP fm 92-93		TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP fm 92-93
AL BIRMINGHAM	250	82	1832	177	363	LA BATON ROUGE	147	32	1276	284	499	TULSA	261	51	2334	248	113
AL HUNTSVILLE	294	108	2091	229	391	LA LAKE CHARLES	133	22	1038	95	267	OR ASTORIA	149	-12	2631	-10	-185
AL MOBILE	159	47	1233	240	454	LA NEW ORLEANS	132	27	1073	194	466	OR EUGENE	195	27	2516	145	25
AL MONTGOMERY	204	68	1530	248	404	LA SHERBOURNE	173	33	1476	167	166	OR MEDFORD	185	-2	2416	-90	161
AK ANCHORAGE	296	-54	5048	-798	-818	ME BANGOR	439	103	4176	169	79	OR NORTH BEND	114	-23	2284	-23	17
AK BARROW	510	-39	9297	-1047	-824	ME PORTLAND	403	89	3763	60	84	OR PENDELTON	167	-54	2764	-173	-479
AK BETHEL	394	-12	6154	-703	-645	MD BALTIMORE	360	122	2691	232	398	OR PORTLAND	161	-16	2155	-239	-239
AK COLD BAY	241	-16	4462	-480	-502	MA BOSTON	353	95	2981	223	127	OR REDMOND	165	-70	3591	51	-314
AK FAIRBANKS	413	-115	7208	-749	-663	MI ALPHEA	433	97	4461	344	248	OR SALEM	176	0	2299	-247	-159
AK JUNEAU	269	-18	4017	-814	-688	MI DETROIT	430	131	3448	89	264	PA ALLENTOWN	402	129	3205	214	295
AK KING SALMON	291	-59	5110	-1001	-794	MI FLINT	440	132	4041	507	550	PA BRADFORD	449	127	4243	134	371
AK KOTzebue	441	-20	7318	-638	-887	MI GRAND RAPIDS	421	117	3928	358	392	PA ERIE	413	133	3411	386	526
AK McGrath	397	-121	7004	-1061	-605	MI LANSING	424	114	3992	362	362	PA PHILADELPHIA	355	110	2441	-95	188
AK Nome	409	4	6670	-563	-1101	MI MUSKOGON	388	94	3784	346	292	PA PITTSBURGH	419	144	3263	175	399
AK ST PAUL ISLAND	276	6	5027	-456	-598	MI TRAVERSE CITY	420	100	3995	190	122	PA SCRANTON	413	128	3497	281	467
AK YAKUTAT	270	-10	4317	-719	-886	MI YPSILANTI	420	100	3995	190	122	PA WILLIAMSPORT	413	133	3462	312	528
AZ FLAGSTAFF	195	-57	3415	-216	-146	MN DULUTH	511	103	5584	426	370	RI PROVIDENCE	352	89	3079	180	226
AZ PHOENIX	27	-54	536	-227	-98	MN INT'L FALLS	528	78	5971	341	255	SC CHARLESTON	207	81	1232	96	307
AZ TUCSON	49	-49	748	-178	-162	MN MINNEAPOLIS	479	103	4624	332	315	SC COLOMBIA	239	85	1652	150	252
AR FORT SMITH	258	61	2086	115	199	NY ROCHESTER	491	113	4764	365	187	SC GREENVILLE	283	108	2070	264	214
AR LITTLE ROCK	272	83	2011	181	205	MS JACKSON	217	70	1735	319	559	SD ABERDEEN	487	101	4935	349	88
CA FRESNO	89	-45	1308	-174	05	MS MERIDIAN	206	65	1543	137	387	SD HURON	460	96	4684	389	170
CA LOS ANGELES	36	-20	362	-267	-207	MO COLUMBIA	349	85	3128	308	250	SD PIERRE	407	70	4288	291	-32
CA SACRAMENTO	103	-35	1441	-66	14	MO KANSAS CITY	316	38	3101	159	95	SD RAPID CITY	325	24	3766	-118	-553
CA SAN DIEGO	41	-15	473	-88	-83	MO SAINT LOUIS	357	105	2749	174	219	SD SIOUX FALLS	445	86	4540	294	168
CA SAN FRANCISCO	66	-47	1173	-359	-39	MO SPRINGFIELD	303	65	2770	239	265	TN BRISTOL	325	106	2551	174	343
CO COLORADO SPRINGS	205	-47	3386	19	-114	NY BILLYINGS	297	1	3712	-144	-450	TN CHATTANOOGA	293	97	2013	25	239
CO DENVER	199	-44	3112	-80	-357	NY GLASSGOW	445	62	4894	127	-101	TN KNOXVILLE	334	129	2344	187	382
CO GRAND JUNCTION	219	-66	3171	23	78	NY GREAT FALLS	290	-17	4212	58	-445	TN MEMPHIS	273	93	1910	175	232
CT HARTFORD	383	96	3437	255	213	NY HAVRE	413	57	4677	32	-413	TN NASHVILLE	330	127	2325	264	426
DE WILMINGTON	360	115	2661	117	297	NY HELENA	266	-52	4207	-204	-586	TX ABILENE	186	31	1623	125	167
DC WASHINGTON	344	127	2425	298	276	NY HALISPELL	219	-95	4376	-253	-461	TX AMARILLO	225	15	2503	147	-138
FL DAYTONA BEACH	84	17	562	69	316	NY MISSOULA	193	-103	4045	-264	-566	TX AUSTIN	129	10	975	-16	51
FL FORT MYERS	22	-13	178	-55	121	NY NORTH PLATTE	328	23	3669	-92	-358	TX BROWNSVILLE	12	-44	355	-44	90
FL JACKSONVILLE	157	59	947	133	396	NY ONTARIO	382	69	3732	233	155	TX CORPUS CHRISTI	51	-26	547	-51	89
FL KEY WEST	0	-14	19	-29	16	NY SCOTTSBLUFF	288	8	3764	144	-359	TX DALLAS FT WORTH	183	29	1482	109	177
FL MIAMI	2	-19	63	-45	50	NV ELKO	236	-43	4224	406	-228	TX EL PASO	122	-33	1478	-136	08
FL ORLANDO	66	10	412	26	231	NY ELY	213	-71	4191	202	185	TX HOUSTON	114	2	979	52	205
FL PENSACOLA	145	34	1040	105	429	NY LAS VEGAS	81	-55	1306	-103	-145	TX LUBBOCK	208	26	2027	60	86
FL TALLAHASSEE	160	49	1102	123	472	NY RENO	164	-60	2583	-529	-432	TX LUFKIN	138	12	1312	170	161
FL TAMPA	63	9	391	-21	225	NY WINNEBOCCA	219	-30	3404	-46	-178	TX MIDLAND ODESSA	180	22	1655	27	120
FL WEST PALM BEACH	8	-20	123	-52	83	NH CONCORD	439	110	4066	167	177	TX SAN ANGELO	161	13	1414	-27	110
GA ATHENS	259	96	1852	228	273	NJ ATLANTIC CITY	349	107	2838	233	344	TX SAN ANTONIO	114	2	974	-3	134
GA ATLANTA	250	82	1714	34	184	NJ NEWARK	348	103	2605	144	343	TX VICTORIA	78	-16	760	-19	135
GA AUGUSTA	227	79	1565	105	294	NM ALBUQUERQUE	169	-46	2346	-164	-65	TX WACO	167	27	1481	230	299
GA MACON	221	81	1603	254	373	NY ALBANY	425	110	3826	287	325	TX WICHITA FALLS	214	38	1913	171	239
GA SAVANNAH	192	73	1154	80	318	NY BINGHAMTON	437	129	4100	412	293	UT CEDAR CITY	176	-73	3058	-110	-102
ID BOISE	257	4	3199	-44	-212	NY BUFFALO	398	104	3650	314	360	UT SALT LAKE CITY	187	-73	3021	-110	-273
ID POCATELLO	229	-62	3944	102	-104	NY MASSENA	449	92	4381	141	210	VT BURLINGTON	433	90	4184	205	346
IL CHICAGO	444	133	3682	279	266	NY NEW YORK	350	112	2541	113	186	VA LYNCHBURG	333	116	2492	169	320
IL MOLINE	454	135	3694	253	219	NY ROCHESTER	418	124	3788	425	306	VA NORFOLK	298	115	1925	145	306
IL PEORIA	434	127	3445	185	254	NY SYRACUSE	413	112	3865	438	450	VA RICHMOND	324	114	2228	93	214
IL ROCKFORD	475	146	3916	264	221	NC ASHEVILLE	308	98	2576	250	383	VA ROANOKE	326	109	2617	270	341
IL SPRINGFIELD	412	125	3248	227	393	NC CAPE HATTERAS	224	77	1185	-123	195	WA OLYMPIA	145	-24	2692	-310	-197
IN EVANSVILLE	388	142	2746	191	410	NC CHARLOTTE	274	92	1875	54	207	WA QUILLAYUTE	141	-34	2815	-216	-273
IN FORT WAYNE	434	135	3431	189	270	NC GREENSBORO	306	105	2293	201	200	WA SEATTLE TACOMA	154	-21	2387	-179	-156
IN INDIANAPOLIS	440	160	3280	297	442	NC RALEIGH DURHAM	294	109	2080	199	265	WA SPOKANE	202	-63	3596	-161	-431
IN SOUTH BEND	447	153	3664	398	437	NC WILMINGTON	233	89	1403	72	220	WA YAKIMA	192	-54	3276	-95	-370
IA DES MOINES	419	97	3833	331	258	ND BISMARCK	466	74	5184	332	51	WV BECKLEY	379	127	3066	125	407
IA MASON CITY	485	121	4559	355	196	ND FARGO	513	97	5241	269	91	WV CHARLESTON	368	137	2702	222	403
IA SIOUX CITY	400	69	4110	333	189	ND MINOT	460	67	5305	357	16	WV HUNTINGTON	386	151	2745	240	448
IA WATERLOO	489	132	4139	126	168	ND WILLSTON	461	67	5277	270	-71	WI EAU CLAIRE	509	125	4791	341	425
KS CONCORDIA	388	34	3106	95	-246	OH AKRON CANTON	441	155	3532	384	400	WI GREEN BAY	491	134	4380	181	217
KS DODGE CITY	268	22	2924	187	-401	OH CLEVELAND	423	137	3397	291	420	WI MADISON	481	135	4133	106	235
KS GOODLAND	263	5	3362	140	-409	OH COLUMBUS	434	161	3144	155	411	WI MILWAUKEE	446	120	3591	-123	79
KS RUSSELL	284	20	2971	61	-299	OH CINCINNATI	419	158	3126	339	447	WI WAUWATOSA	244	-56	3734	-318	-247
KS TOPEKA	305	35	3051	143	61	OH DAYTON	443	165	3333	343	427	WI CHESTER	226	-43	3902	117	-12
KS WICHITA	273	22	2712	72	-53	OH TOLEDO	433	132	3603	211	456	WI LANCHESTER	234	-85	4105	-149	-401
KY LEXINGTON	405	160	2895	336	497	OH YOUNGSTOWN	430	136	3602	282	366	WI ROCK SPRINGS	227	-87	4501	89	-126
KY LOUISVILLE	398	160	2736	304	553	OK OKLAHOMA CITY	249	45	2278	221	156	WI SHERIDAN	328	19	4115	-85	-477

Based on 1961-90 normals.

National Agricultural Summary

January 17 - 23, 1994

HIGHLIGHTS: Snow cover for winter wheat increased during the early part of the week as a major storm brought heavy snow from the Tennessee Valley to New England. This same storm brought ice to the middle Atlantic States and rain to the South, which hindered fieldwork and livestock chores. Bitterly cold temperatures stressed livestock from the northern Great Plains to the Tennessee Valley and eastward. Further south, cold temperatures slowed crop development. In the West, pastures and small grain fields remained stressed by dry conditions. Warmer conditions across the eastern part of the Nation by the end of the week melted some snow cover, especially in the Tennessee and middle Mississippi Valleys, and reduced livestock stress in the Midwest and northern Great Plains.

SMALL GRAINS: Small grains and winter wheat in the southern Great Plains and California continued to need moisture. Cold temperatures slowed crop development in the southern Great Plains and across the South. Small grains in the lower Mississippi Valley needed drier conditions. Snow cover for winter wheat in the upper Great Plains, the Great Lakes, and the Ohio and Tennessee valleys appeared adequate to protect the crop from the frigid conditions. Winter wheat producers in the Northwest, the central Great Plains, and middle Mississippi Valley were concerned about the lack of snow cover for their crops.

OTHER FIELD CROPS: The Georgia onion crop rebounded from last week's cold weather. In Texas, the onion crop made good progress. Irrigation was applied to the onion crop in the central California coast area. The sugarcane harvest and sugarcane planting remained active in Florida. Sugarcane fields were drained in Louisiana. Tobacco bed preparation made progress in North Carolina.

FRUITS AND NUTS: Citrus harvests continued in Arizona, California, and Florida. Rain fell over much of the Florida citrus area this week. The Florida citrus benefited from the cool conditions. Frigid conditions caused concerns to fruit growers in Michigan and Kentucky. Pruning of orchards continued in the

Southeast, Texas, and the Northwest where conditions allowed. Almond orchards were planted in California.

VEGETABLES: The vegetable harvest advanced in California, Florida, Texas, and Arizona. Wet fields hampered fieldwork in parts of northern Florida. Rains delayed harvest in some areas of Texas. Crop growth was slowed by cooler temperatures in Florida. Blowing sand damaged some crops in southwestern and eastern Florida. Low prices continued to slow the broccoli harvest in California. Dry conditions along the California central coast allowed producers to catch up with their fieldwork. Preparations for the planting of spring vegetables continued across the Nation where conditions allowed.

PASTURE AND LIVESTOCK: Snow and bitter cold weather stressed livestock in the upper Great Plains, the Midwest, the Ohio Valley, and the Northeast the first part of the week. Milder conditions at the end of the week lessened livestock stress in these areas. In the Southeast, cool conditions limited pasture growth. Pasture feed conditions there were poor to fair. Pasture feed conditions in the West rated mostly fair due to the continued dry conditions. Supplemental feed usage was heavy from the upper Plains to New England due to the cold, and in Texas, California, and the South due to pasture feed conditions. Nationally, hay supplies were generally adequate except for shortages in parts of Texas and Arkansas. Livestock condition for the Nation remained fair to good.

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 0.46 to 1.44 in. north; 0.35 to 1.90 in. central; 0.21 to 1.73 in. south. Temperatures 9 to 16° below normal over the State. Lows 1 to 12° north; 7 to 16° central; 13 to 21° south. Highs 48 to 62° north; 57 to 63° central; 57 to 66° south.

Primary activities: General care of livestock, poultry, catfish.

ARIZONA: Above normal temperatures most areas, throughout week. Temperatures 2° to 9° above normal. Extremes 13°, 75° higher elevations, 22°, 81° deserts. No precipitation.

Small grains field preparations, planting almost complete. Small grain seeded 99%, 90% 1993, 96% avg.; established 94%, 78% 1993, 87% avg. Alfalfa good. Harvest mostly light, sheeping off activities light; stand renovation, new stand establishment mostly normal. Citrus harvest active. Grapefruit, navel, sweet oranges,

lemons available central, western areas. Tangerines, tangelos, also available central area. Winter vegetable harvest steady. Available from western, central areas: Broccoli, cabbage, cauliflower, leaf, romaine lettuces, spinach. Western harvest also included: Iceberg, Boston lettuce, endive, escarole. Central crops available included: Beets, carrots, mixed greens, green onions, radishes, swiss chard, rapini, turnips. Pecans, tomatoes continued available eastern areas.

ARKANSAS: Temperatures very cool, 10 to 15° below normal. Extremes 0°, 62°. Precipitation snow, ice in north, rain in south. Rainfall 0.64 to 2.34 in.

Soil moisture adequate to surplus. Wheat fair to good, needs dry weather. Livestock, pastures good. Spotty hay shortages reported in southwest.

CALIFORNIA: Precipitation amounts were light. Temperatures above normal.

Fieldwork made good progress. Dry, spring like weather most areas. Intermittent dense fog slowed activity low lying fields. Planting small grains, forage crops, new alfalfa winding down. Newly emerged fields normal growth, more rain needed soon. Applications fertilizer, herbicides ongoing. Ground preparation for planting corn, cotton, dry beans gained momentum. Fields pre irrigated, sprayed weed control. Alfalfa, sudangrass green chopped desert areas. Winter cultural activities progressed. New almond orchards planted: others grafted different varieties. Apples packed, shipped export markets. Kiwifruit exports steady. Grapefruits, lemons, tangerines, tangelos picked; good quality. Navel orange harvest continued. Harvest artichokes Imperial Valley. Poor prices caused broccoli harvest slow down central valley. Broccoli harvest central coast very light. Weeding, planting spring broccoli central valley. Harvest cabbage continued Imperial Valley. Cauliflower harvested central, desert valleys. Celery planting Stanislaus County. Spring corn planted Coachella Valley. Lettuce treated to control aphids, mildew Fresno County. Head, leaf lettuce harvested desert valleys. Onions central coast irrigated. Planting peppers Coachella Valley. Winter potato movement San Jacinto area of Riverside County continued. Harvest spinach Coachella Valley, fields planted San Joaquin Valley. Tomato beds treated with pre emergent herbicides Fresno County. Central coast caught up fieldwork due to dry conditions. Other crops being harvested: Sweet potatoes, parsley, taro root, turnips, various oriental vegetables. Range, pastures deteriorate due to dry weather. Growth slow, additional rainfall badly needed to sustain growth. Supplemental feeding heavy. Livestock remain good condition.

COLORADO: Cold fronts moved across the eastern part of the State the evening of the 17th, again the 19th. However precipitation amounts were light. Strong northwest flow aloft created windy conditions in the northern mountains, the northern foothills on the 18th, 19th, where high wind warnings were issued. Snow in the northern, central mountains was in the 3 to 6 in. range early in the week. Warm, dry air covered the west throughout the week, mountains, east on the 21st through the 23rd. Moisture in crop growing areas of the State during the period was less than 0.05 in. in all the major River Basins. Temperatures 5 to 10° above normal in the east, 3 to 6° elsewhere except in the San Luis Valley where temperatures 2 to 3° below normal.

Topsoil is drying, prone to wind erosion. Care of livestock main producer activity.

FLORIDA: Temperatures 3 to 13° below normal, north, central Peninsula. Temperatures 1 to 3° above normal southeast coast. Highs; upper 70s. Lows; lower 20s. Precipitation 2 to 4 days. Rain totals near 2.00 in. isolated spots, mostly under 0.33 in.

Soil moisture mostly short to adequate throughout State with areas of surplus moisture. Sugarcane harvest, planting active. Planting of tobacco beds virtually complete. Maintaining tobacco beds. Making preparations for spring planted crops. Citrus trees, fruit in near excellent condition. Rain all areas. Cool weather ideal. Trees in near dormant condition. Harvest peak on early, mid oranges. Grapefruit increasing. Tangerine harvest active on three varieties. Growers prepare for bloom. Some field activity hampered by wet fields north. Some wind caused damage Southwest, East Coast. No frost damage reported from near freezing temperatures but cooler temperatures slowing plant growth. Increasing planting activity of many spring crops. Leading vegetable shipments: Tomatoes, peppers, cabbage, celery, cucumbers. Also available: Snap beans, carrots, squash, chinese cabbage, sweet corn, eggplant, escarole, iceberg, leaf, romaine, specialty lettuces, radishes, strawberries, cherry tomatoes. Pasture feed 50% poor, 30% fair, 20% good. Small grain pastures behind schedule. Cattle herds mostly fair to good condition.

GEORGIA: Temperatures 8 to 12° below normal. Subfreezing temperatures common northern areas, maximums below freezing first half of week. Coldest temperatures single digits north, near

20° extreme south. Warmest temperatures mid 50s extreme north, near 70° extreme south. Extremes 3° below zero Blairsville, 19th, maximum 70° Valdosta, 17th. Rainfall 0.50 to 1.00 in., local totals exceeding 1.00 in. over northern areas. Rain reported one day.

Soil moisture adequate throughout the State. Field preparation was limited due to below normal temperatures. Onions rebounding from freezing temperatures nicely. Peach trees pruned in some areas. Hay feeding of cattle was increased due to cold weather. All crop conditions rated fair to good. Pastures poor, livestock fair to good. Routine care of livestock, poultry. Cattle, hogs rated fair to good.

HAWAII: State welcomed much needed showers. Rainfall was steady through the week, 0.04 to 10.90 in. Weather cloudy, windy, rainy. Temperatures mid 50s to low 80s.

Continuous rains restored soil moisture levels, reduced irrigation usage during week. Rains, gusty winds delayed normal field operations. Crop progress slowed by recent adverse weather. Banana, papaya output near last week's level. First watermelon seedlings planted.

IDAHO: Temperatures normal to 13° above normal. Precipitation none to 0.02 in. north, none to 0.03 in. southwest, none south central, none east.

Soil moisture adequate. Hay, roughage supplies adequate. Activities: Marketing, educational meetings, taxes, budgeting, shop activities, livestock care. Livestock good condition with calving, lambing.

ILLINOIS: Continued bitterly cold arctic air held temperatures well below normal, as highs averaged mid teens to mid 20s, lows averaged around -5° to the single digits. Precipitation was minimal due to little moisture in last week's very cold air mass.

Farmers concerns continued in the areas of winter wheat condition, livestock condition, supplies of quality hay.

INDIANA: Frigid weather dominated. Temperatures 11 to 23° below normal. Highs were mostly in the teens, except low 20s along the Ohio river. Average lows -8 to 9°. Extremes lows in -20s to -30s, while maxima reached 30 to 40° on 24th. Precipitation, water equivalent, amounts were generally under 0.30 in. with some reports of only a trace. Snowcover was widespread, began melting quickly.

Cold weather once again stopped almost all farm activity. Wheat condition remains adequate, with diminishing snowcover. Hay supplies are adequate, with continued increase in feeding. Livestock continue to be stressed by colder weather. Additional activities extremely limited by bitter cold.

IOWA: Temperatures 3° below normal southwest to 18° below normal northeast despite major warmup by weekend. Extremes -37° (northeast, 20th); 63° (southwest, 23rd). Minimum -37° at Elkader was lowest temperature recorded in Iowa since January 12, 1974. Light snow 18th, trace southwest one-third of State; 1 to 4 in. elsewhere. Precipitation trace to 0.21 in., average 0.05 in. (normal 0.19 in.)

Grain movement across the State in December 2% no movement, 63% light, 33% moderate, 2% heavy. Grazing of corn stalks 7% no grazing, 41% limited, 34% moderate, 18% extensive. Availability of hay, roughage for livestock feed 48% short, 51% adequate 1% surplus. Quality of hay, roughage for livestock feed 60% poor, 38% fair, 2% good. Cattle loss 16% below average, 80% average, 4% above average. Hog loss 13% below average, 83% average, 4% above average.

KANSAS: Temperatures below normal for the State. Southeast district was the coldest with an average of 12° below normal. South central, east central, north central, northeast districts 7 to 8° below normal. Remainder of the districts were 4 to 5° below normal. Temperatures across State fell sharply from a week ago. Low temperatures were below zero across the northern part of the State, remained at zero or single digits elsewhere. The cold gripped the eastern third of the State during most of the week. Precipitation amounts continued to be light with all areas except the southeast recording less than 0.10 in. Southeast received nearly 0.20 in.

KENTUCKY: Coldest week since 1989. Temperatures did not rise above freezing until 22nd. Several locations recorded all-time low temperatures, some readings dropping to between 20 to 30° below zero. Average temperatures between 10 to 15°, around 15° below normal. Heavy snow received night of 16th, morning 17th with up to 20 in. some northern locations.

Heavy snow followed by extreme cold virtually shut down State. Farmers struggled to feed, care for livestock. Downed utilities, stalled vehicles added to hardship. Death loss impossible to determine, obviously severe to newborn, exposed animals. Fruit growers fear some entire crops could be lost with added concern about the trees. Snow covered the winter grains, should have limited winterkill; however, the sleet preceding snow gave added concern.

LOUISIANA: Temperatures 3.3 to 8.7° below normal. Extremes 16°; 68°. Rainfall 0.75 in. northwest to 2.22 in. west central.

North cold, wet weather delayed fieldwork. Winter grazing of rye grass pasture, supplemental hay feeding were active during the week. Farmers continued attending various extension meetings around the State. South fieldwork was delayed because of rainy, cold weather with the main activities being cattle tending, grazing of rye grass, feeding of hay. Sugarcane farmers were busy with drainage work in their fields, equipment maintenance while rice farmers water leveled a few fields.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 1.04 in., normal 0.73 in. Average temperature 12.6°, normal 32.6°. Extremes -25°; 50°. Many low temperature records were set.

Activities: Staying out of the cold. Caring for livestock.

DELAWARE: Precipitation 1.00 in., normal 0.73 in. Average temperature 13.7°, normal 33.5°. Extremes -5°; 53°. Many record low temperatures set.

Activities: Staying out of the cold. Caring for livestock.

MICHIGAN: Extremes -31°; 38°. Precipitation 0.05 to 0.69 in. across the State. Record low temperatures were recorded over much of the State. Highs for most of the week stayed below the frigid 5° mark. Weekend brought relief with high temperatures back up around the freezing point.

Some concern about damage to fruit trees (especially peaches, nectarines) caused by the extremely cold weather. Livestock are in good condition, feed supplies are adequate. Major activities included: Hauling wood, tax preparation, keeping livestock warm.

MINNESOTA: Temperatures 11 to 16° below normal for the State. Extremes -41°; 38°. Precipitation 0.05 to 0.21 in. below normal. Precipitation none to 0.10 in. for State. Maximum 0.26 in. Snowfall less than 1 inch. Snow depth at weeks end 7 to 8 in. for the southern third of the State, 12 to 24 in. elsewhere.

By the weekend, the frigid weather which covered the State since prior to Christmas moved out, was replaced by above average temperatures over the weekend. Warming trend eased the strain on people, animals, equipment.

MISSISSIPPI: Temperatures 33°, 10.1° below normal. Extremes 4°; 66°. Moderate amounts of precipitation received throughout State. Southwest district received over 2.00 in. Rainfall 1.38 in., 0.26 in. above normal. Soil temperatures 38°.

Days suitable for fieldwork 1.0, 1.0 1993, 0.6 avg. Soil moisture 40% adequate, 60% surplus. Hay supply 15% short, 85% adequate. Feed grain supply 10% short, 90% adequate. Livestock 25% fair, 75% good. Pasture 75% of normal. Activities: Feeding livestock.

MISSOURI: Temperatures mostly 10 to 20° below normal across State, warmer weekend. Rainfall equivalent averaged 0.10 in. across northern third, 0.50 in. across central, 1.00 in. south including up to 10 in. snow southern counties.

Livestock requiring more care, increased feed during cold weather. Farmers doing taxes, going to meetings, doing winter chores.

MONTANA: Temperatures above normal. Precipitation none to light west, light to moderate other areas.

Protectiveness of snowcover for winter wheat mostly poor to fair. Grazing is open to mostly difficult. Farm, ranch activity mostly livestock care, feeding, general maintenance.

NEBRASKA: Cool, dry week. Temperatures near normal across the State with an extreme in the northeast corner 7° below normal. Precipitation in the Panhandle 0.10 in. and a trace elsewhere.

Farm activities: Grain hauling, livestock care, tax preparations.

NEVADA: Strong high pressure dominated for second week in a row. All stations above normal temperatures, no precipitation. Some daily record highs established. Extremes 4°; 73°.

Lack of precipitation continues to be a concern to farmers/ranchers. Mild weather great for starting of calving/lambing. Major activities: Care, feeding of livestock, general maintenance.

NEW ENGLAND: Precipitation 0.36 to 2.61 in. regionwide. Temperatures -6 to 6° north; 3 to 14° south. Maximum temperatures 18 to 33° north; 33 to 47° south. Minimum temperatures -36 to -12° north; -26 to -2° south.

Major farm activities: Removing snow, debris from barnyards, tending livestock, preparing for lambing.

NEW JERSEY: Temperatures much below normal; 10° north, 16° south, 18° coastal. Extremes -26°; 51°. Precipitation was above normal; averaging 1.63 in. north, 1.43 in. south, 1.48 in. coastal. Heaviest 24 hour total 1.85 in. on 17th, 18th. Heaviest 24 hour snowfall 10 in. 17th, 18th. Snow ground on 24th: trace to 1 in. south, 3 to 5 in. central, 10 to 14 in. north.

Farmers busy caring for livestock, tending to normal winter chores.

NEW MEXICO: Western fringe of an arctic air mass that resided over the eastern U.S. occasionally affected extreme eastern areas. Allowed a few spots near the Texas border to experience temperatures slightly below normal. Elsewhere, temperatures were above normal with averages reaching 6 to 7° above normal. Only precipitation was associated with brief invasions of the arctic air into the extreme east. Most of this was non-measurable drizzle.

Farming activities focused on land preparation for spring planting. Supplemental feeding was still prevalent in most livestock areas.

NEW YORK: Extremely cold near Great Lakes, northern border. Some areas reached 40° below zero. High temperatures were below zero north of the Mohawk Valley. Heavy snow fell from Binghamton to the Upper Hudson Valley on 17th. Temperatures got colder on the 18th. Flow of arctic air brought sub-zero weather to New York City on 19th, temperatures fell to -25° in northern areas. On morning of 20th, temperatures plunged again to -40° as far south as Montgomery County. The northern Tug Hill Plateau was buried under 5 feet of snow. By the 21st, high pressure moved in allowing western areas to warm into the teens. The warm-up continued on the 22nd. Extremes -41°; 45°. Warmest areas were New York City, Long Island.

Major activities: Tending livestock, maintenance, attending meetings, snow removal, moving crops from storage. Bitter cold weather, snow hindered outside activities, stressed livestock.

NORTH CAROLINA: Mean temperatures 21° at Asheville to 33° at Cape Hatteras. Precipitation 0.50 in. at Charlotte to 1.14 in. at Asheville.

Activities included: Tobacco plant bed preparation; tending livestock; general farm maintenance, cutting wood.

NORTH DAKOTA: Temperatures 9 to 16° below normal. Extremes -40° northeast; 40° southwest, south central.

Snowcover sufficient to protect fall seeded crops in most areas. Cattle, sheep were in good condition, cold temperatures increased feed requirements. Despite increased usage, feed, forage supplies adequate. Secondary road conditions drifted in some areas. Grain marketing normal.

OHIO: Major winter storm brought moderate to heavy snow to central, southern regions on the 17th. Surges of arctic air dropped low

temperatures to record-breaking levels on the 18th, 19th. High temperatures teens in the north, central regions to the upper teens to mid 20s south. These readings averaged 13 to 19° below normal. Lows averaged in the single digits to as low as 13° below zero, which was 12 to 23° below normal. Lowest temperatures 17 to 31° below zero. Liquid equivalent precipitation ranged from less than 0.10 in. northwest to 0.10 to 0.70 in. over the central, south. This was drier than normal by 0.25 to 0.50 in., except up to 0.10 in. above normal over the south. By the end of the period, snowcover of 2 to 5 in. was reported in the west, 5 to 10 in. over the east.

Snowcover shielded fall-seeded grains from the extreme temperatures. Livestock required considerable amounts of hay and/or other roughage, were sheltered against extreme conditions.

OKLAHOMA: Temperatures near normal Panhandle 6° below normal southeast. Precipitation none Panhandle, northeast to 0.16 south central.

Growth of forages, winter grain crops slowed due to low moisture supplies, below normal temperatures. Feeder steers, heifers \$1.00 to \$2.00 higher.

OREGON: Temperatures above normal statewide, except Willamette Valley, southwestern areas normal; 8° above normal north central, south central areas, 4° above normal coast. Coast 1.00 in., remainder of western areas 0.50 in., eastern areas dry.

Soil moisture adequate. Winter orchard pruning continued. Livestock good to excellent. Supplemental feeding continued, statewide.

PENNSYLVANIA: Precipitation a little above normal from one storm with significant snowfall on 17th. Arctic air mass after snowstorm resulted in record low temperatures. Also record low high temperatures. Some reports of building damage, livestock loss. Frozen pipes forced some farmers to haul water to livestock. Temperature 6°, 20° below normal. Extremes -31°, 35°. Precipitation 0.76 in., 0.11 in. above normal.

Activities: Pushing snow, caring for livestock.

PUERTO RICO: Island rainfall 0.63 in. was 0.03 in. below normal. Highest rainfall was 2.85 in. at Pico Del Este, 1.58 in. at Manati 2E, 1.46 in. at Canovanas. Highest 24 hour total 0.62 in. Pico Del Este. Island temperatures 75 to 78° on the coasts, 69 to 70° in the interior with mean station temperature 78.6° at Guayama to 59° at Cerro Maravilla. Extremes 52°, 90°.

SOUTH CAROLINA: Temperatures 8 to 12° below normal across State. Average precipitation 0.50 in.

Farm activities: Cold weather limited farm activities to only essential activities. No cold damage reported as of yet.

SOUTH DAKOTA: Temperatures 5 to 15° below normal across most of the State, except in the extreme west central where average temperatures were up to 5° above normal. Extremes -32°, 61°. Precipitation generally below normal, except extreme west-central up to 0.64 in. above normal. Maximum 0.78 in.

Activities: Livestock care, farm shows, livestock sales.

TENNESSEE: Temperatures significantly below normal, ranging from 12° below normal in the west to 19° below normal in the Plateau Region. Precipitation ranged from 0.05 in. above normal in eastern areas to 0.43 in. below normal in middle third. Nashville had 0.63 in. of precipitation while Knoxville had 1.27 in.

Extremely cold temperatures should help keep insect populations down next season. Stress on cattle was high during the week, but most areas reported no major problems. Activity for the week was limited to feeding cattle, thawing frozen water supplies.

TEXAS: Early-week shot of Arctic air resulted in cold, dry weather for northern, central Texas. Some single-digit lows were reported in Panhandle. However, readings remained above freezing in Lower Valley and far Southern areas. A series of upper air disturbances brought rain, showers to many areas late in the week. However, moisture was scant on Northern High Plains. Cool weather prevailed along with wetness. For week, temperatures ran below normal over most of State. Readings were near to slightly above normal in Northern Panhandle, South Central, far Southern areas. Precipitation below normal on Northern High, Low Plains,

East Texas areas, Coastal Bend, Upper Coast. Precipitation was near to slightly above normal elsewhere.

Crops: Small grains continue to need moisture as only limited amounts of rain fell. It may be too late for some fields in Southern High Plains as lack of moisture there continued to take its toll. Nitrogen was applied to some oat fields in Blacklands. In Edwards Plateau, some producers were having to contend with greenbugs. Most areas of State need more rain. Wheat 54% normal, 67% 1993.

Commercial Vegetables: Rio Grande Valley: harvest of carrots, cabbage, celery, greens was active. In some areas, rain delayed harvest. Onions made good progress. East Texas: land preparation continued. Pecans harvest almost complete across State. Peaches producers continued their pruning operations in some parts of State.

Range and Livestock: Livestock remained in fair to good condition across State. Heavy winter feeding of livestock continued across Texas as forage supplies remained below normal on many pastures, ranges. Some producers have opted to sell or place some of their cattle in feedlots because of a lack of forage. Hay supplies remained short. Water levels in stock tanks remained low in many areas.

UTAH: Temperature 11° above normal, minimums 3° above normal. Precipitation was zero with only Provo receiving a trace.

Major activities: General maintenance; bookkeeping; marketing hay, grains. Cattle were reported in good to excellent condition, feed supplies were adequate due to warmer than normal weather.

VIRGINIA: Temperatures 15 to 25° below normal. Extremes -16°, 66°. Precipitation averaged near normal. An ice storm struck parts of southwest, west-central, central, northern areas.

Days suitable for fieldwork 0.0. Topsoil 38% adequate, 62% surplus. Winter grains, grazing crops condition 14% poor, 51% fair, 35% good. Forage from pastures, grazing crops dairy cattle 0%, beef cattle 2%, sheep 2%. Feeding, watering livestock, pesticide recertification, working on farm records, some topdressing wheat.

WASHINGTON: Temperatures 1 to 6° above normal west; 7 to 15° above normal east. Precipitation 0.02 to 0.17 in. west; none to 0.02 in. east.

Days suitable for fieldwork 4.6. Soil moisture 25% short, 74% adequate, 1% surplus. Hay, other roughage supplies 5% very short, 10% short, 85% adequate. Range, pasture 10% very poor, 20% poor, 60% fair, 10% good. Winter wheat dryland 1% poor, 39% fair, 60% good; irrigated 2% fair, 95% good, 3% excellent. Barley dryland 95% fair, 5% good; irrigated 10% fair, 90% good. Concern continued to be expressed over lack of snowcover for winter grains as the little that was present continued to melt. Little damage has been reported thus far, but if cold weather comes without snow, damage could be significant. Growth in winter wheat, barley has been noted in some areas where there is no frost in the ground. Dry, warm weather has also caused some anxiety about availability of summer water supply. Fruit growers were concerned about an early bloom due to warmer than normal weather. Livestock have continued on winter feeding programs, feed requirements have remained low due to mild weather.

WEST VIRGINIA: Temperature 12°. Extremes -30°, 55°. Precipitation 0.97 in.

Temperatures 13 to 20° below normal. Precipitation above normal. Activities: Feeding livestock, bookkeeping, general maintenance.

WISCONSIN: Temperatures averaged below normal with extreme wind chills. Average temperature -6°. Extremes -40°, 42°.

There was very little outside activity during the beginning of the week because of the extreme cold weather, dangerous wind chills. Preventing frozen pipes, providing adequate food, shelter for livestock became a full-time job. Warmer temperatures over the weekend were welcomed, permitted catching up on outside activities.

WYOMING: Temperatures varied from 6° below normal in the northeast corner to above normal elsewhere. Temperatures 14° above normal in Lander. Precipitation was normal to below normal in all parts of the States except the northeast which averaged 0.20 to 0.30 in. above normal. Alva received the largest precipitation total with 0.68 in.

Winter wheat mostly fair to good. Snowcover protection on winter wheat improved. Livestock good condition. Hay, roughage supplies mostly adequate. Starting to shear sheep in some farm flocks.

International Weather and Crop Summary

HIGHLIGHTS

January 16 - 22, 1994

FSU-WESTERN: Weather conditions were mostly favorable for dormant winter grains.

EUROPE: Dry weather eased excessive wetness in northwestern crop areas, but moisture is low in southern Spain.

SOUTH ASIA: Scattered, mostly light showers fell across the region.

SOUTHEAST ASIA: Heavy rain continued over Java's rice areas.

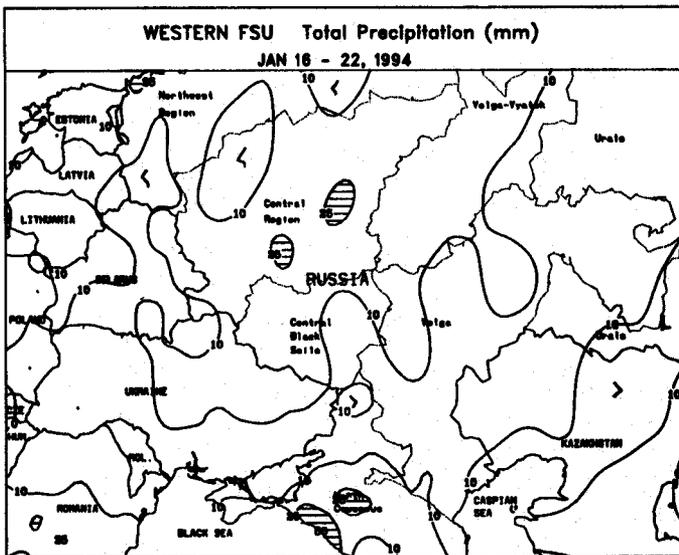
EASTERN ASIA: Seasonably cooler weather returned to the North China Plain, keeping winter wheat dormant.

AUSTRALIA: Dry weather returned to the eastern summer crop region. A weak tropical cyclone brushed coastal southern Queensland, producing beneficial rains for sugarcane.

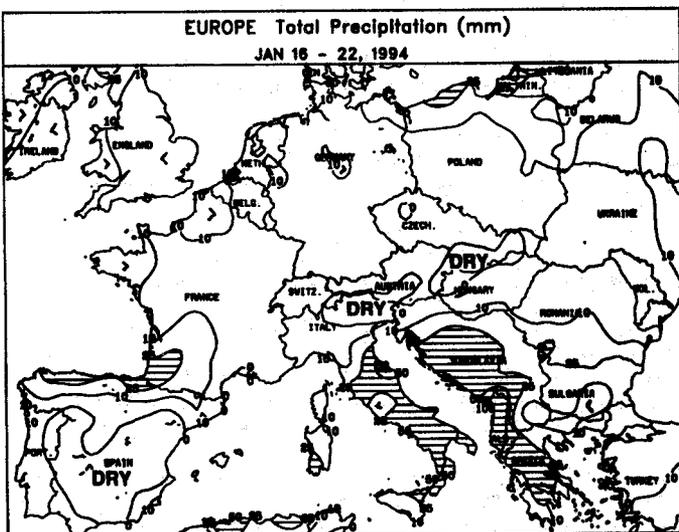
SOUTH AMERICA: Showers favored corn and soybeans across most of the region.

NORTHWESTERN AFRICA: Widespread significant rain benefited winter grains in Algeria.

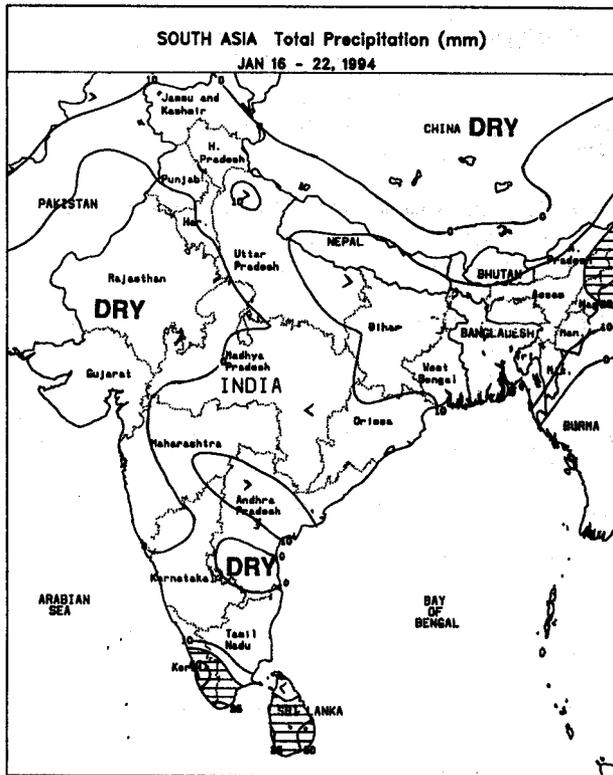
SOUTH AFRICA: Rain favored corn development.



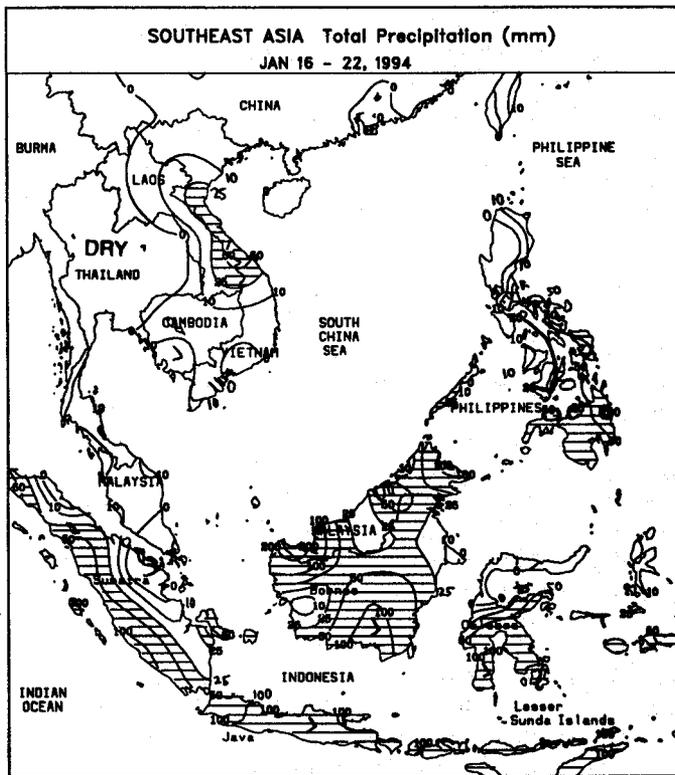
FSU-WESTERN: Light precipitation and continued unusually mild weather provided favorable conditions for dormant winter grains. Precipitation amounts generally varied around 10 mm, with greatest amounts (more than 25 mm) covering winter grains in North Caucasus and Central Region. Snow cover increased in winter grain areas of North Caucasus and lower Volga Valley in Russia. Winter grain areas in Ukraine had little if any snow cover, leaving crops vulnerable to potential extreme cold. Weekly average temperatures were 2-5 degrees Celsius (C) above normal over the region.



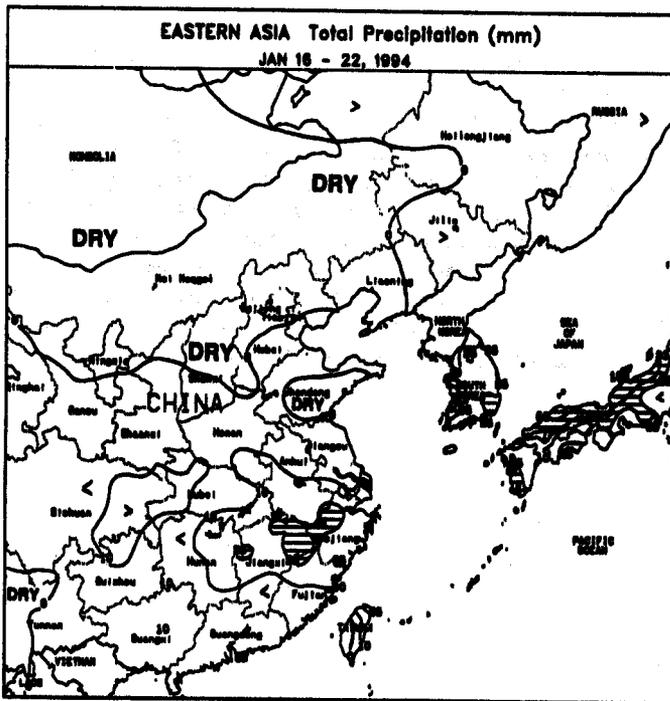
EUROPE: Mostly light precipitation (10 mm or less) fell over western and northern Europe. Greater amounts (10-40 mm) were confined to southwestern France and extreme northern Spain, and along the Baltic coast of Poland. The relatively drier weather eased excessive wetness across western Europe. Substantial moisture (25-75 mm) fell over central and southern Italy, the former Yugoslavia, and Greece. Rainfall amounts of 10-25 mm benefited crop areas of Bulgaria. Unfavorably dry weather persisted over southeastern Spain, where moisture has been inadequate for winter crop development. Weekly temperatures averaging 2-5 degrees C below normal slowed moisture demand in Spain, but kept drying to a minimum in France. Temperatures averaged 1-5 degrees C above normal further east, promoting some crop growth in southern Italy and Greece.



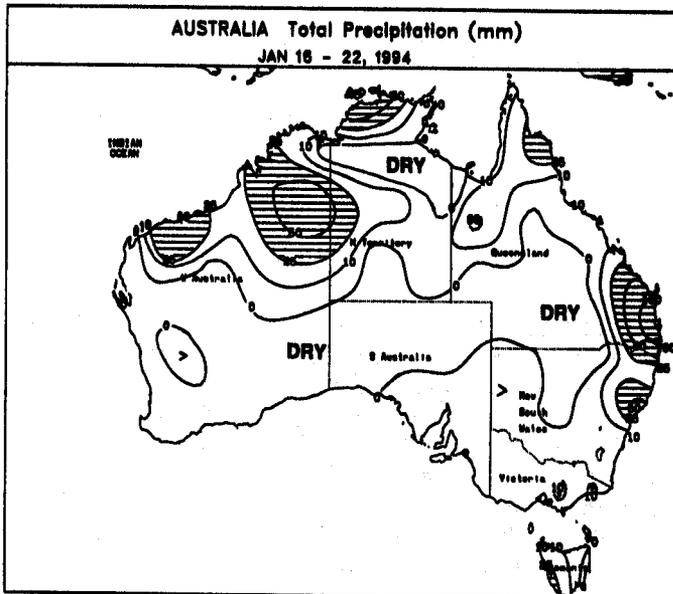
SOUTH ASIA: Scattered showers (1-15 mm) were reported over extreme northwestern India and far-northern Pakistan late in the week, bringing some additional moisture to rainfed crops. However, areal coverage was much less than the previous week, with dry weather prevailing over most of western India. Early-week showers (1-17 mm) in the northeast were concentrated mostly over Bihar as well as the far-eastern States. Elsewhere, scattered variable showers (1-21 mm) fell in Andhra Pradesh, and heavier rain (24-76 mm) was reported in Kerala and extreme southern Tamil Nadu.



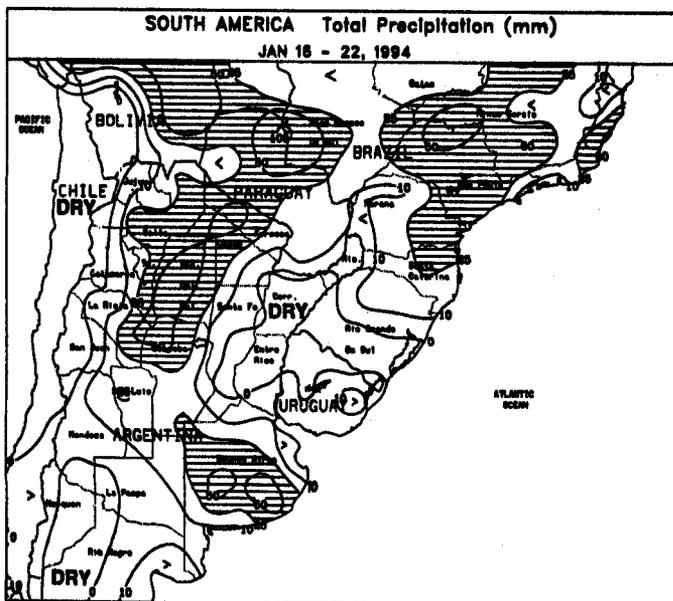
SOUTHEAST ASIA: Substantial rain (50-100 mm or more) continued to soak Java's rice areas, producing ample moisture for irrigation reserves but aggravating flooded areas. Locally heavy rain (50-100 mm) persisted over western Sumatra as well, but rainfall diminished to less than 25 mm in the east. Dry weather prevailed again over the southern Malay Peninsula, with much drier weather from the previous week over the northern half. In the Philippines, light showers (10 mm or less) fell over Luzon, while 50-100 mm of rain soaked Mindanao. Showers increased over Vietnam, with 25-50 mm in central rice areas.



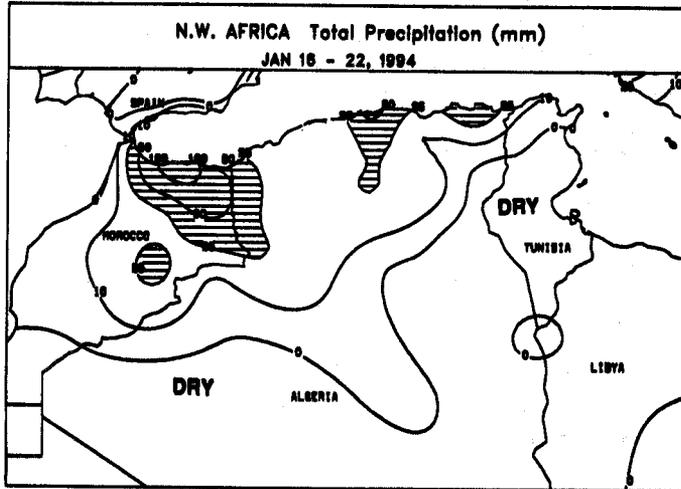
EASTERN ASIA: Seasonably cooler weather returned to the North China Plain, keeping winter wheat dormant. Temperatures averaged 1-2 degrees C above normal across the main wheat belt. Light to moderate showers (10-35 mm) fell across the Yangtze Valley, helping to replenish reservoir levels.



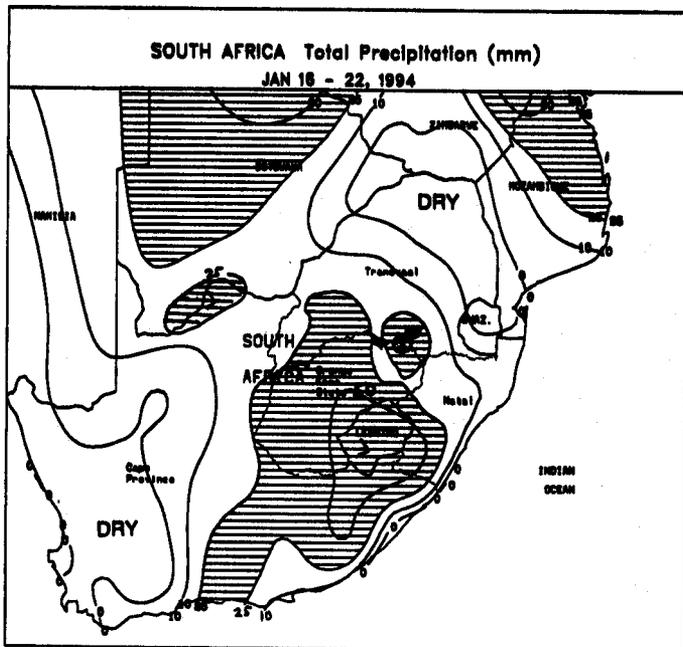
AUSTRALIA: Drier weather returned to the eastern summer crop region, after last week's beneficial rain. Temperatures remained 2-3 degrees C above normal, continuing to deplete soil moisture for vegetative sorghum and irrigation reserves for cotton. Rain is needed in the next few weeks to prevent significant yield losses during the upcoming reproductive stage. A weak tropical cyclone, Rewa, which previously brought heavy rain to New Caledonia, brushed coastal southern Queensland on the 19th and 20th. The storm produced moderate to heavy showers (50-150 mm) along the coast, favoring sugarcane but possibly causing some flooding. Only light showers (4-20 mm) were reported across the main sugarcane region of northeastern Queensland.



SOUTH AMERICA: In Argentina, widespread light to moderate rain (9-35 mm, with isolated amounts greater than 50 mm) fell across southern Cordoba, northeastern La Pampa, and most of Buenos Aires, favoring vegetative corn, sorghum, sunflower seed, and soybeans. Temperatures averaged 1-3 degrees C below normal across this region, with maximum temperatures ranging from 28-33 degrees C. Southern Santa Fe received little or no rain, with maximum temperatures reaching 38 degrees C on the 20th. Cooler weather returned by week's end, preventing significant evapotranspiration losses. Subsoil moisture should still be adequate for early summer crop growth. The northern cotton areas, which had become dry, received beneficial light to moderate rain (8-50 mm). Across southern Brazil, showers (10-60 mm) continued to cover the main summer crop areas, keeping soils moist for corn and soybeans. Heavier amounts (50-90 mm) were again reported across Goias and Minas Gerais. Showers (5-20 mm) brought some relief from dryness to southern Paraguay, but more rain is needed. Temperatures averaged 1-3 degrees C above normal across southern Paraguay and Brazil.



NORTHWESTERN AFRICA: Light precipitation dampened winter grain areas in Morocco, where rainfall ranged from 5 to 11 mm. Further east, widespread light to moderate rain (10-25 mm, with local amounts in excess of 25 mm) benefited crops in Algeria. In Tunisia, dry weather returned to winter grain areas, following last week's beneficial rainfall. Topsoil moisture over most of the region was adequate for winter grains in the early vegetative stage. However, subsoil moisture remained limited. Timely rain is needed throughout the remainder of the growing season, especially during the critical reproductive period of March and April, to prevent declines in crop yield potential.



SOUTH AFRICA: Widespread showers covered most corn growing areas, with 20-50 mm of rain benefiting crops in the Orange Free State and extreme southern Transvaal. Most crop areas received at least 10 mm, maintaining adequate moisture for corn reproduction and development. Near-normal temperatures also favored crop growth. Rainfall diminished further north, with dry weather prevailing over the northern half of the Transvaal.

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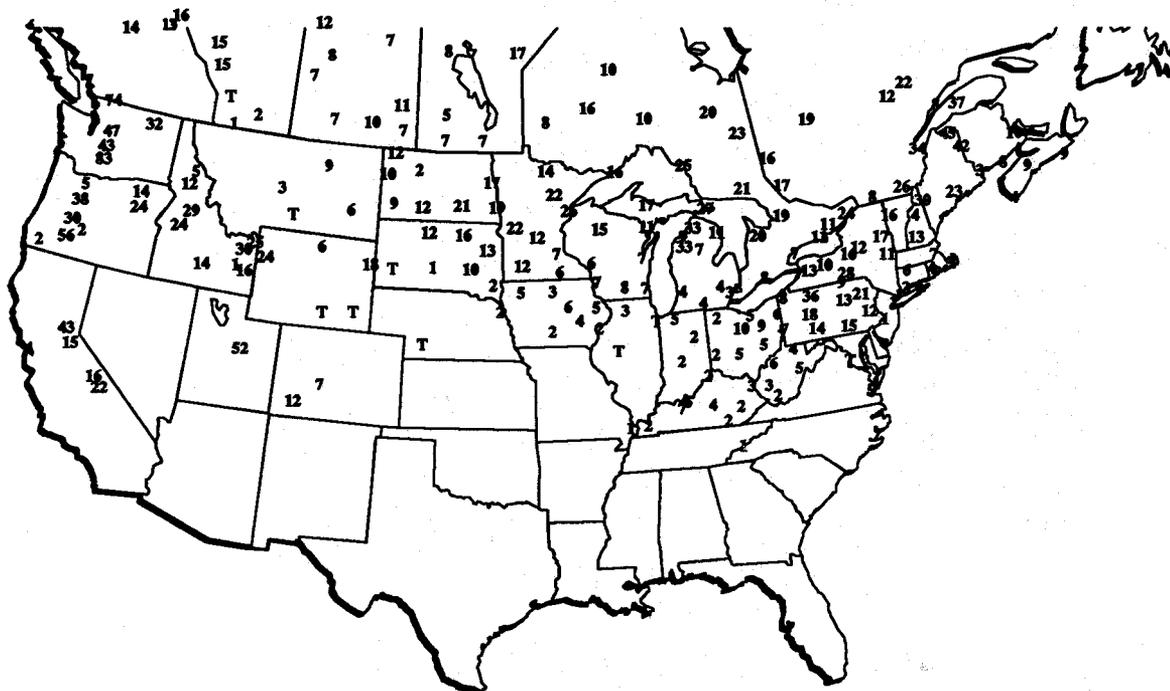
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