

# WEEKLY WEATHER AND CROP BULLETIN

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

U.S. DEPARTMENT OF AGRICULTURE  
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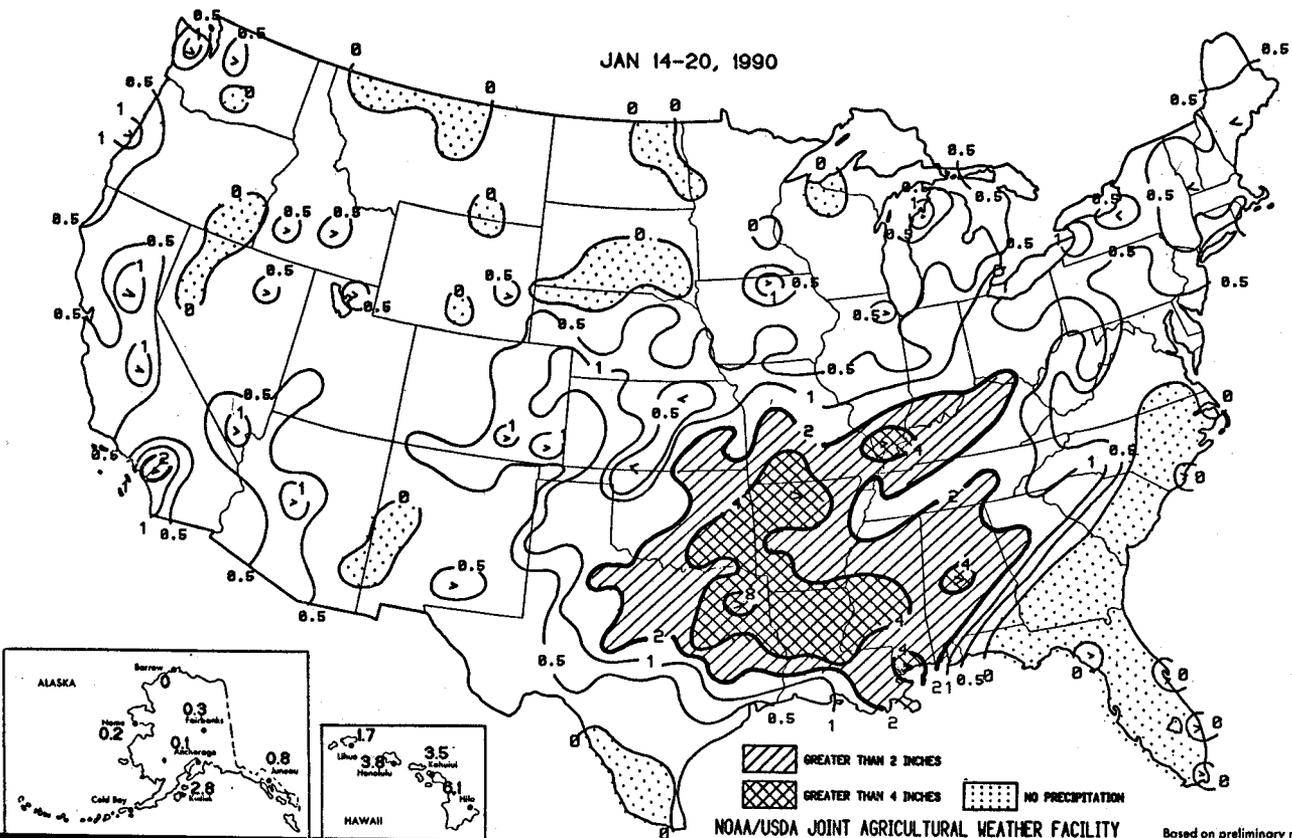
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## TOTAL PRECIPITATION, INCHES

JAN 14-20, 1990



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

## HIGHLIGHTS

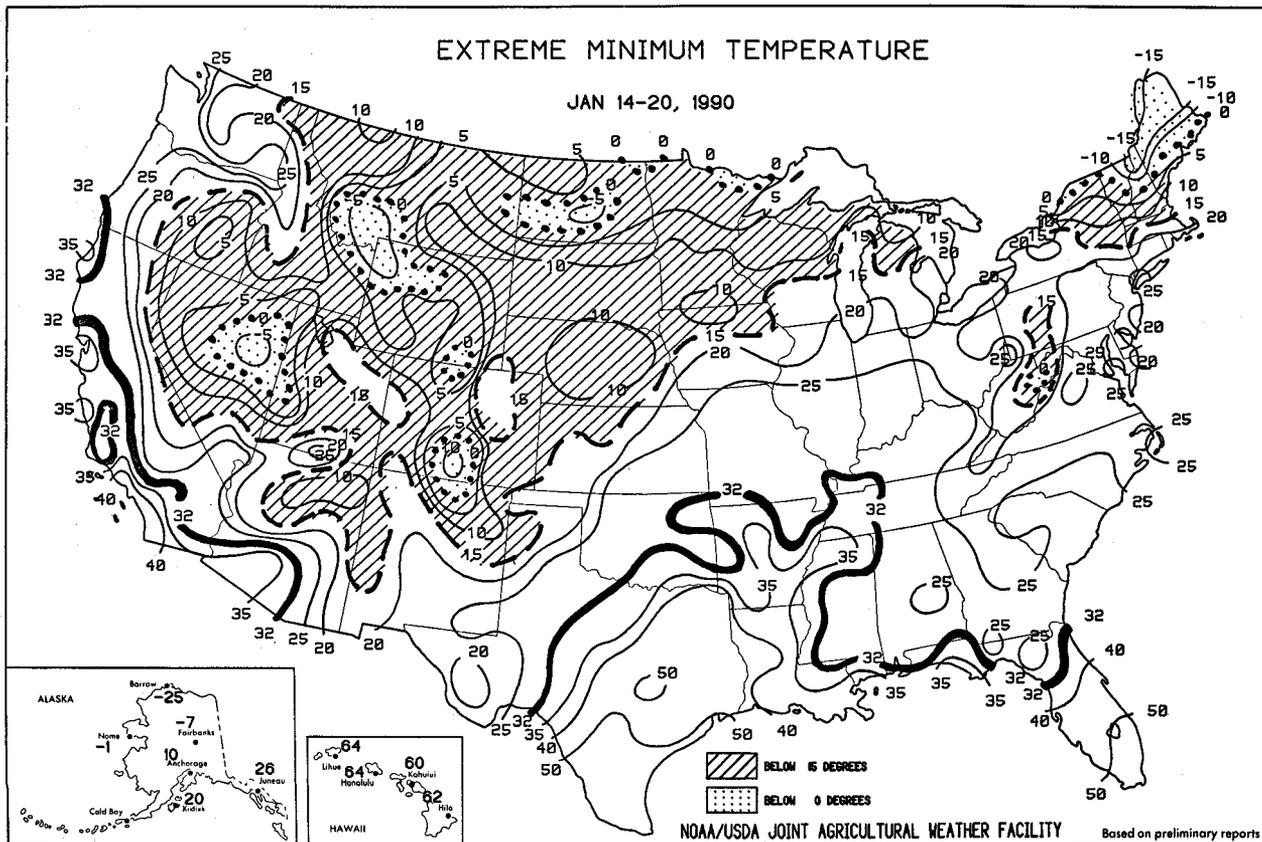
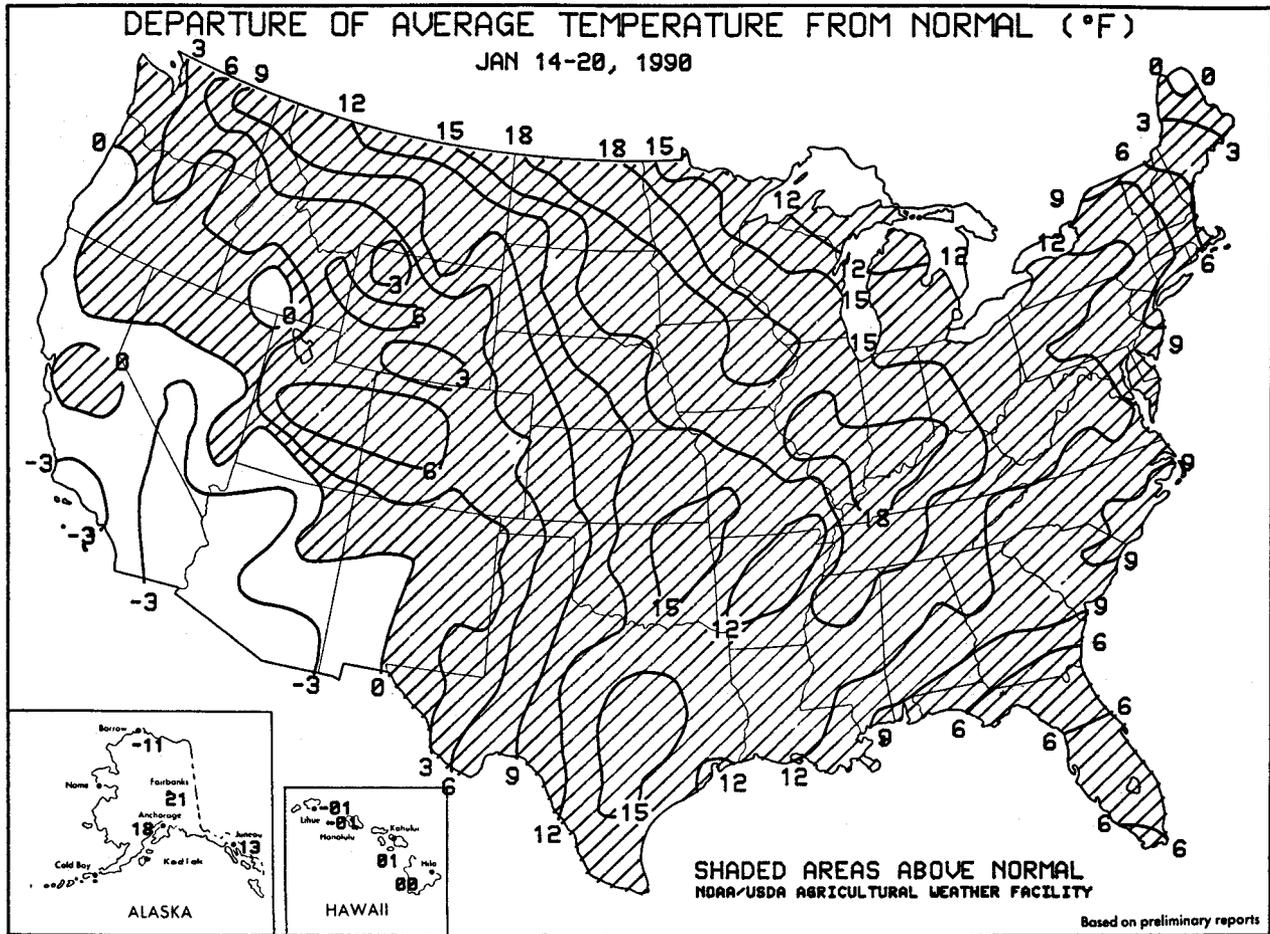
January 14 - 20, 1990

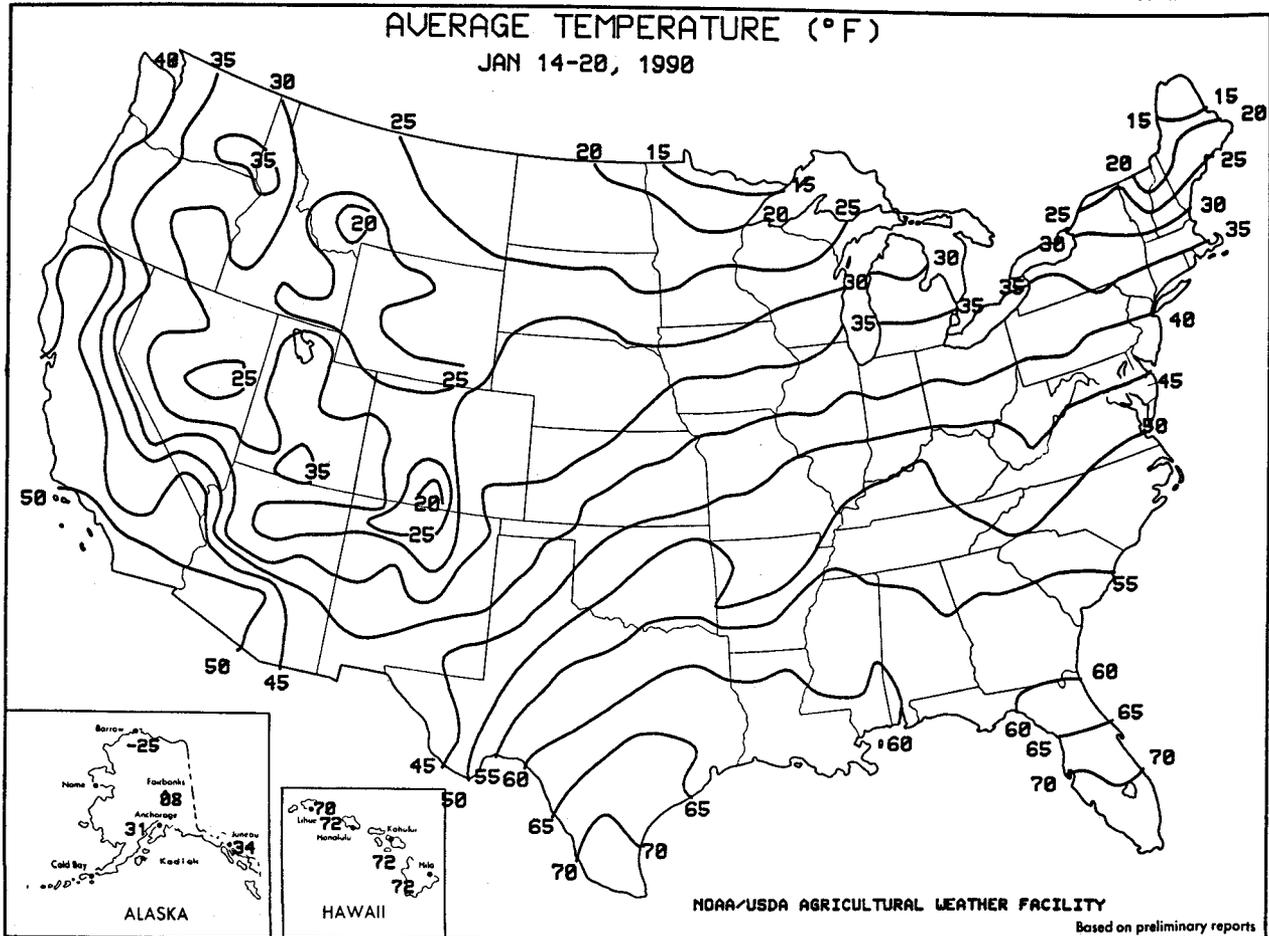
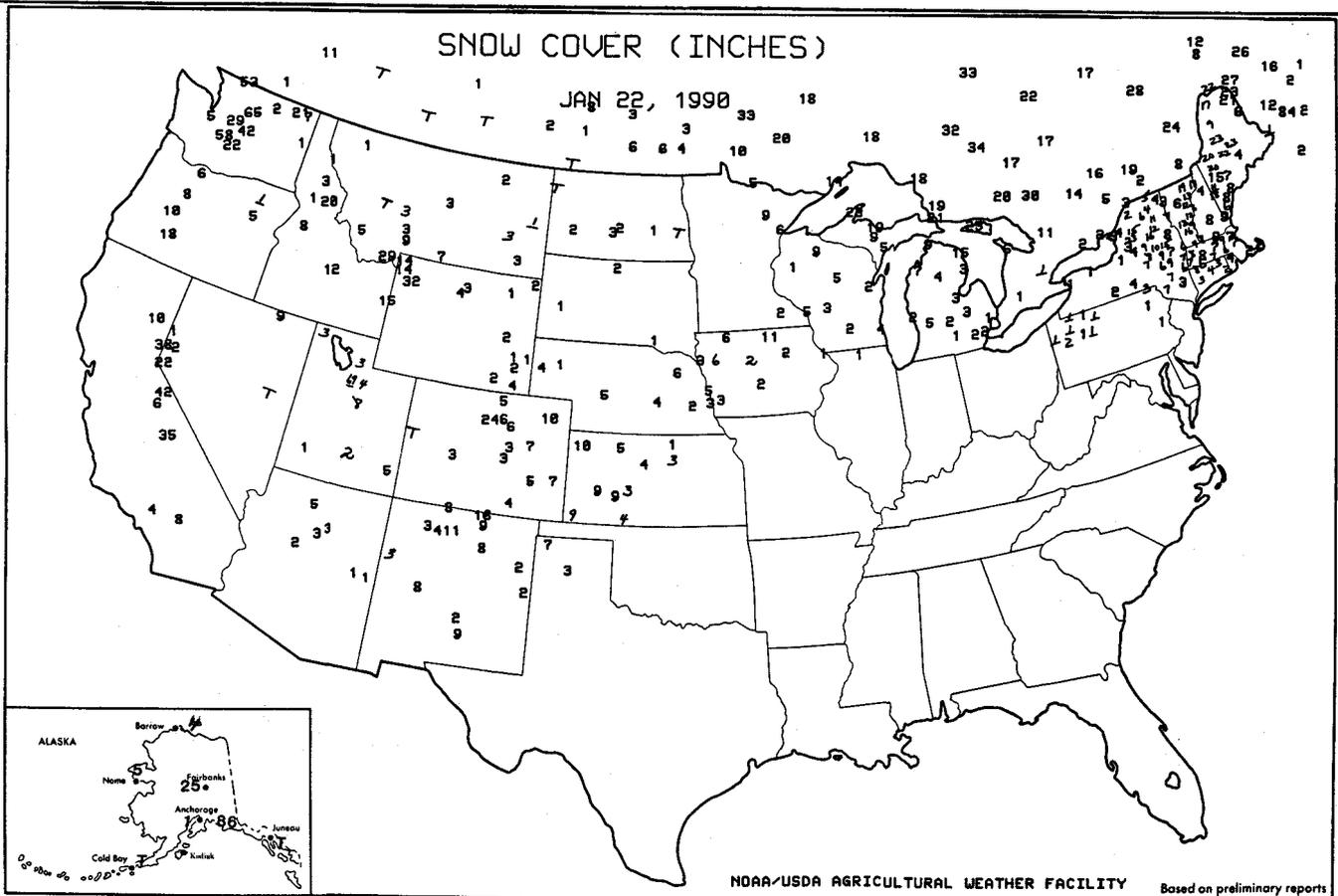
Beneficial rain and snow continued over the **Pacific Coast States** during the first part of the week. On Tuesday, a storm system brought needed rain over the eastern portions of the hard red winter wheat in the **central and southern Plains**. The system then produced heavy rain in the **lower and middle Mississippi Valley** and the **Ohio Valley**. A second storm developed over the **Southwest** on Thursday, spreading heavy snow across the **Rockies** into the **central Plains** and **western Corn Belt** and heavy rain across the **southern Plains** into the **Southeast**. Parts of the western hard red winter wheat areas received over an inch of much welcomed precipitation. Thunderstorms inundated portions of **eastern Texas** with more than 9 inches of rain, while a tornado was spawned near **Lufkin, TX**. This system then brought rain, snow, sleet, and freezing rain to much of the eastern third of the country

at week's end. Unseasonably warm weather remained over much of the Nation so far during January. Numerous stations reported record-high temperatures for the date across the eastern two-thirds of the country.

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### Long-Term Drought Update

Moderate to heavy precipitation brought important relief to dry areas in the central and southern Plains and California last week. The Palmer Drought Index maps, however, show that these and several other areas still need considerably more moisture to eliminate long-term drought. Extreme drought (-4 or less) continues from last year in southern Florida, northern Iowa, southern California, and in parts of the Dakotas, Nebraska, Minnesota, Wisconsin, and Illinois (fig. 1). In addition,

moderate drought or worse (-2 or less) remains in some portions of all the Western States.

For much of Iowa and western Illinois, more than 5 inches of precipitation is required to bring the index close to zero, with more than 10 inches needed along the California coast (fig. 2). The southeast coast of Florida and the southwest coast of California need more than 16 inches of rain to eliminate long-term dryness, according to the Palmer Index.

Figure 1

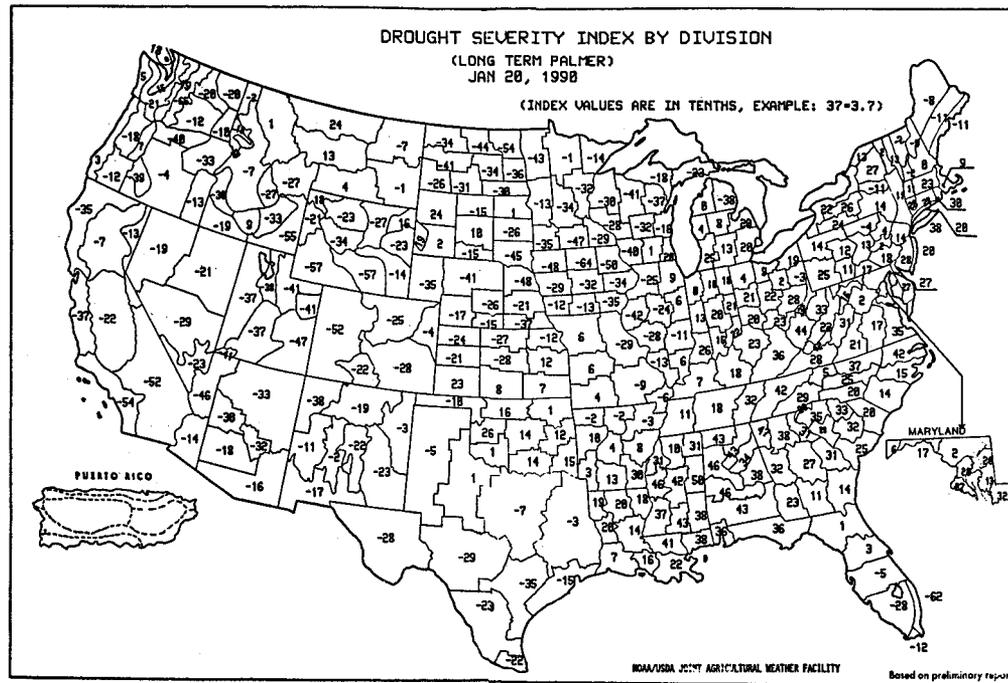
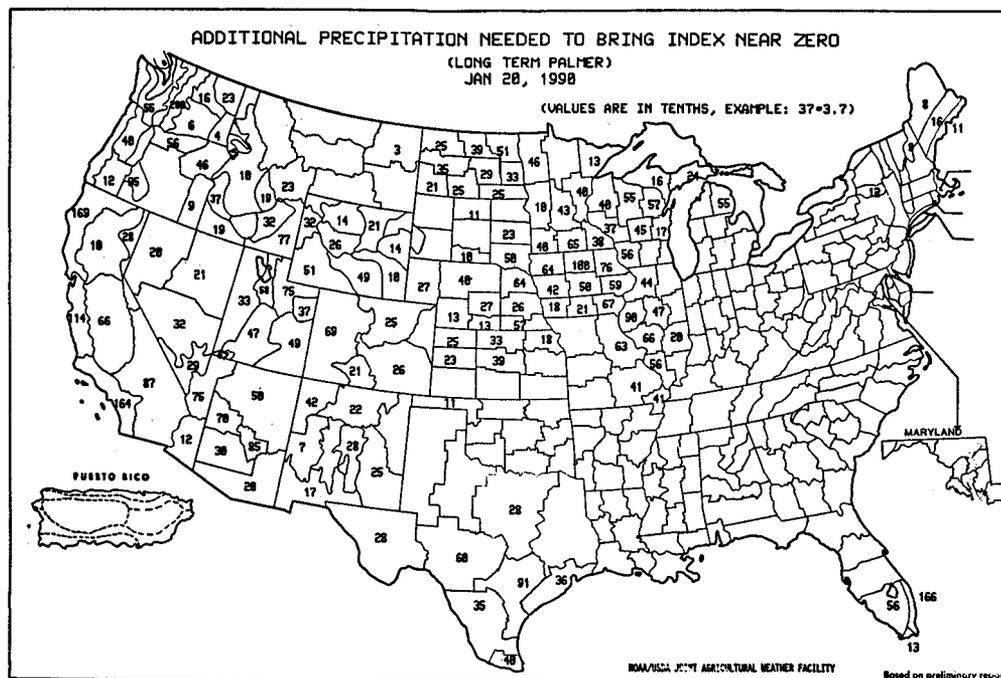


Figure 2



# National Weather Data for Selected Cities

## Weather Data for the Week Ending January 20, 1990

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
AL BIRMINGHAM	66	46	74	27	56	13	2.3	1.1	1.5	8.3	100	4.6	135	95	60	0	1	3	2	
MOBILE	69	52	74	30	60	10	1.9	.9	1.6	12.5	148	5.3	174	96	73	0	1	3	2	
MONTGOMERY	72	45	78	24	58	12	2.5	1.6	1.9	14.0	187	4.8	177	96	56	0	1	2	1	
AK ANCHORAGE	37	24	41	10	31	18	.1	-.1	0	2.6	162	.9	186	93	69	0	7	3	0	
BARROW	-21	-29	-13	-33	-25	-11	0	-.1	0	2.6	76	T	6	77	64	0	7	0	0	
FAIRBANKS	15	2	30	-7	8	21	.3	.2	.1	1.0	94	.5	125	91	79	0	7	6	0	
JUNEAU	37	31	40	26	34	13	.8	0	.6	136	2.8	116	98	82	0	5	2	1	0	
KODIAK	40	30	43	20	35	5	2.8	1.5	1.3	17.8	192	5.6	148	95	76	0	3	5	2	
NOME	22	8	30	-1	15	9	.2	0	.2	1.3	110	.6	104	87	57	0	6	5	0	
AZ PHOENIX	60	44	71	37	52	0	.6	.4	.6	1.0	77	.8	167	89	44	0	0	3	1	
PRESCOTT	40	23	50	13	31	-5	1.1	.7	.7	1.5	56	1.2	110	89	64	0	7	4	1	
TUCSON	59	37	73	28	48	-3	T	.2	.3	1.0	64	.8	141	90	34	0	1	3	0	
YUMA	62	44	70	35	53	-3	T	.1	T	.1	14	.1	33	74	36	0	0	0	0	
AR FORT SMITH	60	41	72	32	50	13	4.3	4.0	1.7	5.4	134	4.7	390	94	65	0	1	4	3	
LITTLE ROCK	57	44	65	37	50	11	3.6	2.7	2.4	5.6	82	4.0	158	89	72	0	0	5	2	
CA BAKERSFIELD	56	39	64	33	48	-1	.4	.1	.2	.7	55	.7	115	97	53	0	0	3	0	
EUREKA	53	39	55	35	46	-1	.7	-.9	.5	6.0	56	5.2	113	91	70	0	0	4	0	
FRESNO	53	37	58	31	45	0	1.6	1.1	.8	2.7	95	2.8	212	100	68	0	3	3	1	
LOS ANGELES	60	46	66	43	53	-3	.7	0	.3	1.1	31	1.1	57	92	54	0	0	4	0	
REDDING	58	35	62	25	46	0	.3	-1.7	.2	7.2	57	7.2	129	94	44	0	3	2	0	
SACRAMENTO	56	37	61	30	46	1	.8	-.2	.7	4.6	84	4.6	176	97	60	0	3	2	1	
SAN DIEGO	60	48	65	44	54	-1	1.6	1.1	.8	3.1	97	2.1	158	84	55	0	0	4	1	
SAN FRANCISCO	55	42	57	38	48	0	.5	-.6	.3	2.6	40	2.6	86	95	60	0	0	2	0	
CO DENVER	43	23	58	17	33	4	.6	.5	.5	1.5	172	.6	203	80	41	0	6	3	1	
GRAND JUNCTION	39	24	52	18	31	6	.3	.2	.2	.7	69	.6	151	94	60	0	7	3	0	
PUEBLO	46	22	61	4	34	4	.6	.5	.5	1.5	327	.6	375	80	43	0	6	3	0	
CT BRIDGEPORT	42	31	52	22	37	7	.8	0	.6	2.3	39	1.5	68	82	53	0	4	2	1	
HARTFORD	45	27	63	18	36	10	.3	-.5	.2	2.0	31	.5	22	84	47	0	6	2	0	
DC WASHINGTON	56	36	69	26	46	11	.1	-.5	.1	2.9	59	.8	46	88	45	0	1	2	0	
FL APALACHICOLA	68	50	73	35	59	6	0	0	0	9.2	159	2.1	90	97	71	0	0	0	0	
DAYTONA BEACH	76	51	83	40	63	6	0	0	0	5.0	135	1.0	70	99	54	0	0	0	0	
JACKSONVILLE	75	44	83	29	60	6	T	-.7	T	4.3	100	.9	50	96	48	0	1	0	0	
KEY WEST	78	68	80	59	73	3	0	-.4	0	1.7	59	T	0	88	66	0	0	0	0	
MIAMI	80	67	83	52	73	6	T	-.5	T	.7	21	.1	5	82	53	0	0	0	0	
ORLANDO	80	56	86	42	68	8	0	0	0	4.5	140	T	0	95	46	0	0	0	0	
TALLAHASSEE	75	41	78	22	58	6	0	-1.1	T	6.4	84	1.8	59	98	52	0	2	0	0	
TAMPA	81	57	85	41	69	9	0	-.5	0	5.2	151	.5	39	92	44	0	0	0	0	
WEST PALM BEACH	79	67	82	53	73	7	.1	-.6	.1	2.8	70	.8	49	80	56	0	0	1	0	
GA ATLANTA	65	48	71	31	57	15	2.9	1.7	2.5	9.1	123	4.6	145	82	54	0	1	2	1	
AUGUSTA	71	39	76	24	55	10	T	-.9	T	6.0	106	1.3	53	97	50	0	2	1	0	
MACON	71	43	79	24	57	10	T	-1.0	T	11.3	165	2.4	87	94	49	0	2	0	0	
SAVANNAH	72	44	79	27	58	9	T	-.7	T	7.8	165	2.6	132	91	45	0	1	0	0	
HI HILO	77	66	84	62	72	0	6.1	4.0	3.5	18.3	97	14.7	246	96	70	0	0	6	4	
HONOLULU	77	68	82	64	72	0	3.8	2.9	1.4	5.1	87	3.8	151	90	70	0	0	6	2	
KAHULUI	77	67	83	60	72	1	3.5	2.6	1.3	8.4	157	3.7	141	98	74	0	0	6	3	
LIHUE	74	67	79	64	70	-1	1.7	.3	.6	4.7	49	1.8	42	95	70	0	0	6	1	
ID BOISE	40	26	47	18	33	3	.2	-.2	.2	.7	31	.6	59	95	68	0	6	1	0	
LEWISTON	42	33	45	27	38	6	T	-.3	T	.7	32	.4	44	84	63	0	3	1	0	
POCATELLO	35	21	42	10	28	5	.1	-.1	.1	.5	31	.4	61	93	66	0	7	3	0	
IL CHICAGO	46	30	57	24	38	18	.7	.3	.3	1.5	43	1.0	91	91	63	0	4	3	0	
MOLINE	46	26	59	19	36	17	.4	0	.2	2.0	68	1.3	117	95	64	0	6	3	0	
PEORIA	47	31	62	23	39	18	.3	-.1	.1	1.5	50	.7	61	94	70	0	5	3	0	
QUINCY	49	33	69	28	41	18	.7	.4	.5	1.6	60	.9	97	90	66	0	5	4	1	
ROCKFORD	44	25	53	19	34	16	.4	0	.3	1.6	56	1.1	115	95	64	0	6	3	0	
SPRINGFIELD	49	34	67	27	42	18	.6	.3	.5	1.4	45	.8	80	93	69	0	3	4	1	
IN EVANSVILLE	57	41	69	31	49	19	3.2	2.6	2.1	4.8	88	3.4	173	91	65	0	1	3	2	
FORT WAYNE	45	32	57	24	38	15	1.0	.5	.7	3.1	80	1.9	136	96	74	0	4	2	1	
INDIANAPOLIS	51	35	66	27	43	17	.7	-.1	.3	3.4	72	1.3	72	92	64	0	3	3	0	
SOUTH BEND	44	30	55	23	37	14	.6	.1	.4	3.2	70	1.4	81	93	67	0	4	3	0	
IA DES MOINES	44	28	59	21	36	18	.6	.4	.4	1.8	110	1.2	197	88	64	0	6	2	0	
SIOUX CITY	41	21	53	12	31	15	.2	.1	.2	.6	52	.2	51	91	51	0	7	1	0	
WATERLOO	43	20	55	11	32	18	.2	.1	.2	.5	31	.3	55	93	55	0	7	2	0	
KS CONCORDIA	47	27	62	19	37	12	.1	0	.1	.7	62	.3	67	85	52	0	6	2	0	
DODGE CITY	50	28	69	18	39	10	1.4	1.3	1.3	2.2	272	1.6	571	84	49	0	5	2	1	
GOODLAND	44	22	63	14	33	6	.7	.6	.7	.9	152	.7	292	84	45	0	7	2	1	
TOPEKA	49	31	66	24	40	14	.8	.6	.5	1.7	92	1.1	183	96	65	0	6	3	1	
WICHITA	52	35	68	28	43	14	1.5	1.4	.9	2.2	153	1.7	393	91	58	0	4	2	2	
KY BOWLING GREEN	60	41	69	28	51	17	2.4	1.3	1.3	5.0	66	2.8	91	94	64	0	1	4	2	
LEXINGTON	56	41	66	28	49	17	2.2	1.4	1.5	4.2	68	2.4	100	88	55	0	1	5	1	
LOUISVILLE	59	42	71	30	51	19	2.6	1.9	1.3	4.3	75	2.8	127	84	49	0	1	3	3	
LA ALEXANDRIA	70	56	75	41	63	15	5.1	4.1	3.2	9.5	122	7.5	259	82	64	0	0	5	2	
BATON ROUGE	73	55	80	33	64	13	3.8	2.8	2.8	13.3	168	7.0	238	96	68	0	0	4	2	
LAKE CHARLES	71	56	76	36	64	14	.6	-.4	.6	5.9	73	3.8	123	99	77	0	0	3	1	
NEW ORLEANS	73	53	79	33	63	10	2.9	1.8	2.7	12.7	150	6.4	201	98	66	0	0	3	1	

Based on 1951-80 normals

Weather Data for the Week Ending January 20, 1990

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
SHREVEPORT	66	52	73	42	59	14	6.2	5.3	3.0	10.9	167	7.6	287	93	72	0	0	5	3	
ME CARIBOU	22	-3	46	-18	9	-1	.4	-1	.2	4.0	84	1.6	103	84	61	0	7	6	0	
PORTLAND	36	19	58	8	28	7	.1	-7	.1	2.5	36	.3	10	82	45	0	6	5	0	
MD BALTIMORE	55	34	68	22	44	12	.1	-5	.1	3.2	61	1.1	56	90	48	0	6	2	0	
SALISBURY	57	34	67	19	46	11	.1	-7	.1	4.6	78	2.0	91	90	47	0	3	2	0	
MA BOSTON	43	28	63	15	36	6	.2	-7	.2	1.2	17	.4	13	83	47	0	5	2	0	
CHATHAM	40	29	47	20	34	3	.1	-8	.1	3.7	47	1.9	66	91	71	0	4	0	0	
MI ALPENA	37	17	49	5	27	3	.3	-1	.2	2.9	93	1.3	117	93	61	0	7	4	0	
DETROIT	43	30	55	20	36	13	.8	.4	.5	2.8	74	1.5	121	96	75	0	4	3	1	
FLINT	41	28	51	19	34	13	.5	.1	.2	2.3	77	1.3	128	91	72	0	5	3	0	
RAND RAPIDS	41	28	52	20	35	12	.8	.3	.4	2.4	61	1.4	105	88	67	0	5	3	0	
HOUGHTON LAKE	37	19	47	12	28	11	.1	-3	.1	1.7	58	.8	76	92	64	0	7	1	0	
LANSING	41	27	52	17	34	14	.4	0	.2	2.0	55	1.1	97	94	73	0	5	3	0	
MARQUETTE	31	11	36	-1	21	10	.1	-4	.1	3.3	88	.7	56	92	66	0	7	2	0	
MUSKEGON	41	29	52	19	35	12	.5	-1	.3	3.0	73	1.2	72	92	67	0	7	2	0	
SAULT ST. MARIE	31	15	35	7	23	10	.4	-1	.2	2.7	67	.9	64	92	73	0	5	3	0	
MN ALEXANDRIA	30	18	36	11	23	18	T	-2	T	2.7	16	T	4	91	72	0	7	1	0	
DULUTH	27	13	32	3	20	14	T	-1	T	.9	41	.2	31	90	72	0	7	2	0	
INT'L FALLS	23	8	31	-3	15	16	T	-2	T	.6	41	.2	32	91	67	0	7	1	0	
MINNEAPOLIS	36	19	43	13	28	17	T	-2	T	.4	31	T	0	86	50	0	7	0	0	
ROCHESTER	38	20	49	12	29	20	T	-2	T	.5	38	.1	25	87	53	0	7	1	0	
MS GREENWOOD	67	50	74	31	59	15	3.4	2.2	2.0	9.3	105	5.8	170	88	66	0	1	3	2	
JACKSON	68	49	75	31	59	13	4.9	3.8	2.4	13.2	152	9.0	270	95	72	0	1	4	3	
MERIDIAN	70	47	76	26	59	13	3.7	2.6	1.9	12.8	142	6.1	184	96	62	0	1	3	2	
MO CAPE GIRARDEAU	56	43	66	32	49	—	4.5	3.9	3.1	6.6	116	5.0	259	94	69	0	1	3	3	
COLUMBIA	52	34	69	29	43	15	1.3	.9	.6	2.5	78	1.7	146	93	65	0	3	4	2	
KANSAS CITY	49	33	65	28	41	14	.7	.4	.4	1.7	74	1.1	140	91	64	0	6	4	0	
SAINT LOUIS	56	38	71	31	47	18	1.0	.6	.6	1.8	53	1.1	101	87	58	0	1	3	1	
SPRINGFIELD	55	38	68	31	46	15	4.4	4.0	2.1	5.9	163	5.1	479	96	62	0	1	3	3	
MT BILLINGS	38	22	50	14	30	9	.1	-1	.1	1.6	112	.2	30	86	58	0	6	2	0	
GLASGOW	28	13	38	1	20	13	.1	0	.1	.5	93	.2	67	95	76	0	7	2	0	
GREAT FALLS	38	20	51	11	29	10	.1	-1	.1	1.5	106	.2	24	83	52	0	7	2	0	
HAVRE	32	17	40	7	25	13	T	-1	T	1.9	212	T	10	94	73	0	7	0	0	
HELENA	35	16	42	8	25	8	T	-1	T	.8	72	.3	63	89	52	0	7	1	0	
KALISPELL	33	22	36	12	28	9	T	-4	T	3.0	113	.7	68	92	64	0	7	0	0	
MILES CITY	30	16	47	2	23	9	.1	-1	.1	1.4	142	.1	26	91	71	0	7	1	0	
MISSOULA	35	24	39	14	30	9	.1	-2	.1	1.4	64	.7	79	93	64	0	7	1	0	
NE GRAND ISLAND	43	22	61	9	33	12	.4	.2	.3	.8	78	.4	116	89	55	0	7	2	0	
LINCOLN	46	24	62	14	35	16	.5	.3	.3	1.1	103	.5	123	92	52	0	7	2	0	
NORFOLK	41	21	59	6	31	14	.6	.5	.6	1.4	145	.6	194	90	55	0	7	1	1	
NORTH PLATTE	46	16	63	6	31	10	.3	.2	.2	.6	88	.3	113	93	43	0	7	2	0	
OMAHA	44	28	57	17	36	16	.6	.5	.6	1.1	93	.6	132	83	55	0	5	2	1	
SCOTTSSBLUFF	43	20	58	14	32	8	.6	.5	.5	1.2	155	.6	190	92	46	0	7	2	0	
VALENTINE	44	17	59	10	31	13	T	-1	T	.3	65	T	0	86	46	0	7	0	0	
NV ELY	35	12	42	-5	23	-1	.2	.1	.1	.4	36	.4	87	89	55	0	7	3	0	
LAS VEGAS	52	36	60	32	44	0	1.2	1.1	.8	1.2	197	1.2	381	88	47	0	1	4	1	
RENO	39	22	45	9	30	-2	.4	.1	.1	.4	22	.4	54	94	62	0	7	4	0	
WINNEMUCCA	40	23	42	6	32	2	.2	0	.2	.5	36	.4	71	90	58	0	5	1	0	
NH CONCORD	37	17	57	6	27	7	.1	-5	.1	1.1	20	.2	9	84	45	0	6	2	0	
NJ ATLANTIC CITY	53	31	67	16	42	10	.1	-7	.1	2.7	45	1.0	46	89	42	0	5	1	0	
NM ALBUQUERQUE	46	25	57	20	35	0	.2	.1	.1	.5	69	.2	88	89	40	0	7	3	0	
CLOVIS	50	25	65	14	38	1	1.0	.9	.9	1.5	170	1.0	323	84	42	0	7	2	1	
ROSWELL	57	28	71	21	42	3	.5	.4	.5	.6	92	.5	200	75	31	0	7	2	0	
NY ALBANY	41	24	55	12	33	12	.1	-4	.1	1.1	24	.3	20	86	53	0	4	4	0	
BINGHAMTON	40	26	53	17	33	12	.6	.1	.4	2.4	53	.8	47	91	61	0	6	5	0	
BUFFALO	43	29	55	16	36	12	1.1	.4	.7	4.4	81	2.1	103	92	63	0	4	5	1	
NEW YORK	48	36	64	26	42	10	.6	-1	.4	2.3	41	1.6	76	85	51	0	3	3	0	
ROCHESTER	44	28	56	21	36	13	.5	-1	.4	2.4	59	.9	57	91	62	0	5	4	0	
SYRACUSE	44	26	58	16	35	12	.3	-3	.2	3.0	60	.8	48	90	57	0	4	6	0	
NC ASHEVILLE	59	36	68	24	48	11	.8	.1	.8	5.3	101	2.0	97	94	50	0	3	2	1	
CHARLOTTE	62	42	69	29	52	12	1.1	.2	1.0	6.1	104	2.4	99	85	46	0	1	2	1	
GREENSBORO	60	39	68	23	50	12	.4	-4	.4	5.2	93	1.7	74	90	48	0	1	2	0	
HATTERAS	63	44	70	27	54	9	T	-1.1	T	8.2	109	1.8	56	99	56	0	1	1	0	
NEW BERN	67	40	74	23	53	9	0	-9	0	7.7	123	1.6	63	95	42	0	1	0	0	
RALEIGH	63	41	73	22	52	12	T	-8	T	4.1	75	1.0	45	86	43	0	1	1	0	
WILMINGTON	69	41	75	25	55	9	T	-8	T	8.5	147	1.4	61	97	48	0	1	1	0	
ND BISMARCK	29	10	42	-6	20	14	.3	.1	.2	.6	70	.3	81	95	74	0	7	2	0	
FARGO	29	16	38	5	23	19	T	-1	T	.3	26	T	0	90	71	0	7	0	0	
GRAND FORKS	26	13	30	4	20	18	T	-2	T	.3	28	.1	19	91	72	0	7	1	0	
WILLISTON	31	16	36	7	23	17	.1	-1	.1	.5	65	.1	39	93	68	0	7	1	0	
OH AKRON-CANTON	45	31	56	15	38	13	.6	.1	.6	3.3	75	1.3	77	95	68	0	4	2	1	
CINCINNATI	55	39	64	27	47	18	1.6	.9	.6	3.7	74	1.8	86	88	59	0	3	4	1	
CLEVELAND	47	32	57	20	40	14	.8	.2	.5	3.3	75	1.6	95	91	65	0	4	4	1	
COLUMBUS	50	33	58	22	41	14	1.3	.7	.8	3.4	77	1.6	86	96	68	0	3	5	1	

Weather Data for the Week Ending January 20, 1990

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	50	35	59	25	43	16	1.4	.8	.9	3.5	84	1.7	98	93	68	0	4	4	1
TOLEDO	45	30	57	19	38	14	1.2	.8	.8	3.2	80	1.9	140	94	70	0	4	3	1
YOUNGSTOWN	46	32	57	17	39	15	.9	.3	.4	2.9	64	1.4	80	95	68	0	4	3	0
OK OKLAHOMA CITY	58	41	69	31	50	14	1.9	1.6	.9	2.2	121	1.9	294	86	57	0	1	2	2
TULSA	59	43	70	34	51	16	2.5	2.2	1.9	3.1	117	2.9	324	89	56	0	0	3	2
OR ASTORIA	50	34	51	28	42	1	.2	-2.2	.2	17.3	92	9.9	138	92	64	0	3	2	0
BURNS	39	17	43	4	28	1	T	-3	T	.4	13	.3	26	97	57	0	4	2	0
MEDFORD	49	30	54	20	40	2	.2	-6	.1	3.1	53	2.4	103	95	54	0	7	1	0
PENDLETON	38	30	43	25	34	2	.1	-3	.1	.8	28	.6	49	93	73	0	4	2	0
PORTLAND	49	34	51	26	41	3	.2	-1.2	.1	7.6	28	4.6	110	93	65	0	3	2	0
SALEM	48	31	50	22	39	0	.2	-1.5	.1	8.7	73	4.7	99	99	67	0	4	3	0
PA ALLENTOWN	46	29	61	22	38	11	.7	-1	.5	2.6	44	1.3	60	85	51	0	6	2	1
ERIE	45	33	57	22	39	15	.9	.3	.6	4.8	99	1.6	96	90	64	0	4	2	1
HARRISBURG	50	31	66	22	41	11	.5	-2	.3	2.2	42	.9	46	89	50	0	6	4	0
PHILADELPHIA	50	32	64	20	41	10	.7	0	.5	3.0	54	1.8	85	91	50	0	4	2	1
PITTSBURGH	48	32	63	17	40	13	1.3	.6	.8	4.1	92	1.7	90	92	59	0	5	5	1
SCRANTON	45	28	60	22	37	11	.5	0	.3	1.6	40	.7	45	88	53	0	5	4	0
RI PROVIDENCE	44	27	61	21	36	7	.5	-4	.4	2.9	41	1.3	47	84	41	0	6	2	0
SC CHARLESTON	71	44	76	30	57	10	T	-7	T	8.5	163	3.8	178	96	48	0	1	0	0
COLUMBIA	69	40	77	25	55	10	T	-1.0	T	6.7	107	1.4	51	97	48	0	2	0	0
FLORENCE	68	42	75	27	55	10	0	-8	0	5.8	110	1.5	64	95	44	0	1	0	0
GREENVILLE	62	41	70	27	51	10	1.1	.2	1.1	7.0	103	2.3	82	87	50	0	1	2	1
SD ABERDEEN	33	16	47	8	24	17	.1	-1	0	.2	25	.1	16	97	64	0	7	2	0
HURON	37	17	50	12	27	17	T	-1	T	.2	27	T	0	90	58	0	7	0	0
RAPID CITY	38	20	59	11	29	9	.2	-1	.1	1.0	151	.2	79	93	80	0	7	2	0
SIoux FALLS	37	18	51	15	28	16	T	-1	T	.3	27	T	13	91	59	0	7	1	0
TN CHATTANOOGA	63	45	71	26	54	15	1.9	.8	1.6	8.4	98	4.7	137	93	53	0	1	3	1
KNOXVILLE	61	41	71	22	51	13	1.8	.7	1.1	6.4	84	3.7	120	88	51	0	1	3	2
MEMPHIS	64	47	71	35	55	16	1.2	-1	.8	4.2	53	2.1	68	92	67	0	0	4	1
NASHVILLE	64	44	72	28	54	17	1.0	0	.6	3.7	49	1.7	57	87	56	0	1	4	1
TX ABILENE	65	46	76	36	56	12	1.9	1.7	.8	2.2	143	1.9	308	88	41	0	0	4	3
AMARILLO	52	30	70	18	41	6	1.2	1.1	.9	1.7	213	1.2	394	76	40	0	5	2	1
AUSTIN	72	60	77	52	66	17	.4	0	.3	.9	30	.8	77	94	59	0	0	4	0
BEAUMONT	73	58	78	45	65	13	.8	-1	.4	8.2	109	5.0	189	98	68	0	0	5	0
BROWNSVILLE	81	65	85	56	73	13	T	-3	T	1.9	104	.2	27	96	60	0	0	2	0
CORPUS CHRISTI	77	63	83	53	70	15	.1	-3	0	1.9	84	.4	35	97	65	0	0	3	0
DEL RIO	70	52	76	37	61	10	.1	0	.1	.9	101	.6	184	80	44	0	0	1	0
EL PASO	60	30	68	23	45	0	.2	-1	.2	.4	67	.2	100	76	29	0	4	1	0
FORT WORTH	66	50	75	40	58	14	3.8	3.4	2.0	4.3	153	4.0	365	94	65	0	0	4	2
GALVESTON	66	57	70	51	61	8	.2	-4	.1	2.4	43	1.9	96	99	83	0	0	3	0
HOUSTON	72	58	76	46	65	13	1.4	.6	1.1	3.8	63	3.0	134	94	67	0	0	5	1
LUBBOCK	58	33	71	26	45	7	.4	-3	.3	.7	113	.4	150	83	35	0	5	3	0
MIDLAND	64	35	74	26	50	6	.3	-2	.3	.4	63	.3	117	91	30	0	3	2	0
SAN ANGELO	68	46	76	34	57	12	1.6	1.5	1.5	1.8	178	1.6	408	86	35	0	0	2	1
SAN ANTONIO	72	59	77	48	66	15	.3	0	.2	1.3	56	.9	97	91	61	0	0	4	0
VICTORIA	73	60	77	48	67	15	.3	-1	.3	2.6	77	1.4	120	96	70	0	0	4	0
WACO	70	54	78	43	62	16	1.8	1.4	1.2	2.3	78	1.8	168	95	64	0	0	5	1
WICHITA FALLS	61	42	74	32	51	11	2.3	2.1	.9	2.6	144	2.3	383	91	56	0	1	4	3
UT CEDAR CITY	38	18	42	7	28	-2	.7	.5	.5	1.0	92	1.0	246	100	69	0	7	4	1
SALT LAKE CITY	40	26	45	19	33	5	.1	-2	.1	.6	25	.4	49	92	61	0	6	3	0
VT BURLINGTON	36	18	52	1	27	11	.4	0	.2	1.8	50	.5	44	88	55	0	7	5	0
VA NORFOLK	62	38	73	22	50	10	T	-8	T	5.9	106	2.0	84	86	45	0	1	1	0
RICHMOND	61	37	72	20	49	13	T	-7	T	3.8	70	1.2	57	89	39	0	1	2	0
ROANOKE	59	37	71	23	48	13	.1	-5	.1	3.7	77	1.1	59	83	42	0	1	2	0
WA QUILLAYUTE	48	36	51	28	42	4	.2	-3.0	.2	17.1	63	8.3	86	96	69	0	2	2	0
SEATTLE-TACOMA	48	35	49	26	42	3	.1	-1.3	.1	10.8	104	6.1	150	98	68	0	3	3	0
SPOKANE	36	29	42	23	32	7	.2	-3	.2	2.8	67	1.8	109	99	76	0	5	2	0
YAKIMA	40	27	47	18	33	5	T	-3	T	1.4	62	1.1	121	93	62	0	7	0	0
WV BECKLEY	53	35	61	17	44	14	.3	-5	.2	3.5	66	1.1	52	85	52	0	2	4	0
CHARLESTON	57	36	65	19	46	14	.4	-4	.3	3.3	60	1.5	64	92	54	0	1	5	0
HUNTINGTON	56	38	64	24	47	14	1.1	.3	.7	3.8	73	1.5	73	89	53	0	1	5	1
PARKERSBURG	53	36	61	22	44	13	.9	.2	.7	2.8	60	1.2	61	89	54	0	2	6	1
WI GREEN BAY	37	22	43	14	29	16	.1	-1	.1	.7	34	.2	24	90	61	0	6	3	0
LACROSSE	39	21	46	15	30	16	.2	0	.2	.8	45	.3	44	93	53	0	7	1	0
MADISON	41	23	50	17	32	17	.4	-1	.2	1.4	64	1.2	156	95	59	0	6	3	0
MILWAUKEE	43	27	51	20	35	17	.5	-1	.3	1.8	58	1.3	118	91	59	0	6	3	0
WAUSAU	34	17	41	8	26	15	.1	-1	.1	.6	30	.2	27	91	62	0	7	2	0
WY CASPER	40	14	50	5	27	5	T	-1	T	.5	59	.2	48	93	47	0	7	1	0
CHEYENNE	37	20	50	16	29	3	.3	.2	.3	1.0	168	.3	125	96	55	0	7	4	0
LANDER	35	18	47	8	27	7	T	-1	T	.4	49	T	6	88	46	0	7	1	0
SHERIDAN	38	20	47	12	29	10	T	-2	T	2.6	215	.2	38	88	51	0	7	0	0

## National Agricultural Summary

January 14-20, 1990

**HIGHLIGHTS:** Above-normal temperatures again prevailed across most of the Nation. Precipitation fell in the Great Plains from Texas to central Nebraska, providing much needed snow cover and moisture to the winter wheat crop. The moderate temperatures and moisture were beneficial to livestock producers as they helped pastures. Wheat producers and fruit growers were concerned that the warm weather will start growth too soon, leaving these crops more vulnerable to a freeze hard later.

**SMALL GRAIN:** Precipitation fell in the Plains States from Texas to central Nebraska, providing much needed moisture and snow cover to much of the winter wheat crop. The Texas small grains were beginning to improve with milder January temperatures and recent moisture. Heavy, wet snow over the northern High Plains was the first moisture of the season for many stressed dryland fields. Irrigation was steady over other fields. Increased greening and slow growth was occurring in the Blacklands and central part of the State. In Oklahoma, the welcomed precipitation ended a lengthy dry period. The recent warmth broke dormancy and wheat pastures were greening. Snow covered the western and southwestern districts of Kansas and will provide protection against possible freeze damage. The recent moisture was beneficial to the Missouri wheat crop, but farmers were concerned that the warm weather will start growth too soon, leaving crops more vulnerable to a late hard freeze. Winter wheat in Montana was in mostly good to fair condition. Most of the poorer crop was in the northeast part of the State. Snow cover was mostly poor to fair with the best protection in the central part of the State. To date, most of the crop is free of wind damage. The Oregon winter wheat crop was in fair to good condition, with the crop growing in most areas. Russian wheat aphid populations were decreasing in most fields in the Columbia Basin, but there were enough exceptions to be of concern. Other fall grains looked good in the Willamette Valley. In the eastern Corn Belt, there was no snow cover; however, there has been no stress with the mild winter weather.

**VEGETABLES:** Warm temperatures and very limited rainfall prevailed over Florida's major vegetable producing areas. Planting of spring crops was very active. Available volume of radishes and escarole was increasing. Reduced supplies of tomatoes, cabbage, peppers, celery, squash, and specialty type lettuce were available. The first west-central watermelons were planted. California artichokes were in moderate supply with variable quality. The central-coast broccoli was in light supply with variable quality, while the desert broccoli was in heavy supply. Cauliflower and celery were in moderate supplies with variable quality in the Santa Maria area. The quality of the desert lettuce was improving. Growers thinned and applied fungicides to iceberg lettuce fields in the Huron area. Processing tomato planting was curtailed due to rain in the San Joaquin Valley. Harvest operations of cabbage and carrots were slowly increasing in Texas'

Rio Grande Valley. Planting operations were increasing. In the San Antonio-Winter Garden area, the spinach harvest was resuming slowly. The carrot harvest was very slow to resume because tops were still weak.

**FRUIT AND NUTS:** The Florida citrus areas received very little rain; temperatures were warm and all areas were irrigating. New growth with pinhead bloom buds were evident. Salvage harvesting of early and midseason oranges was very active. Fresh grapefruit shipments were limited. The honey tangerine harvest was starting. Caretakers were unbanking and unwrapping young trees due to warm weather. In California, pruning vineyards, tying vines, and controlling weeds were slowed by precipitation. Pruning, spraying herbicides, and applying fertilizer progressed in orchards. Naval orange, lemon, grapefruit, and avocado harvests were slowed. Peaches and table grapes were budding in Riverside County. The citrus harvest continued in west and central Arizona. Apple movement slowed and pecan shipments continued. There was not much activity in Texas citrus groves as growers waited to see the extent of tree damage following the freeze. Fruit growers continued pruning operations in many States. Some growers were concerned that fruit trees may become susceptible to freeze damage if warm temperatures continue.

**OTHER FIELD CROPS:** Sugarcane harvest and processing were active in Florida. Continued dry and mild weather early in the week provided excellent conditions for fieldwork in Alabama. A few fields of Irish potatoes were planted in the extreme south. Some early winter forage was greenchopped in California. Late-seeded canola in Kentucky was probably lost to the December cold. Tobacco bed preparation was nearly complete in Georgia and in good condition. Preparing and seeding tobacco beds were active in North Carolina.

**PASTURES AND LIVESTOCK:** Livestock was responding favorably to above-normal temperatures. Texas ranges and pastures were showing some signs of improvement as mild weather and moisture returned most areas. Oklahoma wheat pastures were greening. Heavier feeding of livestock was necessary in areas of the central Plains with snow cover. Lambing and calving activity was increasing in Michigan and Idaho. Florida pastures were mostly fair to good in the Panhandle and northern peninsula and fair in the southern areas.

## 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:** Rain 1.00 to 3.50 in.; near 5.00 in. isolated areas. Temperatures 9 to 15° above normal.

Continued dry, mild weather early in week provided excellent conditions for fieldwork, livestock management. Few fields irish potatoes, vegetables planted in extreme south. Winter wheat, livestock, pastures mostly good. Primary activities: General care of livestock, poultry, catfish; machinery, equipment repair; land preparation, as weather permitted.

**ARIZONA:** Cold upper level storm system brought snow, rain, low temperatures north mountains, central early in period; clearing, colder 16th; additional rain, snow statewide 17th, 18th. Rainfall mostly 0.50 in. to 1.00 in.; temperatures 6° below normal to 3° above normal.

Small grains seeded 100%, 96% 1989, 89% avg.; stands established 94%, 87% 1989, 58% avg.; good; weather slowed fieldwork. Alfalfa mostly good except southeast fair; grazing continued; herbicides applied west. Cotton field preparation began. Citrus harvests continued west, central; fall, winter lettuce harvested west; mixed vegetables harvested west, central. Apple movement slowed; pecan shipments continued.

**ARKANSAS:** Warm, wet week. Well above normal rainfall latter part of week. Extremes 24°; 74°. Rainfall 1.28 to 6.67 in.

Rains replenished moisture shortage. Wheat crop good. Pastures improving. Livestock good, supplemental feeding continued.

**CALIFORNIA:** Series of fronts brought rain with snow at higher elevations over the entire State during first half of week. Snow fell as low as about 1500 feet in central Sierra Nevada. High pressure built over the State mid week, brought warmer temperatures, dry conditions with fog redeveloping in the valleys.

General rains early interrupted field activities. Seeding winter grains. Seeded fields tillering. Russian wheat aphid found Monterey County. Some early winter forage green chopped. Fertilization, weed control active. Sheep grazing alfalfa fields. Some new alfalfa fields seeded. Land preparation spring crops active. Rain delayed desert corn harvest. Vineyard pruning, tying vines, weed control slowed by precipitation. Pruning, spraying herbicide, fertilizer applications progressed, orchards. Navel orange, lemons, grapefruit, avocado harvests slowed. Peaches, table grapes budding, Riverside County. Artichokes moderate supply, variable quality. Broccoli light supply, variable quality, central coast, desert broccoli heavy supply. Cauliflower, celery moderate supplies, variable quality, Santa Maria. Quality desert lettuce improving. Growers thinned, applied fungicides iceberg lettuce fields, Huron area. Processing tomato planting curtailed due to rain, San Joaquin Valley. Livestock good condition, statewide. Range, pasture conditions winter supply levels improved significantly, Sacramento, San Joaquin Valley areas due to continued rainfall. Feeding areas northern, southern counties showed slight improvement from additional precipitation. Supplemental feeding continued.

**COLORADO:** On 15th, western areas received 0.20 to 0.40 in. precipitation at lower elevations, 1.00 to 6.00 in. of new snow in the mountains. On 19th new system moved up from southwest area through the northeast. Storm intensified as it moved, leaving 2.00 to 5.00 in new snow in the northern mountains, 6.00 to 10.0 in. central, southern areas, 12.0 in. or more in northeastern areas. Actual moisture 0.40 to 1.26 in. of water. Temperatures 6 to 8° above normal.

**FLORIDA:** Unseasonably warm, generally dry. Temperatures 10 to 15° above normal northwest; 8 to 12° above normal elsewhere. Maximum readings of 80° or above occurred nearly statewide; a few upper 80s across Peninsula. Lowest temperatures for week mostly in 40s north, 50s elsewhere, except 30s Panhandle, 60s lower southeast coast. Significant rain confined to Panhandle; 0.50 to 1.00 in. common. Elsewhere, little if any rain.

Soil moisture Panhandle adequate to surplus; Peninsula short to adequate. Lack of rainfall helped Panhandle dry out. Sugarcane harvest, processing active. Panhandle, northern Peninsula pastures mostly fair to good; central Peninsula mainly poor to fair; southern Peninsula fair. Throughout State, few localities severe to very poor. Cattle fair to good. Citrus areas very little rain, warm temperatures, irrigating all areas. New growth with pinhead bloom buds. Salvage harvesting early, mid season oranges very active. Limited fresh grapefruit shipments. Honey tangerine harvest starting, caretakers unbanking, unwrapping young trees due to warm weather. Warm temperatures, very limited rainfall prevailed over major vegetable producing areas. Planting spring crops very active. Available volume increasing radishes, escarole. Also available reduced supplies tomatoes, cabbage, peppers, celery, squash, specialty type lettuce. First west central watermelons planted.

**GEORGIA:** Wet north, much less rain in central, south. North 1.00 to 2.50 in., southwest under 1.25 in. Southeast under 0.50 in. Temperatures 10 to 15° above normal. Warmest highs 70s north, upper 70s central, low 80s south. Coldest lows 20, 21st, lows 20s north, mid 30s central, 40° extreme south, southeast.

Soil moisture surplus except adequate southwest. Land preparation slow. Tobacco bed preparation nearly complete, condition good. Small grains fair to good, warm weather increasing growth. Pastures poor to good. Cattle, hogs good.

**HAWAII:** Gusty winds, heavy showers persisted over all islands most of week. Skies mostly cloudy with continuous shower activity. Winds variable 5 to 30 mph with temperatures low 60s to low 80s. Rainfall 1.00 to 19.10 in.

Days suitable for farm work 7.0. Papaya production remains low. Pineapple harvesting continues. Wet conditions many areas hampering field, harvesting activities.

**IDAHO:** Temperatures 1 to 14° above normal. Precipitation light, spotty. Most areas below normal except for southern, eastern localities.

Cooler temperatures kept most farmers indoors, where they planned for upcoming crop season, repaired machinery, prepared taxes, attended meetings. Some calving, lambing underway. Other

activities included marketing, shipping farm products, moving cattle to lower elevation pastures, general livestock care. Livestock good. Hay, roughage supplies adequate.

**ILLINOIS:** Temperatures 14 to 18° above normal. Precipitation generally less than 1.00 in. north, more than 1.50 in. south.

Soil moisture 78% short, 22% adequate. Winter wheat 1% excellent, 68% good, 27% fair, 4% poor. Livestock good.

**INDIANA:** Temperatures about 15° above normal. Lows mostly in the 30s, highs mid 40s to mid 50s. Precipitation 0.50 to 2.00 in. Soils unfrozen at least 4.00 in. deep.

Rain limited field activities. Other activities: Spreading manure, hauling grain, cleaning fence rows, processing tobacco, moving hay, machinery repair, chiseling, purchasing supplies, attending meetings, tax preparation, care of livestock. Hay supplies adequate. Livestock good. Warm week.

**IOWA:** Temperatures 13 to 19° above normal. Extremes 4°; 64°. Precipitation trace to 1.11 in.; average 0.40 in. Wettest week in past ten weeks.

Livestock good. Grain movement mostly light. Moderate utilization of stalk fields. Farmers planning for spring planting.

**KANSAS:** Temperatures continue above normal. Range 5° above northwest to 15° above northeast, east central. Precipitation received across State. Snow in west, southwest areas. Rain over remainder State.

Snowcover western, southwestern areas will provide wheat with protection against possible freeze damage. Other areas received rain improving soil moisture. Heavier feeding livestock necessary in areas snowcovered.

**KENTUCKY:** Warm, wet weather. Temperatures mid 50s to 60s, cooler readings 19th to 21st. Temperatures 14 to 18° above normal. Rainfall 2.00 to 2.50 in. west, central, 1.00 southeast. Most rain 18th through 20th.

Soil moisture ample, flooding low areas, river bottoms. Water erosion some fields. Wheat has partially greened again. Late seeded canola probably lost to December cold. Burley markets beginning to close, rainy weather end of week beneficial for late burley stripping. Barnyards sloppy with rain, mild temperatures. Feed supplies ample.

**LOUISIANA:** Temperatures across the State generally at least 10° above normal. Extremes 21°; 80°. Rainfall 0.70 to 6.71 in.

Main activities: Crawfishing; livestock care; routine chores.

**MARYLAND & DELAWARE:** **MARYLAND:** Precipitation 0.09 in. Temperature 43°, normal 33°. Extremes 10°; 71°.

**DELAWARE:** Precipitation 0.12 in. Temperature 45°, normal 34°. Extremes 21°; 67°.

**MICHIGAN:** Temperatures 9 to 15° above normal. Extremes -1°; 57°. Precipitation 0.04 to 1.23 in. across State. Continued mild temperatures left only minimal snowcover in southern half of State.

Major activities: Marketing grain, hay, caring for livestock, pruning orchards, routine winter maintenance. Mild weather especially good for livestock. Feed supplies remain abundant. Livestock excellent condition. Lambing, calving activity increasing.

**MINNESOTA:** Temperatures 14 to 18° above normal. Extremes 1°; 49°. Precipitation none to 0.10 in. greatest weekly total 0.32 in.

**MISSISSIPPI:** Very warm, very wet. Temperatures 13° above normal. Extremes 17°; 78°. Rainfall 2.01 in. above normal, maximum weekly 7.56 in.

Days suitable for fieldwork 0.3. Soil moisture excessive. Wheat fair to good. Pastures fair, livestock good. Hay supply adequate. Feed grains adequate. Some flooding expected in bottomland fields.

**MISSOURI:** Temperatures 15° above normal south to 22° above normal north. Precipitation 0.50 to 1.00 in. north, 2.00 to 4.00 in. south.

Recent moisture of benefit to wheat, farmers concerned warm weather will start growth too soon, leaving crops more vulnerable to later hard freeze. Range feed quite limited, hay generally adequate. Livestock water supply southern counties improved by rain.

**MONTANA:** Temperatures above normal statewide, north central much above normal. Precipitation accumulated all areas except west, north central. Amounts mostly less than 0.25 in.

Winter wheat 1% very poor, 6% poor, 29% fair, 61% good, 3% excellent. Most of the poorer condition readings are in the northeast part of the State. Snowcover protection 42% poor, 36% fair, 16% good, 6% excellent. Snowcover protection is the best in the central part of State, is generally lacking in the eastern sections. Wind damage to winter wheat to date is 69% none, 23% light, 7% moderate, 1% heavy. About 98% of all cattle and sheep are receiving supplemental feed. Grazing is 44% open, 32% difficult, 24% closed on winter pasture, crop residue.

**NEBRASKA:** Dry until a strong snow storm crossed the State 19th, 20th. Temperatures 7 to 15° above normals. Precipitation a quarter to an inch mostly as snow. Extremes -1°; 62°. Heaviest snowfall occurred in the Panhandle, south central, southwest areas.

**NEVADA:** Return to winter after spring like temperatures earlier. Week began with snow across northern two thirds. By mid week more snow spread into central, northern areas. Clear skies returned end of period with bitter cold temperatures. Coldest reading 24° below zero extreme north. Fog common most low areas.

Low night temperatures hard on newborn calves, lambs. Lack snowcover plus night low temperatures not favorable fall seeded grains. Chopping ice for cattle becoming more widespread.

**NEW ENGLAND:** Precipitation (rainfall and water equivalent of snow) 0.50 to 0.75 in. coastal Connecticut, 0.25 to 0.50 in. remainder. Temperatures low teens near Canadian border to mid 30s south coast. Temperatures near normal.

Major farm activities: Tending livestock, machinery maintenance, moving crops from storage.

**NEW JERSEY:** Temperatures much above normal; 36° north, 40° south, 43° coastal. Extremes 18°; 63°. Precipitation near normal north, below normal south, coastal; 0.71 in. north, 0.49 in. south, 0.38 in. coastal. Heaviest 24 hour total 0.65 in. on 20th, 21st. Heaviest 24 hour snowfall 3.00 in. on 20th, 21st. Depth of snow on ground up to 1.00 in. north, none central, south.

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

**NEW MEXICO:** Winter storm hit State 18th, 20th. Heaviest amounts of snow fell over the northern mountains, northwest, with 2 to 3 feet of snow falling over some of the higher elevations.

**NEW YORK:** Cold, dry with a few snow flurries falling. Warming trend followed. Record high temperatures central, southwestern areas as readings climbed into the upper 50s to 60s. Colder air returned late week setting off heavy rains in the western, northern areas. Runoff from the rains, snow melt started ice moving on many streams, caused some local ice jam flooding. Temperatures tumbled to the 20s, 30s by 19th. Snow followed with 4.00 to 5.00 in. falling in the southern tier, Catskills by the 20th, with more to come.

Major activities: Caring for livestock, grading, packing fruit, attending meetings, trade shows, repair, maintenance work.

**NORTH CAROLINA:** Temperatures 4 to 9° above normal across State. Extremes 18°; 75°. Precipitation none to 1.09 in.

Days suitable for fieldwork 4.1. Soil moisture 85% adequate, 15% surplus. Pasture 2% very poor, 18% poor, 51% fair, 29% good. Livestock feed from pasture 31%. Crop condition: Wheat, 1% very poor, 3% poor, 48% fair, 48% good; oats 3% poor, 49% fair, 48% good; barley 47% fair, 53% good; rye 40% fair, 60% good; hay, roughage supplies 5% short, 89% adequate, 6% surplus. Feed grain supplies 5% short, 94% adequate, 1% surplus. Activities: Preparing, seeding tobacco beds, tending livestock, cutting wood, general farm maintenance.

**NORTH DAKOTA:** Temperatures 11° above normal southwest to 19° above normal north central. Precipitation 0.01 in. north central, northeast to 0.23 in. south central.

Soil moisture below normal. Livestock mostly good, receiving supplemental forages. Hay, roughage supplies mostly adequate.

**OHIO:** Highs mid 40s to mid 50s; average lows mid 30s. Temperatures 13 to 18° above normal. Precipitation 0.50 to 1.00 in. Soils thawed enough to absorb moisture. Soil temperatures mid to upper 30s at 4.00 in. depth.

No snowcover on winter wheat; no stress from mild winter weather. Some concerns that prolonged mild temperatures may make fruit crops susceptible to damage if harsh weather returns.

**OKLAHOMA:** Temperatures moderate. Much needed precipitation fell during week. Over 6.00 in. of snow received northwest. Rest of State ranged 0.50 to 2.00 in. rain.

Welcomed precipitation ended lengthy dry spell. Recent warmth broke dormancy, wheat pasture greening. Fruit trees may become susceptible to freeze damage if warm temperatures continue. Hay supplies remain ample. Cattle good, prices slightly lower than preceding week.

**OREGON:** Rain less than 0.60 in. at coast, 0.30 to 0.40 in. remainder of west. Less than 0.10 in. fell east of Cascades. Normal to slightly above normal temperatures occurred all areas. Extremes 4°; 62°.

Soil moisture short to adequate statewide. Winter wheat fair to good, growing most areas. Russian wheat aphid populations decreasing in most fields Columbia Basin; enough exceptions to be of concern. Other fall grains look good Willamette Valley. Filbert, fruit tree pruning continued. Wind, flood damage to berry trellises west. Ground mostly bare, frozen eastern range country. Livestock good to excellent. Range, pasture poor to excellent. Ranches not full feeding yet,

exception Klamath Basin where ranges are in poorest in State. Hay supplies mostly good. Calving, lambing underway Umatilla County.

**PENNSYLVANIA:** Unseasonably warm weather during mid week with most of precipitation at the beginning, end of the week. Temperature 39°, 13° above normal. Extremes 6°; 68°. Precipitation 0.88 in., 0.23 in. above normal.

Activities: Spreading manure, caring for livestock; maintaining machinery; fixing fences, cutting firewood.

**SOUTH CAROLINA:** Rainfall 2.00 in. northwest to less than 0.25 in. east. Temperatures 10 to 15° above normal.

**SOUTH DAKOTA:** Temperatures 8 to 17° above normal. Extremes -5°; 59°. Precipitation above normal northwest, north central and extreme southeast, light amounts rest of State. Maximum melted precipitation 0.68 in. Yearly precipitation above normal northwest, below normal elsewhere. Range 0.30 in. above normal to 0.78 in. below normal. Snowcover 2.00 to 6.00 in. northwest, north central, 2.00 to 10.0 in. extreme southeast, 5.00 in. Black Hills.

**TENNESSEE:** Warm, moist southerly air spread over State early week. Cold front crossed State 18th, followed by warm front 19th. Another cold front 20th crossed State as weak high pressure built over west 21st. Temperatures 15 to 20° above normal statewide. Mid week frontal systems brought widespread showers statewide. Many areas received over 1.50 in. rainfall.

Livestock responding favorably to very mild conditions. Conditions generally good for outdoor maintenance, improvements. Farmers took advantage of warm weather by catching up routine outdoor chores.

**TEXAS:** Weather unavailable.

**Crops:** Small grains beginning improvement with milder January temperatures, recent moisture. Heavy, wet snow northern High Plains first moisture of season many stressed dryland fields. Irrigation steady other fields. Increased greening, slow growth Blacklands, central. All areas grazing remained very light.

**Commercial Vegetables:** Rio Grande Valley harvest operations slowly increasing cabbage, carrots. Planting operations increasing. Not much activity citrus groves, as grove care companies, growers wait to see extent of tree damage following freeze. San Antonio Winter Garden spinach harvest slowly resuming. Carrot harvest very slow to resume because tops still weak. Land preparations High Plains slowed by wet weather late week. Peach producers continued pruning operations parts of State. Some dormant oils being applied.

**Range and Livestock:** Ranges, pastures showing some signs improvement, mild weather, moisture returned most areas. Small grains provide little grazing. Supplemental feeding active, increased High Plains with heavy snow. Some producers sold or placed some cattle in feedlots because lack of forage. Body conditions vary across State; most fair to good.

**UTAH:** Precipitation all reporting stations. Amounts moderate except light in southeast, Uinta Basin divisions. Maximum temperatures 5° above normal, minimums 10° above.

Very little snow in valleys, below normal snow pack in mountains. Farmers concerned about alfalfa survival because of warm open winter. Livestock stress minimal during moderate weather. Ranges in need of moisture.

**VIRGINIA:** Very warm period, temperatures 7 to 12° above normal. Extremes 14°; 74°. Light precipitation, less than 0.25 in. avg.

Days suitable for fieldwork 3.0. Topsoil 23% surplus, 77% adequate. Winter grains, grazing crops 2% excellent, 42% good, 56% fair. Forage from pastures, dairy cattle 5%, beef cattle 22%, sheep 20%. Soil sampling, plowing, livestock care.

**WASHINGTON:** Temperatures 2 to 11° above normal, east; 1 to 5° above normal, west. Precipitation none to 0.37 in., east; 0.14 to 0.47 in., west.

Days suitable for fieldwork 2.8. Soil moisture 33% short, 66% adequate, 1% surplus. Range, pasture 85% short, 15% adequate. Hay, other roughage 5% very short, 40% short, 55% adequate. Temperatures above normal across the State; precipitation amounts were light. Western counties, flood waters receded, farmers were assessing the damage. Livestock continue to do well with the milder temperatures, some cattle still remain on pasture. Activity in the west included pruning fruit trees, caneberries; feeding livestock; harvesting forced rhubarb. In the east, activities included feeding livestock; applying herbicides to alfalfa; fruit tree pruning. Winter wheat 1% poor, 29% fair, 70% good.

**WEST VIRGINIA:** Temperatures 45°, 13 to 18° above normal. Extremes 19°; 72°. Precipitation 0.69 in., extremes 0.43 in. north central, northwest.

Days suitable for fieldwork 2.4. Soil moisture 68% adequate, 32% surplus. Livestock good to fair; calving 6% complete, lambing 12% complete. Feed supplies adequate to surplus. Wheat good to fair. Barley fair to good. Farm activities: General farm maintenance, feeding livestock, calving, lambing.

**WISCONSIN:** Temperature 28°. Extremes -5°; 54°. Precipitation 0.10 to 0.40 in. Rain statewide 16th to 17th. Snow 1.00 to 7.00 in. south, central on 20th.

**WYOMING:** Temperatures above normal. Precipitation near normal.

Winter wheat fair to good. Livestock mostly good. Warmer weather reducing stress, feed requirements. Supplemental feeding underway most areas. Sheep producers preparing for early shearing, lambing. Farmers, ranchers busy planning for 1990.

## International Weather and Crop Summary

### HIGHLIGHTS

January 14-20, 1990

**WESTERN USSR** ... Early-week bitter cold in the east stresses winter grains. Continued unseasonably warm weather favors winter grain areas in the west and south, but leaves crops without a protective snow cover.

**NORTHWESTERN AFRICA** ... Minimal rain prevails over Moroccan winter grains in the vegetative stage. Showers continue over Algeria and Tunisia, falling mainly along coastal crop areas.

**EUROPE** ... Much warmer-than-normal weather covers northern and central crop areas. Beneficial dry weather continues in sections of the southwest.

**SOUTH ASIA** ... Drier, warmer weather increases growth of vegetative to heading wheat. Light rain covers Pakistan.

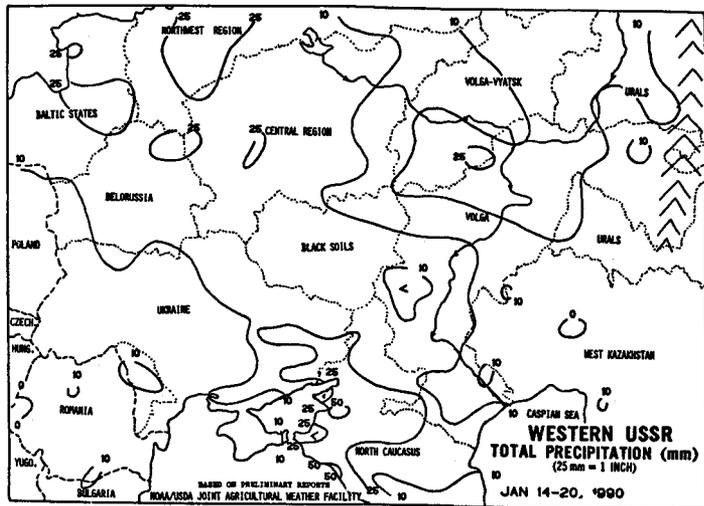
**EASTERN ASIA** ... Heavy rain falls across much of southeastern China.

**SOUTHEAST ASIA** ... Widespread showers continue over Indonesia and Malaysia. Drier weather covers the Philippines.

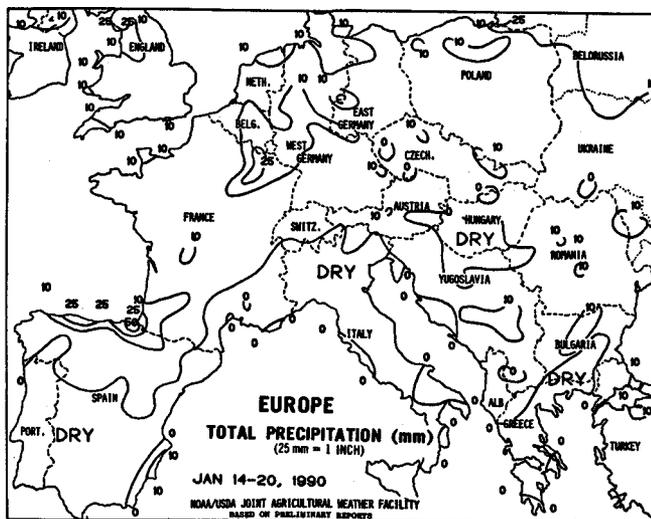
**SOUTH AFRICA** ... Highly variable rain falls over reproductive corn across the Maize Triangle.

**SOUTH AMERICA** ... Widespread rain favors summer crops in Argentina and southern Brazil.

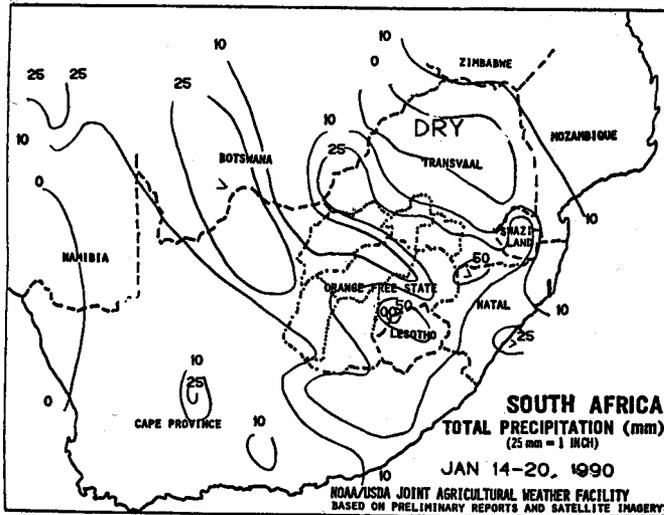
**AUSTRALIA** ... Rain benefits summer crops in southeastern Queensland.



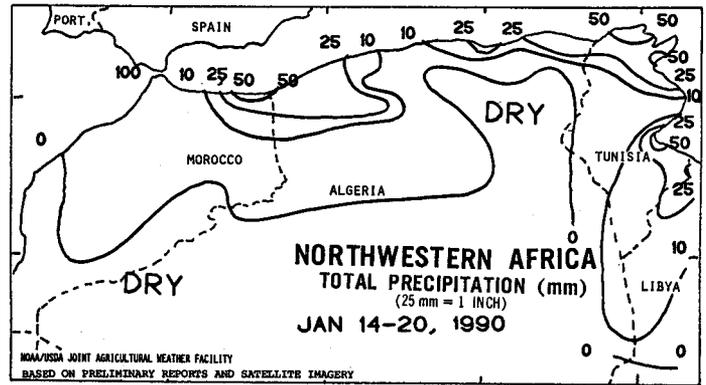
**WESTERN USSR** ... Bitter cold continued to cover winter grain areas in the Volga Vyatsk, the Central Region, Black Soils Region, and the Volga early in the week. Nighttime lows on January 13-15 ranged from -18 to -31 degrees Celsius (C), exceeding the threshold for winterkill in those areas without a protective snow cover. Although adequate snow cover provided protection in most areas, some damage to winter crops may have occurred, especially in the Black Soils Region where snow cover was shallow. On January 16, a rapid warming trend began over these areas and continued until week's end. In the Baltic States, Belorussia, and the Ukraine, the weather continued unseasonably warm. Weekly average temperatures ranging from 4 to 9 degrees C melted most of the snow cover, leaving winter grains vulnerable to potential extreme cold. Widespread precipitation covered the region with heaviest amounts (25-50mm), mostly rain, covering the eastern Ukraine and the western North Caucasus.



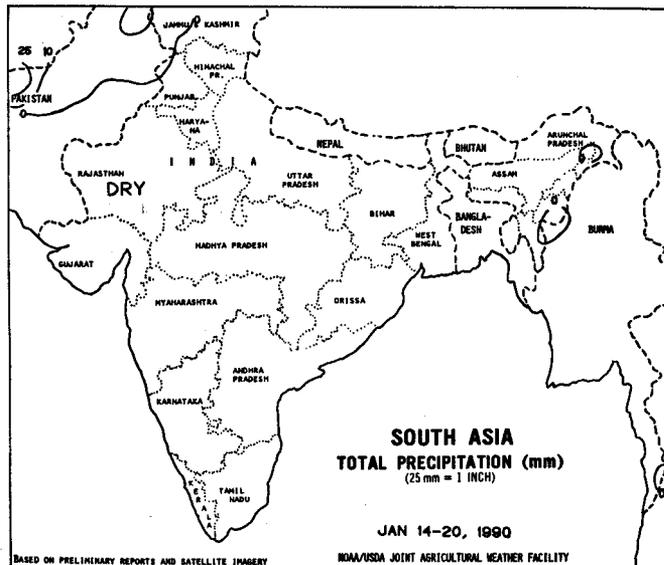
**EUROPE** ... An active storm track through Scandinavia brought mild maritime air and light to moderate rain (5-20mm with isolated amounts in excess of 20mm) to much of northern Europe. Unseasonably mild temperatures (3-9 degrees C above normal) covered northern and central crop areas, reducing protective snow cover in the northeast. In the south, beneficial dry weather continued in central and southern sections of the Iberian Peninsula, while scattered showers (5-40mm, with isolated rainfall in excess of 50mm) fell across northern and eastern coastal Spain and southwestern France. Southeastern France and northern Italy remained unfavorably dry.



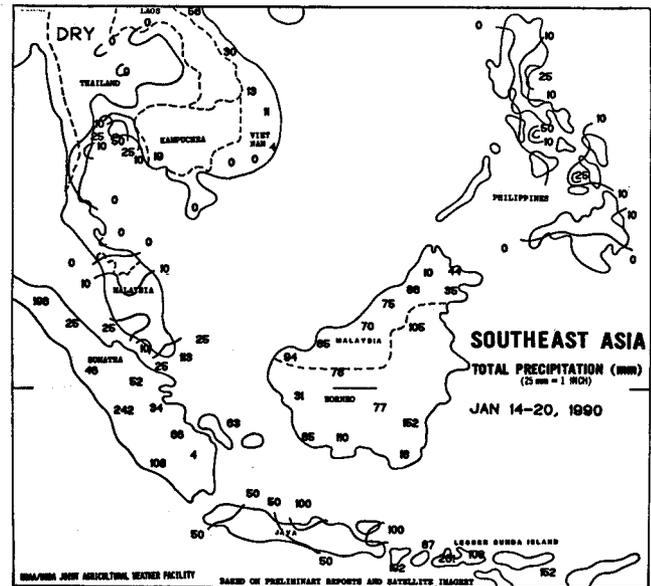
**SOUTH AFRICA** ... Drier, warmer weather returned to the northwestern Maize Triangle, where reproductive to filling crops have experienced limited moisture for much of the growing season. Weekly rainfall averaged less than 10mm over southwestern Transvaal as well as much of the central Orange Free State, but light to moderate showers (10-25mm or more) maintained generally favorable growing conditions over most other primary crop areas. A local heavy shower (100mm) over south-central Orange Free State likely caused local flooding. Temperatures averaged near to above normal across South Africa, with high temperatures in the mid thirties C occurring for brief periods in the western Maize Triangle.



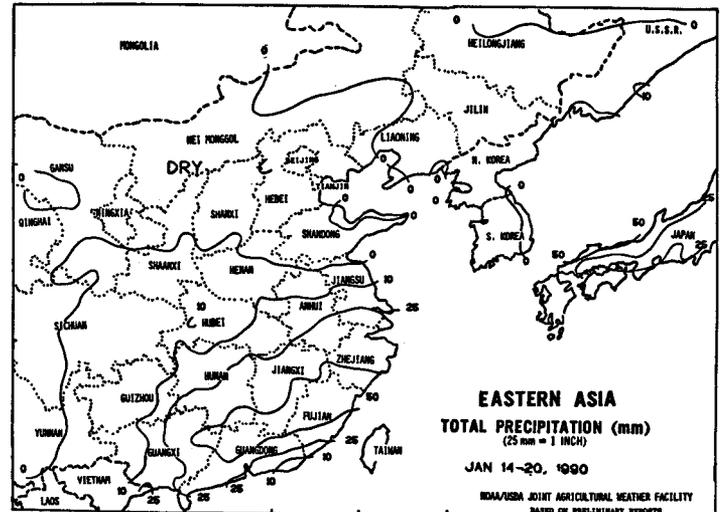
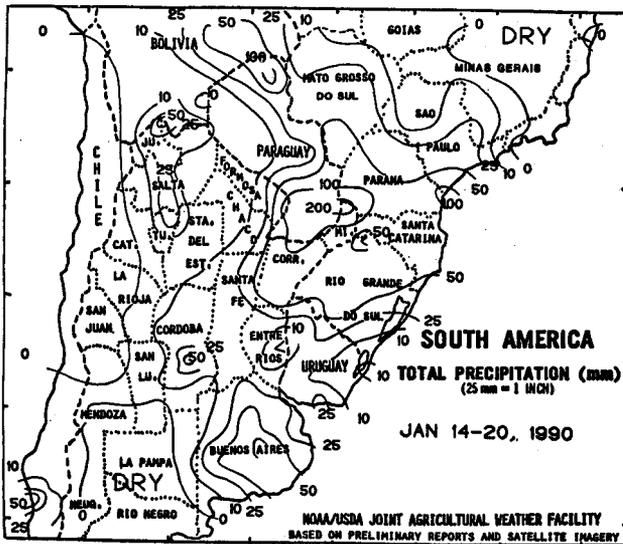
**NORTHWESTERN AFRICA** ... Widespread showers continued over winter grain areas in Algeria and Tunisia. Greatest amounts (25-50mm) fell along coastal locations, while further inland, rainfall amounts ranged from 5 to 18mm. The rain in these areas continued to increase moisture for winter grain emergence and early crop growth. In Morocco, minimal rain covered winter grains in the vegetative stage, and crops had to rely on adequate soil moisture reserves to meet crop-moisture demands.



**SOUTH ASIA** ... In contrast to last week's unseasonably cool weather, temperatures averaged near to above normal across India's northern wheat regions, increasing growth of vegetative crops. Temperatures were near to above normal elsewhere, averaging 1-3 degrees C above normal over central wheat areas. Winter wheat in central India is in or approaching the heading stage. Rainfall in South Asia was limited to Pakistan, where scattered, mostly light rain (1-11mm) fell.

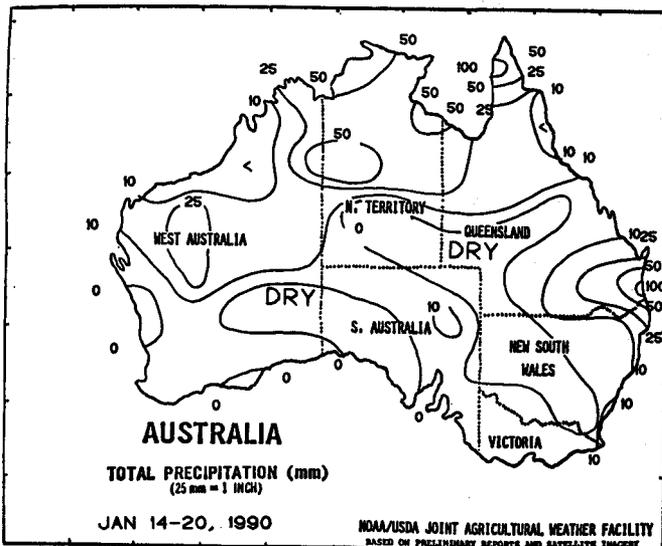


**SOUTHEAST ASIA** ... Widespread, moderate to heavy showers (25-50mm or more) continued across Malaysia and Indonesia, maintaining favorable conditions for immature rice. Heaviest rain (100-200mm or more) fell over western Sumatra and from eastern Java eastward, causing local flooding (data were received from Indonesia for the first time since late December). Further north, only scattered, light rain (1-11mm) fell over the Thai Peninsula, but locally heavy rain (27-53mm) covered rice areas near Bangkok, improving irrigation reserves for secondary crops. In the Philippines, moderate rain (25-50mm or more) was limited to southern and eastern Luzon and only local areas of the central islands. Minimal rain (1-15mm) dominated the east-central islands and Mindanao.



**SOUTH AMERICA** ... Locally heavy showers fell in southern Brazil and scattered portions of Argentina. In south-central Brazil, beneficial rain (42-66mm) favored soybeans in Rio Grande do Sul and southern Parana, where moisture was becoming limited. Widespread showers (10-41mm) fell in southwestern Mato Grosso do Sul, northern Parana, and eastern Sao Paulo. Rainfall diminished to less than 10mm further north. Moisture is adequate to abundant for soybeans. Locally inundating rain (100-200mm) soaked southern Paraguay, likely causing some flooding. In Argentina, showers covered most summer crop areas, with weekly rainfall averaging 10-17mm over most of Cordoba and Santa Fe. While an isolated heavier amount of 60mm was reported in southern Cordoba, widespread heavier rain (25-75mm or more) fell in all but extreme western Buenos Aires. Moisture is adequate for summer crops.

**EASTERN ASIA** ... Moderate to heavy rain (10-60mm, with scattered amounts in excess of 60mm) fell across much of southeastern China from Jiangsu southwestward to Guangxi, further increasing off-season soil moisture levels. It was the heaviest precipitation to fall in the lower Yangtze Valley since early fall. Light to moderate rain (5-20mm) fell across middle and upper sections of the Yangtze Valley. Elsewhere, mostly light snow and rain (less than 10mm) covered sections of Manchuria and the Korean Peninsula, while the North China Plain remained mostly dry. In Japan, heavy seasonal rain and snow (20-60mm, with scattered precipitation in excess of 60mm) fell across most crop areas. Mean weekly temperatures were below normal in the northeast and south, and normal to above normal elsewhere.



**AUSTRALIA** ... Moderate to heavy rain (10-50mm, with isolated rainfall in excess of 100mm) fell over southeastern Queensland, benefiting vegetative to reproductive summer crops. The rain also favored recently planted sugarcane in coastal areas. Elsewhere, mostly light rain (less than 10mm) fell across crop areas of Western and South Australia, Victoria, and northeastern New South Wales, while central New South Wales remained mostly dry. In the north, seasonal rains (10-70mm, with scattered amounts in excess of 70mm) fell from northern Western Australia eastward to northern Queensland. Mean weekly temperatures were above normal in the north and normal to below normal in the south.

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