

# WEEKLY WEATHER AND CROP BULLETIN

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

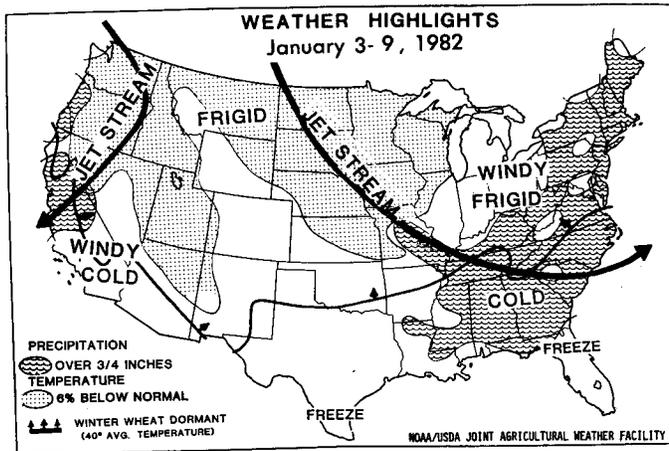
U.S. DEPARTMENT OF AGRICULTURE  
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## National Weather Summary



National Weather Summary  
January 3-9, 1982

**HIGHLIGHTS:** An outbreak of cold polar air spread slowly across all of the United States and was followed by rapidly moving frigid arctic air that spread from the Rocky Mountains to the east coast and into the southern States. Average temperatures were as much as 21° below-normal in Montana, where it was cold all week, and 19° in the mountains of Oregon. Moderate to heavy precipitation in the Southeast was beneficial but heavy rain in west central California caused flooding that resulted in loss of life and property.

**SUNDAY...**A storm system began deepening over south central United States and spread a mixture of snow, sleet, and freezing rain through the central Plains and middle Mississippi River Valley. The weather moved eastward through New England and the mid-Atlantic States. Severe weather developed across the South and thunderstorms produced some heavy rain from northern Mississippi and Tennessee into North Carolina. Another storm off the coast of Washington spread rain--snow in the mountains--from central California through Washington and across the Plateau to the northern Rockies.

**MONDAY...**Snow continued through the western Great Lakes but warming temperatures produced rain through the Ohio Valley and the East before turning colder late in the day. Thunderstorms reached from Florida to the mid-Atlantic States. The storm off the California coast caused heavy rain in the San Francisco Bay area, producing severe flooding. The rain covered the entire west coast and snow piled up in the mountains and over the Plateau from Arizona to the northern Rockies.

**TUESDAY...**The complex storm system in the West spread rain through southern California and heavy snow into Arizona, across the Plateau, and to the central and northern Rockies. The snow pushed across the Rockies into the northern Plains. Another surge of very cold air moved into the northern Plains. Temperatures in Montana dropped to -32° at Glasgow and -28° at Great Falls. Light snow lingered through the Great Lakes and northern Appalachians.

**WEDNESDAY...**The arctic air mass spread over the Plains and into Oklahoma and the northern Texas Panhandle. In Montana, temperatures fell to -34° at Great Falls and Glasgow. Single digit readings reached into Kansas. Some of the cold air spread westward and carried freezing weather all the way to the coast of Washington and Oregon. Snow fell through Arizona, New Mexico, and the central Rockies and spread into the central Plains. Rainshowers dotted the area from southeastern Texas into the Appalachians and northern Ohio Valley.

**THURSDAY...**The cold air spread through the Northeast, the Appalachians, and central Texas and over most of the west coast. Below-freezing temperatures covered all of Washington and Oregon and spread into California to the central valleys. Bitter cold weather continued over the Rockies, northern Plains and western Great Lakes. Ahead of the cold air, showers and thunderstorms covered the South from eastern Texas through Georgia. The showers moved northward along the east coast. Snow fell just behind the cold front through the Ohio Valley and eastern Great Lakes region.

**FRIDAY...**The cold air enveloped all of the United States except the Florida peninsula as a new outbreak of frigid arctic air began to push into the Dakotas. Freezing temperatures again reached into

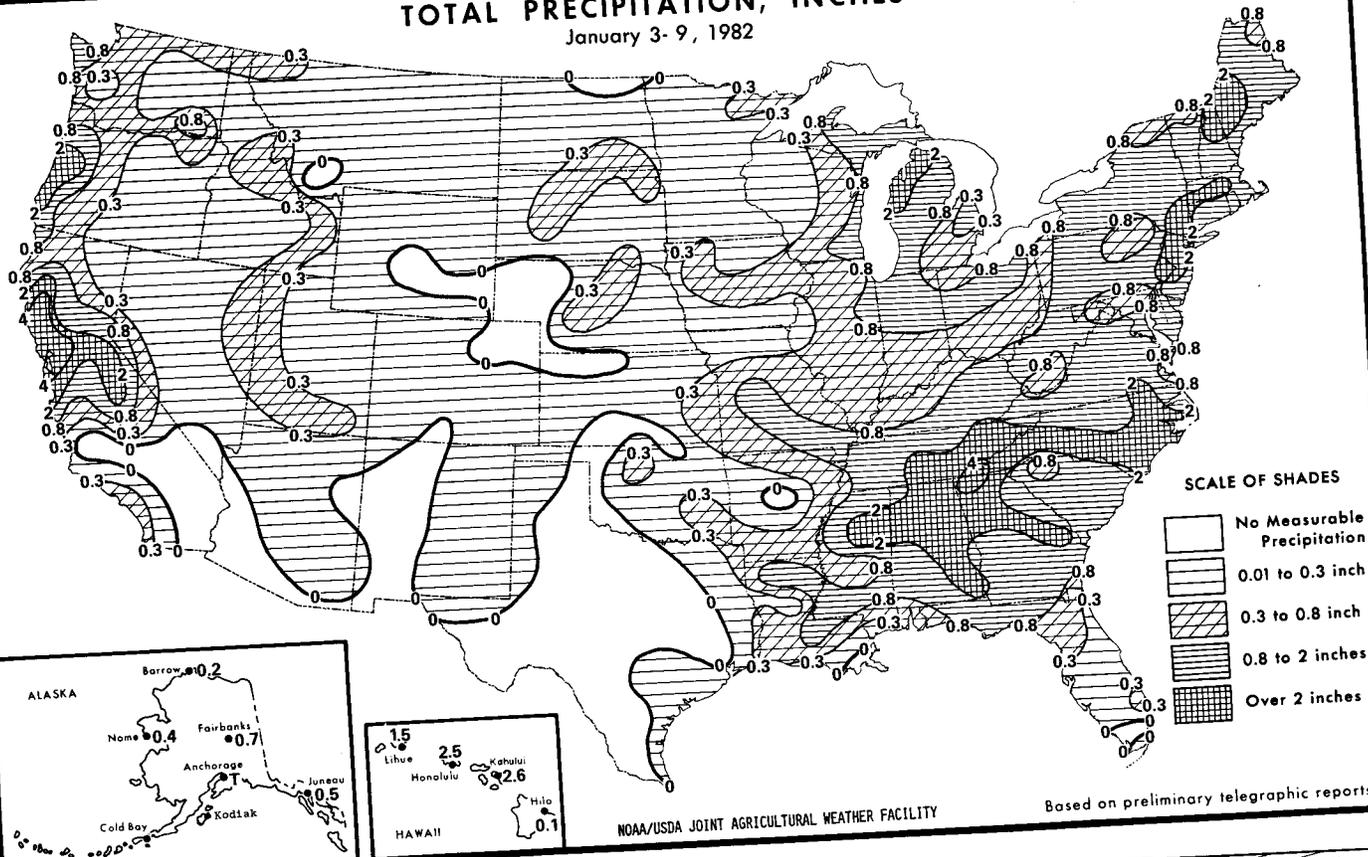
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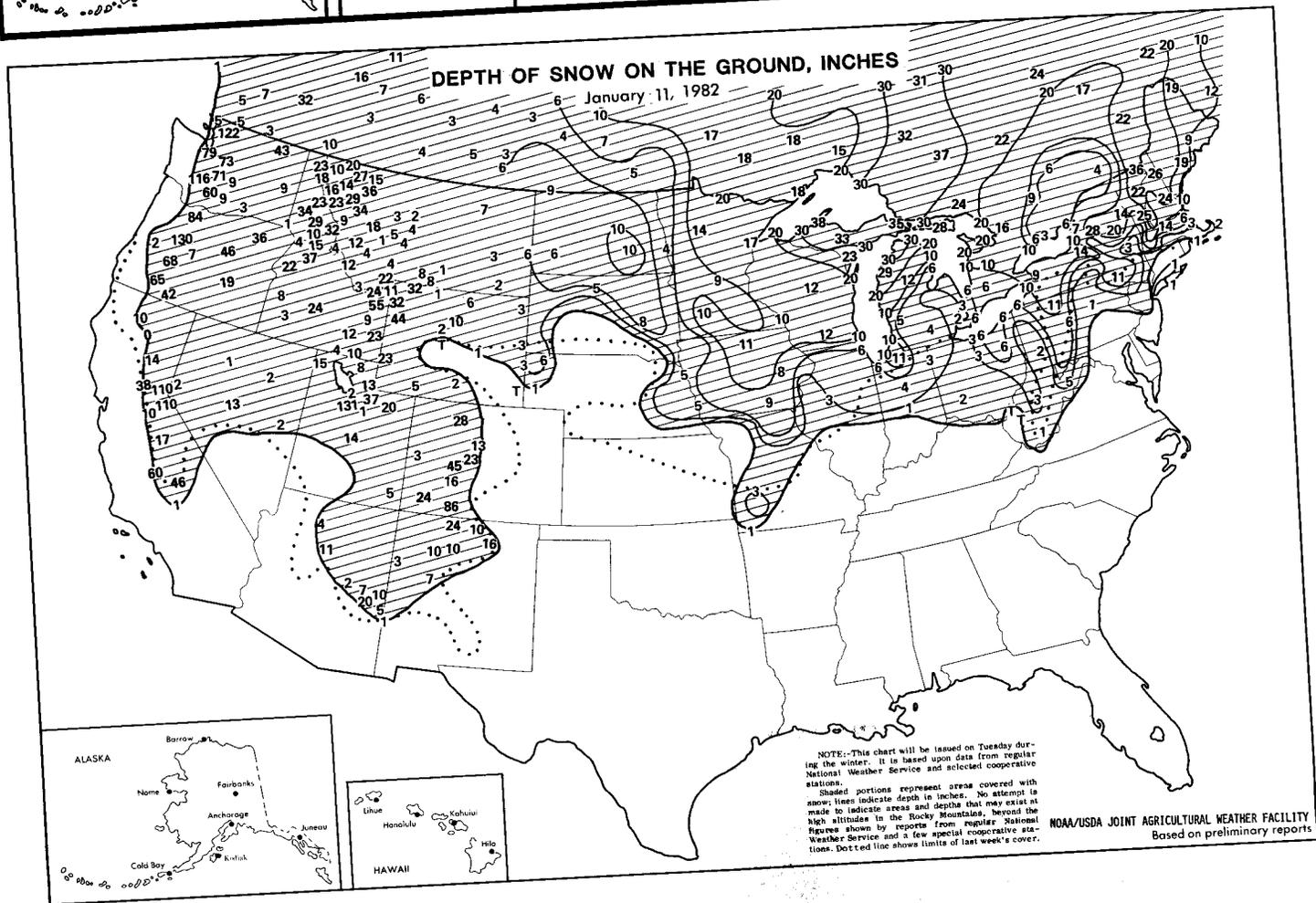
### TOTAL PRECIPITATION, INCHES

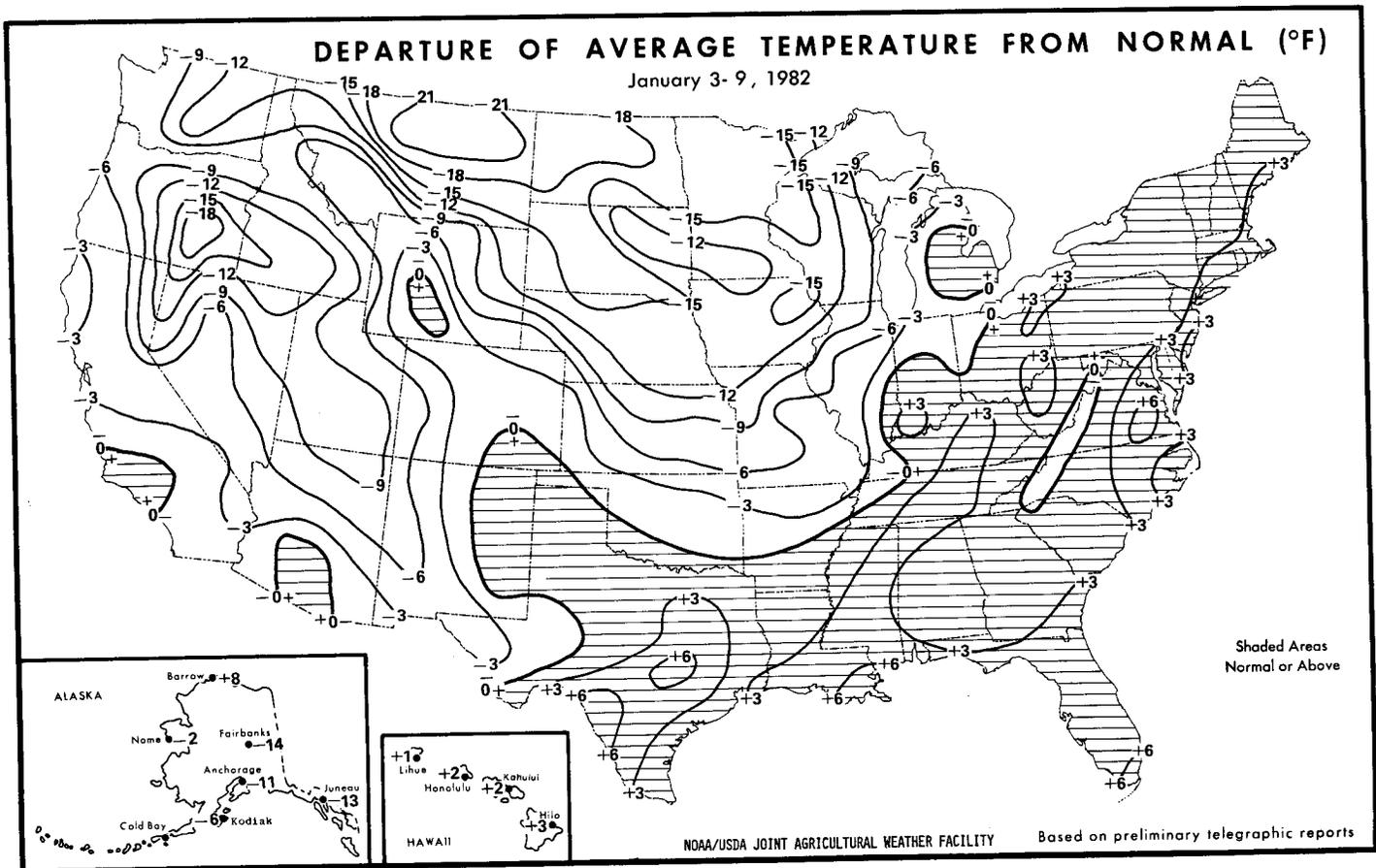
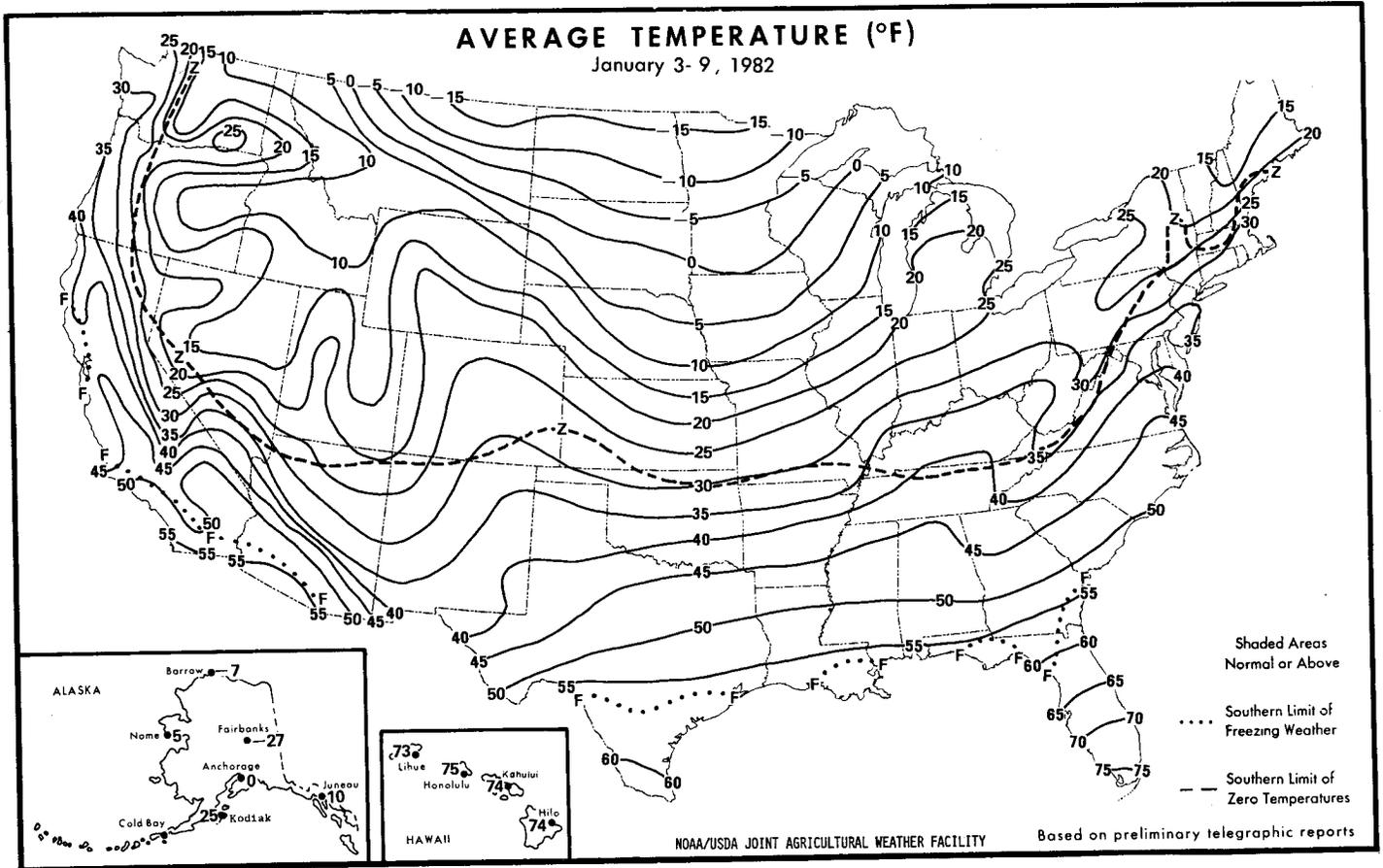
January 3-9, 1982



### DEPTH OF SNOW ON THE GROUND, INCHES

January 11, 1982





Weather Data for the Week Ending January 9, 1982

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 Nov. 29	PCT. NORMAL SINCE Nov. 29	TOTAL, IN., SINCE Jan. 3	PCT. NORMAL SINCE Jan. 3	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL. BIRMINGHAM	59	32	71	19	46	2	2.7	1.7	2.0	9.7	143	2.7	270	89	44	0	4	2	2
MOBILE	66	43	77	27	55	3	.5	-.6	.5	7.9	103	.5	45	83	47	0	1	3	0
MONTGOMERY	61	36	74	25	49	1	2.3	1.4	1.8	10.9	170	2.3	256	87	46	0	3	0	1
AK ANCHORAGE	10	-11	20	-20	0	-11	T	-.2	T	.3	21	0	0	88	51	0	7	3	0
BARROW	3	-16	21	-31	-7	8	.2	-.1	.1	.3	100	.2	200	85	64	0	7	3	0
FAIRBANKS	-17	-37	4	-50	-27	-14	.7	-.6	.4	1.3	163	.7	700	70	56	0	7	4	0
JUNEAU	16	4	28	1	10	-13	.5	-.4	.4	3.2	52	.5	56	72	41	0	7	4	0
KODIAK	30	19	38	14	25	-6	.2	-1.0	.1	7.2	106	.2	17	78	49	0	7	4	0
NOME	15	-6	31	-23	5	-2	.4	.2	.3	1.6	160	.4	200	96	71	0	7	4	0
AZ PHOENIX	63	42	73	34	52	1	.2	0	.1	1.0	83	.2	100	73	32	0	0	2	0
PRESCOTT	43	19	53	9	31	-6	.1	-.3	.1	1.2	100	.1	50	84	33	0	1	3	0
TUCSON	60	40	69	29	50	0	-.1	-.1	.1	1.1	100	.1	50	84	33	0	0	0	0
YUMA	63	44	70	36	54	-2	0	-.1	0	.1	17	0	0	53	17	0	0	0	0
AR FORT SMITH	50	23	65	17	36	-2	.1	-.4	.1	2.4	63	.1	20	85	40	0	6	1	0
LITTLE ROCK	53	30	72	19	41	0	0	-.9	0	1.8	33	0	0	70	48	0	5	0	0
CA BAKERSFIELD	56	37	63	24	47	0	.5	-.2	T	.2	20	0	0	82	40	0	1	1	0
EUREKA	52	35	56	30	43	-3	T	-1.2	.4	10.9	118	.5	29	84	53	0	2	2	0
FRESNO	49	34	53	27	42	-3	1.1	-.7	.8	2.2	92	1.1	275	92	61	0	3	2	1
LOS ANGELES	63	44	78	35	54	0	.3	-.2	.3	2.8	112	.3	60	66	33	0	0	2	0
RED BLUFF	52	32	65	28	42	-3	1.3	-.2	.8	5.2	95	1.3	118	81	40	0	4	3	3
SACRAMENTO	49	33	56	26	41	-5	4.3	3.4	2.7	-.5	-.5	4.3	478	90	58	0	4	3	3
SAN DIEGO	63	46	73	40	55	-1	.4	-.1	.4	2.6	104	.4	80	76	35	0	0	2	0
SAN FRANCISCO	51	38	56	34	44	-4	6.5	5.5	4.5	11.0	200	6.5	650	86	55	0	0	3	3
DENVER	40	14	57	-3	27	-2	T	-.1	T	.9	150	C	0	72	29	0	7	1	0
GRAND JUNCTION	28	9	34	-3	19	-8	.1	-.1	T	1.0	143	.1	50	86	51	0	7	2	0
PUEBLO	42	16	53	-2	29	0	T	-.1	T	.6	120	C	0	83	43	0	6	1	0
CT BRIDGEPORT	41	27	53	21	34	4	.6	-.1	.6	4.7	104	.6	86	76	42	0	6	1	1
HARTFORD	38	20	56	12	29	5	1.5	.7	1.4	6.1	113	1.5	188	70	43	0	7	2	1
DC WASHINGTON	46	31	54	15	38	3	1.0	.4	.7	3.9	98	1.0	167	73	38	0	3	2	1
FL APALACHICOLA	65	49	71	37	57	4	.7	0	.4	6.3	143	.7	100	94	57	0	0	2	0
DAYTONA BEACH	73	52	81	41	62	5	.2	.3	.1	4.4	159	.2	40	93	55	0	0	2	0
JACKSONVILLE	72	46	81	36	59	4	.3	-.3	.3	3.7	109	.3	50	96	51	0	0	0	0
KEY WEST	81	72	84	65	77	6	0	-.4	0	0	0	0	0	91	60	0	0	1	0
MIAMI	81	67	83	55	74	7	T	-.5	T	.1	4	0	0	91	60	0	0	1	0
ORLANDO	77	53	84	44	65	5	.1	-.4	.1	3.0	115	.1	20	96	51	0	2	2	2
TALLAHASSEE	68	43	76	27	55	3	1.5	-.7	.9	6.7	122	1.5	188	98	52	0	0	2	0
TAMPA	75	54	81	43	65	5	.1	-.4	T	3.8	127	.1	20	98	52	0	0	1	1
WEST PALM BEACH	79	63	82	52	71	5	.8	.3	.8	3.5	109	.8	160	92	59	0	0	3	3
GA ATLANTA	57	31	67	21	44	-1	2.4	1.4	1.6	10.2	176	2.4	240	89	45	0	4	3	2
AUGUSTA	58	32	67	21	45	-1	.9	.2	.5	10.0	217	.9	129	98	46	0	3	3	1
MACON	61	37	67	28	49	1	1.8	1.0	1.3	10.9	195	1.8	225	93	47	0	3	3	1
SAVANNAH	66	42	75	32	54	4	1.8	1.1	1.7	5.0	116	1.8	257	88	44	0	1	2	1
HI HILO	81	67	83	64	74	3	.1	-1.8	.1	21.2	109	.1	5	90	64	0	0	3	0
HONOLULU	81	68	83	63	75	2	2.5	1.5	1.2	7.6	146	2.5	250	90	64	0	0	3	2
KAHULUI	81	67	84	63	74	2	2.6	1.8	2.4	5.4	129	2.6	325	86	66	0	0	4	1
LIHUE	81	64	83	61	73	1	1.5	-.1	1.1	10.5	121	1.5	107	90	59	0	0	3	1
ID BOISE	25	6	42	-10	15	-13	.1	-.3	-.1	3.0	143	.1	25	83	52	0	7	1	0
LEWISTON	28	16	36	-4	22	-8	.2	-.1	.1	1.5	38	.2	67	85	52	0	7	3	0
POCATELLO	19	1	32	-24	10	-12	.6	.3	.3	3.0	214	.6	200	90	70	0	7	5	1
IL CHICAGO	25	5	38	-19	15	-8	.9	.4	.5	2.6	104	.5	180	86	57	0	7	4	0
MOLINE	22	1	38	-17	12	-9	.3	0	.2	1.9	79	.3	100	77	55	0	7	3	0
PEORIA	29	8	41	-12	18	-5	.7	-.2	.3	2.8	108	.7	140	80	54	0	7	3	0
QUINCY	27	7	42	-12	17	-10	.2	-.2	.2	1.8	75	.2	83	55	0	7	3	0	
ROCKFORD	21	0	34	-21	10	-10	.5	.1	.2	4.0	160	.5	125	90	68	0	7	3	0
SPRINGFIELD	31	10	43	-10	20	-6	.5	.1	.4	4.1	91	.7	88	88	56	0	5	3	1
IN EVANSVILLE	46	23	60	7	35	3	.7	-.1	.6	4.1	91	.7	88	88	56	0	5	3	1
FORT WAYNE	31	15	43	-8	23	-2	.8	.2	.5	4.2	135	.8	133	88	68	0	6	4	1
INDIANAPOLIS	39	17	54	-8	28	1	.8	.1	.6	6.2	163	.8	114	86	60	0	6	4	1
SOUTH BEND	30	14	42	-5	22	-2	.9	.4	.6	3.1	91	.9	180	89	66	0	7	4	0
IA DES MOINES	15	-3	31	-23	6	-13	.5	.2	.4	2.2	157	.5	167	71	48	0	7	5	0
STOUC CITY	12	-7	20	-23	2	-15	.2	0	.1	1.8	190	.2	100	83	58	0	7	4	0
WATERLOO	10	-6	22	-21	2	-16	.3	0	.2	2.1	175	.3	100	84	62	0	7	4	0
KS CONCORDIA	26	2	37	-4	14	-12	.7	-.1	T	.6	100	0	0	78	54	0	7	1	0
DODGE CITY	39	13	52	8	26	-4	T	-.1	T	.9	150	0	0	74	29	0	7	0	0
GOODLAND	45	7	54	0	26	-1	T	-.1	T	1.1	61	0	0	74	29	0	7	2	0
TOPEKA	28	9	44	0	18	-9	.2	-.1	.1	1.5	94	.2	67	83	60	0	7	0	0
WICHITA	34	14	46	8	24	-7	T	-.2	T	4.5	85	.7	54	90	57	0	5	2	1
KY BOWLING GREEN	48	27	61	10	38	0	.7	-.6	.7	4.5	85	.7	54	90	57	0	5	2	1
LEXINGTON	46	24	59	0	35	3	1.4	-.5	1.1	5.4	113	1.4	156	89	53	0	5	2	0
LOUISVILLE	46	24	60	3	35	2	.6	-.2	.5	5.4	113	.6	75	83	47	0	5	2	0
ALEXANDRIA	65	41	79	28	53	2	.2	-.9	.2	6.3	93	.2	18	91	41	0	1	1	0
LA ALEXANDRIA	69	42	80	30	56	5	.8	-.2	.5	3.5	47	.8	80	81	44	0	2	2	1
BATON ROUGE	68	42	80																

Weather Data for the Week Ending January 9, 1982

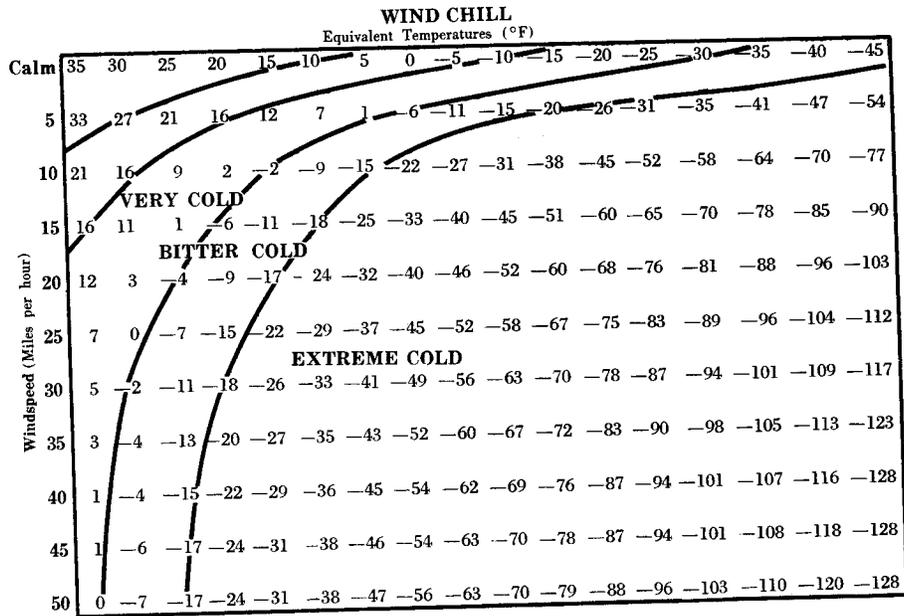
STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Nov. 29	PCT. NORMAL SINCE Nov. 29	TOTAL, IN., SINCE Jan. 3	PCT. NORMAL SINCE Jan. 3	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
ME SHREVEPORT	63	36	77	22	49	2	.7	-.3	.4	--	--	.7	70	83	35	0	3	2	0
ME CARIBOU	22	3	38	-10	12	1	.7	-.2	.5	5.4	159	.7	140	78	55	0	7	3	1
ME PORTLAND	33	16	48	8	24	3	1.7	1.0	1.7	7.2	136	1.7	243	80	44	0	7	2	1
MD BALTIMORE	45	28	55	11	36	3	.4	-.2	.3	4.1	93	.4	67	73	41	0	6	3	0
MD SALISBURY	50	31	65	18	40	3	1.5	.7	.8	--	--	1.5	188	89	50	0	5	2	2
MA BOSTON	41	25	56	18	33	4	1.7	.8	1.6	9.7	170	1.7	189	77	43	0	7	4	1
MA CHATHAM	43	29	51	20	36	--	.8	--	.7	9.4	--	.8	--	84	61	0	5	3	1
MI ALPENA	22	10	36	-10	16	-2	.8	.4	.7	2.1	78	.8	200	87	63	0	7	4	1
MI DETROIT	31	18	45	0	25	0	.5	0	.2	2.8	97	.5	100	87	60	0	6	5	0
MI FLINT	29	18	41	-2	23	1	.3	0	.2	1.5	65	.3	100	94	67	0	6	3	0
MI GRAND RAPIDS	28	18	37	0	23	0	1.3	.8	.8	2.7	87	1.3	260	83	60	0	6	4	1
MI HOUGHTON LAKE	22	12	34	-2	17	0	1.0	.7	.9	2.1	88	1.0	333	83	59	0	7	4	1
MI LANSING	28	18	42	-2	23	-1	.6	.2	.3	1.7	--	.6	150	92	68	0	6	3	0
MI MARQUETTE	13	-3	26	-17	5	-8	1.3	.9	1.1	6.2	214	1.3	325	97	66	0	7	4	1
MI MUSKEGON	28	18	38	-1	23	-1	1.3	.7	.8	3.8	112	1.3	217	83	67	0	7	5	1
MI SAULT STE. MARIE	19	-1	32	-28	9	-5	1.5	1.0	.4	4.5	136	1.5	300	81	56	0	7	5	0
MN ALEXANDRIA	3	-18	14	-28	-8	-16	T	.1	T	--	--	0	0	84	46	0	7	0	0
MN DULUTH	1	-18	18	-28	-9	-17	T	.2	T	1.3	76	0	0	71	48	0	7	1	0
MN INT'L FALLS	-4	-26	14	-36	-15	-16	T	.2	T	1.2	80	.1	33	78	53	0	7	2	0
MN MINNEAPOLIS	9	-10	21	-23	-1	-13	T	.2	T	1.3	108	0	0	79	47	0	7	0	0
MN ROCHESTER	9	-8	19	-23	0	-12	T	.1	T	1.3	130	.1	50	82	60	0	7	2	0
MS GREENWOOD	59	37	73	23	48	--	2.1	--	2.0	--	--	2.1	--	83	43	0	3	2	1
MS JACKSON	63	36	77	21	50	3	.5	.5	.4	6.7	100	.5	50	90	49	0	4	2	0
MS MERIDIAN	65	36	78	21	50	3	.8	.2	.5	8.2	111	.8	80	88	45	0	4	2	0
MO CAPE GIRARDEAU	42	22	63	9	32	-4	.5	.4	.5	--	--	.5	56	94	60	0	6	1	1
MO COLUMBIA	33	15	48	1	24	-5	.6	.2	.5	2.7	117	.6	150	84	54	0	7	2	1
MO KANSAS CITY	25	7	43	-5	16	-10	.3	.1	.3	3.3	135	.3	150	70	54	0	6	2	0
MO SAINT LOUIS	37	16	53	-1	27	-4	.5	.1	.5	4.4	137	.5	125	92	52	0	6	2	0
MO SPRINGFIELD	37	14	52	-6	26	-6	.6	.3	.4	5.5	177	.6	200	79	51	0	7	2	0
MT BILLINGS	20	-7	46	-17	7	-14	.1	-.1	.1	.6	75	.1	50	72	48	0	7	3	0
MT GLASGOW	-4	-25	17	-39	-15	-23	.1	.1	.1	.3	60	.1	+100	65	45	0	7	3	0
MT GREAT FALLS	15	-15	38	-30	0	-20	.2	0	.1	.7	70	.2	100	77	52	0	7	2	0
MT HAVRE	0	-21	27	-37	-11	-21	.2	0	.1	.2	33	.2	100	76	46	0	7	2	0
MT HELENA	27	-4	42	-21	12	-5	T	.1	T	.3	50	0	0	74	42	0	7	1	0
MT KALISPELL	19	-3	31	-23	8	-10	.3	.1	.3	2.5	109	.3	75	93	75	0	7	3	0
MT MILES CITY	8	-13	28	-21	-3	-17	.1	0	.1	.4	67	.1	100	83	48	0	7	3	0
MT MISSOULA	24	5	37	-13	14	-6	.2	-.1	.1	2.2	147	.2	67	95	63	0	7	3	0
NE GRAND ISLAND	19	-4	30	-14	8	-14	.1	0	.1	2.7	450	.1	100	79	50	0	7	1	0
NE LINCOLN	17	-1	27	-14	8	-13	.1	-.1	.1	2.4	218	.1	50	79	50	0	7	3	0
NE NORFOLK	16	-6	28	-18	5	-13	.1	-.1	.1	2.3	288	.1	50	76	52	0	7	3	0
NE NORTH PLATTE	27	-3	39	-12	12	-11	.6	.5	.6	2.2	440	.6	600	92	55	0	7	1	1
NE OMAHA	15	-3	26	-17	6	-14	.1	-.1	.1	2.3	230	.1	50	72	51	0	7	2	0
NE SCOTTSBLUFF	33	7	46	-7	20	-6	T	-.1	T	1.4	467	0	0	73	34	0	7	1	0
NE VALENTINE	19	-13	32	-23	3	-17	T	-.1	T	.5	50	0	0	86	59	0	7	0	0
NV ELY	29	0	43	-21	14	-9	.6	.5	.4	.6	100	.6	600	83	45	0	7	2	0
NV LAS VEGAS	52	30	61	21	41	-3	T	-.1	T	1.2	86	0	0	56	21	0	4	1	0
NV RENO	30	11	44	0	20	-11	.8	.5	.6	--	--	.8	267	93	56	0	7	2	1
NV WINNEMUCCA	31	12	44	2	21	-6	.1	-.1	.1	1.8	138	.1	50	85	46	0	7	1	0
NH CONCORD	31	7	47	-7	19	-2	1.5	.9	1.5	6.7	156	1.5	250	91	54	0	7	3	1
NJ ATLANTIC CITY	45	25	57	14	35	2	1.6	.8	1.3	6.3	119	1.6	200	96	52	0	6	2	1
NM ALBUQUERQUE	44	20	51	10	32	-3	0	-.1	0	.2	33	0	0	71	29	0	7	0	0
NM CLOVIS	52	24	63	19	38	--	T	--	T	--	--	T	--	70	26	0	6	1	0
NM ROSWELL	55	25	70	17	40	1	T	-.1	T	.1	17	0	0	64	22	0	6	0	0
NY ALBANY	32	15	45	4	23	1	1.2	.7	1.2	5.0	132	1.2	240	86	54	0	7	4	1
NY BINGHAMTON	31	16	47	1	23	2	.8	.3	.7	3.7	100	.8	160	91	51	0	7	4	1
NY BUFFALO	33	19	53	2	26	2	1.1	.5	.7	4.2	102	1.1	183	96	59	0	7	6	1
NY NEW YORK	41	28	55	16	35	3	2.1	1.4	2.0	7.8	156	2.1	300	78	38	0	5	4	1
NY ROCHESTER	33	18	50	3	26	2	.8	.3	.6	3.8	119	.8	160	98	69	0	7	6	1
NY SYRACUSE	34	17	51	5	26	2	1.8	1.3	1.1	5.2	124	1.8	360	95	58	0	7	7	1
NC ASHEVILLE	49	28	66	15	38	0	2.2	1.4	1.5	7.5	156	2.2	275	92	41	0	5	2	2
NC CHARLOTTE	54	34	70	24	44	2	2.0	1.2	1.0	8.7	185	2.0	250	87	54	0	3	3	2
NC GREENSBORO	53	29	71	17	41	2	1.4	.7	.7	8.2	191	1.4	200	79	38	0	4	2	2
NC HATTERAS	57	36	67	26	47	2	2.1	1.2	1.6	9.3	155	2.1	233	94	56	0	4	2	2
NC NEW BERN	60	37	72	26	48	2	3.6	2.8	2.6	--	--	3.6	450	91	48	0	2	2	2
NC RALEIGH	53	35	67	24	44	4	1.4	.7	1.0	6.3	150	1.4	200	86	38	0	2	3	1
NC WILMINGTON	60	40	72	28	50	4	3.4	2.7	2.7	9.2	200	3.4	486	93	41	0	2	2	2
ND BISMARCK	2	-18	19	-25	-8	-15	.1	0	T	.7	117	.1	100	82	65	0	7	3	0
ND FARGO	1	-22	16	-28	-11	-16	T	-.1	T	1.0	167	0	0	69	53	0	7	0	0
ND GRAND FORKS	-4	-22	5	-31	-13	-17	.1	0	.1	--	--	.1	100	82	58	0	7	3	0
ND WILLISTON	1	-23	20	-27	-11	-19	.2	0	.1	.8	114	.2	100	66	45	0	7	3	0
OH AKRON-CANTON	38	20	58	-5	29	3	.8	.2	.2	4.2	120	.8	133	83	49	0	5	5	0
OH CINCINNATI	42	20	58	-5	31	0	.2	-.6	.1	3.6	92	.2	25	84	54	0	5	4	0
OH CLEVELAND	36	20	57	-3	28	1	.9	.3	.3	4.4	133	.9	150	83	48	0	6	5	0
OH COLUMBUS	40	20	57	-5	30	2	.7	.1	.4	3.7	116	.7	117	89	54	0	6	4	0

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending January 9, 1982

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 Nov. 29	PCT. NORMAL SINCE Nov. 29	TOTAL, IN., SINCE Jan. 3	PCT. NORMAL SINCE Jan. 3	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	PRECIPITATION	
																		.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	39	19	57	-7	29	1	.8	.1	.6	4.6	139	.8	114	94	62	0	6	4	1
TOLEDO	32	16	48	-5	24	-1	.6	.1	.4	3.6	116	.6	120	89	66	0	6	4	0
YOUNGSTOWN	35	20	55	-3	28	2	.4	.3	.2	3.3	37	.4	57	91	58	0	6	4	0
OK OKLAHOMA CITY	47	23	64	13	35	-1	.2	0	.2	.9	33	.2	100	76	38	0	6	1	0
TULSA	44	24	59	15	34	-2	T	.3	T	1.0	43	C	0	77	45	0	6	1	0
OR ASTORIA	40	27	46	15	33	-7	.5	1.7	.2	15.0	106	.5	23	91	66	0	7	1	0
BURNS	16	-6	35	-27	5	-19	.1	.3	.1	3.9	163	.1	25	81	62	0	7	1	0
MEDFORD	38	26	45	19	32	-4	.5	.4	.4	9.1	186	.5	56	93	69	0	6	2	0
PENDLETON	31	17	40	-4	24	-7	.3	.1	.2	2.5	114	.3	75	88	61	0	7	3	0
PORTLAND	35	24	42	14	29	-8	.7	.7	.5	10.1	122	.7	50	99	80	0	6	3	0
SALEM	38	22	55	15	30	-8	1.4	.2	1.1	11.7	127	1.4	88	94	64	0	6	3	1
PA ALLENTOWN	36	22	54	9	29	1	1.7	1.0	1.5	5.0	102	1.7	243	80	50	0	7	3	1
ERIE	36	23	54	5	29	4	.7	.1	.2	3.6	92	.7	117	77	46	0	6	6	0
HARRISBURG	38	25	48	10	31	1	1.3	.7	1.1	4.0	98	1.3	217	81	50	0	6	4	1
PHILADELPHIA	43	27	58	13	35	3	2.3	1.7	1.5	7.0	159	2.3	383	82	46	0	6	4	0
PITTSBURGH	38	20	58	-2	29	1	.9	.3	.3	4.0	111	.9	150	82	41	0	7	6	1
SCRANTON	35	21	51	5	28	2	1	.3	.1	2.7	82	.1	25	75	48	0	6	3	0
RI PROVIDENCE	40	23	55	15	32	3	1.5	.7	1.5	8.7	161	1.5	188	78	42	0	7	2	1
SC CHARLESTON	61	38	75	27	50	1	.8	.2	.5	6.7	156	.8	133	92	48	0	4	2	1
COLUMBIA	60	34	68	22	47	2	1.4	.6	.9	10.7	228	1.4	175	92	43	0	4	2	2
FLORENCE	59	35	67	23	47	1	1.0	.4	.6	.6	.6	.4	44	86	37	0	4	2	0
GREENVILLE	53	31	70	23	42	0	.4	.5	.2	8.8	160	.4	0	66	51	0	7	-	-
SD ABERDEEN	4	-13	14	-23	-5	-14	-	-	-	-	-	0	0	66	51	0	7	-	-
HURON	12	-11	20	-20	1	-11	.1	.1	1.7	340	.1	+100	74	52	0	7	2	0	
RAPID CITY	22	-7	40	-14	8	-13	.1	0	.1	.5	83	.1	100	76	49	0	7	4	0
SIOUX FALLS	12	-11	21	-21	1	-13	T	.1	T	.9	113	0	0	68	49	0	7	2	0
TN CHATTANOOGA	54	32	64	20	43	3	3.9	2.7	3.5	10.4	146	3.9	325	82	43	0	3	2	1
KNOXVILLE	51	30	60	17	40	-1	2.8	1.7	2.1	8.0	129	2.8	255	90	49	0	4	3	2
MEMPHIS	50	32	66	20	41	1	.4	.7	.4	4.9	78	.4	36	82	47	0	3	1	0
NASHVILLE	52	30	61	17	41	3	1.9	.8	1.8	10.8	177	1.9	173	86	45	0	5	3	1
TX ABILENE	60	31	77	19	45	2	0	.2	0	.7	50	C	0	53	20	0	5	0	0
AMARILLO	55	20	65	11	37	2	T	.1	T	.2	22	C	0	68	21	0	6	1	0
AUSTIN	68	41	79	30	55	6	T	.3	T	.6	21	C	0	74	29	0	2	1	0
BEAUMONT	68	44	81	31	56	4	.3	.6	.3	4.5	70	.3	33	91	43	0	1	1	0
BROWNSVILLE	74	48	91	33	61	1	T	.3	T	.7	39	0	0	87	40	0	0	1	0
CORPUS CHRISTI	70	44	81	37	57	1	T	.3	T	1.3	62	0	0	87	40	0	0	1	0
DEL RIO	70	43	79	36	57	7	0	.1	0	.1	14	0	0	51	33	0	0	1	0
EL PASO	53	23	65	10	38	-5	T	.1	T	.2	33	0	0	78	29	0	6	1	0
FORT WORTH	61	33	79	26	47	3	0	.4	0	.8	32	0	0	67	23	0	4	0	0
GALVESTON	63	47	72	37	55	2	T	.7	T	2.6	33	0	0	87	48	0	0	1	0
HOUSTON	69	41	81	29	55	3	T	.8	T	5.7	108	0	0	89	39	0	2	0	0
LUBBOCK	55	25	65	15	40	1	0	.1	0	.7	100	0	0	72	22	0	5	0	0
MIDLAND	56	26	73	18	41	-2	T	.2	T	.1	14	0	0	54	21	0	4	0	0
SAN ANGELO	61	31	79	22	46	0	0	.2	0	0	0	0	0	61	22	0	4	0	0
SAN ANTONIO	70	39	82	30	55	5	T	.3	T	.9	47	0	0	79	27	0	2	2	0
VICTORIA	69	42	79	34	56	3	.1	.3	.1	1.5	58	.1	25	85	36	0	0	1	0
WACO	63	35	79	26	49	3	0	.4	0	1.0	37	0	0	63	23	0	5	0	0
WICHITA FALLS	58	26	73	18	42	1	0	.2	0	1.0	59	0	0	63	23	0	5	0	0
UT BLANDING	28	8	36	-1	18	-9	.3	0	.1	.8	47	.3	100	85	58	0	7	1	1
CEDAR CITY	32	8	41	-10	20	-8	.7	.5	.7	.7	--	.7	350	72	40	0	7	1	1
SALT LAKE CITY	29	11	39	1	20	-7	.2	.1	.1	2.3	121	.2	67	81	47	0	7	2	0
VT BURLINGTON	29	7	40	-6	18	1	1.1	.7	1.0	3.5	117	1.1	275	82	51	0	7	3	1
VA NORFOLK	56	33	74	23	45	4	.6	.2	.4	6.2	144	.6	75	78	40	0	4	4	0
RICHMOND	54	33	72	20	43	6	1.0	.4	.5	6.2	144	1.0	167	78	42	0	3	3	0
ROANOKE	46	26	63	12	36	0	1.8	1.2	1.4	5.6	140	1.8	300	83	42	0	7	4	1
WA COLVILLE	14	8	30	-7	11	-12	.6	.1	.3	3.5	121	.6	120	83	72	0	7	5	0
QUILLAYUTE	37	24	46	9	30	-8	1.9	1.4	1.2	19.9	95	1.9	58	98	81	0	5	6	2
SEATTLE-TACOMA	36	26	46	13	31	-7	.4	1.0	.3	6.1	76	.4	29	89	64	0	6	3	0
SPOKANE	25	5	33	-15	15	-10	.2	.4	.2	2.7	79	.2	33	87	67	0	7	2	0
YAKIMA	21	2	35	-13	12	-14	.1	.3	T	3.0	167	.1	25	81	62	0	6	2	0
WV BECKLEY	43	22	57	1	33	2	.7	.1	.3	4.1	91	.7	88	86	45	0	4	4	2
CHARLESTON	49	26	63	5	38	4	1.5	.7	.5	4.3	98	1.5	188	83	45	0	4	4	1
HUNTINGTON	46	25	60	4	36	2	1.1	.3	.7	4.0	91	1.1	138	85	49	0	5	5	0
PARKERSBURG	44	25	58	0	34	4	.5	.4	.2	2.3	56	.5	56	64	36	0	5	5	0
WI GREEN BAY	16	-4	32	-18	6	-9	.5	.2	.5	1.9	106	.5	167	87	60	0	7	1	0
LA CROSSE	12	-8	25	-23	2	-14	.1	.1	.1	1.5	107	.1	50	90	63	0	7	2	1
MADISON	19	-4	35	-26	7	-9	.7	.4	.6	1.8	100	.7	233	87	63	0	7	4	1
MILWAUKEE	19	1	32	-19	10	-9	1.1	.7	1.0	2.7	113	1.1	275	84	52	0	7	1	0
WAUSAU	12	-7	26	-24	2	-11	.3	0	.3	--	--	.3	100	86	60	0	7	1	0
WY CASPER	26	3	38	-16	14	-9	.1	.1	T	.5	83	.1	50	72	43	0	7	3	0
CHEYENNE	33	9	46	-4	21	-5	.1	.1	.1	.7	88	.1	50	74	34	0	7	2	0
LANDER	35	8	53	-4	21	2	T	.1	T	0	0	0	0	71	28	0	7	0	0
SHERIDAN	26	-2	47	-15	12	-8	.1	.1	T	.7	70	.1	50	76	40	0	7	2	0
PR SAN JUAN	83	73	85	71	78	3	.5	.4	.2	14.5	238	.5	56	86	59	0	0	6	0

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS



To find the equivalent temperature at a given windspeed find the calm-air temperature along the top line and read down to the line parallel the windspeed. For example, a calm-air temperature of zero degrees has an equivalent cooling effect of minus 40 degrees at a windspeed of 20 miles per hour.

Your thermometer is not always a reliable indicator of how chilly it is outdoors, according to the National Oceanic and Atmospheric Administration. Better check the windspeed, too.

Studies show that heat loss from the surface of the body is strongly affected by both temperature and wind. This is windchill.

For example, a 15-mile-an-hour breeze with the thermometer standing at a cold but not unbearable 35 degrees, produces the effect of a bitter, freezing 16 degrees.

NOAA, a Commerce Department agency created to improve man's understanding and uses of the physical environment and oceanic life, has produced an "equivalent temperature" chart to demonstrate the remarkable cooling power of windchill and assist the public in "what-to-wear-outdoors" decisions. The chart is based on studies made by Arctic explorers and military experts and shows the combined effects of wind and temperature as equivalent calm-air temperatures.

Windchill information is included routinely in the messages issued by many of NOAA's National Weather Service forecast offices.

National Weather Summary  
Continued from page 1

the central valleys of California but damage was light and confined to tender vegetables. Thermal, California reported 31° for a low temperature. Snow fell ahead of the new cold outbreak in the northern Plains, upper Mississippi Valley, and Great Lakes region. A few rainshowers were reported along the cold front in northern Florida.

SATURDAY...Wind, snow, and arctic cold accompanied a rapidly moving cold front that moved through the Northeast into the southern States, central Texas, and the Rockies. Snowshowers along the front were generally light except through the eastern Great Lakes and to the south and east of the Lakes. Sub-zero temperatures covered the northern Plains and western Great Lakes. Blustery north winds brought windchill factors down to dangerous levels.

DECEMBER WEATHER SUMMARY

Seasonal precipitation was well above normal throughout most of the Pacific Northwest, the northern Plateau and the central and northern Rockies. Precipitation in the form of snow, was near or above normal through much of the northern Plains where dry weather had plagued many areas in the fall. The previously dry Southeast and parts of the East also stored much needed moisture. Average temperatures for December were generally above normal in the West and below normal in the East. Exceptions were along the northern tier of States from the Great Lakes and in New England where temperatures were near normal. A hard freeze covered the Southeast late in the month. Freezing temperatures reached the Florida Everglades. Damage to citrus was minimal but damage to tender vegetables was severe in many areas.

**FIRST WEEK...**A seasonal trough of low pressure off the west coast of the United States spawned storm systems which brought high wind and heavy rain to the Pacific Northwest coastal area. Some flooding occurred along the Oregon coast and heavy snow accumulated in the Cascade mountains. Rain--or snow at higher elevations--was lighter over the northern Plateau and Rockies. As the weakened storms moved into the Plains and encountered moisture from the Gulf of Mexico they intensified and spread snow across the northern Plains and Great Lakes region. Rain fell through the Ohio Valley, along the east coast and across the South where some thundershowers were reported.

**SECOND WEEK...**A winter storm which moved along the New England coast brought heavy snow to the area. Twenty or more inches covered the Boston-Rhode Island area. Lesser amounts spread over the rest of New England and even covered the Cape Cod area. Cold northerly winds created blizzard conditions and caused deep snowdrifts through much of New England. The same northerly winds bore cold weather southward to northern Florida. Later in the week, another surge of very cold air pushed into the Southeast with freezing temperatures moving as far south as the northern part of the Everglades. Damage was minimal and mostly confined to tender vegetables. Rain or snow (at high elevations) covered the Pacific Northwest and rainshowers fell all along the coast of the Gulf of Mexico. While most of the East averaged colder than normal, the West was abnormally warm. Parts of the central Rockies and Plateau were 12° to 15° warmer than normal.

**THIRD WEEK...**Precipitation was heavy along the Pacific Northwest coast with heavy snow accumulations in the Cascade mountains, over much of the northern Plateau, and through the northern Rockies. Showers and some thundershowers moved out of the Gulf of Mexico and covered the southern States. Storms moving northeastward spread moderate rain from the lower Mississippi River to the mid-Atlantic States. Another outbreak of arctic air pushed into Texas with freezing temperatures covering all but extreme southern Texas. The cold air moved eastward through the South bringing temperatures in the teens to the Gulf Coast. Freezing temperatures again reached the Everglades in Florida. Record cold temperatures were measured in much of the Southeast with cold air still pouring in as the week ended.

**FOURTH WEEK...**The cold temperatures continued for another two days through the Southeast bringing a hard freeze to Florida as

far south as the Everglades. Damage to citrus was minimal but losses to tender vegetables were severe in some areas. Coastal rain in the West reached all the way to southern California. Snow accumulated in the Sierra Nevada mountains and intensified through the central Rockies. Moderate rain fell through the Ohio Valley and the Southeast. Snow cover continued to increase from the northern Plains through the Great Lakes to New England.

Thunderstorms continued through the southern States, and showers reached the Ohio Valley and New England States during the last four days of December. More snow fell in the Great Lakes region and through the Appalachians in New England. Storms continued to dump moderate amounts of rain along the west coast. Heavy snow fell in the mountains and over the Plateau.

DECEMBER HARVEST PROGRESS

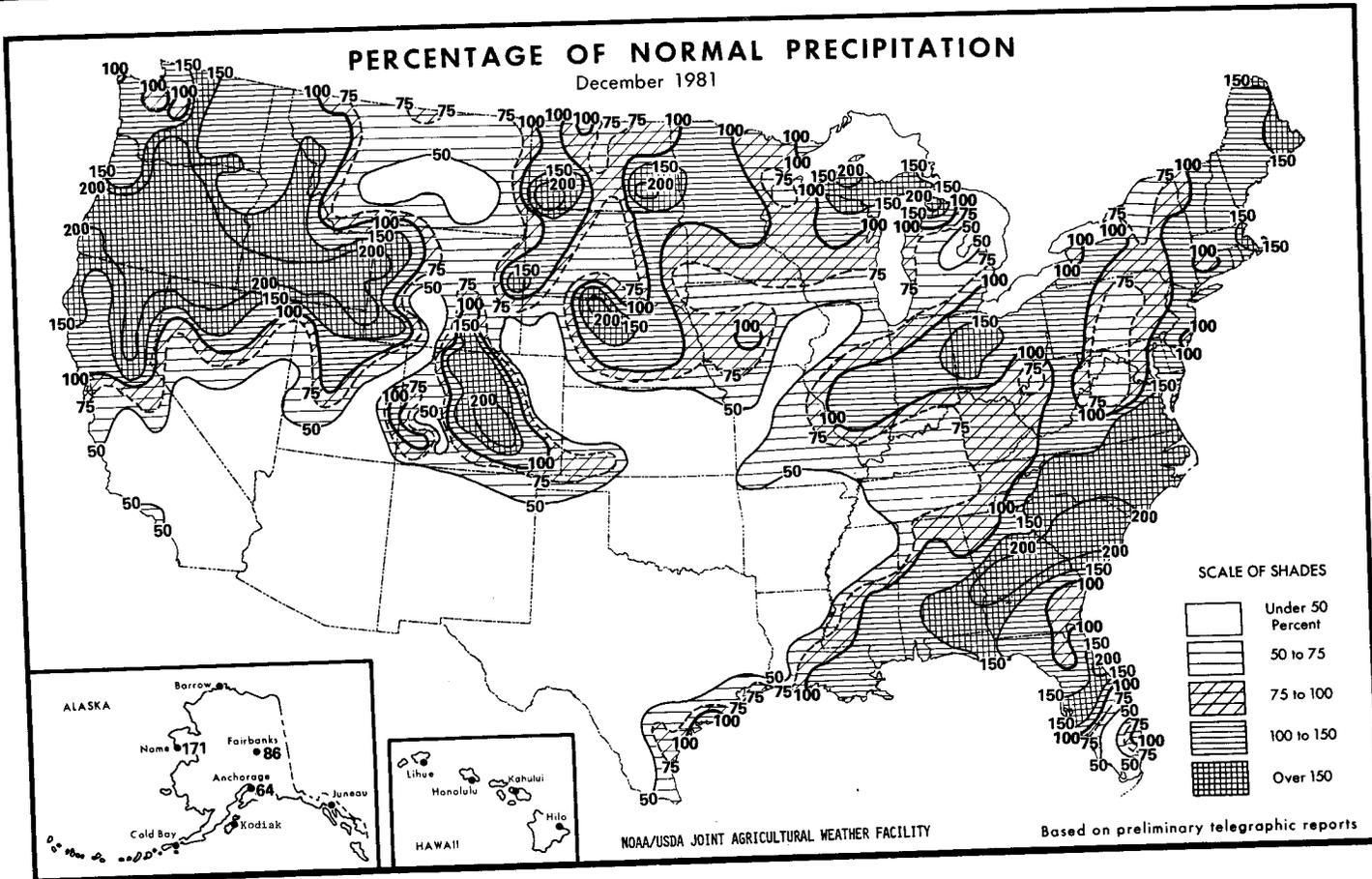
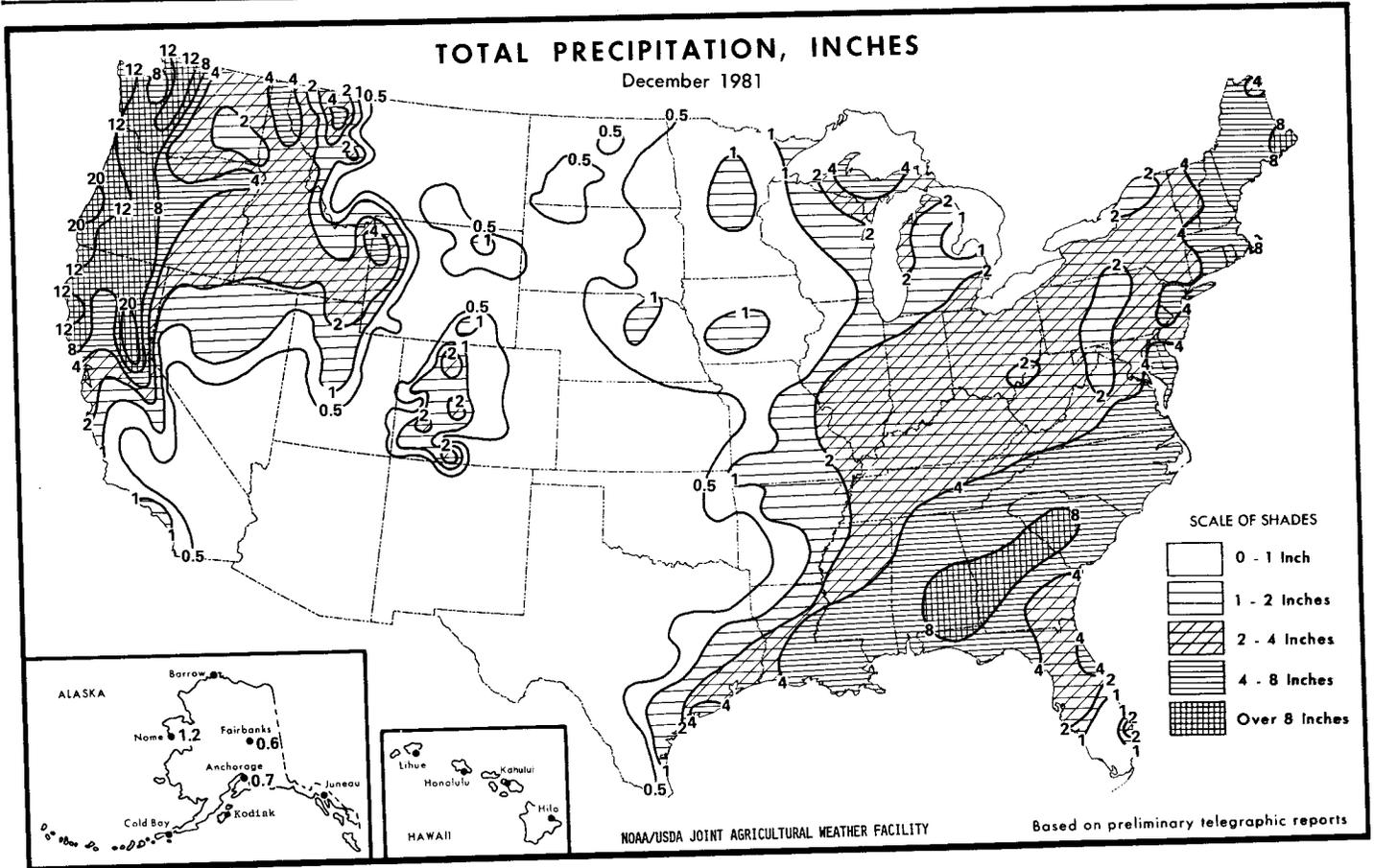
Harvest of most row crops neared completion by the beginning of December. Exceptions included cotton picking in Missouri, Oklahoma, Texas, and the Southwest, soybean combining in the Delta, the Southeast, and Kansas, and corn harvest in Indiana, Ohio, Missouri, Nebraska, and Wisconsin. Progress in many of these areas was slower than average because of unfavorable weather conditions. By the end of the month, corn, soybean, and sorghum harvests had been completed.

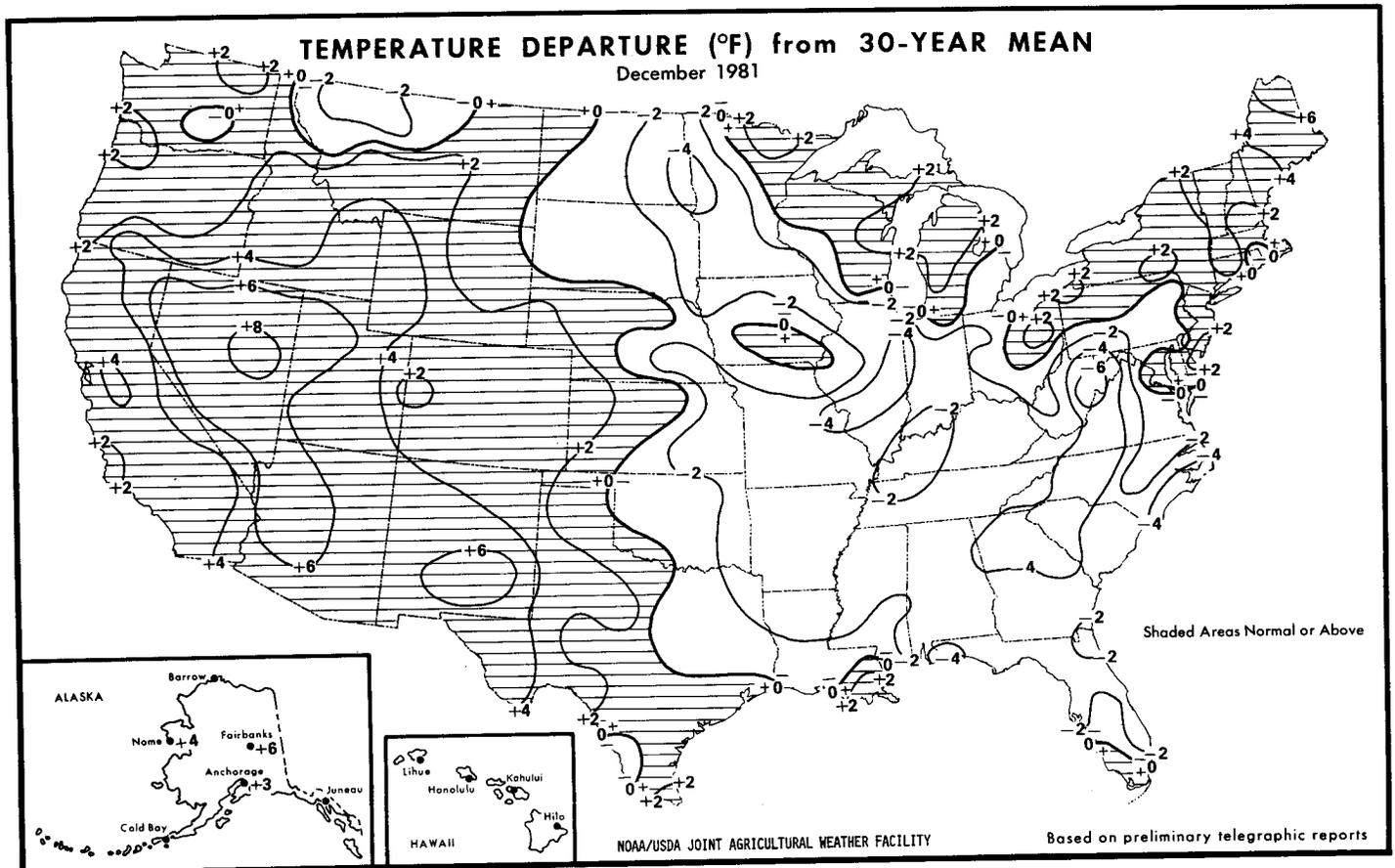
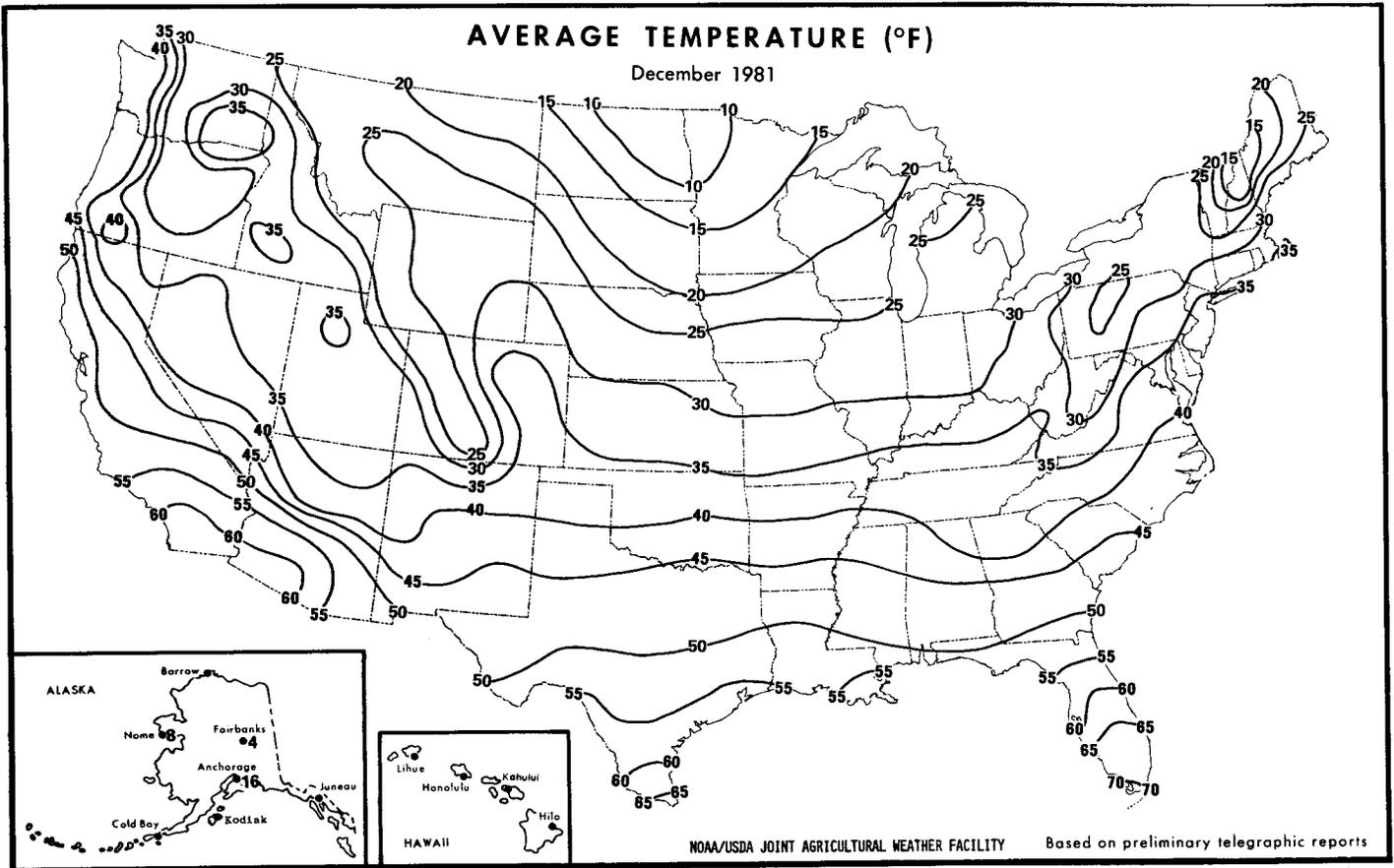
Cotton picking in the 14 major producing States reached 71 percent complete by the beginning of December, 9 percentage points behind a year earlier. Progress was slower than normal in Missouri, Oklahoma, and Texas. Most other areas were on or ahead of schedule. At the end of the month, picking was still active in Texas, Oklahoma, and the Southwest. The Texas harvest advanced to 93 percent complete by month's end. Despite a few delays caused by bad weather, harvest operations were generally running ahead of many gins, causing growers to store cotton in modules. Picking in California, New Mexico, and Oklahoma neared completion. The Arizona harvest moved rapidly toward completion with all acreage picked at least once. Growers snredded, disked, and plowed down stalks as fields were harvested and gleaned.

WINTER WHEAT

winter wheat seeding was virtually finished by the beginning of December except for minor acreages across the South and in California where seeding had not yet reached the half-way mark. Fields which had emerged were in mostly good condition, although more rain was needed in the Southeast for optimum development. Most areas needed snow cover to prevent future damage from cold temperatures and winds.

At the end of the month, winter wheat rated mostly good throughout the Nation. Rainfall in the Southeast eased moisture deficiencies and improved the condition of the crop. Kansas wheat was in good condition, although wind and cold temperatures at month's end caused light damage in the southern half of the State. In Oklahoma, leaf rust was a problem, but the wheat condition still rated good. Texas wheat was in good condition, although late planted fields were showing signs of stress from lack of moisture. Montana wheat was in fair to good condition; light wind damage was evident due to limited snow cover. In the Pacific Northwest, good conditions continued even though slugs and weeds caused concern in parts of Oregon.

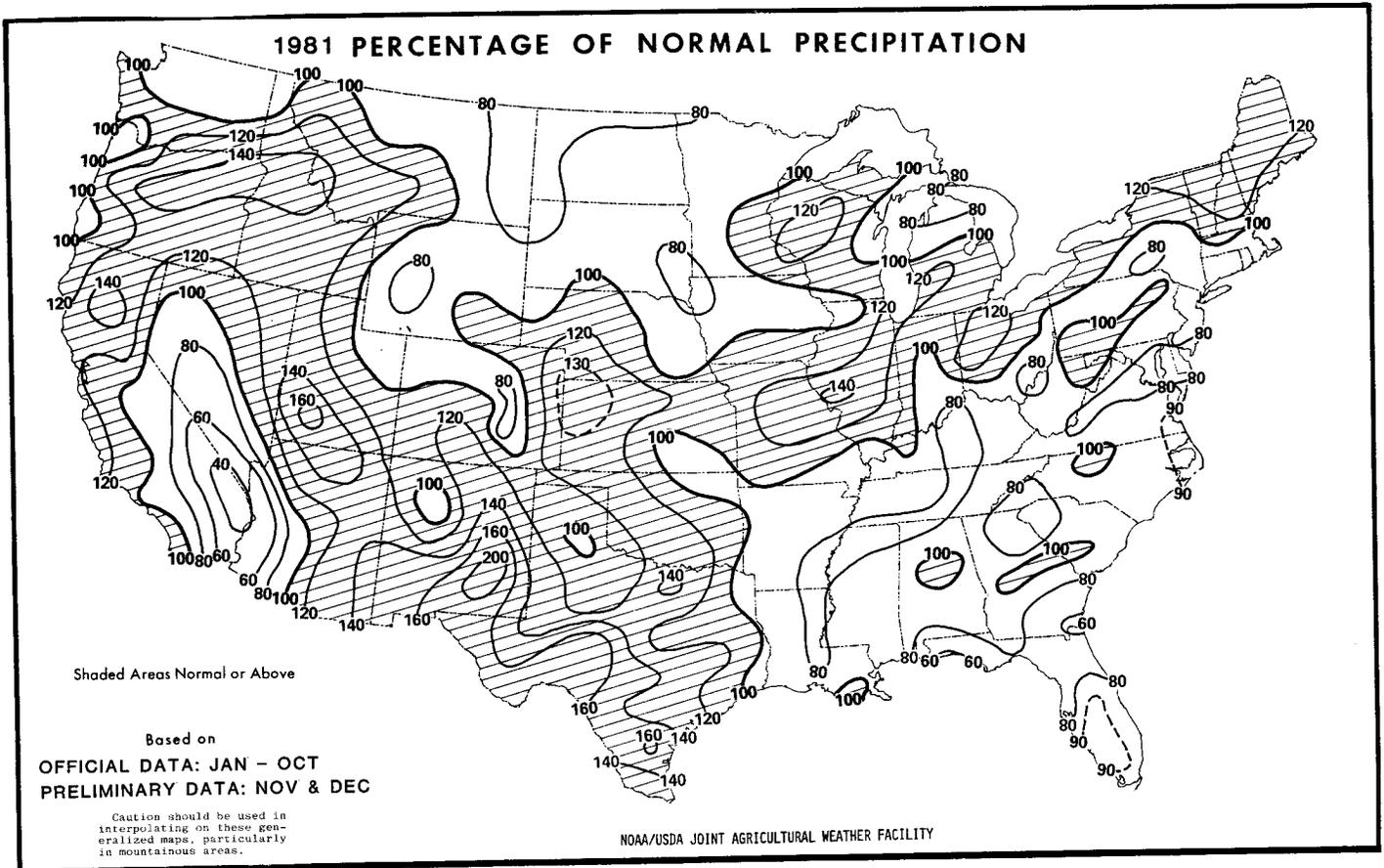
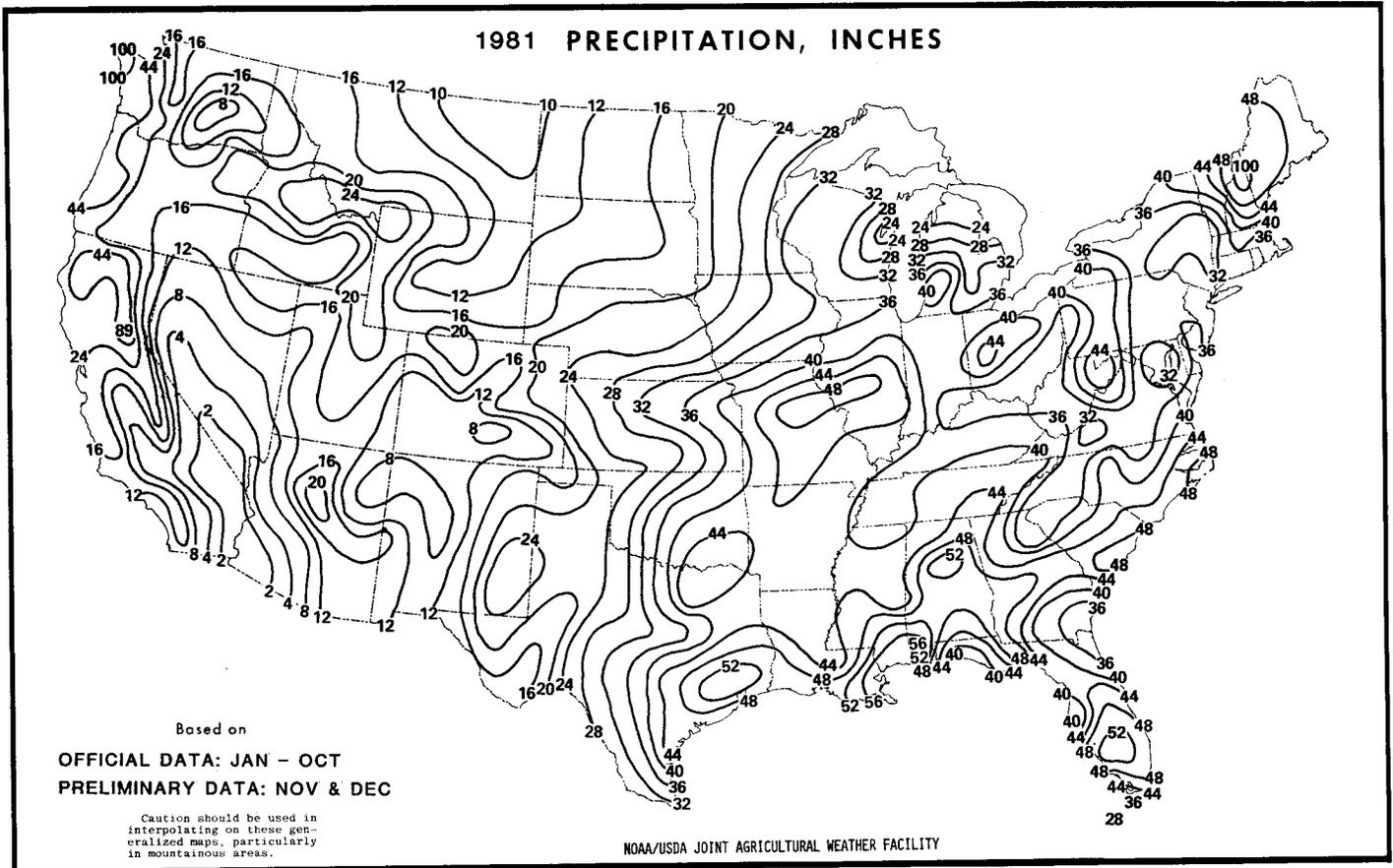




Temperature and Precipitation Data for December 1981

States and Stations	Temperature of		Precipitation Inches		States and Stations	Temperature of		Precipitation Inches		States and Stations	Temperature of		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	42	-3	6.5	1.3	LA BATON ROUGE	52	-1	5.4	-.4	TOLEDO	27	-1	2.9	.7
MOBILE	50	-3	6.8	.9	LAKE CHARLES	53	-1	2.5	-3.2	YOUNGSTOWN	29	0	2.8	.2
MONTGOMERY	47	-2	8.5	3.6	NEW ORLEANS	57	2	7.5	-2.4	OK OKLAHOMA CITY	39	-1	.2	-1.1
AK ANCHORAGE	16	3	.7	-.4	SHREVEPORT	47	-2	.6	-3.6	TULSA	39	-1	.2	-1.4
BARROW	---	---	---	---	ME CARIBOU	23	7	3.8	1.2	OR ASTORIA	45	2	11.8	1.2
FAIRBANKS	-4	6	.6	-.1	PORTLAND	29	3	4.5	.4	BURNS	29	1	3.9	2.2
JUNEAU	---	---	---	---	MD BALTIMORE	35	0	3.3	0	MEDFORD	43	5	8.0	4.3
KODIAK	---	---	---	---	MA BOSTON	33	0	6.3	2.1	PENDLETON	37	1	2.3	.8
NOME	8	4	1.2	.5	CHATHAM	36	2	8.1	4.1	PORTLAND	43	2	8.4	2.4
AZ FLAGSTAFF	36	6	.3	-1.9	MI ALPENA	26	3	1.2	-.7	SALEM	43	2	9.7	2.8
PHOENIX	59	6	0	-.8	DETROIT	28	-1	2.4	-.1	PA ALLENTOWN	31	0	3.2	-.4
TUCSON	55	3	0	-.9	FLINT	26	-1	1.2	-.5	ERIE	31	2	2.8	0
WINSLOW	39	5	T	-.6	GRAND RAPIDS	29	-1	1.1	-1.1	HARRISBURG	32	-1	2.4	-.7
YUMA	61	5	0	-.3	HOUGHTON LAKE	25	2	1.1	-.9	PHILADELPHIA	35	0	4.1	.8
AR FORT SMITH	39	-3	.3	-2.6	LANSING	27	0	1.1	-.2	PITTSBURGH	29	-2	3.0	.5
LITTLE ROCK	41	-2	.7	-3.3	MARQUETTE	19	1	4.3	-2.1	SCRANTON	29	-1	2.1	-.4
CA BAKERSFIELD	51	3	.2	-.5	MUSKEGON	30	1	2.2	-.2	RI PROVIDENCE	31	-1	5.4	1.3
EUREKA	52	3	9.9	3.3	SAULT STE. MARIE	22	2	2.4	0	SC CHARLESTON	46	-3	5.7	2.6
FRESNO	48	2	.7	-1.0	MN DULUTH	15	1	1.0	-.4	COLUMBIA	43	-3	8.5	5.1
LOS ANGELES	59	3	1.5	-.3	INT'L FALLS	11	2	.8	-.2	GREENVILLE	39	-4	7.2	3.1
RED BLUFF	49	3	4.0	.1	MINNEAPOLIS	18	-1	.9	0	SD ABERDEEN	---	---	---	---
SAN DIEGO	60	3	.5	-1.2	ROCHESTER	16	-3	.7	-.1	HURON	18	-1	.5	0
SAN FRANCISCO	52	2	3.9	-.1	SAINT CLOUD	14	-2	1.1	.2	RAPID CITY	26	-1	.4	0
STOCKTON	49	4	1.7	-1.0	MS JACKSON	47	-2	4.9	-.1	STOUX FALLS	18	-2	.4	-.3
CO DENVER	36	3	.7	.3	MERIDIAN	47	-1	5.8	.2	TN CHATTANOOGA	38	-3	5.0	-.3
GRAND JUNCTION	31	1	.6	0	MO COLUMBIA	30	-3	1.1	-.7	KNOXVILLE	39	-3	4.1	-.4
PUEBLO	35	2	.7	.4	KANSAS CITY	29	-2	5.0	0	MEMPHIS	41	-2	1.8	-2.9
CT BRIDGEPORT	34	0	3.7	.3	SAINT LOUIS	31	-4	2.0	0	NASHVILLE	38	-2	2.4	-2.1
HARTFORD	31	3	4.0	.1	SPRINGFIELD	34	-2	1.6	-.9	TX ABILENE	49	3	.3	-.7
DC WASHINGTON	39	2	2.8	-.2	MT BILLINGS	29	2	.5	-.2	AMARILLO	40	1	T	-.7
FL APALACHICOLA	53	-2	5.6	2.3	GLASGOW	18	1	.2	-.1	AUSTIN	54	2	.4	-1.8
DAYTONA BEACH	57	-3	4.6	2.6	GREAT FALLS	25	-2	.4	-.3	BEAUMONT	55	1	3.9	-1.0
FORT MYERS	66	1	.7	-.6	HAVRE	17	-1	.3	-.1	BROWNSVILLE	65	2	.8	-.4
JACKSONVILLE	54	-1	3.4	.8	HELENA	25	2	.3	-.3	CORPUS CHRISTI	59	0	1.2	-.3
KEY WEST	71	-1	.1	-1.4	KALISPELL	22	-2	1.8	-.3	DEL RIO	55	3	.1	-.4
MIAMI	68	0	.1	-1.5	MILES CITY	22	0	.2	-.3	EL PASO	49	5	.1	-.4
ORLANDO	61	-1	3.0	1.1	MISSOULA	24	-1	2.0	.9	FORT WORTH	47	-1	.2	-1.6
TALLAHASSEE	50	-3	5.2	1.0	NE GRAND ISLAND	25	-2	.6	0	GALVESTON	57	0	2.3	-1.4
TAMPA	59	-3	3.6	1.4	LINCOLN	25	-2	.7	0	HOUSTON	55	0	2.1	-1.9
WEST PALM BEACH	65	-2	2.5	-.3	NORFOLK	24	0	.7	.1	LUBBOCK	44	3	.2	-.4
GA ATLANTA	39	-5	6.3	2.1	NORTH PLATTE	27	0	.4	0	MIDLAND	48	2	.1	-.4
AUGUSTA	41	-5	8.7	5.3	OMAHA	25	-1	.6	-.2	SAN ANGELO	49	1	T	-.7
MACON	46	-2	8.7	4.4	VALENTINE	24	0	.8	.5	SAN ANTONIO	53	0	.7	-.8
SAVANNAH	48	-2	3.1	-.2	NV ELY	34	8	.3	-.4	VICTORIA	56	0	1.4	-.6
HI HILO	---	---	---	---	LAS VEGAS	49	4	0	-.4	WACO	49	-1	.5	-1.5
HONOLULU	---	---	---	---	RENO	39	6	1.1	0	WICHITA FALLS	45	1	.3	-1.0
KAHULUI	---	---	---	---	WINNEMUCCA	37	7	1.6	.7	UT BLANDING	34	4	.2	-1.1
LIHUE	---	---	---	---	NH CONCORD	25	0	4.2	.9	SALT LAKE CITY	36	6	1.9	.5
ID BOISE	35	3	2.7	1.3	NJ ATLANTIC CITY	38	3	3.8	-.2	VT BURLINGTON	25	2	2.0	-.2
LEWISTON	37	2	1.3	0	TRENTON	36	1	4.0	.7	VA LYNCHBURG	34	-4	3.9	.7
POCATELLO	31	4	2.2	1.2	NM ALBUQUERQUE	41	5	0	-.5	NORFOLK	41	-1	5.8	2.7
IL CAIRO	37	-2	2.1	-1.8	ROSWELL	46	7	.1	-.4	RICHMOND	38	-1	5.0	1.8
CHICAGO	25	-4	1.1	-1.0	NY ALBANY	26	0	3.5	.6	ROANOKE	33	-4	3.8	.7
MOLINE	25	-2	.7	-1.1	BINGHAMTON	27	2	2.5	-.3	WA COLVILLE	29	2	2.5	.3
PEORIA	27	-1	1.2	-.7	SUFFALO	29	1	2.9	-.1	OMAK	29	2	2.4	.8
ROCKFORD	23	-2	.8	-.9	NEW YORK	37	1	4.7	1.1	QUILLAYUTE	41	0	14.7	-.9
SPRINGFIELD	27	-4	2.4	.5	ROCHESTER	29	1	2.8	.4	SEATTLE-TACOMA	42	1	5.6	-.3
EVANSVILLE	34	-1	2.2	-1.1	SYRACUSE	29	1	3.0	-.1	SPOKANE	30	1	2.5	.1
FORT WAYNE	26	-3	3.2	1.0	NC ASHEVILLE	36	-3	4.8	1.2	WALLA-WALLA	38	1	3.2	1.2
INDIANAPOLIS	28	-3	3.4	-.7	CHARLOTTE	39	-4	6.2	2.8	YAKIMA	30	-1	2.4	1.2
SOUTH BEND	28	0	1.8	-.7	GREENSBORO	36	-4	5.6	2.4	BECKLEY	30	-3	3.4	.1
IA BURLINGTON	29	1	.6	-1.0	HATTERAS	44	-4	7.2	2.7	CHARLESTON	35	-1	2.7	-.5
DES MOINES	26	1	1.1	0	RALEIGH	40	-1	5.0	1.9	HUNTINGTON	34	-2	2.6	-.4
DUBUQUE	---	---	---	---	WILMINGTON	44	-4	5.8	2.4	PARKERSBURG	33	-2	1.7	-1.1
SIoux CITY	21	-3	.6	-.2	ND BISMARCK	15	-1	.5	0	WI GREEN BAY	23	2	1.1	-.2
CONCORDIA	31	1	.2	-.6	FARGO	9	-4	.9	-.3	LA CROSSE	20	-2	.9	-.1
DODGE CITY	34	1	.4	-.1	WILLISTON	16	1	.4	-.1	MADISON	22	0	.8	-.7
GOODLAND	33	3	T	-.4	OH AKRON-CANTON	31	2	3.4	1.0	MILWAUKEE	24	0	1.0	-.8
TOPEKA	30	-2	.2	-1.3	CINCINNATI	29	-5	2.4	-.5	CASPER	27	1	.4	-.1
WICHITA	33	-2	.3	-.8	CLEVELAND	31	1	3.4	1.0	CHEYENNE	31	2	.5	.1
LEXINGTON	33	-3	3.1	-.5	COLUMBUS	31	0	2.9	.5	LANDER	27	4	.1	-.4
LOUISVILLE	34	-2	2.0	-1.3	DAYTON	30	-1	3.5	1.2	SHERIDAN	26	0	.5	-.2
									PR SAN JUAN	79	2	17.2	12.5	

Based on preliminary data and on 1941-1970 normals.



## 1981 Weather Review and Crop Summary

WINTER (DEC - FEB): The most significant feature of the 1980-81 winter season was the widespread drought that affected most of the Nation. Drought which began in the summer continued through the fall and winter. Some relief came in February when heavy rains fell in New England and in the southeast but shortages continued in those areas and in most of the Nation. Public water supplies became critically low in parts of the Northeast before the partial relief in February. In the West, the seasonal rain began on time but was much less than normal except in parts of the State of Washington. Not only was precipitation short in the West, but unusually warm temperatures caused much of the precipitation to fall as rain instead of snow; snow that fell melted and ran off. This reduced the water storage in the mountains snow pack.

SPRING (MAR - MAY): Spring rain began early in the season in the western United States but most of the East had below normal rainfall in March. Precipitation was well above normal in nearly all of the West, and as the season progressed, the above normal rainfall pushed eastward and through most of the Midwest. The eastern part of the northern Plains remained drier than normal but the eastern Corn Belt experienced rainy weather during most of April and May. Spring rain in the East Coast States was generally below normal, but sufficient agricultural needs and to begin filling some reservoirs. Spring temperatures were generally well above normal in the northern and central Plains and the West, but below normal in most of the East Coast States.

SUMMER (JUN - AUG): Summer rainfall was unusually heavy from southern Texas to western Wisconsin. Parts of Texas and Illinois accumulated over twice the normal amounts for the season. Heavy rain fell over most of Missouri during the first 2 months of the season, and some fields were flooded. Tropical storms brought heavy rains to southern Florida and parts of the East, but total amounts were only slightly above normal for the season. Other parts of the East and Southeast had less than normal rainfall and some areas continued unusually dry. Seasonal rains in the Southwest resulted in heavy accumulations in the southern Rockies, and timely rains occurred in the northern Plains. Summer rain was much less than normal in Eastern Montana and drought continued there. Summer temperatures were near normal through the Corn Belt. The Southwest and most of the Plateau was much warmer than normal.

FALL (SEP - NOV): Seasonal rains in the West were above normal from the coast to the western slope of the Rockies. Snow pack in most of the mountain storage areas was well above normal. At midseason, the remnants of three tropical systems moved across Mexico and triggered heavy rain from Texas to Arkansas and Missouri. A persistent low pressure system in the Gulf of Alaska spawned storms which plagued the west coast with wind, rain, and snow. The season's first major snowstorm formed in the northern Plains during the latter part of November and spread snow cover from the Great Lakes and Midwest to the central and northern Appalachians. Average temperatures were generally warmer than normal in the West and cooler in the East. Average temperatures for the season were 3 to 4 degrees above normal in the northern Plains.

### 1981 CROP SEASON

#### WINTER WHEAT:

Planting of the 1981 crop started in early September 1980 and reached the halfway mark during the first week of October. Growers in the northern Great Plains area finished seeding during the second half of October. In other areas, seeding was finished by mid-to-late November. Progress generally remained on schedule during the planting season with most of the crop seeded under dry conditions. However, timely rains promoted germination and maintained the crop in fair to good condition.

Rain and mild temperatures during the first part of December promoted growth and root development. The crop rated fair to good in December, but was generally without snow cover. Some wind damage was evident in Montana. On the last day of January, snow came to the Corn Belt and Plains States extending southward to the middle of Kansas, providing some protection against winter weather. Above normal temperatures during the second half of February encouraged winter wheat to break dormancy, especially in southern areas. Farmers began fertilizing these fields. The shortage of soil moisture supplies continued to pose a very serious problem as wheat began its spring growth. However, above-normal temperatures and timely early spring rains during March improved prospects in many areas. By the end of March, the crop was greening as far north as Montana, jointing in the southern States, and heading on early planted stands in the Southwest.

Frost in early May damaged many fields in western and northern areas of Kansas. Wind and hail thinned some stands in Kansas, Oklahoma, and Texas during May. Wet weather slowed harvests in Oklahoma and Texas, but the rains improved yield prospects in some localities.

Wheat maturity advanced to the heading stage in northern States by the first week in June. Many fields were turning color and harvesting was well underway in southern States.

Nearly half of the Nation's acreage had been harvested by the end of June, nearly double the progress in 1980. In the Great Plains, harvesting was underway as far north as Nebraska. At the beginning of August, harvest was complete in all areas except Colorado, Missouri, Montana, the Dakotas, and the Pacific Northwest. Progress fell behind schedule in Missouri as heavy rains during July delayed harvesting. By the beginning of September harvest was virtually complete except in the Northwest third of the Nation.

#### OTHER CROPS:

Drought continued to plague much of the Nation as 1981 began. Most areas east of the Rockies had less than half of the normal amount of precipitation during January. Surges of cold air caused a hard freeze to spread into southern Florida on the 13th and 14th of January resulting in considerable damage to citrus crops.

Subnormal temperatures and widespread precipitation held field activities to a minimum during the first half of February. Farmers spread fertilizer and manure where field conditions permitted. Above-normal temperatures

during the latter part of the month melted most of the remaining snow cover in northern areas, encouraged growth of crops and pastures, and promoted early planting in southern areas. Corn planting began shortly after mid-February in Texas and by the end of the month had spread eastward to Florida. Grain sorghum planting began about mid-month in southern Texas. Cotton growers prepared land for planting. Vegetable planting and harvest activities centered in the Southwest, Texas, and Florida.

Heavy rainfall early in March held fieldwork and planting activities to a minimum in the South, but helped replenish soil moisture supplies. Timely rains in the Great Plains improved winter wheat condition. By the end of March, corn planting extended across the South and as far north as Virginia. The crop had started emerging in the extreme South. Planting progress was generally well ahead of average. In the Corn Belt, growers prepared land in anticipation of very early planting; plowing was well ahead of normal. Grain sorghum planting centered in Texas and was ahead of schedule as March ended. Cotton planting was concentrated in Texas and Arizona. Earliest plantings produced good stands and were growing well. Tobacco growers seeded plantbeds with transplanting getting underway in Georgia as the month ended. Peach trees reached full bloom during March as far north as South Carolina.

Land preparation and spring planting made rapid progress during the first half of April, but rain and wet fields in the eastern Corn Belt delayed activities during much of the second part of the month. At the end of April, spring planting was ahead of schedule in all areas of the Nation except the eastern Corn Belt. Corn planting started in the Corn Belt about mid-April. By the end of the month, nearly one-fourth of the acreage had been seeded, slightly behind schedule. Progress in many States was ahead of normal, but planting in the important Corn Belt States of Illinois, Indiana, Iowa, Michigan, Minnesota, and Ohio was slowed by rain and wet fields. Cotton planting was nearly one-half finished by the end of April. All major States except Georgia, New Mexico, and Oklahoma were ahead of schedule. Spring wheat was over three-quarters seeded by the end of April, well ahead of the normal progress of about one-half finished. Grain sorghum planting reached northward into Nebraska and parts of South Dakota, although most activity centered in southern areas. Soybean planting was just getting underway as April ended.

Rains and wet fields in the eastern Corn Belt continued to delay planting activities during much of May, but in other areas, planting progressed on schedule. Beneficial rains fell in the spring wheat growing areas and in the South and East, providing moisture for growing crops. At the end of May, corn planting had advanced to 87 percent complete, only 5 points later than normal. However, in the eastern Corn Belt progress fell further behind schedule and, at the end of the month, progress was 45 percentage points behind normal in Indiana and 30 points behind in Ohio. Further south, in Georgia and North Carolina, planting was completed during May. Many fields in the South began to silk. Soybeans seeding started during the first week of May and by month's end was nearly one-half finished. Progress in nearly all major States was slower than normal. Indiana growers were 60 percentage points behind schedule; Ohio, 55 points; Illinois, 39 points; Michigan, 23 points; and Missouri, 22 points slower than normal. Grain sorghum planting was

just over one-half complete at the end of May. In Texas, the crop was beginning to turn color. Spring wheat seeding neared completion by the end of May and most of the acreage had emerged. Cotton planting progressed ahead of normal during May and by month's end was nearly 90 percent finished. Squaring was getting underway toward the end of the month.

Cumulative heavy rainfall of over 8 inches during June kept fields soggy and further delayed fieldwork across parts of the southern Plains into the North Central Region. Severe weather dotted the area at mid-month causing flooding and extensive crop damage in Indiana, Illinois, and Ohio. At the end of June, corn planting was finished except in Indiana where 95 percent of the acreage was planted and Ohio where 88 percent was planted. Much of the acreage across the South was in the dough stage and some fields reached the dent stage. Soybean seeding was 90 percent finished by the end of June. Ohio producers were 25 percentage points behind average; Kentucky, 22 points; Missouri, 19 points; and Indiana, 15 points. Progress in the Southeast was slow during the month because many farmers were waiting to plant double-cropped soybeans after harvesting small grains. Cotton planting was almost complete by the beginning of June, except in Texas and Oklahoma. Boll set was underway during the month with progress ranging up to 30 percent complete by the end of June in Georgia. Grain sorghum seeding progressed on schedule and neared completion by July 1. The 1981 harvest started in southern Texas during the last week in June.

Excessive amounts of rain during July were received over much of Missouri and southern Illinois. Many low-lying areas were flooded, making winter wheat harvest difficult. Above-normal rain in other parts of the Plains and the East were generally beneficial. A large portion of the Southeast had much less than normal rainfall and drought conditions existed. During July, development of corn and soybeans continued later than normal because of the late planting season. Progress of the cotton crop, however, was ahead of normal. Corn was tasseling and silking during the month, soybeans were blooming and began to set pods, cotton was setting bolls, and grain sorghum was heading. Heavy rains and wet fields delayed small grain harvests in parts of Missouri and reduced the intended acreage of double cropped soybeans.

August precipitation provided adequate moisture supplies in major row crop production regions. Subnormal temperatures slowed plant growth in many areas of the Corn Belt, where development was already late because of the delayed planting season. Progress of the cotton crop continued ahead of normal. By the end of August, corn harvesting was underway as far north as Virginia and Kentucky and ranged up to 67 percent complete in Georgia. Soybean leaves were turning color in early planted fields and, in a few fields, leaves started shedding. Cotton harvest was just getting underway in parts of the Delta. Winter wheat harvest was virtually complete except in the Northwest. Plowing for the 1982 crop became more widespread and seeding started on a limited basis.

September rainfall was above normal along the Appalachians and from the Great Lakes through the Northeast but much of the East, the Plains, and the South were drier than normal. Corn harvesting was underway in all major States by the end of September with progress ranging from 2 percent complete in Wisconsin to 86

percent in Georgia. Soybean combining was active in all States except North and South Carolina. Progress lagged average in many major producing States. Cotton harvest neared completion in the southern half of Texas and stalk destruction was underway.

Wet conditions during most of October further delayed corn and soybean harvests. However, mild, dry weather late in October and early November in the major producing areas helped to dry fields and lower grain moisture content. This enabled growers to spend long hours in the fields taking advantage of the good weather. Progress of the corn and soybean harvests were behind normal in nearly all States except in the Southeast where dry weather enabled growers to harvest at a faster than normal pace. On November 1, the corn harvest was 59 percent complete, 11 percentage points behind average. The soybean harvest had reached 67 percent, 7 percentage points behind normal. The cotton harvest was ahead of last year in California, Arizona and New Mexico, equal in Mississippi but behind in all other States. Progress was slow due to the late planting, wet fields, and later than normal frosts.

Harvests of corn, soybeans, and grain sorghum moved rapidly toward completion during November. By the end of the month, 96 percent

of the corn had been harvested. In northern growing areas, the completion of harvest was delayed by wet fields and, in other States where harvests lagged, producers were waiting for the grain to dry in the fields to avoid high drying costs. By the end of November, 96 percent of the soybean crop had been combined. Combining centered in the Delta, the Southeast, and in Kansas. Harvest was finished in Illinois, Iowa, and Nebraska. Grain sorghum harvest reached 95 percent complete. Progress lagged normal in all States except Oklahoma, South Dakota, and Texas. Cotton harvest was 71 percent finished with progress behind normal primarily in Missouri, Oklahoma, and Texas; other areas were on or ahead of schedule. Warm, open weather at the end of November was favorable for harvest and clean-up operations.

Corn, soybeans, and sorghum harvests were completed during December. Cotton picking, however, continued active in Texas, Oklahoma, and the Southwest. The Texas harvest advanced to 93 percent complete by the end of December. Picking in California, New Mexico, and Oklahoma neared completion with few fields remaining for harvest. The Arizona harvest moved rapidly toward completion with all acreage picked at least once. Growers shredded, disked, and plowed down stalks as fields were harvested and gleaned.

## National Agricultural Summary

January 4-10, 1982

**HIGHLIGHTS:** Bitter cold air plunged into most areas of the Nation at the end of the week, increasing feed requirements for livestock. There was some concern about the possibility of winterkill on wheat fields not having protective snow cover. Freezing temperatures threatened Florida's vegetable and citrus crops and damaged some crops in California. Cotton harvest in Texas reached 99%. Clean-up operations were active in Texas and the Southwest. Tobacco growers graded and marketed the 1981 crop and prepared seedbeds for the 1982 crop. Fruit growers pruned deciduous fruit trees and continued dormant spraying as the weather permitted. Marketing of apples picked up momentum. Extremely cold weather stressed livestock in some areas and increased feed requirements. Dry weather limited the growth of grasses in Texas; grazing was limited. Calving and lambing continued.

**SMALL GRAINS:** Winter wheat was generally in fair to good condition throughout the major production areas. However, growers in parts of the Corn Belt and the Southeast were concerned that high winds and unusually low temperatures might cause significant winterkill on fields lacking protective snow cover. Kansas wheat rated good to excellent, with central areas of the State showing the best condition while southeastern areas had the lowest ratings. Oklahoma fields remained in good condition with grazing active in many areas. Montana wheat was in fair to good condition, with light snow cover limiting wind damage. Arizona growers prepared land and continued planting small grains; earliest seedings reached the jointing stage. Heavy rains caused water damage to small grains in some areas of California. Additional seedings are expected. Texas wheat fields showed signs of moisture stress with late planted fields slowly emerging. Spraying for Greenbug started on the Low Plains of Texas.

**OTHER CROPS:** Cotton harvest in Texas reached 99% complete, compared to the average of 98%. Harvest was finished in many areas of the High Plains and gins were working on modules. Clean-up operations were active in harvested fields. The Arizona harvest neared completion rapidly after being delayed by rain and muddy fields earlier in the season. Growers in New Mexico finished picking except for a few limited fields, but clean-up of fields remained active. Tobacco growers continued to grade and market the 1981 crop. Seedbeds were being prepared for planting the 1982 crop. The Florida sugarcane harvest remained active; cane was in good condition. Sugarbeets continued to make good progress in Arizona; growth was ahead of normal. Potato planting continued in Arizona.

**FRUITS AND NUTS:** The Texas pecan harvest neared completion. Yields were good to excellent, but quality rated only fair to good. Limited harvesting was still in progress in New Mexico. Florida's citrus trees continued in good condition, although irrigation became necessary in many areas. Harvest of oranges for processing was active and grapefruit picking increased. Arizona's citrus groves continued in mostly good condition in spite of low temperatures. Harvesting of lemons, Navel oranges, tangerines, and grapefruit made seasonal progress. New crop Valencia oranges sized and colored well. The Texas citrus harvest continued; volume of shipments increased. High winds swept through parts of California, leaving many avocados on the ground. Some of the lemon crop had wind scar damage. Wet fields limited the Navel orange harvest and caused temporary warehouse shortages.

**VEGETABLES:** Above-normal temperatures prevailed most of the week in Florida's vegetable growing areas. Rainfall was light, making irrigation necessary in most fields. Total shipments increased 36% from the previous week. Chinese cabbage, okra, radishes, and squash were the only vegetables declining in volume. The strawberry harvest was active with quality and size reported very good.

Freezing temperatures plunged into California causing some damage to vegetable crops. Cool weather delayed the development and harvest of many crops. The broccoli harvest increased in the South Coast and Desert areas, but was very light in Central Coast areas. The lettuce harvest was light in Desert areas. Cutting was delayed until late mornings because of ice formation in the heads. The first blooms on strawberries were damaged by frost in South Coast areas.

In the Rio Grande Valley of Texas, harvest of lettuce, cauliflower, carrots, and spinach were active. Onion planting neared completion. The spinach harvest continued in the San Antonio-Winter Garden area, although freezing temperatures at the end of the week may have damaged the remaining plants. Onion planting started in the Trans-Pecos region.

**PASTURE AND LIVESTOCK:** Cold weather which gripped the Nation increased the need of supplemental feeding. In some areas, the extremely cold temperatures stressed livestock. Dry conditions in Texas slowed the growth of grasses and small grains. Grazing was very limited and supplemental feeding increased. Hay and feed supplies were adequate in all areas. Calving and lambing continued active in many areas of the Nation.

## 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 SRS State Offices in cooperation with the National Weather Service.

**ALABAMA:** Temperatures were variable with some highs in the upper seventies midweek and lows in the vicinity of zero over the weekend. Rainfall mostly light.

Fieldwork 1.2 days. Soil moisture adequate to surplus. Activities: Routine chores, winter maintenance and repairs. Plowing ranged from over 50% in some northern counties to less than 5% in the south with fieldwork progress behind average. Conditions: Pasture feed short; stored feed mostly adequate; livestock fair; pastures mostly poor; wheat fair to good.

**ARIZONA:** Scattered rain, snow half of week. Rainfall varied few hundredths in. western third, over 1.00 in. some northern areas. Snow level mostly over 6,000 ft. deviations. Amounts ranging 1 to 7 in. Average temperatures ranged 5° below normal to 5° above.

Cotton harvest resumed following rain, muddy conditions. Harvest rapidly winding down, virtually complete many areas. Land preparation, planting small grains, wheat, barley, continued conditions allowing. Earliest plantings reached jointing stage. Most remaining earlier plantings ranged just emerging through tillering. Alfalfa haying continued very slow due colder temperatures. Sheep being pastured alfalfa fields. Sugarbeets good progress, top, tap root development mostly ahead normal. Very few sorghum fields remained. Lettuce harvest resumed field conditions allowing. Harvest broccoli, cabbage, cauliflower, carrots, greens, green onions good progress. Land preparations, planting lettuce, mixed vegetable for late winter, spring active. Planting potatoes, dry onions continued. Planting dry onions mostly complete, potatoes expected continue through most January. Citrus groves remained mostly good condition in spite of effects low temperatures. Harvest lemons, Navels, miscellaneous oranges, tangerines, grapefruit seasonal progress. Navel, miscellaneous harvest winding down, lemons past peak, grapefruit steady but slow. New crop Valencia continued size, color very well. Ranges fair to good, southwestern Deserts poor. Livestock fair to good, water supplies. Soil moisture adequate.

**ARKANSAS:** Cold, dry week with temperatures below normal. Only 1 to 2 days with very light precipitation. Highest temperature 78°, lowest -5°. All departures from normal 0 to -10°. Most rainfall 0.97 in., least zero.

Soil moisture getting dry. Ponds low. Pastures fair to good. Roads good condition for fuel and feed deliveries.

**CALIFORNIA:** Mean temperatures almost uniformly a few to several degrees below normal, and a couple of stations reported overnight minimums in the below zero range. The central portion of the State, especially the Central Coast, was soaked as very moist air produced storm precipitation totals that ranged upwards into the teens. In the Sierra Nevada, snowfall from the storm's precipitation was measured in feet. The mid-California deluge was concentrated, generally, in a couple of days near the beginning of the week.

Wet weather conditions hampered field activity. Small grains progressing, some water damage. Additional planting expected. Alfalfa and sugarbeets good conditions Desert areas. Some corn and milo still unharvested. Winds 75-80 mph swept through parts of southern coastal counties. Many avocados on ground, but growers will probably pick

most up. Significant downgrading will be seen in lemons because of wind scar. In Central Valley, wet Navel orange groves limited picking, caused temporary warehouse shortage. Also light lemon picking there. Cool weather slowed development and delayed harvest vegetable crops. Artichoke harvest fairly light. Asparagus cutting very light Desert. Broccoli increasing South Coast and Desert, very light Central Coast. Carrot harvest moderate Kern, increasing slowly Desert. Cauliflower harvest active South Coast, South Bay. Celery harvest moderate South Coast. Lettuce harvest light Desert, cutting delayed till late morning by ice in heads. Potato movement from storage fairly light. First bloom strawberries damaged by frost South Coast. Rains improved range moisture southern areas but made pastures muddy; flooded some northern areas. Additional moisture needed southern districts. Calving, lambing continue active.

**COLORADO:** Heavy snows continued over the mountains until midweek and then tapered off to flurries. At lower elevations, periods of light snow were reported during the first part of the week, with clear to partly cloudy conditions during the latter part. Temperatures were well below normal in most areas with nighttime temperatures reaching well below zero in some high mountain valleys. Fraser recorded the low temperature of 41° below zero.

**FLORIDA:** A weak cold front moved downward through the State, 4th and 5th, accompanied by 0.25 to 0.50 in. of rain in spots. Temperatures started a general downward trend with the frontal passage, continued falling through morning of the 10th with tens and teens into extreme north while extreme southern portion held in 50's and 60's.

Soil moisture adequate west, north; short central, south. Land preparation increasing slowly for spring planting. Sugarcane good condition, harvest active. Tobacco plants in beds good growth. Small grains responding well to recent rains and warmer temperatures. Continued warm temperatures most of week with some scattered, light rains promoted recovery, growth of winter forage crops. Some additional winter pastures sufficiently advanced to permit grazing. Conditions mostly good Panhandle, fair elsewhere. Cattle condition improved somewhat with warmer temperatures. Surface moisture short, irrigation many areas by weekend. New foliage growth starting. Orange harvest active for processing, picking of grapefruit increased. Above normal temperatures continued most of week in vegetable areas. Daytime highs mostly in 80's; nighttime lows, 60's and 70's. A cooling trend started after midweek. Skies clear to partly cloudy. Rainfall light, scattered. Winds light to moderate, irrigation active. Total vegetable shipments increased 36% from previous week. Harvest gained cabbage, carrots, cauliflower, celery, sweet corn, eggplant, escarole, lettuce, parsley, peppers, strawberries and tomatoes. Supplies about steady snap beans, cucumbers and southern peas. Volume declined Chinese cabbage, okra, radishes and squash. Strawberry harvest active. Quality, size very good.

**GEORGIA:** Rainfall Statewide early in week and again south late in week. Amounts 3.00 in. north and central, 1.00 in. south. More than 5.00 in. locally northwest. Mild temperatures near normal midweek. Overall 3 to 5° above normal. Bitter cold weather developed 9th and 10th. Record lows 10th. No precipitation.

Soil moisture adequate to mostly surplus.

Limited field activity. Small grains continue good. Tobacco plants emerging. Pastures mostly fair to good. Cattle mostly fair to good. Hogs fair to good.

**HAWAII:** Heavy rains pelted the Hawaiian Chain on all Islands except the Island of Hawaii. Crop damage to leafy crops was heavy from the rains on Island of Oahu. Other crops sustained wind damage in exposed areas. Trees in banana and papaya orchards were toppled and leaves heavily shredded. Elsewhere, other Islands, heavy rains temporarily halted farm activities. Muddy conditions prevented harvesting and plantings. Vegetables: Supplies most crops down. Bruising will lower quality. Bananas: Wind caused heavy leaf strippings. Some heavy isolated damage in exposed areas. Papayas: Wet conditions increased phytophthora disease. Strong winds toppled trees in a few orchards. Spraying frequent. Pineapples: Harvesting for fresh purpose only. Sugar: Announcement of closing one sugar plantation on Island of Hawaii made by sugar company. Gradual phase out over three years planned. Pastures: Rains beneficial to some previously dry areas. Forage ample.

**IDAHO:** Temperatures averaged 3 to 21° below normal. The high was 44° in the southwest and the low was 41° below zero in the central region. Precipitation was light with only a few eastern and south central areas receiving above normal amounts.

Farmers spent much of the week digging out from under the previous week's storm. Roads, fences, corrals, haystacks and other feed supplies were covered by drifting snow. Livestock stressed by severe cold and snow and buried hay. Lambing underway.

**ILLINOIS:** Temperatures 12 to 15° below normal north, 8 to 11° below central, 5 to 8° below south. Some record low temperatures set. Precipitation 0.30 in. northern districts; 0.10 in. or less over remainder of State. Precipitation occurred as snow. Activities: Livestock feeding and care, machinery repair.

**INDIANA:** Record breaking cold. Temperatures averaged 4 to 8° below normal. Highs reached the 40's north to high as 70° south early in week, but lows fell below zero Statewide on weekend. Precipitation averaged 0.20 in. north, 0.20 in. central and 0.07 in. south. Snow cover ranged from 11 in. north to 4 in. central and less than 1.00 south. Sunshine 50% of possible. Activities: Attending meetings, working on taxes, cutting wood, clearing land and ditching, hauling grain, hauling manure, removing snow, caring for livestock and usual chores.

**IOWA:** A bitterly cold week with temperatures averaging 13 to 19° below normal. Temperatures plunged as low as 31° below zero on the 10th at Newton while strong northwesterly winds resulted in chill factors of 60 to 90° below zero in all sections of the State on the 9th and 10th. Precipitation, however, was of little consequence with amounts generally less than 0.10 in.

**KANSAS:** Precipitation averaged little or none west and south central to 0.10 in. north central, 0.25 in. northeast and east central, 0.50 in. southeast. Temperatures averaged only 14° north central to 16° northeast and east central to 20 to 24° west and south. These were 6 to 9° below normal west and south to 12° below normal northeast quarter.

Farmers, ranchers step up livestock feeding response to severe winter weather. Supplies feed forage adequate though cold weather necessitated stepped up feeding most areas. Grain stubble utilized for grazing where available. Wheat condition

rating good to excellent over most of State. Central area showing best condition while southeast has lowest rating. Light wind damage noted scattered counties southern half State. Surface moisture short to adequate western, adequate to surplus elsewhere.

**KENTUCKY:** Average air temperatures were near or slightly below normal with mean daily temperatures mostly in middle 40's. Precipitation was also slightly below normal with most reporting stations receiving 0.33 to 0.50 in. Normal precipitation is about 0.50 to 0.75 in.

Extreme cold over weekend, stressed exposed livestock. Concern over fall seeded grains because of sub-zero temperatures with little or no snow cover. Burley marketings were heavy for the January 4-7 period. Other farm activity minimal, although extreme cold increases farm chores.

**LOUISIANA:** Temperatures 1 to 4° below normal. Extremes 83° in southeast on 7th and 16° in north central on 11th. Rainfall: Trace to 0.89 in. Livestock care and routine chores.

**MARYLAND AND DELAWARE:** Temperatures averaged 4° above normal. Highs averaged in the mid to upper 40's. Lows averaged in the upper 20's to low 30's. The greatest precipitation was reported at Neward, Delaware with 2.00 in. and Georgetown, Maryland had the least at 0.76 in. Mostly cloudy on 9th with rain and drizzle but little or no accumulation. Highs mid 30's, lows in the mid-teens. Mostly sunny on 10th with some clouds. Temperatures dropped considerably. High was in the low teens, low was near 2° with a trace of precipitation.

**MICHIGAN:** Temperatures started out above normal but by midweek they dropped below normal due to a cold front which drifted over the State. Average temperatures ranged from 4° below normal to 13° below normal. Large amounts of snow fell over the entire Upper Peninsula and down into the western portion of the Lower Peninsula. Scattered snow flurries drifted throughout the rest of the Lower Peninsula and accumulated moderate amounts.

**MINNESOTA:** Temperatures averaged below zero for week over the entire State with the average temperature ranging from 3° below zero in the extreme south to 14° below zero in the extreme north except 1° at Grand Marais. Departures from normal were generally 15 to 20° below normal. Extremes were 29° at Grand Marais and 37° below zero at Bemidji. Precipitation was light ranging from a trace to 0.10 in. Snowfall ranged from a trace to 2 in. Snow depth on the ground at week's end was around 4 in. in the northwest and southwest and generally 5 to 10 in. elsewhere except 11 to 21 in. north central and northeast.

**MISSISSIPPI:** Week started out mild with this trend continuing through midweek. The weekend was much colder as a strong arctic front moved through the State. Midweek average temperatures ranged from 36° at Tuka to 56° at Poplarville. Seventies were common highs through midweek with 79° at Vicksburg the warmest. Coldest weather 10th with a low of 30° at Tuka the lowest. All stations reported rain with most of it through midweek. Natchez had the least with 0.02 in. and Columbus the most with 3.59.

Soil moisture adequate. Three days suitable for fieldwork. Hay and roughage and feed grain supplies adequate. Wheat, pasture, and livestock conditions fair to good.

**MISSOURI:** Cold air gripped the State sending temperatures from 5 to 11° below normal with the exception of the Bootheel where normal temperatures were recorded. Snow fell across the northern half,

with rain and freezing rain falling over the southern half. Precipitation was generally less than 0.50 in. but the Bootheel averaged around 1.50 in.

**MONTANA:** Very cold week again as arctic air held over most of State. Temperatures over north central and northeast averaged 23° below normal. The average temperature at Glasgow during week was 13° below zero. Elsewhere temperatures averaged 3 to 14° below normal. Highest 46° at Billings, lowest 52° below zero at Loma. Precipitation generally light over southwest and central, about normal elsewhere.

Winter wheat condition fair to good. Snow cover reported poor to fair, wind damage light. Cattle and sheep condition good, most on supplemental feed.

**NEBRASKA:** Precipitation: Some heavy snow in northern part of Panhandle and north central at beginning of week; amounts 4 to 6 in. Elsewhere, traces to 1 in. Temperatures: Bitter cold; week averaged 15 to 20° below normal.

**NEVADA:** Worst blizzard in years hit northern half of State early in period. Temperatures dipped to sub-zero many areas last half of week. Temperatures averaged well below normal northern areas, above normal southern tip.

Livestock feeding operations hampered by heavy snows and generally inclement weather.

**NEW ENGLAND:** Precipitation averaged between 0.50 and 1.00 in. over northern portions of Maine, New Hampshire and Vermont. Precipitation averaged between 1.50 and 2.50 in. over the southern portion of Vermont, New Hampshire and Maine and over southern New England. Bulk of precipitation was rain on the 4th while mostly snow everyday the 6th through the 9th. Temperatures well above normal 4th and 5th with high readings in the 30's and 40's north and 40's and 50's south. Cold arctic air over weekend dropped temperatures well below normal with lows generally below zero over the north 9th and 10th with single digits over south on the 10th.

**NEW JERSEY:** Temperatures were 3 to 5° below normal, averaging 25° north, 29° south and 32° coastal. Extremes -6° at Charlotteburg and 62° at Hammonton. Precipitation was slightly below normal, except in northern counties, averaging 1.11 in. north, 0.59 in. south and 0.47 in. coastal. Heaviest 24-hour total reported was 1.30 in. at Charlotteburg.

Farmers caring for livestock and tending to other normal winter chores.

**NEW MEXICO:** Snow fell over the northwestern areas. Temperatures averaged near normal.

Fall and winter moisture continues to be limited in most areas. Soil moisture remains in short to adequate supply. Clean-up of cotton fields continued as harvest complete except for some limited fields. Wheat reported in fair to good condition with grazing active. Barley in fair to good condition with grazing active. Some harvesting of pecans still in progress with trucks hauling nuts to be shelled. Planting of spring lettuce underway. Fall planted onions in good condition with land preparation for planting of sweet spanish onions. Ranges in fair to good condition with supplemental feeding continuing but still below normal. Range fire hazard continues high in some areas. Livestock in good condition.

**NEW YORK:** Early week temperatures were normal, far below normal over weekend. Precipitation moderate to heavy on 4th, generally light thereafter. Bad ice storm on 3rd. Heaviest rain in lower Hudson Valley and Catskills, up to 2.00 in.

**NORTH CAROLINA:** Temperatures near normal in the east to 1 to 3° below normal in the west. Precipitation ranged from 0.05 in. at Fayetteville to 3.00 in. in Aurora.

Fieldwork: 1.4 days suitable. Soil moisture: 3% short, 54% adequate, 43% surplus. Hay and feed grains supplies mostly adequate. Major farm activities: Cutting firewood and repairing farm equipment.

**NORTH DAKOTA:** The week was unseasonably cold with slightly below normal precipitation. Temperatures averaged 19° below normal ranging from 16° below normal in south central to -21° below normal southwest. Extremes ranged from a high of +24° southwest to -37° west and north central. Precipitation averaged 0.04 in. below normal ranging from 0.04 in. above northwest to 0.09 below east central.

Bitter cold with high winds and blowing snow made travel difficult to impossible at times. Severe wind chill factors were recorded during much of the week necessitating extra care for livestock and increased feed requirements. Record low wind chill conditions of -98° were recorded on 9th. Farmers doing daily chores, planning for coming year.

**OHIO:** High temperatures well into 50's. Highs freezing or lower late week and record breaking weekend highs below zero; 15 to 20° below normal. Precipitation light. Totals ranged from less than 0.10 to 1.00 in. Strong winds caused blowing and drifting snow. Frost penetrated beyond 4 in. level. Snow cover ranged from 1 to 3 in. central but less than an inch in parts of south. Heavier amounts near the lake.

Low temperatures and high winds may prove detrimental to winter wheat.

**OKLAHOMA:** A strong arctic air mass began moving into the State on night of 8th, causing temperatures to drop to near record levels by the end of the weekend. Temperatures ranged from 8° below normal across the northern third of the State to 3° below normal in the southwest. Precipitation was light with some light snow occurring over extreme north central on the 6th. Precipitation ranged from 0 to 0.03 in. in the northeast.

Wheat remains good condition. Grazing active wheat pasture. Cattle good shape with supplemental feeding Statewide.

**OREGON:** Record breaking minimum temperatures reported from eastern and central stations. Burns reported a record breaking -27° on 7th and Baker -10° the same day. Precipitation averaged 2.50 in. along coast; 2.00 in. in the Willamette Valley; 0.50 to 1.00 in. at central locations; up to 0.10 in. at eastern stations.

Soil moisture supply adequate to mostly surplus in west; adequate east. Winter wheat condition fair to mostly good; many fields covered with snow. Weeds of concern to many growers. Range and pasture conditions good. Livestock good. Feed supply surplus; recent snow and cold temperatures will help clean up 1980 crop hay reserves and may improve demand on 1981 crop.

**PENNSYLVANIA:** The coldest week of the season. It was 1° colder than the week of December 21st. The average temperature was 23°, 6° below normal. Precipitation was 0.44 in. Normal precipitation is 0.62 in. The extremes were 65° for maximum and -13° for minimum. Record-breaking cold occurred at most places over the past weekend. Snow accumulation mostly in the lea of Lake Erie and western sections of the State ranging up to 12 in.

**PUERTO RICO:** Island average rainfall 0.80 in. or 0.07 in. below normal. Highest total 3.28 in., highest 24-hour total 1.40 in. Temperatures aver-

aged about 77° on Coasts and 73 to 68° Interior Divisions. Mean station temperatures ranged from 79.2° to 62.2°. Extremes 89 and 53°. Total rainfall 0.48.

**SOUTH CAROLINA:** In contrast to several previous weeks, the State received below normal rainfall. The rain that did occur was in thunderstorms. Temperatures averaged near normal for most of the week, except for on 10th as a cold blast of arctic air entered the State leaving high temperatures only 20 to 30°.

Soil moisture adequate. Winter wheat in good condition. Tobacco bed seeding coming to a close, while some beds have emerged. Other activities include caring for livestock, pruning fruit trees, winter maintenance and repairs of farm machinery and other routine chores.

**SOUTH DAKOTA:** Extreme cold. Temperatures averaged much below normal. Departures from normal ranged from 17 to 21° below normal. Extremes: -42 and 40°. Wind chill factor reached -85°. Most areas received above normal precipitation. Highest amount reported was 0.44 in. of precipitation as 7 to 8 in. of snow. The central and west have above normal precipitation while the east has below normal precipitation.

**TENNESSEE:** Two cold fronts swept through the State. The first passed during midweek and was reinforced on 9th. In some sections, cold front brought lowest temperatures in more than a decade. Temperatures in the east averaged 2° less than normal, the middle 3° less than normal and the west 6° less than normal. Precipitation was also less than normal, averaging less than 0.58 in. Burley tobacco sales end on 14th.

**TEXAS:** Weather: Fair skies first of the week before strong polar cold front entered State 6th. Cold temperatures next few days as arctic cold front moved through 9th and 10th produced light showers South Texas. Light snow parts of Panhandle, West Texas 10th due to cold air. Otherwise fair skies prevailed.

**Commercial vegetables:** Rio Grande Valley harvest of lettuce, cauliflower, carrots, spinach active. Cabbage, onions progressing well. Onion planting virtually complete. Citrus harvest continued, shipments picking up. San Antonio-Winter Garden area harvest of cabbage, carrots resumed. Spinach harvest continued although below freezing temperatures on 10th may hurt remaining plants. Uvalde spinach harvest active. Trans-Pecos region harvest of cabbage continued. Planting of onions underway. Pecan harvest continued to wind down, yields good to excellent. Quality only fair to good.

**Range and livestock:** Range, pastures showing effects of dry conditions. Growth of grasses, small grains virtually stopped, grazing very limited. Plains wheat pastures still providing some grazing, growth affected by dryness, colder temperatures. Livestock in good condition. Supplemental feeding increasing, becoming more frequent.

**Crops:** Cold, dry weather prevailed. High winds deplete surface moisture; some small grain fields showing signs moisture stress. Land preparation spring crops active. Cotton harvest complete many areas High Plains; gins working modules. Clean-up operations active harvested fields. Small grain provide good grazing; many dryland stands poor condition. Wheat fields showing signs moisture stress; late planted stands slow emerging. Greenbugs problem Low Plains and producers started spraying operations. Reported wheat condition was 78% of normal with 14% excellent; 41% good; 41% fair; and 4% poor. This compares with 66% of normal last year.

Cotton harvested 99%, 96% last year, 98% average. Pecans harvested 98%, 93% 1980, 97% average.

**UTAH:** Recurring periods of snow forepart period. Accumulated amounts moisture generally moderate to heavy. Snow accompanied by strong winds closed many roads and isolated farms and ranches.

Farm activities limited to routine chores and care of livestock and poultry. Potato, onion and apple sorting and marketing continued to move as needed.

**VIRGINIA:** Temperatures averaged in low 40's, several degrees above normal. Colder air entered the State at end of period. Extremes: 72° at Richmond on 7th, 15° at Chilhowie and Bluefield on 8th. Precipitation was heavy and mostly rain, averaging about 1.25 in. Some mixed snow and rain fell in western sections on the 3rd.

Wet fields have reduced days available for fieldwork: 1.6. Topsoil moisture rated 11% short, 61% adequate, 28% surplus. Favorable temperatures early in week permitted some orchard pruning and fence and building repair. Care and feeding of livestock and preparation for extremely cold week-end were major farm activities. Hunting, record-keeping, tax preparations, and meetings were also active. Tobacco growers still marketing sun-cured and dark-fired tobacco. Flue-cure growers evaluating new program. Livestock and winter grains continued in good to excellent condition; calving and lambing normal.

**WASHINGTON:** West: Average temperatures were 8 to 12° below normals. Total precipitation was one-third to one-half of expected normals. Snow fall varied from 6 to 9 in. in the north to 1 to 2 in. in the central interior. Activities limited to livestock feeding and meeting attendance.

East: Average temperatures were 10 to 14° below normals. The lowest temperature -- 29° below -- was reported at Odessa during midweek. Precipitation was generally below normal, however, snow cover evident through the area. Crops well protected with present prospects good. Hay movement increased considerably but supplies adequate.

**WISCONSIN:** The worst winter storm in several seasons hit State on the 3rd and 4th leaving much of east and south paralyzed. Between 8 to 16 in. of snow fell. Heavy snow, accompanied by strong winds, caused snow plowing operations to stop in many areas. Most schools and industries were shut down on the 4th. Northwest received 1 in. of snow from the same storm.

Bitter cold air on the 6th and persisted through the 10th. Temperatures ranging from -15 to -30° were common. Milwaukee tied a record low reading of -25° on the 9th which had previously been recorded back in 1875. Snowfall after 4th was insignificant except in the Lake Superior snowbelt region. Pence (Iron County) reported 20 in. of new snow. High temperature of 35° was recorded in Madison on the 3rd while the cold spot was Morse which reported -35° on the 9th.

**WYOMING:** Temperatures below normal, although some sub-zero readings at night were contrasted by some warm afternoon temperatures. Coldest -32° in Green and Bear Drainage and warmest 46° in Lower Platte Drainage. Precipitation did not vary much from normal. Greatest total was 0.91 in. in Snake Drainage. Greatest snow depth on the ground 44 in.

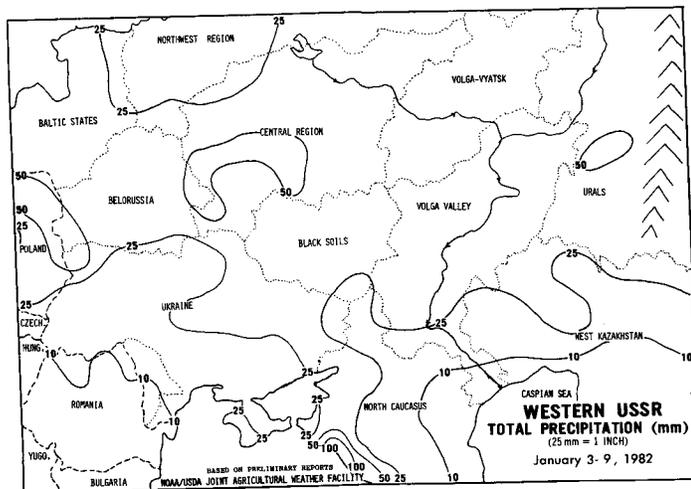
Winter wheat mostly good condition, little wind damage, additional moisture needed. Livestock mostly good condition. Supplemental feeding increasing due to colder weather; snow cover. Feed supplies adequate most areas.

WEST VIRGINIA: Temperatures averaged 4° above normal. High 64°, low 10°. Precipitation averaged above normal except in northwest. Severe cold front moved into State late in the week. Soil moisture adequate. Days worked: 2.9. Hay, grain, and feed supplies adequate.

### International Weather and Crop Summary

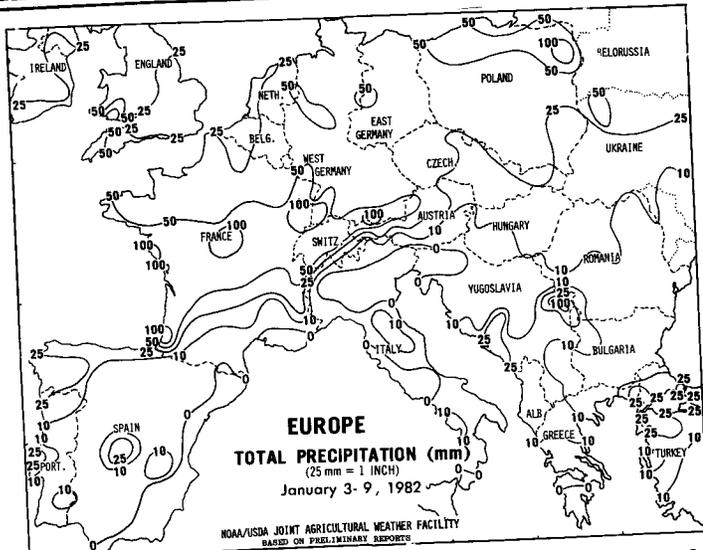
HIGHLIGHTS  
January 3-9, 1982

- WESTERN USSR: Snow cover increases in the north but remains marginal in the south.
- EUROPE: More rain needed in Spain; unseasonably cold and wet in the north.
- MEXICO: Sunny, mild weather favored agriculture.
- NORTHWESTERN AFRICA: Scattered showers beneficial in Morocco; dry to the east.
- SOUTH AFRICA: Beneficial rainfall in some corn areas; crop stressed in others.
- SOUTH AMERICA: Showers aid summer crops advancing into reproductive development.
- AUSTRALIA: Scattered showers benefit Queensland grazing areas; wheat harvest near completion.
- EASTERN ASIA: Most dry weather in winter grain areas.
- SOUTH ASIA: Beneficial rainfall for winter grains.

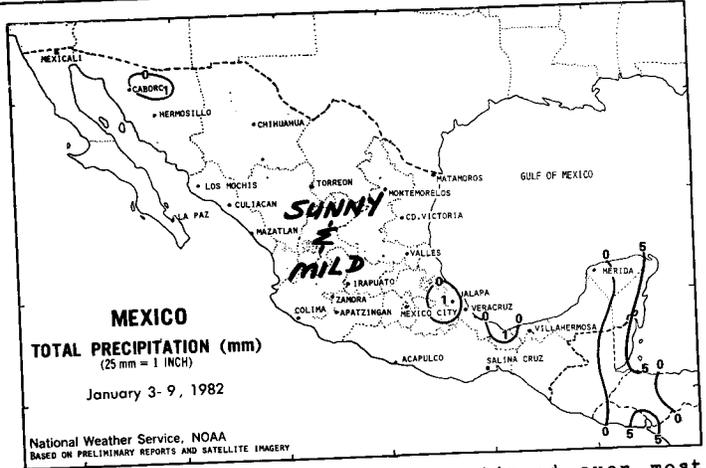


WESTERN USSR: Above-normal precipitation fell across most of the region. Heavy snow fell across winter wheat areas from Belorussia into the Central Region and Black Soils. Very cold temperatures were reported in these areas during the week but an adequate snowcover minimized

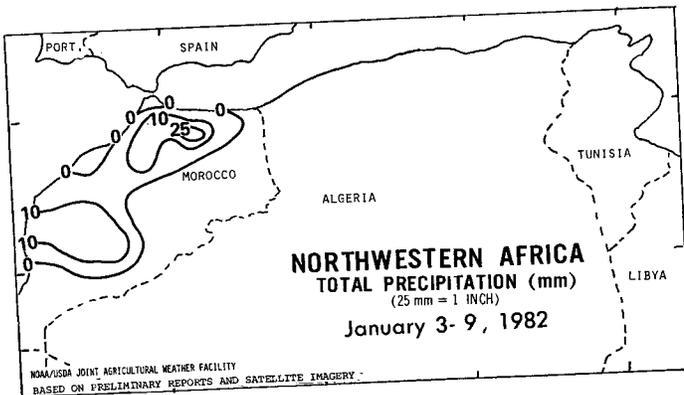
potential winterkill. More southerly winter wheat areas of the Ukraine, North Caucasus, and southern Volga Valley maintained minimal snowcover, leaving these areas more vulnerable to winterkill in the event of a cold air outbreak. Temperatures remained above normal in these southern areas.



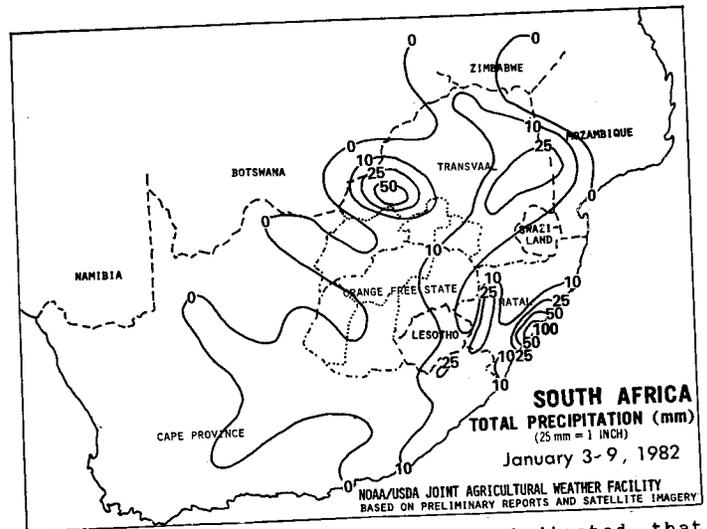
**EUROPE:** Drier weather returned to crop areas of the Iberian Peninsula. Portugal welcomed the drier weather but more rain is needed in winter grain areas of Spain. In Spain, winter grain planting operations are underway in most areas and timely rains during the remainder of the growing season are extremely important as subsoil moisture supplies are very low. In France, periods of snow, freezing rain, and rain may have produced ice glaze conditions over some winter wheat areas. In England, abnormally heavy snowfall along with below-normal temperatures continued to persist. Wet weather also occurred over some central and eastern areas of Europe. Temperatures this week were generally below normal in the north and above normal in the south and west.



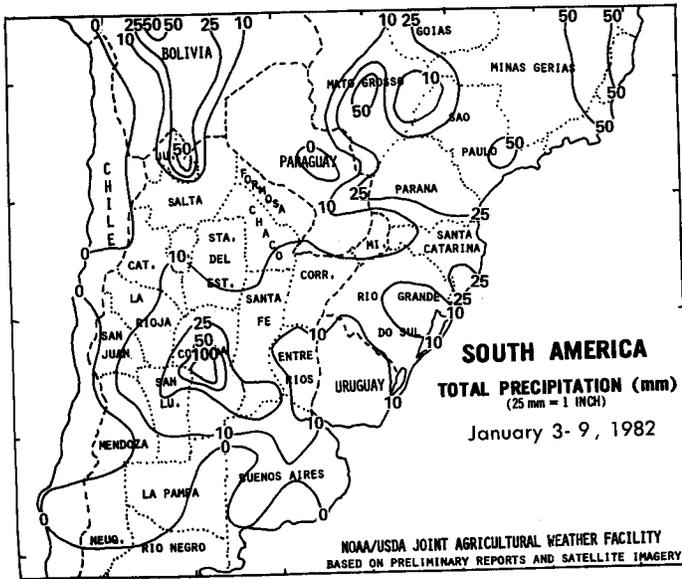
**MEXICO:** Sunny, mild weather continued over most of the country, generally benefiting agriculture. Weather was good for cutting sugarcane and harvesting citrus and coffee in the eastern states. Afternoon highs averaging 27°C and overnight lows around 13°C favored development and harvesting of tomatoes and other tender vegetables in the Culiacan Valley.



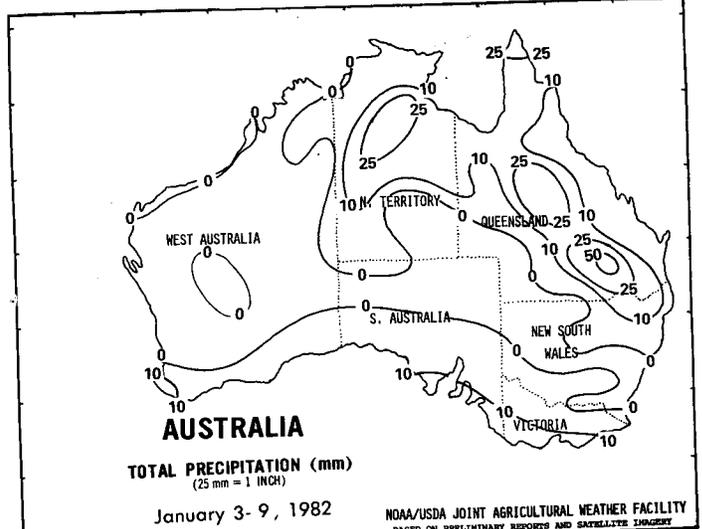
**NORTHWESTERN AFRICA:** Scattered showers over Morocco benefited newly-sown winter grains. Above-normal temperatures benefited well-watered crops in the north, but reduced surface soil moisture for newly sown winter grains just south of Casablanca. In Algeria and Tunisia, crop areas received no precipitation. Apart from western Algeria, soil moisture was adequate for winter grains in spite of persistent above-normal temperatures.



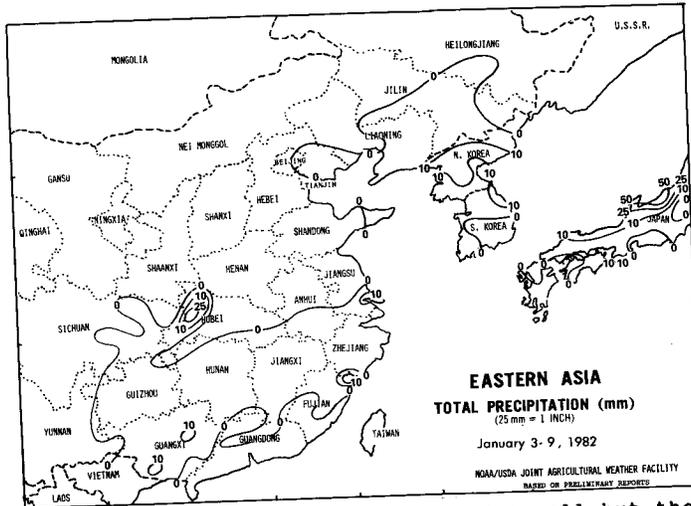
**SOUTH AFRICA:** Available reports indicated that rainfall increased in southern, eastern, and northeastern parts of the corn growing area. Soil moisture should be adequate for plant growth in these areas. Rainfall appeared to be lighter in some central, western, and southwestern growing areas. Dry conditions and higher temperatures may be stressing crops in the Western Transvaal and some western parts of the Free State. Most of the corn should not be seriously affected yet, because of the late planting, but conditions must ameliorate to get the crop through the flowering stage unscathed. Temperatures in other corn-growing areas returned to near normal.



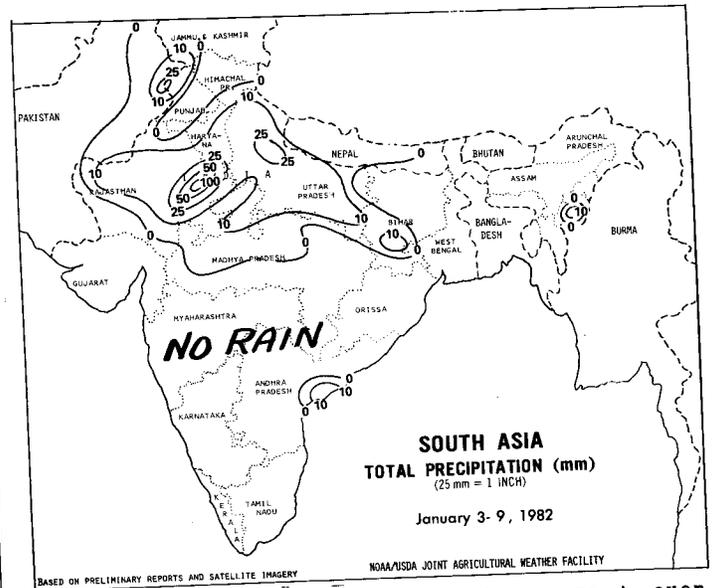
**SOUTH AMERICA:** Showers occurred over most crop areas but weekly rainfall totals were variable due, in part, to incomplete reports. Moisture supplies remain favorable for crop development in Brazil. Corn and soybeans in northern crop areas are progressing through the filling periods while crops in Brazil's southern area as well as in Argentina's major crop area are advancing into the crucial reproductive stages of development. Although moisture supplies are generally adequate in Argentina, additional rainfall is needed during the next several weeks to meet the peak crop moisture demands, especially if episodes of warmer than average weather occur during this period. Argentina's second soybean crop, planted after the wheat harvest, is in early growth stages while the sunflower crop in northern Argentina is reaching maturity.



**AUSTRALIA:** Showers occurred all along the southern coast. However, weekly totals of less than 10 mm, except in extreme southern Victoria, had little impact on the late grain harvest. Favorably dry weather during the past several weeks in most winter grain areas has brought the harvest season near its completion. Scattered showers also benefited summer crops and grazing areas in Queensland.



**EASTERN ASIA:** Dry weather returned to all but the southernmost portions of China's winter grain belt. Light precipitation of generally less than 5 mm fell south of the Yangtze River, with some scattered amounts of up to 30 mm. Temperatures remained slightly above normal, but only in the south near the Yangtze River were conditions warm enough to permit growth. In South Korea most winter grain areas had only very light precipitation with conditions of 15-25 mm fell in the northern part of the country.



**SOUTH ASIA:** Beneficial rainfall occurred over winter grain areas of northern India and northeastern Pakistan. This was the most significant rainfall in that area since early November when widespread rains permitted winter grain sowing. Some parts of Punjab and western Haryana in India remained dry, but irrigation facilities are well developed in the important grain areas of Punjab. The moisture should carry the crop into the heading stage in February. In Bangladesh, eastern India, and southern India, virtually no rain fell. Temperatures stayed slightly above normal throughout the region.

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# IMMEDIATE - U. S. Weather Report

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### Special Florida Freeze Damage Report Morning of January 12

Temperatures dropped Monday night into the 20's throughout the citrus belt of Florida and by Tuesday morning minimum temperatures ranged from 18-20 degrees in the northern and central areas to 22-24 degrees in the lower interior citrus growing areas. Durations below 28 degrees ranged generally from 8-12 hours. Leaf curl was observed in many locations. Ice was observed in fruit in all northern and central locations and in the majority of groves in the south central areas.

Damage to Florida vegetable crops ranged from very light to very severe depending upon the crop, stage of maturity and location. Supplies during February will be greatly reduced where damage is severe. An area breakdown with low readings follows: Hastings, Zellwood, Orlando, 18-23 degrees. Most crops are winter hardy and overall damage is light. Palm Beach, 25-32 degrees. All crops were damaged. Sweet corn suffered foliage top burn. Older snap beans were hit hard and yields will be reduced. Damage to peppers from bloom to fruit stages was moderate to severe. Some fruit was frozen. Older tomatoes had heavy

loss with top half of vines killed, and some fruit frozen. The young crop had only light damage. All stages of eggplant suffered damage. No acreage loss occurred, but heavy production drop is expected. Older squash fields were damaged severely and young fields light to moderately. Older cucumber acreage was destroyed but some of the younger crop will survive. Immokalee, 19-24 degrees. Damage was heavy for peppers and tomatoes from bloom stage to maturity. Young plants suffered mostly from foliage burn. Young cucumbers and watermelons for the spring crop were wiped out. Damage to potatoes was generally light. Readings along the coast were 28-29 degrees. New growth on peppers and tomatoes after December 20 freeze was killed back. Belle Glade, 22 degrees. Leaf burn occurred on lettuce, escarole and radishes. Young sugarcane sustained some damage. The cold was prolonged. Homestead area (Dade County), 29 degrees. Tomatoes, snap beans and squash sustained foliage burn, mostly in tops of plants - about 10 percent of fields in the southern area and 25-30 percent in the northern producing area.

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