

# WEEKLY WEATHER AND CROP BULLETIN

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

U.S. DEPARTMENT OF AGRICULTURE  
National Agricultural Statistics Service and World Agricultural Outlook Board

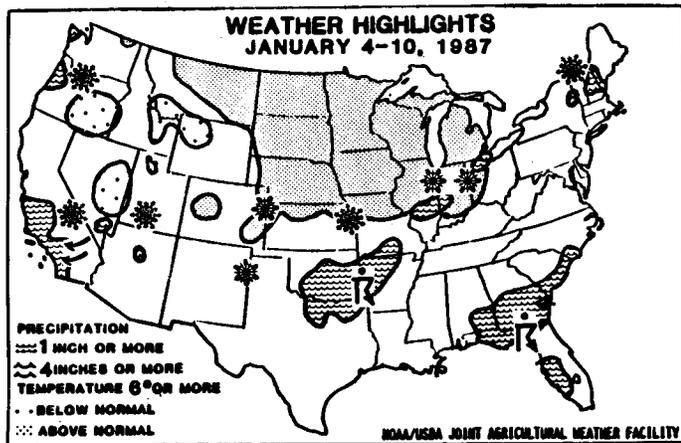
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## National Weather Summary

January 4 to 10, 1987



**HIGHLIGHTS:** A Pacific storm spread rain along the Northwest coast early in the week. Later, successive storms moved through the Southwest and triggered rain over much of California and the lower elevations of the West, and heavy snow in the Mountains and onto the High Plains. Late in the week, two storms spawned from a single center in the central Great Plains. One storm moved northeastward, spreading heavy snow in its path, and the other moved across the South, triggering showers and thunderstorms. The latter storm then moved up the east coast and spread freezing rain along the coast from the mid-Atlantic States northward. Heavy rainshowers fell in Oklahoma and Arkansas, and heavy snow fell from eastern Kansas into Michigan and Ohio. Heavy snow also fell in New England. Average temperatures were again much warmer than normal in the northern Plains.

**SUNDAY...**Storm systems off the northern and southern west coast brought rainshowers to the coastal area and snow to the mountains and intermountain region to the East. Strong winds accompanied the rain and snow in the Southwest. Across the Nation, showers and thunderstorms covered the Southeast from Mississippi to Georgia and Florida.

**MONDAY...**The Pacific storm moved through the Southwest to the central Rockies, spreading heavy snow over the mountains and rain at lower elevations. By nightfall, snow began to spread into the central High Plains. Thundershowers moved out of the Southwest, leaving fair skies to dominate most of the East.

**TUESDAY...**Snow spread from the central Rockies to the upper Mississippi Valley. Some rain or freezing rain fell in the Great Lakes region, while

light rain reached through the upper Ohio Valley. Another storm caused moderate rainshowers along the California coast with heavy snow in the mountains. Freezing temperatures reached into the Mississippi Delta and most of Georgia.

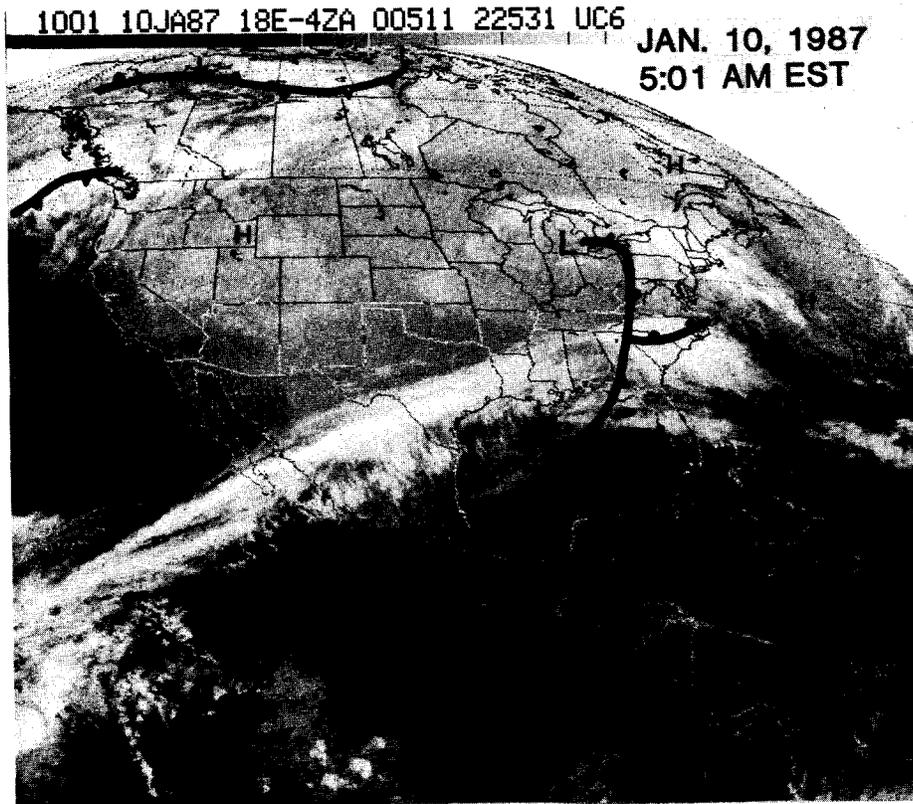
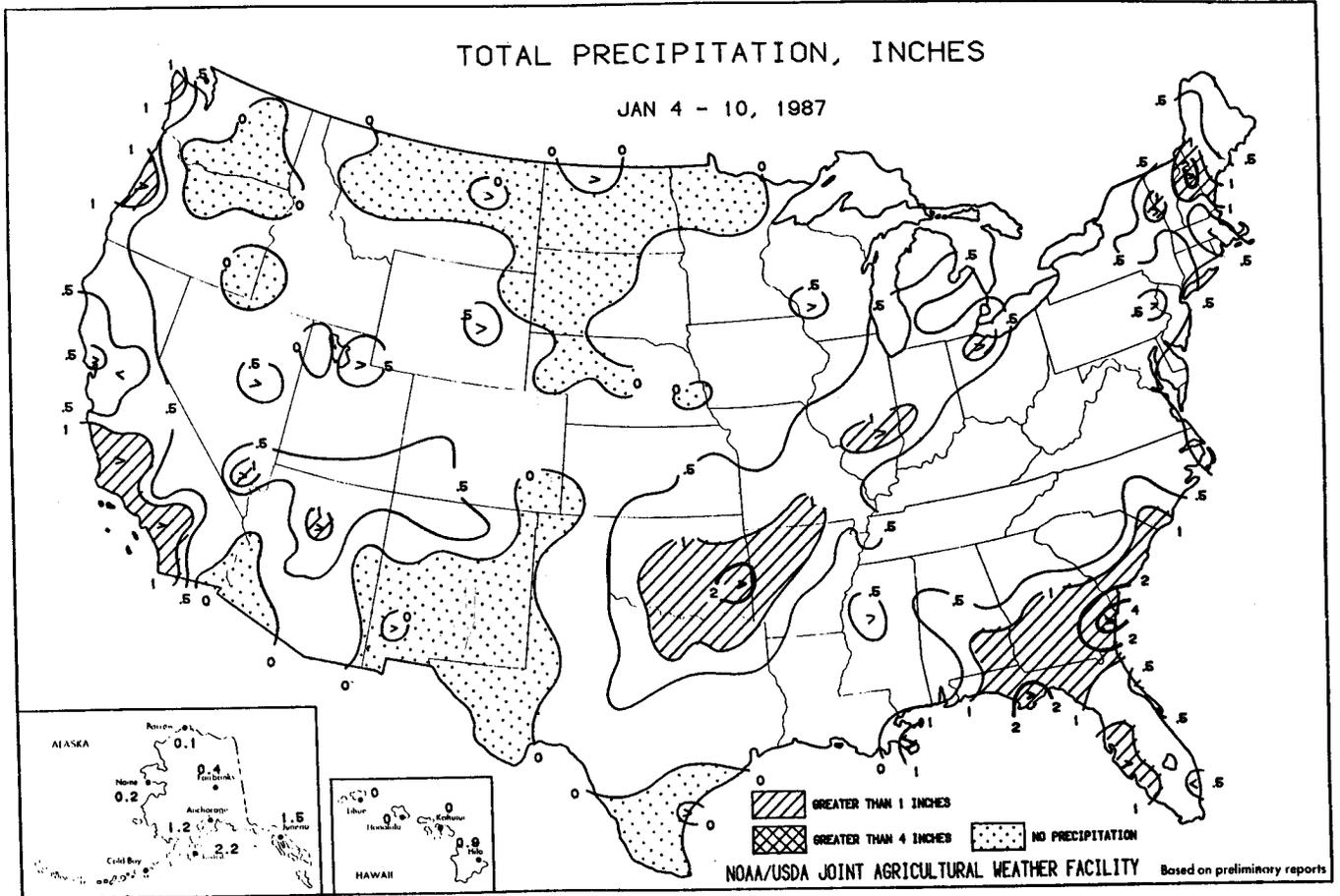
**WEDNESDAY...**Snow moved across the mountains of southern California through the central and southern Plateau and into the western part of the central and southern Plains. Rain fell at lower elevations and spread into southern Texas. Light snow fell through the Northeast. Warmer air covered the Ohio Valley and the Southeast.

**THURSDAY...**Snow fell in the central and southern Rockies and the western portion of the central and southern Plains. The snow moved through the central Plains into the lower Great Lakes States by the end of the day. Showers and thunderstorms were in eastern Texas and Oklahoma and in parts of Arkansas and Missouri. Light snow fell from the central Great Lakes to western New England.

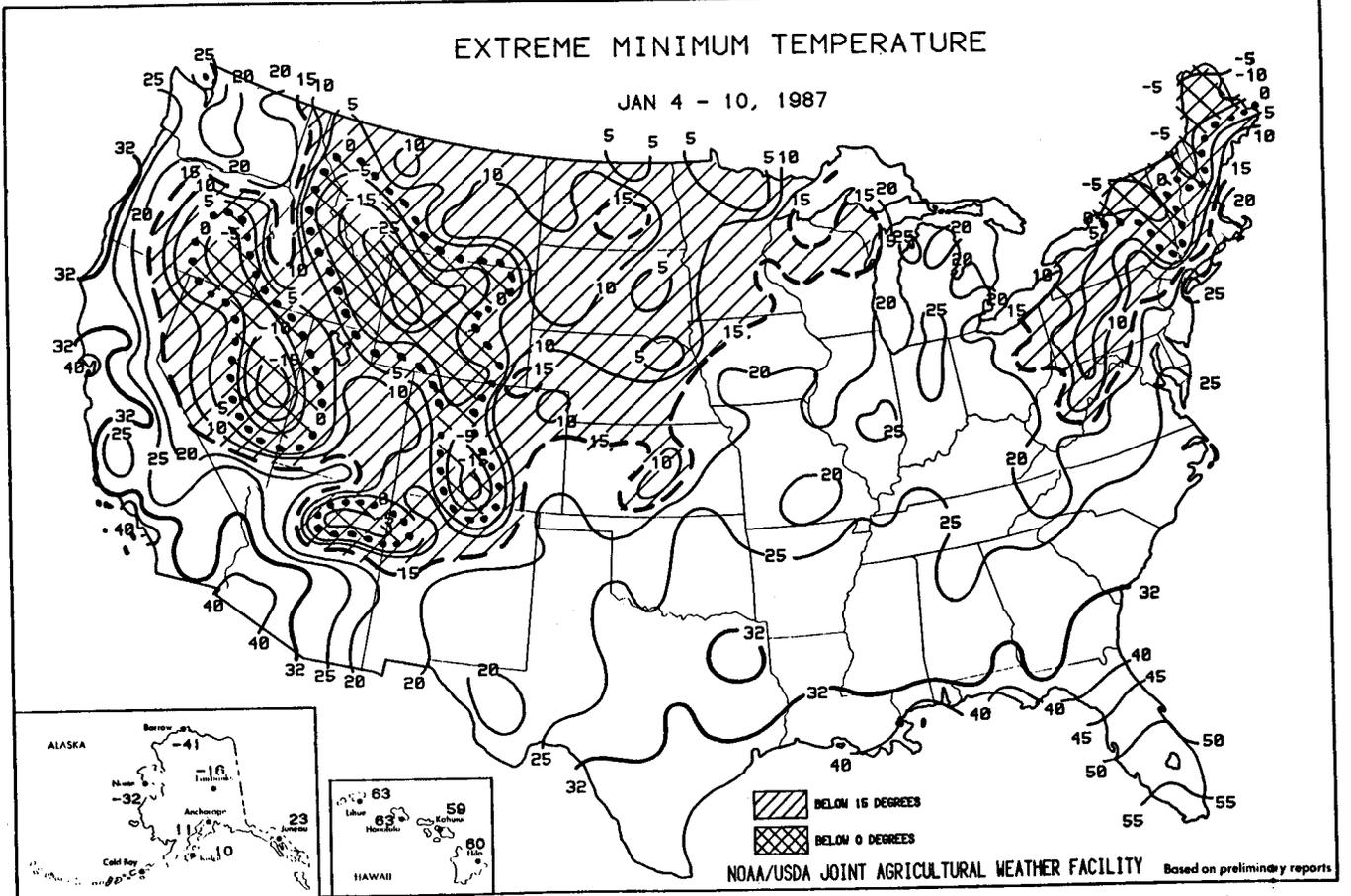
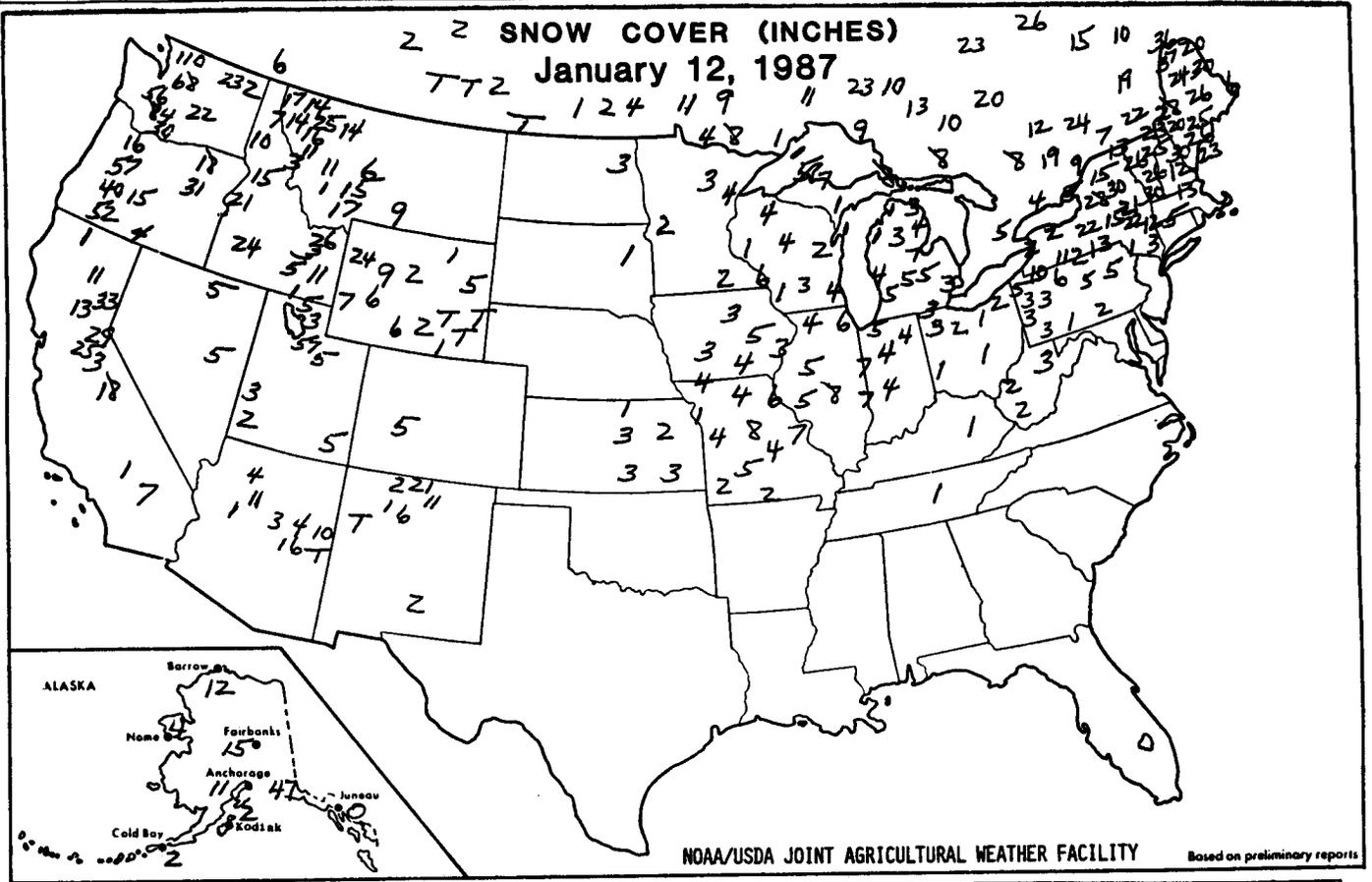
**FRIDAY...**A complex storm system in the eastern part of the southern Plains split into two storms. One moved northeastward and the other eastward across the South. Snow fell from eastern Kansas through New York with heavy amounts accumulating from Missouri into Michigan. Showers and a few thunderstorms covered the South from eastern Texas and Arkansas through Georgia and northward. Freezing rain fell from eastern Pennsylvania northward. Freezing weather pushed across the mountains in the West and covered much of California.

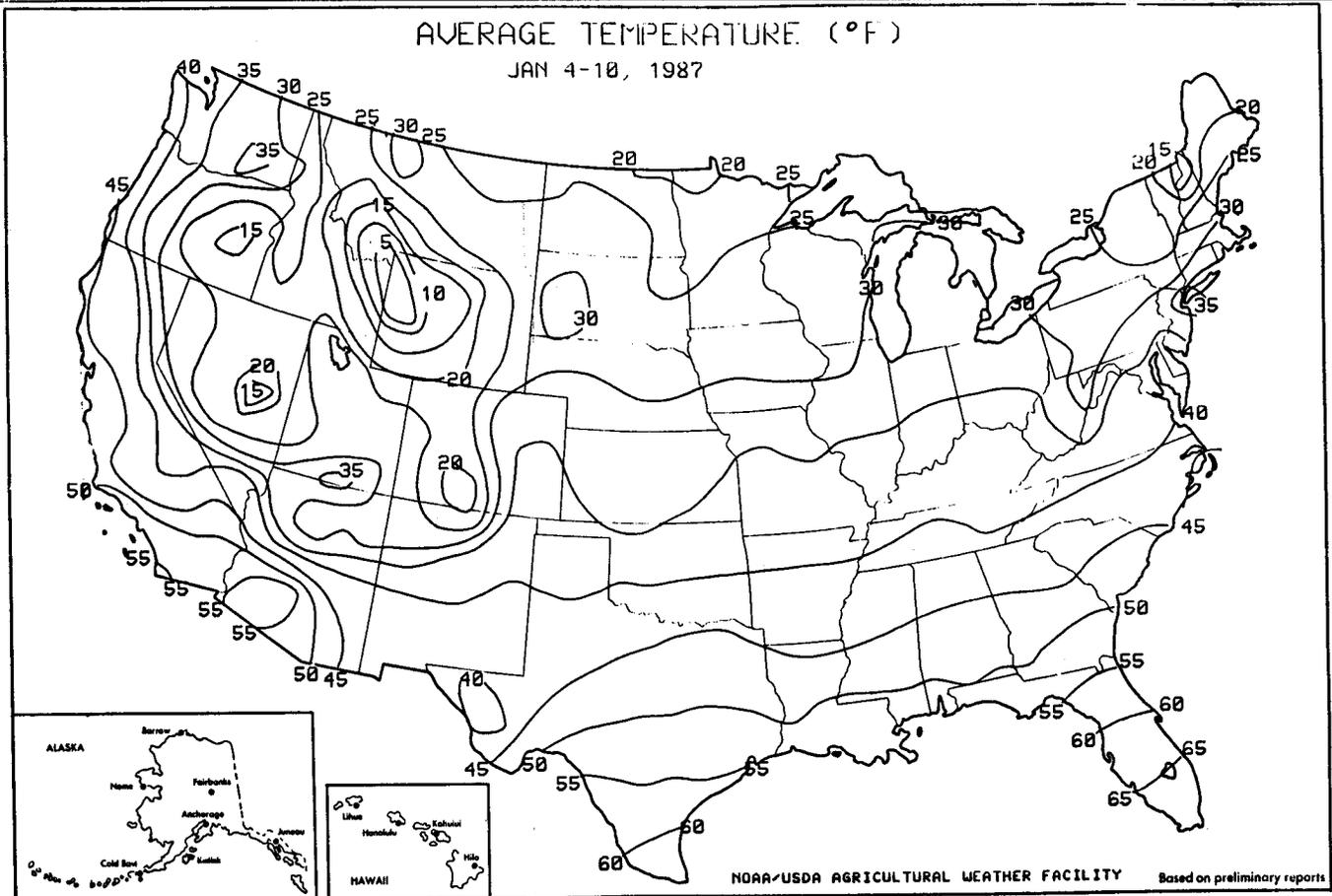
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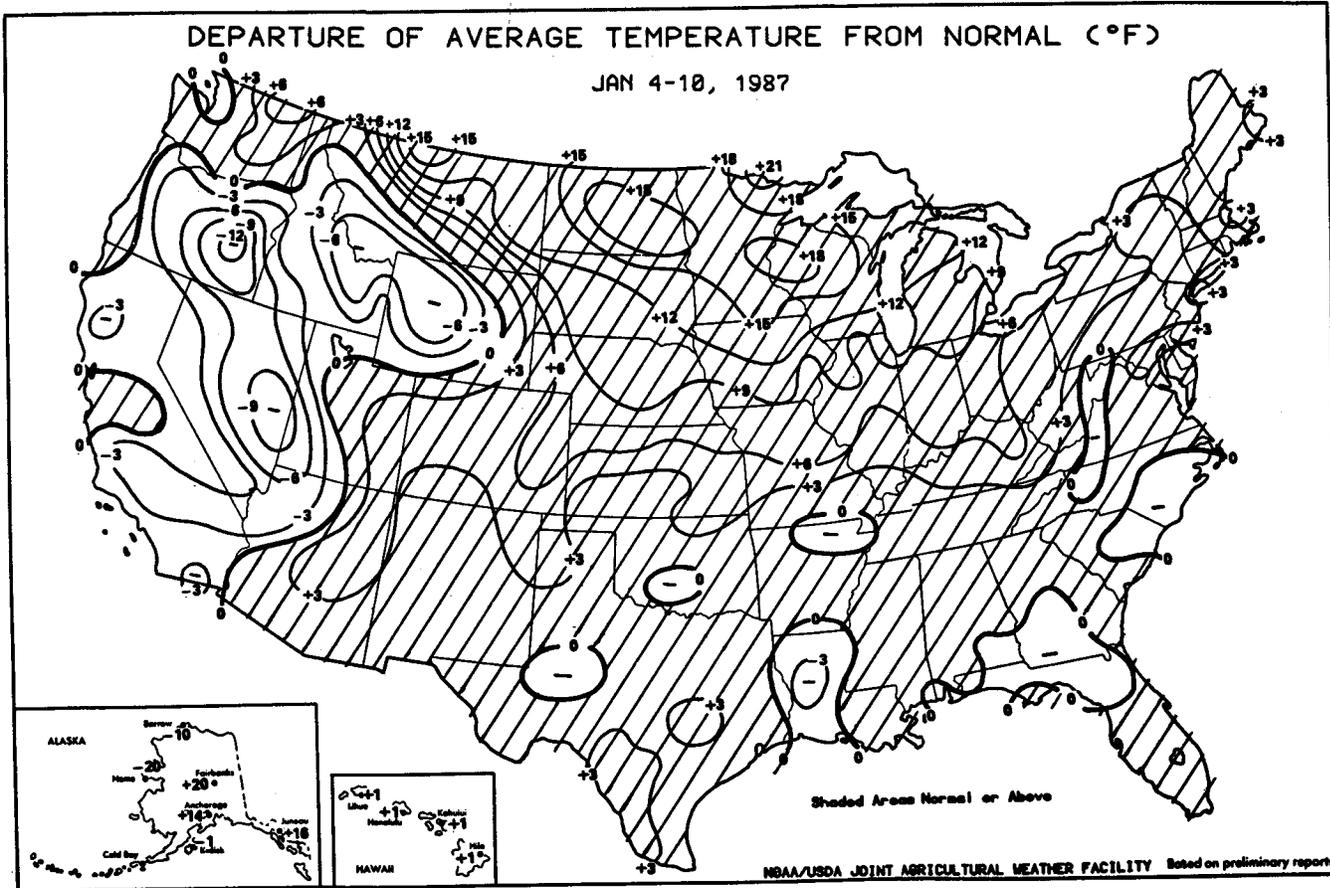


A FRONTAL SYSTEM MOVES THROUGH THE EASTERN UNITED STATES, CAUSING HEAVY SNOW IN NEW YORK AND NEW ENGLAND AND THUNDERSHOWERS IN THE CAROLINAS AND GEORGIA. LIGHTER AMOUNTS OF SNOW FALL OVER THE GREAT LAKES AND UPPER AND MIDDLE MISSISSIPPI VALLEY. RAINSHOWERS ARE ALONG THE PACIFIC COASTS OF BRITISH COLUMBIA AND WASHINGTON.



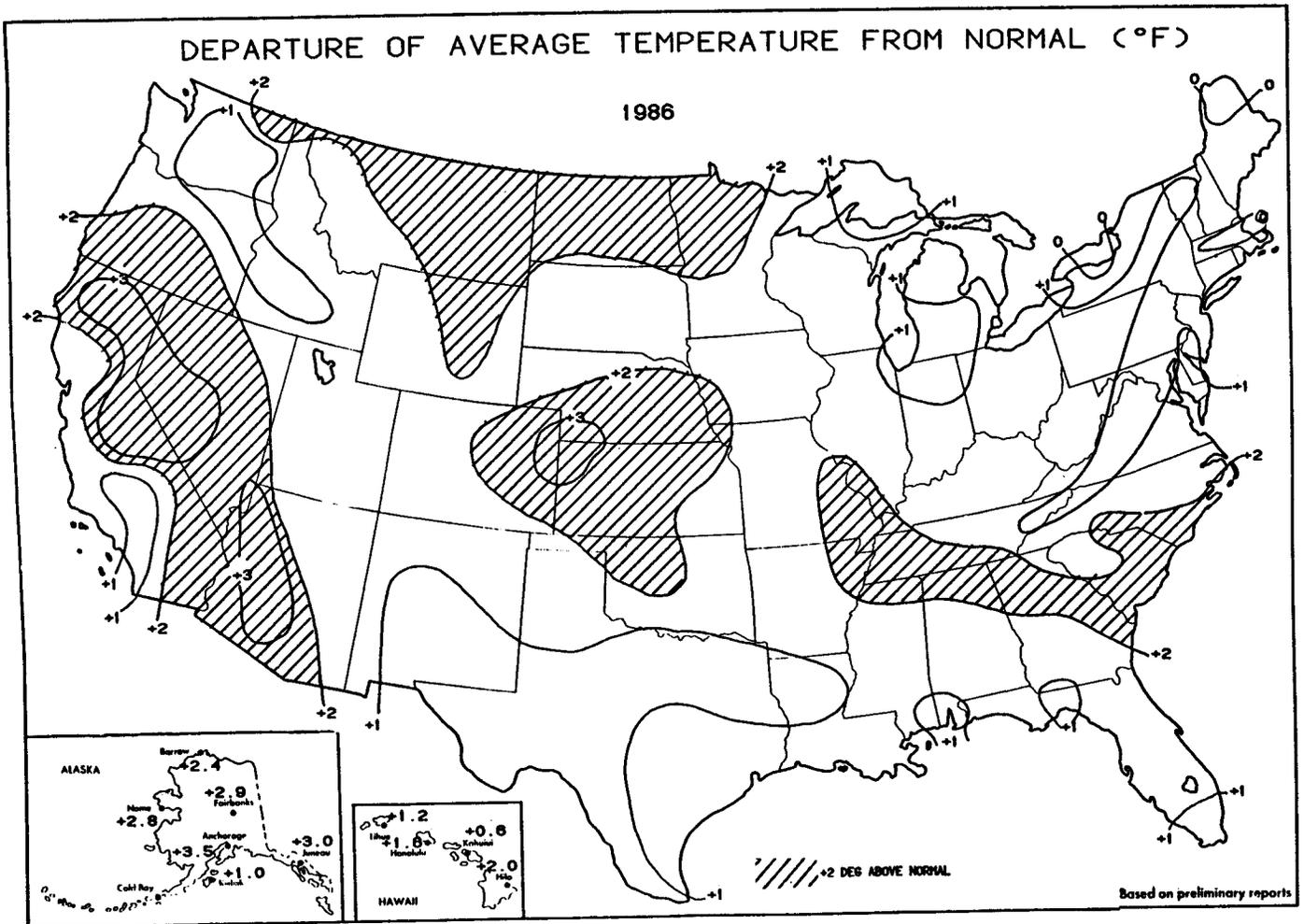


Point values may differ on these computerized maps from the reported values in the tables.



# A Warm 1986 Over The United States

The chart below indicates that temperatures over almost all of the Nation averaged above normal for 1986. Shading denotes the areas in the Southeast, central and northern Great Plains, northern Rockies, and the West where reported temperatures averaged more than 2°F above normal. Overall for the United States, 1986 ranked as the 9th warmest year since 1931 and the warmest since 1954.



# National Weather Data for Selected Cities

Weather Data for the Week Ending January 10, 1987

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	56	31	65	24	44	-1	.2	-1.0	.2	3.6	54	.2	12	90	41	0	5	2	0
MOBILE	61	40	68	35	50	0	.2	-.9	.1	5.1	72	1.4	88	95	52	0	0	3	0
MONTGOMERY	59	35	65	29	47	0	.8	-.2	.6	3.9	63	.9	64	89	42	0	2	3	0
AK ANCHORAGE	31	21	39	11	26	14	1.2	1.0	.8	2.7	193	1.3	433	93	73	0	7	6	1
BARROW	-16	-32	-10	-41	-24	-10	.1	.1	.1	.2	100	.1	78	66	0	7	2	0	0
FAIRBANKS	13	-4	30	-16	5	20	.4	.3	.2	.8	88	.5	250	95	81	0	7	5	0
JUNEAU	41	34	44	23	37	16	1.5	.7	.5	8.2	139	1.6	133	93	66	0	3	7	0
KODIAK	37	25	42	10	31	-1	2.2	.4	.9	13.7	155	2.3	92	88	61	0	6	5	2
NOME	-5	-22	7	-32	-13	-20	.2	0	.1	1.4	155	.3	150	76	51	0	7	2	0
AZ PHOENIX	65	45	77	37	55	3	.1	-.1	.1	1.5	132	.1	33	72	26	0	0	1	0
PRESCOTT	46	25	57	16	36	0	.4	-.1	.2	1.2	55	.4	67	86	47	0	7	2	0
TUCSON	63	37	78	28	50	-1	.1	-.1	.1	1.3	108	.1	33	82	29	0	2	1	0
YUMA	64	45	68	42	54	-1	0	-.1	0	.2	47	0	0	64	29	0	2	0	0
AR FORT SMITH	48	30	63	26	39	2	1.3	.9	1.1	3.0	86	1.8	300	92	59	0	6	2	1
LITTLE ROCK	48	33	62	29	41	1	.5	-.3	.5	4.3	83	1.0	83	82	63	0	4	1	1
CA BAKERSFIELD	51	36	55	26	43	-4	1.3	1.1	1.0	2.3	244	1.3	433	98	71	0	1	3	1
EUREKA	56	40	60	33	48	1	1.0	-.6	.4	7.1	84	3.3	143	91	72	0	0	3	0
FRESNO	51	39	57	33	45	1	1.0	.6	.6	3.9	176	1.6	267	95	73	0	0	3	1
LOS ANGELES	61	46	69	42	54	-3	1.3	.6	.8	1.6	63	1.3	144	86	47	0	0	4	1
REDDING	54	34	60	25	44	**	.9	**	.7	5.4	**	3.5	**	92	48	0	3	2	1
SACRAMENTO	51	34	56	29	43	-1	.7	-.9	.7	1.5	35	.7	54	99	63	0	4	0	0
SAN DIEGO	63	48	67	39	55	-1	1.6	1.2	.8	2.6	127	1.6	229	87	50	0	0	4	1
SAN FRANCISCO	54	42	56	36	48	0	.4	-.6	.3	3.4	68	1.8	120	95	63	0	0	2	0
CO DENVER	45	22	66	13	33	4	.2	.2	.2	.6	85	.2	200	84	42	0	7	3	0
GRAND JUNCTION	40	21	51	14	31	7	.7	-.1	.7	.5	67	.1	50	90	45	0	6	1	0
PUEBLO	50	20	68	12	35	6	.1	0	.1	.5	127	.1	100	94	36	0	7	1	0
CT BRIDGEPORT	39	27	46	22	33	3	.3	-.5	.3	5.9	121	1.5	136	76	49	0	6	1	0
HARTFORD	36	19	45	11	27	2	.7	-.2	.7	8.7	163	2.6	217	88	57	0	7	1	1
DC WASHINGTON	45	30	56	25	38	2	.1	-.6	.1	5.8	141	.8	89	76	47	0	4	1	0
FL APALACHICOLA	65	45	70	40	55	2	2.2	1.4	1.7	11.9	258	2.2	200	94	62	0	0	2	1
DAYTONA BEACH	68	48	80	46	58	0	.4	-.1	.3	3.1	108	.4	57	98	66	0	0	2	0
JACKSONVILLE	66	41	71	34	54	1	1.6	-.9	.8	6.4	184	1.7	189	99	61	0	0	3	1
KEY WEST	77	64	82	62	70	1	.7	-.4	.7	11.2	501	.7	0	90	58	0	0	0	0
MIAMI	77	58	83	54	67	0	.2	-.2	.2	3.0	120	.7	117	92	56	0	0	1	0
ORLANDO	70	52	81	49	61	1	.8	.4	.8	4.4	179	.8	133	96	60	0	0	2	1
TALLAHASSEE	65	38	70	32	51	0	1.7	.7	1.1	9.9	163	2.0	133	98	46	0	1	2	2
TAMPA	72	53	75	48	62	2	1.1	.7	1.0	3.0	111	1.1	183	95	60	0	0	2	1
WEST PALM BEACH	75	57	82	53	66	1	.8	.2	.6	10.9	355	.8	100	95	57	0	0	3	1
GA ATLANTA	56	35	63	32	45	3	.3	-.9	.2	3.5	60	.4	25	84	40	0	2	3	0
AUGUSTA	58	31	66	27	45	0	.2	-.7	.1	6.5	146	2.3	192	89	34	0	4	3	0
MACON	58	33	67	27	46	-1	1.2	.2	1.1	5.7	106	2.1	150	91	41	0	4	2	1
SAVANNAH	61	39	67	34	50	1	2.6	1.9	2.0	9.5	252	4.4	440	91	40	0	0	4	1
HI HILO	80	66	83	60	73	1	.9	-1.1	.4	7.7	49	2.0	69	94	62	0	0	5	0
HONOLULU	83	65	86	63	74	1	.7	-.9	.7	.6	13	0	0	90	52	0	0	0	0
KAHULUI	82	64	85	59	73	1	.7	-.9	.7	2.9	69	.7	0	88	48	0	0	0	0
LIHUE	80	65	84	63	72	1	0	-1.5	0	1.3	17	.7	0	86	56	0	0	0	0
ID BOISE	32	22	40	18	27	-2	.7	-.3	.7	.4	20	.2	40	92	69	0	7	1	0
LEMISTON	38	28	41	23	33	2	0	-.4	0	.5	30	.7	0	80	56	0	7	0	0
POCATELLO	26	6	43	-14	16	-7	.4	.2	.1	.8	61	.6	150	92	71	0	7	5	0
IL CHICAGO	37	26	48	20	32	10	.7	.3	.5	1.9	71	.8	133	94	67	0	6	2	1
HOLINE	36	24	45	15	30	10	.3	-.1	.3	2.6	101	.6	100	91	68	0	6	2	0
PEORIA	37	25	50	20	31	10	.5	.1	.5	3.3	129	.7	117	93	68	0	6	2	1
QUINCY	39	26	52	18	32	9	.7	.3	.7	2.5	114	.7	140	89	60	0	6	1	0
ROCKFORD	34	22	40	17	28	10	.4	0	.4	1.1	47	.5	100	93	75	0	7	1	0
SPRINGFIELD	39	28	54	25	34	9	.6	.2	.5	2.1	81	.7	140	92	64	0	6	2	1
IN EVANSVILLE	45	28	60	23	36	5	.2	-.5	.1	2.4	54	.2	20	94	61	0	6	2	0
FORT WAYNE	39	28	49	23	33	9	.5	0	.4	2.1	68	.6	86	90	63	0	6	2	0
INDIANAPOLIS	41	29	54	25	35	9	.6	0	.6	2.4	63	.7	78	89	61	0	6	2	1
SOUTH BEND	38	28	50	22	33	9	.6	0	.5	2.2	59	.6	67	91	60	0	6	2	1
IA DES MOINES	35	25	44	18	30	11	.3	.1	.3	1.3	97	.3	100	92	70	0	7	2	0
SIOUX CITY	35	21	45	10	28	12	.1	-.1	.1	.3	29	.1	50	96	71	0	7	2	0
WATERLOO	34	24	39	18	29	14	.3	-.1	.3	1.2	79	.3	100	98	75	0	7	2	0
KS CONCORDIA	38	26	47	17	32	7	.4	.3	.3	1.8	202	.4	200	92	62	0	6	2	0
DODGE CITY	41	24	55	16	32	3	.2	0	.2	1.2	160	.2	100	91	56	0	7	1	0
GOODLAND	43	22	62	15	33	6	.2	.1	.2	.3	54	.2	100	86	45	0	7	1	0
TOPEKA	39	27	45	19	33	7	.5	.3	.5	1.8	114	.6	200	92	67	0	5	1	1
WICHITA	38	25	50	11	32	3	.5	.3	.4	1.9	150	.7	233	95	70	0	6	2	0
KY BOWLING GREEN	48	29	58	23	39	5	.2	-.9	.1	4.9	81	.2	13	91	56	0	6	2	0
LEXINGTON	47	27	59	20	37	5	.1	-.7	.1	3.4	68	.1	8	86	51	0	6	2	0
LOUISVILLE	47	30	59	24	39	6	.2	-.6	.2	2.9	62	.2	18	83	52	0	5	1	0
LA ALEXANDRIA	58	39	68	32	48	-3	.2	-.8	.2	6.4	99	1.4	93	83	61	0	1	1	0
BATON ROUGE	64	42	72	33	53	2	.2	-.8	.2	7.8	121	1.6	107	92	54	0	0	2	0
LAKE CHARLES	60	41	71	33	50	-1	.7	-.1	.7	10.9	166	1.0	71	96	62	0	0	1	0
NEW ORLEANS	63	42	73	32	53	0	.5	-.6	.4	6.7	98	1.7	106	96	56	0	1	2	0

Based on 1951-80 normals.

Weather Data for the Week Ending January 10, 1987

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS			
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
ME SHREVEPORT	55	35	68	27	45	-1	.4	-6	.4	5.9	113	1.2	92	95	57	0	3	1	0	
ME CARIBOU	22	9	28	-9	16	5	.1	-5	.1	2.1	52	.4	50	92	67	0	7	1	0	
ME PORTLAND	35	16	39	11	26	4	.7	-2	.7	8.4	145	2.5	192	87	52	0	7	1	0	
MD BALTIMORE	43	29	50	21	36	3	.2	-6	.2	6.8	155	1.3	130	80	46	0	5	1	0	
MD SALISBURY	46	27	58	21	37	2	.8	0	.8	8.7	182	1.9	173	88	46	0	6	1	0	
MA BOSTON	38	26	44	21	32	2	.8	-1	.8	9.6	166	3.3	254	82	53	0	6	1	0	
MA CHATHAM	41	29	46	24	35	3	.5	-5	.5	10.5	164	3.0	214	89	62	0	6	1	0	
MI ALPENA	36	26	41	18	31	12	.2	-2	.2	1.2	47	.3	50	94	65	0	7	1	0	
MI DETROIT	38	28	47	22	33	9	.9	.4	.4	3.3	105	1.1	157	90	63	0	6	2	0	
MI FLINT	37	26	44	18	32	10	.4	0	.2	2.3	89	.5	100	89	64	0	7	2	0	
MI GRAND RAPIDS	37	28	48	23	33	10	.1	-3	.1	1.2	38	.2	29	88	59	0	7	2	0	
MI HOUGHTON LAKE	35	25	40	18	30	12	.2	-2	.2	1.1	45	.2	40	90	62	0	7	2	0	
MI LANSING	37	27	48	22	32	10	.3	-1	.2	1.5	53	.4	67	90	63	0	7	2	0	
MI MARQUETTE	32	20	36	11	26	13	.3	-2	.2	1.1	36	.6	86	97	76	0	7	3	0	
MI MUSKOGON	38	28	45	23	33	9	.6	0	.4	1.9	56	.6	75	91	62	0	7	2	0	
MI SAULT STE. MARIE	35	23	39	15	29	15	.2	-3	.2	2.4	73	.2	29	92	67	0	7	2	0	
MN ALEXANDRIA	30	17	37	10	23	18	.3	-1	.3	.4	42	.3	100	95	76	0	7	1	0	
MN DULUTH	29	19	33	12	24	18	.1	-2	.1	.5	31	.1	25	95	75	0	7	1	0	
MN INT'L FALLS	28	15	34	3	22	22	T	-2	T	.3	24	T	0	95	72	0	7	0	0	
MN MINNEAPOLIS	34	25	40	17	30	18	.1	-1	.1	.4	35	.1	33	93	70	0	7	1	0	
MN ROCHESTER	30	23	33	14	26	15	.3	.1	.3	.6	52	.3	100	96	80	0	7	2	0	
MS GREENWOOD	54	33	60	28	44	0	.5	-7	.4	3.4	48	.8	47	94	57	0	3	2	0	
MS JACKSON	58	34	67	28	46	0	.5	-7	.3	6.0	85	1.1	65	95	54	0	2	2	0	
MS MERIDIAN	59	32	67	27	46	0	.3	-9	.2	5.0	67	.8	47	95	44	0	3	2	0	
MO CAPE GIRARDEAU	43	29	53	23	36	7	.1	-6	.1	2.6	53	.2	20	95	66	0	6	1	0	
MO COLUMBIA	41	28	57	23	35	7	.9	.5	.8	3.0	123	1.0	200	96	70	0	6	2	1	
MO KANSAS CITY	39	27	48	19	33	8	.4	.1	.4	1.6	92	.4	100	92	65	0	6	2	0	
MO SAINT LOUIS	42	30	61	24	36	7	.9	.5	.9	2.1	76	1.1	183	86	59	0	5	2	1	
MO SPRINGFIELD	42	29	57	21	36	4	.8	.4	.8	2.4	78	1.1	220	90	65	0	6	2	1	
MT BILLINGS	33	20	44	11	26	6	.1	-1	.1	.2	15	.1	33	84	57	0	7	1	0	
MT GLASGOW	31	14	48	8	22	14	0	-1	0	.1	21	0	0	91	70	0	7	0	0	
MT GREAT FALLS	41	20	50	10	31	12	0	-2	0	.2	22	0	0	64	30	0	7	0	0	
MT HAVRE	39	14	52	5	27	16	0	-1	0	T	T	0	0	82	53	0	7	0	0	
MT HELENA	31	8	41	0	20	2	0	-2	0	.4	46	T	0	90	75	0	7	1	0	
MT KALISPELL	29	14	38	2	22	3	T	-4	T	.7	32	.2	33	100	75	0	7	0	0	
MT MILES CITY	37	18	48	10	28	14	0	-1	0	.2	19	0	0	87	57	0	7	0	0	
MT MISSOULA	27	13	36	-3	20	-1	T	-4	T	.6	36	.1	20	93	73	0	7	1	0	
NE GRAND ISLAND	37	22	46	13	30	10	T	-1	T	.3	35	0	0	94	60	0	7	1	0	
NE LINCOLN	39	21	47	16	30	11	T	-1	T	1.3	155	T	0	92	56	0	7	0	0	
NE NORFOLK	35	17	46	4	26	9	.1	0	.1	.5	64	.1	50	95	67	0	7	1	0	
NE NORTH PLATTE	40	21	49	13	31	10	.1	0	.1	.4	77	.1	100	94	51	0	7	2	0	
NE OMAHA	35	23	43	16	29	11	T	-1	T	.7	71	T	0	89	69	0	7	0	0	
NE SCOTTSBLUFF	40	17	51	10	29	5	.2	.1	.2	.5	68	.2	100	88	52	0	7	2	0	
NE VALENTINE	42	15	56	8	29	10	T	0	T	T	10	0	0	79	40	0	7	1	0	
NV ELY	27	0	39	-17	13	-11	.5	.3	.4	.6	57	.5	167	89	66	0	7	2	0	
NV LAS VEGAS	51	34	59	28	43	-1	1.2	1.1	.7	1.6	388	1.2	83	43	0	3	4	1	0	
NV RENO	36	22	44	14	29	-2	.1	-2	0	.6	39	.4	100	93	60	0	7	2	0	
NV WINNEMUCCA	33	17	41	7	25	4	.1	-1	0	.5	42	.4	133	95	67	0	7	3	0	
NH CONCORD	35	12	42	2	24	4	.4	-3	.4	5.5	127	1.0	111	88	56	0	6	1	1	
NJ ATLANTIC CITY	43	26	49	20	35	3	.7	-1	.7	6.6	139	1.7	155	89	47	0	7	1	0	
NM ALBUQUERQUE	47	24	52	15	35	1	T	-1	T	.4	61	T	0	78	33	0	7	0	0	
NM CLOVIS	52	29	69	22	40	3	T	-1	T	1.5	179	.1	50	79	35	0	7	0	0	
NM ROSWELL	57	26	70	21	42	1	T	-1	T	.8	228	T	0	84	32	0	7	0	0	
NY ALBANY	33	15	40	0	24	3	.4	-2	.4	5.3	138	1.4	175	97	66	0	7	1	0	
NY BINGHAMTON	32	22	37	13	27	5	.4	-2	.2	3.8	100	1.3	144	91	67	0	7	4	0	
NY BUFFALO	37	22	46	9	30	6	.4	-3	.3	4.9	112	.9	90	91	58	0	7	3	0	
NY NEW YORK	40	31	48	26	36	4	.3	-4	.3	7.6	161	2.4	240	77	52	0	4	1	0	
NY ROCHESTER	36	21	43	6	29	4	.4	-1	.4	4.2	126	.7	88	93	61	0	7	2	0	
NY SYRACUSE	34	17	40	3	26	3	.5	-1	.2	4.7	114	1.3	144	95	62	0	7	4	0	
NC ASHEVILLE	50	24	56	18	37	0	.1	-7	.1	4.6	100	.3	27	91	41	0	7	1	0	
NC CHARLOTTE	52	32	58	27	42	2	T	-8	T	4.8	103	1.6	133	73	38	0	5	1	0	
NC GREENSBORO	49	29	58	23	39	2	T	-7	T	4.5	99	.9	82	77	39	0	6	1	0	
NC HATTERAS	53	38	64	28	46	0	.6	-5	.6	11.3	188	4.6	307	90	55	0	2	1	1	
NC NEW BERN	55	31	60	26	43	-1	.2	-6	.2	6.1	124	2.6	217	96	53	0	4	1	0	
NC RALEIGH	51	28	61	24	40	-1	.2	-6	.2	4.7	111	1.8	164	78	37	0	6	1	0	
NC WILMINGTON	57	33	61	28	45	-1	.6	-2	.6	9.3	204	3.0	273	94	45	0	3	1	1	
ND BISMARCK	34	20	43	16	27	20	T	-1	T	T	3	T	0	93	67	0	7	0	0	
ND FARGO	30	17	40	7	24	19	T	-1	T	.3	34	T	0	92	72	0	7	0	0	
ND GRAND FORKS	27	14	33	7	21	18	T	-2	T	.3	39	T	0	94	79	0	7	0	0	
ND WILLISTON	31	15	40	6	23	16	T	-1	T	.1	13	T	0	96	73	0	7	0	0	
OH AKRON-CANTON	36	24	43	16	30	5	.2	-4	.1	3.5	100	.8	89	94	65	0	7	3	0	
OH CINCINNATI	45	28	56	20	37	7	.2	-5	.2	2.9	72	.3	30	83	52	0	6	2	0	
OH CLEVELAND	38	24	45	15	31	5	.1	-4	.1	3.5	98	.6	75	89	61	0	6	2	0	
OH COLUMBUS	41	27	52	18	34	7	.2	-5	.1	3.1	87	.2	22	88	50	0	6	2	0	

Based on 1951-80 normals.

Weather Data for the Week Ending January 10, 1987

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	41	26	53	20	34	7	.2	-.4	.2	3.1	92	.2	25	91	56	0	6	2	0
TOLEDO	38	26	50	18	32	9	.7	-.2	.5	2.7	81	.8	114	89	61	0	6	2	0
YOUNGSTOWN	37	23	45	12	30	5	.1	-.5	0	4.1	111	.7	78	93	59	0	7	3	0
OK OKLAHOMA CITY	42	30	54	24	36	1	1.2	1.0	1.2	2.5	166	1.3	433	93	66	0	5	2	0
TULSA	43	31	55	26	37	2	1.0	.7	.8	2.2	98	1.3	325	94	65	0	4	2	1
OR ASTORIA	50	36	55	30	43	2	.4	-.3	.4	9.4	61	2.0	53	85	55	0	2	1	0
BURNS	25	6	32	-7	16	-11	.1	-.1	.1	.8	75	.6	300	1	1	0	7	1	0
MEDFORD	46	26	51	18	36	6	.1	-.8	.1	1.9	40	1.1	92	97	55	0	6	1	0
PENDLETON	38	27	48	20	32	0	.1	-.4	.1	1.3	56	.5	83	91	65	0	6	0	0
PORTLAND	47	32	50	24	39	1	.1	-.5	.1	5.8	68	1.5	71	87	56	0	6	0	0
SALEM	46	27	49	19	36	-3	.2	-.5	.2	5.6	59	1.7	71	99	62	0	6	1	0
PA ALLENTOWN	37	23	42	15	30	3	.5	-.2	.5	5.9	123	1.5	136	84	55	0	7	1	1
ERIE	39	24	47	13	31	6	.3	-.3	.2	4.7	114	.7	78	91	57	0	6	4	1
HARRISBURG	37	24	43	13	31	1	.3	-.4	.3	6.3	148	1.4	140	85	56	0	6	1	0
PHILADELPHIA	42	28	46	24	35	3	.3	-.5	.3	7.4	164	1.5	136	82	51	0	6	1	0
PITTSBURGH	39	23	46	9	31	4	.1	-.6	.1	4.2	120	.7	78	77	44	0	7	2	0
SCRANTON	33	22	38	12	28	2	.2	-.4	.2	3.1	93	1.1	138	86	60	0	7	1	0
RI PROVIDENCE	40	25	45	20	32	4	.4	-.5	.4	9.8	169	1.7	131	85	51	0	7	1	0
SC CHARLESTON	59	37	66	31	48	0	1.2	.5	1.1	7.9	190	2.7	245	91	46	0	2	3	1
COLUMBIA	57	31	62	26	44	-1	.1	-.9	.1	4.1	84	1.5	107	83	33	0	5	2	0
FLORENCE	55	33	59	28	44	-1	.1	-.8	.1	4.1	100	.9	82	89	37	0	3	1	0
GREENVILLE	52	30	58	26	41	0	.1	-.9	.1	5.1	97	1.0	77	83	43	0	6	1	0
SD ABERDEEN	33	18	46	8	25	17	.1	-.1	.1	.2	2	0	0	94	66	0	7	1	0
HURON	34	17	54	2	25	14	.1	-.1	.1	.2	27	.2	200	93	64	0	7	1	0
RAPID CITY	45	18	57	12	31	10	.1	-.1	.1	.2	2	0	0	80	33	0	7	0	0
SIoux FALLS	34	20	45	10	27	14	.1	-.1	.1	.3	0	0	0	93	64	0	7	0	0
TN CHATTANOOGA	53	30	61	24	42	3	.2	-1.0	.2	5.0	73	.2	12	88	42	0	5	1	0
KNOXVILLE	50	28	55	21	39	1	.1	-.9	.1	4.4	73	.3	20	89	43	0	6	2	0
MEMPHIS	49	32	60	28	41	1	.4	-.7	.4	4.6	72	.7	47	94	60	0	4	1	0
NASHVILLE	50	30	60	25	40	3	.1	-1.0	.1	3.4	55	-.1	7	85	44	0	5	2	0
TX ABILENE	55	35	67	26	45	2	.3	0	.2	2.3	199	.3	100	84	41	0	2	2	0
AMARILLO	49	27	64	21	38	3	.1	0	.1	.8	120	.1	50	86	47	0	7	2	0
AUSTIN	61	44	68	32	53	4	.2	-.1	.2	6.0	238	.2	40	92	50	0	1	1	0
BEAUMONT	62	43	71	34	53	1	.2	-.8	.2	10.8	183	1.2	86	96	62	0	0	1	0
BROWNSVILLE	73	51	80	38	62	2	0	-.2	0	2.5	164	0	0	95	53	0	0	0	0
CORPUS CHRISTI	68	48	76	36	58	2	.1	-.3	.1	4.6	239	0	0	96	52	0	0	1	0
DEL RIO	63	42	65	32	43	3	.1	-.1	.1	2.4	359	0	0	96	96	0	1	2	0
EL PASO	60	27	71	22	44	0	0	-.1	0	1.4	292	0	0	80	24	0	5	0	0
FORT WORTH	54	36	71	28	45	1	.5	.2	.5	3.0	140	.6	120	92	51	0	3	2	0
GALVESTON	60	50	68	41	55	1	.1	-.7	.1	4.3	92	.2	20	90	62	0	0	1	0
HOUSTON	62	43	71	31	52	1	.1	-.6	.1	6.1	130	.4	40	96	56	0	1	1	0
LUBBOCK	52	28	63	21	40	2	.1	-.1	.1	1.4	272	.1	100	89	42	0	5	1	0
MIDLAND	55	32	66	23	43	0	.1	-.1	.1	3.3	591	.1	0	91	43	0	4	0	0
SAN ANGELO	59	35	67	24	47	2	.3	.2	.3	2.8	336	.3	150	89	42	0	2	1	0
SAN ANTONIO	63	42	69	29	53	3	.1	-.2	.1	7.1	398	.1	25	95	50	0	2	2	0
VICTORIA	65	45	73	33	55	2	.1	-.4	.1	4.3	157	.1	0	96	56	0	0	0	0
WACO	55	38	67	30	46	0	.4	0	.3	3.8	159	.4	80	98	60	0	3	2	0
WICHITA FALLS	51	32	66	24	41	1	1.0	.8	.7	1.9	126	1.0	333	94	51	0	4	2	1
UT BLANDING	39	20	45	9	30	3	.6	.3	.4	1.3	73	.6	120	85	60	0	7	3	0
CEDAR CITY	35	15	50	-3	25	-4	.3	.1	.2	.8	91	.3	150	92	54	0	6	2	0
SALT LAKE CITY	35	20	49	7	28	0	.9	.6	.8	1.2	66	1.1	275	89	57	0	6	3	1
VT BURLINGTON	30	16	34	1	23	6	.2	-.3	.1	1.9	64	.6	100	91	62	0	7	4	0
VA NORFOLK	48	34	62	27	41	1	.5	.1	.5	6.7	152	2.9	242	84	53	0	2	1	1
RICHMOND	47	27	62	22	37	0	.2	-.5	.2	6.6	148	1.5	136	83	42	0	6	1	0
ROANOKE	45	25	53	18	35	-1	.1	-.6	.1	6.2	162	.7	78	80	44	0	6	2	0
WA COLVILLE	34	26	40	19	30	6	.1	-.5	.1	2.2	66	.7	88	96	90	0	6	1	0
QUILLAYUTE	49	33	51	23	41	2	1.2	-2.4	.7	17.0	79	4.6	90	100	66	0	4	4	1
SEATTLE-TACOMA	44	30	51	23	37	-2	.2	-1.2	.2	4.8	57	1.1	55	93	64	0	5	1	0
SPOKANE	32	23	40	16	27	2	.1	-.5	.1	1.4	43	.4	50	94	74	0	7	1	0
YAKIMA	37	26	42	17	32	4	0	-.4	0	1.0	57	.1	20	93	64	0	6	0	0
WV BECKLEY	45	24	56	16	35	5	.1	-.7	0	3.0	69	.3	27	84	44	0	7	3	0
CHARLESTON	46	28	57	19	37	4	.1	-.7	.1	4.5	103	.6	55	87	48	0	4	1	0
HUNTINGTON	46	29	59	21	38	5	.1	-.7	.1	4.0	95	.5	45	86	44	0	5	2	0
PARKERSBURG	43	28	53	19	35	4	.1	-.8	.1	4.4	113	.4	33	86	47	0	5	1	0
WI GREEN BAY	33	22	36	14	28	13	.2	-.1	.1	.7	36	.2	50	97	75	0	7	2	0
LA CROSSE	34	25	39	19	30	15	.5	.3	.3	.9	66	.5	167	93	71	0	7	3	0
MADISON	33	24	37	19	29	13	.3	0	.2	1.0	52	.3	75	92	73	0	7	2	0
MILWAUKEE	36	25	43	20	30	11	.5	.1	.4	1.8	70	.7	117	91	68	0	7	2	0
WAUSAU	32	24	34	14	28	16	.1	-.1	.1	.6	35	.1	33	88	71	0	7	1	0
WY CASPER	29	13	46	1	21	-1	.8	-.8	.5	1.1	185	.9	900	81	59	0	7	2	0
CHEYENNE	38	22	56	16	30	4	.1	-.1	.1	.2	44	0	0	78	45	0	7	2	0
LANDER	23	5	45	-16	14	-5	.4	.4	.2	.7	102	.4	400	86	63	0	7	2	0
SHERIDAN	34	13	49	-2	24	5	.3	.2	.2	.4	49	.3	150	86	62	0	7	2	0
PR SAN JUAN	83	69	86	67	76	-1	.1	-.6	.1	3.2	57	.1	9	95	65	0	0	3	0

Based on 1951-80 normals.

Heating Degree Day Summary Table

CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 1-10-1987
ACCUMULATIONS ARE FROM JULY 1
\*\* = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL WEEK, WEEK WEEK, CUM CUM CUM CUM CUM, TOTAL DEV DEV DEV DEV DEV, FROM FROM FROM FROM FROM, NORM L YR NORM L YR NORM L YR NORM L YR NORM L YR, PRCT PRCT, STATE CITY, CALL WEEK, WEEK WEEK, CUM CUM CUM CUM CUM, TOTAL DEV DEV DEV DEV DEV, FROM FROM FROM FROM FROM, NORM L YR NORM L YR NORM L YR NORM L YR NORM L YR, PRCT PRCT.

## December Weather Summary

**HIGHLIGHTS:** A series of Pacific storms moved into the Southwest, redeveloped, and then spread rain across the South and up the east coast. Snow fell in much of the Southwest and western Texas, and a few thunderstorms developed across the South. Heavy rain along the east coast combined with unusually high tides and caused local flooding and beach erosion. Heavy rain fell in the previously dry mid-Atlantic States. Snow was heavy from the Great Lakes region to the northern Appalachians. Pacific storms also affected the Northwest, but monthly totals of precipitation were considerably less than normal. However, precipitation amounts increased in this area late in the month. Snow covered the Cascades, the northern Sierras, and the Rockies but was less than the normal amount. Although temperatures cooled seasonally during the month, they were generally warmer than normal, especially in the northern Great Plains and the Northeast.

**FIRST WEEK...**A storm moved from the central Plains through New England, dropping moderate rain from the lower Missouri Valley northeastward. At about the same time another storm, out of the Gulf of Mexico, spread moderate rain up the east coast. Snow fell through the Great Lakes region and at the high elevations of the Northeast. Late in the week, rain fell all along the west coast and snow covered most of the mountainous areas of the West. Freezing temperatures reached into the Carolinas and almost to the gulf coast.

**SECOND WEEK...**A storm system developed in the Southwest and moved to the lower Mississippi Valley and then Northeastward. The storm triggered rain-showers in the far Southwest and snow in the southern and central Rockies and western Texas. Showers and thunderstorms spread from central Texas into the Southeast, while rain fell from the lower Mississippi Valley to southern New England. Cold, unsettled weather produced snow from the northern Plains to western New England. Much colder weather spread over all of the West and into the Southeast. Strong, gusty winds accompanied the push of cold air over the Nation.

**THIRD WEEK...**Another storm moved out of the Southwest and spread showers and a few thunderstorms eastward to the Mississippi Delta and then rain from the mid-Atlantic States through the Northeast. Snow fell in northern Arizona and New Mexico, and in the Texas Panhandle. Some freezing rain and snow fell in parts of the interior of the Northeast. Strong northerly wind followed the storm in the Northeast. Rain fell along the west coast and snow inland. Although there was some very cold mornings in the northern Plains and the Northeast, temperatures averaged above normal in most of the Nation. Temperatures were as much as 12 degrees warmer than normal in parts of the northern Plains.

**FOURTH WEEK...**A storm system in the western Gulf of Mexico moved eastward and then northeastward along the east coast. The storm spread rain from New Mexico across the South and over the east coast through New England. Snow covered parts of New Mexico and western Texas, and some freezing rain fell in the interior parts of the Northeast. Heavy rain fell in some of the drier parts of the mid-Atlantic area. Heavy rain fell along the Northwest coast and lighter showers extended southward along the California coast. Snow covered the Cascades. Average temperatures were much warmer than normal in the northern Plains and the Northeast.

The last 4 days of the month brought heavy showers to the Washington and Oregon coast and

moderate amounts southward to central California. Rain and snow fell across the Intermountain region, and cold rain fell in the northern Plains.

### Highlights

**ALL COTTON** production in 1986 is forecast at 9.78 million bales, 27 percent below the 1985 crop and fractionally below December 1.

**CITRUS** production is forecast at 12.2 million tons, down 1 percent from December 1 but 13 percent above last season.

**ORANGE** production is forecast at 198 million boxes, down 1 percent from December 1 but 12 percent above last season.

**GRAPEFRUIT** production, excluding California "other areas" crop, is forecast at 57.6 million boxes, fractionally below December 1 but 9 percent above last season.

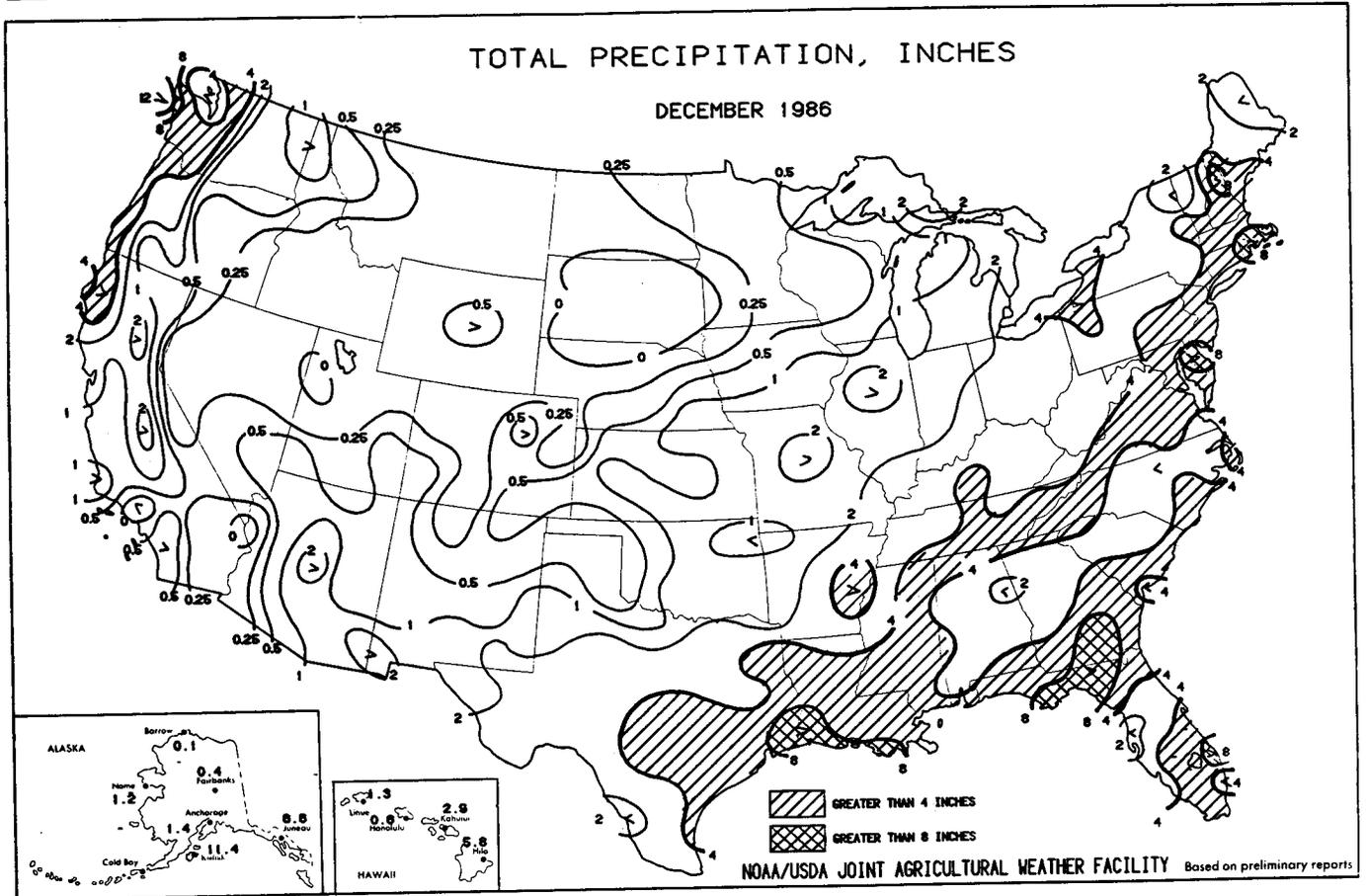
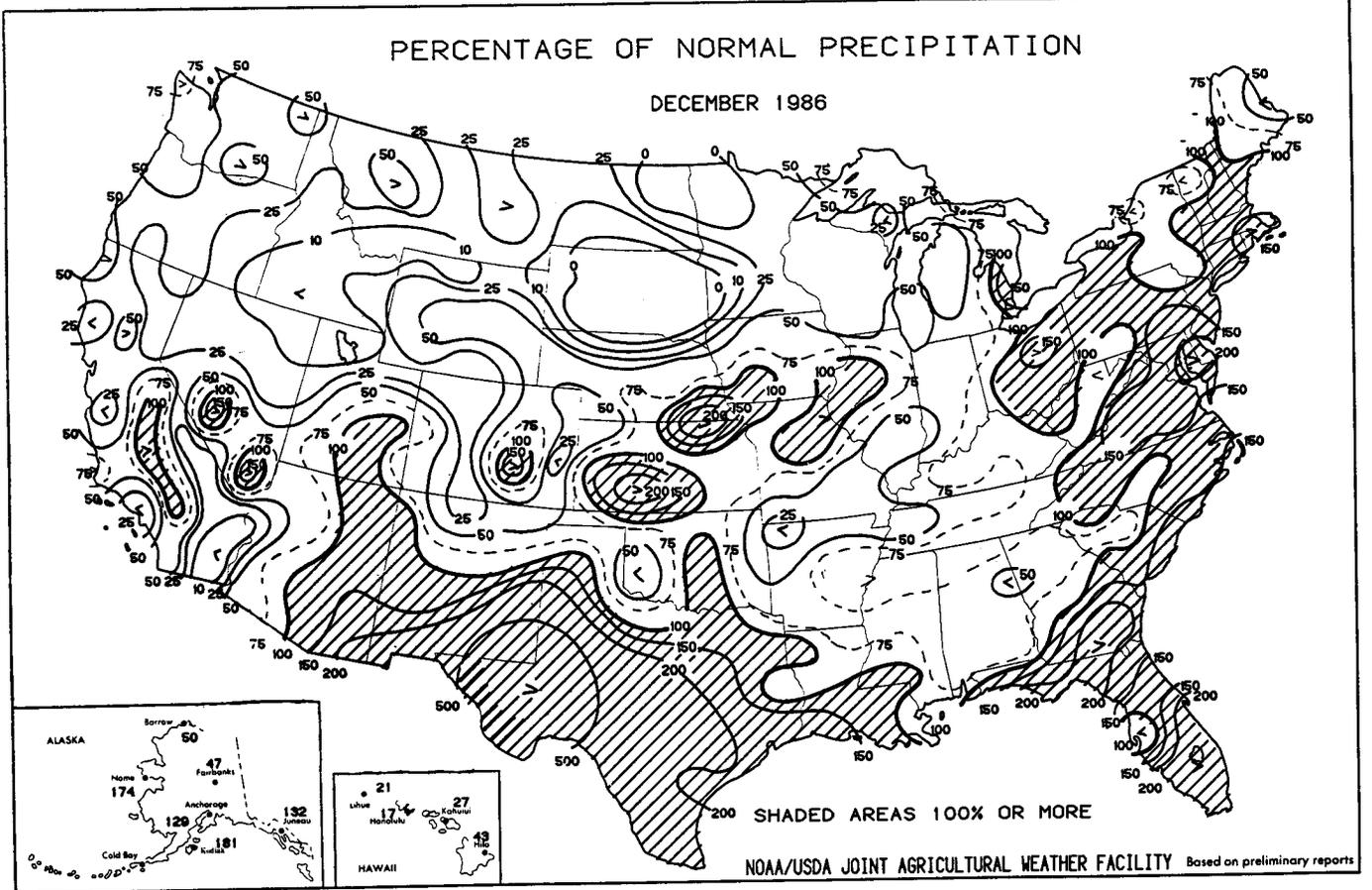
**LEMON** production, at 25.3 million boxes, is up fractionally from December 1 and 38 percent above last season.

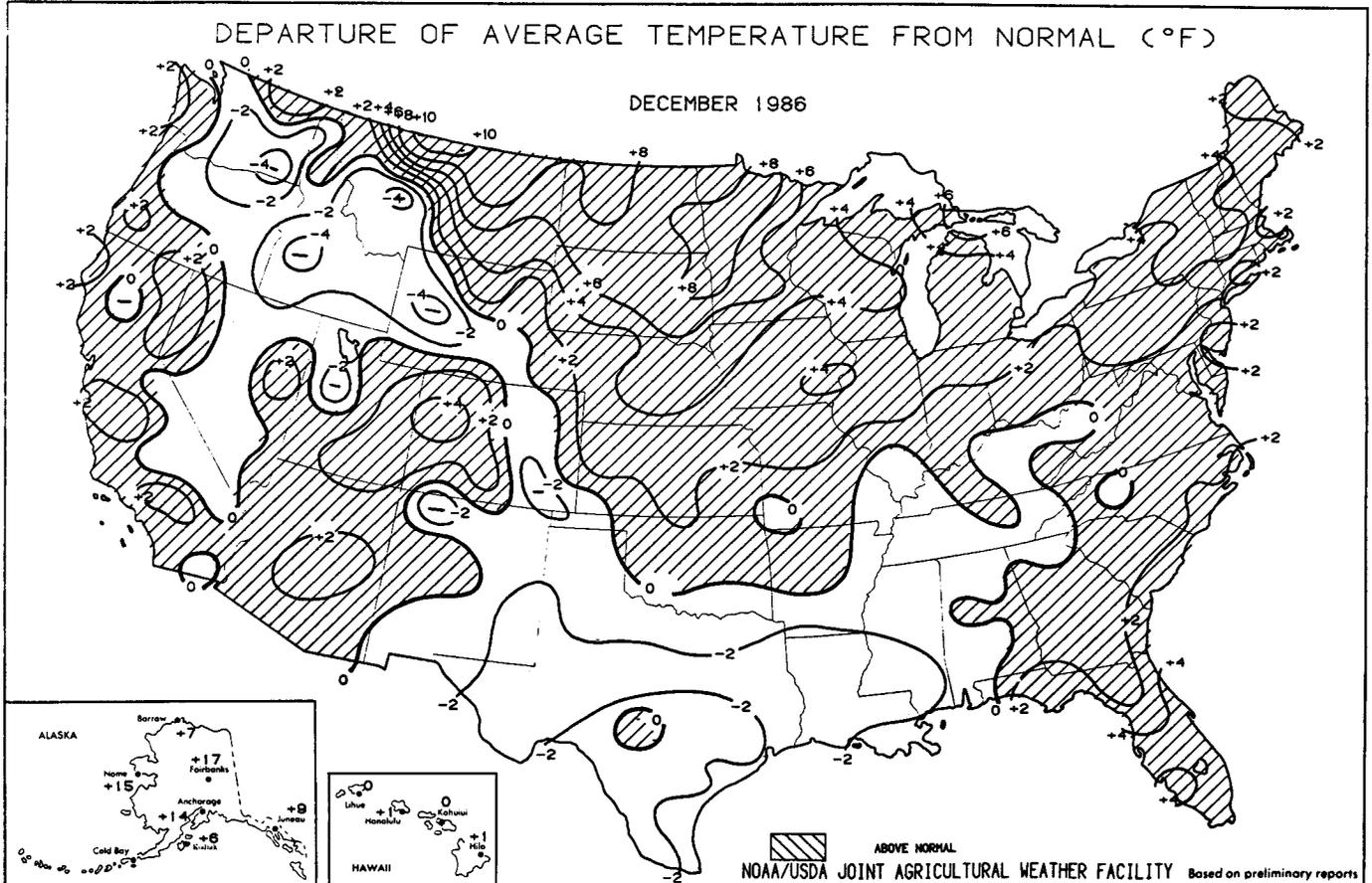
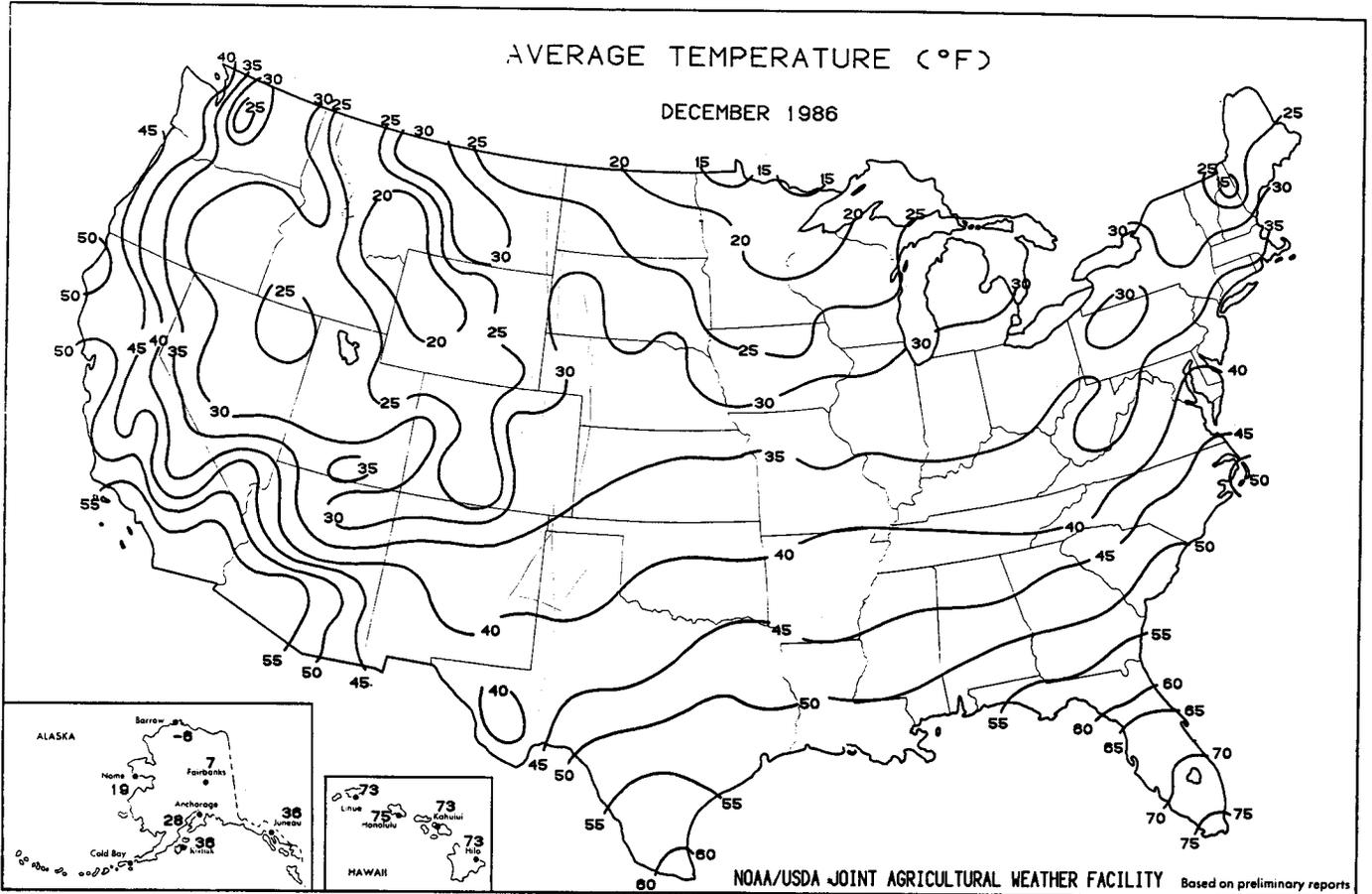
**WINTER POTATO** production for 1987 is forecast at 2.86 million cwt, down 4 percent from last year but 6 percent above 1985.

**HAY STOCKS** on farms December 1, 1986 are estimated at 122 million tons. For previous crops, stocks were measured on January 1 rather than on December 1.

### December Harvesting Progress

Rain prolonged cotton and soybean harvest in the Corn Belt, central and southern Great Plains, Delta, and Southeast during most of December. Wetness caused deterioration of cotton and soybeans in the southern Great Plains and Southeast. Cotton harvest remained behind normal in Alabama, Georgia, New Mexico, Oklahoma, South Carolina, and Texas during the month. Farmers were able to virtually complete harvest in Georgia, and South Carolina before the month ended. As December drew to a close however, nearly two-thirds of Oklahoma's acreage was unharvested. This was two times slower than normal at 35 percent completion on December 28. After the first week of December, wetness kept cotton pickers idle until soils dried enough for harvest to resume around mid-month. Some bottom-land acreage was lost because of flooding. In Texas, harvest reached 65 percent completion near the end of December, compared with 89 percent normally. The first week of December harvest gained 20 points from the previous week but never increased more than 5 points in any week the rest of the month. Harvest virtually stood still the last week of December, ending the month 65 percent finished. Some producers plowed under insured acreage while other's contemplated taking the same action. Soybean harvest crawled along during the month. Near mid-month, however, producers accomplished sizable gains in a few southeastern States. As the month ended, soybeans were still left to be harvested in the Southeast and in Missouri. Corn harvest was limited to mostly scattered fields in the Corn Belt and Rocky Mountain States during December.





December 1986  
Temperature and Precipitation Data for

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	44	-2	3.4	-1.6	LA ALEXANDRIA	49	-3	5.0	0.0	OH COLUMBUS	33	1	2.8	0.2
MOBILE	51	-2	3.7	-1.8	BATON ROUGE	51	-2	6.2	1.2	DAYTON	33	1	2.9	0.4
AK MONTGOMERY	48	-1	3.0	-1.8	LAKE CHARLES	51	-2	9.8	4.8	TOLEDO	31	3	1.9	-0.7
ANCHORAGE	29	15	1.4	0.3	NEW ORLEANS	53	-1	5.0	-0.3	YOUNGSTOWN	31	2	3.4	0.7
BARROW	-6	7	0.1	-0.1	SHREVEPORT	46	-3	4.7	0.8	OK OKLAHOMA CITY	41	1	1.2	0.0
FAIRBANKS	7	18	0.3	-0.4	ME CARIBOU	16	0	1.6	-1.6	TULSA	40	0	1.0	-0.9
JUNEAU	36	9	6.7	2.0	PORTLAND	30	4	5.9	1.4	OR ASTORIA	45	1	7.3	-4.2
KODIAK	36	6	114	5.1	MD BALTIMORE	38	1	5.5	2.1	BURNS	27	-1	0.3	-1.3
NOME	19	15	1.1	0.5	MA SALISBURY	40	1	6.9	3.2	MEDFORD	38	0	0.7	-2.8
AZ FLAGSTAFF	30	0	1.4	-0.9	MI BOSTON	35	2	6.3	1.9	PENDLETON	32	-4	0.8	-0.9
PHOENIX	56	3	1.4	0.6	CHATHAM	38	3	7.2	2.2	PORTLAND	41	0	4.3	-2.1
PRESCOTT	39	2	0.9	-0.8	ALPENA	29	5	1.0	-1.0	SALEM	40	-1	3.9	-3.2
TUCSON	52	0	1.3	0.3	DETROIT	32	3	2.3	-0.2	PA ALLENTOWN	34	2	4.4	0.7
WINSLOW	35	2	0.6	0.0	FLINT	30	3	1.7	-0.3	ERIE	33	3	4.1	0.9
YUMA	58	2	0.2	-0.1	GRAND RAPIDS	30	2	1.0	-1.5	HARRISBURG	36	3	4.9	1.7
AR FORT SMITH	41	0	1.2	-1.6	HOUGHTON LAKE	26	3	0.9	-1.0	PHILADELPHIA	38	2	6.0	2.5
LITTLE ROCK	43	0	3.3	-0.7	LANSING	30	3	1.1	-1.1	PITTSBURGH	33	2	3.5	0.9
CA BAKERSFIELD	47	-1	1.0	0.3	MARQUETTE	21	4	0.5	-1.9	SCRANTON	33	3	2.0	-0.5
EUREKA	51	3	3.8	-2.4	MUSKOGON	31	2	1.4	-1.2	RI PROVIDENCE	35	3	8.1	3.6
FRESNO	47	2	2.3	0.7	MN SAULT STE. MARI	26	6	2.2	-0.4	SC CHARLESTON	53	3	5.2	2.1
LOS ANGELES	58	1	0.3	-1.3	ALEXANDRIA	23	8	0.1	-0.7	COLUMBIA	47	0	2.6	-1.0
REDDING	46	-1	2.0	-5.1	DULUTH	19	5	0.4	-0.9	FLORENCE	48	0	3.2	0.2
SACRAMENTO	46	0	0.8	-2.2	INT'L FALLS	16	8	0.3	-0.6	GREENVILLE	43	-1	4.1	0.2
SAN DIEGO	58	0	0.9	-0.4	MINNEAPOLIS	25	6	0.3	-0.6	SD ABERDEEN	24	7	0.0	-5.0
SAN FRANCISCO	50	1	1.7	-1.9	ROCHESTER	23	4	0.3	-0.5	HURON	27	8	0.0	-0.5
STOCTON	46	0	0.7	-1.7	ST. CLOUD	20	5	0.3	-0.6	RAPID CITY	31	5	T	-0.4
CO DENVER	31	-1	0.3	-0.2	MS GREENWOOD	45	-2	2.5	-2.9	STOUX FALLS	25	6	T	-0.7
GRAND JUNCTION	32	4	0.5	-0.1	JACKSON	47	-2	5.0	-0.4	TN CHATTANOOGA	41	0	4.8	-0.4
FUEBLO	30	-3	0.5	0.2	MERIDIAN	47	-2	4.2	-1.5	KNOXVILLE	39	-2	4.1	-0.5
CT BRIDGEPORT	36	2	4.3	0.6	MO COLUMBIA	35	2	2.1	0.1	MEMPHIS	43	-1	3.9	-0.9
HARTFORD	33	4	6.3	2.1	KANSAS CITY	34	3	1.3	-0.1	NASHVILLE	40	-1	3.3	-1.3
DC WASHINGTON	40	1	5.0	1.8	SAINT LOUIS	35	1	1.1	-1.2	TX ABILENE	44	-3	2.0	1.2
FL APALACHICOLA	58	3	9.7	6.2	SPRINGFIELD	36	0	1.3	-1.3	AMARILLO	37	-1	0.7	0.2
DAYTONA BEACH	65	5	2.8	0.6	MT BILLINGS	32	5	0.1	-0.7	AUSTIN	51	-1	5.8	3.7
FT. MYERS	68	3	3.6	2.0	GLASGOW	25	8	0.1	-0.3	BEAUMONT	52	-3	9.6	5.1
JACKSONVILLE	57	2	4.7	2.1	GREAT FALLS	33	8	0.2	-0.6	BROWNSVILLE	60	-2	2.5	1.3
KEY WEST	75	4	11.2	9.5	HAVRE	29	10	T	-0.5	CORPUS CHRISTI	56	-3	4.5	3.1
MIAMI	73	5	2.2	0.4	HELENA	19	-5	0.4	-0.2	DEL RIO	52	-1	2.4	1.8
ORLANDO	67	5	3.6	1.7	KALISPELL	25	1	0.5	-1.1	EL PASO	43	-2	1.4	1.0
TALLAHASSEE	55	2	7.1	2.5	MILES CITY	27	5	0.2	-0.5	FORT WORTH	46	-2	2.4	0.7
TAMPA	66	5	1.9	-0.2	MISSOULA	21	-3	0.5	-0.7	GALVESTON	54	-3	4.1	0.4
WEST PALM BEACH	72	5	10.1	7.8	NE GRAND ISLAND	31	4	0.3	-0.4	HOUSTON	52	-2	5.7	2.1
GA ATLANTA	45	0	3.1	-1.2	LINCOLN	31	4	1.3	0.7	LUBBOCK	41	-1	1.3	0.9
AUGUSTA	48	1	4.2	1.0	NORFOLK	29	5	0.4	-0.3	MIDLAND	44	-2	3.3	2.8
MACON	49	0	3.8	-0.2	NORTH PLATTE	30	4	0.3	-0.2	SAN ANGELO	45	-3	2.5	1.8
SAVANNAH	54	3	5.1	2.4	OMAHA	29	4	0.7	-0.1	SAN ANTONIO	52	-1	7.0	5.7
HI HILO	73	1	5.8	-7.1	SCOTTSBLUFF	29	1	0.3	-0.3	VICTORIA	54	-3	4.3	2.1
HONOLULU	75	1	0.6	-2.9	VALENTINE	29	5	T	-0.3	WACO	47	-2	3.5	1.6
KAHULUI	73	0	2.9	0.0	NV ELKO	25	-1	0.1	-0.9	WICHITA FALLS	43	-1	0.9	-0.3
LIHUE	73	0	1.3	-4.2	ELY	28	2	0.1	-0.7	UT BLANDING	33	3	0.7	-0.6
ID BOISE	28	-4	0.1	-1.2	LAS VEGAS	46	1	0.5	0.2	CEDAR CITY	33	1	0.5	-0.2
LEWISTON	35	0	0.5	-0.8	RENO	36	3	0.2	-1.0	MILFORD	29	1	0.3	-0.3
POCATELLO	24	-2	0.2	-0.8	WINNEMUCCA	29	-1	0.1	-0.8	SALT LAKE CITY	30	0	0.1	-1.3
IL CAIRO	37	-2	2.3	-1.9	NH CONCORD	29	5	4.5	1.1	VT BURLINGTON	28	5	1.3	-1.1
CHICAGO	31	3	1.1	-1.0	NJ ATLANTIC CITY	38	2	4.8	1.2	VA NORFOLK	45	1	3.8	0.6
MOLINE	30	4	2.0	0.1	NM ALBUQUERQUE	36	1	0.4	-0.1	RICHMOND	41	1	5.2	1.8
PEORIA	31	3	2.6	0.6	CLOVIS	37	-2	1.4	0.8	ROANOKE	38	0	5.5	2.6
QUINCY	32	2	1.8	0.1	ROSWELL	40	-3	0.8	0.6	WA COLVILLE	30	3	1.5	-1.0
ROCKFORD	28	3	0.6	-1.3	NY ALBANY	31	4	3.9	0.9	QUILLAYUTE	43	2	12.4	-3.9
SPRINGFIELD	33	2	1.4	-0.7	BINGHAMTON	31	5	2.5	-0.4	SEATTLE-TACOMA	42	1	3.7	-2.7
IN EVANSVILLE	36	0	2.2	-1.3	BUFFALO	32	4	4.0	0.6	SPOKANE	26	-3	1.0	-1.5
FORT WAYNE	31	2	1.6	-0.9	NEW YORK	39	3	5.2	1.5	WALLA WALLA	33	-4	0.8	-1.4
INDIANAPOLIS	32	1	1.7	-1.2	ROCHESTER	31	2	3.5	0.9	YAKIMA	29	-3	0.9	-0.4
SOUTH BEND	31	2	1.7	-1.3	SYRACUSE	31	3	3.3	0.1	WV BECKLEY	34	1	2.7	-0.5
IA DES MOINES	29	3	1.0	-0.1	NC ASHEVILLE	40	0	4.3	0.8	CHARLESTON	36	-1	3.9	0.6
DUBUQUE	26	3	0.7	-1.2	CHARLOTTE	43	0	3.2	-0.2	ELKINS	33	1	2.6	-0.7
SIOUX CITY	27	4	0.2	-0.5	GREENSBORO	40	0	3.6	0.2	HUNTINGTON	36	-1	3.6	0.4
WATERLOO	24	3	0.8	-0.3	HATTERAS	52	3	6.6	2.1	PARKERSBURG	35	0	4.0	1.2
KS CONCORDIA	34	3	1.4	0.7	NEW BERN	48	1	3.5	-0.2	WI GREEN BAY	25	4	0.5	-0.9
DODGE CITY	35	2	1.0	0.4	RALEIGH	43	1	2.9	-0.3	LA CROSSE	25	4	0.4	-0.7
GOODLAND	33	3	0.1	-0.3	WILMINGTON	50	2	6.3	2.8	MADISON	25	3	0.7	-0.8
TOPEKA	35	3	1.2	-0.1	ND BISMARCK	22	7	T	-0.5	MILWAUKEE	29	3	1.1	-0.9
WICHITA	36	1	1.2	0.2	FARGO	21	8	0.3	-0.4	WAUSAU	23	4	0.5	-0.8
KY BOWLING GREEN	38	0	4.7	0.2	GRAND FORKS	18	7	0.3	-0.3	WY CASPER	26	1	0.3	-0.2
JACKSON	38	4	3.1	-0.4	WILLISTON	22	7	0.1	-0.5	CHEYENNE	29	0	0.2	-0.2
LEXINGTON	36	-1	3.3	-0.5	OH AKRON-CANTON	32	1	2.8	0.1	LANDER	19	-4	0.2	-0.3
LOUISVILLE	37	-1	2.7	-0.8	CINCINNATI	34	0	2.6	-0.4	SHERIDAN	29	5	0.1	-0.6
PADUCAH	37	-1	3.1	-1.1	CLEVELAND	32	-1	2.9	0.1	PR SAN JUAN	78	0	3.0	-1.4

Based on 1951-80 normals

## Heating Degree Days (Base 65° F.)

## December 1986

ALA. Birmingham . . .	635	MAINE, Caribou . . .	1505	OKLA. Okla. City . . .	742
Mobile . . . . .	434	Portland . . . . .	1092	Tulsa . . . . .	771
Montgomery . . . . .	534	MD. Baltimore . . . . .	822	OREG. Astoria . . . . .	635
ALASKA, Anchorage . . .	1129	MASS. Boston . . . . .	905	Burns . . . . .	1181
Barrow . . . . .	2216	Chatham . . . . .	833	Medford . . . . .	833
Fairbanks . . . . .	1787	MICH. Alpena . . . . .	1100	Pendleton . . . . .	1031
Nome . . . . .	1422	Detroit . . . . .	1028	Portland . . . . .	750
ARIZ. Flagstaff . . . . .	1069	Flint . . . . .	1081	Salem . . . . .	779
Phoenix . . . . .	260	Grand Rapids . . . . .	1084	PA. Allentown . . . . .	760
Tucson . . . . .	387	Houghton Lake . . . . .	1179	Erie . . . . .	989
Winslow . . . . .	929	Lansing . . . . .	1078	Harrisburg . . . . .	890
Yuma . . . . .	201	Marquette . . . . .	1348	Philadelphia . . . . .	838
ARK. Fort Smith . . . . .	724	S. Ste. Marie . . . . .	1209	Pittsburgh . . . . .	983
Little Rock . . . . .	684	MINN. Duluth . . . . .	1426	Scranton . . . . .	990
CALIF. Bakersfield . . .	521	Internatl Falls . . . . .	1517	R.I. Providence . . . . .	911
Eureka . . . . .	417	Minneapolis . . . . .	1243	S.C. Charleston . . . . .	376
Fresno . . . . .	537	Rochester . . . . .	1312	Columbia . . . . .	565
Los Angeles . . . . .	199	St. Cloud . . . . .	1390	Greenville . . . . .	682
Red Bluff . . . . .	598	MISS. Jackson . . . . .	566	S. DAK. Aberdeen . . . . .	1258
Stockton . . . . .	585	Meridian . . . . .	566	Huron . . . . .	1174
San Diego . . . . .	223	MO. Columbia . . . . .	937	Rapid City . . . . .	1060
San Francisco . . . . .	447	Kansas City . . . . .	938	Sioux Falls . . . . .	1227
COLO. Denver . . . . .	1045	St. Louis . . . . .	910	TENN. Chattanooga . . . . .	722
Grand Junction . . . . .	1001	Springfield . . . . .	882	Knoxville . . . . .	797
Pueblo . . . . .	1069	MONT. Billings . . . . .	1005	Memphis . . . . .	688
CONN. Bridgeport . . . . .	908	Glasgow . . . . .	1237	Nashville . . . . .	773
Hartford . . . . .	981	Great Falls . . . . .	979	TEX. Abilene . . . . .	647
D.C. Washington . . . . .	775	Havre . . . . .	1099	Amarillo . . . . .	858
FLA. Apalachicola . . . .	225	Helena . . . . .	1432	Austin . . . . .	431
Ft. Myers . . . . .	---	Kalispell . . . . .	1234	Beaumont . . . . .	415
Jacksonville . . . . .	250	Miles City . . . . .	1188	Brownsville . . . . .	177
Key West . . . . .	0	Missoula . . . . .	1347	Corpus Christi . . . . .	294
Miami . . . . .	0	NEBR. Grand Island . . . .	1052	Del Rio . . . . .	419
Orlando . . . . .	42	Lincoln . . . . .	1064	El Paso . . . . .	687
W. Palm Beach . . . . .	2	Norfolk . . . . .	1114	Fort Worth . . . . .	580
Tallahassee . . . . .	316	North Platte . . . . .	1074	Galveston . . . . .	333
Tampa . . . . .	53	Omaha . . . . .	1102	Houston . . . . .	411
GA. Atlanta . . . . .	609	Valentine . . . . .	1098	Lubbock . . . . .	752
Augusta . . . . .	513	NEV. Ely . . . . .	1136	Midland . . . . .	653
Macon . . . . .	491	Las Vegas . . . . .	586	San Angelo . . . . .	604
Savannah . . . . .	349	Reno . . . . .	913	San Antonio . . . . .	413
IDAHO, Boise . . . . .	1141	Winemucca . . . . .	1108	Victoria . . . . .	353
Lewiston . . . . .	932	N.H. Concord . . . . .	1109	Waco . . . . .	540
Pocatello . . . . .	1247	N.J. Atlantic City . . . . .	834	Wichita Falls . . . . .	665
ILL. Cairo . . . . .	865	N. MEX. Albuquerque . . . .	882	UTAH, Milford . . . . .	1112
Chicago . . . . .	1060	N.Y. Albany . . . . .	1053	Salt Lake City . . . . .	1086
Moline . . . . .	1078	Binghamton . . . . .	1041	VT. Burlington . . . . .	1144
Peoria . . . . .	1048	Buffalo . . . . .	1003	VA. Lynchburg . . . . .	802
Rockford . . . . .	1134	New York . . . . .	787	Norfolk . . . . .	619
Springfield . . . . .	999	Rochester . . . . .	1026	Richmond . . . . .	741
IND. Evansville . . . . .	900	Syracuse . . . . .	1027	Roanoke . . . . .	813
Fort Wayne . . . . .	1043	N.C. Asheville . . . . .	774	WASH. Colville . . . . .	1082
Indianapolis . . . . .	1009	Charlotte . . . . .	665	Quillayute . . . . .	682
South Bend . . . . .	1038	Greensboro . . . . .	761	Seattle-Tacoma . . . . .	707
IOWA, Des Moines . . . . .	1114	Hatteras . . . . .	411	Spokane . . . . .	1193
Dubuque . . . . .	1210	Raleigh . . . . .	687	Walla Walla . . . . .	967
Souix City . . . . .	1172	Wilmington . . . . .	369	Yakima . . . . .	1125
KANS. Concordia . . . . .	967	N. DAK. Bismarck . . . . .	1319	W. VA. Beckley . . . . .	939
Dodge City . . . . .	911	Fargo . . . . .	1360	Charleston . . . . .	880
Goodland . . . . .	987	Williston . . . . .	1324	Huntington . . . . .	886
Topeka . . . . .	931	OHIO. Akron-Canton . . . . .	1023	WIS. Green Bay . . . . .	1240
Wichita . . . . .	899	Cincinnati . . . . .	955	Madison . . . . .	1218
KY. Lexington . . . . .	903	Cleveland . . . . .	999	Milwaukee . . . . .	1106
Louisville . . . . .	869	Columbus . . . . .	974	WYO. Casper . . . . .	1196
LA. Baton Rouge . . . . .	431	Dayton . . . . .	991	Cheyenne . . . . .	1121
Lake Charles . . . . .	417	Toledo . . . . .	1027	Lander . . . . .	1424
New Orleans . . . . .	307	Youngstown . . . . .	1036	Sheridan . . . . .	1109
Shreveport . . . . .	579				

Based on 1951-80 normals.

## National Agricultural Summary

January 5 to 11, 1987

**HIGHLIGHTS:** Precipitation slowed cotton harvest in the southern Great Plains and New Mexico. Winter wheat lacked snow cover in the northwestern Corn Belt, northern Rockies, northern Great Plains, and most of the Pacific Northwest. Above-normal temperatures kept winter damage at a minimum. Winter wheat seeding continued in the Southeast and Southwest. A few acres of corn and soybeans were harvested in the Corn Belt and Southeast, respectively. Citrus harvest progressed well. Soil moisture was adequate, but more moisture is needed in some Western States. Livestock was mostly good. Supplemental feeding increased in some areas.

**SMALL GRAINS:** Winter wheat was fair to mostly good. Snow cover protected wheat from the wintery weather in most of the Corn Belt and eastern Kansas. Most of the wheat and small grains in the northwestern Corn Belt, the northern Rockies, the northern Plains, and the Pacific Northwest lacked snow cover. Warmer-than-normal temperatures kept damage to a minimum. Winter wheat was mostly good in Colorado. Recent snow provided adequate cover for most of the small grains. In Minnesota, the lack of snow cover could be a problem for winter grains, if conditions turn cold for an extended period. Light snow provided little benefit to wheat as unseasonable warm temperatures returned in Nebraska. Warm temperatures and adequate moisture improved Oklahoma's wheat. Leaf rust disease and greenbugs may be a problem in the spring, if sufficient cold weather is not encountered this winter. Small grains were mostly good in South Dakota. Producers were concerned about the lack of snow cover and the potential for severe winter damage. In Georgia, small grains were topdressed and seeding finished. Rust was prevalent in most wheat fields in Arkansas. Small grains showed signs of stress and disease in Texas. Cold temperatures slowed growth in the Plains. Yellowing increased in the wetter areas. Producers topdressed with nitrogen as weather permitted. Rain spurred small grain growth in California, but more is needed as planting continues.

**COTTON:** Cotton harvest continued lingering in Oklahoma, New Mexico, and Texas. Precipitation slowed harvest in all three States. In Texas, cotton harvest progressed some early to midweek, but late in the week, snow and frost forced producers out of fields in the Plains. Some acreage was lost in the Plains. Harvest reached 78 percent (%) completion, up 8 points from the previous week but 16 points behind the 5-year average. In New Mexico, harvest slowly climbed to 90% completion. Harvest normally would have been finished by this date. Harvest climbed 20 points ahead of the previous week, but rain slowed harvest somewhat at the end of the week in Oklahoma. Sixty-five percent of the acreage was picked, compared with 95% normally. Large counts of boll weevils and pink boll worms were in

Arkansas. Cold, freezing weather is needed to reduce population before next season's crop. Farmers were busy meeting plowdown requirements in California.

**OTHER CROPS:** A few fields of corn were harvested in the Corn Belt, and some soybeans were picked in the Southeast. Farmers plowed land and spread manure, where conditions would permit in the Corn Belt. In Missouri, late harvest progressed until snow stopped fieldwork. In California and Arizona, land preparation was underway for spring crops, but rain slowed cultural practices in California.

Burley tobacco markets reopened after the Christmas holidays. Farmers were actively stripping and preparing burley tobacco for market. Dark-fired tobacco sales were underway in Tennessee. Tobacco seedbed preparation continued in the Southeast.

**FRUIT AND NUTS:** Orchard pruning continued in Michigan and Oregon. In California, almond buds began swelling. Citrus, avocados, and date harvests continued. Valencia oranges progressed well in Arizona. Pecan harvest and shipments were steady. Citrus harvest progressed. A good supply of fruit remained on Texas' citrus trees. Citrus harvest gained momentum, and quality was good. Florida's citrus groves were very good, and soil moisture was sufficient in all areas. Fruit color was quite pronounced, and droppage slowed. Early and midseason orange movement to processing plants increased rapidly. Fresh market temple orange harvest increased in some areas. Seedless grape shipments increased, following the Christmas break.

**VEGETABLES:** Spring vegetable planting was active in southern Florida. Winter vegetable harvest was active. Volume leaders were tomatoes, cabbage, peppers, and celery. Also, sweet corn, snap beans, cucumbers, squash, carrots, radishes, lettuce, eggplant, escarole, and strawberries were in good supply. Vegetable harvest increased in Texas. Seasonal packing of lettuce, cauliflower, broccoli, asparagus, and mixed vegetables advanced in Arizona. Spring vegetable planting gained momentum. California's broccoli harvest was light in Salinas but moderate in Santa Maria. Some broccoli was treated to control mildew at Westside. Asparagus harvest was light in the Coachella and Palo Verde Valleys but should increase when temperatures rise. Lettuce harvest continued in the Palo Verde Valley but will be slow until new fields mature. Newly planted lettuce was replanted in the Fresno area because of the damage from a winter storm. Celery harvest was light in Santa Maria.

**PASTURES AND LIVESTOCK:** Livestock was mostly good. Lambing, calving, and farrowing were active in most areas. Supplemental feeding increased where snow covered the ground. Pastures were mostly fair.

## State Summaries of Weather and Agriculture

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

**ALABAMA:** Rainfall totals 0.25 in. or less. Temperatures averaged 1 to 2° below normal. Some sleet, snow over northeast.

Soil moisture normal statewide. Livestock, poultry good.

**ARIZONA:** Two cold weather storms 5th to 8th produced near blizzard conditions north, showers with local thunderstorms south. Three to 15 in. new snow Grand Canyon, Mogollon Rim, White Mountain region. Amounts ranged from traces to 3 in. central basin, snow level down to 4,000 ft. Southern portion of strong high pressure system plunged morning temperatures 9th, 10th to below zero high country, teens and lower 20s 5,000 ft., upper 20s and 30s lower deserts. Average temperatures for week varied from 5° below normal to 6° above.

Wheat, barley 85% planted, 75% 1986, 80% avg.; stands established 55%, crops good to excellent. Cotton harvest virtually completed. Stalk shredding, plowdown winding down west, moderate elsewhere. Few late corn acres standing for harvest. Land preparation underway for spring field crops. Sheep grazing alfalfa full swing, moderate to heavy. Alfalfa hay harvest light. Green chopping continued. Weed control measures performed. New alfalfa stands progressing normally. Seasonal packing of lettuce, cauliflower, broccoli, asparagus, mixed vegetables advanced. Spring vegetable planting moved ahead. Citrus harvests continued. Valencia oranges making good progress. Pecans harvested, shipping steady. Apples shipped.

**ARKANSAS:** Temperatures ranged from slightly above normal north and west to slightly below normal south and east. Precipitation during latter part of week in form of snow, sleet; rain. Amounts greatest north and west, least southeast. Temperature extremes 18°; 66°. Rainfall 0.03 to 1.62 in.

Soil moisture mostly adequate to surplus. Very little farming activity. Rust prevalent most winter wheat fields. Large counts of boll weevils, pink boll worms reported; need cold weather to reduce populations.

**CALIFORNIA:** First major storm of winter season struck area beginning of week bringing over 1.00 in. of precipitation to entire State excepting Mojave Desert which received about one-third that amount. Low pressure aloft drove another weak storm across State midweek, kept temperatures slightly below normal except in Sierra Nevada where temperatures as much as 10° below normal. Temporary ridge of high pressure built into area week's end bring return to fair skies.

Rains spurred small grain growth, more needed as plantings continued. Sugarbeet planting, harvesting active. Cotton plowdown requirements being met. Alfalfa being treated for weeds, gophers. Field preparation underway for spring crops. Rain slowed cultural practices. Harvest continued for avocados, dates. Almond buds swelling. Citrus harvested. Artichokes continued moderate supply Salinas. Asparagus harvest Coachella, Palo Verde Valleys. Volume light, will increase temperatures rise. Broccoli light Salinas, moderate Santa Maria. Quality generally good. Westside broccoli harvest active, some fields treated fungicides control mildew. Carrot harvest continued San Joaquin Valley, increasing

desert. Cauliflower moderate supply Santa Maria. Celery harvest light Santa Maria, quality good. Lettuce harvest continued Palo Verde Valley, slow as new fields mature. Demand reported good, good quality, yields. Newly planted fields replanted Fresno area, damage from storms. Ground preparation February planting melons. Ranges, pastures improved recent rains. More rain needed continued growth. Supplemental feeding continued heavy most districts. Stock ponds remain low. Calving, lambing continued active. Sheep grazing crop residues San Joaquin Valley.

**COLORADO:** Temperatures averaged 3 to 6° above normal. Range 68° maximum to -17° for low. Precipitation amounts generally 0.20 to 0.30 in. range. Southern mountains received more.

Livestock good. Supplemental feeding, grazing of crop residue continued to be adequate to maintain condition. Winter wheat good with recent snows providing adequate cover for much of crop.

**FLORIDA:** Cold front cleared Peninsula early week followed by a warming trend until stronger cold front moved through, weekend. Few spotty showers mostly less than 0.25 in. Rather windy after both fronts.

Soil moisture adequate, surplus low areas. Cooler weather benefited small grains. Cotton, soybean harvest virtually complete. Tobacco bed preparation, planting underway. Sugarcane harvest very active. Cooler temperatures, adequate rains favored winter pasture growth, central, northern areas. High daytime temperatures, without killing frosts retarded grazing summer forage central areas. Pastures remain mostly good lower Peninsula; fair to good elsewhere. Some cows appear thin from calving, but most fair to good. All cattle generally good southern Peninsula; fair to good elsewhere. Groves continued very good. Soil moisture sufficient nearly all areas. Cool night temperatures welcomed by growers. Late week cold front moved through growing areas, bringing light, scattered showers many localities. Fruit color quite pronounced all types. Fruit droppage slowed. Early, midseason orange movement to processing plants increased rapidly with ideal harvesting conditions. Shipments seedless grapefruit increased following Christmas break. Fancy tangerine harvest fresh market declined while Tangelo movement continued strong. Temple harvest fresh market began some areas. Caretaking limited to maintenance mowing southern, east coast groves; preparation for cold protection northern, interior areas. Temperatures averaged normal to 5° below over vegetable producing areas. Precipitation limited. Winds light to moderate. Harvest winter crops active. Volume, leaders; tomatoes, cabbage, peppers, celery. Also available good supplies; sweet corn, snap beans, cucumbers, squash, carrots, radishes, lettuce, eggplant, escarole-endive, strawberries. Limited supplies Chinese cabbage, cauliflower available. Planting spring crops active, southern areas.

**GEORGIA:** Temperatures 3° above normal north to 3° below normal south. Temperatures 70° several locations afternoon of 7th. Lowest 19° several locations morning of 12th with mid 20s south. Most rainfall totals under 0.33 in., with 0.50 to 1.00 in. over southeast. Rain 1 to 2 days. Some light snow over north morning of 11th.

Soil moisture adequate north; short north central; surplus central, south. Main activities:

Harvesting cotton, pecans, soybeans; land preparation; tobacco bed preparation; small grain topdressing. Small grain seeding completed. Small grains fair to good, mostly good. Pastures poor to good. Tobacco plants good. Cattle fair to good. Hogs good.

**HAWAII:** Conditions variable. Shower bands passed through islands caused sporadic, light rainfall. Northeasterly winds 5 to 15 mph. Temperatures ranged low 60s to mid 80s. Rainfall ranged none to 3.90 in.

Days suitable for fieldwork 7.0. Weather mostly favorable for crop development. Banana harvesting active, orchards fair to good. Papaya harvesting down slightly, spray programs controlling insects, diseases. Vegetables fair to good.

**IDAHO:** Light precipitation amounts averaged well below normal. Near normal temperatures, quite cool overnight in mountains.

Limited farm activity consists of general care, feeding livestock hay, shop work. Livestock good. Hay, roughage supplies adequate to surplus.

**ILLINOIS:** Temperatures averaged 7 to 11° above normal north, 3 to 7° above normal south. Precipitation 0.22 to 1.25 in.

Winter wheat mostly good. Livestock mostly good.

**INDIANA:** Average temperatures 6 to 8° above normal. Lows in 20s, highs in 50s. First significant snowfall. Amounts up to 10 in. north, central. Water equivalent 0.25 to 1.00 in.

Frozen grounds permitted limited fieldwork. Plowing of land, spreading manure where conditions permitted. Other activities: Hauling grain, cutting wood, tobacco stripping, repairing machinery, working on taxes, purchasing fertilizer, feeding and caring for livestock. Hay supplies adequate.

**IOWA:** Temperatures ranged 10° above normal south to 15° above normal north. Temperature extremes 7° Spencer; 44° Ottumwa. Precipitation varied from near 0.10 in. west, north central to 0.30 to 0.40 in. elsewhere, mostly snow. Snow depths 3 to 5 in. over eastern, central, south central districts.

**KANSAS:** Temperatures averaged 32 to 33° ranged 5 to 8° above normal northern two-thirds, 2 to 4° above normal southern third. Snowfall 5 to 7 in. east, 7 to 9 in. south central, east central. Precipitation 0.20 in. west and north central, 0.30 to 0.70 in. elsewhere.

General snows provided cover, moisture for wheat. Considerable melting particularly west. Field activity halted. Livestock requiring more supplemental feed.

**KENTUCKY:** Very cloudy period most areas. Temperatures averaged 4 to 8° above normal. Rain, snow averaged around 0.20 in.

Light weekend snow some areas, melted or will melt soon. Soil moisture adequate. Ground soft. Very little field activity. Burley markets reopened, prices steady to weak. Livestock satisfactory.

**LOUISIANA:** Temperature 2° below to 2° above normal. Temperature extremes 27°; 74°. Rainfall well below normal; averaged 0.10 to 0.25 in. Activities: Winter chores, caring for livestock.

**MARYLAND & DELAWARE:** Maryland: Temperatures averaged 2° above normal in mid 30s. Virtually no precipitation. Main farm activity caring for livestock.

Delaware: Temperatures averaged 2° above normal in mid 30s. Precipitation average 0.04 in. Main farm activity caring for livestock.

**MICHIGAN:** Temperatures ranged 9 to 15° above normal. Temperature extremes 11°; 48°. Precipitation ranged from 0.08 to 0.87 in. across State. Heavy snow southern area during weekend. Small accumulation rest of State.

Activities: Field cultivating, pruning fruit trees, combining corn, spreading manure, marketing fruits, vegetables, grain, hay, calves and hogs; attending meetings. Livestock good. Lambing underway. Calving, farrowing continued. Feed supplies adequate.

**MINNESOTA:** Temperatures averaged 15 to 20° above normal for State. Temperature extremes 3°; 48°. Precipitation averaged normal to 0.10 in. above normal south central and southeast, 0.03 to 0.19 in. below normal elsewhere. Snowfall averaged 2 to 4 in. southeast, central through northeast. Snow depth weekend near normal southwest and east central, 1 to 3 in. elsewhere except 4 to 6 in. northeast.

Unseasonable warm temperatures easy on livestock, make chores easy tasks. Some beef cows gleaning corn fields, saves hay. Fieldwork limited to hauling manure, stacking corn stalks. Lack of snow cover could be problem for alfalfa, winter grains if conditions turn cold for extended period.

**MISSISSIPPI:** Temperatures near normal; extremes 22°; 70°. Weak cold front during midweek caused some light rain greatest weekly total 0.54 in. Yazoo City. Greatest 24-hour total 0.43 in. Greenwood.

Days suitable for fieldwork 1.3, 4.7 1986, 1.9 avg. Soil moisture surplus to adequate. Wheat fair to good.

**MISSOURI:** Heavy snow 9th ranged 3 to 11 in., heaviest east-central area. Temperatures 3° above normal southeast to 8° above normal elsewhere.

Late harvesting progressed until snow stopped fieldwork. Care of livestock main activity.

**MONTANA:** Plains continued mild, windy; temperatures 7 to 17° above normal. Over west, southwest temperatures near to slightly above normal. Precipitation confined to southwest, south central. Amounts less than 0.25 in.

Winter wheat 1% poor, 72% fair, 27% good. Snow cover protection 97% poor, 3% fair. Wind damage to winter wheat 93% light, 7% moderate. Crop vulnerable to severe freeze, wind. Cattle, calves 88% good, 12% excellent; 77% on supplemental feed. Sheep, lamb 90% good, 10% excellent; 83% on supplemental feed. Grazing 95% open, 5% difficult.

**NEBRASKA:** Very mild winter weather continued across State. Light amounts of precipitation occurred midweek. Average temperatures ranged from 5 to 12° above normals. Temperature extremes 4°; 64°.

Continued mild conditions beneficial to livestock. Light snow provides little benefit to winter wheat as unseasonable temperatures returned.

**NEVADA:** First full week new year brought cold weather pattern all areas, moderate to heavy precipitation south central, extreme south. Considerable snow accumulated south central, unusual snow observed extreme south. Cold weather resulted in early morning fog many areas. Low northern valleys 26° below zero.

Below normal temperatures hard on fall sown grains, newborn calves, lambs. Considerable ice chopping required due unusually low temperatures.

**NEW ENGLAND:** Precipitation averaged 0.25 to 0.50 in. northern Maine, western Vermont, coastal Connecticut. Western Massachusetts 1.00 to 1.25 in. Other areas 0.50 to 1.00 in. Temperatures 2 to 5° above normal. Upper teens northern Maine to low 30s south.

Major farm activities: Machinery repair, clearing snow, tending livestock.

**NEW JERSEY:** Temperatures slightly above normal, averaging 31° north, 34° south, 37° coastal. Extremes 6°; 50°. Precipitation below normal north, south, near normal coastal, averaging 0.33 in. north, 0.40 in. south, 0.69 in. coastal. Heaviest 24-hour total 0.84 in. on 10th, 11th. Heaviest 24-hour snowfall 2 in. on 10th, 11th. Depth of snow on ground 12th 2 to 4 in. north.

Farmers caring for livestock, other normal winter chores.

**NEW MEXICO:** Weekly average temperatures near normal over most of State. Winter storm moved into northern half of State midweek. Temperatures minus 7° northern mountains to 70° southeastern plains. Precipitation none central valleys, southern desert to 0.54 in. northern mountains.

Days suitable for fieldwork 6.3. Soil moisture 73% adequate, 27% surplus. Cotton 17% poor, 33% fair, 50% good. Harvested to date 90% compared to 100% 1986, 100% avg. Barley 20% fair, 80% good. Irrigated wheat 20% fair, 80% good. Dryland wheat 34% poor, 33% fair, 33% good. Pecans 20% fair, 80% good. Cattle 27% fair, 73% good. Sheep 30% fair, 70% good. Ranges 64% fair, 36% good. Some cattle being taken off wheat. Some planting spring lettuce underway Mesilla Valley.

**NEW YORK:** Subzero temperatures in northern areas early week yielded to mild weather midweek. Temperatures averaged 4 to 7° above normal. Major precipitation central areas on 10th in form of snow, other areas reported lesser amounts of precipitation.

Farmers spent week tending livestock, marketing commodities, repairing equipment. Most corn harvested.

**NORTH CAROLINA:** Temperatures normal to 2° below normal across State. Temperature extremes 12°; 64°. Precipitation ranged from none to 0.80 in.

Days suitable for fieldwork 4.1. Soil moisture 7% short, 83% adequate, 10% surplus. Soybeans harvested 95%, 96% 1986, 98% avg. Small grains fair to good. Pasture 5% very poor, 16% poor, 50% fair, 29% good. Hay, roughage supplies 26% short, 73% adequate, 1% surplus. Feed grain supplies 21% short, 75% adequate, 4% surplus. Major farm activities: Harvesting soybeans; preparing tobacco plantbeds; cutting firewood; tending livestock; repairing equipment; conservation work; tillage operations; spreading lime; soil sampling; general farm maintenance.

**NORTH DAKOTA:** Dry, mild weather continued over northern plains last week. Measurable precipitation limited to north central, northeast where Devils Lake and Pembina reported 0.02 in., Towner and Lamoure received 0.01 in. Average, precipitation 0.09 to 0.12 in. below normal. Temperatures averaged 15 to 19° above normal for week. Temperature extremes ranged from 2° above at Pembina 8th to 49° on 4th at Bowman and Taylor.

Mild weather continued. Snow cover virtually nonexistent most areas. Reports of respiratory diseases in calves continued.

**OHIO:** Average lows mid 20s to 30°; 8 to 12° above normal. Average high temperatures mid 30s north, mid 40s south; 3 to 6° above normal. Precipitation under 0.25 in. Soil temperatures near freezing to mid 30s.

Snow cover 2 to 4 in. northwest; 1 in. or less elsewhere. Snow protected winter wheat in major production area.

**OKLAHOMA:** Temperatures averaged 1° below normal west central, central to 2° above normal Panhandle, northeast. Precipitation averaged 0.46 in. Panhandle to 1.47 in. east central.

Recent warm temperatures, adequate soil moisture improved wheat pasture, provided good grazing. Leaf rust disease, greenbugs may be problem spring. Cotton 65% harvested, 95% 1986, 95% avg. Isolated areas near Altus with poor drainage too wet for harvest. Pastures good; livestock good.

**OREGON:** Temperatures slightly above normal along coast, north central section. South central, northeast departures from 5 to 10° below normal. Precipitation ranged from 0.33 to 1.30 in. northwest corner of State. Remaining areas little moisture.

Soil moisture mostly adequate. Grain, seed crops mainly look good. Very little snow cover except at highest elevations of eastern mountains, Cascade Range. Orchard spraying, pruning continued. Livestock, range, pasture mostly good. Some early calving, lambing underway.

**PENNSYLVANIA:** Temperatures about normal, precipitation well below normal. Average temperature 29°, 3° below normal. Temperature extremes -2°; 50°. Average precipitation 0.26 in., 0.41 in. below normal. Activities: Grading potatoes; hauling manure; cutting firewood; machinery maintenance; caring for livestock.

**PUERTO RICO:** Island average rainfall 1.24 in., 0.54 in. above normal. Highest weekly total 4.18 in. Highest 24-hour total 1.62 in. Temperature averaged about 75° on coasts, 69 to 70° interior divisions. Mean station temperature ranged from 62 to 79°. Extremes 48°; 89°. San Juan mean temperature 76°. Total rainfall 0.27 in.

**SOUTH CAROLINA:** Temperatures averaged near normal. General rain on 9th, 10th, heaviest along south coast averaging about 1.00 in.

Soil moisture adequate to surplus, mostly adequate. Main activities final cotton, soybean harvest; late small grain planting; preparing tobacco plantbeds; repairing equipment, caring for livestock, general farm chores.

**SOUTH DAKOTA:** Average temperatures ranged 6 to 17° above normal. Extremes 1°; 60°. Black Hills low -5°. Precipitation light; 1.00 to 3.00 in. snowfall in band south central, east central, northeast.

Winter grains good. Concern about lack of snow cover, potential extremely cold temperatures. Livestock good; grazing stalks. Feed, water supplies adequate.

**TENNESSEE:** Temperatures averaged near, to above normal. Highs 50s, 60s early week; 20s, 30s late week. Precipitation less than 0.50 in. Light snow weekend. No accumulation. Dark-fired tobacco sales underway. Soil moisture adequate. Livestock chores, grain handling, attending meetings, bookkeeping main activities.

**TEXAS:** Generally good weather first half week daytime temperatures mild. Nights cool west, mild elsewhere. Large upper air system northern two-thirds State, scattered snow Panhandle, rain north central. Temperatures started to warm late weekend west. Precipitation above normal Low Plains, Cross-Timbers, Blacklands; near to below normal elsewhere. Temperatures below normal Southern High Plains, Southern Low Plains; above normal Lower Valley, south central; normal elsewhere.

Crops: Grain sorghum harvest progressed Plains through midweek. Most fields now harvested. Yields good Plains. Sorghum 100% harvested, 100% 1985, 100% avg. Cotton harvest some progress early to midweek Plains. Late week frost, snow, forcing producers out fields. Harvest resumed Trans-Pecos. Some acreage losses Plains. Harvested 78%, 96% 1985, 94% avg. Small grains stressed, disease many parts State. Cold temperatures slowed growth, decline available grazing in Plains. Most fields holding own, some producers moving livestock off fields. Rust increased Cross-Timbers, Blacklands, central. Greenbugs increased. Yellowing increased wetter areas. Growth slowed somewhat. Drying conditions early week allowed some producers to topdress with nitrogen. Open weather must for continued good growth many areas. Soybean harvest virtually ended. Considerable loss Upper Coast because prolonged rains. Soybeans 99% harvested, 100% 1985, 100% avg. Sugarbeet harvest Plains continued through midweek. Sugarcane harvest resumed Rio Grande Valley. Sunflowers 100% harvested, 100% 1985, 100% avg. Sugarbeets 91% harvested, 100% 1985, 100% avg. Pecans 96% harvested, 94% 1985, 97% avg. Oats 98% planted, 98% 1985, 100% avg.

Commercial Vegetables: Supplies cabbage, broccoli, celery increased with clearing weather Rio Grande Valley. Harvest carrots underway. Some peppers, tomatoes left for harvest. Onions good progress. Irrigation light. Citrus harvest increased last week. Quality remained good, good supply fruit left on trees. Cabbage, carrots, spinach harvest resumed San Antonio-Winter Garden. White rust decreased spinach supplies quality increased. Onion stands improved, look good. Pecan harvest completed many areas. Winds dried groves enough resume harvest Trans-Pecos. Some spraying dormant oils underway Low Plains.

Range and Pasture: Native range, pasture conditions improving across State. Cold temperatures slowed growth, greening northern areas. Fertilization underway east as ground dries. Small grain pastures providing ample forage despite slow growth. Some movement livestock off fields allowed regrowth. Livestock good. Feeding normal.

UTAH: Precipitation 0.08 in. Uintah Basin to 1.54 in. northern mountains. Temperatures above normal except 1° below normal extreme southwest. Snow cover north, mountains.

Livestock feed adequate. Livestock generally good. Major farm activities: Livestock care, equipment repair, marketing livestock, tax accounting.

VIRGINIA: Seasonable, very dry. No precipitation. Temperatures normal.

Days suitable for fieldwork 2.8. Topsoil moisture 100% adequate. Winter grains good to excellent. Normal winter chores, including livestock feeding, equipment maintenance. Clear weather benefited livestock. Burley tobacco marketing active.

WASHINGTON: Scattered clouds statewide turned to clear skies by midweek. Temperatures below normal west, above normal east. Snow flurries in central counties.

Days suitable for fieldwork 3.0. Soil moisture 15% short, 70% adequate, 15% surplus. Range, pasture 50% short, 50% adequate. Hay, other feed 80% adequate, 20% surplus. Orchard pruning progressing well. Snow cover central area increased because of snow flurries.

WEST VIRGINIA: Temperatures 5° above normal. Extremes 63° Gary; 5° Elkins, Belington, Greenbank, average 34°. Precipitation below normal, average 0.50 in.

Soil moisture 89% adequate, 11% surplus. Feed supplies 5% very short, 15% short, 80% adequate.

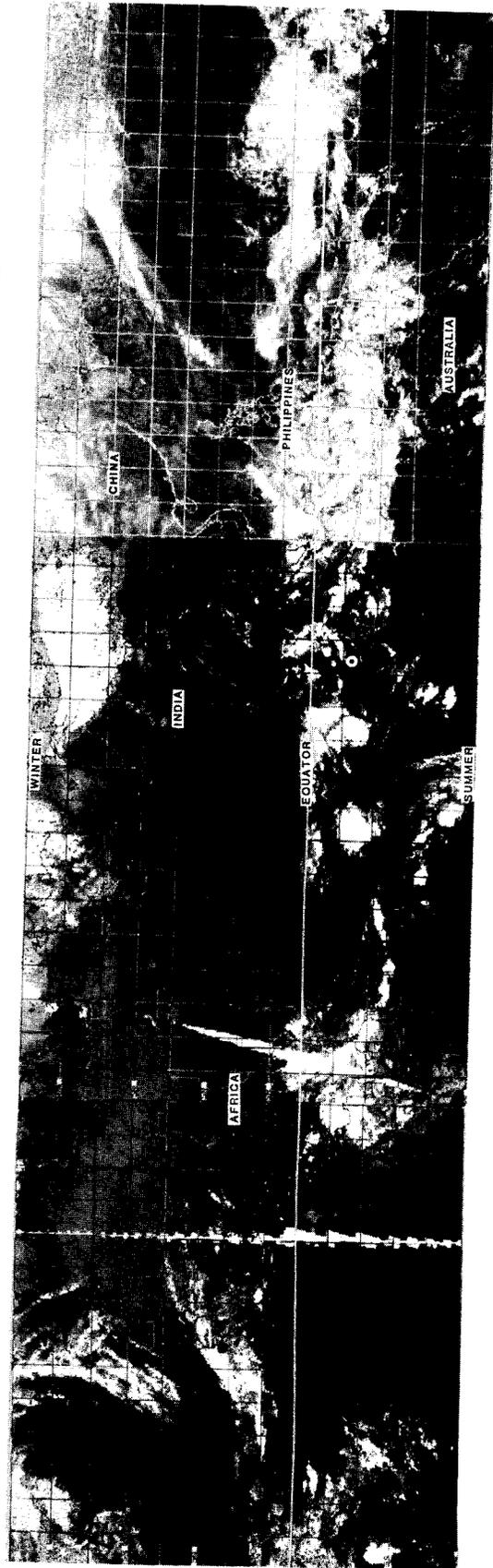
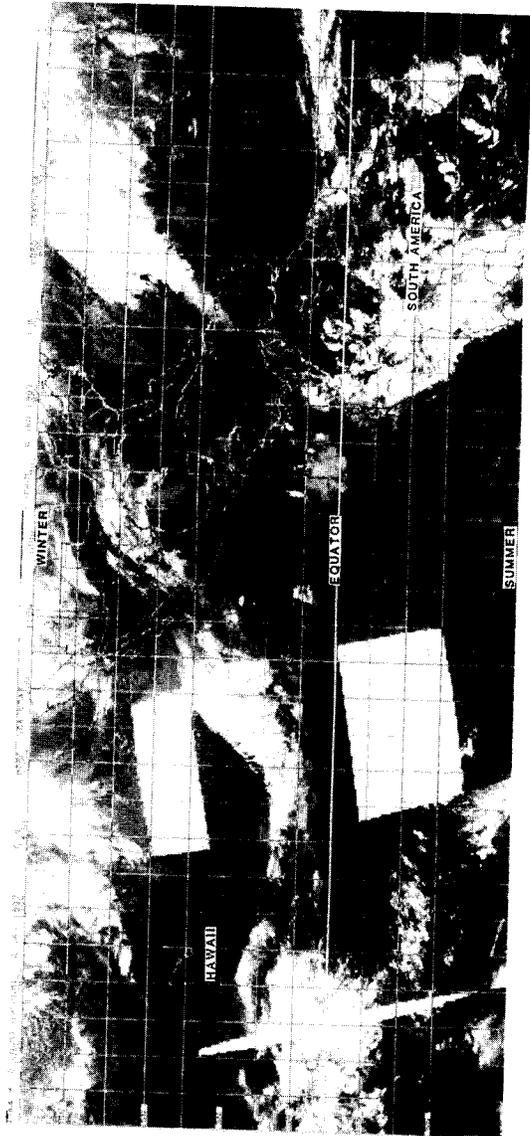
WISCONSIN: Mild week, low 50, high 44°. Snow 6th, 2 to 4 in. northwest, 9th 4 to 7 in. south and southeast.

WYOMING: Most areas slightly above normal precipitation. Eastern area mild week, central and Western portions cooler than average.

Winter wheat good, additional moisture needed for good development. Livestock good, some supplemental feeding. Early lambing, shearing starting. Hay supplies adequate.

# Global Weather Satellite Image

JANUARY 6, 1987



# International Weather and Crop Summary

January 4-10, 1987

**HIGHLIGHTS:**

**UNITED STATES** ... Precipitation slows cotton harvest in the southern Great Plains and New Mexico. Winter wheat lacks snow cover in the northwestern Corn Belt, northern Rockies, northern Great Plains, and most of the Pacific Northwest. Above-normal temperatures keep winter damage at a minimum.

**WESTERN U.S.S.R.** ... Near-record cold stresses winter grains as far south as the central Ukraine. Widely fluctuating temperatures in the south create the potential for winterkill due to frost heaving.

**EUROPE** ... Bitter cold air covers northern and eastern winter grain areas. Extreme cold stresses winter grains in Poland and Czechoslovakia and creates the potential for winterkill in those areas with a limited snow cover.

**SOUTH ASIA** ... Light rain improves moisture reserves for winter grains from central India to northern Pakistan. Dry weather elsewhere favors cotton harvesting and summer rice planting.

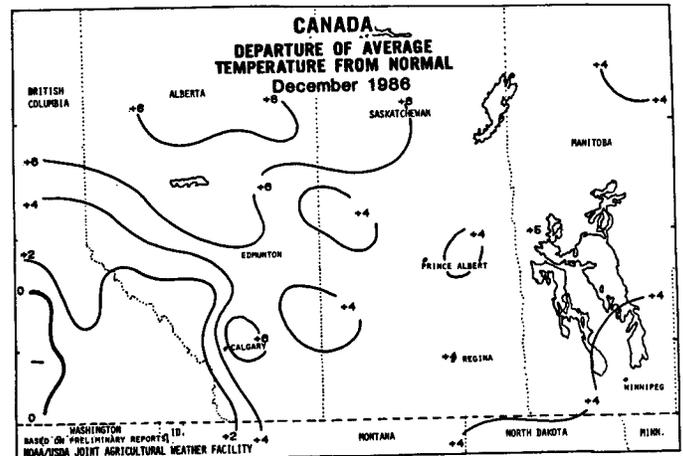
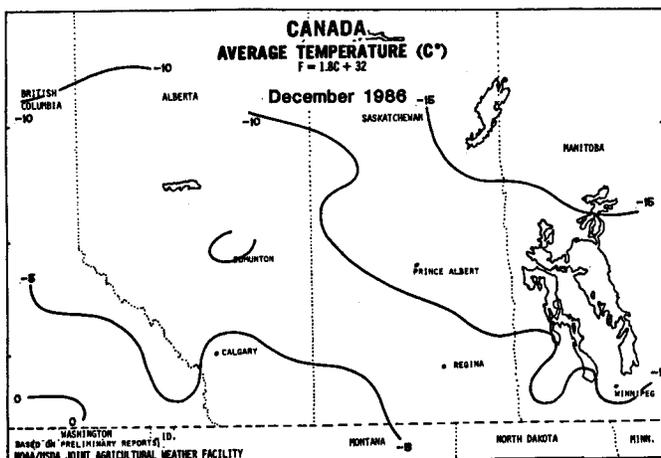
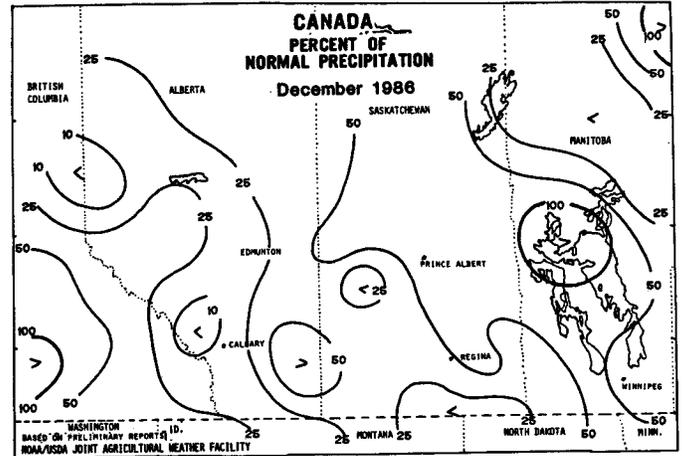
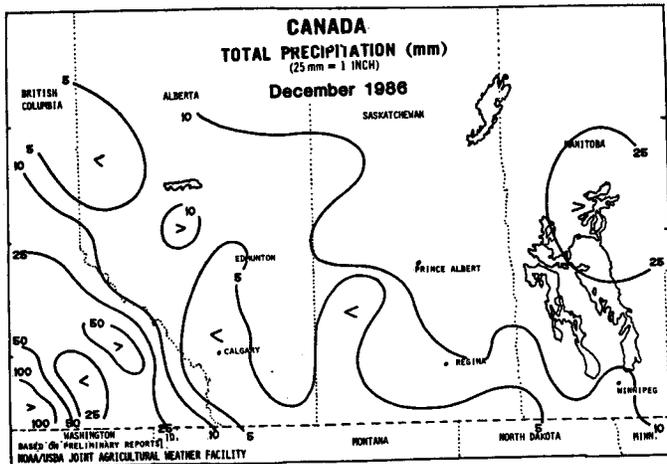
**EASTERN ASIA** ... Mild, dry weather covers dormant winter grains in the North China Plain.

**SOUTH AMERICA** ... Rain favors summer crop development in central Argentina and southern Brazil. Warm weather in Brazil reduces moisture reserves in western Parana and Sao Paulo.

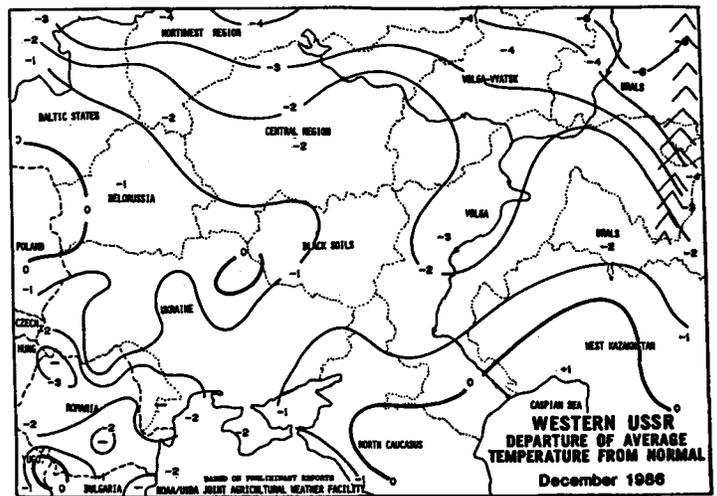
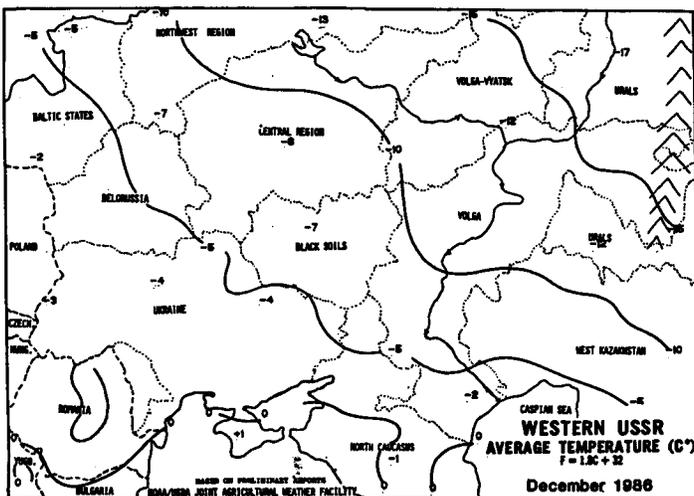
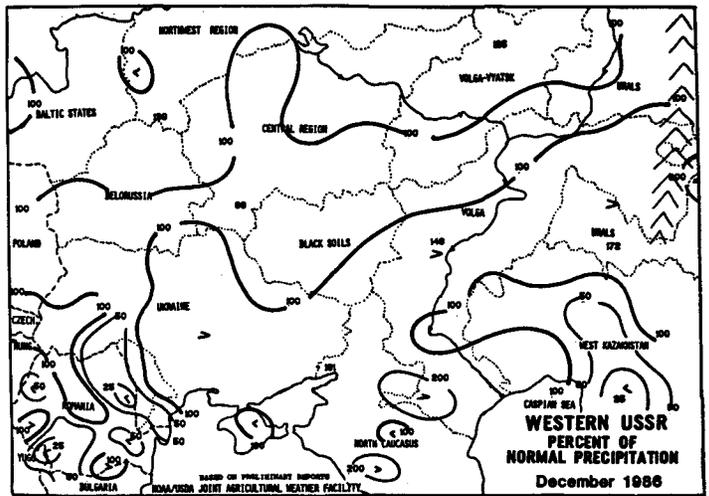
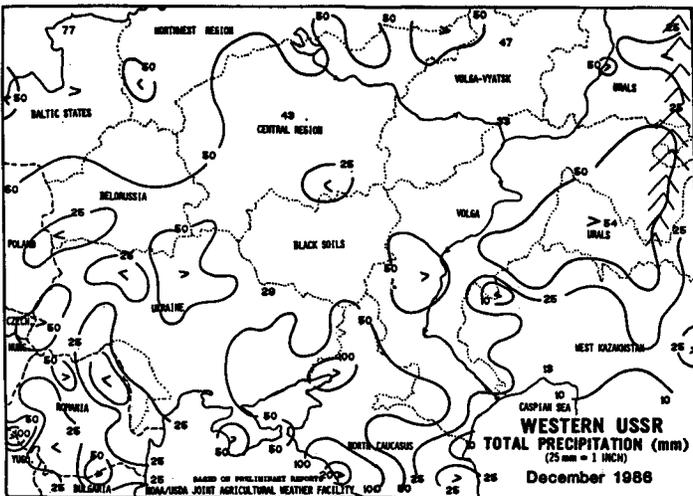
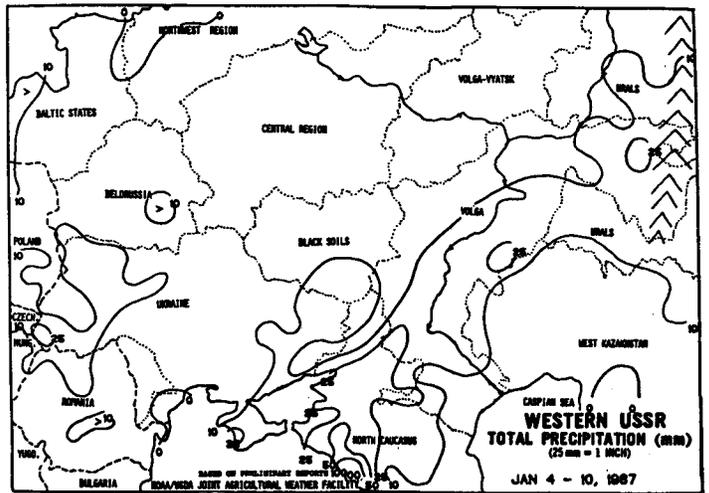
**AUSTRALIA** ... Showers continue in eastern Australia's summer crop regions, improving moisture reserves for crops nearing reproduction. Rain delays wheat harvesting in some southernmost grain areas.

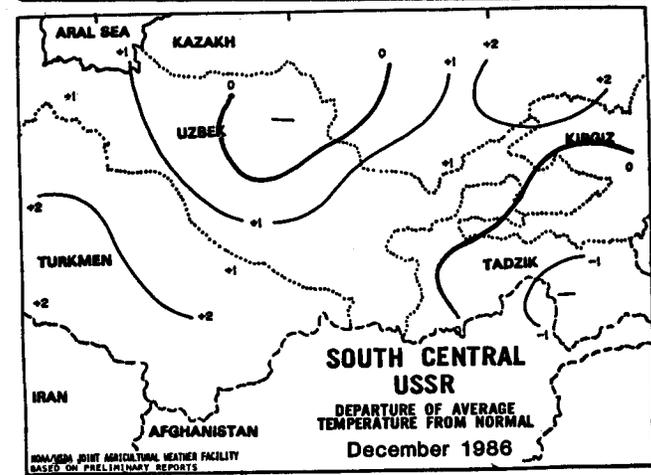
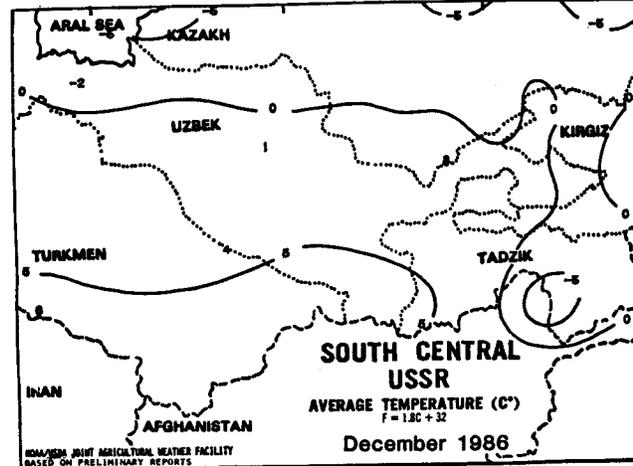
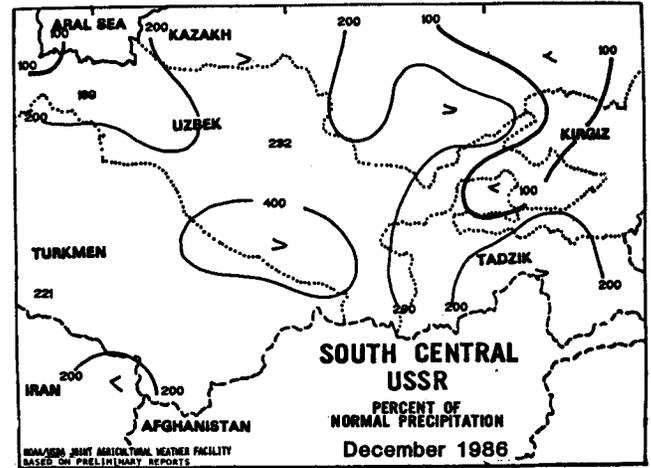
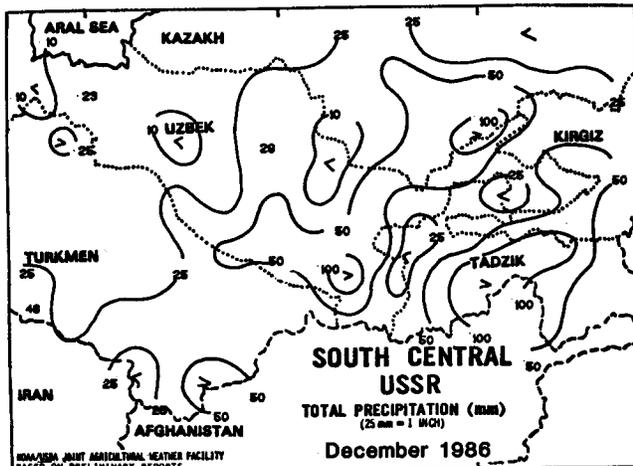
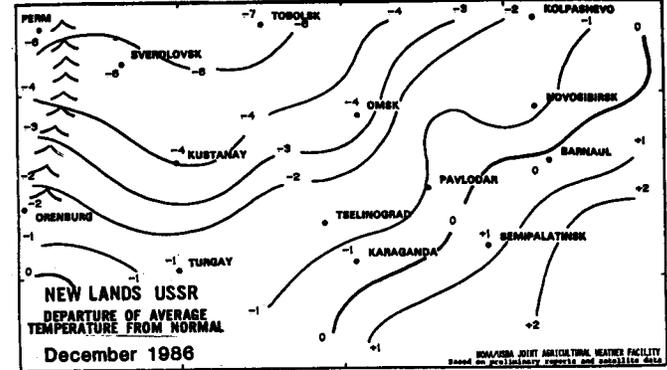
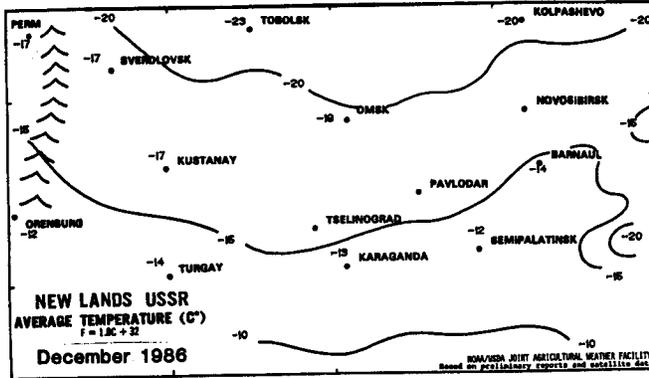
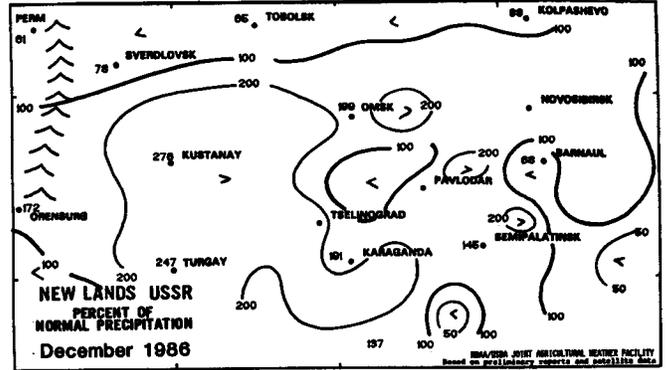
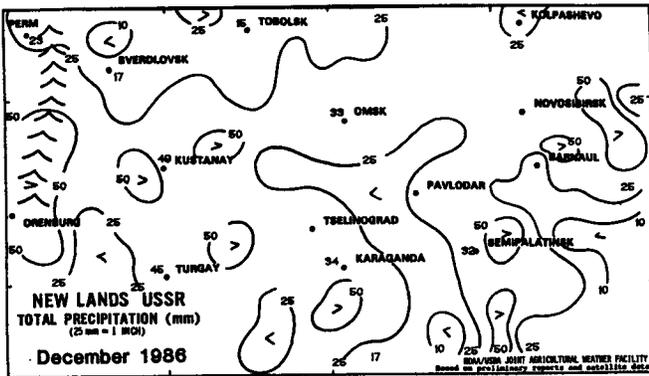
**SOUTH AFRICA** ... Beneficial showers in most eastern grain areas maintain ample soil moisture for corn in or nearing reproduction. Drier, hot weather covers corn areas in western Orange Free State.

**NORTHWESTERN AFRICA** ... Persistent dryness in Morocco stresses winter grains in the early vegetative stage. Showers continue to benefit crop growth in Algeria and Tunisia.

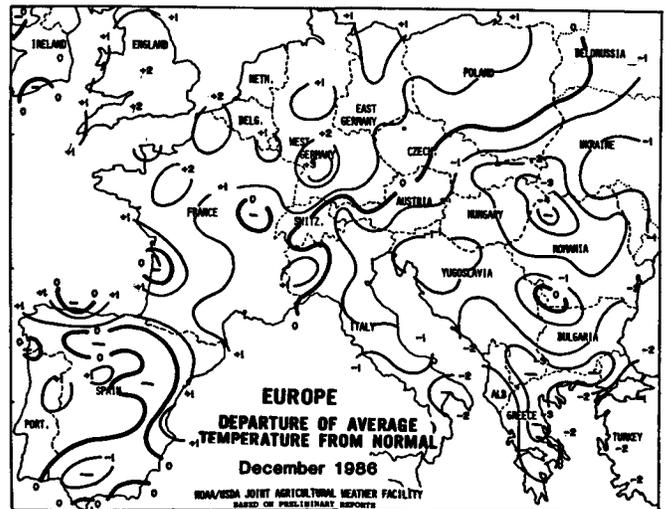
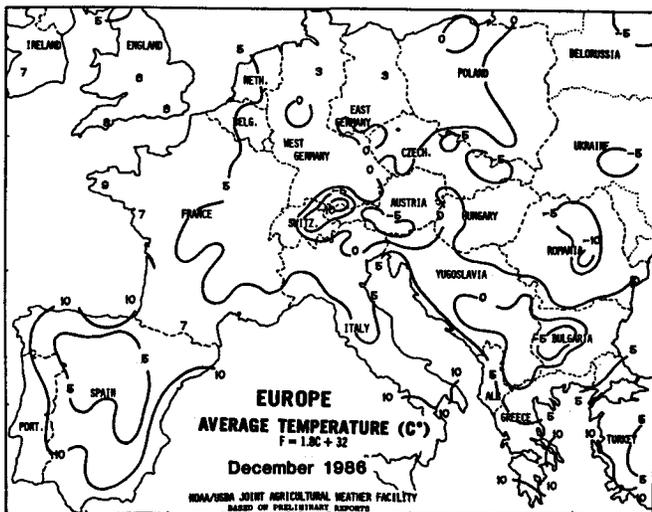
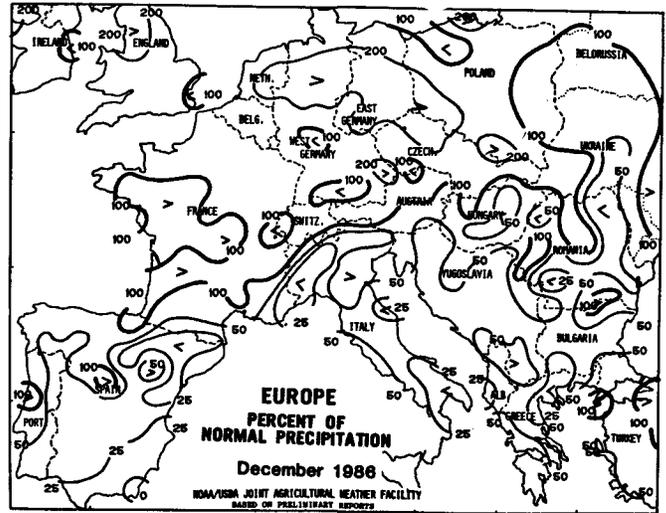
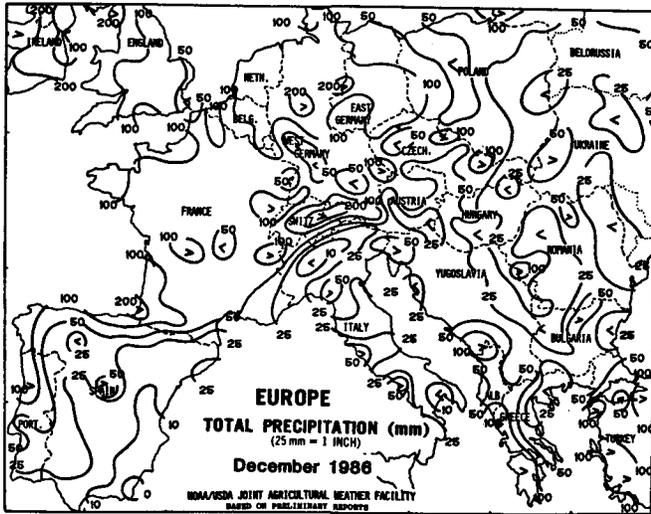
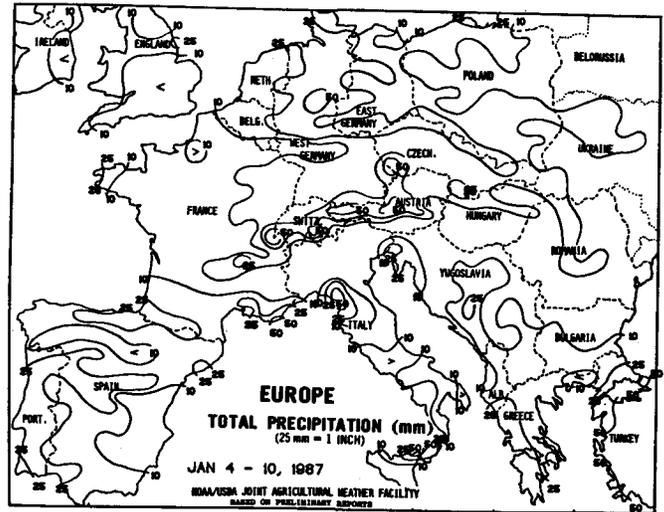


WESTERN U.S.S.R. ... Arctic air from Siberia continued to push into the region, causing a steady decline in temperatures. Near record lows occurred as far south as the central Ukraine. Lowest minimum temperatures during the week ranged from -30 to -35 degrees C over winter grains in the Baltic States, Belorussia, the Central Region, the Black Soils Region, the Volga Vyatsk, and the middle and upper Volga. Minimum temperatures in these areas on most days were well below the threshold for winterkill. A moderate to heavy snow cover in most areas provided some protection, but the potential for winterkill existed, especially in areas with marginal snow cover. In winter grain areas from the southern half of the Ukraine through the North Caucasus, storm systems from the Mediterranean caused widely fluctuating temperatures, increasing the potential for winterkill caused by ice crusting and frost heaving. In December, precipitation was near to above normal over most areas except for the southwestern Ukraine, which received below normal precipitation. December's temperatures were below normal over the region.

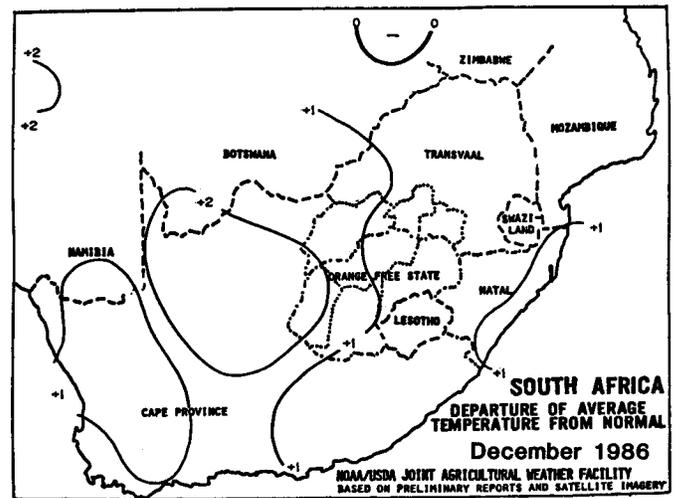
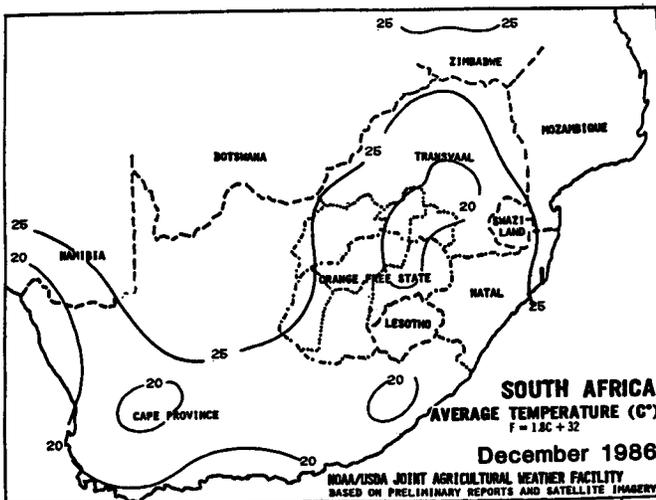
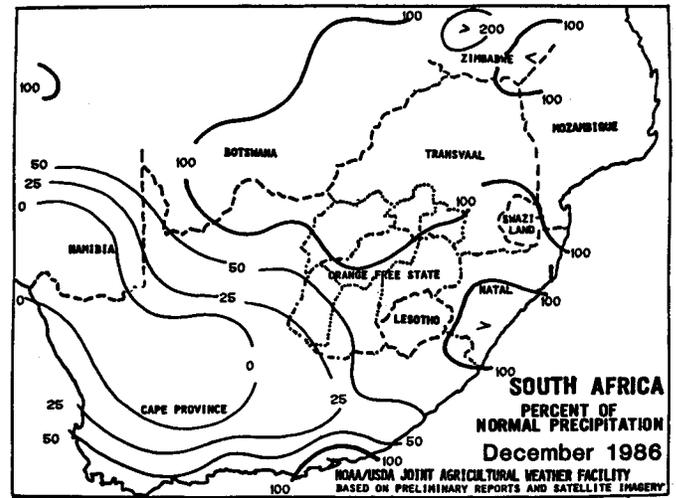
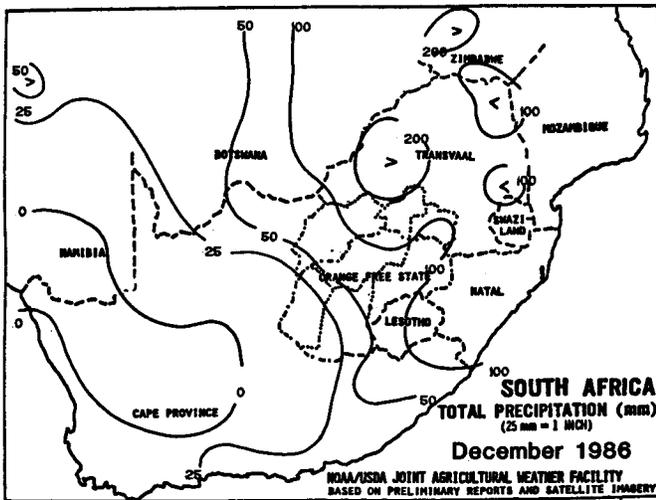
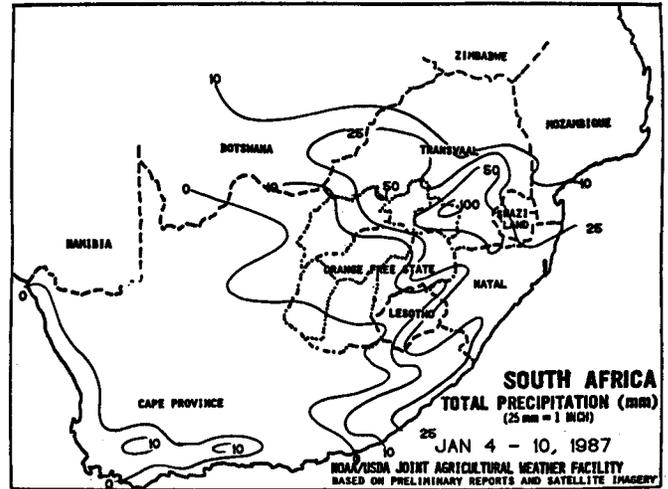


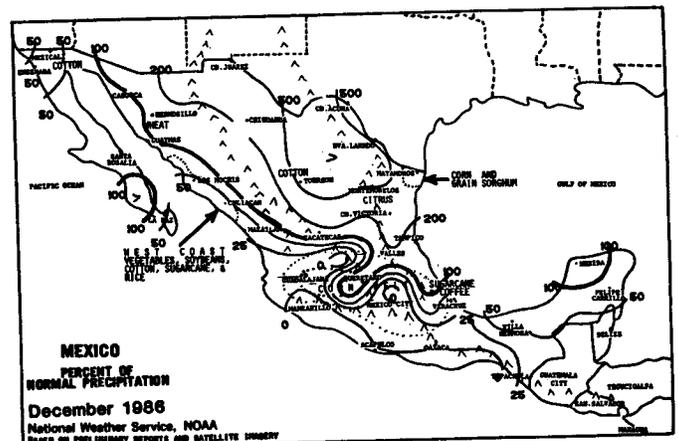
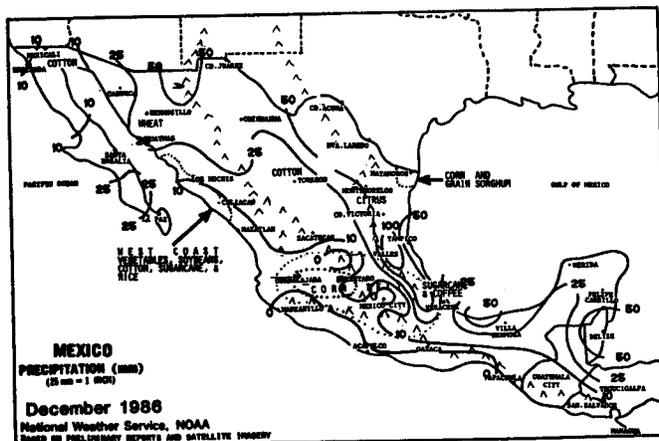
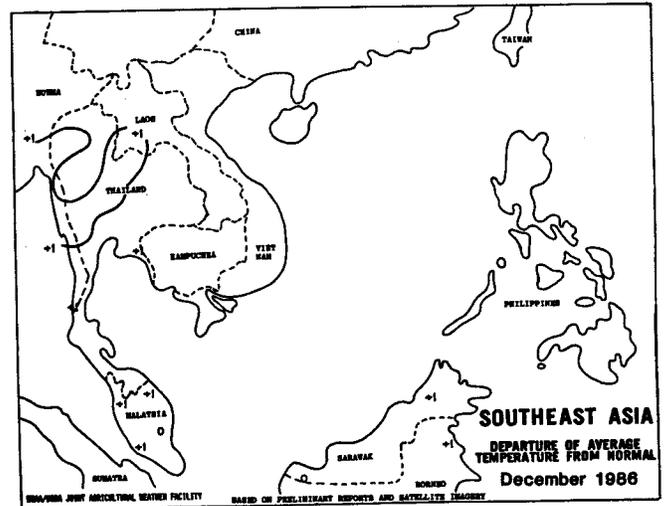
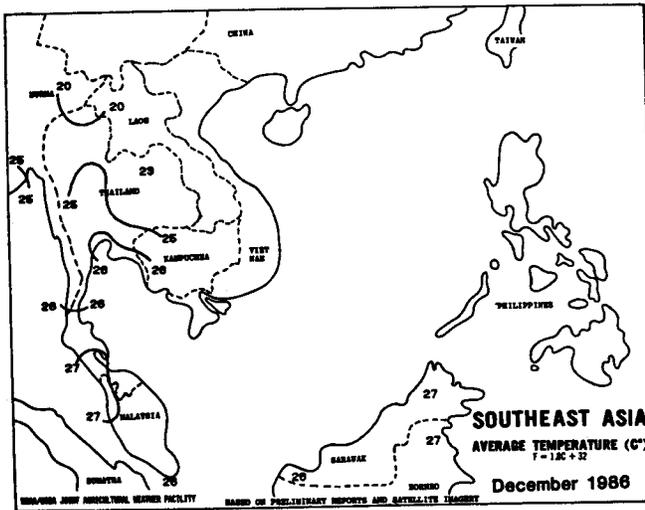
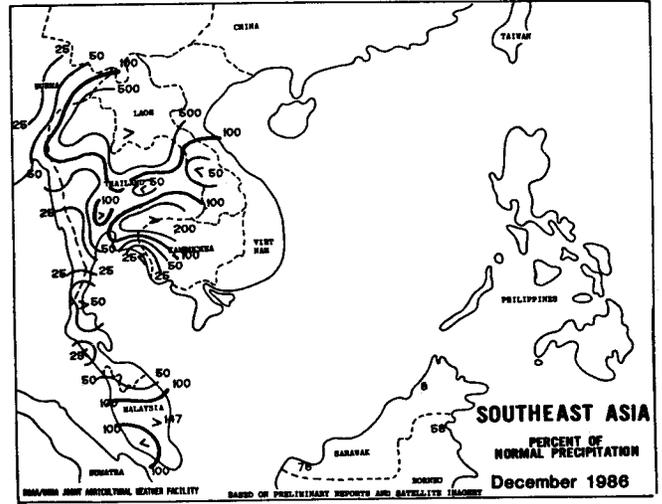
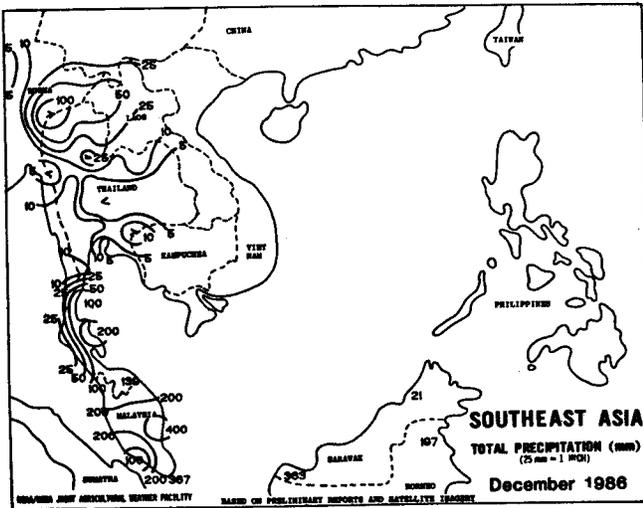


**EUROPE** ... Bitter cold penetrated the continent from the east, causing a sharp drop in temperatures over north-central and Eastern Europe. Coldest weather covered winter grains in Poland and Czechoslovakia, where minimum temperatures on January 8 ranged from -24 to -31 degrees C. By week's end, minimum temperatures fell to around -15 degrees C in East Germany, -10 degrees C in West Germany, -5 degrees C in northern France, and -10 to -15 degrees C in many areas of southeastern Europe. The cold weather in northern West Germany, East Germany, and southern Poland followed December's heavy rainfall pattern, leaving soils saturated. The severe cold in Poland and Czechoslovakia created the potential for winterkill in areas with limited snow cover. In Spain, light showers (10 to 25mm) improved moisture conditions for wheat following December's unfavorable dry weather pattern.

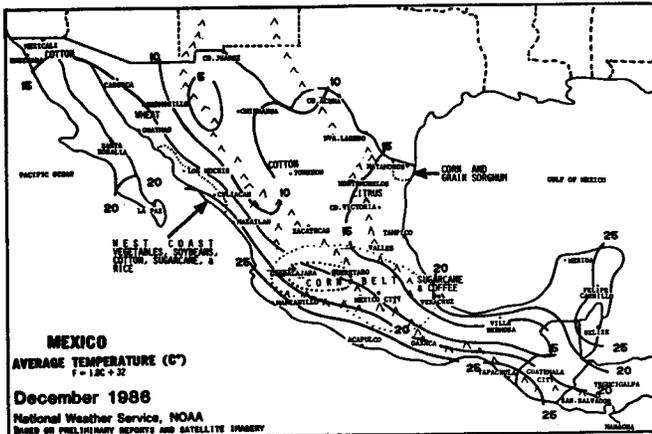
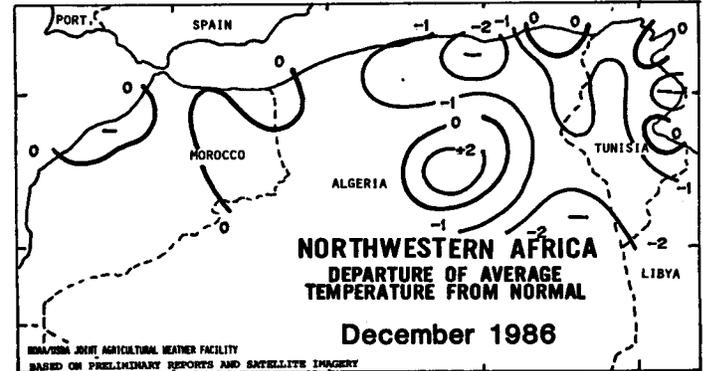
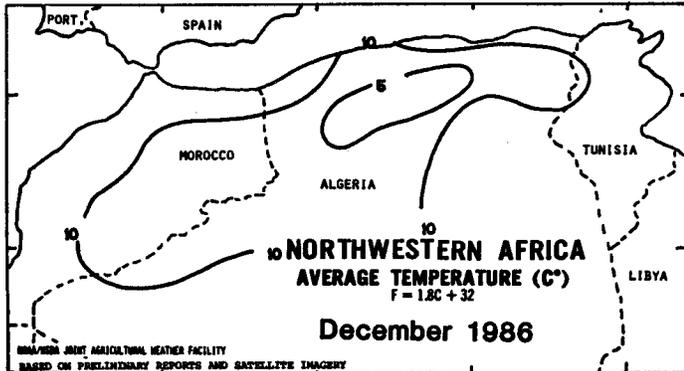
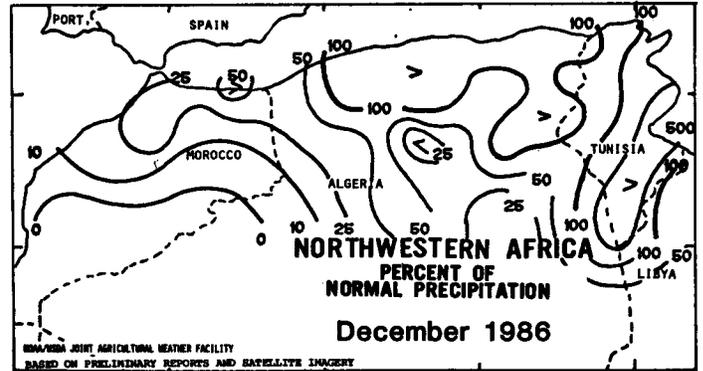
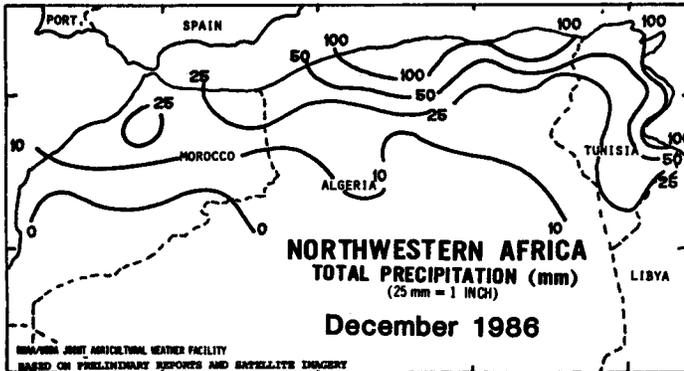
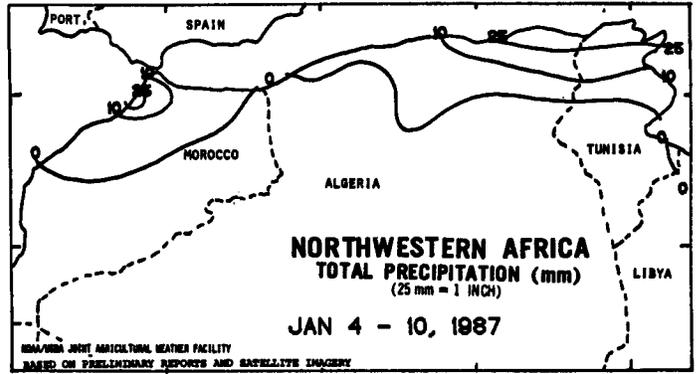


**SOUTH AFRICA** ... Moderate to heavy showers (25 to greater than 50mm) continued in the grain areas of southern Transvaal, northeastern Orange Free State, Natal, and eastern most Cape Province, maintaining adequate moisture supplies for corn in or nearing the tasseling stage. Near-to above-normal rainfall has covered most grain areas since late-October. However, minimal rain (less than 5mm) and warmer temperatures covered western Orange Free State and northern Transvaal, with maximum temperatures in the west averaging 35 degrees C. Soil moisture is limited in western grain areas for corn's vegetative growth due to below-normal rainfall in some areas since mid-November.

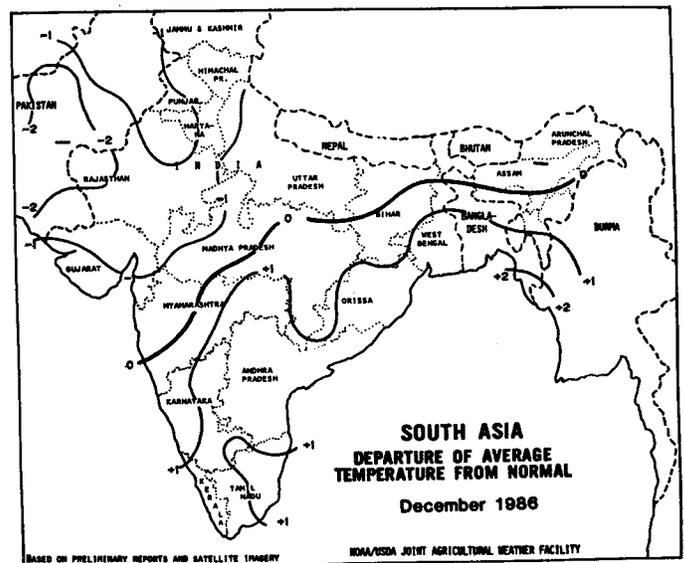
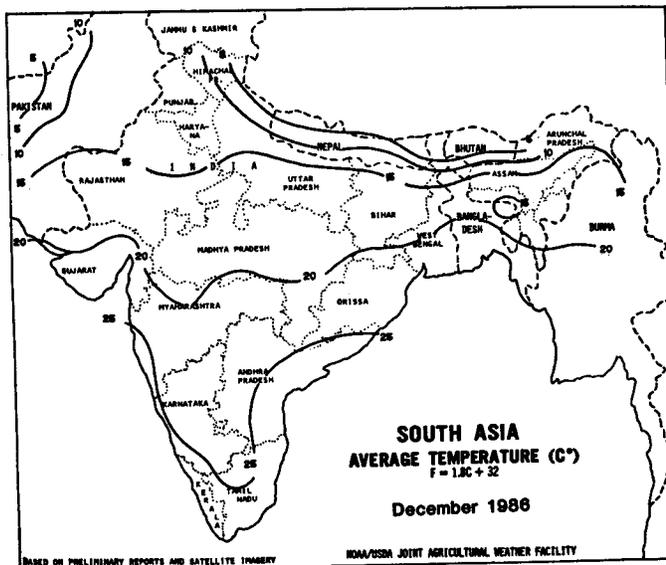
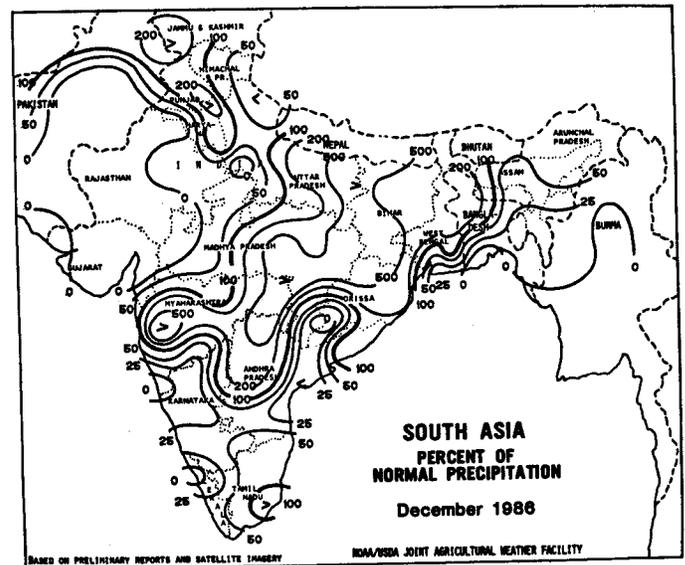
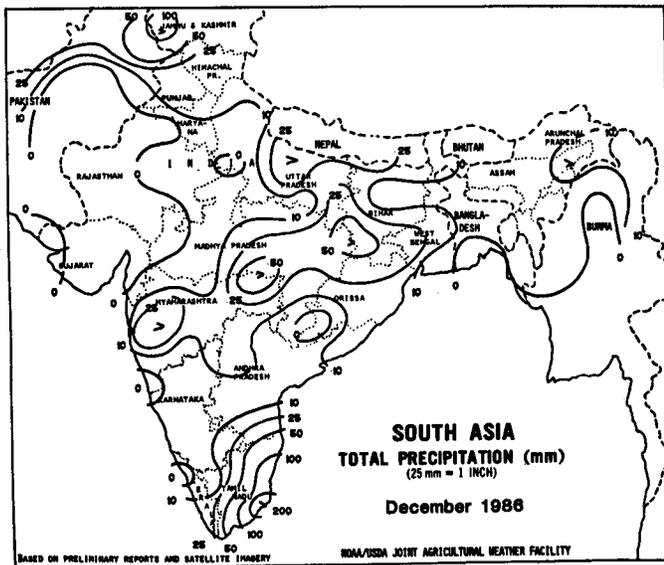
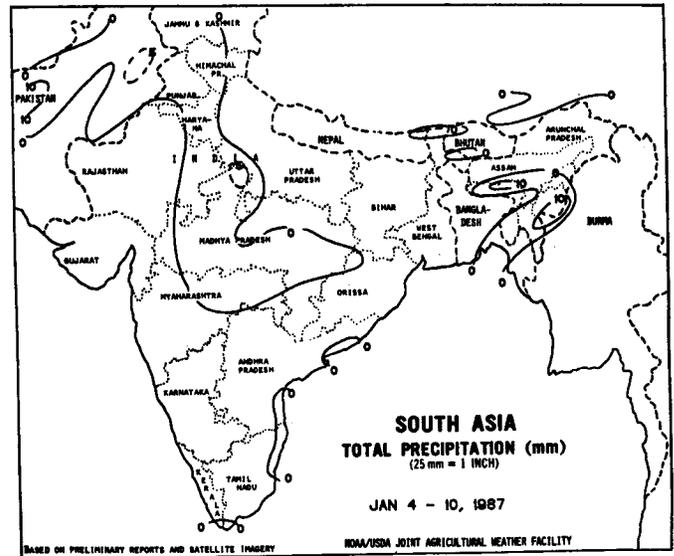




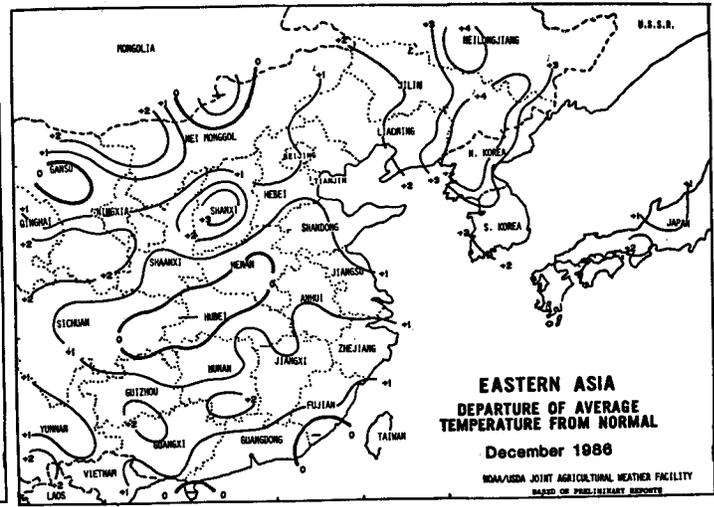
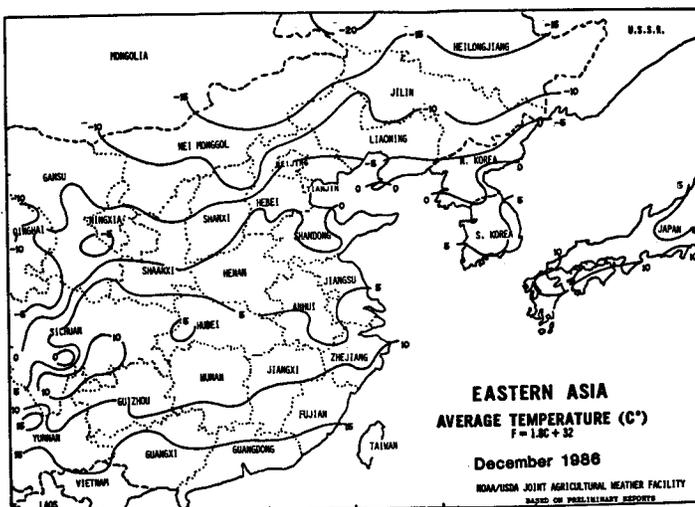
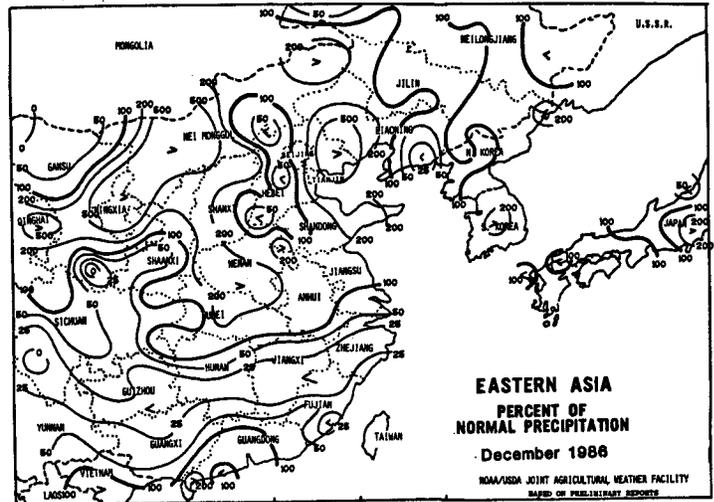
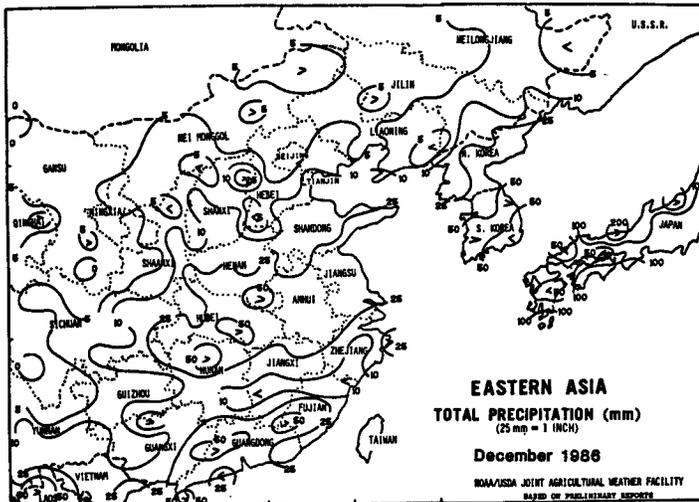
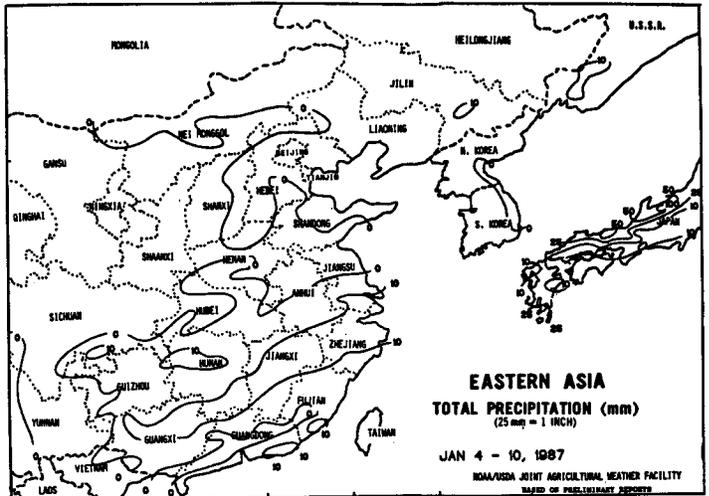
**NORTHWESTERN AFRICA** ... Light, spotty showers covered Morocco, continuing December's well below-normal rainfall pattern. Morocco's dry weather has depleted moisture supplies and created stressful conditions for winter grains in the vegetative stage. A drying trend continued in northwestern Algeria, and moisture conditions are becoming unfavorably low for winter grains. In contrast, above-normal December precipitation covered winter grains in central and eastern Algeria and northern Tunisia, providing favorable moisture for emergence and early plant growth. Light showers continued over these areas. Weekly temperatures were generally below normal over the region, slowing vegetative growth.



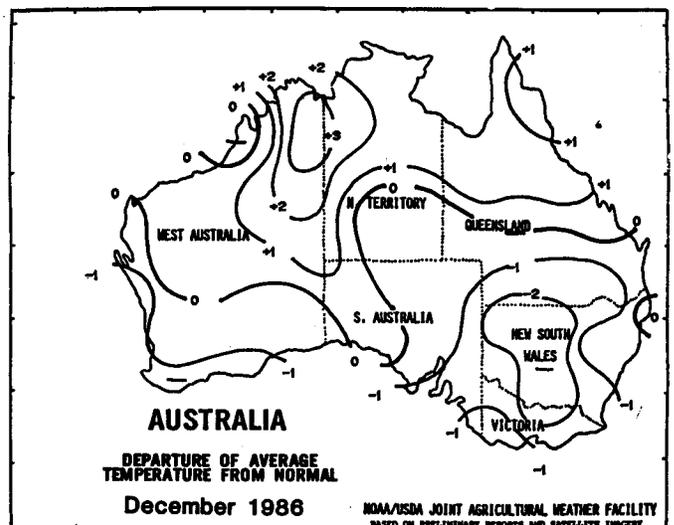
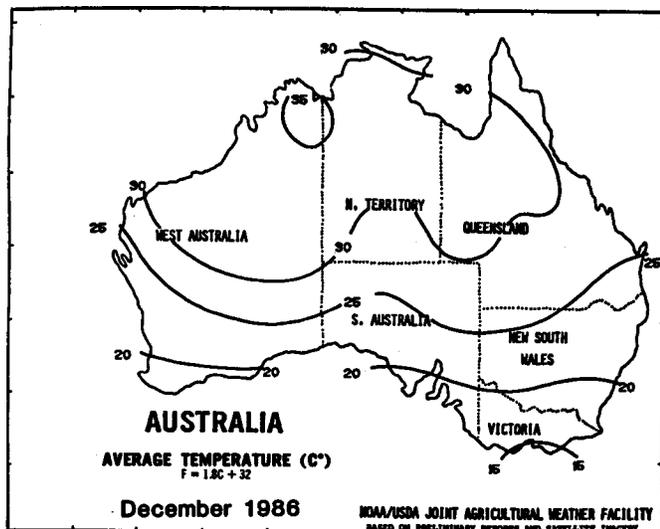
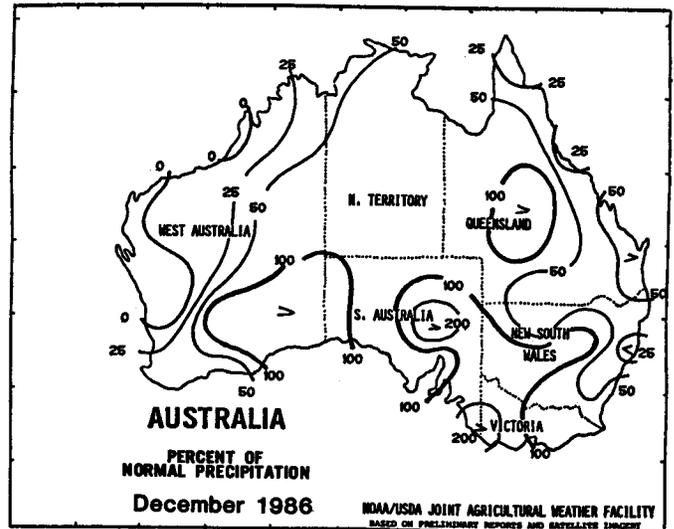
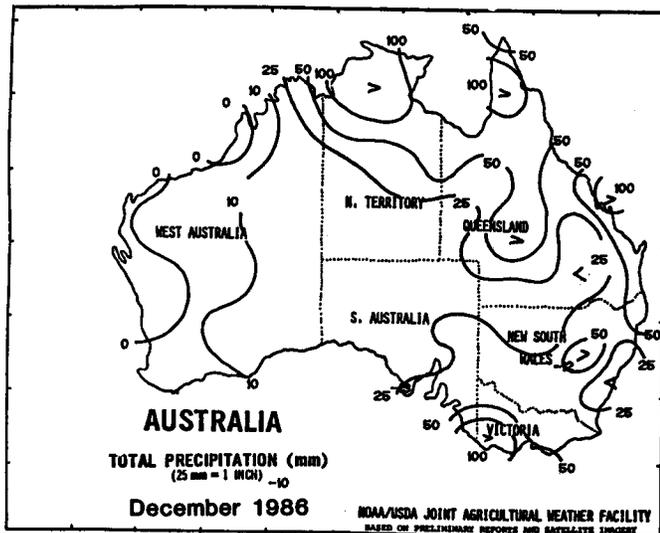
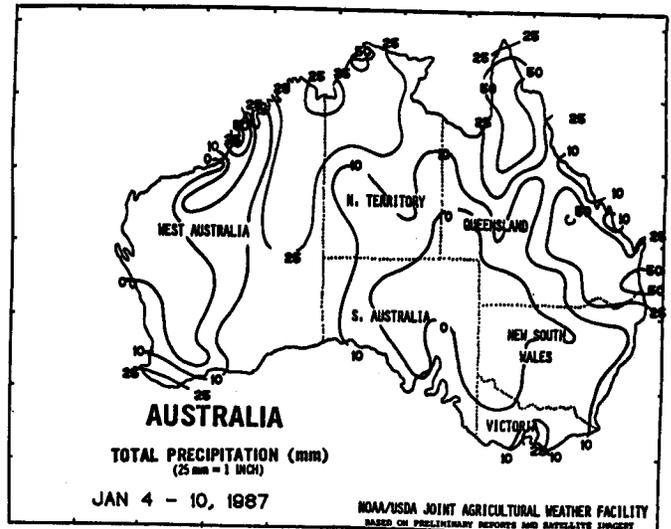
**SOUTH ASIA** ... Light rain (less than 6mm) fell from northern Pakistan and India's Punjab state to northern Maharashtra, increasing moisture supplies for the mostly irrigated winter grains. Showers since late-November in some northern grain areas have maintained favorable irrigation supplies. Winter wheat is normally mostly heading in central India, while further north wheat is in the vegetative stage. Dry weather in southern India from southern Maharashtra and Tamil Nadu to the eastern states favored cotton harvesting and summer rice planting. Cotton harvesting in parts of central India was slowed by unseasonable rain in late-December.



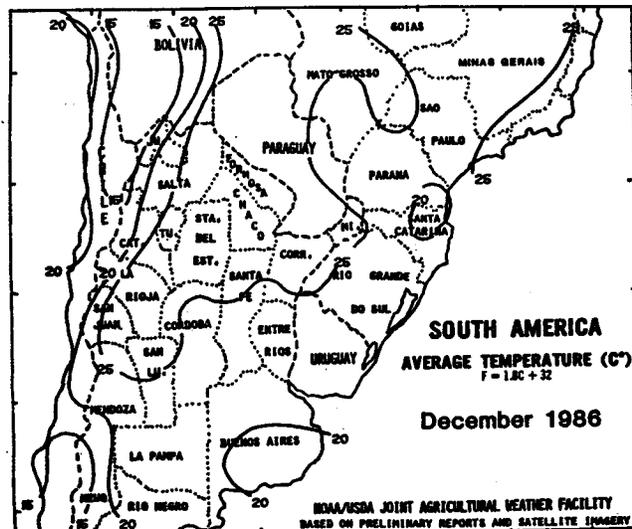
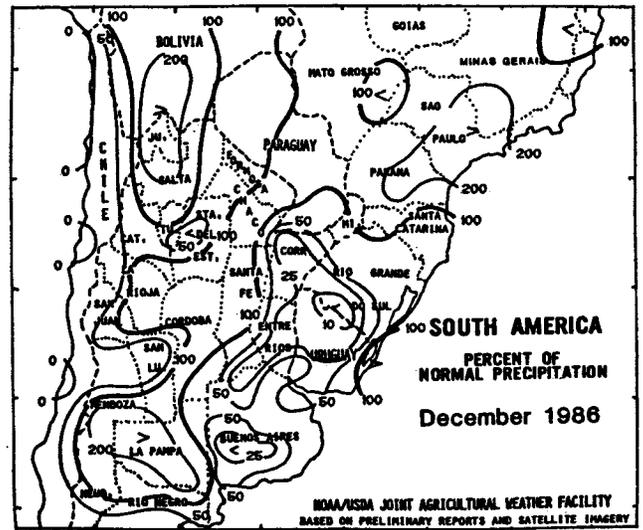
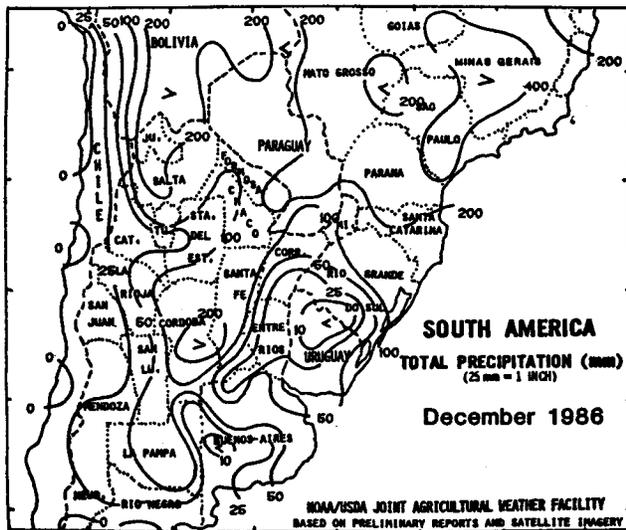
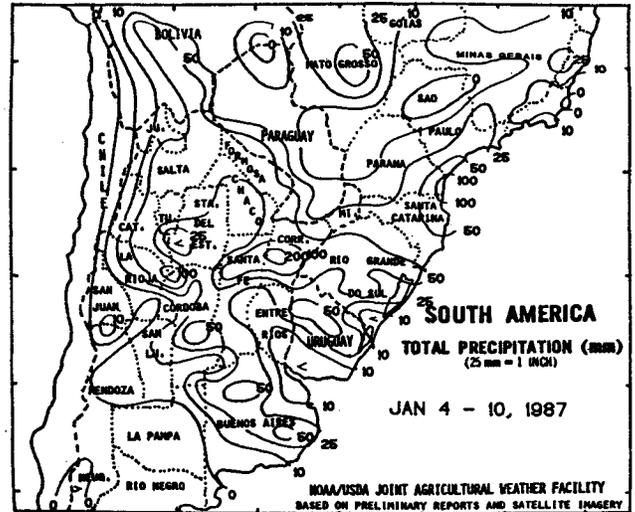
**EASTERN ASIA** ... Above-normal temperatures accompanied dry weather over winter grains in the North China Plain. Although the weather was mild, temperatures were cold enough to keep winter grains dormant. December precipitation was above normal over much of the North China Plain, increasing moisture supplies. Further south, above normal December showers (25 to 50mm) in northern Hunan, Hubei, and Anhui increased soil moisture for spring planting. December's weather was mostly dry in southern China.



**AUSTRALIA** ... Moderate to heavy showers (10 to more than 40mm) continued in summer crop areas of southeast Queensland and northern New South Wales, increasing moisture reserves for grains and cotton nearing reproduction. Below-normal rainfall throughout December had limited moisture supplies for vegetative growth. Drier weather (less than 5mm) covered most grain areas from southern New South Wales to South Australia. However, heavy showers (greater than 25mm) lingered in central Victoria, delaying the wheat harvest and possibly damaging more of the unharvested grain. Moderate rain (greater than 10mm) fell over Western Australia's southern coast, likely slowing the wheat harvest. Wheat harvesting in the southernmost grain areas usually continues through January. Minimal rain (less than 16mm) persisted in the sugar cane areas of northeast Queensland, reflecting December's dry pattern.



**SOUTH AMERICA** ... In Argentina, substantial showers (25 to 70mm) fell over the major corn and soybean areas where December rainfall tended below average, especially in northern Buenos Aires. Summer crops are entering the crucial reproductive period with generally adequate moisture. Little or no rain fell in southwestern Buenos Aires, continuing December's below-average rainfall, and in La Pampa reversing December's unusual wetness. Wheat harvesting is over 70 percent complete in Buenos Aires. Locally heavy rain (50 to over 100mm) continued to saturate soils in the northeast. In Brazil, significant rain (25 to 90mm) in Rio Grande do Sul reversed December's below-normal rainfall and improved conditions for soybean flowering. Showers diminished further north, except in Mato Grosso do Sul where 25 to 52mm of rain fell. Most areas have adequate moisture for crops, but above-average temperatures recently are depleting reserves in western Parana and Sao Paulo.



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Continued from front page

SATURDAY...Stormy weather continued into Saturday in the East Coast States and from the middle and upper Mississippi Valley through New England. Showers and thunderstorms in the Southeast and light rain in the mid-Atlantic States tapered off early in the day, but heavy snow fell most of the day in parts of New York and New England. Freezing rain slickened streets along the coast.

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