

WEEKLY WEATHER AND CROP BULLETIN

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

U.S. DEPARTMENT OF AGRICULTURE
Statistical Reporting Service and World Agricultural Outlook Board

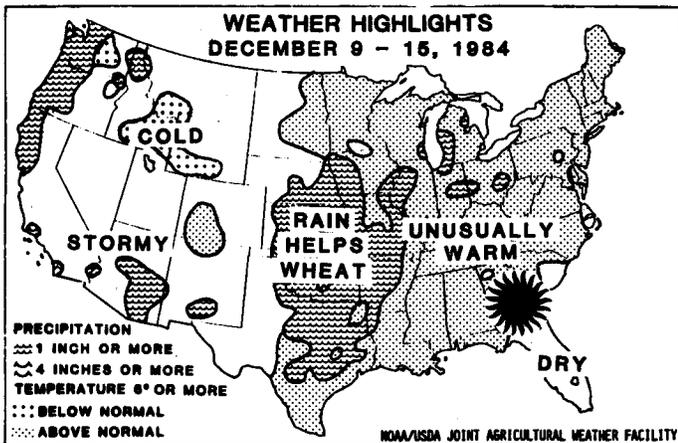
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Dec. 18, 1984

National Weather Summary

December 9 to 15



HIGHLIGHTS: Unseasonably mild temperatures dominated the East while temperatures of 6-9 degrees colder than normal covered the northern Rockies and much of the Northwest. Temperatures averaged 10-12 degrees warmer than normal from eastern Texas to New England and above 40 degrees south of a line from the Texas Panhandle to the southern Great Lakes. Storm systems entering the Northwest, and later the Southwest, spread rain along the west coast and snow over the Plateau and mountains. A mixture of snow, sleet, freezing rain, and snow spread from Arizona to eastern Nebraska. Heavy showers fell from eastern Texas to Iowa and Illinois. Lighter rain slowed fieldwork in the eastern Corn Belt. The Southeast remained warm and clear.

SUNDAY...Moderate to heavy rainshowers along the northwest coast spread southward to the California coast. Snow was heavy east of the Cascades in the Northwest. Light rain developed in Iowa and Missouri and spread eastward to the lower Great Lakes region, and the Ohio and Tennessee Valleys. The warming trend spread throughout the South and East.

MONDAY...Rain or snow showers spread throughout the area west of the Rockies. Some moderate rainshowers developed along the west coast and in southern California. Snow was heavy in the northern Rockies. In the East, light rain covered the upper Ohio Valley, the Mid-Atlantic States, and most of the east coast. Warmer weather continued in all but the extreme northern Plains.

TUESDAY...Showers continued in the West and spread across the northern Plains to the Great Lakes and Ohio Valley. Snow continued over the northern Rockies and northern Plains. An arctic outbreak drastically dropped temperatures in the northern Rockies and Plains, but the warming trend continued in the South and East.

WEDNESDAY...Heavy rain fell along the western slopes of the Cascades in the Northwest and heavy snow fell to the east. Snow continued in the central and northern Plateau and Rockies, and rainshowers covered the Southwest. Rainshowers also spread from Texas through the Great Lakes to New England. Temperatures fell below zero in the early morning in the northern Plains and stayed below freezing all day as far south as Kansas.

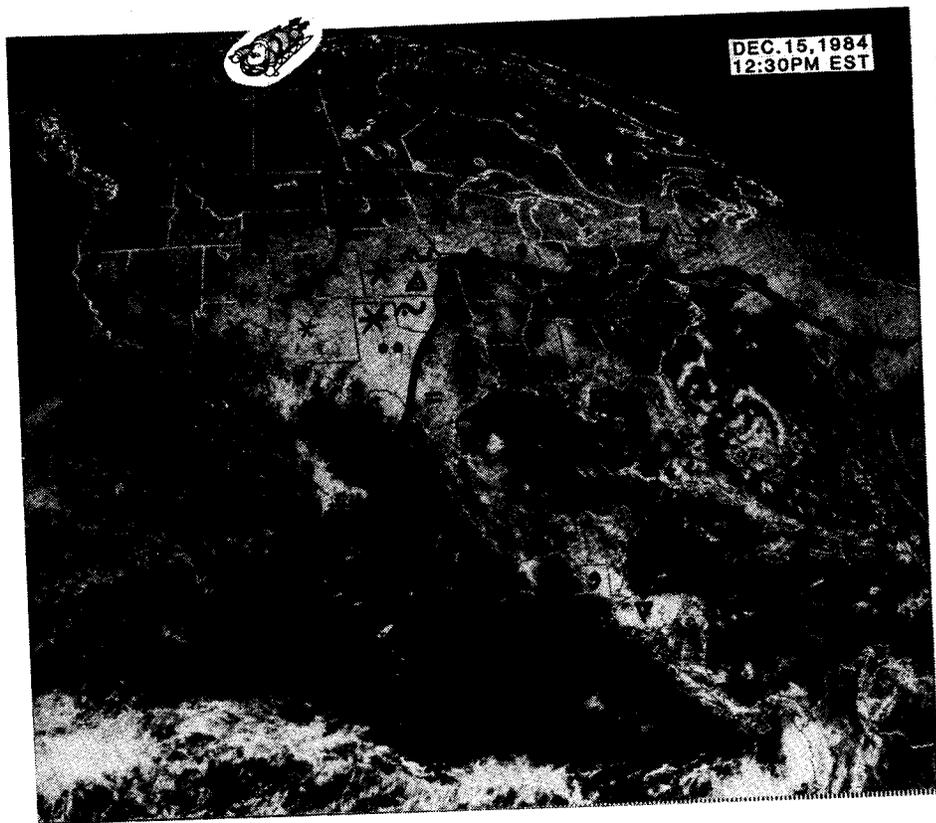
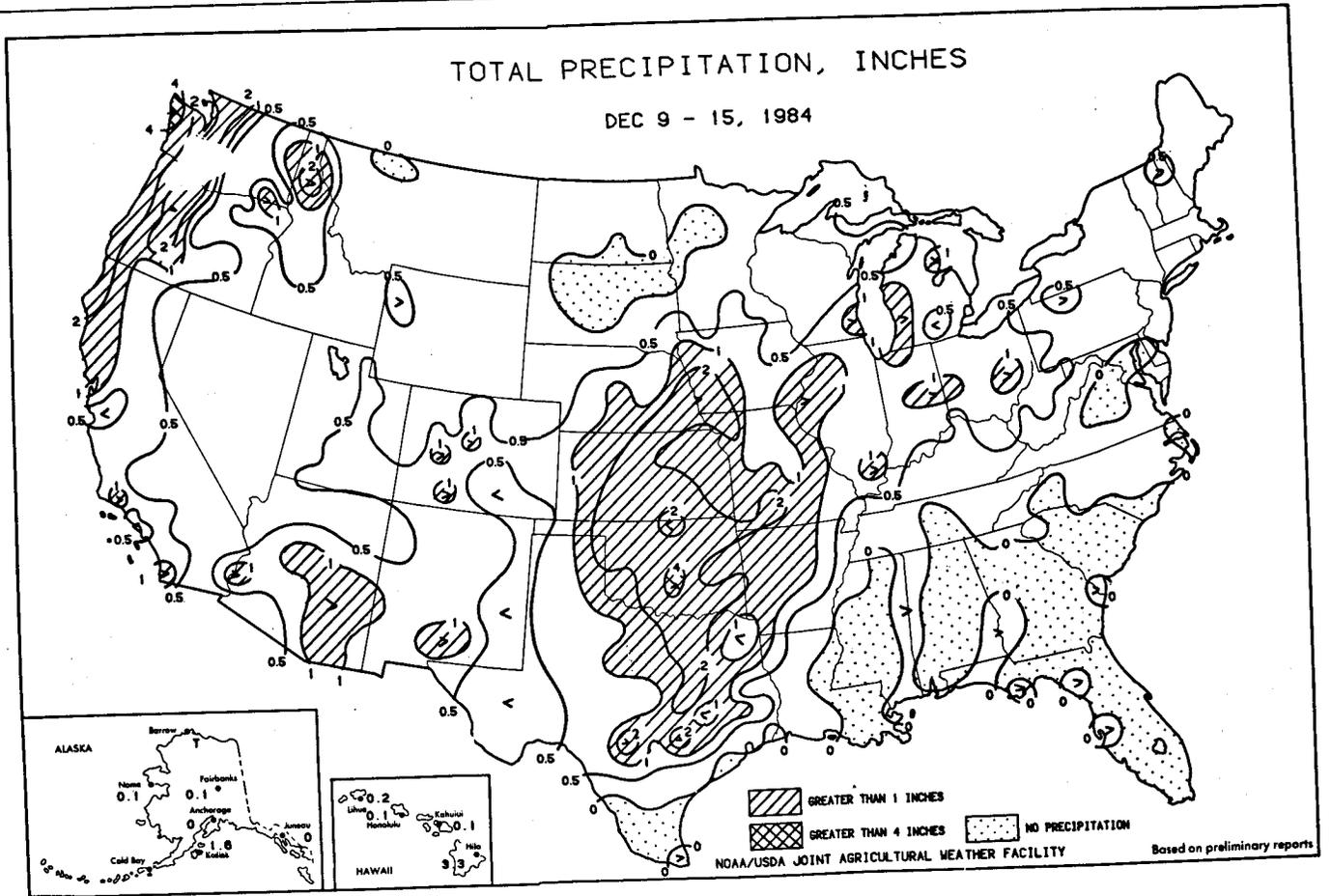
THURSDAY...A storm intensified in the Southwest and spread snow from Arizona to the central Plains. Moderate to heavy rainshowers fell through the rest of the southern and central Plains and through the Ohio Valley. Subzero temperatures spread over parts of the northern Plains and Rockies, and freezing weather reached the Texas Panhandle.

FRIDAY...It was a frigid winter day from the Cascades and Sierras in the West, to an area reaching from Arizona to the Texas Panhandle, and to the western Great Lakes. Warm weather continued in most of the East and Southeast. Showers continued from Arizona to Texas and northeastward to New England.

SATURDAY...The colder air spread to western Texas and through New England, but record warm weather continued from eastern Texas through the Southeast. A new Pacific storm spread rain along the west coast and snow inland. A complex storm system spread a mixture of snow, sleet, or freezing rain from western Texas into eastern Nebraska, and heavy showers from eastern Texas into Iowa.

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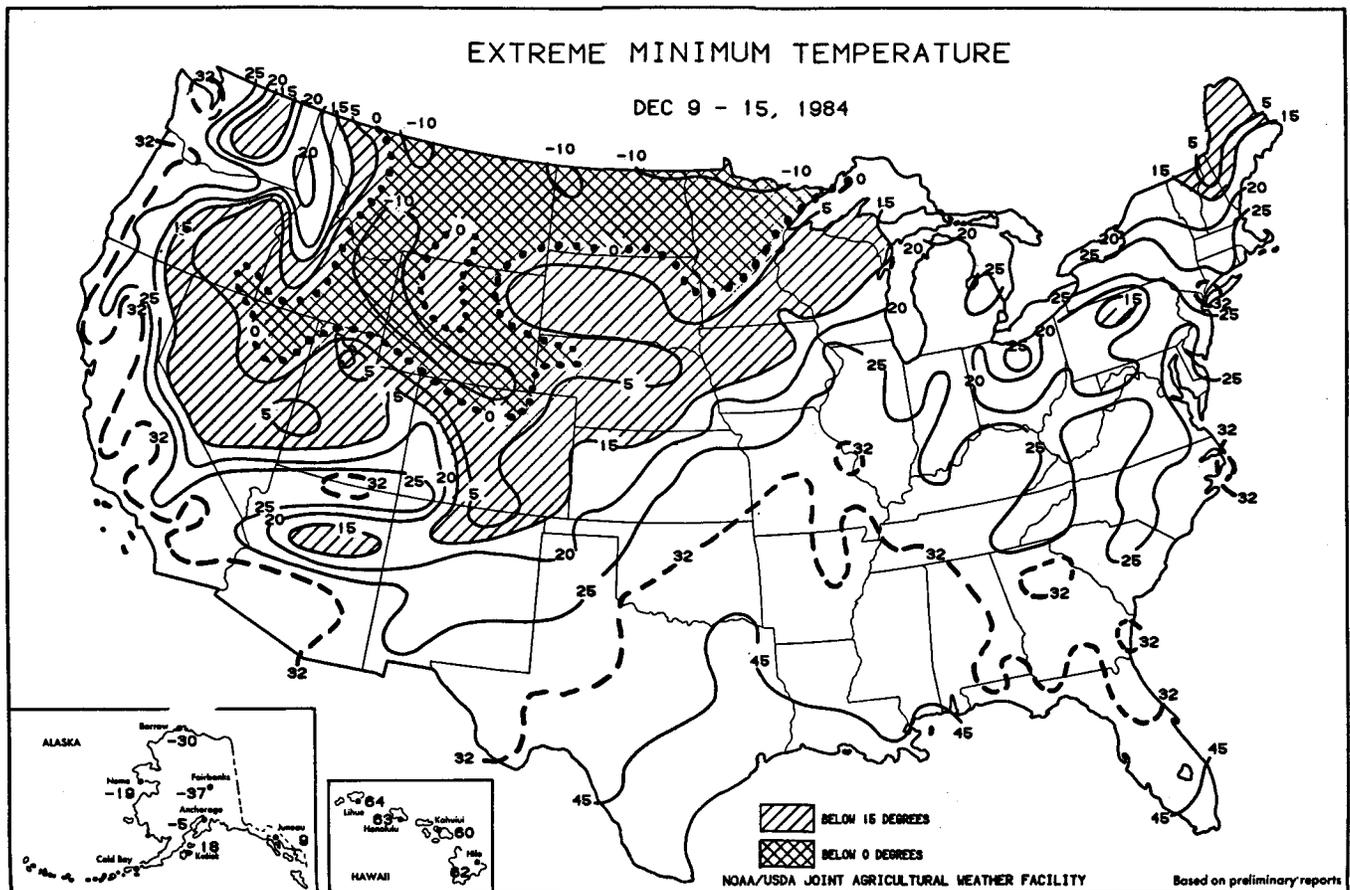
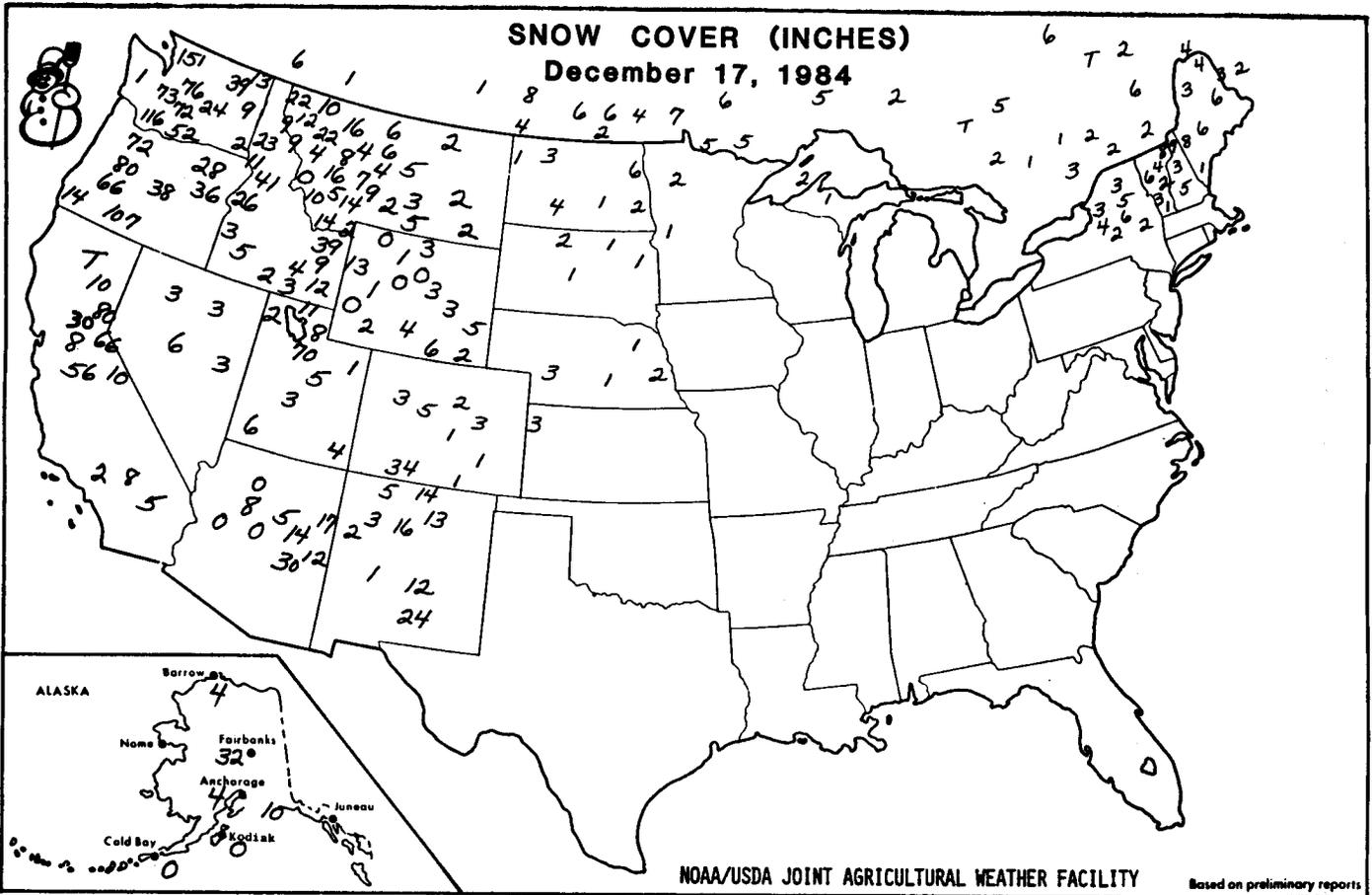
SNOW, SLEET, FREEZING RAIN, AND RAIN REACH FROM THE MOUNTAINS OF ARIZONA AND NEW MEXICO INTO WESTERN TEXAS AND TO MINNESOTA.

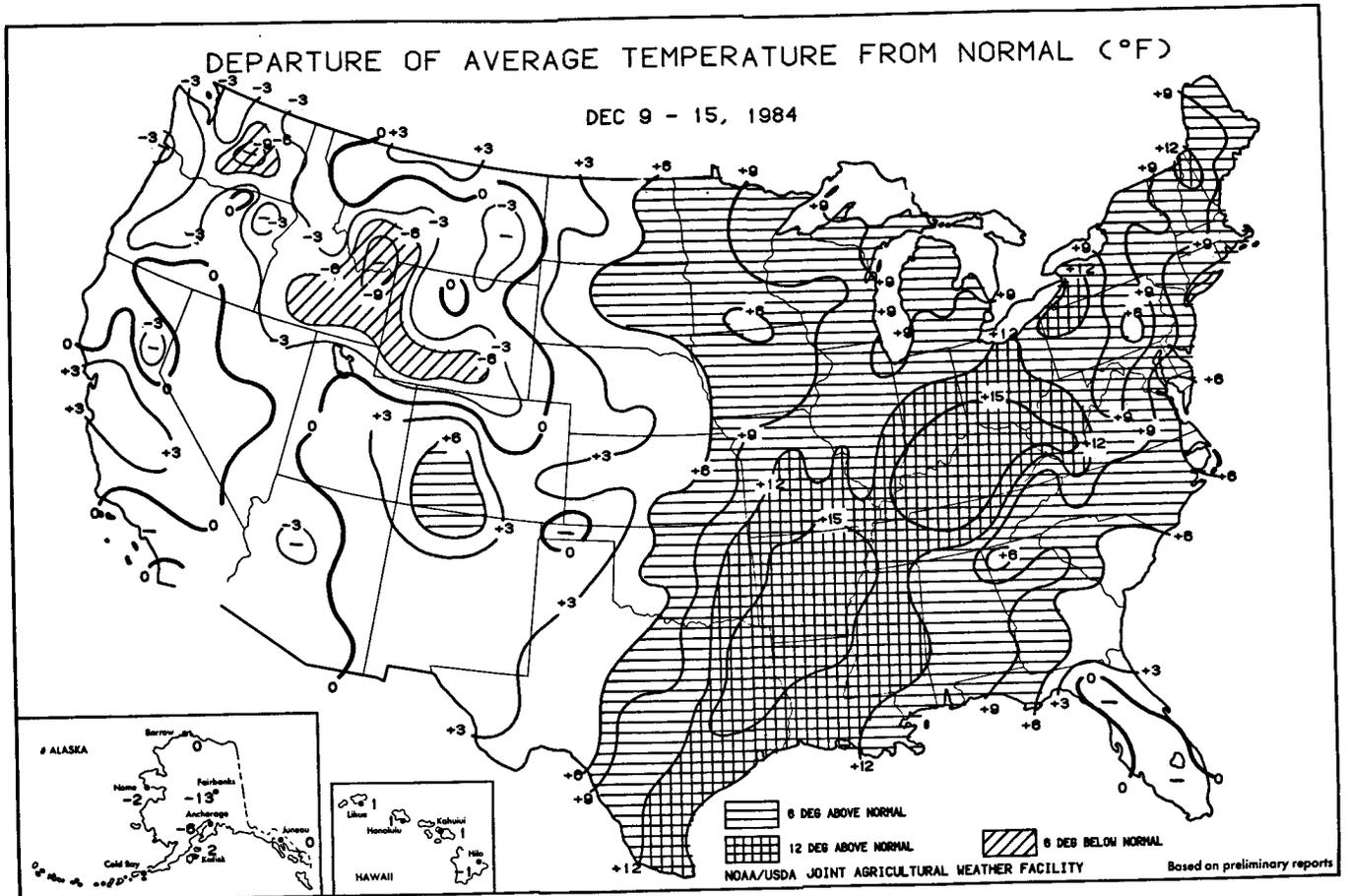
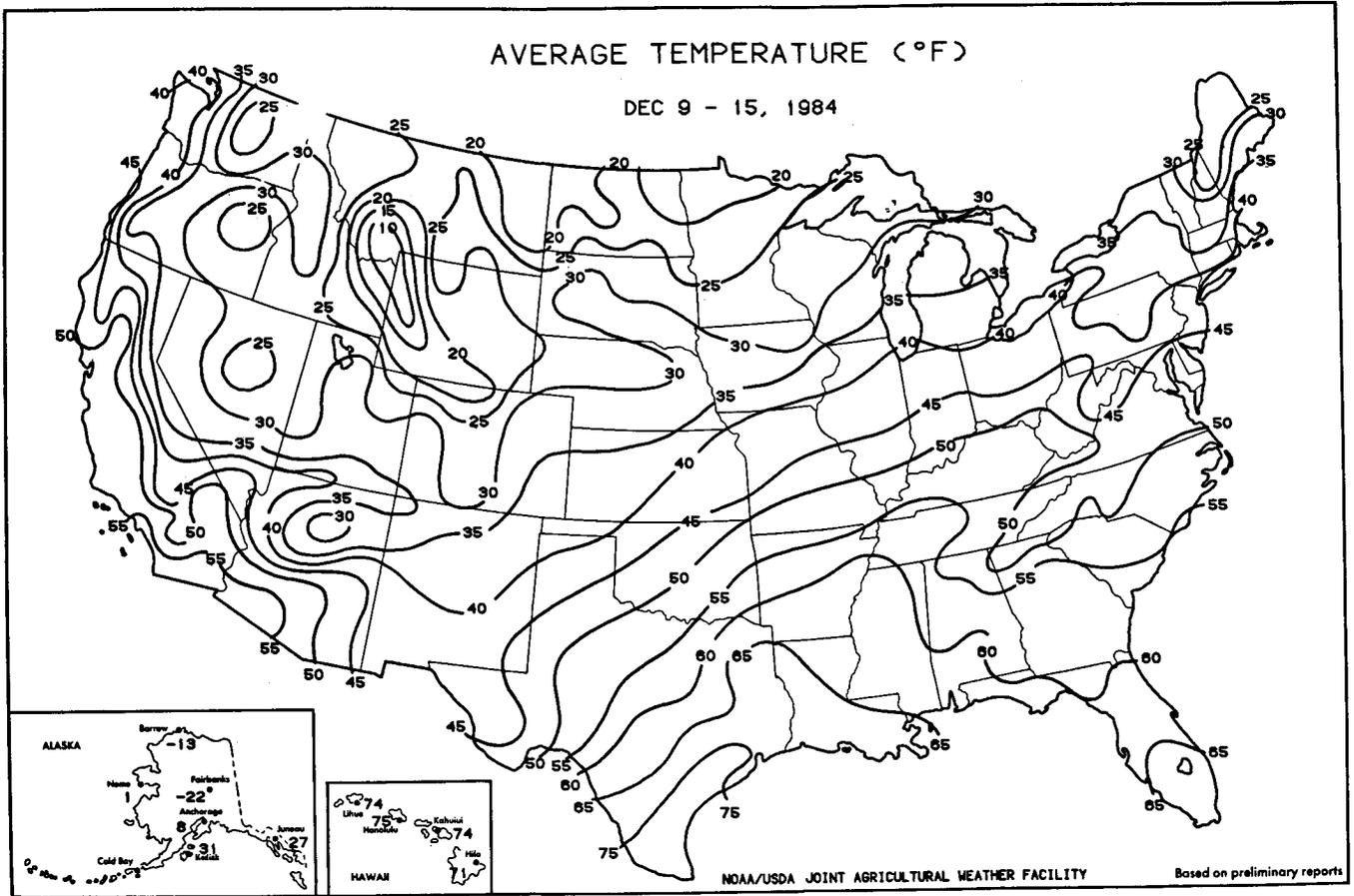
SNOW IS FALLING ON MUCH OF THE GREAT BASIN, THE ROCKIES, AND IN MONTANA.

A TROF OF LOW PRESSURE TRIGGERS MODERATE RAIN ON THE OREGON COAST, SHOWERS ALONG THE CALIFORNIA COAST, AND SNOW IN THE SIERRAS.

DRIZZLE COVERS THE IMPORTANT VEGETABLE AREAS FROM CULIACAN THROUGH MAZATLAN IN MEXICO. CLOUDS INDICATE SHOWERS AND THUNDERSTORMS IN THE GULF OF MEXICO, IN THE BAHAMAS, AND IN THE CARIBBEAN.

SANTA CLAUS COMES INTO VIEW FROM THE NORTH POLE.





Weather Data for the Week Ending December 15, 1984

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	50	29	60	15	40	-8	1.8	.8	.9	1.8	152	45.3	89	91	41	0	4	3	3	2	
MOBILE	58	38	76	23	48	-7	2.0	.8	1.9	2.0	142	53.6	88	87	45	0	3	3	1		
MONTGOMERY	57	34	78	22	45	-5	4.5	3.4	1.7	4.5	382	53.6	117	89	46	0	3	3	3	0	
AK ANCHORAGE	33	22	39	11	28	12	.3	0	.2	.3	78	14.1	97	97	83	0	7	2	0	0	
BARROW	-7	-16	0	-26	-12	-1	T	T	T	T	13	3.9	83	85	71	0	7	1	0	0	
FAIRBANKS	16	1	32	-5	9	17	.2	0	.1	.2	90	9.2	93	97	84	0	7	3	0	0	
JUNEAU	37	29	41	20	33	4	T	T	T	T	0	45.0	91	100	83	0	4	0	0	0	
KODIAK	41	35	44	27	38	8	1.6	.3	.8	1.6	108	64.3	92	92	66	0	4	0	0	0	
NOME	23	12	30	5	17	11	.2	.1	.1	.3	161	13.9	97	96	80	0	7	5	2	0	
AZ PHOENIX	65	47	74	40	56	2	.9	.7	.7	.9	538	12.8	200	84	38	0	0	3	1	0	
PRESCOTT	52	29	59	23	41	2	.3	0	.3	.3	83	13.7	78	88	41	0	6	1	1	0	
TUCSON	65	43	72	34	54	1	1.1	.9	.9	1.1	463	13.4	128	69	32	0	0	3	3	0	
YUMA	68	49	74	42	59	1	.5	.5	.3	.5	663	5.3	220	80	40	0	0	3	3	0	
AR PORT SMITH	46	27	58	18	37	-7	.6	-2	.5	.6	68	47.4	125	83	44	0	5	2	1	1	
LITTLE ROCK	46	30	62	20	38	-7	.7	-3	.7	.7	64	54.6	126	82	57	0	5	1	1	0	
CA BAK. FIELD	63	45	69	36	54	4	.1	0	.1	.1	88	2.4	45	94	49	0	0	2	0	0	
EUREKA	60	43	64	37	51	.2	.9	-5	.8	.9	57	37.1	109	91	58	0	0	3	1	0	
FRESNO	59	45	67	37	52	5	.2	-1	.2	.2	60	5.0	53	89	63	0	0	1	0	0	
LOS ANGELES	66	52	75	45	59	1	1.0	.6	.8	1.0	250	4.6	42	81	46	0	0	3	3	1	
RED BLUFF	57	40	66	35	48	0	1.0	.2	.6	1.0	113	14.4	76	96	59	0	0	4	1	1	
SACRAMENTO	57	41	61	37	49	2	.5	-1	.4	.5	70	8.1	54	100	71	0	0	2	2	0	
SAN DIEGO	65	54	77	48	60	1	.5	.2	.2	.5	150	4.5	54	92	62	0	0	3	0	0	
SAN FRANCISCO	57	44	64	41	51	0	.6	.1	.3	.6	78	12.9	75	96	68	0	0	3	0	0	
CO DENVER	46	19	68	12	33	-1	0	T	T	T	0	16.1	108	75	25	0	6	0	0	0	
GRAND JUNCTION	41	21	43	15	31	1	T	T	T	T	8	11.0	145	72	34	0	0	1	0	0	
PUEBLO	47	18	72	12	33	-2	.1	.1	.1	.1	150	15.8	149	90	40	0	7	1	0	0	
CT BRIDGEPORT	43	31	52	22	37	0	1.5	.6	.9	1.5	141	41.5	107	81	47	0	2	3	2	0	
HARTFORD	39	23	46	15	31	-1	1.3	.3	.6	1.3	120	41.4	100	80	45	0	7	3	2	0	
DC WASHINGTON	44	30	54	22	37	-4	1.0	.3	.8	1.0	123	37.8	103	80	42	0	3	4	1	0	
FL APALACHICOLA	68	46	79	28	57	1	T	T	T	T	33	55.7	107	85	52	0	-2	2	0	0	
DAYTONA BEACH	73	49	83	31	61	0	.1	-4	.1	-1	12	46.7	100	87	53	0	2	2	0	0	
JACKSONVILLE	67	43	78	26	55	-1	.1	-4	.1	-1	20	48.9	96	96	52	0	1	2	0	0	
KEY WEST	78	70	83	58	74	2	.1	-4	.1	-1	15	39.4	103	79	59	0	0	1	0	0	
MIAMI	78	60	84	45	69	-1	.1	-3	.1	-2	50	59.6	106	93	56	0	0	2	0	0	
ORLANDO	73	51	83	35	62	-1	.1	-3	.1	-2	31	44.2	95	99	55	0	0	1	0	0	
TALLAHASSEE	69	44	77	22	57	3	.4	-6	.3	1.4	124	56.4	92	95	47	0	2	3	0	0	
TAMPA	75	52	82	34	63	1	.1	-4	.1	-1	11	32.3	71	94	51	0	0	2	0	0	
WEST PALM BEACH	78	59	84	43	68	0	T	-5	T	1	12	69.0	119	96	59	0	1	0	0	0	
GA ATLANTA	48	30	63	16	39	-7	3.4	2.5	1.8	3.4	328	55.2	121	90	47	0	3	4	2	1	
AUGUSTA	57	32	70	21	44	-4	1.2	.5	.8	1.2	159	44.2	109	93	43	0	4	4	1	0	
MACON	57	33	74	21	45	-5	2.0	1.2	1.1	2.0	214	44.0	106	93	46	0	4	4	1	0	
SAVANNAH	60	40	75	24	50	-2	.1	-5	.1	-1	15	50.4	106	82	45	0	3	1	0	0	
HI HILO	80	64	82	62	72	0	.6	-2	.7	.5	18	87.8	73	88	58	0	0	2	0	0	
HONOLULU	83	70	84	65	77	2	.5	-3	.2	.5	56	12.3	58	86	59	0	0	4	0	0	
KAHULUI	85	66	88	61	76	2	T	-6	T	T	0	8.0	45	87	50	0	0	0	0	0	
LIHUE	80	70	81	69	75	1	.6	-6	.4	.8	61	24.3	61	82	62	0	0	3	0	0	
ID BOISE	32	15	33	13	24	-10	0	-3	0	0	0	12.4	116	83	48	0	0	0	0	0	
LEWISTON	37	21	46	15	29	-7	0	-3	0	0	3	10.2	86	84	52	0	7	0	0	0	
FOCATELLO	25	1	30	-5	13	-15	T	-2	T	T	4	12.6	125	84	57	0	7	0	0	0	
IL CHICAGO	31	14	48	7	23	-8	.1	-4	.1	-1	21	30.9	97	91	60	0	7	2	0	0	
MOLINE	33	13	50	2	23	-7	.3	-2	.2	.3	48	36.2	101	79	52	0	7	2	0	0	
PEORIA	35	15	50	3	25	-6	.1	-4	.1	.1	23	37.0	110	91	55	0	7	2	0	0	
QUINCY	36	17	51	2	27	-7	T	-4	T	T	4	36.3	99	90	54	0	7	1	0	0	
ROCKFORD	31	12	51	4	22	-8	.2	-3	.2	.2	41	30.4	85	92	57	0	7	2	0	0	
SPRINGFIELD	35	17	48	-1	26	-8	.1	-4	.1	.1	25	38.9	120	89	55	0	7	2	0	0	
IN EVANSVILLE	37	20	51	2	29	-10	.7	-2	.4	.7	71	44.4	113	86	55	0	6	3	0	0	
FORT WAYNE	34	17	48	9	25	-7	.4	-2	.2	.4	63	28.7	88	87	59	0	7	2	0	0	
INDIANAPOLIS	34	17	50	2	26	-9	.6	-1	.3	.6	71	38.4	104	89	59	0	6	3	0	0	
SOUTH BEND	33	17	46	9	25	-7	.8	-1	.4	.8	96	30.8	85	84	59	0	7	2	0	0	
IA DES MOINES	36	10	62	-3	23	-6	T	-3	T	T	9	38.9	129	84	44	0	7	1	0	0	
SIOUX CITY	39	11	68	-1	25	-2	T	-2	T	T	0	32.6	131	75	37	0	7	0	0	0	
WATERLOO	30	7	48	-4	18	-7	T	-3	T	T	.1	26	32.4	101	86	62	0	7	1	0	0
KS CONCORDIA	42	19	63	4	30	-3	T	-2	T	T	0	25.2	94	90	41	0	7	0	0	0	
DODGE CITY	47	23	69	14	35	-1	.1	-1	.1	.1	56	16.6	82	82	39	0	7	2	0	0	
GOODLAND	49	17	65	12	33	1	0	-1	0	0	0	20.5	127	81	31	0	7	0	0	0	
TOPEKA	41	19	58	7	30	-5	.1	-2	.1	.1	28	35.9	110	81	46	0	7	1	0	0	
WICHITA	40	21	57	11	30	-7	.4	.1	.2	.4	123	24.3	87	89	51	0	7	2	0	0	
KY BOWLING GREEN	41	22	55	9	31	-9	.5	-5	.5	.5	46	55.8	122	95	58	0	6	2	0	0	
LEXINGTON	37	19	49	2	28	-11	.3	-6	.3	.3	33	37.8	88	92	59	0	6	3	0	0	
LOUISVILLE	40	22	53	6	31	-9	.5	-4	.4	.5	48	42.4	103	80	48	0	6	2	1	0	
LA ALEXANDRIA	56	39	74	26	47	-6	1.4	.3	1.4	1.4	110	64.2	125	78	46	0	0	2	3	0	
BATON ROUGE	56	37	69	22	47	-8	2.3	1.1	1.3	2.3	177	49.7	95	92	52	0	3	3	2	0	
LAKE CHARLES	56	39	72	26	48	-8	3.5	2.4	2.8	3.5	273	61.4	124	95	57	0	1	3	3	2	
NEW ORLEANS	59	41	80	27	50	-6	1.6	.4	1.0	1.7	126	51.2	91	91	51	0	2	3	2	2	

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

Weather Data for the Week Ending December 15, 1984

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 HUMIDITY, PERCENT		TEMPERATURE °F			
														AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	56	36	77	23	46	-5	.6	-.3	.6	.6	60	46.1	112	81	38	0	2	1	1
ME CARIBOU	26	12	34	-1	19	-1	1.4	-.6	.9	1.4	164	33.6	98	90	71	0	7	5	1
PORTLAND	37	20	45	10	29	0	2.0	-.9	.9	2.0	159	46.6	115	85	47	0	4	4	0
MD BALTIMORE	44	28	54	20	36	-3	.9	.1	.5	.9	97	36.0	91	79	37	0	5	4	1
SALISBURY	51	29	61	22	40	-1	1.2	.4	.7	1.2	130	41.3	96	88	45	0	5	3	1
MA BOSTON	41	28	47	19	35	-2	1.2	.1	.9	1.2	100	48.5	119	75	46	0	6	2	1
CHATHAM	46	29	53	21	38	-1	1.3	.1	1.1	1.3	98	47.4	109	96	67	0	4	3	1
MI ALPENA	32	16	43	6	24	-2	.4	-.1	.2	.4	71	28.7	105	96	67	0	7	3	0
DETROIT	35	18	45	10	27	-3	.2	-.4	.1	.2	35	23.9	82	81	53	0	7	4	0
FLINT	35	20	45	14	27	-3	.3	-.2	.2	.3	52	26.6	96	85	59	0	7	4	0
GRAND RAPIDS	33	19	45	14	26	-4	.3	-.4	.2	.3	36	24.6	75	97	65	0	2	3	0
HOUGHTON LAKE	29	18	40	11	24	-2	.1	-.3	.1	.2	42	25.7	97	91	64	0	7	4	0
LANSING	33	17	44	10	25	-3	.3	-.3	.1	.3	44	25.6	91	90	65	0	7	4	0
MARQUETTE	28	8	44	-2	18	-3	.9	.3	.4	.9	133	30.7	97	87	71	0	7	4	0
MUSKEGON	35	22	43	18	29	-2	.7	.1	.4	.7	94	26.1	88	85	62	0	7	3	2
SAULT STE. MARIE	29	11	38	-4	20	-3	1.8	1.2	.8	1.9	253	31.6	99	98	73	0	7	2	0
MN ALEXANDRIA	24	2	47	-10	13	-5	T	T	T	.1	25	31.1	129	84	52	0	7	1	0
DULUTH	23	6	41	-12	14	-4	.1	-.2	0	.1	22	25.3	88	81	56	0	7	2	0
INT'L FALLS	20	-2	36	-18	9	-9	T	T	T	T	17	19.6	83	88	66	0	7	2	0
MINNEAPOLIS	25	5	41	-7	15	-1	.1	-.1	.1	.3	129	34.8	135	80	53	0	7	2	0
ROCHESTER	23	3	38	-9	13	-10	.4	-.2	.4	.4	171	26.7	96	88	67	0	7	0	0
MS GREENWOOD	48	32	64	17	40	-4	.4	-.8	.3	.4	26	50.2	102	91	45	0	3	2	2
JACKSON	52	31	68	17	42	-6	1.5	.3	.8	1.5	107	49.0	100	97	54	0	3	3	2
MERIDIAN	53	32	67	21	43	-7	2.4	1.1	1.8	2.4	170	52.2	106	92	50	0	3	3	1
MO CAPE GIRARDEAU	38	21	55	5	30	-1	1.1	-.2	.7	1.1	109	43.8	105	97	60	0	6	2	1
COLUMBIA	40	19	56	5	30	-6	.1	-.4	.1	.1	14	45.7	132	89	51	0	7	1	0
KANSAS CITY	41	17	60	5	29	-6	.1	-.3	.1	.1	8	35.1	103	92	47	0	7	1	0
SAINT LOUIS	41	23	56	8	32	-5	.3	-.3	.2	.3	41	47.1	145	87	46	0	6	2	0
SPRINGFIELD	41	23	57	8	32	-6	.3	-.3	.3	.3	44	39.1	104	76	51	0	6	1	0
MT BILLINGS	40	20	58	7	30	-3	.3	-.1	.1	.1	19	9.6	66	65	38	0	6	0	0
GLASGOW	28	8	48	-5	18	-3	T	T	T	T	0	6.1	54	81	52	0	7	0	0
GREAT FALLS	34	16	53	-6	25	-3	T	T	T	.2	106	11.0	75	72	47	0	5	0	0
HAVRE	31	13	51	-10	22	0	T	T	T	T	0	6.2	58	81	53	0	7	0	0
HELENA	24	0	37	-6	12	-14	T	T	T	T	0	8.8	81	99	63	0	7	0	0
KALISPELL	23	5	38	-9	14	-12	.1	-.3	.1	.1	30	15.1	102	91	64	0	7	1	0
MILES CITY	30	7	48	-8	19	-6	T	T	T	T	38	7.9	58	86	56	0	7	1	0
MISSOULA	22	4	31	0	13	-13	T	T	T	.1	18	12.6	102	90	63	0	7	0	0
NE GRAND ISLAND	43	15	66	1	29	-1	T	T	T	T	0	30.3	132	69	31	0	7	0	0
LINCOLN	41	14	65	1	28	-2	T	T	T	T	0	33.1	145	81	35	0	7	0	0
NORFOLK	40	13	69	-2	27	-1	T	T	T	T	0	32.7	140	88	39	0	7	0	0
NORTH PLATTE	46	10	65	2	28	0	T	T	T	T	0	20.4	106	85	29	0	7	0	0
OMAHA	38	13	60	0	26	-4	T	T	T	T	4	33.5	114	73	48	0	7	1	0
SCOTTSELUFF	46	9	66	0	27	-2	T	T	T	T	13	12.4	87	80	35	0	6	0	0
VALENTINE	38	3	59	-8	20	-7	T	T	T	T	0	19.0	112	80	35	0	7	1	0
NV ELY	41	11	51	5	26	-1	T	T	T	T	13	14.1	166	88	51	0	7	1	0
LAS VEGAS	55	39	60	33	47	0	.2	.2	.2	.2	275	5.4	135	85	41	0	7	1	0
RENO	45	27	51	22	36	2	T	T	T	T	10	4.2	64	94	55	0	7	1	0
WINNEMUCCA	45	20	51	17	32	1	T	T	T	T	17	12.4	172	75	39	0	7	3	2
NH CONCORD	36	16	44	6	26	-1	1.2	.4	.7	1.2	125	40.8	120	97	58	0	7	3	1
NJ ATLANTIC CITY	47	27	58	19	37	-1	1.3	.5	.5	1.3	134	39.1	99	77	43	0	6	3	0
NM ALBUQUERQUE	46	26	51	22	36	-2	.1	.1	.1	.1	150	11.0	173	89	47	0	7	1	0
CLOVIS	48	25	69	19	37	-4	.2	.2	.2	.2	138	24.1	143	75	34	0	6	1	0
ROSWELL	50	26	72	20	38	-6	.1	0	.1	.1	71	17.4	183	88	41	0	6	1	0
NY ALBANY	35	21	42	9	28	-2	1.4	.7	.7	1.5	193	35.9	107	99	69	0	7	4	2
BINGHAMTON	32	23	40	12	28	-2	.7	0	.3	.8	101	37.4	107	85	54	0	7	3	0
BUFFALO	33	20	42	9	26	-5	.7	-.1	.3	.8	83	34.5	99	91	56	0	7	4	1
NEW YORK	43	33	54	26	38	-1	1.2	.3	.6	1.2	115	49.2	122	82	47	0	3	3	0
ROCHESTER	35	24	44	13	30	-2	.8	.2	.4	.9	129	31.3	106	84	50	0	6	4	0
SYRACUSE	33	23	39	11	28	-4	1.0	.3	.5	1.3	148	34.7	94	96	58	0	7	6	0
NC ASHEVILLE	45	23	56	10	34	-7	1.1	.3	.8	1.1	126	45.5	101	95	44	0	7	3	2
CHARLOTTE	48	28	57	16	38	-6	2.2	1.5	1.2	2.2	262	44.8	110	89	42	0	4	2	2
GREENSBORO	47	26	58	16	36	-6	1.6	.9	1.1	1.6	200	50.1	125	85	41	0	6	2	2
HATTERAS	61	41	71	31	51	-1	1.1	.1	.9	1.1	94	44.6	85	92	53	0	2	4	1
NEW BERN	57	35	69	24	46	-2	1.1	.3	.8	1.1	117	59.2	117	88	50	0	3	3	1
RALEIGH	47	29	60	18	38	-6	2.2	1.5	1.1	2.2	274	46.1	117	83	42	0	5	4	2
WILMINGTON	58	37	73	24	48	-2	1.0	.3	.6	1.0	117	57.3	113	92	44	0	2	4	1
ND BISMARCK	30	5	48	-12	17	-2	T	T	T	T	25	14.3	96	86	53	0	7	1	0
FARGO	24	3	50	-9	14	-4	T	T	T	T	19	19.3	101	80	49	0	7	0	0
GRAND FORKS	22	2	42	-9	12	-4	T	T	T	T	0	19.5	110	82	59	0	7	0	0
WILLISTON	26	4	46	-10	15	-4	T	T	T	T	30	10.3	76	86	61	0	7	0	0
OH AKRON-CANTON	33	18	47	7	26	-7	.7	.1	.4	.7	99	33.4	98	86	58	0	6	4	0
CINCINNATI	36	18	50	1	27	-9	.7	0	.5	.7	89	38.3	101	84	56	0	7	4	1
CLEVELAND	34	19	47	9	26	-6	.6	0	.3	.6	83	38.5	115	79	51	0	7	3	0
COLUMBUS	34	18	49	6	26	-9	.5	-.1	.3	.5	72	31.0	88	85	55	0	7	4	0

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

Weather Data for the Week Ending December 15, 1984

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
DAYTON	33	16	49	3	25	-10	.7	-.1	.5	.7	108	32.6	99	85	58	0	7	3	0
TOLEDO	33	17	46	9	25	-6	.3	-.4	.2	.3	39	28.3	94	90	62	0	7	4	0
YOUNGSTOWN	32	19	44	12	26	-7	.8	-.2	.5	.8	111	35.3	100	91	64	0	7	3	0
OK OKLAHOMA CITY	45	29	58	20	37	-5	.6	.3	.4	.6	181	26.2	87	85	51	0	6	2	0
TULSA	45	28	60	16	37	-6	.7	.2	.4	.7	120	40.7	108	83	46	0	6	2	0
OR ASTORIA	50	35	56	30	42	-2	.5	-.2	.5	.5	17	62.4	102	80	54	0	2	2	1
BURNS	31	6	37	5	19	-10	0	-.2	0	0	0	10.8	150	99	59	0	2	2	0
MEDFORD	46	30	56	25	38	-1	.3	-.5	.3	.3	32	16.8	97	99	64	0	2	2	0
PENDLETON	30	23	39	20	27	-11	T	-.3	T	T	5	12.1	110	95	76	0	7	1	0
PORTLAND	43	34	46	29	38	-4	.1	-.3	.1	.1	8	34.9	106	76	52	0	3	1	0
SALEM	44	28	47	22	36	-6	.1	-.3	.1	.1	7	41.6	118	90	63	0	6	1	0
PA ALLENTOWN	39	27	47	22	33	-1	1.0	-.1	.5	1.0	94	50.2	121	83	47	0	7	3	0
ERIE	35	24	46	18	29	-4	.8	0	.4	.8	88	34.4	92	91	60	0	7	3	0
HARRISBURG	40	29	51	22	34	-2	.9	-.1	.4	.9	100	42.0	114	78	43	0	5	3	0
PHILADELPHIA	44	29	51	24	36	-2	1.3	.5	.6	1.3	141	42.7	109	75	43	0	5	3	1
PITTSBURGH	35	19	46	9	27	-7	.6	-.1	.4	.6	100	33.0	96	92	57	0	7	4	0
SCRANTON	37	27	47	18	32	-1	.8	-.1	.4	.8	106	37.1	111	88	49	0	5	4	0
RI PROVIDENCE	41	25	50	15	33	-2	1.4	-.4	.9	1.4	118	46.9	111	82	43	0	7	3	1
SC CHARLESTON	56	37	68	23	47	-5	.6	-.1	.3	.6	79	46.1	94	94	52	0	3	3	0
COLUMBIA	53	29	68	19	41	-7	1.7	1.0	1.4	1.7	218	44.5	96	94	46	0	4	3	1
FLORENCE	49	32	62	19	41	-8	.9	.3	.7	.9	126	39.8	95	91	49	0	4	2	1
GREENVILLE	49	27	62	17	38	-7	2.1	1.3	1.0	2.1	221	58.2	122	83	40	0	3	4	2
SD ABERDEEN	26	2	46	-15	14	-7	T	-.1	T	.2	138	21.0	120	83	57	0	7	1	0
HURON	27	3	48	-11	15	-7	.1	-.1	.1	.4	219	29.5	161	82	53	0	7	1	0
RAPID CITY	44	11	69	2	27	-1	T	-.1	T	.1	31	15.0	94	66	32	0	7	0	0
SIoux FALLS	34	4	61	-10	19	-4	T	-.2	T	.1	33	27.9	118	81	45	0	7	1	0
TH CHATTANOOGA	45	26	55	13	35	-8	.9	-.2	.5	.9	71	46.8	96	86	50	0	4	3	1
KNOXVILLE	44	22	56	10	33	-10	.7	-.3	.5	.7	61	46.8	106	93	48	0	6	3	1
MEMPHIS	46	31	62	20	38	-7	.7	-.5	.7	.7	51	53.4	111	87	48	0	4	1	1
NASHVILLE	43	24	56	10	34	-9	.5	-.5	.4	.5	42	54.7	121	90	50	0	6	3	0
TX ABILENE	52	33	65	27	43	-6	.1	-.1	.1	.1	29	19.3	85	66	38	0	5	1	0
AMARILLO	50	25	77	19	37	-3	T	0	T	T	38	18.2	97	79	34	0	7	1	0
AUSTIN	57	37	71	28	47	-7	.4	-.1	.3	.4	63	23.4	78	90	47	0	1	3	0
BEAUMONT	59	42	73	28	51	-6	.9	-.1	.4	.9	78	58.2	118	93	52	0	1	3	0
BROWNSVILLE	67	50	82	37	59	-5	1.2	.9	1.2	1.2	381	39.7	161	99	69	0	0	0	1
CORPUS CHRISTI	63	45	81	33	54	-6	.3	-.1	.2	.3	71	21.0	72	94	53	0	0	3	0
DEL RIO	57	40	72	33	49	-5	T	-.1	T	T	6	12.8	76	86	44	0	0	1	0
EL PASO	55	32	67	28	44	-2	.2	-.1	.2	.2	250	15.8	211	85	38	0	5	1	0
FORT WORTH	61	33	64	28	42	-7	.7	.3	.4	.7	140	28.0	99	89	45	0	3	2	0
GALVESTON	58	44	74	36	51	-7	2.2	1.4	1.8	2.2	229	35.0	93	85	53	0	0	1	0
HOUSTON	59	38	79	26	49	-7	.7	-.2	.4	.7	70	46.0	109	83	39	0	0	2	0
LUBBOCK	51	27	73	20	39	-4	T	-.1	T	T	25	13.4	77	85	40	0	6	1	0
MIDLAND	53	29	68	22	41	-7	T	-.1	T	T	6	15.7	117	83	40	0	5	1	0
SAN ANGELO	54	31	66	25	43	-7	.1	-.1	.1	.1	29	15.6	88	93	44	0	5	1	0
SAN ANTONIO	59	37	77	26	48	-7	.4	0	.2	.4	93	22.9	81	89	45	0	2	3	0
VICTORIA	61	40	82	30	51	-7	.8	.3	.5	.8	136	30.7	87	96	53	0	1	3	1
WACO	54	36	65	31	45	-7	.4	-.1	.2	.4	78	29.7	100	87	46	0	2	2	0
WICHITA FALLS	51	31	66	25	41	-5	.4	-.1	.3	.4	109	20.6	80	88	44	0	6	2	0
UT BLANDING	45	23	50	16	34	-2	T	-.2	T	T	7	8.9	84	83	44	0	7	1	0
CEDAR CITY	46	21	56	15	34	-2	T	-.2	T	T	0	11.9	121	91	43	0	7	0	0
SALT LAKE CITY	39	21	40	17	30	-2	T	-.3	T	T	81	21.1	148	86	54	0	7	1	0
VT BURLINGTON	33	20	41	3	27	0	1.3	.7	.8	1.3	219	34.6	108	80	46	0	7	4	1
VA NORFOLK	52	34	62	26	43	-3	2.1	1.4	1.2	2.1	265	44.7	104	81	48	0	2	4	1
RICHMOND	49	28	58	21	38	-4	1.2	.4	.8	1.2	135	45.8	110	90	40	0	6	4	1
ROANOKE	45	26	59	15	35	-5	.6	-.1	.5	.6	78	42.4	115	75	35	0	6	4	1
WA COLVILLE	24	9	34	0	17	-13	.6	-.1	.5	.6	98	24.5	156	92	84	0	7	2	0
QUILLAYUTE	47	31	50	24	39	-3	2.8	-.9	2.7	2.8	67	101.2	109	97	62	0	6	3	1
SEATTLE-TACOMA	47	32	49	26	39	-3	1.7	.3	1.0	1.7	104	33.5	98	85	47	0	5	2	2
SPOKANE	27	10	38	5	18	-12	.1	-.5	.1	.1	13	16.1	108	100	78	0	7	0	0
YAKIMA	27	9	34	0	18	-15	0	-.3	0	0	0	8.5	121	78	65	0	7	0	0
WV BECKLEY	39	19	51	3	29	-7	.6	-.2	.3	.6	69	38.5	97	85	46	0	7	5	0
CHARLESTON	43	23	58	10	33	-6	.7	-.1	.2	.7	81	37.9	94	87	48	0	7	3	0
HUNTINGTON	39	21	53	7	30	-9	.5	-.2	.3	.5	66	36.9	96	95	58	0	7	3	0
PARKERSBURG	40	20	54	6	30	-8	.6	0	.3	.6	85	30.5	78	90	50	0	7	3	0
WI GREEN BAY	29	11	41	4	20	-5	.2	-.2	.2	.2	48	35.0	130	90	63	0	7	3	0
LA CROSSE	24	6	40	-5	15	-10	.5	-.2	.5	.5	153	31.0	105	87	59	0	7	2	0
MADISON	29	11	48	1	20	-6	.3	-.1	.3	.3	70	31.3	105	89	55	0	7	1	0
MILWAUKEE	32	14	49	8	23	-6	.3	-.2	.2	.3	48	36.3	124	83	53	0	7	3	0
WAUSAU	25	6	43	-2	15	-7	.7	-.4	.7	.7	177	39.2	127	91	62	0	7	1	1
WY CASPER	34	11	47	-5	22	-5	.1	0	.1	.2	94	12.8	115	76	36	0	6	1	0
CHEYENNE	40	13	58	2	26	-4	T	-.1	T	T	0	17.2	131	77	31	0	5	0	0
LANDER	27	5	39	-3	16	-9	0	-.1	0	0	6	12.9	101	71	42	0	7	0	0
SHERIDAN	34	4	54	-13	19	-8	T	-.2	T	T	0	13.6	94	84	45	0	7	0	0
PR SAN JUAN	83	72	84	71	78	0	.9	-.3	.3	.9	68	41.1	81	81	59	0	0	7	0

BASED ON PRELIMINARY REPORTS AND 1951-80 NORMALS

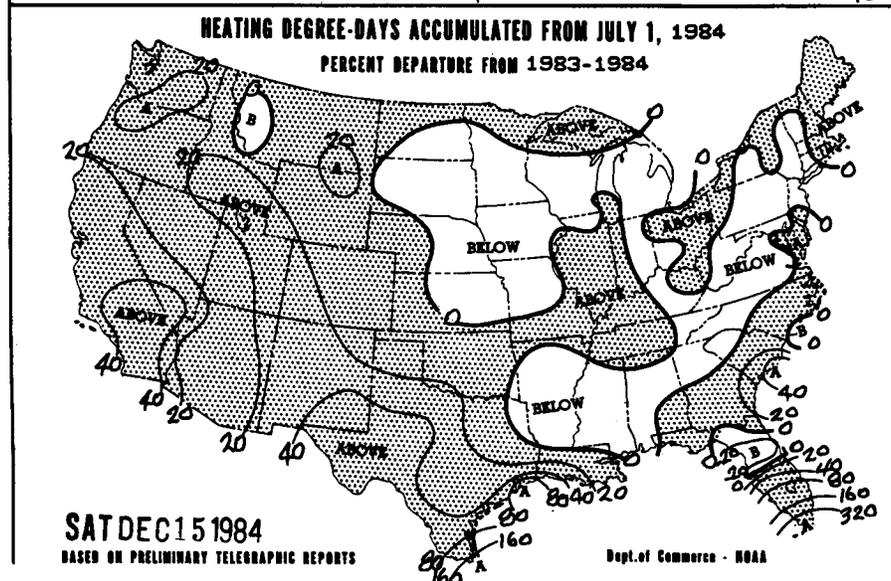
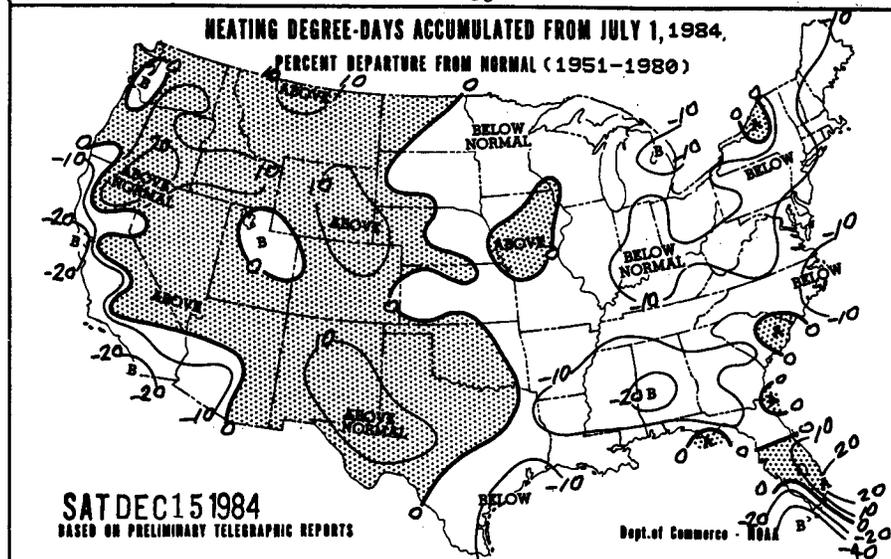
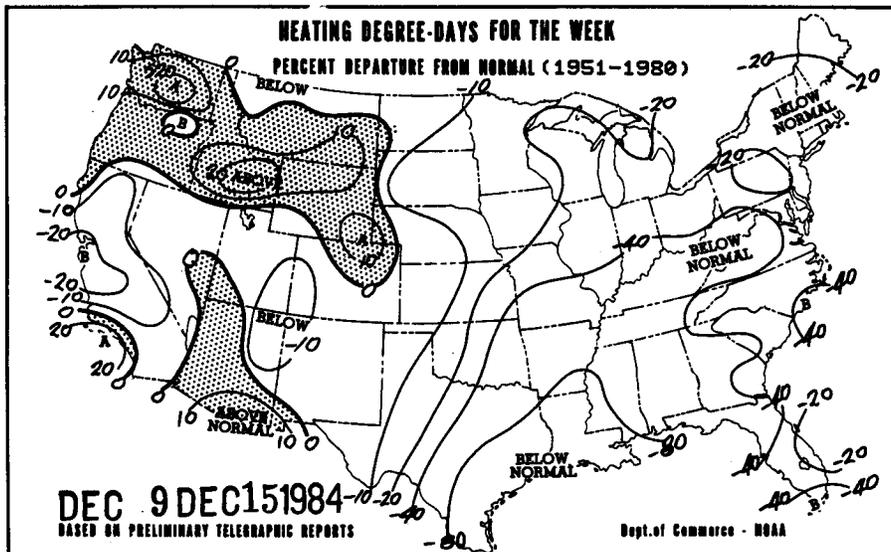
HEATING DEGREE DAY DATA WEEKLY SUMMARY
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

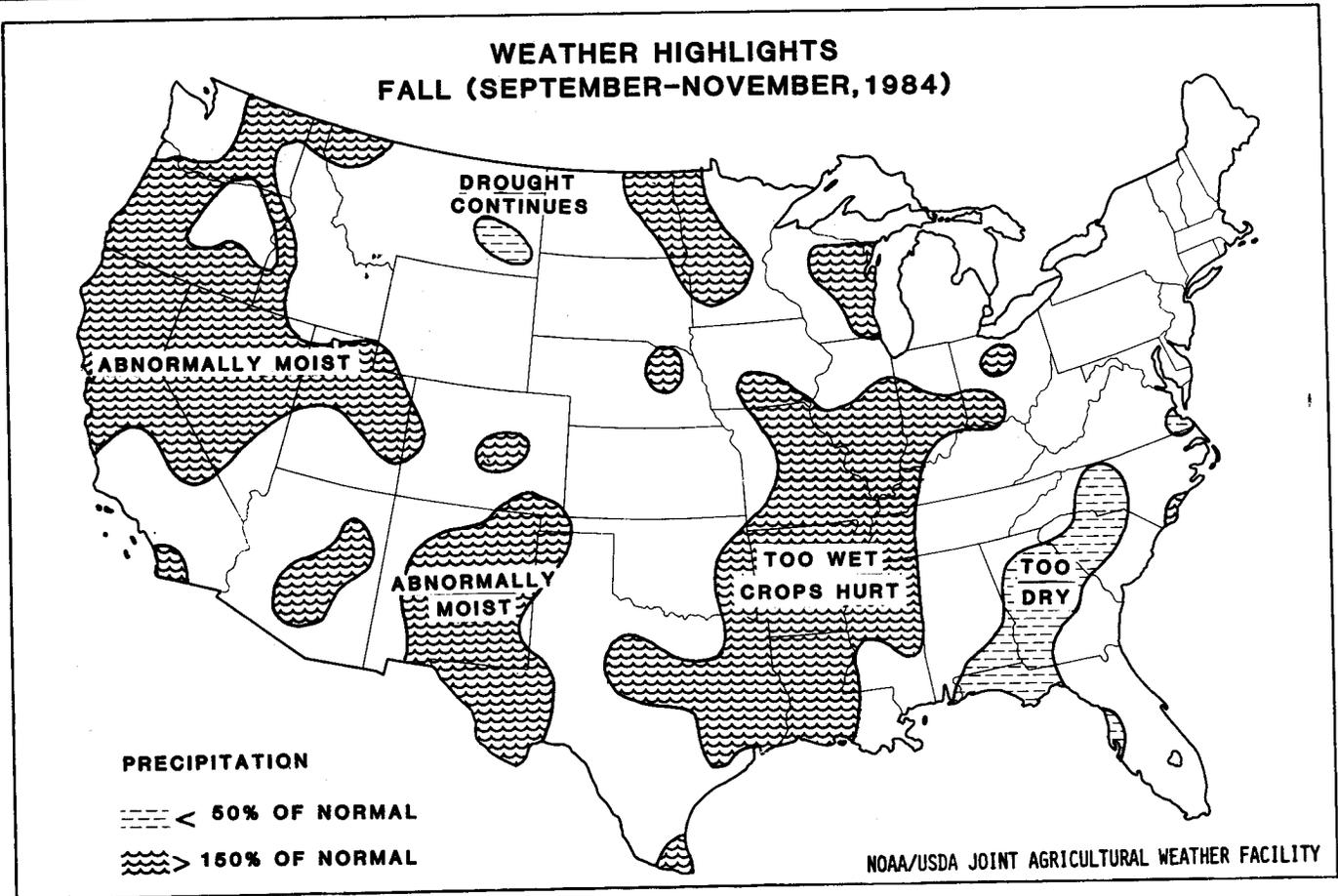
LAST DATE OF DATA COLLECTION PERIOD IS 12-15-1984
ACCUMULATIONS ARE FROM JULY 1
**** = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK FROM, WEEK TO, CUM TOTAL, CUM FROM, CUM TO, CUM FROM, CUM TO, STATE CITY, CALL, WEEK TOTAL, WEEK FROM, WEEK TO, CUM TOTAL, CUM FROM, CUM TO, CUM FROM, CUM TO. Lists cities and their heating degree day data.

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OCT 73





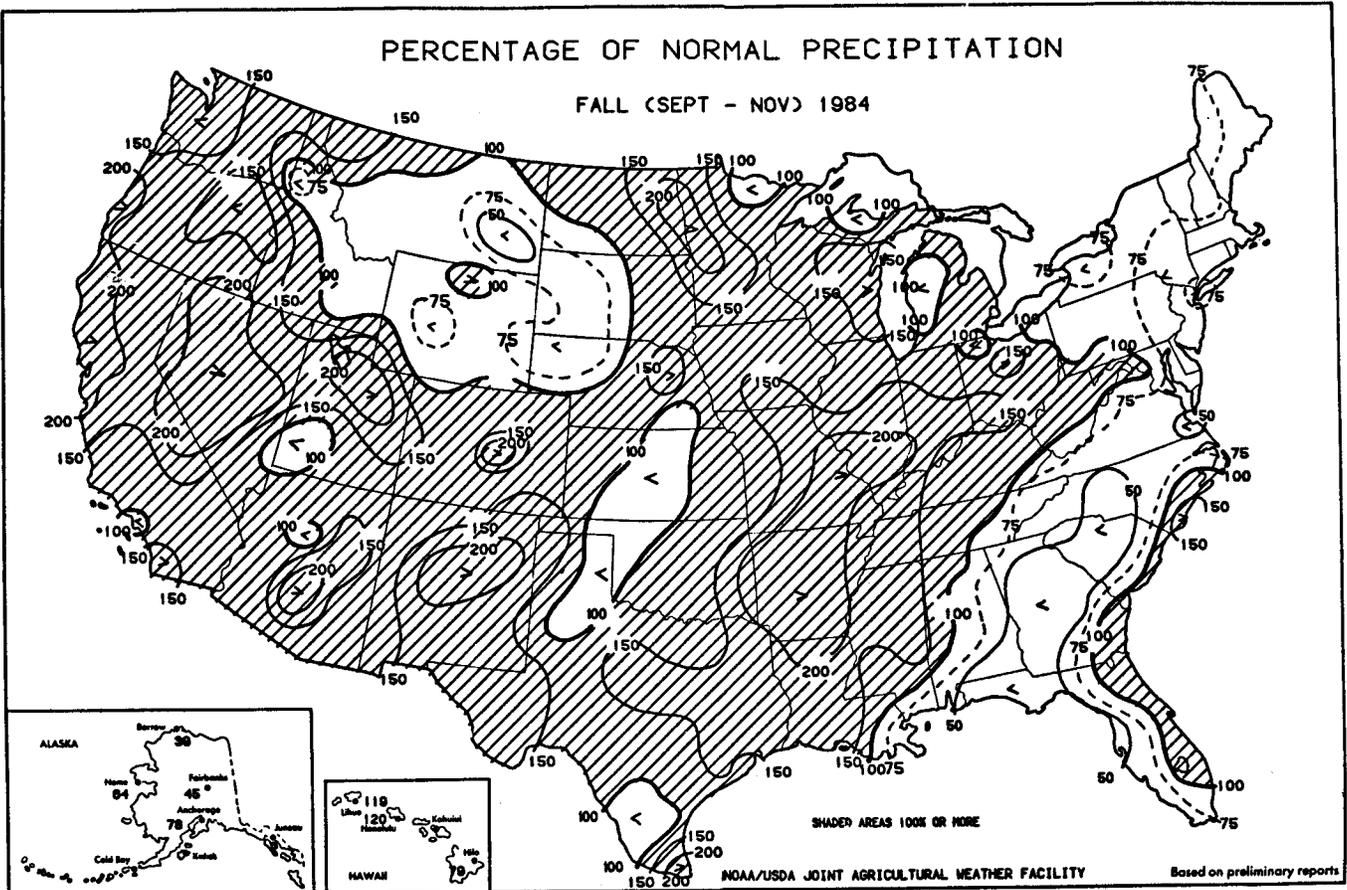
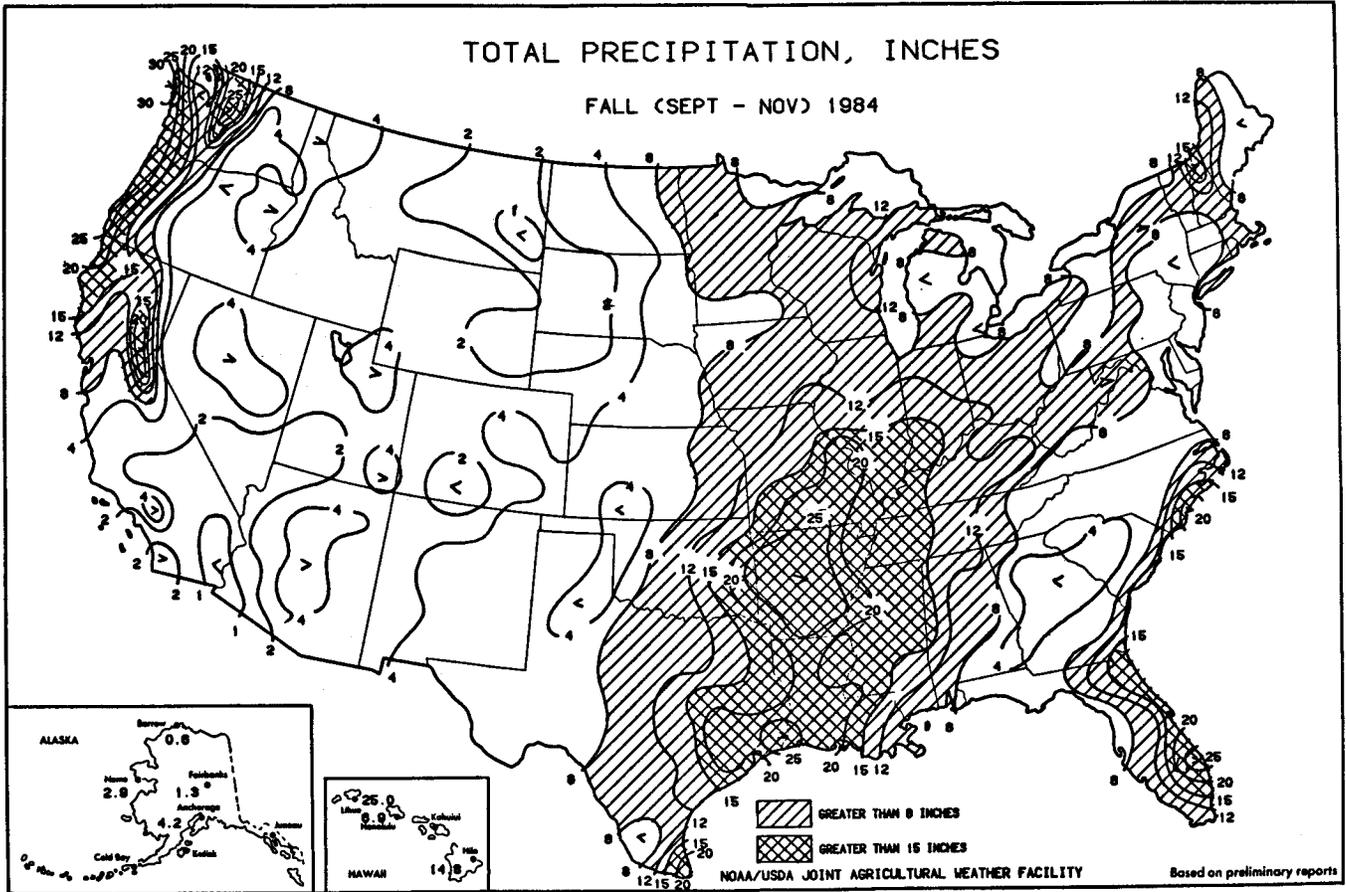
FALL WEATHER REVIEW
September, October, and November, 1984

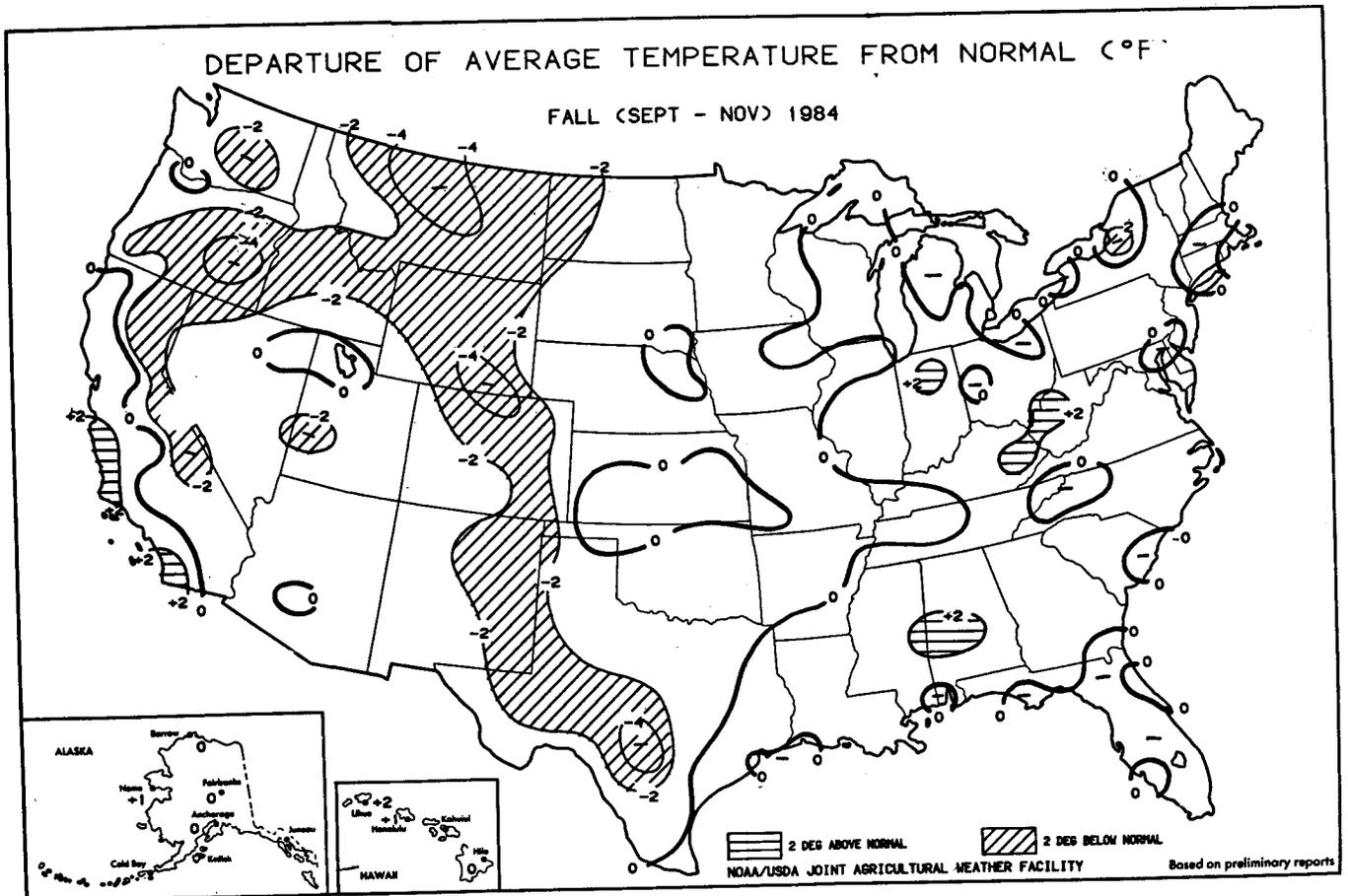
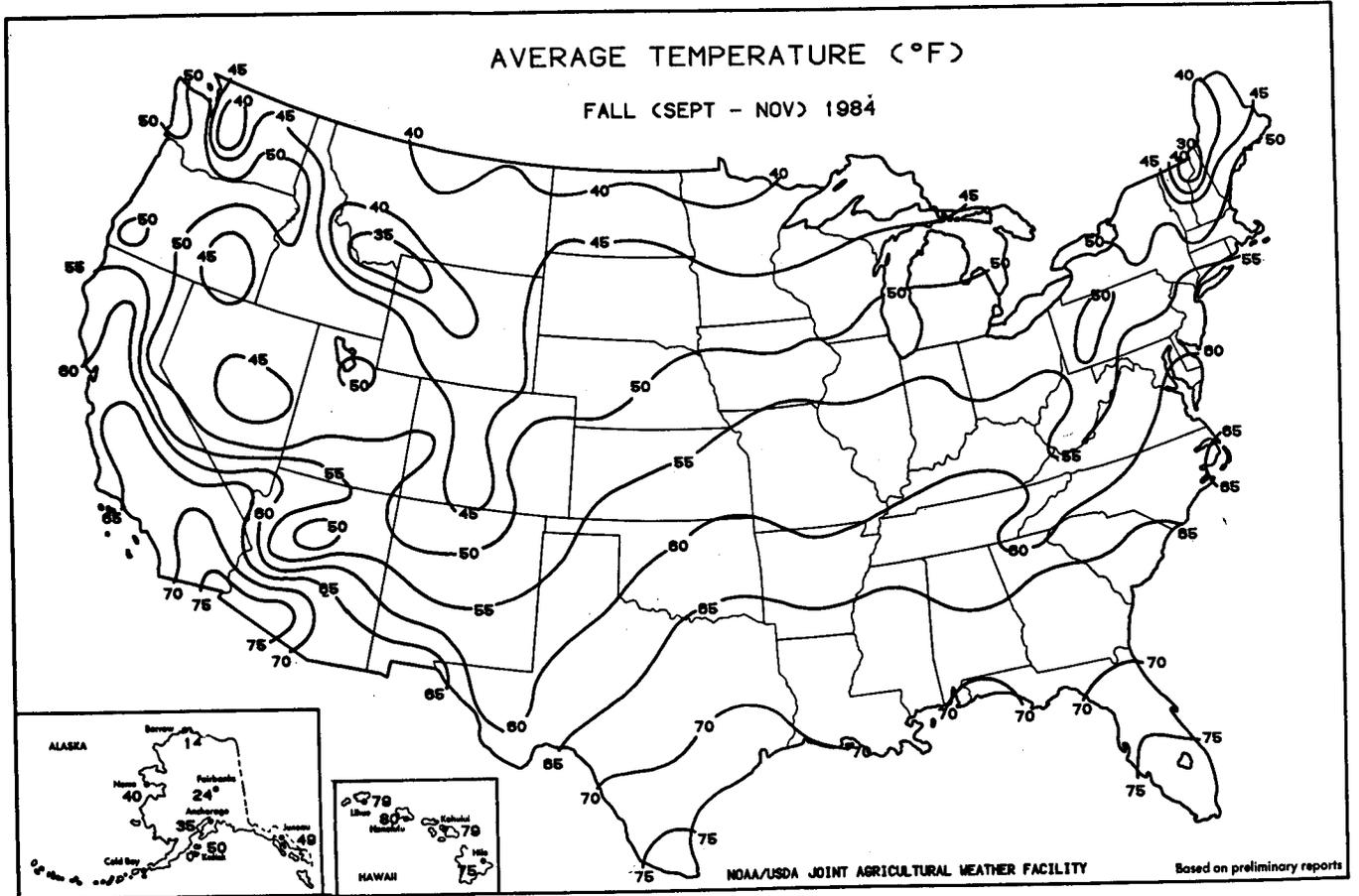
HIGHLIGHTS: Dry weather plagued the Southeast as less than half the normal amount of rain fell. More than double the usual amount deluged parts of the Delta and from Arkansas to southern Illinois. The entire east coast was drier than normal and drought continued in eastern Montana. Dry weather bothered parts of the central Plains but the Mississippi, Ohio, and Tennessee Valleys had well-above normal rain. Above-normal precipitation covered the west coast and the Great Basin. Average temperatures for the season were a little warmer than normal east of the Mississippi River, and 3-5 degrees colder than normal through the Rockies and the northern Plateau.

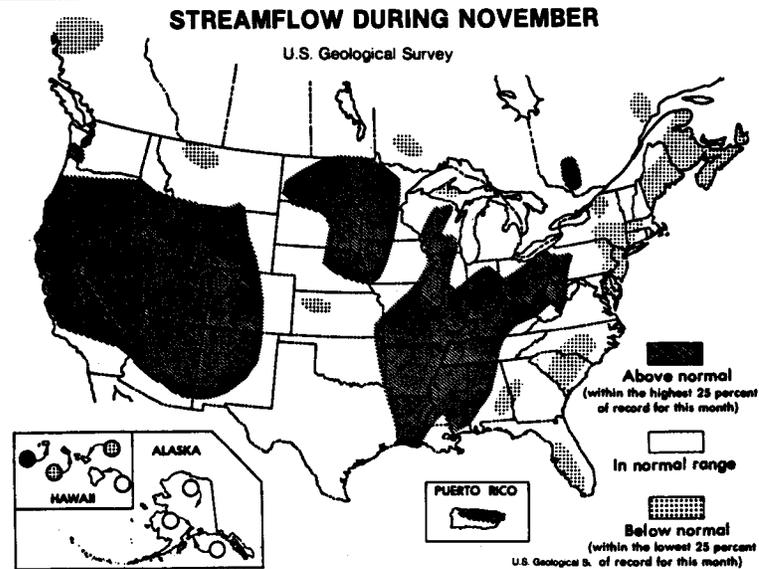
SEPTEMBER...It was a dry month for most of the east coast, the High Plains from Texas to Montana, and part of the western Corn Belt. It was especially dry in the Southeast, including most of the Delta where soybeans were yet to mature. Hurricane Diana and Tropical Storm Isidore moved northward along the southeastern coast, pounding the coastline with heavy surf and rain; but the rain did not reach far enough inland to help the dry conditions. Showers produced above-normal precipitation from central Texas to the Great Lakes, and brought much needed moisture to southern Illinois and Indiana. Hot weather plagued parts of the Plains but an outbreak of very cold air near the month's end brought an end to the growing season in the northern Plains and much of the central Plains. The cold air spread over most of the Nation. Hotter than normal weather persisted over most of California as it had since April.

OCTOBER...Precipitation was above normal in most of the Nation. The East Coast States, a small area in the central and southern Plains, the Southwest, and the western portion of the northern Plains and Rockies were the driest areas. Much of the Southeast from Florida to Virginia had less than half the normal rainfall. Very heavy rain fell from southeastern Texas to the lower Ohio Valley. Downpours in the upper Mississippi Delta damaged some crops. Rain in the central and southern Plains benefited winter grain planting and early growth, but delayed harvest in other areas. Freezing temperatures spread through the northern Plains to Nebraska and covered the western Corn Belt. Temperatures averaged above normal east of the Plains, and below normal to the West. Much of the East was 5-9 degrees warmer than normal, and the West was 5-8 degrees colder than normal.

NOVEMBER...Stormy weather prevailed during most of the month in the lower and middle Mississippi and Ohio Valleys, and along the Pacific coast. Over 150 percent of normal precipitation hampered fieldwork in the Delta States and the southern Corn Belt. Over 20 inches of rain deluged parts of the Northwest coast. In contrast, it was abnormally dry in the central sections of the Great Plains, much of the northern Plains, the eastern Seaboard, and extreme southern Texas. Most of the Nation averaged warmer than normal. However, it was slightly cooler than normal through the eastern coastal Plains, the central Appalachians, and the Sierras in the West. The central and northern Plains were a little warmer than normal.







The U.S. Geological Survey (USGS), Department of the Interior's monthly check of the Nation's surface and ground waters revealed that November streamflows were above normal in much of the Mississippi River basin and the western United States because of runoff from heavy precipitation, but were below normal along the Eastern Seaboard. Twenty-two sites in the Mississippi River Basin and the Western States reported record-high or near record-high flows with the flow of the Mississippi River at Vicksburg, averaging the second highest for November's record during 56 years recording.

In contrast, record-low or near record-low flows occurred at five sites in Florida, Kansas, Montana, and Hawaii.

The combined flow of 172 billion gallons per day (bgd) of the three major U.S. rivers,—the Mississippi, St. Lawrence, and Columbia,—averaged 68 percent more than the long-term November average and 56 percent more than the combined flows during October. These three rivers drain more than half of the 48 contiguous States and provide hydrologists with a convenient check on the overall status of the Nation's water resources.

Out of 174 streamflow index stations across the Nation checked by USGS hydrologists, 42 percent recorded well-above average, 45 percent had average flows, and 13 percent had flows that were well-below average.

Record-high or near record-high flows occurred at three sites in Minnesota; two sites each in Colorado, Illinois and Utah; and one site each in Alaska, Arkansas, California, Idaho, Iowa, Mississippi, Nebraska, Nevada, Oregon, Pennsylvania, Tennessee, Wisconsin, and Wyoming, plus one in Puerto Rico.

Hai C. Tang, a hydrologist at the USGS National Center in Reston, VA, said contents of reservoirs were generally average or above average in the Central and Western States, but below average in parts of Texas, Oklahoma, and in much of the Eastern Seaboard region. Contents of the New York City reservoirs on the Delaware River were at 52 percent of capacity, which was 20-percent below normal for late November. The Hartford, CN, reservoir was 15 percent below the long-term November average.

In the West, combined contents of Lakes Meade and Mohave in Arizona measured at 92 percent of capacity and 31-percent above average for November. In California, combined contents

of 10 index reservoirs were 21 percent above the long-term December average.

Tang said groundwaters across the Nation showed a mixture of levels below average, average, and above average, with no general trends apparent.

The U.S. Geological Survey, working in cooperation with State and local organizations, routinely gathers data on quantity and quality of surface and groundwater resources from more than 60,000 hydrologic stations across the Nation.

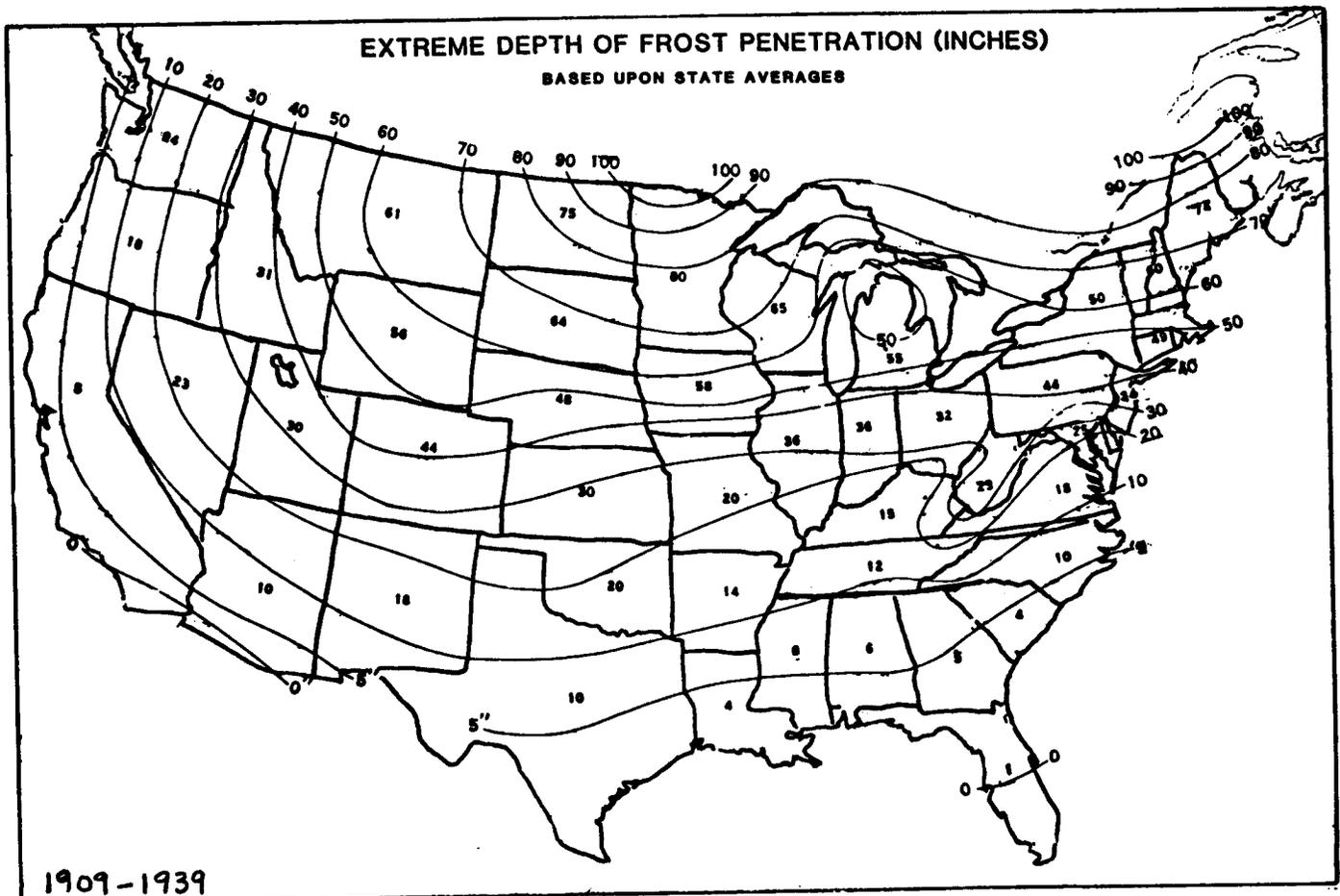
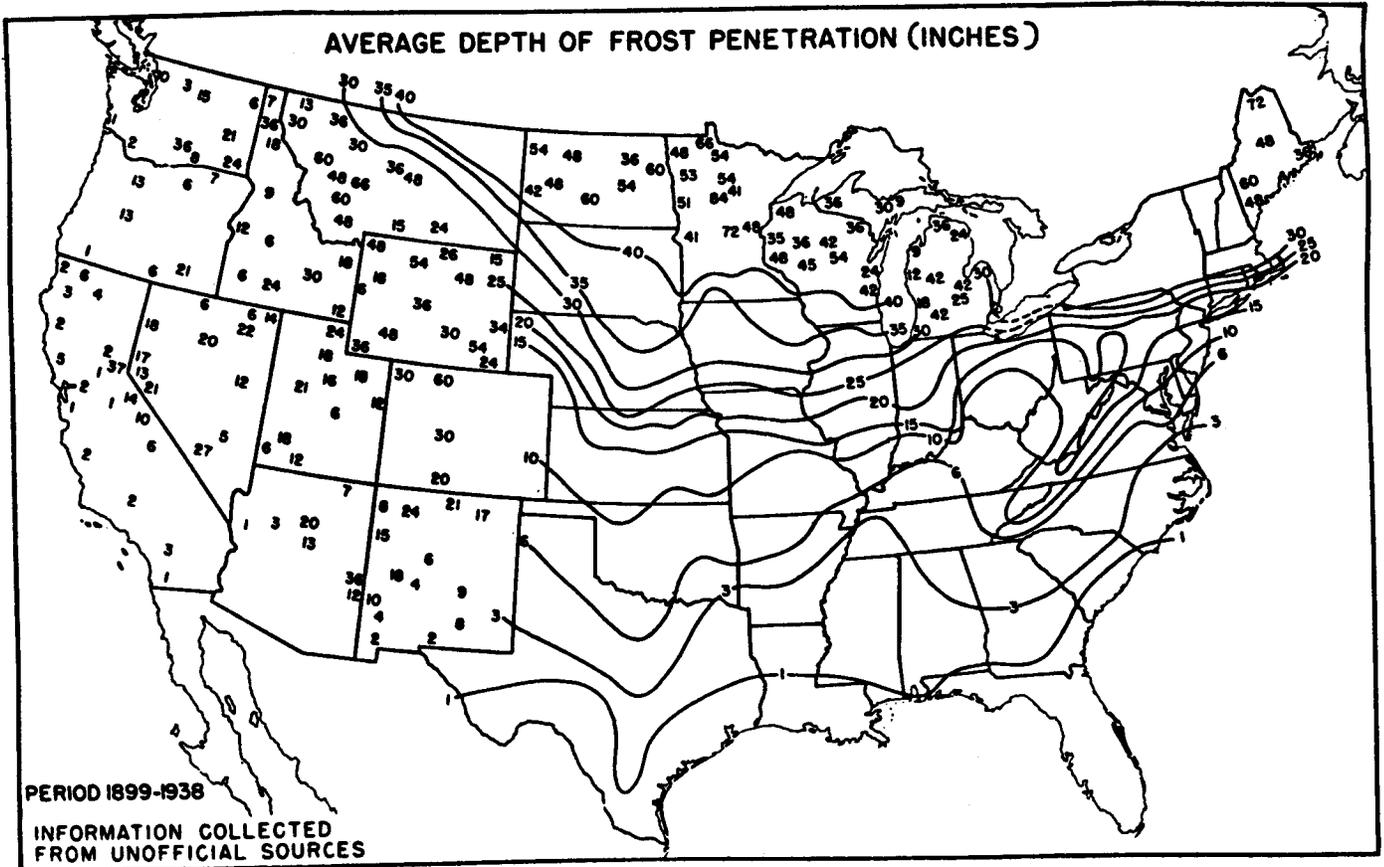
Additional information on national stream conditions:

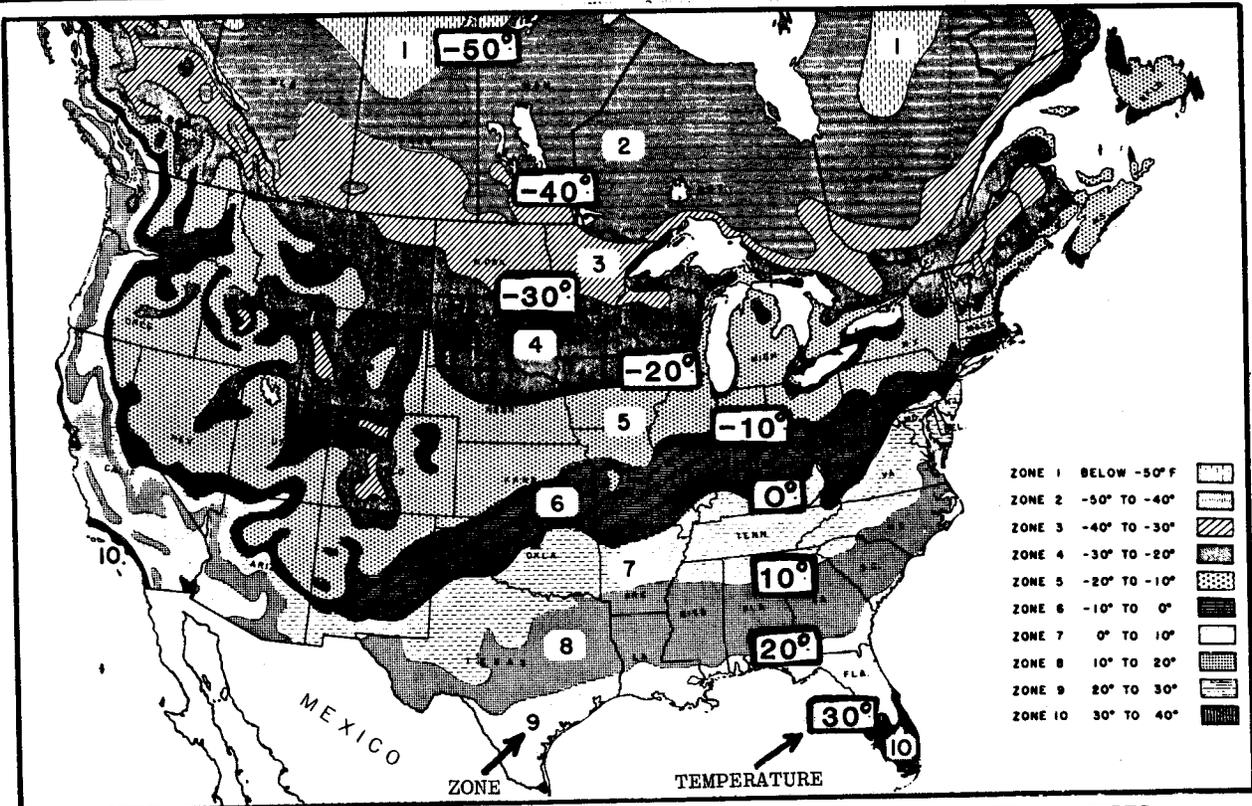
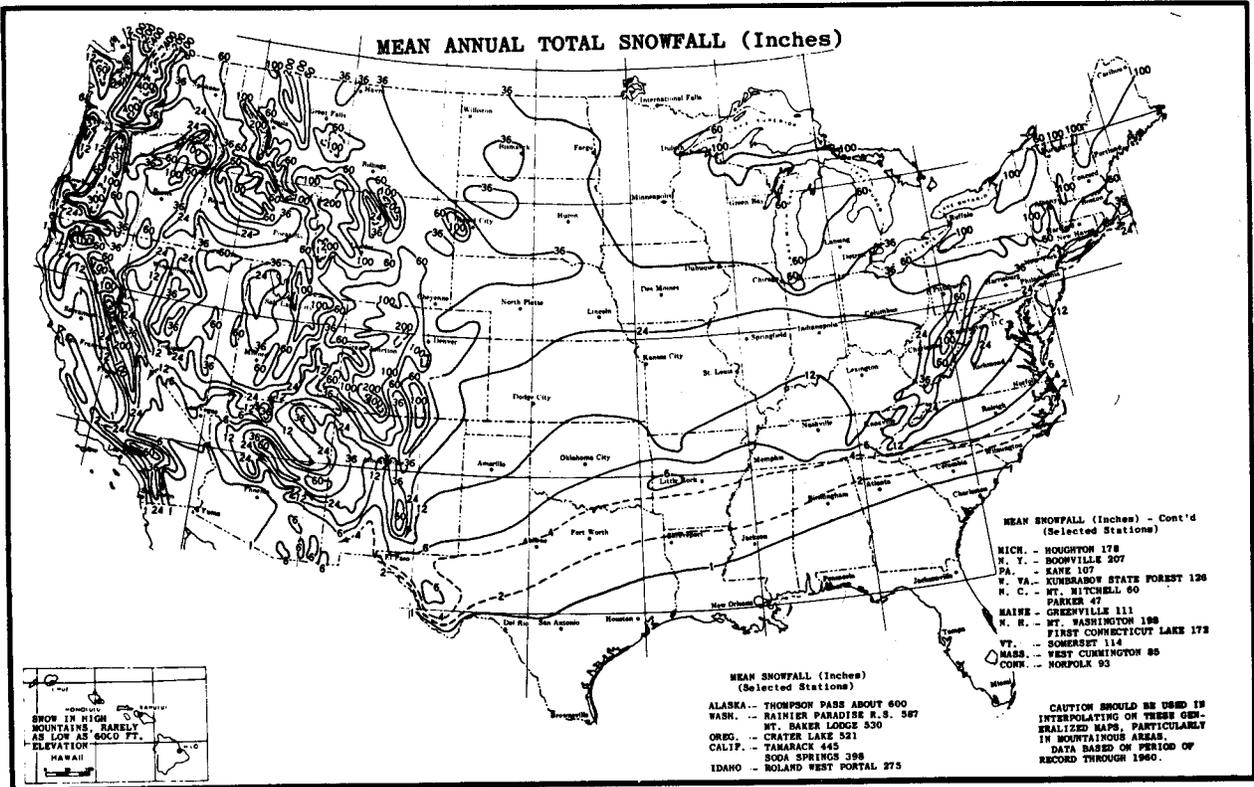
FIVE LARGE RIVERS: The Mississippi River at Vicksburg, MS, during November averaged 474 bgd, which was more than twice the long-term average and nearly twice the previous month's flow. For November, this was second only to the 533 bgd flow in 1972. Flow of the St. Lawrence River near Massena NY, averaged 171 bgd, or 7 percent more than average, but down 2 percent from October. The Ohio River at Louisville, KY, had a 71 bgd average flow or 76 percent above average, and 109 percent more than in October. Flow of the Missouri River near Hermann, MO, averaged 73 bgd, or 106 percent above average, and 44 percent more than October. Flow of the Columbia River at The Dalles, OR, averaged 67 bgd, or 19-percent above average, and 16 percent more than in October.

MINNESOTA: Streamflows remained high in some areas because of heavy precipitation. Average flow of 1 bgd of the Crow River at Rockford was the second highest for November in the 60 years of recordkeeping. The average flow of 8.1 bgd for the Mississippi River at St. Paul was the third highest in 93 years of recordkeeping.

UTAH: Record-high precipitation in October and November resulted in above-normal streamflows at all seven index stations in the State. The Colorado River at Cisco had a record-high flow of 4,450,000 gpd. The water level of the Great Salt Lake measured 4,108.3 feet above sea level, about 2.5 inches below the previous month, but 3 feet 3 inches higher than last year.

HAWAII: Flows at key streamflow stations on Kauai climbed above the normal range during November and into the normal range for Hawaii. But flows remained well-below average at the two USGS index stations on Oahu and Maui.





PLANT HARDINESS ZONES - AVERAGE OF THE WINTERS EXTREME MINIMUM TEMPERATURES

This map shows the average of the winters extreme minimum temperatures in most of the horticulturally important areas of the United States (excluding Alaska and Hawaii) and Canada. It shows 10 different zones, based on the isotherms, that represent areas of winter hardiness for certain ornamental plants.

National Agricultural Summary

December 10 to 16

HIGHLIGHTS: Rain and snow provided beneficial moisture to winter wheat across much of the central and southern Plains. Warmer than normal temperatures allowed germination and growth of late planted wheat as far north as the southeastern Corn Belt, and stimulated pasture grass growth across the South. Fair weather allowed good cotton and soybean harvest progress across the Delta States, but wet conditions slowed combining the remaining corn and soybean fields in the eastern Corn Belt. Continued wet weather limited farm activities in the Pacific Northwest. Soil moisture was generally adequate to surplus throughout most of the Nation. Fieldwork was limited to 1-3 days from the southern and central Plains through the eastern Corn Belt, while 3-5 days were suitable in the Southeast and Delta region.

Winter wheat generally rated fair to mostly good. Warmer than normal temperatures aided germination of late seedings from the southeastern Corn Belt and southward. The cotton harvest rapidly advanced to 81% completion in the 14 major producing States, 10 points slower than normal. Soybean harvesting advanced to 96% completion in the 18 major producing States, 3 points behind the average. Warm weather stimulated pasture growth across the South, and conditions rated mostly fair to good. Livestock were in mostly good condition. Supplemental feeding was heavy in regions with snow cover.

SMALL GRAINS: Winter wheat planting neared completion in the Southeast. Warmer than normal temperatures allowed germination of late seeded wheat northward into the southeastern Corn Belt. Snow cover protected winter wheat from freezing temperatures across the northern Plains. However, additional snow would benefit most areas of the central and northern Plains. Wheat stands rated fair to mostly good across the major producing areas. Late-week rain and snow replenished soil moisture for Kansas wheat. Beneficial rain fell across Oklahoma, but warm weather was needed for growth. Wheat stands rated fair to mostly good. Texas wheat was 98% emerged and rated mostly good. Stands grew well with favorable moisture levels. Montana's wheat was in mostly fair condition, but rated good in southern and western areas. Wind damage was light despite only fair snow cover. The Pacific Northwest wheat condition was fair to good, but cold weather left development behind normal.

COTTON: In the 14 major cotton producing States, 81% of the acreage was harvested, well behind last year's 95% and the 91% average. Picking neared completion in Alabama, Arizona, Arkansas, California, Georgia, and South Carolina. Fair weather allowed good harvest progress in most regions. However, picking was 18 points behind normal in Texas, 25 points behind in Oklahoma, and 13 points slower than normal in Tennessee. Progress lagged normal in all States except Arizona, California, and North Carolina. Wet weather interrupted Texas harvesting at midweek and caused some deterioration of grade and quality. Picking continued behind normal and may extend into next year.

SOYBEANS: Combining reached 96% completion in the 18 major producing States, 2 points behind last year and 3 points slower than normal. Harvesting continued to lag in 9 of the major States, as much as 14 points below average in Tennessee and 8 points less in Kentucky. Wetness continued to hamper combining of the remaining eastern Corn Belt fields. Harvesting trailed normal by 5 points in

the South-central States. In contrast, southeastern producers were 4 points ahead of schedule.

OTHER CROPS: Corn harvesting was virtually complete. Only a few fields, too soft to carry harvesting equipment, remain for harvest.

Tobacco growers continued marketing, stripping, and preparing and fumigating plant beds for next year's crop. Virginia's burley, sun-cured, and dark-fire markets were very active.

Texas peanut harvesting advanced early in the week, but rain delayed activities later in the week. Ninety-four percent of the acreage was dug compared to 98% for both last year and average.

Florida's sugarcane harvest was in full swing and rated good. Louisiana cutting was 94% finished, 2 points ahead of schedule. Texas sugarbeets were stockpiled as the harvest neared completion.

FRUITS AND NUTS: Florida's citrus groves were in good condition despite cold temperatures on the 8th and 9th, which left scattered leaf burn in colder locations; no serious damage was reported. Irrigation was limited so unwanted new growth would not develop during the winter. Harvesting for all citrus fruit increased. Arizona grapefruit and lemons were packed at seasonal volumes. Navel and sweet oranges as well as some tangerines were picked in the Salt River Valley. California's Emperor grape harvest was completed. Quality was good but some decay was reported. Kiwifruit moved to market in light volumes. Navel orange quality, demand, and prices remained good as the harvest continued. Desert and San Joaquin Valley lemon picking continued with good quality. Producers picked good-quality desert grapefruit and tangerines.

VEGETABLES: Florida's vegetable shipments increased 4% from last week. Supplies were steady for snap beans, okra, southern peas, and tomatoes. Volumes declined for cauliflower, Chinese cabbage, sweet corn, cucumbers, and squash. Fall watermelons were in very limited supply. Strawberry picking was light but rising. The Texas Rio Grande Valley escaped any frost, and crops made good progress. Cabbage, broccoli, and tomato supplies were light, while moderate volumes of carrots, peppers, and cabbage were shipped. Light volumes of San Antonio-Winter Garden broccoli, cabbage, and carrots were available. Moderate volumes of Arizona lettuce and heavy supplies of cauliflower were packed in the Yuma area. Harvesting of a wide variety of vegetables continued active in the Salt River Valley. California producers harvested light to moderate volumes of artichokes, broccoli, carrots, cauliflower, celery, and lettuce from the San Joaquin Valley and Salinas-Watsonville, Santa Maria, and desert areas. Potato movement was in full swing in the Tulelake-Butte Valley. San Joaquin Valley growers tended to the spring lettuce crop and prepared tomato plant beds.

PASTURES AND LIVESTOCK: Warm weather stimulated grass growth across the South where pastures rated mostly fair to good. Small grains provided good grazing across much of the southern Plains, reducing dependence on short hay supplies. Supplemental feeding increased as snow swept across the Plains. Overall, livestock continued in good condition across the Nation.

State Summaries of Weather and Agriculture

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

ALABAMA: Temperatures were about 14° above normal. Rainfall 0.01 to 0.05 in.

Fieldwork: 4.8 days. Soybeans harvested 99%, 100% 1983, 100% average. Cotton harvested 99%, 100% 1983, 100% average. Wheat seeded 99%, 100% 1983, 100% average. Activities: Harvesting cotton, soybeans, pecans, and fall vegetables; planting small grains and winter grazing; applying lime; and routine care of livestock and poultry. Conditions: Soybeans and pastures fair; cotton, wheat, and livestock fair to good.

ARIZONA: Cold, stormy weather prevailed over the State 10th through 14th. Storm crossed the State on 10th and 11th, followed by a very intense cold storm that brought heavy rain or snow to all sections. Snow level reached down to between 2,000 and 3,000 ft. Snowfall amounts over the Grand Canyon, Mogollon Rim, White Mountains ranged from 18 to 20 in., 3 to 12 in. over central basins. Some southeastern valleys received 1 to 3 in. Moisture amounts were mostly 0.75 and 2.00 in. except locally over 3.00 in. in central basins, White Mountains. Phoenix, Tucson set new all-time low pressure. Average temperatures varied from 6° below normal to 2° above.

Lettuce packing slower pace due to morning frost, some delays by rain. Weaker market also contributed to smaller volume packed. Moderate volumes Romaine, leaf, Boston lettuce; heavy volume cauliflower packed Yuma area. Mixed vegetable harvest continued active in Salt River Valley, some delays by rain. Box-choy, beets, broccoli, endive, rapini, green onions, parsely, radishes, turnips, rutabas, few carrots harvested. Moderate to heavy volumes of cauliflower, greens harvested. Grapefruit, lemons packed at seasonal volumes. Navels, sweet oranges, tangerines were harvested in Salt River Valley. Cotton 98% picked, 99% last year, 91% average. Rains held harvest operations to a minimum. Small grains seeded preparation, seeding continued as weather permitted.

ARKANSAS: Last week extremely warm after a cool front early in the week. Temperatures 13 to 19° above normal. High 79°, low 28°. Rainfall light to moderate. Most 2.02 in., least none.

Four days suitable for fieldwork. Soil moisture surplus. Crop growth moderate to slow. Remaining cotton poor condition; harvested 98%, 99% 1983, and average. Soybean condition fair; harvested 96%, 99% 1983, and average. Wheat fair condition; planting virtually finished, 100% 1983 and average. Pastures average. Livestock good condition.

CALIFORNIA: After successive weeks of below normal temperature averages throughout the State, the week produced normal to above normal temperatures for all zones. The greatest temperature departure being the San Joaquin Valley with a 3° above normal average. Precipitation occurred at all locations as periodic storm activity continues to move through the State. The most significant weekly precipitation total was at the normally dry desert locality of Blythe where 1.46 in. fell during the week.

Cotton harvest virtually complete: 99% harvested, 97% last year, 97% average. Rain slowed fieldwork; considerable wheat, barley unplanted. Dryland wheat growing well; rains continued. Cool weather slowed fall planted sugarbeets. Old alfalfa sheeped off; fall planted growing well. Rain damage, cut hay few areas. Fieldwork next year's crops continues as weather allows. Emperor grape harvest complete. Quality good but some slip skins and decay reported. Kiwifruit moving in light volume to market. Pruning, irrigating, and spraying in stone fruit orchards. Navel orange harvest continues. Quality, demand, and prices very good. Lemon harvest in the desert and San Joaquin Valley continues, quality good. Desert grapefruit and tangerine harvests ongoing with good quality. Artichoke harvest continues light supply, cool weather slows growth. Quality variable. Broccoli moderate supply variable quality Salinas-Watsonville, fairly heavy supply Santa Maria. Harvest continues San Joaquin Valley producing areas. Carrot supply light harvest curtailed, wet fields, quality variable Salinas-Watsonville. Harvest desert continuing. Cauliflower remained light supply Salinas area, supplies fairly heavy Santa Maria. Quality variable. Harvest continues San Joaquin Valley. Celery light supply both Salinas, Santa Maria variable quality. Lettuce harvest finished Salinas, Santa Maria while harvest winding down Firebaugh. Harvest continuing Palo Verde Valley. Spring crop lettuce growing San Joaquin. Dehydrator onions continue planted, weather. Potato movement full swing Tullake-Butte Valley. Sweetpotato hotbed, tomato bed preparation continues San Joaquin Valley. Rangeland grasses continue grow, gain strength. Cattle, sheep good to excellent condition. Calving continues.

COLORADO: Pacific cold fronts moved across State on 11th, 12th, and 15th providing abundant moisture levels. There were 2 to 6 in. snowfalls in the lower elevations; the mountain valleys 6 to 12 in.; and 18 to 36 in. in the higher mountain areas. Temperatures averaged 3 to 9° above normal.

Fieldwork mainly feeding livestock.

FLORIDA: A warming trend 10th, 11th followed by mild, mostly dry conditions 12th through 16th. Only sprinkles of rain fell, few Peninsula locations. Temperatures averaged 6 to 9° above normal.

Soil moisture generally adequate south, Panhandle but short elsewhere. Light soybean harvest continued but nearing completion. Cotton harvest practically over. Sugarcane harvest in full swing, crop in good condition. Wheat planting continued but winding down. Small grain condition improved with better weather. Pasture conditions remain generally good, lower southern Peninsula but poor to fair elsewhere. Cattle in the south generally good condition but mostly poor to fair elsewhere. Groves good condition. December 8th and 9th cold left scattered leaf burn colder locations, no serious damage. Warm temperatures returned remainder of week. Very little irrigation as

new growth not wanted during winter. Harvest increasing for all types. Below normal temperatures prevailed early week in vegetable areas. Nighttime readings were in upper 30's to low 40's; daytime highs in 70's. Light, scattered frost reported in southwest area. Remainder of week was warm, sunny. Little to no rainfall occurred in most areas. Overall shipments increased 4% from previous week. Harvest gained cabbage, carrots, celery, eggplant, escarole, lettuce, parsley, peppers, radishes, strawberries. Supplies about steady snap beans, okra, southern peas, tomatoes. Volume declined cauliflower, Chinese cabbage, sweet corn, cucumbers, squash. Very limited supply fall watermelons remains available. Strawberry harvest light but increasing; quality good.

GEORGIA: Warm and mostly dry weather prevailed through week. Average temperatures about 100 above normal. Warmest reading for week was 400 at Bainbridge. Low for States was 280 at Clayton. Rainfall totals were less than 0.10 in. with most stations reporting no rain for week.

Soil moisture short to adequate. Main activities livestock care, harvesting soybeans, cotton, pecans and seeding small grains. Small grains in fair to mostly good condition. Pastures in fair condition. Cattle in fair to good condition. Hogs in fair condition. Tobacco bed preparation underway.

HAWAII: Weather during the week typified by moderate temperatures and rainfall. Heavy winds prevalent during previous weekend diminished by midweek.

Some light wind damage to vine crops and bananas. Papaya supplies continue seasonal decline. Rains continue to aid sugarcane development in non-irrigated areas. Pineapple harvesting for fresh market only, normal for this time of year. Vegetable supplies adequate, tomato harvesting increasing.

IDAHO: A moist air front from the Gulf of Alaska and Canada, brought heavy snow and cold temperatures to the State. Temperatures averaged well below normal with below zero readings common. Snowfall was recorded in most areas with the heaviest amounts received in the north and central mountains. Snow and cold temperatures across most of the State limited farm activity. Farmers kept busy with general chores and livestock feeding. Livestock feed remained in good supply in most areas.

ILLINOIS: Temperatures 9 to 180 above normal. Precipitation 0.49 to 1.62 in.

Soybeans harvested 95%, last year 100%, average 100%.

INDIANA: Average daily highs ranged from 500 north to low 60's southwest. Average lows ranged from upper 30's to upper 40's. Soil temperatures at the four in. depth soared to maximums in the upper 40's and low 50's and any residual frozen layers were quickly eliminated. Average four in. readings for the week were in the 40's. Precipitation totals above normal in most areas. Amounts near or in excess of 1.00 in. were common.

Fieldwork limited by wet fields. Soybeans 97% combined, 1983 100%, average 100%. Activities: Preparing tobacco for market, putting away equipment, getting ready for winter, mending fences, cutting firewood, attending meetings and usual chores.

IOWA: A very wet week with 0.50 to 1.00 in. precipitation in the east, near 1.00 in. in the central, and 1.00 to 3.00 in. in the west. Temperatures averaged from 50 above normal in the west to 140 above normal in the east. Snowfall of 3 to 9 in. over the northwest two-thirds of the State on the 13th had all melted by the 17th owing to the warm temperatures and rain at the weekend.

Main activities: Livestock care and snow plowing.

KANSAS: Precipitation averaged 0.75 in. northwest, 1.08 in. south central and 1.00 to 1.50 in. elsewhere. Moisture fell mostly as rain east and south central and freezing rain and snow west and north central. Temperatures averaged 320 northwest, 42 to 460 east and 35 to 400 elsewhere. These were 1 to 20 above normal west, 3 to 50 above normal central and 9 to 100 above normal east.

Soybean acreage harvested 100%, last year 95%, average 100%. Field activity included soybean harvest and late fall tillage. Rain and snow latter part of week favorable to fall sown grains and helped replenish soil moisture supplies.

KENTUCKY: Unseasonably warm weather. New record high temperatures were achieved at numerous locations. Average daily temperatures were in mid and upper 50's, about 15 to 200 above normal. Precipitation occurred mainly during first half, amounts averaged 0.25 to 0.50 in. Normal precipitation is about 0.75 in.

Most soils still very wet and field activity minimal. Very limited corn and soybean harvesting. Soybeans 91% harvested, 99% last year and average. Some pasture feed still being utilized.

LOUISIANA: Soil moisture adequate east central; surplus northeast, west central, and southwest; and adequate to surplus elsewhere.

Days suitable for fieldwork: 3.9. Activities included harvesting cotton, sugarcane, and pecans; planting and topdressing winter wheat; and repairing farm equipment. Cotton harvested 96% 1984, 100% 1983, 99% average. Soybean harvested 99% 1984, 100% 1983, 99% average. Winter wheat planting 94% 1984, 98% 1983, 97% average; emerged 89% 1984, 97% 1983, 94% average; condition fair to good. Sugarcane harvested 94% 1984, 93% 1983, 92% average. Pecans harvested 83% 1984, 83% 1983, 88% average. Vegetable condition fair. Pasture condition fair. Livestock condition fair to good.

MARYLAND AND DELAWARE: Maryland: The week was warm and dry. Temperatures averaged mostly 4 to 70 above normal. High temperatures were mostly in the mid 60's while lows were in the mid 20's, except Oakland with 100. Precipitation averaged 0.07 in. ranging from a trace to 0.34 in. at Oakland.

Tobacco farmers in south continued to strip tobacco. Sixty percent of the crop had been stripped compared with 55% a week earlier.

Delaware: The week was cool and dry. Temperatures averaged 4 to 60 above normal. Highs were in the mid 60's and lows were in the low to mid 20's. Precipitation was light, averaging 0.03 in.

Farmers were busy during the week repairing machinery.

MICHIGAN: This was an unusually warm late fall week across the State. Temperatures averaged

10° above normal. Moderate amounts of precipitation fell on the State. The warm and moist air caused heavy fog to form over much of the State for several days.

Farmers trying to harvest remaining fields of corn. Other activities include tending livestock and preparing for winter.

MINNESOTA: A week of above normal temperatures ended with rainfall that eliminated most of the State's snow cover. Temperatures averaged 5 to 9° above normal. High 56°, low 16°. Precipitation averaged 0.31 to 1.18 in. above normal. Greatest weekly total 1.78 in. Snowfall for the week averaged 3 to 6 in. for the south central, southeast and east central, and a trace to 1 in. elsewhere. Snow depth at weeks end averaged 2 to 6 in. for the northeast and north central, and zero to a trace elsewhere.

Soybeans harvested 100%, 1983 100%, normal 100%.

MISSISSIPPI: Drier and warmer weather came to the State with temperatures 8 to 18° above normal. Extremes were 81 and 28°. Greatest single day rainfall was 0.61 in. on the 13th.

Soil moisture surplus northern half of State, surplus to adequate southern half. Fieldwork 3.5 days suitable, 1.3 1983, 2.5 average. More favorable weather conditions have aided harvesting of the soybean and cotton crop. Cotton 93% harvested, 100% 1983, 99% average. Soybeans 91% harvested, 96% 1983, 97% average. Pecans harvested, 82% 1983, 88% average. Wheat rated in fair condition; 80% planted, 97% 1983, 98% average. Pasture in fair condition. Livestock in fair to good condition.

MISSOURI: Warm air covered the State as temperatures averaged 11° above normal. Rainfall averaged 1.00 in. over the State. Heaviest rain fell in south central.

Soybeans harvested 95%, 100% last year, 100% normal. Cotton harvested 95%, 100% last year, 100% normal.

MONTANA: Mild temperatures west of Divide all week with temperatures averaging 2 to 4° above normal. Temperatures east of Divide mild first and last of week with a cool midweek. Temperatures averaged 3 to 6° below normal over southwest, about 5° above normal in north central, near normal over rest of the State. Precipitation heaviest in west, southwest and south central areas with amounts from 0.15 to 1.00 in. Most of north central and southeast mostly dry.

Winter wheat in mostly fair condition, good in south and west. Wind damage light despite only fair snow cover. Livestock in generally good condition, about 70% of cattle and 75% of sheep receiving supplemental feed. Grazing difficult north and west, open elsewhere.

NEBRASKA: Snow storm 13th; heavy rains over weekend. Precipitation ranged from 0.20 to 0.50 in. Panhandle to 3.00 in. to 4.00 in. southeast. Temperatures averaged 4° below normal west to 5° above normal east. Precipitation from snow and rain benefitted winter wheat areas that had previously been slightly dry.

NEVADA: Week scattered with temperatures slightly above normal but ended with cooler air northern and central sections, that plunged to sub zero levels some localities. Series of minor disturbances crossed State midweek bringing light precipitation amounts. A more severe cold, winter storm late in period brought

significant amounts snow northern and central areas with considerable snow accumulations in Sierra and mountains north.

Rain and snow made livestock feeding operations difficult. Movement potatoes and grain to market slowed by icy roads.

NEW ENGLAND: Precipitation averaged 0.25 in. across the region. Lowest precipitation, 0.01 in., at Clayton Lake, ME. Highest precipitation, 0.43 in., at Falmouth, MA. Average temperatures ranged from the low 20° near the Canadian border to the mid 40° along the south coast.

Farmers tending livestock, cutting firewood, cutting and marketing Christmas trees, and general farm maintenance.

NEW JERSEY: Temperatures were much above normal, averaging 39° north, 45° south and 46° coastal. Extremes were 19 and 68°. Precipitation this period was much below normal, averaging 0.17 in. north, 0.09 in. south and 0.06 in. coastal. The heaviest 24-hour total was 0.18 in. on the 14th and 15th.

Fieldwork: Small grain crops in good condition. Topsoil moisture adequate throughout the State. Farm activities include packing fruit, sweetpotatoes, butternut squash, repairing machinery, and preparing for year end inventory and taxes.

NEW MEXICO: Average temperatures little below normal statewide. Maximum temperature: 68° southeastern plains. Minimum temperature: 1° central valley and highlands. Storm crossed State on 14th; left substantial precipitation, mostly snow. Precipitation totals between 0.08 and 1.59 in.

Soil moisture supplies short to adequate. Cotton poor to good; harvest slowed by snow. Barley good to excellent; grazing continued. Irrigated, dryland wheat good to excellent; 70% grazed. Irrigated, dryland grain sorghum fair to excellent; virtually all harvested. Pecans fair to excellent, mostly good. Red chile fair to good; harvest halted by snow. Cattle, sheep good to excellent. Range fair to excellent. Cotton harvested 85%, last year 86%, average 89%.

NEW YORK: Temperatures were well above average. The warmest day was on 13th. Most highs were in the 50's that day, with the lower Hudson Valley reaching low 60's. The coldest readings were on 14th when the teens were common in the north and the 20's to low 30's were the most frequent lows in the south. Precipitation was well below normal for the week with most of it occurring late in the week. High pressure was interrupted by a weak disturbance early in the week. A strong cold front moved through the area with a low pressure system moving along the front and through the area late in the week.

Farm activities included tending livestock, machinery maintenance, and general farm chores.

NORTH CAROLINA: Temperatures averaged 7 to 9° above normal across the State. Precipitation ranged from none to 0.36 in. with most areas not receiving any.

Soil moisture: 11% short, 83% adequate, 6% surplus. Days suitable for fieldwork: 4.7. Condition: Pasture 9% poor, 21% fair, 68% good, 2% excellent. Wheat 20% fair, 78% good, 2% excellent. Oats 19% fair, 79% good, 2% excellent. Barley 21% fair, 76% good, 3% excellent. Rye 20% fair, 78% good, 2% excellent. Harvest: Soybeans 91%, 1983 83%, average 88%. Cotton 97%, 1983 100%, average 97%. Farm feed supplies: Hay and roughage 4%

short, 86% adequate, 10% surplus. Feed grains 4% short, 87% adequate, 9% surplus. Major farm activities: Harvesting soybeans, fall plowing, cutting firewood, tending livestock, grading and marketing burley tobacco, gassing tobacco plant beds, picking cotton, general farm and machinery maintenance.

NORTH DAKOTA: Temperatures started out much above normal early in the week. Highs averaged 10 to 25° above normal. A short lived but cold blast of arctic air swept through the State in the middle of the week sending overnight lows below zero statewide. Temperatures rebounded toward the end of the week to above normal readings. The overall weekly temperatures had a 2 to 6° above normal departure. Temperature extremes ranged from 59° the 8th to 17° below zero on the 11th and 12th. Precipitation was below normal for the week. Light amounts of snow fell with the arctic air in midweek. Blizzard conditions existed for most of State on the 16th. Snowfall roughly 1 to 4 in., winds 30+ mph and windchill factors from -15 to -45° below.

Rapid changes in weather conducive to respiratory problems in livestock.

OHIO: Temperatures 13 to 20° above normal. Average highs 50's to near 60°. Average lows 30's to 40's. Precipitation near normal. Totals from 0.22 to 1.26 in. Bare soil temperatures low 40's, 4 to 8° above normal.

Soybeans harvested 99% 1984, 100% 1983, 100% average. Fieldwork again limited as wet conditions persisted throughout the week.

OKLAHOMA: Temperatures averaged 20° above normal Panhandle to 14° above normal southwest. Precipitation averaged 0.63 in. Panhandle to 3.37 in. central.

Rain beneficial to wheat pasture, but warm weather needed for growth. Cotton harvest delayed by wet fields. Livestock marketing average. Supplemental feeding active. Wheat and cattle good to fair; cotton and pastures fair condition. Cotton harvested: 60%; 85% 1983; 85% average.

OREGON: Rainfall averaged over 2.00 in. along coast and ranged from 1.00 to 2.00 in. in the Willamette Valley. Precipitation east of Cascades generally varied from 0.30 to 0.70 in. Temperatures were near normal west of Cascades, east were mostly 2 to 7° below normal.

Winter wheat condition fair to good; cold weather has left development behind normal. Some late vegetable crops still being harvested. Some fruit growers pruning and spraying their orchards. A few potato fields remain un-dug. Growth on pastures and rangeland has been poor. Livestock in mostly good condition. Soil moisture adequate in east, surplus in west.

PENNSYLVANIA: This was an unseasonably warm week throughout the State. The average temperature was 41°, 11° above normal. Statewide average precipitation was only 0.33 in., 0.37 in. less than normal. Rainfall was lightest in the eastern divisions. The Scranton area reported a mean of 0.05 in. for the week, the Reading-Philadelphia area had 0.12 in.

Fieldwork harvesting remainder of corn, hauling manure and spreading fertilizer.

PUERTO RICO: Island average rainfall 1.10 in. or 0.06 in. above normal. Highest weekly total 3.05 in. Highest 24-hour total 2.50 in. Temperature averaged 76 to 75° on coasts and

71° interior divisions. Mean station temperature ranged from 78.9 to 64.5°. Extremes: 91 and 54°.

SOUTH CAROLINA: Weather averaged warmer and more humid than usual. There was little or no rainfall over the State. Early week temperatures were below normal but increased late in the week.

Cotton picking virtually complete with harvest at 99% this year, 100% last year, 100% average. Soybean harvest continued active and now stands at about 92% this year, 80% last year, 92% average. Warm temperatures and adequate moisture stimulated growth of winter grazing and small grain crops.

SOUTH DAKOTA: Average temperatures ranged from 3 to 12° above normal. Extremes: 64 and -8°. Precipitation was widespread and light. Yearly precipitation totals remain above normal over most of the State.

Major agricultural activities include feeding livestock, moving hay, working cattle, fence repair, and moving grain to elevators. Livestock reported in good condition.

TENNESSEE: Frontal system remained north and west of the State throughout the week. The absence of transitory air masses produced mild temperatures and very little rain for the week. Weekly mean temperatures were well above normal statewide with the west and eastern sections of the State being warmer than the east. Precipitation was limited to only trace amounts.

Major farm activities continue to include harvest of all major crops, marketing of tobacco and wheat seeding. Pastures and livestock remain in good condition.

TEXAS: High pressure aloft and at surface kept temperatures well above normal statewide. By midweek developing upper level storm pushed abundant moisture into State from Pacific. Cold front moving into Panhandle end of the week triggered showers, thunderstorms eastern half State. Behind front, light snow and freezing rain High Plains and Trans-Pecos. Front moved Central Texas stalling, retreating northward as warm front. Temperatures above normal, rainfall near normal South and Central Texas, above normal rest of State.

Crops: Harvest activity remaining crops continues delayed because unfavorable weather conditions. Some progress on cotton, peanuts early part week, but wet cool front interrupted progress midweek. Last hay cuttings interrupted by wet conditions, numerous windrows on ground. Growth wheat, oats benefit from additional moisture, some yellowing and some fields too wet to graze. Cotton harvest resumed momentum first part week, again interrupted wet conditions midweek. Some deterioration both grade, quality, mature cotton continues "string out." Harvest remains behind normal progress, may extend into new year. Statewide condition reported 64% of normal. Current reported conditions 46% good; 32% fair; 16% poor; and 6% failure. Peanut harvest advanced first part week, but behind normal progress. As fields dry, harvest should resume. Irrigated peanuts done well. Soybean harvest virtually complete; only limited progress made few remaining fields. Sugarbeets continue stockpiled as harvest nears completion. Weather delays slowed activity. Small grains make good progress, benefit from favorable moisture conditions. Grazing plentiful, helping reduce dependence supplemental feeding. Some isolated fields seeded across State. Only scattered reports

rust and mites received. Statewide wheat condition 81% of normal compared with 75% last year. Current reported conditions 19% excellent; 58% good; 29% fair; and 3% poor.

Cotton open bolls 99% 1984, 100% 1983, 100% average; harvested 67% 1984, 93% 1983, 85% average. Sorghum harvested for grain 99% 1984, 100% 1983, 100% average. Wheat planted all purposes 100% 1984, 100% 1983, 100% average; emerged 98% 1984, 98% 1983, 94% average. Peanuts harvested 94% 1984, 98% 1983, 99% average. Soybeans harvested 99% 1984, 100% 1983, 98% average. Sugarbeets harvested 100% 1984, 99% 1983, 98% average. Pecans harvested 84% 1984, 84% 1983, 77% average. Sunflower harvested 94% 1984, 100% 1983, 97% average.

Commercial Vegetables: Rio Grande Valley escaped frost, vegetables continue make good progress. Light supplies cabbage, broccoli, tomatoes available. More plentiful supplies of carrots, peppers, cabbage being shipped. Onions growing well. San Antonio-Winter Garden, light supplies broccoli, cabbage, carrots. Some white rust, blue mold on spinach. Harvest pecans continues across State. Quality and quantity poor eastern half State. Western half, improved varieties done well.

Range and Livestock: Livestock continue benefit from favorable growth small grain crops. Wheat, oats providing grazing most areas, reduce dependence short hay supplies. Supplemental feeding increased as coldest storm of season swept across State. Wet conditions, frost ended hay cuttings. Overall, livestock good condition and prices continue to strengthen.

UTAH: Precipitation light Uintah Basin, light to moderate western division, moderate to heavy rest of State. Maximum temperature average 2° below normal, ranging 9° below to 3° above. Minimum temperature average 8° above normal in south and Uintah Basin, 1° above in north, ranging 8° below to 12° above.

Marketing, sorting and sales of apples, onions and potatoes continued. Stockmen on western ranges providing supplemental feed for livestock and breaking ice on stock tanks.

VIRGINIA: Unseasonably warm moist air produced mostly cloudy conditions. Temperatures 5 to 10° above normal. Light spotty rain first half of period. Total rain less than 0.25 in.

Topsoil moisture relatively unchanged from last week. Moisture ratings 4% short, 78% adequate and 18% surplus. Days suitable for fieldwork averaged 3.9. Corn for grain harvest close to completion. Soybean harvest 95% complete, 86% last year, 89% average. Sorghum for grain harvest 94% complete, 98% last year, 96% average. Burley, sun-cured and dark-fire markets active. Pasture and livestock in good to excellent condition. Winter feedstocks adequate. Calving and lambing progressing normally. Routine fall chores and hunting.

WASHINGTON: A high pressure system produced a west to southwest flow of moist air into the State. Temperatures were near normal but rainfall was recorded nearly every day west of the Cascades. Significant precipitation fell to the east in the later half of the week.

Very little field activity reported. Some fruit tree pruning. Growers were gearing up for annual meetings and doing bookwork. Snow cover in eastern regions protected fall seeded grains from the cold temperatures. Christmas tree cutting and sales were brisk.

WEST VIRGINIA: Temperatures were 13 to 18° above normal except the northeast division which was 8° above normal. Weekly precipitation ranged from 0.10 to 0.50 in. below normal.

Soil moisture adequate to surplus. Days for fieldwork averaged 1.6. Corn harvest virtually complete. Pasture in fair to good condition.

WISCONSIN: Mild temperatures early in the week gave way to seasonable cold at midweek but rebounded to very mild readings through the weekend. Record high temperatures were recorded at some stations on the 16th. Precipitation ranged from 0.20 to 1.00 in. water equivalent. Most was in the form of rain but from 1 to 5 in. of snow fell on the 14th in the south.

Soil moisture remained at a surplus through most of the State. Frost depths in the soil ranged from 0.0 to 8.0 in. across the State as of the 14th, and averaged 2.20 in., about half of normal. The frost was softened and brought out of the soil by the high temperatures.

WYOMING: Temperatures below normal except extreme northeast. Above normal precipitation in southeast. Elsewhere below normal.

Winter wheat mostly good condition. Snow cover most areas. Livestock mostly good condition with supplemental feeding in areas with snow cover. Hay supplies adequate most areas. Some pine needle abortion scattered areas western county.



CROP PROGRESS

FOR WEEK ENDING DEC 16

cotton

	% HARVESTED		
	1984	1983	AVG.
ALA	99	100	100
ARIZ	98	99	91
ARK	98	99	99
CALIF	99	97	97
GA	98	96	99
LA	96	100	99
MISS	93	100	99
MO	95	100	100
N MEX	85	86	89
N C	97	100	97
OKLA	60	85	85
S C	99	100	100
TENN	86	100	99
TEX	67	93	85
14 STATES	81	95	91

THESE 14 STATES PRODUCED 99%
OF THE 1983 COTTON CROP.

soybeans

	% HARVESTED		
	1984	1983	AVG.
ALA	99	100	100
ARK	96	99	99
GA	96	91	95
ILL	95	100	100
IND	97	100	100
IOWA	100	100	100
KANS	100	95	100
KY	91	99	99
LA	99	100	99
MICH	100	100	100
MINN	100	100	100
MISS	91	96	97
MO	95	100	100
NEBR	100	100	100
N C	91	83	88
OHIO	99	100	100
S C	92	80	82
TENN	86	100	100
18 STATES	96	98	99

THESE 18 STATES PRODUCED 93%
OF THE 1983 SOYBEAN CROP.

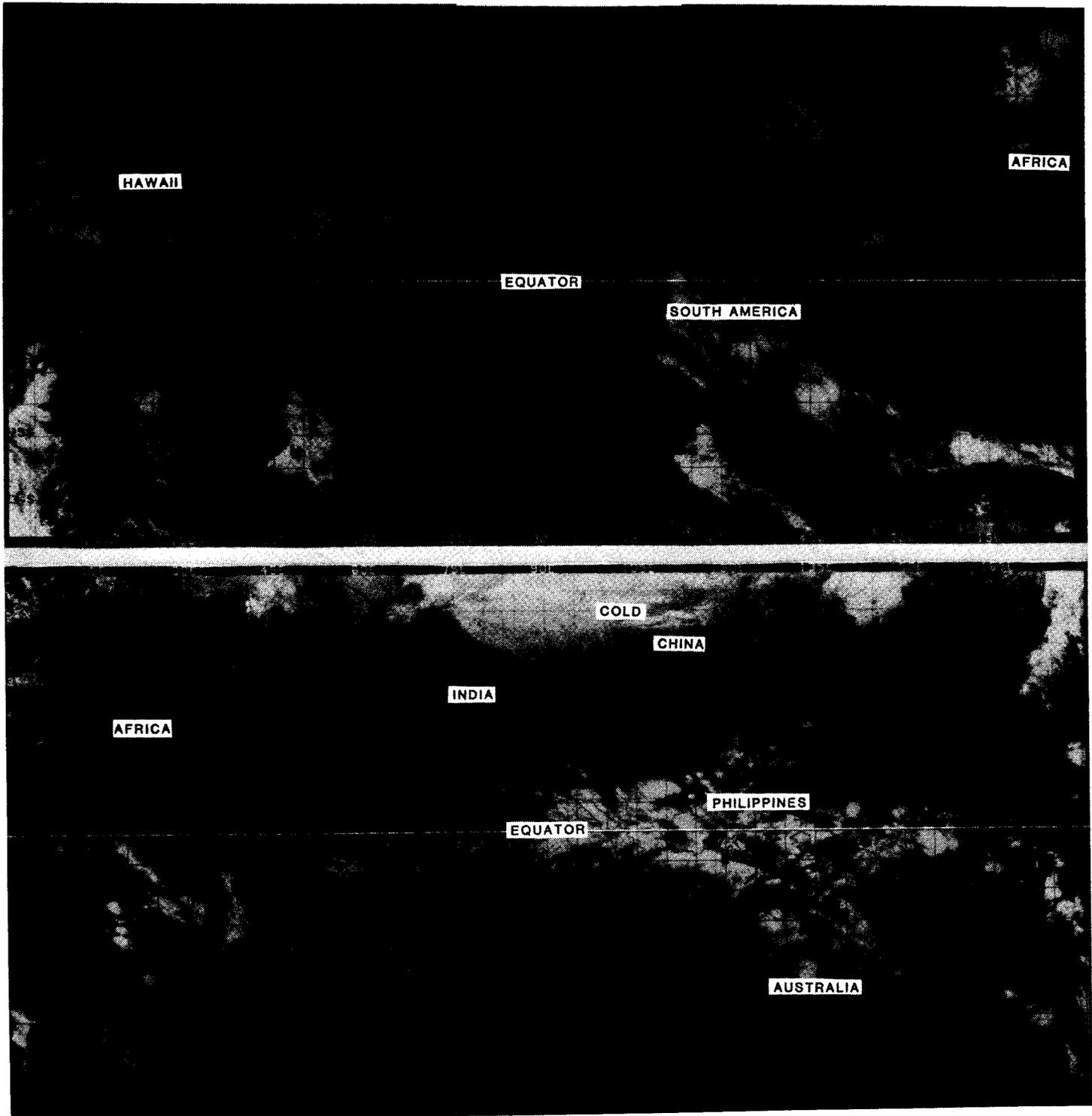
Merry Christmas



And Happy New Year

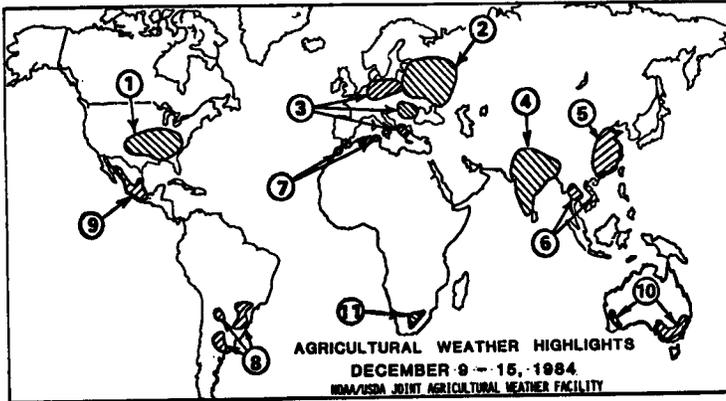
GLOBAL WEATHER SATELLITE PHOTO

Dec. 16- 17



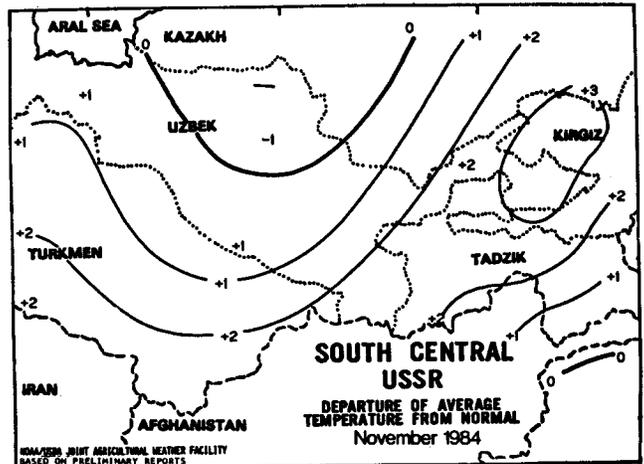
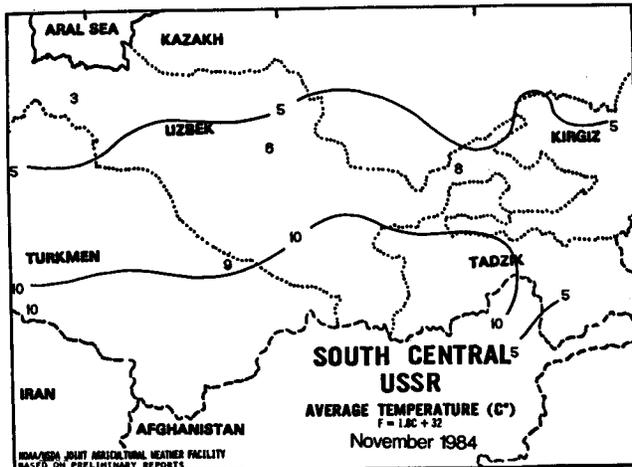
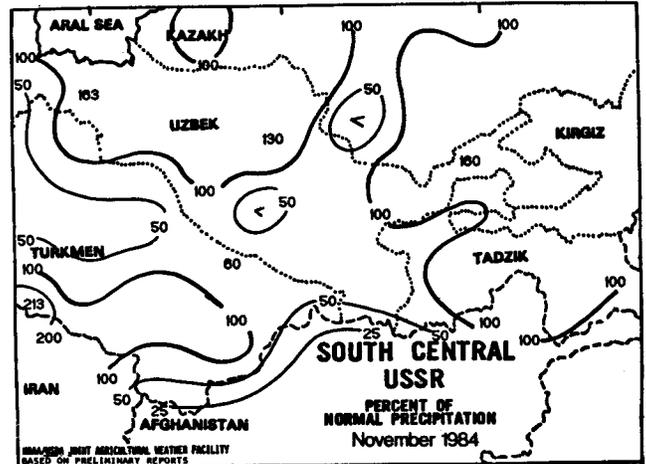
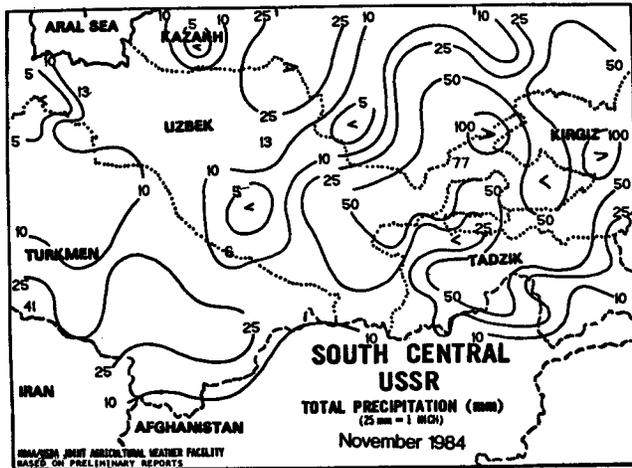
International Weather and Crop Summary

Dec. 9 - 15

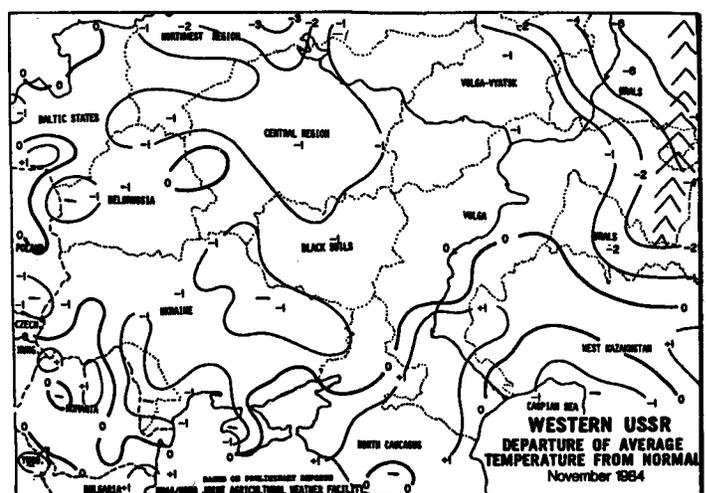
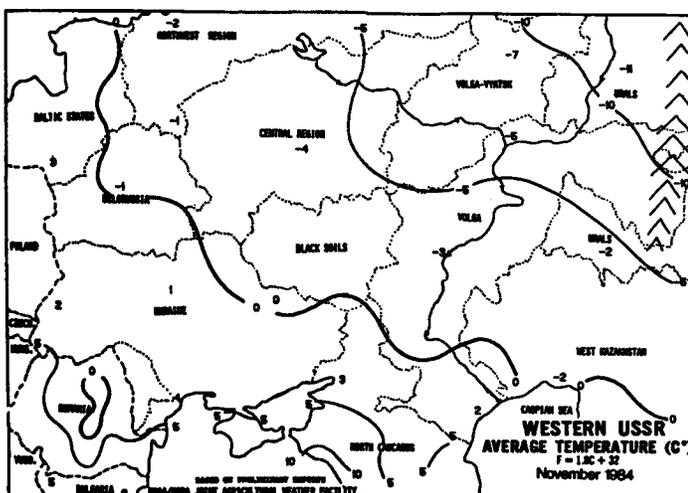
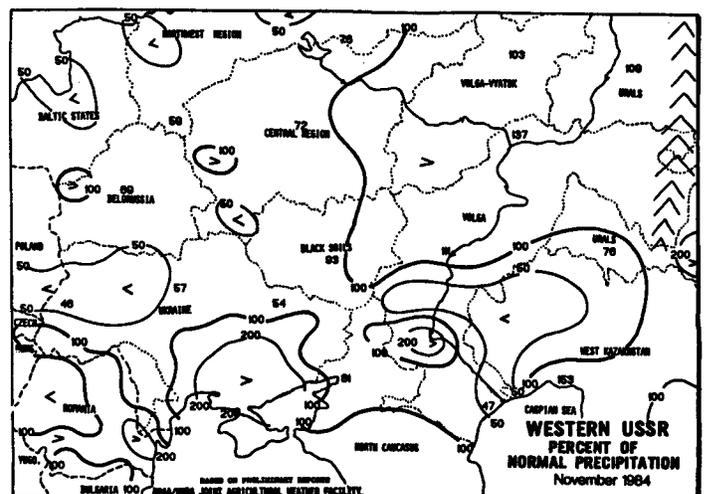
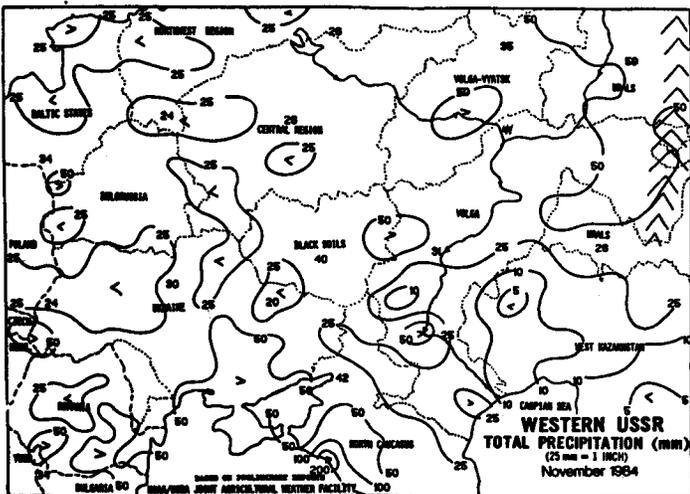
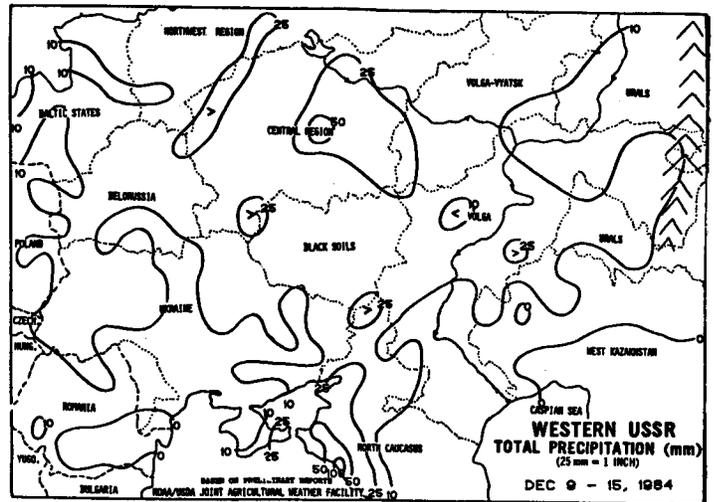


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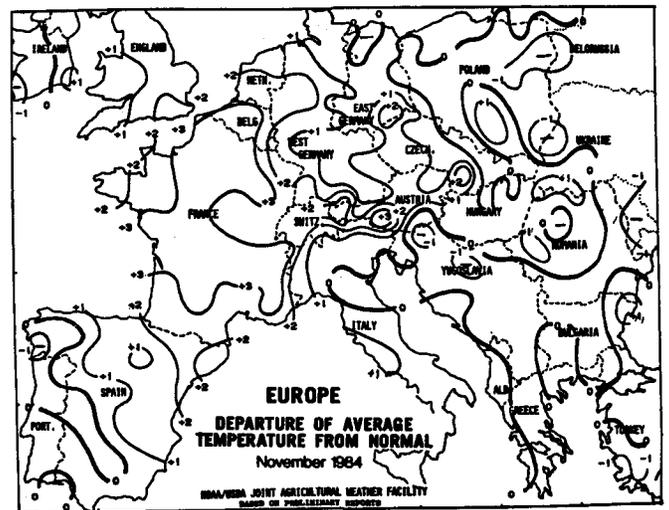
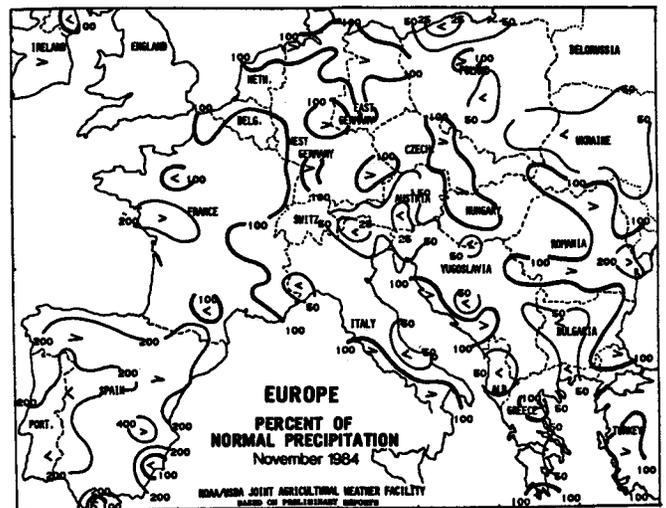
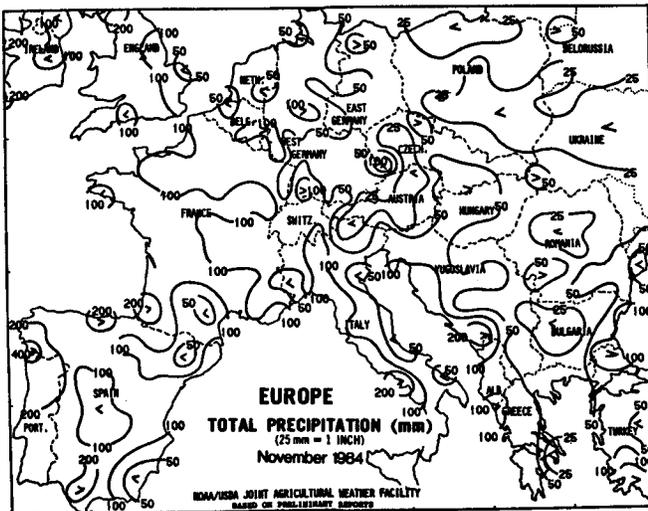
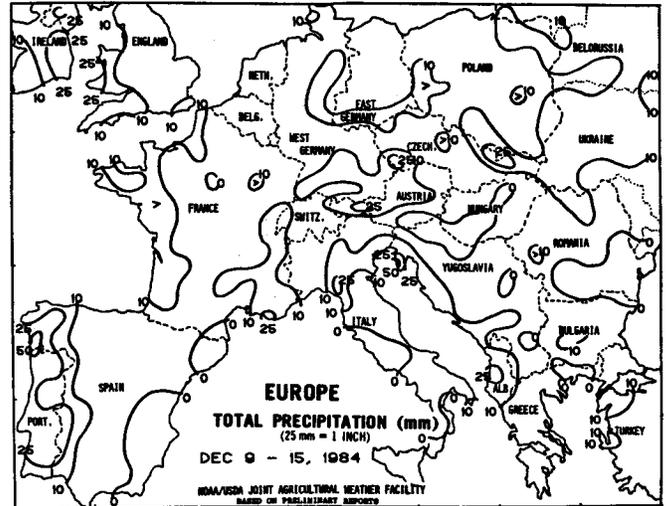
1. UNITED STATES ... Wetness shifts westward into the central and southern Plains, benefiting winter wheat but delaying cotton harvest. Fair weather accelerates harvesting across the Delta and Southeast. Rain slows fieldwork in the eastern Corn Belt, but warm weather stimulates development of late-planted wheat.
2. WESTERN USSR ... Snow blankets most winter grain areas.
3. EUROPE ... Light snow covers dormant winter grains in the north and east. Unfavorable dryness continues for winter grain planting in Greece.
4. SOUTH ASIA ... Seasonable weather favors rice and cotton harvesting.
5. EASTERN ASIA ... Precipitation in the North China Plain adds to favorable moisture supplies for winter wheat.
6. SOUTHEAST ASIA ... Dry weather in most of the region benefits rice harvesting.
7. NORTHWESTERN AFRICA ... Dry weather covers most winter grain areas as planting nears completion.
8. SOUTH AMERICA ... Showers maintain good growing conditions for summer crops in southern Brazil and Argentina. Brazil's soybean planting is 90 percent-complete, while Argentina's wheat harvest advances to about 30-percent completion.
9. MEXICO ... Widespread rain over the northwest slows harvesting but increases irrigation water.
10. AUSTRALIA ... Mostly dry weather over the south and west favors wheat and barley harvesting. Showers in eastern summer crop areas aid crop establishment.
11. SOUTH AFRICA ... Moderate rain relieves a dry period, but moisture is still limited, especially in the western corn region.



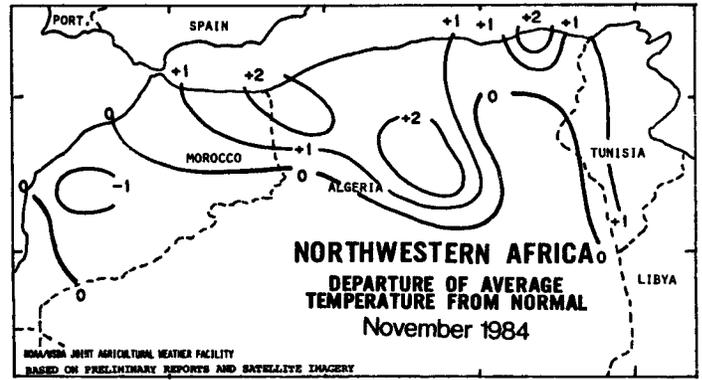
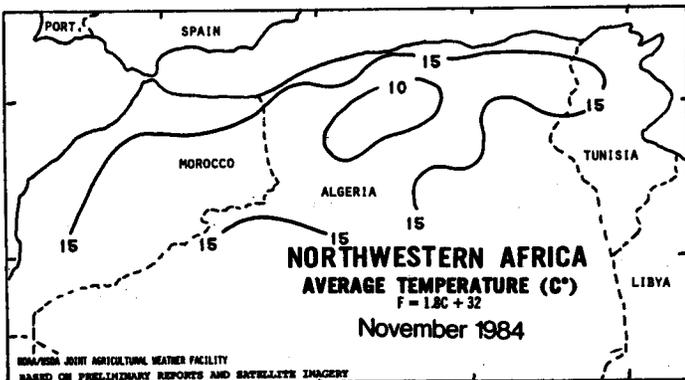
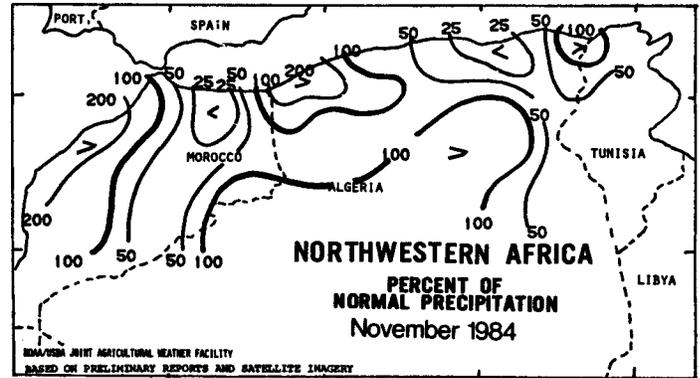
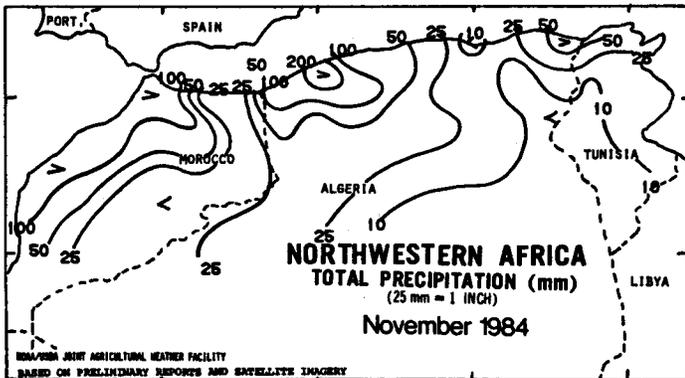
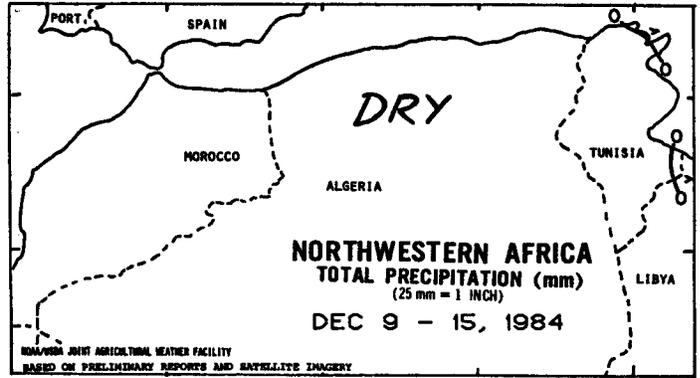
WESTERN USSR...Snow blanketed most winter grain areas; the heaviest amounts fell in a band which stretched northeastward from the north central Ukraine through the Central Region into the Volga Vyatsk Region. In November, southern winter grains continued to develop with good moisture until temperatures fell sharply in mid-November. As a result, those plants were forced into dormancy with minimal hardening. In late November, a second cold spell in eastern winter grain areas plunged nightly temperatures to no more than -15°C for as many as six consecutive days at some localities. The area hardest hit by these low temperatures had a thin-to-adequate snow cover in the north, but only patchy snow cover in the south. Despite the cold weather, the winter grain crop appears to have sustained little, if any, damage and has entered dormancy in generally good condition.



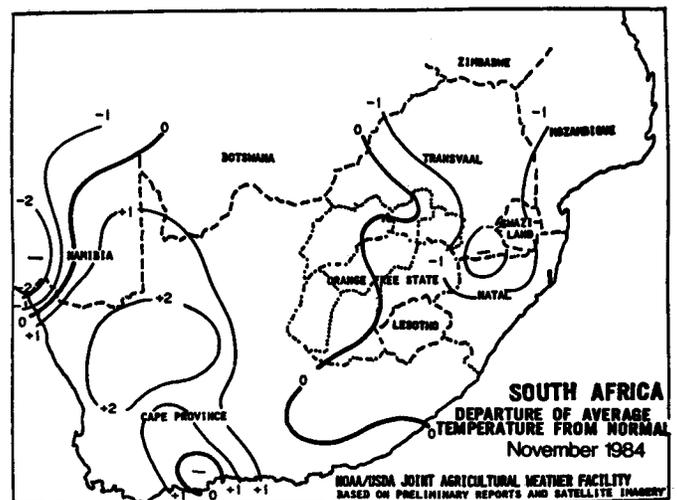
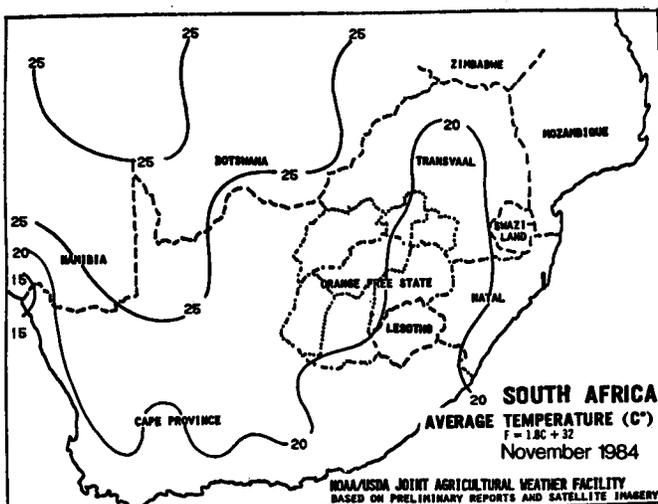
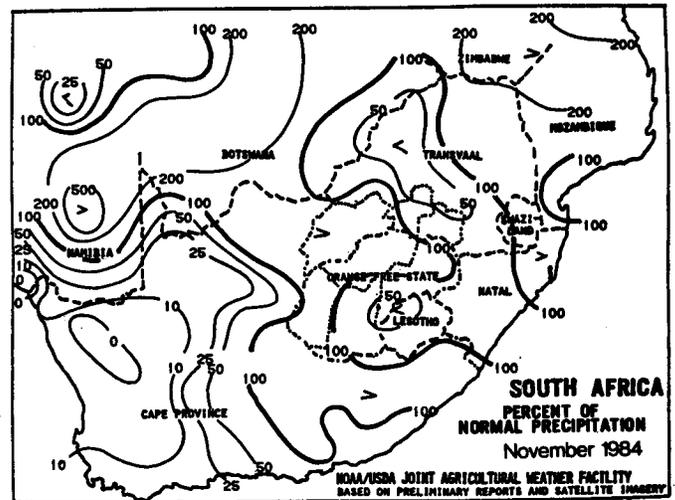
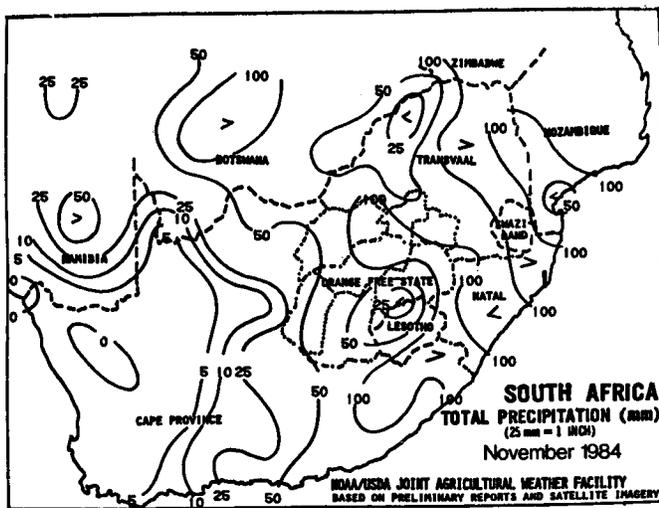
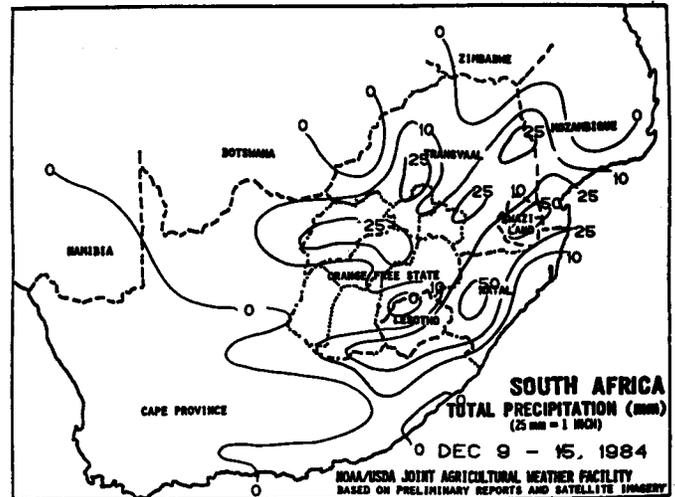
EUROPE...Light precipitation (less than 10 mm) covered most winter grain areas, mostly snow in the north and east and rain in the west and south. In November, above-normal precipitation over Spain and Portugal favored winter grain planting and early establishment. Persistent wet weather in southwestern France slowed late corn harvesting. Showers in southeastern Romania and Bulgaria improved moisture conditions for winter grains, but the cold weather limited plant establishment. Continued dry weather in Greece created very unfavorable conditions for winter grain planting. Although most winter grain areas in Poland received below-normal precipitation in November, the crop entered dormancy in good condition. Weather conditions during the past few weeks should have allowed winter grains to become well-hardened in the north and east. Winter grains in England, France, and northern Italy are just entering the dormant state.

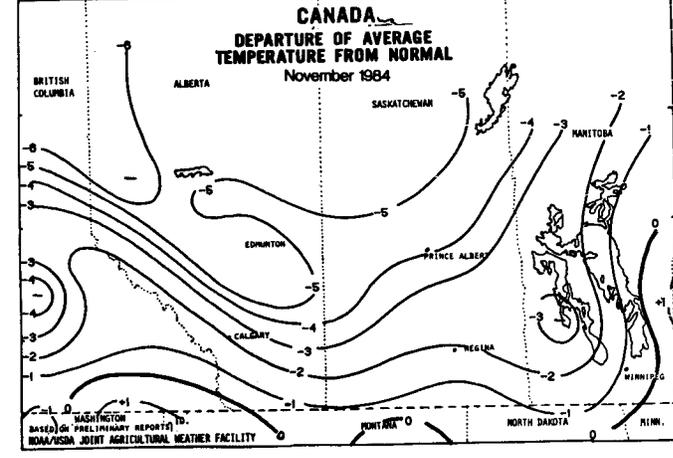
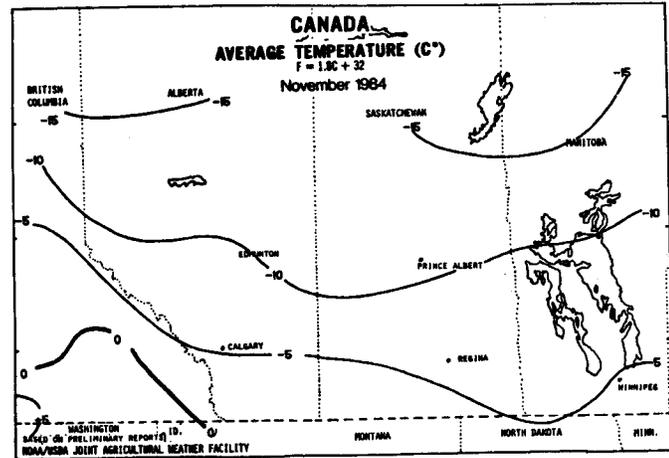
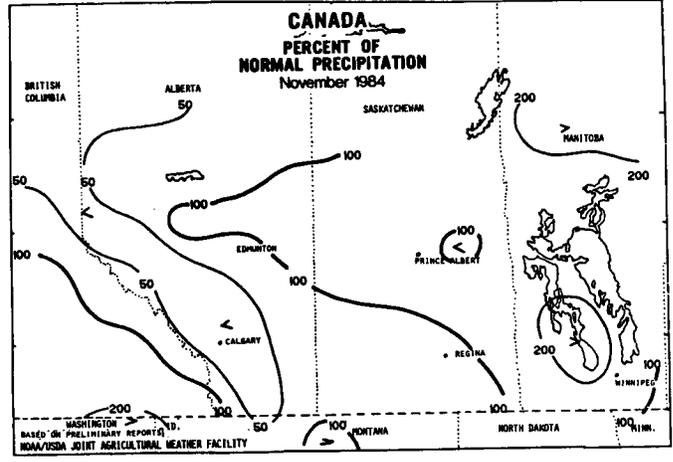
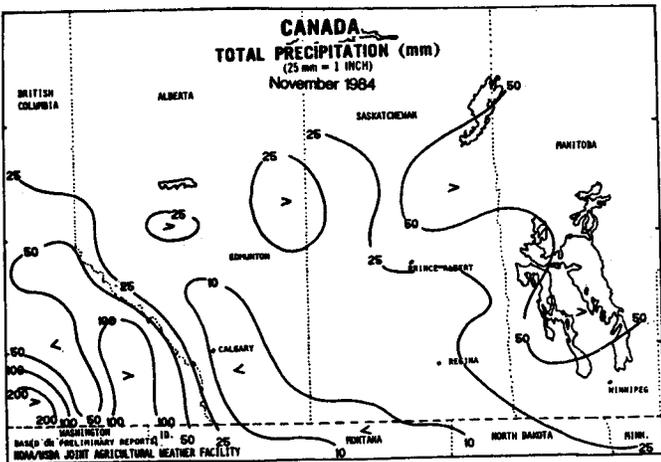
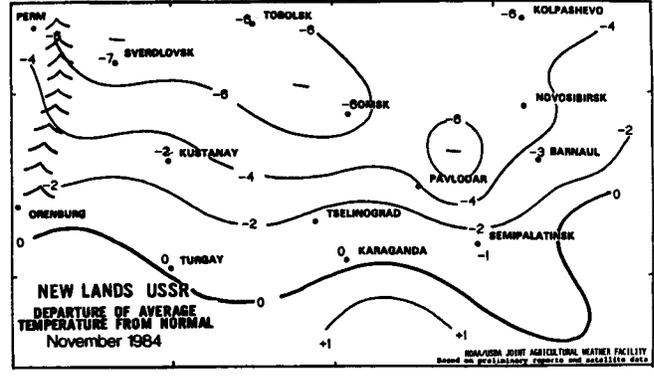
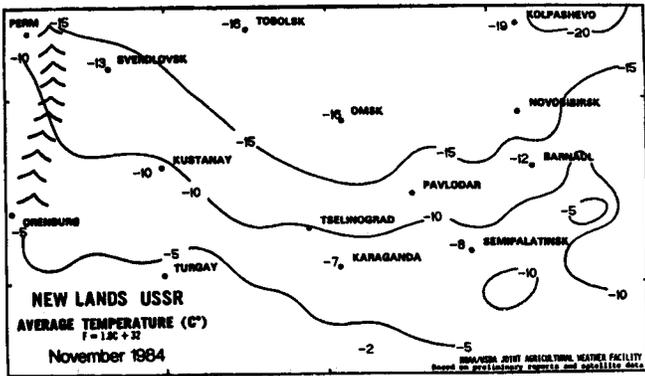
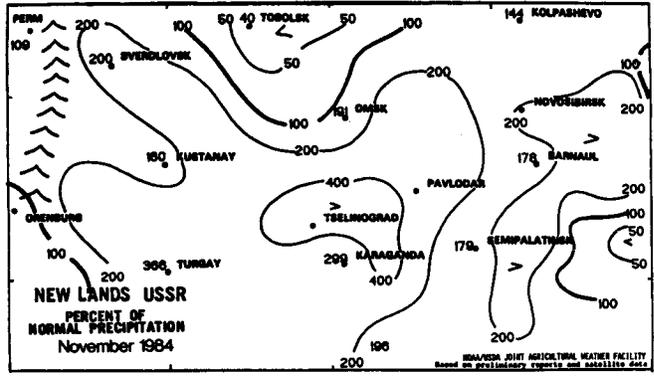
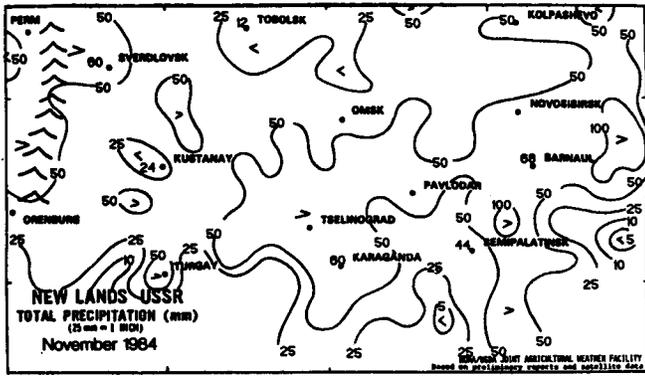


NORTHWESTERN AFRICA... Dry weather covered most winter grain areas. In November, the autumn rainy season began early in the month over Morocco's and northwestern Algeria's winter grain areas. Precipitation continued near- to above-normal, favoring planting. Tunisia's and northeastern Algeria's November planting rains were below normal. However, precipitation was adequate for planting, except southern crop areas in northeastern Algeria received less than 25 mm of rainfall. At present, winter grain planting is normally in the later stages in most areas. Despite some dry pockets, moisture thus far has been generally favorable for planting and early growth. However, subsoil moisture is limited, and timely rains will be needed during the remainder of the growing season to ensure favorable crop prospects.

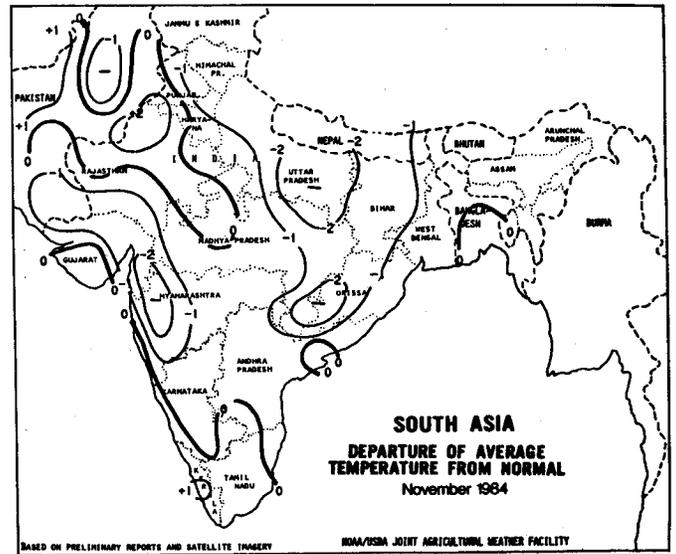
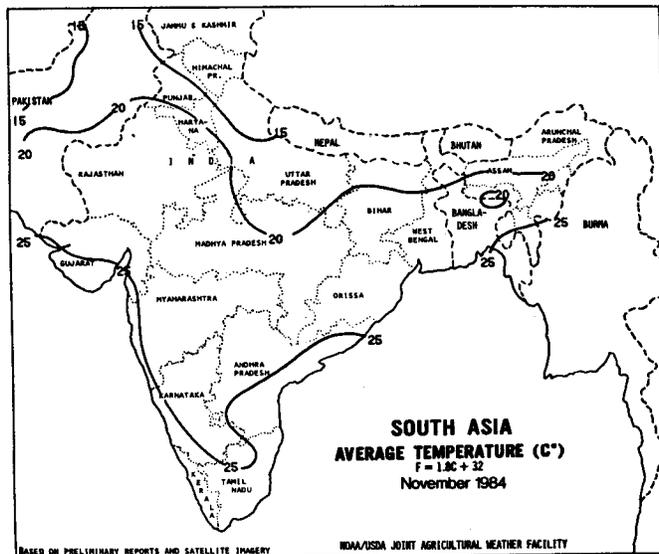
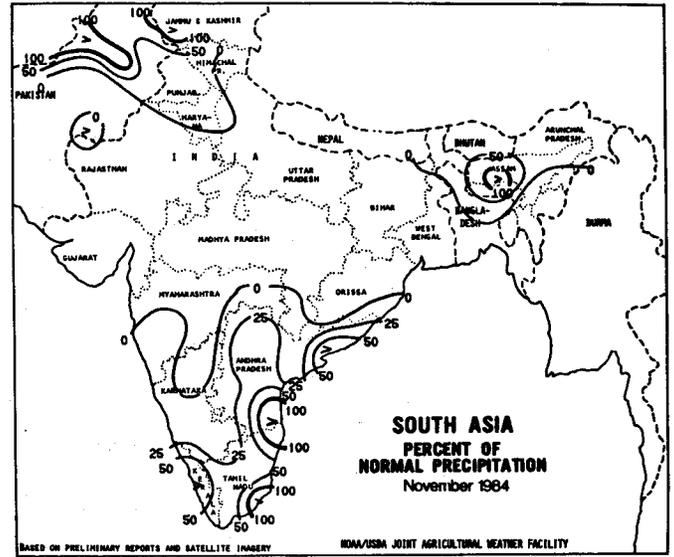
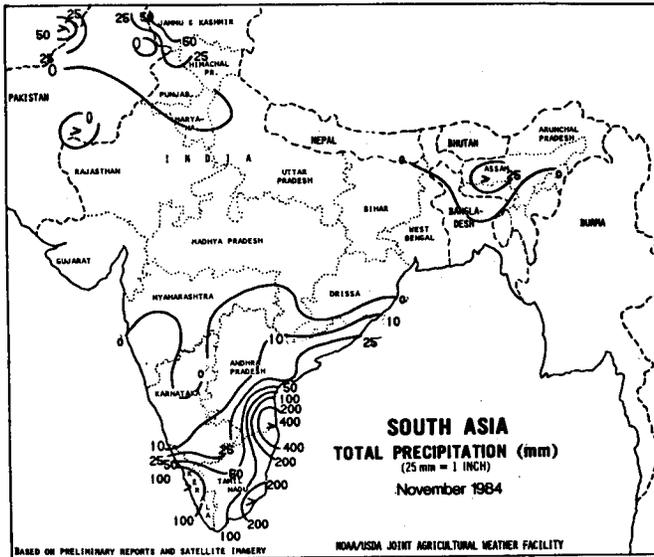
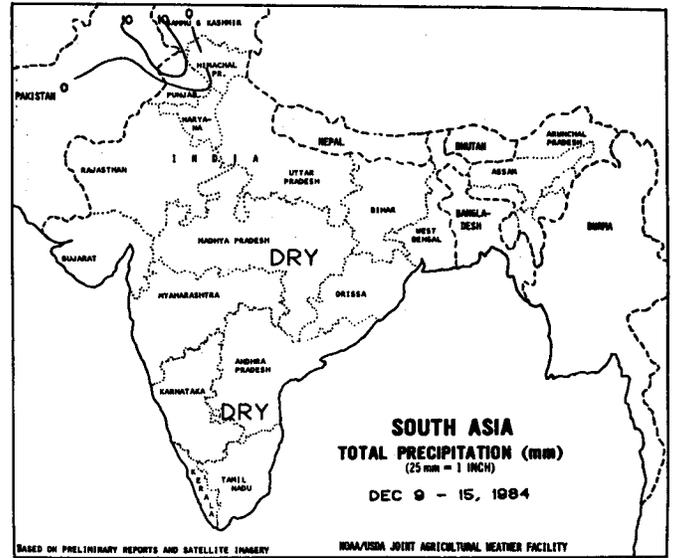


SOUTH AFRICA...Moderate rain (10-25 mm) returned to the Maize Triangle. Mid-week showers spread across the northern and eastern corn region. Only light showers (less than 10 mm) fell in the southwestern Maize Triangle. Weekly temperatures averaged above-normal in the west, where soil moisture is limited. November precipitation was near- to above-normal in much of the corn region. However, most of the western rain fell very late in the month. November temperatures averaged slightly above normal in the west and below normal in the east. Extended dry periods in November and early December have been unfavorable for corn planting and emergence. Corn normally reaches the moisture critical reproductive stage in January.

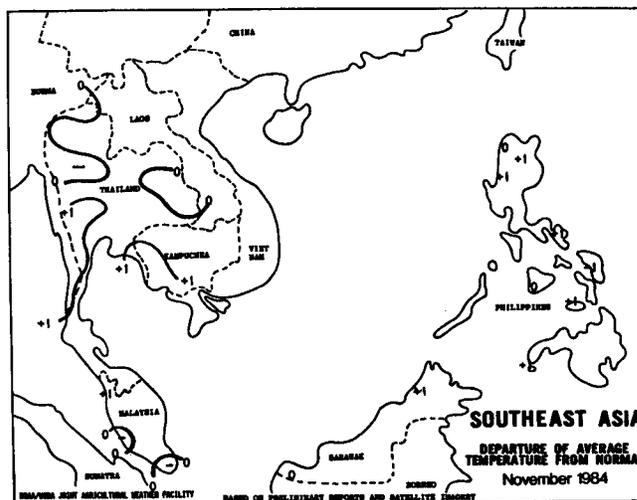
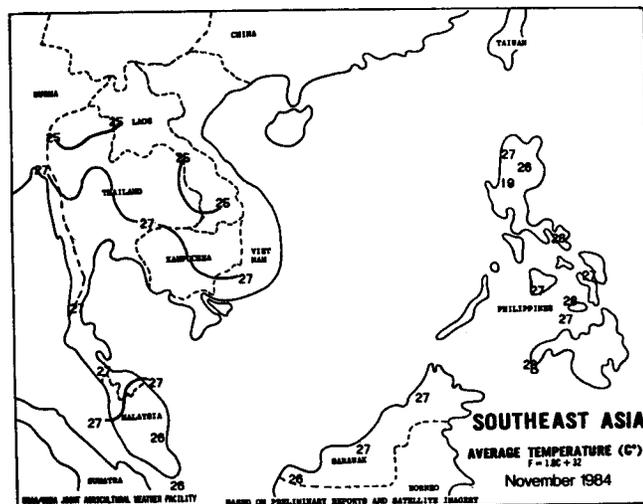
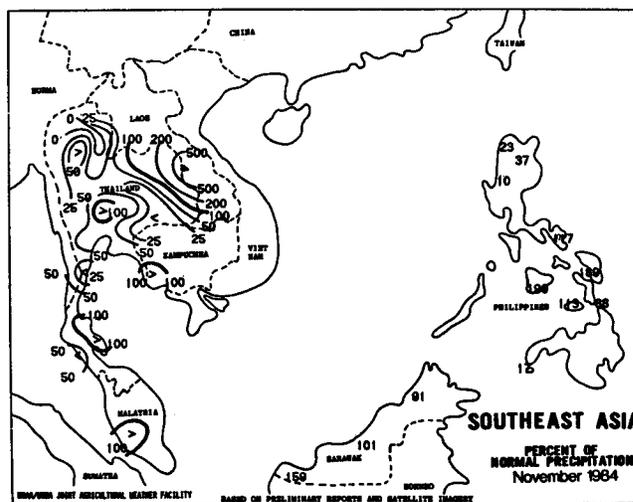
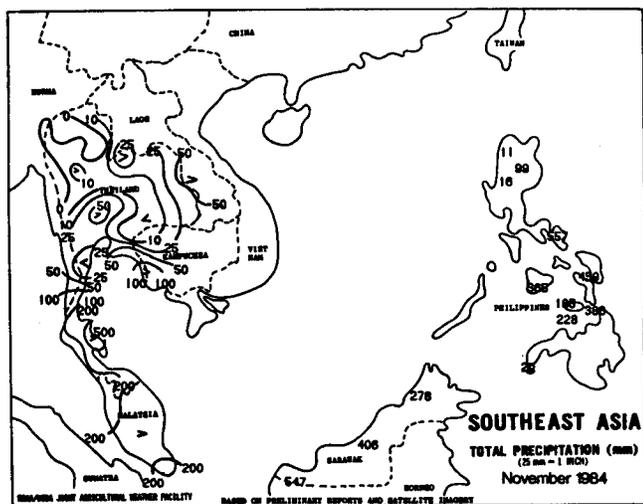
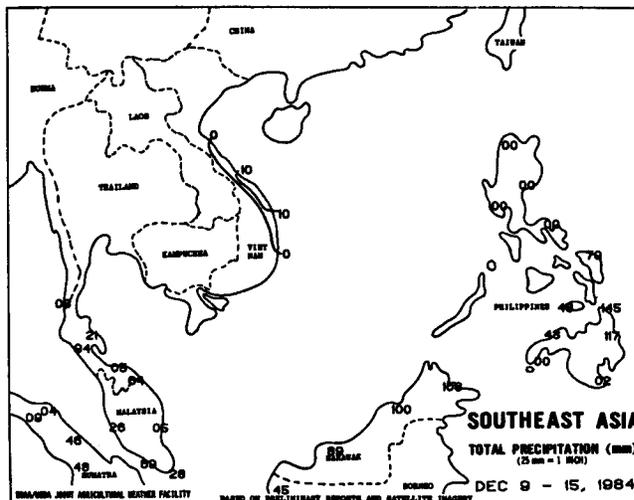




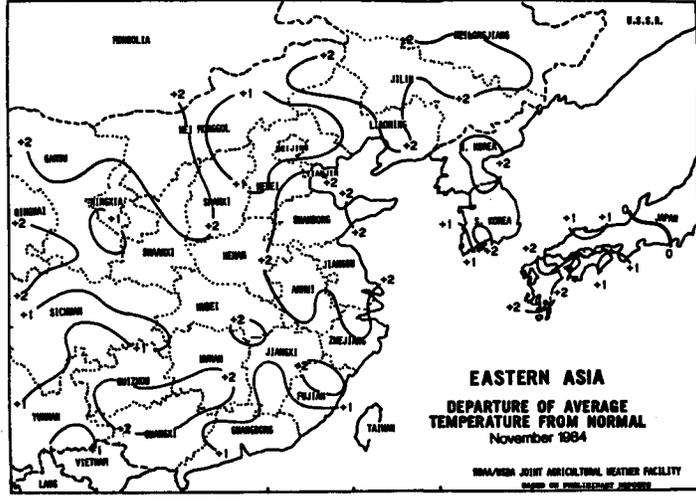
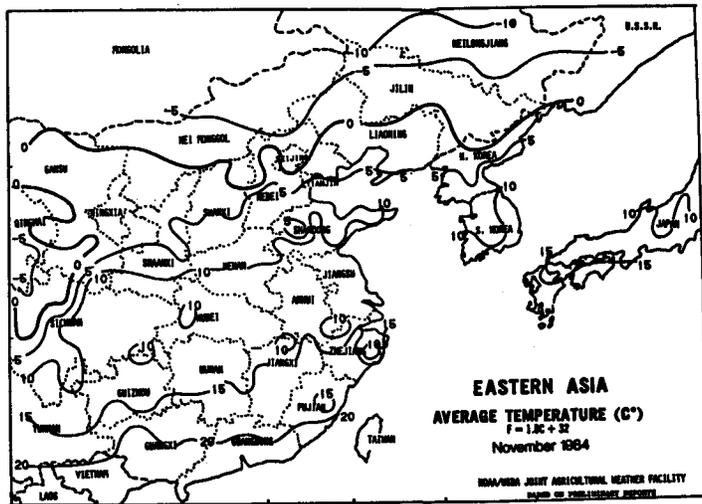
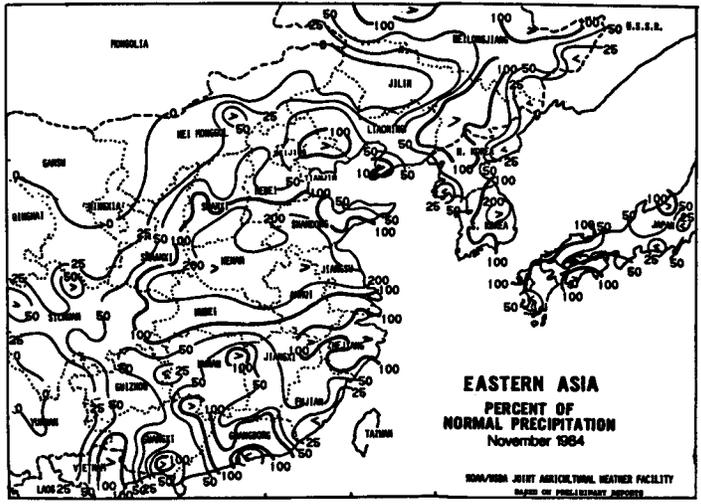
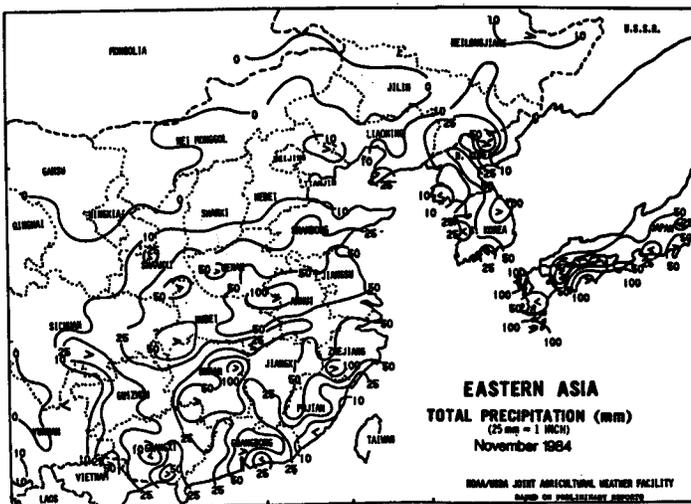
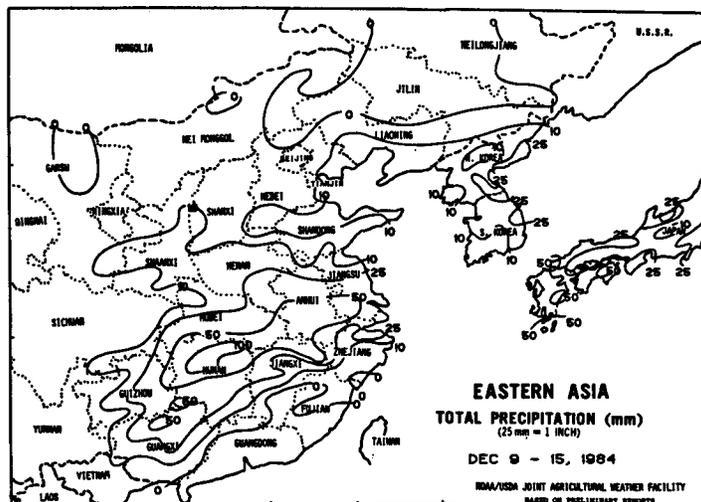
SOUTH ASIA...Seasonably dry weather covered most of India, benefiting cotton and rice harvesting. Temperatures averaged above normal this week, increasing evaporation rates in the wheat region. November temperatures were above-normal in the western wheat belt but were favorably cool in the east. Light showers (5-20 mm) fell in northern Pakistan, favoring wheat. In mid-November, a tropical cyclone inundated India's southeastern coastal areas. Flooding damaged maturing winter rice. The storm dissipated rapidly, and inland crop areas were not greatly affected.



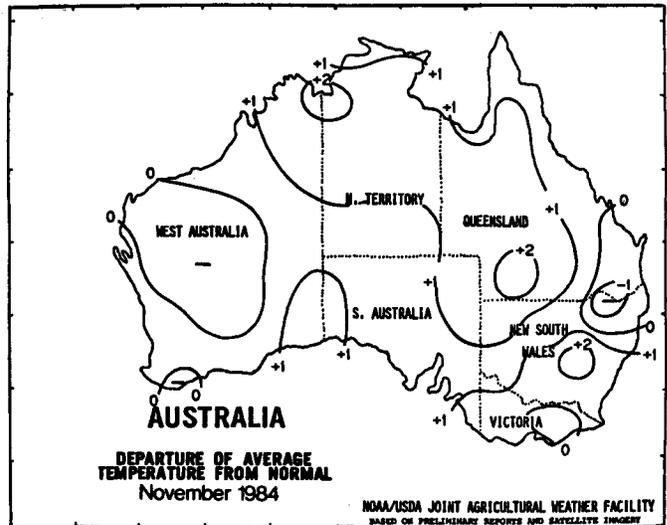
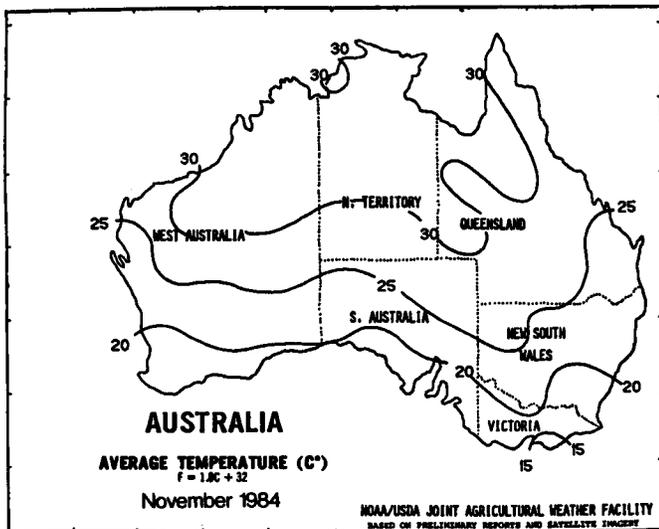
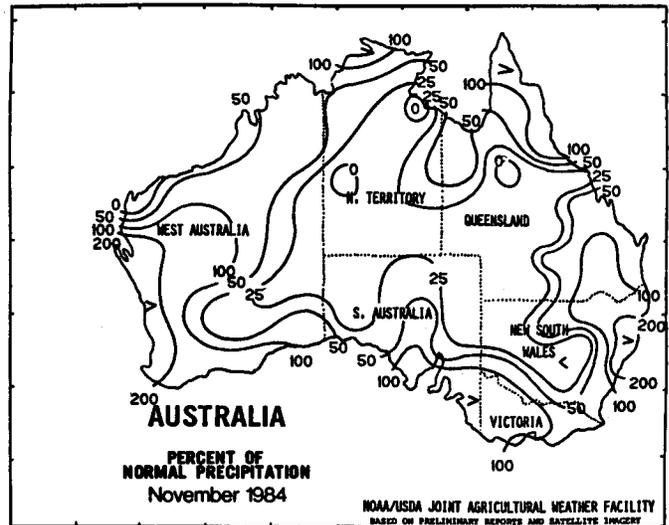
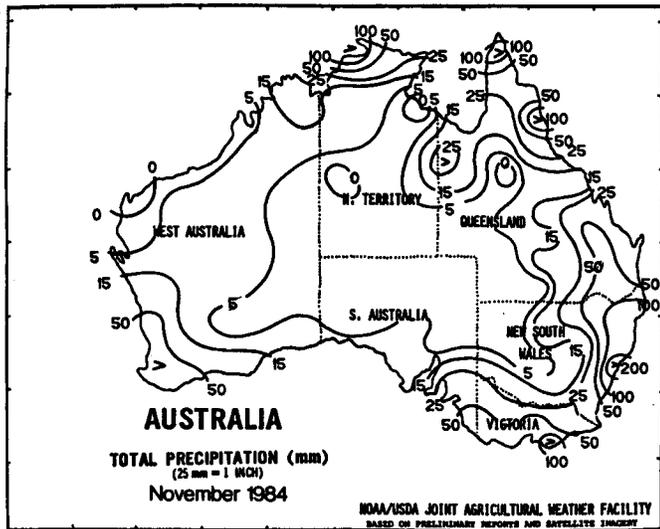
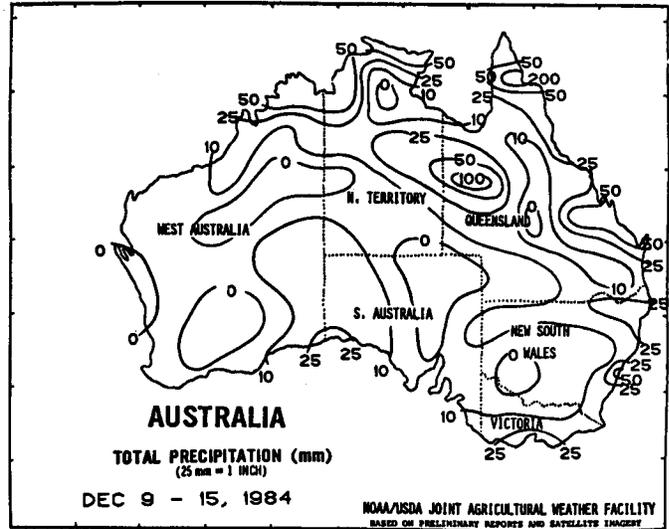
SOUTHEAST ASIA...Mostly dry conditions in Indochina favored maturing rice. Dryness in central and northern Thailand and relatively drier weather in Vietnam benefited rice. Dry weather in the northern Philippines also favored rice harvesting. November precipitation was above normal in south central Thailand and central Laos, but most of the rain fell earlier in the month. Weekly weather summaries for Southeast Asia will be discontinued until next spring's planting season. Monthly precipitation and temperature analyses will continue through the winter.



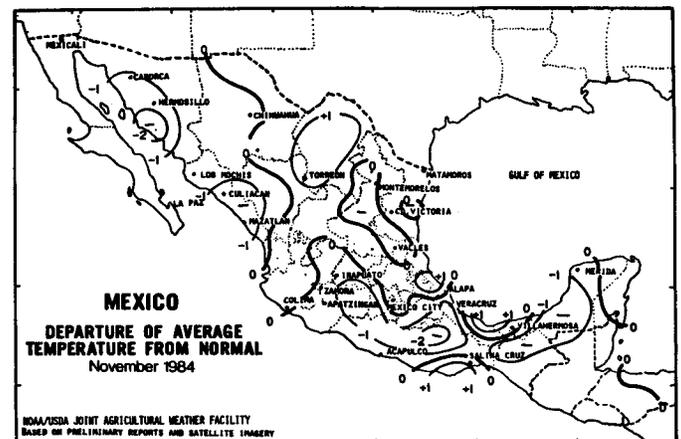
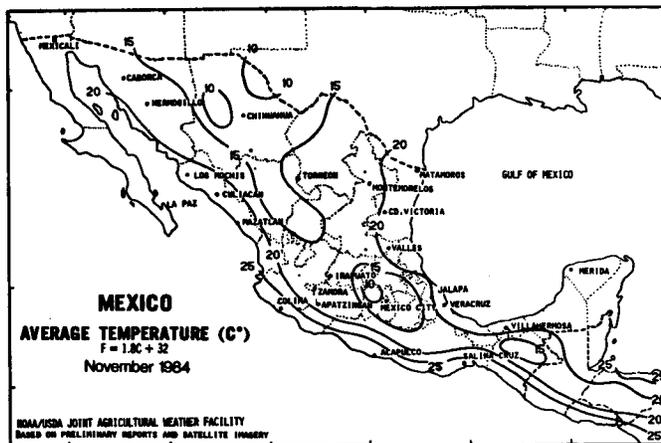
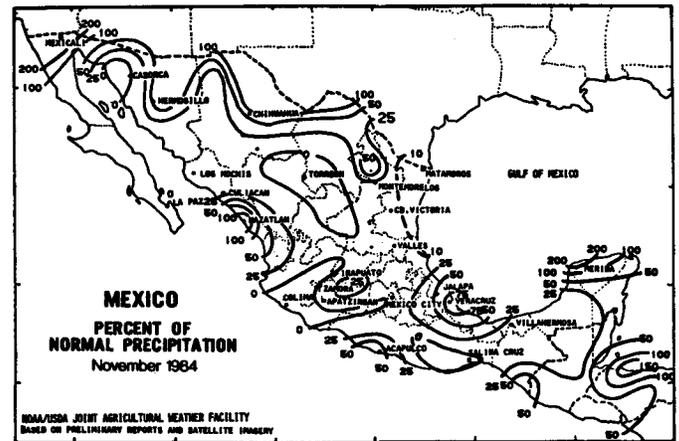
EASTERN ASIA... Precipitation continued in eastern China, following last week's showers. This week's light to moderate rain (10-25 mm) in the winter wheat region added to the favorable moisture supplies from the above-normal November precipitation. November's rainfall was below normal in Hebei, and nonirrigated winter wheat entered dormancy under less than favorable conditions. The majority of the winter wheat benefited from favorable moisture and mild temperatures. Seasonably cooler, but above-normal temperatures in the Yangtze Valley hardened the winter wheat. November precipitation varied in the south, but was mostly below normal, favoring late rice harvesting. Moderate to heavy rain (25-100 mm) fell in the south this week. However, Guangdong and Fujian remained mostly dry.



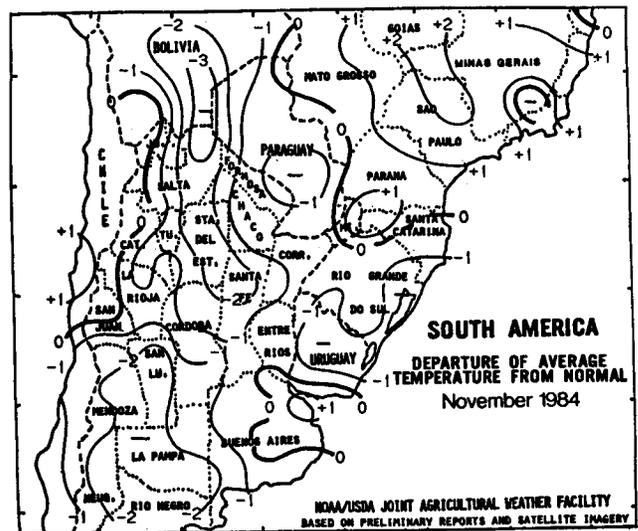
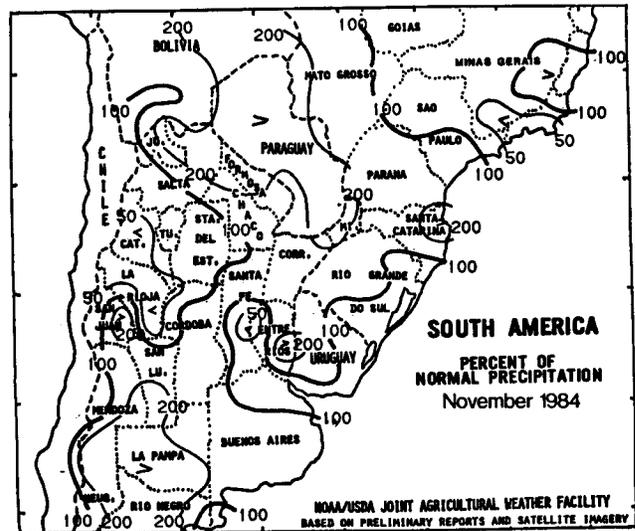
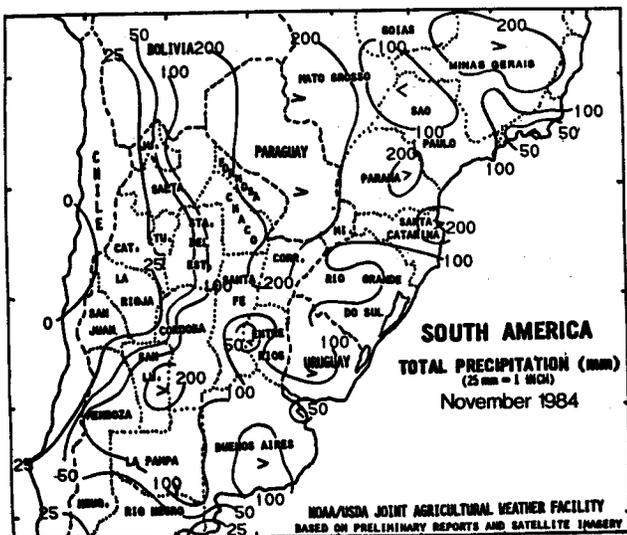
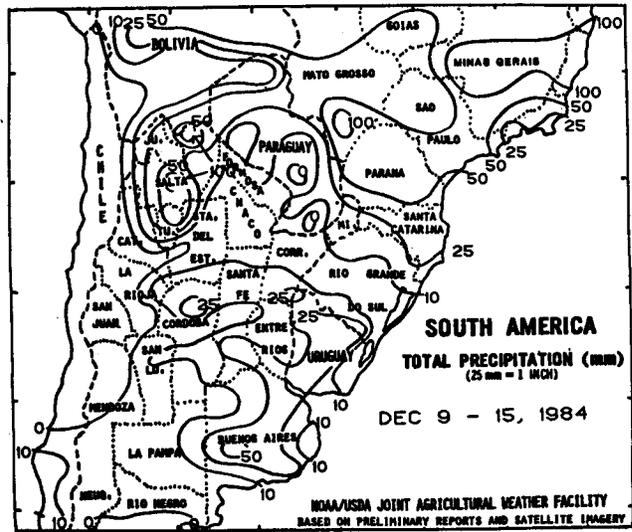
AUSTRALIA...Mostly dry weather aided wheat and barley harvesting from southern New South Wales across the southern wheat belt of Victoria and South Australia and in crop areas of Western Australia. December is the peak wheat harvest month. Below-average November rainfall in southern New South Wales and portions of the southern wheat growing states limited available moisture for grain filling of the late-planted crop. Early November rain boosted Western Australia's total monthly rainfall above average, while drier weather late in the month favored maturing grains. This week's showers in southeastern Queensland and northern New South Wales aided summer crop establishment. Queensland's wheat harvest is virtually complete. Substantial tropical showers covered northern portions of the country.



MEXICO...Stormy weather over the northwestern half of the Nation interrupted vegetable harvesting and field activities, but increased soil moisture supplies. Winter-type storms, moving across the northwestern board, triggered rain over an unusually wide area; including most of the west coast vegetable district and mountain watersheds, and the north central rangelands. Muddy fields slowed some vegetable harvesting along the Pacific coast. Heavy rain falling over some of the mountain watersheds increased irrigation supplies. The rest of the country was sunny and mild to warm, which was ideal for sugar cane and coffee harvesting.



SOUTH AMERICA...This week, showers covered almost all crop areas of Argentina and Brazil, maintaining adequate to abundant moisture for early summer crop growth. In southern Brazil, showers over northern Rio Grande do Sul helped newly planted soybeans. Substantial, late-November rain broke the 3 week dry spell which halted earlier soybean planting in that state. Locally heavy rain fell over southern Minas Gerais, halting fieldwork in northern soybean areas. Brazil's soybean planting reached over 90-percent. In Argentina, November rainfall was above average except for crop areas of southern Santa Fe and northeastern Buenos Aires. Significant showers (16-33 mm) recently fell in those areas. The wheat harvest is over 30-percent complete, with harvesting moving into southern crop areas. Corn planting is virtually complete, sunflowers are mostly planted, sorghum planting is in late stages, and soybean planting was estimated at 30-percent completion.



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