

WEEKLY WEATHER AND CROP BULLETIN

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

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

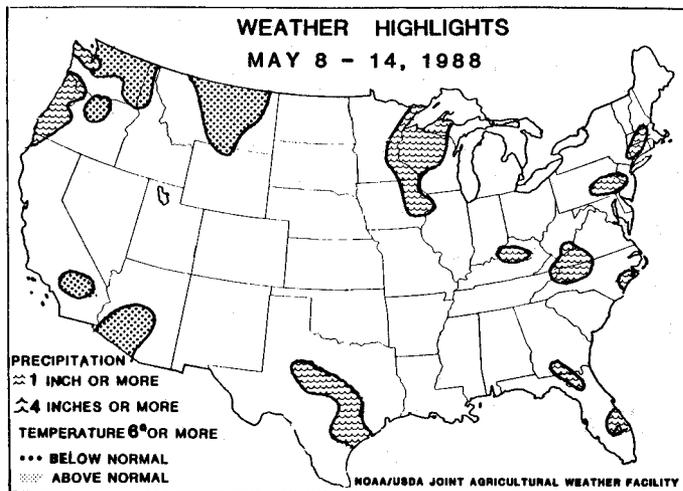
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National Weather Summary

May 8-14, 1988



HIGHLIGHTS: Beneficial rains fell in many areas which have experienced prolonged dryness, most notably Texas, the upper Midwest, and the Southeast. Most of the Nation was warmer than normal, although Atlantic Coast States and Gulf Coast States had temperatures near normal.

SUNDAY...A low pressure system centered over Minnesota produced widespread severe weather in the upper and middle Mississippi Valley. Hail and tornadoes accompanied thunderstorms in Iowa, Kansas, Missouri, Illinois, Wisconsin, Indiana, and Michigan. Strong winds raked the Great Plains and Mississippi Valley. Showers were scattered over western Oregon.

MONDAY...Showers developed in the afternoon in western New York, western Pennsylvania, and the southern Appalachians. Light rain was scattered across the upper Mississippi Valley. Gusty winds prevailed from the northern Plains to the upper and middle Mississippi Valley. Afternoon temperatures were in the sixties and seventies over most of the Nation. Strong winds and hail accompanied thunderstorms in Ohio, Indiana, Michigan, and Kentucky. Severe thunderstorms also broke out in Tennessee, West Virginia, Texas, and Alabama.

TUESDAY...Showers and thunderstorms were scattered along a frontal zone extending from the middle Atlantic States to the Gulf of Mexico. The thunderstorms caused severe weather in southeastern Pennsylvania, the Carolinas, Georgia, and the Gulf States. Showers and thunderstorms were scattered from the Colorado Rockies to west-central Texas. The Pacific Coast States had unusually high temperatures.

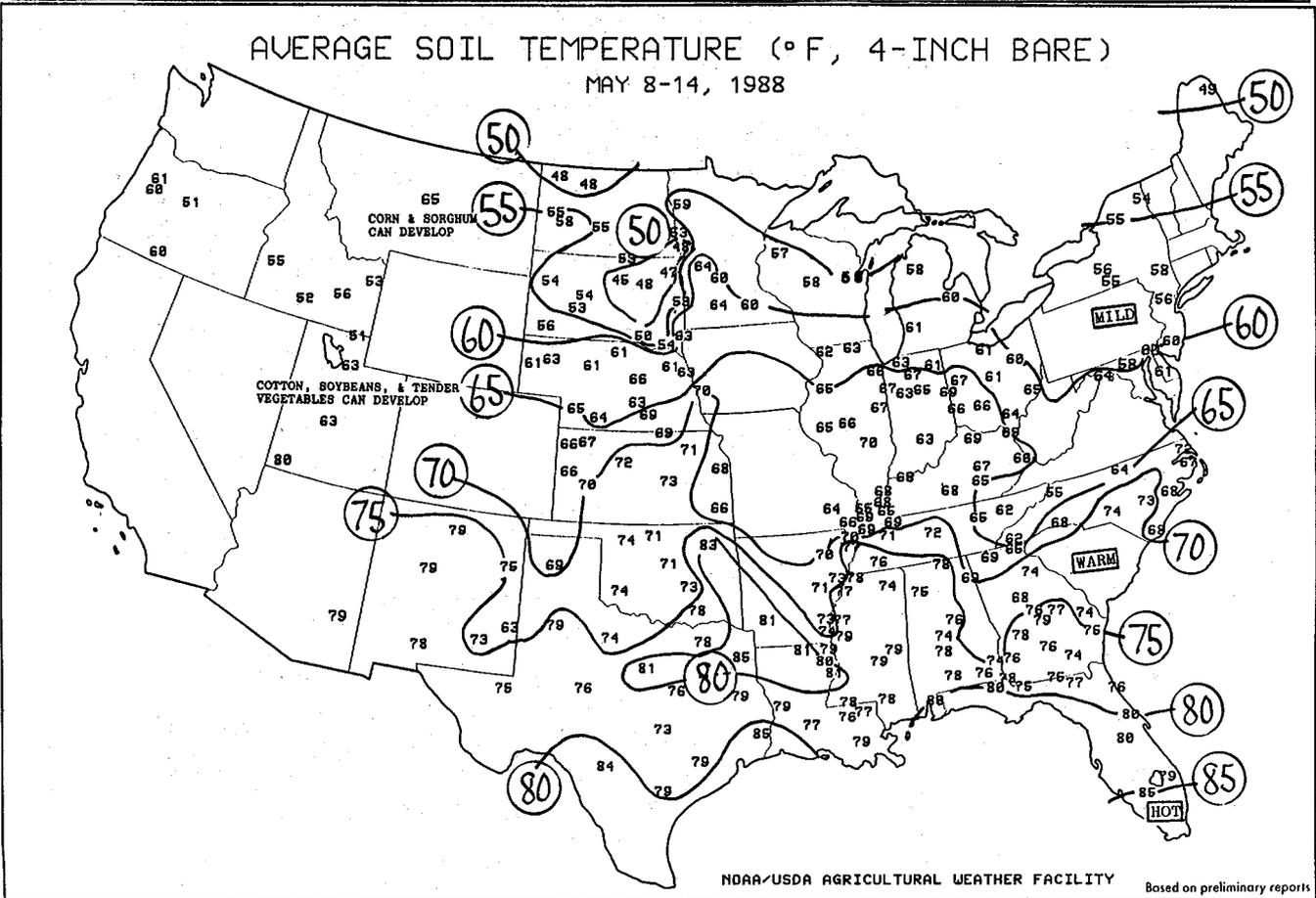
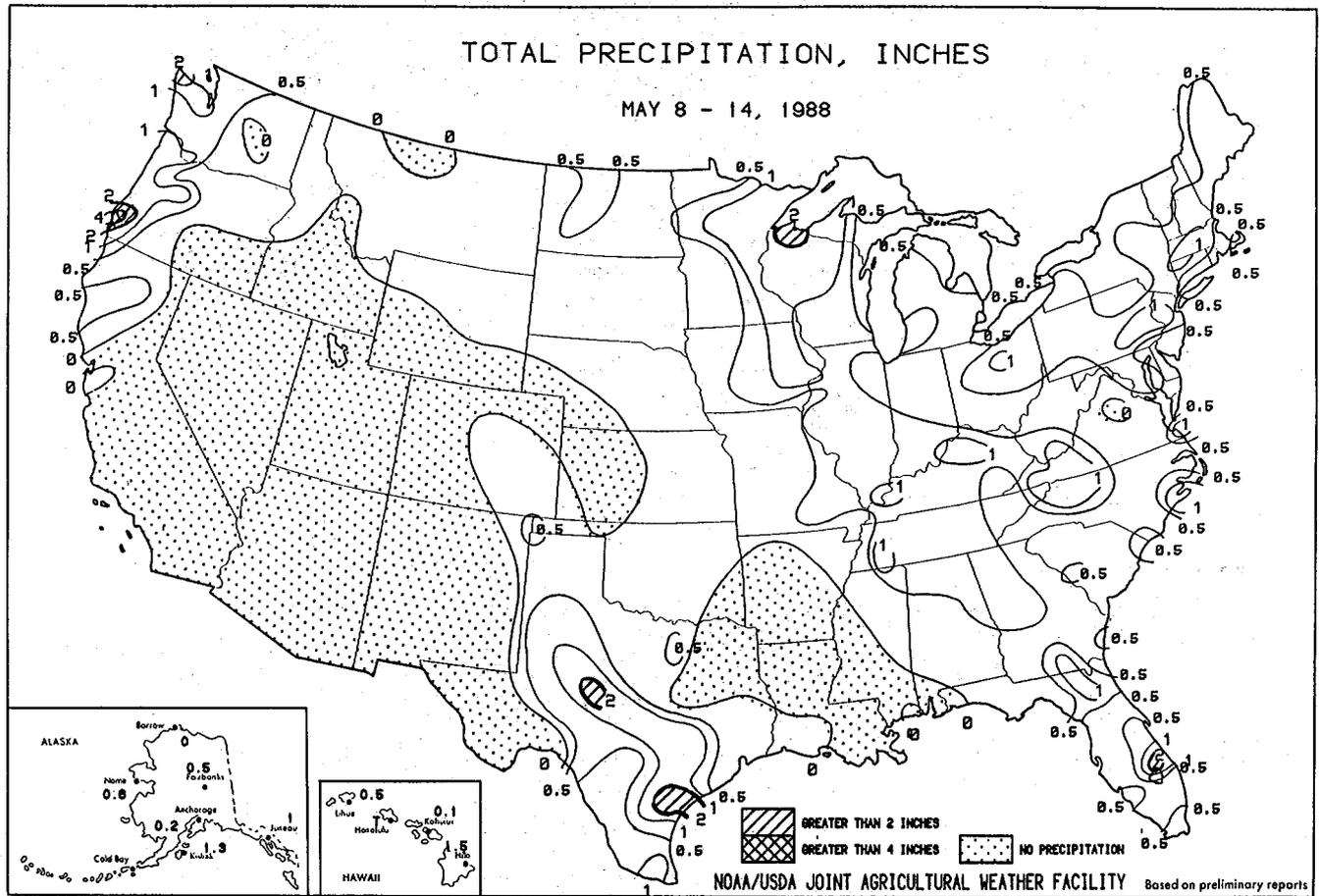
WEDNESDAY...Afternoon showers and thunderstorms developed from south-central Texas through Oklahoma, Kansas, Nebraska, Iowa, and Missouri. Strongest thunderstorms occurred over south-central Texas, where small hail, gusty winds, and heavy rain were reported. Showers and thunderstorms also developed along a cold front moving across the upper Mississippi Valley and the northern Plains. Thunderstorms broke out in the evening along the Atlantic coast. New England was generally cool, while the deserts of California and Arizona were hot.

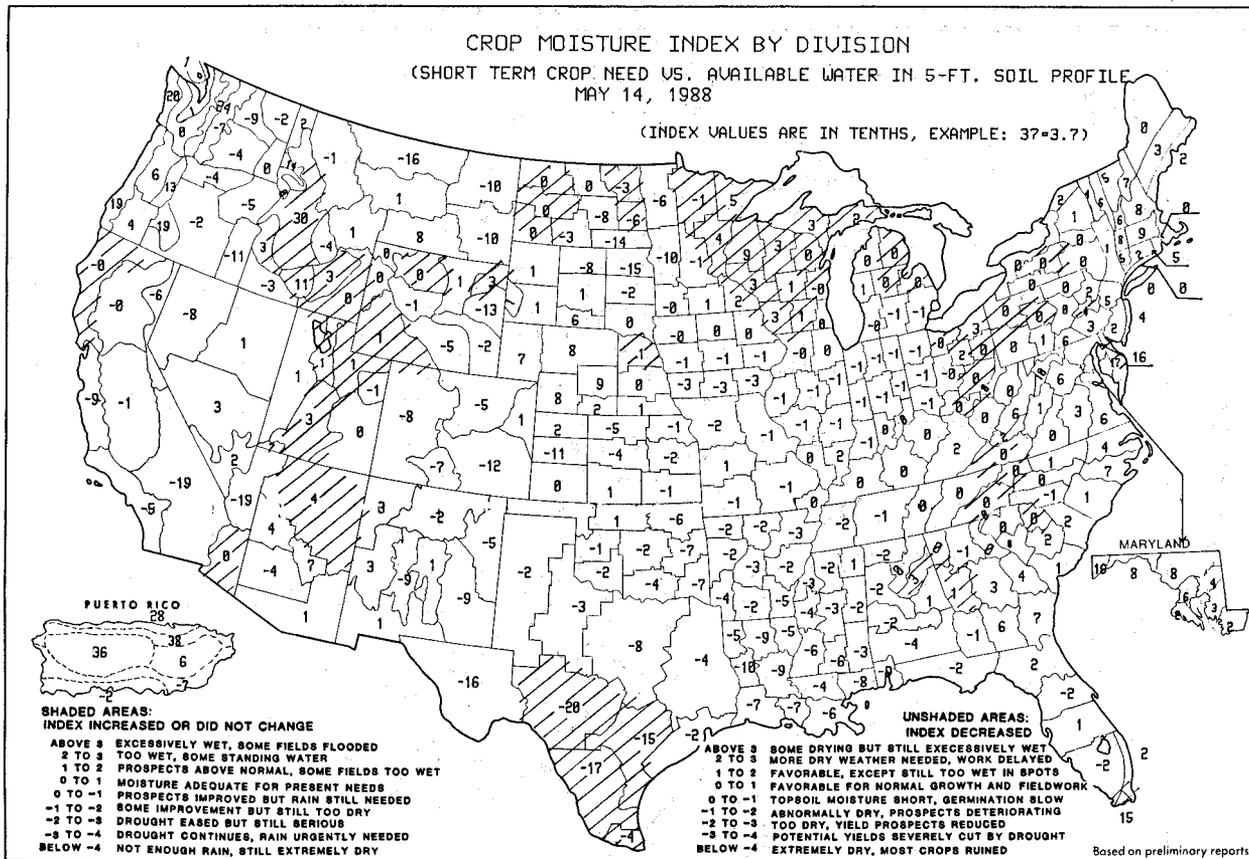
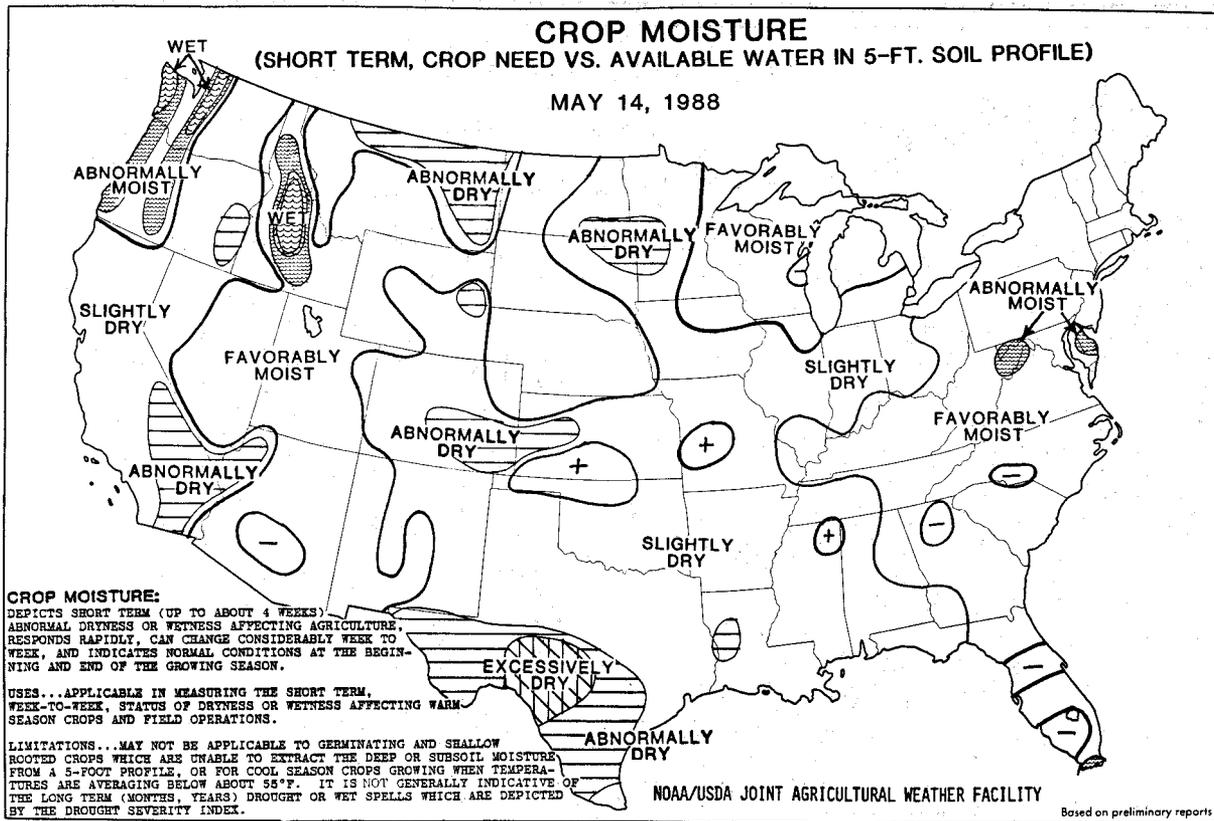
THURSDAY...A cold front extending across the upper Mississippi Valley and the northern Plains triggered showers and thunderstorms. Small hail and gusty winds accompanied the storms in northern Minnesota. Showers and thunderstorms were widely scattered across Arkansas as well as along the Louisiana coast and northwestern Florida. Showers moved onshore across the northern Pacific coast region. Temperatures were quite high again over the Southwest as well as parts of Oregon and Washington.

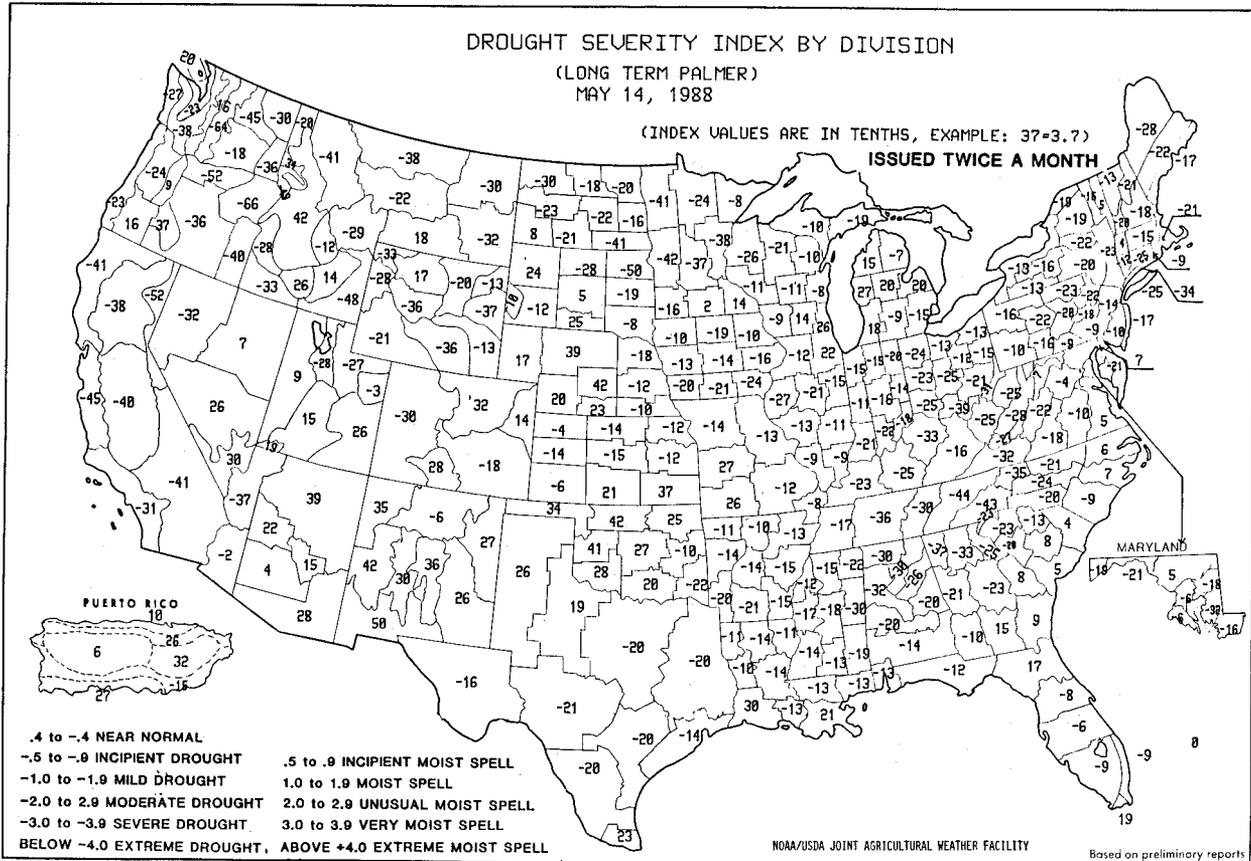
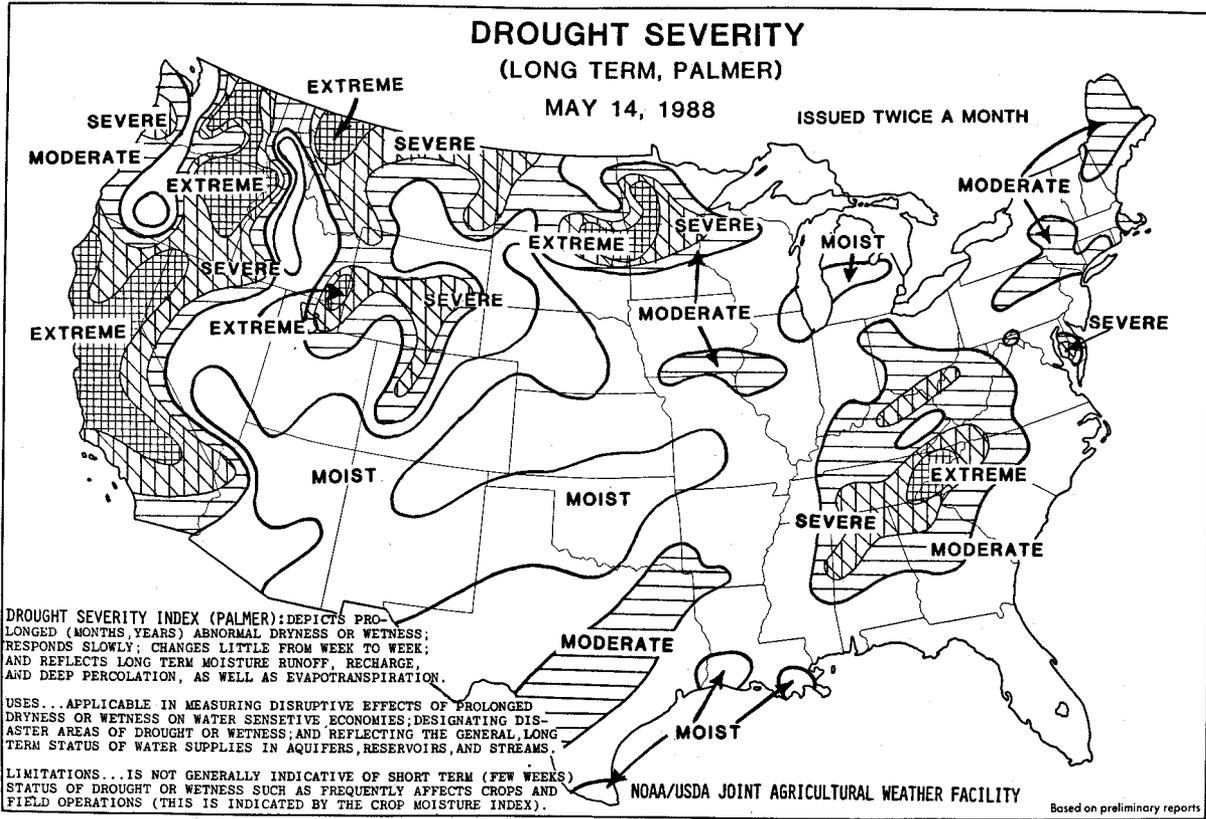
FRIDAY...A cold front moving through the Western States produced strong winds at numerous locations. Thunderstorms developed along a front extending from New England to Kansas. Thunderstorms also were scattered from the Carolina coast to Mississippi. Cool weather prevailed in the Great Lakes region and hot weather in the desert Southwest.

SATURDAY...Warm weather spread from the Southwest to the central and southern Plains and the lower Mississippi Valley. Thunderstorms occurred over most of the Southeast. A cold front triggered thunderstorms in southern Minnesota. Cool weather covered the northern tier of States.

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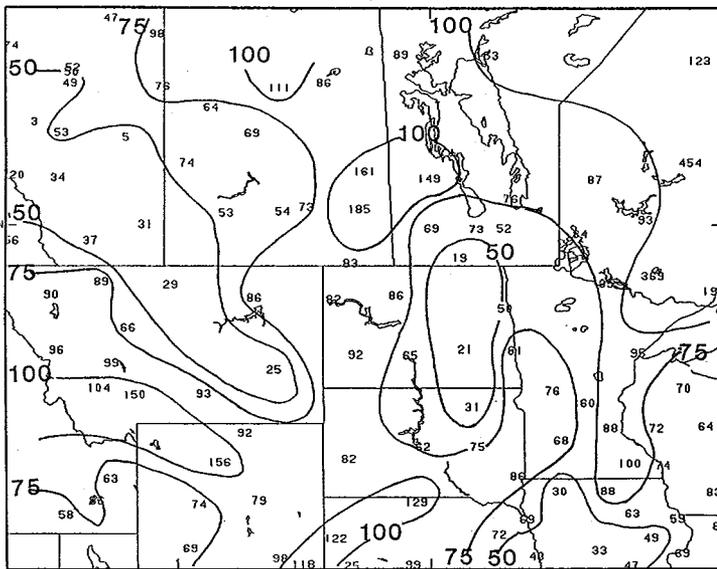






DROUGHT CONTINUES IN THE UPPER MISSISSIPPI VALLEY, NORTHERN PLAINS, AND CANADIAN PRAIRIES

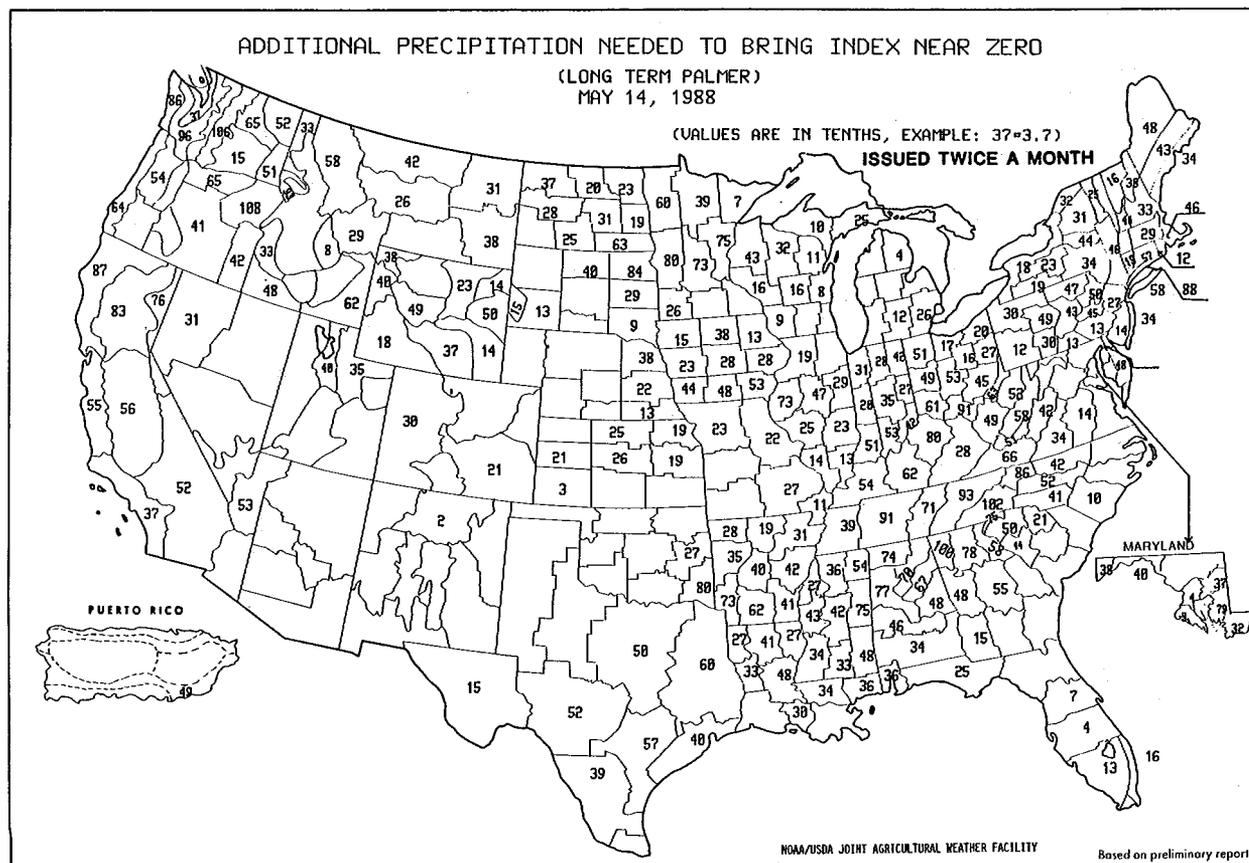
Percentage of Normal Precipitation,
January 1 - May 12, 1988

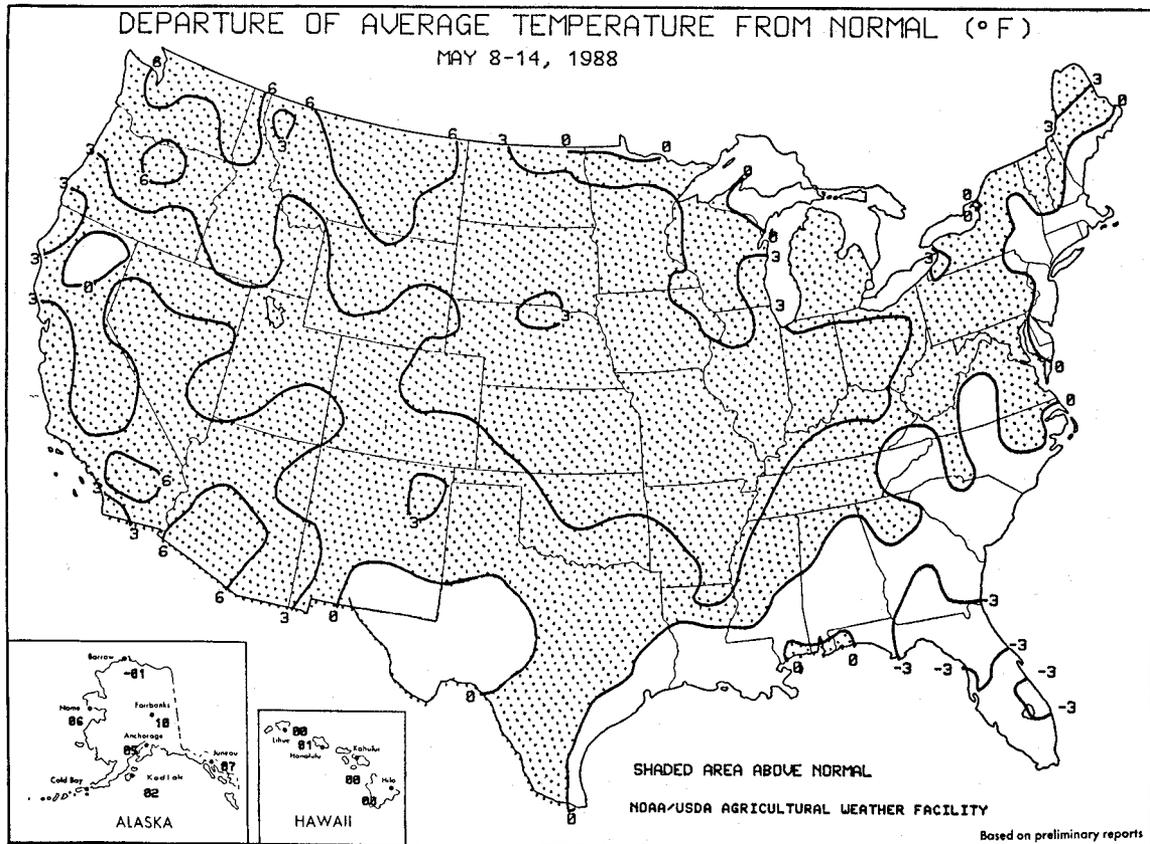
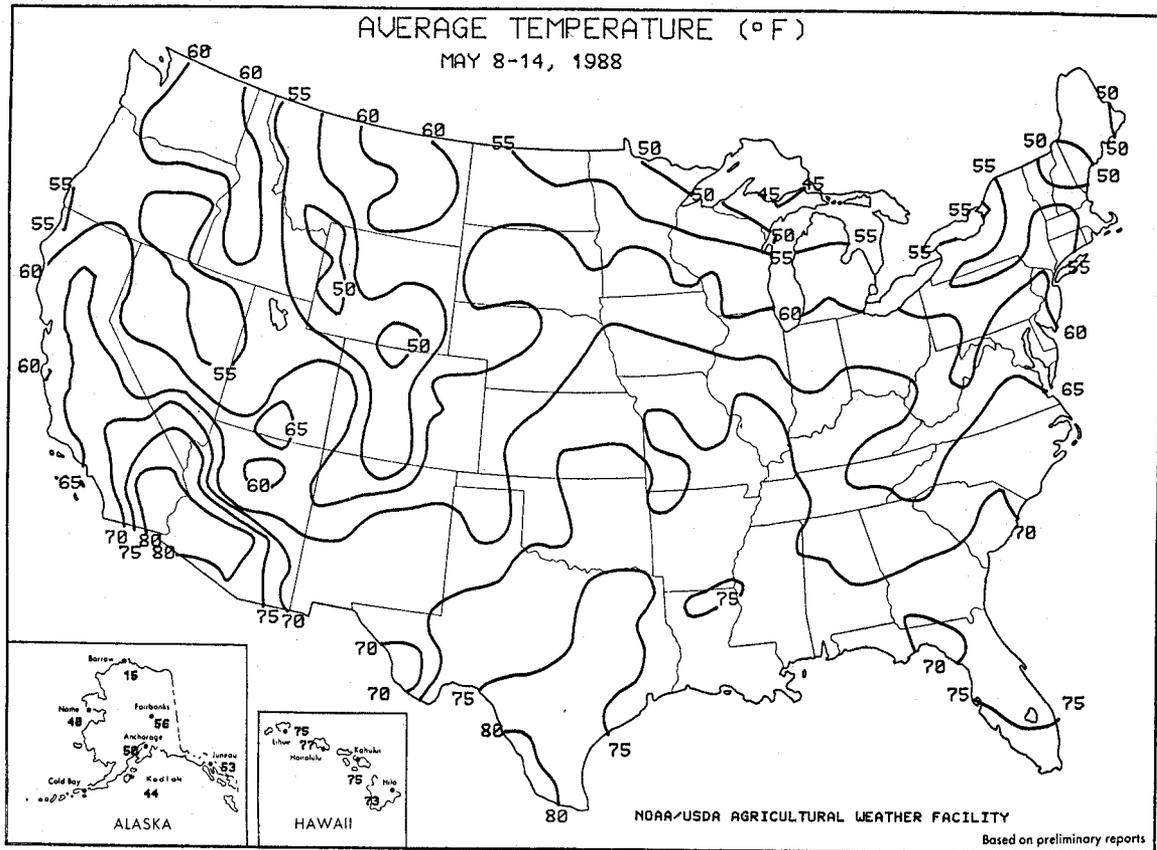


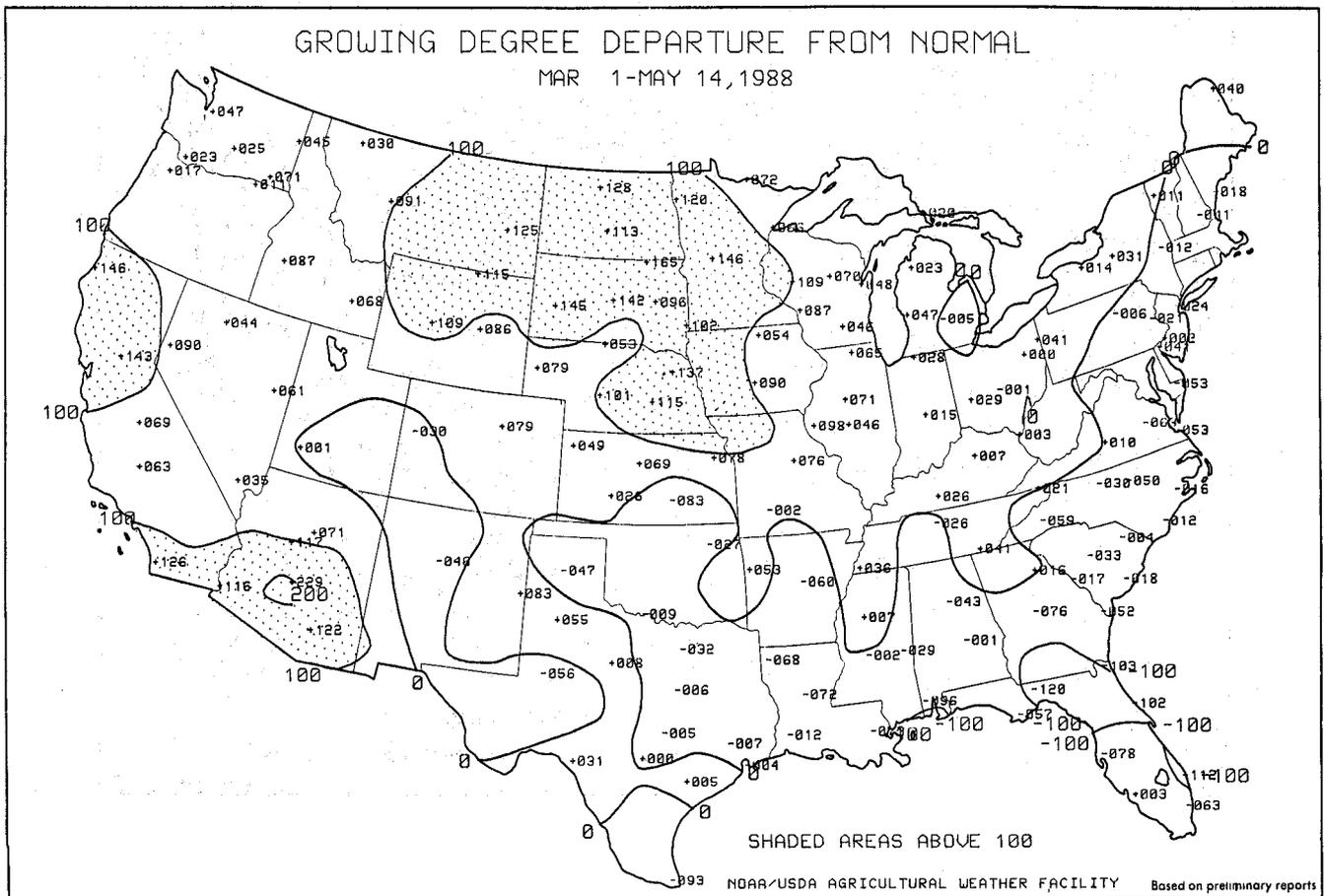
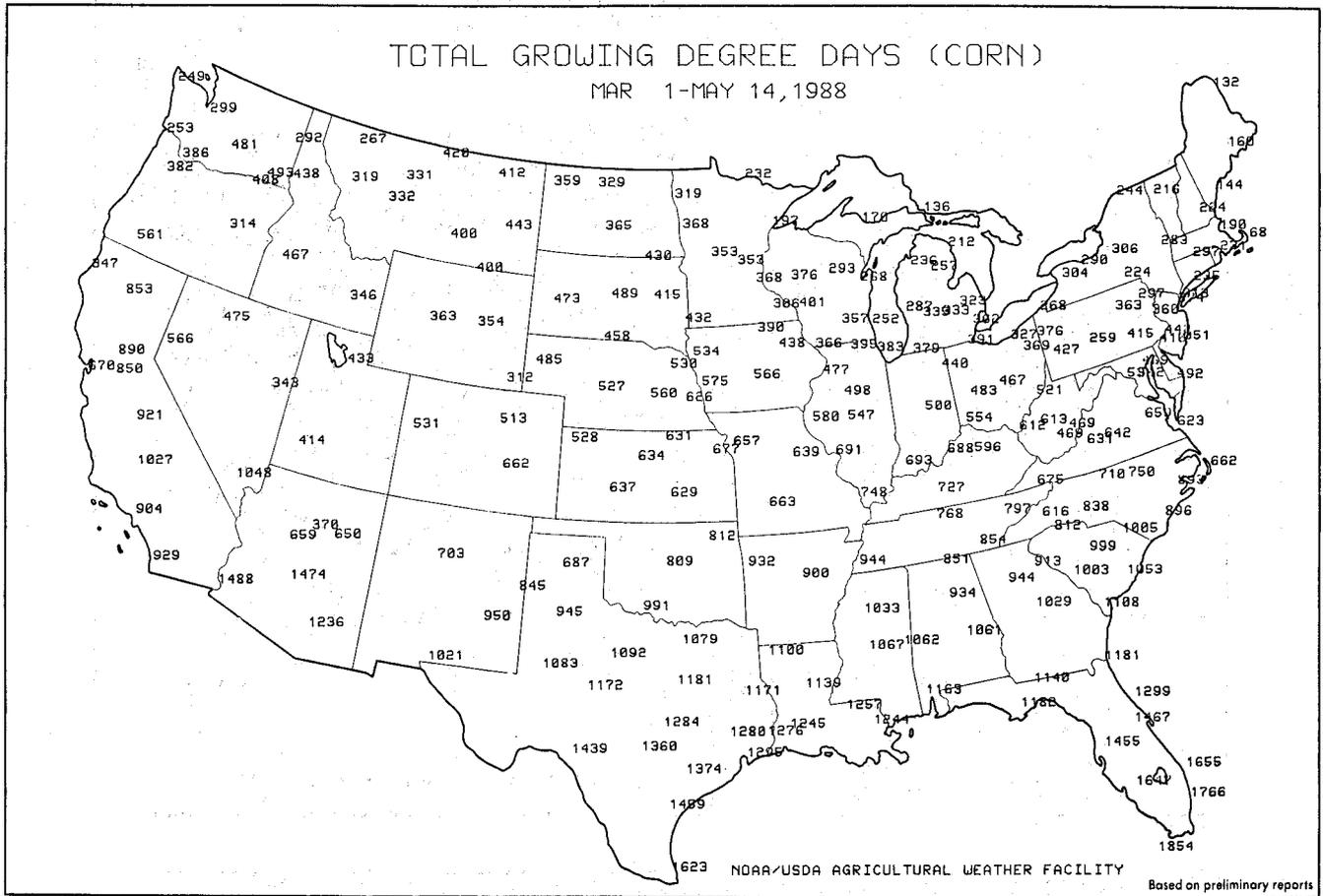
The map of Drought Severity Index (p. 4) shows severe and extreme drought conditions in the northern Great Plains and upper Mississippi Valley. These conditions also extend northward into the Canadian Prairie provinces, an important spring wheat region.

A major storm during the first few days of May produced precipitation amounts of more than an inch in parts of Montana, the Dakotas, Nebraska, and the Canadian prairies, but left significant dry pockets in the north-central States and in south-central Canada. Another storm May 11-12 produced beneficial rainfall in eastern Minnesota and Iowa.

The accompanying map shows percent of normal precipitation accumulations between January 1 and May 12, 1988. Above-normal temperatures during this period have exacerbated the dryness.







National Weather Data for Selected Cities

Weather Data for the Week Ending May 14, 1988

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 MAR 1	PCT. NORMAL SINCE MAR 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	82	55	88	50	68	-1	.4	-.7	.4	6.6	48	14.2	60	96	38	0	0	1	0
MOBILE	85	60	90	52	73	-1	T	-1.2	T	12.0	84	22.9	96	93	38	1	0	0	0
MONTGOMERY	85	56	88	52	70	-1	.3	-.6	.3	11.1	92	22.5	108	94	38	0	0	1	0
AK ANCHORAGE	56	44	61	42	50	5	.2	.1	.1	1.2	82	1.9	61	88	51	0	0	2	0
BARROW	21	10	25	-5	15	-1	T	0	T	.1	33	.2	22	87	76	0	7	0	0
FAIRBANKS	66	46	73	42	56	10	.5	.3	.4	.8	98	1.3	70	77	30	0	0	3	0
JUNEAU	58	48	67	43	53	7	1.0	.2	.6	7.5	97	16.6	109	93	64	0	0	4	1
KODIAK	47	41	50	39	44	2	1.3	.1	.4	16.9	170	34.0	163	100	85	0	0	6	0
NOME	46	35	50	31	40	6	.6	.5	.3	1.9	140	3.7	141	92	63	0	1	2	0
AZ PHOENIX	99	70	107	57	84	9	0	0	0	1.3	116	2.4	100	35	11	6	0	0	0
PRESCOTT	80	44	86	34	62	6	0	-1	0	2.6	102	4.4	75	49	14	0	0	0	0
TUCSON	98	59	105	47	79	7	0	0	0	1.5	142	2.4	98	34	11	6	0	0	0
YUMA	100	67	110	56	84	7	0	0	0	.6	229	1.0	112	42	13	6	0	0	0
AR FORT SMITH	89	53	92	48	71	3	0	-1.1	0	10.7	104	14.4	98	92	29	4	0	0	0
LITTLE ROCK	85	63	88	60	74	5	T	-1.2	T	8.2	65	14.4	70	65	38	0	0	0	0
CA BAKERSFIELD	86	54	96	46	70	0	0	-1	0	1.8	106	2.9	79	74	24	2	0	0	0
EUREKA	65	51	72	49	58	6	.2	-.2	.2	3.7	43	11.4	54	81	61	0	0	1	0
FRESNO	85	52	96	45	69	2	0	-1	0	3.1	108	5.5	80	84	25	2	0	0	0
LOS ANGELES	73	56	79	51	64	2	0	0	0	1.2	45	4.6	56	91	51	0	0	0	0
REDDING	78	48	89	42	63	-4	.6	.3	.6	5.3	63	12.6	54	89	32	0	0	1	1
SACRAMENTO	82	51	94	46	66	2	0	0	-1	0	2.4	70	67	90	29	1	0	0	0
SAN DIEGO	72	58	79	54	65	1	0	0	0	4.3	165	6.7	104	91	56	0	0	0	0
SAN FRANCISCO	73	52	80	51	62	5	T	-1	T	2.2	52	6.5	53	87	44	0	0	0	0
CO DENVER	75	46	87	37	60	5	.2	-.4	.2	2.3	56	3.3	62	63	20	0	0	1	0
GRAND JUNCTION	79	46	89	39	63	2	0	-2	0	1.7	98	3.0	102	45	12	0	0	0	0
PUEBLO	81	41	92	33	61	2	T	-3	T	1.8	77	2.8	96	70	16	2	0	2	0
CT BRIDGEPORT	66	48	72	43	57	0	.5	-.3	.5	4.8	52	11.1	71	86	48	0	0	2	0
HARTFORD	70	44	77	35	57	-1	.8	0	.5	5.5	57	12.8	78	94	39	0	0	4	0
DC WASHINGTON	76	55	82	49	66	1	.2	-.6	.1	5.7	72	11.3	85	96	43	0	0	3	0
FL APALACHICOLA	80	62	84	57	71	-3	.1	-.5	.1	9.0	106	20.4	129	97	59	0	0	2	0
DAYTONA BEACH	81	61	84	55	71	-4	.3	-.4	.2	7.1	111	14.2	118	97	58	0	0	3	0
JACKSONVILLE	81	59	86	53	71	-4	.2	-.7	.1	6.8	84	19.2	130	98	49	0	0	3	0
KEY WEST	82	71	85	65	77	-4	1.5	.8	1.4	6.4	160	11.6	150	86	59	0	0	2	1
MIAMI	84	69	88	66	76	-2	.3	-1.1	.2	3.4	45	5.9	50	84	48	0	0	2	0
ORLANDO	85	64	87	59	75	-2	.7	-1.1	.5	8.8	128	13.3	108	94	45	0	0	4	1
TALLAHASSEE	84	55	88	50	69	-4	.1	-1.0	.1	11.6	98	22.2	102	98	40	0	0	3	0
TAMPA	85	63	86	57	74	-2	T	-.7	T	5.9	92	10.1	86	94	48	0	0	1	0
WEST PALM BEACH	83	66	88	63	75	-3	T	-1.3	T	9.8	118	16.2	118	89	51	0	0	1	0
GA ATLANTA	80	59	86	55	69	1	.8	-1.1	.7	9.9	82	17.9	83	84	39	0	0	3	1
AUGUSTA	82	56	85	49	69	-1	.8	-1.1	.6	9.1	93	16.7	93	99	42	0	0	2	1
MACON	82	58	86	51	70	-2	.6	-.2	.4	9.1	88	17.0	89	96	42	0	0	2	0
SAVANNAH	82	62	86	58	72	-1	T	-1.0	T	8.0	89	15.5	101	90	40	0	0	0	0
HI HILO	80	66	82	63	73	0	1.5	-.8	.5	30.3	97	50.5	93	96	68	0	0	7	0
HONOLULU	85	70	86	68	77	1	T	-.3	T	2.0	37	6.4	53	87	53	0	0	2	0
KAHULUI	82	68	85	63	75	0	.1	0	.1	2.4	60	11.1	100	88	59	0	0	2	0
LIHUE	80	71	81	68	75	0	.5	-.2	.3	6.1	66	17.5	91	89	68	0	0	4	0
ID BOISE	77	46	93	39	62	5	T	-.3	T	3.5	129	5.2	96	70	21	1	0	1	0
LEWISTON	78	50	95	44	64	7	.1	-.3	.1	2.3	83	3.4	67	73	27	1	0	1	0
POCATELLO	70	39	85	32	54	2	T	-.3	T	2.6	100	3.9	85	85	25	0	1	1	0
IL CHICAGO	74	47	85	39	61	3	.2	-.5	.1	4.5	56	7.6	71	93	41	0	0	3	0
MOLINE	77	49	86	42	63	3	1.2	.3	.8	4.9	57	7.8	67	91	38	0	0	4	1
PEORIA	78	52	86	48	65	5	.6	-.3	.6	5.0	59	7.7	66	81	34	0	0	1	1
QUINCY	80	53	89	50	66	4	.7	-.3	.7	3.4	38	5.0	42	82	36	0	0	1	1
ROCKFORD	74	48	83	39	61	3	.7	-1.1	.4	6.0	70	9.0	81	89	42	0	0	4	0
SPRINGFIELD	80	53	89	47	66	4	.4	-.4	.4	4.4	51	8.0	66	79	34	0	0	1	0
IN EVANSVILLE	83	56	89	50	69	5	.5	-.6	.4	5.2	49	12.4	74	88	32	0	0	2	0
FORT WAYNE	76	50	83	45	63	4	.4	-.4	.3	6.2	77	9.7	80	81	31	0	0	2	0
INDIANAPOLIS	77	52	83	44	64	3	.4	-.5	.2	7.6	86	13.0	92	86	36	0	0	3	0
SOUTH BEND	73	47	83	39	60	2	.2	-.4	.1	6.1	74	10.3	80	90	39	0	0	4	0
IA DES MOINES	79	52	93	47	66	5	.6	-.3	.6	2.0	28	3.0	32	74	27	1	0	2	1
STOUC CITY	81	48	93	46	65	4	T	-.7	T	3.5	64	4.7	66	79	26	1	0	1	0
WATERLOO	75	48	88	45	61	4	1.5	.6	1.5	4.6	60	5.7	61	88	38	0	0	2	1
KS CONCORDIA	82	53	90	47	68	6	.1	-.8	.1	2.2	38	3.6	48	71	25	1	0	1	0
DOUG CITY	82	53	90	43	68	5	0	-.7	0	3.9	83	5.0	87	70	24	2	0	0	0
GOODLAND	78	45	88	37	62	4	T	-.6	T	4.6	135	6.5	155	76	22	0	0	0	0
TOPEKA	83	54	90	47	69	5	.4	-.5	.4	4.5	65	7.0	78	85	27	1	0	1	0
WICHITA	84	54	90	49	69	5	T	-.8	T	7.5	122	8.2	106	84	28	1	0	2	0
KY BOWLING GREEN	80	53	87	44	67	1	.5	-.5	.4	5.9	52	13.1	65	97	36	0	0	2	0
LEXINGTON	79	53	84	46	66	3	1.2	.2	.6	7.1	66	13.1	74	88	35	0	0	4	2
LOUISVILLE	81	56	88	50	68	4	1.0	.1	.9	8.6	81	16.2	93	92	36	0	0	3	1
LA ALEXANDRIA	84	60	87	54	72	-1	T	-1.2	T	11.7	90	16.8	76	87	38	0	0	0	0
BATON ROUGE	86	61	92	54	73	-1	T	-1.2	T	13.7	108	30.1	135	93	42	2	0	0	0
LAKE CHARLES	85	63	91	55	74	0	.2	-1.1	.2	9.8	102	18.1	102	96	48	1	0	1	0
NEW ORLEANS	84	61	89	53	73	-1	T	-1.2	T	18.2	158	33.2	152	99	46	0	0	0	0

Based on 1951-80 normals

Weather Data for the Week Ending May 14, 1988

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 MAR 1	PCT. NORMAL SINCE MAR 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	86	62	90	56	74	2	T	-1.1	T	7.4	69	13.0	71	91	38	1	0	1	0
ME CARIBOU	67	40	76	30	54	5	.6	0	.5	3.8	61	9.2	86	83	32	0	1	2	1
PORTLAND	58	40	65	34	49	-2	.7	-1.1	.3	6.5	69	11.8	70	95	56	0	0	3	0
MD BALTIMORE	74	51	83	45	63	1	.3	-.5	.2	6.8	80	13.3	91	93	42	0	0	3	0
SALISBURY	74	49	79	39	61	-1	.3	-.5	.2	10.4	119	18.5	119	95	46	0	0	2	0
MA BOSTON	62	47	75	41	54	-3	.4	-.4	.3	5.8	61	12.2	71	90	49	0	0	2	0
CHATHAM	55	44	59	38	49	-3	.5	-.4	.4	6.1	53	14.0	76	86	71	0	0	3	0
MI ALPENA	65	39	82	29	52	1	.9	-.2	.4	6.8	120	9.4	107	93	43	0	2	4	0
DETROIT	70	48	82	42	59	2	.4	-.2	.2	3.1	44	6.4	61	83	40	0	0	3	0
FLINT	70	45	82	37	58	3	.1	-.5	.1	4.2	66	7.0	74	85	42	0	0	2	0
GRAND RAPIDS	70	47	83	36	58	2	.6	0	.6	5.9	78	9.4	85	86	42	0	0	3	1
HOUGHTON LAKE	66	45	79	31	55	3	.3	-.3	.2	5.1	89	7.9	93	83	44	0	1	3	0
LANSING	70	45	82	35	58	2	.2	-.3	.1	5.6	90	8.3	89	90	43	0	0	2	0
MARQUETTE	61	34	72	26	48	-1	.4	-.5	.2	5.6	67	10.5	86	92	48	0	5	6	0
MUSKEGON	69	45	83	36	57	2	.3	-.2	.2	6.1	89	10.7	98	86	42	0	0	3	0
SAULT ST. MARIE	58	35	72	24	46	-2	.2	1.0	.4	5.5	61	10.8	101	106	49	0	4	5	0
MN ALEXANDRIA	74	45	81	32	59	5	.4	-.2	.2	3.3	71	4.5	72	78	26	0	1	3	0
DULUTH	64	38	75	30	51	3	2.6	2.0	1.5	5.9	113	6.8	93	89	38	0	1	4	2
INT'L FALLS	63	36	76	26	49	0	.3	-.2	.2	2.7	73	3.3	62	88	37	0	2	3	1
MINNEAPOLIS	74	46	86	39	60	3	1.0	.3	.5	4.1	80	5.7	85	86	38	0	0	3	1
ROCHESTER	71	44	80	37	57	2	1.7	.9	1.4	5.6	97	7.0	96	85	43	0	0	2	1
MS GREENWOOD	86	60	91	52	73	2	.2	-1.0	.2	7.1	50	11.5	48	84	32	1	0	1	0
JACKSON	87	58	91	51	72	1	T	-1.2	T	12.8	94	19.0	82	95	36	1	0	0	0
MERIDIAN	85	55	89	49	70	-1	.4	-.6	.4	11.9	85	18.8	79	96	35	0	0	1	0
MO CAPE GIRARDEAU	84	56	90	48	70	4	.4	-.7	.4	6.9	59	12.2	69	89	32	1	0	1	0
COLUMBIA	81	55	86	51	68	4	.4	-.7	.4	7.5	80	11.3	86	83	40	0	0	1	0
KANSAS CITY	82	56	90	52	69	4	.4	-.6	.4	4.9	61	7.0	67	74	28	1	0	1	0
SAINT LOUIS	82	58	90	52	70	5	.6	-.3	.6	6.5	78	12.1	98	74	34	1	0	1	1
SPRINGFIELD	82	53	86	48	68	4	.2	-.8	.2	10.0	106	13.6	102	80	33	0	0	2	0
MT BILLINGS	74	49	87	42	62	8	.1	-.4	.1	4.0	99	5.2	91	63	21	0	0	2	0
GLASGOW	77	46	85	40	62	8	.2	-.1	.1	1.4	84	2.1	79	79	21	0	0	2	0
GREAT FALLS	73	44	80	35	58	6	T	-.5	T	2.1	60	3.3	64	70	22	0	0	1	0
HAVRE	78	45	87	33	62	8	T	-.4	T	.5	19	1.0	28	64	17	0	0	0	0
HELENA	72	42	82	36	57	6	.1	-.3	.1	2.7	109	3.4	96	81	25	0	0	1	0
KALISPELL	67	39	82	34	53	3	.1	-.2	.1	2.9	111	4.7	89	92	40	0	0	2	0
MILES CITY	76	46	87	32	61	5	.2	-.3	.1	.7	25	1.1	27	71	23	0	1	2	0
MISSOULA	70	39	84	34	55	4	T	-.3	T	3.1	124	4.4	94	89	34	0	0	1	0
NE GRAND ISLAND	80	48	88	44	64	4	T	-.8	T	3.1	53	4.6	64	76	26	0	0	0	0
LINCOLN	81	51	90	48	66	5	.1	-.8	.1	3.1	48	3.8	46	78	25	1	0	2	0
NORFOLK	79	48	89	46	64	5	.1	-.7	.1	3.3	63	4.5	69	79	26	0	0	3	0
NORTH PLATTE	78	43	87	36	60	3	T	-.7	T	4.2	96	4.9	93	88	26	0	0	1	0
OMAHA	80	52	91	50	66	4	T	-.9	T	2.9	42	3.5	41	74	34	1	0	2	0
SCOTT'SBLUFF	76	42	89	31	59	3	T	-.5	T	4.1	116	5.0	115	76	21	0	1	1	0
VALENTINE	74	44	85	38	59	3	.1	-.6	.1	4.3	107	5.7	122	75	28	0	0	1	0
NV ELY	72	34	81	25	53	4	T	-.3	T	2.2	93	3.5	94	82	25	0	4	0	0
LAS VEGAS	92	60	101	49	76	4	0	-1.1	0	.8	109	1.7	102	36	10	5	0	0	0
RENO	78	41	89	29	59	6	0	-.2	0	1.0	66	1.5	41	68	16	0	1	0	0
WINNEMUCCA	75	36	88	27	56	2	T	-.2	T	1.9	104	3.3	98	76	18	0	2	1	0
NH CONCORD	67	39	82	30	53	-1	.8	-.2	.3	5.1	70	9.3	74	95	39	0	2	3	0
NJ ATLANTIC CITY	68	44	76	35	56	-3	.2	-.5	.1	5.3	62	12.1	78	97	51	0	0	2	0
NM ALBUQUERQUE	81	50	89	37	66	2	0	-.1	0	2.3	210	2.5	135	43	12	0	0	0	0
CLOVIS	81	53	94	50	67	3	0	-.5	0	1.2	56	1.7	56	62	21	1	0	0	0
ROSWELL	85	51	96	45	68	0	T	-.2	T	1.6	146	3.3	172	60	19	2	0	0	0
NY ALBANY	71	41	81	36	56	0	.5	-.3	.2	4.4	59	9.3	77	94	39	0	0	4	0
BINGHAMTON	68	41	78	31	54	0	.4	-.3	.4	5.0	68	10.4	84	86	39	0	1	3	0
BUFFALO	71	47	82	39	59	4	.5	-.1	.3	6.5	89	12.2	95	83	33	0	0	3	0
NEW YORK	68	51	75	47	60	-1	.3	-.5	.2	5.5	59	11.6	74	95	50	0	0	2	0
ROCHESTER	71	44	82	35	58	2	.2	-.4	.1	4.2	66	7.1	64	90	35	0	0	3	0
SYRACUSE	72	43	81	37	58	2	.4	-.3	.2	5.0	63	8.6	65	91	36	0	0	3	0
NC ASHEVILLE	76	46	82	40	61	-2	.1	-.9	0	5.1	51	9.7	59	94	38	0	0	2	0
CHARLOTTE	81	56	84	52	69	1	.3	-.5	.3	6.0	63	10.6	61	89	35	0	0	1	0
GREENSBORO	78	52	81	48	65	0	1.0	-.2	.8	6.4	76	10.0	65	93	46	0	0	2	1
HATTERAS	74	56	80	47	65	-1	.2	-.7	.1	7.1	80	16.9	95	96	58	0	0	2	0
NEW BERN	81	56	84	46	69	0	.7	-.3	.7	9.6	113	16.9	102	94	45	0	0	2	1
RALEIGH	80	53	83	50	67	0	T	-.8	T	6.1	75	11.7	77	96	43	0	0	1	0
WILMINGTON	80	57	83	50	68	-2	.2	-.7	.2	9.3	106	16.7	105	99	50	0	0	1	0
ND BISMARCK	73	41	84	29	57	3	.1	-.4	.1	1.4	45	2.5	61	81	26	0	1	2	0
FARGO	74	43	82	24	59	4	.5	0	.4	1.8	48	3.6	78	81	25	0	1	3	0
GRAND FORKS	70	41	79	27	55	2	.3	-.1	.3	1.2	42	2.0	48	80	35	0	2	1	0
WILLISTON	74	43	80	38	59	5	.4	0	.2	2.0	79	3.0	86	84	26	0	0	2	0
OH AKRON-CANTON	73	49	81	43	61	3	.6	-.2	.5	6.1	75	10.0	77	82	36	0	0	3	1
CINCINNATI	80	52	85	47	66	4	.4	-.4	.3	7.8	84	15.4	102	86	31	0	0	3	0
CLEVELAND	72	47	83	39	60	2	.6	-.2	.3	6.5	83	10.4	83	79	39	0	0	3	0
COLUMBUS	77	52	84	44	64	4	.3	-.5	.2	5.8	70	12.2	92	84	36	0	0	4	0

Based on 1951-80 normals

Weather Data for the Week Ending May 14, 1988

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 MAR 1	PCT. NORMAL SINCE MAR 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	77	52	84	46	65	4	.5	-.4	.4	5.5	68	10.8	84	75	32	0	0	4	0
TOLEDO	72	47	82	39	60	2	.3	-.4	.2	3.4	49	5.9	55	84	36	0	0	3	0
YOUNGSTOWN	73	43	82	36	58	2	.6	-.2	.3	5.2	63	8.8	67	88	36	0	0	3	0
OK OKLAHOMA CITY	84	59	87	53	71	4	T	-1.2	T	11.1	150	12.8	131	71	26	0	0	0	0
TULSA	86	61	90	54	73	5	0	-1.2	0	9.7	101	11.9	93	71	28	1	0	0	0
OR ASTORIA	65	46	76	39	55	4	.6	-.1	.3	14.2	108	24.4	76	96	61	0	0	4	0
BURNS	70	36	86	30	53	2	T	-.2	T	1.9	97	3.1	69	82	24	0	2	1	0
MEDFORD	74	43	91	38	59	2	.3	.1	.2	2.6	77	5.3	60	94	37	1	0	2	0
PENDLETON	76	47	92	41	62	4	.1	-.2	.1	3.6	142	5.5	103	82	30	1	0	2	0
PORTLAND	72	50	88	44	61	5	.6	.1	.5	9.0	132	15.1	89	94	47	0	0	2	0
SALEM	70	46	83	39	58	4	.6	.2	.3	8.5	113	16.0	83	95	54	0	0	3	0
PA ALLENTOWN	73	46	80	39	60	1	1.1	.3	.5	5.9	62	11.9	75	93	43	0	0	4	0
ERIE	70	45	83	38	58	3	.6	-.1	.5	6.2	79	10.2	82	84	38	0	0	2	1
HARRISBURG	74	49	83	43	61	1	1.1	.3	.9	7.2	86	12.6	89	92	41	0	0	2	1
PHILADELPHIA	74	50	81	43	62	0	.2	-.5	.1	6.2	72	13.1	89	92	43	0	0	3	0
PITTSBURGH	75	47	83	38	61	3	.5	-.3	.3	5.5	65	10.4	76	92	37	0	0	3	0
SCRANTON	71	45	81	36	58	0	.1	-.6	.1	5.4	77	9.2	81	84	37	0	0	3	0
RI PROVIDENCE	64	44	73	36	54	-2	.2	-.6	.2	7.6	78	15.6	88	95	52	0	0	2	0
SC CHARLESTON	82	61	85	56	71	0	.1	-.8	.1	6.1	70	11.2	73	98	45	0	0	3	0
COLUMBIA	83	55	86	49	69	-1	.2	-.7	.2	5.8	56	11.9	63	96	35	0	0	1	0
FLORENCE	83	57	87	51	70	-1	.1	-.6	.1	8.0	95	12.0	78	95	38	0	0	1	0
GRENVILLE	80	53	85	45	66	-1	.1	-.7	.1	7.7	64	13.4	64	94	39	0	0	2	0
SD ABERDEEN	77	43	88	28	60	5	.1	-.4	.1	.8	21	1.5	29	72	19	0	1	2	0
HURON	76	45	88	33	60	5	.1	-.5	0	3.1	71	4.0	72	76	28	0	0	2	0
RAPID CITY	75	45	84	36	60	6	.4	-.2	.4	3.5	85	4.0	78	77	28	0	0	1	0
SIOUX FALLS	76	45	87	41	61	4	T	-.7	T	3.8	71	5.5	82	76	28	0	0	2	0
TN CHATTANOOGA	81	53	86	48	67	0	.5	-.5	.2	5.9	46	14.9	65	97	39	0	0	3	0
KNOXVILLE	80	51	85	46	65	-1	.3	-.5	.2	6.4	59	13.7	69	96	41	0	0	2	0
MEMPHIS	85	61	91	58	73	3	.7	-.5	.4	7.8	57	15.5	68	86	35	1	0	2	0
TX NASHVILLE	83	56	89	48	69	2	.3	-.8	.3	5.1	42	10.8	52	88	33	0	0	2	0
ABILENE	85	58	89	50	71	0	.3	-.4	.3	3.0	59	3.4	48	75	26	0	0	2	0
AMARILLO	79	50	91	39	64	0	.4	-.2	.4	3.8	126	4.2	102	73	25	1	0	2	0
AUSTIN	86	67	96	62	76	2	.9	-.1	.8	5.6	82	6.2	57	95	44	3	0	2	1
BEAUMONT	85	64	89	57	74	0	.2	-.9	.2	8.4	88	16.7	93	98	51	0	0	1	0
BROWNSVILLE	86	71	89	65	78	0	.3	-.2	.2	1.7	56	7.2	125	95	58	0	0	2	0
CORPUS CHRISTI	85	68	90	63	77	-1	.8	-.1	.5	2.2	55	4.2	59	97	62	1	0	2	0
DEL RIO	88	66	95	60	77	0	.3	-.1	.3	.6	18	.9	17	75	29	3	0	1	0
EL PASO	88	50	97	41	69	-2	0	-.1	0	.3	59	1.3	93	49	14	3	0	0	0
FORT WORTH	88	59	91	54	74	2	0	-1.0	0	4.2	49	6.4	52	83	25	1	0	0	0
GALVESTON	80	71	82	67	75	0	.1	-.6	.1	9.7	156	13.6	117	90	60	0	0	1	0
HOUSTON	86	64	90	56	75	0	T	-1.1	T	6.2	72	8.7	57	95	47	1	0	1	0
LUBBOCK	83	53	93	46	68	0	.4	-.2	.3	2.2	74	2.9	73	72	28	1	0	2	0
MIDLAND	86	53	93	46	70	-2	.5	0	.5	1.5	67	2.0	61	72	24	3	0	1	0
SAN ANGELO	85	55	95	47	70	-2	2.0	1.4	1.5	4.0	110	4.5	87	87	30	2	0	2	1
SAN ANTONIO	89	66	97	59	77	3	T	-.8	T	2.1	37	3.4	38	93	35	3	0	1	0
VICTORIA	84	66	87	60	75	-1	.7	-.3	.5	3.5	59	6.3	63	98	57	0	0	2	0
WACO	88	63	95	57	75	2	T	-1.1	T	4.5	55	6.6	56	91	36	3	0	1	0
WICHITA FALLS	87	57	91	51	72	2	.2	-.8	.2	7.6	111	9.4	107	80	23	2	0	1	0
UT BLANDING	77	44	83	34	60	5	0	-.1	0	.8	46	3.3	82	49	21	0	0	0	0
CEDAR CITY	75	39	82	31	57	2	0	-.2	0	4.6	186	6.2	157	70	20	0	2	0	0
SALT LAKE CITY	73	44	85	41	59	1	.1	-.2	.1	3.1	67	4.3	59	78	24	0	0	1	0
VT BURLINGTON	70	41	81	33	55	1	.4	-.2	.3	3.9	63	6.3	64	87	38	0	0	2	0
VA NORFOLK	76	54	83	45	65	-1	.9	0	.8	8.0	96	13.8	90	96	45	0	0	2	1
RICHMOND	79	52	84	45	66	1	.1	-.7	.1	5.8	72	11.4	79	96	41	0	0	1	0
ROANOKE	77	49	82	44	63	-1	.3	-.5	.2	5.4	65	8.3	58	96	43	0	0	2	0
WA QUILLAYUTE	67	46	84	36	57	6	2.1	.8	1.3	28.9	134	46.5	96	99	56	0	0	4	2
SEATTLE-TACOMA	71	50	83	46	61	6	.6	.2	.5	7.9	118	12.7	74	93	46	0	0	2	0
SPOKANE	75	44	89	39	59	6	.1	-.2	.1	3.9	131	6.0	85	87	28	0	0	1	0
YAKIMA	77	46	91	38	61	5	.1	-.1	.1	1.7	136	2.4	71	84	28	1	0	1	0
WV BECKLEY	74	49	80	40	62	3	.6	-.2	.4	6.7	74	10.6	67	81	32	0	0	3	0
CHARLESTON	79	50	84	40	65	2	.2	-.6	.1	6.2	68	10.3	65	93	35	0	0	4	0
HUNTINGTON	80	51	84	40	64	2	.4	-.5	.3	7.5	80	11.8	77	93	33	0	0	2	0
PARKERSBURG	77	50	84	40	64	1	.1	-.7	.1	6.4	75	9.2	65	95	37	0	0	2	0
WI GREEN BAY	71	43	79	35	57	3	.1	-.6	0	3.7	62	6.2	75	93	39	0	0	2	0
LACROSSE	73	48	85	40	61	3	.9	.1	.6	4.8	73	5.9	71	91	38	0	0	3	1
MADISON	72	45	80	36	59	3	.9	.2	.6	4.8	71	7.1	79	93	40	0	0	5	1
MILWAUKEE	70	46	81	39	58	5	.4	-.1	.2	5.9	82	10.4	103	94	50	0	0	4	0
WAUSAU	69	43	77	36	56	2	1.2	.4	.9	4.7	72	5.1	61	93	41	0	0	4	1
WY CASPER	71	37	85	30	54	3	.5	0	.5	2.3	67	3.4	75	83	21	0	2	1	1
CHEYENNE	70	40	82	33	55	4	T	-.5	T	3.4	105	4.6	113	73	23	0	0	0	0
LANDER	72	41	86	34	56	5	T	-.6	T	3.6	78	4.0	70	65	21	0	0	1	0
SHERIDAN	72	43	87	38	57	6	T	-.5	T	3.6	85	5.0	88	87	34	0	0	1	0
PR SAN JUAN	87	75	89	74	81	1	.7	-.6	.5	6.5	77	12.6	93	90	82	0	0	3	1

Based on 1951-80 normals

National Agricultural Summary

May 9 to 15, 1988

HIGHLIGHTS: Inadequate moisture hampered seeding and crop growth throughout most of the eastern half of the Nation. Above-normal temperatures accelerated small grain development in most areas of the Nation. Soil moisture remained short in the northern Great Plains. In the Southeast, soil moisture was mostly adequate to short and in the Corn Belt and Delta short to adequate. Fieldwork averaged 5 to 6 days in most areas.

Wheat began showing moisture stress in the central and northern Great Plains. Heading was 42 percent (%) finished, equaling the 5-year average. Harvest was underway in California, Arizona, Texas, and Georgia. Spring wheat seeding reached 93% completion, 16 percentage points above normal. Corn planting increased 18 points ahead of the previous week and was 22 points ahead of normal. Corn reached the dough stage in Texas. Planting neared completion in most Corn Belt States. Soybeans were 39% seeded, slightly behind 1987 but 18 points above normal. Dryness hampered seeding. Cotton producers seeded 60% of the acreage, 3 points above average. Cotton was squaring in Arizona and setting bolls in Texas. Sorghum was 34% seeded. Rice seeding increased 11 points to 84% completion. In the Delta, flushing was needed to achieve germination. Livestock was mostly good.

SMALL GRAINS: Winter wheat was mostly good to fair but remained mostly fair in the northern and central Great Plains. Soil moisture was becoming increasingly short as wheat moves into the critical heading stage in the northern and central Great Plains. Winter wheat heading advanced 23 points to 42% completion in the 20 major producing States. Despite the surge, heading remained 12 points behind 1987 but pulled even with the average. Above-normal temperatures spurred development in most areas. Heading had not begun in Idaho, Montana, and South Dakota.

In Texas, small grains matured rapidly in the Blacklands and harvest is expected to begin soon. Producers irrigated heavily but dryland fields need additional moisture. Rain delayed harvest in southern Texas. Oklahoma's wheat need moisture to fill grain heads in many localities. Disease was becoming more evident in northern areas. Warm weather pushed development ahead of normal with some wheat reaching the soft dough stage. Kansas wheat was moisture stressed in most areas. The presence of Russian wheat aphids and wheat streak mosaic disease was light to severe in central and western areas, but was light elsewhere. Heading climbed 10 points ahead of normal, reaching 50% completion. Nebraska wheat producers experienced problems with streak mosaic disease in the Panhandle, southwest, south-central, and east-central areas. Heading was just beginning but lagged slightly behind normal. Winter wheat showed drought stress in north-central Montana.

Dryland wheat was mostly fair in Washington. Plants suffered drought stress in shallow soil. Wheat harvest began in the California desert.

Spring wheat was 93% seeded, compared with 92% in 1987 and 77% normally. Seeding was finished or neared completion except in Idaho and North Dakota. Seventy-one percent of the crop was emerged, 24 points ahead of normal.

CORN: Corn planting climbed 18 points ahead of the previous week to 88% completion, equaling 1987. The rapid pace pushed seeding 22 points ahead of the 66% average. Seeding neared completion in the Southeast, Texas, and most Corn Belt States. South Dakota corn acreage was 63%

planted, up 38 points from the previous week. In Pennsylvania, less than half the acreage was seeded, trailing 1 point behind the 43% average. Wisconsin and Michigan were 72 and 75% seeded, respectively. Some early planted corn was replanted because of poor germination in Nebraska.

SOYBEANS: Soybeans were 39% seeded, leaping 25 points ahead of the previous week. This compares with last year's rapid pace of 41% and the 21% average. Planting increased 43 points in Illinois but was at least 32 points ahead of the previous week in Indiana, Iowa, Minnesota, and Ohio. Planting was behind normal in most Southeast and Delta States. Dryness hampered seeding and germination in the Corn Belt, Delta, and Southeast. Some producers were awaiting additional moisture before planting resumes.

COTTON: Cotton planting progressed normally, ending the week 3 points ahead of the 57% average. Planting was behind normal in most Delta, Southeast, and western States. Dryness halted planting in Oklahoma at 20% completion. High winds and blowing sand damaged some cotton acreage in Arkansas. Louisiana cotton producers began irrigating, and some acreage is expected to be replanted because of the dryness. In Texas, cotton began setting bolls in the Rio Grande Valley. Cool temperatures slowed planting in California. Seeding and reseeding were active in most areas. Warm weather produced excellent cotton growth in south-central Arizona. Cool weather contributed to replanting south-eastern Arizona. Upland and pima cottons were replanted in central and western areas. Squaring was underway in Arizona.

SORGHUM: The 11 major sorghum producing States, seeded 34% of their acreage, 5 points ahead of normal. Seeding trailed 7 points behind normal in Louisiana. Oklahoma registered a 5-point deficit, while Texas fell 2 points short of the average. The dry weather spurred planting across the Corn Belt and in Tennessee. Sorghum began heading in Texas.

OTHER CROPS: Rice was 84% seeded and 55% emerged. This compares with 75% seeded and 55% emerged normally. Seeding was finished in Texas and neared completion in Louisiana and Mississippi. Rice producers continued flooding operations and fertilizer and herbicide applications in Texas. In Arkansas, flushing was necessary to aid germination, but some stands were still spotty and uneven. Cool weather and poor germination caused some reseeding in California.

Peanut planting trailed 22 points behind normal in North Carolina. South Carolina's planting was 62% finished, 8 points below average. Virginia's acreage was 68% seeded, compared with 93% normally. Seeding was ahead of normal in Georgia and Alabama.

Flue-cured tobacco transplanting was finished in Georgia and South Carolina. North Carolina flue-cured tobacco was 75% transplanted, 6 points above normal. Burley tobacco was 5% transplanted in Kentucky and 18% transplanted in Tennessee.

FRUITS AND NUTS: Scattered rain was insufficient for citrus producers to discontinue irrigation in Florida. Citrus trees continued normal dropping of new-crop fruit. Grapefruit movement slowed but valencia harvest was active. Despite rain, irrigation continued in Texas' citrus producing areas. In California, extreme heat damaged

seedless grapes in the Coachella Valley. Fruit and nut crops developed normally in the San Joaquin and Sacramento Valleys. Freestone peaches and plums were picked. Valencia harvest accelerated and Desert Valley grapefruit harvest continued.

VEGETABLES: Spring vegetable harvest neared completion in southern Florida but was active in

central areas. In Texas, vegetable harvest progressed normally. California vegetable harvest consisted mostly of artichoke, asparagus, broccoli, cauliflower, carrots, lettuce, and strawberries. Some melon fields were replanted in the Sacramento Valley.

PASTURES AND LIVESTOCK: Pastures were mostly fair. Moisture is needed in most areas to maintain growth. Livestock was mostly good.

State Summaries of Weather and Agriculture

ALABAMA: Rainfall totals mostly 0.50 in. or less; 1.00 to 2.00 in. local areas east central, northeast; none most areas extreme south, southwest. Temperatures averaged close to normal.

Days suitable for fieldwork 5.9. Soil moisture 78% short, 22% adequate. Dry conditions delayed plantings, depleted pastures. Acreage intended for spring planting 96% prepared. Corn 97% planted, 96% 1987, 93% avg.; 5% poor, 35% fair, 60% good. Sorghum 37% planted, 29% 1987, 32% avg. Cotton 94% planted, 94% 1987, 82% avg.; 11% poor, 42% fair, 47% good. Peanuts 79% planted, 53% 1987, 65% avg.; 54% fair, 46% good. Soybeans 21% planted, 18% 1987, 16% avg. Wheat 98% headed, 93% 1987, 93% avg.; 48% turning color, 43% 1987, 40% avg.; 10% poor, 32% fair, 53% good, 5% excellent. First hay crop 30% harvested, 32% 1987, 20% avg. Peach harvest underway Mobile County. Pastures, livestock mostly good. Primary activities: Land preparation, seeding spring crops; harvesting, marketing vegetables; cutting, baling hay; fertilizing pastures; controlling weeds in row crops; thinning, harvesting peaches; caring for, harvesting catfish; general care of livestock, poultry.

ALASKA: Warm, seasonal rainfall boosted growth to hayfields, pastures. Temperature lows 4 to 12° above normal, highs 3 to 9° above normal. Seasonal precipitation totals 0.33 in. drier than normal to 0.84 in. wetter than normal.

Days suitable for fieldwork 5.0. Topsoil moisture 14% short, 68% adequate, 18% surplus. Subsoil moisture 4% short, 80% adequate, 16% surplus. Progress of farm work on schedule. Oats, barley for grain 20% seeded. Commercial potato, vegetable plantings excellent progress Matanuska Valley. Livestock good.

ARIZONA: Sunshine, warm temperatures, 12 to 18° above normal 8th to 13th. Cold front moved across State 14th. Temperatures 2 to 9° above normal.

Small grains 99% heading stage, 70% turned color, 2% harvested. Cotton 96% planted, 1 point below 1987, 2 points below avg.; 9% squared. Replanting upland, pima cotton west, central. Cool weather southeast contributed to replanting. Excellent growth with warm weather south central. Alfalfa good; harvesting, irrigation statewide. Weed, insect damage light. Corn progress continued, emergence southeast. Sorghum planting began west. Table potato harvest, shipping continued western areas. Peaches also harvested. Artichokes, apricots, nectarines, peaches harvested Parker. Melons behind in maturing; field activities included irrigation, fertilizing, pollination. Melon harvest should get underway first week of June. Dry onion, chipper potato harvest, shipping central areas. Few plums, nectarines, apricots harvested. Mixed vegetables also harvested. Head lettuce harvest should begin east later this week. Grapefruit, valencia orange harvest continued central, west.

ARKANSAS: Warm, dry. Widely scattered showers midweek. Temperature extremes 40°; 93°. Rainfall totals none to 1.40 in.

Days suitable for fieldwork 7.0. Soil moisture supplies 94% short, 6% adequate. Planting almost

halted due to lack of moisture. Germination slow. Cotton 49% emerged, 63% 1987, 46% average. Cotton 23% poor, 43% fair, 30% good, 4% excellent. Some cotton acres damaged by high winds, blowing sand early week. Rice 18% poor, 25% fair, 57% good. Flushing necessary to aid germination; stands spotty, uneven. Sorghum 57% emerged, 62% 1987; 7% poor, 52% fair, 41% good. Corn 98% planted, 94% 1987, 88% avg.; 42% fair, 40% good, 18% excellent. Alfalfa hay 33% cut; 4% poor, 42% fair, 54% good. Strawberry yields, quality good. Watermelon plant growth normal. Some tomato fields irrigated. Pastures deteriorating. Cattle good, fair growth.

CALIFORNIA: Week began, low pressure area over west coast. Showers over much northern half State. High pressure built midweek, warmer dry conditions. However, another weak system moved through northern half State dropping light amounts rain. Overall, above normal temperatures, except northern interior, 2° below normal.

Cool temperatures slowed planting activities. Cotton seeding, reseeding active. Hand thinning, weeding. Controls applied heavy populations mites, thrips, aphids. Rice planting progressed. Some reseeding, poor germination, cool weather. Controls applied weeds, shrimp, insects. Wheat grain harvest began desert. Small grain green-chop, hay, silage harvests active. Sugarbeet harvest overwintered crop, seeding new crop. Mildew treated new seedings. Alfalfa harvest normal. Turning previously rained hay. Thompson seedless grapes damaged, Coachella Valley temperatures 110°. Fruit, nuts development normal San Joaquin, Sacramento Valleys. Cherry harvest continued, splitting apparent some varieties. Freestone peaches, plums picked San Joaquin Valley. Grape growers applied gibberellic acid, nematode control. Olive trees setting fruit. Valencia orange harvest accelerated. Desert valley grapefruit harvest continued. Almond growers propped limbs. Walnut growers treated orchards, blight problems Sacramento Valley. Artichoke volume heavy, variable quality, Castroville. Asparagus cutting neared complete Sacramento Valley, continued Delta. Broccoli harvest moderate to heavy, good quality, Salinas, Santa Maria; continued Westside. Cauliflower movement heavy to moderate, good quality, Salinas, Santa Maria. Carrots dug Westside, Coachella Valley. Lettuce supplies heavy, variable quality, Salinas; moderate supplies, good quality, Santa Maria; finished Westside. Some melon fields replanted Sacramento Valley. Sweetpotatoes planted Merced-Atwater. Potatoes 50% planted, Modoc. Strawberry volume heavy, variable quality, Salinas, Santa Maria. Tomatoes planted Delta. Tomatoes set fruit Westside, harvested Coachella Valley. Watermelon harvest active Coachella Valley. Livestock fair to good statewide. Range, pasture conditions improved slightly most areas due to spring rains. Forage continued to deteriorate lower elevations Sacramento, San Joaquin Valleys. Carrying capacity higher elevations half normal. Supplemental feeding light summer ranges available. Livestock movement active Redding. Rains benefited water supplies.

COLORADO: Warm, clear weather. Precipitation none to 0.30 in. Average temperatures 2° below to 5° above normal.

Days suitable for fieldwork 6.0. Soil moisture supplies 6% very short, 63% short, 31% adequate. Some sugarbeet acreage being replanted due to wind damage. Winter wheat 59% jointed, mostly good. Barley 98% planted, 91% emerged. Fall potatoes 45% planted. Livestock good. Calving 93%, lambing 97%. Stored feed supplies adequate. Ranges, pastures mostly good.

FLORIDA: Clear skies, mild temperatures with no rain dominated through 12th. Widespread clouds, heavy rains some locations, 13th, 14th, as skies cleared statewide 15th.

Soil moisture generally adequate extreme upper Peninsula, mostly short other areas. Dry conditions slowed cotton, peanut planting. Soybean growers waiting for rain before planting. Cotton needed moisture to improve stands. Wheat ready to harvest. Corn, sugarcane, tobacco good progress. Early haymaking underway. Continued below normal temperatures, extremely dry topsoils some areas limited growth warm season grasses. Pastures varied from severely dry upper west central Peninsula to very poor, drier parts of Panhandle. Elsewhere, conditions fair to good. Mole crickets damaged few Bahia pastures. Cattle fair to mostly good with nursing cows showing some stress few driest areas. Dry most of week, citrus areas. Scattered rains insufficient to discontinue irrigation. New crop fruit continued normal dropping with trees adjusting amount of next crop. Valencia harvest active. Grapefruit movement slowed. Honey tangerine harvest almost over. Vegetable areas continued cooler than normal. Precipitation very limited. Harvest spring crops nearly complete south, active central. Volume leaders: Potatoes, tomatoes, watermelon, sweet corn, cucumbers, peppers, celery. Also good volume cabbage, squash, snap beans, carrots, radishes, eggplant. Digging active Hastings potatoes.

GEORGIA: Wide range of rainfall. Few areas up to 2.00 in., others less than 0.25 in. Temperatures about normal, warmest mid and upper 80s, coolest 40s north, 50s elsewhere.

Days suitable for fieldwork 5.3. Soil moisture 2% very short, 45% short, 51% adequate, 2% surplus. Corn 30% fair, 61% good, 9% excellent. Cotton 4% poor, 46% fair, 50% good; planting very active. Sorghum planting continued slow. Peanuts 80% planted, 61% 1987, 73% avg.; 28% fair, 61% good, 11% excellent. Soybeans fair to good. Tobacco 44% fair, 42% good, 14% excellent; some hail damage. Watermelons fair to mostly good, planting neared completion. Wheat harvest underway. Other small grains good. Apples good. Peaches good, harvest underway. Pastures good. Cattle, hogs good.

HAWAII: Variable weather. Windward sections varying amounts of sunshine, showers generally beneficial. Gusty winds hampered some crop development. Rainfall none to 6.20 in. Variable winds 10 to 25 mph. Temperatures upper 60s to mid 80s.

Days suitable for fieldwork 7.0. Leeward areas dry, irrigation increased. Pesticide spraying increased due to increased insect, disease infestations. Chinese cabbage production moderate, quality good. Head cabbage production moderate to heavy, quality good. Tomato harvesting declined. Watermelon production increased, above 1987 levels. Papaya production down slightly, orchards good. Banana production steady.

IDAHO: Temperatures above normal north, southwest, near normal rest. Precipitation near, above normal south central, below normal rest.

Days suitable for fieldwork 6.0. Soil moisture 45% short, 55% adequate. Irrigation water supplies fair, good. Potatoes 70% planted, 87% 1987, 55%

avg.; 5% emerged. Spring wheat good; 90% planted, 80% avg.; 75% emerged. Winter wheat good; over 50% jointed. Barley 90% planted, nearly 100% 1987, 67% avg.; 74% emerged. Oats 84% seeded, 58% emerged. Sugarbeets replanted, frost damage. Dry peas 90% planted, nearly 100% 1987. Lentils 84% seeded. Corn 69% planted, 69% 1987; 21% emerged. Fruit trees survived cold, appeared good. Livestock good, sent to rangeland.

ILLINOIS: Temperature lows averaged 1 to 6° above normal, highs averaged 4 to 6° above normal. Precipitation averaged 0.10 to 0.50 in. north; trace or less central, south.

Days suitable for fieldwork 5.5. Soil moisture 77% short, 23% adequate. Wheat 7% filled, 8% 1987, 8% avg. Alfalfa 1st crop cut 16%, 21% 1987, 9% avg.; 3% poor, 22% fair, 64% good, 11% excellent. Red clover 10% cut, 8% 1987, 4% avg.; 1% poor, 24% fair, 64% good, 11% excellent. Oats 29% fair, 66% good, 5% excellent. Pasture 6% poor, 43% fair, 49% good, 2% excellent.

INDIANA: Temperatures 2 to 6° above normal. Lows in upper 30s, highs upper 80s to low 90s. Precipitation below normal most areas. Totals trace to 0.90 in. Soil temperatures above normal.

Days suitable for fieldwork 6.4. Topsoil moisture 95% short, 5% adequate. Subsoil moisture 65% short, 35% adequate. Corn 48% emerged, 68% 1987, 38% avg. Soybeans 8% emerged, 30% 1987, 22% avg. Wheat height 17 in., 19 in. 1987, 17 in. avg. Oats height 6 in., 8 in. 1987, 7 in. avg. Alfalfa hay 10% cut once, 14% 1987, 9% avg. Pastures 2% very poor, 30% poor, 54% fair, 12% good 2% excellent. Soils dry, germination slow.

IOWA: Temperatures averaged 4 to 7° above normal. Precipitation 0.10 to 0.50 in.

Days suitable for fieldwork 4.9. Topsoil moisture 60% short, 40% adequate; subsoil moisture 43% short, 57% adequate. Oats 1% very poor, 9% poor, 28% fair, 51% good, 11% excellent. Hay 5% very poor, 19% poor, 32% fair, 37% good, 7% excellent. Oats 97% emerged, 100% 1987, 85% avg. Corn 50% emerged, 66% 1987, 34% avg. Soybeans 5% emerged, 9% 1987, 3% avg. Livestock continued to be mostly good to excellent. Some cattle received hay to supplement short pastures. Pasture 11% very poor, 23% poor, 30% fair, 33% good, 3% excellent.

KANSAS: Temperatures averaged mid 60s northwest, 70° central, east; 5 to 8° above normal. Rain light to none except northeast 0.50 in., southwest 0.10 to 0.20 in.

Days suitable for fieldwork 6.0. Topsoil moisture 77% short, 22% adequate, 1% surplus. Subsoil 44% short, 54% adequate, 2% surplus. Wheat 50% heading, 70% 1987, 40% avg. Wheat 95% jointing, 99% 1987, 90% avg. Russian wheat aphid, wheat streak mosaic light to severe central, west, light elsewhere. Most areas show moisture stress. Corn planting rapid progress, emergence good; 85% planted, 85% 1987, 60% avg. Sorghum 10% planted, 15% 1987, 5% avg. Soybean 15% planted, 20% 1987, 5% avg. First cutting alfalfa 20%, excellent curing weather. Alfalfa weevil infestations heavy west, central. Range, pasture condition declined but forage still adequate.

KENTUCKY: Temperatures averaged mid to upper 60s, several degrees above normal. High temperatures upper 70s early, upper 80s by 15th. Low temperatures 40s early, 50s and 60s later. Rainfall early 0.25 to over 1.00 in. Scattered showers additional amounts.

Days suitable for fieldwork 4.9. Soil moisture 7% very short, 57% short, 36% adequate. Corn fair to mostly good, 50% emerged. Planting single crop soybeans active. Wheat 80% headed, some fields short due to dry weather. Wheat 3% poor, 27% fair, 60% good, 10% excellent. Burley 5% set, comparable 1987 and avg. Plants in beds 25% over 4 in., 50% 2 to 4 in. Plant supply adequate. Pastures need rain, mostly fair. Many 1st hay cuttings also short.

LOUISIANA: Temperature extremes 1° below to 3° above normal. Temperature extremes 48°; 97°. Rainfall averaged 0.01 to 0.17 in.

Days suitable for fieldwork 6.8. Soil moisture 30% very short, 57% short, 13% adequate. Spring plowing 99%, 97% 1987, 95% avg. Corn fair to good; 99% planted, 98% 1987, 97% avg.; 96% emerged, 94% 1987, 94% avg. Cotton 56% emerged, 58% 1987, 63% avg. Sorghum 49% emerged, 45% 1987, 65% avg. Sweetpotatoes fair to good; 20% planted, 17% 1987, 34% avg. Winter wheat fair to good; 100% headed, 98% 1987, 99% avg.; 81% turning color, 77% 1987, 76% avg.; 2% harvested, 2% 1987, 7% avg. Hay 1st cutting 35%, 29% 1987, 32% avg. Livestock, sugarcane, peaches good. Vegetables, pastures fair to good. Dry conditions slowed planting, caused some stress to emerged crops. Some cotton being irrigated, some to be replanted, due to dry conditions. Main activities: Spring plowing; fertilizing pastures; harvesting hay, vegetables; planting cotton, rice, sorghum, soybeans, sweetpotatoes.

MARYLAND & DELAWARE: Maryland: Precipitation averaged 0.59 in. Average temperature 62°, normal 62°. General temperature extremes 43°; 84°. Mountain extremes 30°; 85°.

Days suitable for fieldwork 4.4. Topsoil, subsoil moisture adequate. Acreage 85% prepared for planting, 90% avg. Corn 65% planted, 70% avg. Soybeans 5% planted, 5% avg. Oats 97% planted, 97% avg. Tobacco 10% transplanted, 10% avg. Wheat, oats, barley, rye good. Wheat 35% headed, 40% avg. Barley 95% headed, 95% avg.

Delaware: Precipitation averaged 0.45 in. Average temperature 62°, normal 62°.

Days suitable for fieldwork 5.2. Topsoil moisture adequate. Subsoil moisture 40% short, 60% adequate. Acreage 80% prepared for planting, 90% avg. Corn 75% planted, 75% avg. Soybeans 5% planted, 5% avg. Wheat, barley, rye good. Barley 95% headed, 90% avg.

MICHIGAN: Temperatures ranged 2° below normal to 3° above normal. Temperature extremes 24°; 85°. Precipitation 0.04 to 1.02 in. across State.

Days suitable for fieldwork 6.0. Soil moisture 70% short, 30% adequate. Corn 75% planted, 85% 1987, 60% avg. Potatoes 65% planted, 45% 1987, 50% avg. Soybeans 20% planted, 25% 1987, 10% avg. Winter wheat none headed, none 1987, none avg. Wheat 1% very poor, 10% poor, 27% fair, 50% good, 12% excellent. Activities: Spring tillage; herbicide, fertilizer application; corn, soybean, potato planting. Fruit development, vegetable planting slightly behind.

MINNESOTA: Temperatures averaged near normal to 5° above normal. Temperature extremes 21°; 93°. Precipitation averaged 0.11 to 0.54 in. above normal eastern one-third, near normal to 0.53 in. below normal elsewhere. Greatest weekly total 1.93 in.

Days suitable for fieldwork 4.9. Topsoil moisture 14% very short, 35% short, 49% adequate, 2% surplus. Spring wheat 99% planted, 99% 1987, 78% avg.; 90% emerged, 80% 1987, 50% avg.; 1% jointing, 3% 1987, 1% avg. Oats 99% planted, 99% 1987, 84% avg.; 88% 1987, 62% avg.; 1% jointing, 5% 1987, 1% avg. Barley 99% planted, 98% 1987, 73% avg.; 87% emerged, 77% 1987, 46% avg.; less than 1% jointing, 1% 1987, none avg. Corn 94% land prepared, 97% 1987, 71% avg.; 90% planted, 93% 1987, 56% avg.; 32% emerged, 61% 1987, 19% avg. Soybeans 75% land prepared, 83% 1987, 40% avg.; 50% planted, 56% 1987, 20% avg.; 2% emerged, 9% 1987, 2% avg. Sunflowers 49% planted, 71% 1987, 22% avg. Flax 43% planted, 71% 1987, 22% avg. Potatoes 67% planted, 80% 1987, 42% avg. Dry edible beans 40% planted, 56% 1987, 19% avg. Green peas 83% planted, 86% 1987, 66% avg. Sweet corn 53% planted, 65% 1987, 35% avg. Spring wheat 5% poor, 44% fair, 44% good, 6% excellent. Field corn 2%

very poor, 5% poor, 45% fair, 42% good, 6% excellent.

MISSISSIPPI: Average temperatures near normal. Greatest weekly rainfall 1.73 in. Average rainfall 0.27 in.; 0.87 in. below normal.

Days suitable for fieldwork 6.3, 3.2 1987, 4.0 avg. Soil moisture down to 40% very short, 50% short, 8% adequate, 2% surplus. Farmers in 4 delta counties prohibited from pumping irrigation water from rivers; waiting for rain before planting soybeans. Corn fair to good; 95% planted, 97% 1987, 89% avg. Wheat good; 16% mature, 7% 1987, 11% avg. Sorghum 76% planted, 62% 1987, 52% avg. Rice fair to poor; 67% emerged, 62% 1987, 60% avg. Cotton fair; 87% planted, 77% 1987, 75% avg.; 52% emerged, 53% 1987, 47% avg. Soybeans 11% planted, 12% 1987, 14% avg. Hay 20% harvested. Sweetpotato, peanut, watermelon planting ahead of average. Pasture mostly fair. Peaches 15% poor, 30% fair, 45% good, 10% excellent. Activities: Flushing rice, haying, planting cotton, tilling soybean land.

MISSOURI: Temperatures averaged 4° above normal except Bootheel near normal. Precipitation averaged 0.50 in.

Days suitable for fieldwork 6.2. Topsoil moisture 91% short, 9% adequate, lowest this date since 1980. Crop germination, growth limited by moisture shortage. Tillage for spring crops 94%, 93% 1987, 82% avg. Corn 13% poor, 68% fair, 17% good, 2% excellent. Alfalfa hay 1st cutting 23%, 26% 1987, 15% avg. Other hay 6%, 11% 1987. Dry weather hurt hay yields. Pasture 10% very poor, 28% poor, 53% fair, 9% good, poorest pastures north central, northeastern counties.

MONTANA: Temperatures 3 to 4° above normal west, east much above normal. East 0.04 to 0.50 in. moisture. Southwestern, south central some precipitation. Other divisions spotty, light precipitation.

Days suitable for fieldwork 5.6. Topsoil moisture 60% short, 40% adequate. Subsoil moisture 66% short, 34% adequate. Winter wheat showing drought stress parts of north central. Spring wheat stand uneven drier areas. Barley 93% planted, 85% 1987, 81% avg. Barley 67% emerged, 56% 1987, 49% avg. Oats 89% planted, 73% 1987, 72% avg. Extensive sugarbeet replanting south central due to frost. Range livestock moved to summer ranges 48%, 46% 1987, 37% avg. Range grass growth very poor much of east.

NEBRASKA: Dry, warm, widely scattered thunderstorms. Rainfall up to 0.30 in. Average temperatures 4 to 7° above normal. Extremes 31°; 93°.

Days suitable for fieldwork 6.0. Topsoil moisture 64% short, 36% adequate. Subsoil moisture 33% short, 67% adequate. Winter wheat 80% jointed, 93% 1987, 67% avg. Widely scattered streak mosaic problems in Panhandle, southwest, south central, east central. Corn 30% emerged, 43% 1987, 25% avg. Some replanting of early planted fields due to poor germination in dry soils. Oats seeding virtually complete. Additional moisture needed to improve wheat, alfalfa, pasture growth. Alfalfa hay 5% poor, 28% fair, 65% good, 2% excellent. Wild hay fair to good. Pasture, range feeds adequate. Calves worked, cattle moved to pastures. Weather conditions favorable for livestock, no major problems.

NEVADA: Week started with scattered showers across north, central areas. Scenario changed quickly to very warm, even hot extreme south, also very dry. Weak front end of period weakened high pressure system when cold front dropped temperatures most areas 13th, but rebounded again 14th. Gusty winds 20 to 40 mph common all areas end of week.

Planting spring crops behind normal. Alfalfa showing slow growth. Range areas continued dry.

NEW ENGLAND: Precipitation averaged 0.75 to 1.00 in. northern New Hampshire, western and central Massachusetts, 0.50 in. remainder. Extreme amount at Ware, Massachusetts 1.52 in. Temperatures averaged low to mid 50s interior Maine and southern coast, upper 40s Maine coast, mid to upper 50s interior south. Temperatures normal for interior, 2 to 4° below normal coastal areas.

Days suitable for fieldwork 5.5. Soil moisture 5% short, 80% adequate, 15% surplus. Grazing availability 100% adequate. Fieldwork progress 2.5 days behind. Maine potatoes 30% planted, 30% 1987, 20% avg. Rhode Island potatoes 60% planted, 60% 1987, 70% avg. Connecticut River Valley potatoes fair; 65% planted, 60% 1987, 55% avg.; 20% emerged, 40% 1987, 30% avg. Maine oats 60% sown, 40% 1987, 30% avg. Field corn fair to good; 20% planted, 20% 1987, 20% avg.; 10% emerged, 10% 1987, 10% avg. Sweet corn fair to good; 30% planted, 30% 1987, 30% avg.; 25% emerged, 25% 1987, 20% avg. Hay fair to good. Fruit trees in bud to bloom. Strawberries bud north, early to full bloom south. Lowbush blueberries bud to early bloom. Major farm activities: Planting, spreading lime, fertilizer, turning cattle out to pasture.

NEW JERSEY: Temperatures averaged near normal. Extremes 32°; 83°. Rainfall averaged 0.74 in. north, 0.45 in. central, 0.47 in. south. Heaviest 24-hour total 0.58 in. on 10th, 11th. Estimated soil moisture percent field capacity averaged 97% north, 90% central, 89% south. Four inch soil temperatures averaged 57° north, 58° central, 59° south.

Warmer weather advanced crop growth. Soil moisture adequate. Harvest of spring crops increased. Planting of summer vegetables active. Irish potatoes up. Peaches, strawberries sized. Field corn, soybean planting active. Fall sown grains headed. Hay cutting general. Pasture growth good.

NEW MEXICO: Dry western areas, thundershowers east. Seasonable temperatures early week, above average temperatures toward weekend; limited hail, wind damage.

Days suitable for fieldwork 6.9. Soil moisture 73% short, 27% adequate. Barley 50% fair, 50% good. Wheat 40% poor, 34% fair, 26% good; 96% heading. Cotton 87% planted. Onions 40% fair, 60% good. Lettuce 50% fair, 50% good; harvest activity heavy, quality excellent, price poor. Cattle 64% fair, 36% good. Sheep 33% fair, 56% good, 11% excellent. Range 9% poor, 73% fair, 18% good.

NEW YORK: Week began, ended with superb weather. Typically spring-like light showers most days, seasonably mild overall. Some rain most day. Total rainfall below normal. But temperatures around early May normal.

Days suitable for fieldwork 5.8. Soil moisture adequate. Corn 26% planted, 35% 1987, 27% avg. Oats, hay fair to good. Winter grains mostly good, progressing well. Vegetable planting continued. Orange County onion crop in. Early market sweet corn up under plastic most counties. Hudson Valley fruit in full bloom.

NORTH CAROLINA: Temperatures averaged near normal across State. Temperature extremes 32°; 85°. Precipitation ranged 0.01 to 1.36 in. across State.

Days suitable for fieldwork 5.1. Soil moisture 1% very short, 30% short, 62% adequate, 7% surplus. Oats 2% poor, 19% fair, 70% good, 9% excellent. Barley 21% fair, 64% good, 15% excellent. Rye 2% poor, 14% fair, 75% good, 9% excellent. Pasture 3% poor, 27% fair, 60% good, 10% excellent. Flue-cured tobacco 75% transplanted, 57% 1987, 69% avg. Tobacco plantbeds 3% poor, 29% fair, 64% good, 4% excellent. Tobacco plant supplies 5% short, 92% adequate, 3% surplus. Tobacco in fields 1% poor, 37% fair, 60% good, 2% excellent. Burley 10% transplanted, 15% 1987, 12% avg. Peanuts 37% planted, 50% 1987, 59% avg. Sweetpotatoes 19% planted, 12% 1987, 14% avg. Irish potatoes 29%

fair, 68% good, 3% excellent. Peaches 4% poor, 21% fair, 67% good, 8% excellent. Truck crops 3% poor, 32% fair, 65% good. Sorghum 40% planted, 26% 1987, 31% avg. Corn 2% poor, 40% fair, 58% good. Cotton 9% poor, 48% fair, 43% good. Major farm activities: Planting corn, sorghum, cotton, soybeans, peanuts; transplanting tobacco, sweetpotatoes; tending tobacco plantbeds; bedding land for tobacco transplanting; cutting hay; picking strawberries; fertilizing, spraying nursery crops; cultivating tobacco, truck crops, corn; tending livestock; general farm maintenance.

NORTH DAKOTA: Cool, scattered showers early, mild, dry late. Temperatures averaged 3 to 6° above normal. Extremes 20° northeast; 86° southeast. Precipitation averaged 0.25 in. south central to 0.68 in. southwest.

Days suitable for fieldwork 6.3. Soil moisture supplies below normal. Topsoil 22% very short, 62% short, 16% adequate. Subsoil 32% very short, 42% short, 26% adequate. Spring planting ahead of normal pace. Spring wheat 89% planted, 93% 1987, 71% avg.; durum 76%, 88% 1987, 59% avg.; oats 85%, 92% 1987, 68% avg.; barley 89%, 95% 1987, 72% avg.; flax 23%, 40% 1987, 25% avg.; corn 39%, 56% 1987, 31% avg.; soybeans 17%, 31% 1987, 17% avg.; potatoes 43%, 66% 1987, 40% avg.; sunflower 6%, 17% 1987, 7% avg.; dry edible beans 6%, 19% 1987, 9% avg. Winter wheat 7% very poor, 20% poor, 55% fair, 18% good; 37% jointing and beyond. Extreme high winds statewide combined with an early morning frost in eastern one-third of State caused damage to emerged crops, alfalfa. Sugarbeets 33% to replant. Pastures 35% very poor, 36% poor, 29% fair.

OHIO: Average temperatures 3 to 5° above normal extremes: mid 30s to lower 90s. Precipitation less than 0.25 in. far south; near 2.00 in. north, northeast; many areas 0.50 in.; average 0.25 to 0.50 in. below normal. Soil temperature averaged 60s, minimum readings remained above 50°.

Days suitable for fieldwork 6.0. Soil moisture 61% short, 37% adequate, 2% surplus. Farm activities: Planting row crops, harvesting hay, spraying pesticides. Some soybean plantings delayed because of dry soils. Herbicides in need of moisture to be activated. Grasslands fair to good but need moisture most areas. Alfalfa weevil infestations evident across south, most severe southeast. Irrigation used on some crops including potatoes to aid emergence.

OKLAHOMA: Temperatures averaged 3° above normal south central to 6° above normal northeast. Precipitation averaged none north central, west central, northeast, east central to 0.56 in. central.

Days suitable for fieldwork 6.3. Topsoil moisture 60% short, 40% adequate. Subsoil moisture 15% short, 85% adequate. Lowest moisture level since last summer. Wheat 1% fair, 84% good, 15% excellent; 85% heading, 90% 1987, 75% avg.; 25% soft dough, 35% 1987, 20% avg. Warm, open weather pushed development ahead of average. Moisture needed many localities to fill grain heads. Diseases becoming more evident north. Sorghum 10% planted, 10% 1987, 15% avg. Cotton 20% planted, 10% 1987, 15% avg. Peanuts 15% planted, 20% 1987, 15% avg. Soybeans 15% planted, 30% 1987, 15% avg. Corn 97% planted, 95% 1987, 75% avg. Many fields need rain before planting. Cool soil temperatures hindered growth. Pastures, livestock good. Warm, dry weather caused increase of tick, fly infestations.

OREGON: Temperatures above average, precipitation relatively light statewide. Temperatures mostly 2 to 5° above normal west, 3 to 8° above normal northeast, near normal to 2° above southeast. Precipitation 1.30 in. coastal areas, 1.00 in. north Cascades. Western valleys, high plateau slightly more than 0.50 in. Less than 0.20 in. northeast, less elsewhere east of Cascades.

Soil moisture 26% short, 72% adequate, 2% surplus. Spraying for disease control continued Willamette Valley grain, grass seed fields; seed crop heading southern valley. Flag leaf emerging most wheat fields Umatilla County. Growers rouged weeds from grass seed fields central area. Mint flaming neared completion, crimson clover doing well west. First curing of hay Malheur County, irrigation started on alfalfa southeast plateau, alfalfa cut for silage between showers southeast. Weed control in nursery crops west, sugarbeets Malheur County. Apple, pear crops progressing well Hood River, fireblight sprays applied. Apples very good shape Gilliam County. Codling moth cover sprays started on apples, pears Willamette Valley; cherries forming nicely. Strawberries in full bloom, potential good Willamette Valley; setting fruit well Medford area. First of bloom evident on raspberries. Blueberries show widespread botrytis infection. Asparagus harvest continued Milton-Freewater. Most potato planting completed Malheur County; fieldwork in onions underway. Onions cultivated Medford; sweet corn planting continued. Harvest of early season vegetables underway Willamette Valley; sowing snap beans, sweet corn, squash, broccoli, some locales delayed vegetable planting due to wet soils. Livestock good to excellent. Western pastures mostly good, some abuse due to dry fall. Eastern ranges fair to good, forage potential for high elevation summer range improved with rain, warm temperatures most areas. Areas south, east of Blue Mountains still short of moisture.

PENNSYLVANIA: Warm, dry. Thunderstorms much of State, hail up to 1 inch in diameter. Average temperature 59°, 5° above normal. Temperature extremes 29°; 86°. Average precipitation 0.58 in., 0.24 in. below normal.

Days suitable for fieldwork 4.0. Soil moisture 23% short, 57% adequate, 20% surplus. Plowing 85%, 87% 1987, 79% avg. Corn 42% planted, 51% 1987, 43% avg. Soybeans 10% planted, 27% 1987, 15% avg. Oats 93% planted, 94% 1987, 87% avg. Potatoes 76% planted, 77% 1987, 68% avg. Barley 40% pre-boot, 38% 1987, 42% avg.; 30% boot, 20% 1987, 27% avg.; 30% heading or headed, 42% 1987, 31% avg. Wheat 74% pre-boot, 64% 1987, 67% avg.; 25% boot, 31% 1987, 28% avg.; 1% heading or headed, 5% 1987, 5% avg. Wheat 6% poor, 21% fair, 56% good, 17% excellent. Oats 4% poor, 21% fair, 59% good, 16% excellent. Hay stands mostly good to fair. Feed from pastures mostly average to below average. Peaches 16% pre-pink, none 1987, 1% avg.; 15% pink, 3% 1987, 9% avg.; 69% full bloom or past, 97% 1987, 90% avg. Cherries 18% pre-pink, 1% 1987, 3% avg.; 10% pink, 2% 1987, 7% avg.; 72% full bloom or past, 97% 1987, 90% avg. Apples 14% pre-pink, 2% 1987, 12% avg.; 24% pink, 14% 1987, 15% avg.; 62% full bloom or past, 84% 1987, 73% avg. Activities: Planting corn, potatoes, oats, hay, soybeans; spring plowing; fence work; hauling manure; spreading fertilizer; machinery maintenance; caring for livestock.

PUERTO RICO: Island average rainfall 2.75 in., 1.24 in. above normal. Highest weekly total rainfall 10.89 in. Manati, 7.83 in. Arecibo Observatory, 6.37 in. central Coloso. Highest 24-hour total 8.10 in. Manati. Total rainfall since January 1st 17.51 in., 18% above normal. San Juan WSFO mean temperature 82°, 2° above normal. Total rainfall 5.06 in., 3.77 in. above normal. Divisional temperature averaged 80 to 81° on coasts, 75 to 77° interior divisions. Mean station temperature 67° Pico Del Este-Luquillo to 83° Roosevelt Roads. Lowest minimum temperature 62° Arecibo Observatory. Highest maximum temperature 94° several locations.

SOUTH CAROLINA: Rainfall statewide 0.03 to 1.08 in. Temperatures near normal.

Days suitable for fieldwork 5.8. Soil moisture 5% very short, 41% short, 54% adequate. Corn fair

to good. Tobacco fair to good. Cotton fair to good; 78% planted, 88% 1987, 87% avg. Peanuts fair to good; 62% planted, 73% 1987, 70% avg. Sorghum fair to good; 20% planted, 34% 1987, 27% avg. Watermelons fair to good; 87% planted, 92% 1987, 92% avg. Sweetpotatoes fair to good; 22% planted, 17% 1987, 21% avg. Tomatoes good. Spring cukes fair to good; 85% planted, 93% 1987, 93% avg. Snap beans fair to good; 72% planted, 81% 1987, 85% avg. Wheat good; 98% headed, 93% 1987, 92% avg.; 26% turning color, 26% 1987, 48% avg. Oats good; 94% headed, 92% 1987, 94% avg.; 32% turning color, 36% 1987, 44% avg. Peaches fair to good.

SOUTH DAKOTA: Average temperatures normal to 6° above normal. Extremes 24°, 90°. Rainfall varied greatly; up to 0.75 in. over northern area, up to 0.50 in. southwest, 0.33 in. or less southeast. Rainfall for growing season below normal.

Days suitable for fieldwork 5.5. Topsoil moisture mostly short to critical; 32% adequate, 47% short, 21% critically short. State still very dry, conditions little worse from previous week.

TENNESSEE: Cold front moved through State 9th. High pressure dominated rest of week. Upper level disturbance brought some rain to west 13th. Temperatures averaged above normal west, near normal east. Departures ranged 9° above normal Memphis to 3° below normal plateau. Rainfall amounts less than 0.50 in.

Days suitable for fieldwork 5.5. Soil moisture 12% very short, 67% short, 21% adequate. Corn 86% planted, 86% 1987, 68% avg. Cotton 87% planted, 91% 1987, 69% avg. Sorghum 56% planted, 56% 1987, 47% avg. Soybeans 14% planted, 16% 1987, 11% avg. Tobacco 18% transplanted, 12% 1987, 14% avg.; 8% poor, 56% fair, 35% good, 1% excellent. Wheat 94% headed, 95% 1987, 83% avg.; 9% turning color, 8% 1987, 22% avg.; 2% poor, 38% fair, 56% good, 4% excellent. Alfalfa hay cutting continued; 25% poor, 50% fair, 25% good. Pastures fair to good. Cattle mostly good. Primary activities: Land preparation, seeding spring crops; applying fertilizer, herbicides to cropland; spraying fungicides on fruits, vegetables; baling hay; livestock chores.

TEXAS: Week started series cold fronts, upper level disturbances touching off scattered thunderstorm activity. Late week clearing skies. Despite thunderstorm activity, rainfall amounts generally below seasonal normals. Temperatures near, slightly above normal; south, Lower Valley below average.

Crops: Small grains head out many fields Plains. Dryland fields need additional moisture. Irrigation steady. Insect, disease problems decreased. Some yield prospects poor Cross-Timbers. Fields Blacklands mature rapidly, harvest to begin soon. Harvest delayed south, south central because rain. Early yields fair. Wheat 53% headed, 83% 1987, 79% avg. Corn producers Plains finished planting many fields. Most planted fields good stands, good growth. Insect pressures light to fair. Irrigation steady. Blackland fields need more moisture for continued progress. Last week's rainfall still benefit fields silking Coastal Bend, south. Dough stage much Rio Grande Valley. Corn 4% silked, 4% 1987, 12% avg. Grain sorghum planting increased Plains. Many parts Plains need rain for germination. Rainfall beneficial to crop Blacklands, central, south, Upper Coast. Fields heading Coastal Bend, Rio Grande Valley. Fields beginning to head Upper Coast. Sorghum 2% headed, 2% 1987, 9% avg. Cotton planting full swing Plains warmer weather continued. Good rain benefited planting moisture. Thrips heavy untreated fields Blacklands. Trans-Pecos scattered hail hurt some young plants. Fields Rio Grande Valley, Coastal Bend setting bolls. Recent rain help overall progress these areas. Cotton 8 squaring, 2% 1987, 4% avg. Rice producers continued flooding

operations. Fertilizer, herbicide applications continued. Peanut land preparation, prewatering active Cross-Timbers. Some planting continued Hill Country. Recent rain helped. Some greenbug problems early planted fields central. Many producers awaiting rain to begin fall planting operations. Soybean planting behind normal because dry weather. Some progress Upper Coast with recent moisture. Other field crops: Oats 9% harvested, 8% 1987, 5% avg. Peanuts 12% planted, 16% 1987, 16% avg. Soybeans 14% planted, 28% 1987, 17% avg. Sunflowers 4% planted, 4% 1987, 14% avg.

Commercial Vegetables: Rio Grande Valley harvest onions, cabbage, cucumbers continued. Harvest melons increased. Irrigation many citrus groves steady, despite some scattered rain. San Antonio-Winter Garden harvest onions continued low prices. Melons slow growth. East sweetpotato transplanting underway. Tomatoes good progress. Producers cultivating watermelons. Normal harvest continued. High Plains potatoes, onions good progress under irrigation. Peppers good progress. Trans-Pecos onion harvest continued Presidio area. Cantaloups blooming. Cabbage, lettuce showing good progress. Most chili planting complete. Peaches reaching maturity east, some Hill Country orchards. Late sizes very good. Some spraying continued. Pecans showing good sets many areas. Many groves still blooming. Spray programs continued.

Range and Pasture: Range conditions improved some southern parts, still remain short. Additional small grains grazed, cut for hay. Other hay cuttings increased. Heavy movement to market of livestock from small grain fields continued. Overall conditions held steady. Normal insect control, treatment continued.

UTAH: Precipitation dry south, light to moderate rest of State. Temperatures slightly below normal.

Days suitable for fieldwork 6.6. Soil moisture 37% short, 63% adequate. Winter wheat 62% jointed, 76% 1987, none avg.; 19% booting, 34% 1987, none avg. Oats 82% emerged, 80% 1987, 51% avg. Corn 65% planted, 80% 1987, 44% avg.; 40% emerged, 51% 1987, 22% avg. Potato, snap bean, tomato planting underway. Winter wheat height 10 in., 12 in. 1987, 9 in. avg. Alfalfa height 10 in., 12 in. 1987, 9 in. avg. First cutting alfalfa completed extreme southwest. Ranges, pastures continued to grow well. Livestock good. Major farm activities: Land preparation, corn planting, weeds control, irrigation, moving livestock.

VIRGINIA: Typical spring weather until end period, then above normal temperatures. Temperatures averaged 2° above normal most areas, 3° below normal southwest. Scattered showers, thunderstorms. Averages 0.25 to 0.50 in.

Days suitable for fieldwork 4.2. Topsoil moisture 18% short, 74% adequate, 8% surplus. Corn 74% planted, 68% 1987, 80% avg. Soybeans 13% planted, 9% 1987, 18% avg. Peanuts 68% planted, 87% 1987, 93% avg. Flue-cured tobacco 40% transplanted, 14% 1987, 46% avg. Burley tobacco 8% transplanted, 2% 1987, 8% avg. Small grains, pastures, fruit, germinating crops good to excellent. Barley maturing. Some small grains cut for silage. Some cereal leaf beetle, powdery mildew control efforts in small grains. Thinned fruit trees. Hay mostly good, harvest becoming active. Hay yields short some areas due to dry, cool weather. Planted, cultivated vegetables. Sheared sheep. Voted on beef referendum.

WASHINGTON: High pressure caused warm, dry weather across State early week. Migrant Pacific weather fronts crossed State midweek bringing cooler, moist weather conditions. Temperatures near normal to 7°

above normal west, near normal to 10° above normal east.

Days suitable for fieldwork west 5 to 7, east 7. Soil moisture 40% short, 60% adequate. Fieldwork progressed well during warm, dry weather. Winter wheat, barley began heading. Dryland wheat 5% poor, 60% fair, 20% good, 15% excellent. Plants in shallow soil areas Adams, Lincoln Counties suffered drought stress. Frost from previous week, insect damage other factors adversely affecting cereal crops. Crop progress advanced rapidly. Planting spring wheat, barley, potatoes mostly completed. Planting corn, dry peas ahead normal. First cutting alfalfa hay underway early areas. Warm temperatures increased fruit, insect development. Fireblight severe on bosc pears, moderate to severe some bartlett orchards in Lower Yakima Valley. Western fruit, ornamental trees infested with scale insects. Strawberries, blueberries, caneberrries developing normally respective growing areas. Asparagus harvest accelerated by warmer temperatures. Sweet corn, carrot, bean planting continued. Vegetable seed crop planting mostly completed Franklin County. Range pasture 40% short, 60% adequate. Hay, other roughage feed supplies mostly adequate.

WEST VIRGINIA: Average temperature 63°. Extremes 92° Creston; 32° Greenbank. Average precipitation 0.52 in.

Days suitable for fieldwork 3.6. Soil moisture 34% short, 60% adequate, 6% surplus. Wheat, barley, oats good to fair. Oats 90% planted, 78% emerged. Corn fair to good; 38% planted, 3% emerged. Tobacco fair to good; 99% planted, 94% emerged. Apples fair to good. Peaches good to fair. Feed supplies adequate to short. Cattle, sheep good to fair. Farm activities: Machinery repair, fencing, planting corn, setting tobacco; lime, fertilizer application, spraying fruit trees, shearing sheep, farrowing, pasturing livestock.

WISCONSIN: Temperatures averaged 57°, 1° above normal. Extremes 24°; 85°. Precipitation 0.10 to 0.60 in., most received early in week.

Days suitable for fieldwork 4.7. Soil moisture 27% short, 72% adequate, 1% surplus. Oats 96% seeded, 96% 1987, 86% avg. Corn 72% planted, 72% 1987, 49% avg. Fields showing rows in south. Soybeans 17% planted, 21% 1987, 11% avg. Rain only minor factor in planting. Alfalfa growing very nicely. Some damage to apple crop due to wind, frost.

WYOMING: Temperatures 1° below to 5° above normal. Precipitation above normal north central, dry elsewhere.

Days suitable for fieldwork 6.0. Topsoil moisture 28% short, 63% adequate, 9% surplus. Subsoil moisture 58% short, 26% adequate, 16% surplus. Spring wheat 85% planted, 90% 1987, 85% avg.; 60% emerged, 70% 1987, 55% avg. Oats 75% planted, 80% 1987, 75% avg.; 45% emerged, 55% 1987, 50% avg. Barley 90% planted, 95% 1987, 85% avg.; 70% emerged, 80% 1987, 65% avg. Sugarbeets 60% emerged, 75% 1987, 55% avg. Corn 50% planted, 60% 1987, 55% avg.; 5% emerged, 20% 1987, 10% avg. Potatoes 25% planted, 65% 1987, 50% avg.; 15% emerged, 40% 1987. Dry beans few planted, 25% 1987, 15% avg. Winter wheat fair to good. Livestock mostly good. Most spring calves born. Death losses light to normal. Farm flock: Ewes lambed 95%, most 1987, 95% avg.; shorn 90%, 95% 1987, 90% avg. Range flock: Ewes lambed 75%, 75% 1987, 75% avg.; shorn 90%, 85% 1987, 85% avg. Death losses light to normal. Ranges, pastures fair to good. Spring grazing prospects fair to good.

WINTER WHEAT
% HEADED

	1988	1987	AVG.
ARK	99	98	NA
CALIF	97	98	94
COLO	1	1	4
GA	100	98	98
IDAHO	0	0	0
ILL	60	77	44
IND	15	26	23
KANS	50	70	40
MICH	0	0	0
MO	64	78	54
MONT	0	0	0
NEBR	6	17	8
N MEX	96	96	NA
N C	86	74	NA
OHIO	1	8	15
OKLA	85	90	75
OREG	5	20	5
S DAK	0	7	3
TEX	53	83	79
WASH	2	4	2
20 STATES	44	56	NA
EXCL. STATES WITH NA	42	54	42

THESE 20 STATES PRODUCED 91%
OF THE 1987 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

GRAIN SORGHUM
% PLANTED

	1988	1987	AVG.
ARK	81	82	68
ILL	50	43	17
KANS	10	15	5
LA	71	60	78
MISS	76	62	52
MO	52	43	27
NEBR	20	23	14
OKLA	10	10	15
S DAK	4	14	5
TENN	56	56	47
TEX	65	62	67
11 STATES	34	35	29

THESE 11 STATES PRODUCED 96%
OF THE 1987 GRAIN SORGHUM CROP.

RICE
% EMERGED

	1988	1987	AVG.
ARK	46	69	49
CALIF	15	30	14
LA	77	80	81
MISS	67	62	60
TEX	98	89	87
5 STATES	55	66	55

THESE 5 STATES PRODUCED 97%
OF THE 1987 RICE CROP.

Crop Progress 1/
FOR WEEK ENDING MAY 15, 1988

FOR WEEK ENDING MAY 15, 1988

SPRING WHEAT
% PLANTED

	1988	1987	AVG.
IDAHO	89	100	80
MINN	99	99	78
MONT	95	75	80
N DAK	89	93	71
S DAK	100	100	88
5 STATES	93	92	77

THESE 5 STATES PRODUCED 95%
OF THE 1987 SPRING WHEAT CROP.

SPRING WHEAT
% EMERGED

	1988	1987	AVG.
IDAHO	74	95	63
MINN	90	80	50
MONT	69	53	49
N DAK	57	61	37
S DAK	94	99	74
5 STATES	71	69	47

THESE 5 STATES PRODUCED 95%
OF THE 1987 SPRING WHEAT CROP.

COTTON
% PLANTED

	1988	1987	AVG.
ALA	94	94	82
ARIZ	96	97	98
ARK	86	83	73
CALIF	95	99	98
GA	65	69	68
LA	73	76	79
MISS	87	77	75
MO	97	95	65
N MEX	87	87	69
N C	60	61	70
OKLA	20	10	15
S C	78	88	87
TENN	86	91	69
TEX	33	39	34
14 STATES	60	62	57

THESE 14 STATES PRODUCED 100%
OF THE 1987 COTTON CROP.

RICE
% PLANTED

	1988	1987	AVG.
ARK	87	93	72
CALIF	50	80	44
LA	91	89	89
MISS	99	88	82
TEX	100	100	100
5 STATES	84	91	75

THESE 5 STATES PRODUCED 97%
OF THE 1987 RICE CROP.

SOYBEANS
% PLANTED

	1988	1987	AVG.
ALA	21	18	16
ARK	13	16	11
GA	17	16	20
ILL	68	62	34
IND	55	62	25
IOWA	45	52	23
KANS	15	20	5
KY	17	18	10
LA	13	11	21
MICH	20	25	10
MINN	50	56	20
MISS	11	12	14
MO	33	33	17
NEBR	25	28	14
N C	10	10	15
OHIO	59	56	32
S C	8	11	10
S DAK	16	38	9
TENN	14	16	11
19 STATES	39	41	21

THESE 19 STATES PRODUCED 96%
OF THE 1987 SOYBEANS CROP.

CORN
% PLANTED

	1988	1987	AVG.
COLO	78	58	55
GA	98	98	98
ILL	98	95	76
IND	97	90	66
IOWA	98	97	76
KANS	85	85	60
KY	82	84	59
MICH	75	85	60
MINN	90	93	56
MO	93	90	69
NEBR	80	83	65
N C	97	86	89
OHIO	90	88	67
PA	42	51	43
S DAK	63	86	36
TEX	97	97	97
WIS	72	72	49
17 STATES	88	88	66

THESE 17 STATES PRODUCED 94%
OF THE 1987 CORN CROP.

Crop Condition

FOR WEEK ENDING MAY 15, 1988

WINTER WHEAT

STATE	VP	P	F	G	EX
ARK	0	16	31	44	9
CALIF	0	5	20	70	5
COLO	0	6	23	59	12
GA	0	0	7	88	5
IDAHO	0	1	25	64	10
ILL	0	0	22	65	13
IND	1	8	52	38	1
KANS	6	26	41	24	3
MICH	1	10	27	50	12
MO	1	8	50	38	3
MONT	7	10	35	36	12
NEBR	0	2	57	39	2
N MEX	0	40	34	26	0
N C	0	1	17	72	10
OHIO	0	7	30	52	11
OKLA	0	0	1	84	15
OREG	0	0	18	77	5
S DAK	4	23	41	27	5
TEX	0	21	36	39	4
WASH	0	5	60	20	15

VP - VERY POOR P - POOR F - FAIR
G - GOOD EX - EXCELLENT

International Weather and Crop Summary

May 8-14, 1988

HIGHLIGHTS:

UNITED STATES ... Inadequate moisture hampers seeding and crop growth throughout most of the eastern half of the Nation. Above-normal temperatures accelerate small grain development in most areas.

USSR ... Rain over the Central Region, the Black Soils Region, the northern Ukraine, North Caucasus, and the Volga benefits winter grains but causes some spring grain planting delays. In the New Lands, showers increase topsoil moisture for spring grain planting which usually begins in mid-May.

EUROPE ... Widespread rain falls in the southwest, but dryness persists in the northeast.

SOUTH ASIA ... Rainfall diminishes in the south, but showers in eastern rice regions boost irrigation levels for summer crop planting.

NORTHWESTERN AFRICA ... Light showers cause minor delays in winter grain harvesting.

CANADA ... Light rain covers most grain regions of western Saskatchewan and eastern Alberta. Showers improve planting conditions in the southeastern Prairies.

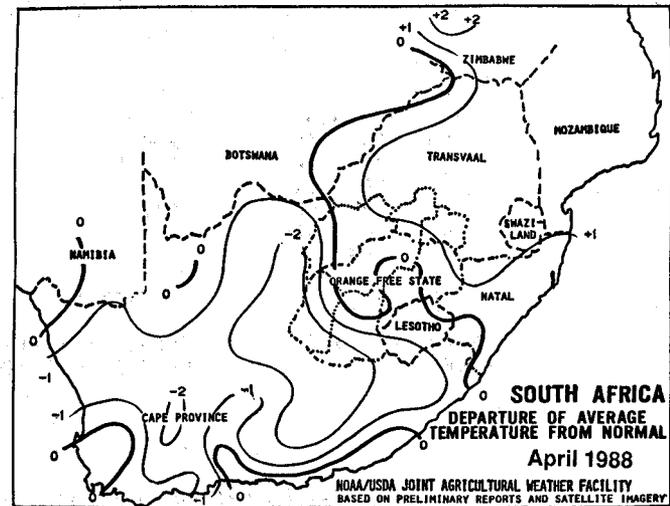
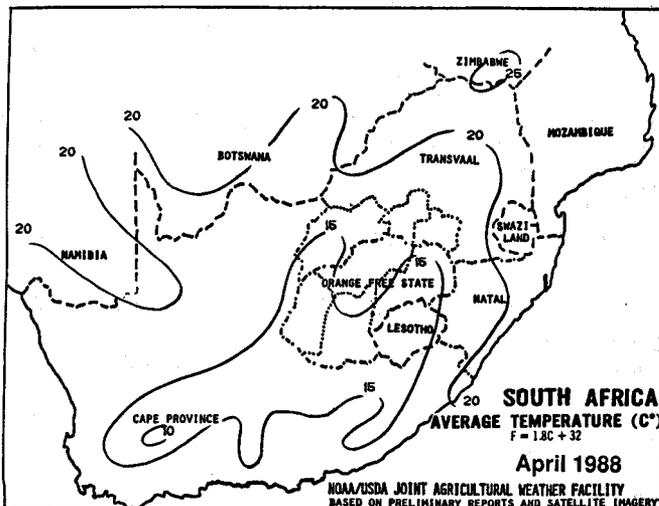
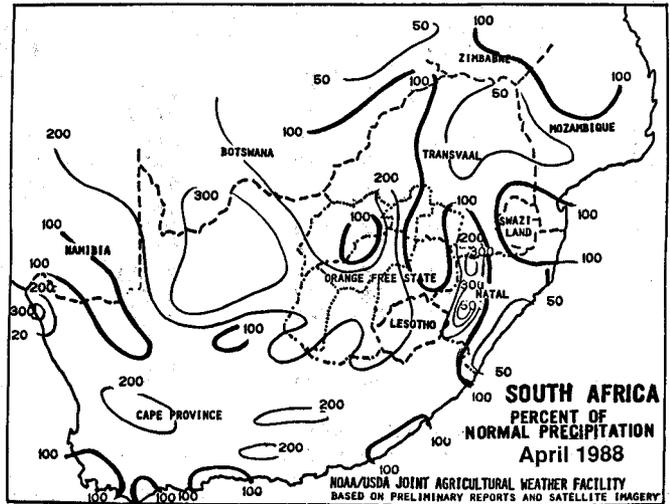
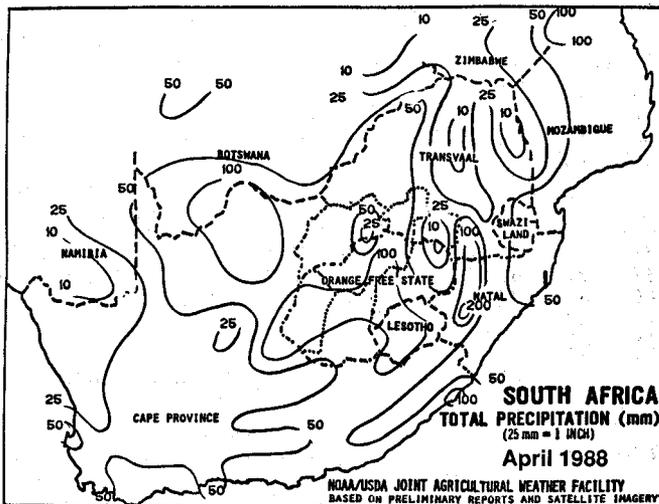
EASTERN ASIA ... Locally heavy rain falls in the south. Widespread light rain benefits early growth in the north.

SOUTHEAST ASIA ... Widespread showers continue across Indochina, maintaining favorable pre-planting conditions but causing some local flooding. Variable rainfall continues in the Philippines.

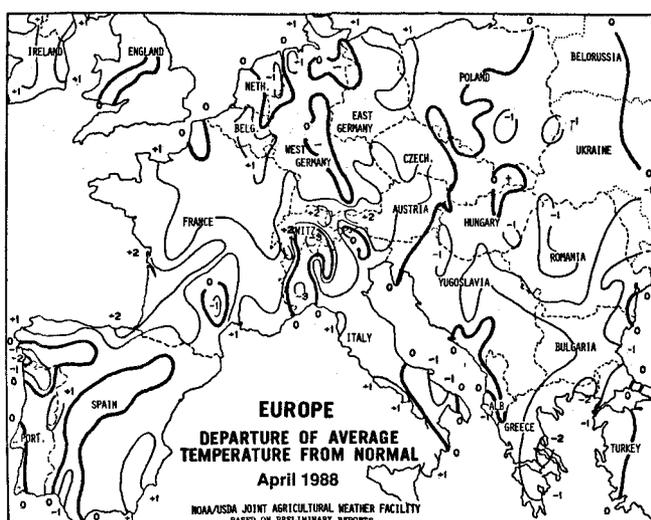
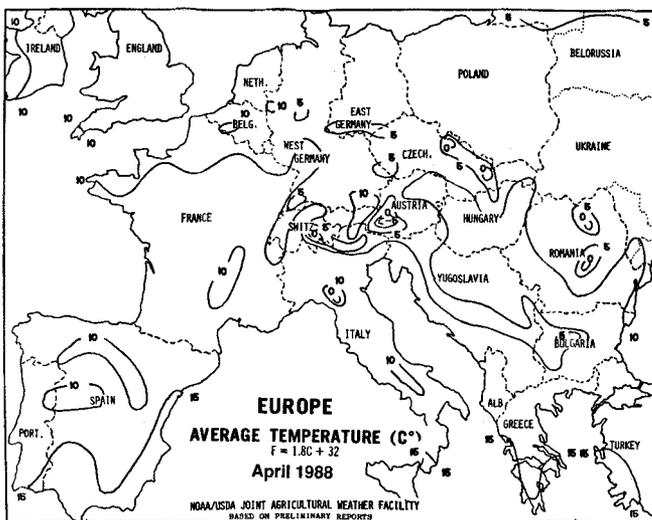
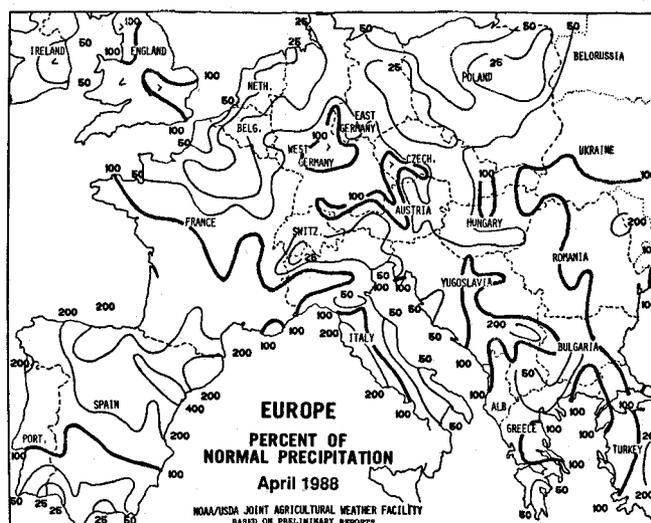
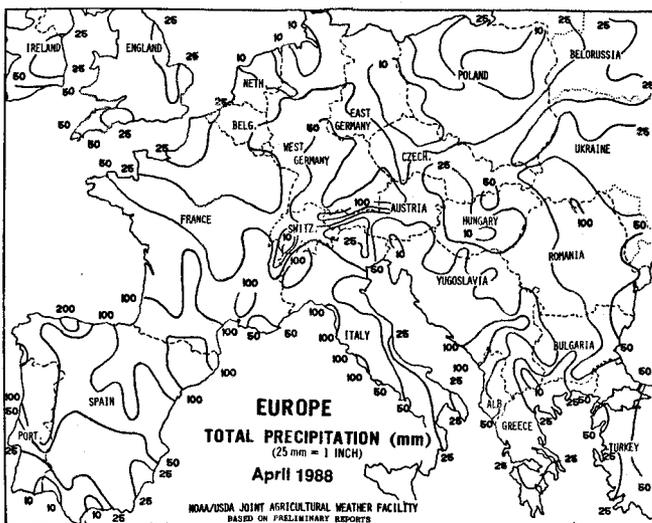
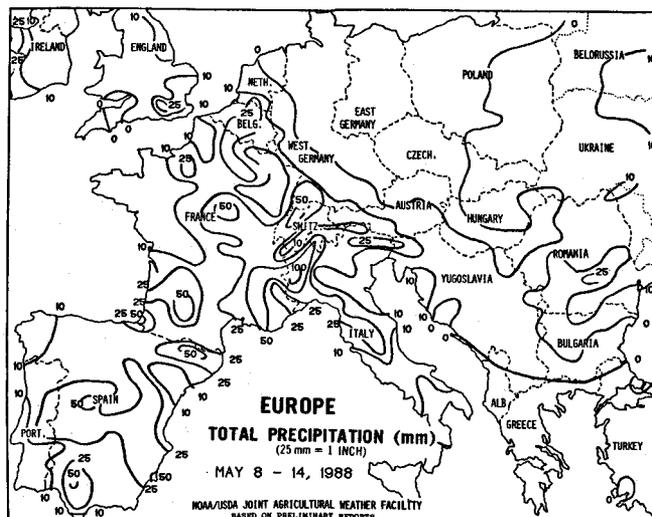
SOUTH AMERICA ... Mostly dry weather favors Argentina's summer crop harvests and early wheat planting. Rain returns to southern Brazil, slowing wheat planting in Parana.

AUSTRALIA ... Dry weather favors fieldwork in the east while rain keeps topsoils moist for planting in the west.

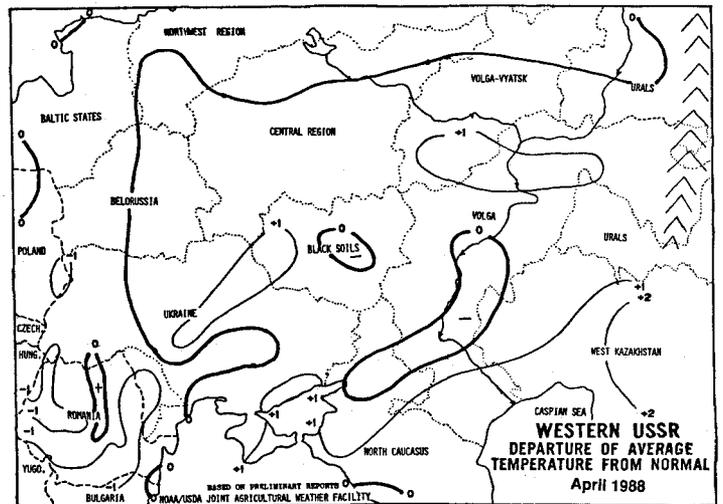
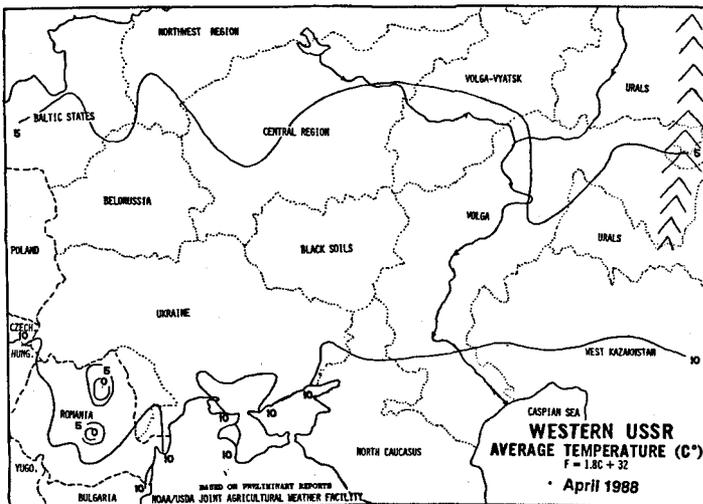
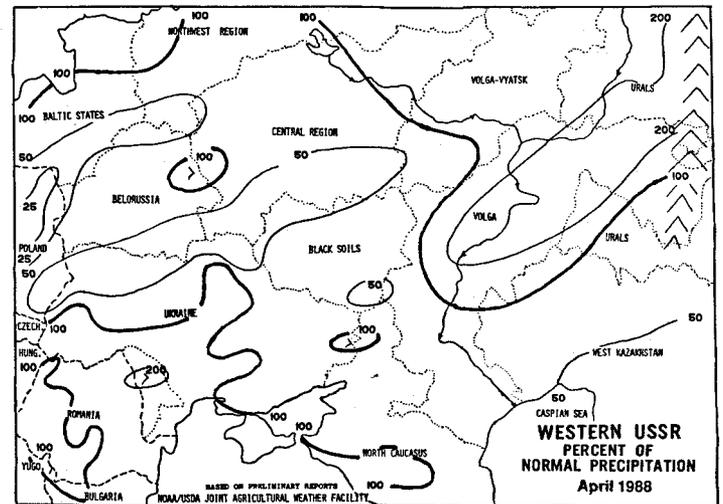
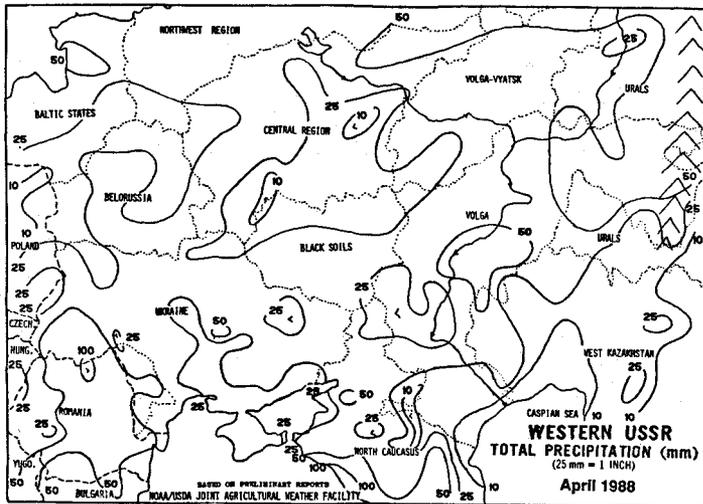
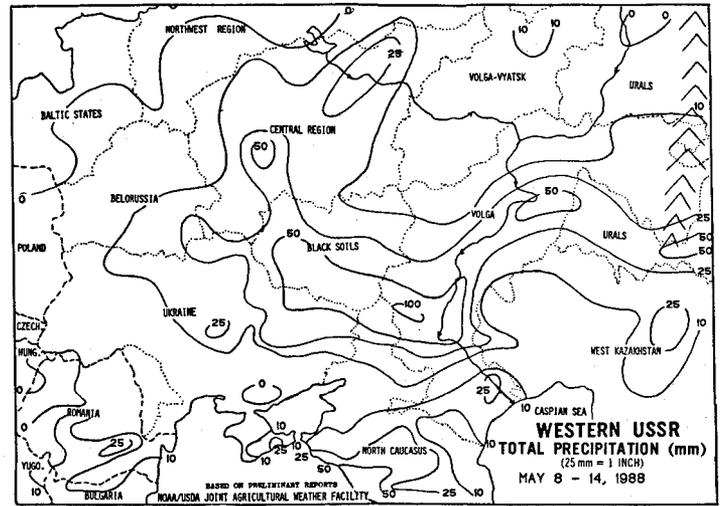
MEXICO ... Scattered rain covers the east, but dryness prevails in the west.



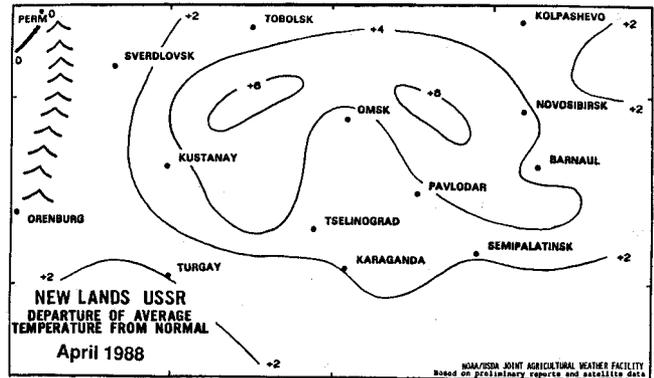
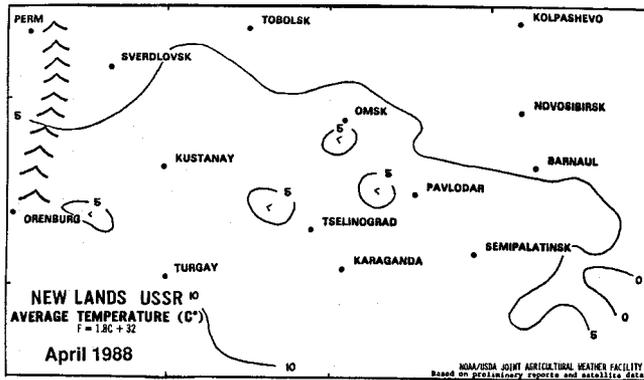
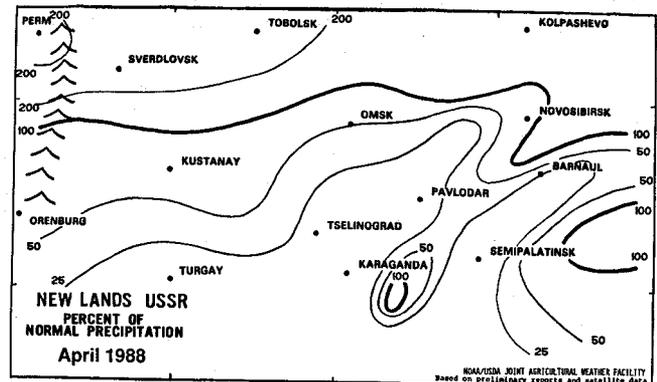
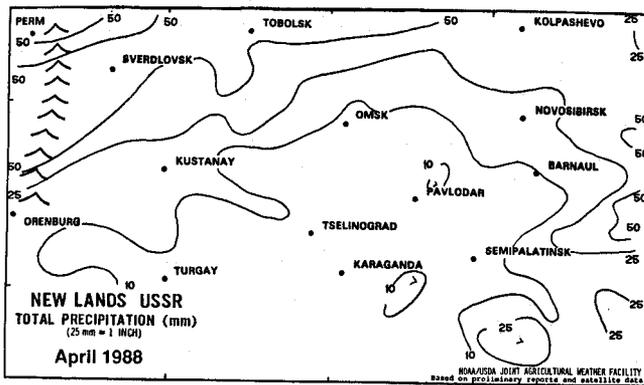
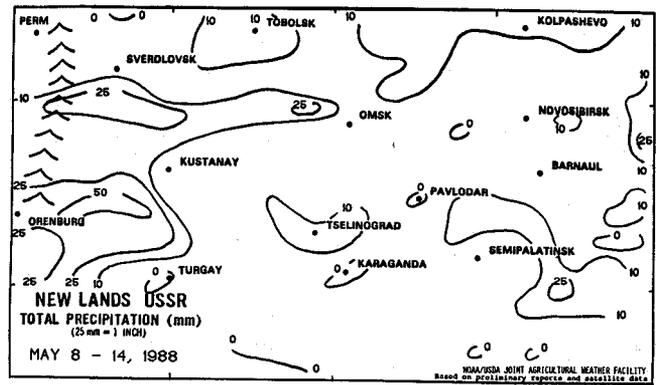
EUROPE ... Widespread rain fell over western Europe, benefiting winter wheat growth in the north and heading to filling wheat in the south. Light rain also favored winter and early summer crops in the Balkans. In contrast, dry weather persisted over northeastern Europe, reflecting April's below-normal precipitation pattern. The generally drier weather across northern Europe has allowed spring fieldwork and planting to progress rapidly after several consecutive weeks of excessive rainfall during late winter and early spring. However, moisture has been declining as winter crops begin to advance into stages of maximum water usage over the next several weeks. April precipitation was much above normal in extreme southern France and northern Spain. Average monthly temperatures ranged from slightly above normal over western and central sections to slightly below normal in the extreme east.



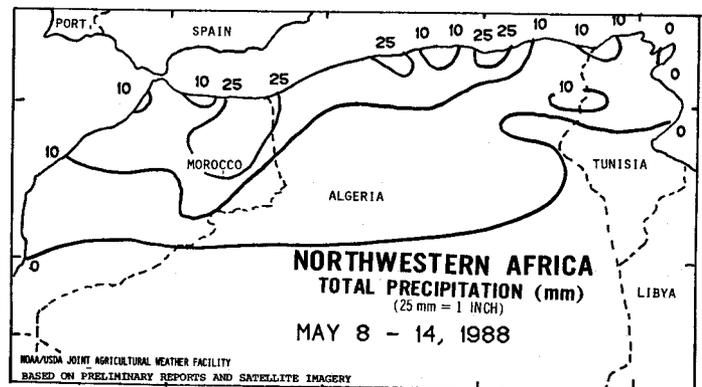
WESTERN USSR ... Winter grains were mostly jointing, with spring grains emerging to tillering over the southern Ukraine and North Caucasus. Rainfall increased during the week with moderate to heavy precipitation (50-100mm) covering the southern Black Soils Region, the northern tip of the North Caucasus, and the lower Volga. Although the rain in these areas was mostly beneficial, delays in spring grain planting likely occurred. Widespread precipitation over the Central Region, the northern Ukraine, the central North Caucasus, and the Volga benefited winter grains and increased topsoil moisture for spring grain planting. In April, winter grains in major southern producing areas advanced into the jointing stage, while crops in northern areas broke dormancy and resumed tillering. Below-normal April precipitation covered most of European USSR, except for crop areas in Moldavia and the eastern Volga where precipitation was above normal. Unseasonable warm weather in early April was replaced by a pronounced cooling trend which began over western areas on April 22, and spread eastward. Although temperatures were not low enough to adversely impact crop development, the unseasonable cool weather slowed winter grain growth.

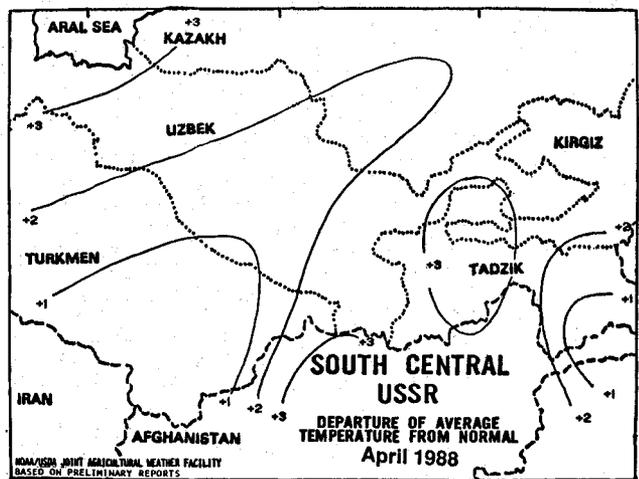
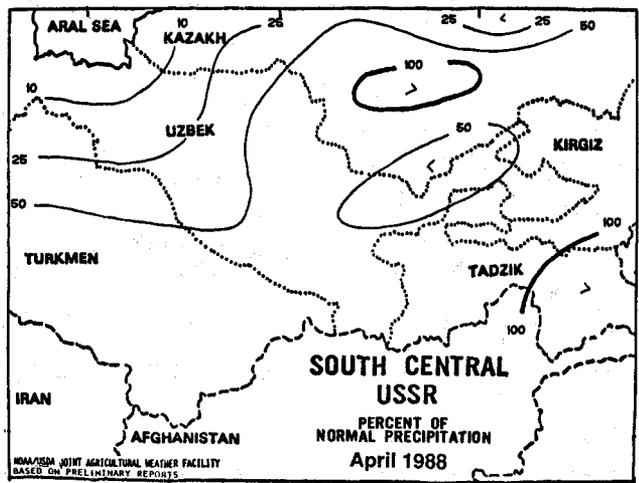
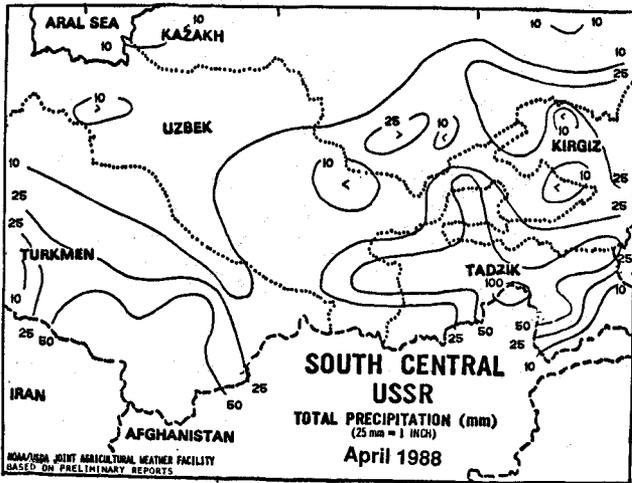
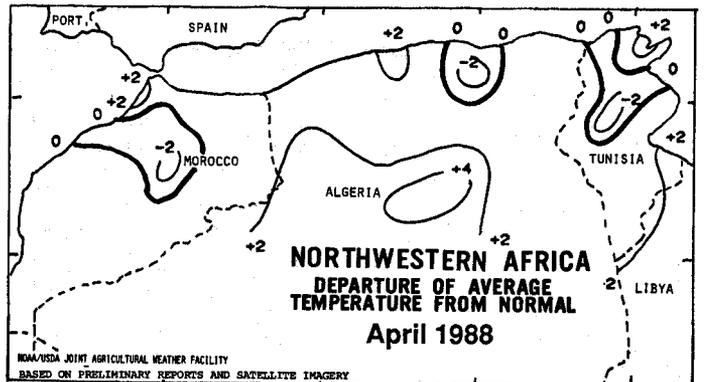
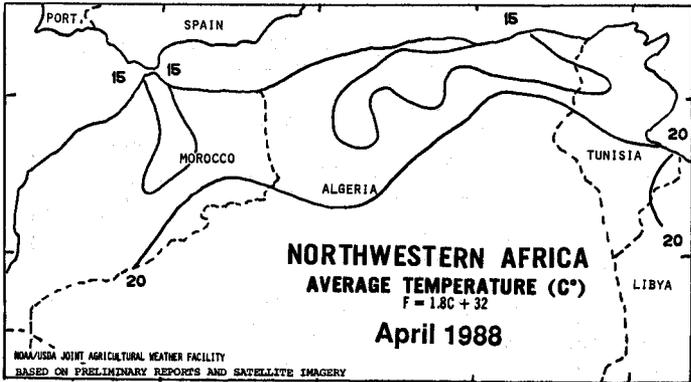
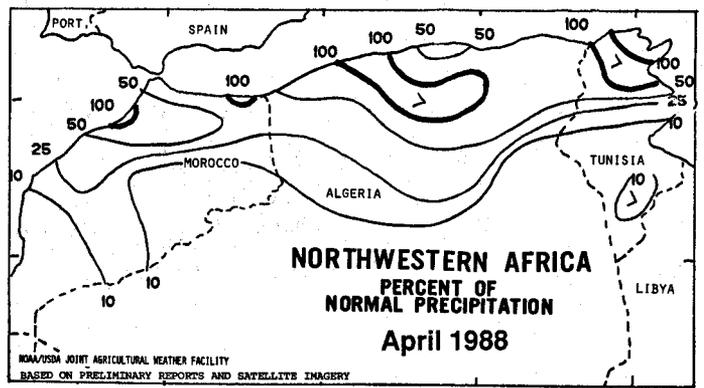
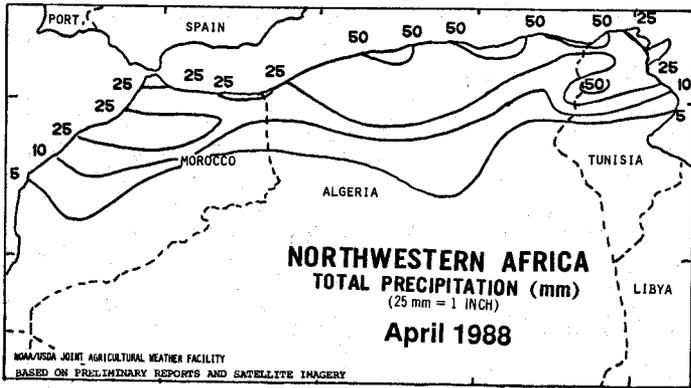


NEW LANDS ... Spring grain planting usually begins around mid-May. Near- to above-normal autumn and winter precipitation provided abundant sub-soil moisture. Although March and April precipitation was significantly below normal over most areas, widespread light showers since May 1 have helped to increase topsoil moisture for the upcoming planting season.

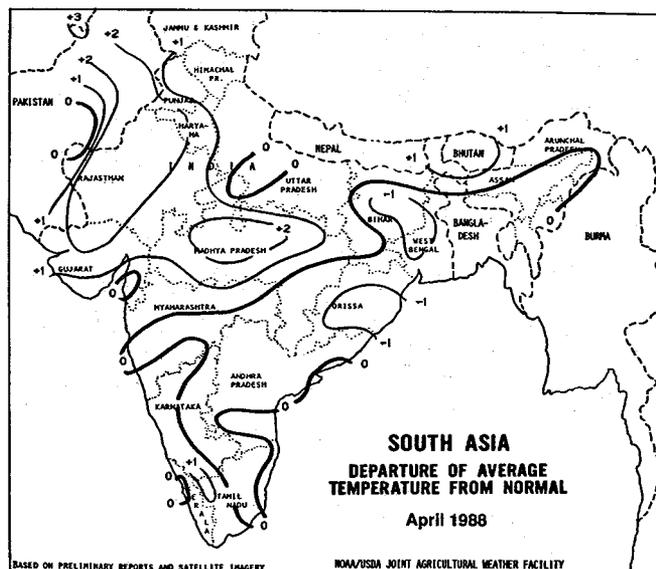
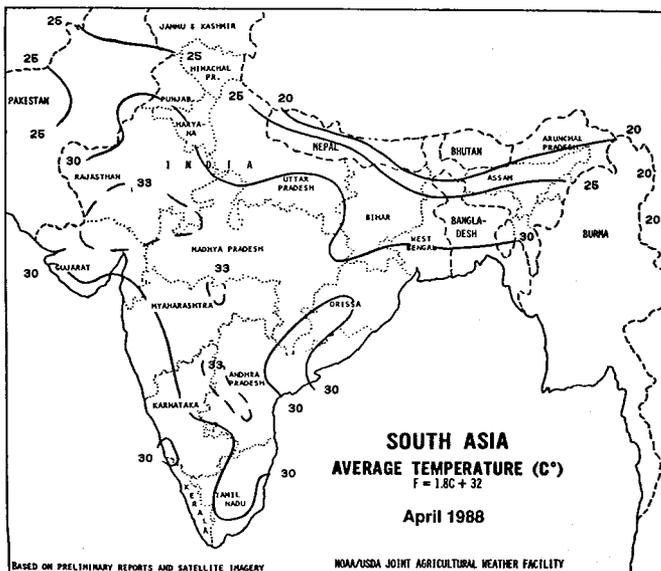
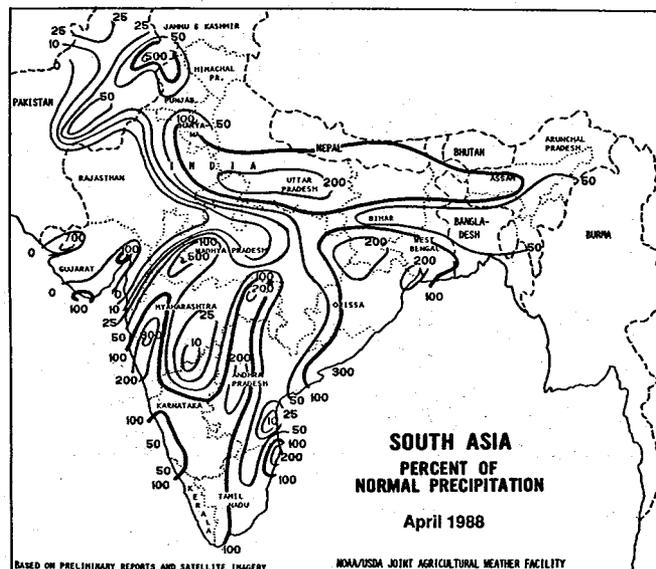
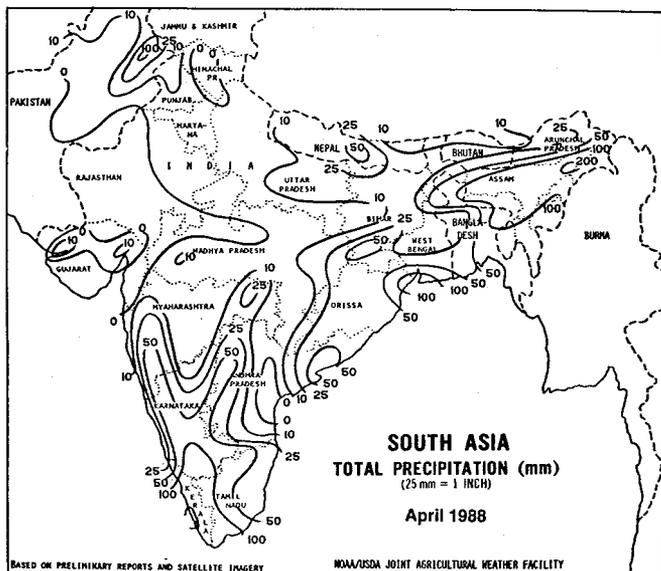
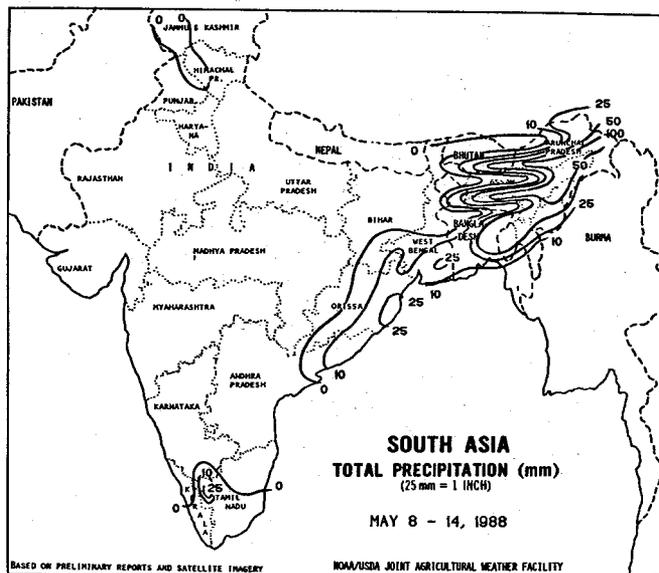


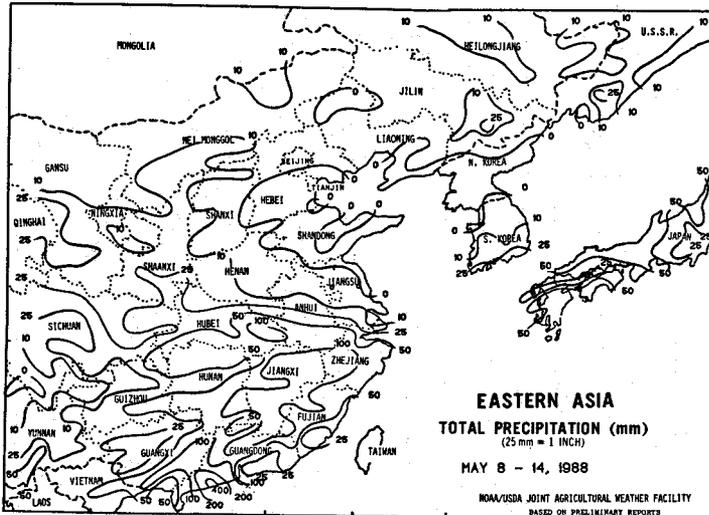
NORTHWESTERN AFRICA ... Light rain over winter grains in Morocco, Algeria, and Tunisia, caused minor delays in early harvesting. In April, winter grains advanced through the filling stage. April precipitation was mostly above normal in Tunisia, below normal in Algeria, and well below normal in Morocco. The rain which covered Tunisian winter grain areas fell late in the month and arrived too late to help most of the maturing crop. To review the season, abundant moisture benefited Moroccan winter grains during the vegetative stage. However, well-below-normal precipitation and unseasonable warm weather in March and April increased stress on winter grains as they advanced through the highly weather sensitive reproductive and filling stages of development. In Algeria and Tunisia, unfavorable dry weather during most of the growing season, particularly in southernmost crop areas, adversely affected crop development. Weekly summaries for northwestern Africa will be discontinued until the beginning of next year's planting season.



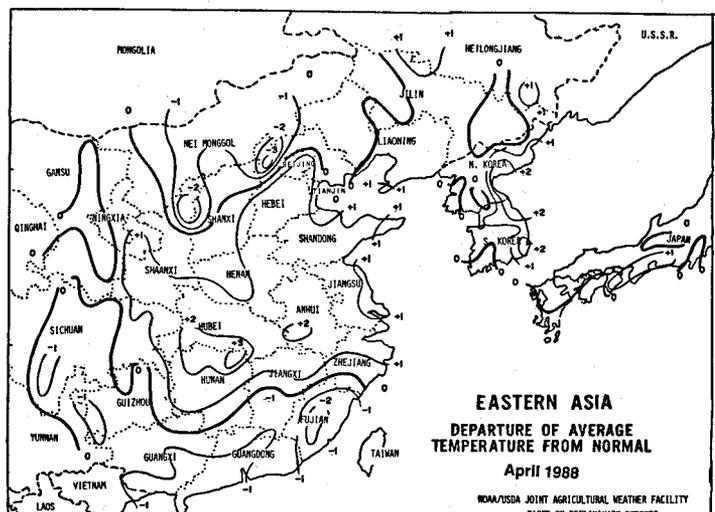
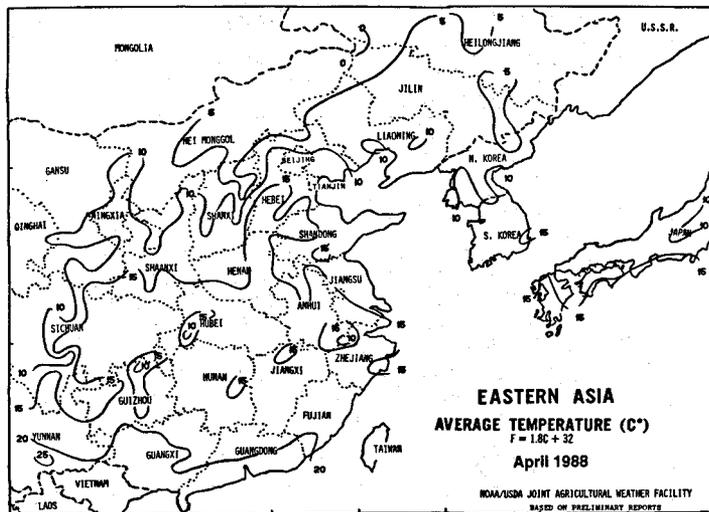
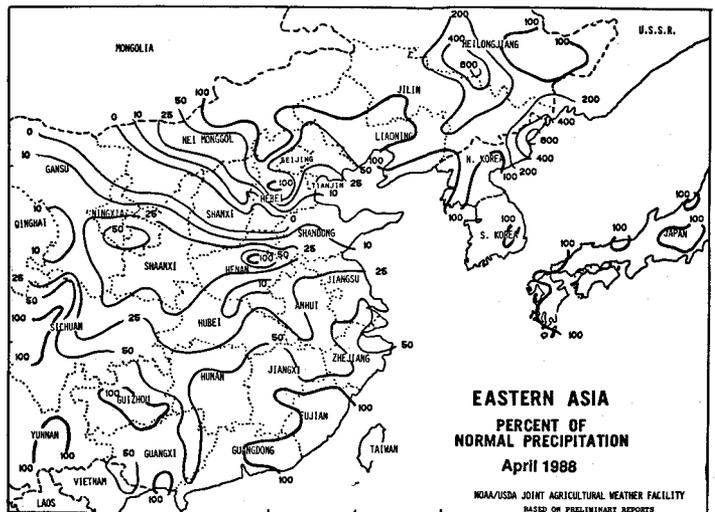
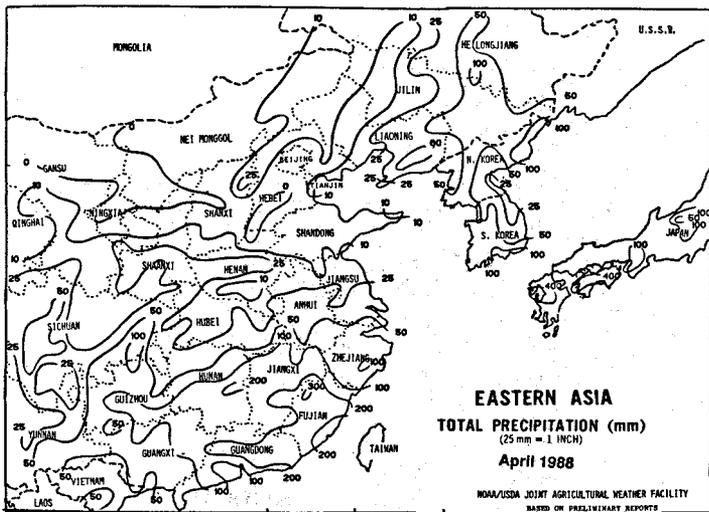


SOUTH ASIA ... Rainfall diminished across the southern half of India. Coastal rice regions from northern Kerala to the central coast of Tamil Nadu received less than 5mm, while coastal regions northward to central Andhra Pradesh were dry. Moderate rain (10-27mm) fell from northern Andhra Pradesh to the southern half of West Bengal, increasing irrigation reserves for rice planting normally underway during June. Dry pockets continued over Bangladesh, but moderate to heavy rain (25-100mm or more) covered east-central Bangladesh and the eastern states, improving pre-planting conditions but possibly causing local flooding. In April, rainfall was above normal over southwestern India, in eastern crop areas from northern Andhra Pradesh to southern West Bengal, and across much of the northern wheat belt, though amounts ranged from 5-25mm. Rainfall averaged 50-150mm or more from Bangladesh eastward, which is below normal for most of the area. The rainfall in the south and east improved irrigation reserves for summer crop planting, usually underway during June, and filling rice planted during the winter. Temperatures were seasonably hot, however, stressing immature grains.

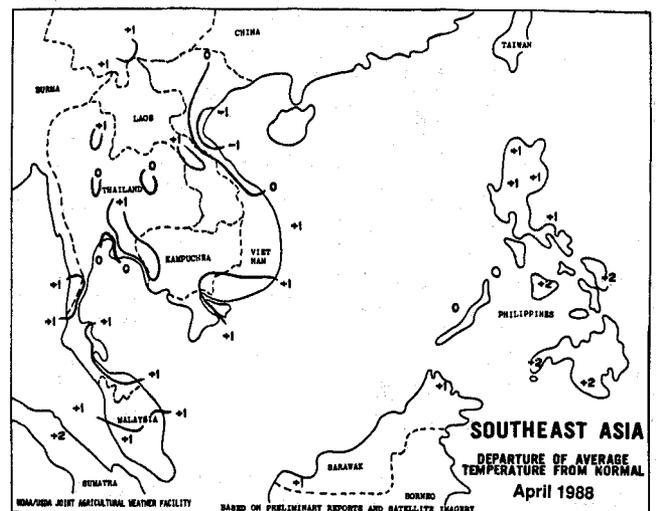
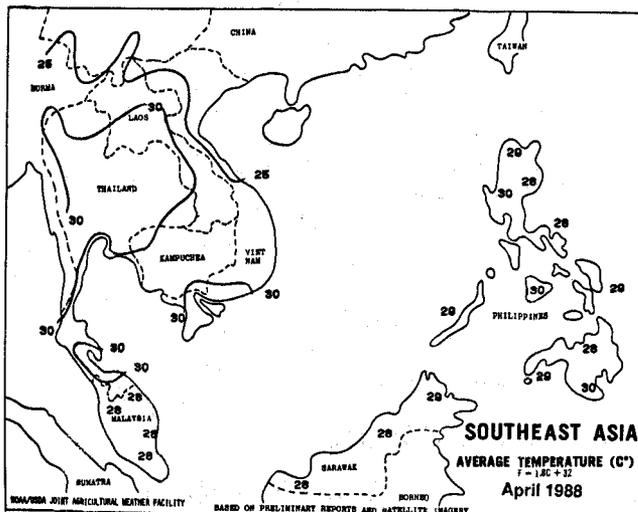
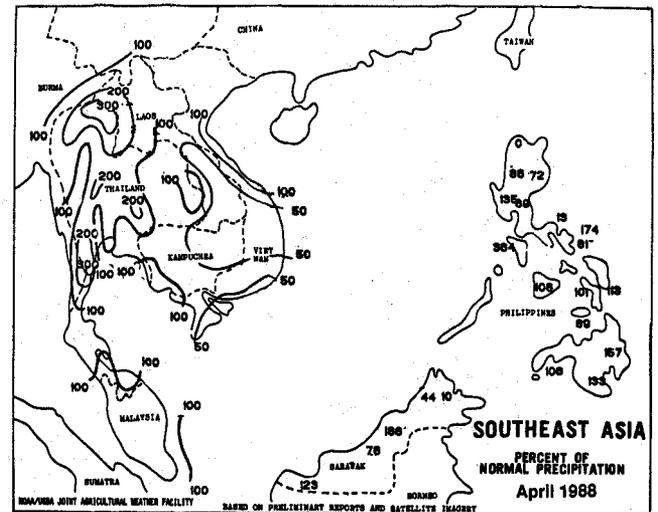
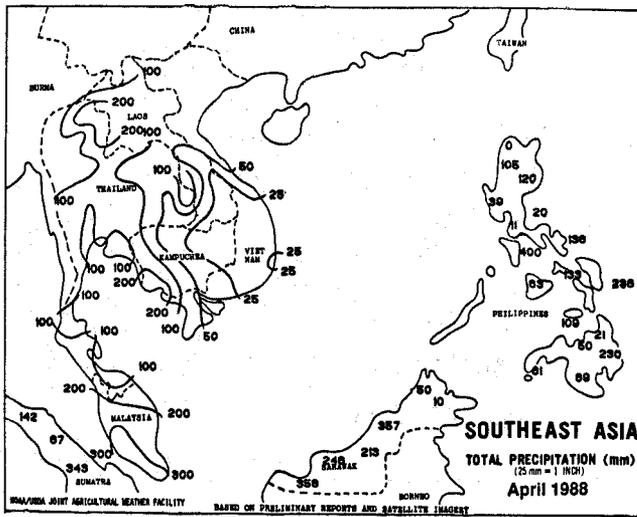
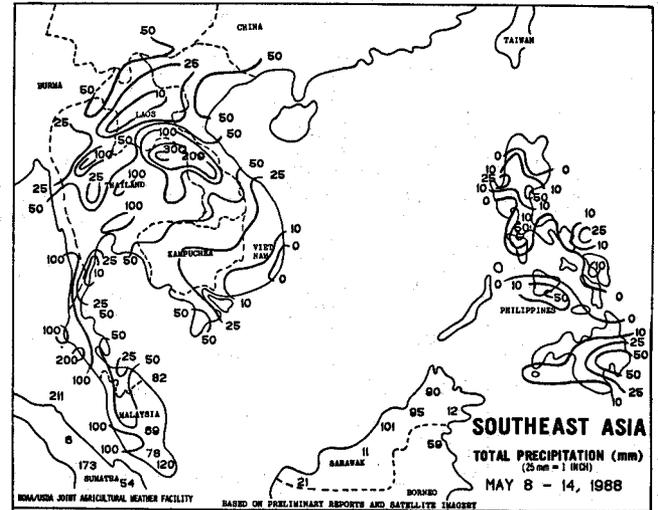


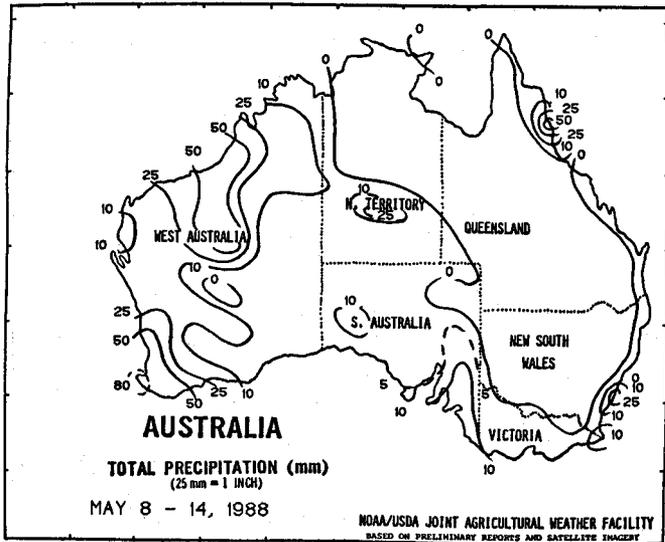


EASTERN ASIA ... Widespread heavy rain fell across the Yangtze River Valley, ending several weeks of persistent dryness and benefiting reproductive winter grains and vegetative single crop rice. Very heavy rainfall (in excess of 100mm) may have caused flooding, especially in the southeast. Showers also favored winter and spring crops across northwestern Chinese and southern Japanese growing areas. In Manchuria, warmer temperatures and light rainfall helped emerging to vegetative spring wheat. Light rain also fell in far northern sections of the North China Plain which were missed by last week's rainfall. Dry weather was confined to Hebei and Shandong. April rainfall was below normal in much of Eastern Asia except for coastal southeastern China, Manchuria, the Korean Peninsula, and Japan where it was normal to above normal.

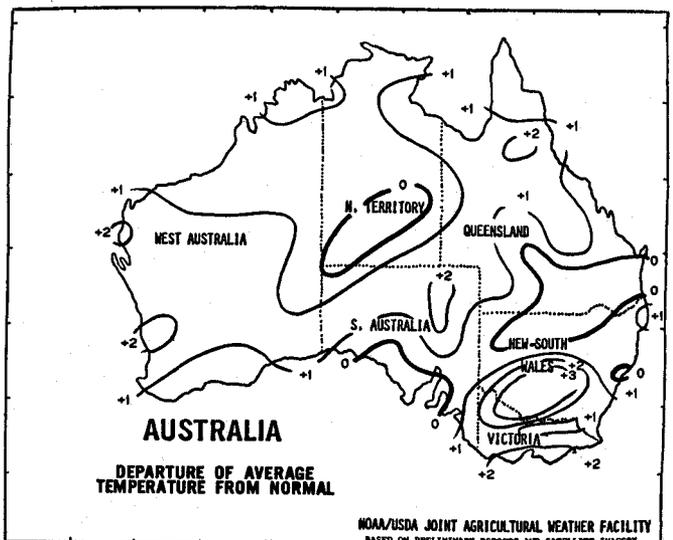
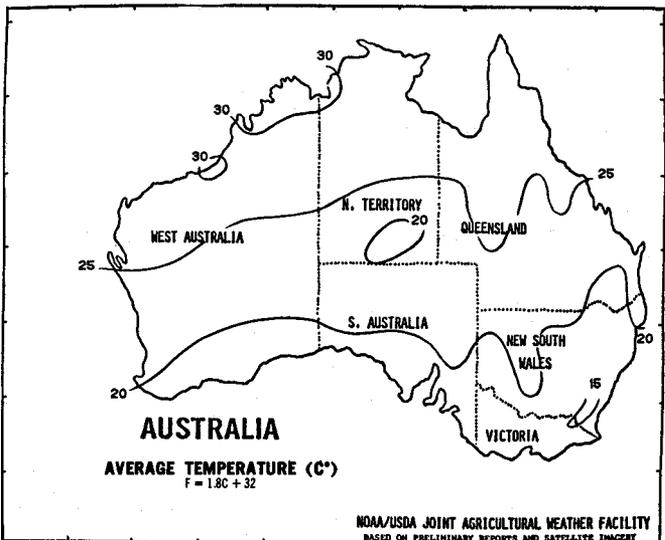
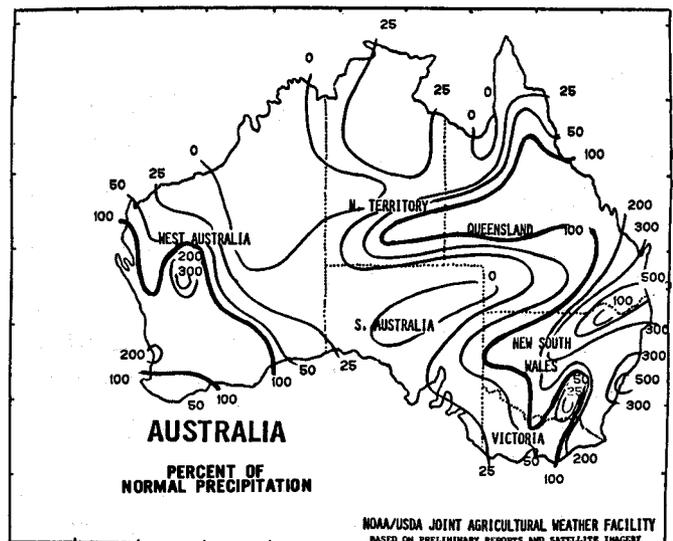
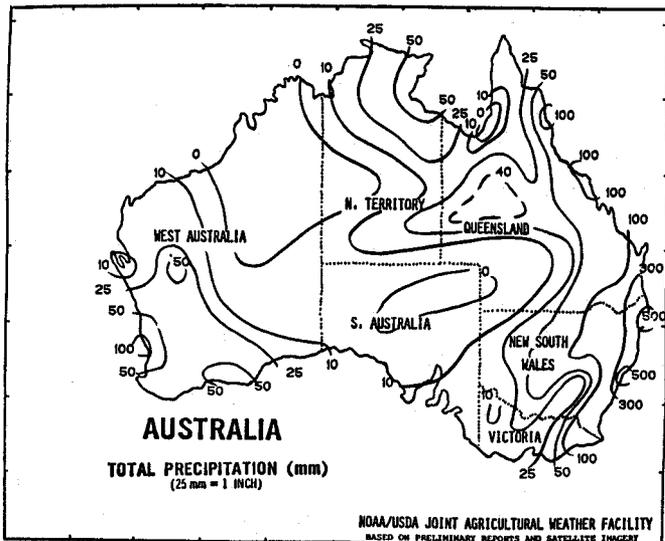


SOUTHEAST ASIA ... Moderate to heavy showers (25-100mm or more) continued across Indochina, maintaining generally favorable pre-planting conditions. Inundating rain (up to 296mm), however, caused local flooding in northeastern Thailand and central Laos. Rainfall increased in Vietnam from the previous week, ranging from 25-79mm in central and northern rice areas. Moderate to heavy rain (25-100mm or more) continued over most of the Malay peninsula, with heaviest rain along the west coast of peninsular Thailand, causing local flooding. In April, rainfall was near to above normal over Malaysia, Thailand, western Kampuchea, northern and southwestern Laos, and northern Vietnam. In the Philippines, scattered showers covered crop areas from central Luzon southward to Mindanao, with dry pockets persisting over southern Luzon and many central islands. Northern Luzon's Cagayan Valley remained dry. In April, rainfall was near to above normal over most crop areas, due mainly to heavy rain early in the month. Dry weather since mid-April in northern Luzon has limited moisture for grain planting which usually takes place during May and June.

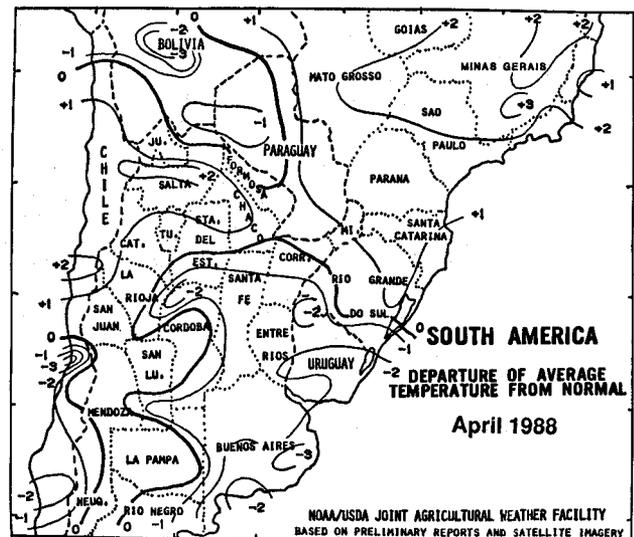
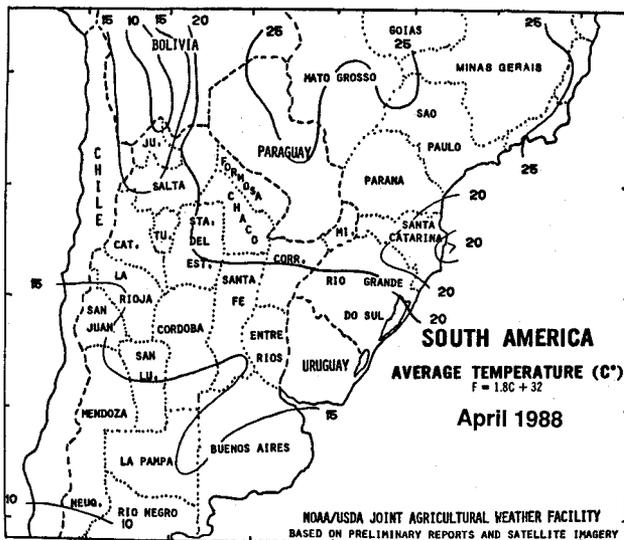
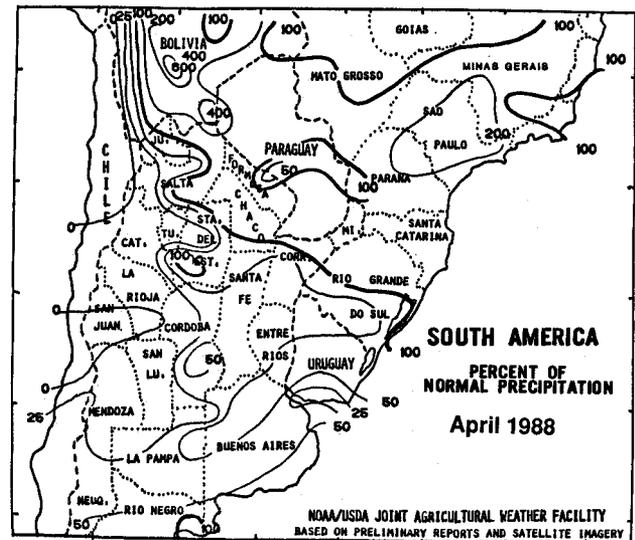
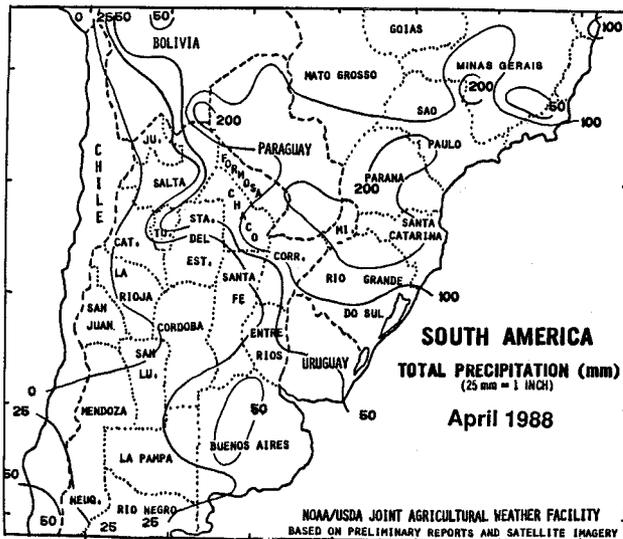
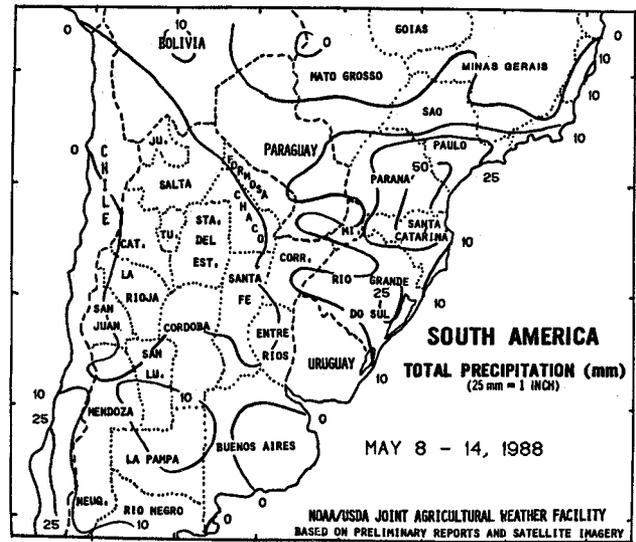


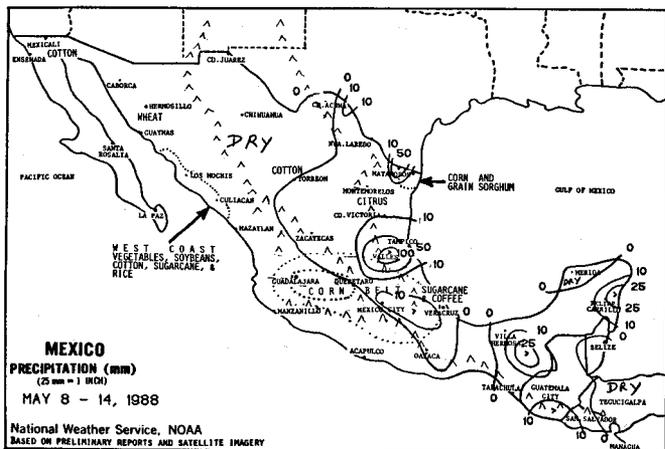


AUSTRALIA ... Mostly dry, mild weather favored summer crop harvesting and winter grain planting over southern Queensland and northern New South Wales. Scattered showers fell over coastal sections of southeastern New South Wales, Victoria, and South Australia. Planting moisture for winter wheat and barley has been adequate in most growing areas except for western portions of South Australia. Late-week showers covered much of Western Australia, bringing beneficial topsoil moisture to western grain areas. April rainfall was normal to above normal over crop areas of Queensland, eastern New South Wales, and Western Australia, while below-normal rainfall covered growing areas in South Australia, Victoria, and southwestern New South Wales.

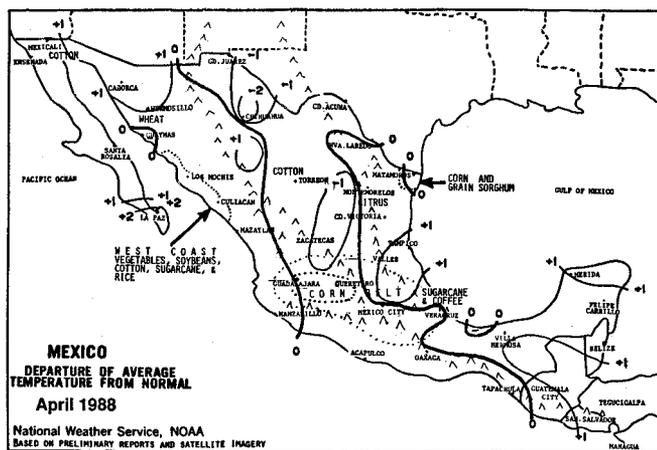
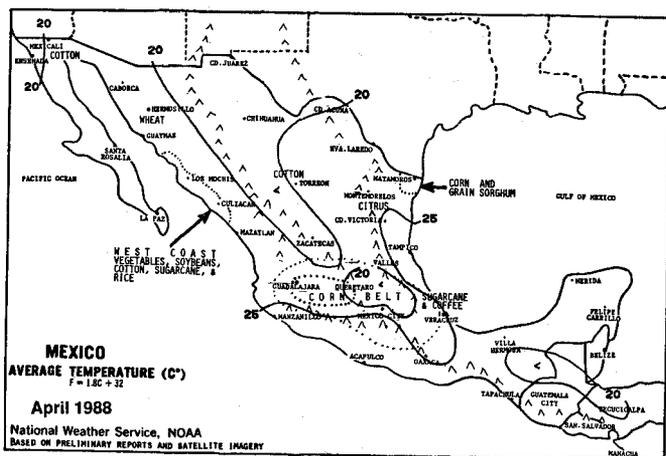
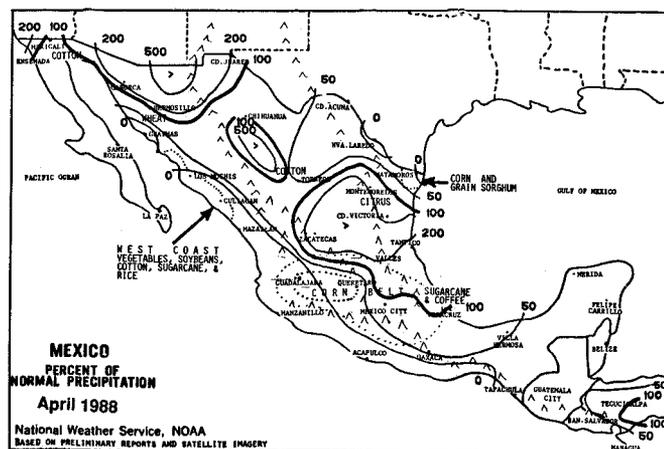
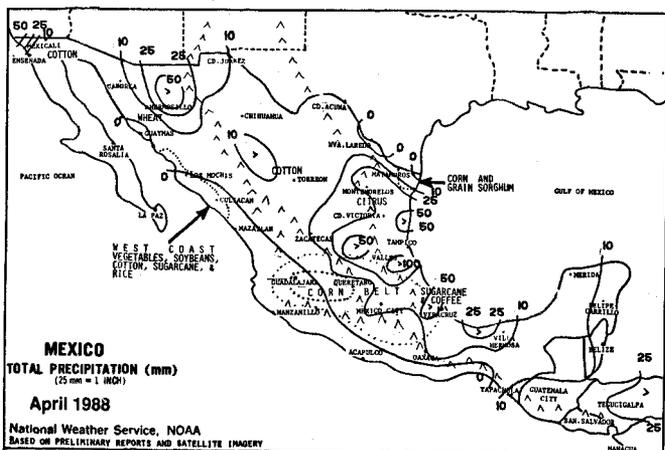


SOUTH AMERICA ... Mostly dry weather favored Argentina's summer crop harvests which have advanced rapidly in recent weeks. Corn and sorghum harvesting reached about 80 percent complete, while soybeans were 20 percent harvested. April's below-average rainfall pattern promoted rapid fieldwork. Wheat planting is likely underway with showers (8-13mm) moistening topsoils in western crop areas, including extreme western Buenos Aires, northern La Pampa, and southern Cordoba. Mostly dry weather favored cotton harvesting in the north. In south-central Brazil, some rain (3-20mm) slowed late soybean harvesting in Rio Grande do Sul, but Brazil's total soybean harvest reached 90 percent. Rain (20-83mm) returned to Santa Catarina and Parana late in the week, following about a week of dry weather which helped wheat planting. The heavier rain (50-83mm) fell in eastern sections. Above-average April rainfall, especially in eastern Sao Paulo and northeastern Parana, slowed early wheat planting. Dry weather prevailed recently over northern crop areas.

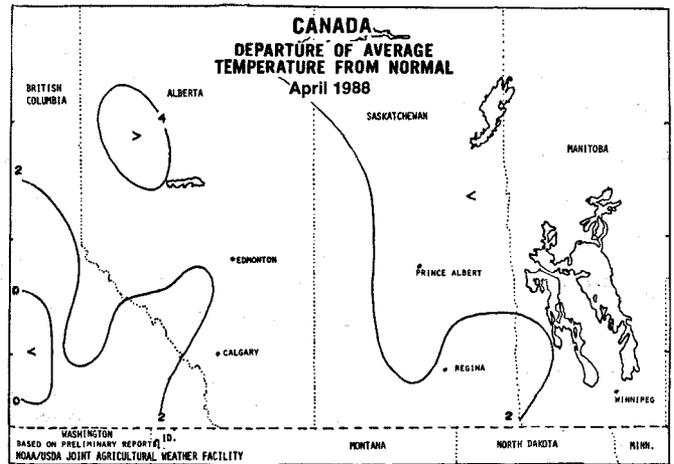
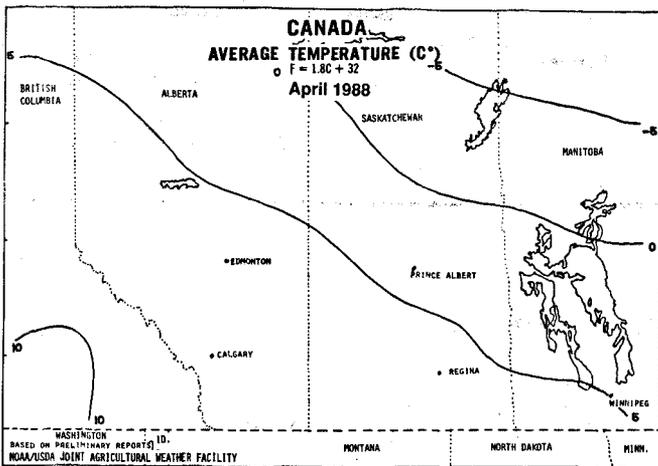
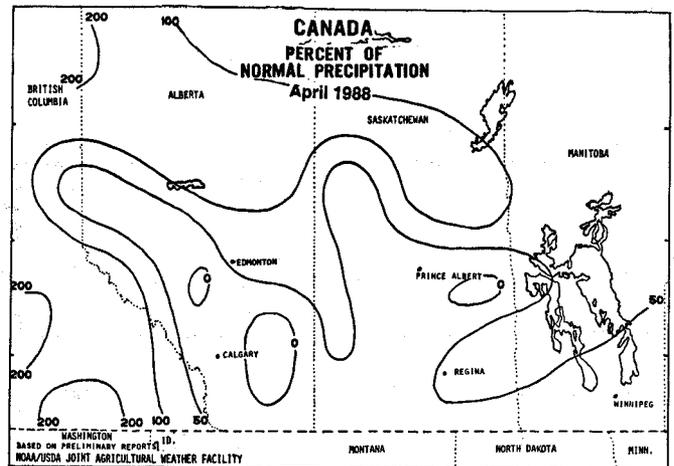
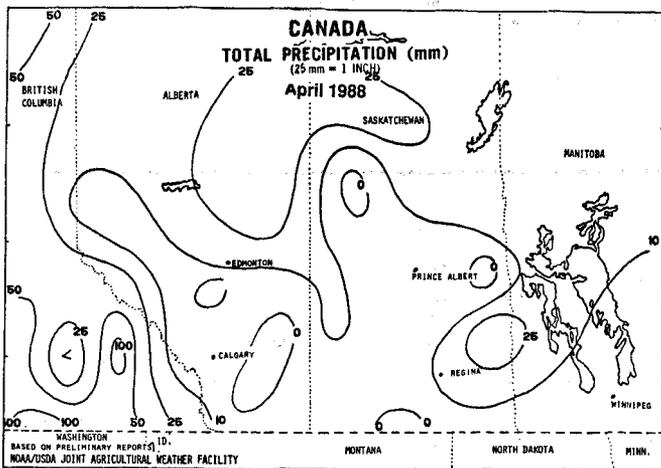
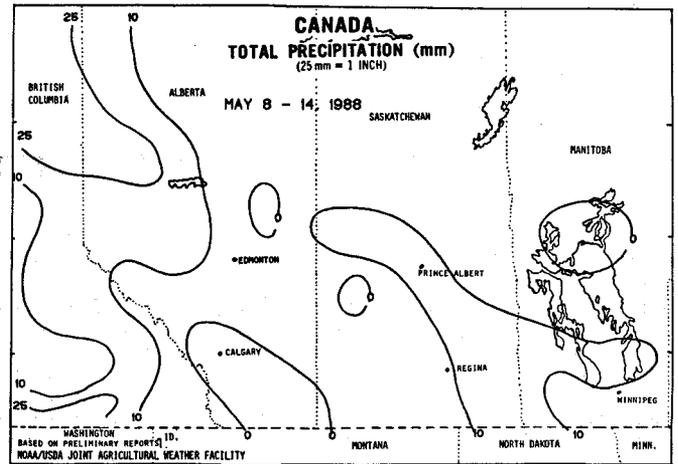




MEXICO ... Scattered showers covered much of eastern and southern Mexico, while dry weather prevailed in western and north-central portions of the country. In the Southern Plateau corn belt, substantial rainfall (8-17mm) benefited early season corn in the northeast. Locally heavy rain (52-144mm) was reported in the vicinity of Ciudad Valles. Reservoir levels are reportedly low in the northwest, which has a significant portion of the cotton, soybean, rice, and dry bean crops, and, in the central region, which is a major corn, sorghum and dry bean producing area. While April rainfall averaged above normal over much of the northeast, and northwestern mountains, mostly dry April weather prevailed along the west coast and western half of the Southern Plateau. There are marked regional variations but, in general, about 75-80 percent of Mexico's annual rainfall occurs from April to October.



CANADA ... Beneficial rain (10-23mm) covered most grain regions of eastern Saskatchewan and parts of southwestern Manitoba. The much needed rain reached northeastern grain regions of Saskatchewan that were dry the previous week. Light rain (5mm or less), however, returned to crop areas of Manitoba south of Winnipeg. Light rain (less than 10mm) covered western Saskatchewan and northern grain regions of Alberta, with dry weather returning to crop areas of Alberta south of Calgary. In April, rainfall was below normal over much of the Prairie grain belt. The exception was east-central crop regions of Saskatchewan east of Regina. April temperatures were 1-4 degrees C above normal. May rainfall improved planting conditions in the southeastern Prairies, but conditions continued unfavorable over much of the southwest.

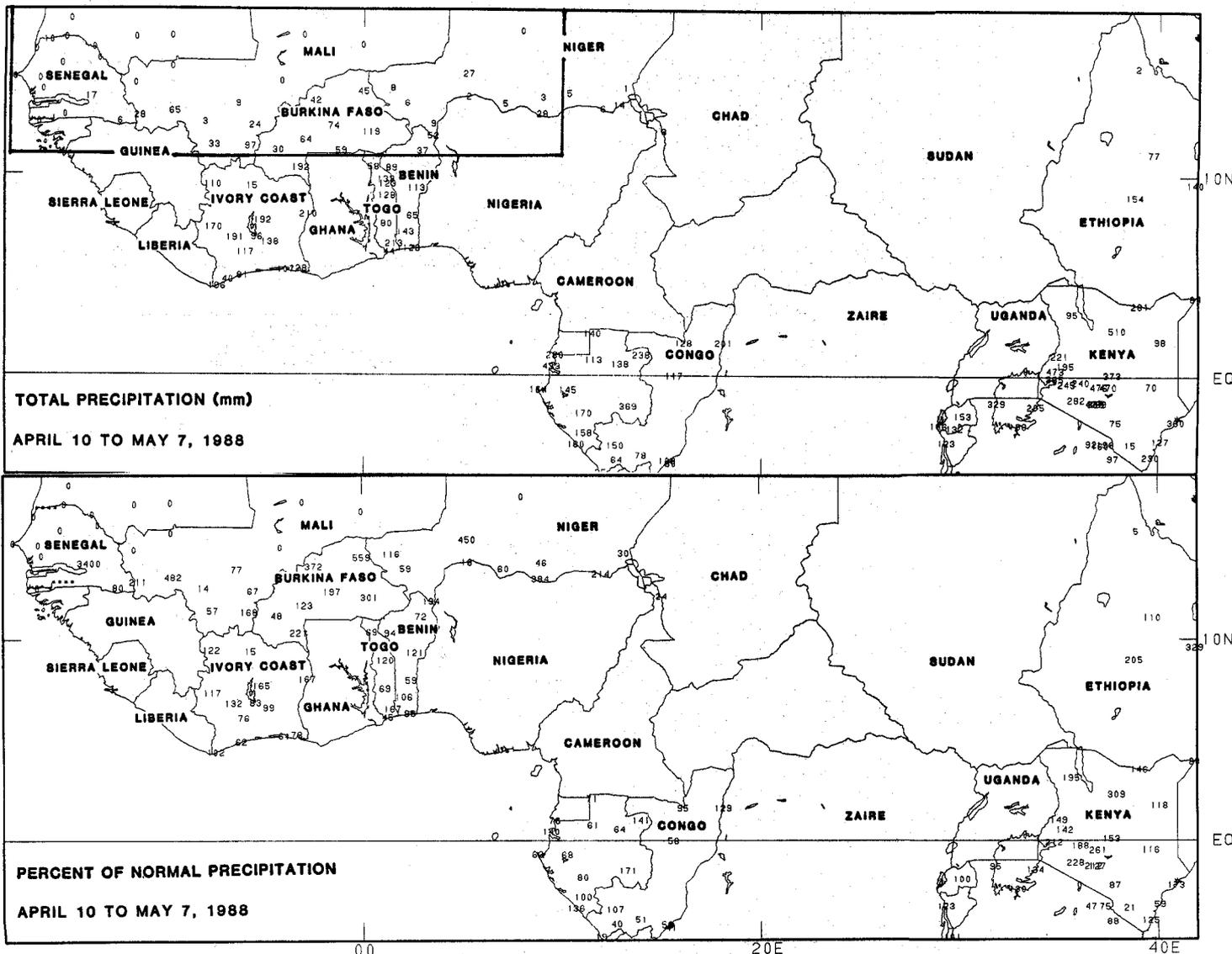


AFRICAN AGRICULTURAL WEATHER SUMMARY

In western Africa, frequent rainfall in the coastal countries from Liberia eastward has maintained generally favorable conditions for southern crops planted during April. Satellite imagery indicated showers over Ghana and Nigeria, benefiting recently planted southern grains and, in Ghana, cocon which is usually flowering during April and May. Dry pockets occurred over northern Cote d'Ivoire and northern Togo in May, but northern planting is usually just underway. Beneficial showers until early May reached northern Burkina Faso and southern Mali, improving pre-planting conditions. Planting in the Sahel normally begins in late May and early June.

In eastern Africa, April rainfall in northern Tanzania and western Kenya improved field conditions for grain planting, following earlier dryness. However, excessive rainfall since mid-April in southwestern Kenya has caused flooding and damage to newly planted corn. Inundating rain during the last 2 weeks of April in northeastern Tanzania likely damaged poorly established crops. Replanting in Tanzania could subject immature grains to seasonably dry weather when rainy season ends. Conditions have been generally favorable in the northwest. Rainfall since mid-April has improved planting conditions in central and eastern Ethiopia. Satellite imagery since late April has depicted scattered showers over southern Sudan, occasionally reaching central crop regions. Planting in Sudan usually begins in June.

See story on back page for an explanation of this box.



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ANNUAL RAINFALL INDEX FOR THE WESTERN SUBSAHARA

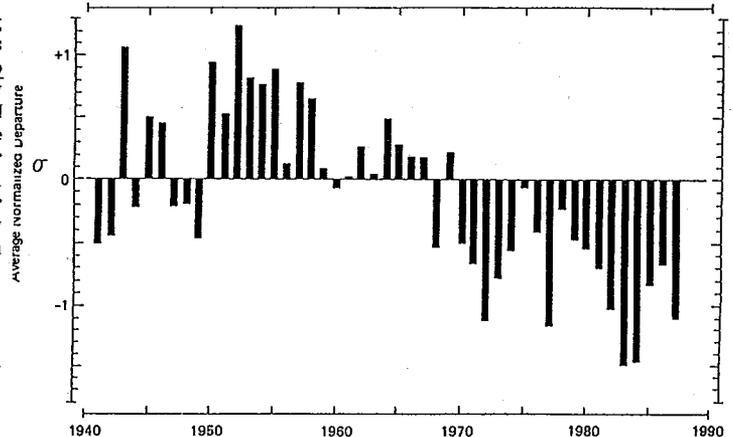
Lamb (1986) developed a rainfall index indicating departures from long-term normals since 1941 from stations in Sub-Saharan West Africa (see Weekly Weather and Crop Bulletin, Vol. 74, No. 21). The index uses the monthly average precipitation for 20 stations that lie between 11 N and 18 N west of 10 E (see box on previous page). The accompanying figure shows the dramatic trend toward drier weather in the last 20 years. Total average annual rainfall in this area during 1987 was the 5th lowest for the 48-year period. However, following a late start to the rainy season, timely rain was beneficial to crops in southern Senegal, Burkina Faso, and southern Mali.

REFERENCE

Lamb, P.J., R.A. Pepler, and S. Hastenrath. "Interannual Variability in the Tropical Atlantic," Nature. Vol. 322, pp. 238-240, July 1986.

SUBSAHARAN RAINFALL INDEX

(Courtesy of P. Lamb)



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