

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

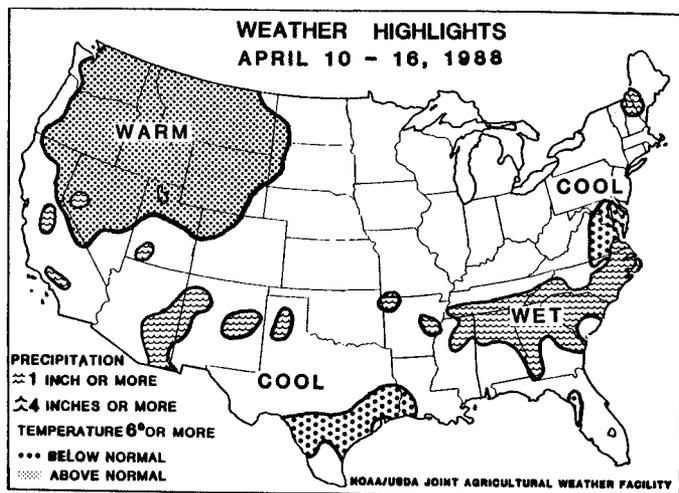
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National Weather Summary

April 10-16, 1988



HIGHLIGHTS: Rains soaked the Southeast from Monday through Wednesday, while strong northeasterly winds caused flooding along the mid-Atlantic coast. Record-high temperatures in the Southwest gave way to cooler, showery conditions as a storm developed off the California coast and moved inland.

SUNDAY...Fair-weather systems dominated the East and the extreme West as cold air plunged southward through the Great Plains to Texas. Light snow fell in southeastern Colorado, while rain extended from western Missouri across northwestern Arkansas and eastern Oklahoma to parts of Texas. Record-high temperatures for April 10 were recorded along the west coast.

MONDAY...Below-freezing temperatures reached southward through the Great Plains as far south as northwestern Texas. Scattered showers extended from Mississippi across Alabama to northern Florida and Georgia. New England was damp and cold, with some snow in Maine. Abnormal heat continued in the Southwest, particularly California.

TUESDAY...A developing storm in the Southeast produced scattered rain showers and a few thunderstorms in Georgia, Florida, and the Carolinas. Heavy snow fell in western North Carolina. Northeasterly winds increased along the east coast from South Carolina to New Jersey. Warm air spread from California into Nevada, Utah, Colorado, and Idaho.

WEDNESDAY...Scattered showers lowered temperatures in the Southwest. Rain also fell at coastal areas of Washington and Oregon. The storm in the Southeast continued to give beneficial rains to eastern Tennessee and the Carolinas, while associated strong northeasterly winds caused coastal flooding from the Carolinas to New Jersey. Light showers were widely scattered along a cold front moving southward through the Great Plains and upper Mississippi Valley.

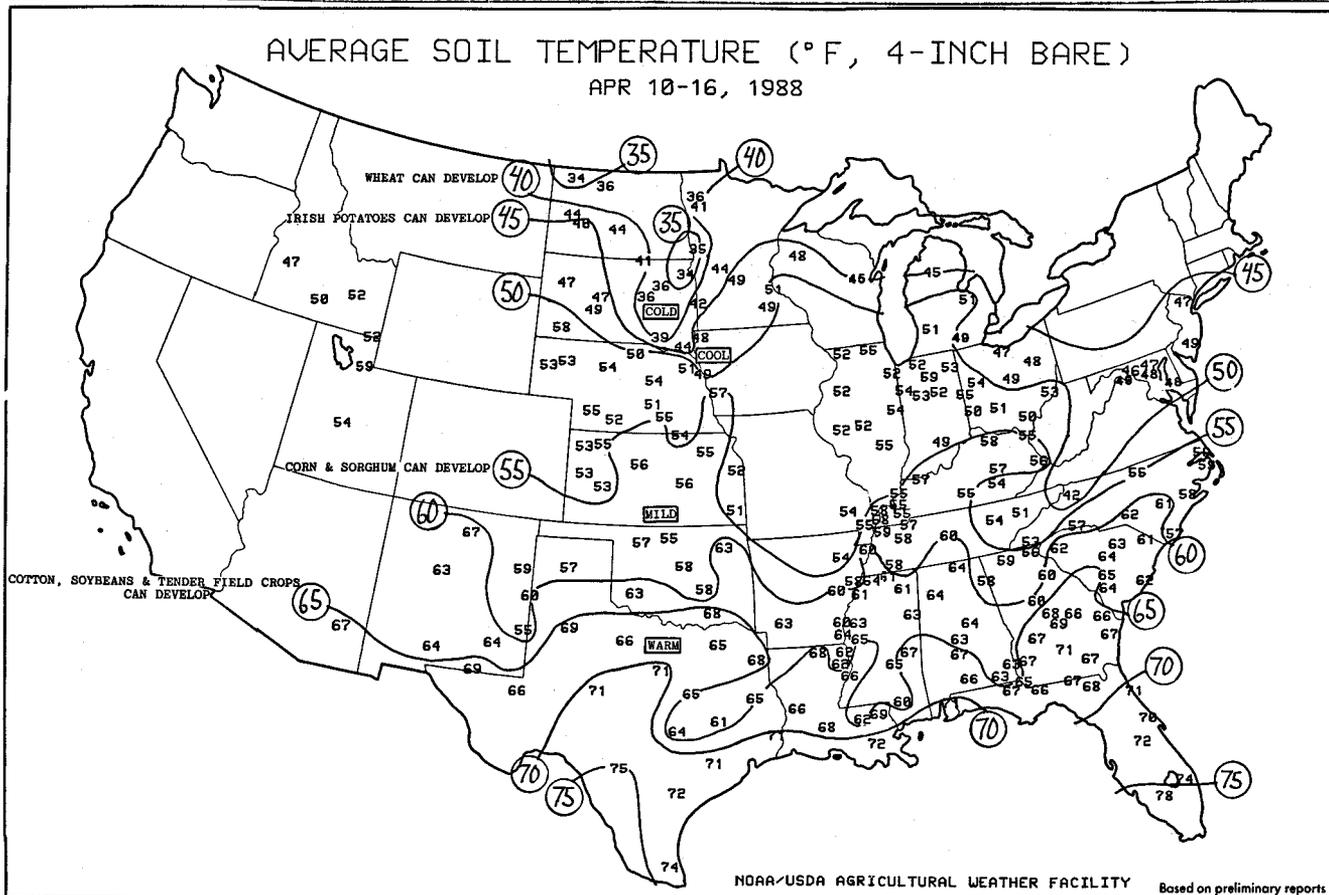
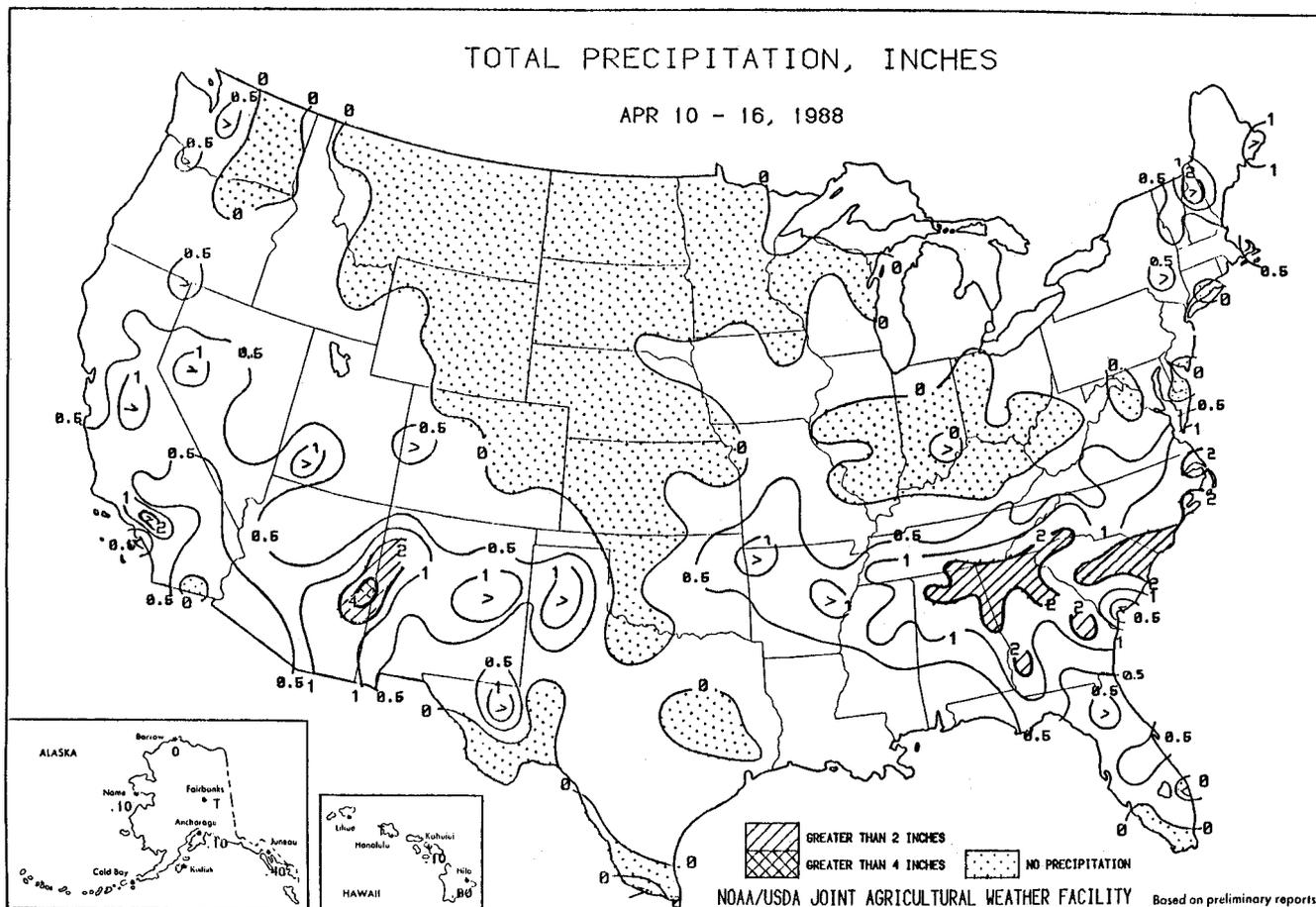
THURSDAY...Rain showers and a few thunderstorms continued in Oregon and portions of California. Showers were also scattered from Nevada to New Mexico. Wintry weather visited the Great Lakes region with snow showers. Light rain showers were scattered ahead of a cold front extending from the eastern Great Lakes through the Ohio Valley into the southern Plains.

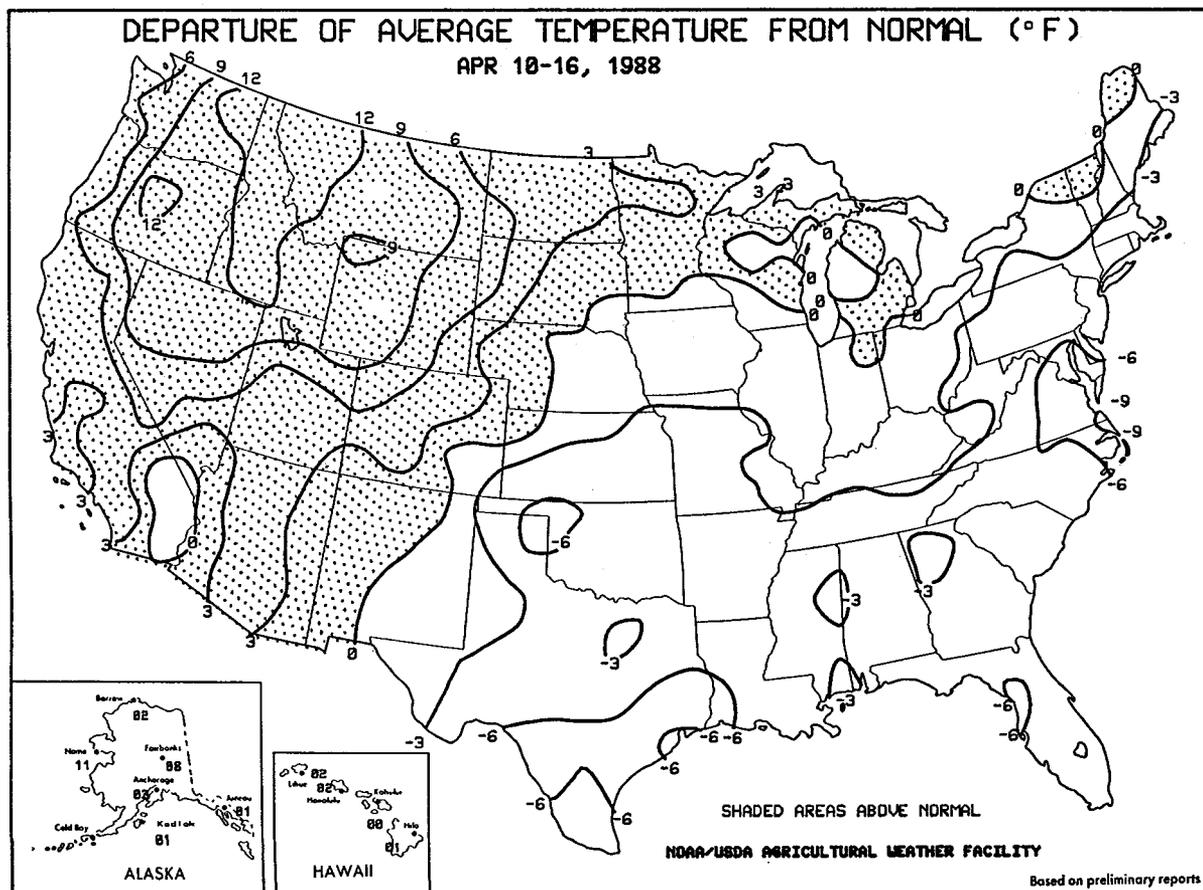
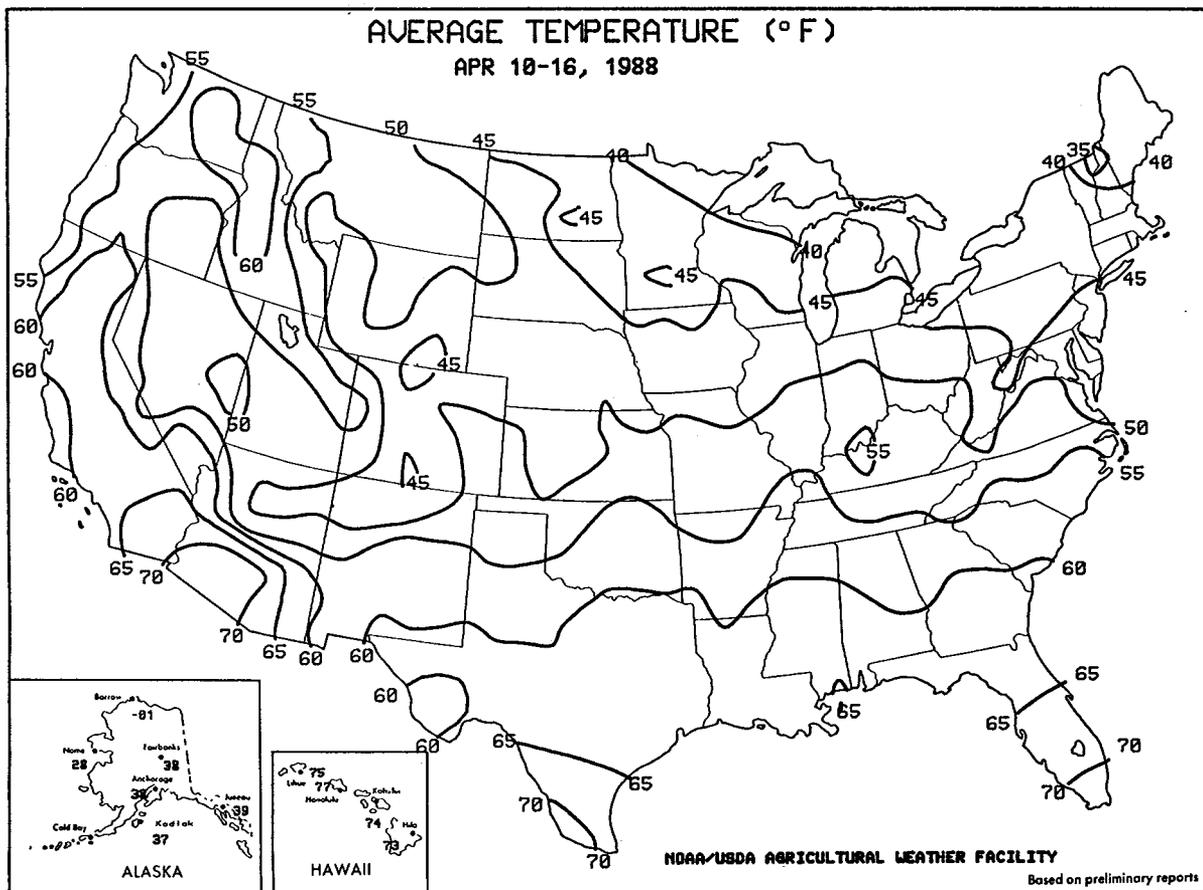
FRIDAY...Snow fell in Michigan, northern Ohio, western New York, and Vermont, but accumulations were generally light. Temperatures continued to fall in the desert Southwest as shower activity intensified. Rain persisted in Oklahoma, Missouri, Arkansas, and Tennessee.

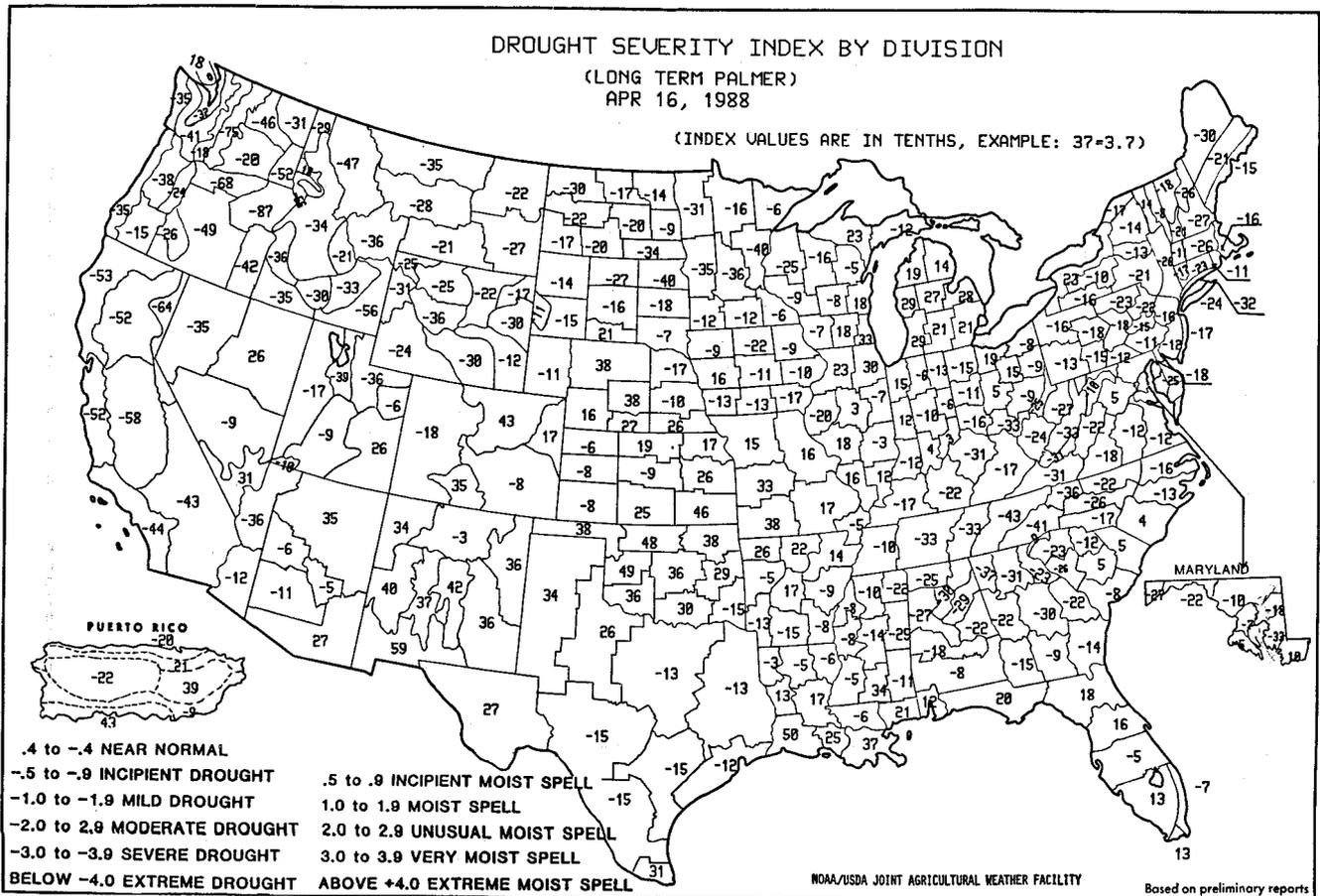
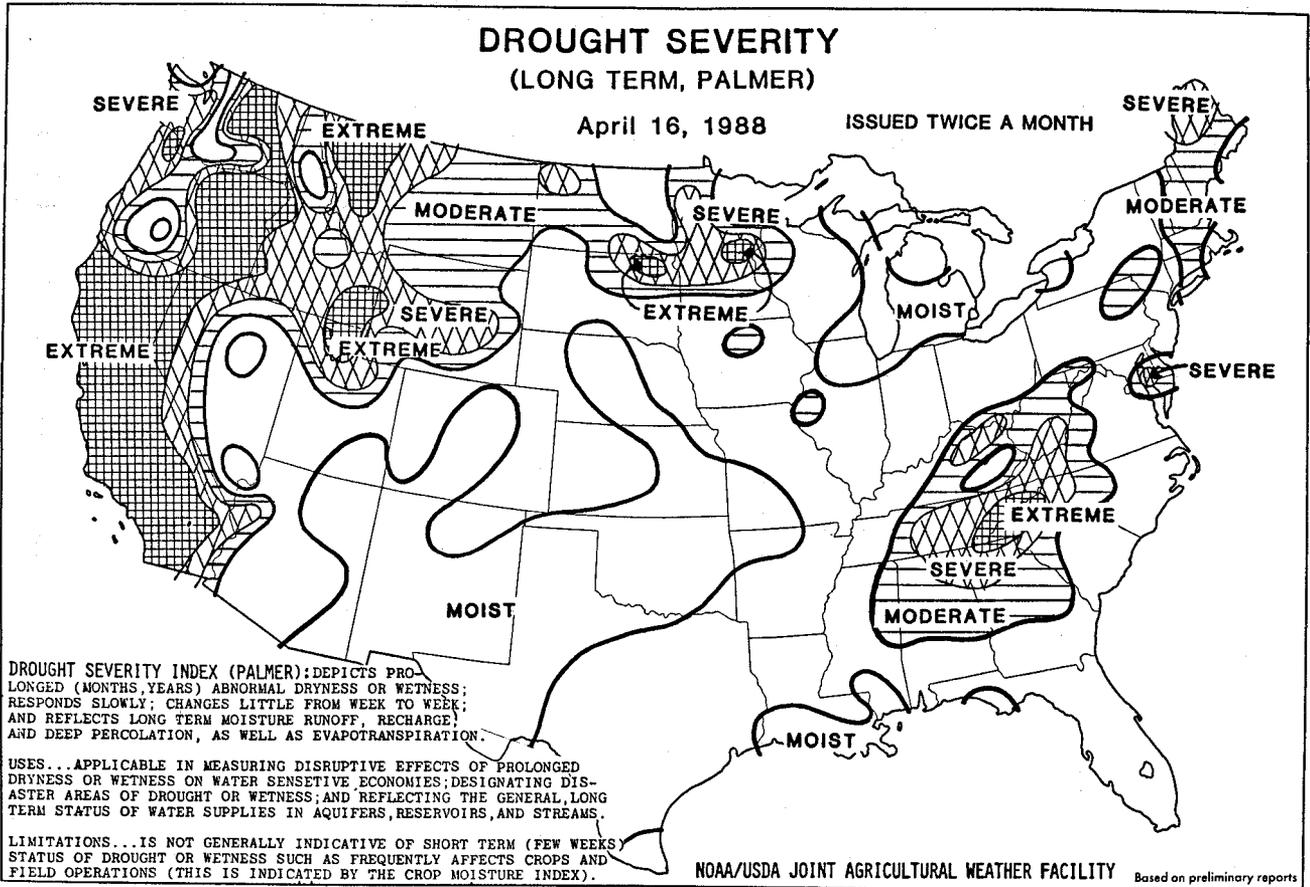
SATURDAY...Severe thunderstorms broke out during the afternoon in New Mexico and Texas. Rain showers moved across Colorado and Kansas. Wintry weather prevailed in much of the Northeast, with snow showers and below-freezing temperatures.

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National Weather Data for Selected Cities

Weather Data for the Week Ending April 16, 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	71	44	80	40	57	-5	1.0	-1	1.0	5.0	53	12.5	64	95	38	0	0	2	1	
MOBILE	78	50	83	44	64	-4	T	-1.2	T	10.6	113	21.5	113	95	33	0	0	1	0	
MONTGOMERY	74	47	82	42	60	-5	.7	-4	.5	6.5	78	18.0	105	91	39	0	0	2	0	
AK ANCHORAGE	44	32	49	30	38	3	.1	0	.1	.8	78	1.5	56	90	49	0	5	2	0	
BARROW	7	-9	31	-26	-1	2	T	-1	T	.1	40	.1	22	86	73	0	7	0	0	
FAIRBANKS	49	26	56	20	38	8	T	-1	T	.1	25	.6	39	75	30	0	7	1	0	
JUNEAU	45	33	51	29	39	1	.4	-2	.3	6.1	127	15.2	123	99	65	0	3	3	0	
KODIAK	41	33	43	19	37	1	3.0	2.2	.7	12.5	218	29.7	178	95	71	0	1	7	0	
NOME	35	22	41	-7	28	11	.1	-1	.1	.9	107	2.8	128	86	57	0	6	1	0	
AZ PHOENIX	87	61	97	52	74	7	.5	.5	.3	.7	72	1.8	80	51	21	4	0	2	0	
PRESCOTT	69	40	80	31	55	5	.5	.3	.4	.8	40	2.6	49	55	20	1	1	2	1	
TUCSON	84	53	96	46	69	4	1.1	1.1	.7	1.5	170	2.4	105	53	19	2	0	4	1	
YUMA	83	60	97	51	72	1	.5	.5	.2	.5	252	.9	108	58	26	3	0	3	0	
AR FORT SMITH	71	44	83	41	58	-3	.6	-4	.4	9.4	155	13.1	125	90	40	0	0	3	0	
LITTLE ROCK	68	46	80	37	57	-5	1.0	-3	.6	6.2	82	12.3	80	77	44	0	0	4	1	
CA BAKERSFIELD	79	54	96	48	67	5	.3	.1	.2	.7	53	1.9	56	69	35	2	0	0	0	
EUREKA	58	49	63	46	53	4	.1	-6	.1	1.8	27	9.5	50	93	77	0	0	2	0	
FRESNO	75	51	93	46	63	3	.8	.6	.8	1.1	49	3.5	56	81	43	2	0	1	1	
LOS ANGELES	70	55	82	48	63	3	.5	.2	.4	.5	23	3.9	50	93	52	0	0	2	0	
REDDING	77	50	91	45	64	4	.4	-3	.3	.9	14	8.3	39	82	35	1	0	2	0	
SACRAMENTO	74	52	93	47	63	4	.6	.3	.5	.8	29	5.4	55	86	44	2	0	3	1	
SAN DIEGO	72	56	83	50	64	3	.7	.5	.5	1.3	59	3.6	60	96	52	0	0	3	0	
SAN FRANCISCO	68	52	91	49	60	5	.1	-3	.1	.1	4	4.4	39	87	52	1	0	2	0	
CO DENVER	68	35	78	22	52	5	T	-4	T	1.4	67	2.4	73	70	24	0	2	0	0	
GRAND JUNCTION	72	41	80	27	57	6	1.0	.8	.6	1.7	155	3.0	131	57	19	0	2	3	1	
PUEBLO	69	30	83	23	50	-1	T	-2	T	1.2	106	2.2	130	81	22	0	4	0	0	
CT BRIDGEPORT	50	39	62	34	45	-3	T	-9	T	1.7	28	8.0	65	73	49	0	0	1	0	
HARTFORD	54	36	65	30	45	-3	T	-8	T	2.6	41	10.0	76	79	40	0	2	0	0	
DC WASHINGTON	58	40	66	37	49	-4	T	-7	T	3.4	69	9.1	87	82	42	0	0	1	0	
FL APALACHICOLA	74	53	79	45	64	-4	.6	-1	.4	6.0	102	17.3	132	95	52	0	0	2	0	
DAYTONA BEACH	77	51	83	43	64	-5	.1	-4	.1	4.7	113	11.8	121	97	39	0	0	2	0	
JACKSONVILLE	75	50	83	41	63	-6	.3	-3	.3	3.1	62	15.5	133	95	40	0	0	2	0	
KEY WEST	79	63	83	59	71	-4	T	-3	T	1.7	90	6.9	123	81	48	0	0	0	0	
MIAMI	81	61	85	55	71	-4	T	-7	T	.4	13	2.9	39	86	36	0	0	1	0	
ORLANDO	78	54	82	49	66	-5	.5	0	.3	6.5	147	11.0	112	91	36	0	0	2	0	
TALLAHASSEE	76	46	84	37	61	-6	1.0	0	-7	8.3	107	18.9	108	98	40	0	0	2	0	
TAMPA	76	54	80	47	65	-6	.2	-2	.1	4.3	98	8.5	88	96	46	0	0	2	1	
WEST PALM BEACH	80	57	86	53	69	-5	T	-7	T	5.5	132	11.9	125	87	39	0	0	2	0	
GA ATLANTA	72	46	82	40	59	-2	1.6	.6	1.6	5.1	61	13.0	73	82	31	0	0	2	1	
AUGUSTA	73	45	83	42	59	-4	1.2	.5	1.2	4.7	70	12.3	83	97	40	0	0	2	1	
MACON	75	45	84	39	60	-5	.8	-1	.8	4.1	58	12.0	75	93	32	0	0	1	1	
SAVANNAH	72	50	85	47	61	-5	1.3	.6	1.1	3.5	64	11.0	93	87	44	0	0	2	1	
HI HILO	80	67	81	62	73	1	.8	-2.3	.6	21.4	103	41.7	95	87	58	0	0	3	1	
HONOLULU	85	68	88	65	77	2	T	-3	T	1.1	25	5.4	50	80	45	0	0	1	0	
KAHULUI	83	65	84	62	74	0	.1	-2	.1	1.1	31	9.7	93	84	48	0	0	1	0	
LIHUE	80	70	81	65	75	2	.2	-5	.2	2.0	32	13.5	82	83	59	0	0	2	0	
ID BOISE	77	44	82	33	61	12	.1	-2	.1	2.1	131	3.9	90	71	24	0	0	2	0	
LEWISTON	78	48	81	39	63	13	0	-3	0	1.1	67	2.2	56	64	29	0	0	0	0	
POCATELLO	73	34	81	19	54	10	T	-3	T	1.2	82	2.5	73	75	19	0	2	0	0	
IL CHICAGO	56	35	73	32	46	-2	.1	-8	.1	3.7	77	6.9	90	81	35	0	1	1	0	
MOLINE	60	36	76	29	48	-2	T	-9	T	3.3	68	6.1	79	76	29	0	2	1	0	
PEORIA	60	37	72	30	48	-2	T	-9	T	3.9	80	6.6	83	76	32	0	2	1	0	
QUINCY	60	37	72	32	48	-4	0	-9	0	2.6	50	4.2	52	73	34	0	1	0	0	
ROCKFORD	59	35	73	28	47	0	.1	-1.0	.1	4.6	96	7.6	102	84	36	0	2	1	0	
SPRINGFIELD	61	38	71	33	50	-4	0	-9	0	3.7	70	7.2	85	75	31	0	0	0	0	
IN EVANSVILLE	67	41	72	32	54	-2	0	-9	0	4.1	61	11.3	88	80	25	0	1	0	0	
FORT WAYNE	61	38	70	30	50	1	T	-8	T	5.6	115	9.1	101	78	32	0	2	0	0	
INDIANAPOLIS	63	39	70	32	51	-1	0	-9	0	5.6	101	11.0	102	69	29	0	1	0	0	
SOUTH BEND	58	37	68	31	47	-1	T	-9	T	4.9	93	9.1	93	85	35	0	2	1	0	
IA DES MOINES	63	34	78	29	49	-1	T	-7	T	1.2	31	2.1	36	67	20	0	3	1	0	
SIoux CITY	63	29	73	24	46	-3	T	-5	T	2.1	74	3.3	73	80	22	0	6	1	0	
WATERLOO	61	30	73	24	46	-1	T	-8	T	1.9	47	3.0	52	83	24	0	4	0	0	
KS CONCORDIA	65	37	80	32	51	-1	0	-5	0	1.5	50	2.8	63	66	25	0	1	0	0	
DODGE CITY	64	35	80	29	49	-1	0	-4	0	2.0	87	3.0	92	71	24	0	2	0	0	
GOODLAND	66	34	84	24	50	2	0	-2	0	1.8	118	3.6	160	67	20	0	3	0	0	
TOPEKA	65	36	78	29	50	-4	T	-7	T	3.1	81	5.6	97	82	24	0	1	0	0	
WICHITA	64	39	74	35	52	-4	T	-5	T	4.8	148	5.5	114	81	29	0	0	0	0	
KY BOWLING GREEN	69	41	75	31	55	-2	.1	-9	.1	4.0	51	11.2	68	85	33	0	1	1	0	
LEXINGTON	65	41	70	33	53	-2	0	-9	0	4.6	65	10.6	76	69	31	0	0	0	0	
LOUISVILLE	68	44	74	37	56	0	0	-1.0	0	5.3	76	12.9	94	68	27	0	0	0	0	
LA ALEXANDRIA	73	49	82	41	61	-6	.1	-1.2	.1	10.9	138	16.0	93	83	39	0	0	1	0	
BATON ROUGE	77	50	82	44	64	-5	.1	-1.2	.1	10.7	140	27.1	157	93	36	0	0	1	0	
LAKE CHARLES	75	49	80	41	62	-6	T	-8	T	7.3	145	15.6	119	94	41	0	0	1	0	
NEW ORLEANS	75	50	80	47	63	-6	.1	-1.0	.1	17.1	243	32.1	185	97	42	0	0	1	0	

Based on 1951-80 normals

Weather Data for the Week Ending April 16, 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	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	74	46	83	36	60	-5	.2	-.9	-.1	6.5	104	12.1	88	87	37	0	0	2	0
ME CARIBOU	46	29	52	21	38	1	-.7	-.1	-.6	2.2	59	7.6	92	92	45	0	5	2	0
PORLAND	47	32	63	26	40	-2	-.9	0	-.5	3.4	56	8.7	64	92	54	0	3	3	1
MD BALTIMORE	56	38	63	35	47	-7	-.7	-.7	-.7	6.3	63	9.9	86	82	42	0	0	1	0
SALISBURY	57	39	69	38	48	-8	-.7	-.7	-.7	8.4	145	16.5	130	86	46	0	0	0	0
MA BOSTON	48	38	64	33	43	-5	-.7	-.1	-.1	4.0	66	10.5	75	88	53	0	0	0	0
CHATHAM	45	37	57	35	41	-3	-.8	-.1	-.4	4.2	69	12.1	82	87	63	0	0	5	0
MI ALPENA	53	29	64	25	41	1	-.2	-.4	-.1	4.2	132	6.8	108	89	33	0	6	2	0
DETROIT	59	36	68	31	48	1	-.1	-.6	-.1	2.2	52	5.6	71	76	32	0	2	2	0
FLINT	58	33	67	28	46	0	-.2	-.2	-.2	3.0	79	5.8	85	86	36	0	1	2	0
GRAND RAPIDS	57	35	67	28	46	0	-.2	-.7	-.7	4.0	87	7.5	92	84	34	0	1	3	0
HOUGHTON LAKE	54	31	63	24	42	1	-.2	-.4	-.2	3.5	107	6.3	104	86	37	0	5	1	0
LANSING	58	33	66	28	45	0	-.3	-.4	-.3	4.6	116	7.3	103	90	36	0	3	7	1
MARQUETTE	50	25	65	19	37	-2	-.2	-.4	-.2	4.6	134	9.6	142	88	41	0	0	2	0
MUSKEGON	54	35	64	29	45	0	-.2	-.5	-.2	3.6	84	8.1	98	83	39	0	2	2	0
SAULT ST. MARIE	48	29	58	25	38	1	-.1	-.4	-.1	4.5	139	8.6	120	90	41	0	7	2	0
MN ALEXANDRIA	58	29	74	24	44	3	-.3	-.5	0	2.6	115	3.8	99	73	26	0	6	0	0
DULUTH	54	27	70	20	41	3	-.5	-.5	0	3.0	105	3.9	79	67	25	0	6	1	0
INT'L FALLS	53	26	68	21	39	2	-.4	-.4	0	1.9	102	2.5	72	73	31	0	6	0	0
MINNEAPOLIS	60	32	69	29	46	0	0	0	0	1.7	64	3.4	78	69	22	0	5	0	0
ROCHESTER	57	28	66	22	43	-1	0	0	0	2.0	66	3.4	74	70	26	0	6	0	0
MS GREENWOOD	74	47	81	42	61	-3	-.6	-.7	-.6	5.5	59	9.8	51	89	32	0	0	2	1
JACKSON	74	46	83	42	60	-4	-.2	-.1	-.2	9.8	113	15.9	88	94	40	0	0	2	0
MERIDIAN	76	46	84	42	61	-3	-.6	-.7	-.4	7.7	80	14.7	75	95	38	0	0	3	0
MO CAPE GIRARDEAU	67	42	73	32	55	-1	-.1	-.1	-.1	4.3	58	9.7	72	82	30	0	1	1	0
COLUMBIA	61	38	72	35	49	-6	-.4	-.5	-.4	5.4	101	9.2	101	76	36	0	0	1	0
KANSAS CITY	64	38	76	32	51	-4	0	0	0	3.3	77	5.5	80	66	23	0	1	0	0
SAINT LOUIS	65	42	73	37	53	-2	0	0	0	5.4	105	11.0	121	70	29	0	0	0	0
SPRINGFIELD	61	38	71	35	49	-6	-.8	-.6	-.6	9.1	163	12.6	134	86	40	0	0	3	1
MT BILLINGS	70	38	80	29	54	10	0	-.4	0	1.2	60	2.4	64	48	20	0	1	0	0
GLASGOW	67	32	78	23	50	7	0	0	0	.5	81	1.2	94	50	15	0	4	0	0
GREAT FALLS	70	38	81	29	54	11	0	-.3	0	.6	37	1.8	55	55	19	0	2	0	0
HAVRE	70	33	78	19	52	9	0	-.3	0	.5	41	1.0	45	43	16	0	2	0	0
HELENA	72	35	78	24	53	11	0	-.2	0	.8	70	1.6	69	78	23	0	2	0	0
KALISPELL	74	40	80	21	57	14	0	-.2	0	1.0	72	2.8	69	65	20	0	2	0	0
MILES CITY	72	36	81	26	54	9	0	-.3	0	.3	22	.7	27	37	13	0	2	0	0
MISSOULA	77	36	81	22	57	13	T	-.2	T	1.2	95	2.5	73	73	20	0	2	1	0
NE GRAND ISLAND	65	30	75	24	48	-2	T	-.6	T	1.6	55	3.0	73	69	20	0	3	0	0
LINCOLN	66	29	82	25	48	-3	T	-.5	T	1.4	41	2.0	40	81	20	0	6	0	0
NORFOLK	64	29	74	25	47	-2	0	0	0	1.5	60	2.7	70	77	18	0	5	0	0
NORTH PLATTE	66	30	79	21	48	1	0	-.4	0	1.6	83	2.4	82	76	18	0	6	0	0
OMAHA	63	37	74	33	50	-2	T	-.7	T	1.3	39	1.9	38	53	28	0	0	0	0
SCOTTSBLUFF	69	28	81	17	49	3	0	-.3	0	1.1	68	2.0	82	61	15	0	5	0	0
VALENTINE	66	24	80	17	45	0	0	-.4	0	1.3	75	2.7	114	66	16	0	6	0	0
NV ELY	65	31	75	15	48	8	.2	0	.1	.5	35	1.8	65	71	26	0	3	3	0
LAS VEGAS	76	50	89	45	63	0	0	-.5	-.7	133	1.6	110	63	22	0	0	3	1	1
RENO	71	40	83	30	56	10	1.0	-.9	.6	1.0	102	1.5	47	73	25	0	1	3	1
WINNEMUCCA	74	35	84	26	54	10	.4	-.2	-.2	.5	42	1.9	71	66	23	0	3	3	0
NH CONCORD	50	32	59	22	41	-3	.3	-.4	-.1	1.9	41	6.1	61	91	43	0	3	4	0
NJ ATLANTIC CITY	54	37	63	35	45	-5	.1	-.7	-.1	3.1	53	9.9	78	87	46	0	0	1	0
NM ALBUQUERQUE	70	41	80	36	56	1	1.0	-.9	-.8	2.3	339	2.6	175	65	18	0	0	2	1
CLOVIS	70	43	85	36	57	0	.3	.1	.3	1.0	115	1.5	84	58	23	0	0	1	0
ROSWELL	75	41	86	32	58	-2	.2	-.1	-.2	.2	34	1.9	136	68	17	0	1	1	0
NY ALBANY	54	34	60	28	44	-2	.4	-.3	-.3	2.2	49	7.2	78	83	44	0	2	3	0
BINGHAMTON	50	31	57	26	41	-3	.1	-.7	-.1	2.3	51	7.7	81	93	48	0	4	1	0
BUFFALO	54	35	65	31	44	0	.1	-.7	-.1	4.4	96	10.1	100	87	43	0	3	1	0
NEW YORK	54	40	61	37	47	-4	.2	-.6	-.2	2.9	48	8.9	72	81	48	0	0	1	0
ROCHESTER	52	32	61	28	42	-3	.1	-.5	-.1	2.9	73	5.8	67	90	47	0	5	2	0
SYRACUSE	54	33	62	27	44	-2	.1	-.7	-.1	3.0	62	6.7	65	88	45	0	5	3	0
NC ASHEVILLE	65	35	73	30	50	-6	1.6	-.8	1.3	4.1	62	8.7	66	94	43	0	1	2	1
CHARLOTTE	70	44	77	39	57	-3	1.0	-.3	1.0	5.0	76	9.6	67	81	35	0	0	3	1
GREENSBORO	67	39	74	33	53	-5	.5	-.2	.4	3.1	55	6.7	53	86	34	0	0	2	0
HATTERAS	59	42	73	35	51	-8	1.8	1.1	1.1	5.9	105	15.7	107	99	63	0	0	3	2
NEW BERN	69	44	82	40	56	-4	2.5	1.9	2.2	6.1	119	13.3	101	85	31	0	0	3	1
RALEIGH	66	40	76	34	53	-6	.8	.1	.6	3.6	68	9.1	74	89	36	0	0	3	1
WILMINGTON	70	45	82	37	58	-5	2.2	1.6	1.3	6.5	116	13.9	108	96	41	0	0	3	2
ND BISMARCK	64	26	82	17	45	3	0	-.3	0	.9	65	2.0	85	68	15	0	5	0	0
FARGO	61	27	81	18	44	2	T	-.4	T	1.0	57	2.9	106	67	22	0	6	0	0
GRAND FORKS	61	28	78	22	44	4	0	-.3	0	.9	63	1.7	63	75	22	0	6	0	0
WILLISTON	65	27	78	15	46	5	0	-.3	0	.8	66	1.8	84	64	14	0	5	0	0
OH AKRON-CANTON	58	34	64	28	46	-2	T	-.7	T	3.8	75	7.6	78	85	40	0	3	2	0
CINCINNATI	64	39	71	30	52	-1	0	-.8	0	5.9	101	13.6	115	72	26	0	1	0	0
CLEVELAND	54	35	64	30	45	-3	.1	-.7	-.1	4.2	89	8.1	86	88	44	0	4	3	0
COLUMBUS	62	36	68	29	49	-2	T	-.8	T	4.5	89	10.9	109	83	29	0	3	0	0

Based on 1951-80 normals

Weather Data for the Week Ending April 16, 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		
DAYTON	62	35	68	30	49	-2	T	-8	T	4.5	91	9.7	101	75	29	0	2	0	0		
TOLEDO	59	34	68	27	46	-1	T	-7	T	2.6	62	5.1	63	81	31	0	3	0	0		
YOUNGSTOWN	56	32	64	28	44	.2	T	-6	T	3.3	64	7.0	69	92	39	0	5	2	0		
OK OKLAHOMA CITY	70	44	83	39	57	-3	T	-6	T	9.2	271	10.9	190	75	30	0	0	0	0		
TULSA	68	45	79	39	56	-4	T	-4	T	8.9	169	11.0	131	76	30	0	0	1	1		
OR ASTORIA	58	45	68	38	52	4	T	-1.0	T	10.5	105	20.6	72	93	68	0	0	2	0		
BURNS	72	34	79	23	53	10	T	0	T	0	8	59	2.1	48	75	21	0	2	0		
MEDFORD	73	45	86	38	59	9	T	-2	T	1.1	8	34	3.6	45	86	36	0	0	0		
PENDLETON	73	45	79	36	59	9	T	-2	T	1.1	72	3.1	70	74	36	0	0	0	0		
PORTLAND	67	48	80	43	57	7	T	-1	T	4.9	102	11.1	74	93	55	0	0	4	0		
SALEM	66	44	79	38	55	7	T	-2	T	3	85	12.3	71	92	54	0	0	3	0		
PA ALLENTOWN	55	35	64	32	45	-4	T	-8	T	3.0	50	9.0	72	86	41	0	1	1	0		
ERIE	51	34	60	30	43	-2	T	-7	T	1.1	4.2	88	8.2	88	87	47	0	3	3		
HARRISBURG	56	37	64	33	46	-6	T	-7	T	3.3	64	8.8	80	80	39	0	0	1	0		
PHILADELPHIA	58	39	64	37	48	-4	T	-7	T	3.6	62	10.4	88	85	43	0	0	1	0		
PITTSBURGH	58	35	66	27	47	-3	T	-7	T	3.9	73	8.9	83	88	41	0	2	2	0		
SCRANTON	54	32	61	30	43	-5	T	-5	T	2.6	62	6.3	74	90	38	0	3	2	0		
RI PROVIDENCE	50	37	64	33	44	-4	T	-8	T	1.1	4.4	68	12.3	86	84	46	0	0	3	0	
SC CHARLESTON	72	48	84	41	60	-4	T	9	T	4	2.9	50	8.0	64	97	40	0	0	3	0	
COLUMBIA	74	44	83	37	59	-5	T	1.1	T	1.3	4.1	57	10.2	65	95	33	0	0	3	2	
FLORENCE	72	45	83	40	58	-5	T	1.9	T	1.4	5.5	95	9.5	75	95	35	0	0	4	2	
GREENVILLE	69	43	77	39	56	-4	T	1.7	T	1.2	5.9	70	11.6	67	88	43	0	0	3	1	
SD ABERDEEN	64	23	81	18	43	0	T	-4	T	0	4	19	1.0	33	60	15	0	6	0	0	
HURON	64	27	79	19	45	0	T	-5	T	0	1.7	75	2.6	76	71	19	0	6	0	0	
RAPID CITY	69	31	83	22	50	6	T	-4	T	0	6	28	1.1	36	48	14	0	4	0	0	
STOCK FALLS	62	26	74	21	44	-2	T	-5	T	2.0	73	3.8	90	71	21	0	6	0	0	0	
TN CHATTANOOGA	70	43	78	37	57	-3	T	1.7	T	1.0	4.3	48	13.3	70	90	35	0	0	3	2	
KNOXVILLE	69	38	78	30	54	-5	T	6	T	3.3	3.9	50	11.1	67	92	36	0	0	3	1	
MEMPHIS	69	49	80	45	59	-3	T	9	T	8	5.7	67	13.4	76	82	38	0	0	3	0	
NASHVILLE	68	40	77	28	54	-6	T	9	T	1	3.6	45	9.3	56	90	34	0	1	2	0	
TX ABILENE	76	46	87	34	61	-4	T	3	T	2	1.1	47	1.5	35	75	23	0	0	2	0	
AMARILLO	67	35	82	26	51	-5	T	1.2	T	1.2	3.1	241	3.5	147	77	27	0	3	2	1	
AUSTIN	75	51	84	44	63	-5	T	7	T	3.6	113	4.2	57	83	37	0	0	2	0	0	
BEAUMONT	76	48	81	40	62	-7	T	9	T	5.8	112	14.1	104	94	43	0	0	1	0	0	
BROWNSVILLE	80	58	83	47	69	-6	T	4	T	1.4	116	6.9	173	93	48	0	0	0	0	0	
CORPUS CHRISTI	79	53	84	40	66	-7	T	4	T	9	58	2.9	62	91	36	0	0	1	0	0	
DEL RIO	78	52	89	40	65	-7	T	4	T	2	10	4	13	61	26	0	0	0	0	0	
EL PASO	77	45	86	35	61	-2	T	0	T	1	27	1.1	86	51	14	0	0	1	0	0	
FORT WORTH	75	49	84	42	62	-3	T	9	T	2.5	57	4.6	57	79	31	0	0	1	0	0	
GALVESTON	72	56	76	47	64	-5	T	4	T	2	134	8.5	96	79	50	0	0	1	0	0	
HOUSTON	76	47	83	39	62	-7	T	7	T	5.1	113	7.7	67	90	40	0	0	1	0	0	
LUBBOCK	75	41	87	31	58	-2	T	8	T	1.8	138	2.5	110	74	22	0	1	1	0	0	
MIDLAND	79	42	85	30	61	-3	T	2	T	8	101	1.3	71	62	16	0	1	0	0	0	
SAN ANGELO	79	44	90	30	62	-5	T	4	T	9	55	1.3	42	82	19	1	2	2	0	0	
SAN ANTONIO	77	49	88	37	63	-6	T	3	T	3	1.5	2.8	46	84	31	0	0	1	0	0	
VICTORIA	76	49	84	40	63	-8	T	3	T	3	2.3	90	5.1	76	91	38	0	0	1	0	
WACO	77	49	86	42	63	-3	T	9	T	3	86	5.4	72	80	29	0	0	0	0	0	
WICHITA FALLS	73	44	83	38	59	-5	T	7	T	5.7	177	7.5	145	84	30	0	0	0	0	0	
UT BLANDING	67	39	77	27	53	6	T	2	T	0	3	22	2.8	79	45	22	0	1	3	0	
CEDAR CITY	66	36	76	21	51	4	T	1.5	T	1.3	2.6	163	4.2	137	76	33	0	2	5	2	
SALT LAKE CITY	71	42	80	28	57	8	T	2	T	2	1.1	38	2.3	41	62	19	0	1	1	0	
VT BURLINGTON	52	33	60	28	43	1	T	3	T	3	2.2	62	4.6	64	86	42	0	3	2	0	0
VA NORFOLK	56	41	74	38	49	-9	T	1.1	T	4	7	4.5	84	83	92	57	0	0	3	1	0
RICHMOND	63	37	78	32	50	-7	T	3	T	4	3.8	75	9.4	82	90	36	0	1	2	2	0
ROANOKE	65	39	74	32	52	-4	T	6	T	1	2.5	47	5.5	48	85	32	0	1	2	1	0
WA QUILLAYUTE	62	41	70	33	52	6	T	1.7	T	19.9	124	37.6	87	94	52	0	0	1	0	0	0
SEATTLE-TACOMA	64	46	74	42	55	7	T	4	T	1	6.2	124	10.9	71	92	55	0	0	2	0	0
SPOKANE	73	44	79	33	58	13	T	3	T	3.1	163	5.2	87	77	31	0	0	0	0	0	0
YAKIMA	77	42	81	29	59	11	T	1	T	2	26	9	30	80	27	0	1	1	0	0	0
WV BECKLEY	60	37	68	31	49	-2	T	8	T	3.4	58	7.3	58	71	30	0	2	1	0	0	0
CHARLESTON	66	39	75	34	52	-3	T	0	T	3.7	62	7.8	62	77	24	0	0	0	0	0	0
HUNTINGTON	65	40	72	35	53	-3	T	0	T	4.2	71	8.6	71	74	26	0	0	0	0	0	0
PARKERSBURG	63	37	70	30	50	-4	T	8	T	5.1	96	7.9	73	74	31	0	1	0	0	0	0
WI GREEN BAY	54	33	63	28	43	0	T	6	T	2.5	76	5.0	91	84	37	0	4	0	0	0	0
LACROSSE	59	35	68	28	47	0	T	7	T	2.6	76	3.8	71	76	24	0	3	2	0	0	0
MADISON	58	32	73	25	45	-1	T	7	T	2	65	4.7	80	77	32	0	3	2	0	0	0
MILWAUKEE	54	35	73	29	45	1	T	7	T	3.7	83	8.2	111	85	38	0	1	1	0	0	0
WAUSAU	54	31	65	26	43	0	T	6	T	2.4	73	2.9	54	88	31	0	5	1	0	0	0
WY CASPER	68	29	75	18	49	7	T	3	T	0	7	44	1.8	66	66	16	0	4	0	0	0
CHEYENNE	62	29	72	15	45	4	T	3	T	1.5	96	2.7	114	73	23	0	5	0	0	0	0
LANDER	71	37	75	22	54	12	T	5	T	0	1.5	65	1.9	56	53	14	0	2	0	0	0
SHERIDAN	71	33	80	20	52	10	T	5	T	0	1.0	47	2.4	68	67	20	0	3	0	0	0
PR SAN JUAN	91	75	92	74	83	5	T	1.7	T	9	1.6	3.5	90	84	71	4	0	0	2	0	1

Based on 1951-80 normals

National Agricultural Summary

APRIL 11 to 17, 1988

HIGHLIGHTS: Rain and wetness hampered land preparation and spring seeding in the Southeast and Appalachian States and northern Delta. Precipitation provided much needed moisture in central California. Dry weather spurred spring wheat seeding. Inadequate moisture continued plaguing crop development in the northern and central Great Plains. Fieldwork averaged 5-6 days but was restricted to 3-5 days in the Southeast.

Winter wheat was mostly good to fair. Heading was underway on 3 percent (%) of the acreage, compared with the 7% 5-year average. Heading was restricted to the southern half of the Nation. Spring wheat seeding surged 24 percentage points ahead of the previous week to 32% completion. Seeding was proceeding four times faster than normal. Corn planting reached 6% completion, slightly ahead of 1987 and average. Planting moved into the Corn Belt. Cotton seeding progressed to 19% completion, compared with 18% normally. Planting surged 30 points ahead of the previous week in California. Grain sorghum was 15% seeded, 1 point ahead of 1987, but 1 point behind normal. Rice seeding trailed 3 points behind normal at 21% completion. Peanuts were seeded in Alabama and Georgia. Livestock was mostly good.

SMALL GRAINS: Winter wheat was mostly good to fair. Inadequate moisture continued plaguing growth in the central and northern Great Plains. Heading reached 3% completion but was limited to the southern half of the Nation. Normally, 7% would be heading by this date.

Small grain condition declined in many areas of Texas. Rain is needed in most areas. Dryland small grains were under stress. Rust developed in some Blacklands' fields. In Oklahoma, ample moisture provided good growth but also promoted disease. Heading was just beginning but trailed 8 points behind the 10% average. Growers were concerned that nitrogen deficiency may limit production. Insects and disease plagued most Kansas wheat. Wheat streak mosaic was present in most areas of the State. Symptoms were more apparent in west-central, southwestern, and south-central areas of the State. Severely affected fields were chlorotic. Wheat spindle streak was present in central and eastern areas and powdery mildew developed recently in eastern Kansas. Nebraska's wheat greened despite low moisture. Growers continued locating Russian wheat aphids in the Panhandle and southwest areas.

Moisture helped dryland small grains in California. Rain improved small grains west and east of the Cascades in Oregon. Wheat improved in central and western areas but worsened in Umatilla County. Wheat was good to excellent in Arizona. Heading and loss of green color progressed rapidly in western areas.

Spring wheat seeding surged 24 points ahead of the previous week to 32% completion. Seeding was 21 points ahead of 1987 and 24 points ahead of average. In South Dakota, seeding was 60% finished compared with 20% normally. More than one-fourth of Minnesota, Montana, and South Dakota acreage was seeded in 1 week.

OTHER CROPS: Corn planting in the 17 major producing States reached 6% completion, compared with 4% in 1987 and 5% average. Seeding was underway in all States except Michigan, South Dakota, and Wisconsin. Planting surpassed the average in nearly all States. Planting moved into

the Corn Belt and reached as far North as Minnesota.

Cotton was 19% seeded at week's end. Seeding equaled 1987 but was 1 point ahead of normal. Planting was underway in all States except Arkansas, Missouri, and North Carolina. Cotton planting progressed well in the Blackland and central areas of Texas. Many fields were up to stand. Cooler weather slowed cotton development in the Rio Grande Valley and at Coastal Bend. Planting reached 13% completion in Texas, just slightly ahead of normal. In California, cotton seeding was in full swing. Planting jumped 30 points to 70% completion. Rain caused crusting problems on acreage not emerged. Arizona cotton producers irrigated to help emergence in western areas.

Sorghum was 15% seeded in the 11 major producing States, trailing 1 point behind normal. Seeding trailed behind normal in virtually all States. Wetness has held seeding to 11% completion in Louisiana, 14 points below normal. Planting was not underway in the central Great Plains but was just beginning in Oklahoma and Tennessee. Texas producers were busy cultivating sorghum in central and southern areas. Planting reached 54% completion, compared with 51% in 1986 and 57% average.

Rice seeding climbed 13 points ahead of the previous week to 21% completion. Despite the rapid seeding rate, planting still remained 3 points below the average. California producers began seeding about a week ahead of schedule. Planting lagged 4 points behind normal in Arkansas, 6 points behind normal in Mississippi, and 11 points behind normal in Louisiana.

Georgia's tobacco acreage was 84% transplanted, 24 points ahead of normal. High winds caused some retransplanting. South Carolina's tobacco was 43% transplanted, and 7% was in the ground in North Carolina. Tobacco plants emergence was ahead of normal in Kentucky and Tennessee. Peanut seeding reached 13% completion in Alabama and was 6% finished in Georgia.

FRUITS AND NUTS: Citrus bloom was finished in Florida. Citrus trees were good but rain is needed. Irrigation was underway in most areas. Valencia harvest increased and grapefruit movement remained strong. Pecan trees began budding in many areas of Texas. Peach trees escaped further frost damage early in the week. Weed control, thinning, and fungicide and pesticide applications continued in California's orchards. Grapes received mildew protection. Almonds sized well and valencia orange harvest gained momentum.

VEGETABLES: Spring lettuce harvest was just beginning in Salinas, California. Lettuce volume was heavy in the San Joaquin Valley. Broccoli and cauliflower supplies were heavy in Salinas. Fresh-market strawberry harvest was in full swing along the central coast while most production in the South went for freezing. In Arizona, head lettuce harvest was finished in western areas. Cantaloup, watermelon, and honeydew progressed well. Dry weather stressed some vegetables in the San Antonio-Winter Garden area of Texas. Wind caused scarring and foliage burn to vegetables in Florida. However, most crops were fair to good.

PASTURES AND LIVESTOCK: Moisture spurred pasture growth in the Southeast. Dryness slowed growth in the northern and central Great Plains. Livestock was mostly good.

State Summaries of Weather and Agriculture

ALABAMA: Rainfall totals mostly 1.00 to 2.00 in. north; 1.00 in. central; under 1.00 in. south. Temperatures averaged 5° below normal.

Days suitable for fieldwork 4.3. Soil moisture 22% short, 76% adequate, 2% surplus. Fieldwork progress continued ahead of normal. Acreage intended for spring planting 77% prepared, 63% 1987. Corn 75% planted, 64% 1987, 57% avg. Sorghum 17% planted, 10% 1987, 7% avg. Cotton 23% planted, 20% 1987, 13% avg. Peanuts 13% planted, 6% 1987, 5% avg. Wheat 40% headed, 41% 1987, 38% avg.; 10% turning color, 2% 1987; 43% fair, 55% good; 2% excellent. Livestock, pastures mostly good. Primary activities: Land preparation; planting row crops, vegetables; applying fertilizer, pre-plant herbicides to cropland; maintaining equipment, repairing fences; applying fungicides to pecan trees; general care livestock, poultry.

ARIZONA: Sunshine, dry air 10th to 12th. Storm system moved eastward 13th with scattered showers. Cooler temperatures 14th. Heavy showers, thunderstorms, strong gusty winds 15th. Snowfall northeast, hail southeast 15th. Snowfall amounts 1 to 10 in. north 17th. Average temperatures normal to 7° above.

Planting of cotton continued all areas; 67% planted, 66% 1987, 66% avg. Growers applied post-emergence irrigation west. Alfalfa mostly good to fair western areas; stands good to excellent, curing conditions not favorable due to rains. Rain slowed cuttings all other areas. Wheat, barley stands good to excellent statewide; 100% of acreage jointing, 65% heading, 15% turning color. Heading, loss of green color progressed rapidly west. Eastern areas continued to monitor fields for wheat aphids. All corn acreage planted central. Head lettuce harvest complete western areas. Limited harvesting, shipping cauliflower, asparagus. Artichoke harvest, shipping in Parker area. Spring vegetable season almost complete. Cantaloup, watermelons, honeydews made good progress central. Grapes good. Head lettuce harvest, shipping in Harquahala-Aguila area, Eloy-Marana, Maricopa. Mixed vegetables shipped from Salt River Valley. Valencia orange, grapefruit harvest progressed west, central.

ARKANSAS: Temperatures below normal all sections. Temperature extremes 32°; 84°. Moderate rainfall all sections. Rainfall totals 0.24 to 1.36 in.

Land preparation, planting continued as weather and soil conditions allowed. Main farming activities: Pasture fertilization, weed control; planting corn, sorghum, rice; spraying fruit trees. Wheat good; despite sulphur deficiency, rust, septoria leaf blotch, bacterial stripe, downy mildew. Some peach damage northern counties due to frost. Other fruits good. Hay being treated for alfalfa weevil. Livestock good, still bothered by external parasites. Some farmers stopped feeding hay.

CALIFORNIA: High pressure brought very warm weather beginning week. By weekend, rain over nearly all of State.

Field activities interrupted last half, widespread showers. Moisture some help dryland grains. Much of acreage too late. Few more rice fields seeded, planting preparations active. Cotton seeding full swing. Rains caused crusting problems acreage not emerged. Corn, dry bean seeding progressed. Alfalfa, small grains harvest hay, silage, green-chop active. Rain, windrowed hay being turned. Rodent controls alfalfa. Thin irrigate sugarbeets. Weed control, thinning, fungicide, pesticide applications continued in orchard. Avocado, citrus picking active. Mildew

control applied to grapes. Navel orange harvest winding down. Valencia orange harvest gained momentum. Almonds sizing well. Artichoke harvest active Castroville. Asparagus movement continued Sacramento Valley, delta. Broccoli, cauliflower supplies heavy, good quality Salinas, Westside. Carrots, celery harvested south. Lettuce volume heavy, good quality San Joaquin Valley. Lettuce beginning Salinas. Strawberry production south moved toward freezer; fresh production central coast continued full swing. Tomatoes growing well Sacramento Valley, blooming Riverside. Livestock fair to good statewide. Light rains improved grass, water supply conditions slightly, more needed. Supplemental feeding heavy Redding, continued other areas. Movement to market very active as feed supplies shortened.

COLORADO: Generally warm dry weather until weekend. Precipitation none to 0.44 in. Average temperature 2° below to 3° above normal.

Days suitable for fieldwork 4.9. Soil moisture 21% short, 74% adequate, 5% surplus. Winter wheat good, 2% jointed. Small grain seeding ongoing. Corn planting just underway. Livestock good, death losses average. Calving, lambing 75%. Stored feed supplies adequate.

FLORIDA: Clouds, strong winds, widespread rain through midweek gave way to sunshine, light winds, very slow warming trend remainder of week.

Soil moisture short to adequate. Winter wheat, other small grains mostly good. Tobacco transplanting nearly completed. Irrigation underway. Land preparation, planting peanuts becoming active. Land preparation cotton, soybeans, sorghum underway. Corn cultivated. Sugarcane good growth. Dry topsoils, cool temperatures limited growth permanent pastures. Grazing seasonally fair; few Peninsular areas good. Cattle fair to mostly good. Citrus bloom completed, groves good; however, rain needed. Irrigation most areas. Valencia harvest increased. Grapefruit movement continued strong, temple harvest all but over, honey tangerine remained active but slowed. Cooler than normal, vegetable areas; very little rain, considerable wind. Irrigation active. Some wind scarring, foliage burn. Crops fair to good. Harvest active. Volume leaders: Tomatoes, potatoes, cabbage, peppers, cucumbers, celery. Also good volume available squash, sweet corn, snap beans, carrots, lettuce, radishes, strawberries. First cucumbers, snap beans harvested west central areas.

GEORGIA: Cool week, temperatures 3 to 6° below normal. Warmest temperatures mid 70s mountains, mid 80s south. Coldest temperatures mid 30s, low 40s, some upper 20s mountains. Rain 1.00 to 3.00 in. north, 0.50 in. or less south.

Days suitable for fieldwork 4.6. Soil moisture 32% short, 64% adequate, 4% surplus. Corn 10% fair, 76% good, 14% excellent; planting ahead average. Cotton 5% planted, 1% 1987, 8% avg. Peanuts 6% planted, 3% 1987, 9% avg. Tobacco 4% poor, 24% fair, 72% good; 84% transplanted, 61% 1987, 77% avg. Some retransplanting from last week's wind. Wind damaged watermelons. Wheat 97% jointing, 98% 1987, 96% avg.; 75% boot, 72% 1987, 80% avg.; some rust, mildew. Other small grains 17% fair, 71% good, 12% excellent; small grains helped by rain. Apple bloom rapid, now ahead of average. Peaches 86% good, 14% excellent. Pasture liming, fertilizing; fair to mostly good. Livestock, poultry good.

HAWAII: Favorable weather. Mostly sunny. Light to moderate showers mostly overnight. Record

breaking heat over weekend. Temperatures mid 60s to high 80s. Rainfall none to 0.50 in. Variable winds 5 to 20 mph.

Days suitable for fieldwork 7.0. Irrigated crops good. Non-irrigated crops fair. Papaya production increased, good quality. Banana production steady. Head cabbage output moderate to heavy. Chinese cabbage production moderate to heavy. Shipments to U.S. mainland continued. Ginger root harvesting continued. Field preparation for next season's crop increased. Head lettuce production steady. Watermelon production expected to increase as more melons approached maturity.

IDAHO: Temperatures 5 to 10° above normal. Precipitation well below normal despite rainfall southwest, south central.

Days suitable for fieldwork 6.0. Soil moisture 21% very short, 41% short, 38% adequate. Irrigation water supplies fair. Spring wheat 52% planted, 63% 1987, 41% avg.; 21% emerged, 15% 1987, 12% avg. Winter wheat good. Barley 40% seeded, 58% 1987, 30% avg.; 20% emergence. Oats 29% planted, 40% 1987, 32% avg. Sugarbeets near 100% planted, 98% 1987; 23% emergence. Onion seeding finishing, same 1987, 78% avg.; 46% emergence, 38% 1987, 25% avg. Dry peas 7% seeded, 36% 1987, 24% avg. Lentil planting underway. Potatoes 7% planted, nearly same 1987, 7% avg. Fruit trees full bloom, full of leaves. Livestock good; hay, roughage supplies same. Calving, lambing nearly finished.

ILLINOIS: High temperatures averaged 1 to 3° above normal north; normal central, south. Lows averaged 2 to 8° below normal. Precipitation averaged less than 0.25 in. north, central; 0.75 in. south.

Days suitable for fieldwork 5.3. Soil moisture 12% short, 85% adequate, 3% surplus. Oats 70% planted, 82% 1987, 55% avg. Alfalfa 11% fair, 77% good, 12% excellent. Pasture 21% fair, 66% good, 13% excellent. Livestock roughage requirement 41%, 42% 1987, 34% avg. Freeze damage apples 69% none, 31% light. Freeze damage peaches 62% none, 34% light, 4% moderate.

INDIANA: Temperatures averaged below normal. Lows upper 20s, low 30s. Highs 60s to low 70s. Precipitation below normal. Totals 0.10 in. north to 0.50 in. south. Average 4 in. soil temperatures low 50s.

Days suitable for fieldwork 3.8. Topsoil moisture 4% short, 84% adequate, 12% surplus. Subsoil moisture 9% short, 79% adequate, 12% surplus. Spring cropland 80% tilled, 83% 1987, 68% avg. Wheat 7 in. high, 6 in. 1987, 6 in. avg. Wheat 16% joined, 15% 1987, 13% avg. Oats 50% seeded, 83% 1987, 64% avg. Clover 75% seeded, 87% 1987, 72% avg. Pastures 6% poor, 53% fair, 38% good, 3% excellent. Good week for fieldwork.

IOWA: Temperature averaged near normal. Precipitation below average 0.07 in. 13th. Since January 1st precipitation total only 32% of normal.

Days suitable for fieldwork 6.3. Topsoil moisture 66% short, 34% adequate; subsoil moisture 32% short, 68% adequate. Winter wheat 3% poor, 33% fair, 55% good, 9% excellent. Pasture 12% poor, 42% fair, 40% good, 6% excellent. Oats 90% sown, 64% 1987, 46% avg.; 25% emerged, 9% 1987, 17% avg. Seedbed preparation 75%; fertilizer application 75%, 51% 1987, 46% avg.; fertilizer availability 98% adequate, 2% surplus. Livestock mostly good. Feedlots good shape due to dry weather. Good weight gains. Lambing, calving doing excellent.

KANSAS: Temperatures average 52° west to 55° southeast; 4° above normal northwest; 2 to 3° below normal south, east. Precipitation 0.11 in. southwest to 0.50 in. southeast. Heaviest rain southeast, local amounts about 1.00 in.

Days suitable for fieldwork 5.0. Topsoil moisture 19% short, 77% adequate, 4% surplus. Subsoil 30% short, 65% adequate, 5% surplus. Wheat 35% jointing, 65% 1987, 35% avg. Light freeze damage all areas. Light wind damage southwest, south central. Russian wheat aphid light levels western third. Wheat streak mosaic most of State. Symptoms more apparent west central, southwest, south central. Severely affected fields chlorotic. Wheat spindle streak central, east. Powdery mildew recently developed east. Oat, barley seeding neared completion. Seedbed preparation spring row crops. Spraying for alfalfa weevil. Spring black stem defoliating alfalfa southeast. Range, pastures good statewide; best conditions east, worst northwest. Cattle off wheat to grass. Pastures supplied 40% roughage requirements. Feed grain, hay, forage adequate supply. Calving winding down.

KENTUCKY: Near normal temperatures. High temperatures averaged upper 60s, while mean lows upper 30s. No precipitation throughout most State leaving deficits about 1.00 in.

Days suitable for fieldwork 5.4. Soil moisture 2% very short, 29% short, 67% adequate, 2% surplus. Tobacco plants 64% emerged, 63% 1987, 47% avg. Plants mostly good. Winter wheat mostly good major grain producing areas. Barley began to head. Alfalfa 9 in. tall. Spraying for alfalfa weevil. Pastures improving, mostly good. Fruit trees began to bloom.

LOUISIANA: Temperatures 3 to 6° below normal. Temperature extremes 35°; 84°. Rainfall averaged 0.02 to 0.25 in.

Days suitable for fieldwork 5.4. Soil moisture 5% short, 93% adequate, 2% surplus. Spring plowing 60%, 57% 1987, 69% avg. Corn fair; 62% planted, 64% 1987, 74% avg.; 36% emerged, 35% 1987, 63% avg. Rice 16% emerged, 28% 1987, 32% avg. Sweetpotatoes 2% planted, 3% 1987, 4% avg. Winter wheat fair to good; 73% headed, 64% 1987, 59% avg. Pastures, livestock good. Sugarcane, vegetables fair to good. Harvesting strawberries. Main activities: Spring plowing; fertilizing pastures; harvesting crawfish; planting corn, cotton, rice, sorghum, vegetables.

MARYLAND & DELAWARE: Maryland: Precipitation averaged 0.03 in. through 15th, 1.64 in. below normal. Average temperature 48°, normal 53°. General temperature extremes 30°; 70°. Mountain extremes 23°; 69°. No significant frost damage.

Days suitable for fieldwork 6.0. Topsoil, subsoil moisture adequate. Acreage 50% prepared for planting. Wheat, oats, barley, rye good. Corn 5% planted, 5% 1987. Sweet corn 5% planted, 5% 1987. Green peas 75% planted, 65% avg. Peaches 80% bloom, 70% avg.

Delaware: Precipitation averaged 0.06 in., 1.08 in. below normal. Average temperature 48°, normal 53°. Temperature extremes 35°; 64° through 15th.

Days suitable for fieldwork 5.5. Topsoil moisture adequate. Subsoil moisture 10% short, 90% adequate. Acreage 30% prepared for planting, 30% 1987. Wheat, barley, rye good. Corn 5% planted, 2% 1987. Sweet corn 15% planted, 15% 1987. Potatoes 85% planted, 70% 1987. Green peas 70% planted, 60% avg.

MICHIGAN: Temperatures ranged 1° below to 1° above normal. Temperature extremes 21°; 68°. Precipitation ranged none to 0.60 in. across State. Light snow most areas end of week. New snow melted quickly.

Winter wheat improved, pastures greening. Wheat needs warmer temperatures. Activities: Sowing oats, working ground, planting fruit trees, protecting orchards from frost, marketing grain,

livestock. Feed supplies adequate. Hay supplies getting short. Livestock condition ideal. Calving, lambing active. Cattle out on pastures.

MINNESOTA: Temperatures averaged near normal to 3° above normal. Temperature extremes 15°; 81°. Precipitation averaged 0.37 to 0.61 in. below normal. Greatest weekly total 0.04 in.

Topsoil moisture 19% very short, 52% short, 29% adequate. Spring wheat 31% planted, 31% 1987, 9% avg. Oats 41% planted, 54% 1987, 17% avg. Barley 31% planted, 15% 1987, 5% avg. Sugarbeets 25% planted, 9% 1987, 2% avg. Corn 11% land prepared, 24% 1987, 6% avg. Soybeans 4% land prepared, 12% 1987, 30% avg. Green peas 16% land prepared, 24% 1987, 3% avg.

MISSISSIPPI: Average temperatures from 1 to 6° below normal. Extremes 35°; 84°. Fair, cool, dry. Rainfall 0.88 in. below normal. Greatest 24-hour total rainfall 0.95 in. Greatest weekly rainfall 1.08 in.

Days suitable for fieldwork 4.0, 3.5 1987, 4.2 avg. Soil moisture 5% short, 80% adequate, 15% surplus. Corn 47% planted, 41% 1987, 52% avg.; 30% emerged, 32% avg. Wheat mostly good; 31% heading, 21% 1987, 34% avg. Rice 16% planted, 5% 1987, 22% avg. Sorghum 12% planted, 16% avg. Pastures, livestock mostly good. Peaches 10% very poor, 5% poor, 20% fair, 60% good, 5% excellent. Lots of tillage, some planting. Cotton 1% planted, none 1987.

MISSOURI: Temperatures averaged 3 to 8° above normal. Rainfall widespread but light, 0.25 to 0.50 in. Some damaging winds, hail 12th.

Days suitable for fieldwork 2.4. Topsoil moisture 10% short, 65% adequate, 25% surplus. Oats 73% sown, 75% 1987, 54% avg. Tillage for spring crops 57%, 46% 1987, 40% avg. Alfalfa weevil damage showing up southern counties. Pasture 1% very poor, 4% poor, 36% fair, 53% good, 6% excellent.

MONTANA: Warm dry week. Temperatures 15° above normal west, 11° above southwest and central, 8° above eastern third. Several record warm temperatures set. No precipitation.

Days suitable for fieldwork 6.5. Topsoil moisture 76% short, 24% adequate. Subsoil moisture 62% short, 38% adequate. Winter wheat 3% dormant, 37% greening, 60% green and growing. Barley 32% planted, 6% 1987, 13% avg. Barley 2% emerged. Oats 21% planted, 3% 1987, 7% avg. Sugarbeets 23% planted, 2% 1987, 5% avg. Calving 84%, 73% 1987, 75% avg. Lambing 75%, 64% 1987, 64% avg.

NEBRASKA: Mild, dry. Warm days, cool nights average temperatures near normal averaging 3° above normal to 2° below normal. Only trace amounts of rainfall across State. Extremes 17°; 83°.

Days suitable for fieldwork 6.2. Topsoil moisture mostly short to adequate. Subsoil moisture adequate. Winter wheat 42% fair, 54% good, 4% excellent. Crop began to green-up despite low soil moisture. Russian wheat aphids continued to be found Panhandle, Southwest. Corn planting limited progress due to cool soil temperatures; 2%, none 1987, 1% avg. Oats 85% planted, 53% 1987, 44% avg. Sugarbeet, spring barley, alfalfa seeding well underway. Summer potato planting virtually complete. Pasture, range feed adequate. Dry, cool weather slowed spring growth of grasses. Some cattle already turned out on summer pasture. Livestock good shape, good gains.

NEVADA: High pressure across State first half of week produced temperatures much above normal. Upper level low midweek resulted in cooler temperatures over State second half of week. Substantial rain over most western, southern areas

with lighter amounts east, north. Heaviest 2.11 in. Pahrump, Fallon 1.83 in., most stations west, south over 0.50 in.

Planting 1988 fall potatoes off to slow start due to rain showers, gusty winds. Alfalfa forage harvesting extreme south delayed slightly by widespread showers. Recent precipitation beneficial range areas.

NEW ENGLAND: Precipitation averaged less than 0.25 in. south, 0.50 to 0.75 in. northern Maine and northern New Hampshire, 0.25 to 0.50 in. remainder. Average temperatures ranged mid 30s near Canadian border to mid 40s southern coast. Temperatures slightly below normal.

Major farm activities: Spreading manure for field preparation, tending livestock, preparing machinery for spring planting.

NEW JERSEY: Temperatures averaged much below normal. Extremes 25°; 69°. Rainfall averaged 0.20 in. north, 0.21 in. central, 0.11 in. south. Heaviest 24-hour total 0.30 in. on 15th, 16th. Estimated soil moisture percent field capacity averaged 90% north, south; 89% central. Four inch soil temperatures averaged 44° north, 45° central, 47° south.

Soil moisture continued adequate. Frost received colder areas, no damage. Peach bloom continued to advance. Harvest of greens, leeks, green onions, spinach, asparagus increased. Warmer weather needed. Oat planting well advanced. Fall sown grains, hay, pasture growth increased.

NEW MEXICO: Average weekly temperatures above normal over north central, northwest. Moderate to heavy precipitation statewide, light hail damage, moderate to heavy wind damage.

Days suitable for fieldwork 6.0. Soil moisture 50% short, 50% adequate. Barley 100% good. Wheat 70% fair, 25% good, 5% excellent; none heading. Cotton planting active 18%. Onions 29% fair, 71% good. Lettuce 100% fair. Cattle 55% fair, 45% good. Sheep 38% fair, 62% good. Range 18% poor, 64% fair, 18% good.

NEW YORK: Except for isolated light showers, early week dry. Rain 14th to 15th as frontal system moved across State. Most places 0.10 to 0.33 in. Snow mixed with rain 14th. Widespread flurries 15th. Few towns from Binghamton to Adirondacks 1 to 2 in. Temperatures averaged near normal despite cool weekend.

Dry weather allowed continued fieldwork. Potato planting on Long Island well underway. Very little seeding upstate. Producers very concerned about labor supply, new State pesticide regulations.

NORTH CAROLINA: Temperatures averaged 5 to 9° below normal across State. Temperature extremes 20°; 83°. Precipitation ranged 0.23 to 3.26 in.

Days suitable for fieldwork 3.8. Soil moisture 21% short, 63% adequate, 16% surplus. Oats 2% poor, 17% fair, 73% good, 8% excellent. Barley 14% fair, 76% good, 10% excellent. Rye 4% poor, 14% fair, 73% good, 9% excellent. Pasture 6% poor, 28% fair, 62% good, 4% excellent. Hay and roughage supplies 7% short, 82% adequate, 11% surplus. Feed grains supplies 6% short, 91% adequate, 3% surplus. Tobacco 7% transplanted, 1% 1987, 2% avg. Tobacco plantbeds 1% poor, 26% fair, 66% good, 7% excellent. Tobacco plant supplies 11% short, 87% adequate, 2% surplus. Irish potatoes 20% fair, 77% good, 3% excellent. Peaches 31% fair, 65% good, 4% excellent. Truck crops 42% fair, 55% good, 3% excellent. Sorghum 5% planted, none 1987, 6% avg. Major farm activities: Planting corn; preparing land for spring planting; tending tobacco plantbeds; bedding land for tobacco transplanting; transplanting tobacco, peppers, squash, cabbage; fertilizing, spraying nursery crops; spraying

alfalfa weevils; feeding livestock; general farm maintenance.

NORTH DAKOTA: Warm, dry statewide. Temperatures averaged 2° above normal northeast to 7° above normal northwest, southwest. Extremes 10° southwest; 85° south central. Precipitation none.

Days suitable for fieldwork 6.9. Topsoil moisture further depleted; 63% very short, 35% short, 2% adequate. Subsoil moisture below normal; 35% very short, 49% short, 16% adequate. Dry conditions combined with strong winds caused soil erosion. Winter wheat 86% green; 4% very poor, 29% poor, 52% fair, 15% good. Small grain planting progressed well ahead of normal. Spring wheat 22% planted, 2% 1987, 4% avg.; durum 8%, 1% 1987, 1% avg.; barley 19%, 2% 1987, 3% avg.; oats 18%, 2% 1987, 4% avg. Sugarbeets 21% seeded. Livestock good; calving 82%, lambing 91%, shearing 88%. Pastures mostly poor, 93% open for grazing.

OHIO: Temperatures averaged 0 to 3° subnormal. Lows in 30s, highs upper 50s to lower 60s. Extremes mid 20s to low 70s. Precipitation only on 17th; up to 0.50 in., mostly 0.10 in. Soil temperatures mid 40s to mid 50s.

Days suitable for fieldwork 5.5. Soil moisture 5% short, 84% adequate, 11% surplus. Farm activities included equipment preparations, fence repair, tilling land, spreading manure, fertilizer, spraying herbicides, digging nursery stock, shipping bedding plants. Corn planting just started. Winter wheat good. Oats 36% seeded, 55% 1987, 41% avg. Grasslands good. Tobacco plantbeds 80% seeded, 79% 1987, 60% avg. Vegetable planting included carrots, cabbage, sweet corn. Prepared beds for planting processing tomatoes. Fruit good; no significant damage to fruit by low temperatures during survey period.

OKLAHOMA: Temperatures averaged 2° below normal south central to 5° below normal north central. Precipitation averaged 0.41 in. southeast to 1.61 in. west central.

Days suitable for fieldwork 5.5. Topsoil moisture 20% short, 70% adequate, 10% surplus. Subsoil moisture 100% adequate. Wheat 10% fair, 90% good; 65% jointing, 90% 1987, 75% avg.; 2% heading, 3% 1987, 10% avg. Ample moisture most areas provided good growth. Nitrogen deficiency may limit production. Disease problems because excess moisture. Sorghum 1% planted, 1% 1987, 1% avg. Cotton 1% planted, none 1987, none avg. Pastures improved with warmer temperatures, rain. Cattle marketings, prices stable.

OREGON: Mild temperatures 2 to 12° above normal. Southwest, east of Cascades greatest departures; coastal, Willamette Valley areas 2 to 6° above normal. Precipitation widespread only northeast fairly dry. Lake, Klamath County welcomed reprieve from arid conditions, average 0.50 in. Coast, northwest interior like amounts; remainder lesser amounts trace to slightly over 0.10 in.

Soil moisture 59% short, 41% adequate. Barley 97% seeded, 88% 1987, 85% avg. Dryland winter wheat east of Cascades received small amounts needed rain. Conditions portions Umatilla County worsened; other major growing areas slightly improved. Wheat improved central, western growing areas. Spring grain seeding full swing northeast, most counties spring crops in, few awaiting moisture for planting. Southern counties planting spring crops, spring grains planted west of Cascades. Potato planting preparation Baker County, mostly planted Umatilla County, 20% planted Malheur area. Onions 99% planted Malheur; some sugarbeets froze, replanted. Western mint growth slow, hop yards being strung. Vegetable field preparation, planting west of Cascades. Central

irrigation begun most crops. Hood River pears full bloom, western area cherries, prunes full bloom. Strawberries early blooming, canberries pre-bloom or leafing out. Blueberry planting active. Statewide livestock good. Eastern ranges fair, improved; need regular moisture. Central range forage early, dying out. Stockwater shortage on southern desert. Forage western area short, rebounding with rain.

PENNSYLVANIA: Temperatures near normal, precipitation scarce. Unseasonably cold air mass arrived for weekend. Average temperature 44°, 1° below normal. Temperature extremes 24°; 70°. Average precipitation 0.11 in., 0.71 in. below normal.

Days suitable for fieldwork 5.0. Soil moisture 29% short, 64% adequate, 7% surplus. Plowing 43%, 28% 1987, 27% avg. Corn 5% planted, 2% 1987, 1% avg. Soybeans none planted, none 1987, none avg. Oats 50% planted, 40% 1987, 25% avg. Potatoes 27% planted, 19% 1987, 7% avg. Tobacco beds 75% planted, 50% 1987, 37% avg. Barley 98% pre-boot, 100% 1987, 100% avg.; 2% boot, none 1987, none avg. Wheat 98% pre-boot, 100% 1987, 100% avg.; 2% boot, none 1987, none avg.; 1% very poor, 4% poor, 26% fair, 48% good, 21% excellent. Oats 3% poor, 24% fair, 54% good, 19% excellent. Hay stands mostly fair to good. Feed from pastures mostly average to below average. Peaches 75% pre-pink, 96% 1987, 94% avg.; 15% pink, 4% 1987, 4% avg.; 10% full bloom, or past, none 1987, 2% avg. Cherries 71% pre-pink, 86% 1987, 85% avg.; 18% pink, 14% 1987, 13% avg.; 11% full bloom or past, none 1987, 2% avg. Apples 93% pre-pink, 100% 1987, 93% avg.; 7% pink, none 1987, 7% avg. Activities: Planting corn, potatoes, oats; spring plowing; fence repair; hauling manure; spreading fertilizer; machinery maintenance; caring for livestock.

PUERTO RICO: NO DATA AVAILABLE.

SOUTH CAROLINA: Rainfall ranged 0.40 TO 3.25 in. statewide. Temperatures normal.

Days suitable for fieldwork 4.5. Soil moisture 33% short, 67% adequate. Corn good; 89% planted, 62% 1987, 65% avg. Tobacco good; 43% planted, 20% 1987, 41% avg. Cotton fair to good; 6% planted, 2% 1987, 25% avg. Watermelons fair to good; 76% planted, 75% 1987, 70% avg. Tomatoes good; 93% planted, 92% 1987, 92% avg. Spring cukes fair to good; 67% planted, 65% 1987, 72% avg. Wheat good; 19% headed, 5% 1987, 23% avg. Oats fair to good; 35% headed, 19% 1987, 20% avg. Peaches fair to good.

SOUTH DAKOTA: Average temperatures 3° below to 6° above normal. Extremes 10°; 87°. Black Hills low 8°. Precipitation for year below normal over most of State.

Days suitable for fieldwork 6.0. Topsoil moisture mostly short to critical; 43% critically short, 33% short, 24% adequate. Severe soil blowing some areas along with above normal winterkill on winter wheat. Spring seeding well ahead of normal due to lack of rainfall to impede field operations.

TENNESSEE: Low pressure brought rain west 11th. Spread across State 11th, 12th. High pressure brought drying 13th. Cold front 14th brought rain statewide 15th to 16th. Temperatures averaged 5 to 10° below normal east, middle; near or slightly below normal west. Precipitation statewide ranged 2.00 in. west to less than 0.25 in. middle.

Days suitable for fieldwork 4.4. Soil moisture 1% very short, 29% short, 67% adequate, 3% surplus. Corn 22% planted, 17% 1987, 20% avg. Cotton 2% planted, 1% 1987, 3% avg. Tobacco beds 99% seeded, 97% 1987, 96% avg.; 69% plants up, 67% 1987, 66%

avg. Wheat 68% jointed, 57% 1987, 52% avg.; 4% headed, 1% 1987, 1% avg. Sorghum 2% planted, 1% 1987, 2% avg. Small grains, fruit trees showed good progress. Planting corn, general fieldwork, spraying insecticides main activities.

TEXAS: Winter-like temperatures returned early week north. Freezing temperatures Hill Country further concern to peach growers. Sunny skies, warm temperatures later. Upper level low pressure west coast U.S. spread tropical moisture weekend. Thunderstorms northern part. Generally, rainfall below normal. Above normal High Plains, Low Plains. Temperatures below normal. Near normal High Plains, Edwards Plateau.

Crops: Small grain conditions declined many areas. Rain needed most areas. Irrigation steady Plains, dryland fields stressed. Producers continued spray for aphids. Blacklands rust some varieties. Many fields blooming need rain. Fields heading central, south need moisture. Some additional grazing because poor grain progress. Wheat 10% headed, 17% 1987, 23% avg. Corn planting increased Plains. Blacklands, central many fields moisture stressed. Growth slow. Producers cultivating many fields. Dry, windy conditions hampered growth Coastal Bend, Rio Grande Valley. Cultivation operations steady Upper Coast. Corn 69% planted, 64% 1987, 67% avg. Grain sorghum fields could use good rain. Producers busy cultivating central, south. Cool temperatures early week slowed progress some areas. Land preparations virtually completed Plains. Planting begin as corn planting winds down. Sorghum 54% planted, 51% 1987, 57% avg. Cotton planting progressing Blacklands, central. Many fields up good stands. Planting underway Trans-Pecos. Land preparations continued Plains. Cooler weather early week slowed progress Valley, Coastal Bend. Windy conditions depleting needed soil moisture. Cotton 13% planted, 14% 1987, 11% avg. Rice planting continued Upper Coast. Many producers almost finished planting. Rice 83% planted, 63% 1987, 66% avg.; 10% emerged, 19% 1987, 27% avg. Land preparations peanuts almost complete south. Producers need rain to insure good planting moisture. Other field crops: Peanuts 1% planted, 1% 1987, 3% avg. Sugarbeets 43% planted, 15% 1987, 56% avg.

Commercial Vegetables: Rio Grande Valley onion harvest progressed nicely. Later varieties showed seed stem problems. Melons, tomatoes good progress. Citrus movement about over for season. Sets for next year heavy. Some mite problems. San Antonio-Winter Garden producers replant some melons because earlier plantings did not come up. Dry conditions hampered progress. Cucumbers stressed by dry weather. East planting activity continued. Early week frost minor damage. Most planted fields good progress. High Plains, irrigation continued potatoes, onions. Progress good. Trans-Pecos cantaloups good stands. Onions good progress. Peach trees escaped much further frost damage early week. Later varieties good progress. Pecan trees budding many areas. Producers continued spraying schedule.

Range and Pasture: Warmer temperatures helped promote greening many areas. Growth limited by lack of moisture. East pastures good. Other areas producers fertilizing to help promote growth. Grazing small grains increased to provide needed forage. Livestock fair. Feeding continued many areas. Markets steady. Some lighter weight cattle shipped to market because lack good grazing.

UTAH: Temperatures 3 to 5° above normal. Precipitation light.

Days suitable for fieldwork 6.1. Soil moisture 67% short, 33% adequate. Spring wheat 78% seeded, 52% 1987, 27% avg. Barley 82% seeded, 68% 1987, 41% avg. Oats 58% seeded, 46% 1987, 21% avg.

Apricots full bloom, sweet cherry bloom underway, tart cherry bloom just began. Cows calved 74%, ewes lambed 87% farm, 40% range. Sheep sheared 79% farm, 51% range. Livestock good. Range, pasture growth slow. Major farm activities: Seeding grain, spraying weeds, fertilizer application, land preparation, cleaning irrigation ditches, hauling manure, pruning fruit trees, spraying orchards, calving, lambing, shearing.

VIRGINIA: Temperatures below normal. Temperatures averaged 5 to 10° below normal, range 23 to 78°. Precipitation above average, heavy along coast.

Days suitable for fieldwork 3.9. Topsoil moisture 20% short, 78% adequate, 2% surplus. Crops good to excellent. Light frost, no damage. Corn 23% planted, 18% 1987, 23% avg. Sprayed to control alfalfa weevil. Overseeded, fertilized hayland. Peaches full bloom, apples blooming early. Vegetables being planted east. Cattle sales, preparation active. Pasture grazing increased. Some lambing, calving.

WASHINGTON: High pressure ridge protected State from migrant Pacific weather systems for most of week. Temperatures generally above normal warm days, cool nights. Precipitation sparse, spotty falling mostly at either early or late week.

Days suitable for fieldwork 7 east Cascades, 5 west. Soil moisture 60% short, 40% adequate east; 70% adequate, 30% surplus west. Sunny weather allowed spring planting good progress. Other activities included applying fertilizer, herbicides. Temperatures mild, crops generally improved. Fruit trees continued blossoming throughout State. Sweet cherry trees early areas Benton, Grant, Chelan Counties at or past full bloom stage. Thinning sprays being applied early areas Benton, Yakima Counties. Apple trees past full bloom stage early area Grant, Yakima Counties. Bartlett, winter pears most areas earlier bloom stages. Bud break began in grapes Benton County. Early strawberry plants blooming Snohomish County. Vegetable growers west kept from fields by wetness. Asparagus harvest underway Benton, Grant, Franklin Counties. Stockmen continued turning livestock out to dry range, pasture. Calving, lambing season winding down. Sheep shearing began Snohomish County.

WEST VIRGINIA: Average temperature 48°; 2 to 5° below normal. Extremes 78° Williamson, Gary; 20° Greenbank. Average precipitation 0.09 in.; well below normal.

Days suitable for fieldwork 5.6. Soil moisture 13% very short, 37% short, 50% adequate. Wheat good to fair; barley, oats fair to good. Oats 48% planted, 25% emerged. Tobacco beds fair to good; 37% planted, 14% emerged. Apples fair to good, close to full bloom. Peaches fair to good, past full bloom. Feed supplies adequate to short. Cows calves 83%; ewes lambed 92%. Farm activities: General farm maintenance, plowing, spreading fertilizer, planting, livestock care.

WISCONSIN: Temperatures averaged 45°, normal 45°. Extremes 18°; 79°. Precipitation trace.

Days suitable for fieldwork 5.5. Soil moisture 21% short, 76% adequate, 3% surplus. Warm spring rain would be welcomed. Spring plowing 18%, 23% 1987, 13% avg. Oats 25% seeded, 25% 1987, 13% avg. Tobacco beds being steamed. Apple trees leafing. Corn planting to start coming week.

WYOMING: Warm week. Much drier than normal.

Days suitable for fieldwork 6.2. Topsoil moisture 65% short, 35% adequate. Spring wheat 25% planted, 25% 1987, 35% avg.; small amount emerged, small amount 1987, 10% avg. Oats 25% planted, 25% 1987, 25% avg.; small amount emerged, small amount

1987, 5% avg. Barley 60% planted, 55% 1987, 55% avg.; 15% emerged, 15% 1987, 20% avg. Sugarbeets 40% planted, 35% 1987, 40% avg. Winter wheat fair to good; light wind, freeze damage. Livestock mostly good. Spring calves 75% born, 70% 1987, 70%

avg. Death losses light to normal. Farm flock: Ewes lambled 75%, 85% 1987, 80% avg.; shorn 60%, 80% 1987, 75% avg. Range flock: Ewes lambled 45%, 40% 1987, 45% avg.; shorn 45%, 50% 1987, 45% avg. Death losses light to normal. Range, pasture fair to good.

Crop Progress

FOR WEEK ENDING APRIL 17, 1988

**CORN
% PLANTED**

	1988	1987	AVG.
COLO	1	0	0
GA	86	74	80
ILL	3	2	2
IND	2	2	2
IOWA	3	0	0
KANS	5	5	5
KY	20	13	11
MICH	0	0	0
MINN	1	1	0
MO	16	9	10
NEBR	2	0	1
N C	49	23	40
OHIO	2	0	0
PA	5	2	1
S DAK	0	0	0
TEX	69	64	67
WIS	0	0	0
17 STATES	6	4	5

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

**WINTER WHEAT
% HEADED**

	1988	1987	AVG.
ARK	5	15	NA
CALIF	65	70	66
COLO	0	0	0
GA	34	28	52
IDAHO	0	0	0
ILL	0	0	NA
IND	0	0	0
KANS	0	0	0
MICH	0	0	0
MO	0	0	0
MONT	0	0	0
NEBR	0	0	0
N MEX	0	0	NA
N C	1	0	NA
OHIO	0	0	0
OKLA	2	3	10
OREG	0	0	0
S DAK	0	0	0
TEX	10	17	23
WASH	0	0	0
20 STATES	3	5	NA
EXCL. STATES WITH NA	3	5	7

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

NA - NOT AVAILABLE.

**COTTON
% PLANTED**

	1988	1987	AVG.
ALA	23	20	13
ARIZ	67	66	67
ARK	0	0	1
CALIF	70	65	65
GA	5	1	8
LA	3	1	5
MISS	1	0	NA
MO	0	0	0
N MEX	18	5	6
N C	0	6	7
OKLA	1	0	0
S C	6	2	25
TENN	2	1	3
TEX	13	14	11
14 STATES	18	17	NA
EXCL. STATES WITH NA	19	19	18

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

NA - NOT AVAILABLE.

**SPRING WHEAT
% PLANTED**

	1988	1987	AVG.
IDAHO	52	63	41
MINN	31	31	9
MONT	34	2	5
N DAK	22	2	4
S DAK	60	19	20
5 STATES	32	11	8

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

**RICE
% PLANTED**

	1988	1987	AVG.
ARK	8	14	12
CALIF	2	0	1
LA	34	41	45
MISS	16	5	22
TEX	83	63	66
5 STATES	21	22	24

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

**GRAIN SORGHUM
% PLANTED**

	1988	1987	AVG.
ARK	16	14	18
ILL	0	NA	NA
KANS	0	0	0
LA	11	13	25
MISS	12	7	16
MO	0	0	0
NEBR	0	0	0
OKLA	1	1	2
S DAK	0	0	0
TENN	2	1	2
TEX	54	51	57
11 STATES	15	NA	NA
EXCL. STATES WITH NA	15	14	16

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

NA - NOT AVAILABLE.

Crop Condition

FOR WEEK ENDING APRIL 17, 1988

WINTER WHEAT

STATE	VP	P	F	G	EX
ARK	0	0	1	70	29
CALIF	0	5	20	70	5
COLO	1	3	22	61	13
GA	0	0	19	66	15
IDAHO	0	0	24	66	10
ILL	0	0	7	72	21
IND	0	4	40	53	3
KANS	0	6	39	36	19
MO	0	0	32	62	6
MONT	1	7	35	43	14
NEBR	0	0	42	54	4
N MEX	0	0	70	25	5
N C	0	0	12	76	12
OHIO	0	4	21	59	16
OKLA	0	0	10	90	0
OREG	0	23	29	46	2
S DAK	15	20	36	27	2
TEX	3	19	47	23	8
WASH	0	5	70	20	5

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

International Weather and Crop Summary

April 10-16, 1988

HIGHLIGHTS:

UNITED STATES ... Rain and wetness hamper land preparation and spring seeding in the Southeast and Appalachian States. Dry weather spurs spring wheat seeding.

WESTERN U.S.S.R. ... Significant precipitation and mild weather over the middle Volga promote early winter grain growth.

EUROPE ... Beneficial dry weather continues in the north. Rain favors vegetative to heading wheat across southern growing areas.

SOUTH ASIA ... Showers cover rice regions of the south and east. Dry, hot weather continues across the wheat belt.

NORTHWESTERN AFRICA ... Unseasonably warm, dry weather stresses winter grains in the filling stage.

CANADA ... Dry weather covers the Prairie grain belt.

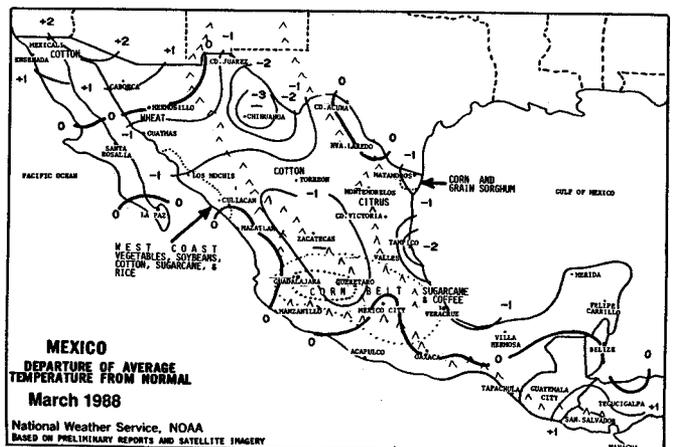
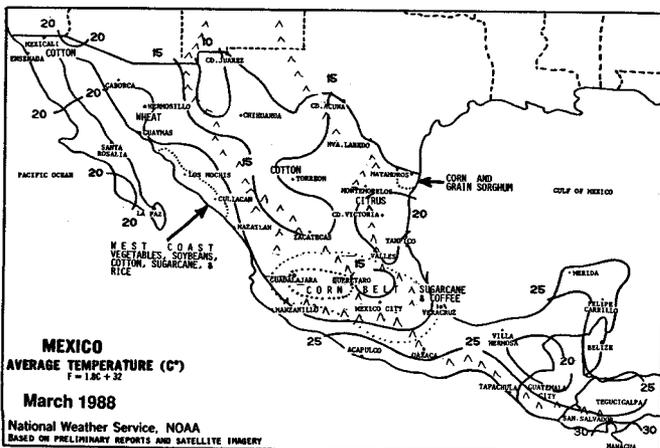
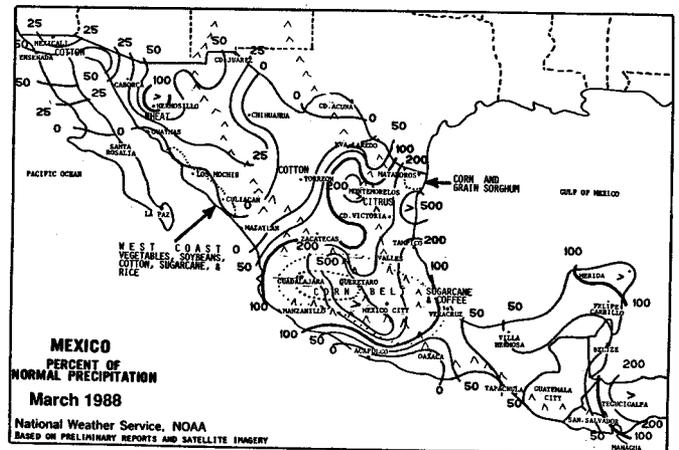
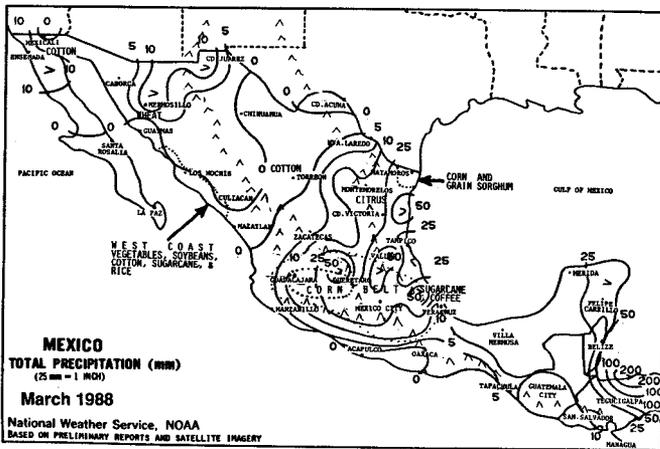
SOUTH AFRICA ... Rain delays early corn harvesting in the southern half of the Maize Triangle, but dry weather benefits maturing crops to the north and in coastal regions.

SOUTHEAST ASIA ... Widespread showers continue throughout southeast Asia, improving preplanting conditions in grain regions of Thailand and the Philippines.

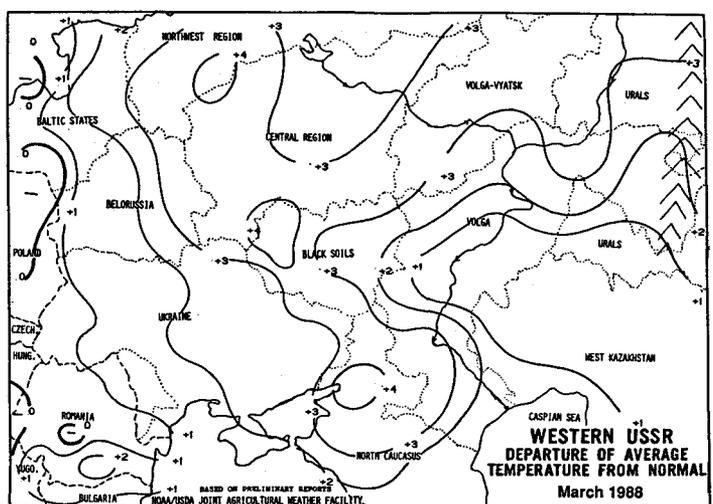
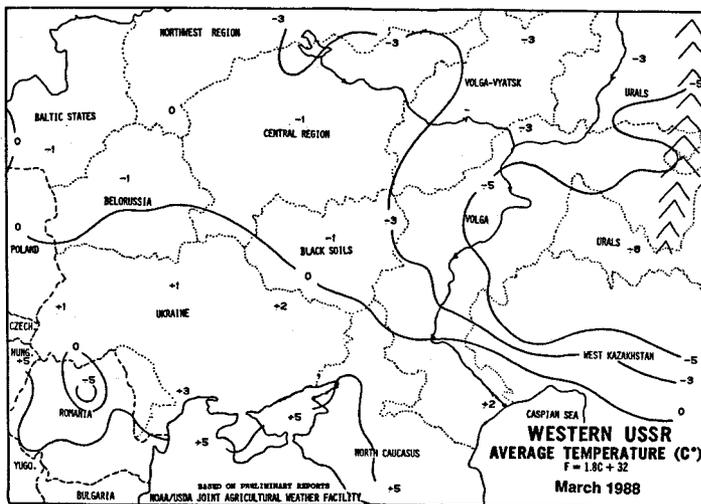
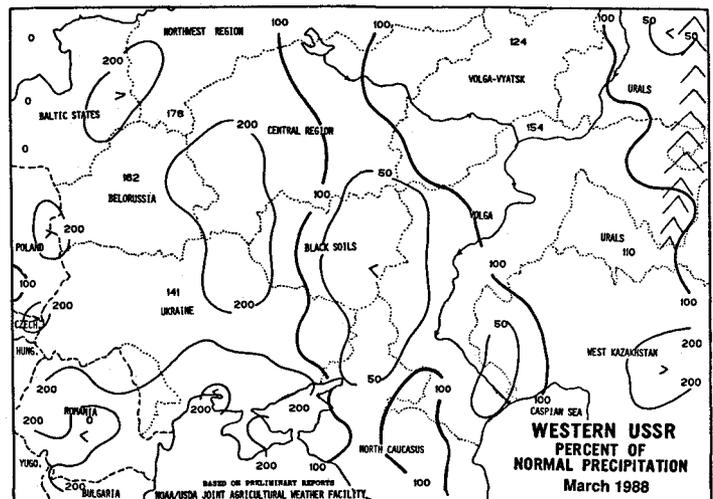
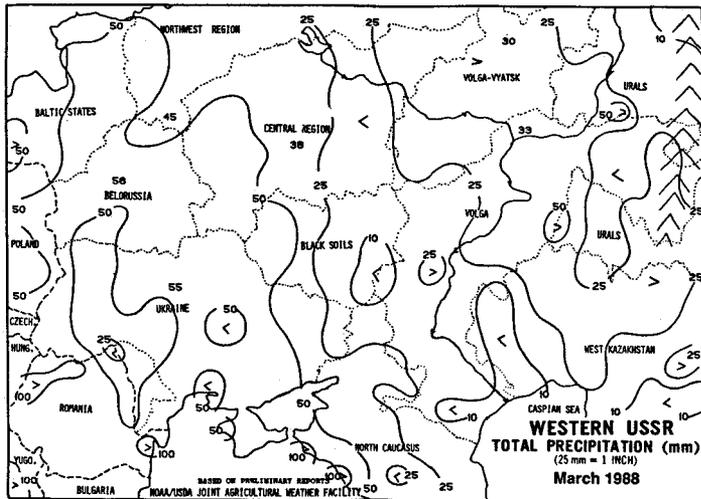
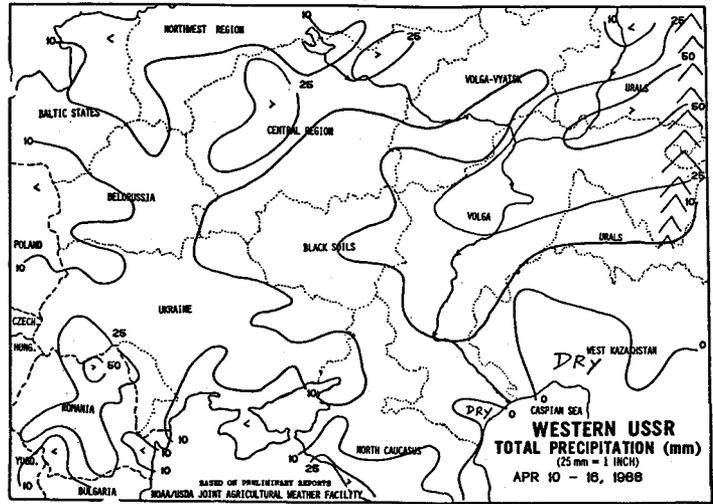
EASTERN ASIA ... Rain helps to relieve dryness in southwestern Chinese crop areas. Above-normal temperatures favor development of winter grains.

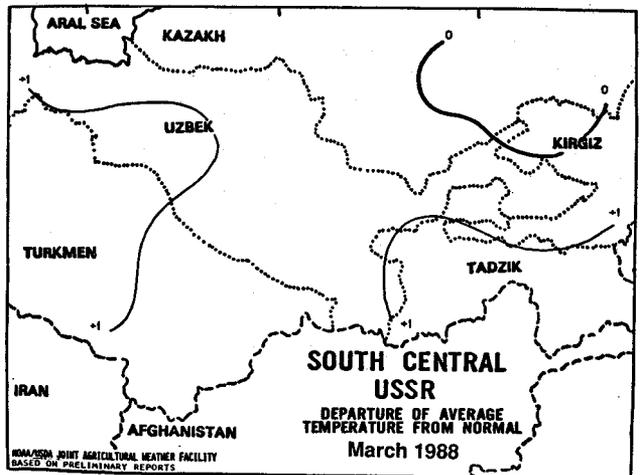
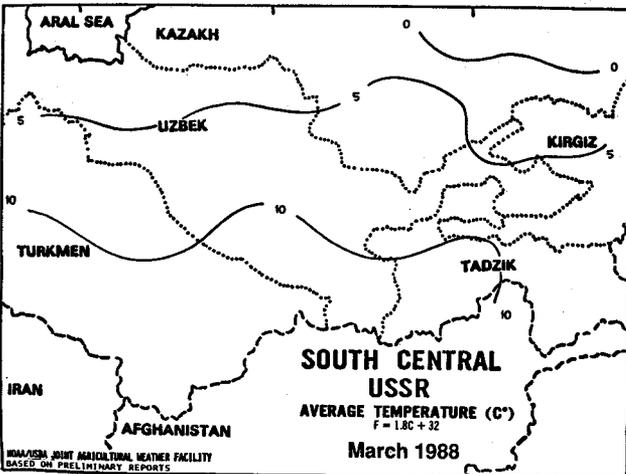
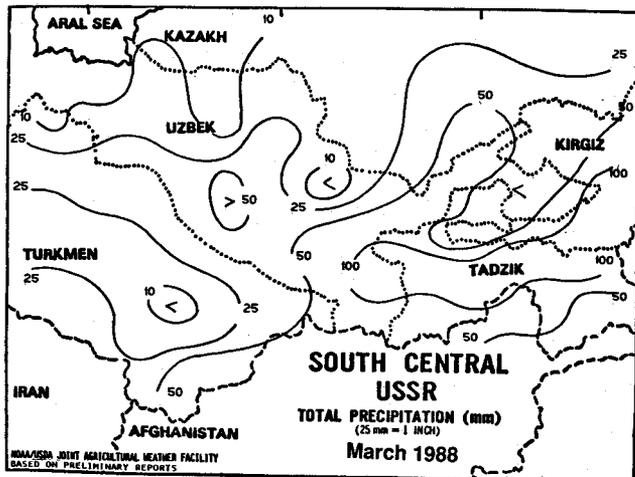
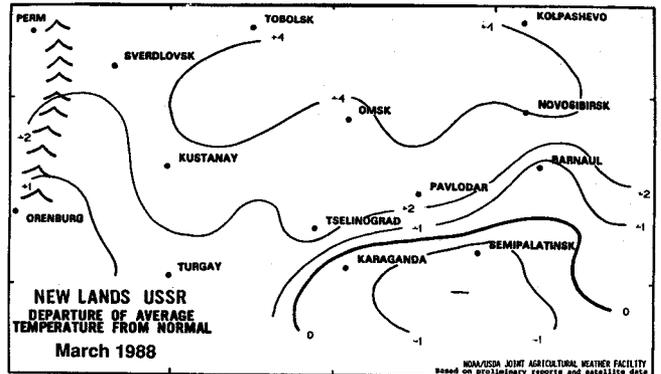
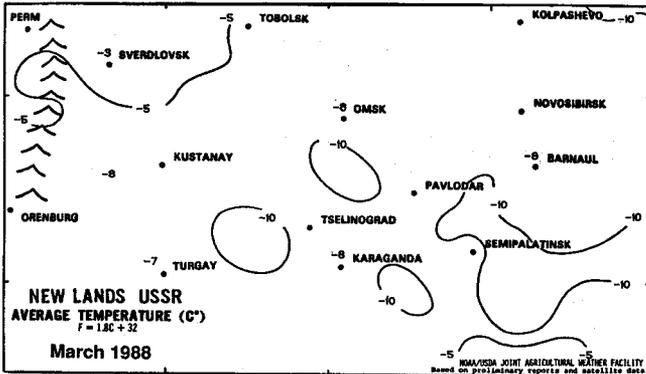
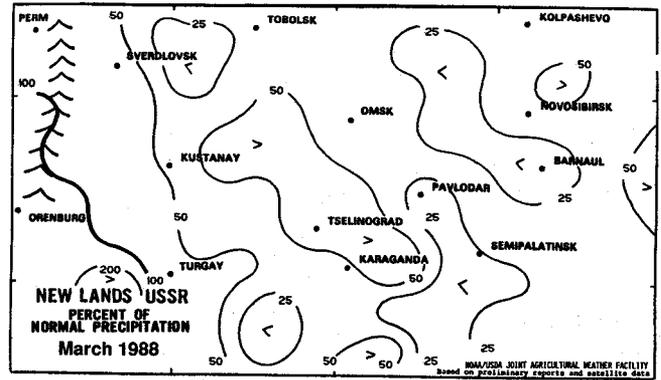
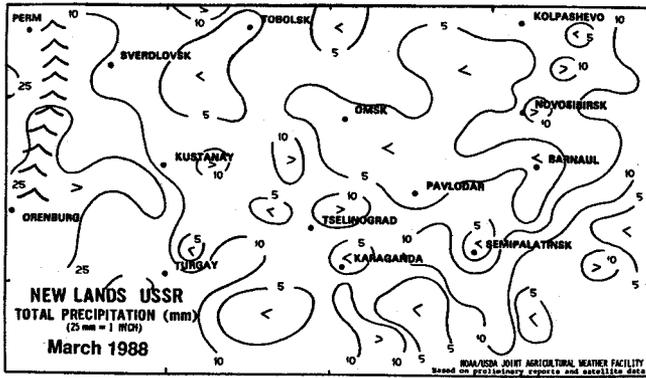
SOUTH AMERICA ... Rain slows harvest in southern Brazil, but drier weather across the entire region late in the week improves field conditions. Harvest pace increases in Argentina.

AUSTRALIA ... Persistent heavy rain causes harvest delays in the extreme east. Scattered rainfall benefits pre-season moisture levels for wheat in the west.

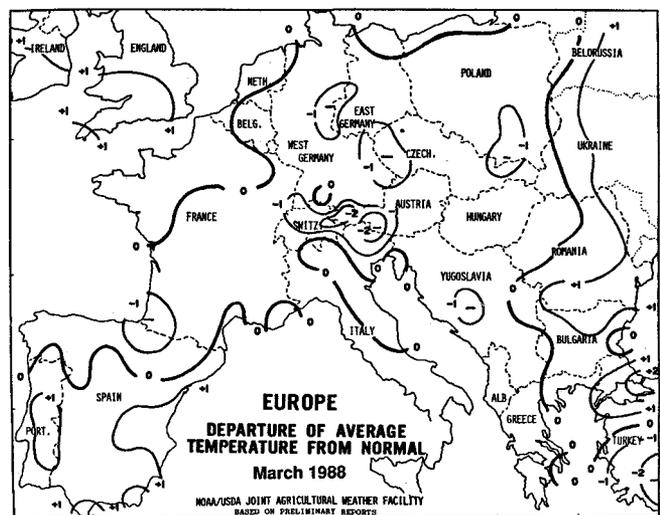
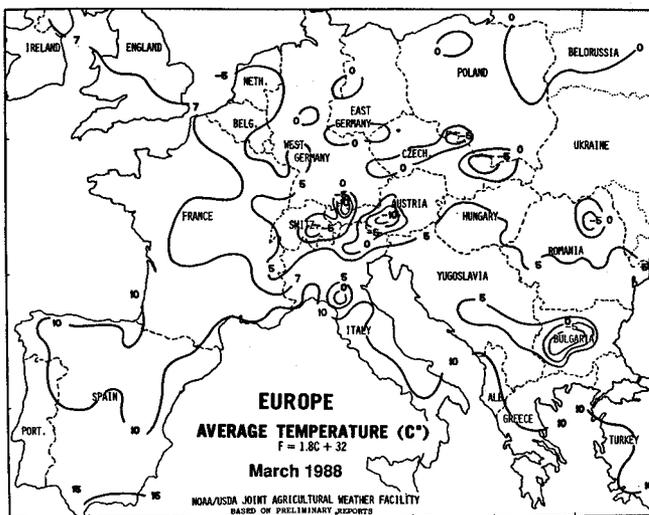
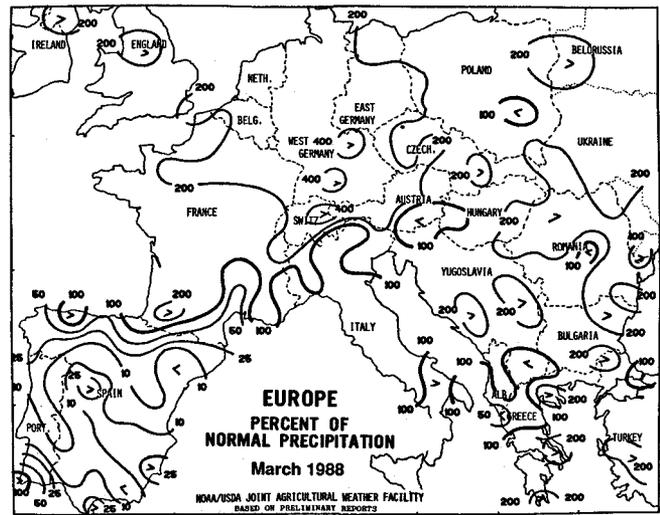
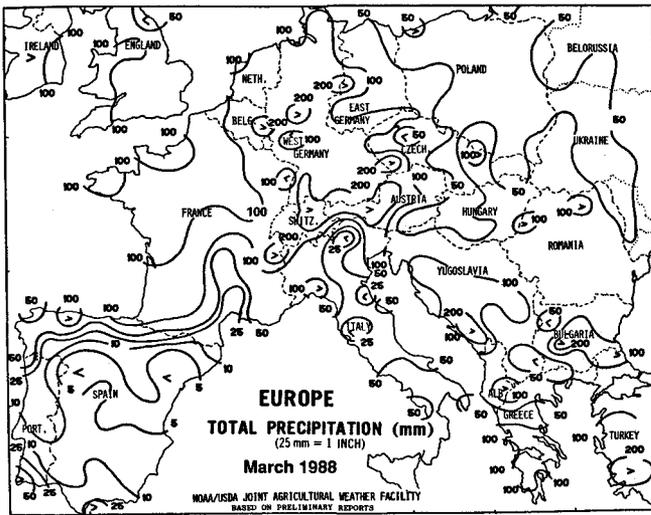
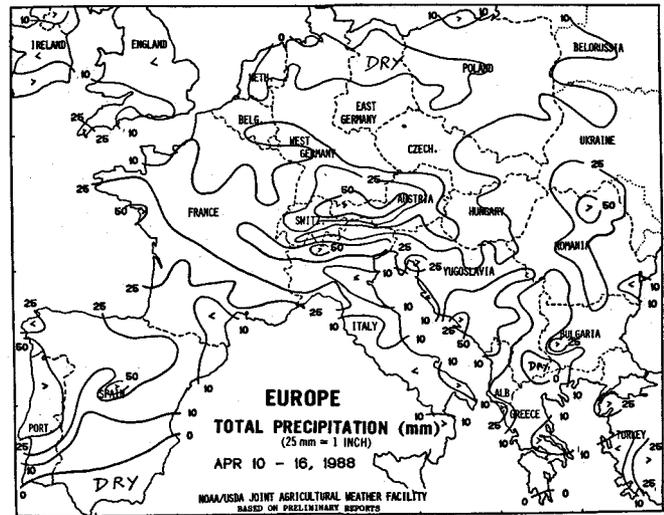


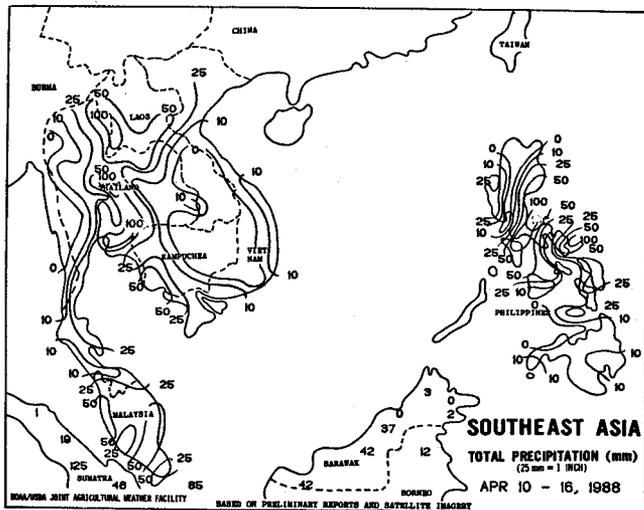
WESTERN U.S.S.R ... Unseasonably warm weather covered winter grain areas during March, with monthly temperatures averaging 2-4 degrees Celsius (C) above normal. March's mild weather melted snow cover and caused winter grains in the southern half of the Ukraine and the North Caucasus to break dormancy 1-2 weeks earlier than usual. Near- to above-normal March precipitation over the Baltic States, Belorussia, the Ukraine, and the North Caucasus provided abundant initial soil moisture for early crop growth. Much below-normal March precipitation covered the eastern Ukraine and the middle Volga. This past week, substantial precipitation (14-38mm) covered the middle Volga, promoting early winter grain growth and improving pre-planting moisture. Mostly light precipitation (3-12mm) covered crop areas over the remainder of the region. Unseasonably cool weather over the Baltic States, Belorussia, the western Ukraine, and the Central Region slowed winter grain growth.



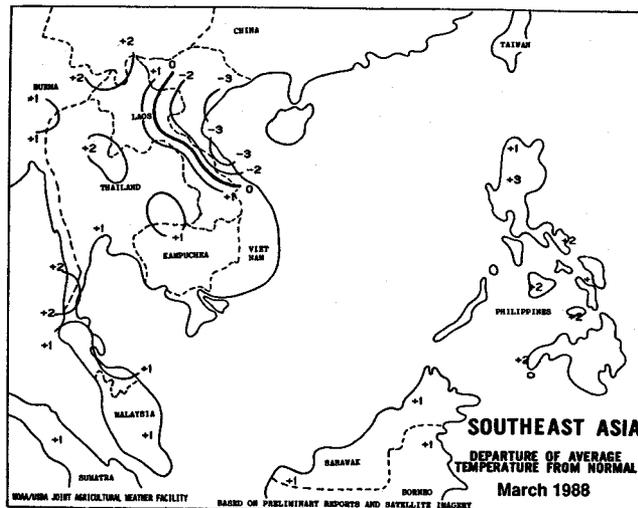
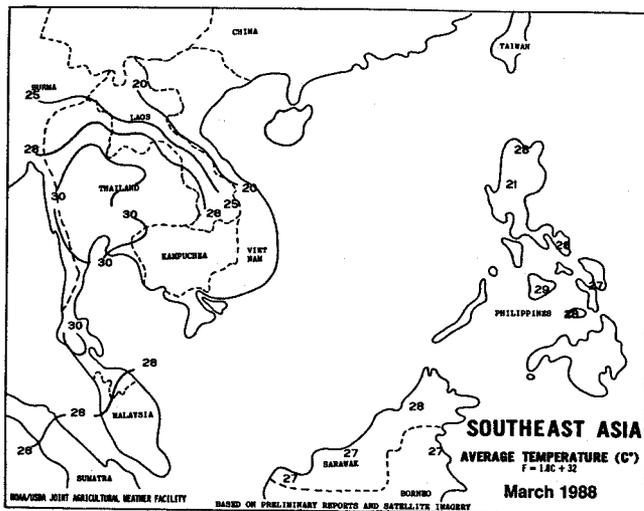
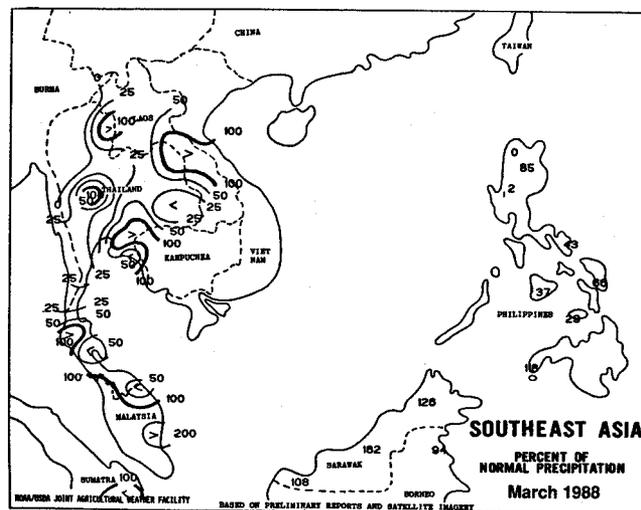
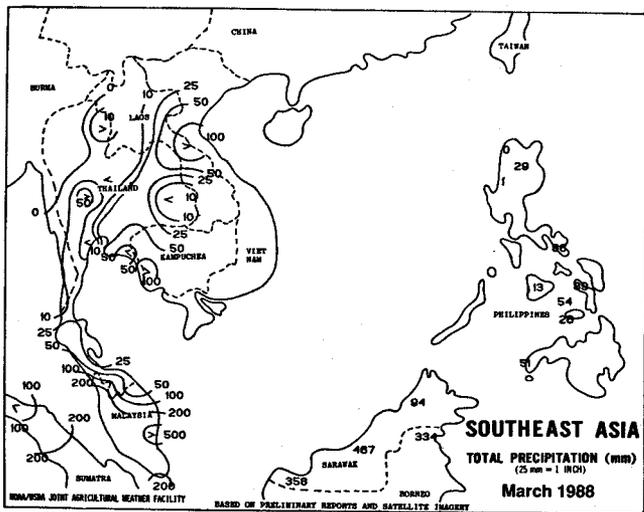


EUROPE ... Moderate to heavy rain (greater than 25mm) benefited vegetative to heading wheat across sections of the northern Iberian Peninsula, southern France and West Germany, and the Balkans. Light to moderate rain (less than 20mm) caused minor delays in spring planting across much of the remainder of western and southern Europe, while northern Europe continued mostly dry. Beneficial dry weather in northern Europe over the past 2 weeks followed much above-normal rainfall during March that caused extensive spring fieldwork delays and flooding. March precipitation was above normal in nearly all of Europe except for sections of Portugal, Spain, southern France, and Italy, where it was below normal. Monthly average temperatures were near to slightly below normal in northern and eastern growing areas, and normal to above normal across the west.

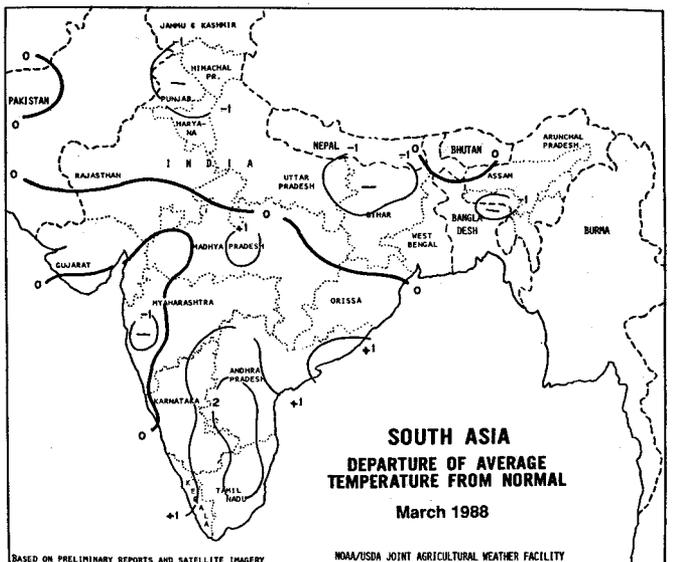
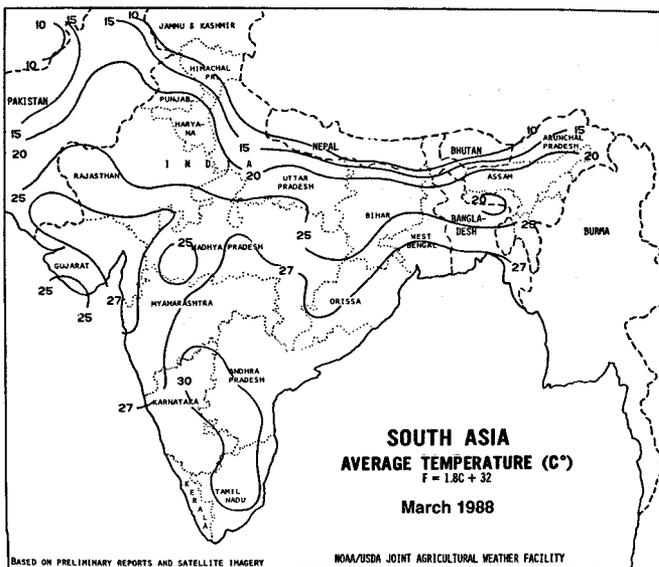
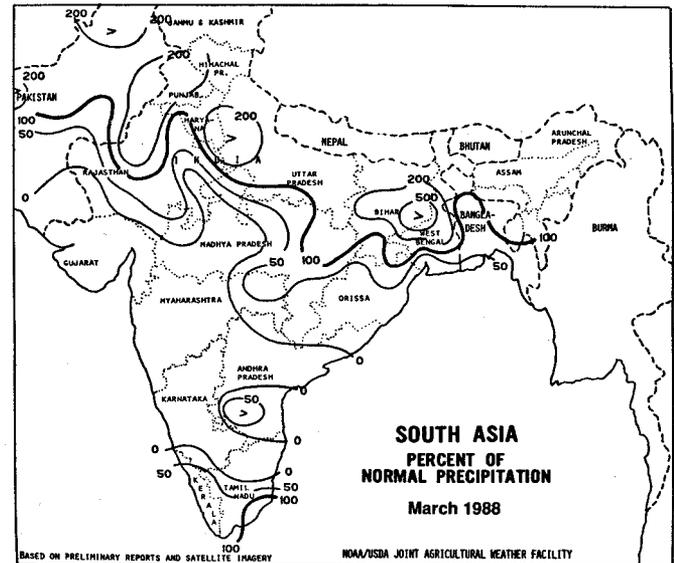
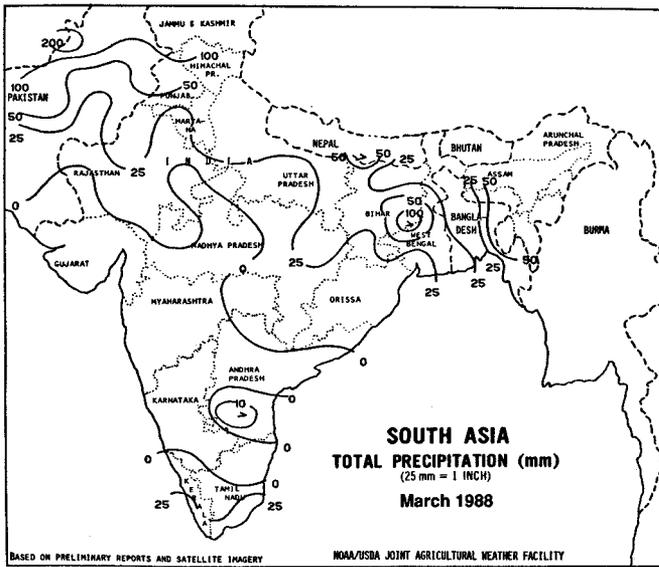
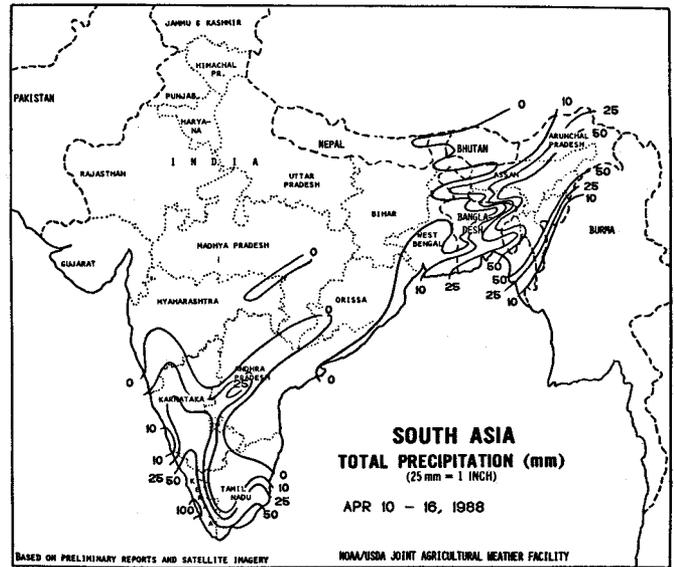


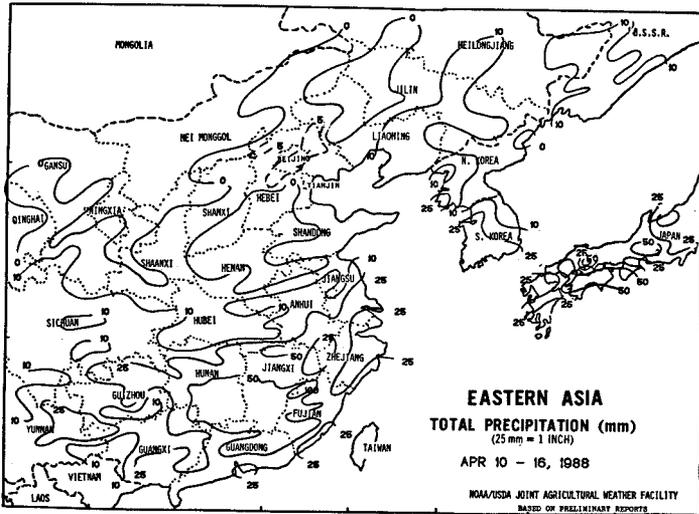


SOUTHEAST ASIA ... Light rain (less than 10mm) covered southern Indonesian crops from eastern Java eastward, but moderate to heavy showers (25-100mm or more) covered crop regions elsewhere in Indonesia and Malaysia, reflecting March's generally beneficial rainfall pattern. The rainfall continued for the second week over parts of western Malaysia which were drier than normal during March. Further north, variable rain (7-56mm) covered peninsular Thailand, but heavier showers (25-100mm or more) covered grain regions of central and northern Thailand, boosting moisture levels for grain planting in May, as well as northern Laos and parts of western Kampuchea. Lighter rain covered Vietnam's rice regions with dry weather from southern Laos southward. In March, peninsular Thailand was drier than normal as was most of Indochina. In the Philippines, beneficial scattered showers continued for the second week, boosting moisture reserves for grain planting in May but possibly causing flooding in south-central Luzon. March rainfall was below normal over the northern and central islands though rain was more frequent along the east coast. Late-month, inundating showers covered central Mindanao. Temperatures averaged 1-3 degrees C above normal throughout the islands.

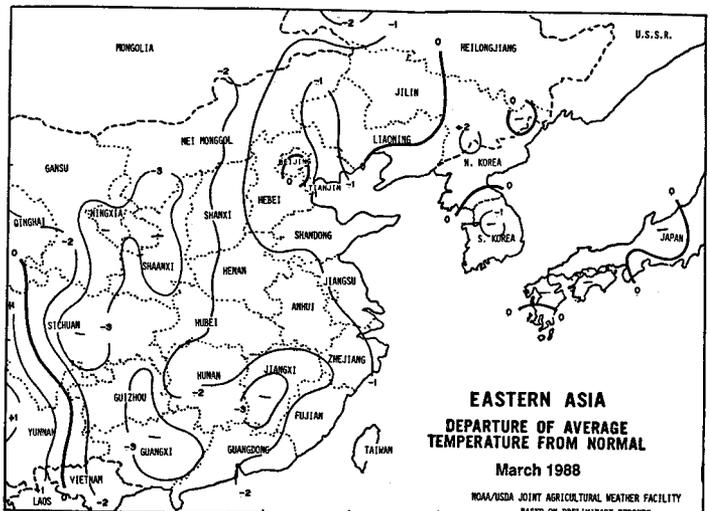
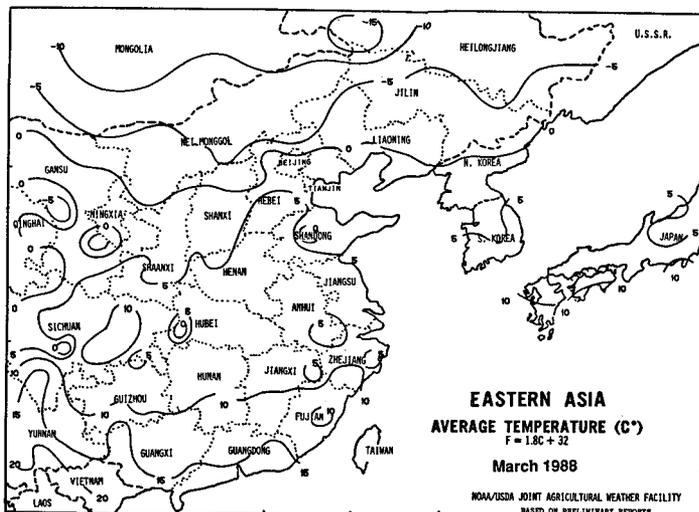
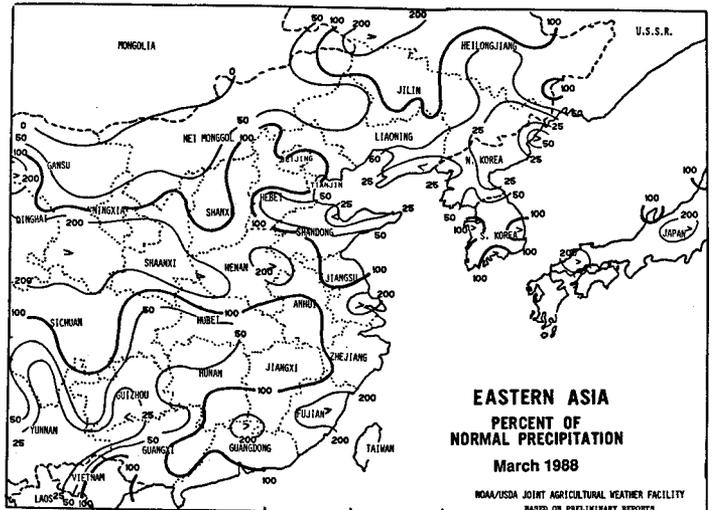
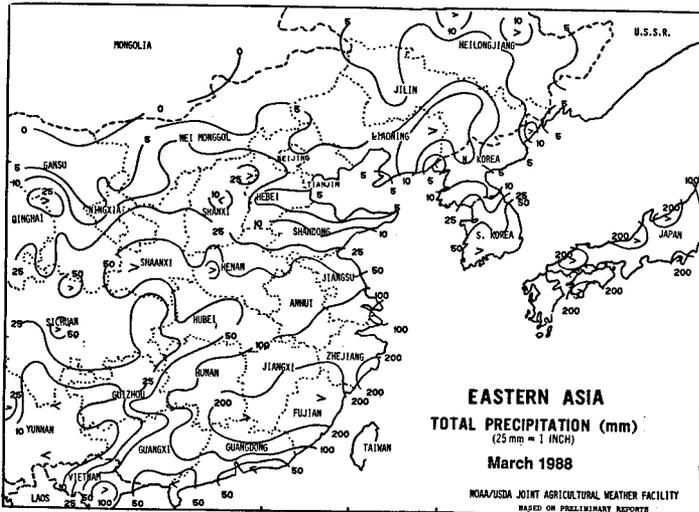


SOUTH ASIA ... Light to moderate showers (1-31mm) benefited filling rice along coastal regions of eastern and southern India, with heavy rain (57-120mm) continuing over rice regions of Kerala. Moderate to heavy rain (25-96mm) fell from eastern Bangladesh eastward through Assam, boosting irrigation levels for rice planting. Hot, dry weather continued across the wheat belt. In early March, much needed rain across northern Pakistan and northern India brought relief to late-planted wheat still flowering to filling and boosted irrigation supplies for heading rice. Hot, drier weather the latter half of the month stressed the immature grains. Late-month rain along the southern tip benefited immature rice.

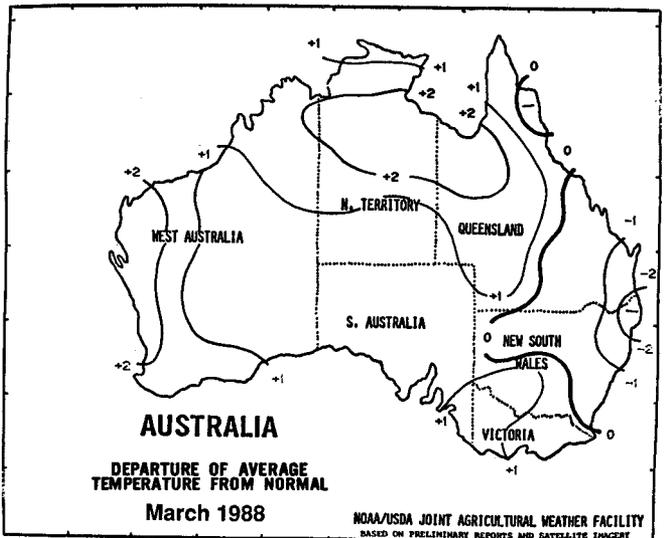
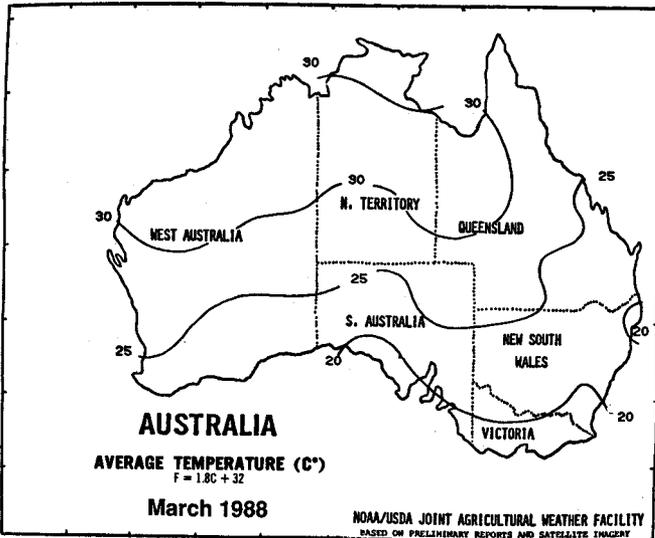
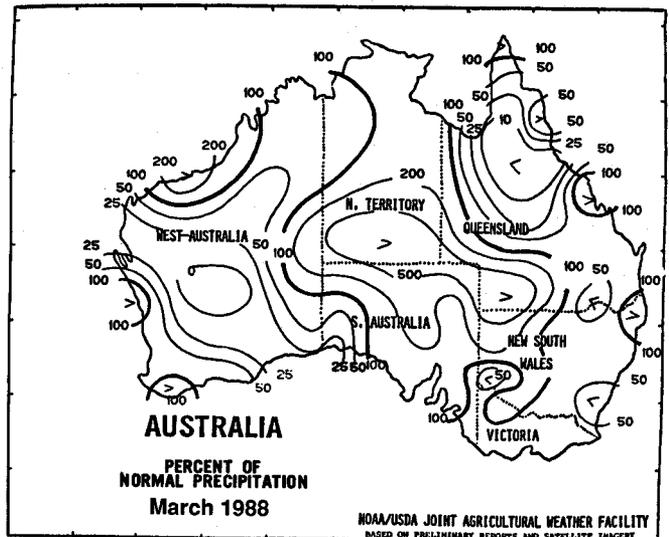
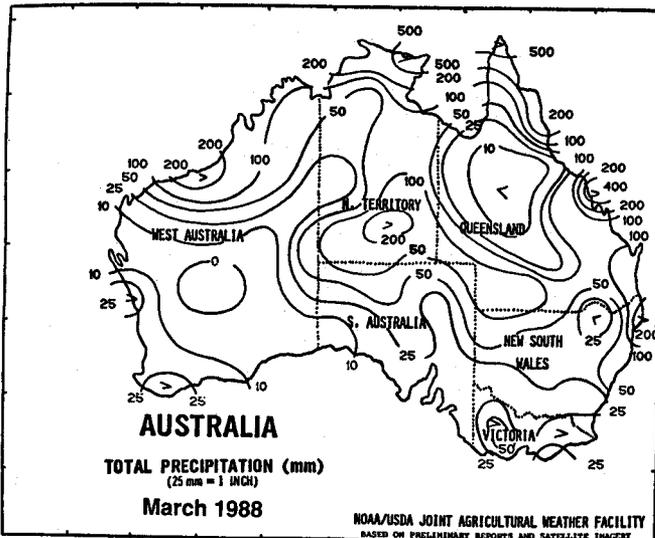
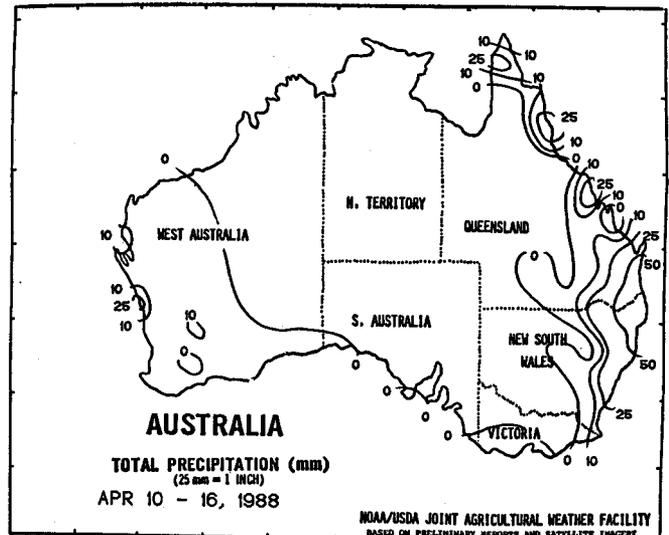


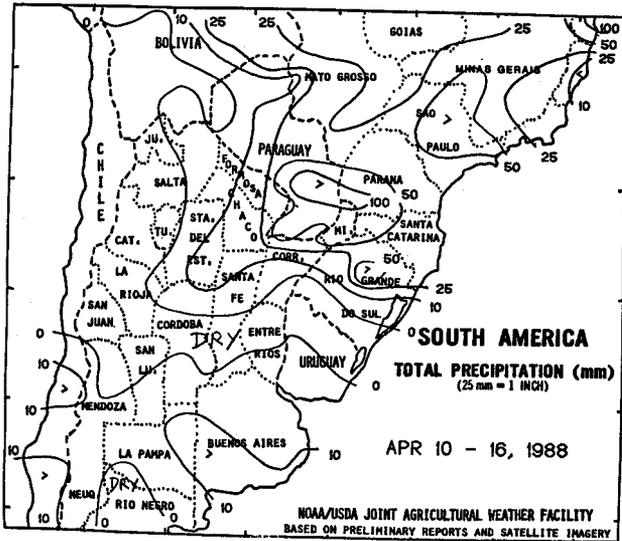


EASTERN ASIA ... Heavy rain continued over southern China, with possible flooding in sections of Hunan, Jiangxi, and Fujian. Moderate to heavy rain helped to relieve persistent dryness in southern Guangdong and Yunnan. In northern growing areas, scattered rainfall benefited pre-season soil moisture levels for single crop rice but caused delays in spring wheat planting. Temperatures during the week turned above normal across northern and central areas, favoring developing winter grains. The warm temperatures followed several weeks of colder-than-normal weather since March, when temperatures were below normal over nearly all but extreme southwestern growing areas. Rainfall for the month was above normal across southeastern and northwestern Chinese crop areas and Japan, and below normal across sections of North Korea, the North China Plain, and southwestern Chinese crop areas.

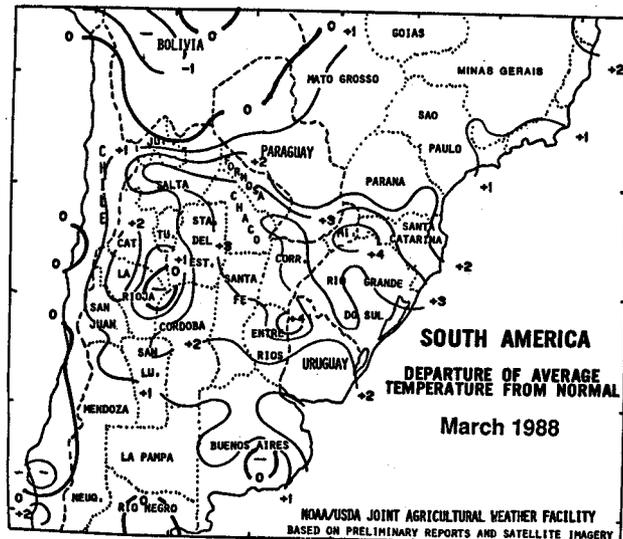
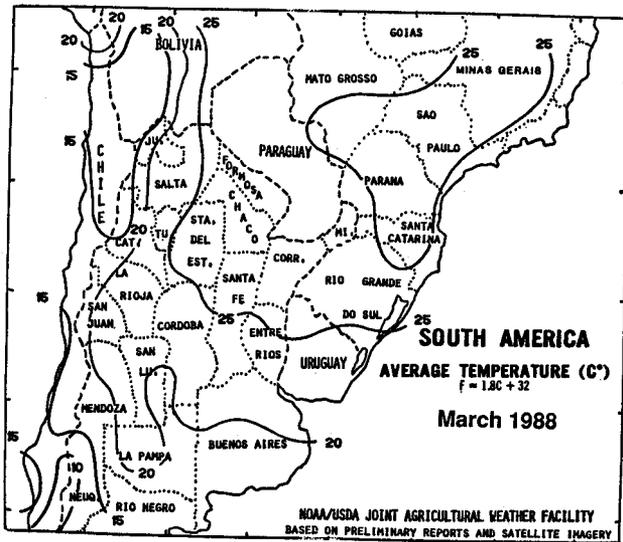
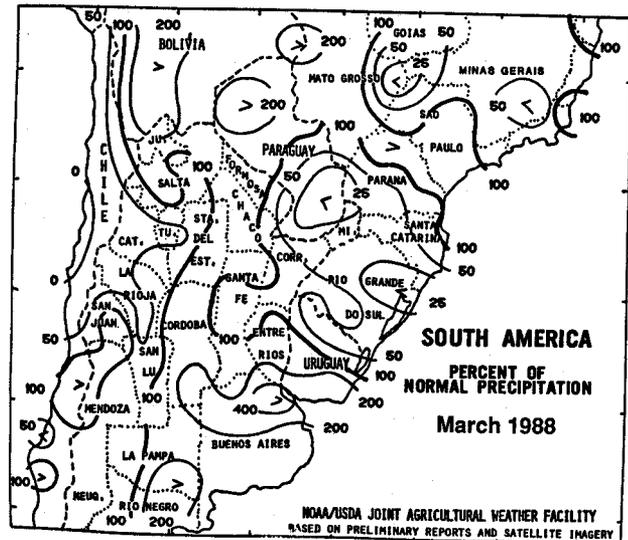
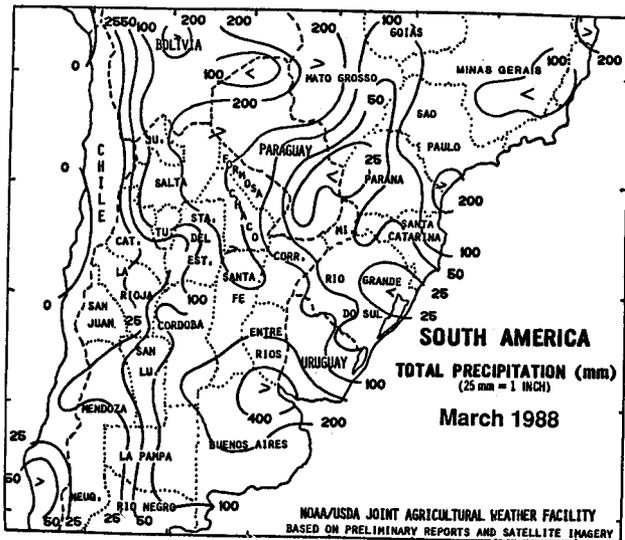


AUSTRALIA ... Moderate to heavy rain (greater than 25mm) persisted in eastern growing areas through midweek, causing continued problems with flooding and harvest delays. Above-normal rainfall since late March caused a deterioration in quality of cotton, which is normally harvested from late March through early June. Scattered mostly light rain (less than 10mm) increased pre-season soil moisture levels for wheat in Western Australia, while southern growing areas remained mostly dry. Rainfall during March was above normal in South Australia, the rangelands of southwestern Queensland and northwestern New South Wales, and scattered coastal areas of Queensland, New South Wales, and Western Australia. Below-normal rainfall fell in sections of Queensland, New South Wales, Victoria, and Western Australia. Average temperatures for the month were above normal in all but eastern growing areas, where they were normal to below normal.

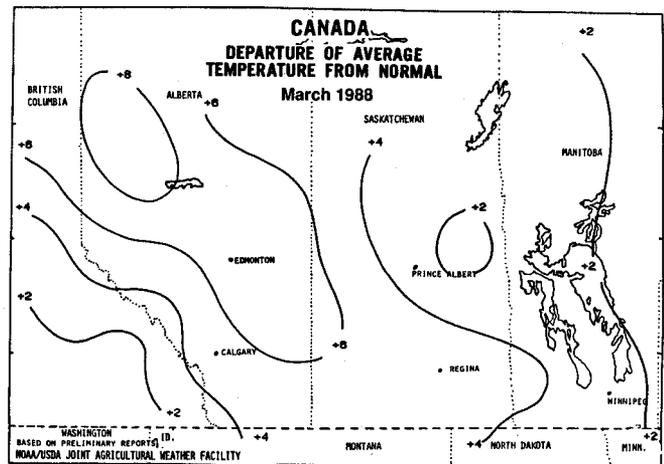
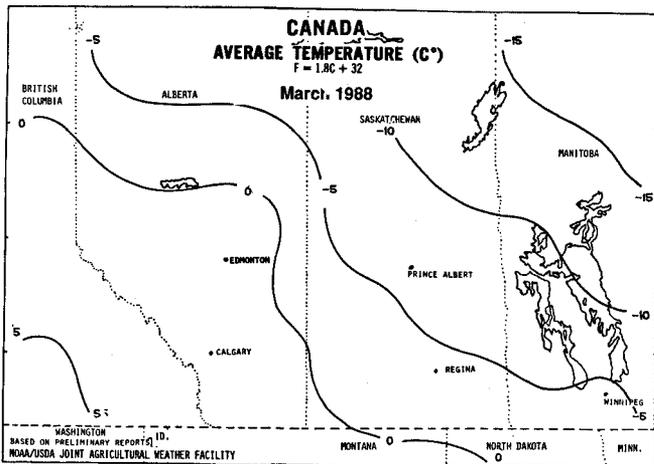
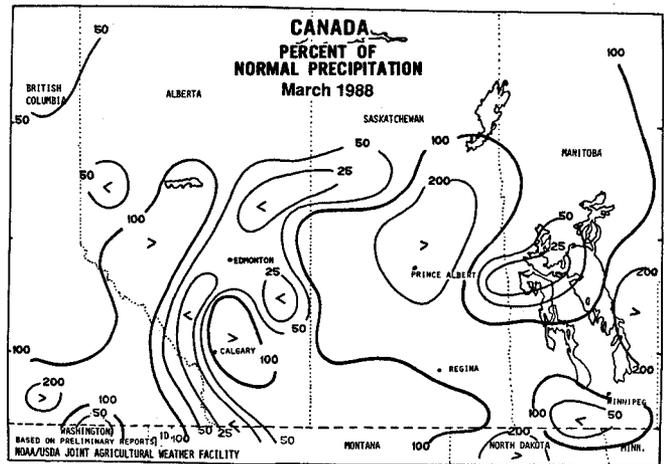
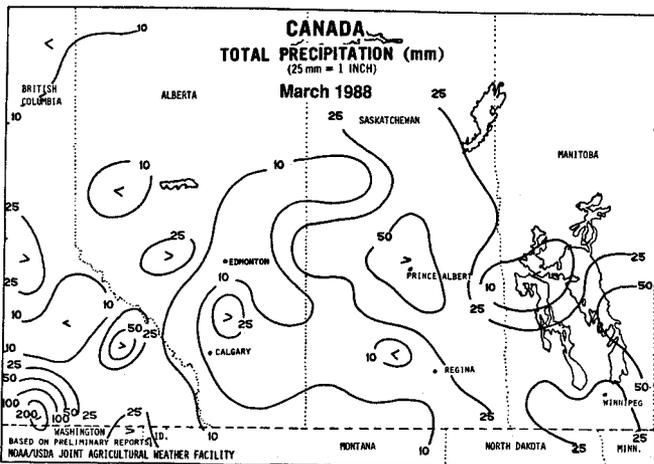
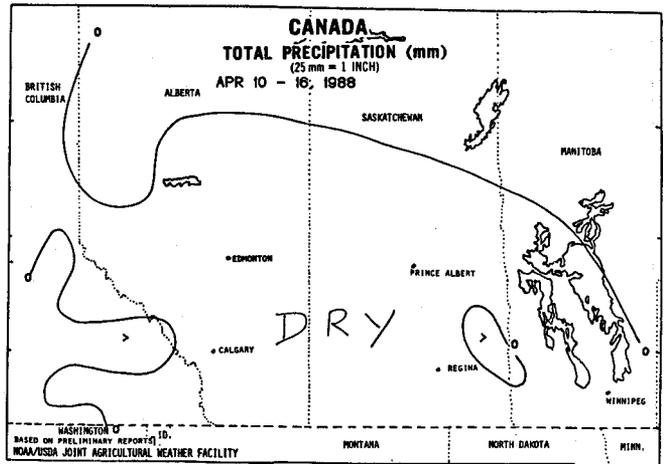


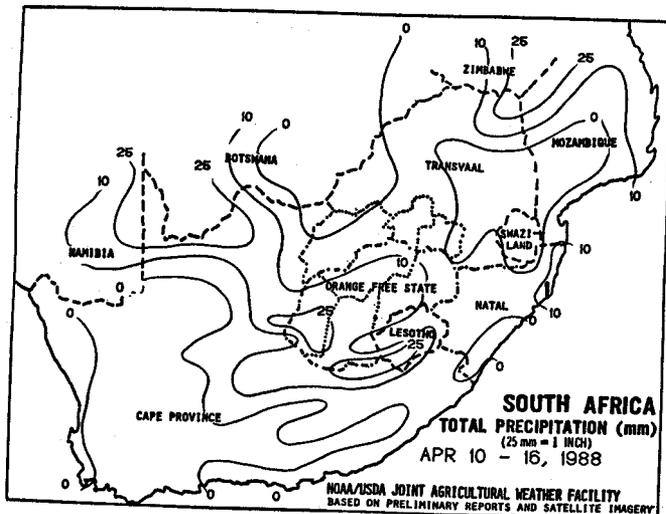


SOUTH AMERICA ... In south-central Brazil, widespread, locally heavy showers fell during midweek over most soybean areas, slowing the harvest. Drier weather improved field conditions later in the week, but total rainfall reached 50-84mm in northwestern Rio Grande do Sul, western Santa Catarina, and Parana. Heavier rain (60-173mm) fell in southern Paraguay. Well below-average March rainfall in these areas, coupled with persistent hot weather, stressed immature soybeans. This past week's highly variable rainfall across Brazil's northern soybean areas also caused harvest delays. In Argentina, some light rain fell in Buenos Aires, but mostly dry weather favored corn and soybean harvesting. Recent harvest weather improved markedly from March, when much above-average rain, especially in northern Buenos Aires, soaked maturing crops. Sunny skies have recently increased the harvest pace across the region.

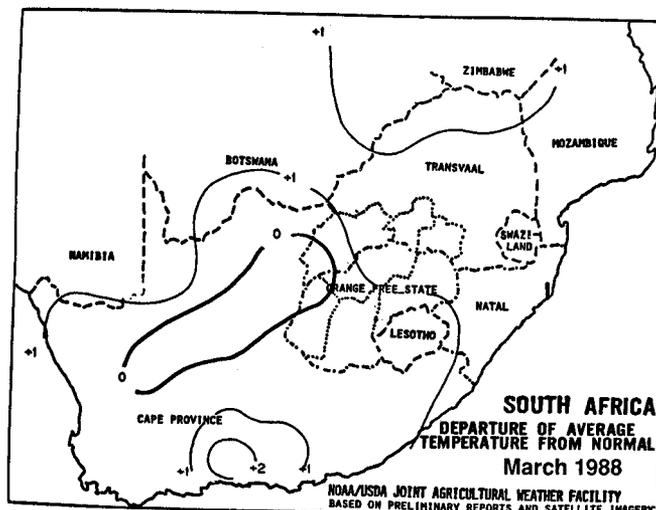
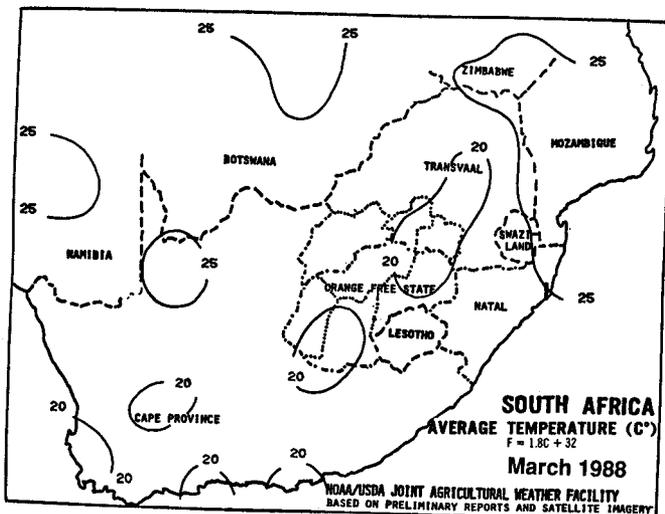
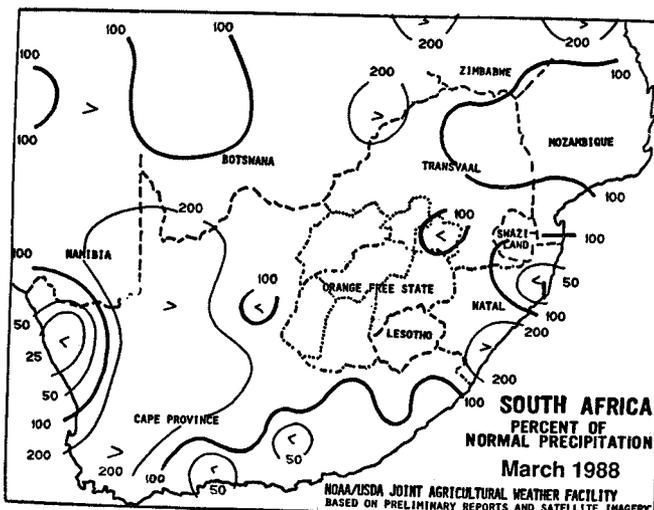
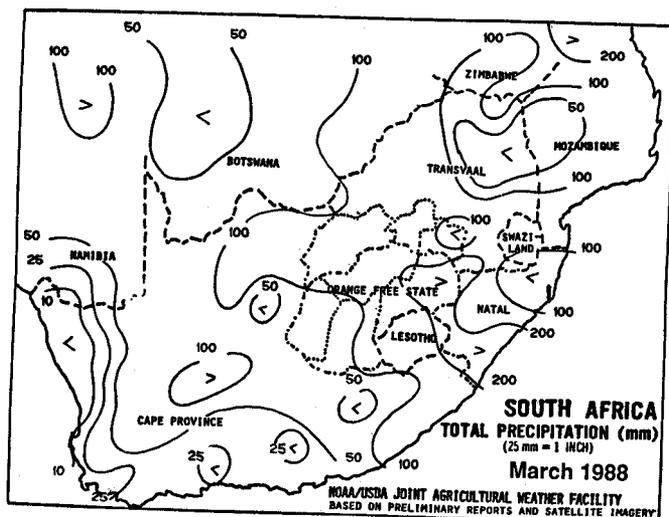


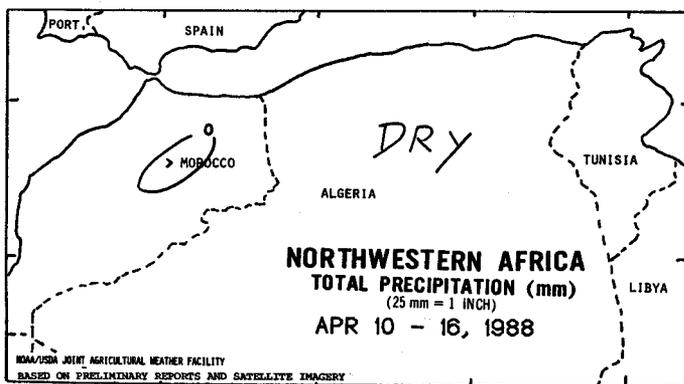
CANADA ... Dry weather covered the Prairie grain belt, which extends from Alberta to Manitoba. In March, rainfall was near to above normal over most crop regions, but pockets of less than 50 percent of normal rainfall persisted in each Province. Temperatures were 4-7 degrees C above normal throughout the grain belt. Spring wheat planting normally begins in late April, but soil moisture is short over much of the region due to this season's drier-than-normal winter.



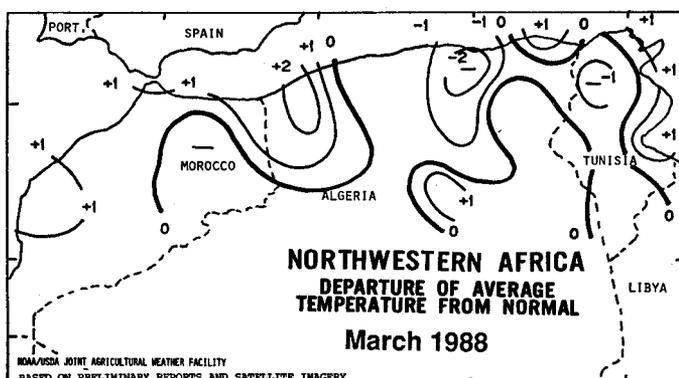
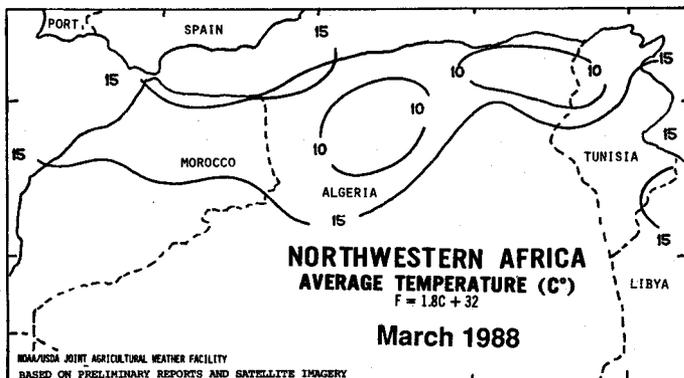
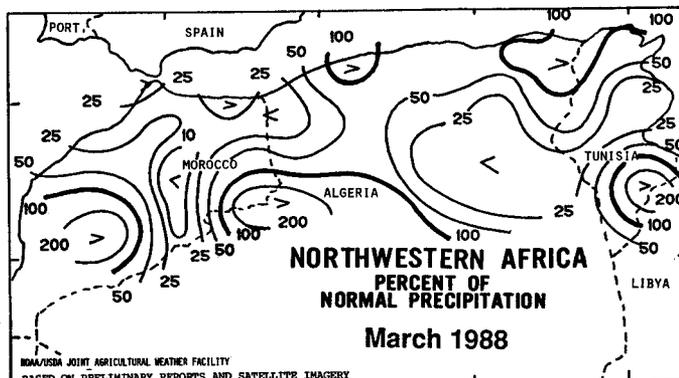
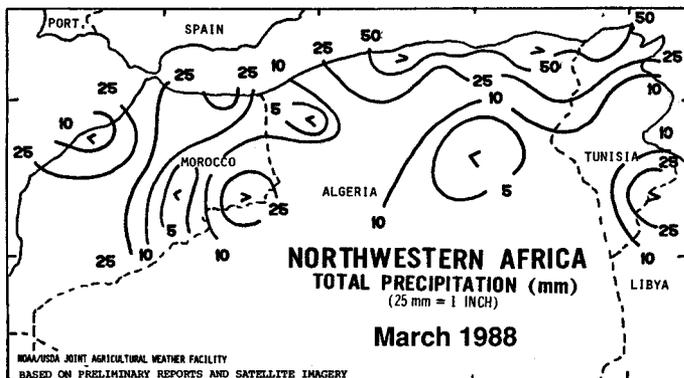


SOUTH AFRICA ... Moderate to heavy rain (15-45mm) continued over the southern half of the Maize Triangle, causing delays in early harvesting. Dry weather covered the northern Triangle and crop regions of Natal and the Cape Province, benefiting maturing crops. In March, rainfall was above normal throughout most crop regions, improving soil conditions for wheat planting in May but worsening flood conditions in Natal and parts of the southern and western Triangle. This will be the last weekly summary of the season, though maps of monthly rainfall and temperatures will continue to be published. Weekly coverage will resume in October, corresponding to the normal corn planting period.





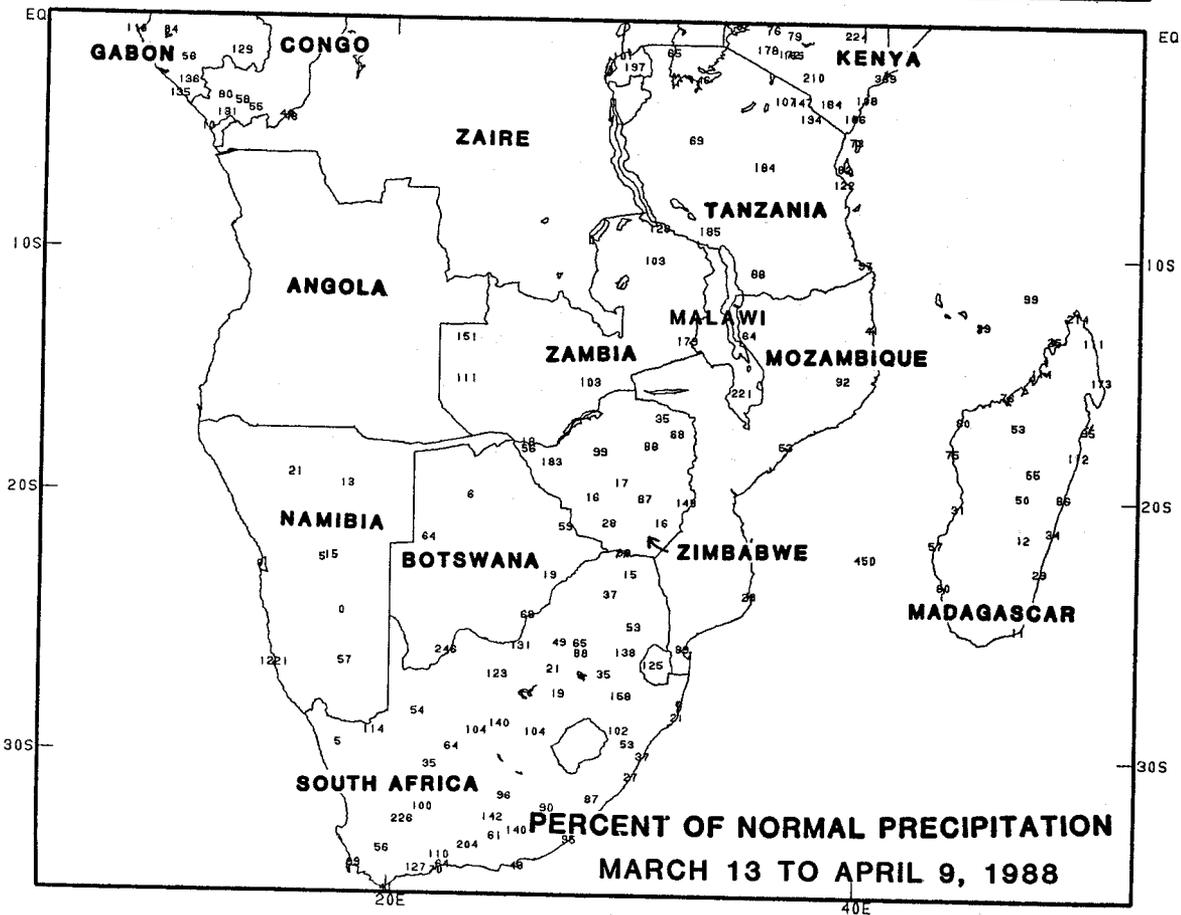
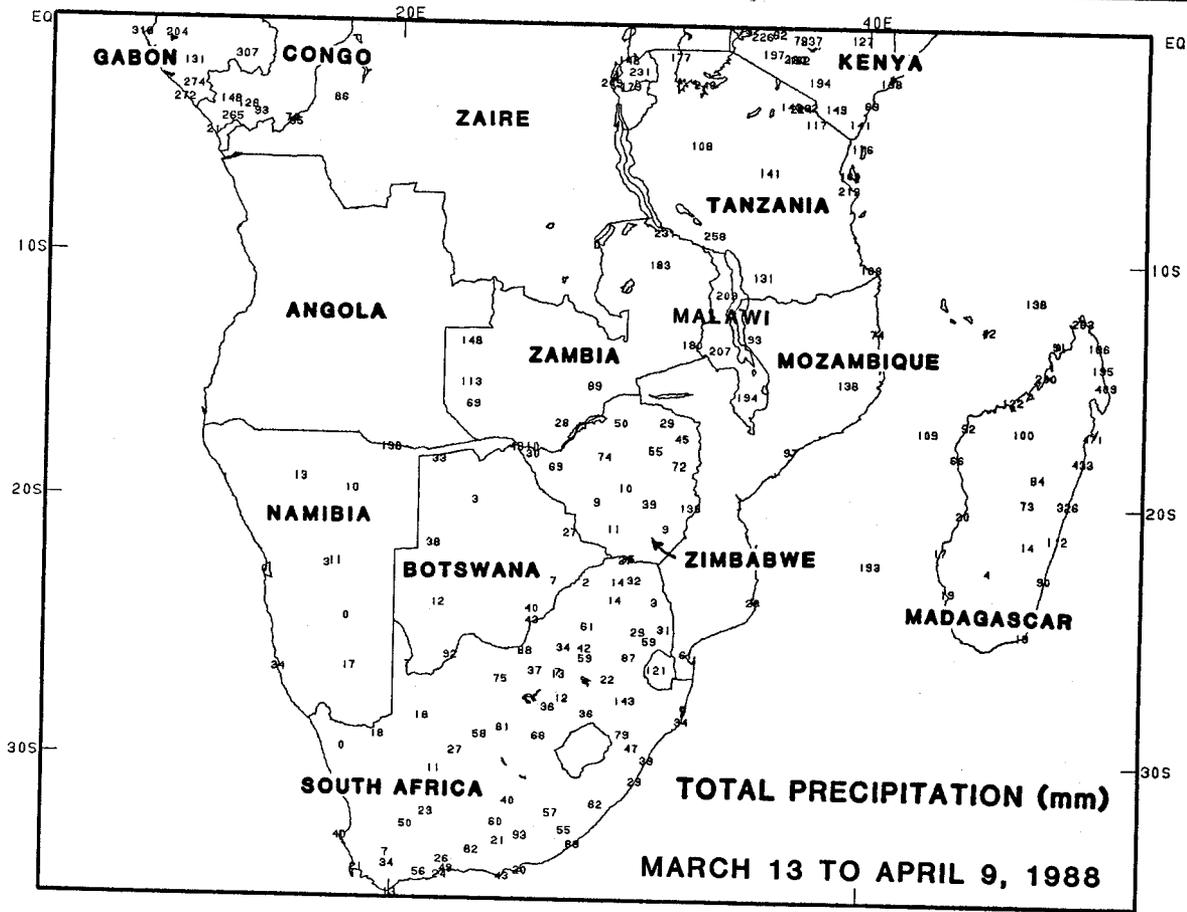
NORTHWESTERN AFRICA ... Minimal rain covered Moroccan winter grains during March with precipitation ranging from 25 to 50 percent of normal. In addition, above-normal March temperatures placed increasing stress on winter grains advancing through reproduction. In Algeria and Tunisia, early-March temperatures brought temporary relief to winter grains previously stressed by prolonged dryness. Dry weather returned to crop areas in mid-March accompanied by above-normal temperatures. This past week, dry weather and above-normal temperatures covered Morocco, Algeria, and Tunisia, stressing winter grains in the filling stage.



African Agricultural Weather Summary

In southern Africa, widespread showers covered filling to maturing crops over Zambia, Malawi, and northern Zimbabwe until late March, as the Intertropical Convergence Zone (ITCZ) strengthened and moved northward. The rainfall reached chronically dry regions of northeastern Mozambique and southern Tanzania but moved out of southern Mozambique and southern Zimbabwe. In April, drier, warm weather covered all but coastal regions, benefiting maturing crops.

In equatorial Africa, showers developed over northern Tanzania and Kenya by mid-March as the ITCZ moved northward. The rainfall improved soil conditions for planting of main season crops, delayed in Tanzania by dry weather. Locally heavy rains in April, however, may have necessitated replanting. Satellite imagery indicated generally light, scattered showers over Ethiopia, where primary crop planting is usually underway. The ITCZ moved into western Africa, providing moisture for early planting in coastal countries.



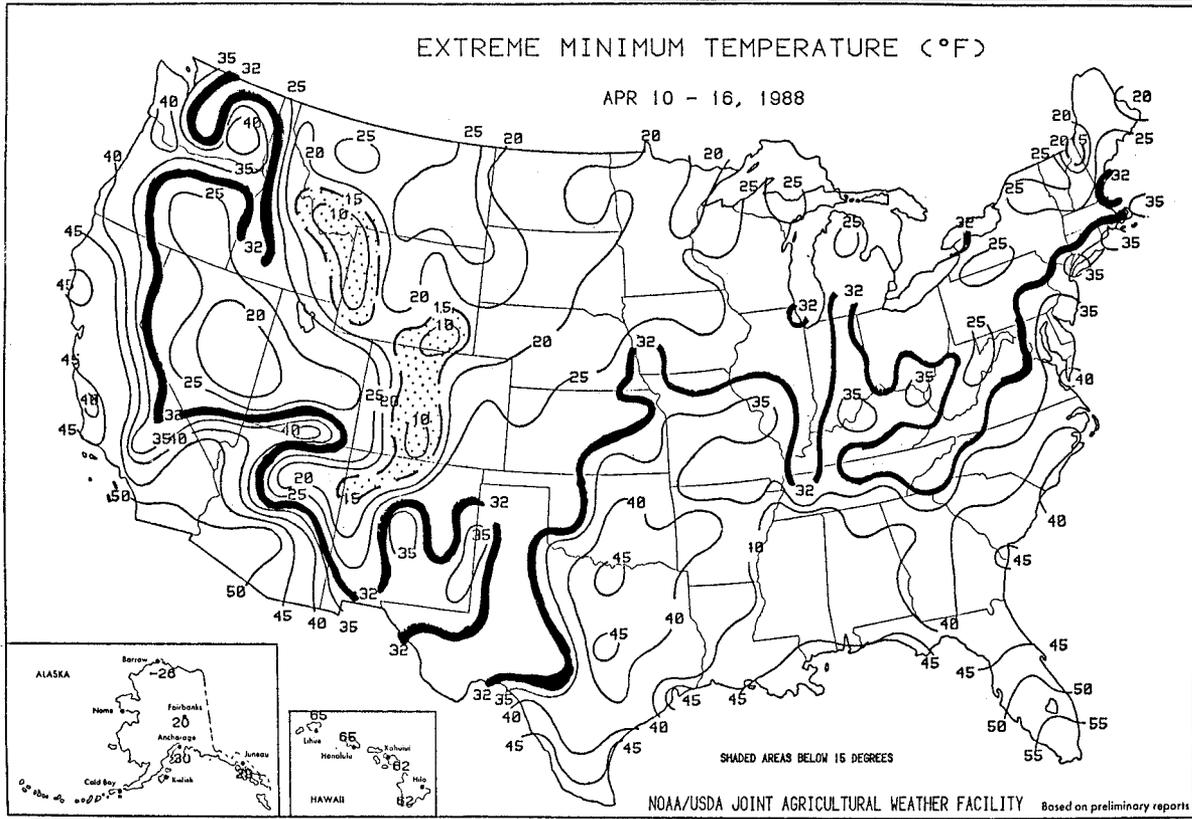
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