

# 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

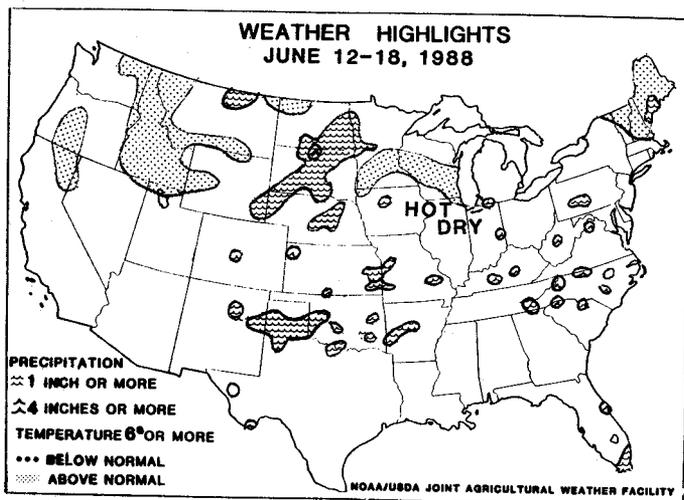
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Washington, D.C.

June 21, 1988

## National Weather Summary

June 12 - 18, 1988



WEDNESDAY...Severe thunderstorms with tornadoes moved through the central High Plains. The thunderstorms brought much needed rain. Beneficial showers extended into parts of the central and southern Plains and middle Mississippi Valley. The East again experienced a hot, dry day.

THURSDAY...A frontal system moved through the drought stricken Ohio Valley but brought only sparse precipitation. Scattered rain fell from New England to the southern Appalachians and into northern Arkansas. Afternoon thunderstorms developed in the middle Missouri Valley. Other Thunderstorms were scattered across Florida and in the Pacific Northwest.

FRIDAY...The slow moving frontal system, extending from New England to the mid-Atlantic States and into the lower Mississippi Valley, brought only widely scattered substantial rain. Showers brought welcome rain to parts of Iowa.

HIGHLIGHTS: Hot, dry weather prevailed over much of the Nation. Substantial rain fell only in portions of the Great Plains and Atlantic Coast States, and temperatures were below normal only across the South. Light or no rain fell over most of the Delta and Corn Belt.

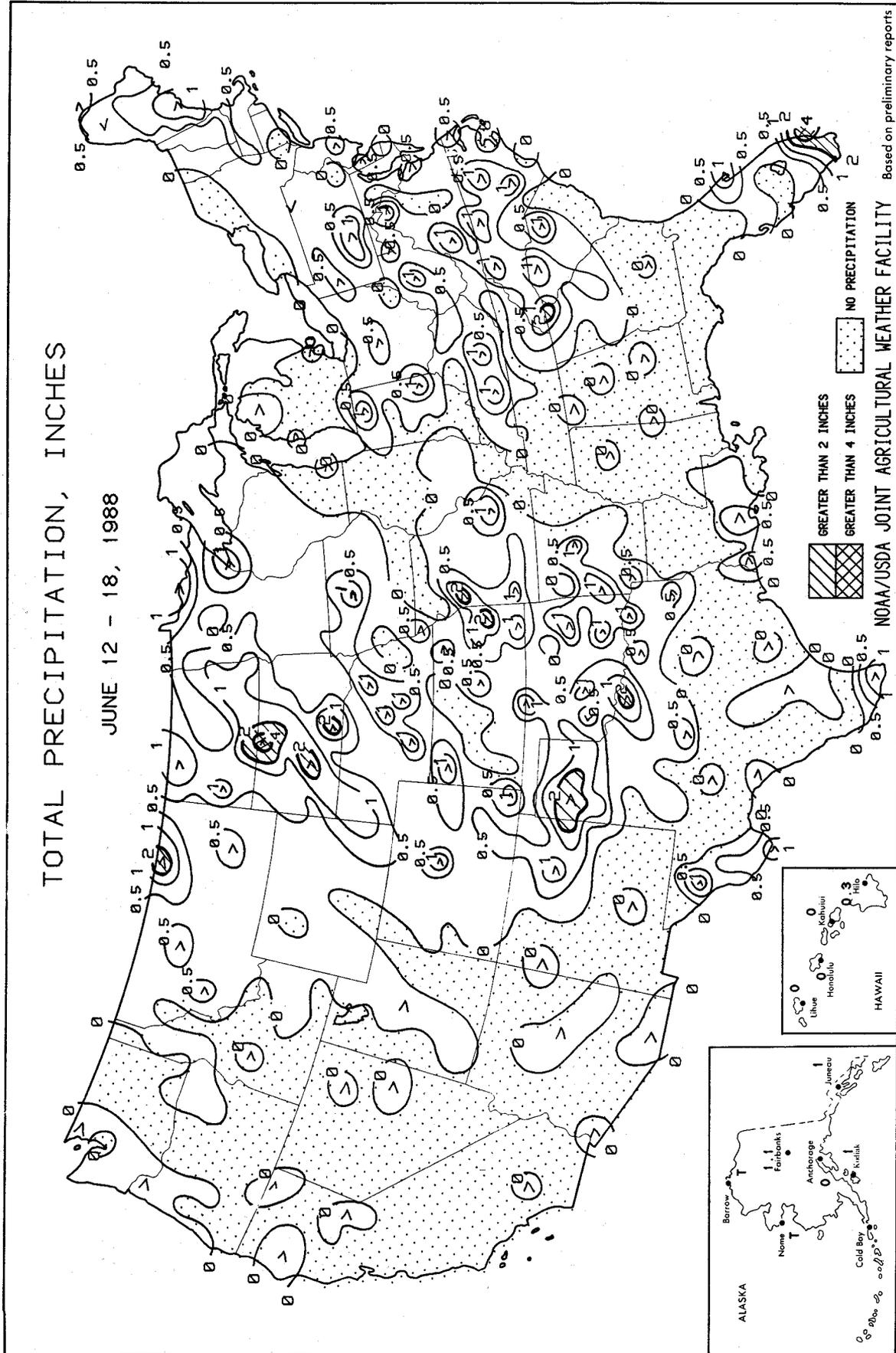
SATURDAY...Thunderstorms produced locally heavy rain and damaging winds over portions of the Southeast and the north-central United States. Most of the Nation remained hot and dry.

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SUNDAY...Thunderstorms dampened the northern Plains, bringing much needed moisture. Scattered thunderstorms continued over the Rockies. Dry weather again prevailed over the remainder of the Nation.

MONDAY...Afternoon thunderstorms produced severe weather in the central High Plains. Thunderstorms developed over much of the north-central United States by the evening. Southern Florida received substantial rain. Warm, dry conditions continued in the East, and mild, dry weather prevailed west of the Rockies.

TUESDAY...Thunderstorms moved across the northern and central Plains and into the Upper Mississippi Valley. Warm, dry weather continued over much of the remainder of the country.

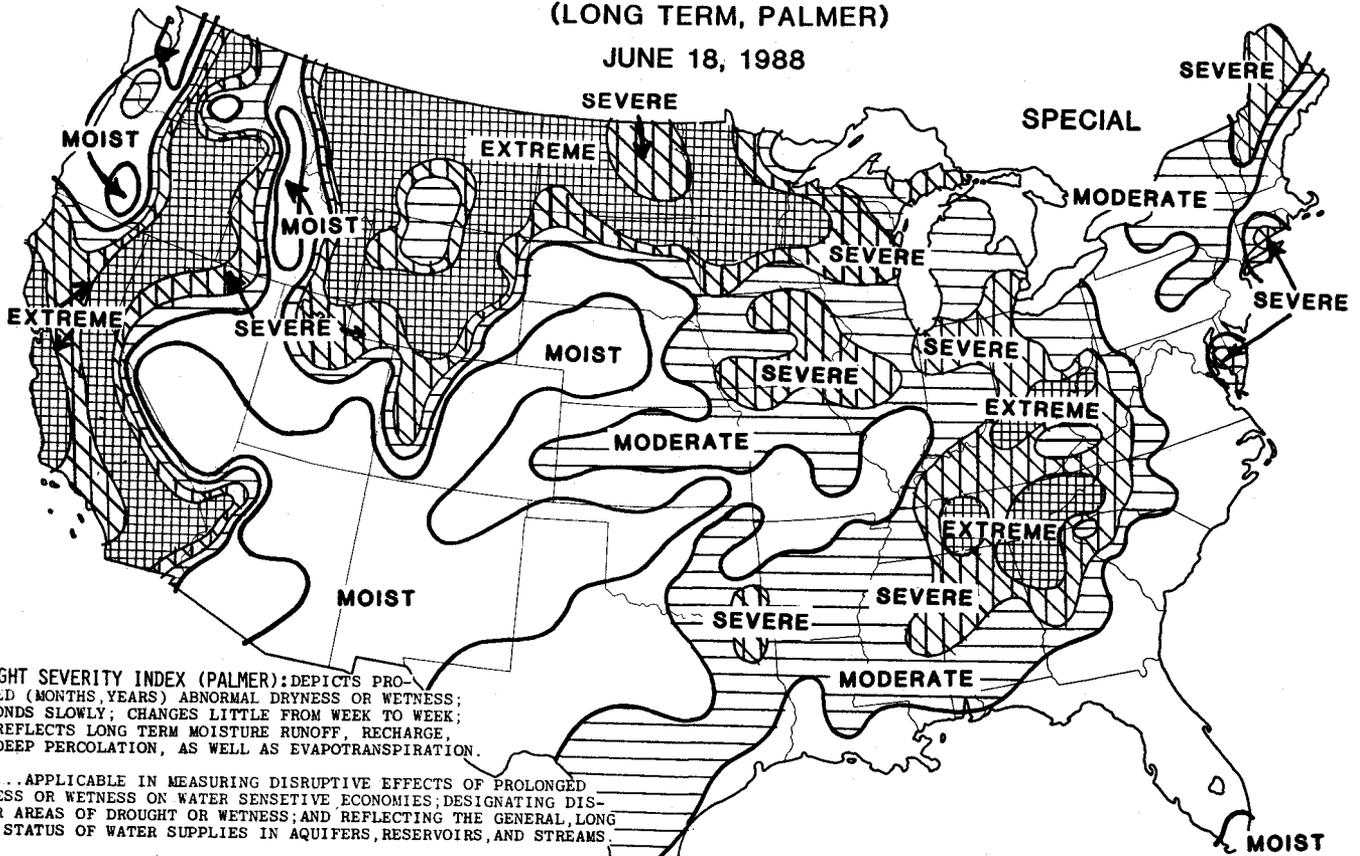




# DROUGHT SEVERITY

(LONG TERM, PALMER)

JUNE 18, 1988



DROUGHT SEVERITY INDEX (PALMER): DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.

USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES; DESIGNATING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL, LONG TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS, AND STREAMS.

LIMITATIONS... IS NOT GENERALLY INDICATIVE OF SHORT TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

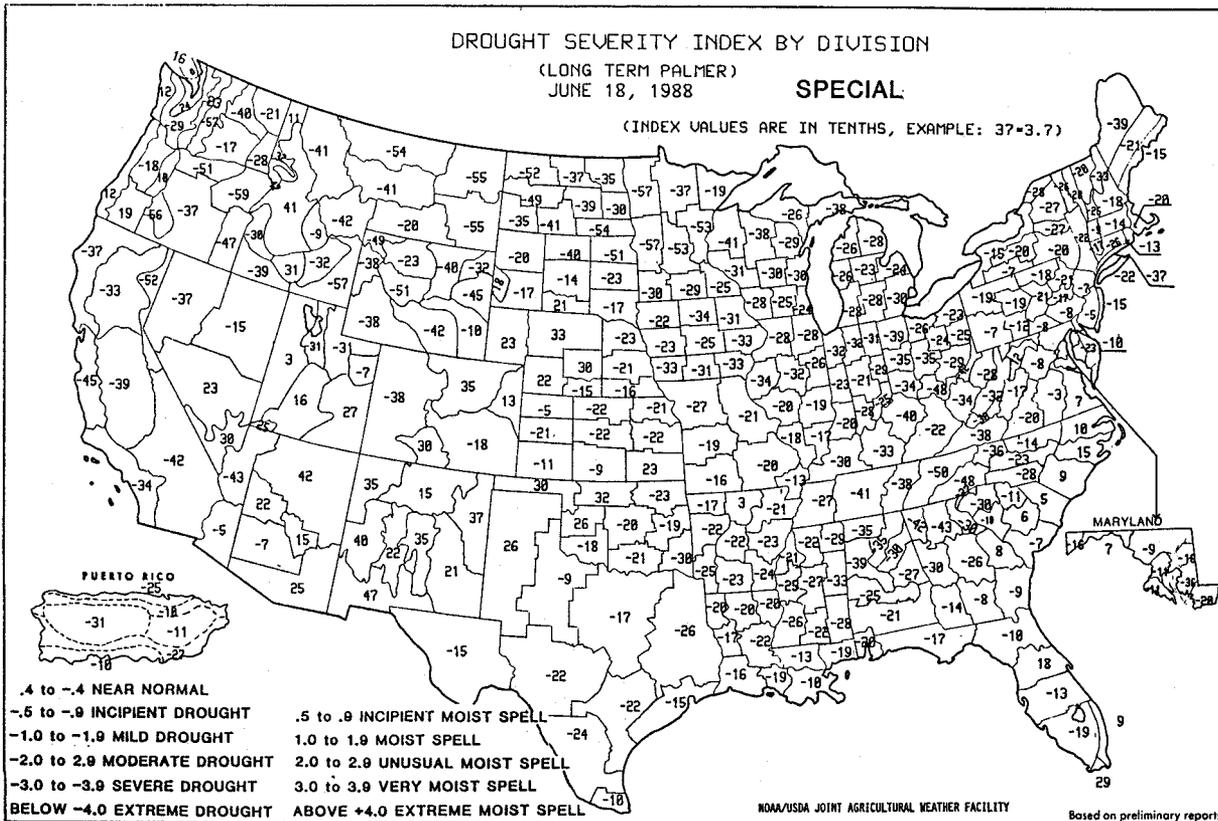
Based on preliminary reports

## DROUGHT SEVERITY INDEX BY DIVISION

(LONG TERM PALMER)  
JUNE 18, 1988

SPECIAL

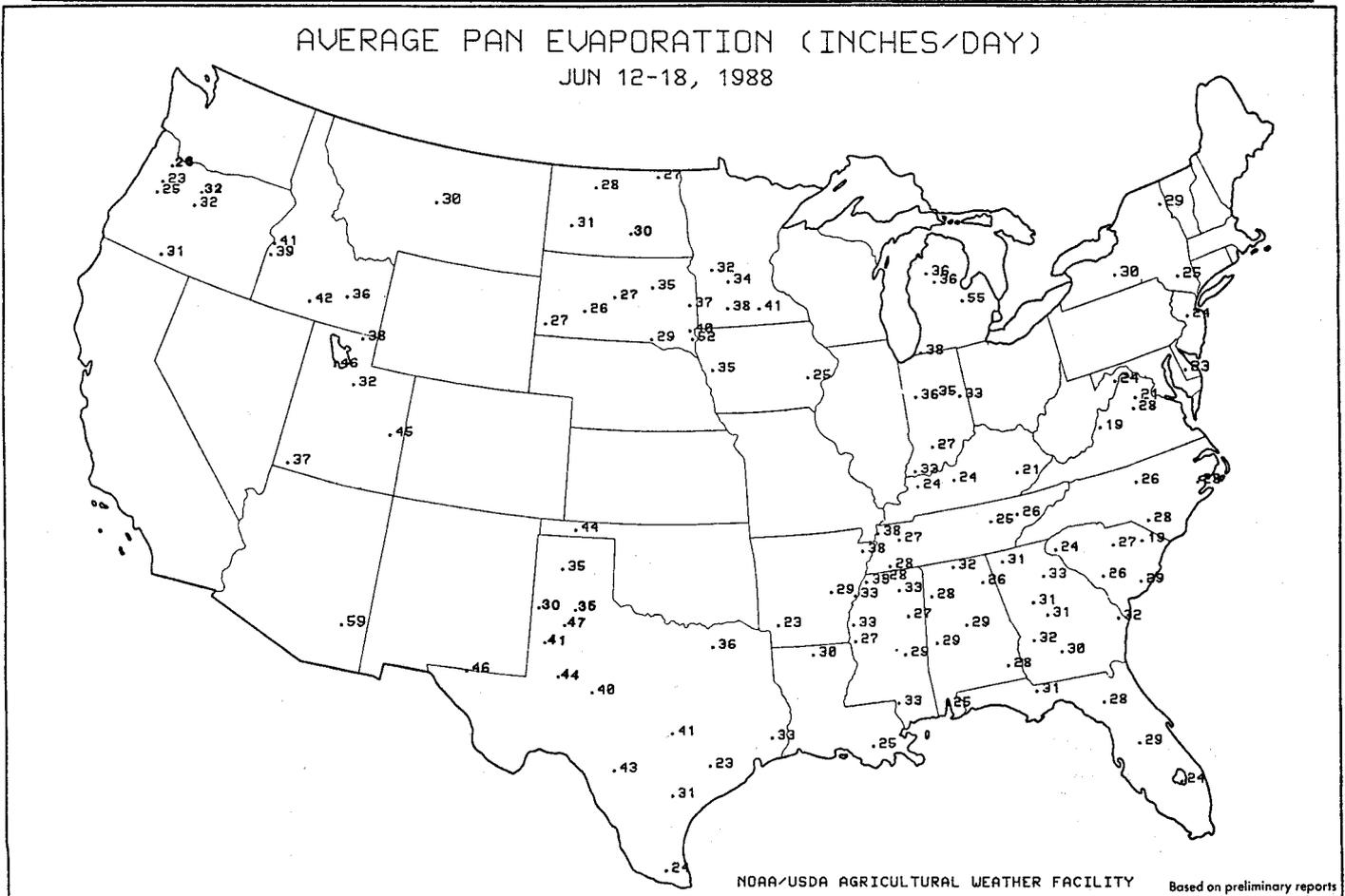
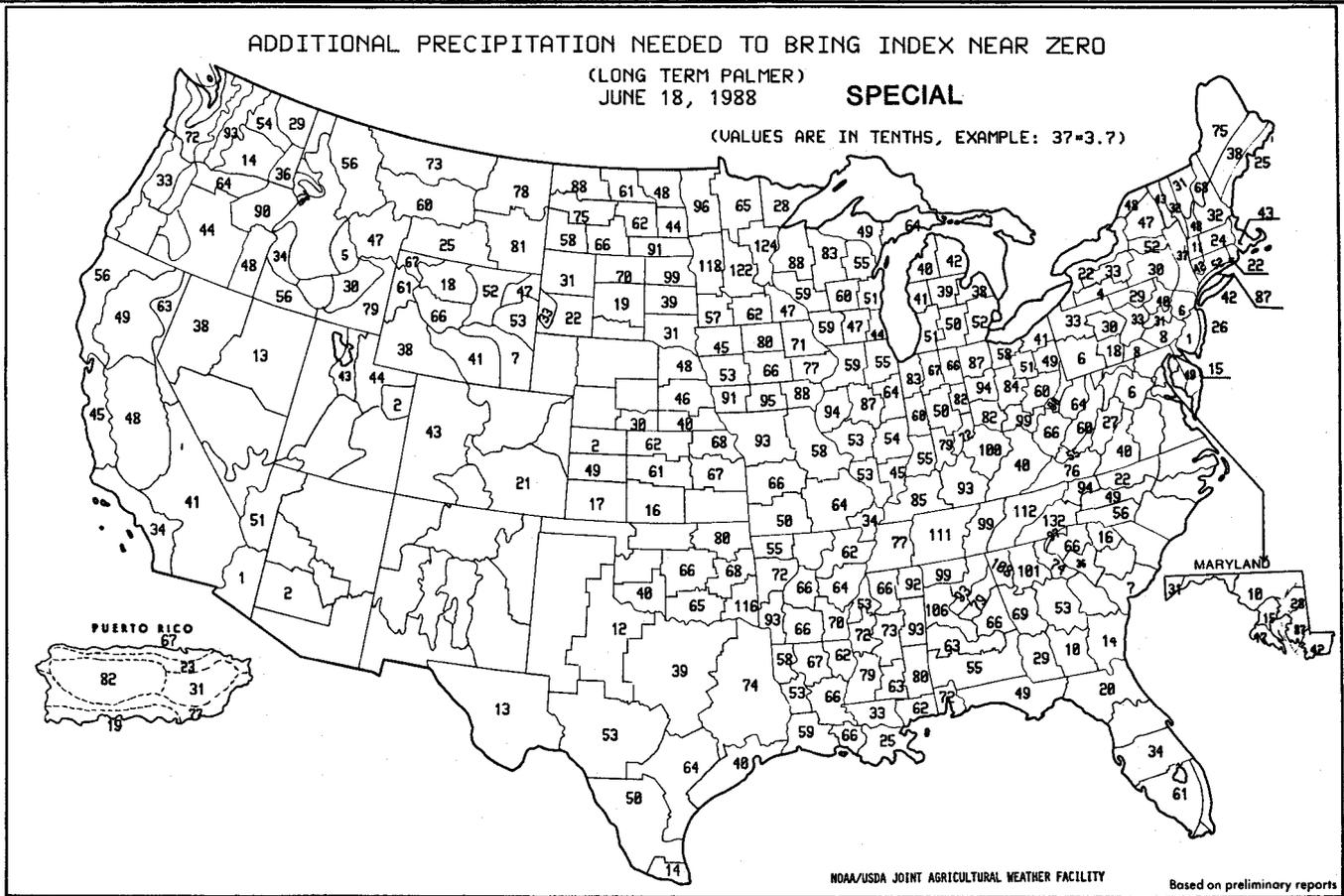
(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)

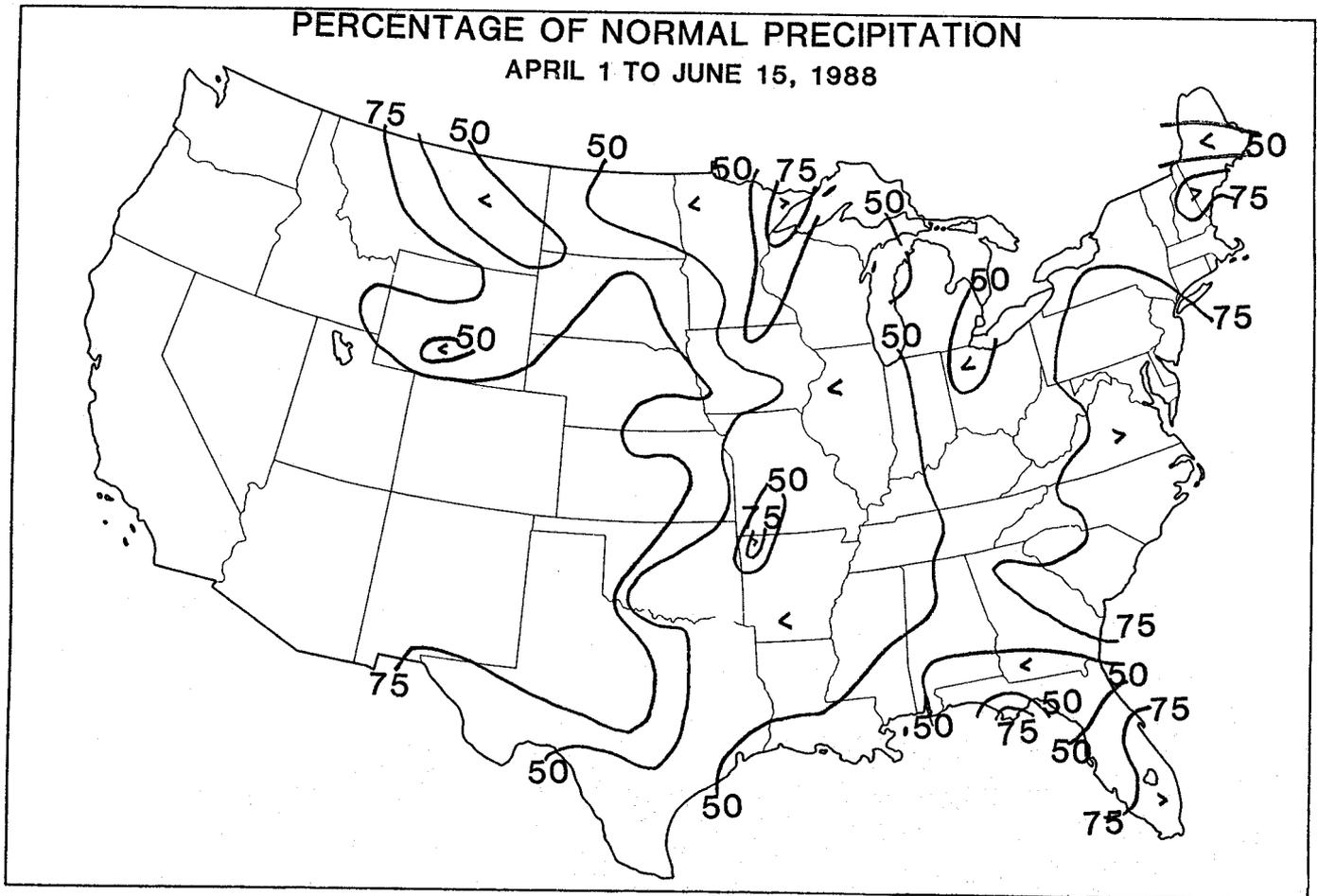


- |                              |                                |
|------------------------------|--------------------------------|
| .4 to -.4 NEAR NORMAL        | .5 to .9 INCIPIENT MOIST SPELL |
| -.5 to -.9 INCIPIENT DROUGHT | 1.0 to 1.9 MOIST SPELL         |
| -1.0 to -1.9 MILD DROUGHT    | 2.0 to 2.9 UNUSUAL MOIST SPELL |
| -2.0 to 2.9 MODERATE DROUGHT | 3.0 to 3.9 VERY MOIST SPELL    |
| -3.0 to -3.9 SEVERE DROUGHT  | ABOVE +4.0 EXTREME MOIST SPELL |
| BELOW -4.0 EXTREME DROUGHT   |                                |

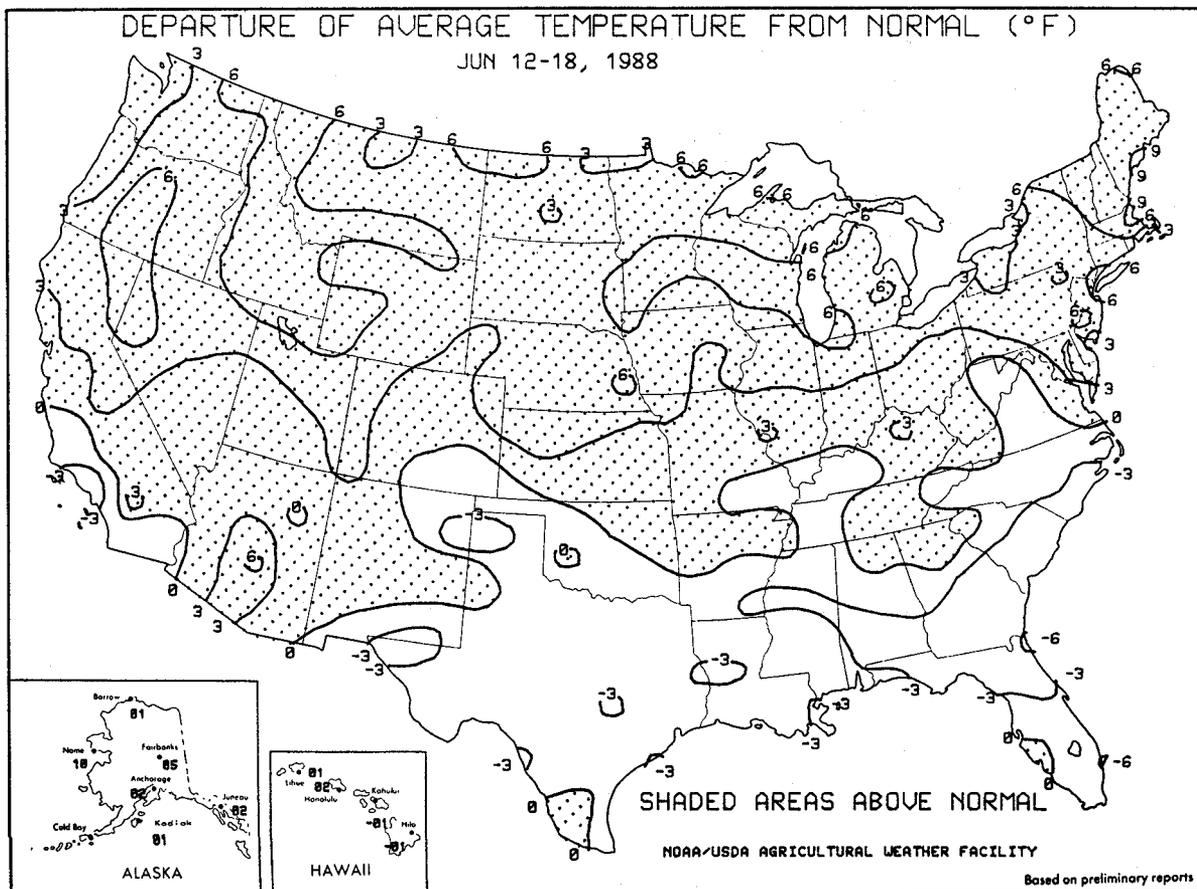
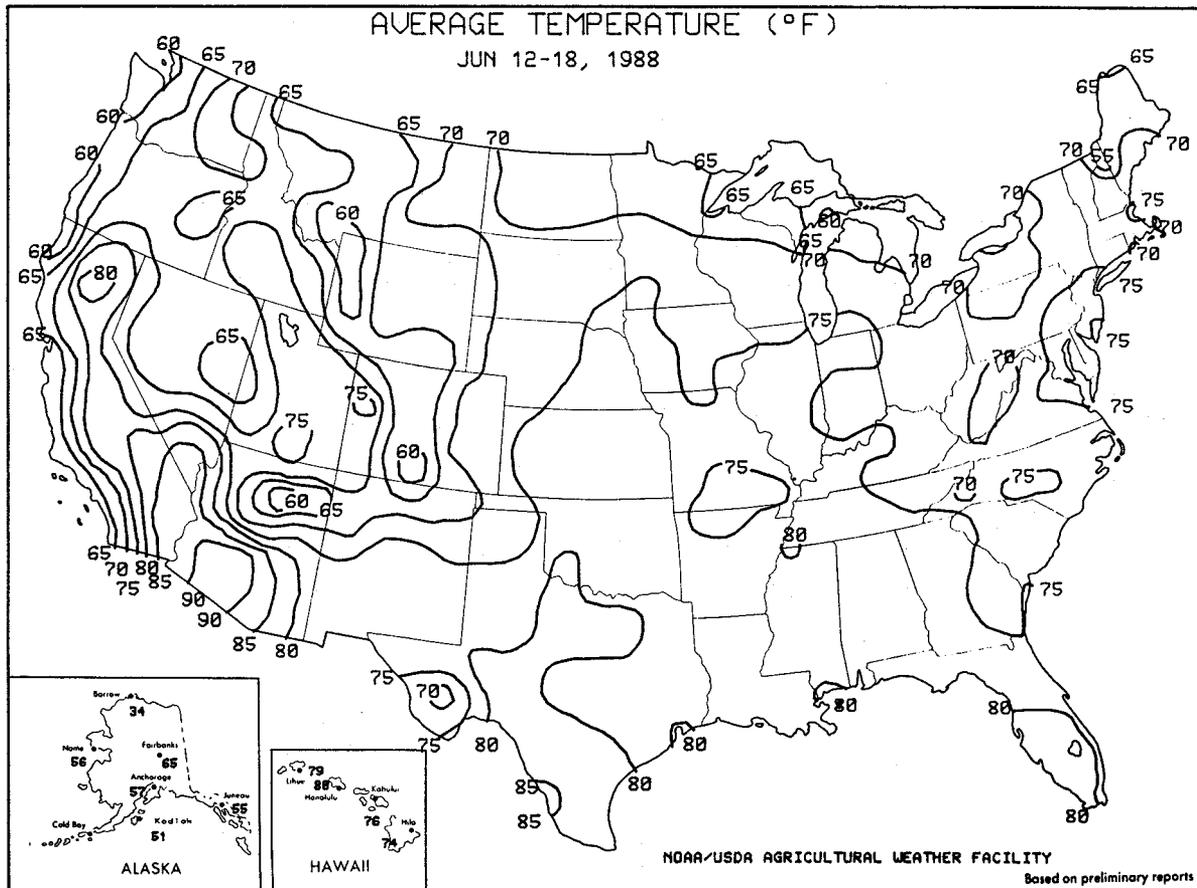
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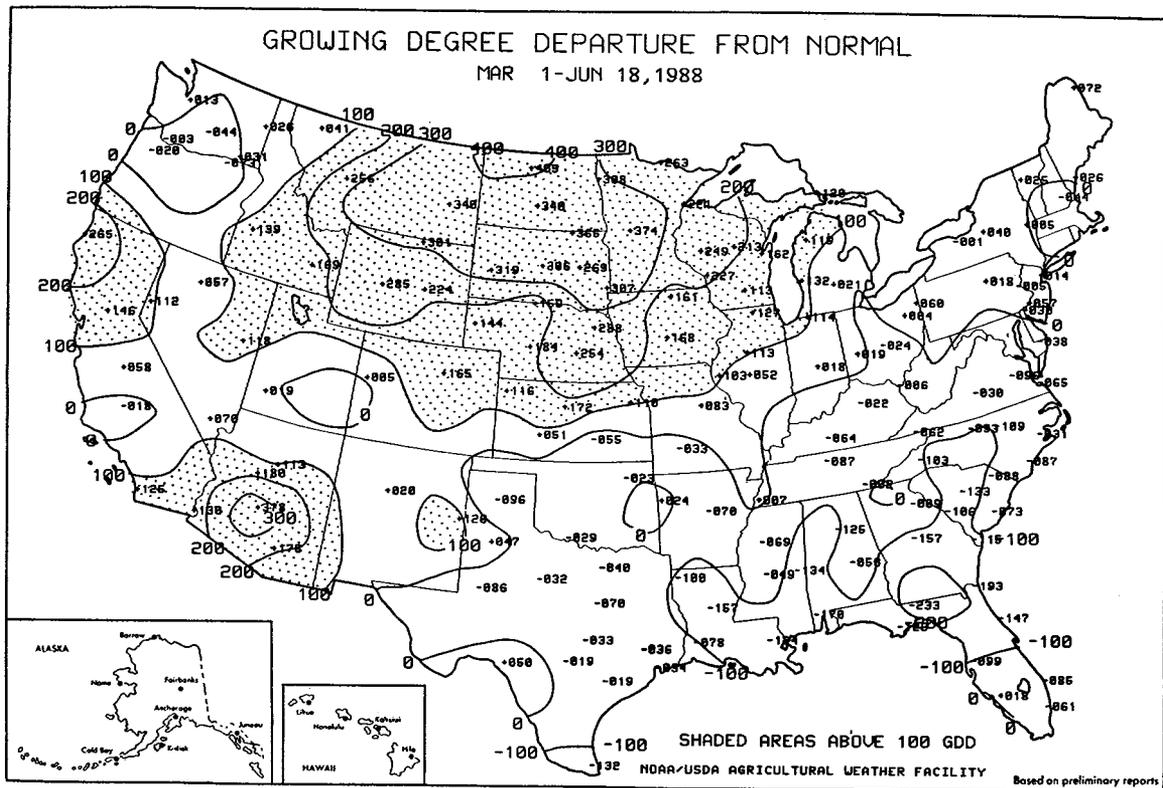
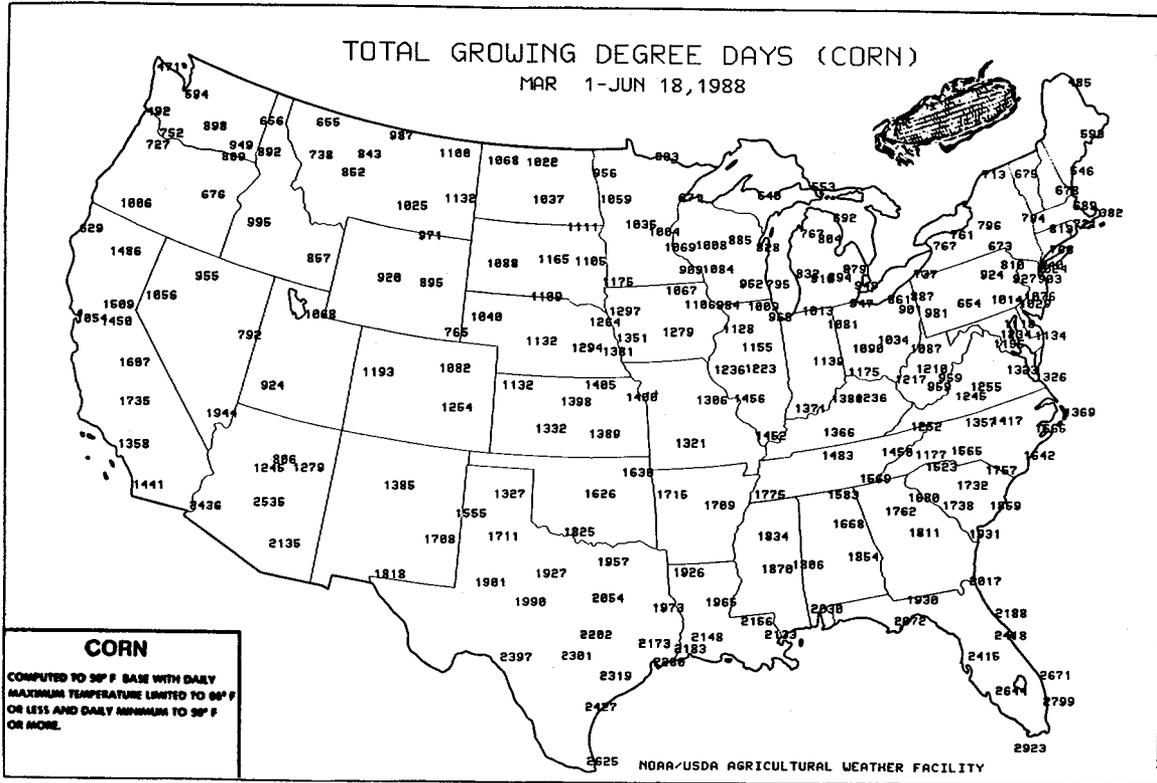
Based on preliminary reports





Large areas of the Nation have experienced unusually dry weather since the beginning of the growing season (April 1). Most of the northern Plains, Mississippi, and Ohio Valleys and much of South-central, Southeast, and Northeast have received less than 75 or 50 percent of their normal rainfall.





# National Weather Data for Selected Cities

Weather Data for the Week Ending June 18, 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 June 1	PCT. NORMAL SINCE June 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERA- TURE OF		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	92	62	96	56	77	0	.2	-.6	.2	.2	8	15.8	56	83	29	5	0	1	0
MOBILE	90	66	95	61	78	-3	T	-1.1	T	1.8	62	25.2	85	95	38	3	0	0	0
MONTGOMERY	92	61	97	55	77	-3	T	-1.8	T	.6	28	26.3	105	95	30	5	0	1	0
AK ANCHORAGE	63	51	68	48	57	2	T	.3	T	.7	128	3.0	75	79	50	0	0	0	0
BARROW	38	31	44	28	34	1	T	.1	T	.1	29	.3	25	98	86	0	6	1	0
FAIRBANKS	76	54	83	46	65	5	1.1	.8	.9	1.3	184	3.6	122	87	38	0	0	4	1
JUNEAU	59	50	67	48	55	2	1.0	.3	.3	1.4	81	20.7	110	96	70	0	0	5	0
KODIAK	54	47	58	44	51	1	1.0	.0	.5	1.4	55	36.1	137	97	76	0	0	0	0
NOME	65	47	74	38	56	10	T	.3	T	1.3	218	5.3	147	80	43	0	0	0	0
AZ PHOENIX	106	80	113	72	93	6	T	0	T	0	0	2.4	95	28	9	7	0	0	0
PRESCOTT	87	55	92	48	71	4	.1	-.1	.1	.1	.1	36	4.4	71	43	16	3	0	1
TUCSON	104	70	109	62	87	4	.1	0	.1	.1	.1	200	2.5	98	29	11	7	0	0
YUMA	102	72	107	68	87	-1	.1	.1	.1	.1	.1	1.1	124	54	16	7	0	1	0
AR FORT SMITH	94	63	98	54	79	1	0	-.8	0	1.6	69	17.1	88	91	35	6	0	0	0
LITTLE ROCK	91	67	93	61	79	0	.1	-.8	.1	1.0	43	16.3	64	71	39	5	0	1	0
CA BAKERSFIELD	95	63	102	54	79	0	0	0	0	0	0	3.0	78	55	22	5	0	0	0
BURBAK	63	54	67	53	59	4	T	-.1	T	2.4	590	16.0	72	88	72	0	0	1	0
PRESNO	96	62	102	55	79	4	0	0	0	0	0	5.5	79	69	22	6	0	0	0
LOS ANGELES	66	57	68	55	61	-4	T	0	T	0	0	4.6	56	92	67	0	0	0	0
REDDING	96	65	102	56	80	3	T	-.2	T	1.3	236	16.5	68	71	23	6	0	0	0
SACRAMENTO	94	57	102	53	76	4	0	0	0	.1	171	6.8	64	81	24	6	0	0	0
SAN DIEGO	68	60	69	59	64	-2	0	0	0	0	0	6.7	104	84	66	0	0	0	0
SAN FRANCISCO	74	53	84	50	64	3	T	0	T	.6	857	7.3	59	89	51	0	0	0	0
CO DENVER	83	56	93	52	70	2	.2	-.1	.1	1.0	100	8.1	107	79	31	2	0	3	0
GRAND JUNCTION	90	60	95	55	75	3	.1	0	.1	.1	19	4.1	115	46	12	4	0	1	0
PUEBLO	88	54	98	47	71	-1	.1	-.2	0	.4	57	4.7	109	87	25	3	0	2	0
CT BRIDGEPORT	84	63	93	56	74	6	0	0	0	.6	33	13.5	71	84	44	3	0	0	0
HARTFORD	88	59	97	51	74	5	T	-.8	T	.6	27	15.8	78	91	38	4	0	1	0
DC WASHINGTON	89	67	94	59	78	3	T	-.8	T	1.0	48	15.4	89	91	43	4	0	2	0
FL APALACHICOLA	84	67	87	64	76	-5	0	-1.1	0	2.8	105	23.9	118	89	53	0	0	0	0
DAYTONA BEACH	84	69	87	63	77	-3	.1	-1.5	0	2.3	60	17.4	96	89	57	0	0	2	0
JACKSONVILLE	86	63	92	57	75	-5	0	-1.4	0	2.7	79	22.5	109	96	47	2	0	0	0
KEY WEST	85	76	88	73	81	-2	2.2	1.0	1.4	2.7	87	18.4	142	91	69	0	0	5	1
MIAMI	85	74	87	73	80	-1	4.8	2.6	2.2	8.3	148	18.3	85	89	61	0	0	5	2
ORLANDO	87	69	92	68	78	-3	.9	-.8	.9	3.5	88	18.9	101	90	48	2	0	2	1
TALLAHASSEE	91	60	95	56	75	-5	0	-1.5	0	.9	25	23.2	82	92	32	4	0	0	0
TAMPA	90	70	94	67	80	-1	.2	-1.1	.1	1.5	50	12.9	76	87	47	3	0	4	0
WEST PALM BEACH	85	75	87	71	80	-1	T	-1.9	T	6.2	130	28.7	129	86	62	0	0	1	0
GA ATLANTA	90	66	93	60	78	2	T	-.8	T	.1	5	18.4	72	70	29	4	0	0	0
AUGUSTA	89	58	93	51	74	-4	T	-.9	T	3.5	154	20.9	94	98	36	3	0	1	0
MACON	91	60	97	53	75	-4	T	-.8	T	.4	17	19.1	81	91	30	3	0	1	0
SAVANNAH	87	62	93	57	74	-4	0	-1.3	0	.9	27	19.1	89	94	40	2	0	0	0
HI HILO	81	67	82	66	74	-1	.3	-1.1	.1	3.3	90	57.3	91	92	63	0	0	6	0
HONOLULU	88	73	89	71	80	2	0	-.1	0	T	13	6.8	53	77	44	0	0	0	0
KAHULUI	86	67	87	63	76	-1	T	-.1	T	0	12.2	107	79	47	0	0	0	0	0
LIHUE	84	74	84	71	79	1	0	-.4	0	T	0	19.5	90	84	62	0	0	0	0
ID BOISE	91	55	102	42	73	7	T	-.2	T	.2	39	6.6	98	61	17	5	0	0	0
LEWISTON	87	56	97	46	72	6	0	-.3	0	.4	49	4.6	68	66	23	2	0	0	0
FOCATELLO	86	50	95	43	68	5	.1	-.1	.1	.1	21	4.2	71	65	18	3	0	1	0
IL CHICAGO	89	61	94	54	75	6	0	-1.0	0	T	0	8.6	57	74	26	5	0	0	0
MOLINE	89	63	92	53	76	4	T	-1.0	T	.4	15	9.2	56	73	29	3	0	0	0
PEORIA	89	61	91	55	75	4	0	-.9	0	.5	23	9.4	59	75	28	4	0	0	0
QUINCY	88	62	91	55	75	2	T	-.9	T	1.4	60	7.7	46	78	32	3	0	1	0
ROCKFORD	89	59	93	52	74	5	0	-1.1	0	0	0	9.6	60	76	32	3	0	0	0
SPRINGFIELD	88	62	91	55	75	2	0	-.8	0	.6	28	9.9	62	73	30	3	0	0	0
IN EVANSVILLE	90	60	96	53	75	0	T	-.8	T	.7	33	13.9	65	90	30	4	0	0	0
FORT WAYNE	91	60	97	55	76	5	T	-.8	T	.6	26	11.9	73	71	24	5	0	1	0
INDIANAPOLIS	88	59	93	52	74	2	.2	-.8	.2	.3	14	14.0	76	84	31	4	0	1	0
SOUTH BEND	91	62	96	54	76	7	.1	-.9	.1	.1	2	11.6	69	77	27	5	0	1	0
IA DES MOINES	87	63	93	57	75	3	T	-1.0	T	2.5	97	6.3	45	75	34	3	0	1	0
ST LOUIS	91	63	99	55	77	6	.3	-.6	.2	.4	18	7.2	62	78	34	4	0	2	0
SIoux CITY	87	59	95	50	73	4	.1	-.9	.1	.1	5	5.9	42	80	32	4	0	1	0
KS WATERLOO	82	66	100	57	79	5	T	-1.0	T	.2	8	6.0	49	75	29	5	0	0	0
CONCORDIA	90	63	103	58	76	1	.1	-.6	.1	.1	8	8.3	89	89	36	2	0	1	0
DODGE CITY	88	59	100	54	74	3	1.2	.6	1.2	1.8	110	10.9	144	86	31	2	0	1	1
GOODLAND	89	61	93	54	75	1	.1	-1.2	0	.1	5	9.4	65	84	38	3	0	2	0
TOPEKA	91	64	98	60	78	1	.3	-.6	.3	.4	17	10.9	88	86	37	6	0	1	0
WICHITA	88	59	93	50	74	-1	1.2	.1	.6	1.9	69	16.2	64	99	38	3	0	2	2
KY BOWLING GREEN	89	61	94	54	75	3	T	-1.0	T	.6	23	14.9	66	81	28	4	0	0	0
LEXINGTON	90	62	93	53	76	1	0	-.8	0	-.9	42	17.6	81	89	33	4	0	0	0
LOUISVILLE	91	64	93	56	78	-3	T	-.9	T	.3	13	18.7	69	85	34	5	0	0	0
LA ALEXANDRIA	93	67	98	58	80	-1	T	-.9	T	2.4	146	33.5	127	88	33	6	0	1	0
BATON ROUGE	89	67	94	62	78	-2	0	-.9	0	2.7	111	23.5	102	98	45	3	0	0	0
LAKE CHARLES	89	67	94	62	78	-2	0	-.9	0	2.7	111	23.5	102	98	45	3	0	0	0
NEW ORLEANS	88	66	93	60	77	-3	T	-1.0	T	9.0	338	43.8	161	98	49	2	0	1	0

CORRECTION:

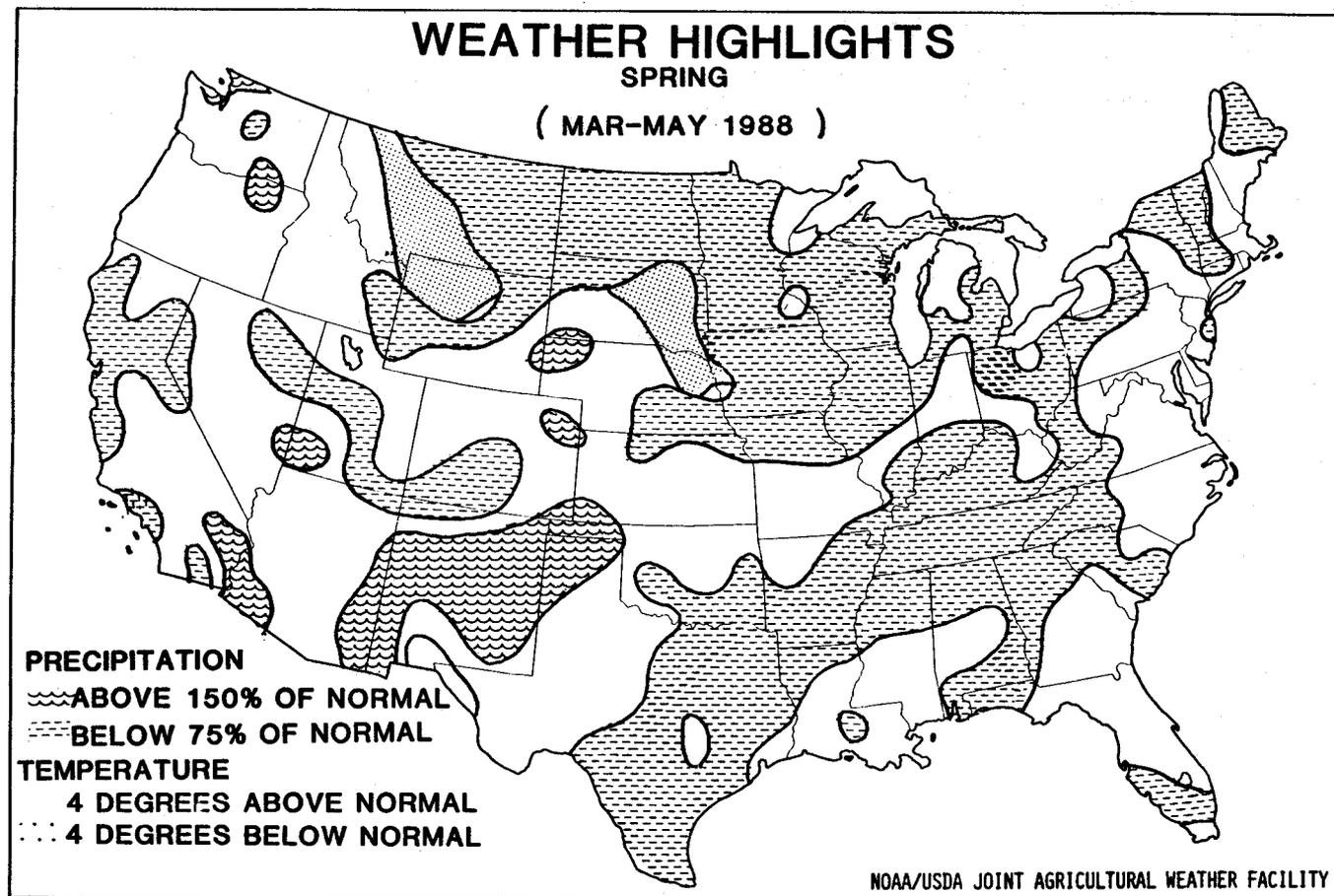
Vol. 75, No. 24, June 14, 1988 ("TOTAL, IN., Since Mar 1" should have been since June 1).

Weather Data for the Week Ending June 18, 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 JUNE 1	PCT. NORMAL SINCE JUNE 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	92	64	95	53	78	-2	0	-1.8	0	.1	4	13.5	59	88	34	6	0	0	0
ME CARIBOU	78	56	93	50	67	6	.3	-1.4	.2	.4	20	10.8	76	93	51	1	0	3	0
PORTLAND	85	58	97	50	72	9	1.0	-1.3	1.0	1.3	70	16.4	81	92	42	3	0	1	0
MD BALTIMORE	89	65	94	56	77	4	T	-1.9	T	.8	37	16.5	88	92	42	4	0	2	0
SALISBURY	89	63	96	58	76	4	1.3	-1.5	1.3	1.5	72	21.5	110	92	38	4	0	1	0
MA BOSTON	88	68	98	61	78	10	.5	-1.2	.3	.6	32	14.9	71	76	43	4	0	2	0
CHATHAM	71	57	78	53	64	6	T	-1.5	T	.1	36	16.0	73	93	71	0	0	1	0
MI ALPENA	85	50	98	37	67	5	T	-1.7	T	.3	16	9.8	81	86	32	3	0	0	0
DETROIT	88	59	96	53	74	5	0	-1.8	0	.4	19	7.2	52	68	27	3	0	0	0
FLINT	89	56	95	50	72	6	0	-1.8	0	.5	27	7.8	60	76	28	3	0	0	0
GRAND RAPIDS	87	59	92	52	73	5	0	-1.9	0	.1	5	9.9	67	73	29	2	0	0	0
HOUGHTON LAKE	83	54	91	42	69	5	T	-1.7	T	.3	15	8.3	70	76	31	1	0	1	0
LANSING	89	57	96	48	73	6	0	-1.0	0	.1	6	8.9	68	77	25	3	0	0	0
MARQUETTE	80	49	96	32	65	5	.1	-1.8	.1	.5	21	12.0	71	89	40	2	1	2	0
MUSKEGON	83	59	89	52	71	5	T	-1.6	T	.1	7	10.9	79	73	35	0	0	0	0
SAULT ST. MARIE	80	46	90	37	63	4	T	-1.8	T	.1	3	10.7	81	90	37	1	0	0	0
MN ALEXANDRIA	84	59	98	52	71	6	.2	-1.7	.2	.3	13	5.8	55	87	42	2	0	2	0
DULUTH	76	51	89	39	64	4	1.6	-1.7	.6	2.5	106	10.3	90	95	51	0	0	5	2
INT'L FALLS	79	56	91	44	68	6	2.1	-1.2	.8	2.2	104	5.9	66	95	52	1	0	5	2
MINNEAPOLIS	87	62	95	58	75	6	T	-1.9	T	.1	5	6.4	57	77	37	4	0	1	0
ROCHESTER	85	59	93	53	72	5	T	-1.9	T	T	1	7.7	67	77	39	3	0	1	0
MS GREENWOOD	92	62	97	57	77	-3	T	-1.7	T	.1	3	12.9	45	82	31	6	0	0	0
JACKSON	95	61	98	52	78	-1	T	-1.7	T	T	2	19.3	71	94	29	7	0	0	0
MERIDIAN	94	58	98	50	76	-3	.2	-1.6	.2	.3	13	19.6	70	96	29	6	0	1	0
MO CAPE GIRARDEAU	91	61	95	54	76	1	-	-1.8	T	.2	7	14.5	65	85	28	4	0	0	0
COLUMBIA	89	61	92	53	75	1	T	-1.9	T	T	0	12.3	69	78	32	3	0	1	0
KANSAS CITY	91	66	95	61	79	3	T	-1.1	T	T	0	7.8	49	76	30	5	0	0	0
SAINT LOUIS	90	68	92	61	79	3	T	-1.9	T	1.3	57	14.2	86	68	29	4	0	1	0
SPRINGFIELD	87	61	90	51	74	0	.3	-1.8	.3	.7	24	18.2	98	87	39	1	0	2	0
MT BILLINGS	85	56	98	45	70	6	.1	-1.4	.1	.1	8	5.6	67	65	21	3	0	2	0
GLASGOW	82	58	95	50	70	6	1.0	-1.4	.6	1.0	65	3.5	73	72	25	3	0	2	1
GREAT FALLS	78	52	92	42	65	3	.8	-1.1	.5	.8	47	4.9	58	83	30	2	0	4	0
HAVRE	78	52	95	42	65	2	.1	-1.4	.1	.1	10	1.3	22	83	29	2	0	2	0
HELENA	80	50	91	39	65	5	.2	-1.3	.1	.4	33	4.8	81	81	29	2	0	3	0
KALISPELL	81	49	90	37	65	6	.1	-1.5	.1	.4	31	6.8	88	85	25	1	0	1	0
MILES CITY	85	57	102	50	71	4	.5	-1.1	.3	.5	30	1.8	25	60	21	3	0	2	0
MISSOULA	82	50	93	44	66	6	.5	0	.5	.9	79	7.1	104	92	28	1	0	2	0
NE GRAND ISLAND	92	62	99	54	77	5	.9	-1.1	.9	1.6	68	7.3	63	77	30	5	0	2	1
LINCOLN	93	66	100	57	79	7	T	-1.9	T	.1	4	6.5	51	68	28	6	0	0	0
NORFOLK	90	63	98	53	76	5	.4	-1.6	.3	.7	24	9.6	83	79	32	4	0	2	0
NORTH PLATTE	89	55	101	48	72	4	.1	-1.8	.1	.2	8	6.9	72	90	30	2	0	2	0
OMAHA	89	68	95	61	79	5	T	-1.0	T	.1	2	8.1	60	59	38	4	0	0	0
SCOTTSBLUFF	85	54	94	50	69	2	1.3	-1.6	.9	1.4	76	10.9	139	89	34	2	0	2	1
VALENTINE	88	57	100	47	72	4	1.0	-1.3	.5	1.0	54	9.4	116	87	32	3	0	3	1
NV ELY	82	40	88	34	61	2	.5	-1.3	.5	.5	98	4.3	90	77	22	0	0	1	0
LAS VEGAS	101	72	106	68	86	2	T	0	T	T	0	1.7	97	29	13	7	0	0	0
RENO	89	51	96	43	70	8	T	-1.1	T	T	5	1.6	37	70	14	4	0	0	0
WINNEMUCCA	91	47	97	41	69	5	0	-1.2	0	.3	56	3.9	88	56	15	5	0	0	0
NH CONCORD	88	56	96	44	72	7	.1	-1.6	.1	.1	6	11.7	73	99	37	4	0	2	0
NJ ATLANTIC CITY	88	62	94	56	75	6	.1	-1.5	.1	.9	55	14.9	79	91	42	3	0	1	0
NM ALBUQUERQUE	89	61	92	58	75	0	T	-1.1	T	.4	146	3.5	147	67	17	3	0	1	0
CLOVIS	88	63	95	60	76	1	.3	-1.4	.1	.5	34	7.4	124	76	33	2	0	4	0
ROSWELL	92	64	96	60	78	-1	T	-1.2	T	.2	30	5.6	195	71	24	5	0	0	0
NY ALBANY	88	57	96	47	73	6	.1	-1.7	.1	.2	11	12.0	75	92	33	3	0	2	0
BINGHAMTON	82	58	91	51	70	5	.2	-1.6	.2	.6	30	14.2	88	77	34	2	0	2	0
BUFFALO	79	59	85	51	69	3	T	-1.6	T	.8	48	15.1	95	79	37	0	0	0	0
NEW YORK	88	71	96	65	80	8	T	-1.7	T	.7	38	15.2	79	69	37	5	0	1	0
ROCHESTER	84	56	93	48	70	3	0	-1.7	0	.3	15	8.9	63	79	32	2	0	0	0
SYRACUSE	87	57	97	52	72	6	T	-1.8	T	.2	11	11.4	67	80	29	3	0	1	0
NC ASHEVILLE	85	52	91	40	69	-2	.5	-1.4	.4	.5	22	10.9	52	96	37	1	0	3	0
CHARLOTTE	89	62	92	56	76	0	4.0	3.2	3.9	4.4	204	16.7	78	86	34	3	0	2	1
GREENSBORO	86	59	90	48	73	-1	1.5	-1.5	1.4	2.7	119	14.7	75	93	44	1	0	2	1
HATTERAS	83	62	84	49	72	-2	T	-1.0	T	.5	22	20.8	92	99	47	0	0	2	0
NEW BERN	87	62	89	52	75	-1	T	-1.2	T	3.0	103	23.2	105	91	37	0	0	0	0
RALEIGH	87	60	89	49	73	-1	.4	-1.4	.4	1.7	80	15.4	79	92	43	0	0	1	0
WILMINGTON	85	60	89	53	73	-4	T	-1.3	T	1.6	50	24.2	112	98	38	0	0	0	0
ND BISMARCK	83	52	100	44	68	3	.4	-1.4	.2	.4	20	3.6	50	91	34	2	0	3	0
FARGO	82	58	97	48	70	4	.9	-1.2	.7	.9	51	5.6	73	92	45	1	0	3	1
GRAND FORKS	79	57	87	45	68	4	.8	-1.1	.6	.8	49	3.8	54	93	45	0	0	3	1
WILLISTON	83	57	102	50	70	6	1.0	-1.4	1.0	1.0	61	4.1	66	74	29	2	0	2	1
OH AKRON-CANTON	85	56	93	49	71	3	.1	-1.7	.1	.4	18	11.0	66	81	33	3	0	1	0
CINCINNATI	88	58	93	48	73	1	.3	-1.6	.3	.6	23	17.6	89	92	34	3	0	1	0
CLEVELAND	86	58	95	49	72	4	.1	-1.8	.1	.4	21	11.3	69	76	32	3	0	1	0
COLUMBUS	87	57	93	50	72	1	.2	-1.7	.2	1.0	40	14.4	81	90	32	3	0	1	0

Weather Data for the Week Ending June 18, 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 June 1	PCT. NORMAL SINCE June 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
DAYTON	87	60	94	53	74	2	.4	-.5	.4	1.1	46	13.0	75	73	29	3	0	1	0
TOLEDO	89	56	96	50	73	4	T	-.8	T	.2	9	7.2	50	76	27	4	0	0	0
YOUNGSTOWN	84	55	93	43	70	3	.3	-.5	.3	.5	26	11.6	68	81	32	3	0	1	0
OK OKLAHOMA CITY	89	65	93	59	77	0	T	-.9	T	.2	7	13.9	92	82	38	1	4	0	0
TULSA	91	68	94	61	79	1	0	-1.1	0	.6	20	13.6	74	73	35	4	0	0	0
OR ASTORIA	67	51	79	44	59	2	T	-.6	T	3.3	206	29.4	84	93	60	0	0	1	0
BURNS	83	45	93	34	64	4	.1	-.1	.1	.5	126	4.4	83	73	17	1	0	1	0
MEDFORD	90	54	95	43	72	6	0	-.2	0	1.1	244	6.9	69	88	28	4	0	0	0
PENDLETON	84	56	91	47	70	4	4	-.2	T	.3	57	7.2	113	66	25	2	0	1	0
PORTLAND	80	54	89	48	67	4	.1	-.2	.1	2.1	218	18.4	97	96	39	0	0	2	0
SALEM	79	48	90	41	64	3	T	-.3	T	1.7	201	18.5	88	95	40	1	1	1	0
PA ALLENTOWN	89	61	95	55	75	5	.4	-.4	.4	1.6	77	18.9	96	93	34	4	0	2	0
ERIE	81	60	89	50	71	5	.1	-.8	.1	.2	9	12.8	78	71	35	0	0	1	0
HARRISBURG	89	61	94	54	75	4	T	-.8	T	.9	42	16.8	91	85	33	4	0	1	0
PHILADELPHIA	91	65	97	58	78	6	0	-.9	0	.6	24	16.2	86	89	36	4	0	0	0
PITTSBURGH	86	57	94	48	71	3	.3	-.5	.3	1.3	60	13.5	76	86	36	2	0	1	0
SCRANTON	85	57	91	47	71	4	T	-.8	T	.8	36	13.4	88	89	36	2	0	2	0
RI PROVIDENCE	86	62	97	50	74	7	.1	-.5	.1	.5	28	18.5	87	89	45	3	0	1	0
SC CHARLESTON	87	62	92	56	74	-3	0	-1.5	0	1.6	42	13.6	62	98	42	2	0	0	0
COLUMBIA	90	59	94	48	75	-3	.1	-.9	.1	1.6	61	14.8	62	94	33	4	0	2	0
FLORENCE	87	60	90	53	74	-4	T	-1.1	T	1.3	50	14.2	71	91	38	1	0	0	0
GREENVILLE	91	59	95	49	75	0	1.8	.7	1.8	2.1	80	16.8	66	86	31	6	0	1	1
SD ABERDEEN	86	57	101	49	71	5	.8	0	.6	.9	44	5.5	63	96	39	1	0	3	1
HURON	89	58	101	51	74	6	.2	-.6	.1	.2	11	9.7	105	91	34	4	0	3	0
RAPID CITY	85	53	102	46	69	4	.3	-.5	.2	.3	15	5.2	60	84	31	3	0	3	0
SIOUX FALLS	89	62	100	53	75	7	.2	-.7	.1	.3	12	7.2	66	82	33	2	0	2	0
TN CHATTANOOGA	92	61	95	51	76	1	.4	-.4	.4	.4	20	16.7	62	93	29	5	0	1	0
KNOXVILLE	91	58	93	47	74	0	T	-.9	T	.4	16	14.8	61	97	31	5	0	1	0
MEMPHIS	93	67	94	59	80	1	0	-.8	0	.2	9	17.4	63	68	28	7	0	0	0
NASHVILLE	93	62	95	53	77	1	0	-.8	0	.1	2	11.9	47	84	27	7	0	0	0
TX ABILENE	90	68	93	66	79	-1	T	-.6	T	2.4	152	8.4	81	75	34	3	0	1	0
AMARILLO	85	60	92	58	73	-2	2.7	1.8	1.7	2.7	126	12.5	157	94	34	2	0	4	2
AUSTIN	90	68	92	64	79	-2	0	-.7	0	1.7	87	10.3	69	91	38	5	0	0	0
BEAUMONT	90	68	93	62	79	-2	.1	-1.0	.1	3.8	136	20.9	89	98	45	3	0	1	0
BROWNSVILLE	90	73	92	71	81	-2	1.1	.4	.9	1.7	100	8.9	102	94	54	6	0	2	1
CORPUS CHRISTI	90	71	92	70	80	-2	.2	-.7	.2	1.6	65	5.9	51	93	53	4	0	1	0
DEL RIO	91	72	95	71	82	-2	.2	-.2	.1	.3	24	2.2	31	70	30	6	0	2	0
EL PASO	94	63	97	59	79	-3	T	-.1	T	T	13	1.5	83	67	18	7	0	0	0
FORT WORTH	92	69	95	60	80	-1	T	-.5	T	2.4	157	10.9	68	82	35	6	0	0	0
GALVESTON	84	76	85	74	80	-2	0	-.8	0	1.6	74	15.9	101	79	54	0	0	0	0
HOUSTON	91	66	93	63	79	-2	0	-1.0	0	1.2	43	11.2	54	95	37	6	0	0	0
LUBBOCK	92	65	98	61	78	0	T	-.7	T	T	0	5.1	71	87	31	5	0	0	0
MIDLAND	91	66	95	62	78	-2	.2	-.2	.2	.2	20	3.7	71	77	30	3	0	2	0
SAN ANGELO	93	67	96	61	80	-2	0	-.4	0	0	0	5.8	75	79	30	7	0	0	0
SAN ANTONIO	92	70	94	66	81	-1	.2	-.6	.2	3.6	187	7.4	57	88	36	6	0	1	0
VICTORIA	91	69	92	66	80	-2	0	-1.1	0	1.3	44	5.6	36	93	41	6	0	0	0
WACO	93	68	95	60	80	-2	.1	-.5	.1	4.0	232	11.1	69	90	38	7	0	1	0
WICHITA FALLS	93	65	97	60	79	-2	1.4	.8	1.4	1.6	88	11.7	91	84	33	7	0	2	1
UT BLANDING	87	55	92	50	71	3	T	-.1	T	T	0	4.6	100	54	20	3	0	0	0
CEDAR CITY	85	49	92	44	67	0	.4	-.3	.4	.4	178	7.7	169	68	19	1	0	1	0
SALT LAKE CITY	88	59	98	50	74	6	T	-.2	T	T	0	6.1	71	60	18	4	0	0	0
VT BURLINGTON	89	57	97	50	73	8	T	-.9	T	T	0	7.7	56	83	28	3	0	0	0
VA NORFOLK	87	64	91	57	75	1	.1	-.7	.1	1.7	85	18.7	96	85	42	2	0	1	0
RICHMOND	89	61	93	51	75	1	.2	-.6	.2	1.3	61	16.2	88	91	41	4	0	2	0
ROANOKE	86	57	91	48	72	0	1.7	-.9	.8	3.6	182	14.0	76	97	42	2	0	3	2
WA QUILLAYUTE	67	48	84	44	58	2	.3	-.3	.2	1.8	98	53.8	102	95	58	0	0	3	0
SEATTLE-TACOMA	73	51	86	46	62	2	T	-.3	T	1.5	172	16.2	87	92	48	0	0	0	0
SPOKANE	82	51	90	41	67	5	T	-.3	T	.5	66	7.8	90	77	26	1	0	0	0
YAKIMA	86	52	92	44	69	4	T	-.1	T	.9	263	3.4	84	78	23	2	0	0	0
WV BECKLEY	81	54	86	45	68	2	.1	-.9	.1	.8	34	12.9	64	90	41	0	0	1	0
CHARLESTON	87	57	94	47	72	1	.5	-.3	.5	.8	46	12.5	63	97	36	3	0	2	0
HUNTINGTON	87	57	93	48	72	0	.4	-.4	.2	.7	35	13.2	68	98	36	3	0	2	0
PARKERSBURG	88	55	93	49	72	0	0	-.9	0	.8	33	10.9	60	93	30	3	0	0	0
WI GREEN BAY	86	56	94	50	71	6	0	-.7	0	T	2	6.2	53	82	33	4	0	0	0
LACROSSE	89	64	97	56	76	8	.3	-.7	.3	.3	12	6.4	50	81	31	4	0	1	0
MADISON	88	58	93	46	73	6	0	-.9	0	0	0	7.1	54	73	30	2	0	0	0
MILWAUKEE	86	60	94	55	73	8	T	-.8	T	.1	6	10.6	77	76	33	3	0	1	0
WAUSAU	86	57	93	48	72	7	.1	-.8	.1	.6	26	6.0	47	82	28	2	0	1	0
WY CASPER	85	51	95	42	68	5	T	-.3	T	T	3	3.7	58	76	19	3	0	1	0
CHEYENNE	77	51	87	48	64	2	.7	-.2	.5	1.4	114	8.8	132	88	39	0	0	4	0
LANDER	85	53	93	48	69	6	.1	-.2	.1	.1	9	4.8	59	66	19	3	0	1	0
SHERIDAN	84	52	100	45	68	6	.3	-.2	.2	.5	32	7.1	83	85	29	3	0	2	0
PR SAN JUAN	90	77	93	76	84	2	.7	-.4	.3	.9	31	25.1	126	90	69	5	0	6	0



## Spring Weather Review

(March - May 1988)

**HIGHLIGHTS:** Much of the Nation experienced a warm, dry spring. The prolonged drought continued across the northern Plains. High temperatures exacerbated conditions. Most of the Mississippi, Missouri, Ohio, and Tennessee Valleys, eastern Texas, and the Southeast received well-below-normal rainfall. Spring rains brought relief to prolonged dryness in western Washington and Oregon.

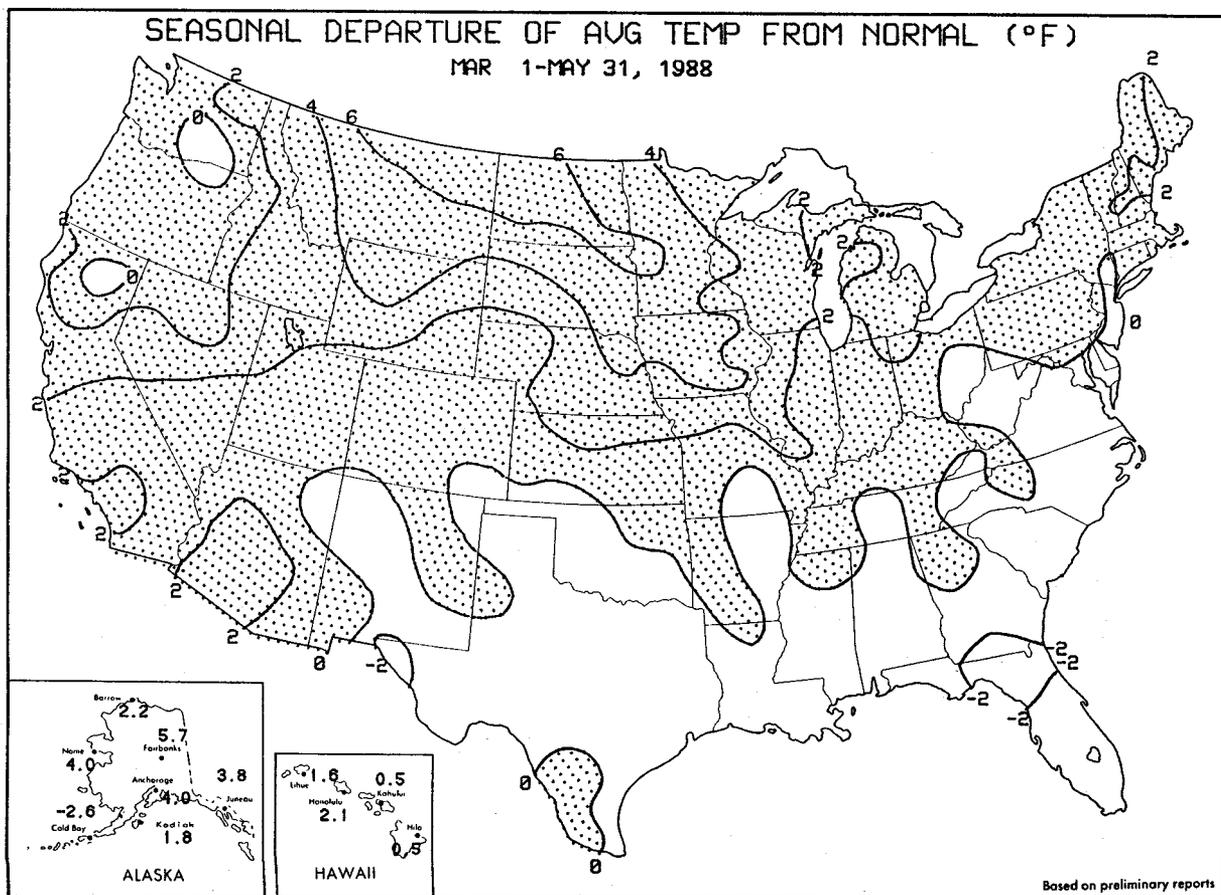
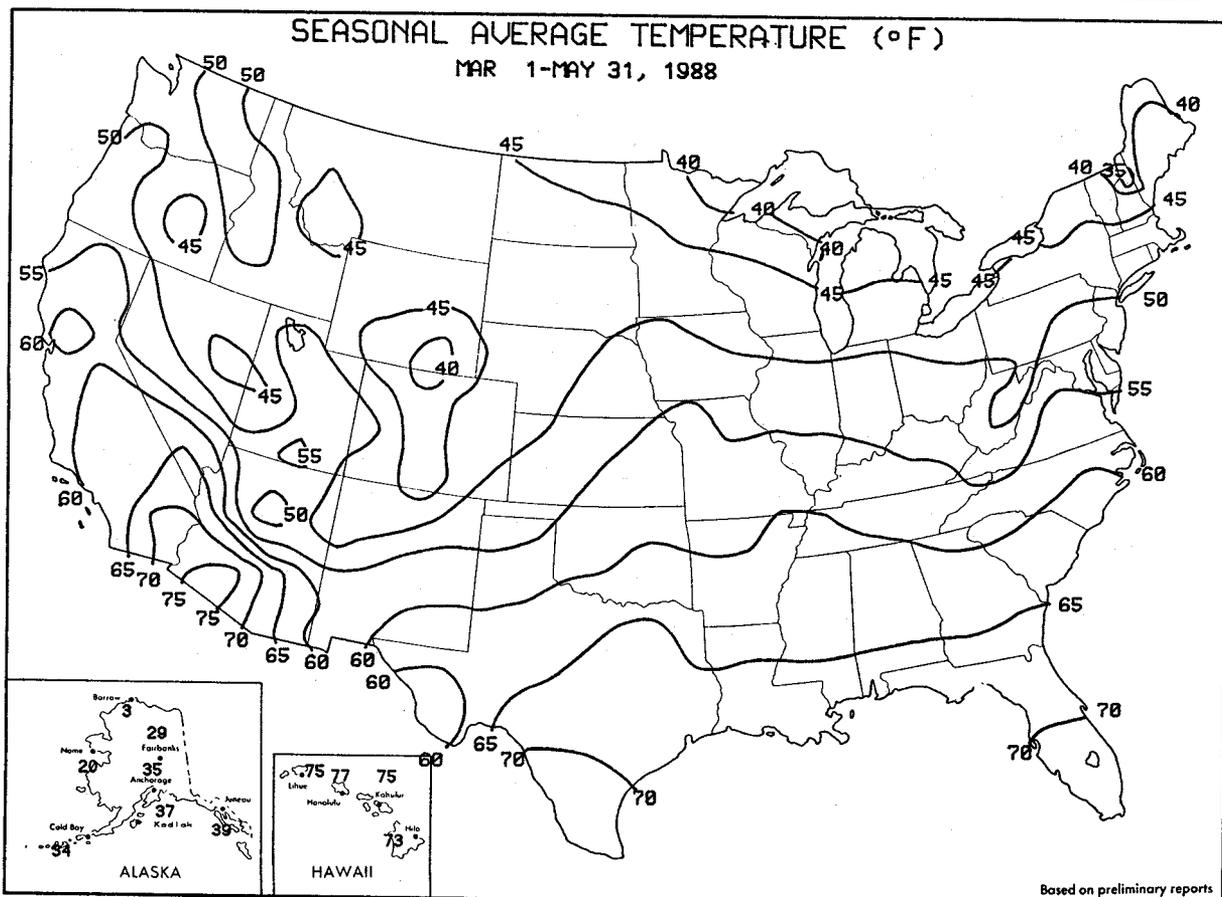
**MARCH...**Most of the Nation experienced above-normal temperatures. The northern Plains had the largest positive temperature anomalies, all the more remarkable because the winter of 1987-88 (December through February) was the third in a row with such anomalies in this region. The deep South had near-normal or slightly below-normal temperatures. The dryness in the West continued, but it was more extreme in the Southwest, while less extreme in the Northwest. The most significant areas of wetness were in Oklahoma, east Texas, southern

Missouri, Arkansas, Louisiana, and northern Florida.

**APRIL...**The western half of the Nation experienced mostly above-normal temperatures and above-normal precipitation. However, the northern Plains were very dry. Above-normal precipitation in the Pacific Northwest and parts of the Southeast helped to alleviate the drought in those areas. The southern Plains and the Atlantic coastal regions had generally below-normal temperatures.

**MAY...**Dry and unseasonably warm weather prevailed over much of the northern Plains and Corn Belt. The dryness extended through the Mississippi Valley and much of the Southeast. The northern and central Pacific Coast, western Plains, and middle Atlantic Coast States received above-normal precipitation.





## National Agricultural Summary

June 13 to 19, 1988

**HIGHLIGHTS:** Precipitation across the northern Great Plains did very little to ease the drought and improve crop condition. The lack of moisture combined with high temperatures stressed crops and slowed growth throughout most of the eastern half of the Nation. Plants wilted in some areas as moisture shortened. Nearly the entire week was suitable for fieldwork in most areas.

Winter wheat was 23 percent (%) harvested, 6 percentage points above the 5-year average. Near ideal weather pushed harvest 14 points above the previous week. Corn silking was limited mostly to the Southeast. The effects of the drought showed as leaves curled in some areas. Soybeans were 93% planted, compared with 89% normally. Planting lagged behind normal in the Southeast and Delta. Twenty-four percent of the cotton acreage had plants with squares, slightly below normal but 12 points less than in 1987. Cotton set bolls in Texas, Alabama, Georgia, and Arizona. Sorghum was 90% seeded, 10 points above normal. Spring wheat was 45% headed, compared with 28% in 1987 and 12% normally. Crop condition continued declining and was mostly fair to poor. Livestock was mostly fair to good.

**SMALL GRAINS:** Winter wheat harvest jumped 14 points above the previous week to 23% completion. This was 6 points above normal but trailed 4 points behind 1987. Harvest was underway as far north as Illinois. The hot, dry weather pushed harvest ahead of normal in the Delta and Southeast. Harvest neared completion in Arkansas and Georgia. Oklahoma's wheat growers combined half their acreage and was 40 points ahead of the 35% average as the week ended. Wheat harvest trailed behind normal in California, Illinois, North Carolina, and Texas. Kansas wheat harvest was active in south-central areas with test cutting elsewhere. Wheat damage varied from Russian wheat aphids and wheat streak mosaic disease, particularly in the Panhandle and southwest Nebraska. Turning color exceeded the 48% average by 12 points.

Spring wheat was mostly poor except in Idaho, where crop condition was good to fair. Precipitation across the northern Great Plains did very little to ease the drought-like conditions as spring wheat entered the critical heading and grain filling stage. Forty-five percent of the acreage was heading, nearly 4 times greater than normal.

**CORN:** Corn was good to fair in the central Great Plains and fair in most other major producing areas. Corn silking was limited mostly to the Southeast and Delta. Georgia's corn was more advanced with some acreage finishing the dough stage and entering dent. The average stalk height exceeded the average in Illinois. Extreme dry conditions stressed corn in Ohio, but earlier plantings fared better than late plantings. The extreme heat rolled corn leaves in Nebraska.

**SOYBEANS:** Soybean planting inched 3 points closer to completion in the 19 major producing States. Ninety-three percent of the acreage was seeded, compared with 95% in 1987 and 89% normally. Soybeans were mostly planted in the Corn Belt and central Great Plains. The lack of moisture hampered and in some cases halted planting in the Delta and Southeast. Soybeans were mostly fair, but available moisture kept condition good to fair in the central Great Plains. Soybeans suffered the most in the Delta and Appalachian States where condition was fair to poor. In Arkansas, soybean fields were flushed prior to seeding. Kansas soybeans progressed well, but the hot, dry weather continued depleting moisture supplies. Early planted soybeans bloomed in a few eastern

counties. The heat and dryness stressed soybeans in Ohio. Crop condition was mostly fair but declined toward poor.

**COTTON:** Cotton condition declined and was fair to poor in the Delta. The crop was fair to good in the Southeast and mostly good in the Southwest. In the 14 major producing States, 24% of the acreage reached the squaring stage but lagged 12 points behind 1987 and 2 points behind normal. Texas cotton producers increased plantings as weather permitted. Warm weather and rain improved growth. Plants set bolls in the Blacklands and many central areas. Moisture is needed to prevent boll droppage at Coastal Bend. Rain and hot temperatures improved cotton condition in Oklahoma. Seeding neared completion, with 10% of the acreage to be planted. In California, cotton development lagged about 2 weeks behind normal. Cotton advanced rapidly in Arizona. Thirteen percent of the acreage was setting bolls. Cotton began setting bolls in Alabama and Georgia. Producers abandoned many cotton fields in northern Louisiana.

**SORGHUM:** Sorghum was 90% seeded, equaling 1987 but 10 points ahead of normal. Seeding neared completion except in Kansas, Oklahoma, and South Dakota. In Texas, sorghum progress ranged from planting to harvesting. Isolated hard rain may cause some replanting. In Arkansas, moisture stressed sorghum wilted in some fields. Hot weather reduced green bug population in Kansas.

**OTHER CROPS:** Rice was mostly good to fair. Heading was underway in Louisiana and Texas. Some rice was reseeded in California. In Arkansas, salt build-up from flushing caused problems. Rice water weevils caused some damage.

Peanuts bloomed and pegged in Georgia but trailed behind normal. Pegging was 8 points ahead of normal in Alabama. Peanut planting increased in central and southern Texas. Producers irrigated heavily to maintain adequate moisture in many areas of the State.

Kentucky's tobacco was poor to fair. Resetting was necessary in some areas. Transplanting was almost completed in Tennessee. Georgia's tobacco improved slightly.

**FRUITS AND NUTS:** Peach harvest was active throughout the Southeast and in Texas. Dry weather damaged late maturing variety peaches in Arkansas.

Florida's citrus groves were very good. Rain provided moisture for southern groves, but growers irrigated extensively in other areas. New crop fruit progressed well. Valencia harvest slowed and grapefruit movement were nearly finished. California's lemon harvest was virtually complete in the San Joaquin Valley but continued in southern coastal areas. Walnut growers sprayed for husk fly. Clingstone peaches were thinned in the Sacramento Valley. Warm temperatures promoted growth in vineyards and orchards. Texas citrus sized well under heavy irrigation.

**VEGETABLES:** Dry weather aided tomato development in northern Florida. Watermelon, sweet corn, pepper, cucumber, celery, carrot, eggplant, and squash harvests were active. Dry weather slowed vegetable production in eastern Texas. California vegetable harvest consisted mostly of cauliflower, broccoli, carrots, celery, and lettuce. Fall lettuce fields were prepared at Westside.

**PASTURES AND LIVESTOCK:** Pastures showed no signs of resurgence in the eastern half of the Nation. Livestock was good to fair. Producers began culling herds as pastures declined.

## State Summaries of Weather and Agriculture

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

**ALABAMA:** Rainfall totals 1.00 to 2.00 in. north central; none central, south. Temperatures averaged 2° above normal north; 2° below normal near coast.

Days suitable for fieldwork 6.9. Soil moisture 100% short. Drought conditions persisted; crops plowed under some areas south. Corn 58% silked, 56% 1987, 48% avg.; 35% very poor, 45% poor, 20% fair. Sorghum 81% planted, 81% 1987, 79% avg.; 9% very poor, 44% poor, 47% fair. Cotton 57% squaring, 49% 1987, 35% avg.; 5% setting bolls, 2% 1987, 1% avg.; 40% poor, 58% fair, 2% good. Soybeans 76% planted, 84% 1987, 78% avg.; 4% very poor, 56% poor, 38% fair, 2% good. Peanuts 20% pegging, 13% 1987, 12% avg.; 31% poor, 62% fair, 7% good. Wheat 82% harvested, 68% 1987, 64% avg. First hay 96% harvested, 82% 1987, 81% avg. Livestock mostly fair; pastures mostly poor to very poor. Primary activities: Harvesting wheat, hay, commercial fruits, vegetables; controlling weeds, insects in row crops; planting soybeans, sorghum; building, managing fishponds; providing supplemental feed, general care of livestock, poultry.

**ALASKA:** Railbelt-wide, warmer temperatures combined with rain promoted mostly rapid growth. Temperature lows 1 to 7° above normal, highs 10° below normal to 6° warmer than normal. Seasonal precipitation totals ranged 0.16 in. drier than normal to 2.24 in. wetter than normal.

Days suitable for fieldwork 5.0. Topsoil moisture 18% short, 78% adequate, 4% surplus. Subsoil moisture 7% short, 82% adequate, 11% surplus. First hay harvest delayed by rain. Many hayfields cut, farmers waiting for drier weather to bale; less than 5% harvested. Barley, oats, mixed crops for grain in pre-boot stage; heights 8 in., 4 in. 1987. Commercial potato heights ranged just emerging to 4 in.

**ARIZONA:** Weak low pressure system 12th lowered maximum temperatures 4 to 8°. Temperatures rose 14th through 16th. Monsoon-like conditions, scattered thunderstorms southeast 15th; rainfall slight. Thunderstorms scattered 16th to 17th. Clouds covered State 18th; thunderstorms eastern one-third. Rainfall 0.05 to 0.50 in. Average temperatures 1° below to 6° above normal.

Cotton advanced statewide; 70% squaring, 13% setting bolls. Early fields sprayed for pink boll worms. Irrigation, lay-by herbicides applied west. Fields cultivated, irrigated other areas. Statewide crop good. Small grain harvest continued; 85% harvested. Rains slowed progress on 18th, west. Harvested fields prepared for planting other crops. Alfalfa good to excellent. Harvest active, excellent curing conditions west. Growers beginning 1st cuttings southeast, slowed by rain. Weed, insect, disease infestations light to moderate statewide. Watermelon, cantaloup, honeydew harvest continued west, central. Potato harvest completed west. Table, chipper potatoes harvested central. Tomato processing west. Figs shipped out of Maricopa. Sweet corn, dry onions, carrots, summer squash harvested central. Dry onion harvest east. Lettuce harvest ended Willcox. Valencia orange, grapefruit harvest continued central, west.

**ARKANSAS:** Drought conditions getting worse. Only few isolated showers. Temperature extremes 45°; 99°. Rainfall totals none to 1.64 in.

Days suitable for fieldwork 7.0. Soil moisture supplies 100% short. Irrigating crops main activity, if water available. Many fields being flushed for seeding soybeans. Soybeans 56% emerged, 78% 1987, 65% avg. Salt build-ups from flushing rice fields caused problems. Rice water weevils caused damage. Sorghum 96% emerged, 96% 1987; some fields wilting due to moisture stress. Wheat yields continued better than anticipated. Dry weather caused damage to late maturing peach varieties. Hay poor to fair. Pastures providing below average quality forage. Livestock fair to good; some hay feeding, early marketing.

**CALIFORNIA:** High pressure returned, brought above normal temperatures to State. Weak low pressure moved through midweek, brought showers to mountain areas. Only areas with below normal temperatures south coast, part of southern interior.

Warm, open weather, rapid progress field activities, accelerated crop development. Small grain harvest full swing. Cotton 10 days - 2 weeks behind. Few fields plowed, poor stands. Thinning, fertilization, irrigation active. Some rice reseeded, weather stressed. Weed controls established fields. Seeding 2nd crop beans, corn, sorghum active. Sugarbeet harvest progressed. Mildew controls applied. Seeding new crop. Safflower bloom most areas. Alfalfa harvest normal. Some small grains, sudan cut for hay. Warm weather promoted growth, vineyards, orchards. Crops irrigated, regular basis. Fresh apricot harvest neared completion San Joaquin Valley. Coachella Valley table grape harvest continued flame seedless, thompson seedless varieties. San Joaquin Valley grape growers applied gibberellic acid, mildew, insect control materials. Earlier cool temperatures slowed kiwifruit development Sacramento Valley. Clingstone peaches thinned Sacramento Valley. Lemon harvest virtually completed San Joaquin Valley; continued southern coastal area. Walnut growers sprayed for husk fly. Broccoli moderate to heavy, good quality Salinas, Santa Maria; harvested Riverside. Cauliflower moderate, good quality Salinas, Santa Maria. Carrots dug Salinas, Riverside good quality. Celery harvested south, central coasts good quality. Lettuce moderate, variable quality Salinas; moderate, good quality Santa Maria. Fall lettuce fields prepared Westside. Melons blooming, setting fruit Cutler-Orosi; harvested Westside. Potato plants growing well Tulalake. Strawberries moderate Salinas, Santa Maria. Tomatoes growing well Merced-Atwater. Fresh, processing tomatoes harvested Riverside. Livestock fair to good statewide. Range, pastures poor to fair most non-irrigated Sacramento, central valley areas. Rangeland feed fair supply, higher elevations. Livestock movement light Redding. Water supplies low, supplemental feeding continued most areas.

**COLORADO:** Afternoon showers, thunderstorms, some tornado activity. Precipitation none to 1.98 in.; 0.20 to 0.60 in. Temperatures averaged 3° below to 4° above normal.

Days suitable for fieldwork 5.9. Soil moisture 5% very short, 43% short, 52% adequate. Winter wheat 27% turning color. Other small grains just beginning to turn color. Sorghum 76% planted, 57% emerged. Alfalfa 56% cut 1st time. Livestock, pastures good.

**FLORIDA:** Easterly flow prevailed with areas of rain in vicinity stationary front, related extensive

cloud masts south through Florida Straits into 12th. Spotty showers central, followed by drying period; north mostly rain free as ridge prohibited development of showers. Rainfall heavy along central east coast, south, totals from 1.00 to 6.00 in. Central area generally less than 1.00 in. for period. Temperatures averaged between 3 to 8° below normal north, near normal south, central.

Soil moisture short Panhandle, northern Peninsula, most of central Peninsula; adequate lower Peninsula. Soybean planting stopped because of inadequate moisture. Haymaking stopped with no growth drier areas. Cotton set 1st squares. Peanuts blooming, pegging. Thrip problems cotton, peanut fields. Tobacco harvest more active. Sugarcane good progress. Most pastures central Peninsula northward throughout Panhandle stressed from lack of moisture with condition ranging from very poor western Panhandle, to fair to good few central Panhandle areas, very poor to fair elsewhere. Grazing lower Peninsula mostly good or better. Cattle condition continued to deteriorate; in driest areas Panhandle, west central Peninsula, only poor to fair; elsewhere generally good with few areas excellent. Most citrus groves very good. Rain southern groves; other areas dry, extensive irrigation. Ponds, lakes low. New crop fruit good progress, valencia harvest slowed. Grapefruit movement nearly finished. Hot days, mild nights continued vegetable producing areas. Dry, north, aided tomato development. Harvest active watermelons, sweet corn, peppers, cucumbers, celery, carrots, eggplant, squash. Hastings potatoes, palmetto-ruskin tomato harvests virtually completed.

**GEORGIA:** Scattered thunderstorms late week northern counties. Local totals 1.00 to 2.00 in. north, 2.50 in. Epworth. Southern half little rain during weekend. Temperatures averaged 2° above normal north, 3° below normal south. Most highs 90s with 98° Dublin 17th. Lowest temperatures mid 50s to low 60s, 49° Blairsville to 66° Brunswick.

Days suitable for fieldwork 6.4. Soil moisture 67% very short, 30% short, 3% adequate. Corn 20% dough, 21% 1987, 33% avg.; 2% dent, 1% 1987, 10% avg. Cotton 100% planted, 99% 1987, 100% avg.; 2% bolls set, 2% 1987, 8% avg. Sorghum conditions dropped, mostly fair; planting stopped. Peanut condition down, still mostly good; 100% planted, blooming and pegging behind average. Soybean plantings slowed, drought. Tobacco improved slightly. Watermelon harvest beginning. Small grain harvest active; excellent conditions, yields. Apples mostly good. Peaches mostly fair, harvest active. Pasture, hay mostly poor. Cattle mostly fair. Hogs mostly good.

**HAWAII:** Sunny, warm days. Light morning showers. Rainfall none to 1.30 in. Trade winds 10 to 25 mph.

Days suitable for fieldwork 7.0. Irrigation heavy. Spraying heavy to control insects, diseases. Chinese cabbage production moderate. Head cabbage output moderate to heavy, quality good. Head lettuce supplies light. Papaya production increase expected. Watermelon harvesting heavy. New acreage to boost cucumber production. Ginger root planting nearly complete.

**IDAHO:** Temperatures above normal. Precipitation below normal.

Days suitable for fieldwork 7.0. Soil moisture 19% very short, 36% short, 45% adequate. Potatoes 84% emerged, 87% 1987, 82% avg. Winter wheat good; 55% headed, 69% 1987. Spring wheat good; 27% headed. Spring barley 60% boot or beyond; 23% headed. Sugarbeets 88% thinned. Dry bean planting wrapping up, 60% emerged. First harvest alfalfa 54% cut, 65% 1987, 47% avg. Cherry harvest

underway. Livestock good despite rapidly drying ranges.

**ILLINOIS:** Temperature lows averaged 3 to 6° above normal north, 3 to 5° below normal south. Highs averaged 6 to 10° above normal north, 3 to 6° below normal south. Precipitation averaged less than 0.25 in. parts of south, rest of State none.

Days suitable for fieldwork 7.0. Soil moisture 100% short. Corn height 30 in., 39 in. 1987, 26 in. avg. Most advanced 42 in., 57 in. 1987, 40 in. avg. Wheat 95% turning yellow, 99% 1987, 79% avg.; 61% ripe, 87% 1987, 40% avg. Oats 90% headed, 95% 1987, 80% avg.; 53% filled, 73% 1987, 53% avg.; 15% turning yellow, 30% 1987, 13% avg.; 2% very poor, 24% poor, 65% fair, 9% good. Alfalfa 1st cut 100%, 97% 1987, 91% avg.; 2nd cut 16%, 21% 1987, 10% avg.; 2% very poor, 34% poor, 49% fair, 15% good. Red clover cut 87%, 88% 1987, 77% avg.; 1% very poor, 37% poor, 52% fair, 9% good, 1% excellent. Pasture 20% very poor, 58% poor, 22% fair.

**INDIANA:** Temperatures 2 to 5° above normal south; 6 to 10° above normal central, north. Lows upper 50s to low 60s, highs upper 80s to upper 90s. Precipitation minimal. Totals less than 0.25 in., some areas received none.

Days suitable for fieldwork 6.6. Topsoil moisture 100% short. Subsoil moisture 98% short, 2% adequate. Corn, soybeans, wheat declined. Corn height 22 in., 40 in. 1987, 25 in. avg. Soybeans 94% emerged, 97% 1987, 89% avg. Soybeans height 6 in., 10 in. 1987, 5 in. avg. Wheat 33% ripe, 46% 1987, 18% avg. Alfalfa hay 99% cut once, 96% 1987, 88% avg. Pastures 40% very poor, 53% poor, 7% fair. Hot, dry conditions slowed growth, development of crops.

**IOWA:** Temperatures 4 to 8° above normal; extremes 41°; 103°. Rainfall 0.04 to 1.44 in. north; none to 0.10 in. south.

Days suitable for fieldwork 6.8. Topsoil moisture 96% short, 4% adequate; subsoil moisture 91% short, 9% adequate. Oats 9% very poor, 42% poor, 40% fair, 9% good. Oats 93% headed, 88% 1987, 62% avg.; oats 18% turning color, 13% 1987, 5% avg. Winter wheat mostly fair. Hay 15% very poor, 41% poor, 41% fair, 3% good. First alfalfa 98% harvested, 91% 1987, 75% avg.; 1st clover 75% harvested, 67% 1987, 46% avg. Corn 97% cultivated 1st time, 90% 1987, 63% avg. Average corn height 26 in. Soybeans 72% cultivated 1st time, 58% 1987, 31% avg. Livestock mostly good to excellent. Culling of cow herds. Heat stress in sows. Pastures 51% very poor, 37% poor, 11% fair, 1% good.

**KANSAS:** Temperatures averaged 78° northwest to 81° southeast, 4° above normal south to 6 to 8° above normal north. Rainfall short, scattered. Significant rainfall east middle of week, light, scattered showers elsewhere.

Days suitable for fieldwork 6.0. Topsoil moisture 82% short, 18% adequate. Subsoil 56% short, 44% adequate. Hot dry weather continued, wheat ripening all areas. Harvest active south, central, test cutting elsewhere. Planting corn, sorghum, soybeans good progress but hot weather depleting moisture supplies. Early growth row crops good. Green bug migration from wheat to corn, sorghum about over, populations reduced by hot dry weather. Chinch bug population increased in corn, sorghum. Early stands soybeans blooming few eastern counties. Range, pasture condition deteriorating rapidly, adequate forage still available. Ranchers culling herds fit grazing outlook. Haying good progress, quality good, quantity short side. Little regrowth under present conditions.

**KENTUCKY:** Dry pattern continued. Temperatures generally 5 to 10° above normal during day, slightly below normal at night. Precipitation occurred with cold front; 1.00 to 1.75 in. some central, south central areas. Most of State no rain.

Days suitable for fieldwork 5.8. Soil moisture 85% very short, 15% short. Corn poor to fair with leaf twisting, curling. Average height 27 in. Soybeans mostly poor to fair. Tobacco poor to fair, some resetting necessary. Pastures very poor to poor. Hay crops thin, short. Water level dropping in farm ponds. General rain needed.

**LOUISIANA:** Temperature 1 to 4° below normal. Temperature extremes 50°; 98°. Rainfall averaged 0.03 to 0.39 in.

Days suitable for fieldwork 6.7. Soil moisture 65% very short, 27% short, 8% adequate. Corn declined to poor to fair; 62% silked, 13% dough stage, 2% mature. Rice 5% headed; most in south central. Sorghum 92% emerged; some abandoned northwest. Soybeans 56% emerged. Sweetpotatoes poor to fair; 70% planted, well below normal. Winter wheat 99% harvested, above normal. Hay 1st cutting 82%; some producers not cutting, poor early growth. Peaches fair to good; 28% harvested, about average. Sugarcane good. Livestock fair to good. Pastures, vegetables, pecans fair. Farmers feeding hay. Many cotton fields abandoned, northern parishes. Main activities: Fertilizing rice; harvesting hay, vegetables, peaches, wheat; planting soybeans, sweetpotatoes.

**MARYLAND & DELAWARE:** Maryland: Precipitation averaged 0.04 in. Average temperature 74°, normal 71°. General temperature extremes 43°; 97°. Mountain extremes 33°; 92°.

Days suitable for fieldwork 6.8. Topsoil moisture 40% very short, 60% short. Subsoil moisture 80% short, 20% adequate. Corn 98% planted, 100% avg. Soybeans 70% planted, 70% avg. Tobacco 90% transplanted, 85% avg. Wheat, barley, oats, rye good. Wheat 100% headed, 100% avg. Barley 99% turn color, 100% avg. Barley 40% harvested, 60% avg. Apples, peaches fruit set average. Green peas 85% harvested, 75% avg.

Delaware: Precipitation averaged 0.10 in. Average temperature 75°, normal 72°.

Days suitable for fieldwork 6.7. Topsoil, subsoil moisture 80% short, 20% adequate. Corn 100% planted, 100% avg. Soybeans 65% planted, 65% avg. Wheat, barley, rye 50% fair, 50% good. Wheat 100% turning color, 95% avg. Barley 100% turn color, 100% avg. Apples, peaches fruit set above average. Green peas 70% harvested, 60% avg.

**MICHIGAN:** Temperatures ranged 5 to 8° above normal. Temperature extremes 34°; 98°. Precipitation ranged none to 0.27 in. across State.

Days suitable for fieldwork 7.0. Soil moisture 100% short. Corn 5% very poor, 20% poor, 35% fair, 35% good, 5% excellent. Soybeans 97% planted, 100% 1987, 95% avg.; 10% very poor, 20% poor, 35% fair, 30% good, 5% excellent. Wheat 5% very poor, 20% poor, 45% fair, 25% good, 5% excellent. Dry beans 45% planted, 90% 1987, 70% avg. Major activities: Soybean, dry bean planting; harvesting hay, sidedressing fertilizer, cultivating corn, soybeans. Dry conditions stressed fruit, vegetable. Some vegetable planting delayed. Irrigation extensive. Strawberry harvest active.

**MINNESOTA:** Temperatures averaged 3 to 8° above normal. Temperature extremes 35°; 104°. Precipitation averaged 0.16 to 1.63 in. Greatest weekly total 2.52 in.

Days suitable for fieldwork 6.3. Topsoil moisture 82% very short, 18% short. Spring wheat 99% jointing, 90% 1987, 65% avg.; 67% heading, 49%

1987, 16% avg. Oats 99% jointing, 96% 1987, 72% avg.; 82% heading, 74% 1987, 28% avg. Barley 99% jointing, 93% 1987, 66% avg.; 73% heading, 52% 1987, 18% avg. Corn 95% cultivated, 85% 1987, 52% avg.; 24 in. height, 25 in. 1987, 13 in. avg. Soybeans 81% cultivated once, 67% 1987, 30% avg.; 9 in. height, 8 in. 1987, 4 in. avg. Alfalfa 90% cut, 89% 1987, 63% avg. Soybeans 1% very poor, 16% poor, 61% fair, 22% good. Field corn 3% very poor, 15% poor, 58% fair, 24% good. Spring wheat 24% very poor, 42% poor, 34% fair.

**MISSISSIPPI:** Fair, cool, dry. Average temperature 77°, 2° below normal. Extremes 46°; 98°. Greatest 24-hour rainfall 0.80 in.; greatest weekly rainfall 0.80 in.

Days suitable for fieldwork 6.5, 5.0 1987, 4.1 avg. Soil moisture 80% very short, 20% short. Weekend thunderstorms did not help to improve soil moisture. Corn poor to fair; 37% silking, 33% 1987, 39% avg. Wheat 89% harvested, 75% 1987, 65% avg. Harvest conditions perfect. Sorghum fair; 1st heading. Cotton fair; 50% squaring, 63% 1987, 42% avg. Rice fair; 99% emerged, 100% 1987, 99% avg. Soybeans poor to fair; 60% emerged, 76% 1987, 61% avg. Peaches fair; 23% harvested, 40% 1987, 22% avg. Pasture mostly poor. Livestock mostly fair. Shortages of good hay, grazing. Hay 40% harvested, 38% 1987, 39% avg. Activities: Irrigation, wheat harvest, application of pesticides, soybean planting.

**MISSOURI:** Temperatures 3° above normal except 2° below normal Bootheel. Mostly dry, except over 0.50 in. some southwestern counties.

Days suitable for fieldwork 6.5. Topsoil moisture 100% short. All crops suffering from moisture shortage. Alfalfa 2nd cutting 16%, 31% 1987, 15% avg. Other hay 77% harvested, 73% 1987, 54% avg. Pasture 48% very poor, 49% poor, 3% fair.

**MONTANA:** Temperatures above normal. Maximums over 100° east, 4° above normal southwest, 5 to 8° above elsewhere. Precipitation over most of State with heaviest amounts north central, northeast where few areas 1.50 to 2.00 in. Average in plains 0.50 in.; 0.30 in. west, southwest.

Days suitable for fieldwork 6.0. Topsoil moisture 80% short, 20% adequate. Subsoil moisture 87% short, 13% adequate. Barley 23% very poor, 30% poor, 25% fair, 20% good, 2% excellent. Oats 29% very poor, 35% poor, 21% fair, 14% good, 1% excellent. Sugarbeets 4% very poor, 16% poor, 24% fair, 38% good, 18% excellent. Barley 42% pre-boot, 39% boot, 19% headed. Oats 35% pre-boot, 42% boot, 23% headed. First cutting alfalfa 33% harvested, 13% 1987, 9% avg. Other hay 12% harvested, 8% 1987, 4% avg. Range feed remained very poor.

**NEBRASKA:** Hot, dry few scattered thundershowers. Precipitation amounts from traces to around 1.00 in. locally in Panhandle, central. Average temperatures 2 to 8° above normal. Extremes 47°; 104°.

Days suitable for fieldwork 6.4. Topsoil moisture 74% short, 26% adequate. Subsoil moisture 61% short, 39% adequate. Wheat 60% turning color, 82% 1987, 48% avg. Varying crop damage from Russian wheat aphids, wheat streak mosaic particularly in Panhandle, southwest. Wheat 8% ripe, 8% 1987, 3% avg. Corn leaves rolling in response to extreme heat. Soybeans 99% emerged, 90% 1987, 88% avg. Sorghum 99% emerged, 88% 1987, 86% avg. Greenbugs affecting fields southern half of State. Cinch bugs affecting east central, southeast fields. Alfalfa hay 15% poor, 65% fair, 19% good, 1% excellent. Alfalfa 1st cutting 94%, 90% 1987, 81% avg. Alfalfa weevils, hot weather delayed regrowth and start of 2nd cutting. Pasture, range feeds short to adequate. Livestock,

pastures showing heat stress. Fly numbers increasing.

**NEVADA:** Warming trend, widely scattered thunderstorms mainly afternoons, evenings. Precipitation generally light. Temperature averages rose 8 to 14° from preceding week. High base thunderstorms started several wildfires. Temperatures soared near end of period. Extremes 29°; 111°.

Alfalfa hay harvest accelerated by above normal temperatures. Lack of significant precipitation also beneficial. Most crops fair, lack of adequate irrigation water supplies will hurt later. Pastures, ranges continued to deteriorate.

**NEW ENGLAND:** Precipitation averaged 0.50 to 1.00 in. Southern interior, Coastal Maine; 0.25 to 0.50 in. northern Maine, New Hampshire, central, coastal Massachusetts; less than 0.25 in. remainder. Temperatures averaged from upper 60s far north to mid 70s southern coast. Temperatures above normal.

Days suitable for fieldwork 6.5. Fieldwork 1.0 days ahead. Soil moisture 21% very short, 58% short, 21% adequate. Grazing availability 7% very short, 47% short, 46% adequate. Maine potatoes 90% emerged, 75% 1987, 65% avg.; good to excellent. Rhode Island potatoes 100% emerged, 100% 1987, 100% avg.; good to excellent. Connecticut River Valley good; potatoes 100% emerged, 85% 1987, 95% avg. Maine oats 100% sown, 100% 1987, 100% avg.; good to excellent. Field corn 95% planted, 95% 1987, 90% avg.; 90% emerged, 80% 1987, 80% avg.; good to excellent. Sweet corn good; 90% planted, 85% 1987, 90% avg. Shade tobacco good. Outdoor tobacco good; 70% transplanted. Apple set average to heavy; apple drop average; scab infection light. Strawberries set average to heavy; 20% harvested. Major farm activities: Haying, spraying, irrigating, picking strawberries.

**NEW JERSEY:** Temperatures averaged much above normal. Extremes 50°; 99°. Rainfall averaged 0.06 in. north, 0.37 in. central, 0.24 in. south. Heaviest 24-hour total 0.92 in. on 17th, 18th. Estimated soil moisture percent field capacity averaged 61% north, 52% central, 45% south. Four inch soil temperatures averaged 69° north, 71° central, 72° south.

Hot, humid, dry weather prevailed. Irrigation in full use during 90+ degree days. Spring vegetable harvest decreased. Hot weather caused some blossom loss on summer crops. Apple, peach thinning continued. Strawberry harvest advanced. Blueberries well sized. Barley combining active. Wheat, rye well colored. Hay, straw baling active under favorable conditions. Field corn, soybeans generally good. Soybean planting continued following barley harvest.

**NEW MEXICO:** Temperatures slightly above normal; precipitation many locations.

Days suitable for fieldwork 6.8. Soil moisture 38% short, 62% adequate. Barley 60% fair, 40% good. Wheat 40% poor, 30% fair, 30% good; 100% headed, 7% harvested. Cotton 30% squaring; 71% fair, 29% good. Onions 25% fair, 75% good; harvest well underway, yields good. Cattle 62% fair, 38% good. Sheep 45% fair, 55% good. Range 8% poor, 69% fair, 15% good, 8% excellent.

**NEW YORK:** Very warm, dry week. Hot sun baked soil first half of week sending afternoon temperatures into 90s. No rain until latter half of week when it cooled off a bit. However, there were only widely scattered showers, thunderstorms with most areas remaining dry.

Days suitable for fieldwork 6.8. Soil moisture further depleted, mostly short. Rain needed. Corn planting neared completion. First cutting alfalfa 62%, 48% 1987, 31% avg. Clover-timothy hay 45%

cut, 26% 1987, 25% avg. Dry bean planting progressing rapidly. Pastures, hay mostly fair. Vegetables need rain, irrigation active. Development slow due to dryness. Strawberry harvest full swing. Peach thinning underway. Sweet cherries started to show color.

**NORTH CAROLINA:** Temperatures averaged 2 to 5° below normal statewide. Temperature extremes 39°; 95°. Precipitation ranged none to 2.77 in. across State.

Days suitable for fieldwork 6.1. Soil moisture 21% very short, 47% short, 31% adequate, 1% surplus. Pasture 1% very poor, 25% poor, 34% fair, 40% good. Burley tobacco 97% transplanted, 95% 1987, 88% avg. Tobacco in fields 4% poor, 40% fair, 54% good, 2% excellent. Peanuts 28% fair, 72% good. Sweetpotatoes 90% transplanted, 89% 1987, 84% avg.; 31% fair, 69% good. Irish potatoes 18% harvested, 14% 1987, 14% avg.; 20% fair, 73% good, 7% excellent. Peaches 39% fair, 58% good, 3% excellent. Truck crops 5% poor, 42% fair, 48% good, 5% excellent. Sorghum 90% planted, 78% 1987, 78% avg. Hay 90% 1st cutting, 30% 2nd cutting; 13% poor, 40% fair, 47% good. Peaches 17% harvested, 12% 1987, 18% avg.; 39% fair, 58% good, 3% excellent. Apples 7% poor, 52% fair, 41% good. Major farm activities: Cutting hay; harvesting small grains, irish potatoes; planting soybeans, sorghum; transplanting tobacco, sweetpotatoes; picking strawberries, blueberries, peaches; fertilizing, spraying nursery crops; cultivating tobacco, truck crops, corn; tending livestock; general farm maintenance.

**NORTH DAKOTA:** Cool early, extremely warm late. Temperatures ranged 4 to 8° above normal. Extremes 38°; 103°. Much needed precipitation received statewide; averaged 0.60 in. southwest to 1.12 in. east central.

Days suitable for fieldwork 6.7. Despite rainfall, soil moisture did not improve; remained driest since records started in 1950. Topsoil 70% very short, 28% short, 2% adequate. Subsoil 57% very short, 38% short, 5% adequate. Heat stress, isolated hail east central caused additional damage to crops. Winter wheat 32% very poor, 46% poor, 21% fair, 1% good; spring wheat 23%, 45%, 32%; durum 19%, 52%, 29%; oats 37%, 53%, 10%; barley 21%, 48%, 32%; corn 11%, 16%, 49%, 24%; flax 12%, 45%, 43%; soybean none, 1%, 29%, 70%; sunflower 3%, 26%, 45%, 26%; dry edible beans 1%, 5%, 46%, 48%; potatoes 28% fair, 72% good. All crops ahead of normal development. Winter wheat 53% milk to dough or beyond, 44% 1987, 16% avg.; spring wheat 40% heading and beyond, 17% 1987, 7% avg.; durum 23%, 10% 1987, 3% avg.; oats 42%, 25% 1987, 10% avg.; barley 48%, 29% 1987, 12% avg. Row crops above average height. Corn height 12 in., 12 in. 1987, 8 in. avg.; soybeans 7 in., 6 in. 1987, 5 in. avg.; sunflower 7 in., 5 in. 1987, 4 in. avg.; dry edible beans 6 in., 7 in. 1987, 4 in. avg.; potatoes 8 in., 9 in. 1987, 6 in. avg.; flax 5 in., 5 in. 1987, 4 in. avg. Many cattle marketed early as pastures remained mostly very poor to poor.

**OHIO:** Temperatures ranged 50s to 90s. Average low temperatures normal; average high temperatures 3 to 9° above normal. Rainfall occurred mainly in west central, central; but almost all under 0.50 in.

Days suitable for fieldwork 6.5. Soil moisture 93% short, 7% adequate. Soybean, oat, strawberry development behind 1987, ahead of average. Alfalfa, other hay cutting ahead of 1987 and average. Wheat completely headed. Extreme dry conditions stressing corn, soybeans stands. Earlier plantings better than late. Corn, soybean fair moving toward poor. No-till corn plantings worse than conventional plantings.

**OKLAHOMA:** Temperatures averaged normal north central to 5° above normal northeast. Precipitation averaged none northeast, southeast to 0.61 in. southwest.

Days suitable for fieldwork 6.3. Topsoil moisture 85% short, 15% adequate. Subsoil moisture 55% short, 45% adequate. Wheat 75% harvested, 70% 1987, 35% avg. Harvest quality above average. Approximately 25% stubble plowed. Cotton 20% poor, 40% fair, 40% good; 90% planted, 60% 1987, 70% avg.; 5% squaring, 3% 1987, none avg. Rain, hot temperatures improved prospects. Sorghum 5% poor, 20% fair, 75% good; 70% planted, 75% 1987, 70% avg. Peanuts 80% planted, 85% 1987, 80% avg. Soybeans 70% planted, 80% 1987, 70% avg. Pastures good to fair. Cattle good; producers culling because of pasture deterioration. Prices down.

**OREGON:** Temperatures above normal across State. West 3° above normal, east averaged 5° above normal. Extreme east warmest near or above 100°. About 0.10 in. along coast, northern Willamette Valley; remainder of west trace or less. Isolated thunderstorms across east 0.10 in. or less; Klamath Falls 0.38 in.

Soil moisture 26% short, 74% adequate. Early barley harvest start next week. First cutting hay beginning central area. First crop alfalfa started southeast. Alfalfa cutting to start few days, Klamath Basin; grain planting complete. Red clover hay shows problems with wet fields mid Willamette Valley. Vale area running low on water for crops. Bartlett, apple thinning in progress Hood River Valley; 1st cover spray going on. Pears starting to size Jackson County. Majority of sweet cherry orchards than 10% rain splitting damage; early ripening orchards 25 to 30% damage Wasco County. Bing cherry harvest continued Willamette Valley. Pheromone traps show abundance of black headed fire worm moths, south coast. Evergreen blackberries blooming. Red raspberry insect spray applied. Gray mold on strawberries stopped with hot weather; harvest continued Willamette Valley. Onions bulbing Hermiston-Boardman. Green pea harvest continued Milton-Freewater. Snap pea harvest continued Douglas County. Green peas, broccoli flower buds bloomed. Livestock good to excellent. Shipping of lambs started, weights good. Cattle out on 15th allotments. More cattle contracted for fall sale. Range, pasture mostly good to excellent. Grass growth, feed availability better than normal most locales especially Willamette Valley, eastern high country.

**PENNSYLVANIA:** Hot, dry through week. Scattered light showers on 17th, 18th. Average temperature 71°, 5° above normal. Temperature extremes 43°; 97°. Average precipitation 0.24 in., 0.66 in. below normal.

Days suitable for fieldwork 6.0. Soil moisture 80% short, 20% adequate. Corn 97% planted, 98% 1987, 98% avg. Average corn height 9 in., 13 in. 1987, 11 in. avg. Corn 1% very poor, 9% poor, 33% fair, 40% good, 17% excellent. Tobacco 75% transplanted, 80% 1987, 80% avg. Soybeans 85% planted, 83% 1987, 82% avg. Soybeans 1% very poor, 13% poor, 30% fair, 46% good, 10% excellent. Barley 53% heading or headed, 41% 1987; 35% turning yellow, 35% 1987; 10% ripe, 16% 1987; 2% harvested, 8% 1987. Wheat 86% heading or headed, 70% 1987; 14% turning yellow, 30% 1987. Wheat 5% poor, 22% fair, 51% good, 22% excellent. Oats 95% heading or headed, 89% 1987; 5% turning yellow, 11% 1987. Oats 3% poor, 25% fair, 49% good, 23% excellent. First cutting alfalfa 80%, 73% 1987. Second cutting alfalfa 6%, 14% 1987. First cutting clover-timothy 67%, 58% 1987. Hay stands mostly good. Feed from pastures average to below average. Activities: Planting corn, soybeans, vegetables; transplanting tobacco; harvesting barley, hay, haylage, strawberries, vegetables; weed control; machinery

maintenance; caring for livestock; spreading fertilizer.

**PUERTO RICO:** Island rainfall averaged 1.69 in., 0.37 in. above normal. Highest weekly total rainfall 3.97 in. central Coloso, 3.75 in. Juncos, 3.72 in. San Sebastian. Highest 24-hour total 2.23 in. Juncos. Total rainfall since January 1st 21.53 in., 3% below normal. San Juan mean temperature 83°, 1° above normal. Total rainfall 0.74 in., 0.31 in. below normal. Divisional temperature averaged 81 to 82° on coasts, 76 to 79° interior. Mean station temperature ranged 68° Pico Del Este-Luquillo to 84° Roosevelt Roads. Lowest minimum temperature 60° Arecibo Observatory. Highest maximum temperature 10° Trujillo Alto.

**SOUTH CAROLINA:** Isolated showers, scattered thunderstorms, averaged less than 0.25 in. Temperatures, mid 90s.

Days suitable for fieldwork 6.2. Soil moisture 19% very short, 78% short, 3% adequate. Cotton 9% squaring, 63% 1987, 48% avg.; 1% very poor, 10% poor, 59% fair, 30% good. Soybeans 79% planted, 77% 1987, 75% avg.; 2% very poor, 5% poor, 62% fair, 31% good. Tobacco fair to good; 11% topped, 7% 1987, 19% avg. Peanuts fair to good. Sorghum fair; 62% planted, 77% 1987, 75% avg. Peaches fair to good; 22% harvested, 18% 1987, 18% avg. Wheat excellent; 97% ripe, 95% 1987, 93% avg.; 76% harvested, 62% 1987, 69% avg. Oats good; 94% ripe, 93% 1987, 92% avg.; 74% harvested, 67% 1987, 73% avg. Barley fair to good; 90% ripe, 91% 1987, 88% avg.; 74% harvested, 63% 1987, 71% avg. Rye good; 89% ripe, 85% 1987, 92% avg.; 61% harvested, 56% 1987, 66% avg. Grain hay fair to good; 93% harvested, 94% 1987, 94% avg. Pastures fair.

**SOUTH DAKOTA:** Average temperatures none to 7° above normal. Extremes 40°; 104°. Rainfall widespread with heaviest amounts southwest; Black Hills across central into northeast sections.

Days suitable for fieldwork 5.6. Topsoil moisture improved; 19% critically short, 55% short, 26% adequate. Crop conditions much same. Drought, disease problems include red leaf in oats, greenbugs in sorghum, cutworms in corn, alfalfa weevils in hay, grasshoppers; especially in west river counties, wheat streak mosaic.

**TENNESSEE:** Weak front 16th produced isolated thundershowers, otherwise very warm, dry. Temperatures 4° above normal west, 2° below normal plateau. Average weekly rainfall deficit 0.75 to 1.00 in.

Days suitable for fieldwork 6.3. Soil moisture 87% very short, 13% short. Tobacco 96% transplanted, 99% 1987, 982% avg. Wheat 88% ripe, 91% 1987, 79% avg.; 52% harvested, 69% 1987, 38% avg. Primary activities: Maintenance, chores, livestock care.

**TEXAS:** Large stable air mass kept State locked in dry pattern. Only area receiving rain Panhandle. Strong winds north, Panhandle aggravated dryness locations. Temperatures at or slightly below normal. Only exception Northern High Plains, above normal. Rainfall below normal all areas except Panhandle.

Crops: Small grain harvest winding down Low Plains, Cross Timbers. Yields fair because of dry weather. Harvest beginning High Plains, rain delayed operations slightly. Dryland fields harvested first, early yields fair. Heavy aphid populations may hold down yields. Corn fields good High Plains, may improve more with recent rain. Growth good. Fields Blacklands, central fairly good despite mostly dry conditions. Corn maturing rapidly south, Coastal Bend, Rio Grande Valley. Dry conditions may cause some abandonment south.

Fields very moisture stressed northeastern State. Corn 28% doughing, 26% 1987, 40% avg.; 4% dented, 3% 1987, 15% avg.; none mature, none 1987, 1% avg. Grain sorghum planting continued Plains. Early fields good stands. Isolated hard rains may cause some replanting. Fields heading Blacklands, central; fields look good, but could use rain. Some light harvesting underway Coastal Bend, Rio Grande Valley. Many fields mature. Sorghum 47% headed, 41% 1987, 48% avg., 17% turning color, 10% 1987, 24% avg.; 4% mature, none 1987, 5% avg. Plains cotton producers increased planting operations weather permitted. Early fields up to stands. Rain, warm weather improved growth. Some thrip controls. Plants continued setting bolls Blacklands, many parts central. Spraying occurred some fields control thrips. Rain needed Coastal Bend to prevent bolls droppage. Fields Valley could use moisture. Cotton 94% planted, 90% 1987, 90% avg.; 10% setting bolls, 9% 1987, 7% avg. Rice fields continued heading under heavy flooding Upper Coast. General progress good. Rice 8% headed, 6% 1987, 7% avg. Peanut planting increased central, south. Fields Cross-Timbers, Low Plains currently making good growth. Irrigation heavy many portions State. Soybean planting increased Plains, Upper Coast. Fields Upper Coast need moisture but look good. Growth good Plains. Other Field Crops: Oats 72% harvested, 44% 1987, 61% avg. Peanuts 68% planted, 49% 1987, 65% avg. Soybeans 81% planted, 63% 1987, 70% avg. Sunflowers 37% planted, 44% 1987, 70% avg.

**Commercial Vegetables:** Rio Grande Valley harvest tomatoes, peppers continued, melon harvest winding down. Citrus sizing well under heavy irrigation. San Antonio-Winter Garden onions, beets harvested. Watermelons, cantaloups harvested. East vegetable production slowed because dry conditions. Growth slow transplanted sweetpotatoes. Melons suffering. High Plains onions, potatoes good progress. Potato harvest continued Knox-Haskell area. Trans-Pecos chili peppers blooming. Onion harvest slow. Cantaloups fair progress. Peach harvest continued many areas. Quality good. Pecans good sets. Recent rainfall Plains help. Moisture needed soon other areas to hold nuts.

**Range and Pasture:** Range, pasture grasses greening Plains. Dry weather declined conditions rapidly northeastern, southern areas. Hay cutting continued low yields many areas. Livestock marketings increased because lack of forage. Tank water levels low many areas.

**UTAH:** Precipitation very light western, Uinta Basin, south central, none rest of State. Temperature 1 to 4° above normal.

Days suitable for fieldwork 6.8. Soil moisture 80% short, 20% adequate. Winter wheat 89% headed, 100% 1987, 85% avg.; 17% turning color, 30% 1987, 27% avg. Spring wheat 85% booted, 92% 1987, 70% avg.; 35% headed, 69% 1987, 45% avg. Barley 90% booted, 97% 1987, 78% avg.; 50% headed, 65% 1987, 54% avg. Oats 84% jointed, 90% 1987, 66% avg.; 55% booted, 75% 1987, 46% avg.; 21% headed, 32% 1987, 18% avg. Corn height 12 in., 19 in. 1987, 9 in. avg. Alfalfa 1st cutting 55%, 66% 1987, 58% avg. Second cutting underway extreme south. Movement to summer range, cattle 90%, 100% 1987, 85% avg.; sheep 83%, 92% 1987, 83% avg. Livestock good to excellent. Major farm activities; Haying, irrigation, sidedressing corn, spraying weeds in corn.

**VIRGINIA:** Hot, dry. Temperature range 34 to 95°. Precipitation less than 0.10 in. most areas. Isolated, widely scattered thunderstorms end period few areas over 1.00 in.

Days suitable for fieldwork 6.1. Topsoil moisture 91% short, 9% adequate. Despite recent hot, dry spell most crops good condition, but need

rain. Pasture, hay only fair in dry southwest mountains. Corn planting essentially complete. Soybeans 70% planted, 67% 1987, 71% avg. Irrigated, cultivated tobacco. Burley tobacco 96% transplanted, 94% 1987, 93% avg. Apply land plaster, weed control in peanuts. Irrigated potatoes, other vegetables. First cutting hay yields good, slow growth recently. Barley 66% harvested, 67% 1987, 77% avg. Wheat 8% harvested, 19% 1987, 36% avg. Some lodging evident.

**WASHINGTON:** High pressure ridge dominated weather over State. One disturbance moved through State end of week, produced few areas light rain. Temperatures above seasonal normals.

Days suitable for fieldwork 6.5. Soil moisture 60% short, 40% adequate. Warm weather across State accelerated growth, development of grain, hay crops. Winter wheat 86% headed, 98% 1987, 86% avg. Spring wheat, barley respectively 62%, 72% headed. Winter wheat 5% poor, 40% fair, 45% good, 10% excellent. Barley yellow dwarf virus, wheat stem maggot on winter wheat local areas east central areas. Russian wheat aphid activity increased in spring grain crops. Warmer temperatures helped hay growers catch up on 1st hay cutting. Most hay escaped excessive rain damage from previous week. First hay cutting in later areas just beginning, 2nd hay cutting underway early areas Grant County. Cherry harvest continued early areas of Benton, Chelan, Grant, Yakima Counties. Minor rain damage from most sweet cherry producing areas. Asparagus cutting neared completion central areas. Green pea harvest, sweet onion harvest preparation underway Walla Walla County. Lettuce harvest underway, rhubarb harvest neared completion King, Pierce Counties. Range, pasture mostly adequate. Stock water short some areas.

**WEST VIRGINIA:** Average temperature 71°, 1 to 5° above normal. Extremes 98° Creston, 39° Greenbank. Precipitation well below normal averaged 0.17 in.

Days suitable for fieldwork 5.5. Soil moisture 43% very short, 41% short, 16% adequate. Wheat, barley good to fair. Oats fair to good. Wheat 97% headed, 10% ripe. Barley 98% headed, 31% ripe. Oats 85% jointed, 45% headed, 10% ripe. Corn fair to good, 96% emerged. Tobacco fair to poor, 90% set. Apples, peaches fair to poor. Cattle, sheep good to fair. Feed supplies 33% short, 67% adequate. Farm activities: Haying, livestock care, clipping pasture, general farm maintenance.

**WISCONSIN:** Temperatures averaged 71°, 4° above normal. Extremes 39°, 102°. Precipitation none to 0.70 in. Rain very scattered, insufficient.

Days suitable for fieldwork 6.5. Soil moisture 100% short. Crops 9% very poor, 41% poor, 44% fair, 6% good. Corn deteriorating; 2% very poor, 21% poor, 65% fair, 12% good. Average corn height 16 in., 20 in. 1987, 11 in. avg. Oats 60% headed, 56% 1987, 27% avg.; very short, filling poorly. First hay very rapid progress; 85% cut, 78% 1987, 58% avg. Yields low but quality good. Regrowth slow to none. All non-irrigated vegetables poor. Pastures very poor.

**WYOMING:** Temperatures above normal. Precipitation above normal southeast. Elsewhere dry.

Days suitable for fieldwork 7.0. Topsoil moisture 77% short, 23% adequate. Subsoil moisture 73% short, 27% adequate. Winter wheat 5% not jointed, none 1987, 5% avg.; 15% jointed, 5% 1987, 10% avg.; 25% boot, 20% 1987, 20% avg.; 55% headed, 75% 1987, 65% avg. Barley 25% not jointed, 20% 1987, 25% avg.; 30% jointed, 15% 1987, 20% avg.; 25% boot, 35% 1987, 30% avg.; 20% headed, 30% 1987, 25% avg. Spring wheat 35% not jointed, 10% 1987, 30% avg.; 30% jointed, 25% 1987, 30% avg.; 20%

(Continued to back cover)

**Crop Progress 1/**  
FOR WEEK ENDING JUNE 19, 1988

**WINTER WHEAT**  
**% HEADED**

	1988	1987	AVG.
ARK	100	100	NA
CALIF	100	100	100
COLO	91	89	90
GA	100	100	100
IDAHO	55	69	51
ILL	100	100	100
IND	100	100	100
KANS	100	100	100
MICH	98	100	90
MO	100	100	100
MONT	81	59	37
NEBR	100	100	98
N MEX	100	100	NA
N C	100	100	NA
OHIO	100	100	99
OKLA	100	100	100
OREG	88	100	96
S DAK	100	100	88
TEX	100	100	100
WASH	86	98	86

20 STATES 97 96 NA

EXCL. STATES WITH NA 97 96 93

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

NA - NOT AVAILABLE.

**WINTER WHEAT**  
**% HARVESTED**

	1988	1987	AVG.
ARK	87	88	66
CALIF	35	55	44
COLO	0	0	0
GA	90	92	88
IDAHO	0	0	0
ILL	10	51	17
IND	5	5	2
KANS	10	25	10
MICH	0	0	0
MO	28	57	23
MONT	0	0	0
NEBR	0	0	0
N MEX	7	50	NA
N C	36	51	57
OHIO	0	0	0
OKLA	75	70	35
OREG	0	0	0
S DAK	0	0	0
TEX	46	35	48
WASH	0	0	0

20 STATES 22 27 NA

EXCL. STATES WITH NA 23 27 17

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

NA - NOT AVAILABLE.

**SPRING WHEAT**  
**% HEADED**

	1988	1987	AVG.
IDAHO	27	27	18
MINN	67	49	16
MONT	24	5	5
N DAK	40	17	7
S DAK	65	64	33

5 STATES 45 28 12  
THESE 5 STATES PRODUCED 95% OF THE 1987 SPRING WHEAT CROP.

**GRAIN SORGHUM**  
**% PLANTED**

	1988	1987	AVG.
ARK	98	98	96
ILL	97	99	85
KANS	85	85	65
LA	97	99	98
MISS	98	100	94
MO	100	99	89
NEBR	100	98	95
OKLA	70	75	70
S DAK	87	89	84
TENN	96	94	86
TEX	91	90	90

11 STATES 90 90 80

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

**COTTON**  
**% SQUARING**

	1988	1987	AVG.
ALA	57	49	35
ARIZ	70	89	85
ARK	46	64	35
CALIF	10	50	36
GA	46	49	54
LA	28	47	36
MISS	50	63	42
MO	27	48	24
N MEX	30	25	17
N C	3	36	30
OKLA	5	3	0
S C	9	63	48
TENN	20	52	21
TEX	14	17	14

14 STATES 24 36 26

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

**CORN**  
**% SILKING**

	1988	1987	AVG.
COLO	0	0	0
GA	58	68	68
ILL	0	NA	NA
IND	0	0	0
IOWA	0	0	0
KANS	0	1	1
KY	0	1	NA
MICH	0	0	0
MINN	0	0	0
MO	0	0	0
NEBR	0	0	0
N C	6	7	15
OHIO	0	0	0
PA	0	0	0
S DAK	0	0	0
TEX	60	57	59
WIS	0	0	0

17 STATES 2 NA NA

EXCL. STATES WITH NA 3 3 3

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

NA - NOT AVAILABLE.

**SOYBEANS**  
**% PLANTED**

	1988	1987	AVG.
ALA	76	84	78
ARK	75	89	77
GA	79	81	82
ILL	100	100	97
IND	99	99	94
IOWA	100	100	100
KANS	90	85	65
KY	80	82	60
LA	75	84	86
MICH	97	100	95
MINN	100	100	100
MISS	74	86	77
MO	90	95	78
NEBR	100	99	96
N C	73	69	75
OHIO	98	99	96
S C	79	77	75
S DAK	100	98	92
TENN	80	85	70

19 STATES 93 95 89

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

1/ AVERAGES IN THESE SUMMARIES ARE FOR THE YEARS 1983 - 1987.

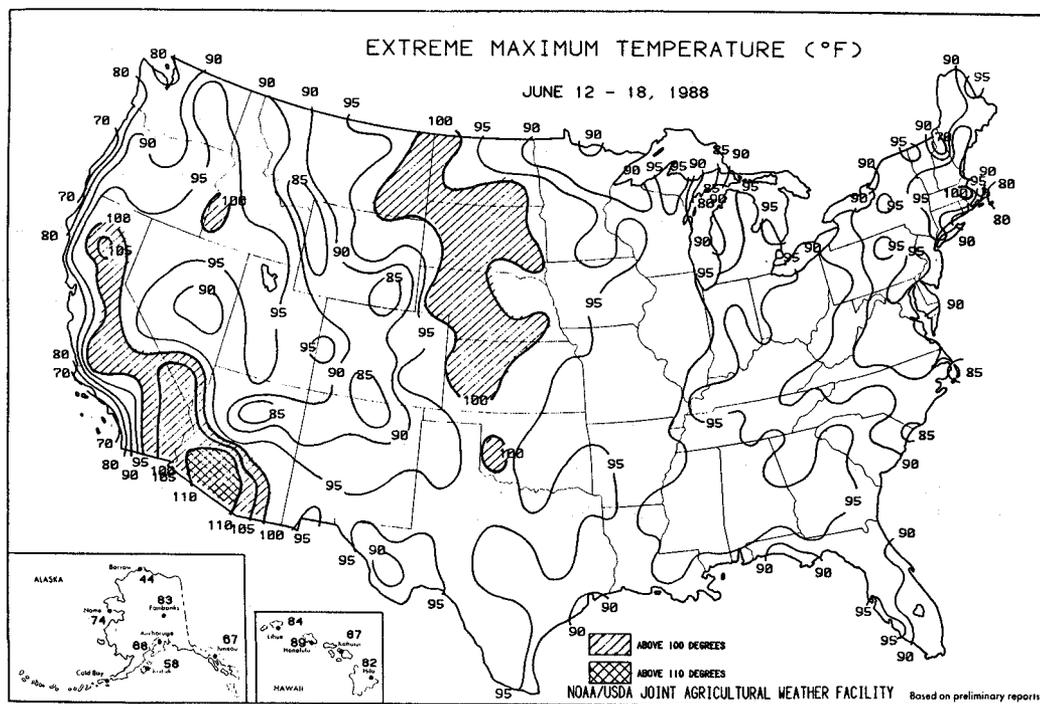
Crop Condition

FOR WEEK ENDING JUNE 19, 1988

SOYBEANS						SPRING WHEAT						GRAIN SORGHUM					
STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX
ALA	4	56	38	2	0	IDAHO	0	11	23	50	16	ARK	0	28	56	16	0
ARK	8	29	55	8	0	MINN	24	42	34	0	0	ILL	2	24	60	14	0
GA	0	23	50	27	0	MONT	33	38	20	8	1	KANS	6	11	22	45	16
ILL	1	14	64	21	0	N DAK	23	45	32	0	0	LA	14	34	46	6	0
IND	4	29	65	2	0	S DAK	18	37	34	9	2	MISS	10	30	50	10	0
IOWA	1	12	53	32	2							MO	8	44	46	2	0
KANS	2	6	34	38	20							NEBR	0	5	60	35	0
KY	12	32	53	3	0							OKLA	0	5	20	75	0
LA	10	31	47	12	0							S DAK	4	6	41	47	2
MICH	10	20	35	30	5							TENN	8	19	71	2	0
MINN	1	16	61	22	0							TEX	3	13	32	45	7
MISS	10	45	35	5	5												
MO	6	38	55	1	0												
NEBR	0	2	47	50	1												
N C	0	10	37	52	1												
OHIO	7	27	45	21	0												
S C	2	5	62	31	0												
S DAK	0	4	21	66	9												
TENN	12	28	59	1	0												

RICE						CORN						WINTER WHEAT					
STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX
ARK	0	13	64	23	0	COLO	0	3	13	69	15	ARK	0	0	12	41	47
CALIF	0	5	20	70	5	GA	10	23	53	14	0	CALIF	0	5	15	65	15
LA	0	4	30	66	0	ILL	1	12	44	43	0	COLO	1	6	17	62	14
MISS	10	25	40	25	0	IND	2	38	58	2	0	GA	0	1	11	46	42
TEX	0	0	14	72	14	IOWA	1	7	51	39	2	IDAHO	0	9	13	58	20
						KANS	9	8	23	45	15	ILL	1	12	41	43	3
						KY	10	22	60	8	0	IND	6	33	59	2	0
						MICH	5	20	35	35	5	KANS	2	33	49	13	3
						MINN	3	15	58	24	0	MICH	5	20	45	25	5
						MO	6	41	48	5	0	MO	1	15	57	26	1
						NEBR	0	0	48	50	2	MONT	21	36	28	14	1
						N C	1	7	38	51	3	NEBR	0	21	60	19	0
						OHIO	6	24	45	24	1	N MEX	0	40	30	30	0
						PA	1	9	33	40	17	N C	0	1	13	76	10
						S DAK	3	3	21	66	7	OHIO	4	25	47	23	1
						TEX	1	11	27	48	13	OKLA	0	0	15	70	15
						WISC	2	21	65	12	0	OREG	0	0	1	82	17
												S DAK	18	22	42	16	2
												TEX	3	20	41	31	5
												WASH	0	5	40	45	10



## International Weather and Crop Summary

June 12-18, 1988

### HIGHLIGHTS:

**UNITED STATES** ... The lack of moisture and high temperatures stress crops and slow growth throughout most of the eastern half of the Nation. Precipitation does little to ease drought and improve crop condition in the northern Great Plains.

**USSR** ... In the Western USSR, widespread heavy rain covers most crop areas. In the New Lands, hot and dry weather stress spring crops.

**EUROPE** ... Moderate to heavy rain causes delays in winter grain harvest across the south. Rain favors heading to filling winter grains in the east.

**SOUTH ASIA** ... Heavy rain causes local flooding in the east and southwest. Dry weather covers the southern interior, likely causing some planting delays.

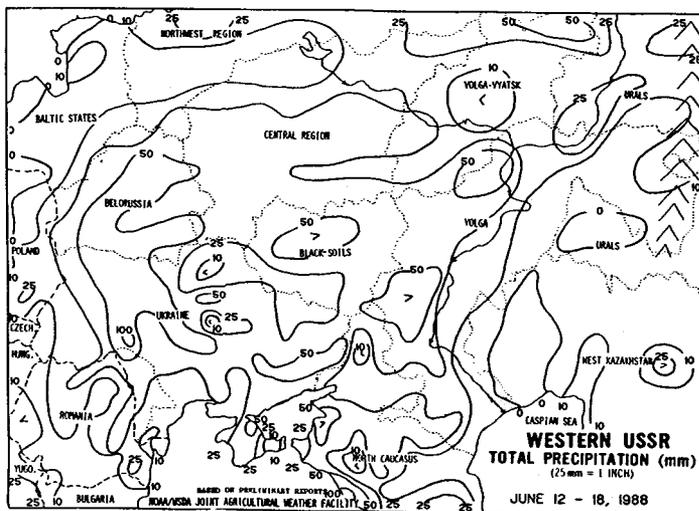
**EASTERN ASIA** ... Heavy rain falls over much of southern China, possibly causing a resumption of flooding in the southeast. Hot, dry weather stresses crops in the North China Plain.

**SOUTHEAST ASIA** ... Drier weather covers vegetative Thai corn. Showers continue across the Philippines, boosting moisture for early grain growth.

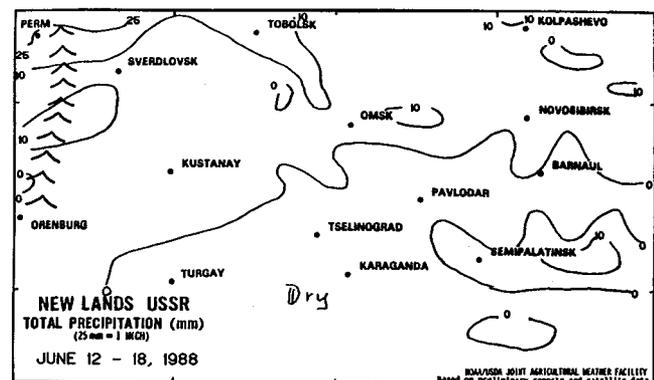
**SOUTH AMERICA** ... In Argentina, light rain helps wheat planting in some areas but moisture is limited. More rain falls over Brazil's south-central wheat areas. Mild weather prevails.

**AUSTRALIA** ... Moderate to heavy rain continues across southern winter grain areas.

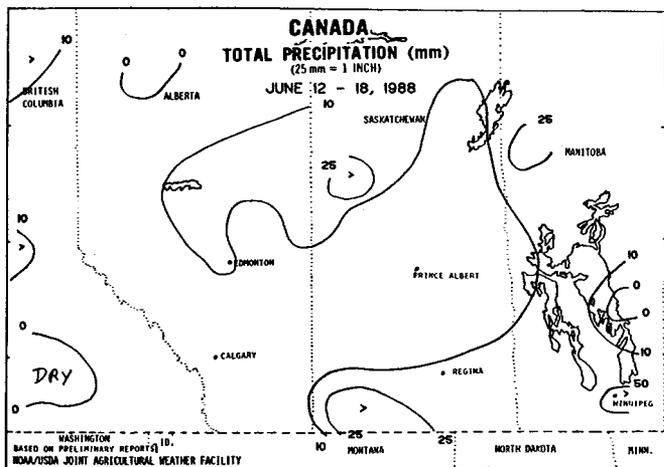
**MEXICO** ... Beneficial rain falls over many crop areas, helping crop emergence in the Southern Plateau.



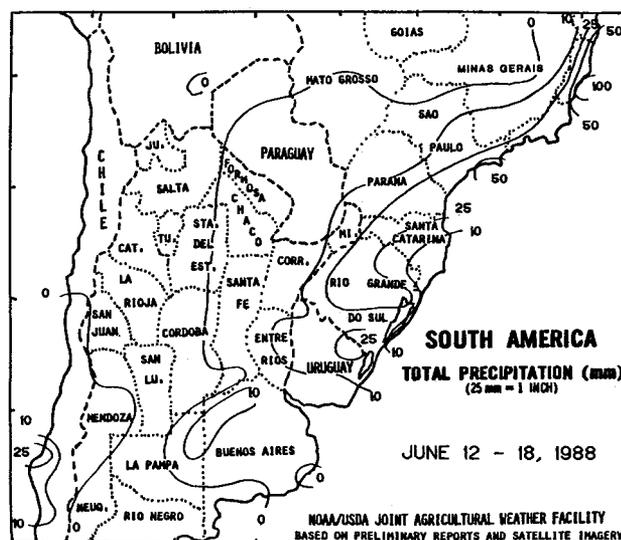
**USSR** ... In Western USSR, a slow moving area of low pressure brought widespread heavy rain to most all of the region except for the Baltics. Very heavy rain (50-100mm, with isolated amounts in excess of 100mm) may have caused flooding in sections of the Ukraine and North Caucasus. The rainfall brought much needed relief to winter grains over sections of southern Volga-Vyatsk, northern Volga Valley, and northwestern Black Soils, where persistent dryness had begun to stress crops. Cooler temperatures covered most growing areas, slowing crop development and decreasing evaporative loss rates. For the week, mean temperatures ranged from 4 degrees C below normal in Belorussia and the western Ukraine to 2 degrees C above normal in the eastern Volga Valley and North Caucasus. Winter grains range from vegetative in the north to filling in the south.



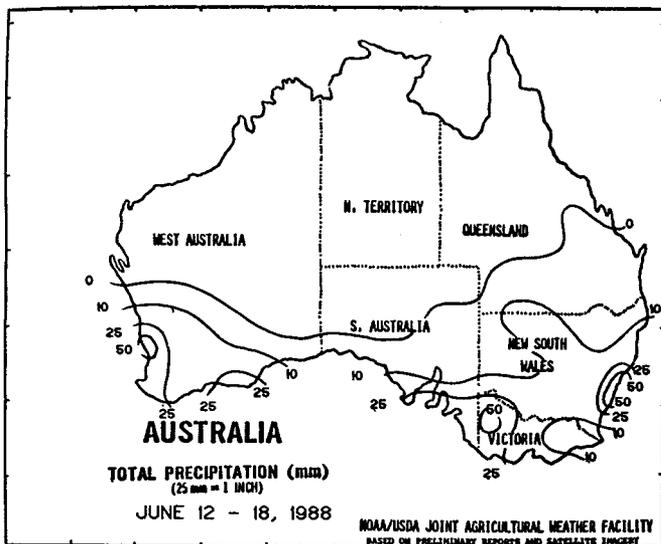
In the New Lands, hot and dry weather developed over much of the region, with maximum temperatures reaching the 35-40 degrees C range over the southern Urals, north-central Kazakhstan, and Western Siberia. The excessive heat greatly increased water demands by most crops, which up until now have had sufficient soil moisture. Light rain (less than 10mm), spreading from a weather system affecting western USSR, provided limited relief to crops in parts of the southern Urals, north-central Kazakhstan, and Western Siberia by week's end. Mean weekly temperatures were above normal over the entire region, with departures as much as 8 degrees C above normal in north-central Kazakhstan.



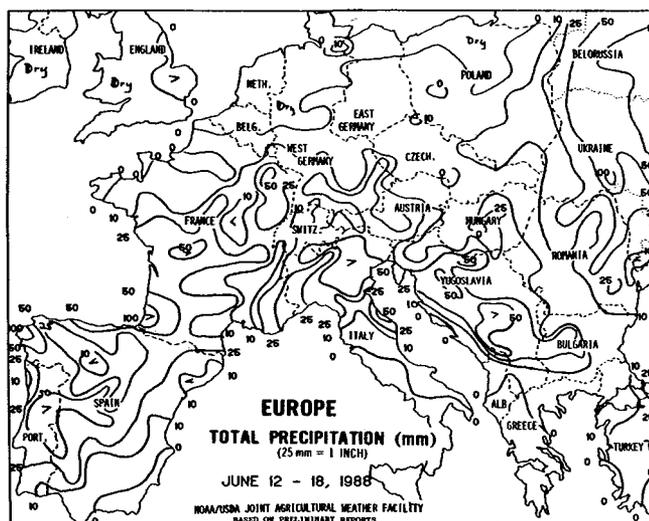
**CANADA** ... Much needed rain (10-25mm or more) covered vegetative crops in southern Saskatchewan and Manitoba, with heaviest rain (25-50mm or more) in chronically dry regions of southwestern Saskatchewan and south-central Manitoba. Light rain (less than 10mm) returned to western crop regions following last week's beneficial rain. By week's end, however, warmer weather returned to much of the region, increasing evaporation rates and hastening crop growth. More rain is needed across the Prairie grain belt to ensure proper spring wheat establishment. Since early June, rain has reached all but northeastern Saskatchewan's crop regions, but warmer-than-normal weather has increased moisture loss through evaporation.



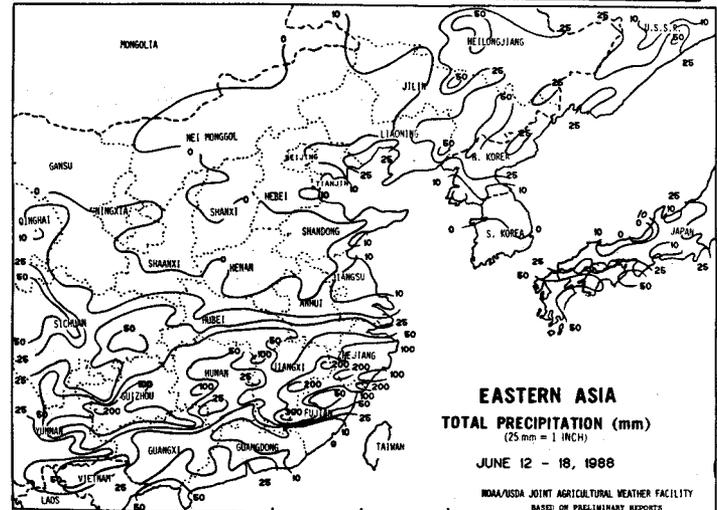
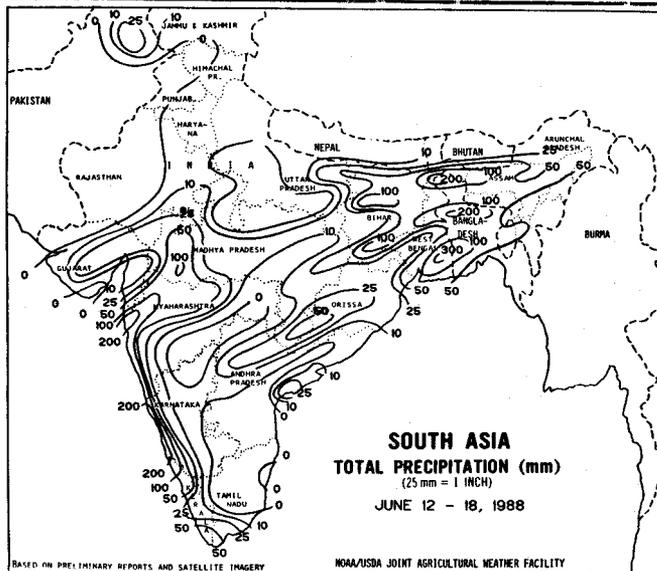
**SOUTH AMERICA** ... In Argentina, light showers fell over Buenos Aires, producing 1-6mm of weekly rainfall in most areas and more significant amounts of 10-15mm in the northwest portion of the province. Mostly dry weather prevailed elsewhere in the wheat area, except for an isolated shower of 9mm in southern Santa Fe. The moisture in northwestern Buenos Aires was beneficial for planting and emergence, but more substantial rainfall is needed during the planting season for wheat establishment. In south-central Brazil, showers continued over wheat areas of Rio Grande do Sul and extended northward to cover much of Parana. Weekly rainfall averaged 10-36mm but diminished to less than 10mm in northwestern Parana. Mild weather and light showers prevailed in the coffee areas.



**AUSTRALIA** ... Moderate to heavy rain (greater than 25mm) continued across winter crop areas of Western Australia, South Australia, and Victoria, causing late planting delays but benefiting the large fraction of the crop already planted. Ample soil moisture and above-normal weekly mean temperatures (as much as 6 degrees C in Western Australia) favored rapid crop establishment and development in most southern growing areas. In eastern crop areas, light to moderate rain (5 to 15mm) caused only minor planting and late summer harvest delays. Some crop areas of northern New South Wales and southern Queensland are becoming too dry, however, and will require further rainfall to ensure proper fall crop establishment.

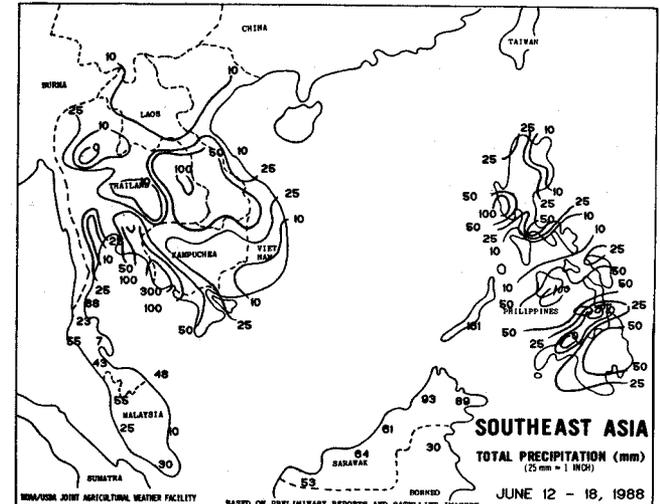
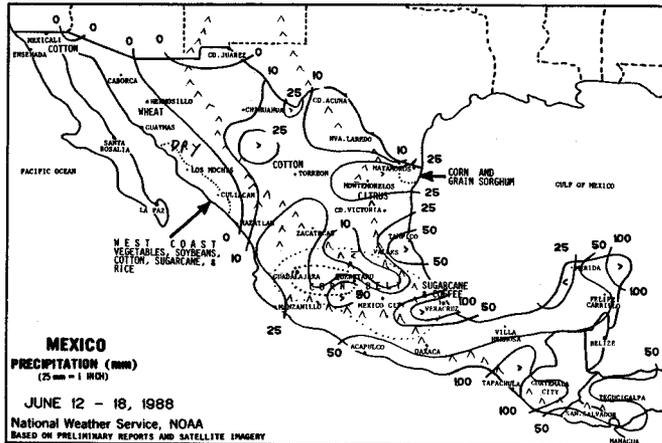


**EUROPE** ... Moderate to heavy rain (greater than 25mm) fell across northern Spain, southern France, Italy's Po Valley, Yugoslavia, and Bulgaria. The rain benefited summer crops but slowed dry down of maturing winter grains and caused harvest delays. In eastern Europe, light to moderate rain (less than 20mm) favored heading to filling winter grains and mostly vegetative summer crops from southern Poland southward to Romania. Northern crop areas from the United Kingdom eastward to northern Poland remained mostly dry. Soil moisture was adequate for crops across Europe. Weekly average temperatures trended below normal across all but northwestern Europe where they were normal to above normal.



**SOUTH ASIA** ... Mostly heavy showers (50-100mm or more) continued along India's southwest coast, promoting some local flooding. Amounts exceeded 200mm as far north as Maharashtra. Dry weather covered interior crop areas from Andhra Pradesh to southern Maharashtra, but the heaviest rain of the season reached central crop areas from Gujarat and central Maharashtra to eastern Madhya Pradesh, with rainfall ranging from 10-98mm. Planting is usually widespread in the south by mid-June, but dry weather has likely caused delays in some interior crop regions. Scattered, mostly light rain continued in the northwest but temperatures continued seasonably hot, reaching the mid-40's C. In the east, locally heavy showers (100-300mm or more) from Bihar to Bangladesh likely caused some flooding, but rainfall ranged from 25-100mm from Orissa eastward, boosting irrigation reserves for vegetative rice.

**EASTERN ASIA** ... Heavy rain (greater than 25mm) fell across much of southern China, helping to relieve heat and dryness in extreme southern China but causing delays in early crop rice harvest which is beginning across the region. Very heavy rain (100-200mm, with isolated amounts up to 339mm) returned to sections of Zhejiang and Fujian, possibly bringing a resumption of flooding. Moderate to heavy rain also continued across northeastern crop areas. Hot and dry weather covered much of the North China Plain, with maximum temperatures reaching the 35-40 degrees C range for much of the week. The heat favored a rapid dry down of maturing winter grains but stressed summer crops and late planted winter grains which are still filling. Mean temperatures for the week were above normal in all growing areas except for western and northern areas, where they were below normal.



**MEXICO** ... Beneficial rain fell over many of the parched crop areas. Weekly rainfall averaged 10-27mm in the north-central range and cotton areas, providing some respite from dryness, and 20-84mm in the western half of the Southern Plateau corn belt. Elsewhere in the corn belt, locally heavy showers (25-147mm) fell over much of the east, while a small narrow pocket of light showers (1-7mm) extended from east-central to north-central portions of the Southern Plateau. The moisture was timely for corn planting and emergence and for earlier planted crops in vegetative growth. Heavy showers (45-142mm) also covered most of the Yucatan peninsula. This week's area of no rainfall shrank considerably to include the west coast farming region and far northwest.

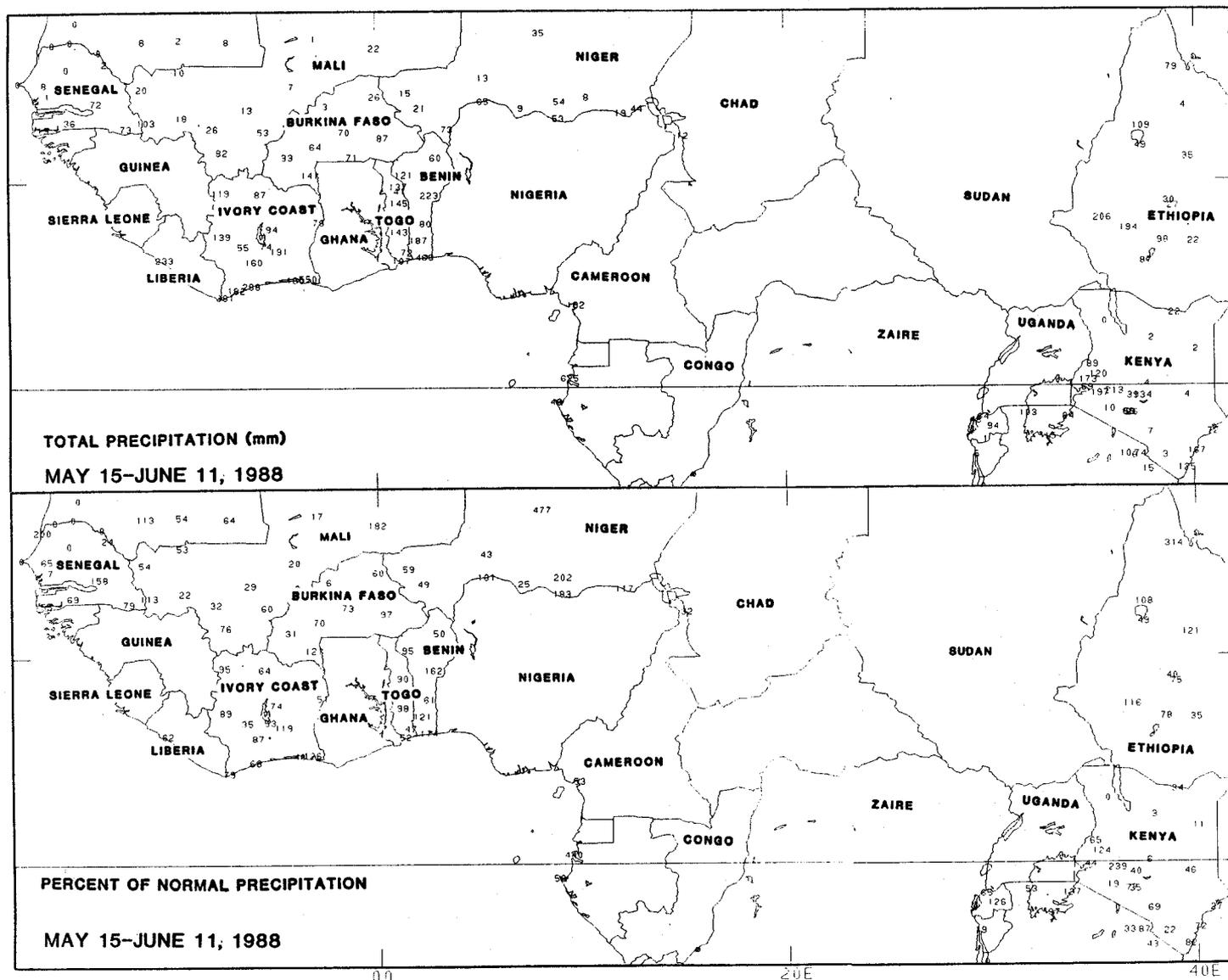
**SOUTHEAST ASIA** ... Rainfall diminished over northern and central Thailand, ranging from 1-22mm over most corn regions. However, due to this season's ample rainfall, moisture levels continued favorable for vegetative growth. Moderate to heavy rain (25-50mm or more) continued over eastern and southern Thailand, with pockets of excessive rainfall (200-365mm) over southern Thailand and western Kampuchea. Light to moderate rain (10-50mm or more) fell elsewhere in Indochina, but dry pockets returned to portions of northern and southeastern Vietnam. In the Philippines, widespread showers (25-50mm or more) covered most grain regions, improving conditions for planting and vegetative growth.

### AFRICAN AGRICULTURAL WEATHER SUMMARY

In eastern Africa, recent moderate to heavy rain continued over central and western Ethiopia, improving conditions for vegetative grains. Drier-than-normal weather persisted to the north and east, reflecting the unfavorable weather pattern that has occurred since April. In contrast, conditions have improved recently in the west. Satellite imagery in early June depicted mostly dry weather over Somalia and frequent, scattered showers over the southern half of Sudan, reflecting May's rainfall pattern. Planting in Sudan is likely underway. Mostly dry weather covered crops in Kenya and Tanzania, though recent pockets of heavy rain (50-100mm or more) occurred in southwestern Kenya and coastal Tanzania. Drier weather during May has reduced moisture for crops in northeastern Tanzania. Drier weather since mid-May in western Kenya brought some relief to crop regions flooded from previous, excessive rainfall. Corn in

Kenya is normally reproductive during June, but the earlier, inundating rains likely necessitated local replanting.

In western Africa, variable rainfall (25-100mm or more) continued over most crop regions in the coastal countries, reflecting the generally favorable May rainfall pattern which has promoted planting and establishment. Southernmost grains are reproductive to filling, and Ghana's cocoa crop is usually flowering. Recent beneficial rain (10-50mm) for the second week in southern and western Mali, Burkina Faso, and Niger improved early planting conditions. During May, occasional rain reached southern Senegal and southern Mali. Early May rain in Burkina Faso likely spurred planting in the southern half of the country. Planting to the north, from Senegal and Mauritania to Niger, usually occurs from June to mid-July.



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(Continued from p. 21)

boot, 50% 1987, 30% avg.; 15% headed, 15% 1987, 10% avg. Oats 50% not jointed, 25% 1987, 35% avg.; 30% jointed, 35% 1987, 30% avg.; 20% boot, 35% 1987, 30% avg.; small amount headed, 5% 1987, 5% avg. Most potatoes emerged. Dry beans 90% emerged, 85% 1987. Sugarbeets 80% thinned, 65% 1987, 75% avg. Alfalfa 1st cutting 20%, 35% 1987, 25% avg. Other hay 5%, 10% 1987, 5% avg. Livestock moved to summer ranges; 80% cattle, 85% sheep.

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