

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

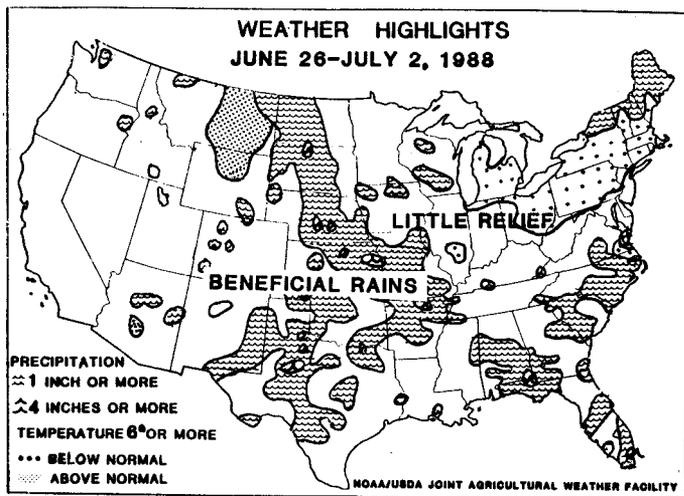
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July 6, 1988

National Weather Summary

June 26-July 2, 1988



HIGHLIGHTS: Cooler air brought relief from record heat to much of the central and eastern United States, while abundant rainfall relieved drought in parts of the Plains States and the South. Dryness continued in the eastern Mississippi Valley, Ohio Valley, and Mid-Atlantic States.

SUNDAY...A welcomed cold front continued to trek slowly southward across the central Plains and Ohio Valley, bringing sharply lower temperatures to much of the Midwest and northern Plains States. Ahead of the front, record-high temperatures baked the Tennessee Valley. An upper level disturbance contributed to heavy rains in parts of Texas and Oklahoma.

MONDAY...The cold front continued southward to the Gulf States, while high pressure in its wake brought clear skies and pleasant temperatures from the Mississippi Valley eastward to the eastern seaboard. However, high temperatures broke records in the Dakotas, and hot weather prevailed in the Deep South. Thunderstorms dotted the countryside in the South and in the Rockies.

TUESDAY...A fresh cold front pushed southward from Canada across the Great Lakes region, bringing much needed moderate-to-heavy rainfall to Wisconsin, Illinois, Iowa, and Nebraska. Temperatures close to 100 degrees prevailed in the Plains States ahead of the front.

WEDNESDAY...The southward-advancing cold front brought moisture to parched farmlands in the western Corn Belt, including Illinois, Iowa, and Missouri.

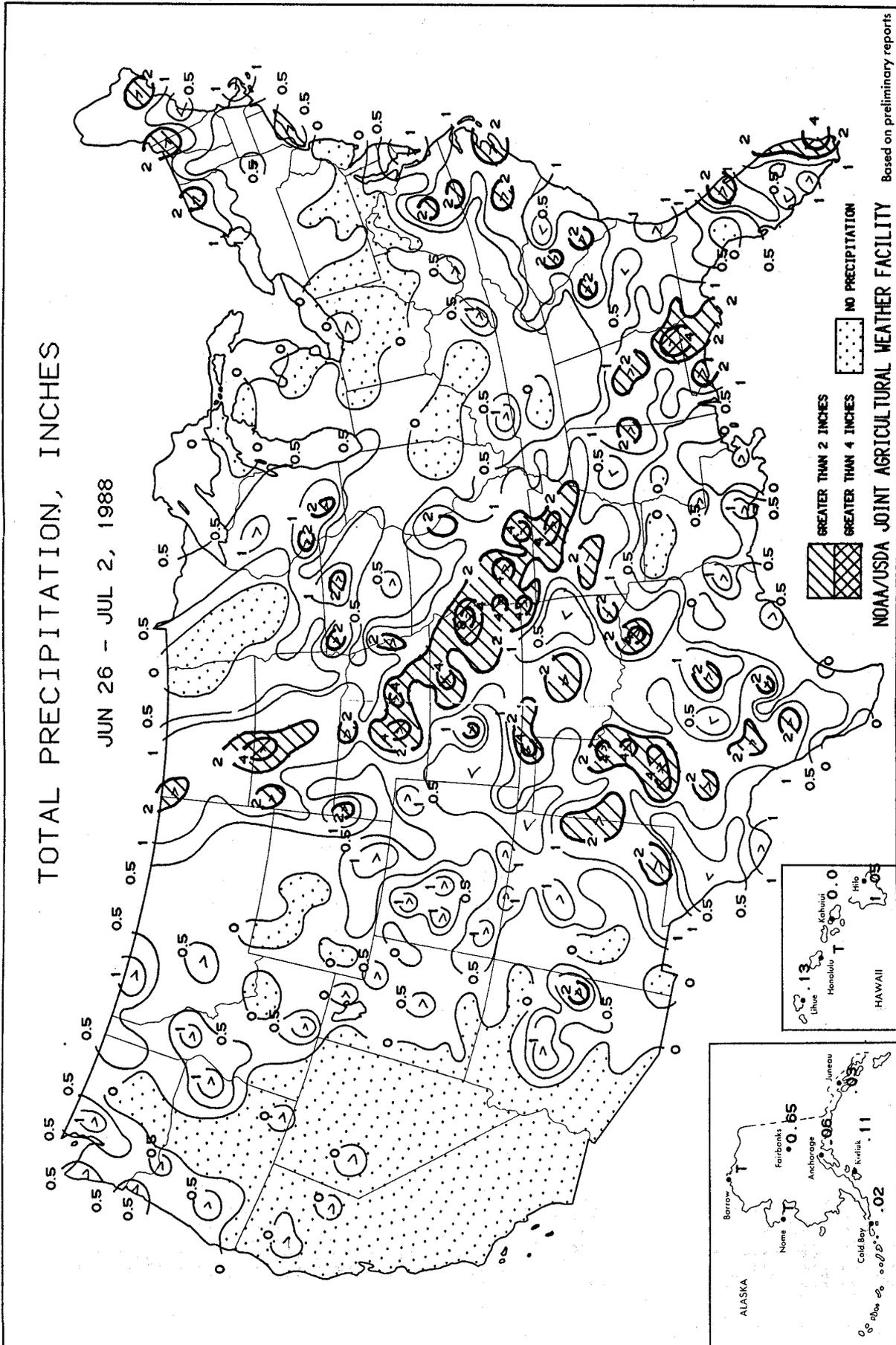
THURSDAY...Heavy rains fell across the southern Plains States as the front continued to drift southward. Over 1 inch fell in Kansas, Nebraska, and Missouri.

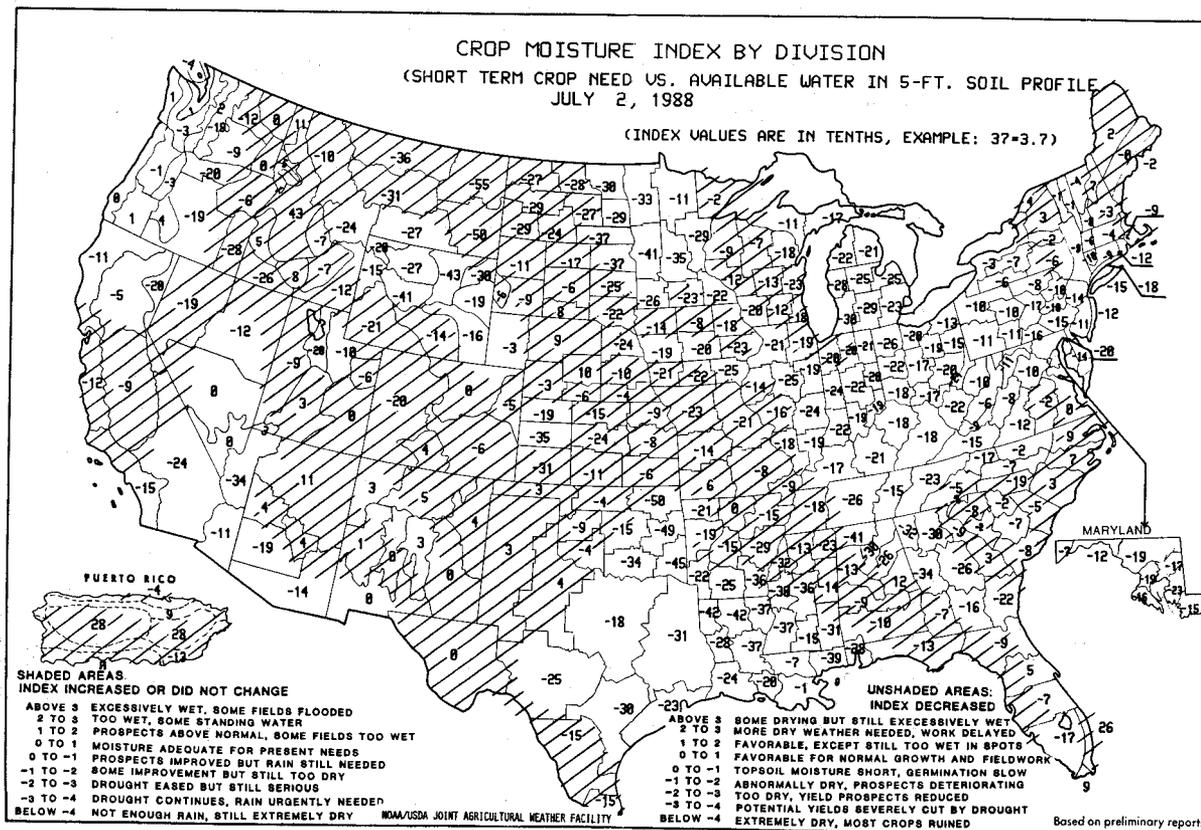
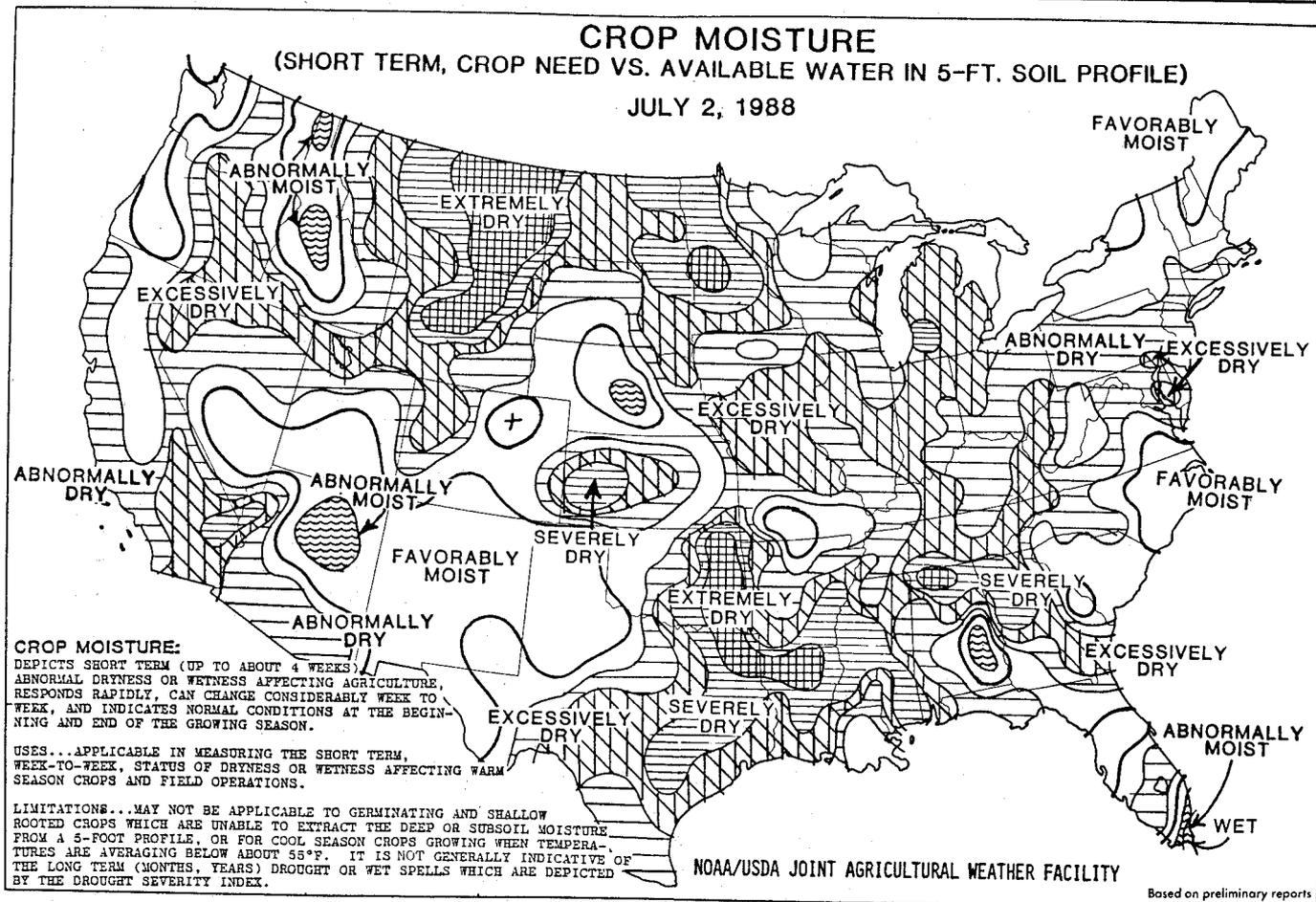
FRIDAY...The front became stationary across the Gulf States and triggered numerous thunderstorms. High pressure, centered over the Great Lakes, brought fair skies and pleasant temperatures to most of the Midwest. The East had record-low temperatures in the morning. Light rain, drizzle, and showers fell across the Plains.

SATURDAY...High pressure dominating the central and eastern United States delivered sunny skies and moderate temperatures. Showers continued across the South.

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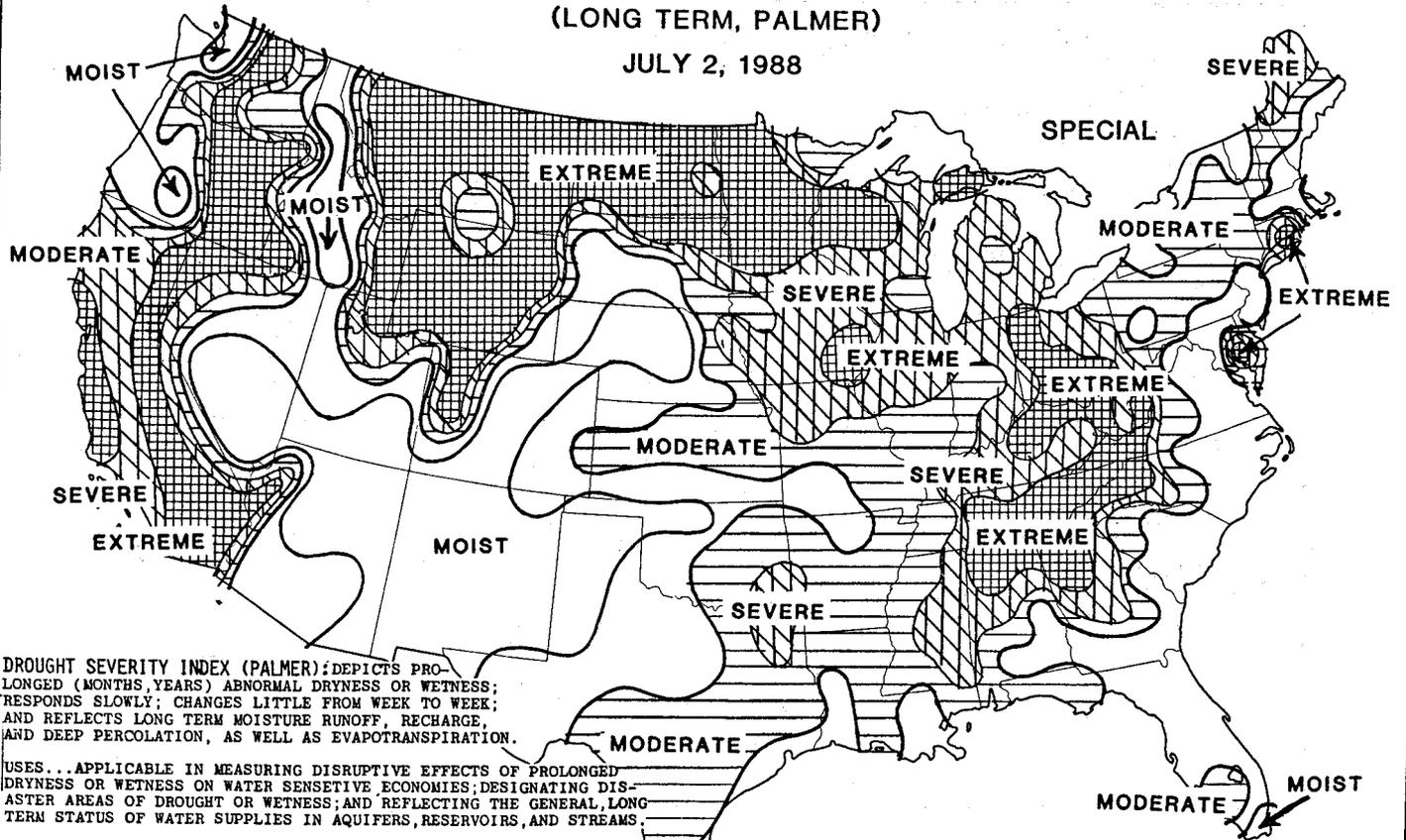




DROUGHT SEVERITY

(LONG TERM, PALMER)

JULY 2, 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 DISTASTER 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

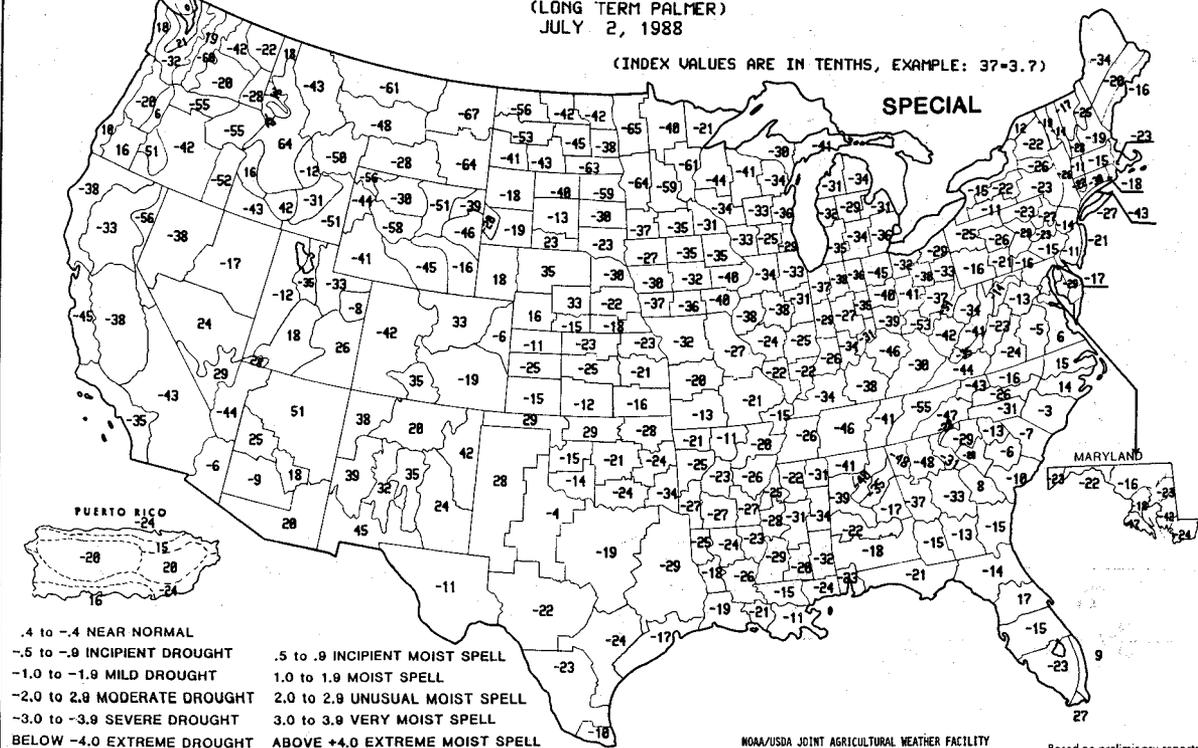
Based on preliminary reports

DROUGHT SEVERITY INDEX BY DIVISION

(LONG TERM PALMER)

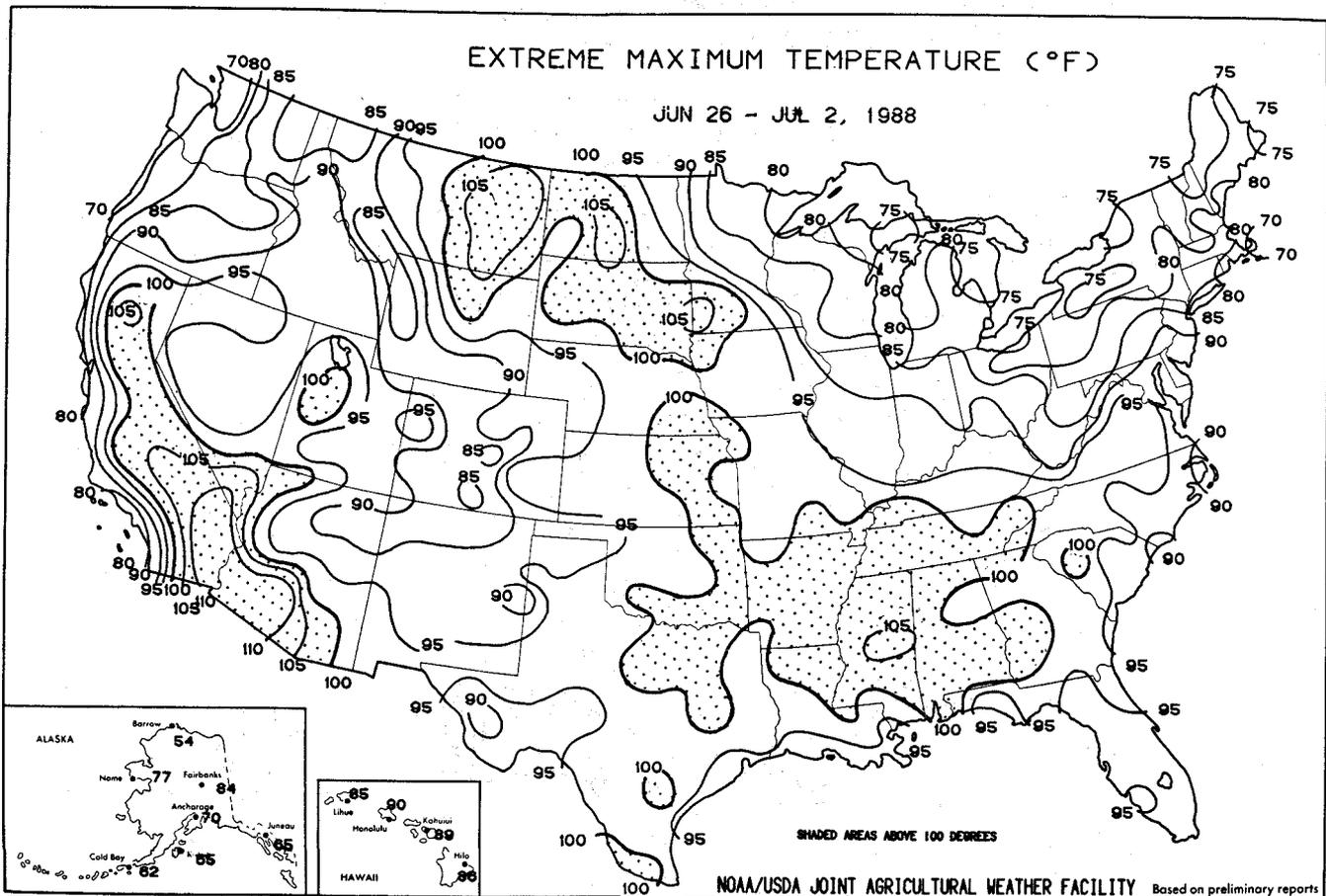
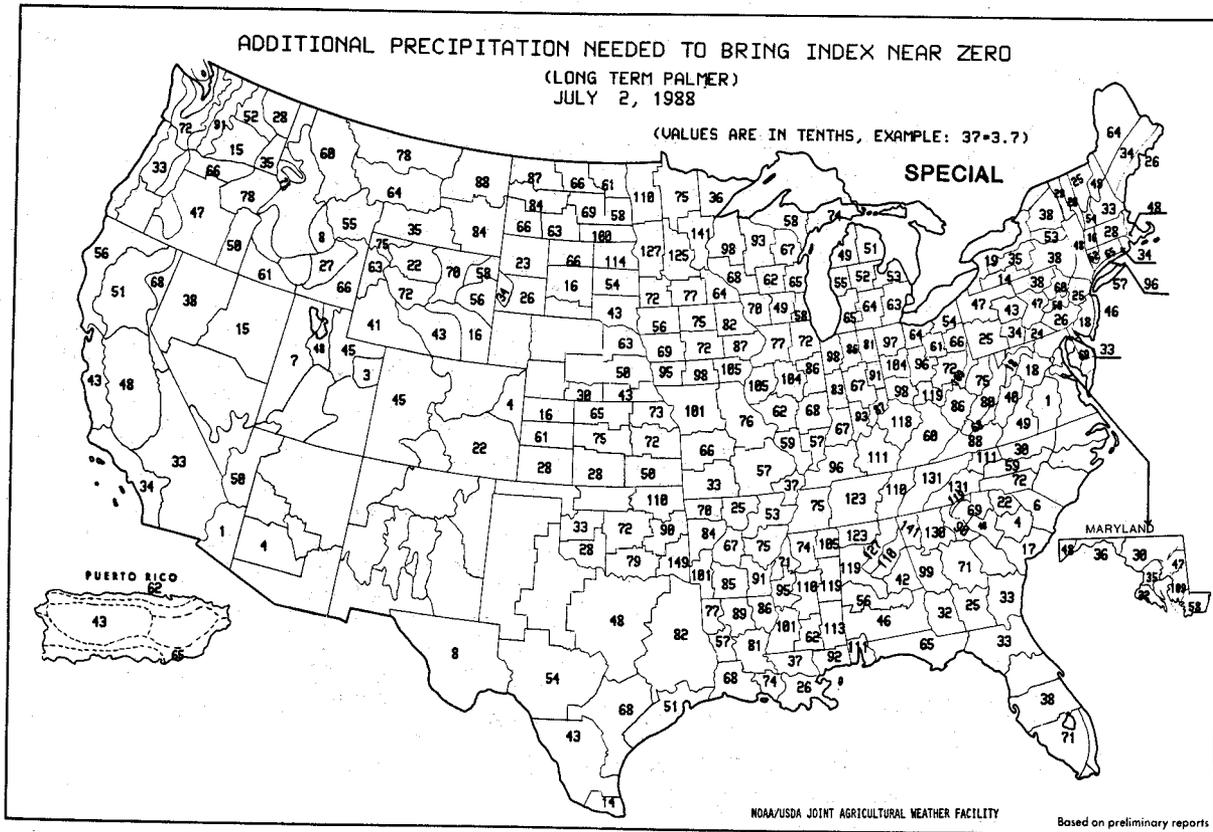
JULY 2, 1988

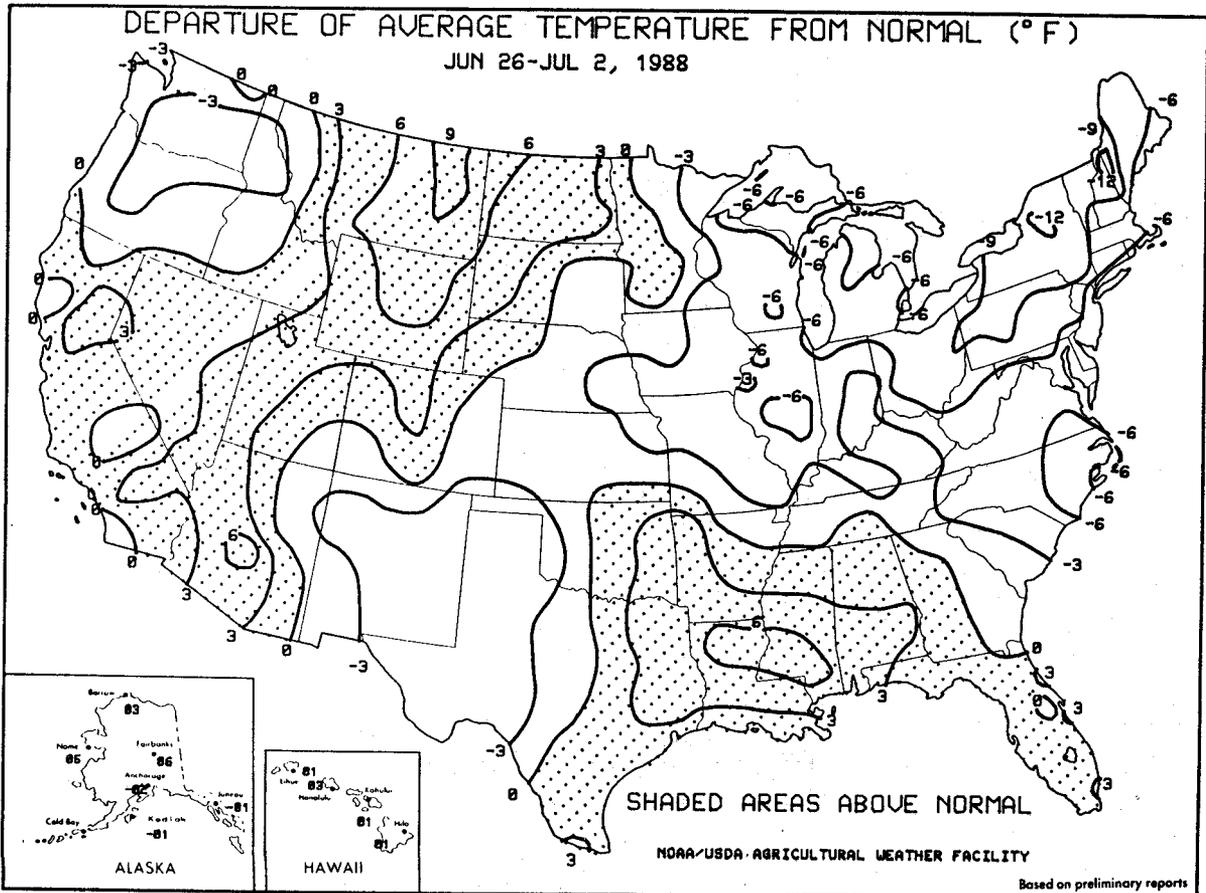
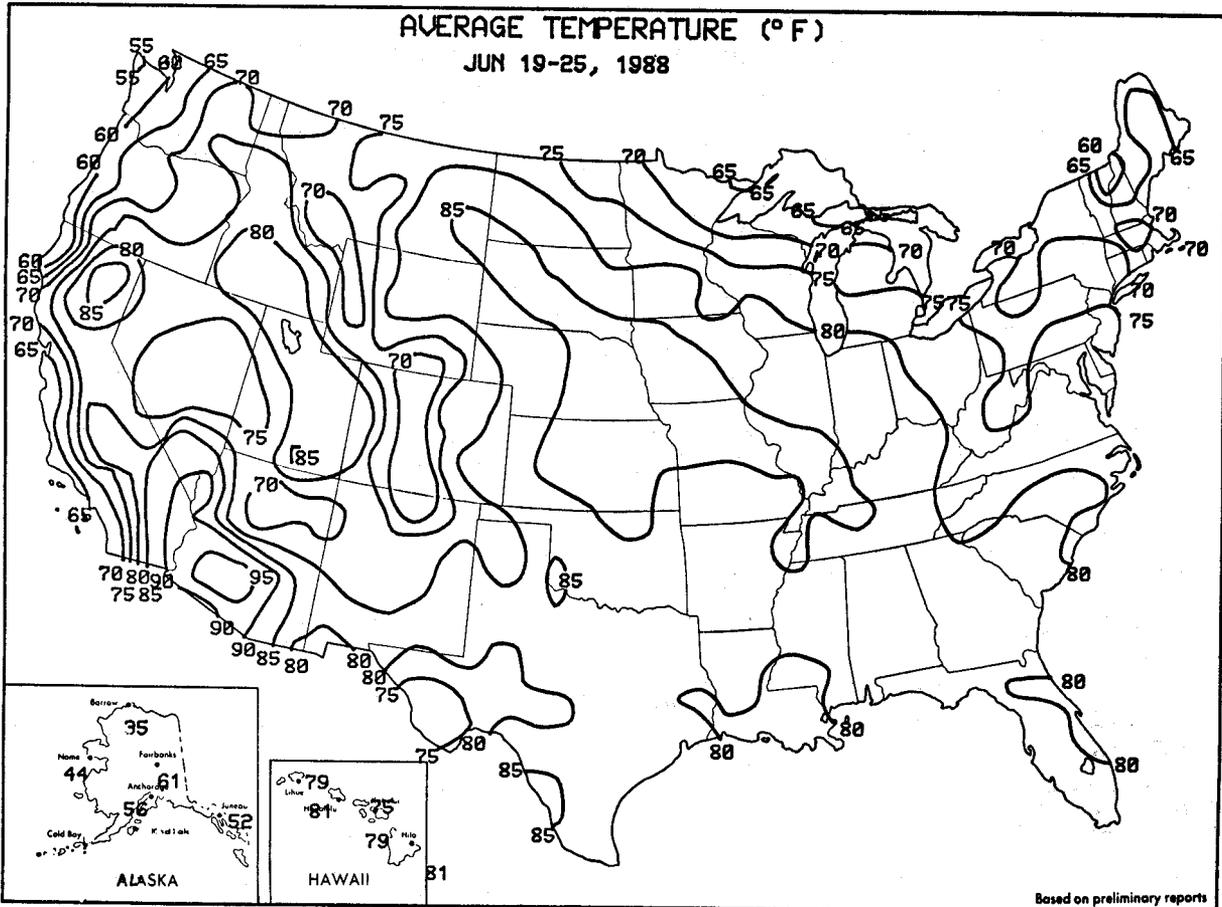
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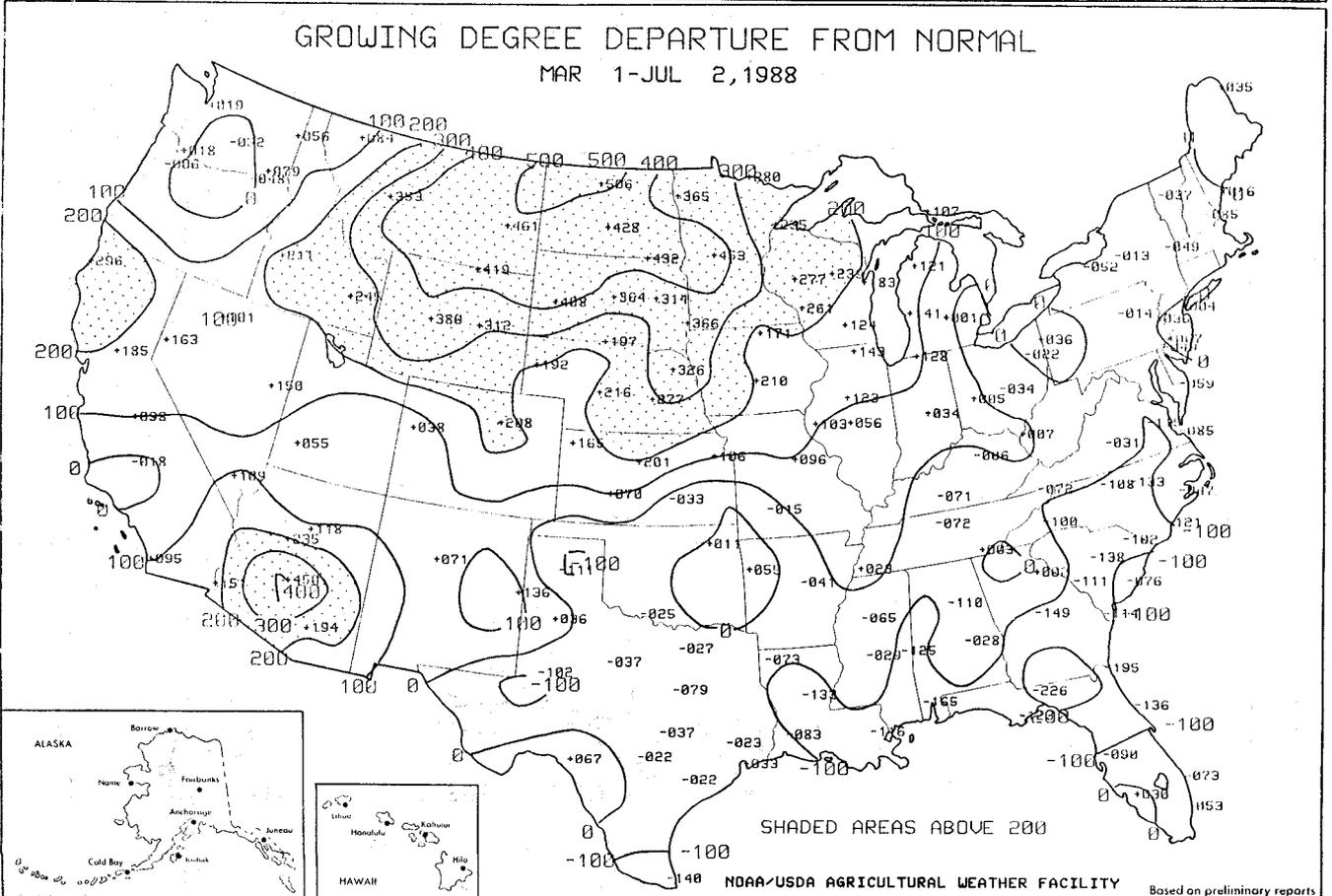
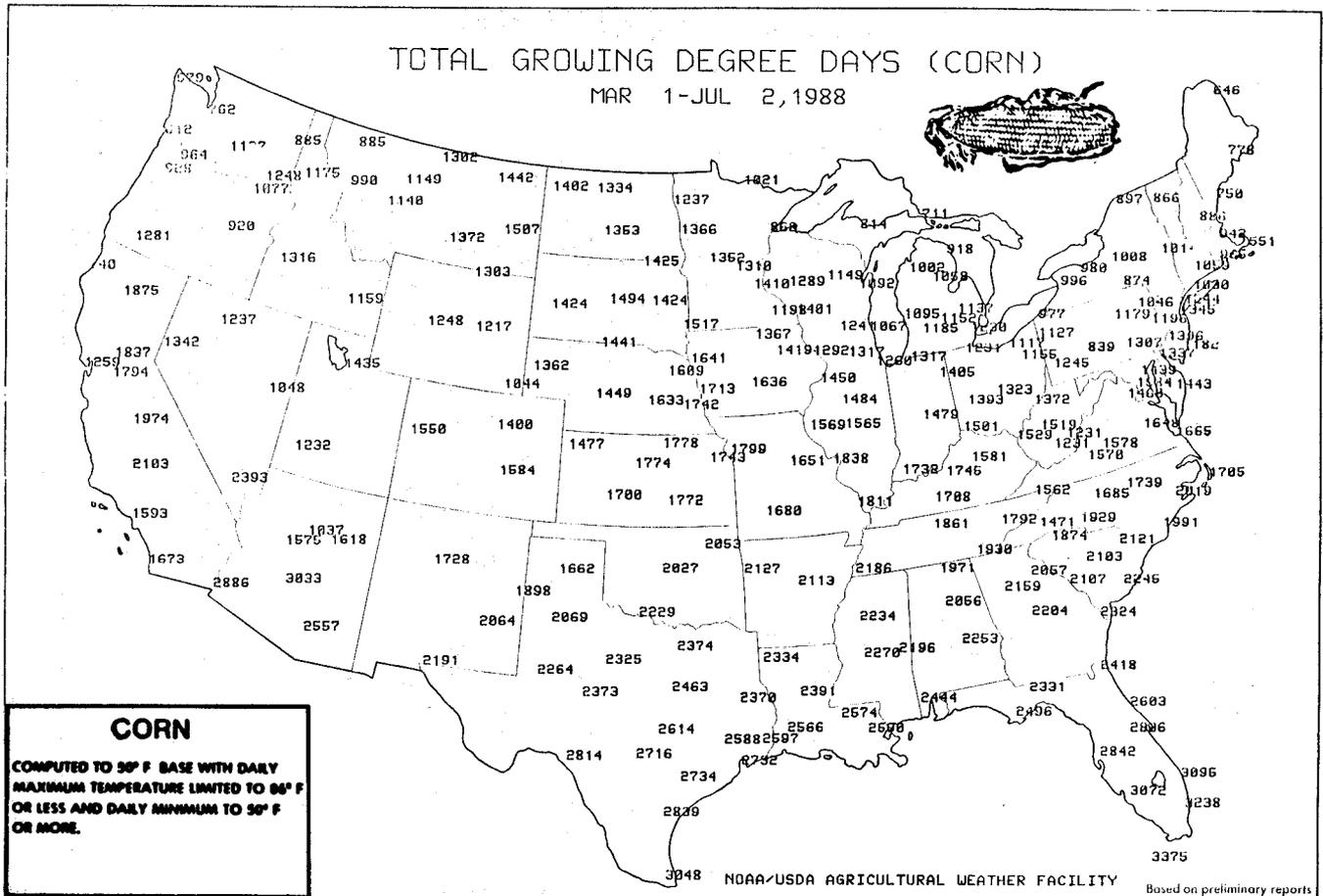


NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports







National Weather Data for Selected Cities

Weather Data for the Week Ending July 2, 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
AL BIRMINGHAM	91	71	100	69	81	2	.3	-.7	.3	-.9	21	18.4	55	92	43	4	0	2	0
MOBILE	97	75	100	71	86	5	.3	-1.2	.2	2.5	46	28.0	80	96	41	7	0	2	0
MONTGOMERY	95	72	101	70	84	3	2.7	1.7	1.6	3.2	85	28.9	108	97	50	7	0	3	0
AK ANCHORAGE	61	50	69	47	56	-2	.1	-.3	.1	.8	64	3.1	66	87	57	0	0	1	0
BARROW	46	34	54	32	40	3	.7	-.1	.4	.2	39	.4	29	97	74	0	2	0	0
FAIRBANKS	78	59	84	54	68	7	.7	-.3	.4	2.2	156	4.5	123	73	34	0	0	0	0
JUNEAU	61	46	65	43	53	-1	.4	-.4	.2	2.2	68	21.5	106	97	57	0	0	4	0
KODIAK	57	44	65	39	51	-1	.1	-.7	.1	1.7	39	36.4	130	95	72	0	0	3	0
NOME	63	44	77	38	54	5	T	-.4	T	1.4	105	5.3	124	86	49	0	0	0	0
AZ PHOENIX	107	86	110	84	97	6	T	-.1	T	T	10	2.4	90	36	15	7	0	0	0
PRESCOTT	89	59	92	57	74	3	1.4	1.0	.7	1.5	204	5.9	87	67	22	5	0	5	1
TUCSON	103	74	105	70	88	3	.1	-.2	.1	.2	34	2.6	88	45	16	7	0	5	1
YUMA	107	79	109	75	93	2	0	0	0	.1	1.1	1.1	123	52	18	7	0	1	0
AR FORT SMITH	99	74	103	73	87	6	.1	-.6	.1	1.8	46	17.3	82	94	40	7	0	2	0
LITTLE ROCK	92	71	102	66	82	1	1.4	.6	.8	2.4	62	17.7	65	82	53	5	0	2	2
CA BAKERSFIELD	97	64	104	61	80	-2	0	0	0	0	33	3.0	79	54	20	7	0	0	0
EUREKA	63	52	66	50	58	2	0	0	0	2.2	427	15.9	71	93	73	0	0	0	0
FRESNO	97	63	103	60	80	2	0	0	0	T	50	5.5	79	59	18	7	0	0	0
LOS ANGELES	74	63	77	60	68	1	0	0	0	T	0	4.6	56	89	67	0	0	0	0
REDDING	95	67	102	60	81	0	0	0	0	1.7	210	16.9	69	49	16	5	0	0	0
SACRAMENTO	97	60	104	56	78	4	0	0	0	.2	154	6.9	65	70	18	7	0	0	0
SAN DIEGO	71	63	75	62	67	-1	0	0	0	0	0	6.7	104	91	70	0	0	0	0
SAN FRANCISCO	76	53	80	51	64	2	0	0	0	.6	545	7.3	59	86	38	0	0	0	0
CO DENVER	85	59	94	51	72	1	-.1	-.3	.1	1.3	77	8.5	102	84	33	1	0	1	0
GRAND JUNCTION	91	64	97	60	77	0	-.1	.1	.1	.2	48	4.3	114	67	24	5	0	2	0
PUEBLO	89	61	96	56	75	0	.6	.3	.2	1.9	150	6.2	126	96	33	3	0	4	0
CT BRIDGEPORT	76	56	83	49	66	-6	.2	-.5	.1	.9	29	13.8	68	77	38	0	0	2	0
HARTFORD	76	51	84	44	63	-8	T	-.7	T	.7	20	15.9	73	86	36	0	0	2	0
DC WASHINGTON	84	61	92	54	73	-5	T	-.8	T	1.0	27	15.4	82	62	29	1	0	0	0
FL APALACHICOLA	90	76	96	73	83	2	2.2	.8	1.3	5.0	94	26.1	114	97	68	3	0	5	2
DAYTONA BEACH	92	75	97	71	84	3	.1	-1.4	0	2.4	35	17.5	83	97	52	5	0	2	0
JACKSONVILLE	90	72	96	68	81	-1	1.1	-.3	.5	3.9	63	23.7	101	93	54	3	0	4	1
KEY WEST	89	78	90	76	84	0	.6	-.4	.3	3.6	68	19.3	127	87	65	4	0	3	0
MIAMI	93	76	94	73	85	3	3.5	1.7	1.3	12.7	134	22.7	89	89	52	7	0	3	3
ORLANDO	90	73	93	70	82	0	2.4	.5	1.7	5.9	77	21.3	95	98	56	4	0	3	1
TALLAHASSEE	93	72	99	67	82	1	1.9	.1	.8	3.2	45	25.5	80	98	54	4	0	4	3
TAMPA	89	76	90	73	83	1	T	-1.5	T	5.2	90	16.6	84	93	62	4	0	1	0
WEST PALM BEACH	92	74	94	72	83	2	3.6	1.9	2.8	11.5	138	34.0	132	96	54	6	0	3	2
GA ATLANTA	89	70	97	67	80	2	.2	-.8	.1	.3	8	18.6	68	85	39	3	0	3	0
AUGUSTA	89	65	100	59	77	-2	1.4	.4	.8	4.9	118	22.3	92	99	46	3	0	3	2
MACON	92	70	100	67	81	0	.5	-.5	.4	.9	22	19.6	77	94	43	5	0	2	0
SAVANNAH	89	68	95	62	79	-2	1.0	-.5	.6	2.7	43	20.9	86	96	46	3	0	4	1
HI HILO	83	68	86	66	76	0	1.1	-.5	.5	5.2	79	59.2	90	94	62	0	0	6	0
HONOLULU	89	75	90	73	82	3	T	-.1	T	8	6.8	52	77	45	3	0	0	0	0
KAHULUI	88	70	89	64	79	1	0	-.1	0	T	0	12.2	106	83	50	0	0	0	0
LIHUE	84	75	85	73	80	1	-.1	-.3	.1	.6	37	20.1	90	87	64	0	0	1	0
ID BOISE	86	53	93	38	69	-2	T	-.1	T	.5	51	6.8	97	72	22	3	0	1	0
LEWISTON	77	54	89	46	66	-5	.3	.2	.2	1.7	119	5.9	80	76	35	0	0	2	0
POCATELLO	86	53	93	42	70	2	.2	0	.2	.4	35	4.4	70	74	22	3	0	1	0
IL CHICAGO	77	54	88	51	65	-6	.7	-.2	.5	1.1	23	9.7	57	88	34	0	0	2	0
MOLINE	81	54	92	48	67	-7	.6	-.5	.6	1.2	25	10.0	54	87	34	1	0	1	1
PEORIA	82	56	90	52	69	-5	T	-.9	T	.6	15	9.4	53	76	31	1	0	1	0
QUINCY	82	56	94	51	69	-6	1.4	.5	1.4	2.8	66	9.1	49	82	35	1	0	1	1
ROCKFORD	80	53	88	47	67	-5	.4	-.7	.3	.5	9	10.0	55	86	33	0	0	2	0
SPRINGFIELD	83	57	91	51	70	-6	T	-.8	T	.6	17	9.9	56	72	33	1	0	1	0
IN EVANSVILLE	88	60	94	54	74	-3	.2	-.7	.2	1.1	30	14.3	62	78	27	3	0	1	0
FORT WAYNE	84	55	88	47	69	-3	T	-.8	T	.8	20	12.1	67	75	26	0	0	0	0
INDIANAPOLIS	84	59	91	53	71	-3	T	-1.0	T	.4	8	14.1	69	69	27	1	0	1	0
SOUTH BEND	79	53	83	49	66	-6	.2	-.7	.2	.5	12	12.0	65	95	36	0	0	1	0
IA DES MOINES	83	61	99	55	72	-3	T	-.8	T	2.8	63	6.6	41	76	36	1	0	1	0
SIOUX CITY	83	60	103	53	72	-3	.1	-.8	.1	.5	13	7.3	55	83	42	1	0	2	0
WATERLOO	80	56	95	48	68	-4	.9	-.2	.9	3.1	68	8.9	55	91	42	1	0	1	1
KS CONCORDIA	85	65	101	59	75	-3	3.0	2.1	2.1	3.2	71	9.0	63	79	50	4	0	3	2
DODGE CITY	91	64	99	53	77	-1	T	-.6	T	.2	5	8.3	77	97	40	4	0	1	0
GOODLAND	88	59	94	53	74	0	T	-.6	T	1.9	65	10.9	124	94	38	3	0	1	0
TOPEKA	84	62	100	53	73	-4	3.2	2.1	2.3	3.3	61	12.6	75	92	54	3	0	4	2
WICHITA	90	69	99	61	80	0	1.6	.7	1.5	2.0	46	12.4	88	92	47	5	0	2	1
KY BOWLING GREEN	86	58	98	48	72	-5	.2	-.9	.1	2.1	44	16.4	60	94	34	2	0	2	0
LEXINGTON	86	58	92	52	72	-3	0	-1.1	0	.6	13	14.9	60	69	23	3	0	0	0
LOUISVILLE	88	61	93	55	75	-2	T	-.9	T	.9	23	17.6	75	68	23	3	0	0	0
LA ALEXANDRIA	97	78	99	77	88	6	T	-.9	T	1.1	25	19.4	67	90	46	7	0	1	0
BATON ROUGE	96	77	100	72	86	5	T	-1.1	T	4.2	116	35.2	125	94	49	7	0	0	0
LAKE CHARLES	92	77	94	74	84	3	.3	-.7	.3	5.7	128	26.5	105	97	61	6	0	1	0
NEW ORLEANS	94	76	96	73	85	3	T	-1.3	T	11.3	223	46.1	156	99	58	7	0	0	0

Based on 1951-80 normals

Weather Data for the Week Ending July 2, 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 °F		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	100	75	102	72	88	6	T	-8	T	.1	4	13.5	55	91	34	7	0	0	0
ME CARIBOU	64	50	75	47	57	-7	1.7	-.9	.7	2.6	76	13.1	83	97	66	0	0	6	2
PORTLAND	71	51	83	46	61	-5	.4	-.3	.4	2.4	74	17.5	81	94	50	0	0	3	0
MD BALTIMORE	84	56	93	50	70	-5	T	-.9	T	.8	21	16.5	81	77	30	1	0	0	0
SALISBURY	83	57	92	49	70	-5	T	-.8	T	1.7	45	21.7	102	86	32	1	0	1	0
MA BOSTON	73	55	84	50	64	-8	.6	-.1	.2	1.5	48	15.8	71	93	46	0	0	4	0
CHATHAM	66	55	68	51	60	-5	1.5	-.9	1.2	2.5	85	17.8	77	91	73	0	0	4	1
MI ALPENA	76	46	82	39	61	-4	T	-.7	T	.8	25	10.4	76	92	30	0	0	0	0
DETROIT	77	53	82	48	65	-6	T	-.8	T	1.0	27	7.8	50	79	28	0	0	0	0
FLINT	77	46	84	41	62	-7	T	-.7	T	.6	19	7.9	55	84	28	0	0	0	0
GRAND RAPIDS	78	50	82	45	64	-7	T	-.8	T	.3	6	10.1	61	85	31	0	0	1	0
HOUGHTON LAKE	75	48	81	37	61	-4	T	-.7	T	.9	26	8.8	67	82	31	0	0	1	0
LANSING	77	47	82	40	62	-8	.1	-.7	.1	.2	5	8.9	60	87	31	0	0	1	0
MARQUETTE	68	42	77	35	55	-8	.1	-.8	.1	.7	17	12.2	66	87	39	0	0	2	0
MUSKEGON	74	51	77	45	63	-6	.1	-.5	.1	.5	18	11.2	76	85	38	0	0	1	0
SAULT ST. MARIE	70	42	76	40	56	-6	0	-.7	0	.5	15	11.1	76	93	40	0	0	0	0
MN ALEXANDRIA	81	57	89	50	69	1	T	-.8	T	.7	17	6.2	51	76	30	0	0	0	0
DULUTH	70	44	79	35	57	-6	.9	-.1	.9	4.6	109	12.4	93	96	41	0	0	1	1
INT'L FALLS	75	48	83	41	61	-3	1.0	-.1	.9	4.4	112	8.1	76	94	39	0	0	2	1
MINNEAPOLIS	83	59	89	56	71	0	0	-.9	0	.2	5	6.5	50	74	31	0	0	0	0
ROCHESTER	79	51	91	45	65	-5	T	-.9	T	1.5	38	9.2	69	89	38	1	0	1	0
MS GREENWOOD	97	72	101	61	85	3	.4	-.5	.3	.4	11	13.2	44	86	38	7	0	2	0
JACKSON	102	73	105	64	88	6	T	-.9	T	.1	3	19.4	67	88	34	7	0	0	0
MERIDIAN	98	71	104	64	85	4	1.5	.5	.8	1.9	50	21.3	71	96	40	7	0	4	1
MO CAPE GIRARDEAU	86	65	99	56	75	2	.5	-.3	.5	.7	18	15.1	63	85	39	3	0	1	1
COLUMBIA	82	61	98	55	72	-5	.7	-.1	.3	.7	18	13.0	67	85	45	2	0	3	0
KANSAS CITY	84	64	101	59	74	-4	1.8	.8	1.0	1.8	37	9.6	54	84	45	3	0	3	2
SAINT LOUIS	84	64	95	60	74	-4	.7	-.2	.5	2.0	50	14.9	81	76	33	1	0	2	1
SPRINGFIELD	86	66	99	62	76	0	6.6	5.6	3.7	7.3	149	24.8	121	89	57	3	0	4	3
MT BILLINGS	93	61	102	48	77	8	.3	0	.2	.4	21	5.9	65	65	18	6	0	2	0
GLASGOW	92	61	108	50	77	8	.6	.1	.6	1.5	59	4.1	69	75	23	4	0	2	1
GREAT FALLS	85	55	94	45	70	4	.4	0	.3	1.4	51	5.5	58	73	25	3	0	3	0
HAVRE	88	58	98	46	73	6	T	-.4	T	1.8	78	2.9	43	71	25	3	0	1	0
HELENA	84	53	92	40	69	4	.7	.3	.7	1.5	72	5.9	88	72	27	2	0	2	1
KALISPELL	75	50	81	40	62	0	1.0	.7	.6	1.5	66	7.9	91	96	43	0	0	4	1
MILES CITY	94	66	106	57	80	9	.2	-.3	.2	.7	25	2.0	24	65	22	5	0	1	0
MISSOULA	78	49	87	34	63	-1	.3	0	.2	1.7	89	7.8	104	94	39	0	0	4	0
NE GRAND ISLAND	81	61	99	57	71	-4	3.1	2.3	2.4	4.7	121	10.4	79	87	54	2	0	3	1
LINCOLN	84	62	102	57	73	-3	.7	-.2	.3	.8	20	7.2	50	80	46	4	0	3	0
NORFOLK	82	60	99	53	71	-3	.7	-.2	.6	1.3	29	10.2	77	87	51	2	0	2	1
NORTH PLATTE	84	59	95	52	71	-1	2.7	1.9	2.3	3.1	80	9.9	88	93	47	3	0	2	1
OMAHA	81	61	99	53	71	-5	2.9	2.1	1.7	3.0	69	11.0	72	87	51	1	0	4	2
SCOTTSSBLUFF	88	58	94	49	73	1	.9	.3	.9	2.3	75	11.8	130	88	33	5	0	1	1
VALENTINE	85	61	99	54	73	1	1.7	1.1	1.1	3.4	111	11.8	126	77	43	4	0	3	2
NV ELY	90	46	92	40	68	4	0	-.2	0	.6	76	4.4	87	58	16	4	0	0	0
LAS VEGAS	106	78	109	70	92	4	0	-.1	0	T	44	1.7	95	26	12	7	0	0	0
RENO	89	50	94	46	70	3	0	-.1	0	.6	179	2.2	50	65	15	3	0	0	0
WINNEMUCCA	91	49	97	44	70	1	0	-.1	0	.5	58	4.0	87	53	16	6	0	0	0
NH CONCORD	73	45	82	38	59	-9	.7	0	.4	1.2	37	12.8	74	98	41	0	0	3	0
NJ ATLANTIC CITY	83	52	93	42	67	-5	0	-.7	0	1.0	34	15.0	75	90	31	1	0	0	0
NM ALBUQUERQUE	85	62	94	58	73	-5	1.4	1.2	.9	1.3	216	4.4	162	84	32	1	0	3	1
CLOVIS	81	63	88	60	72	-5	3.6	3.0	1.4	4.3	152	11.1	154	95	51	0	0	6	2
ROSWELL	87	65	93	63	76	-5	1.3	1.0	.5	1.5	138	6.9	203	91	38	3	0	4	1
NY ALBANY	72	50	82	46	61	-9	.3	-.4	.2	1.6	47	13.4	77	91	43	0	0	4	0
BINGHAMTON	66	47	75	44	57	-11	.2	-.6	.1	1.1	30	14.7	82	94	47	0	0	4	0
BUFFALO	70	51	76	45	61	-9	.2	-.4	.2	1.6	54	15.9	92	84	37	0	0	1	0
NEW YORK	77	60	84	56	69	-6	.2	-.5	.2	1.0	28	15.6	75	74	34	0	0	3	0
ROCHESTER	71	49	79	43	60	-10	.1	-.5	.1	1.1	37	9.7	63	93	40	0	0	1	0
SYRACUSE	69	48	78	42	59	-11	.6	-.2	.4	2.5	65	13.7	73	93	47	0	0	3	0
NC ASHEVILLE	82	56	95	44	69	-4	.3	-.6	.3	.9	24	11.4	50	93	44	1	0	2	0
CHARLOTTE	85	64	96	59	75	-3	.7	-.1	.5	1.6	41	13.9	60	89	40	2	0	2	0
GREENSBORO	83	59	95	49	71	-5	.2	-.8	.2	3.2	76	15.2	70	88	41	1	0	2	0
HATTERAS	80	61	86	55	70	-6	1.8	.7	.8	2.3	50	22.5	91	92	54	0	0	3	2
NEW BERN	84	61	93	56	72	-6	2.4	1.0	1.4	5.4	97	25.6	104	94	47	1	0	3	2
RALEIGH	83	58	96	51	70	-6	.3	-.6	.3	2.9	74	16.6	78	92	40	1	0	2	0
WILMINGTON	83	61	91	55	72	-7	1.3	-.2	1.1	2.9	47	25.5	103	95	46	1	0	2	1
ND BISMARCK	83	62	107	57	73	4	1.8	1.2	1.8	2.2	70	5.4	64	80	43	3	0	2	1
FARGO	84	58	93	53	71	2	0	-.8	0	1.2	38	5.9	65	73	32	1	0	0	0
GRAND FORKS	82	54	91	45	68	1	0	-.7	0	1.1	35	4.1	48	78	35	1	0	0	0
WILLISTON	88	61	101	51	75	7	2.0	1.5	1.6	3.5	126	6.7	90	80	33	3	0	3	1
OH AKRON-CANTON	75	49	80	43	62	-9	T	-.8	T	.4	11	11.0	60	90	31	0	0	0	0
CINCINNATI	83	57	90	49	70	-4	.1	-.9	.1	1.2	27	18.2	84	82	30	1	0	1	0
CLEVELAND	74	51	81	45	63	-9	T	-.8	T	.7	18	11.5	64	88	33	0	0	1	0
COLUMBUS	82	50	87	44	66	-7	0	-.9	0	1.3	31	14.8	75	82	30	0	0	0	0

Weather Data for the Week Ending July 2, 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 °F		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	81	53	88	46	67	-7	.3	-.6	.3	1.4	35	13.3	70	77	31	0	0	2	0
TOLEDO	80	49	84	40	64	-7	T	-.8	T	.3	7	7.3	45	82	27	0	0	0	0
YOUNGSTOWN	74	46	79	43	60	-6	T	-.9	T	.7	19	11.8	63	95	31	0	0	0	0
OK OKLAHOMA CITY	91	71	99	66	81	1	3.5	2.8	3.1	3.7	92	17.5	104	93	48	4	0	3	1
TULSA	95	74	102	66	84	3	T	-.9	T	.6	12	13.6	67	85	43	6	0	1	0
OR ASTORIA	63	50	68	44	57	-2	.6	.2	.3	3.9	153	30.0	83	95	62	0	0	5	0
BURNS	78	43	87	31	61	-5	0	-1	0	7	112	4.4	80	77	22	0	2	0	0
MEDFORD	83	51	91	38	67	-2	0	-1	0	1.0	158	6.8	67	81	24	1	0	0	0
PENDELTON	79	53	86	45	66	-5	T	-1	T	.3	45	7.3	110	69	26	0	0	1	0
PORTLAND	70	53	77	48	62	-4	.3	.1	.2	2.4	166	18.7	96	91	52	0	0	0	0
SALEM	72	50	77	41	61	-3	.3	.1	.3	2.0	161	18.8	88	92	50	0	0	3	0
PA ALLENTOWN	79	53	86	48	66	-7	.1	-.8	.1	1.8	50	19.2	90	86	35	0	0	1	0
ERIE	71	53	77	50	62	-6	T	-.9	T	1.3	30	13.9	76	82	42	0	0	2	0
HARRISBURG	80	54	87	49	67	-7	T	-.8	T	1.0	26	16.9	84	73	27	0	0	0	0
PHILADELPHIA	83	57	91	52	70	-5	0	-.9	0	.6	14	16.2	79	78	30	1	0	0	0
PITTSBURGH	76	50	80	46	63	-8	T	-.9	T	1.3	34	13.5	70	86	34	0	0	0	0
SCRANTON	72	50	80	44	61	-9	.3	-.5	.3	1.1	31	13.7	82	88	40	0	0	2	0
RI PROVIDENCE	75	54	80	48	64	-6	.3	-.3	.3	.9	31	18.9	84	94	43	0	0	2	0
SC CHARLESTON	87	66	94	62	77	-3	.8	-.9	.3	2.5	35	14.5	57	97	47	3	0	3	0
COLUMBIA	90	63	103	55	77	-3	.1	-1.0	.1	1.7	35	14.9	57	90	35	2	0	3	0
FLORENCE	86	62	97	57	74	-5	.7	-.5	.4	2.1	41	14.9	67	96	42	2	0	3	0
GREENVILLE	85	63	97	58	74	-4	1.2	.1	.8	3.3	70	18.0	65	92	44	2	0	2	1
SD ABERDEEN	82	59	97	50	71	1	.4	-.3	.4	1.3	38	5.9	59	88	41	2	0	3	0
HURON	82	59	103	53	70	-1	1.1	.4	.6	1.3	39	10.8	102	89	47	2	0	3	1
RAPID CITY	88	59	102	51	74	4	.3	-.3	.2	1.1	32	6.0	59	83	35	5	0	2	0
SIOUX FALLS	85	61	105	55	73	1	.6	-.2	.4	.9	24	7.9	63	82	38	2	0	2	0
TN CHATTANOOGA	88	65	101	60	76	-1	.5	-.5	.3	.9	25	17.2	60	90	37	4	0	2	0
KNOXVILLE	88	60	101	49	74	-3	.2	-.8	.2	.5	12	14.9	57	92	35	3	0	1	0
MEMPHIS	91	72	102	65	81	0	2.9	2.1	1.8	3.2	85	20.4	70	77	45	4	0	3	2
NASHVILLE	90	66	103	55	78	0	.1	-.8	.1	.5	12	12.4	46	81	31	3	0	2	0
TX ABILENE	91	71	96	68	81	-2	.7	.2	.5	3.8	143	9.7	86	87	45	4	0	4	0
AMARILLO	82	63	91	57	73	-5	.8	.1	.6	3.7	101	13.5	143	98	51	2	0	4	1
AUSTIN	95	74	98	70	85	1	-.7	-.1	.7	2.6	83	11.2	69	97	43	7	0	1	1
BEAUMONT	95	74	97	74	85	3	T	-1.2	T	4.7	91	21.8	84	99	52	7	0	0	0
BROWNSVILLE	93	76	95	74	85	1	.2	-.3	.2	2.9	104	10.0	102	93	53	7	0	1	0
CORPUS CHRISTI	95	74	96	71	85	1	0	-.7	0	1.6	41	6.0	45	96	49	7	0	0	0
DEL RIO	92	74	97	71	83	-2	.5	.2	.5	1.9	103	3.8	49	83	42	5	0	1	1
EL PASO	93	66	98	61	80	-4	1.4	1.1	1.3	1.4	215	2.9	131	85	26	6	0	2	1
FORT WORTH	98	75	101	72	86	2	.8	.4	.8	3.2	132	11.7	69	89	40	7	0	2	1
GALVESTON	89	79	90	78	84	1	T	-.8	T	2.4	64	16.7	96	85	63	2	0	1	0
HOUSTON	97	76	99	74	86	4	T	-.9	T	2.0	44	12.1	53	95	42	7	0	1	0
LUBBOCK	85	68	96	63	75	-4	1.5	.9	.6	1.9	64	7.0	83	100	58	2	0	6	1
MIDLAND	89	67	96	65	78	-3	.7	.3	.5	.9	56	4.4	75	93	45	4	0	5	1
SAN ANGELO	92	70	95	66	81	-3	1.3	1.0	1.1	2.1	112	7.9	94	92	44	4	0	3	1
SAN ANTONIO	94	75	97	70	85	1	.3	-.2	.3	5.5	177	9.3	65	96	41	7	0	3	0
VICTORIA	95	75	98	73	85	2	.2	-.6	.2	1.7	37	6.1	35	95	47	7	0	2	0
WACO	96	74	100	69	85	1	1.6	1.2	1.6	5.6	211	12.7	75	95	45	7	0	1	1
WICHITA FALLS	93	72	99	70	83	-1	.6	.1	.3	2.7	92	12.8	91	92	46	5	0	3	0
UT BLANDING	82	58	90	55	70	-2	1.0	.8	.4	1.3	289	5.9	122	83	43	2	0	3	0
CEDAR CITY	91	58	94	53	74	3	T	-.2	T	.7	127	7.9	164	67	17	6	0	0	0
SALT LAKE CITY	92	64	100	53	78	4	T	-.2	T	3	6.2	68	62	22	4	0	1	0	0
VT BURLINGTON	68	48	79	40	58	-10	.8	0	.3	3.6	93	11.2	73	94	50	0	0	5	0
VA NORFOLK	82	63	93	60	72	-5	1.6	.7	1.5	3.8	101	20.8	98	87	42	1	0	3	1
RICHMOND	84	58	97	52	71	-6	.2	-.8	.2	2.3	58	17.2	85	82	36	1	0	3	1
ROANOKE	84	56	96	47	70	-5	T	-.8	T	3.7	104	14.0	70	89	32	1	0	1	0
WA QUILLAYUTE	63	47	66	40	55	-3	.6	-.1	.4	2.9	99	55.0	102	97	58	0	0	3	0
SEATTLE-TACOMA	68	52	71	48	60	-3	.3	0	-.2	1.8	131	16.5	86	95	50	0	0	2	0
SPOKANE	73	51	81	42	62	-4	.6	.4	.3	1.1	91	8.4	93	86	35	0	0	3	0
YAKIMA	79	48	84	43	64	-4	0	-1	0	1.0	175	3.5	82	84	28	0	0	0	0
WV BECKLEY	76	50	87	41	63	-5	.3	-.7	.2	2.3	54	14.4	66	88	35	0	0	2	0
CHARLESTON	82	54	88	47	68	-5	.1	-.9	.1	.9	26	12.6	59	86	29	0	0	1	0
HUNTINGTON	82	55	89	47	69	-6	.1	-.8	.1	.8	21	13.3	63	86	28	0	0	2	0
PARKERSBURG	80	50	86	44	65	-8	T	-.9	T	.8	18	10.9	54	82	32	0	0	0	0
WI GREEN BAY	76	49	84	43	62	-6	.6	-.2	.6	.7	19	6.9	51	87	38	0	0	1	1
LACROSSE	81	55	87	50	68	-4	2.3	1.4	2.3	3.3	75	9.4	63	93	34	0	0	2	1
MADISON	79	49	84	43	64	-6	2.0	1.1	1.9	2.1	50	9.1	61	94	33	0	0	2	1
MILWAUKEE	72	56	82	53	64	-5	.5	-.3	.5	.7	18	11.2	72	83	41	0	0	2	0
WAUSAU	77	49	85	42	63	-5	.9	0	.9	1.8	43	7.2	49	85	29	0	0	1	1
WY CASPER	91	57	98	45	74	7	.2	0	.1	.3	22	4.0	58	79	19	6	0	3	0
CHEYENNE	81	54	90	49	67	1	.2	-.3	.2	2.0	96	9.4	125	94	35	1	0	1	0
LANDER	90	58	94	51	74	6	.1	-.2	0	.2	14	4.9	57	56	21	5	0	2	0
SHERIDAN	91	58	105	43	75	8	.1	-.3	.1	.6	24	7.2	76	80	25	4	0	2	0
PR SAN JUAN	93	76	96	75	85	3	.3	-.8	.1	1.5	29	25.6	116	89	59	4	0	4	0

National Agricultural Summary

June 27 to July 3, 1988

HIGHLIGHTS: Precipitation and lower temperatures eased drought stress in the Great Plains, Delta, and western Corn Belt. The lower temperatures eased stress in the central and eastern Corn Belt, but inadequate moisture plagued crop development and growth. Despite precipitation, soil moisture remained short in the northern and central Great Plains, Delta, and Southeast. The lack of moisture worsened in most Corn Belt States. Farmers were able to work 5 to 7 days in most areas, but precipitation caused minor delays in the central and northern Great Plains and Southeast.

Winter wheat harvest climbed 12 percentage points ahead of the previous week to 64 percent (%) completion. This is 22 points ahead of the 5-year average. Spring wheat was 87% headed, compared with 77% in 1987 and 57% normally. Crop condition remained mostly poor. Corn entered the silking stage in the Corn Belt with very little available moisture. Silking was 6% finished, just slightly behind normal. Soybean planting inched 1 point closer to completion. Ten percent or more of the acreage remained to be seeded in most Delta and Southeast States. Soybeans were 17% bloomed, 8 points above normal. Squares were present on 60% of the cotton acreage, 10 points ahead of normal. Boll setting was 3 points below normal at 11% completion. Sorghum began heading in the Delta and central Great Plains. Rice was 7% headed but was restricted to Louisiana and Texas. Livestock was mostly fair.

SMALL GRAINS: Winter wheat harvest climbed 13 points ahead of the previous week to 65% completion. This was 7 points ahead of 1987 and 23 points above average. Rain interrupted small grain and winter wheat harvest throughout most of the central and northern Great Plains and western Corn Belt. The precipitation prolonged the conclusion of winter wheat harvest in Kansas, Oklahoma, and the Delta. Harvest surged 37 and 45 points ahead of the previous week in Ohio and Indiana, respectively. In Illinois and Missouri, harvest was virtually finished. Harvest was just beginning in Michigan but was not underway in Idaho, Montana, Oregon, and Washington. In Idaho, 23% of the acreage turned color. Wheat filled heads and turned color in north-central Oregon.

Spring wheat was 87% headed, compared with 77% in 1987 and 57% average. Crop condition remained mostly poor except in Idaho where condition was mostly good. Heading was finished in South Dakota and neared completion in Minnesota. Fifty-three percent of Minnesota spring wheat turned color. Slightly more than half of North Dakota's passed the milk-dough stage.

CORN: Cooler temperatures and precipitation provided relief from the hot, dry conditions in the northern and central Great Plains, western Corn Belt, and Delta. Temperatures subsided, but the lack of moisture continued plaguing crop development in the central and eastern Corn Belt. Growers believe some corn in northern Missouri was beyond restoration. Ohio's corn was stunted with little or no growth. Corn reached the silking stage in the Corn Belt but was more prevalent in the southern Great Plains, Delta, and Southeast. Silking fell 2 points behind normal at 6% completion. Crop condition stabilized somewhat but was still mostly fair to poor.

SOYBEANS: Soybeans were 96% planted, 2 points behind 1987 and 1 point below average. Precipitation allowed planting to resume in the Delta and Southeast, but more than 10 percent of the acreage remained to be planted in most States. Soybeans were mostly fair in the Great

Plains and Southeast but were mostly poor in the Delta. Seventeen percent of the acreage was blooming, nearly doubling the average, but was 8 points behind 1987. Soybeans were blooming in all major producing States except Michigan, North Carolina, Ohio, and South Carolina.

SORGHUM: Sorghum was mostly poor to fair in the Delta and mostly fair in the central Great Plains. Planting was ending in the Texas Plains. Precipitation improved planted fields. Sorghum began heading in the Low Plains and at Cross-Timbers. Harvest started in the Rio Grande Valley, Coastal Bend, and along the Upper Coast. Sorghum began heading in Arkansas. Rain relieved drought stress condition in Kansas but more moisture is needed. Chinchies were widespread but caused light damage in central and eastern counties. Insects continued plaguing sorghum in Nebraska. Sorghum headed in Oklahoma.

COTTON: Dryness left cotton mostly fair to poor except in the southern Great Plains and Southwest, where condition was mostly good to fair. Cotton thinning, fertilization, and irrigation was active in California. In Arizona, cotton progressed well. Fields were selectively sprayed for pink boll worms, army worms, and boll weevils. Cotton was virtually seeded in Texas, but wetness delayed planting scattered fields. Bolls opened in the Rio Grande Valley and at Coastal Bend. Hot weather and moisture benefited cotton in Oklahoma. Some cotton was plowed-up in northwest Louisiana. Cotton development lagged behind normal in Georgia. Cotton squaring climbed 23 points ahead of the previous week. Sixty percent of the acreage had squares, 10 points ahead of normal. Eleven percent of the acreage set bolls, compared with 18% in 1987 and 14% normally.

OTHER CROPS: Rice was 7% headed, 2 points ahead of normal. Rice tillering progressed well in California. In Louisiana, rice growers treated for sheath blight.

Tobacco harvest was underway in Georgia and Florida. Irrigated tobacco showed favorable growth in Kentucky. Black shank disease and manganese toxicity were problems.

FRUITS AND NUTS: Florida's citrus trees were good. Moisture was mostly adequate but irrigation continued. Valencia harvest slowed and grapefruit harvest was almost finished. Pecans developed well in most areas, but droppage was heavy in drier areas of Texas. Table grape harvest neared completion in California's Coachella Valley. Apricots, fig, stone fruit, and citrus harvests were active. Navel oranges were sprayed for red scale. Nut crops progressed well.

VEGETABLES: Florida's vegetable harvest was mostly finished. Light supplies of snap beans, sweet corn, cucumbers, eggplant, peppers, tomatoes, and watermelons were available. Unirrigated vegetable yields were reduced in northern and Panhandle areas. Fall vegetable land preparation continued in the Rio Grande Valley. Dry conditions decreased vegetable production in east Texas. California vegetable harvest consisted mostly of broccoli, cauliflower, carrots, celery, sweet corn, lettuce, and melons.

PASTURES AND LIVESTOCK: Cooler temperatures eased livestock stress. Ranchers continued culling herds as forage supplies decreased. Producer provided supplemental feed in most areas. Pastures were mostly poor and showed very little regrowth.

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: Beneficial rain central, south portions of State; lighter amounts northern half, 1.00 to 2.00 in. central, south with most totals less than 0.50 in. north. Temperatures averaged 1 to 5° above normal most areas.

Days suitable for fieldwork 6.6. Soil moisture 91% short, 9% adequate. Cool front, showers brought some relief to drought central, southern areas. Corn 73% silked, 77% 1987, 73% avg.; 20% dented, 20% 1987, 14% avg.; 59% very poor, 30% poor, 11% fair. Sorghum 89% planted, 88% 1987, 88% avg.; 21% very poor, 33% poor, 41% fair, 5% good. Cotton 83% squaring, 82% 1987, 74% avg.; 15% setting bolls, 15% 1987, 11% avg.; 12% very poor, 36% poor, 47% fair, 5% good. Soybeans 87% planted, 94% 1987, 93% avg.; 8% blooming, 12% 1987, 7% avg.; 15% very poor, 46% poor, 35% fair, 4% good. Peanuts 42% pegging, 56% 1987, 44% avg.; 22% poor, 64% fair, 14% good. Wheat 99% harvested, 88% 1987, 94% avg. Livestock mostly fair; pastures mostly poor to very poor. Pasture feed supplies 100% short; stored feed 93% short, 7% adequate. Primary activities: Harvesting wheat, catfish; controlling insects on fruit, vegetables; spraying cotton; cultivating row crops; applying fungicides to peanuts; building, managing fish ponds; providing supplemental feed, general care of livestock, poultry.

ALASKA: Seasonal mixture of warm, sunny weather with rainfall plagued haying activity. Temperature lows ranged normal to 11° above normal. Highs ranged 4° below normal to 4° warmer than normal. Seasonal precipitation totals ranged 0.48 in. drier than normal to 3.65 in. wetter than normal.

Days suitable for fieldwork 4.0. Topsoil moisture 31% short, 65% adequate, 4% surplus. Subsoil moisture 22% short, 74% adequate, 4% surplus. Haying over 20% for 1st crop. Crop growth mostly moderate to rapid. Barley for grain mostly good; heights of small grains 13 in. slightly above 1987. Nearly 20% barley headed out. Commercial potato height 9 in. Commercial head lettuce harvest began, earliest date on record.

ARIZONA: Sunny skies, deserts 26th, scattered showers, thunderstorms northeast. Showers, thunderstorms eastern two-thirds 28th. Mountain thunderstorms 30th. Strong gusty winds, blowing dust 30th, central. Showers, thunderstorms north, east, 1st to 2nd. Sunny, very hot south central, southwest 2nd. Rainfall totals 0.50 to 1.50 in. central basins, White Mountains; very little elsewhere. Average temperatures 3° below to 7° above normal.

Ranges mostly good, providing average feed supplies statewide. Ranges extremely dry southeast. Grasshopper problems northern upper elevations. Ranges 85% of normal northeast, west 75%, central 53%, southwest 80%. Soil moisture short northeast, central; improved with recent rains. Soil moisture mostly adequate southwest. Cattle fair to good. Sheep, lambs good. Cotton progressed well, 95% squaring, 40% setting bolls. Crop excellent west; american-pima cotton improved. Fields selectively sprayed, pink boll worms, weevils. Lay-by herbicides applied west. Central fields sprayed, fertilized; boll worms, army worms infested some fields. Fields flowering south central. Irrigation, cultivation continued statewide. Crop 33% fair, 50% good, 17% excellent. Alfalfa cuttings continued. Crop good to excellent. Insect levels less than 1987. Irrigation continued statewide. Hay, roughage supplies 26% adequate, 74% surplus. Small grain harvest nearly completed. Watermelon, cantaloupe, honeydew, mixed melon harvest continued west.

central. Garlic harvest complete west. Tomatoes harvested for processing progressed west. Grape harvest completed. Central assorted vegetables harvested Salt River Valley. Chipper potato harvest central. East dry onion harvest continued. Valencia orange, grapefruit harvest continued, central.

ARKANSAS: Hot days, warm nights with scattered thundershowers late week; heaviest amounts north, northeast. Temperature extremes 53°; 106°. Rainfall totals none to 6.10 in.

Days suitable for fieldwork 7.0. Soil moisture supplies 90% short, 10% adequate. Irrigation still major activity. Sorghum 99% emerged, 100% 1987. Sorghum 5% headed, 34% 1987. Corn tasseling; 1% very poor, 20% poor, 34% fair, 45% good. Wheat harvest virtually complete. Oat harvest complete. Fruit harvest continued, yields limited by drought. Second cutting of hay where possible. Livestock fair, marketings up. Stock water supplies mostly short. Pastures poor to very poor. Hay supplies short to very short.

CALIFORNIA: Mostly fair weather prevailed throughout week with above normal temperatures most locations. Rainfall beginning of period result of scattered thunderstorms at higher elevations.

Field activities normal progress, warm, open weather. Small grain harvest full swing. Burning, working for 2nd crops active. Dry bean planting active. Rice tillering progress good. Safflower bloom continued. Early seed sunflowers headed. Cotton thinning, fertilization, irrigation active. Insect controls as needed. Sugarbeet planting, harvest progressed. Some mildew controls. Seed alfalfa full bloom. Alfalfa harvest normal. Meadow hay harvest active. Irrigation, weed control active. Coachella Valley table grape harvest neared completion. Good growth on other area grapes. Harvest active apricots, figs, stonefruit, citrus. Navel oranges sprayed for red scale. Nut crops progressed well. Broccoli moderate to fairly heavy Salinas-Watsonville, moderate Santa Maria, good quality. Cauliflower fairly heavy Salinas-Watsonville, moderate Santa Maria, good quality. Carrot fairly heavy Salinas-Watsonville, continued active Westside. Celery moderate both Salinas-Watsonville, Santa Maria, good quality. Sweet corn picking started Huron District. Harvest progressed Delta, south coast. Lettuce moderate to fairly heavy Salinas-Watsonville, variable quality, heavy Santa Maria good quality. Melons good quality, progressed well San Joaquin Valley. Sacramento Valley several fields replanted. Variable spring weather caused rot after germination. Desert harvest active, good quality. Dry onion for dehydrating fresh market active Delta, Westside, desert. Fall potato fields Tulelake-Butte Valley growing well. Summer potatoes harvested Riverside County. Strawberry fairly light Salinas-Watsonville, light Santa Maria area, variable quality. Picking for freezer market slowed south coast. Harvest all berries continued to wind down Sacramento Valley. Tomato harvest fresh market progressed statewide. Fields for processing north, central valley showed much red fruit harvest time approaches. Harvest for processing started Palo Verde Valley. Livestock fair to good statewide. Rangeland, pasture conditions dry, poor, San Joaquin, Sacramento Valley, good northern counties. Cattle moved to summer pastures, higher elevations. Water supplies adequate, northern counties, low most other areas. Water problems reported scattered foothill, mountain areas.

COLORADO: Moist air dominated State with precipitation ranging 0.20 to 1.00 in. Average temperature 1 to 2° above normal.

Days suitable for fieldwork 5.4. Soil moisture 5% very short, 46% short, 44% adequate, 5% surplus. Winter wheat 6% harvested, spring wheat 5% turning color, spring barley 35% turning color. Livestock good to excellent with pastures fair to good.

FLORIDA: Weak cold front moved into north late 27th, became stationary; then drifted over central area, dissipated by 30th with weak ridge building over State. Another weak cold front pushed into north 1st, became stationary, moderate with easterly flow. Rainfall heaviest along southeast coast; totals up to 6.00 in. Elsewhere, totals up to 4.00 in. Temperatures averaged about 3° above normal north, near normal south, central.

Lower Peninsula only major area with adequate soil moisture. Showers revitalized crops, but more rain needed before soil moisture becomes adequate. Some soybean plantings. Showers very beneficial to peanuts in bloom, pegging stage. Bollworms, budworms concern in cotton. Showers too late to help dryland corn appreciably. Tobacco harvest active. Sugarcane good. Scattered showers greened pastures many northern Peninsula, Panhandle areas. However, more rain, time needed to restore grazing in driest areas, which vary from severe to good or better depending on rain amounts. Elsewhere, most areas fair to generally good grazing. Cattle continued only poor to mostly fair, driest areas; elsewhere, generally good to excellent. Citrus trees good. Moisture generally adequate; irrigation continued. Valencia harvest slowed. Grapefruit harvest almost complete. Caretakers very active summer grove care. Scattered showers, hot days, warm nights vegetable areas. Most harvest completed. Light supplies snap beans, sweet corn, cucumbers, eggplant, peppers, tomatoes, watermelons available north, Panhandle, central areas. Unirrigated crop yields reduced in north, Panhandle.

GEORGIA: Rain southwest, north. Light rainfall southeast. Rain totals mountains over 1.00 in., mostly under 0.50 in. elsewhere in north. Southeast under 0.50 in. except near Florida border. Temperatures 2 to 5° below normal north, east, near normal elsewhere. Extreme lows 60s north, mid 60s central, south.

Days suitable for fieldwork 5.8. Soil moisture 53% very short, 38% short, 9% adequate. Corn development behind 1987 and average. Cotton development behind 1987 and average. Sorghum grain improved, planting resumed following showers. Peanuts condition down; 78% blooming, 85% 1987, 86% avg. 36% pegging, 50% 1987, 55% avg. Soybeans some improvement allowed planting to continue many areas. Tobacco improved slightly, harvest active. Watermelon harvest active, condition some improved. Small grain harvest neared completion. Apples fair to good. Peaches mostly fair, harvest active. Pasture, hay mostly poor, about same as last week. Cattle, hogs mostly fair.

HAWAII: Weather dominated by high pressure center northeast of State. Sparse cloud cover produced sunny days, record tying temperatures of low 90s high 80s. Rainfall light, mainly trade wind induced. Rainfall none to 1.40 in. Trade winds 10 to 20 mph.

Days suitable for fieldwork 7.0. Irrigation heavy, hampered by gusty winds. Chinese cabbage production moderate. Head cabbage output moderate to heavy, quality good. Head lettuce supplies light. Cucumber production continued heavy. Papaya production increased. Watermelon production decreased to moderate levels.

IDAHO: Temperatures near normal, precipitation above normal.

Days suitable for fieldwork 6.0. Soil moisture 13% very short, 25% short, 62% adequate.

Irrigation water supplies fair, good. Potatoes nearly 100% emerged; 72% 12 in. height and beyond; 22% closing middles. Spring wheat good; 70% headed, 78% 1987, 58% avg. Winter wheat good; 95% headed, 23% turning color. Spring barley 68% headed. Nearly all dry beans emerged. Cherries 84% harvested, 96% 1987. First cut alfalfa 84%, 88% 1987. Second cut alfalfa underway. Livestock good.

ILLINOIS: Temperatures averaged 3 to 8° below normal. Precipitation averaged 0.50 to 1.50 in. north, west central; 0.25 in. or less elsewhere.

Days suitable for fieldwork 6.5. Soil moisture 100% short. Corn 52 in. height, 66 in. 1987, 49 in. avg. Most advanced 67 in., 87 in. 1987, 67 in. avg. Wheat 100% ripe, 100% 1987, 87% avg. Oats 97% filled, 100% 1987, 91% avg.; 78% turning yellow, 84% 1987, 57% avg.; 32% ripe, 43% 1987, 20% avg.; 2% very poor, 24% poor, 65% fair, 9% good. Alfalfa 2nd crop cut 57%, 54% 1987, 37% avg.; 7% very poor, 36% poor, 51% fair, 6% good. Red clover cut 95%, 99% 1987, 92% avg.; 7% very poor, 40% poor, 47% fair, 6% good. Pasture 39% very poor, 48% poor, 13% fair.

INDIANA: Temperatures 4 to 8° below normal northern half of State, 2 to 4° below normal south. Lows 40s north to 50s south, highs upper 80s to lower 90s. Precipitation minimal. Totals less than 0.10 to 0.25 in.

Days suitable for fieldwork 6.6. Topsoil moisture 100% short. Subsoil moisture 99% short, 1% adequate. Corn, soybeans mostly poor, wheat mostly fair. Corn 39 in. height, 66 in. 1987, 43 in. avg. Soybeans 10 in. height, 18 in. 1987, 11 in. avg. Wheat 98% ripe, 94% 1987, 70% avg. Hay poor. Pastures 64% very poor, 33% poor, 3% fair. Few areas received rain, not enough to improve crop conditions.

IOWA: Temperatures averaged 1° above normal northwest to 6° below normal east; extremes 40° to 103°. Rainfall none to 2.30 in.; average 0.40 in.

Days suitable for fieldwork 6.0. Topsoil moisture 90% short, 10% adequate; subsoil moisture 94% short, 6% adequate. Oats 12% very poor, 45% poor, 38% fair, 5% good. Oats 85% turning color, 84% 1987, 42% avg. Winter wheat mostly poor to fair; 50% harvested, 33% 1987, 10% avg. Hay 22% very poor, 46% poor, 29% fair, 3% good. Availability of hay for feed 31% short, 65% adequate, 4% surplus. Second crop alfalfa 20% harvested, 25% 1987, 15% avg. First crop clover 95% harvested, 95% 1987, 81% avg. Corn 5% tasseled, 13% 1987, 4% avg.; corn 46 in. height, tallest 61 in. Soybeans 35% blooming, 31% 1987, 8% avg. Soybean 95% cultivated 1st time, 91% 1987, 72% avg. Cooler temperatures help livestock. Hay being fed to supplement pastures. Pastures 56% very poor, 35% poor, 9% fair.

KANSAS: Temperatures 76° north to 78° south, 2° above normal northwest, normal to 2° below elsewhere. Rainfall mid to late week central, east; totals 1.00 to 2.73 in. Some locally heavy flooding. Elsewhere totals 0.20 to 0.80 in.

Days suitable for fieldwork 6.0. Topsoil moisture 82% short, 18% adequate. Subsoil moisture 73% short, 27% adequate. Wheat harvest neared completion one of quickest harvest seasons on record. Weather allowed harvest to proceed 24-hours per day from start to finish. Corn, sorghum, soybeans drought stress relieved by rain but additional moisture needed soon. Corn borer infestation light. Chinch bug widespread on sorghum, light damage central, eastern counties. Moisture available to complete soybean planting intentions. Early growth good, stands blooming most areas. Range, pastures mostly poor, very poor. Ranchers culling earlier, heavier as forage supplies decrease. Regrowth alfalfa slow, outlook 3rd cutting bleak.

KENTUCKY: Seasonably warm high temperatures cooler overnight. Lows in mid 50s, 5 to 10° below normal.

Highs averaged mid 80s about normal. Most rain west of State amounts 0.25 to 0.50 in. Rest of State precipitation averaged less 0.10 in.

Days suitable for fieldwork 5.9. Soil moisture 96% very short, 4% short. Corn, soybeans, tobacco crops virtual stand still. Corn very poor to fair. Early planted tolerating dry conditions better. Planting double crop soybeans where rainfall received. Only irrigated tobacco showed favorable growth; 19% very poor, 34% poor, 45% fair, 2% good. Set burley 61% under 12 in, 34% 12 to 24 in, 5% over 24 in. Disease problems limited. Problems included black shank, manganese toxicity. Wheat 91% harvested. Very good yields, test weights. Hay cutting, baling active. Pastures 76% very poor, 23% poor, 1% fair.

LOUISIANA: Temperature 2 to 6° above normal. Temperature extremes 66°; 103°. Rainfall averaged none to 0.41 in.

Days suitable for fieldwork 6.1. Soil moisture 43% very short, 33% short, 24% adequate. Corn fair; 88% silked, 42% dough stage, 7% mature. Sorghum 14% headed, 32% 1987, 43% avg. Soybeans 71% emerged; some replanted northwest. Sweetpotatoes fair; 88% planted, 98% 1987, 96% avg. Hay 1st cutting 84%. Peaches fair to good; 53% harvested. Sugarcane good. Livestock, vegetables, pecans fair. Pastures poor to fair. Some cotton plowed up northwest areas. Some rice growers treating for sheath blight. Main activities: Fertilizing rice; harvesting hay, vegetables, peaches; planting soybeans, sweetpotatoes; cultivating, spraying soybeans.

MARYLAND & DELAWARE: Maryland: Precipitation averaged 0.02 in. Average temperature 70°, normal 74°. General temperature extremes 40°; 93°. Mountain extremes 33°; 96°.

Days suitable for fieldwork 7.0. Topsoil moisture 90% very short, 10% short. Subsoil moisture 50% very short, 50% short. Pasture 70% poor, 30% fair. Current hay supply adequate. Corn 60% poor, 40% fair. Soybeans 30% poor, 70% fair. Soybeans 75% planted, 90% avg. Soybean planting delayed for lack of moisture. Tobacco fair. Wheat, barley, oats, rye good. Wheat 65% harvested, 55% avg. Alfalfa 2nd cutting 60%, 50% avg. Apples, peaches 20% fair, 80% good.

Delaware: Precipitation averaged 0.08 in. Average temperature 70°, normal 74°.

Days suitable for fieldwork 7.0. Topsoil moisture very short, subsoil moisture 70% very short, 30% short. Pasture 30% poor, 70% fair. Current hay supply adequate. Corn, soybeans fair. Soybeans 65% planted, 80% avg. Soybean planting delayed for lack of moisture. Wheat, barley 40% fair, 60% good. Wheat 60% harvested, 55% avg. Apples, peaches good.

MICHIGAN: Temperatures ranged 4 to 9° below normal. Temperature extremes 35°; 84°. Precipitation ranged none to 0.23 in. across State.

Days suitable for fieldwork 7.0. Soil moisture 100% short. Corn none silking, 17% 1987, none avg.; 15% very poor, 30% poor, 35% fair, 17% good, 3% excellent. Soybeans none blooming, 5% 1987, 1% avg.; 15% very poor, 25% poor, 35% fair, 22% good, 3% excellent. Wheat 90% turning, 95% 1987, 65% avg.; 1% harvested, 2% 1987, none avg.; 10% very poor, 25% poor, 45% fair, 20% good. Pastures supplying only 25% of livestock feed supply. Major activities: Dry bean planting, harvesting hay, cultivating corn, soybeans; harvesting wheat, strawberries, sweet cherries, tart cherries, celery.

MINNESOTA: Temperatures averaged 2° above to 4° below normal. Temperature extremes 35°; 106°. Precipitation averaged 0.02 to 0.82 in. Greatest weekly total 0.97 in.

Days suitable for fieldwork 6.4. Topsoil moisture 75% very short, 22% short, 3% adequate. Spring wheat 99% heading, 95% 1987, 67% avg.; 53% turning ripe, 21% 1987, 5% avg. Oats 99% heading,

98% 1987, 78% avg.; 58% turning ripe, 51% 1987, 12% avg. Barley 99% heading, 95% 1987, 72% avg.; 51% turning ripe, 18% 1987, 6% avg. Corn 42 in. height, 49 in. 1987, 29 in. avg.; 2% tasseling, 6% 1987, 1% avg. Soybeans 15 in. height, 14 in. 1987, 9 in. avg.; 40% blooming, 21% 1987, 5% avg. Winter wheat 13% harvested for grain, 2% 1987, none avg. Rye 13% harvested for grain, 3% 1987, 1% avg. Soybeans 7% very poor, 17% poor, 59% fair, 16% good, 1% excellent. Field corn 11% very poor, 19% poor, 60% fair, 10% good. Spring wheat 33% very poor, 33% poor, 34% fair.

MISSISSIPPI: Record breaking high temperatures over much of State. Extremes 58°; 105°. Thunderstorms became more common as week progressed. One to 2.00 in. of rain north; less than 0.50 in. south, southwest.

Days suitable for fieldwork 6.3, 3.2 1987, 4.8 avg. Soil moisture 30% very short, 20% short, 50% adequate. Corn poor to very poor; 53% silking, 69% 1987, 66% avg.; 30% dough, 34% 1987, 36% avg. Sorghum poor to very poor; 8% heading, 21% 1987, 22% avg. Cotton poor to fair; 87% squaring, 89% 1987, 78% avg. Rice fair; none heading, none 1987, 5% avg. Soybeans poor to very poor; 80% planted, 94% 1987, 78% avg.; 66% emerged, 89% 1987, 81% avg.; 6% blooming, 2% 1987, 4% avg. Peaches fair; 46% harvested, 71% 1987, 45% avg. Pasture poor to very poor. Livestock mostly fair. Hay 50% harvested, 46% 1987, 46% avg. Wheat harvest virtually complete. Activities: Irrigating, spraying cotton.

MISSOURI: Temperatures averaged 3° below normal. Precipitation averaged 2.00 to 4.00 in. south, west central; none to 0.25 in. north central, around 1.00 in. elsewhere.

Days suitable for fieldwork 5.3. Topsoil moisture supplies 90% short, 10% adequate. Crop growth retarded by lack of moisture. Cooler weather, scattered rainfall offered some relief; most areas still extremely dry. Some corn northern counties beyond help. Oats 62% harvested, 61% 1987, 30% avg. Alfalfa 2nd cutting 73%, 74% 1987, 47% avg. No growth for 2nd cutting some areas. Other hay 88% harvested, 83% 1987, 75% avg. Stock water supplies 17% critically short, 69% short, 14% adequate, worst shortage north central. Supplies of hay, roughage 55% very short, 41% short, 4% adequate. Pasture providing 63% of roughage requirements for cattle. Pastures 73% very poor, 27% poor.

MONTEANA: Temperatures near normal west. Southwest, central 4 to 7° above normal. East 9 to 11° above. Maximums over 100° central, east. Numerous thunderstorms first half of week over 1.00 in. parts of west, north central, central. Some hail, brief heavy rain caused localized flooding.

Days suitable for fieldwork 5.8. Topsoil moisture 81% short, 19% adequate. Subsoil moisture 84% short, 16% adequate. Barley 29% very poor, 27% poor, 27% fair, 15% good, 2% excellent. Oats 38% very poor, 29% poor, 22% fair, 10% good, 1% excellent. Range, pasture feed 36% very poor, 37% poor, 20% fair, 6% good, 1% excellent. Barley 67% headed, 52% 1987, 36% avg. Oats 70% headed, 59% 1987, 35% avg. First cutting alfalfa 81% harvested, 70% 1987, 55% avg. Other hay 53% harvested, 33% 1987, 21% avg.

NEBRASKA: Widespread thunderstorms provided much needed moisture. Amounts varied from 0.20 in. west to 3.00 in. remainder. Temperatures averaged 4° below normal while Panhandle normal. Extremes 47°; 105°.

Days suitable for fieldwork 5.0. Topsoil moisture 40% short, 57% adequate, 3% surplus. Subsoil moisture 74% short, 25% adequate, 1% surplus. Wheat 100% turning, 100% 1987, 89% avg. Wheat 70% ripe, 70% 1987, 42% avg. Spider mite problems continued east central, southwest. Sorghum greenbug, chinch bug problems. Alfalfa hay 4% very poor, 28% poor, 44% fair, 24% good.

Alfalfa 2nd cutting 35%, 25% 1987, 18% avg. Low yields in alfalfa. Oats 20% harvested, 7% 1987, 6% avg. Pasture, range feeds short to adequate. Cooler weather eased stress on livestock.

NEVADA: Thunderstorm activity mainly eastern areas early. Flash flooding northeast. Weak cold front midweek cooled daytime temperatures, ended thunderstorm activity most areas. Average temperatures above normal all sections.

Warm weather, strong gusty winds stressed crops all areas. Irrigation water requirements increased, but water in limited supply. Pasture, range conditions continued to deteriorate. No relief from drought in sight.

NEW ENGLAND: Precipitation averaged 1.50 to 2.00 in. northern Maine, northern New Hampshire; 0.50 to 1.00 in. remainder north, 0.25 to 0.50 in. southeast Vermont, coastal Massachusetts less than 0.25 in. remainder south. Temperatures averaged from upper 50s near Canadian border to mid 60s southern coast. Temperatures slightly below normal.

Days suitable for fieldwork 6.0. Fieldwork 2.0 days ahead. Soil moisture 8% very short, 67% short, 25% adequate. Grazing availability 5% very short, 64% short, 32% adequate. Maine potatoes good. Rhode Island potatoes excellent. Connecticut River Valley potatoes fair to good. Field corn fair to good. Sweet corn fair to good. Outdoor tobacco good. First crop hay good; 90% cut, 75% 1987, 75% avg. Second crop hay 5% cut, 5% 1987, 3% avg.; fair to good. Apple set average to heavy; apple drop average; scab infection light to average. Blueberry set average. Strawberries 80% harvested. Major farm activities: Haying, harvesting strawberries, vegetables; spraying, irrigating.

NEW JERSEY: Temperatures averaged much below normal. Extremes 41°; 89°. Rainfall averaged 0.03 in. north, 0.02 in. central, 0.01 in. south. Heaviest 24-hour total 0.09 in. on 1st, 2nd. Estimated soil moisture percent field capacity averaged 46% north, 27% central, 17% south. Four inch soil temperatures averaged 63° north, 65° central, 69° south.

Soil moisture short all areas. Irrigation in full use. Unirrigated crops showing signs of dry weather. Summer vegetable harvest active. Scattered harvest of sweet corn, tomatoes, peppers began. Strawberry harvest complete. Very light raspberry, blackberry picking began. Blueberry harvest general. Barley, wheat, rye combining active. Field corn, soybeans need rain. Dry soils delayed late soybean seeding. Second growth of hay poor. Pastures brown most areas.

NEW MEXICO: Temperatures ranged 41° Ruidoso to 100° Animas. Rainfall greatest over mountains, eastern plains.

Days suitable for fieldwork 5.7. Soil moisture 27% short, 64% adequate, 9% surplus. Wheat 40% poor, 40% fair, 20% good; 84% harvested. Cotton 60% squaring, 10% setting bolls; 15% poor, 50% fair, 35% good. Onions 10% fair, 80% good; harvest well underway, yields good. Cattle 10% poor, 30% fair, 50% good, 10% excellent. Sheep 25% fair, 62% good, 13% excellent. Range 20% poor, 50% fair, 10% good, 20% excellent.

NEW YORK: Unseasonably cold weather. Lows in 40s, 50s with isolated 30s on 29th north of Mohawk Valley. Highs in 60s, with 70s on 27th, 28th, 2nd. Scattered showers brought locally light amounts 26th through 29th. Showers fairly numerous east of Finger Lakes, north on 30th and 1st. Weekend dry.

Days suitable for fieldwork 6.0. Soil moisture very short to adequate. Field activities: Harvesting hay, spraying corn. Pastures poor to fair. Hay fair to good, rains should benefit hay regrowth. First cutting alfalfa 91%, 77% 1987, 72% avg. Clo-tim harvest 80%, 63% 1987, 56% avg. Grass silage 89% harvested, 81% 1987, 76% avg. Apple drop lighter than expected. Sweet cherry harvest began. Fruit crops good, need rainfall.

Vegetables showing stress, growers irrigating where possible.

NORTH CAROLINA: Temperatures averaged 4 to 7° below normal statewide. Record lows set at Asheville, Greensboro, Cape Hatteras, Wilmington morning of 2nd. Precipitation ranged 0.02 to 2.42 in. across State.

Days suitable for fieldwork 5.5. Soil moisture 17% very short, 41% short, 40% adequate, 2% surplus. Pasture 9% very poor, 22% poor, 31% fair, 35% good, 3% excellent. Burley tobacco 100% transplanted, 100% 1987, 100% avg. Tobacco 5% poor, 41% fair, 51% good, 3% excellent. Peanuts 6% poor, 11% fair, 74% good, 9% excellent. Sweetpotatoes 97% transplanted, 98% 1987, 96% avg.; 2% very poor, 2% poor, 28% fair, 59% good, 9% excellent. Irish potatoes 59% harvested, 70% 1987, 50% avg.; 7% poor, 32% fair, 51% good, 10% excellent. Peaches 25% fair, 71% good, 4% excellent. Truck crops 1% very poor, 6% poor, 29% fair, 61% good, 3% excellent. Sorghum 96% planted, 92% 1987, 90% avg. Hay 97% 1st cutting, 40% 2nd cutting; 4% very poor, 22% poor, 33% fair, 37% good, 4% excellent. Peaches 38% harvested, 32% 1987, 47% avg.; 25% fair, 71% good, 4% excellent. Apples 13% poor, 53% fair, 31% good, 3% excellent. Major farm activities: Cutting hay; harvesting small grains, Irish potatoes, peaches; planting soybeans, sorghum; transplanting tobacco, sweetpotatoes; fertilizing, spraying nursery crops, peanuts, tobacco, soybeans; cultivating tobacco, soybeans, truck crops, corn; tending livestock; general farm maintenance.

NORTH DAKOTA: Temperatures 3 to 8° above normal. Extremes 44°; 108°. Precipitation west, central; heaviest 3.93 in. south central.

Days suitable for fieldwork 6.3. Topsoil moisture improved; 47% very short, 37% short, 16% adequate. Subsoil 53% very short, 44% short, 3% adequate. Most small grain crops beyond improvement. Spring wheat 38% very poor, 39% poor, 20% fair, 3% good; durum 39%, 42%, 19%; winter wheat 40%, 48%, 12%; oats 55%, 41%, 4%; barley 43%, 30%, 27%; corn 20%, 27%, 35%, 18%; flax 26%, 32%, 36%, 6%; soybeans 8%, 16%, 31%, 45%; sunflower 12%, 12%, 48%, 28%; dry edible beans 1%, 7%, 29%, 63%; potatoes none, none, 74%, 26%. All crops ahead of normal development. Winter wheat 69% turning and beyond, 60% 1987, 21% avg.; spring wheat 52% milk-dough and beyond, 28% 1987, 13% avg.; durum 37%, 20% 1987, 7% avg.; oats 51%, 40% 1987, 17% avg.; barley 63%, 46% 1987, 20% avg.; potatoes 34% bloom and beyond, 45% 1987, 18% avg.; flax 16%, 22% 1987, 13% avg.; dry edible beans 19%, 6% 1987, 3% avg.; soybeans 21%, 4% 1987, 1% avg. Pastures very poor to poor. Hay supplies critical, emergency forages planted. Failed small grain crops continued to be hayed or grazed.

OHIO: Average low temperatures mid 40s to low 50s. Average high temperatures mid 70s to low 80s. Lowest readings upper 30s, 40s on 30th. Highest readings 80s to lower 90s on 3rd. Rainfall very scattered, less than 0.30 in.

Days suitable for fieldwork 6.8. Soil moisture 98% short, 2% adequate. Cooler temperatures helped ease stress to crops, but little or no growth occurred. Activities: Harvesting wheat, baling straw, hay; some cultivating. Corn, beans stunted with little or no growth; both fair to poor. Wheat fair. Oat harvest just beginning; fair to poor. No significant insect or disease damage. Second cut hay limited due to little regrowth. Hay poor; pasture very poor.

OKLAHOMA: Temperatures averaged 3° below normal north central to 5° above normal east central. Precipitation averaged none northeast, southeast to 1.32 in. central.

Days suitable for fieldwork 5.7. Topsoil moisture 65% short, 35% adequate. Subsoil moisture 55% short, 45% adequate. Wheat 99% harvested, 98% 1987, 80% avg. Over 50% stubble plowed. Cotton 40% fair, 60% good; 97% planted, 90% 1987, 95% avg.;

30% squaring, 10% 1987, 5% avg.; 1% setting bolls, none 1987, none avg. Sorghum 90% planted, 95% 1987, 90% avg.; 1% heading, 1% 1987, 3% avg. Soybeans 85% planted, 95% 1987, 90% avg. Peanuts 97% planted, 97% 1987, 95% avg. Corn 25% tasseling, 45% 1987, 30% avg. Late planted row crops germinating with recent rainfall. Hot weather benefited cotton. Pastures fair, cattle good to fair. Cattle marketings stable, prices up slightly from preceding week.

OREGON: Normal temperatures. Baker 1.50 in. precipitation. Precipitation associated with thunderstorm activity east. Departures ranged -5 to 4°.

Soil moisture 35% short, 58% adequate, 7% surplus. Swathing begun Fescue seed crops, early grass seed; cereal crops look good northwest. Crimson clover being swathed Washington County. Second alfalfa cutting, winter barley almost ripe southwest. Wheat turning, heads filling nicely north central. Winter wheat headed out Jefferson County. Cherry harvest underway; apple, bartlett pear thinning continued Hood River. Cherries look good. Some early blackberries sold fresh market. Strawberry harvest near end. Red, black raspberry harvest underway Mid-Willamette Valley. Peaches sizing well upper Willamette Valley. Fruit sizing fertilizers applied southwest. Hand thinning apples Milton-Freewater. Processing snap beans, broccoli harvest to begun, cauliflower transplanting begun Columbia Basin. Harvesting fresh market vegetables, cole crops planting underway Clackamas County. Onions bulbing Jackson. Final irrigation garlic; bees in carrots, radish for seed Jefferson County. Klamath vegetables sprinkled for frost protection. Vegetables good. Range, pasture good. Livestock mainly good. Freezing temperatures little effect on pasture, range.

PENNSYLVANIA: Unseasonably cool air through morning of 29th. Scattered showers northern counties due to cold front. Unstable conditions covered State 30th to 1st providing few showers. Average temperature 62°, 6° below normal. Temperature extremes 34°, 91°. Average precipitation 0.05 in., 0.88 in. below normal.

Days suitable for fieldwork 6.0. Soil moisture 100% short. Corn 100% planted, 100% 1987, 100% avg. Corn 17 in. height, 30 in. 1987, 23 in. avg. Corn 4% very poor, 17% poor, 40% fair, 32% good, 7% excellent. Tobacco 93% transplanted, 95% 1987, 97% avg. Soybeans 95% planted, 94% 1987, 94% avg. Soybeans 5% very poor, 18% poor, 46% fair, 29% good, 2% excellent. Barley 20% heading or headed, 14% 1987; 19% turning yellow, 16% 1987; 15% ripe, 27% 1987; 46% harvested, 43% 1987. Wheat 21% heading or headed, 20% 1987; 60% turning yellow, 50% 1987; 15% ripe, 26% 1987; 4% harvested, 4% 1987. Wheat 1% very poor, 3% poor, 23% fair, 54% good, 19% excellent. Oats 74% heading or headed, 63% 1987; 26% turning yellow, 35% 1987; none ripe, 2% 1987. Oats 2% very poor, 6% poor, 30% fair, 54% good, 8% excellent. First cutting alfalfa 97%, 91% 1987. Second cutting alfalfa 31%, 25% 1987. First cutting clover-timothy 91%, 81% 1987. Hay stands mostly fair to good. Feed from pastures mostly below average. Activities: Planting soybeans; transplanting tobacco, harvesting barley, hay, wheat haylage, vegetables; weed control; machinery maintenance; caring for livestock.

PUERTO RICO: Island rainfall averaged 1.89 in., 0.67 in. above normal. Highest weekly total rainfall 6.23 in. Arecibo Observatory, 5.14 in. Lares, 4.41 in. Pico Del Este-Luquillo. Highest 24-hour total 2.85 in. Arecibo Observatory. Total rainfall since January 1st 25.51 in., 4% above normal. San Juan WSFO temperature 84°, 2° above normal. Total rainfall 0.42 in., 0.63 in. below normal. Divisional temperature averaged about 81 to 82° on coasts, 76° interior. Mean station

temperature ranged 84° San Juan WSFO to 67° Cerro Maravilla. Lowest minimum temperature 62° Pico Del Este-Luquillo. Highest maximum temperature 95° San Juan WSFO.

SOUTH CAROLINA: Temperatures 5 to 7° below normal. Rainfall ranged 3.30 to less than 0.25 in.

Days suitable for fieldwork 5.6. Soil moisture 17% very short, 63% short, 20% adequate. Cotton 43% squaring, 81% 1987, 83% avg.; 4% setting bolls, 7% 1987, 32% avg.; 2% very poor, 3% poor, 76% fair, 19% good. Soybeans 92% planted, 92% 1987, 92% avg.; 2% very poor, 5% poor, 66% fair, 27% good. Tobacco fair to good; 63% topped, 37% 1987, 56% avg. Peanuts fair to good. Sorghum fair; 77% planted, 89% 1987, 87% avg. Wheat yields good; 97% harvested, 92% 1987, 94% avg. Oats 93% harvested, 92% 1987, 92% avg. Peaches good to excellent; 35% harvested, 36% 1987, 38% avg. Pastures poor to fair. Livestock fair to good.

SOUTH DAKOTA: Average temperatures 5° above to 3° below normal. Extremes 30°, 106°. Rainfall widespread heaviest amounts west, central; east below normal.

Days suitable for fieldwork 5.4. Topsoil moisture improved; 29% critically short, 37% short, 31% adequate, 3% surplus. Subsoil moisture 36% critically short, 40% short, 24% adequate. Small grains beginning harvest, cut for hay. Problems in crops include red leaf in oats, wheat streak mosaic, cutworms in corn, grasshoppers everywhere.

TENNESSEE: High pressure early week produced record high temperatures. Cold front 29th, 30th brought needed rainfall and cooler temperatures. Highs above 100° west, middle; 96° east. Precipitation ranged less than 0.25 in. middle, east to 3.00 in. along extreme western border.

Days suitable for fieldwork 6.0. Soil moisture 90% very short, 9% short, 1% adequate. Corn 26% tasseling, 64% 1987, 38% avg.; 4% dough, 7% 1987, 5% avg. Wheat 98% harvested, 94% 1987, 85% avg. Alfalfa 2nd cutting 70% harvested, 76% 1987, 74% avg. Corn, sorghum condition declining, mostly poor. Soybean planting at standstill. Wheat, other small grains yields excellent. Pastures, hay declining daily, mostly poor. Cattle poor to fair.

TEXAS: Upper level disturbance, two cool fronts brought rain to much area, although drought still maintained grip many areas. Rainfall above normal Plains, Trans-Pecos. Rainfall close to normal south, Lower Valley; below normal elsewhere. Temperatures below normal Plains, Trans-Pecos, south; near to above normal elsewhere.

Crops: Small grain harvest slowed by continued rain Plains, Cross-Timbers. Most fields harvested Blacklands. Yields varied dryland fields Plains. Corn excellent progress Plains. Some poorer fields Cross-Timbers cut for silage. Many fields stressed for moisture Blacklands, central. Fields drying rapidly. Fields entering dent stage. Coastal Bend, Rio Grande Valley fields maturing rapidly under hot temperatures. Fields northeast, south very dry. Harvest to soon begin south. Corn 60% doughing, 49% 1987, 56% avg.; 30% dented, 13% 1987, 33% avg.; 5% mature, none 1987, 5% avg. Grain sorghum planting winding down Plains; continued wet conditions kept some producers from finishing. Planted fields improved with rain. Fields beginning to head Low Plains, Cross-Timbers. Rain beneficial these areas. Fields continued head out, turn color Blacklands, central. Harvest begun Coastal Bend, Rio Grande Valley. Harvest started Upper Coast. Sorghum 97% planted, 98% 1987, 97% avg.; 56% headed, 52% 1987, 57% avg.; 27% turning color, 30% 1987, 39% avg.; 13% mature, 3% 1987, 16% avg.; 1% harvested, none 1987, 4% avg. Cotton progress improved Plains, Cross-Timbers. Most planting completed; wet conditions delayed planting scattered fields. Blackland producers cultivating, treating for bollworms. Growth good central, many fields need rain. Bolls opening Valley, Coastal

Bend light insect populations. Cotton 98% planted, 100% 1987, 99% avg.; 2% open bolls, none 1987, none avg. Early rice fields continued head Upper Coast. Producers continued to fertilized, flood fields. Peanut fields look good Low Plains, Cross-Timbers after last week's rain. Stands good Hill Country. Stands fair central, planting continued. Soybean progress improved Plains. Some producers planting behind wheat because good price prospects. Stands look good Upper Coast, could use some moisture. Other Field Crops: Oats 79% harvested, 80% 1987, 83% avg. Peanuts 93% planted, 80% 1987, 86% avg. Soybeans 93% planted, 90% 1987, 92% avg. Sunflowers 56% planted, 91% 1987, 91% avg.

Commercial Vegetables: Rio Grande Valley melon harvest about over. Land preparations planting continued. San Antonio-Winter Garden harvest melons, onions continued, onions about over. East dry conditions continued to decrease production. Irrigated sweetpotatoes fair progress. High Plains onion, potato harvest to begin soon. Carrot planting slowed by rain. Trans-Pecos chilies setting fruit. Cantaloup harvest to begin couple of weeks. Presidio area harvest continued. Harvest peaches continued, good quality. Pecans good development most areas; drier parts State heavy drop.

Range and Pasture: Range, pasture grasses continued to receive good moisture Plains. Growth increased. Many other areas greening with scattered rains. South, northeast remained very dry. Hay cuttings continued low yields. Livestock marketings continued steady, lack of forage. Hay supplies declining.

UTAH: Precipitation light. Temperatures 5 to 7° above normal.

Days suitable for fieldwork 6.1. Soil moisture 68% short, 32% adequate. Winter wheat 65% turning color, 85% 1987, 68% avg.; 9% ripe, 12% 1987, 8% avg. Spring wheat 84% headed, 89% 1987, 85% avg.; 30% turning color, 61% 1987, 47% avg. Barley 82% headed, 93% 1987, 81% avg.; 32% turning color, 63% 1987, 41% avg. Oats 69% headed, 76% 1987, 54% avg.; 8% turning color, 20% 1987, 8% avg. Alfalfa 2nd cutting 15%, 12% 1987, 3% avg. Grass hay harvest well along. Sweet cherry harvest well along; tart cherries, apricots beginning. Winter wheat 45% fair, 55% good. Spring wheat 45% fair, 50% good, 5% excellent. Barley 19% fair, 76% good, 5% excellent. Oats 19% fair, 71% good, 10% excellent. Livestock good. Ranges, pastures need rain. Major farm activities: Irrigating corn, alfalfa; weed control row crops, summer fallow fields; haying, small grain silage.

VIRGINIA: Temperatures averaged 4° below normal. Record lows to 39°. Rainfall sparse, from scattered severe thunderstorms. Range none to 2.49 in., but most locations on low side of range.

Days suitable for fieldwork 6.1. Topsoil moisture 37% very short, 38% short, 25% adequate. Crops still mostly good but under moisture stress, declining. Best conditions southeast, worst southwest mountains. Corn fair to good. Corn 22% in or beyond silk stage, 18% 1987, 25% avg. Soybeans good to excellent. Soybeans 88% planted, 87% 1987, 88% avg. Flue-cured tobacco good to excellent. Irrigated, insect control. Some topping southern most counties. Burley tobacco fair, under stress. Peanuts good to excellent. Weed control active. Barley 94% harvested, 89% 1987, 94% avg. Wheat 67% harvested, 69% 1987, 78% avg. Potatoes 20% harvested. Hay mostly good, fair southwest. Pastures fair mountain areas, good most other areas. Some feeding livestock in driest areas.

WASHINGTON: Weak disturbance passed through State, caused scattered showers across area. Temperatures also slightly below normal.

Days suitable for fieldwork 6.5. Showers, cool temperatures improved soil moisture conditions; 45% short, 55% adequate. Winter wheat 100% headed,

100% 1987, 97% avg. Cereal grain crops continued coloring. Growers planned to begin harvest soon. Hay growers continued cutting 1st crop hay late areas, 2nd crop hay early areas. Hay, other roughage feed supplies 5% short, 60% adequate, 35% surplus. Range, pastures mostly adequate west, central areas; short eastern part of State. Dryland wheat, barley 5% poor, 40% fair, 45% good, 10% excellent. Irrigated grains, potato crop mostly good. Fruit, berry harvest activities continued despite cool temperatures, scattered showers. Cherry harvest winding down Yakima, Grant, Benton Counties. Springcrest peach harvest began Yakima County. Strawberry harvest continued western area. Raspberry harvest started early areas only. Lettuce, radishes, onions, early fresh potatoes being harvested. Most vegetable crops progressing satisfactorily.

WEST VIRGINIA: Average temperature 64°, 4 to 10° below normal. Extremes 31° Greenbank, 95° Creston. Precipitation averaged 0.03 in., nearly 1.00 in. below normal.

Days suitable for fieldwork 6.0. Soil moisture 73% very short, 27% short. Wheat, barley, oats mostly fair; some very poor, good. Wheat 100% headed, 65% ripe, 10% harvested. Barley 100% headed, 86% ripe, 33% harvested. Oats 84% headed, 20% ripe, 5% harvested. Corn, tobacco fair to very poor. Tobacco 100% set. Apples fair to good, some poor to very poor. Peaches good to fair. Hay, pasture very poor to good. Cattle, sheep fair to good. Feed supplies 44% short, 56% adequate. Farm activities: Haying, general farm maintenance, livestock care, gardening.

WISCONSIN: Temperatures averaged 64°, 6° below normal. Extremes 30°; 92°. Precipitation 0.30 to 1.90 in. Rain helpful, more needed.

Days suitable for fieldwork 6.2. Soil moisture 99% short, 1% adequate. Crops about same; 13% very poor, 47% poor, 35% fair, 5% good. Corn 5% very poor, 23% poor, 54% fair, 18% good. Corn 32 in. height, 45 in. 1987, 29 in. avg.; growth slower than normal. Oats 93% headed, 93% 1987, 69% avg. Most oats cut for silage, hay. First crop hay 97% cut, 93% 1987, 87% avg. Second crop 10% cut, 7% 1987, 5% avg. Yields extremely low. Soybeans growing slowly. Sweet corn tasseling short height. Christmas trees showing stress. Pastures bad.

WYOMING: Temperatures above normal. Rainfall above normal southern mountains, south central sections; elsewhere drier than normal.

Days suitable for fieldwork 7.0. Topsoil moisture 83% short, 17% adequate. Winter wheat 5% booted, none 1987, 10% avg.; 45% headed, 40% 1987, 60% avg.; 40% turning color, 55% 1987; 10% mature, 5% 1987. Barley none not yet jointed, 5% 1987, 5% avg.; 10% jointed, 10% 1987, 10% avg.; 15% booted, 20% 1987, 25% avg.; 45% headed, 35% 1987, 50% avg.; 25% turning color, 30% 1987; 5% mature, none 1987. Spring wheat none not jointed, none 1987, 5% avg.; 10% jointed, 5% 1987, 15% avg.; 25% booted, 40% 1987, 35% avg.; 45% headed, 45% 1987, 45% avg.; 15% turning color, 10% 1987; 5% mature, none 1987. Oats 5% not jointed, 10% 1987, 10% avg.; 15% jointed, 15% 1987, 15% avg.; 30% booted, 35% 1987, 35% avg.; 35% headed, 35% 1987, 40% avg.; 10% turning color, 5% 1987; 5% mature, none 1987. Sugarbeets 100% thinned, 95% 1987. Alfalfa 1st cutting 80%, 65% 1987, 60% avg. Other hay 30% harvested, 25% 1987, 20% avg. Livestock mostly good. Ranges, pastures poor to mostly fair. Stock water supplies short to adequate.

Crop Progress 1/

FOR WEEK ENDING JULY 3, 1988

	CORN % SILKING		
	1988	1987	AVG.
COLO	0	0	0
GA	85	91	91
ILL	8	39	14
IND	1	30	4
IOWA	1	5	1
KANS	10	25	5
KY	10	44	24
MICH	0	1	0
MINN	0	0	0
MO	14	41	17
NEBR	5	7	3
N C	44	40	48
OHIO	1	9	0
PA	0	0	0
S DAK	0	2	0
TEX	64	67	70
WIS	0	1	0
17 STATES	6	17	8

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

	COTTON % SQUARING		
	1988	1987	AVG.
ALA	83	82	74
ARIZ	95	98	97
ARK	85	91	79
CALIF	65	90	74
GA	73	81	83
LA	61	85	68
MISS	87	89	78
MO	88	98	66
N MEX	60	54	53
N C	47	67	56
OKLA	30	10	5
S C	43	81	83
TENN	72	88	62
TEX	46	32	27
14 STATES	60	59	50

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

	COTTON % SETTING BOLLS		
	1988	1987	AVG.
ALA	15	15	11
ARIZ	40	60	62
ARK	11	36	18
CALIF	5	20	13
GA	20	24	29
LA	7	25	16
MISS	3	13	10
MO	10	56	18
N MEX	10	0	9
N C	2	13	12
OKLA	1	0	0
S C	4	7	32
TENN	6	14	5
TEX	13	13	11
14 STATES	11	18	14

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

	RICE % HEADED		
	1988	1987	AVG.
ARK	0	0	0
CALIF	0	0	0
LA	22	14	24
MISS	0	0	5
TEX	23	26	37
5 STATES	7	6	9

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

	SPRING WHEAT % HEADED		
	1988	1987	AVG.
IDAHO	70	78	58
MINN	99	95	67
MONT	72	47	37
N DAK	86	75	47
S DAK	100	100	100
5 STATES	87	77	57

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

	SOYBEANS % PLANTED		
	1988	1987	AVG.
ALA	87	94	93
ARK	86	98	94
GA	85	94	95
ILL	100	100	100
IND	100	100	99
IOWA	100	100	100
KANS	96	95	85
KY	88	92	86
LA	89	92	95
MICH	100	100	100
MINN	100	100	100
MISS	80	94	91
MO	96	99	97
NEBR	100	100	100
N C	87	82	90
OHIO	100	100	100
S C	92	92	92
S DAK	100	100	100
TENN	88	95	91
19 STATES	96	98	97

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

	SOYBEANS % BLOOM		
	1988	1987	AVG.
ALA	8	12	7
ARK	2	2	1
GA	4	8	9
ILL	25	56	23
IND	12	42	15
IOWA	35	31	8
KANS	5	10	5
KY	8	16	6
LA	2	4	7
MICH	0	5	1
MINN	40	21	5
MISS	6	2	4
MO	17	31	11
NEBR	15	11	5
N C	0	0	0
OHIO	0	15	0
S C	0	0	0
S DAK	27	17	5
TENN	2	3	2
19 STATES	17	25	9

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

	WINTER WHEAT % HARVESTED		
	1988	1987	AVG.
ARK	99	98	96
CALIF	60	80	73
COLO	6	1	4
GA	98	97	98
IDAHO	0	0	0
ILL	93	92	56
IND	70	57	37
KANS	97	80	50
MICH	1	2	0
MO	96	93	63
MONT	0	0	0
NEBR	45	31	26
N MEX	84	92	NA
N C	80	89	88
OHIO	38	27	12
OKLA	99	98	80
OREG	0	2	1
S DAK	10	4	1
TEX	84	84	84
WASH	0	0	0
20 STATES	64	58	NA

EXCL. STATES WITH NA 64 58 44

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

NA - NOT AVAILABLE.

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

Crop Condition
FOR WEEK ENDING JULY 3, 1988

CORN						COTTON						GRAIN SORGHUM						
STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX	
COLO	0	1	13	71	15	ALA	12	36	47	5	0	ARK	13	35	49	3	0	
GA	6	49	34	9	2	ARIZ	0	0	33	50	17	ILL	0	27	66	7	0	
ILL	2	20	60	18	0	ARK	0	30	50	20	0	KANS	3	19	36	39	3	
IND	11	54	35	0	0	CALIF	0	0	15	50	35	LA	20	24	53	3	0	
IOWA	2	15	59	22	2	GA	18	4	65	13	0	MISS	35	45	15	5	0	
KANS	8	19	31	34	8	LA	0	65	23	12	0	MO	8	44	46	2	0	
KY	31	37	30	2	0	MISS	25	40	30	5	0	NEBR	0	8	68	24	0	
MICH	15	30	35	17	3	MO	0	20	80	0	0	OKLA	1	9	25	65	0	
MINN	11	19	60	10	0	N MEX	0	15	50	35	0	S DAK	2	6	32	59	1	
MO	13	60	26	1	0	N C	0	17	31	44	8	TENN	23	45	32	0	0	
NEBR	0	5	53	38	4	OKLA	0	0	40	60	0	TEX	1	18	27	48	6	
N C	1	11	40	44	4	S C	2	3	76	19	0							
OHIO	14	35	42	8	1	TENN	8	21	66	5	0							
PA	7	32	40	17	4	TEX	0	7	25	55	13							
S DAK	0	7	34	53	6													
TEX	1	13	29	44	13													
WISC	5	23	54	18	0													

RICE						SOYBEANS						WINTER WHEAT						
STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX	
ARK	0	9	47	44	0	ALA	15	46	35	4	0	ARK	0	0	17	28	55	
CALIF	0	5	20	70	5	ARIZ	6	50	38	6	0	CALIF	0	5	15	65	15	
LA	0	1	34	65	0	GA	8	22	52	18	0	COLO	1	7	19	62	11	
MISS	0	20	45	35	0	ILL	2	14	69	15	0	GA	0	5	17	60	18	
TEX	0	1	11	85	3	IND	6	40	51	3	0	IDAHO	0	1	16	66	17	
						IOWA	0	12	56	28	4	IND	2	9	58	28	3	
						KANS	2	12	37	46	3	MICH	10	25	45	20	0	
						KY	20	38	42	0	0	MONT	26	35	28	10	1	
						LA	16	15	50	19	0	NEBR	0	2	44	53	1	
						MICH	15	25	35	22	3	N MEX	0	40	40	20	0	
						MINN	7	17	59	16	1	N C	C	1	15	73	11	
						MISS	35	45	15	5	0	OHIO	3	22	43	29	3	
						MO	7	39	51	2	1	OREG	0	0	1	98	1	
						NEBR	0	4	66	30	0	S DAK	15	25	46	13	1	
						N C	0	11	35	50	4	TEX	10	16	35	36	3	
						OHIO	15	31	42	11	1	WASH	0	5	40	45	10	
						S C	2	5	66	27	0							
						S DAK	1	3	34	60	2							
						TENN	19	43	35	3	0							

SPRING WHEAT					
STATE	VP	P	F	G	EX
IDAHO	0	5	8	74	13
MINN	33	33	34	0	0
MONT	34	35	20	9	2
N DAK	38	39	20	3	0
S DAK	26	35	31	8	0

International Weather and Crop Summary

June 26 - July 2, 1988

HIGHLIGHTS:

UNITED STATES ... Precipitation and lower temperatures ease drought stress in the Great Plains, Delta, and western Corn Belt. The lower temperatures ease stress in the central and eastern Corn Belt, but inadequate moisture plagues crop development and growth.

USSR ... In Western USSR, weather conditions are mostly favorable for crop growth. In the New Lands, continued hot, dry weather in the eastern Volga, the southern Urals, and Kazakhstan is stressing spring grains entering reproduction.

EUROPE ... Rain falls over nearly all of the continent. Wetness, harvest delays continue in the southwest.

SOUTH ASIA ... Showers in central and northern regions improve planting conditions. Dry weather persists to the south, limiting moisture for establishment.

EASTERN ASIA ... Heavy rain helps alleviate dryness in the southwest. Rain favors spring and summer crops across northern growing areas.

SOUTHEAST ASIA ... Light to moderate rain benefits Thai corn in or nearing reproduction. Showers benefit most Philippine grain regions.

SOUTH AMERICA ... Dryness continues to delay wheat planting in Argentina. Drier weather prevails in south-central Brazil.

AUSTRALIA ... Dry weather develops in southern winter crop areas.

MEXICO ... Beneficial rain covers most of the country, helping topsoil moisture for crop growth.

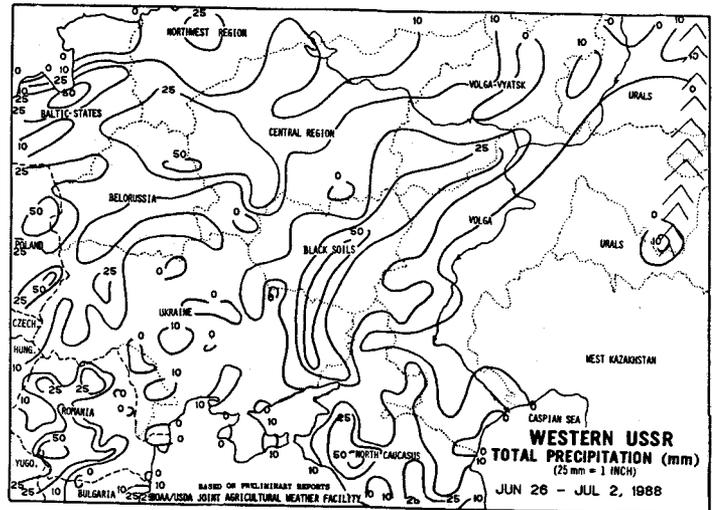
CANADA ... Rain covers much of Alberta and Saskatchewan, bringing some relief to crops in or nearing reproduction.

MONTHLY DATA FROM SELECTED FOREIGN CITIES
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
*** = DATA NOT AVAILABLE

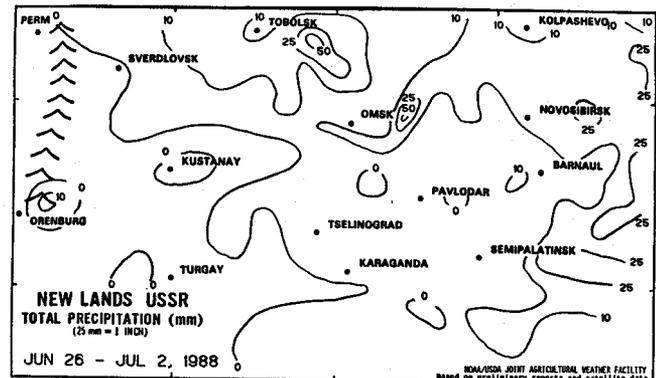
June 1988

COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)			COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
	AVG MAX	AVG MIN	HI	LO	DPART	F/NRM	TOTAL	DPART		AVG MAX	AVG MIN	HI	LO	DPART	F/NRM	TOTAL	DPART
NORWAY OSLO	23	11	31	7	17	2.9	61.4	-12.0	USSR ODESSA	23	16	27	12	19	-0.2	30.1	-11.4
SWEDEN STOCKHOLM	21	11	28	5	16	0.3	78.6	32.1	YALTA	24	17	29	14	21	-0.1	41.1	-1.8
FINLND HELSINKI	23	12	30	3	17	2.1	47.0	4.8	VORONEZH	26	15	32	4	21	2.1	135.1	85.7
U KING GLASGOW	20	10	25	5	15	0.7	10.0	-55.3	SARATOV	28	18	35	13	23	3.5	19.6	-16.8
EDINBURGH	18	10	25	4	14	0.8	12.3	-33.6	KHARKOV	24	16	30	10	20	0.7	73.7	24.2
BIRMINGHAM	19	10	24	6	14	0.2	57.4	4.5	VOLGOGRAD	28	17	33	12	23	1.3	37.6	10.8
LONDON	19	10	25	5	15	0.3	8.8	-50.1	ROSTOV	26	17	32	14	22	0.4	116.5	56.0
IRELND DUBLIN	18	11	24	6	15	1.0	38.1	-14.7	ASTRAKHAN	32	19	36	14	26	2.4	16.9	-3.3
ICELND REYKJAVIK	10	6	14	3	8	-0.9	46.9	-0.6	KRASNODAR	26	17	30	13	21	0.0	227.1	150.0
DENMRK COPENHAGEN	21	12	26	1	17	1.0	21.2	-25.8	ORENBURG	30	16	37	8	23	3.8	12.8	-29.6
LUXEMB LUXEMBOURG	19	11	24	6	15	-0.6	60.7	-1.1	TSELINOGRAD	28	14	39	8	21	2.5	13.2	-18.8
SWITZL ZURICH	21	11	25	7	16	0.5	169.6	35.9	KARAGANDA	28	13	39	7	21	2.1	1.3	-38.9
GENEVA	23	12	27	7	17	0.5	28.3	-62.3	TBILISI	27	16	32	11	22	0.3	90.7	23.6
FRANCE PARIS	21	11	27	5	16	-0.1	13.9	-42.4	TASHKENT	35	19	42	11	27	1.9	0.1	-10.4
STRASBOURG	23	12	26	8	17	0.4	45.0	-29.7	ASHKHABAD	37	21	46	17	29	0.9	0.1	-4.7
BOURGES	22	12	27	8	17	-0.2	35.6	-25.6	SYRIA DAMASCUS	33	15	37	9	24	-0.7	0.1	0.1
BORDEAUX	23	14	30	8	19	1.1	73.2	8.7	ISRAEL JERUSALEM	28	16	34	10	22	-0.2	0.1	0.1
TOULOUSE	24	14	29	10	19	0.6	100.6	36.2	PAKIST KARACHI	37	29	45	28	33	1.6	0.1	-7.6
MARSEILLE	25	15	29	11	20	-0.7	10.2	-21.4	INDIA AMRITSAR	39	24	44	19	32	-0.6	6.1	-51.1
SPAIN VALLADOLID	21	10	30	5	16	-2.1	92.8	53.5	NEW DELHI	38	28	45	23	33	-0.8	70.9	14.2
MADRID	25	12	32	7	18	-2.3	98.0	71.9	AHMEDABAD	39	29	44	23	34	1.1	37.1	-68.3
SEVILLE	28	16	36	13	22	-1.4	48.4	33.1	INDORE	37	25	43	21	31	0.5	162.0	27.9
E GRMY LEIPZIG	20	12	27	9	16	-0.7	52.3	-14.8	CALCUTTA	33	26	39	20	30	-0.5	675.8	425.5
DRESDEN	20	12	27	8	16	-0.4	68.2	0.2	VERAVAL	33	28	34	25	30	0.8	7.0	-152.9
W GRMY HAMBURG	19	12	25	7	15	-0.2	58.8	-11.1	BOMBAY	33	27	36	24	30	0.9	436.0	-211.5
BERLIN	21	13	27	8	17	-0.9	124.2	48.0	POONA	32	23	38	21	28	0.4	73.0	-44.7
DUSSELDORF	20	12	28	7	16	-0.9	30.5	-35.5	BEGAMPET	35	25	41	22	30	0.8	81.2	-18.8
STUTTGART	20	11	27	7	16	-0.7	68.1	-25.7	MADRAS	38	28	40	23	33	1.1	7.3	-54.9
NURNBERG	21	11	29	8	16	-0.6	50.6	-23.1	MANGALORE	29	23	35	21	26	-0.3	***	170.0
MUNICH	20	11	27	5	15	-0.2	113.0	-22.0	H KONG HONG KONG	31	27	33	25	29	1.4	314.7	-117.2
AUSTRI VIENNA	23	12	30	9	17	-0.9	41.5	-20.5	N KREA PYONGYANG	25	15	30	11	20	1.0	84.9	-72.1
INNSBRUCK	21	11	28	6	16	-0.2	105.2	-6.8	S KREA SEOUL	27	18	33	14	23	2.1	63.7	-105.2
CZECH PRAGUE	20	11	28	7	16	-0.7	86.3	7.8	JAPAN SAPPORO	21	14	28	10	17	1.5	74.9	-1.7
POLAND WARSAW	22	12	28	7	17	-0.3	101.5	37.3	NAGOYA	27	19	32	15	23	1.1	364.0	154.1
LODZ	21	12	28	6	16	0.4	53.2	-15.9	TOKYO	26	20	30	17	23	1.2	208.5	27.8
KATOWICE	20	12	29	5	16	0.2	54.4	-33.5	YOKOHAMA	25	19	29	17	22	1.3	214.3	-1.6
PRZEMYSL	20	12	26	3	16	-0.9	64.3	-34.6	KYOTO	28	19	33	15	23	1.6	293.5	60.7
HUNGAR BUDAPEST	24	14	30	10	19	-0.7	36.6	-31.8	OSAKA	27	20	31	17	24	1.2	353.7	140.9
YUGOSL SARAJEVO	23	11	28	6	17	0.0	63.5	-42.4	THAILN PHETCHABUN	33	25	37	23	29	0.8	110.1	-72.0
ROMANI BUCHAREST	27	14	30	8	21	0.2	108.5	20.7	BANGKOK	33	26	36	24	30	0.6	102.3	-55.8
BULGAR SOFIA	23	13	27	10	18	0.3	87.6	10.6	MALAYS KUALA LUMPUR	32	24	34	21	28	1.1	280.3	148.4
ITALY MILAN	25	16	31	12	20	-0.2	105.6	18.1	VIETNM HANOI	34	27	38	23	30	0.6	93.8	-145.0
VERONA	25	15	28	12	20	-0.8	132.7	54.1	CHINA HARBIN	27	15	34	9	21	1.3	37.6	-40.4
VENICE	24	16	27	12	20	-0.9	68.6	-8.1	HAMI	32	17	38	9	24	-0.6	3.5	-1.2
GENOA	24	17	28	13	21	-1.2	47.0	-2.0	LANCHOW	27	14	37	9	21	0.5	57.7	25.1
ROME	25	16	29	13	21	-0.5	40.8	19.4	BEIJING	30	20	38	16	25	0.8	72.4	-5.5
NAPLES	28	17	33	11	22	1.5	39.0	5.0	TIENTSIN	30	21	39	15	26	1.4	50.0	-19.3
GREECE THESSALONIKA	29	18	34	14	24	-0.9	11.4	-18.4	LHASA	25	10	29	4	17	1.0	18.7	-51.6
LARISSA	32	16	37	9	24	-1.1	9.6	-16.9	KUNMING	25	16	28	11	21	1.4	172.1	-8.3
ATHENS	28	21	34	17	25	-0.9	2.0	-6.2	CHENGCHOW	33	21	39	14	27	0.5	1.9	-66.2
TURKEY ISTANBUL	26	18	32	15	22	1.5	47.1	23.1	YEHCHANG	30	22	37	16	26	0.4	194.7	35.9
ANKARA	24	9	29	3	16	-4.0	48.6	10.6	HANKOW	30	23	35	16	26	0.8	221.3	11.7
CYPRUS LARNACA	30	19	35	16	25	-0.1	2.4	-2.7	CHIHKLIANG	30	20	35	14	25	0.8	131.3	-51.4
USSR TALLINN	21	12	29	1	16	1.9	19.6	-26.4	SHANGHAI	28	21	36	17	25	1.4	68.0	-91.0
LENINGRAD	22	14	31	6	18	2.5	61.9	11.0	NANCHANG	30	24	36	18	27	1.4	239.8	-51.3
KAUNAS	22	12	31	8	17	1.0	54.8	-33.4	TAIPEI	33	26	36	18	29	2.7	297.0	-19.0
MINSK	21	13	28	9	17	0.6	143.4	76.3	CANTON	33	25	35	21	29	1.8	143.5	-144.0
KAZAN	26	15	33	7	20	3.0	44.9	-16.4	NANNING	33	25	36	19	29	1.8	66.1	-165.9
MOSCOW	25	15	33	6	20	3.0	103.8	35.9	CNRY I LAS PALMAS	25	19	27	17	22	0.9	0.1	0.1
SVERDLOVSK	26	11	32	2	18	3.2	7.7	-61.2	MOROCC CASABLANCA	24	17	28	12	20	0.1	7.0	1.2
OMSK	25	12	37	2	18	0.7	4.7	-51.7	MARRAKECH	29	16	35	12	22	-0.8	0.3	-5.9
KUSTANAY	30	15	41	6	23	3.7	10.9	-26.2	ALGERI ALGER	28	16	39	13	22	0.8	18.0	-4.0
KRASNOYARSK	18	9	29	2	13	-2.8	45.7	-11.6	BATNA	30	16	38	9	23	1.6	35.3	12.2
NOVOSIBIRSK	21	10	34	1	15	-0.9	23.6	-29.7	TUNISI TUNIS	29	19	39	14	24	1.1	21.1	6.5
BARNAUL	22	11	36	5	17	-1.2	8.7	-38.4	NIGER NIAMEY	37	26	40	20	31	0.3	73.8	-1.3
KHABAROVSK	27	15	33	11	21	3.4	38.0	-39.7	MALI TIMBUKTU	41	30	46	24	36	1.9	1.0	-15.8
VLADIVOSTOK	18	11	26	2	14	1.5	80.6	-21.6	BAMAKO	35	25	39	20	30	0.8	188.8	51.7
KIEV	23	15	29	10	19	0.4	104.5	41.6	MAURIT NOUAKCHOTT	36	22	44	18	29	1.4	12.9	12.1
LVOV	20	12	26	7	16	-0.4	93.3	4.3	SENEGL DAKAR	28	23	32	15	26	-0.2	19.2	9.2
KIROVOGRAD	23	14	28	8	19	-0.6	123.3	71.8	CHAG A DIEGO GARCIA	29	25	30	24	27	0.5	128.7	-29.1

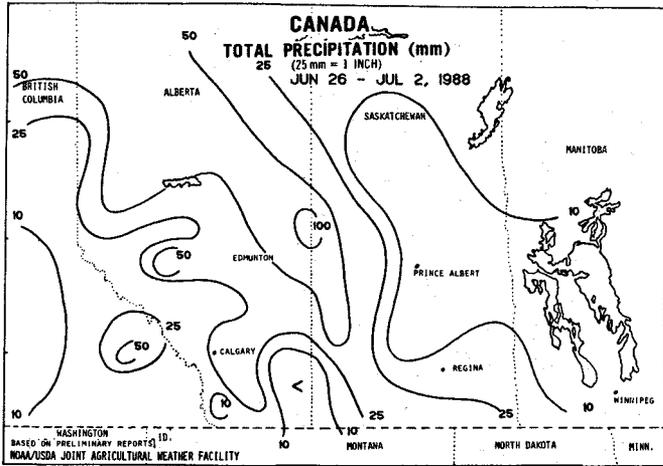
COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
	AVG MAX	AVG MIN	HI	LO	AVG	DPART F/NRM	TOTAL	DPART F/NRM
LIBYA TRIPOLI	35	22	44	15	29	2.7	0.4	-1.3
BENGHAZI	35	23	44	15	29	3.0	0.1	0.1
EGYPT CAIRO	36	22	44	18	29	2.1	0.1	0.1
ASWAN	41	27	47	23	34	1.0	0.1	0.1
ETHIOP ADDIS ABABA	23	11	36	7	17	0.0	119.9	1.9
KENYA NAIROBI	23	13	26	8	18	0.2	20.3	-10.6
TANZAN DAR ES SALAAM	29	21	30	18	25	0.7	66.9	34.0
GABON LIBREVILLE	28	24	30	22	26	0.7	475.8	457.4
TOGO LOME	30	24	32	20	27	1.3	118.0	-160.8
B FASO OUAGADOUGOU	34	25	38	19	29	0.4	68.3	-56.1
IVRY C ABIDJAN	29	24	31	21	27	0.6	361.8	-268.8
MOZAMB MAPUTO	26	13	34	10	19	0.8	43.0	27.0
ZAMBIA KABWE	24	11	28	8	18	2.1	3.0	3.0
ZIMBAB HARARE	22	10	25	7	16	2.5	7.6	3.6
S AFRI PRETORIA	19	5	25	-1	12	1.1	8.6	2.6
KROONSTAD	17	-1	25	-6	8	0.1	8.1	0.2
JOHANNESBURG	16	5	23	-1	10	1.1	26.3	20.1
BETHAL	16	1	24	-7	9	0.2	25.4	17.5
DURBAN	22	12	27	7	17	0.7	26.6	0.4
CAPE TOWN	19	6	26	-1	13	-0.1	45.5	-45.7
CANADA TORONTO	25	10	36	3	18	0.0	24.9	-42.2
MONTREAL	23	11	33	4	17	-0.9	72.5	-10.0
WINNIPEG	30	15	37	6	22	5.3	95.1	14.9
REGINA	30	15	41	6	23	6.8	44.0	-35.7
SASKATOON	29	14	41	4	21	5.5	23.5	-35.0
LETHBRIDGE	26	12	34	4	19	3.4	46.5	-31.7
CALGARY	23	10	29	4	16	3.0	84.9	-4.6
EDMONTON	22	11	29	6	17	1.6	157.4	80.0
VANCOUVER	19	11	26	7	15	0.1	39.0	-6.3
MEXICO GUADALAJARA	31	15	38	9	23	0.7	276.3	124.3
MEXICO CITY	25	13	31	8	19	1.4	134.5	30.4
ACAPULCO	31	24	36	20	28	-1.0	162.4	-116.4
BERMUD ST. GEORGES	30	26	32	22	28	3.0	115.3	-21.6
BAHAMA NASSAU	31	23	33	20	27	0.3	152.5	-72.2
CUBA HAVANA	30	24	33	21	27	0.4	371.5	209.6
JAMAIC KINGSTON	33	26	35	25	30	1.6	17.1	-61.3
P RICO SAN JUAN	33	25	36	23	29	1.6	39.7	-83.2
GUADEL RAIZET	32	24	33	22	28	0.8	77.8	-2.5
MARTINQ LAMENTIN	31	25	32	22	28	2.4	223.1	56.7
BARBAD BRIDGETOWN	31	25	32	23	28	0.7	99.7	9.0
TRINID PORT OF SPAIN	32	24	33	22	28	1.6	107.5	-146.8
COLOMB BOGOTA	18	8	25	1	13	-0.2	63.1	-8.2
VENEZU CARACAS	32	25	34	22	28	1.6	19.1	-34.2
F GUTA CAYENNE	30	23	32	22	27	1.3	282.4	-181.5
BRAZIL PORTALEZA	30	23	31	21	26	0.1	151.5	-0.9
RECIFE	28	22	30	20	25	0.6	298.5	-54.4
BELO HORIZONTE	25	14	29	9	19	0.6	2.3	-8.7
CAMPO GRANDE	27	15	35	3	21	1.3	10.3	-39.7
FRANCA	23	12	29	2	18	0.3	5.1	-17.0
RIO DE JANEIRO	25	18	31	13	21	-0.2	76.7	32.9
LONDRINA	22	11	28	1	16	-0.4	55.4	-36.2
SANTA MARIA	16	7	29	-1	12	-3.1	207.5	43.4
PORTO ALEGRE	**	15	**	15	**	**	0.0	-140.0
PERU LIMA	20	15	22	11	17	0.0	0.1	-0.8
BOLIVI LA PAZ	13	-4	16	-6	5	-2.7	0.1	-3.3
CHILE SANTIAGO	16	1	22	-4	9	0.5	4.8	-65.8
ARGENT IGUAZU	19	10	28	0	14	***	93.3	****
FORMOSA	21	11	30	0	16	-1.5	14.1	-62.9
CERES	19	5	25	-4	12	-0.9	4.3	-21.0
CORDOBA	18	2	24	-3	10	-0.4	0.1	-13.5
RIO CUARTO	17	3	23	-2	10	0.7	0.1	-23.5
ROSARIO	16	4	21	-4	10	-0.8	2.9	-42.3
BUENOS AIRES	15	4	24	-3	10	-0.3	5.7	-54.2
SANTA ROSA	15	1	22	-4	8	0.6	12.6	-12.5
TRES ARROYOS	14	3	18	-4	9	0.7	1.0	-43.3
MIDW I MIDWAY ISLAND	29	24	31	21	27	2.3	101.3	29.2
N CALD NOUMEA	25	20	29	18	22	1.5	118.4	4.2
FIJI NAUSORI	27	22	28	18	25	1.2	130.0	-36.6
SAMOA PAGO PAGO	30	25	35	23	27	1.0	193.5	-24.1
TAHITI PAPEETE	30	22	32	20	26	1.6	25.3	-36.2
N ZEAL AUCKLAND	15	8	19	4	12	0.1	60.6	-71.1
WELLINGTON	13	8	17	3	10	1.2	49.4	-89.7
PA N G PORT MORESBY	28	24	30	22	26	-0.2	85.6	37.9
AUSTRAL DARWIN	30	21	33	18	25	0.2	0.1	-1.7
MOREE	17	7	22	1	12	0.1	15.9	-11.0
BRISBANE	21	12	23	7	16	0.0	118.2	43.8
PERTH	19	13	23	6	16	1.7	168.0	-8.5
CEDUNA	18	9	26	3	14	1.4	16.6	-20.2
ADELAIDE	16	10	23	5	13	0.8	73.2	19.1
MELBOURNE	14	8	20	2	11	0.8	30.0	-8.7
WAGGA	13	6	19	1	10	1.0	42.8	2.0
CANBERRA	11	3	16	-2	7	0.8	38.2	-0.5
PHILIP MANILA	32	25	35	23	29	0.0	238.4	-14.7



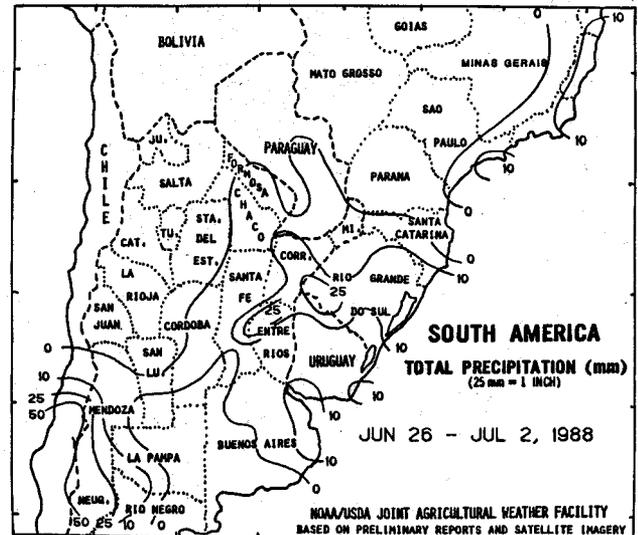
USSR ... In Western USSR, unseasonable warm, dry weather over southern Belorussia and the northern and central Ukraine was mostly favorable for winter wheat in the filling stage. The warm, dry weather in these areas helped to minimize the potential for diseases brought on by the unseasonably cool, wet weather of the past several weeks. Early-week wet weather (25-50mm) continued over winter wheat areas in the western and southern North Caucasus, slowing crop maturation. A narrow band of significant precipitation (25-50mm) stretched northeastward from the eastern Ukraine, through the central Black Soils Region, and into the southern Volga Vyatsk Region, benefiting filling winter wheat, spring grains in the reproductive to filling stages, and corn entering the tasseling stage. Further east, unfavorably hot and dry weather in the central and eastern Volga stressed spring grains in the early filling stage.



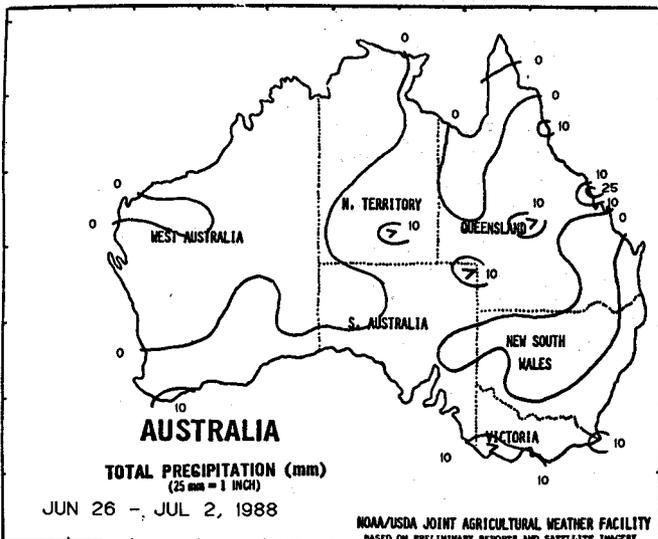
In the New Lands, unfavorably hot, dry weather stressed spring grains in the eastern Volga, the Urals, and Kazakhstan. Spring grains were entering the highly weather sensitive reproductive phase of development in the southern Urals and Kazakhstan and were jointing in the northern Urals. The hottest weather occurred on July 2 when maximum temperatures ranged from 32 to 37 degrees C in the southern Urals and Kazakhstan, and 31 to 34 degrees C in the eastern Volga and the northern Urals. Widespread rain and cooler weather is needed in these areas to alleviate stress and to prevent further crop deterioration. In Western Siberia, scattered showers, accompanied by continued unseasonably cool weather, favored spring grains in the jointing stage. Weekly average temperatures were 2-5 degrees C below normal in Western Siberia.



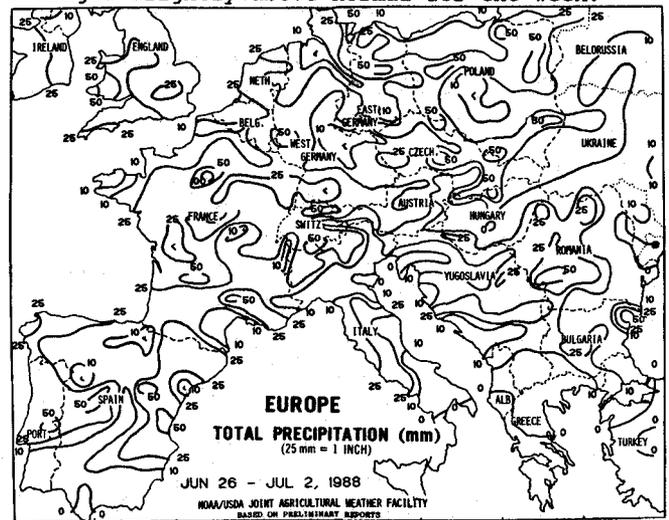
CANADA ... A frontal system brought much needed rain (10-50mm or more) and cooler weather to crop regions of northern and central Alberta and all but northeastern Saskatchewan. Minimal rain (less than 10mm), however, persisted in southern Alberta, northeastern Saskatchewan, and Manitoba. Early week temperatures reached the middle to upper 30's C in Saskatchewan and Manitoba, continuing the previous week's period of stressful growing conditions and high evaporative moisture losses, but temperatures moderated by week's end. Most crops are in or nearing the moisture and temperature sensitive reproductive phase, requiring more rain and mild weather for normal development.



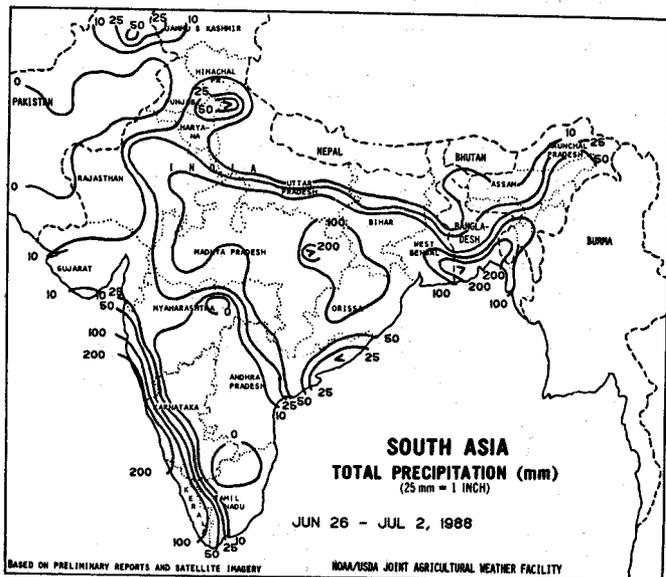
SOUTH AMERICA ... In Argentina, mostly light showers (1-5mm) fell over eastern Buenos Aires, Cordoba, and Santa Fe, providing little significant moisture for wheat planting. Heavier showers (10-25mm or more) were confined to northeast coastal areas of Buenos Aires and northern Entre Rios. Clear skies prevailed over western Buenos Aires and La Pampa. Wheat planting has been delayed by persistent dryness in nearly all major crop areas. The small area of showers extended into extreme southern Brazil, where 10-29mm of rain fell in southern Rio Grande do Sul. Rain diminished in Santa Catarina, and dry weather prevailed over the remainder of Brazil's center-south region, covering northern wheat areas and the coffee growing region. Weekly temperatures generally averaged slightly above normal for the week.



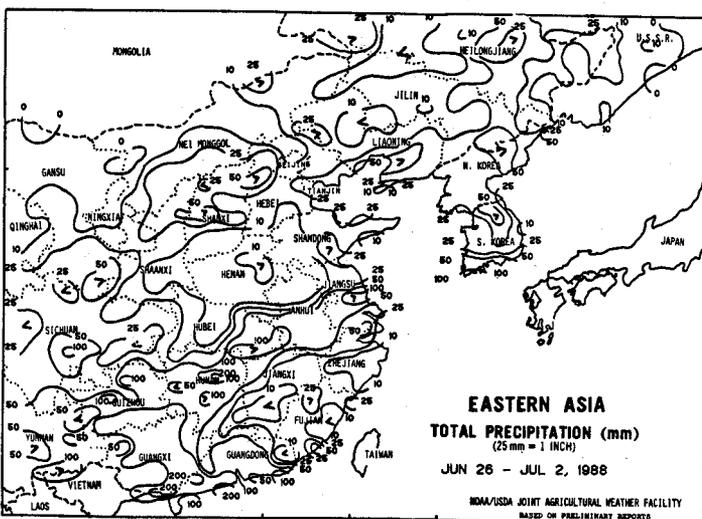
AUSTRALIA ... Drier weather developed over most southern wheat areas, with only scattered light to moderate rain (less than 15mm) in coastal locations. The dry weather allowed a resumption of fieldwork and late winter cereals planting. Dry weather continued in northeastern New South Wales and southeastern Queensland, and soil moisture remained limited for establishing winter grains. Summer crop harvest, which was delayed due to heavy rains earlier in the season, is nearing completion. In eastern Queensland, scattered coastal showers caused only minor delays in sugarcane harvest and crush. Weekly mean temperatures ranged from below normal in Western Australia to near or above normal elsewhere.



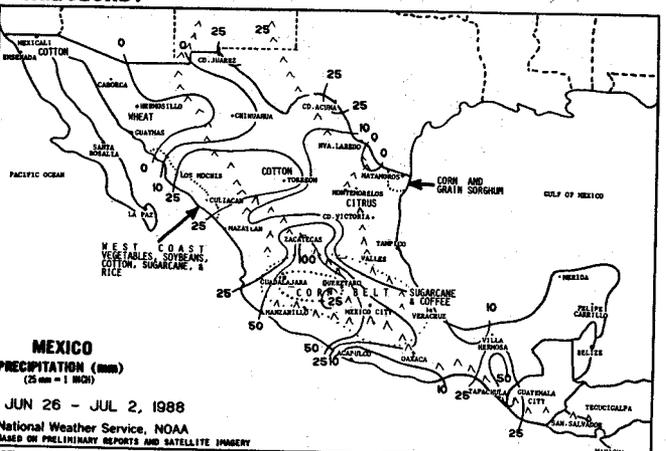
EUROPE ... A strong southwesterly jet stream pattern over western Europe led to widespread rain across nearly all of the continent by week's end. Light to moderate rainfall (10-20mm with scattered amounts greater than 30mm) across the northern Iberian Peninsula continued harvest delays and caused declines in forage quality. Below-normal temperatures and low evaporation rates compounded the persistent wetness. In northwestern Europe, moderate rainfall (15-25mm) ended a drier than normal trend over the past 3 weeks and benefited filling winter grains. Conditions for winter and summer crops remained favorable in most northern and eastern growing areas. Crop growth rates in the northeast were accelerated by warm temperatures, which ranged from 2 to 4 degrees C above normal for the week.



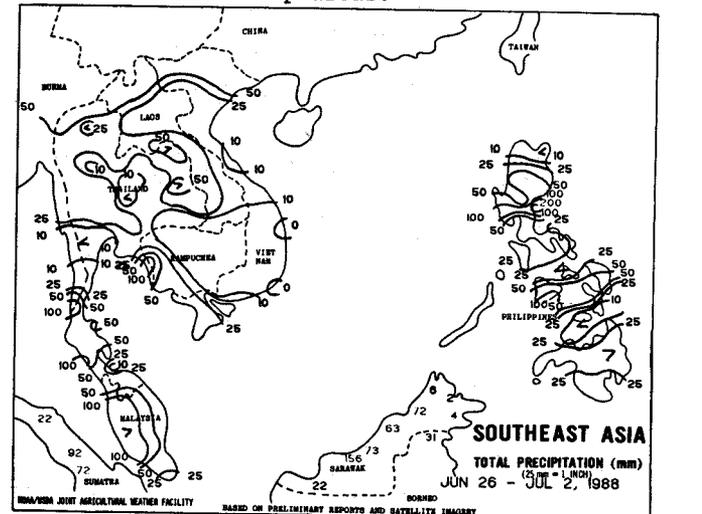
SOUTH ASIA ... Moderate to heavy showers (25-100mm or more) continued over central and northern India from northern Andhra Pradesh and western Madhya Pradesh to southern Uttar Pradesh, improving planting conditions. Variable, scattered showers continued from Rajasthan and central Uttar Pradesh northward. Light rain (9-23mm) returned to Gujarat, but rainfall averaged less than 10mm from Maharashtra southward, continuing the recent trend of unfavorably dry weather. Moisture levels in the southern interior are limited for summer crop establishment. Heavy showers (97-276mm), however, continued along the southwest coast. In the east, mostly moderate to heavy rain (25-100mm or more) maintained favorable conditions for vegetative rice and upland rice planting west of Bangladesh, but from southern Bangladesh eastward, the continuation of heavy rain exacerbated flood conditions.



EASTERN ASIA ... Scattered rain (generally less than 20mm) persisted in southeastern China, keeping soils unfavorably wet and delaying early crop rice harvest. Heavy rain (greater than 25mm, with isolated rainfall over 100mm) continued in southwestern crop areas of Sichuan, Yunnan, Guizhou, and Guangxi, replenishing depleted soil moisture supplies and favoring vegetative to reproductive single-crop rice. Light to moderate rain (5-15mm) benefited corn and cotton crops entering reproductive phases in the lower Yellow River Valley. More rain is needed, however, due to below-normal rainfall over the past 2-4 weeks. In the north, widespread moderate to heavy rain (greater than 25mm, with isolated rainfall greater than 75mm) favored spring and summer crops from Gansu eastward to Manchuria and the Korean Peninsula. Heavy rain also covered much of Japan. Mean weekly temperatures were near normal to above normal over most crop areas.



MEXICO ... Beneficial showers fell over the west coast farming region, providing the first substantial rain of the season to that area. The showers extended into the north-central cotton and range lands. Light showers (generally less than 10mm) fell in the northeast, while more beneficial rain helped corn growth in the Southern Plateau corn belt. Substantial showers (25-75mm or more) penetrated into the previously drier pocket of the north-central Plateau. Widespread shower activity covered much of southern Mexico as well. Thus, the wet season appears to be underway throughout much of the country, albeit somewhat late in starting. Moisture reserves are especially low in the northwest.



SOUTHEAST ASIA ... Light to moderate rain (15-40mm) covered central Thailand, benefiting corn in or nearing reproduction. Temperatures continued seasonably warm, however, increasing evaporation rates. Moderate to heavy showers (25-100mm or more) covered most other Thai crop areas, maintaining generally favorable conditions for rice planting. Mostly dry, hot weather continued over rainfed rice regions of central Vietnam, but moderate rain fell elsewhere in Indochina. In the Philippines, moderate to heavy rain (25-100mm or more) covered most crop regions. Drier weather, however, returned to grain regions of northern Luzon.

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