

# 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

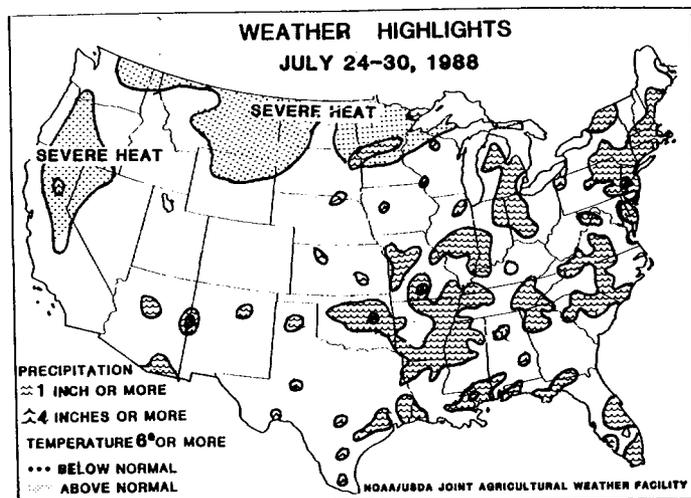
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Aug. 2, 1988

## National Weather Summary

July 24 to 30, 1988



**HIGHLIGHTS:** Showers and thunderstorms continued to ease long-term dryness over much of the eastern half of the Nation. Thunderstorms were scattered over the Southwest through the week. The severe heat in the West spread into the Central United States.

**SUNDAY...** Showers and thunderstorms persisted along the eastern Atlantic Coast States during the morning. These showers resulted from the frontal system which brought needed rain to much of the Eastern United States the previous week. A frontal system, extending from the upper Great Plains, triggered scattered thunderstorms. Hot, humid weather prevailed in the Southwest, and extreme heat continued to plague the Pacific Coast States.

**MONDAY...** Severe weather occurred along and ahead of the cold front, extending from Michigan to the middle Mississippi Valley and into the central Plains. The Pacific Northwest to the upper Mississippi Valley was dry, while much of the remainder of the Nation had widely scattered thunderstorms.

**TUESDAY...** The frontal system moved through the Ohio and middle Mississippi Valleys and central Plains. Thunderstorms, fueled by hot, humid air from the Gulf, were spread ahead of this system across the Southern and Eastern States. The hot air in the West spread into the northern Plains.

**WEDNESDAY...** Showers and thunderstorms continued to develop ahead of the stationary frontal system, curving through the Eastern and South Central United States. Heavy rains caused local flooding in Texas, Louisiana, and Massachusetts. The heat returned to the northern Plains and upper Mississippi Valley as temperatures soared into the hundreds.

**THURSDAY...** The front dissipated, but spotty thunderstorms remained along the Atlantic and Gulf Coasts. Thunderstorms produced heavy rain over Oklahoma, Arkansas, and the Carolinas. Cooler air moved into the Pacific Northwest, but temperatures were still high in California, the Southwest, and the northern and southern Great Plains.

**FRIDAY...** A cold front moved across the northern Plains and triggered severe thunderstorms in the upper Mississippi Valley. Afternoon thunderstorms were scattered across the Southeast, Great Plains, and Southwest. Hot weather dominated much of the United States.

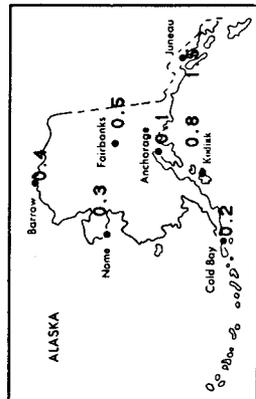
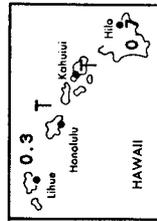
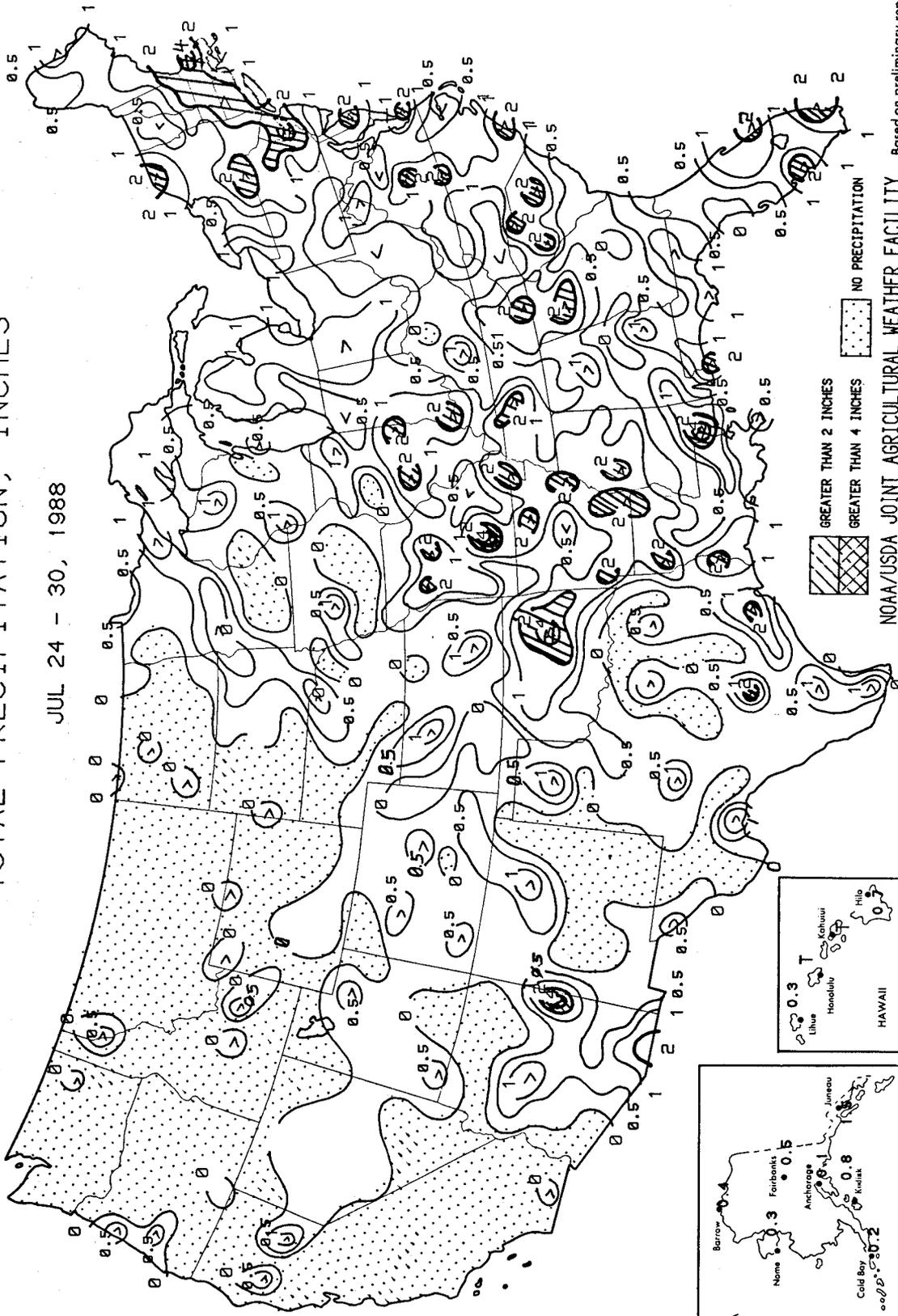
**SATURDAY...** The front swept to the east and brought rain from the Northeast to the Ohio and middle Mississippi Valleys. Thunderstorms were widely scattered across the southern half of the country. Hot, humid conditions again prevailed over most of the Nation.

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TOTAL PRECIPITATION, INCHES

JUL 24 - 30, 1988

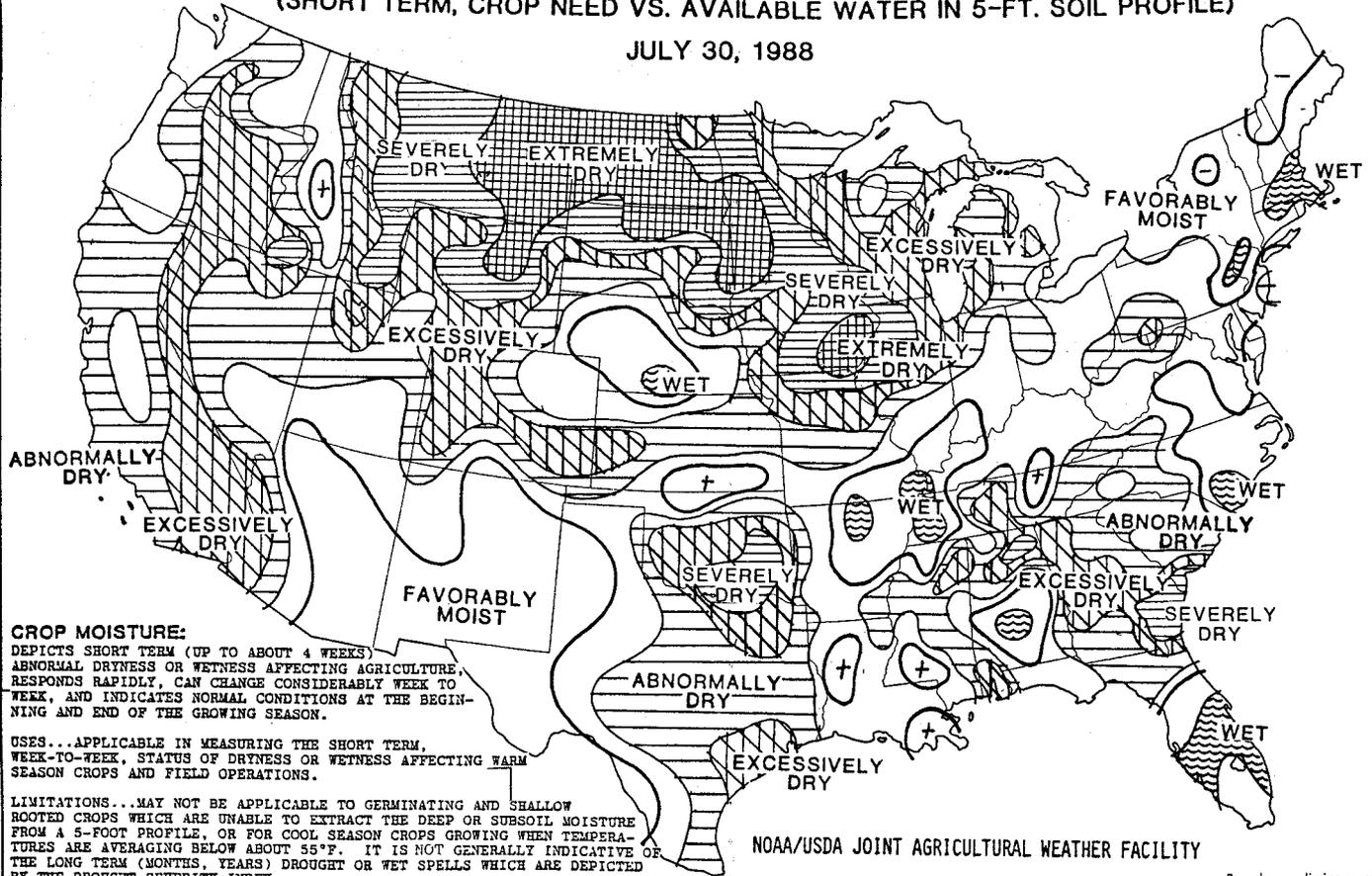


NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

### CROP MOISTURE

(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)

JULY 30, 1988



**CROP MOISTURE:**

DEPICTS SHORT TERM (UP TO ABOUT 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE. RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

USES...APPLICABLE IN MEASURING THE SHORT TERM, WEEK-TO-WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS.

LIMITATIONS...MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A 5-FOOT PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55°F. IT IS NOT GENERALLY INDICATIVE OF THE LONG TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.

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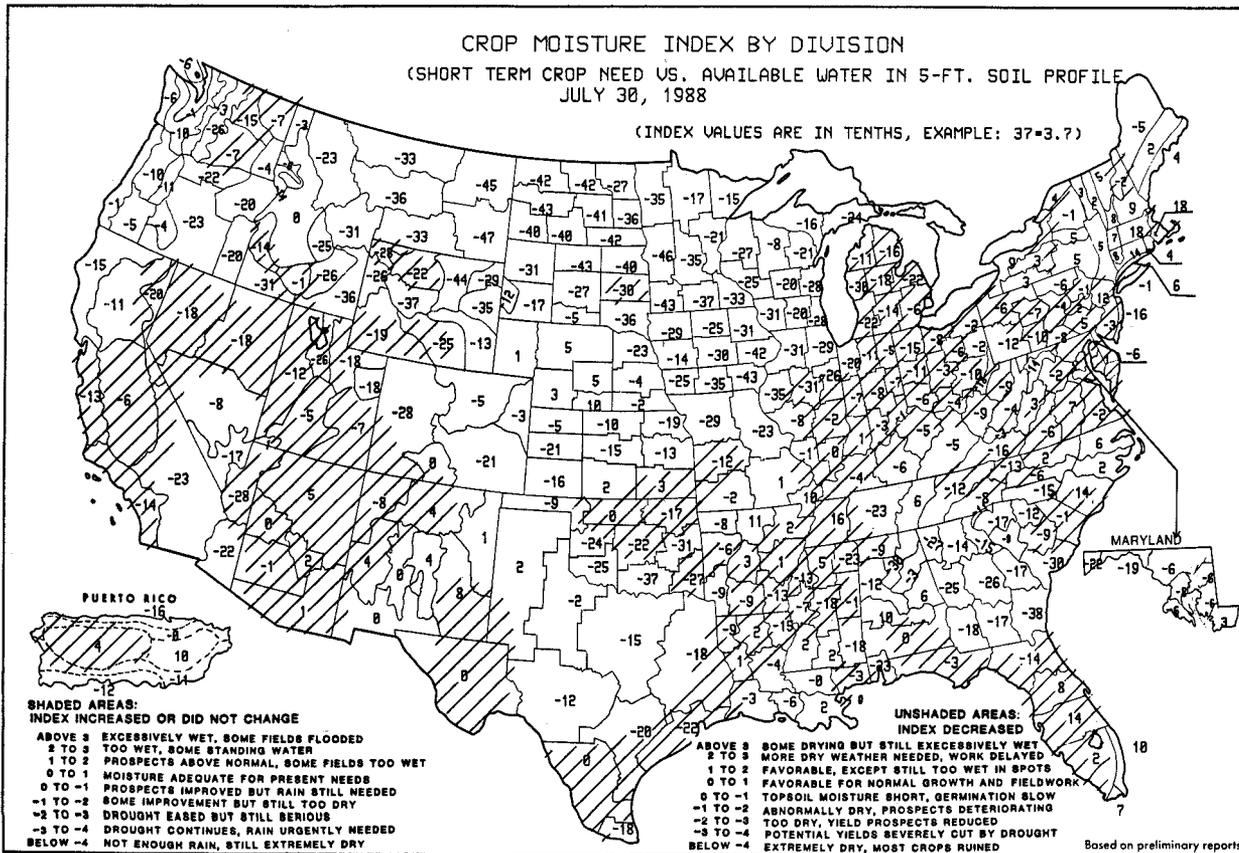
Based on preliminary reports

### CROP MOISTURE INDEX BY DIVISION

(SHORT TERM CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)

JULY 30, 1988

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



**SHADED AREAS:**  
**INDEX INCREASED OR DID NOT CHANGE**  
 ABOVE 3 EXCESSIVELY WET, SOME FIELDS FLOODED  
 2 TO 3 TOO WET, SOME STANDING WATER  
 1 TO 2 PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET  
 0 TO 1 MOISTURE ADEQUATE FOR PRESENT NEEDS  
 0 TO -1 PROSPECTS IMPROVED BUT RAIN STILL NEEDED  
 -1 TO -2 SOME IMPROVEMENT BUT STILL TOO DRY  
 -2 TO -3 DROUGHT EASED BUT STILL SERIOUS  
 -3 TO -4 DROUGHT CONTINUES, RAIN URGENTLY NEEDED  
 BELOW -4 NOT ENOUGH RAIN, STILL EXTREMELY DRY

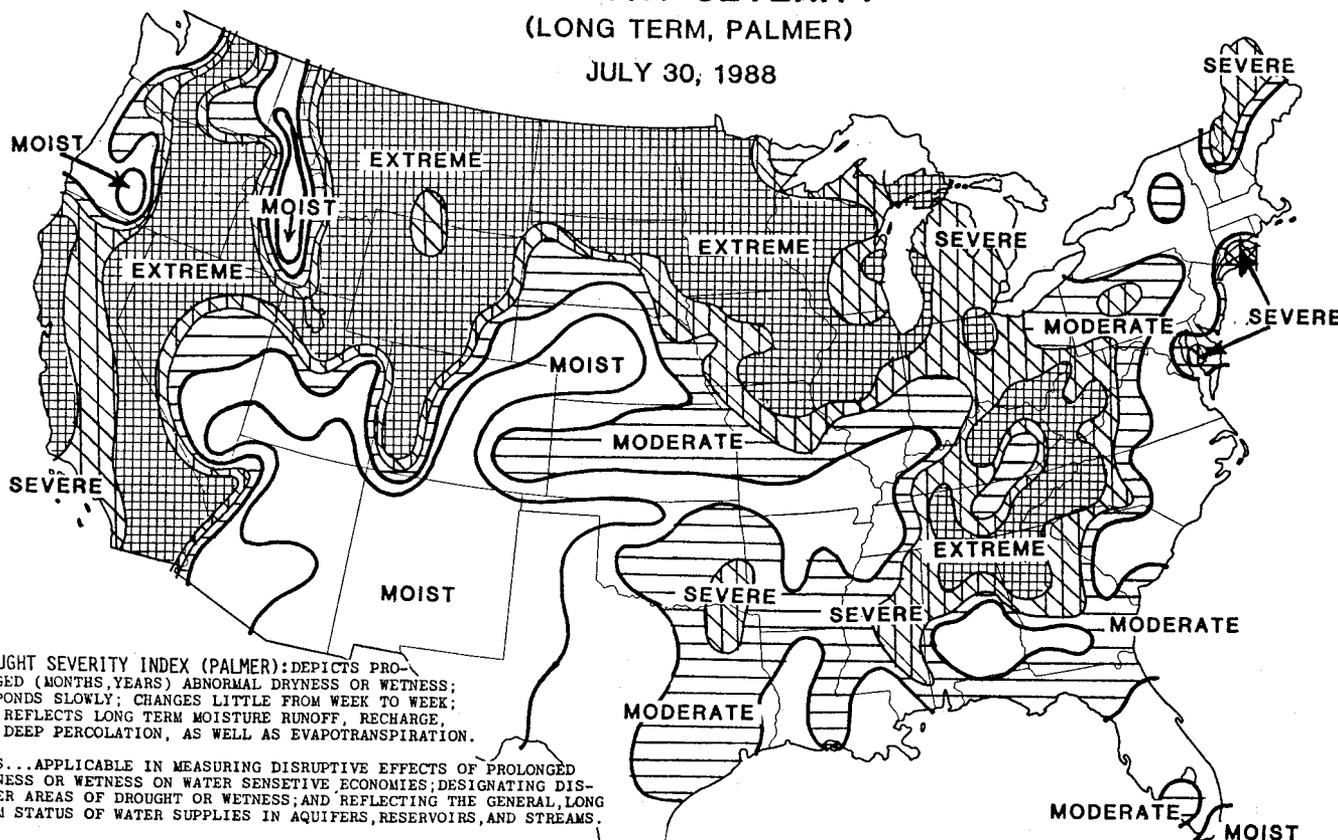
**UNSHADED AREAS:**  
**INDEX DECREASED**  
 ABOVE 3 SOME DRYING BUT STILL EXCESSIVELY WET  
 2 TO 3 MORE DRY WEATHER NEEDED, WORK DELAYED  
 1 TO 2 FAVORABLE, EXCEPT STILL TOO WET IN SPOTS  
 0 TO 1 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK  
 0 TO -1 TOPSOIL MOISTURE SHORT, GERMINATION SLOW  
 -1 TO -2 ABNORMALLY DRY, PROSPECTS DETERIORATING  
 -2 TO -3 TOO DRY, YIELD PROSPECTS REDUCED  
 -3 TO -4 POTENTIAL YIELDS SEVERELY CUT BY DROUGHT  
 BELOW -4 EXTREMELY DRY, MOST CROPS RUINED

Based on preliminary reports

### DROUGHT SEVERITY

(LONG TERM, PALMER)

JULY 30, 1988



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

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

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

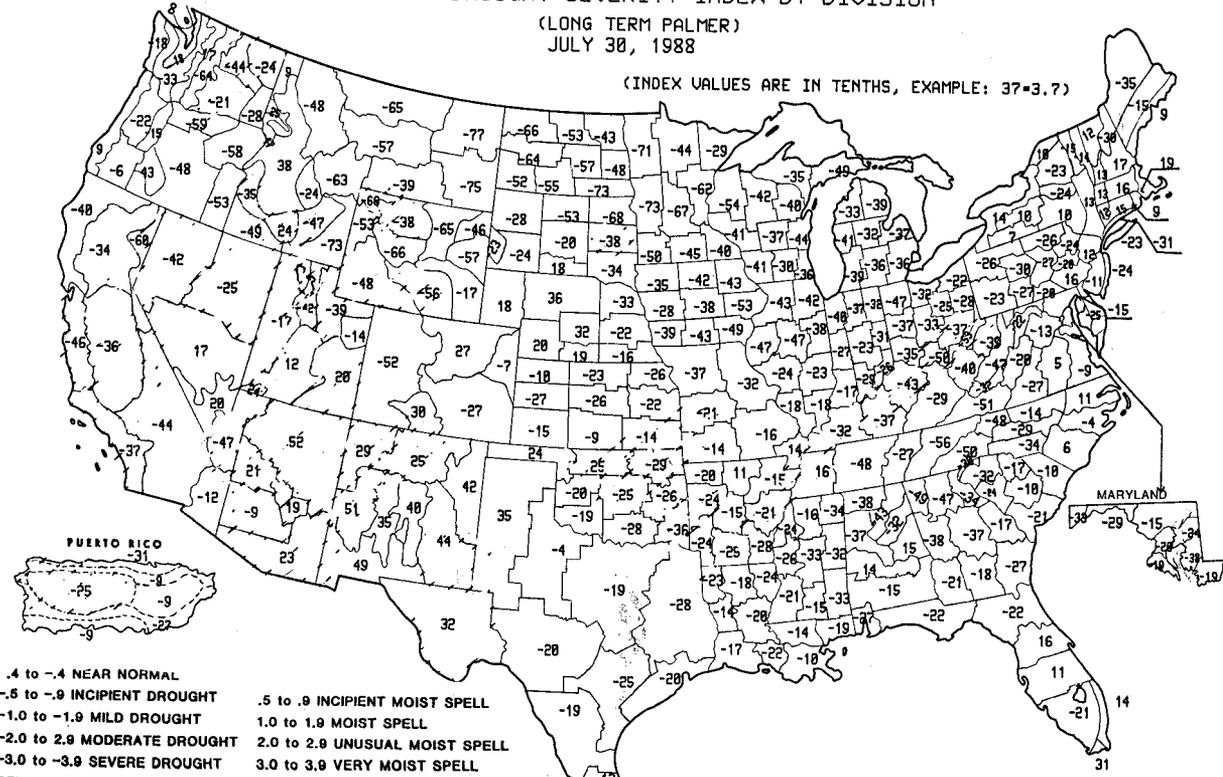
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

### DROUGHT SEVERITY INDEX BY DIVISION

(LONG TERM PALMER)  
JULY 30, 1988

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



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

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Based on preliminary reports



### Comparison of Drought Severity, 1895-1988

Between July 16 and July 23, 1988, drought conditions improved in 50 percent of the climate divisions in the contiguous United States. Major areas in the Midwest and Plains States showed significant improvement, while the most dramatic change was in the Northeast where some areas changed from severe drought conditions to the "moist spell" category. On July 23, about 43 percent of the contiguous United States was in severe or extreme drought (fig. 1).

In the North Central United States (fig. 2), 59 percent of the area was in a severe or extreme, long-term drought.

This areas covers the corn and much of the soybean belts. For comparison, in July 1934, over 89 percent of the region was in severe or extreme drought (fig. 3).

The failure of the spring precipitation has been the major contributor to the current crop problem in the corn and soybean belts. The spring area-average precipitation departures over the region are depicted in figure 4. The spring of 1988 is comparable to the worst years in the 1930's, while from 1940 to 1980 the spring rainfall was reliable with an absence of large negative departures from the 20th century mean.

National Climatic Data Center

FIGURE 1

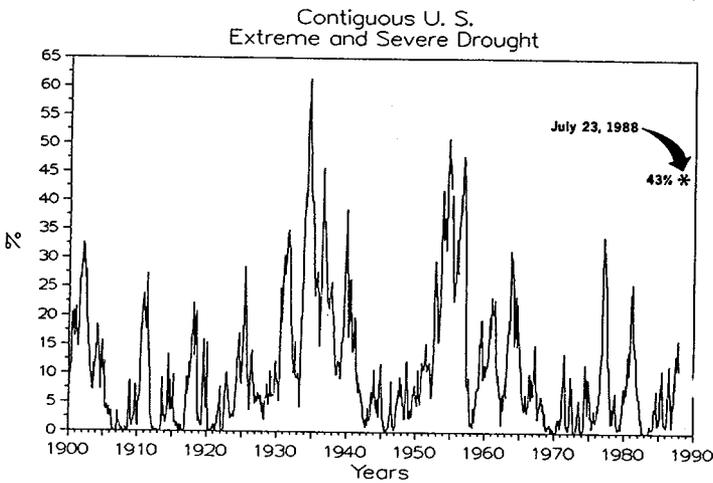


FIGURE 2

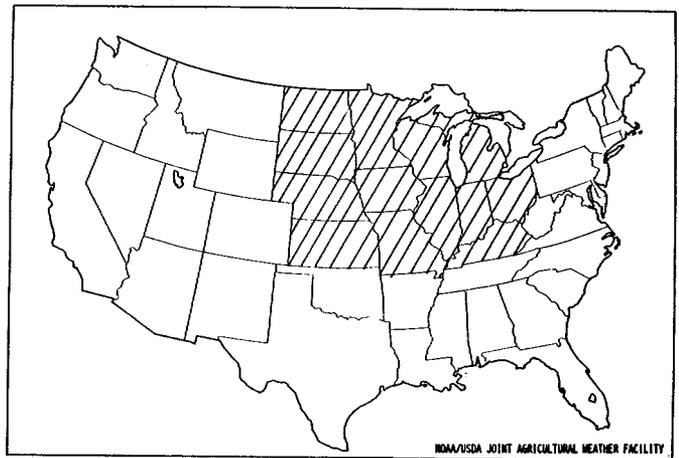


FIGURE 3

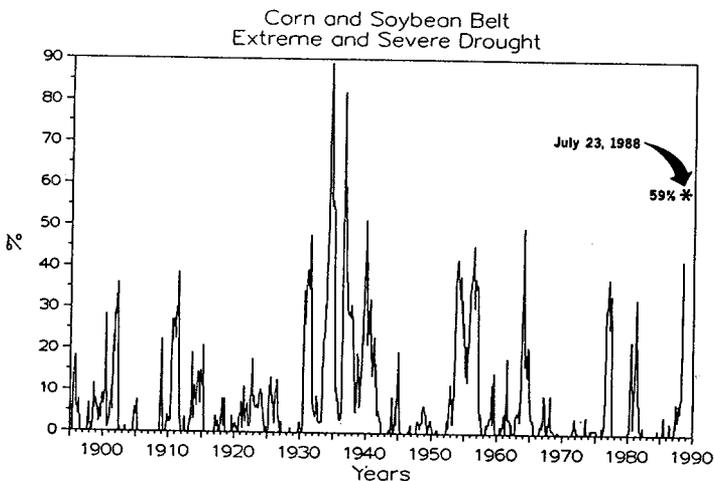
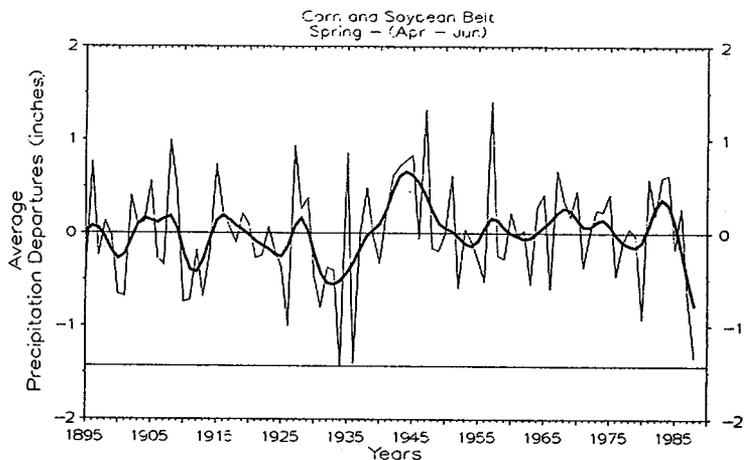
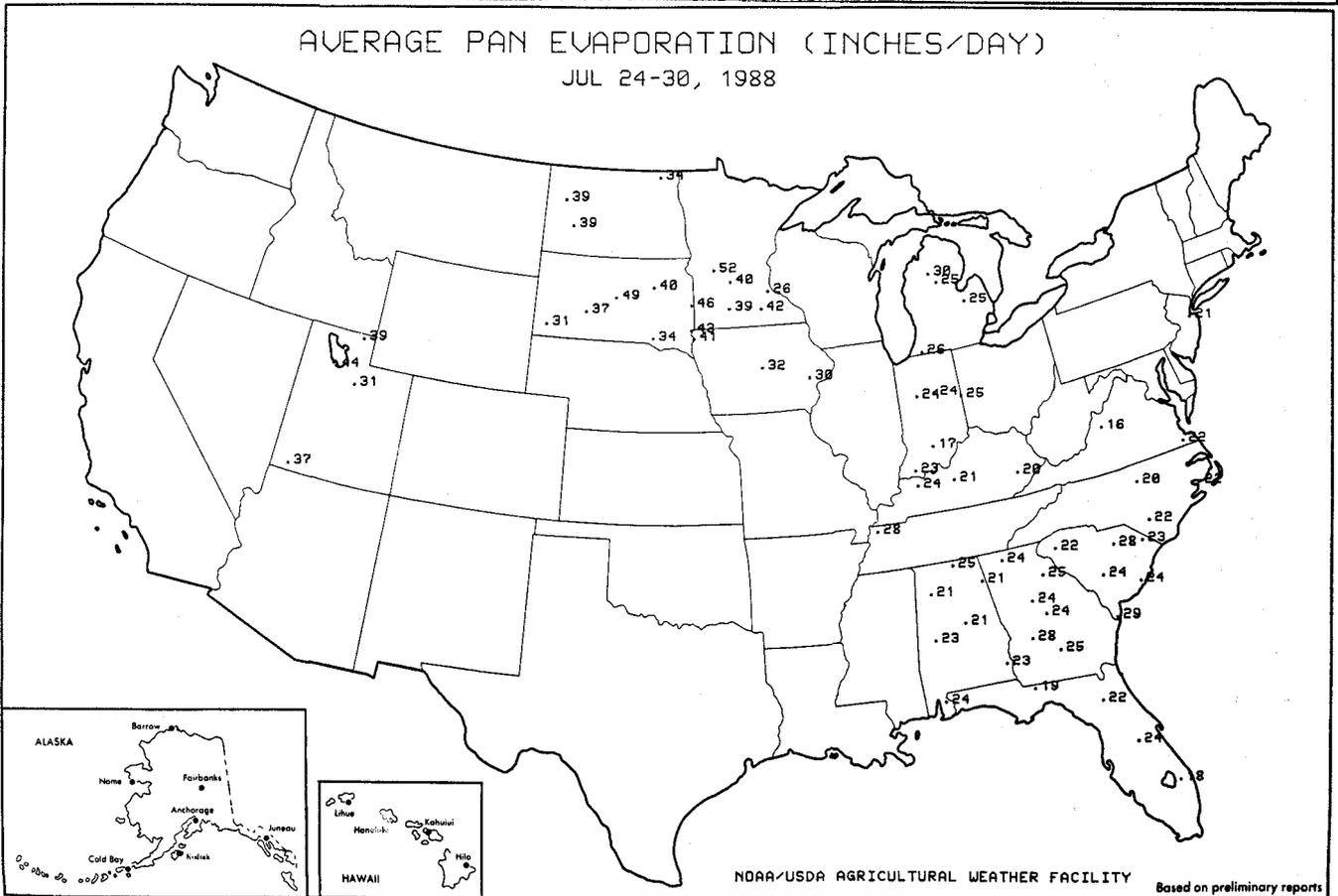
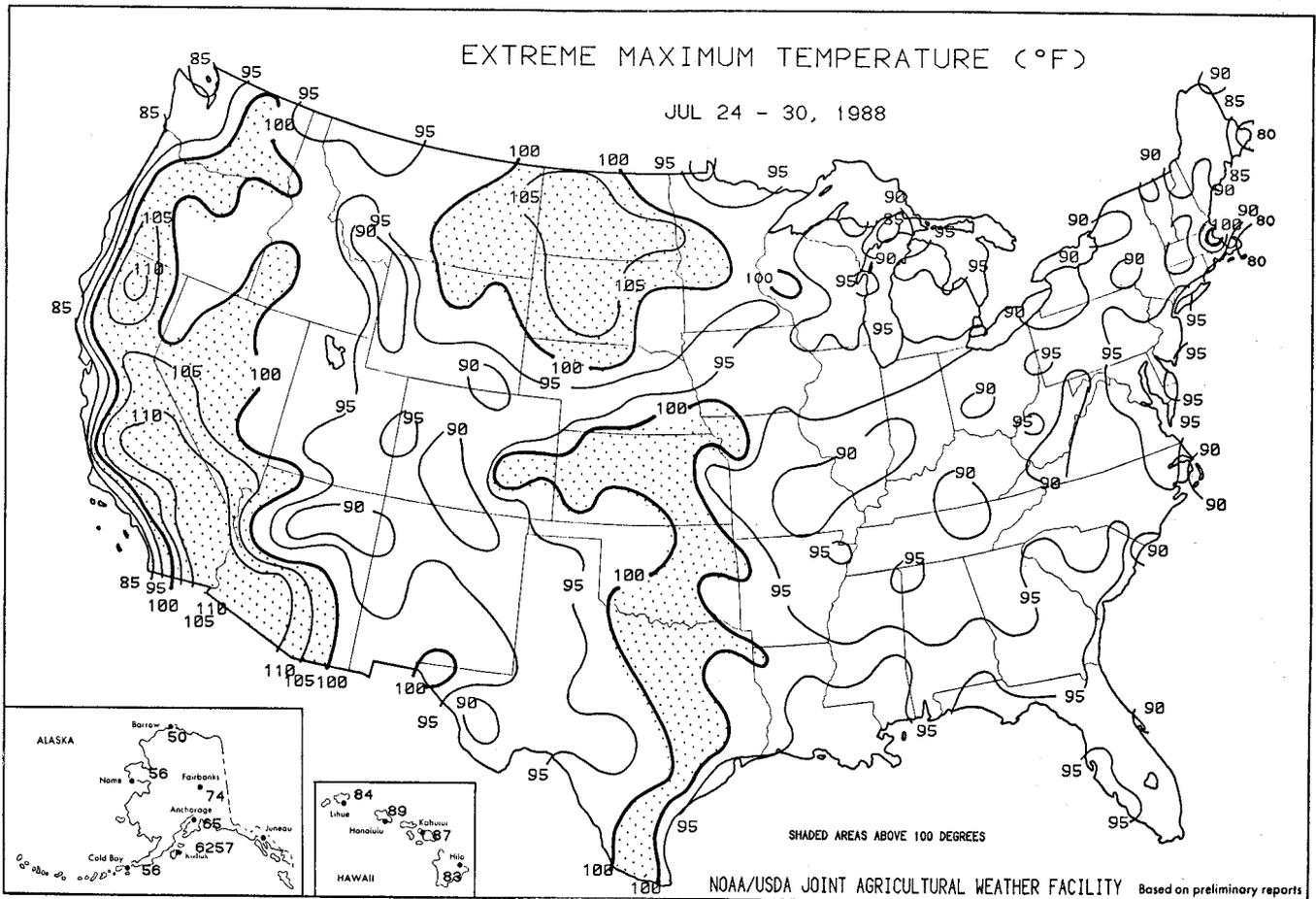
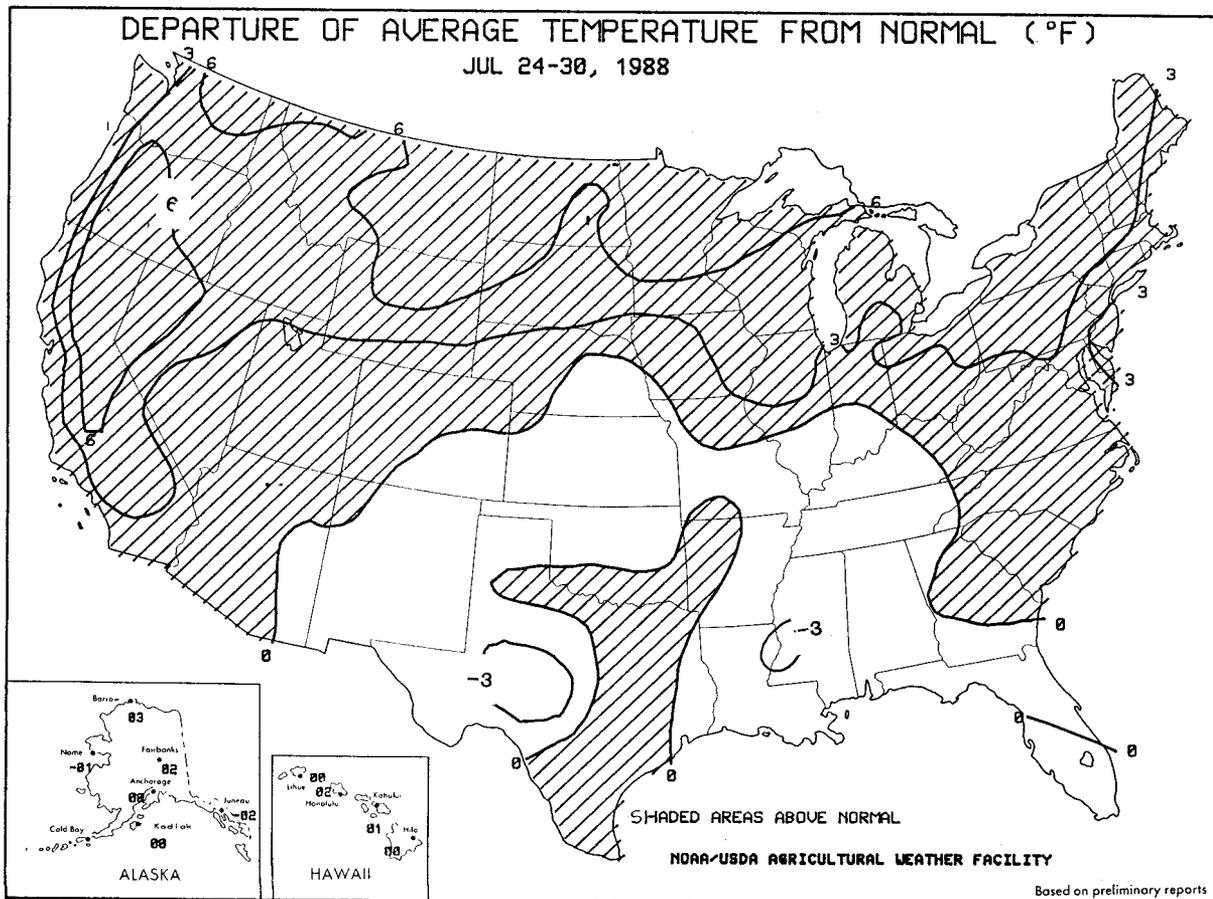
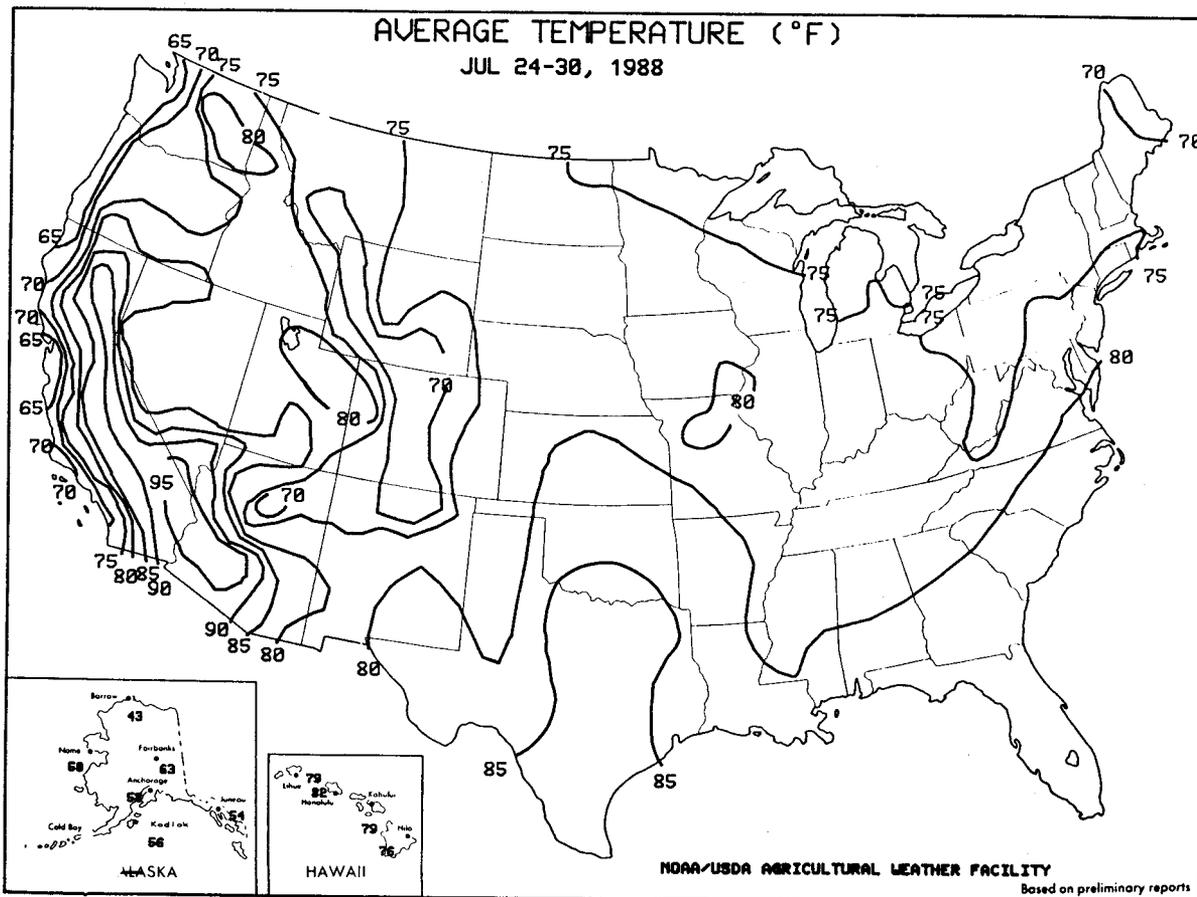
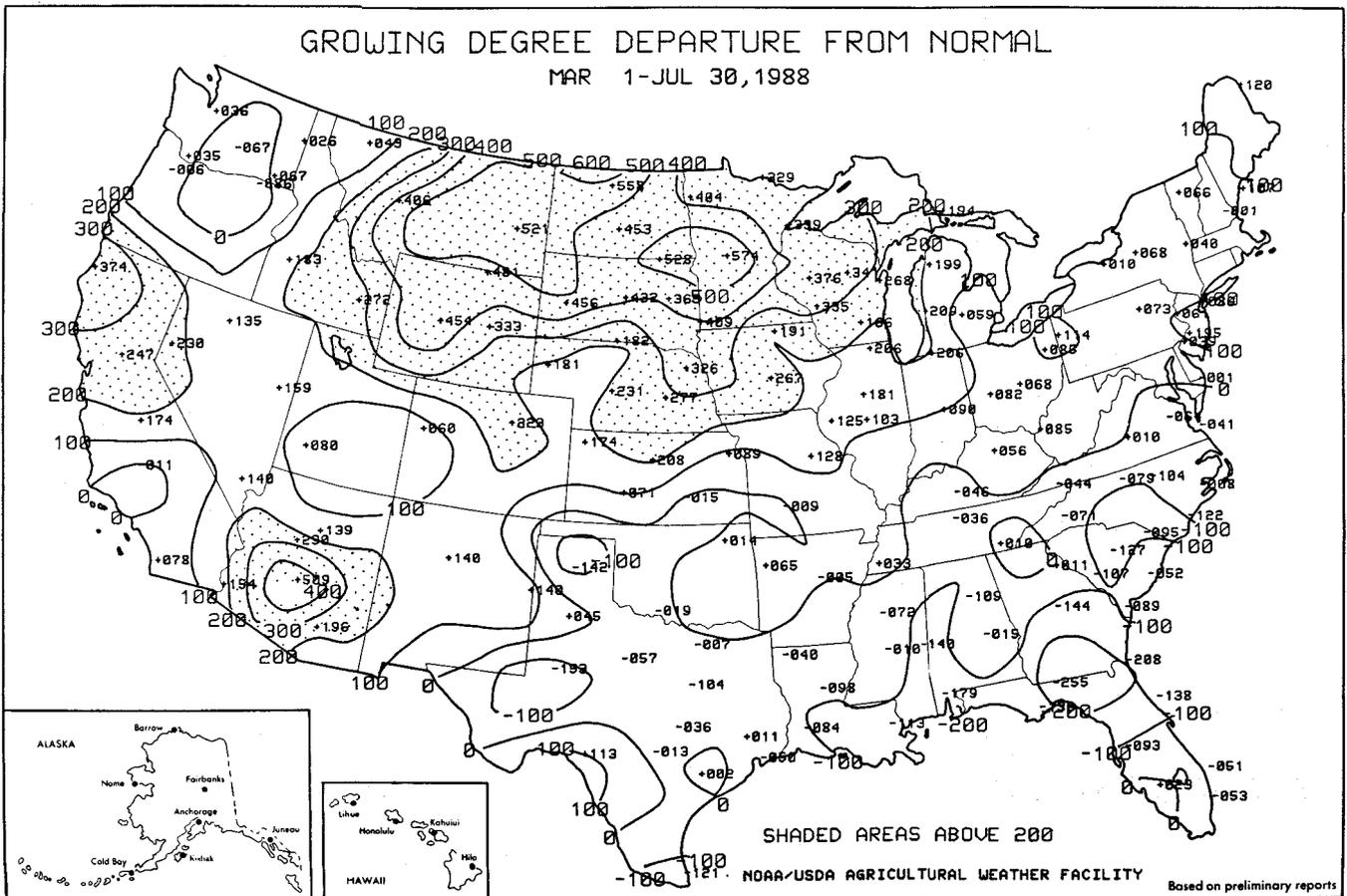
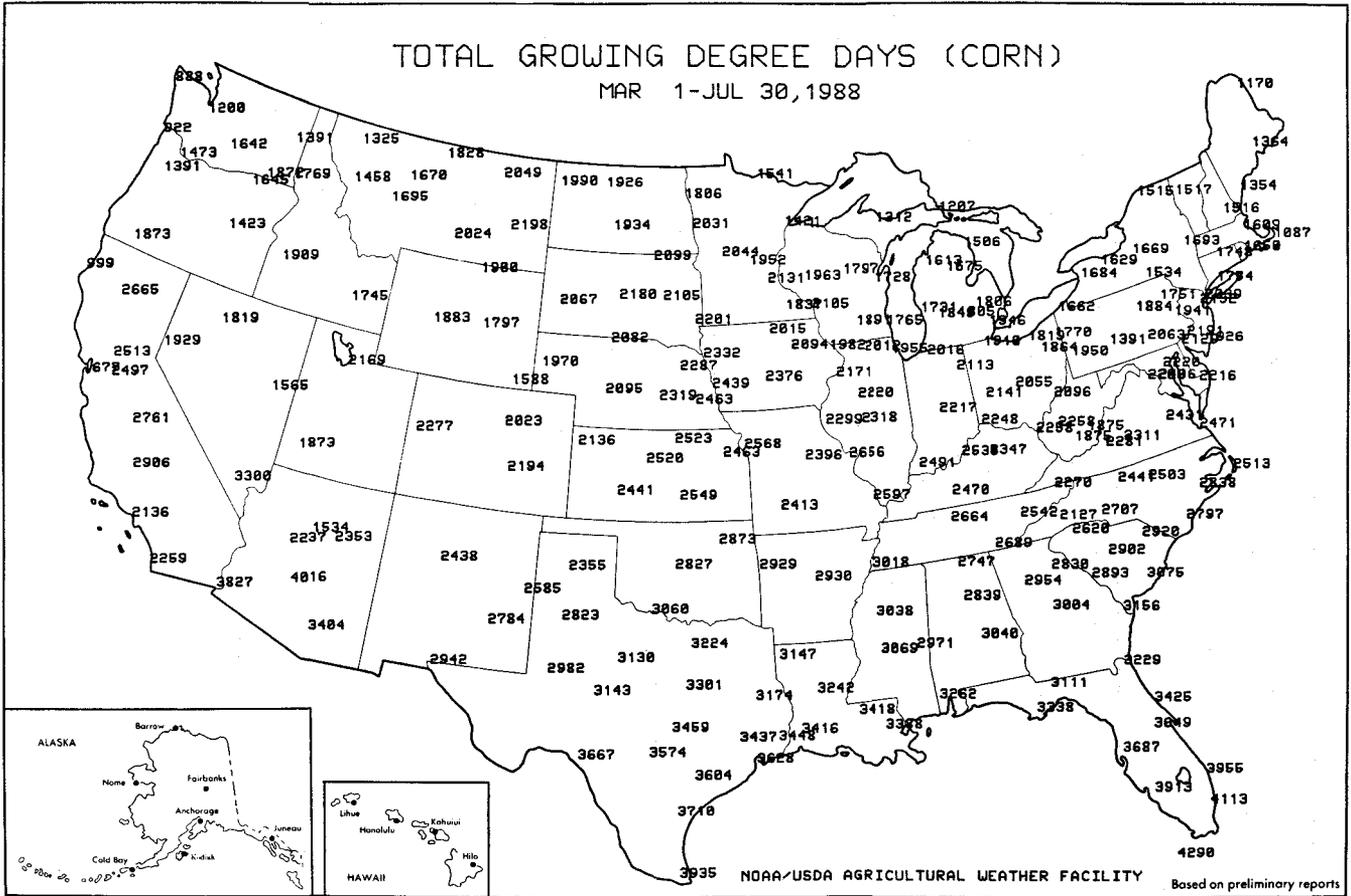


FIGURE 4









# National Weather Data for Selected Cities

Weather Data for the Week Ending JULY 30, 1988

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 1	PCT. NORMAL SINCE June 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERA- TURE OF		PRECIPI- TATION	
																90 AND ABOVE	52 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	91	67	93	64	79	-2	1.5	.3	.8	3.5	40	19.1	55	100	47	5	0	4	2
MOBILE	93	71	95	70	82	0	.1	-1.7	0	8.4	66	31.8	81	96	45	7	0	0	0
MONTGOMERY	91	69	95	66	80	-2	0	-1.0	0	12.2	152	38.0	122	98	51	4	0	2	0
AK ANCHORAGE	65	51	69	45	58	0	.1	-.4	0	1.4	47	3.7	57	88	54	0	0	2	0
BARROW	50	36	58	32	43	3	.4	-.2	.3	.9	76	1.1	54	98	69	0	1	6	0
FAIRBANKS	74	51	78	44	63	2	.5	0	.4	3.3	107	5.5	105	88	38	0	0	2	0
JUNEAU	57	50	59	48	54	2	1.1	.1	.4	6.5	94	25.9	108	97	76	0	0	6	0
KODIAK	62	49	67	46	58	0	.8	0	.5	5.7	76	40.4	129	98	73	0	0	4	0
NOME	56	45	68	39	50	-1	.3	-.3	.2	1.7	51	5.6	89	92	62	0	0	4	0
AZ PHOENIX	106	84	111	75	95	2	.2	0	.1	.9	100	3.3	98	58	22	7	0	3	0
PRESCOTT	89	61	95	57	75	1	1.6	-.7	.9	4.3	117	8.7	89	76	30	3	0	4	2
TUCSON	100	72	106	69	86	0	.6	-.1	.3	1.8	68	4.3	82	81	28	7	0	6	0
YUMA	103	83	112	80	93	-1	T	-.1	T	.1	71	1.1	107	68	33	7	0	0	0
AR FORT SMITH	96	72	101	68	84	1	.6	-.1	.2	4.1	61	19.6	82	92	44	6	0	3	0
LITTLE ROCK	91	72	94	68	81	-1	.1	-.7	.1	10.0	141	25.3	84	78	54	4	0	1	0
CA BAKERSFIELD	105	74	106	71	90	5	0	0	0	T	33	3.0	79	58	21	7	0	0	0
EUREKA	64	53	67	53	59	2	0	0	0	T	67	5.5	79	63	20	7	0	0	0
FRESNO	106	74	108	68	90	9	0	0	0	T	370	15.9	71	96	73	0	0	0	0
LOS ANGELES	74	65	78	64	70	0	0	0	0	T	0	4.6	56	92	71	0	0	0	0
REDDING	107	74	110	70	91	7	T	0	T	1.7	179	16.9	68	62	18	7	0	0	0
SACRAMENTO	102	65	106	59	84	8	0	0	0	-.2	154	6.9	65	70	23	7	0	0	0
SAN DIEGO	76	68	78	67	72	1	0	0	0	T	0	6.7	104	89	70	0	0	0	0
SAN FRANCISCO	75	56	79	50	66	3	0	0	0	.6	545	7.3	59	93	52	0	0	0	0
CO DENVER	90	60	94	57	75	1	T	-.4	T	3.5	102	10.7	106	72	26	4	0	1	0
GRAND JUNCTION	94	65	99	62	80	0	T	-.1	T	-.4	45	4.5	107	58	19	6	0	1	0
PUEBLO	93	59	100	54	76	-1	T	-.5	T	3.0	102	7.3	111	76	23	5	0	0	0
CT BRIDGEFORD	84	69	93	66	76	2	2.1	1.3	1.4	9.4	150	22.3	94	93	57	1	0	4	1
HARTFORD	87	65	98	62	76	2	2.8	2.1	2.4	9.1	144	24.3	99	98	49	2	0	3	1
DC WASHINGTON	91	70	96	68	81	1	1.1	-.1	1.0	4.7	66	19.1	85	93	46	5	0	2	1
FL APALACHICOLA	90	73	94	71	81	0	1.6	-.1	.8	11.5	97	32.6	111	95	57	3	0	4	1
DAYTONA BEACH	90	72	92	70	81	-1	.5	-.8	.4	4.9	42	20.0	77	100	60	4	0	3	0
JACKSONVILLE	93	72	94	71	83	0	.1	-1.4	.1	8.2	69	28.1	96	93	49	7	0	2	0
KEY WEST	91	81	92	74	86	1	1.0	-.2	.8	9.4	111	25.0	136	83	63	7	0	3	1
MIAMI	91	76	93	72	84	1	3.0	1.7	1.1	21.3	144	31.2	102	89	57	6	0	5	3
ORLANDO	91	73	93	71	82	-1	1.3	-.5	1.2	13.6	91	29.0	98	99	55	4	0	2	1
TALLAHASSEE	93	69	96	66	81	-1	1.5	-.5	1.5	8.8	59	31.1	78	98	44	6	0	2	1
TAMPA	92	74	95	73	83	1	.2	-1.5	.1	8.6	69	20.0	76	95	53	6	0	3	0
WEST PALM BEACH	90	76	90	73	83	0	.8	-.4	.6	19.8	144	42.3	136	92	60	6	0	3	1
GA ATLANTA	90	70	93	67	80	1	2.9	1.8	2.7	5.2	65	23.5	74	89	43	0	2	1	0
AUGUSTA	95	70	98	66	82	1	.4	-.6	.2	6.8	83	24.1	86	93	40	7	0	2	0
MACON	93	71	96	67	82	0	.1	-.9	.1	4.3	54	23.0	78	94	39	7	0	1	0
SAVANNAH	94	74	97	73	84	3	.1	-1.7	.1	4.4	34	22.6	73	94	43	6	0	1	0
HI HILO	83	69	84	68	76	0	.7	-1.5	.4	10.2	70	64.2	87	91	62	0	0	5	0
HONOLULU	89	74	91	70	82	2	T	-.1	T	.1	14	6.9	51	78	47	4	0	0	0
KAHULUI	87	71	89	65	79	1	T	-.1	T	.1	21	12.3	104	85	50	0	0	0	0
LIHUE	84	73	85	69	79	0	.3	-.2	.2	2.0	55	21.4	88	89	64	0	0	3	0
ID BOISE	97	60	102	55	79	3	0	0	0	.5	44	6.8	95	46	14	7	0	0	0
LEWISTON	98	63	103	60	81	5	0	-.1	0	2.0	104	6.2	79	47	13	7	0	0	0
POCATELLO	94	58	97	53	76	4	T	-.1	T	.4	24	4.4	66	55	15	7	0	0	0
IL CHICAGO	92	65	98	59	78	5	1.6	-.9	1.5	3.8	51	12.4	62	89	39	5	0	2	1
MOLINE	93	64	97	58	79	4	.7	-.4	.7	3.0	33	11.8	52	89	31	6	0	1	1
PEORIA	92	65	98	60	79	4	0	-.9	0	.9	12	9.7	46	89	37	5	0	0	0
QUINCY	92	66	95	59	79	2	T	-1.0	T	2.9	36	9.2	41	85	34	6	0	0	0
ROCKFORD	91	64	95	60	77	4	.2	-.7	.2	2.8	32	12.4	56	91	37	5	0	2	0
SPRINGFIELD	89	67	92	62	78	2	1.6	.8	1.6	2.4	34	11.6	56	90	42	4	0	1	1
IN EVANSVILLE	87	65	90	62	76	-2	2.2	1.3	2.1	7.7	105	21.0	79	97	52	2	0	2	1
FORT WAYNE	88	64	93	60	76	3	1.9	1.1	1.9	7.3	105	18.6	88	93	44	2	0	1	1
INDIANAPOLIS	87	65	92	57	76	1	.9	0	.8	5.1	62	18.7	77	94	47	2	0	2	1
SOUTH BEND	90	65	97	57	78	5	.2	-.6	.2	1.8	24	13.3	61	92	38	4	0	2	0
IA DES MOINES	91	66	97	61	78	2	T	-.8	T	7.5	104	11.3	60	85	39	4	0	0	0
STIOUX CITY	90	62	95	56	76	0	0	-.7	0	3.5	48	10.2	63	93	42	4	0	0	0
WATERLOO	93	61	99	54	77	4	0	-1.0	0	4.6	52	10.4	51	92	33	6	0	0	0
KS CONCORDIA	93	66	101	60	79	-1	T	-.7	T	4.8	64	10.6	62	84	34	5	0	0	0
DODGE CITY	94	67	99	60	81	0	T	-.7	T	2.1	36	10.3	76	84	31	6	0	0	0
GOODLAND	93	62	97	58	77	1	.1	-.4	.1	5.3	106	14.3	131	90	29	6	0	2	0
TOPEKA	91	63	98	55	77	-2	.1	-.8	.1	4.9	54	14.1	69	95	42	0	0	1	0
WICHITA	95	69	102	64	82	0	T	-.7	T	2.8	37	13.2	76	85	37	0	0	2	0
KY BOWLING GREEN	86	67	90	64	77	-2	.1	-.8	.1	6.1	70	20.4	65	100	57	1	0	3	0
LEXINGTON	88	66	92	64	77	1	T	-1.1	T	4.1	45	18.4	63	91	44	2	0	0	0
LOUISVILLE	89	67	93	63	78	0	.2	-.7	.2	5.6	74	22.3	82	92	45	2	0	1	0
LA ALEXANDRIA	90	70	93	70	80	-3	.1	-.9	.1	5.7	69	24.0	73	80	49	5	0	2	0
BATON ROUGE	92	72	94	70	82	0	.4	-1.3	.3	10.6	105	41.7	120	96	51	6	0	3	0
LAKE CHARLES	92	72	95	69	82	0	1.4	.1	1.2	11.7	127	32.5	109	99	56	6	0	4	1
NEW ORLEANS	91	72	93	69	81	-1	.1	-1.5	.1	17.6	158	52.5	147	99	57	6	0	1	0

Based on 1951-80 normals

Weather Data for the Week Ending JULY 30, 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		PRECIPI- TATION	
																90 AND ABOVE	52 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	95	70	100	68	82	-1	1.5	-.8	1.5	3.3	47	16.7	60	93	43	6	0	2	1
ME CARIBOU	81	60	90	55	70	5	.1	-.8	0	4.6	65	15.1	78	98	55	1	0	4	0
PORTLAND	78	62	93	61	70	1	1.8	1.1	.8	8.2	143	23.4	96	100	72	1	0	4	0
MD BALTIMORE	90	69	97	67	80	2	.9	-.1	.9	4.6	62	20.3	85	95	50	3	0	1	1
MD SALISBURY	89	70	94	68	80	2	2.7	1.6	2.3	9.1	116	29.1	115	97	53	3	0	3	1
MA BOSTON	82	66	96	63	74	0	3.9	3.2	2.4	8.9	163	23.2	95	96	64	1	0	4	2
MA CHATHAM	76	64	79	58	70	2	1.3	.5	.6	6.8	122	22.1	86	100	83	0	0	3	2
MI ALPENA	86	59	97	54	73	6	.5	-.2	.4	3.4	56	12.9	79	95	41	2	0	3	0
MI DETROIT	88	65	95	59	76	4	.9	-.2	.6	3.5	55	10.3	56	93	44	2	0	3	1
MI FLINT	87	62	94	55	74	4	1.2	.5	.6	4.6	77	11.8	70	96	46	2	0	3	1
MI GRAND RAPIDS	86	62	93	55	74	2	.9	.3	.6	3.9	61	13.8	72	92	44	2	0	3	1
MI HOUGHTON LAKE	85	61	93	49	73	6	1.2	.6	1.0	3.3	57	11.3	71	90	39	2	0	3	1
MI LANSING	88	62	94	54	75	4	.5	-.1	.4	2.8	44	11.5	67	93	42	2	0	2	0
MI MARQUETTE	83	59	100	50	71	6	.5	-.2	.4	2.2	31	13.6	64	90	40	2	0	2	0
MI MUSKEGON	84	64	89	53	74	3	.2	-.4	.1	2.1	44	12.9	76	93	50	0	0	2	0
MI SAULT ST. MARIE	83	58	95	54	71	6	.7	0	.5	2.7	44	13.3	77	99	48	2	0	4	1
MN ALEXANDRIA	92	66	100	58	79	8	1.1	.4	.7	2.8	40	8.3	55	78	28	5	0	2	1
MN DULUTH	88	58	96	52	73	7	.4	-.5	.2	5.7	74	13.6	80	95	37	3	0	2	0
MN INT'L FALLS	85	58	93	49	71	5	.9	-.1	.9	8.4	114	12.1	85	92	40	2	0	2	1
MN MINNEAPOLIS	92	67	97	61	80	6	T	-.8	T	1.4	19	7.6	48	72	27	5	0	0	0
MN ROCHESTER	90	61	94	53	76	5	0	-.9	0	2.7	36	10.4	62	87	33	4	0	0	0
MS GREENWOOD	90	68	94	64	79	-3	1.3	.3	1.1	2.9	38	15.7	46	93	52	5	0	2	1
MS JACKSON	92	68	97	62	80	-2	.6	-.4	.4	2.8	37	22.1	67	98	50	6	0	4	0
MS MERIDIAN	92	67	95	63	79	-2	.1	-.1	.1	5.5	63	24.8	72	99	49	6	0	2	0
MO CAPE GIRARDEAU	89	68	93	65	79	-1	.4	-.4	.3	3.2	44	17.6	64	96	50	3	0	2	0
MO COLUMBIA	92	66	93	62	79	0	.6	-.1	.4	2.7	41	15.0	68	92	40	7	0	3	0
MO KANSAS CITY	94	67	100	59	81	0	.3	-.6	.3	3.0	35	10.8	50	87	33	7	0	1	0
MO SAINT LOUIS	90	71	92	67	80	1	.9	-.2	.8	5.0	69	17.9	83	85	44	5	0	3	1
MO SPRINGFIELD	88	68	94	63	78	-1	.4	-.3	.2	10.1	126	27.7	117	93	56	2	0	2	0
MT BILLINGS	96	63	101	55	80	6	T	-.1	T	.5	17	6.0	61	42	15	7	0	0	0
MT GLASGOW	95	62	100	56	79	7	0	-.3	0	2.8	68	5.4	72	43	15	6	0	0	0
MT GREAT FALLS	93	56	97	50	75	4	0	-.2	0	3.2	87	7.3	70	53	17	5	0	0	0
MT HAVRE	94	56	97	52	75	4	0	-.3	0	1.8	52	2.9	37	49	14	6	0	0	0
MT HELENA	95	58	98	54	76	8	0	-.2	0	1.9	63	6.2	82	46	13	7	0	0	0
MT KALISPELL	91	47	94	42	69	3	0	-.2	0	2.4	78	8.8	93	82	16	5	0	0	0
MT MILES CITY	98	68	104	58	83	7	0	-.3	0	.7	17	2.0	21	36	14	7	0	0	0
MT MISSOULA	93	52	97	48	73	4	0	-.2	0	2.2	84	8.4	101	62	16	6	0	0	0
NE GRAND ISLAND	89	64	96	58	77	-1	.1	-.4	.1	8.3	133	14.1	91	94	44	3	0	1	0
NE LINCOLN	92	63	99	57	77	-1	T	-.7	T	1.8	26	8.2	47	93	37	5	0	1	0
NE NORFOLK	89	62	94	56	76	0	T	-.6	T	5.9	80	14.8	91	95	44	4	0	0	0
NE NORTH PLATTE	89	61	94	57	75	0	T	-.6	T	6.2	94	12.9	93	92	42	2	0	0	0
NE OMAHA	89	68	95	64	78	0	T	-.8	T	5.5	72	13.5	73	83	52	3	0	0	0
NE SCOTTSBLUFF	93	59	97	52	76	1	T	-.3	T	3.1	65	12.6	117	86	27	5	0	0	0
NE VALENTINE	96	61	101	50	79	4	0	-.6	0	4.3	81	12.8	109	73	22	6	0	0	0
NV ELY	88	49	95	44	69	0	.1	0	.1	.8	56	4.6	81	76	25	3	0	2	0
NV LAS VEGAS	106	79	109	75	93	2	T	-.1	T	.1	20	1.8	80	41	16	7	0	0	0
NV RENO	95	59	100	51	77	7	.2	.2	.2	.8	145	2.4	52	71	18	5	0	2	0
NV WINNEMUCCA	98	61	103	56	80	7	.1	0	.1	.6	53	4.1	85	46	14	7	0	1	0
NH CONCORD	83	62	95	59	73	3	1.9	1.2	.7	7.2	124	18.8	94	100	56	1	0	5	2
NJ ATLANTIC CITY	88	68	95	64	78	3	1.0	-.1	.7	5.5	83	19.5	82	97	55	3	0	3	1
NM ALBUQUERQUE	92	65	97	61	79	0	.7	.3	.3	3.5	200	6.6	171	68	21	4	0	3	0
NM CLOVIS	88	64	91	62	76	-2	0	-.6	0	8.0	147	14.8	151	81	34	3	0	0	0
NM ROSWELL	94	66	98	62	80	0	T	-.4	T	5.6	212	11.1	222	71	24	7	0	0	0
NY ALBANY	85	65	94	60	75	3	.4	-.3	.4	4.6	75	16.3	82	100	55	2	0	2	0
NY BINGHAMTON	82	62	89	59	72	3	3.1	2.4	1.3	6.8	99	20.4	97	96	48	0	0	6	3
NY BUFFALO	83	65	87	61	74	3	1.6	.8	.9	7.8	140	22.2	111	93	52	0	0	3	2
NY NEW YORK	88	70	99	69	79	2	1.6	.7	.9	9.7	145	24.3	101	93	49	2	0	4	1
NY ROCHESTER	85	64	91	60	74	3	.2	-.4	.2	5.4	103	14.0	79	96	54	1	0	3	0
NY SYRACUSE	86	64	93	61	75	4	.7	-.1	.7	8.2	113	19.3	88	99	53	2	0	2	1
NC ASHEVILLE	85	63	89	59	74	0	.1	-.8	.1	3.6	49	14.0	54	98	48	0	0	1	0
NC CHARLOTTE	89	70	93	67	80	1	.2	-.7	.2	5.1	70	17.4	65	95	49	3	0	2	0
NC GREENSBORO	89	68	93	66	79	1	.3	-.6	.3	7.6	94	19.6	77	98	51	2	0	3	0
NC HATTERAS	87	73	89	71	80	1	.2	-.1	.1	4.9	51	25.1	85	99	66	0	0	3	0
NC NEW BERN	91	73	95	70	82	2	.5	-.1	.4	10.5	89	30.7	99	95	55	6	0	2	0
NC RALEIGH	90	69	93	66	79	1	.9	-.1	.8	5.6	71	19.3	77	99	49	4	0	3	1
NC WILMINGTON	89	72	92	69	81	0	3.7	2.0	3.5	18.9	146	41.5	132	98	59	4	0	4	1
ND BISMARCK	99	54	106	44	76	5	T	-.4	T	2.7	55	5.9	57	74	16	6	0	0	0
ND FARGO	94	63	105	53	79	7	T	-.7	T	1.7	27	6.4	53	69	26	5	0	1	0
ND GRAND FORKS	92	58	100	47	75	6	T	-.6	T	4.8	84	7.8	70	80	27	3	0	0	0
ND WILLISTON	98	60	108	51	79	8	T	-.3	T	4.0	91	7.1	79	57	15	6	0	0	0
OH AKRON-CANTON	87	64	92	61	75	3	.6	-.3	.3	5.4	76	16.1	73	96	44	1	0	3	0
OH CINCINNATI	89	65	93	62	77	1	0	-.9	0	6.4	78	23.5	92	91	39	2	0	0	0
OH CLEVELAND	86	64	93	60	75	3	1.0	.2	.7	4.1	61	14.9	71	94	46	3	0	3	1
OH COLUMBUS	88	65	91	61	76	2	.8	-.1	.5	9.1	116	22.6	97	98	44	2	0	3	1

Weather Data for the Week Ending JULY 30, 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		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	88	65	93	63	77	2	1.5	.8	1.3	5.2	74	17.1	78	91	41	2	0	2	1
TOLEDO	87	63	95	58	75	2	2.1	1.4	1.6	4.2	63	11.2	59	94	46	2	0	2	2
YOUNGSTOWN	86	60	92	55	73	3	1.6	-.3	.4	6.0	82	17.1	77	98	45	1	0	2	0
OK OKLAHOMA CITY	95	71	100	68	83	0	1.6	.9	.9	5.5	82	19.3	99	80	35	6	0	4	2
TULSA	92	73	101	68	82	-1	2.2	1.5	2.1	4.8	61	17.8	76	84	45	5	0	3	1
OR ASTORIA	72	52	85	49	62	1	T	-.2	T	4.5	128	30.6	83	93	58	0	0	0	0
BURNS	95	53	99	47	74	3	0	-.1	0	1.0	123	4.7	82	50	12	7	0	0	0
MEDFORD	102	61	107	56	81	8	0	-.1	0	1.0	116	6.8	85	66	16	7	0	0	0
PENDLETON	95	62	99	59	78	4	0	-.1	0	.3	34	7.3	106	42	15	6	0	0	0
PORTLAND	90	58	100	54	74	6	0	-.1	0	3.0	164	19.3	97	83	28	3	0	0	0
SALEM	93	54	103	50	74	6	0	-.1	0	2.0	134	18.8	87	83	25	4	0	0	0
PA ALLENTOWN	87	68	95	66	78	3	1.7	.7	1.6	8.0	108	25.3	101	96	51	2	0	4	1
ERIE	83	66	89	62	75	4	1.9	1.1	1.7	5.4	75	18.0	85	89	54	2	0	3	1
HARRISBURG	86	67	97	65	77	1	1.1	.4	.6	5.4	79	21.3	92	95	54	2	0	2	2
PHILADELPHIA	90	71	98	68	81	3	2.3	1.4	2.0	8.7	114	24.3	101	96	49	4	0	3	1
PITTSBURGH	88	64	95	58	76	4	.3	-.5	.3	4.1	57	6.4	72	93	47	3	0	2	0
SCRANTON	84	64	92	60	74	2	1.1	.3	.8	7.1	106	19.7	99	93	51	2	0	3	1
RI PROVIDENCE	84	67	94	64	75	2	.9	.1	.5	6.1	108	24.1	96	100	62	1	0	3	1
SC CHARLESTON	92	74	95	72	83	2	.3	-1.3	.3	6.5	47	18.5	58	97	53	6	0	1	0
COLUMBIA	94	71	96	68	82	1	1.1	-.2	1.1	4.9	51	18.1	59	96	43	6	0	1	1
FLORENCE	92	71	96	68	81	0	1.7	-.4	1.6	8.4	83	21.3	77	99	57	7	0	2	1
GREENVILLE	91	66	95	64	79	0	.1	-.9	.1	5.5	63	20.2	64	97	44	5	0	1	0
SD ABERDEEN	94	62	104	54	78	5	.4	-.1	.4	4.1	74	8.7	71	82	28	6	0	1	0
HURON	95	63	99	53	79	4	.4	-.1	.4	2.2	41	11.7	93	83	28	6	0	1	0
RAPID CITY	97	62	104	54	80	6	T	-.4	T	1.5	28	6.3	53	53	16	6	0	0	0
SIOUX FALLS	93	63	96	54	78	4	.1	-.5	.1	1.4	22	8.4	56	90	30	5	0	0	0
TN CHATTANOOGA	90	68	93	64	79	0	1.9	.9	1.9	6.5	83	22.8	70	97	47	3	0	2	1
KNOXVILLE	89	66	92	62	78	0	.6	-.4	.6	4.1	50	18.5	62	100	48	3	0	2	1
MEMPHIS	89	71	93	66	80	-2	.9	0	.9	7.4	100	24.6	75	92	52	4	0	3	1
NASHVILLE	91	69	94	65	80	0	.2	-.7	.1	3.7	50	15.6	51	93	48	6	0	3	0
TX ABILENE	94	72	97	69	83	-1	.1	-.4	.1	5.5	122	11.5	87	72	32	6	0	1	0
AMARILLO	91	64	93	62	77	-2	2.0	1.4	2.0	7.0	116	16.8	142	82	32	4	0	1	1
AUSTIN	97	73	100	70	85	0	.5	-.1	.4	5.4	112	14.0	78	96	37	7	0	2	0
BEAUMONT	93	73	96	71	83	-1	1.9	.5	.9	9.4	89	26.5	85	99	50	7	0	3	2
BROWNSVILLE	95	76	97	75	86	1	T	-.3	T	3.9	95	11.0	100	92	48	7	0	0	0
CORPUS CHRISTI	95	76	97	74	85	1	.6	0	.3	3.4	56	7.8	51	96	48	7	0	2	0
DEL RIO	94	74	96	72	84	-2	T	-.4	T	6.2	186	8.1	87	72	34	6	0	1	0
EL PASO	95	67	100	63	81	-2	.3	0	.3	3.5	163	4.9	135	79	25	7	0	1	0
FORT WORTH	101	75	104	71	88	2	0	-.5	0	5.7	129	14.2	75	72	30	7	0	0	0
GALVESTON	89	76	90	72	83	-1	.9	0	.8	8.3	115	22.6	109	83	60	1	0	2	1
HOUSTON	96	72	100	69	84	0	.9	.1	.9	5.2	67	15.3	59	95	40	7	0	2	1
LUBBOCK	95	69	97	66	82	2	T	-.5	T	4.0	79	9.1	86	76	29	7	0	0	0
MIDLAND	91	65	92	63	78	-4	T	-.4	T	7.5	245	11.0	149	90	34	7	0	1	0
SAN ANGELO	95	67	97	64	81	-3	.2	-.1	.1	3.4	112	9.1	96	88	31	7	0	2	0
SAN ANTONIO	95	75	97	74	85	0	.1	-.4	.1	11.0	230	14.8	93	96	38	6	0	1	0
VICTORIA	96	74	100	70	85	0	1.4	.9	1.4	4.5	65	8.9	45	93	40	6	0	1	1
WACO	102	74	104	72	88	2	0	-.4	0	6.7	180	13.9	75	80	27	7	0	0	0
WICHITA FALLS	100	75	102	71	87	1	.1	-.3	.1	3.4	72	13.5	85	75	28	7	0	2	0
UT BLANDING	90	60	93	57	75	1	.3	.1	.2	1.9	135	6.5	112	74	25	3	0	3	0
CEDAR CITY	91	58	95	55	75	0	.3	0	.2	2.0	130	9.3	159	78	22	5	0	4	0
SALT LAKE CITY	96	67	98	63	81	3	T	-.1	T	.1	4	6.2	64	63	20	7	0	1	0
VT BURLINGTON	85	65	95	62	75	5	T	-.8	T	5.8	84	13.5	73	94	47	2	0	1	0
VA NORFOLK	90	72	97	71	81	2	.5	-.7	.4	6.7	79	23.7	91	96	51	2	0	2	0
RICHMOND	90	70	95	67	80	2	.6	-.6	.4	9.8	114	24.7	99	99	53	3	0	3	0
ROANOKE	88	64	92	62	76	-1	1.0	-.1	.8	7.4	112	17.8	77	100	47	2	0	3	1
WA QUILLYUTE	75	53	95	51	64	4	T	-.6	T	4.1	76	56.2	100	91	47	1	0	0	0
SEATTLE-TACOMA	84	56	94	50	70	5	0	-.2	0	1.9	96	16.6	84	84	33	2	0	0	0
SPOKANE	92	59	97	57	76	5	0	-.1	0	1.3	79	8.6	90	48	13	5	0	0	0
YAKIMA	95	54	100	48	75	3	0	0	0	1.0	142	3.5	79	71	18	7	0	0	0
WV BECKLEY	82	60	87	58	71	1	.2	-.9	.2	6.9	80	18.9	72	95	49	0	0	1	0
CHARLESTON	90	64	96	61	77	2	.3	-.9	.2	4.0	46	15.6	59	98	38	4	0	2	0
HUNTINGTON	89	65	94	63	77	1	.6	-.5	.6	7.7	95	20.2	79	99	42	2	0	1	1
PARKERSBURG	88	64	92	62	76	1	.3	-.7	.2	6.1	78	16.3	68	100	48	2	0	2	0
WI GREEN BAY	87	62	96	56	75	5	T	-.7	T	3.0	48	9.2	57	92	43	2	0	0	0
LACROSSE	91	66	97	56	79	5	.5	-.3	.5	6.6	86	12.8	70	90	36	4	0	1	1
MADISON	89	62	95	56	75	4	.1	-.7	.1	4.5	60	11.5	63	89	39	4	0	1	0
MILWAUKEE	87	68	96	64	78	6	.2	-.5	.2	2.2	32	12.7	68	84	46	4	0	2	0
WAUSAU	87	63	94	57	75	5	.3	-.6	.3	4.5	58	9.9	54	86	36	3	0	2	0
WY CASPER	94	58	97	50	76	4	T	-.2	T	.8	37	4.5	58	59	13	7	0	0	0
CHEYENNE	87	56	90	53	72	2	.2	-.2	.1	3.8	101	11.2	122	84	27	1	0	2	0
LANDER	94	62	99	55	78	6	T	-.1	T	.5	26	5.2	57	43	13	7	0	1	0
SHERIDAN	97	60	103	53	79	8	T	-.2	T	.6	19	7.2	71	53	18	7	0	0	0
PR SAN JUAN	89	78	91	75	84	2	1.1	-.1	.3	5.0	51	29.1	110	91	66	3	0	6	0

Cooling Degree Days Table

LAST DATE OF DATA COLLECTION PERIOD IS 7-30-1988
ACCUMULATIONS ARE FROM JANUARY 1
\*\*\* = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

Table with columns: STATE CITY, CALL WEEK, WEEK WEEK, CUM CUM CUM CUM CUM, TOTAL DEV DEV DEV DEV DEV, FROM FROM FROM FROM FROM, NORM L YR L YR L YR L YR L YR, FRCT FRCT. Lists cities and their corresponding cooling degree day data.

## National Agricultural Summary

JULY 25 to 31, 1988

**HIGHLIGHTS:** High temperatures depleted soil moisture, stressing crops in the northern Great Plains. Precipitation gave some crops a boost across the central and eastern Corn Belt but may be too late to help other crops. Much of the gain accomplished in restoring soil moisture was lost as temperatures approached or exceeded the century mark in the western Corn Belt, Great Plains, and northern Rocky Mountain States. Fieldwork dropped below 6 days in the Delta and Southeast, but averaged 6 days or more in most other areas.

Winter wheat harvest reached 91 percent (%) completion, 6 percentage points ahead of the 5-year average. Spring wheat harvest doubled from the previous week reaching 52% completion. This was 35 points ahead of 1987 and 45 points above normal. Corn silking surged 11 points ahead of the 71% average. Corn in the dough stage was 19% finished, down 4 points from normal. Slightly more than three-fourths of the soybean acreage bloomed, 4 points above the 72% average. Forty-one percent set pods, 16 points above the previous week and 7 points above normal. Cotton setting bolls reached 69% completion, compared with 62% average. Boll opening was 5% finished. Sorghum was 44% headed and 28% of the acreage turned color. Rice was 32% headed, 11 points below normal. Livestock was mostly fair.

**SMALL GRAINS:** Winter wheat harvest was 3 points closer to completion, ending the week 91% finished. Harvest was 4 points ahead of 1987 and 6 points greater than normal. Harvest was finished or virtually finished except in Idaho, Montana, Oregon, and Washington. In Montana, 70% of the acreage was combined, 7 times greater than normal. Oregon's wheat harvest fell 28 points behind normal at 16% completion. Idaho's harvest was 28% finished, doubling the normal pace. Washington's wheat growers cut 14% of their acreage in 1 week but still lagged 14 points behind the 30% average. A few acres remained to be combined in California, Colorado, and Michigan.

Spring wheat harvest surged 26 points ahead of the previous week to 52% completion. Harvest progressed nearly 8 times faster than normal and was 35 points ahead of 1987. South Dakota's harvest reached 90% completion, when normally less than one-third of the acreage is cut by this date. North Dakota's harvest was slightly more than half finished, compared with 3% average. Montana's harvest was 29% finished, 15 points above the previous week and 28 points above average. Slightly more than one-fifth of Minnesota's spring wheat was combined in 1 week.

**CORN:** Precipitation did very little to improve corn in the central and eastern Corn Belt, where condition was mostly poor to fair. In the central Great Plains, corn was good to fair. Corn silking was 90% finished, compared with 94% in 1987 and 79% normally. Nineteen percent of the acreage had ears in the dough stage or beyond but lagged 4 points behind normal. Corn reached the dough stage in all major producing States except Michigan, Pennsylvania, and South Dakota. Corn harvest continued spreading across the Southeast.

**SOYBEANS:** Soybeans were mostly fair and began improving in most major producing areas. Additional precipitation gave soybeans a lift in the central and eastern Corn Belt. The lack of precipitation again began taking its toll in the northern Great Plains. In the 19 major producing States, 76% of the acreage had bloomed and 41% set pods. Normally 72% would be blooming and 34%

would be setting pods. Soybean blooming increased 10 points from the previous week, while setting pods gained 16 points. Armyworms were becoming a problem in Georgia. Late planted dryland soybeans needed rain in Kansas. In Ohio, spider mite damage worsened and velvet-leaf beetle was becoming a major problem.

**COTTON:** Cotton responded well to the heat and moisture, especially in the Delta and Southeast. Cotton was mostly good to fair, up from the previous week. In Georgia, armyworms and aphids increased. Bollworms and boll weevils were a problem in Arkansas. In Oklahoma, the hot weather promoted growth. Cotton harvest increased from the Rio Grande Valley northward through Coastal Bend. Hot temperatures opened bolls rapidly in central and Blacklands areas. Cotton developed well in California. Some cotton aborted squares because of hot weather stress. Insect infestations decreased in central and western Arizona but were moderate in other areas. Cotton squaring was 7 points above the 62% average in the 14 major producing States. Five percent of the acreage had bolls open, just slightly ahead of normal. Cotton was opening bolls in Alabama, California, Georgia, Louisiana, Mississippi, and Texas.

**SORGHUM:** Sorghum was 44% headed, 11 points slower than in 1987 but 3 points faster than normal. Twenty-eight percent of the acreage turned color, compared with 31% in 1987 and 32% normally. The crop was mostly good to fair. Harvest was ending in most southern areas of Texas but progressed well in central and Blacklands areas. Producers applied controls for midge in Arkansas. Kansas producers irrigated in many areas, but dryland sorghum needed rain. Harvest was underway in some Southeastern States.

**OTHER CROPS:** Rice was 32% headed and lagged 21 points behind 1987 and 11 points behind the average. Heading trailed behind normal in all States except Texas. Texas' rice was 4% harvested, 3 points behind normal. Many fields turned color. Harvest was underway in Louisiana but lagged behind normal at 5% completion.

Peanuts were mostly fair to good in the Southeast. Most acreage reached the pegging stage in Georgia and Alabama. Pegging was 20 points ahead of normal in Oklahoma. Peanuts began pegging in central and southern Texas but could use additional moisture.

Tobacco was mostly fair to good in the Southeast. Harvest was active in all States. Burley topping was underway in Kentucky. Sun scald and aphids caused some problems.

**FRUITS AND NUTS:** Peach harvest neared completion in Georgia. South Carolina's harvest reached 63% completion. Peach picking gained momentum in New Jersey.

New crop citrus progressed well in Florida. Moisture was adequate in most areas. Valencia harvest was finished. California growers provided moisture through irrigation in fruit and nut orchards. Sunburn and blight occurred in walnuts. New Crop citrus sized well. Almonds split hulls and table and raisin grapes were harvested.

**VEGETABLES:** Fall vegetable land preparation was very active in Florida. Initial plantings were underway. Light supplies of summer vegetables

(Continued to back cover)

## State Summaries of Weather and Agriculture

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

**ALABAMA:** Rainfall totals mostly 0.25 in. central, south; over 0.25 in. north, 1.00 to 2.00 in. local areas. Temperatures averaged 1° above normal southeast; 1° below normal elsewhere.

Days suitable for fieldwork 5.4. Soil moisture 3% very short, 40% short, 57% adequate. Scattered showers helped few areas; mostly warm, humid conditions prevailed. Soybeans 45% blooming, 52% 1987, 51% avg.; 21% setting pods, 24% 1987, 23% avg.; few fields turning color; 13% poor, 40% fair, 31% good, 16% excellent. Corn 68% dented, 80% 1987, 76% avg.; 43% mature, 57% 1987, 49% avg.; 16% harvested, 19% 1987, 9% avg.; 15% very poor, 19% poor, 61% fair, 5% good. Cotton 92% setting bolls, 92% 1987, 83% avg.; 2% bolls opened, 1% 1987, 1% avg.; 16% very poor, 17% poor, 45% fair, 20% good, 2% excellent. Peanuts 98% pegging, 90% 1987, 93% avg.; 88% good, 12% excellent. Sorghum 12% poor, 58% fair, 30% good. Hay, roughage supplies 8% very short, 85% short, 7% adequate. Pasture feed supplies 3% very short, 39% short, 58% adequate. Livestock, pastures mostly fair to good. Primary activities: Harvesting corn, vegetables, peaches, other fruits; cutting, baling hay; controlling weeds, insects in row crops; applying fungicides to peanuts; planting fall vegetables; aerating fish ponds and monitoring conditions; general care of livestock, poultry.

**ALASKA:** Warm temperatures dominated with some isolated rainfall. Temperature highs ranged from 3° below normal to 4° warmer than normal. Lows ranged from 3° below normal to 3° warmer than normal. Seasonal precipitation totals ranged from 1.60 in. drier than normal to 5.47 in. wetter than normal.

Days suitable for haying, 4.0. Topsoil moisture 35% short, 64% adequate, 1% surplus. Subsoil moisture 28% short, 70% adequate, 2% surplus. First crop hay 90% harvested, 75% 1987. Small grains for grain had over half in the hard dough stage of development; a small percentage turned color. Commercial potato bloom averaged nearly 80%. Commercial vegetable harvest continued.

**ARIZONA:** Scattered showers, thunderstorms central mountains; hot weather western deserts 24th. Monsoon activity southern Arizona 25th. Isolated rain north 26th. Active monsoon rains 28th to 30th; locally 1.00 to 2.00 ins. Average temperatures 1° below normal to 3° above.

Cotton progressed well; 100% squaring, 89% setting bolls. Insect infestations decreased central, west; moderate levels other areas. Insecticide, herbicide spraying; irrigation statewide. Cotton rated 71% good, 29% excellent. Alfalfa good to excellent; harvesting continued. Rain, wind damage central, south. Severe armyworm damage central. Hay, roughage supplies 86% adequate, 14% surplus. Watermelons, cantaloupe, honeydews, parsley, greens, green onions shipped central. Field preparation, planting fall lettuce east. Ranges fair to good. No supplemental feeding. Cattle, calves fair to good.

**ARKANSAS:** Near normal temperatures with scattered showers statewide. Temperature extremes 59°; 101°. Rainfall totals none to 2.73 inches.

Days suitable for fieldwork 6.0. Soil moisture supplies 2% surplus, 56% adequate, 42% short. Soybean planting complete. Corn condition 11% poor, 47% fair, 32% good, 10% excellent. Problems with bollworms and boll weevils in cotton; sheath blight and blast in rice; weeds in soybeans; and midge in sorghum. Treatments being made. Hay and

roughage supplies 18% very short, 73% short, 9% adequate. Pasture and range condition 4% very poor, 32% poor, 46% fair, 18% good. Stockwater supplies 33% short, 66% adequate, 1% surplus. Livestock fair, problems with external parasites.

**CALIFORNIA:** Weather dry with above normal temperatures. High pressure continued all week. Some widely scattered showers fell along foothills, Sierra Nevada.

Warm, open weather, normal progress field activities, rapid crop growth. Cotton development good. Some cotton fields aborting squares, hot weather stress. Pest control, growth regulator applications active. Most rice boot stage. Safflower harvest progressed. Few alfalfa seed fields harvested. Corn development good. Silage harvest soon. Early dry bean harvest began. Alfalfa harvest normal. Irrigation continued in fruit and nut crops. Spraying for codling moth. Early variety apples harvested. Almond hulls began to split. Date bunches bagged. Table, raisin grapes harvested. Stone fruit harvest continued. Sunburn, blight problems occurring in walnuts. Citrus, avocado harvests continued. New citrus crop sizing well. Artichoke continued light. Broccoli, cauliflower good supply and quality Salinas. Celery light supply Salinas, Santa Maria. Lettuce moderate supply, variable quality, weight. Melon harvest packing continued increase. Strawberry volume dropped, quality variable. Berries diverted freezer. Harvest processing tomatoes active. Riverside dry onion harvest. Alturas fall potatoes growing well. Livestock fair to good. Rangeland, pasture deteriorating rapidly valley, foothill areas. Fire danger high. Livestock movement at seasonal low, but picked up Redding area. Hay, roughage supplies very short some central valley areas, adequate most other areas. Supplemental feeding continued. Stock ponds short to very short. A few poultry, fish operations experienced high mortality due to heat. Hay and roughage 15% short, 85% adequate.

**COLORADO:** Hot, dry weather over mountains and Western Valleys; substantial rains over the Eastern Plains. Precipitation ranged from 0.05 to 5.26 in. Average temperature range 3 to 5° normal.

Days suitable for fieldwork 5.5. Soil moisture 9% very short, 43% short, 46% adequate, and 2% surplus. Hay and roughage supplies 9% short, 89% adequate, and 2% surplus. Barley harvested, 41%. Spring wheat harvest 7%. Oat harvest at 30%. Rain has slowed progress on Eastern Plains. Livestock mostly good to excellent with pastures and range also good to excellent.

**FLORIDA:** Typical summertime weather. Scattered daily thunderstorms brought variable rains of less than 0.50 in. per day. Temperatures near normal.

Soil moisture generally adequate except scattered areas northern Peninsula remained short. Cotton, peanuts, soybeans responded well to improved moisture. Growers harvested corn for silage, prepared to harvest high moisture corn for grain. Haymaking, tobacco harvest active. Sugarcane good growth. Pasture, forage supplies continued improving most areas. Conditions good except few sections Panhandle, northern Peninsula only fair. Hay, roughage supplies 32% short, 68% adequate. Cattle also continued improving generally; good to excellent lower Peninsula, mostly good elsewhere

except only fair few extreme northern localities. Citrus groves, trees very good. Moisture adequate; rains continued most areas. New crop fruit progressed well. Valencia harvest complete. Caretakers very busy, summer care activities. Typical summertime weather vegetable producing areas. Land preparation very active, fall crops. Initial plantings underway. Light supply summer vegetables available northern, Panhandle areas.

**GEORGIA:** Overall warm week. Temperatures near normal north, 1 or 2° above central, south. Extreme lows low 60s northeast, upper 60 elsewhere. Extreme highs mid 90s north, upper 90s central and south. Rain 1 to 3 days, totals under 0.50 in, none some areas. Isolated locations 1.00 to over 2.00 in.

Days suitable for fieldwork 5.8. Soil moisture 18% very short, 57% short, 25% adequate. Corn 42% mature, 4% harvested. Armyworms, aphids increasing in cotton. Peanuts fair to good; 98% pegging; 96% avg. Armyworms increasing in soybeans. Tobacco mostly fair to good; harvest active; 43% complete. Apples mostly good; harvest beginning. Peach harvest nearly complete. Pecans mostly fair to good. Pastures mostly fair. Hay poor to fair; supplies 27% very short, 62% short, 11% adequate. Cattle fair to good. Hogs mostly good.

**HAWAII:** Unstable weather early week. Cloudy skies, light to heavy rainfall, cleared by midweek. Mostly sunny, hot thereafter. Temperatures increased as week progressed, high of 90°. Rainfall light to heavy, none to 1.30 in. Trade winds variable at 5 to 25 mph.

Days suitable for fieldwork 7.0. Irrigation heavy especially second half of week. Chinese cabbage production moderate. Spraying for insects and diseases heavy, infestations high. Head cabbage good output moderate. Cucumber production moderate. Papaya harvesting active, production expected to increase through September. Tomato production light, increased output expected later this month.

**IDAHO:** Temperatures ranged from normal to 7° above normal. Precipitation negligible.

Days suitable for fieldwork 7.0. Soil moisture 21% very short, 36% short, 43% adequate. Irrigation water supplies fair, good; Eastern area very poor, poor. Potatoes good, 85% closing middles, 3% turning. Winter wheat 28% harvested, 7% 1987, 14% avg. Spring wheat good, 8% harvested. Spring barley 10% harvested. Second cutting of alfalfa 61% harvested, 46% 1987, 34% avg. Peaches 26% harvested. Mint 34% harvested. Dry peas, lentils, oat harvesting underway. Range, pasture fair. Hay, roughage 24% short, 72% adequate, 4% surplus. Livestock may be off ranges early; otherwise good.

**ILLINOIS:** Temperature highs averaged 6 to 9° above normal north, 1 to 2° within normal south. Temperature lows normal.

Precipitation averaged greater than 1.00 in. around Chicago and parts of Central Illinois, variable elsewhere with stations in northern and central parts of state reporting none.

Days suitable for fieldwork 6.31. Soil moisture 86% short, 14% adequate. Oats ripe 100%, 100% 1987, 98% avg.; harvested for grain 92%, 96% 1987, 84% avg. Alfalfa 3rd crop cut 30%, 39% 1987, 22% avg; 6% very poor, 35% poor, 51% fair, 8% good. Hay and roughage supplies 15% very short, 64% short, 21% adequate. Pasture 45% very poor, 36% poor, 19% fair.

**INDIANA:** Temperatures 1 to 3° above normal central and south, 5 to 8° above normal northern area. Lows mid to upper 60s, highs upper 80s to low 90s. Precipitation varied. Totals less than 0.10 in. to 2.23 in.

Days suitable for fieldwork 6.4. Topsoil moisture 67% short, 33% adequate. Subsoil moisture 93% short, 7% adequate. Major crops and pasture continues to improve. Soybeans 25 in. high, 34 in. 1987, 25 in. avg. Oats 84% combined, 99% 1987, 81% avg. Alfalfa 91% cut twice, 92% 1987, 88% avg. Pastures 29% fair, 54% poor, 17% very poor. Livestock water supply 73% adequate, 22% short, 5% very short. Hay, roughage for feeding season 21% adequate, 67% short, 12% very short. Widespread showers brought relief to most areas of State.

**IOWA:** Temperatures 2 to 6° above normal; extremes 50 to 105°. No rain in most areas; isolated light showers southeast.

Days suitable for fieldwork 6.9. Topsoil moisture 95% short, 5% adequate; subsoil moisture 93% short, 7% adequate. Hay 26% very poor, 39% poor, 27% fair, 8% good. Second crop alfalfa 95% harvested, 89% 1987, 85% avg. Second crop clover 75% harvested, 68% 1987, 62% avg. Hay being fed to supplement pastures 1% none, 17% light, 51% moderate, 31% heavy; availability of hay for feed 6% very short, 29% short, 61% adequate, 4% surplus. Corn 45% milk stage, 75% 1987, 36% avg. Extreme heat, dryness has caused considerable stress on cattle, hogs, poultry. Livestock replacement slow. Ponds, streams drying up. Pastures 66% very poor, 23% poor, 8% fair, 3% good.

**KANSAS:** Temperatures average 80 to 82°; 1 to 3° above normal north, normal to 1° above normal elsewhere. Precipitation scattered, less than 0.10 in. many locations to over 1.00 in. in few areas. District averages all less than 0.50 in.

Days suitable for fieldwork 6.5. Topsoil moisture 65% short, 35% adequate, decrease from previous week. Subsurface moisture 59% short, 41% adequate. European, southwestern corn borers present light to moderate southwest, south central. Irrigation activity many areas, operators try to keep up with water demand. Chinch bugs remain sorghum pest but appear losing significance. Irrigation underway many areas, dryland sorghum needs rain. Late planted dryland soybeans need rain. All row crop conditions showed improvement, will likely decrease without rain. Hay and roughage supplies 7% very short, 53% short, 40% adequate. Range and pastures holding their own waiting for next rain. Third cutting alfalfa slow progress, approximately 40% complete. Operators worked wheat stubble, applied anhydrous to wheat ground, cultivated row crops.

**KENTUCKY** Very warm humid week with precipitation below normal for most areas. High temperatures mostly upper 80s, mean temperature near normal. Average precipitation 0.10 to 0.75 in. with over 1.00 in. isolated western locations.

Days suitable fieldwork 5.2. Soil moisture 7% very short, 62% short, 31% adequate. All crops showed improved prospects from last week. Major crop activities spraying and cultivating, as weed, insect populations increased. Corn mainly poor to fair, soybeans fair to good, tobacco fair to good. Aphids a major problem with tobacco, some sun scald also reported. Topping burley getting underway. Pasture, hay mostly short but conditions improving. Some farmers still feeding hay. Hay and roughage supplies still considered short for this feeding season.

**LOUISIANA:** Temperatures normal to 3° below normal. Temperature extremes 62°; 100°. Rainfall averaged 0.19 to 2.19 in.

Days suitable for fieldwork 3.8. Soil moisture 24% short, 48% adequate, 28% surplus. Corn fair; 98% dough stage, 41% mature, 4% harvested. Rice 9% ripe, 5% harvested, both below average. Growers spraying fungicides for sheath blight. Sorghum 4%

ripe. Sweetpotatoes fair to good; 2% harvested. Hay first cutting 97% complete. Peaches 91% harvested, about normal. Hay, roughage supplies 22% very short, 44% short, 34% adequate. Livestock feed obtained from pastures 88%. Sugarcane good. Livestock, pastures, pecans fair to good. Vegetables fair. Soybean farmers in southern parishes applying fungicides for aerial blight. Water damage to soybeans in same area. Main activities: Fertilizing pastures, hay; harvesting hay, peaches, corn, rice, sweetpotatoes; cultivating, spraying soybeans.

**MARYLAND & DELAWARE:** Maryland: Precipitation averaged 2.38 in. Precipitation this growing season 16.36 in. Average temperature 77.6°, normal 76.2°. Temperature extremes 96°; 52°.

Days suitable for fieldwork 4.2. Topsoil moisture adequate. Subsoil moisture 40% short, 60% adequate. Pasture 20% poor, 80% fair. Current hay supply 40% short, 60% adequate. Corn 20% poor, 80% fair. Corn silked 75%, 80% avg. Corn dough 25%, 40% avg. Some corn too mature to benefit from moisture. Soybeans 60% fair, 40% good. Soybeans planted 99%, 100% avg. Soybeans 40% bloomed, 40% avg. Soybeans 10% set pods, 10% avg. Apples 70% fair, 30% good. Peaches fair. Peaches harvested 20%, 40% avg. Sweet corn 50% harvested, 50% avg. Alfalfa third cutting 30%, 30% avg.

Delaware: Precipitation averaged 2.82 in. Precipitation this growing season 17.07 in., 18.31 normal. Average temperature 78°, normal 77°.

Days suitable for fieldwork 4.7. Topsoil moisture adequate. Subsoil moisture 50% short, 50% adequate. Pasture fair. Current hay supply 10% short, 90% adequate. Corn 40% poor, 60% fair. Corn 85% silked, 85% avg; 10% dough, 25% avg. Soybeans 40% fair, 60% good. Soybeans planted 98%, 100% avg. Alfalfa third cutting 45%, 45% avg. Apples, peaches good. Sweet corn harvested 35%, 50% avg.

**MICHIGAN:** Temperatures ranged 3 to 7° above normal. Temperature extremes 47°; 99°. Precipitation ranged from none to 1.56 in.

Days suitable for fieldwork 6.0. Soil moisture 80% short, 20% adequate. Corn 68% silked, 95% 1987, 65% avg.; none dough, 40% 1987, 10% avg.; 20% very poor, 32% poor, 35% fair, 12% good, 1% excellent. Soybeans 60% bloomed, 85% 1987, 60% avg.; setting pods 10%, 45% 1987, 20% avg.; 10% very poor, 20% poor, 35% fair, 30% good, 5% excellent. Wheat 95% harvested, 98% 1987, 85% avg. Dry beans 40% bloomed, 80% 1987, 60% avg. Oats 40% harvested, 60% 1987, 20% avg. Pastures supplying 20% of livestock feed supply. Hay and roughage supplies 47% very short, 50% short, 3% adequate. Major activities: Wheat and oats harvest, cutting hay, cherry picking, vegetable harvest.

**MINNESOTA:** Temperatures averaged 3 to 11° above normal. Temperature extremes 46°; 110°. Precipitation averaged 0.50 to .88 in. below normal. Greatest weekly total 1.38 in. Days suitable for fieldwork 6.6. Topsoil moisture 84% very short, 16% short. Spring Wheat 48% combined, 28% 1987, 9% avg. Oats 84% combined, 68% 1987, 30% avg. Barley 64% combined, 53% 1987, 23% avg. Corn 97% tasseling, 98% 1987, 86% avg.; 48% in milk, 69% 1987, 23% avg.; 8% dough, 12% 1987, 2% avg. Soybeans 96% blooming, 95% 1987, 87% avg.; 71% setting pods, 66% 1987, 31% avg. Winter Wheat 97% harvested for grain, 86% 1987, 49% avg. Rye 96% harvested for grain, 81% 1987, 44% avg. Sweet Corn 17% harvested for processing, 14% 1987, 5% avg. Soybeans 22% very poor, 32% poor, 42% fair, 4% good. Field Corn 27% very poor, 43% poor, 24% fair, 6% good. Spring Wheat 25% very poor, 36% poor, 32% fair, 7% good. Sugarbeets 16% very poor, 48% poor, 36% fair. Hay supplies for the remainder

of the feeding season 36% very short, 56% short, 8% adequate. Livestock feed now obtained from pastures 26%.

**MISSISSIPPI:** Temperatures 1 to 3° below normal. Thunderstorms produced around an inch of precipitation in most locations, slightly below normal.

Days suitable for fieldwork 4.9, 6.5 1987, 5.5 avg. Soil moisture 5% very short, 25% short, 65% adequate, 5% surplus. Corn fair; 71% dough stage, 94% 1987, 82% avg.; 13% mature, 24% 1987, 23% avg. Sorghum fair; 72% heading, 88% 1987, 74% avg. Cotton fair to good; 86% setting bolls, 99% 1987, 81% avg.; 2% open bolls, none 1987, none avg. Rice fair; 19% heading, 67% 1987, 51% avg.; treating for sheath blight. Soybeans fair; 36% blooming, 55% 1987, 51% avg.; 21% podding, 22% 1987, 16% avg. Peaches 80% harvested, 98% 1987, 84% avg. Pastures fair to good. Livestock good. Watermelons 51% harvested, 74% 1987, 62% avg. Corn silage 27% harvested, 35% 1987, 29% avg. Sorghum silage 21% harvested, 15% 1987, 21% avg. Hay 60% harvested, 69% 1987, 66% avg. Hay supply 25% very short, 60% short, 15% adequate. Continued improvement of crops and pastures due to scattered showers. Activities: cutting hay, weed and insect control.

**MISSOURI:** Temperatures averaged 2° above normal north, 3° below normal south. Precipitation 0.50 to 0.75 in. south, some local 2.00 in. rains, less than 0.25 in. north.

Days suitable for fieldwork 6.1. Topsoil moisture supply 75% short, 23% adequate, 2% surplus. Surplus in southeast only. North central, northeast 100% short. Warm temperatures, limited rainfall retarding crop growth, development. West central, southwest, southeast crop conditions better than elsewhere. Alfalfa 3rd cutting 42%, 60% 1987, 40% avg. Livestock feed from pasture 62%. Supply of hay, roughage 32% very short, 62% short, 6% adequate. Stock water supply 26% critically short, 42% short, 32% adequate. Pastures 34% very poor, 35% poor, 16% fair, 15% good, northern districts poorest.

**MONTANA:** Very hot, dry with temperatures 3 to 9° above normal. Only southwest received measurable moisture.

Days suitable for fieldwork 6.9. Topsoil moisture 93% short, 7% adequate. Subsoil moisture 87% short, 13% adequate. Barley 33% very poor, 28% poor, 24% fair, 13% good, 2% excellent. Oats 45% very poor, 27% poor, 16% fair, 12% good. Range, pasture feed 49% very poor, 34% poor, 14% fair, 3% good. Spring grain harvest well underway. Barley 23% harvested, 1% 1987, 3% avg. Oats 27% harvested, 1% 1987, 1% avg. Hay, roughage supplies 38% very short, 32% short, 27% adequate, 3% surplus. Second cutting alfalfa 39% harvested, 21% 1987, 22% avg. Other hay 72% harvested, 69% 1987, 73% avg.

**NEBRASKA:** The week saw only a few isolated light showers with totals of only a few hundredths of an inch. The rest saw hot, dry conditions prevail. Extremes: 50°; 104°.

Days suitable for fieldwork 6.8. Topsoil moisture 65% short, 35% adequate. Subsoil moisture 58% short, 42% adequate. Alfalfa hay 1% very poor, 19% poor, 49% fair, 31% good. Alfalfa hay 3rd cutting 20%, 14% 1987, 5% average. Oats harvested 96%, 95% 1987, 85% average. Pasture, range feed supplies 4% very short, 47% short, 47% adequate, 2% surplus. Hay, roughage supplies 2% very short, 33% short, 59% adequate, 6% supplies.

**NEVADA:** Hot, mostly dry, seventh consecutive week. Readings 100° or higher common all areas. Average temperatures above normal throughout State.

Locally heavy showers accompanied thunderstorms scattered localities.

Baling second crop alfalfa hay where irrigation water available. Small grain harvest moving northward. Garlic harvest underway. Stock water sources drying up.

Hay roughage supplies 39% short, 30% adequate, 15% surplus.

**NEW ENGLAND:** Precipitation averaged 1.25 in. and above across area. Thunderstorm rain amounts 2.50 in. and above in scattered locations. Average temperatures mid 70s. Temperatures above normal.

Days suitable for fieldwork 4.5. Fieldwork 3.0 days behind. Soil moisture 5% very short, 81% adequate, 14% surplus. Grazing availability 20% short, 75% adequate, 5% surplus. Hay and roughage 35% short, 65% adequate. Percent of feed now being obtained from pasture 43%. Maine potato condition good. Connecticut River Valley potato fair to good. Field corn fair to good. Sweet corn fair to good. Shade tobacco, outdoor tobacco good. First hay crop 98% harvested, 99% 1987, 95% avg.; condition good. Second crop hay 35% cut. 45% 1987, 40% avg.; fair to good. Apple set average; fruit drop average; scab infection average. Blueberry set average.

Major farm activities: Harvesting sweet corn and other vegetables, haying, and spraying fruit.

**NEW JERSEY:** Temperatures averaged above normal. Extremes 58°; 100°. Rainfall averaged 2.16 in. north, 1.27 in. central, 1.03 in. south. Heaviest 24-hour total 3.38 in. on 26th, 27th. Estimated soil moisture percent field capacity averaged 93% north, 72% central, south. Four inch soil temperatures averaged 76° north, 77° central, 78° south.

Soil moisture generally adequate. Extended hot humid weather continued to cause yield, quality problems summer crops. Summer vegetable harvest active, culling heavy. Fall vegetable crop planting continued. Peach picking increased. Blueberry harvest light. Summer variety apple picking underway. Field corn, soybean growth responded to showers. Hay, pasture growth improved. Hay and roughage supplies: adequate 50%; short 50%.

**NEW MEXICO:** Temperatures near normal. High 99° Las Cruces; low 40° Chama. Scattered thundershowers produced measurable rain statewide, except spotty rainfall east-central, southeastern plains. High totals include 2.23 in. Los Alamos, 2.01 in. Silver City.

Days suitable for fieldwork 6.7. Soil moisture 33% short, 67% adequate. Cotton 98% squaring; 70% setting bolls; 17% poor, 33% fair, 50% good. Onions 33% fair, 67% good. Shipments moderate. Cattle 21% fair, 72% good, 7% excellent. Sheep 90% good, 10% excellent. Range 43% fair, 43% good, 14% excellent. Hay and roughage stocks decline to short to adequate.

**NEW YORK:** Temperatures 3 to 5° above normal. Nights warm, humid. Late week 90° weather hit again. Wet pattern continued with showers, thunderstorms dumping as much as 2.00 to 3.00 in. of rain some areas. Hail pelted parts of capital area on 30th.

Days suitable for fieldwork 4.5. Soil moisture adequate. Wheat 65% harvested, 75% 1987, 65% average. Some sprouting. Corn mostly fair to good; plants tasseling. Some concern about small size. Pastures fair. Hay mostly fair to good. Second cutting alfalfa 39% complete, 42% 1987, 40% average. Hay and roughage supplies 6% very short, 50% short, 44% adequate. Hudson Valley apples good. Recent rains beneficial to late apple varieties. Sweet, tart cherry harvest complete. Concord grapes western areas good. Processing snap

bean harvest underway. Early planted cabbage harvest began. Orange County onions good. Sweet corn harvest continued.

**NORTH CAROLINA:** Temperatures averaged 1° below normal Mountain Region, normal to 2° above normal Piedmont Region, Coastal Plain Region. Temperature extremes 52°; 95°. Precipitation ranged 0.02 to 4.12 in.

Days suitable for fieldwork 5.0. Soil moisture 1% very short, 32% short, 63% adequate, 4% surplus. Pasture 2% very poor, 18% poor, 38% fair, 41% good, 1% excellent. Flue-cured tobacco 19% harvested, 16% 1987, 15% avg. Tobacco 1% poor, 18% fair, 70% good, 11% excellent. Peanuts 4% poor, 11% fair, 70% good, 15% excellent. Sweet potato condition 11% fair, 77% good, 12% excellent. Irish potatoes 92% harvested, 93% 1987, 95% avg. Condition 11% fair, 81% good, 8% excellent. Peaches 66% harvested, 69% 1987, 75% avg. Condition 18% fair, 66% good, 16% excellent. Truck crops 30% fair, 70% good. Hay and roughage supply 3% very short, 26% short, 67% adequate, 4% surplus. Condition 2% very poor, 17% poor, 41% fair, 40% good. Livestock feed obtained from pasture 65%. Apples 3% poor, 28% fair, 66% good, 3% excellent. Major farm activities: Tobacco topping, suckering, harvesting; cultivating soybeans, cotton, peanuts; harvest peaches, truck crops, hay, Irish potatoes, corn silage; clipping pastures; apply insecticides; shearing Christmas trees; land preparation for fall planting; tending livestock and general farm maintenance.

**NORTH DAKOTA:** Record setting hot temperatures, dry statewide. Temperatures averaged 6 to 9° above normal. Extremes 42°; 109°. Precipitation mostly none.

Days suitable for fieldwork 7.0. Topsoil further depleted; 82% very short, 18% short. Subsoil 68% very short, 27% short, 5% adequate. Unharvested small grains mostly very poor to poor. Spring wheat 37% very poor, 43% poor, 16% fair, 4% good; durum 31%, 48%, 21%; oats 60%, 35%, 5%; barley 45%, 29%, 26%; flax 33%, 27%, 37%, 3%; corn 35%, 42%, 18%, 5%; dry edible beans 3%, 17%, 52%, 28%; sunflower 17%, 11%, 56%, 16%; soybeans 17%, 37%, 31%, 15%; potatoes none, 26%, 70%, 4%. Small grain harvest progressed at a record pace. Spring wheat 52% combined, 5% 1987, 3% avg.; durum 24%, 2% 1987, 1% avg.; oats 58%, 8% 1987, 7% avg.; barley 59%, 17% 1987, 12% avg.; sunflower 66% bloom or beyond, 40% 1987, 23% avg.; potatoes 91%, 99% 1987, 89% avg.; dry edible beans 93%, 81% 1987, 80% avg.; corn 34% milk to dough or beyond, 22% 1987, 10% avg.; flax 25% turning and beyond, 16% 1987, 13% avg.; soybeans 16% plant fully podded, 5% 1987, 18% avg. Hay and roughage supplies 38% very short, 49% short, 13% adequate. Pastures 98% very poor to poor, 2% fair; furnished 68% roughage requirements.

**OHIO:** Average high temperatures high 80s. Average low temperatures low to mid 60s. Daily temperatures averaged about 3° above normal. The week generally dry until late on the 30th. Precipitation ranged from 0.25 in. to 2.00 in. Some reports of hail north central.

Days suitable for fieldwork 5.7. Soil moisture 62% short, 37% adequate, 1% surplus. Rain continued to improve crop conditions. Rootworm damage in corn. Pollination taking place on plants smaller than normal. Corn very poor to poor. Spider mite damage in beans worsening. Velvetleaf a major problem. Soybeans fair to poor. Oat harvest continued along with harvesting of potatoes, processing tomatoes, summer apples, corn silage, and pickles. Hay, pasture continued to grow with hay poor and pasture very poor to poor. Hay and roughage supplies 37% very short, 46% short, 16% adequate, 1% surplus.

**OKLAHOMA:** Temperatures averaged 2° below normal north central to 1° above normal south central.

Precipitation averaged none west central, Panhandle to 1.20 in. northeast.

Days suitable for fieldwork 6.1. Topsoil moisture 70% short, 30% adequate. Subsoil moisture 50% short, 50% adequate. Cotton 100% good; 98% squaring, 85% 1987, 65% avg.; 60% setting bolls, 40% 1987, 25% avg. Hot weather promoted growth. Sorghum 15% fair, 85% good; 45% heading, 45% 1987, 35% avg.; 15% coloring, 15% 1987, 10% avg. Peanuts 90% pegging, 65% 1987, 70% avg. Soybeans 25% flowering, 60% 1987, 40% avg. Corn 40% milk-to-soft, 75% 1987, 65% avg. Pasture good. Supplemental feed comprised 20% of livestock feed. Hay, forage supplies 15% very short, 43% short, 42% adequate. Cattle good. Marketings average, prices up from previous week.

**OREGON:** Above average temperatures, mostly 6 to 10°, across State except central coast 1° below normal. Many locations highs above 100°, warmest reading 107° at Redmond. Only measurable precipitation 0.02 in. North Bend.

Soil moisture 45% short, 55% adequate. Winter wheat 9% fair, 77% good, 14% excellent. Barley 37% harvested, 58% 1987, 52% 3-year avg. Hay, roughage supplies 25% short, 65% adequate, 10% surplus. Grass seed harvest continued west; warehouses nearly filled. Mint harvest to begin shortly west, central areas. Second hay cutting many eastern areas; third cutting southwest. Sweet cherry harvest continued Union County, other districts completed. Tart cherry harvest underway Willamette Valley. Blueberry harvest in full swing Willamette Valley, Hood River Valley; good yields, some heat damage. Marionberry, Boysenberry harvest continued west; heat caused losses. Growers preparing for early prune harvest Milton-Freewater. Harvested snap beans, broccoli, cucumbers, squash Willamette Valley. Snap bean harvest underway Milton-Freewater. Sweet corn for fresh market harvested Jackson County. At Hermiston-Boardman, early potato harvest just started, watermelon harvest underway. Walla Walla sweet onion harvest continued Milton-Freewater. Livestock mostly good to excellent. Ranges, pastures fair to good; quite dry especially east.

**PENNSYLVANIA:** Week started cool, thunderstorms. Midweek was dry. Week ended hot, thunderstorms. Average temperature 75°, 4° above normal. Temperature extremes 53°; 99°. Average precipitation 0.94 in., 0.08 in. above normal.

Days suitable for fieldwork 5.0. Soil moisture 47% short, 48% adequate, 5% surplus. Corn 40% silk, 73% 1987, 51% avg. Avg. corn height 46 in., 73 in. 1987, 64 in. avg. Corn 22% very poor, 33% poor, 32% fair, 11% good, 2% excellent. Soybeans 10% very poor, 25% poor, 40% fair, 22% good, 3% excellent. Barley 4% turning yellow, 2% 1987; 8% ripe, 3% 1987; 88% harvested, 95% 1987. Wheat 3% turning yellow, 5% 1987; 25% ripe, 16% 1987; 72% harvested, 79% 1987. Wheat 5% poor, 22% fair, 50% good, 23% excellent. Oats 5% heading or headed, 3% 1987; 19% turning yellow, 20% 1987; 43% ripe, 34% 1987; 33% harvested, 43% 1987. Oats 6% very poor, 20% poor, 31% fair, 35% good, 8% excellent. Second cutting alfalfa 75% complete, 69% 1987. Hay stands mostly fair to poor. Feed from pastures mostly below average. Hay and roughage supplies 36% very short, 57% short, 7% adequate. 17% of livestock feed now obtained from pastures. Activities: planting soybeans; harvesting oats, barley, wheat, hay, haylage, vegetables; controlling weeds; caring for livestock; maintaining machinery.

**PUERTO RICO:** Island average rainfall 1.09 in., 0.20 in. below normal. Highest weekly total rainfall 5.17 in. Coloso followed by 2.76 in. Pico Del Este, 2.36 in. Arecibo. Highest 24-hour total 3.37 in. Coloso. Accumulated total rainfall since

January 1 to July 29 30.09 in., 2% above normal. Total rainfall 0.82 in., minus 0.34 in. Divisional temperature averaged about 83° coasts, 77° interior with mean station temperature ranging from 69° Pico Del Este to 84° San Juan City. Highest maximum temperature 95° Ponce 4E, lowest minimum temperature 60° Arecibo Ionospheric Observatory.

**SOUTH CAROLINA:** Temperatures near normal. Rainfall widely distributed but highly variable. Rainfall ranged from less than 0.10 to 3.00 in.

Days suitable for fieldwork 5.3. Soil moisture, 11% very short, 65% short, 21% adequate, 3% surplus. Cotton 93% squaring, 96% 1987, 97% avg.; 58% setting bolls, 80% 1987, 88% avg.; 4% poor, 47% fair, 49% good. Soybeans 24% blooming, 33% 1987, 29% avg.; 5% setting pods, 15% 1987, 11% avg.; 8% poor, 48% fair, 44% good. Tobacco fair to good; 35% harvested, 32% 1987, 32% avg. Corn 80% dough stage, 89% 1987, 83% avg.; 24% mature, 39% 1987, 36% avg.; 1% harvested, 2% 1987, 5% avg.; fair. Peanuts fair to good. Sorghum fair; 5% harvested, 8% 1987, 6% avg. Peaches fair to good; 63% harvested, 71% 1987, 78% avg. Pastures fair. Livestock fair to good. Hay and roughage supplies 21% very short, 63% short, 16% adequate.

**SOUTH DAKOTA:** Temperatures normal to 9° above normal. Extremes 40°; 107°. Rainfall spotty; fell mostly around Black Hills, East.

Days suitable for fieldwork 6.2. Topsoil moisture; 70% critically short, 27% short, 3% adequate. Row crops suffering from heat, moisture stress, some already being cut for silage. Hay and roughage supplies; 21% very short, 53% short, 25% adequate, 1% surplus. Seventy-two percent of livestock feed being obtained from pasture.

**TENNESSEE:** Warm, humid week. Weak cold front brought rain west 25th, spread eastward 26th, 27th. Scattered thundershowers over weekend. Temperatures averaged near or slightly below normal. Precipitation ranged from 0.33 in. northeast to 3.00 in. northwest.

Days suitable for fieldwork 4.5. Soil moisture 8% very short, 39% short, 51% adequate, 2% surplus. Corn 52% dough, 74% 1987, 48% avg.; 22% dent, 42% 1987, 22% avg.; 14% very poor, 36% poor, 41% fair, 8% good, 1% excellent. Hay, roughage supplies 23% very short, 72% short, 5% adequate. Tobacco 14% topped, 44% 1987, 44% avg.; 1% very poor, 18% poor, 54% fair, 27% good. Rain continues to improve most crops. Pastures improving. Cattle fair.

**TEXAS:** Moist, rather unstable air continued western third State. Weak upper air disturbances, daily heating triggered isolated to scattered thundershowers west first part week. Shower activity picked up southern half State weekend. Rainfall all districts; amounts below normal except southeast, most southern areas. Temperatures below normal southern High Plains, Low Plains, Trans-Pecos, south; near normal reading elsewhere.

**Crops:** Corn harvest increased central beginning Blacklands. Harvest winding down Upper Coast, Coastal Bend with about average yields. Harvest continued Valley. Fields High Plains excellent progress. Irrigation beginning again, hot temperatures dried many fields. Slight buildup insects. Corn dented 65%, 65% 1987, 64% 3-year avg.; mature 56%, 39% 1987, 45% 3-year avg. Harvested 20%, 5% 1987, 12% avg. Grain sorghum harvest good progress central, Blacklands. Yields generally good. Harvest winding down most southern areas with good yields. Fields beginning color Plains. Insect activity increased. Producers water again as conditions dried. Sorghum mature 45%, 40% 1987, 46% avg. Harvested 36%, 20% 1987, 32% avg. Cotton harvest increased Valley northward through Coastal Bend. Bolls

opening rapidly central, Blacklands under hot temperatures. Increased bollworm problems increased spraying operations. Fields continued bloom, some setting bolls Plains, Cross Timbers. Insect activity increasing these areas. Irrigation increasing. Cotton squaring 96%, 95% 1987, 90% avg. Harvested 3%, 2% 1987, 1% avg. Rice harvest began last week Upper Coast. Other fields continued head, many turning color. Rice harvested 4%, 3% 1987, 7% avg. Peanuts continued good progress most areas. Fields central, southern areas pegging could use additional moisture. Fields Cross Timbers look good, irrigation started again. Some fungicide spraying occurred. Soybean progress remained good last week. Irrigation Plains increased. Recent rain Upper Coast helped. Other Field Crops: Oats 100% harvested, 100% 1987, 100% avg. Sunflowers 100% planted, 100% 1987, 100% avg.

**Commercial Vegetables:** Rio Grande Valley, land preparation, planting continued. San Antonio-Winter Garden, most melon harvest complete. Land preparation underway. East Texas, recent rains helped sweetpotatoes. Other vegetable harvest remained light. Melon yields down. High Plains, onion, potato harvest continued. Harvest continued peppers, cucumbers. Melons harvested. Trans-Pecos, cantaloupe harvest full swing. Onion harvest winding down. Harvest green chilies underway. Peach harvest winding down many areas. Pecans continued good progress under light insect pressures. Some areas need additional moisture to hold nuts.

**Range and Pasture:** Ranges, pastures many areas state improved some last week. Haying operations increasing, recent rains increased regrowth. Grazing conditions good Plains. Livestock overall good condition. Weight gains good. Markets improved some last week. Overall hay and roughage supplies for livestock were 15% very short; 38% short; 43% adequate; and 4% surplus.

**UTAH:** Precipitation moderate southwest, light elsewhere. Temperature maximums 2 to 5° above normal, minimums 2 to 6° above normal.

Days suitable fieldwork 6.6. Soil moisture 74% short, 26% adequate. Winter wheat 78% harvested, 67% 1987, 31% avg. Spring wheat 83% ripe, 80% 1987, 43% avg.; 46% harvested, 45% 1987, 18% avg. Barley 90% ripe, 79% 1987, 60% avg.; 53% harvested, 51% 1987, 30% avg. Oats 75% ripe, 46% 1987, 29% avg.; 13% harvested for grain, 10% 1987, 7% avg. Corn height 70 in., 66 in. 1987, 64 in. avg.; 80% tasseled, 76% 1987, 47% avg. Alfalfa 2nd cutting completed 76%, 63% 1987, 53% avg. Pasture, range 42% poor, 38% fair, 20% good. Irrigation water supply 14% very short, 42% short, 44% adequate. Stock water supply 62% short, 38% adequate. Hay and roughage supplies 14% short, 86% adequate. Livestock good to excellent. Major farm activities: Haying, grain harvest, irrigation, weed control.

**VIRGINIA:** Hot, above normal precipitation. Temperatures averaged 6° above normal, range 62° to 104°. Precipitation range 0.33 to 3.40 in.

Days suitable for fieldwork 4.4. Topsoil moisture 12% very short, 36% short, 38% adequate, 14% surplus. Majority of crop conditions improve. Best conditions south, worst east. Corn mostly fair to good. Corn 58% in or beyond silk stage, 62% 1987, 72% avg. In or beyond dough stage 18%, 30% 1987, 32% avg. Soybeans fair to good. Soybeans 16% blooming, 21% 1987, 23% avg. Setting pods 4%, 6% 1987, 5% avg. Flue-cured tobacco excellent; spraying sucker control, topping nearly complete. Burley tobacco poor, stressed. Peanuts excellent, weed control. Potatoes 82% harvested. Hay, roughage supplies 8% very short, 39% short, 45% adequate, 8% surplus. Pastures poor mountains,

fair central, good to excellent south, southeast, poor elsewhere. Livestock water shortage, supplemental feeding some areas. Soil moisture reducing nitrate levels in corn.

**WASHINGTON:** High pressure aloft, thermal trough from south kept weather warm, dry. Temperatures well above seasonal normals. Highs in 90s, 100s; lows in 50s.

Days suitable for fieldwork 6.9. Harvest operations progressing full scale. Winter wheat 26% harvested, 37% 1987, 30% avg. Spring wheat 10% harvested, 21% 1987, 18% avg. Winter wheat yields, quality reported good. Potato fields being sprayed, dug Franklin County. Early potato harvest also underway Grant, Benton Counties. Second cutting alfalfa hay continued late areas. Cutting third crop hay underway early areas. Hay sales, movement strong; roughage feed supplies estimated 65% adequate, 35% surplus. Peach harvest continued Benton, Yakima Counties. Late apricot varieties being picked Yakima County. Cherry harvest finished Chelan County. Western Washington raspberries, blueberries, blackberries being picked. Cranberry crop looks good, minor frost damage reported. Early onions, carrots, sweet corn, watermelons being harvested Franklin, Benton Counties. Green pea harvest underway west; truck farmers unloading produce at local farmers' markets. Range, pasture conditions mostly adequate.

**WEST VIRGINIA:** Average temperature 76°, 2 to 5° above normal. Extremes 98° Weston, Williamson; 51° Greenbank. Average precipitation 0.47 in., 0.50 in. below normal.

Days suitable for fieldwork 4.6. Soil moisture 17% very short, 55% short, 28% adequate. Corn poor to fair. Apples fair to poor. Peaches mostly fair. Wheat, barley combining virtually completed. Oats 100% ripe, 82% harvested. Corn 40% silked, 17% dough. Pasture and hay poor to fair. Cattle and sheep mostly fair to good. Feed supplies 18% very short, 48% short, 34% adequate. Feed from pasture 76%, up 12 points from last week. Farm activities: general farm maintenance, livestock care, clipping pasture.

**WISCONSIN:** Temperatures averaged 76°, 5° above normal. Extremes: 45°; 103°. Precipitation none to 0.60 in.

Days suitable for fieldwork 6.7. Soil moisture 94% short, 6% adequate. Crop conditions 17% very poor, 51% poor, 27% fair, 5% good; best northeast, east central. Corn condition 12% very poor, 41% poor, 35% fair, 12% good. Corn 79% silked, 86% 1987, 60% avg. Corn in dough 9%, 16% 1987, 8% avg. Oats 57% harvested, 49% 1987, 25% avg. Straw short supply. Second crop hay 70% cut, 63% 1987, 59% avg. Some too short to cut. Soybeans look good. Winter wheat 87% harvested, 81% 1987, 58% avg. Yields below average, but better than expected. Feed and roughage supplies 41% very short, 53% short, 6% adequate.

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

Days suitable for fieldwork 7.0. Topsoil moisture 97% short, 3% adequate. Winter wheat 5% turning color, small amount 1987, 10% avg.; 30% mature, 30% 1987, 40% avg.; 65% harvested, 70% 1987, 50% avg. Barley 5% headed, 10% 1987, 10% avg.; 15% turning color, 30% 1987, 35% avg.; 40% mature, 40% 1987, 40% avg.; 40% harvested, 20% 1987, 15% avg. Spring wheat small amount headed, 5% 1987, 15% avg.; 20% turning color, 40% 1987, 35% avg.; 50% mature, 35% 1987, 35% avg.; 30% harvested, 20% 1987, 15% avg. Oats 10% headed, 15% 1987, 20% avg.; 35% turning color, 45% 1987, 40% avg.; 40% mature, 30% 1987, 30% avg.; 15% harvested, 10% 1987, 10% avg. Corn 65% tasseled, 75% 1987, 70% avg.; 35% silked, 40% 1987, 35% avg.

(Continued to back cover)

Crop Progress 1/

FOR WEEK ENDING JULY 31, 1988

GRAIN SORGHUM  
% HEADED

	1988	1987	AVG.
ARK	62	87	NA
ILL	55	92	NA
KANS	15	30	15
LA	76	88	90
MISS	72	88	74
MO	62	80	59
NEBR	60	64	41
OKLA	45	45	35
S DAK	49	43	19
TENN	72	78	75
TEX	69	79	73
11 STATES	45	57	NA

EXCL. STATES  
WITH NA

44	55	41
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THESE 11 STATES PRODUCED 96%  
OF THE 1987 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

GRAIN SORGHUM  
% COLORING

	1988	1987	AVG.
ARK	7	46	NA
ILL	0	0	NA
KANS	0	NA	NA
LA	20	34	50
MISS	16	46	42
MO	5	25	14
NEBR	0	0	0
OKLA	15	15	10
S DAK	3	0	0
TENN	22	24	18
TEX	56	55	60
11 STATES	16	NA	NA

EXCL. STATES  
WITH NA

28	31	32
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THESE 11 STATES PRODUCED 96%  
OF THE 1987 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

SOYBEANS  
% BLOOM

	1988	1987	AVG.
ALA	45	52	51
ARK	19	50	37
GA	51	61	57
ILL	93	100	88
IND	92	95	84
IOWA	98	93	87
KANS	70	70	50
KY	67	67	50
LA	38	59	59
MICH	60	85	60
MINN	96	95	87
MISS	36	55	51
MO	84	85	66
NEBR	93	87	84
N C	32	30	27
OHIO	79	100	85
S C	24	33	29
S DAK	88	90	71
TENN	38	55	54
19 STATES	76	83	72

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

COTTON  
% SETTING BOLLS

	1988	1987	AVG.
ALA	92	92	83
ARIZ	89	96	94
ARK	96	98	92
CALIF	90	95	79
GA	93	96	87
LA	87	89	83
MISS	86	99	81
MO	96	100	82
N MEX	70	69	75
N C	75	82	74
OKLA	60	40	25
S C	58	80	88
TENN	80	92	66
TEX	49	51	44
14 STATES	69	72	62

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

COTTON  
% BOLLS OPENING

	1988	1987	AVG.
ALA	2	1	1
ARIZ	0	0	0
ARK	0	0	0
CALIF	2	2	1
GA	1	2	3
LA	1	0	4
MISS	2	0	0
MO	0	0	0
N MEX	0	0	0
N C	0	0	0
OKLA	0	0	0
S C	0	0	0
TENN	0	0	0
TEX	10	7	6
14 STATES	5	3	3

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

WINTER WHEAT  
% HARVESTED

	1988	1987	AVG.
ARK	100	100	100
CALIF	99	99	99
COLO	95	86	82
GA	100	100	100
IDAHO	28	7	14
ILL	100	100	100
IND	100	100	100
KANS	100	100	100
MICH	95	98	85
MO	100	100	100
MONT	70	8	10
NEBR	100	100	94
N MEX	100	100	NA
N C	100	100	100
OHIO	100	100	99
OKLA	100	100	100
OREG	16	53	44
S DAK	100	91	73
TEX	100	100	100
WASH	26	37	30

20 STATES 91 87 NA

EXCL. STATES  
WITH NA 91 87 85

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

NA - NOT AVAILABLE.

SOYBEANS  
% SETTING PODS

	1988	1987	AVG.
ALA	21	24	23
ARK	8	21	17
GA	26	27	24
ILL	60	82	47
IND	30	53	31
IOWA	70	74	53
KANS	35	40	20
KY	19	26	15
LA	17	33	32
MICH	10	45	20
MINN	71	66	31
MISS	21	22	16
MO	41	58	37
NEBR	40	44	38
N C	4	7	9
OHIO	21	64	40
S C	5	15	11
S DAK	41	46	19
TENN	14	26	16
19 STATES	41	54	34

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

SPRING WHEAT  
% HARVESTED

	1988	1987	AVG.
IDAHO	8	NA	NA
MINN	48	28	9
MONT	29	0	1
N DAK	52	5	3
S DAK	90	63	29
5 STATES	51	NA	NA
EXCL. STATES WITH NA	52	17	7
THESE 5 STATES PRODUCED 95% OF THE 1987 SPRING WHEAT CROP.			
NA - NOT AVAILABLE.			

	CORN % SILKING		
	1988	1987	AVG.
COLO	68	40	39
GA	100	100	100
ILL	98	100	94
IND	89	100	86
IOWA	98	100	86
KANS	90	90	75
KY	83	94	78
MICH	68	95	65
MINN	94	95	73
MO	98	100	86
NEBR	96	92	78
N C	96	93	95
OHIO	75	96	80
PA	40	73	51
S DAK	78	83	46
TEX	95	98	97
WIS	79	86	60
17 STATES	90	94	79

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

	CORN % DOUGH		
	1988	1987	AVG.
COLO	2	2	7
GA	96	99	96
ILL	37	77	45
IND	5	66	26
IOWA	9	30	11
KANS	30	55	20
KY	14	46	34
MICH	0	40	10
MINN	8	12	2
MO	51	76	52
NEBR	15	30	13
N C	68	66	75
OHIO	8	51	30
PA	0	0	0
S DAK	9	0	0
TEX	76	83	79
WIS	9	16	8
17 STATES	19	42	23

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

	RICE % HEADED		
	1988	1987	AVG.
ARK	12	48	30
CALIF	5	10	6
LA	66	70	72
MISS	19	67	51
TEX	97	91	89
5 STATES	32	53	43

THESE 5 STATES PRODUCED 97% OF THE 1987 RICE CROP

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

**Crop Condition**  
FOR WEEK ENDING JULY 31, 1988

SOYBEANS						COTTON						CORN					
STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX
ALA	0	13	40	31	16	ALA	16	17	45	20	2	COLO	0	2	17	52	29
ARK	0	8	62	30	0	ARIZ	0	0	0	71	29	GA	8	26	51	15	0
GA	1	12	65	22	0	ARK	0	0	13	74	13	ILL	13	42	41	4	0
ILL	2	23	63	12	0	CALIF	0	0	15	65	20	IND	12	49	36	3	0
IND	3	10	66	21	0	GA	0	13	59	28	0	IOWA	15	34	36	13	2
IOWA	3	19	53	23	2	LA	0	0	58	42	0	KANS	1	28	10	50	11
KANS	1	2	16	45	36	MISS	5	5	40	45	5	KY	18	46	31	5	0
KY	1	10	64	25	0	MO	0	14	29	57	0	MICH	20	32	35	12	1
LA	4	6	47	43	0	N MEX	0	17	33	50	0	MINN	27	43	24	6	0
MICH	10	20	35	30	5	N C	0	3	17	76	4	MO	26	41	27	6	0
MINN	22	32	42	4	0	OKLA	0	0	0	100	0	NEBR	0	3	30	58	9
MISS	10	25	45	15	5	S C	0	4	47	49	0	N C	0	15	33	50	2
MO	9	30	52	9	0	TENN	0	4	21	71	4	OHIO	31	34	29	6	0
NEBR	0	0	56	42	2	TEX	2	1	24	56	17	PA	22	33	32	11	2
N C	0	4	27	68	1	14 STATE	2	2	27	57	12	S DAK	21	37	37	5	0
OHIO	15	28	40	16	1							TEX	0	5	31	40	24
S C	0	8	48	44	0							WISC	12	41	35	12	0
S DAK	8	19	50	23	0												
TENN	3	10	61	21	5												
19 STATE	6	18	52	22	2							17 STATE	15	33	33	16	3

RICE						GRAIN SORGHUM						SPRING WHEAT					
STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX	STATE	VP	P	F	G	EX
ARK	0	6	47	47	0	ARK	0	14	48	34	4	IDAHO	9	11	26	44	10
CALIF	0	0	10	85	5	ILL	0	14	57	29	0	MINN	25	36	32	7	0
LA	0	1	20	77	2	KANS	2	2	29	53	14	MONT	42	32	19	5	2
MISS	0	0	65	25	10	LA	2	14	46	38	0	N DAK	37	43	16	4	0
TEX	0	0	12	72	16	MISS	0	25	50	25	0	S DAK	28	49	22	1	0
5 STATE	0	3	33	60	4	MO	6	19	54	20	1	5 STATE	34	39	21	5	1
						NEBR	0	0	64	36	0						
						OKLA	0	0	15	85	0						
						S DAK	2	12	67	18	1						
						TENN	4	17	54	25	0						
						TEX	0	5	28	48	19						
						11 STATE	1	5	38	46	10						

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

International Weather and Crop Summary

July 24-30, 1988

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

HIGHLIGHTS

**USSR** ... In Western USSR, drier weather helps winter and spring grain harvesting. In the New Lands, rain and cooler weather halt further crop deterioration in the Urals. Hot, dry weather stresses spring grains in West Siberia.

**EUROPE** ... Heavy rain delays winter grain harvest in the north. Scattered light showers offer limited relief to crops in the southeast.

**SOUTH ASIA** ... Widespread rain continues across India, benefiting vegetative summer crops but causing flooding in Gujarat. Dry pockets, however, cover portions of the southern tip.

**EASTERN ASIA** ... Heavy rain helps alleviate heat and dryness across central China. Beneficial dry weather develops in the western Korean Peninsula.

**SOUTHEAST ASIA** ... Scattered, variable rain covers Thailand. Inundating rain in the northwestern Philippines likely causes local crop damage.

**SOUTH AMERICA** ... Dry weather prevails throughout Argentina and south-central Brazil. Wheat planting conditions remain unfavorable in Argentina's western and southern crop areas.

**AUSTRALIA** ... Heavy rain continues to delay planting and fieldwork in Victoria.

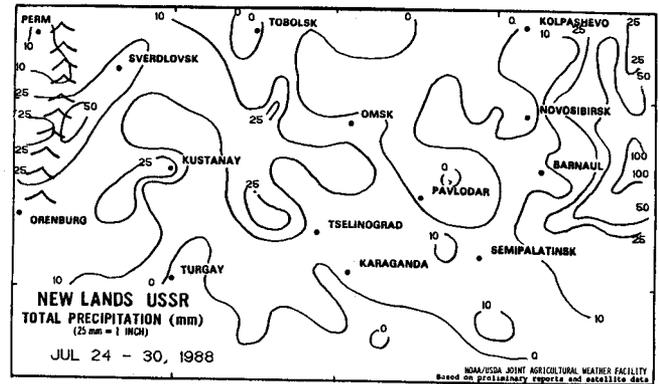
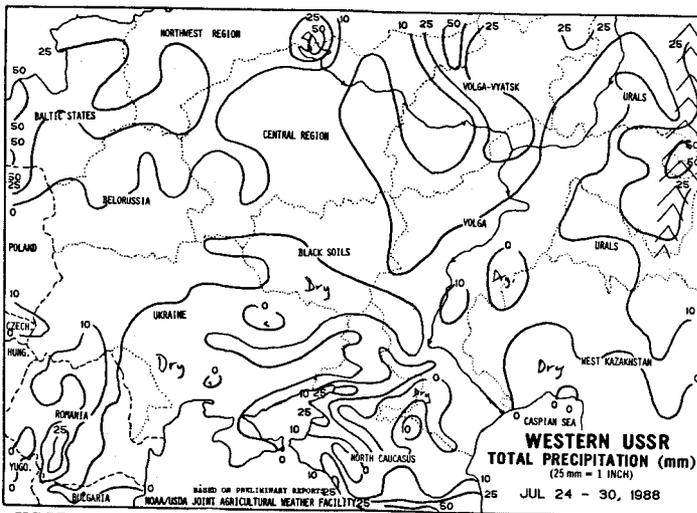
**MEXICO** ... Widespread, beneficial rain covers most agricultural areas.

**CANADA** ... Drier than normal weather continues across the Prairies. Periodic hot weather stresses filling crops in all but northwestern growing areas.

JULY 1988

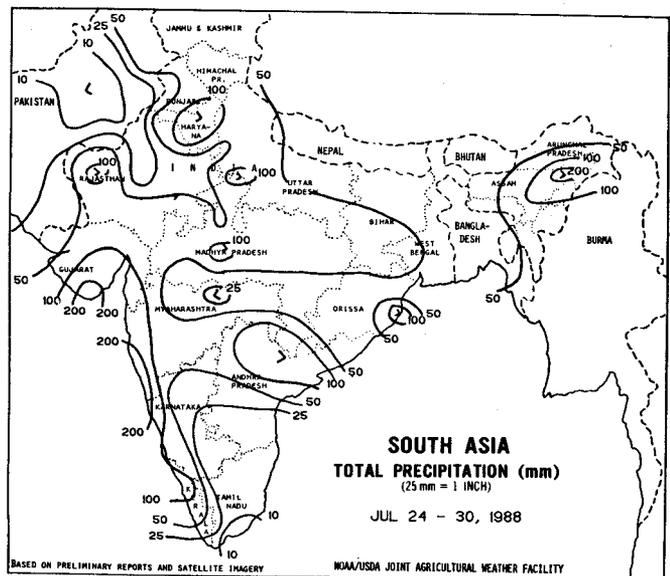
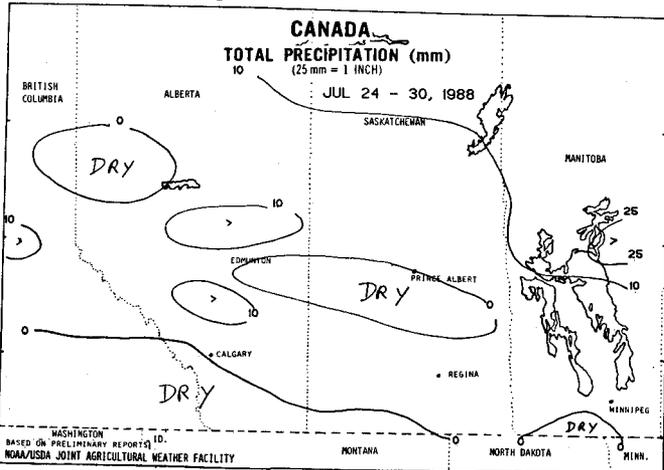
COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
	AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	TOTAL F/NRM	
NORWAY OSLO	20	11	26	5	15	0.1	134.6	42.1
SWEDEN STOCKHOLM	22	14	26	10	18	0.9	91.1	21.2
FINLND HELSINKI	25	14	29	9	20	2.8	64.1	-7.6
U KING GLASGOW	17	11	21	8	14	-1.6	149.0	66.2
EDINBURGH	17	11	20	8	14	-0.4	150.8	86.3
BIRMINGHAM	18	11	22	6	15	-0.9	106.2	53.8
LONDON	19	11	22	8	15	-0.7	88.4	39.6
IRELND DUBLIN	18	11	21	9	14	-0.6	91.4	32.1
ICELND REYKJAVIK	14	9	18	6	11	0.5	32.0	-15.6
DENMRK COPENHAGEN	21	14	25	11	18	-0.3	83.9	12.8
LUXEMB LUXEMBOURG	20	12	28	8	16	-1.3	107.0	40.8
SWITZL ZURICH	23	14	32	9	18	1.0	170.9	40.5
GENEVA	26	12	34	5	19	-0.2	45.1	-23.3
FRANCE PARIS	23	13	29	8	18	-0.5	114.8	64.2
STRASBOURG	24	13	34	8	19	0.2	59.8	-1.2
BOURGES	24	12	33	8	18	-1.1	91.6	40.8
BOURDEAUX	25	14	31	10	20	0.2	49.2	-5.0
TOULOUSE	27	15	33	12	21	0.1	68.5	21.1
MARSEILLE	28	18	32	13	23	-0.3	7.3	-7.0
SPAIN VALLADOLID	28	12	36	9	20	-0.7	42.8	25.8
MADRID	32	16	38	9	24	-0.8	7.4	0.3
SEVILLE	36	20	41	14	28	1.2	0.6	-0.2
E GRMY LEIPZIG	24	14	32	10	19	0.9	46.6	-16.4
DRESDEN	24	15	33	11	19	1.3	96.5	-12.5
W GRMY HAMBURG	22	13	27	10	18	0.9	115.8	29.1
BERLIN	24	15	30	12	19	0.6	89.5	8.8
DUSSELDORF	23	15	32	11	19	0.1	144.9	70.0
STUTTART	23	13	31	9	18	0.0	107.1	29.0
NURNBERG	24	14	34	9	19	0.9	66.1	-3.9
MUNICH	24	13	33	9	18	1.0	94.2	-31.3
AUSTRI VIENNA	27	16	36	11	21	1.1	37.6	-31.5
INNSBRUCK	25	13	34	10	19	1.4	150.5	15.6
CZECH PRAGUE	23	12	33	9	18	0.4	101.9	30.1
POLAND WARSAW	25	14	33	8	19	1.1	66.1	-10.0
LODZ	24	14	34	9	19	1.2	116.2	25.3
KATOWICE	25	13	34	7	19	1.3	46.9	-47.1
PRZEMYSL	24	15	31	10	20	1.6	74.0	-25.1
HUNGAR BUDAPEST	29	17	35	12	23	2.0	22.6	-44.9
YUGOSL SARAJEVO	31	14	39	9	22	3.5	6.1	-68.8
ROMANI BUCHAREST	32	19	39	13	25	2.5	42.8	-22.1
BULGAR SOFIA	30	17	37	12	23	3.8	13.1	-49.4
ITALY MILAN	30	19	33	15	24	1.4	64.1	1.7
VERONA	29	19	33	15	24	1.3	74.5	14.6
VENICE	29	19	34	14	24	1.2	62.4	-4.9
GENOA	27	22	31	19	24	0.0	10.3	-17.4
ROME	30	20	34	16	25	1.3	0.1	-12.7
NAPLES	33	20	39	17	27	3.5	0.1	-21.2
GREECE THESSALONIKA	34	22	42	18	28	1.1	32.9	7.9
LARISSA	36	21	45	16	28	1.0	1.0	-17.7
ATHENS	34	25	42	22	30	1.3	0.1	-1.7
TURKEY ISTANBUL	30	21	34	16	26	2.4	11.5	-9.5
ANKARA	28	12	34	1	20	-3.4	2.2	-17.8
CYPRUS LARNACA	34	24	40	22	29	1.7	0.1	-0.9
USSR TALLINN	24	15	29	11	19	2.9	89.5	12.4
LENINGRAD	25	18	32	12	21	3.4	100.6	23.8
KAUNAS	24	14	29	9	19	1.7	56.1	-16.5
MINSK	25	15	30	11	20	2.6	48.3	-31.5
KAZAN	29	17	34	10	23	3.7	51.9	-13.9
MOSCOW	27	17	31	12	22	3.7	45.0	-40.1
SVERDLOVSK	28	15	34	3	22	3.4	96.5	12.5
OMSK	28	16	34	8	22	2.6	35.1	-30.3
KUSTANAY	27	16	36	8	22	1.3	143.6	95.9
KRASNOYARSK	23	14	28	10	19	0.8	17.1	-59.0
NOVOSIBIRSK	24	13	30	3	19	0.1	38.8	-19.6
BARNAUL	25	14	32	6	20	-0.4	73.9	13.0
KHABAROVSK	28	18	32	13	23	1.9	94.0	-22.9
VLADIVOSTOK	20	15	30	3	17	-0.3	186.6	62.9
KIEV	27	18	33	14	22	2.4	65.2	-14.5
LVOV	24	14	32	8	19	1.6	90.0	-7.4
KIROVOGRAD	28	16	35	11	22	0.7	89.7	28.4

COUNTRY CITY	TEMPERATURE					PRECIPITATION			COUNTRY CITY	TEMPERATURE					PRECIPITATION				
	(C)					(MM)				(C)					(MM)				
	AVG MAX	AVG MIN	HI	LO	AVG	DPART F/NRM	TOTAL	DPART F/NRM		AVG MAX	AVG MIN	HI	LO	AVG	DPART F/NRM	TOTAL	DPART F/NRM		
<b>JULY 1988</b>																			
USSR	ODESSA	28	20	34	12	24	1.7	141.6	94.0	TANZAN	DAR ES SALAAM	30	19	32	17	24	0.8	1.0	-29.7
	YALTA	30	22	33	18	26	1.8	10.4	-37.6	GABON	LIBREVILLE	27	22	28	21	25	0.7	8.1	6.9
	VORONEZH	27	16	32	12	22	2.0	72.1	4.2	TOGO	LOME	29	24	30	21	26	1.1	91.9	-8.6
	SARATOV	29	20	33	16	24	3.5	25.0	-21.2	B FASO	OUAGADOUGOU	31	23	34	20	27	0.2	222.1	32.1
	KHARKOV	27	18	31	14	22	1.5	70.1	11.3	IVRY C	ABIDJAN	29	24	31	22	26	1.4	21.5	-290.6
	VOLGOGRAD	30	19	34	14	25	0.6	50.2	23.0	MOZAMB	MAPUTO	26	14	31	9	20	1.6	40.0	20.9
	ROSTOV	29	20	34	17	24	1.0	95.0	41.4	ZAMBIA	KABWE	24	10	28	7	17	1.0	0.3	0.3
	ASTRAKHAN	33	20	39	11	27	1.6	26.5	4.7	ZIMBAB	HARARE	22	9	25	5	15	1.9	17.2	15.8
	KRASNODAR	30	19	34	16	24	0.8	79.4	33.6	S AFRI	PRETORIA	21	5	26	1	13	2.1	2.4	-3.5
	ORENBURG	31	18	37	11	25	2.7	9.1	-30.9		KROONSTAD	19	-2	23	-6	8	0.0	1.8	-7.1
	TSELINOGRAD	28	16	34	8	22	2.1	57.0	6.6		JOHANNESBURG	18	6	24	0	12	2.0	4.8	-2.1
	KARAGANDA	27	16	31	8	22	1.1	119.7	76.5		BETHAL	17	1	21	-5	9	0.7	8.1	0.2
	TBILISI	30	20	34	10	25	0.3	15.1	-30.0		DURBAN	23	12	28	7	18	1.5	33.7	-0.4
	TASHKENT	37	20	41	6	29	1.5	0.1	-3.9	CANADA	CAPE TOWN	17	8	22	2	12	0.5	99.6	26.6
	ASHKhabAD	37	23	43	18	30	-0.6	20.5	19.5		TORONTO	30	16	38	8	23	2.4	109.5	38.1
SYRIA	DAMASCUS	37	18	41	15	28	0.8	0.1	0.1		MONTREAL	28	17	34	10	23	1.6	40.5	-49.5
ISRAEL	JERUSALEM	30	19	33	16	24	0.8	0.1	0.1		WINNIPEG	28	14	36	7	21	1.5	70.7	-5.3
PAKIST	KARACHI	34	29	36	26	32	1.3	28.8	-71.0		REGINA	28	12	38	7	20	1.2	43.7	-9.6
INDIA	AMRITSAR	33	25	40	22	29	-1.6	217.5	33.1		SASKATOON	27	12	37	8	19	0.7	58.9	5.3
	NEW DELHI	34	27	37	25	31	-0.5	199.3	-35.5		LETHBRIDGE	27	11	34	7	19	0.4	13.8	-29.8
	AHMEDABAD	33	26	37	25	30	-0.1	362.9	96.1		CALGARY	23	10	33	5	17	0.2	47.1	-18.3
	INDORE	30	23	34	21	26	0.0	277.5	-7.5		EDMONTON	22	12	31	9	17	-0.2	139.8	51.0
	CALCUTTA	33	27	34	24	30	0.6	230.7	-90.9		VANCOUVER	22	13	32	9	18	0.3	22.4	-9.7
	VERAVAL	31	26	33	21	28	0.3	525.6	225.1	MEXICO	GUADALAJARA	26	17	31	15	21	0.0	316.5	59.4
	BOMBAY	30	25	32	22	28	0.3	****	281.4		MEXICO CITY	24	13	27	12	18	1.6	156.1	30.9
	POONA	28	23	33	21	25	0.3	302.9	109.6		ACAPULCO	33	25	35	23	29	0.5	53.7	-180.8
	BEGAMPET	30	23	36	22	27	0.2	336.4	173.2		BERMUD ST. GEORGES	30	26	33	21	28	1.4	168.9	60.6
	MADRAS	35	26	38	23	30	-0.1	126.1	6.4		BAHAMA NASSAU	32	24	33	21	28	0.6	76.3	-80.3
	MANGALORE	28	23	31	12	26	-0.2	****	-19.0		CUBA HAVANA	31	24	33	22	28	0.7	100.9	-4.1
H KONG	HONG KONG	32	27	34	23	29	0.7	327.4	10.9		JAMAIC KINGSTON	34	26	36	23	30	1.1	21.8	-19.8
N KREA	PYONGYANG	25	18	31	12	22	-2.0	484.7	87.7		P RICO SAN JUAN	32	25	34	22	29	1.1	86.0	-41.1
S KREA	SEOUL	28	22	32	16	25	0.3	380.6	22.7		GUADEL RAIZET	31	24	33	22	28	0.9	64.9	-40.2
JAPAN	SAPPORO	23	15	29	12	19	-1.1	26.0	-54.3		MARTNQ LAMENTIN	31	25	32	23	28	2.3	78.5	-142.6
	NAGOYA	29	22	37	18	25	-0.2	183.6	-34.8		BARBAD BRIDGETOWN	30	25	31	21	28	0.6	48.9	-81.0
	TOKYO	25	20	33	17	23	-2.5	178.4	53.7		TRINID PORT OF SPAIN	32	24	33	22	28	1.7	111.1	-148.4
	YOKOHAMA	25	20	31	17	23	-2.1	176.8	35.9		COLOMB BOGOTA	18	9	32	2	13	-0.3	47.2	9.9
	KYOTO	30	23	35	19	26	0.1	228.3	12.3		VENEZU CARACAS	32	24	36	22	28	1.7	74.1	23.6
	OSAKA	30	23	33	20	27	-0.2	142.5	-50.1		F GUIA CAYENNE	31	23	33	21	27	1.0	130.4	-129.8
THAILN	PHECHABUN	33	25	36	22	29	1.4	177.9	-20.2		BRAZIL FORTALEZA	30	23	32	20	26	0.2	68.5	-38.8
	BANGKOK	33	25	36	23	29	0.5	178.2	5.3		RECIFE	27	21	29	20	24	0.2	546.0	241.8
MALAYS	KUALA LUMPUR	31	24	34	22	27	0.9	140.6	10.7		BELO HORIZONTE	23	13	27	8	18	0.1	0.1	-51.8
VIETNM	HANOI	33	27	36	19	30	1.3	275.5	-47.1		CAMPO GRANDE	25	13	31	3	19	0.2	0.1	-36.0
CHINA	HARBIN	27	18	32	10	23	-0.6	203.5	42.8		FRANCA	22	10	25	4	16	-0.9	0.1	-15.9
	HAMI	34	18	38	13	26	-0.9	35.7	29.2		RIO DE JANEIRO	24	17	31	14	20	-0.8	70.8	23.6
	LANCHOW	30	17	35	12	24	1.2	53.5	-10.4		LONDRINA	22	10	27	3	16	-0.6	0.1	-76.4
	BELJING	30	22	36	18	26	0.2	267.3	74.4		SANTA MARIA	19	9	29	-1	14	0.0	73.2	-69.8
	TIENTSIN	30	23	35	19	26	-0.3	341.7	151.8	PERU	LIMA	18	14	27	13	16	-0.2	2.5	1.3
	LHASA	23	11	27	8	17	0.9	112.2	-25.6		BOLIVI LA PAZ	14	-4	16	-9	5	-2.1	2.6	-6.3
	KUNMING	24	17	28	10	20	0.6	131.8	-80.5		CHILE SANTIAGO	15	1	25	-4	8	0.1	21.7	-45.2
	CHENGCHOW	31	23	40	17	27	-0.3	134.4	-20.0		ARGENT IGUAZU	19	8	28	-4	14	***	3.2	****
	YEHCHANG	35	26	39	23	31	2.3	46.8	-173.9		FORMOSA	21	10	31	-1	15	-1.6	24.0	-24.0
	HANKOW	35	27	39	23	31	2.0	84.0	-72.1		CERES	17	5	30	-5	11	-1.3	63.0	45.1
	CHIHKIANG	33	24	37	21	28	0.8	60.0	-87.8		CORDOBA	15	2	27	-6	9	-1.6	7.4	-0.3
	SHANGHAI	34	26	38	22	30	2.0	84.7	-49.6		RIO CUARTO	14	2	26	-6	8	-1.2	9.4	-0.4
	NANCHANG	36	27	39	24	32	1.8	39.2	-86.8		ROSARIO	15	4	26	-7	9	-1.0	30.6	-9.0
	TALPEI	35	28	38	26	32	3.5	152.9	-81.0		BUENOS AIRES	14	3	26	-5	9	-1.1	20.8	-44.6
	CANTON	33	26	37	20	29	0.9	242.6	29.5		SANTA ROSA	13	-1	20	-10	7	-1.1	1.0	-16.8
	NANNING	34	26	39	24	30	1.5	169.2	-26.0		TRES ARROYOS	13	1	20	-9	7	-0.4	7.2	-44.7
CNRY I	LAS PALMAS	27	21	32	15	24	0.4	0.1	0.1	MIDW I	MIDWAY ISLAND	30	25	32	23	28	2.2	50.1	-83.0
MOROCC	CASABLANCA	26	20	30	18	23	0.9	0.1	0.1	N CALD	NOUMEA	24	18	27	16	21	1.4	43.9	-39.2
	MARRAKECH	38	22	45	15	30	2.2	0.1	-0.6	FIJI	NAUSORI	26	22	27	18	24	0.9	149.7	25.7
ALGERI	ALGER	31	20	37	16	25	1.2	0.3	-1.5	SAMOA	PAGO PAGO	29	25	34	22	27	0.8	239.6	74.3
	BATNA	35	19	41	16	27	2.7	0.8	-6.3	TAHITI	PAPEETE	29	21	31	17	25	0.4	175.1	119.4
TUNISI	TUNIS	34	21	40	19	28	1.8	1.1	-2.7	N ZEAL	AUCKLAND	15	9	18	1	12	1.1	175.3	43.4
NIGER	NIAMEY	34	24	38	20	29	0.5	163.8	-3.1		WELLINGTON	12	7	15	1	10	1.2	122.1	-20.5
MALI	TIMBUKTU	37	27	42	23	32	0.4	39.9	-18.6	PA N G	PORT MORESBY	28	24	31	21	26	0.5	13.6	-8.5
	BAMAKO	31	22	33	17	26	-0.2	429.7	188.6	AUSTRL	DARWIN	31	22	33	18	26	1.7	0.1	-1.5
MAURIT	NOUAKCHOTT	31	23	43	19	27	-0.2	0.6	-14.8		MOREE	17	8	20	1	13	2.0	56.9	20.0
SENEGL	DAKAR	30	25	39	21	28	0.5												



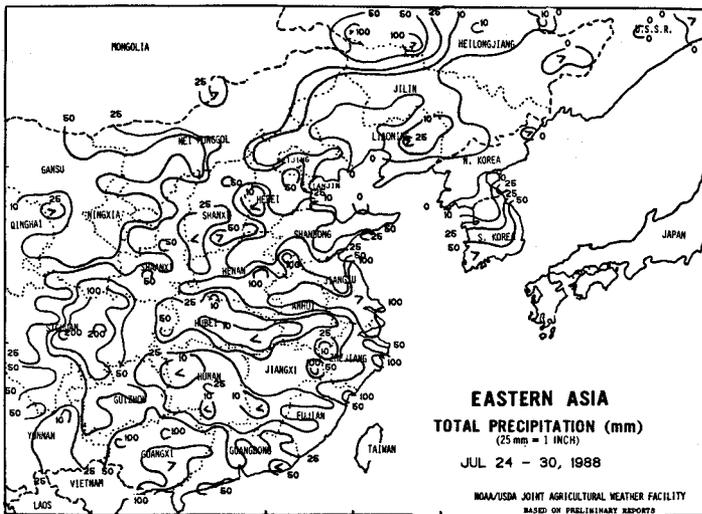
**USSR ...** In Western USSR, winter grain harvesting was well underway over much of the region, while spring grains were being harvested mainly in southern areas. Mostly dry weather in the Ukraine and the Black Soils Region helped the harvest to progress with few delays. Light precipitation (around 10mm) in Belorussia, the Central Region, the Volga, and the North Caucasus caused only brief delays in harvest. Corn was entering the filling stage in the southern Ukraine and the North Caucasus. Although the weather was mostly dry in the southern and eastern Ukraine, soil moisture was adequate to meet the crop moisture demands of corn and sunflowers entering the filling stage. Average weekly temperatures were 1-2 degrees Celsius (C) above normal in the west and north and near normal in the southeast. This past week's warm and drier weather in the western Ukraine and southern Belorussia followed several weeks of excessive precipitation, benefiting potatoes and sugar beets.

In the New Lands, spring grains were in the filling stage over most of the region, with some of the crop maturing in southernmost areas. Early week hot, dry weather in the eastern Volga and the Urals was replaced by cooler weather and showers by week's end. Although the rain came too late to improve prospects for maturing spring grains in the eastern Volga and southern Urals, it helped to prevent further crop deterioration in the northern Urals where spring grains were filling. In Kazakhstan, scattered showers and thunderstorms covered spring grains in the filling to maturing stages of development. Rainfall in Kazakhstan ranged from 10 to 25mm with locally heavier amounts (in excess of 25mm) in some areas. In the western half of West Siberia, unfavorably hot, dry weather stressed spring grains in the filling stage.

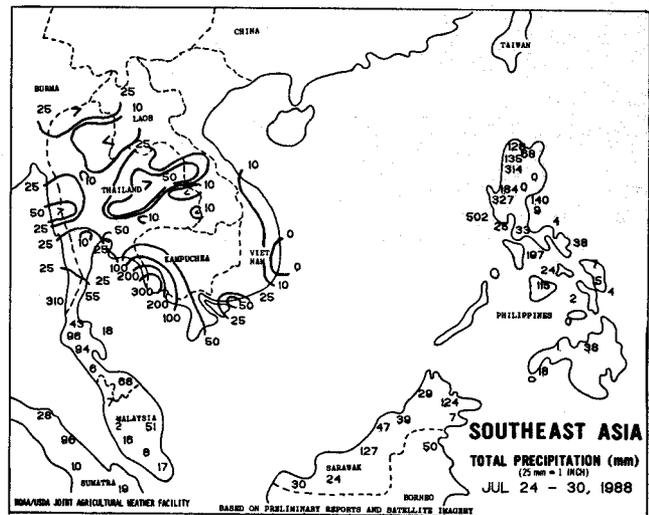


**CANADA ...** Mostly dry, warmer than normal weather continued for the second week over the Prairie Provinces. Portions of northern Alberta received more than 10mm, of weekly rainfall but elsewhere, rainfall ranged from 1 to 8mm. No rain fell over large portions of the southwest, southeast, and north. Weekly temperatures averaged 1-4 degrees C above normal as midweek temperatures reached the middle to upper thirties C in southern Alberta, Manitoba, and most of Saskatchewan. The hot weather stressed grains and oilseeds in filling stages of development and reflected this season's trend of generally unfavorable growing conditions. Early spring wheat harvesting was underway across the southern Prairies.

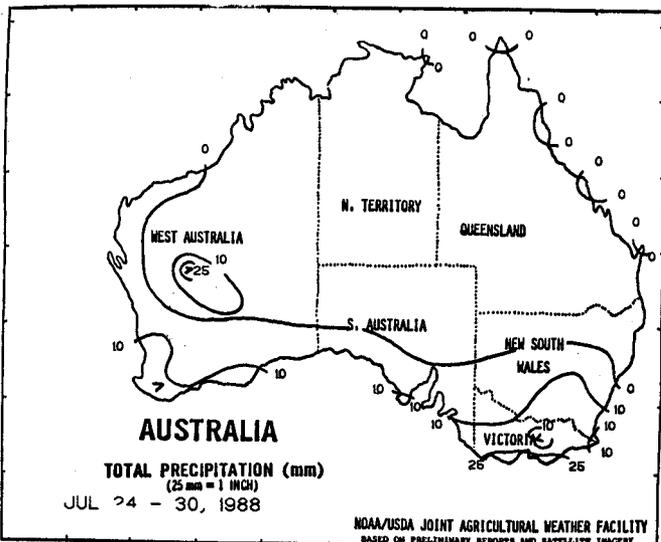
**SOUTH ASIA ...** Beneficial showers (25-100mm or more) continued over most Indian crop regions, including cotton and groundnut regions of northern Karnataka that have been drier than normal for most of the season. Below-normal rainfall (2-22mm), however, returned to crop regions of southern Karnataka and southern Andhra Pradesh and continued over Tamil Nadu, reflecting this season's trend of drier than normal weather. Rainfall in Gujarat was excessive (100-222mm) for the third week, exacerbating wet field conditions and delaying replanting. Conditions were generally favorable for vegetative crops in central and northern India, though periods of excessive rain in recent weeks have caused local flooding and necessitated replanting. Scattered, mostly light rain (1-27mm) continued over Pakistan.



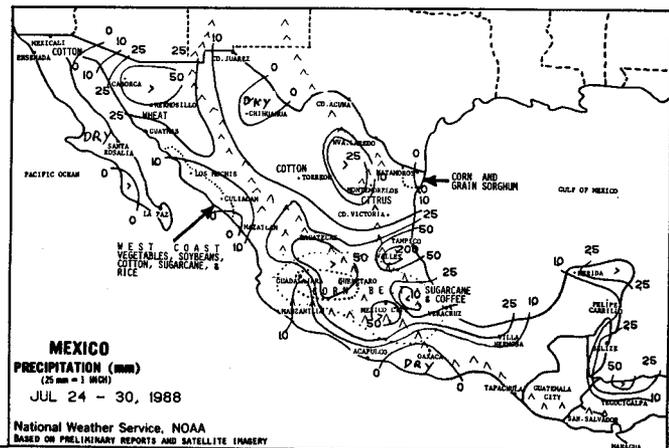
**EASTERN ASIA** ... A cool front brought heavy rain (greater than 25mm) to much of central and southern China early in the week, easing heat and dryness that persisted for much of July. Some areas in Hubei and Hunan Provinces received only light rainfall, however, and remained unfavorably dry. Very heavy rain (50-100mm, with isolated amounts in excess of 100mm) may have caused flooding in Sichuan, Guangxi, Zhejiang, and Jiangsu. In the north, widespread heavy rain (25-60mm) from Shaanxi to Hubei kept soil moisture at mostly favorable levels for spring and summer crops. Mostly dry weather covered Manchuria and allowed soils to dry in the western Korean Peninsula after excessive rainfall the past 2-3 weeks. Heavy rain (25-75mm) continued in southern South Korea, however, and possibly caused late-week flooding in eastern Japan due to Tropical Storm Agnes.



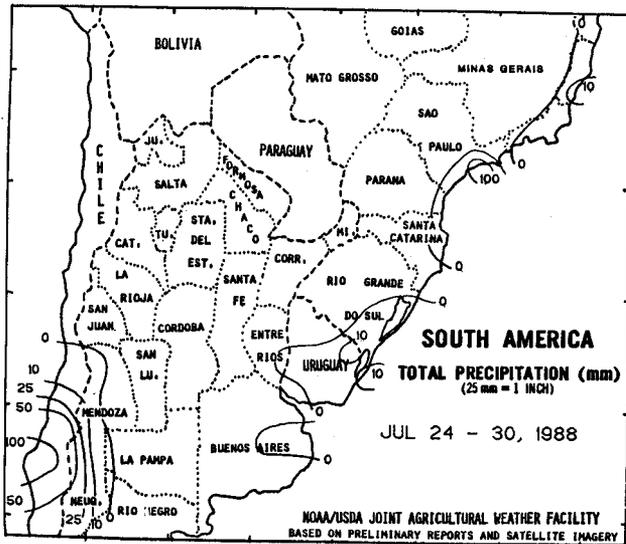
**SOUTHEAST ASIA** ... Scattered, highly variable rain (2-87mm) covered central Thailand, benefiting immature corn but slowing early harvesting. Rainfall was light (1-14mm) in portions of the east and north, but moderate rain (25-95mm) covered most rice regions of northeastern and south-central Thailand. Seasonably warm weather, however, maintained high evaporation rates. Moderate to heavy rain (25-100mm or more) covered rice regions of southern Vietnam, portions of northern Vietnam, western Kampuchea, and Laos. In the Philippines, inundating rain (300-502mm) in west-central Luzon likely caused local crop damage. Heavy rain (68-100mm or more) continued in northern grain regions and locally in some west-central islands, but mostly dry weather covered the east-central and southern islands.



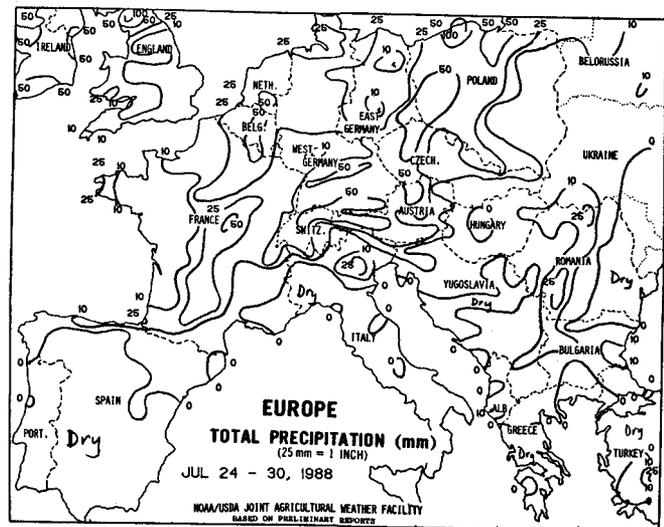
**AUSTRALIA** ... Heavy rain (25-50mm) fell over sections of southern Victoria, delaying late planting and fieldwork. Winter cereals planting normally concludes by the end of July across most of Australia. Light to moderate rain (5-20mm) kept soil moisture at adequate to surplus levels across the remainder of southern crop areas. Established winter grains in most of Australia have become semi-dormant. Dry weather covered eastern wheat areas and coastal Queensland, where it favored progress in sugarcane harvest. Weekly average temperatures across Australia ranged from near normal in southwestern Western Australia to above normal in much of the rest of the continent.



**MEXICO** ... Substantial rain fell in the northwest, the Southern Plateau corn belt, and coastal areas of the Yucatan peninsula. In the northwest, weekly rainfall averaged 25-73mm. Mostly light, scattered showers fell in the north-central cotton and grazing areas and in the northeast, where grain and vegetable harvesting are underway. Widespread showers covered the Southern Plateau, benefiting immature corn. Locally inundating rain (78-263mm) fell over the east coast from Tampico to Valleys further inland. Mostly light rain helped emerging corn in southern Mexico. Light showers also covered the west coast farming region, likely necessitating some irrigation to meet crop moisture requirements.



**SOUTH AMERICA** ... Dry weather covered the major crop areas of Argentina and south-central Brazil. Light showers (mostly less than 10mm) were confined to east-central Buenos Aires in Argentina, and coastal areas of Uruguay and Brazil. Locally heavy showers (50-169mm) fell in central Chile, another area with prolonged dryness. In Argentina, the previous week's rain in Santa Fe and northeastern Buenos Aires helped wheat planting but in western and southern wheat areas, continued dryness caused further planting delays. In south-central Brazil, early sown wheat advances into grain filling in northernmost crop areas during August. Moisture was generally adequate for crop development throughout the wheat areas, but a drying trend reduced topsoil moisture reserves. Dryness favored Sao Paulo's sugarcane harvest. The first flush of coffee flowering normally begins during August in Minas Gerais.



**EUROPE** ... A strong cool front brought heavy rain (25-50mm, locally in excess of 50mm) early in the week to sections of Great Britain, northern France, West and East Germany, western Czechoslovakia, and western Poland. The rain caused delays in winter grain harvest, which is now in full swing across most of northern Europe. In the Balkans, scattered, mostly light (less than 10mm) showers offered some relief to reproductive to filling summer crops, although soil moisture levels in most growing areas continued to decline. Weekly mean temperatures as much as 5 degrees C above normal further increased both evaporative losses and crop stress levels. Southwestern Europe remained seasonably warm and dry. Average temperatures ranged from above normal in the east to below normal in the northwest.

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(Continued from p. 20)

were available in northern and Panhandle areas. Land preparation and planting continued in Rio Grande Valley, and land preparation began in the San Antonio-Winter Garden area. California vegetable harvest consisted mostly of broccoli, celery, lettuce, melons, and strawberries.

PASTURES AND LIVESTOCK: Pastures remained mostly poor in the northern and central Great Plains, Corn Belt, and Rocky Mountain States. Pastures were mostly fair in the Southeast. Livestock suffered heat stress in some areas but was mostly fair.

(Continued from p. 14)

Dry beans 85% bloom, 80% 1987, 80% avg.; 55% setting pods, 45% 1987, 50% avg. Potatoes 90% bloom, 95% 1987, 90% avg. Row crops mostly good. Alfalfa 40% second cutting complete, 30% 1987, 20% avg. Other hay 75% harvested, 80% 1987, 65% avg. Stock water 60% short, 40% adequate. Livestock feed obtained from pastures 85%. Hay, roughage supplies 20% very short, 45% short, 35% adequate.

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