

# 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

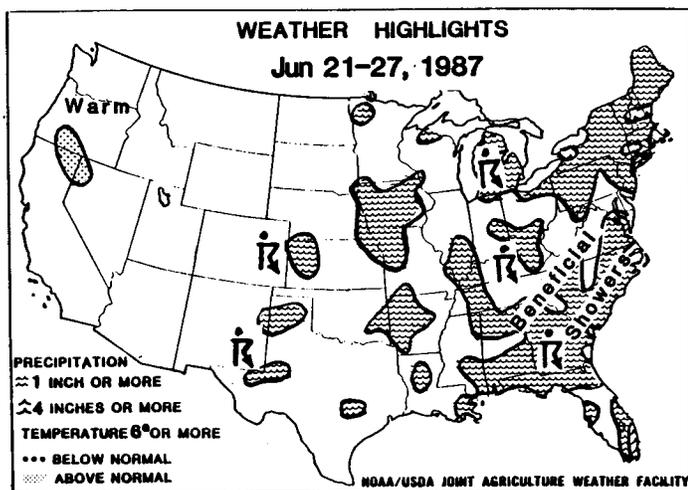
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June 30, 1987

## National Weather Summary

June 21 to 27, 1987



**HIGHLIGHTS:** Showers and thunderstorms covered most areas from the Rocky Mountains to the East coast. Only small amounts of rain fell in the northern Rockies and Great Plains, but heavy thunderstorms covered the High Plains from Texas and New Mexico to western Nebraska. Heavy showers also fell from the eastern Great Lakes to New England, from the upper Ohio Valley to New England, along the east coast, and through the Southeast. Other areas of moderate showers were from western Arkansas through Iowa and in southern Illinois. Seasonal temperatures covered most of the East, except for the upper Mississippi Valley where it was warmer than normal. Unusually warm weather developed over the west coast at midweek and spread eastward to the Great Plains by week's end.

**SUNDAY...**Thunderstorms were widespread east of the Mississippi Valley. The heaviest showers were along the gulf coast and from the lower Great Lake States and upper Ohio Valley into southern New York. Severe weather accompanied thunderstorms in western Texas and eastern New Mexico. Lighter showers were over the Northwest and the Canadian Prairies.

**MONDAY...**Showers and thunderstorms were widespread from the lower Mississippi Valley through the Northeast. Heavy showers caused flooding in parts of New York. Elsewhere thunderstorms moved through the Northwest to the northern Great Plains and lower Missouri River. Unseasonably warm, afternoon temperatures spread to parts of the northern Plains.

**TUESDAY...**Much cooler weather moved over the northern Plains, resulting in mild temperatures for the northern half of the Nation. Thunderstorms reached from the central and northern Plains to the Mississippi Valley and from the lower Mississippi Valley to New England. Moderate to heavy showers fell from Louisiana to Kansas and in the Florida Panhandle.

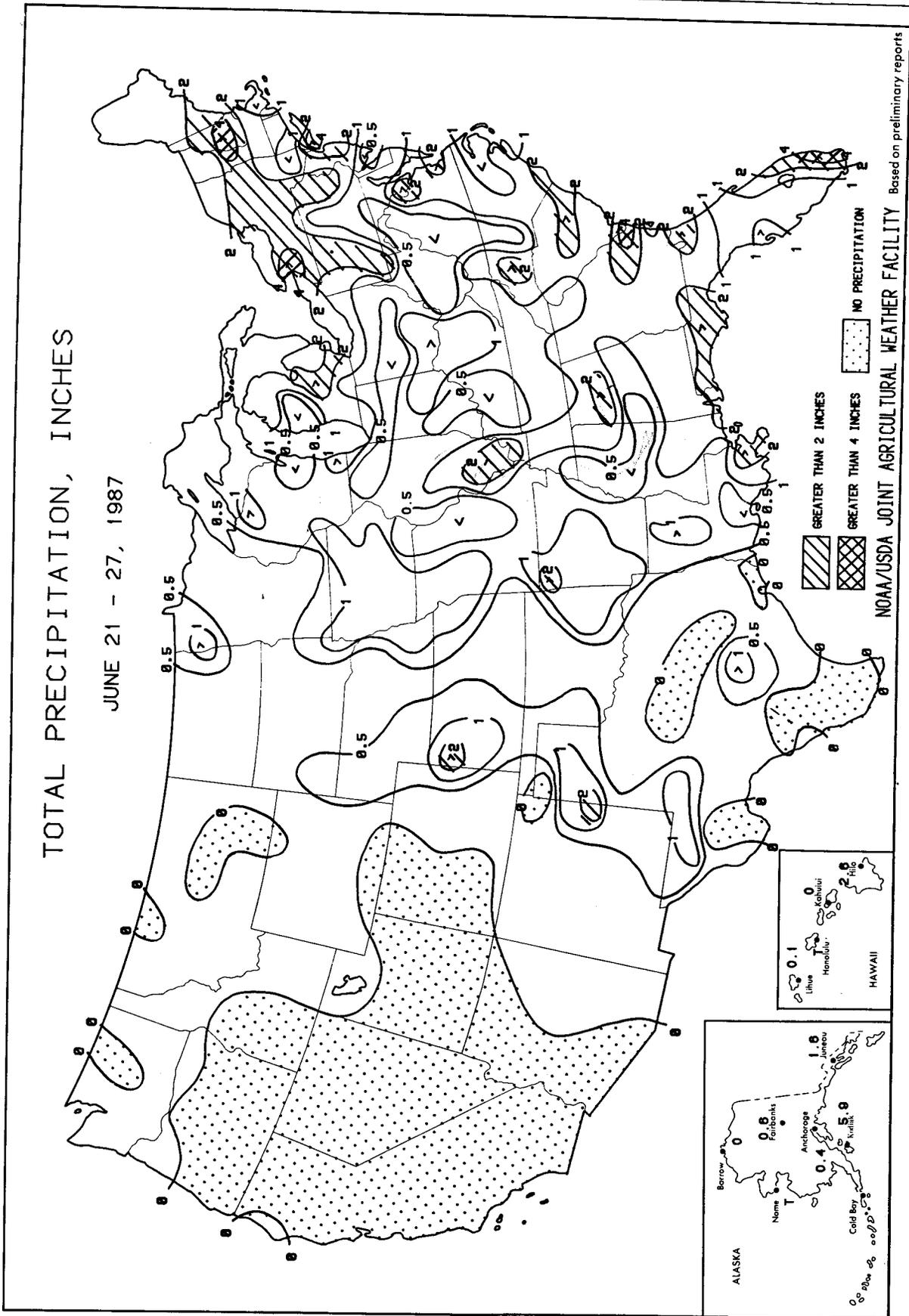
**WEDNESDAY...**Thunderstorms were widespread from northern Texas to the upper Mississippi Valley and in the Southeast. Showers were generally light to moderate, but isolated heavy amounts accompanied severe storms. Afternoon temperatures were unusually high through California but were seasonable elsewhere.

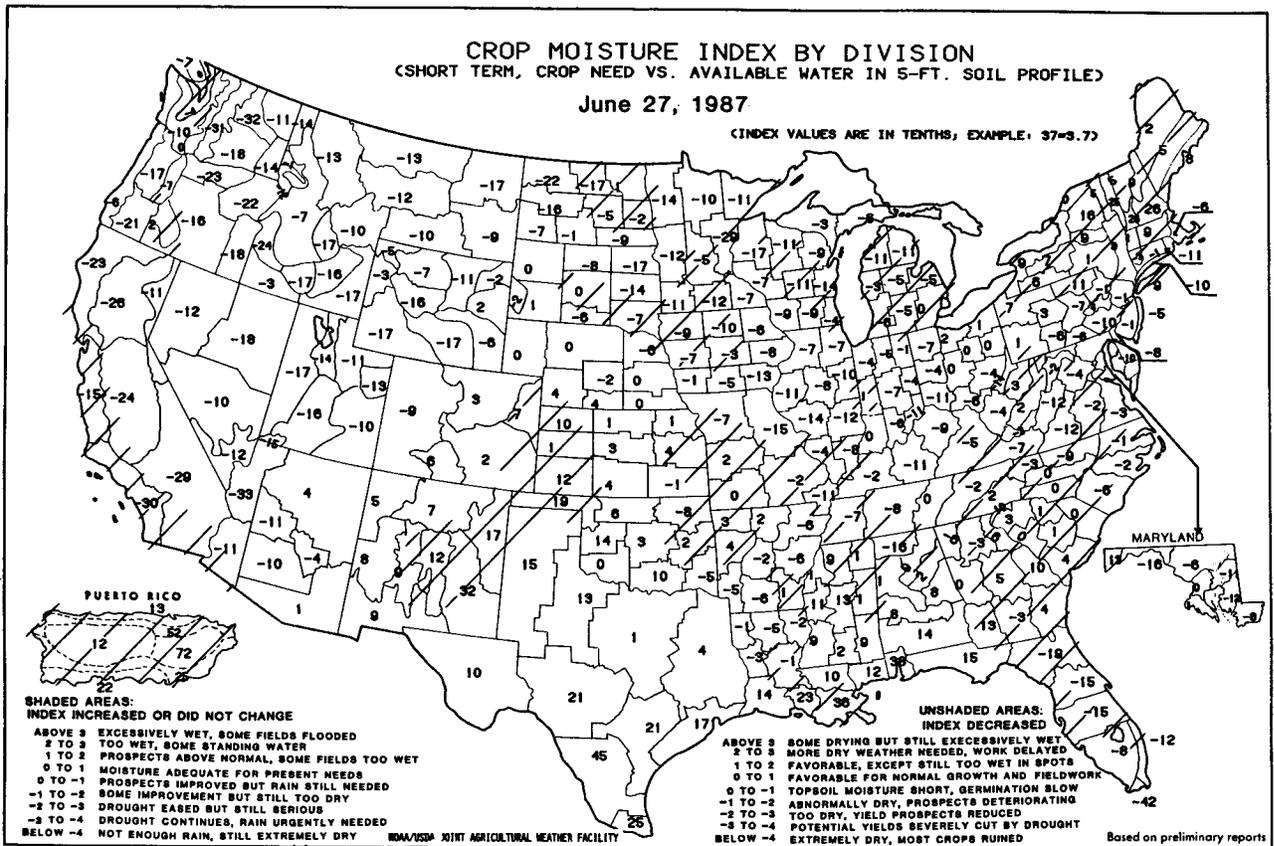
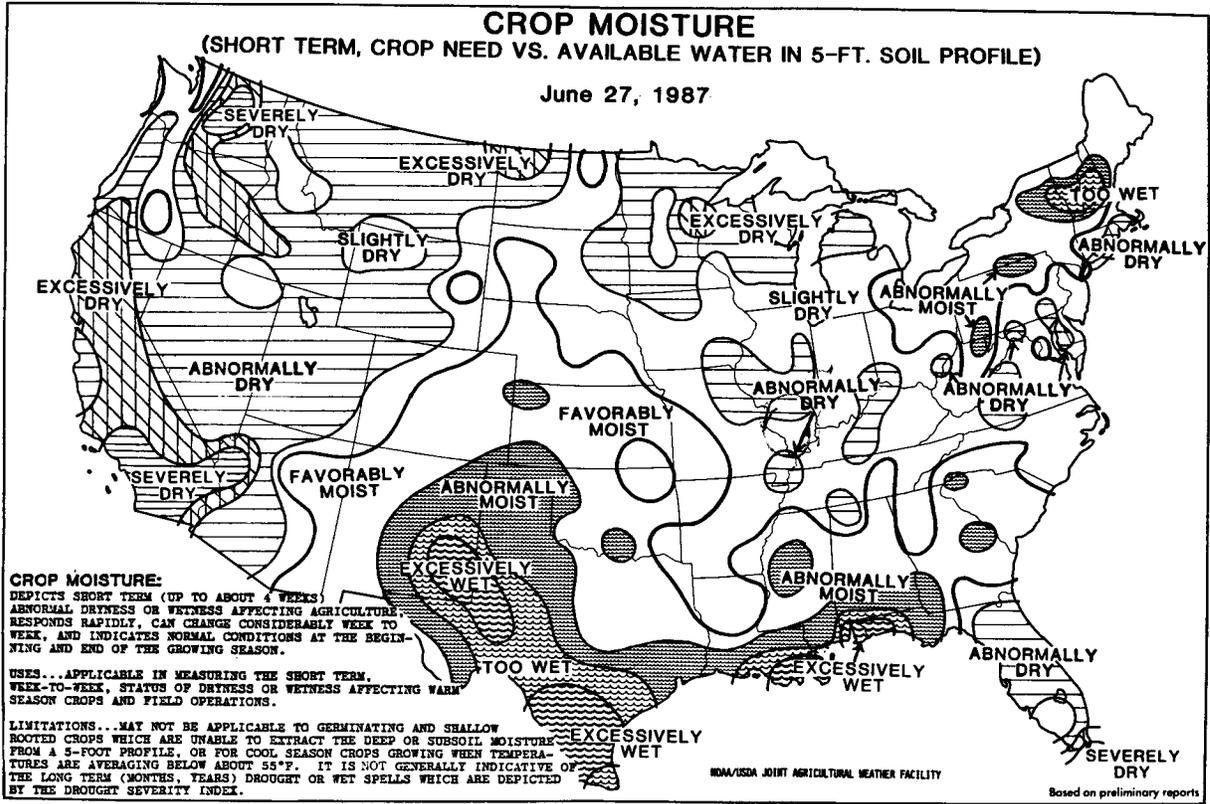
**THURSDAY...**Widespread thunderstorm activity reached from the upper Mississippi Valley to the eastern Great Lakes and southward through the Southeast. Moderate to heavy showers were in Michigan and the Southeast. Heavy showers fell in parts of southeastern Texas and Gulf of Mexico, moisture reached to the southern Rockies. Afternoon temperatures soared in the West Coast States. Ninety degree readings reached into southern Canada.

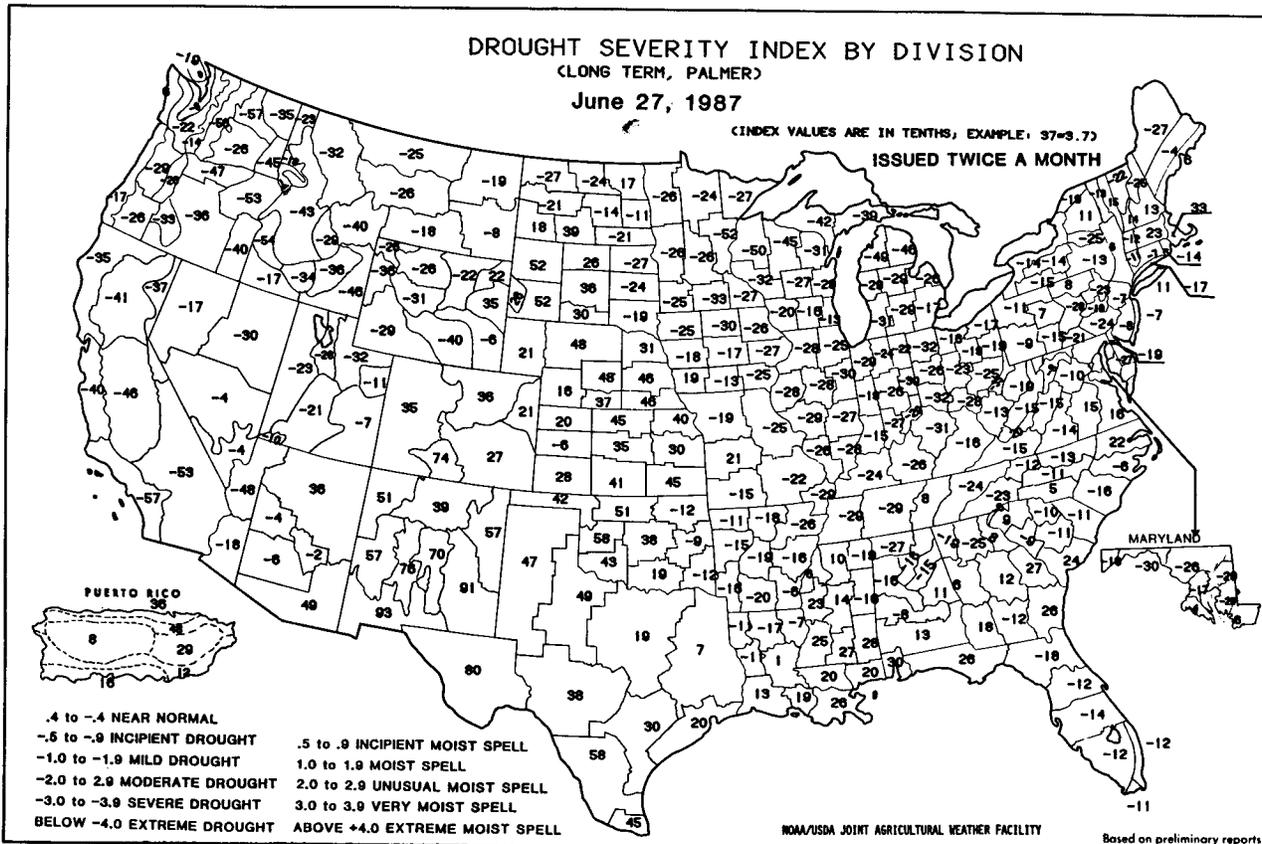
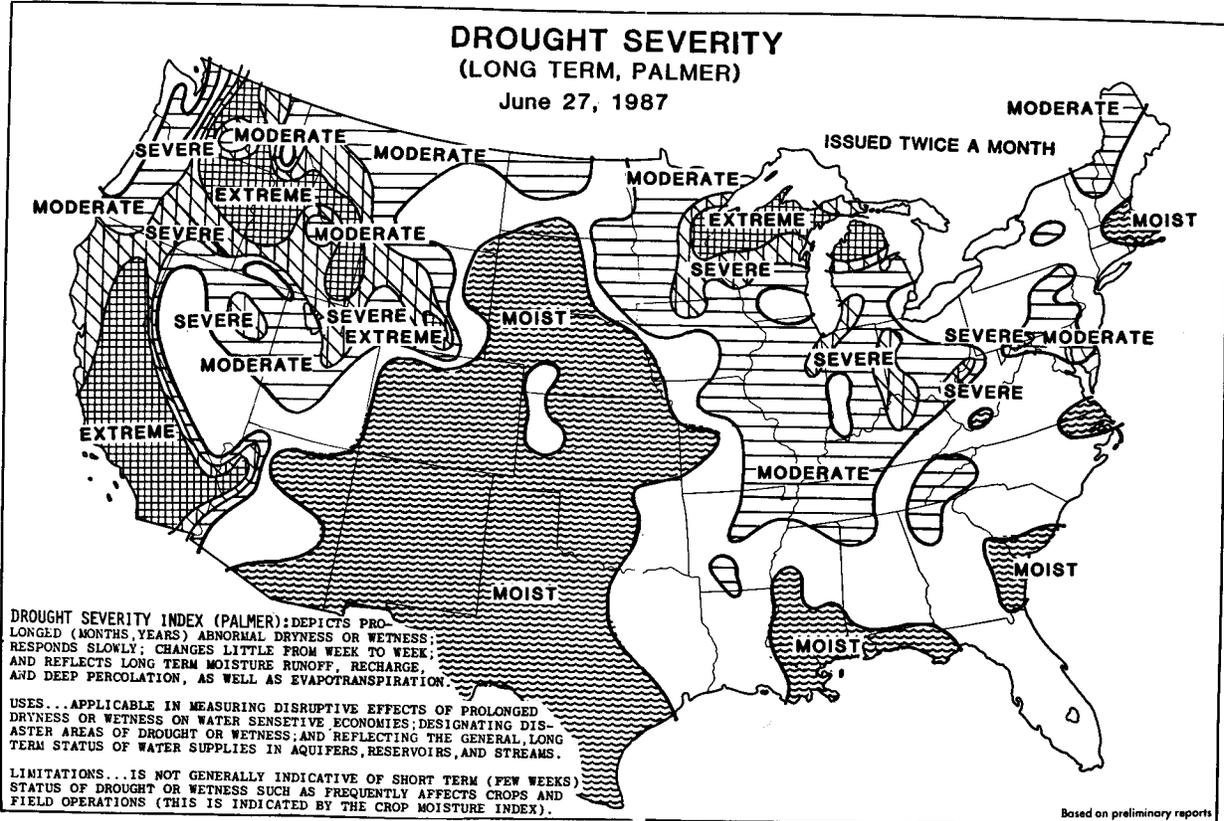
**FRIDAY...**Thunderstorms continued into the early morning through the eastern Great Lakes, but the widespread shower and thunderstorm area moved to the East Coast States. Moderate to heavy showers fell in many areas from New England to Florida. Thunderstorms continued over the High Plains of Texas and New Mexico and a few developed in Kansas. Unusually warm afternoon temperatures continued in the West and spread a little eastward.

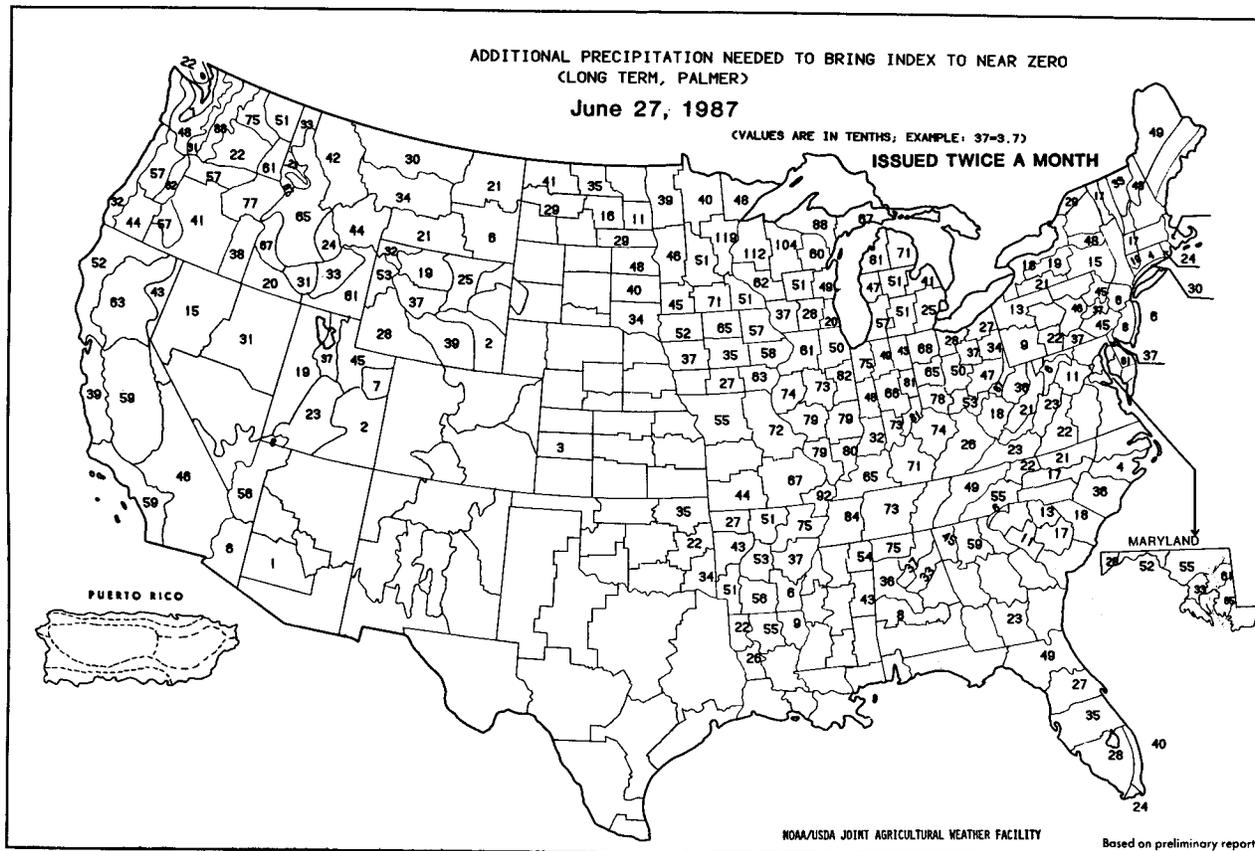
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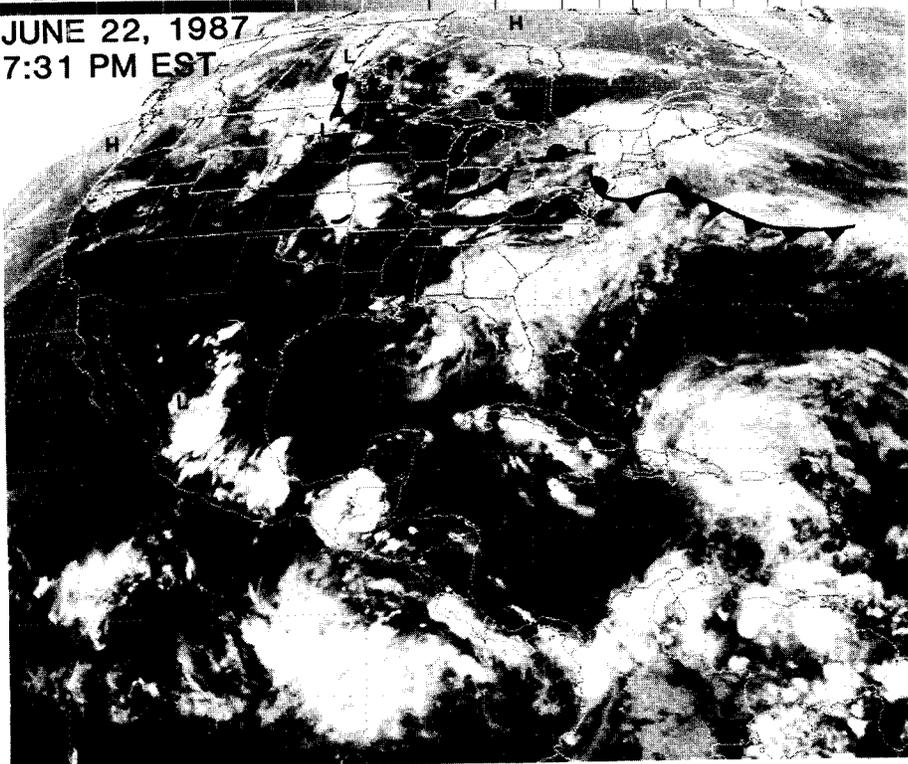




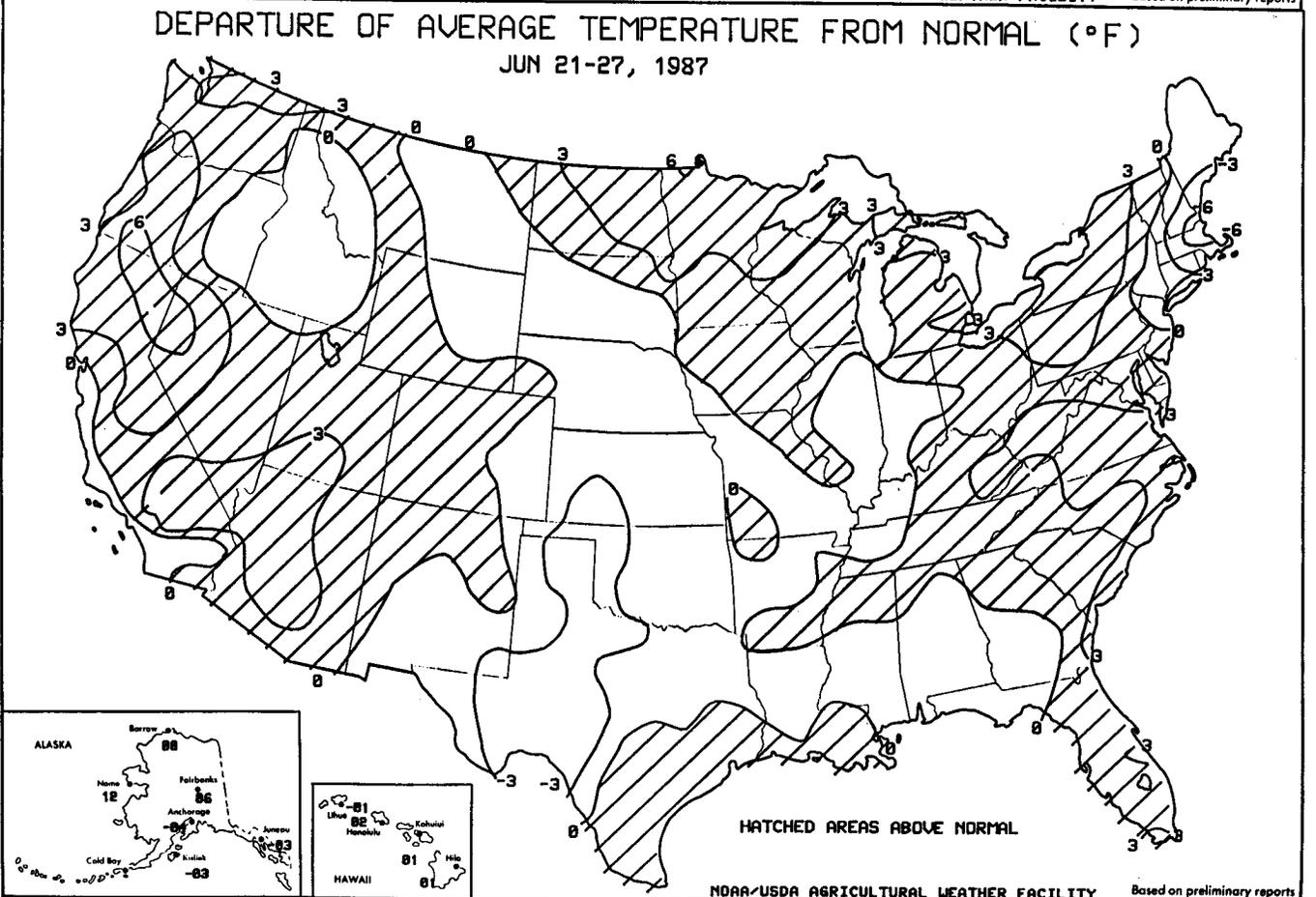
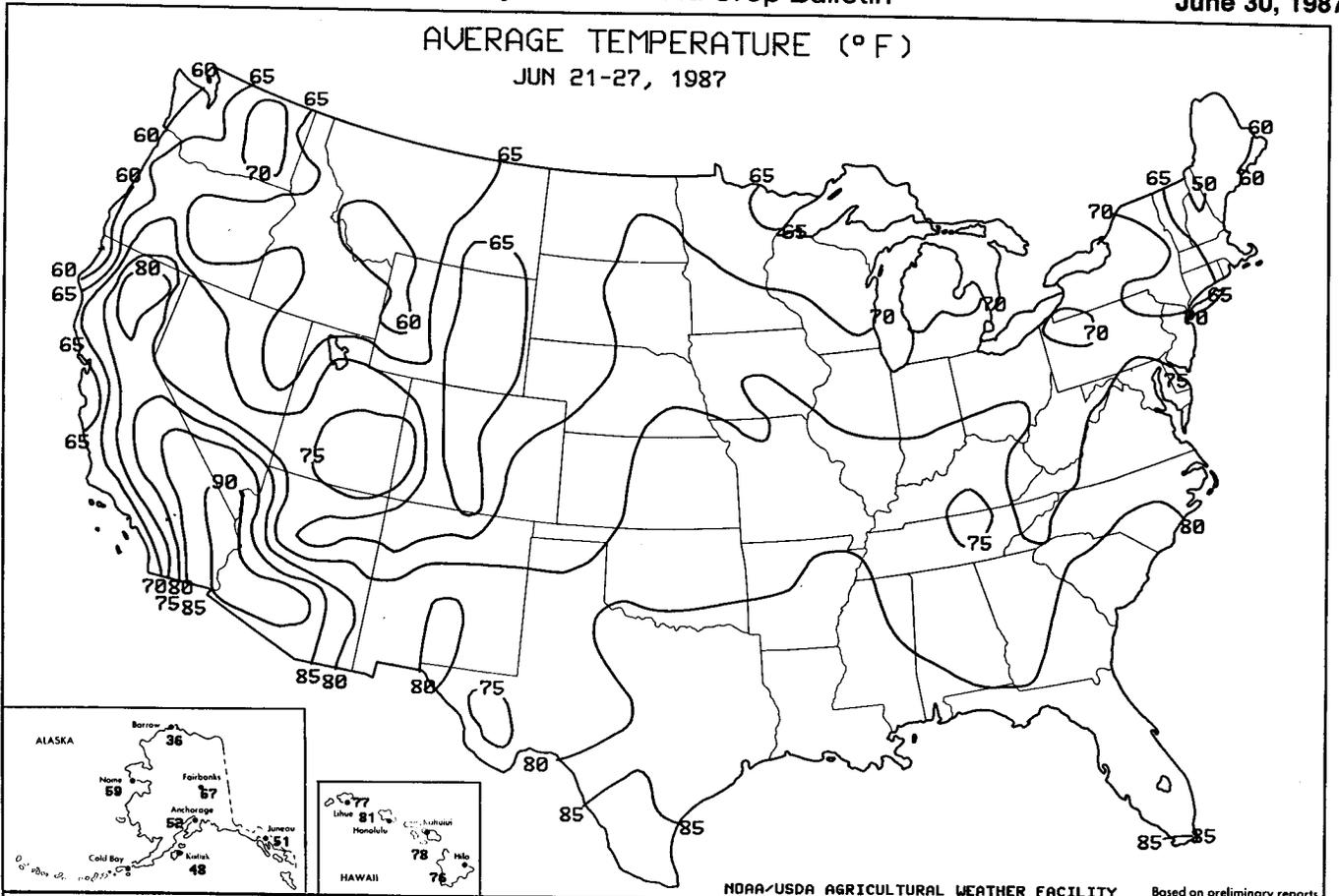


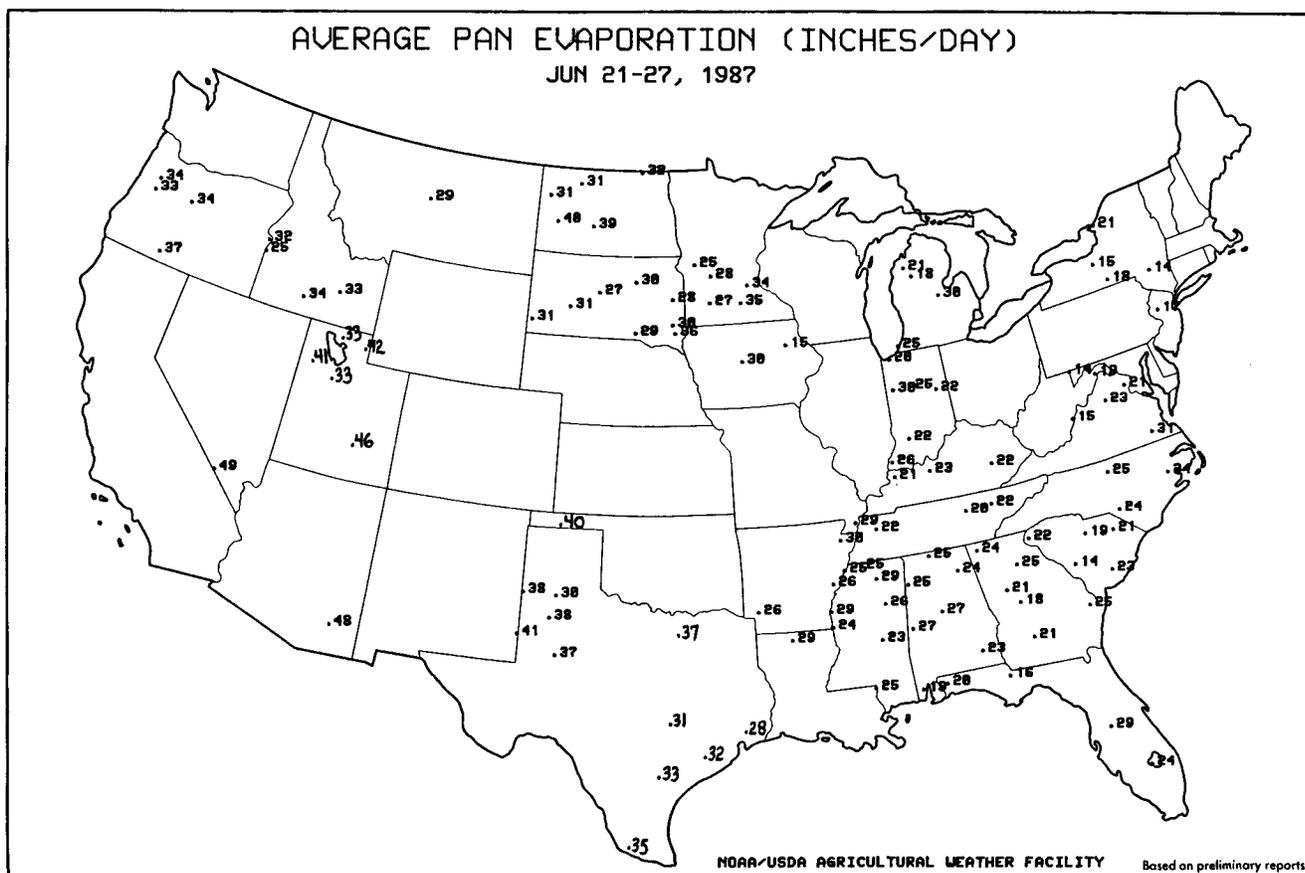
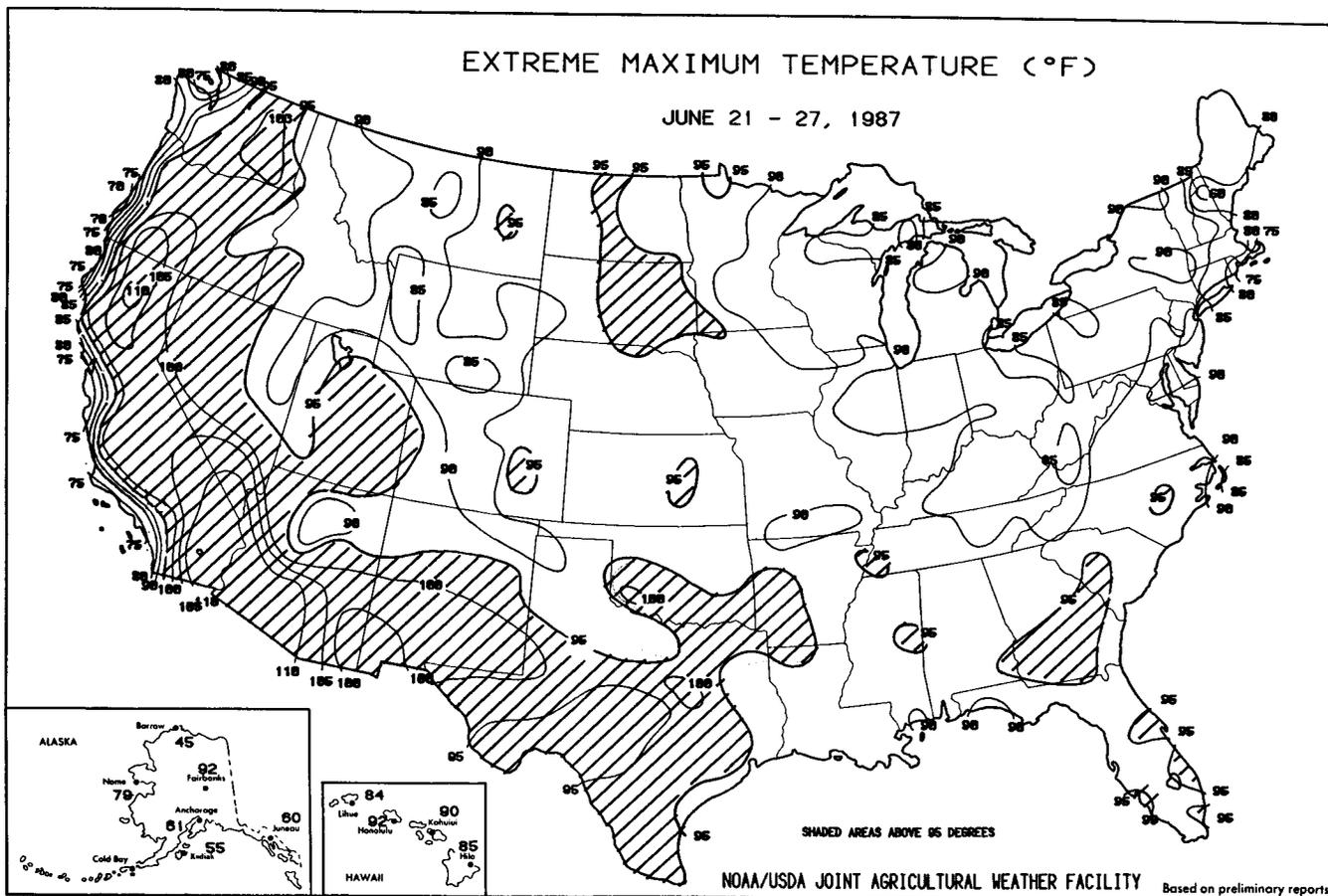
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JUNE 22, 1987  
7:31 PM EST



THUNDERSTORMS ARE BEHIND A COLD FRONTAL SYSTEM MOVING ACROSS THE NORTHERN GREAT PLAINS. THUNDERSTORMS AND SHOWERS ARE SCATTERED OVER THE CENTRAL PLAINS, OHIO VALLEY, NORTHEAST, SOUTHEAST, AND CENTRAL AND SOUTHERN MEXICO.





### Winter Anomaly for the Northern Great Plains, 1986/87

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The impressive warm anomaly (+11°F) centered over Canada during December 1986 - April 1987 resulted in record-breaking winter temperatures from Montana to Wisconsin (Weekly Weather and Crop Bulletin, May 19, 1987, Vol. 74, No. 20). Analysis of the State areally-weighted average winter temperature data described by Karl and others, indicates the winter of 1986/87 was the warmest since 1895 in Montana, North Dakota, South Dakota, Minnesota, and Wisconsin. The greatest anomaly in the contiguous United States was centered in North Dakota, where the average temperature for the winter was 22.5°F, compared to the long-term average of 9.9°F, resulting in a 12.6°F anomaly. During February 1987, the anomaly in North Dakota reached its peak at 16.0°F. The accumulated effect of this warm spell reduced North Dakota's heating degree days by 20 percent for the winter (December-February). Table 1 contains relevant statistics for the affected States, and figure 1 puts the North Dakota anomaly in historical perspective.

REFERENCE

Karl, T.R., R.E. Livezey, and E.S. Epstein. "Recent Unusual Mean Winter Temperatures Across the Contiguous United States." Bulletin American Meteorological Society, Vol. 65, 1302-1309, Dec. 1984.

TABLE 1. Wintertime Temperatures and Associated Anomalies

State	Mean	Anomaly	Since 1895
<b>November 1986 through March 1987</b>			
Minnesota	24.9°F	7.3°F	Warmest
Montana	29.4°F	5.5°F	Fourth warmest
North Dakota	23.4°F	7.4°F	Third warmest
South Dakota	29.6°F	6.1°F	Third warmest
Wisconsin	27.1°F	5.1°F	Second warmest
<b>December 1986 through March 1987</b>			
Minnesota	25.0°F	10.2°F	Warmest
Montana	29.7°F	7.3°F	Warmest
North Dakota	23.9°F	10.5°F	Warmest
South Dakota	29.7°F	8.3°F	Warmest
Wisconsin	26.7°F	7.3°F	Warmest
<b>December 1986 through February 1987</b>			
Minnesota	22.1°F	10.8°F	Warmest
Montana	27.9°F	7.9°F	Warmest
North Dakota	22.5°F	12.6°F	Warmest
South Dakota	28.8°F	10.4°F	Warmest
Wisconsin	23.8°F	7.4°F	Warmest
<b>January 1987 through March 1987</b>			
Minnesota	26.4°F	11.3°F	Warmest
Montana	30.7°F	7.9°F	Third warmest
North Dakota	24.8°F	11.2°F	Warmest
South Dakota	30.4°F	8.6°F	Warmest
Wisconsin	28.0°F	8.5°F	Warmest

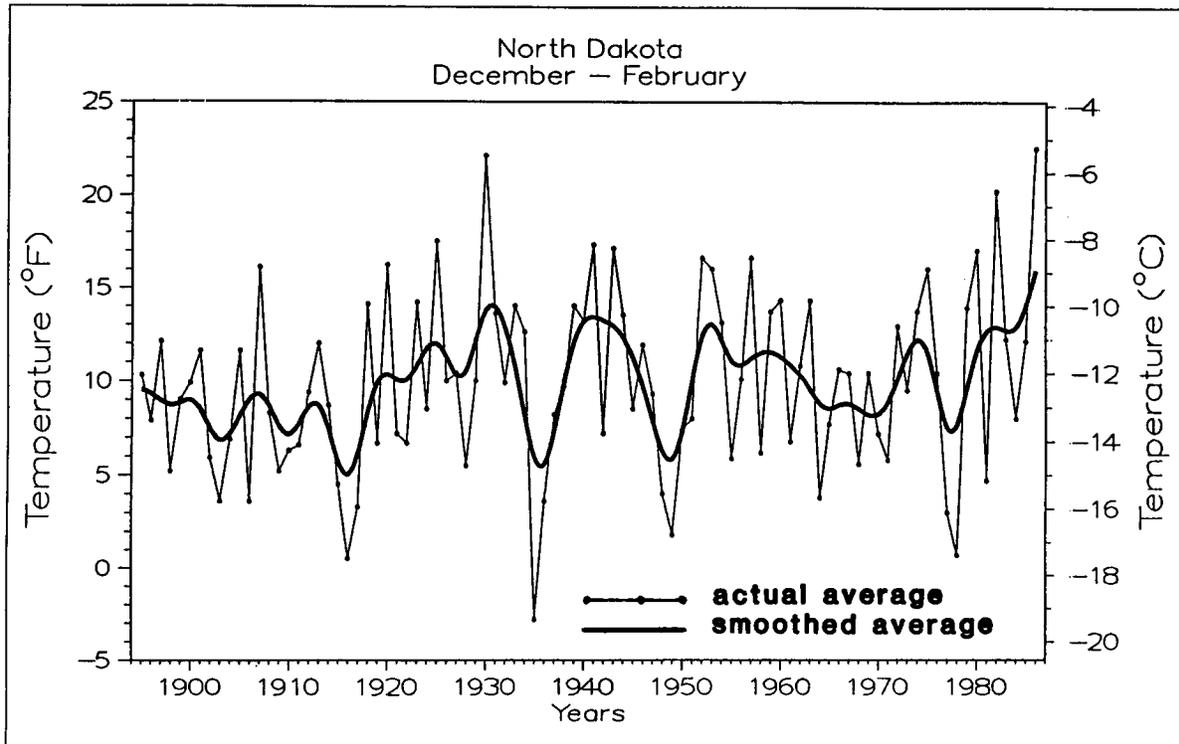
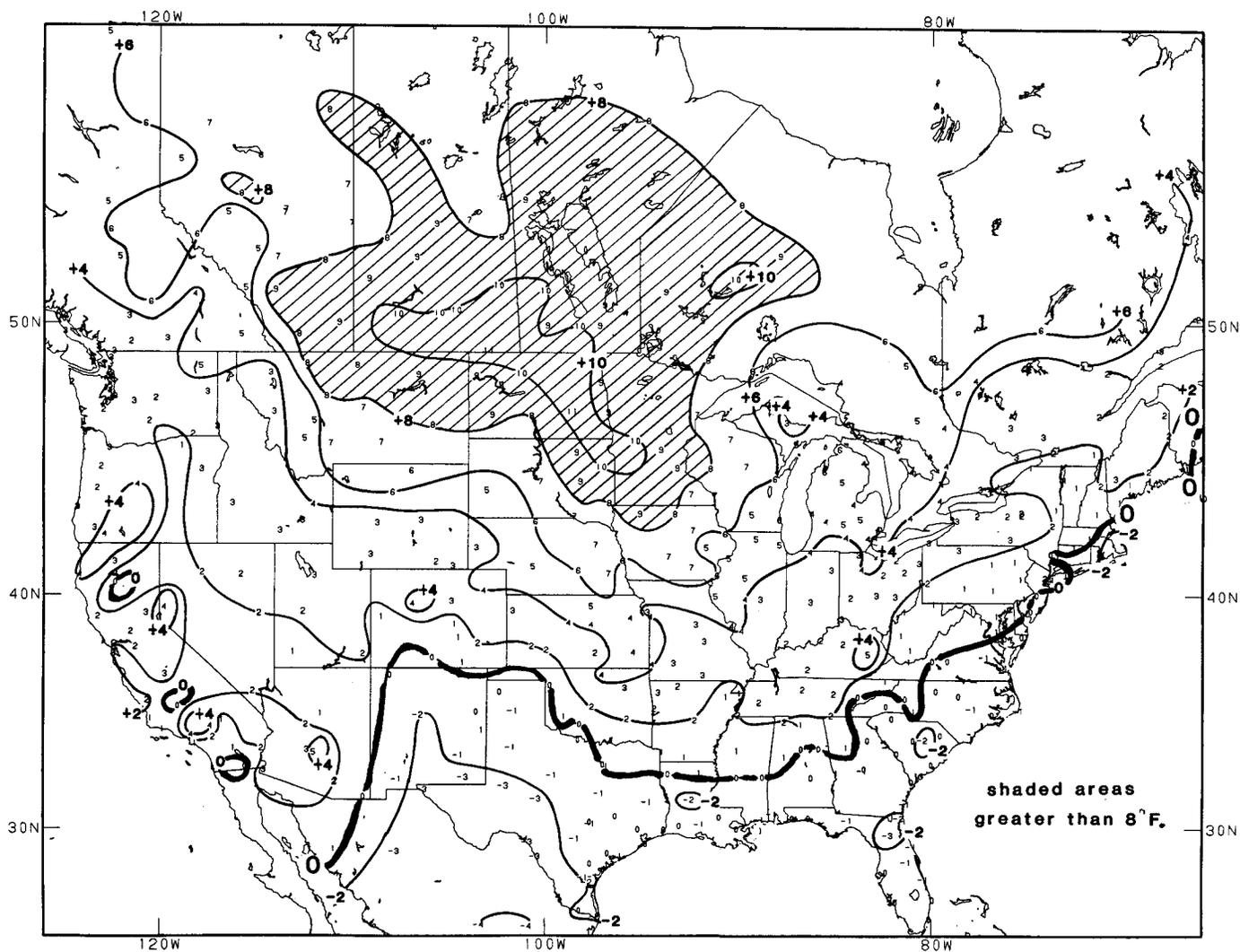
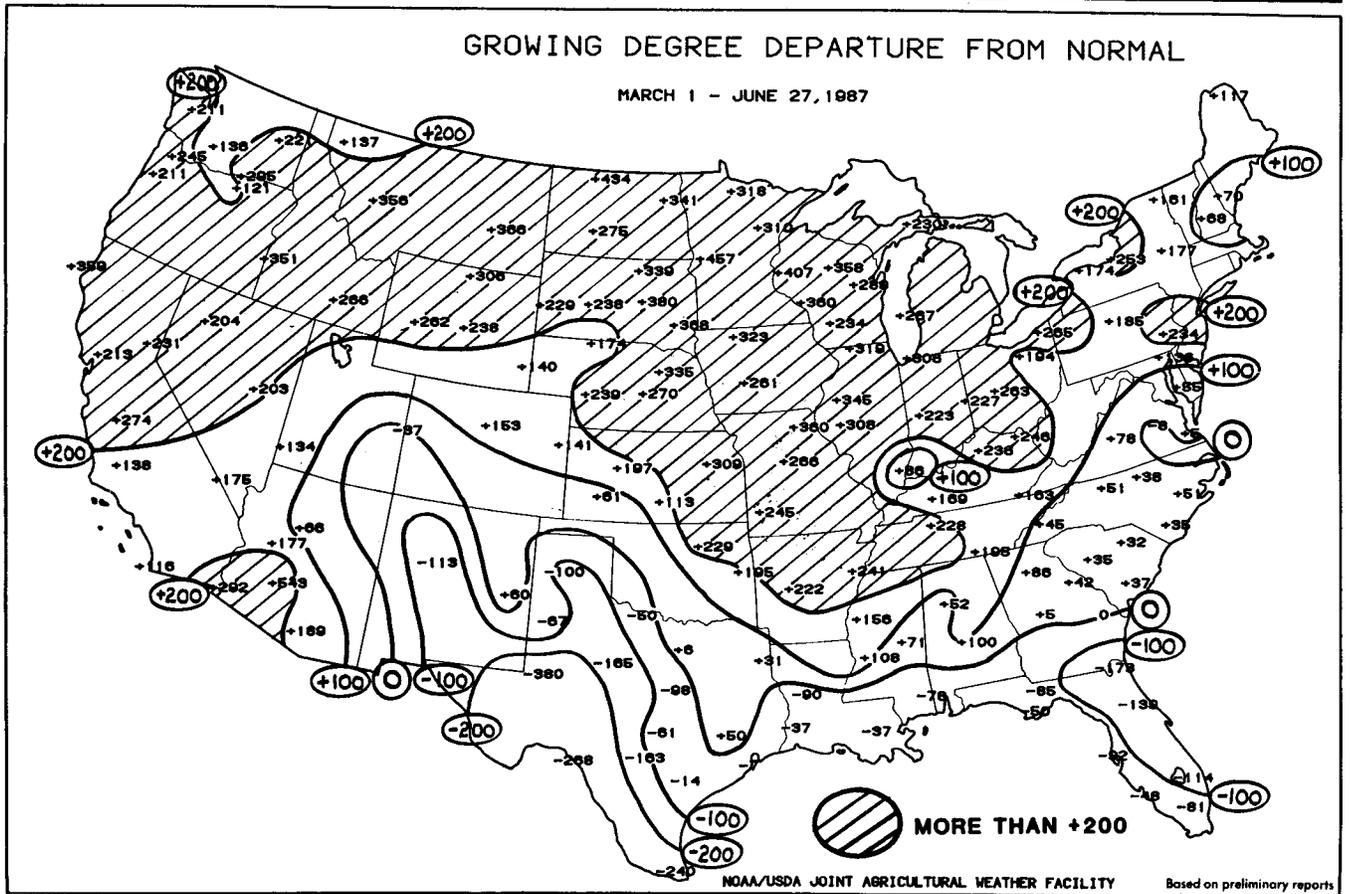
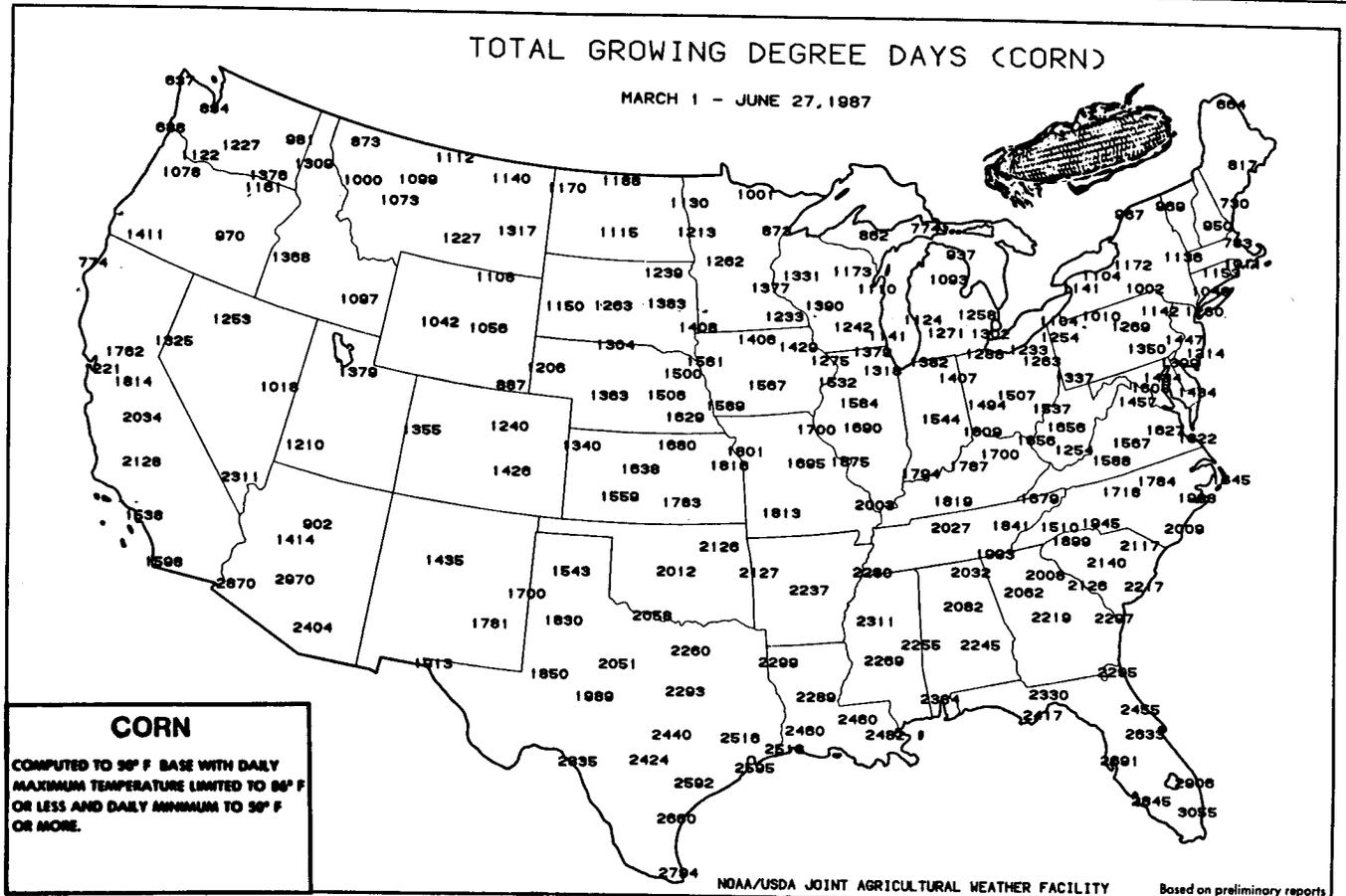


Figure 1. North Dakota Areal Average Winter Temperatures (1895 is the winter of 1895/96)

**Temperature Departures from Normal (<sup>o</sup>F) Over North America from January 1 to June 27, 1987**

Temperatures have been much above normal over most of Canada and the central United States for the 6-month period from January to June 1987. The most impressive departures above normal of 8-11<sup>o</sup>F are over south-central Canada and the northern Great Plains.





# National Weather Data for Selected Cities

## Weather Data for the Week Ending June 27, 1987

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 6	PCT. NORMAL SINCE JUNE 6	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION			
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE		
AL BIRMINGHAM	88	68	92	61	78	0	2.6	1.7	2.3	4.6	143	25.1	86	97	55	2	0	2	1		
MOBILE	88	72	93	68	80	-2	1.3	0	.6	7.7	173	40.0	129	99	61	3	0	5	1		
MONTGOMERY	89	70	94	62	79	-1	1.4	.6	1.3	7.3	239	34.6	133	98	60	4	0	3	1		
AK ANCHORAGE	57	47	61	41	52	-5	.4	-.1	-.2	.9	91	4.6	104	89	55	0	0	4	0		
BARROW	41	32	45	30	36	0	T	-.1	T	T	13	.4	36	96	70	0	5	0	0		
FAIRBANKS	79	56	92	47	67	-6	1.6	-.3	1.1	94	2.1	62	70	24	2	2	2	2	0		
JUNEAU	56	47	60	45	51	-3	1.6	-.9	-.8	5.9	223	20.4	104	95	65	0	0	4	2		
KODIAK	50	46	55	45	48	-3	5.9	5.1	3.8	374	43.0	157	97	88	0	0	7	2	2		
NOME	70	49	79	45	59	12	T	-.3	T	.4	39	2.8	71	80	39	0	0	1	0	0	
AZ PHOENIX	107	81	112	75	94	5	0	-.1	0	T	8	3.2	123	28	11	7	0	0	0	0	
PRESCOTT	92	57	95	50	75	5	5	-.2	T	T	3	79	4.9	76	40	11	4	0	0	0	0
TUCSON	105	75	109	64	88	3	T	-.1	T	T	2	89	4.8	175	37	11	7	0	0	0	0
YUMA	106	75	112	69	90	1	0	0	0	0	0	4	49	44	14	7	0	0	0	0	0
AR FORT SMITH	91	68	95	60	79	0	1.2	-.4	1.2	2.4	73	19.9	87	82	53	3	0	2	0	0	0
LITTLE ROCK	90	70	94	65	80	-1	.6	-.2	.3	2.9	87	20.2	76	59	19	5	0	0	0	0	0
CA BAKERSFIELD	96	64	103	57	80	0	0	0	0	100	3.7	97	59	79	1	0	0	1	0	0	0
EUREKA	63	53	69	52	58	3	.1	0	.1	.3	48	17.7	80	90	71	0	0	0	0	0	0
FRESNO	98	64	104	57	81	4	0	0	0	T	14	6.6	95	65	21	6	0	0	0	0	0
LOS ANGELES	70	61	73	59	66	-1	0	0	0	.1	0	2.9	35	92	70	0	0	0	0	0	0
REDDING	102	66	111	61	84	5	T	-.2	T	T	0	19.1	78	54	16	6	0	0	0	0	0
SACRAMENTO	95	57	104	52	76	3	0	0	0	T	0	8.8	83	77	22	5	0	0	0	0	0
SAN DIEGO	70	62	72	61	66	-1	0	0	0	T	0	5.1	83	84	70	0	0	0	0	0	0
SAN FRANCISCO	72	53	80	51	63	1	T	0	T	T	0	8.5	69	92	49	0	0	0	0	0	0
CO DENVER	86	56	93	53	71	2	-.1	-.3	-.1	2.2	154	11.1	139	77	24	2	0	1	0	0	0
GRAND JUNCTION	93	58	96	55	75	0	0	-.1	0	T	10	5.4	146	35	11	7	0	0	0	0	0
PUEBLO	92	56	98	50	74	0	.4	.1	.4	.9	90	5.7	124	86	24	4	0	1	0	0	0
CT BRIDGEPORT	73	63	84	55	68	-2	.6	0	.4	1.6	60	17.5	88	95	73	0	0	4	0	0	0
HARTFORD	76	58	86	50	67	-4	1.1	.3	.6	3.7	120	22.2	105	98	66	0	0	5	1	1	1
DC WASHINGTON	87	70	91	65	78	2	1.3	.5	.9	3.9	131	17.3	95	95	54	1	0	4	1	1	1
FL APALACHICOLA	88	75	91	72	81	0	2.1	.8	.7	4.4	105	27.4	127	97	68	2	0	5	3	3	3
DAYTONA BEACH	91	72	93	70	82	1	.8	-.7	.3	2.6	45	22.3	112	97	60	6	0	5	0	0	0
JACKSONVILLE	92	74	94	73	83	2	2.2	.8	.7	4.2	81	21.9	98	97	56	7	0	5	3	3	3
KEY WEST	92	82	93	81	87	3	T	-.2	T	.1	2	13.8	96	85	61	6	0	1	0	0	0
MIAMI	94	78	97	72	86	4	4.1	2.0	3.6	5.0	61	17.8	74	88	52	7	0	4	1	1	1
ORLANDO	95	75	98	73	85	3	.6	-.1	.4	.8	13	17.1	82	96	47	6	0	4	0	0	0
TALLAHASSEE	88	71	94	66	80	-1	3.6	1.9	2.0	12.5	216	41.0	136	100	62	1	0	6	3	3	3
TAMPA	91	77	92	75	84	2	1.3	-.1	1.0	2.8	61	22.9	124	91	56	6	0	3	1	1	1
WEST PALM BEACH	92	76	96	73	84	3	3.5	1.6	1.7	4.7	65	23.1	95	95	58	6	0	6	2	2	2
GA ATLANTA	87	69	93	63	78	1	.8	0	.4	6.2	206	27.2	102	96	51	1	0	5	0	0	0
AUGUSTA	90	72	95	65	81	2	1.0	.1	5	5.7	166	28.5	122	98	56	4	0	6	1	1	1
MACON	89	70	95	62	80	0	1.9	1.0	1.4	5.0	150	26.7	109	100	57	3	0	6	1	1	1
SAVANNAH	91	73	94	72	82	2	5.1	3.7	2.5	8.1	160	30.8	134	96	57	5	0	5	3	3	3
HI HILO	83	70	85	69	77	1	2.6	1.2	.8	11.4	208	54.5	85	95	67	0	0	7	3	3	3
HONOLULU	89	73	92	70	81	2	T	0	T	.4	102	3.1	24	83	49	3	0	1	0	0	0
KAHULUI	86	70	90	67	78	1	T	-.1	T	.1	43	12.3	108	87	56	1	0	0	0	0	0
LIHUE	83	72	84	68	77	0	.1	-.2	.1	.3	23	11.1	50	90	67	0	0	3	0	0	0
ID BOISE	85	52	98	45	69	0	0	-.2	0	.6	67	5.7	82	59	17	2	0	0	0	0	0
LEWISTON	84	54	96	48	69	0	.1	-.2	.1	.3	25	3.9	54	67	22	3	0	1	0	0	0
POCATELLO	83	47	93	41	65	0	T	-.2	T	.6	61	5.7	92	77	20	2	0	1	0	0	0
IL CHICAGO	82	59	91	54	71	0	.2	-.9	-.1	2.1	53	10.8	66	97	49	1	0	2	0	0	0
MOLINE	85	63	93	54	74	1	.8	-.2	.8	1.2	32	10.5	60	94	44	1	0	1	1	1	1
PEORIA	83	63	89	52	73	0	.6	-.3	.6	3.1	88	10.9	64	96	51	0	0	2	1	1	1
QUINCY	85	65	91	53	75	1	0	-.9	0	2.0	55	10.7	60	92	44	2	0	0	0	0	0
ROCKFORD	80	63	88	53	72	1	.4	-.7	.3	2.3	56	11.6	68	93	53	0	0	2	0	0	0
SPRINGFIELD	84	64	90	52	74	-1	1.1	.2	.9	3.1	99	10.6	63	97	52	1	0	3	1	1	1
IN EVANSVILLE	87	68	92	55	77	1	.8	0	.5	5.7	179	18.2	82	98	53	3	0	3	1	1	1
FORT WAYNE	82	63	87	54	72	1	.2	-.6	.2	4.1	125	13.6	79	93	52	0	0	2	0	0	0
INDIANAPOLIS	84	64	88	54	74	0	1.1	.1	1.0	3.4	96	12.5	64	94	44	0	0	4	1	1	1
SOUTH BEND	81	63	87	56	72	1	1.2	.3	1.1	3.2	90	14.2	80	96	53	0	0	2	1	1	1
IA DES MOINES	86	63	93	53	75	1	1.6	.6	1.6	2.1	55	13.5	89	91	41	2	0	1	1	1	1
SIoux CITY	87	61	94	52	74	0	1.3	.3	1.2	2.6	72	13.9	111	92	39	2	0	2	1	1	1
WATERLOO	83	61	89	49	72	1	.8	-.3	.5	2.7	69	11.0	71	89	46	0	0	3	1	1	1
KS CONCORDIA	89	63	93	59	76	0	.1	-.9	.1	1.8	46	20.6	153	88	35	4	0	1	0	0	0
DODGE CITY	86	62	91	59	74	-3	.8	.1	.6	3.6	134	13.4	132	88	39	2	0	3	1	1	1
GOODLAND	86	57	94	52	71	-1	2.4	1.8	1.2	6.4	261	14.2	172	91	35	1	0	3	2	2	2
TOPEKA	86	64	92	60	75	-1	1.5	.3	1.5	4.2	90	20.2	127	95	50	2	0	2	1	1	1
WICHITA	90	66	95	60	78	0	T	-.9	T	2.3	65	19.8	148	91	36	6	0	2	0	0	0
KY BOWLING GREEN	84	67	89	56	76	-1	.3	-.8	.2	2.8	70	18.7	71	98	57	0	0	2	0	0	0
LEXINGTON	84	66	88	57	75	1	1.5	.5	.8	6.5	172	18.6	79	92	55	0	0	4	2	2	2
LOUISVILLE	86	68	90	59	77	-2	.2	-.6	.1	3.6	111	15.8	70	91	49	1	0	3	0	0	0
LA ALEXANDRIA	89	70	91	63	80	-3	1.1	-.2	.6	2.4	68	29.0	96	91	59	4	0	3	1	1	1
BATON ROUGE	91	73	92	68	82	0	.2	-.6	.1	3.3	122	29.9	110	94	55	6	0	3	0	0	0
LAKE CHARLES	91	75	93	71	83	0	.9	0	.9	9.2	251	30.2	125	94	57	6	0	2	1	1	1
NEW ORLEANS	91	75	93	74	83	2	.3	-.9	.2	12.2	298	30.5	135	97	60	5	0	2	0	0	0

Based on 1951-80 normals.

(continued from front cover)

SATURDAY...A few showers lingered along the East Coast from Georgia to Virginia but were widespread in Florida and the Northeast. Moderate to heavy showers fell in New England and Florida. Widely

scattered thundershowers developed over the Rocky Mountains and the northern Plains but were more widespread in the central Plains. The unusually warm temperatures spread through the intermountain area onto the central and northern Plains.

Weather Data for the Week Ending June 27, 1987

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 6	PCT. NORMAL SINCE JUNE 6	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMPERATURE		PRECIPITATION	
																		°F	°F	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	91	70	93	66	81	0	.1	-.7	.1	4.9	157	23.5	99	95	47	6	0	1	0		
ME CARIBOU	73	51	83	42	62	-1	1.5	-.7	1.4	3.1	110	11.9	78	91	48	0	0	3	1		
PORTLAND	68	54	79	51	61	-4	2.6	1.9	1.1	5.0	182	23.5	111	97	70	0	0	4	3		
MD BALTIMORE	86	67	92	61	76	2	1.0	.1	1.0	2.5	74	17.5	89	98	55	1	1	4	1		
SALISBURY	86	64	91	53	75	2	1.0	.1	1.0	2.7	85	21.0	102	97	53	1	1	3	1		
MA BOSTON	66	55	82	53	68	-10	.5	-.1	.4	2.6	99	26.2	121	99	82	0	0	3	0		
CHATHAM	65	54	71	51	60	-4	.9	.3	.6	1.3	54	27.7	122	98	80	0	0	2	1		
MI ALPENA	81	54	92	50	68	4	1.3	.5	.9	3.1	111	8.8	67	97	43	1	1	4	1		
DETROIT	81	64	85	56	73	2	2.6	1.8	2.2	5.8	190	15.5	103	91	52	0	0	4	1		
FLINT	79	60	88	51	70	2	.8	.1	.6	1.5	51	8.7	63	98	55	0	0	2	1		
GRAND RAPIDS	79	61	89	55	70	0	1.9	1.0	1.8	2.7	83	8.4	53	92	51	0	0	2	1		
HOUGHTON LAKE	79	56	91	50	67	3	.4	-.3	.2	.7	26	5.7	45	91	45	1	0	4	0		
LANSING	80	61	88	54	71	2	2.1	1.2	1.8	2.9	80	8.1	57	95	51	0	0	3	1		
MARQUETTE	75	53	85	43	64	2	.8	0	.3	1.7	59	13.0	94	93	53	0	0	5	0		
MUSKEGON	78	60	85	54	69	1	.4	-.2	.4	1.1	49	10.2	71	96	55	0	0	2	0		
SAULT ST. MARIE	77	54	88	49	66	5	.9	-.1	.9	2.6	90	9.6	69	94	52	0	0	1	1		
MN ALEXANDRIA	81	60	90	52	70	3	.2	-.7	.2	1.4	39	8.1	71	89	38	1	0	1	0		
DULUTH	77	53	88	46	65	4	.1	-.8	.1	.8	22	6.5	51	94	44	0	0	1	0		
INT'L FALLS	78	53	92	45	66	2	.3	-.7	.3	1.1	34	6.0	61	95	41	1	0	1	0		
MINNEAPOLIS	82	61	86	49	72	1	.2	-.8	.2	1.3	34	4.7	39	88	38	0	0	2	0		
ROCHESTER	80	58	85	45	69	0	.3	-.6	.3	3.3	98	8.6	68	96	50	0	0	1	0		
MS GREENWOOD	91	70	94	63	81	0	.2	-.6	.2	3.1	103	25.6	87	93	51	5	0	1	0		
JACKSON	91	70	94	62	81	0	1.0	-.3	.6	6.1	218	32.6	116	97	52	4	0	2	1		
MERIDIAN	90	69	93	62	79	-1	.7	-.2	.7	5.5	177	36.1	125	96	53	4	0	1	1		
MO CAPE GIRARDEAU	89	69	91	56	79	-1	1.4	.6	.9	3.6	115	15.7	67	95	55	3	0	3	1		
COLUMBIA	86	64	90	56	75	-1	.3	-.5	.3	2.1	62	11.5	61	93	45	1	0	1	0		
KANSAS CITY	87	65	91	60	76	-1	1.5	.5	1.2	4.1	97	16.9	99	93	42	3	0	3	1		
SAINT LOUIS	87	68	92	59	78	1	.1	-.8	.1	3.0	91	12.3	70	90	47	2	0	1	0		
SPRINGFIELD	87	64	92	58	76	0	.5	-.6	.2	3.2	76	22.1	112	97	51	3	0	3	0		
MT BILLINGS	82	52	91	48	67	0	.2	-.2	.2	1.0	54	7.1	80	69	23	2	0	1	0		
GLASGOW	82	50	94	46	66	-1	.2	-.4	.2	1.0	43	4.6	84	78	26	2	0	1	0		
GREAT FALLS	80	48	91	42	64	0	.2	-.3	.2	1.3	51	6.6	73	73	20	2	0	1	0		
HAVRE	77	49	86	43	63	-2	T	-.5	T	1.3	67	4.0	63	84	27	0	0	1	0		
HELENA	80	48	90	42	64	2	T	-.4	T	1.4	77	5.3	83	63	20	2	0	1	0		
KALISPELL	77	47	90	41	62	2	T	-.5	T	1.2	59	7.4	89	84	26	1	0	1	0		
MILES CITY	83	53	95	45	68	-1	T	-.6	T	.8	31	6.0	76	64	21	2	0	0	0		
MISSOULA	78	44	92	35	61	-1	.1	-.3	.1	1.5	90	5.2	71	87	30	2	0	1	0		
NE GRAND ISLAND	87	59	92	52	73	-1	.2	-.6	.2	1.3	39	15.0	120	92	34	1	0	1	0		
LINCOLN	88	62	92	53	75	0	1.5	.6	1.5	4.4	125	17.7	129	91	38	.3	0	1	1		
NORFOLK	87	57	93	47	72	-1	.1	-.8	.1	.5	14	15.1	120	95	32	2	0	2	0		
NORTH PLATTE	86	53	92	48	70	-1	.7	-.1	.7	3.3	97	10.9	103	92	33	1	0	2	1		
OMAHA	85	63	92	56	74	-1	.3	-.6	.3	1.6	43	15.1	104	84	46	2	0	1	0		
SCOTTSBUFF	87	51	94	47	69	-1	.9	.2	.8	4.0	149	15.5	181	86	22	3	0	2	1		
VALENTINE	84	53	95	48	69	-2	.4	-.2	.2	2.3	88	10.6	119	82	31	2	0	2	0		
NV ELY	86	41	89	35	64	2	T	-.2	T	.1	8	5.0	101	59	16	0	0	0	0		
LAS VEGAS	105	74	110	70	90	3	0	0	0	.1	325	3.3	188	24	10	7	0	0	0		
RENO	89	52	98	42	71	6	0	0	0	.9	303	5.8	134	59	12	4	0	0	0		
WINNEMUCCA	89	51	98	42	70	4	0	0	0	.4	47	6.7	146	47	16	4	0	0	0		
NH CONCORD	72	53	88	45	63	-4	3.8	3.1	1.9	5.8	217	18.0	107	98	67	0	0	4	3		
NJ ATLANTIC CITY	82	63	89	53	72	1	1.3	.6	.7	2.2	88	22.1	113	97	59	0	0	4	1		
NM ALBUQUERQUE	92	60	98	56	76	-1	T	-.1	T	.1	26	3.0	119	50	15	6	0	1	0		
CLOVIS	90	64	94	61	77	1	2.0	1.4	1.2	4.0	174	9.3	140	91	39	5	0	2	2		
ROSWELL	93	64	101	57	78	-2	.7	.5	.5	3.8	441	8.0	255	82	29	5	0	3	1		
NY ALBANY	79	62	91	56	71	2	1.3	.6	.5	3.2	109	15.5	93	100	62	1	0	4	1		
BINGHAMTON	78	60	86	54	69	3	1.8	.9	1.1	3.6	112	14.7	86	99	58	0	0	5	1		
BUFFALO	81	63	90	59	72	3	5.8	5.2	5.0	7.9	325	20.1	120	96	58	1	0	3	2		
NEW YORK	78	64	88	60	71	-2	4.8	4.1	4.0	5.9	211	22.5	111	96	68	0	0	4	2		
ROCHESTER	81	62	89	58	71	2	2.2	1.6	1.2	3.7	145	13.0	87	97	55	0	0	3	2		
SYRACUSE	82	62	90	60	72	4	3.1	2.2	2.7	4.7	145	14.9	83	97	57	1	0	4	1		
NC ASHEVILLE	83	63	87	55	73	2	1.5	.6	.8	8.9	267	27.1	123	100	59	0	0	4	1		
CHARLOTTE	88	70	93	66	79	2	.2	-.6	.2	3.1	98	20.3	90	93	51	2	0	2	0		
GREENSBORO	88	69	93	62	78	3	.3	-.6	.2	1.2	33	23.5	113	96	53	3	0	4	0		
HATTERAS	82	71	85	66	77	1	.5	-.5	.5	3.0	77	33.1	139	96	68	0	0	1	1		
NEW BERN	88	72	92	63	80	3	1.9	.6	1.9	6.2	136	27.0	115	94	62	2	0	1	1		
RALEIGH	88	69	92	65	79	3	1.4	.6	1.3	2.1	64	22.9	112	96	51	3	0	2	1		
WILMINGTON	89	73	92	68	81	3	2.0	.6	1.0	4.9	98	22.4	96	96	61	3	0	4	2		
ND BISMARCK	85	52	96	45	68	2	.3	-.4	.2	1.5	53	8.9	111	90	27	2	0	3	0		
FARGO	82	59	94	47	70	3	.1	-.7	0	.5	17	5.7	66	90	38	2	0	3	0		
GRAND FORKS	80	55	93	49	68	2	1.0	.3	.8	1.4	54	7.3	92	94	43	1	0	3	1		
WILLISTON	83	52	93	43	67	1	.1	-.5	.1	.6	23	5.0	72	78	23	2	0	2	0		
OH AKRON-CANTON	81	62	85	53	71	2	.5	-.3	.2	2.8	95	14.5	82	99	52	0	0	3	0		
CINCINNATI	84	65	87	53	75	1	1.5	.5	1.1	3.7	102	16.4	79	95	48	0	0	3	1		
CLEVELAND	81	63	87	56	72	2	1.6	.6	.6	6.2	197	17.9	103	98	56	0	0	3	2		
COLUMBUS	84	64	89	53	74	2	.1	-.9	0	3.4	94	12.0	64	96	56	0	0	3	0		

Based on 1951-80 normals.

Weather Data for the Week Ending June 27, 1987

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 6	PCT. NORMAL SINCE JUNE 6	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F			
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	83	64	88	55	73	0	.2	-.6	.2	2.5	73	12.7	70	94	49	0	0	3	0
TOLEDO	83	60	87	50	72	2	1.0	.1	.6	4.3	137	12.6	81	97	48	0	0	2	1
YOUNGSTOWN	81	61	86	52	71	2	1.8	-.9	1.2	5.7	181	16.9	94	100	56	0	0	3	1
OK OKLAHOMA CITY	90	68	95	63	79	0	0	-.7	T	4.3	121	25.4	158	87	40	4	0	2	0
TULSA	91	71	93	63	81	1	.5	-.5	.5	1.9	46	21.9	112	88	42	6	0	1	0
OR ASTORIA	68	49	78	44	58	1	.2	-.4	.1	.7	28	31.4	88	97	60	0	0	2	0
BURNS	80	45	93	35	63	0	0	-.1	T	.9	131	6.0	97	***	***	2	0	0	0
MEDFORD	93	53	107	42	73	0	0	-.1	0	.1	20	8.0	79	75	18	4	0	0	0
PENDLETON	84	52	99	45	68	-1	.1	0	.1	.4	62	5.2	80	65	20	3	0	1	0
PORTLAND	83	56	95	51	69	5	.1	-.2	.1	.1	10	18.1	94	83	32	2	0	1	0
SALEM	85	50	98	45	68	5	T	-.2	T	.3	23	19.2	90	88	29	3	0	1	0
PA ALLENTOWN	79	65	91	61	72	1	3.0	2.1	1.2	4.4	144	18.2	88	97	61	1	0	4	3
ERIE	79	63	87	57	71	4	1.6	-.6	1.1	4.0	113	15.1	86	93	58	0	0	5	1
HARRISBURG	84	66	89	60	75	2	.5	-.3	.4	3.5	105	16.8	87	96	51	0	0	4	0
PHILADELPHIA	86	66	92	61	76	3	1.0	.1	.6	2.0	57	15.7	79	97	54	0	0	4	1
PITTSBURGH	82	64	86	53	73	3	.8	0	.6	4.9	158	18.1	96	95	51	0	0	4	1
SCRANTON	78	62	89	57	70	1	3.3	2.5	2.3	4.4	139	15.4	95	98	59	0	0	4	2
RI PROVIDENCE	72	59	78	52	66	-4	.3	-.3	.2	1.4	57	20.9	95	99	77	0	0	2	0
SC CHARLESTON	90	74	94	72	82	3	.7	-1.0	.4	3.9	67	24.9	105	97	58	6	0	6	0
COLUMBIA	90	72	97	70	81	2	3.0	1.9	2.3	6.5	163	27.1	109	95	55	3	0	2	2
FLORENCE	89	72	94	69	81	2	1.3	-.1	1.2	4.0	97	20.8	97	95	54	3	0	2	1
GREENVILLE	89	68	92	61	79	2	1.0	-.1	.6	6.7	171	27.3	102	98	56	3	0	3	1
SD ABERDEEN	85	55	97	45	70	1	.3	-.4	.3	.8	26	6.0	64	91	32	2	0	2	0
HURON	85	55	96	45	70	0	.3	-.4	.2	1.0	34	9.9	99	95	36	2	0	2	0
RAPID CITY	83	50	89	43	67	-1	.6	-.2	.6	1.4	47	7.7	81	78	28	0	0	1	1
STOUX FALLS	84	57	95	45	70	-1	1.0	-.2	.9	1.6	49	8.5	72	95	38	2	0	2	1
TN CHATTANOOGA	88	68	92	61	78	1	1.6	-.8	1.5	5.2	175	30.5	110	100	60	2	0	3	1
KNOXVILLE	88	65	91	57	76	0	.7	-.3	.3	2.7	76	21.7	86	99	52	3	0	4	0
MEMPHIS	91	72	94	67	81	1	.4	-.4	.3	3.2	98	20.8	73	87	47	4	0	3	0
NASHVILLE	88	68	91	59	78	0	.8	-.1	.6	2.3	68	15.3	58	86	52	3	0	3	1
TX ABILENE	91	69	96	64	80	-2	.3	-.5	0	.9	41	12.0	110	91	36	5	0	0	0
AMARILLO	86	62	90	58	74	-3	1.3	.5	.6	2.7	86	10.6	120	91	40	1	0	5	2
AUSTIN	93	74	97	71	84	1	1.6	1.0	1.6	10.9	386	23.2	147	91	47	7	0	1	1
BEAUMONT	92	75	94	71	83	1	T	-1.2	T	10.0	233	31.5	127	97	56	7	0	0	0
BROWNSVILLE	93	77	95	75	85	2	T	-.6	T	4.8	194	13.0	138	97	58	7	0	1	0
CORPUS CHRISTI	92	75	95	72	84	1	0	-.8	0	4.7	133	18.7	148	96	56	7	0	0	0
DEL RIO	91	72	95	67	82	-3	.1	-.3	.1	5.4	350	15.9	214	86	47	6	0	2	0
EL PASO	97	65	104	59	81	-2	.5	-.3	.4	2.2	509	3.8	196	54	17	6	0	3	0
FORT WORTH	93	72	94	68	82	-1	T	-.5	T	3.4	157	16.0	97	89	43	7	0	0	0
GALVESTON	89	78	92	75	84	1	.3	-.5	.3	3.2	100	16.4	99	83	56	3	0	1	0
HOUSTON	95	74	98	69	84	2	.1	-.9	0	8.4	208	21.9	99	93	47	7	0	2	0
LUBBOCK	91	66	97	60	78	-1	.1	-.6	.1	1.8	70	7.6	95	91	36	3	0	1	0
MIDLAND	90	66	100	61	78	-4	1.8	1.5	1.3	3.0	236	11.1	199	94	43	4	0	3	1
SAN ANGELO	90	67	94	62	78	-4	.3	-.1	.3	2.1	121	21.5	263	98	46	4	0	1	0
SAN ANTONIO	94	76	98	73	85	1	T	-.6	T	7.6	274	28.8	209	87	44	7	0	0	0
VICTORIA	93	74	96	71	84	1	.3	-.7	.3	11.2	269	23.2	139	96	51	7	0	1	0
WACO	96	72	100	65	84	0	0	-.5	0	5.8	245	18.2	110	96	44	7	0	0	0
WICHITA FALLS	91	69	95	63	80	-3	.2	-.3	.2	2.4	93	20.7	153	91	41	6	0	1	0
UT BLANDING	90	56	92	51	73	3	0	-.1	0	T	0	5.0	106	42	19	4	0	0	0
CEDAR CITY	89	55	93	49	72	3	T	-.1	T	T	5	4.8	102	43	13	4	0	0	0
SALT LAKE CITY	88	57	96	52	73	2	T	-.2	T	.2	22	7.8	88	55	16	3	0	1	0
VT BURLINGTON	81	60	90	48	71	4	1.4	.6	.5	5.0	154	12.8	87	94	53	1	0	4	0
VA NORFOLK	87	70	96	60	79	2	.6	-.2	.4	3.0	96	24.8	121	92	53	3	0	3	0
RICHMOND	88	68	92	61	78	3	1.8	.9	1.7	6.3	198	26.3	135	97	48	3	0	3	1
ROANOKE	86	68	91	61	77	3	.4	-.4	.4	.7	23	28.0	145	93	51	2	0	1	0
WA COLVILLE	82	50	95	42	66	2	.1	-.3	.1	1.9	140	10.3	115	69	35	2	0	1	0
QUILLAYUTE	69	47	81	41	58	2	.4	-.1	.4	1.7	68	52.9	99	97	50	0	0	2	0
SEATTLE-TACOMA	77	54	88	50	65	4	.1	-.2	.1	.2	13	18.7	98	83	35	0	0	1	0
SPOKANE	80	49	92	43	64	0	T	-.2	T	.6	53	7.1	80	73	19	2	0	1	0
YAKIMA	85	47	99	37	66	0	.1	-.1	.1	.1	19	3.9	93	78	22	3	0	1	0
WV BECKLEY	78	62	80	53	70	3	.2	-.8	.1	4.2	119	23.1	109	96	59	0	0	3	0
CHARLESTON	84	67	88	57	76	3	.2	-.6	.2	3.4	117	17.8	86	97	56	0	0	3	0
HUNTINGTON	84	66	88	57	75	2	.4	-.4	.3	2.6	85	19.2	94	98	55	0	0	3	0
PARKERSBURG	83	65	88	54	74	1	.7	-.3	.3	2.2	64	12.7	66	99	52	0	0	4	0
WI GREEN BAY	78	58	89	52	68	1	.3	-.4	.3	.7	24	8.0	63	94	49	0	0	2	0
LACROSSE	82	62	89	51	72	2	1.2	.3	1.0	2.0	53	12.5	89	94	47	0	0	2	1
MADISON	79	60	90	51	69	1	.5	-.4	.3	1.1	32	10.7	76	92	52	1	0	2	0
MILWAUKEE	80	63	88	55	72	4	1.7	.8	.9	1.9	58	14.1	96	89	52	0	0	3	2
WAUSAU	78	60	88	50	69	2	.6	-.3	.4	1.7	47	7.6	54	89	46	0	0	2	0
WY CASPER	83	46	93	38	64	-1	.1	-.1	.1	.7	59	6.7	100	71	16	2	0	2	0
CHEYENNE	80	49	89	44	65	0	T	-.4	T	.9	48	8.2	114	79	25	0	0	0	0
LANDER	82	51	90	44	67	2	T	-.2	T	.9	68	9.5	112	56	18	1	0	1	0
SHERIDAN	80	46	91	39	63	-1	0	-.5	0	1.1	53	6.8	75	83	25	2	0	0	0
PR SAN JUAN	88	76	90	73	82	0	3.6	2.5	2.8	6.2	141	35.6	169	95	83	2	0	2	2

Based on 1951-80 normals.

Cooling Degree Days Summary

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

LAST DATE OF DATA COLLECTION PERIOD IS 6/30/1987 ACCUMULATIONS ARE FROM JANUARY 1 \*\*\* NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK DEV FROM, WEEK DEV FROM, CUM TOTAL, CUM DEV FROM, CUM DEV FROM, CUM DEV FROM, CUM DEV FROM. Rows list various cities and their corresponding cooling degree day data.

## National Agricultural Summary

June 22 to 29, 1987

**HIGHLIGHTS:** Rain impeded soybean planting and small grain harvest in the Southeast but provided much needed moisture. Inadequate moisture began plaguing small grains in the northern Great Plains and Rocky Mountain States. Crop development continued pushing ahead of normal in the central Plains and Corn Belt. Fieldwork averaged less than 4 days in most Southeast and Delta States. Farmers were able to work 4 to 6 days in most other areas. Soil moisture was becoming short in the Corn Belt, northern Great Plains, and Rocky Mountain States.

Winter wheat harvest increased 17 percentage points from the previous week to 48 percent (%) completion. This was 15 points above the 5-year average but 4 points below 1986. Spring wheat was 64% headed more than doubling the average. Corn was 7% silked, compared with 4% normally. Doughing and denting began spreading across the Southeast and Delta. Soybeans were 97% seeded, 3 points above normal. Soybeans were blooming in the Corn Belt and Southeast. Sorghum planting was 97% finished. Heading was underway in Louisiana and Texas. Cotton squaring reached 49% completion, and 11% of the acreage was setting bolls. The first cotton of the season was ginned in the Rio Grande Valley. Rice was heading in Louisiana and Texas. Tobacco harvest was underway in Florida and Georgia. Livestock was mostly good.

**SMALL GRAINS:** Winter wheat was mostly good, except in the Delta and southern Great Plains, where the condition was fair to good. Combining was 48% finished in the 20 major producing States, compared with 52% in 1986 and the 33% average. Harvest surged 17 points ahead of the previous week. Harvest was underway in all major producing States except Idaho, Montana, South Dakota, and Washington. Illinois wheat was 85% harvested, 30 points above the previous week and nearly 4 times greater than normal. Kansas wheat harvest more than doubled the average at 65% completion. In Nebraska, harvest was 15% finished, 11 points above the average. Harvest was most advanced in southeastern areas of Nebraska. Harvest neared completion in Arkansas, Oklahoma, and most Delta and Southeastern States.

Spring wheat was 64% headed, compared with 30% in 1986 and 31% normally. Heading neared completion in South Dakota and Minnesota, 21 and 58 points ahead of normal, respectively. Spring wheat was mostly good, but the lack of moisture began showing in South Dakota.

**CORN:** Corn was mostly good. Seven percent of the acreage reached the silking stage, 3 points above the average. Silking reached as far North as Illinois and in 8 of 17 major producing States. Missouri's silking progress was 16 points ahead of normal. Silking was 87% finished in Georgia, while 40% of the acreage reached the dough stage, and 7% was denting. Silking was 12 points behind normal in North Carolina and 3 points below normal in South Dakota. Denting and doughing began spreading across the Delta and Southeast.

**SOYBEANS:** Soybean seeding inched closer to completion, but rain caused seeding delays in the Southeast. The Southeast and Gulf Coast States have most of the acreage left to be planted. A few acres were to be planted in Kansas, Kentucky, Missouri, and Tennessee. The crop was mostly good

to fair. Soybeans were blooming in Georgia, Iowa, Missouri, Nebraska, and Kansas.

**SORGHUM:** In the 11 major producing States, 97% of the sorghum acreage was planted. Oklahoma producers seeded a fifth of their acreage in 1 week. Planting climbed ahead of normal in Texas at 96% completion. Heading was 47% finished in Texas, and 19% turned color. Sorghum was 16% headed in Louisiana, compared with 35% normally. Heading was underway in eastern Oklahoma.

**COTTON:** Cotton was mostly good, but the condition remained fair to good in the southern Great Plains. Squaring increased 12 points to 49% of the acreage. Normally, 36% of the acreage would be squaring by this date. Eleven percent of the acreage was setting bolls, compared with 9% in 1986 and 8% normally. Cotton progress ranged from planting to harvesting in Texas. Planting neared completion, and the first bale of the season was ginned in the Rio Grande Valley. Planting reached 85% completion in Oklahoma, only 5 points behind normal. Cultivation, irrigation, fertilization, and insect control measures were the major activities for cotton in California. Bolls set quickly in Arizona but lagged 15 points behind the 55% average. Boll setting was behind normal throughout most of the Southeast.

**OTHER CROPS:** Rice heading was off to a slow start. Heading was active in Louisiana and Texas and behind normal by 11 and 17 points, respectively.

Peanut development lagged behind normal in Georgia. Pegging was 10 points below the 37% average, and blooming was 3 points below normal. Alabama's peanuts were 43% pegged, compared with 30% normally. Planting was in full swing in southern Texas and at Cross-Timbers. Planting reached 64% completion but lagged 18 points behind normal. Peanuts began blooming in the Low Plains.

Tobacco was mostly good to fair. Georgia harvest reached 4% completion but trailed 6 points behind normal. Kentucky and Tennessee tobaccos were fair to good.

**FRUIT AND NUTS:** A few late oranges remained to be picked in Florida. Some fruit began softening in nonirrigated groves. Texas citrus groves were treated for mites. New crop fruit sized well. Apricot, avocado, Coachella Valley table grape, nectarine, valencia orange, freestone peach, and plum harvests were active in California. Almond and walnuts were maturing.

**VEGETABLES:** Typical summer weather prevailed in Florida's vegetable producing area. Harvest of most crops was nearly finished in central areas. Watermelons, sweet corn, and tomatoes were volume leaders. Texas vegetable harvest progressed normally. Broccoli, carrots, cauliflower, celery, sweet corn, and lettuce were harvested in California. Some lettuce was destroyed because of low demand. In Arizona, grape harvest progressed as fruit reached maturity. Citrus groves were good, and movement of grapefruit and valencia oranges continued.

**PASTURES AND LIVESTOCK:** Livestock was mostly good. Pastures began improving in the Southeast. Pastures declined from the lack of moisture in the northern Plains and Rocky Mountain States.

### CROP PROGRESS

FOR WEEK ENDING JUNE 28, 1987

	COTTON % SQUARING		
	1987	1986	AVG.
ALA	78	73	60
ARIZ	93	96	95
ARK	82	77	60
CALIF	75	70	44
GA	66	51	69
LA	73	80	57
MISS	83	78	66
MO	93	59	49
N MEX	29	40	33
N C	57	63	46
OKLA	5	2	5
S C	75	74	78
TENN	80	45	40
TEX	24	17	17
14 STATES	49	43	36

THESE 14 STATES PRODUCED 100%  
OF THE 1986 COTTON CROP.

	COTTON % SETTING BOLLS		
	1987	1986	AVG.
ALA	13	7	5
ARIZ	40	50	55
ARK	7	0	0
CALIF	7	5	2
GA	14	14	20
LA	17	12	7
MISS	7	5	3
MO	24	0	0
N MEX	0	0	2
N C	0	0	0
OKLA	0	0	0
S C	4	34	25
TENN	1	1	1
TEX	11	9	9
14 STATES	11	9	8

THESE 14 STATES PRODUCED 100%  
OF THE 1986 COTTON CROP.

	WINTER WHEAT % HARVESTED		
	1987	1986	AVG.
ARK	95	87	89
CALIF	70	65	56
COLO	1	7	2
GA	93	98	94
IDAHO	0	0	0
ILL	85	36	24
IND	35	30	11
KANS	65	80	30
MICH	1	0	0
MO	86	75	35
MONT	0	0	0
NEBR	15	8	4
N MEX	62	95	NA
N C	82	91	78
OHIO	8	3	2
OKLA	95	95	75
OREG	1	0	0
S DAK	0	0	0
TEX	71	83	68
WASH	0	0	0
20 STATES	49	53	NA

EXCL. STATES  
WITH NA 48 52 33

THESE 20 STATES PRODUCED 91%  
OF THE 1986 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

	RICE % HEADED		
	1987	1986	AVG.
ARK	0	0	0
CALIF	0	0	0
LA	8	22	19
MISS	0	0	4
TEX	16	31	33
5 STATES	3	8	8

THESE 5 STATES PRODUCED 97%  
OF THE 1986 RICE CROP.

	SPRING WHEAT % HEADED		
	1987	1986	AVG.
IDAHO	56	38	37
MINN	90	31	32
MONT	47	25	28
N DAK	52	23	20
S DAK	93	56	64
5 STATES	64	30	31

THESE 5 STATES PRODUCED 94%  
OF THE 1986 SPRING WHEAT CROP.

	SOYBEANS % PLANTED		
	1987	1986	AVG.
ALA	89	90	89
ARK	95	88	87
GA	89	85	89
ILL	100	100	100
IND	99	96	97
IOWA	100	100	100
KANS	95	95	75
KY	88	84	79
LA	91	94	94
MICH	100	97	99
MINN	100	100	100
MISS	90	89	87
MO	98	95	81
NEBR	100	100	100
N C	85	85	85
OHIO	100	97	99
S C	87	88	87
S DAK	100	92	96
TENN	91	85	85
19 STATES	97	95	94

THESE 19 STATES PRODUCED 96%  
OF THE 1986 SOYBEANS CROP.

	CORN % SILKING		
	1987	1986	AVG.
COLO	0	0	0
GA	87	91	82
ILL	12	8	2
IND	5	0	0
IOWA	0	0	0
KANS	15	5	3
KY	25	25	10
MICH	0	0	0
MINN	0	0	0
MO	21	21	5
NEBR	0	0	0
N C	24	42	36
OHIO	0	0	0
PA	0	0	0
S DAK	0	0	0
TEX	62	68	65
WIS	0	0	0
17 STATES	7	6	4

THESE 17 STATES PRODUCED 94%  
OF THE 1986 CORN CROP.

	GRAIN SORGHUM % PLANTED		
	1987	1986	AVG.
ARK	100	100	NA
ILL	100	98	93
KANS	97	90	80
LA	100	100	99
MISS	100	98	96
MO	100	97	91
NEBR	100	100	100
OKLA	95	85	85
S DAK	97	94	93
TENN	96	94	92
TEX	96	89	94
11 STATES	98	93	NA

EXCL. STATES  
WITH NA 97 92 89

THESE 11 STATES PRODUCED 96%  
OF THE 1986 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

**CROP CONDITION**

FOR WEEK ENDING JUNE 28, 1987

WINTER WHEAT

STATE	VP	P	F	G	EX
ARK	0	8	55	31	6
COLO	2	4	17	64	13
GA	0	13	38	49	0
IDAHO	0	1	7	71	21
ILL	0	0	7	65	28
IND	0	1	19	70	10
KANS	0	6	4	36	54
MICH	1	9	30	50	10
MONT	0	0	12	77	11
NEBR	0	0	13	85	2
N MEX	0	0	23	43	34
N C	0	0	19	77	4
OHIO	0	4	20	63	13
OKLA	0	5	85	10	0
OREG	0	0	5	80	15
S DAK	0	7	46	40	7
TEX	0	12	44	32	12
WASH	0	0	20	70	10

CORN

STATE	VP	P	F	G	EX
COLO	0	6	15	51	28
GA	0	0	11	77	12
ILL	0	0	15	60	25
IND	0	0	12	65	23
IOWA	0	0	8	68	24
KANS	0	5	1	14	80
KY	0	1	37	55	7
MICH	2	8	20	50	20
MINN	0	2	22	64	12
MO	0	2	43	49	6
NEBR	0	0	7	78	15
N C	0	4	37	55	4
OHIO	0	2	13	59	26
PA	0	2	11	49	38
S DAK	0	0	14	67	19
TEX	0	2	14	56	28
WISC	1	1	18	55	25

COTTON

STATE	VP	P	F	G	EX
ALA	0	0	23	70	7
ARIZ	0	0	0	85	15
ARK	0	0	7	89	4
CALIF	0	0	0	40	60
GA	0	0	10	77	13
LA	0	0	21	79	0
MISS	0	0	22	67	11
MO	0	0	8	69	23
N MEX	0	0	25	75	0
N C	0	0	19	81	0
OKLA	0	7	48	45	0
S C	0	0	14	86	0
TENN	8	4	21	52	15
TEX	0	6	46	45	3

GRAIN SORGHUM

STATE	VP	P	F	G	EX
ARK	0	0	45	55	0
ILL	0	0	19	71	10
KANS	0	2	9	29	60
LA	0	8	39	53	0
MISS	0	0	9	83	8
MO	0	3	49	44	4
NEBR	0	0	26	61	13
OKLA	0	0	15	82	3
S DAK	0	0	25	71	4
TENN	2	2	40	49	7
TEX	0	1	16	63	20

SOYBEANS

STATE	VP	P	F	G	EX
ALA	0	3	24	68	5
ARK	0	0	23	75	2
GA	0	0	26	68	6
ILL	0	1	23	62	14
IND	0	1	19	68	12
IOWA	0	1	17	70	12
KANS	0	0	8	40	52
KY	0	3	52	37	8
LA	0	17	37	46	0
MICH	2	3	25	50	20
MINN	2	3	37	54	4
MISS	0	2	45	51	2
MO	0	7	45	47	1
NEBR	0	0	33	63	4
N C	0	2	38	60	0
OHIO	0	4	21	57	18
S C	0	0	25	75	0
S DAK	0	0	11	86	3
TENN	0	5	40	47	8

SPRING WHEAT

STATE	VP	P	F	G	EX
IDAHO	0	3	23	61	13
MINN	1	6	30	62	1
MONT	0	0	11	79	10
N DAK	0	6	35	58	1
S DAK	0	6	24	68	2

RICE

STATE	VP	P	F	G	EX
ARK	0	2	20	73	5
CALIF	0	0	0	50	50
LA	0	0	16	81	3
MISS	0	0	3	86	11
TEX	0	0	12	75	13

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

## 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 total mostly 0.33 in., local amounts 1.00 to 2.00 in. Temperatures averaged 1 to 2° below normal.

Days suitable for fieldwork 3.2 Soil moisture 3% short, 59% adequate, 38% surplus. Rain promoted crop growth, but increased weed, insects, disease. Some fields drowned out extreme southeast. Soybeans 89% planted, 90% 1986, 89% avg.; 3% poor, 24% fair, 68% good, 5% excellent. Sorghum 88% planted, 88% 1986, 86% avg.; 3% poor, 23% fair, 74% good. Cotton 78% squaring, 73% 1986, 60% avg.; 13% setting bolls, 7% 1986, 5% avg.; 23% fair, 70% good, 7% excellent. Corn 73% silking, 75% 1986, 66% avg.; 15% dented; 25% fair, 73% good, 2% excellent. Peanuts 43% pegging, 22% 1986, 30% avg.; 8% fair, 69% good, 23% excellent. Winter wheat 86% harvested, 89% 1986, 83% avg. First hay 90% cut, 80% 1986, 83% avg. Livestock, pastures mostly good. Primary activity planting soybeans, sorghum, summer foliage crops; harvesting wheat, vegetables, peaches, potatoes; controlling weeds, insects, disease in row crops, vegetables; spraying orchards; routine care livestock, poultry.

**ALASKA:** Generally hot, dry weather conditions prevailed Tanana Valley while Matanuska Valley, Kenai Peninsula continued cool, cloudy, damp. Temperature lows ranged from 3° below normal to 11° warmer than normal, highs ranged 8° below normal to 4° above normal. Seasonal precipitation totals ranged from 0.56 in. drier than normal to 2.13 in. wetter than normal.

Days suitable for fieldwork 5.0. Days suitable for haymaking 3.0. Topsoil moisture 15% short, 85% adequate. Subsoil moisture 1% short, 99% adequate. Barley for grain 17% poor, 26% fair, 50% good, 7% excellent. Barley, oats for grain heights averaged 7 in. versus 9 in. 1986. Crop growth 36% slow, 48% moderate, 16% rapid. First cutting hay, grass silage active when weather permitted. Pasture, ranges 7% poor, 44% fair, 39% good, 10% excellent. Commercial radish harvest underway.

**ARIZONA:** Typical June weather through 23rd; abundant sunshine, dry air. Influx of moisture east 24th set off widely scattered showers, thunderstorms southeast quarter, White Mountains. Moisture spread northwest late 24th. Mostly cloudy conditions, high humidities 25th. Widely scattered afternoon, evening showers, thunderstorms Mogollon Rim, White Mountains 25th. Sunny skies west, widely scattered showers, thunderstorms east, remainder of week. Precipitation traces to locally over 0.50 in. east, few traces west. Average temperatures 1° below normal to 5° above.

Cotton progress good, bolls set quickly. Irrigation, herbicide lay-by, cultivation active. Weed, insect infestations light to moderate. Wheat, barley harvest continued good progress. Some fields burned off west in preparation for next crop. Yields average to above. Alfalfa harvest continued; cutting moderate. Summer hay now harvested; advanced maturity prior to cutting. Excellent growth sudan grass; some fields harvested for hay, others utilized for green manure. Corn, sorghum continued good progress. Harvest bermuda grass seed underway west; vegetable seed harvest neared completion. Cantaloup, watermelon, honeydew shipments continued west, central valley. Canary, crenshaw melons picked Parker-Poston; cantaloups neared completion. Sharlyn, casabas shipped central valley. Grape harvest continued as fruit reached maturity. Thompson harvest progressed

west; perlette, flame seedless complete. Thompson harvest began 22nd central valley. Citrus groves good; movement grapefruit, valencia oranges continued. Dry onion movement east expected to finish 3rd. Green onions, chipper potatoes shipped central valley. Cattle, calves 4% poor, 27% fair, 55% good, 14% excellent. Ranges continued excellent southeast.

**ARKANSAS:** Warm weather with scattered showers prevailed through week. Temperature extremes 58°; 97°. Rainfall none to 3.48 in.

Days suitable for fieldwork 6.0. Major activities: Harvesting wheat; planting soybeans; baling hay; applying herbicides, fertilizer to rice, soybeans. Soybeans 80% emerged. Sorghum 96% emerged.

**CALIFORNIA:** Beginning week, trough over State. By 24th, replaced by ridge bringing extremely high temperatures. Another trough moved in 26th, 27th, cooling temperatures across State. Scattered showers over Sierra Nevada. Interior valley temperatures above normal while lower coastal areas near normal.

Warm weather, drying winds, reduced prospects dryland hay, grain. Irrigated crops responded favorably. Small grain harvest approached peak activity. Cultivation, irrigation, fertilization, insect control measures normal. Most cotton fields squaring, few early show bolls. Seeding corn, dry beans, sorghum after grain active. Early corn good progress, earliest tasseling. Alfalfa harvest hay, green-chop active. Expect good alfalfa seed yield. Apricot, avocado, Coachella Valley table grape, nectarine, valencia orange, freestone peach, plum harvests active. Almond, walnut crops maturing. Broccoli moderate Salinas, fairly light Santa Maria, quality variable and good respectively. Carrot fairly heavy, good quality, Salinas. Cauliflower moderate Salinas, Santa Maria, good quality. Acreage Fremont, San Jose harvested for local out of State markets. Celery moderate, good quality, Santa Maria, Oceano. Packing Salinas-Watsonville moderate but increased, good quality. Sweet corn harvest started Sacramento Valley, continued active, Westside. Good amounts trucked to market Orange County, quality good. Cucumber packing neared peak Tulare County, remained active Westside. Lettuce fairly light both Salinas, Santa Maria variable quality. Some fields disced Salinas due to lack of markets. Harvest south coast limited. Melon fields well, statewide. Westside cantaloup harvest to begin 3rd, honeydew melon picking to start following week. Light amounts seedless watermelons packed Kingsburg-Dinuba. South coast, watermelon fields ready for harvest. Red, yellow onion digging continued Fresno. Bell pepper picking active Merced-Atwater, limited harvesting continued, south coast. Fall potato plantings Shasta Valley, showed good growth. Fields Tulalake-Butte Valley some frost damage. Packing sheds continued to move 1986 crop part-time. Summer potato harvest began, Kern-Tulare. Harvest Hemet, San Jacinto to begin 3rd. Sweetpotato fields well statewide. Pumpkin planting started Delta. Tomatoes for processing, fresh market progressed well, statewide. Westside table tomato packing active, good quality. Harvest for canning to begin 3rd. Production continued south coast, Cutler, Orosi, Merced-Atwater, good quality. Dry range conditions continued across most of State. High ranges northern areas slightly better due showers. Fire danger high, Valley,

Foothill areas. Central Valley pastures irrigated. Livestock generally good in spite of drying conditions.

**COLORADO:** Temperatures 3° below to 2° above normal. Heavy rains, thundershowers in most of State; 0.20 to 0.40 in.; San Luis Valley, trace. Some hail, tornadoes eastern plains.

Days suitable for fieldwork 5.4. Soil moisture adequate. Small grains, livestock good. Dry beans 98% planted, 96% emerged. First cutting alfalfa 87% complete.

**FLORIDA:** Rain prevalent; many areas received precipitation 4 or more days. Weak low pressure trough moved through Panhandle late week, producing numerous morning showers, thunderstorms west coast, interior. Temperatures averaged about 2° above normal Panhandle, 3 to 4° above, Peninsula.

Soil moisture adequate to surplus Panhandle; some problems with excessive moisture. Peninsula area soil moisture adequate to short. Tobacco harvest, haymaking active, weather permitting. Corn, peanut, cotton generally good. Late soybean plantings continued. Pastures improved with increased shower activity. Condition variable central areas with spotty rainfall. Cattle fair to excellent, mostly good. Rain increased most citrus areas; temperatures very hot. Some irrigation continued. Trees good. Very few late oranges remained to be picked; some fruit softening, nonirrigated groves. Caretakers very busy fertilizing, cultivating cover crops, maintaining irrigation ditches. Typical summer weather vegetable producing areas. Harvest most crops nearly complete central area. Volume leaders: Watermelons, sweet corn, tomatoes. Light supplies celery, peppers, eggplant, cucumbers. Ruskin tomato season ended. Watermelons available northern areas.

**GEORGIA:** Warm, very humid, drier toward weekend. Rain totals few locations less than 0.50 in., numerous areas between 1.00 to 4.00 in., temperatures mostly near normal. Extreme lows 40s north to mid 60s south. Extreme highs low 90s north to mid 90s central, south.

Days suitable for fieldwork 2.8. Soil moisture 3% short, 62% adequate, 35% surplus. Corn 40% dough, 60% 1986, 54% avg.; 7% dent, 18% 1986, 20% avg. Cotton 100% planted, 100% 1986, 100% avg. Sorghum grain 16% fair, 81% good, 3% excellent; 92% planted, 92% 1986, 86% avg. Peanuts 14% fair, 82% good, 4% excellent; 71% blooming, 60% 1986, 74% avg.; 27% pegging, 24% 1986, 37% avg. Soybeans 4% blooming, 3% 1986, 5% avg. Tobacco 22% fair, 78% good; 4% harvested, 5% 1986, 10% avg. Watermelons 1% poor, 30% fair, 69% good; 11% harvested, 27% 1986, 27% avg. Rye 18% poor, 27% fair, 55% good. Other small grains 18% poor, 23% fair, 59% good. Apples 18% fair, 72% good, 9% excellent. Peaches 10% poor, 3% fair, 87% good; 56% harvested, 68% 1986, 63% avg. Pasture 1% poor, 6% fair, 71% good, 22% excellent. Hay 3% poor, 11% fair, 75% good, 11% excellent. Cattle 6% fair, 89% good, 5% excellent. Hogs 3% fair, 91% good, 6% excellent. Main activities: Planting, cultivating, spraying, haying between showers.

**HAWAII:** Hot, humid weather. Record high monthly temperatures some areas. Light, scattered showers mostly windward areas. Irrigation remained heavy. Non-irrigated crops need added rainfall. Spraying heavy, pest damage lowered some yields. Crop mostly fair to good. Trade winds 5 to 20 mph. Temperatures ranged low 70s to low 90s. Rainfall ranged none to 2.40 in.

Days suitable for fieldwork 7.0. Banana, papaya production steady. Chinese, head cabbage production moderate good quality. Active watermelon harvesting continued.

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

Days suitable for fieldwork 6.0. Warm temperatures continued rapid development small grains, field crops. Small grains turning color. Dry bean planting continued. Potatoes showed good growth, closing middles, condition good. First cutting alfalfa hay active, 2nd cutting underway. Range, pastures showed some moisture stress. Livestock good.

**ILLINOIS:** Temperatures averaged 1 to 3° below normal. Precipitation widely scattered 0.25 to 1.00 in. north and central, heavier south.

Days suitable for fieldwork 4.8. Soil moisture 54% short, 44% adequate, 2% surplus. Corn height average all fields 58 in., 53 in. 1986, 37 in. avg.; most advanced fields 76 in., 69 in. 1986, 53 in. avg. Soybeans 40% blooming, 19% 1986, 8% avg. Wheat 98% ripe, 87% 1986, 66% avg. Oats 91% filled, 94% 1986, 70% avg.; 70% turning yellow, 48% 1986, 30% avg.; 25% ripe, 13% 1986, 5% avg.; 6% poor, 22% fair, 64% good, 8% excellent. Alfalfa hay 2nd crop 42% cut, 19% 1986, 22% avg.; 7% poor, 24% fair, 58% good, 11% excellent. Red clover crop 95% cut, 79% 1986, 84% avg.; 5% poor, 25% fair, 62% good, 8% excellent. Pasture 1% very poor, 14% poor, 43% fair, 35% good, 7% excellent.

**INDIANA:** Temperatures 1 to 2° below normal. Lows upper 50s, highs low to mid 80s. Precipitation average 0.10 to 0.25 in. widespread, variable.

Days suitable for fieldwork 4.7. Topsoil moisture 28% short, 66% adequate, 6% surplus. Subsoil moisture 38% short, 61% adequate, 1% surplus. Corn, soybeans, wheat good. Corn 57 in. tall, 39 in. 1986, 27 in. avg. Soybeans 14 in. tall, 9 in. 1986, 7 in. avg. Wheat 88% ripe, 63% 1986, 38% avg. Alfalfa 100% cut once, 90% 1986, 94% avg. Clover 90% cut, 83% 1986, 79% avg. Pastures 1% very poor, 5% poor, 50% fair, 44% good. Showers slowed wheat harvest some areas.

**IOWA:** Near seasonal temperatures. Precipitation near normal west to subnormal east. Driest southeast.

Days suitable for fieldwork 4.7. Topsoil moisture 33% short, 62% adequate, 5% surplus. Subsoil moisture 27% short, 70% adequate, 3% surplus. Oats 8% poor, 37% fair, 50% good, 5% excellent; 60% turning color, 23% 1986, 18% avg. Winter wheat mostly good to fair. Hay 4% poor, 30% fair, 58% good, 8% excellent. Second crop alfalfa 10% harvested, 5% 1986, 4% avg. First crop clover 90% harvested, 71% 1986, 68% avg. Winter wheat 5% harvested, none 1986, 1% avg. Average corn height 46 in.; 3% tasseled, none 1986, none avg. Soybean 10% blooming, none 1986, none avg.; 85% cultivated 1st time, 59% 1986, 51% avg. Livestock mostly good. Some hog losses from heat. Pastures providing little new roughage. Pastures 3% very poor, 13% poor, 42% fair, 36% good, 6% excellent.

**KANSAS:** Temperatures averaged mid 70s to upper 70° ranging normal to 4° below normal. Precipitation variable, greater than 0.50 in. east and west.

Days suitable for fieldwork 4.0. Soil moisture 3% short, 78% adequate, 19% surplus. Wheat 99% ripe, harvest full swing. Corn development ahead of normal. Corn borers, corn ear worms present some areas. Sorghum virtually all planted, scattered damage from chinch bugs in fields adjacent to small grains. Soybean planting in windup, early fields starting to bloom. Second cutting alfalfa 45% complete. Ranges, pastures good grazing.

**KENTUCKY:** Humid, unstable air through midweek triggered scattered thunderstorms 25th. Cold front moved through State dropping temperatures.

humidity. Average temperatures 60s for lows, 80s for highs. Soil moisture temperatures 4 in. depth averaged 80°. Rainfall averaged 0.50 to 0.75 in., some areas 2.00 to 3.00 in.

Days suitable for fieldwork 4.0. Soil moisture 11% very short, 43% short, 44% adequate, 2% surplus. Corn growing well. Continued to plant 2nd crop soybeans as soil conditions, small grain harvesting permits. Tobacco continued variable; 1% very poor, 7% poor, 46% fair, 45% good, 1% excellent. Set burley 45% under 12 in., 42% - 12 to 24 in., 13% over 24 in. Wheat harvest 82% complete, 74% 1986, 54% avg. Second cutting hay about 50% complete. Pastures 3% very poor, 15% poor, 51% fair, 29% good, 2% excellent.

**LOUISIANA:** Temperature 1° below to 1° above normal. Temperature extremes 58°; 96°. Rainfall averaged 0.10 to 3.50 in.

Days suitable for fieldwork 3.3. Soil moisture 7% short, 53% adequate, 40% surplus. Corn good; 82% silked, 99% 1986, 87% avg.; 37% dough stage, 74% 1986, 53% avg. Cotton 73% squaring, 80% 1986, 57% avg.; 17% setting bolls, 12% 1986, 7% avg. Rice 8% headed, 22% 1986, 19% avg. Sorghum 16% headed, 51% 1986, 35% avg. Soybeans 91% planted, 94% 1986, 94% avg.; 83% emerged, 90% 1986, 88% avg. Sweetpotatoes 94% planted, 95% 1986, 93% avg. Winter wheat 97% harvested, 97% 1986, 98% avg. Peaches 41% harvested, 70% 1986, 44% avg. Hay 1st cutting 88%, 90% 1986, 91% avg. Sugarcane, pastures, livestock good; vegetables fair to good. Main activities: Planting soybeans; harvesting hay, peaches, vegetables; weed, insect control.

**MARYLAND & DELAWARE:** Maryland: Temperatures averaged 77°, 73° normal; lowest temperature 51°; highest temperature 97°. Precipitation averaged 0.79 in., ranging from 0.14 in. at Snow Hill to 2.71 in. at Oakland.

Days suitable for fieldwork 6.5. Topsoil moisture mostly short. Subsoil moisture short to adequate. Soybeans 80% planted, 80% 1986, 85% avg. Tobacco 98% transplanted, 90% avg. Wheat, oats, barley, rye good. Apples, peaches mostly good to excellent. Alfalfa 25% 2nd cut.

Delaware: Temperatures averaged 77°, 74° normal. Precipitation averaged 0.47 in.

Days suitable for fieldwork 6.5. Topsoil moisture short. Subsoil moisture short. Wheat, barley, rye good. Soybeans 70% planted, 70% 1986, 80% avg.

**MICHIGAN:** Temperatures ranged 1 to 5° above normal. Temperature extremes 41°; 93°. Precipitation ranged from 0.01 to 3.84 in. across State.

Days suitable for fieldwork 5.5. Soil moisture 70% short, 30% adequate. Corn 2% very poor, 8% poor, 20% fair, 50% good, 20% excellent. Soybeans 100% planted, 97% 1986, 99% avg.; 2% very poor, 3% poor, 25% fair, 50% good, 20% excellent. Wheat 1% very poor, 9% poor, 30% fair, 50% good, 10% excellent; 80% turning, 25% 1986, 25% avg. Scattered showers relieved moisture shortages. Major activities: Spreading fertilizer, making hay, cultivating, spraying insecticides, irrigating, harvesting tart cherries.

**MINNESOTA:** Temperatures averaged 1° below normal southwest, 1 to 3° above normal elsewhere. Temperature extremes 36°; 96°. Precipitation averaged 0.10 to 0.80 in. below normal. Precipitation totals averaged 0.10 in. northeast, nearly 1.00 in. central and south central, 0.50 to 0.75 in. elsewhere. Greatest weekly total 2.94 in.

Days suitable for fieldwork 5.6. Topsoil moisture 24% very short, 36% short, 39% adequate, 1% surplus. Spring wheat 99% jointing, 78% 1986, 82% avg.; 90% heading, 31% 1986, 32% avg. Oats 99%

jointing, 90% 1986, 87% avg.; 98% heading, 58% 1986, 47% avg. Barley 99% jointing, 74% 1986, 83% avg.; 96% heading, 23% 1986, 39% avg. Field corn 99% cultivated, 85% 1986, 71% avg.; height 39 in., 23 in. 1986, 18 in. avg. Soybeans 89% cultivated, 62% 1986, 48% avg.; height 12 in., 6 in. 1986, 6 in. avg. Alfalfa hay 1st crop 99% cut, 90% 1986, 79% avg. Field corn 2% poor, 22% fair, 64% good, 12% excellent. Soybeans 2% very poor, 3% poor, 37% fair, 54% good, 4% excellent. Spring wheat 1% very poor, 6% poor, 30% fair, 62% good, 1% excellent.

**MISSISSIPPI:** Temperatures 1° below to 3° above normal; extremes 56°; 96°. Warm, humid first part of week, cold front during midweek resulted in cool, dry weather. Greatest 24-hour total rainfall 2.10 in. Greatest weekly total rainfall 3.12 in.

Days suitable for fieldwork 2.6, 5.9 1986, 4.3 avg. Soil moisture 27% adequate, 61% surplus, 12% excessive. Corn 56% silking, 68% 1986, 52% avg.; 25% dough stage, 36% 1986; 5% denting, 13% 1986; 12% fair, 72% good, 16% excellent. Wheat 95% harvested, 92% 1986, 84% avg. Sweetpotatoes 94% planted, 90% 1986, 90% avg. Peanuts 100% planted, 96% 1986. Hay 43% harvested, 38% 1986, 44% avg. Rice 3% fair, 86% good, 11% excellent. Sorghum 15% heading, 21% 1986; 9% fair, 83% good, 8% excellent. Cotton 83% squaring, 78% 1986, 66% avg.; 7% setting bolls, 5% 1986, 3% avg.; 22% fair, 67% good, 11% excellent. Soybeans 90% planted, 89% 1986, 87% avg.; 85% emerged, 73% 1986, 75% avg.; 2% poor, 45% fair, 51% good, 2% excellent.

**MISSOURI:** Temperatures averaged normal. Precipitation 0.33 in. northeast, over 1.00 in. elsewhere. Heaviest extreme southeast, extreme southwest.

Days suitable for fieldwork 4.7. Topsoil moisture 51% short, 44% adequate, 5% surplus. Corn 39% tasseling, 28% 1986, 9% avg. Soybeans 17% blooming, 2% 1986, none avg. Oat 46% harvested, 24% 1986, 8% avg. Alfalfa hay 2nd cutting 63%, 39% 1986, 25% avg. Other hay 80% harvested, 67% 1986, 63% avg. Pasture 4% very poor, 23% poor, 54% fair, 19% good.

**MONTANA:** Temperatures normal. No station more than 2° from average. Most places had precipitation. Averages low except southwest 0.40 in.

Days suitable for fieldwork 5.8. Topsoil moisture 31% short, 68% adequate, 1% surplus. Subsoil moisture 21% short, 79% adequate. Barley 1% poor, 20% fair, 71% good, 8% excellent. Oats 1% poor, 21% fair, 66% good, 12% excellent. Sugarbeets 79% good, 21% excellent. Barley 52% headed, 24% 1986, 26% avg. Oats 41% headed, 24% 1986, 24% avg. Alfalfa 70% harvested, 69% 1986, 46% avg. Wild hay 33% harvested, 28% 1986, 15% avg. Grasshopper damage severe localized areas mainly east.

**NEBRASKA:** Temperatures averaged normal to 3° below normal. Precipitation ranged 0.30 to 2.00 in. scattered locations. Extremes 43°; 95°.

Days suitable for fieldwork 6.0. Topsoil moisture 29% short, 69% adequate, 2% surplus. Subsoil moisture 2% short, 96% adequate, 2% surplus. Winter wheat 100% turned color with 40% ripe, 43% 1986, 16% avg. Harvesting most advanced southeast. For State 15% harvested, 8% 1986, 4% avg. Oats 2% harvested, none 1986, none avg. Corn mostly good to excellent. Spraying selected fields for corn borer. Soybeans mostly good to fair. Some fields blooming east. Sorghum mostly good. Alfalfa hay mostly good to fair. First cutting 100%, 99% 1986, 90% avg. Second cutting 15%, 14% 1986, 9% avg. Pasture, range supplies mostly adequate. Cattle, calves making good gains.

**NEVADA:** Summer in full swing most areas. Average temperatures above normal. Precipitation spotty,

light. Thunderstorms end of period produced several range fires. Temperature extremes 32°; 106°.

Good progress alfalfa hay harvest all areas. Vegetative growth pushed by warmer night temperatures. Irrigation requirements increased by summer weather.

**NEW ENGLAND:** Precipitation averaged 1.50 to 2.00 in. northern Maine, New Hampshire, Vermont, 2.00 to 4.00 in central areas, 0.50 to 1.00 in. south. Temperatures ranged from low 60s north to mid to upper 60s remainder.

Days suitable for fieldwork 6.0. Soil moisture 6% very short, 50% short, 44% adequate. Grazing availability 42% short, 50% adequate, 8% surplus. Fieldwork 1 day behind. Maine potatoes 100% emerged, 97% 1986, 98% avg. Maine oats 100% sown, 100% 1986, 100% avg. Field corn 97% planted, 99% 1986, 98% avg.; 92% emerged, 97% 1986, 94% avg. Sweet corn 93% planted, 96% 1986, 96% avg.; 87% emerged, 90% 1986, 93% avg. Hay good; 72% harvested. Major farm activities: Cultivating, harvesting strawberries, weed and pest control, top and side dressing of corn, harvesting hay.

**NEW JERSEY:** Temperatures averaged below normal north, central; near normal south. Extremes 47°; 92°. Rainfall averaged 1.21 in. north, 2.23 in. central, 0.68 in. south. Heaviest 24-hour total 2.31 in. on 23rd, 24th. Estimated soil moisture percent field capacity averaged 67% north, 71% central, 40% south. Four inch soil temperatures averaged 70° north, 71° central, 73° south.

Weekend rain beneficial to unirrigated crops. Harvest of summer vegetable crops increased. Squash, snap beans, cucumbers, sweet corn, tomatoes, cabbage, greens, late spring vegetable crops moved to market. Blueberry harvest increased. Barley combining active. Second cutting of hay interrupted by rain. Early field corn up over 18 in. Early soybeans up 4 to 6 in.; planting continued. Pastures improved by rain.

**NEW MEXICO:** Temperatures over State near normal. Low temperature low 35° Quemado, highs 104° Hobbs. One in. weekly rainfall totals common over central mountains, eastern plains; lesser amounts western areas.

Days suitable for fieldwork 6.8. Soil moisture 36% short, 64% adequate. Some localized severe hail damage northeast. Alfalfa 25% fair, 75% good. Cotton 43% fair, 57% good. Squaring reported many fields. Barley 33% fair, 50% good, 17% excellent; harvest continued. Wheat 23% fair, 43% good, 34% excellent. Harvest activity heavy, very good yields indicated. Corn 13% fair, 74% good, 13% excellent. Onion harvest continued, good market prevails. Pecans 50% fair, 50% good; average nut set. Chile 25% fair, 75% good; light to average pod set reported. Range 36% fair, 55% good, 9% excellent. Cattle, sheep reported fair to good.

**NEW YORK:** Abundant, heavy rainfall. Widespread showers 22nd, 23rd north. Temperatures seasonable 1st, 22nd. Very warm, dry 24th, 25th. Highs near 90°. Temperatures averaged below normal. Extensive showers again 26th into 27th.

Days suitable for fieldwork 5.0. Soil moisture mostly adequate. Pastures good. Corn grew well. Oats heading out. Wheat approaching milk stage, expect early harvest. Alfalfa 1st cut 76% complete, 60% 1986, 59% avg. Clo-tim 61% harvested, 43% 1986, 42% avg. Grass silage harvest 76% complete, 66% 1986, 65% avg. Dry beans emerged, stands good. Fruits good to excellent, sizing rapidly.

**NORTH CAROLINA:** Temperatures averaged near normal. Temperature extremes 54°; 94°. Precipitation

ranged from 0.16 to 5.22 in. across State. Storms scattered.

Days suitable for fieldwork 5.4. Soil moisture 6% very short, 37% short, 50% adequate, 7% surplus. Irish potatoes 29% fair, 71% good. Pasture fair to mostly good. Tobacco 23% fair, 75% good, 2% excellent. Peanuts 22% fair, 78% good. Hay 3% poor, 43% fair, 49% good, 5% excellent; 100% harvested. Oats 89% harvested, 93% 1986, 83% avg. Barley 90% harvested, 95% 1986, 87% avg. Rye 72% harvested, 85% 1986, 78% avg. Sorghum 91% planted, 88% 1986, 86% avg. Sweetpotatoes 97% planted, 92% 1986, 93% avg.; 4% poor, 11% fair, 82% good, 3% excellent. Fruit, truck crops fair to mostly good. Major farm activities: Harvesting small grains; cutting and baling hay; transplanting sweetpotatoes; planting sorghum, soybeans; cultivating tobacco, soybeans, corn; sidedressing corn, cotton, tobacco; herbicide applications; harvesting vegetables, peaches, blueberries; tending livestock; general farm maintenance.

**NORTH DAKOTA:** Temperatures averaged 2 to 5° above normal. Extremes 39° southwest; 99° south central. Scattered showers, thunderstorms midweek, weekend. Heaviest east central 2.24 in.

Days suitable for fieldwork 6.3. Topsoil moisture well below normal; 11% very short, 58% short, 31% adequate. Subsoil moisture below normal; 5% very short, 31% short, 64% adequate. Small grains progressed ahead of 1986 and average. Spring wheat 52% heading and beyond, 23% 1986, 20% avg.; durum wheat 32%, 10% 1986, 10% avg.; oats 53%, 29% 1986, 21% avg.; barley 63%, 32% 1986, 30% avg.; winter wheat 35% turning and beyond, 3% 1986, 1% avg. All row crops above average height. Corn 22 in., 16 in. 1986, 12 in. avg.; flax 8 in., 7 in. 1986, 6 in. avg.; soybeans 9 in., 8 in. 1986, 6 in. avg.; sunflower 11 in., 9 in. 1986, 8 in. avg.; dry edible beans 9 in., 7 in. 1986, 6 in. avg.; potatoes 12 in. 9 in. 1986, 8 in. avg. Weed spraying essentially completed. Pasture 2% very poor, 31% poor, 38% fair, 29% good. First cutting of hay progressed ahead of normal; alfalfa 88%, other hay 60% completed. Grasshopper population heavy western regions. Wheat streak mosaic reported southwest counties.

**OHIO:** Temperatures averaged 3° above normal; ranged from 40s to 90s. Precipitation 0.50 to 1.00 along north, east, south borders; 0.10 in. elsewhere.

Days suitable for fieldwork 4.3. Soil moisture 19% short, 66% adequate, 15% surplus. Corn good; development 12 leaves emerged. Earliest fields tasseling. Soybeans good; growing rapidly. Some replanting, double crop beans planted. Winter wheat good; local lodging by severe thunderstorms. Grasslands good; hay cutting ahead of normal. Vegetable harvests increased volume.

**OKLAHOMA:** Temperatures averaged 4° below normal north central to 1° above normal northeast. Precipitation averaged 0.02 in. central to 1.51 in. east central.

Days suitable for fieldwork 4.4. Topsoil moisture 2% short, 70% adequate, 28% surplus. Subsoil moisture 100% adequate. Wheat 95% harvested, 95% 1986, 75% avg. Harvest neared completion. Low-lying areas still wet, dry weather needed. Weeds made combining difficult central. Sorghum 15% fair, 82% good, 3% excellent; 90% planted, 80% 1986, 80% avg. Heading began eastern 3rd. Cotton 7% poor, 48% fair, 45% good; 85% planted, 85% 1986, 90% avg.; 5% squaring, 2% 1986, 5% avg.; none setting bolls, none 1986, none avg. Pastures, livestock good. Weekly cattle marketings average, prices steady to higher.

**OREGON:** Temperatures reached 90s and low 100s many areas at weeks end. Weekly averages near normal,

due to cooler temperatures around 22nd. Coastal regions cool throughout week due to fog. Precipitation light statewide, all areas some rain except southwest. Few sites received more than 0.10 in.

Soil moisture 59% short, 41% adequate. Barley 4% harvested, most combining on driest fields of Columbia Basin region. All small grains ripening fast. Grass seed swathing winding down Willamette Valley, neared full swing central area. Crimson clover harvest neared completion Willamette Valley. Carrot seed bolting central area. Haying activities full swing around State. Early 3rd cutting Hermiston-Boardman, 2nd cutting west, 1st cutting high eastern elevations. Strawberry harvest very nearly completed, excellent yields, some fruit by passed due to picker shortage. Red, black raspberries harvested, dry weather reduced yields. Marionberry, boysenberry harvests started. Blueberry harvest full swing. Sweet, tart cherry harvest underway all areas; The Dalles sweet cherry crop shows excellent quality, yields, lack of pickers minor problem. Apple, bartlett pear thinning continued Hood River. Third irrigation completed Medford area tree fruits; bartlett harvest expected to begin 1 to 2 weeks early. Cranberry bloom completed on stevens variety, past peak on mcFarlin, crowley south coast. Snap beans, cucumbers, sweet corn growing well with adequate irrigation Willamette Valley. Early sweet corn tasseling, broccoli harvest continued western fields. Walla Walla sweet onions harvested Hermiston area. Onions began to bulb Jackson County. Garlic drying down central area. Watermelon harvest expected to start in 7 to 10 days; early potato harvest 2 weeks away Hermiston-Boardman area. Potatoes growing well; all hilled and closing row central area. Livestock, range mostly good throughout State. Cows milking well, calves growing fast east of Cascades. Pastures drying faster than normal western areas. Recent rains sustained green forage, many grasshoppers hatched eastern counties. Stockwater still short some areas.

**PENNSYLVANIA:** Warm, wet conditions across Commonwealth beginning, end of week. Warm, dry during middle of week. Average temperature 71°, 3° above normal. Temperature extremes 44°, 92°. Average precipitation 1.32 in., 0.39 in. above normal.

Days suitable for fieldwork 4.0. Soil moisture 16% short, 69% adequate, 15% surplus. Corn 2% poor, 11% fair, 49% good, 38% excellent; average height 24 in., 25 in. 1986, 19 in. avg. Soybeans 92% planted, 98% 1986, 92% avg.; 3% poor, 17% fair, 56% good, 24% excellent. Barley 27% heading or headed, 12% 1986; 17% turning yellow, 32% 1986; 27% ripe, 28% 1986; 29% harvested, 28% 1986. Wheat 35% heading or headed, 26% 1986; 54% turning yellow, 64% 1986; 10% ripe, 9% 1986; 1% harvested, 1% 1986; 1% poor, 12% fair, 54% good, 33% excellent. Oats 79% heading or headed, 84% 1986; 20% turning yellow, 15% 1986; 1% ripe, 1% 1986; 2% poor, 15% fair, 49% good, 34% excellent. First cutting alfalfa 87% complete, 86% 1986. Second cutting alfalfa 17% complete, 22% 1986. First cutting clover-timothy 73% complete, 78% 1986. Hay stands mostly fair to good. Feed from pastures average to above average. Activities: Planting soybeans; spraying corn; harvesting barley, hay, haylage; machinery maintenance; caring for livestock.

**PUERTO RICO:** NO DATA AVAILABLE.

**SOUTH CAROLINA:** Temperatures averaged near normal. Rain showers numerous with many areas receiving 1.00 to 3.00 in.

Days suitable for fieldwork 4.4. Soil moisture 17% short, 80% adequate, 3% surplus. Cotton 75% squaring, 74% 1986, 78% avg.; 4%

setting bolls, 34% 1986; 25% avg. Soybeans 87% planted, 88% 1986, 87% avg.; 25% fair, 75% good. Tobacco good; 18% topped, 54% 1986, 54% avg. Corn good; 48% silked, 78% 1986, 73% avg.; 8% dough stage, 27% 1986, 27% avg. Peanuts good, some leafspot disease. Small grain harvest nearly complete. Peach harvest slow 26%, 45% 1986, 32% avg. Overall crop, pasture improved.

**SOUTH DAKOTA:** Average temperatures 3° below to 2° above normal. Extremes 39°, 100°. Black Hills low 28°. Rainfall since April 5th continued below normal.

Days suitable for fieldwork 5.4. Topsoil moisture mostly short to adequate. Some problems reported with poor small grain stands, reduced hay yields due to lack of moisture. Crop progress continued ahead of normal pace. Many areas need rain. Livestock good to excellent. Feed, stockwater supplies adequate.

**TENNESSEE:** Early week showers. Precipitation below normal except locally heavy showers west. Averaged 0.50 to 1.00 in. Temperatures above normal west, below normal east. Extremes 50s, mid 90s.

Days suitable for fieldwork 4.1. Soil moisture 3% very short, 24% short, 67% adequate, 6% surplus. Corn 45% tasseling, 35% 1986, 20% avg.; 1% very poor, 1% poor, 40% fair, 48% good, 10% excellent. Tobacco 4% poor, 51% fair, 40% good, 5% excellent. Wheat 88% harvested, 80% 1986, 70% avg. Alfalfa 2nd cutting 65%, 60% 1986, 60% avg. Hay 1% very poor, 5% poor, 38% fair, 53% good, 3% excellent. Cattle mostly good. Pastures mostly good. Main activities: Wheat harvest, soybean planting, haying.

**TEXAS:** Very warm, humid weather prevailed early week. Thunderstorms, some associated with squall lines west, south central. Cool front approached Panhandle setting off showers, thunderstorms. Front moved through, lowering humidities, dropping temperatures northern half State. Temperatures below normal, normal readings portions coast, east. Precipitation below normal everywhere.

**CROPS:** Corn continued good progress. Irrigation operations full swing High Plains. Most fields Plains began tassel, fields Blacklands, east, central dough stage. Coastal Bend, Valley, south denting. Yields statewide expected good. Corn 40% doughing, 61% 1986, 58% avg.; 5% dented, 43% 1986, 39% avg.; none mature, 10% 1986, 5% avg. Grain sorghum planting progress Plains. Early fields good start. Progress good Blacklands, some midge showed up. Fields central, south rapidly turning color. Some spraying midge Upper Coast. Some fields mature southern areas. Sorghum 47% headed, 58% 1986, 57% avg.; 19% turning color, 47% 1986, 38% avg.; 2% mature, 23% 1986, 15% avg.; none harvested, 4% 1986, 1% avg. Cotton behind many areas; warmer weather allowed good progress most areas. Cultivation operations active over good portion State. Some insect spraying. Early fields Plains emerging good stands. Most fields set bolls southern areas. First baled cotton ginned Rio Grande Valley June 24th. Many other fields open bolls. Cotton 99% planted, 94% 1986, 97% avg. Small grain harvest good progress most areas. Yields continued average. Most producers central winding down harvest operations. Harvest winding down Blacklands, east. High winds, hail some additional damage High Plains. Wheat 100% turning color, 100% 1986, 99% avg. Rice heading increased Upper Coast. Permanent flooding, fertilization continued. Rice none turning color, 3% 1986, 2% avg. Soybean planting good progress Plains. Early fields showed good stands. Fields Upper Coast late, stands good. Replanting may be necessary. Peanuts good progress. Planting full swing south, Cross-Timbers. Fields blooming Low Plains. Other

crops planted: Peanuts 64%, 68% 1986, 82% avg. Soybeans 78%, 78% 1986, 82% avg. Sunflowers 79%, 72% 1986, 81% avg. Other crops harvested: Oats 70%, 65% 1986, 76% avg.

**Commercial Vegetables:** Rio Grande Valley few peppers, tomatoes harvested. Citrus groves being treated for mites. Fruit sizing well. San Antonio-Winter Garden onion harvest continued, poor yields, quality. Watermelon harvest increased fair yields. Trans-Pecos onion harvest continued. Melons blooming, look good. East harvest light most truck crops. Sweetpotatoes look good. Some watermelons harvested. High Plains thrips continued to cause problems many onion fields. Harvest to begin soon. Peppers good progress. Pecans develop well most areas. Insect problems increased. Rain caused heavier than normal nut drop. Producers resume spraying schedules.

**Range and Pasture:** Ranges, pastures continued to look good; warmer temperatures rapidly dry conditions. Most areas good into summer. Haying operations increased. Yields good; protein levels may suffer from prolonged wetness. Cattle great shape. Hornflies increased. Sheep, lambs good.

**UTAH:** Precipitation none to very light. Temperatures 1 to 30 above normal.

Days suitable fieldwork 6.7. Soil moisture 67% short, 33% adequate. Winter wheat 78% turning, 86% 1986, 22% avg.; 6% ripe, none 1986, none avg. Spring wheat 78% headed, 85% 1986, 53% avg.; 25% turning, 38% 1986, 9% avg. Barley 79% headed, 90% 1986, 65% avg.; 36% turning, 55% 1986, 17% avg. Oats 61% headed, 47% 1986, 29% avg.; 6% turning, 10% 1986, 2% avg. Alfalfa 2nd cutting 7% complete, 2% 1986, none avg. Winter wheat 5% poor, 44% fair, 48% good, 3% excellent. Spring wheat 32% fair, 68% good. Barley 30% fair, 50% good, 20% excellent. Oats 25% fair, 75% good. Sweet cherry harvest neared completion. Tart cherry harvest expected to begin 9th, apricots 14th. Sweet cherry crop light. Lower elevation ranges dry, higher elevation ranges generally good. Livestock good. Grasshoppers light. Continued spraying for alfalfa weevil, aphids. Spider mites reported north. Major farm activities: Hay harvest, cultivating corn, summer fallow tillage, irrigation, spraying.

**VIRGINIA:** Warm, variable rainfall. Temperatures averaged 4° above normal, range 53 to 96°. Rainfall varied from none to 1.94 in.

Days suitable for fieldwork 5.6. Topsoil moisture 63% short, 37% adequate. Diverse crop conditions due to hit or miss thunderstorm activity. Moisture stress some areas, excellent growth other areas. Corn good to excellent overall. Some fair in dry areas. Corn 3% in silk, 10% 1986, 17% avg. Soybeans good; 79% planted, 79% 1986, 82% avg. Tobacco good to excellent. Cultivated, irrigated where needed. Peanuts, apples excellent. Barley 86% harvested, 95% 1986, 90% avg. Wheat 40% harvested, 76% 1986, 68% avg. Oats 58% harvested, 62% 1986, 57% avg. Substantial small grain lodging. Good yields, low quality some areas. Hay, pasture condition declined to fair dry areas, remained excellent other areas, good to excellent overall. Sprayed for leafhoppers in

alfalfa, problem widespread. General rain needed to improve soil moisture.

**WASHINGTON:** Mild, dry weather prevailed. Average temperature 64°. Extremes 101° Walla Walla, 36° Goldendale. Precipitation below normal southeast, east; normal elsewhere.

Days suitable for fieldwork 7.0. Soil moisture 40% short, 60% adequate. Winter wheat 100% headed, 98% 1986, 94% avg. Wheat, barley began turning colors. Dry wheat, barley mostly good, fair. Irrigated wheat, barley, potato, dry beans good. Weed control, irrigation major activities. First crop alfalfa hay cutting completed. First cutting timothy hay continued. Cherry harvest continued. Labor supply remained short, hand thinning of apples, pears delayed. Blueberry harvest expected to begin early. Raspberry harvest continued. Range, pastures 40% short, 60% adequate. Livestock grazing continued. Commercial sheep producers began marketing lambs. Asparagus harvest completed. Summer vegetables progressed well.

**WEST VIRGINIA:** Average temperature 71°, 1 to 3° above normal. Extremes 41° Greenbank; 92° Creston. Precipitation averaged 0.74 in; 0.69 in. above normal north central; below normal elsewhere.

Days suitable for fieldwork 3.7. Soil moisture 9% very short, 37% short, 37% adequate, 17% surplus. Wheat, barley, oats, corn, good to fair. Tobacco fair to good; 97% set. Hay good to fair. Pasture fair to good. Feed supplies adequate. Farm activities: Harvesting hay, setting tobacco, clipping pastures, gardening, farm maintenance.

**WISCONSIN:** Temperatures averaged 70°, 10 above normal. Extremes 40°; 95°. Rainfall 0.50 to 1.50 in. More rain needed, especially northwest.

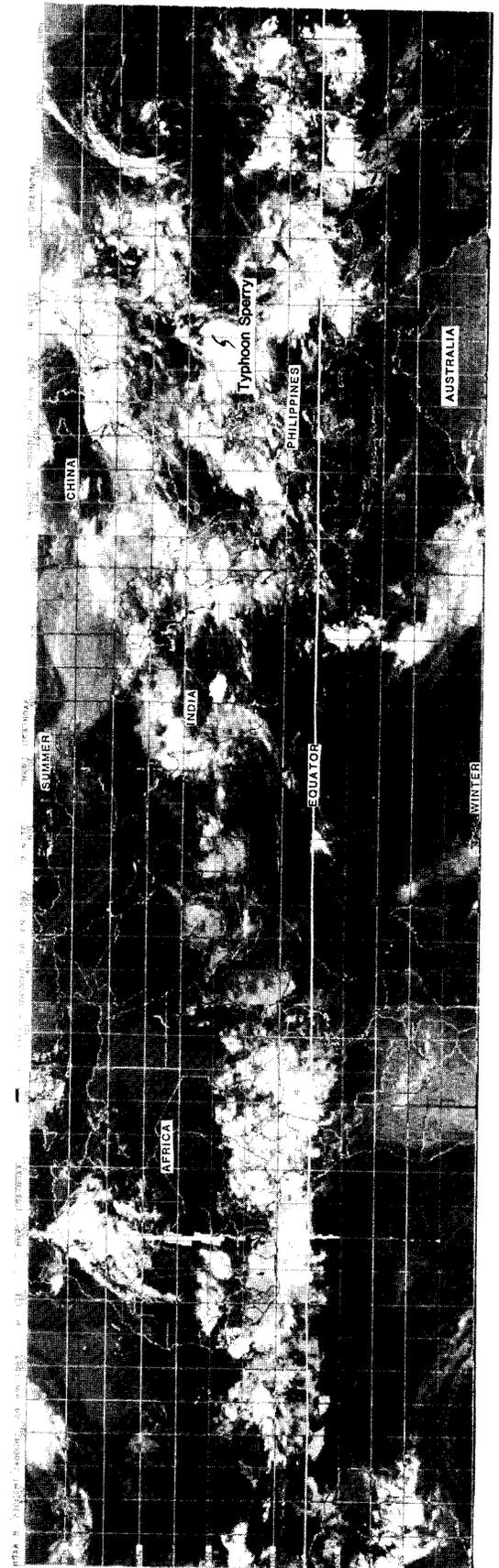
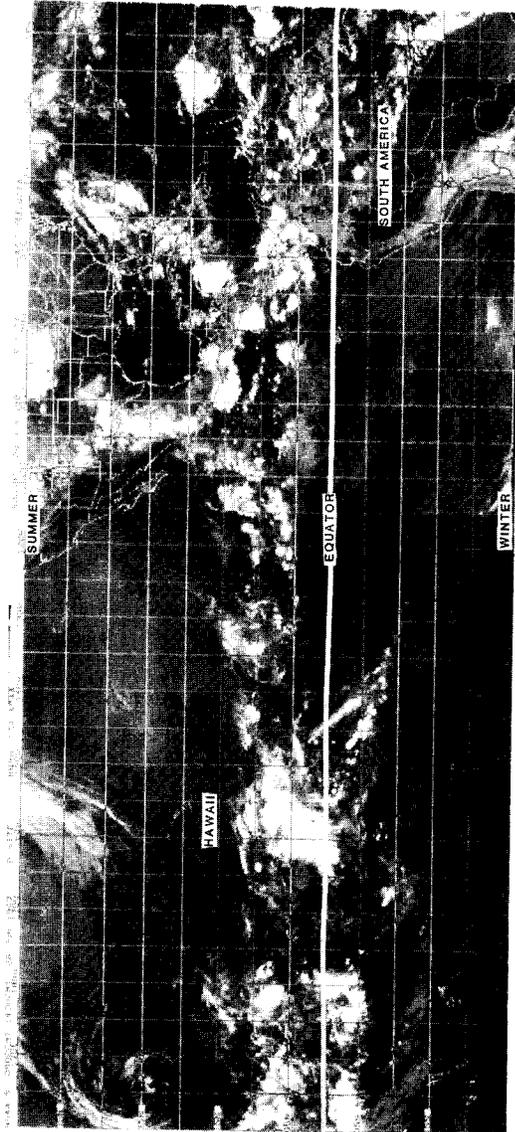
Days suitable for fieldwork 5.8. Soil moisture 72% short, 27% adequate, 1% surplus. Crops 1% very poor, 3% poor, 33% fair, 60% good, 3% excellent. Hay, oats affected by dry conditions. Average corn height 37 in., 21 in. 1986, 17 in. avg. Some much taller. Soybeans slow growing. First crop hay 86% cut, 83% 1986, 77% avg. Second crop slow northwest, south central, southeast. Good central, southwest. Oats 84% headed, 72% 1986, 46% avg. Straw short. Oatlage being cut. Peas, broccoli harvested. Snap beans good.

**WYOMING:** Temperatures near normal. Below normal precipitation.

Days suitable for fieldwork 7.0. Topsoil moisture 52% short, 48% adequate. Winter wheat 5% jointed; 15% boot, 15% 1986; 80% headed, 85% 1986, 75% avg. Barley 10% not jointed, 20% 1986; 15% jointed, 15% 1986; 30% boot, 15% 1986; 45% headed, 50% 1986, 40% avg. Spring wheat 5% not jointed, 5% 1986; 15% jointed, 40% 1986; 35% boot, 35% 1986; 45% headed, 20% 1986; 25% avg. Oats 15% not jointed, 15% 1986; 25% jointed, 35% 1986; 35% boot, 35% 1986; 25% headed, 15% 1986; 15% avg. Sugarbeets 85% thinned, 90% 1986. Alfalfa 1st cutting 50% complete, 40% 1986, 35% avg. Other hay 20% harvested, 10% 1986, 10% avg. All crops mostly good to excellent. Livestock good to excellent. Range, pastures good to excellent.

# Global Weather Satellite Image

June 28, 1987



## International Weather and Crop Summary

June 21-27, 1987

### HIGHLIGHTS:

**UNITED STATES** ... Rain impedes soybean planting and small grain harvest in the Southeast but provides much needed moisture. Inadequate moisture plagues small grains in the northern Great Plains and Rocky Mountain States. Crop development continues pushing ahead of normal in the central Plains and Corn Belt.

**U.S.S.R.** ... Weather conditions continue favorable for winter wheat in the reproductive and filling stages. Persistent hot, dry weather in Volga, Urals, and western Kazakhstan stresses spring grains and accelerates crop growth.

**EUROPE** ... Showers in southeastern Europe relieve dry conditions for filling wheat and early vegetative summer crops.

**SOUTH ASIA** ... Summer crop planting and emergence progress normally in southern and central India.

**SOUTHEAST ASIA** ... Minimal rain covers Thailand's grain areas. Scattered showers continue over the Philippines.

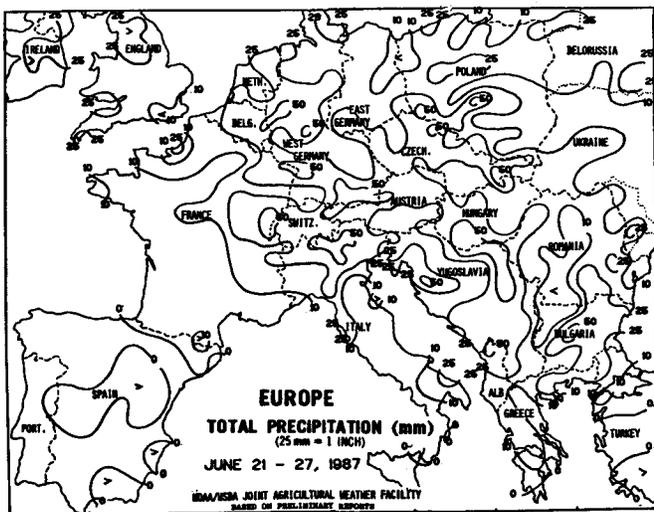
**EASTERN ASIA** ... Widespread rain benefits cotton and corn in the North China Plain. Inundating rain covers crops in southern Sichuan. Welcomed dryness covers south coastal rice.

**SOUTH AMERICA** ... Dry, cold weather slows Argentina's wheat planting. Cooler, drier weather moves into south-central Brazil.

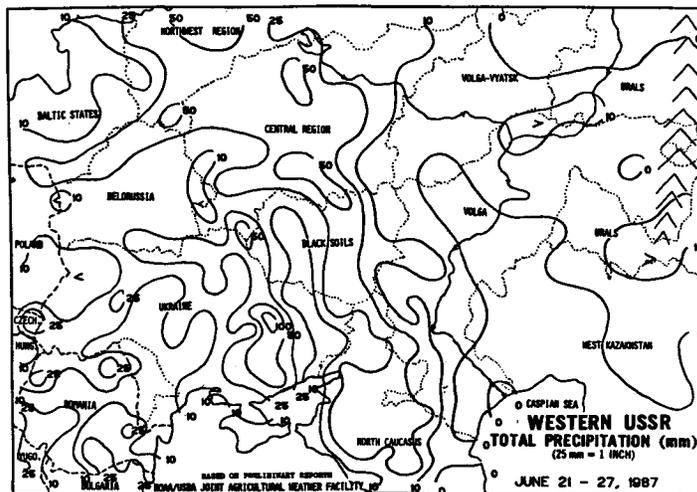
**AUSTRALIA** ... Showers spur wheat planting in Queensland and New South Wales.

**MEXICO** ... Highly variable rainfall covers much of the country. However, sunny weather continues over the west coast.

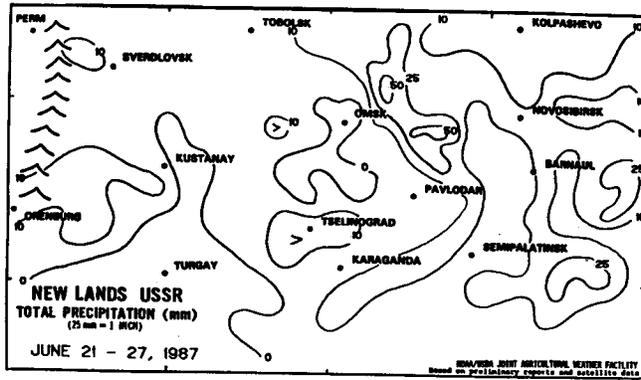
**CANADA** ... Scattered rain and generally mild weather help late vegetative growth of spring crops. Spring wheat heading begins in the south with only marginal moisture reserves.



**EUROPE** ... Minimal rain (less than 10mm) covered southwestern Europe from the Iberian peninsula through western France to central and southern Italy. The drier weather in Italy favored wheat harvesting that had been delayed by last week's heavy showers. The moisture favored the normal vegetative development of French corn. Cool, wet weather continued in central Europe from eastern France and the Netherlands to Czechoslovakia, and extended into the Balkan Peninsula from eastern Yugoslavia to Bulgaria. Moisture levels favor heading to filling wheat in central Europe, but the persistent, unseasonable, cool weather has slowed the progress of many crops, including corn and sugarbeets. The rain in the southeast relieved dryness in some areas of Hungary, Yugoslavia, and Romania, where wheat is filling and summer crops are vegetative. Rainfall averaged 10mm from northern West Germany through Poland, benefiting wheat in the jointing to heading stages of development.

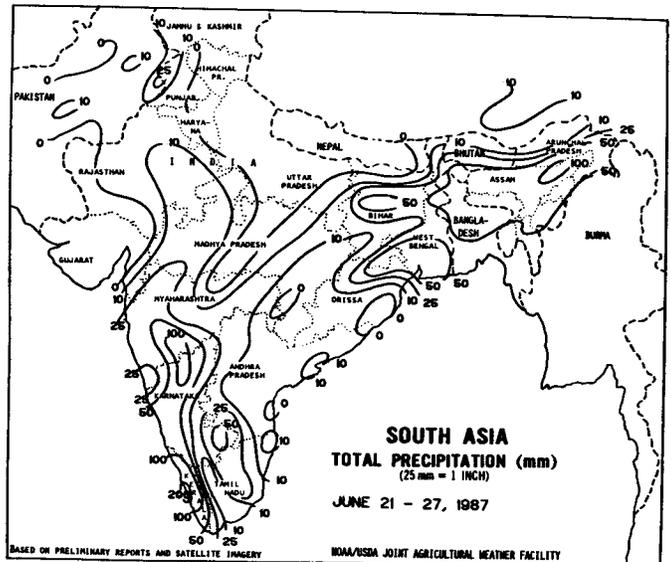


**U.S.S.R.** ... In Western U.S.S.R., showers and thunderstorms occurred throughout the western two-thirds of the region. Heavy rain (50 to 100mm) fell in a narrow band that stretched northward from the southeastern Ukraine, through the northern Ukraine, into southern crop areas in the Central Region. Hot, dry weather continued over the Volga and Volga Vyatsk regions with weekly average temperatures ranging from 4 to 6 degrees C above normal. The persistent hot, dry weather has likely accelerated the growth of both winter and spring grains grown in these areas. Overall, near-normal temperatures and ample moisture throughout major winter wheat areas of the Ukraine and North Caucasus have been beneficial for winter wheat in the reproductive and filling stages and spring grains entering the heading stage.



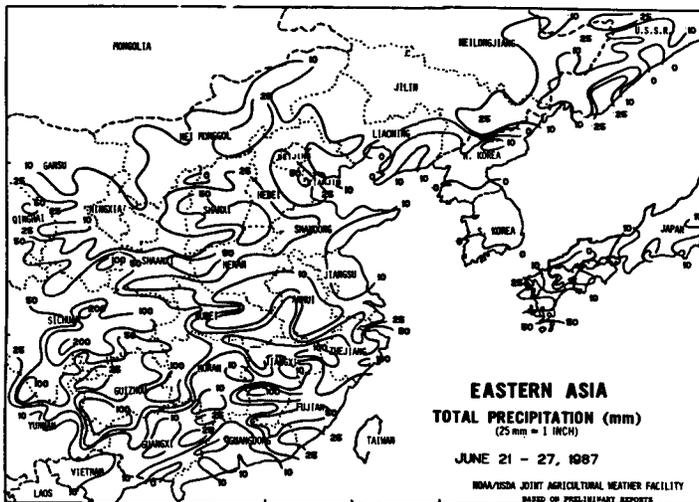
**NEW LANDS USSR**  
TOTAL PRECIPITATION (mm)  
(25 mm = 1 INCH)  
JUNE 21 - 27, 1987

In the New Lands, high pressure continued over the region, keeping the western half unseasonably warm and dry. Weekly average temperatures in the Urals, the eastern Volga, and western Kazakhstan were 6-10 degrees C above normal and maximum temperatures on numerous days ranged from 32 to 36 degrees C. In addition, unseasonably warm, dry weather has continued over these areas for 3 weeks, accelerating spring wheat growth and depleting soil moisture. Spring grains were in the jointing stage over much of the region, except for crop areas in the southern Urals, where spring grains were entering the heading stage. In crop areas east of Omsk, unseasonably cool weather slowed crop growth and scattered showers, some locally heavy, maintained favorable moisture conditions. Toward week's end, local showers brought temporary relief to crops in the southern Urals.



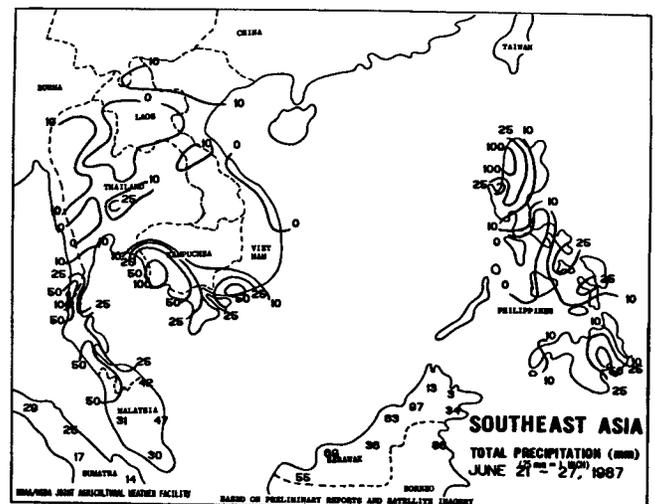
**SOUTH ASIA**  
TOTAL PRECIPITATION (mm)  
(25 mm = 1 INCH)  
JUNE 21 - 27, 1987

**SOUTH ASIA** ... Moderate to heavy showers (10 to more than 100mm) continued in central and southern India from Madhya Pradesh to Tamil Nadu, favoring cotton and groundnut emergence. Rain (4-21mm) in Rajasthan's summer crop areas helped prepare fields for cotton and groundnut planting, which normally begins in early July with the onset of the southwest monsoon. Mostly dry weather continued in Gujarat. Rain (4-25mm) in northern Pakistan and India's northern states maintained irrigation reserves for vegetative rice and cotton. Moderate to heavy showers (25-76mm) continued in eastern India and Bangladesh, where vegetative rice is progressing normally.



**EASTERN ASIA**  
TOTAL PRECIPITATION (mm)  
(25 mm = 1 INCH)  
JUNE 21 - 27, 1987

**EASTERN ASIA** ... Early-week, widespread moderate to heavy rains covered crop areas in the North China Plain. Rainfall amounts, ranging from 25 to 83mm, benefited cotton and corn approaching the flowering and tasseling stages, respectively. However, the rain may have caused some delays in wheat harvesting. In the Manchurian Valley, scattered light showers (less than 10mm) covered corn and soybeans in the vegetative stage. Widespread rain is needed in upcoming weeks in these areas as crops enter the highly moisture sensitive reproductive phase of development. Inundating rain (100-200mm) covered rice and corn areas in Sichuan. Flooding was likely in southern areas, and conditions were too wet for filling corn and intermediate rice harvesting. Welcomed dryness covered rice in Guangxi and Guangdong.



**SOUTHEAST ASIA**  
TOTAL PRECIPITATION (mm)  
(25 mm = 1 INCH)  
JUNE 21 - 27, 1987

**SOUTHEAST ASIA** ... Minimal rain (less than 5mm) covered most rice and corn areas in Thailand. Except for some corn regions of central Thailand, moisture reserves favor the normal development of corn and rice. Grains are nearing reproduction, however, in many rainfed grain regions. Moderate to heavy showers (25-172mm) continued in southwestern Kampuchea, but rainfall remained light (less than 25mm) in Vietnam and Laos. In the Philippines, pockets of heavy rain (up to 122mm) continued in some grain areas, but rainfall generally averaged less than 10mm in most crop areas. Moderate to heavy showers returned to Malaysia and Indonesia, but rainfall continues below normal in Java.



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