

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

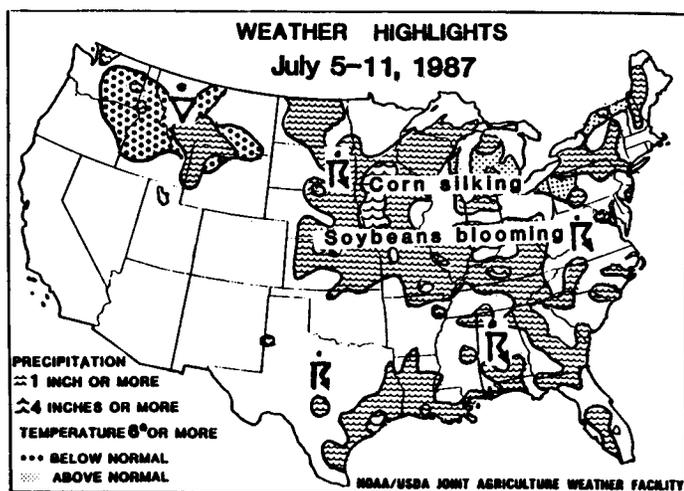
Volume 74, No. 28

Washington, D.C.

July 14, 1987

National Weather Summary

July 5 to 11, 1987



TUESDAY...Thunderstorms were concentrated in the lower Missouri Valley, New York, Pennsylvania, and New Jersey, and along the gulf coast. Scattered storms appeared throughout the East. Much cooler temperatures pushed over the northern Plains, and it was warming in the Southeast.

WEDNESDAY...The heaviest showers were in Iowa and along the western gulf coast. Some moderate showers fell in eastern Pennsylvania and southeastern New York. Thunderstorms were scattered throughout the area east of the Rockies. Mild temperatures prevailed over most of the Nation, but afternoon highs were over 95 degrees from the mid-Atlantic coast to the Georgia coast.

THURSDAY...Moderate showers fell in an area from eastern Nebraska and western Iowa through northwestern North Dakota. Thundershowers were scattered from eastern Texas to the Great Lakes and the Northeast and along the east coast. Afternoon temperatures rose to the high nineties from New Jersey to Georgia.

FRIDAY...Thunderstorms continued in the northern Plains and were scattered throughout the warm, humid air over the East. Light showers dated the west coast, while cool rain covered the northern Rockies. Moderate rain fell in parts of Montana and Wyoming.

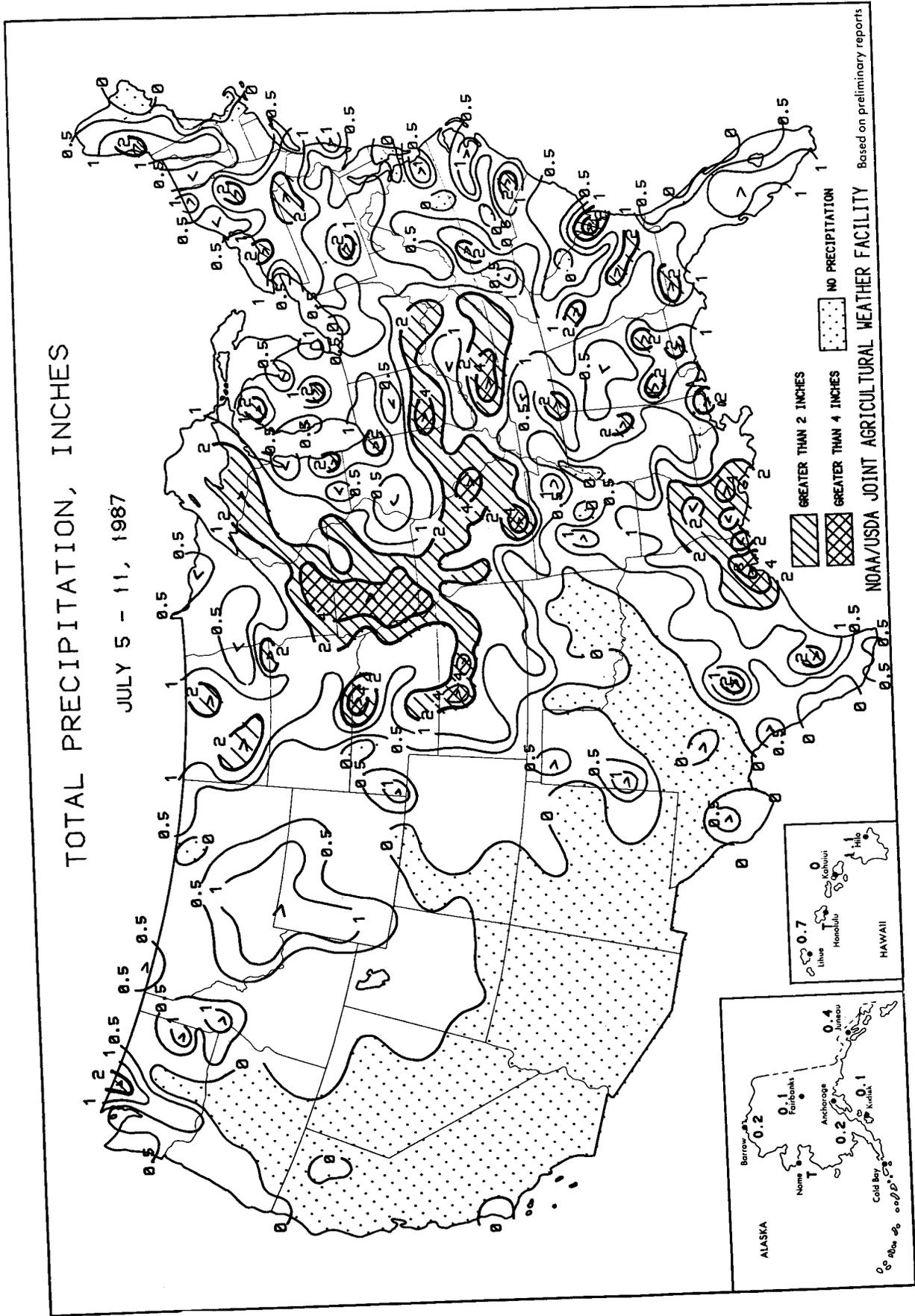
SATURDAY...Heavy thunderstorms were near a solid mass from northeastern Kansas through upper Michigan. Storms were more isolated through the northern Plains, the central Rockies, the middle Ohio Valley, and east of the Appalachians from South Carolina through New England. Much cooler air spread through the Rockies, but hot, humid weather continued in the South and much of the East.

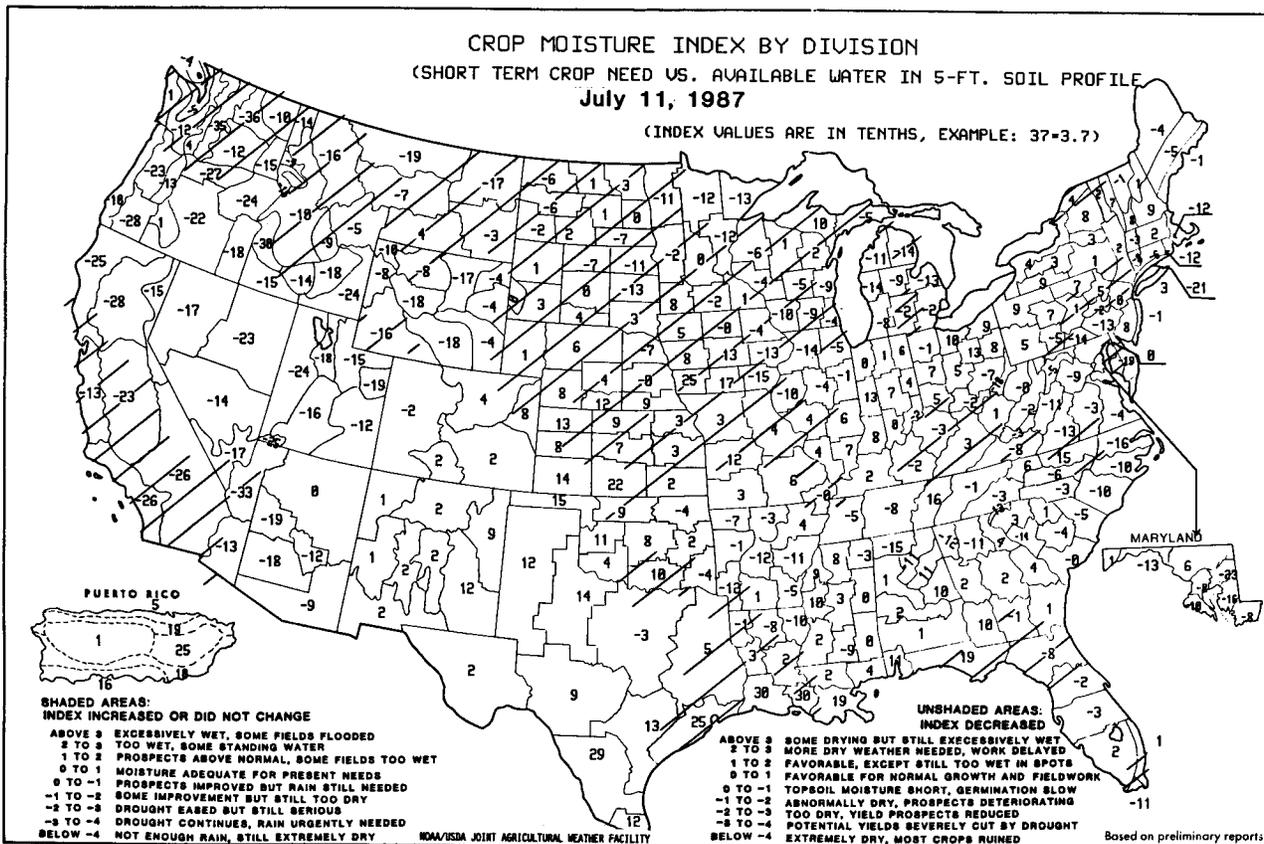
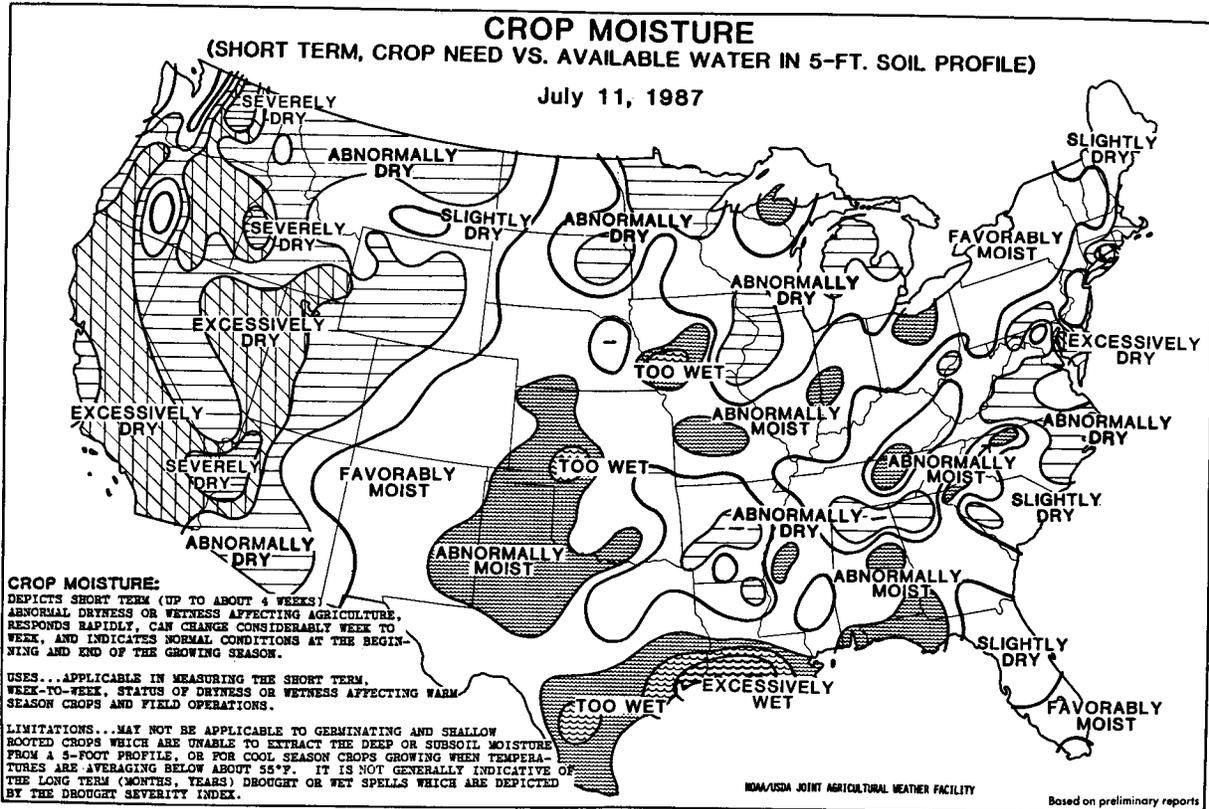
HIGHLIGHTS: Warm, humid air in eastern United States, being fed moisture from the Gulf of Mexico, spawned numerous thunderstorms. The heaviest thundershowers and severe weather occurred in the eastern half of the northern Great Plains, the Ohio Valley, and the Northeast. Isolated downpours and severe weather covered the rest of the East. Early in the week, afternoon temperatures were in the high nineties through the northern Plains, but much cooler weather pushed southward at midweek. Later, temperatures in the high nineties reached from Georgia to New Jersey. Much cooler air pushed into the northern Rockies at week's end and triggered moderate rainshowers. Average temperatures were warmer than normal east of the Mississippi River and cooler in most of the West, much cooler in the northern Rockies.

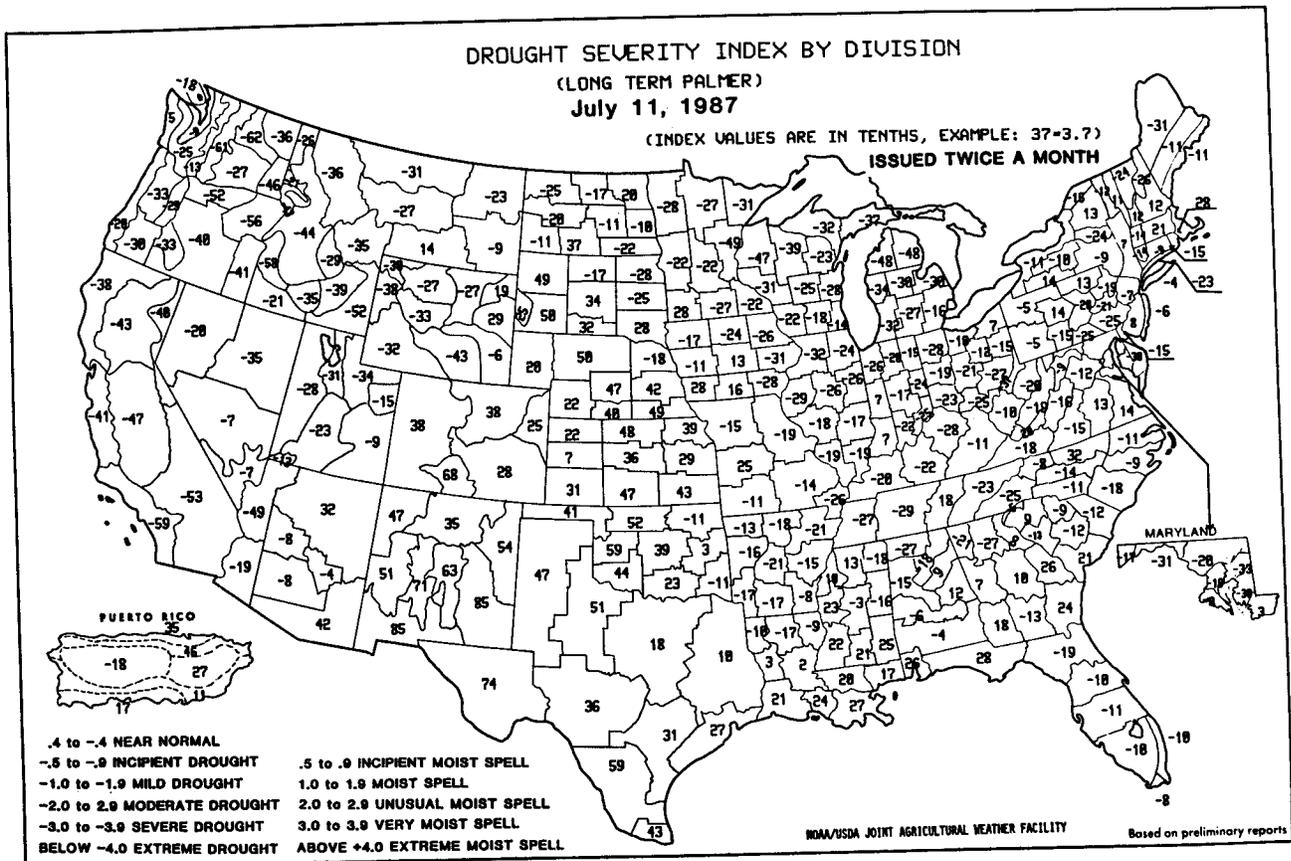
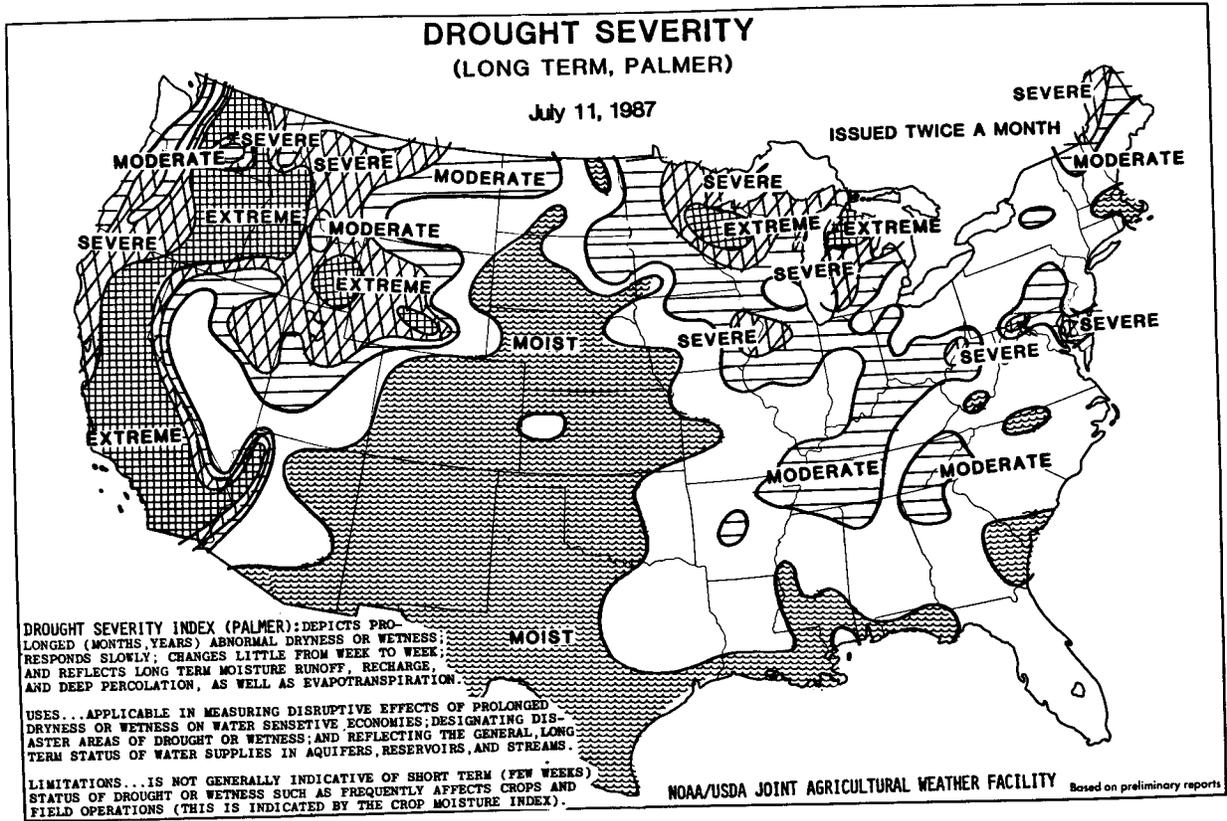
SUNDAY...Thunderstorms moved from Kansas into Missouri. Isolated severe storms dotted the middle and upper Mississippi Valley, the central and western Great Lakes, and the Ohio Valley. Scattered thunderstorms wandered through the Southeast. Showers moved through the Northwest to the central Great Plains. Seasonable temperatures covered most areas, but the northern Plains was warming.

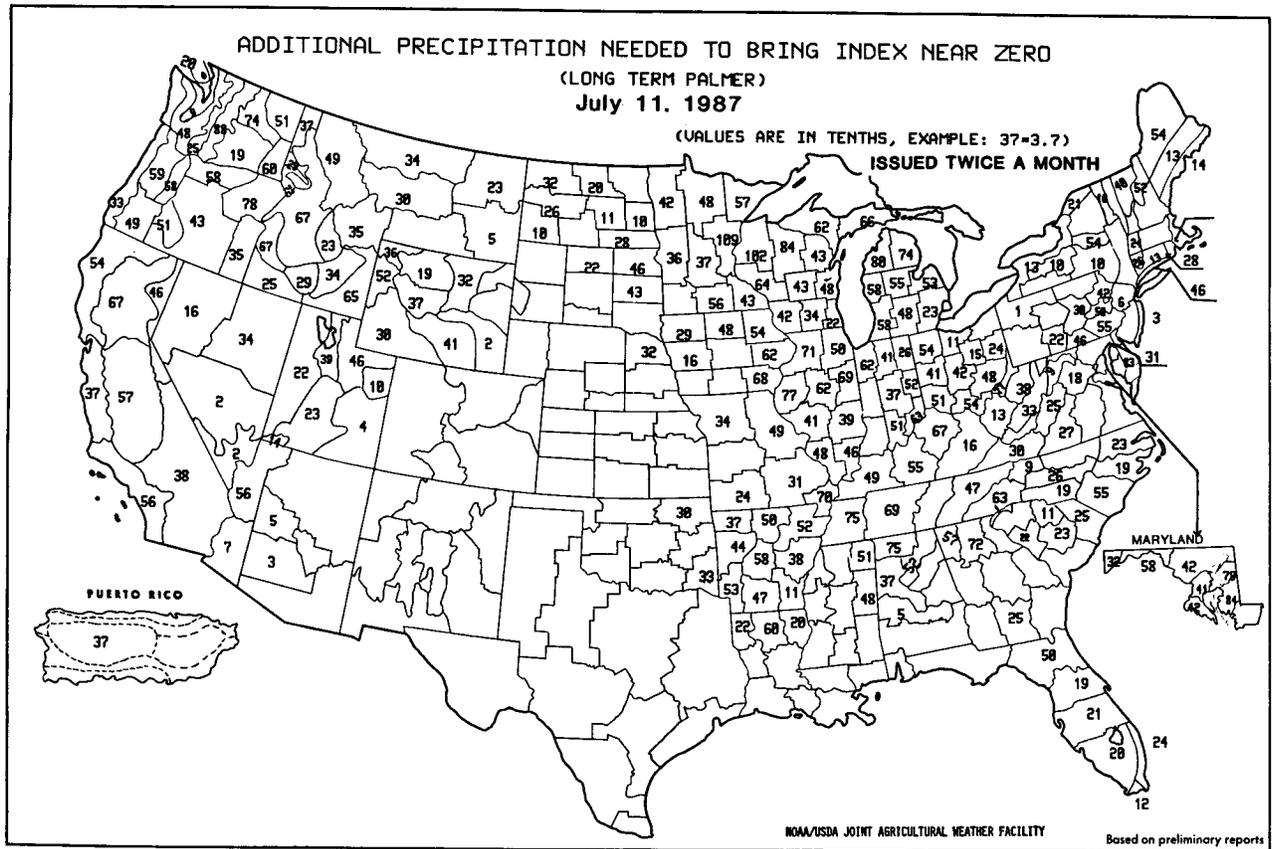
MONDAY...Heavy thunderstorms covered most of Nebraska. Lighter storms reached through the Missouri Valley and from the upper and middle Mississippi Valley, and eastward to New York and the Mid-Atlantic States. Thunderstorms were also heavier in the Southeast, the southern Appalachians, and the gulf coast. Afternoon temperatures rose to over 95 degrees in parts of the northern Plains.

Contents	Page
National Weather Summary	1
Total Precipitation	2
Crop Moisture & Crop Moisture Index	3
Drought Severity & Drought Severity Index	4
Precipitation Needed to End Drought & North American Satellite Image	5
Average Temperature & Departure	6
Extreme Maximum Temperature & Pan Evaporation	7
Total Growing Degree Days & Departure	8
National Weather Data for Selected Cities	9
Cooling Degree Days Summary Table	12
National Agricultural Summary	13
Crop Progress & Condition Tables	14
State Summaries of Weather and Agriculture	16
Global Weather Satellite Image	22
International Weather and Crop Summary, Includes Monthly Maps	23
Indian Monsoon	35
Subscription and Mailing Permit Information	36

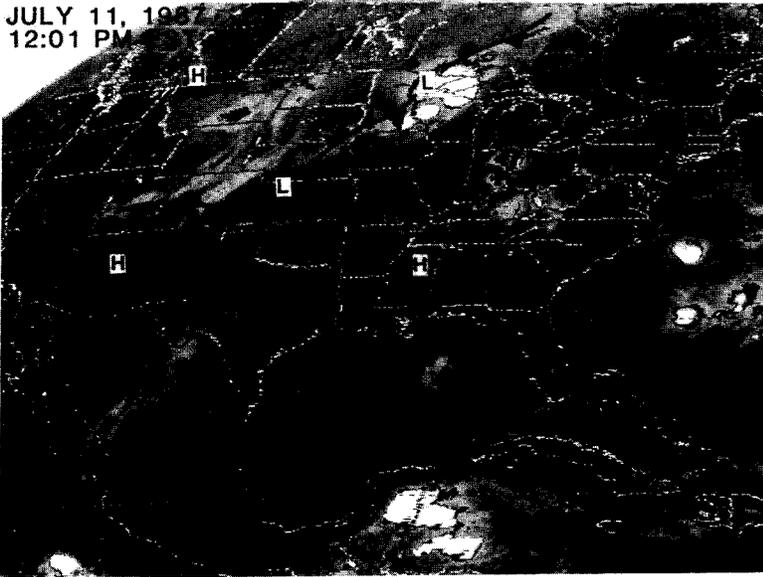






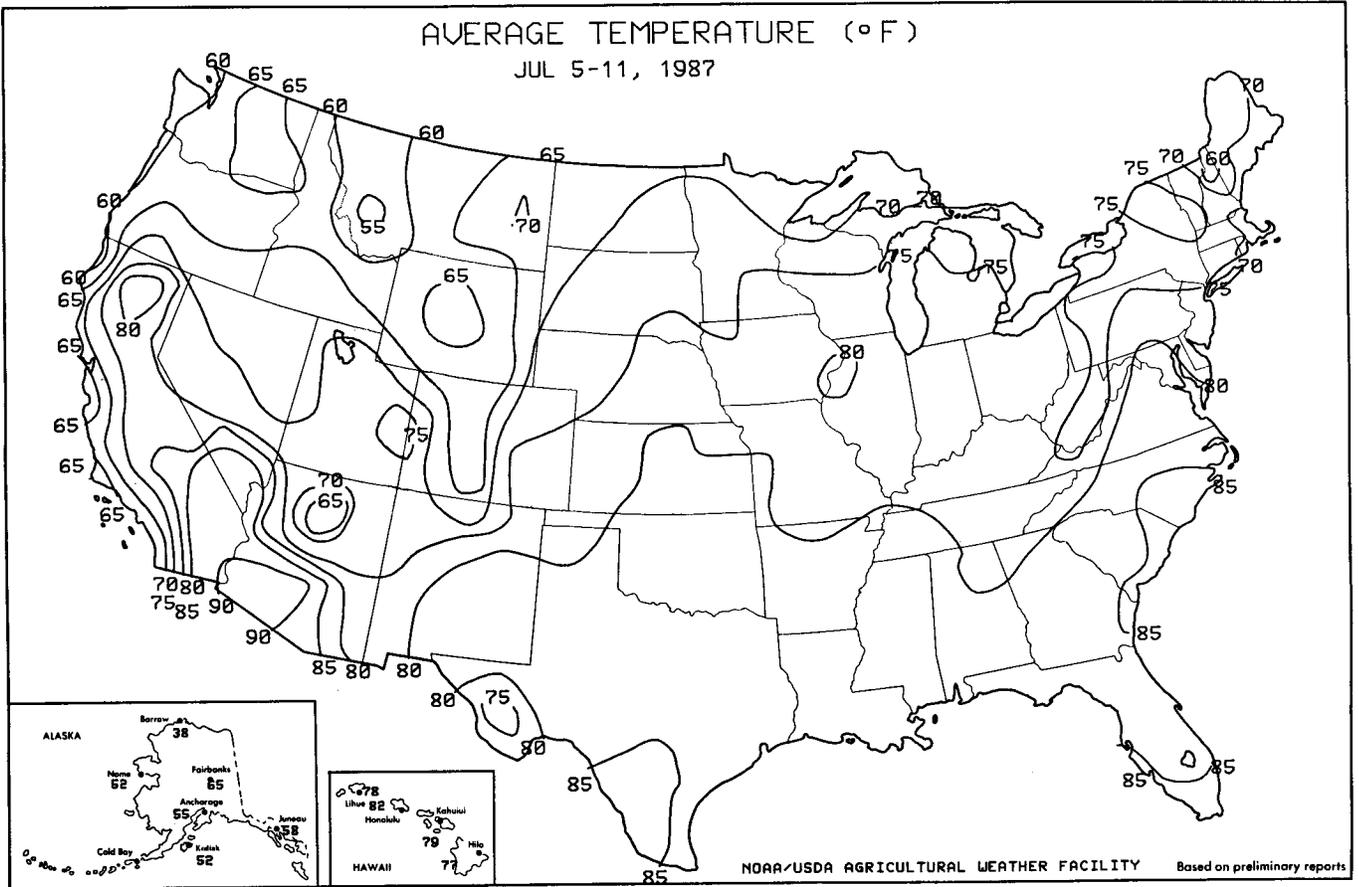


17:01 11JUL87 29A-Z 0090-1640 EDI
 JULY 11, 1987
 12:01 PM

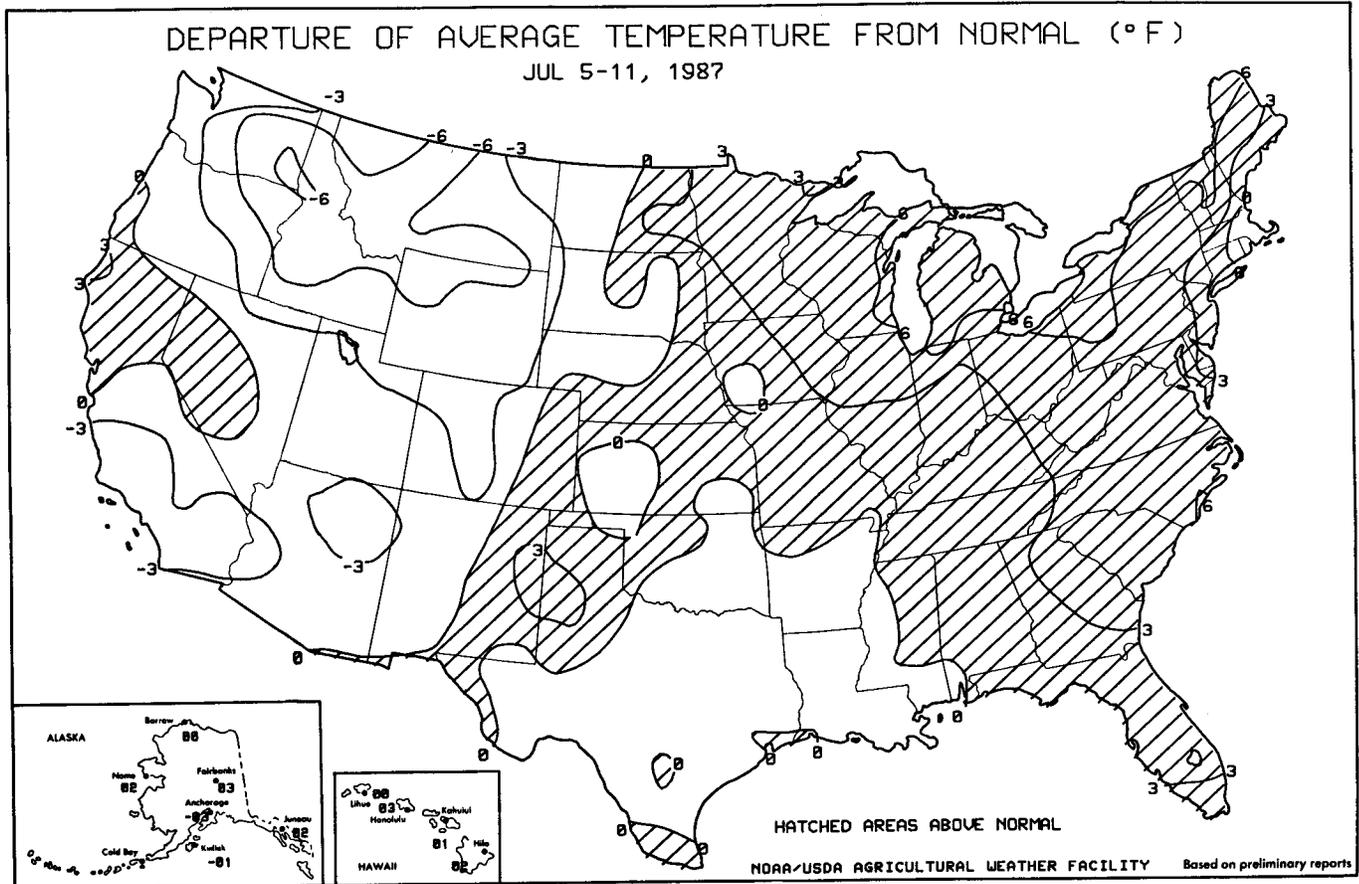


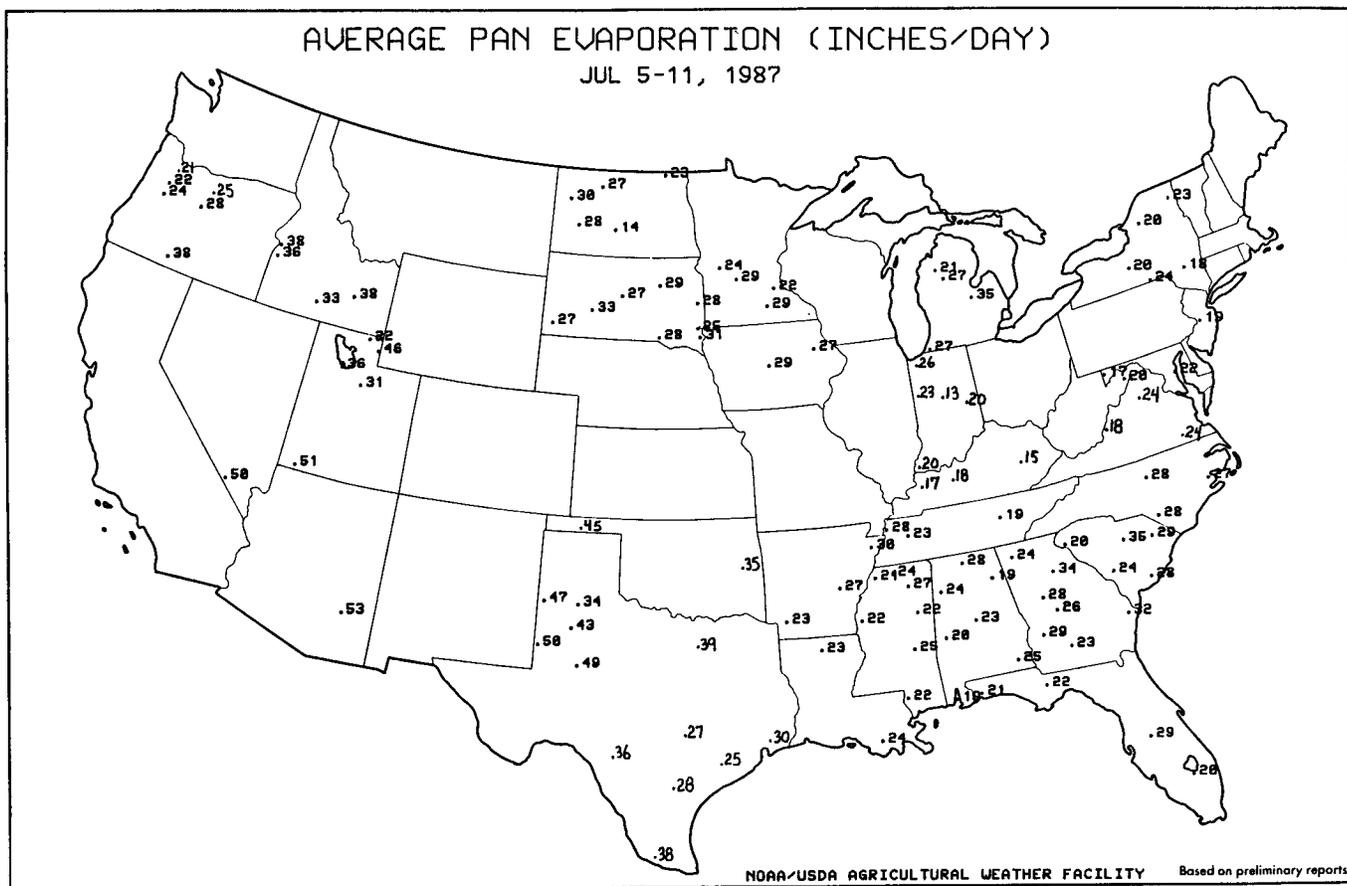
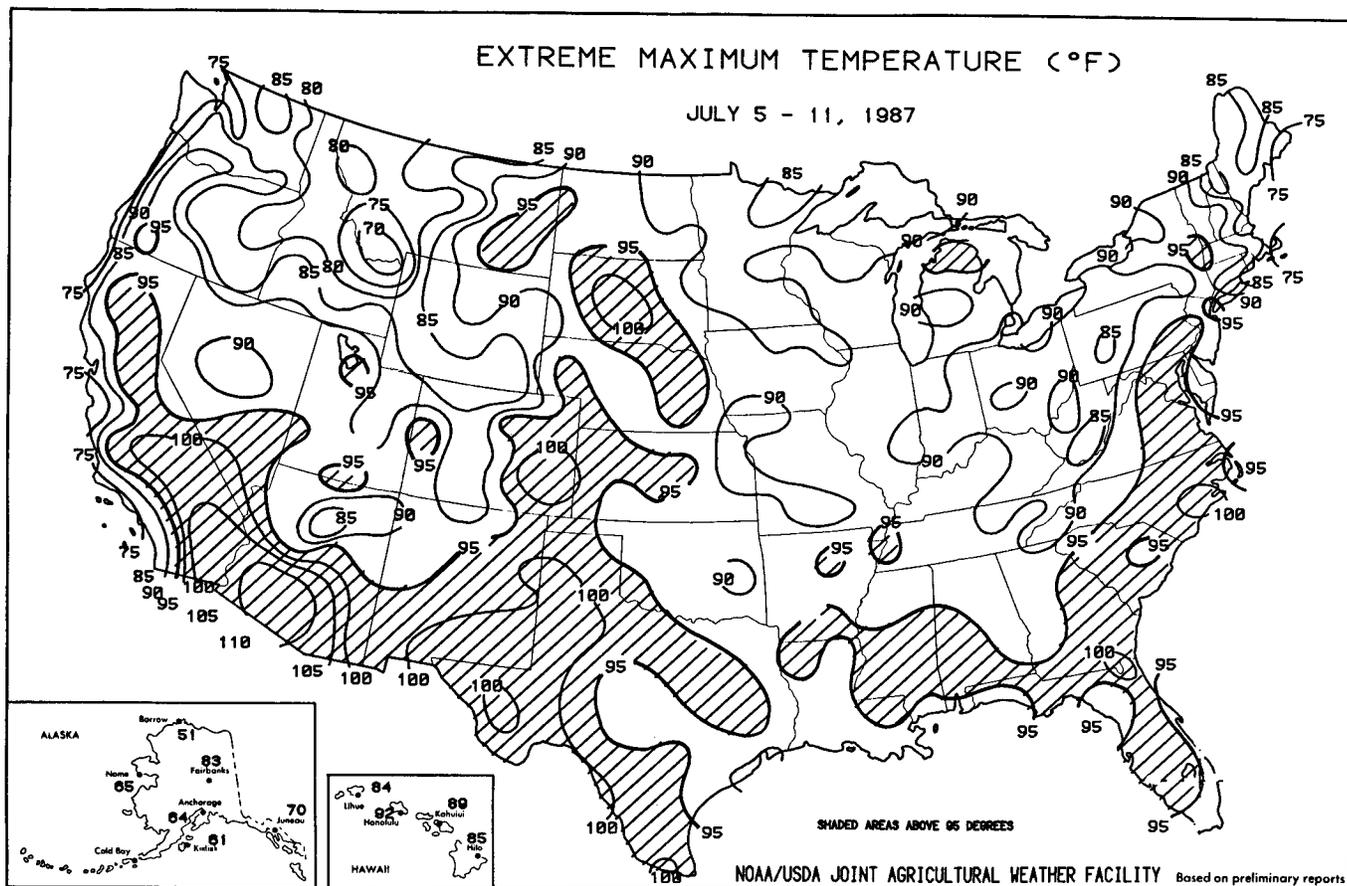
SHOWERS AND THUNDERSTORMS
 EXTEND FROM THE NORTHERN ROCKIES
 TO THE UPPER MISSISSIPPI VALLEY
 IN CONJUNCTION WITH A STATIONARY
 FRONTAL ZONE.

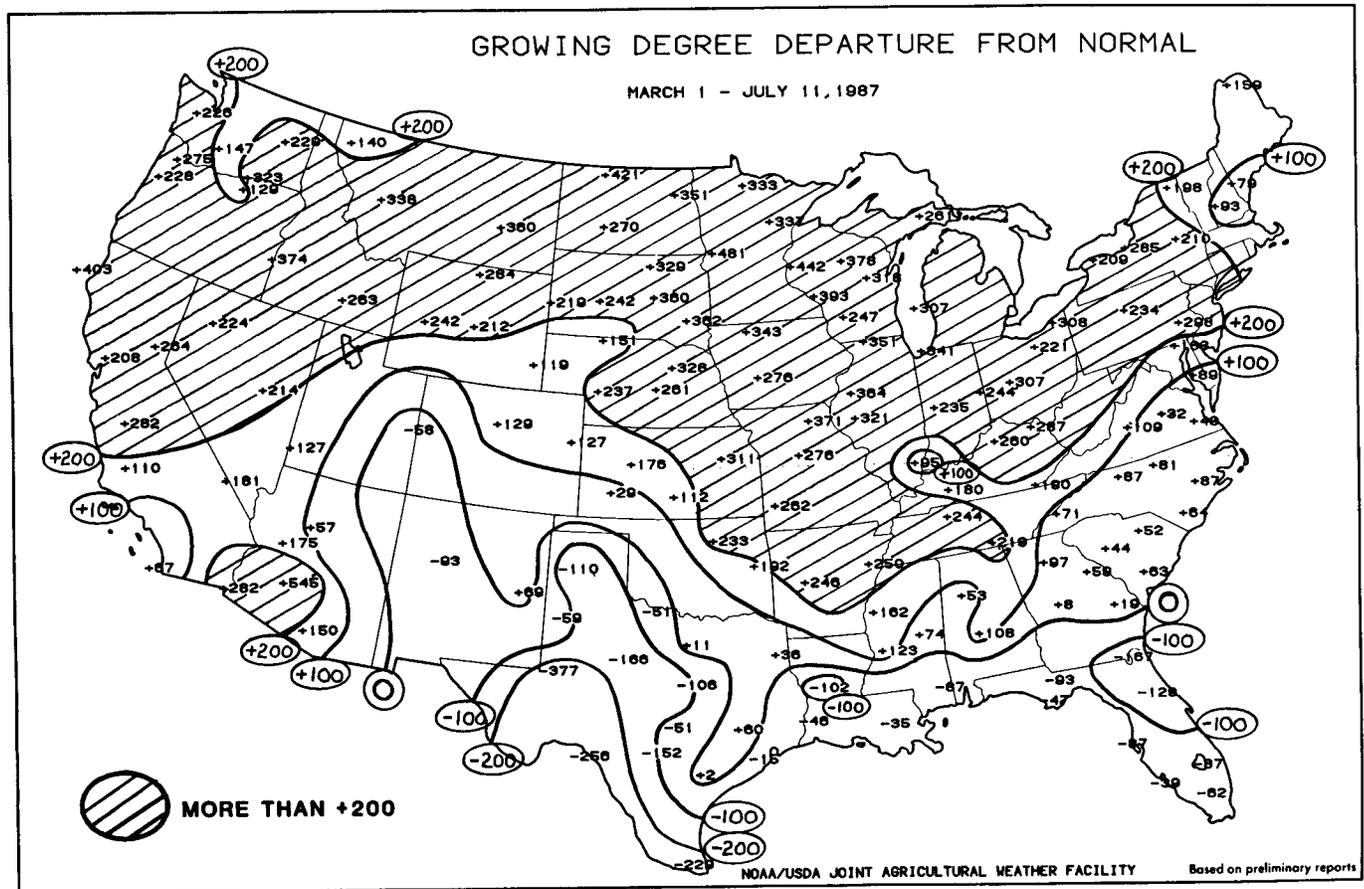
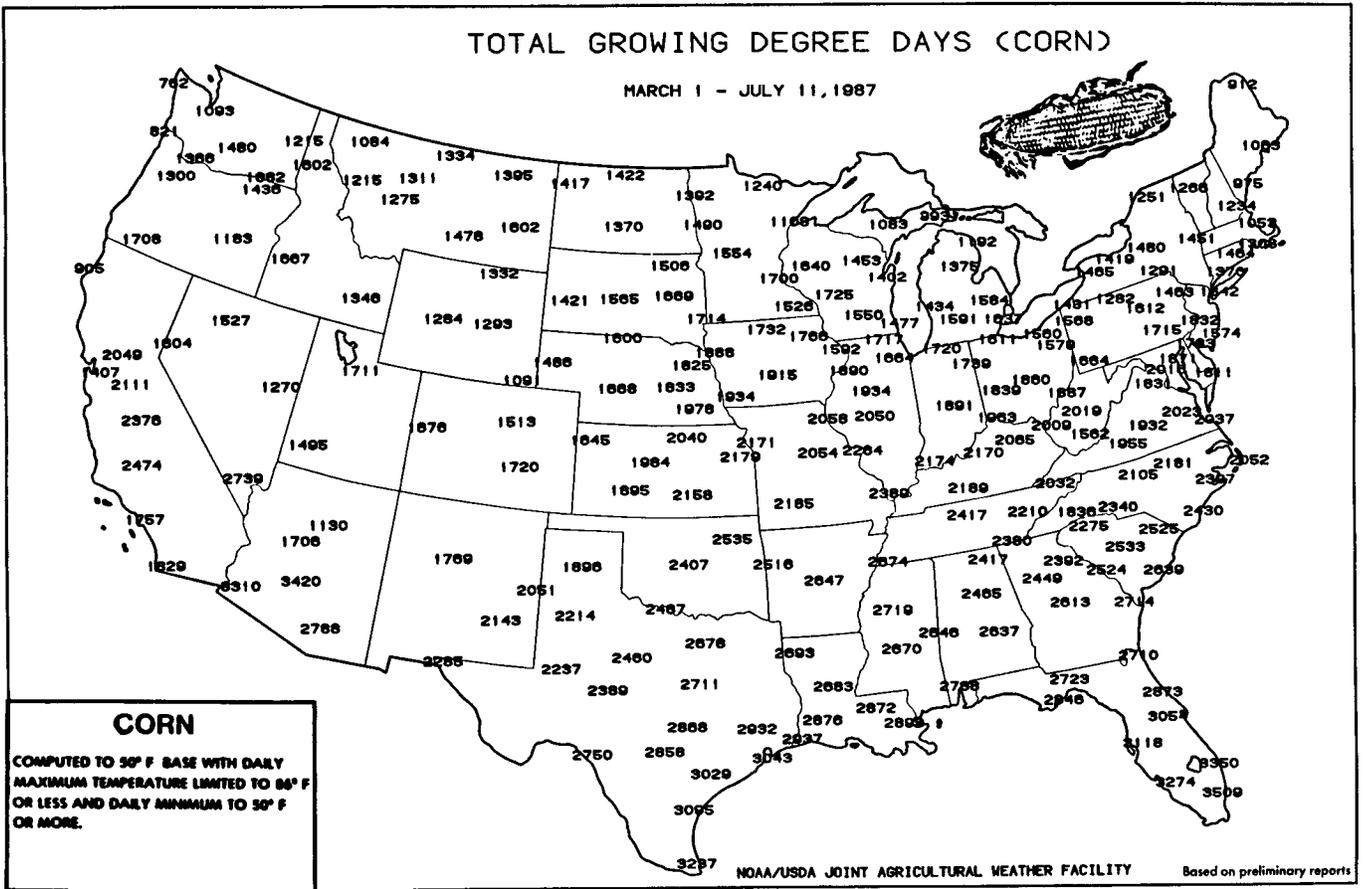
THUNDERSTORMS DEVELOP ALONG
 A SQUALL LINE IN THE OHIO VALLEY.



Point values may differ on these computerized maps from the reported values in the tables.







National Weather Data for Selected Cities

Weather Data for the Week Ending July 11, 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		PRECIPITATION		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
AL BIRMINGHAM	91	69	94	67	80	0	.2	-1.0	.2	5.5	100	26.1	83	97	54	6	0	1	0	
MOBILE	89	73	96	70	81	-1	1.2	-1.5	.8	10.0	131	42.3	123	97	60	5	0	3	1	
MONTGOMERY	93	71	95	69	82	1	.1	-1.0	.1	9.5	185	36.8	131	98	53	7	0	1	0	
AK ANCHORAGE	60	49	64	43	55	-4	.2	-2.2	.1	1.3	74	5.0	96	98	60	0	0	4	0	
BARROW	44	33	51	30	38	0	.2	.1	.1	.4	66	.8	53	98	67	0	2	2	0	
FAIRBANKS	76	56	83	50	66	4	.1	-1.3	.1	1.2	61	2.2	53	66	29	0	1	1	0	
JUNEAU	64	52	70	51	58	3	.4	-1.5	.4	6.4	150	20.9	98	87	55	0	2	3	0	
KODIAK	57	47	61	44	52	-1	.1	-1.7	.1	17.0	321	46.2	160	96	75	0	3	0	0	
NOME	56	48	65	45	52	2	.2	-1.4	.0	.8	43	3.2	67	95	74	0	2	0	0	
AZ PHOENIX	108	78	110	76	93	1	.0	-1.1	.0	.3	3	3.2	113	25	9	7	0	0	0	
PRESCOTT	90	55	93	50	72	0	.0	-1.6	.0	.2	22	4.9	65	34	7	4	0	0	0	
TUCSON	105	68	107	64	86	0	.0	-1.5	.0	.2	16	4.8	135	25	8	7	0	0	0	
YUMA	105	77	107	74	91	-2	.0	.0	.0	.0	.4	48	39	13	7	0	0	0	0	
AR FORT SMITH	91	73	92	69	82	0	.0	-1.7	.0	3.1	65	20.6	94	95	54	5	0	0	0	
LITTLE ROCK	90	72	93	69	81	-1	.0	-1.8	.0	3.4	68	20.6	74	85	59	4	0	0	0	
CA BAKERSFIELD	94	64	97	58	79	-5	.0	.0	.0	.3	517	4.0	103	64	24	6	0	0	0	
EUREKA	64	55	66	54	60	4	.0	.0	.0	.3	44	17.7	79	91	72	0	0	0	0	
FRESNO	94	64	99	59	79	-1	.0	.0	.0	.0	14	6.6	95	67	22	7	0	0	0	
LOS ANGELES	71	61	75	60	66	-2	.0	.0	.0	.1	.0	2.9	35	93	68	0	0	0	0	
REDDING	98	69	102	60	84	1	.0	-1.1	.0	.0	0	19.1	77	47	18	7	0	0	0	
SACRAMENTO	93	59	99	55	76	0	.0	.0	.0	.0	0	8.8	82	82	27	4	0	0	0	
SAN DIEGO	70	62	73	61	66	-4	.0	.0	.0	.0	0	5.1	83	81	67	0	0	0	0	
SAN FRANCISCO	73	55	77	54	64	2	.0	.0	.0	.0	0	8.5	69	85	50	0	0	0	0	
CO DENVER	90	57	96	53	73	1	.0	-1.4	.0	3.6	160	12.5	141	75	21	3	0	1	0	
GRAND JUNCTION	92	61	96	57	77	-2	.2	.2	.2	.5	85	5.8	151	40	12	6	0	1	0	
PUEBLO	96	58	101	55	77	1	.0	-1.4	.0	1.5	84	6.3	117	70	14	6	0	1	0	
CT BRIDGEPORT	80	67	89	63	74	1	.3	-1.4	.2	2.1	53	18.1	85	92	64	0	2	0	0	
HARTFORD	85	64	94	58	75	1	.0	-1.6	.0	4.6	104	23.1	102	97	54	3	0	2	1	
DC WASHINGTON	93	75	99	72	84	5	1.8	.9	1.7	5.7	124	19.1	97	93	45	5	0	2	1	
FL APALACHICOLA	93	75	96	73	84	2	.9	-1.3	.7	6.5	91	29.5	120	96	57	7	0	2	1	
DAYTONA BEACH	91	73	94	71	82	1	.0	-1.3	.0	4.3	51	24.0	106	98	60	5	0	0	0	
JACKSONVILLE	95	73	96	70	84	2	.2	-1.1	.1	5.2	65	22.9	91	97	51	7	0	3	0	
KEY WEST	90	81	93	79	86	1	.3	-1.5	.1	4.6	73	18.4	114	84	62	6	0	4	0	
MIAMI	92	79	92	77	85	3	.5	-1.0	.3	6.4	56	19.2	71	84	55	7	0	3	0	
ORLANDO	95	74	96	73	84	2	.8	-1.1	.4	5.8	58	22.1	90	97	49	7	0	3	0	
TALLAHASSEE	94	70	96	69	82	1	2.7	.7	1.8	16.2	170	44.8	132	99	51	7	0	3	2	
TAMPA	93	74	95	73	84	2	1.0	-1.6	.7	5.6	73	25.7	120	93	56	7	0	3	1	
WEST PALM BEACH	90	79	91	77	84	2	3.3	-1.2	.3	8.2	80	26.6	97	91	63	4	0	1	0	
GA ATLANTA	91	71	93	67	81	3	2.7	1.6	2.7	11.0	218	32.0	112	94	49	5	0	1	1	
AUGUSTA	95	72	97	71	84	3	.0	-1.0	.0	6.0	112	28.8	114	97	46	7	0	0	0	
Macon	94	72	96	70	83	2	.6	-1.5	.6	5.9	111	27.6	104	97	47	7	0	1	1	
SAVANNAH	95	74	97	71	85	4	3.2	1.5	3.2	12.0	146	34.7	133	94	47	7	0	1	1	
HI HILO	83	70	85	69	77	1	1.1	-1.7	.5	15.7	178	58.9	87	95	66	0	7	0	0	
HONOLULU	90	75	92	73	83	3	.0	-1.1	.0	.5	72	3.1	23	81	48	4	0	1	0	
KAHULUI	86	71	89	69	79	1	.0	-1.0	.0	.1	31	12.4	107	84	55	0	0	0	0	
LIHUE	83	74	84	71	78	0	.7	.3	.7	2.2	96	13.0	57	91	70	0	3	1	0	
ID BOISE	80	53	86	44	67	-7	.1	.0	.1	.7	62	5.7	81	69	23	0	1	0	0	
LEWISTON	78	57	82	52	67	-6	.8	.6	.8	2.4	148	6.0	80	72	29	0	1	1	0	
POCATELLO	78	52	85	41	65	-5	.1	.0	.1	.9	75	6.0	93	71	27	0	1	0	0	
IL CHICAGO	89	69	93	68	79	7	1.1	.3	.5	3.3	60	12.1	67	95	53	6	5	1	0	
MOLINE	91	70	94	65	80	5	.5	-1.6	.2	2.1	34	11.3	57	94	55	5	0	4	0	
PEORIA	89	69	93	65	79	4	.2	-1.7	.1	3.5	65	11.3	60	93	62	1	0	3	0	
QUINCY	87	68	90	65	77	1	.7	-1.3	.4	3.7	67	12.4	63	93	62	1	0	3	0	
ROCKFORD	87	68	91	65	78	5	.8	-1.2	.3	3.9	63	13.3	69	96	61	2	0	5	0	
SPRINGFIELD	87	70	91	64	79	2	.5	-1.3	.3	7.6	159	15.0	81	94	59	2	0	4	0	
IN EVANSVILLE	88	71	92	68	80	2	.8	-1.1	.5	7.2	146	19.8	83	98	65	2	0	3	1	
FORT WAYNE	84	68	87	65	76	3	1.4	.6	1.0	7.7	159	17.2	91	97	66	0	4	4	1	
INDIANAPOLIS	85	68	90	66	77	2	1.0	.0	1.0	10.2	185	19.4	90	97	66	1	0	4	1	
SOUTH BEND	86	70	90	64	78	6	1.0	.2	.4	4.6	87	15.6	80	96	61	2	0	3	0	
IA DES MOINES	85	68	94	66	77	1	2.5	1.8	.7	4.7	89	16.2	97	95	63	2	0	5	2	
SIOUX CITY	86	65	90	61	76	0	1.8	1.0	1.1	4.9	93	16.2	114	98	60	1	0	6	1	
WATERLOO	87	68	90	65	78	5	2.5	1.4	1.3	5.1	86	13.5	77	90	53	1	0	3	2	
KS CONCORDIA	91	70	95	63	80	2	1.4	.6	.9	4.9	89	23.7	157	86	49	4	0	3	1	
DODGE CITY	90	67	93	61	79	-1	.8	.1	.7	6.2	151	16.0	138	88	44	4	0	3	1	
GOODLAND	91	62	99	57	76	1	.4	-1.2	.2	8.0	223	15.9	169	88	33	4	0	3	0	
TOPEKA	87	71	89	65	79	1	1.5	.5	.9	6.4	95	22.4	125	94	65	0	4	1	1	
WICHITA	91	72	92	65	81	1	.9	.0	.9	6.1	114	23.6	155	91	53	6	0	1	1	
KY BOWLING GREEN	87	69	92	64	78	0	5.1	4.1	2.4	9.8	159	25.7	90	100	64	1	0	4	3	
LEXINGTON	86	68	90	66	77	2	.5	-1.6	.2	7.9	131	20.0	77	95	61	1	0	5	0	
LOUISVILLE	88	70	91	67	79	1	.8	-1.2	.4	5.1	102	17.4	71	96	61	2	0	5	1	
LA ALEXANDRIA	89	72	93	70	81	-2	1.1	.0	.7	4.7	84	31.3	97	94	67	4	0	3	0	
BATON ROUGE	91	74	95	73	82	0	.7	-1.8	.3	6.6	123	33.3	111	97	60	5	0	3	0	
LAKE CHARLES	89	74	92	71	82	0	1.7	.5	.7	17.7	303	38.7	147	97	65	4	0	4	2	
NEW ORLEANS	90	74	96	71	82	0	.7	-1.8	.4	18.8	273	45.1	144	99	62	3	0	3	0	

Based on 1951-80 normals.

Weather Data for the Week Ending July 11, 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		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	90	71	96	69	81	-2	.7	-2	.2	6.2	130	24.8	98	97	59	5	0	4	0
ME CARIBOU	84	60	91	49	72	-7	.3	-6	.2	4.1	90	12.9	76	98	51	1	0	2	0
PORTLAND	77	60	83	56	69	1	T	-6	T	5.3	130	23.8	106	98	65	0	0	0	0
MD BALTIMORE	89	73	95	68	81	4	.1	-8	0	6.0	118	21.0	98	96	57	4	0	2	0
SALISBURY	89	70	94	62	79	3	T	-9	T	3.4	68	21.7	97	97	61	4	0	1	0
MA BOSTON	76	63	80	57	70	-3	T	-6	T	3.3	87	26.9	118	96	67	0	0	0	0
CHATHAM	68	56	74	54	62	-5	0	0	0	2.6	69	28.9	121	94	80	0	0	0	0
MI ALPENA	84	60	95	47	72	6	.8	-1	.4	4.2	99	9.8	68	100	62	2	2	3	0
DETROIT	86	69	91	61	78	6	.7	0	.6	8.0	178	17.7	108	96	60	1	1	2	1
FLINT	89	67	93	55	78	8	.7	0	.5	2.3	54	9.4	63	100	57	4	0	2	0
GRAND RAPIDS	87	67	91	57	77	6	.8	-2	.8	4.4	92	10.0	58	98	53	3	0	4	1
HOUGHTON LAKE	86	63	92	52	74	8	.9	-2	.7	1.9	45	6.9	49	94	52	1	0	3	1
LANSING	86	68	90	60	77	7	2.1	1.5	1.3	5.4	-110	10.6	69	95	57	1	0	4	1
MARQUETTE	82	58	87	47	70	5	2.7	2.0	1.0	5.1	118	16.4	108	97	59	0	0	5	2
MUSKEGON	84	67	88	58	76	6	.1	-4	0	1.4	42	10.5	68	97	59	0	0	2	0
SAULT ST. MARIE	82	59	88	49	70	7	.7	0	.4	3.7	85	10.6	69	100	59	0	0	3	0
MN ALEXANDRIA	84	64	86	58	74	4	.8	-1	.3	2.8	55	9.5	73	92	43	0	0	5	0
DULUTH	79	59	86	55	69	5	.6	-3	.5	2.1	40	7.8	54	100	60	0	0	4	1
INT'L FALLS	82	59	85	52	70	4	.1	-8	.1	1.8	35	6.7	57	92	45	0	0	1	0
MINNEAPOLIS	86	67	88	65	77	4	1.4	.6	.9	3.4	64	6.9	50	95	50	0	0	5	1
ROCHESTER	84	65	88	63	74	4	2.1	1.2	.7	5.8	113	11.0	77	99	62	0	0	7	3
MS GREENWOOD	90	73	94	71	81	0	.2	-8	.2	5.4	108	27.9	89	95	60	4	0	2	0
JACKSON	93	71	97	70	82	0	T	-1.0	T	6.3	135	32.9	110	97	49	6	0	0	0
MERIDIAN	93	71	96	68	82	1	.1	-1.1	.1	8.5	158	39.2	126	97	52	6	0	1	0
MO CAPE GIRARDEAU	89	70	94	67	80	-	3.7	2.9	1.4	10.7	222	22.8	91	97	65	4	0	3	3
COLUMBIA	88	67	93	64	78	0	3.2	2.4	2.5	5.9	122	15.4	76	97	62	5	0	4	1
KANSAS CITY	88	71	91	66	80	0	1.4	.4	1.1	6.0	97	18.9	99	93	63	4	0	2	1
SAINT LOUIS	88	70	93	65	79	1	3.9	3.0	3.1	8.2	162	17.5	91	93	63	3	0	3	1
SPRINGFIELD	89	70	90	69	80	2	.2	-7	.2	6.3	104	25.2	117	96	58	1	0	1	0
MT BILLINGS	77	54	92	48	66	-6	1.0	.8	.7	2.0	85	8.1	87	80	33	1	0	4	1
GLASGOW	81	54	92	47	68	-2	.1	-3	.1	1.3	42	5.0	78	79	24	1	0	2	0
GREAT FALLS	73	48	82	44	61	-8	.4	T	.4	2.0	62	7.3	75	73	26	0	0	1	0
HAVRE	75	49	85	40	62	-7	T	-3	T	2.4	87	5.1	71	74	28	0	0	1	0
HELENA	70	50	78	47	60	-7	.8	.5	.4	2.6	105	6.4	92	77	37	0	0	3	0
KALISPELL	69	49	78	44	59	-5	.1	-1	.1	1.3	50	7.5	85	88	34	0	0	2	0
MILES CITY	83	58	97	50	70	-3	.4	0	.3	1.5	43	6.7	76	77	28	1	0	3	0
MISSOULA	72	49	81	44	60	-6	.2	0	.1	1.8	81	5.4	70	87	37	0	0	4	0
NE GRAND ISLAND	90	65	97	60	78	1	1.0	.3	.4	2.4	50	16.1	116	93	44	4	0	4	1
LINCOLN	89	68	94	64	78	1	1.1	.4	.6	5.9	117	19.2	126	92	54	4	0	4	2
NORFOLK	89	64	96	57	76	1	1.9	1.1	.7	2.5	45	17.1	120	95	48	3	0	5	2
NORTH PLATTE	88	61	92	57	74	1	1.7	1.0	.9	6.3	128	13.8	115	94	45	3	0	4	2
OMAHA	87	66	93	65	77	-1	4.1	3.3	1.2	6.0	111	19.5	121	92	63	2	0	6	5
SCOTTSBLUFF	87	56	95	51	72	-2	.5	0	.5	4.8	127	16.3	169	90	28	2	0	2	0
VALENTINE	88	60	98	56	74	0	2.4	1.8	1.6	5.6	147	13.9	138	86	41	3	0	4	1
NV ELY	86	46	90	41	66	0	0	0	.1	.3	28	5.2	99	62	20	1	0	1	0
LAS VEGAS	103	76	106	73	89	0	0	0	.1	.1	72	3.3	174	25	9	7	0	0	0
RENO	89	53	93	47	71	2	0	-1	0	1.2	280	6.0	136	58	16	4	0	0	0
WINNEMUCA	87	51	91	44	69	-3	T	-1	T	.5	48	6.7	142	52	15	2	0	0	0
NH CONCORD	85	63	90	55	74	4	1.3	.7	1.3	8.7	219	20.9	115	96	51	2	0	1	1
NJ ATLANTIC CITY	85	67	93	60	76	2	1.3	.5	.9	6.0	149	26.0	123	98	62	2	0	3	1
NM ALBUQUERQUE	94	62	95	57	78	-1	0	-3	0	.1	15	3.0	102	25	8	7	0	0	0
CLOVIS	96	64	98	58	80	3	T	-7	T	4.4	121	9.6	121	82	22	7	0	0	0
ROSMELL	100	66	102	60	83	2	.4	.1	.2	4.1	271	8.3	219	70	19	7	0	2	0
NY ALBANY	86	65	95	59	76	5	.2	-4	.1	4.7	109	17.0	94	99	53	3	0	3	0
BINGHAMTON	83	65	87	59	74	5	1.7	.9	1.6	6.7	141	17.9	95	97	60	0	0	2	1
BUFFALO	85	69	89	59	77	6	T	-6	T	8.7	239	20.9	117	91	59	0	0	1	0
NEW YORK	85	70	92	65	78	1	1.3	.5	1.2	9.2	212	25.8	119	83	49	3	0	2	1
ROCHESTER	87	66	90	57	77	6	3.8	3.3	3.3	8.0	217	17.3	108	97	58	1	0	3	1
SYRACUSE	88	65	92	57	76	6	.4	-5	.2	6.1	124	16.3	83	97	55	3	0	3	0
NC ASHEVILLE	87	65	89	62	76	3	.4	-5	.2	10.6	211	28.7	121	99	53	0	0	2	0
CHARLOTTE	94	72	96	70	83	5	T	-8	T	3.8	76	20.9	87	92	41	7	0	3	0
GREENSBORO	92	71	94	68	82	5	.6	-4	.6	5.4	100	27.7	122	94	47	6	0	1	1
HATTERAS	90	75	94	70	82	5	.1	-1.1	.1	3.8	63	34.0	130	98	63	5	0	1	0
NEW BERN	96	74	100	72	85	6	1.6	.1	1.3	9.3	126	30.2	114	92	50	7	0	3	1
RALEIGH	94	72	98	71	83	6	.2	-7	.2	2.0	54	23.6	106	95	45	7	0	2	0
WILMINGTON	96	76	99	72	86	6	.8	-9	.8	6.2	75	23.7	89	95	49	7	0	1	1
ND BISMARCK	84	56	93	50	70	0	2.0	1.5	.8	3.5	92	10.9	120	94	42	2	0	4	2
FARGO	84	62	91	56	73	3	.3	-5	.2	1.3	29	6.5	60	95	45	1	0	3	0
GRAND FORKS	83	60	89	56	72	3	.9	-2	.3	2.4	62	8.3	90	96	44	0	0	5	0
WILLISTON	80	56	95	48	68	-2	.7	.2	.4	1.4	40	5.8	73	85	39	1	0	2	0
OH AKRON-CANTON	85	67	89	57	76	5	.1	-9	0	5.8	124	17.5	90	100	63	0	0	0	0
CINCINNATI	86	68	88	66	77	2	1.6	.6	1.3	8.0	142	20.7	91	95	62	0	0	3	1
CLEVELAND	86	69	91	55	78	6	T	-8	T	9.7	208	21.4	114	97	59	1	0	0	0
COLUMBUS	87	69	90	65	78	4	.4	-5	.3	6.4	117	15.0	73	97	62	1	0	3	0

based on 1951-80 normals.

Weather Data for the Week Ending July 11, 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 °F		PRECIPITATION	
																		°F	°F	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	86	68	90	65	77	2	1.1	.3	.6	7.0	140	17.2	87	94	63	1	0	3	1		
TOLEDO	85	67	88	57	76	4	.5	-.2	.4	6.4	138	14.7	87	99	64	0	0	4	0		
YOUNGSTOWN	86	66	89	52	76	6	.6	-.3	.3	9.1	185	20.3	103	99	58	0	0	4	0		
OK OKLAHOMA CITY	90	74	91	71	82	0	0	-.7	-.7	7.8	157	29.0	165	88	52	4	0	0	0		
TULSA	90	77	92	75	83	1	0	-.9	-.9	4.6	77	24.6	115	87	54	4	0	0	0		
OR ASTORIA	66	53	72	50	59	0	.5	.2	.3	1.2	41	32.0	88	96	66	0	0	4	0		
BURNS	75	40	80	27	58	-10	0	0	0	.9	105	6.0	94	***	***	0	1	0	0		
MEDFORD	86	54	96	48	70	-1	-.1	0	0	.1	16	8.0	78	77	22	1	0	0	0		
PENDLETON	78	55	86	51	66	-7	-.7	0	0	.5	66	5.3	80	68	27	0	0	1	0		
PORTLAND	74	57	91	55	65	-2	.2	.1	.1	.3	21	18.3	93	87	47	1	0	2	0		
SALEM	76	51	90	44	64	-2	.1	0	.1	.4	30	19.3	90	94	41	1	0	2	0		
PA ALLENTOWN	86	68	95	61	77	3	.2	-.7	.2	5.8	120	19.6	87	95	59	2	0	3	0		
ERIE	83	70	86	60	76	7	1.1	.3	1.0	6.9	134	18.0	94	90	61	0	0	3	1		
HARRISBURG	88	70	95	66	79	4	.3	-.5	.3	4.1	84	17.4	83	94	54	3	0	2	0		
PHILADELPHIA	88	71	95	66	80	3	.6	-.3	.3	4.7	89	18.4	85	94	56	3	0	3	0		
PITTSBURGH	85	68	88	59	76	5	.4	-.4	.4	8.5	175	21.6	106	95	56	0	0	1	0		
SCRANTON	84	65	90	58	75	3	2.9	2.2	1.9	8.5	182	19.6	111	97	62	1	0	3	2		
RI PROVIDENCE	80	62	89	55	71	-1	.4	-.3	.3	2.8	74	22.2	96	98	66	0	0	2	0		
SC CHARLESTON	94	75	97	70	84	4	.3	-1.3	.3	6.4	70	27.4	101	95	51	7	0	1	0		
COLUMBIA	97	71	99	65	84	3	.5	-.7	.5	8.7	139	29.3	108	92	41	7	0	1	0		
FLORENCE	96	74	99	72	85	5	.4	-.9	.4	5.0	75	21.7	91	93	45	7	0	1	0		
GREENVILLE	92	70	94	65	81	3	1.8	.7	1.8	9.5	159	30.1	104	98	49	7	0	1	1		
SD ABERDEEN	87	57	94	53	72	1	.8	.2	.7	1.6	38	6.9	64	97	36	1	0	2	1		
HURON	85	61	90	56	73	-1	1.2	-.6	.5	2.8	67	11.7	104	98	50	1	0	4	0		
RAPID CITY	85	55	90	49	70	-2	.3	-.2	.2	1.7	42	8.0	75	93	36	1	0	2	0		
SIOUX FALLS	88	64	92	60	76	2	2.4	1.8	.9	4.4	95	11.3	86	97	46	1	0	6	3		
TN CHATTANOOGA	91	70	94	68	80	2	1.0	0	.6	6.7	136	32.0	108	100	60	5	0	3	1		
KNOXVILLE	89	68	91	67	79	1	2.1	1.1	.7	6.6	119	25.6	94	100	56	5	0	6	3		
MEMPHIS	91	74	94	72	83	1	0	-.9	0	4.3	87	21.9	73	86	56	4	0	0	0		
NASHVILLE	90	71	93	67	81	2	.5	-.4	.3	4.2	83	17.2	61	98	57	4	0	2	0		
TX ABILENE	93	74	95	71	83	-1	0	-.5	0	1.8	56	12.9	109	82	40	7	0	0	0		
AMARILLO	94	66	99	61	80	1	.3	-.4	.3	3.6	80	11.5	113	82	31	6	0	1	0		
AUSTIN	92	75	94	72	84	-1	.6	-.1	.6	11.6	308	24.0	143	97	53	7	0	1	1		
BEAUMONT	90	75	92	72	83	0	1.2	-.1	.6	15.4	225	36.8	135	98	68	5	0	4	1		
BROWNSVILLE	92	76	94	73	84	0	.1	-.3	.1	4.9	149	13.0	128	96	54	6	0	2	0		
CORPUS CHRISTI	91	76	93	74	83	-1	1.1	-.5	.9	6.0	126	20.0	144	97	61	5	0	2	1		
DEL RIO	93	73	96	72	83	-3	.5	-.1	.5	6.3	270	16.7	204	80	40	6	0	1	1		
EL PASO	100	68	101	64	84	1	0	-.3	0	2.2	211	3.8	149	35	12	7	0	0	0		
FORT WORTH	94	75	96	72	84	-1	0	-.5	0	4.1	132	16.7	96	88	45	7	0	0	0		
GALVESTON	88	78	89	73	83	0	5.5	4.6	4.6	12.4	254	25.6	140	87	69	0	0	3	2		
HOUSTON	91	75	95	71	83	-1	2.6	1.8	2.2	13.4	234	26.9	114	95	59	4	0	5	1		
LUBBOCK	96	69	101	66	83	3	.3	-.3	.3	2.8	77	8.6	95	84	29	6	0	1	0		
MIDLAND	95	71	101	66	83	1	0	-.4	0	3.0	150	11.1	176	79	32	7	0	0	0		
SAN ANGELO	92	72	94	69	82	-2	0	-.3	0	3.3	143	22.7	259	83	44	6	0	0	0		
SAN ANTONIO	93	76	96	75	84	0	.3	-.1	.2	8.0	216	29.3	199	91	48	7	0	2	0		
VICTORIA	91	76	94	73	84	0	.9	-.3	.6	12.7	227	24.7	137	97	55	6	0	2	1		
WACO	95	74	97	72	85	-1	.6	-.2	.5	7.1	221	19.5	112	94	49	7	0	2	0		
WICHITA FALLS	93	74	95	72	84	-1	.1	-.4	.1	4.5	124	22.8	156	87	44	7	0	1	0		
UT BLANDING	89	55	91	50	72	-1	0	-.2	0	.1	12	5.1	100	41	16	4	0	0	0		
CEDAR CITY	89	56	93	50	73	-1	0	-.2	0	.1	16	4.9	96	36	14	2	0	0	0		
SALT LAKE CITY	86	62	95	54	74	-3	0	-.1	0	.2	19	7.9	85	60	20	1	0	2	0		
VT BURLINGTON	85	65	93	57	75	6	.3	-.5	.2	5.3	110	13.1	81	95	52	2	0	3	0		
VA NORFOLK	90	75	95	71	83	5	.5	-.6	.5	4.2	82	26.1	116	95	57	5	0	1	0		
RICHMOND	91	73	97	71	82	5	0	-.1	0	6.9	130	26.9	125	96	53	4	0	1	0		
ROANOKE	92	70	93	68	81	5	.2	-.5	.1	2.6	57	29.8	144	98	51	6	0	2	0		
WA COLVILLE	76	53	82	48	64	-3	.1	-.1	.1	2.2	125	10.6	114	85	47	0	0	2	0		
QUILLAYUTE	66	49	75	45	57	-1	.6	0	.3	2.9	78	54.1	99	99	62	0	0	4	0		
SEATTLE-TACOMA	71	53	85	50	62	-2	1.1	-.1	.1	.3	20	18.9	97	94	51	0	0	1	0		
SPOKANE	72	52	77	48	62	-7	1.0	.8	.7	1.8	129	8.4	91	87	34	0	0	3	1		
YAKIMA	79	49	85	40	64	-6	0	0	0	.1	8	3.9	90	85	30	0	0	0	0		
WV BECKLEY	83	64	84	62	74	5	.4	-.7	.2	5.8	103	24.7	106	97	58	0	0	4	0		
CHARLESTON	88	68	91	65	78	4	1.2	0	.4	7.2	141	21.6	95	99	61	1	0	5	0		
HUNTINGTON	88	67	89	64	78	2	2.4	1.4	1.2	5.3	104	21.9	97	99	63	0	0	4	2		
PARKERSBURG	88	68	92	65	78	4	.6	-.3	.4	3.1	58	13.6	64	98	51	2	0	2	0		
WI GREEN BAY	86	64	92	53	75	6	1.0	-.3	.4	2.7	63	10.0	71	99	57	2	0	2	0		
LACROSSE	89	68	92	64	79	6	1.0	.2	.5	3.9	70	14.4	91	93	54	3	0	3	2		
MADISON	86	66	92	58	76	5	.1	-.7	.1	1.5	29	11.1	70	95	56	1	0	2	0		
MILWAUKEE	85	69	91	65	77	7	2.0	1.2	1.1	4.3	88	16.5	101	94	61	2	0	5	1		
WAUSAU	84	63	89	56	73	4	1.4	.6	.9	4.7	89	10.6	68	95	56	0	0	4	1		
WY CASPER	81	49	89	46	65	-5	.3	0	.2	1.3	78	7.3	101	88	24	0	0	3	0		
CHEYENNE	80	51	84	48	65	-2	.4	0	.4	2.3	86	9.6	119	79	28	0	0	2	0		
LANDER	79	53	88	49	66	-4	.1	-.1	0	1.5	86	10.1	114	69	26	0	0	2	0		
SHERIDAN	76	50	94	41	63	-5	1.3	1.0	.7	2.6	98	8.3	86	87	36	1	0	4	1		
PR SAN JUAN	89	77	91	75	83	1	.4	-.7	.3	8.3	126	37.6	162	94	76	2	0	3	0		

Based on 1951-80 normals.

Cooling Degree Days Summary

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

LAST DATE OF DATA COLLECTION PERIOD IS 7-11-1987
ACCUMULATIONS ARE FROM JANUARY 1
** = NORMAL LESS THAN 10% OR RATIO INCALCULABLE

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

NATIONAL AGRICULTURAL SUMMARY

July 6 to 12, 1986

HIGHLIGHTS: Rain spurred crop growth and development across the Corn Belt and central Great Plains. Crop development continued ahead of normal in most areas. Precipitation eased the dry conditions in the northern Great Plains, but crops were still under stress in some areas. Crops were mostly good throughout the Nation. Soil moisture remained short in the northern Plains and some Corn Belt and Southeast States. Farmers were able to work 4-6 days in most areas, but rain limited fieldwork to 3 days or less in Indiana, Missouri, Kansas, Kentucky, and Louisiana.

Rain slowed wheat harvest in the Corn Belt and central Plains, but harvest climbed 10 percentage points ahead of the previous week. Harvest reached 70 percent (%) completion, 13 points above the 5-year average. Harvest moved into the Pacific Northwest. Spring wheat was virtually ahead. Spring wheat turned color in Minnesota, and harvest is expected to begin soon. Corn was silking on 47% of the acreage, compared with 16% normally. Corn reached the dough stage in Illinois and Kansas. Soybeans were blooming on 48% of the acreage. Pods were setting in Georgia, Mississippi, Kansas, Illinois, Louisiana, and Iowa. Sorghum was 24% headed, 2 points above normal. Harvest was underway in Texas. Cotton was squaring on 74% of the acreage and 33% was setting bolls. Cotton opened bolls in Texas. Rice was 14% headed, compared with 17% normally. Rice began turning color in Texas. Livestock was mostly good.

SMALL GRAINS: Winter wheat was 70% harvested, compared with 72% in 1986 and 63% normally. Harvest increased 10 points despite rain in the northern and central Plains and Corn Belt. Harvest increased 20-28 points above the previous week in Colorado, Indiana, Michigan, Nebraska, and Ohio. Combining neared completion as far North as Colorado. Rain slowed wheat harvest in Indiana, Ohio, and Nebraska. Wheat lodged and heads sprouted in Ohio. Harvest moved into the Pacific Northwest, where harvest reached 7 and 6 points completion in Oregon and Washington, respectively. Harvest was not underway in Idaho but should begin soon.

Spring wheat was mostly good to fair. Fifty-three percent of Minnesota's acreage turned color, compared with 8% normally. Two percent was cut, but none was combined. Sixty-seven percent of North Dakota's spring wheat reached the milk-dough stage, 36 points above normal. Spring wheat was under moisture stress in South Dakota. Heading was finished in Minnesota and South Dakota and neared completion in Idaho, Montana, and North Dakota.

CORN: Corn condition was mostly good to excellent in the Corn Belt and central and northern Great Plains. Crop condition was mostly good to fair in the Southeast and Delta. Adequate moisture continued pushing development ahead of normal in the Corn Belt and central Plains. In Illinois, 10% of the acreage reached the dough stage, while 15% of Kansas' corn acreage reached dough. In the 17 major producing States, silking was 47% finished nearly 3 times greater than normal. Silking more than doubled from the previous week.

SOYBEANS: Forty-eight percent of the soybean acreage was blooming in the 19 major producing States, more than doubling the 20% average. Blooming was 2-3 times ahead of normal in most

States and 8 times greater than normal in Michigan. Blooming was 2 points behind normal in Georgia. Soybeans formed pods in 6 of the 19 major producing States. Illinois soybeans formed pods on 30% of the acreage, while 18% of Iowa's acreage had begun the process. The other States are as follows: Georgia 2%, Mississippi 1%, Kansas 10%, and Louisiana 4%. Soybeans thrived on ideal moisture and temperature conditions in the Corn Belt and central Plains. Inadequate moisture in some areas and too much in other areas left crop condition mostly good to fair in the Southeast and Delta. Excess water drowned some soybeans and caused yellowing and root rot in Ohio.

SORGHUM: Sorghum was 24% headed, 2 points ahead of normal but 3 points below 1986. Heading lagged behind normal in most Delta States and in Texas. Sorghum was mostly good to fair in the major producing States. Sorghum turned color in Louisiana but lagged 7 points behind the 11% average. In Texas, light harvest was underway at Coastal Bend.

COTTON: Cotton squaring was 7 points ahead of last year and 10 points ahead of normal at 74% completion. Boll development climbed 15 points ahead of the previous week and was 12 points above the 21% average. Crop condition was mostly good to fair except in the Southwest, Georgia, and Missouri where conditions were good to excellent. Cotton benefited from warmer temperatures in Texas. One percent of Texas cotton acreage had open bolls. The weather provided excellent growing conditions for cotton in Arizona. Boll set was heavy, and a good crop is expected.

OTHER CROPS: Rice was 14% headed compared with 17% normally. Heading continued lagging behind normal in Texas and Louisiana. Rice began turning color in Texas.

Tobacco was 16% harvested in Georgia, trailing 9 points behind normal. Harvest was underway in South Carolina with 4% of the crop harvested.

Alabama and Georgia peanuts were 70 and 71% pegged, respectively. Crop condition was mostly good in the Southeast. Peanut planting continued in Texas, reaching 95% completion. Fields could use rain at Cross Timbers.

FRUIT AND NUTS: Irrigation resumed in Florida's citrus producing areas. Valencia harvest neared completion. New crop fruit progressed well. Stonefruit harvest continued in California. Table grape harvest was finished in the Coachella Valley but accelerated in the San Joaquin Valley. Valencia orange harvest continued with heavy export demand. Almond orchards were prepared for harvest.

VEGETABLES: Watermelon harvest declined seasonally in Florida. Harvest of most vegetables was finished, but light supplies of a few crops were available from northern producing areas. Land preparation was the major activity in the Rio Grande Valley. Heavy rainfall caused tomato and watermelon losses in east Texas. Lettuce, broccoli, celery, carrots, cauliflower, and sweet corn were harvested in California. Freezer beans were planted at Westside. Processing and fresh market tomatoes were in full production.

PASTURES AND LIVESTOCK: Livestock was mostly good. Pastures were mostly good. Additional moisture is needed in the northern Plains.

Crop Progress

FOR WEEK ENDING JULY 12, 1987

	WINTER WHEAT % HARVESTED		
	1987	1986	AVG.
ARK	99	98	98
CALIF	95	90	87
COLO	36	63	34
GA	100	100	99
IDAHO	0	0	0
ILL	99	82	83
IND	90	80	65
KANS	96	99	85
MICH	25	1	2
MO	98	97	80
MONT	1	0	0
NEBR	55	56	38
N MEX	100	100	NA
N C	97	99	96
OHIO	56	60	40
OKLA	100	100	95
OREG	7	3	2
S DAK	15	8	12
TEX	96	99	95
WASH	6	3	1
20 STATES	70	72	NA
EXCL. STATES WITH NA	70	72	63
THESE 20 STATES PRODUCED 91% OF THE 1986 WINTER WHEAT CROP.			
NA - NOT AVAILABLE.			

	SPRING WHEAT % HEADED		
	1987	1986	AVG.
IDAHO	98	91	85
MINN	100	82	86
MONT	95	95	89
N DAK	97	79	72
S DAK	100	92	95
5 STATES	98	85	82
THESE 5 STATES PRODUCED 94% OF THE 1986 SPRING WHEAT CROP.			

	CORN % SILKING		
	1987	1986	AVG.
COLO	11	5	4
GA	98	98	96
ILL	83	64	33
IND	70	30	15
IOWA	40	13	5
KANS	50	40	15
KY	68	65	37
MICH	20	1	1
MINN	39	1	0
MO	77	67	30
NEBR	30	21	7
N C	74	84	78
OHIO	44	29	15
PA	5	4	3
S DAK	4	1	2
TEX	74	84	81
WIS	12	2	2
17 STATES	47	29	16
THESE 17 STATES PRODUCED 94% OF THE 1986 CORN CROP.			

	GRAIN SORGHUM % HEADED		
	1987	1986	AVG.
ARK	54	55	NA
ILL	30	11	NA
KANS	5	5	0
LA	52	83	64
MISS	40	39	31
MO	32	24	9
NEBR	4	4	1
OKLA	10	10	5
S DAK	3	0	0
TENN	45	25	25
TEX	54	63	64
11 STATES	26	28	NA
EXCL. STATES WITH NA	24	27	22
THESE 11 STATES PRODUCED 96% OF THE 1986 GRAIN SORGHUM CROP.			
NA - NOT AVAILABLE.			

	RICE % HEADED		
	1987	1986	AVG.
ARK	3	0	0
CALIF	0	0	0
LA	25	50	41
MISS	7	18	10
TEX	57	67	66
5 STATES	14	19	17
THESE 5 STATES PRODUCED 97% OF THE 1986 RICE CROP.			

	SOYBEANS % BLOOM		
	1987	1986	AVG.
ALA	22	19	16
ARK	9	9	5
GA	16	14	18
ILL	80	60	41
IND	70	30	25
IOWA	65	27	22
KANS	30	30	10
KY	28	24	12
LA	16	30	18
MICH	40	5	5
MINN	58	19	13
MISS	14	19	12
MO	49	32	16
NEBR	40	38	20
N C	10	4	5
OHIO	52	27	16
S C	5	5	0
S DAK	43	16	22
TENN	13	17	11
19 STATES	48	29	20
THESE 19 STATES PRODUCED 96% OF THE 1986 SOYBEANS CROP.			

	COTTON % SQUARING		
	1987	1986	AVG.
ALA	92	95	89
ARIZ	99	98	99
ARK	98	97	93
CALIF	98	95	78
GA	99	82	90
LA	95	93	82
MISS	99	93	92
MO	100	92	83
N MEX	60	60	73
N C	85	88	74
OKLA	35	25	15
S C	86	86	89
TENN	94	86	85
TEX	56	45	46
14 STATES	74	67	64
THESE 14 STATES PRODUCED 100% OF THE 1986 COTTON CROP.			

	COTTON % SETTING BOLLS		
	1987	1986	AVG.
ALA	40	31	24
ARIZ	75	90	80
ARK	75	56	36
CALIF	35	30	24
GA	36	38	51
LA	42	47	31
MISS	52	46	26
MO	98	24	19
N MEX	8	20	26
N C	45	32	38
OKLA	3	3	2
S C	45	57	64
TENN	25	20	12
TEX	20	13	13
14 STATES	33	27	21
THESE 14 STATES PRODUCED 100% OF THE 1986 COTTON CROP.			

Crop Condition

FOR WEEK ENDING JULY 12, 1987

WINTER WHEAT

STATE	VP	P	F	G	EX
ARK	0	35	65	0	0
COLO	1	3	22	62	12
IDAHO	0	0	5	68	27
MICH	3	12	35	45	5
MONT	0	0	13	77	10
NEBR	0	0	24	70	6
N MEX	0	0	0	100	0
N C	0	2	31	65	2
OHIO	0	3	22	61	14
OKLA	0	10	50	40	0
OREG	0	0	8	63	29
S DAK	5	9	40	36	10
WASH	0	0	25	65	10

GRAIN SORGHUM

STATE	VP	P	F	G	EX
ARK	0	0	33	53	14
ILL	0	0	13	70	17
KANS	0	8	2	29	61
LA	0	5	34	61	0
MISS	0	0	11	83	6
MO	0	0	25	64	11
NEBR	0	0	6	77	17
OKLA	0	0	30	65	5
S DAK	0	0	42	47	11
TENN	0	0	26	58	16
TEX	0	1	19	55	25

CORN

STATE	VP	P	F	G	EX
COLO	0	1	11	69	19
GA	0	0	10	59	31
ILL	0	2	4	65	29
IND	0	1	5	59	35
IOWA	0	1	12	60	27
KANS	1	8	4	19	68
KY	0	2	13	59	26
MICH	2	8	25	40	25
MINN	2	2	26	52	18
MO	0	0	17	60	23
NEBR	0	0	3	72	25
N C	1	7	27	64	1
OHIO	0	2	13	52	33
PA	0	2	8	50	40
S DAK	1	3	13	53	30
TEX	0	1	13	56	30
WISC	1	3	18	57	21

COTTON

STATE	VP	P	F	G	EX
ALA	0	2	12	79	7
ARIZ	0	0	0	80	20
ARK	0	0	0	78	22
CALIF	0	0	0	40	60
GA	0	0	8	63	29
LA	0	0	20	69	11
MISS	0	0	31	62	7
MO	0	0	0	67	33
N MEX	0	0	29	71	0
N C	0	0	20	64	16
OKLA	0	5	30	55	10
S C	0	0	18	82	0
TENN	0	0	21	31	48
TEX	0	2	55	38	5

SOYBEANS

STATE	VP	P	F	G	EX
ALA	0	0	16	80	4
ARK	0	2	22	72	4
GA	0	0	6	90	4
ILL	0	1	4	80	15
IND	0	1	7	68	24
IOWA	0	1	14	75	10
KANS	0	3	4	26	67
KY	0	1	28	60	11
LA	3	17	26	45	9
MICH	1	4	25	50	20
MINN	2	2	29	54	13
MISS	0	2	35	58	5
MO	0	1	28	65	6
NEBR	0	0	12	81	7
N C	0	2	42	56	0
OHIO	1	5	18	55	21
S C	0	0	26	74	0
S DAK	0	1	13	54	32
TENN	0	1	26	64	9

SPRING WHEAT

STATE	VP	P	F	G	EX
IDAHO	0	1	23	53	23
MINN	2	8	54	32	4
MONT	0	1	35	57	7
N DAK	0	6	32	60	2
S DAK	4	5	43	47	1

RICE

STATE	VP	P	F	G	EX
ARK	0	2	22	72	4
CALIF	0	0	0	75	25
LA	0	0	43	57	0
MISS	0	0	8	87	5
TEX	0	0	18	71	11

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 totals mostly under 0.33 in.; local areas over 1.00 in. Temperatures averaged near normal west; 1 to 2° above normal elsewhere.

Days suitable for fieldwork 4.3. Soil moisture 4% short, 73% adequate, 23% surplus. Mostly dry conditions allowed good progress all field activities; weeds, insects, diseases remain problem most areas. Soybeans 97% planted, 99% 1986, 97% avg.; 22% blooming, 19% 1986, 16% avg.; 16% fair, 80% good, 4% excellent. Sorghum 96% planted, 98% 1986, 96% avg.; 13% fair, 85% good, 2% excellent. Cotton 92% squaring, 95% 1986, 89% avg.; 40% setting bolls, 31% 1986, 24% avg.; 2% poor, 12% fair, 79% good, 7% excellent. Corn 92% silking, 90% 1986, 86% avg.; 40% dented, 30% 1986, 29% avg.; 14% fair, 80% good, 6% excellent. Peanuts 70% pegging, 42% 1986, 58% avg.; 6% fair, 88% good, 6% excellent. Livestock, pastures mostly good. Primary activities: Harvesting hay, vegetables, fruits, potatoes; cultivating row crops; applying fungicides to peanuts; spraying cotton; stocking, fertilizing fish ponds; routine care of livestock, poultry.

ALASKA: Most areas of Railbelt received soaking rainfall, but some areas welcomed it more. Continuation of cool, wet cloudy. Temperature lows ranged from 1° below normal to 5° warmer than normal, highs ranged 7° below normal to 2° above normal. Seasonal precipitation totals ranged from 1.31 in. drier than normal to 1.31 in. wetter than normal.

Days suitable for haymaking 2.0. Topsoil moisture 7% short, 93% adequate. Subsoil moisture 4% short, 96% adequate. Barley for grain 28% poor, 38% fair, 29% good, 5% excellent. Barley, oats for grain heights averaged 15 in., 25 in. 1986. Crop growth 32% slow, 58% moderate, 10% rapid. First cutting of hay averaged 70% complete, 80% 1986; haying activity brisk when conditions permitted. Potato heights averaged 14 in., 16 in. 1986. Commercial radishes, leaf lettuce, romaine, other greens harvest gaining momentum.

ARIZONA: Typical pre-monsoon weather through 11th. Dry westerly, southwesterly winds aloft resulted in hot sunny days, low humidities, breezy afternoons. Relatively cool nights made for large daily temperature ranges. Average temperatures 1° above normal to 7° below. Monsoon conditions delayed until winds shift south, southeast. Average date of monsoon Phoenix 8th; Douglas 2nd.

Cool night temperatures, delayed monsoon season, provided excellent conditions for cotton. Boll set heavy; good crop expected. Pink bollworm control, light spraying, irrigation, fertilization active. Wheat, barley harvest virtually complete; yields good. Alfalfa harvest active. Hay stacked for later sale. Irrigation active; summer stunting minimal. Sudan grass progressed. Numerous plantings utilized for green manure. Corn silage harvest active. Sorghum good, jointing. Citrus season complete. Final shipments valencia oranges, grapefruit. Prospects new crop favorable; groves good. Grape harvest continued, shipments thompsons, flame seedless. Figs picked. Chipper potato harvest complete central valley. Carrots dug. Winter squash harvest complete. Chili harvest underway south. Tomato harvest active. Mixed melons shipped central valley. Honeydews, cantaloups harvested. Melon harvest complete west.

ARKANSAS: Temperatures slightly above normal northwest, slightly below normal east, south.

Rainfall spotty, very light. Temperature extremes 65°; 99°. Rainfall none to 1.39 in.

Days suitable for fieldwork 6.0. Major activities: Cutting, baling hay; cultivating, irrigating crops; applying herbicides, insecticides, fertilizer. Fruit, vegetable harvest. Livestock good. External parasites increased.

CALIFORNIA: Low pressure trough moving over Pacific brought cooler temperatures. All stations below normal except for northern, central coast stations. Trace of precipitation reported along southern coast.

Winter wheat, barley harvested. Rice normal, cotton bloomed, some bolls. Night applications pink bollworm treatments in Imperial Valley. Sugarbeets thinned, weeded. Corn mite controls applied. Alfalfa cut, baled. Seed alfalfa full bloom. Picking of gravenstein apples began Sonoma County. Fig growers prepared orchards for harvest Fresno County. Table grape harvest completed Coachella Valley, accelerated San Joaquin Valley with perlette, flame seedless varieties. Thompson seedless harvest set to begin. Grape maturity 10 days ahead of normal. Vineyards sprayed to control mildew, leafhoppers, grapeleaf skeletonizer. Stone fruit harvest continued midseason varieties. Bartlett pear harvest began Sacramento River district. Valencia orange harvest continued, heavy exports. Almond growers prepared orchards for harvest. Pistachios normal development, light year of 2 year cycle. Artichokes light, good quality, Salinas. Asparagus plantings Westside, sprayed for aphids. Snap bean harvest active desert, south coast. Freezer bean acreage being planted Westside. Broccoli moderate Salinas; heavy Santa Maria; good quality. Carrot heavy Salinas, good quality. Harvest underway Westside. Production, Kern-Tulare heavy, good quality. Cauliflower moderate Salinas; fairly heavy Santa Maria; good quality. Celery moderate both Salinas-Watsonville, Santa Maria-Oceano, good quality. Sweet corn harvesting continued statewide. Westside reduced amount packed, response to slowdown in demand. Cucumber packing active Delta, Westside, south coast. Harvest flow inhibited West Orange County, due to fruit fly quarantine. Lettuce packing Salinas, Santa Maria, moderate, variable quality. Cantaloup, honeydew, watermelon harvest started, Westside. Depressed market conditions cantaloups, caused some packers to shut down, wait for better prices. Picking Palo Verde Valley wound down, light demand caused by early San Joaquin Valley harvest. Watermelon fields nearly ready for harvest, south coast. Dry onion digging active Delta, desert. Processing acreage Westside, being harvested. Dehydrator fields Tulalake-Butte Valley, grew well despite hail damage. Summer potato harvest continued Hemet-San Jacinto. Fall potato fields Tulalake-Butte Valley, continued excellent growth. Sweetpotato fields continued good, statewide. Tomatoes processing, fresh market full production, statewide. Cannery tomato harvest Palo Verde Valley, moving quickly towards completion. Range pasture conditions remained normal, dry. Fire danger high. Stock ponds low. Cattle movement supplemental feeding light.

COLORADO: Temperatures 1 to 7° below normal. Cold fronts reduced temperatures, produced thundershowers, tornadoes. Rainfall varied across State, 0.02 to 2.00 in.; 0.20 in. avg.

Days suitable for fieldwork 5.2. Soil moisture adequate. Small grains, livestock good. Corn good. Some oats, barley harvested. Summer potatoes 21% flowered.

FLORIDA: High pressure moved from Atlantic to north early week, sending area's high temperatures into upper 90s. Peninsula highs generally low to mid 90s. Weak low pressure trough moved into northern, central areas, 12th, with minimal impact. Rainfall from mainly afternoon thunderstorms, though variable, averaged near 1.00 in.

Topsoil moisture mostly adequate to surplus; however, last part of week hot with very little rain many areas. Tobacco harvest, haymaking active. Corn, peanuts, sugarcane continued good growth with normal insect problems. Heavy rains damaged some late cotton. Boll weevils becoming problem. Some Panhandle, northern Peninsula pastures fair; elsewhere mostly good to excellent. Cattle generally good. Citrus areas hot temperatures, little rain many areas; irrigation resumed. Valencia harvest almost complete, low volume to gift trade, chilled juice. New crop fruit progressed well, caretakers busy with summertime activities. Hot days, warm nights, scattered thunderstorms over vegetable producing areas. Harvest most vegetables complete. Light supplies few crops available mostly northern areas. Watermelon harvest declined seasonally.

GEORGIA: Hot with significant rainfall local areas. Temperatures 2 to 4 above normal. Temperatures 90° each day central, south. Warmest mid 90s north, upper 90s south. Lows near 60s northeast mountains to 70s central, south. Rainfall under 0.50 in., few local areas 1.00 to 2.00 in. Most stations 3.00 to 9.00 in. above normal for year, local areas 1.00 to 10.00 in. deficits.

Days suitable for fieldwork 5.0. Soil moisture 9% short, 80% adequate, 11% surplus. Corn 80% dough, 82% 1986, 76% avg.; 38% dent, 57% 1986, 47% avg.; 4% mature, 19% 1986, 15% avg.; 1% 1986, 1% avg. Sorghum grain 7% fair, 88% good, 5% excellent; 99% planted, 97% 1986, 94% avg. Peanuts 8% fair, 74% good, 18% excellent; 94% blooming, 86% 1986, 93% avg; 71% pegging, 59% 1986, 73% avg. Soybeans 99% planted, 96% 1986, 97% avg.; 2% setting pods, 1% 1986, 4% avg. Tobacco 8% fair, 84% good, 8% excellent; 16% harvested, 18% 1986, 25% avg. Watermelons 20% fair, 70% good, 10% excellent; 59% harvested, 79% 1986, 63% avg. Apples 10% fair, 87% good, 3% excellent; 1% harvested, 11% 1986, 9% avg. Peaches 11% poor, 9% fair, 79% good, 1% excellent; 77% harvested, 85% 1986, 80% avg. Pasture 7% fair, 68% good, 25% excellent. Hay 1% poor, 10% fair, 74% good, 15% excellent. Cattle 4% fair, 86% good, 10% excellent. Hogs 3% fair, 86% good, 11% excellent. Main activities: Spraying for weeds, insects, disease control. Harvesting peaches, vegetables, hay. Final planting of soybeans, sorghum.

HAWAII: Conditions variable. Days mostly sunny. Passing showers mainly windward, mountain areas. Winds northeasterly 10 to 20 mph. Temperatures ranged upper 60s to lower 90s. Diminishing winds 10th helped set daily record high temperature. Rainfall ranged none to 1.90 in.

Days suitable for fieldwork 7.0. Crop development fair. Irrigation heavy most areas. High temperatures slowed progress leafy vegetables. Bananas fair to good. Papaya orchards good, production steady. Pineapple, sugarcane harvesting active.

IDAHO: Temperatures cooler, 1 to 5 below normal. Precipitation above normal north, slightly below elsewhere.

Days suitable for fieldwork 6.0. Crops continued to mature ahead of schedule, harvest of winter wheat expected soon. Potatoes making good growth, over 50% closing row middles. Dry beans, sugarbeets developed well. Some weevil, aphid problems appeared. First cutting alfalfa winding down, 2nd cutting underway. Range, pastures little change. Livestock good.

ILLINOIS: Temperatures averaged 2 to 3 above normal south, 3 to 6° above normal north. Precipitation widely scattered 1.00 to 2.00 in. west southwest to east central. Few areas received totals of 3.00 to 4.00 in.

Days suitable for fieldwork 4.3. Soil moisture 41% short, 37% adequate, 22% surplus. Corn 10% dough, 8% 1986, 4% avg. Soybeans 30% setting pods, 18% 1986, 9% avg. Oats 90% ripe, 53% 1986, 35% avg.; 35% harvested, 23% 1986, 13% avg.; 3% poor, 24% fair, 57% good, 16% excellent. Alfalfa hay 2nd crop 78% cut, 48% 1986, 58% avg.; 2% very poor, 9% poor, 19% fair, 59% good, 11% excellent. Pasture 4% very poor, 7% poor, 40% fair, 41% good, 8% excellent.

INDIANA: Temperatures 2 to 5 above normal. Lows upper 60s to low 70s, highs upper 80s to low 90s. Scattered showers over most of State. Totals 1.00 to 1.50 in. northeast, southern half, 0.25 to 0.50 in. elsewhere.

Days suitable for fieldwork 2.8. Topsoil moisture 72% adequate, 28% surplus. Subsoil moisture 8% short, 84% adequate, 8% surplus. Corn, soybeans mostly good to excellent. Corn 80 in. tall, 61 in. 1986, 49 in. avg. Soybeans 27 in. tall, 14 in. 1986, 13 in. avg. Oats 32% combined, 12% 1986, 8% avg. Alfalfa 50% cut twice, 33% 1986, 45% avg. Pastures 1% poor, 27% fair, 67% good, 5% excellent. Rain slowed wheat harvest, field activities.

IOWA: Temperatures normal west, 2 to 4 above normal east. Excessive rains. Precipitation 5.75 in. Beaconsfield 7th, 7.60 in. Clarinda 9th, flooding near Clarinda; 6.30 in. Ft. Dodge 12th.

Days suitable for fieldwork 3.6. Topsoil moisture 27% short, 45% adequate, 28% surplus. Subsoil moisture 25% short, 61% adequate, 14% surplus. Oats 1% very poor, 6% poor, 48% fair, 44% good, 1% excellent; 99% turning color, 87% 1986, 70% avg.; 22% harvested, 5% 1986, 7% avg. Winter wheat fair to good; 60% harvested, 13% 1986, 27% avg. Hay 1% very poor, 7% poor, 35% fair, 51% good, 6% excellent. Second crop alfalfa 55% harvested, 26% 1986, 29% avg. Second crop clover 18% harvested, 7% 1986, 8% avg. Corn 70% tasseled, 24% 1986, 14% avg. Soybeans 18% setting pods, none 1986, 1% avg. Livestock mostly good to excellent. Some heat stress on sows reported. Pastures 3% very poor, 16% poor, 37% fair, 35% good, 9% excellent.

KANSAS: Temperatures averaged 76 to 81; 30 below normal southeast, about normal elsewhere. Rainfall averaged 0.50 to 1.50 in., heaviest central and east.

Days suitable for fieldwork 3.0. Soil moisture 1% short, 60% adequate, 39% surplus. Wheat harvest complete except rain delays west central, northwest. Corn excellent growth; 15% dough, 5% 1986, 1% avg. Sorghum planting complete except south central, rain delays. Soybean planting complete except south central. Setting pods 10%, 5% 1986, 1% avg. Alfalfa 2nd cutting 70% complete, some 3rd cuttings underway. Range, pasture good to excellent.

KENTUCKY: Rainfall plentiful averaging 1.00 to 1.50 in. Amounts varied widely, ranging from none Ft. Campbell to 5.23 in. Somerset. Heaviest rain

early in week. Temperatures 1 to 4° above normal. Lows in 60s, highs mostly lower to mid 90s.

Days suitable for fieldwork 3.0. Soil moisture 21% short, 65% adequate, 14% surplus. Extensive wind damage some areas caused power outages. Corn developed well. Soybean planting virtually complete. Tobacco 1% very poor, 2% poor, 40% fair, 51% good, 6% excellent. Topping underway. Wheat harvest 98% complete, 96% 1986; yields excellent. Sorghum fair to good. Hay, pastures fair to mostly good.

LOUISIANA: Temperature 10 below to 10 above normal. Temperature extremes 67°; 96°. Rainfall averaged 0.48 to 3.09 in.

Days suitable for fieldwork 3.0. Soil moisture 4% short, 59% adequate, 37% surplus. Corn good; 98% silked, 100% 1986, 96% avg.; 80% dough stage, 92% 1986, 79% avg.; 6% mature, 21% 1986, 20% avg. Cotton 95% squaring, 93% 1986, 82% avg.; 42% setting bolls, 47% 1986, 31% avg. Rice 25% headed, 50% 1986, 41% avg. Sorghum 52% headed, 63% 1986, 64% avg.; 4% turning color, 21% 1986, 11% avg. Soybeans 97% planted, 99% 1986, 99% avg.; 93% emerged, 97% 1986, 97% avg.; 16% blooming, 30% 1986, 18% avg.; 4% setting pods, 3% 1986, 3% avg. Peaches 77% harvested, 88% 1986, 69% avg. Hay 1st cutting 94%, 96% 1986, 97% avg. Sugarcane, sweetpotatoes, pasture, livestock good; vegetables fair to good. Main activities: Baling hay; weed, insect control; planting, replanting soybeans. Weeds big problem due to very wet fields.

MARYLAND & DELAWARE: **Maryland:** Temperatures averaged 80°, 75° normal; lowest temperature 59° Oakland; highest temperature 98° Snow Hill. Precipitation averaged 0.59 in., ranging from none Wye Center to 2.29 in. Hagerstown.

Days suitable for fieldwork 6.2. Topsoil moisture short to adequate. Subsoil moisture short to adequate. Corn mostly good; 30% silked, 25% avg. Soybeans mostly good to fair; 95% planted, 98% avg. Tobacco 100% transplanted, 100% avg. Pasture good. Wheat, barley, rye good. Oats good to excellent. Apples, peaches good. Sweet corn 18% harvested, 15% avg.

Delaware: Temperatures averaged 79°, 76° normal. Precipitation averaged 0.59 in., ranging from 0.10 in. Wilmington to 1.57 in. Georgetown.

Days suitable for fieldwork 7.0. Topsoil moisture short. Subsoil moisture short. Wheat fair to good. Soybeans mostly fair to good; 85% planted, 100% avg. Corn fair to good; 45% silked, 40% avg. Pasture fair.

MICHIGAN: Temperatures ranged 6 to 9° above normal. Temperature extremes 52°; 96°. Precipitation ranged from 0.12 to 2.68 in. across State.

Days suitable for fieldwork 5.5. Soil moisture 70% short, 30% adequate. Corn 20% silked, 1% 1986, 1% avg.; 2% very poor, 8% poor, 25% fair, 40% good, 25% excellent. Soybeans 40% blooming, 5% 1986, 5% avg.; 1% very poor, 4% poor, 25% fair, 50% good, 20% excellent. Wheat 25% harvested, 1% 1986, 2% avg.; 3% very poor, 12% poor, 35% fair, 45% good, 5% excellent. Major activities: Irrigating, cultivating, making hay, spraying, combining wheat. Apple, peach harvest under way.

MINNESOTA: Temperatures averaged 1 to 6° above normal. Temperature extremes 48°; 96°. Precipitation averaged 0.18 to 0.38 in. below normal north central and northeast, 1.44 to 2.07 in. above normal southern third of State, 0.10 to 0.87 in. above normal elsewhere. Precipitation totals averaged 2.39 to 2.86 in. southern third, 0.63 to 1.70 in. elsewhere. Greatest weekly total 4.94 in.

Days suitable for fieldwork 5.3. Topsoil moisture 27% very short, 33% short, 38% adequate, 2% surplus. Spring wheat 53% turning ripe, 5% 1986, 8% avg.; 2% cut, none 1986, none avg. Oats 88% turning ripe, 20% 1986, 18% avg.; 16% cut, none 1986, none avg.; 3% combined, none 1986, none avg. Barley 68% turning ripe, 10% 1986, 17% avg.; 4% cut, none 1986, none avg. Field corn height 62 in., 46 in. 1986, 38 in. avg.; 42% tasseling, 5% 1986, 3% avg.; 1% in milk, none 1986, none avg. Soybeans height 20 in., 13 in. 1986, 12 in. avg.; 58% blooming, 19% 1986, 13% avg.; 6% setting pods, none 1986, none avg. Winter wheat 8% harvested, none 1986, none avg. Rye 6% harvested, none 1986, none avg. Field corn 2% very poor, 2% poor, 26% fair, 52% good, 18% excellent. Soybeans 2% very poor, 2% poor, 29% fair, 54% good, 13% excellent. Spring wheat 2% very poor, 8% poor, 54% fair, 32% good, 4% excellent.

MISSISSIPPI: Temperatures from 10 below to 30 above normal; extremes 64°; 98°. High pressure over south resulted in high temperatures, 0.25 in. average rainfall. Greatest weekly rainfall 1.91 in. Greatest 24-hour total rainfall 1.50 in.

Days suitable for fieldwork 4.0, 6.3 1986, 5.8 avg. Soil moisture 2% short, 55% adequate, 39% surplus, 4% excessive. Corn 88% silking, 89% 1986, 78% avg.; 50% dough stage, 58% 1986, 46% avg.; 24% denting, 25% 1986, 25% avg.; 6% fair, 76% good, 18% excellent. Wheat 100% harvested, 98% 1986. Sweetpotatoes 100% planted, 98% 1986. Hay 51% harvested, 50% 1986, 52% avg. Rice 7% headed, 18% 1986, 10% avg.; 8% fair, 87% good, 5% excellent. Sorghum 40% headed, 39% 1986, 31% avg.; 11% fair, 83% good, 6% excellent. Cotton 99% squaring, 93% 1986, 92% avg.; 52% setting bolls, 46% 1986, 26% avg.; 31% fair, 62% good, 7% excellent. Soybeans 99% planted, 97% 1986, 95% avg.; 95% emerged, 90% 1986, 86% avg.; 14% blooming, 19% 1986, 12% avg.; 1% podding, 4% 1986, 3% avg.; 2% poor, 35% fair, 58% good, 5% excellent.

MISSOURI: Temperatures averaged near normal. Precipitation 3.00 to 7.00 in. east central, 2.00 in. or more common rest of State.

Days suitable for fieldwork 2.3. Topsoil moisture 8% short, 67% adequate, 25% surplus. Corn 88% tasseling, 83% 1986, 43% avg. Oat 79% harvested, 72% 1986, 53% avg. Alfalfa hay 2nd cutting 83%, 74% 1986, 64% avg. Alfalfa hay 3rd cutting 8%, 10% 1986, 6% avg. Other hay 85% harvested, 82% 1986, 79% avg. Pasture 2% very poor, 7% poor, 50% fair, 36% good, 5% excellent.

MONTANA: Cool wet week. Temperatures 5 to 8° below normal western two-thirds, 1 to 4° below normal east; 1.00 to 3.00 in. rain southwest, central, south central. Early in week light to moderate rain showers west, northeast. North central remained dry.

Days suitable for fieldwork 6.1. Topsoil moisture 48% short, 52% adequate. Subsoil moisture 51% short, 49% adequate. Barley 3% poor, 39% fair, 53% good, 5% excellent. Oats 2% poor, 30% fair, 60% good, 8% excellent. Sugarbeets 87% good, 13% excellent. Barley 94% headed, 84% 1986, 81% avg. Second cutting alfalfa 6% harvested, none 1986, none avg. Wild hay 64% harvested, 66% 1986, 48% avg. Grasshopper infestation 21% light, 47% moderate, 32% heavy.

NEBRASKA: Thunderstorms daily provided ample moisture, little drying across State. Areas in north central, east received 4.00 to 6.00 in. Temperatures near normal. Extremes 46°; 98°.

Days suitable for fieldwork 4.0. Topsoil moisture 16% short, 70% adequate, 14% surplus. Subsoil moisture 10% short, 78% adequate, 12% surplus. Winter wheat 85% ripe, 89% 1986, 68% avg. Precipitation across State slowed harvest

activities. Oats 30% harvested, 32% 1986, 19% avg. Western bean cutworms, corn borers, root worms reported across State with minimal damage some areas. Moderate to total hail damage some areas from 1 week ago reported western counties. Alfalfa hay mostly good. Second cutting 50%, 46% 1986, 34% avg. Pasture, range supplies mostly adequate. Cooler temperatures ideal for livestock gains.

NEVADA: Westerly flow aloft brought dry weather all areas early, middle part week. Temperatures near normal. Low pressure trough produced some cooling, spotty light showers northeast, northwest end of period. Temperature extremes 32°; 107°.

Hot, dry weather ideal small grain, hay harvests. Ranges, pastures again began to show affect searing temperatures. Stockwater ponds drying.

NEW ENGLAND: Precipitation averaged less than 0.25 in. central Maine, Massachusetts, Rhode Island, 0.25 to 0.50 in. Vermont, northern and southern Maine, Connecticut, 0.50 to 0.75 in. New Hampshire. Temperatures ranged from upper 60s coastal Maine, New Hampshire, Massachusetts to 70 to 75° remainder. Temperatures normal except above normal interior Maine, interior New Hampshire, Vermont.

Days suitable for fieldwork 6.0. Soil moisture 6% very short, 11% short, 83% adequate. Grazing availability 92% adequate, 8% surplus. Fieldwork behind 1 day. Hot conditions boosted crop growth. Maine potatoes excellent. Field corn excellent south, good north. Sweet corn good. First hay crop good; 90% harvested, 80% 1986, 80% avg. Active vegetable harvest. Heavy bloom on cranberries. Major farm activities: Cultivating, hilling potatoes, haying, spraying, harvesting vegetables.

NEW JERSEY: Temperatures averaged well above normal. Extremes 56°; 98°. Rainfall averaged 1.34 in. north, 1.19 in. central, 0.66 in. south. Heaviest 24-hour total 1.86 in. on 7th, 8th. Estimated soil moisture percent field capacity averaged 78% north, 72% central, 64% south. Four inch soil temperatures averaged 73° north, 76° central, 77° south.

Heavy isolated thunderstorms caused some damage. Soil moisture ranged short to excessive. Summer vegetable harvest active. Clingstone peach picking active. Blueberry harvest at peak. Raspberry, blackberry marketing continued from limited acreage. Wheat combining delayed by weather conditions. Early field corn shoulder high. Many soybean fields weedy; cultivating active as conditions permit. Hay making progressed as drying conditions permitted.

NEW MEXICO: Weekly average temperatures above normal east, below normal west. Rain recorded over eastern plains from trace to 0.44 in.

Days suitable for fieldwork 6.9. Soil moisture 58% short, 42% adequate. Hail damage 75% none, 25% light. Alfalfa 22% fair, 67% good, 11% excellent. Cotton 29% fair, 71% good. Corn 25% fair, 75% good; some fields tasseling. Barley 33% fair, 67% good; most fields harvested. Grain sorghum mostly good; little heading to date. Onions 100% good; about 50% harvested Mesilla Valley. Pecans 25% fair, 75% good. Cattle 18% fair, 73% good, 9% excellent. Sheep 87% good, 13% excellent. Ranges 55% fair, 36% good, 9% excellent.

NEW YORK: Temperatures averaged above normal statewide. Extremes 46°; 96°. Unusually warm, humid weather over area most of week with mainly afternoon thundershowers.

Days suitable for fieldwork 5.0. Soil moisture adequate to surplus. Pastures fair to good. Corn shoulder high in many areas, potential high yields. Haymaking limited. First cut alfalfa 84% complete, 82% 1986, 86% avg. Clo-tim harvest 70% complete,

71% 1986, 74% avg. Grass silage harvest 90% complete, 91% 1986, 89% avg. Wheat harvest began, some sprouting occurred. Oats good, headed out. Apples good to excellent, sizing rapidly. Harvest of early season vegetables active.

NORTH CAROLINA: Temperatures averaged 1 to 6° above normal. Temperature extremes 61°; 100°. Precipitation ranged from 0.03 to 3.68 in. across State. Storms scattered.

Days suitable for fieldwork 5.8. Soil moisture 7% very short, 43% short, 49% adequate, 1% surplus. Irish potatoes 58% fair, 42% good; 80% harvested, 82% 1986, 73% avg. Pasture fair to mostly good. Tobacco 29% fair, 69% good, 2% excellent. Peanuts 29% fair, 67% good, 4% excellent. Hay 3% poor, 42% fair, 54% good, 1% excellent. Oats 98% harvested, 100% 1986, 97% avg. Barley 98% harvested, 99% 1986, 99% avg. Rye 90% harvested, 99% 1986, 97% avg. Sorghum 95% planted, 95% 1986, 95% avg. Sweetpotatoes 47% fair, 50% good, 3% excellent. Fruit, truck crops fair to mostly good. Peaches 50% harvested, 64% 1986, 63% avg. Major farm activities: Harvesting small grains; cutting and baling hay; planting sorghum, soybeans; cultivating tobacco, soybeans, corn, peanuts, cotton; herbicide applications; harvesting vegetables, peaches, blueberries; shearing christmas trees; topping tobacco; applying sucker control to tobacco; irrigating tobacco; tending livestock; general farm maintenance.

NORTH DAKOTA: Statewide rains received. Rainfall averaged 1.78 in. north central to 0.88 in. southeast. Temperatures averaged near normal. Extremes 45° west central; 95° northwest, west central.

Days suitable for fieldwork 4.2. Topsoil moisture replenished; 25% short, 73% adequate, 2% surplus. Subsoil moisture near normal; 31% short, 69% adequate. Small grains well ahead of 1986, avg. Spring wheat 67% milk-dough and beyond, 37% 1986, 31% avg.; durum 57%, 22% 1986, 18% avg.; oats 71%, 47% 1986, 35% avg.; barley 81%, 50% 1986, 46% avg.; winter wheat 21% swathed or combined, none 1986, none avg. All row crops above average height. Corn 44 in., 38 in. 1986, 28 in. avg.; soybeans 17 in., 14 in. 1986, 12 in. avg.; sunflower 27 in., 25 in. 1986, 20 in. avg.; dry edible beans 13 in., 13 in. 1986, 11 in. avg.; potatoes 20 in., 17 in. 1986, 15 in. avg. Row crop development ahead of normal pace. Potatoes 69% bloom or beyond, 54% 1986, 32% avg.; flax 38%, 36% 1986, 28% avg.; dry edible beans 25%, 32% 1986, 18% avg.; soybeans 25%, 23% 1986, 14% avg. Pastures improved to mostly fair to good. First cutting alfalfa completed, other hay 83% complete.

OHIO: Temperatures 1 to 8° above normal ranging from upper 60s to upper 80s. Precipitation ranged from trace to 3.00 in. mostly from thunderstorms.

Days suitable for fieldwork 4.2. Soil moisture 6% short, 67% adequate, 27% surplus. Corn good to excellent; no widespread water, flood damage. Soybeans good; some water damage, yellowing, root rot, some drowned-out low spots. Winter wheat harvest slowed by wet soils; some lodging with sprouting in heads. Wheat good. Grasslands good; potato leaf hopper population increased in alfalfa.

OKLAHOMA: Temperatures averaged 1° below normal Panhandle to 1° above normal south central. Precipitation averaged 0.15 in. Panhandle to 1.83 in. south central.

Days suitable for fieldwork 5.3. Topsoil moisture 2% short, 88% adequate, 10% surplus. Subsoil moisture 2% short, 98% adequate. Wheat 100% harvested, 100% 1986, 95% avg. Approximately 65% wheat stubble tilled. Sorghum 30% fair, 65% good, 5% excellent; 10% heading, 10% 1986, 5% avg. Cotton 35% squaring, 25% 1986, 15% avg.; 3% setting

bolts, 3% 1986, 2% avg. Some cotton growers with poor stands considering mung beans. Pastures, livestock good. Marketings, prices stable.

OREGON: Temperatures up to 7° below normal all areas except coast until weekend. Only south coast above normal. Coolest temperatures far east. Rainfall scattered throughout State. Greatest precipitation north coast, northeast; least amounts extreme south.

Soil moisture 59% short, 41% adequate. Grass seed harvest delayed by rains Willamette Valley; about 50% complete central area. Barley 22% harvested, 10% 1986, 28% 1985. Wheat yields good, all grain crops mostly good to excellent. Haying activities continued around State; 1st cutting alfalfa wrapping up. Mint harvest started Malheur County. Raspberry harvest nearly completed. Marionberry, boysenberry picking past peak. Harvest of other blackberries underway. Blueberry picking at peak. Cherry harvest winding down Willamette Valley, full swing with good quality and yields Hood River Valley, about 50% completed Union County. Apple, pear thinning continued Hood River, fruit sizing well. Labor supply tight. Medford pear crop good. Many salad vegetables harvested west. Green pea, snap bean, squash harvests just began. Broccoli harvest continued. First sweet corn harvested southwest; tasseling Willamette Valley. Sweet corn, beans, cucumbers doing well. Cool weather slowed vegetable growth Malheur County. Early potato harvest began, late potatoes grew well Hermiston-Boardman area. Livestock mostly good; range fair throughout State. Pastures continued to dry up. Most nonirrigated pastures running out of feed 2 to weeks early west of Cascades. Range fire conditions may be extreme this year eastern counties.

PENNSYLVANIA: Very warm, humid with above average temperatures and rainfall. Average temperature 76°, 7° above normal. Temperature extremes 55°, 95°. Average precipitation 0.99 in., 0.11 in. above normal.

Days suitable for fieldwork 4.0. Soil moisture 68% adequate, 32% surplus. Corn 2% poor, 8% fair, 50% good, 40% excellent; height 48 in., 42 in. 1986, 33 in. avg. Soybeans 98% planted, 100% 1986, 98% avg.; 2% poor, 18% fair, 50% good, 30% excellent. Barley 7% heading or headed; 9% turning yellow, 13% 1986; 30% ripe, 29% 1986; 54% harvested, 58% 1986. Wheat 7% heading or headed, 3% 1986; 27% turning yellow, 30% 1986; 45% ripe, 47% 1986; 21% harvested, 20% 1986. Wheat 6% poor, 16% fair, 51% good, 27% excellent. Oats 38% heading or headed, 34% 1986; 47% turning yellow, 46% 1986; 12% ripe, 19% 1986; 3% harvested, 1% 1986. Oats 6% poor, 16% fair, 51% good, 27% excellent. First cutting alfalfa 96% complete, 98% 1986. Second cutting alfalfa 30% complete, 50% 1986. First cutting clover-timothy 90% complete, 93% 1986. Hay stands mostly fair. Feed from pastures average to above average. Activities: Spraying corn, soybeans; harvesting small grains, hay, haylage; machinery maintenance; caring for livestock.

PUERTO RICO: Island average rainfall 1.18 in., 0.02 in. below normal. Highest weekly total rainfall 4.39 in. Mayaguez Ceer followed by 3.38 in. Canovanas, 2.61 in. Pico Del Este-Luquillo. Highest 24-hour total 1.98 in. Mayaguez Ceer. San Juan mean temperature 83°, 6° above normal. Total rainfall 0.73 in., 0.32 in. above normal. Divisional temperature averaged about 81 to 82° on coasts, 76 to 78° interior with mean station temperature ranging from 69° San Sebastian to 84° Fajardo. Lowest minimum temperature 59° San Sebastian, highest maximum temperature 95° San Sebastian also.

SOUTH CAROLINA: Hot humid conditions averaged 2 to 4° above normal. Scattered showers late week mid-State.

Days suitable for fieldwork 5.8. Soil moisture 55% short, 45% adequate. Cotton 86% squaring, 86% 1986, 89% avg.; 45% setting bolls, 57% 1986, 64% avg. Soybeans 98% planted, 100% 1986, 100% avg.; 8% blooming, 5% 1986. Corn 42% dough, 64% 1986, 53% avg.; 87% silked, 95% 1986, 86% avg.; 6% mature, 14% 1986, 13% avg. Corn, cotton, soybeans good. Tobacco good; 75% topped, 82% 1986, 83% avg.; 4% harvested, 12% 1986, 13% avg. Peaches 47% harvested, 70% 1986, 56% avg.; fair to good. Fruits, vegetables, small grains, pastures good.

SOUTH DAKOTA: Average temperatures 2° below normal. Extremes 43°, 96°. Black Hills low 31°. Rainfall continued below normal.

Days suitable for fieldwork 5.9. Topsoil, subsoil moisture mostly short. Topsoil 18% critically short, 61% short, 21% adequate. Subsoil 4% critically short, 41% short, 56% adequate. Winter wheat harvest began. Moisture stress on small grain, hay. Crop progress continued ahead of normal. Livestock good to excellent. Feed, stockwater supplies adequate.

TENNESSEE: Temperatures above normal. Precipitation below normal.

Days suitable for fieldwork 3.7. Soil moisture 1% very short, 9% short, 80% adequate, 10% surplus. Corn 75% tasseling, 75% 1986, 50% avg.; 25% dough, 25% 1986, 11% avg.; 3% dent, 1% 1986, 1% avg.; 2% poor, 16% fair, 58% good, 25% excellent. Tobacco 2% poor, 31% fair, 63% good, 4% excellent. Alfalfa 2nd cutting 85%, 91% 1986, 90% avg. Hay 3% poor, 29% fair, 63% good, 5% excellent. Cattle mostly good. Pastures mostly good. Wheat harvest, soybean planting complete.

TEXAS: Afternoon showers eastern half State, result northwestward shift of general circulation pattern. Most significant rains Coastal Plain, extreme eastern area. Western areas isolated showers. Rainfall above normal Lower Rio Grande Valley, along coast to southeast. Cloudiness kept temperatures below normal statewide, except Northern High Plains, Blacklands.

Crops: Corn excellent growth, progress throughout State. Growers irrigated Plains. Rains beneficial Plains, east. Fields central southward denting some fields Valley neared maturity. Fields Blacklands northwestward dough stage. Corn 60% doughing, 66% 1986, 64% avg.; 30% dented, 58% 1986, 54% avg.; 2% mature, 27% 1986, 16% avg.; none harvested, 1% 1986, none avg. Grain sorghum planting virtually completed Plains. Growth, progress good. Some scattered replanting occurred. Fields heading Low Plains. Many fields Blacklands southeastward turning color some mature fields Coastal Bend, Valley. Some light harvest underway Coastal Bend. Sorghum 100% planted, 99% 1986, 100% avg.; 40% turning color, 54% 1986, 49% avg.; 10% mature, 39% 1986, 29% avg. Cotton fields benefited hot temperatures making good progress. Some irrigating Plains. Many fields squaring. Cultivation operations active. Flea hoppers, bollworms increased some spraying underway. Fields setting bolls central, southern areas. Good rain benefited fields Blacklands. Open bolls 1%, 2% 1986, 1% avg. Small grain harvest virtually completed Plains. Scattered remaining fields very weedy. Yields varied widely depending on freeze damage. Scattered showers held up final harvesting. Rice fields progressed nicely along Upper Coast. Some fields began to turn color. Fertilization continued. Rice 57% headed, 67% 1986, 66% avg.; 22% turning color, 32% 1986, 20% avg. Soybeans making normal progress Plains, Upper Coast. Stands good. Planting continued Plains.

Peanut planting good progress most areas. Stands good Cross-Timbers, fields need rain. Fields look good central, southern areas. Other crops planted: Peanuts 95%, 92% 1986, 97% avg. Soybeans 98%, 95% 1986, 96% avg. Sunflowers 98%, 96% 1986, 96% avg. Other crops harvested: Oats 91%, 82% 1986, 99% avg.

Commercial Vegetables: Rio Grande Valley, land preparation major activity. San Antonio-Winter Garden harvest watermelons, cantaloups, honeydews continued. High Plains, harvest transplanted onions increased. Yields lower than normal. Harvest potatoes underway. Peppers good growth. Trans-Pecos, cantaloups irrigated harvest 2 weeks away. East watermelon, tomato, squash, peas harvest continued. Heavy rainfall caused tomato, watermelon losses. Pecans continued good progress. Many producers treating aphids, 2nd generation casebearers.

Range and Pasture: Hay making again active many areas. Yields, quality good. Some loss quality occurred from heavy rains East. Native grasses making good growth; hot temperatures slowed growth. Many areas use good rain on pastures. Livestock, markets remained good. Working sheep, goats continued.

UTAH: Precipitation none to very light. Temperatures normal.

Days suitable fieldwork 6.6. Soil moisture 73% short, 27% adequate. Winter wheat 42% ripe, 28% 1986, 20% avg.; 11% harvested, 7% 1986, 3% avg. Barley 80% turned color, 76% 1986, 52% avg.; 20% ripe, 22% 1986, 5% avg.; 5% harvested, 6% 1986, 3% avg. Spring wheat 71% turned color, 68% 1986, 43% avg.; 6% ripe, 7% 1986, 1% avg.; 3% harvested, 1% 1986, none avg. Oats 88% headed, 66% 1986, 70% avg.; 41% turned color, 20% 1986, 11% avg. Alfalfa 2nd cutting 19% complete, 15% 1986, 5% avg. Corn 46 in. high, 37 in. 1986, 29 in. avg. Field corn 12% fair, 77% good, 11% excellent. Potatoes generally good. Major farm activities: Hay harvest, combining, cultivation, irrigation, spraying weeds. Lower elevation ranges dry. High elevation ranges good. Livestock good.

VIRGINIA: Hot, muggy. Scattered thunderstorm activity across State. Temperatures above normal. Varied precipitation from trace to 2.00 in.

Days suitable for fieldwork 4.8. Topsoil moisture 34% short, 66% adequate. Slow growth in isolated areas for corn, hay, pasture. Corn excellent; 33% in or beyond silk stage, 39% 1986, 48% avg.; 5% in or beyond dough stage, 6% 1986, 10% avg. Soybeans good to excellent, planting neared completion. Peanuts excellent. Tobacco good to mostly excellent. Flue tobacco being topped. Dark-fire progress reported slow. Barley harvest neared completion. Oats 84% complete, 77% 1986, 80% avg. Wheat 90% complete, 96% 1986, 92% avg. Fruit good to excellent. Peaches sizing well. Pastures, hay good to excellent, growth slowed with hot, dry weather. Leaf hoppers reported in alfalfa. Potato harvest 69% complete, 69% 1986, 50% avg. Summer vegetables being harvested. Livestock excellent.

WASHINGTON: Cool, dry conditions prevailed. Temperatures averaged 2 to 9° below normal. Extremes 40° Yakima, 85° Omak. Precipitation below normal central, west; normal elsewhere.

Days suitable for fieldwork 6.5. Soil moisture 50% short, 50% adequate. Winter wheat 6% harvested, 3% 1986, 1% avg. Winter barley 9% harvested. Dryland grain good. Irrigated grain good, excellent. Potato harvest started Benton County. Cherry harvest continued. Harvest of apricots, early nectarines, peaches underway. Hand thinning of apples continued. Western area harvest of blackberries, blueberries, raspberries continued. Range, pastures 45% short, 55% adequate. Dairymen prepare milk cows for slaughter. Leafy vegetable harvest continued King, Pierce Counties. Summer vegetables western area good. Green pea harvest 95% complete Grant, Benton Counties. Sweet corn central area mostly good.

WEST VIRGINIA: Average temperature 77°, 3 to 8° above normal. Extremes 57° Terra Alta; 97° Romney. Precipitation averaged 0.61 in.; 0.82 in. below normal southern; 0.10 in. above normal southwestern; 0.50 in. below elsewhere.

Days suitable for fieldwork 4.7. Soil moisture 8% very short, 50% short, 42% adequate. Wheat, barley, oats, corn, good to fair. Tobacco, fair to good. Hay, pasture, fair to good. Feed supplies adequate. Farm activities: Harvesting hay, clipping pastures, combining grain, weed, pest control, farm maintenance, gardening.

WISCONSIN: Temperatures averaged 76°, 5° above normal. Extremes 52°; 98°. Rainfall 0.90 to 2.50 in.

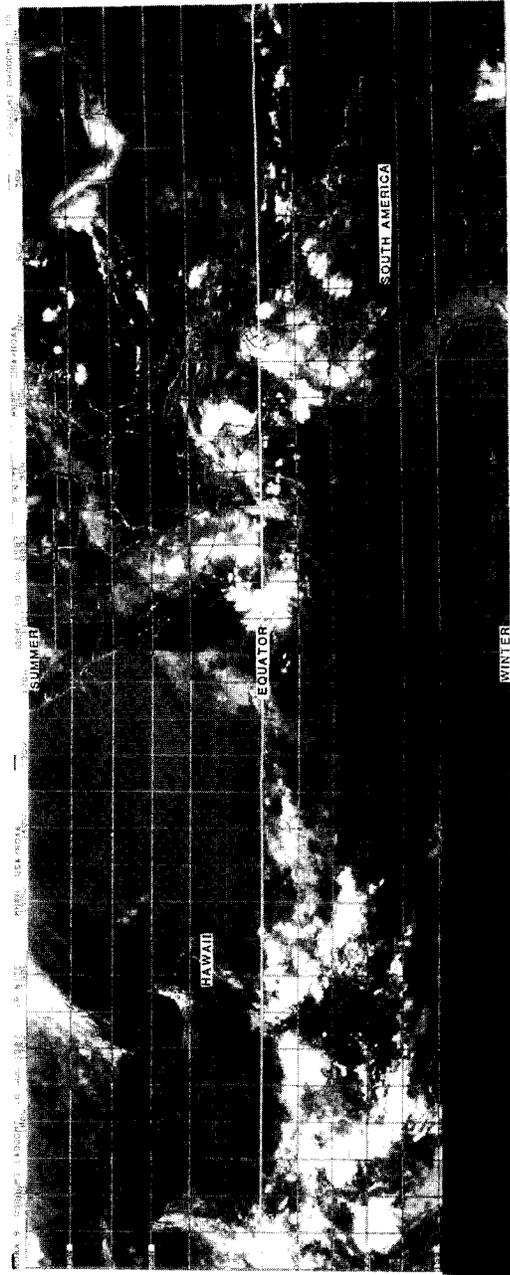
Days suitable for fieldwork 4.7. Soil moisture 62% short, 37% adequate, 1% surplus. Crops 1% very poor, 7% poor, 35% fair, 57% good. Corn better, average height 60 in., 48 in. 1986, 39 in. avg.; 12% in silk, 2% 1986, 2% avg. Second crop hay 20% cut, 13% 1986, 13% avg. Scattered rains help, regrowth remain slow. Oats swathing, chopping active. Winter wheat, barley ripening, harvest just started. Early potatoes dug, some tobacco reset.

WYOMING: Most temperatures slightly below normal. Precipitation trace to nearly 1.00 in.

Days suitable for fieldwork 6.0. Topsoil moisture 59% short, 41% adequate. Subsoil moisture 38% short, 62% adequate. Winter wheat 15% headed, 20% 1986; 55% turning color, 50% 1986; 30% mature, 30% 1986. Barley 10% boot, 10% 1986; 40% headed, 30% 1986; 40% turning color, 45% 1986; 10% mature, 10% 1986. Spring wheat 15% boot, 15% 1986; 55% headed, 55% 1986, 60% avg.; 25% turning color, 25% 1986; 5% mature. Oats 5% jointed, 10% 1986, 20% boot, 15% 1986; 60% headed, 65% 1986, 60% avg.; 10% turning color, 10% 1986, 5% avg.; 5% mature. Alfalfa 1st cut 80% complete, 80% 1986, 75% avg. Other hay 35% harvested, 40% 1986, 30% avg. Dry beans 5% in bloom, 20% 1986. Potatoes 10% in bloom, 15% 1986. Winter wheat mostly good. Spring grains fair to mostly good. Sugarbeets good to excellent. Range, pastures mostly good. Stockwater supplies adequate.

Global Weather Satellite Image

July 10, 1987



International Weather and Crop Summary

July 5-11, 1987

HIGHLIGHTS:

UNITED STATES ... Rain spurs crop growth and development across the Corn Belt and central Great Plains. Crops are mostly good throughout the Nation. Precipitation eases dry conditions in the northern Great Plains, but crops are still under stress in some areas.

U.S.S.R. ... In Western U.S.S.R., mild, dry weather over most areas favors maturing wheat and promotes corn growth. In the New Lands, showers benefit heading wheat in western areas.

EUROPE ... Light rain and near-normal temperatures benefit heading to filling wheat. Dry pockets persist in the southeast.

SOUTH ASIA ... Showers benefit early vegetative crops in central India. Light rain returns to southern summer crop areas where moisture may be limited for emergence.

SOUTHEAST ASIA ... Below-normal rainfall continues over Thailand's tasseling corn. Showers benefit vegetative Philippine grain.

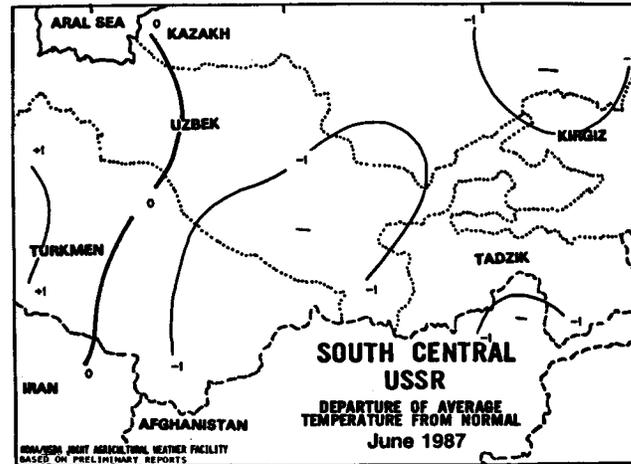
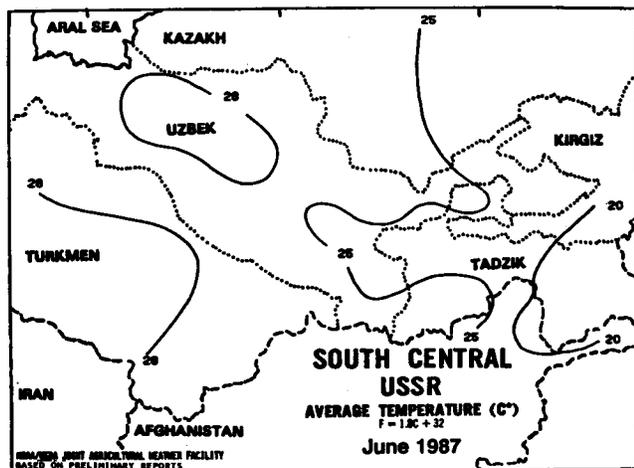
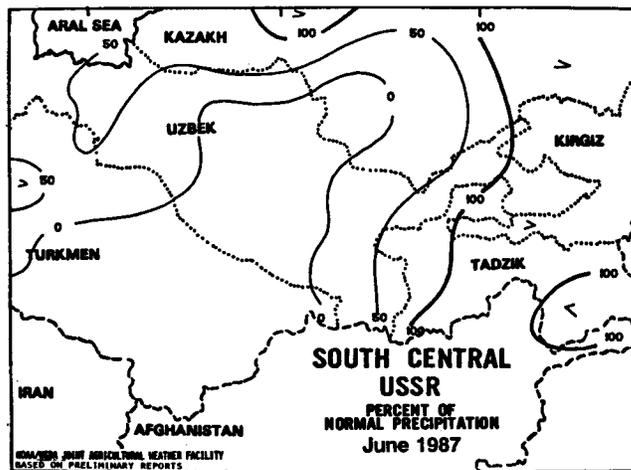
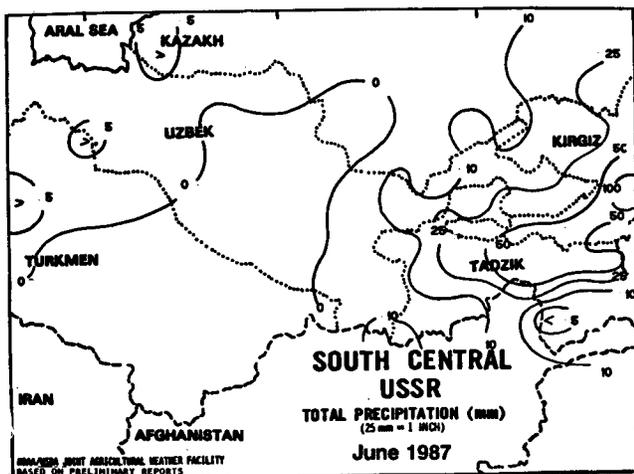
EASTERN ASIA ... Continued moderate to heavy rain likely causes flooding along the Yangtze Valley. Soaking rain continues to benefit corn and soybeans in the Manchurian Valley.

CANADA ... Showers and cool weather improve crop moisture and alleviate heat stress as crops advance through reproduction.

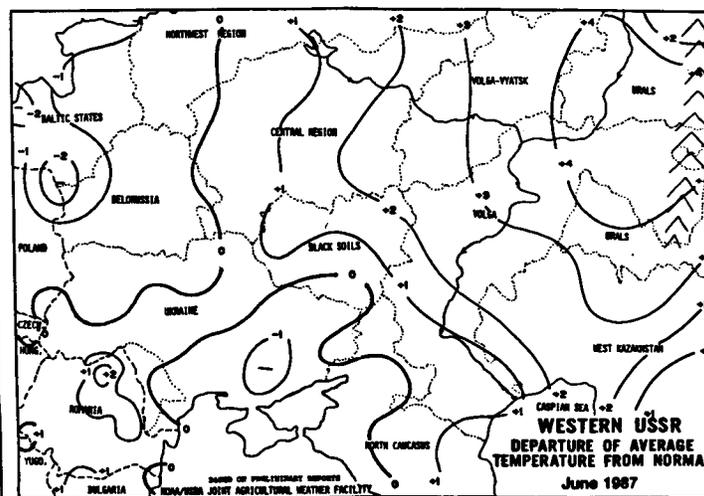
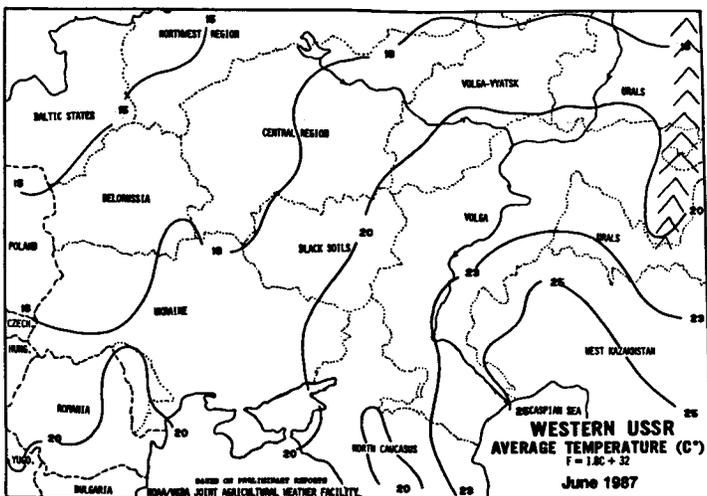
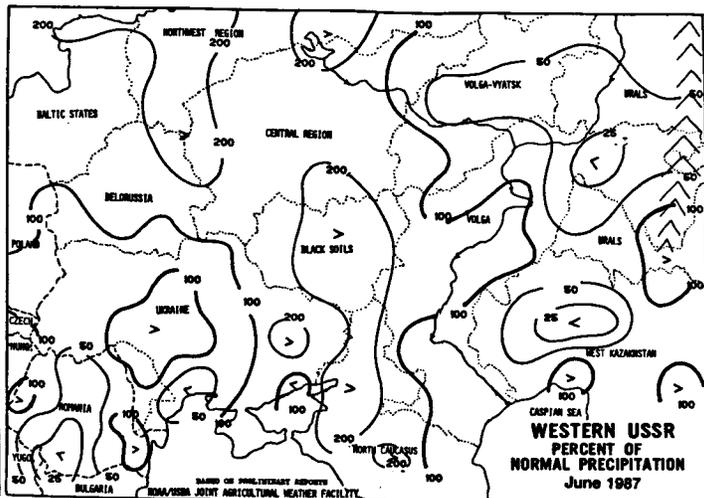
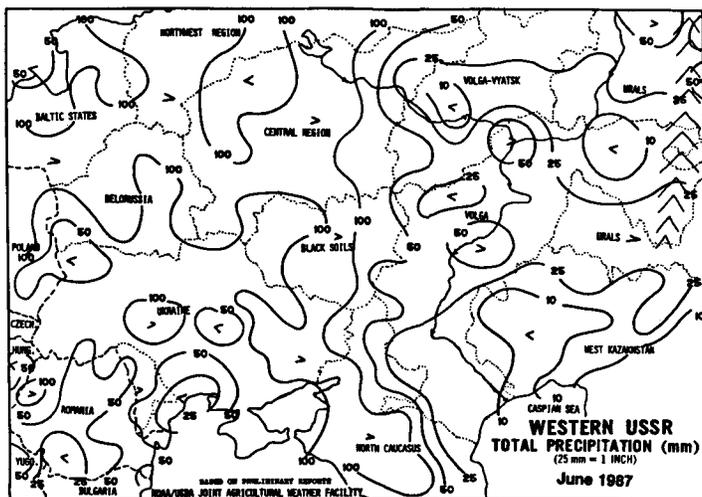
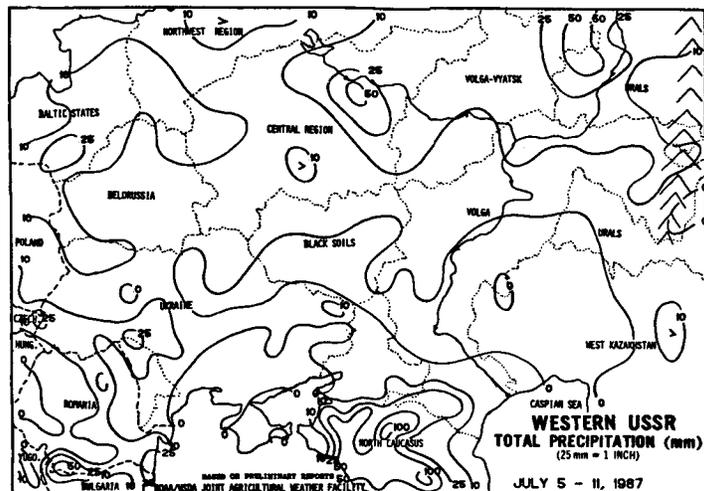
SOUTH AMERICA ... Dry weather returns to Argentina, where wheat planting is underway. Heavy rain continues in southern Brazil.

AUSTRALIA ... Dry weather continues in eastern Australia. Rain benefits vegetative wheat in Western Australia.

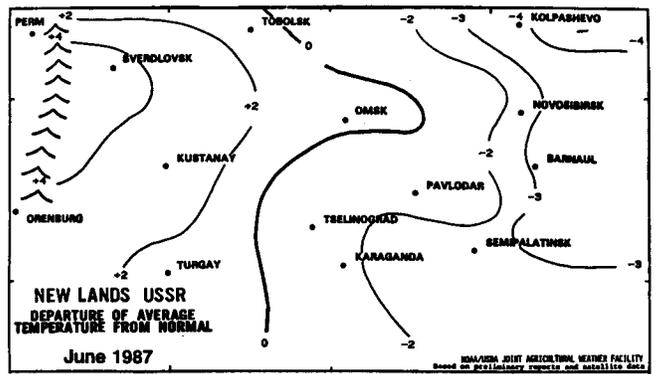
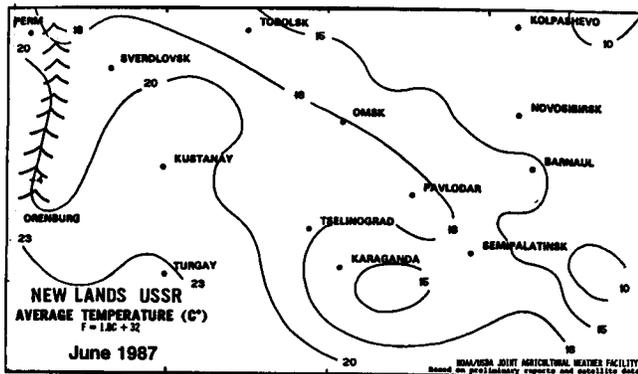
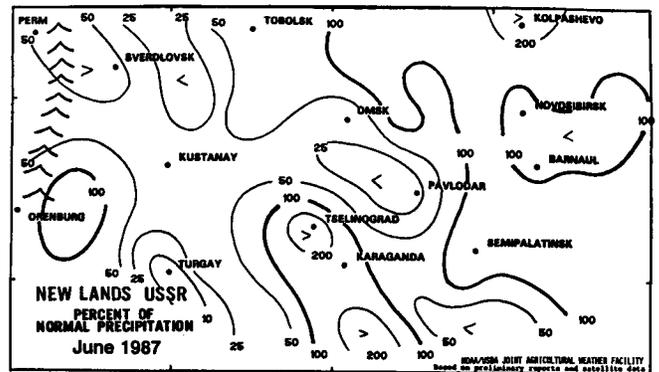
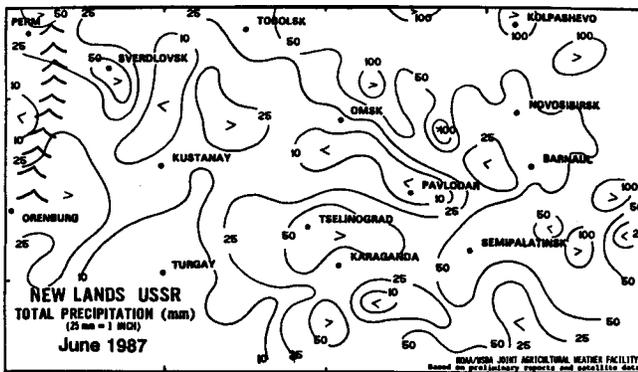
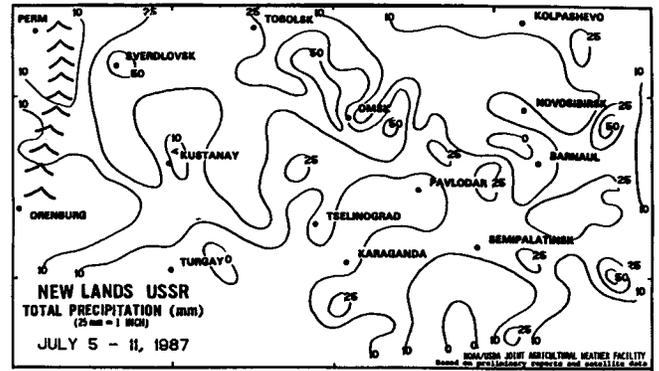
MEXICO ... Widespread, locally heavy rain favors corn development in the Southern Plateau.



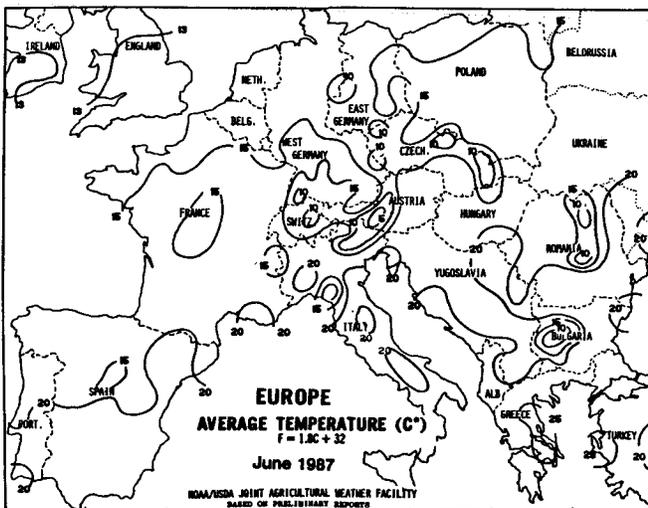
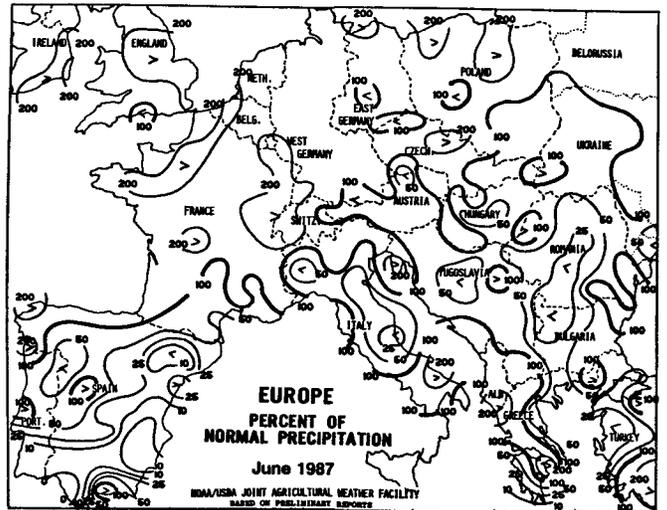
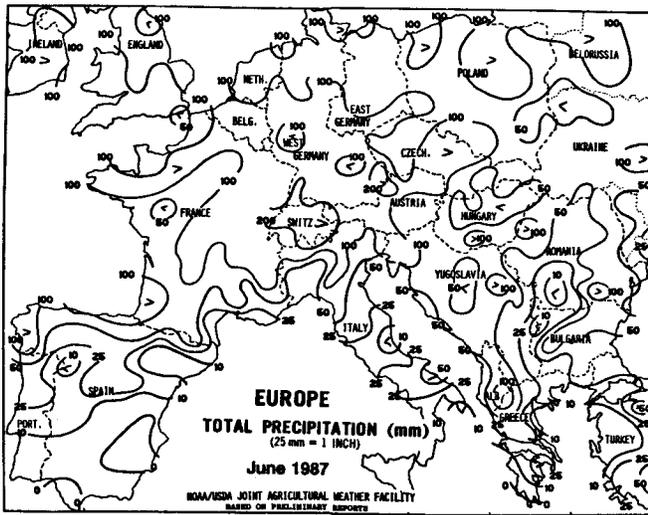
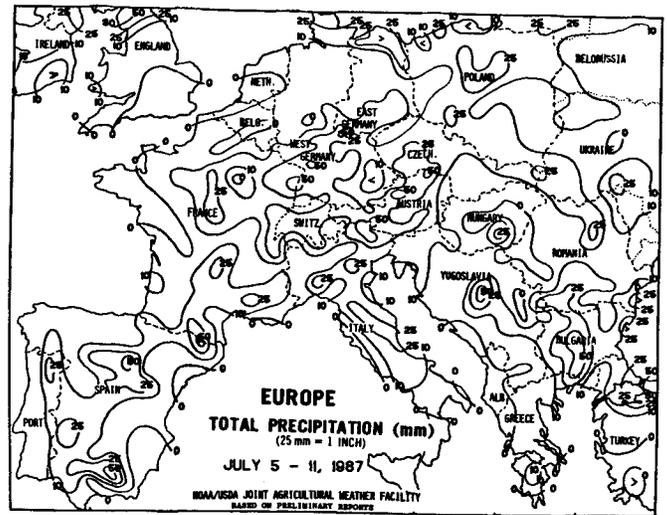
WESTERN U.S.S.R. ... Above-normal June precipitation covered crop areas in the Baltic States, Belorussia, the Central Region, the Black Soils Region, the central and eastern Ukraine, and the North Caucasus. June precipitation was below normal over the southwestern Ukraine, the Volga, and the Volga Vyatsk Regions. During June, winter grains flowered, spring barley entered the heading stage, and corn was in the vegetative stage. Soil moisture was ample to surplus for crop growth in most areas. Weather conditions were unfavorably dry for crops in the Volga, Volga Vyatsk, and the Urals. From June 11 until the month's end, unfavorably hot, dry weather covered the Volga, the Volga Vyatsk, and the Urals, stressing spring grains entering the heading stage. This past week, clear skies and mild weather favored filling wheat and corn approaching the tasseling stage. Moderate to locally heavy rain in the central North Caucasus was unfavorable for maturing winter wheat and may have lodged crops.

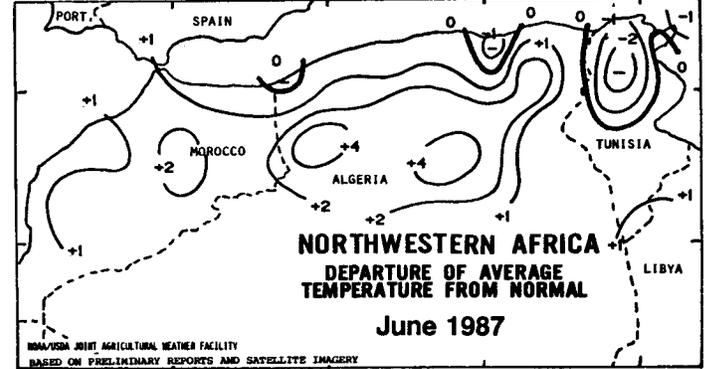
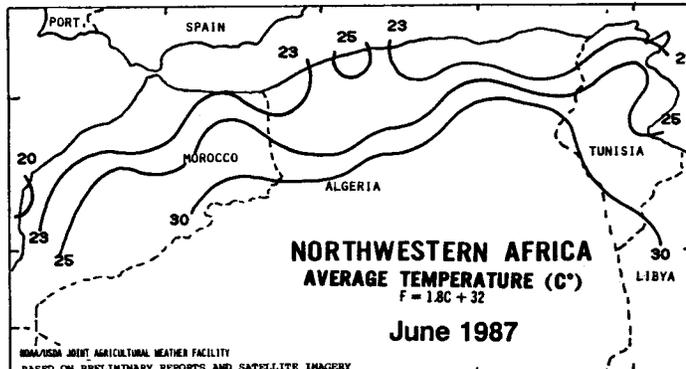
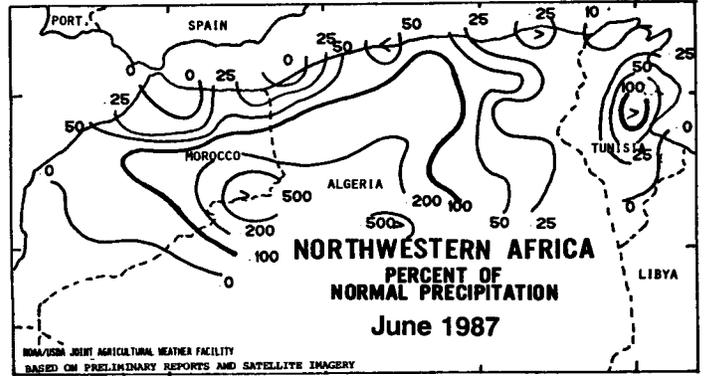
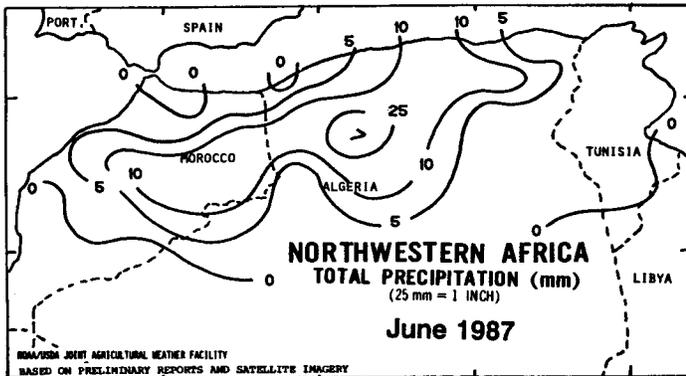
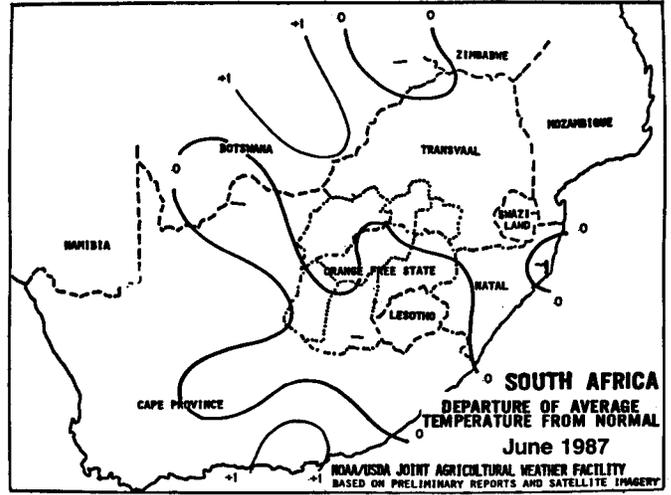
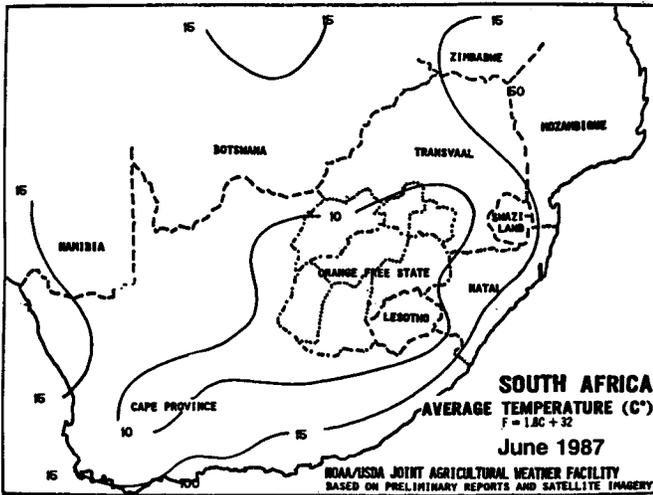
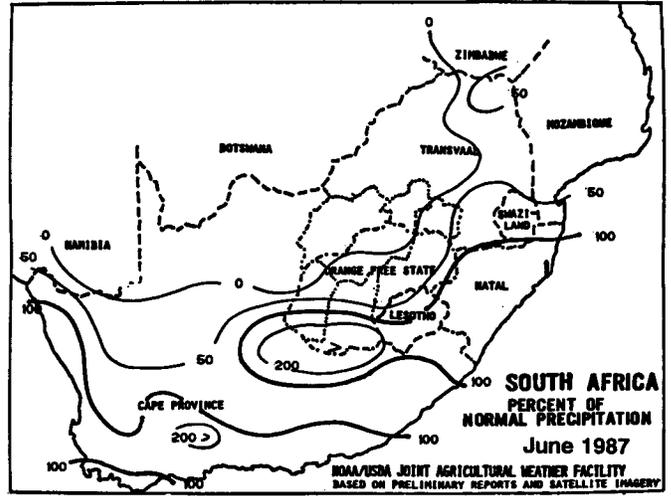
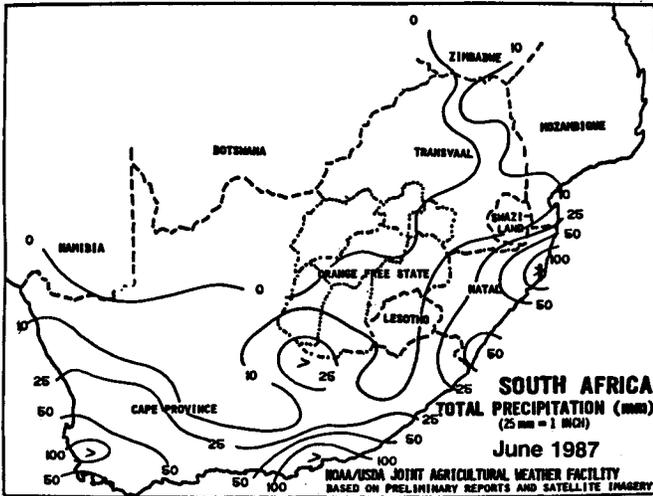


NEW LANDS ... In June, hot, dry weather from the Volga and Urals region moved into western Kazakhstan, reducing soil moisture and accelerating crop growth. From June 20 to June 30, daytime maximum temperatures ranged from 32 to 38 degrees C with minimum temperatures dropping to around 20 degrees C. Farther east in Western and Eastern Siberia, near to above-normal precipitation favored spring grains in the vegetative stage. Below-normal temperatures in these areas slowed crop growth. This past week, widespread showers covered spring grain areas west of Omsk. Rainfall amounts ranged from 20 to 50mm, benefiting spring grains in the heading and flowering stages. Mostly dry weather covered crop areas between Omsk, Novosibirsk, and Barnaul. Weekly average temperatures were near normal.

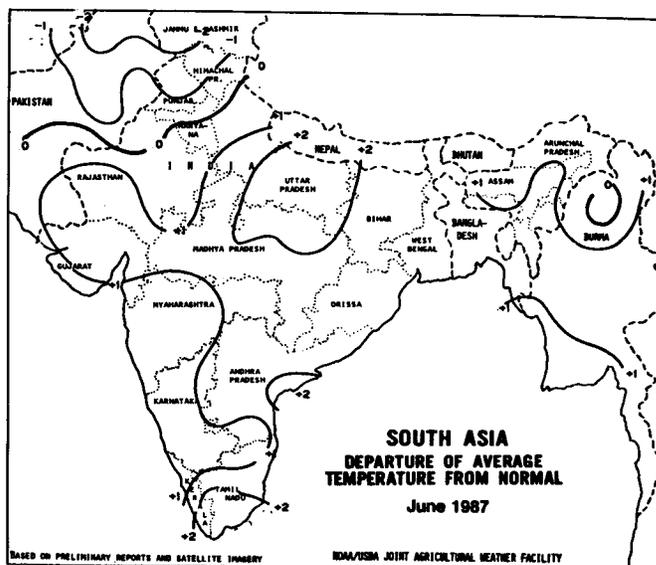
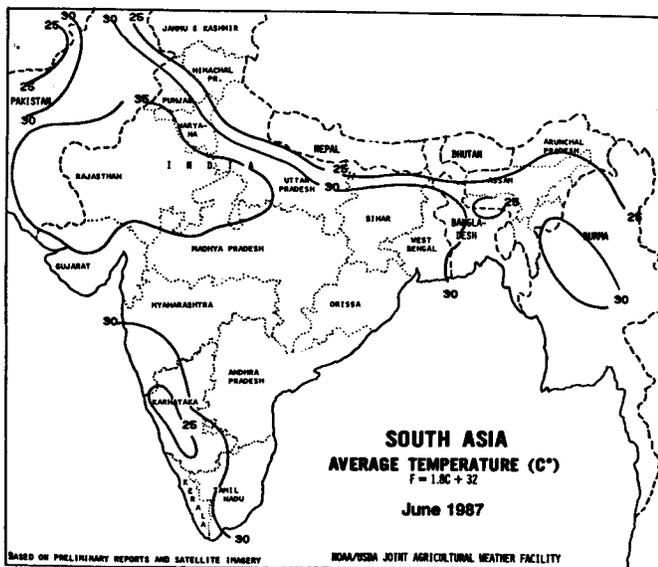
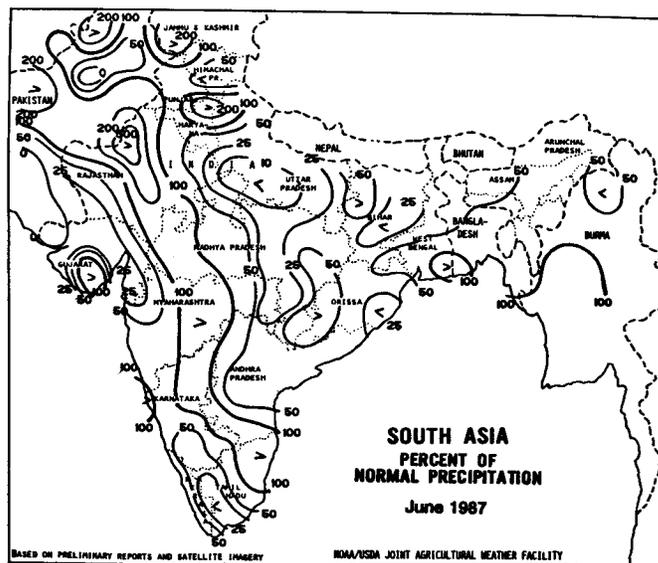
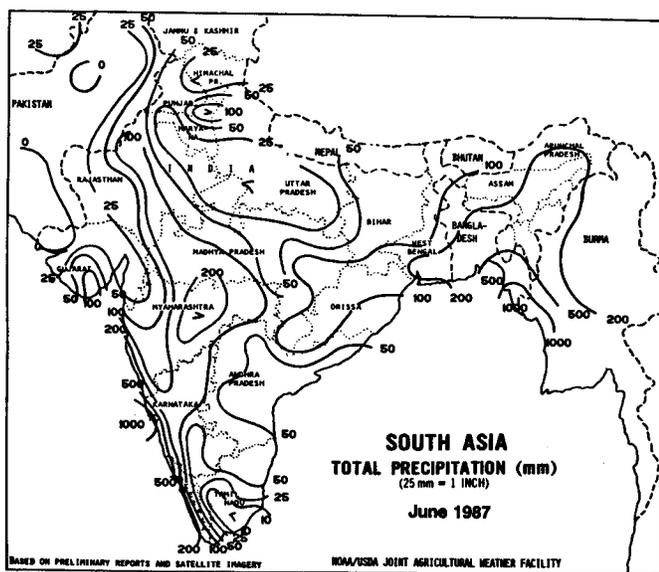
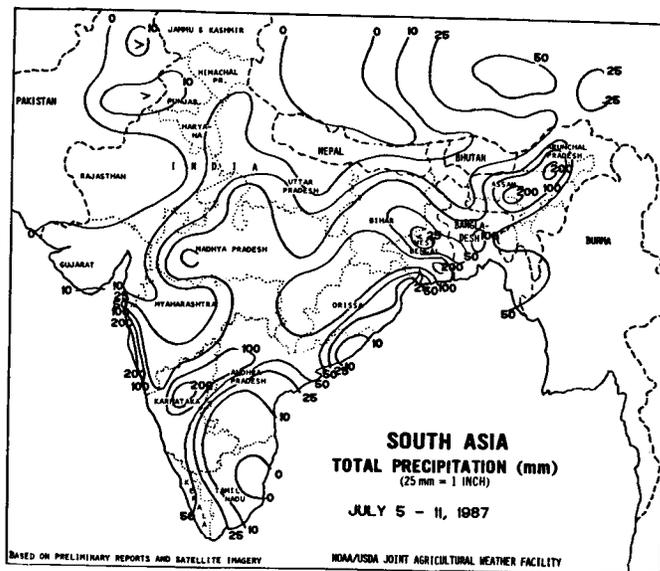


EUROPE ... Light rain (less than 10mm) and near-normal temperatures continued in western and northern Europe from southern England and western France to Poland, maintaining favorable moisture for heading to filling wheat and improving sugarbeet and corn development. Rainfall (10-61mm) brought relief to central Spain, but coastal areas of the Iberian Peninsula continued dry. Showers (10-25mm) in Italy benefited filling wheat in the Po Valley but interrupted harvesting further south. Scattered showers (10-62mm) benefited filling to maturing winter wheat and corn nearing reproduction in southeastern Europe, but dry pockets persisted in Hungary, Yugoslavia, and Romania, limiting moisture for grain development. In June, pockets of above-normal temperatures and below-normal rainfall in southeastern Europe limited moisture for filling winter wheat and vegetative summer crops. Warm, dry conditions persisted throughout the Iberian Peninsula. Elsewhere in Europe, wet weather maintained ample moisture for winter grain development, but cool temperatures slowed sugarbeet and corn growth.

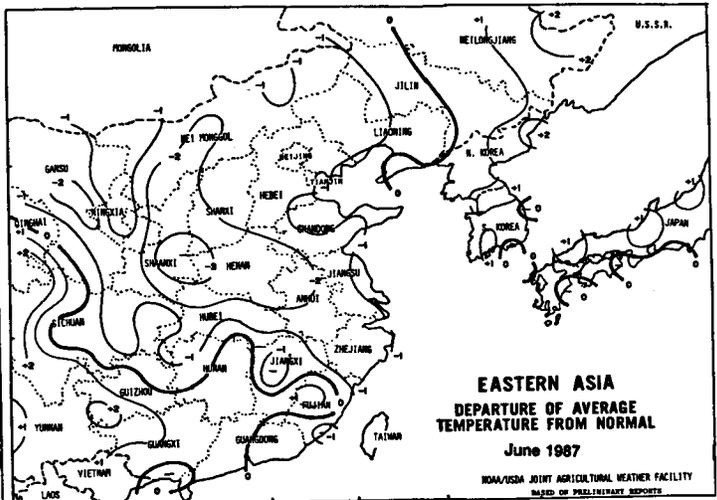
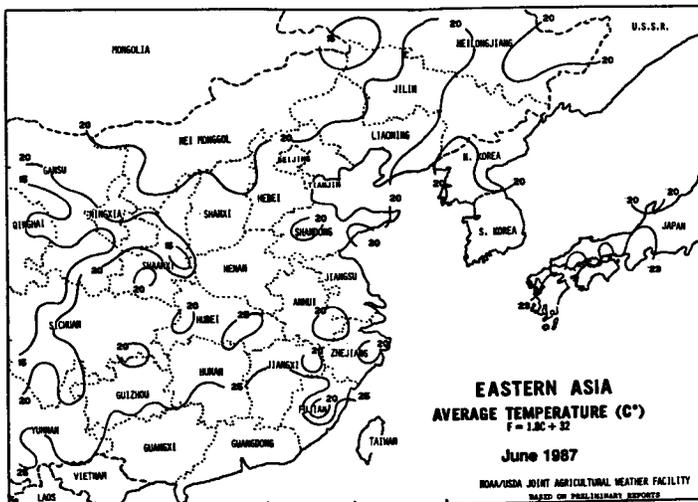
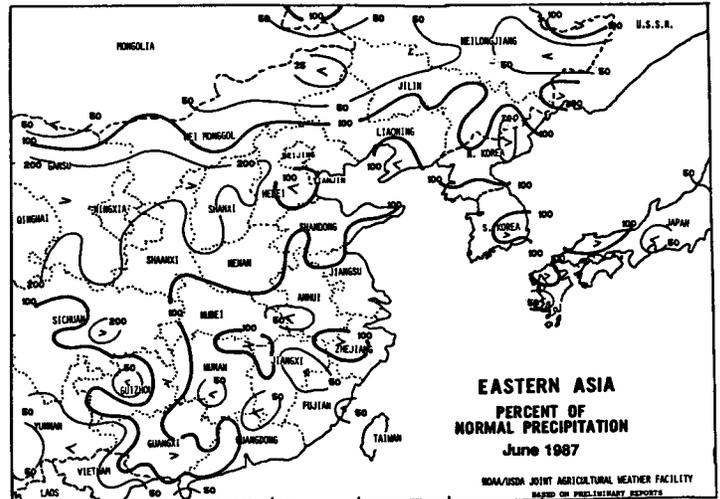
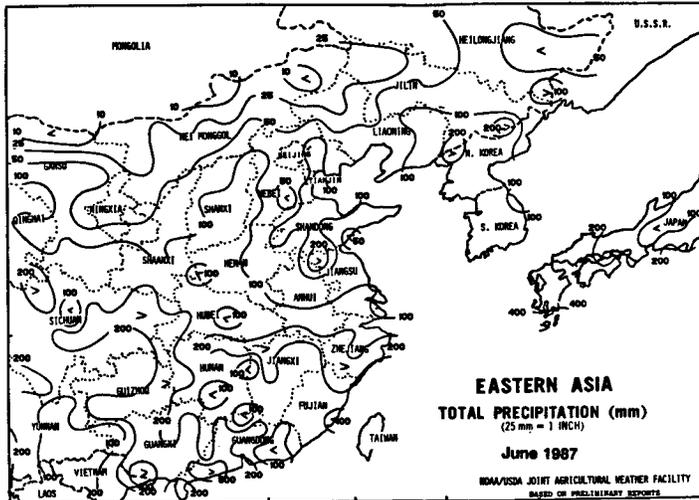
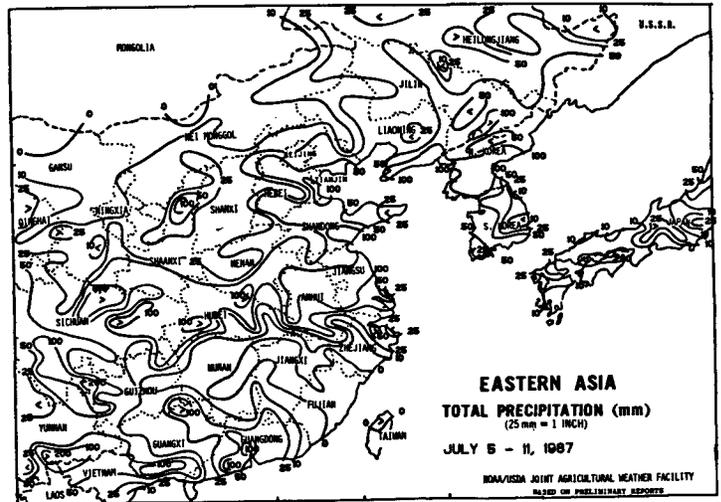




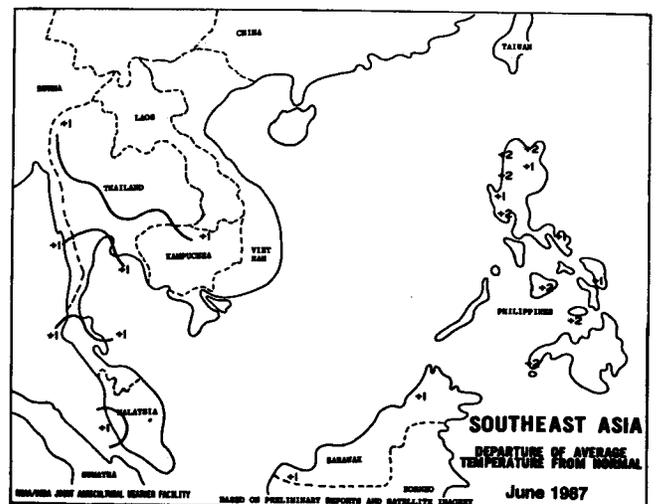
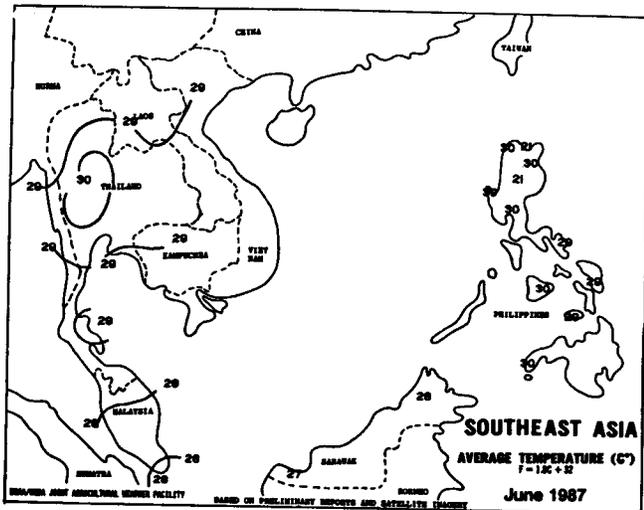
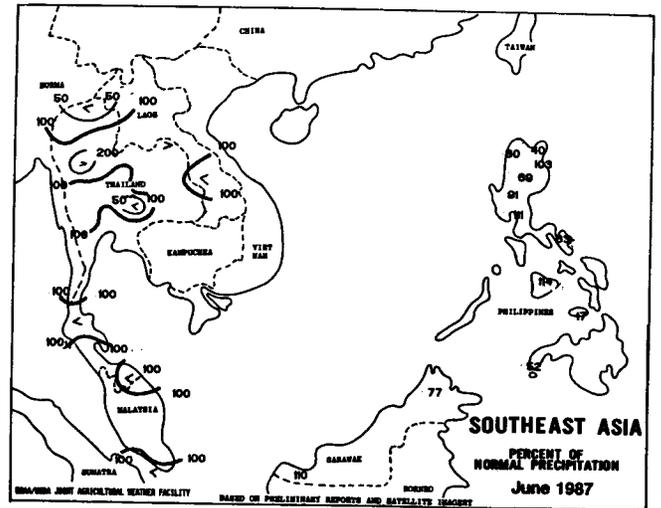
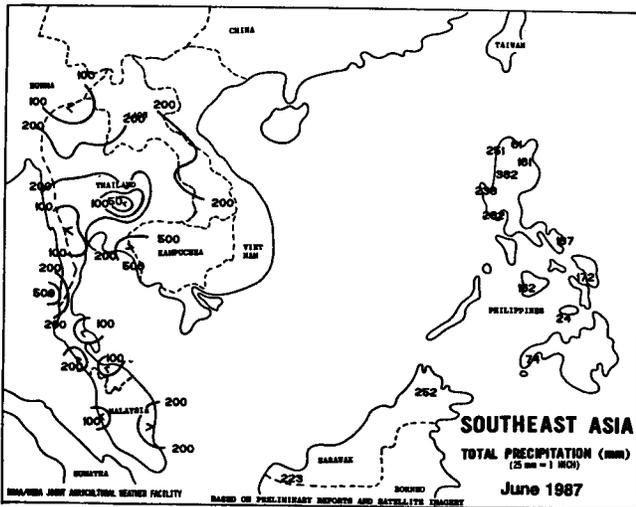
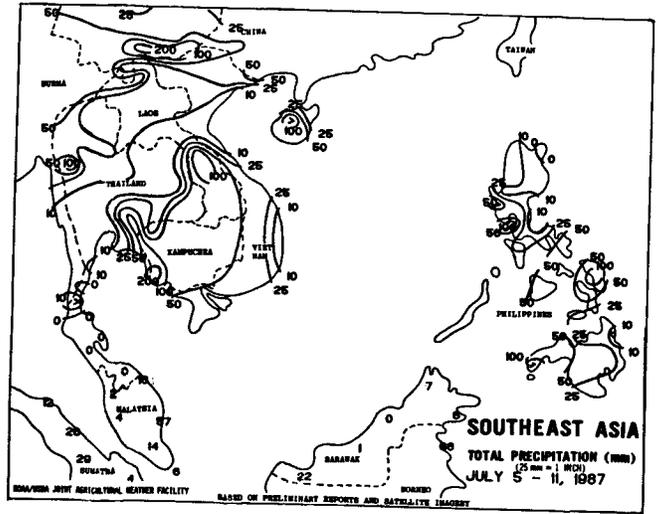
SOUTH ASIA ... Moderate to heavy showers (25 to more than 100mm) spread through central India from Maharashtra to West Bengal, maintaining beneficial soil moisture for crop emergence and establishment. Minimal rain (less than 10mm) returned to southern India from Tamil Nadu and Karnataka to coastal Orissa, where moisture may be limited for emerging groundnuts and cotton. In June, planting generally progressed normally in central and southern India. Below-normal rainfall, however, in Tamil Nadu, Karnataka, and western Maharashtra likely delayed cotton and groundnut planting. Light rain (less than 10mm) continued in Gujarat and Rajasthan, promoting preplanting fieldwork. Light to moderate rain (4-24mm) in northern India and northern Pakistan maintained irrigation reserves. Moderate to heavy showers (50 to more than 200mm) continued along India's southwest coast, in the eastern states, and in Bangladesh, where wet weather since early June has promoted local flooding.



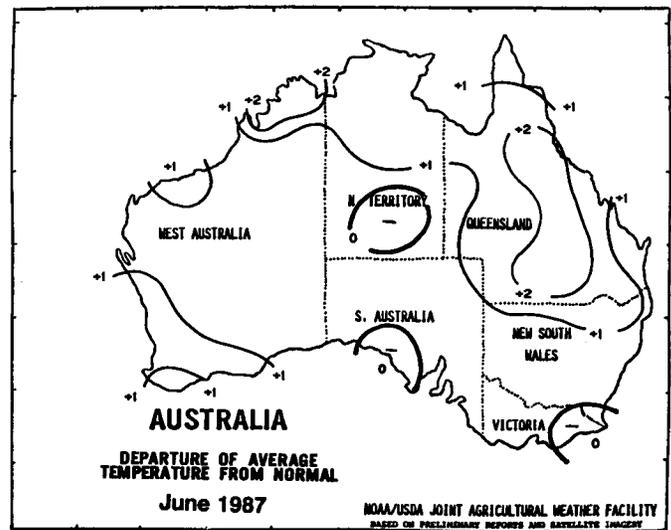
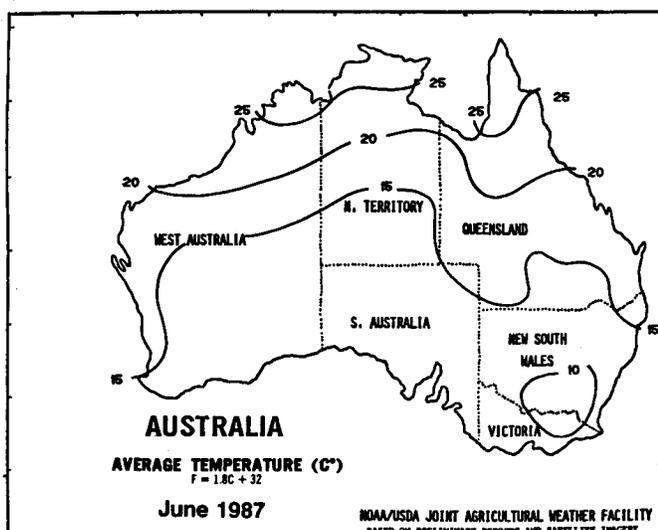
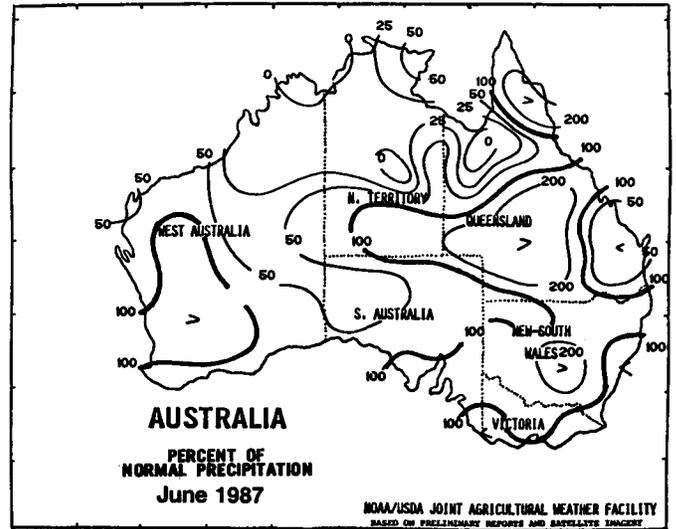
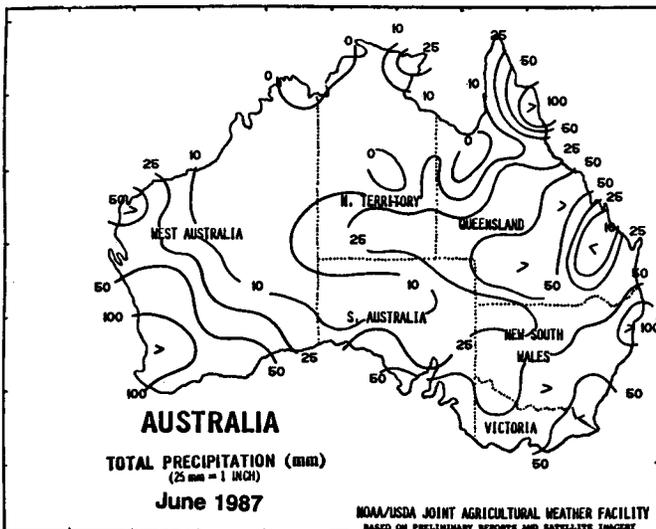
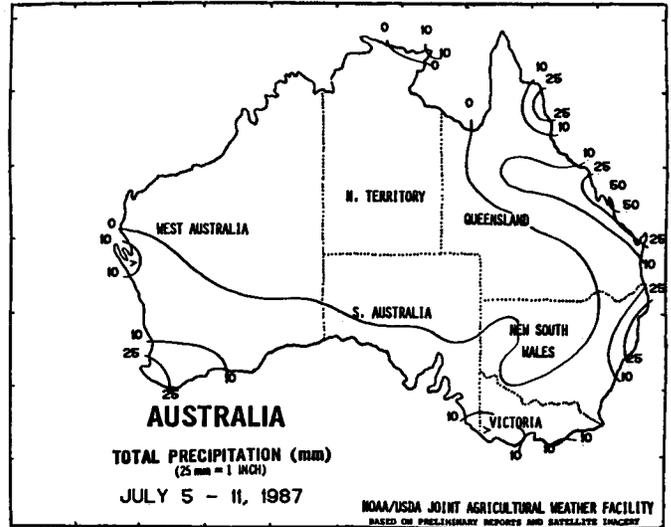
EASTERN ASIA ... June precipitation was above normal throughout most of the North China Plain. The rain benefited cotton, which entered the flowering stage, as well as early corn and soybeans in the reproductive phase. Near- to below-normal June precipitation covered rice in Hubei, Anhui, Jiangsu, Hunan, Jiangxi, Zhejiang, Guangdong, and Fujian. Above-normal precipitation covered rice in Sichuan and Guangxi. This past week, moderate to heavy rain continued over the Yangtze Valley, where conditions are likely too wet for flowering cotton. Rainfall in excess of 100mm in central Jiangsu and Anhui likely caused some flooding. Widespread moderate rain over the North China Plain continued June's above-normal rainfall pattern. In the Manchurian Valley, widespread soaking rain reversed June's below-normal precipitation pattern in northern Jilin and Heilongjiang, benefiting corn and soybeans in the tasseling and flowering stages, respectively.



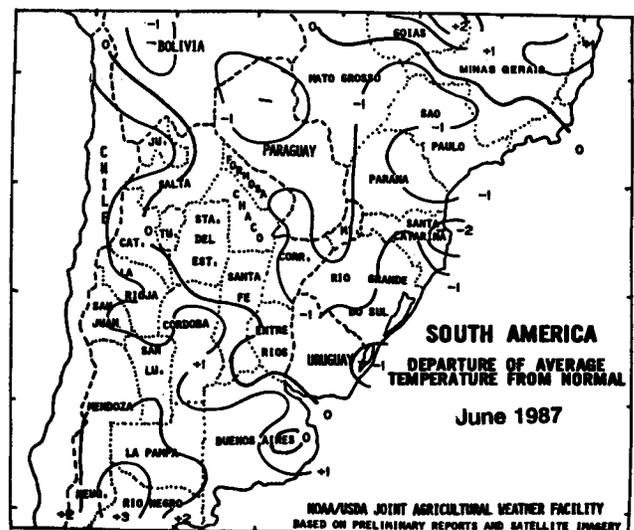
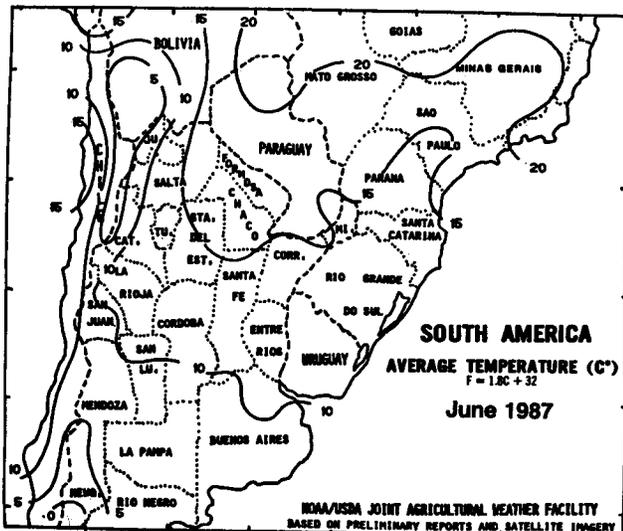
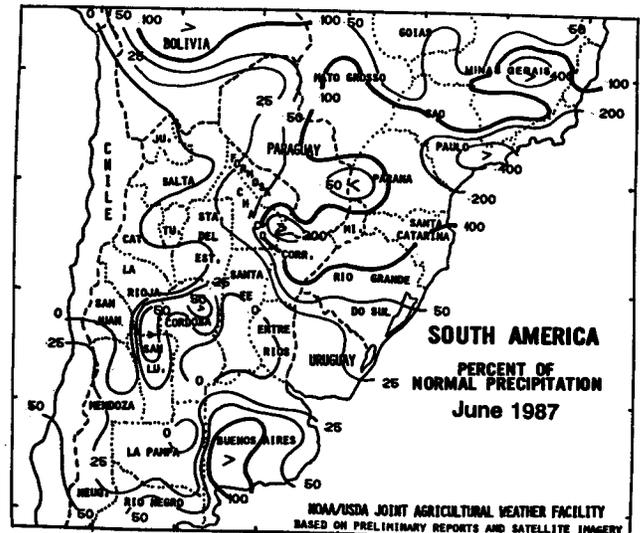
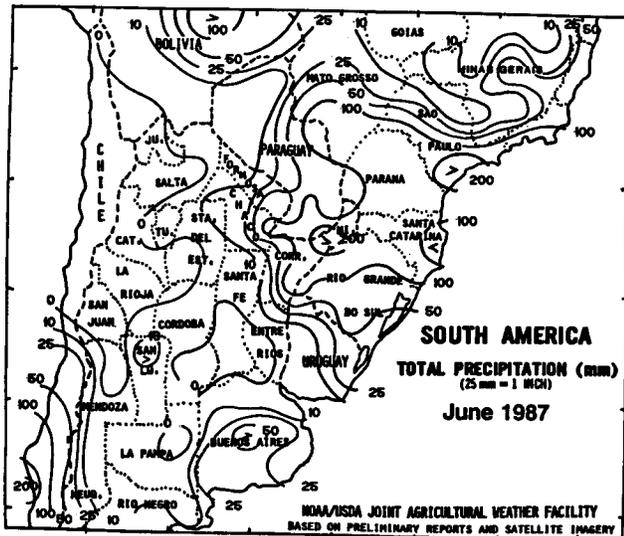
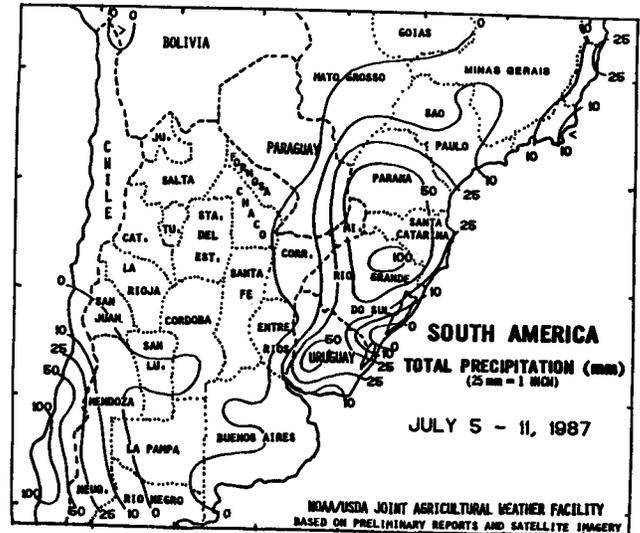
SOUTHEAST ASIA ... Below-normal rainfall (3-20mm) continued in Thailand's major rainfed corn regions, limiting moisture for tasseling corn. Moderate to heavy showers (10-110mm) reached rainfed rice areas of the Northern Hills and the Khorat Plateau, which borders Kampuchea. June rainfall was near to above normal in most Thai rainfed grain areas, but drier weather has persisted since late June. Moderate to heavy showers (25 to more than 100mm) elsewhere, except for coastal Vietnam, reflected June's rainfall distribution. Mostly dry weather covered the Malay peninsula, reversing June's near normal pattern and returned to Indonesia, reflecting dry conditions that persisted throughout June. Scattered showers (6-100mm) benefited vegetative Philippine grains, which have received near- to above-normal showers since mid-May. Beneficial rain (21-48mm) continued for the second week in sugarcane regions of the central islands, reversing the dry pattern that had persisted since October.



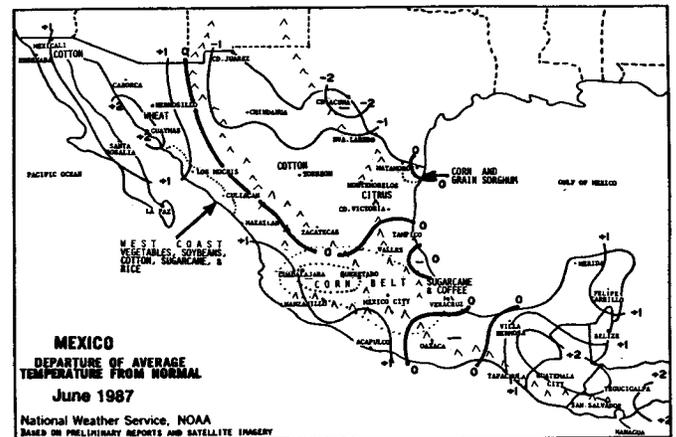
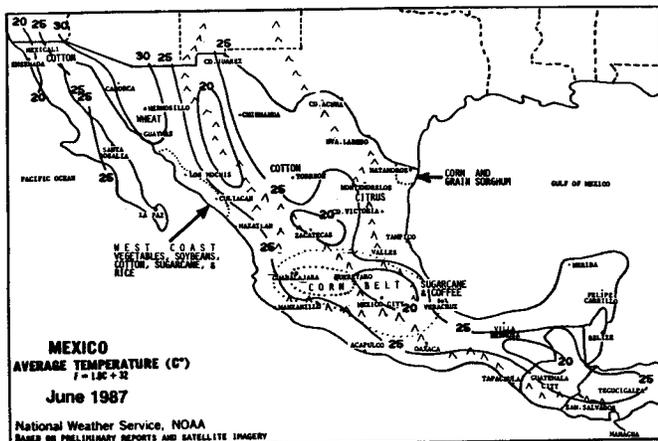
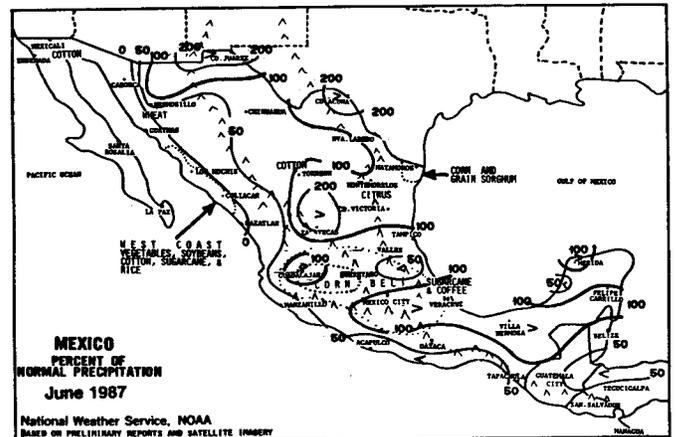
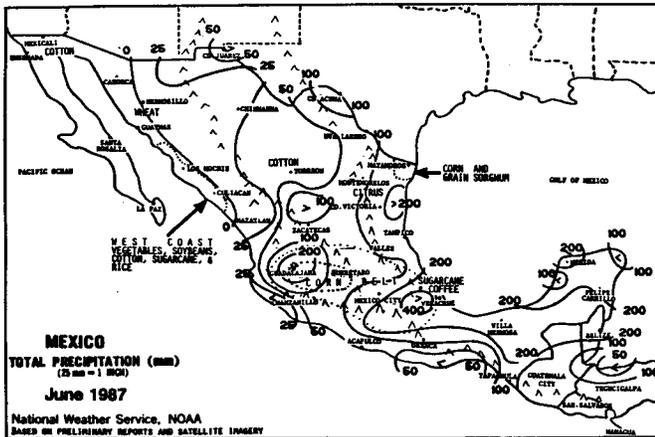
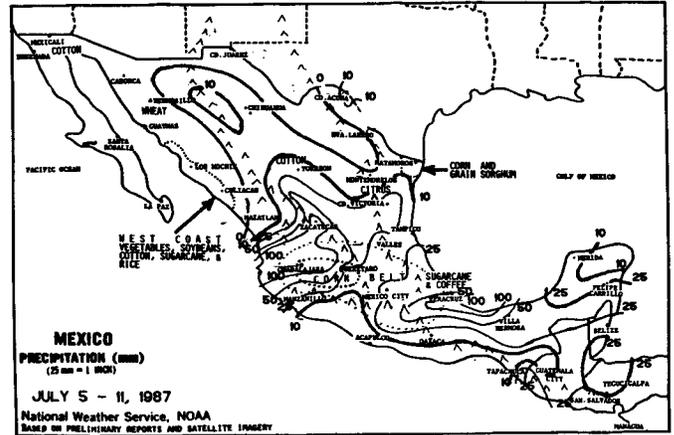
AUSTRALIA ... Rainfall averaged only 2mm in winter grain areas of South Australia, Victoria, and southern New South Wales. Soil moisture continued adequate, however, for vegetative winter wheat following near-to-normal June rainfall. Dry weather persisted in northern New South Wales and southeastern Queensland. June rainfall was near normal in northern New South Wales, improving moisture reserves and promoting late wheat planting. Poor conditions have persisted in Queensland grain areas since April. Light to moderate rain (5-25mm) covered Western Australia's grain areas, where near-normal rainfall in June maintained adequate moisture levels for vegetative wheat. Scattered showers (1-4mm) fell in Queensland's sugarcane areas, reflecting June's variable rainfall distribution.



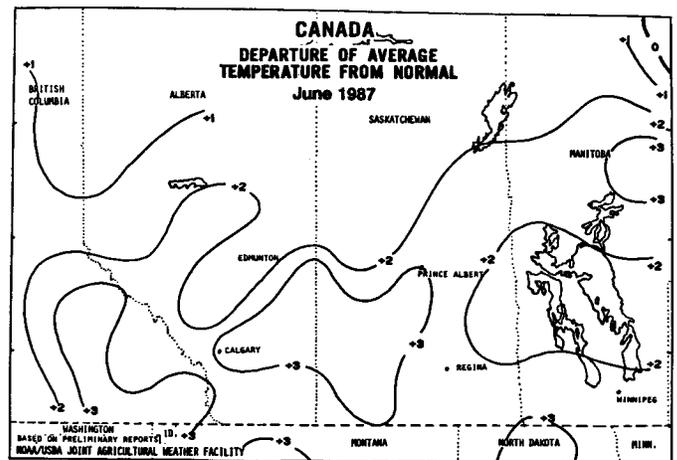
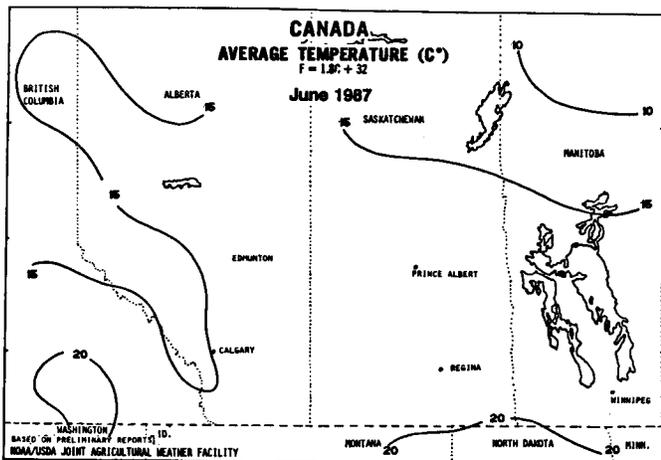
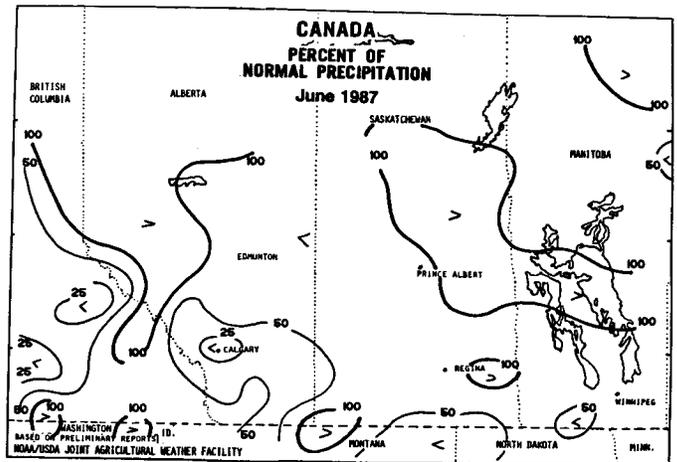
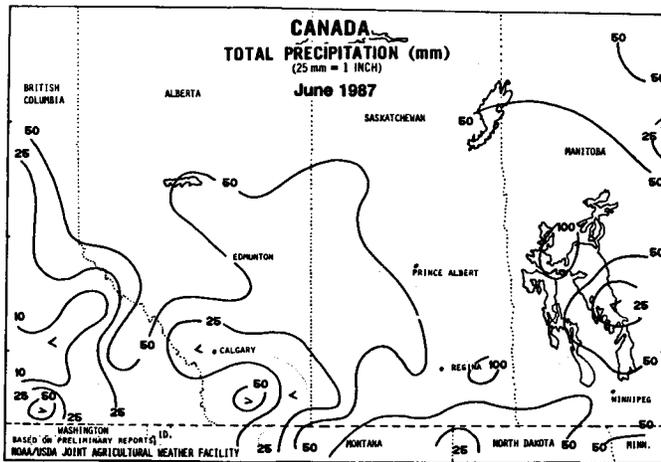
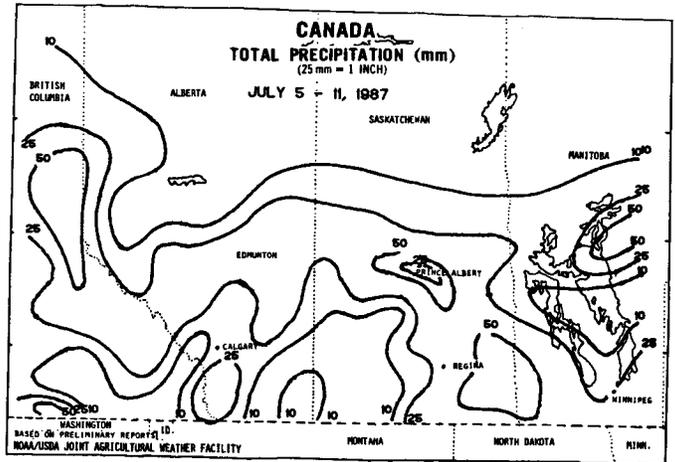
SOUTH AMERICA ... Mostly dry weather returned to Argentina's wheat area, following the previous week's beneficial rain. Below-normal June rainfall delayed wheat planting, but the recent moisture improved sowing conditions. Showers began in southern Buenos Aires during late June bringing monthly totals up to near normal in the southwest. However, virtually no rain fell during June in southern portions of Cordoba and Santa Fe, as well as in northeastern La Pampa and northernmost Buenos Aires. Moisture is still limited for wheat establishment despite last week's rain. In Brazil, locally heavy rain fell again in the south with expanded coverage reaching into Parana's coffee areas. June rainfall was near to slightly below average in Rio Grande do Sul likely favoring early wheat growth, while above-average rain in Parana kept wheat fields wet and slowed coffee harvesting.



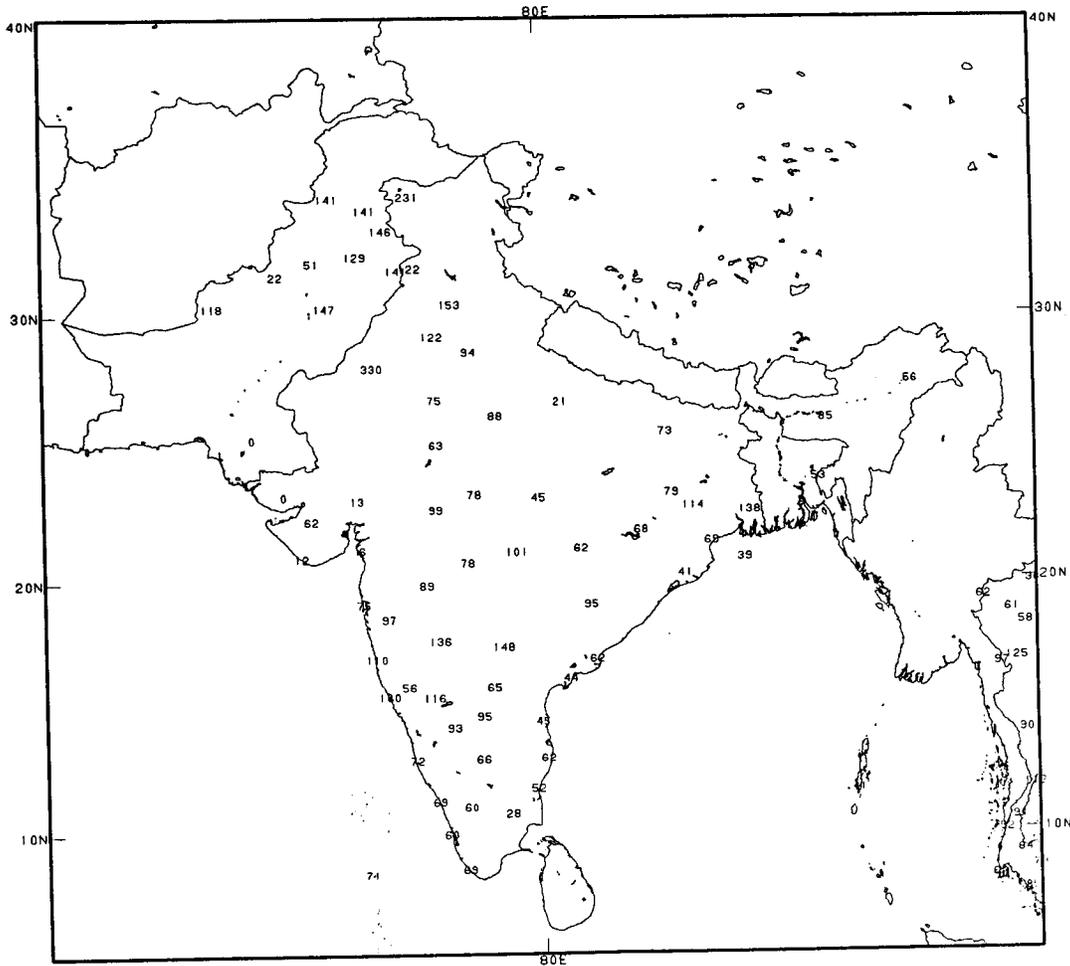
MEXICO ... Widespread, locally heavy rain covered much of the Nation. Dry weather was confined to the west coast farming region and the extreme northwest. In the Southern Plateau corn belt, weekly rainfall averaged 100-160mm in the west, 13-92mm across the central portion, and 25-100mm in the east. June rainfall was below average over much of the central and southwest corn belt, and near average in the east. The recent moisture was highly beneficial for corn growth throughout the Southern Plateau. Above-average June rainfall covered the northeast and southern Mexico, while dry weather prevailed along the west coast. Recent beneficial showers (10-29mm) reached into the north-central rangelands and cotton areas, south of Torreon. Some rain also fell over the northwestern mountains, helping irrigation reservoirs.



CANADA ... Showers and cool weather covered the Prairie Provinces grain belt, improving crop moisture and alleviating heat stress. In the southwest, where less than 50 percent of normal June rainfall and unfavorably hot weather caused crop deterioration, weekly rainfall averaged 8-14mm in southern Alberta and less than 10mm in southwestern Saskatchewan. Deficient moisture for heading and grain forming crops continued in this area, but weekly temperatures averaged several degrees below normal over the entire grain belt, reducing crop moisture demand. Weekly rainfall generally averaged 20-76mm elsewhere in the grain belt, providing timely moisture for reproductive crops. In general, recent weather showed a significant improvement over June's hot and drier-than-normal conditions. Grains are advancing into the filling period with marginal moisture supplies in the southwest, however.



India's Monsoon Arrives Late



INDIA: PERCENTAGE OF NORMAL PRECIPITATION MAY 1 TO JULY 11, 1987

The southwest monsoon circulation, which provides India with its summer rainfall, was not fully established in southern India during the normal, early June onset (see WWCB, Vol. 74, No. 22). However, a recurring trough, positioned to the west, induced southwesterly flow and generated near-to above-normal rainfall in many of southern India's summer crop areas. Consequently, rice planting progressed normally throughout southern India in late May, and pre-planting and fieldwork took place in major cotton and groundnut regions in June. The monsoon circulation was established by late June, improving moisture reserves for emerging summer crops and promoting late cotton and groundnut planting.

The Weekly Weather and Crop Bulletin (ISSN 0043-1974) is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the Weekly Chronicle. It is issued under general authority of the Act of January 12, 1895 (44-usc 213), 53d Congress, 3d Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

Annual subscriptions: domestic \$25, foreign \$33 (in U.S. funds by international money order or check drawn on U.S. bank) payable to U.S. Department of Commerce, NOAA. POSTMASTER: Send address changes to Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, D.C. 20250. Order subscriptions from the office and address listed above. Second class postage paid at Washington, D.C. and additional mailing offices.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climate Analysis Center
Managing Editor (Acting) Lyle Denny
Meteorologists Tom Heddinghaus,
Ray McInturff, Jim Williams, Wes Byrd,
Richard Monteith, and Bradley Rippey

Subscriptions (202) 447-7917 . . . Andrea Kuiper

U.S. DEPARTMENT OF AGRICULTURE
Economics Management Staff
Editor Sharon Lee
National Agricultural Statistics Service
Agricultural Statistician Clif James
World Agricultural Outlook Board
Agricultural Weather Analysts. . . Ray Motha,
Tom Puterbaugh, and Mark Brusberg

NOAA/USDA Joint Agricultural
Weather Facility
Room 5844 USDA South Building
Washington, D.C. 20250

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, \$300

WEEKLY NEWS BULLETIN
SECOND CLASS

SECOND CLASS MAIL
POSTAGE AND FEES PAID
NOAA PERMIT NO.
ISSN 0043 1974