

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration, National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
Economics and Statistics Service
World Food and Agricultural Outlook and Situation Board

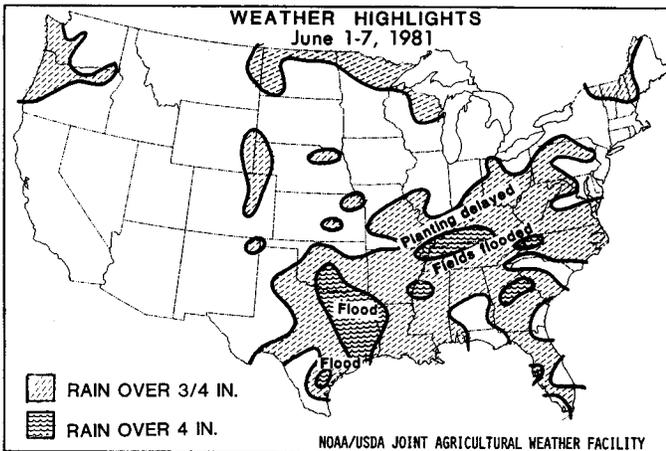
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June 9, 1981

National Weather Summary

June 1-7, 1981



HIGHLIGHTS: Heavy rain fell over much of the area east of the Rockies. The rain restored depleted soil moisture in most of the area, but the eastern Corn Belt was too wet for fieldwork and planting continued to be delayed. Severe weather was frequent in the central and southern Plains and moved into the Ohio Valley and the Southeast after midweek. A tropical depression moved out of the Gulf of Mexico and increased the intensity of the heavy downpours. Flooding was widespread from central Texas through the Tennessee and Ohio River Valleys into West Virginia and parts of the Southeast.

MONDAY...A cold front moving into the Plains produced heavy thunderstorms along and east of the front. The storms were numerous through the Texas Panhandle, central Plains, Ohio Valley, and lower Mississippi Valley. Hail, high winds, tornadoes, and heavy downpours plagued the area. More thunderstorms developed over drought stricken Florida. Thundershowers were widely scattered from the Pacific Northwest through the Plateau region. Temperatures climbed into the eighties in eastern Washington and Idaho.

TUESDAY...Scattered showers and thunderstorms spread across the southern Plains to the Atlantic and from the central Plains, through the Ohio Valley, to the Atlantic, as far north as Massachusetts. Some of the thunderstorms spawned tornadoes and others produced hail, high winds, and heavy rains. The rains caused flooding in Oklahoma and West Virginia, and in southern Texas and parts of the Ohio Valley. Scattered thunderstorms spread northward through the northern Mississippi Valley and a cold front produced scattered showers over the Great Basin and the central and northern Rockies.

WEDNESDAY...Thunderstorms continued from the southern and central Plains to the southern three

quarters of the Atlantic Coast. The heavy rains and resultant flooding spread from Texas and Oklahoma to Louisiana, Arkansas, and Missouri. Late in the day, another area of severe weather produced tornadoes and hail from eastern Colorado to southern Montana. Tornadoes caused many injuries and extensive property damage in the area north of Denver. Parts of Washington State had widely scattered showers and temperatures reached the nineties in interior sections of northern and central California.

THURSDAY...Thunderstorms continued to spread heavy rain over the lower Mississippi Valley and southern Plains. To compound the instability, a tropical depression formed in the western Gulf of Mexico and began to pour more moisture northward. Showers and thunderstorms were also pushing through the Dakotas into Minnesota, with all the thunder and rain, there were few reports of severe weather other than heavy rain.

FRIDAY...The tropical depression moved inland west of Galveston, Tex., early in the day and caused more heavy rain in southeastern Texas. The small town of Anahuac, Tex., reported 15 inches of rain. Heavy rain moved through northern Louisiana and Arkansas. Thunderstorms ahead of the depression dumped locally heavy amounts of rain in parts of the Ohio Valley. Showers and thunderstorms covered the Tennessee Valley and West Virginia.

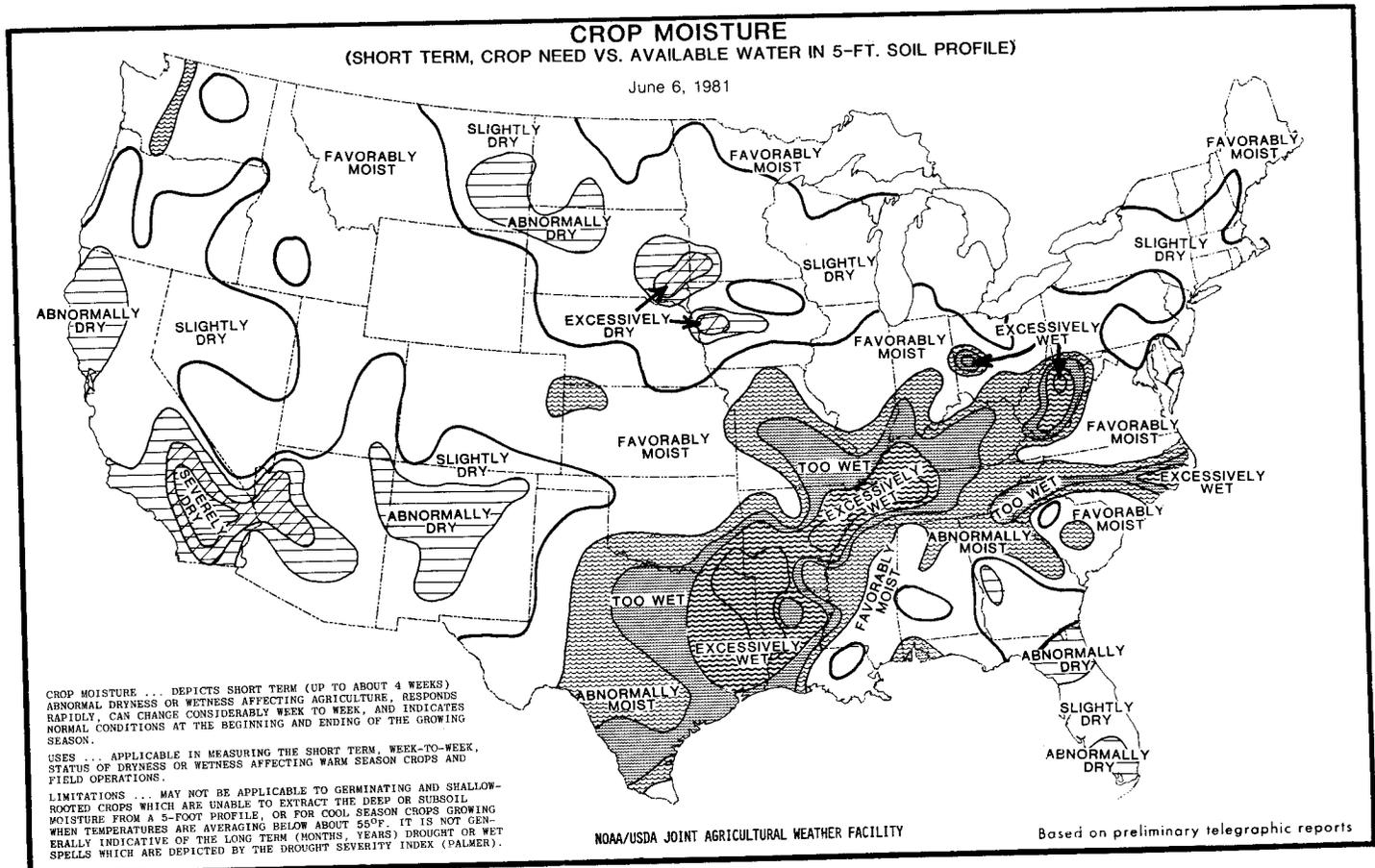
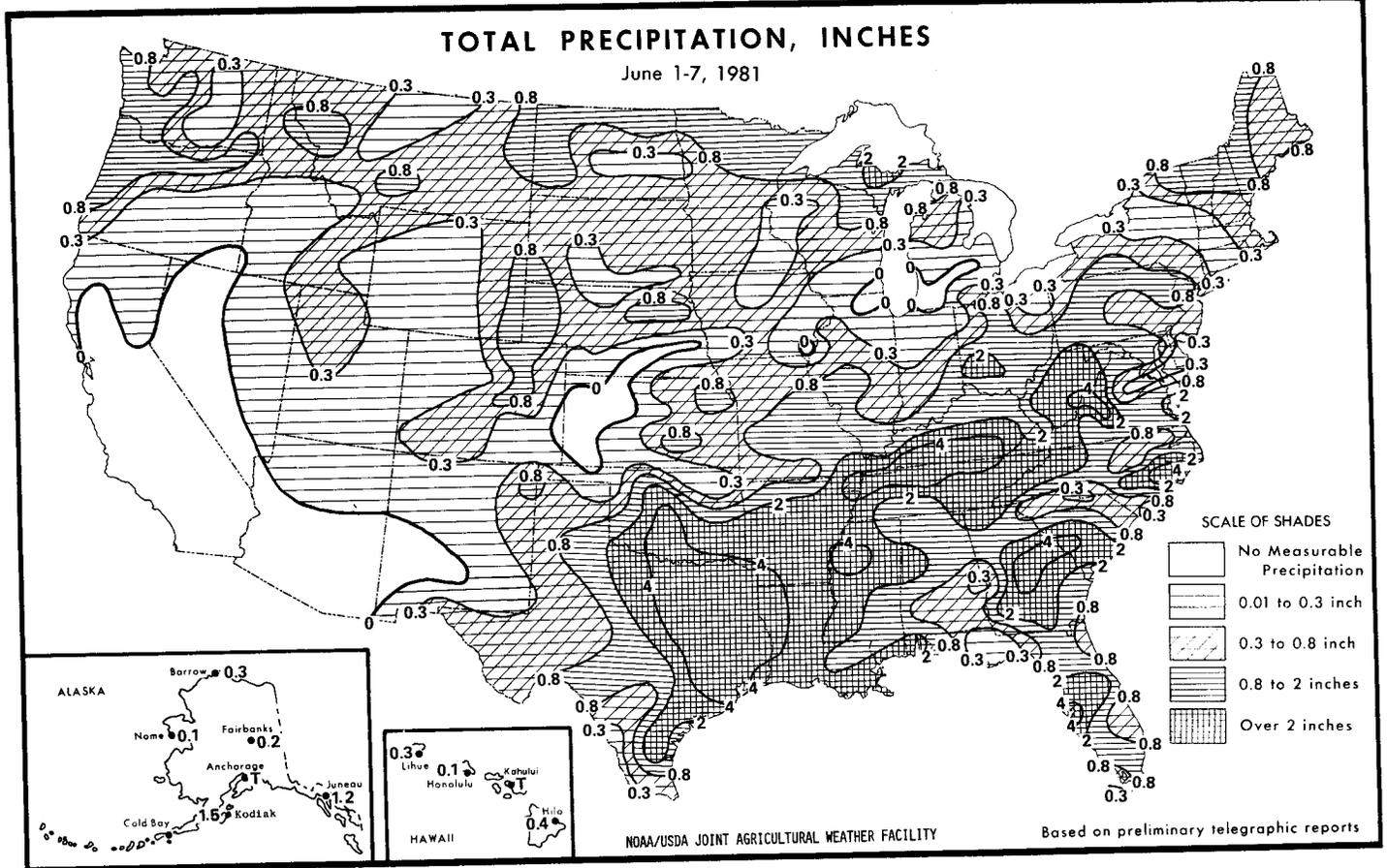
SATURDAY...The remnants of the tropical depression continued to dump heavy rain over the Tennessee and Ohio Valleys and into West Virginia. Serious flooding occurred in West Virginia when the heavy rain overflowed streams and saturated soils. Scattered areas of showers and thunderstorms swept through the southeastern quarter of the Nation and across the mid-Atlantic States into Maine. Widely scattered thundershowers reached from the Rockies into the High Plains.

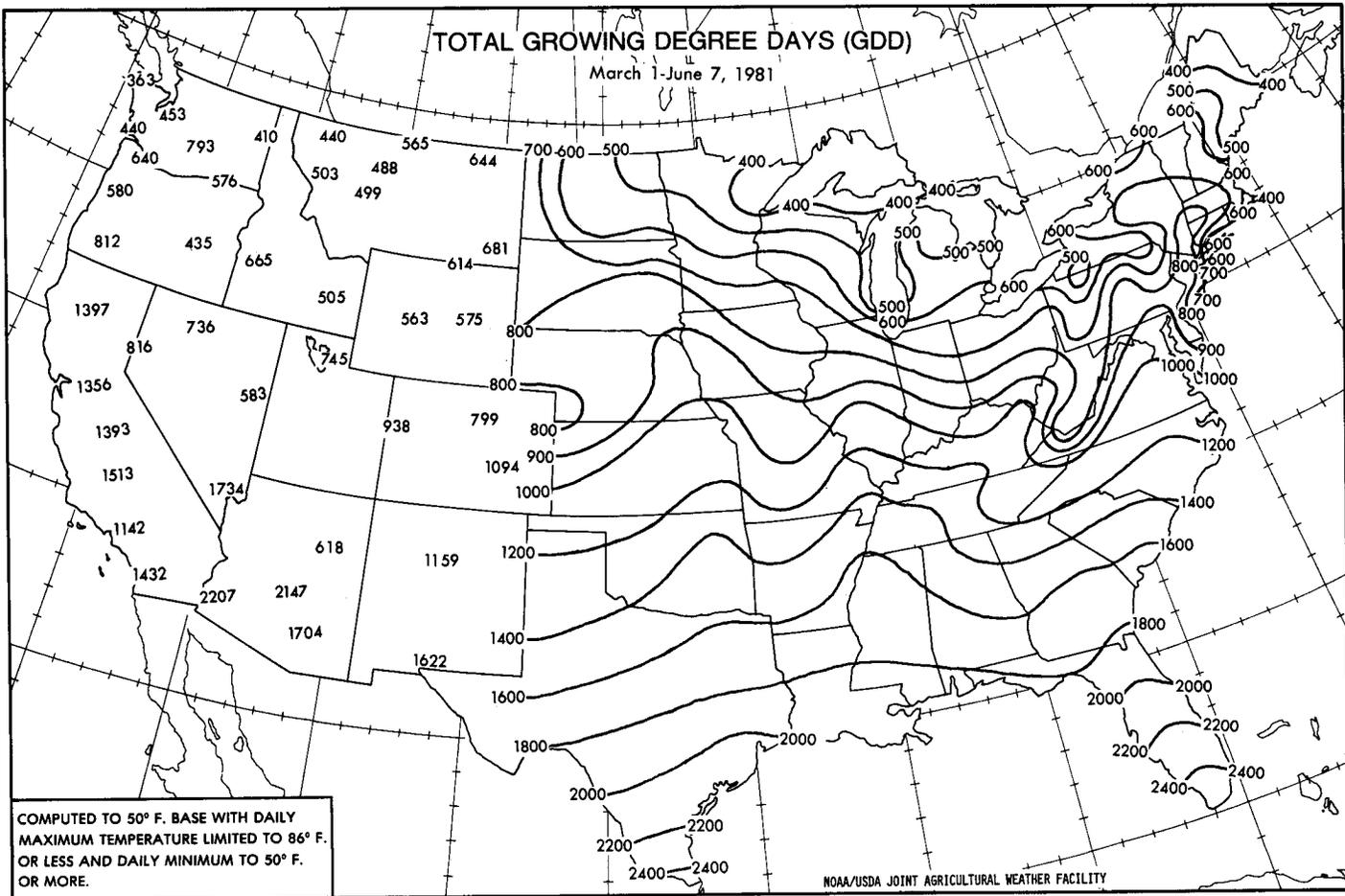
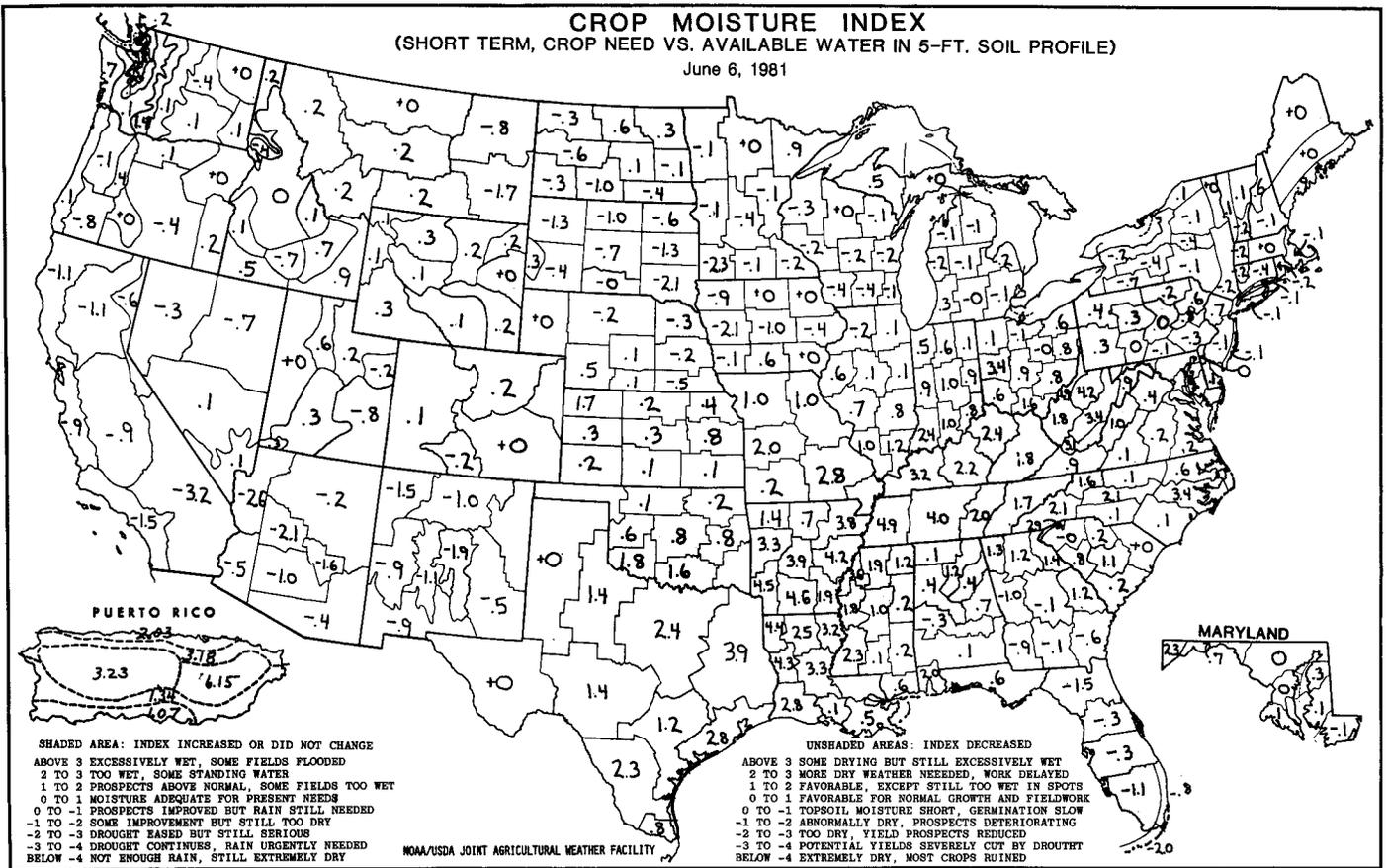
SUNDAY...Showers and thundershowers were scattered from the Tennessee Valley to the gulf

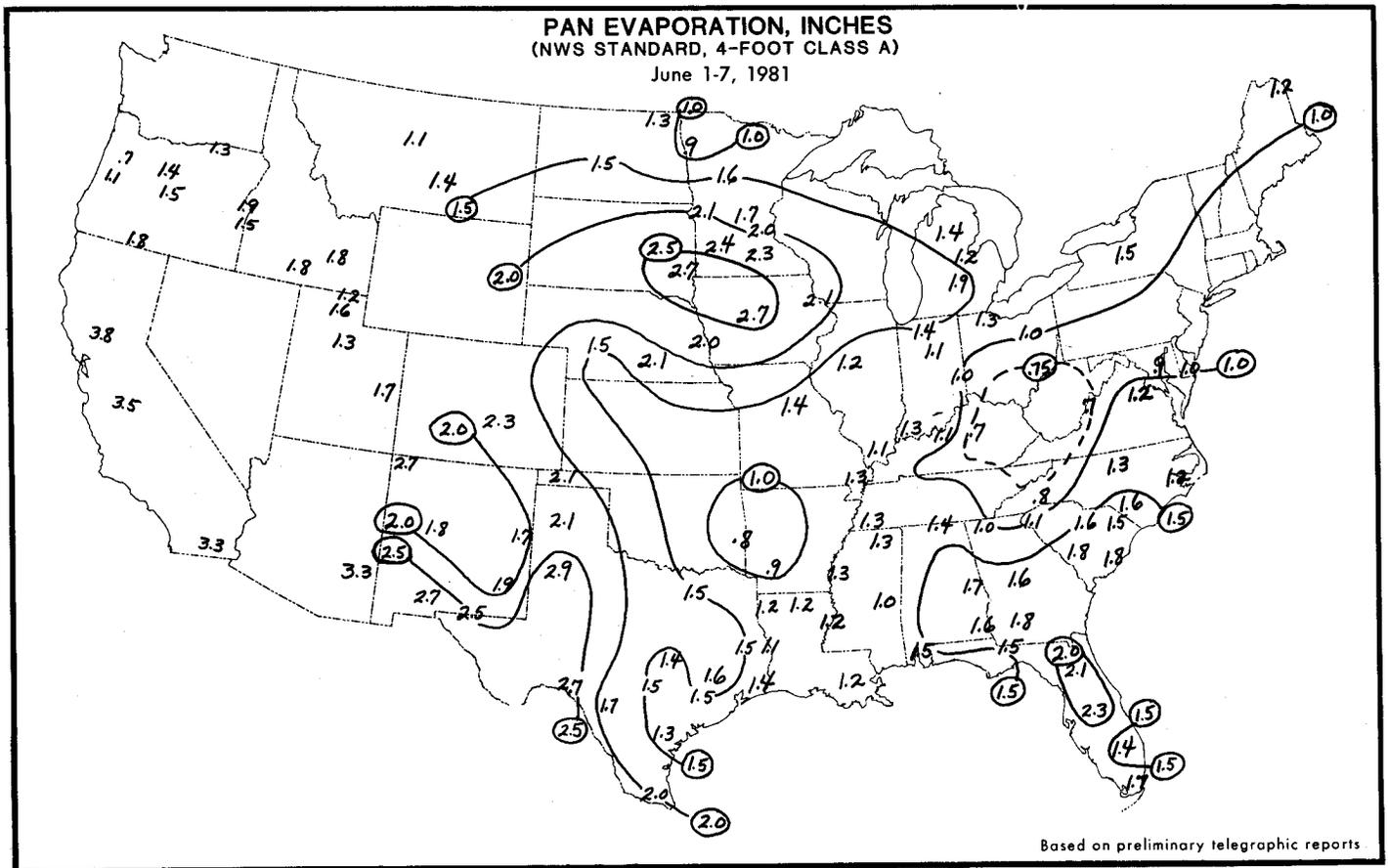
(Continued on page 28)

In This Issue

	Page
National Weather Summary	1
Precipitation & Crop Moisture	2
Crop Moisture Index by Division & Growing Degree Days.	3
Pan Evaporation--Guide to Water Use.	4
Average Temperature & Departure (Weekly)	7
Weather Data for Selected Cities	8
Cooling Degree Days.	11
National Summaries of Weather & Agriculture (May).	12
May Precipitation & Percentage of Normal	13
May Temperature & Departure.	14
May Temperature & Precipitation (Table).	15
May Heating Degree Days.	16
National Agricultural Summary.	17
Crop Progress.	17
State Summaries of Weather & Agriculture	18
International Weather & Crop Summary	25
Subscription Information	28







Pan Evaporation: Guide to Crop Water Use
and Reservoir Evaporation

Don Haddock
NOAA/USDA Agricultural Weather Facility

A new map, "Pan Evaporation," is being issued to depict the weekly amount of water evaporated from standard National Weather Service Class A, 4-foot, pans. The data is of interest in water and crop management, especially during droughts or when irrigation of crops is being expanded to maintain a reliable supply of agricultural commodities for national and world needs.

Pan evaporation data can be used to estimate consumptive water use by crops and evaporation from lakes and stock ponds. It also serves as a general climatic index incorporating temperature, humidity, wind and solar radiation.

When multiplied by appropriately-derived coefficients, pan evaporation can be used to estimate the water use by a crop. The coefficients, ratio of crop water use to pan evaporation, change throughout the growing season. An example of the relationship between water use by corn during its various development stages and pan evaporation are shown in figure 1. The relationship for sugar cane is depicted in figure 2.

Pan evaporation values for the map in this Bulletin will be listed in inches per week so as to coincide with the accompanying weekly precipitation map.

The difference between the crop water needs and rainfall can be made up by irrigation in some areas; otherwise, crop yields may be lowered when moisture is short, especially during the critical crop stages of flowering and early maturation.

Examples of consumptive water use throughout the entire year for summer corn, winter wheat, and meadow are depicted in figures 3 and 4.

A main use of pan evaporation is to estimate the evaporation from lakes which is of particular interest to the Army's Corps of Engineers, Water Resource Departments and reservoir managers. The coefficient for conversion of evaporation from the Class A pan to that of a shallow lake or free water surface averages around .7, but varies across the country. It is generally smaller in arid regions and larger in the humid ones.

The National Weather Service's Office of Hydrology is in the process of updating its Technical Paper 37, "Evaporation Maps of the United States," to reflect data from a larger number of stations and a longer period of record.

The Class A pans are generally of monel or galvanized metal, unpainted, 4 feet in diameter, 10 inches deep and mounted on a platform a few inches above the surrounding soil.

Daily observations are recorded on monthly forms and sent to the National Climatic Center in Asheville, N.C. for publication. Some daily readings are used on a real time basis in agricultural weather, water resource and Corps of Engineer operational programs. Observations are taken throughout the year in southern areas and generally in April to October elsewhere.

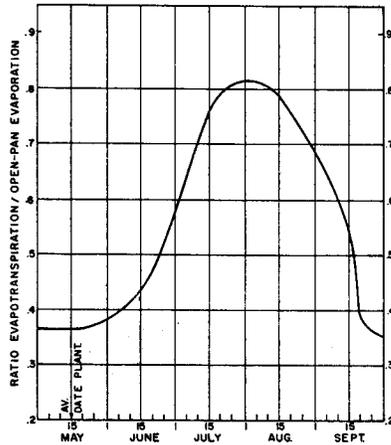


Figure 1. Ratio of evapotranspiration of corn to open-pan evaporation throughout the growing season (after Denmead and Shaw, 3). On the average, 50 percent of the corn in Iowa is silked by July 31.

AVERAGE EVAPOTRANSPIRATION/PAN EVAPORATION RATIOS FROM THREE FIELDS COMPARED TO AGE OF CANE

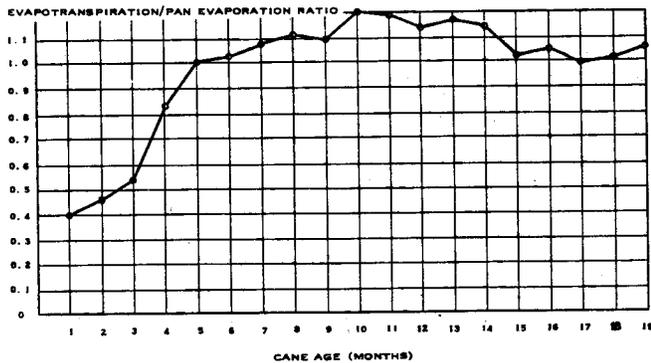
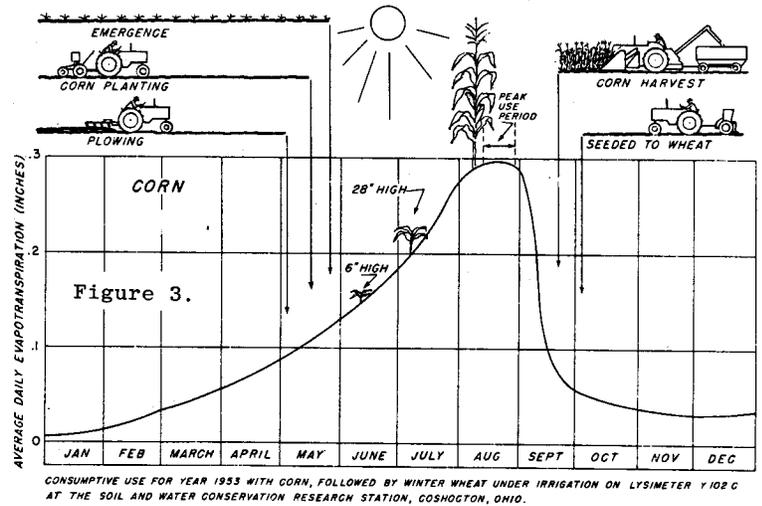
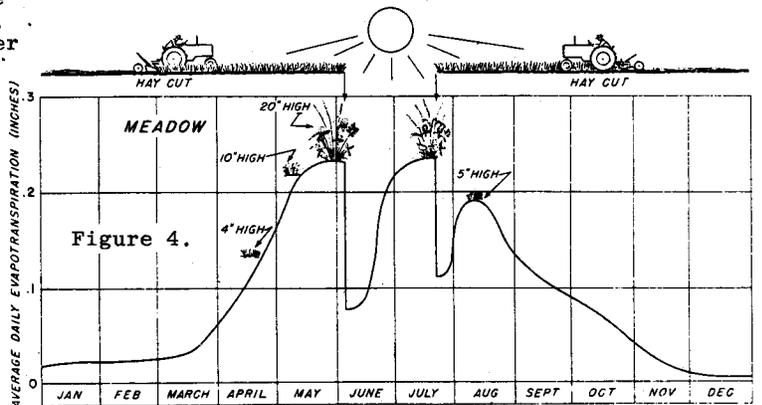


Figure 2. Ratio of average evapotranspiration or consumptive water use to pan evaporation for three fields by age of sugarcane. (Redrawn from Chang, Jen-Hu. Microclimate of Sugarcane. Hawaii Planter Rec. 56(3): 195-225. 1961.)

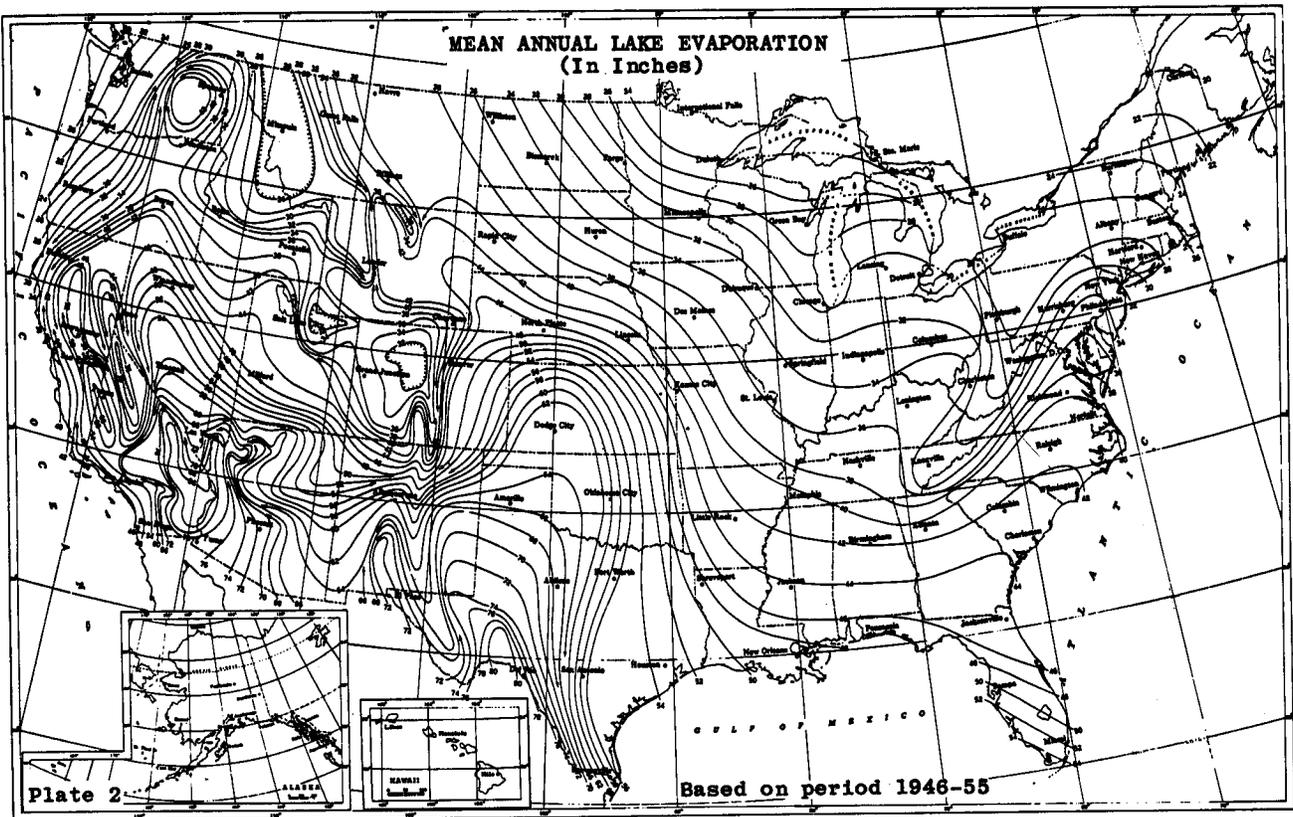
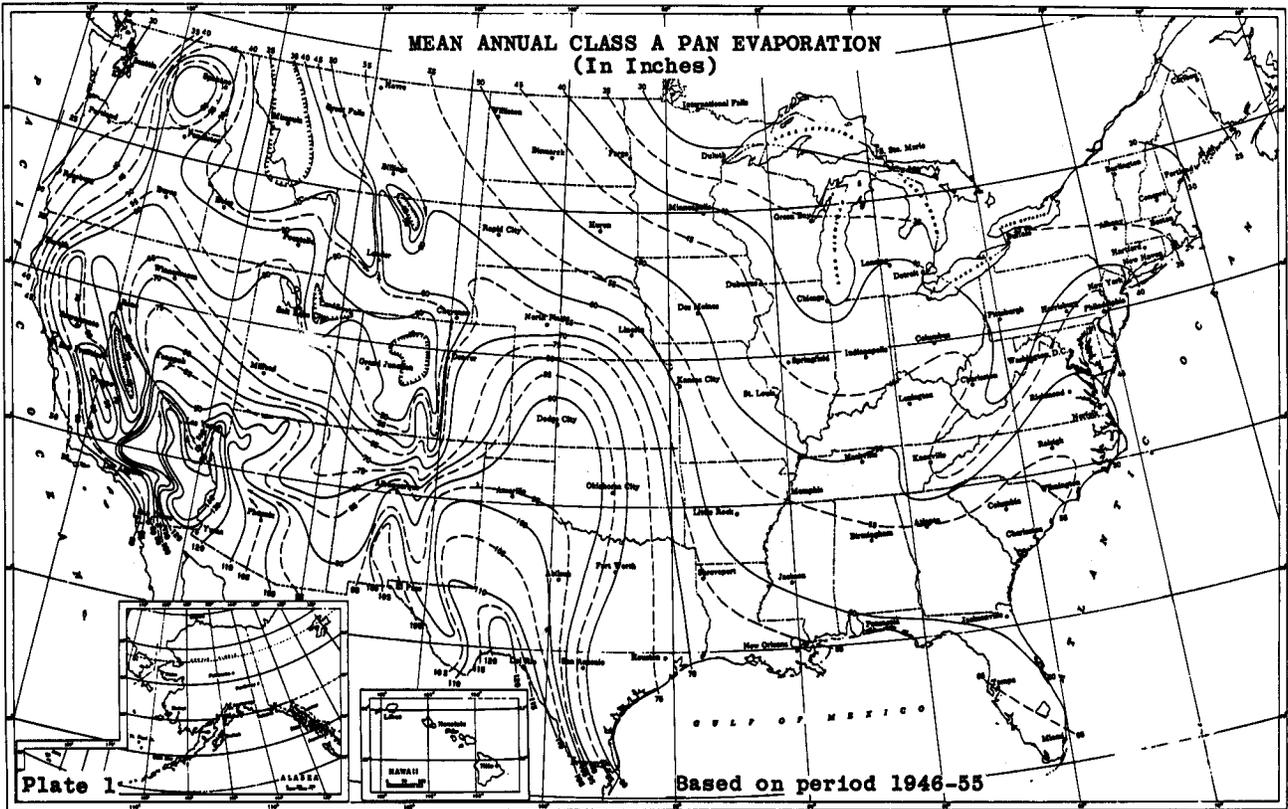


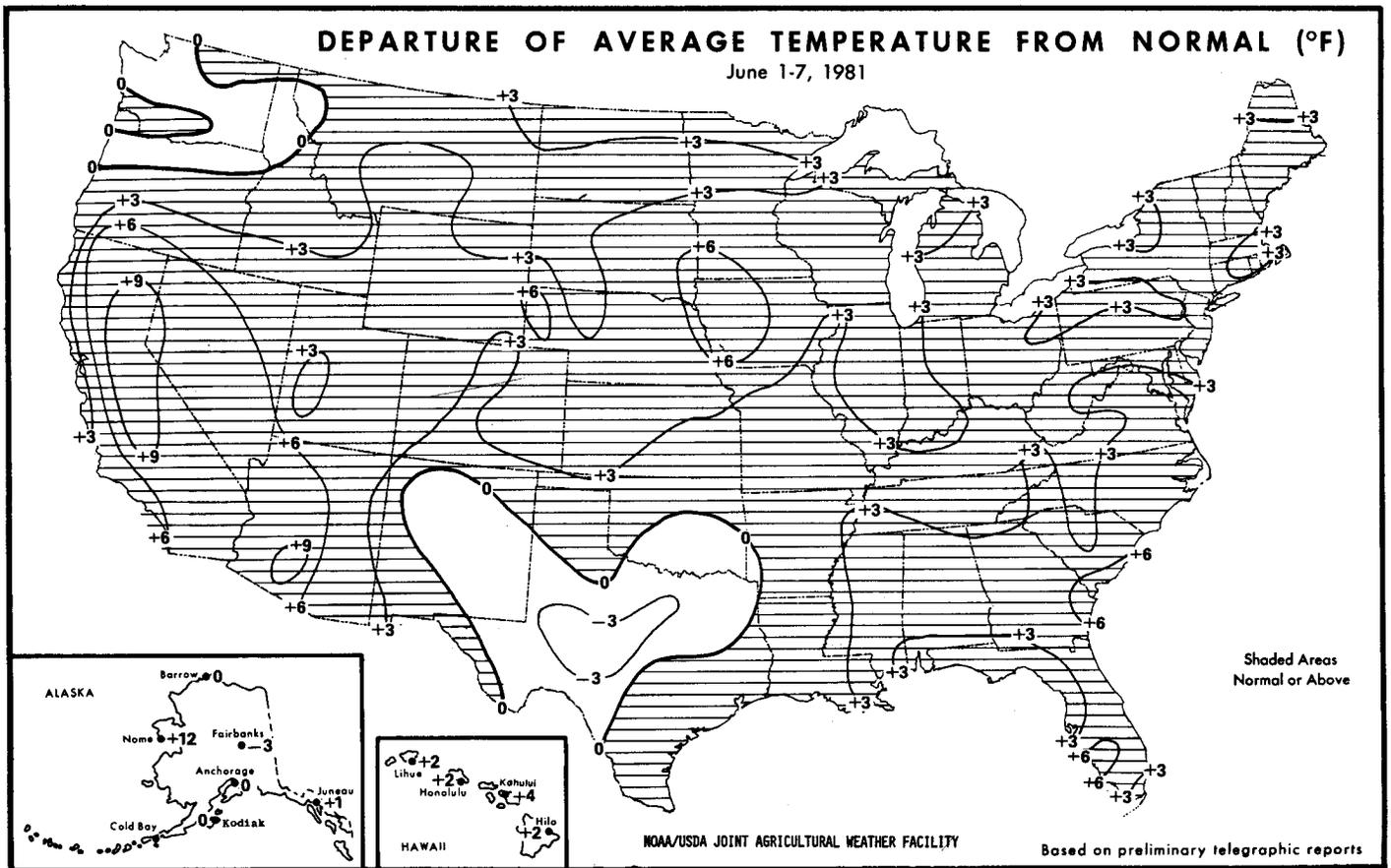
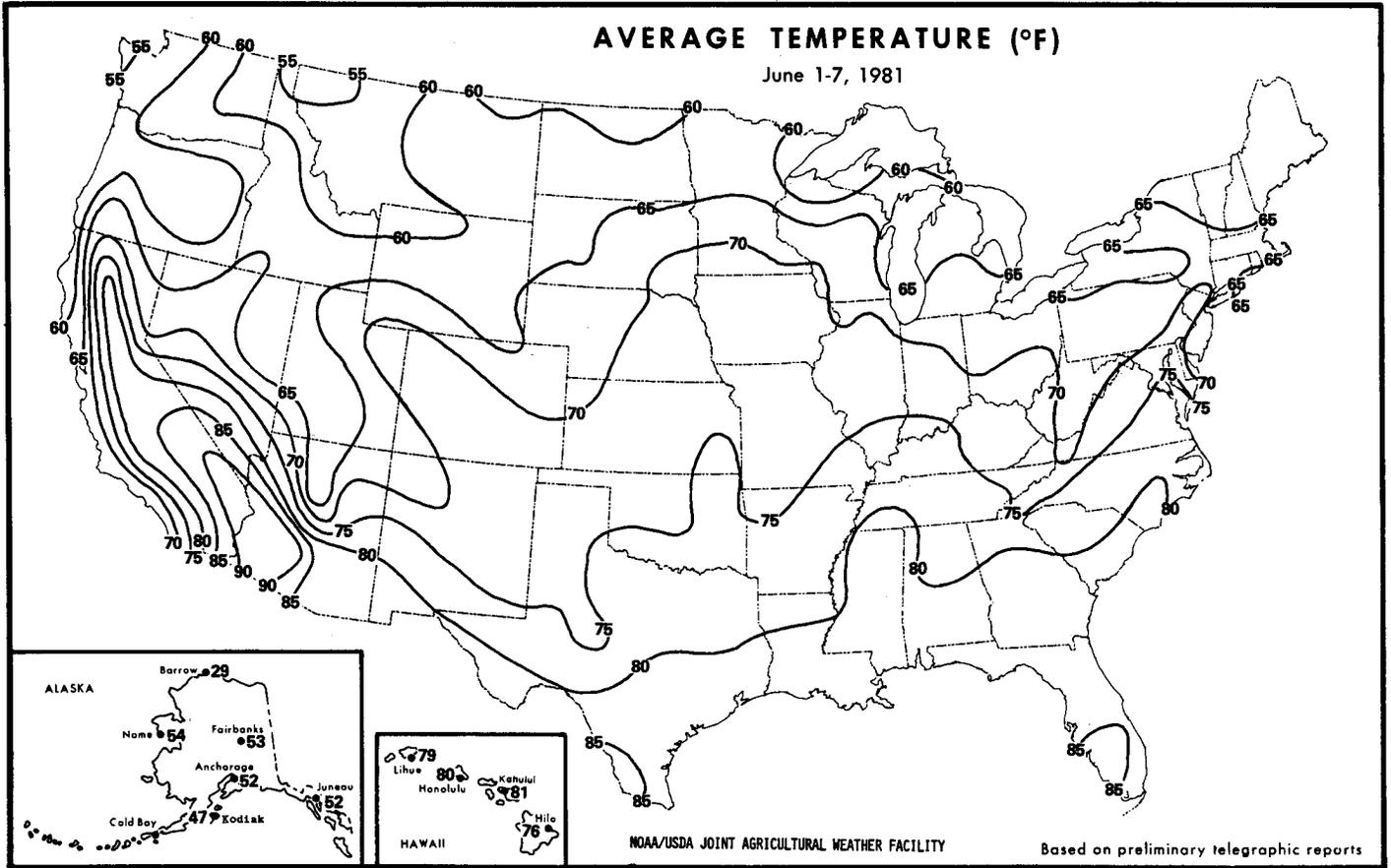
CONSUMPTIVE USE FOR YEAR 1955 WITH CORN, FOLLOWED BY WINTER WHEAT UNDER IRRIGATION ON LYSIMETER T102 G AT THE SOIL AND WATER CONSERVATION RESEARCH STATION, COSHOCTON, OHIO.



CONSUMPTIVE USE FOR YEAR 1955 WITH IRRIGATED FIRST YEAR MEADOW OF ALFALFA, RED CLOVER, TIMOTHY ON LYSIMETER T102 G AT THE SOIL AND WATER CONSERVATION RESEARCH STATION, COSHOCTON, OHIO.

Figures 3 & 4. --Average daily consumptive use for irrigated corn and meadow at Coshocton, Ohio. (From Harrold, L. L., and Dreibelbis, F. R. Evaluation of Agricultural Hydrology by Monolith Lysimeters, 1944-55. U.S. Dept. Agr. Tech. Bul. 1179, 166 pp. 1958.)





Weather Data for the Week Ending June 7, 1981

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 1	PCT. NORMAL SINCE June 1	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPI-TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	87	71	90	70	79	4	1.9	1.0	1.0	1.9	211	20.3	80	90	61	2	0	4	2
MOBILE	88	73	92	71	81	2	2.9	1.7	2.0	2.9	242	29.4	105	92	63	3	0	5	2
MONTGOMERY	91	74	93	71	82	5	.5	-.4	.1	.5	56	23.4	102	91	55	6	0	3	0
AK ANCHORAGE	59	43	61	39	52	0	T	-.2	T	0	0	3.2	97	74	47	0	0	0	0
BARROW	31	26	34	23	29	0	.3	-.3	.3	.3	+100	--	--	99	86	0	7	4	0
FAIRBANKS	64	41	69	35	53	-3	.2	-.1	.2	.2	67	1.7	63	65	33	0	0	5	0
JUNEAU	57	46	62	43	52	1	1.2	-.6	.4	1.2	200	17.6	99	91	62	0	0	7	0
KODIAK	52	44	56	38	47	0	1.5	-.4	.4	1.5	136	38.1	166	98	78	0	0	6	0
NOME	64	45	66	39	54	12	.1	-.1	T	-.1	50	5.5	138	65	38	0	0	2	0
AZ FLAGSTAFF	78	46	86	43	62	7	.2	-.1	.2	.2	200	9.0	120	78	24	0	0	2	0
PHOENIX	104	77	111	74	91	10	0	0	0	0	+100	3.1	129	34	12	7	0	0	0
TUCSON	98	68	105	65	83	4	0	0	0	0	+100	5.0	200	38	12	7	0	0	0
WINSLOW	89	55	99	49	72	4	T	0	T	0	+100	2.1	84	--	--	3	0	0	0
YUMA	107	73	114	70	90	7	0	0	0	0	+100	1.1	79	41	13	7	0	0	0
AR FORT SMITH	83	67	89	64	75	0	2.0	1.0	1.1	2.0	200	17.9	87	94	65	0	0	6	1
LITTLE ROCK	84	67	88	66	76	1	2.7	1.8	1.3	2.7	300	25.3	101	99	64	0	0	5	2
CA BAKERSFIELD	97	69	106	64	83	9	0	0	0	0	+100	4.4	113	47	18	7	0	0	0
EUREKA	62	51	68	49	57	2	T	-.3	T	0	0	18.4	80	95	75	0	0	1	0
FRESNO	98	66	106	61	82	11	0	0	0	0	0	7.5	107	53	16	7	0	0	0
LOS ANGELES	74	63	81	61	68	5	T	0	T	0	+100	6.6	84	87	61	0	0	0	0
RED BLUFF	93	66	102	63	80	7	T	-.1	T	0	0	16.3	123	61	21	4	0	0	0
SAN DIEGO	74	66	76	65	70	6	0	0	0	0	+100	8.5	142	91	72	0	0	0	0
SAN FRANCISCO	77	53	94	51	65	4	T	-.1	T	0	0	12.2	100	83	43	1	0	0	0
STOCKTON	97	63	106	58	80	10	0	-.1	0	0	0	9.2	102	59	20	6	0	0	0
CO DENVER	79	54	89	48	66	4	.3	-.2	.1	.3	60	8.1	109	80	34	0	0	4	0
GRAND JUNCTION	86	58	97	52	72	5	.1	-.1	T	-.1	50	4.0	125	60	20	2	0	2	0
PUEBLO	96	56	100	51	71	4	.1	-.3	.1	.1	25	2.4	48	76	27	2	0	2	0
CT BRIDGEPORT	72	60	78	57	65	0	.2	-.5	.1	.2	29	11.2	67	90	65	0	0	2	0
HARTFORD	78	59	89	50	69	4	.2	-.7	.2	.2	22	13.1	71	84	40	0	0	3	0
DC WASHINGTON	82	69	88	64	75	3	.9	-.1	.8	.9	113	11.5	74	95	61	0	0	5	1
FL APALACHICOLA	88	74	90	71	81	2	.2	-.7	.2	.2	22	9.0	46	90	69	1	0	1	0
DAYTONA BEACH	90	73	94	71	81	3	.9	-.4	.9	.9	69	11.7	79	89	56	2	0	1	1
FORT MYERS	96	77	98	74	87	7	1.3	-.4	.6	1.3	76	8.3	57	89	48	7	0	4	1
JACKSONVILLE	94	72	96	65	83	5	.5	-.7	.3	.5	42	13.3	76	97	52	7	0	3	0
KEY WEST	90	81	91	80	85	2	.1	-.8	.1	.1	11	4.5	42	91	70	3	0	2	0
MIAMI	89	77	91	75	83	3	1.8	-.2	.8	1.8	90	13.5	75	92	64	2	0	4	2
ORLANDO	93	73	95	71	83	4	2.4	1.1	1.0	2.4	185	11.1	70	92	50	7	0	5	2
TALLAHASSEE	93	70	94	63	81	3	.4	-.9	.2	.4	31	22.1	92	98	51	7	0	2	0
TAMPA	91	73	92	70	82	2	4.1	3.0	2.1	4.1	373	13.3	89	98	58	5	0	5	2
WEST PALM BEACH	90	79	94	75	84	5	.3	1.4	.3	.3	18	13.6	75	84	59	3	0	2	0
GA ATLANTA	89	70	92	67	79	6	1.8	1.0	.9	1.8	225	19.2	81	91	53	3	0	4	2
AUGUSTA	91	68	92	65	80	3	4.8	4.0	1.6	4.8	600	21.0	107	98	54	7	0	6	3
MACON	92	71	95	68	81	4	5.2	4.3	4.1	5.2	578	23.7	110	92	50	6	0	4	3
SAVANNAH	94	74	96	71	84	7	.9	-.3	.7	.9	75	12.7	69	89	46	7	0	2	1
HI HILO	83	69	85	66	76	2	.4	1.2	.1	.4	25	--	--	85	52	0	0	5	0
HONOLULU	87	73	88	72	80	3	.1	1.0	.1	.1	100	4.5	35	81	51	0	0	3	0
KAHULUI	88	73	90	58	81	4	T	0	T	0	+100	--	--	68	45	1	0	0	0
LIHUE	84	73	86	70	78	1	.3	-.1	.1	.3	75	--	--	89	66	0	0	5	0
ID BOISE	79	49	89	41	64	2	T	-.3	T	0	0	8.0	121	78	27	0	0	1	0
LEWISTON	72	50	84	45	61	-1	.7	-.2	.5	.7	140	6.8	108	93	46	0	0	4	0
POCATELLO	73	49	81	43	61	3	.3	-.1	.2	.3	75	8.0	148	81	36	0	0	2	0
IL CAIRO	84	70	88	67	77	2	2.6	1.5	1.3	2.6	236	20.5	88	--	--	0	0	5	2
CHICAGO	81	56	86	50	69	4	.1	-.8	.1	.1	11	15.1	114	92	45	0	0	2	0
MOLINE	83	56	86	51	70	2	.8	-.2	.8	.8	80	10.1	71	91	39	0	0	1	1
PEORIA	83	61	87	55	72	3	.4	-.5	.4	.4	44	15.5	101	94	48	0	0	1	0
ROCKFORD	83	58	88	52	71	5	T	1.0	T	0	0	10.4	73	88	40	0	0	0	0
SPRINGFIELD	84	63	89	59	74	4	.9	0	.9	.9	100	16.4	110	95	48	0	0	1	1
IN EVANSVILLE	84	68	88	63	76	4	.8	0	.6	.8	100	21.3	103	100	65	0	0	5	1
FORT WAYNE	78	58	82	48	68	2	.1	-.8	.1	.1	11	14.3	91	89	48	0	0	1	0
INDIANAPOLIS	82	63	85	53	72	3	.4	-.5	.4	.4	44	20.0	112	87	48	0	0	3	0
SOUTH BEND	78	57	83	51	68	2	T	-.8	T	0	0	15.7	103	91	47	0	0	0	0
IA BURLINGTON	81	61	87	56	71	3	T	1.0	T	0	0	12.4	89	95	47	0	0	0	0
DES MOINES	85	61	91	57	73	6	.6	-.6	.6	.6	50	7.0	55	76	36	1	0	2	1
DUBUQUE	82	58	89	54	70	5	T	1.2	T	0	0	10.0	63	78	39	0	0	1	0
SIoux CITY	87	58	96	53	72	5	.5	-.5	.4	.5	50	5.5	55	77	33	2	0	2	0
KS CONCORDIA	86	60	95	54	73	4	.6	-.6	.5	.6	50	11.0	103	96	47	1	0	2	1
DODGE CITY	87	62	99	58	75	4	T	.8	T	0	0	8.7	110	80	37	1	0	1	0
GOODLAND	83	56	95	54	69	4	T	.7	T	0	0	16.7	265	84	32	1	0	0	0
TOPEKA	85	63	91	50	74	4	1.2	-.1	.9	1.2	92	11.3	88	92	51	1	0	4	1
WICHITA	84	54	92	53	74	2	1.8	-.8	1.8	1.8	180	11.3	100	89	52	1	0	1	1
KY LEXINGTON	79	66	83	61	72	2	1.5	-.5	.6	1.5	150	18.2	86	93	69	0	0	6	1
LOUISVILLE	82	67	88	61	75	4	1.1	-.1	.4	1.1	110	15.2	71	91	61	0	0		

Weather Data for the Week Ending June 7, 1981

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 1	PCT. NORMAL SINCE June 1	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
LAKE CHARLES	87	73	90	70	80	1	3.4	2.3	1.7	3.4	309	17.6	77	95	69	1	0	4	2
NEW ORLEANS	90	76	93	73	83	4	2.4	1.4	1.3	2.4	240	22.1	91	95	64	3	0	3	2
SHREVEPORT	86	70	90	67	78	0	5.4	4.5	1.4	5.4	600	25.8	111	99	73	1	0	6	4
ME CARIBOU	72	51	83	45	62	5	.8	0	.6	.8	100	13.9	109	88	40	0	0	3	1
PORTLAND	72	50	78	43	61	2	.8	0	.8	.8	100	16.0	88	98	57	0	0	3	1
MD BALTIMORE	79	64	86	59	71	2	1.0	.2	.4	1.0	125	11.3	68	91	58	0	0	6	0
MA BOSTON	76	60	85	55	68	4	.4	.4	.4	.4	50	12.8	68	87	46	0	0	4	0
CHATHAM	66	54	74	52	60	-	.3	-	.1	.3	-	16.3	93	72	0	0	3	0	
MI ALPENA	75	45	87	36	60	2	.1	.6	.1	.1	14	8.1	74	96	44	0	0	1	0
DETROIT	78	54	83	44	66	1	.3	.5	.2	.3	38	10.8	80	86	48	0	0	2	0
FLINT	77	53	82	46	65	2	0	.8	0	0	0	10.8	89	87	44	0	0	0	0
GRAND RAPIDS	80	53	86	49	66	2	.1	.7	.1	.1	13	18.2	137	89	40	0	0	2	0
HOUGHTON LAKE	76	51	81	41	63	4	.4	.3	.4	.4	57	10.1	94	90	43	0	0	1	0
LANSING	78	54	84	49	66	2	0	.8	0	0	0	12.9	100	95	49	0	0	0	0
MARQUETTE	71	48	80	39	60	4	2.6	1.7	1.7	2.6	289	14.7	113	95	47	0	0	5	2
MUSKOGON	76	52	80	46	64	2	0	.6	0	0	0	11.1	85	94	45	0	0	0	0
MN SAULT STE. MARIE	69	42	76	33	56	0	1.1	.4	.6	1.1	157	9.9	88	93	55	0	0	5	1
DULUTH	67	48	78	43	58	2	.8	.2	.4	.8	80	9.2	86	95	56	0	0	5	0
INT'L FALLS	73	51	82	50	62	5	1.2	.4	.9	1.2	150	6.9	86	89	50	0	0	4	1
MINNEAPOLIS	81	56	89	49	68	5	.3	.6	.2	.3	33	7.7	82	83	40	0	0	2	0
ROCHESTER	80	53	86	48	67	4	.1	.9	.1	.1	10	8.1	84	86	45	0	0	2	0
SAINT CLOUD	78	55	87	48	66	4	.3	.8	.2	.3	27	7.7	77	73	46	0	0	3	0
MS JACKSON	88	72	92	70	80	2	2.7	1.9	2.1	2.7	338	21.1	84	93	63	2	0	5	1
MERIDIAN	90	73	93	70	81	4	1.0	.2	.3	1.0	125	23.8	95	93	59	4	0	5	0
MO COLUMBIA	81	63	86	59	72	2	1.2	.1	.7	1.2	109	17.7	112	87	54	0	0	4	1
KANSAS CITY	82	63	88	54	73	3	.5	.8	.2	.5	38	14.1	100	95	54	0	0	2	0
SAINT LOUIS	82	66	86	60	74	2	.9	.1	.6	.9	90	16.9	108	99	57	0	0	3	1
SPRINGFIELD	81	64	89	58	72	1	.8	.3	.4	.8	73	15.0	86	95	66	0	0	5	0
MT BILLINGS	75	51	85	44	63	4	.5	.1	.3	.5	83	10.4	158	78	39	0	0	4	0
GLASGOW	70	49	79	44	59	1	.4	.1	.4	.4	80	3.2	84	82	43	0	0	6	0
GREAT FALLS	70	49	75	45	60	2	T	.7	T	0	0	8.5	125	77	35	0	0	3	0
HAVRE	72	47	77	41	60	1	.2	.3	.1	.2	40	3.7	84	86	32	0	0	3	0
HELENA	71	48	75	41	59	3	.1	.5	.1	.1	17	8.3	180	75	36	0	0	4	0
KALISPELL	64	45	71	38	55	0	.6	.1	.3	.6	86	9.9	139	91	46	0	0	5	0
MILES CITY	73	52	82	50	63	1	.6	.1	.2	.6	86	4.1	72	83	37	0	0	5	0
MISSOULA	68	49	75	44	59	3	1.1	.6	.7	1.1	220	8.2	144	91	49	0	0	4	1
NE GRAND ISLAND	86	55	97	49	72	5	T	.1	T	0	0	9.1	95	86	34	3	0	0	0
LINCOLN	87	58	98	51	73	4	T	.1	T	0	0	7.1	72	89	43	3	0	1	0
NORFOLK	85	58	93	54	72	5	1.3	.1	1.3	1.3	108	6.8	71	82	31	2	0	1	1
NORTH PLATTE	83	51	89	46	67	2	.6	.3	.4	.6	67	11.5	146	91	39	0	0	2	0
OMAHA	86	61	98	53	73	6	T	.1	T	0	0	7.0	63	79	39	2	0	0	0
VALENTINE	82	50	92	42	66	3	.1	.8	.1	.1	11	4.2	58	71	31	1	0	1	0
NV ELY	79	40	87	34	60	5	.1	.2	T	.1	33	5.6	144	74	21	0	0	2	0
LAS VEGAS	99	72	108	59	86	7	0	0	0	0	+100	2.2	122	34	11	7	0	0	0
RENO	87	50	95	45	68	10	0	.1	0	0	0	2.5	63	60	17	1	0	0	0
WINNEMUCCA	84	44	94	37	64	6	T	.3	T	0	0	4.1	95	69	17	1	0	0	0
NH CONCORD	77	50	86	40	63	2	.4	.4	.3	.4	50	15.8	109	93	44	0	0	4	0
NJ ATLANTIC CITY	76	59	84	49	68	1	.4	.4	.4	.4	50	15.5	81	91	56	0	0	2	0
TRENTON	77	63	84	57	70	2	.7	0	.7	.7	100	13.6	82	95	67	0	0	2	1
NM ALBUQUERQUE	87	53	100	44	70	-2	.1	0	.1	.1	100	2.5	104	72	19	2	0	3	0
ROSWELL	89	59	101	56	74	-1	T	.2	T	0	0	4.9	158	76	26	3	0	1	0
NY ALBANY	76	54	85	43	65	1	.3	.4	.2	.3	43	10.6	78	89	49	0	0	3	0
BINGHAMTON	71	54	81	44	63	1	.5	.4	.5	.5	56	11.2	72	85	52	0	0	3	0
BUFFALO	73	55	78	41	64	2	.4	.2	.4	.4	67	12.3	83	93	49	0	0	2	0
NEW YORK	76	64	85	59	70	1	.8	.1	.7	.8	114	14.1	80	78	47	0	0	3	1
ROCHESTER	76	54	83	40	65	2	.3	.4	.3	.3	43	10.1	75	90	48	0	0	3	0
SYRACUSE	77	56	84	44	67	3	T	.7	T	0	0	9.7	63	85	42	0	0	1	0
NC ASHEVILLE	81	64	86	62	72	4	3.2	2.4	1.8	3.2	400	21.3	109	100	71	0	0	6	2
CHARLOTTE	84	68	90	66	76	3	.3	.5	.2	.3	38	12.3	65	95	60	1	0	3	0
GREENSBORO	85	67	91	60	76	4	1.4	.6	.6	1.4	175	12.1	70	89	60	1	0	4	2
HATTERAS	83	72	85	69	77	6	1.7	.8	1.1	1.7	189	14.8	75	97	69	0	0	5	1
RALEIGH	84	69	89	66	76	4	.3	.5	.3	.3	38	12.0	69	100	64	0	0	2	0
WILMINGTON	87	72	90	66	80	4	.2	.9	.1	.2	18	13.8	74	96	60	2	0	3	0
ND BISMARCK	74	47	81	39	61	1	.2	.6	.1	.2	25	2.4	40	95	35	0	0	4	0
FARGO	74	52	80	47	63	2	.3	.4	.1	.3	43	5.6	82	93	54	0	0	4	0
WILLISTON	76	54	81	49	65	5	1.4	.7	1.0	1.4	200	3.7	76	82	41	0	0	4	1
OH AKRON-CANTON	80	59	82	43	69	4	.5	.3	.4	.5	63	20.2	124	83	48	0	0	4	0
CINCINNATI	78	62	82	53	70	1	1.3	.5	.5	1.3	163	17.9	97	99	66	0	0	5	0
CLEVELAND	78	54	85	40	66	1	.1	.7	.1	.1	13	12.1	76	90	46	0	0	2	0
COLUMBUS	80	60	83	51	70	2	1.1	.1	.9	1.1	110	19.6	114	93	59	0	0	3	0
DAYTON	78	59	82	48	69	1	3.9	3.0	3.8	3.9	433	18.7	115	96	60	0	0	3	1
TOLEDO	79	54	84	40	66	0	1.0	.2	.6	1.0	123	11.0	82	85	47	0	0	2	1
YOUNGSTOWN	80	59	86	42	69	5	.3	.6	.1	.3	33	16.0	94	93	46	0	0	2	0
OK OKLAHOMA CITY	84	64	91	60	74	0	4.2	3.1	2.5	4.2	382	14.0	97	93	58	1	0	3	3

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

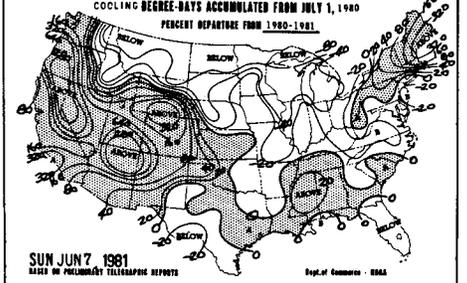
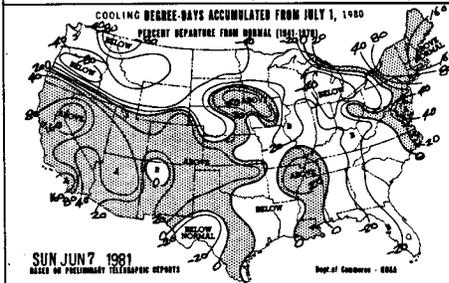
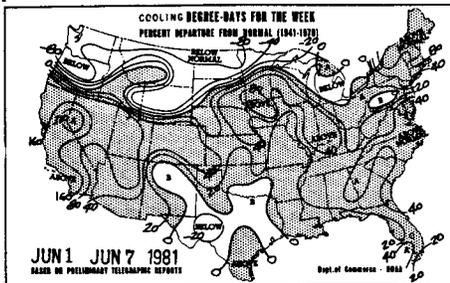
Weather Data for the Week Ending June 7, 1981

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 1	PCT. NORMAL SINCE June 1	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	PRECIPI- TATION		
																		.01 INCH OR MORE	.50 INCH OR MORE	
OR TULSA	86	67	94	57	77	3	.1	-1.1	.1	.1	8	12.8	79	100	63	2	0	2	0	
OR ASTORIA	63	50	66	44	57	2	1.4	-.8	.6	1.4	233	28.7	89	90	66	0	0	6	0	
OR BURNS	72	43	82	37	58	2	.1	-.2	.1	.1	33	6.5	114	--	--	0	0	3	0	
OR MEDFORD	80	52	88	47	66	5	.1	-.2	.1	.1	33	5.5	54	86	32	0	0	2	0	
OR PENDLETON	71	52	81	44	61	-2	.5	.3	.3	.5	250	7.1	109	79	40	0	0	2	0	
OR PORTLAND	68	54	73	49	61	1	1.5	1.1	.9	1.5	375	13.4	74	93	59	0	0	5	1	
OR SALEM	68	47	72	43	58	-1	1.5	1.0	1.0	1.5	300	14.6	70	97	64	0	0	6	1	
PA ALLENTOWN	77	61	85	48	69	3	.9	-.1	.6	.9	113	15.2	86	84	56	0	0	2	1	
PA ERIE	72	54	78	.40	64	3	.5	-.2	.5	.5	71	16.4	109	89	57	0	0	4	-1	
PA HARRISBURG	76	61	85	51	69	0	.7	-.1	.3	.7	88	12.7	79	89	59	0	0	2	0	
PA PHILADELPHIA	77	62	86	56	70	1	.5	.3	.2	.5	63	13.8	83	94	59	0	0	3	0	
PA PITTSBURGH	78	56	80	42	67	1	1.3	.5	.5	1.3	163	14.9	91	84	56	0	0	4	1	
PA SCRANTON	74	57	83	45	66	1	1.3	.5	.7	1.3	163	17.2	123	84	56	0	0	4	0	
RI PROVIDENCE	78	56	89	49	67	4	.6	-.1	.4	.6	86	12.8	68	92	48	0	0	4	0	
SC CHARLESTON	91	73	93	71	82	6	2.4	1.2	1.7	2.4	200	14.0	74	93	53	6	0	3	2	
SC COLUMBIA	89	70	92	68	79	3	2.7	1.9	.9	2.7	338	15.1	76	98	58	3	0	6	2	
SC GREENVILLE	85	69	90	58	77	3	.7	-.1	.5	.7	88	13.2	61	94	65	1	0	5	0	
SD ABERDEEN	78	52	84	44	65	3	.4	-.4	.2	.4	50	4.6	64	89	41	0	0	2	0	
SD HURON	85	52	92	45	69	5	.6	-.3	.3	.6	67	3.5	44	90	33	1	0	2	0	
SD RAPID CITY	77	50	94	44	64	3	.7	-.2	.5	.7	88	13.2	61	94	65	1	0	2	0	
SD SIOUX FALLS	87	55	96	50	71	7	.3	-.7	.1	.3	30	3.7	35	33	27	2	0	4	0	
TN CHATTANOOGA	83	68	88	64	76	2	3.4	2.7	1.1	3.4	486	21.9	92	95	67	0	0	7	3	
TN KNOXVILLE	82	68	86	65	75	2	3.3	2.5	1.3	3.3	413	18.7	85	100	74	0	0	6	2	
TN MEMPHIS	86	73	89	72	80	4	2.4	1.6	1.3	2.4	300	23.1	90	88	64	0	0	5	2	
TN NASHVILLE	85	68	88	66	76	2	5.0	4.1	3.1	5.0	556	21.7	93	98	59	0	0	6	3	
TX ABILENE	88	66	95	63	78	0	1.8	1.0	1.8	1.8	225	11.3	111	90	48	4	0	2	1	
TX AMARILLO	87	61	101	58	74	2	.6	-.2	.6	.6	75	5.9	95	80	34	2	0	1	1	
TX AUSTIN	90	71	95	70	80	1	1.7	-.9	.6	1.7	213	17.6	114	98	57	3	0	5	3	
TX BEAUMONT	88	74	91	70	81	2	3.2	2.1	1.8	3.2	291	17.9	82	98	69	4	0	4	3	
TX BROWNSVILLE	91	77	93	75	84	3	.4	-.3	.2	.4	57	12.8	160	93	62	6	0	5	0	
TX CORPUS CHRISTI	88	75	94	74	82	1	.9	-.2	.4	.9	129	17.3	163	99	66	3	0	4	9	
TX DEL RIO	91	68	98	64	80	-2	1.0	.5	1.0	1.0	200	12.9	184	86	47	3	0	2	1	
TX EL PASO	98	63	108	60	80	2	.4	-.4	.4	.4	+100	3.7	176	61	19	7	0	1	0	
TX FORT WORTH	83	67	92	66	75	-3	5.2	4.3	2.5	5.2	578	19.6	120	97	64	1	0	5	3	
TX GALVESTON	83	75	85	73	79	0	4.8	4.0	2.5	4.8	600	13.2	89	96	80	0	0	4	3	
TX HOUSTON	89	73	92	72	81	1	4.7	3.6	2.0	4.7	427	22.6	115	95	64	3	0	4	3	
TX LUBBOCK	86	62	96	59	74	-1	.8	0	.5	.8	100	6.2	91	90	36	2	0	5	0	
TX MIDLAND	87	62	95	59	75	-3	.4	0	.4	.4	100	6.5	138	88	36	3	0	1	0	
TX SAN ANGELO	85	63	92	57	74	-5	.6	-.1	.6	.6	120	13.3	182	89	51	1	0	1	1	
TX SAN ANTONIO	90	73	97	71	82	1	.7	0	.5	.7	100	15.3	130	98	58	4	0	4	1	
TX VICTORIA	88	74	93	72	81	1	2.8	1.9	2.7	2.8	311	17.2	127	100	67	3	0	4	3	
TX WACO	87	68	96	66	78	-1	4.8	4.0	2.5	4.8	600	15.5	96	96	61	4	0	4	3	
TX WICHITA FALLS	87	65	93	64	76	-2	3.6	2.7	2.2	3.6	400	16.5	128	99	57	2	0	5	3	
UT BLANDING	83	50	91	44	67	4	.3	-.2	.2	.3	300	4.9	109	68	26	1	0	2	0	
UT SALT LAKE CITY	80	55	85	49	68	5	.4	0	.3	.4	100	8.2	100	75	29	0	0	2	0	
VT BURLINGTON	73	55	83	47	64	2	1.4	.7	1.2	1.4	200	15.6	136	96	53	0	0	3	1	
VA LYNCHBURG	80	63	87	57	72	2	4.7	3.9	2.8	4.7	588	14.9	95	99	64	0	0	6	3	
VA NORFOLK	86	68	91	64	77	5	2.4	1.6	1.1	2.4	300	12.5	74	95	48	1	0	6	2	
VA RICHMOND	84	67	91	60	75	4	1.4	.7	.8	1.4	200	16.2	101	89	52	2	0	5	1	
VA ROANOKE	79	63	86	58	71	2	1.6	.7	1.1	1.6	178	13.4	81	96	61	0	0	5	1	
WA COLVILLE	69	49	75	44	59	0	.6	.2	.3	.6	150	9.6	126	84	52	0	0	1	0	
WA OMAK	73	51	81	48	62	--	.1	-.3	.1	.1	--	5.2	88	--	--	0	0	3	0	
WA QUILLAYUTE	60	46	62	39	53	-1	1.9	1.0	1.0	1.9	211	46.7	91	98	70	0	0	5	1	
WA SEATTLE-TACOMA	64	50	70	46	57	-1	.5	.1	.4	.5	125	12.7	71	87	58	0	0	4	0	
WA SPOKANE	65	47	74	42	56	-2	.5	.1	.2	.5	125	7.5	82	90	46	0	0	3	0	
WA WALLA-WALLA	73	55	84	48	64	0	1.4	1.0	.7	1.4	350	12.0	136	78	43	0	0	3	1	
WA YAKIMA	74	50	80	43	62	0	.1	-.1	.1	.1	50	2.6	70	79	35	0	0	2	0	
WV BECKLEY	75	60	79	55	68	3	3.4	2.4	1.4	3.4	340	16.5	85	100	72	0	0	6	2	
WV CHARLESTON	81	63	85	56	72	2	2.9	2.2	.9	2.9	414	18.3	99	90	59	0	0	5	1	
WV HUNTINGTON	80	65	85	58	72	2	1.8	1.0	.6	1.8	225	20.9	115	100	61	0	0	5	1	
WV PARKERSBURG	78	63	85	53	71	1	1.5	.6	.7	1.5	167	14.2	82	79	54	0	0	2	1	
WI GREEN BAY	77	53	85	48	65	4	.7	0	.7	.7	100	8.7	82	88	43	0	0	2	1	
WI LA CROSSE	80	59	90	55	70	4	.6	-.5	.4	.6	55	9.7	86	90	49	1	0	2	0	
WI MADISON	82	52	89	47	67	4	.6	-.9	.4	.6	0	0	6.9	61	83	34	0	0	2	0
WI MILWAUKEE	74	54	84	46	64	3	.6	-.8	.4	.6	0	0	11.5	102	85	48	0	0	2	0
WY CASPER	78	45	88	40	62	3	.2	-.2	.2	.2	50	6.9	121	87	25	0	0	3	1	
WY CHEYENNE	74	49	80	41	61	3	1.1	-.5	.8	1.1	183	8.5	127	88	38	0	0	1	0	
WY LANDER	78	47	86	42	63	5	.3	-.5	.2	.3	38	6.3	78	89	45	0	0	2	0	
WY SHERIDAN	73	47	81	39	60	2	.3	-.5	.2	.3	0	0	7.2	97	67	29	0	0	2	0
PR SAN JUAN	87	78	92	76	83	3	2.1	-.7	.9	2.1	150	25.8	132	90	70	1	0	6	2	

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

COOLING DEGREE DAYS (BASE 65°) FOR WEEK ENDING JUN. 7, 1981.
 BASED ON 1941-70 NORMALS. + ACCUMULATION FROM JULY 1, 1980.

STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +		
	TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1979-80		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1979-80		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1979-80
ALA. BIRMINGHAM...	10	27	361	1	530	MAINE. CARIBOU...	6	2	25	5	19	YOUNGSTOWN...	4	29	83	3	54
MOBILE...	24	16	416	2	480	PORTLAND...	6	2	25	5	19	OKLA. OKLAHOMA CITY...	6	29	259	1	16
MONTGOMERY...	24	16	416	2	480	MD. BALTIMORE...	4	4	128	2	30	TULSA...	1	30	329	5	47
ARIZ. FLAGSTAFF...	10	6	6	43	43	MASS. BOSTON...	30	15	95	60	67	OREG. ASTORIA...	6	0	0	0	0
PHOENIX...	10	6	6	43	43	MICH. ALPENA...	1	1	1	1	1	BURNS...	1	0	0	0	0
TUCSON...	10	6	6	43	43	DETROIT...	1	1	1	1	1	MEDFORD...	1	0	0	0	0
WINSLON...	10	6	6	43	43	FLINT...	1	1	1	1	1	PENDLETON...	1	0	0	0	0
YUMA...	10	6	6	43	43	GRAND RAPIDS...	1	1	1	1	1	PORTLAND...	1	0	0	0	0
ARK. FORT SMITH...	7	3	26	4	65	HOUGHTON LAKE...	1	1	1	1	1	SALEM...	1	0	0	0	0
LITTLE ROCK...	8	6	36	5	11	LANING...	2	2	2	2	2	PA. ALLENTOWN...	1	12	12	2	10
CALIF. BAKERSFIELD...	13	68	470	158	263	MARQUETTE...	2	2	2	2	2	ATLANTA...	1	12	12	2	10
EUREKA...	12	1	1	1	1	MUSKOGEE...	2	2	2	2	2	HARRISBURG...	1	12	12	2	10
FRESNO...	12	1	1	1	1	S. STE. MARIE...	2	2	2	2	2	PHILADELPHIA...	1	12	12	2	10
LOS ANGELES...	12	1	1	1	1	MINN. DULUTH...	1	1	1	1	1	PITTSBURGH...	1	12	12	2	10
RED BLUFF...	12	1	1	1	1	INTERNAT. FALLS...	1	1	1	1	1	SCRANTON...	1	12	12	2	10
SAN DIEGO...	12	1	1	1	1	MINNEAPOLIS...	1	1	1	1	1	R.I. PROVIDENCE...	1	12	12	2	10
SAN FRANCISCO...	12	1	1	1	1	MINNEAPOLIS...	1	1	1	1	1	S.C. CHARLESTON...	1	12	12	2	10
STOCKTON...	12	1	1	1	1	ROCHESTER...	1	1	1	1	1	COLUMBIA...	1	12	12	2	10
COLO. DENVER...	20	8	33	21	6	ST. CLOUD...	1	1	1	1	1	GREENVILLE...	1	12	12	2	10
GRAND JUNCTION...	20	8	33	21	6	MISS. JACKSON...	1	1	1	1	1	S. DAK. ABERDEEN...	1	12	12	2	10
PUEBLO...	20	8	33	21	6	HERIDIAN...	1	1	1	1	1	HURON...	1	12	12	2	10
CONN. BRIDGEPORT...	17	3	38	7	11	MO. COLUMBIA...	1	1	1	1	1	RAPID CITY...	1	12	12	2	10
HARTFORD...	17	3	38	7	11	KANSAS CITY...	1	1	1	1	1	ST. LOUIS...	1	12	12	2	10
DEL. WILMINGTON...	40	12	121	45	16	SPRINGFIELD...	1	1	1	1	1	TEXAS. ARLING...	1	12	12	2	10
D.C. WASHINGTON...	72	24	243	79	21	MONTE. BILLINGS...	1	1	1	1	1	AMARILLO...	1	12	12	2	10
FLA. APALACHICOLA...	11	1	31	1	1	GLASGOW...	1	1	1	1	1	AUSTIN...	1	12	12	2	10
DAYTONA BEACH...	11	1	31	1	1	GREAT FALLS...	1	1	1	1	1	BEAUMONT...	1	12	12	2	10
FORT MYERS...	11	1	31	1	1	HAVRE...	1	1	1	1	1	BROOKSVILLE...	1	12	12	2	10
JACKSONVILLE...	11	1	31	1	1	HELENA...	1	1	1	1	1	CORPUS CHRISTI...	1	12	12	2	10
KEY WEST...	11	1	31	1	1	KALISPELL...	1	1	1	1	1	DEL RIO...	1	12	12	2	10
LAKELAND...	11	1	31	1	1	KILES CITY...	1	1	1	1	1	FORT WORTH...	1	12	12	2	10
MIAMI...	11	1	31	1	1	MISSOULA...	1	1	1	1	1	GALVESTON...	1	12	12	2	10
ORLANDO...	11	1	31	1	1	NEBR. GRAND ISLAND...	1	1	1	1	1	HOUSTON...	1	12	12	2	10
TALLAHASSEE...	11	1	31	1	1	LINCOLN...	1	1	1	1	1	LUBBOCK...	1	12	12	2	10
TAMPA...	11	1	31	1	1	NORFOLK...	1	1	1	1	1	MIDLAND...	1	12	12	2	10
WEST PALM BEACH...	11	1	31	1	1	NORTH PLATTE...	1	1	1	1	1	SAN ANGELO...	1	12	12	2	10
GA. ATLANTA...	10	3	30	10	3	OMAHA...	1	1	1	1	1	SAN ANTONIO...	1	12	12	2	10
AUGUSTA...	10	3	30	10	3	VALENTINE...	1	1	1	1	1	VICTORIA...	1	12	12	2	10
MALDEN...	10	3	30	10	3	NEV. ELV...	1	1	1	1	1	WACO...	1	12	12	2	10
SAVANNAH...	10	3	30	10	3	LAS VEGAS...	1	1	1	1	1	WICHITA FALLS...	1	12	12	2	10
IDAHO. BOISE...	11	1	13	1	1	RENO...	1	1	1	1	1	UTAH. SALT LAKE CITY...	1	12	12	2	10
LEWISTON...	11	1	13	1	1	WINNEVOCA...	1	1	1	1	1	VT. BURLINGTON...	1	12	12	2	10
POCATELLO...	11	1	13	1	1	N. H. CONCORD...	1	1	1	1	1	VA. LYNCHBURG...	1	12	12	2	10
ILL. CAIRO...	14	14	32	34	2	N. J. ATLANTIC CITY...	1	1	1	1	1	NORFOLK...	1	12	12	2	10
CHICAGO...	15	15	36	36	2	TRENTON...	1	1	1	1	1	RICHMOND...	1	12	12	2	10
MOLINE...	15	15	36	36	2	N. MEX. ALBUQUERQUE...	1	1	1	1	1	ROANOKE...	1	12	12	2	10
PEORIA...	15	15	36	36	2	ROSWELL...	1	1	1	1	1	WASH. QUILLAYUTE...	1	12	12	2	10
ROCKFORD...	15	15	36	36	2	N. Y. ALBANY...	1	1	1	1	1	SEATTLE-TACOMA...	1	12	12	2	10
SPRINGFIELD...	15	15	36	36	2	BINGHAMTON...	1	1	1	1	1	SPOKANE...	1	12	12	2	10
IND. EVANSVILLE...	17	23	18	15	0	BUFFALO...	1	1	1	1	1	HALLA HALLA...	1	12	12	2	10
FORT WAYNE...	17	23	18	15	0	NEW YORK...	1	1	1	1	1	YARIMA...	1	12	12	2	10
INDIANAPOLIS...	17	23	18	15	0	ROCHESTER...	1	1	1	1	1	W. VA. BECKLEY...	1	12	12	2	10
SOUTH BEND...	17	23	18	15	0	SACRASE...	1	1	1	1	1	CHARLESTON...	1	12	12	2	10
IOWA. BURLINGTON...	30	3	81	4	62	N. C. ASHLETTE...	1	1	1	1	1	HUNTINGTON...	1	12	12	2	10
DES MOINES...	30	3	81	4	62	GREENSBORO...	1	1	1	1	1	PARKERSBURG...	1	12	12	2	10
DUBUQUE...	30	3	81	4	62	HATTERAS...	1	1	1	1	1	WIS. GREEN BAY...	1	12	12	2	10
STOUC CITY...	30	3	81	4	62	RALEIGH...	1	1	1	1	1	LACROSSE...	1	12	12	2	10
KANS. CONCORDIA...	18	18	15	14	2	WILMINGTON...	1	1	1	1	1	MADISON...	1	12	12	2	10
DOGGE CITY...	18	18	15	14	2	N. DAK. BISMARCK...	1	1	1	1	1	WILBAUKEE...	1	12	12	2	10
GOODLAND...	18	18	15	14	2	FARGO...	1	1	1	1	1	WYO. CASPER...	1	12	12	2	10
LOPEKA...	18	18	15	14	2	HILLISTON...	1	1	1	1	1	CHEYENNE...	1	12	12	2	10
MICHIA...	18	18	15	14	2	OHIO. AKRON-CANTON...	1	1	1	1	1	LANDER...	1	12	12	2	10
KY. LEXINGTON...	15	9	123	50	4	CINCINNATI...	1	1	1	1	1	SHERIDAN...	1	12	12	2	10
LOUISVILLE...	15	9	123	50	4	CLEVELAND...	1	1	1	1	1						
LA. BATON ROUGE...	11	12	63	11	1	COLUMBUS...	1	1	1	1	1						
LAKE CHARLES...	11	12	63	11	1	DAYTON...	1	1	1	1	1						
NEW ORLEANS...	11	12	63	11	1	TOLEDO...	1	1	1	1	1						
SHREVEPORT...	11	12	63	11	1												



National Summaries of Weather and Agriculture

MAY WEATHER SUMMARY

HIGHLIGHTS: May rains this year were well above normal in most parts of the Nation. Spring rains during the month of May are usually rather reliable, but this year most parts of the Nation had well above the normal spring rains. After the dry summer of 1980 and dry winter of 1980-81, many parts of the Nation suffered from drought. The unusually wet month of May provided adequate crop moisture and helped make up for the moisture shortages accumulated over the past winter and summer. The month was rather cool and some freeze damage occurred in the central Plains, in Michigan and New York. Typically, severe weather plagued many parts of the Nation. Tornadoes, hail, and torrential rains damaged crops and destroyed homes. The rapid succession of storms through the Corn Belt kept fields wet and delayed planting. Flooding eroded some fields and destroyed early planted corn. Although all of the country had some rain, some areas are still too dry. Much of the northern Plains, the Southwest, and parts of the Southeast still need rain for crops.

The first 3 days of May were dominated by a high pressure system extending southward from central Canada to the central Plains. Freezing temperatures reached into North Dakota and Minnesota on the first of May and moved eastward to New England by the third. Clearing weather moved eastward with the high pressure, but a cold front followed, producing showers and thunderstorms from southern Texas to Montana.

FIRST WEEK...The cold front moved eastward, causing widespread showers and thunderstorms from the Plains to the East Coast. Later in the week another complex storm system moved out of the central Rockies and brought severe weather and heavy rain to the central Plains and then to the southern Plains and eastward. The frequent rain was welcomed to areas suffering from drought but left fields too wet to work through the Corn Belt. Cold air from Canada plunged southward after the severe weather and brought freezing temperatures to parts of the winter wheat area in Kansas and Nebraska where some of the wheat was beginning to flower.

SECOND WEEK...Storm systems moved through the Rockies and intensified in the central Plains in rapid succession. Severe weather was frequent east of the Rockies and moderate to heavy rain kept many fields too wet. Unseasonably cold air spread over much of the Nation, slowing plant germination and growth. Deep snow accumulated in the Rockies.

THIRD WEEK...An intense storm wound up in the central Plains, causing more heavy rain and assuring ample moisture for the winter wheat but bringing widespread severe weather in the form of thunderstorms, tornadoes, hail, and floods. Tornadoes were especially frequent along a line from central Texas to Iowa. The rain moved eastward through the Carolinas where drought had plagued the area for months. Thunderstorms brought some relief from dry weather in central and southern Florida. Welcome rain also covered most of the dry northern Plains where spring wheat had been sown.

FOURTH WEEK...The rapid succession of storm systems moving onto the West Coast, through the Rockies and eastern United States produced some precipitation in nearly all of the Nation. Heavy rain resulted in flooding in south central

Texas, Arkansas, and southern Indiana. The moderate to heavy rain in the eastern Corn Belt continued to delay corn and soybean planting. The spring wheat areas in the northern Plains generally recorded good rains, but more will be needed for continued growth of crops. More rain fell in the Carolinas and southeast, further relieving the long dry spell. Temperatures warmed during the week and averaged a little above normal in most of the Nation.

MAY AGRICULTURAL SUMMARY

Rain and wet field conditions in the eastern Corn Belt delayed planting activities during much of May, but in other areas planting progressed on schedule.

At the beginning of May, corn planting was 24 percent complete, 2 points slower than average. By the end of the month, planting advanced to 87 percent finished, 5 points behind average. Progress was 45 points behind normal in Indiana and 30 points behind in Ohio. Rains and wet fields slowed planting in these areas during most of the planting season. Georgia and North Carolina growers finished planting by the end of the month. Much needed rain fell in southern and eastern areas at the end of the month, helping to alleviate dry conditions and promote growth in recently seeded fields. Fair to mostly good stands were reported. Many fields were silking in the South.

Soybean seeding got underway during the first week of May and by the end of the month was 46 percent complete, lagging the 64 percent average. Progress in all major producing States except Louisiana, Minnesota, and Nebraska was slower than normal. Indiana growers were 60 percentage points behind schedule; Ohio, 55 points; Illinois, 39 points; Michigan, 23 points; Missouri, 22 points; Kentucky, 17 points; and Georgia, 15 points slower than normal. Wet conditions throughout the season have delayed progress. Emerged plants were in fair to good condition.

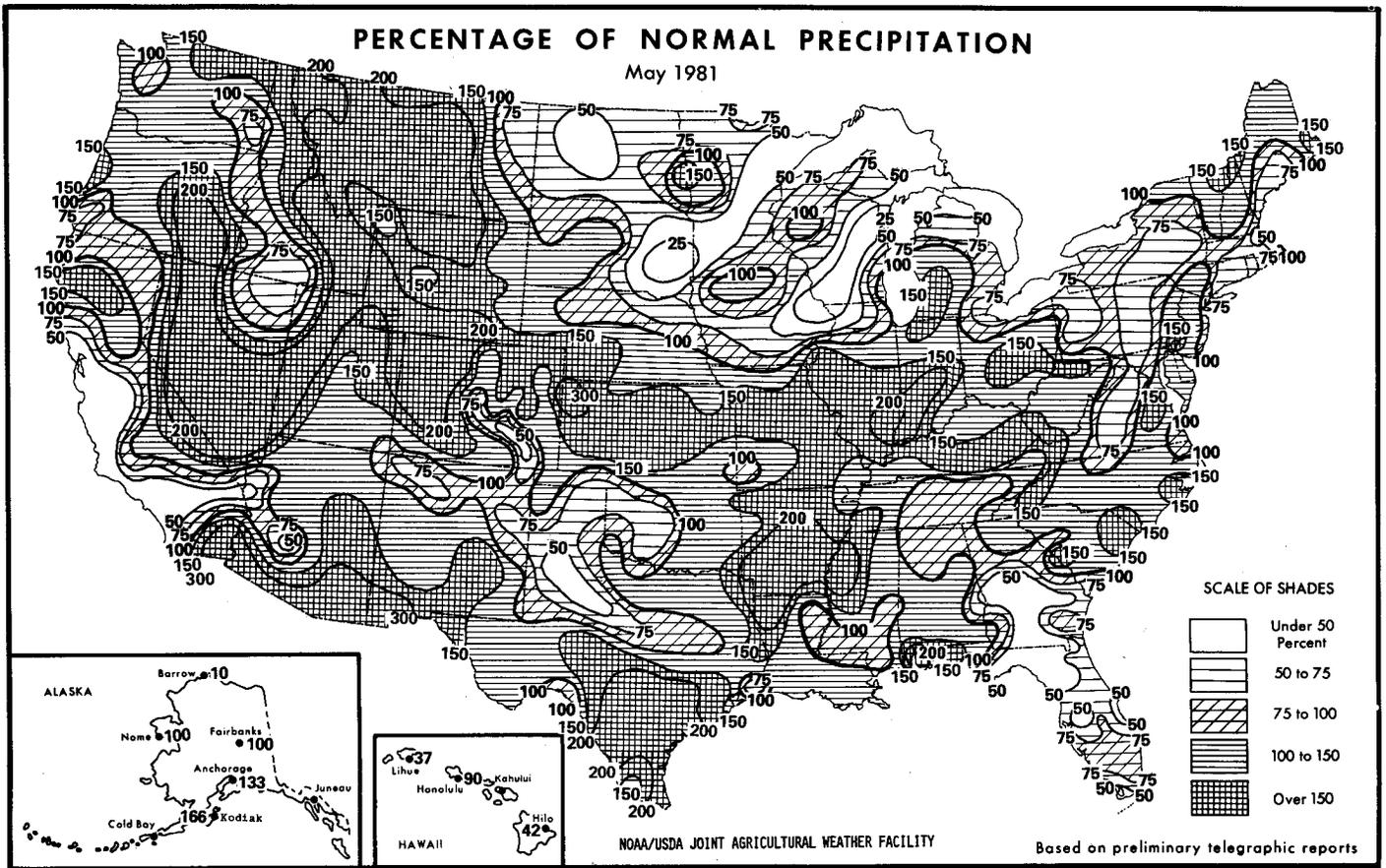
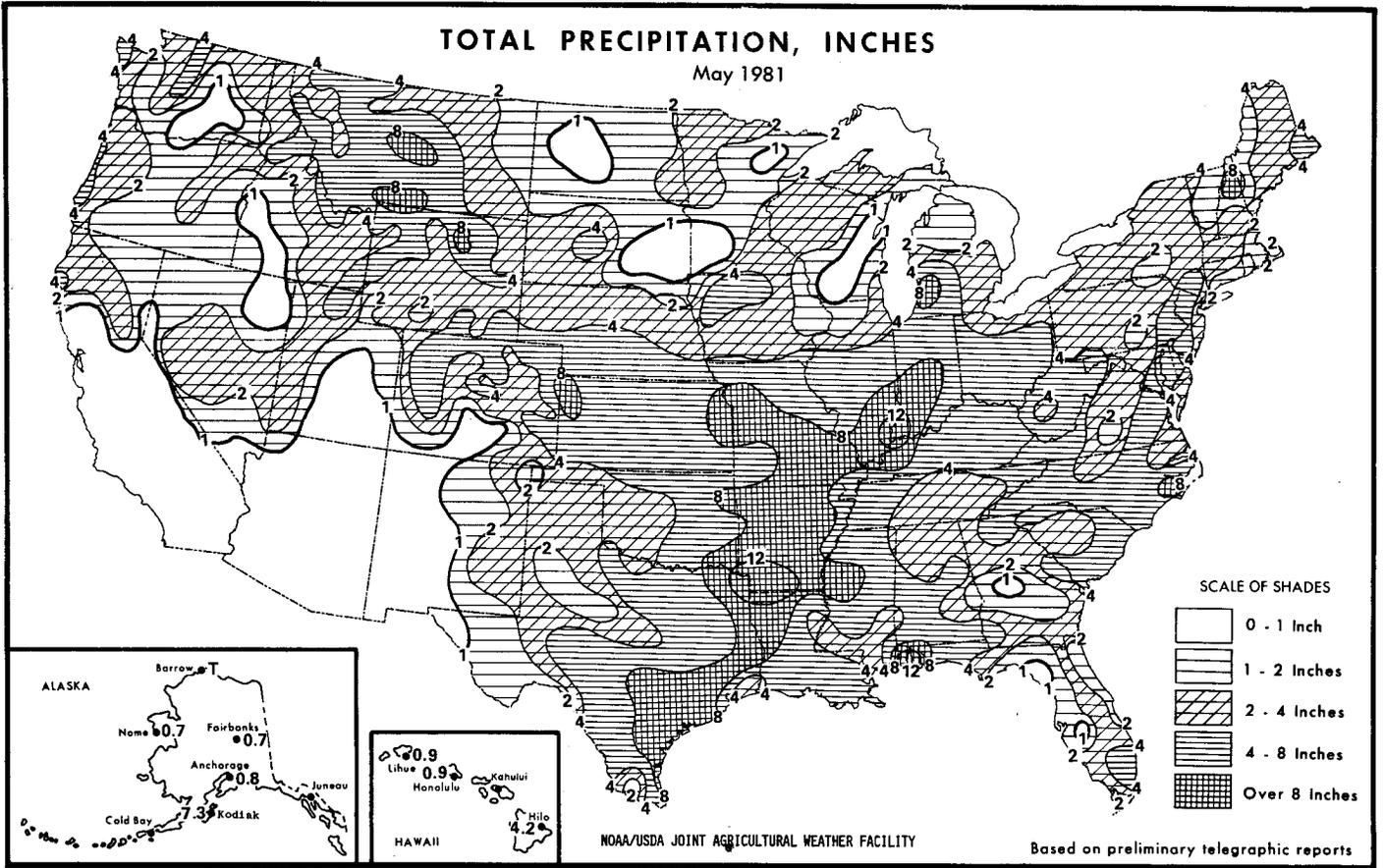
Grain sorghum planting in the seven major producing States advanced to 54% finished by the end of May, 2 points behind average. Progress was 10 points behind average in Kansas, Missouri, and Nebraska, but 15 points ahead of average in Oklahoma. In Texas, 90 percent of the crop was planted, 27 percent was headed, and 6 percent was turning color.

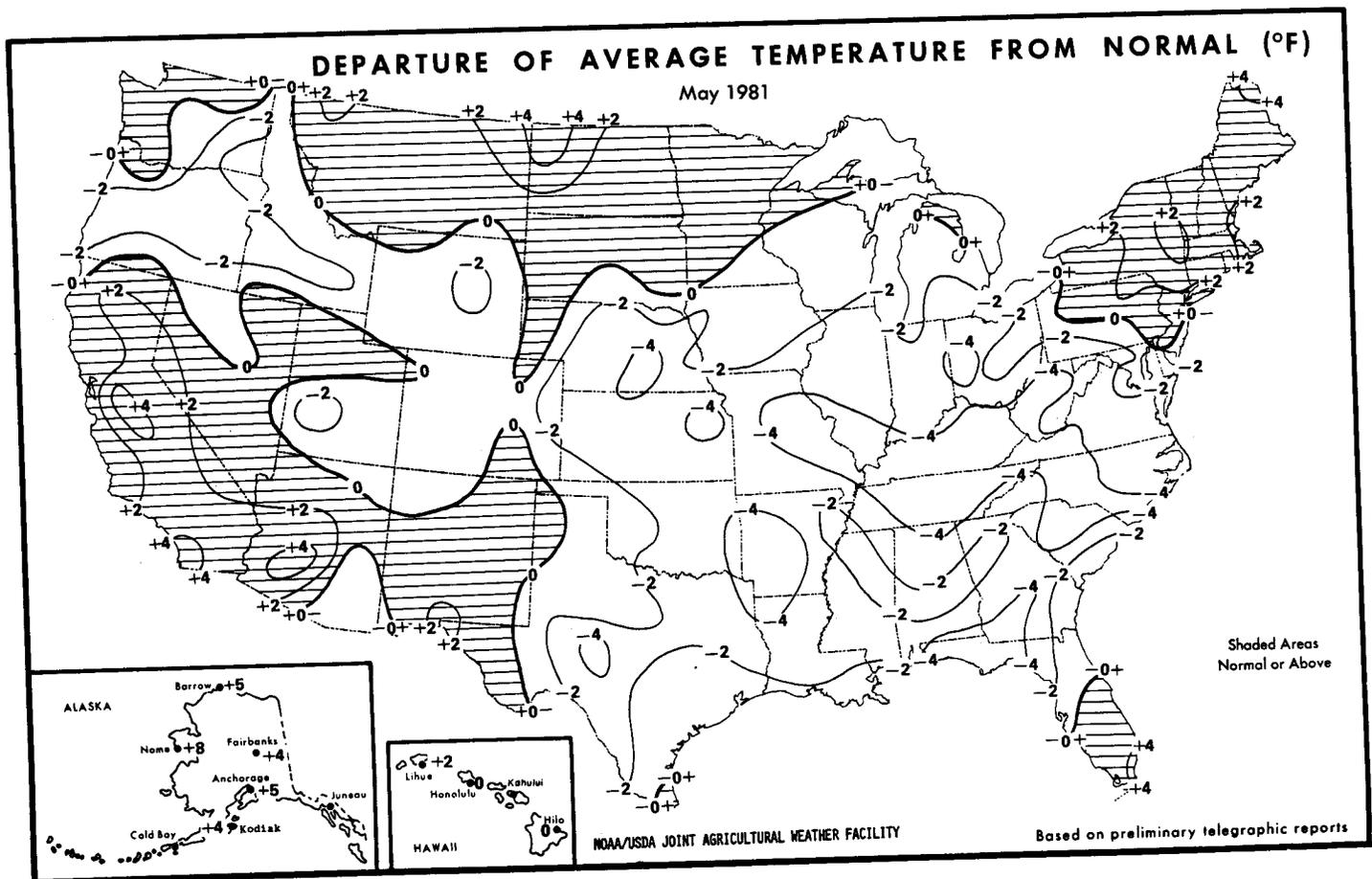
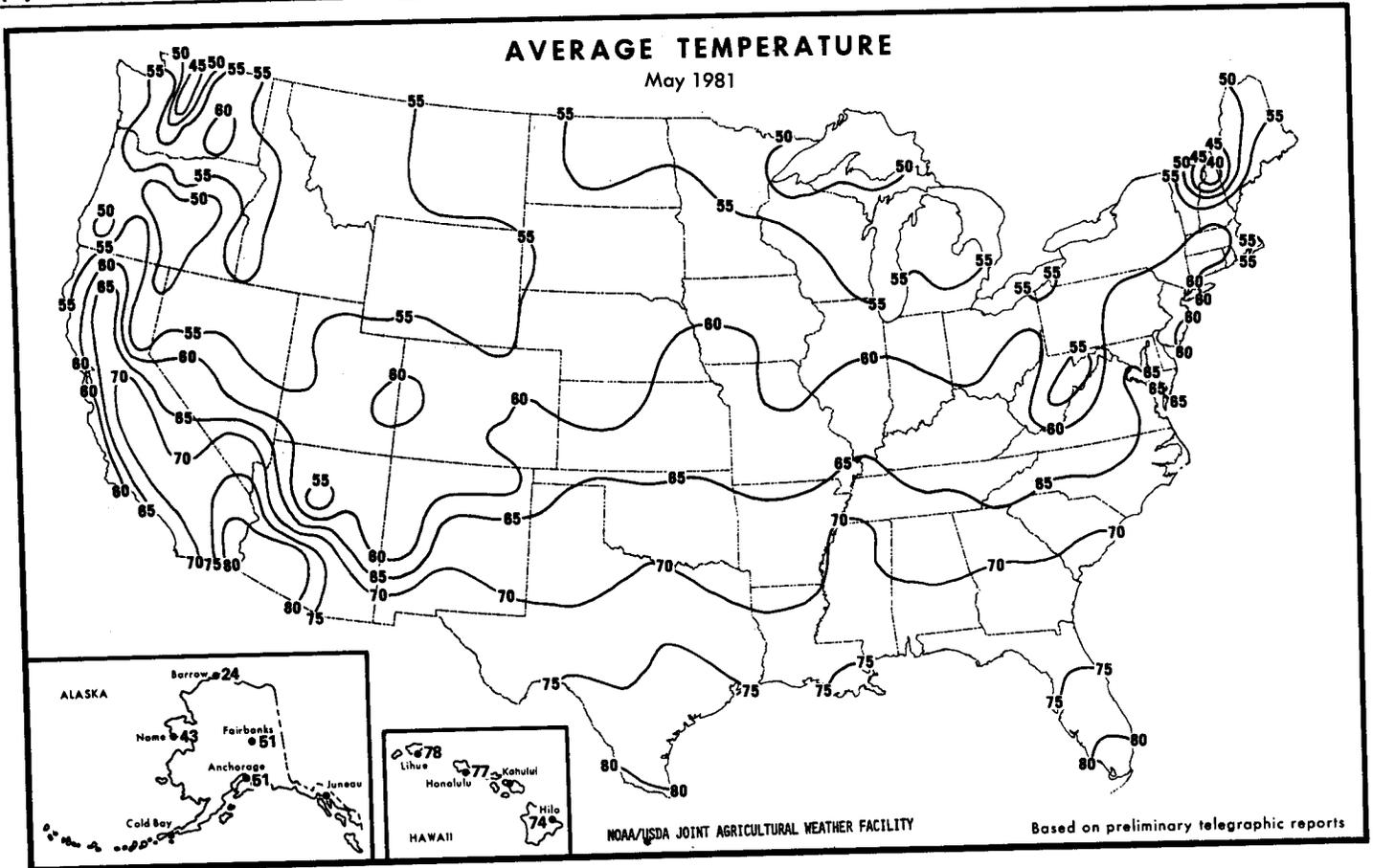
Spring wheat seeding got off to an early start and progress advanced rapidly. At the beginning of May, 77 percent of the acreage had been planted, well ahead of the average of 49 percent. Seeding neared completion by the end of the month and 91 percent of the acreage had emerged. Beneficial rains fell on growing areas during the latter part of the month and helped relieve dry conditions and promote growth, but more is needed.

Cotton planting progressed ahead of normal and by the end of the month was 88 percent finished. Squaring was underway on 10 percent of the acreage. Hail damaged some stands in Texas and replanting was necessary.

Rice seeding was 68 percent complete at the beginning of May and was virtually finished by the end of the month; 87 percent of the acreage had emerged.

Peanut planting neared completion in eastern areas at the end of May, and early planted fields were blooming. Plants were in fair to good condition. In Texas, 39 percent of the crop was planted by the end of the month, compared with the average of 33 percent.





Temperature and Precipitation Data for May 1981

States and Stations	Temperature OF		Precipitation Inches		States and Stations	Temperature OF		Precipitation Inches		States and Stations	Temperature OF		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	68	- 3	2.8	- .8	LA BATON ROUGE	72	- 3	4.5	- .1	TOLEDO	55	- 4	2.4	- .9
MOBILE	72	- 3	12.5	8.0	LAKE CHARLES	73	- 2	5.9	- .8	YOUNGSTOWN	58	0	4.0	- .1
MONTGOMERY	71	- 1	3.8	.3	NEW ORLEANS	75	0	5.4	1.2	OK OKLAHOMA CITY	66	- 2	2.7	- 2.5
AK ANCHORAGE	51	5	.8	.2	SHREVEPORT	69	- 4	10.0	5.0	TULSA	66	- 3	6.7	- .4
BARROW	24	5	T	-	ME CARIBOU	54	4	3.2	- .2	OR ASTORIA	53	1	3.0	- .3
FAIRBANKS	51	4	.7	.0	PORTLAND	55	2	2.3	- 1.0	BURNS	49	- 3	2.1	1.0
JUNEAU	--	--	--	--	MD BALTIMORE	62	- 2	3.6	0	MEDFORD	57	0	1.2	- .2
KODIAK	47	4	7.3	2.9	MA BOSTON	60	1	1.2	- 2.3	PENDLETON	56	- 3	1.6	- .4
NOME	43	8	.7	0	CHATHAM	53	0	3.4	- .2	PORTLAND	58	1	2.3	- .2
AZ FLAGSTAFF	52	2	.7	.1	MI ALPENA	52	1	1.1	- 1.6	SALEM	55	- 1	2.2	- .1
PHOENIX	81	5	T	- .1	DETROIT	56	- 2	2.6	- .7	PA ALLENTOWN	61	1	4.8	1.0
TUCSON	73	- 1	.3	.2	FLINT	54	- 2	3.1	0	ERIE	54	- 1	2.1	- 1.5
WINSLOW	63	0	.7	.4	GRAND RAPIDS	56	- 1	8.3	5.1	HARRISBURG	62	- 1	1.9	- 1.9
YUMA	82	3	- .1	.1	HOUGHTON LAKE	53	0	1.7	- 1.1	PHILADELPHIA	63	0	4.5	1.1
AR FORT SMITH	66	- 4	5.5	0	LANSING	54	- 3	4.7	1.4	PITTSBURGH	58	- 2	2.0	- 1.6
LITTLE ROCK	66	- 4	10.3	5.2	MARQUETTE	48	0	2.4	- 1.0	SCRANTON	60	2	3.0	- .8
CA BAKERSFIELD	72	2	- .2	.0	MUSKOGON	54	- 1	2.8	- .1	RI PROVIDENCE	59	2	1.9	- 1.6
EUREKA	53	0	2.0	- .1	SAULT STE. MARIE	51	2	1.2	- 1.8	SC CHARLESTON	71	- 1	4.0	- .2
FRESNO	71	4	T	- .3	MN DULUTH	50	1	1.2	- 2.2	COLUMBIA	68	- 4	3.4	0
LOS ANGELES	65	3	T	.1	INT'L FALLS	53	3	2.5	- .3	GREENVILLE	66	- 3	4.2	1.2
RED BLUFF	70	3	2.3	1.3	MINNEAPOLIS	57	0	2.2	- 1.2	SD ABERDEEN	56	0	1.6	- 1.0
SAN DIEGO	67	4	T	- .2	ROCHESTER	55	- 1	2.7	- .8	HURON	58	1	.7	- 2.1
SAN FRANCISCO	59	1	0	- .4	SAINT CLOUD	55	0	1.4	- 2.2	RAPID CITY	55	0	2.8	0
STOCKTON	69	4	- .1	- .3	MS JACKSON	70	- 3	6.6	2.2	ST LOUIS	58	0	.6	- 2.8
CO DENVER	57	0	3.7	1.1	MERIDIAN	70	- 2	3.7	- .1	TN CHATTANOOGA	65	- 4	3.4	0
GRAND JUNCTION	61	- 1	1.5	.9	MO COLUMBIA	59	- 5	7.7	3.0	KNOXVILLE	64	- 4	3.0	- .3
PUEBLO	62	1	.8	- .9	KANSAS CITY	61	- 3	9.5	5.2	MEMPHIS	70	- 1	7.1	2.7
CT BRIDGEPORT	59	1	1.9	- 1.7	SAINT LOUIS	61	- 5	6.8	2.9	NASHVILLE	64	- 5	3.1	- 1.0
HARTFORD	62	4	2.2	- 1.3	SPRINGFIELD	62	- 3	6.2	1.3	TX ABILENE	72	0	1.5	- 2.4
DC WASHINGTON	66	0	3.4	- .3	MT BILLINGS	56	1	7.7	5.6	AMARILLO	66	0	2.1	- .7
FL APALACHICOLA	71	- 4	1.1	- 1.7	GLASGOW	56	2	2.1	.8	AUSTIN	75	0	9.0	5.0
DAYTONA BEACH	74	- 1	1.7	- 1.0	GREAT FALLS	53	0	5.2	2.8	BEAUMONT	74	- 1	3.0	- 1.9
FORT MYERS	79	1	3.1	- .9	HAVRE	55	0	2.6	1.1	BROWNSVILLE	80	1	5.9	3.4
JACKSONVILLE	73	- 1	1.5	- 1.7	HELENA	53	1	6.1	4.3	CORPUS CHRISTI	77	- 1	8.6	5.4
KEY WEST	81	0	.6	- 1.9	KALISPELL	53	2	3.4	1.4	DEL RIO	76	- 2	1.9	- .5
MIAMI	80	2	4.9	- 1.2	MILES CITY	57	1	2.9	.8	EL PASO	74	2	.7	.4
ORLANDO	77	1	2.0	- .8	MISSOULA	53	1	4.2	2.5	FORT WORTH	71	- 2	6.2	1.7
TALLAHASSEE	71	- 4	1.4	- 2.6	NE GRAND ISLAND	57	- 4	4.3	.5	GALVESTON	75	- 1	4.3	1.1
TAMPA	75	- 2	1.7	- .7	LINCOLN	60	- 2	4.0	- .5	HOUSTON	75	- 1	8.8	3.7
WEST PALM BEACH	79	1	5.1	- .1	NORFOLK	58	- 2	2.3	- 1.4	LUBBOCK	68	- 1	1.3	- 1.9
GA ATLANTA	68	- 1	3.9	.2	NORTH PLATTE	55	- 3	5.4	2.1	MIDLAND	70	- 2	2.2	0
AUGUSTA	68	- 4	5.3	1.9	OMAHA	60	- 1	3.9	- .1	SAN ANGELO	71	- 4	4.7	2.0
MACON	71	- 3	1.0	- 2.6	VALENTINE	55	- 2	2.7	- .2	SAN ANTONIO	75	- 1	6.4	3.3
SAVANNAH	72	- 1	2.1	- 2.1	NV ELY	50	0	2.0	1.1	VICTORIA	76	- 1	8.4	4.4
HI HILO	74	0	4.2	- 5.9	LAS VEGAS	74	1	.5	.4	WACO	73	- 2	3.7	- .9
HONOLULU	77	0	.9	- .1	RENO	58	3	.6	- .1	WICHITA FALLS	70	- 2	3.5	- 1.1
KAHULUI	--	--	--	--	WINNEMUCCA	53	- 1	1.9	1.0	UT BLANDING	56	- 1	.6	0
LIHUE	78	2	.9	- 1.5	NH CONCORD	58	3	3.2	- .2	SALT LAKE CITY	58	0	3.7	2.2
ID BOISE	55	- 2	1.0	- .3	NJ ATLANTIC CITY	58	- 4	3.2	- .3	VT BURLINGTON	58	3	3.8	.8
LEWISTON	57	- 1	1.1	- .5	TRENTON	63	1	4.3	.9	VA LYNCHBURG	63	- 2	1.7	- 1.5
POCATELLO	52	- 2	3.2	1.9	NM ALBUQUERQUE	65	0	.5	0	NORFOLK	65	- 2	2.8	- .5
IL CAIRO	65	- 4	7.6	2.4	ROSNELL	69	0	3.4	2.4	RICHMOND	64	- 3	6.6	3.2
CHICAGO	55	- 3	3.1	- .3	NY ALBANY	59	1	2.4	- .9	ROANOKE	60	- 4	4.6	1.1
MOLINE	58	- 3	1.5	- 2.4	BINGHAMTON	57	2	1.9	- 1.9	WA COLVILLE	55	0	3.4	1.8
PEORIA	59	- 3	5.8	1.9	BUFFALO	56	1	2.6	- 1.4	OMAK	60	3	2.0	- .9
ROCKFORD	56	- 3	1.8	- 2.1	NEW YORK	64	2	3.3	- .1	QUILLAYUTE	51	0	4.8	- .1
SPRINGFIELD	60	- 3	6.2	2.7	ROCHESTER	57	0	2.3	- .5	SEATTLE-TACOMA	55	0	1.3	- .4
IN EVANSVILLE	61	- 4	12.9	8.5	SYRACUSE	59	2	2.6	- .4	SPOKANE	52	- 3	2.0	- .5
FORT WAYNE	57	- 3	4.4	.5	NC ASHEVILLE	61	- 3	7.5	4.2	WALLA-WALLA	59	- 1	2.1	- .5
INDIANAPOLIS	60	- 2	9.2	5.1	CHARLOTTE	65	- 4	4.3	1.4	YAKIMA	57	- 1	.7	- .1
SOUTH BEND	57	- 1	6.8	3.6	GREENSBORO	63	- 4	2.8	- .2	WV BECKLEY	57	- 2	5.2	1.4
IA BURLINGTON	59	- 3	6.0	2.4	HATTERAS	65	- 2	4.9	1.6	CHARLESTON	60	- 5	3.8	- .3
DES MOINES	60	- 1	2.5	- 1.7	RALEIGH	64	- 3	4.3	1.0	HUNTINGTON	61	- 4	5.2	1.4
DUBUQUE	57	- 1	1.1	- 3.7	WILMINGTON	67	- 4	5.0	1.0	PARKERSBURG	60	- 4	4.5	1.0
SIoux CITY	59	- 2	2.0	- 1.5	ND BISMARCK	54	0	.9	- 1.2	WI GREEN BAY	54	- 1	.6	- 2.5
CONCORDIA	60	- 3	7.0	2.8	FARGO	56	1	3.5	1.2	LA CROSSE	58	- 1	1.9	- 1.8
DODGE CITY	62	- 2	5.7	2.6	WILLISTON	59	5	1.2	- .4	MADISON	55	- 1	.6	- 2.8
GOODLAND	56	- 3	8.2	5.7	OH AKRON-CANTON	59	0	4.8	.9	MILWAUKEE	52	- 2	3.1	- .2
TOPEKA	61	- 4	5.9	1.9	CINCINNATI	60	- 3	5.1	1.4	CASPER	51	- 2	3.5	1.6
WICHITA	63	- 3	6.3	2.7	CLEVELAND	56	- 2	2.2	- 1.3	CHEYENNE	51	- 1	5.7	3.2
KY LEXINGTON	60	- 5	5.1	.9	COLUMBUS	60	- 1	6.5	2.4	LANDER	52	- 1	3.2	- .8
LOUISVILLE	63	- 2	4.6	.4	DAYTON	57	- 5	4.8	1.0	SHERIDAN	52	- 1	5.7	3.2
									PR SAN JUAN	83	4	11.0	4.5	

Based on 1941-70 normals

Heating Degree Days (Base 65° F.)

May 1981

ALA. Birmingham	49	MAINE, Caribou	333	OKLA. Okla. City	69
Mobile	4	Portland	312	Tulsa	58
Montgomery	7	MD. Baltimore	148	OREG. Astoria	354
ALASKA, Anchorage	438	MASS. Boston	200	Burns U.	487
Barrow	---	Chatham	369	Medford	244
Fairbanks	418	MICH. Alpena	397	Pendleton	275
Juneau	---	Detroit	293	Portland	229
Nome	682	Flint	336	Salem	318
ARIZ. Flagstaff	398	Grand Rapids	298	PA. Allentown	163
Phoenix	0	Houghton Lake	368	Erie	346
Tucson	0	Lansing	330	Harrisburg	147
Winslow	105	Marquette U.	315	Philadelphia	129
Yuma	0	S. Ste. Marie	438	Pittsburgh	223
ARK. Fort Smith	61	MINN. Duluth	455	Scranton	195
Little Rock	63	Internatl Falls	359	R. I. Providence	228
CALIF. Bakersfield	9	Minneapolis	249	S. C. Charleston	16
Eureka U.	357	Rochester	305	Columbia	43
Fresno	9	St. Cloud	314	Greenville	50
Los Angeles U.	29	MISS. Jackson	18	S. DAK. Aberdeen	273
Red Bluff	18	Meridian	15	Huron	243
Stockton	23	MO. Columbia	211	Rapid City	311
San Diego	1	Kansas City	179	Sioux Falls	230
San Francisco	180	St. Louis	168	TENN. Chattanooga	381
COLO. Denver	243	Springfield	134	Knoxville	94
Grand Junction	153	Springfield	292	Memphis	23
Pueblo	119	MONT. Billings	250	Nashville	96
CONN. Bridgeport	214	Glasgow	373	TEX. Abilene	20
Hartford	149	Great Falls	297	Amarillo	65
D. C. Washington	75	Havre	371	Austin	0
FLA. Apalachicola	3	Helena	376	Beaumont	3
Ft. Myers	0	Kalispell	376	Brownsville	0
Jacksonville	6	Miles City	252	Corpus Christi	0
Key West	0	Missoula	253	Del Rio	0
Lakeland U.	-	NEBR. Grand Island	255	El Paso	2
Miami	0	Lincoln	192	Fort Worth	23
Orlando	0	Norfolk	235	Galveston U.	0
W. Palm Beach	0	North Platte	318	Houston	1
Tallahassee	5	Omaha	169	Lubbock	33
Tampa	0	Valentine	328	Midland	20
GA. Atlanta	43	NEV. Ely	457	San Angelo	17
Augusta	33	Las Vegas	2	San Antonio	0
Macon	6	Reno	228	Victoria	0
Savannah	8	Winnemucca	365	Waco	13
IDAHO, Boise	315	N. H. Concord	267	Wichita Falls	33
Lewiston	249	N. J. Atlantic City	251	UTAH, Milford	316
Pocatello	407	Trenton U	122	Salt Lake City	233
ILL. Cairo U.	82	N. MEX. Albuquerque	62	VT. Burlington	239
Chicago	313	Roswell	21	VA. Lynchburg	131
Moline	258	N. Y. Albany	235	Norfolk	96
Peoria	221	Binghamton	276	Richmond	107
Rockford	275	Buffalo	269	Roanoke	158
Springfield	184	New York	97	WASH. Colville	298
IND. Evansville	155	Rochester	260	Omak	---
Fort Wayne	259	Syracuse	221	Quillayute	422
Indianapolis	180	N. C. Asheville	152	Seattle-Tacoma	316
South Bend	271	Charlotte	74	Spokane	359
IOWA, Burlington	211	Greensboro	116	Walla Walla U.	199
Des Moines	177	Hatteras R.	82	Yakima	255
Dubuque	262	Raleigh	99	W. VA. Beckley	264
Sioux City	200	Wilmington	64	Charleston	175
KANS. Concordia	196	N. DAK. Bismarck	335	Huntington	167
Dodge City	166	Fargo	298	Parkersburg U.	192
Goodland	297	Williston U	205	WIS. Green Bay	350
Topeka	176	OHIO. Akron-Canton	222	Madison	307
Wichita	126	Cincinnati U.	191	Milwaukee	417
KY. Lexington	180	Cleveland	298	WYO. Casper	418
Louisville	122	Columbus	195	Cheyenne	445
LA. Baton Rouge	6	Dayton	252	Lander	383
Lake Charles	1	Toledo	309	Sheridan	396
New Orleans	0	Youngstown	232		
Shreveport	20				

Preliminary reports from airport locations, except those marked U for urban and R for rural.
*Estimated.

National Agricultural Summary

JUNE 1-7, 1981

Highlights: Rainfall in the eastern half of the Nation delayed planting activities but helped relieve the moisture shortage in the Southeast. Spring wheat growing areas again received moisture needed to promote growth in recently emerged fields. Soil moisture supplies were adequate to surplus in Illinois, Ohio, Missouri, North Carolina, Virginia, West Virginia, Arkansas, Louisiana, and Mississippi, and short to mostly adequate elsewhere. Rains during the week improved soil moisture supplies in the eastern areas of the Nation, but limited the number of days suitable for fieldwork. Farmers in all areas except New England, Michigan, Wisconsin, Iowa, Nebraska, South Dakota, and much of the West had less than 4 days suitable for fieldwork. In the South Central region, heavy rains limited fieldwork to 1 to 3 days. Corn planting was 92% finished, 7 points behind last year and 5 points behind average. Soybean planting was 59% complete, behind last year's 80% and the 76% average. In Indiana and Ohio, planting of soybeans and corn is considerably behind last year and average. Rains have delayed progress during much of the season. Winter wheat is fair to mostly good except in Kansas where poor to fair conditions, caused by the recent freeze, are becoming more apparent. Heading was 91% complete, compared to 86% last year. Harvesting was underway as far north as Oklahoma. Spring wheat was 4% headed, 1 point ahead of average. Cotton planting reached 92% complete and squaring was underway on 13% of the acreage compared to 10% last year. Grain sorghum planting was 65% finished, 6 points behind average. Rice seeding was finished and 93% of the acreage had emerged. Pastures were rated fair to good in all areas except the northern Plains, the Southwest, and in the Southeast. Rains during the week in all areas except the Southwest, should improve conditions, but more is needed for recovery. Livestock were in fair to good condition.

Corn: Corn planting in the 17 major producing States was 92% complete, behind last year's 99% and the 97% average. Planting in Georgia, Iowa, and North Carolina was finished. Rain again delayed progress in most areas, but growers in Indiana were able to plant 20% of their acreage during the week while Ohio farmers planted 10%. Progress is 31 points behind normal in Indiana and 27 points behind in Ohio. Emerged fields were in fair to mostly good condition. Silking became more widespread in the South and a few early planted fields reached the dough stage.

Soybeans: Soybean planting in the 18 major producing States was 59% complete, behind last year's 80% and the 76% average. Progress in all States except Iowa, Louisiana, Minnesota, and Nebraska was slower than average. Rain again delayed planting in many major growing areas. Indiana growers were 55 percentage points behind average; Ohio, 40 points; Kentucky, 29 points; Illinois, 24 points; Arkansas, 23 points; Missouri, 22 points; and Kansas, 20 points slower than average. Emerged plants were in fair to good condition.

Small Grains: Winter wheat was in fair to mostly good condition in all major producing areas except Kansas where poor to fair conditions were reported. Damage from earlier freezes was becoming more apparent in Kansas. Some frost - damaged fields were being salvaged as silage or hay and some were being replanted to sorghum. In the 15 major producing States, 91% of the wheat was headed, ahead of last year's 86%. Many fields were turning color and

harvesting was underway as far north as Oklahoma, where 5% had been harvested. A few fields in Kansas were ripe, but wet field conditions delayed harvesting. Texas harvest was 17% finished and California was 10% complete. Harvesting continued in full swing in Arizona. Hail destroyed some fields in Texas and lodging is expected to reduce yields on the Low Plains.

Spring wheat was 4% headed in the 5 major producing States, equal to last year's development but 1 point ahead of average. Much - needed rainfall again fell on most growing areas, improving crop prospects. However, more is needed.

Cotton: Cotton planting reached 92% complete in the 14 major producing States, 1 point ahead of last year. Squaring was underway on 13% of the acreage, compared to 10% a year ago. Seeding operations in Texas were interrupted by showers. From central Texas southward, growth was slowed by cool weather and some stands were adversely affected by excessive moisture.

Other Crops: Grain sorghum planting was 65% finished in the seven major States, 6 points behind last year and average. Planting progress compared with average was: Colorado-23% behind, Kansas-20% behind, Missouri-17% behind, Oklahoma-10% ahead, South Dakota-8% ahead, and Texas-4% ahead. Stands in Texas were blooming; pollination may be lowered by continual showers.

Rice seeding was finished and 93% of the acreage had emerged, equal to a year ago.

Peanut planting was virtually finished in the Southeast, but only 42 percent complete in Texas, 7 points behind average. Some fields in Texas were washed out and will be replanted. Emerged plants in Virginia were in good to excellent condition. Twenty-six percent of the acreage in Georgia was blooming.

Fruits and Nuts: Peach harvesting advanced in the South and reached northward into South Carolina. Harvesting in Georgia was 18% complete, 11 points behind average.

Several days of rain improved Florida's citrus grove condition. Most irrigation was stopped. The Valencia orange harvest slowed, and the grapefruit harvest was virtually finished. Harvesting of Valencia oranges and grapefruit made seasonal progress in Arizona. In California, Desert grapefruit and Navel oranges were picked. The southern California lemon harvest was 76% complete. Valencia oranges were harvested in good volume.

CROP PROGRESS
FOR WEEK ENDING JUNE 7, 1981

	RICE % EMERGED			SPRING WHEAT % HEADED			
	1981	1980	AVG.	1981	1980	AVG.	
ARK	94	92	NA	IDA	4	5	2
CALF	79	88	NA	MINN	4	1	10
LA	98	92	98	MONT	0	0	0
MISS	98	91	94	N D	1	3	1
TEX	99	100	NA	S DAK	15	12	0
5 STATES	93	93	NA	5 STATES	4	4	3
EXCL. STATES WITH NA	98	92	97	THESE 5 STATES PRODUCED 92% OF THE 1980 SPRING WHEAT CROP.			

THESE 5 STATES PRODUCED 98%
OF THE 1980 RICE CROP.

NA - NOT AVAILABLE

CROP PROGRESS
FOR WEEK ENDING JUNE 7, 1981

WINTER WHEAT % HEADED				WINTER WHEAT % HARVESTED				COTTON % PLANTED				COTTON % SQUARING			
	1981	1980	AVG.		1981	1980	AVG.		1981	1980	AVG.		1981	1980	AVG.
CALF	100	100	NA	CALF	10	9	NA	ALA	99	98	98	ALA	5	5	4
COLO	88	78	86	COLO	0	0	0	ARIZ	100	99	100	ARIZ	40	28	34
IDA	22	24	20	IDA	0	0	0	ARK	100	100	NA	ARK	2	0	NA
ILL	100	100	97	ILL	0	0	0	CALF	100	100	NA	CALF	0	0	NA
IND	100	100	100	IND	0	0	0	GA	100	100	100	GA	30	35	36
KANS	100	95	97	KANS	0	0	0	LA	97	99	100	LA	8	0	NA
MO	100	97	100	MO	0	0	0	MISS	100	100	100	MISS	12	3	8
MONT	15	35	30	MONT	0	0	0	MO	100	100	100	MO	0	0	0
NEBR	99	90	85	NEBR	0	0	0	N MEX	100	100	100	N MEX	0	0	0
OHIO	95	80	85	OHIO	0	0	0	N C	100	100	100	N C	2	3	NA
OKLA	100	100	100	OKLA	5	5	10	OKLA	60	45	60	OKLA	0	0	0
OREG	90	85	NA	OREG	0	0	NA	S C	100	100	100	S C	8	0	0
S DAK	91	73	53	S DAK	0	0	0	TENN	100	100	100	TENN	0	0	0
TEX	100	100	NA	TEX	17	12	15	TEX	90	88	85	TEX	17	15	NA
WASH	78	35	43	WASH	0	0	0								
15 STATES	91	86	NA	15 STATES	3	2	NA	14 STATES	92	91	NA	14 STATES	13	10	NA
EXCL. STATES WITH NA	90	84	84	EXCL. STATES WITH NA	3	2	3	EXCL. STATES WITH NA	91	89	88	EXCL. STATES WITH NA	12	8	10

THESE 15 STATES PRODUCED 88% OF THE 1980 WINTER WHEAT CROP.

THESE 15 STATES PRODUCED 88% OF THE 1980 WINTER WHEAT CROP.

THESE 14 STATES PRODUCED 99% OF THE 1980 COTTON CROP.

THESE 14 STATES PRODUCED 99% OF THE 1980 COTTON CROP.

NA - NOT AVAILABLE

NA - NOT AVAILABLE

NA - NOT AVAILABLE

NA - NOT AVAILABLE

	CORN % PLANTED		
	1981	1980	AVG.
COLO	94	91	95
GA	100	100	100
ILL	94	100	97
IND	65	99	96
IOWA	100	100	100
KANS	90	90	96
KY	85	99	92
MICH	95	95	96
MINN	99	98	98
MO	86	100	86
NEBR	99	100	99
N C	100	100	100
OHIO	70	100	97
PA	90	92	92
S DAK	98	100	95
VA	97	97	98
WIS	99	100	92
17 STATES	92	99	97

THESE 17 STATES PRODUCED 93% OF THE 1980 CORN CROP.

	SORGHUM % PLANTED		
	1981	1980	AVG.
COLO	56	63	79
KANS	30	45	50
MO	48	82	65
NEBR	85	85	85
OKLA	70	60	60
S DAK	72	70	64
TEX	92	89	88
7 STATES	65	71	71

THESE 7 STATES PRODUCED 92% OF THE 1980 SORGHUM CROP.

	SOYBEAN % PLANTED		
	1981	1980	AVG.
ALA	68	69	70
ARK	31	52	54
GA	59	70	76
ILL	63	95	87
IND	25	85	80
IOWA	95	97	94
KANS	30	65	50
KY	23	62	52
LA	73	66	73
MICH	75	80	80
MINN	95	92	92
MISS	57	65	61
MO	42	82	64
NEBR	85	90	85
N C	62	72	68
OHIO	40	80	90
S C	55	72	71
TENN	36	72	57
18 STATES	59	80	76

THESE 18 STATES PRODUCED 95% OF THE 1980 SOYBEAN CROP.

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 ESS State Offices in cooperation with the National Weather Service.

ALABAMA: Temperatures 3° above normal. Rain-fall 0.50 to 2.00 in.
Fieldwork: 3.5 days suitable. Soil moisture adequate. Corn silking 34%; 7% 1980. Soybeans planted 68%; 69% 1980; 70% average. Cotton planted 99%, 98% 1980; 98% average. Cotton squaring 5%, 5% 1980, 4% average. Peanuts planted 99%. Peanuts pegging 1%. Wheat turning 96%; harvested 40%; 34% 1980; 39% average. Sorghum planted 55%; 54% 1980. Hay harvested 34%.
Conditions: Corn, wheat, soybeans, peanuts, sorghum, and pasture mostly good; cotton mostly fair.

ALASKA: Cool temperatures, cloudy skies, shower activity covered much of Railbelt past week. However, crop growth still rated moderate or better. Farmers averaged 3 to 7 days suitable fieldwork. Barley seeded for grain virtually complete. Nearly all fields have good, even emergence. Condition all crops average or above throughout Railbelt. Potatoes, vegetables continue make good growth. Soil moisture supplies adequate or better, Tanana Valley; short to adequate, Matanuska Valley. Winter-spring livestock losses normal.

ARIZONA: Sunny, hot, dry during week except for

isolated rain showers 1st Mogollon Rim, White Mountains. Average temperatures mostly 2 to 12° above normal.

Cotton planting virtually complete, squaring, blooming, boll setting increasing; 40% fields squaring. Harvest small grains full swing, making excellent progress. Alfalfa haying very good progress. Sugarbeet harvest full swing. Safflower, corn, sorghum very good growth. Harvest virtually all late winter, early spring vegetable crops complete. Potato, dry onion digging continued. Harvest cantaloups, watermelons increasing. Harvest Valencia oranges, grapefruit seasonal progress. Grape harvest increasing. Range conditions mostly poor to fair, only Navajo County mostly fair to good. Soil moisture, stock water critically short. Water hauling, supplemental feeding active some areas. Cattle generally fair condition, sheep mostly good to very good condition.

ARKANSAS: Excessive rainfall, some flooding. Temperatures near normal. Highest temperature, 91°, lowest 53°. All departures range from +3 to -3°. Most rainfall 5.52 in., least 0.72 in.

Soybean planting and other field activities virtually halted by rain. Soybeans 31% planted, 52% 1980, 54% average; emerged 27%, 36% 1980. Rice 94% emerged, 92% 1980. Cotton 96% emerged, 88% 1980. Wheat and oat harvest ready to begin but farmers waiting for dry fields. Sorghum 92% planted, 87% 1980, 87% average. Corn good condition up to stand. Tomato harvest underway and southeastern auctions opened. Average of 2 days available for fieldwork. Soil moisture supplies rated adequate to surplus. Forage cover on pastures average and improving. Livestock condition good.

CALIFORNIA: Warmest temperatures of the year so far. Many stations recorded highs above the 100° mark for the first time this year. Highest in the State was Blythe with 112°. The lowest temperature of the week was 36° at Tulalake. The majority of the State was dry with only the North Coast and the northern mountains receiving minimal amounts of rain.

Warm weather favors cotton development. Growing conditions excellent. Weeding, cultivating, irrigating and spraying for mites in several counties. Rice 79% emerged; 88% 1980. Controls actively applied. Winter wheat approaching 10% harvest; 9% 1980. Oat, barley harvests active most areas. Blackeye, lima beans still being planted. Harvesting, planting continue for sugarbeets. Alfalfa in third cutting. Field corn planting continues. Spraying for scale weed control in orchards. Good quality Royal Derby apricots. Avocado market prices depressed; movement high. Bing cherry harvest near completion. Desert table grape picking continues. May Grand nectarines, Gemfree Freestone peaches to market. Santa Rosa plums next week. Prune set good. Desert grapefruit, Navel oranges active. Southern California lemons 76% finished. Valencia oranges good volume to export. Asparagus volume mostly to processing. Green bean harvest active. Broccoli heavy supply Central Coast. Cantaloup harvest increasing Desert. Carrot volume decreasing Desert, increasing Kern, Salinas. Cauliflower moderate supply. Celery harvest moderate South Coast, starting Santa Maria, Salinas. Lettuce heavy supply Central Coast, good quality. Onion volume decreasing Desert, increasing San Joaquin Valley. Spring potatoes near peak volume. Planting fall potatoes complete Tulalake. Market tomato harvest increasing Desert, South Coast. Processing tomato harvest started Imperial Valley. Watermelon harvest still slow Desert. Ranges dry lower elevations. Stock water supplies drying up few areas. Movement livestock grazing areas tapering off. Egg production slightly decreased due to hot daytime temperatures.

COLORADO: Isolated showers 1st increased to locally heavy downpours north and east 2nd. Most severe tornado outbreak on record in the Denver metro area 3rd. Hail, strong winds accompanied locally heavy rains as the storm moved across Eastern areas. Northeast had locally heavy rain and golf-ball sized hail on weekend. Temperatures at or slightly above normal.

Winter wheat jointed 95%, 98% 1980, 96% average; headed 88%, 78% 1980, 86% average. Barley headed 22%, 10% 1980. Spring wheat seeded 98%, 97% 1980. Corn seeded 94%, 97% 1980, 95% average; emerged 82%, 88% 1980, 87% average. Sorghum planted 56%, 63% 1980, 79% average; emerged 29%, 43% 1980, 60% average. Dry bean seeded 44%, 51% 1980, 66% average; emerged 17%, 24% 1980. Fall potatoes seeded 99%, 91% 1980, 95% average; emerged 15%, 24% 1980, 50% average. Sugarbeets thinned 55%, 50% 1980, 52% average. Four and one-half days suitable for fieldwork. Livestock good condition.

FLORIDA: Warm moist high pressure area dominated. Highs were mostly in upper 80's to mid 90's. Lows in the 70's. Rain fell mostly in afternoon showers and thundershowers with most areas receiving some during the period. Rainfall amounts averaged less than 1.00 in. in the Panhandle, around 1.00 in. in the north, and 1.00 to 2.00 in. central and south.

Soil moisture mostly adequate west and south, mostly short north and central. Corn good condition west, poor to fair north and central. Irrigated tobacco good condition, harvest about ready to begin. Soybean planting continues, about complete in the west. Peanut planting practically complete, early crop fair condition. Sugarcane good condition. Wheat and oat harvest nearing completion. Pasture improved where adequate moisture, most areas still dry with pasture providing little or no forage. Cattle condition mostly poor to fair, some good. Several days of rain improved citrus grove condition; most irrigation stopped. Young and old trees putting out new growth. New crop fruit progressing normally in irrigated groves. Valencia harvest slowing, grapefruit harvest all but over. Total vegetable shipments were down 5% from the previous week. Harvest gained sweet corn, okra and watermelons. Supplies about steady Chinese cabbage and peppers. Volume decline snap beans, cabbage, carrots, celery, cucumbers, eggplant, escarole, parsley, potatoes, radishes, squash and tomatoes. Harvest complete for lettuce. Watermelon harvest continues active as production shifts to the north central and north areas. Melon quality good.

GEORGIA: Variable rainfall ranging from less than 0.10 to over 7.00 in. Temperatures well above average; 70's north to low 80's south. The 6th and 7th wet. Rainfall range less than 0.10 to over 4.00 in.

Soil moisture short to adequate. Averaged 4 days suitable for fieldwork. Activity mainly haying, planting, weed control, spraying and harvesting small grains. Soybeans fair to mostly good, 59% planted, last year 70%, average 76%. Corn fair to good, 38% silked, 6% dough, last year 27% silked, 5% dough. Peanuts fair to mostly good, 26% blooming, last year 23%, average 41%, pegging 7%, last year 3% and average 13%. Continue spraying for thrips. Cotton fair to good, 30% squaring, 35% last year, 36% average. Tobacco fair to good, sucker control and topping, 1% harvested, last year 2%, and average 4%. Sorghum 57% planted, same as last year, 59% average. Hay crops fair to good. Wheat 50% harvested, same last year, average 57%. Peaches fair to mostly good, 18% harvested, 14% last year, 29% average. Apples fair to good. Watermelons fair to good, 3% harvested, none last year, 3% average. Vegetables fair to good. Pastures and cattle fair to good. Hogs fair to mostly good.

HAWAII: Weather favorable for crop growth. Some areas dry. Heavy irrigation necessary to maintain fair to good crop growth. Spraying frequent to control insect damage. Light showers fell mainly in the windward crop areas.

Vegetables: Supplies adequate. Tomatoes, heavy. Shipments were held back in storage the previous week. Normal shipments resuming. Bananas: Supplies continue light. Papayas: Supplies light to moderate. Rains beneficial. Pineapples: Peak harvesting approaching. Night shifts being installed at different intervals. Hiring more labor. Sugar: Harvesting active. Pastures: More rains necessary. Most windward pastures in fair to good condition.

IDAHO: Temperatures averaged in the upper 50's to lower 60's. Highs in lower 80's and upper 70's. Lows in upper 30's to mid 40's. Precipitation varied. All stations reported rainfall except Rexburg. Greatest amounts in north and southeast.

Potatoes planted, 75%, 88% in 1980 and 95% average. Potatoes emerged, 46%, 50% 1980 and 52% average. Dry beans planted, 72%, 66%, 82%. Winter wheat headed, 22%, 24%, 20%. Spring wheat headed, 4%, 5%, 2%. Spring barley headed, 4%, 4%, 2%. Alfalfa hay 1st cut, 10%. Sugarbeets thinned, 75%. Small grains good to excellent condition, some yellow dwarf virus and stripe rust. Some hail damage to fruit. Five days suitable.

ILLINOIS: Temperatures 3 to 5° above normal. Precipitation trace to 0.10 in. north; 0.80 to 2.50 in. south; thunderstorms scattered over State.

Corn condition 5% excellent, 58% good, 35% fair and 2% poor; 81% of full stand; 94% planted, 100% 1980, 97% average. Soybean planting 63% complete, 95% 1980, 87% average. Winter wheat condition 22% excellent, 68% good, 10% fair; 90% filled, 87% 1980, 81% average; 50% turning yellow, 23% 1980, 36% average. Oats 24% excellent, 70% good, 6% fair; 45% headed, 24% 1980, 37% average; 20% filled, 4% 1980, 15% average. Alfalfa condition 21% excellent, 62% good, 14% fair; 3% poor; first cutting 59% complete, 47% 1980, 61% average. Red clover condition 31% excellent, 63% good, 6% fair; first cutting 30% complete, 35% 1980, 50% average. Pastures 34% excellent, 57% good, 9% fair. Soil moisture 9% short, 54% adequate, 37% surplus. Fieldwork: 4.3 days suitable.

INDIANA: Warm week. Temperatures averaged 4° above normal and ranged from 48 to 88°. Rainfall 0.40 central, 0.60 north, and 1.30 south. Waterloo in northeast reported 4.97 in. Humidities high in southwest.

Fieldwork averaged 3 days. Corn 65% planted, 1980 99%, average 96%. Corn 60% emerged, 1980 95%, average 85%. Soybeans 25% planted, 1980 85%, average 80%. Soybeans 25% emerged, 1980 75%, average 65%. Wheat 100% headed, 1980 100%. Wheat 5% turning yellow. Oats 15 in. high, 1980 12 in. Oats 15% headed, 1980 15%, average 35%. Tobacco 30% set, 1980 25%, average 50%. Alfalfa hay 30% cut first time, 1980 50%, average 60%. Clover hay 20% cut, 1980 35%, average 35%. Pastures good.

IOWA: A warm, dry week. Spotty showers primarily early week and at the weekend. Several damaging storms with high winds, hail and excessive rains 7th in the south central. Osceola reported 4.83 in., Winterset 4.60 in., and Derby 3.64 in. rain.

Topsoil moisture: 45% short, 53% adequate, 2% surplus. Subsoil moisture: 43% short, 55% adequate, 2% surplus. Corn emerged: 97%, 1980 100%, normal 95%. Soybeans planted: 95% complete, 1980 97%, normal 94%. Soybeans emerged: 74%, 1980 89%, normal 79%. First cut alfalfa hay harvested: 64% complete, 1980 24%, normal 42%. Fieldwork: 6.2 days suitable. Crop conditions: Pasture, winter wheat, alfalfa hay, clover, oats, corn and soybeans fair to good. Livestock good condition.

KANSAS: Moisture 0.50 to 1.00 in. south and extreme east, few areas reporting 2.00 in. to over 3.00 in. Elsewhere precipitation quite variable and generally not over 0.50 in. Temperatures well above normal over weekend. Averages were from 71° northwest and from 73 to 77° elsewhere or from 2 to 4° above normal central and southern districts and 4 to 6° above normal elsewhere.

Wheat ripe 3%, last year 0%, average 1%, harvest delayed by muddy fields. Some test cutting average 30%; wheat turning 45%, last year 15%, average 30%; crop is 100% headed, 95% last year, 97% average. Wheat condition fair to poor, freeze damage becoming apparent. Some frost-damaged wheat being salvaged as silage or hay. Row crop planting also delayed by weather. Corn planted 90%, last year 90%, average 96%. Soybeans planted 30%, 11 days behind last year's 65%, average 50%. Sorghum planted also 30%, last year 45%, average 50%. Fieldwork: 3.5 days suitable.

KENTUCKY: Extremely heavy rainfall last week resulted in precipitation from 1.00 in. north to 5.00 in. south. Rain was reported almost every day last week with amounts averaging 1.00 to 4.00 in. above normal. Temperatures averaged 2 to 4° above normal.

Virtually all farmland has surplus soil moisture. Low-lying areas have been flooded. Farmers averaged less than one day in the field and some have done very little for a month. Corn 85% planted, last year 99%, average 92%. Some intended corn acreage may be shifted to soybeans. Average height emerged corn 10 in., some early fields waist high or better. Soybeans 23% planted, last year 62%, average 52%. Replanting will be necessary of some corn and soybean fields. Burley 53% set, about average for date, but ahead of last year. Many plants in beds getting too large. Barley 15% harvested; average date of beginning wheat harvest June 20. Wheat lodging. Pastures good. Much hay ruined.

LOUISIANA: Rainfall substantial Statewide. Temperatures normal west and 3 to 4° above normal southeast.

Soil moisture adequate to surplus. Days suitable for fieldwork: 2.6. Corn silked 64%, 30% 1980, dough stage 32%, 3% 1980, condition good. Rice emerged 98%, 92% 1980, 98% average, condition good. Cotton planted 97%, 99% 1980, 100% average, emerged 96%, 91% 1980, 94% average, condition fair to good. Soybeans planted 73%, 66% 1980, 73% average, emerged 66%, 48% 1980, 60% average, condition fair to good. Sorghum planted 89%, 57% 1980, 72% average, emerged 82%, 52% 1980, 64% average, condition good. Sugarcane condition good. Smut reported on several fields in Iberia Parish. Sweet potatoes transplanted 88%, 77% 1980, 78% average, condition good. Vegetables fair to good condition. Wheat harvested 76%, 75% 1980, 70% average. Hay first cutting 74%, 60% 1980. Pastures, livestock good condition. Peach condition good. Harvested 14%, 12% 1980.

MARYLAND AND DELAWARE: Temperatures 2° above normal. Highs 70's to low 80's, lows mid 60's. Precipitation 0.80 in.

Rains slowed fieldwork and crop development. Maryland corn planting virtually complete, 95% last year and average. Delaware corn completed. Soybeans 40% planted in Maryland, 65% last year, 50% average; Delaware 60%, last year 35%, average 50%. In Maryland; barley 90% turned, last year 90%; wheat 35%, last year 80%; rye 65%, last year 90%; oats just starting in primary area. In Delaware 60% barley turned. Tobacco 48% planted, last year 60%, average 40%. Vegetables 90% planted.

MICHIGAN: Mild temperatures prevailed. Average temperatures 1 to 4° above normal. Precipitation limited over southern two-thirds Lower. Northern Lower 0.30 to 0.50 in. Moderate precipitation Upper averaging 1.00 to 1.60 in.

Planting continued in full swing. About 6 days suitable for fieldwork. Northern areas need rain. Corn 95% planted, 95% last year, 96% normal. Soybeans 75% planted, 80% last year, 80% normal. Dry beans 30% planted, 30% last year, 32% normal. Asparagus 70% harvested, 85% last year, 81% normal. Strawberry harvest beginning. Fruit set: Tart cherries, light; sweet cherries, light to average; apples, generally average. Vegetable development near normal.

MINNESOTA: Temperatures averaged near normal 4° above normal in the northern districts, up to 5° above normal in the central districts, 4 to 6° above normal in the southern districts. Extremes: 96° at St. James and 40° at Pipestone. Precipitation averaged near normal to 0.50 in. above normal northwest and north central districts, up to 1.50 in. or more above normal in the northeast district, near normal to 0.50 in. below normal in the central districts, 0.50 in. to 1.00 in. below normal in the southern districts. Precipitation totals were generally an in. to two in. in the northern districts, 0.50 in. in the central districts, 0.50 in. or less in the southern districts.

Recent rains greatly improved crop prospects in northwest where moisture inadequate 2 to 3 weeks ago. Southwest remains dry and most crops not developing properly. Not enough rain last week to alleviate very dry conditions. Small grains heading at 3 in. and row crops emerging poorly. Cutting of alfalfa active. Crop very short and infested by dandelions. Topsoil moisture is 12% very short, 21% short, and 67% adequate. Planted: soybeans 95%, 1980 92%, normal 92%; sunflowers 97%, 1980 94%, normal 92%; potatoes 95%, 1980 94%, normal 91%; flax 95%, 1980 90%, normal 89%; sweet corn for processing 81%, 1980 84%, normal 90%. Emerged: field corn 94%, 1980 90%, normal 90%; soybeans 69%, 1980 76%, normal 74%; flax 63%, 1980 70%, normal 71%. Jointing: spring wheat 49%, 1980 21%, normal 28%; oats 54%, 1980 23%, normal 31%; barley 43%, 1980 19%, normal 28%; winter wheat 93%, 1980 85%, normal 75%; rye 98%, 1980 89%, normal 81%. Heading: spring wheat 4%, 1980 1%, normal 10%; oats 4%, 1980 1%, normal 12%; barley 2%, 1980 1%, normal 9%; winter wheat 45%, 1980 40%, normal 42%; rye 71%, 1980 49%, normal 54%. Turning ripe: winter wheat 1%, 1980 0%, normal 1%; rye 3%, 1980 0%, normal 0%. Cut: alfalfa hay 16%, 1980 11%, normal 22%.

MISSISSIPPI: Temperatures 1 to 3° above normal. Extremes: 63 and 93°. Showers and thunder-showers in parts of State each day. Greatest 24 hour rainfall 3.91 in.

Soil moisture surplus to adequate. Fieldwork: 2.0 days suitable. Cotton 100% planted, 100% last year and average; 12% squaring, 3% last year, 8% average; condition fair to good. Soybeans 57% planted, 65% 1980, 61% average; 43% to stand, 36% last year; condition fair to good. Rice 98% to stand, 91% last year, 94% average; condition good. Corn 23% silking, 16% last year; condition good. Winter wheat 96% ripe, 30% harvested, condition good. Hay 25% harvested; peaches 9% harvested.

MISSOURI: Temperatures near normal. Precipitation widespread with the heaviest amounts falling in the southeast.

Fieldwork: 2.3 days suitable. Corn 86% planted, last year 100%, normal 86%. Grain sorghum 48% planted, last year 82%, normal 65%. Soybeans 42% planted, last year 82%, normal 64%. Wheat 76% coloring, last year 35%, normal 52%. Alfalfa hay 1st cutting 75% harvested, 1st year 80%, normal 63%. Other hay 30% harvested. Condition of winter wheat fair to good. Condition of pasture good. Topsoil moisture supply adequate to surplus.

MONTANA: Much needed rains came to northeast during week. Two to three inches of rain fell over area that was most deficient in moisture. Moderate to heavy rains fell elsewhere. Temperatures were generally mild with warmest days at end of week. Temperatures averaged 2 to 5° above normal. Highest 87° at Baker, lowest 28° at Cooke City.

Topsoil moisture generally adequate to surplus, except eastern third short to adequate. Subsoil moisture short eastern third, adequate elsewhere. Fieldwork: 4 days suitable. Winter wheat, spring wheat, barley and oats condition generally good to excellent, except eastern third fair to good. Sugarbeet condition good, 15% thinned. Current spring crops planted compared with last year and average: corn 85, 90, 85; potatoes 85, 70, 80; cry beans 95, 100, 95. Winter wheat progress: 25% preboot, 60% boot, 15% headed. About 85% cattle and sheep moved to summer ranges. Stockwater supply short eastern third, generally adequate elsewhere. Current irrigation water supplies adequate except southeast. Prospective supplies below average much of State.

NEBRASKA: Temperatures: near normal over west; 3 to 5° above normal in east. Precipitation scattered showers with greatest amounts over Panhandle and northern section, averaging 0.70 in. Southern edge generally less than 0.10 in.

Corn planting 99%, 100% last year and 99% normal. Emerged 90%, 96% previous year and 90% normal. Sorghum planting 85%, same as last year and normal. Emerged 55%, behind 70% last year and 65% normal. Chinch bugs moving into corn and sorghum fields in east central and southeastern counties. Soybean planting 85%, same as normal, 90% a year ago. Emergence 55%, behind 75% last year and 65% normal. Winter wheat mostly fair. Heading 99%, 90% last year and 85% normal. Turning color 15%, well ahead of 1% last year and 5% normal. Wheat crop maturity about one week ahead of normal. First cutting of alfalfa 60% complete, 45% last year and normal. Dry bean planting near completion in Morrill and Box Butte Counties with rain slowing progress elsewhere. Pasture and range feed supplies mostly adequate. Topsoil moisture short to mostly adequate. Subsoil moisture short to adequate. Days suitable for fieldwork: 6.4.

NEVADA: Sunny skies and warm temperatures first part of week. Light precipitation midweek. Sunny and warm the remainder. Temperatures above seasonal normals for period. Extremes: 108 and 32°. Overall precipitation minimal.

Second crop alfalfa hay finished extreme south, not yet started north. Most spring crops emerged. Development behind normal. Ranges showing effects hot weather and minimal stream runoff. Most calving and lambing done.

NEW ENGLAND: Temperature extremes: 34°, to low 90's. Warming trend with rain beginning end of week. Rainfall varied from 0.25 to over 1.00 in. in local downpours.

Fieldwork: about 5 days suitable. Corn planting nearly finished, over 60% emerged. Hay and haylage being made. Fertilized fields appear to yield well. Strawberries being picked south, harvest to start next week north. Crop appears good. Maine blueberry bushes in petal fall. Conditions for pollination ideal. Cranberry flower buds appearing a few days ahead of schedule. Insect damage reported in vegetable fields. Growers applying insecticides. Over 85% of potato crop planted in northern Maine. Grazing conditions and soil moisture rated adequate.

NEW JERSEY: Temperatures averaged about normal. Extremes: 42° at Charlotteburg on 8th and 89° at Toms River on 7th. Rainfall averaged 1.23 in. north, 0.57 in. central and 0.56 in. south.

Heaviest 24 hour total was 1.00 at Cape May Court House on 2nd to 3rd. Estimated soil moisture, in percent of field capacity, averaged: 82 north, 69 central and 66 south. Four inch soil temperature averaged: 65 north, 68 central and south. Total sunshine at Trenton from 1st to 7th was 36% of possible hours.

Fieldwork: 3.6 days suitable. Showers and cloudy weather slowed hay making. Water table continues low, surface moisture adequate. Cabbage harvest active. Strawberry harvest general. Blueberry harvest expected to begin next week. Peach thinning starting where needed. Early planted field corn and soybeans look good. Barley well colored.

NEW MEXICO: Temperatures cool first of week and hot late week. Scattered showers, mostly light, through midweek.

Soil moisture continues in short supply in most areas. Activities included hay cutting, irrigating, sorghum planting and harvesting onions. Cotton in good condition. Slow growth continues due to cool nighttime temperatures. Alfalfa in good condition, however some insect problems occurring. The first cutting progressing in the north and the second cutting getting underway in the south. Irrigated wheat and barley in good condition and dryland in poor condition. Harvest just getting underway. Corn in good condition. Sorghum planting continuing with emerged fields in good condition. Chile in good condition. Some acreage had to be replanted due to crusting of soil. Onion harvest continuing. Pecans progressing in good condition. Cattle and sheep in good condition. Ranges continue in mostly poor condition.

NEW YORK: Temperatures near normal. Widespread showers brought subnormal moisture totals. All areas now dry.

Planting conditions good, drying conditions fair. Corn 87% planted, 92% 1980, 85% average. Corn, oats, wheat condition good. Wheat heading. First cut alfalfa hay 7% done, 23% 1980, 18% average. Clover-timothy hay 5% cut, 11% 1980, 10% average. Grass silage 9%, 25% 1980, 23% average. Upstate potato planting complete. Vegetable crop planting on schedule. Good growth of Long Island potatoes. Fruit drop evident in Lake Ontario region. Orchard and vineyard spraying active.

NORTH CAROLINA: Temperatures: above normal. Precipitation: 0.12 in. at Fayetteville to 5.84 in. at New Bern.

Fieldwork: 3.3 days suitable. Soil moisture: 1% very short, 8% short, 67% adequate, 24% surplus. Conditions: hay crops fair to mostly good; pasture fair to mostly good; field tobacco mostly good; corn mostly good; cotton fair to good; peanuts fair to mostly good; soybeans mostly good; Irish potatoes mostly good; sweetpotatoes mostly good; apples fair to mostly good; peaches fair to mostly good; truck crops mostly good. Supplies: fuel supplies mostly adequate. Plantings: sweetpotatoes 70%, 1980 55%, 71% average; sorghum 81%, 1980 72%, 67% average; soybeans 62%, 1980 72%, 68% average; burley tobacco 77%, 1980 82%, 72% average.

NORTH DAKOTA: Temperatures 1 to 4° above normal. South central and southeast warmest with averages of 63°. North central and west central coolest with 61°. Extremes: 91° southwest and 38° several locations. Precipitation averaged above normal in all but south central and southeast. Wettest areas north. Several stations recorded more than 2.00 in. Intermittent showers added to moisture levels.

Crop outlook bright. Most crops rated good to very good. Farmers battling weeds. Spraying delayed by wet fields and wind. Conditions ex-

cellent for crop development, which in near last year's pace and ahead of average. Small grain seeding virtually complete. Northeast needs dry weather to finish. Row crop planting nearing completion at average pace. Some leaf diseases, notably tan spot, showing up. Also, cutworms and other insects resulting in some replanting. Percents boot or beyond, last year and average: hard red spring wheat 11, 14, 8; durum 4, 7, 3; barley 13, 17, 9; oats 9, 15, 9. Percents heading or beyond: winter wheat 24, 43, 29; rye 44, 56, 49. Percents planted: flax 79, 66, 77; sunflower 82, 69, 83; potatoes 94, 96, 94; corn 87, 79, 89; dry beans 94, 91, 93; soybeans 91, 79, 89.

OHIO: Temperatures above normal. Average temperatures were as much as 5 to 7° above normal in the northeast and 1 to 3° above in other areas. Average daily highs were 80° or higher in all areas while average of daily lows ranged from mid-40's to mid-50's. Growing degree days were from 100 to 150. Precipitation was quite variable, ranging from 0.08 in. at Cleveland to 3.85 in. at Dayton. Generally, western and southern areas received 1.00 to 2.00 in. while other areas had 0.50 in. or less.

There were only up to 2 days suitable for fieldwork in the west central, central, south central and southwest districts, where corn and soybean planting was, and still is, considerably behind the rest of the State. Almost the entire half of southern Ohio is facing a poor, disastrous crop year if present conditions continue. Cutworms area a major problem in many corn fields. Mexican bean beetles already showing up in the southwest, where they cut yields substantially last year. Winter wheat still rated good. Armyworms a problem in some localities, and much acreage is lodged. Since virtually none of the crop is ripening yet, however, the lodged wheat may well come back up. Corn planted 70%, 100% 1980, 97% average. Soybeans planted 40%, 80% 1980, 90% average. Wheat headed 95%, 80% 1980, 85% average. Oats headed 10%, 10% 1980, 20% average. Alfalfa harvested (1st cut) 25%, 35% 1980, 50% average. Other hay harvested (1st cut) 10%, 20% 1980, 30% average. Tobacco transplanted 10%, 30% 1980, 35% average. Days favorable 3.0. Pasture condition good. Soil moisture 34% adequate, 66% surplus.

OKLAHOMA: Temperatures ranged from 1° above normal in the north to 2° below normal over south central and southeast sections. All divisions reported precipitation with the range being from 0.09 in. in the northeast division to 4.72 in. in the southeast division.

Wheat ripe all districts except Panhandle. Harvest delayed by wet weather, extremely beneficial to row crops and pasture. Wheat ripe; 95%; 70% 1980; 90% average. Wheat harvested: 5%; 5% 1980; 10% average. Sorghum grain planted: 70%; 60% 1980; 60% average. Sorghum grain up to stand: 40%; 20% 1980; 30% average. Cotton planted: 60%; 45% 1980; 60% average. Cotton up to stand: 30%; 15% 1980; 30% average. Days suitable for fieldwork: 2.0.

OREGON: Precipitation light to moderate during midweek with greatest amounts along coast at 0.40 in. Rest of State 0.10 to 0.30 in. Heavier amounts received end of week. Temperatures averaged 2° above normal.

Soil moisture adequate with some surplus in west. Winter wheat condition good to excellent; 90% headed compared to 85% last year. Just beginning to turn color in east averaging 3% for State, about same as last year. Prospects look good. Hay crop good but stalled by rains. Spraying for aphids in hay and wheat. Early spring wheat beginning to head. Strawberry harvest started maturity slowed by wet weather. Spraying cherries for fruit flies. Pear thinning virtually complete. Vegetable crops making good progress.

Early planted potatoes filling rows, late planting just emerging. Early planted pea crop in Umatilla County nearing harvest. Range and pastures showing excellent growth. Livestock condition good.

PENNSYLVANIA: Seasonable temperatures with scattered showers daily. Maxima mostly 70's and 80's and minima 40's to 60's. Extremes: 88 and 35°. Rainfall generally 1.00 to 1.50 in. with 2.00 to 2.50 in. parts of northern mountains. Only extreme southeast measured less than 0.50 in. total.

Two days suitable for fieldwork. Moisture adequate to surplus. Activities: Spraying alfalfa and fruit trees; repairing fences and machinery; filling silo; harvesting early strawberries and hay; tobacco transplanting; and planting corn, soybeans, green chop, tomatoes, snap beans. Corn 90% planted, last year and average 92%. Average height 4 in., same as last year. Tobacco 48% planted, last year 32%. Soybeans 59% planted, last year 66%. Barley 75% headed, 7% turning yellow, last year 81% headed, 3% turning yellow. Wheat 64% headed, last year 71% headed. Oats less than 5% headed, same as last year. First cutting alfalfa 29%, last year 33%. Clo-tim 8% harvested, last year 13%. Quality of hay poor to fair. Feed from pasture average.

PUERTO RICO: Island average rainfall 2.63 in. or 0.90 in. above normal. Highest weekly total 5.92 in. Temperatures averaged about 80 to 79° on Coasts and 76 to 75° Interior Divisions. Extremes: 93 and 56°.

SOUTH CAROLINA: The week was wetter and warmer in most areas. Temperatures slightly higher latter part of the week. Rainfall occurred throughout the period.

Soil moisture adequate. Three days for fieldwork. Corn good condition, 14% silked, ahead of last year, average. Cotton 8% squaring. Thrips heavy. Condition fair. Soybeans 55% planted, 72 last year, 71 average. Tobacco topped early, 2% year ago. Spraying budworms, good condition. Peaches good condition; 6% harvested, 6 last year, 8 average. Snap beans 38% harvested, 47 last year. Condition good. All cucumbers fair to good, 33% harvested, 40 last year. Tomato harvest underway at 1%, 3% last year. Wheat fair to good condition, 18% harvested, 28 last year, 29 average. Oats fair to good, 24% harvested, 34 last year, 38 average.

SOUTH DAKOTA: Precipitation over most of State, generally under 1.00 in. Temperatures 2 to 5° above. Extremes: 99 and 30°.

Five days suitable for fieldwork. Row crop planting, spraying, branding and cattle moving were the major activities. Topsoil moisture critically short in most of east central, parts of central and southeast. Adequate extreme west central, southwest and band from south central through north central and most of northeast. Short elsewhere. Subsoil moisture critically short parts of northwest, southwest, central and most of east central and southeast. Average corn height 4 in., 16% has been cultivated once. Ranges and pastures mostly poor to fair. Stock water supplies short. First cutting alfalfa 16% complete. Corn planted 98%, 1980 100%, average 95%. Sorghum planted 72%, 1980 70%, average 64%. Soybeans planted 95%, 1980 91%, average 85%. Sunflower planted 58%, 1980 80%, average 61%. Flax planted 90%, 1980 87%, average 89%.

TENNESSEE: Wet week, heaviest amounts in west. Precipitation averaged about 3.00 in. in the east and almost 5.00 in. in the middle and west. Temperatures averaged 2 to 4° above normal.

Fieldwork: 1.2 days suitable. Soil moisture surplus. Corn 99% planted, 1980 96%, average 90%. Soybeans 36% planted, 1980 72%, average 57%. Tobacco 85% transplanted, 1980 71%, average 78%. Wheat 95% turning color, 86% in 1980, 88% average.

Wheat ripe 30%, 1980 18%, average 25%. Oats 78% turning color, 79% 1980 and average. Oats 15% ripe 1981 and 1980, 20% average. Oats 4% harvested, 3% 1980, 2% average. Barley 95% turning color, 87% 1980, 92% average. Barley 35% ripe, 21% 1980, 33% average. Barley 9% harvested, 6% 1980. Pastures in good to excellent condition. Cattle in good condition. Hay making delayed, 2nd cutting alfalfa 20% completed, 1980 0, average 15%. Wheat lodging reported. Garden and commercial vegetables progressing well. Moderate European corn worm damage in corn and thrips in cotton reported. Flood waters hit parts of the middle of the State.

TEXAS: Weather: Slow moving front widespread rain over State. Temperatures 2 to 4° below normal. Rainfall 0.50 to 1.00 in. above normal West Texas; 2 to 3 in. above eastern half. Widespread showers, some locally heavy, slowed most field operations.

Crops: Several cotton fields Panhandle replanted following heavy hail damage, washing rains. Some wheat fields ready harvest completely destroyed by hail. Recently cut hay fields Central, East Texas several days, heavy rains, not be baled. Cotton planting some progress; seeding operations interrupted many areas by scattered showers. Central Texas southward, growth slowed because cool temperatures; some stands being stressed because surplus moisture. Coastal Bend, some low lying fields standing in water; excess moisture may cause shedding top squares. Sorghum stands blooming Blacklands, pollination may be lowered by continual showers. Fields South Central Texas developing well with good moisture supplies. Some low lying areas Coastal Bend standing in water; stands being stressed. Reported condition Statewide 36% excellent; 54% good; and 10% fair. Corn fields making good progress with abundant moisture. Coastal Bend, high winds caused lodging some fields. Earworms increasing Central Texas; producers not able initiate control measures because continual rain. Statewide, reported condition 36% excellent; 51% good; and 13% fair. Scattered showers delayed wheat, oat harvest across State. Northern High Plains, heavy rains, hail destroyed some wheat fields ready for harvest. Lodging problem many small grain fields Low Plains; producers expecting reduced yields. Cool, cloudy, wet weather over Panhandle delaying wheat development some areas. Moisture too late for many dryland fields which failed to mature. Reported wheat condition Statewide 11% excellent; 39% good; 37% fair; and 13% poor. Peanut planting some progress, mostly Edwards Plateau. Some fields washed out heavy rains; be replanted. Soybean stands developing slowly along Coast; some fields standing in water. Heavy rains along Upper Coast helped supplement irrigation water rice fields; some levees washout. Cotton planted 90%, 88% 1980, 85% average. Cotton squaring 17%, 15% 1980. Cotton setting bolls 9%, 9% 1980. Rice emerged 99%, 100% 1980. Rice headed 0%, 1% 1980. Sorghum planted 92%, 89% 1980, 88% average. Sorghum headed 41%, 31% 1980. Sorghum turning color 11%, 13% 1980. Sorghum mature 0%, 1% 1980. Wheat headed 100%, 100% 1980. Wheat turning color 82%, 61% 1980. Wheat harvested 17%, 12% 1980, 15% average. Oats harvested 49%, 32% 1980, 39% average. Peanuts harvested 42%; 53% 1980, 49% average. Soybeans harvested 43%, 59% 1980, 54% average. Sunflowers harvested 57%, 55% 1980, 42% average.

Commercial vegetables: Rio Grande Valley, harvesting activity slowed by rains. Remaining onions, potatoes may be lost due to saturated soil conditions. Coastal Bend, harvesting of watermelons, cucumbers at standstill. Cucumber harvest nearly complete. East Texas, watermelons, tomatoes, continue to mature, harvest expected as conditions improve. Some disease attributed to high humidity, moisture of recent weeks. San

Antonio-Winter Garden area, fieldwork limited. Trans-Pecos region, moisture adequate, activity light. Plains, conditions improved. Some pepper replanting occurring due to hail. Peaches making excellent progress, harvest continuing. Pecan producers North Texas spraying for casebearer worms. Central, South Texas spraying complete. **Range and livestock:** Range, pasture conditions continued to improve. Recent showers have promoted growth of grasses, weeds. Livestock in good to excellent condition.

UTAH: Recurring periods of shower and thunderstorm activity many areas. Accumulated amounts moisture extremely variable, ranging from little or none to well over 1.00 in. Rising trend in temperatures with averages ranging from 1 to 6° above normal. Pan evaporation, in the major agricultural areas, ranged from about 1 in. to over 2.5 in. during period.

Soil moisture adequate most areas above two feet, but still deficient below that depth many areas. Five days suitable for fieldwork. Spring planting nearly complete. First crop alfalfa about one-fourth cut. Yields and quality disappointing in some areas due to May frost. Most fall seeded grains in boot or head stage. Development ahead of last year. May rains very helpful to dryland crops and ranges. Condition rates generally good. About three-fourths cattle and sheep moved to summer ranges. Livestock in good condition.

VIRGINIA: Mild temperatures early in period gave way to high humidities and summertime temperature reading, with highs in upper 80's and low 90's. Extremes: 91 and 50°. Daily rainfall averaged about 2.00 in. but amounts varied greatly from station to station. Some southern sections reported 3.00 to 5.00 in. Others received less than 0.50 in.

Rain fell every day in some areas and State-wide only 2.1 days were suitable for fieldwork. Soil moisture rated mostly adequate to surplus. Corn in excellent condition, with 97% of the crop planted, 97% last year and 98% average. Soybeans in excellent condition, 56% seeded, 49% 1980, 44% average. Peanuts in good to excellent condition; planting virtually complete, the same as last year and average. Tobacco in excellent condition, flue-cured tobacco 94% transplanted, 78% 1980, 83% average. Sun-cured 81% transplanted, 44% 1980, 63% average. Fire-cured 82% transplanted, 58% 1980, 65% average. Barley 66% transplanted, 26% 1980, 53% average. Small grain harvest just beginning: Barley 5% combined, oats less than 1%, wheat none. Pasture, apples and peaches rated excellent. Hay rated fair in western and central areas, good to excellent elsewhere. Farmers welcomed the rain, but were not able to make much progress with plantings or small grain and hay harvests.

WEST VIRGINIA: Temperatures above normal. High 86°, low 37°. Precipitation well above normal; range 5.65 to 1.15 in.

Soil moisture surplus to adequate. Days suitable for fieldwork: 0.7. Major activities: Fencing, general maintenance. Wheat good to fair, 2% pre-jointed, 39% jointed, 59% heading, compared to 42% jointed and 58% heading in 1980. Barley good to fair, 2% pre-jointed, 22% jointed, and 76% heading, compared to 23% jointed and 77% heading in 1980. Oats good to fair condition, 98% planted and 95% emerged compared to 94% and 93% in 1980. Corn fair to good, 82% planted, 77% emerged, compared to 89% and 76% in 1980. Hay good to fair, 9% harvested, compared to 18% in 1980. Tobacco fair to good, 100% planted, 100% emerged, and 28% set, the same as in 1980. Pastures good to fair, fruit fair. Gardens fair to good, potatoes good to fair. Rain, sometimes heavy throughout the week, caused

some localized flooding with damages yet to be assessed.

WISCONSIN: Temperatures 4° above normal. Highs 70's and 80's, with a few readings exceeding 90 in west 5th and 7th. Lows 40's and 50's. Extremes: 91 and 36°. Rainfall variable, heaviest northern areas where up to 1.00 in. fell. Driest south where some locations received no measurable rain. Most of week's rain came in thunderstorms 2nd and 5th.

Fieldwork: 6 days suitable. First crop haying 15% done, 1980 5%, average 10%. Yields well below normal most areas due to winterkill and lack of rain in May. Much grass and dandelions in alfalfa fields. Hay quality good as little rain in south where haying most advanced. Alfalfa weevil larval numbers reaching peak in south but damage variable. Pasture conditions below normal for early June. Early corn doing well, late corn germinating uneven in dry soil areas. Corn being cultivated to control weeds where dry conditions limited effectiveness of herbicides. Silage corn and sudan grass being planted after first crop hay removed from poorer fields. Early oats looks good but needs more rain for development. Winter wheat starting to head, straw length shorter than normal. Soybeans have spotty germination where moisture short. Potatoes and vegetables being irrigated. Early peas in bloom. Early strawberries being picked. Cherries had good pollination in Door County. Little tobacco transplanted yet as growers waiting for rain. Topsoil moisture 72% short, 28% adequate. All crops need a soaking rain.

WYOMING: Temperatures slightly above normal except in Big Horn and Lower Platte Drainage. Highest temperatures 90° in Cheyenne and Niobrara Drainage while lowest 31° in Snake and Upper Platte Drainages. Most stations below normal precipitation. Only in Lower Platte Drainage majority of stations reported above normal precipitation.

Topsoil moisture adequate 91% State. Average 5 days suitable fieldwork. Corn planting: 95%; year ago 89%. Corn emerged: 55%; year ago 64%; normal 81%. Potato planting: 85%; year ago 63%, normal 88%. Potatoes emerged: 35%; year ago 21%; normal 56%. Dry beans planted: 60%; year ago 72%, normal 72%. Dry beans emerged: 10%; year ago 36%, normal 43%. Spring wheat emerged: 80%, year ago 83%. Barley emerged: 95%, year ago 92%. Oats emerged: 85%, year ago 81%. Most sugarbeets emerged, 40% thinned. Winter wheat 45% headed, year ago 17%, normal 36%. Small amount hay harvested. About 45% cattle, calves and 40% sheep, lambs moved to summer ranges.

WASHINGTON: West: Temperatures were slightly above normal with the interior areas averaging 2° above normal. Precipitation amounts varied from 0.30 to 0.50 in. above normal. The Puget Sound Basin received 0.10 to 0.20 in. above normal, while southwest was generally 0.10 in. below normal. Broccoli and cauliflower planting continued while green peas and corn neared completion. Raspberries, blueberries and cabbage seed fields past peak bloom. Strawberries showing some color but on a scattered basis. Rhubarb harvest near complete; lettuce harvest just beginning. Spinach and radish harvest continued. Silage cutting and green chopping continued. Hay and pasture feed adequate; livestock in good shape to date.

East: Temperatures averaging near normal with the Central Basin being the warmest area of the State. Precipitation values were below normal in all sections except the Walla Walla areas where an isolated thundershower on the 30th produced over 0.50 in. in some areas. Generally speaking, precipitation ranged from 0.10 to 0.30 in. below normal. Fruit tree development con-

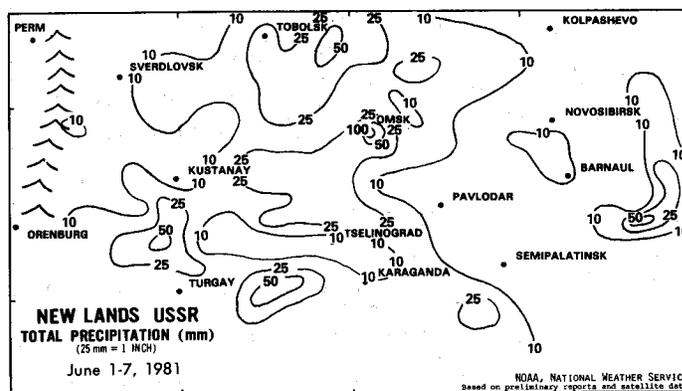
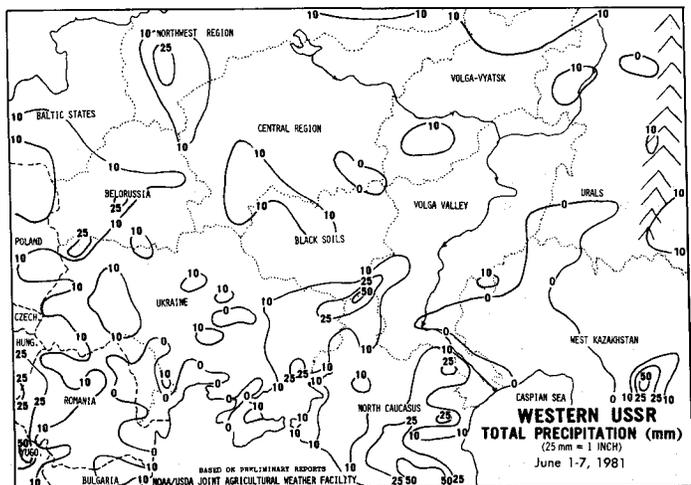
tinues to make good progress in Chelah, Douglas, and Okahogan Counties. Powdery mildew infection has growers concerned in Yakima County. First cherry harvest in early areas of the Yakima Valley may begin this week. Asparagus cutting continued. Vegetable planting continued with crops doing well at this point. Dry bean and corn seeding near completion. Wheat and barley

in average to above average condition. This is in spite of leaf rust, stripe rust, and barley yellow dwarf virus. There were also reports of aphid which has made spraying necessary. Walla Walla sweet onion harvest expected to begin after June 20. Pasture and range feed mostly adequate. Soil moisture ranges from adequate to good.

International Weather and Crop Summary

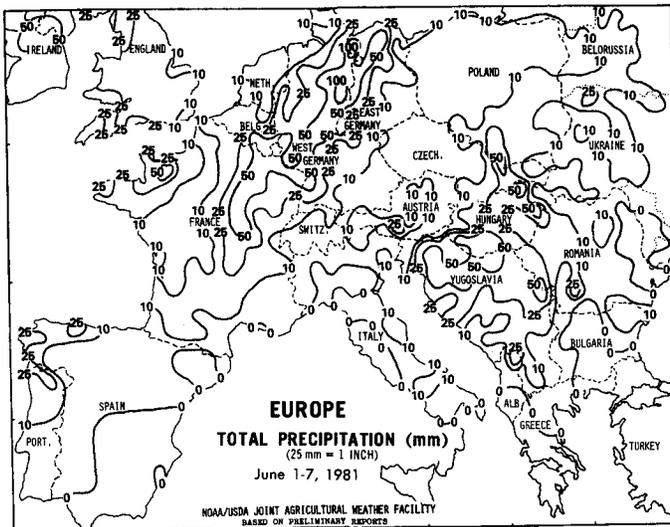
HIGHLIGHTS June 1-7, 1981

- EUROPE:** Continued wet weather in portions of West Germany and France hampered fieldwork and maintained unfavorable conditions for crop growth.
- USSR:** Spring-sown crops came under increasing stress in the northeastern half of European USSR, since little rain fell in most portions. In the New Lands, a storm dumped beneficial rainfall in the west, but briefly brought hot, dry air into the already dry eastern portions on Saturday.
- CHINA:** Very little rain fell on the North China Plain, and heavy rains in the south retreated to the hills, leaving rice in good condition.
- INDIA:** Monsoon rains spread to cover the entire southwestern coast, but upper atmospheric flow does not indicate monsoon development over the rest of the country.
- AUSTRALIA:** Beneficial showers occurred throughout the wheat belt, providing adequate soil moisture for planting and early crop growth.
- CANADA:** Widespread showers improved soil moisture conditions throughout the Prairies, except in central Saskatchewan which is still too dry.
- SOUTH AMERICA:** Wet weather in Brazil improved soil conditions in Parana, Sao Paulo, and adjacent states and aided wheat growth in southern states. Dry weather in Argentina favored crop harvests.
- SOUTHEAST ASIA:** Wet-season crops are benefiting from continued showery weather associated with the monsoon season.
- MEXICO:** Rainy season over most of the south helped some citrus and corn.

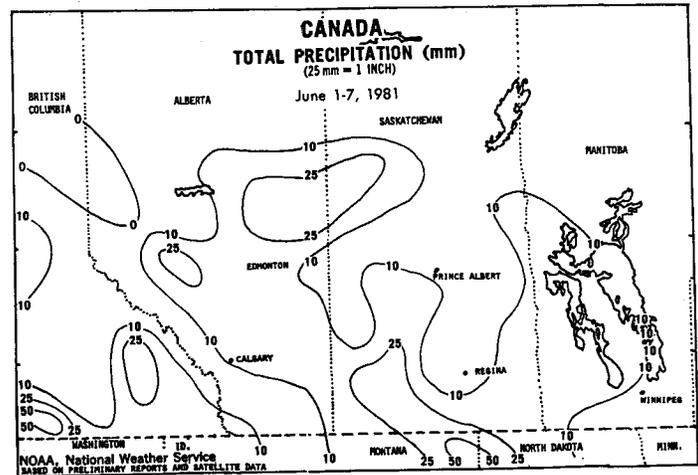


USSR: Major crop areas in European USSR remained under the influence of a stationary high pressure system. Showers produced above-normal rainfall in some areas, most notably the eastern Ukraine and lower Volga Valley, improving growing conditions for spring crops. However, many areas received only light rain, and limited surface soil moisture combined with drier-than-normal atmospheric conditions may be stressing crops. Winter grains, with their well-developed root systems, should have adequate moisture. Temperatures dropped slightly to just below normal in parts of eastern

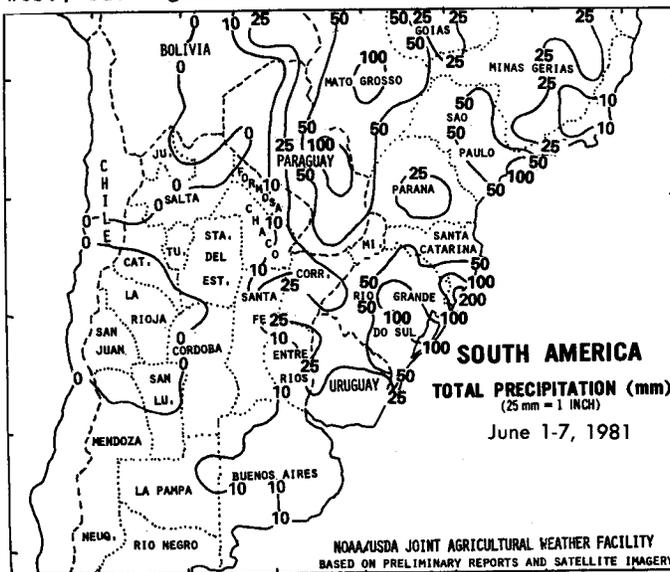
European USSR, but stayed above normal in the west. In the New Lands, above-normal rainfall maintained good growth over much of the region. Some areas in the east remained too dry, with conditions most unfavorable near Pavlodar, but a storm system which spread abundant rainfall across the western portion over the weekend was advancing on that dry area. Temperatures remained near normal in the west, but warmer-than-normal weather prevailed in the east. In fact, hot and dry air from the south briefly stressed newly sown grains over a limited area between Pavlodar and Semipalatinsk on Saturday, June 6, before a cold front moved through. Some damage may have been sustained on lighter soils.



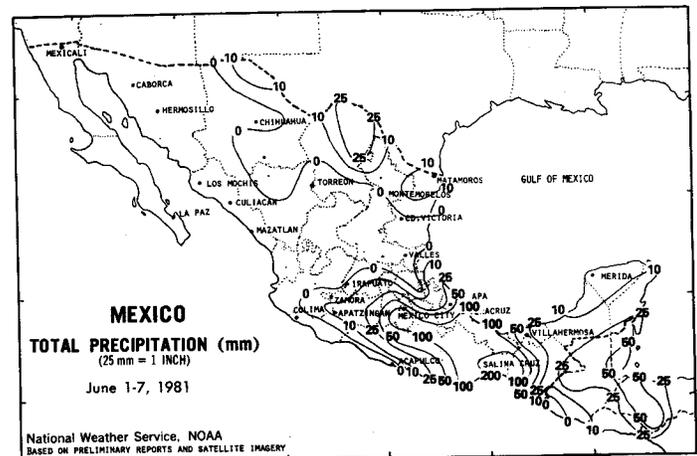
EUROPE: Wet conditions continued to plague portions of West Germany and France. Winter grains would be the most sensitive crop to excessive wetness at this time, but conditions were also too wet for good growth of spring crops. Fieldwork also was hampered. Only light rain fell across the southern Mediterranean areas, but abundant rains in extensive portions of southeastern countries maintained favorable growing conditions. Soil moisture remained adequate in the northeast despite only light rainfall in many areas. Temperatures stayed near normal in the west, but registered above normal in the east.



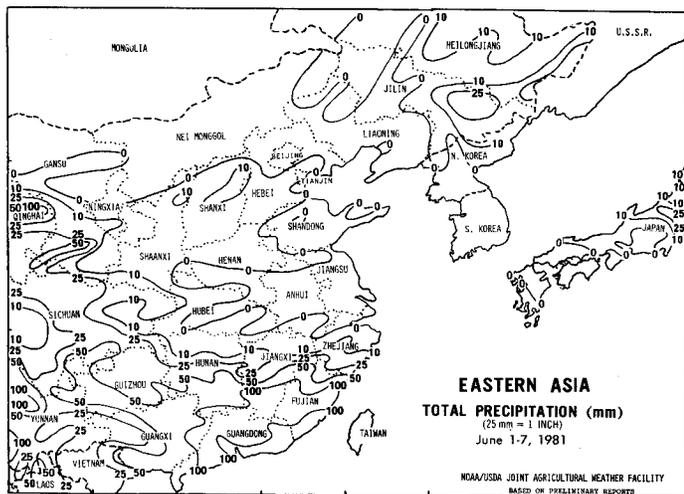
CANADA: Widespread showers, associated with frontal activity in the Canadian Prairies, brought beneficial moisture to the entire wheat belt. Weekly rainfall totaled 10-30 mm in most spring wheat areas. Central Saskatchewan received less than 10 mm of rain during the week, but southern portions of the province benefited from greater amounts of rainfall. This moisture will improve conditions for crop germination and emergence in Saskatchewan, but additional rainfall is needed to replenish dry soils in order to meet crop moisture demands during the growing season. Elsewhere in the Prairies, soil moisture supplies are adequate for early crop growth. Spring plantings are nearly complete throughout the Prairie Provinces, and most areas have reported good crop germination.



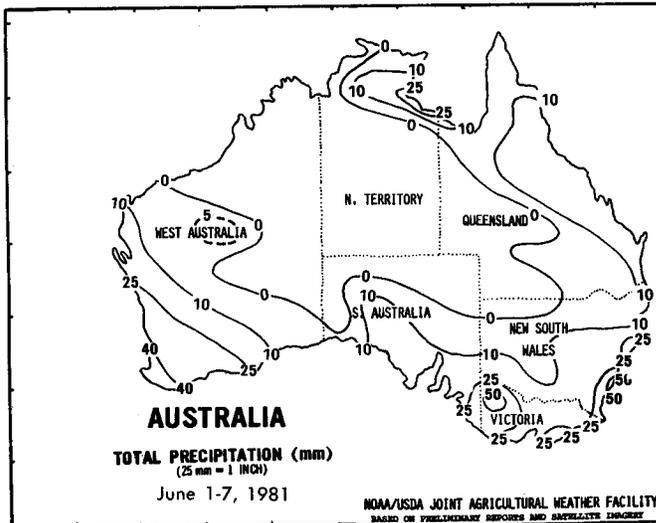
SOUTH AMERICA: Widespread showers produced significant rainfall in many areas of Brazil which had been dry for several weeks. Weekly totals varied considerably but most areas of Parana, Sao Paulo, and adjacent states received at least 25 mm, greatly benefiting soil moisture reserves. Brazil's wheat area received 30 to 100 mm of rain. While the additional moisture benefited newly-emerged wheat, some late planting may be delayed by wet fields. In Argentina, relatively dry weather aided late harvests of corn and sorghum, and improved conditions for more rapid progress of the soybean harvest which had been hampered by several weeks of prolonged rainfall. In the wheat area of La Pampa and southern Buenos Aires, however, weekly rainfall of less than 10 mm needs to be supplemented by additional moisture to ensure good crop development. Temperatures have been slightly below normal in Argentina with some light frost occurring in southern Buenos Aires.



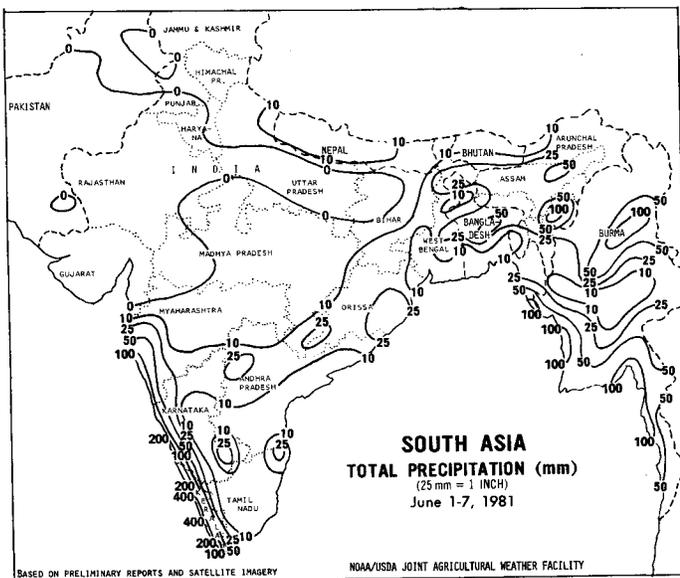
MEXICO: The rainy season progressed across most of southern Mexico dumping 100-200 mm of rainfall over the southeastern mountains. The rains aided southern citrus and the eastern corn belt of the southern Plateau. However, the western corn belt remained dry and young corn became more stressed from lack of moisture. About 10 mm of rain helped older corn and grain sorghum around Matamoros. The other major agricultural areas were sunny, dry and warm to hot with irrigation being needed to maintain adequate soil moisture.



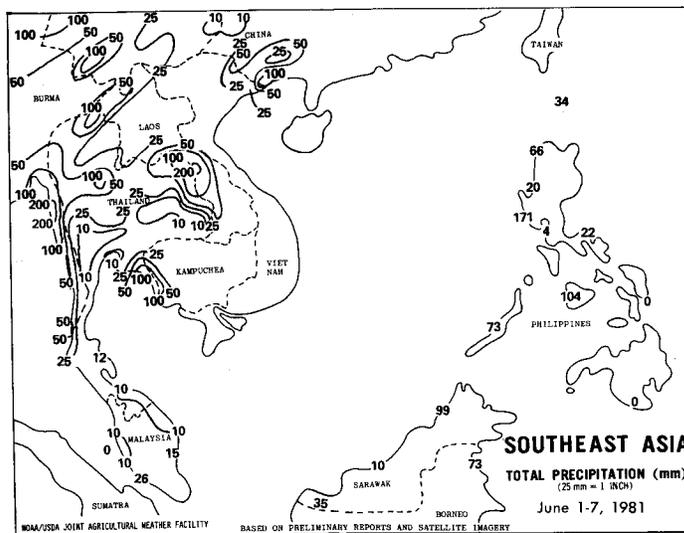
EASTERN ASIA: Very little rain fell on the North China Plain, favoring winter grain harvesting in the southern half. Late filling of winter grains in Hebei may have benefited slightly from the moisture. Dry weather in the winter grain belt during April and May reduced potential yields somewhat in unirrigated fields, especially in Shandong. Rainfall south of the Yangtze River slackened somewhat and retreated to the hills, where amounts stayed just above normal. Rain slackened to near normal in Guangxi as well, and conditions should be favorable for rice growth in most crop areas. In South Korea, continued dry weather prevented the start of rice transplanting in the southern portion of the crop area. Yields of winter grains being harvested in that area should be good.



AUSTRALIA: Showers occurred in most wheat-growing areas of Australia. In the wheat belt, weekly rainfall totals averaged 25-40 mm in West Australia, 10-25 mm in South Australia, 10-75 mm in Victoria, 5-25 mm in New South Wales, and, less than 10 mm in Queensland. The moisture in south-eastern Australia was extremely beneficial for wheat and barley. In general, soil moisture supplies are adequate for planting and early growth of spring crops. Additional moisture will be needed, however, to meet crop demands later in the growing season when crops approach the moisture-sensitive reproductive stage of development.



SOUTH ASIA: Monsoon rains spread to cover nearly the entire southwestern coast of India. Rain in Bangladesh and eastern India apparently resulted from premonsoon showers. Upper atmospheric flow does not indicate the onset of the monsoon in that area yet. Agriculture in this region is very dependent on timely arrival of monsoon rains. Rice seedlings are grown in irrigated plots, and the transplanting schedule does not permit much delay.



SOUTHEAST ASIA: Monsoon weather prevailed during the week in Southeast Asia with widespread showers occurring frequently. Rainfall tended to vary considerably throughout Thailand. Greatest amounts seemed to be confined to higher elevations of eastern and northern Thailand. The rainfall pattern suggests that significant moisture also fell in central Laos and western Kampuchea. However, no station reports are available for confirmation. Weekly rainfall in the Central Plains, north of Bangkok, averaged 10-40 mm. Conditions remain favorable for wet-season crops, most of which should be in early vegetative growth, although the long planting season for rice continues.

