

# 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

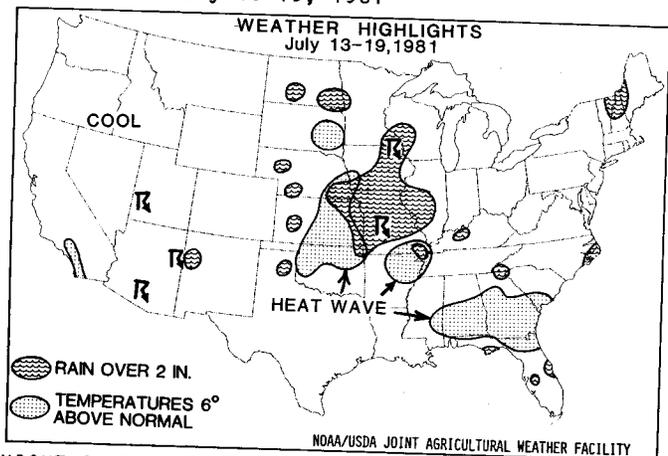
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July 21, 1981

## National Weather Summary

July 13-19, 1981



**HIGHLIGHTS:** A heat wave persisting over the southeastern Gulf Coast, with only a few light showers, brought back memories of last summers' disastrous weather. The heat wave also extended into the middle half of the Great Plains, but general rains kept moisture adequate for most immature crops. Moderate to heavy rains fell from the Texas Panhandle to the northern Plains and eastward into the Great Lakes and Ohio Valley. Very heavy rains doused central Missouri. Moist, tropical air supported heavy thunderstorms across central New Mexico and into southern Utah, causing local flooding.

**MONDAY...**Heat waves with 100° readings continued in the central Plains and parts of the Southeast as a large high pressure system was centered over the South. Temperatures around 95°, excessively hot for pollination of corn, blanketed the southern Corn Belt into mid-Atlantic Coast. A cool front stretching from the central Plateau to the eastern Great Lakes triggered general rains across northern States. Some heavy rains doused parts of North Dakota, Minnesota, Illinois, and New England.

**TUESDAY...**Hot weather blanketed the southern half of the Nation as a front extended from the Plateau to the mid-Atlantic Coast. Very hot and humid weather continued over most of the central Plains and Southeast. A strong high pressure system dominating the South prevented showers and kept crop water usage reservoir evaporation at an unusually high rate. Rainfall was limited except for some heavy amounts in the central Corn Belt, and numerous light showers lingered in New England.

**WEDNESDAY...**Localized flooding hit parts of the Southwest as the front drifted southward triggering some heavy thunderstorms. Heavy rains also caused problems across the mid-Mississippi Valley. Central Missouri

averaged 3 to 4 inches. The heat wave remained over the southeastern corner of the country, decreased in the central Plains, and spread into the southern Plains. Temperatures in the seventies was limited to the northern border States.

**THURSDAY...**Thunderstorms were scattered along a broad frontal zone from Oklahoma to the Carolinas. Heavy amounts drenched eastern Kansas and southwestern Missouri. A surge of cooler air swept into the northern Plains and central Rockies, triggering some light showers. High pressure with sunny skies kept the heat wave going over the lower Southeast.

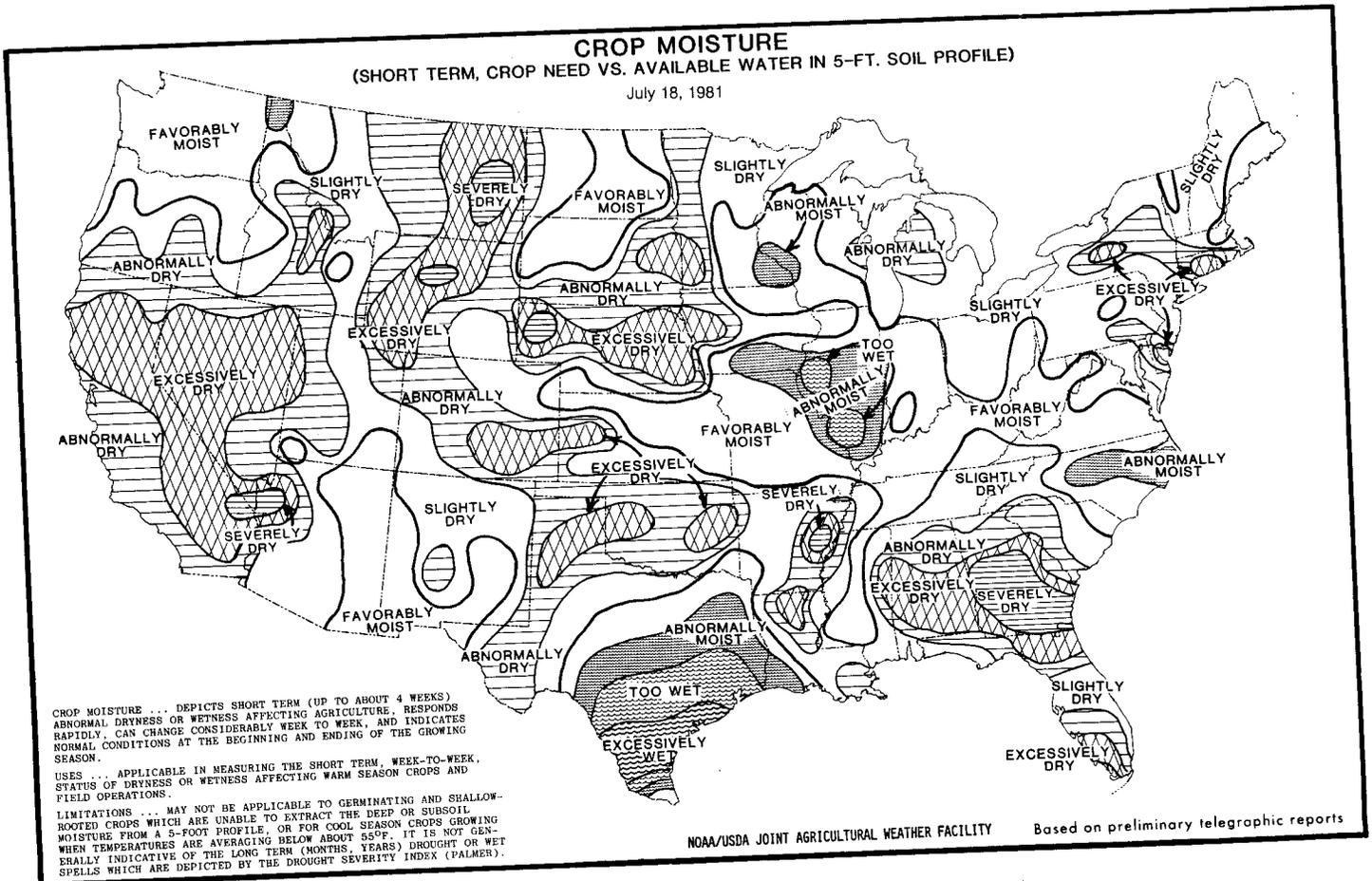
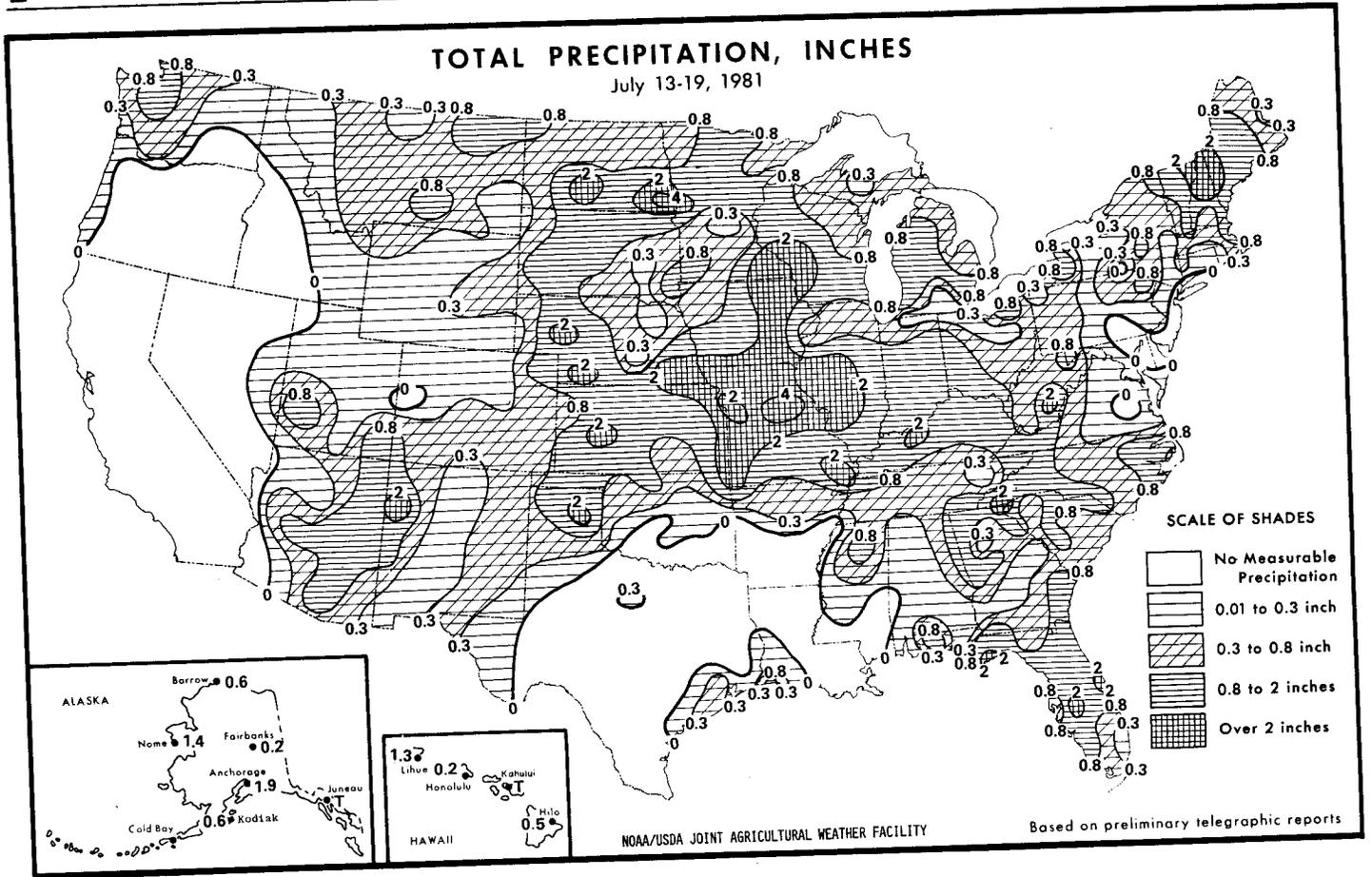
**FRIDAY...**Numerous thunderstorms continued over eastern Kansas and spread westward to the Rockies along a stationary front. The eastern portion of the front also generated scattered thundershowers from Missouri to northern Florida, while light showers dotted Wisconsin and the northwestern Plains. Unusually hot weather remained over the extreme Southeast and popped up again in the southern Plains.

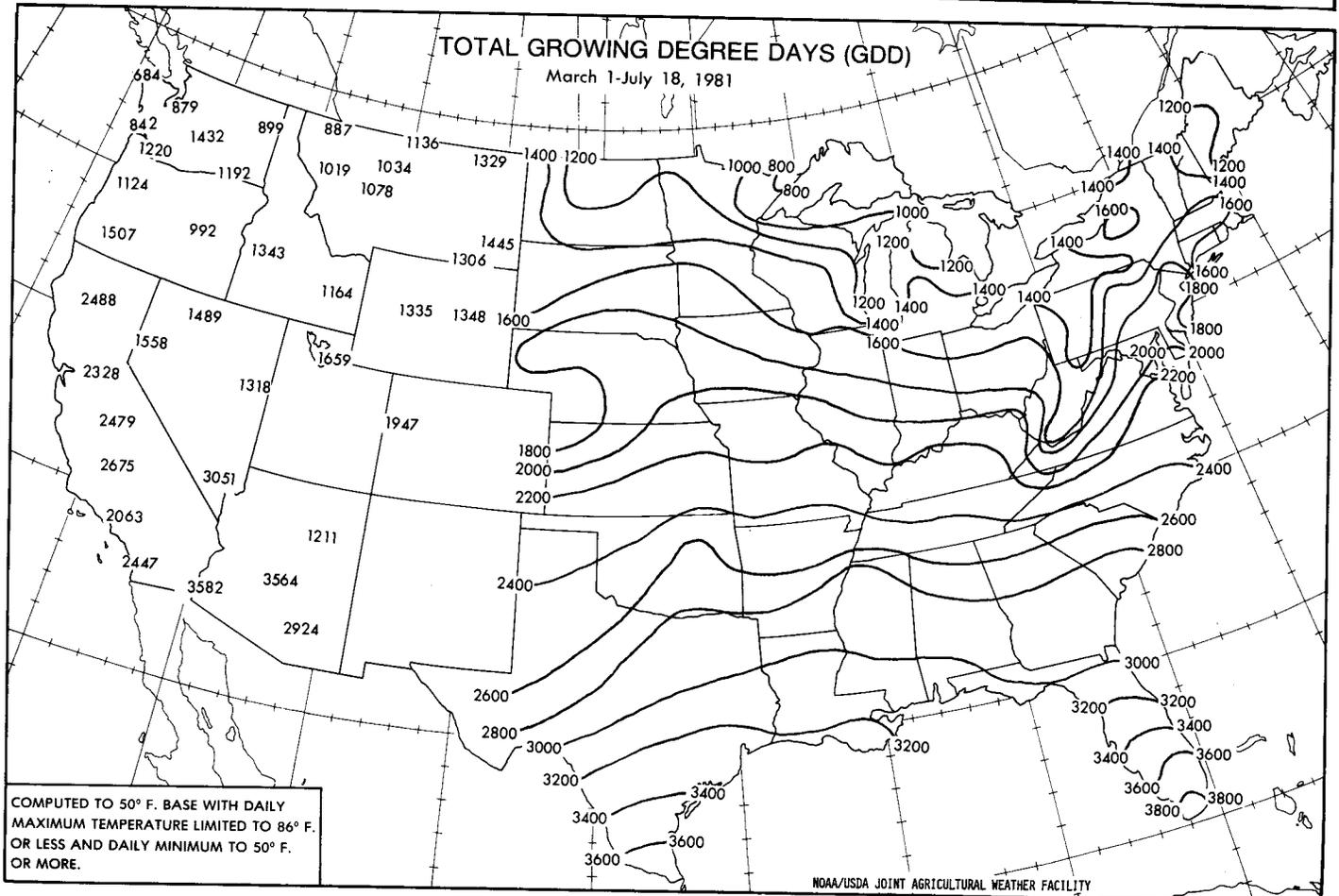
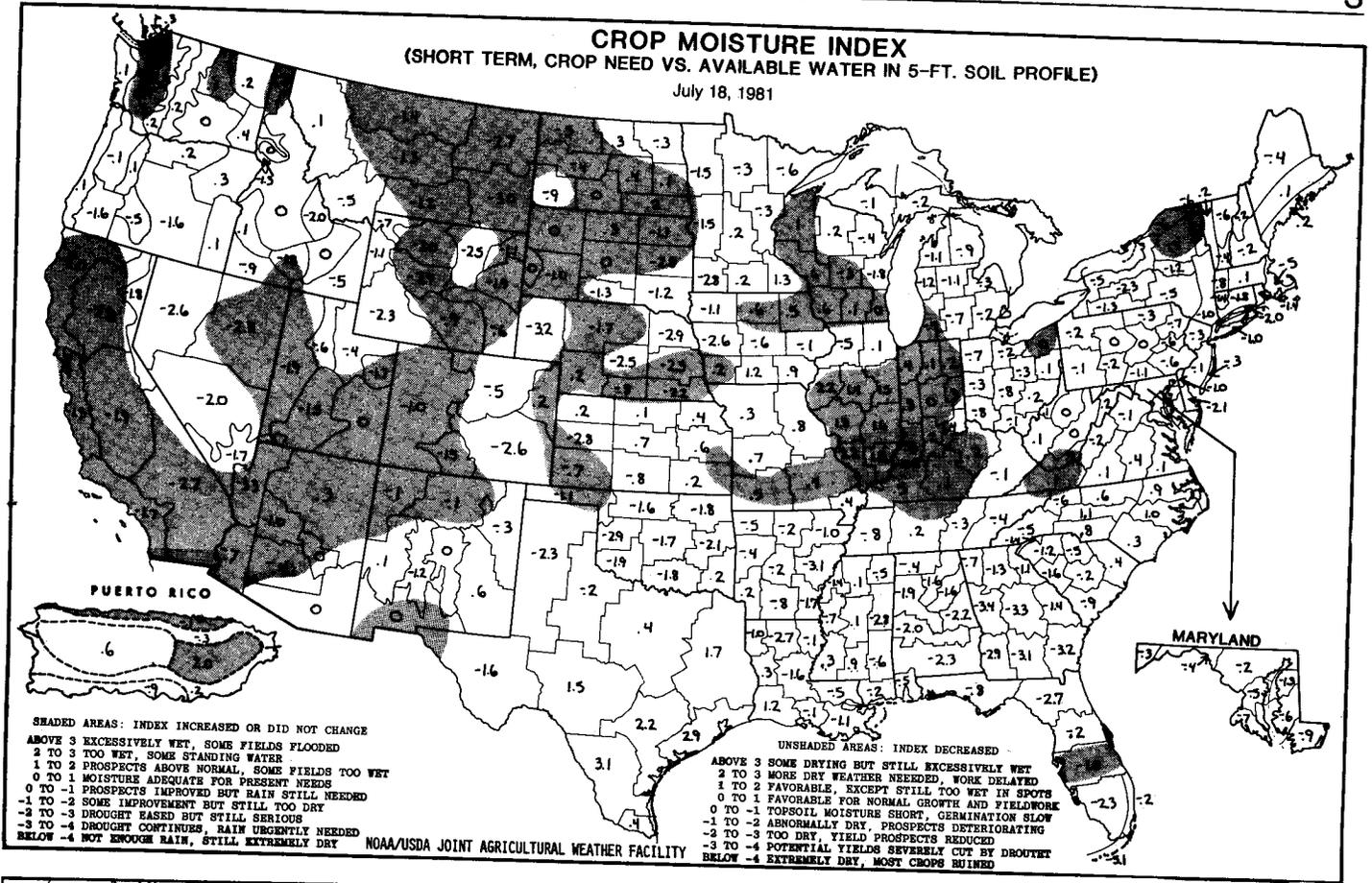
**SATURDAY...**The wet weather pattern of the central Plains drifted into the mid-Mississippi Valley along a showery front from the southeastern coast to the central Rockies. Very heavy rains doused northern and central Missouri, while generally light showers covered the northern Plains. Thundershowers were also scattered over the northeastern corner of the Nation. Abnormally hot weather continued across the Gulf Coast and parts of the southern Plains.

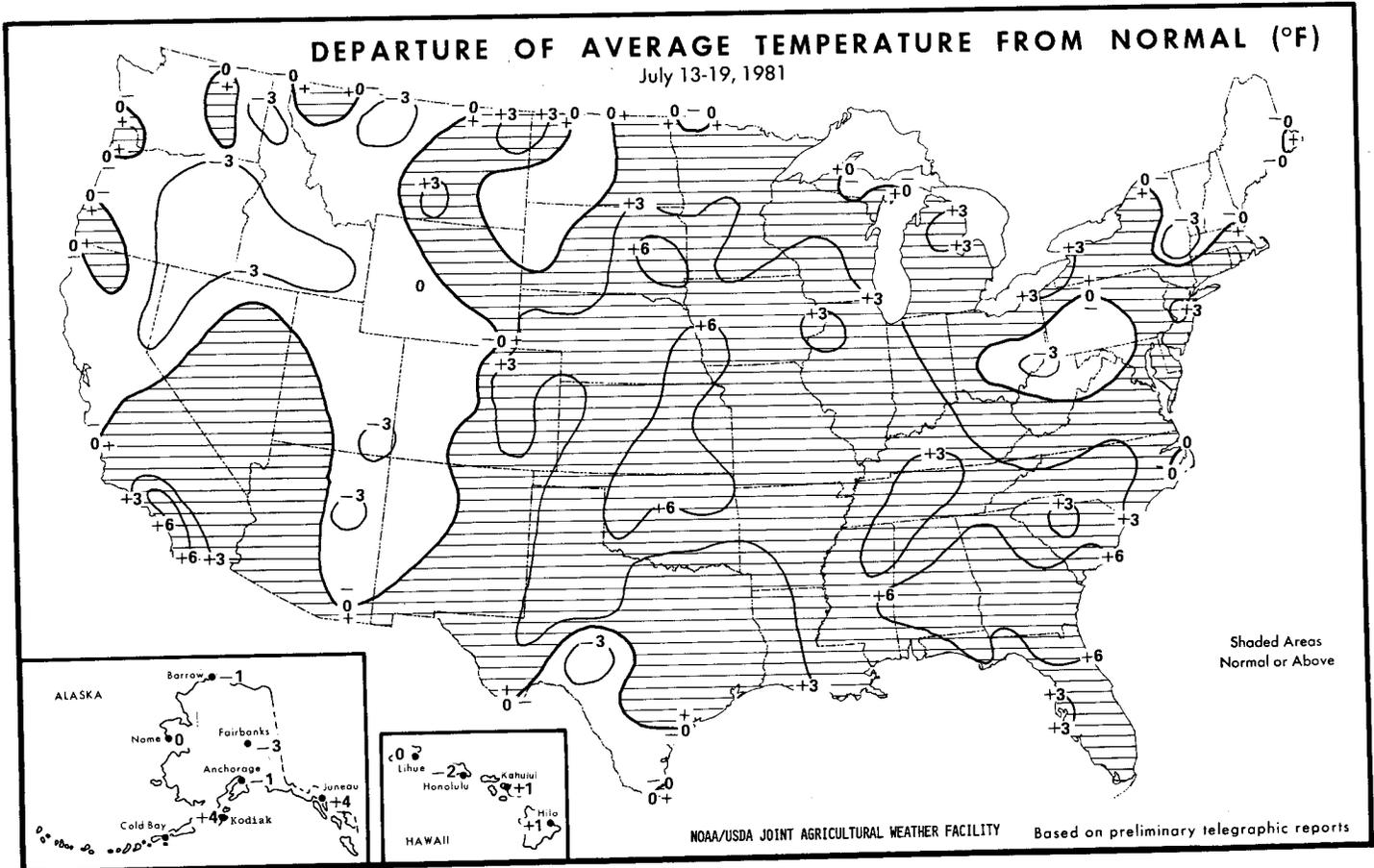
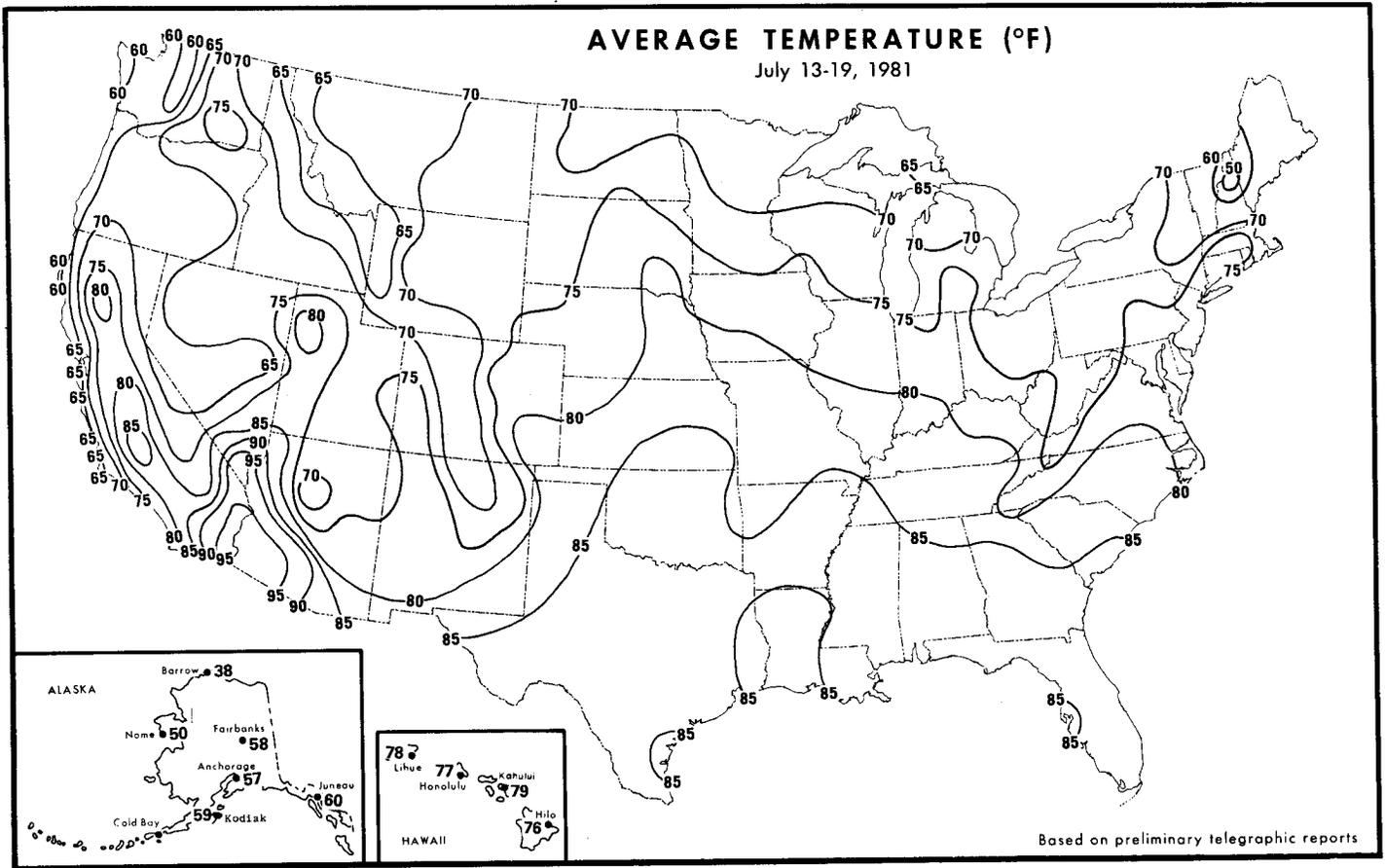
**SUNDAY...**Rains covered the northeastern half of the country ahead of a front drifting eastward. The heaviest amounts stretched from Illinois to Pennsylvania. Even the Southeast had a few showers, giving some relief from the hot, dry pattern of the past several weeks which was also becoming entrenched over the southern Plains. Typical midsummer weather covered the rest of the Nation.

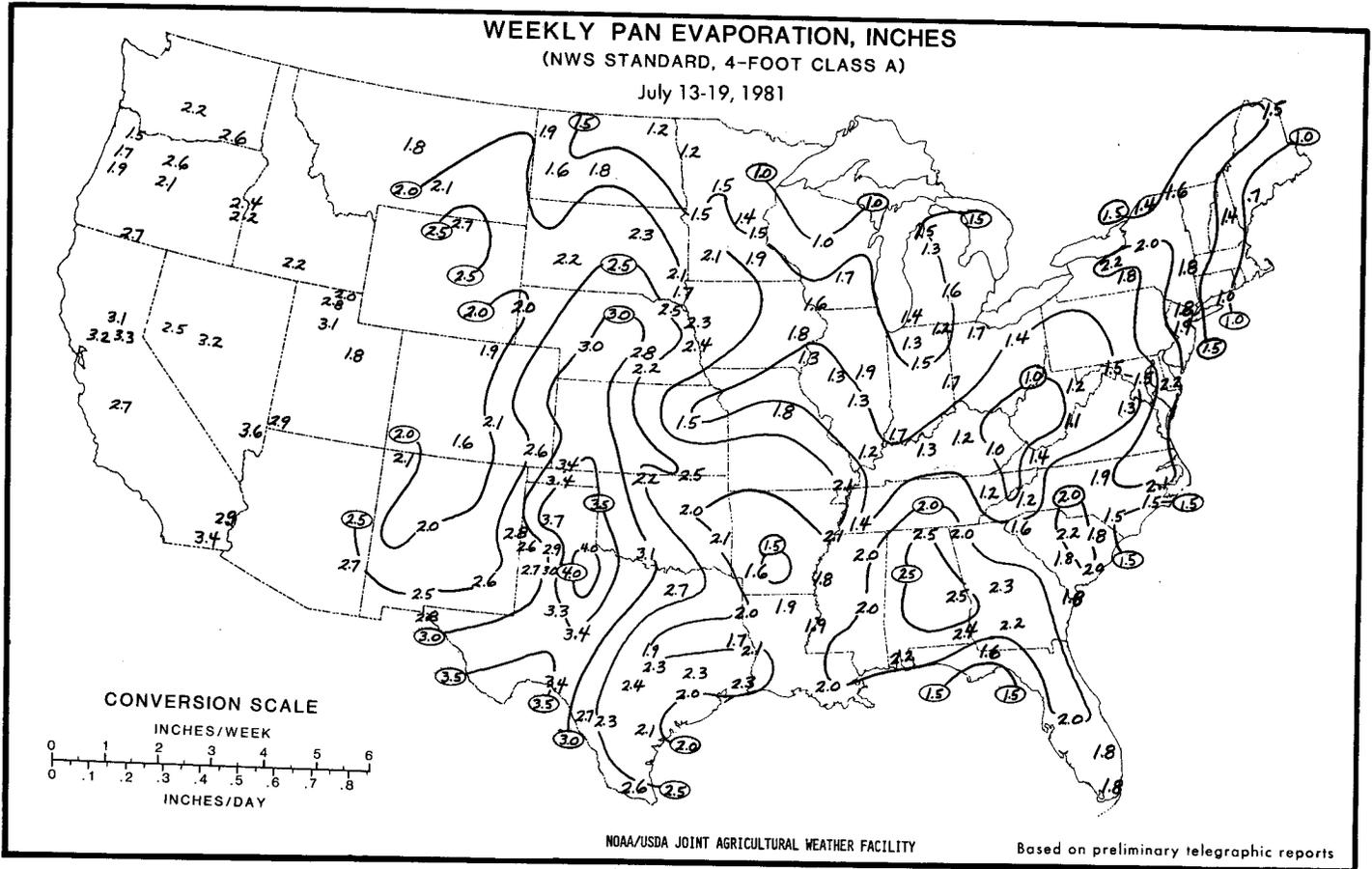
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**Pan Evaporation: Guide to Estimating Cotton Water Requirements**

Don Haddock, Chief of NOAA Section  
NOAA/USDA Agricultural Weather Facility

The expanding use of irrigation increases the need for information on crop water requirements. Considerable emphasis is being put on supplemental irrigation in the eastern United States, especially after the severe drought in 1980. Irrigation helps insure against crop failure during dry years and may increase yields in normal years to meet expanding market demand.

Estimates of crop water requirements are needed when assessing the current status of crops and their potential yields, as well as when calculating how much water to apply. Water needs of crops can be estimated from pan evaporation by utilizing a crop coefficient which varies with the stage of development. This type of information is presented in accompanying graphs for several cotton producing sites, ranging from the dry western United States to the humid East.

The relation between cotton water requirements and (free water) pan evaporation is depicted in figures 1-7. Both the cotton and the pan are subjected to the same weather elements of temperature, humidity, wind, and solar radiation. A curve of crop coefficients is indicated for adapting pan evaporation to cotton water requirements throughout the growing season, from planting to defoliation (fig. 8).

Cotton uses very little moisture until the squaring stage, then the moisture need increases rapidly during early bloom. The highest use stage is at peak bloom and

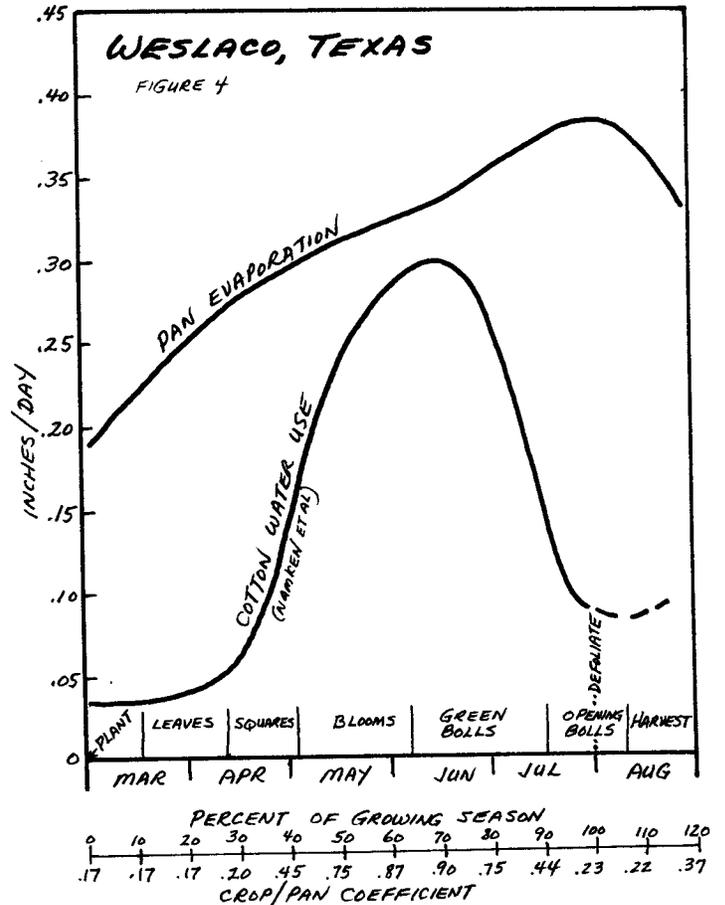
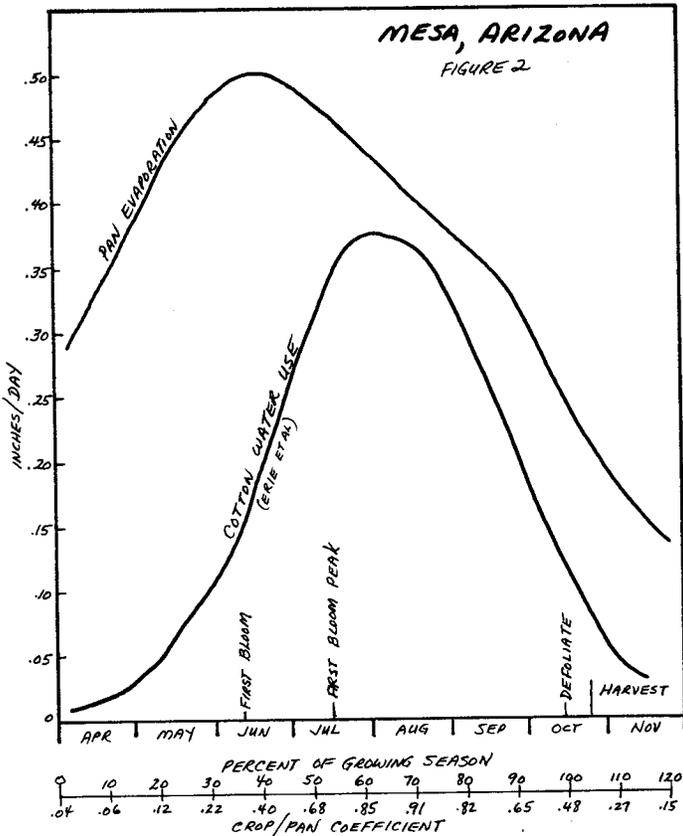
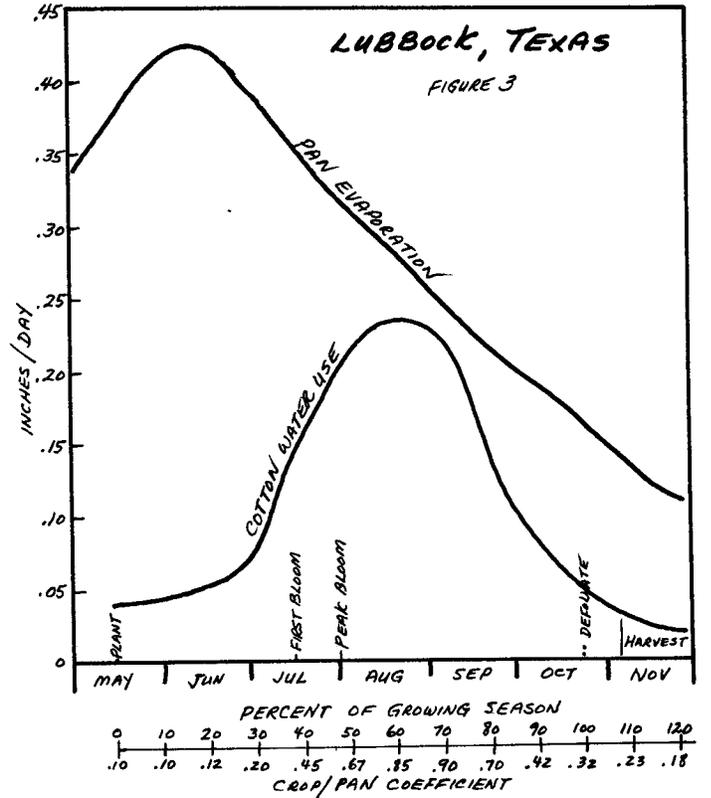
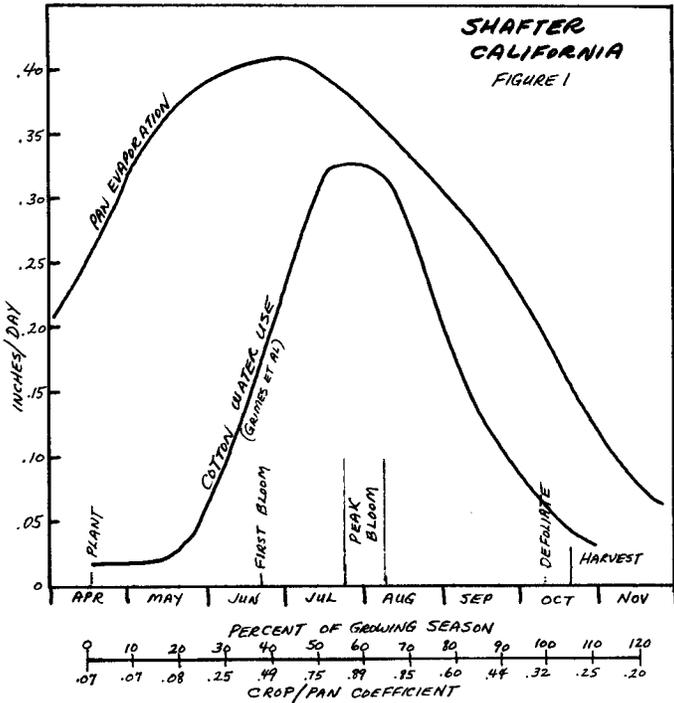
when bolls are forming. As bolls mature and open, the water needs decrease. The squaring and blooming stages overlap into the green boll; however, the greatest set of bolls, which determines yield, are largely from the earlier squares and blooms.

The crop use and coefficient curves are quite similar between the semiarid and humid regions. Consideration should be given in selecting the proper crop coefficients in the drier western States because of the "oasis" effect--the appropriate value will depend upon whether the pan is in an irrigated pasture or over bare soil. Coefficients are larger for pans in irrigated pastures than for those over bare, natural sites. The "oasis" effect is generally not significant in the East as most pan sites have a grass cover and the air is usually moist across hundreds of square miles.

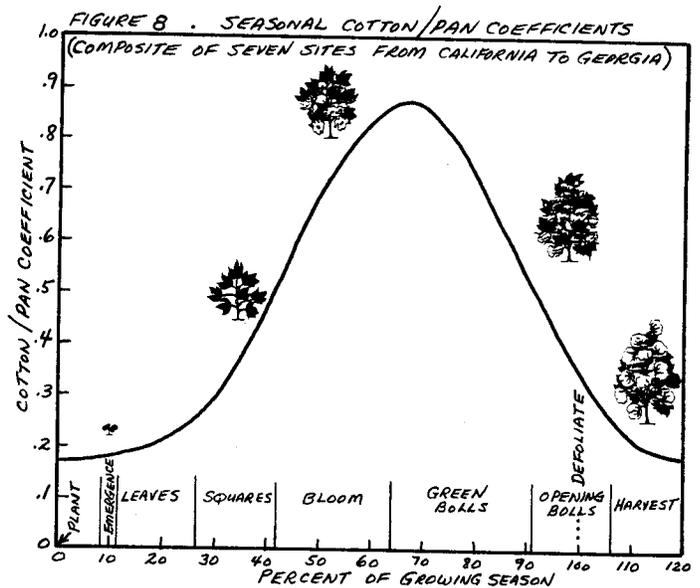
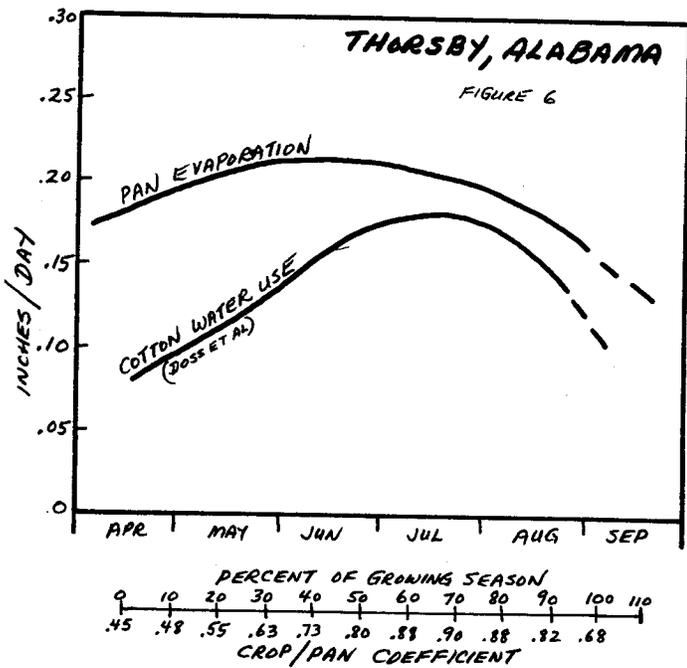
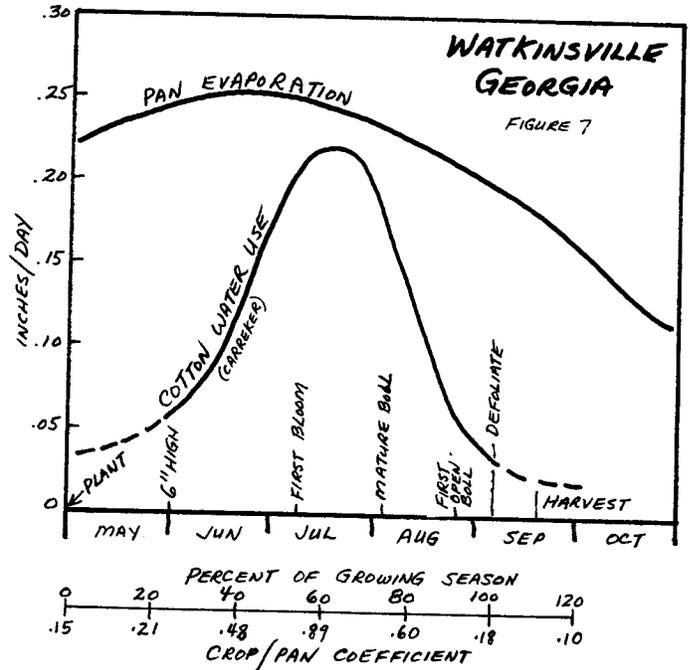
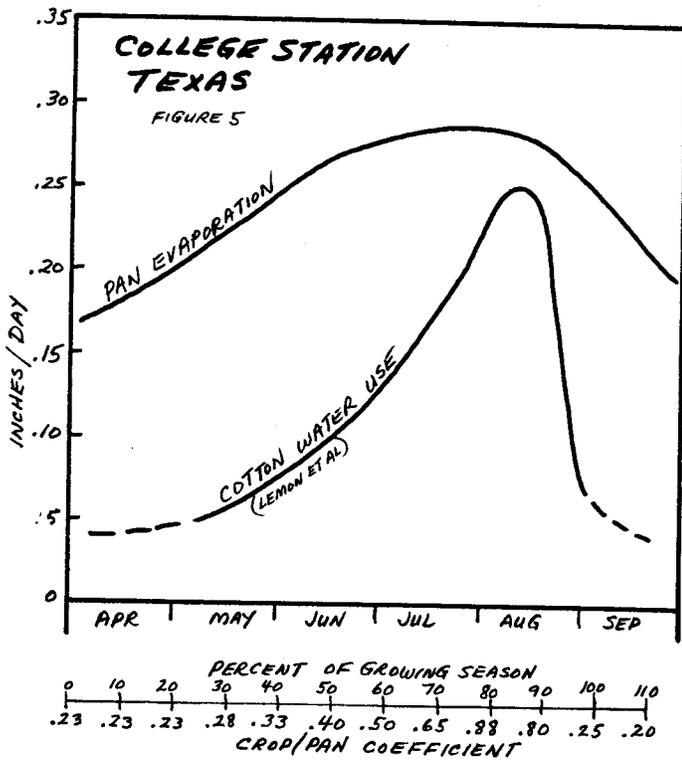
The cotton plant may use more water at reproduction time than the evaporation from a pan, depending upon how much water is available from irrigation, rainfall, or stored soil moisture. But an excessive amount of water, especially in the East, may keep the plant in a vegetative rather than reproductive stage, and result in low yield and earnings.

Information on pan evaporation versus water requirements of soybeans, peanuts, and other crops will be presented in future issues of this Bulletin.

COTTON WATER REQUIREMENTS VS. PAN EVAPORATION



### COTTON WATER REQUIREMENTS VS. PAN EVAPORATION



Weather Data for the Week Ending July 19, 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
AL BIRMINGHAM	96	73	99	69	85	5	.2	- 1.0	.2	5.1	70	23.5	74	89	43	7	0	1	0
AL MOBILE	97	77	98	75	87	5	.2	- 1.9	.2	11.5	97	38.0	98	82	43	7	0	1	0
AL MONTGOMERY	97	77	99	75	87	6	1.1	- 1.1	.1	6.2	84	29.1	98	88	48	7	0	1	0
AK ANCHORAGE	61	53	64	51	57	-1	1.9	1.4	1.1	3.6	157	6.7	124	92	71	0	0	7	2
AK BARROW	43	33	62	30	38	-1	.6	.4	.3	2.1	233	--	--	100	85	0	3	5	0
AK FAIRBANKS	67	49	74	44	58	-3	.2	.3	.1	3.3	122	4.8	94	95	56	0	0	4	0
AK JUNEAU	69	51	75	44	60	4	T	- 1.1	T	4.2	72	20.6	90	84	52	0	0	0	0
AK KODIAK	64	54	68	50	59	4	.6	.2	.2	2.7	43	39.3	138	96	73	0	0	6	0
AK NOME	52	47	56	43	50	0	1.4	.8	.4	2.5	114	7.9	132	89	74	0	0	6	0
AZ FLAGSTAFF	78	56	86	53	67	1	.3	.3	.2	3.1	155	11.9	127	96	43	0	0	4	0
AZ PHOENIX	105	83	108	78	94	2	.7	.5	.4	.7	140	3.8	131	59	21	7	0	2	0
AZ TUCSON	98	73	100	70	86	-1	.9	.4	.6	2.2	147	7.2	185	75	25	7	0	2	1
AZ WINSLOW	87	61	97	60	74	-4	.8	.5	.5	2.5	250	4.6	131	78	45	3	0	4	1
AZ YUMA	107	85	110	83	96	2	0	.1	0	T	0	1.1	73	50	21	7	0	0	0
AR FORT SMITH	96	74	98	73	85	3	0	.7	0	4.7	78	20.6	80	92	48	7	0	0	0
AR LITTLE ROCK	96	76	97	73	86	5	0	.7	0	6.2	117	28.8	98	81	52	7	0	0	0
CA BAKERSFIELD	101	70	106	64	86	1	0	0	0	0	0	4.4	110	47	15	7	0	0	0
CA EUREKA	59	51	60	50	55	-1	T	0	T	.6	75	19.0	81	98	82	0	0	0	0
CA FRESNO	102	65	107	59	83	2	0	0	0	0	0	7.5	107	58	14	7	0	0	0
CA LOS ANGELES	79	66	82	64	73	4	0	0	0	T	+100	6.6	84	83	55	0	0	0	0
CA RED BLUFF	101	65	105	62	83	0	0	0	0	T	0	16.3	119	54	13	7	0	0	0
CA SAN DIEGO	83	71	84	69	77	7	T	0	T	T	+100	8.5	142	85	59	0	0	0	0
CA SAN FRANCISCO	72	51	89	49	61	-1	T	0	T	T	0	12.2	99	87	46	0	0	0	0
CA STOCKTON	98	56	104	50	77	0	0	0	0	0	0	9.2	102	76	19	6	0	0	0
CO DENVER	91	63	99	59	77	3	.1	.4	.1	1.2	39	9.0	91	71	22	4	0	1	0
CO GRAND JUNCTION	89	67	98	65	78	-1	T	.1	T	.3	43	4.2	114	66	25	4	0	0	0
CO PUEBLO	95	65	100	61	80	3	.3	.1	.2	1.0	40	3.3	46	85	27	6	0	6	0
CT BRIDGEPORT	85	66	88	64	75	1	T	.7	T	4.8	104	15.8	78	79	39	0	0	0	0
CT HARTFORD	87	63	91	58	75	2	.3	.5	.3	4.1	73	17.0	73	83	37	2	0	1	0
DC WASHINGTON	89	71	95	67	80	1	.6	.4	.6	5.5	93	16.1	78	83	47	4	0	1	1
FL APALACHICOLA	95	79	98	75	87	6	2.5	.6	1.8	7.4	73	16.2	56	90	62	7	0	4	2
FL DAYTONA BEACH	97	75	102	73	86	5	2.0	.5	1.3	3.5	32	14.3	59	87	51	7	0	5	1
FL FORT MYERS	95	79	96	76	87	5	1.1	.9	.6	14.9	103	21.9	80	91	55	7	0	3	1
FL JACKSONVILLE	100	75	103	73	88	7	1.0	.7	.7	4.4	41	17.3	64	94	44	7	0	3	1
FL KEY WEST	90	82	91	80	86	1	.3	.6	.3	1.4	20	5.8	34	86	68	4	0	1	0
FL MIAMI	95	78	98	75	86	4	.2	- 1.3	.1	7.4	54	19.1	65	88	48	7	0	2	0
FL ORLANDO	96	75	98	74	86	5	1.3	.6	1.2	15.3	122	24.0	89	92	48	7	0	2	1
FL TALLAHASSEE	96	76	99	74	86	5	1.5	.7	.8	10.2	82	31.9	91	99	49	7	0	5	1
FL TAMPA	92	77	95	72	84	2	.5	- 1.4	.5	10.1	87	19.3	76	96	63	4	0	1	1
FL WEST PALM BEACH	97	76	99	74	86	4	T	- 1.4	T	5.6	45	18.9	66	88	46	7	0	0	0
GA ATLANTA	96	75	98	73	86	8	0	- 1.2	0	4.5	66	21.9	74	85	45	7	0	0	0
GA AUGUSTA	96	73	99	71	84	4	- 1.1	.1	.1	8.3	122	24.5	95	97	48	7	0	1	0
GA MACON	100	75	102	73	88	7	.2	.8	.2	8.4	125	26.9	99	87	37	7	0	2	0
GA SAVANNAH	98	77	103	73	88	7	1.0	.8	1.0	4.2	39	16.0	58	97	50	6	0	1	1
HI HILO	84	69	85	66	76	1	.5	- 1.6	.3	3.7	31	--	83	56	0	0	3	0	
HI HONOLULU	85	69	87	66	77	-2	.2	0	.1	.3	38	4.7	35	89	59	0	0	3	0
HI KAHULUI	87	71	92	66	79	1	T	.1	T	T	0	--	73	50	1	0	0	0	
HI LIHUE	85	71	88	68	78	0	1.3	.9	.4	3.6	129	--	--	93	61	0	0	7	0
ID BOISE	89	54	94	44	71	-4	0	0	0	.9	75	8.9	116	53	15	5	0	0	0
ID LEWISTON	88	56	94	51	72	-2	0	.1	0	2.8	112	8.9	107	70	23	3	0	0	0
ID POCATELLO	89	50	96	41	70	-3	.1	0	.1	1.0	63	8.6	126	70	16	3	0	1	0
IL CAIRO	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
IL CHICAGO	85	68	90	62	77	5	.7	.1	.4	7.2	113	22.2	118	89	55	1	0	3	0
IL MOLINE	86	68	88	61	77	2	.3	.8	.2	6.7	91	16.0	77	91	60	0	0	4	0
IL PEORIA	86	71	96	63	79	3	3.3	2.5	1.8	10.6	171	25.7	124	97	68	1	0	5	2
IL ROCKFORD	83	68	88	63	76	3	.4	.6	.4	6.3	88	16.7	81	90	58	0	0	3	0
IL SPRINGFIELD	88	72	96	67	80	4	2.8	1.9	1.4	11.8	174	27.3	133	98	66	2	0	5	2
IN EVANSVILLE	91	74	96	72	82	4	1.1	.3	.9	6.0	102	26.5	103	85	60	4	0	2	1
IN FORT WAYNE	83	68	88	64	75	2	1.1	.2	1.1	9.0	141	23.2	109	85	45	0	0	2	1
IN INDIANAPOLIS	86	70	95	62	78	3	1.5	.6	.8	4.9	74	24.6	105	87	51	2	0	4	1
IN SOUTH BEND	82	64	88	61	73	1	.2	.6	.2	7.3	122	23.0	113	95	56	0	0	4	0
IA BURLINGTON	86	71	98	67	78	3	3.8	3.0	1.7	14.0	200	26.4	133	91	65	2	0	4	3
IA DES MOINES	88	72	96	69	80	5	.9	.2	.7	8.9	125	15.3	82	87	59	2	0	4	1
IA DUBUQUE	82	69	86	62	75	3	1.0	0	.5	7.6	94	17.5	76	92	61	0	0	2	1
IA SIOUX CITY	88	69	97	64	79	3	1.3	.6	1.0	6.8	101	11.8	75	85	55	3	0	3	1
KS CONCORDIA	93	72	101	69	83	5	1.7	1.0	1.4	8.4	118	18.8	113	92	47	5	0	4	1
KS DODGE CITY	97	72	103	70	85	5	1.4	.7	.8	4.8	91	13.5	109	78	35	6	0	4	1
KS GOODLAND	91	62	100	58	77	1	.5	.2	.4	1.4	29	18.1	174	84	32	5	0	2	0
KS TOPEKA	92	75	95	73	83	5	1.4	.5	1.3	11.3	131	21.4	106	85	55	6	0	4	1
KS WICHITA	98	75	107	70	87	6	.4	.6	.3	4.9	66	14.4	81	78	37	6	0	3	0
KY LEXINGTON	86	70	90	65	78	2	1.6	.4	.5	6.5	88	23.2	84	96	61	1	0	4	2
KY LOUISVILLE	89	74	95	69	82	5	1.8	.9	1.0	6.7	103	20.8	78	89	56	3	0	4	2
LA BATON ROUGE	93	77	94	74	85	3	0	- 1.5	0	8.8	113	26.7	84	94	53	7	0	0	0

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

+100 = NORMAL & ACTUAL NEAR THE SAME

Weather Data for the Week Ending July 19, 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	92	75	97	74	84	2	.2	-1.4	.2	18.1	199	32.3	104	95	58	7	0	1	0	
NEW ORLEANS	95	77	96	73	86	4	0	-1.6	0	9.5	107	29.2	90	100	54	7	0	0	0	
SHREVEPORT	93	75	94	73	84	1	0	-.6	0	8.3	160	28.7	105	95	53	7	0	0	0	
ME CARIBOU	75	55	82	48	65	0	.3	-.6	.3	6.0	103	19.1	107	93	52	0	0	1	0	
PORTLAND	77	57	83	53	67	-1	1.2	-.6	.5	7.0	146	22.2	100	97	55	0	0	3	1	
MD BALTIMORE	89	65	96	60	77	0	T	-.9	T	8.0	131	18.3	83	82	41	4	0	0	0	
MA BOSTON	83	66	88	63	75	1	1.1	.5	.5	3.6	75	16.0	70	84	44	0	0	2	2	
CHATHAM	78	64	80	63	71	-1	-.8	-.1	-.8	6.3	--	22.3	--	90	70	0	0	1	1	
MI ALPENA	81	56	92	50	68	3	.5	0	T	2.9	64	10.9	75	95	47	1	0	2	0	
DETROIT	85	64	91	59	75	2	1.5	.8	1.2	4.9	92	15.4	86	82	41	2	0	2	1	
FLINT	82	62	89	59	72	2	.8	.2	.8	5.2	100	16.0	97	84	42	0	0	1	1	
GRAND RAPIDS	83	64	91	59	74	2	1.5	.8	1.4	5.8	104	23.9	132	90	51	1	0	3	1	
HOUGHTON LAKE	81	57	87	45	69	3	1.2	.5	1.2	5.4	100	15.1	98	94	47	0	0	3	1	
LANSING	84	62	91	55	73	2	.1	-.6	-.1	3.8	73	16.7	95	97	49	2	0	2	1	
MARQUETTE	75	54	82	43	65	-2	.1	-.6	-.1	6.7	105	18.8	102	94	52	0	0	1	0	
MUSKOGON	80	63	87	58	71	1	1.2	-.6	1.1	6.0	122	16.1	96	90	54	0	0	2	1	
SAULT STE. MARIE	75	52	80	45	63	-1	.5	-.1	.5	6.1	120	14.9	96	95	57	0	0	2	0	
MN DULUTH	76	58	84	52	67	1	1.1	.3	1.1	7.2	104	15.6	94	95	55	0	0	4	1	
INT'L FALLS	81	57	88	52	69	3	1.2	.3	1.1	5.1	81	10.8	80	91	49	0	0	2	1	
MINNEAPOLIS	81	62	87	56	72	0	.8	-.1	.8	7.6	121	15.0	100	91	52	0	0	2	1	
ROCHESTER	81	64	87	60	73	3	2.6	1.8	1.7	13.6	192	21.6	137	98	63	0	0	3	2	
SAINT CLOUD	80	62	86	60	71	1	.1	-.5	.1	8.6	130	16.1	104	84	55	0	0	2	0	
MS JACKSON	96	75	97	74	85	3	T	-1.0	T	10.2	165	28.6	95	93	51	7	0	1	0	
MERIDIAN	102	74	103	73	88	7	T	-1.2	T	4.2	60	27.0	87	92	40	7	0	0	0	
MO COLUMBIA	90	73	94	72	82	4	4.1	3.2	1.9	13.1	185	29.6	135	92	63	4	0	4	2	
KANSAS CITY	90	74	95	71	82	4	1.0	0	.7	8.9	107	22.5	106	93	59	4	0	3	1	
SAINT LOUIS	90	75	96	70	82	3	2.9	2.1	2.6	10.4	149	26.4	122	96	63	3	0	3	1	
SPRINGFIELD	92	72	95	69	82	4	1.1	.3	.8	10.6	149	24.8	106	95	59	7	0	3	1	
MT BILLINGS	92	59	94	55	75	3	1.0	.9	1.0	2.8	88	12.7	138	66	25	6	0	3	1	
GLASGOW	84	59	94	53	72	0	1.5	1.2	1.5	3.5	95	6.3	90	81	31	2	0	1	1	
GREAT FALLS	79	52	84	49	65	-4	.4	.2	.3	2.3	55	10.8	105	78	33	0	0	2	0	
HAVRE	80	54	88	48	67	-3	.1	-.2	.1	1.8	50	5.3	69	88	35	0	0	2	0	
HELENA	82	54	85	50	68	-1	.5	.3	.5	1.9	59	10.2	142	79	28	0	0	4	0	
KALISPELL	78	53	85	49	66	1	T	.2	T	4.1	128	13.4	134	81	33	0	0	1	0	
MILES CITY	87	62	93	54	74	0	.2	-.1	.1	2.9	64	6.4	69	75	31	1	0	2	0	
MISSOULA	82	49	88	44	65	-1	T	-.2	T	3.5	121	10.6	128	86	28	0	0	1	0	
NE GRAND ISLAND	91	69	101	66	80	3	.3	-.4	.3	2.0	31	11.1	73	93	48	4	0	1	0	
LINCOLN	93	74	103	72	83	6	2.1	1.4	.8	3.1	44	10.2	63	92	52	4	0	4	2	
NORFOLK	93	70	102	63	81	5	T	.7	T	3.9	55	9.4	61	89	40	5	0	0	0	
NORTH PLATTE	90	65	101	61	77	3	1.9	1.2	.7	4.3	74	15.2	119	92	44	3	0	6	2	
OMAHA	91	72	103	70	82	7	1.9	1.1	1.6	4.0	55	11.0	63	90	57	4	0	4	1	
VALENTINE	91	63	103	57	77	2	.7	.2	.7	4.7	89	8.8	76	88	35	4	0	2	1	
NV ELY	90	49	94	38	70	2	.2	.1	.2	.4	31	5.9	120	60	13	4	0	2	0	
LAS VEGAS	104	79	108	76	92	2	0	-.1	0	T	0	2.2	100	37	14	7	0	0	0	
RENO	93	42	97	35	67	-3	0	-.1	0	T	0	2.5	54	62	8	6	0	0	0	
WINNEMUCCA	94	48	98	37	71	-1	0	-.1	0	T	0	4.1	77	33	5	6	0	0	0	
NH CONCORD	81	57	86	50	69	-1	.7	0	.6	5.9	109	21.3	112	95	43	0	0	2	1	
NJ ATLANTIC CITY	88	63	95	56	76	0	0	-1.0	0	5.7	95	20.8	86	91	39	2	0	0	0	
TRENTON	88	70	95	60	79	3	T	-1.1	T	6.3	105	19.3	88	92	41	3	0	0	0	
NM ALBUQUERQUE	94	64	99	63	79	0	.2	-.1	.2	1.2	92	3.6	100	71	24	7	0	2	0	
ROSWELL	93	68	95	66	81	1	.3	-.1	.2	9.9	430	14.8	285	81	32	7	0	2	0	
NY ALBANY	81	54	85	49	68	-5	.1	-.6	T	4.0	82	14.3	80	94	45	0	0	2	0	
BINGHAMTON	81	60	85	55	71	1	T	-.9	T	3.6	63	14.3	70	82	39	0	0	0	0	
BUFFALO	82	65	86	60	73	3	1.0	.3	1.0	5.4	138	17.3	95	85	41	0	0	1	1	
NEW YORK	88	71	92	65	79	2	.1	-.8	.1	5.6	106	18.9	85	75	36	3	0	1	0	
ROCHESTER	83	62	89	55	73	2	.1	.5	.1	4.0	95	13.8	82	88	44	0	0	2	0	
SYRACUSE	85	61	90	57	73	1	.1	-.6	.1	2.1	43	11.8	61	85	38	1	0	2	0	
NC ASHEVILLE	86	68	90	67	77	4	1.2	.1	.7	5.8	85	23.9	93	97	58	1	0	4	1	
CHARLOTTE	90	73	96	70	82	3	1.5	.4	1.5	5.1	76	17.1	69	90	47	4	0	1	1	
GREENSBORO	90	71	96	66	80	3	.7	-.3	.7	6.0	91	16.7	73	89	52	3	0	2	1	
HATTERAS	86	69	90	62	77	-1	2.0	.7	2.0	9.3	111	22.4	82	96	59	1	0	1	1	
RALEIGH	90	73	94	69	81	4	.5	-.7	.3	5.6	84	17.3	74	93	52	4	0	2	0	
WILMINGTON	91	74	98	70	82	2	.7	-1.2	.5	4.3	41	17.9	63	91	54	4	0	3	1	
ND BISMARCK	81	59	86	55	70	-1	2.6	2.2	1.7	5.0	98	7.2	70	95	50	0	0	3	2	
FARGO	80	63	86	57	71	0	1.5	.8	1.4	4.8	91	10.1	89	90	52	0	0	4	1	
WILLISTON	85	61	90	54	73	3	.6	-.1	.2	4.6	98	6.9	76	85	42	1	0	4	0	
OH AKRON-CANTON	83	63	91	57	73	1	.1	-.8	.1	8.1	135	27.8	131	84	46	1	0	2	0	
CINCINNATI	88	68	97	64	78	2	1.4	.4	1.1	6.1	94	22.7	94	94	51	3	0	4	1	
CLEVELAND	81	62	89	56	72	0	1.8	1.1	1.8	7.0	127	3.0	92	84	46	0	0	3	1	
COLUMBUS	83	63	93	56	73	-1	.8	-.2	.5	7.1	103	25.6	111	89	53	1	0	2	1	
DAYTON	85	67	96	62	76	1	1.9	1.1	1.4	10.1	166	24.9	116	88	52	1	0	4	2	
TOLEDO	83	63	91	58	73	1	.1	-.7	T	9.2	164	19.2	105	83	49	1	0	2	0	
YOUNGSTOWN	81	61	86	52	71	0	.4	-.5	.4	4.6	77	20.3	92	81	44	0	0	1	0	
OK OKLAHOMA CITY	98	74	100	70	86	4	T	-.6	T	8.0	133	17.8	92	80	34	7	0	0	0	

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

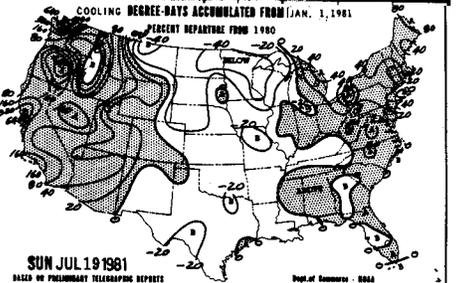
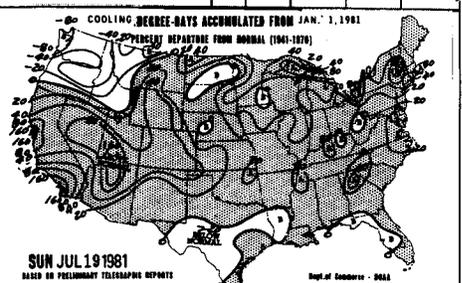
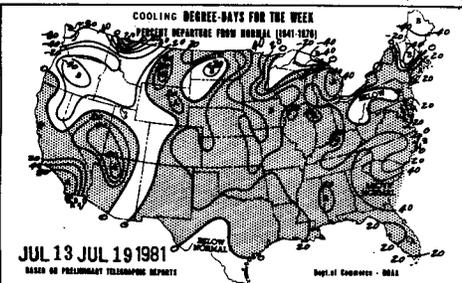
Weather Data for the Week Ending July 19, 1981

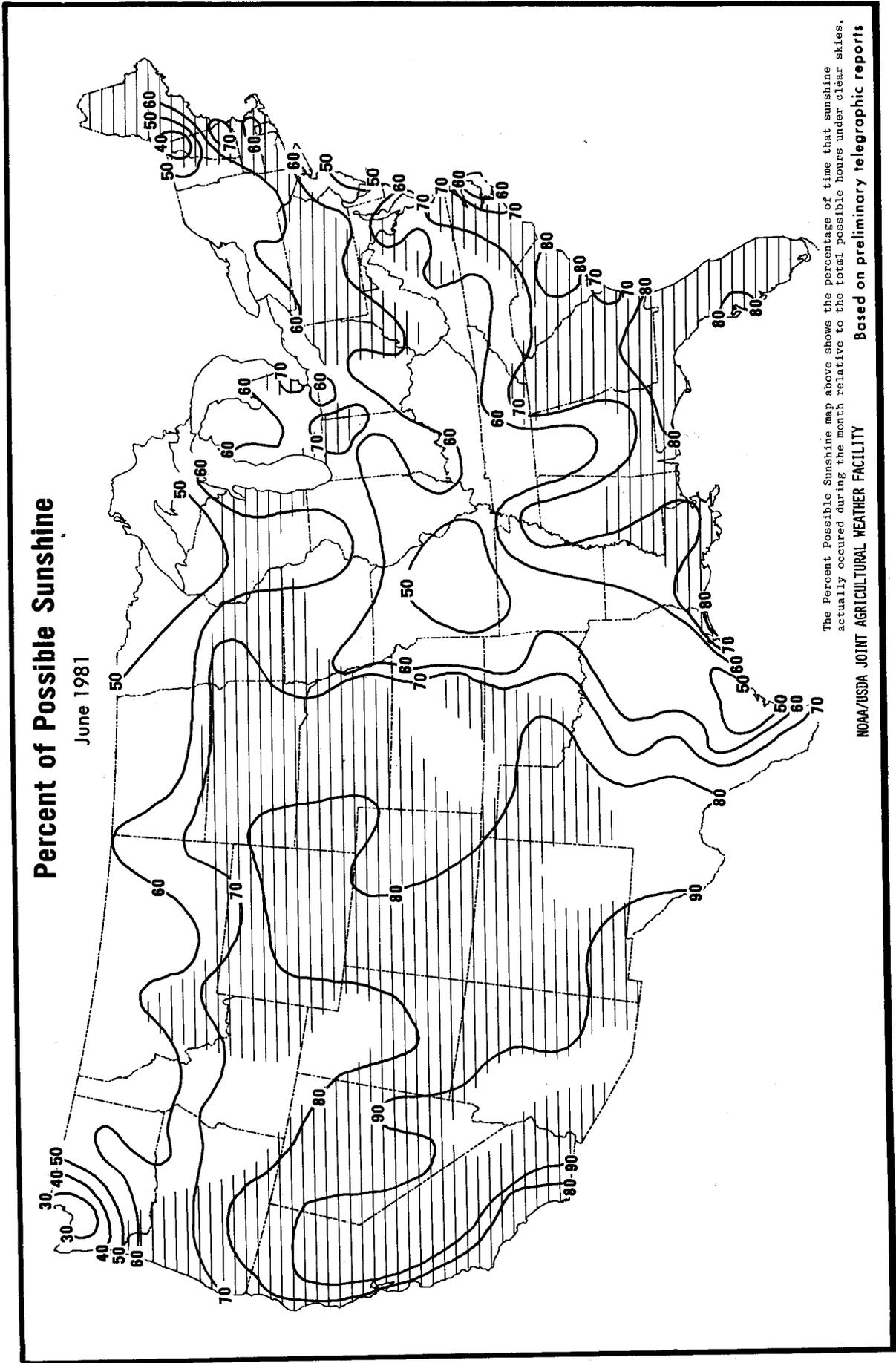
STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE June 1	PCT. NORMAL SINCE June 1	TOTAL, IN., SINCE Jan. 1	PCT. NORMAL SINCE Jan. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION	
																90 AND ABOVE	52 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
OR TULSA	100	80	102	78	90	8	.1	-.7	.1	4.0	58	16.7	76	91	46	7	0	1	0
OR ASTORIA	67	56	73	48	61	1	.1	-.1	.1	6.7	203	34.0	97	87	64	0	0	3	0
BURNS	86	45	92	37	65	-4	0	-.1	0	.7	58	7.1	108	77	1	2	0	0	0
MEDFORD	93	52	99	46	73	0	0	-.1	0	.9	75	6.3	57	78	18	6	0	0	0
PENDLETON	86	55	92	49	71	-3	0	-.1	0	2.4	200	9.0	120	60	21	3	0	0	0
PORTLAND	79	57	86	53	68	1	T	-.1	T	3.5	184	15.4	78	91	49	0	0	0	0
SALEM	81	50	88	48	65	-2	0	-.1	0	3.6	200	16.7	75	97	43	0	0	0	0
PA ALLENTOWN	87	62	91	55	75	0	T	-1.0	T	6.7	110	21.0	91	89	32	3	0	1	0
ERIE	82	64	91	55	73	4	T	-.8	T	5.1	93	21.0	105	79	44	1	0	1	0
HARRISBURG	88	65	95	62	77	0	T	-.8	T	6.0	113	18.0	89	85	38	3	0	0	0
PHILADELPHIA	88	68	95	62	78	1	.1	-.9	.1	7.1	115	20.4	93	85	40	3	0	1	0
PITTSBURGH	82	62	87	57	72	0	.4	-.5	.3	9.1	154	22.7	106	87	49	0	0	2	0
SCRANTON	84	62	89	55	73	1	1.3	-.3	.8	5.9	97	21.8	113	80	40	0	0	3	1
RI PROVIDENCE	88	62	92	59	75	3	.2	-.4	.2	4.2	98	16.4	74	93	37	3	0	1	0
SC CHARLESTON	94	78	99	75	86	6	.6	-1.3	.6	14.0	123	25.6	88	93	55	7	0	2	1
COLUMBIA	92	73	96	71	83	2	.3	-1.0	.3	8.4	117	20.8	80	97	50	6	0	2	0
GREENVILLE	91	73	97	70	82	4	.5	-.4	.4	4.3	65	16.8	61	90	53	5	0	2	0
SD ABERDEEN	87	65	90	61	76	4	1.0	-.4	.9	5.7	102	9.9	83	91	47	2	0	2	0
HURON	93	67	96	58	80	6	.1	-.4	.1	2.2	42	5.1	41	91	39	6	0	2	0
RAPID CITY	83	60	87	57	72	-1	1.4	-.9	.9	4.0	75	7.5	60	94	42	0	0	5	1
SIoux FALLS	91	69	100	57	80	6	.5	-.2	.5	6.6	102	10.0	65	81	43	6	0	1	0
TN CHATTANOOGA	95	73	98	69	84	5	1.3	.1	1.1	7.6	95	26.1	87	92	44	7	0	3	1
KNOXVILLE	93	74	95	73	84	5	.2	-1.0	.1	6.8	101	22.2	79	89	49	6	0	2	0
MEMPHIS	96	80	97	77	88	6	T	-.8	T	3.8	68	24.5	81	80	46	7	0	0	0
NASHVILLE	93	72	95	68	82	2	.7	-.2	.4	10.3	178	27.0	96	95	52	5	0	4	0
TX ABILENE	99	75	100	74	87	3	0	-.5	0	4.4	100	13.9	101	77	28	7	0	0	0
AMARILLO	96	68	100	65	82	3	.8	-.1	.4	1.9	36	7.2	67	72	29	7	0	3	0
AUSTIN	95	76	96	76	86	1	0	-.4	0	17.9	407	33.8	178	89	41	7	0	0	0
BEAUMONT	93	76	94	74	84	1	.2	-1.3	.2	16.4	195	31.1	107	100	63	7	0	2	0
BROWNSVILLE	94	76	96	74	85	1	0	-.2	0	4.6	131	17.0	155	90	51	7	0	0	0
CORPUS CHRISTI	92	75	92	73	83	-2	0	-.4	0	8.2	205	24.6	177	95	55	7	0	0	0
DEL RIO	98	73	99	72	85	-2	0	-.2	0	5.7	211	17.6	191	87	36	6	0	0	0
EL PASO	97	69	101	64	83	1	.7	-.3	.6	1.4	88	4.7	138	82	24	7	0	2	1
FORT WORTH	98	75	99	73	86	1	0	-.4	0	9.7	226	24.1	122	88	38	7	0	1	0
CALVESTON	89	81	89	78	85	2	.2	-.8	.2	14.9	213	23.3	111	81	63	0	0	1	0
HOUSTON	94	75	97	73	85	2	.3	-.6	.3	13.7	190	31.6	122	94	51	7	0	2	0
LUBBOCK	95	74	98	70	84	4	T	-.5	T	1.9	45	7.3	70	64	28	7	0	1	0
MIDLAND	101	69	105	66	85	3	0	-.4	0	.7	27	6.8	99	75	21	7	0	0	0
SAN ANGELO	95	69	97	58	82	-3	0	-.3	0	4.7	174	17.4	183	85	31	7	0	0	0
SAN ANTONIO	94	76	97	75	85	0	0	-.4	0	8.9	223	23.5	156	96	45	7	0	0	0
VICTORIA	94	76	95	75	85	1	T	-.6	T	12.3	241	26.7	151	96	51	7	0	1	0
WACO	97	75	99	73	86	0	0	-.3	0	7.3	192	18.0	94	91	40	7	0	0	0
WICHITA FALLS	100	76	102	72	88	2	0	-.5	0	5.7	119	18.6	111	71	30	7	0	0	0
UT BLANDING	85	58	92	57	72	-2	1.7	1.5	1.0	3.1	310	7.7	148	90	39	1	0	3	1
SALT LAKE CITY	92	61	94	54	77	-1	T	-.1	T	1.3	72	9.1	95	62	15	6	0	2	0
VT BURLINGTON	78	60	84	55	69	-1	1.0	.2	.5	5.2	93	19.4	120	87	49	0	0	3	1
VA LYNCHBURG	86	70	92	65	78	2	.1	-.8	.1	8.8	149	19.0	91	88	48	1	0	1	0
NORFOLK	87	72	94	67	79	1	.1	-1.2	T	9.5	138	19.6	85	88	53	3	0	2	0
RICHMOND	89	69	95	65	79	1	T	-1.3	T	6.9	101	21.7	98	89	49	4	0	0	0
ROANOKE	86	68	92	62	77	2	.7	-.2	.4	4.5	80	16.3	76	88	45	2	0	3	0
WA COLVILLE	78	53	88	47	66	-3	.3	.1	.3	4.9	245	13.9	151	87	48	0	0	1	0
OMAK	86	57	96	51	72	--	-.2	--	.2	1.3	--	6.4	91	47	31	4	0	1	0
QUILLAYUTE	65	52	77	43	59	0	-.7	.2	.4	9.8	196	54.6	99	99	71	0	0	5	0
SEATTLE-TACOMA	71	55	80	51	63	-2	-.9	.7	.9	3.7	185	15.9	81	87	58	0	0	2	1
SPOKANE	80	52	87	45	66	-4	.2	.1	.2	2.5	147	9.5	90	85	31	0	0	1	0
WALLA-WALLA	91	61	99	55	76	0	0	-.1	0	3.4	213	14.0	140	57	20	5	0	0	0
YAKIMA	88	53	96	44	71	-1	T	0	T	.7	70	3.2	74	77	26	5	0	1	0
WV BECKLEY	80	62	83	55	71	1	.6	-.4	.4	7.9	110	21.0	82	91	52	0	0	3	0
CHARLESTON	88	64	92	58	76	1	-.1	-1.1	.1	7.8	120	23.2	96	91	45	2	0	2	0
HUNTINGTON	87	65	93	60	76	1	.8	-.2	.7	8.8	147	27.9	119	96	54	2	0	3	1
PARKERSBURG	86	64	92	54	75	0	.4	-.5	.2	7.3	109	20.0	87	93	47	1	0	2	0
WI GREEN BAY	81	61	92	59	71	2	.1	-.7	T	2.8	51	10.8	71	95	56	1	0	2	0
LA CROSSE	85	68	91	62	76	3	2.6	1.8	2.1	9.5	142	18.6	110	98	58	2	0	4	1
MADISON	83	64	90	61	74	4	1.6	.8	1.3	8.2	119	15.1	88	85	53	1	0	4	1
MILWAUKEE	78	64	85	62	71	1	1.2	.5	.9	4.7	82	16.2	100	98	63	0	0	3	1
WY CASPER	89	56	92	55	73	1	.4	-.2	.4	1.3	65	8.0	110	85	17	3	0	1	0
CHEYENNE	81	58	86	51	70	0	.1	-.3	.1	3.7	100	11.1	113	89	34	0	0	3	0
LANDER	87	55	91	48	71	0	.1	-.1	T	.1	4	7.3	78	64	16	3	0	2	0
SHERIDAN	87	57	90	50	72	1	.1	-.1	T	2.3	59	8.3	74	75	26	2	0	1	0
PR SAN JUAN	91	78	93	75	85	4	2.0	.4	1.3	9.1	96	32.8	119	90	66	7	0	4	1

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

COOLING DEGREE DAYS (BASE 65°) FOR WEEK ENDING JUL. 19, 1981.  
 BASED ON 1941-70 NORMALS. + ACCUMULATION FROM JULY 1, 1981.

STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +		
	TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1980		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1980		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*	DEPARTURE FROM 1980
ALA. BIRMINGHAM...	141	11	1057	101	51	MAINE CARIBOU...	17	14	100	44	45	OKLA. OKLAHOMA CITY...	154	36	95	102	17
MOBILE...	131	11	1319	129	111	PORTLAND...	11	11	145	51	31	TULSA...	175	56	110	111	27
MONTGOMERY...	155	12	1229	129	111	MD. BALTIMORE...	87	7	615	104	77	OREG. ASTORIA...	147	1	60	5	9
FLAGSTAFF...	22	1	190	13	82	MASS. BOSTON...	70	8	461	171	147	BURNS...	1	1	60	5	9
PHOENIX...	14	1	2337	173	113	MICH. ALPENA...	26	1	322	95	63	MEDFORD...	1	1	60	5	9
TULSON...	14	1	1487	160	113	DETROIT...	1	1	666	61	1	PENDLETON...	1	1	60	5	9
MINSON...	14	1	1600	160	113	FLINT...	1	1	119	9	1	PORTLAND...	1	1	60	5	9
YUMA...	11	1	2337	173	113	GRAND RAPIDS...	1	1	664	16	16	SALEM...	1	1	60	5	9
ARK. FORT SMITH...	23	2	961	16	75	HOUGHTON LAKE...	35	5	322	40	40	PA. ALLENTOWN...	13	13	497	133	87
LITTLE ROCK...	151	38	1083	163	82	LANSING...	61	11	453	98	98	HARRISBURG...	3	3	436	144	108
CALIF. BAKERSFIELD...	10	10	1326	364	573	MARQUETTE...	11	1	28	28	28	PHILADELPHIA...	1	1	46	2	2
EUREKA...	13	2	1168	43	151	MUSKOGEE...	4	1	9	9	9	SCRANTON...	1	1	46	2	2
FRESNO...	22	2	450	27	284	ST. MARIE...	6	1	8	8	8	R.I. PROVIDENCE...	73	20	417	202	159
LOS ANGELES...	22	2	273	27	284	MINN. DULUTH...	20	2	92	11	11	S.C. CHARLESTON...	44	15	1227	204	141
RED BLUFF...	123	10	1088	251	99	INTERNAT. FALLS...	30	3	49	49	49	COLUMBIA...	15	15	1052	204	141
SAN DIEGO...	83	1	609	40	89	MINNEAPOLIS...	48	1	56	56	56	GREENVILLE...	24	3	934	166	108
SAN FRANCISCO...	1	1	100	39	89	ROCHESTER...	56	2	22	22	22	S. DAK. ABERDEEN...	27	27	276	49	48
STOCKTON...	84	1	929	39	89	ST. CLOUD...	66	1	16	16	16	HURON...	7	7	271	151	62
COLO. DENVER...	22	22	422	172	40	MISS. JACKSON...	144	25	12	88	87	RAPID CITY...	10	10	271	151	62
GRAND JUNCTION...	95	6	681	171	147	MERIDIAN...	161	25	12	88	87	STOUX FALLS...	4	4	469	135	90
PUEBLO...	25	25	677	223	92	MO. COLUMBIA...	120	24	657	117	114	TENN. CHATTANOOGA...	34	36	856	254	78
CONN. BRIDGEPORT...	76	13	346	59	32	KANSAS CITY...	120	24	760	179	179	KNOXVILLE...	40	40	796	306	202
HARTFORD...	13	13	444	175	139	SPRINGFIELD...	120	24	743	169	169	MEMPHIS...	4	4	841	14	15
DEL. WILMINGTON...	93	16	573	126	102	NEBR. BILLINGS...	76	23	293	103	103	TEXAS. ABILENE...	21	21	1250	186	162
D.C. WASHINGTON...	109	11	891	230	86	GLASSBORO...	48	22	124	101	101	AHARILLO...	22	22	145	1	1
FLA. APALACHICOLA...	154	42	1251	31	112	GREAT FALLS...	108	22	83	83	83	AUSTIN...	4	4	1357	1	1
DAYTONA BEACH...	148	4	1434	4	40	HAVRE...	22	22	92	71	71	BEAUMONT...	1	1	1357	1	1
FORT MYERS...	15	15	2072	262	98	HELONA...	22	22	92	71	71	BIRMINGHAM...	1	1	1357	1	1
JACKSONVILLE...	16	16	1384	220	206	MILLS CITY...	1	1	318	16	16	CORPUS CHRISTI...	1	1	1650	4	4
KEY WEST...	14	14	1448	198	198	MISSOULA...	1	1	49	22	22	DEL RIO...	1	1	1234	31	31
LAKELAND...	15	15	1448	198	198	NEBR. GRAND ISLAND...	106	22	56	91	117	EL PASO...	1	1	1234	15	15
MIAMI...	15	15	1448	198	198	LINCOLN...	113	22	39	196	16	FORT WORTH...	1	1	1234	15	15
ORLANDO...	15	15	1448	198	198	NORFOLK...	113	22	39	196	16	HOUSTON...	1	1	1234	15	15
TALAHASSEE...	15	15	1448	198	198	NORTH PLATTE...	113	22	39	196	16	LUBBOCK...	1	1	1234	15	15
TAMPA...	15	15	1448	198	198	OMAHA...	113	22	39	196	16	MIDLAND...	1	1	1234	15	15
WEST PALM BEACH...	15	15	1448	198	198	VALENTINE...	113	22	39	196	16	SAN ANGELO...	1	1	1234	15	15
GA. ATLANTA...	146	55	1080	317	52	NEV. LAS VEGAS...	187	1	168	390	485	SAN ANTONIO...	1	1	1234	15	15
AUGUSTA...	136	48	1026	34	34	RENO...	187	1	168	390	485	VICTORIA...	1	1	1234	15	15
Macon...	16	16	1224	161	1	MINNEAPOLIS...	4	4	272	103	131	WACO...	1	1	1234	15	15
SAVANNAH...	61	13	1331	170	97	N.H. CONCORD...	29	10	271	120	105	RICHITA FALLS...	1	1	1234	15	15
IDAHO. BOISE...	46	26	184	88	15	N.J. ATLANTIC CITY...	79	7	434	55	176	UTAH. SALT LAKE CITY...	83	9	467	106	72
LEXINGTON...	8	8	149	101	14	TRENTON...	84	4	475	33	18	VT. BURLINGTON...	32	9	293	111	99
POCATELLO...	33	17	153	14	92	N. MEX. ALBUQUERQUE...	101	3	719	98	25	VA. LYNCHBURG...	1	1	89	103	103
ILL. CAIRO...	137	25	1002	134	47	ROSELLE...	109	11	912	132	220	WASH. GUILDFORD...	1	1	0	0	0
CHICAGO...	137	25	1002	134	47	N.Y. ALBANY...	22	32	33	17	42	SEATTLE-TACOMA...	1	1	19	18	18
MOLINE...	97	7	493	128	48	BINGHAMTON...	41	1	339	9	9	SPOKANE...	1	1	19	18	18
PEORIA...	97	7	493	128	48	BUFFALO...	106	10	666	14	14	HALLA HALLA...	1	1	19	18	18
ROCKFORD...	77	21	421	155	11	ROCHESTER...	109	11	912	132	220	YAKIMA...	1	1	19	18	18
SPRINGFIELD...	105	11	696	150	11	SYRACUSE...	109	11	912	132	220	W. VA. BECKLEY...	4	4	267	35	25
IND. EVANSVILLE...	123	32	769	82	31	N.C. ASHEVILLE...	88	28	517	113	113	HUNTINGTON...	18	18	460	44	44
FORT WAYNE...	74	14	381	23	4	CHARLOTTE...	106	10	666	14	14	PARKERSBURG...	13	13	35	35	35
INDIANAPOLIS...	93	23	546	66	9	GREENSBORO...	106	10	666	14	14	WIS. GREEN BAY...	11	11	215	38	20
SOUTH BEND...	61	16	320	9	139	HATTERAS...	114	14	811	107	107	LACROSSE...	8	8	401	19	19
IOWA. BURLINGTON...	88	16	480	4	71	RALEIGH...	114	14	811	107	107	HADISON...	6	6	283	69	69
DES MOINES...	108	37	588	153	77	WILMINGTON...	121	16	980	44	44	HILLAUREE...	41	41	196	13	13
DUBUQUE...	69	20	358	77	102	N. DAK. BISMARCK...	36	11	171	11	11	WYO. CASPER...	5	5	25	25	25
SIoux CITY...	99	23	513	61	73	FARGO...	44	12	196	40	40	CHEYENNE...	5	5	25	25	25
KANS. CONCORDIA...	126	34	686	105	163	WILLISTON...	59	17	282	101	101	LANDER...	5	5	25	25	25
DODGE CITY...	141	41	880	240	83	OHIO. AKRON-CANTON...	56	7	356	55	55	SHERIDAN...	5	5	25	25	25
GOODLAND...	84	24	465	64	90	CINCINNATI...	56	7	356	55	55						
TOPEKA...	131	39	745	101	148	CLEVELAND...	56	7	356	55	55						
NICHITA...	150	38	868	89	210	COLUMBUS...	56	7	356	55	55						
KY. LEXINGTON...	92	15	569	16	29	DAYTON...	56	7	356	55	55						
LOUISVILLE...	118	34	760	149	0	TOLEDO...	56	7	356	55	55						
LA. BATON ROUGE...	141	22	1374	67	23												
LAKE CHARLES...	131	12	1307	55	39												
NEW ORLEANS...	130	11	1500	148	0												
SHREVEPORT...	134	8	1133	81	235												





## National Agricultural Summary

July 13-19, 1981

**HIGHLIGHTS:** Hot, dry weather in most regions of the Nation was ideal for haymaking and harvesting small grains. However, rain is needed for growing crops. Most areas of the Nation had almost a full week favorable for fieldwork. Soil moisture supplies were short to adequate in all areas except parts of the Great Plains and Southeast where supplies were short. Rain is needed to replenish soil moisture and sustain the growth of crops. Winter wheat harvesting reached 79% complete, 2 points behind last year. Harvesting was completed in the Southern Plains and underway in the Pacific Northwest. Spring wheat was 91% headed and beginning to turn color. Corn was in fair to good condition; 37% of the crop was silking. Harvesting was underway in the South. Soybeans were in fair to mostly good condition; 33% of the crop was blooming and 7% was setting pods. Cotton rated fair to good; 82% of the acreage was squaring and 43% was setting bolls. Grain sorghum was heading as far north as Nebraska. Harvest was in full swing in southern parts of Texas. Rice was 34% headed; harvesting was underway in Louisiana. Tobacco harvest gained momentum. Peanuts were in good to excellent condition. Deciduous fruit harvest spread throughout the Nation. Vegetables were harvested in increasing volume in northern production areas. Growers in the South prepared land for fall planting. Pastures rated fair to good except in the Southwest and parts of the Southeast where dry weather caused poor to fair conditions. Ranges in the West were extremely dry and fires threatened.

**SMALL GRAINS:** Winter wheat harvesting advanced to 79% complete, 2 points behind last year. Harvesting was underway in all major States except Idaho. Harvesting progress is normal for this date. Producers in Oklahoma and Texas finished winter wheat harvest and those in Kansas, Illinois, and Indiana neared completion, slightly ahead normal. Oats harvest was 15% completed in Ohio, 30% in Illinois, 40% in Indiana, 71% in Iowa, 34% in South Dakota, and just beginning in Michigan. Spring wheat heading in the five major States, reached 91% or 3 points ahead of last year and 5 points ahead of average. Much of the acreage was beginning to turn color.

**CORN:** Corn was in fair to mostly good condition. In the 17 major producing States, 37% of the crop was silking, lagging last year's progress of 48%. In the eastern North Central States, progress continued behind normal. Silking was as much as 27 and 25 percentage points behind average in Indiana and Ohio, respectively. In the Southeast, progress remained ahead of normal. Most of the acreage was in or past the dough stage and about three-fourths of the acreage was in the dent stage. Harvesting extended from southern Texas to Florida and as far north as South Carolina.

**SOYBEANS:** Soybeans rated fair to mostly good in all major production areas. In the 18 major States, 33% of the soybeans were blooming, behind last year's 46%. Seven percent of the crop was setting pods, compared to 11% a year earlier.

**COTTON:** Cotton was in fair to good condition, although a few poor stands were reported in Missouri. In the 14 major producing States, 82% of the acreage was squaring and 43% was setting bolls. Irrigation was resumed at a steady pace in Texas. In the Southwest, cotton continued to develop ahead of normal with stub cotton fields showing a substantial number of bolls.

**OTHER CROPS:** Grain sorghum heading advanced northward into Nebraska. In the seven major producing States, 29% of the acreage was heading, 1 point behind a year ago. Texas sorghum was 39% mature and harvesting reached 16% finished. Harvest was in full swing in South Texas and along the Gulf Coast.

Rice was in good condition in the Delta. In the five major States, heading advanced to 34% complete, compared to 31% last year. Harvesting was underway in Louisiana and expected to start soon in Texas.

Tobacco harvesting ranged from 1% complete in Virginia to 34% complete in Georgia. Wet, humid conditions in Kentucky were conducive to Blue Mold development, although no serious problems were reported.

Peanuts were in good to excellent condition. Pegging ranged from 80% complete in Alabama to 91% complete in Georgia. Planting in Texas was nearly complete.

**FRUITS AND NUTS:** Deciduous fruit harvests spread throughout the Nation. New England growers harvested early apples, peaches, and berry crops. Sweet cherry harvesting neared completion in most areas but continued active in Michigan and the Northwest. In the Southeast, peach harvest ranged from 57% finished in North Carolina to 63% in South Carolina and 73% in Georgia.

Scattered afternoon showers brought relief from the hot, dry conditions in Florida's citrus groves. Harvest was complete in all but a few groves on the lower East Coast. California growers harvested apricots, avocados, grapes, nectarines, peaches, plums, and apples. Arizona citrus groves were in good condition.

**VEGETABLES:** Northern growers harvested an increasing volume of summer vegetables, including sweet corn, snap beans, peas, tomatoes, cabbage, cucumbers, peppers, beets, and potatoes. Southern growers finished harvesting and started land preparations for late summer and fall plantings. California growers harvested carrots, lettuce, peppers, broccoli, cauliflower, celery, artichokes, and tomatoes.

**PASTURES AND LIVESTOCK:** Pastures and ranges were in fair to good condition except in the Southwest and parts of the Southeast where dry weather caused poor to fair conditions. Dry weather also slowed growth of grasses in parts of Kansas. California ranges were extremely dry, and fire conditions threatened. Hot weather stressed livestock in some areas of Iowa.

**Crop Update**

FOR WEEK ENDING JULY 19, 1981

	SOYBEAN % BLOOMING		
	1981	1980	AVG.
ALA	33	32	26
ARK	13	21	NA
GA	24	25	NA
ILL	46	73	58
IND	15	55	45
IOWA	60	67	60
KANS	15	30	15
KY	12	27	23
LA	39	27	39
MICH	20	15	19
MINN	45	68	62
MISS	41	34	33
MO	18	41	28
NEBR	45	65	NA
N C	19	10	NA
OHIO	20	45	50
S C	12	7	12
TENN	22	29	27
18 STATES	33	46	NA
EXCL. STATES WITH NA	35	50	44

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

	SOYBEAN % SETTING PODS		
	1981	1980	AVG.
ALA	10	11	NA
ARK	2	8	NA
GA	6	4	NA
ILL	10	22	19
IND	0	5	10
IOWA	19	19	17
KANS	1	5	5
KY	0	0	0
LA	16	11	NA
MICH	0	0	0
MINN	3	8	10
MISS	10	6	6
MO	6	10	NA
NEBR	5	15	5
N C	0	0	NA
OHIO	0	8	20
S C	1	2	NA
TENN	4	3	5
18 STATES	7	11	NA
EXCL. STATES WITH NA	8	12	12

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

	CORN % SILKING		
	1981	1980	AVG.
COLO	10	8	0
GA	100	100	NA
ILL	58	78	60
IND	13	45	40
IOWA	49	47	41
KANS	30	45	40
KY	65	60	63
MICH	5	5	19
MINN	38	58	53
MO	48	58	48
NEBR	35	50	35
N C	94	79	NA
OHIO	15	50	40
PA	0	0	0
S DAK	8	14	13
VA	64	42	NA
WIS	0	0	5
17 STATES	37	48	NA
EXCL. STATES WITH NA	34	46	39

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

	COTTON % SQUARING		
	1981	1980	AVG.
ALA	97	92	87
ARIZ	99	98	99
ARK	99	100	NA
CALIF	85	65	NA
GA	96	96	100
LA	95	94	93
MISS	99	97	95
MO	84	92	78
N MEX	95	95	NA
N C	88	78	NA
OKLA	45	40	40
S C	100	98	95
TENN	94	90	82
TEX	77	85	NA
14 STATES	82	84	NA
EXCL. STATES WITH NA	88	86	84

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

	COTTON % SETTING BOLLS		
	1981	1980	AVG.
ALA	65	50	39
ARIZ	92	69	81
ARK	53	91	66
CALIF	45	12	NA
GA	84	93	91
LA	58	57	56
MISS	60	58	40
MO	47	52	35
N MEX	45	40	28
N C	61	47	NA
OKLA	8	4	3
S C	95	78	70
TENN	21	43	25
TEX	35	28	NA
14 STATES	43	36	NA
EXCL. STATES WITH NA	54	56	46

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

	WINTER WHEAT % HARVESTED		
	1981	1980	AVG.
CALIF	93	92	NA
COLO	78	84	82
IDAHO	0	0	0
ILL	97	98	96
IND	95	95	90
KANS	98	99	96
MO	80	98	93
MONT	1	3	2
NEBR	92	90	75
OHIO	90	75	80
OKLA	100	100	100
OREG	3	3	NA
S DAK	52	76	43
TEX	100	99	100
WASH	2	0	4
15 STATES	79	81	NA
EXCL. STATES WITH NA	81	83	80

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

	SORGHUM % HEADED		
	1981	1980	AVG.
COLO	2	0	0
KANS	3	5	5
MO	14	26	16
NEBR	10	15	7
OKLA	15	30	20
S DAK	0	4	2
TEX	73	67	NA
7 STATES	29	30	NA
EXCL. STATES WITH NA	6	11	7

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

	RICE % HEADED		
	1981	1980	AVG.
ARK	8	6	NA
CALIF	5	4	NA
LA	65	58	63
MISS	23	11	12
TEX	93	92	NA
5 STATES	34	31	NA
EXCL. STATES WITH NA	53	44	48

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

	SPRING WHEAT % HEADED		
	1981	1980	AVG.
IDAHO	98	98	90
MINN	99	99	95
MONT	65	60	60
N D	93	88	87
S DAK	100	100	100
5 STATES	91	88	86

THESE 5 STATES PRODUCED 92% OF THE 1980 SPRING WHEAT CROP.

NA - NOT AVAILABLE

## 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 5° above normal. Below normal rainfall.

Fieldwork: 5.8 days. Activities: Planting sorghum, row crop cultivation, scouting and treating crop pests, and harvesting fruits, vegetables, and corn. Corn: Silked 97%, 89% 1980, 86% average; dented 65%, 38% 1980, 40% average; mature 32%, 13% 1980. Soybeans: Planted 100%; blooming 33%, 32% 1980, 26% average; setting pods 10%, 11% 1980. Sorghum planted 95%, 97% 1980. Cotton: Squaring 97%, 92% 1980, 87% average; setting bolls 65%, 50% 1980, 39% average. Peanuts pegging 80%, 59% 1980, 75% average. Conditions: Soybeans, cotton, peanuts good; corn, sorghum, pasture fair.

**ALASKA:** Tanana Valley: Cool north and near normal temperatures south with scattered light rain.

Matanuska Valley: Cloudy, cool and rain produced below normal temperatures and heavy precipitation.

Kenai Peninsula: Cloudy and rainy week.

Kodiak Island: Mild above normal temperatures but with rainfall at midweek interrupted an otherwise dry week.

Clear skies and warm temperatures started the week in the Tanana Valley but showers continued throughout Railbelt. Cutting hay in the Tanana Valley. Statewide cutting complete with prospects for second cutting average and above. Oats 80% headed out with early seeded fields in dough stage. Barley prospects generally above average with nearly 90% of barley acreage headed out. Over 10% at dough stage. Potato hilling nearing completion. Moisture supply normal to adequate. Vegetable supplies adequate to surplus.

**ARIZONA:** Scattered thundershowers eastern areas. Drying trend by weekend. Amounts mostly 0.25 to 0.75 in. Average temperatures mostly 1 to 4° below normal eastern areas, 1 to 5° above normal western regions.

Cotton better than average progress, squaring, blooming, boll setting increasing rapidly, 99% fields squaring, compared 98% last year. Fields setting bolls exceeded 90%, 15% ahead last year, stub cotton fields showed substantial number bolls. Early planted sorghum rapidly approaching maturing central, western areas, later planted fields, mostly double cropped behind small grains, all stages, developing good stands. Corn for green chop central areas nearly all cut, corn for grain, mostly Cochise County, tasseling. Safflower harvest virtually complete, better than average yields reported. Small grain harvest nearing completion. Sugarbeet harvest steady progress, abnormally hot weather reduced yields, sugar percents. Alfalfa haying good progress, ahead normal. Honeydew harvest active. Potato harvest, mostly chippers, rapidly winding down. Watermelon harvest steady Salt River Valley. Grape harvest complete western area, harvest Salt River Valley slowing. Citrus groves generally good condition. Ranges mid-to-higher elevations fair to good, adequate stock water, soil moisture. Southwestern Deserts, poor to fair, water supplies, soil moisture short to adequate. Livestock fair to good.

**ARKANSAS:** Another warm, humid week. Highest temperature 100°, lowest 63°. All normals ranged from -1 to +5°. Most rainfall 1.28 in., least zero.

Soybean emergence virtually complete. Soybean bloom 13%, 21% 1980. Setting pods less than 5%, 8% 1980. Cotton setting bolls 56%, 91% 1980, 66% average. Seven days suitable for fieldwork. Sorghum practically headed out. Grains rated good condition. Soil moisture supplies adequate. Forage cover on pastures slightly above average. Livestock condition good.

**CALIFORNIA:** With the exception of the South Coastal region, the temperatures over the State were below normal. It was particularly cool in the mountains and the Desert where temperatures were 1 to 6° below the normal. Only San Francisco recorded a trace of rain making this the second dry week of our water year.

Wheat and barley harvest continue. Wheat 93% harvested compared to 92% one year earlier. Rice progressing well. Cotton growing conditions excellent; squaring 85% complete compared to 65% one year earlier and 45% bolls set compared to 12% one year earlier. Good to excellent crop expected. Alfalfa cutting and baling continues. Corn in various growth stages. Sugarbeets show satisfactory growth. Dry beans in various stages of development. Set light due to high temperatures. Gravensteins underway Sebastopol. Delicious to begin mid-August. Apricots nearing completion. Avocados heavy supply. Table grapes complete Desert, peak Arvin. Fresh nectarines, peaches good supply. Clings increasing, sizes small early varieties. Bartletts sizing better, Sacramento River District past peak. Plums at peak. Some prune drop from sunburn. Valencia's moving Central areas. Lemons some affects from heat, Ventura. Almonds sprayed and splitting. Carrot, lettuce and green pepper harvest continues. Broccoli, cauliflower, celery, and carrot supplies good with good quality. Lettuce supply good with variable weight and quality. Artichokes very light supply, good quality. Mixed melons supplies very light with variable quality. Summer onion harvest beginning. Spring potato harvest complete. Market tomato supplies very good. Processing tomato harvest very active. Ranges extremely dry, high fire danger. Livestock in good condition. Stock water supplies depleted many areas.

**COLORADO:** Warm, moist, unstable air persisted with numerous showers and thunderstorms developing during afternoon and evening hours each day. The southwest area was especially hard hit. Flash flood watches covered the central and southern mountains during much of the week. Temperatures averaged 2 to 5° above normal with the northwest being slightly below normal.

Winter wheat turned color 97% 100% 1980, 98% average; ripe 92%, 94% 1980, 94% average; harvested 78%, 84% 1980, 82% average. Barley headed 95%, 88% 1980; turned color 45%, 55% 1980; ripe 29%, 42% 1980. Corn average height 53 in., 56 in. 1980, 56 in. average; silked 10%, 8% 1980, 9% average. Sorghum emerged 93%, 99% 1980, 100% average; sorghum headed 2%, 0% 1980, 0% average. Dry beans flowered 21%, 20% 1980, 20% average. Alfalfa 1st cutting 90%, 92% 1980, 97% average; 2nd cutting 36%, 30% 1980, 38% average. Ranges and pastures fair condition. Livestock good condition. Six days suitable for fieldwork.

**FLORIDA:** High pressure dominated with scattered thunderstorms, hot temperatures. Thunderstorm activity a little below normal but increased late week. Rainfall varied considerably with several places getting 2.00 in. or more. Temperatures were above normal with some places reaching over 100°. Lows were mostly in the 70's to the low 80's.

Soil moisture continues mostly short except for a few scattered localities. Harvest of corn progressing slowly. The acreage of dry land corn lost due to the drought is increasing. Tobacco harvest active. Hay harvest slow, yields below normal. Soybean, peanut condition declining due to lack of moisture. Sugarcane fair condition but needs rain. Pastures mostly good western Panhandle, extreme southern areas; poor to fair and very poor most other areas. Cattle mostly fair. In citrus growing areas, scattered afternoon showers during the week brought welcome relief from hot, dry conditions. Harvest complete for all but a few scattered groves lower East Coast. Season essentially complete vegetable crops. Light supply watermelons remain for harvest. Fieldwork limited to land preparation summer, fall crops.

**GEORGIA:** Very hot and dry temperatures, 5 to 8° above normal. High 70's mountains to upper 80's south. Rainfall averaged less than 0.25 in. except 0.50 to 1.00 in. extreme northwest and 0.25 to 0.50 in. southeast. Temperatures continued well above normal 18th and 19th. Thunderstorms more numerous. Rainfall 0.25 to 0.50 in. south, but less than 0.25 in. elsewhere.

Soil moisture very short to short. Hot, dry weather affecting crop prospects, scattered local showers provided some relief. Six days suitable for fieldwork. Main activities continue to be harvesting, spraying and irrigating. Corn poor to fair, 90% dough, 75% dent and 42% mature, last year 80%, 57% and 29% respectively; 4% harvested this year and 3% last year. Soybeans fair to good, 24% blooming, 25% last year; 6% pod set, 4% last year. Peanuts mostly fair to good, 98% blooming, 99% last year and average; 91% pegging, 90% last year, 94% average. Cotton fair to good, 84% setting bolls, 93% last year, 91% average. Tobacco fair to good, 34% harvested, 35% last year, average 49%. Pastures and hay crops poor to fair. Cattle and hogs fair to good. Peaches fair to good, 73% harvested, 83% last year, 86% average. Apples fair to good, 8% harvested, 14% last year. Watermelons mostly fair to good, 73% harvested, last year 71%, average 79%. Vegetables fair.

**HAWAII:** Rains during week brought welcomed relief Island chain but not for the drought stricken sectors, Island of Hawaii. Shortage of water very critical in the south Kohala District. Vegetable plantings ceased. Growers harvesting and salvaging their crop. Some fields were prematurely harvested. Production to drop drastically next week. This drought expected to offset production until late October or November when the winter rains come again if normal weather pattern continues as in past. Normally, summer and fall are dry seasons. Whatever intermittent rains come during this period, specialists predicting runoff will not be sufficient to generate waterflows to fill the reservoirs. Livestock people hauling water and feed to herds. Federal feed program continuing to assist ranchers. Rains on Island of Maui welcome relief. Most of reservoirs were filled. However, voluntary water use still in effect in anticipation of normally dry few months ahead. Elsewhere, rainfall beneficial to most crop areas. Spraying was heavy to control disease and insect infestations.

**Vegetables:** Supplies from the Waimea District, Island of Hawaii, greatly affected by drought. Lettuce, romaine, celery will have sharp shipment reduction. Head cabbage production, Island of Maui, reduced from heavy insect damage.

**Bananas:** Supplies will continue light. Moisture level adequate most Oahu orchards. **Papayas:** Production declining seasonally. Showers, Puna District, Island of Hawaii, beneficial. **Pineapples:** Peak harvest. Harvesting and canning on 24-hour basis. **Sugar:** Active harvesting will continue.

**Pastures:** Feed assistance continuing Island of Hawaii. Some ranchers report cattle death caused by drought.

**IDAHO:** Temperatures averaged 8° below normal. Mountain Home and Burley showed the high at 100°. Stanley had the low at 26°. Only a few stations reported minor precipitation.

Winter wheat headed: 100%, 100% in 1980, 100% average. One-half turning color. Winter wheat harvest just underway. Spring wheat headed: 91%, 83% in 1980. Second cutting of alfalfa: 6%, 12%, 5%. Cherry harvest virtually complete. Apricot harvest starting. Mint harvest 3% complete. Bluegrass swathing started. Potatoes: 43% closed middles. Seven days suitable for fieldwork.

**ILLINOIS:** Temperatures 2 to 5° above normal. Precipitation 0.25 to 1.00 in. northern third, 1.00 to 4.00 in. remainder of State.

Corn condition 17% excellent, 69% good, and 14% fair; 58% silked, 78% 1980, and 60% average; 5% dough, 13% 1980, and 9% average. Soybeans 46% blooming, 73% 1980, 58% average; 10% setting pods, 22% 1980, 19% average; condition 8% excellent, 66% good, 26% fair. Winter wheat harvest 97% complete, 98% 1980, 96% average. Oats 80% ripe, 51% 1980, 60% average; 30% combined, 28% 1980, 36% average. Alfalfa condition 15% excellent, 76% good, 8% fair, 1% poor; second cutting 72% complete, 68% 1980, 70% average. Pastures 16% excellent, 67% good, 17% fair. Soil moisture 20% short, 66% adequate, 14% surplus. Fieldwork: 5.0 days suitable.

**INDIANA:** Good general rains. Temperatures 4 to 6° above normal and ranged from 60's to middle 90's. Rainfall 2.50 in. west central, 1.20 to 1.70 in. elsewhere. Soil temperatures 2 to 6° above normal. Humidity above normal. Sunshine below normal.

Fieldwork averaged 6 days. Topsoil moisture short to adequate. Subsoil moisture adequate. Wheat 95% combined, 1980 95%, average 90%. Oats 40% combined, 1980 20%, average 35%. Rye 70% harvested, 1980 75%, average 75%. Corn and soybean condition fair to good. Corn 13% silked, 1980 45%, average 40%. Soybeans 15% blooming, 1980 55%, average 45%. Soybeans 0% setting pods, 1980 5%, average 10%. Corn 47 in. high, 1980 65 in., average 65 in. Soybeans 11 in. high, 1980 17 in., average 20 in. Alfalfa hay 50% cut second time, 1980 60%, average 65%. Pasture condition fair to good.

**IOWA:** Most of the State received good rains with the greatest amounts at Clarinda with 4.22 in., Centerville with 4.06 in., and Osage with 3.86 in. Significant portions of the northwest, central, and west central regions were left with little or no rain. Temperatures continued 4 to 5° above normal except the extreme east where it was only 2° above normal. Maximum temperatures were generally in the mid -80's to the low 90's.

Topsoil moisture: 28% short, 61% adequate, 11% surplus. Subsoil moisture: 38% short, 55%

adequate, 7% surplus. Corn tasseled: 1981 71%, 1980 78%, normal 64%. Corn silked: 1981 49%, 1980 47%, normal 41%. Soybeans bloomed: 1981 60%, 1980 67%, normal 60%. Soybeans setting pods: 1981 19%, 1980 19%, normal 17%. Oats harvested: 71% complete, 1980 50%, normal 51%. Second cut alfalfa hay harvested: 73% complete, 1980 65%, normal 65%. Second crop clover hay harvested: 30% complete, 1980 31%, normal 29%. Fieldwork: 5.3 days suitable. Crop conditions: pasture, winter wheat, alfalfa hay, clover, oats, corn and soybeans mostly good. Some heat stress affecting livestock with isolated reports of livestock losses.

**KANSAS:** Intermittent showers and thunderstorms, 0.20 in. northwest and west central, 0.30 in. to 0.50 in. south central and southeast, 1.13 in. east central. Temperatures averaged 80° northwest, 86° northeast and south central, 7° above normal northeast, 4 to 5° above normal elsewhere.

Wheat harvest 98% complete, 99% last year, 96% average. Corn 30% silked, 45% last year, 40% average. Soybeans 15% blooming, 30% last year, 15% average; 1% setting pods, 5% last year and average. Sorghum 3% headed, 5% last year and average. Chinch bug damage to sorghum most severe north central. Alfalfa second cutting 90%, third cutting 15%. Southwest continues dry, pastures rate poor to fair; rate good to excellent elsewhere.

**KENTUCKY:** Temperatures 5° warmer than normal. Rainfall amounts averaged between 1.00 and 2.00 in.

Fieldwork: 4.8 days suitable. Soil moisture 19% short, 73% adequate, 8% surplus. Northern counties near Cincinnati were adequate to short while rest were mostly adequate. Corn making good progress, 65% silked and beyond, compared with 60% last year and 63% average. Soybean development behind last year, 12% blooming compared to 27% last year. Some late planting still being done. Tobacco highly variable depending on date planted and soil conditions. Vary from ready to top to very small. About 65% of crop 2 feet or more in height. Wet, humid conditions experienced last week were conducive to blue mold development in scattered counties. Pastures good to excellent. Hay quantity good but quality has been hurt by frequent rains.

**LOUISIANA:** Rainfall sparse. Temperatures 2 to 3° above normal.

Soil moisture adequate. Days suitable: 5.6. Corn dough stage 90%, 71% 1980, 79% average; mature 57%, 20% 1980; condition fair to good. Rice headed 65%, 58% 1980, 63% average; ripe 11%, 11% 1980 and average; harvested 6%, 4% 1980; condition good. Cotton squaring 95%, 94% 1980, 93% average; setting bolls 58%, 57% 1980, 56% average; condition good. Soybeans blooming 39%, 27% 1980, 39% average; setting pods 16%, 11% 1980; condition fair to good. Sorghum headed 77%, 36% 1980, 58% average; turning color 37%, 5% 1980; condition good. Sugarcane condition good. Sweet-potato harvest just beginning, condition good. Vegetables fair to good. Peach harvest 90%, 86% 1980. Pastures, livestock good condition.

**MARYLAND AND DELAWARE:** Rainfall light with 1° above normal temperatures. Highs in mid 90's all stations, low averaged mid 60's. Many stations reported no rainfall. Average precipitation 0.10 in.

Crop deterioration beginning. Late corn and soybeans beginning to stress. **Maryland:** Corn 55% silked, 40% last year. Rye and barley harvested. Wheat 90% cut, 90% last year. Oats 50% in north, completed elsewhere. Alfalfa hay 2nd cutting 85% completed, other hays, 55% harvested.

**Delaware:** Corn 55% silked, equals last year. Barley, rye, and wheat harvest completed, a few acres of oats remaining in north. Second cutting alfalfa hay 90% cut, other hays at 70%. Blue mold prevalent in tobacco topping just underway. Insects beginning to cause concern in scattered areas in both states.

**MICHIGAN:** Precipitation extremely spotty in all areas. Average rainfall 0.25 to 0.50 in. Temperatures Lower Michigan normal to 2° above normal, Upper Peninsula 2° above normal west, near normal east.

Wheat harvest in full swing southern areas, just getting underway central areas. Statewide 35% combined, 10% last year, 35% average. Oats development hastened by warm weather, few early fields harvested. Row crops drawing heavily on soil moisture and stressed by warm, dry weather. First crop hay nearing completion, second cut in full swing southern areas. Developing crops need rain.

**MINNESOTA:** Temperatures averaged near normal. Extremes: 98° Lamberton, 48° Ely. Precipitation averaged normal to 1.00 in. above normal except slightly below normal central through west central. Local areas southeast 1.80 in. above normal. Precipitation totals generally 0.50 to 1.75 in. except patchy areas less than 0.50 in. Recent heavy rains over most of southern half of State of great benefit to crops. Rains came just when crops beginning to show stress. Rochester and Preston areas received between 7.00 and 8.00 in.

Topsoil moisture rated 4% very short, 10% short, 69% adequate and 17% surplus. Tasseling: Field corn 38%, 1980 58%, normal 53%. Blooming: Soybeans 45%, 1980 68%, normal 62%; sunflowers 11%, 1980 31%, normal 14%. Turning ripe: Spring wheat 60%, 1980 64%, normal 50%; oats 72%, 1980 77%, normal 64%; barley 76%, 1980 75%, normal 56%; winter wheat 94%, 1980 96%, normal 91%; rye 93%, 1980 94%, normal 93%. Cut or swathed: Spring wheat 3%, 1980 3%, normal 11%; oats 8%, 1980 8%, normal 19%; barely 4%, 1980 17%, normal 17%; winter wheat 15%, 1980 34%, normal 34%; rye 12%, 1980 23%, normal 31%.

**MISSISSIPPI:** Temperatures about 3° above normal. Extremes: 67 and 103°. Rainfall limited to widely scattered thundershowers. Greatest 24-hour rainfall 1.18 in.

Soil moisture short to adequate. Fieldwork: 6.1 days suitable. Cotton 99% squaring, 97% last year, 95% average; 85% blooming, 83% last year, 70% average; 60% setting bolls, 58% last year, 40% average; condition good. Soybeans 41% blooming, 34% last year, 33% average; 10% podding, 6% last year and average; condition good to fair. Rice 23% heading, 11% last year, 12% average; condition good. Corn 78% in dough stage, 51% last year; 36% dented, 20% last year; condition good. Sorghum 45% headed. Hay harvest 70% completed, peaches 55%, watermelons 60%, and corn silage 27% harvested. Pasture condition good.

**MISSOURI:** Temperatures averaged 4° above normal across State. Precipitation fell mostly in last half of week in form of thunderstorms. Rains spotty with locally heavy amounts of 3 in. or more.

Fieldwork: 4.7 days suitable. Wheat harvested 80%, 98% 1980. Soybean plantings at 95% for single crop. Soybean blooming 18%, 40% 1980. Grain sorghum 93%. Corn condition reported 15% excellent, 6% good, 16% fair, 2% poor with 64% tasseled, 48% silking. Pasture condition 18% excellent, 65% good, 13% fair, 4% poor. Topsoil moisture supply 30% surplus, 51% adequate, 19% short. Second crop alfalfa hay 77%, 84% 1980.

Cotton squaring 84%, 92% 1980, 78% average.  
Cotton setting bolls 47%, 52% 1980, 35% average.

**MONTANA:** Showers and thundershowers occurred over much of State first and last of week. Up to 1.50 in. of rain fell from heavy showers. Isolated severe hailstorms accompanied a few thundershowers. Temperatures were generally mild and ranged from a few degrees below normal in North Central and Central to 2° above normal in South Central. Highest 94° at Billings and Glasgow, lowest 32° at West Yellowstone and Wisdom.

Topsoil moisture short to adequate; subsoil moisture adequate northwest and central, short to adequate elsewhere. Fieldwork: 6 days suitable. Winter wheat condition good to excellent. Harvest began in localized areas last week. Yield very good although affected somewhat by wheat streak mosaic and barley yellow dwarf. Spring small grains good to excellent condition Central, South Central and Northwest, fair to good Eastern third; good elsewhere. Moisture needed for spring small grains to realize potential. Sugarbeet condition good to excellent main growing areas. Corn and potato condition good. Crop progress compared with last year and average: winter wheat turning 70, 70, 70; winter wheat ripe 15, 15, 15; spring wheat headed 65, 60, 60; spring wheat turning 25, 30, 25; barley turning 30, 25, 25; oats turning 30, 20, 25. First cutting alfalfa hay harvested 90, 85, 90; wild hay harvested 60, 45, 50. Irrigation supplies currently average, prospective supplies somewhat below average. Livestock condition good.

**NEBRASKA:** Temperatures 3 to 5° above normal. Precipitation: as of 17th, thunderstorm amounts averaged from 0.75 in. across southern border to 0.20 in. in Panhandle. Additional amounts fell in many areas over weekend.

Winter wheat harvest 92%, 90% last year and 75% normal. Corn fair to mostly good; silking 35%, 50% last year and 35% normal; silking 50% in east central and southeastern counties. Sorghum mostly fair to good. Heading 10%, 15% last year and 7% normal. Soybeans fair to good. Blooming 45%, 65% last year. Podding 5%, 15% last year and 5% normal. Second cutting of alfalfa 80%, same as last year but 70% normal. Pasture and range feed supply mostly short to adequate. Topsoil moisture as of 17th, short. Subsoil moisture short. Days suitable 6.4.

**NEVADA:** Cool early, warming trend midweek raised temperatures to near normal. Extremes: 109 and 32°. Cloudy end of period. Thunderstorm activity confined to eastern border.

Lack of rain ideal for alfalfa hay and small grain harvesting. Warmer night temperatures benefited most row crops. Hot, dry weather continues to deteriorate ranges and stock water supplies.

**NEW ENGLAND:** Low pressure most of week. Temperatures above normal. Highs: north, 70's and 80's; south, 80's and 90's. Humid throughout week. Variable precipitation occurring as scattered showers and thunderstorms. Portland, Maine and South Weymouth, MA. 1.22 inches.

Fieldwork: 5.5 days favorable. First crop hay cut, 87%. Potatoes: blooming, hilling, cultivating and applying insecticides. Oats growing well, headed. Apples: scab, sizing. Vegetables: harvesting, growing well, many insects. Cranberries: good fruit set, fruitworm treatment. Strawberries: harvest declining, renovation occurring. Good conditions: corn, potato, oats, vegetables, cranberries, raspberries. Fair condition: apples, blueberries. Soil moisture mostly adequate, grazing adequate.

**NEW JERSEY:** Temperatures averaged 1 to 2° above normal. Extremes: 49° at Newton and Neshanic Station on 16th and 97° at Hammonton on 19th. Rainfall averaged 0.14 in. north, 0.05 in. central and none in south. Heaviest 24-hour total 0.33 in. at Long Valley on 13th. Estimated soil moisture, in percent of field capacity, averaged: 59 north, 40 central and 31 south. Four inch soil temperature averaged: 76 north, 78 central and 80 south. Total sunshine at Trenton from 13th to 19th was 76% of possible hours.

Fieldwork: 6.6 days suitable. Above normal temperatures continue to dry soils and advance crop maturity. Cooler weather and a good soaking rain would be beneficial. Summer vegetables in good supply. Limited movement of white potatoes continues. Blueberry harvest past peak. Peach harvest increasing. Red Haven picking begun. Summer apples continue in light volume. Wheat harvest well advanced. Oat combining beginning. Hay making very active. Pastures browning from heat.

**NEW MEXICO:** Scattered showers throughout the State all week. Temperatures averaged within 2° of normal.

Soil moisture remains in short to adequate supply. Farm activities included hay cutting, irrigating, and cultivating. Cotton remains in good condition and progressing slightly ahead of last year. Cotton squaring 95%, 1980 95%. Cotton setting bolls 45%, 1980 40%, average 28%. Alfalfa in good condition with only minor insect problems. Much of the hay cut in the last two weeks has been rained on. Harvest of wheat and barley complete in the major producing areas. Corn and irrigated grain sorghum in good condition. Chile and onions continue in good condition. Pecans progressing well. Apple harvest expected to get underway in mid-August in the southern producing areas.

**NEW YORK:** Temperatures near normal, rainfall below normal.

Good fieldwork conditions. Second cutting alfalfa for dry hay 18% in, 14% 1980, 16% average. First cutting alfalfa over 90% in. Clover-timothy haying nearly 90% done. Wheat harvest off to quick start at 30% complete, under 5% 1980, 17% average. Vegetable crops condition good. A few early Upstate potatoes being harvested. Snap bean, sweet corn harvesting beginning. Sweet cherry harvest complete; splitting of fruit due to earlier heavy rains significant. Tart cherry harvest nearing completion. Chautauqua, Erie, Niagara Counties set on Concord grapes good.

**NORTH CAROLINA:** Temperatures: 2 to 5° above normal. Precipitation: a few hundredths in the west to over 2.00 in. on the coast.

Fieldwork: 5.6 days suitable. Soil moisture: 4% very short, 47% short, 47% adequate, 2% surplus. Conditions: pasture fair to mostly good; field tobacco, corn, cotton, peanuts, soybeans, hay, Irish potatoes, sweetpotatoes, apples, peaches and truck crops mostly good. Harvest: flue-cured tobacco 15%, 1980 8%, 14% average. Peaches 57%, 1980 66%, 61% average; hay 69%, 1980 68%, 71% average. Phenological stages: cotton squared 88%, 1980 78%; cotton setting bolls 61%, 1980 47%; corn silked 94%, 1980 79%; corn dough stage 69%, 1980 52%; corn dent stage 37%, 1980 21%; soybeans blooming 19%, 1980 10%.

**NORTH DAKOTA:** Thunderstorms brought heavy rainfall to portions of central and southeast early last week and again over the weekend. Heaviest reported amounts were 5.20 in. southeast. Elsewhere rainfall averaged above normal in all but the north central and northeast divisions. Temperatures averaged near normal, breaking the

recent hot spell. Extremes ranged from 90° northwest and northeast to 48° west central.

Moisture received over most of the State helped later seeded small grains and row crops. Conditions have been good for row crop development. Despite the generally good to excellent crop conditions, heat stress from abnormally high temperatures earlier showing up, especially in the west. The heat reduced high potential yields somewhat. Topsoil moisture supplies considered short in only 36% of the State, compared to 81% last year and the average of 60%. Maturity of hard red spring wheat, barley and oats ahead of normal, durum about normal. Swathing of rye, winter wheat, barley and oats just getting underway on a limited scale. Percent heading to flower or beyond with last year and average: Hard red spring wheat 93, 88, 87; durum 88, 85, 81; barley 96, 88, 89; oats 94, 89, 88. Row crop developing rapidly with hot weather and good moisture but development to date still generally lags normal progress due to the cool wet June. Average height of all fields with last year and average: Sunflower 30, 29, 34; corn 32, 34, 38. Percent bloom or beyond: Potatoes 60, 52, 67; flax 46, 31, 44; dry beans 43, 21, 45.

OHIO: Temperatures slightly above normal; extreme highs ranged from upper 80's to mid-90's. Growing degree days slightly above normal. Precipitation widespread and highly variable. Northwest driest with only 0.25 in.; elsewhere 0.75 to 1.50 in. Evaporation loss ranged from 1.41 to 1.75 in.

Good weather to combine small grains, cut hay. Weekend rains spilling over into next week helped row crops which had been under stress from heat and dry soils. Corn, soybean development continued to lag. Row crops condition mostly fair. Wheat harvested 90%, 75% 1980, 80% average. Soybeans blooming 20%, 45% 1980, 50% average. Corn silking 15%, 50% 1980, 40% average. Soybeans setting pods 0%, 8% 1980, 20% average. Oats harvested 15%, 15% 1980, 15% average. Alfalfa harvest (2nd cut) 40%, 50% 1980, 60% average. Other hay (2nd cut) 20%, 30% 1980, 30% average. Days favorable 6.5. Pasture condition fair to good. Soil moisture 61% short, 38% adequate, 1% surplus.

OKLAHOMA: Rainfall received all areas except southeast and south central divisions. Averaged from 0.01 in. southwest division to 0.75 in. Panhandle. Temperatures averaged 1° above normal southwest. Elsewhere, temperatures averaged 3 to 7° above normal.

Row crops in good condition but more rain needed. Soil moisture supplies shortest northern one-third State. Wheat harvested: 100% 1981; 100% 1980, 100% average. Sorghum grain heading: 25% 1981; 30% 1980; 20% average. Sorghum grain milk-to-dough; 8% 1981; 5% 1980; 3% average. Cotton squaring: 45% 1981; 40% 1980; 40% average. Cotton setting bolls: 8% 1981; 4% 1980; 3% average. Days suitable for fieldwork: 6.5.

OREGON: Mean temperatures 1 to 4° below normal. Only rain along coast with 0.10 to 0.50 in.

Soil moisture supplies mostly adequate although short supplies in some areas, especially southwest. Winter wheat condition good in east, fair to good west. Wheat 95% turning color with 3% harvested; 3% harvested in 1980. Barley harvest continuing. Haying continuing with open weather. Grass seed harvest in full swing with most of crimson clover complete. Spearmint harvest in full swing in Malheur County. Green pea harvest winding down; early snap bean harvest just starting. Norgold potatoes being dug in Hermiston-Boardman area. Cherry harvest peaked, better quality than earlier in season. Strawberries about complete; caneberry and bushberries in full

swing. Pear thinning in Bartletts. Filberts good condition. Livestock condition good. Range and pastures good but drier weather has reduced forage growth. High fire danger in some eastern counties.

PENNSYLVANIA: Another sunny, very warm and mostly dry week. Near normal average temperatures. Coolest 15th with warming trend thereafter and increasing humidity over the weekend. Temperature maximums mostly in the 70's and 80's and minimums in the 50's and 60's. Extremes: 41 and 94°. Light widely scattered showers beginning, mid week and end of period produced rainfall amounts of 0.10 to 0.40 in. south and 0.30 to 1.00 in. north.

Six days suitable. Topsoil moisture adequate to short. Activities: making hay; harvesting small grains; baling straw; spraying potatoes and alfalfa; harvesting sweet corn, snap beans, peaches, and apples. Average corn height 57 inches; last year 43 inches. Barley 7% turning yellow, 5% ripe, and 84% harvested; last year 11% turning yellow, 18% ripe, and 70% harvested. Wheat 11% turning yellow, 36% ripe, and 52% harvested; last year 20% turning yellow, 45% ripe, and 32% harvested. Oats 21% headed, 50% turning yellow, 24% ripe, and 5% harvested; last year 33% headed, 48% turning yellow, 15% ripe, and less than 5% harvested. Second cutting alfalfa 61% complete; last year 50%. Clo-tim harvest virtually complete; last year 94%. Quality of hay made good to fair. Feed from pasture average to below average.

PUERTO RICO: Island average rainfall 1.23 in. or 0.12 in. below normal. Temperatures averaged 83 to 81° on Coasts and 77 to 76° Interior Divisions. Extremes: 95 and 62°.

SOUTH CAROLINA: Above normal temperatures first of week to near normal latter part of week. Scattered thunderstorms middle of period.

Soil moisture short to adequate. Five and one-half days suitable for fieldwork. Corn fair condition, 90% dough stage, 64 year ago, 72 average; 31% mature, 14 year ago, 22 average. Some harvesting just beginning. Cotton condition good, 95% setting bolls, 78 last year, 70 average; insect control for boll weevil active. Soybean condition fair to good, 12% blooming, 7 last year, 12 average. Peaches good condition, quality good, 63% harvested, 60 last year, 66 average. Tomatoes 98% harvested, 97 last year. Watermelons fair to good condition, 66% harvested, 63 last year, 69 average.

SOUTH DAKOTA: Temperatures near normal. Extremes: 104 and 48°. Precipitation over most of State. Mainly 1.00 to 2.00 in. North central received 3.00 to 4.00 in.

Topsoil moisture critically short northwest, central and east central. Adequate in west central, north central and extreme northeast. Short elsewhere. Small grain harvest, except winter rye, ahead or equal to normal. Five days suitable. Row crop condition and maturity below normal. Conditions 83 to 86%. Livestock in good condition. Ranges and pasture condition 62% of normal. Second crop alfalfa 30% cut. Wild hay 42% harvested. Oats turning color 95%, 1980 96%, average 82%. Spring wheat turning color 75%, 1980 85%, average 65%. Barley turning color 95%, 1980 94%, average 84%. Corn tasseled 21%, 1980 36%, average 26%. Corn silked 8%, 1980 14%, average 13%. Sorghum headed 0%, 1980 4%, average 2%. Winter wheat harvested 52%, 1980 76%, average 43%. Winter rye harvested 21%, 1980 40%, average 29%. Oats harvested 34%, 1980 33%, average 21%. Spring wheat harvested 10%, 1980 19%, average 11%. Barley harvested 30%, 1980 31%, average 24%.

TENNESSEE: A weak stationary front dominated. Scattered thundershowers occurred with 1.00 to 1.50 in. of rain in the east and northwest and only a trace in the southwest. Temperatures averaged 2 to 6° above normal.

Fieldwork: 4.8 days suitable. Soil moisture adequate. Soybean blooming 22%, 1980 29%, average 27%. Soybeans setting pod 4%, 1980 3%, average 5%. Cotton 94% squaring, 90% 1980, 82% average. Cotton setting bolls 21%, 1980 43%, average 25%. Corn 74% silked, 1980 66%, average 65%. Corn in dough stage 25%, 1980 12%, average 15%. Some topping on tobacco; blue mold spreading. Green June beetle and Japanese beetle feeding on ripening fruit. Pastures fair condition. Fly population on the rise. Haymaking nearing completion. Second cutting of alfalfa 93% completed, 1980 94%, average 88%. Cultivation and weed spraying continues. Early apples being marketed.

TEXAS: Weather: High pressure kept much of State free of precipitation. A few showers were in evidence in Panhandle, Coast. Temperatures little above normal over all. Precipitation generally below normal.

Range and livestock: Range and pasture conditions declined, some areas short of moisture. Grasshoppers, other insects problem on Plains and western portion of State. Livestock remain in fair condition, stomach worms continue plague sheep, goats.

Commercial vegetables: San Antonio-Winter Garden harvest spring vegetables virtually completed. Harvest peas, okra continue. North, East Texas, harvest tomatoes, okra, peppers, squash, peas, corn, beans nearing completion. Harvest watermelons active. Trans-Pecos area, harvest potatoes, onions active. Harvest cantaloups expected. High Plains onion, potato harvest active. Peach harvest Elberta, late varieties active. Fruit quality good. Pecans entering water stage. Warm, dry conditions prevailed.

Crops: Warm, dry conditions prevailed. Field crops continued to progress, some areas in need of rain. Sorghum harvest South Texas, Gulf Coast in full swing. Cotton continues to develop well Panhandle. Irrigation resumed at a steady pace. Early planted fields setting bolls, later planted fields beginning to bloom. Grasshoppers, other insects continue to build, Plains, boll weevils, bollworms in Blacklands. Statewide condition 8% excellent; 62% good; 30% fair. High Plains outlook remains good. Sorghum harvest continued at steady pace South, South Central Texas. Crop maturing rapidly, production expected to be good. Harvest should begin soon Blacklands, East Texas. Condition Statewide 28% excellent; 60% good; 12% fair. Corn, Panhandle continued to tassel, some early fields filling ears. Harvest underway Rio Grande Valley. Grasshoppers, cornborers, other insects building. Statewide condition reported as 24% excellent; 64% good; 12% fair. Wheat harvest virtually complete. Small grain fields now being plowed. Soybeans being replanted, Coast, many fields flooded out. Stands in good condition, developing well. Peanut planting nearly complete, stands in good condition. Irrigation of fields underway. Rice progressing well, harvest expected soon. Cotton squaring 77%, 85% 1980. Cotton setting bolls 35%, 28% 1980. Cotton open bolls 5%, 8% 1980. Rice headed 93%, 92% 1980. Rice turning color 60%, 52% 1980. Rice harvested 0%, 1% 1980. Sorghum headed 73%, 67% 1980. Sorghum turning color 59%, 57% 1980. Sorghum mature 39%, 42% 1980. Sorghum harvested for grain 16%, 37% 1980, 27% average. Wheat harvested 100%, 99% 1980, 100% average. Oats harvested 100%, 100% 1980, 100% average. Peanuts planted 100%, 100% 1980, 100% average. Soybeans planted 94%, 100% 1980, 100% average. Sunflowers planted 96%, 100% 1980, 99% average.

UTAH: Recurring periods scattered shower and thunderstorm activity principally southern portion. Accumulated amounts variable ranging from little or none to locally very heavy. Considerable local flash flooding and local hail damage to crops heavier thunderstorms areas. Average temperatures generally above normal, ranging from 2° below normal to 5° above.

Major farm activities included irrigation and harvest of small grains, hay, and fruits. Second crop hay 33% cut. Both quality and tonnage better than first crop. Winter wheat 12% harvested, barley about 7%. Corn development ahead of last year. Average height 40 in. Tart cherries 25% picked, apricots about 45%. Peach harvest to begin August 10.

VIRGINIA: A cold front crossed the State 15th and brought welcome relief from hot summertime temperatures. Highs 16th mostly in the 70's. The front brought moderate rainfall to the southwest. Light amounts fell elsewhere. By 18th and 19th temperatures climbed back into the 90's.

Topsoil moisture was rated 50% short, 46% adequate. Days suitable for fieldwork: 5.2. Corn in excellent condition, 64% silking or has silked, 42% 1980. Soybeans in good to excellent condition, bloom beginning. Peanuts excellent condition, late land plaster being applied, spraying for insect control. The tobacco crop continues to be rated in excellent condition, 5% of the flue-cured tobacco harvested, 1% 1980, 2% average. Pastures and hayfields in good to excellent condition and an additional cutting may be possible if rainfall is adequate. Wheat harvest nearly complete except in southwestern areas; 98% this year, 92% 1980, 89% average. Crop prospects continue to be very favorable but showers would be welcomed. Crops not yet under stress but need additional moisture. Garden and vegetable crop harvests have been bountiful this year.

WASHINGTON: West: Average temperatures were 2 to 5° below normals. Precipitation averaged 0.20 to 0.30 in. above normal except in the southwest where averages were 0.10 to 0.20 in. below normal. Strawberry harvest near completion. Raspberry harvest at midway point. Blueberry harvest got started in some areas while harvest continued strong in early areas. Harvest of fresh market vegetables continued. Corn and carrots growing well, while cucumbers slightly behind normal. Green pea harvest continued for second week. Hay baling, green chopping, and silage making continued. Hay and pasture feed adequate.

East: Temperatures averaged 2 to 4° below normals, but precipitation, mostly as showers, was near normals. Harvesting of peaches and apricots continued. Cherry harvest winding down. Apples turning color and size average. Early potatoes being harvested on a limited basis. Other crops being harvested include vegetables, dry peas, mint, turnip seed and wheat. Winter wheat was in its early stages of harvest. Spring wheat and barley harvest about a week or two off in most areas. Wheat and barley were reported in average or better condition. Grass seed harvest expected to begin this week. Alfalfa baling continued with some areas into its second cutting. Soil moisture in dryland areas was adequate. Winter wheat harvested 2%.

WEST VIRGINIA: Temperatures near normal. High 94°, low 40°. Precipitation below normal except above normal in southern areas. Range: Trace to 3.56 in.

Soil moisture adequate to short. Days suitable for fieldwork: 4.9. Main activities: Hay harvesting, small grain harvesting, and gardening. Wheat good to fair, 12% headed, 33% ripe, 55%

harvested, 16%, 45%, 39% in 1980. Barley good to fair, 5% headed, 18% ripe, 77% harvested; 11%, 24% and 65% in 1980. Oats good to fair, 3% pre-headed, 39% headed, 32% ripe and 26% harvested; 4%, 56%, 30%, and 10% in 1980. Corn good to fair. Hay good to fair, 1st cutting, 85% complete, 79% of normal, 91% and 87% in 1980; 2nd cutting 25% complete, 83% of normal, 27% and 79% in 1980. Fruit poor to fair, peaches 4% harvested, 55% of normal, 7%, 64% in 1980. Tobacco fair. Pastures good to fair. Potatoes good to fair. Gardens fair to good.

WISCONSIN: Temperatures averaged 1° above normal as the State experienced a mild week. Highs were mostly 90's and lows mostly 50's. Extremes: 95 and 52°. Rainfall heaviest in the southwest which averaged 2.10 in. Other regions averaged from 0.20 to 2.00 in. Localized flooding reported on the Kickapoo and Lacrosse Rivers while many areas in the east central area reported only 0.10 in. of rainfall.

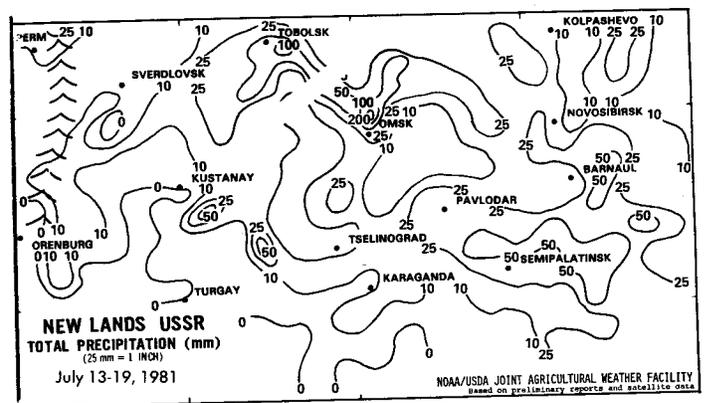
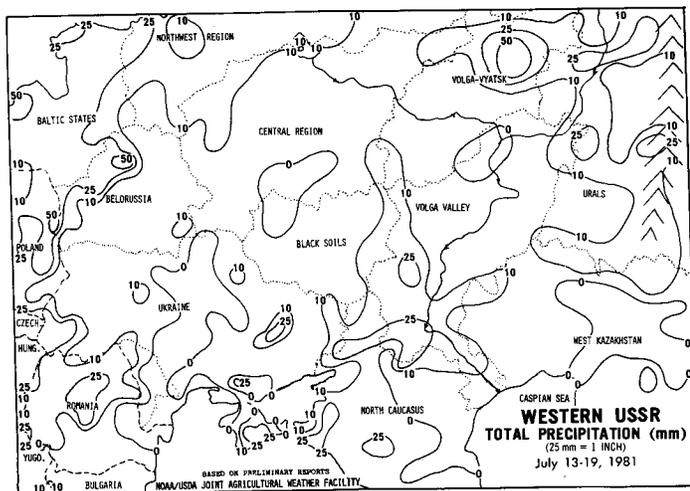
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## International Weather and Crop Summary

July 13-19, 1981

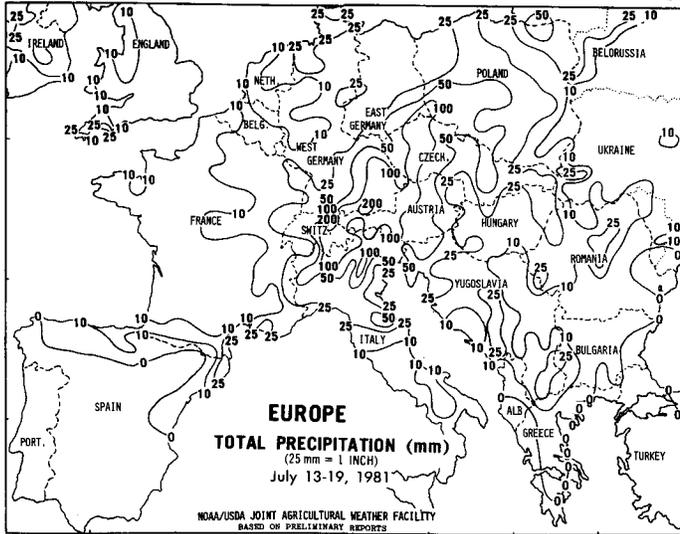
### HIGHLIGHTS

- EUROPE:** Heavy rains caused some flooding in central areas, but conditions stayed too dry in England and Romania.
- USSR:** Winter grain harvesting weather was good in the Ukraine, but too wet in the North Caucasus and lower Volga Valley. Some spring grain received beneficial rain, but other major areas continued to suffer from dryness.
- CHINA:** Heavy rains caused flooding in Sichuan. Moderate rainfall benefited Hebei, but kept Heilongjiang too wet.
- INDIA:** Abundant rain fell across the north, while some southern areas stayed too dry.
- SOUTH AMERICA:** Very wet weather in extreme Southern Rio Grande do Sul followed by near-freezing temperature in Southern Brazil over the weekend.
- AUSTRALIA:** Showers confined mostly to southern wheat areas; conditions remain favorable.
- CANADA:** Beneficial moisture relieved stress conditions in most areas as crops advance through reproduction period.
- SOUTHEAST ASIA:** Monsoon showers produce variable amounts of rainfall in Thailand as early-season corn matures.
- MEXICO:** Corn, in tasseling stage, received very beneficial rains in southern Plateau.

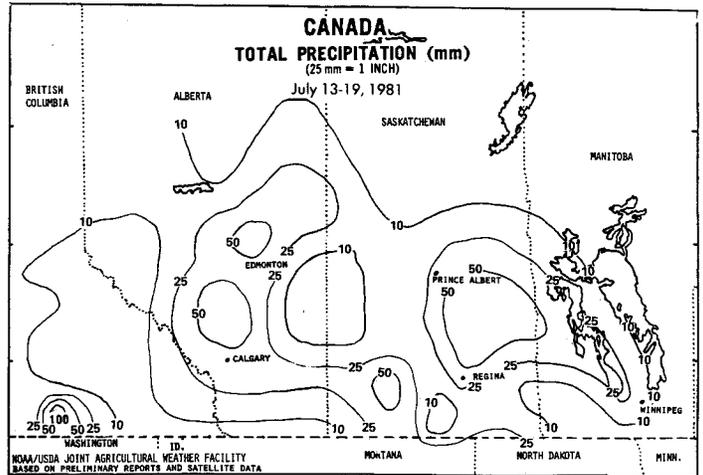


**USSR:** Warmer and drier weather over most of the Ukraine dramatically improved harvesting conditions. The harvest front has now passed through the Cernozem Region and lower Volga Valley. Continued above-normal rainfall in the North Caucasus and lower Volga Valley complicated harvesting, while relatively warm and dry weather persisted in the middle and upper Volga Valley. Spring grains in that northern area had

unfavorably dry weather as they advanced through the heading stage. Northwestern winter grain areas received abundant rains, but the crop should already be in the latter grain filling stage. In the New Lands, generous rains maintained favorable growing conditions in the west, but may have come too late to avoid yield losses in much of the east. Further yield declines in much of the east have been at least temporarily halted. However, soil moisture remained deficient in an extensive area between Pavlodar and Omsk, and poor yields are expected from that area. Temperatures remained below normal over most of the New Lands.



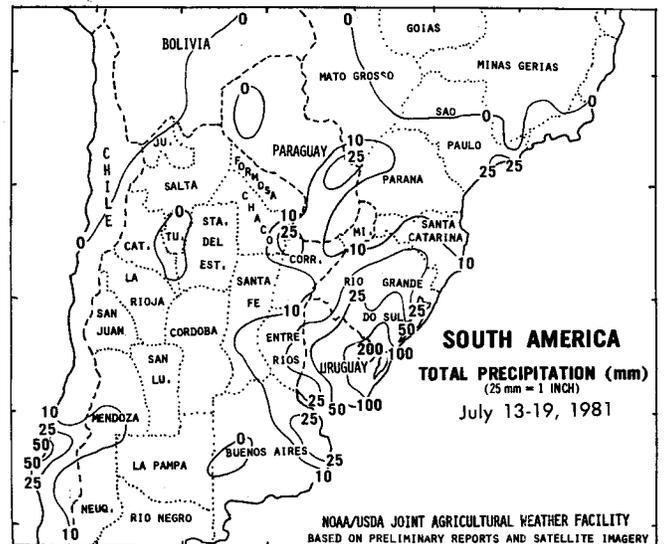
**EUROPE:** Relatively dry weather persisted for most of the week over the region, but heavy rains occurred in central areas during the weekend. Amounts in excess of 100 mm fell from extreme northern Italy through Austria, southeastern West Germany, and western Czechoslovakia. Some locations received up to 200 mm, and flooding has been reported. Winter grain harvesting was disrupted by the heavy rains. Other northeastern areas benefited from moderate rainfall. Only light rain fell in England and agricultural areas of Romania and Yugoslavia, putting spring-planted crops under some stress. However, conditions have not yet become serious, and Yugoslavia is expecting a very good corn crop. Somewhat drier weather in France came as a relief. Temperatures dipped slightly below normal in the northwestern quarter of the region, but stayed near normal elsewhere.



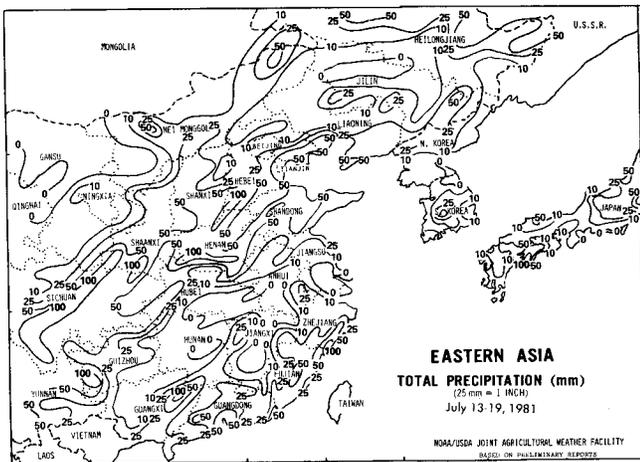
**CANADA:** A storm system produced beneficial rain in much of Saskatchewan's wheat area and portions of Alberta and Manitoba as well. However, rainfall was very light (less than 5 mm) in crop areas of northeastern Alberta, northwestern and extreme south-central Saskatchewan, and southwestern Manitoba. Cereal and oilseed crops are now mostly in heading and flowering stages, respectively, with early-seeded crops in the filling stage. Adequate moisture is essential during this period for favorable yield prospects. The timely rains that fell in the Prairie Provinces provided better crop growing conditions after the previous week's high temperatures. However, some localized crop areas which received minimal rainfall may still experience some stress from lack of moisture during this critical period of crop development.



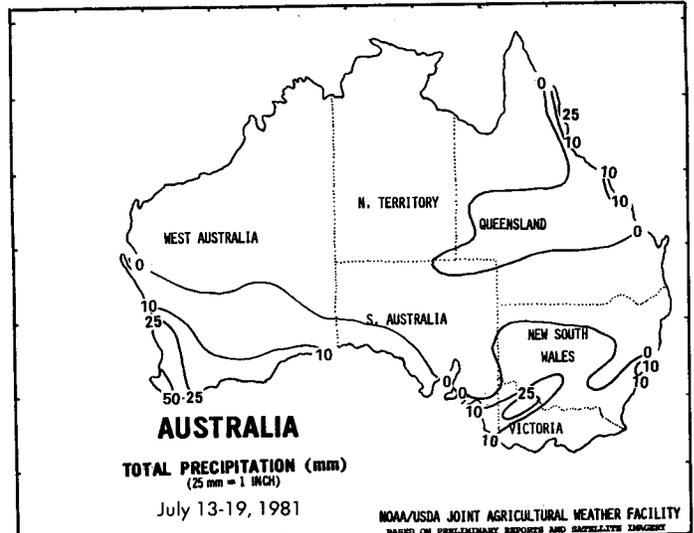
**MEXICO:** Beneficial rains drenched southern Plateau corn which was generally in the tasseling/silking stage. Scattered light to moderate showers fell over several watersheds in the Northwest, and also over field crops in Sinaloa. In contrast, the northeastern quarter of the Nation was hot and dry, benefiting grain harvesting and cotton development but stressful to nonirrigated citrus, ranges, and livestock.



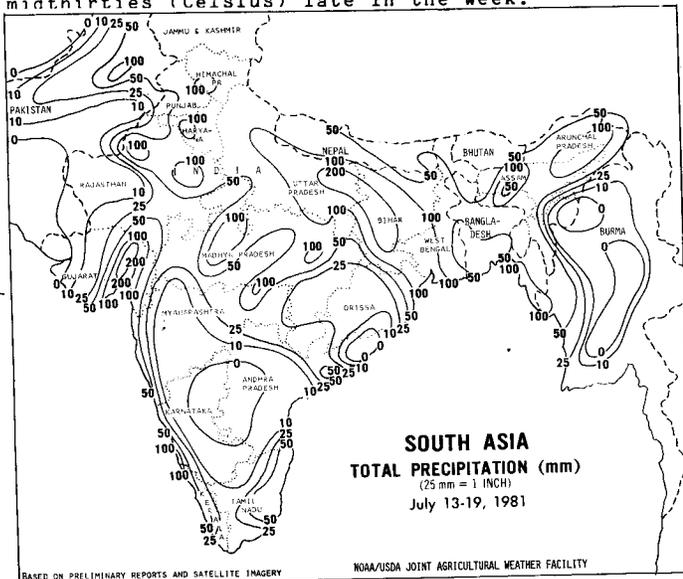
**SOUTH AMERICA:** The weather pattern remained unchanged from the previous week with a stationary front producing rainfall in southern Brazil, Uruguay and southern Paraguay, and adjacent areas of Argentina. However, weekly totals were much greater than last week. The greatest amounts were centered in Uruguay and extreme southern Rio Grande do Sul where over 100 mm of rain fell. The heavy rains may have caused soils to become saturated in some areas. The principal adverse effect of excessive rainfall after sowing is the likelihood of a reduction in seedling establishment. The low pressure system finally moved eastward out of the area by week's end and was replaced by a high pressure system which brought subfreezing temperatures to most of Argentina and low lying areas of southern Brazil. Near-freezing temperatures penetrated into the southern fringe of Parana's coffee-growing area.



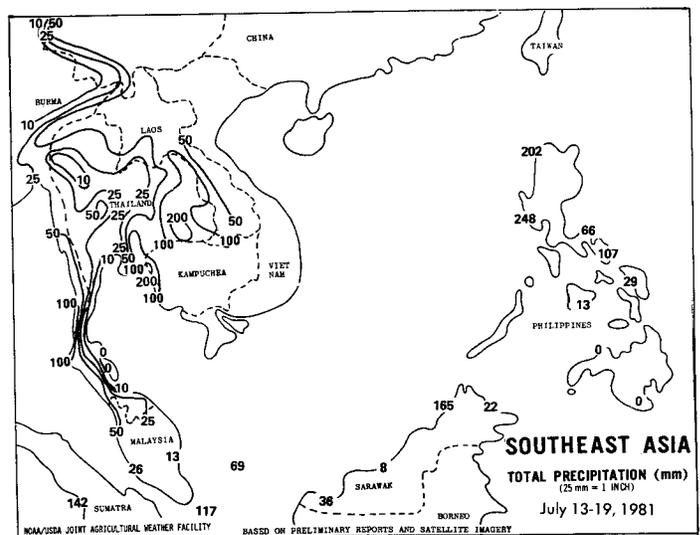
**EASTERN ASIA:** A front moving in slowly from the west early in the week dumped very heavy rains in China's Sichuan Province, including the northwestern part of Sichuan Valley. Extensive flooding was reported in the Valley, and damage to rice, oilseeds, corn, and cotton likely occurred. The floodwaters dissipated as they moved into Hubei. Abundant rain from the front benefited crop areas in Henan, Shandong, and Hebei. Drier weather benefited crops in the lower Yangtze Valley and much of the Manchurian Valley, but northern portions of Heilongjiang stayed too wet. At the week's end, tropical storm Maury was dumping heavy rain on coastal areas of Zhejiang and Fujian, but should dissipate somewhat as it moves westward. In South Korea, most areas received only light rainfall, but water supplies should be quite adequate for rice irrigation needs. However, unirrigated fields may have been stressed somewhat as temperatures climbed to the mid-thirties (Celsius) late in the week.



**AUSTRALIA:** Weekly rainfall was confined mostly to southwestern, southeastern, and east-coastal portions of the continent. Showers provided beneficial moisture for wheat and barley in West Australia during midweek. By the weekend, shower activity shifted eastward bringing beneficial moisture for crop growth to southern portions of the eastern wheat belt. Soil moisture reserves are mostly adequate for crops, especially during this slow growth period. Average maximum temperatures for the week generally ranged from 14 to 19°C, and average minimum temperatures ranged from 4 to 8°C. Overall, conditions remain favorable for winter crop development.



**SOUTH ASIA:** Above-normal rainfall occurred across the northern parts of Bangladesh, India, and Pakistan. Amounts greater than 200 mm in eastern Uttar Pradesh and western Bihar may have caused some flooding. Upland areas of Madhya Pradesh continued to receive generous rainfall for the unirrigated crops. The rainfall in northern Pakistan should allow planting of summer crops to begin shortly. Much of Bangladesh remained drier than normal, but irrigation supplies should be quite adequate. In southern India, a large interior area again received only light rainfall, prolonging dry conditions for peanuts and cotton. However, Tamil Nadu had beneficial rains over some inland areas.



**SOUTHEAST ASIA:** Monsoon activity brought variable amounts of rainfall to Thailand. Heaviest amounts of 70 to 200 mm fell in eastern Thailand, benefiting some areas which had been receiving below-average rainfall for the past several weeks. Weekly totals were highly variable in the Central Plains but most areas received less than 25 mm. Seasonably warm weather has favored ripening of early-maturing corn. July usually marks the beginning of the corn harvest season in Thailand.



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(continued from page 21)

Fieldwork: 5 days suitable. Crops in general made very good progress with warm weather and the precipitation. Corn tasseled 20%, 35% 1980, 25% average. Second crop hay looks good, although concerns being raised over yields, which appear short. Second crop harvest 25% complete, 1980 24%, average 16%. Pastures reported to be 78% of normal. Small grains advancing rapidly. Some winter wheat being combined in southern areas while the crop is several weeks away from harvest in the north. Soybeans looking good with the recent rains. Potatoes and other irrigated crops look good. Pea harvest progressing. Topsoil moisture supplies 25% short, 64% adequate and 11% surplus. Localized dry areas the east central and northeast districts.

WYOMING: Temperatures above normal except in Big Horn Drainage. Highest temperature 104°. Lowest temperature 32°. Most stations above normal precipitation. Greatest amount 1.94 in. Topsoil moisture short 60% State. Average 6 days suitable for fieldwork. Winter wheat mature: 85%; year ago 75%; 67% normal. Winter wheat harvested: 31%; year ago 30%; 31% normal. Spring wheat turning color: 60%; year ago 65%; 48% normal. Spring wheat mature: 10%; year ago 20%; 13% normal. Oats turning color: 25%; year ago 40%; 33% normal. Oats mature: 5%; year ago 10%; 10% normal. Barley turning color: 45%; year ago 55%; 47% normal. Barley mature: 15%; year ago 20%; 13% normal. Corn tasseled: 30%; year ago 20%; 14% normal. Dry beans in bloom: 30%; year ago 35%; 38% normal. First cutting alfalfa: 85%; year ago 80%; 83% normal. Other hay harvested: 40%; year ago 35%; 39% normal. Row crops mostly good condition. Stock water supplies 48% short, year ago 32% short.

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