

# WEEKLY WEATHER AND CROP BULLETIN

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

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

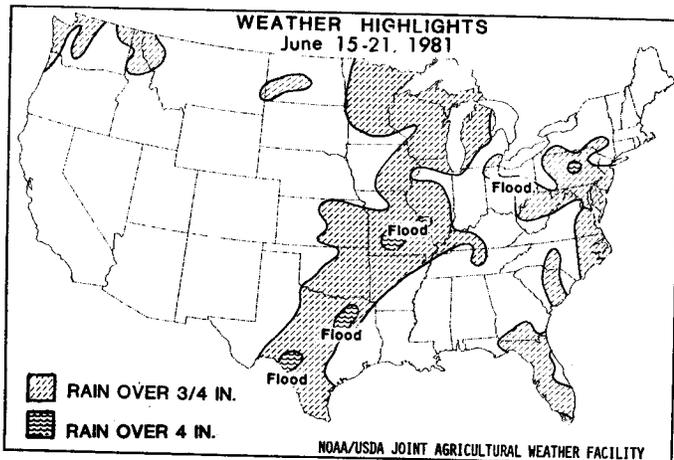
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June 23, 1981

## National Weather Summary

JUNE 15-21, 1981



**HIGHLIGHTS:** Severe weather, accompanied by heavy rain, caused flooding in south central Texas, Missouri, eastern Kansas, Ohio, and Indiana. The persistent heavy rain and flooding in the eastern Corn Belt has eroded some newly planted crop land. Much warmer than normal weather persisted in the Southwest and in much of the East.

**MONDAY...**A cold front pushed thunderstorms from the Plains into the Mississippi Valley. Very heavy rain fell at many points from south central Texas to the Great Lakes. Tornadoes, high wind, and hail accompanied many of the storms. Rain pushed through the lower Ohio Valley by the end of the day. Cool weather settled into the northern Rockies and Plains but record warm temperatures were measured ahead of the cold front. Richmond, Va., with 98°; Florence, S.C., with 104°; and over 100° in southern California.

**TUESDAY...**Daily rainfall in south central Texas continued the serious flooding in that area and more rain in the eastern Corn Belt led to floods in Indiana and Ohio. The cold front triggering the storms moved through the Ohio Valley and then rapidly to the East Coast. Skies cleared behind the front as cooler, drier air moved in. Record high and low temperatures were marked. Freezing temperatures occurred throughout the Rockies and lows in the forties set records in western Texas.

**WEDNESDAY...**There were cool overnight temperatures behind the cold front. Dallas, Tex., dropped to 58°--the coolest for this date since 1917. Fayetteville, Ark., recorded 47°. Hot weather remained in the Southwest and Southeast. Rainfall was scant across the Nation. There were scattered thunderstorms along the gulf coast and over Florida with a few in the Carolinas and Virginia. Flooding from earlier rain continued in Ohio and Indiana and in Texas.

**THURSDAY...**Skies were fair over much of the Nation but scattered thunderstorms developed along the gulf coast and showers fell in the western Great Lakes. Isolated thunderstorms developed in parts of the central Plains. Temperatures equaled or exceeded 100° over parts of the Southeast and approached 120° at some southwestern locations. This was the 7th consecutive day that Ft. Meyers, Fla., went over 100°.

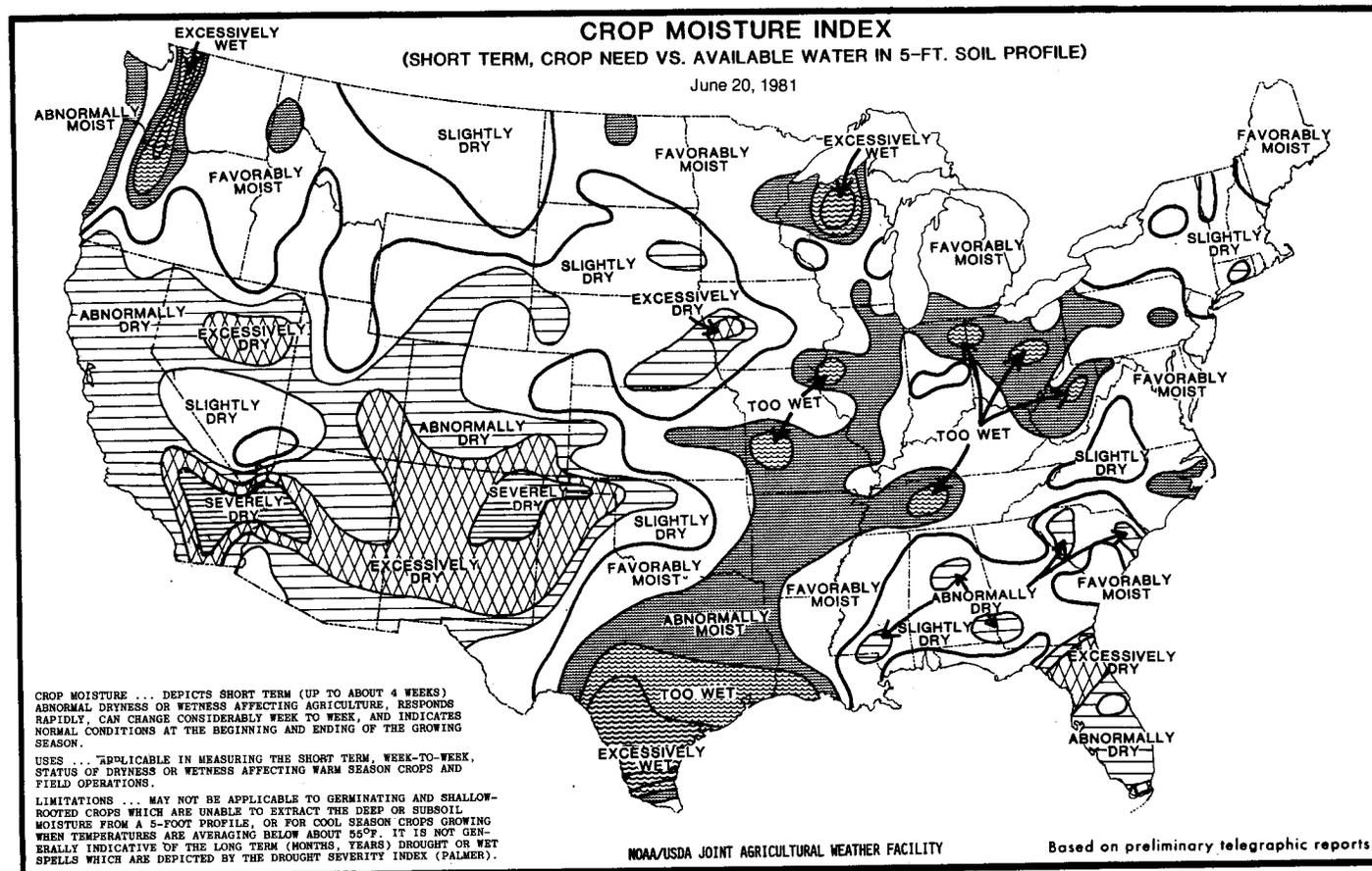
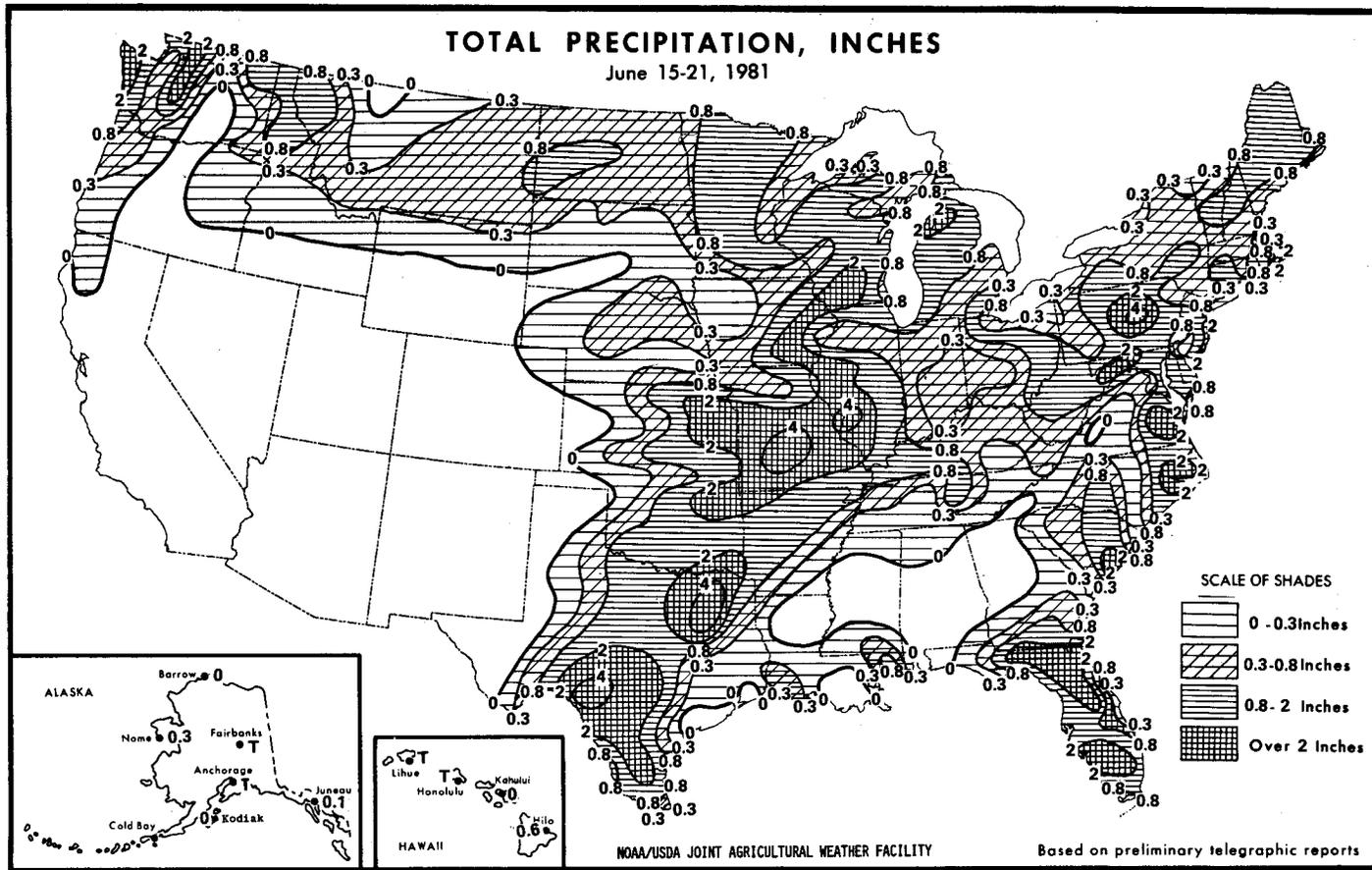
**FRIDAY...**Severe thunderstorms produced tornadoes and hail in northeastern Kansas and in extreme southeastern United States. Scattered thunderstorms developed over the Ohio and Tennessee Valleys and through the Florida Peninsula to the mid-Atlantic Coast and across southern Mississippi. Some showers fell in the upper Mississippi Valley and the northern Rockies. It was another hot day across the South. The warmest weather was in the Southwest, but south central and southeastern areas were near 100°.

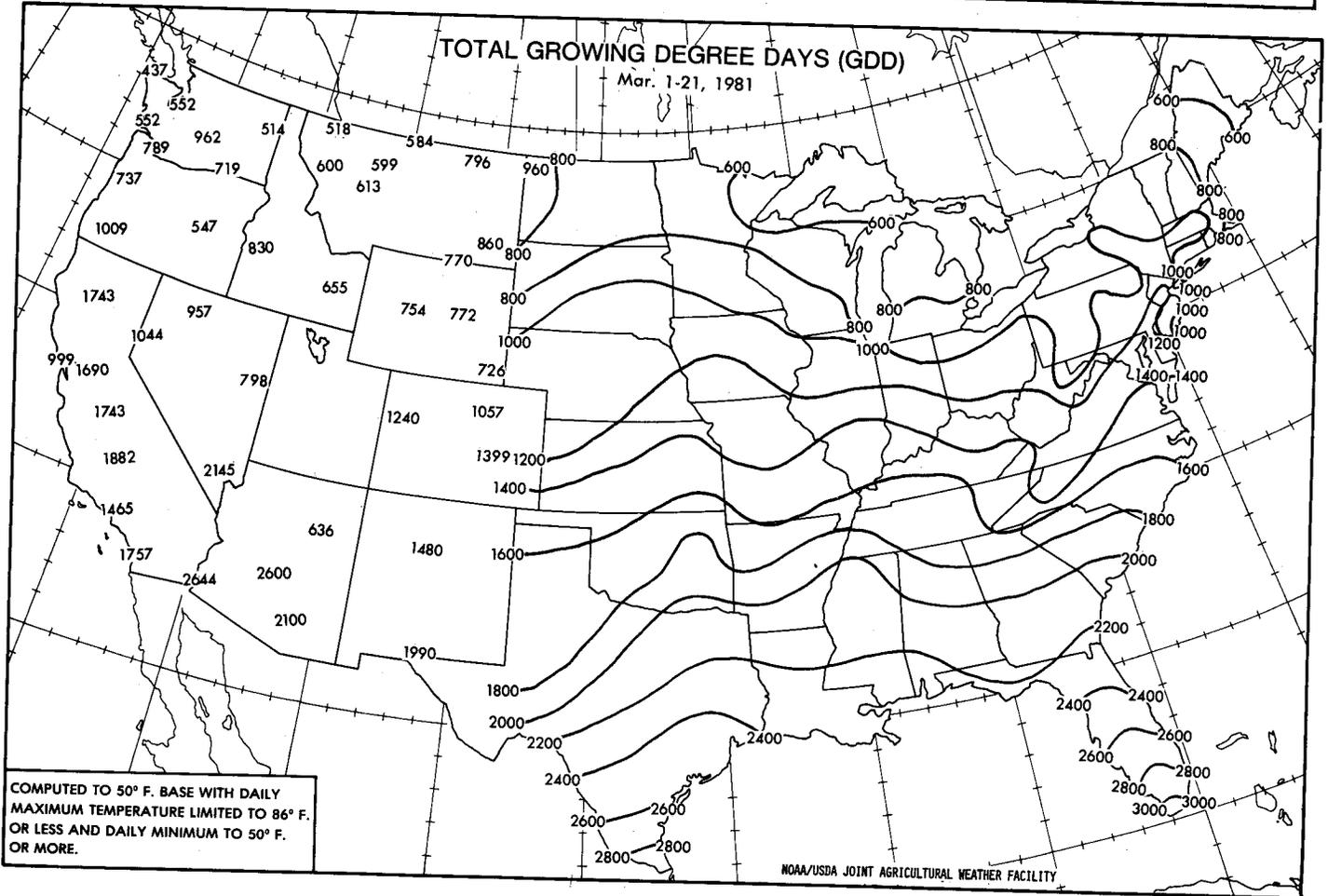
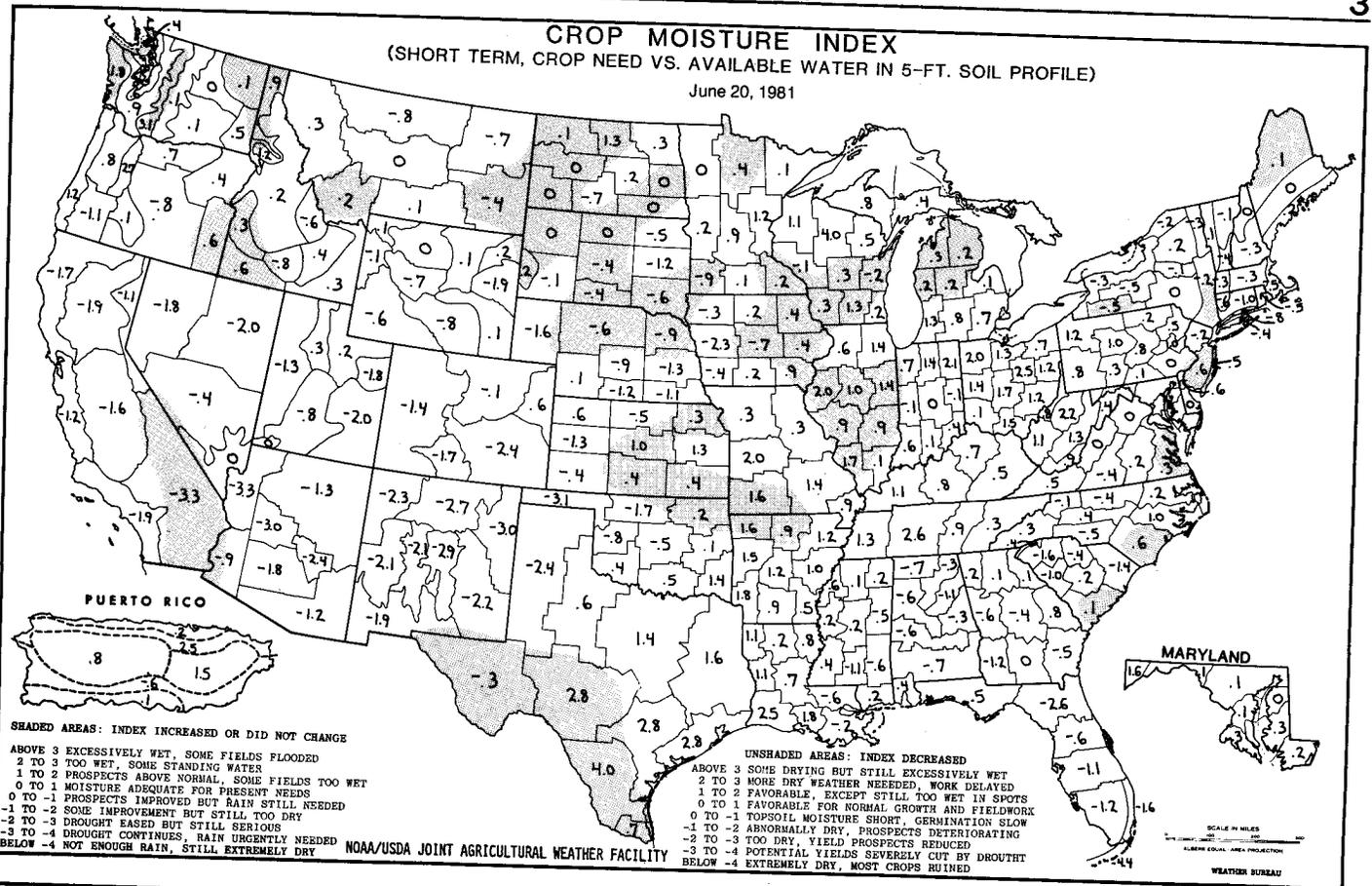
**SATURDAY...**Severe weather struck parts of the Atlantic Coast States and central United States. Storms were also scattered from the eastern Dakotas to Colorado and to western Montana. Some of the strongest storms hit from eastern Kansas to central Illinois, but several tornadoes and hail were reported from Florida through the Carolinas. High temperatures were well over 100° in the Southwest and up to northern California. The nineties reached across the South to the Atlantic Coast.

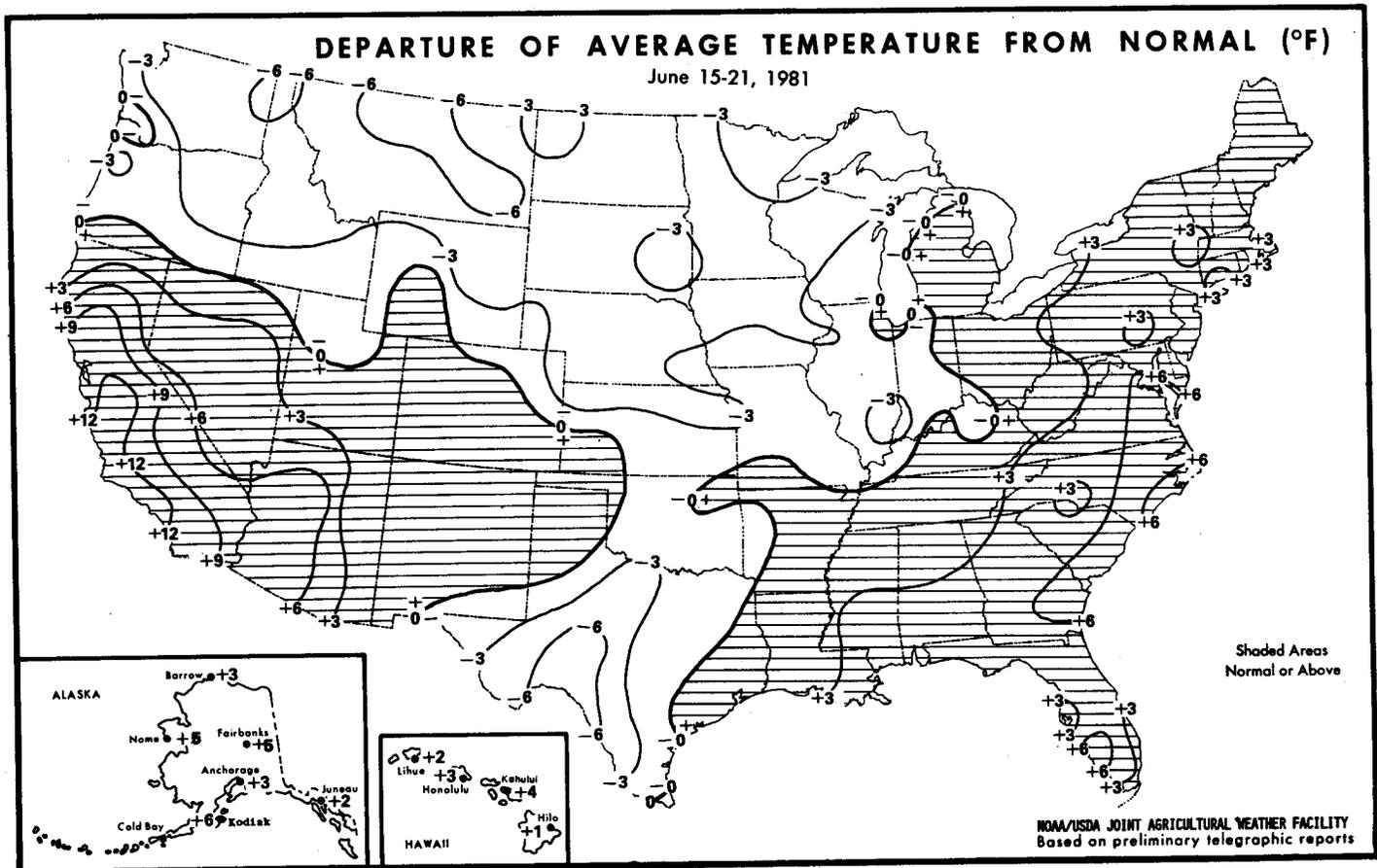
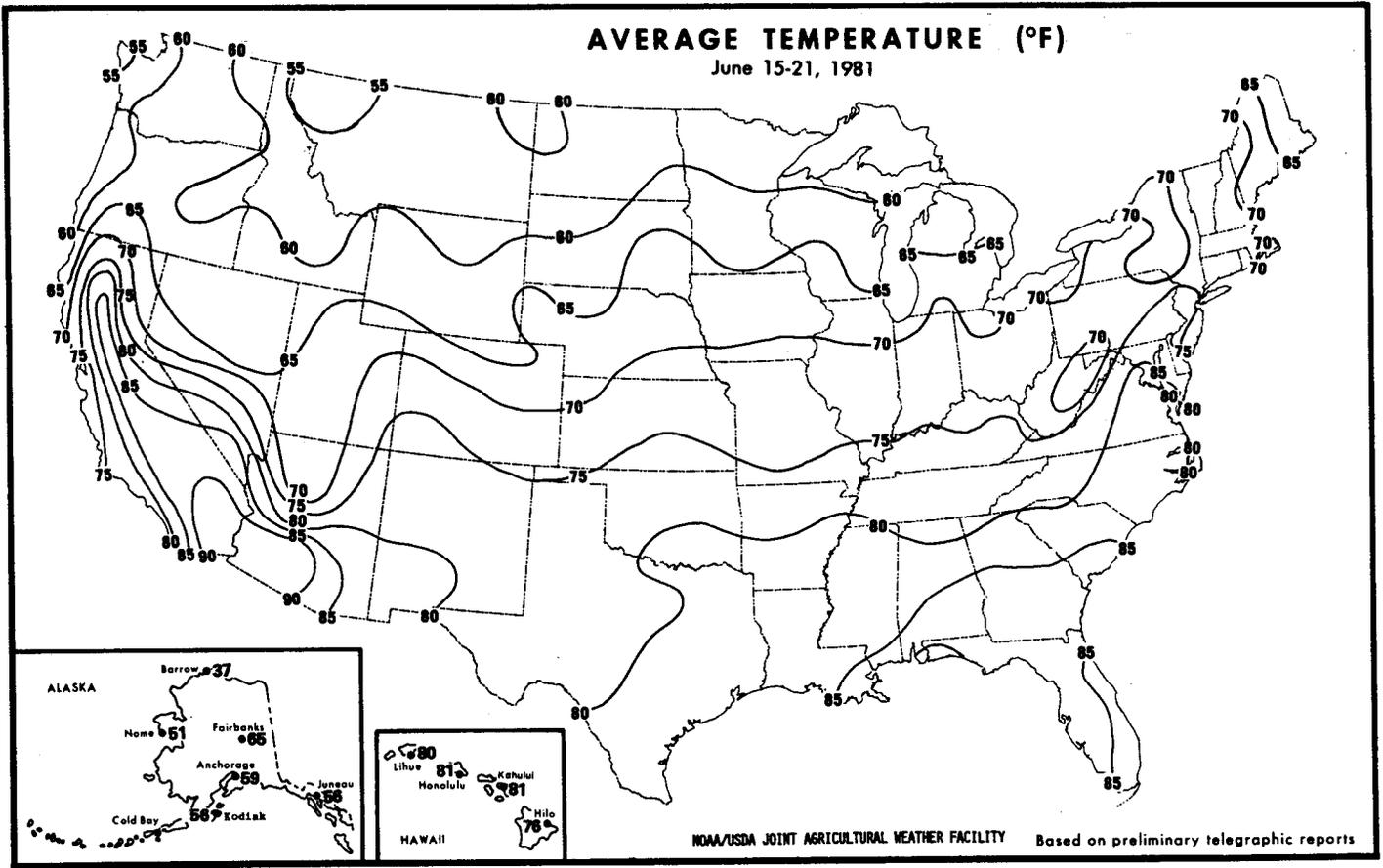
**SUNDAY...**Thunderstorms reached from the central Plains to the northern Plains, eastward to the middle and northern Atlantic Coast. Heavy rainfall caused flooding in much of Missouri and severe weather brought damage to much of the northern Mississippi Valley and the Ohio Valley. Severe weather again hit Florida. Temperatures set record highs from Albuquerque, N.M., to Savannah, Ga.

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Weather Data for the Week Ending June 21, 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	TEMPERA- TURE °F		PRECIPI- TATION				
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE			
AK BIRMINGHAM	93	68	97	61	80	2	0	-.9	0	2.1	81	20.5	76	87	39	6	0	0	0			
AK MOBILE	95	75	98	71	85	4	0	1.5	0	4.7	121	31.2	101	87	39	6	0	0	0			
AK MONTGOMERY	95	74	98	70	85	5	0	1.9	0	4.7	121	31.2	101	86	45	7	0	0	0			
AK ANCHORAGE	66	51	73	45	59	3	0	-.9	0	2.9	112	25.8	104	86	45	7	0	0	0			
AK BARROW	42	32	47	28	37	3	0	-.3	0	.2	29	3.4	89	74	46	0	0	0	0			
AK FAIRBANKS	76	53	81	47	65	5	0	-.1	0	.3	150	---	---	96	76	0	0	0	0			
AK JUNEAU	65	47	74	40	56	2	0	-.3	0	.3	33	1.8	55	66	24	0	0	0	0			
AK KODIAK	66	46	76	40	56	6	0	-.6	0	1.4	74	17.8	94	90	54	0	0	0	0			
AK NOME	57	46	65	40	51	5	0	-.9	0	1.8	60	38.4	154	84	48	0	0	0	0			
AZ FLAGSTAFF	84	49	91	39	67	8	0	0	0	-.5	100	5.9	137	79	54	0	0	0	0			
AZ PHOENIX	108	78	112	70	93	8	0	-.1	0	.2	67	9.0	117	33	12	1	0	0	0			
AZ TUCSON	103	68	107	56	85	2	0	0	0	0	0	+100	129	22	6	7	0	0	0			
AZ WINSLOW	94	55	101	41	75	2	0	-.1	0	0	0	+100	5.0	192	24	9	7	0	0	0		
AZ YUMA	111	75	115	69	93	7	0	0	0	0	0	2.1	78	---	---	5	0	0	0	0		
AR FORT SMITH	88	66	92	57	77	-2	1.7	.8	0	0	0	+100	1.1	79	27	11	7	0	0	0		
AR LITTLE ROCK	88	69	93	59	79	1	.8	-.1	1.1	3.7	123	19.6	87	92	50	5	0	0	0	0		
CA BAKERSFIELD	102	71	108	65	87	10	0	-.1	0	4.0	154	26.6	100	95	58	4	0	0	0	0		
CA EUREKA	63	52	64	48	57	2	0	0	0	0	0	4.4	110	40	15	7	0	0	0	0		
CA FRESNO	102	67	107	59	84	10	0	0	0	.6	100	19.0	82	93	71	0	0	0	0	0		
CA LOS ANGELES	89	66	104	64	77	12	0	0	0	0	0	7.5	107	50	16	7	0	0	0	0		
CA RED BLUFF	101	69	104	61	85	9	0	0	0	0	0	6.6	84	78	36	3	0	0	0	0	0	
CA SAN DIEGO	85	68	100	64	77	11	0	-.1	0	0	0	16.3	121	40	15	7	0	0	0	0	0	
CA SAN FRANCISCO	87	55	92	51	71	9	0	0	0	0	0	8.5	142	82	44	2	0	0	0	0	0	
CA STOCKTON	104	66	108	56	85	12	0	0	0	0	0	12.2	99	70	27	2	0	0	0	0	0	
CO DENVER	83	52	92	44	68	1	0	0	0	0	0	9.2	102	52	14	7	0	0	0	0	0	
CO GRAND JUNCTION	91	55	100	42	73	1	0	-.4	0	-.6	43	8.4	101	57	20	2	0	0	0	0	0	
CO PUEBLO	92	54	104	43	73	1	0	-.1	0	-.1	25	4.0	118	30	11	5	0	0	0	0	0	
CT BRIDGEPORT	78	64	83	58	71	2	0	-.3	0	1.1	10	2.4	43	52	13	5	0	0	0	0	0	
CT HARTFORD	83	62	91	55	72	4	0	-.1	0	1.4	70	12.4	69	95	60	0	0	0	0	0	0	
DC WASHINGTON	90	73	97	67	81	6	0	-.8	0	.9	37	13.8	68	92	50	1	0	0	0	0	0	
FL APALACHICOLA	96	76	98	72	86	5	0	-.4	0	.3	2.3	96	12.9	75	91	53	4	0	0	0	0	
FL DAYTONA BEACH	94	71	98	69	83	3	0	-1.2	0	-.1	.3	9	9.1	42	83	50	7	0	0	0	0	
FL FORT MYERS	98	75	103	74	87	6	3.0	-1.7	0	1.1	24	11.9	66	86	43	7	0	0	0	0	0	
FL JACKSONVILLE	99	72	102	70	85	5	2.3	-.7	1.4	3.3	79	16.1	79	95	43	7	0	0	0	0	0	
FL KEY WEST	90	81	93	80	85	1	0	-.1	0	1.1	3	4.5	35	86	63	3	0	0	0	0	0	
FL MIAMI	93	76	95	70	84	3	1.8	-.3	1.7	3.6	56	15.3	69	90	50	6	0	0	0	0	0	
FL ORLANDO	96	73	98	72	85	4	3.4	1.7	2.9	11.5	244	20.2	104	92	39	7	0	0	0	0	0	
FL TALLAHASSEE	96	72	98	71	84	4	2.4	-.8	1.3	4.0	93	25.7	96	96	44	7	0	0	0	0	0	
FL TAMPA	93	73	96	71	83	2	1.3	-.3	-.6	7.1	173	16.3	91	98	54	6	0	0	0	0	0	
FL WEST PALM BEACH	91	74	93	71	82	1	1.6	-.3	1.6	4.4	77	17.7	81	92	55	5	0	0	0	0	0	
GA ATLANTA	94	72	97	70	83	6	0	-.9	0	2.7	108	20.1	79	81	41	7	0	0	0	0	0	
GA AUGUSTA	97	70	99	68	83	5	0	-.8	0	4.8	200	21.0	99	94	41	7	0	0	0	0	0	
GA MACON	97	72	99	70	85	5	0	-.9	0	6.4	246	24.9	108	88	38	7	0	0	0	0	0	
GA SAVANNAH	98	75	102	74	87	7	0	-.9	0	5.9	59	14.1	67	82	38	7	0	0	0	0	0	
HI HILO	82	69	83	68	76	1	0	-1.3	0	1.1	24	---	---	82	57	0	0	0	0	0	0	
HI HONOLULU	88	73	89	72	81	3	0	-.1	0	1.1	33	4.5	35	79	46	0	0	0	0	0	0	
HI KAHULUI	89	74	91	71	81	4	0	0	0	0	0	---	---	70	43	2	0	0	0	0	0	
HI LIHUE	86	74	88	70	80	2	0	0	0	0	0	---	---	85	58	0	0	0	0	0	0	0
ID BOISE	76	48	79	39	62	-3	0	-.3	0	.6	55	---	---	70	43	2	0	0	0	0	0	0
ID LEWISTON	71	51	79	47	61	-5	0	-.3	0	.7	78	8.7	121	72	23	0	0	0	0	0	0	0
ID POCATELLO	73	47	79	32	60	-2	0	-.3	0	1.9	127	8.0	110	85	40	0	0	0	0	0	0	0
IL CAIRO	86	68	93	68	77	-2	0	-.9	0	.7	64	8.4	138	64	26	0	1	0	0	0	0	0
IL CHICAGO	79	59	88	52	69	0	0	-.1	0	3.1	96	21.6	85	---	---	1	0	0	0	0	0	0
IL MOLINE	79	59	83	50	69	0	0	-.1	0	3.7	132	18.7	123	85	53	0	0	0	0	0	0	0
IL PEORIA	80	61	86	51	71	-2	0	-.6	0	.3	83	11.8	72	87	52	0	0	0	0	0	0	0
IL ROCKFORD	78	58	83	50	68	-2	2.3	1.4	1.3	4.4	163	19.5	113	93	60	0	0	0	0	0	0	0
IL SPRINGFIELD	82	62	89	52	72	-2	1.0	0	0	4.7	152	15.1	92	87	51	0	0	0	0	0	0	0
IN EVANSVILLE	83	63	96	53	73	-3	2.1	1.1	1.4	4.8	166	20.3	120	93	62	0	0	0	0	0	0	0
IN FORT WAYNE	79	61	89	52	71	1	0	0	0	.6	75	22.3	99	97	62	1	0	0	0	0	0	0
IN INDIANAPOLIS	82	61	90	52	71	-1	0	-.8	0	2	5.4	193	19.6	111	78	48	0	0	0	0	0	0
IN SOUTH BEND	78	59	88	51	69	-1	0	-.9	0	1.3	41	20.8	105	84	48	1	0	0	0	0	0	0
IA BURLINGTON	80	61	83	55	70	-2	0	-.1	0	6.1	235	21.8	128	91	51	0	0	0	0	0	0	0
IA DES MOINES	79	60	83	56	69	-2	2.3	1.2	1.3	5.9	184	18.3	114	94	56	0	0	0	0	0	0	0
IA DUBUQUE	74	60	78	57	67	-1	0	-.5	0	1.7	47	8.1	53	77	39	0	0	0	0	0	0	0
IA SIOUX CITY	79	55	91	49	67	-4	3.2	1.9	2.3	5.0	132	15.0	81	85	50	0	0	0	0	0	0	0
KS CONCORDIA	83	57	90	49	70	-4	0	-1.0	0	1.7	53	6.6	71	36	1	0	0	0	0	0	0	0
KS DODGE CITY	89	60	99	50	74	-1	1.8	-.6	1.0	2.7	75	13.1	100	92	38	1	0	0	0	0	0	0
KS GOODLAND	83	52	93	40	67	-3	0	-.3	0	1.1	46	9.8	103	85	31	4	0	0	0	0	0	0
KS TOPEKA	82	61	87	55	72	-3	2.6	1.2	1.6	6.3	154	16.8	103	85	31	4	0	0	0	0	0	0
KS WICHITA	88	64	99	52	76	-1	1.1	0	1.1	2.9	94	12.4	93	80	60	0	0	0	0	0	0	0
KY LEXINGTON	82	62	89	55	72	-2	0	0	0	2.3	79	19.0	83	92	58	0	0	0	0	0	0	0
KY LOUISVILLE	84	65	92	59	75	1	0	-.6	0	2.3	79	19.0	83	92	58	0	0	0	0	0	0	0
LA BATON ROUGE	93	75	94	73	84	3	0	-.9	0	3.3	114	17.4	75	87	52	1	0	0	0	0	0	0

BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

+100 = NORMAL & ACTUAL NEAR THE SAME

Weather Data for the Week Ending June 21, 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	90	75	91	73	82	1	.8	-.4	.8	11.5	329	25.7	101	94	54	4	0	2	1
NEW ORLEANS	94	76	96	73	85	4	0	-1.1	0	5.9	190	25.6	97	94	52	7	0	0	0
SHREVEPORT	90	72	92	68	81	0	T	-.8	T	5.5	220	25.9	104	96	59	5	0	0	0
ME CARIBOU	72	57	81	48	65	4	1.3	-.5	.7	2.5	104	15.6	109	94	61	0	0	5	1
PORTLAND	77	57	85	52	67	4	.3	-.4	.2	2.4	104	17.6	89	98	64	0	0	2	0
MD BALTIMORE	87	67	95	62	77	4	1.2	-.3	1.2	4.6	184	14.9	81	92	56	2	0	1	1
MA BOSTON	82	66	92	60	74	5	.2	-.5	.2	1.0	43	13.4	66	87	51	2	0	1	0
CHATHAM	71	59	80	56	65	--	3.3	--	3.3	4.3	--	20.3	--	98	77	0	0	2	1
MI ALPENA	74	51	93	45	62	0	.8	.1	.6	1.7	81	9.7	79	94	49	1	0	3	1
DETROIT	79	59	89	52	69	0	1.0	-.2	1.0	2.8	117	13.3	88	82	50	0	0	3	1
FLINT	77	57	88	49	67	0	.4	-.4	.4	2.7	108	13.5	98	86	49	0	0	3	0
GRAND RAPIDS	80	59	90	50	69	1	.9	0	.5	3.9	156	22.0	147	89	47	1	0	3	1
HOUGHTON LAKE	74	57	85	47	64	0	1.1	.3	.6	1.7	71	11.4	93	85	47	0	0	3	1
LANSING	78	57	89	48	68	0	.5	-.3	.4	3.2	133	16.1	111	94	54	0	0	2	0
MARQUETTE	69	47	80	39	58	-3	1.3	.5	.9	5.4	186	17.5	116	91	52	0	0	2	1
MUSKEGON	74	58	85	48	66	-1	1.7	1.1	1.0	3.4	189	14.5	102	93	55	0	0	3	1
SAULT STE. MARIE	68	44	80	35	56	-3	1.3	.5	.4	4.0	174	12.8	98	99	56	0	0	5	0
MN DULUTH	67	48	76	43	58	-2	.6	-.4	.3	3.5	109	11.9	92	93	51	0	0	4	0
INT'L FALLS	71	47	78	40	59	-2	.9	0	.7	2.7	104	8.4	86	88	45	0	0	5	1
MINNEAPOLIS	72	54	83	49	63	-5	.4	-.5	.4	3.7	137	11.1	97	80	46	0	0	3	0
ROCHESTER	72	52	80	46	62	-5	1.2	.1	.7	2.1	64	10.1	84	93	51	0	0	5	1
SAINT CLOUD	69	50	83	45	60	-6	1.0	-.1	.6	5.6	165	13.0	106	77	53	0	0	4	1
MS JACKSON	94	71	96	67	83	2	T	-.8	T	3.1	129	21.5	81	92	45	6	0	0	0
MERIDIAN	95	70	98	68	83	3	0	-.9	0	1.8	69	24.6	91	92	46	7	0	0	0
MO COLUMBIA	81	62	85	52	72	-2	3.6	2.6	2.8	5.7	178	22.2	122	86	55	0	0	5	1
KANSAS CITY	80	60	86	54	70	-3	2.5	1.2	1.8	3.8	100	17.4	104	93	62	0	0	4	2
SAINT LOUIS	82	65	88	56	73	-2	4.4	3.3	2.3	5.7	178	21.7	122	97	54	0	0	5	2
SPRINGFIELD	88	61	92	48	73	-1	4.0	2.9	2.3	6.3	191	20.5	104	93	51	4	0	3	3
MT BILLINGS	74	48	81	42	61	-2	.4	-.2	.2	1.2	63	11.1	141	69	30	0	0	5	0
GLASGOW	73	46	83	42	59	-4	.6	-.1	.2	1.2	63	4.0	77	84	29	0	0	5	0
GREAT FALLS	67	44	72	38	56	-6	T	-.7	T	1.2	50	9.7	114	74	32	0	0	2	0
HAVRE	68	44	75	36	56	-7	T	-.6	T	1.0	56	4.5	76	90	36	0	0	0	0
HELENA	68	44	72	38	56	-4	T	-.6	T	1.1	61	9.3	160	77	32	0	0	1	0
KALISPELL	62	44	68	41	53	-4	1.1	-.4	.5	3.5	194	12.8	152	90	45	0	0	6	0
MILES CITY	71	49	82	42	60	-6	.4	-.4	.3	2.5	104	6.0	81	87	34	0	0	4	0
MISSOULA	64	45	72	39	55	-5	.6	-.1	.3	2.2	147	9.3	135	93	46	0	0	6	0
NE GRAND ISLAND	83	55	94	47	69	-3	.2	-.8	.1	.4	13	9.5	79	84	28	1	0	3	0
LINCOLN	83	58	92	47	71	-2	.3	-1.0	.2	.4	11	7.5	60	82	33	1	0	2	0
NORFOLK	80	55	90	47	68	-3	.6	-.6	.5	2.2	61	7.7	64	79	29	1	0	2	0
NORTH PLATE	79	50	87	42	65	-4	.4	-.5	.4	1.6	59	12.5	129	85	32	0	0	1	0
OMAHA	80	59	90	52	68	-3	.5	-.7	.2	1.2	34	8.2	60	77	41	1	0	3	0
VALENTINE	77	50	84	41	63	-4	.2	-.7	.1	.9	33	5.1	57	75	27	0	0	2	0
NV ELY	85	40	92	25	62	4	0	-.2	0	.1	14	5.6	130	49	11	1	1	0	0
LAS VEGAS	104	71	110	59	87	4	0	0	0	0	+100	2.2	122	17	6	6	0	0	0
RENO	89	45	93	36	67	5	0	-.1	0	T	0	2.5	60	57	11	4	0	0	0
WINNEMUCCA	86	43	90	30	64	2	0	-.2	0	T	0	4.1	85	51	12	2	1	0	0
NH CONCORD	83	59	94	50	71	5	.8	-.1	.8	1.8	72	17.2	106	95	47	1	0	1	1
NJ ATLANTIC CITY	84	63	92	56	73	2	2.2	1.4	1.8	3.7	154	18.8	91	95	57	1	0	4	1
TRENTON	85	66	94	61	75	3	1.6	-.7	1.6	3.3	157	16.2	89	99	58	1	0	2	1
NM ALBUQUERQUE	94	57	103	50	76	0	0	-.1	0	.1	33	2.5	96	26	6	5	0	0	0
ROSWELL	95	61	109	55	78	0	0	-.3	0	T	0	4.9	132	64	13	5	0	0	0
NY ALBANY	82	58	94	50	70	2	1.3	.6	.8	2.2	105	12.5	83	88	54	1	0	3	1
BINGHAMTON	79	59	88	51	69	3	1.4	.6	1.0	3.1	124	13.8	81	92	56	0	0	5	1
BUFFALO	77	60	86	52	69	2	.6	-.1	.5	1.8	113	13.7	86	93	53	0	0	3	1
NEW YORK	83	67	90	63	75	3	.8	-.1	.5	2.1	100	15.4	81	89	51	1	0	3	1
ROCHESTER	81	60	91	54	71	3	.8	.2	.6	1.7	89	11.5	79	93	53	1	0	3	1
SYRACUSE	83	60	93	52	72	4	.7	0	.4	1.7	81	11.4	68	89	50	2	0	2	0
NC ASHEVILLE	88	65	92	63	77	5	T	-.9	T	3.3	127	21.4	100	97	47	4	0	0	0
CHARLOTTE	89	69	94	66	79	3	.4	-.5	.3	1.5	58	13.5	65	91	51	5	0	3	0
GREENSBORO	90	70	95	66	80	5	.7	-.2	.7	2.7	104	13.4	71	89	53	5	0	1	1
HATTERAS	87	73	92	71	80	5	1.9	-.7	1.3	3.7	116	16.8	76	95	68	1	0	3	1
RALPHIGH	91	71	98	69	81	6	.1	-.8	.1	.5	20	12.2	64	95	46	5	0	1	0
WILMINGTON	92	74	97	71	83	5	1.0	-.3	.9	2.3	64	15.9	75	96	58	4	0	3	1
ND BISMARCK	68	46	77	40	56	-9	.7	-.2	.2	1.6	62	3.8	49	94	44	0	0	5	0
FARGO	69	51	78	46	60	-6	.5	-.2	.3	1.8	.78	7.1	85	92	48	0	0	6	0
WILLISTON	72	49	82	45	61	-3	.5	-.3	.4	2.7	117	5.0	77	84	41	0	0	5	0
OH AKRON-CANTON	80	62	89	55	71	2	.9	-.1	.8	4.5	188	24.2	135	83	54	0	0	2	1
CINCINNATI	82	61	90	53	72	-1	.4	-.5	.2	3.3	127	19.9	99	97	61	1	0	3	0
CLEVELAND	80	61	90	53	70	2	.1	-.7	.1	3.1	129	15.1	86	84	52	1	0	2	0
COLUMBUS	82	63	91	55	73	2	.2	-.8	.1	5.4	180	23.9	124	87	53	1	0	2	0
DAYTON	83	62	92	55	73	1	.1	-.9	T	6.0	214	20.8	114	91	53	1	0	2	0
TOLEDO	79	60	89	52	70	0	.7	-.1	.6	6.6	275	16.6	111	88	53	0	0	4	1
YOUNGSTOWN	83	64	91	53	73	6	.2	-.6	.1	2.5	100	18.2	98	78	50	2	0	2	0
OK OKLAHOMA CITY	87	65	94	55	76	-2	.9	-.1	.9	5.1	165	14.9	90	88	47	3	0	1	1

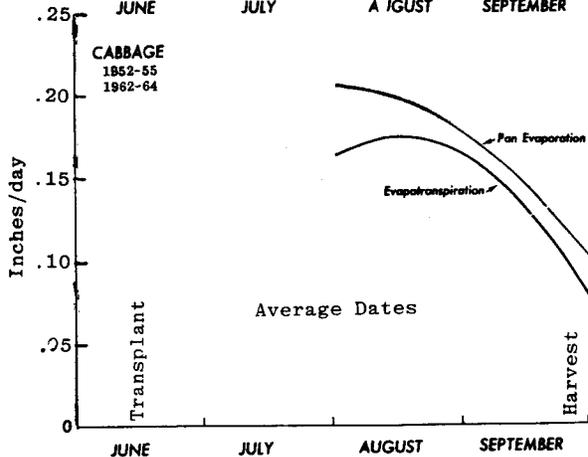
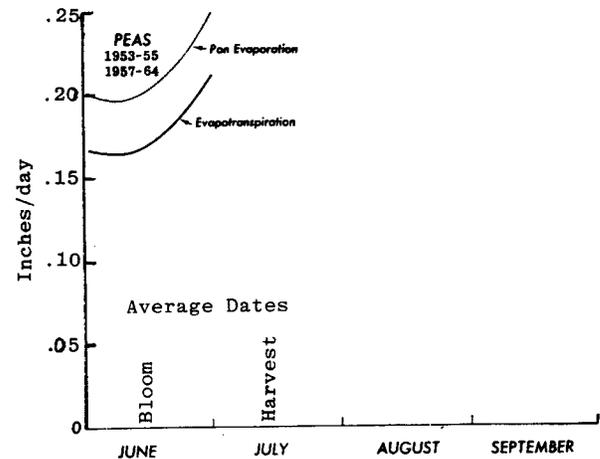
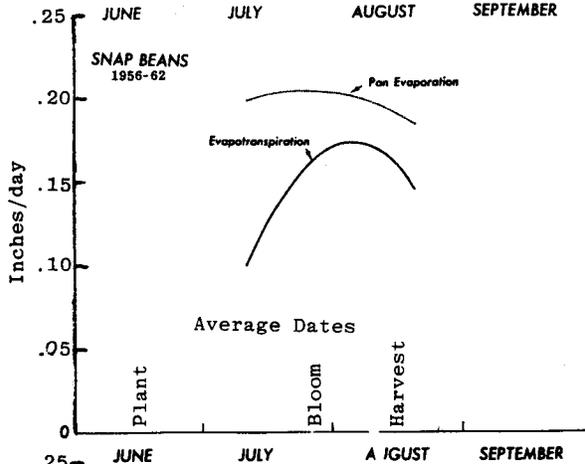
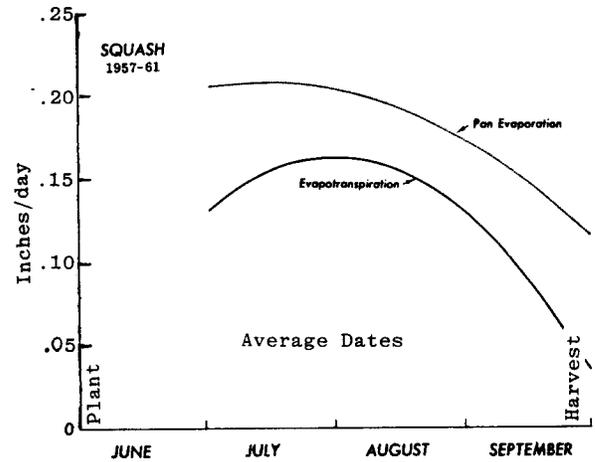
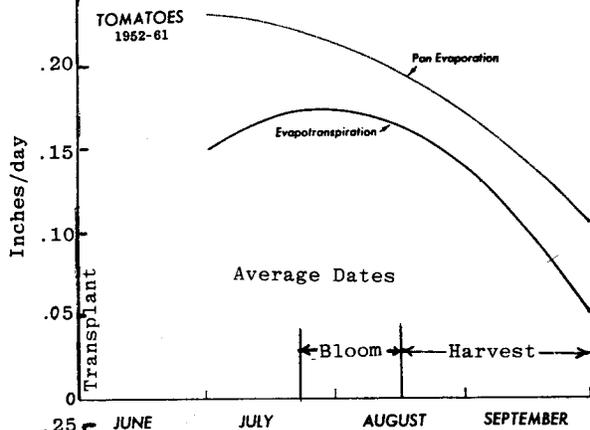
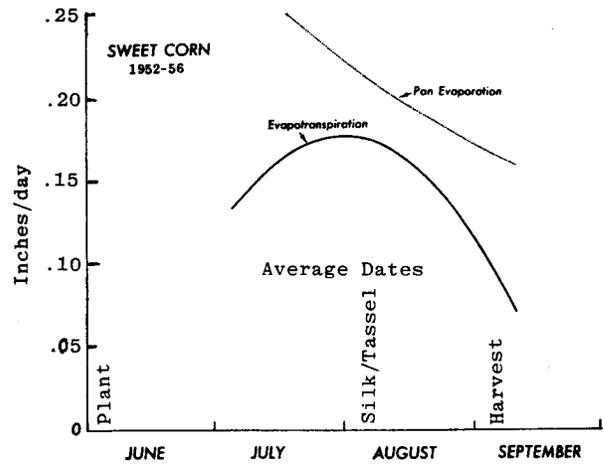
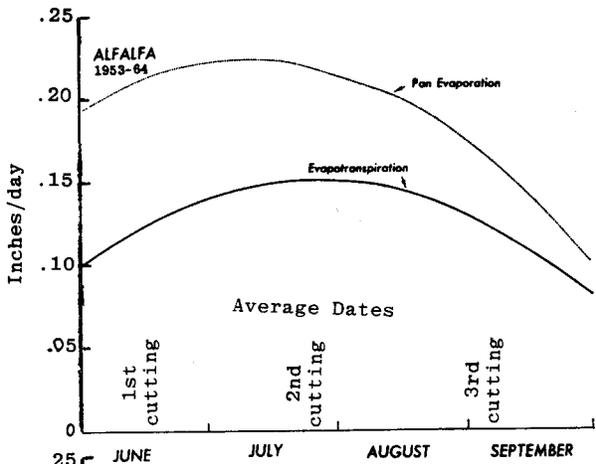
BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Weather Data for the Week Ending June 21, 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	TEMPERA- TURE °F		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
OR TULSA	88	68	93	56	78	0	2.7	1.6	2.7	3.3	94	16.0	86	96	58	4	0	1	1
ASTORIA	63	52	67	44	58	1	1.9	1.3	.6	5.4	284	32.7	97	89	59	0	0	1	1
BURNS	73	39	80	32	56	-3	0	.2	0	.5	6.3	6.9	111	78	36	0	0	7	0
MEDFORD	84	49	89	40	66	1	T	.2	T	.5	6.3	5.9	56	83	24	0	0	0	0
PENDLETON	70	52	79	46	61	-5	.1	.1	.1	1.5	214	8.1	116	77	35	0	0	0	0
PORTLAND	69	54	76	48	62	0	.5	.1	.1	3.2	267	15.1	79	92	53	0	0	4	0
SALEM	69	50	78	40	60	-2	.5	.2	.3	3.4	283	16.5	76	94	54	0	0	2	0
PA ALLENTOWN	86	64	94	56	75	4	1.8	1.0	1.3	4.8	209	19.1	101	85	51	2	0	4	1
ERIE	76	60	86	51	68	2	.6	.3	.4	2.9	121	18.8	111	87	57	0	0	2	1
HARRISBURG	86	64	95	56	75	2	1.3	.6	.7	3.5	159	15.5	90	92	56	2	0	2	1
PHILADELPHIA	85	65	92	62	75	2	.8	.1	.6	2.4	96	15.7	86	95	58	1	0	2	1
PITTSBURGH	82	61	89	52	72	2	1.2	.4	.9	5.5	229	19.1	106	89	50	0	0	2	1
SCRANTON	82	62	91	52	72	3	.3	.5	.2	3.0	125	18.9	121	84	57	1	0	3	0
RI PROVIDENCE	81	62	89	56	71	4	1.0	.4	1.0	1.9	100	14.1	71	97	55	0	0	3	0
SC CHARLESTON	96	74	100	70	85	7	2.3	.8	1.9	5.6	137	17.2	79	93	43	7	0	3	1
COLUMBIA	94	71	99	70	83	6	.4	.6	.1	4.2	162	16.6	77	91	40	7	0	3	0
GREENVILLE	72	52	76	47	62	-4	.1	.7	.3	1.1	41	13.6	58	87	41	6	0	1	0
SD ABERDEEN	79	53	84	46	66	-2	.2	.8	.1	2.0	77	6.2	69	86	45	0	0	2	0
HURON	73	48	81	42	61	-4	.2	.7	.2	1.2	44	4.1	42	86	33	0	0	3	0
RAPID CITY	79	55	85	51	67	-2	.2	.9	.2	1.8	64	5.3	54	82	33	0	0	2	0
SIoux FALLS	90	66	94	61	78	2	0	.9	0	3.7	154	22.2	60	92	34	0	0	2	0
CHATTANOOGA	87	68	90	61	78	1	.2	.7	.0	3.7	154	22.2	87	92	41	4	0	0	0
KNOXVILLE	91	73	96	64	82	2	.1	.6	.2	4.1	164	19.5	82	97	54	3	0	1	0
MEMPHIS	87	66	93	59	77	0	.2	.6	.1	2.5	109	23.2	86	82	49	5	0	2	0
NASHVILLE	89	65	96	56	77	-4	.9	.3	.9	6.3	263	23.0	93	91	51	3	0	2	0
TX ABILENE	88	72	93	67	80	-2	2.1	1.3	1.9	8	33	6.1	106	67	18	3	0	1	0
AMARILLO	91	75	94	73	83	2	T	1.0	T	15.0	625	30.9	182	89	57	5	0	2	1
AUSTIN	91	77	93	73	84	1	.1	.6	.1	8.1	253	22.8	96	97	64	6	0	0	0
BEAUMONT	89	75	92	74	82	-1	.5	.1	.5	1.1	52	13.5	144	91	59	7	0	2	0
BROWNSVILLE	85	69	91	65	77	-8	4.0	3.6	3.9	2.5	125	18.9	159	96	60	3	0	2	0
CORPUS CHRISTI	89	62	108	53	80	-1	0	.1	0	5.5	367	17.4	217	95	59	2	0	1	0
DEL RIO	91	68	95	58	79	-2	2.5	1.8	1.7	.4	133	3.7	161	38	9	5	0	0	0
EL PASO	89	79	97	76	84	2	0	1.0	0	7.9	329	22.3	125	93	45	5	0	2	2
FORT WORTH	92	75	94	73	84	2	.2	.9	0	8.0	296	16.4	98	89	69	1	0	0	0
GALVESTON	94	62	107	49	78	0	T	.6	T	9.0	273	26.9	123	87	51	6	0	2	0
HOUSTON	93	61	102	48	77	-4	0	.3	0	.8	38	6.2	77	81	20	4	0	1	0
LUBBOCK	86	65	92	58	76	-7	1.2	.8	1.0	.4	36	6.5	120	84	26	4	0	0	0
MIDLAND	88	73	93	67	81	-2	2.5	1.9	1.0	1.8	129	14.5	177	92	50	3	0	2	1
SAN ANGELO	86	73	93	70	83	1	T	.8	T	2.3	410	22.8	174	97	63	5	0	3	1
SAN ANTONIO	91	74	93	70	83	1	T	.8	T	8.2	328	22.6	150	96	59	6	0	0	0
VICTORIA	91	71	96	64	81	-2	1.0	.4	1.0	7.1	338	17.8	102	92	52	5	0	2	0
WACO	93	66	99	55	80	-3	1.0	.2	1.0	4.6	184	17.5	121	89	43	4	0	1	1
WICHITA FALLS	87	50	95	36	69	-4	0	.1	0	.3	100	4.9	104	40	10	3	0	0	0
UT BLANDING	80	52	87	43	66	-1	0	.3	0	1.0	100	8.8	100	67	22	0	0	0	0
SALT LAKE CITY	80	62	93	55	71	5	.4	.4	.3	2.5	104	16.7	128	90	54	1	0	4	0
VT BURLINGTON	89	66	94	63	78	5	.1	.7	.1	4.9	204	15.1	87	89	49	3	0	1	0
VA LYNCHBURG	90	73	96	70	81	6	2.0	1.2	1.8	4.5	188	14.6	79	92	55	4	0	2	1
NORFOLK	92	71	98	68	81	6	2.2	1.4	1.1	3.7	161	18.5	105	89	53	6	0	4	2
RICHMOND	87	64	99	61	76	4	T	.8	T	1.6	64	13.4	74	87	44	3	0	0	0
ROANOKE	66	47	74	40	57	-5	1.2	.8	.4	2.6	217	11.6	138	92	59	0	0	6	0
WA COLVILLE	73	48	79	42	61	--	.1	--	T	.7	--	5.8	91	--	--	0	0	3	0
OMAK	59	49	63	43	54	-2	3.4	2.6	1.1	7.9	316	52.7	100	99	76	0	0	6	3
QUILLAYUTE	62	51	66	49	57	-4	.5	.2	.3	2.3	209	14.5	78	88	56	0	0	5	0
SEATTLE-TACOMA	66	47	74	42	56	-6	.5	.2	.4	1.3	118	8.3	85	88	40	0	0	4	0
SPOKANE	73	55	81	49	63	-5	.4	.2	.3	2.6	289	13.2	142	77	36	0	0	3	0
WALLA-WALLA	75	47	83	41	61	-4	T	.2	T	.4	67	2.9	71	79	32	0	0	0	0
YAKIMA	79	60	83	51	69	1	.5	.5	.5	4.2	140	17.3	81	98	63	0	0	4	0
WV BECKLEY	85	64	91	55	74	2	1.4	.6	.6	5.5	250	20.9	105	91	53	2	0	5	2
CHARLESTON	85	63	91	55	74	1	.7	0	.4	5.8	252	24.9	126	100	58	1	0	4	0
HUNTINGTON	82	63	89	56	74	1	1.7	.8	.1	4.8	178	17.5	90	90	49	0	0	2	0
PARKERSBURG	73	54	80	47	63	-2	1.1	.3	.8	2.0	87	10.0	82	94	52	0	0	5	1
WI GREEN BAY	76	56	82	51	66	-4	.5	.5	.3	1.8	58	10.9	82	96	49	0	0	3	0
LA CROSSE	76	55	81	46	65	-1	3.3	2.2	2.6	4.1	137	11.0	82	83	47	0	0	3	1
MADISON	72	55	82	51	64	-2	.7	.1	.3	2.0	80	13.5	104	87	53	0	0	4	0
MILWAUKEE	78	42	85	32	60	-3	0	.3	0	.3	30	7.0	111	72	16	0	1	0	0
WY CASPER	76	45	85	36	61	-1	0	.6	0	.6	67	8.6	109	69	22	0	0	0	0
CHEYENNE	77	46	83	34	62	0	0	.4	0	T	0	7.2	87	58	20	0	0	0	0
LANDER	71	45	80	37	58	-4	.3	.4	.2	1.7	74	7.7	80	82	34	0	0	4	0
SHERIDAN	71	45	80	37	58	-4	.3	.4	.2	1.7	74	7.7	80	82	34	0	0	4	0
PR SAN JUAN	91	78	94	76	85	4	.8	.5	.9	3.6	90	27.3	123	87	66	7	0	1	1

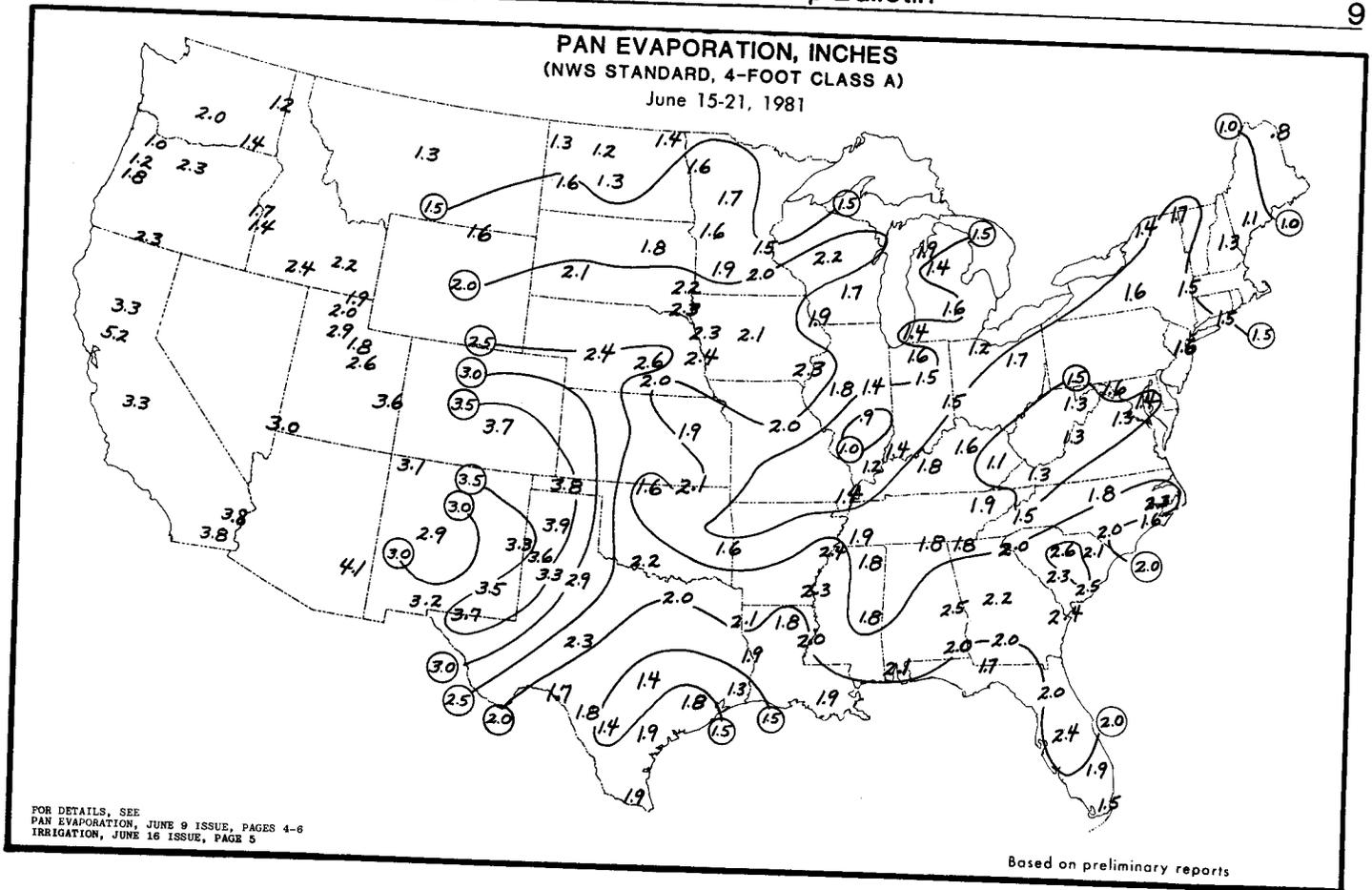
BASED ON PRELIMINARY REPORTS AND 1941-70 NORMALS

Evapotranspiration Rates for Irrigated Crops at Geneva, New York<sup>1</sup>



Overall standard quadratic regression curves for daily evapotranspiration by crops and for evaporation of water from a NWS STANDARD, 4-FT CLASS A pan as dependent upon day during growing season.

<sup>1</sup>N. H. Peck, M. T. Vittum, and G. H. Gibbs



### Spring Weather Review

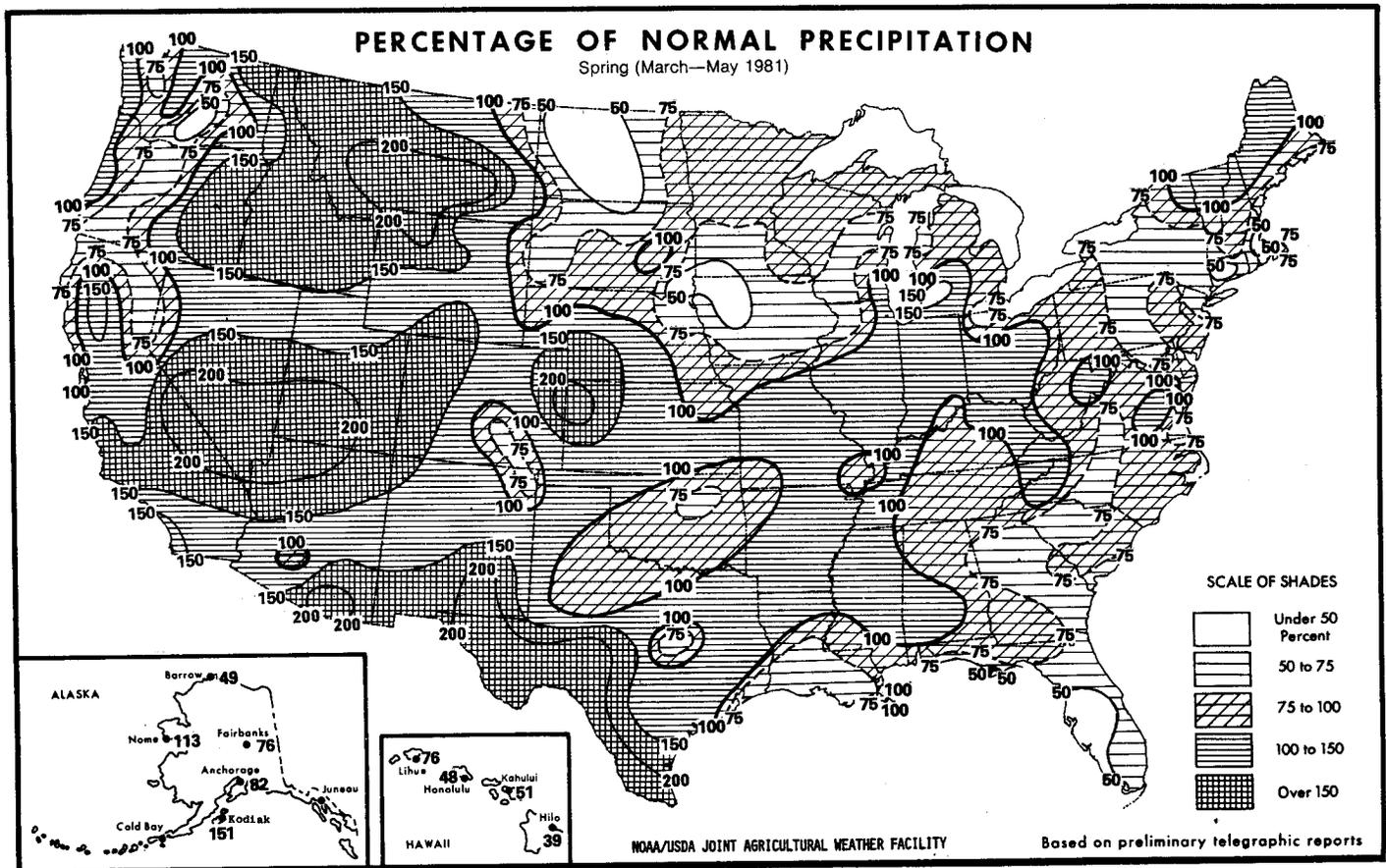
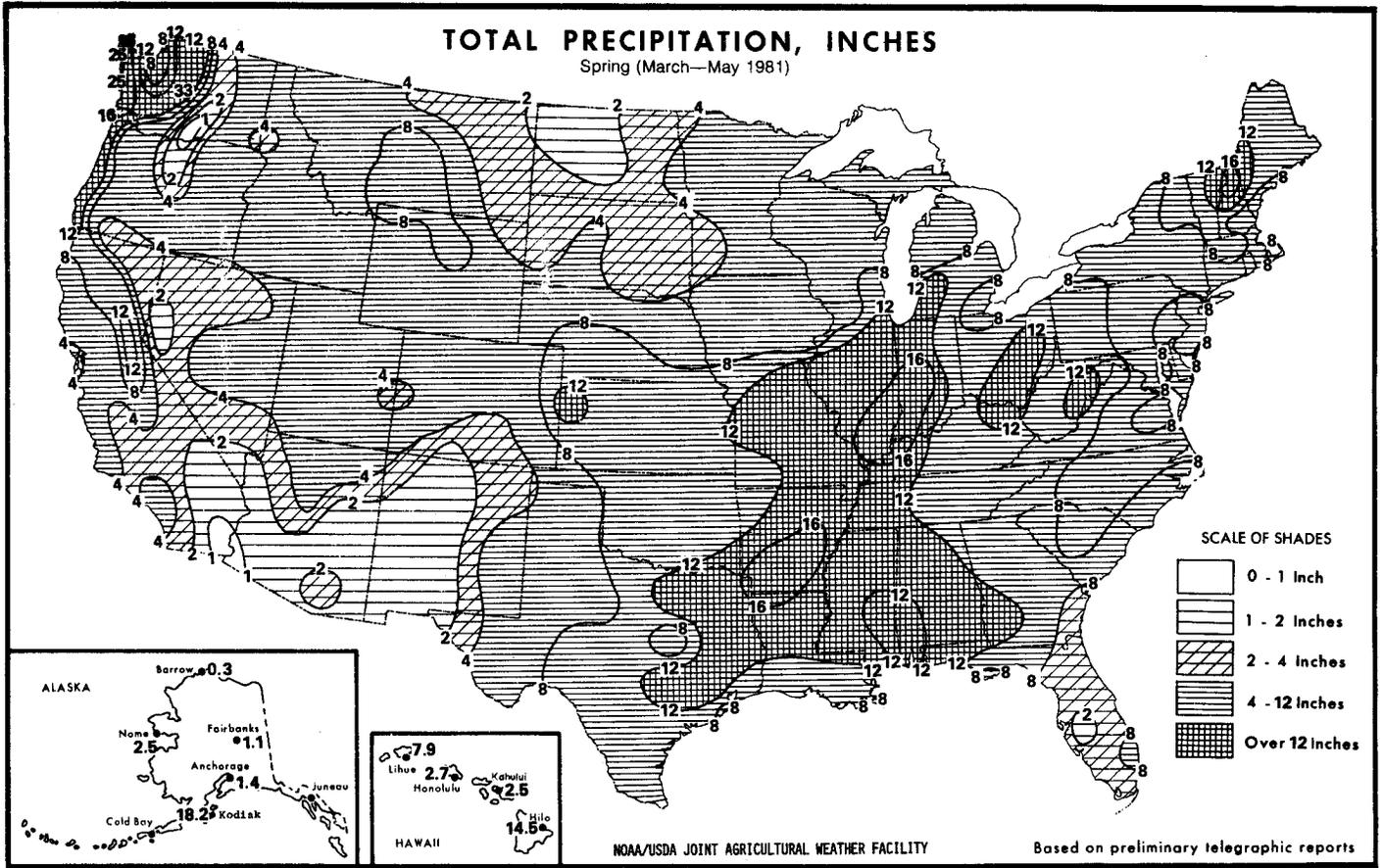
**HIGHLIGHTS:** Spring rain began early in the season, in the western United States but most of the East had below normal rainfall in March. Precipitation was well above normal in nearly all of the West and, as the season progressed, the above normal rain pushed eastward and covered most of the Midwest. The eastern part of the northern Plains remained drier than normal but the eastern Corn Belt was rainy during most of April and May. Much planting was delayed. Spring rain in the East Coast States is normally moderately heavy, but this year, the total amount was generally below normal. However there was enough rain for agricultural needs and to begin filling some reservoirs. Seasonal average temperatures were generally well above normal in the northern and central Plains and the West. Most of the East Coast States were cooler than normal.

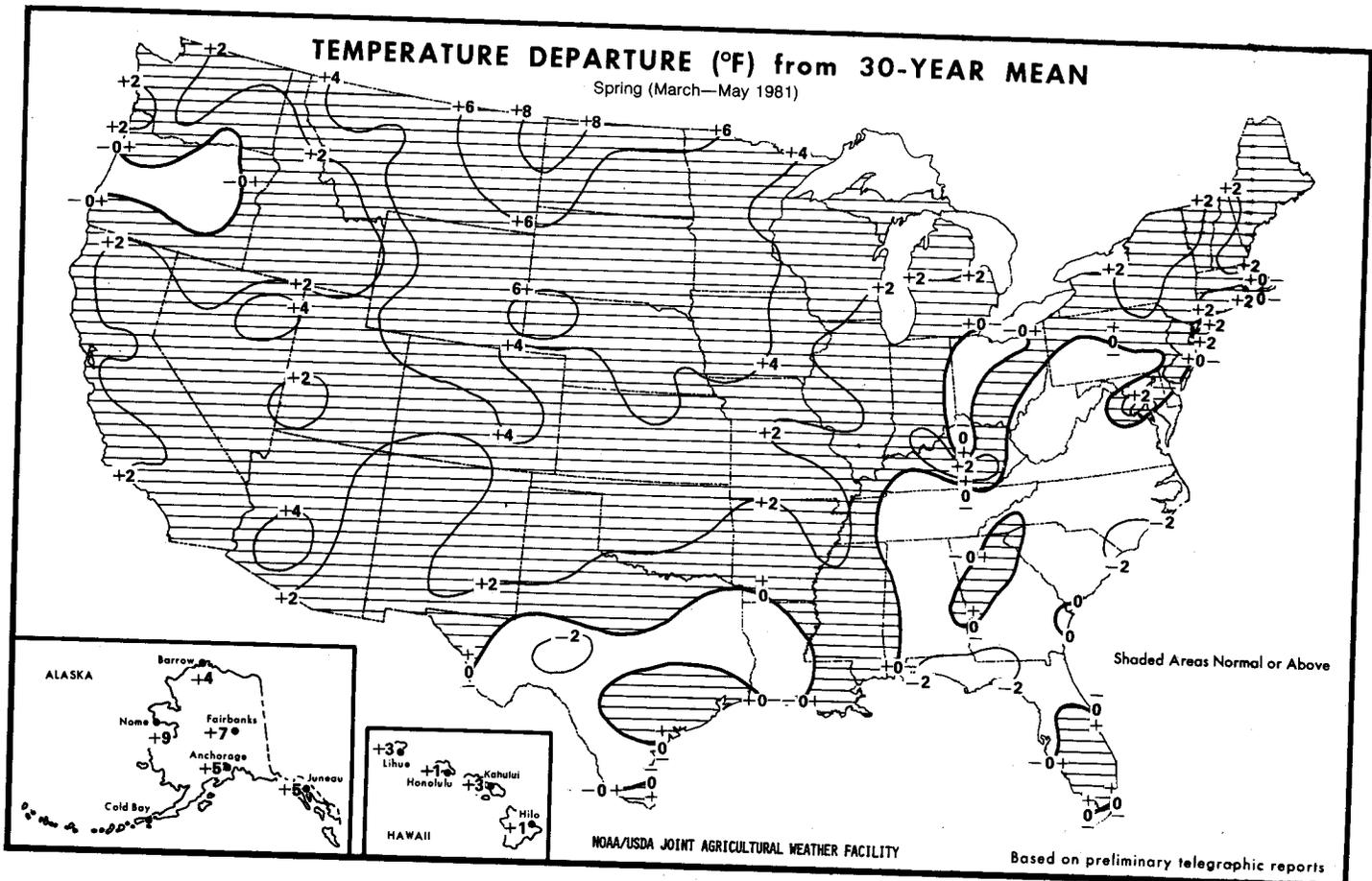
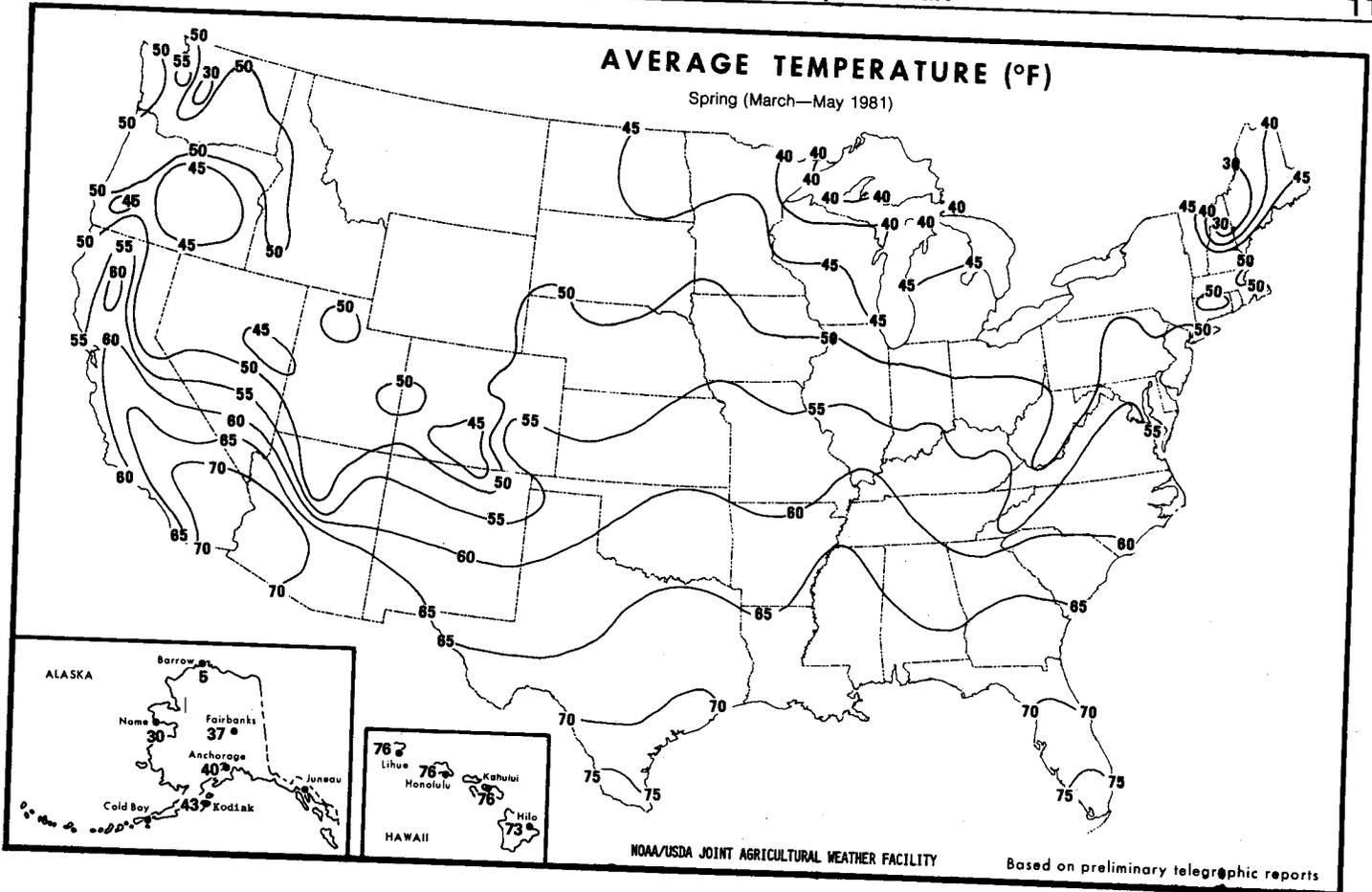
**MARCH...** Generally dry weather prevailed in most of the eastern United States while the West recorded near to well above normal precipitation. After February rains provided some respite, drought conditions worsened again in much of the East, especially along the East Coast. A large portion of Mississippi and Alabama, southern Georgia and the Florida Panhandle had very good rain early in the month. The rain permitted early planting of crops in this southern area. Rain in the central and southern Plains was timely for the early breaking of dormancy of winter wheat. Temperatures averaged near to well above normal over most of the Nation. The

northern Plains averaged 10 to 14° warmer than normal. A cold outbreak in the latter part of the month pushed freezing temperatures all the way to northern Florida.

**APRIL...** Average temperatures for the month were well above normal everywhere except southwestern Texas, where rainy weather kept temperatures cooler. Most of the Plains ranged 6 to 10° above normal. As soil temperatures warmed, planting activity moved north but rain in the eastern Corn Belt kept equipment out of the fields. Much of New England had near normal precipitation but other areas in the South and the East Coast States had little rain and drought conditions worsened. Normal or better rainfall covered the northern Mississippi Valley, the Great Lakes area, and the Ohio Valley. parts of Kansas and Colorado experienced heavy showers as did most of western Texas.

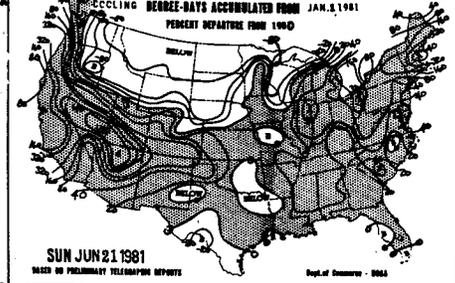
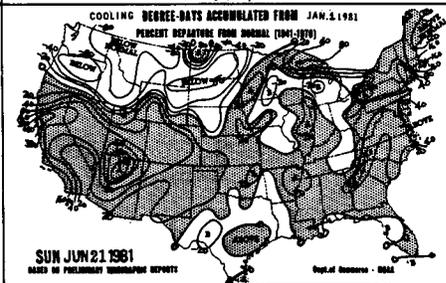
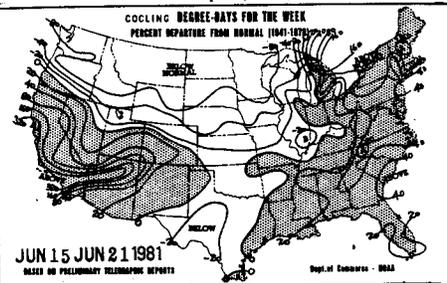
**MAY...** A rapid succession of storms moved out of the central Rockies and brought needed rain to wheat in the central Plains but kept the eastern Corn Belt wet and delayed corn planting. Typical of the season, warm, moist air from the Gulf of Mexico pounced northward, triggering severe weather. Thunderstorms dumped heavy rain from southcentral Texas to the lower Ohio Valley. More rain was needed in much of the east Coast region, the northeastern Plains area, and the southern part of the central Plains. Temperatures were rather cool on the average. Early in the month freezing temperatures in parts of the central Plains damaged winter wheat that was just beginning to flower.





COOLING DEGREE DAYS (BASE 65°) FOR WEEK ENDING JUN. 21, 1981.
BASED ON 1941-70 NORMALS. \* ACCUMULATION FROM JULY 1, 1980.

Table with columns for STATES AND STATIONS, WEEKLY DEPARTURE\*, WEEKLY ACCUMULATION +, and SEASONAL ACCUMULATION +. Rows list various cities across states like ALA., ARIZ., ARK., CALIF., COLO., CONN., DEL., D.C., FLA., GA., IDAHO, ILL., IND., IOWA, KANS., KY., LA., MAINE, MD., MASS., MICH., MINN., MISS., MO., MONT., NEBR., NEV., N.H., N.J., N.MEX., N.Y., N.C., N.DAK., OHIO, OKLA., OREG., PA., R.I., S.C., S.DAK., TENN., TEXAS, UTAH, VT., VA., WASH., W.VA., WIS., WYO., and YOUNGSTOWN.



**National Agricultural Summary**

June 15-21, 1981

**HIGHLIGHTS:** Wet field conditions continued to delay planting in the eastern Corn Belt. Much needed rain fell in the spring wheat growing areas improving crop conditions and promoting growth. Soil moisture supplies were rated adequate to surplus in Illinois, Indiana, Ohio, Missouri, West Virginia, and in parts of Montana. Elsewhere, supplies were short to mostly adequate. Farmers in Illinois, Indiana, Wisconsin, Kansas, Missouri, West Virginia, Ohio, and Montana had 4 days or less suitable for fieldwork. In other areas, 5 to 7 days were available. Corn planting neared completion in all areas except Indiana and Ohio where wet fields continued to delay fieldwork. Soybean planting was 79% finished, lagging the 92% average. Planting progress was slower than average in all States except Iowa, Minnesota, and Nebraska. Cotton was in fair to good condition; 28% of the acreage was squaring. Winter wheat harvesting reached 23% complete, 8 points ahead of last year. Harvesting reached northward into southern Nebraska. Spring wheat was 30% headed. Grain sorghum seeding reached 87% complete, 3 points ahead of average. Pastures were in fair to good condition in all regions except the dry Southwest, where poor to fair conditions were reported.

**CORN:** Corn planting neared completion in all major producing areas except Indiana and Ohio, where wet fields continued to delay fieldwork. Indiana's intended acreage was 90% planted and Ohio's 85% planted. Planting is normally completed in these States by June 10. Much of the remaining acreage may be planted to soybeans when fields dry. Many fields in Indiana, Illinois, and Ohio were either lost completely or damaged by floods last week.

**SOYBEANS:** Soybean planting in the 18 major producing States was 79% completed, behind last year's 93% and the 92% average. Planting progress in States except Iowa, Minnesota, and Nebraska has been slower than average. Kentucky producers were 43 percentage points behind normal; Ohio, 39 points; Indiana, 32 points; Arkansas, 26 points; and Tennessee, 22 points. Wet conditions have delayed planting in many areas, especially in the eastern Corn Belt. However, in the Delta and the Southeast, planting is behind normal because more double-cropped soybeans are expected to be planted this year following the small grain harvest. Many fields in Indiana, Illinois, and Ohio were damaged by floods last week.

**COTTON:** In the 14 major producing States; 28 percent of the cotton had squared, 3 points ahead of last year. Plants were in fair to good condition. In Arizona, Georgia, and Texas, boll setting was underway. High winds and sand damaged many dryland cotton fields in the southern High Plains of Texas. Replanting was underway. Excessive moisture in the Blacklands prevented many fields from squaring properly. The abundant moisture in the southern half of the State increased the vegetative growth of the plants.

**SMALL GRAIN:** Winter wheat harvesting in the 15 major producing States was 23% complete, 8 points ahead of last year. On the Great Plains, harvesting was underway as far north as southern Nebraska. Heavy rains, hail, and floods damaged some fields in Kansas last week. In the Blacklands, heavy rains also delayed harvesting and caused lodging and crop damage. Southcentral areas, and along the Texas coast,

wet conditions prevented combines from entering fields in Central Texas and the Blacklands. Due to harvesting delays, yields and quality decreased in some areas.

Spring wheat was 30% headed in the 5 major producing States, 4 points behind a year ago but 5 points ahead of average. Most growing areas again received some rainfall, but more is needed.

**OTHER CROPS:** Grain sorghum planting reached 87% complete, 3 points ahead of average. Producers in Nebraska finished seeding the 1981 crop. In Texas, 53% of the acreage was heading, 24% was turning color, and 3% was mature. Early June rains were a tremendous boost for fields in Texas, although they caused some lodging in southern areas.

Tobacco harvest was underway in the Southeast, although many growers were still topping the crop. Harvesting was 7% complete in Georgia.

Peanuts were in generally good condition. Blooming was underway. Twenty percent of the acreage was pegging in Alabama and 33% in Georgia. The Texas crop was 60% planted, 22 points behind average. Wet, cool soils delayed seeding progress and development of the crop.

**FRUITS AND NUTS:** Harvesting of peaches was 16% finished in South Carolina and 34% complete in Georgia. The New England apple set was light to average.

Florida citrus groves conditions improved due to recent rains, but more is needed to relieve the dry conditions. The Valencia harvest continues to decline seasonally. Arizona citrus groves were in good condition. The Valencia orange and grapefruit harvest was seasonally slow, but the grape harvest increased. California growers harvested a large volume of Hass avocados. Cherry picking was virtually finished. Nectarines, peaches, and plums were also picked.

**VEGETABLES:** The summer vegetable harvest slowly advanced northward, while some growers in northern production areas continued to plant late-season crops.

Very hot days and warm nights prevailed in Florida's vegetable growing areas. Rainfall was limited to light, scattered showers. Total vegetable shipments declined 26% from the previous week. Volume declined seasonally for most crops. California growers harvested green beans, broccoli, carrots, cauliflower, sweet corn, lettuce, onions, and tomatoes.

**PASTURES AND LIVESTOCK:** Pastures were fair to good in all areas of the Nation except the dry Southwest where poor to fair conditions were reported. Much needed rainfall in the northern Plains improved pastures and ranges, but more is needed for full recovery. Cattle were in fair to good condition.

**CROP PROGRESS**

FOR WEEK ENDING JUNE 21, 1981

	SORGHUM		
	% PLANTED		
	1981	1980	AVG.
COLO	86	96	95
KANS	75	80	80
MO	65	95	86
NEBR	100	100	100
OKLA	95	90	90
S DAK	92	90	92
TEX	96	97	96
7 STATES	87	91	90

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

WINTER WHEAT % HARVESTED			SPRING WHEAT % HEADED			COTTON % SQUARING			SOYBEAN % PLANTED		
	1981	1980	AVG.		1981	1980	AVG.		1981	1980	AVG.
CALIF	40	26	NA	IDAHO	31	26	18	ALA	87	82	88
COLO	0	0	0	MINN	47	44	37	ARIZ	55	79	81
IDAHO	0	0	0	MONT	5	20	20	ARK	77	81	88
ILL	6	2	13	N D	17	24	18	CALIF	88	100	98
IND	2	0	3	S DAK	74	65	35	GA	65	97	97
KANS	20	1	5					IND	100	100	100
MO	20	13	26	5 STATES	30	34	25	IOWA	65	85	75
MONT	0	0	0					KANS	42	92	85
NEBR	1	0	0					KY	86	83	90
OHIO	0	0	0	THESE 5 STATES PRODUCED 92%				LA	95	95	96
OKLA	70	60	55	OF THE 1980 SPRING WHEAT CROP.				MICH	99	99	99
OREG	0	0	NA					MINN	84	84	85
S DAK	0	0	0					MISS	68	100	87
TEX	46	43	49					MO	100	100	100
WASH	0	0	0					NEBR	77	83	84
								N C	60	98	99
15 STATES	23	15	NA					OHIO	83	84	87
								S C	58	86	80
EXCL. STATES WITH NA	23	15	17					TENN	79	93	92
								18 STATES			

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

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

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

NA - NOT AVAILABLE

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 4° above normal. Rain limited to few light showers mostly north.

Fieldwork: 5.6 days. Soil moisture short to adequate. Activities: Wheat harvest; sorghum, soybean planting; crop cultivation; tobacco harvest. Corn 58% silked, 30% 1980, 37% average. Soybeans 80% planted, 82% 1980, 88% average; a lot no-till after wheat. Cotton 54% squaring, 24% 1980 and average. Peanuts 20% pegging, 13% 1980, 16% average. Wheat 80% combined, 79% 1980, 78% average. Sorghum 84% planted, 67% 1980. Hay harvest 60%. Condition: Corn, peanuts, sorghum good; soybeans mostly good, cotton, pasture mostly fair.

**ALASKA:** Farmers had 5 to 7 days suitable for fieldwork. Crop growth generally rapid as temperatures remained high. Light precipitation fell early-late week throughout Railbelt. Small grain fields showed rapid growth. Heights ranging from 2 to 16 in. and averaged 7 in. Virtually all oats and barley in preboot stage. Haying general on many fields. Potato height ranged 2 to 12 in. Topsoil moisture mostly short to adequate. Subsoil moisture short to mostly adequate.

**ARIZONA:** Sunny, hot, dry weather during week with no precipitation. Average temperatures mostly 1 to 9° above normal.

Cotton progress excellent, well ahead normal. Eighty percent fields squaring compared 55% last year. Boll setting progressing in all areas. Small grain harvest approaching completion most areas. Alfalfa cutting, baling excellent progress, well ahead of normal. Safflower forming heads. Corn satisfactory progress. Sorghum crop in all stages development. Sugarbeet harvest full swing, 50% complete. Harvest cantaloups, watermelons increased during week, less than full volume. Size, quality good. Harvest Valencia oranges, grapefruit slow. Citrus groves good condition. Grape harvest increased. Southern Deserts very poor to poor. Ranges mid-to-upper elevations poor to fair. Northern counties getting very dry, stock water hauling required some

areas. Summer rains needed badly. Livestock poor to fair southern Deserts, fair in higher elevations. Soil moisture, water supplies short.

**ARKANSAS:** Temperatures near normal. Highest temperature 98°, lowest 47°. All departures from normal -4 to +2°. Most rainfall 2.60 in., least zero.

Wheat 74% harvested, 89% 1980, 75% average. Some yield losses due to shattering. Oats 79% harvested, 95% 1980, 84% average. Soybeans 55% planted, 79% 1980, 81% average. Cotton 19% squared, 20% 1980. Weed control major problem on all spring crops. Water weevil numbers requiring harsher controls on rice crop. Early planted sorghum starting to head. Five days available for fieldwork. Soil moisture supplies adequate but several eastern counties at surplus levels. Forage cover on pastures slightly above average. Livestock condition good.

**CALIFORNIA:** This is the fourth consecutive week with average temperatures generally above normal. The greatest departures from normal were mostly along the Central and South Coastal areas. Maximum temperatures, 100° or hotter in all regions except Cascade-Sierra; even there; highs pushed into the middle nineties. No rain except first of week extreme north where a few localities reported less than a tenth of an inch.

Hot dry weather speeding small grain harvest. Wheat 40% harvested compared 26% year earlier. Rice planting continues. Some problems associated with high winds. Cotton and sugarbeets progressing favorable. Cultivation, irrigation and weeding continues. Cotton squaring 12% complete. Planting continues second crop dry beans and corn. Blenheim/Tilton apricots harvested. High volumes Hass avocados. Cherries virtually complete. Black Mission figs packed. Perlette, Cardinal, Superior Seedless, Thompson Seedless moving from Desert. Maygrain nectarines, June Lady peaches, and Santa Rosa plums to market. Heat worries citrus growers. Desert Valley grapefruit/Navel oranges wrapping up this week.

Almonds/walnuts good progress. Green bean harvest coastal areas, San Joaquin Valley. Broccoli good supply Central Coast. Bushberry harvest slowing San Joaquin Valley. Cantaloup harvest past peak Imperial, full swing Blythe. Carrot harvest heavy Kern, Salinas areas. Cauliflower fairly light supply. Sweet corn winding down Coachella Valley, increasing South Coast, San Joaquin Valley. Lettuce moderate supply Central Coast. Onion harvest active San Joaquin Valley. Spring potatoes past peak Kern district. Market tomato harvest increasing South Coast. Huron district green pack in full swing; Culter-Orosi pole tomatoes increasing. Progressing tomato harvest increasing Desert. Watermelon harvest full swing Blythe, yields down. Cattle mostly moved higher elevations irrigated pastures. Range grasses very dry, many fires. Water supplies good.

**COLORADO:** Light rain and snow showers on 15th in the mountains, with dry conditions the remainder of the week. Average temperatures normal except for Arkansas Valley with 3 to 5° above normal.

Winter wheat headed 94%, 97% 1980, 98% average; turned color 53%, 31% 1980, 55% average; ripe 1%, 0% 1980, 7% average. Barley headed 58%, 42% 1980; turned color 3%, 20% 1980. Corn planted 99%, 100% 1980, 100% average; emerged 98%, 97% 1980. Average height 14.0 in., 10.0 in. 1980, 14.0 in. average. Sorghum planted 86%, 96% 1980, 95% average; emerged 65%, 72% 1980, 85% average. Dry beans seeded 88%, 94% 1980, 96% average; emerged 75%, 70% 1980, 79% average. Alfalfa 1st cutting 54%, 54% 1980, 62% average. Ranges and pastures good condition. Livestock good condition. Six days suitable for fieldwork.

**FLORIDA:** Hot and dry, 15th through 17th, with near record high daily temperatures around 100°. A weak front pushed into Panhandle the 18th, dissipating over Peninsula 19th caused scattered, mainly afternoon, evening thundershowers Statewide which increased humidity and returned temperatures to near normal remainder of week. Readings averaged 3° above normal with rainfall averaging near 1.00 in. with isolated amounts up to 3.00 in.

Soil moisture variable, short central and north, short to adequate west and south. Recent rains helpful. Irrigated corn good condition, dry land corn poor most areas. Tobacco harvest increasing. Peanuts fair condition. Soybean planting nearing completion some areas. Sugarcane fair condition. Corn and sorghum silage being cut. Small grain harvest over. Some improvement in pasture condition. General rains still needed. Cattle condition poor to good. Some broiler losses reported. Citrus grove condition improved from recent rain. More rain needed. New growth most trees. No appreciable late bloom. Valencia harvest continues to slow. Very hot days and warm nights prevailed in vegetable areas. Temperatures averaged 3 to 5° above normal. Rainfall was limited to light, scattered showers during most of the week but increased considerably over the weekend. Total vegetable shipments were down 26% from the previous week. Supplies were about steady, eggplant and watermelons. Volume declined seasonally, snap beans, cabbage, carrots, celery, sweet corn, cucumbers, okra, peppers, potatoes, radishes, southern peas, squash and tomatoes. Watermelon harvest continues active. Quality good.

**GEORGIA:** Temperatures generally 3 to 6° above normal, mid 70's mountains to mid 80's south. Rainfall spotty ranging from zero at several locations to over 3.00 in. southeast. The 20th and 21st hot and dry except scattered thundershowers, mainly south.

Soil moisture mostly short to adequate. Primarily extreme northern section of State adequate. Averaged 6 days suitable for fieldwork. Activity

heavy, mainly haying, planting, harvesting, weed control and spraying. Corn fair to good, inadequate soil moisture, 83% silked, 40% dough, 4% dent, last year 55% silked, 26% dough, 5% dent. Soybeans fair to good, 77% planted, last year 81%, average 88%, 3% blooming, same last year. Peanuts fair to good, applying fungicides and herbicides, 71% blooming, 74% last year, 80% average, 33% pegging, 30% last year, 44% average. Cotton fair to good, 72% squaring, 77% last year, average 74%, 20% setting bolls, 10% last year, 26% average. Tobacco fair to good. Topping and sucker control active, 7% harvested, 9% last year, average 14%. Sorghum 74% planted, 68% last year, 74% average. Wheat 83% harvested, last year 90%, average 92%. Haying active, fair to good. Pastures and cattle fair to good. Hogs fair to mostly good. Peaches fair to mostly good, 34% harvested, 40% last year, 53% average. Apples fair to mostly good condition. Watermelons fair to good, 13% harvested, 10% last year, average 17%. Vegetables fair to mostly good.

**HAWAII:** Weather favorable. Showers light most windward areas. Leeward sections dry. Heavy irrigation necessary. More rains needed in some dry areas where irrigation facilities not available. Crop condition fair to good. Vegetables: Supplies adequate. Tomato harvest continues heavy. Bananas: Supplies light. Papayas: Moderate harvest anticipated. Showers beneficial some areas. Pineapples: Peak harvest approaching. Sugar: Active harvest on all plantations. Pastures: Dry weather affecting pastures and ranges. Most windward pastures still generally fair to good.

**IDAHO:** Temperatures averaging 4 to 8° below normal, ranging from 87 to 27°. Precipitation above normal in the north, near normal in the southwest and less than normal in the south central and southeast.

Potatoes planted 99%, 100% in 1980 and 100% average. Potatoes emerged 70%, 80%, 86%. Dry beans planted 100%, 98% 1980 and 100% average. Alfalfa hay cut 37%. Winter wheat headed 55%, 66% in 1980, 62% average. Spring wheat headed, 31%, 25%, 18%. Spring barley headed 32%, 23%, 24%. Frost in east causes some damage to potatoes and headed small grains.

**ILLINOIS:** Temperatures normal to 3° below normal. Precipitation mostly 1.00 to 4.50 in., light extreme southeast plus other scattered areas.

Corn condition 5% excellent, 75% good, 19% fair and 1% poor; average height 20 in., most advanced 34 in.; planting 88% complete; 100% 1980, 98% average; condition 4% excellent, 71% good, 24% fair, 1% poor; full stand 89%, 1980 86%. Winter wheat condition 14% excellent, 77% good, 9% fair; 96% turning yellow, 92% 1980, 84% average; 60% ripe, 30% 1980, 45% average; harvest 6% complete, 2% 1980, 13% average. Oats 15% excellent, 78% good, 7% fair; 85% headed, 80% 1980, 80% average; 40% filled, 38% 1980, 44% average. Alfalfa condition 16% excellent, 69% good, 15% fair; first cutting 88% complete, 92% 1980, 93% average. Red clover condition 25% excellent, 61% good, 14% fair; first cutting 75% complete, 76% 1980, 82% average. Pastures 30% excellent, 65% good, 5% fair. Soil moisture 65% adequate, 35% surplus. Fieldwork: 3.3 days suitable.

**INDIANA:** Less rain this week welcomed. Rainfall north third 1.00 in., central and south 0.40, except west central 0.80 in. Near normal temperatures ranged from 48 to 96°. Some local storm damage from several thunderstorms and tornadoes.

Fieldwork averaged 4 days. Topsoil and subsoil moisture mostly adequate to surplus. Corn 90% planted, 1980 100%, average 100%. Corn 85%

emerged. Corn 13 in. tall, 1980 19 in., average 19 in. Soybeans 65% planted, 1980 97%, average 97%. Soybeans 60% emerged. Soybeans 3 in. tall, 1980 4 in., average 4 in. Wheat 2% combined, 1980 0%, average 3%. Wheat 15% ripe, 1980 5%, average 25%. Wheat 65% turning color. Wheat 100% in milk. Oats 85% headed, 1980 65%, average 75%. Alfalfa hay 65% cut, 1980 90%, average 90%. Clover 55% cut. Tobacco 90% set, 1980 70%, average 90%.

IOWA: Temperatures averaged about 30 subnormal and precipitation varied from 0.20 in. western districts to 2.00 in. or more over the southeast and east central districts. Showers fell primarily the 15th, 19th through the 21st.

Topsoil moisture: 23% short, 71% adequate, 6% surplus. Subsoil moisture: 42% short, 54% adequate, 4% surplus. Soybeans emerged: 99% emerged, 1980 97%, normal 95%. First cut alfalfa hay harvested: 94% complete, 1980 83%, normal 90%. First crop clover hay harvested: 68% complete, 1980 62%, normal 59%. Fieldwork: 4.5 days suitable. Crop conditions: pasture, winter wheat, alfalfa hay, clover, oats, corn and soybeans good. Livestock good to excellent.

KANSAS: Moisture averaged from 1.00 in. to over 2.00 in. southeast of a line from Sublette to Hays to Washington with 8.00 in. to over 12.00 in. rains Barton and Pawnee Counties and 2.00 in. to 4.00 in. east central and southeast at beginning of the period. Considerable flooding on Arkansas River near Great Bend and on Marais Des Cygne River. Temperatures averaged from 70° northwest and north central to 76° south central or normal northwest to from 1 to 4° below normal elsewhere.

Wheat harvest advanced to 20%, mostly in south central and southwest, last year 1%, average 5%. Test weight running mostly under 60 pounds. Crop 60% ripe, last year 1%, average 25%. Corn planting virtually complete, about 4 days behind last year and 2 days behind average both at 100%. Sorghum planted 75%, trails last year and average, both 80%. Soybean plantings 65%, about 2 weeks behind 1980's 85%, average 75%. Garden webworm causing problems in alfalfa, soybeans, corn, and sorghum in eastern areas. Surface moisture mostly adequate except southwest. Four days suitable fieldwork.

KENTUCKY: Temperatures averaged within 1 or 2° of normal with weekly mean readings in the low to mid 70's. Precipitation averaged about 0.75 in., but localized heavier amounts were observed. This was only slightly below normal.

For the first time since early May, farmers averaged 5 days in the field. Some bottomland remains too wet to work, but generally field tillage and planting progressed rapidly. Soybean planting advanced to 42% complete, last year 90%, average 85%. Most corn planted; average height 26 inches. Early fields tasseling. Burley tobacco over 90% set. Barley harvest 70% complete. Wheat 25% harvested. Pastures good to excellent.

LOUISIANA: Rain sparse. Temperatures 1 to 4° above normal.

Soil moisture adequate. Days suitable: 6.7. Corn silked, 83%, 47% 1980, 69% average, dough stage 55%, 24% 1980, mature 19%, 8% 1980, condition good. Rice headed 19%, 16% 1980, condition good. Cotton squaring 37%, 36% 1980, 29% average, condition fair to good. Soybeans planted 86%, 83% 1980, 90% average, emerged 79%, 74% 1980, 81% average, condition fair to good. Sorghum planting 94%, 85% 1980, 88% average, emerged 87%, 75% 1980, 81% average, headed 21%, condition fair to good. Sugarcane good condition. Sweet potatoes transplanted 97%, 87% 1980, 90% average, condition good. Vegetables good condition.

Wheat harvested 96%, 94% 1980. Hay first cutting 83%, 85% 1980. Pastures, livestock good condition. Peach condition good, harvest 36%, 38% 1980.

MARYLAND AND DELAWARE: Temperatures 5° above normal. Highs in 80's, lows in 60's. Precipitation averaged 0.95 in.

Barley 30% cut in Maryland, last year 50%; Delaware 60% cut, last year 70%. Wheat 5% cut in Maryland, 1% Delaware. Acreage turned: Barley 100%, wheat and rye 90%, oats 95%, last year 75%. Light army worms infestations. Soybeans in Maryland 80% planted, last year 75%, average 70%; Delaware 80%, 70% last year, average 75%. First cutting alfalfa in Maryland 95% harvested, last year 80%; in Delaware 100% last year same. Other hay in Maryland 70% cut; Delaware 100% cut. Tobacco 90% planted, same last year, average 70%. Fieldwork: 5.5 days suitable. Moisture and feed supplies adequate. Heat stressed poultry and swine.

MICHIGAN: Another wet week with near normal temperatures. Precipitation averaged over 1.00 in. except for the southern portion of the Lower Peninsula.

Rain last week slowed fieldwork until 18th in some areas but growing conditions for crops were excellent. First cutting of hay continued. About 5 days were suitable for fieldwork. Soybeans 95% planted, 95% last year, 96% normal. Dry beans 85% planted, 80% last year, 85% normal. Corn 11 inches, 10 inches last year, 13 inches normal. Asparagus 95% harvested, 98% last year, 96% normal. Strawberries 35% harvested, 25% last year, 40% normal. Fruit set: tart cherries, light; sweet cherries, light to average; apples, light to average. Vegetable development normal.

MINNESOTA: Temperatures averaged up to 6° below normal in the northern districts, 3 to 5° below normal in the central districts, 2 to 4° below normal in the southern districts. Extremes: 85° at 6 stations in the southern districts, 37° at Preston and Fairbault. Precipitation averaged 0.50 in. or more above normal in the northern districts, 0.50 in. below normal central districts, near normal to 0.50 in. below normal southern districts. Precipitation totals light southwest, generally 0.50 to 1.00 in. elsewhere. Extremes 0.03 in. Redwood Falls, 2.35 in. Red Wing.

Crop growth in southwest aided by heaviest rainfall of year. Enough rain to sustain crops for short time but more needed soon if crops are to continue developing. Central part of southwest received less than other areas and moisture still short. Heavy rain in band across central and as a result moisture surplus. Topsoil moisture rated 10% short, 81% adequate, and 9% surplus. High winds in southern half of State "sand-blasted" crops but little damage resulted. Emerged: Soybeans 95%, 1980 96%, normal 97%; flax 95%, 1980 94%, normal 93%. Jointing: Spring wheat 92%, 1980 88%, normal 70%; oats 91%, 1980 83%, normal 73%; barley 93%, 1980 91%, normal 69%. Heading: Spring wheat 47%, 1980 44%, normal 37%; oats 54%, 1980 42%, normal 42%; barley 64%, 1980 52%, normal 42%; winter wheat 97%, 1980 91%, normal 85%; rye 95%, 1980 95%, normal 88%. Turning ripe: Spring wheat 1%, 1980 0%, normal 1%; oats 1%, 1980 0%, normal 1%; barley 1%, 1980 0%, normal 1%; winter wheat 8%, 1980 5%, normal 17%; rye 16%, 1980 6%, normal 15%. Cultivated once: Field corn 72%, 1980 71%, normal 73%; soybeans 45%, 1980 55%, normal 58%; sunflowers 66%, 1980 69%. Height: Field corn 14 in., 1980 13 in., normal 16 in.; soybeans 5 in., 1980 6 in., normal 6 in.; sunflowers 7 in., 1980 9 in. First cutting alfalfa hay 53%, 1980 69%, normal 68%.

MISSISSIPPI: Unseasonably warm weather. Weak cold front at midweek was only temporary. Little to no rain all reporting locations.

Soil moisture adequate. Fieldwork: 5.9 days suitable. Cotton 70% squaring, 34% last year, 40% average; 6% blooming; condition good to fair. Soybeans 84% planted, 84% last year, 85% average; 62% to stand, 67% last year; condition good to fair. Corn 61% silked, 30% last year; 23% in dough stage; condition good. Sorghum 89% planted, 83% last year, 82% average. Winter wheat 88% harvested, 85% last year and average. Hay 40% harvested; peaches 20% harvested. Rice condition good, pasture condition good, peach condition good.

MISSOURI: Temperatures averaged from 1 to 3° below normal. Thunderstorms were numerous and amounts of rain received ranged from 1.25 in. to over 7.00 in.

Fieldwork: 2.5 days suitable. Grain sorghum 65% planted, last year 95%, normal 86%. Soybeans 68% planted, last year 100%, normal 87%. Wheat 20% harvested, last year 13%, normal 26%. Alfalfa hay, 1st cutting 94% harvested, last year 97%, normal 88%. Alfalfa hay, 2nd cutting 13% harvested, last year 16%. Other hay 52% harvested, last year 71%. Cotton 2% squaring. Pasture condition good to excellent. Topsoil moisture supply adequate to surplus.

MONTANA: It was a wet week over west and southwest with daily precipitation. Many valley areas received 1.00 to 1.50 in. of rain while mountains had up to 4.00 in. Moderate precipitation fell over the plains with some heavy amounts in central areas. Cool weather prevailed. Temperatures averaged from 4 to 7° below normal. Coolest area was across southwest. Highest 83° at Glasgow, lowest 28° at West Yellowstone and Jackson.

Topsoil moisture adequate to surplus except northeast short to adequate. Subsoil adequate except eastern third of State short to adequate. Fieldwork: 3 days suitable. Winter wheat condition good to excellent except fair to good eastern third of State. Spring wheat, barley, oats, sugarbeets, potatoes, corn condition good. Sugarbeets thinned, 55%. Crop progress compared with last year and average: winter wheat headed 70, 80, 65; spring wheat boot 35, 40, 30; headed 5, 20, 20; barley boot 30, 40, 30; oats boot 35, 30, 30. First cutting alfalfa hay 10% complete. Stock water supplies short eastern half of State, adequate to surplus elsewhere.

NEBRASKA: Temperatures: 1° below normal. Precipitation: Widespread showers at beginning and end of week. Heaviest amounts of 2.00 in. or more in northeast.

Winter wheat harvest just underway, less than 1% harvested, 0% last year and normal. Condition mostly fair. Mature 5%, 0% last year and less than 5% normal. Coloring 75%, 65% last year and 55% normal. Corn fair to mostly good. Sorghum and soybean emergence neared completion, same as last year. Pasture and range feed supplies short to adequate. Livestock gains near normal. High winds caused dusty conditions for livestock. Topsoil moisture mostly short. Subsoil moisture mostly short to adequate. Days suitable: 6.3.

NEVADA: Cool early, typical summer weather last half. A few scattered, light showers fell along northern border. Temperatures averaged 10° below seasonal normal early in week to 10° above normal end of period. Extremes: 110 to 25°.

Alfalfa hay harvest gaining momentum. Small grains helped by warmer weather. Summer ranges getting drier.

NEW ENGLAND: Temperatures above normal. Cold front 17th accompanied with showers. Precipitation developed ahead of disturbance on 20th and 21st. Precipitation above normal, north (1.00 in.); below normal, south (0.50 in.).

Fieldwork: 5 days favorable. Hay crop 33%

cut. Corn emergence: 89%. Potato emergence: 81%, cultivating and applying herbicides. Oats 91% emerged, growing well. Apple fruit set: Light-average. Drop: Heavy. Vegetables growing well, many insects, some Gypsy moth. Cranberries in bloom: 25 to 30%, heavy bloom. Strawberries: Active harvest, good yield prospects. Good conditions: Corn, potato, oats, vegetables, cranberries, strawberries. Fair condition: Apples. Soil moisture short to adequate. Grazing adequate.

NEW JERSEY: Temperatures averaged 2 to 4° above normal. Extremes: 47° at Newton on 18th, 97° at Toms River on 16th. Rainfall averaged 0.81 in. north, 1.62 in. central and 1.31 in. south. Estimated soil moisture, in percent of field capacity, averaged: 73 north, 77 central and 74 south. Four inch soil temperature today averaged: 71 north, 76 central and 76 south. Total sunshine at Trenton from 15th to 21st was 67% of possible hours.

Fieldwork: 5.2 days suitable. Heavy thunderstorms caused excessive soil moisture in many areas. Summer vegetable harvest increasing as cucumbers, snap beans and squash move to market. Blueberry harvest begun. Strawberry volume declined to moderate supplies from northern areas. Barley combining underway as weather conditions permit. Wheat ripening. Weather conditions continue to hamper hay making. Soybean planting continues as barley fields harvested. Pasture growth remains good.

NEW MEXICO: Weather hot and dry.

Generally crops in good condition. Cotton 40% squared. Dryland cotton generally poor condition. Alfalfa good condition with first cutting nearly complete and second cutting in full swing in southern part of State. Some insect damage reported to seed hay. Irrigated grain crops good condition, dryland reported as poor. Pecan crop progressing normally. Vegetables in good condition with onion harvest continuing. Ranges poor to fair, some supplemental feeding. Livestock fair to good condition.

NEW YORK: Temperatures, rainfall, humidity all above normal.

Poor haying conditions. First cutting alfalfa hay 40% in, 57% 1980, 58% average. Clover-Timothy hay 30% done, 37% 1980, 40% average. Grass silage 51% complete, 68% 1980, 66% average. Corn planting about done. Wheat condition good to excellent. Dry bean planting in late stages. Heavy rains delayed western vegetable planting. Sweet corn, cabbage, Long Island and Upstate potatoes in good condition. Long Island growing conditions excellent. Grapes setting well in Hudson Valley and Finger Lakes. Some western vineyards in late bloom. No bloom this year on many tart, sweet cherry orchards.

NORTH CAROLINA: Temperature: 3 to 5° above normal. Precipitation: 0 in the Piedmont to nearly 6.00 in. in southern coastal area.

Fieldwork: 5.3 days suitable. Soil moisture: 2% very short, 35% short, 58% adequate, 5% surplus. Conditions: Pasture fair to mostly good; tobacco, corn, cotton, peanuts, hay, Irish potatoes, sweetpotatoes, apples, peaches and truck crops mostly good. Supplies: Fuel supplies mostly adequate. Plantings: Sweetpotatoes 87%, 1980 90%, 91% average; sorghum 85%, 1980 84%, 86% average; soybeans 77%, 1980 83%, 84% average; burley tobacco 97%, 1980 93%, 95% average. Harvests: Irish potatoes 37%, 1980 21%, 32% average; wheat 65%, 1980 68%, 52% average; oats 80%, 1980 77%, 63% average; barley 82%, 1980 88%, 68% average; rye 77%, 1980 76%, 61% average.

NORTH DAKOTA: Frequent showers with cool temperatures dominated. Totals averaged from 0.50

to 1.00 in. Largest 2.60 in. northeast. Temperatures averaged 4 to 7° below normal. Extremes: 82° west central to 34° north central.

Fifth consecutive week with widespread shower activity. Only 5% of State short of topsoil moisture compared to 69% last year and 30% average. Period of warm, sunny weather needed to spur row crop development and allow haying and fieldwork to progress. Crop planting now virtually complete. Small grain development generally near average pace. Condition mostly good to very good. Leaf disease concerns in many areas. Also scattered cutworm damage to row crops. Pasture and haylands recovering nicely from earlier drought and frost damage. Haying will be in full swing when weather permits. Percents heading or beyond with last year and average: Hard red spring wheat, 17, 24, 18; durum 7, 15, 11; barley 26, 27, 22; oats 18, 19, 15; winter wheat 86, 76, 74; rye 33, 37, 32. Percent planted with last year and average: Flax 97, 90, 97; corn 99, 98, 99; sunflower 99, 95, 99.

OHIO: Temperatures averaged above normal. Afternoon high temperatures close to seasonal levels, but overnight lows warm. Growing degree day totals above normal. Precipitation widespread: Amounts were extremely varied, ranging from 0.20 to 2.50 in. Ponding and flooding a problem. Soils already saturated.

Surface moisture, humidity remain nearly ideal for disease activation and spread. Conditions also ideal for weed growth while cultivation and spraying were limited. Very little further corn planting will occur. Any that is planted will be primarily for silage. The crop condition was rated fair. Many fields show water damage, but replanting is unlikely. Planting of soybeans is expected to continue well into July. Bean leaf beetles and Mexican bean beetles are a threat but have not yet reached economic thresholds. The crop condition was rated fair. Winter wheat was rated fair to good, prospects have deteriorated the past couple of weeks. Lodging, army worms, and rust are problems. Intended corn planted 85%, 100% 1980, 100% average. Intended beans planted 60%, 98% 1980, 99% average. Tobacco transplanted 65%, 85% 1980, 85% average. Alfalfa, 1st cut 60%, 80% 1980, 90% average. Other hay, 1st cut 40%, 60% 1980, 65% average. Wheat ripe 4%, 2% 1980, 5% average. Oats headed 65%, 45% 1980, 60% average. Days favorable: 2.5. Pasture condition good. Soil moisture 24% adequate, 76% surplus.

OKLAHOMA: Temperatures averaged within 1° of normal. Several readings above 100° were reported. No rainfall reported in the Panhandle. Elsewhere rainfall ranged from 0.28 in. in the north central to 1.75 in. in the northeast and 1.73 in. in the southeast division.

Wheat ripe all districts. Harvest delayed wet weather. Extremely beneficial row crops and pasture. Wheat ripe: 100%, 90% 1980, 100% average. Wheat harvested: 70%, 30% 1980, 55% average. Sorghum grain planted: 95%, 85% 1980, 90% average. Sorghum grain up to stand: 75%, 50% 1980, 65% average. Cotton planted: 100%, 90% 1980, 95% average. Cotton up to stand: 65%, 70% 1980, 70% average. Days suitable for fieldwork: 4.2.

OREGON: Average temperatures 3 to 9° below normal. Coastal stations received up to 2.40 in. of rain; southwestern valleys and south central area received less than 0.10 in., all other areas received 0.50 to 1.00 in.

Soil moisture supplies adequate to surplus west; adequate east. Winter wheat condition good to excellent east; good and some fair in west. Western fields have rust. Wheat 37% turning color; 17% last year. Spraying for aphids and disease. Barley turning. Mint slow. Hay and silage halted due to rain; much will be lost. Strawberry harvest hampered by continuous rain; many rotting. Red raspberry picking just

starting. Cherry harvest delayed by rains; splitting a major problem in most areas. Filbert clusters showing well. Late vegetables not planted because of rain and mud. Green pea harvest slowed. Early beans showing flower buds. Some western onion fields had flood damage. Livestock good to excellent. Range and pasture good to excellent. Good forage growth.

PENNSYLVANIA: A cold front moved through the State bringing a cooler air mass. Rainfall from showers and thunderstorms ranged from 0.25 to 0.75 in. Mild and comfortable mid-week. Humid air mass returned to the State over the weekend accompanied by showers and thunderstorms. Rainfall amounts were again near to 0.50 in. Heaviest rainfall totals for the week appear to have fallen over the southern half of the State.

Four days suitable. Topsoil moisture adequate to surplus. Activities: making hay and haylage; cultivating corn; spraying corn, potatoes, and fruit trees; transplanting tobacco and planting cabbage. Corn planting virtually complete, which is about a week behind last year. Average height 13 inches, last year 10 inches. Tobacco 86% transplanted, last year 78%. Soybeans 87% planted, last year 94%. Barley 38% headed, 54% turning yellow, 7% ripe with traces of harvesting, last year 40% headed, 50% turning yellow, 5% ripe. Wheat 70% headed and 27% turning yellow, last year 79% headed and 14% turning yellow. Oats 64% headed, last year 30% headed. First cutting alfalfa 61%, last year 73%. Traces of a second cutting, the same as last year. Clo-tim 40% harvested, last year 57%. Quality of hay made fair to good. Feed from pasture average to above average.

SOUTH CAROLINA: Temperatures varied, much higher than normal first of week to near normal latter part of week. Rainfall below normal over much of State except in areas of heavy downpours mostly near south coast.

Soil moisture short. Fieldwork: 5.5 days suitable. Corn fair to good condition, 74% silking, 24 last year, 50 average. Corn suffering from heat damage. Cotton 80% squaring, 74 last year, 65 average. Cotton condition fair to good. Soybeans 83% planted, 84 last year, 87 average. Tobacco 46% topped, 13 last year, 50 average, condition good, 1% harvested. Peaches good condition, 16% harvested, 11 last year, 19 average. Tomato harvest 29%, 30 last year.

SOUTH DAKOTA: Precipitation was scattered and light, generally less than 0.30 in. Temperatures 3 to 6° below normal. Extremes: 91 and 25°.

Five days suitable. Topsoil moisture adequate over north central, northeast, southeast and parts of West River. Critically short in parts of central and east central. Short elsewhere. Average corn height 10 in.; 73% cultivated once. Both slightly ahead of normal. Small grain in fair to mostly good condition. Poorer stands to be harvested as hay or being grazed. Range and pasture improving except where over-grazed earlier this spring. First crop alfalfa over 50% harvested. Sorghum planted 92%, 1980 90%, average 92%. Sunflowers planted 92%, 1980 95%, average 91%. Oats headed 85%, 1980 68%, average 44%. Spring wheat headed 74%, 1980 65%, average 35%. Barley headed 86%, 1980 71%, average 45%.

TENNESSEE: High pressure dominated for much of the week, but thunderstorms moved into the west and middle on 19th. Most rainfall over the weekend. Temperatures from normal to 4° above normal.

Fieldwork: 5.0 days suitable. Soil moisture adequate. Soybeans 58% planted, 1980 86%,

average 80%. Cotton 25% squaring, 1980 25%, average 14%. Tobacco transplanting 96% completed, 1980 93%, average 94%. Wheat ripe 96%, 1980 95%, average 95%. Wheat harvest 47%, 1980 46%, average 48%. Oats ripe 88%, 1980 100%, average 85%. Oats harvest 39%, 1980 35%, average 37%. Barley ripe 95%, 1980 95%, average 91%. Barley harvest 53%, 1980 43%, average 47%. Pastures in good condition. Hay making progressed at a rapid pace. Second cutting alfalfa 50% completed, 1980 63%, average 46%. Weeds and insects still a problem. Japanese beetle observed in upper eastern areas. Squash harvest began. Tobacco budworm and hornworm causing slight damage.

**TEXAS: Weather:** Cold front southward across Texas 15th, 16th heavy rains many areas. Fair, partly cloudy, warm weather midweek to 21st; scattered showers southeast 18th; southwest 19th, 20th, 21st. East, and northeast Texas below normal by near 4°, southwest Texas, Trans-Pecos above normal by 3°. Rainfall above normal north central, and northeast Texas, Lower Valley; northwestern half of Panhandle, southwest Texas below normal by 0.50 in.

**Range and livestock:** Warm temperatures, recent rains have promoted growth grasses, weeds in most areas. Portions of Northern High Plains remained dry. Water level in stock ponds replenished.

**Commercial vegetables:** Rio Grande Valley, harvesting picked up following rains. Some fields remained muddy. Harvest of tomatoes, cucumbers, squash, cantaloups, watermelons continued. Coastal Bend, harvest resumed, cucumber harvest nearly complete, watermelon harvest gained momentum. East Texas, tomato harvest resumed, producers indicated loss of quantity due to saturated soil conditions. San-Antonio-Winter Garden area, fields remained wet, some hand harvest. Trans-Pecos region, onion, cabbage harvest continued. Cantaloups outlook remains good. Plains, potatoes, onions continue to progress. Peach harvest continued. Pecans progressing well.

**Crops:** Hard blowing winds, sand damaged many dryland cotton fields southern High Plains. Replanting underway blown-out fields. Some producers replanting to sorghum, sunflowers. Low Plains to be completed: Some stands replanted third time. Grasshoppers increasing problem Low Plains: Blacklands excessive moisture, fleahoppers preventing many fields from squaring properly. Abundant moisture producing increased vegetative growth southern half of State. Early June rains tremendous boost for sorghum. South Texas heavy rains caused some lodging, scattered areas grain sprouting in the heads. Reported condition Statewide 37% excellent; 54% good; and 9% fair. Irrigated corn making good growth High Plains; short moisture conditions have been stressing dryland stands. Scattered low-lying fields South Texas have been standing in water; drainage operations underway. Statewide reported condition is 25% excellent; 60% good; and 15% poor. Wheat harvest rapid progress Statewide; wet conditions Central Texas, Blacklands prevented many combines from entering fields. With harvesting delays, yield, quality decreasing some areas. Scattered areas seed sprouting in head; weeds becoming problem many areas. Reported condition Statewide 9% excellent; 44% good; 39% fair; and 8% poor. Wet, cool soils delaying peanut planting, development Cross-Timbers. Some producers concerned over short-age planting seed. Because numerous rain delays, many hay fields, meadows have overly matured at cutting time. Blacklands some fields still too wet to cut. Wheat harvest gaining momentum across State. Producers replanting harvested fields to soybeans, sunflowers. Cotton planted 97%, 98% 1980, 98% average. Cotton squaring 21%, 23% 1980. Cotton setting bolls 14%, 13% 1980. Rice headed 27%, 15% 1980. Sorghum planted 96%, 97% 1980, 96% average. Sorghum headed 53%, 52% 1980. Sorghum turning color 24%, 25% 1980. Sorghum mature 3%,

11% 1980. Wheat turning color 96%, 90% 1980. Wheat harvested 46%, 43% 1980, 49% average. Peanuts planted 60%, 87% 1980, 82% average. Soybeans planted 54%, 92% 1980, 84% average. Sunflowers planted 77%, 82% 1980, 73% average. Oats harvested 66%, 75% 1980, 85% average.

**UTAH:** Generally fair weather, with brief period of cloudiness principally north portion. Little or no precipitation reported. Average temperatures ranged from 1° above normal to 9° below. Soil moisture continues at adequate most ranges, but pan evaporation ranged from 1.8 in. to over 3 in. in spite of generally subnormal temperatures.

Fieldwork made good progress under mostly dry weather. Hay harvest major activity. First crop harvest moved from 45% complete last week to 71% this week. Quality and tonnage below normal because of frost damage, weeds, and insects. Frost on 15th caused damage to small grain, corn, and gardens in southwest quarter of State. Extent of loss uncertain. Sweet cherry harvest to begin this week in major producing counties. Apricot picking to begin around mid-July. Late season fruits in mostly good condition with some local frost damage reported.

**VIRGINIA:** Scattered afternoon and evening thundershower activity. All districts with amounts ranging from 0.01 at Bristol to near 2.00 in. central and eastern areas. High temperatures well into the 90's. Most sections with lows ranging from 50's in the West to 70's in the East.

Topsoil moisture rated short to adequate, down from mostly adequate last week. Days suitable for fieldwork: 5.4. With the exception of soybeans, all summer crop plantings completed or virtually completed. Corn in excellent condition and 2% silked. Peanuts, tobacco, pastures and hay crops in good to excellent condition. Small grain harvest very active. Barley 69% harvested, 46% 1980, 44% average. Oats 17% harvested, 11% 1980, 19% average. Wheat 20% harvested, 15% 1980, 17% average. Soybeans 77% planted, 73% 1980, 68% average. The emerged acreage in good to excellent condition.

**WASHINGTON: West:** Temperatures averaged 2 to 4° below normal. Precipitation above normal all areas with 1.00 in. above normal at Bellingham, 2.00 in. above at Everett, 1.60 in. at Quillayute and 0.60 in. at Aberdeen and Longview, above normal. Strawberry harvest continues to be delayed due to rain. Reports of fruit rot continued to surface. Raspberries continued to develop with harvest underway next week in several areas. Broccoli and cauliflower planting continued when breaks in the weather occurred. Some field corn still to be planted when fields dry enough to permit field activity. Flower bulb harvest began this week. Vegetable seed crops showing mildew problems. Peas were in bloom and seed potatoes were up in Whatcom County. Green chopping continued while wet conditions delayed hay production.

**East:** Temperatures averaged from 4 to 9° below normal. Precipitation averaged a little less than normal in central part of State and more than normal along the eastern side from Walla Walla to Spokane. Apple orchardists have reported powdery mildew and apple scab. Overall, fruit growth has been slow due to the cold weather. Cherry harvest continued with a considerable amount of splitting because of untimely rains. The extent of damage yet unknown. Potatoes and green peas thinning, but corn and drybeans suffering due to cool temperatures. Dry peas and lentils in good shape. Irrigated wheat and barley in average to above average condition. Dryland wheat and barley in mostly above average condition. Aphids continue to spread, requiring spraying in many areas.

Disease problems serious only in some fields, losses expected to be near normal for the State. Soil moisture good in dryland areas.

**WEST VIRGINIA:** Temperatures well above normal. High 94°, low 41°. Precipitation near normal, range 3.51 in. to a trace.

Soil moisture adequate to surplus. Days suitable for fieldwork: 3.5. Main activities: hay harvesting, gardening. Wheat good to fair, 2% pre-headed, 87% headed, 10% ripe, 1% harvested; 17% pre-headed, 80% headed, 10% ripe in 1980. Barley good to fair, 2% pre-headed, 74% headed, 22% ripe and 3% harvested in 1980. Oats good to fair, 62% pre-headed, 32% headed, 4% ripe, 2% harvested; 58% pre-headed, 40% headed, 2% ripe in 1980. Corn fair to good, 90% planted, 92% emerged; 97% and 94% in 1980. Tobacco fair to poor, 66% set, 73% in 1980. Hay good to fair, 1st cutting 22% complete, 55% in 1980. Pasture good. Potatoes good to fair. Gardens fair to good. Fruit fair to poor. Heavy showers again presented problems with localized flood and insect control the most common.

**WISCONSIN:** Temperatures 3° below normal. Highs in 70's and 80's except 60's 16th, lows ranged from 40's to 60's. Extremes: 87 and 40°. Rain-fall above normal except northeast and west central. Heaviest totals of nearly 3.00 in. north central and south central. Measurable rain somewhere in State each day with greatest totals 15th and 20th-21st.

Fieldwork: 4 days suitable. Crops benefitted from needed rainfall but some erosion where very heavy rains fell in short period 15th. First crop hay 60% harvested, 1980 60%, average 43%.

#### FLOOD REPORT

**ILLINOIS:** Heavy rains of 3 to 8 inches on the morning of June 13 in Northern Illinois from Lee eastward through Southern Cook and northern Will County flooded low areas causing moderate to extensive damage to some fields.

Heavy and persistent rains since May 9 have delayed planting in the Southwest, Southeast, and southern part of the East Southeast Districts. May rain fall in the Southwest District, 198% of normal; Southeast District, 223% of normal; and East Southeast District, 160% of normal. About 10% of the corn and two-thirds of beans in the three districts still to be planted after June 15.

**KANSAS:** The rains occurred in the Great Bend-Larned starting Sunday night, June 14 and on Monday, June 15. The heaviest rains occurred between 4 and 8 p.m., Sunday night. The storms centered between Great Bend and Larned and in a 25 mile area. Eight to 14 inches of rain occurred within 4 hours. A few reports of up to 19 and 20 inches were unofficially reported. At Larned 7.06 inches of rain fell, at Great Bend 6.40 inches, Stafford 5 inches and 2.5 miles northwest of Larned 11.35 inches. These were official Weather Service readings. The area in and around this area is very flat and two streams come into play, namely the Arkansas River and Cow Creek. Surface run off and small stream flooding was the chief result of the down pour. The Arkansas River stayed in its dikes and by noon on Wednesday it was back within its regular banks. Tuesday evening most small streams were within their banks. The Arkansas River between Great Bend and Larned was 2 to 3 miles wide after the rain storm and covered 50 sections, or square miles. Damage was pretty much confined to two counties, namely Barton and

many done with first crop in south. Prospects improved for second crop with June rains. Pastures also improving. Corn growing better with additional moisture. Corn height averages 12 in., 1980 14 in., average 11 in. Much variation for corn height in fields where dry weather earlier delayed germination on knolls and hills. Cultivation and post-emergence sprays being used for weed control. Soybeans look better after rains but some uneven germination. Oats 30% headed, 1980 15%, average 15%. Much oats headed south where seeded in March. Oatlage going into silos. Wheat headed, straw length short on small grains but kernel fill should be good. Tobacco planting making good progress. Pea harvest underway. Strawberries being picked. Potatoes look good with irrigation. Topsoil moisture 15% short, 75% adequate, 10% surplus.

**WYOMING:** Temperatures below normal except in Cheyenne and Niobrara Drainages. Highest temperature 91° in Lower Platte Drainage, lowest temperature 29°. Most stations reported below normal precipitation.

Topsoil moisture adequate 45% State. Average 6 days suitable for fieldwork. Most crops planted. Dry beans emerged: 70%; year ago 70%; normal 88%. Potatoes emerged: 85%; year ago 65%; normal 85%. Corn emerged: 95%; year ago 90%. Winter wheat headed: 90%; year ago 70%; normal 81%. Barley headed: 35%; year ago 20%; normal 49%. Oats headed: 30%; year ago 15%. Sugarbeets thinned 75%. First cutting alfalfa 20%; year ago 20%; normal 23%. Other hay harvest starting. Winter wheat, other crops mostly good condition. Contracting livestock starting.

**Pawnee.** Water remained on low lands long enough to cause crop loss. When fields become firm enough to carry heavy machinery, producers are likely to try to harvest some of the wheat that was not severely damaged by hail and being under water too long.

**OHIO:** Ohio weather since mid-April has been detrimental to all field crops. Too frequent rains, heavy rains and flooding prevented planting and damaged or wiped out existing plantings. Fieldwork has been limited to two or three days per week in some areas and less in others, especially in southern and western Ohio where some farmers have not been able to enter fields for six weeks or more. On a Statewide average, less than 20 days have been favorable for fieldwork since mid-April, less than half the normal availability. Topsoil moisture has been rated surplus by more than 55 percent of weekly respondents since mid-April. Most weekly ratings were over two-thirds surplus with one week each in May and June over 90 percent. Approximately 50-60 percent of the soybeans were already planted in northwestern Ohio when torrential rains caused overflowing streams and ponding in low lying fields. Clear weather since June 13 helped dry fields rapidly, especially where tilled, giving farmers their longest period of uninterrupted work days during the entire 1981 planting season.

**MINNESOTA:** No flooding north of Twin cities weekend of June 13th. Some limited wind and hail damage. Soils were dry and rivers low, so were able to hold all the rain.

**TEXAS:** During the last of May and first half of June heavy rains fell over the eastern half of Texas with lesser amounts over the western half. At first, these rains brought badly needed moisture to most areas. As the rains continued to fall however, surplus moisture

quickly accumulated. Soils became saturated and run off increased. Stock tanks filled and some flooding of low areas occurred causing small acreages of row crops to be lost.

Areas most affected were the Blacklands, Southcentral Texas and along the Coast. The Blacklands has about 20 percent of the State's acreage and the crop in this area was about 45 percent harvested by June 12. Harvest is resuming as fields dry.

In the Upper Coast area very heavy rains fell and soybeans, which were rather small, were

damaged severely. Replanting will be necessary for considerable acreage. Rice on the other hand was not damaged to any extent in the same area.

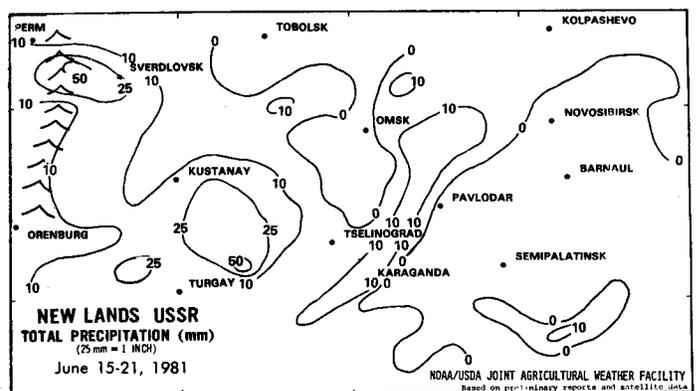
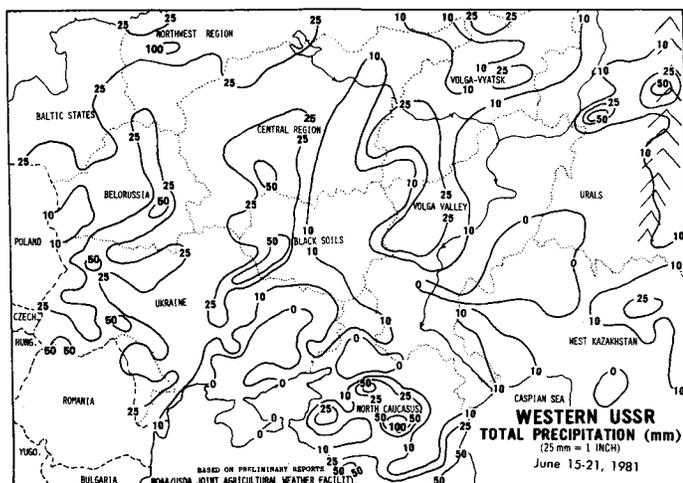
Rains also caused some loss of quality to cut hay and standing hay which has passed the optimum harvesting stage. Abundant moisture coupled with cooler than normal temperatures have caused vegetative growth in cotton and fruit set has been limited. Peanut planting has been delayed.

## International Weather and Crop Summary

June 15-21, 1981

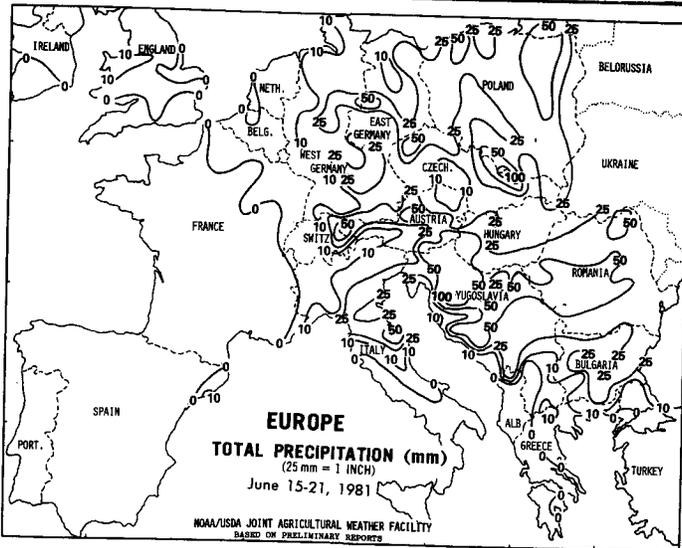
### HIGHLIGHTS

- EUROPE:** Dry weather benefited the northwest, heat damaged crops in Iberia, and some eastern areas became too wet.
- USSR:** Beneficial rains occurred in western European USSR and western New Lands, but hot and dry weather stressed spring barley which should be in the heading stage in southeastern European USSR.
- CHINA:** Abundant rainfall benefited spring planted crops across the north, including the Manchurian Valley, Hebei, and Shandong. Only light rain fell in the south.
- INDIA:** Monsoon rains seem to be starting in the northeast, while strong activity continues along the southwest coast.
- CANADA:** Showers provided beneficial moisture for crop growth.
- SOUTHEAST ASIA:** Conditions remain highly favorable for wet-season crops.
- AUSTRALIA:** Beneficial showers in the west; adequate moisture elsewhere, except for localized areas of dryness.
- SOUTH AMERICA:** Cold weather pushed the wheat crop into the semi-dormant stage in southern areas.
- MEXICO:** Rainy season advanced northward, generally benefiting crops.

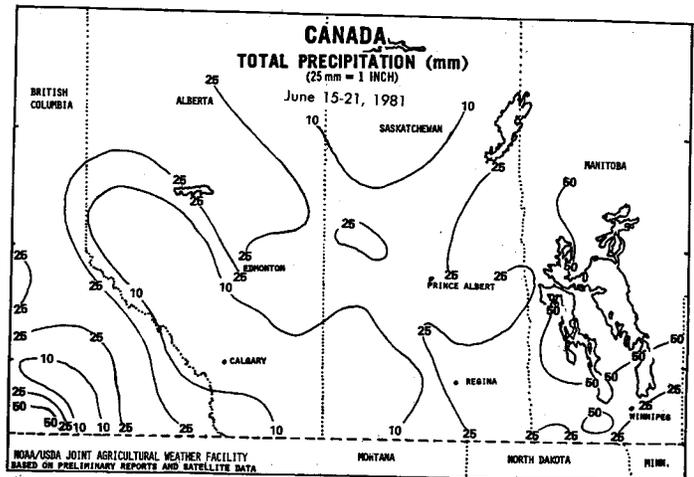


**USSR:** High pressure aloft dominated eastern European USSR, preventing any major storms from moving through the area. However, above-normal rainfall occurred in the central and western Ukraine, and northward into the Central Region. Beneficial rain also fell in limited portions of the North Caucasus and Volga Valley. Soils in many parts of eastern European USSR remained too dry for good growth of spring-planted crops. Cool weather early in the week gave way to unfavorably

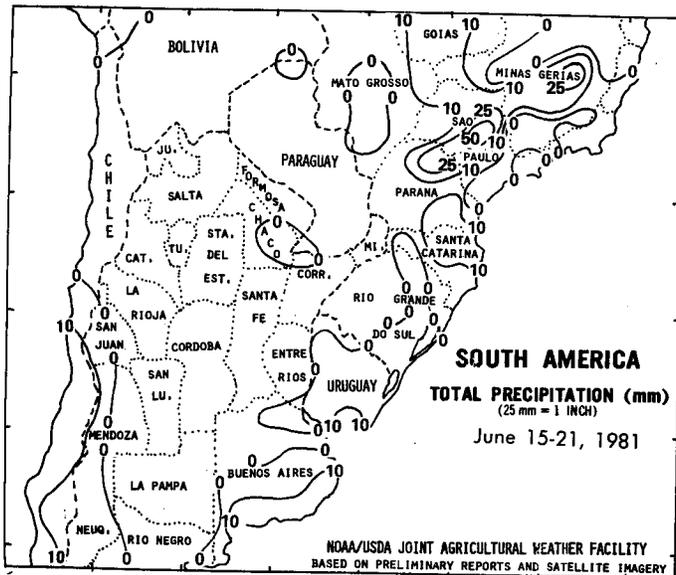
not and dry conditions by the weekend. The most severe conditions occurred in the eastern Ukraine, North Caucasus, and lower Volga Valley. Spring barley should have been in the sensitive heading stage of development, and may have been adversely affected. In the New Lands, beneficial rain continued in the area between Kustanay and Tselinograd, and spring grain prospects remain favorable despite warmer-than-normal weather. Light rain fell between Omsk and Pavlodar, improving dry conditions somewhat. Dry weather east of Pavlodar dried soils to a degree, but moisture should still be adequate for crop needs.



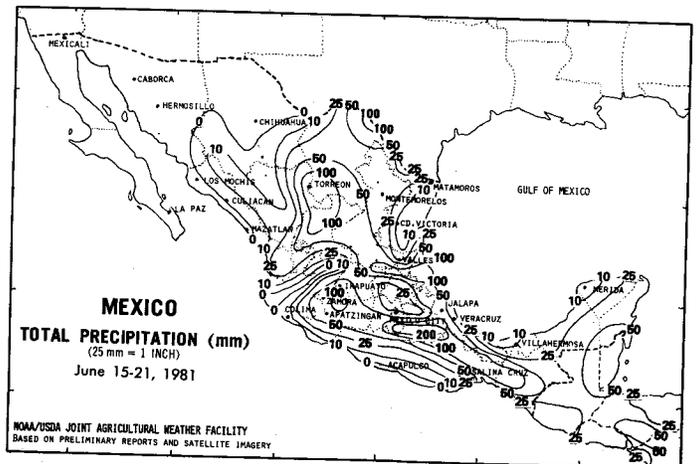
**EUROPE:** Very little rain fell in westernmost countries and across the south. The dryness benefited crops in the northwest, where temperatures stayed below normal. Very hot weather in the Iberian Peninsula likely caused some damage to spring crops and maturing winter grains. Abundant rainfall covered most of the eastern countries and parts of northern Italy and West Germany. Some locations may have become too wet, but for the most part the moisture was beneficial. Temperatures in the east were mostly below normal, but near normal in the southeastern countries.



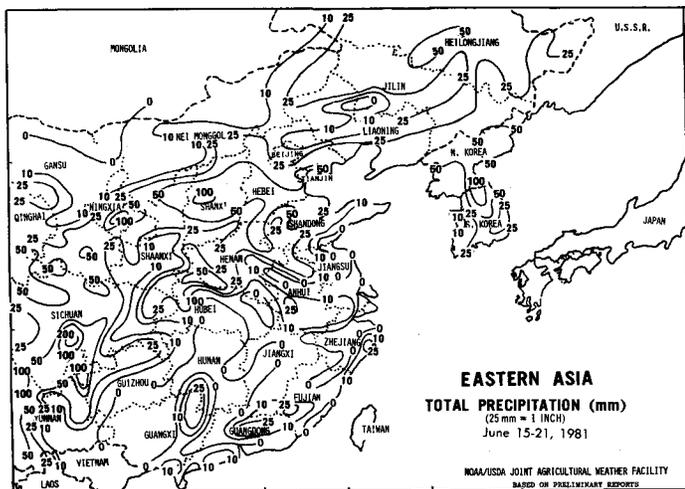
**CANADA:** Scattered showers occurred throughout the Prairie Provinces during the week. Weekly totals were generally higher in eastern portions of the grain belt where, on the average, about 25-35 mm of rain fell. Rainfall averaged 15-25 mm in much of Saskatchewan's crop area, while generally less than 15 mm fell in western wheat growing areas of Alberta. The additional moisture was beneficial for crop growth as most spring-sown crops are now in vegetative development. Conditions are rated mostly good in nearly all crop areas of the Prairie Provinces.



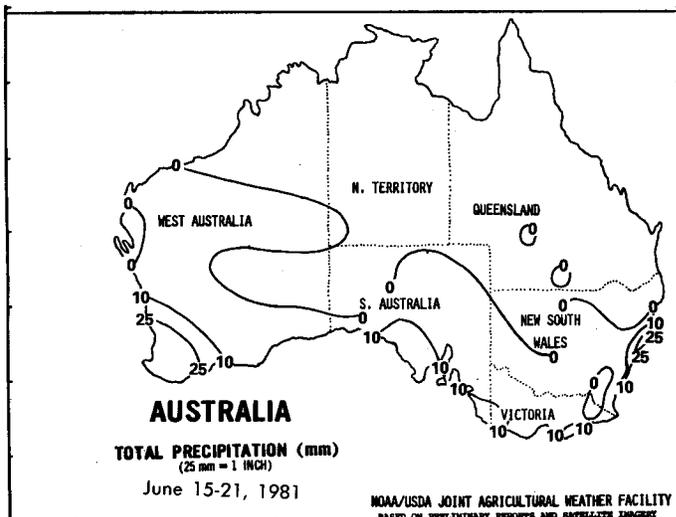
**SOUTH AMERICA:** Significant shower activity, producing 25-50 mm of weekly rainfall, was confined to the coffee-producing areas of northern Parana, Sao Paulo and portions of Minas Gerais. In the wheat-growing areas, weekly rainfall totals of 10-20 mm fell in eastern portions of Parana and Santa Catarina in Brazil, and in extreme southern portions of Buenos Aires province, Argentina. Elsewhere, mostly light rainfall occurred in eastern Rio Grande do Sul and dry weather prevailed in other wheat-growing regions. Cold weather prevailed over the region during most of the week, sending the wheat crop into semi-dormancy in the south, and slowing the growth rate considerably in the north. No significant widespread frost was reported in the coffee-growing areas of Brazil, however. Some minor damage to newly formed buds on the coffee trees may have occurred in isolated locations due to the light frosts.



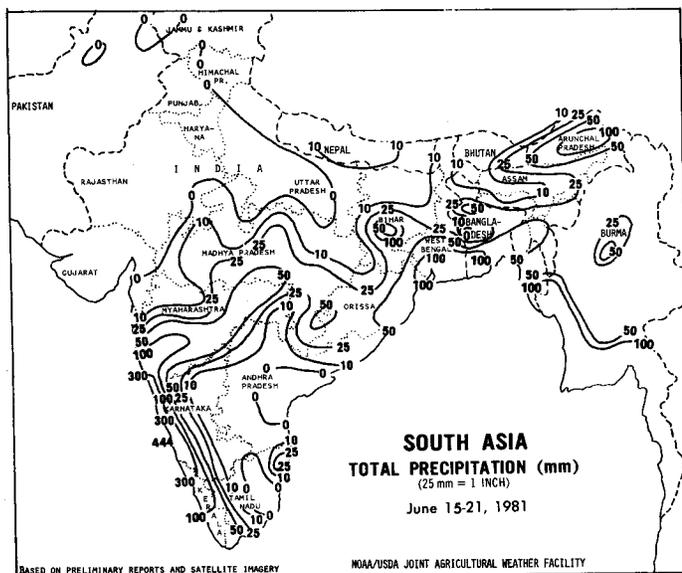
**MEXICO:** The rainy season advanced further northward across most of the country and generally benefitted agriculture. Some showers even reached into the watersheds of the highly productive northwest. The western corn belt of the southern Plateau finally received rains on most of the young crop which had been moisture-stressed for the past several weeks. Heavy rain around Torreon reduced irrigation needs of cotton but may have damaged some plants. Most of the northeast had moderate rains, which benefitted rangeland and immature crops; however, some non-irrigated citrus had only light or insignificant amounts.



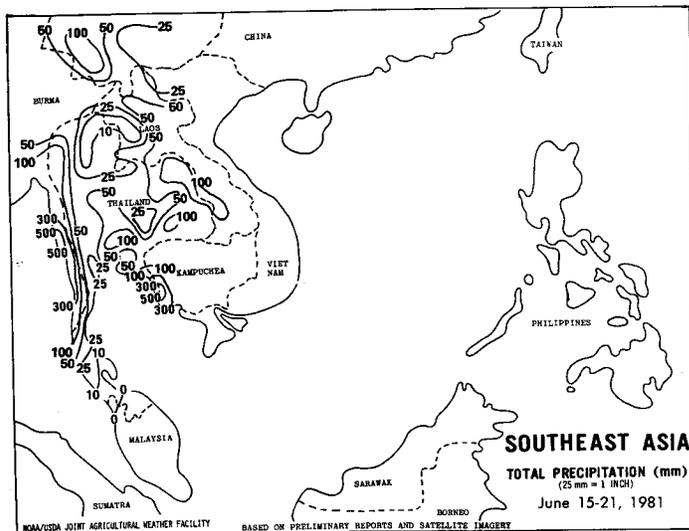
**EASTERN ASIA:** Abundant rain fell across most or northern China. Amounts were far in excess of normal in many areas, and dramatically improved growing conditions. Harvesting of wheat in Hebei was temporarily delayed, but the beneficial effects of the moisture far outweighed the disruption. Much more moisture will be needed to replenish reservoir supplies, but these rains represent a dramatic turn for the better. The rains extended into the Manchurian Valley, and although they may have maintained wet conditions in the east, the moisture substantially improved growing conditions in the western part of the Valley. Rainfall south of the Yangtze River dipped still further below normal, with many areas receiving little or no moisture. Quite adequate irrigation supplies remain for the rice crop. Heavy rainfall occurred in the upper reaches of the Yangtze River basin in and to the south of the Sichuan Valley. In South Korea, beneficial rainfall continued to improve growing conditions for rice. Dry conditions persist in many areas, however.



**AUSTRALIA:** Beneficial showers occurred in West Australia, improving crop prospects in the second largest wheat-producing State of Australia. Weekly totals of 10-25 mm of rain occurred in much of that State's wheat area. Soil moisture supplies have improved considerably in the western portion of the wheat belt. Rainfall was much lighter in the eastern wheat belt with significant shower activity confined mostly to coastal areas. Soil moisture should be adequate for the near future in most areas except for localized pockets of dryness, especially in South Australia and Victoria.



**SOUTH ASIA:** Monsoon rains appear to have begun in Bangladesh and eastern India. Heavy rain continued along the southwest coast of India for the third consecutive week, and the monsoon seems well-established there. The onset has been rather tentative over the rest of India, making it difficult for farmers to plant crops with confidence in recent weeks. Planting should now become widespread.

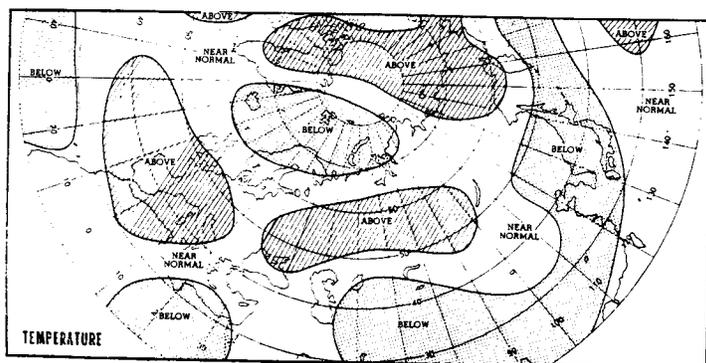
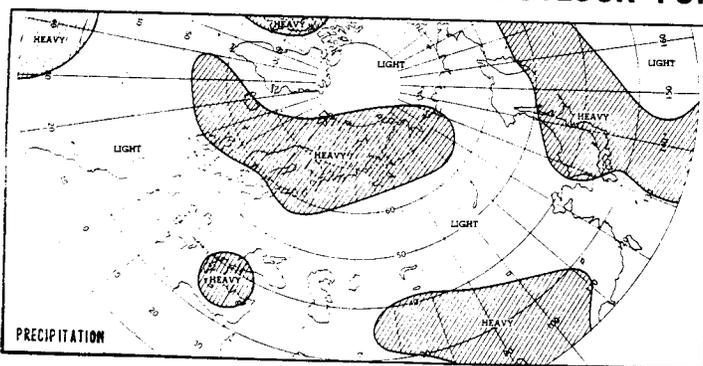


**SOUTHEAST ASIA:** Rainfall generally increased from north to south through Thailand and vicinity. Weekly amounts of 10-25 mm occurred in northern Thailand while 50-100 mm of rain fell in much of western and extreme eastern portions of the country. The rainfall pattern suggests that significant weekly totals also occurred in Laos and Kampuchea. Heavy rain fell in adjacent coastal areas of Burma as well. In Thailand, crops are developing very well with the continuation of highly favorable moisture conditions.



# FIRST CLASS MAIL

## EURASIA OUTLOOK FOR MID-JUNE TO MID-JULY



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