

WEEKLY WEATHER AND CROP BULLETIN

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

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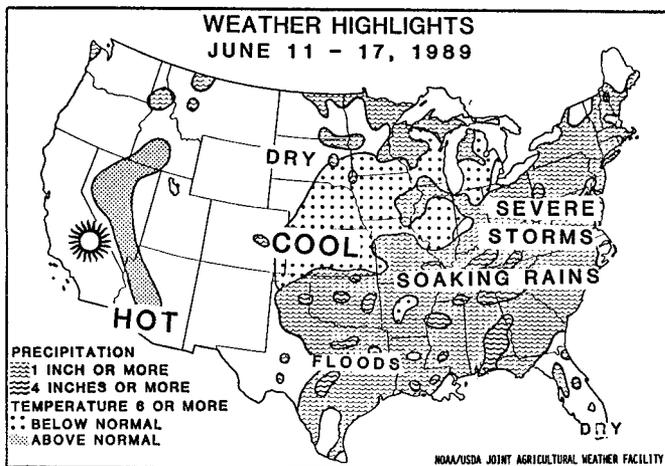
Washington, D.C.

June 20, 1989

National Weather Summary

June 11-17, 1989

SPRING WEATHER REVIEWS



HIGHLIGHTS: Showers and severe thunderstorms continued to bring drenching rain, hail, damaging wind, and tornadoes across the southern Plains and Mississippi Valley to the Atlantic coast. High winds downed trees and caused massive power outages in the Washington, DC, area. Needed rains fell across parched southern Texas. Much of the northern Plains and portions of the western Corn Belt, however, again received only light amounts of rain. Unseasonably cool air settled into the central portions of the Nation and covered much of the East at week's end. Warm weather prevailed over the West, with record breaking high temperatures in the Southwest.

SUNDAY: Intense showers and thunderstorms remained across the southern and central Plains and spread into the middle Mississippi Valley and eastern Gulf Coast States. These storms spawned tornadoes and produced hail and heavy rain. Coffeyville, KS, was deluged with 7.2 inches of rain in 12 hours. A cold front pushed across the northern Plains and central Rockies, causing showers and thunderstorms.

MONDAY: Tornadoes, high wind, hail, and flooding continued as thunderstorms rumbled from the Texas Panhandle to the Ohio and Tennessee Valleys. Rain spread from the northern Plains into the Great Lakes.

TUESDAY: Showers and thunderstorms developed ahead of a slow moving frontal system curving from the Northeast, across the Ohio Valley, to southern Texas. Most roads were inundated across North Central Texas. Rain and drizzle fell from the Dakotas to the Great Lakes. A Pacific front brought showers to the Northwest coast.

WEDNESDAY: Violent thunderstorms produced high wind and drenching rain from the central Gulf coast into the Northeast. Over a hundred thousand people lost power from numerous trees being blown down in the Washington, DC, area. Showers were spread over the Great Lakes and scattered across the Pacific Northwest.

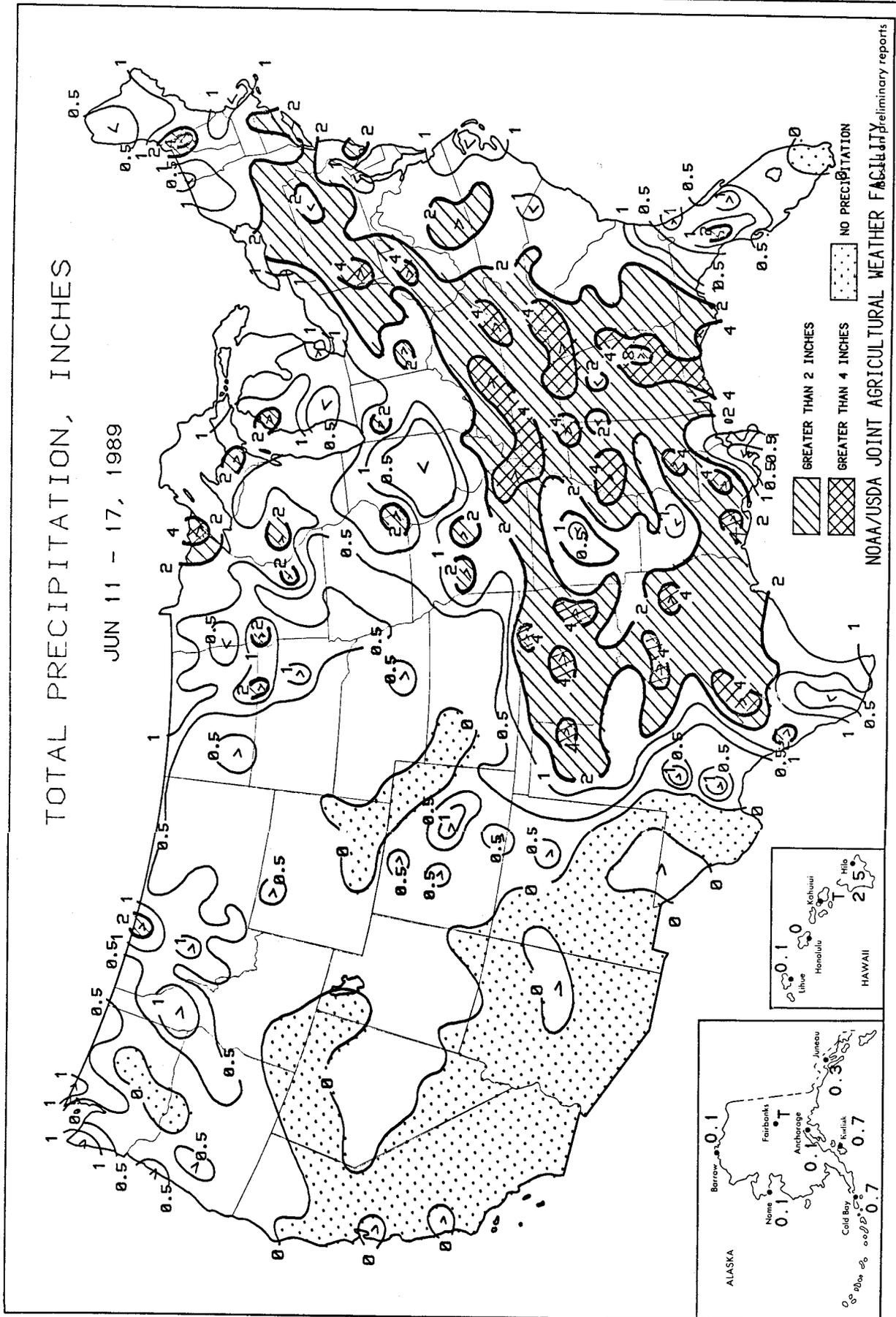
THURSDAY: Rains again soaked the East as showers developed in the warm moist air ahead of the eastward drifting frontal system. Storms caused more power outages in the Washington, DC, area. Unseasonably cool air spread into the central States behind the system. Rain was widespread from the Northwest to the northern Rockies.

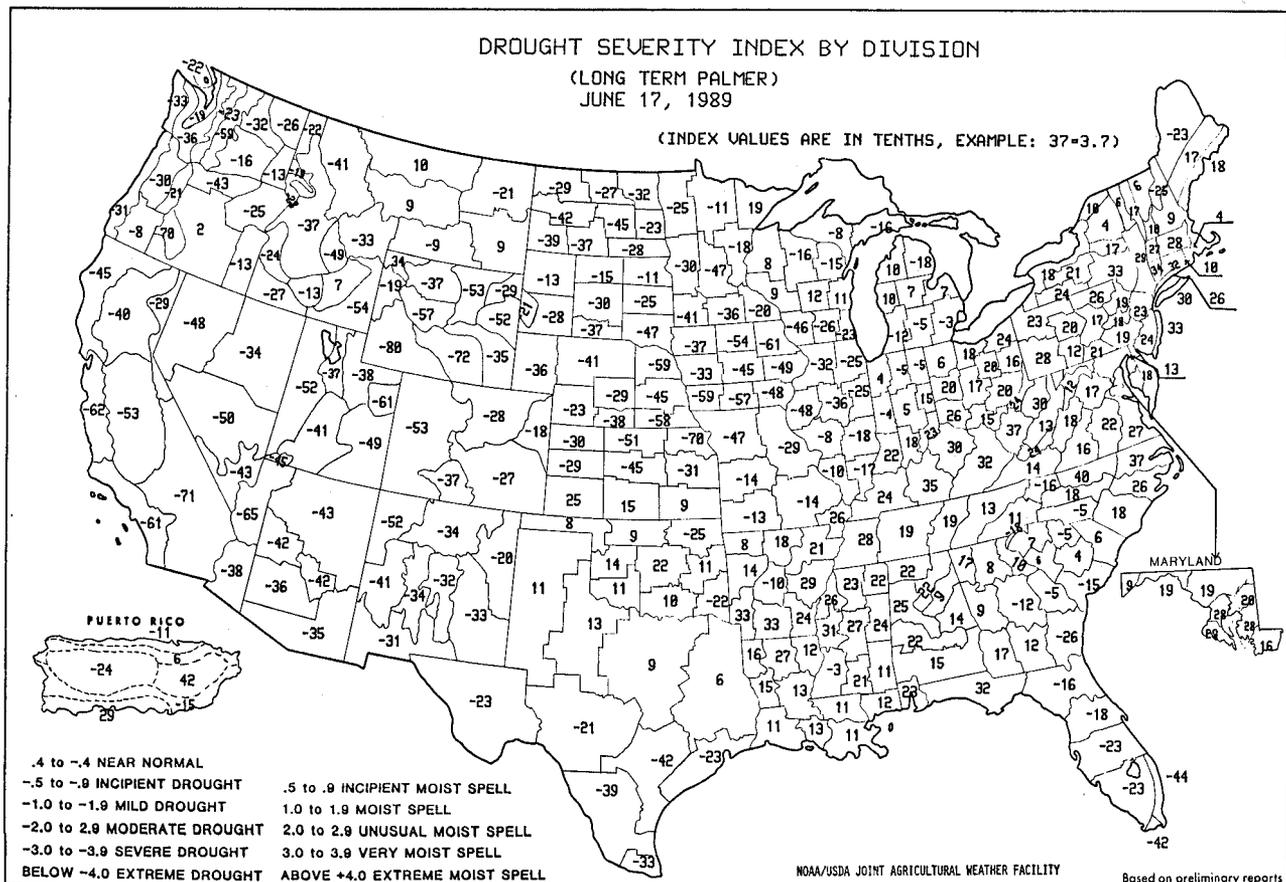
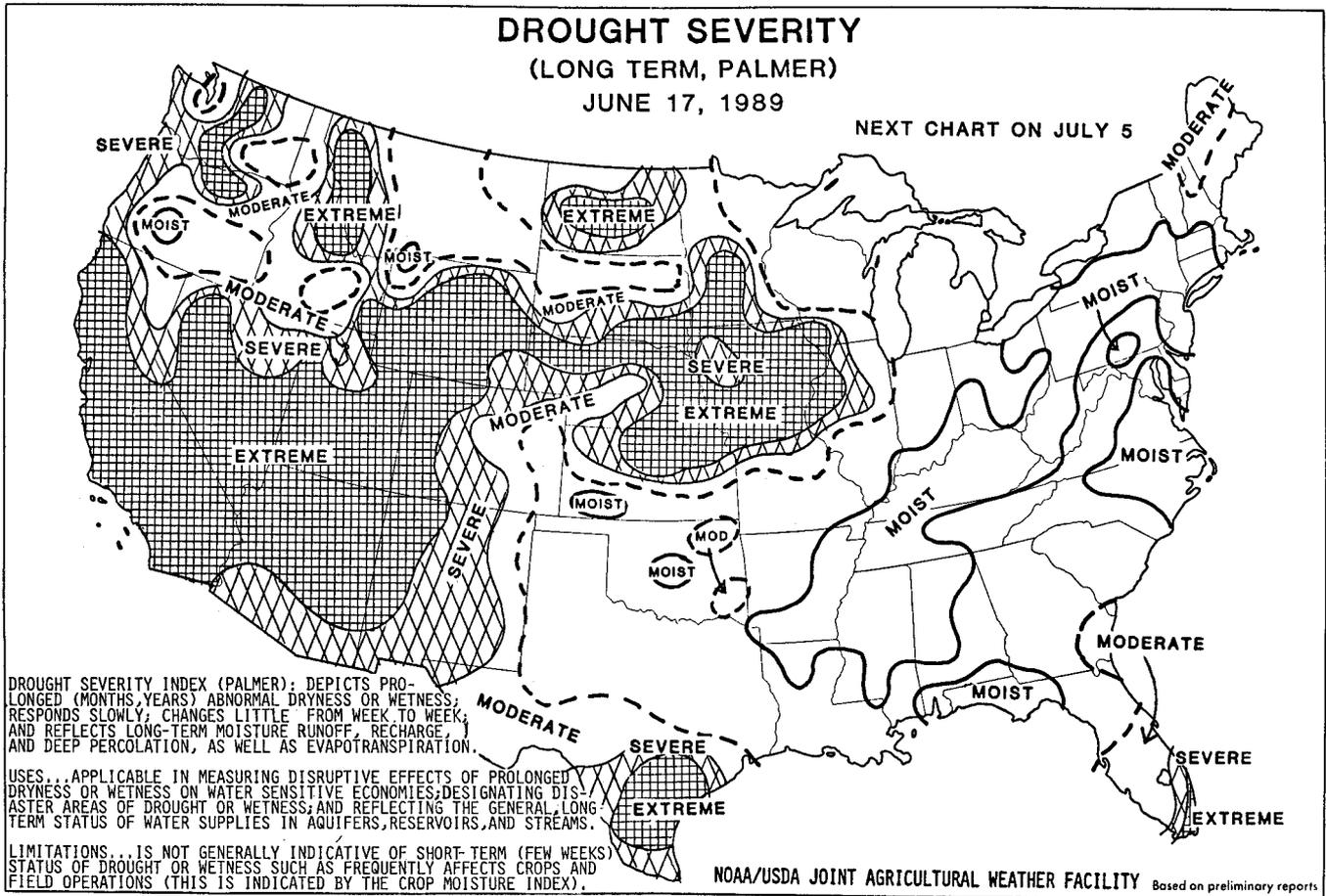
FRIDAY: Rains continued to drench the Atlantic Coast and Great Lakes States as the frontal system shifted eastward. Cool air settled into the middle third of the country as several dozen low-temperature records for the date were broken. A cold front brought scattered rain across the northern and central Rockies and northern High Plains.

SATURDAY: The slow moving frontal system caused more showers along the Atlantic seaboard and in the eastern Great Lakes. Another slow moving system brought needed showers and thunderstorms into the middle Mississippi and Missouri Valleys. Rain fell along the northern Pacific coast ahead of an approaching cold front.

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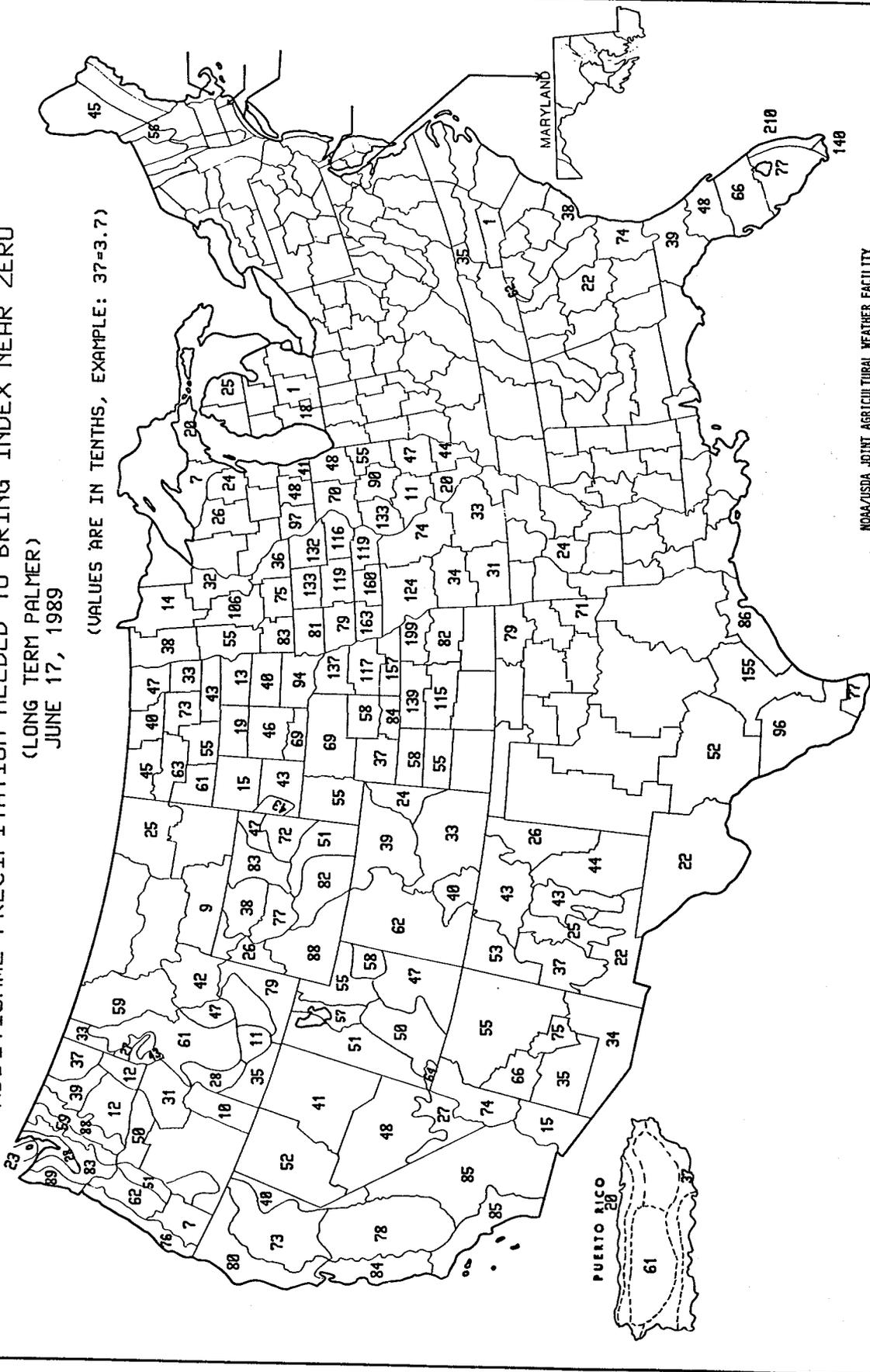
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ADDITIONAL PRECIPITATION NEEDED TO BRING INDEX NEAR ZERO
 (LONG TERM PALMER)
 JUNE 17, 1989

(VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

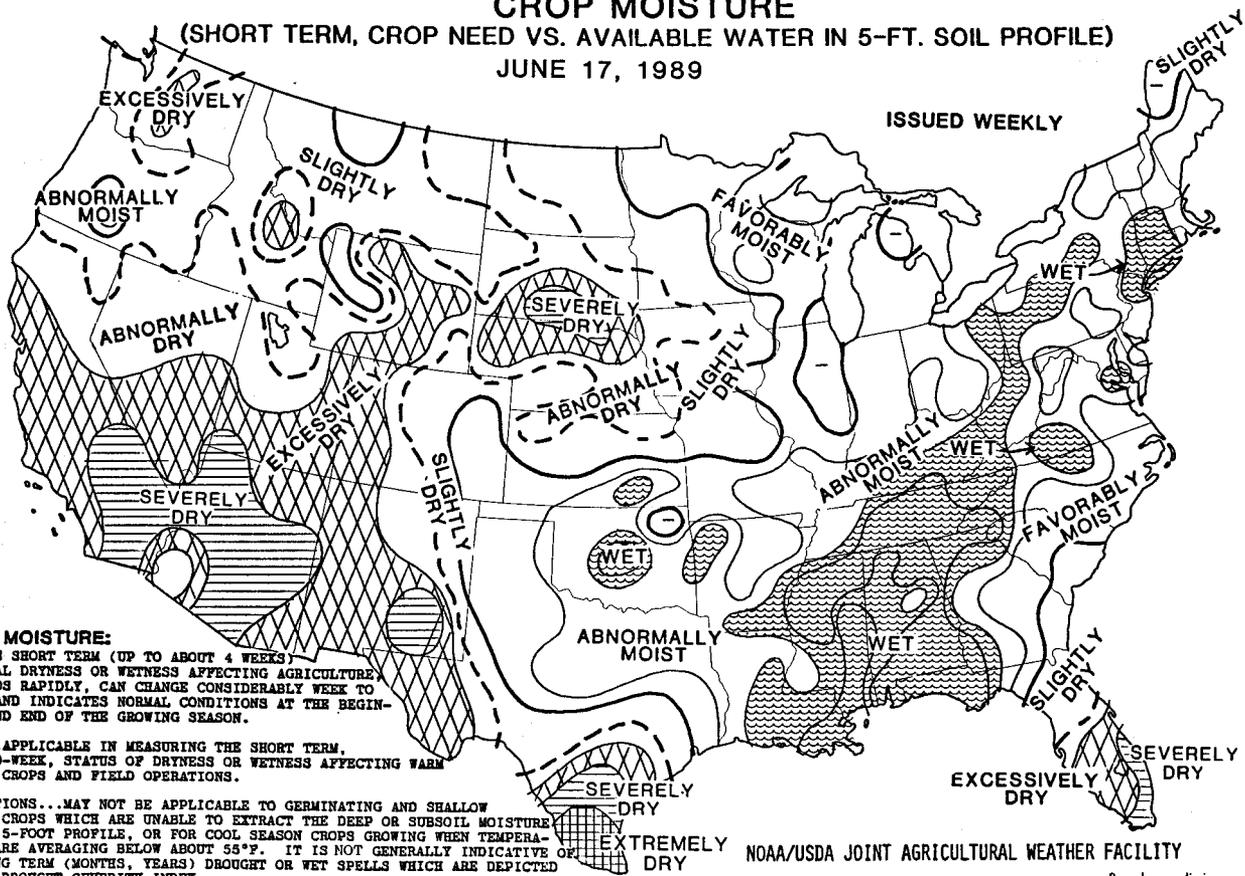
Based on preliminary reports

CROP MOISTURE

(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)

JUNE 17, 1989

ISSUED WEEKLY



CROP MOISTURE:
 DEPICTS SHORT TERM (UP TO ABOUT 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE. RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

USES...APPLICABLE IN MEASURING THE SHORT TERM, WEEK-TO-WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS.

LIMITATIONS...MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A 5-FOOT PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55°F. IT IS NOT GENERALLY INDICATIVE OF THE LONG TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

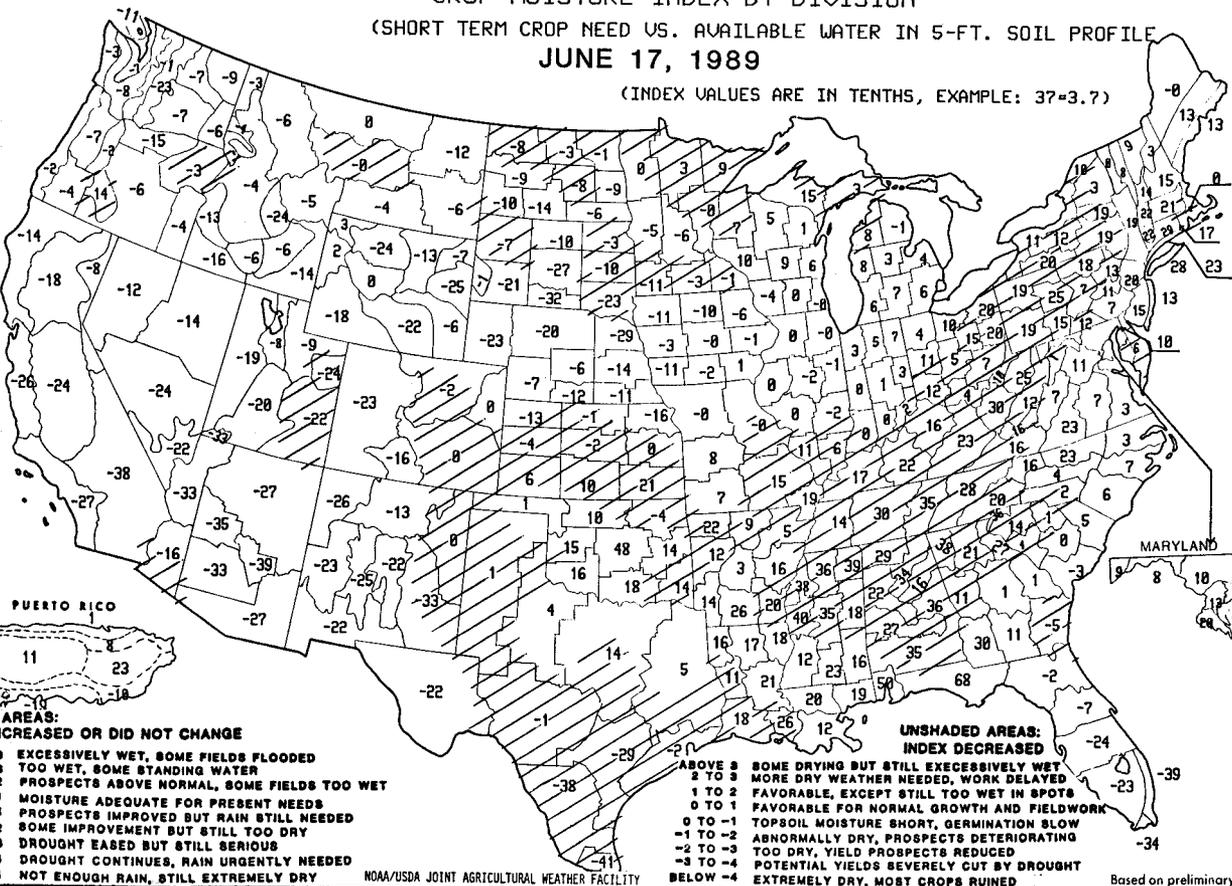
Based on preliminary reports

CROP MOISTURE INDEX BY DIVISION

(SHORT TERM CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)

JUNE 17, 1989

(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)



SHADED AREAS: INDEX INCREASED OR DID NOT CHANGE

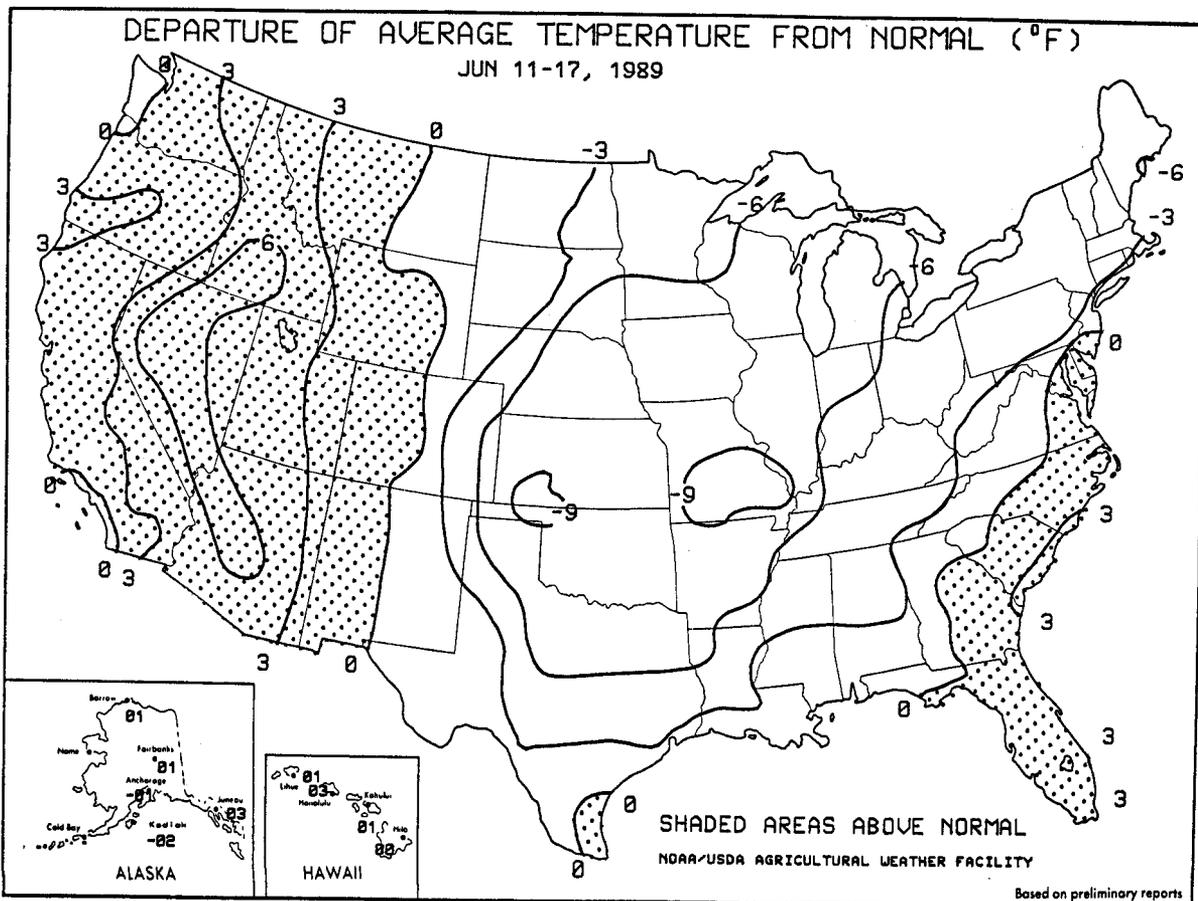
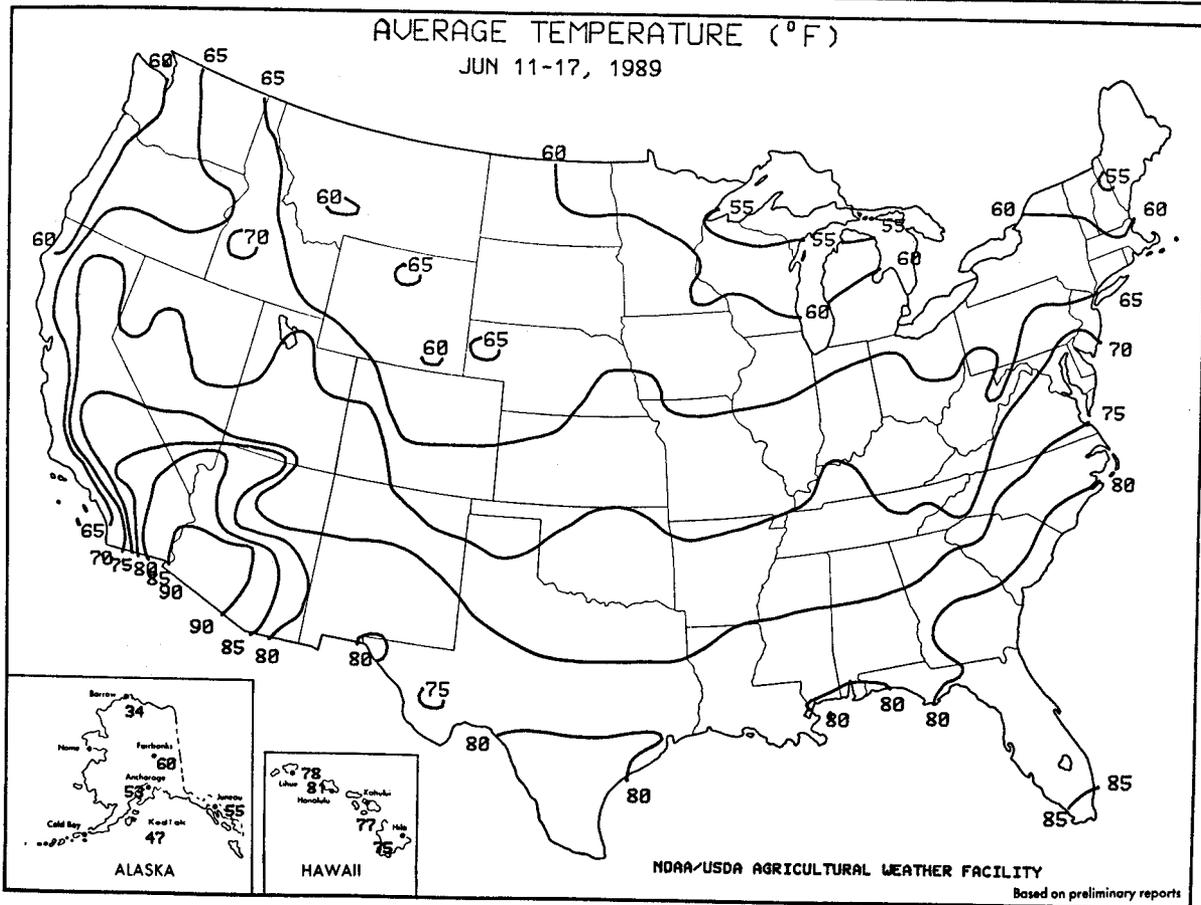
- ABOVE 3 EXCESSIVELY WET, SOME FIELDS FLOODED
- 2 TO 3 TOO WET, SOME STANDING WATER
- 1 TO 2 PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET
- 0 TO 1 MOISTURE ADEQUATE FOR PRESENT NEEDS
- 0 TO -1 PROSPECTS IMPROVED BUT RAIN STILL NEEDED
- 1 TO -2 SOME IMPROVEMENT BUT STILL TOO DRY
- 2 TO -3 DROUGHT EASED BUT STILL SERIOUS
- 3 TO -4 DROUGHT CONTINUES, RAIN URGENTLY NEEDED
- BELOW -4 NOT ENOUGH RAIN, STILL EXTREMELY DRY

UNSHADED AREAS: INDEX DECREASED

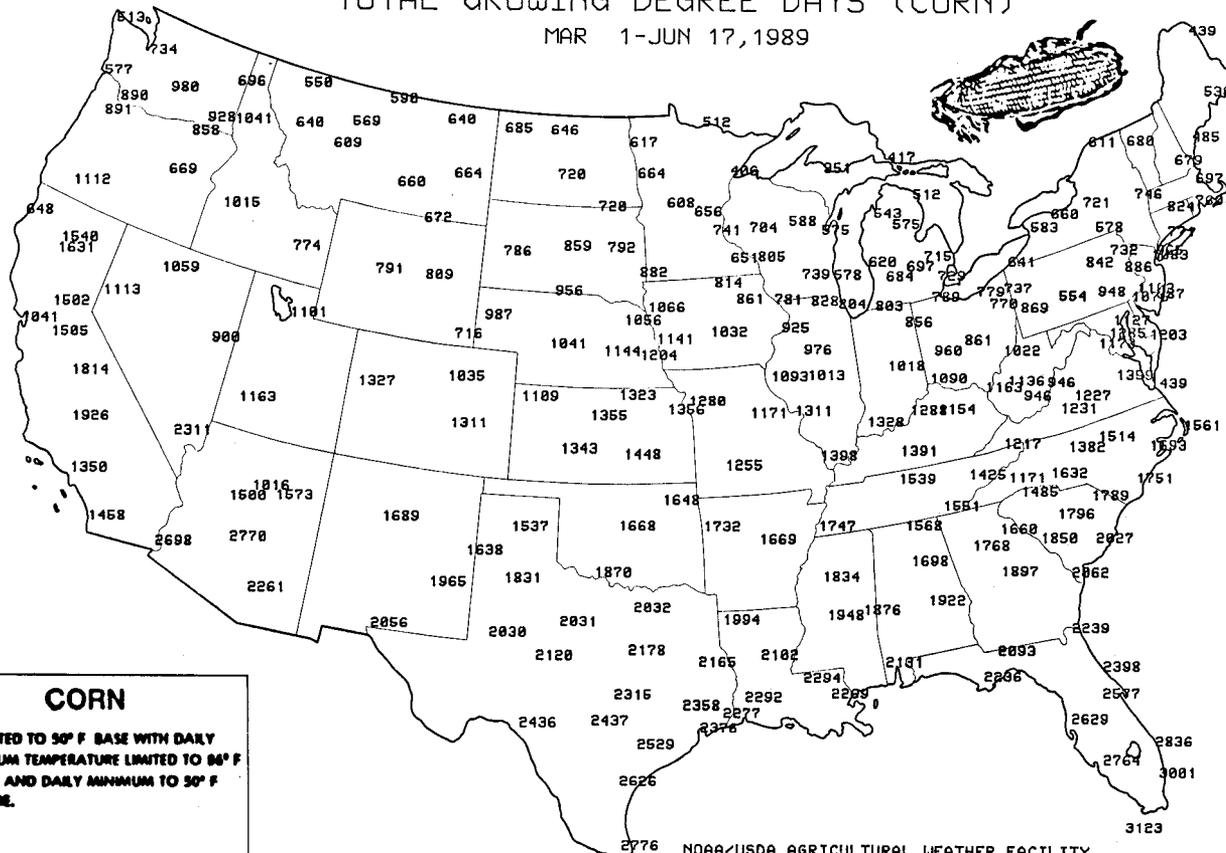
- ABOVE 3 SOME DRYING BUT STILL EXCESSIVELY WET
- 2 TO 3 MORE DRY WEATHER NEEDED, WORK DELAYED
- 1 TO 2 FAVORABLE, EXCEPT STILL TOO WET IN SPOTS
- 0 TO 1 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
- 0 TO -1 TOPSOIL MOISTURE SHORT, GERMINATION SLOW
- 1 TO -2 ABNORMALLY DRY, PROSPECTS DETERIORATING
- 2 TO -3 TOO DRY, YIELD PROSPECTS REDUCED
- 3 TO -4 POTENTIAL YIELDS SEVERELY CUT BY DROUGHT
- BELOW -4 EXTREMELY DRY, MOST CROPS RUINED

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports



TOTAL GROWING DEGREE DAYS (CORN) MAR 1-JUN 17, 1989



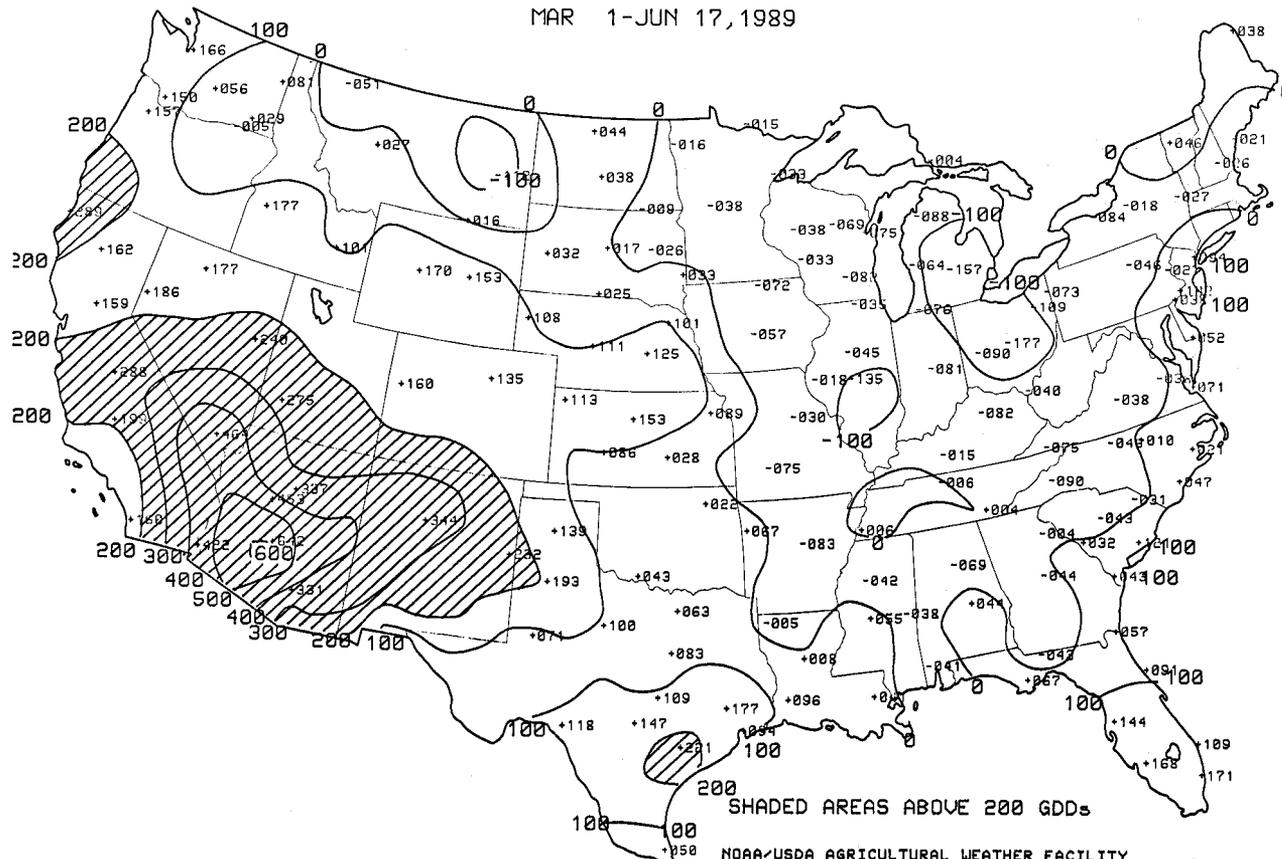
CORN

COMPUTED TO 50° F BASE WITH DAILY
MAXIMUM TEMPERATURE LIMITED TO 86° F
OR LESS AND DAILY MINIMUM TO 30° F
OR MORE.

NOAA/USDA AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

GROWING DEGREE DEPARTURE FROM NORMAL MAR 1-JUN 17, 1989



SHADED AREAS ABOVE 200 GDDs

NOAA/USDA AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

National Weather Data for Selected Cities

Weather Data for the Week Ending June 17, 1989

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 JUN 1	PCT. NORMAL SINCE JUN 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	83	66	88	57	74	-3	1.3	.5	.5	3.2	166	26.2	94	95	58	0	0	4	1
MOBILE	86	71	90	64	79	-3	2.4	1.3	1.5	7.9	297	27.1	92	98	63	1	0	3	2
MONTGOMERY	86	67	91	63	77	-3	7.5	6.7	3.1	8.8	475	32.1	130	98	60	3	0	5	4
AK ANCHORAGE	62	45	67	40	53	-1	.1	.1	.1	.6	123	4.3	108	87	47	0	0	2	2
BARROW	39	29	45	25	34	1	.1	.1	0	.4	233	1.3	127	96	69	0	6	0	0
FAIRBANKS	71	50	77	45	61	1	.1	.1	0	.4	233	1.3	127	96	69	0	6	0	0
JUNEAU	62	48	71	41	55	3	.3	.4	.2	1.0	60	13.3	72	77	31	0	0	0	0
KODIAK	54	41	64	34	47	-3	.7	.7	.2	1.0	60	13.3	72	96	47	0	0	4	0
NOME	54	38	65	33	46	1	.1	.1	.1	5.3	215	18.7	72	97	72	0	0	4	0
AZ PHOENIX	109	81	112	77	95	9	0	0	0	.2	30	7.2	206	81	43	0	0	1	0
PRESCOTT	92	58	96	53	75	8	0	0	0	0	0	2.3	92	28	10	7	0	0	0
TUCSON	104	70	109	65	87	4	0	0	0	0	0	2.8	46	11	5	0	0	0	0
YUMA	107	76	111	73	92	0	0	0	0	0	0	2.0	76	30	8	7	0	0	0
AR FORT SMITH	81	62	86	52	71	-5	0	0	0	0	0	.8	93	39	13	7	0	0	0
LITTLE ROCK	80	63	86	55	72	-7	1.9	1.0	.8	5.1	234	31.9	165	95	54	0	0	3	3
CA BAKERSFIELD	93	63	97	57	78	0	.4	.4	.2	4.6	209	31.9	126	86	63	0	0	3	0
EUREKA	64	52	70	47	58	3	0	0	0	0	0	2.3	59	69	24	6	0	0	0
FRESNO	94	62	99	56	78	0	.1	.1	.1	.1	20	19.0	86	88	66	0	0	1	0
LOS ANGELES	70	60	72	57	65	4	0	0	0	0	0	4.8	69	67	20	6	0	0	0
REDDING	91	63	95	56	77	0	0	0	0	0	0	3.2	39	93	69	0	0	0	0
SACRAMENTO	90	55	97	51	72	1	0	0	0	1.0	176	19.6	81	75	26	5	0	1	0
SAN DIEGO	71	60	74	60	66	0	0	0	0	.6	829	9.1	86	85	29	4	0	0	0
SAN FRANCISCO	69	53	73	52	61	0	T	T	T	T	T	2.0	31	92	67	0	0	0	0
CO DENVER	77	51	92	46	64	-2	.1	.1	.1	1.9	206	9.1	121	82	32	1	0	1	0
GRAND JUNCTION	87	58	97	52	73	1	.2	.1	.2	.2	78	3.7	103	57	18	2	0	0	0
PUEBLO	82	51	99	45	66	-5	.1	.1	.1	.7	118	3.6	84	93	31	1	0	2	0
CT BRIDGEPORT	70	58	79	55	64	-3	1.7	1.1	1.1	4.3	264	24.9	132	84	67	0	0	4	0
HARTFORD	71	55	83	53	63	-5	1.7	.9	.8	5.9	304	27.0	134	92	60	0	0	6	2
DC WASHINGTON	83	66	88	60	75	0	1.6	.8	.8	4.2	225	25.0	147	91	55	0	0	4	1
FL APALACHICOLA	87	73	89	71	80	0	3.1	2.1	2.2	8.4	344	22.7	114	99	76	0	0	2	2
DAYTONA BEACH	92	72	94	71	82	3	.1	-1.4	-1	1.6	45	16.0	91	92	53	6	0	2	0
JACKSONVILLE	94	71	96	70	83	3	.6	-8	.4	2.2	70	12.2	60	95	44	7	0	3	0
KEY WEST	89	81	90	78	85	2	.3	-9	.3	.8	28	6.9	55	81	64	1	0	1	0
MIAMI	90	79	91	78	85	4	T	-2.2	T	1.9	37	7.3	35	82	55	5	0	0	0
ORLANDO	94	73	95	72	83	2	1.1	-5	1.1	3.8	102	13.7	75	92	42	7	0	3	1
TALLAHASSEE	89	68	91	64	78	-1	3.0	1.5	1.7	9.1	266	25.5	91	100	60	6	0	5	2
TAMPA	93	75	95	73	84	3	.3	-1.0	.2	1.3	48	6.0	36	90	50	7	0	2	0
WEST PALM BEACH	91	77	93	75	84	4	T	-1.9	T	.8	17	12.1	56	84	54	5	0	1	0
GA ATLANTA	83	68	91	65	76	0	3.6	2.8	1.8	5.1	279	27.5	108	92	55	1	0	4	2
AUGUSTA	90	67	93	63	79	2	1.5	.6	1.3	3.4	161	20.6	94	97	47	4	0	3	1
MACON	87	69	92	66	78	-1	1.4	.6	.7	2.8	135	24.1	104	94	52	4	0	3	2
SAVANNAH	93	72	95	71	82	4	2.0	.7	1.0	3.7	121	12.8	61	96	46	7	0	3	2
HI HILO	81	69	83	67	75	0	2.5	1.1	.9	5.0	145	103.3	166	95	65	0	0	7	2
HONOLULU	89	74	89	71	81	3	0	0	0	0	0	12.7	98	76	44	0	0	0	0
KAHULUI	84	71	85	68	77	1	T	0	T	.1	46	26.2	230	87	61	0	0	1	0
LIHUE	83	74	83	72	78	1	.1	.1	.1	1.4	143	31.7	147	81	60	0	0	3	0
ID BOISE	87	56	94	48	71	6	T	-2	T	.1	12	6.5	98	58	20	2	0	1	0
LEWISTON	79	58	91	50	68	3	1.4	1.0	1.3	1.4	158	8.1	120	73	37	1	0	2	1
POCATELLO	81	48	90	41	65	3	T	-2	T	.6	85	6.5	112	81	26	1	0	1	0
IL CHICAGO	72	54	80	44	63	-5	.8	-2	.7	2.0	81	8.2	55	94	52	0	0	3	1
MOLINE	73	54	83	46	64	-7	2.0	1.0	1.6	3.3	140	14.6	91	91	50	0	0	2	1
PEORIA	74	54	82	45	64	-7	.4	-5	.4	.7	31	10.6	68	93	48	0	0	2	1
QUINCY	74	57	80	48	65	-7	.5	-5	.3	.8	34	7.6	46	91	49	0	0	2	0
ROCKFORD	72	54	82	49	63	-6	1.1	.1	.6	2.0	81	9.8	63	93	55	0	0	2	1
SPRINGFIELD	75	56	80	46	65	-7	.3	-6	.2	.6	28	14.1	90	95	50	0	0	2	0
IN EVANSVILLE	79	60	85	53	70	-5	1.3	.5	1.0	3.4	171	28.1	133	97	54	0	0	3	1
FORT WAYNE	74	56	79	47	65	-5	.6	-3	.5	5.3	255	18.0	112	96	53	0	0	3	0
INDIANAPOLIS	76	57	82	50	67	-5	.6	-3	.6	2.2	102	19.1	105	94	50	0	0	3	1
SOUTH BEND	71	54	78	44	62	-6	.5	-4	.4	2.8	132	13.3	81	95	51	0	0	3	0
IA DES MOINES	75	54	82	48	64	-7	.3	-7	.2	1.1	44	9.4	68	90	43	0	0	2	0
STOUX CITY	75	52	85	41	64	-7	.8	-2	.4	.8	33	5.4	48	88	42	0	0	3	0
WATERLOO	76	50	84	43	63	-6	.5	-5	.4	.7	29	6.9	50	94	39	0	0	2	0
KS CONCORDIA	77	57	83	43	63	-6	.1	-1.0	.1	1.7	68	7.8	65	85	42	0	0	2	0
DODGE CITY	77	55	88	44	66	-8	.1	-6	.1	4.1	240	9.3	101	91	46	0	0	1	0
GOODLAND	78	51	85	41	64	-5	0	-6	0	2.0	126	6.3	85	91	32	0	0	2	0
TOPEKA	78	57	88	50	68	-6	.3	-9	.3	1.2	40	11.0	78	89	42	0	0	2	0
WICHITA	78	59	87	50	69	-7	.3	-6	.3	5.6	245	14.3	119	89	49	0	0	2	0
KY BOWLING GREEN	79	61	84	51	70	-4	4.2	3.1	2.5	5.4	212	35.9	144	95	63	0	0	4	3
LEXINGTON	75	58	81	50	67	-5	2.2	1.2	.8	3.6	152	31.7	142	97	61	0	0	4	3
LOUISVILLE	77	60	83	51	69	-5	1.6	.8	1.0	3.9	193	31.4	146	93	54	0	0	4	3
LA ALEXANDRIA	86	69	93	62	78	-2	1.4	.5	1.4	2.3	104	34.5	128	95	56	3	0	1	1
BATON ROUGE	88	70	92	62	79	-1	4.0	3.3	3.9	9.1	592	36.3	139	100	57	3	0	2	1
LAKE CHARLES	87	71	91	61	79	-1	2.5	1.6	2.5	7.4	314	27.3	120	92	57	3	0	1	1
NEW ORLEANS	87	71	90	62	79	-1	.6	-4	.5	3.9	158	20.4	76	97	59	2	0	3	1

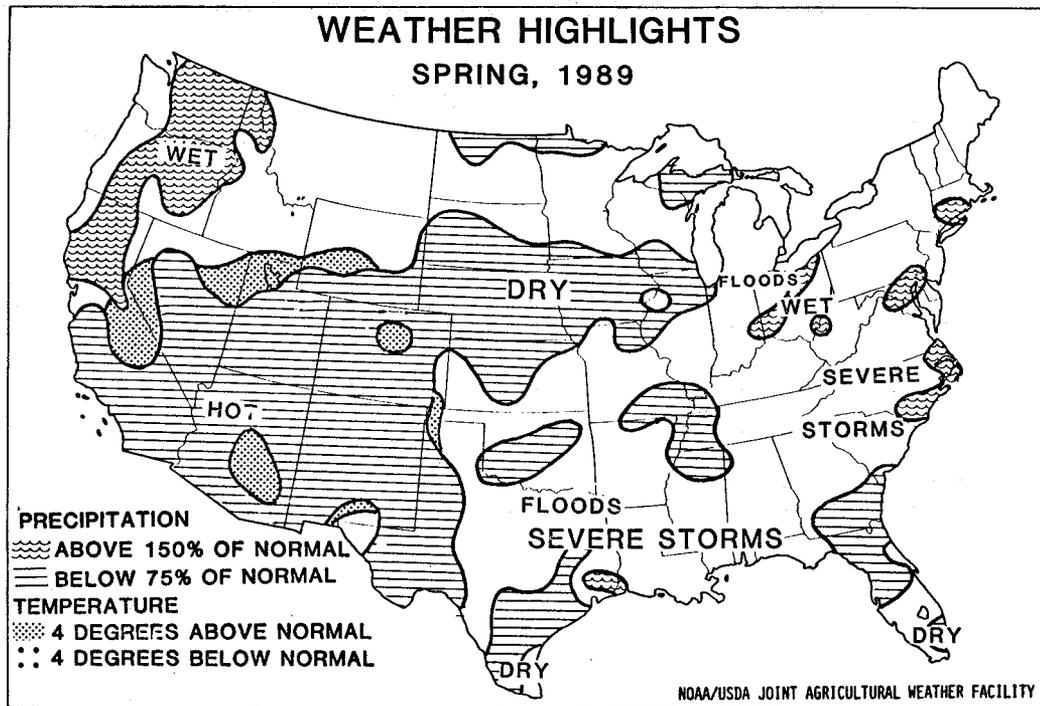
Based on 1951-80 normal

Weather Data for the Week Ending June 17, 1989

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 Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
ME SHREVEPORT	83	64	90	56	74	.6	1.6	.8	1.3	9.1	450	36.2	160	98	58	1	0	2	1
ME CARIBOU	82	45	72	40	54	-.6	.5	-.2	.3	2.3	133	13.4	95	91	63	0	0	3	0
ME PORTLAND	65	50	77	47	58	-.4	1.3	.6	.7	4.4	252	21.7	108	95	57	0	0	4	1
MD BALTIMORE	80	63	86	55	72	0	.9	0	.5	4.0	191	26.5	143	97	62	0	0	4	0
MD SALISBURY	83	63	92	51	73	0	1.8	1.0	1.3	4.2	212	21.4	111	96	54	2	0	3	1
MA BOSTON	71	56	85	53	63	-.5	1.0	.3	.8	2.6	152	15.9	77	86	52	0	0	4	1
MA CHATHAM	66	55	74	53	61	-.1	.9	.2	.5	2.9	181	22.8	105	97	72	0	0	5	1
MI ALPENA	63	48	75	45	56	-.6	.8	-.1	.2	2.0	116	10.8	90	98	68	0	0	6	0
MI DETROIT	70	55	75	48	62	-.5	.9	-.1	.5	3.1	161	13.7	99	97	67	0	0	5	1
MI FLINT	69	53	74	43	61	-.6	.6	-.2	.2	1.0	55	10.4	82	97	58	0	0	5	0
MI GRAND RAPIDS	69	52	76	44	61	-.7	.2	-.7	.2	1.2	56	11.7	80	97	62	0	0	3	0
MI HOUGHTON LAKE	62	49	75	38	56	-.7	.9	-.2	.3	2.3	132	11.1	96	96	69	0	0	4	0
MI LANSING	69	52	76	41	60	-.6	.7	-.3	.4	1.2	54	13.2	102	97	63	0	0	3	0
MI MARQUETTE	60	42	75	37	51	-.6	1.6	.6	.6	4.7	207	14.7	88	91	57	0	0	5	2
MI MUSKEGON	68	53	74	40	60	-.3	.3	-.3	.3	.7	52	10.7	79	93	61	0	0	1	0
MI SAULT ST. MARIE	62	48	76	42	55	-.3	.8	0	.3	2.1	111	12.6	97	93	64	0	0	6	0
MN ALEXANDRIA	72	48	82	43	60	-.5	1.0	0	.6	1.0	44	6.8	67	96	47	0	0	3	1
MN DULUTH	66	42	79	35	54	-.5	1.7	.8	1.4	2.2	100	11.4	101	95	50	0	0	3	1
MN INT'L FALLS	70	46	82	39	58	-.3	1.5	.6	1.0	1.8	93	6.8	79	93	42	0	0	2	1
MN MINNEAPOLIS	75	51	85	41	63	-.5	1.6	.6	.8	1.8	80	11.6	107	85	39	0	0	3	1
MN ROCHESTER	71	44	83	35	58	-.9	.4	-.5	.3	.9	43	8.6	76	92	47	0	0	2	0
MS GREENWOOD	84	65	91	59	75	-.2	7.9	7.2	4.5	12.2	645	39.0	138	94	55	1	0	4	2
MS JACKSON	87	67	92	57	77	-.5	1.8	1.1	1.4	7.2	407	28.6	106	99	54	3	0	3	1
MS MERIDIAN	87	67	92	58	77	-.1	2.4	1.6	1.9	6.1	327	33.2	120	98	55	3	0	5	3
MO CAPE GIRARDEAU	76	61	84	54	68	-.8	5.2	4.4	2.5	6.4	313	30.3	136	98	60	0	0	2	2
MO COLUMBIA	73	56	77	48	65	-.9	2.2	1.3	1.3	2.3	103	14.9	85	96	59	0	0	1	3
MO KANSAS CITY	76	58	86	51	67	-.8	.9	-.2	.7	2.7	100	12.4	80	88	46	0	0	2	1
MO SAINT LOUIS	77	61	81	51	69	-.6	.3	-.6	.1	.6	29	15.4	94	88	48	0	0	3	0
MO SPRINGFIELD	72	54	78	43	63	-.10	1.3	-.2	.7	2.4	91	18.0	99	95	58	0	0	3	2
MT BILLINGS	75	51	89	44	63	-.1	.4	-.1	.3	.7	57	9.0	109	83	35	0	0	2	0
MT GLASGOW	74	49	84	42	62	-.2	.3	-.3	.3	.6	40	5.9	126	84	40	0	0	2	0
MT GREAT FALLS	73	49	83	41	61	0	.6	-.1	.3	1.4	84	9.7	118	90	42	0	0	2	0
MT HAVRE	76	51	89	44	63	1	.4	-.2	.2	.6	49	5.3	94	75	32	0	0	2	0
MT HELENA	76	50	80	43	63	3	.6	-.1	.6	1.4	117	6.7	116	88	33	0	0	3	1
MT KALISPELL	73	48	82	37	60	3	.3	-.3	.2	1.3	95	9.3	122	94	44	0	0	3	0
MT MILES CITY	73	53	82	44	63	3	.2	-.5	.1	.7	42	8.4	119	76	35	0	0	2	0
MT MISSOULA	75	50	85	38	63	3	.5	0	.5	1.2	107	6.8	102	88	38	0	0	2	0
NE GRAND ISLAND	77	53	85	40	65	-.6	.6	-.3	.5	1.0	48	4.8	42	89	39	0	0	3	1
NE LINCOLN	78	54	84	44	66	-.1	.1	-.8	.1	1.2	54	4.6	36	92	40	0	0	1	0
NE NORFOLK	75	51	85	38	63	-.7	.3	-.8	.2	.3	12	5.6	50	90	40	0	0	3	0
NE NORTH PLATTE	76	48	86	34	62	-.6	.1	-.8	.1	1.2	56	6.0	64	90	38	0	0	1	0
NE OMAHA	76	55	82	46	65	-.8	.3	-.6	.3	1.5	63	6.2	47	86	44	0	0	2	0
NE SCOTTSBLUFF	82	50	100	42	66	-.1	T	-.7	T	.2	9	4.5	59	76	21	1	0	1	0
NE VALENTINE	76	47	90	33	61	-.7	T	-.7	T	.1	5	3.3	42	78	34	1	0	1	0
NV ELY	82	43	90	38	63	4	.1	-.1	.1	1.0	210	3.9	82	74	20	1	0	1	0
NV LAS VEGAS	103	75	109	69	89	6	0	0	0	T	0	1.3	74	28	13	7	0	0	0
NV RENO	87	52	92	45	69	7	T	-.1	T	1.0	473	3.9	91	71	17	2	0	0	0
NV WINNEMOCCA	89	50	94	42	69	6	0	-.2	0	.4	63	2.8	64	55	14	4	0	0	0
NH CONCORD	67	49	78	46	58	-.6	.9	.3	.9	3.9	232	17.4	110	96	59	0	0	4	1
NJ ATLANTIC CITY	78	59	87	48	69	0	1.0	.4	.5	3.5	238	23.3	126	95	59	0	0	4	1
NM ALBUQUERQUE	90	60	98	57	75	0	T	-.1	T	T	9	1.4	62	47	13	4	0	0	0
NM CLOVIS	83	57	97	53	70	-.4	.5	-.1	.5	2.3	161	3.5	62	86	36	2	0	2	1
NM ROSWELL	94	60	105	56	77	-.1	T	-.2	T	T	4	1.6	56	67	20	4	0	0	0
NY ALBANY	71	55	80	52	63	-.4	1.8	1.0	1.1	5.6	300	18.9	121	93	61	0	0	5	1
NY BINGHAMTON	67	53	73	49	60	-.4	2.4	1.6	.8	4.1	205	18.7	117	95	66	0	0	6	2
NY BUFFALO	69	53	75	48	61	-.5	1.9	1.3	.7	5.8	375	22.4	142	98	59	0	0	6	2
NY NEW YORK	75	62	86	59	68	-.3	1.7	.9	1.1	5.2	294	26.1	136	91	60	0	0	6	1
NY ROCHESTER	70	53	76	48	62	-.5	2.5	1.9	1.5	3.7	229	17.8	128	94	59	0	0	6	1
NY SYRACUSE	70	53	79	49	61	-.5	1.7	.9	.6	3.6	182	15.3	92	91	62	0	0	5	1
NC ASHEVILLE	78	58	85	54	68	-.2	3.4	2.5	1.7	6.8	309	24.5	118	99	56	0	0	5	3
NC CHARLOTTE	86	68	92	64	77	-.2	1.0	.2	.7	1.7	86	20.9	99	90	52	2	0	3	1
NC GREENSBORO	83	65	89	61	74	1	1.9	1.0	1.0	4.8	225	25.6	132	94	56	0	0	4	1
NC HATTERAS	83	69	87	58	76	2	.6	-.4	.6	2.3	98	34.5	154	100	58	0	0	1	1
NC NEW BERN	88	70	94	64	79	3	.6	-.6	.3	3.5	127	24.9	115	97	55	3	0	3	0
NC RALEIGH	86	65	91	59	76	2	1.4	.6	.7	4.7	232	26.6	139	96	54	2	0	5	1
NC WILMINGTON	88	71	95	66	80	3	1.7	.4	1.7	5.3	180	27.5	129	93	57	3	0	1	1
ND BISMARCK	74	48	89	39	61	-.3	.3	-.4	.1	.4	22	5.3	75	83	40	0	0	5	0
ND FARGO	71	50	79	45	61	-.4	.1	-.6	.1	.1	9	7.3	98	51	42	0	0	2	0
ND GRAND FORKS	70	48	79	40	59	-.5	.6	-.1	.5	.8	50	5.9	86	52	38	0	0	3	1
ND WILLISTON	75	49	86	37	62	-.2	.3	-.3	.3	1.1	75	6.2	101	83	40	0	0	2	0
OH AKRON-CANTON	71	56	77	46	63	-.4	3.1	2.3	1.2	5.5	302	22.0	133	93	60	0	0	5	3
OH CINCINNATI	75	57	84	50	66	-.5	1.3	.4	.5	2.5	112	26.7	138	98	61	0	0	4	0
OH CLEVELAND	71	56	75	47	64	-.4	1.5	.7	.4	3.8	192	23.9	148	93	62	0	0	6	0
OH COLUMBUS	74	57	80	50	65	-.5	1.5	.5	.6	2.7	118	19.9	114	97	57	0	0	5	1

Weather Data for the Week Ending June 17, 1989

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 Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
DAYTON	75	57	80	51	66	-5	2.0	1.1	.8	4.1	191	30.6	180	94	56	0	0	5	1	
TOLEDO	72	55	76	46	63	-5	.9	.1	.5	3.1	160	16.1	113	96	61	0	0	6	0	
YOUNGSTOWN	70	54	76	42	62	-4	3.4	2.5	2.0	5.8	304	21.2	126	100	67	0	0	5	3	
OK OKLAHOMA CITY	80	62	86	56	71	-6	5.7	4.8	4.6	13.5	572	24.0	160	88	45	0	0	3	3	
TULSA	78	62	84	52	70	-7	2.7	1.6	1.5	3.9	143	16.5	91	90	50	0	0	3	3	
OR ASTORIA	63	50	67	43	56	0	.3	-.3	.2	.3	21	30.5	88	94	65	0	0	3	0	
BURNS	75	47	84	38	61	1	.4	-.3	.4	1.0	257	5.9	113	76	32	0	0	1	0	
MEDFORD	82	53	91	46	67	3	.2	0	.2	.2	34	10.4	104	81	29	1	1	1	0	
PENDLETON	78	53	88	45	66	0	.3	.1	.1	.3	56	8.3	131	75	32	0	0	2	0	
PORTLAND	71	53	85	49	62	0	.4	0	.3	.4	38	18.2	96	94	51	0	0	2	0	
SALEM	73	49	85	43	61	1	.3	0	.3	.3	38	15.3	73	95	48	0	0	2	0	
PA ALLENTOWN	73	57	80	50	65	-4	1.5	-.7	.5	3.5	186	22.1	113	94	60	0	0	5	0	
ERIE	68	55	71	47	62	-3	1.1	-.1	.4	2.6	117	20.4	126	96	67	0	0	5	0	
HARRISBURG	74	59	79	48	66	-5	2.6	1.7	1.5	4.2	203	21.9	121	97	64	0	0	6	2	
PHILADELPHIA	80	62	86	55	71	0	.7	-.2	.3	3.9	181	23.0	124	92	57	0	0	3	0	
PITTSBURGH	72	57	76	49	65	-3	4.6	3.8	1.8	6.0	307	24.9	142	97	63	0	0	6	3	
SCHANTON	70	55	77	46	63	-5	1.8	1.0	.7	3.3	171	17.3	116	95	62	0	0	5	1	
RI PROVIDENCE	72	57	81	54	65	-2	1.8	1.1	.9	4.6	284	23.8	113	89	60	0	0	5	2	
SC CHARLESTON	91	72	94	69	81	4	1.2	-.4	.7	5.1	145	18.1	84	95	50	5	0	3	1	
COLUMBIA	91	67	95	63	79	2	1.0	0	.5	3.1	127	21.8	93	98	43	5	0	4	1	
FLORENCE	90	69	94	67	80	2	.7	-.3	.4	3.6	146	20.2	102	97	48	4	0	3	0	
GREENVILLE	84	64	90	56	74	-1	2.0	-.9	1.2	3.2	133	20.9	83	96	56	1	0	3	2	
SD ABERDEEN	72	51	83	39	62	-4	1.8	1.0	1.0	1.9	101	8.8	105	93	43	0	0	3	2	
HURON	74	48	88	38	61	-7	1.3	-.5	1.0	1.3	66	7.0	79	94	42	0	0	4	1	
RAPID CITY	77	50	101	42	63	-1	.3	-.5	.1	.3	18	4.5	54	83	30	1	0	4	0	
SIOUX FALLS	75	49	85	37	62	-6	1.0	-.1	.9	1.0	45	5.7	54	86	41	0	0	3	1	
TN CHATTANOOGA	82	63	87	57	73	-2	3.4	2.6	1.5	5.3	291	32.2	121	99	59	0	0	5	3	
KNOXVILLE	80	62	87	55	71	-3	3.1	2.2	.9	6.3	293	30.1	126	100	64	0	0	5	3	
MEMPHIS	82	65	89	59	74	-4	2.3	1.5	1.4	4.0	194	32.6	120	92	57	0	0	4	1	
NASHVILLE	80	63	86	54	72	-4	3.7	2.9	1.4	5.8	271	32.2	128	96	60	0	0	4	3	
TX ABILENE	84	62	92	57	73	-7	2.0	1.4	1.1	9.5	628	18.7	184	89	49	1	0	2	2	
AMARILLO	81	55	90	48	68	-7	2.4	1.6	2.0	5.0	252	9.5	124	91	45	1	0	2	1	
AUSTIN	88	67	94	60	77	-4	3.0	2.2	1.2	3.0	156	19.1	128	95	49	3	0	3	3	
BEAUMONT	87	70	91	59	79	-2	2.3	1.2	2.3	3.5	130	29.3	126	91	55	2	0	1	1	
BROWNSVILLE	91	72	93	63	81	-1	.6	-.1	.5	.6	34	7.8	92	93	52	5	0	2	1	
CORPUS CHRISTI	91	72	95	63	82	0	1.3	-.4	1.3	1.3	58	8.1	71	92	48	6	0	1	1	
DEL RIO	92	70	95	63	81	-3	.1	-.3	.1	.3	31	5.3	78	72	33	5	0	2	0	
EL PASO	96	66	105	60	81	0	0	-.1	0	0	0	2.1	123	44	14	6	0	0	0	
FORT WORTH	83	63	91	54	73	-8	3.1	2.6	1.8	8.6	584	30.0	190	91	51	1	0	3	2	
GALVESTON	85	75	89	68	80	-3	2.4	1.6	2.4	2.8	141	15.0	97	83	59	0	0	1	1	
HOUSTON	88	68	94	57	78	-3	3.5	2.4	1.8	4.1	157	28.8	140	95	53	3	0	3	2	
LUBBOCK	86	59	97	56	73	-5	1.7	1.1	1.7	5.0	307	7.6	108	89	39	4	0	2	1	
MIDLAND	93	63	105	56	78	-2	0	-.3	0	.6	67	3.4	66	80	29	4	0	0	0	
SAN ANGELO	87	62	95	53	75	-6	.2	-.3	.2	2.8	244	10.6	138	89	44	4	0	1	0	
SAN ANTONIO	91	67	97	61	79	-3	3.3	2.5	1.6	3.3	177	10.6	82	90	38	4	0	3	3	
VICTORIA	90	71	94	61	80	-1	1.5	-.4	1.5	1.9	70	9.8	64	90	45	3	0	1	1	
WACO	87	64	92	56	75	-6	2.2	1.6	1.2	3.9	233	22.0	139	95	50	3	0	4	1	
WICHITA FALLS	83	62	90	55	72	-8	1.9	1.2	1.0	8.5	473	19.4	152	93	50	1	0	3	2	
UT CEDAR CITY	88	52	94	43	70	4	T	-.1	T	.7	309	3.4	75	56	13	3	0	0	0	
SALT LAKE CITY	87	58	99	52	73	5	T	-.2	T	.2	37	6.3	73	67	18	1	0	1	0	
VT BURLINGTON	70	52	79	45	61	-4	.6	-.3	.2	3.3	164	12.1	90	91	50	0	0	4	0	
VA NORFOLK	87	68	94	59	78	3	.6	-.2	.4	3.3	175	27.5	143	89	47	4	0	4	0	
RICHMOND	85	63	91	54	74	0	1.9	1.1	.7	4.8	252	25.3	139	99	57	2	0	6	1	
ROANOKE	80	62	86	57	71	-1	2.2	1.4	1.9	6.2	326	21.5	118	97	58	0	0	4	1	
WA QUILLAYUTE	63	46	70	38	54	-1	1.8	1.2	1.2	1.8	105	42.9	81	99	61	0	0	3	2	
SEATTLE-TACOMA	71	53	84	49	62	2	.3	-.1	.2	.3	33	17.9	96	89	49	0	0	2	0	
SPOKANE	75	52	87	45	64	3	.2	-.1	.2	.4	55	8.3	97	84	38	0	0	2	0	
YAKIMA	81	50	91	38	65	1	T	-.1	T	T	0	3.4	84	74	30	1	0	0	0	
WV BECKLEY	73	58	79	51	65	0	1.5	-.6	.9	3.1	143	21.5	109	96	63	0	0	5	1	
CHARLESTON	76	59	81	50	68	-3	4.0	3.3	2.0	7.0	404	32.7	168	99	63	0	0	5	4	
HUNTINGTON	75	59	82	48	67	-5	2.1	1.4	.8	4.1	222	29.9	155	99	64	0	0	5	2	
PARKERSBURG	75	58	79	51	67	-4	1.2	.3	.5	2.5	119	25.9	144	99	66	0	0	5	0	
WI GREEN BAY	65	51	77	47	58	-7	.8	-.1	.4	1.5	83	9.9	84	92	61	0	0	4	0	
LACROSSE	73	49	85	43	61	-7	.3	-.7	.1	.6	24	8.5	67	96	48	0	0	4	0	
MADISON	71	49	81	44	60	-6	.7	-.2	.4	1.2	53	8.4	66	96	52	0	0	3	0	
MILWAUKEE	66	52	79	46	59	-6	.6	-.2	.5	1.2	61	10.0	74	95	65	0	0	4	1	
WAUSAU	67	46	77	42	56	-8	1.2	.3	.7	2.5	111	10.7	85	97	50	0	0	4	1	
WY CASPER	79	46	93	36	63	-8	T	-.3	T	.7	95	6.2	98	79	20	2	0	1	0	
CHEYENNE	74	47	89	38	61	-1	T	-.5	T	2.1	177	6.0	91	83	29	0	0	0	0	
LANDER	79	49	91	43	64	2	.1	-.3	.1	2.0	213	9.6	119	76	24	1	0	2	0	
SHERIDAN	77	45	91	39	61	0	.1	-.4	.1	.3	18	6.6	79	89	30	1	0	2	0	
PR SAN JUAN	-999	78	-999	75	-999	-	0	-1.1	0	0	0	8.9	46	83	65	0	0	0	0	



Spring Weather Review

HIGHLIGHTS: The spring of 1989 was noted for the unusual amount of severe weather (see Weekly Weather and Crop Bulletin, Vol. 76, No. 23, June 13, 1989). Outbreaks of severe storms brought flooding, damaging winds, large hail, and tornadoes to much of the eastern half of the Nation. Rainfall was particularly heavy in the central Gulf Coast States, eastern Corn Belt, and along the middle and northern Atlantic coast. Wet weather also prevailed in the Northwest. Dry weather, however, remained over much of the western Corn Belt, northern Plains, south Atlantic coast, and southern Texas. Very warm weather dominated the West, while temperatures averaged near to below normal across the northern Plains and the eastern half of the United States.

MARCH: A major, late-season winter storm came ashore in the Pacific Northwest and spread winter weather across much of the Nation during the first of the month. The storm triggered severe thunderstorms across the Southeast, freezing rain from the mid-section of the country to the mid-Atlantic coast, and heavy snow from Texas to the middle Mississippi Valley and in the central Appalachians. Frigid air behind the storm dropped temperatures below zero in the northern and central Plains. The steady flow of moisture from the Pacific brought above-normal precipitation into the Northwestern States. During the latter part of the month, warm moist air from the Gulf of Mexico and slow moving frontal systems caused severe weather and heavy rain from the southern Plains to the Middle and Southern Atlantic Coast States. Much needed rain fell over winter wheat in the central Plains, while torrential rain caused flooding in northeastern Texas. Gener-

ally dry conditions again prevailed in the northern Corn Belt, Southwest, and southeastern Florida, which received the least amount of rainfall on record for the September to March period. The abnormally warm weather in the West spread over much of the United States at month's end and melted much of the snow cover across the Northern States.

APRIL: A stalled frontal system during the latter part of the month was responsible for severe weather but brought much needed rain over the spring wheat regions of the northern Plains, across the Corn Belt, and to the mid-Atlantic coast. At the same time, hot, dry conditions prevailed over the hard red winter wheat in the central and southern Plains. Showers and thunderstorms brought soaking rains into the Southeast and along the Atlantic seaboard throughout the month, while dry weather dominated much of the remainder of the Nation. The West remained abnormally warm.

MAY: Severe thunderstorms brought drenching rains from the central Plains to the central Gulf coast and from the Great Lakes and middle Mississippi Valley to the northern and middle Atlantic coast. These storms dumped torrential rain and caused severe flooding in the Red River Valley of the South and eastern Corn Belt. Dry weather covered much of the northern Plains, northwestern Corn Belt, and the southern Atlantic seaboard. Omaha, NE, received the least amount of precipitation for the month on record. Temperatures were abnormally high in the Southwest, southern Plains, southern Florida, northern Plains, and New England. Cool weather prevailed over the eastern Corn Belt and central and southern Appalachians.

Spring Weather in Historical Perspective

Precipitation averaged across the United States for spring was below the long-term mean but the wettest in the last 5 years (fig. 1). The areally averaged temperature for the Nation was above normal as were the previous 4 years (fig. 2).

The temperature and precipitation rankings for spring 1989 for nine U.S. regions are listed in table 1. The regions are shown in figure 3. Wet areas included the Northeast (12th wettest) due to a very wet May and the Northwest (9th wettest). The Southwest was hot and dry (1st and 7th, respectively), while very warm weather persisted in the West (3rd hottest). Precipitation rankings for each State are listed in table 2. Both Nebraska and New Mexico suffered from their 2nd driest spring, while dry conditions also prevailed over Colorado (5th driest) and Iowa (9th). Connecticut (5th wettest), Delaware (3rd), Maryland (6th), New Jersey (6th), North Carolina (4th), Ohio (5th), Pennsylvania (9th), and Rhode Island (8th) all had one of their wetter springs.

Figure 1

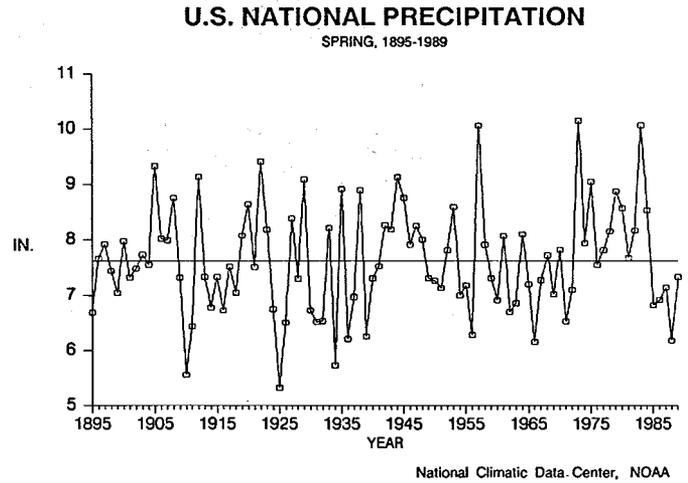


Figure 2

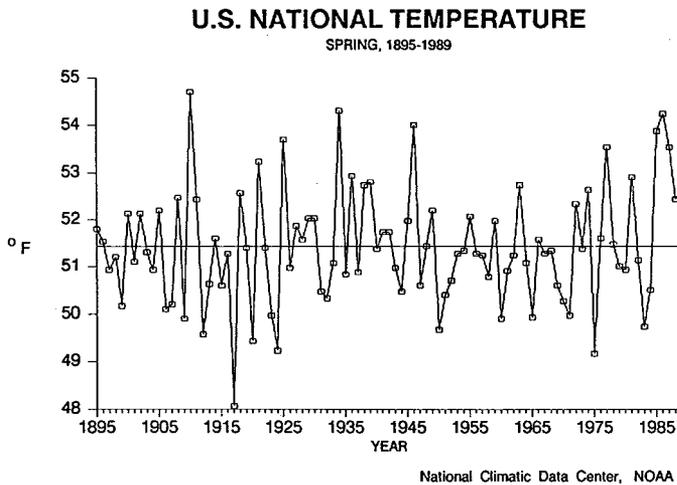


Table 1. Temperature and Precipitation Rankings for Spring 1989, based on the period 1895-1989. 1 = driest/coldest, 95 = wettest/hottest.

Region	Precipitation	Temperature
National	43	80
Northeast	84	37
East North Central	18	33
Central	48	38
Southeast	61	39
West North Central	26	52
South	26	73
Southwest	7	95
Northwest	87	70
West	58	93

Figure 3

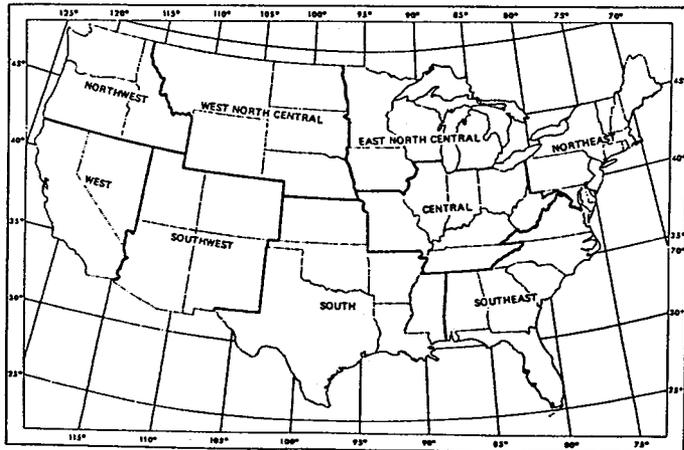
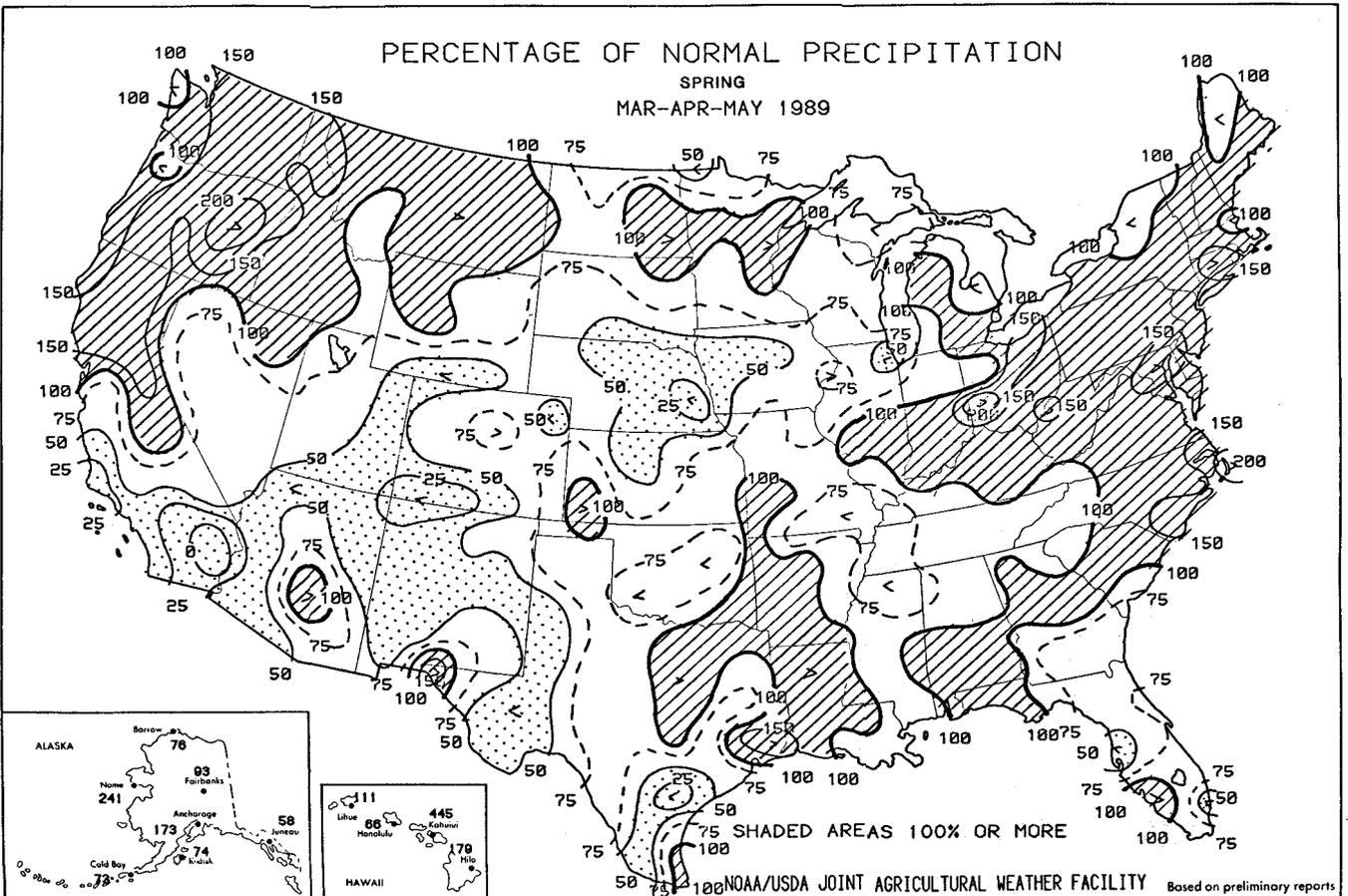
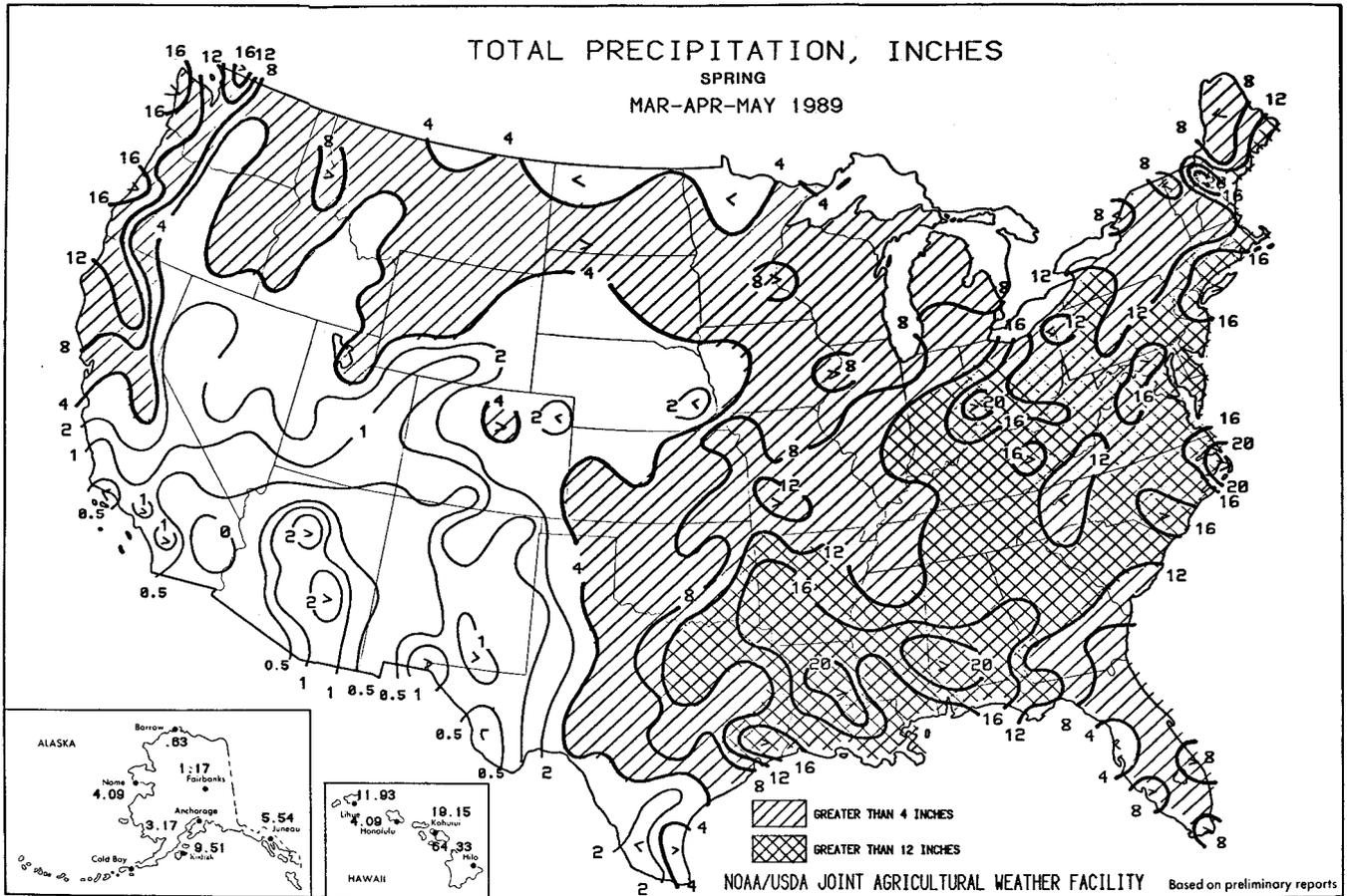
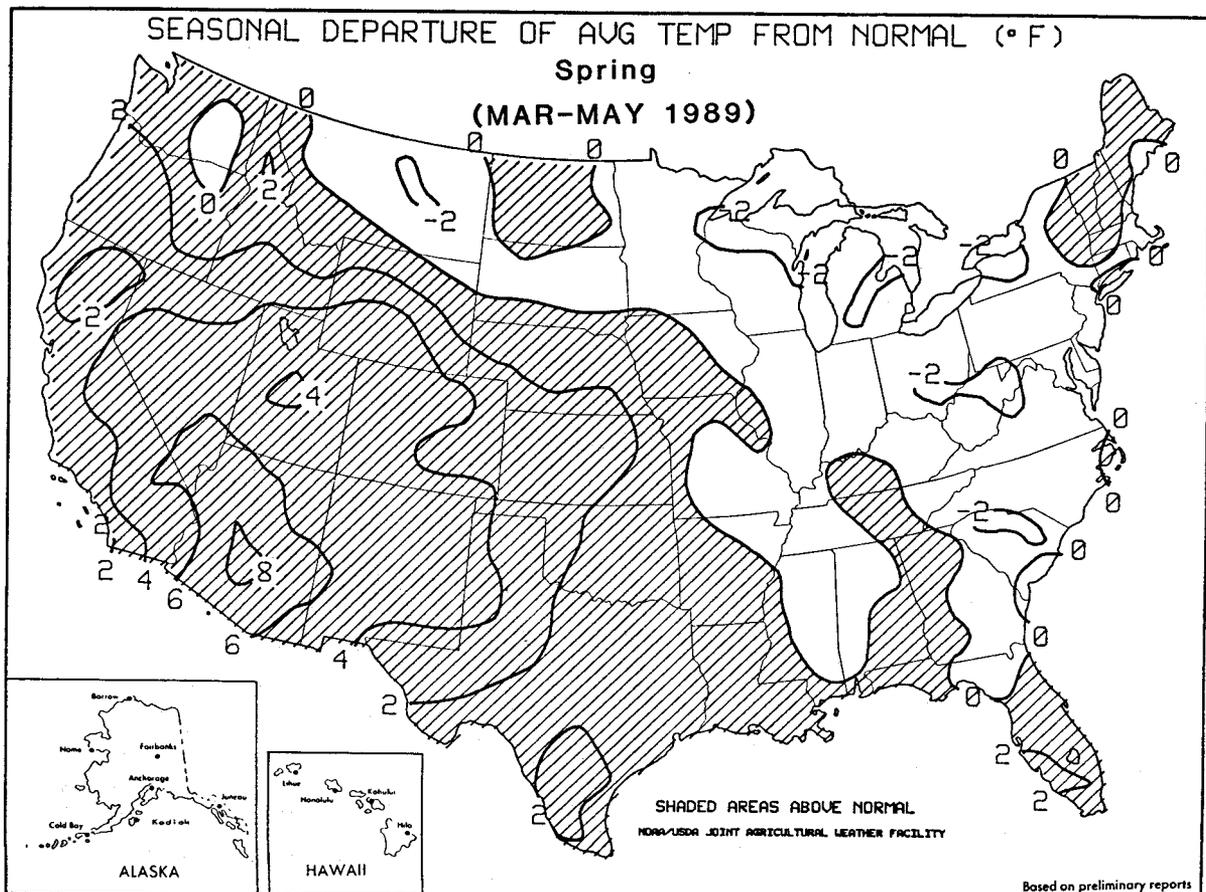
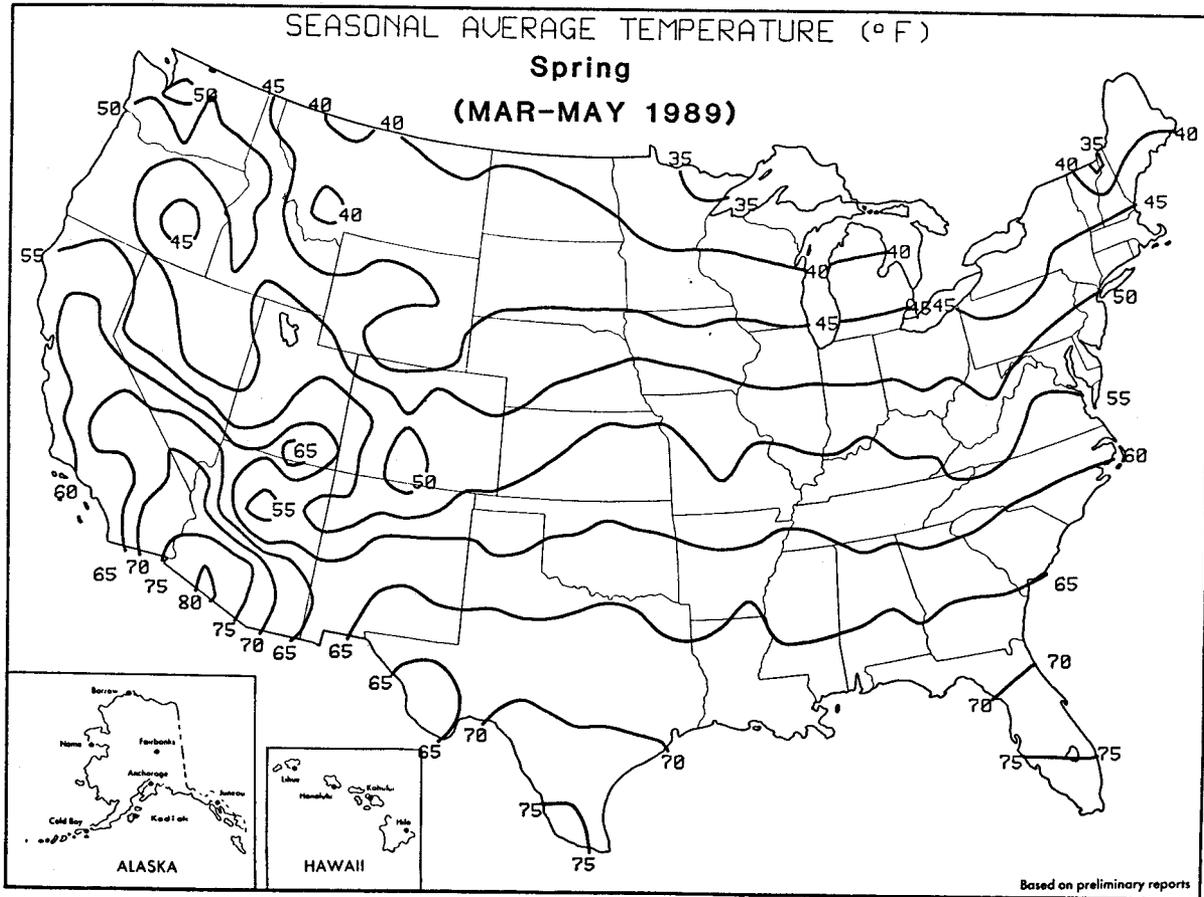


Table 2. Precipitation Rankings for Spring 1989, based on the period 1895 to 1989. 1 = driest, 95 = wettest.

State	Rank	State	Rank	State	Rank	State	Rank
AL	53	IA	9	NE	2	RI	88
AZ	18	KS	11	NV	39	SC	63
AR	61	KY	61	NH	64	SD	55
CA	66	LA	72	NJ	90	TN	50
CO	5	ME	55	NM	2	TX	19
CT	91	MD	90	NY	75	UT	13
DE	93	MA	59	NC	92	VT	58
FL	27	MI	35	ND	58	VA	82
GA	43	MN	30	OH	91	WA	82
ID	74	MS	44	OK	18	WV	84
IL	26	MO	15	OR	84	WI	28
IN	69	MT	79	PA	87	WY	11





National Agricultural Summary

June 12-18, 1989

HIGHLIGHTS: Rain and wet field conditions slowed fieldwork in the central and southern Great Plains and most of the East. The Delta averaged less than 2 days suitable for fieldwork. Soil moisture was mostly surplus to adequate in the Delta. Soil moisture was mostly surplus to adequate in the eastern Corn Belt and much of the Northeast. In the northern Great Plains, western Corn Belt, and the West, soil moisture was mostly short to adequate.

Winter wheat was mostly fair to poor with 94 percent (%) of the acreage headed, equal to the 5-year average. Harvest was 10% complete, 10 points behind normal. Rain slowed harvest in the central and southern Great Plains, the Delta, and Southeast. Spring wheat was mostly good to fair with 7% of the acreage headed, 11 points behind normal. Corn was mostly good to fair and planting was nearly complete. In the eastern Corn Belt, unplanted acreage was expected to be planted with an alternate crop or left idle. Soybeans were mostly good to fair and planting was 81% complete, 8 points behind normal. Rain continued to slow planting in the Delta and eastern Corn Belt. Cotton was mostly fair and planting was 96% complete, 2 points ahead of normal. Twenty-three percent of the acreage was squaring, 5 points behind normal. Sorghum was mostly good to fair and planting was 82% complete, equal to the average. Heavy rains delayed vegetable harvests in northern Florida.

SMALL GRAINS: Winter wheat was mostly fair to poor with 94% of the acreage headed, equal to the average. Heading was behind normal in Montana, ahead of normal in Idaho and Washington, and near normal in the other major producing States. Harvest was 10% complete, 10 points behind normal. Harvest was underway in 8 of the 20 major producing States. Harvest lagged behind normal in those States, except California, where harvest was 45% complete, equal to the average.

In Nebraska, winter wheat was mostly fair to poor. Producers continued to cut poorer fields for hay. Rain delayed the start of harvest in Kansas. Normally, 15% of the acreage would be harvested by now. Condition of the crop was still mostly very poor to poor. Rain slowed harvest in Oklahoma and Texas. In Oklahoma, harvest was 30% complete, 10 points behind normal. In Texas, harvest was 40% complete, 9 points behind normal. In Montana, winter wheat was mostly good to fair. Heading lagged 25 points behind normal. Heading was 20 points and 15 points ahead of normal in Idaho and Washington, respectively.

Spring wheat was mostly good to fair with 7% of the acreage headed, 11 points behind normal. Heading lagged behind normal in all five major producing States. In North Dakota, spring wheat was mostly good with 1% of the acreage headed, 12 points behind normal.

CORN: Corn was mostly good to fair. Planting was complete in most of the major producing States. In Indiana and Ohio, corn acreage not yet planted was expected to be switched to an alternate crop or left idle. In Pennsylvania, planting was 83% complete, 15 points behind normal. Some replanting of corn was necessary in Michigan. In Illinois, corn was mostly good and in Indiana and Iowa, corn was mostly good to fair. Wind and hail damaged corn in the High Plains area of Texas.

SOYBEANS: Soybeans were mostly good to fair and planting was 81% complete, 8 points behind normal. Rain continued to slow planting in the Delta and

eastern Corn Belt. In Ohio, planting was 57 points behind the 98% average. Planting was more than 15 points behind normal in Arkansas, Louisiana, and Mississippi. In Indiana, planting advanced 22 points, reaching 79% completion, 14 points behind normal. Planting was 17 points behind normal in North Carolina. Planting was complete in Iowa, Nebraska, and South Dakota and nearly complete in Illinois and Minnesota.

COTTON: Cotton was mostly fair. Planting was 96% complete, 2 points ahead of normal. Planting was complete in 11 of the 14 major producing States. Twenty-three percent of the acreage had reached the squaring stage, 5 points behind normal. Squaring lagged behind normal except in Arizona, California, New Mexico, and Oklahoma. Squaring was 15-20 points behind normal in most of the Delta and Southeast. Heavy rains lowered crop condition in the Delta, Oklahoma, and Texas.

SORGHUM: Sorghum was mostly good to fair and planting was 82% complete, equal to the average. Planting was ahead of normal in Nebraska, South Dakota, and Tennessee and normal or behind normal in the other major producing States. Earlier heavy rains forced some replanting in Kansas. In Texas, harvest began in the Coastal Bend area. Rain improved crop condition in the Plains area. Sorghum was heading in the Blacklands and central area.

OTHER FIELD CROPS: Rice was mostly good to fair. Rice was mostly fair in Mississippi and planting was nearly complete. Peanuts were mostly good in Georgia and good to fair in North Carolina. Peanut planting continued in Oklahoma and Texas. Tobacco was mostly good to fair in Georgia and North Carolina and fair to good in South Carolina. In Kentucky, tobacco was in good to excellent condition.

FRUIT AND NUTS: Scattered showers benefited Florida citrus groves, but more rain was needed. Grapefruit harvest was nearly complete. Peaches were fair to good in Georgia, Louisiana, and South Carolina. In North Carolina, peaches were good to fair. In Texas, hail and wind caused light damage to peaches in the Hill Country. In central Arizona, grapefruit and orange harvests continued. Citrus harvest was complete in western Arizona. In California, San Joaquin Valley harvests included apricots, avocados, peaches, plums, nectarines, lemons, and oranges. Table grape harvest was active in the Coachella Valley. Cherry harvest was underway in Idaho and Oregon.

VEGETABLES: Heavy rains delayed harvest and reduced crop quality in Florida's northern vegetable producing areas. Crops most affected were tomatoes and watermelons. Harvest was active in southern Florida. In Georgia, watermelons were mostly good to fair. Harvest began in the early planted fields. Watermelons were fair to good in South Carolina. In North Carolina, Irish potatoes were good to fair. Watermelon, cucumber, and tomato harvests were active in the Rio Grande Valley of Texas. Rain slowed harvests in east Texas. Onion harvest began in the Trans-Pecos. Watermelon and cantaloupe harvests were active in Arizona. Chipper potato harvest continued in the Queen Creek area. Sweet corn and dry onion harvests were nearly complete in central Arizona. In California, broccoli, cauliflower, and tomato harvests were active. Sweet corn harvest was complete in the Coachella Valley.

(Continue to back cover)

Crop Progress

FOR WEEK ENDING JUNE 18, 1989

GRAIN SORGHUM
% PLANTED

	1989	1988	AVG.
ARK	97	97	96
ILL	87	98	89
KANS	70	85	70
LA	94	97	99
MISS	90	98	97
MO	1	99	91
NEBR	100	99	94
OKLA	55	65	70
S DAK	87	86	83
TENN	94	93	87
TEX	88	89	90

11 STATES 82 89 82

THESE 11 STATES PRODUCED 96% OF THE 1988 GRAIN SORGHUM CROP.

COTTON
% PLANTED

	1989	1988	AVG.
ALA	100	100	100
ARIZ	100	100	100
ARK	100	100	100
CALIF	100	100	100
GA	98	100	100
LA	100	100	100
MISS	100	100	100
MO	100	100	100
N MEX	100	100	100
N C	100	100	100
OKLA	80	85	65
S C	100	100	100
TENN	100	100	100
TEX	92	93	89

14 STATES 96 96 94

THESE 14 STATES PRODUCED 99% OF THE 1988 COTTON CROP.

COTTON
% SQUARING

	1989	1988	AVG.
ALA	28	57	41
ARIZ	97	70	88
ARK	12	37	36
CALIF	50	10	36
GA	34	46	55
LA	36	28	38
MISS	22	46	43
MO	11	24	26
N MEX	50	30	25
N C	7	3	25
OKLA	10	5	1
S C	10	8	34
TENN	8	23	23
TEX	13	14	15

14 STATES 23 23 28

THESE 14 STATES PRODUCED 99% OF THE 1988 COTTON CROP.

SPRING WHEAT
% HEADED

	1989	1988	AVG.
IDAHO	10	24	13
MINN	6	81	26
MONT	0	24	7
N DAK	1	36	13
S DAK	33	62	36

5 STATES 7 46 18

THESE 5 STATES PRODUCED 87% OF THE 1988 SPRING WHEAT CROP.

SOYBEANS
% PLANTED

	1989	1988	AVG.
ALA	68	75	77
ARK	58	73	75
GA	75	79	82
ILL	97	100	98
IND	79	100	93
IOWA	100	100	97
KANS	70	85	75
KY	71	78	67
LA	69	73	85
MICH	85	96	95
MINN	99	99	97
MISS	50	72	77
MO	81	91	80
NEBR	100	99	94
N C	56	72	73
OHIO	41	100	98
S C	66	77	73
S DAK	100	100	92
TENN	68	80	74

19 STATES 81 92 89

THESE 19 STATES PRODUCED 95% OF THE 1988 SOYBEANS CROP.

WINTER WHEAT
% HEADED

	1989	1988	AVG.
ARK	100	100	100
CALIF	99	100	100
COLO	96	91	95
GA	100	100	100
IDAHO	60	52	40
ILL	100	100	100
IND	100	100	100
KANS	100	100	100
MICH	95	98	95
MO	100	100	100
MONT	18	81	47
NEBR	100	98	98
N MEX	100	100	NA
N C	100	100	NA
OHIO	99	99	98
OKLA	100	100	100
OREG	89	88	94
S DAK	90	100	87
TEX	100	100	100
WASH	95	78	80

20 STATES 94 96 NA

EXCL. STATES WITH NA 94 96 94

THESE 20 STATES PRODUCED 90% OF THE 1988 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

WINTER WHEAT
% HARVESTED

	1989	1988	AVG.
ARK	12	76	67
CALIF	45	35	45
COLO	0	0	0
GA	81	90	91
IDAHO	0	0	0
ILL	0	9	16
IND	0	3	2
KANS	0	15	15
MICH	0	0	0
MO	1	25	24
MONT	0	0	0
NEBR	0	0	0
N MEX	13	7	NA
N C	21	34	55
OHIO	0	0	0
OKLA	30	65	40
OREG	0	0	0
S DAK	0	0	0
TEX	40	45	49
WASH	0	0	0

20 STATES 10 22 NA

EXCL. STATES WITH NA 10 23 20

THESE 20 STATES PRODUCED 90% OF THE 1988 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

Crop Condition

PERCENT

FOR WEEK ENDING JUNE 18, 1989

CORN

STATE	VP	P	F	G	EX
COLO	0	2	21	67	10
GA	0	0	29	68	3
ILL	0	0	8	78	14
IND	1	3	41	52	3
IOWA	0	2	24	67	7
KANS	1	6	15	51	27
KY	0	2	13	72	13
MICH	3	7	25	50	15
MINN	1	6	40	50	3
MO	0	3	42	52	3
NEBR	0	6	73	21	0
N C	0	0	27	69	4
OHIO	3	13	41	40	3
PA	1	7	31	43	18
S DAK	0	4	46	49	1
TEX	5	12	13	45	25
WIS	0	2	16	71	11
17 STATE	1	4	32	55	8
PREV YEAR	2	14	47	34	3

SOYBEANS

STATE	VP	P	F	G	EX
ALA	0	0	5	90	5
ARK	0	9	65	26	0
GA	0	0	17	83	0
ILL	0	0	18	72	10
IND	1	5	42	49	3
IOWA	0	4	30	63	3
KANS	2	1	28	42	27
KY	0	3	22	70	5
LA	2	17	56	25	0
MICH	5	10	25	45	15
MINN	3	5	46	43	3
MISS	0	45	45	10	0
MO	0	6	39	53	2
NEBR	0	11	60	29	0
N C	0	0	24	74	2
OHIO	2	10	45	41	2
S C	0	0	30	70	0
S DAK	0	5	40	54	1
TENN	0	4	36	60	0
19 STATE	1	7	37	51	4
PREV YEAR	4	21	52	21	2

SPRING WHEAT

STATE	VP	P	F	G	EX
IDAHO	0	5	27	51	17
MINN	0	3	14	61	22
MONT	0	1	11	66	22
N DAK	0	0	11	86	3
S DAK	2	10	38	43	7
5 STATE	0	2	16	71	11
PREV YEAR	24	41	30	4	1

RICE

STATE	VP	P	F	G	EX
ARK	0	5	44	51	0
CALIF	0	0	10	80	10
LA	0	4	39	54	3
MISS	0	10	70	20	0
TEX	0	0	0	77	23
5 STATE	0	4	34	57	5
PREV YEAR	1	10	43	44	2

SORGHUM

STATE	VP	P	F	G	EX
ARK	0	2	67	31	0
ILL	0	0	20	75	5
KANS	1	6	26	47	20
LA	0	7	55	34	4
MISS	0	10	60	30	0
MO	0	7	46	44	3
NEBR	0	8	62	30	0
OKLA	0	8	10	80	2
S DAK	0	5	77	17	1
TENN	0	3	30	62	5
TEX	3	23	23	36	15
11 STATE	1	10	36	42	11
PREV YEAR	4	14	35	39	8

COTTON

STATE	VP	P	F	G	EX
ALA	0	0	60	40	0
ARIZ	0	0	0	50	50
ARK	0	21	78	1	0
CALIF	0	0	5	90	5
GA	0	0	21	78	1
LA	4	8	80	8	0
MISS	0	55	35	10	0
MO	8	25	26	33	8
N MEX	0	15	45	40	0
N C	0	0	54	43	3
OKLA	0	0	95	5	0
S C	0	0	59	41	0
TENN	4	11	62	23	0
TEX	1	18	57	23	1
14 STATE	1	16	50	30	3
PREV YEAR	2	13	33	48	4

WINTER WHEAT

STATE	VP	P	F	G	EX
ARK	0	12	46	42	0
CALIF	0	0	5	75	20
COLO	11	21	44	23	1
GA	1	32	43	24	0
IDAHO	0	7	24	55	14
ILL	0	0	6	68	26
IND	0	3	18	68	11
KANS	44	30	21	4	1
MICH	0	5	20	50	25
MO	0	7	37	56	0
MONT	1	7	24	56	12
NEB	20	35	42	3	0
N MEX	60	30	5	5	0
N C	1	6	47	46	0
OHIO	1	8	35	50	6
OKLA	10	25	62	3	0
OREG	0	0	34	50	16
S DAK	5	23	50	21	1
TEX	19	44	35	2	0
WASH	0	0	70	30	0
20 STATE	17	23	37	20	3
PREV YEAR	3	18	35	36	8

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

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service.

ALABAMA: Rainfall 2.00 in.; 5.00 to 10.00 in. local areas. Temperatures 5° below normal Tennessee Valley; 1 to 3° below normal elsewhere. Days suitable for fieldwork 1.4. Soil moisture 19% adequate, 81% surplus. Heavy rains caused flooding in low lying fields, pasture; caused delays in weed, insect control. Corn 75% silked, 57% 1988, 52% avg.; 1% fair, 76% good, 23% excellent. Sorghum 79% planted, 80% 1988, 80% avg.; 9% fair, 91% good. Cotton 28% squaring, 57% 1988, 41% avg.; 2% setting bolls, 4% 1988, 2% avg.; 60% fair, 40% good. Soybeans 68% planted, 75% 1988, 77% avg.; 5% fair, 90% good, 5% excellent. Peanuts 16% pegging, 20% 1988, 15% avg.; 53% good, 47% excellent. Winter wheat 66% harvested, 80% 1988, 71% avg. First hay 78% harvested, 96% 1988, 86% avg. Livestock, pastures good to excellent. Primary activities: Planting soybeans, sorghum, as weather permitted; controlling weeds, insects, diseases in row crops, vegetables; harvesting peaches, plums, blueberries, vegetable crops; maintaining equipment, machinery; general care of livestock, poultry, catfish.

ALASKA: Warmer temperatures with varying amounts of rainfall dominated. High 4° above normal to 2° below normal. Lows 5° below normal to 3° above normal. Seasonal precipitation 0.18 in. drier than normal Fairbanks to 1.38 in. wetter than normal Anchorage.

Days suitable for fieldwork 6.0. Topsoil 13% short, 87% adequate. Subsoil 2% short, 95% adequate, 3% surplus. Small grains in pre-boot stage of development; heights up to 8 in. Crop growth moderate to rapid. Potato heights just emerging up to 4 in., behind a year ago.

ARIZONA: Sunny, warmer temperatures prevailed. Scattered showers, thunderstorms northeast 12th; 0.08 in. Show Low, Holbrook. Clear south, west. Lower 80s, 14th high country; 100 to 117° lower deserts. Cold front 16th brought gusty winds. Sunny, hot weather continued 17th. Temperatures 1° to 9° above normal.

Cotton 97% squaring, 70% 1988, 88% avg.; 65% setting bolls, 13% 1988, 35% avg.; spraying for pink boll worms selected fields west, northwest; activities included irrigation, cultivation; 50% good, 50% excellent. Alfalfa harvest continued, good; hay, roughage adequate. Small grain combining 86% completed, 85% 1988, avg.; good. Grape, honeydew, watermelon, cantaloupe harvest continued west, central. Chipper potato harvest continued Queen Creek. Processing tomatoes harvested Yuma. Sweet corn, dry onion harvest nearing completion central. Dry onion harvest began, cabbage harvest continued east. Citrus harvest completed west. Grapefruit, valencia oranges picked central.

ARKANSAS: Unseasonably cold weather. Temperatures 4 to 9° below normal. Rainfall moderate to heavy. Extremes 45°; 90°. Rainfall 0.39 to 3.90 in.

Days suitable for fieldwork 2.0. Soil moisture 18% adequate, 82% surplus. Cotton 99% emerged, 99% 1988, 100% avg. Rice 99% emerged, 98% 1988, 98% avg. Soybeans 51% emerged, 54% 1988, 63% avg. Oats 13% harvested, 88% 1988, 63% avg.; 5% poor, 76% fair, 19% good. Corn 1% poor, 20% fair, 62% good, 17% excellent. Sorghum 96% emerged, 95%

1988. Main activities: Limited soybean planting, wheat harvest; ditching, draining cotton, soybean fields; rice weed control, flooding; applying herbicides, fertilizer; cutting, baling hay; fruit harvest. Crop growth moderate, flooding problems continue in certain areas. Seedling diseases becoming a problem in cotton. Lodging of wheat continues as harvest is delayed. Early varieties of peaches being harvested. Excess rain continues to slow hay cutting. Pastures making excellent growth. Livestock remained good.

CALIFORNIA: High pressure over State warmed temperatures to above normal first of week. Low pressure system out of Gulf of Alaska late week brought cooler temperatures, central State, some rainfall to scattered areas, mid to late week.

Clear weather, normal progress field activities. Small grain harvest full swing. Seeding second crop Sudan grass, corn, grain sorghum, dry beans. Cotton thinning, cultivation, insect, weed controls active. Rice progress good, continued weed control applications. Grain hay harvest nearly complete. Alfalfa, Sudan grass hay harvests active. San Joaquin Valley apricot harvest active, Tilton variety picked. Avocado picking steady. Avocado bloom light, 1990 crop, Ventura County. Coachella Valley table grape harvest continued, Exotic, Thompson seedless varieties. San Joaquin Valley grape growers treated vineyards for pests, mildew. Freestone peaches, plums, nectarines harvested, San Joaquin Valley. Lemon harvest progressed, San Joaquin Valley, southern coastal region. Valencia oranges harvested for export, San Joaquin Valley. Almond, walnut orchards treated for mite control. Broccoli Santa Maria Salinas-Watsonville area heavy, variable quality. Cauliflower remained in moderate supply, variable quality. Harvest of fresh market, processing tomatoes, progressed Coachella Valley. Tomato harvest continued Cutler-Orosi area. Volume light due to cool mornings, delayed maturity. Sweet corn harvest Coachella Valley virtually complete. Potato fields continued to mature Tullake-Butte Valley; harvest Kern-Tulare, Perris-Hemet continued. Celery supplies Salinas-Watsonville areas increased seasonally, generally good quality. Supplies Santa Maria moderate, quality variable. Cantaloupe fields treated for insects Kingsburg area, other locations thinned, weeded. Lettuce supplies Salinas, Santa Maria light, varying quality. Strawberries light, generally good quality. Bell peppers, onions, squash, green beans, cucumber harvests continued. Livestock good. Range, pastures valley dry, poor. Scattered rainfall north coast, northeastern interior kept feeding areas, water supplies good. Movement to summer ranges, supplemental feeding, continued active. Water low, Valley Foothill areas.

COLORADO: Dry weather dominated State, widespread showers, thundershowers on 13th on the Eastern Plains. Rainfall 0.10 to 0.20 in. Temperatures 2 to 4° below normal south, 5 to 7° above normal north.

Days suitable for fieldwork, 5.0. Soil moisture 6% very short, 35% short, 57% adequate, 2% surplus. First cutting of alfalfa 44% complete. Barley 43% headed, 12% turning color. Oats 43% headed, 6% turning color. Dry beans 80% planted,

35% emerged. Sorghum 65% planted, 46% emerged. Spring wheat 32% headed. Winter wheat 96% headed, 31% turning color. Livestock fair to good. Range, pastures improving, fair to good.

FLORIDA: Rain 2.00 to 3.00 in. west, north; 1.00 in. or less central, south. Greatest weekly total 8.69 in. Jay. Rain fell 2 to 6 days. Temperatures near to slightly below normal west, north; about 2° above normal elsewhere. Extremes 55° Perry; 101° Archbold.

Topsoil surplus Panhandle with water standing in fields, some flooding many areas; fieldwork limited. Peninsula topsoil short; summer showers few, light. Irrigated crops Peninsula good progress. Heavy rains promoted forage growth, Panhandle, pastures remained short most Peninsula areas because of limited rainfall. Grazing good to excellent Panhandle, poor to good, Peninsula, depending on moisture supplies. Cattle improved to good to excellent, Panhandle; vary more widely in Peninsula poor to excellent, most areas fair to good. Scattered rains citrus areas; more rain needed, irrigation continued. New fruit sizes variable. Regular bloom new fruit good progress. Valencia harvest slowed. Grapefruit movement almost over. Caretakers, cultivating, spraying, fertilizing. Heavy rains over some northern vegetables areas delayed harvests, reduced quality, yields, especially tomatoes, watermelons. Hot days, warm nights, scattered showers over major southern vegetable areas. Harvest active watermelons, sweet corn, peppers, eggplant, squash, tomatoes, cherry tomatoes. Lighter supplies snap beans, cucumbers, potatoes, celery, carrots. Commercial harvest finished for cabbage, radishes.

GEORGIA: Wet, stormy. Rain 3.00 to 5.00 in. common north, west. Heaviest 10.47 in. Chattooga county. Rain 4 to 6 days north, west, 2 to 4 days east. Temperatures 1 to 3° below normal north, west, 1 to 3° above normal southeast. Hottest temperature 96° Jesup. Blairsville coolest temperature 50°.

Days suitable for fieldwork 4.0. Soil moisture 13% short, 56% adequate, 31% surplus. Corn 70% silked, 58% 1988, 73% avg.; 24% dough, 20% 1988, 35% avg.; moisture plentiful at pollination stage. Cotton none setting bolls, 2% 1988, 8% avg.; cotton insects increasing. Sorghum grain 14% fair, 86% good; 84% planted, 85% 1988, 84% avg. Peanuts 8% fair, 79% good, 13% excellent; 52% blooming, 47% 1988, 60% avg.; 19% pegging, 9% 1988, 21% avg.; good rains throughout peanut belt. Soybean planting stopped by rain. Tobacco 30% fair, 70% good; Harvest beginning. Watermelons 20% fair, 80% good; harvesting early plantings. Wheat harvest stopped by late rains. Apples fair to good. Peaches declined, fair to good; 52% harvested, 46% 1988, 48% avg. Pastures good to excellent. Hay 11% fair, 79% good, 10% excellent; harvest stopped. Cattle, hogs good.

HAWAII: Mostly sunny with scattered showers. Active pest spraying, irrigation necessary to maintain crops. Temperatures high 60s to high 80s. Rainfall none to 5.00 in. Winds variable 5-25 mph.

Days suitable for fieldwork 7.0. Papaya production heavy. Sugar, pineapple harvesting continuous. Improved weather benefited watermelon, ginger production.

IDAHO: Temperatures 2 to 9° above normal. Precipitation below normal, except Panhandle areas which received over an inch of rain.

Days suitable for fieldwork 6.0. Soil moisture 3% very short, 16% short, 76% adequate, 5% surplus. Winter wheat good; 60% headed, 52% 1988,

40% avg. Spring wheat good; 10% headed, 24% 1988, 13% avg. Spring barley 10% headed, 21% 1988, 14% avg. Potatoes 88% emerged, 83% 1988, 78% avg. Sugarbeets 88% thinned, 86% 1988, 82% avg. First cut alfalfa hay 52% harvested, 52% 1988, 45% avg. Virtually all field corn emerged. Dry bean planting wrapping up, 75% emerged. Cherry harvest underway. Cattle movement to summer ranges continues. New calf branding, tagging wrapping up. Ranges drying rapidly. Rain needed to replenish lost soil moisture. Livestock good, excellent.

ILLINOIS: Temperatures 3 to 9° below normal, low 70s high to mid 50s low. Precipitation under 1.00 in. north, 1.00 in. or more south.

Days suitable for fieldwork 4.5. Soil moisture 36% short, 50% adequate, 14% surplus. Corn 21 in. high, 29 in. 1988, 28 in. avg.; most advanced 34 in., 40 in. 1988, 42 in. avg. Winter wheat 96% filled, 100% 1988, 98% avg.; 83% turning yellow, 94% 1988, 83% avg.; ripe 17%, 56% 1988, 46% avg. Alfalfa 1st crop cut 95%, 100% 1988, 94% avg.; 8% 2nd crop cut, 14% 1988, 12% avg.; 10% poor, 34% fair, 53% good, 3% excellent. Red clover 70% 1st crop cut, 86% 1988, 78% avg.; 4% poor, 19% fair, 72% good, 5% excellent. Oats 79% headed, 87% 1988, 84% avg.; 36% filled, 51% 1988, 53% avg.; 3% turning yellow, 13% 1988, 13% avg.; 7% fair, 75% good, 18% excellent. Pasture 1% poor, 18% fair, 66% good, 15% excellent.

INDIANA: Temperatures 4 to 8° below normal. Highs low to upper 70s, lows mid 50s to 60s. Precipitation moderate most areas, 0.10 to 1.50 in.

Days suitable for fieldwork 3.0. Topsoil 38% adequate, 62% surplus. Subsoil 2% short, 61% adequate, 37% surplus. Corn fair; 94% emerged, 100% 1988, 100% avg.; 15 in. high, 21 in. 1988, 23 in. avg. Soybean fair to good; 4 in. high, 6 in. 1988, 6 in. avg. Oats 17 in. high, 15 in. 1988, 20 in. avg. Alfalfa hay 72% cut, 100% 1988, 88% avg. Pasture 10% fair, 66% good, 24% excellent. Wheat 10% ripe, 33% 1988, 19% avg. Tobacco 65% set, 83% 1988, 80% avg. Planting intentions switched corn to soybeans due to wet conditions.

IOWA: Temperatures 5 to 8° below normal. Extremes 34°; 86°. Frost north on 15th. Rainfall light; none to 0.91 in.

Days suitable for fieldwork 5.8. Topsoil 51% short, 49% adequate; subsoil 92% short, 8% adequate. Oats 10% poor, 32% fair, 50% good, 8% excellent. Winter wheat fair to good. Hay 2% very poor, 16% poor, 59% fair, 21% good, 2% excellent. First crop alfalfa 90% harvested, 95% 1988, 79% avg. First crop clover hay 55% harvested, 71% 1988, 52% avg. Corn 85% cultivated first time, 95% 1988, 70% avg. Corn 16 in. high, tallest corn 24 in. Soybeans 50% cultivated first time, 69% 1988, 38% avg. Oats 85% headed, 90% 1988, 71% avg. Livestock good to excellent. Pasture 6% very poor, 24% poor, 52% fair, 16% good, 2% excellent.

KANSAS: Temperatures generally above normal 2° above southwest, 7 to 8° above southern areas, 4 to 6° above elsewhere. Thunderstorms covered most of State; rainfall light to moderate central, north, heavier in south. Northeast lightest 0.18 in., southeast heaviest 2.59 in.

Days suitable for fieldwork 3.5. Topsoil 21% short, 60% adequate, 19% surplus. Subsoil 53% short, 45% adequate, 2% surplus. Wheat ripening rapidly. Harvest delayed by wet fields, high moisture. Extensive test cutting southern areas, harvest expected to move rapidly as fields dry. Corn planting complete, most stands good growth

with adequate moisture, high temperatures. Sorghum planting good progress; some replanting necessary where stands washed out by heavy rains two weeks ago. Migration of greenbugs from wheat to sorghum underway, control measures not necessary yet. Soybeans planting good progress, some replanting where stands washed out by recent heavy rains. Emergence, growth generally good. Ranges, pastures greening up, furnishing more grazing, still below normal. First cutting alfalfa nearly over, second cutting getting started. Feed grains 22% short, 75% adequate, 3% surplus; range, pasture 52% short, 46% adequate, 2% surplus.

KENTUCKY: Cooler than normal, highs mid 70s to lower 80s. Above normal rainfall, 2.00 to 3.00 in. west, 1.00 to 4.00 in. east.

Days suitable for fieldwork 1.3. Soil moisture 30% adequate, 70% surplus. Corn 25 in. high, most advanced 36 in. Little field activity. Wheat harvest just starting. Tobacco good to excellent. Setting not complete. Small grain, hay harvests delayed by rain. Pastures good to excellent.

LOUISIANA: Temperatures 1 to 5° below normal. Extremes 55°; 93°. Rainfall 0.97 to 3.54 in.

Days suitable for fieldwork 1.9. Soil moisture 22% adequate, 78% surplus. Corn 58% silked, 57% 1988, 71% avg.; 13% dough stage, 12% 1988, 29% avg.; 1% mature, 2% 1988, 1% avg.; 30% fair, 57% good, 13% excellent. Cotton 100% emerged, 100% 1988, 100% avg.; 36% squaring, 28% 1988, 38% avg.; 4% very poor, 8% poor, 80% fair, 8% good. Wet ground causing serious weed control problems. Hay 65% first cutting, 81% 1988, 83% avg. Peaches 18% harvested, 27% 1988, 28% avg.; 18% poor, 53% fair, 29% good. Rice 100% emerged, 100% 1988, 100% avg.; 8% headed, 5% 1988, 7% avg.; 4% poor, 39% fair, 54% good, 3% excellent. Topdressing continues. Sorghum 94% planted, 97% 1988, 99% avg.; 92% emerged, 91% 1988, 97% avg.; 7% poor, 55% fair, 34% good, 4% excellent. Soybeans 69% planted, 73% 1988, 85% avg.; 63% emerged, 54% 1988, 75% avg.; 2% very poor, 17% poor, 56% fair, 25% good. Planting operations delayed due to persistent rains. Highly possible that some intended acreage may not be planted this season. Sugarcane 11% fair, 72% good, 17% excellent. Sweet potatoes 64% planted, 67% 1988, 82% avg.; 7% poor, 43% fair, 50% good. Wheat 81% harvested, 98% 1988, 92% avg. Vegetable 11% poor, 50% fair, 39% good. Pasture 12% fair, 84% good, 4% excellent. Livestock 5% fair, 93% good, 2% excellent.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 1.46 in. Temperature 71°, normal 71°. Extremes 43°; 92°.

Days suitable for fieldwork 2.9. Topsoil 53% adequate, 47% surplus. Subsoil 60% adequate, 40% surplus. Corn 95% planted, 98% 1988, 100% avg. Soybeans 56% planted, 72% 1988, 68% avg. Tobacco 67% transplanted, 90% 1988, 84% avg. Wheat, barley, oats, rye good. Wheat 86% turned color, 61% 1988, 86% avg. Barley 21% harvested, 36% 1988, 60% avg. Apples good, average fruit set. Peaches fair to good, below average fruit set.

DELAWARE: Precipitation 1.06 in. Temperature 72°, normal 72°. Extremes 51°; 90°.

Days suitable for fieldwork 3.0. Topsoil 29% adequate, 71% surplus. Subsoil 57% adequate, 43% surplus. Soybeans 71% planted, 67% 1988, 67% avg. Wheat, rye good. Barley fair to good. Barley 16% harvested, 41% 1988, 67% avg. Apples good, average fruit set. Peaches fair to good, below average fruit set.

MICHIGAN: Temperatures 5 to 7° below normal. Extremes 39°; 82°. Precipitation 0.12 to 2.20 in. across State.

Days suitable for fieldwork 2.5. Soil moisture 35% adequate, 65% surplus. Corn 3% very poor, 7% poor, 25% fair, 50% good, 15% excellent. Soybeans 85% planted, 96% 1988, 95% avg.; 5% very poor, 10% poor, 25% fair, 45% good, 15% excellent. Wheat 95% headed, 98% 1988, 95% avg.; 5% poor, 20% fair, 50% good, 25% excellent. Dry beans 25% planted, 45% 1988, 65% avg. Major activities: Limited soybean, dry bean planting; very little hay, asparagus harvest; replanting of corn, soybeans in some areas. Strawberry harvest has begun. Grapes in bloom in the southwest. Weather good for pollination.

MINNESOTA: Temperatures 2 to 6° below normal. Extremes 34°; 90°. Precipitation 0.37 to 1.71 in. Greatest weekly total 2.31 in.

Days suitable for fieldwork 5.1. Topsoil 22% very short, 29% short, 45% adequate, 4% surplus. Spring wheat 63% jointing, 98% 1988, 72% avg.; 6% heading, 81% 1988, 26% avg. Oats 75% jointing, 98% 1988, 80% avg.; 18% heading, 79% 1988, 40% avg. Barley 58% jointing, 98% 1988, 73% avg.; 2% heading, 69% 1988, 28% avg. Corn 65% cultivated, 94% 1988, 62% avg., 11 in. height, 23 in. 1988, 15 in. avg. Soybeans 91% emerged, 99% 1988, 93% avg., 39% cultivated, 80% 1988, 41% avg.; 4 in. height, 9 in. 1988, 5 in. avg. Sweet Corn 97% planted, 99% 1988, 93% avg. Alfalfa Hay 64% cut, 88% 1988, 69% avg. Soybean 3% very poor, 5% poor, 46% fair, 43% good, 3% excellent. Corn 1% very poor, 6% poor, 40% fair, 50% good, 3% excellent. Spring wheat none very poor, 3% poor, 14% fair, 61% good, 22% excellent.

MISSISSIPPI: Cool, wet. Temperatures 3° below normal. Extremes 52°; 92°. Rainfall 2.64 in., 1.82 in. above normal.

Days suitable for fieldwork 1.0, 6.5 1988, 4.9 avg. Soil moisture 15% adequate, 40% surplus, 45% excessive. Corn fair; 16% silking, 33% 1988, 37% avg. Cotton poor; 100% planted, 100% 1988, 100% avg.; 22% squaring, 46% 1988, 43% avg. Hay 26% harvested, 39% 1988, 38% avg. Rice fair; 98% planted, 100% 1988, 100% avg. Sorghum fair; 90% planted, 98% 1988, 97% avg. Soybeans poor to fair, 50% planted, 72% 1988, 77% avg. Sweet potatoes 84% planted, 91% 1988, 86% avg. Wheat fair; 27% harvested, 85% 1988, 74% avg. Peaches fair; 28% harvested, 21% 1988, 24% avg. Pastures, livestock good. Activities: Shopwork due to rain delay.

MISSOURI: Temperatures 6 to 10° below normal. Rainfall varied, less than 0.50 in. west, northeast to over 4.00 in. southeast, most areas 1.00 to 2.00 in.

Days suitable for fieldwork 3.6. Topsoil 17% short, 66% adequate, 17% surplus. Southeast surplus moisture. Subsoil 54% short, 39% adequate, 7% surplus. Alfalfa hay first cutting 94%, 99% 1988, 91% avg. Alfalfa hay 8% second cutting, 15% 1988, 15% avg. Other hay 56% harvested, 76% 1988, 58% avg. Pasture 7% poor, 35% fair, 56% good, 2% excellent. Livestock water 12% critical short, 18% short, 70% adequate.

MONTANA: Rain over entire State, 0.50 in. or less. Temperatures 3 to 4° above normal west, southwest; 1 to 3° below in east.

Days suitable for fieldwork 5.3. Topsoil 10% short, 87% adequate, 3% surplus. Subsoil 17% short, 82% adequate, 1% surplus. Barley 2% poor, 12% fair, 59% good, 27% excellent. Barley boot 20%, 58% 1988, 27% avg., 1% headed. Oats 1% poor, 12% fair, 65% good, 22% excellent. Oats boot 18%, 65% 1988, 29% avg. Pasture, range feed 1% very poor, 3% poor, 17% fair, 53% good, 26% excellent. First cutting alfalfa 8% cut, 33% 1988, 14% avg. Other hay 6% cut, 12% 1988, 7% avg.

NEBRASKA: Temperatures 1° below normal west to 8° below normal east. Extremes 33°; 100°. Precipitation 0.33 to 0.75 in. east, only a few hundredths elsewhere.

Days suitable for fieldwork 6.5. Topsoil 85% short, 15% adequate. Subsoil 88% short, 12% adequate. Winter wheat 45% turning, 49% 1988, 44% avg.; 3% ripe, 5% 1988, 6% avg. Moderate to severe damage in Panhandle from storm. Many producers cutting wheat for hay. Soybeans 99% emerged, 96% 1988, 85% avg. Sorghum 94% emerged, 95% 1988, 84% avg. Alfalfa hay 5% very poor, 30% poor, 56% fair, 9% good. 80% first cutting, 89% 1988, 81% avg. Some growers cutting first crop just to stimulate second growth. Pasture, range feed supplies 84% short, 16% adequate. Light frost midweek from northeast through the central section to the southwest. Low lying corn, soybeans affected most, growth may be set back. Full extend of damage not yet evident, most affected crops expected to recover. Growth of spring crops slow, uneven. Chinch bugs moving from wheat, oat fields to corn, sorghum fields, causing severe damage in Southeast. Main activities: Cultivating, spraying; cutting hay; irrigating; side-dress fertilizing.

NEVADA: High pressure ridge ended wet weather of early June. Weak storm front midweek brought wind, cooler weather, insignificant precipitation. Most areas dry throughout period. Temperatures 3 to 9° above seasonal normals. Extremes 31°; 112°. Alfalfa hay harvest accelerated by dry weather, above normal temperatures. Pastures, ranges continued to improve slightly.

NEW ENGLAND: Precipitation less than 0.75 in. northern Maine, northern New Hampshire, 1.00 to 2.00 in. remainder, 2.00 to 2.50 in. localized areas in Connecticut, Massachusetts. Temperatures 4° to 7° below normal.

Days suitable for fieldwork 3.0. Fieldwork progress 9.5 days behind. Soil moisture 10% adequate, 90% surplus. Grazing availability 60% adequate, 40% surplus. Maine potatoes 100% planted, 100% 1988, 100% avg.; 56% emerged, 85% 1988, 64% avg.; fair to good. Connecticut River Valley potatoes 100% planted, 100% 1988, 100% avg.; 97% emerged, 100% 1988, 97% avg.; fair. Rhode Island potatoes 100% emerged, 100% 1988, 100% avg.; fair to good. Maine oats 100% sown, 100% 1988, 100% avg.; good. Field corn 85% planted, 96% 1988, 93% avg.; 73% emerged, 90% 1988, 84% avg.; fair to good. Sweet corn 88% planted, 90% 1988, 88% avg.; 77% emerged, 81% 1988, 79% avg.; fair to good. First crop hay 15% cut, 76% 1988, 52% avg.; good. Shade tobacco 95% transplanted; fair to good. Outdoor tobacco 75% transplanted; poor to fair. Apple set average; scab infection average. Strawberries 20% harvested south; average set. Blueberries average. Cranberries early bloom stage; 10% open blossoms. Major farm activities: Planting, some haying, cultivating, spraying, strawberry harvest beginning.

NEW JERSEY: Temperatures below normal north, normal central, south. Extremes 46°; 89°. Rainfall 1.87 in. north, 1.52 in. central, 1.50 in. south. Heaviest 24-hour total 1.08 in. 12th, 13th. Estimated soil moisture percent field capacity averaged 98% north, 93% central, 86% south. Four inch soil temperatures averaged 65° north, 69° central, 71° south.

Rainy weather continued to cause problems for farmers. Soil moisture remained ample to excessive. Peach, apple, strawberries fair. Strawberry season cut short due to excess moisture. Root rot, bacterial spots on

vegetables. Many field intended for field corn switched to soybeans. Hay cutting behind schedule. Large heads for wheat, rye. Pasture growth good.

NEW MEXICO: Temperatures a few degrees below normal plains area; above normal elsewhere.

Days suitable for fieldwork 6.9. Soil moisture 87% short, 13% adequate. Wheat harvest underway, estimated 13% complete; 60% very poor, 30% poor, 5% fair, 5% good. Cotton squaring 50%, 25% avg.; 15% poor, 45% fair, 40% good. Cattle 35% poor, 47% fair, 12% good, 6% excellent. Sheep 25% poor, 50% fair, 17% good, 8% excellent. Ranges, pastures 18% very poor, 70% poor, 6% fair, 6% good.

NEW YORK: Wet weather continued, 1.00 to 2.00 in. of rain with a few places up to 2.50 in. Rainfall lightest from Northern Adirondacks into the Champlain Valley. Heavy clouds held temperatures below normal. Most places failed to get above 80°.

Days suitable for fieldwork 2.0. Soil moisture surplus to excessive. Pasture, hay, wheat good. Corn 77% planted, 100% 1988, 100% avg. Alfalfa 20% harvested, 57% 1988, 40% avg. Clover-timothy 12% harvested, 43% 1988, 25% avg. Grass Silage 17% harvested, 61% 1988, 43% avg. Lake Ontario region apples good, sizing well. Tart cherries good. Rainfall has provided numerous infection periods for grape diseases. The Finger Lakes Region reported widespread black rot, powder mildew. Vegetable planting continued slow. Crops in Ontario County look good. Wetness on Long Island increased root diseases. Sweet corn planting continued as weather permitted. Orange County crop two to three weeks late.

NORTH CAROLINA: Temperatures 4° below to 2° above normal across State. Extremes 40°; 95°. Precipitation none to 4.30 in.

Days suitable for fieldwork 4.3. Soil moisture 6% short, 68% adequate, 26% surplus. Pasture 1% poor, 10% fair, 76% good, 13% excellent. Livestock feed from pasture 83%. Burley transplanted 94%, 97% 1988, 91% avg. Field tobacco 1% poor, 31% fair, 67% good, 1% excellent. Irish potato 13% fair, 84% good, 3% excellent. Sweet potatoes 76% transplanted, 88% 1988, 85% avg. Sweet potato 23% fair, 77% good. Peaches 3% poor, 45% fair, 52% good. Apple fair to good. Truck crops 2% poor, 35% fair, 63% good. Sorghum 70% planted, 89% 1988, 81% avg. Peanut 32% fair, 65% good, 3% excellent. Hay 1% very poor, 1% poor, 19% fair, 70% good, 9% excellent. First cutting 80% complete, second cutting 17% complete. Hay, roughage 86% adequate, 14% surplus. Harvesting completed: peaches 15%, 15% 1988, 15% avg.; wheat 21%, 34% 1988, 55% avg.; oats 31%, 49% 1988, 63% avg.; barley 41%, 63% 1988, 70% avg.; rye 29%, 38% 1988, 52% avg.. Major activities: Planting soybeans, cultivating tobacco, harvesting small grains, cutting hay. Other activities: spraying crops; planting sweet potatoes, vegetables, sorghum; harvesting peaches, blueberries, cabbage; tending livestock; general farm maintenance. Continued wet weather has slowed planting progress, hay cutting, small grain harvest, tobacco cultivation.

NORTH DAKOTA: Temperatures 1° above northwest, 3° below central, eastern one-third. Extremes 32° southwest; 91° south central. Precipitation 1.27 in. north central, 1.26 in. northeast, 2 to 3 in.; remaining sections 0.43 to 0.72 in. of rain.

Days suitable for fieldwork 5.9. Topsoil near average, 5% very short, 33% short, 62% adequate; subsoil below average 7%, 76%, 17%. Spring wheat 11% fair, 86% good, 3% excellent; barley 8%, 88%, 4%; durum wheat 12% fair, 88% good; oats 19%, 81%;

corn 20%, 80%; flax 30%, 70%; sunflower 23%, 77%; soybeans 24%, 76%; dry edible beans 2% poor, 11% fair, 87% good; potatoes 100% good. Spring wheat 54% jointing and beyond, 13% boot and beyond; durum 38%, 5%; oats 50%, 12%; barley 59%, 15%. Pasture improved, 12% poor, 50% fair, 38% good, furnished 98% roughage requirements.

OHIO: High temperatures low to mid 70s, 6 to 8° below normal. Low temperatures upper 50s, near to slightly above normal. Rainfall at least 0.86 in. all regions; up to 3.37 in. northeast. Growing degree days accumulated less than 120 except in some southern areas.

Days suitable for fieldwork 1.5. Soil moisture 14% adequate, 86% surplus. Corn planting complete; soybeans, government programs, insurance will compensate for intended acres not planted in corn. Emerged corn fair to good, with some infestations of insects, slugs. Soybeans fair to good, with some damage by bean leaf beetles. Winter wheat fair to good, affected by disease, fungi. Oats heading continued; stands fair to good. First crop hay greatly reduced by damp weather, alfalfa weevils. Potato, tomato planting progressing. Strawberry harvest delayed by rain. Livestock restricted from soggy pastures; rain prevented planting of feed crops.

OKLAHOMA: Temperatures 9° below normal north central to 5° below normal northeast. Precipitation 0.42 in. north central to 3.05 in. central.

Days suitable for fieldwork 1.8. Topsoil 20% adequate, 80% surplus. Subsoil 3% short, 97% adequate. Wheat 10% very poor, 25% poor, 62% fair, 3% good; 100% heading, 100% 1988, 100% avg.; 30% harvested, 65% 1988, 40% avg. Cotton 95% fair, 5% good; 80% planted, 80% 1988, 85% avg.; 10% squaring, 5% 1988, 1% avg. Sorghum 8% poor, 10% fair, 80% good, 2% excellent; 55% planted, 65% 1988, 70% avg. Soybeans 70% planted, 70% 1988, 75% avg. Peanuts 80% planted, 80% 1988, 85% avg. Corn 10% tasseling, 10% 1988, 15% avg. Pastures good. Cattle good; marketings stable, prices up from preceding week.

OREGON: Temperatures slightly below normal west, slightly above normal east. Rainfall Statewide, 0.30 to 0.40 in. west, 1.70 in. high plateau area, 0.75 to 1.00 in. northeast mountain locations, 0.20 to 0.30 in. rest of east.

Soil moisture 37% short, 63% adequate. Winter wheat, other grains fair to good west, fair to excellent east but need rain in north central areas. Russian wheat aphid still present Wasco, Baker, Sherman Counties. Spring grain planting completed, none headed yet Klamath County. Weekend rains helped heat-stressed grains Union County. Winter wheat turning color, forming grain kernels, need more moisture Willamette Valley. Shallow spots showing up in grain from heat, wind Wasco County. Crimson clover seed fields swathed; awaiting better weather for harvest Washington County. First cutting alfalfa, other hay underway, complete most areas. Grass seed swathing of early varieties expected next week with rust in some perennial rye grass fields Willamette Valley. Grass seed receiving final irrigation Jefferson County. Strawberry harvest continued west. Berry size small Washington County. Good crop, labor shortage Benton County. Harvest of Royal Anne cherries started 13th; bing cherries to start 20th Wasco County. Crop looks good. Light rain 14th improved fruit sizes, no splitting. Cherries yellowing, harvest predicted in 2 to 3 weeks, cherry fruit fly emerged Lane County. Cherry cracking from rain Douglas County. Raspberry harvest expected 2 to 3 weeks west. Cranberry bloom development 20 to 40 percent Coos

County. Fruit thinning underway, cover spray being applied Hood River County. Good growing weather for vegetables west except cool weather slowing growth of snap beans, sweet corn Washington County. Green peas, snap beans in flower, still planting Willamette Valley. Weed problems without dinoseb Benton County. Carrots bolting in Jefferson County. Potatoes doing well, 7 to 10 days behind last year in growth Klamath County. Hail damage to onions south of Nyssa. Filbert worm moth emerged Willamette Valley. Range, pasture good to excellent east, fair to good west. Could use rain to guarantee forage year Grant County; shallow areas browning quickly Wasco County; drying out Morrow County. Livestock good to excellent east with cattle recovering from hard winter Lake County. Livestock fair to good northwest; excellent in Benton, Lincoln Counties.

PENNSYLVANIA: Low pressure system stalled across State. Below normal temperatures, excessive rainfall were its result. Temperature 2°, 64° below normal. Extremes 33°, 86°. Precipitation 2.25 in., 1.35 in. above normal.

Days suitable for fieldwork 1.0. Soil moisture none short, 20% adequate, 80% surplus. Corn 83% planted, 97% 1988, 98% avg.; 6 in high, 9 in. 1988, 11 in. avg.; 1% very poor, 7% poor, 31% fair, 43% good, 18% excellent. Tobacco 40% transplanted, 72% 1988, 82% avg. Soybeans 49% planted, 84% 1988, 83% avg.; 1% very poor, 6% poor, 29% fair, 45% good, 19% excellent. Barley 40% heading or headed, 53% 1988; 57% turning yellow, 36% 1988; 3% ripe, 9% 1988; none harvested, 2% 1988. Wheat 91% heading or headed, 87% 1988; 9% turning yellow, 13% 1988; 3% poor, 19% fair, 53% good, 25% excellent. Oats 2% boot, none 1988; 98% heading or headed, 96% 1988; none turning yellow, 4% 1988; 1% very poor, 8% poor, 22% fair, 49% good, 20% excellent. First cutting alfalfa 37% complete, 78% 1988. Second cutting alfalfa none complete, 5% 1988. First cutting clover-timothy 22% complete, 64% 1988. Hay stands poor. Feed from pastures above average to average. Activities: Spring plowing; planting corn, soybeans, potatoes, other vegetables; transplanting tobacco; harvesting hay, haylage, strawberries, vegetables; weed control; fence work; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

PUERTO RICO: Rainfall 0.30 in. was 1.02 in. below normal. Highest weekly rainfall 1.15 in. Maricao, 1.03 in. Rio Piedras Aes, 1.00 in. Rio Blanco Lower. Highest 24-hour total 1.03 in. Rio Piedras Aes. Mean temperatures 82° plus/minus none rainfall 0.01 minus 1.04. Divisional temperatures about 78 to 82° on coast, 76° Interior. Extremes 60°; 94°.

SOUTH CAROLINA: Rainfall 1.00 to 3.00 in. over State. Temperatures 1 to 2° above normal.

Days suitable for fieldwork 4.7. Soil moisture 36% short, 62% adequate, 2% surplus. Cotton 59% fair, 41% good; 10% squaring, 8% 1988, 34% avg. Soybeans 30% fair, 70% good; 66% planted, 77% 1988, 73% avg. Corn good. Tobacco fair to good; 9% topped, 10% 1988, 15% avg. Peanuts fair to good. Sorghum good; 42% planted, 61% 1988, 72% avg. Sweet potatoes fair to good; 71% planted, 71% 1988, 76% avg. Watermelons fair to good. Cucumbers, snap beans, fair to good; tomatoes good; 14% planted, 5% 1988, 21% avg. Peaches fair to good; 18% harvested, 20% 1988, 20% avg. Wheat good; 98% ripe, 96% 1988, 97% avg.; 64% harvested, 72% 1988, 73% avg. Oats good; 93% ripe, 93% 1988, 95% avg.; 53% harvested, 71% 1988, 73% avg. Grain hay good; 90% harvested, 92% 1988, 94% avg. Pastures good.

SOUTH DAKOTA: Temperatures 2° above to 7° below normal. Extremes 30°; 104°. Precipitation scattered. Rainfall up to 1.50 in. Growing season precipitation 0.31 in. above to 4.89 in. below normal.

Small grain deteriorating, fair. Row crop good to fair, making little progress. Spraying, cultivating, hay harvest, moving cattle are the major activities.

TENNESSEE: Warm, humid. Cold fronts brought abundant rainfall to State. Temperatures below normal Statewide. Precipitation 3.00 in. above normal Statewide.

Days suitable for fieldwork 0.7. Soil moisture 14% adequate, 86% surplus. Corn 4% tasseling, 6% 1988, 12% avg.; 3% poor, 14% fair, 70% good, 13% excellent. Tobacco 86% transplanted, 95% 1988, 92% avg. Wheat 100% turning color, 100% 1988, 100% avg.; 1% very poor, 11% poor, 45% fair, 41% good, 2% excellent. Hay 3% poor, 20% fair, 68% good, 9% excellent. Little fieldwork possible in soaked fields. Pastures, cattle good.

TEXAS: Slow passage of cold front across State, unusual for time of year, brought more soaking rains first half week. North, central under various flood watches, warnings. Very dry air replaced wet, nighttime temperatures drop rapidly. Some record lows. Temperatures below normal. Rainfall above normal except below southern High Plains, the Trans-Pecos, dry Lower Rio Grande Valley.

Crops: Small grain harvest about two-thirds completed Blacklands when rain arrived. Isolated heavy rains may wipe out some remaining fields. Producers begin harvesting High Plains as dry. Remaining fields Plains not expected to yield well. Corn High Plains wind, hail damage; recent rain allowed most fields show good progress. Rain boosted conditions Blacklands, central, many fields dough stage. Fields suffered through dry spring Coastal Bend, Valley, poor. Poorer fields cut for silage, hay. Fields Upper Coast decline. Fields maturing. Corn 60% silked, 60% 1988, 59% avg.; 32% doughing, 28% 1988, 36% avg.; 4% dented, 4% 1988, 11% avg. Grain sorghum planting slow progress through midweek Plains. Last weeks moisture help planted fields. Blacklands, central fields heading. Hot, dry conditions increased maturing Coastal Bend, harvesting beginning. Dry Coastal Bend, Upper Coast caused some lodging. Grain sorghum 41% headed, 47% 1988, 48% avg.; 25% turning color, 17% 1988, 23% avg.; 1% mature, 4% 1988, 5% avg. Cotton planting slow Plains. Cooler temperatures slowed progress planted fields. Heavy rains parts Blacklands caused some square shedding. Fields Trans-Pecos near blooming. Rainfall Coastal Bend, Valley still help fields as set bolls. Cotton setting bolls 8%, 10% 1988, 8% avg. Rice fields good progress, fields beginning to head. Some spraying. Rice 5% headed, 8%, 7% avg. Peanut planting increase south, central with additional moisture. Planting delayed Cross Timbers. Isolated heavy rains caused some damage. Most stands look good. Soybean planting slowed Plains. Hail damage occurred. Upper Coast early varieties good progress. Most late variety planting winding down. Conditions drying quickly. Other field crops: Oats 56% harvested, 71% 1988, 61% avg. Peanuts 63% planted, 66% 1988, 63% avg. Soybeans 77% planted, 79% 1988, 72% avg. Sunflowers 55% planted, 35% 1988, 61% avg.

Commercial Vegetables: Rio Grande Valley, melons, cucumbers, tomatoes harvested; rain slowed activities some. Citrus groves good. San Antonio-Winter Garden, limited onion, watermelon harvest. East Texas, wet conditions slowed

harvest. Disease problems continued to show up. High Plains, damage to onions, potatoes occurred past couple of weeks. Onion harvest begin soon. Trans-Pecos, cabbage harvest continued. Onion harvest beginning. Peaches received some light hail, wind damage Hill Country. Harvest increasing, sizes somewhat smaller. Picking slowed by rain. Pecans benefitted from recent rain, some nut drop started. Producers expecting small native crop. Most first generation casebearer spraying completed.

Range and Livestock: Rainfall most State improved most ranges, pastures. Some hay that on ground, not baled may be lost. Haying operations slowed. Livestock conditions declined drier areas. Forced sales, because lack of grazing, continued parts Valley, south.

UTAH: Precipitation light. Temperatures 3 to 4° above normal.

Days suitable for fieldwork 6.5. Soil moisture 83% short, 17% adequate. Winter wheat 90% headed, 87% 1988, 83% avg.; 10% turning color, 17% 1988, 16% avg. Spring wheat 76% booted, 83% 1988, 70% avg., 32% headed, 35% 1988, 43% avg. Barley 71% booted, 90% 1988, 80% avg. Oats 71% jointed, 84% 1988, 69% avg.; 39% booted, 55% 1988, 48% avg.; 16% headed, 21% 1988, 19% avg. Corn 12 in. high, 14 in. 1988, 9 in. avg. Alfalfa 1st cutting 64% complete, 55% 1988, 57% avg. Other hay cutting underway. Livestock moved to summer range 93% cattle, 96% sheep. Range pastures dry. Livestock good. Major farm activities: Irrigating, harvesting hay, cultivating corn, spraying weeds, small grains, spraying weevil in alfalfa, moving livestock.

VIRGINIA: Above normal rainfall with normal temperatures. Rainfall 0.60 to 2.80 in. with some damaging winds, hail. Temperatures upper 60s to middle 70s.

Days suitable for fieldwork 2.7. Topsoil 51% adequate, 49% surplus. Corn 97% planted, 96% 1988, 97% avg.; 28% fair, 63% good, 9% excellent. Soybeans 53% planted, 52% 1988, 55% avg.; 14% fair, 64% good, 22% excellent. Flue-cured tobacco transplanting nearly complete. Burley tobacco 93% transplanted, 94% 1988, 72% avg. Fire-cured tobacco 87% transplanted, 83% 1988, 93% avg.; 20% fair, 68% good, 12% excellent. Pastures 4% fair, 45% good, 51% excellent. Alfalfa 20% fair, 44% good, 36% excellent. Other hay 6% poor, 7% fair, 45% good, 42% excellent. Barley harvest 24% complete, some lodging. Wheat harvest 6% complete, oat harvest started.

WASHINGTON: Temperatures 12° above normal to 3° below normal, east; 8° above normal to 1° below normal, west. Precipitation none to 0.53 in., east; 0.01 to 0.38 in., west.

Days suitable for fieldwork, 6.8. Soil moisture 25% short, 70% adequate, 5% surplus. Range, pasture 25% short, 75% adequate. Hay, other roughage 19% short, 80% adequate, 1% surplus. Small grains are heading out faster than normal. Winter wheat 95% headed, 78% 1988, 80% avg. Spring wheat 70% headed, 60% 1988, 55% avg. Barley 80% headed, 69% 1988, 59% avg. First cutting of alfalfa hay 94% complete. Second cutting started, 2% complete. Planting of dry beans completed. Green pea planting was completed, harvest 3% complete. Major activities: Apple thinning, spraying for codling moths, harvesting cherries, strawberries, weeding vegetables, harvesting spinach, lettuce, radishes, asparagus. Pastures good, although a portion in central part of State is dry.

(Continue to back cover)

International Weather and Crop Summary

June 11-17, 1989

HIGHLIGHTS

USSR ... In Western USSR, widespread showers and thunderstorms spread across most crop areas west of the Volga River. Isolated storms occur to the east. In the New Lands, mostly light showers help vegetative spring wheat. Warm weather prevails in the northwest.

EUROPE ... Widespread rain covers eastern crop areas. Dryness returns to the northwest.

SOUTH ASIA ... Variable, widespread showers improve conditions for planting and establishment over most summer crop regions.

EASTERN ASIA ... Beneficial rain continues in Manchuria. Remnants of Typhoon Dot cause heavy rain and localized flooding in the south.

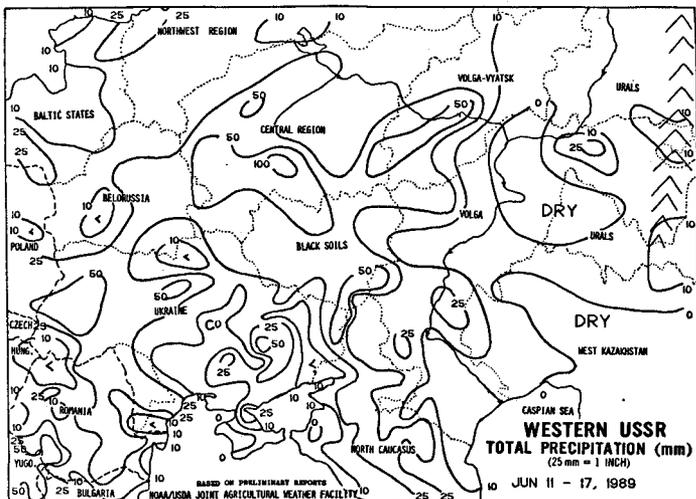
SOUTHEAST ASIA ... Showers and seasonable temperatures benefit vegetative Thai grains.

SOUTH AMERICA ... In south-central Brazil, lingering showers help Parana's wheat growth, but dry weather continues in the south. Dry weather in Argentina promotes early wheat plantings.

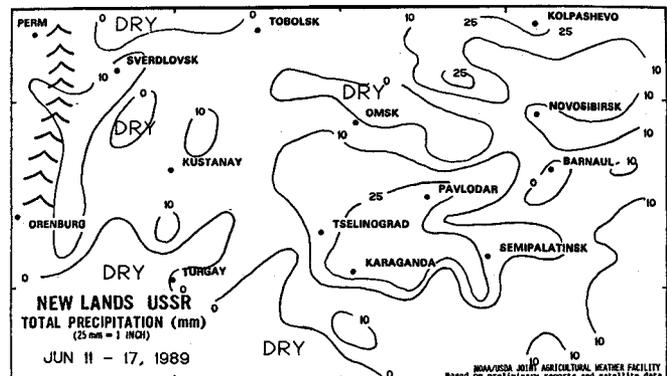
AUSTRALIA ... Moderate to heavy rain returns to southeastern crop areas. Heavy rain covers western winter grains.

CANADA ... Much needed showers cover the southeastern Prairies, benefiting early crop growth.

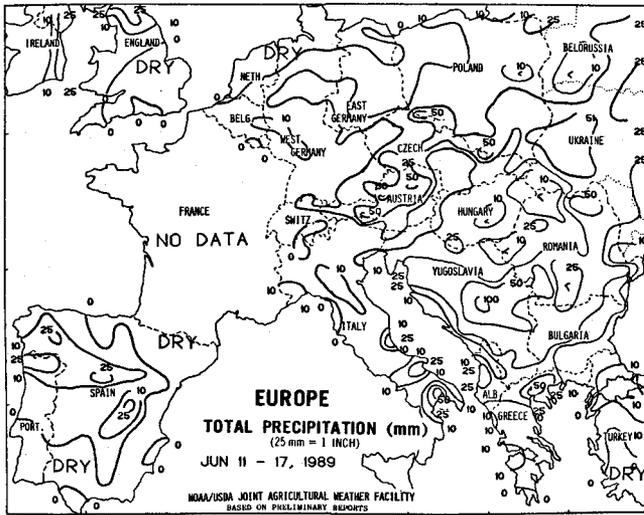
MEXICO ... Beneficial rain helps crop plantings in the Southern Plateau and the northeast. Hot, dry weather maintains high irrigation demands in the northwest.



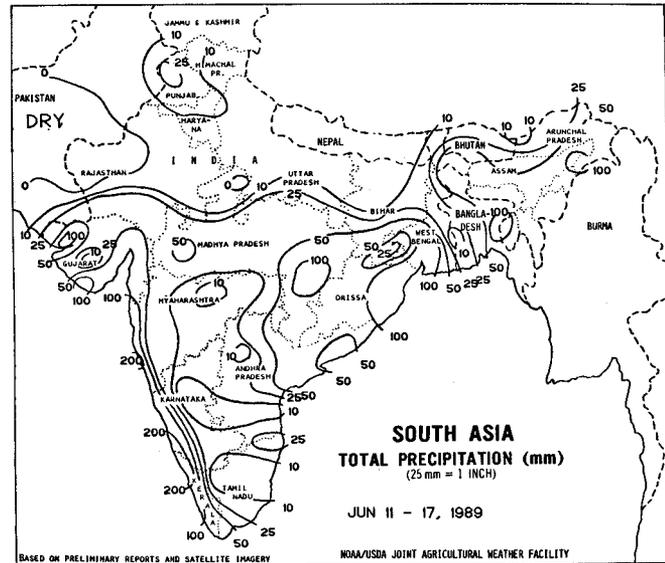
USSR ... In Western USSR, widespread showers and thunderstorms continued in the west and spread across most crop areas to the Volga Valley where mostly dry weather prevailed to the east of the Volga River. Weekly rainfall averaged 25-50mm or more in the western Ukraine, eastern Belorussia, the Black Soils Region, much of the Central Region, the southern Volga Vyatsk, and spotty areas of the eastern Ukraine, the North Caucasus, and the lower Volga. Isolated thunderstorms also produced rainfall in excess of 25mm in scattered areas of the Volga Vyatsk Region. Gusty winds accompanied thunderstorm activity throughout the region. The unsettled weather brought relief from stress conditions on reproductive grains. Weekly temperatures averaged 3-4 degrees Celsius (C) above normal in the southern Urals and Volga Region, but below-average temperatures prevailed in the west.



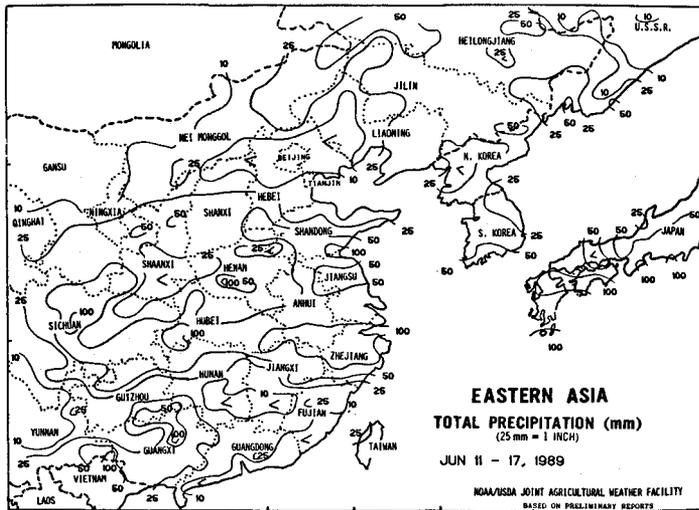
In the New Lands, light showers (less than 10mm) fell over most of the spring grain region. More substantial showers (10-44mm) fell in an area to the south of Omsk from Tselinograd and Karaganda in the west to Pavlodar and Semipalatinsk in the east. The moisture benefited early vegetative growth of spring grains. Spotty dryness prevailed in the northern Urals and along a narrow southern portion of West Siberia to the north of Omsk. Weekly temperatures averaged 3-4 degrees C above normal in the northern Urals, and about 2 degrees C below normal in the eastern part of West Siberia. Near-normal temperatures generally prevailed in Kazakhstan.



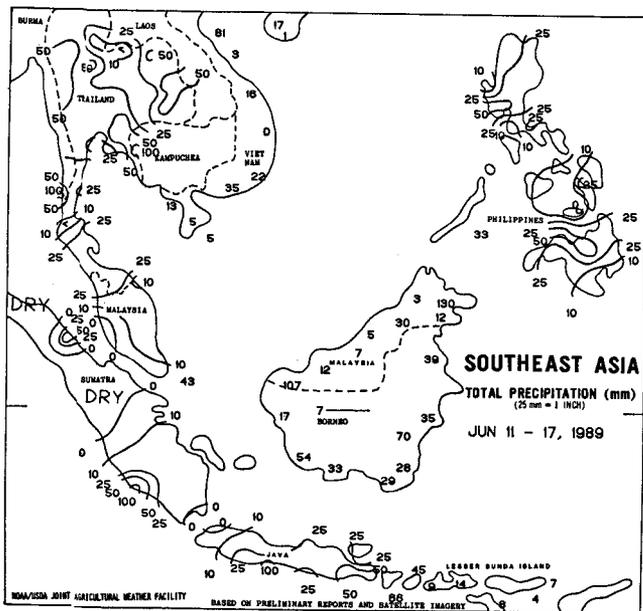
EUROPE ... Widespread rain (10-50mm, with isolated amounts in excess of 80mm) covered much of eastern Europe, benefiting spring planted crops and reproductive winter grains in the northeast but delaying early winter grain harvest in the southeast. Mostly dry weather returned to sections of England, France, the Low Countries, and northern West and East Germany. Winter grains in the northwest were mostly reproductive to filling. In the southwest, scattered showers (5-20mm, with isolated amounts in excess of 50mm) caused mostly minor delays in the winter grain harvest. Below-normal rainfall since early May in sections of southern France and northern Italy has led to unfavorably low soil moisture levels for spring planted crops. Mean temperatures over the region were above normal in western crop areas and below normal in the east.



SOUTH ASIA ... Variable, widespread showers continued across central and southern India, improving moisture reserves for summer crop planting and establishment. Rainfall tapered off from the previous week over crop areas of Karnataka and western Tamil Nadu, but moderate showers (25-50mm or more) covered large portions of Andhra Pradesh and western Orissa that had been dry for much of the early planting period. Variable showers (25-100mm or more) continued for the second week across Gujarat and Madhya Pradesh, improving conditions for planting which usually begins in July. Light to moderate rain (2-32mm) fell from northern Pakistan to northern Bihar, boosting irrigation reserves. In the east, heavy rain (50-100mm or more) covered a large area from southern Bihar and eastern Orissa eastward through Assam, increasing irrigation reserves for rice planting and establishment. Planting of the primary rice crop in eastern India and Bangladesh usually runs from June to August.

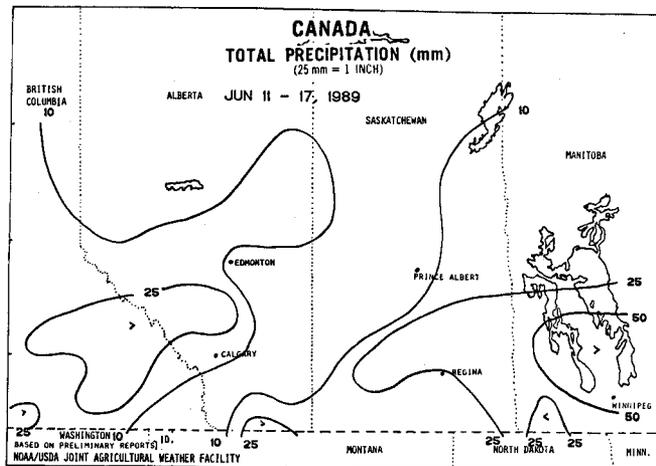


EASTERN ASIA ... Widespread, moderate to heavy rain (15-50mm, with isolated amounts in excess of 50mm) continued for the second consecutive week across crop areas of Heilongjiang, Jilin, and Liaoning, benefiting vegetative summer crops. Moderate to heavy rain (15-75mm, with scattered amounts greater than 75mm) also covered crop areas of northwestern China, the Korean Peninsula, and Japan. In the south, remnants of Typhoon Dot brought heavy rain (50-169mm) and localized flooding to sections of Guangxi, Yunnan, and Guizhou early in the week, while crop areas in neighboring Guangdong and Fujian remained unseasonably dry for the second consecutive week. In central China, heavy seasonal rains (25-100mm) continued to favor summer crops but caused winter grain harvest delays. Mean temperatures were below normal in the north and above normal in the south.

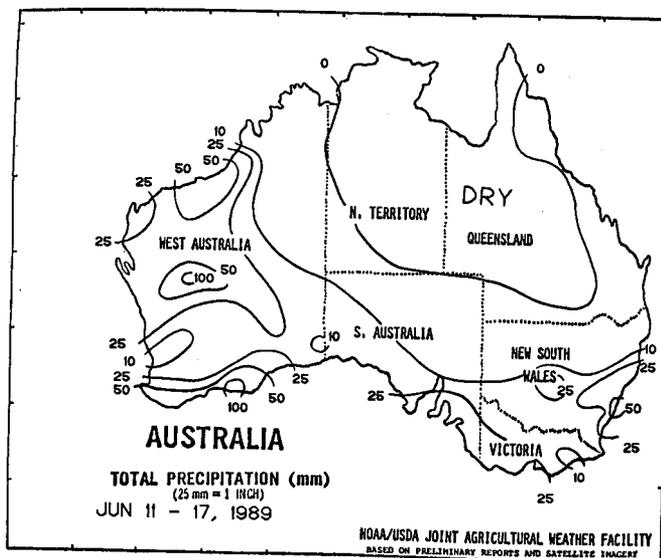


SOUTHEAST ASIA ... Widespread, light to moderate showers (25-50mm) continued across most Thai grain regions, including south-central rice areas near Bangkok, maintaining generally favorable growing conditions for recently planted corn and rice. Rainfall tapered off from the previous week over some central and north-central areas, but temperatures across the region continued seasonable, with maximum temperatures averaging in the low 30's C. Typhoon Dot brought heavy showers to northern Vietnam early in the week, likely causing local flooding. In the Philippines, rainfall totaled less than 25mm over most southern and central growing areas, but moderate showers (25-76mm) continued over much of central and northern Luzon, benefiting vegetative rice and corn.

AUSTRALIA ... Moderate to heavy rain (10-45mm) returned to southern New South Wales, South Australia, and Victoria, causing further delays in late winter wheat planting. Wheat planting in the region normally concludes in late June or early July. Crop areas in northern New South Wales and southern Queensland turned seasonably dry. In the west, residual tropical moisture brought widespread heavy rain (25-75mm, with isolated rainfall in excess of 100mm) and localized flooding to the southwestern half of Western Australia. The rainfall kept soil moisture at high levels for establishment of winter grains. Mean weekly temperatures ranged from above normal in the east to below normal in the west.

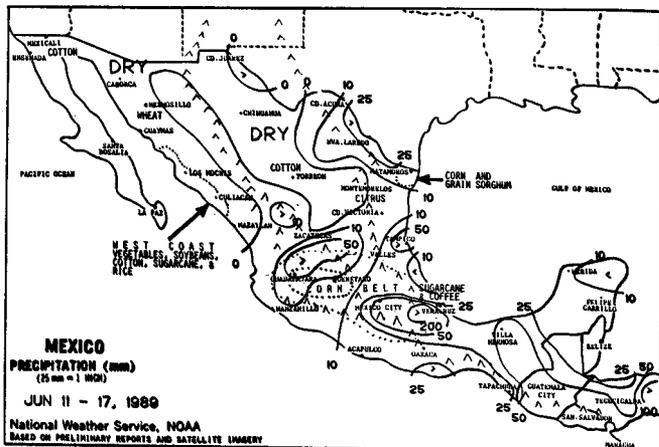


CANADA ... Moderate to heavy rain (20-50mm or more) covered crop regions of Manitoba and most of Saskatchewan, improving conditions for vegetative summer crops. The rainfall was especially needed in parts of southeastern Saskatchewan and southwestern Manitoba that had been trending dry most of the season and missed last week's beneficial rain. Rainfall was light (10mm or less) over northwestern Saskatchewan and most crop areas of Alberta. Temperatures across the Prairies averaged 1-3 degrees C above normal from Alberta to northwestern Saskatchewan and near to slightly below normal elsewhere. No freezing temperatures were reported.





SOUTH AMERICA ... Showers lingered early in the week in south-central Brazil, with weekly rainfall ranging from 25 to 83mm in western Parana, 10-25mm in extreme eastern portions of Sao Paulo and Minas Gerais, and 25-100mm or more along coastal areas. Elsewhere, light showers (10mm or less) fell over most of the region. The recent rain helped vegetative wheat in Parana, but a drying trend continued in southern wheat areas of Rio Grande do Sul. Generally favorable harvest weather continued in Sao Paulo's citrus and coffee areas. In Argentina, dry weather prevailed over most crop areas, favoring late summer crop harvesting which is nearing completion, and promoting early wheat planting. Reports indicate that over 10 percent of the wheat acreage had been sown as of June 13.



MEXICO ... Rainfall increased over the Southern Plateau, the northeast, and throughout the south during the week, bringing much needed moisture for agriculture. Weekly rainfall averaged 10-62mm in the western third of the Southern Plateau, providing the first significant moisture of the wet season for crop plantings. Light showers (2-12mm) fell across central and northeastern portions of the Plateau's major corn growing area, while heavier rain (25-57mm, with isolated amounts up to 221mm near Veracruz) soaked topsoils in the southeast Corn Belt. Weekly rainfall averaged 10-31mm in the northeast, helping immature crops. Mostly dry, hot weather continued in the northwest and along the west coast farming area, maintaining high irrigation demands and stressing livestock. Substantial tropical shower activity prevailed over southern Mexico.

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climatic Analysis Center
Managing Editor Douglas Le Conte
Meteorologists Tom Heddinghaus
Vilhelm Bjerknes, Bob Stefanski, Wes Byrd,
and Jeffrey Savadel

Subscriptions (202) 447-7917 . . . Jeanette Hill

U.S. DEPARTMENT OF AGRICULTURE
Economics Management Staff
Editor Sharon Lee
National Agricultural Statistics Service
Agricultural Statistician . . . Tom Kurtz (202) 447-2157
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(Continue from p. 23)

WEST VIRGINIA: Temperature 66^o, 2^o below normal. Extremes 43^o Greenbank; 86^o Moorefield. Precipitation 2.38 in., divisional 0.26 to 2.66 in. above normal.

Days suitable for fieldwork 0.9. Soil moisture 34% adequate, 66% surplus. Wheat, barley good. Wheat 17% ripe, barley 55% ripe. Oats good, 60% jointed; 45% headed. Corn good; 90% planted, 83% emerged. Tobacco fair; 75% set. Hay good to fair; 1st cut 38%. Apples fair, peaches poor. Farm activities: General farm maintenance, corn planting, cutting hay, turning wet hay, machinery repair.

WISCONSIN: Temperature 58^o, 9^o below normal. Extremes 31^o; 88^o. Precipitation 0.40 to 1.50.

Days suitable for fieldwork 3.7. Soil moisture 19% short, 69% adequate, 12% surplus. Pasture 81% of normal, 43% 1988, 74% avg. General condition of crops 1% poor, 14% fair, 79% good, 6% excellent. Winter wheat 12% fair, 69% good, 19% excellent. Corn 2% poor, 16% fair, 71% good, 11% excellent; 9 in. high, 16 in. 1988, 13 in. avg. Soybeans 95% planted, 97% 1988, 95% avg. Oats 17% headed, 57% 1988, 35% avg. First cut hay 43% completed, 84% 1988, 66% avg.

WYOMING: Temperatures below normal in east to generally above normal west. Rainfall at a minimum.

Days suitable for fieldwork 7.0. Topsoil 69% short, 31% adequate. Subsoil 83% short, 17% adequate. Irrigation water short many areas, usage limited some areas. Winter wheat 15% not jointed, 5% 1988, 5% avg.; 15% jointed, 15% 1988, 10% avg.; 35% boot, 25% 1988, 20% avg.; 35%

headed, 55% 1988, 65% avg. Barley 25% not jointed, 25% 1988, 20% avg.; 20% jointed, 30% 1988, 25% avg.; 35% boot, 25% 1988, 30% avg.; 20% headed, 20% 1988, 25% avg. Spring wheat 35% not jointed, 35% 1988, 25% avg.; 35% jointed, 30% 1988, 30% avg.; 25% boot, 20% 1988, 30% avg.; 5% headed, 15% 1988, 15% avg. Oats 40% not jointed, 45% 1988, 35% avg.; 40% jointed, 30% 1988, 30% avg.; 20% boot, 20% 1988, 30% avg.; none headed, 5% 1988, 5% avg. Potatoes 80% emerged, 95% 1988. Dry beans 70% emerged, 90% 1988. Sugarbeets 70% thinned, 80% 1988, 80% avg. Alfalfa first cutting 10% completed, 20% 1988, 25% avg. Other hay 5% completed, 5% 1988, 5% avg. Livestock moved to summer ranges; 85% cattle, 80% sheep. Stockwater 60% short, 40% adequate.

(Continue from p. 15)

PASTURES AND LIVESTOCK: Pastures were mostly good in the Delta and the East and fair to good in the Great Plains and the West. Livestock was mostly good. In Ohio, wet, muddy pasture conditions forced producers to restrict grazing in some areas.

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