

WEEKLY WEATHER AND CROP BULLETIN

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

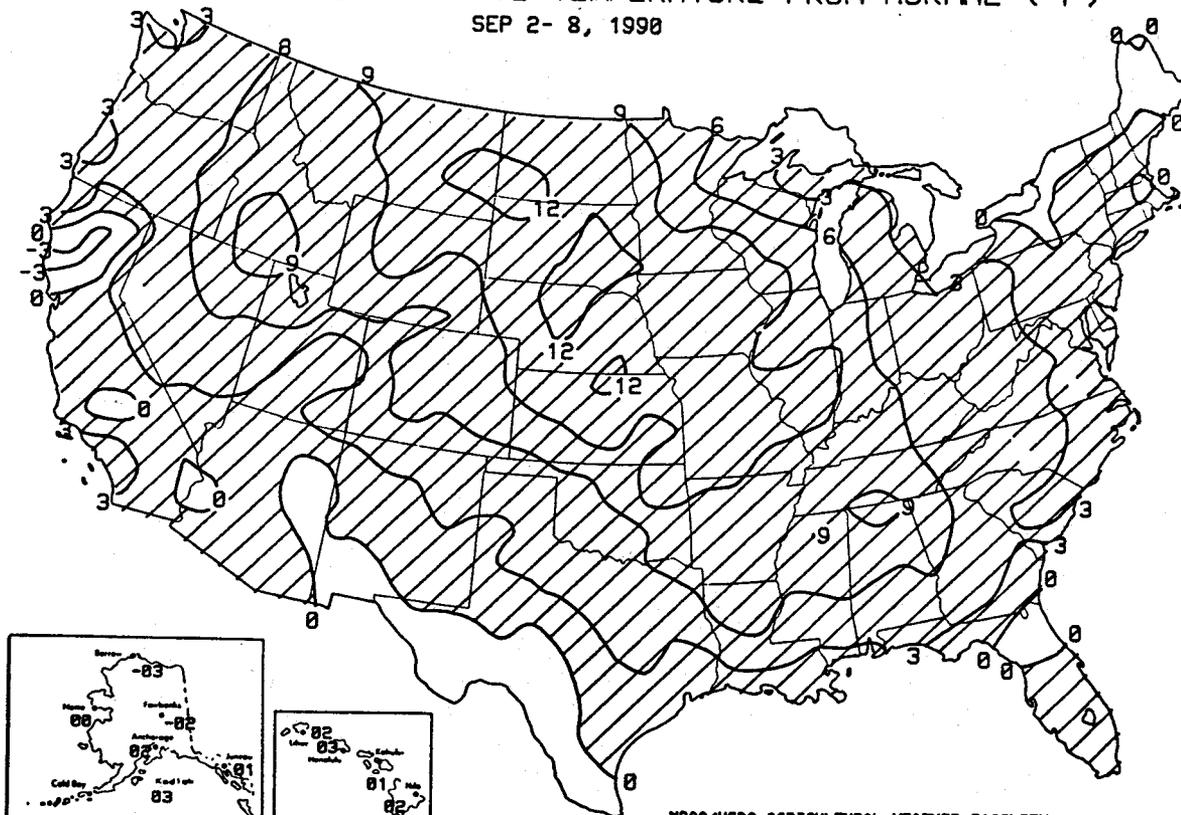
U.S. DEPARTMENT
OF AGRICULTURE
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DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (F)
SEP 2 - 8, 1990



NOAA/USDA AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

HIGHLIGHTS

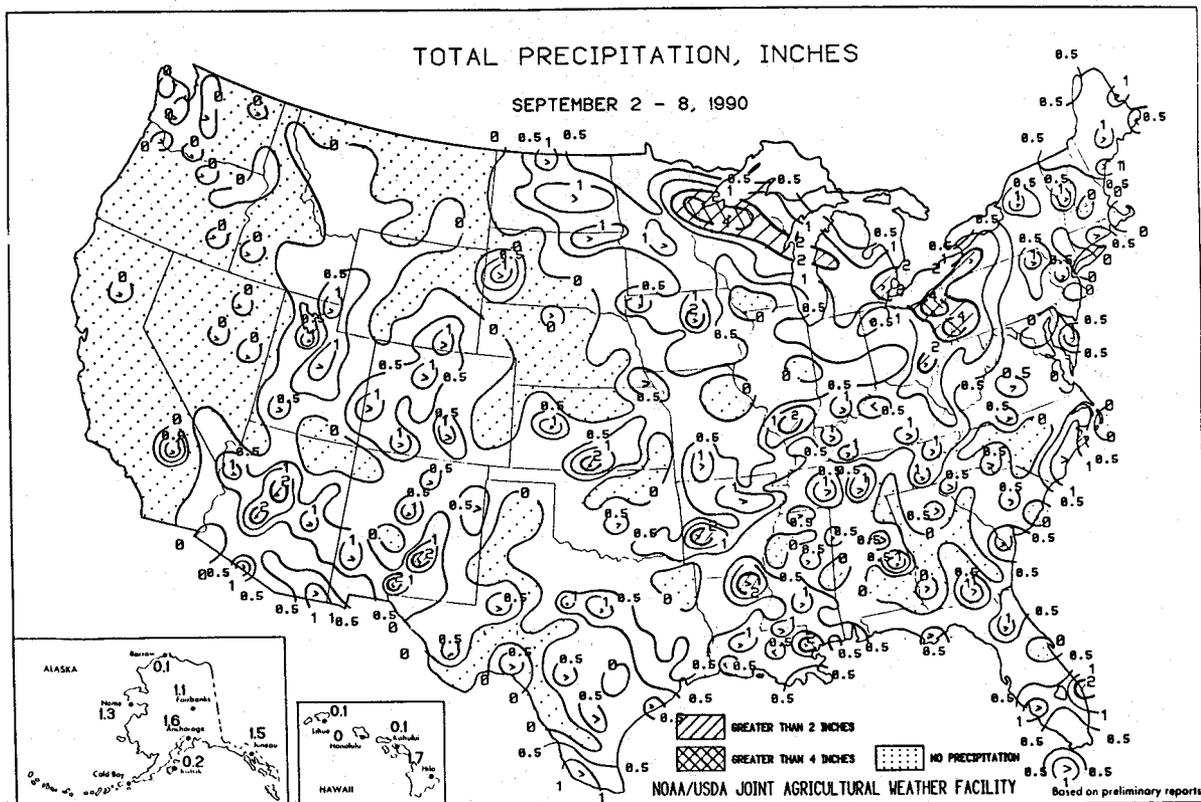
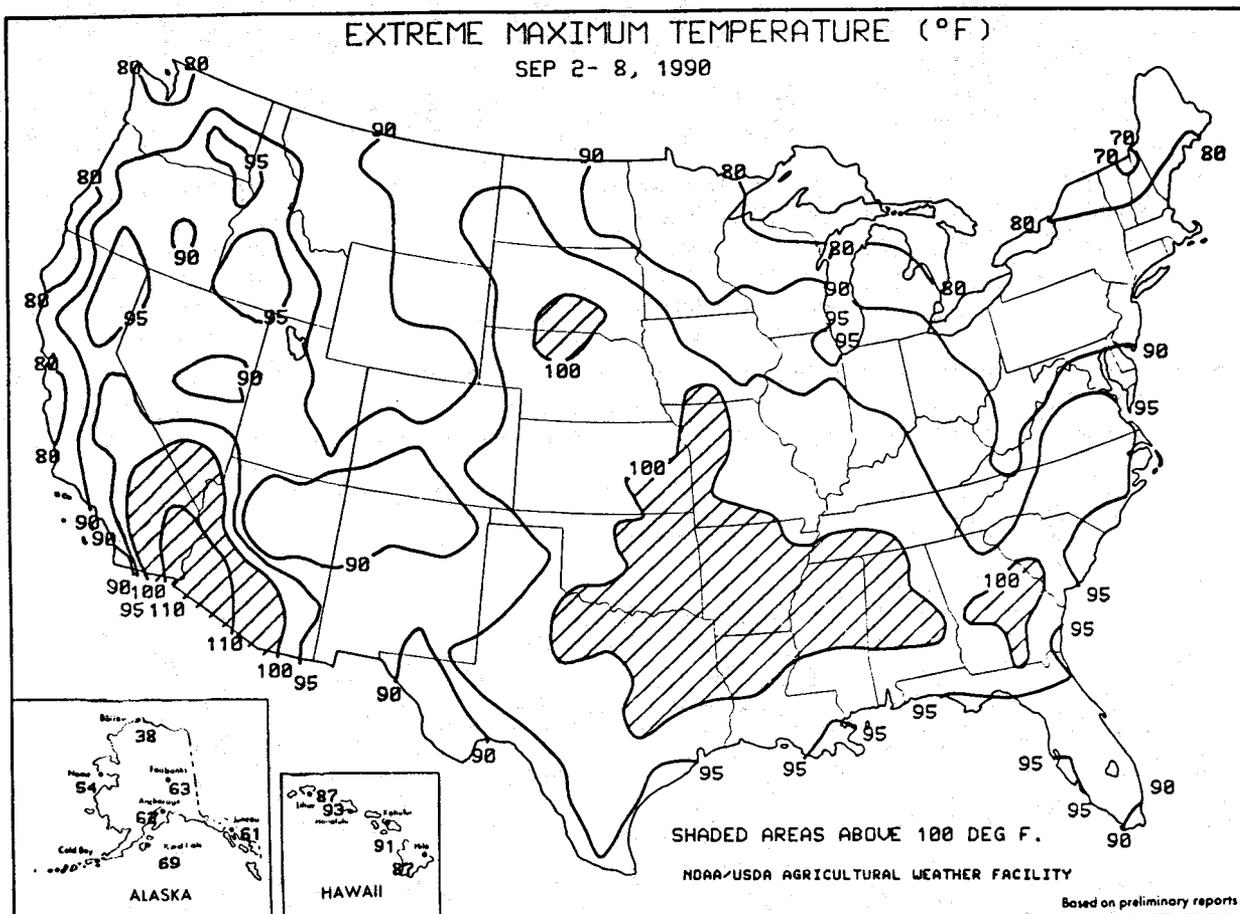
September 2 - 8, 1990

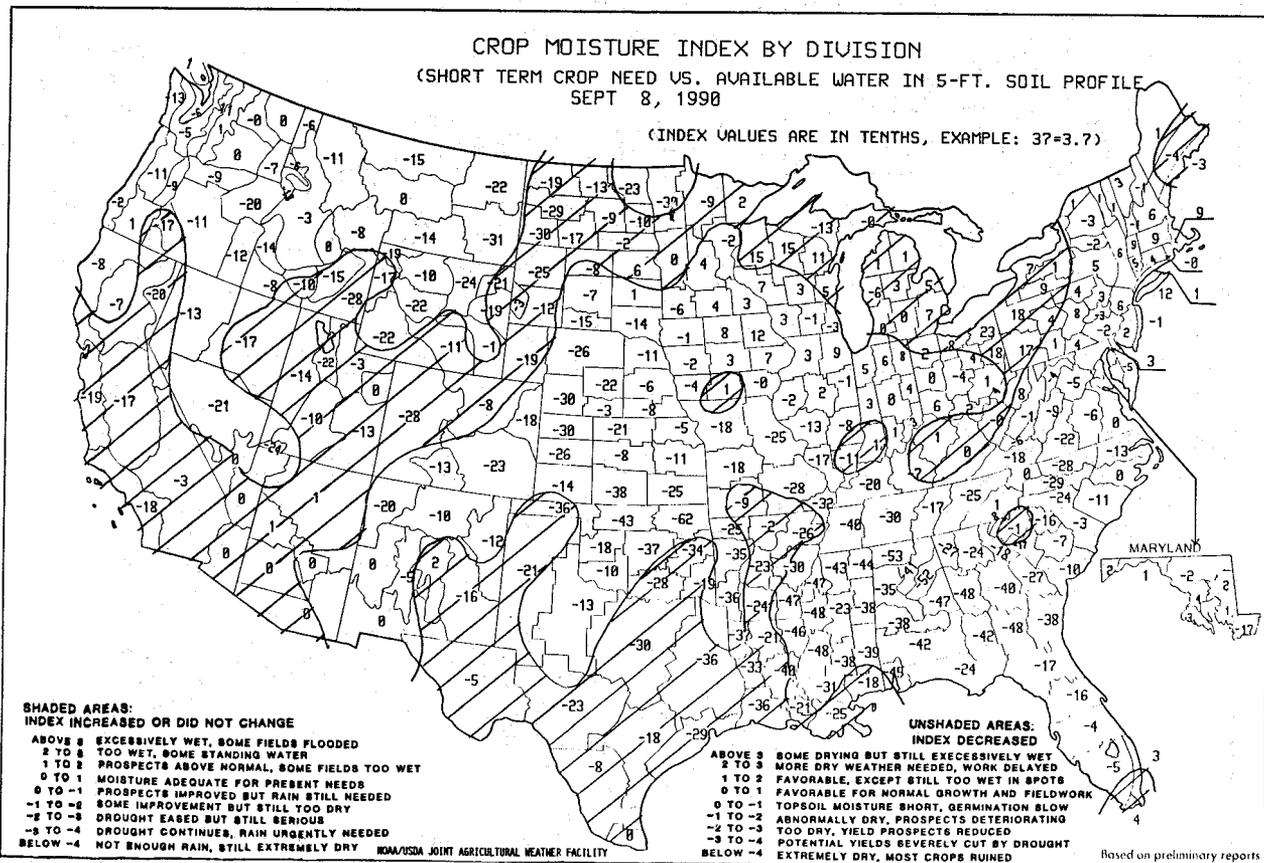
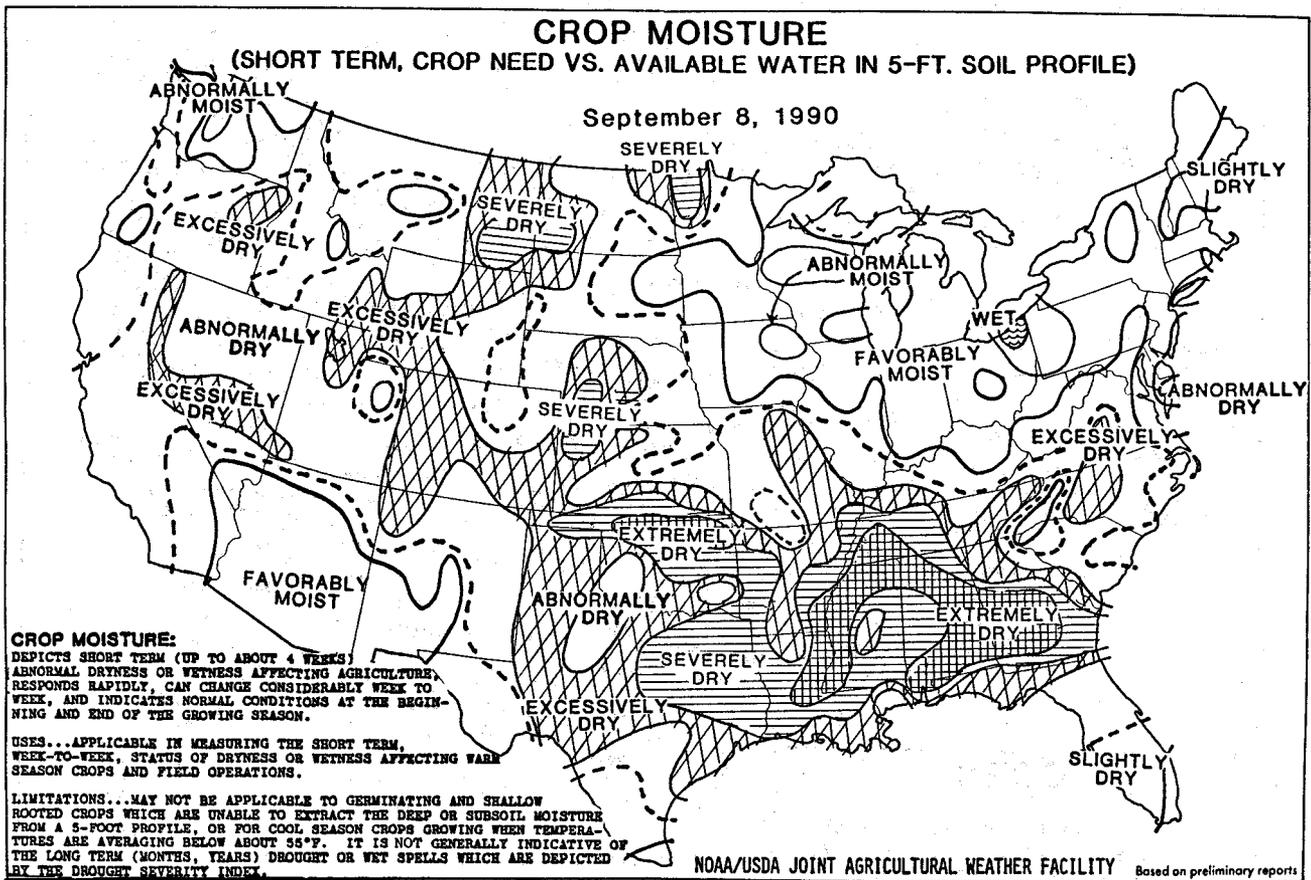
Excessive heat and high humidity continued to plague much of the country. Temperatures averaged 9-12° F above normal in the **northern and central Great Plains** and **middle Mississippi Valley**, while high-temperature records for the date were set daily in the **Corn Belt, southern Plains, and Southeast**. Showers were widely scattered over the Nation, with severe thunderstorms bringing locally heavy rain to the **central Rockies, northern Plains, middle Mississippi Valley**, and across the **South**. During the latter part of the week, intense thunderstorms roared across the **Great Lakes** into the **upper Ohio Valley**, causing torrential rains and floods. Dry weather remained over much of the **Great Plains**. At week's end, scattered showers and thunderstorms continued to develop in the hot, humid air across the **Gulf and southern Atlantic Coast States** and in the **Ohio Valley**.

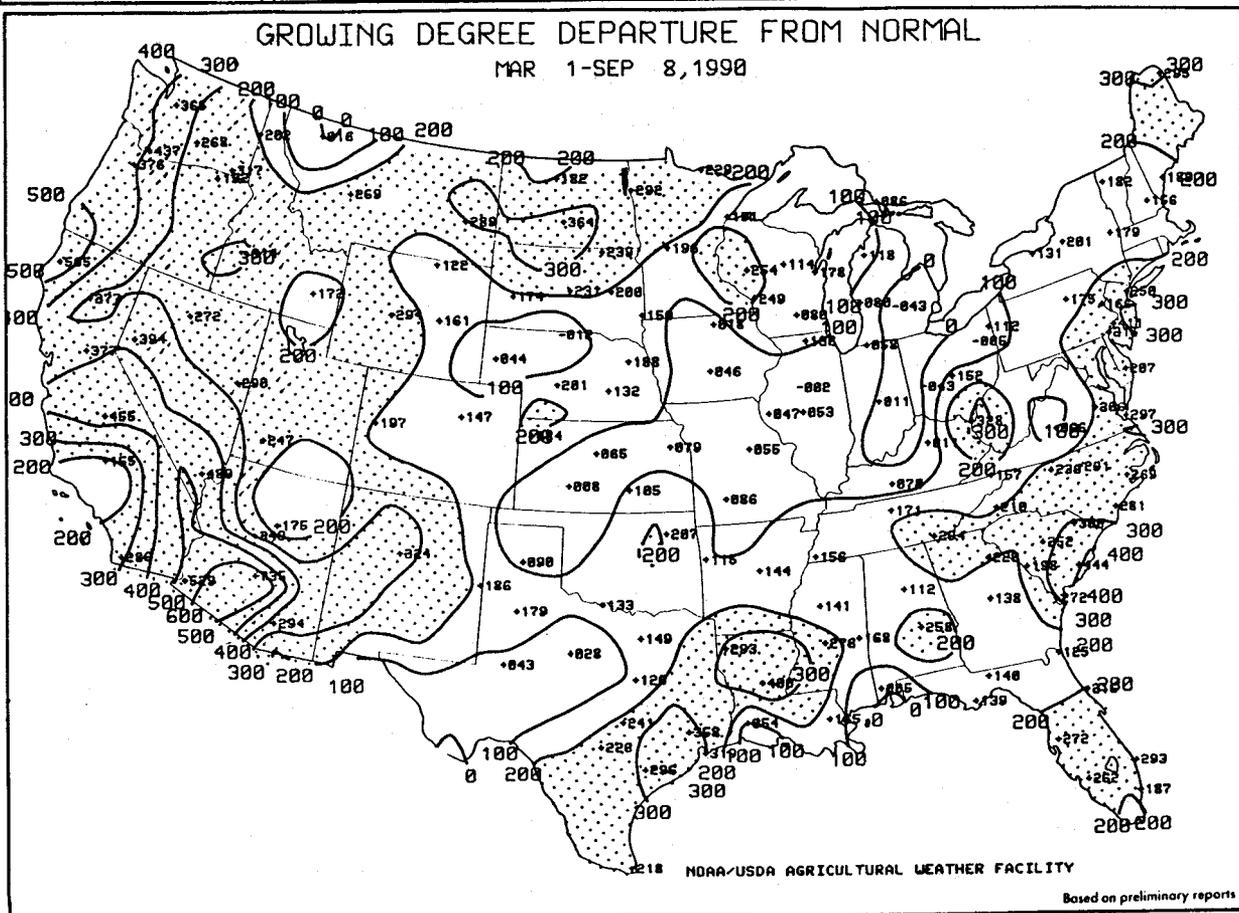
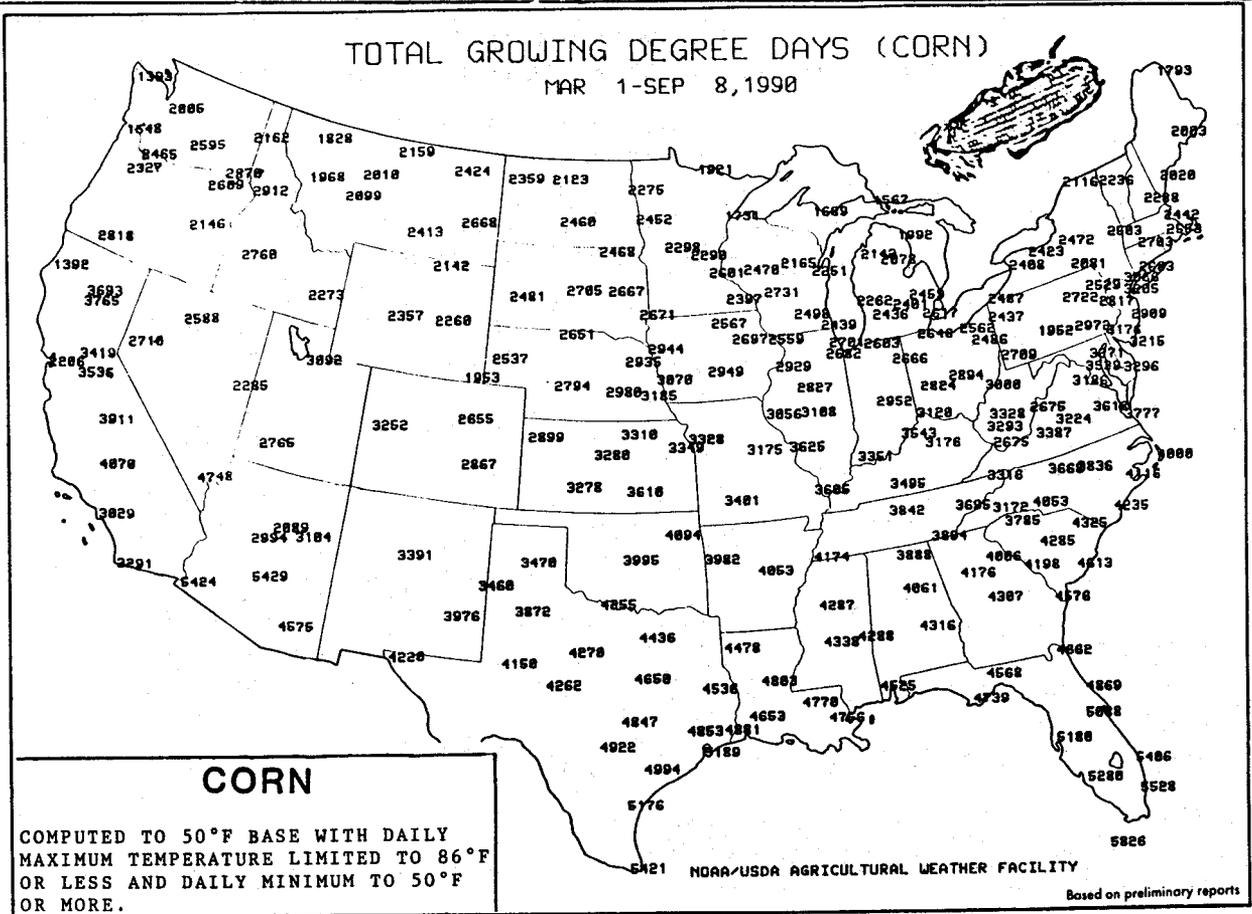
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National Weather Data for Selected Cities

Weather Data for the Week Ending September 8, 1990

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 Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP.	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	98	73	100	70	85	8	.4	-.7	.4	.4	29	32.7	82	84	32	7	0	1	0
MOBILE	95	71	99	70	83	3	.1	-1.7	.1	.1	3	45.2	94	95	38	7	0	1	0
MONTGOMERY	98	70	100	68	84	5	.0	-1.1	.0	.0	0	45.5	92	34	0	0	0	0	0
AK ANCHORAGE	59	48	62	37	54	-2	1.6	1.0	.8	1.6	244	9.6	103	92	4	0	0	2	0
BARROW	35	29	38	28	32	-3	.1	-.1	.1	.1	61	3.5	110	94	6	7	7	4	0
FAIRBANKS	54	42	63	30	48	-2	1.1	.7	.5	1.2	331	13.2	176	95	65	0	3	5	1
JUNEAU	57	49	61	43	53	1	1.5	.2	1.0	3.1	204	34.9	114	98	78	1	1	1	1
KODIAK	63	47	69	40	55	3	.2	-1.1	.2	.2	15	44.3	118	94	57	0	0	4	1
NOME	51	42	54	32	47	0	1.3	.7	.7	.2	182	16.7	165	94	68	0	0	5	1
AZ PHOENIX	102	78	108	74	90	2	.3	-.1	.2	.3	163	6.3	138	77	30	1	1	1	0
PRESCOTT	83	57	90	52	70	2	.8	-.4	.5	.5	157	13.3	97	80	38	0	3	3	0
TUCSON	98	70	105	67	84	1	.5	-.1	.5	.5	121	11.3	148	83	38	0	0	1	0
YUMA	104	82	111	79	93	3	.5	-.1	.5	.5	0	1.3	84	56	28	7	0	0	0
AR FORT SMITH	100	72	103	68	86	8	.4	-.3	.3	.4	48	44.6	161	91	35	0	0	0	0
LITTLE ROCK	96	75	100	70	86	8	.4	-.6	.3	.4	31	41.6	121	77	44	6	2	2	0
CA BAKERSFIELD	93	64	94	61	78	-2	.5	.0	.0	.0	0	2.6	68	68	25	0	0	0	0
EUREKA	68	55	70	53	62	0	.0	-.1	.0	.0	0	21.4	94	93	73	0	0	0	0
FRESNO	95	63	96	60	79	2	.0	.0	.0	.0	0	7.4	105	63	23	7	0	0	0
LOS ANGELES	80	65	84	62	72	2	.0	.0	.0	.0	0	5.1	60	87	52	0	0	0	0
REDDING	93	56	95	53	74	-5	.0	-.2	.0	.0	0	21.4	84	74	16	7	0	0	0
SACRAMENTO	92	57	94	55	75	1	.0	.0	.0	.0	0	11.5	107	83	18	0	0	0	0
SAN DIEGO	80	68	84	66	74	4	.0	.0	.0	.0	0	5.9	91	89	58	6	0	0	0
SAN FRANCISCO	75	57	78	55	66	2	.0	.0	.0	.0	0	7.9	64	91	50	0	0	0	0
CO DENVER	89	58	93	54	74	7	.1	-.2	.1	.1	29	12.8	107	77	25	3	0	1	0
GRAND JUNCTION	88	61	91	56	74	3	.6	-.5	.6	.7	379	5.4	102	78	27	2	0	0	1
PUEBLO	93	58	96	52	75	6	.1	-.2	.1	.1	31	12.5	143	78	21	2	0	3	0
CT BRIDGEPORT	78	64	86	55	71	2	.2	-.6	.2	.2	22	31.1	110	85	54	0	0	1	0
HARTFORD	80	57	87	45	68	1	.2	-.7	.1	.1	20	35.0	118	94	49	0	0	2	0
DC WASHINGTON	85	68	93	62	76	2	.0	-.8	.0	.0	0	29.8	107	87	52	2	0	0	0
FL APALACHICOLA	91	74	92	70	82	1	.6	-1.6	.3	.6	25	28.4	72	96	58	5	0	3	0
DAYTONA BEACH	89	73	93	71	81	0	.3	-1.3	.2	.3	16	27.8	81	93	58	1	0	0	0
JACKSONVILLE	93	69	98	65	81	0	.9	-.8	.6	.9	44	21.7	56	95	48	5	0	2	1
KEY WEST	90	77	91	74	83	-1	1.8	-.4	.6	1.8	113	23.6	96	90	58	4	0	4	2
MIAMI	90	77	91	73	84	1	1.0	-.8	.9	1.0	49	41.7	105	90	58	6	0	2	1
ORLANDO	92	73	95	72	83	1	.5	-1.6	.2	.5	0	25.3	67	94	44	7	0	0	0
TALLAHASSEE	95	71	98	67	83	3	.3	-1.7	.2	.3	47	33.4	68	97	41	7	0	1	0
TAMPA	94	73	95	72	84	2	.2	-1.5	.2	.2	0	29.4	82	95	47	7	0	0	0
WEST PALM BEACH	90	75	92	74	83	1	2.2	-.2	1.6	2.2	95	39.7	101	95	57	6	0	2	1
GA ATLANTA	93	72	97	69	83	7	.2	-.6	.2	.6	67	44.7	124	85	44	6	0	1	0
AUGUSTA	95	67	100	63	81	4	.4	-.8	.1	.1	7	20.3	61	99	44	6	0	1	0
MACON	96	70	100	65	83	4	.4	-.8	.1	.1	0	22.9	67	92	37	7	0	0	0
SAVANNAH	92	71	97	67	81	2	.7	-.7	.7	1.1	65	25.8	66	93	45	5	0	1	1
HI HILO	85	71	87	67	78	2	1.7	-.1	.6	1.7	90	97.7	114	94	65	0	0	7	1
HONOLULU	91	75	93	73	83	3	.1	-.1	.1	.1	0	10.4	73	80	46	6	0	0	0
KAHULUI	88	71	91	68	80	1	.1	-.0	.1	.1	133	15.9	129	86	54	2	0	1	0
LIHUE	86	76	87	72	81	2	.1	-.3	.1	.1	17	21.2	80	78	57	0	0	1	0
ID BOISE	92	60	98	54	76	9	.9	-.1	.1	.1	0	9.5	124	59	20	5	0	0	0
LEWISTON	94	62	99	58	78	11	.1	-.2	.2	.2	11	8.4	96	51	20	6	0	1	0
POCATELLO	89	52	92	46	71	8	.3	-.2	.2	.3	188	7.8	105	82	26	4	0	3	0
IL CHICAGO	84	66	96	59	75	7	.2	-.9	.2	.2	13	30.2	122	94	57	2	0	1	0
MOLINE	87	68	97	63	77	9	.1	-.8	.1	.1	10	41.2	149	94	56	3	0	2	0
PRORIA	84	67	93	64	76	7	.2	-.7	.1	.2	19	40.5	157	98	63	3	0	3	0
QUINCY	89	69	97	64	79	9	.5	-.9	.5	.5	0	29.2	106	92	55	3	0	0	0
ROCKFORD	86	65	95	58	76	9	.7	-.9	.7	.7	0	34.5	129	91	52	3	0	0	0
SPRINGFIELD	89	69	97	66	79	9	.1	-.7	.1	.1	6	37.3	149	88	52	3	0	1	0
IN EVANSVILLE	94	69	100	66	82	9	.9	-.2	.9	.9	116	35.7	118	95	43	6	0	2	1
FORT WAYNE	84	63	92	58	73	5	.4	-.2	.4	.4	56	37.2	149	95	57	2	0	2	0
INDIANAPOLIS	86	66	94	61	76	6	.4	-.3	.2	.4	45	32.6	115	97	55	2	0	2	0
SOUTH BEND	85	64	94	57	74	7	1.0	-.2	1.0	1.0	108	33.8	127	94	51	1	0	1	1
IA DES MOINES	89	69	97	63	79	11	.3	-.5	.3	.3	34	36.4	153	91	52	3	0	2	0
SIOUX CITY	90	67	95	59	79	11	.7	-.4	.3	.3	41	21.0	104	94	45	5	0	1	0
WATERLOO	85	67	92	63	76	10	.3	-.1	.5	.7	77	36.8	146	97	59	3	0	3	0
KS CONCORDIA	98	72	99	63	85	13	.7	-.8	.7	.7	0	21.5	100	67	29	7	0	0	0
DODGE CITY	95	67	98	64	81	8	.5	-.5	.5	.5	2	18.3	110	73	24	7	0	1	0
GOODLAND	94	62	98	59	78	10	.0	-.4	.0	.0	0	15.4	117	71	22	7	0	0	0
TOPEKA	94	68	99	65	81	9	.3	-.5	.3	.3	31	27.4	109	91	41	5	0	2	0
WICHITA	98	69	101	64	84	9	.8	-.1	.8	.8	93	14.8	70	76	28	7	0	2	1
KY BOWLING GREEN	96	67	104	61	81	8	.9	-.1	.9	.9	98	29.5	83	94	39	6	0	1	1
LEXINGTON	87	67	93	59	77	5	.4	-.4	.3	.4	43	33.1	97	98	55	3	0	2	0
LOUISVILLE	93	70	99	64	81	8	.1	-.7	.1	.1	9	39.9	127	90	42	6	0	1	0
LA ALEXANDRIA	97	76	101	74	87	7	.1	-.7	.1	.1	15	41.7	109	88	44	7	0	1	0
BATON ROUGE	95	72	99	70	84	4	.5	-.7	.4	.7	51	51.0	124	99	45	7	0	2	0
LAKE CHARLES	93	72	96	71	82	2	.4	-.1	.3	1.0	65	36.0	97	100	53	7	0	4	0
NEW ORLEANS	93	72	96	70	82	2	.8	-.7	.5	.8	47	42.1	97	99	49	7	0	2	1

Based on 1951-80 normals

Weather Data for the Week Ending September 8, 1990

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 Sep 1	PCT. NORMAL SINCE Sep 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	
																		OR MORE	OR MORE		
SHREVEPORT	99	73	102	70	86	6	T	-8	T	T	0	45.7	147	90	36	7	0	0	0	0	
ME CARIBOU	69	46	76	37	57	0	T	-1	T	T	74	24.9	102	90	54	0	0	0	3	1	
FORTLAND	73	53	84	44	63	1	T	-5	T	T	144	27.9	100	95	55	0	0	0	2	2	
MD BALTIMORE	84	64	89	58	74	2	T	-9	T	T	0	31.3	105	90	50	0	0	0	0	0	
MA BOSTON	83	61	91	52	72	0	1.0	-0	1.0	1.0	84	28.9	90	96	55	1	1	1	1	1	
MA CHATHAM	76	59	87	52	68	0	T	-8	T	T	2	32.9	113	87	54	0	0	0	2	0	
MI ALPENA	72	60	77	55	66	1	T	-9	T	T	3	31.6	102	94	73	0	0	0	1	0	
MI DETROIT	73	52	79	37	62	2	.4	-4	3.3	3.3	48	22.2	109	96	62	0	0	0	2	0	
MI FLINT	83	61	92	54	72	5	3.5	3.0	3.2	3.5	527	29.0	130	94	50	1	1	1	1	1	
MI GRAND RAPIDS	80	58	86	49	69	5	1.0	-4	9	1.0	137	20.2	96	95	53	0	0	0	2	1	
MI HOUGHTON LAKE	83	59	92	51	71	5	.7	-1	7	.7	78	23.9	104	96	55	1	1	1	1	1	
MI LANSING	76	57	81	51	67	6	.2	-5	2	.2	24	20.8	106	92	58	0	0	0	1	0	
MI MARQUETTE	83	58	91	49	70	6	1.7	1.0	1.5	1.7	200	21.6	103	95	51	1	1	1	1	1	
MI MUSKOGON	69	46	74	37	58	0	1.0	-1	6	1.0	101	21.0	82	95	71	0	0	0	4	1	
MI SAULT ST. MARIE	73	59	88	52	71	6	1.0	-3	1.0	1.0	128	22.2	106	94	48	0	0	0	2	1	
MN ALEXANDRIA	72	51	77	42	61	3	1.0	-1	1.0	1.0	97	22.0	101	97	58	0	0	0	2	1	
MN DULUTH	80	61	87	52	71	9	.8	-2	4	.8	118	18.1	94	94	57	0	0	0	3	0	
MN INTY L FALLS	78	50	82	46	62	9	3.5	2.7	1.7	3.5	364	25.9	118	100	69	0	0	0	5	2	
MN MINNEAPOLIS	83	65	88	44	64	8	.0	-8	0	.0	0	15.8	88	97	43	0	0	0	0	0	
MN ROCHESTER	82	64	88	60	74	10	.7	-0	4	.7	92	29.0	142	95	58	0	0	0	2	0	
MS GREENWOOD	89	73	102	70	73	11	.9	-0	8	.9	93	39.6	186	96	62	0	0	0	2	1	
MS JACKSON	89	71	103	69	85	8	.7	-7	T	T	2	34.6	92	99	36	7	7	1	0	0	
MS MERIDIAN	101	70	105	67	85	6	.0	-2	4	.7	68	38.9	103	99	38	7	7	0	0	0	
MO CAPE GIRARDEAU	94	70	99	67	82	1	.2	-7	2	.2	22	51.3	132	94	33	7	7	0	2	0	
MO COLUMBIA	93	69	98	66	81	9	.7	-9	T	T	0	43.7	165	92	41	5	5	0	0	0	
MO KANSAS CITY	94	71	101	67	83	9	.5	-5	5	.5	44	33.3	125	81	38	5	5	0	1	1	
MO SAINT LOUIS	95	76	101	72	86	12	.1	-6	T	T	1	29.5	119	81	41	6	6	0	1	0	
MO SPRINGFIELD	97	71	99	67	84	11	1.5	-6	1.5	1.5	143	45.4	164	84	35	6	6	1	1	1	
MT BILLINGS	88	60	92	59	74	11	.1	-2	1	.1	23	9.4	84	84	22	5	5	0	1	0	
MT GLASGOW	89	56	93	50	72	11	.7	-2	T	T	0	5.6	62	69	20	3	3	0	0	0	
MT GREAT FALLS	85	52	88	46	69	7	.1	-2	1	.1	20	12.5	104	68	24	0	0	0	1	0	
MT HAVER	89	54	94	49	71	10	.0	-3	0	.0	0	5.4	57	64	20	3	3	0	0	0	
MT HELENA	86	51	89	47	69	10	.1	-1	1	.1	44	7.5	83	82	26	0	0	0	2	0	
MT KALISPELL	84	45	88	40	65	7	.1	-3	T	T	0	15.8	142	93	29	0	0	0	0	0	
MT MILES CITY	92	62	95	53	77	13	.1	-1	1	.1	42	7.4	66	64	21	6	6	0	1	0	
MT MISSOULA	85	49	89	44	67	7	.1	-2	T	T	14	10.7	113	89	30	0	0	0	1	0	
NE GRAND ISLAND	94	66	97	55	80	12	.1	-6	1	.1	11	23.5	125	80	31	7	7	0	1	0	
NE LINCOLN	95	67	98	58	81	12	.1	-8	T	T	0	22.5	104	84	34	7	7	0	0	0	
NE NORFOLK	91	65	96	52	78	11	.3	-3	3	.3	89	23.1	119	90	35	5	5	0	1	0	
NE NORTH PLATTE	97	59	99	51	78	12	.1	-4	T	T	2	13.1	81	84	21	7	7	0	0	0	
NE OMAHA	92	70	98	60	81	11	.1	-8	1	.1	13	19.4	82	83	42	5	5	0	1	0	
NE SCOTTSBLUFF	93	56	96	47	75	9	.1	-2	T	T	36	14.2	118	88	25	6	6	0	2	0	
NE VALENTINE	94	62	102	49	78	13	.0	-4	0	.0	0	15.0	103	79	24	6	6	0	0	0	
NV ELY	82	49	88	44	65	5	.2	-0	1	.2	95	6.9	107	83	30	0	0	0	3	0	
NV LAS VEGAS	96	73	106	70	85	1	.1	-1	T	T	20	3.3	117	64	29	6	6	0	1	0	
NV RENO	89	50	92	46	70	7	.0	-1	0	.0	0	4.3	87	61	13	2	2	0	0	0	
NV WINNEVOCCA	92	46	94	42	69	6	.0	-1	0	.0	0	5.3	101	50	11	7	7	0	0	0	
NC CONCORD	77	50	87	38	63	1	.3	-5	2	.3	31	27.0	112	99	49	0	0	0	2	0	
NC ATLANTIC CITY	80	59	88	50	70	-1	.1	-7	1	.1	9	26.7	91	96	58	0	0	0	1	0	
NM ALBUQUERQUE	86	62	91	59	74	2	.4	-2	2	.4	150	8.1	143	78	30	1	1	0	4	0	
NM CLOVIS	85	64	90	59	75	2	.7	-3	7	.7	135	8.0	62	83	35	1	1	0	1	1	
NM ROSWELL	88	66	94	64	77	3	.4	-1	2	.4	67	5.3	69	80	36	3	3	0	3	0	
NY ALBANY	78	56	87	45	67	2	.1	-7	1	.1	7	32.5	134	95	53	0	0	0	1	0	
NY BINGHAMTON	71	53	78	43	62	-1	.3	-5	2	.3	37	27.9	110	98	63	0	0	0	3	0	
NY BUFFALO	75	56	85	48	66	1	1.8	-9	9	1.8	180	33.1	132	93	55	0	0	0	3	2	
NY NEW YORK	80	66	88	59	73	1	.0	-9	0	.0	0	36.6	124	78	49	0	0	0	0	0	
NY ROCHESTER	75	55	83	45	65	0	1.9	1.3	1.1	1.9	253	27.9	129	96	55	0	0	0	3	2	
NY SYRACUSE	76	54	82	42	65	0	.4	-4	3	.4	48	31.9	119	96	53	0	0	0	3	0	
NC ASHEVILLE	86	63	91	60	75	5	.2	-7	2	.2	20	39.8	126	100	51	2	2	0	2	0	
NC CHARLOTTE	92	70	96	64	81	6	.9	-0	9	.9	91	28.1	90	86	39	5	5	0	1	1	
NC GREENSBORO	90	66	97	58	78	5	T	-9	T	T	0	23.7	78	90	43	3	3	0	0	0	
NC HATTERAS	85	69	90	61	77	0	T	-1.4	T	T	0	34.2	91	89	55	1	1	0	0	0	
NC NEW BERN	88	68	95	64	78	1	1.2	-3	1.2	1.2	71	39.5	102	94	50	3	3	0	1	1	
NC RALEIGH	90	66	98	57	78	4	.0	-9	0	.0	0	27.0	88	95	47	4	4	0	0	0	
NC WILMINGTON	90	69	95	62	79	2	1.4	-1	1.4	1.4	80	41.5	104	95	49	5	5	0	1	1	
ND BISMARCK	87	59	93	51	73	11	.6	-3	3	.6	149	11.3	91	90	38	3	3	0	3	0	
ND FARGO	84	61	88	56	73	11	.9	-4	8	.9	161	14.1	92	93	42	0	0	0	2	1	
ND GRAND FORKS	83	58	89	53	71	10	.2	-3	1	.2	37	13.5	94	93	39	0	0	0	3	0	
ND WILLISTON	90	54	95	47	72	11	T	-3	T	T	3	8.4	78	78	25	5	5	0	1	0	
OH AKRON-CANTON	80	61	87	56	71	4	4.1	3.3	2.8	4.1	483	44.8	171	99	61	0	0	0	2	2	
OH CINCINNATI	86	67	91	62	76	5	.1	-6	1	.1	13	38.2	131	96	58	2	2	0	3	0	
OH CLEVELAND	79	61	87	55	70	3	3.3	2.6	2.6	3.3	399	34.0	135	96	64	0	0	0	3	2	
OH COLUMBUS	86	65	93	59	75	6	.6	-2	.6	.6	69	34.4	124	96	53	2	2	0	1	1	

Based on 1951-80 normals

Weather Data for the Week Ending September 8, 1990

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 Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL IN, SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																			.01 INCH OR MORE	.50 INCH OR MORE	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	83	64	90	58	73	4	.1	.1	.1	19	38.8	151	95	57	2	0	2	0	0	0		
TOLEDO	84	59	95	53	71	3	1.7	1.4	1.4	54	26.5	116	97	50	0	0	1	1	0	0		
YOUNGSTOWN	80	58	85	53	69	3	1.7	1.7	1.7	195	30.2	113	99	59	0	0	0	0	3	2		
OK OKLAHOMA CITY	94	72	98	68	83	3	.0	.0	.0	1	28.9	127	76	36	6	0	0	0	0	0		
TULSA	99	76	103	73	88	10	.0	.0	.0	0	27.2	99	70	29	7	0	0	0	0	0		
OR ASTORIA	71	54	84	46	63	3	.0	.0	.0	0	47.2	120	95	65	0	0	0	0	0	0		
BURNS	86	47	89	42	67	4	.0	.0	.0	0	3.8	61	58	15	0	0	0	0	0	0		
MEDFORD	92	52	98	50	72	4	.0	.0	.0	0	9.4	86	86	20	0	0	0	0	0	0		
PENDLETON	86	58	92	53	72	4	.0	.0	.0	0	7.0	92	62	25	0	0	0	0	0	0		
PORTLAND	81	59	92	54	70	4	.0	.0	.0	0	21.8	102	88	44	1	0	0	0	0	0		
SALEM	84	53	92	49	68	4	.0	.0	.0	3	22.1	97	93	39	1	0	0	0	0	0		
PA ALLENTOWN	80	60	87	51	70	2	.0	.0	.0	0	30.0	97	95	51	0	0	0	0	0	0		
ERIE	76	62	80	54	69	4	2.9	2.0	1.6	273	33.3	126	97	64	0	0	0	0	3	2		
HARRISBURG	82	62	88	56	72	1	1.4	1.4	1.4	4	28.8	106	90	52	0	0	0	0	1	0		
PHILADELPHIA	84	64	90	55	74	2	2	2	2	0	27.4	94	95	54	2	0	0	0	0	0		
PITTSBURGH	81	62	86	56	71	4	3.2	2.5	1.7	413	35.3	131	99	60	0	0	0	0	5	2		
SCRANTON	76	58	83	50	67	1	1.4	1.3	1.3	152	32.4	134	92	53	0	0	0	0	3	1		
RI PROVIDENCE	77	55	87	46	66	0	0	0	0	0	29.6	98	94	52	0	0	0	0	0	0		
SC CHARLESTON	92	72	96	67	82	4	4	4	4	0	29.9	75	93	47	0	0	0	0	0	0		
COLUMBIA	95	68	99	62	82	4	4	4	4	0	25.5	68	93	41	0	0	0	0	0	0		
FLORENCE	93	69	96	62	81	3	2	2	2	0	18.0	54	91	46	0	0	0	0	0	0		
GREENVILLE	90	68	95	63	79	4	4	4	4	1	32.7	88	94	49	0	0	0	0	1	0		
SD ABERDEEN	88	63	95	55	75	12	1.5	1.1	1.5	341	18.4	127	93	42	0	0	0	0	1	0		
HURON	92	65	99	54	78	13	2.0	1.2	1.2	44	20.9	140	95	35	0	0	0	0	0	0		
RAPID CITY	91	60	97	54	76	11	2.0	1.7	1.8	653	14.6	107	85	25	0	0	0	0	4	1		
SIOUX FALLS	90	64	98	50	77	12	2	1.7	1.8	4	15.7	84	94	42	0	0	0	0	0	0		
TN CHATTANOOGA	87	70	99	68	84	8	.0	-.0	.0	0	46.4	125	94	34	0	0	0	0	0	0		
KNOXVILLE	93	67	95	64	80	5	.0	-.0	.0	4	38.1	112	94	37	0	0	0	0	0	0		
MEMPHIS	97	76	101	73	87	9	.1	-.8	.1	12	36.3	97	81	39	0	0	0	0	2	0		
NASHVILLE	97	70	102	67	84	8	.3	-.9	.1	3	25.5	73	90	34	0	0	0	0	1	0		
TX ABILENE	93	71	96	67	82	3	.1	-.6	.1	15	21.9	133	77	32	0	0	0	0	0	0		
AMARILLO	89	63	93	60	76	3	.0	-.5	.0	0	13.6	89	82	32	0	0	0	0	0	0		
AUSTIN	97	72	102	70	85	3	.1	-.7	.1	15	18.9	90	90	39	0	0	0	0	0	0		
BEADMONT	94	74	99	72	84	3	.6	-.8	.3	37	48.1	125	98	47	0	0	0	0	4	0		
BROWNSVILLE	89	74	92	73	82	3	.8	-.3	.5	1.7	128	13.4	88	97	60	0	0	0	3	0		
CORPUS CHRISTI	92	74	95	73	83	3	.2	-.4	.1	2	15.5	75	93	49	0	0	0	0	0	0		
DEL RIO	89	70	94	67	80	3	.2	-.4	.2	24	16.7	145	75	43	0	0	0	0	0	0		
EL PASO	89	65	95	63	77	4	-.1	-.3	.0	.1	29	7.3	139	89	39	0	0	0	2	0		
FORT WORTH	98	73	102	68	85	4	.1	-.6	.1	.2	19	36.2	167	82	35	0	0	0	2	0		
GALVESTON	92	78	94	72	85	3	.6	-.9	.6	35	25.4	95	84	51	0	0	0	0	1	0		
HOUSTON	94	72	98	71	83	3	.5	-.7	.4	.5	37	30.7	98	95	44	0	0	0	3	0		
LUBBOCK	90	64	97	61	77	3	.0	-.5	.0	2	11.0	83	76	31	0	0	0	0	1	0		
MIDLAND	91	66	96	63	79	3	.9	-.4	.7	.9	157	9.2	97	87	34	0	0	0	2	1		
SAN ANGELO	93	64	97	61	78	1	.1	-.6	.1	.3	38	17.7	146	93	33	0	0	0	1	0		
SAN ANTONIO	93	71	97	68	82	4	.2	-.7	.2	1.0	100	28.6	146	91	43	0	0	0	1	0		
VICTORIA	93	74	96	71	83	1	.0	-.3	.1	.1	6	27.6	113	97	49	0	0	0	2	0		
WACO	100	72	104	67	86	4	.7	-.0	.6	.7	87	23.2	109	87	30	0	0	0	2	1		
WICHITA FALLS	98	71	102	67	85	5	.0	-.7	.0	2	31.3	166	80	31	0	0	0	0	1	0		
UT CEDAR CITY	84	56	89	54	70	3	.5	-.3	.5	.5	188	7.1	97	79	29	0	0	0	1	0		
SALT LAKE CITY	90	64	93	60	77	8	.0	-.2	.0	5	7.7	71	68	23	0	0	0	0	1	0		
VT BURLINGTON	71	52	76	39	62	-1	.5	-.3	.5	.5	50	26.5	114	94	57	0	0	0	1	0		
VA NORFOLK	86	68	96	62	77	2	.0	-.1	.0	2	36.5	112	90	56	0	0	0	0	1	0		
RICHMOND	87	65	99	57	76	3	.2	-.7	.2	.2	18	32.1	103	92	46	0	0	0	1	0		
ROANOKE	86	65	95	57	76	4	.2	-.6	.2	.2	23	27.3	98	97	53	0	0	0	1	0		
WA QUILLAYUTE	72	51	87	42	62	4	.0	-.1	.0	0	61.6	102	96	54	0	0	0	0	0	0		
SEATTLE-TACOMA	75	56	81	54	66	4	.0	-.4	.0	5	24.7	115	91	49	0	0	0	0	1	0		
SPOKANE	86	53	91	47	70	7	.0	-.2	.0	0	13.3	128	77	24	0	0	0	0	0	0		
YAKIMA	86	51	91	49	68	4	.0	-.0	.0	44	5.5	114	88	27	0	0	0	0	1	0		
WV BECKLEY	81	61	87	57	71	6	.0	-.9	.0	3	27.0	87	94	54	0	0	0	0	2	0		
CHARLESTON	89	66	94	60	77	6	.6	-.1	.4	.6	71	27.9	89	97	50	0	0	0	3	0		
HUNTINGTON	88	66	93	60	77	5	1.4	-.6	.9	1.4	154	33.9	112	98	50	0	0	0	2	1		
PARKERSBURG	84	65	91	59	75	4	.1	-.6	.1	.1	17	34.5	122	98	59	0	0	0	3	0		
WI GREEN BAY	78	60	90	53	69	7	2.7	2.0	2.7	2.7	310	28.2	139	96	61	0	0	0	2	1		
LACROSSE	84	66	94	61	75	10	.0	-.8	.0	4	31.2	137	95	67	0	0	0	0	1	0		
MADISON	84	61	93	54	73	9	.0	-.8	.0	0	27.5	120	97	56	0	0	0	0	0	0		
MILWAUKEE	81	66	96	64	74	8	.1	-.6	.1	.1	8	30.2	134	90	62	0	0	0	1	0		
WAUSAU	77	59	85	54	68	6	1.2	-.2	.9	1.2	109	26.1	111	98	64	0	0	0	3	1		
WY CASPER	88	54	92	49	71	8	.0	-.1	.0	17	9.3	108	75	22	0	0	0	0	1	0		
CHEYENNE	83	54	86	51	69	7	.1	-.2	.1	.2	52	16.6	151	85	28	0	0	0	3	0		
LANDER	86	57	89	53	72	9	.0	-.2	.0	0	6.6	67	62	23	0	0	0	0	0	0		
SHERIDAN	90	55	94	52	72	10	.1	-.2	.1	.1	25	10.1	88	74	22	0	0	0	2	0		

Based on 1951-80 normals

August Weather and Crop Summary

WEATHER

HIGHLIGHTS: Stagnant weather systems early and late in August brought rainfall of 4 to over 12 inches along the **Atlantic Coast States**. Thunderstorms caused severe weather and heavy rains in much of the **Corn Belt** and parts of the **Great Plains**. At mid-August, swollen water levels from torrential downpours threatened to rupture dams on **Lakes Manito and Tomah** in northern Indiana. On the 28th, tornadoes devastated northern **Illinois**. Hot, dry conditions prevailed across the **Delta** and **Southeast**. Temperatures were abnormally high in the **West** during the first half of the month, while a late-summer heat wave baked the **Central and Southern States** at month's end.

AUGUST 1-4: A frontal system edged eastward and drenched the central and southern Plains and Corn Belt with heavy rain. Hot weather returned to the Western United States, while unseasonably cool air remained over the Plains and Corn Belt.

AUGUST 5-11: A stagnant weather pattern brought widespread showers and drenching rain to the Atlantic seaboard throughout the week. Steady rains soaked much of the Northeast and Middle Atlantic Coast States with 4 to over 8 inches. Strong thunderstorms again caused locally heavy rain and flooding from the central High Plains to southern Texas. Widespread showers reached from the northern Rockies into the Great Lakes and middle Mississippi Valley. The West remained unseasonably hot as temperatures soared into triple digits in the interior portions of the Pacific Coast States. Medford, OR had 10 straight days of 100° F weather, while Sacramento, CA had a record seven straight days with a high of 105° F or above. In contrast, abnormally cool air remained over the central section of the Nation as numerous low-temperature records for the date were set early in the week in the Plains and Mississippi Valley.

AUGUST 12-18: Showers and thunderstorms were widespread over much of the Nation, producing heavy rain and local flooding in the Southwest and Central and North Central States. Desert Hill, AZ, near Phoenix, was deluged with 3.42 inches of rain in less than 2 hours on Tuesday morning. Rainfall of 5-7 inches was reported across northern Indiana late in the week. Dry weather prevailed across parts of the Gulf Coast States. Hot weather continued over the interior of the Northwest early in the week as temperatures again climbed into the hundreds. Relatively cool air remained over the Southwest, while record-high temperatures for the date were broken across the Southeast at week's end.

AUGUST 19-25: An upper level trough brought persistent overcast, rainy weather to much of the eastern seaboard. Rainfall in excess of 2 inches was common, with heavier rains (up to 13.5 inches) causing floods in several locations. Heavy rains were once again common across the Corn Belt, with over 4 inches reported in parts of Iowa and northern Illinois. Thunderstorms relieved dryness in the Gulf States, though high temperatures boosted evaporation rates. Maximum temperatures exceeded 100° F from Kansas southward to Texas and eastward to Alabama. Beneficial rain of 1-2 inches alleviated dryness in Montana and the Dakotas.

AUGUST 26-31: A late-summer heat wave baked much of the Nation as only the interior portions of the Pacific Coast States remained relatively cool. Temperatures soared into triple digits in the central and southern Great Plains and across the Southeast. Afternoon highs reached 108° F in central Kansas, where temperatures averaged 12° F above normal. Showers and thunderstorms were scattered over the eastern half of the country, the northern Pacific coast, and the

Southwest, while dry conditions prevailed in the Great Plains. Thunderstorms spawned deadly tornadoes that struck Plainfield, IL and killed 29 people on the 28th. Intense thunderstorms continued to rake the Midwest, producing large hail, high wind, and heavy rain. Severe weather extended into the Atlantic Coast States and erupted across southern Texas at month's end.

CROP DEVELOPMENT

Early in August, beneficial rains fell in the **central Great Plains** and along the **Atlantic Coast**. Soil moisture was adequate in the **Corn Belt**, but rain was needed in the **Delta**, the **northern Great Plains**, and the **Pacific Northwest**. Below-normal temperatures slowed crop development in the **eastern two-thirds of the Nation**. About mid-August, rain brought some relief in portions of the **Delta** and **Southeast**. Soil moisture remained short in the **northern Great Plains**, but rain improved crop conditions in the **Pacific Northwest**. Continued periodic rains kept soil moisture adequate or adequate to surplus in the **Corn Belt** through the end of August. In the **central and southern Great Plains**, soil moisture was adequate to short during most of August, but rain was needed near the end of the month for winter wheat seeding. Late in August, lack of moisture stressed crops in the **Delta** and **Southeast**, especially in **Alabama** and **Mississippi**. Above-normal temperatures speeded crop development near the end of the month.

Corn was in good to fair condition. Early in August, temperatures slowed crop development, especially in **Illinois**, **Iowa**, and **Missouri**. Lack of moisture stressed the crop in portions of **South Dakota**. Hail caused some damage in **Nebraska**. Late in August, above-normal temperatures accelerated crop development in the **Corn Belt**, but it was still behind normal. By September 2, in the 17 major producing States, 41 percent of the acreage was in the dent stage or beyond, 31 percentage points behind the 5-year average. Seven percent was mature, 19 points behind normal. The percentage in the dent stage lagged more than 40 points behind normal in **Illinois**, **Indiana**, and **Minnesota**. Crop condition was good to excellent in **Illinois** and **Iowa** and good to fair in **Nebraska**.

Soybeans were in good to fair condition. Below-normal temperatures slowed crop development early in the month. Lack of moisture stressed the crop in the **Delta** and **Southeast**. About mid-August, rain improved the condition in portions of the **Southeast**. Crop condition was good in **Illinois** and good to fair in **Iowa**. Above-normal temperatures improved crop development in late August, but lack of moisture was still a problem in the **Delta** and **Southeast**. Crop condition was fair to poor in the **Delta**. Crop development still lagged behind normal in **Illinois**, **Indiana**, **Iowa**, and **Missouri**. By September 2, in the 19 major producing States, 90% of the acreage was setting pods, 3 points behind normal. Three percent was dropping leaves, 6 points behind normal.

Cotton was in good to fair condition. Early in August, harvest was active in **Texas** and defoliation in preparation for harvest was underway in southern **California**. Crop development lagged behind normal in **Arkansas**, **Mississippi**, and **Missouri** but was near or ahead of normal in the other major producing States. Lack of moisture stressed the crop in the **Delta** and **Southeast** during most of August. About mid-August, rain provided some relief in the **Carolinas**. By the end of August, harvest was underway in **Alabama**, **Arizona**, **Arkansas**, **Georgia**, **Louisiana**, and **Mississippi** and continued in **Texas**. On September 2, 36% of the acreage was opening bolls in the 14 major producing States, 1 point ahead of normal.

(Continued to p. 27)

August Weather in Historical Perspective

Temperatures for August 1990 averaged over the Nation were above the long-term mean and ranked as the 29th warmest (fig. 1). The national precipitation index ranks August as the 46th driest on record (fig. 2).

Regional rankings for the nine climatically homogeneous regions (fig. 3) are listed in table 1. The combination of cool air incursions and heat waves during the month resulted in 100 daily low-temperature and 150 daily high-temperature records for the Nation and a variety of monthly average temperatures. Averages were in the warm third of the historical distribution along the east coast and in the Northwest and West North Central regions, while temperatures averaged in or near the cool third of the distribution in the Central and Southwest regions. Monthly precipitation also had considerable variability. The Northwest and Northeast regions were unusually wet while the South and Southeast were relatively dry.

The East North Central region had the second wettest January-August on record (fig. 4). Only 2 years ago, this region was experiencing conditions at the other extreme.

Figure 3

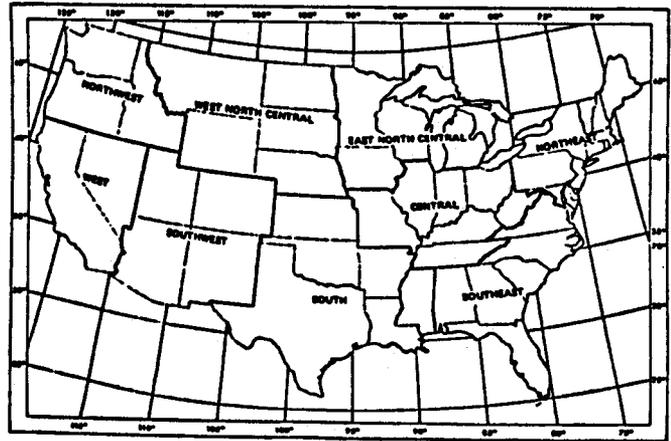


Figure 1

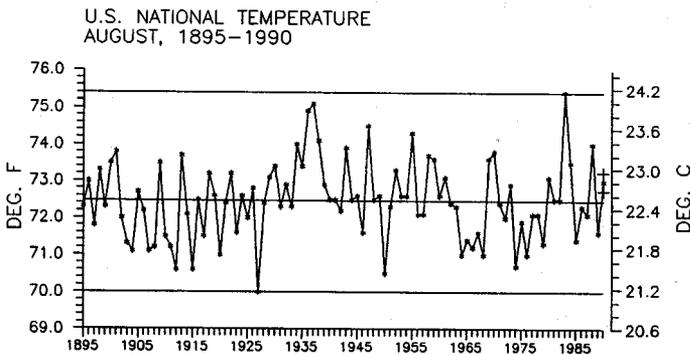


TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR AUGUST 1990, BASED ON THE PERIOD 1895-1990. 1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	90	69
EAST NORTH CENTRAL	51	60
CENTRAL	55	36
SOUTHEAST	37	80
WEST NORTH CENTRAL	50	77
SOUTH	29	43
SOUTHWEST	34	26
NORTHWEST	82	74
WEST	65	62
NATIONAL	43	68

Figure 2

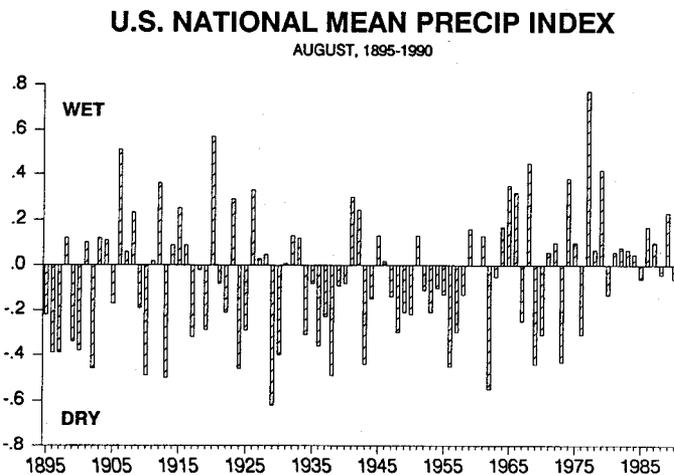
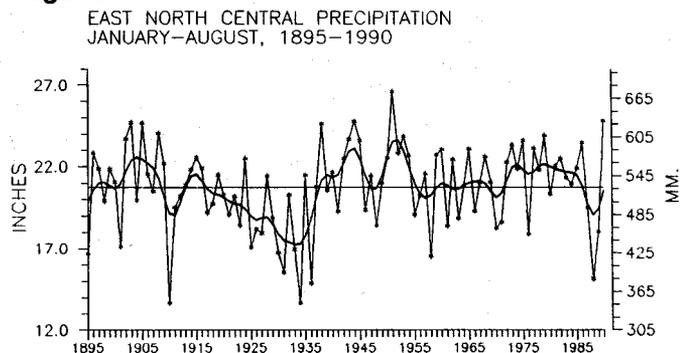
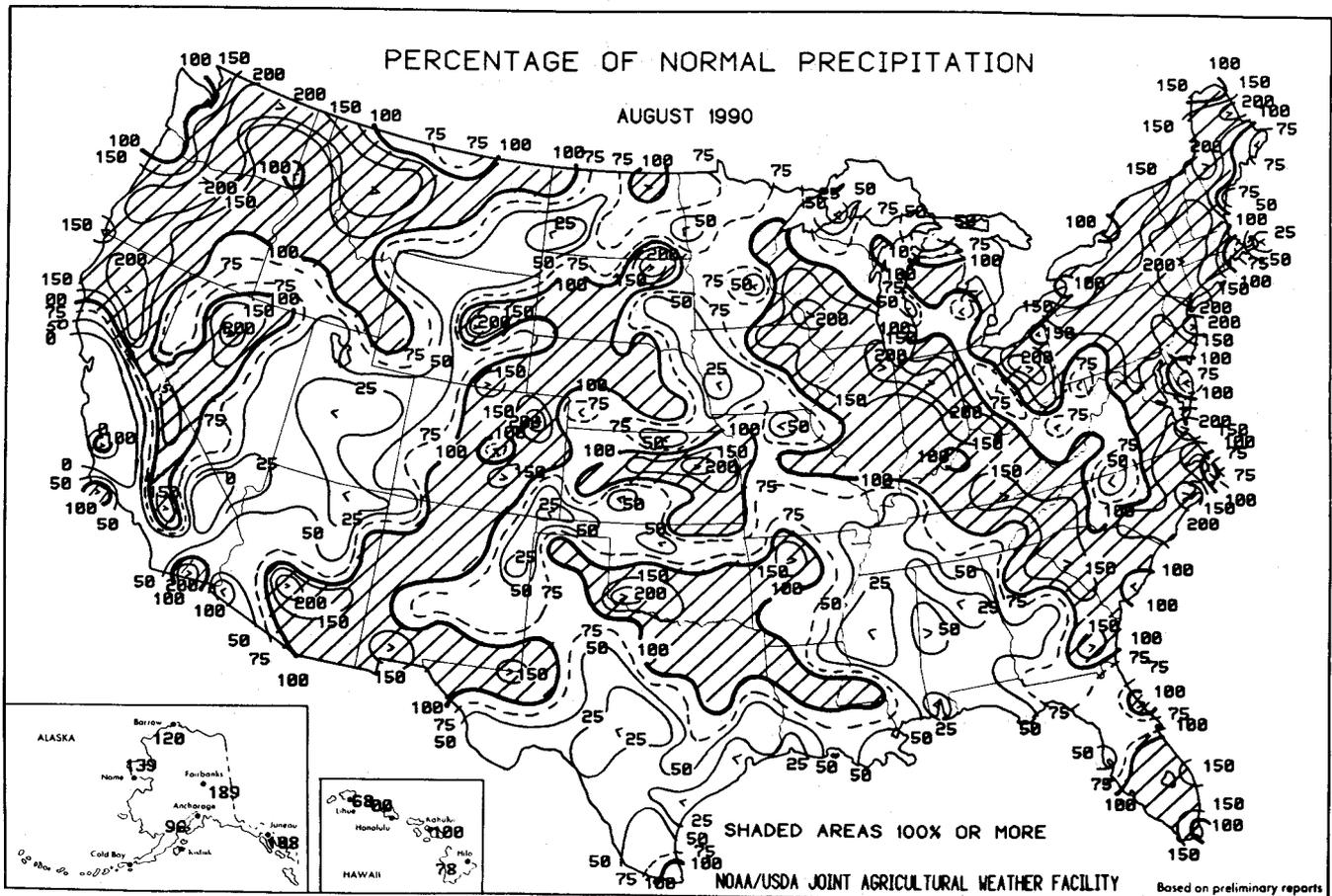
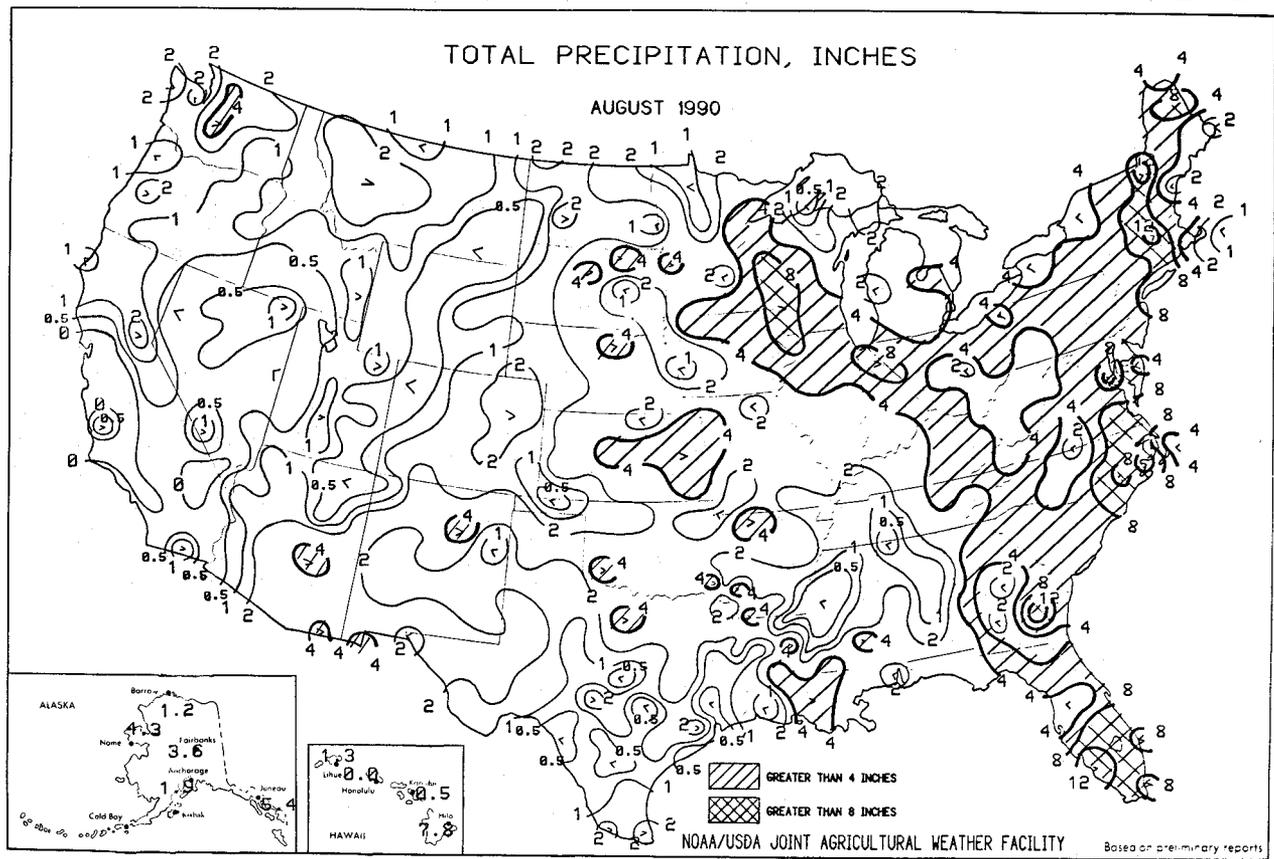
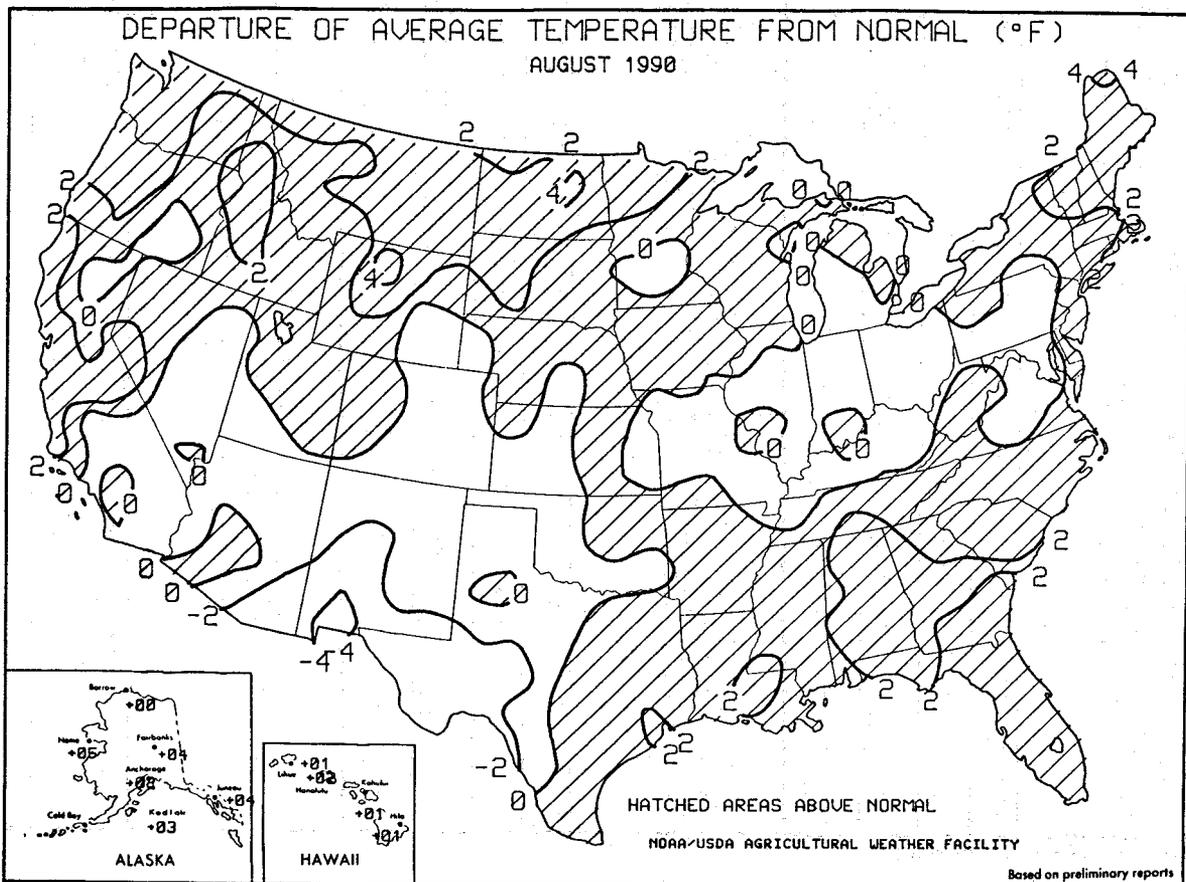
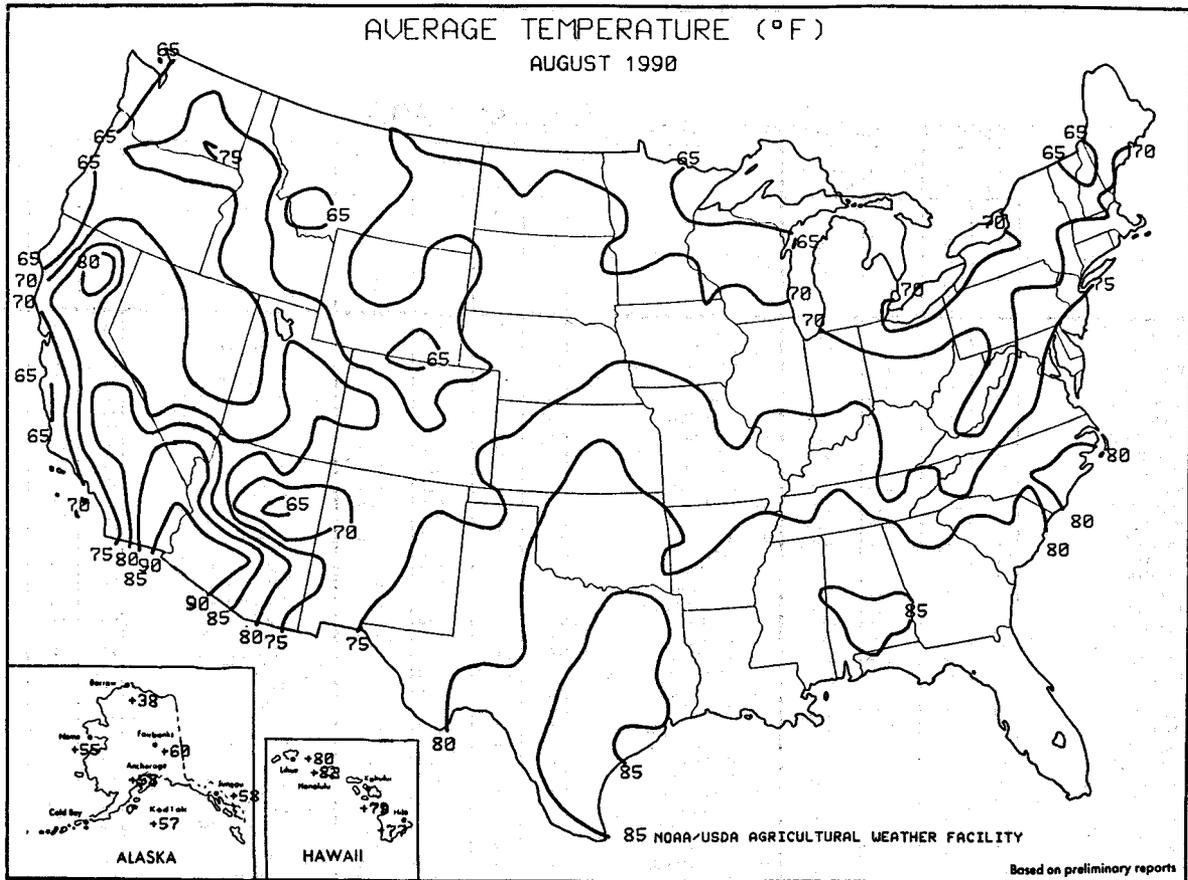


Figure 4







Temperature and Precipitation Data for August 1990

States and Stations		Temperature °F		Precipitation Inches		States and Stations		Temperature °F		Precipitation Inches		States and Stations		Temperature °F		Precipitation Inches		
		Average	Departure	Total	Departure			Average	Departure	Total	Departure			Average	Departure	Total	Departure	
AL	BIRMINGHAM	82	3	0.6	-3.2	LA	PADUCAH	76	-1	1.3	-1.9	DAYTON	72	-1	3.8	0.7		
	HUNTSVILLE	81	3	1.9	-1.2		ALEXANDRIA	84	1	2.5	-1.7		MANSFIELD	69	-2	7.0	3.7	
	MOBILE	83	1	1.5	-5.3		BATON ROUGE	83	2	4.4	-0.7		TOLEDO	70	0	3.3	0.2	
	MONTGOMERY	85	4	0.9	-2.2		LAKE CHARLES	83	1	0.9	-4.5		YOUNGSTOWN	68	-1	3.0	-0.4	
AK	ANCHORAGE	58	2	1.9	-0.2		NEW ORLEANS	83	1	2.4	-3.6	OK	OKLAHOMA CITY	82	0	3.2	0.7	
	BARROW	37	0	1.2	0.2		SHREVEPORT	83	1	2.9	0.4		TULSA	83	2	1.8	-1.2	
	FAIRBANKS	60	4	3.6	1.7	ME	CARIBOU	67	4	3.2	-0.7	OR	ASTORIA	63	2	1.6	0.0	
	JUNEAU	58	3	5.4	0.4		PORTLAND	70	3	1.9	-0.9		BURNS	66	-1	0.7	-0.1	
	KODIAK	57	2	8.1	3.2	MD	BALTIMORE	75	-1	6.2	1.6		MEDFORD	74	2	1.0	0.6	
	NOME	55	5	4.3	1.2		SALISBURY	75	0	3.3	-2.4		PENDLETON	72	0	0.6	0.1	
AZ	FLAGSTAFF	63	-1	1.7	-0.9	MA	BOSTON	73	1	6.6	2.9		PORTLAND	71	4	1.0	-0.2	
	PHOENIX	91	1	2.7	1.7		CHATHAM	70	3	0.9	-3.2		SALEM	69	3	0.8	0.1	
	PRESCOTT	71	1	1.5	-2.0	MI	ALPENA	66	1	2.4	-0.8	PA	ALLENTOWN	72	0	6.5	2.0	
	TUCSON	83	-1	2.7	0.6		DETROIT	71	0	3.8	0.7		ERIE	70	1	6.5	2.5	
	WINSLOW	72	-4	0.5	-0.9		FLINT	69	1	2.4	-1.0		HARRISBURG	73	-2	6.1	2.8	
AR	FORT SMITH	82	1	3.6	0.6		GRAND RAPIDS	69	-1	3.4	0.3		PHILADELPHIA	76	0	4.1	0.0	
	LITTLE ROCK	82	1	3.2	0.2		HOUGHTON LAKE	65	0	3.3	0.3		PITTSBURGH	71	0	3.6	0.3	
CA	BAKERSFIELD	81	-1	T	0.0		LANSING	68	0	2.4	-0.6		SCRANTON	69	-1	5.7	2.2	
	BISHOP	73	-2	0.5	0.4		MARQUETTE	63	1	2.7	-0.6		WILLIAMSPORT	71	0	5.5	2.2	
	EUREKA	60	3	0.7	0.4		MUSKEGON	68	-1	1.2	-1.9	RI	PROVIDENCE	74	2	3.7	-0.3	
	FRESNO	81	2	0.0	0.0		SAULT ST. MARIE	63	-1	2.3	-1.1	SC	CHARLESTON	82	2	6.3	-0.2	
	LOS ANGELES	70	-1	T	-0.1	MN	ALEXANDRIA	69	1	1.9	-1.7		COLUMBIA	82	1	6.5	1.0	
	REDDING	80	-1	1.1	0.6		DULUTH	64	1	5.4	1.3		FLORENCE	82	2	5.8	1.0	
	SACRAMENTO	77	2	0.0	-0.1		INT'L FALLS	66	3	2.2	-0.8		GREENVILLE	78	1	6.2	2.2	
	SAN DIEGO	72	1	T	-0.1		MINNEAPOLIS	71	0	1.7	-1.9	SD	ABERDEEN	71	1	4.9	2.9	
	SAN FRANCISCO	66	3	T	0.0		ROCHESTER	69	2	5.3	1.7		HUNON	73	1	0.7	-1.3	
	STOCKTON	78	1	T	-0.1	MS	ST. CLOUD	67	0	3.4	0.9		RAPID CITY	74	2	1.9	0.4	
CO	ALAMOSA	61	-1	1.3	0.2		GREENWOOD	82	1	0.1	-2.7		SIoux FALLS	73	1	1.2	-1.9	
	CO. SPRINGS	68	-1	1.5	1.1		JACKSON	82	1	0.6	-3.0	TN	BRISTOL	74	0	3.5	0.3	
	DENVER	71	0	2.0	0.4		MERIDIAN	83	2	1.6	-1.8		CHATTANOOGA	80	2	2.3	-1.1	
	GRAND JUNCTION	77	1	0.5	-0.4		TUPELO	81	1	1.0	-1.8		KNOXVILLE	78	1	3.0	0.0	
	PUEBLO	72	-2	0.9	-0.9	MO	CAPE GIRARDEAU	76	-	1.6	-1.9		MEMPHIS	82	1	1.2	-2.5	
CT	BRIDGEPORT	74	1	6.5	2.8		COLUMBIA	75	-1	4.0	0.7	TX	NASHVILLE	80	1	3.1	-0.3	
	HARTFORD	73	2	8.3	4.3		KANSAS CITY	77	-1	5.0	1.2		ABILENE	82	-1	0.8	-1.7	
DC	WASHINGTON	76	-1	6.7	2.4		SAINT LOUIS	78	1	2.8	0.3		AMARILLO	76	-1	2.8	-0.1	
FL	APALACHICOLA	83	2	2.3	-5.2		SPRINGFIELD	77	0	1.5	-1.4		AUSTIN	86	2	0.3	-1.9	
	DAYTONA BEACH	84	1	7.0	0.7	MT	BILLINGS	73	2	0.9	-0.1		BEAUMONT	84	1	1.7	-4.0	
	FT. MYERS	82	1	14.9	6.3		GLASGOW	72	3	1.4	0.1		BROWNSVILLE	85	1	2.9	0.1	
	JACKSONVILLE	83	1	3.8	-4.0		GREAT FALLS	69	1	3.2	1.9		CORPUS CHRISTI	86	1	0.7	-3.0	
	KEY WEST	86	1	8.0	3.3		HAVRE	71	2	0.8	-0.4		DEL RIO	83	-2	0.4	-1.2	
	MIAMI	84	1	11.1	4.1		HELENA	68	3	2.6	1.4		EL PASO	77	-4	2.0	0.8	
	ORLANDO	83	1	3.8	-2.8		KALISPELL	66	2	2.3	0.8		FORT WORTH	85	0	2.4	0.4	
	TALLAHASSEE	83	2	6.8	-0.4		MILES CITY	75	2	0.4	-0.8		GALVESTON	85	2	0.2	-4.1	
	TAMPA	84	2	3.3	-4.4		MISSOULA	66	1	2.6	1.7		HOUSTON	85	2	0.3	-3.7	
	WEST PALM BEACH	84	1	6.6	0.8	NE	GRAND ISLAND	74	0	3.2	0.6		LAREDO	89	1	0.9	-1.8	
GA	ATHEN	80	1	6.2	2.6		LINCOLN	77	1	3.5	0.0		LUBBOCK	78	0	1.9	-0.3	
	ATLANTA	81	2	4.6	1.2		NORFOLK	74	1	2.4	-0.3		MIDLAND	79	-2	2.2	0.6	
	AUGUSTA	82	2	6.5	2.5		NORTH PLATTE	74	2	1.8	-0.1		SAN ANGELO	80	-3	1.0	-0.8	
	MACON	83	2	1.2	-2.4		OMAHA	76	1	0.8	-3.2		SAN ANTONIO	85	1	1.3	-1.4	
	SAVANNAH	82	2	7.2	0.6		SCOTTSBLUFF	71	-1	1.2	0.3		VICTORIA	85	1	1.5	-1.9	
HI	HILO	77	1	7.8	-2.2		VALENTINE	72	0	2.4	-0.1		WACO	87	1	1.0	-0.9	
	HONOLULU	82	2	T	-0.6	NV	ELKO	67	-1	0.6	0.0		WICHITA FALLS	84	0	2.1	0.0	
	KAHULUI	79	0	0.5	0.0		ELY	65	0	0.2	-0.4	UT	BLANDING	-	-	0.8	-0.6	
	LIHUE	80	1	1.3	-0.6		LAS VEGAS	88	0	T	-0.5		CEDAR CITY	71	-1	0.5	-0.7	
ID	BOISE	74	2	0.4	0.0		RENO	71	4	0.2	0.0		SALT LAKE CITY	76	1	0.5	-0.4	
	LEWISTON	76	3	0.7	-0.1	NH	WINNEMUCCA	70	2	1.0	0.6	VT	BURLINGTON	70	3	4.8	1.0	
	POCATELLO	69	0	0.7	0.1		CONCORD	70	2	7.2	3.9	VA	LYNCHBURG	73	-2	3.3	-0.4	
IL	CAIRO	-	-	2.1	-1.9		ATLANTIC CITY	73	0	6.0	1.3		NORFOLK	78	0	11.8	6.5	
	CHICAGO	72	0	7.8	4.3	NM	ALBUQUERQUE	74	-2	1.8	0.3		RICHMOND	76	-1	6.7	1.8	
	MOLINE	74	1	6.4	2.7		CLOVIS	75	-1	1.5	-1.0	WA	ROANOKE	75	-1	4.4	0.5	
	PEORIA	72	-1	5.3	1.9		ROSWELL	78	0	1.2	-1.0		COLVILLE	64	-3	2.4	1.2	
	QUINCY	74	0	2.8	-1.1	NY	ALBANY	71	1	6.7	3.3		QUILLAYUTE	62	3	2.3	-0.6	
	ROCKFORD	71	0	6.7	3.0		BINGHAMTON	67	-1	5.6	2.2		SEATTLE-TACOMA	67	4	0.7	-0.5	
	SPRINGFIELD	74	0	2.7	-0.7		BUFFALO	70	1	3.2	-0.9		SPOKANE	69	1	1.0	0.3	
IN	EVANSVILLE	76	0	3.5	0.4		WALLA WALLA	76	1	10.3	6.0		WY	WYOMING	-	-	0.9	0.2
	FORT WAYNE	70	-2	6.8	3.5		YAKIMA	70	0	3.6	0.4		BECKLEY	70	1	3.5	-0.2	
	INDIANAPOLIS	73	-1	4.5	1.0	NC	CHARLESTON	74	1	7.8	3.4		CHARLESTON	74	0	2.5	-1.6	
	SOUTH BEND	70	-1	4.6	0.7		ELKINS	80	2	3.5	-0.2		ELKINS	70	2	3.3	-0.9	
IA	DES MOINES	74	1	1.8	-2.3		HUNTINGTON	77	1	2.0	-2.2		HUNTINGTON	74	-1	3.7	-0.1	
	DUBUQUE	71	1	8.0	3.5		PARKERSBURG	80	1	3.2	-2.9		PARKERSBURG	72	-2	7.0	3.4	
	SIoux CITY	74	0	1.3	-1.8		GREEN BAY	80	1	10.4	4.1	WI	GREEN BAY	68	0	2.5	-0.6	
	WATERLOO	72	1	5.2	1.6		LA CROSSE	78	1	2.6	-1.8		LA CROSSE	72	1	8.1	4.4	
KS	CONCORDIA	79	1	1.5	-1.9		MADISON	80	0	11.4	4.8		MADISON	70	1	6.0	2.2	
	DODGE CITY	79	0	1.2	-1.3	ND	MILWAUKEE	72	3	1.4	-0.3		MILWAUKEE	71	2	4.7	1.6	
	GOODLAND	74	1	2.0	0.0		WAUSAU	71	2	1.0	-1.7		WAUSAU	67	0	4.5	0.4	
	TOPEKA	76	-1	5.7	2.0		CASPER	70	3	2.3	-0.3		CASPER	69	0	1.9	1.3	
	WICHITA	81	1	2.0	-0.8		CHIEYENNE	71	3	1.7	0.3		CHIEYENNE	66	0	2.0	0.6	
KY	BOWLING GREEN	76	-1	3.4	0.0	OH	AKRON-CANTON	69	-1	6.3	3.0		LANDER	71	2	0.4	-0.1	
	JACKSON	73	1	4.2	0.6		CINCINNATI	74	-1	5.7	2.7		SHERIDAN	70	2	0.5	-0.5	
	LEXINGTON	74	-1	4.4	0.4		CLEVELAND	70	-1	4.8	1.4	PR	SAN JUAN	83	1	3.4	-2.	

The Summer of 1990 in Historical Perspective

Temperatures for the summer of 1990 averaged across the contiguous United States were above the long-term mean and ranked as the 15th warmest on record (fig. 1). The filtered curve, showing the long-term variations, reached unusually warm levels, rivaling the summer warmth of the 1950's but well short of the extreme heat of the 1930's. The national precipitation index ranked the summer as the 49th driest on record (fig. 2).

The temperature and precipitation rankings for the nine climatically homogeneous regions in the United States are listed in table 1. Unusual warmth prevailed across the country except in the Central and East North Central regions, which were near normal. The precipitation pattern showed dry conditions in the Southeast and South regions, while the Northeast, East North Central, and Northeast regions were in the wettest third of the historical distribution.

Six States (all in the South or Southeast) had the 10th driest or drier summer on record in 1990, while another six in the Midwest (plus Washington) had the 10th wettest or wetter summer in 1990 (table 2). Delaware, Florida, and Maine had the 10th warmest or warmer summer in 1990, with Florida ranking as the warmest of record (table 3). The lower Mississippi and south Atlantic-Gulf river basins had the fifth driest summer on record, while the upper Mississippi basin had the fourth wettest summer (table 4).

There were 592 tornadoes across the contiguous United States this summer. This is a record number (fig. 3) and compares with a 38-year mean of 298 tornadoes. The high total is due to unusually high tornado activity in June.

Figure 1

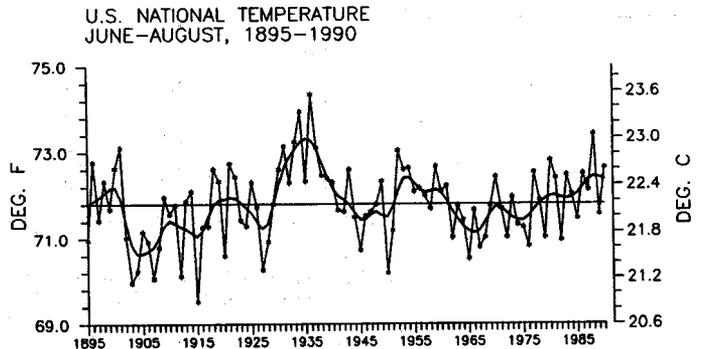


Figure 2

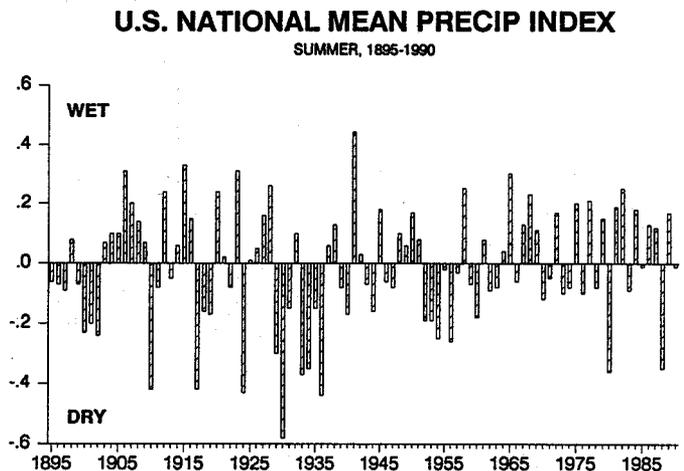


Figure 3
TOTAL NUMBER OF TORNADES, U.S.

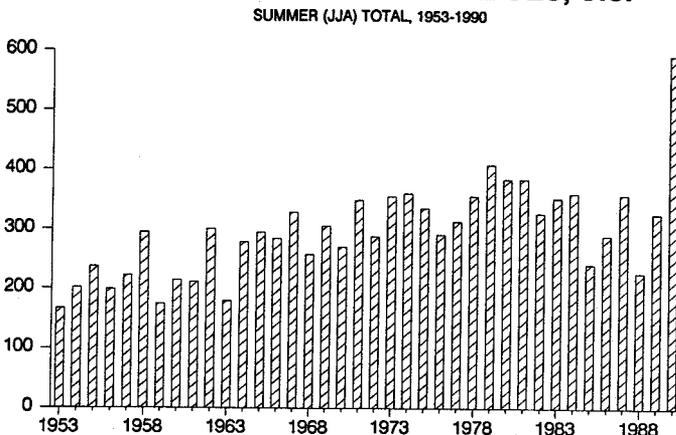


TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR JUNE-AUGUST 1990, BASED ON THE PERIOD 1895-1990. 1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	77	69
EAST NORTH CENTRAL	91	46
CENTRAL	65	40
SOUTHEAST	7	81
WEST NORTH CENTRAL	42	72
SOUTH	18	75
SOUTHWEST	50	81
NORTHWEST	80	83
WEST	56	83
NATIONAL	29	82

TABLE 2. PRECIPITATION RANKINGS FOR JUNE-AUGUST 1990, BASED ON THE PERIOD 1895 TO 1990. 1 = DRIEST, 96 = WETTEST.

STATE	RANK	STATE	RANK	STATE	RANK	STATE	RANK
AL	6	IA	95	NE	42	RI	60
AZ	60	KS	48	NV	53	SC	5
AR	12	KY	38	NH	84	SD	73
CA	60	LA	5	NJ	69	TN	14
CO	48	ME	62	NM	54	TX	43
CT	80	MD	57	NY	73	UT	41
DE	45	MA	71	NC	5	VT	83
FL	22	MI	54	ND	56	VA	30
GA	4	MN	74	OH	89	WA	90
ID	60	MS	6	OK	30	WV	49
IL	90	MO	42	OR	63	WI	92
IN	87	MT	28	PA	78	WY	37

TABLE 3. TEMPERATURE RANKINGS FOR JUNE-AUGUST 1990, BASED ON THE PERIOD 1895 TO 1990. 1 = COLDEST, 96 = WARMEST.

STATE	RANK	STATE	RANK	STATE	RANK	STATE	RANK
AL	72	IA	46	NE	51	RI	84
AZ	82	KS	71	NV	76	SC	78
AR	66	KY	37	NH	71	SD	56
CA	85	LA	85	NJ	82	TN	63
CO	72	ME	87	NM	68	TX	66
CT	79	MD	68	NY	49	UT	83
DE	90	MA	56	NC	84	VT	86
FL	96	MI	33	ND	77	VA	59
GA	81	MN	66	OH	26	WA	84
ID	76	MS	75	OK	77	WV	38
IL	39	MO	49	OR	80	WI	46
IN	29	MT	72	PA	42	WY	78

TABLE 4. STATISTICS FOR SELECTED RIVER BASINS: PRECIPITATION RANKING FOR JUNE-AUGUST 1990, WHERE RANK OF 1 = DRIEST, 96 = WETTEST, BASED ON THE PERIOD 1895 TO 1990. RIVER BASIN REGIONS AS DEFINED BY THE U.S. WATER RESOURCES COUNCIL.

RIVER BASIN	PRECIPITATION RANK
MISSOURI BASIN	47
PACIFIC NORTHWEST BASIN	78
CALIFORNIA RIVER BASIN	60
GREAT BASIN	45
UPPER COLORADO BASIN	39
LOWER COLORADO BASIN	60
RIO GRANDE BASIN	72
ARKANSAS-WHITE-RED BASIN	22
TEXAS GULF COAST BASIN	33
SOURIS-RED-RAINY BASIN	51
UPPER MISSISSIPPI BASIN	93
LOWER MISSISSIPPI BASIN	5
GREAT LAKES BASIN	76
OHIO RIVER BASIN	69
TENNESSEE RIVER BASIN	17
NEW ENGLAND BASIN	76
MID-ATLANTIC BASIN	62
SOUTH ATLANTIC-GULF BASIN	5

National Agricultural Summary

September 3-9, 1990

HIGHLIGHTS: Spring wheat harvest was almost complete. Winter wheat seedings slowed due to inadequate moisture. Moisture was very short to short in most of the Southeast and western Corn Belt, causing deteriorating crop and pasture conditions. Insect problems were increasing in the Southeast. Soil moisture was adequate in the Northeast and the central and northern Corn Belt. Temperatures were reported above normal in most areas, except the Northeast.

SMALL GRAINS: Winter wheat seeding was 7 percent (%) complete, 2 percentage points behind the 5-year average. Winter wheat seeding continued in areas with adequate moisture. Nebraska and Colorado seeding lagged behind the average due to lack of moisture. Spring wheat harvest was virtually complete in the five major producing States with 96% harvested, 6 points above the average. South Dakota reported 100% harvest, 2 points above normal.

CORN: Corn was in mostly good to fair condition. Ninety-three percent was in the dough stage or beyond, 4 points behind normal. Sixty-five percent was dented, 20 points behind normal. Corn maturity was 17%, compared with 43% of average. Conditions deteriorated in the western Corn Belt due to lack of moisture. Corn condition was good to excellent in Illinois and Iowa, with Nebraska mostly good to fair. Crop maturity lagged furthest behind in Illinois, Indiana, and Missouri.

SOYBEANS: Soybeans were mostly good to fair in the 19 major producing States. Podding was 96% complete, equal to the average. Eleven percent of the crop has dropped leaves, compared with 22% of average. Percentage dropping leaves lagged more than 20 points behind normal in Illinois, Indiana, and Iowa. Soybean crop condition continued to decline in the Southeast and Delta areas. Alabama, Mississippi, and Georgia reported poor to fair conditions. Louisiana and Georgia reported increased pressure from insects. Conditions in the central Great Plains were also deteriorating.

COTTON: Cotton continued to be good to fair. Forty-five percent have bolls opening, equal to the average. Boll opening in Arkansas is 23 points behind normal, with Georgia boll opening 26 points above the average. Lack of moisture in Missouri and the Texas Plains hindered crop development. The harvest continues in south Texas, the Delta, and southwestern Arizona. California reports harvest beginning in Riverside County, and defoliation is underway in the San Joaquin Valley.

SORGHUM: Sorghum was fair to good, with Nebraska and Kansas conditions deteriorating slightly. Crop condition deteriorated slightly in the central Great Plains. Thirty-two percent of the crop was mature, 2 points below normal. Texas reports rapid drying and some dryland fields wilted.

OTHER FIELD CROPS: Rice harvest was 29% complete, 6 points behind normal. In Arkansas, harvest was 2% complete, 16 points behind normal. Peanut harvest continued in Alabama, Georgia, and Texas and was underway in South Carolina. In North Carolina, peanuts were in good to fair condition. Tobacco harvest continued in Kentucky and Tennessee. Condition of the housed crop was good in Kentucky. Tobacco harvest was nearly half finished in North Carolina and was nearly complete in Georgia. Sugarcane planting continued in Louisiana.

FRUIT AND NUTS: Florida's citrus groves were in good to excellent condition. Fruit continued to size well but rain was needed. Robinson tangerine harvest was underway. Pecans were in fair to poor condition in Georgia. Lemon and raisin harvests were active in Arizona. Pistachio harvest was complete. Desert lemon harvest began in Riverside County, CA. Almond and pistachio harvests continued and some early variety walnuts were harvested. In Oregon, Bartlett pear harvest was complete in the Hood River and Willamette Valleys and in the Medford area. Apple and pear harvests continued in Washington, while peach and plum harvests were active in Idaho and continued in New England.

VEGETABLES: Vegetable planting continued in Florida. Crops being planted included snap beans, celery, carrots, cucumbers, and radishes. Sweet potato harvest continued in Louisiana and Mississippi. In Texas, rain slowed land preparation for fall plantings in the Rio Grande Valley. High temperatures damaged vegetable crops in east Texas. In the High Plains, cucumber and pepper harvests continued. Mixed melon harvests were active in Arizona. Broccoli supplies were moderate in California. Cauliflower and celery supplies were heavy. Snap bean harvest was nearly complete in Oregon. Potato harvest continued in Oregon, Washington, and Idaho. In Colorado, summer potato harvest was 60% complete and potato harvest was underway. North Dakota's potatoes were in fair to poor condition with harvest 12% complete, 5 points behind normal.

PASTURES AND LIVESTOCK: Above-normal temperatures and high humidity stressed livestock in the Corn Belt and Great Plains. Lack of moisture lowered pasture and range conditions. Pastures were in poor condition in portions of the Delta. In the northern Great Plains, pastures were poor to fair. In the Corn Belt, pastures were mostly good.

Crop Progress

FOR WEEK ENDING SEPTEMBER 9, 1990

RICE
% HARVESTED

	1990	1989	AVG.
AR	2	6	18
CA	0	0	0
LA	81	69	73
MS	23	7	26
TX	86	85	89
5 STATES	29	27	35

THESE 5 STATES PRODUCED 97% OF THE 1989 RICE CROP.

RICE
% HEADED

	1990	1989	AVG.
AR	95	97	98
CA	95	100	96
LA	99	100	100
MS	100	100	100
TX	100	100	100
5 STATES	97	99	99

THESE 5 STATES PRODUCED 97% OF THE 1989 RICE CROP.

SPRING WHEAT
% HARVESTED

	1990	1989	AVG.
ID	83	92	89
MN	99	98	88
MT	91	75	86
ND	98	99	90
SD	100	100	98
5 STATES	96	94	90

THESE 5 STATES PRODUCED 89% OF THE 1989 SPRING WHEAT CROP.

SOYBEANS
% SETTING PODS

	1990	1989	AVG.
AL	85	89	87
AR	87	84	86
GA	87	93	96
IL	99	100	100
IN	100	100	100
IA	100	100	100
KS	99	95	96
KY	80	85	85
LA	99	93	95
MI	95	95	98
MN	99	99	99
MS	90	76	85
MO	94	99	99
NE	100	100	100
NC	84	79	80
OH	97	95	100
SC	76	77	78
SD	100	100	100
TN	90	92	94
19 STATES	96	95	96

THESE 19 STATES PRODUCED 95% OF THE 1989 SOYBEANS CROP.

SOYBEANS
% DROPPING LEAVES

	1990	1989	AVG.
AL	14	13	10
AR	1	2	4
GA	17	8	12
IL	5	15	32
IN	5	7	30
IA	5	16	26
KS	20	15	25
KY	11	11	16
LA	15	8	8
MI	2	3	10
MN	39	35	38
MS	16	10	12
MO	2	6	12
NE	12	13	17
NC	5	0	0
OH	6	3	22
SC	0	1	2
SD	37	46	36
TN	14	12	15
19 STATES	11	13	22

THESE 19 STATES PRODUCED 95% OF THE 1989 SOYBEANS CROP.

WINTER WHEAT
% PLANTED

	1990	1989	AVG.
AR	0	0	0
CA	4	5	6
CO	18	21	33
GA	1	0	1
ID	4	5	6
IL	0	0	0
IN	0	0	0
KS	0	1	5
MI	0	0	0
MO	0	0	0
MT	8	9	8
NE	9	10	19
NC	0	0	0
OH	0	0	0
OK	10	5	5
OR	1	2	1
SD	23	22	25
TX	14	14	15
WA	20	19	28
19 STATES	7	7	9

THESE 19 STATES PRODUCED 91% OF THE 1990 WINTER WHEAT CROP.

CORN
% DOUGH

	1990	1989	AVG.
CO	89	92	95
GA	100	100	100
IL	91	100	100
IN	100	100	100
IA	98	100	100
KS	100	98	99
KY	99	100	100
MI	56	85	90
MN	96	99	98
MO	94	100	100
NE	99	99	100
NC	100	100	100
OH	90	94	97
PA	76	65	86
SD	92	97	86
TX	100	100	100
WI	69	80	87
17 STATES	93	97	97

THESE 17 STATES PRODUCED 95% OF THE 1989 CORN CROP.

CORN
% DENT

	1990	1989	AVG.
CO	63	64	73
GA	100	100	100
IL	68	84	94
IN	57	78	91
IA	72	91	89
KS	85	80	85
KY	75	90	95
MI	20	40	55
MN	59	78	83
MO	77	93	97
NE	80	87	87
NC	92	85	96
OH	45	44	80
PA	29	23	50
SD	63	77	65
TX	100	100	100
WI	32	54	66
17 STATES	65	79	85

THESE 17 STATES PRODUCED 95% OF THE 1989 CORN CROP.

CORN
% MATURE

	1990	1989	AVG.
CO	27	36	30
GA	99	98	100
IL	10	26	52
IN	9	16	48
IA	20	32	51
KS	45	40	55
KY	25	49	57
MI	0	0	10
MN	10	31	35
MO	28	49	72
NE	12	20	28
NC	90	76	84
OH	2	2	25
PA	3	2	9
SD	17	27	27
TX	84	71	80
WI	5	9	25
17 STATES	17	27	43

THESE 17 STATES PRODUCED 95% OF THE 1989 CORN CROP.

COTTON
% BOLLS OPENING

	1990	1989	AVG.
AL	60	24	53
AZ	98	82	78
AR	32	17	55
CA	60	70	73
GA	70	25	44
LA	93	46	73
MS	76	29	69
MO	32	25	46
NM	40	70	54
NC	45	24	56
OK	5	3	15
SC	57	21	46
TN	48	22	50
TX	26	26	25

14 STATES 45 33 45

THESE 14 STATES PRODUCED 99% OF THE 1989 COTTON CROP.

GRAIN SORGHUM
% MATURE

	1990	1989	AVG.
AR	34	58	NA
CO	9	18	9
IL	4	19	NA
KS	5	5	15
LA	86	80	86
MS	72	55	77
MO	16	36	45
NE	9	12	20
NM	0	NA	NA
OK	3	10	15
SD	12	29	17
TX	83	68	66

12 STATES 31 NA NA

EXCL. STATES WITH NA 32 30 34

THESE 12 STATES PRODUCED 98% OF THE 1989 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

GRAIN SORGHUM
% COLORING

	1990	1989	AVG.
AR	76	88	NA
CO	60	44	54
IL	37	78	NA
KS	55	35	55
LA	95	96	97
MS	89	88	93
MO	45	77	84
NE	75	67	77
NM	40	NA	NA
OK	55	90	80
SD	69	78	66
TX	85	74	82

12 STATES 67 NA NA

EXCL. STATES WITH NA 68 59 70

THESE 12 STATES PRODUCED 98% OF THE 1989 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

Crop Condition
PERCENT

FOR WEEK ENDING SEPTEMBER 9, 1990

CORN

STATE	VP	P	F	G	EX
CO	0	3	14	63	20
GA	13	39	31	11	6
IL	0	3	10	63	24
IN	0	0	21	71	8
IA	0	0	5	77	18
KS	0	2	23	46	29
KY	7	5	46	39	3
MI	0	0	20	45	35
MN	0	7	28	54	11
MO	0	3	39	57	1
NE	2	8	25	55	10
NC	6	35	40	19	0
OH	2	7	26	52	13
PA	0	4	19	51	26
SD	1	7	31	49	12
TX	0	3	30	58	9
WI	0	1	9	81	9
17 STATE	1	4	19	61	15
PREV WEEK	1	4	16	63	16
PREV YEAR	2	7	26	52	13

GRAIN SORGHUM

STATE	VP	P	F	G	EX
AR	0	10	65	25	0
CO	4	7	23	57	9
IL	0	12	60	24	4
KS	0	7	40	43	10
LA	0	13	31	56	0
MS	0	0	63	36	1
MO	3	11	51	31	4
NE	1	13	44	40	2
NM	0	5	23	67	5
OK	0	1	15	84	0
SD	13	11	15	55	6
TX	0	7	49	41	3
12 STATE	1	8	42	44	5
PREV WEEK	0	5	35	54	6
PREV YEAR	1	10	36	40	13

SOYBEANS

STATE	VP	P	F	G	EX
AL	19	52	28	1	0
AR	7	23	57	13	0
GA	26	43	29	2	0
IL	0	4	22	61	13
IN	0	0	30	65	5
IA	0	2	20	69	9
KS	0	3	38	56	3
KY	6	17	46	30	1
LA	4	14	55	24	3
MI	0	5	15	50	30
MN	2	6	39	43	10
MS	22	45	20	13	0
MO	1	6	66	25	2
NE	0	20	48	32	0
NC	0	11	44	44	1
OH	2	8	29	48	13
SC	0	5	62	33	0
SD	2	4	34	51	9
TN	15	35	45	5	0
19 STATE	3	10	35	45	7
PREV WEEK	2	8	32	51	7
PREV YEAR	1	7	38	47	7

RICE

STATE	VP	P	F	G	EX
AR	0	0	39	61	0
CA	0	0	15	75	10
LA	0	0	22	78	0
MS	0	2	67	26	5
TX	0	0	37	63	0
5 STATE	0	0	34	64	2
PREV WEEK	0	0	33	65	2
PREV YEAR	0	0	28	65	7

COTTON

STATE	VP	P	F	G	EX
AL	2	40	58	0	0
AZ	0	0	25	75	0
AR	0	6	37	57	0
CA	0	0	10	85	5
GA	21	38	26	15	0
LA	0	18	36	46	0
MS	6	10	57	27	0
MO	0	7	86	7	0
NM	0	7	27	66	0
NC	0	2	32	59	7
OK	0	0	20	70	10
SC	1	52	46	1	0
TN	7	33	48	8	4
TX	0	4	40	52	4
14 STATE	2	9	38	48	3
PREV WEEK	2	7	34	52	5
PREV YEAR	0	6	52	38	4

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 under 0.25 in.; near 2.00 in. local areas. Temperatures 3 to 6° above normal; 8 to 10° above normal north.

Days suitable for fieldwork 6.8. Soil moisture 84% very short, 16% short. Drought conditions continue to stress crops, livestock, poultry. Corn 95% mature, 95% 1989, 97% avg.; 53% harvested, 52% 1989, 60% avg.; 10% very poor, 20% poor, 45% fair, 19% good, 6% excellent. Sorghum 30% harvested, 45% 1989, 36% avg.; 6% very poor, 35% poor, 56% fair, 3% good. Cotton 60% bolls opened, 24% 1989, 53% avg.; 6% harvested, 1% 1989, 3% avg.; 2% very poor, 40% poor, 58% fair. Peanuts 27% dug, 29% 1989, 14% avg.; 13% combined, 14% 1989, 7% avg.; 14% very poor, 85% poor, 1% fair. Soybeans 96% blooming, 89% 1989, 95% avg.; 85% setting pods, 80% 1989, 87% avg.; 24% turning color, 22% 1989, 22% avg.; 14% dropping leaves, 13% 1989, 10% avg.; 19% very poor, 52% poor, 28% fair, 1% good. Winter wheat seeding begun few areas. Pastures 41% very poor, 49% poor, 10% fair. Livestock 9% very poor, 12% poor, 67% fair, 12% good. Primary activities: Harvesting corn, sorghum, peanuts; controlling pests in soybeans; defoliating, harvesting cotton; providing supplemental feed, water to cattle; routine care of livestock, poultry, catfish.

ALASKA: Heavy rain was general throughout the Railbelt. Highs 1° below normal at Fairbanks to 6° above normal at Palmer, Wasilla. Lows were cooler than normal, 9° below normal at Fairbanks, PMC Butte, Kenny Lake to 1° below normal at Kerai. Seasonal precipitation 1.86 in. Drier than normal at PMC Butte to 5.04 in. wetter than normal at Fairbanks.

Days suitable for hay, grain harvest 1.0. Topsoil 62% adequate, 38% surplus. Subsoil 2% short, 88% adequate, 10% surplus. Barley 40% harvest, 10% swathed, 50% ripe; 2nd crop hay harvest delayed due to rain. Commercial potatoes digging 30% complete versus 15% 1989.

ARIZONA: Thunderstorms east 2nd, spreading across State 3rd; heavy rain, damaging winds, severe flooding central, northwest, north central; tornado north Phoenix; monsoon activity tapered off 6th; mostly sunny 7th, 8th; temperatures 2° below to 3° above normal. Extremes 62°; 113° deserts, 46°; 96° higher elevations; precipitation from traces southwest to 3.60 in. central.

Cotton 98% bolls opening, 82% 1989, 78% avg.; early harvesting continued southwest, underway central; defoliation activity mostly light, moderate southwest; crop 75% good, 25% fair. Alfalfa hay mostly good; harvest activity moderate; scattered lost, damaged hay central, west; field corn good; lemon harvest, fall vegetable planting active west; raisin shipping, mixed melon harvest continued central; apple harvest remained active east; mixed vegetable harvest continued; pistachio harvest completed.

ARKANSAS: Continued hot, dry first part of week. Cooler with scattered thundershowers weekend. Extremes 62°; 105°. Rainfall none to 3.34 in.

Days suitable for fieldwork 7.0. Soil moisture 98% short, 2% adequate. Main activities: Harvesting corn, rice, sorghum; irrigating cotton, soybeans; draining rice fields; controlling worms; feeding hay to livestock; culling cows; baling hay; preparing harvest equipment. Corn 40% harvested,

68% 1989, 74% avg.; 39% fair, 61% good. Soybeans 95% blooming, 97% 1989, 98% avg.; 6% yellowing, 7% 1989, 12% avg.; 7% very poor, 23% poor, 57% fair, 13% good. Sorghum 11% harvested, 25% 1989, 46% avg.; 10% poor, 65% fair, 25% good. Defoliants sprayed on cotton. Rice yields good. Early Group IV soybeans being harvested. Desiccants sprayed on sorghum, good yields reported. Corn yields good. Pecan potentials down. Pasture 27% very poor, 57% poor, 16% fair. Poultry heat stress, higher mortality most flocks. Milk production down due to high temperatures.

CALIFORNIA: Low pressure trough off west coast brought cooling early in week, strong high pressure building northwestward warmed temperatures throughout State. Only rain recorded was in southeast portion of State, result of subtropical moisture surging northward around high producing thundershower activity.

Field activities progressed, open weather. Rice heading near complete, harvest started Merced County. Cotton harvest began Riverside County, defoliation started San Joaquin Valley. Crop stress evident, lack of water. Alfalfa seed harvest winding down. Safflower, sugarbeet, corn for silage, grain harvests ongoing. Alfalfa hay treated, armyworms. Field preparation, fall seeded crops continued. Picking, packing apple crop continued. Medjool date harvest began, other soft varieties will follow. Avocado, fig harvest ongoing. Table, Wine Grapes packed, shipped. Growers treated vineyards; control leafhoppers, bunch rot. Raisin lay began to wind down, rolling continued. Hosui, Shinsiki Asian pears, Early Foothill pomegranates harvested, packed. Harvested late variety peaches, plums, nectarines. Desert lemon harvest began, Riverside. Western county grapefruit, valencia orange harvest continued, low volume. Almond, pistachio harvests progressed. Picking of early variety walnuts began some orchards treated for codling moth, husk fly. Broccoli moderate supply, generally good quality. Cauliflower heavy supply, variable quality. Celery heavy supply, generally good quality. Sweet corn harvest continued. Iceberg head lettuce moderate supply, variable quality, reduced yields. Tomato harvest continued. Desert melon, squash fields blooming. Livestock good, statewide. Range fair in northern third of State. Pasture poor central, southern counties with supplemental feeding required. Water supplies short. Some fall calving has started.

COLORADO: Above normal temperatures over the entire State during the week with numerous showers, thunderstorms at mid week, some locally heavy. Precipitation a trace to 1.01 in. Temperatures 3 to 13° above normal.

Days suitable for fieldwork 6.1. Soil moisture 9% very short, 46% short, 43% adequate, 2% surplus. Most small grains harvest nearing completion. Dry beans 32% cut, 20% threshed. Corn 89% in or past the dough State, 63% dented, 27% mature, silage harvest 20% complete. Sorghum 91% headed, 60% turning color, 9% mature. Onions 63% harvested. Summer potatoes 60% harvested. Fall potatoes 2% harvested. Winter wheat 18% seeded. Pasture, range feed 2% very poor, 11% poor, 33% fair, 43% good, 11% excellent. Livestock mostly good to excellent.

FLORIDA: Warmer, drier than normal. Temperatures 3 to 5° above normal, Panhandle; 1 to 3° above, elsewhere. Maximum temperatures as hot as upper 90s over northern, interior areas central areas. Elsewhere, hottest temperatures generally low or mid 90s. Coolest readings mostly mid 60s to low 70s; few low 60s north. Rainfall very spotty; many locations none. Isolated rain totals of 1.00 to 2.00 in. did occur, however. Heaviest rain for week totaled 2.73 in. Stuart.

Soil moisture continued short Panhandle; short to adequate central, northern Peninsula; adequate to surplus southern Peninsula. Peanut harvest active; corn harvest, haying steady. Sugarcane planting underway. Sugarcane good progress. Pastures 6% poor, 25% fair, 50% good, 19% excellent. Panhandle, northern Peninsula cattle good; elsewhere, good to excellent. Citrus groves good to excellent; only light, scattered rains, however. Low volume irrigation increased. Early bloom fruit good progress. About 50 packing houses moving early fruit. Fresh shipments Robinson Tangerines earliest ever. Caretakers mowing, disking, spraying, fertilizing. Daytime temperatures continued hot over vegetable producing areas. Showers limited. Irrigation active. Planting southern areas gaining momentum. Crops planted included snap beans, celery, cabbage, carrots, cucumbers, eggplant, peppers, radishes, squash, sweet corn, tomatoes.

GEORGIA: Warm, humid week. Temperatures 3 to 7° above normal. Extreme highs mid 90s northeast to 100° elsewhere. Coolest lows upper 50s northeast to mid 60s elsewhere. Showers most numerous north. Totals under 0.30 in., isolated spots north, south over 1.00 in.

Days suitable for fieldwork 6.5. Soil moisture 45% very short, 43% short, 12% adequate. Corn 82% harvested for grain, 64% 1989, 75% avg. Cotton 13% harvested, 3% avg.; harvest active. Sorghum 5% very poor, 40% poor, 47% fair, 8% good; 27% harvested for grain, 31% 1989, 26% avg. Peanuts 22% very poor, 34% poor, 40% fair, 4% good; 22% dug, 27% 1989, 23% avg.; 11% threshed, 11% 1989, 12% avg. Soybeans 98% blooming, 97% 1989, 99% avg.; increased insect pressure. Tobacco 11% poor, 47% fair, 42% good; 96% harvested, 100% 1989, 97% avg. Wheat 1% planted, 1% avg. Rye 2% planted, 2% 1989, 2% avg. Other small grains 1% planted, 1% 1989, 1% avg. Apples 1% very poor, 7% poor, 3% fair, 89% good; harvest halfway completed. Pecans 5% very poor, 40% poor, 55% fair. Hay 7% very poor, 23% poor, 53% fair, 16% good, 1% excellent. Pasture 6% very poor, 28% poor, 43% fair, 22% good, 1% excellent. Cattle, hogs fair to good. Main activities: Planting small grains, harvesting apples, tobacco, hay and silage, mowing pastures, limited insect control on cotton, soybeans, peanuts.

HAWAII: General cooling as week progressed. High 90s early in week replaced by upper 80s over weekend. Rainfall light to moderate mainly overnight. Winds strengthened to 10 to 20 mph. Temperatures low 70s to low 90s. Rainfall none to 4.40 in.

Days suitable for farm work 7.0. Irrigation remained heavy in most areas. Most vegetable crops experiencing low yields due to hot weather. Banana production to increase seasonally. Papaya production steady. Sugarcane harvesting active.

IDAHO: Temperatures up to 12° above normal. Precipitation above normal south central, east.

Days suitable for fieldwork 7.0. Soil moisture 24% very short, 26% short, 49% adequate, 1% surplus. Winter wheat 100% harvested, 97% 1989, 97% avg.; 4% planted. Spring wheat 83% harvested, 92% 1989, 89% avg. Spring barley 88% harvested,

90% 1989, 86% avg. Potatoes 11% harvested, 10% 1989, 6% avg. Oats 80% harvested, 78% 1989, 83% avg. Alfalfa 2nd cutting, 92% harvested, 97% 1989, 95% avg; 3rd cutting 39% harvested, 40% 1989, 30% avg. Dry beans 19% harvested, 30% 1989, 28% avg. Onions 40% harvested, 28% 1989, 32% avg. Sweet corn for processing 79% harvested. Hops 19% harvested. Peaches 92% harvested, 89% 1989, 87% avg. Plums 88% harvested, 75% 1989, 50% avg. Apple harvest began southwest. Moving cattle east. Range, pasture 11% very poor, 21% poor, 39% fair, 28% good, 1% excellent.

ILLINOIS: Temperatures 6 to 10° above normal across State. Precipitation little or none north, scattered showers central, south 0.50 to 1.40 in.

Days suitable for fieldwork 6.50. Soil moisture 41% short, 58% adequate, 1% surplus. Soybeans turning yellow 18%, 48% 1989, 61% avg. Sorghum headed 89%, 100% 1989. Alfalfa 2% poor, 23% fair, 61% good, 14% excellent. Alfalfa hay third cutting 75%, 78% 1989, 85% avg. Pasture 8% poor, 33% fair, 51% good, 8% excellent.

INDIANA: Temperatures 3 to 8° above normal. Lows mostly 60s, highs low to upper 80s. Precipitation 0.25 to 2.00 in.

Days suitable for fieldwork 6.1. Topsoil 24% short, 69% adequate, 7% surplus. Subsoil 5% short, 87% adequate, 8% surplus. Soybeans 19% turning yellow, 29% 1989, 60% avg. Tobacco 30% harvested, 35% 1989, 53% avg. Pasture 4% poor, 34% fair, 54% good, 8% excellent. 1991 winter wheat cropland 30% plowed, 35% 1990, 30% avg. Hot, dry week helped corn, soybeans advance toward maturity.

IOWA: Temperatures 10 to 13° above normal. Extremes 54°; 100°. Rainfall none to 2.08 in.; average 0.35 in.

Days suitable for fieldwork 6.3. Topsoil 19% short, 77% adequate, 4% surplus. Subsoil 5% short, 89% adequate, 6% surplus. Hay 2% poor, 14% fair, 70% good, 14% excellent. Pasture 1% poor, 17% fair, 65% good, 17% excellent. Third crop alfalfa hay 80% harvested, 90% 1989, 87% avg. Livestock under considerable stress as high temperatures, humidity blanketed the State.

KANSAS: Temperatures 8 to 10° above average across State. Precipitation generally light; heaviest 0.29 in., 0.19 in. west central, southwest respectively.

Days suitable for fieldwork 6.5. Surface moisture 99% short, 1% adequate. Subsoil 64% short, 36% adequate. Corn, sorghum, soybeans slightly behind schedule. Range, pasture still good for time of year. Third cutting of alfalfa hay 99% complete; fourth cutting 35% complete. Wheat seeding activity was noted in southwest, south central, most areas remain too dry for planting at this time. Applying fertilizer, cutting hay remain the major activities.

KENTUCKY: Temperatures 4 to 10° above seasonal mean. Precipitation about 0.90 in. Extremes 62°; 97°. Highs about 5° above normal, lows 6° above normal.

Days suitable fieldwork 5.9. Soil moisture 33% very short, 39% short, 28% adequate. Conditions for corn, soybeans, tobacco in field, hay crops, pasture deteriorated from previous week. Need soaking rain. Burley 53% cut. Dark tobacco 48% cut. Generally pleased with housed tobacco, little houseburn. Condition tobacco in field 3% poor, 46% fair, 50% good, 1% excellent. Corn for grain 3% harvested. Yields quite variable. Silage cutting active. Soybeans stressed with pod filling being limited. Few early fields harvested. Pastures, hay fields poor to good. Baling hay for winter supplies. Reseeding pastures, hay fields as

moisture permits, starting to sow cover crops in tobacco fields after harvest. Pastures 11% very poor, 20% poor, 27% fair, 37% good, 5% excellent.

LOUISIANA: Temperatures 2 to 6° above normal. Extremes 61°; 103°. Rainfall 0.06 to 1.13 in.

Days suitable for fieldwork 6.6. Soil moisture 41% very short, 44% short, 12% adequate, 3% surplus. Corn harvested 99%, 85% 1989, 85% avg. Cotton open bolls 93%, 46% 1989, 73% avg.; harvested 15%, 0% 1989, 5% avg.; 18% poor, 36% fair, 46% good. Hay final cutting 74%, 58% 1989, 60% avg. Rice headed 99%, 100% 1989, 100% avg.; ripe 87%, 79% 1989, 85% avg.; harvested 81%, 69% 1989, 73% avg. Sorghum headed 100%, 100% 1989, 100% avg.; turning color 95%, 96% 1989, 97% avg.; ripe 86%, 80% 1989, 86% avg.; harvested 79%, 55% 1989, 64% avg. Soybeans blooming 100%, 99% 1989, 99% avg.; setting pods 99%, 93% 1989, 95% avg.; turning color 51%, 23% 1989, 25% avg.; shedding leaves 15%, 8% 1989, 8% avg.; harvested 2%, 0% 1989, 0% avg.; 4% very poor, 14% poor, 55% fair, 24% good, 3% excellent. Velvetbean caterpillars problem south. Spraying active. Sweet potatoes harvested 42%, 27% 1989, 42% avg.; 66% fair, 17% good, 17% excellent. Sugarcane planted 26%, 48% 1989, 36% avg.; 14% poor, 71% fair, 15% good. Afternoon showers allowed planting to continue. Livestock 13% poor, 29% fair, 58% good. Pasture 3% very poor, 39% poor, 45% fair, 13% good. Vegetable 6% very poor, 32% poor, 52% fair, 10% good.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 0.10 in. Temperature 74°, normal 72°. Extremes 50°; 95°.

Days suitable for fieldwork 6.3. Topsoil 20% short, 80% adequate. Subsoil 5% short, 95% adequate. Corn good; 95% dough, 94% 1989, 94% avg.; 81% dent, 77% 1989, 82% avg.; 24% mature, 31% 1989, 38% avg.; grain 4% harvested, 5% 1989, 8% avg.; silage 25% harvested, 33% 1989, 44% avg. Soybeans good; 97% bloomed, 96% 1989, 97% avg.; 86% setting pods, 82% 1989, 85% avg.; 13% turned, 7% 1989, 13% avg. Tobacco good to excellent; 97% bloomed, 97% 1989, 98% avg.; 90% topped, 78% 1989, 86% avg.; 64% harvested, 56% 1989, 58% avg. Sweet corn 91% harvested, 93% 1989, 94% avg. Potatoes 98% harvested, 77% 1989, 84% avg. Watermelons 97% harvested, 96% 1989, 95% avg. Cantaloupes 97% harvested, 96% 1989, 96% avg. Lima beans 58% harvested, 83% 1989, 78% avg. Snap beans 94% harvested, 97% 1989, 92% avg. Tomatoes 90% harvested, 90% 1989, 92% avg. Hay supplies adequate. Alfalfa hay third cut 95% complete, 94% 1989, 93% avg. Alfalfa hay fourth cut 30% complete, 33% 1989, 33% avg. Other hay second cut 97% complete, 94% 1989, 94% avg. Other hay third cut 39% complete, 33% 1989, 61% avg. Other hay fourth cut 10% complete, 5% 1989, 2% avg. Apples fair to good; 30% harvested, 40% 1989, 32% avg. Peaches fair; 94% harvested, 91% 1989, 92% avg. Pasture good.

DELAWARE: Precipitation 0.03 in. Temperature 73°, normal 72°. Extremes 51°; 93°.

Days suitable for fieldwork 6.8. Topsoil 50% short, 50% adequate. Subsoil 25% short, 75% adequate. Corn good; 99% dough, 97% 1989, 98% avg.; 87% dent, 82% 1989, 88% avg.; 28% mature, 29% 1989, 42% avg.; grain 4% harvested, 5% 1989, 8% avg.; silage 40% harvested, 30% 1989, 55% avg. Soybeans good; 83% setting pods, 77% 1989, 85% avg.; 3% turned, 2% 1989, 13% avg. Sweet corn 92% harvested, 91% 1989, 94% avg. Potatoes 96% harvested, 80% 1989, 91% avg. Watermelons 85% harvested, 97% 1989, 97% avg. Cucumbers 85% harvested, 94% 1989, NA avg. Lima beans 42% harvested, 32% 1989, 47% avg. Snap beans 94% harvested, 87% 1989, NA avg. Tomatoes 93% harvested, 89% 1989, 81% avg. Hay supplies adequate. Alfalfa hay third cut 98% complete, 79% 1989, 95% avg. Alfalfa hay fourth cut 25% complete,

18% 1989, 52% avg. Other hay third cut 59% complete, 84% 1989, 86% avg. Apples fair to good; 38% harvested, 47% 1989, 29% avg. Pasture good.

MICHIGAN: Temperatures 1° above to 6° above normal. Extremes 37°; 95°. Precipitation none to 3.53 in. across State.

Days suitable for fieldwork 5.0. Soil moisture 12% short, 71% adequate, 17% surplus. Corn 56% dough, 85% 1989, 90% avg.; 20% dented, 40% 1989, 55% avg.; 0% mature, 0% 1989, 10% avg.; 20% fair, 45% good, 35% excellent. Soybeans 95% setting pods, 95% 1989, 985 avg.; 2% dropping leaves, 3% 1989, 10% avg.; 5% poor, 15% fair, 50% good, 30% excellent. Winter wheat 0% seeding, 0% 1989, 0% avg. Pasture 5% poor, 20% fair, 40% good, 35% excellent. Major activities: Baling 2nd, 3rd cutting hay, preparing equipment for fall harvest, harvesting dry beans, harvest of apples, plums, pears continues. Harvest of wine grapes has begone. Most vegetables are being harvested; wide spread disease problems reported.

MINNESOTA: Temperatures 7 to 11° above normal. Extremes 41°; 96°. Precipitation 0.09 to 1.47 in.; greatest weekly total 3.91 in.

Days suitable for fieldwork 5.5. Topsoil 14% very short, 9% short, 70% adequate, 7% surplus. Corn 96% in dough, 99% 1989, 98% avg.; 59% denting, 78% 1989, 83% avg.; 10% mature, 31% 1989, 35% avg. Soybeans 39% shedding leaves, 35% 1989, 38% avg.; 11% mature, 5% 1989, 13% avg.; 1% combined, 0% 1989, 1% avg. Dry beans 46% harvested, 21% 1989, 26% avg. Potatoes 12% harvested, 14% 1989, 21% avg. Sweet corn 70% harvested, 86% 1989, 85% avg. Flax 57% harvested, 53% 1989, 46% avg. Sunflowers 1% harvested, 0% 1989, 0% avg. Winter wheat 49% seeded, 54% 1989, 50% avg. Rye 58% seeded, 55% 1989, 52% avg. Field corn 9% silage, 10% 1989, 19% avg. Land 61% plowed, tilled, 59% 1989, 53% avg. Soybeans 13% moisture, NA 1989, NA avg. Field corn 7% poor, 28% fair, 54% good, 11% excellent. Soybeans 2% very poor, 6% poor, 39% fair, 43% good, 10% excellent.

MISSISSIPPI: Temperatures 5° above normal. Extremes 62°; 105°. Mostly dry statewide. Rainfall 0.23 in., 0.70 in. below normal. Soil temperature 90°.

Days suitable for fieldwork 6.5, 6.4 1989, 5.7 avg. Soil moisture 88% very short, 12% short. Cotton 76% open bolls, 29% 1989, 69% avg.; 8% harvested, 0% 1989, 5% avg.; 6% very poor, 10% poor, 57% fair, 27% good. Corn 85% mature, 74% 1989, 87% avg.; 40% harvested, 36% 1989, 46% avg.; 84% silage harvested, 75% 1989, 87% avg. Rice 59% mature, 53% 1989, 70% avg.; 23% harvested, 7% 1989, 26% avg. Soybeans 90% podding, 76% 1989, 85% avg.; 37% turning color, 25% 1989, 30% avg.; 22% very poor, 45% poor, 20% fair, 13% good. Sorghum 89% coloring, 88% 1989, 93% avg.; 72% mature, 55% 1989, 77% avg.; 42% harvested, 25% 1989, 43% avg.; 87% silage harvested, 76% 1989, 71% avg.; hay 82% harvested, 80% 1989, 83% avg. Peanuts 32% harvested, 38% 1989, 48% avg. Sweet potatoes 28% harvested, 41% 1989, 35% avg. Pasture very poor. Livestock fair. Activities: Harvesting cotton, soybeans, planting wheat.

MISSOURI: Temperatures 7° above normal southeast to 11° above normal north. Rainfall over 1.00 in. south central, less than 1.00 in. southeast, mostly less than 0.25 in. elsewhere.

Days suitable for fieldwork 6.7. Topsoil 92% short, 8% adequate. Corn, soybeans 2 weeks behind avg. Corn mature varies 60% southeast district, 40% northwest, less than 20% elsewhere. Late crops, especially soybeans need rain. Sorghum mature varies 30% southeast to less than 10% central,

northern districts. Alfalfa 3rd cutting 90%, 92% 1989, 93% avg. Pasture 17% very poor, 26% poor, 36% fair, 20% good, 1% excellent.

MONTANA: Warm, dry. Temperatures 6 to 12° above normal. Western areas had precipitation amounts mostly less than 0.25 in. Scattered locations, elsewhere less than 0.10 in.

Days suitable for fieldwork 6.6. Topsoil 53% short, 46% adequate, 1% surplus. Subsoil 58% short, 42% adequate. Barley 86% harvested, 65% 1989, 81% avg. Oats 86% harvested, 75% 1989, 85% avg. Second cutting alfalfa 84% harvested, 75% 1989, 85% avg. Dry beans harvested 10%, 21% 1989, 17% avg. Corn silage 15% harvested, 29% 1989, 35% avg. Potatoes harvested 3%. Winter wheat seeded 8%, 9% 1989, 8% avg. Pasture, range feed 6% very poor, 11% poor, 33% fair, 46% good, 4% excellent.

NEBRASKA: Temperatures 9° above normal northwest, 11 to 13° above normal remainder of State. Extremes 47°; 102°. Only light precipitation occurred.

Days suitable for fieldwork 6.8. Topsoil 88% short, 12% adequate. Subsoil 74% short, 26% adequate. Alfalfa hay 2% very poor, 23% poor, 28% good, 3% excellent; 92% 3rd cutting, 87% 1989, 97% avg. High humidity hampering drying eastern part of State. Soybeans 45% turning color, 43% 1989, 53% avg. Heat, dry conditions, not maturity, causing many fields to turn color, drop leaves, pods. Also interfering with pods filling. Producers began harvesting seed corn, some early dryland corn harvested southwest. Many dryland fields turning white, many grain fields being cut silage. Corn borers causing heavy damage many areas. Ear droppage, breaking stalks resulting from this damage. A few sorghum fields harvested. Sorghum weathering heat better than other crops, still stressed, some dryland fields cut for silage. Chinch bugs moving in high numbers, southeast. Chinch bugs moving into small grain fields, eating plants as they emerge. Winter wheat planting most advanced western, northern of State. Some emergence in these areas, as well as in east, southeast. Many growers waiting for moisture before planting. Hot weather accelerated maturity all row crops, raising fears of reduced test weights, yields. Many operators began irrigating again, most for final time. Several counties reported opening of government acres for haying, grazing. Dry edible bean millet harvest continues, west. Pasture, range 10% very poor, 31% poor, 43% fair, 12% good, 4% excellent. Pasture deteriorating, turning brown across State. Some cattle coming off summer pastures, calving being sold, west. Calves sold early, southwest. Heat, poor pastures force southeastern producers to market cattle, hogs. Cattle moved or fed some central, northeastern counties. Flies a problem western feedlots.

NEVADA: Mostly warm, dry, widespread afternoon, evening thunderstorm activity extreme south early. By mid week storms moved to eastern half. No precipitation end of period. Temperatures well above normal. Extremes 33°; 112°.

Digging 1990 potato crop favored by warm, dry weather gained momentum main producing area. Alfalfa seed combining also made good progress due mild weather, lack of precipitation. Wild hay harvest like last year completed earlier than usual. Ranges continue to deteriorate.

NEW ENGLAND: Precipitation none to 0.28 in. New Hampshire, Massachusetts, Rhode Island, Connecticut; 0.12 to 1.17 in. Maine, Vermont. Temperatures mid 50s to low 60s north, to high 60s south; 2° below normal to 1° above normal for New England. Maximum temperatures mid 70s to mid 80s north, upper 70s to low 90s south.

Days suitable for fieldwork 6.0. Soil moisture north 8% short, 92% adequate; south 16% short, 76% adequate, 8% surplus. Grazing availability 10% short, 90% adequate. Pasture 23% fair, 73% good, 4% excellent. Maine potatoes 7% harvested, 8% 1989, 8% avg.; good. Rhode Island potatoes 75% harvested, 50% 1989, 51% avg.; good. Connecticut River Valley potatoes 23% harvested, 33% 1989, 26% avg.; good. Maine oats 74% harvested, 58% 1989, 54% avg.; good. Field corn 10% harvested, 10% 1989, 10% avg.; good. Sweet corn 82% harvested, 82% 1989, 83% avg.; good. Second cut hay 84% harvested, 79% 1989, 87% avg.; good. Third crop hay 33% harvested, 50% 1989, 51% avg.; good. Outdoor tobacco 93% harvested, shade tobacco 91% harvested; good. Apples 19% harvested, size medium to large; good. Peaches 69% harvested; fair to good. Pears 43% harvested; fair to good. Blueberries 96% harvested; good. Major farm activities: Cutting hay, repairing farm machinery, harvesting fruits, vegetables.

NEW JERSEY: Temperatures near normal. Extremes 40°; 91°. Rainfall 0.04 in. north, none central, 0.07 in. south. Heaviest 24 hour total 0.26 in. on 9th, 10th. Estimated soil moisture percent field capacity averaged 75% north, 54% central, 45% south. Four inch soil temperatures averaged 67° north, 69° central, 70° south.

Soil moisture adequate to short. Cooler temperatures aided apple, cranberry coloring. Fieldwork active. Peach harvest complete. Fall variety apple harvest increased. Summer vegetable harvest light. Corn silage making increased. Soybeans, corn for grain started coloring. Some 3rd, 4th cutting of hay made. Preparation, seeding of fall grains active. Pasture growth very good.

NEW MEXICO: Temperatures 3 to 4° above normal, with anomalies of plus five, plus nine in the northwest. Most areas received some precipitation, heaviest amounts in the south. Highest totals 2.54 in. Ruidoso, 2.19 in. Silver City.

Days suitable for fieldwork 6.6. Soil moisture 42% short, 55% adequate, 3% surplus. Spotty showers across State. Farmers want hot, dry weather until after cotton harvest. Wheat planting on the High Plains continues, russian aphids are still a problem. Some head worms showing up in milo. Ranchers wanting more rain. Grasses are greening, heading out, not much growth. Not enough growth to make a good supply of winter feed. Some dead turf reported from drought. Cattle, sheep are in fair to good condition with most supplemental feeding stopped for the time being. Range 20% poor, 45% fair, 35% good.

NEW YORK: Weather started warm with highs upper 80s. Cooled significantly by mid week with highs in mid 60s to mid 70s in most areas. Low temperatures by end of week fell to near freezing in the St. Lawrence Valley, Adirondacks, to upper 30s, 40s elsewhere. Precipitation heaviest in western areas where 1.50 to 3.00 in. fell. Central areas of state averaged 0.50 to 1.00 in. Less than 0.25 in. fell in eastern areas.

Days suitable for fieldwork 4.7. Soil moisture adequate. Pastures 6% poor, 6% fair, 88% good. Hay, corn condition good. Alfalfa second cutting 94% complete, 93% 1989, 94% avg. Third cutting 41% finished, 33% 1989, 38% avg. Oats 91% combined, 99% 1989, 94% avg. Silage corn harvest getting underway. Potato harvest in full swing. Aurore grape harvest well underway in Finger Lakes region. Apple harvest active statewide. Vegetable harvest continued active. Orange County onion harvest progressed. Excellent yields reported. Tomato, sweet corn harvest in full swing in all areas.

NORTH CAROLINA: Temperatures 3° above normal in the Piedmont Region, 3° above in the Mountain Region, 2° above in the Coastal Plain Region. Precipitation none to 1.52 in.

Days suitable for fieldwork 6.4. Soil moisture 20% very short, 36% short, 44% adequate. Pasture 4% very poor, 20% poor, 40% fair, 34% good, 2% excellent. Livestock feed from pasture 72%. Hay third cutting 48%. Flue cured tobacco harvested 74%. Corn silage harvested 70%; corn for grain harvested 23%; burley tobacco 46%; sweet potatoes 13%; apples 22%; sorghum 12%. Corn mature 90%; cotton opening bolls 45%; soybeans setting pods 84%. Crop condition: Corn 6% very poor, 35% poor, 40% fair, 19% good; cotton 2% poor, 32% fair, 59% good, 7% excellent; soybeans 11% poor, 44% fair, 44% good, 1% excellent; peanuts 31% fair, 66% good, 3% excellent; sorghum 20% poor, 47% fair, 33% good; tobacco 36% fair, 64% good; sweet potatoes, 3% poor, 32% fair, 60% good, 5% excellent; apples 14% poor, 57% fair, 29% good; hay 3% very poor, 17% poor, 48% fair, 30% good, 2% excellent. Major activities: Harvesting flue cured tobacco; cutting corn silage; harvesting, topping, spraying burley tobacco; spraying field crops; harvesting corn for grain; harvesting vegetables. Other activities included: Cutting hay; shearing Christmas trees; harvesting apples, sweet potatoes, sorghum; tending livestock; general farm maintenance.

NORTH DAKOTA: Temperatures 10° above normal north central, northeast, central, east central, southeast to 13° above normal southwest. Precipitation 0.21 in. southwest to 0.92 in. east central.

Days suitable for fieldwork 6.2. Topsoil 35% very short, 51% short, 14% adequate. Subsoil 47% very short, 51% short, 2% adequate. Small grain crops: spring wheat 98% combined, 99% 1989, 90% avg. Durum 93% combined, 95% 1989, 83% avg. Oats 99% combined, 100% 1989, 96% avg. Late season crops: Flax 2% very poor, 8% poor, 30% fair, 49% good, 11% excellent; 52% combined, 42% 1989, 34% avg. Corn for grain 1% very poor, 1% poor, 69% fair, 29% good; 6% ripe, 12% 1989, 12% avg. Corn for silage 11% very poor, 16% poor, 46% fair, 27% good; 27% cut, 23% 1989, 27% avg. Potatoes 46% poor, 54% fair; 12% dug, 5% 1989, 17% avg. Soybeans 1% poor, 85% fair, 14% good; 57% mature or beyond, 22% 1989, 36% avg. Dry edible beans 8% very poor, 12% poor, 63% fair, 17% good; 43% combined, 11% 1989, 17% avg. Sunflower 1% very poor, 6% poor, 30% fair, 54% good, 9% excellent; 20% bracts turned brown and beyond, 22% 1989, 22% avg. Sugarbeets 17% poor, 49% fair, 34% good. Pastures 20% very poor, 48% poor, 30% fair, 2% good. Stockwater 4% very short, 52% short, 44% adequate. Hay crops: second cutting alfalfa 97% complete.

OHIO: Mostly hot early in period, cooler at end. High upper 70s to mid 80s; low 60s; 2 to 6° above normal. Showers, downpours at end of period 1.00 to 4.00 in.

Days suitable for fieldwork 6.1. Soil moisture 11% short, 69% adequate, 20% surplus. Farm activities: Harvesting hay, fruit, vegetables; preparing land for seeding late summer, fall crops; preparing equipment for fall harvest. Corn good; earliest stands at 33% moisture. Soybeans fair to good; becoming weedy. Hay good. Pasture 1% very poor, 7% poor, 26% fair, 56% good, 10% excellent. Flies, heat stressed livestock.

OKLAHOMA: Weather not available.

Days suitable for fieldwork 7.0. Topsoil 95% short, 5% adequate. Subsoil 60% short, 40% adequate. Wheat 10% planted, 5% 1989, 5% avg. Cotton 20% fair, 70% good, 10% excellent; 5% open bolls, 3% 1989, 15% avg. Sorghum 1% poor, 15%

fair, 84% good; 55% coloring, 90% 1989, 80% avg.; 3% mature, 10% 1989, 15% avg. Soybeans 60% setting pods, 90% 1989, 85% avg.; 1% mature, 20% 1989, 10% avg. Peanuts 10% mature, 10% 1989, 20% avg. Corn 15% harvested, 20% 1989, 40% avg. Pastures 5% very poor, 15% poor, 55% fair, 25% good. Cattle good; marketings stable, prices steady to up from preceding week.

OREGON: Temperatures above normal statewide. Precipitation mostly north central, northeastern areas, trace to 0.60 in.

Soil moisture 36% short, 64% adequate. Barley 76% harvested, 74% 1989, 87% avg. Good soil conditions for winter wheat seeding many areas. Late haying some areas. Red clover seed harvest continued. Mint harvest nearly complete. Tillage operations in full swing. Bartlett pear harvest complete Hood River, Medford, Willamette Valley; winter varieties began. Apple harvest began Milton Freewater, Hood River, Willamette Valley. Peach, raspberry, blackberry harvesting continued. Strawberry growers busy subsoiling, cultivating, some new fields in. Some fresh market cranberries harvested south coast, main crop good to excellent. Hazelnuts began falling Willamette Valley. Fresh market vegetables in full production west. Snap bean harvest nearly completed. Carrots, beets reached harvest mid point. Onions drying west. Norkota potato harvest underway Klamath Co. Livestock good to excellent; some rain southwest. Range, pasture 8% poor, 45% fair, 43% good, 4% excellent.

PENNSYLVANIA: Temperatures near normal while precipitation was a little above normal. Temperature 68°, 2° above normal. Extremes 41°; 90°. Precipitation 1.23 in., 0.38 in. above normal.

Days suitable for fieldwork 5. Soil moisture 4% short, 88% adequate, 8% surplus. Corn 97% silk, 96% 1989, 93% avg.; 76% dough, 65% 1989, 86% avg.; 29% dent, 23% 1989, 50% avg.; 3% mature, 2% 1989, 9% avg. Ensilage corn harvested 5% complete, 10% 1989. Corn 4% poor, 19% fair, 51% good, 26% excellent. Soybean 3% poor, 20% fair, 52% good, 25% excellent. Wheat planted 5% complete, 21% 1989. Oat harvest 98% complete, 98% 1989. Barley planted 6% complete, 19% 1989. Tobacco harvest 60% complete, 64% 1989. Potato harvest 36% complete, 48% 1989. Second cutting alfalfa 95% complete, 91% 1989. Third cutting alfalfa 60% complete, 53% 1989. Fourth cutting alfalfa 15% complete, 21% 1989. Second cutting clover timothy 83% complete, 76% 1989. Quality of hay made mostly fair to good. Feed from pasture 2% very poor, 9% poor, 59% fair, 30% good. Apple harvest 29% complete, 24% 1989. Peach harvest 87% complete, 82% 1989. Grapes harvest 16% complete, 11% 1989. Fall plowing 31% complete, 36% 1989. Activities: Harvesting hay, haylage, oats, potatoes, tobacco, corn silage, fruits, vegetables; repairing fence; weed control; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

PUERTO RICO: Rainfall of 1.63 in. was 0.22 in. below normal. Rainfall 7.07 in. at Cerro Maravilla, 7.28 in. at Jajuya, 5.20 in. at Negro Conrozal. Highest 24 hour 3.52 in. at Coloso. Divisional temperatures 82 to 83° on the Coasts, 77° in the Interior with mean station temperature 65° at Cerro Maravilla to 85° at Trujillo Alto. Extremes 59°; 96°.

SOUTH CAROLINA: Temperatures 2 to 4° above normal. Rainfall 0.30 in. west, north central to 0.60 in. mountains.

Days suitable for fieldwork 6.1. Soil moisture 9% very short, 66% short, 25% adequate. Cotton 1% very poor, 52% poor, 46% fair, 1% good, 57% open

bolts, 21% 1989, 46% avg. Soybeans 5% poor, 62% fair, 33% good, 96% blooming, 92% 1989, 96% avg.; 76% setting pods, 77% 1989, 78% avg.; 6% leaves turning, 9% 1989, 6% avg.; 0% shedding leaves, 1% 1989, 2% avg. Corn poor to fair, 69% harvested, 37% 1989, 45% avg. Sorghum fair, 34% harvested, 25% 1989, 22% avg. Tobacco fair to good, 85% harvested, 86% 1989, 90% avg.; 21% stalks destroyed, 21% 1989, 23% avg. Peanuts fair, 6% harvested, 10% 1989, 5% avg. Pastures 1% very poor, 14% poor, 72% fair, 13% good.

SOUTH DAKOTA: Temperatures 8 to 15° above normal. Extremes 37°, 102°. Precipitation scattered, variable. Maximum 2.30 in. Growing season precipitation above normal east, below normal west, 5.77 in. above to 6.87 in. below normal. Growing degree days near normal east, above normal west. Range 70 below to 389 above normal.

Days suitable for fieldwork 5.7. Subsoil 25% critically short, 44% short, 31% adequate. Topsoil 19% critically short, 49% short, 32% adequate. Range, pasture 3% very poor, 19% poor, 42% fair, 34% good, 2% excellent. Crop conditions mostly good. Grasshopper, root worm beetles, aphid, fly, weed problems. Major activities: Harvesting, silage, planting winter grain, haying, fall tillage, hauling hay.

TENNESSEE: Hot, dry weather persisted until weekend. Temperatures 2 to 10° above normal. Little rainfall, 0.35 in. west, 0.13 in. Plateau, east.

Days suitable for fieldwork 6.3. Soil moisture 66% very short, 31% short, 3% adequate. Corn 85% dent, 100% 1989, 97% avg.; 42% mature, 58% 1989, 67% avg.; 40% harvested for silage, 37% 1989, 52% avg.; 8% harvested for grain, 7% 1989, 14% avg.; 3% very poor, 19% poor, 59% fair, 19% good. Cotton 48% open bolls, 22% 1989, 50% avg.; 7% very poor, 33% poor, 48% fair, 8% good, 4% excellent. Sorghum 80% turning color, 98% 1989, 92% avg.; 28% mature, 29% 1989, 60% avg.; 4% harvested for grain, 12% 1989, 24% avg.; 7% very poor, 29% poor, 45% fair, 19% good. Soybeans 90% setting pods, 92% 1989, 94% avg.; 14% shedding leaves, 12% 1989, 15% avg.; 4% mature, 3% 1989, 4% avg.; 15% very poor, 35% poor, 45% fair, 5% good. Burley tobacco 64% harvested, 62% 1989, 63% avg. Dark fired tobacco 62% harvested, 71% 1989, 64% avg. Dark air cured tobacco 54% harvested, 70% 1989, 63% avg. Pastures 27% very poor, 36% poor, 27% fair, 10% good. Cattle 1% very poor, 9% poor, 45% fair, 44% good, 1% excellent. Tobacco, corn, sorghum, hay harvests main activities.

TEXAS: Weak upper air disturbance, couple of tropical systems generated showers, thunderstorms around State last week. Rains significant south, tropical waves moved across northern gulf, slid south westward lower State coast. Rains pushed westward to Coastal Plains, south central. Moisture travelled around periphery high pressure up into west. Despite rainfall, almost all areas reported below normal totals for week. South central above normal. Amounts slightly below normal Blacklands, south, Trans Pecos. Temperatures at or above normal Central. Averages below normal Lower Valley, Trans Pecos, High Plains.

Crops: Harvest high moisture corn for silage increased last week High Plains. Yields good. Corn harvested for grain continued dry down. Some harvest occurred Blacklands, northeast. Harvest winding down central, later dryland fields not yielding very well. Corn harvested 70%; 66% 1989; 65% avg. Grain sorghum fields Plains continued rapidly dry down under summertime heat. Some dryland fields wilting. Producers spraying for headworms some fields. Harvest beginning light

basis. Harvest continued without much delay Blacklands, Hill Country. Most central, southern areas finished. Harvest virtually completed Upper Coast. Sorghum harvested 58%, 57% 1989, 57% avg. Cotton continued open rapidly Plains, Trans Pecos. Some dryland fields Plains wilting, rain still help some fields. Harvest continued Blacklands, scattered showers late week delayed harvest some areas. Harvest continued central, Upper Coast. Stalk destruction continued Coastal Bend, nearing completion Valley. Cotton setting bolls 100%, 98% 1989, 99% avg.; harvested 14%; 12% 1989; 13% avg. Small grain planting continued High Plains some fields being watered. Dryland planting slowed some, producers wait for much needed rain to improve soil moisture. Planting increasing Blacklands. Land preparations increasing many other areas. Wheat emerged 0%, 0% 1989, 1% avg. Soybean harvest nearing High Plains, fields rapidly dried down. Harvest continued Blacklands without much delay. Rain delayed harvest slightly Upper Coast; moisture will benefit later crop. Rice harvest some delays Upper Coast, many producers winding up harvest first crop. Red rice caused few problems. Peanut harvest increased south, central last week. Dryland yields fair, irrigated yields better. Hot temperatures hurt some later fields. Fields Hill Country, Cross Timbers continued good, some disease problems. Other field crops: Peanuts 8% harvested, 2% 1989, 5% avg. Soybeans harvested 18%, 20% 1989, 15% avg. Sunflowers harvested 9%, 5% 1989, 6% avg. Oats planted 1%, 2% 1989, 5% avg.

Commercial Vegetables: Rio Grande Valley, peppers, cabbage good progress. Planting, land preparations slowed some by rain. San Antonio Winter Garden, planting carrots, spinach good progress. Eastern State, harvest summer vegetables slowing, extreme heat hurting remaining fields. Fall planting increasing. High Plains, cucumber, pepper harvest continued without delay. Trans Pecos, pepper harvest continued. Land preparation continued. Pecan harvest begin soon south, crop expected to be good. Native crop highly varied across State; improved crop looked good. Spraying operations continued.

Range and Livestock: Moisture becoming more critical range, pasture conditions across much State. Supplemental feeding increasing with lack of grazing. Haying operations slowing. Planting small grains for stockers increased Plains. Moisture needed for emergence. Livestock remained good. Range, pasture 5% very poor, 15% poor, 46% fair, 30% good, 4% excellent.

UTAH: Temperatures 6° above normal; precipitation light to heavy throughout State, except for Dixie area which was zero.

Days suitable for fieldwork 6.6. Soil moisture 100% short. Major farm activities: Irrigation, plowing, seeding fall crops. Winter wheat 39% planted, 35% 1989, 41% avg. Alfalfa hay third cutting 60% completed, 72% 1989, 54% avg. Corn silage 11% harvested, 8% 1989, 12% avg. Onion, potato harvests underway. Apple, peach, pear harvests continued. Cattle, sheep moving from summer ranges. Non irrigated range, pasture 12% very poor, 39% poor, 49% fair.

VIRGINIA: Temperatures above normal. Extremes 45°; 99°. Very light precipitation.

Days suitable for fieldwork 6.1. Topsoil 1% very short, 58% short, 34% adequate, 7% surplus. Corn dented 74%, 71% 1989, 74% avg.; mature 58%, 48% 1989, 57% avg.; silage 28% harvested, 20% 1989, 27% avg.; grain 17% harvested, 9% 1989, 13% avg. Soybeans bloomed 90%, 97% 1989, 95% avg.; setting pods 87%, 87% 1989, 80% avg.; 10% poor, 30% fair, 60% good. Flue tobacco 58% harvested, 63% 1989,

(Continued to back cover)

International Weather and Crop Summary

HIGHLIGHTS

September 2-8, 1990

USSR ... In Western USSR, wet weather in the north continues to cause significant harvest delays and slows winter grain planting. In the New Lands, widespread rain covers northern areas, delaying early spring grain harvests. Light rain in the south causes only brief delays in harvesting.

EUROPE ... Widespread rain delays harvest in north-central and northeastern crop areas. Mostly dry weather favors harvest in sections of France and Spain.

EASTERN ASIA ... Tropical Storm Cecil and Typhoon Dot bring further heavy rain, flooding, and crop damage to sections of Zhejiang and Jiangsu.

SOUTH ASIA ... Showers benefit most immature summer crops, but some flooding and crop damage occur in the far north.

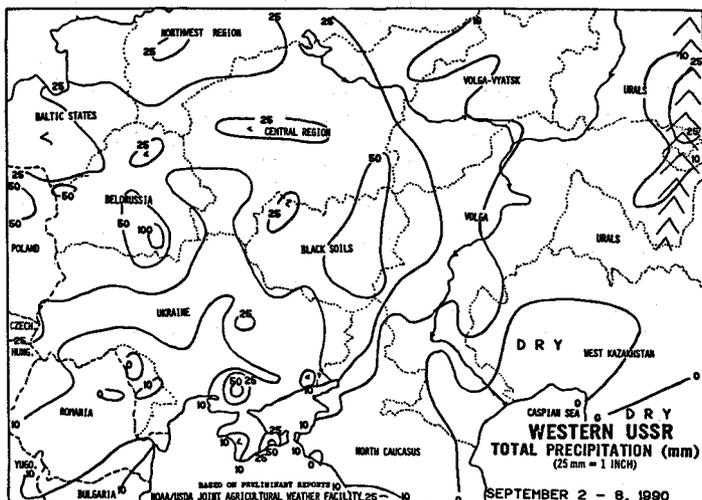
SOUTHEAST ASIA ... Beneficial showers continue over Thailand. Inundating rains persist in the northern Philippines.

SOUTH AMERICA ... Widespread rain helps Argentina's wheat. Soaking rain falls over southern Brazil.

AUSTRALIA ... Dryness continues across Queensland and northern New South Wales. Scattered light rain favors winter crops across the south.

CANADA ... Mostly dry, warm weather favors grain and oilseed harvests.

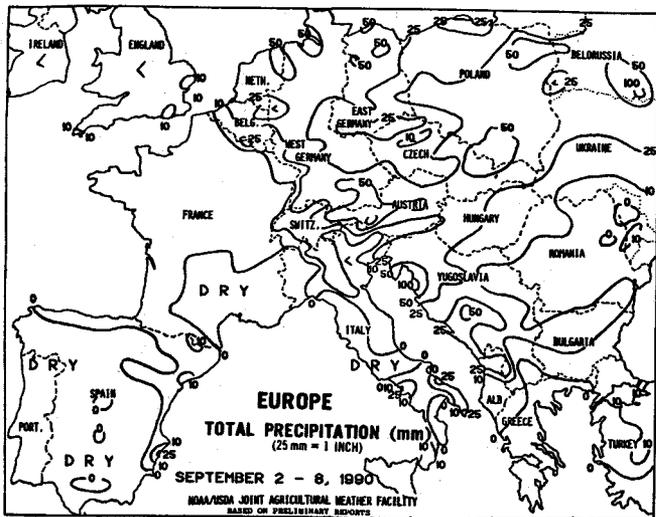
MEXICO ... Rain continues to soak numerous crop areas.



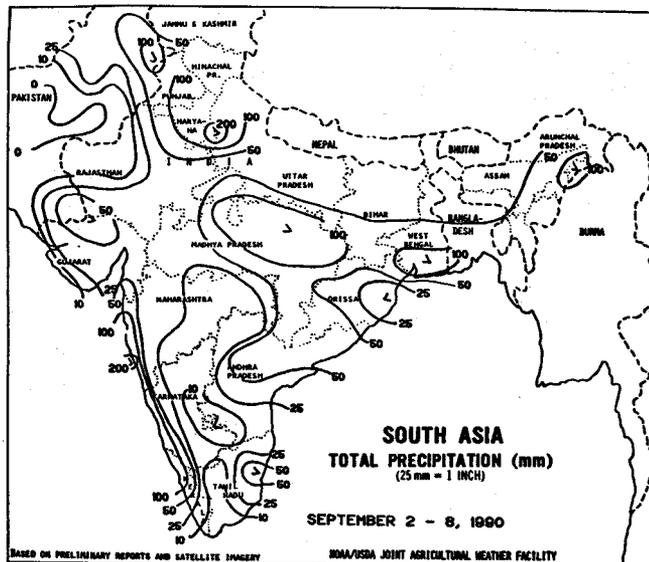
USSR ... In Western USSR, precipitation increased during the week and became more widespread. The most rain (25-30mm, with local amounts in excess of 75mm) fell in Belorussia, the extreme northwestern Ukraine, the Central Region, Black Soils Region, and the western Volga. Persistent rains in these areas have saturated topsoils, creating significant delays in the small grains harvest. The wet weather has also slowed the planting of 1991 winter grain crops. By September 3, reports indicate small grains and pulses had been harvested on 62 percent of the sown area. This year, the pace of harvesting has been about 20 percentage points behind last year's pace. Generally light precipitation (2-17mm) over the southern Ukraine and the central North Caucasus caused only minor delays in early corn and sunflower harvesting. Weekly average temperatures were 1-3 degrees Celsius (C) below normal in the north and near normal in the south.



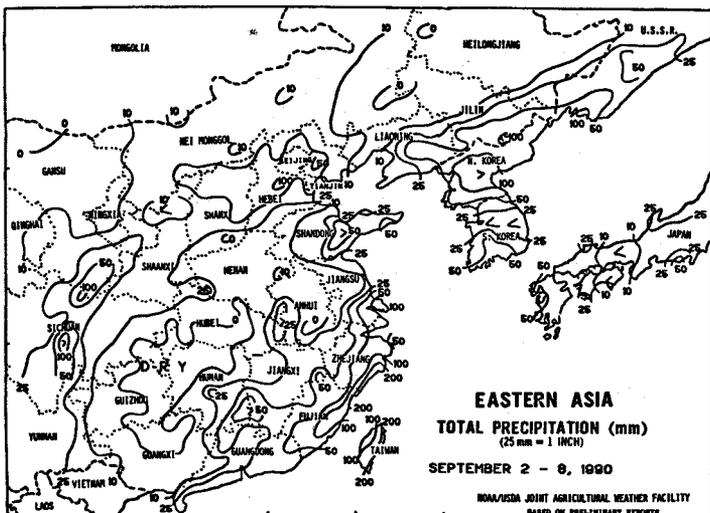
In the New Lands, rain began over western areas early in the week and spread eastward during the week. The most rain (15-30mm, with local amounts in excess of 40mm) fell on spring grains in the northern Urals and Western Siberia, delaying early harvest activities. Light precipitation (6-13mm) over most of the Kazakhstan and the southern Urals caused only brief delays in spring grain harvesting. Weekly average temperatures over the region ranged from 1 to 3 degrees C below normal. In addition, localized frosts in the northern Urals and the western portion of Western Siberia had minimal impact on mature spring grains.



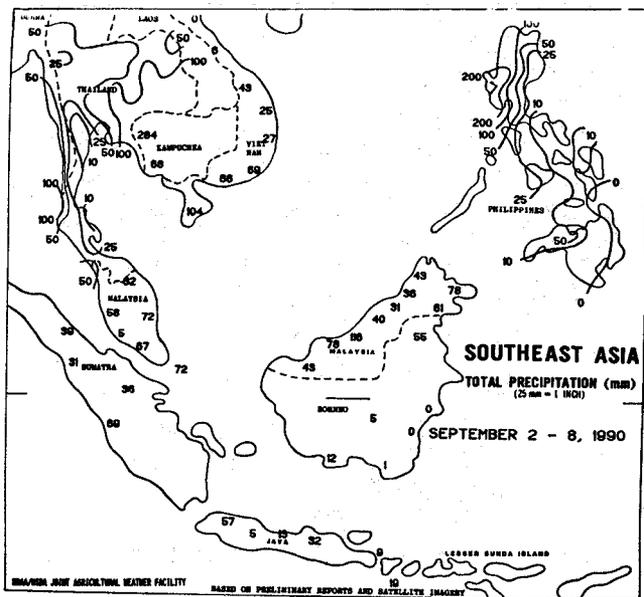
EUROPE ... Widespread rain (10-40mm, with scattered amounts greater than 40mm) and cooler temperatures (mean weekly temperatures 1-2 degrees C below normal) covered much of the north-central and northeastern Europe, delaying harvest of summer crops but increasing soil moisture for winter grains planting during the next several weeks. The rainfall continued a wetter-than-normal pattern in sections of West Germany during the past 3 weeks. In France and northern Spain, mostly dry weather favored harvest of corn and sunflowerseed crops. Light to moderate rain (5-15mm, with scattered amounts greater than 15mm) over central and northern sections of the Balkans fell too late to benefit most summer crops but locally improved pre-planting soil moisture for winter grains.



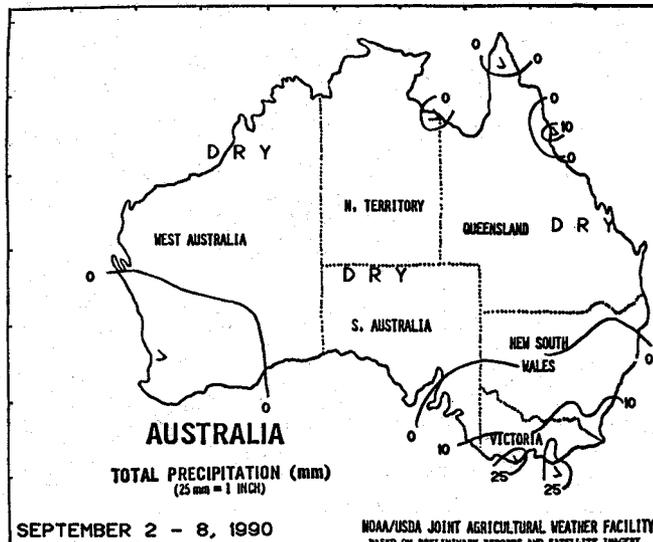
SOUTH ASIA ... Continuing showers benefitted reproductive to filling summer crops in most central, southern, and eastern crop regions. Rainfall totaled 25-50mm over most areas, but locally heavy showers (100mm or more) fell in Madhya Pradesh and from southern West Bengal eastward. Beneficial rain (19-86mm) continued for the second week over India's southern tip. In contrast, pockets of drier-than-normal weather persisted in Uttar Pradesh and northern Bihar. In the north, heavy showers (50-100mm or more, with local accumulations exceeding 200mm) in northernmost Pakistan and India's Punjab and Haryana states caused local flooding and possibly some damage to maturing cotton and rice. Harvesting in India's northern states generally runs from October to December but can begin as early as September in areas planted during March or April.



EASTERN ASIA ... Following Typhoon Abe during the previous week, Tropical Storm Cecil moved into Zhejiang on the 4th, spreading further heavy rain (25-125mm, with isolated amounts greater than 125mm) and flooding across eastern Zhejiang and southern Jiangsu Provinces. Later in the week, Typhoon Dot struck Taiwan on the 7th with 120-140 km/hr winds and heavy rain (25-100mm) before moving into Fujian Province on the 8th. Persistent heavy rain and flooding associated with these systems have caused damage to maturing cotton and single-season rice crops, especially in Zhejiang and southern Jiangsu. Elsewhere, a slow-moving frontal system brought widespread rain (20-100mm, with isolated amounts in excess of 100mm) from northern Sichuan northeastward to southern Manchuria and the Korean Peninsula, delaying early harvest of spring-planted crops.

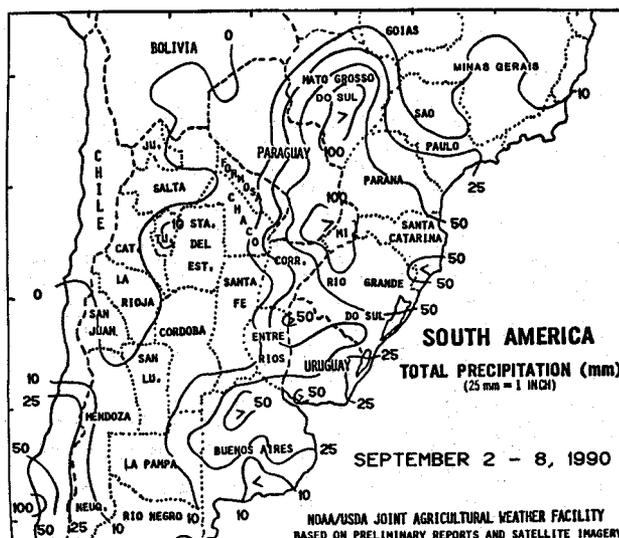


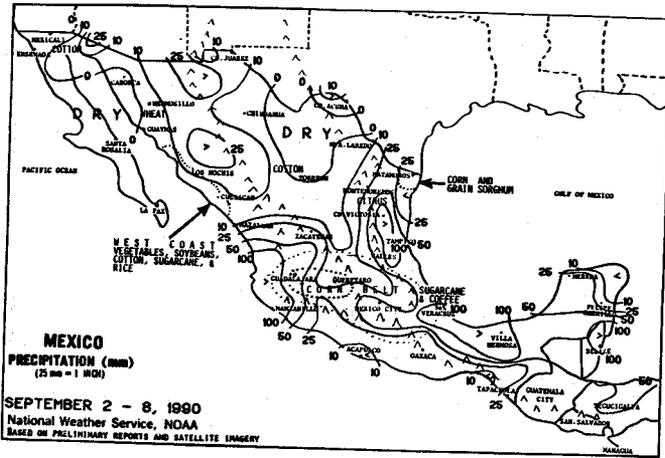
SOUTHEAST ASIA ... Moderate to heavy showers (35-100mm or more) covered Thailand's primary grain regions, continuing to improve irrigation reserves for secondary grain crops. Rainfall ranged from 25 to 95mm in portions of northeastern Thailand, flooded by last week's heavy rains. Temperatures averaged 1-2 degrees C above normal, maintaining high evaporation rates. In the Philippines, heavy showers (100-300mm or more) persisted in western and northern Luzon, due mainly to the passage of Typhoon Dot. This was the third to fourth consecutive week of inundating rains in western Luzon. In contrast, light rain (25mm or less) again dominated the southern and east-central islands.



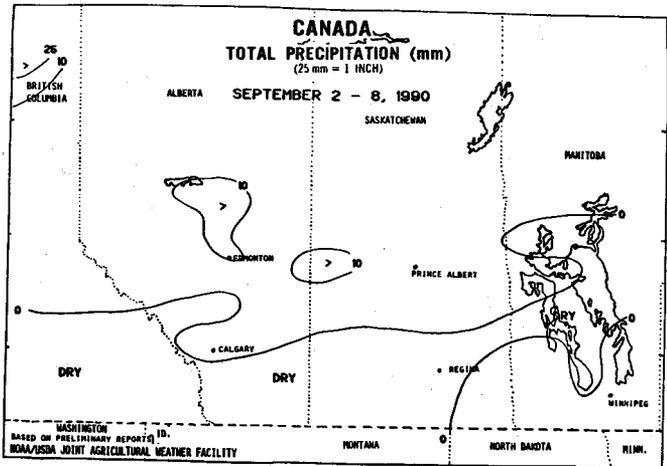
AUSTRALIA ... Mostly dry weather continued over Queensland and northern New South Wales, depleting topsoil moisture for vegetative winter grains in some areas. However, evapotranspiration losses and crop growth rates were slowed by below-normal temperatures (mean weekly temperatures 2-3 degrees below normal). Light rain (less than 10mm) fell across winter crop areas of Western Australia, Victoria, and southern New South Wales, while South Australia turned mostly dry. Mean temperatures across the south ranged from near normal in Victoria to above normal in Western Australia.

SOUTH AMERICA ... In Argentina, widespread substantial rain fell over Buenos Aires, northeastern La Pampa, and extreme southern portions of Cordoba and Santa Fe. Weekly rainfall averaged 25-73mm in the northern two-thirds of Buenos Aires and scattered areas of northeastern La Pampa. Rainfall generally averaged 10-25mm over the remainder of the wheat belt but diminished rapidly to 6mm or less in northern wheat areas of Cordoba and Santa Fe. Wheat is in vegetative growth phases in Argentina. In south-central Brazil, locally heavy rain (50-109mm) soaked wheat areas from southern Parana to Rio Grande do Sul and, for the second week in a row, inundated crop areas of Mato Grosso do Sul. Showers covered northern Parana and citrus and coffee areas further north, where rainfall generally averaged 10-37mm.





MEXICO ... Widespread rain fell over most crop areas, including locally heavy rain (100-144mm) along the eastern edge of the Sierra Madre Oriental range in the northeast. Showers continued to help irrigation watersheds in the northwest. Variable rain covered the Southern Plateau, with the greatest amounts (50-100mm or more) in the western and southeastern portions of the Corn Belt. Locally heavy rain also fell in the southeast, where weekly totals reached 100-176mm. Showers diminished to 25-50mm over the Yucatan Peninsula. Dry weather was confined to north-central pasture land.



CANADA ... Mostly dry, warmer-than-normal weather across the Canadian Prairies favored maturing grains and oilseeds and allowed rapid harvest progress across the south. Heaviest rain (4-16mm) was limited to northern Alberta, northwestern Saskatchewan, and local areas of Manitoba, causing minor fieldwork delays. However, weekly temperatures averaged 2-5 degrees C above normal, hastening crop drydown and enhancing evaporation.

ERRATA: In last week's issue (#35), the cumulative rainfall map for the African Sahel growing season had an incorrect starting date. The correct date is May 1 - August 31, 1990.

(Continued from p. 8)

Sorghum was good to fair. In early August, harvest was underway in Texas. Crop development lagged behind normal in the central Great Plains during the month. By September 2, 46% of the acreage was in the coloring stage in the 12 major producing States, 12 points behind normal. Harvest was 56% complete in Texas.

Early in August, winter wheat harvest was still active in the Pacific Northwest and northern Great Plains. By mid-August, harvest was nearly complete. Late in August, winter wheat seeding for the 1991 harvest was underway in the central and southern Great Plains. Moisture was needed to improve crop germination and emergence. Spring wheat harvest was active during August. By September 2, in the five major producing States, spring wheat harvest was 92% complete, 8 points ahead of normal. Harvest was nearly complete in Minnesota and was complete in South Dakota.

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(Continued from p. 23)

48% avg. Fire tobacco 78% harvested, 90% 1989, 59% avg. Burley 42% harvested, 36% 1989, 30% avg. Sun cured 57% harvested, 50% 1989, 40% avg. Peanut 67% fair, 33% good. Livestock mostly good. Pasture fair to good. Apple, sweet potato harvest continued.

WASHINGTON: Temperatures 1 to 6° above normal east; 3° above normal to 1° below normal west. Precipitation none to 0.04 in. east; none to 0.15 in. west.

Days suitable for fieldwork 6.8. Soil moisture 55% short, 45% adequate. Range, pasture 5% very poor, 23% poor, 42% fair, 30% good. Hay, other roughage 99% adequate, 1% surplus. Winter wheat planted 20%, 19% 1989, 28% avg.; harvested 99%, 100% 1989, 100% avg. Spring wheat harvested 99%, 95% 1989, 98% avg. Barley harvested 99%, 93% 1989, 98% avg. Potatoes harvested 35%, 26% 1989, 26% avg. Dry beans harvested 20%, 8% 1989, 27% avg. Alfalfa hay 3rd cutting 75%, 70% 1989, 74% avg. Small grain harvest was nearing completion. Excellent yields eastern area border counties for winter wheat. Yields varied across the remainder of the State. Spring grain yields were more average as the heavy rains, extreme heat reduced test weights. Apple, pear harvests continued. Vegetable harvests continued.

WEST VIRGINIA: Temperature 72°, 2 to 5° above normal. Extremes 51°; 94°. Precipitation 1.01 in., 0.39 below to 0.88 in. above normal.

Days suitable for fieldwork 5.2. Soil moisture 60% short, 35% adequate, 5% surplus. Pasture 29% fair, 67% good, 4% excellent. Cattle, sheep good. Corn good; 68% dough, 22% mature. Hay good; second cutting 77% complete, third cutting 43% complete.

Apples poor. Tobacco fair to good; 97% topped, 43% harvested. Farm activities: Making hay, clipping pastures, caring for livestock, topping, harvesting tobacco, chopping silage, general farm maintenance.

WISCONSIN: Temperature 70°, 7° above normal. Extremes 44°; 97°. Precipitation 0.10 to 2.10 in.

Days suitable for fieldwork 6.0. Soil moisture 10% short, 80% adequate, 10% surplus. Pasture 1% poor, 9% fair, 70% good, 20% excellent. General condition of crops 9% fair, 86% good, 5% excellent. Soybean 86% of normal. Soybeans 13% turned, 18% 1989, 36% avg. Corn 1% poor, 9% fair, 81% good, 9% excellent; 32% in dent, 54% 1989, 66% avg.; 5% mature, 9% 1989, 25% avg. Third cut hay 54% complete, 44% 1989, 50% avg.

WYOMING: Temperatures above normal. Precipitation below normal.

Days suitable for fieldwork 7.0. Topsoil 32% short, 68% adequate. Barley 15% mature, 10% 1989, 15% avg.; 85% harvested, 90% 1989, 85% avg. Spring wheat 5% mature, 0% 1989, 5% avg.; 95% harvested, 100% 1989, 95% avg. Oats 20% mature, 10% 1989, 15% avg.; 80% harvested, 90% 1989, 85% avg. Dry beans 85% turning color, 95% 1989, 85% avg.; 35% windrowed, 30% 1989, 35% avg.; 10% combined, 10% 1989, 15% avg. Corn 5% milk, 5% 1989; 50% dough, 45% 1989; 40% dented, 45% 1989; 5% mature, 5% 1989. Corn silage 20% harvested, 20% 1989, 10% avg. Potatoes 20% harvested, 20% 1989, 10% avg. 1991 winter wheat 55% seeded, 60% 1989, 35% avg.; 10% emerged, 15% 1989, 10% avg. Alfalfa second cutting 90% complete, 90% 1989, 90% avg.; third cutting 10% complete, 30% 1989, 20% avg. Range, pasture 5% very poor, 10% poor, 85% good. Stockwater 60% adequate.

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