

WEEKLY WEATHER AND CROP BULLETIN

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

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service and World Agricultural Outlook Board

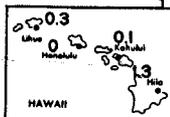
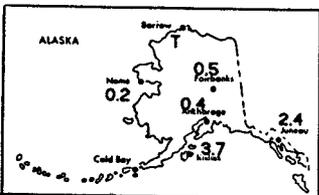
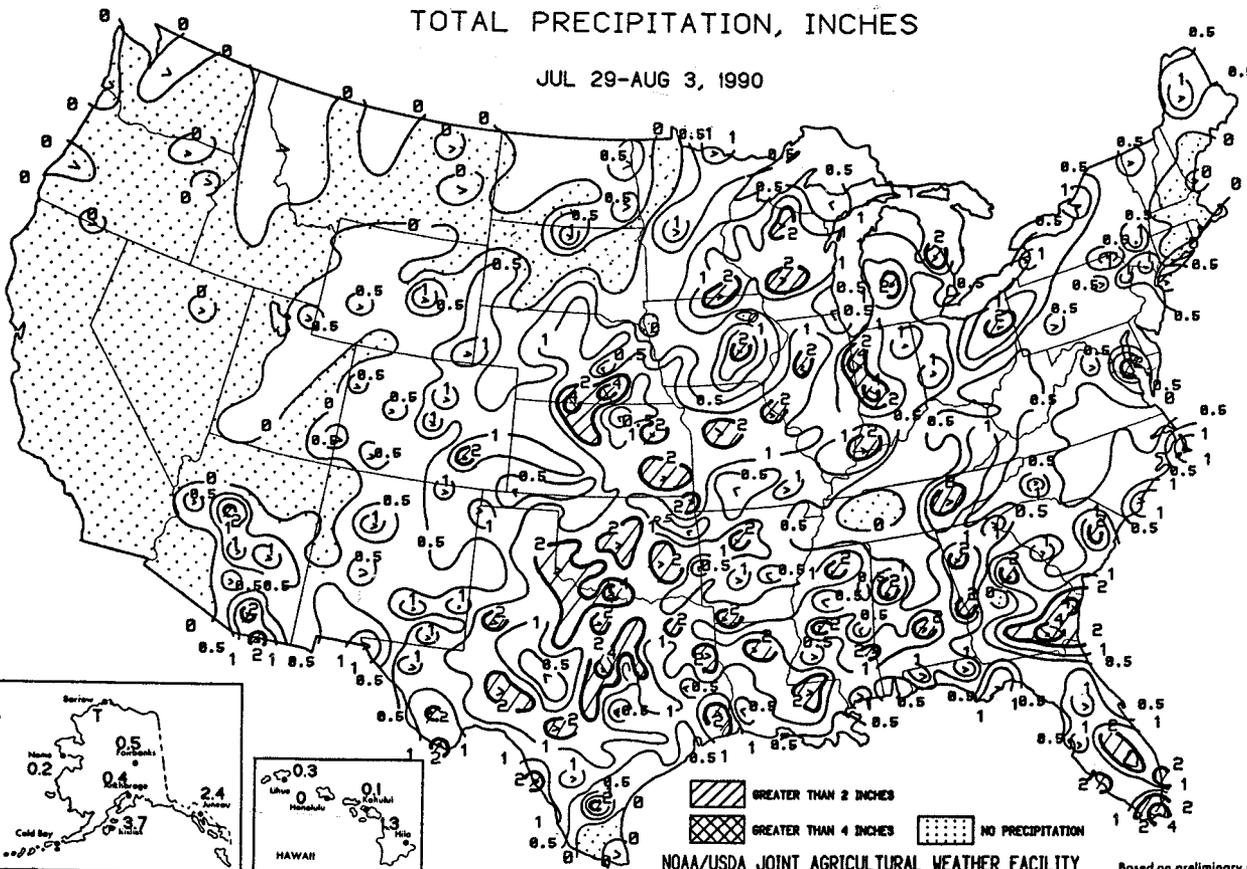
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Washington, D.C.

August 7, 1990

TOTAL PRECIPITATION, INCHES

JUL 29-AUG 3, 1990



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

HIGHLIGHTS

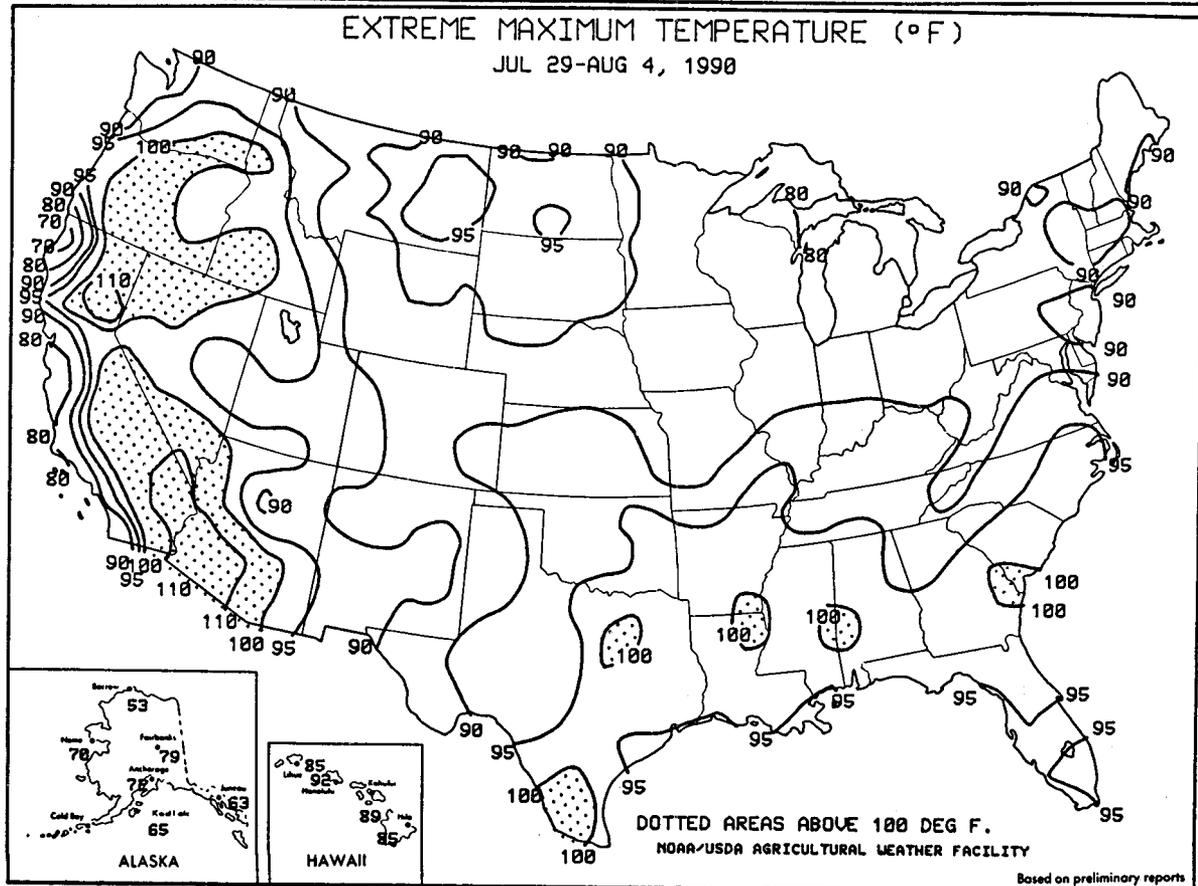
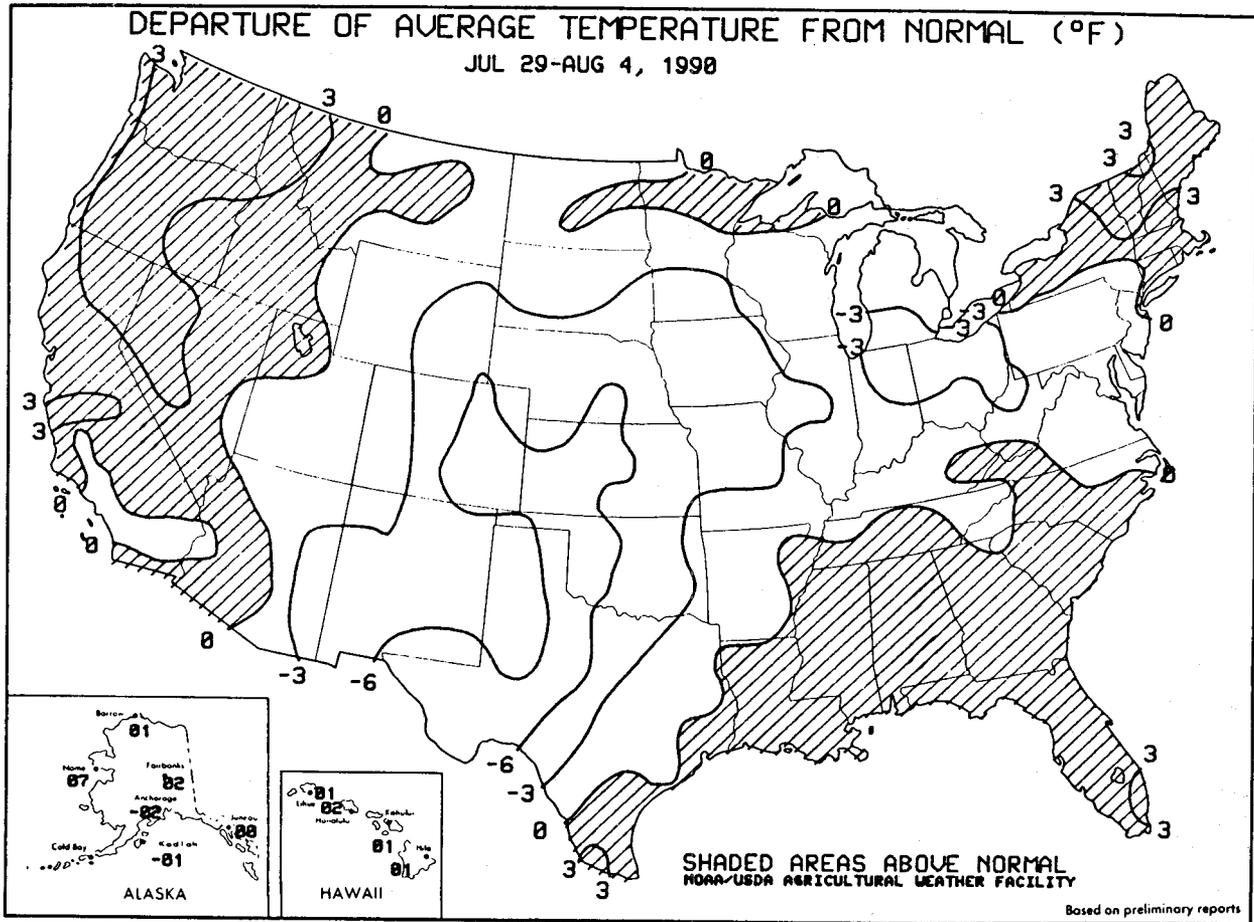
July 29 - August 4, 1990

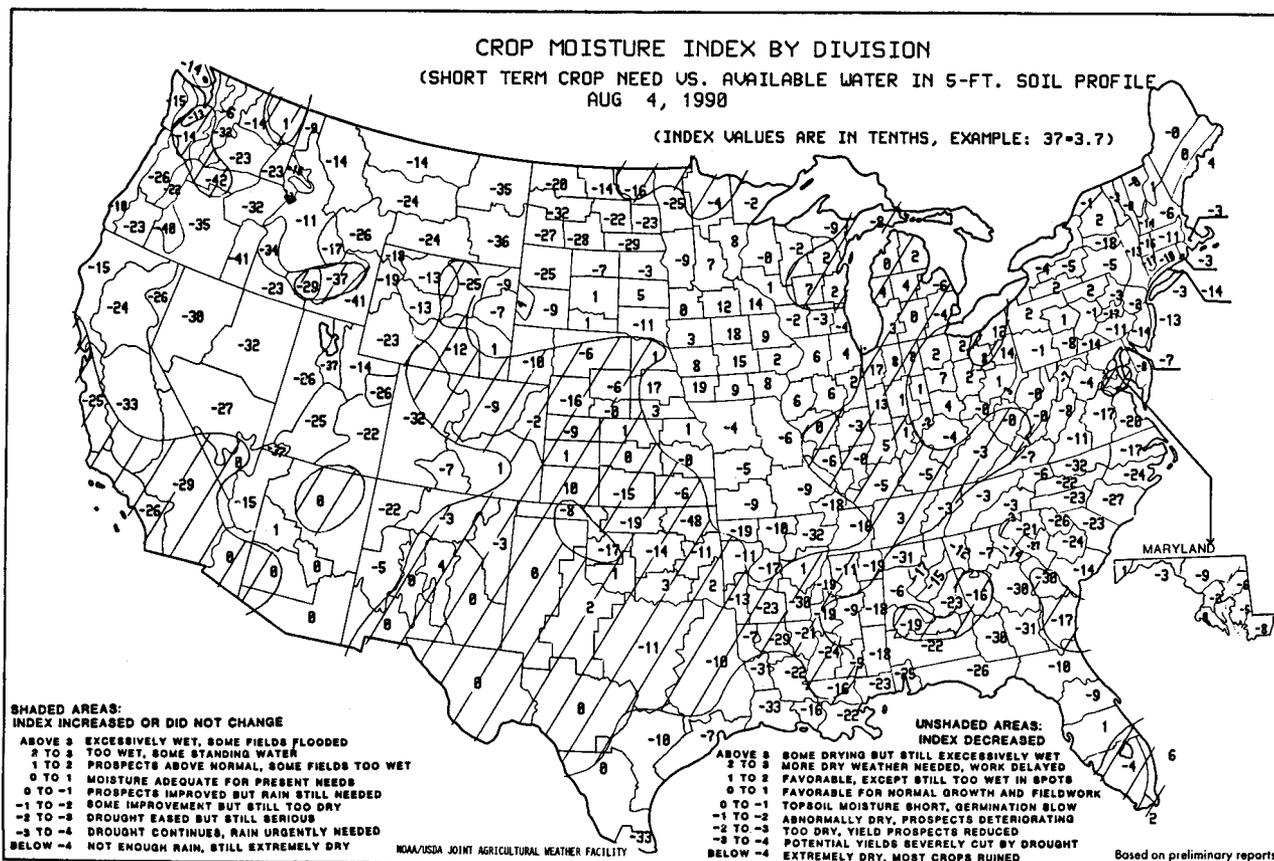
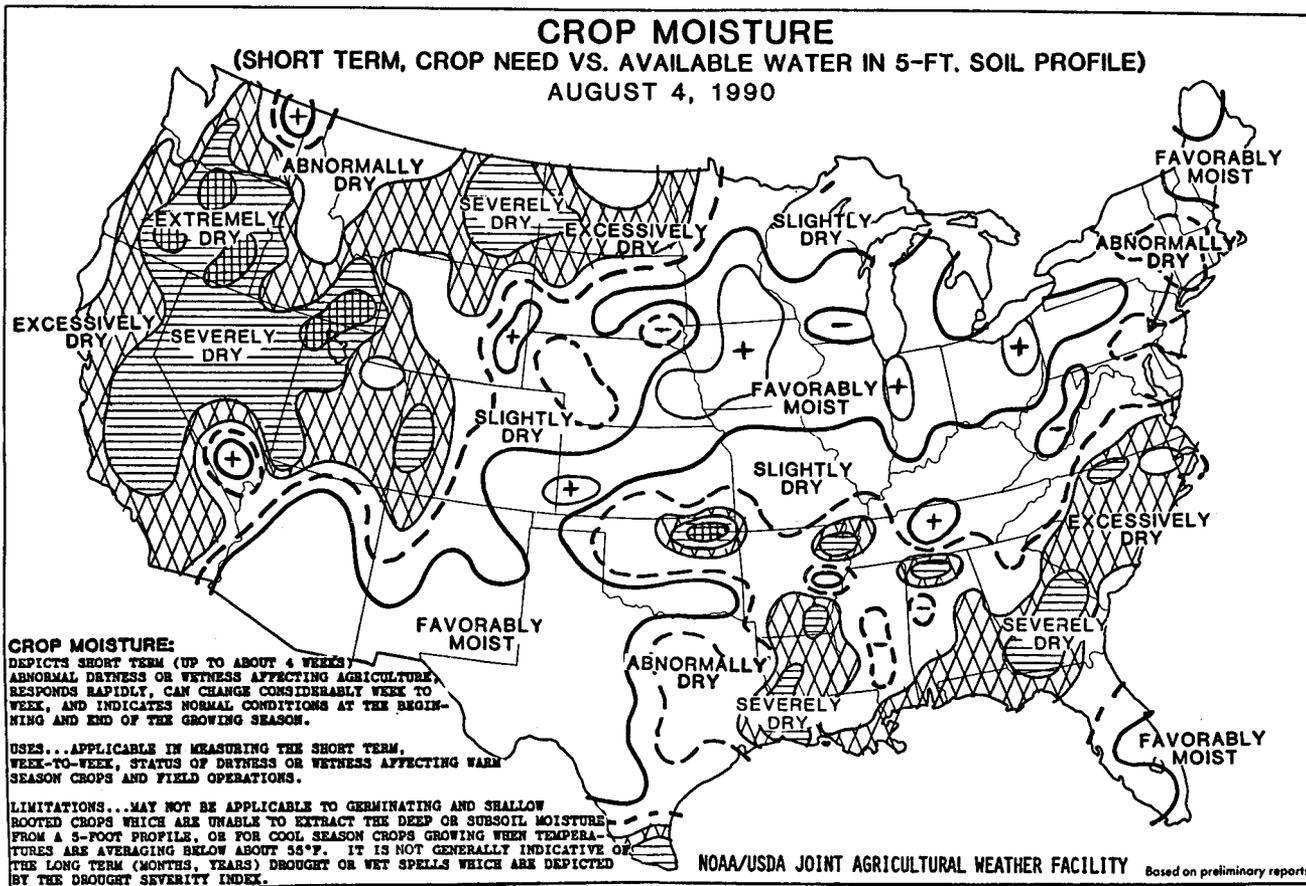
Scattered showers and thunderstorms continued over the eastern three quarters of the Nation, again producing locally heavy rain and flooding. During the first part of the week, a slow moving cold front spread rain from the central and southern Plains to the Atlantic coast as additional rains led to more flooding in the central and southern High Plains. At midweek, showers and thunderstorms formed in the warm, humid air south of the front which became stationary across Texas to the Carolina coasts. At the same time, showers and thunderstorms continued to develop in the central Plains. At week's end, another frontal system edged eastward, drenching the central and southern Plains and Corn Belt with more rain. Showers were scattered through the week (Continued to back cover)

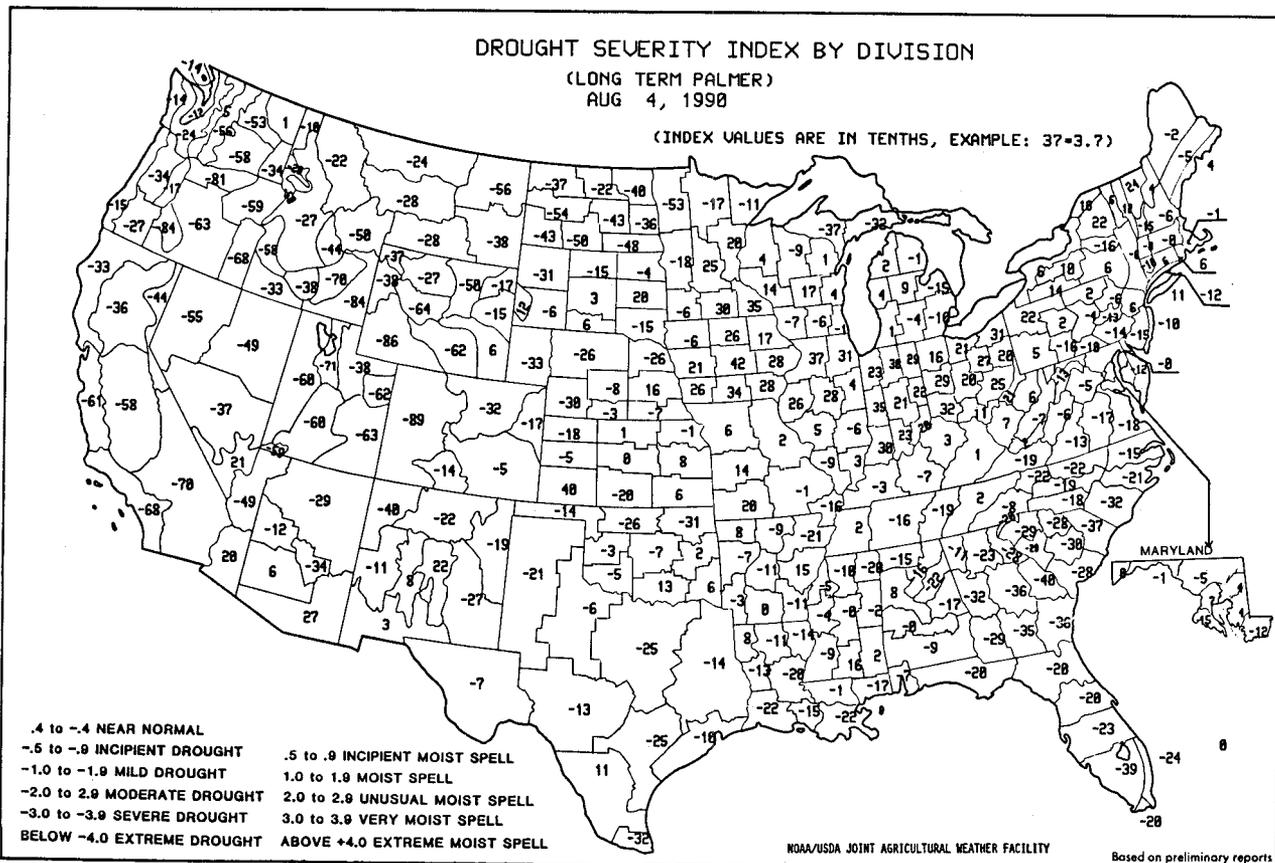
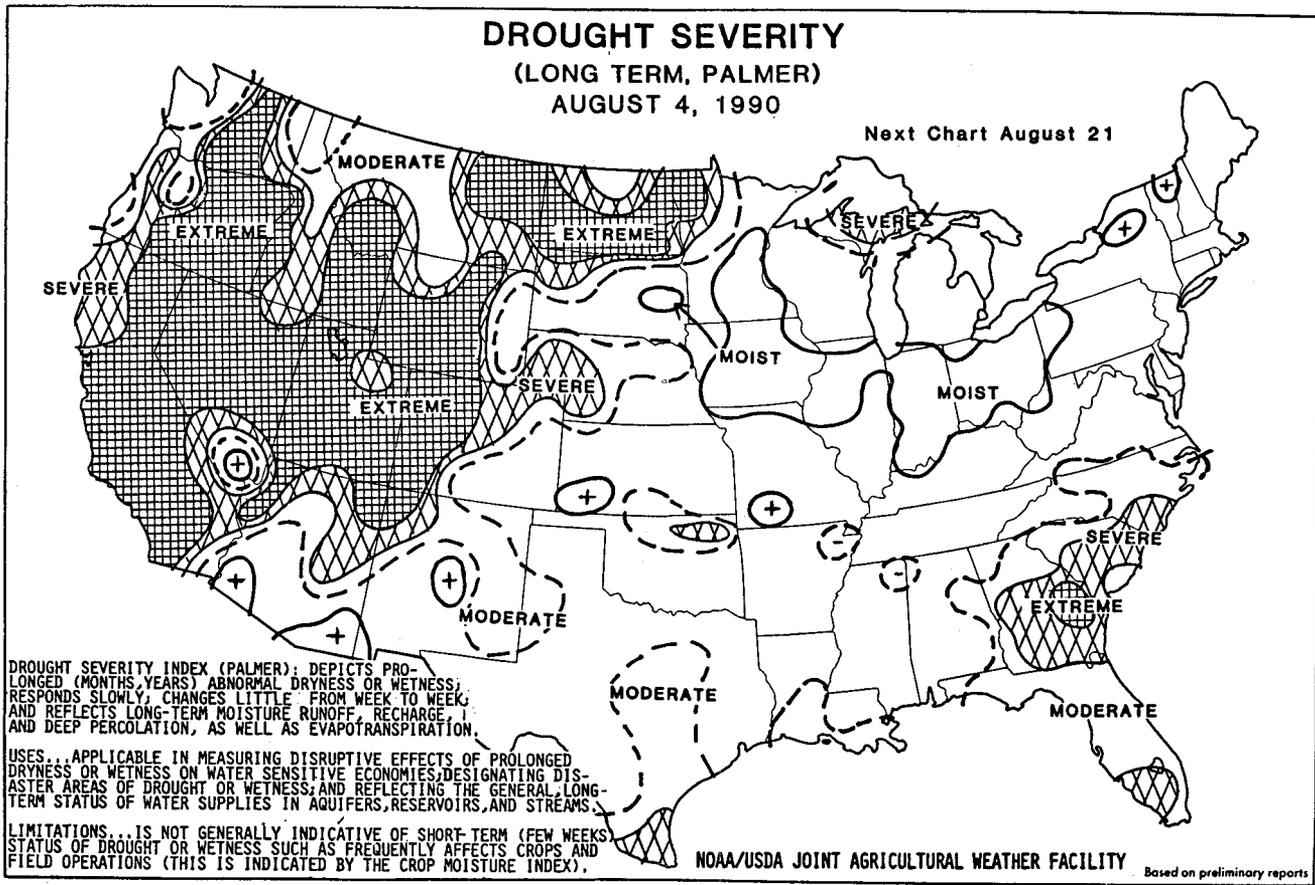
Contents

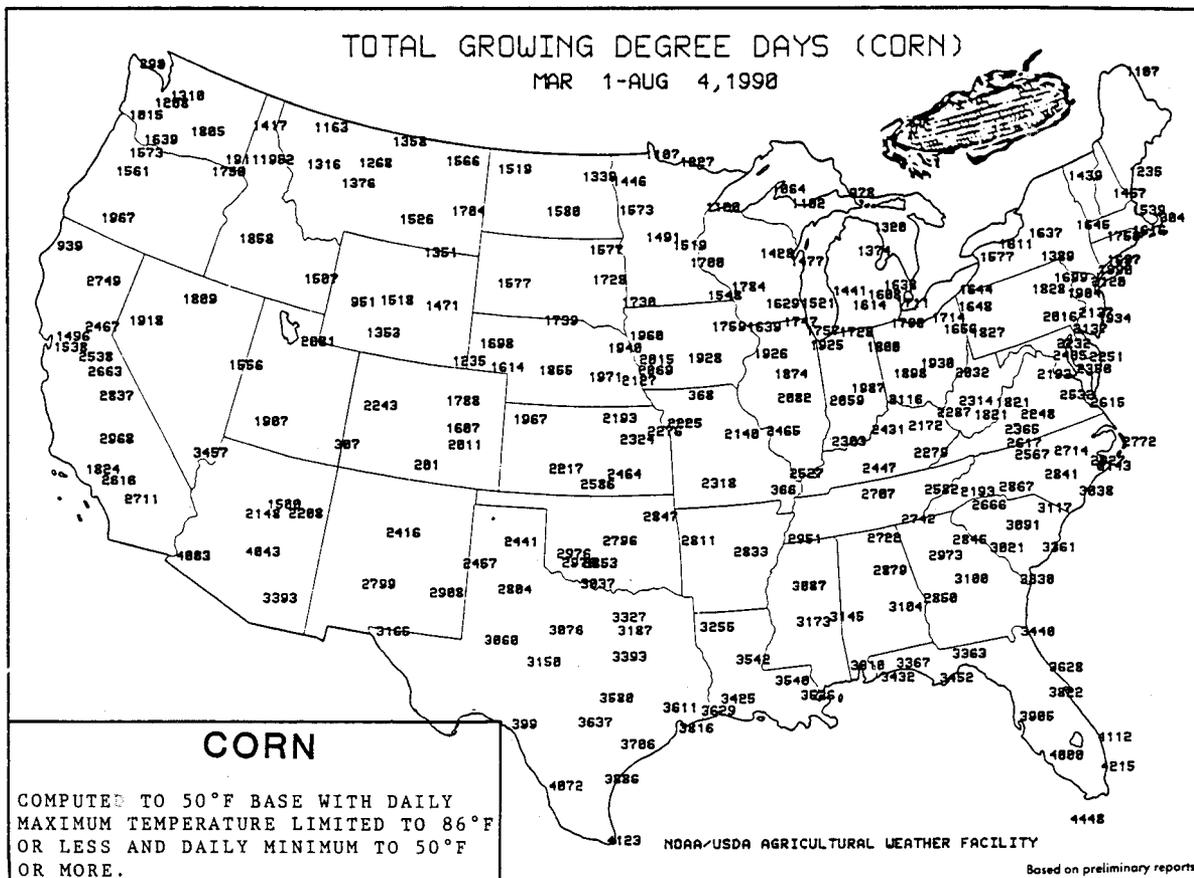
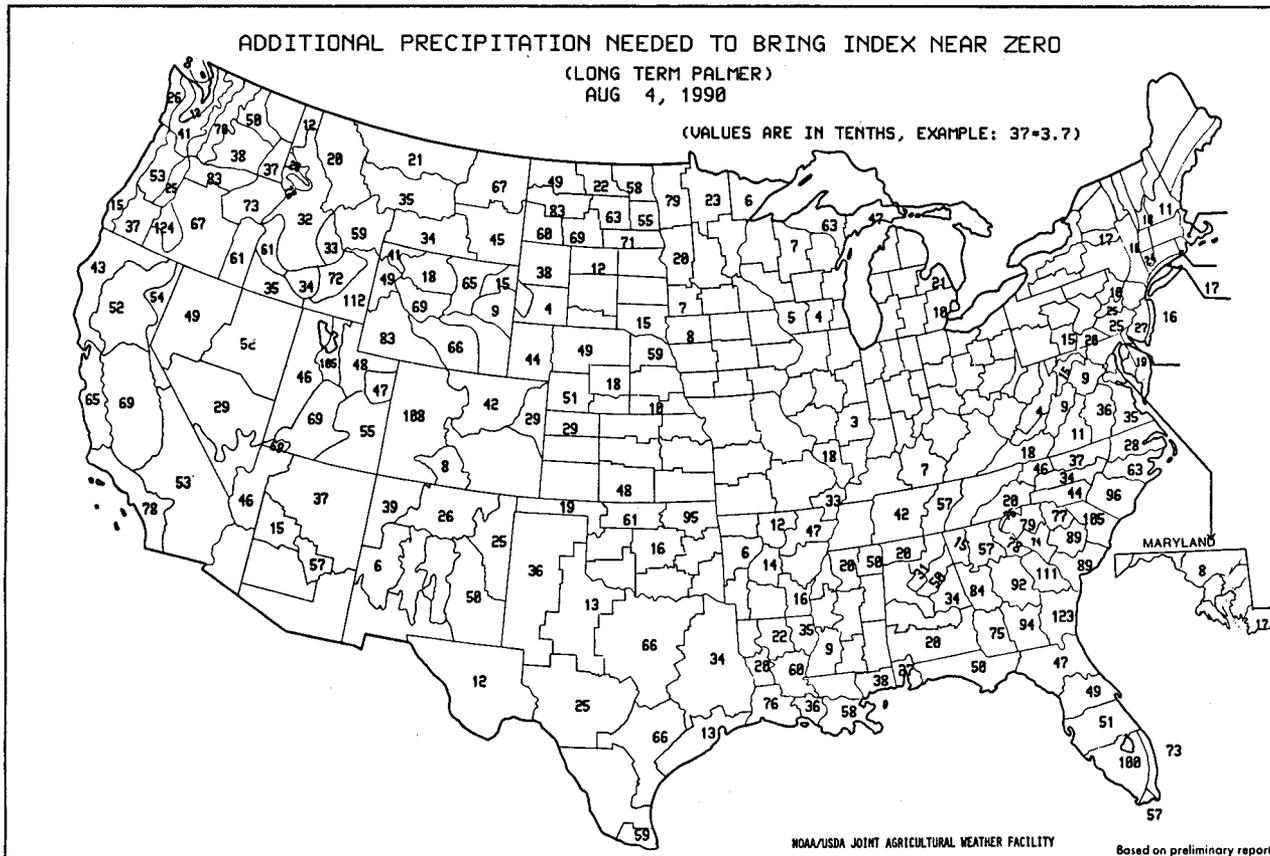
Page

Highlights & Total Precipitation Map	1
Temperature Departure & Extreme Maximum Temperature Maps	2
Crop Moisture Maps	3
Drought Severity Maps	4
Precipitation Needed to End Drought & Growing Degree Day Maps	5
National Weather Data for Selected Cities	6
July Weather and Crop Summary	9
July Weather in Historical Perspective	10
July Precipitation & Temperature Maps	11
July Weather Data for Selected Cities	13
National Agricultural Summary	14
Crop Progress and Condition Tables	15
State Summaries of Weather and Agriculture ...	17
International Weather and Crop Summary & July Temperature/Precipitation Table	23
Subscription and Mailing Permit Information ..	28









National Weather Data for Selected Cities

Weather Data for the Week Ending August 4, 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 Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jun 1	PCT. NORMAL SINCE Jun 1	AVERAGE MAXIMUM	AVERAGE 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
AL BIRMINGHAM	92	69	96	67	81	0	.4	-1.7	.4	5.7	59	32.2	91	91	44	6	0	1	0		
MOBILE	95	73	98	71	84	2	.4	-1.7	.4	5.0	36	43.7	108	96	45	7	0	1	0		
MONTGOMERY	97	72	98	71	85	3	1.2	.3	1.0	6.6	76	44.7	142	97	47	7	0	4	1		
AK ANCHORAGE	64	49	72	43	57	-2	.4	-1.1	.2	1.9	56	6.2	92	93	53	0	0	4	0		
BARROW	46	34	53	30	40	0	.4	-1.2	.4	1.7	132	2.2	100	98	71	0	2	0	0		
FAIRBANKS	73	52	79	49	62	2	.5	0	.4	7.0	208	8.8	159	87	37	0	0	0	0		
JUNEAU	60	51	63	46	56	0	2.3	1.3	1.0	12.4	162	28.3	115	96	77	0	0	0	2		
KODIAK	58	49	65	44	54	-2	3.7	2.8	1.7	13.4	164	39.7	125	98	79	0	0	0	3		
NOME	66	52	70	45	59	7	.2	-4	.2	5.8	156	11.0	165	85	54	0	0	0	0		
AZ PHOENIX	105	81	111	76	93	1	.3	-1	.3	1.4	143	3.6	104	57	22	7	0	0	0		
PRESCOTT	89	58	93	53	74	1	.6	-3	.6	6.9	166	11.6	113	63	20	4	0	0	1		
TUCSON	98	71	104	68	85	-1	.3	-3	.2	6.2	206	8.3	151	76	23	7	0	0	0		
YUMA	107	82	112	79	95	1	0	-1	0	.7	358	1.2	110	54	21	7	0	0	0		
AR FORT SMITH	90	71	98	69	80	-2	1.5	.9	.8	3.8	53	41.5	170	96	54	4	0	0	2		
LITTLE ROCK	90	73	97	71	82	-1	.7	-1	.6	3.3	44	38.6	126	85	54	4	0	0	1		
CA BAKERSFIELD	100	70	102	69	85	1	0	0	0	0	0	2.6	69	55	21	7	0	0	0		
EUREKA	63	53	65	51	58	1	T	0	0	.5	81	20.7	93	96	79	0	0	0	0		
FRESNO	101	69	103	68	85	4	0	0	0	0	0	7.4	106	68	24	7	0	0	0		
LOS ANGELES	73	63	76	61	68	-2	0	0	0	0	0	5.1	61	90	65	0	0	0	0		
REDDING	104	69	107	66	86	3	0	-1	0	1.3	125	20.3	82	66	15	7	0	0	0		
SACRAMENTO	95	58	98	56	77	1	0	0	0	0	0	11.5	108	87	27	7	0	0	0		
SAN DIEGO	77	66	80	64	72	1	0	0	0	.9	0	5.9	92	85	63	0	0	0	0		
SAN FRANCISCO	73	57	77	56	65	3	0	0	0	T	8	7.9	64	88	54	0	0	0	0		
CO DENVER	82	54	88	52	68	-6	1.1	.7	.7	4.2	112	11.1	108	84	30	0	0	0	1		
GRAND JUNCTION	93	63	95	59	78	-1	T	-1	T	1.2	124	4.2	98	42	13	6	0	0	1		
PUEBLO	85	54	90	51	69	-7	.2	-2	.1	5.3	163	11.6	169	91	32	2	0	0	0		
CT BRIDGEPORT	83	66	90	62	75	1	0	-8	0	4.7	70	24.4	101	82	47	1	0	0	0		
HARTFORD	88	62	93	54	75	1	T	-8	T	5.7	82	26.5	106	92	36	2	0	0	0		
DC WASHINGTON	87	68	90	64	77	-2	.1	-9	.1	6.9	89	23.0	100	82	45	2	0	0	0		
FL APALACHICOLA	92	75	97	73	84	2	1.0	-6	.9	13.2	103	26.4	87	95	58	6	0	0	0		
DAYTONA BEACH	93	74	97	71	83	2	.2	-1.1	.2	8.7	69	20.6	77	98	55	4	0	0	1		
JACKSONVILLE	94	73	98	69	83	1	1.8	.1	1.5	9.6	73	18.5	61	94	47	7	0	0	0		
KEY WEST	93	79	93	75	86	1	2.6	1.7	2.1	7.5	82	16.2	86	88	52	7	0	0	3		
MIAMI	94	78	98	76	86	3	.5	-8	.3	11.7	74	30.1	96	89	50	7	0	0	1		
ORLANDO	95	75	97	75	85	2	.6	-1.0	.6	13.5	85	22.1	73	95	47	7	0	0	4		
TALLAHASSEE	97	71	100	69	84	3	1.5	-4	1.5	8.9	55	28.0	69	97	41	7	0	0	2		
TAMPA	93	76	95	73	85	2	.2	-1.6	.1	15.3	112	25.4	93	93	54	7	0	0	1		
WEST PALM BEACH	94	76	96	73	85	3	1.7	.5	1.4	18.5	127	32.6	102	94	52	7	0	0	2		
GA ATLANTA	90	71	93	69	80	1	1.3	.4	1.3	6.2	72	40.8	127	94	49	4	0	0	3		
AUGUSTA	95	70	100	68	82	2	1.1	-1	.9	4.4	50	14.8	52	98	45	7	0	0	1		
MACON	95	71	99	68	83	1	T	-9	T	4.8	55	21.7	73	94	42	7	0	0	1		
SAVANNAH	95	73	101	71	84	2	2.5	.9	1.8	5.4	38	20.0	63	92	42	7	0	0	2		
HI HILO	83	72	85	70	77	2	1.3	-1.0	.6	21.1	131	88.5	118	95	68	0	0	0	2		
HONOLULU	90	74	92	71	82	2	0	-1	0	.6	54	10.5	76	78	45	4	0	0	0		
KAHULUI	87	72	89	70	80	1	.1	0	.1	1.4	214	15.3	129	95	63	0	0	0	0		
LIHUE	84	75	85	72	80	1	.3	-2	.1	1.9	49	20.7	85	77	60	0	0	0	1		
ID BOISE	95	59	104	53	77	2	0	0	0	.5	45	9.1	126	50	15	6	0	0	0		
LEWISTON	96	64	102	59	80	5	T	-1	T	1.1	53	7.7	97	51	15	7	0	0	0		
POCATELLO	91	51	97	47	71	-1	0	-1	0	.9	57	6.8	100	61	13	4	0	0	0		
IL CHICAGO	81	61	87	51	71	-3	.3	-5	.2	7.0	87	22.9	112	96	54	0	0	0	0		
MOLINE	83	63	87	52	73	-2	.3	-6	.3	13.5	139	35.0	149	95	52	0	0	0	3		
PEORIA	81	62	85	52	72	-3	2.0	1.2	1.1	18.1	218	35.9	165	99	65	0	0	0	0		
QUINCY	83	64	86	56	73	-3	2.1	1.2	1.7	11.5	129	28.4	123	97	59	0	0	0	2		
ROCKFORD	81	61	86	51	71	-2	.9	0	.4	14.7	153	28.2	125	92	53	0	0	0	3		
SPRINGFIELD	83	64	87	54	74	-2	1.7	.9	1.1	15.3	204	35.2	166	96	56	0	0	0	1		
IN EVANSVILLE	89	65	94	60	77	-1	2.1	1.3	2.0	6.3	79	33.4	124	96	46	4	0	0	2		
FORT WAYNE	80	59	87	53	70	-4	1.6	.8	1.6	11.6	155	31.7	147	95	51	0	0	0	1		
INDIANAPOLIS	83	61	89	55	72	-3	1.5	-6	1.3	8.1	92	29.0	117	98	54	0	0	0	1		
SOUTH BEND	79	58	85	50	68	-4	1.1	.2	1.1	10.9	135	29.3	131	95	55	0	0	0	1		
IA DES MOINES	81	64	84	58	72	-4	.2	-7	.1	18.4	234	34.4	178	93	58	0	0	0	0		
SIOUX CITY	81	60	85	52	71	-5	T	-7	T	7.4	96	19.3	115	97	51	0	0	0	0		
WATERLOO	80	60	85	53	70	-3	T	-9	T	17.6	186	30.9	146	97	55	0	0	0	0		
KS CONCORDIA	86	63	92	57	75	-5	.3	-5	.2	8.0	100	20.3	115	93	44	2	0	0	0		
DODGE CITY	85	61	91	58	73	-7	1.0	.4	.9	4.2	66	17.2	124	97	40	2	0	0	1		
GOODLAND	84	59	89	57	71	-5	.9	-2	.4	6.0	112	13.7	122	92	41	0	0	0	3		
TOPEKA	86	63	91	57	75	-4	1.7	-2	.4	6.0	112	13.7	122	92	41	0	0	0	3		
WICHITA	89	68	94	63	79	-3	1.3	1.1	1.9	10.5	109	23.3	112	97	52	1	0	0	1		
KY BOWLING GREEN	90	65	95	61	78	-1	1.3	.6	.9	4.6	57	12.9	72	93	42	2	0	0	3		
LEXINGTON	85	63	90	60	74	-2	.6	-5	.4	11.2	115	28.5	96	92	50	4	0	0	1		
LOUISVILLE	89	66	94	62	78	0	.3	-5	.3	8.4	103	36.8	133	89	43	4	0	0	2		
LA ALEXANDRIA	93	75	96	73	84	1	1.1	0	1.0	6.0	67	40.0	119	95	55	6	0	0	2		
BATON ROUGE	94	73	97	72	84	2	1.5	.1	1.0	15.0	137	46.5	131	97	46	6	0	0	1		
LAKE CHARLES	92	73	95	71	83	1	.2	-1.0	.2	7.4	73	34.1	111	100	57	6	0	0	2		
NEW ORLEANS	94	73	96	72	84	2	.1	-1.4	.1	3.4	28	38.9	107	99	52	7	0	0	0		

NOTICE: In last week's Bulletin, the previous week's table (July 15-21) was inadvertently published in place of the correct one (July 22-28). We regret any confusion this might have caused, and will publish the correct table in next week's issue if we can recreate the data.

Weather Data for the Week Ending August 4, 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 Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		.01 INCH OR MORE	.50 INCH OR MORE	.01 INCH OR MORE	.50 INCH OR MORE
ME SHERBROOK	94	73	99	72	84	0	.8	-.1	.8	6.9	93	43.5	155	96	48	6	0	0	0	0	1
ME CARIBOU	82	60	89	56	71	0	.6	-.4	.3	9.0	116	21.2	106	88	50	0	0	0	0	0	0
ME PORTLAND	83	60	91	55	72	0	.6	-.4	.3	7.4	118	24.8	103	83	50	0	0	0	0	0	0
MD BALTIMORE	86	65	89	60	75	0	.2	-1.0	.0	8.2	100	25.1	102	85	45	0	0	0	0	0	0
MD SALISBURY	85	64	88	58	75	0	.2	-1.0	.0	5.0	57	24.6	94	86	50	0	0	0	0	0	0
MA BOSTON	82	66	92	63	74	0	.2	-.7	.2	4.0	79	26.3	105	86	50	0	0	0	0	0	0
MA CHATHAM	76	65	82	64	71	0	.2	-.8	.2	7.5	115	30.7	116	93	74	0	0	0	0	0	0
MI ALPENA	78	56	85	49	67	0	1.3	-.6	.5	8.4	127	20.0	118	86	52	0	0	0	0	0	0
MI DETROIT	80	60	88	52	70	0	.6	-.6	.5	6.8	99	22.1	117	89	49	0	0	0	0	0	0
MI FLINT	80	58	89	49	69	0	.2	-.5	.2	5.8	90	22.1	98	81	46	0	0	0	0	0	0
MI GRAND RAPIDS	79	58	83	51	68	0	2.2	-1.6	1.6	7.4	106	20.5	105	97	54	0	0	0	0	0	0
MI HOUGHTON LAKE	75	55	81	47	65	0	2.2	-1.1	1.6	7.0	109	17.9	110	93	55	0	0	0	0	0	0
MI LANSING	78	57	85	47	68	0	.5	-1.1	.6	6.6	97	18.0	103	94	49	0	0	0	0	0	0
MI MARQUETTE	76	55	81	45	65	0	.5	-2	.4	5.2	70	17.4	90	91	53	0	0	0	0	0	0
MI MUSKOGON	79	57	83	48	68	0	1.0	-.3	.6	5.2	99	20.2	116	92	51	0	0	0	0	0	0
MI SAULT ST. MARIE	76	51	80	45	64	0	.9	-.2	.8	6.2	102	18.8	106	99	56	0	0	0	0	0	0
MN ALEXANDRIA	79	58	88	51	69	0	0	-.8	0	5.9	78	15.4	100	91	43	0	0	0	0	0	0
MN DULUTH	78	56	86	45	67	0	.4	-.5	.4	7.7	92	17.3	99	95	47	0	0	0	0	0	0
MN INT'L FALLS	78	54	85	43	66	0	1.7	1.0	1.7	10.4	132	15.3	105	96	48	0	0	0	0	0	0
MN MINNEAPOLIS	80	61	84	53	70	0	1.2	-.4	1.2	16.1	200	27.8	168	93	49	0	0	0	0	0	0
MN ROCHESTER	78	58	82	50	68	0	2.3	-1.5	1.5	18.5	230	34.3	199	95	54	0	0	0	0	0	0
MS GREENWOOD	94	72	97	69	83	0	.1	-.8	.1	7.8	94	34.6	100	96	51	6	6	6	6	6	6
MS JACKSON	96	71	98	70	83	0	.7	-.3	.6	3.7	44	37.7	112	100	45	7	7	7	7	7	7
MS MERIDIAN	97	69	100	66	83	0	.3	-.3	.2	7.3	78	49.8	142	98	42	2	2	2	2	2	2
MO CAPE GIRARDEAU	88	68	95	62	78	0	1.0	-.2	1.0	4.8	62	34.5	124	92	50	3	3	3	3	3	3
MO COLUMBIA	83	65	84	61	74	0	1.5	-.8	1.2	14.5	201	41.1	182	97	60	0	0	0	0	0	0
MO KANSAS CITY	85	64	88	57	74	0	1.0	-.1	1.0	11.7	126	28.7	130	95	56	0	0	0	0	0	0
MO SAINT LOUIS	86	70	91	63	78	0	.5	-.2	.5	6.9	90	27.2	124	85	49	1	1	1	1	1	1
MO SPRINGFIELD	86	67	89	61	77	0	.1	-.5	.1	7.8	91	42.5	176	94	53	0	0	0	0	0	0
MT BILLINGS	88	59	86	56	74	0	.1	-.2	.1	1.0	35	8.4	68	20	2	2	2	2	2	2	2
MT GLASGOW	87	56	97	50	72	0	.7	-.3	.6	1.8	41	4.2	55	73	22	0	0	0	0	0	0
MT GREAT FALLS	86	53	89	47	69	0	.1	-.2	.1	2.2	56	9.2	87	73	21	0	0	0	0	0	0
MT HAVRE	85	54	92	50	70	0	.1	-.1	.1	1.5	41	4.7	58	84	25	1	1	1	1	1	1
MT HBIENA	87	54	90	51	71	0	.1	-.2	.1	1.3	41	4.8	62	71	19	1	1	1	1	1	1
MT KALISPELL	85	53	89	47	69	0	.1	-.2	.1	3.5	108	13.6	142	89	25	0	0	0	0	0	0
MT MILES CITY	89	61	97	54	75	0	.1	-.3	.1	2.7	61	6.9	69	67	22	3	3	3	3	3	3
MT MISSOULA	88	53	95	48	70	0	.1	-.1	.1	1.2	42	8.0	96	83	21	3	3	3	3	3	3
NE GRAND ISLAND	82	60	85	57	71	0	.4	-.2	.4	12.3	183	20.7	131	93	51	0	0	0	0	0	0
NE LINCOLN	84	62	90	54	73	0	.6	-.2	.6	10.4	139	19.6	110	93	47	1	1	1	1	1	1
NE NORFOLK	83	59	86	52	71	0	1.1	-.4	.8	13.8	175	21.3	128	94	50	0	0	0	0	0	0
NE NORTH PLATTE	85	59	88	55	72	0	.2	-.3	.2	3.9	56	11.3	80	94	41	0	0	0	0	0	0
NE OMAHA	80	64	83	59	72	0	.3	-.6	.2	10.0	122	18.7	99	90	58	0	0	0	0	0	0
NE SCOTTSBLUFF	84	55	91	52	70	0	1.3	1.0	.8	4.8	94	13.4	123	95	36	1	1	1	1	1	1
NE VALENTINE	85	57	92	52	71	0	.9	-.3	.8	6.0	105	13.5	112	71	31	1	1	1	1	1	1
NV ELY	89	47	92	42	68	0	.1	-.1	.1	1.2	78	6.5	113	45	10	3	3	3	3	3	3
NV LAS VEGAS	106	77	109	74	92	1	0	-.1	0	1.6	279	3.3	145	26	10	7	7	7	7	7	7
NV RENO	96	57	98	54	76	7	.7	-.1	.7	.9	152	4.1	88	56	12	7	7	7	7	7	7
NH WINNEMUCCA	97	54	101	46	76	4	0	-.1	0	.3	27	4.4	90	36	14	7	7	7	7	7	7
NH CONCORD	86	56	92	49	71	2	.1	-.7	.1	4.3	69	19.5	95	96	37	2	2	2	2	2	2
NJ ATLANTIC CITY	85	61	91	57	73	-2	.1	-1.0	.1	5.2	70	20.7	85	94	50	2	0	0	0	0	0
NM ALBUQUERQUE	87	62	89	59	74	-4	.7	.3	.3	3.2	162	6.5	158	74	24	0	0	0	0	0	0
NM CLOVIS	83	62	87	59	73	-5	.3	-.3	.2	2.2	38	5.9	58	91	38	0	0	0	0	0	0
NM ROSWELL	88	66	92	62	77	-4	.2	-.2	.1	1.2	40	3.6	68	86	36	1	0	0	0	0	0
NY ALBANY	88	61	92	51	75	3	.1	-.6	.1	4.4	66	25.8	126	93	39	3	0	0	0	0	0
NY BINGHAMTON	78	58	83	52	68	-1	.2	-.5	.2	5.6	75	22.0	103	100	56	0	0	0	0	0	0
NY BUFFALO	84	61	91	56	73	2	.9	-.1	.7	6.7	109	28.1	138	89	41	2	0	0	0	0	0
NY NEW YORK	86	70	91	67	78	1	.3	-.6	.3	4.9	67	26.3	106	80	42	2	0	0	0	0	0
NY ROCHESTER	84	60	91	55	72	1	.6	-.1	.6	6.0	105	22.4	124	95	43	2	0	0	0	0	0
NY SYRACUSE	84	61	90	54	72	1	.5	-.4	.5	6.6	85	26.1	116	92	47	1	0	0	0	0	0
NC ASHEVILLE	85	63	88	61	74	0	.4	-.5	.4	7.9	98	32.2	120	100	52	0	0	0	0	0	0
NC CHARLOTTE	91	71	93	67	81	2	.1	-.8	0	3.7	46	23.8	88	82	39	7	0	0	0	0	0
NC GREENSBORO	89	67	93	64	78	0	0	-1.0	0	1.5	17	21.7	84	86	40	4	0	0	0	0	0
NC HATTERAS	85	69	90	63	77	-2	1.1	-.3	.9	6.0	58	30.9	102	93	56	1	0	0	0	0	0
NC NEW BERN	91	71	97	66	81	1	.1	-1.5	.1	4.2	33	27.9	88	93	45	6	0	0	0	0	0
NC RALEIGH	89	66	95	61	78	0	.7	-1.0	.7	3.3	38	24.3	94	93	42	3	0	0	0	0	0
NC WILMINGTON	90	71	97	67	81	0	1.4	-.2	1.4	10.2	73	30.1	93	97	54	4	0	0	0	0	0
ND BISMARCK	87	58	97	49	72	1	.7	-.4	.7	6.3	119	9.3	88	82	25	3	0	0	0	0	0
ND FARGO	84	57	93	48	71	-1	.4	-.3	.4	7.2	107	12.6	100	87	34	2	0	0	0	0	0
ND GRAND FORKS	84	56	93	45	70	1	.4	-.2	.4	6.1	100	11.4	100	84	35	1	0	0	0	0	0
ND WILLISTON	86	54	95	45	70	-1	0	-.3	0	3.1	67	6.7	72	83	24	3	0	0	0	0	0
OH AKRON-CANTON	80	58	86	49	69	-3	2.4	1.6	1.8	15.4	200	36.2	161	96	50	0	0	0	0	0	0
OH CINCINNATI	86	62	91	57	74	-2	.1	-.7	.1	8.8	100	32.6	126	93	45	2	0	0	0	0	0
OH CLEVELAND	79	59	87	51	69	-3	1.0	-.2	.9	8.2	113	26.8	125	91	52	0	0	0	0	0	0
OH COLUMBUS	83	61	89	54	72	-2	1.1	-.2	.6	13.9	163	32.6	138	95	47	0	0	0	0	0	0

Based on 1951-80 normals

Weather Data for the Week Ending August 4, 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 Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		01 INCH OR MORE	.50 INCH OR MORE		
DAYTON	82	61	88	54	71	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
TOLEDO	81	57	89	48	69	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
YOUNGSTOWN	80	56	87	50	68	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
OK OKLAHOMA CITY	88	70	93	67	79	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
TULSA	91	71	95	67	81	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
OR ASTORIA	72	56	86	51	64	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
BURNS	91	51	97	44	71	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
MEDFORD	100	57	106	53	78	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
PENDLETON	93	63	99	58	78	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
PORTLAND	87	60	100	54	74	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SALEM	89	55	99	51	72	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
PA ALLENTOWN	86	63	90	56	74	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
ERIE	81	61	87	54	71	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
HARRISBURG	86	63	89	56	75	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
PHILADELPHIA	88	67	92	62	77	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
PITTSBURGH	82	60	87	54	71	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SCRANTON	83	60	88	52	72	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
RI PROVIDENCE	84	63	90	61	74	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SC CHARLESTON	94	73	99	71	84	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
COLUMBIA	95	71	98	69	83	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
FLORENCE	96	71	101	68	84	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
GREENVILLE	90	68	94	66	79	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SD ABERDEEN	85	57	93	49	71	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
HURON	84	59	92	53	71	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
RAPID CITY	87	58	93	51	73	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SIOUX FALLS	83	59	92	47	71	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
TN CHATTANOOGA	92	69	93	66	80	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
KNOXVILLE	89	68	91	67	79	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
MEMPHIS	92	74	98	70	83	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
NASHVILLE	92	69	95	66	81	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
TX ABILENE	87	68	95	65	78	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
AMARILLO	84	62	88	61	73	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
AUSTIN	95	74	98	72	84	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
BEAUMONT	94	74	96	71	84	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
BROWNSVILLE	94	76	97	74	85	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
CORPUS CHRISTI	96	76	100	73	86	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
DEL RIO	89	72	94	70	81	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
EL PASO	86	65	92	63	76	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
FORT WORTH	92	73	101	72	82	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
GALVESTON	91	80	92	77	86	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
HOUSTON	95	74	98	71	84	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
LUBBOCK	85	66	92	64	75	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
MIDLAND	87	67	94	64	77	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SAN ANGELO	88	68	94	66	78	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SAN ANTONIO	93	74	96	72	84	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
VICTORIA	94	76	95	72	85	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
WACO	98	73	103	69	85	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
WICHITA FALLS	91	71	101	69	81	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
UT CEDAR CITY	91	57	94	52	74	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SALT LAKE CITY	93	65	102	59	79	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
VT BURLINGTON	85	60	90	54	72	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
VA NORFOLK	86	68	95	62	77	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
RICHMOND	86	66	92	61	76	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
ROANOKE	87	63	90	57	75	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
WA QUILLAYUTE	73	53	88	48	63	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SEATTLE-TACOMA	82	58	92	51	70	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SPOKANE	88	60	94	55	74	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
YAKIMA	93	57	97	50	75	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
WV BECKLEY	81	59	84	53	70	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
CHARLESTON	86	61	91	55	73	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
HUNTINGTON	86	63	93	58	75	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
PARKERSBURG	82	59	87	52	71	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
WI GREEN BAY	80	58	83	49	69	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
LACROSSE	81	61	85	51	71	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
MADISON	80	58	85	48	69	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
MILWAUKEE	78	58	86	54	70	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
WAUSAU	78	56	81	47	67	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
WY CASPER	83	51	90	48	67	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
CHEYENNE	75	50	82	46	62	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
LANDER	84	54	89	50	69	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		
SHERIDAN	84	53	93	49	69	.3	1.3	.6	1.3	13.1	173	36.2	162	93	50	0	0	1	1		

Based on 1951-80 normals

July Weather and Crop Summary

WEATHER

HIGHLIGHTS: Thunderstorms continued to bring severe weather, abundant rain, and local flooding to the Corn Belt and parts of the Great Plains and Atlantic Coast States throughout July. An active Southwest monsoon caused widespread showers, flash floods, and contributed to the above-normal rainfall over much of the western third of the Nation. In mid-July, thunderstorms raked southern Texas with torrential rain. The storms deluged El Dorado with 12.5 inches, San Antonio with 10 inches, and Beeville with 10.64 inches. Dry conditions remained over parts of the Southeast.

Unseasonably cool air prevailed in the Plains and Mississippi Valley, while the West remained hot. Above-normal temperatures continued along the Atlantic seaboard.

JULY 1-7: Oppressive heat again dominated much of the Nation as record-high temperatures for the date progressed from the northern and central Rockies and central Plains early in the week to the middle and southern Atlantic coast at week's end. Parts of Alaska also experienced record warmth early in the week. On July 2, Valentine, NE smashed their alltime record high with a reading of 114° F. The 108° F at North Platte, NE was their hottest on record for so early in the season.

Scattered showers and thunderstorms developed throughout the week across the Gulf Coast States and in the Southwest, producing some heavy rain. At the first of the week, showers and thunderstorms covered the Atlantic seaboard and dotted the West. Beneficial rain dampened the northern Plains. At midweek, thunderstorms developed along a slow moving cold front, reaching from the central Rockies to the middle Atlantic coast. Severe storms caused local torrential rain in Indiana, Ohio, Maryland, and Delaware. Flooding resulted from heavy rains in Denver, CO. Intense thunderstorms swept across the upper Mississippi Valley and Great Lakes, with heavy rain and high wind at week's end.

JULY 8-14: Showers and thunderstorms were widespread throughout the week over much of the eastern half of the Nation, causing locally heavy rains and flooding. During the first of the week, thunderstorms developed around a stationary front reaching from the central Rockies to New Jersey, producing moderate to heavy rainfall. Armstrong County in western Pennsylvania was pounded with 5.1 inches of rain in a 4-hour period. Scattered thunderstorms in the Southeast brought some relief from the heat. During the rest of the week, a stagnant weather pattern developed and resulted in extensive showers drenching parts of the central and southern Plains, much of the Mississippi Valley, and the eastern third of the country. Some severe thunderstorms produced torrential rain and large hail, and spawned a few tornadoes. Nearly 6 inches of rain inundated Virginia Beach, VA in 6 hours on Thursday morning. The Southwest monsoon continued throughout the week, with scattered showers and thunderstorms across Arizona, New Mexico, Utah, and Colorado. Heavy rains at week's end caused a number of flash floods. A 12-foot wall of water was reported to be moving down the Puerco River in Arizona on Saturday. A wide area of torrential rain covered southern Texas on Sunday, July 15, as 12.5 inches deluged Eldorado, TX.

Unseasonably cool air spread into the northeastern and central portions of the Nation as numerous low-temperature records for the date were broken in the Plains, Mississippi Valley, and New England at week's end. In contrast, abnormally hot weather remained in the West, and the Middle and Southern Atlantic Coast States, where record-high temperatures for the date were set during the middle of the week.

JULY 15-21: Showers and thunderstorms were again widespread over much of the Nation. At the first of the week, intense thunderstorms deluged southern Texas with torrential rain causing extensive flooding. Bloomington, TX was pounded with 15 inches of rain on Monday and Tuesday as a number of stations reported 10

inches or more. During the latter part of the week, thunderstorms developed around a southeastward drifting frontal system and soaked the central and southern Plains to the northern and middle Atlantic coast with widespread rain. These thunderstorms produced locally heavy rain, high wind, and large hail and spawned a number of tornadoes. Scattered thunderstorms alleviated dryness across the Southeast throughout the week, while rain showers dotted the West.

Numerous low-temperature records for the date were broken early in the week from the central Plains to Florida as unseasonably cool air remained over the Plains and middle and lower Mississippi Valley. Hot weather continued along the Pacific Coast States as temperatures again soared into the hundreds. Temperatures were also abnormally high in the Northeast.

JULY 22-28: Intense thunderstorms rumbled across the Great Plains, upper Mississippi Valley, and the Northeast throughout the week, producing hail, high wind, locally torrential rain, and flooding. At the first of the week, showers and thunderstorms continued to develop in the warm, humid air ahead of a frontal system reaching from the southern Plains to the Northeast. At midweek, heavy rain spread from the northern Rockies and northern Plains into the Mississippi Valley. During the latter part of the week, more showers and thunderstorms formed ahead of a slow moving frontal system and drenched the southern Plains to the upper Great Lakes with additional heavy rain. Thunderstorms were scattered through the week along the Gulf and Atlantic coasts and in the Southwest.

JULY 29-31: A slow moving frontal system spread rain from the central and southern Plains to the Atlantic coast as more rains caused flooding in the central and southern High Plains.

CROP DEVELOPMENT

Early in July, hot, dry weather stressed crops in the **central and southern Great Plains, Delta, and Southeast.** Soil moisture was mostly short in the **Delta and Southeast.** Rain improved crop conditions late in the month, but additional rain was needed, especially in the **Southeast.** Soil moisture was mostly adequate in the **Corn Belt** and adequate to short in the **northern Great Plains.** Crop development lagged behind normal in the **Corn Belt.** Soil moisture was short to adequate in most of the **West.**

Corn was in mostly good to fair condition during July. Crop development lagged behind normal during the month, especially in Illinois, Indiana, Iowa, and Missouri. By July 29, in the 17 major producing States, 56 percent (%) of the acreage was in the silking stage or beyond, 26 percentage points behind the 5-year average. During July, hot, dry weather stressed the crop in the Southeast. Near the end of the month, rain improved crop condition, but it was still mostly fair to poor in Georgia and North Carolina. Corn was in good condition in the Corn Belt. Harvest began in Texas early in the month and was underway in Georgia by mid-July.

Soybeans were mostly good to fair during July. Crop development lagged behind normal in the central and western Corn Belt during the month. By July 29, 16% of the acreage was setting pods, 19 points behind normal. Lack of moisture stressed the crop in the Delta and Southeast during the month. Near the end of the month, rain improved crop condition, but additional moisture was needed. In the Corn Belt, soybeans were in good to fair condition.

(Continued to back cover)

July Weather in Historical Perspective

Temperatures for July averaged over the Nation were near the long-term mean and ranked as the 42nd coldest (fig. 1). The national precipitation index ranks July 1990 as the 24th wettest July on record (fig. 2).

Regional rankings for the nine climatically homogeneous regions are listed in table 1 (see the *Weekly Weather and Crop Bulletin*, Vol. 77, No. 18, May 8, 1990, page 10 for a map of the regions). The Central and East North Central regions had unusually cool and wet conditions, while the Southeast was unusually warm and dry. The western third of the country was unusually warm, with the West region having the tenth warmest July on record. In contrast, the South had the 19th coolest July. Localized heavy thunderstorms in the Southwest gave that region the ninth wettest July on record.

Widespread heavy rains in the East North Central region have made June-July 1990 the second wettest such period on record (fig. 3). Meanwhile, the Southeast has had extremely dry conditions during the last 2 months, with 1990 ranking as the second driest June-July on record (fig. 4).

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

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	55	53
EAST NORTH CENTRAL	76	25
CENTRAL	75	29
SOUTHEAST	14	74
WEST NORTH CENTRAL	55	40
SOUTH	50	19
SOUTHWEST	88	31
NORTHWEST	56	86
WEST	60	87

Figure 1

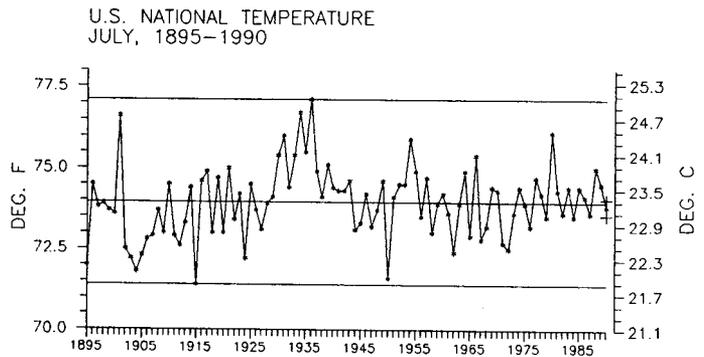


Figure 2

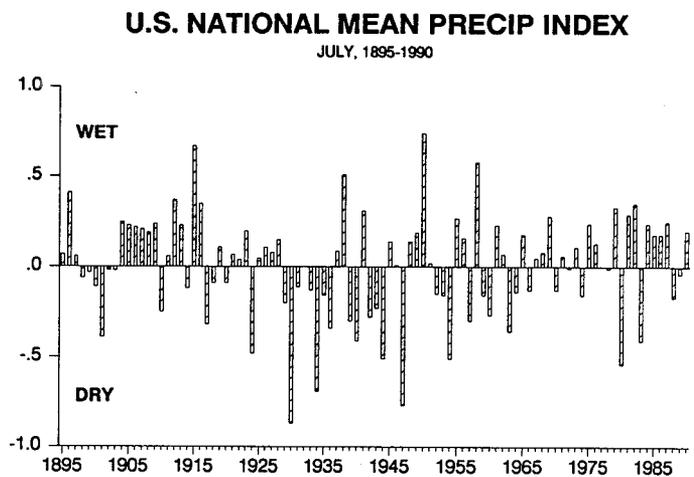


Figure 3

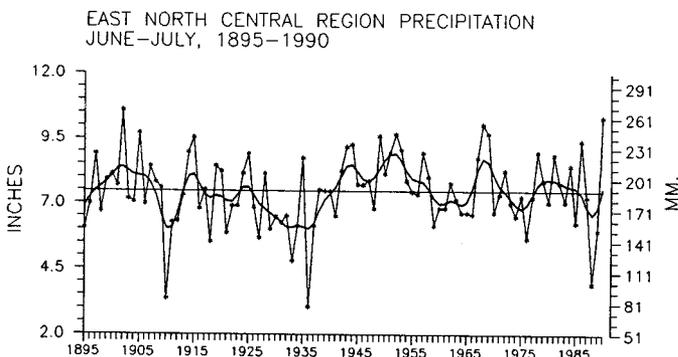
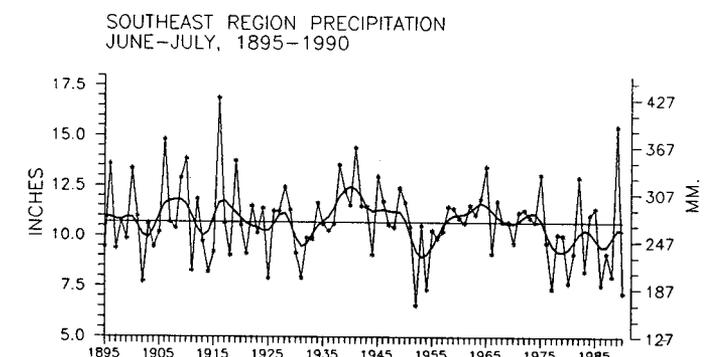
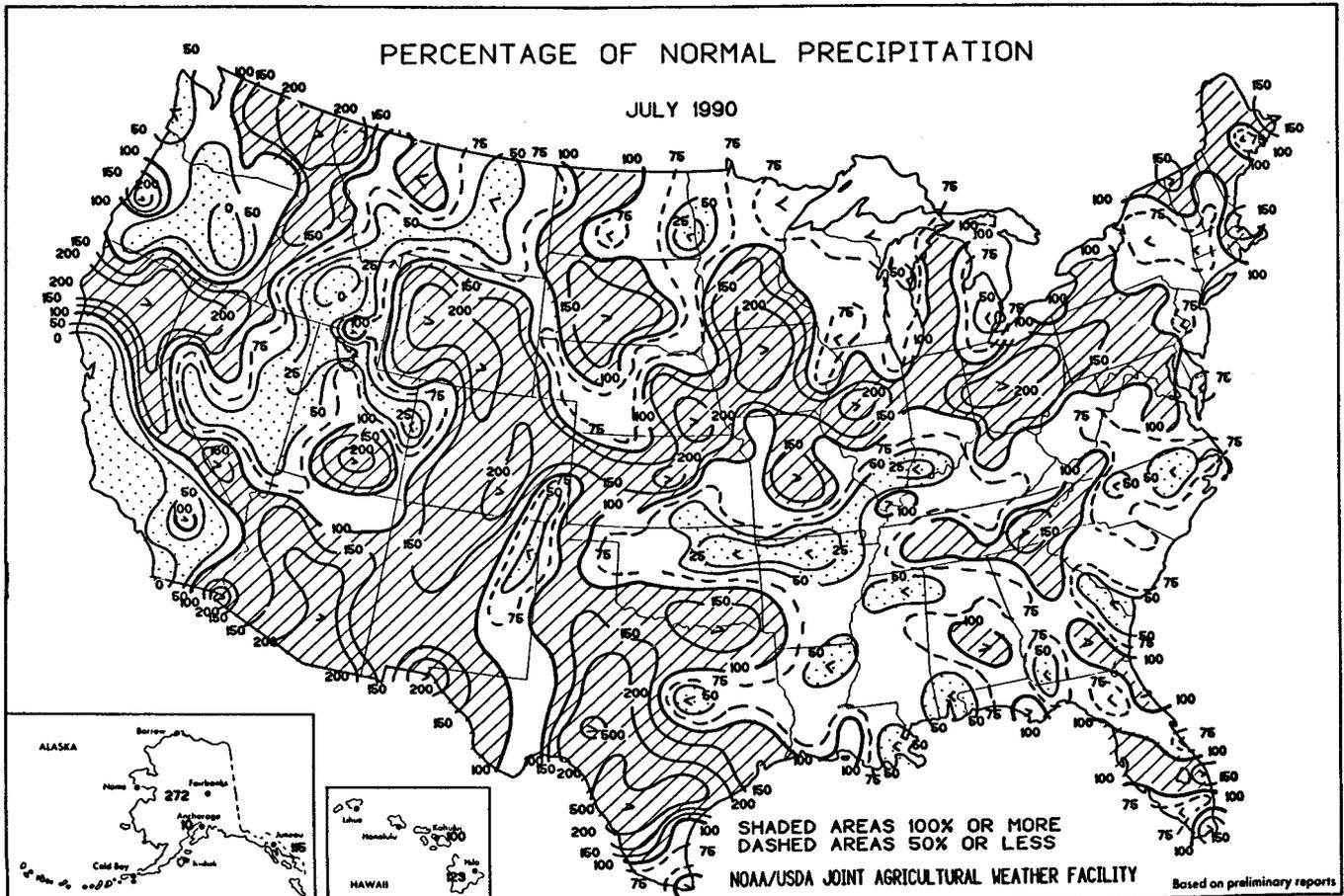
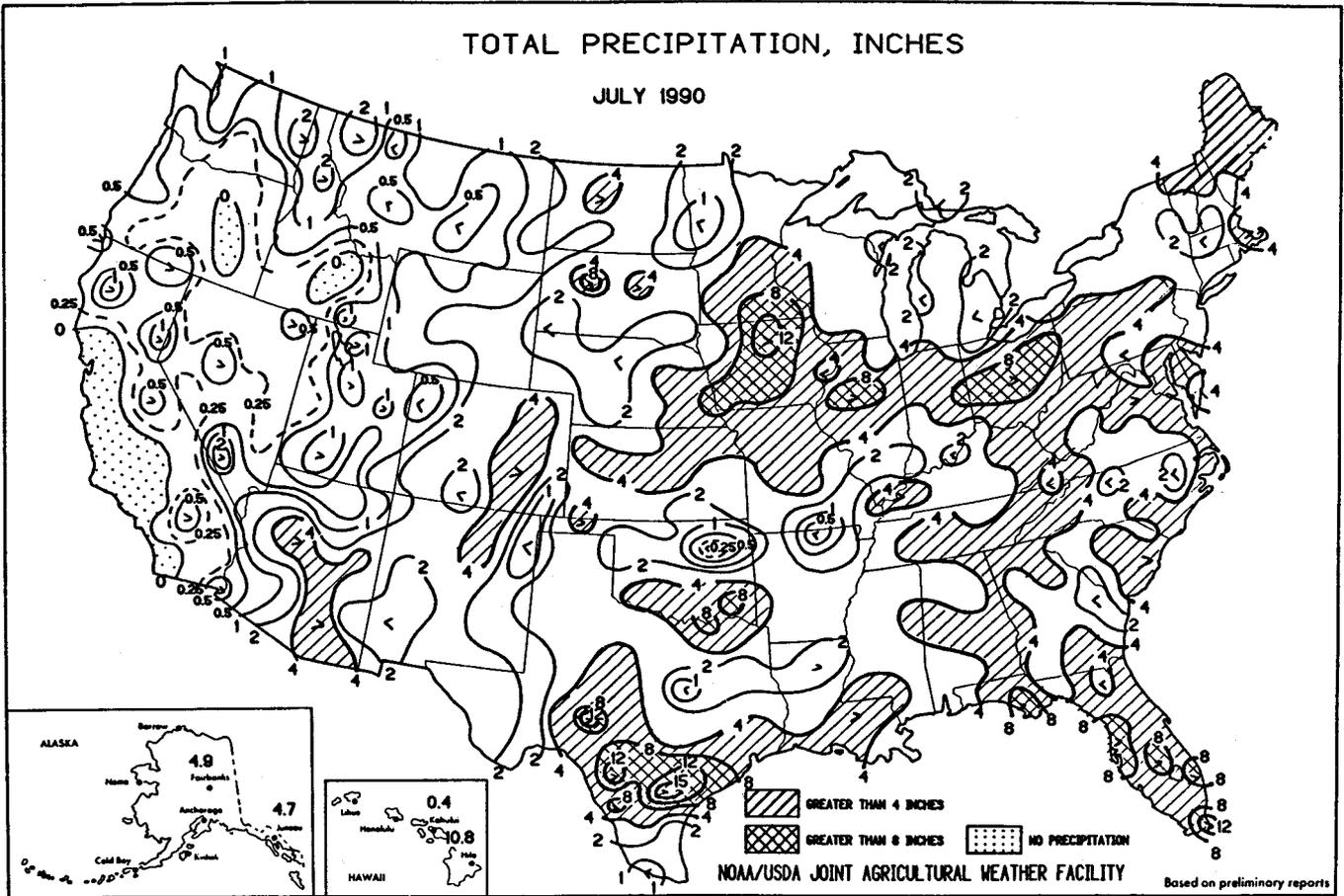
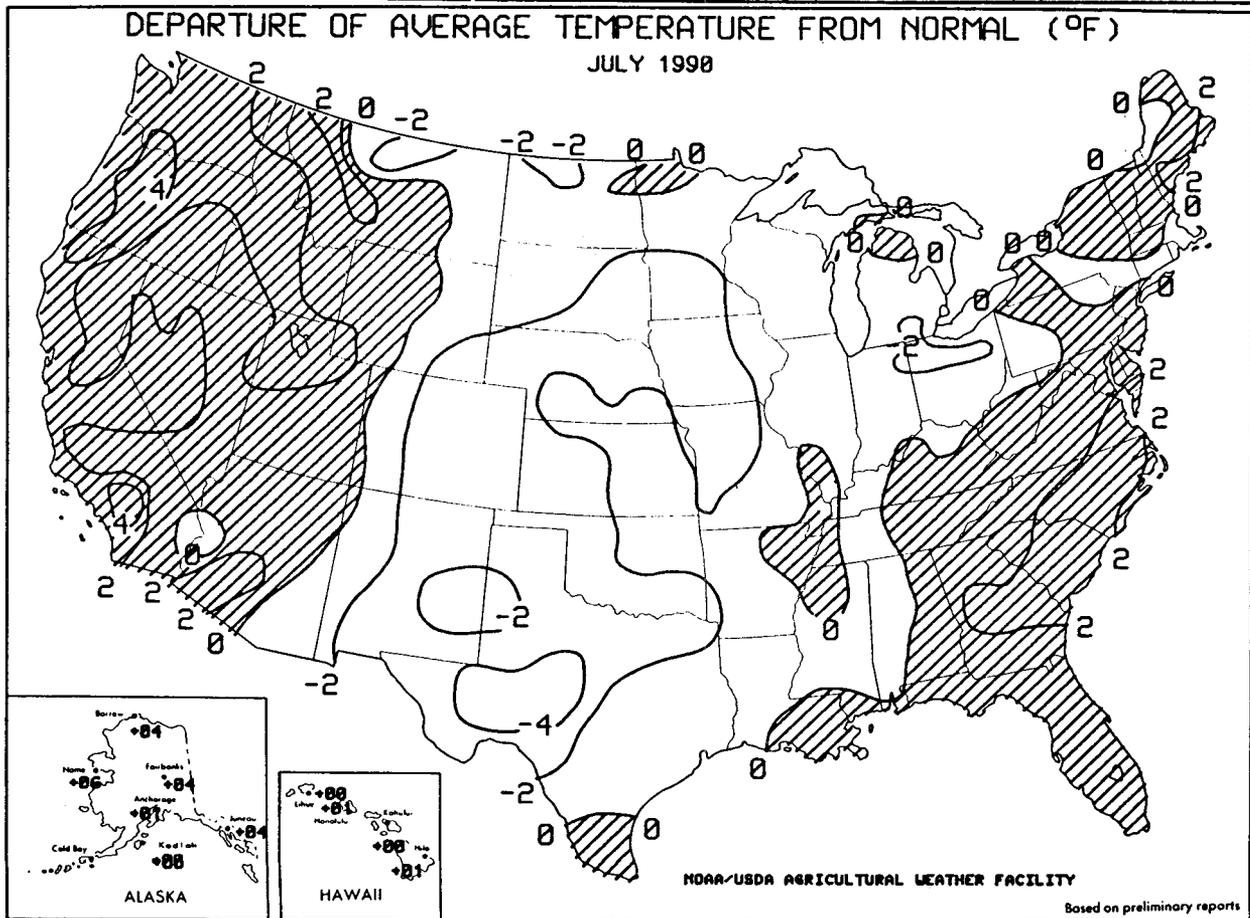
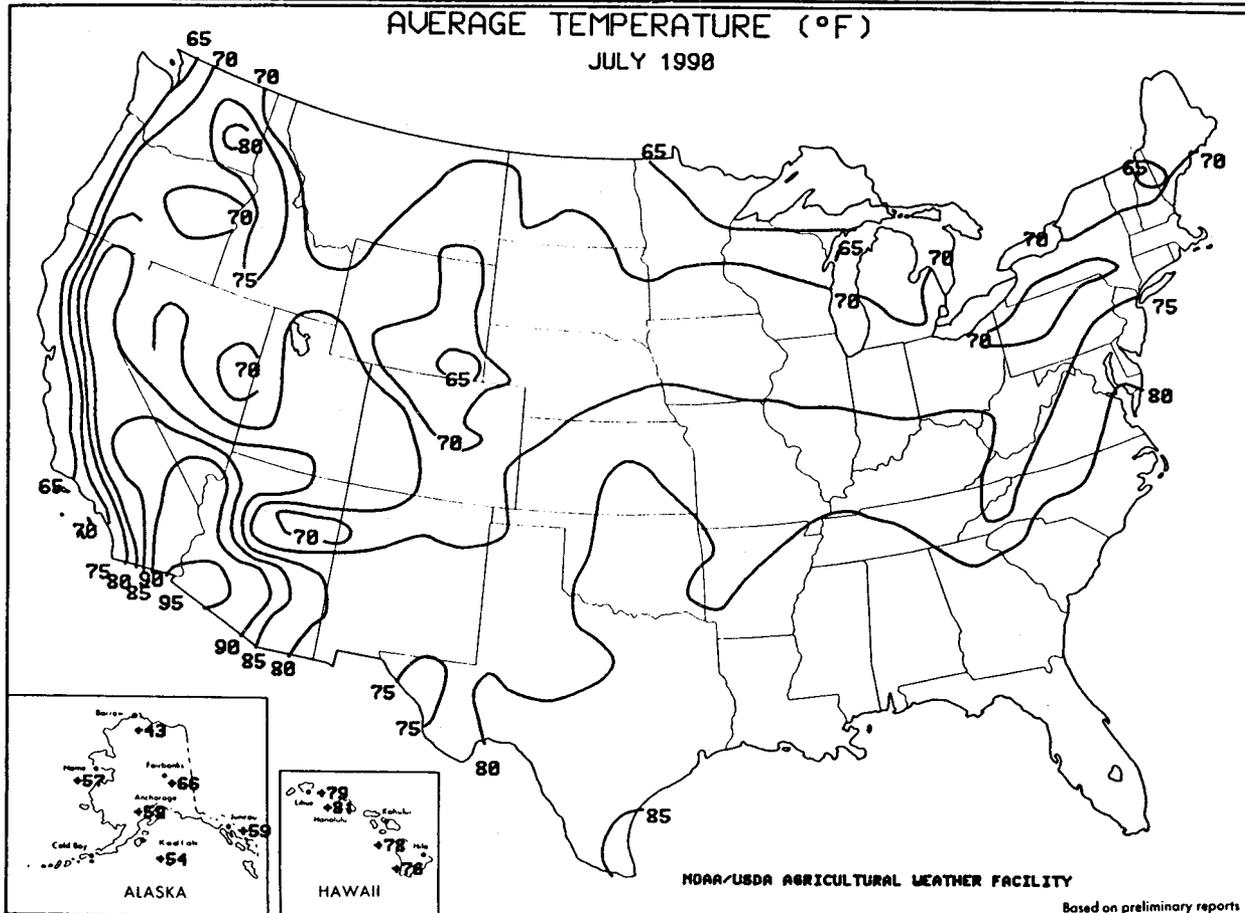


Figure 4







Temperature and Precipitation Data for July 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	80	0	3.2	-2.2	LA PADUCAH	79	0	4.0	0.3	DAYTON	73	-2	8.6	5.2
HUNTSVILLE	80	1	3.6	-1.5	ALEXANDRIA	82	0	3.0	-1.5	MANSFIELD	70	-2	9.6	5.9
MOBILE	82	-1	2.4	-5.3	BATON ROUGE	82	0	7.4	0.3	TOLEDO	72	-1	1.9	-1.3
MONTGOMERY	82	0	5.6	0.8	LAKE CHARLES	81	-1	3.5	-1.8	YOUNGSTOWN	69	-1	6.9	2.9
AK ANCHORAGE	59	0	0.2	-1.8	NEW ORLEANS	82	0	2.3	-4.4	OK OKLAHOMA CITY	81	-2	2.7	-0.4
BARROW	43	4	1.4	0.5	SHREVEPORT	82	-1	3.5	-0.1	TULSA	83	0	0.2	-3.3
FAIRBANKS	66	4	4.9	3.1	ME CARIBOU	66	1	4.2	0.2	OR ASTORIA	62	2	0.5	-0.6
JUNEAU	59	4	4.7	0.6	PORTLAND	70	2	3.2	0.4	BURNS	69	0	T	-0.2
KODIAK	54	0	7.7	4.1	MD BALTIMORE	78	1	5.7	1.8	MEDFORD	76	4	0	-0.1
NOME	57	6	4.7	2.5	SALISBURY	78	2	3.0	-1.4	PENDLETON	75	2	0.2	-0.1
AZ FLAGSTAFF	67	1	4.3	1.8	MA BOSTON	73	-1	4.1	1.4	PORTLAND	71	4	0.3	-0.1
PHOENIX	94	1	1.1	0.3	CHATHAM	68	0	4.3	1.4	SALEM	70	3	0.5	0.1
PRESCOTT	74	1	6.3	3.1	MI ALPENA	67	0	3.7	0.6	PA ALLENTOWN	74	0	3.2	-0.9
TUCSON	85	-1	5.5	3.1	DETROIT	72	0	1.5	-1.6	ERIE	71	1	2.5	-0.9
WINSLOW	76	-3	1.6	1.8	FLINT	70	0	1.8	-1.0	HARRISBURG	75	-1	3.6	0.3
YUMA	96	2	0.7	0.5	GRAND RAPIDS	70	-1	3.7	0.7	PHILADELPHIA	78	1	2.6	-1.2
AR FORT SMITH	82	0	2.4	-0.8	HOUGHTON LAKE	67	0	3.8	0.9	PITTSBURGH	72	-1	6.6	2.8
LITTLE ROCK	82	0	2.1	-1.5	LANSING	69	-1	3.6	0.8	SCRANTON	72	0	4.4	1.0
CA BAKERSFIELD	85	1	0.0	0.0	MARQUETTE	64	-1	2.0	-1.2	WILLIAMSPORT	73	0	5.1	1.1
BISHOP	78	1	0.3	0.1	MUSKEGON	70	0	1.3	-1.1	RI PROVIDENCE	73	0	3.5	0.5
EUREKA	60	4	0.2	0.1	SAULT ST. MARIE	63	-1	1.7	-1.3	SC CHARLESTON	84	3	6.0	-1.4
FRESNO	54	3	T	0.0	MN ALEXANDRIA	69	-1	1.9	-1.2	COLUMBIA	84	3	5.1	-0.2
LOS ANGELES	71	2	0.0	0.0	DULUTH	65	-1	2.4	-1.5	FLORENCE	84	4	2.1	-3.6
REDDING	64	0	0.5	0.3	INT'L FALLS	66	0	3.1	-0.8	GREENVILLE	79	0	3.6	-0.9
SACRAMENTO	78	2	0.0	-0.1	MINNEAPOLIS	71	-2	5.1	1.6	SD ABERDEEN	70	-2	2.0	-0.4
SAN DIEGO	72	3	0.0	0.0	ROCHESTER	70	-1	8.3	4.5	HURON	71	-3	3.5	1.2
SAN FRANCISCO	65	2	T	0.0	ST. CLOUD	68	-2	5.2	1.6	RAPID CITY	72	-1	1.9	-0.2
STOCKTON	79	1	T	-0.1	MS GREENWOOD	82	0	1.4	-3.1	SIOUX FALLS	71	-3	1.8	-0.9
CO ALAMOSA	64	-1	1.9	0.7	JACKSON	82	0	2.8	-1.8	TN BRISTOL	75	0	3.8	-0.4
I CO. SPRINGS	68	-3	5.1	2.2	MERIDIAN	81	0	3.2	-2.1	CHATTANOOGA	79	1	4.7	0.1
J DENVER	71	-3	3.6	1.7	TUPELO	81	0	4.6	-2.6	KNOXVILLE	78	0	7.6	3.3
GRAND JUNCTION	78	-1	1.0	0.5	MO CAPE GIRARDEAU	80	-	2.1	-1.6	MEMPHIS	83	0	2.2	-1.8
PUEBLO	73	-4	5.1	3.3	COLUMBIA	76	-3	6.0	2.5	NASHVILLE	80	1	4.9	1.1
CT BRIDGEPORT	74	0	2.8	-0.7	KANSAS CITY	77	-3	4.4	0.3	TX ABILENE	80	-4	4.3	2.2
HARTFORD	74	1	2.1	-1.0	SAINT LOUIS	80	1	3.3	-0.3	AMARILLO	76	-2	3.3	0.6
DC WASHINGTON	79	0	3.8	-0.1	SPRINGFIELD	77	-1	3.0	-0.6	AUSTIN	83	-1	3.1	1.3
FL APALACHICOLA	83	1	9.3	2.2	MT BILLINGS	72	0	0.4	-0.5	BEAUMONT	83	0	6.2	0.3
DAYTONA BEACH	82	1	5.8	0.3	GLASGOW	71	0	0.6	-1.1	BROWNSVILLE	84	0	1.5	0.0
FT. MYERS	84	1	6.5	-2.1	GREAT FALLS	68	-2	1.0	-0.1	CORPUS CHRISTI	83	-1	1.7	-0.7
JACKSONVILLE	83	1	6.5	0.2	HAVRE	68	-2	1.4	-0.1	DEL RIO	83	-4	4.1	2.4
KEY WEST	85	0	4.1	0.5	HELENA	70	2	0.4	-0.6	EL PASO	80	-3	4.0	2.4
MIAMI	84	1	4.3	-1.7	KALISPELL	67	2	2.4	1.4	PORT WORTH	83	-3	2.6	0.4
ORLANDO	83	0	6.7	-1.1	MILES CITY	74	0	0.9	-0.6	GALVESTON	84	0	4.8	1.0
TALLAHASSEE	82	1	3.4	-5.3	MISSOULA	68	1	0.8	-0.1	HOUSTON	82	-1	4.9	1.3
TAMPA	83	0	10.0	2.7	NE GRAND ISLAND	74	-3	3.6	1.0	LAREDO	87	-1	2.8	1.8
WEST PALM BEACH	83	1	10.2	4.1	LINCOLN	77	-1	7.3	4.1	LUBBOCK	78	-2	3.1	0.8
GA ATHEN	81	2	6.1	0.9	NORFOLK	74	-2	5.1	1.9	MIDLAND	79	-3	1.7	-0.1
ATLANTA	81	2	3.5	-1.2	NORTH FLATTE	74	-1	2.0	-1.0	SAN ANGELO	79	-5	4.1	2.9
AUGUSTA	83	3	1.9	-2.5	OMAHA	75	-3	5.6	2.0	SAN ANTONIO	83	-1	8.3	6.4
MACON	83	1	3.8	-0.6	SCOTTSBLUFF	72	-2	3.1	1.1	VICTORIA	83	-1	13.6	11.0
SAVANNAH	84	3	1.9	-5.5	VALENTINE	72	-2	3.1	0.7	WACO	85	-1	0.7	-1.1
HI HILO	76	0	10.8	2.1	NV ELKO	71	1	0.2	-0.1	WICHITA FALLS	83	-2	2.2	0.2
HONOLULU	81	1	0.5	0.0	ELY	69	2	0.3	-0.3	UT BLANDING	-	-	1.9	0.9
KAHULUI	78	0	0.4	0.0	LAS VEGAS	91	1	0.6	0.2	CEDAR CITY	75	1	0.4	-0.7
LIHUE	79	0	1.3	-0.7	RENO	74	4	0.9	0.6	SALT LAKE CITY	79	2	0.6	-0.1
ID BOISE	76	2	0.4	0.2	WINNEMUCCA	74	2	0.1	-0.1	VT BURLINGTON	70	1	5.1	1.7
LEWISTON	78	3	0.4	-0.1	NH CONCORD	71	1	1.8	-1.1	VA LYNCHBURG	76	0	2.8	-1.1
POCATELLO	71	0	0.1	-0.3	NJ ATLANTIC CITY	75	1	3.6	-0.4	NORFOLK	81	2	4.1	-1.1
IL CAIRO	-	-	4.2	0.2	NM ALBUQUERQUE	77	-2	2.4	1.1	RICHMOND	80	2	6.7	1.6
CHICAGO	72	-1	2.3	-1.1	CLOVIS	75	-2	2.1	-0.8	ROANOKE	77	1	3.8	0.3
MOLINE	74	-1	3.6	-1.3	ROSWELL	80	-1	1.2	-0.2	WA COLVILLE	66	-2	2.0	1.8
PEORIA	73	-2	9.2	5.2	ALBANY	73	1	1.7	-1.3	QUILLAYUTE	82	3	0.9	-1.7
QUINCY	75	-1	4.3	0.0	BINGHAMTON	68	-1	3.1	-0.4	SEATTLE-TACOMA	68	3	0.6	-0.1
ROCKFORD	72	-1	4.9	0.4	BUFFALO	71	0	3.1	0.2	SPOKANE	71	1	2.3	1.8
SPRINGFIELD	75	-1	5.5	1.9	NEW YORK	77	0	2.8	-0.9	WALLA WALLA	-	-	0.4	0.0
IN EVANSVILLE	77	-1	1.0	-3.0	ROCHESTER	71	-1	3.1	0.6	YAKIMA	73	3	T	-0.1
FORT WAYNE	72	-2	4.6	1.2	SYRACUSE	72	1	3.7	0.0	WV BECKLEY	71	1	3.6	-1.1
INDIANAPOLIS	74	-1	3.7	-0.6	ASHVILLE	74	0	6.6	2.2	CHARLESTON	76	1	5.3	0.0
SOUTH BEND	71	-1	5.5	1.8	CHARLOTTE	81	2	2.7	-1.2	EINS	75	1	4.0	-0.7
IA DES MOINES	74	-2	8.8	5.6	GREENSBORO	79	2	1.5	-2.8	HUNTINGTON	70	0	4.2	-0.6
DUBUQUE	71	-1	4.3	0.0	HATTERAS	80	1	4.2	-1.2	PARKERSBURG	73	-2	5.5	1.4
SIOUX CITY	73	-2	3.2	-0.2	NEW BERN	82	2	2.6	-4.2	WI GREEN BAY	69	-1	2.9	-0.3
WATERLOO	72	-1	9.6	4.9	RALEIGH	80	2	2.2	-2.2	LACCROSSE	73	0	4.0	0.2
KS CONCORDIA	79	0	4.0	0.6	WILMINGTON	82	1	6.6	-0.9	MADISON	71	0	2.6	-1.1
DODGE CITY	77	-3	3.1	0.0	ND BISMARK	70	0	1.5	-0.5	MILWAUKEE	71	0	3.0	-0.5
GOODLAND	74	-2	4.1	1.7	FARGO	70	-1	0.8	-2.5	WAUSAU	68	-2	3.8	-0.2
TOPEKA	78	-1	3.1	-1.0	GRAND FORKS	69	0	1.7	-1.1	WY CASPER	70	-1	2.2	1.1
WICHITA	82	0	1.7	-1.9	WILLISTON	70	0	1.3	-0.5	CHEYENNE	65	-3	3.6	1.7
KY HOWLING GREEN	78	0	2.4	-1.9	OH AKRON-CANTON	70	-2	10.0	6.0	LANDER	71	0	1.9	1.2
JACKSON	76	3	4.2	-0.7	CINCINNATI	75	-1	3.7	-0.6	SHERIDAN	69	-1	1.1	0.2
LEXINGTON	75	-1	6.5	1.5	CLEVELAND	71	-1	5.6	2.3	PR SAN JUAN	83	1	5.8	0.8
LOUISVILLE	79	1	2.0	-2.1	COLUMBUS	73	-1	8.0	4.0					

Based on 1951-80 normals.

National Agricultural Summary

June 30 - August 5, 1990

HIGHLIGHTS: Rains improved crop condition in the Southwest, Corn Belt, and along the Gulf Coast; however, cooler-than-normal temperatures delayed development of corn, soybeans, and sorghum in the Corn Belt. Soil moisture was adequate to surplus in Iowa and mostly adequate in Nebraska, Illinois, and Indiana. Abundant rain fell over Texas and Oklahoma, improving cotton, sorghum, and soybeans. The Dakotas and Montana continued to have short to adequate soil moisture supplies. Little moisture fell over the Pacific Northwest, where soil moisture supplies were mostly short to adequate. The Delta and Gulf Coast States received rain, where soil moisture supplies were generally short.

SMALL GRAINS: Winter wheat harvest reached 93 percent (%) complete, equal to the 5-year average. Harvest advanced 20 or more percentage points in Idaho, Oregon, and Washington. Montana and South Dakota harvests advanced 19 and 17 points, respectively; however, Montana trails normal harvest progress by 14 points. In the Pacific Northwest, winter wheat was mostly good to fair.

Spring wheat harvest advanced 12 points to 17% complete, 11 points behind the average. North Dakota was 14% complete, 12 points behind normal. Minnesota, Montana, and South Dakota were 8 or more points behind normal, while Idaho harvest was 6 points ahead of normal. Condition was good to fair, essentially unchanged from last week but better than a year earlier.

CORN: Condition was mostly good to fair, unchanged from last week. Silking progressed to 80%, 9 points behind last year and 13 points behind normal. Silking was complete in Georgia, North Carolina, and Texas. Illinois and Iowa were 21 and 13 points, respectively, behind normal silking progress. Nebraska was 3 points behind. Fourteen percent of the corn acreage had reached the dough stage, 6 points farther along than last week but 25 points behind the average. Georgia harvest was 19% complete, and Texas was 38% complete.

SOYBEANS: Soybean condition was good to fair, with 68% of the crop blooming and 32% setting pods. These progress stages were 13 and 21 points behind normal, respectively. Condition in the Corn Belt was essentially unchanged, although cooler-than-normal temperatures during the week slowed crop development. Most soybean-producing States received rainfall during the week. Virtually all States were behind normal crop development, especially Illinois, Missouri, Nebraska, Indiana, and Iowa.

COTTON: Cotton was good to fair, with 85% of the acreage setting bolls and 6% showing open bolls. Boll setting is 6 points ahead of normal, and bolls opening is 1 point ahead of normal. Boll set was nearly complete in many States, including California, where some pink bollworm infestation was reported. Harvest continued in Texas as 4% of the acreage was picked by August 5. Rain helped some fields in the Plains. Mississippi cotton was rated good with irrigation and pesticide application common. Conditions in Arkansas and Louisiana were good to fair, with insect spraying active. In Arizona, the crop was good to excellent with insect activity varied.

SORGHUM: Sorghum was mostly good to fair, with conditions improved in Oklahoma. Forty-three percent of the acreage was headed, 13 points behind the average. Sorghum coloring reached 20%, 2 points behind normal. In the High Plains of Texas, rainfall during the week improved prospects. Harvest was complete in the southern

and Coastal Bend areas of Texas and continued in the Blacklands. Conditions in Kansas remained good to fair, with 20% of the crop headed and 1% turning color. Abundant rainfall fell over Oklahoma, improving crop condition to mostly good. Cool temperatures slowed heading and coloring progress.

OTHER FIELD CROPS: Rice was mostly good to fair with 41% of the acreage headed, 13 points behind normal. Rice harvest continued in Louisiana and Texas. The peanut crop condition was mostly good in Alabama and North Carolina and fair to poor in Georgia. Tobacco was good to fair in North Carolina, Georgia, and Tennessee and fair to good in Kentucky, Virginia, and South Carolina. Harvest was well underway in the southeast and just getting started in Kentucky and Tennessee. Sugarcane was in fair to good condition in Louisiana. Sugarbeets were fair to good in Colorado.

FRUIT AND NUTS: Rains were spotty with some heavy thunderstorms over Florida's fruit-producing areas. More rain was needed. Abundant new growth occurred with good fruit size. The early grapefruit are large, but juice and maturity improvement are needed before picking. Peach harvest was nearing completion in the Delta and Southeast. Pecans were in fair to good condition in Georgia, with aphids and powdery mildew problems reported. New York tree fruits continue in good to excellent condition. Adequate moisture has contributed to good fruit size. Grapes in the Finger Lakes area show good vine growth and berry size, but wetness increased disease pressure. In California, tree fruit harvest progressed with good quality and demand. Harvest began for early variety almonds. Apple harvest continued. Date bagging and fig harvest continued. Flame seedless grape picking was active, and Thompson seedless grape harvest gained momentum. A few kiwifruit lots were picked and packed. Picking of Valencia oranges and lemons continued in low volumes with generally good quality. Stonefruit harvest continued. Cherry harvest was complete or winding down in Washington, Oregon, and Michigan. Blackberry harvest was active in Oregon, but light in New Jersey.

VEGETABLES: In Florida, hot temperatures and scattered showers continued over the vegetable-producing areas. Planting was active in the Panhandle and the north-central peninsula. Field preparations were active, with limited planting of selected crops over most other producing areas. Watermelon harvest was nearing completion in Georgia and South Carolina. In the Texas Rio Grande Valley, peppers continued progressing well. Irrigation was steady and land preparation continued without much delay. In the San Antonio-Winter Garden area, land preparation continued and some fall planting was underway. The east Texas sweetpotato harvest was getting underway. There were insect problems in tomatoes. On the High Plains, snap beans, cantaloupe, sweet corn, onions, potatoes, and cabbage were harvested. Rainfall slowed harvest of onions and cantaloupe in the Trans-Pecos. The Oregon snap bean harvest continued as the sweet corn harvest was beginning. Potatoes were sizing well in Baker County, and the harvest was beginning in Malheur County and continued in the Columbia Basin. Early onions were topped in the Willamette Valley, where the harvest is expected in 2-3 weeks. Early onion harvest began in Malheur County. In Idaho, the potato crop condition was good with virtually all middles colored. A few early potatoes were harvested.

(Continued to back cover)

Crop Progress

FOR WEEK ENDING AUGUST 5, 1990

	RICE % HEADED		
	1990	1989	AVG.
AR	16	26	43
CA	15	15	14
LA	74	73	79
MS	68	44	65
TX	91	93	92
5 STATES	41	43	54
THESE 5 STATES PRODUCED OF THE 1989 RICE CROP.			97%

	CORN % SILKING		
	1990	1989	AVG.
CO	71	67	80
GA	100	100	100
IL	79	98	100
IN	80	88	94
IA	85	97	98
KS	97	90	95
KY	77	93	92
MI	70	85	85
MN	83	81	88
MO	69	99	99
NE	93	92	96
NC	100	93	97
OH	75	64	89
PA	51	35	63
SD	65	87	83
TX	100	98	98
WI	56	76	82
17 STATES	80	89	93
THESE 17 STATES PRODUCED OF THE 1989 CORN CROP.			95%

	CORN % DOUGH		
	1990	1989	AVG.
CO	12	4	21
GA	99	98	99
IL	20	53	68
IN	15	27	46
IA	0	9	28
KS	40	45	50
KY	20	31	41
MI	0	0	10
MN	6	6	14
MO	31	66	75
NE	7	20	31
NC	80	73	80
OH	16	10	44
PA	3	3	12
SD	6	11	12
TX	85	85	84
WI	4	8	19
17 STATES	14	25	39
THESE 17 STATES PRODUCED OF THE 1989 CORN CROP.			95%

	GRAIN SORGHUM % HEADED		
	1990	1989	AVG.
AR	52	76	NA
CO	27	13	29
IL	10	61	NA
KS	20	20	35
LA	90	81	90
MS	86	73	86
MO	36	70	73
NE	30	47	64
NM	56	NA	NA
OK	35	65	50
SD	23	41	36
TX	81	73	77
12 STATES	43	NA	NA
EXCL. STATES WITH NA	43	46	56
THESE 12 STATES PRODUCED OF THE 1989 GRAIN SORGHUM CROP.			98%
NA - NOT AVAILABLE.			

	GRAIN SORGHUM % COLORING		
	1990	1989	AVG.
AR	4	0	NA
CO	0	0	0
IL	0	0	NA
KS	1	0	2
LA	60	36	52
MS	41	37	45
MO	0	21	26
NE	0	0	0
NM	0	NA	NA
OK	7	15	15
SD	0	1	0
TX	62	62	61
12 STATES	19	NA	NA
EXCL. STATES WITH NA	20	21	22
THESE 12 STATES PRODUCED OF THE 1989 GRAIN SORGHUM CROP.			98%
NA - NOT AVAILABLE.			

	SPRING WHEAT % HARVESTED		
	1990	1989	AVG.
ID	14	3	8
MN	19	38	33
MT	7	9	15
ND	14	29	26
SD	45	66	56
5 STATES	17	30	28
THESE 5 STATES PRODUCED OF THE 1989 SPRING WHEAT CROP.			89%

	SOYBEANS % BLOOM		
	1990	1989	AVG.
AL	60	54	59
AR	27	35	34
GA	70	70	73
IL	69	94	96
IN	78	84	91
IA	90	100	97
KS	55	55	75
KY	57	64	65
LA	72	68	69
MI	70	70	80
MN	93	94	95
MS	57	40	56
MO	44	76	81
NE	75	93	96
NC	37	32	38
OH	68	59	78
SC	39	37	43
SD	79	82	80
TN	42	50	56
19 STATES	68	76	81
THESE 19 STATES PRODUCED OF THE 1989 SOYBEANS CROP.			95%

	SOYBEANS % SETTING PODS		
	1990	1989	AVG.
AL	33	26	31
AR	1	13	20
GA	35	35	36
IL	33	77	77
IN	20	31	48
IA	55	78	78
KS	30	30	40
KY	16	20	23
LA	47	34	41
MI	15	15	25
MN	45	64	56
MS	30	21	27
MO	17	42	53
NE	20	45	60
NC	18	11	13
OH	50	19	58
SC	12	11	15
SD	41	48	42
TN	16	17	25
19 STATES	32	46	53
THESE 19 STATES PRODUCED OF THE 1989 SOYBEANS CROP.			95%

	WINTER WHEAT % HARVESTED		
	1990	1989	AVG.
AR	100	100	100
CA	99	99	99
CO	93	95	96
GA	100	100	100
ID	33	13	24
IL	100	100	100
IN	100	100	100
KS	100	100	100
MI	97	95	97
MO	100	100	100
MT	28	26	42
NE	99	100	100
NC	100	100	100
OH	100	100	100
OK	100	100	100
OR	66	55	65
SD	96	96	92
TX	100	100	100
WA	52	47	47
19 STATES	93	92	93
THESE 19 STATES PRODUCED OF THE 1989 WINTER WHEAT CROP.			88%

	COTTON % SETTING BOLLS		
	1990	1989	AVG.
AL	97	82	94
AZ	100	99	97
AR	99	91	97
CA	95	95	95
GA	99	97	97
LA	92	82	92
MS	93	73	93
MO	97	99	98
NM	80	85	84
NC	90	69	82
OK	65	45	50
SC	89	77	83
TN	86	90	90
TX	76	59	64
14 STATES	85	73	79

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

	COTTON % BOLLS OPENING		
	1990	1989	AVG.
AL	1	2	1
AZ	30	22	14
AR	0	0	1
CA	1	0	2
GA	3	1	4
LA	6	0	6
MS	0	0	0
MO	0	0	0
NM	0	2	0
NC	0	0	0
OK	0	0	0
SC	1	0	0
TN	4	0	0
TX	9	11	9
14 STATES	6	6	5

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

Crop Condition
PERCENT

FOR WEEK ENDING AUGUST 5, 1990

CORN					
STATE	VP	P	F	G	EX
CO	1	4	15	61	19
GA	10	32	37	21	0
IL	0	1	10	71	18
IN	0	4	19	64	13
IA	0	0	11	71	18
KS	0	3	29	36	32
KY	4	11	47	36	2
MI	0	4	16	50	30
MN	0	0	35	54	11
MO	0	4	43	50	3
NE	0	2	17	51	30
NC	12	32	43	13	0
OH	2	8	29	49	12
PA	0	5	20	51	24
SD	0	0	18	65	17
TX	7	20	39	32	2
WI	0	1	13	80	6
17 STATE	1	3	20	60	16
PREV WEEK	1	3	21	62	13
PREV YEAR	1	5	23	55	16

SPRING WHEAT					
STATE	VP	P	F	G	EX
ID	0	6	18	67	9
MN	3	5	34	48	10
MT	6	17	42	30	5
ND	3	3	26	64	4
SD	1	7	25	53	14
5 STATE	3	7	30	53	7
PREV WEEK	2	6	33	48	11
PREV YEAR	7	16	55	20	2

COTTON					
STATE	VP	P	F	G	EX
AL	0	0	46	54	0
AZ	0	0	0	86	14
AR	0	0	28	62	10
CA	0	0	10	85	5
GA	5	41	37	17	0
LA	0	6	47	47	0
MS	0	3	15	69	13
MO	0	0	57	43	0
NM	0	6	25	69	0
NC	0	5	49	38	8
OK	0	0	55	45	0
SC	0	47	52	1	0
TN	3	5	39	53	0
TX	0	7	54	35	4
14 STATE	0	6	40	49	5
PREV WEEK	0	8	39	49	4
PREV YEAR	0	16	40	39	5

SORGHUM					
STATE	VP	P	F	G	EX
AR	1	12	68	19	0
CO	1	3	24	63	9
IL	0	0	44	50	6
KS	0	3	36	46	15
LA	0	0	50	50	0
MS	0	6	44	41	9
MO	0	8	61	31	0
NE	0	12	24	51	13
NM	0	15	38	47	0
OK	0	2	25	73	0
SD	0	4	13	80	3
TX	2	15	56	24	3
12 STATE	1	9	41	41	8
PREV WEEK	1	10	41	42	6
PREV YEAR	1	9	26	49	15

RICE					
STATE	VP	P	F	G	EX
AR	0	2	42	56	0
CA	0	0	15	75	10
LA	0	0	35	59	6
MS	0	0	25	57	18
TX	0	0	24	70	6
5 STATE	0	1	33	61	5
PREV WEEK	0	1	29	67	3
PREV YEAR	0	1	37	55	7

SOYBEANS					
STATE	VP	P	F	G	EX
AL	0	0	47	53	0
AR	2	20	48	30	0
GA	11	27	48	14	0
IL	0	1	33	60	6
IN	0	4	30	59	7
IA	0	3	26	61	10
KS	0	1	39	52	8
KY	0	17	40	42	1
LA	0	7	37	45	11
MI	0	3	15	52	30
MN	0	2	39	53	6
MS	7	4	57	28	4
MO	0	3	66	29	2
NE	0	0	22	57	21
NC	0	17	61	22	0
OH	3	9	33	44	11
SC	0	37	36	27	0
SD	0	2	15	71	12
TN	0	3	40	47	10
19 STATE	1	6	37	49	7
PREV WEEK	1	4	36	52	7
PREV YEAR	1	7	29	54	9

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

State Summaries of Weather and Agriculture

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

ALABAMA: Rainfall mostly under 0.50 in.; 1.00 to 2.00 in. local areas. Temperatures near normal north, 2 to 4° above normal central, south.

Days suitable for fieldwork 6.2. Soil moisture 4% very short, 77% short, 19% adequate. Dry conditions stressed crops, pastures, livestock. Corn 90% dented, 78% 1989, 85% avg.; 60% mature, 50% 1989, 65% avg.; 24% harvested, 23% 1989, 24% avg.; 16% poor, 41% fair, 31% good, 12% excellent. Sorghum 6% harvested, 4% 1989, 4% avg.; 39% fair, 58% good, 3% excellent. Cotton 97% setting bolls, 82% 1989, 94% avg.; 1% bolls opened, 2% 1989, 1% avg.; 46% fair, 54% good. Peanuts 13% fair, 57% good, 30% excellent. Soybeans 60% blooming, 54% 1989, 59% avg.; 33% setting pods, 26% 1989, 31% avg.; 47% fair, 53% good. Pastures 19% poor, 55% fair, 26% good. Livestock 35% fair, 65% good. Primary activities: Controlling insects in row crops; applying fungicides to peanuts; irrigating crops; repairing equipment, fences; harvesting hay, corn, fruits, vegetables; routine care of livestock, poultry, catfish.

ALASKA: Stressed crops got little beneficial rain except in the Fairbanks area of the Tanana Valley. Highs 1° below normal at Clearwater to 5° above normal at Fairbanks. Lows 4° colder than normal at Kenny Lake to 4° above normal at Homer. Precipitation 2.66 in. drier than normal at Kenny Lake to 3.00 in. wetter than normal at Fairbanks.

Days suitable for fieldwork 5.0. Topsoil 74% short, 23% adequate, 3% surplus. Subsoil 68% short, 32% adequate. Oats 75% dough; 25% turning color. Barley 25% dough; 60% turning color; 15% ripe. Commercial potato, small grains, second crop hay mostly fair to good depending on availability of irrigation. Commercial vegetable harvest continues; many are being harvested ahead of schedule aided by up to 560 growing degree days above normal for this time of year.

ARIZONA: Monsoon activity increased, moving further west each day, scattered heavy showers, thunderstorms; heaviest central; local flooding many areas; precipitation none southwest to 2.43 in. southeast; temperatures 4° below to 1° above normal. Extremes 4°; 95° mountains, 68°; 112° deserts.

Cotton setting bolls 100%, 99% 1989, 97% avg.; bolls opening 30%, 22% 1989, 14% avg.; bolls open all areas except extreme southeast, south central; 86% good, 14% excellent; insect activity moderate to light, south central heavy, controls applied heliothis. Alfalfa good; rain damage moderate; harvest progress active except south central moderate. Fall vegetables, lettuce ground preparation began west; mixed melon harvest continued central; cabbage, peaches, pinto beans, chilies harvested east.

ARKANSAS: Temperatures near to slightly below normal. Scattered rain showers primarily in southern parts. Extremes 60°; 101°. Rainfall 0.05 to 2.74 in.

Days suitable for fieldwork 6.0. Soil moisture 66% short, 34% adequate. Main activities: Applying herbicides, insecticides, fertilizer; scouting for disease, insects; irrigation; cutting, baling hay. Corn 1% poor, 57% fair, 42% good. Soybeans 100% emerged, 95% 1989, 98% avg.; 27% blooming, 35% 1989, 34% avg.; 2% very poor, 20% poor, 48% fair, 30% good. Sorghum 52% headed, 76% 1989, 81% 4 year avg.; 1% very poor, 12% poor, 68%

fair, 19% good. Cotton fruiting well, spraying for insects. Sheath blight, blast, weeds in rice. Watermelon, peach, grape, squash harvest continuing. Mosquitoes, flies still a problem. However, cooler temperatures benefitted cattle weight gain.

CALIFORNIA: Very strong high pressure brought much above average temperatures to State. No measurable rain, though thunderstorms scattered along Sierra range brought some isolated shower activity to mountain areas.

Field activities progressed. Rice heading continued. Cotton boll set nearly complete. Pink bollworm infestation, Tulare County, control underway. Sugarbeet harvest continued, fields treated, worms, leafhoppers. Safflower, alfalfa hay harvests active. Alfalfa seed harvest progressed, Fresno County. Second crop corn, dry beans progressing. Tree fruit harvest progressed, quality, demand good. Harvest began, early variety almonds. Apple harvest continued; a few Royal Galla, Golden Supreme. Date bagging, fig harvest continued. Flame Seedless picking active. Thompson Seedless harvest gained momentum. Few kiwifruit lots, picked, packed. Picking of valencia oranges, lemons continued, low volumes, generally good quality. Stonefruit harvest progressed to approximately: peaches 75%, plums 78%, nectarines 64%. Asian pears, hosui, shinseki, packed. Bartlett, crimson pears harvested. Treatment, control of scale insects continued, walnut orchards. Broccoli continued light supply, generally good quality. Cauliflower moderate supply, variable quality. Celery heavy supply. Sweet corn harvest active. Iceberg head lettuce moderate supply, variable quality. Sweet potato harvest began Merced County. Processing tomato harvest completed. Harvest late planted strawberry fields beginning Santa Maria area. Livestock mostly good. Pasture, ranges fair northern third only fair to very poor, elsewhere. Supplemental feeding continued some areas. Water supplies continued adequate to light northern third even tighter supplies southern two thirds. Water hauling continued.

COLORADO: Moderate to heavy thunderstorm activity continued across eastern plains, keeping temperatures well below normal. Precipitation a trace to 1.80 in. Temperatures more than 5° below normal over the State except for the Colorado River Basin 1 to 3° below normal.

Days suitable for fieldwork 5.1. Soil moisture 8% very short, 21% short, 65% adequate, 6% surplus. Alfalfa 2nd cutting 51% complete. Barley harvest 50% complete. Oat harvest 45% complete. Spring wheat harvest 35% complete. Corn silked 71%; dough 11%. Dry bean 60% flowered. Corn, dry bean improved significantly. Sugarbeets mostly fair to good. Pasture, range feed 3% very poor, 8% poor, 32% fair, 45% good, 12% excellent. Livestock good.

FLORIDA: Temperatures 1 to 3° above normal. Widely scattered thunderstorms, most numerous across south 2.00 to 4.00 in. fell; elsewhere, mostly under 0.50 in.

Soil moisture Panhandle, northern Peninsula short to adequate; other areas mostly adequate. Corn, hay harvest continued active. Cotton, peanuts, soybeans generally good progress; sugarcane good progress. Pastures, 19% excellent, 44% good, 38% fair. Cattle, good. Rain spotty, some

thunderstorms heavy, more rain needed all areas, abundant new growth, fruit sizes good, early grapefruit large with juice, maturity improvements needed before picking. Caretakers very active cutting cover crops. Spot sprays continue on crops for fresh use. Hot temperatures, scattered showers continued over vegetable producing areas. Planting active Panhandle, north central Peninsula. Field preparations active, limited planting selected crops, most other production areas.

GEORGIA: Temperatures 1 to 2° above normal north, 2 to 4° above normal central, south. Extreme highs 90° northeast mountains, 100° central, south. Coolest low 60s northeast mountains, 70° central, south. Rain over all State, amounts varied. Many totals under 0.50 in., some areas 1.00 to over 5.00 in.

Days suitable for fieldwork 5.8. Soil moisture 26% very short, 41% short, 33% adequate. Corn 95% dent, 88% 1989, 94% avg.; 78% mature, 52% 1989, 72% avg.; 19% harvested for grain, 7% 1989, 16% avg. Cotton fields being abandoned due to drought, insects. Sorghum 3% very poor, 22% poor, 53% fair, 22% good. Peanuts 2% very poor, 36% poor, 37% fair, 25% good; 100% pegging, 100% 1989, 98% avg.; insects real problem. Tobacco 2% poor, 36% fair, 60% good, 2% excellent; 63% harvested, 72% 1989, 65% avg. Watermelons 20% poor, 72% fair, 8% good; 93% harvested, 94% 1989, 96% avg. Apples 1% very poor, 14% poor, 49% fair, 36% good; 26% harvested, 13% 1989, 18% avg. Peaches 99% harvested, 96% 1989, 98% avg. Pecans 14% poor, 68% fair, 18% good; aphids, powdery mildew in pecans. Hay 3% very poor, 16% poor, 48% fair, 33% good. Pasture 3% very poor, 21% poor, 48% fair, 28% good. Cattle, hogs mostly good.

HAWAII: Fair skies, record or near record high temperatures maintained good crop progress. Days sunny with scattered showers. Winds variable 5 to 20 mph. Temperatures low 70s to low 90s. Rainfall none to 1.60 in.

Days suitable for farm work 7.0. Papaya production on up swing, sugar, pineapple harvest continuous. Watermelon harvesting active. Hot weather caused increases in insect populations, spraying for control intensified.

IDAHO: Temperatures normal to 7° above normal, except southeast. Precipitation Panhandle only.

Days suitable for fieldwork 7.0. Soil moisture 5% very poor, 31% poor, 64% adequate. Winter wheat harvest continued full speed, spring cereal harvest gained momentum. Spring wheat good; 90% turning color. Spring barley nearly all turning color; 16% harvested, 5% 1989, 12% avg. Potato good; virtually all closed middles, 19% turning, 7% vines dying, killed; a few acres early potatoes harvested. Dry peas 39% harvested, 11% 1989, 35% avg. Lentils 19% harvested, 1% 1989, 12% avg. Mint half acreage harvested. Peaches 36% harvested, 27% 1989, 25% avg. Plums, prunes progressing well. Early summer apples just ripe, fall varieties developing well north. Grasshoppers statewide. Range, pasture 6% very poor, 20% poor, 36% fair, 36% good, 2% excellent.

ILLINOIS: Temperatures generally 2 to 5° cooler than normal across State. Precipitation generally 0.20 to 1.00 in., isolated areas more than 2.00 in.

Days suitable for fieldwork 6.25. Soil moisture 20% short, 77% adequate, 3% surplus. Oats turning color 98%, 100% 1989, 100% avg. Oats ripe 82%, 94% 1989, 98% avg. Oats harvested 82%, 94% 1989, 98% avg. Alfalfa 18% fair, 69% good, 13% excellent. Alfalfa hay second cutting 87%, 100% 1989, 98% avg. Pasture 3% poor, 20% fair, 60% good, 17% excellent.

INDIANA: Temperatures 2 to 6° below normal. Lows mid 50s to low 60s, highs upper 70s to upper 80s. Precipitation 0.50 to 1.50 in.

Days suitable for fieldwork 6.0. Topsoil 21% short, 74% adequate, 5% surplus. Subsoil 7% short, 90% adequate, 3% surplus. Soybeans 25 in. high, 26 in. 1989, 28 in. avg. Oats 87% harvested, 86% 1989, 92% avg. Alfalfa hay 94% cut twice, 84% 1989, 92% avg. Pasture 1% poor, 25% fair, 68% good, 6% excellent. Cool temperatures has slowed soybean growth. Corn height varies significantly across the State.

IOWA: Temperatures 3 to 5° below normal. Extremes 47°; 87°. Rainfall trace to 3.10 in.; average 0.37 in. Driest in past 15 weeks.

Days suitable for fieldwork 4.3. Topsoil 40% adequate, 60% surplus. Subsoil 2% short, 66% adequate, 32% surplus. Hay 2% poor, 21% fair, 62% good, 15% excellent. Pasture 10% fair, 58% good, 32% excellent. Oats 90% harvested, 100% 1989, 100% avg. Second crop alfalfa hay 90% harvested, 100% 1989, 97% avg. Corn 97% tasseled, 100% 1989, 100% avg.; 20% milk stage, 55% 1989, 68% avg. Livestock excellent.

KANSAS: Temperatures 4 to 7° below normal across State. Rainfall 0.65 in. or less in northwest, north central up to 1.24 in. southeast.

Days suitable for fieldwork 4.5. Surface moisture 26% short, 69% adequate, 5% surplus. Subsoil 35% short, 65% adequate. Cool, wet weather improved crop condition, slowed development. Corn silking ahead schedule; corn in dough stage behind schedule; dent stage on schedule. Some treatment for corn borers. Farmers hoping for late freeze to let corn, sorghum, soybeans reach full potential. Sorghum heading behind schedule as is soybeans blooming, setting pods. Third cutting alfalfa hay near half way mark; fair prospects for fourth cutting southern areas. Range, pasture generally good for time of year furnishing adequate grazing. Short surface moisture, however, reducing outlook northwest, north central, southeast. Some culling, sending cows, calves to market underway.

KENTUCKY: Temperatures lower 80s northeast to near 90s southwest; 1 to 3° below normal. Low temperatures normal, lower 60s northeast to upper 60s west. Extremes 55°; 96°. Rainfall above normal, greatest amounts northwest, 2.00 in. common; lightest far north, less than 0.50 in. majority late in week.

Days suitable for fieldwork 5.8. Soil moisture 19% very short, 53% short, 28% adequate. Crops suffered drought stress many areas, weekend rains most welcome. Corn, soybean development highly varied, condition poor to good. Tobacco mostly fair to good. Burley 25% topped, another 35% blooming. Nearly two thirds dark tobacco topped. Earliest tobacco being cut. Pasture 3% very poor, 12% poor, 36% fair, 43% good, 6% excellent. Hay crops fair to good.

LOUISIANA: Temperatures 1 to 2° above normal. Extremes 66°; 101°. Rainfall 0.19 to 1.07 in.

Days suitable for fieldwork 5.8. Soil moisture 52% short, 48% adequate. Corn mature 93%, 69% 1989, 68% avg.; harvested 14%, 17% 1989, 16% avg.; 4% poor, 28% fair, 60% good, 8% excellent. Good yields. Cotton squaring 100%, 99% 1989, 100% avg.; setting bolls 92%, 82% 1989, 92% avg.; open bolls 6%, 0% 1989, 6% avg.; 6% poor, 47% fair, 47% good. Hay first cutting 100%, 94% 1989, NA avg.; final cutting 18%, 7% 1989, 12% avg. Peaches harvested 94%, 98% 1989, 98% avg. Rice headed 74%, 73% 1989, 79% avg.; ripe 31%, 24% 1989, 24% avg.; harvested 17%, 12% 1989, 14% avg.; 35% fair, 59% good, 6% excellent. Good yields. Sorghum headed 90%, 81% 1989, 90% avg.; turning color 60%, 36% 1989, 52% avg.; ripe 22%, 5% 1989, 17% avg.; 50% fair, 50% good. Soybeans emerged 100%, 100% 1989, 100% avg.; blooming 72%, 68% 1989, 69% avg.; setting pods 47%,

34% 1989, 41% avg.; 7% poor, 37% fair, 45% good, 11% excellent. Sweet potatoes planted 100%, 98% 1989, 100% avg.; harvested 7%, 4% 1989, 6% avg.; 36% fair, 46% good, 18% excellent. Sugarcane 10% poor, 50% fair, 40% good. Livestock 5% poor, 24% fair, 71% good. Pasture 16% poor, 53% fair, 31% good. Many acres short due to lack of moisture. Vegetable 15% poor, 58% fair, 27% good.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 0.50 in. Temperature 74°, normal 76°. Extremes 42°; 91°.

Days suitable for fieldwork 6.3. Topsoil 55% short, 40% adequate, 5% surplus. Subsoil 15% short, 85% adequate. Corn good; 89% silked, 72% 1989, 85% avg.; 37% dough, 30% 1989, 45% avg. Corn 14% dent, 11% 1989, 19% avg. Soybeans fair to good; 56% bloomed, 43% 1989, 50% avg.; 31% setting pods, 22% 1989, 21% avg. Oats fair to good; 70% harvested, 59% 1989, 78% avg. Sweet corn 55% harvested, 48% 1989, 61% avg. Potatoes 58% harvested, 47% 1989, 52% avg. Watermelons 49% harvested, 52% 1989, 54% avg. Cantaloupes 61% harvested, 59% 1989, 65% avg. Lima beans 12% harvested, 20% 1989, 30% avg. Snap beans 70% harvested, 63% 1989, 76% avg. Tomatoes 58% harvested, 53% 1989, 48% avg. Hay supplies adequate. Alfalfa hay second cut 99% complete, 91% 1989, 96% avg. Alfalfa hay third cut 30% complete, 27% 1989, 40% avg. Other hay second cut 63% complete, 49% 1989, 77% avg. Other hay third cut 6% complete, 3% 1989, 25% avg. Apples fair to good; 6% harvested, 6% 1989, 8% avg. Peaches fair to good; 43% harvested, 32% 1989, 44% avg. Pasture fair to good.

DELAWARE: Precipitation 0.70 in. Temperature 75°, normal 77°. Extremes 57°; 90°.

Days suitable for fieldwork 6.2. Topsoil 14% short, 86% adequate. Subsoil 29% short, 71% adequate. Corn good; 98% silked, 97% 1989, 94% avg.; 29% dough, 25% 1989, 37% avg.; 3% dent, 9% 1989, 14% avg. Soybeans good; 48% bloomed, 57% 1989, 50% avg.; 6% setting pods, 5% 1989, 20% avg. Sweet corn 51% harvested, 55% 1989, 59% avg. Potatoes 51% harvested, 32% 1989, 46% avg. Watermelons 30% harvested, 32% 1989, 24% avg. Cantaloupes 78% harvested, 54% 1989, 62% avg. Cucumbers 40% harvested, 77% 1989, 72% avg. Snap beans 74% harvested, 71% 1989, 71% avg. Tomatoes 44% harvested, 24% 1989, 24% avg. Hay supplies adequate. Alfalfa hay third cut 24% complete, 47% 1989, 72% avg. Other hay second cut 91% complete, 89% 1989, 82% avg. Other hay third cut 25% complete, 44% 1989, 32% avg. Apples good; 5% harvested, 22% 1989, 7% avg. Peaches 88% harvested, 60% 1989, 46% avg. Pasture good.

MICHIGAN: Temperatures 4° below to 1° above normal. Extremes 41°; 90°. Precipitation 0.01 to 2.40 in. across State.

Days suitable for fieldwork 6.0. Soil moisture 41% short, 57% adequate, 2% surplus. Corn 70% silked, 85% 1989, 85% avg.; 0% dough, 0% 1989, 10% avg.; 4% poor, 16% fair, 50% good, 30% excellent. Soybeans 75% blooming, 70% 1989, 80% avg.; 15% setting pods, 15% 1989, 25% avg.; 3% poor, 15% fair, 52% good, 30% excellent. Wheat 97% harvested, 95% 1989, 97% avg. Pasture 5% poor, 30% fair, 40% good, 25% excellent. Major activities: Baling 2nd cutting hay, finishing wheat, starting oat harvest, weed spraying; harvesting various vegetables, early apples, peaches, finishing tart cherry harvest.

MINNESOTA: Temperatures 2 to 4° below normal. Extremes 41°; 97°. Precipitation 0.10 to 0.30 in., greatest weekly total 1.73 in.

Days suitable for fieldwork 4.9. Topsoil 21% very short, 19% short, 41% adequate, 19% surplus. Spring wheat 99% turning ripe, 99% 1989, 90% avg.; 41% cut, 57% 1989, 52% avg.; 19% combined 38% 1989,

33% avg. Oats 99% turning ripe, 99% 1989, 97% avg.; 71% cut 89% 1989, 83% avg.; 44% combined, 75% 1989, 64% avg. Barley 99% turning ripe, 99% 1989, 96% avg.; 90% cut, 87% 1989, 74% avg.; 66% combined, 63% 1989, 52% avg. Corn 92% tasseling, 96% 1989, 97% avg.; 26% in milk, 40% 1989, 57% avg.; 6% dough, 6% 1989, 14% avg. Soybeans 93% blooming, 94% 1989, 95% avg.; 45% setting pods, 56% 1989, 64% avg. Winter wheat 73% harvested, 90% 1989, 79% avg. Rye 54% harvested, 89% 1989, 79% avg. Field corn 35% fair, 54% good, 11% excellent. Soybeans 2% poor, 39% fair, 53% good, 6% excellent. Spring wheat 3% very poor, 5% poor, 34% fair, 48% good, 10% excellent. Alfalfa 2% very poor, 17% poor, 41% fair, 33% good, 7% excellent.

MISSISSIPPI: Temperatures 1° above normal. Extremes 55°; 100°. Mostly dry statewide with scattered showers. State avg. rainfall 0.78 in., 0.19 in. below normal. Soil temp. 88°.

Days suitable for fieldwork 5.1, 3.9 1989, 5.1 avg. Soil moisture 6% very short, 32% short, 62% adequate. Cotton 93% boll setting, 73% 1989, 93% avg.; 3% poor, 15% fair, 69% good, 13% excellent. Corn 97% silking, 97% 1989, 98% avg.; 77% dough, 72% 1989, 88% avg.; 62% dent, 48% 1989, 70% avg., 29% mature, 18% 1989, 23% avg.; 34% silage harvested, 20% 1989, 36% avg.; 18% poor, 28% fair, 53% good, 1% excellent. Rice 68% heading, 44% 1989, 65% avg.; 25% fair, 57% good, 18% excellent. Soybeans 57% blooming, 40% 1989, 56% avg.; 30% podding, 21% 1989, 27% avg.; 7% very poor, 4% poor, 57% fair, 28% good, 4% excellent. Sorghum 86% heading, 73% 1989, 86% avg.; 41% coloring, 37% 1989, 45% avg.; 10% mature, 4% 1989, 9% avg.; 6% poor, 44% fair, 41% good, 9% excellent. Peaches 93% harvested, 90% 1989, 92% avg.; 68% very poor, 7% poor, 21% fair, 4% good. Hay 66% harvested, 48% 1989, 64% avg. Peanuts 17% harvested. Pasture, livestock good to fair. Activities: Cultivating row crops, cutting hay, spraying pesticides, irrigating cotton, trimming pastures, corn harvested for grain has begun.

MISSOURI: Temperatures 2 to 5° below normal. Rainfall over 1.00 in., varying less than 0.50 in. parts of northeast, southwest, south central, to over 2.00 in. isolated areas.

Days suitable for fieldwork 5.4. Topsoil 25% short, 69% adequate, 6% surplus. Subsoil 19% short, 77% adequate, 4% surplus. Main moisture shortages in southern third. Corn development nearly 3 weeks behind avg. Corn dough stage varies less than 20% north central, northeast, central districts to 84% southeast. Soybeans podding range less than 10% central, southwest, 29% southeast. Sorghum heading ranges 8% northeast to 61% southeast. Oats harvested 96%, 100% 1989, 100% avg. Alfalfa hay 2nd cutting 90%, 100% 1989, 100% avg. Alfalfa 3rd cutting 23%, 46% 1989, 58% avg. Other hay harvested 89%, 92% 1989, 96% avg. Pasture 10% poor, 30% fair, 53% good, 7% excellent.

MONTANA: Temperature normal in all divisions. Precipitation light in all divisions, normal this time of year.

Days suitable for fieldwork 6.2. Topsoil 62% short, 37% adequate, 1% surplus. Subsoil 67% short, 33% adequate. Winter wheat 3% very poor, 5% poor, 24% fair, 54% good, 14% excellent. Barley 5% very poor, 14% poor, 29% fair, 41% good, 11% excellent; 8% harvested, 9% 1989, 15% avg. Oats 6% very poor, 20% poor, 35% fair, 36% good, 3% excellent; 7% harvested, 3% 1989, 16% avg. Pasture, range feed 4% very poor, 16% poor, 27% fair, 49% good, 4% excellent. Second cutting alfalfa harvested 31%, 35% 1989, 44% avg. Other hay harvested 82%, 75% 1989, 80% avg.

NEBRASKA: Temperatures 3 to 7° below normal. Extremes 50°; 97°. Precipitation mid week traces southwest up to 1.08 in. northeast.

Days suitable for fieldwork 4.9. Topsoil 28% short, 69% adequate, 3% surplus. Subsoil 46% short, 54% adequate. Oats 98% harvested, 98% 1989, 97% avg. Rain slowed harvest northeast. alfalfa 7% poor, 40% fair, 40% good, 13% excellent; 97% second cutting, 93% 1989, 96% avg.; 12% third cutting, 33% 1989, 26% avg. Potato leaf hoppers causing problems in alfalfa east. Growers spraying second broad corn borers, spider mites in corn. Chinch bugs caused heavy damage edges of sorghum fields, nor moving further southeast. Western bean cutworm active in dry edible beans west, southwest. Some eastern irrigation systems shut down all or most of last week after more rainfall, spotty rain over remainder of State. Irrigation continued, except portions of southwest where some irrigation water shut off July 31. Crop development running at least one week behind normal most of State, increasing concerns about early frost. Growers preparing fields for fall small grains, alfalfa planting. Pasture, range 3% very poor, 16% poor, 40% fair, 38% good, 3% excellent. Pastures holding up well most of State, poorest conditions southwest where some cattle being sold livestock is good condition, good grains reported due to mild temperatures. Main activities: Baling hay, straw; weed, insect control, irrigation.

NEVADA: Mostly another hot, dry week. Isolated thunderstorms north, central mid week produced more lightning, gusty winds than precipitation. Temperatures mostly well above normal. Extremes 34°; 111°.

Haying, small grain harvesting operations favored by hot, dry weather. Most grain crops harvested in July. Good progress harvesting garlic. Wool prices reported down from year earlier. Some producers holding until prices go back up. Ranges continuing to deteriorate. Range, pasture poor to fair, mostly fair.

NEW ENGLAND: Precipitation none to 0.40 in. New England, up to 1.00 in. selected stations north. Temperatures high 60s to low 70s north, to mid 70s south; 1 to 5° above normal north, 1° above normal south. Maximum temperatures high 80s to low 90s.

Days suitable for fieldwork 6.0. Soil moisture north 6% very short, 47% short, 42% adequate, 5% surplus; south 5% very short, 50% short, 45% adequate. Grazing availability 28% short, 72% adequate. Pasture 5% poor, 45% fair, 50% good. Maine, Rhode Island, Connecticut River Valley potato good. Maine oat good. Field corn good. Sweet corn 25% harvested, 23% 1989, 23% avg.; good. First cut hay 97% harvested, 97% 1989, 95% avg.; good. Second cut hay 44% harvested, 39% 1989, 47% avg.; good. Outdoor, shade tobacco good. Apples, peaches, pears, good. Blueberries 45% harvested, good. Major farm activities: Cutting hay, harvesting vegetables, tobacco, cultivating vegetables, irrigating, spraying for insects, disease.

NEW JERSEY: Temperatures near normal. Extremes 51°; 94°. Rainfall 1.80 in. north, 1.66 in. central, 0.77 in. south. Heaviest 24 hour total 3.60 in. on 5th, 6th. Estimated soil moisture percent field capacity averaged 62% north, 50% central, 38% south. Four inch soil temperatures 72° north, central, 74° south.

Days suitable for fieldwork 7. Rain on 5th very beneficial to unirrigated crops. Summer vegetable planting active. Irish potato digging continued light. Blueberry harvest light. Summer variety apple harvest increased. Early planted field corn, soybean prospects excellent. Late planted fields stressed in central, southern areas. Harvest of fall sown grains about complete. Oat combining well advanced. Hay making active until rain. Pasture growth very good most areas.

NEW MEXICO: Temperatures 1 to 8° below normal statewide. Precipitation 0.01 in. at Farmington to 1.80 in. at Hobbs.

Days suitable for fieldwork 6.2. Soil moisture 56% short, 37% adequate, 7% surplus. Rains causing damage to alfalfa crop. Livestock, rangeland continuing to improve. Cattle, sheep both poor to good. Range 11% very poor, 49% poor, 29% fair, 11% good.

NEW YORK: Warm, dry week. Rainfall was below average throughout the State. Great Lakes region was closest to normal, receiving 86% of its weekly allotment. Driest zones were the Mohawk Valley with only 12% of normal; Hudson Valley with 14%. Temperatures were high at the beginning of the week, fell sharply on 31st then warmed up again. Most areas 1 to 2° above normal. Extremes 44°; 92°.

Days suitable for fieldwork 6.2. Soil moisture mostly adequate. Pastures 54% fair, 46% good. Excellent week for haying, crop development. Second cutting alfalfa 56% complete, 39% 1989, 66% avg. Oats turning color many areas, harvest active in south. Oats 15% harvested, 19% 1989, 17% avg. Corn silking, hot weather promoted growth, conditions mostly good. Dry beans good. Growers expecting excellent yields. Tree fruits continue good to excellent. Adequate moisture has contributed to good fruit size. Grapes in Finger Lakes area show good vine growth, berry size. Wetness increased disease pressure. Orange County onions in good condition, harvest active. Celery planting complete, harvest continued. Sweet corn harvest underway across State.

NORTH CAROLINA: Temperatures about normal across the State. Extremes 50°; 100°. Precipitation none to 1.40 in.

Days suitable for fieldwork 6.4. Soil moisture 35% very short, 49% short, 16% adequate. Pasture 3% very poor, 27% poor, 53% fair, 17% good. Livestock feed from pasture 71%. Hay second cutting 56%; third cutting 18%. Peaches harvested 94%; flue cured tobacco harvested 31%. Corn soft dough 80%; corn dent 59%; corn mature 30%; cotton setting bolls 90%; soybeans blooming 37%; soybeans setting pods 18%; tobacco topped 93%. Crop condition: Corn 12% very poor, 32% poor, 43% fair, 13% good; cotton 5% poor, 49% fair, 38% good, 8% excellent; soybeans 17% poor, 61% fair, 22% good; peanuts 4% poor, 44% fair, 48% good, 4% excellent; sorghum 23% poor, 65% fair, 12% good; tobacco 3% poor, 45% fair, 51% good, 1% excellent; sweet potatoes, 100% good; peaches 29% poor, 65% fair, 6% good; apples 17% poor, 50% fair, 33% good; truck crops 3% very poor, 21% poor, 50% fair, 26% good; hay 3% very poor, 26% poor, 52% fair, 19% good. Major activities: Harvesting flue cured tobacco; hay harvesting; spraying field crops; harvesting vegetables. Other activities included: Tending livestock; harvesting irish potatoes; harvesting peaches; topping, spraying, irrigating tobacco; harvesting corn silage, general farm maintenance.

NORTH DAKOTA: Temperatures 2° below normal west central, east central, southeast to normal south central, northeast. Precipitation 0.03 in. southeast, west central to 0.70 in. northeast.

Days suitable for fieldwork 6.8. Topsoil 34% very short, 60% short, 6% adequate. Subsoil 45% very short, 49% short, 6% adequate. Spring wheat 3% very poor, 3% poor, 26% fair, 64% good, 4% excellent; 14% combined, 29% 1989, 26% avg. Durum 1% poor, 28% fair, 65% good, 6% excellent; 4% combined, 13% 1989, 14% avg. Oats 6% very poor, 6% poor, 39% fair, 46% good, 3% excellent; 26% combined, 37% 1989, 33% avg. Barley 1% very poor, 25% fair, 68% good, 6% excellent; 40% combined, 52% 1989, 42% avg. Winter wheat 6% poor, 40% fair, 50% good, 4%

excellent; 61% combined, 79% 1989, 71% avg. Corn 5% very poor, 5% poor, 27% fair, 52% good, 11% excellent; 8% milk to dough, 15% 1989, 31% avg. Flax 2% very poor, 4% poor, 24% fair, 62% good, 8% excellent; 24% turning to ripe, 22% 1989, 30% avg. Potatoes 46% poor, 54% good; 64% rows filled, 48% 1989, NA avg. Soybeans 2% poor, 25% fair, 63% good, 10% excellent; 10% fully podded, 7% 1989, 27% avg. Dry beans 9% poor, 36% fair, 51% good, 4% excellent; 17% fully podded and beyond, 12% 1989, 41% avg. Sunflower 4% poor, 19% fair, 60% good, 17% excellent; 56% bloom and beyond, 53% 1989, 55% avg. Sugarbeets 26% poor, 37% fair, 37% good. Pastures 17% very poor, 30% poor, 44% fair, 6% good, 3% excellent. Stockwater 1% very short, 48% short, 51% adequate. Second cutting alfalfa 49% complete, other hay 89% complete.

OHIO: Temperatures 1 to 5° subnormal. Highs mid 70s to 80s. Lows mid 50s to low 60s. Rain at beginning and end of week 1.00 to 2.00 in. Base 50 growing degree days totaled 120 to 150; 10 to 30 units below normal.

Days suitable for fieldwork 6.4. Soil moisture 9% short, 85% adequate, 6% surplus. Activities: Harvesting hay, small grains, straw, apples, vegetables; clipping pastures, weeds; plowing for late summer, fall seedings; detassling seed corn stands; spraying pesticides. Corn good; some nitrogen deficiency from leaching, some drowned out spots. Soybeans fair to good; root, stem rot prevalent. Bean leaf beetle populations low but increasing. Hay curing weather excellent. Hay stands mostly good. Pastures 1% very poor, 4% poor, 30% fair, 54% good, 11% excellent. Tobacco plants topped, treated for sucker control.

OKLAHOMA: Temperatures 8° below normal southwest, north central to 4° below normal east central. Precipitation 0.10 in. west central to 2.50 in. southeast.

Days suitable for fieldwork 5.6. Topsoil 40% short, 55% adequate, 5% surplus. Subsoil 50% short, 50% adequate. Wheat 100% harvested, 100% 1989, 100% avg.; 97% ground plowed, 85% 1989, 95% avg.; 7% seed bed prepared, 15% 1989, 10% avg. Cotton 55% fair, 45% good; 95% squaring, 75% 1989, 90% avg.; 65% setting bolls, 45% 1989, 50% avg.; 0% open bolls, 0% 1989, 0% avg. Sorghum 2% poor, 25% fair, 73% good; 35% heading, 65% 1989, 50% avg.; 7% coloring, 15% 1989, 15% avg. Soybeans 40% flowering, 50% 1989, 55% avg.; 15% setting pods, 20% 1989, 25% avg. Peanuts 87% pegging, 80% 1989, 90% avg.; 45% setting pods, 30% 1989, 50% avg. Corn 75% milk to soft, 65% 1989, 80% avg.; 25% mature, 3% 1989, 20% avg. Alfalfa 85% third cutting, 85% 1989, 75% avg.; 12% fourth cutting, 10% 1989, 10% avg. Pastures 5% poor, 65% fair, 30% good. Cattle good; marketings average, prices up from last week.

OREGON: Minimal rainfall. Thunderstorms east of Cascades started numerous fires, dropped significant precipitation in a few locations. High temperatures set on 28th at Portland, Astoria, Medford.

Soil moisture 90% short, 10% adequate. Barley 45% harvested, 46% 1989, 59% avg. Grass seed harvest nearing completion. Mint harvest well underway western areas, Malheur Co.; two weeks until harvest Crook Co., Garlic drying Crook Co. Second cutting alfalfa underway in selected eastern counties. Cherry harvest complete Lane Co.; peach harvest continued Willamette Valley. Early Gravenstein apple harvest began Lane Co.; near harvest Hood River. Bartlett, starkrimson pear harvest scheduled week of August 6th Hood River; early harvest underway Jackson Co. Blueberry harvest at mid point Lane Co.; continued Multnomah, Washington Co. Marion blackberry harvest in full swing Multnomah Co. Cranberry development

progressing nicely. Strawberry fieldwork continued Willamette Valley. Snap bean harvest continued. Early sweet corn harvest beginning. Potatoes sizing well Baker Co.; beginning harvest Malheur Co.; harvest continued Columbia basin. Early onions topped Willamette Valley; harvest expected in 2 to 3 weeks. Early onion harvest began Malheur Co. Livestock good to excellent. Stockwater remains short south central areas. Range, pasture 8% poor, 50% fair, 38% good, 4% excellent.

PENNSYLVANIA: Dry, normal temperatures. Temperature 71°, at normal. Extremes 46°; 94°. Precipitation 0.41 in., 0.45 in. below normal.

Days suitable for fieldwork 6. Soil moisture 31% short, 68% adequate, 1% surplus. Corn 46% pre silk, 62% 1989, 25% avg.; 51% silk, 35% 1989, 63% avg.; 3% dough, 3% 1989, 12% avg.; 5% poor, 20% fair, 51% good, 24% excellent. Soybean 3% poor, 19% fair, 57% good, 21% excellent. Wheat harvest 81% complete, 79% 1989. Oat harvest 51% complete, 37% 1989. Barley harvest 89% complete, 90% 1989. Potato harvest 6% complete, 9% 1989. Second cutting alfalfa 68% complete, 48% 1989. Third cutting alfalfa 11% complete, 8% 1989. Second cutting clover timothy 33% complete, 29% 1989. Quality of hay made mostly good. Pasture 2% very poor, 14% poor, 69% good, 15% excellent. Apple harvest 5% complete, 4% 1989. Peach harvest 12% complete, 15% 1989. Grapes harvest 1% complete, 0% 1989. Fall plowing 2% complete, 3% 1989. Activities: Planting vegetables; harvesting hay, haylage, barley, wheat, potatoes, oats, fruit, vegetables; repairing fence; weed control; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

PUERTO RICO: Rainfall 0.92 in. was 0.44 in. below normal. Rainfall 5.17 in. at Toa Baja, 2.98 in. at Pico Del Este Luquillo, 2.44 in. Rio Piedras Aes. Highest 24 hour total was 5.17 in. at Toa Baja. Divisional temperature 81 to 82° on the Coast, 74 to 78° in the Interior with Mean Station. Temperature 68° Pico Del Este Luquillo to 84° at Roosevelt Roads N.S. Extremes 59°; 98°.

SOUTH CAROLINA: Temperatures near normal in the northwest to more than 4° hotter than usual near the Coast. Rainfall 0.20 to 0.80 in. over State.

Days suitable for fieldwork 6.1. Soil moisture 24% very short, 61% short, 15% adequate. Cotton 47% poor, 52% fair, 1% good; 89% setting bolls, 77% 1989, 83% avg.; 1% open bolls, 0% 1989, 0% avg. Soybeans 37% poor, 36% fair, 27% good; 39% blooming, 37% 1989, 43% avg.; 12% setting pods, 11% 1989, 15% avg. Corn poor to fair, 97% dough stage, 85% 1989, 91% avg.; 79% matured, 42% 1989, 47% avg.; 14% harvested, 4% 1989, 6% avg. Sorghum fair, 9% harvested, 13% 1989, 9% avg. Tobacco fair to good, 51% harvested, 36% 1989, 38% avg.; 1% stalks destroyed, 0% 1989, 0% avg. Peanuts fair. Watermelons fair, 87% harvested, 84% 1989, 86% avg. Cantaloupes fair, 81% harvested, 80% 1989, 83% avg. Peaches fair, 78% harvested, 76% 1989, 82% avg. Pastures 6% very poor, 34% poor, 50% fair, 10% good.

SOUTH DAKOTA: Temperatures slightly below normal. Extremes 34°; 96°. Precipitation none for over half of State. Maximum 1.83 in. Growing season precipitation below normal north, west, above normal central, east. Range 7.90 in. above normal to 4.35 in. below normal. Growing degree days 228 units above to 104 units below normal.

Days suitable for fieldwork 5.4. Subsoil 17% critically short, 41% short, 39% adequate, 3% surplus. Topsoil 12% critically short, 42% short, 43% adequate, 3% surplus. Range, pasture 3% very poor, 6% poor, 30% fair, 50% good, 11% excellent. Other crop mostly good condition. Rapid movement in small grains harvest. Grasshoppers, dry weather

major problems. Major activities: Combining, haying, spraying, summer fallow work, fencing.

TENNESSEE: Cold front brought widespread showers, thunderstorms to State 4th, 5th. Temperatures near normal, except 5° below normal Plateau. Highest reading for week 95° at Memphis 4th. Lowest reading 60° Bristol 2nd. Rainfall slightly below normal west, above normal elsewhere.

Days suitable for fieldwork 6.1. Soil moisture 14% very short, 64% short, 22% adequate. Corn 86% tasseling, 100% 1989, 98% avg.; 38% dough, 62% 1989, 69% avg. 16% dent, 22% 1989, 35% avg.; 1% very poor, 10% poor, 51% fair, 36% good, 2% excellent. Cotton 86% setting bolls, 90% 1989, 90% avg., 4% open bolls, 0% 1989, 0% avg.; 3% very poor, 5% poor, 39% fair, 53% good. Sorghum 54% headed, 78% 1989, 80% avg. 8% turning color, 15% 1989, 29% avg.; 5% very poor, 8% poor, 42% fair, 45% good. Soybeans 42% blooming, 50% 1989, 56% avg., 16% setting pods, 17% 1989, 25% avg.; 3% poor, 40% fair, 47% good, 10% excellent. Tobacco 40% topped, 37% 1989, 44% avg.; 2% very poor, 1% poor, 43% fair, 52% good, 2% excellent. Burley tobacco 4% harvested, 3% 1989, 4% avg. Dark fired tobacco 2% harvested, 2% 1989, 2% avg. Dark air cured tobacco 2% harvested, 2% 1989, 1% avg. Pastures 1% very poor, 6% poor, 57% fair, 35% good, 1% excellent. Cattle 1% poor, 25% fair, 71% good, 3% excellent. Farmers spraying pesticides. Water shortages common.

TEXAS: Moist, unstable air blanketed State during week, interacted with daily heating, weak surface features to trigger daily showers, thunderstorms over much State. Heavy rains central, southeastern counties; amounts skimpy far southern areas, Lower Valley. Temperatures near to below normal statewide, much below normal readings Plains, Cross Timbers. Rainfall above normal, except coastal areas, far south, northern Panhandle, where totals below normal.

Crops: Corn continued good progress Plains. Most fields dough stage with some entering dent stage. Cooler weather slowed progress some. Intermittent showers slowed harvest Blacklands, central. Additional rain caused more stalks lie down. Harvest continued Upper Coast, slight delays. Corn dented 72%, 67% 1989, 67% avg.; mature 60%, 51% 1989, 54% avg.; harvested 38%, 36% 1989, 27% avg. Rain improved grain sorghum conditions Plains. Few fields started turning color. Harvest continued Blacklands, central, fair to poor yields. Some lodging occurred. Harvest complete south, Coastal Bend. Sorghum mature 61%, 48% 1989, 50% avg.; harvested 41%, 38% 1989, 39% avg. Cotton conditions improved some Plains last week; some dryland fields too far gone for much help. Cooler temperatures slowed maturing. Bolls opening most Blacklands, central. Many bolls already shed because earlier dry weather. Harvest slightly delayed Coastal Bend. Warmer weather needed Trans Pecos continued good development. Harvest just beginning along Upper Coast. Cotton 100% squaring, 93% 1989, 95% avg.; harvested 4%, 5% 1989, 4% avg. Soybeans doing well High Plains. Moisture promoted good pod development. Harvest beginning Blacklands, early yields only fair. Later crop may be better with recent rains. Early varieties being harvested Upper Coast. Later varieties improving with recent moisture. Rice harvest continued Upper Coast as weather allowed. Additional draining fields occurred. Rice harvested 11%, 23% 1989, 17% avg. Peanut conditions improved recently most areas with rainfall. Peanuts Hill Country blooming, pegging.

Commercial Vegetables: Rio Grande Valley, peppers continued good progress. Irrigation steady. Salt build up becoming problem. Land preparations continued without much delay. San Antonio Winter Garden, land preparation, some fall

planting underway. Eastern areas sweet potato harvest getting underway irrigated fields. Melon harvest continued. Insects problems on tomatoes. High Plains, snap beans, cantaloupes, sweet corn, onions, potatoes, cabbage harvested. Trans Pecos, rainfall slowed onion, cantaloupe harvest. Insects problems peppers.

Range and Livestock: Ranges, pastures improved significantly many areas past two weeks. Producers hoping for better hay yields second, even first cuttings. Earlier yields down. Grasshoppers continued cause problems some areas. Livestock markets strong. Sheep shearing continued Hill Country. Range, pasture conditions 3% very poor, 16% poor, 49% fair, 27% good, 5% excellent.

UTAH: Temperatures 1° above normal. Precipitation was almost zero.

Days suitable for fieldwork 6.9. Soil moisture 93% short, 7% adequate. Major farm activities: Harvesting small grains, cutting second crop alfalfa hay, irrigating crops. Irrigation water short several locations southern, eastern areas. Stockwater adequate most locations. Winter wheat 66% harvested, 72% 1989, 68% avg. Barley 52% harvested, 51% 1989, 53% avg. Spring wheat 44% harvested, 45% 1989, 43% avg. Oat acreage ripened 55%, 56% 1989, 59% avg. Oat acreage for hay 76% harvested; acreage for grain 40% harvested. Average height of corn 65.0 in. Corn tasseling 58%, 67% 1989, 74% avg. Alfalfa hay second cutting 82% completed, 85% 1989, 81% avg. Washington County peach, apple, pear crops good. Non irrigated range, pasture 3% very poor, 24% poor, 73% fair. Winter ranges not making sufficient summer growth in Garfield, Kane Counties.

VIRGINIA: Temperatures below normal. Precipitation quite variable. Extremes 46°; 98°.

Days suitable for fieldwork 6.2. Topsoil 18% very short, 48% short, 27% adequate, 7% surplus. Corn silked 73%, 67% 1989, 74% avg.; dough stage 43%, 33% 1989, 41% avg.; dent stage 22%, 17% 1989, 17% avg.; 2% very poor, 21% poor, 53% fair, 24% good. Soybeans bloomed 43%, 44% 1989, 36% avg.; setting pods 30%, 27% 1989, 15% avg.; 2% very poor, 12% poor, 43% fair, 43% good. Flue tobacco 18% harvested, 8% 1989, 5% avg. All tobacco 13% poor, 47% fair, 40% good. Topping, suckering was active. Marketing continued. Peanut 40% fair, 40% good, 20% excellent. Leafspot disease evident. Potato harvest winding down. Peach, summer apple harvest continued. Pasture 5% very poor, 31% poor, 49% fair, 15% excellent. Alfalfa mostly fair to good. Other hay mostly fair to good. Livestock mostly fair to good. Irrigating, harvesting vegetables. Planting cucumbers, snap beans. Cabbage good quality, quantity. Dry conditions affecting crops across the State.

WASHINGTON: Temperatures normal to 7° above normal east; 2 to 5° above normal west. Precipitation none to 0.20 in. east; none to 0.01 in. west.

Days suitable for fieldwork 6.4. Soil moisture 55% short, 40% adequate, 5% surplus. Range, pasture 6% very poor, 20% poor, 42% fair, 32% good. Hay, other roughage 15% short, 83% adequate, 2% surplus. Winter wheat 48% fair, 47% good, 5% excellent, harvested 52%, 47% 1989, 47% avg. Spring wheat harvested 29%, 21% 1989, 29% avg. Barley harvested 38%, 37% 1989, 42% avg. Alfalfa hay, 2nd cutting 86%, 84% 1989, 82% avg. Potatoes harvested 10%, 9% 1989, 9% avg. Hot dry weather allowed farmers to harvest small grains all week. Dry pea, lentil, mint, grass seed harvests continued. Raspberry harvest was winding down. Blueberry harvest continued. Stonefruits continued to be harvested. Cherry harvest was completed. Many varieties of vegetables were harvested.

WEST VIRGINIA: Temperature 71^o. Extremes 48^o; 93^o. Precipitation 0.96 in., 0.42 below to 0.59 in. above normal.

Days suitable for fieldwork 5.7. Soil moisture 30% short, 70% adequate. Pasture 21% fair, 56% good, 23% excellent. Cattle, sheep good. Wheat good, 56% harvested. Oats good; 92% headed; 78% ripe. Corn good; 72% silked; 40% dough. Hay good; first cutting 97% complete, second cutting 30% complete. Apples, peaches poor. Tobacco fair, 16% topped. Farm activities: Making hay, clipping pastures, small grain harvesting, fencing.

WISCONSIN: Temperature 68^o, 3^o below normal. Extremes 36^o; 89^o. Precipitation 0.30 to 2.00 in.

Days suitable for fieldwork 6.5. Soil moisture 20% short, 72% adequate, 8% surplus. Pasture 1% very poor, 4% poor, 21% fair, 62% good, 12% excellent. General condition of crops 11% fair, 82% good, 7% excellent. Soybean 85% of normal. Corn 1% poor, 13% fair, 80% good, 6% excellent; 56% silked, 76% 1989, 82% avg.; 4% in dough, 8% 1989, 19% avg. Second cut hay 70% completed, 69% 1989, 73% avg. Hay crop large with quality mostly good. Oats 25% harvested, 36% 1989, 51% avg. Winter wheat 55% harvested, 67% 1989, 82% avg.

WYOMING: Temperatures mostly below normal. Precipitation above normal eastern areas, dry in the west.

Days suitable for fieldwork 6.0. Topsoil 46% short, 54% adequate. Subsoil 60% short, 40% adequate. Winter wheat 10% turning color, 5% 1989, 5% avg.; 40% mature, 25% 1989, 30% avg.; 50% harvested, 70% 1989, 65% avg. Barley 10% headed, 5% 1989, 10% avg.; 20% turning color, 25% 1989, 25% avg.; 45% mature, 55% 1989, 45% avg.; 25% harvested, 15% 1989, 20% avg. Spring wheat 10% headed, 0% 1989, 5% avg.; 50% turning color, 30% 1989, 30% avg.; 30% mature, 45% 1989, 40% avg.; 10% harvested, 25% 1989, 25% avg. Oats 35% headed, 10% 1989, 15% avg.; 35% turning color, 25% 1989, 35% avg.; 25% mature, 45% 1989, 35% avg.; 5% harvested, 20% 1989, 15% avg. Potatoes 95% in bloom, 95% 1989, 90% avg. Dry beans 65% in bloom, 80% 1989, 75% avg.; 45% setting pods, 50% 1989, 50% avg. Corn 80% tasseled, 70% 1989, 70% avg.; 30% silked, 30% 1989, 35% avg.; 5% milk, 10% 1989. Alfalfa hay second cutting 25% complete, 45% 1989, 30% avg. Other hay 70% harvested, 65% 1989, 70% avg. Ranges, pastures 15% poor, 80% good, 5% excellent. Stockwater 40% short, 60% adequate.

International Weather and Crop Summary

HIGHLIGHTS

July 29 - August 4, 1990

USSR ... In Western USSR, continued unseasonably cool weather in the north delays winter grain harvests and slows crop maturation. In the New Lands, cool weather and periodic showers continue to benefit spring grains.

EUROPE ... Unseasonable heat and dryness continue to stress most summer crops in all but eastern growing areas.

EASTERN ASIA ... Tropical Storm Tasha relieves dryness across much of southeastern China. Heat and dryness continue over much of central and southern Japan.

SOUTH ASIA ... Unfavorably dry weather persists in primary summer crop areas of the south and west.

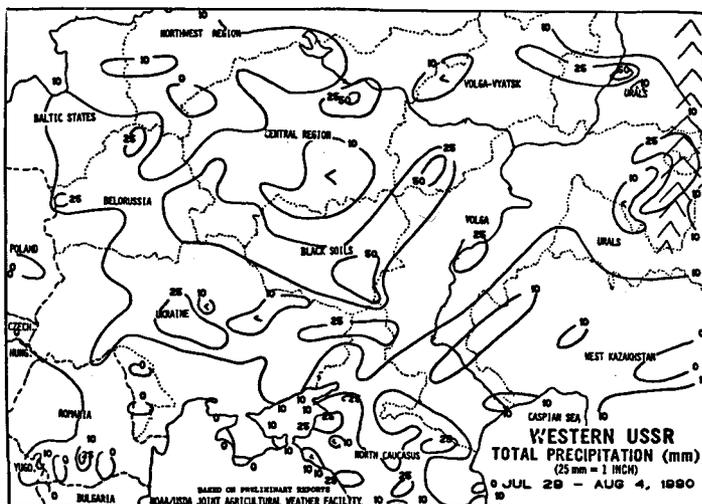
SOUTHEAST ASIA ... Unseasonably dry, warm weather in central Thailand favors maturing corn but reduces moisture for immature crops and new plantings.

SOUTH AMERICA ... Dry weather prevails throughout Argentina and south-central Brazil. Milder weather returns to the region.

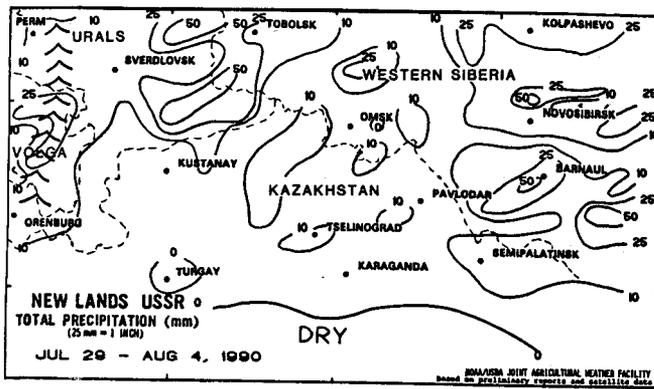
AUSTRALIA ... Wet, cool weather returns to eastern crop areas. Heavy rain causes flooding in eastern New South Wales.

CANADA ... Light rain and mild temperatures benefit vegetative to filling spring crops.

MEXICO ... Well-distributed rainfall continues to favor immature crops. Dryness lingers in the northeast.



USSR ... In Western USSR, unseasonably cold, wet weather continued over the Baltic States, Belorussia, the Central Region, Black Soils Region, the Volga Vyatsk, and the upper Volga. Greatest amounts of rain (25-70mm) covered eastern Belorussia, the extreme southwestern portion of the Central Region, the Black Soils Region, and the southern Volga Vyatsk Region. Prolonged rains and unseasonably cold weather in these areas have delayed the winter grain harvest, increased the potential for crop lodging, and slowed the ripening of both winter and spring grains. By week's end, weather conditions began to improve. Maximum temperatures around 25 degrees Celsius (C) were accompanied by welcomed dry weather. In the Ukraine and North Caucasus, light showers brought some relief to summer crops such as corn, sugarbeets, and sunflowers stressed by unfavorably dry weather in July.

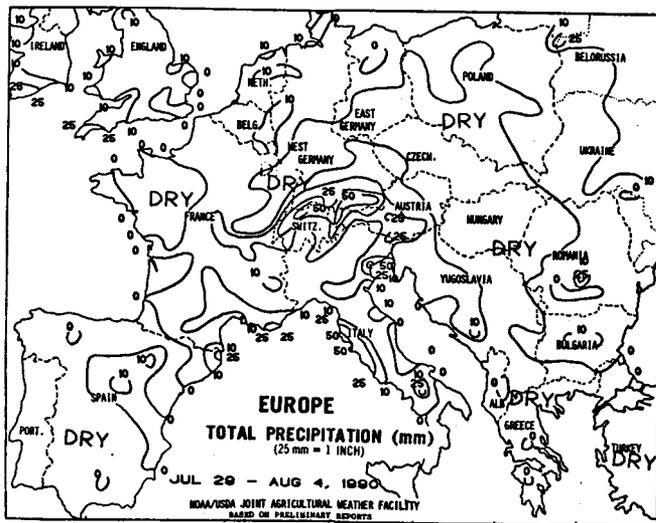


July 1990

MONTHLY DATA FROM SELECTED FOREIGN CITIES
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
*** = DATA NOT AVAILABLE

In the New Lands, cool weather and periodic showers continued to benefit filling spring grains in the Urals and Western Siberia. Most spring grain crops in Kazakhstan were maturing. Greatest amounts of rain (15-50mm) fell over crop areas in the northern Urals as well as in a band that stretched northward from Semipalatinsk through Barnaul, to Novosibirsk. Weekly average temperatures over the region were 1-3 degrees C below normal. Highest weekly temperatures ranged from 21 to 25 degrees C in the north and 25 to 30 degrees C across the south.

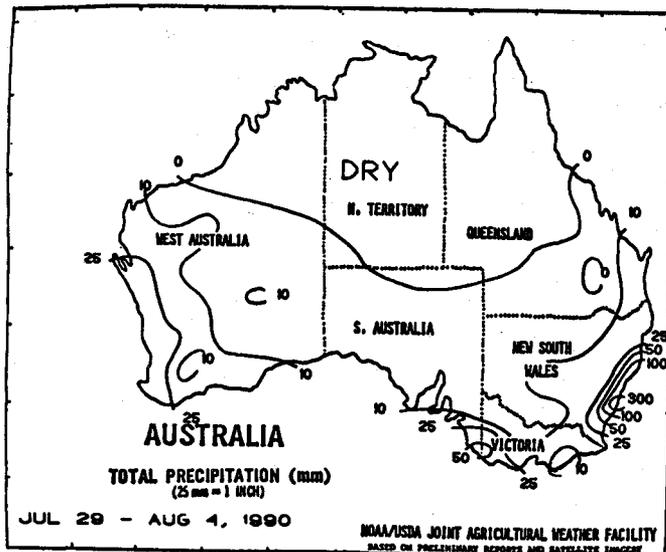
COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
	AVG MAX	AVG MIN	HI	LO	AVG	DPART F/NRM	DPART F/NRM	
NORWAY OSLO	20	11	29	6	16	0.5	43.8	-48.7
SWEDEN STOCKHOLM	20	12	28	9	16	-1.0	133.3	63.4
FINLND HELSINKI	20	11	23	4	16	-1.0	116.5	44.8
U KING GLASGOW	20	11	26	5	15	-0.3	73.7	-9.1
EDINBURGH	19	10	26	3	15	0.3	76.0	11.5
BIRMINGHAM	23	11	31	3	17	1.4	26.4	-26.0
LONDON	24	11	30	7	17	1.3	14.7	-34.1
IRELND DUBLIN	20	12	25	6	16	1.0	51.1	-8.2
ICELND REYKJAVIK	14	9	20	5	12	0.9	49.4	1.8
DENMRK COPENHAGEN	21	13	27	9	17	-0.7	37.8	-33.3
LUXEMB LUXEMBOURG	23	12	32	6	18	0.4	79.2	13.0
SWITZL ZURICH	25	14	33	9	19	1.6	100.5	-29.9
GENEVA	27	14	34	7	20	1.1	66.3	-2.1
FRANCE PARIS	26	13	34	5	19	1.2	21.6	-29.0
STRASBOURG	25	13	34	8	19	0.1	25.0	-36.0
BOURGES	27	14	36	8	21	1.7	13.2	-37.6
BORDEAUX	28	16	38	9	22	2.7	21.0	-33.2
TOULOUSE	30	16	37	10	23	2.8	10.8	-36.6
MARSEILLE	29	19	33	14	24	0.3	3.5	-10.8
SPAIN VALLADOLID	33	15	38	8	24	2.9	6.6	-10.4
MADRID	35	18	40	12	26	1.5	4.6	-2.5
SEVILLE	37	20	42	13	29	2.1	0.1	-0.7
E GRMY LEIPZIG	24	13	33	8	18	0.1	17.9	-45.1
DRESDEN	23	13	34	8	18	-0.5	25.6	-83.4
W GRMY HAMBURG	21	12	31	6	17	-0.1	45.5	-41.2
BERLIN	23	14	32	10	18	-0.7	20.4	-40.3
DUSSELDORF	23	13	31	9	18	-0.4	41.0	-33.9
STUTTGART	23	12	32	7	17	-0.3	34.3	-43.8
NURNBERG	23	12	30	6	17	-0.7	58.1	-11.9
MUNICH	23	11	31	7	17	0.1	82.8	-42.7
AUSTRI VIENNA	24	13	31	8	19	-1.4	44.5	-24.6
INNSBRUCK	25	12	31	8	18	0.7	143.0	8.1
CZECH PRAGUE	23	11	33	6	17	-0.5	3.8	-68.0
POLAND WARSAW	22	12	29	8	17	-1.1	66.5	-9.6
LODZ	22	11	30	5	17	-1.0	83.1	-7.8
KATOWICE	22	11	29	6	16	-1.3	66.4	-27.6
PRZEMYSL	22	13	31	9	17	-0.5	100.2	1.1
HUNGAR BUDAPEST	27	15	34	10	21	-0.2	45.2	-22.3
YUGOSL SARAJEVO	***	***	***	***	***	*****	0.0	-74.9
ROMANI BUCHAREST	30	15	37	10	23	0.1	24.7	-40.2
BULGAR SOFIA	28	15	34	11	21	1.8	34.6	-27.9
ITALY MILAN	29	17	33	1	23	0.3	30.2	-32.2
VERONA	30	19	35	13	25	1.5	47.6	-12.3
VENICE	27	19	31	14	23	-0.1	93.5	26.2
GENOA	27	22	31	19	24	0.0	10.1	-17.6
ROME	29	19	32	16	24	0.2	44.0	31.2
NAPLES	30	20	35	18	25	2.2	0.5	-20.8
GREECE THESSALONIKA	32	20	34	16	26	-1.0	4.2	-20.8
LARISSA	34	19	40	14	26	-1.0	59.7	41.0
ATHENS	33	24	36	20	29	0.3	0.1	-1.7
TURKEY ISTANBUL	29	21	32	17	25	1.2	4.3	-16.7
ANKARA	29	14	35	8	21	-2.3	19.1	-0.9
CYPRUS LARNACA	32	22	37	19	27	-0.6	0.1	-0.9
USSR TALLINN	20	12	22	8	16	-0.4	101.2	24.1
LENINGRAD	21	14	26	10	17	-0.5	83.0	6.2
KAUNAS	20	12	26	8	16	-1.1	107.1	34.5
MINSK	20	13	26	8	16	-1.2	147.0	67.2
KAZAN	24	14	31	7	19	-0.5	74.8	9.0
MOSCOW	22	14	31	10	18	-0.5	121.7	36.6
SVERDLOVSK	23	12	29	3	18	-0.4	56.4	-27.6
OMSK	26	15	31	4	21	1.1	93.5	28.1
KUSTANAY	25	15	30	8	20	-0.8	113.1	65.4
KRASNOYARSK	25	15	31	8	20	1.3	97.2	21.1
NOVOSIBIRSK	25	16	31	8	20	1.7	177.1	118.7
BARNAUL	26	16	30	11	21	0.8	145.4	84.5
KHABAROVSK	28	17	33	7	22	1.4	65.0	-51.9
VLADIVOSTOK	20	16	27	12	18	0.5	389.3	265.6
KIEV	24	15	30	10	19	-0.7	50.6	-29.1
LVOV	21	12	30	7	16	-1.4	100.7	3.3
KIROVOGRAD	26	14	32	9	20	-1.5	31.9	-29.4



EUROPE ... Unseasonable heat (daily maximum temperatures 32-39 degrees C and weekly mean temperatures 3-7 degrees C above normal) and dryness continued across all but eastern crop areas, providing near optimal conditions for harvest of winter grains but stressing many summer crops, especially unirrigated corn. Summer crops were mostly filling. Scattered, mostly light showers (less than 10mm) in sections of the west and south provided only minor relief from dryness which has persisted across many crop areas since spring. In the east, near-to slightly above-normal temperatures and mostly dry weather covered most crop areas, continuing a drier-than-normal trend over the past 4 weeks.

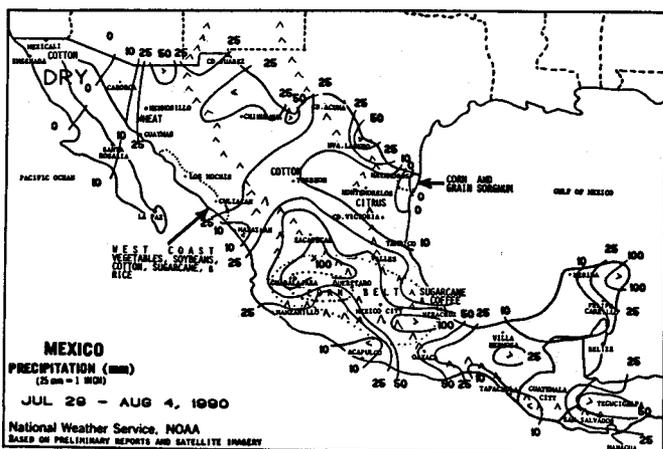
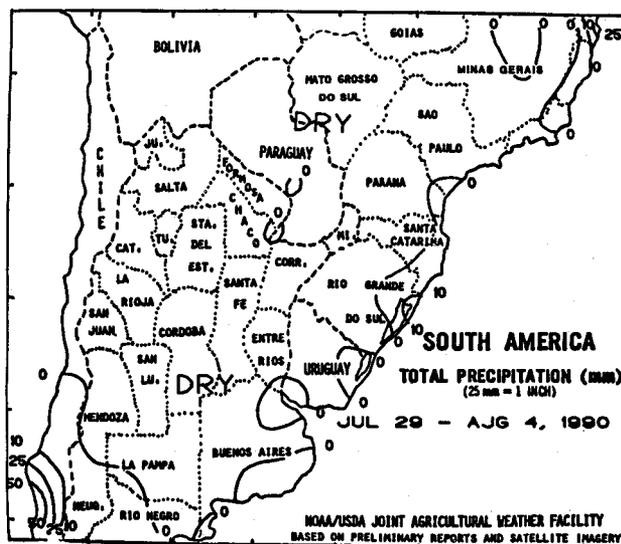
BASED ON PRELIMINARY REPORTS

COUNTRY CITY	TEMPERATURE							PRECIPITATION			COUNTRY CITY	TEMPERATURE							PRECIPITATION		
	(C)							(MM)				(C)							(MM)		
	AVG MAX	AVG MIN	HI	LO	DPART	F/NRM	TOTAL	DPART	F/NRM	AVG MAX		AVG MIN	HI	LO	DPART	F/NRM	TOTAL	DPART	F/NRM		
July 1990																					
USSR	ODESSA	26	18	29	13	22	0.0	42.9	-4.7	TANZAN	DAR ES SALAAM	28	18	30	14	23	-0.6	30.0	-0.7		
	YALTA	29	21	34	18	25	0.5	2.8	-45.2	GABON	LIBREVILLE	26	22	27	20	24	-0.3	0.1	-1.1		
	VORONEZH	24	13	32	4	19	-1.0	84.1	16.2	TOGO	LOME	28	24	30	21	26	0.8	67.4	-33.1		
	SARATOV	25	16	30	11	21	-0.3	76.7	30.5	B FASO	OUAGADOUGOU	32	23	35	19	28	0.7	140.1	-48.1		
	KHARKOV	25	15	32	10	20	-1.1	16.8	-42.0	IVRY C	ABIDJAN	27	23	30	21	25	0.3	51.0	-261.1		
	VOLGOGRAD	28	16	32	10	22	-2.0	29.8	2.6	MOZAMB	MAPUTO	26	14	30	9	20	1.7	0.1	-19.0		
	ROSTOV	28	18	34	12	23	-0.3	57.0	3.4	ZAMBIA	KABWE	25	9	28	6	17	1.3	0.1	0.1		
	ASTRAKHAN	32	20	37	14	26	0.9	13.0	-8.8	ZIMBAB	HARARE	23	9	25	5	16	2.7	0.1	-1.3		
	KRASNODAR	31	18	35	12	24	0.5	10.1	-35.7	S AFRI	PRETORIA	21	6	25	1	14	2.6	1.0	-4.9		
	ORENBURG	27	14	31	9	21	-1.3	57.0	17.0		KROONSTAD	19	-1	31	-9	9	0.4	5.8	-2.2		
	TSELINOGRAD	25	16	30	9	20	0.1	141.7	91.3		JOHANNESBURG	17	3	23	-5	10	0.4	3.0	-3.9		
	KARAGANDA	25	15	31	10	20	-0.6	74.4	31.2		BETHAL	19	-1	23	-8	9	0.7	1.0	-7.0		
	TBILISI	31	21	35	18	26	1.3	12.2	-32.9		DURBAN	23	12	29	8	18	1.5	1.2	-32.9		
	TASHKENT	35	19	40	10	27	-0.1	9.4	5.4	CANADA	CAPE TOWN	16	8	21	1	12	0.4	131.2	58.2		
	ASHKHABAD	38	24	42	21	31	0.1	0.9	-0.1		TORONTO	27	15	36	11	21	0.4	68.6	-2.8		
SYRIA	DAMASCUS	37	17	42	12	27	0.1	0.1	0.1		MONTREAL	26	16	31	8	21	0.2	132.6	42.6		
ISRAEL	JERUSALEM	29	17	33	11	23	-0.2	0.1	0.1		WINNIPEG	26	13	31	7	19	-0.4	33.0	-43.0		
PAKIST	KARACHI	33	26	36	25	30	-0.7	0.1	-99.7		REGINA	25	11	33	7	18	-1.1	95.7	42.4		
INDIA	AMRITSAR	34	26	39	22	30	-0.5	129.8	-54.6		SASKATOON	24	11	31	5	18	-0.8	75.4	21.8		
	NEW DELHI	34	27	37	20	30	-0.6	149.4	-85.4		LETHBRIDGE	25	11	33	5	18	-0.9	41.3	-2.3		
	AHMEDABAD	33	26	36	25	30	0.0	219.0	-47.8		CALGARY	22	11	31	4	16	0.0	84.3	18.9		
	INDORE	29	23	38	21	26	-0.7	236.3	-48.7		EDMONTON	22	12	31	6	17	0.0	152.0	63.2		
	CALCUTTA	32	26	34	22	29	-0.1	665.0	343.4		VANCOUVER	23	15	29	12	19	1.5	10.9	-21.2		
	VERAVAL	30	26	32	24	28	-0.2	25.9	-274.6	MEXICO	GUADALAJARA	25	17	29	14	21	-0.4	687.8	430.7		
	BOMBAY	30	26	31	25	28	0.9	396.8	-548.6		MEXICO CITY	22	14	24	12	18	0.9	234.3	109.1		
	POONA	27	22	30	20	25	-0.6	255.1	61.8		ACAPULCO	33	25	35	23	29	0.3	232.0	-2.5		
	BEGAMPET	31	23	33	21	27	0.0	107.5	-55.7		ST. GEORGES	31	26	37	22	28	1.4	78.7	-29.6		
	MADRAS	36	26	38	24	31	0.3	75.2	-44.5	BAHAMA	NASSAU	32	25	34	21	28	0.7	51.8	-104.8		
	MANGALORE	28	23	30	22	26	-0.2	770.8	-288.1	CUBA	HAVANA	31	25	33	23	28	0.9	66.5	-38.5		
H KONG	HONG KONG	32	27	33	20	29	0.7	285.8	-30.7	JAMAIC	KINGSTON	33	26	34	23	29	0.7	15.5	-26.1		
N KREA	PEYONGYANG	25	19	32	13	22	-1.3	607.4	210.4	P RICO	SAN JUAN	32	25	34	22	28	0.5	146.3	19.2		
S KREA	SEOUL	28	22	34	17	25	0.9	491.9	134.0	GUADAL	RAIZET	32	24	33	22	28	1.1	48.3	-56.8		
JAPAN	SAPPORO	25	18	31	13	21	1.2	51.5	-28.8	MARTINQ	LAMENTIN	31	25	32	22	28	2.0	53.3	-167.8		
	NAGOYA	31	24	35	19	27	1.8	208.4	-10.0	BARBAD	BRIDGETOWN	30	25	31	21	27	0.2	46.8	-83.1		
	TOKYO	29	23	35	18	26	0.9	39.0	-85.7	TRINID	PORT OF SPAIN	32	24	34	22	28	1.7	126.1	-133.4		
	YOKOHAMA	29	23	35	18	26	1.2	65.5	-75.4	COLOMB	BOGOTA	18	8	21	2	13	0.3	43.7	2.9		
	KYOTO	33	24	37	18	28	2.4	198.6	-17.4	VENEZU	CARACAS	31	24	33	21	28	1.1	64.3	13.8		
	OSAKA	33	25	37	19	29	1.8	155.1	-37.5	F GUIA	CAYENNE	31	22	32	21	27	1.1	148.2	-112.0		
THAILN	PHETCHABUN	32	24	34	23	28	0.2	247.8	76.2	BRAZIL	FORTEALEZA	29	23	30	22	26	0.0	94.3	-13.0		
	BANGKOK	33	25	35	23	29	0.4	161.5	-11.4		RECIFE	28	21	29	20	25	0.5	359.9	55.7		
MALAYS	KUALA LUMPUR	32	24	34	20	28	1.3	73.1	-56.8		BELO HORIZONTE	25	15	30	12	20	1.8	14.2	-37.7		
VIETNM	HANOI	32	26	37	23	29	0.4	322.0	-0.6		CAMPO GRANDE	24	12	32	5	18	-0.9	21.7	-14.4		
CHINA	HARBIN	27	18	31	11	23	-0.5	158.8	-1.9		FRANCA	23	13	28	5	18	0.6	27.2	11.2		
	HAMI	33	18	38	13	25	-1.2	8.0	1.5		RIO DE JANEIRO	23	19	31	16	21	0.0	3.2	-44.0		
	LANCHOW	30	18	38	12	24	1.6	49.3	-14.6		LONDRINA	20	10	27	1	15	-1.2	148.4	71.9		
	BEIJING	30	22	38	19	26	0.2	233.9	41.0		SANTA MARIA	16	8	24	-1	12	-2.0	90.9	-52.1		
	TIENTSIN	30	23	37	17	27	0.0	227.4	37.5		PORTO ALEGRE	17	8	24	0	13	-1.7	49.7	-78.3		
	LHASA	22	10	25	1	16	-0.3	191.4	53.6	PERU	LIMA	19	15	29	14	17	0.8	4.0	-1.0		
	KUNMING	23	17	26	15	20	0.3	154.7	-57.6	BOLIVI	LA PAZ	12	-4	15	-8	4	-2.7	0.6	-8.3		
	CHENGCHOW	32	24	38	19	28	0.4	108.0	-46.4	CHILE	SANTIAGO	16	0	27	-4	8	-0.1	26.0	-40.9		
	YEHCHANG	34	25	37	20	29	1.0	186.7	-34.0	ARGENT	IGUAZU	19	10	27	-2	14	***	108.2	****		
	HANKOW	34	27	39	21	30	1.6	115.1	-41.0		FORMOSA	19	10	28	1	15	-2.2	70.2	22.2		
	CHITKIANG	32	24	35	19	28	0.3	62.4	-85.4		CERES	17	6	24	-4	11	-1.1	27.1	9.2		
	SHANGHAI	34	27	37	22	30	2.4	38.0	-96.3		CORDOBA	16	4	23	-4	10	-0.3	17.0	9.3		
	NANCHANG	35	27	39	22	31	1.3	46.5	-79.5		RIO CUARTO	14	5	21	-2	10	0.5	11.4	1.6		
	TAIPEI	34	27	39	20	31	2.4	232.1	-1.8		ROSARIO	15	5	22	-5	10	-0.1	23.2	-16.4		
	CANTON	34	25	38	18	30	1.0	139.5	-73.6		BUENOS AIRES	14	5	21	-4	9	-0.5	16.8	-48.6		
	NANNING	32	25	35	23	29	0.4	177.8	-17.4		SANTA ROSA	14	3	24	-8	9	0.9	7.5	-10.3		
CNRY I	LAS PALMAS	27	21	32	19	24	0.7	0.1	0.1		TRES ARROYOS	12	3	21	-4	8	0.2	51.3	-0.6		
MOROCC	CASABLANCA	26	21	35	17	24	1.4	0.1	0.1	MIDW I	MIDWAY ISLAND	29	24	31	17	26	0.9	25.9	-107.2		
	MARRAKECH	38	22	43	18	30	2.1	0.4	-0.3	N CALD	NOUMEA	24	18	26	16	21	1.1	57.9	-25.2		
ALGERI	ALGER	30	19	36	13	25	0.5	22.3	20.5	FIJI	NAUSORI	26	20	28	16	23	0.1	203.2	79.2		
	BATNA	33	16	38	10	24	-0.4	6.6	-0.5	SAMOA	PAGO PAGO	29	25	31	21	27	0.9	121.3	-44.0		
TUNISI	TUNIS	33	20	41	16	27	0.8	1.0	-2.8	TAHITI	PAPEETE	30	22	31	20	26	1.5	37.6	-18.1		
NIGER	NIAMEY	33	25	38	21	29	0.4	82.4	-83.4	N ZEAL	AUCKLAND	15	9	18	4	12	1.2	176.4	44.5		
MALI	TIMBUKTU	38	27	44	20	33	1.0	108.3	49.2	PA N G	PORT MORESBY	29	23	30	22	26	0.1	20.5	-1.6		
	BAMAKO	31	23	33	20	27	0.2	231.3	-8.6	AUSTRAL	DARWIN	30	21	33	15	26	0.8	0.1	-1.5		
MAURIT	NOUAKCHOTT	31	24	41	21	27	-0.4	13.7	-2.6		MOREE	16	6	25	-1	11	0.0	38.6	1.7		
SENEGAL	DAKAR																				

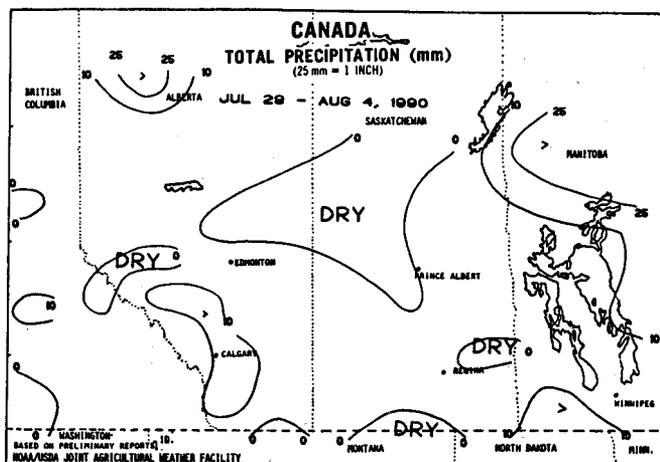


AUSTRALIA ... A slow moving frontal system brought widespread rain (5-20mm, with isolated amounts greater than 20mm) to interior crop areas of southern Queensland, New South Wales, Victoria, and South Australia, maintaining generally favorable soil moisture levels for winter grains. Torrential rainfall (100-300mm, with isolated amounts in excess of 300mm) in east-central coastal areas of New South Wales caused flooding. Scattered rain (5-25mm) in southeastern coastal sections of Queensland delayed sugarcane harvest. Cooler-than-normal temperatures (1-3 degrees C below normal) returned to eastern crop areas, halting early growth of winter grains. In the southwest, moderate to heavy seasonal rains (15-40mm) continued in most crop areas.

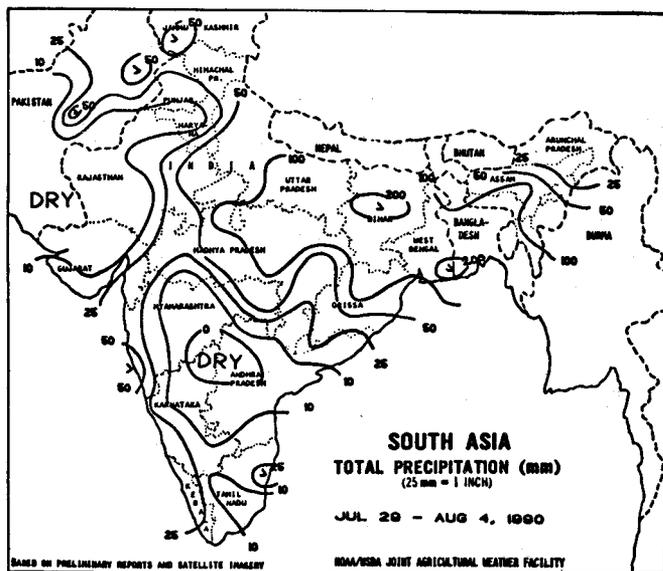
SOUTH AMERICA ... Dry weather prevailed throughout nearly all crop areas of Argentina and south-central Brazil. Weekly temperatures generally averaged 2-5 degrees C below normal in Brazil's wheat and coffee areas, and near normal throughout Argentina's wheat growing areas. The cold air in Brazil's coffee areas produced freezing temperatures in Parana and frost in Minas Gerais. However, minimal frost damage to coffee has been reported since low lying areas were most affected. Parana's wheat crop may have been vulnerable to some frost damage. In Argentina, seasonally cool weather kept wheat at a slow growth pace requiring minimal moisture.



MEXICO ... Periodic showers maintained favorable moisture conditions throughout most of the country, as this year's wet season continues to produce abundant and well-distributed rainfall. The major exception is in the northeast, where dry weather persisted again this week. Unirrigated immature crops have been stressed by heat and dryness in the northeast. Elsewhere, weekly rainfall averaged 25-50mm in the northwest and along the west coast farming region, favoring immature grains, oilseeds, and cotton and improving irrigation reserves. Locally heavier rain (50-180mm) fell throughout the Southern Plateau, keeping immature grains well supplied with moisture. Tropical showers produced highly variable rainfall (10-63mm) over southern portions of the country.

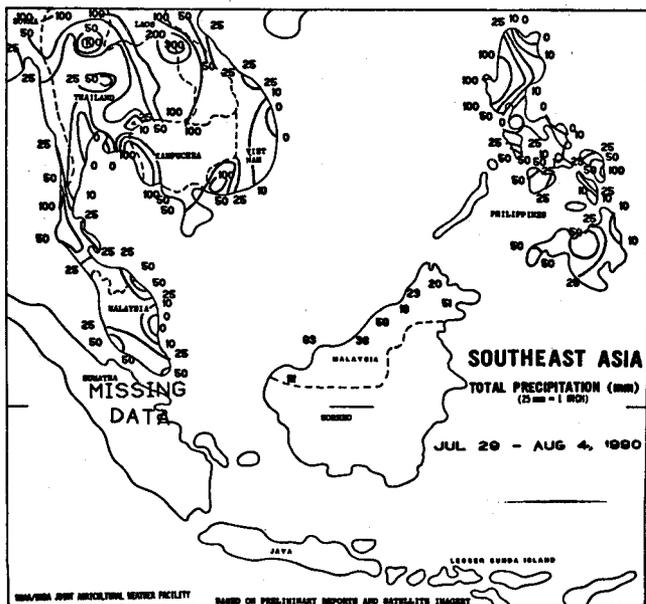
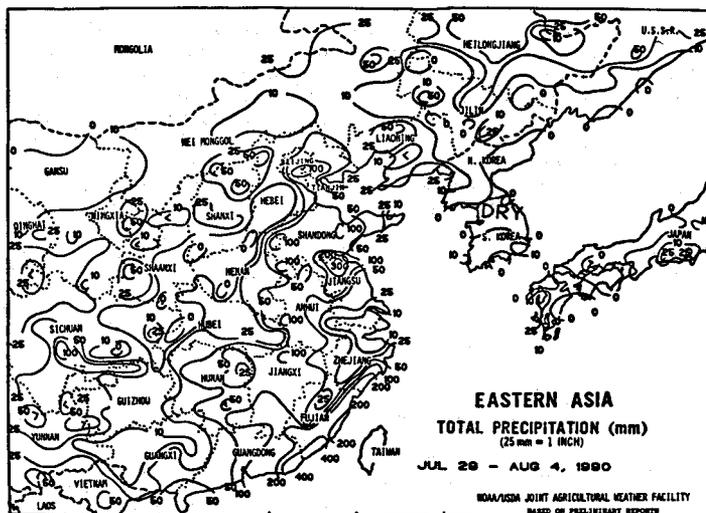


CANADA ... Rainfall tapered off from last week over the Canadian Prairies, with most spring wheat and oilseed areas receiving 1-9mm. The exception was southern Manitoba, where rainfall totaling 10-17mm benefited reproductive to filling spring wheat following a 3-week drying trend. Temperatures across the Prairies averaged near to slightly below normal, but daily high temperatures averaged in the middle to upper 20's C, stimulating growth of vegetative to filling crops.



SOUTH ASIA ... Unseasonably dry weather persisted over the primary groundnut regions of Gujarat, with accumulations totaling only 4-13mm. Seasonably warm temperatures (highs in the low to middle 30's C) maintained high evaporative losses and added further stress on vegetative crops. Minimal rain (10mm or less) also covered most of the southern interior, including the primary summer crop areas of Maharashtra which received timely rains last week. Southern India's summer crops are in or approaching reproduction, and need rain soon to prevent losses in yield potential. Elsewhere, moderate to heavy showers (50-100mm or more) covered most crop areas from eastern Rajasthan and central Madhya Pradesh eastward, maintaining ample moisture reserves for vegetative to reproductive crops but causing more flooding. Local accumulations from central Uttar Pradesh to West Bengal exceeded 200mm. Further north, drier weather covered north-central India, but widespread rain (33-63mm) boosted irrigation reserves over northern Pakistan.

EASTERN ASIA ... Tropical Storm Tasha moved onshore in eastern Guangdong on the 30th, bringing gusty winds and heavy rain (25-100mm, with scattered rain greater than 100mm) to much of southeastern China and Taiwan. The rain ended up to 4 weeks of hotter- and drier-than-normal weather over interior southeastern China, benefiting filling single crop rice and recently transplanted late crop rice. However, localized torrential rainfall (100-425mm) in sections of Taiwan, Guangdong, Fujian, and Jiangxi likely caused flooding. In the North China Plain, widespread rain (15-60mm, with scattered amounts greater than 60mm) continued normal to above-normal soil moisture levels for most spring planted crops. Mostly dry weather in central sections of the Korean Peninsula allowed soils to dry following several weeks of heavy rain and flooding. In Japan, Typhoon Vernon brushed extreme southeastern sections with scattered rain (5-30mm), although unseasonable heat (mean weekly temperatures 1-3 degrees C above normal) and dryness persisted over much of central and southern Honshu.



SOUTHEAST ASIA ... Moderate to heavy showers (50-100mm or more) covered many northern and eastern Thai rice regions as well as local areas of the central corn belt, although most of central Thailand received 11-30mm. A pocket of very heavy rain (200-323mm) in northeastern Thailand caused local flooding. Temperatures averaged 1-3 degrees C above normal, benefiting maturing corn but reducing moisture reserves for immature crops and upcoming secondary plantings. In the Philippines, rainfall tapered off from last week but amounts still totaled 50-157mm in western Luzon. Moderate rain (25-50mm or more) covered much of the central islands and western Mindanao.

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(Continued from front cover)

in the **Rockies** and **Southwest**. Hurricane Bertha churned northeastward off the **Atlantic coast**, passing within 300 miles of **North Carolina's outer banks** and generating heavy surf. Bertha slammed into **Newfoundland** at the end of the week before Tropical Storm Diana crossed the **Yucatan** and moved into the **southern Gulf** on Monday, August 6.

Hot weather returned to the Western United States as temperatures again climbed into the hundreds in the **Northwest**, while **Florida** experienced record-setting heat through the week. Unseasonably cool air remained over the **Plains** and **Corn Belt**.

(Continued from p. 9)

Sorghum was in fair to good condition during July. Lack of moisture stressed the crop in the central and southern Great Plains. Crop development lagged behind normal in Missouri, Nebraska, and Oklahoma. Near the end of the month, rain improved condition in most of the Great Plains and Delta. By July 29, 32% of the acreage was headed, 10 points behind normal. Harvest was active in Texas.

Cotton was in good to fair condition during July. Crop development lagged behind normal in Missouri and Tennessee but was near or ahead of normal in the other major producing States. Lack

of moisture stressed the crop in portions of the Delta and Southeast. Rain improved condition in the Delta and Southeast near the end of the month, but additional moisture was needed for this crop as well. By July 29, 70% of the crop was setting bolls, 5 points ahead of normal.

In early July, winter wheat harvest was nearly complete in the southern Great Plains. Harvest advanced rapidly in the central Great Plains but lagged behind normal in the Corn Belt. About mid-July, rain slowed harvest in the Corn Belt and northern Great Plains. In the Pacific Northwest, crop condition was good to fair and harvest was underway by mid-July. By the end of the month, harvest was nearly complete in most of the Corn Belt. As of July 29, harvest was 89% complete, equal to the average. Spring wheat was good to fair in July. By the end of the month, harvest was underway in all five major producing States.

(Continued from p. 14)

PASTURES AND LIVESTOCK: Pastures were in mostly good to fair condition in the Corn Belt and fair to good in the Great Plains, Southeast, and Northwest. Rain improved pastures in many areas of the county. Grasshopper problems were reported in Idaho, South Dakota, and Texas. Livestock was in excellent condition in Iowa. Cattle were in good condition in Oklahoma. Livestock markets were strong in Texas. In Nebraska, livestock was in good condition. Some cattle were being sold in the southeast part of the State, where pasture conditions were not as good.

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