

# 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

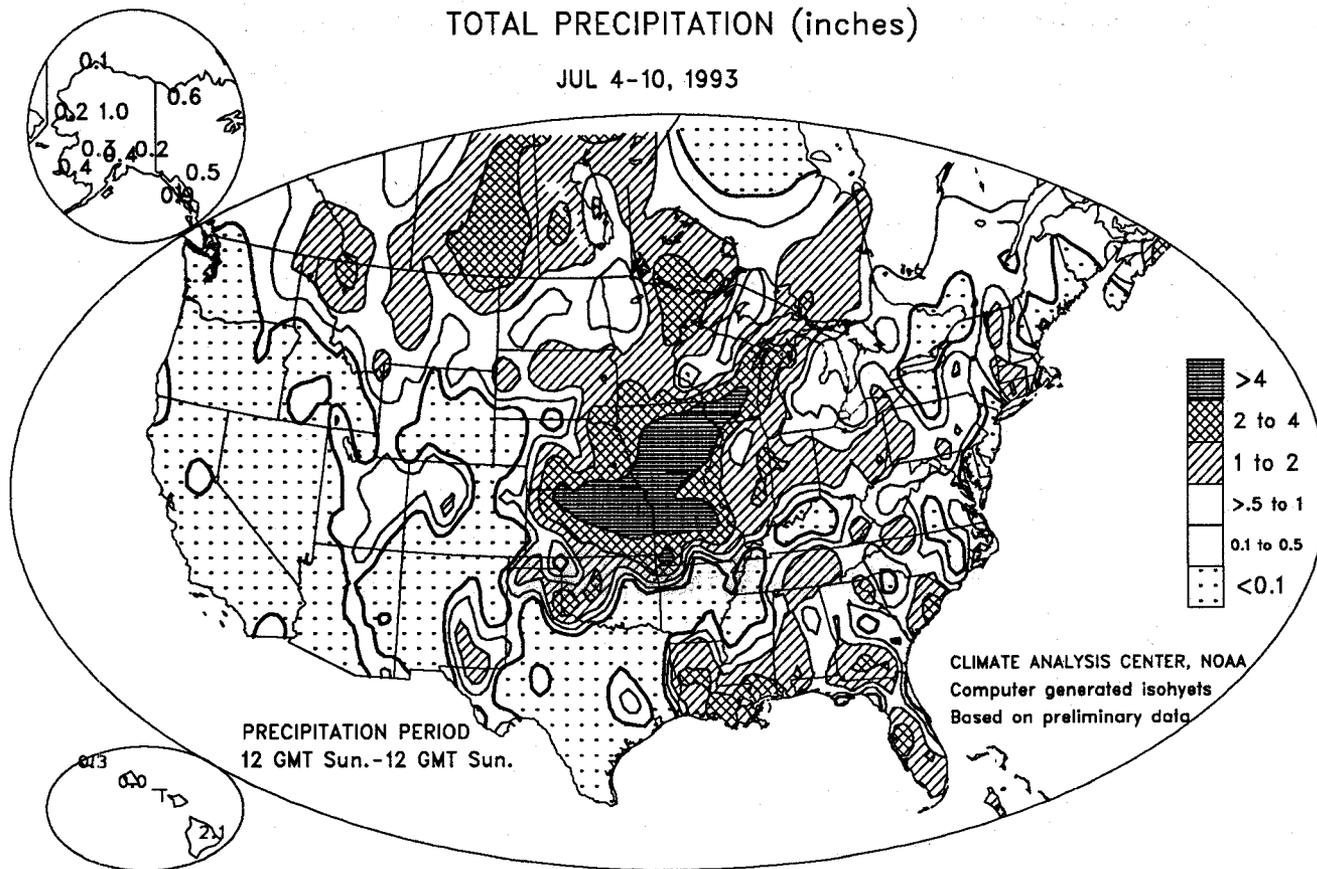
Volume 80, No. 28

Washington, D.C.

July 13, 1993

## TOTAL PRECIPITATION (inches)

JUL 4-10, 1993



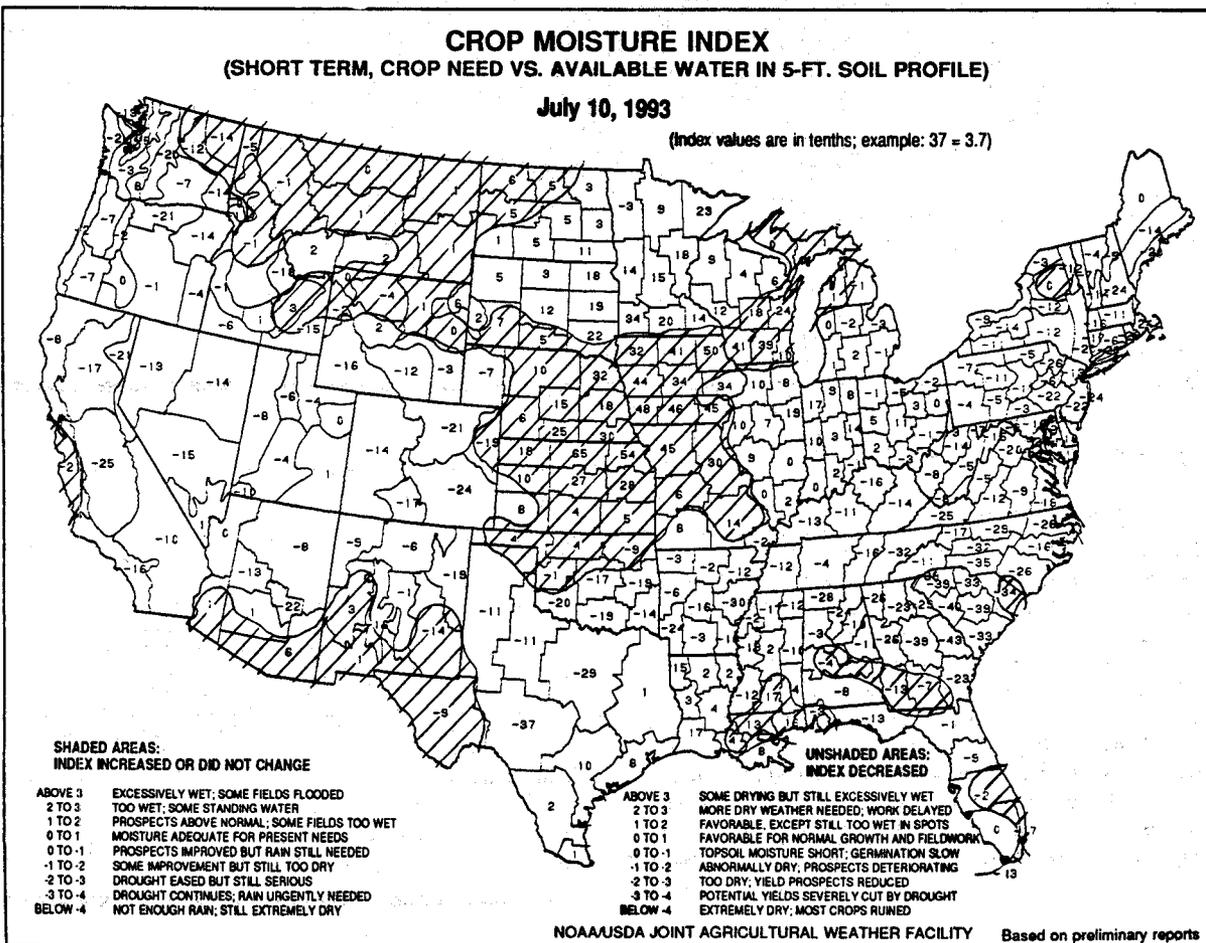
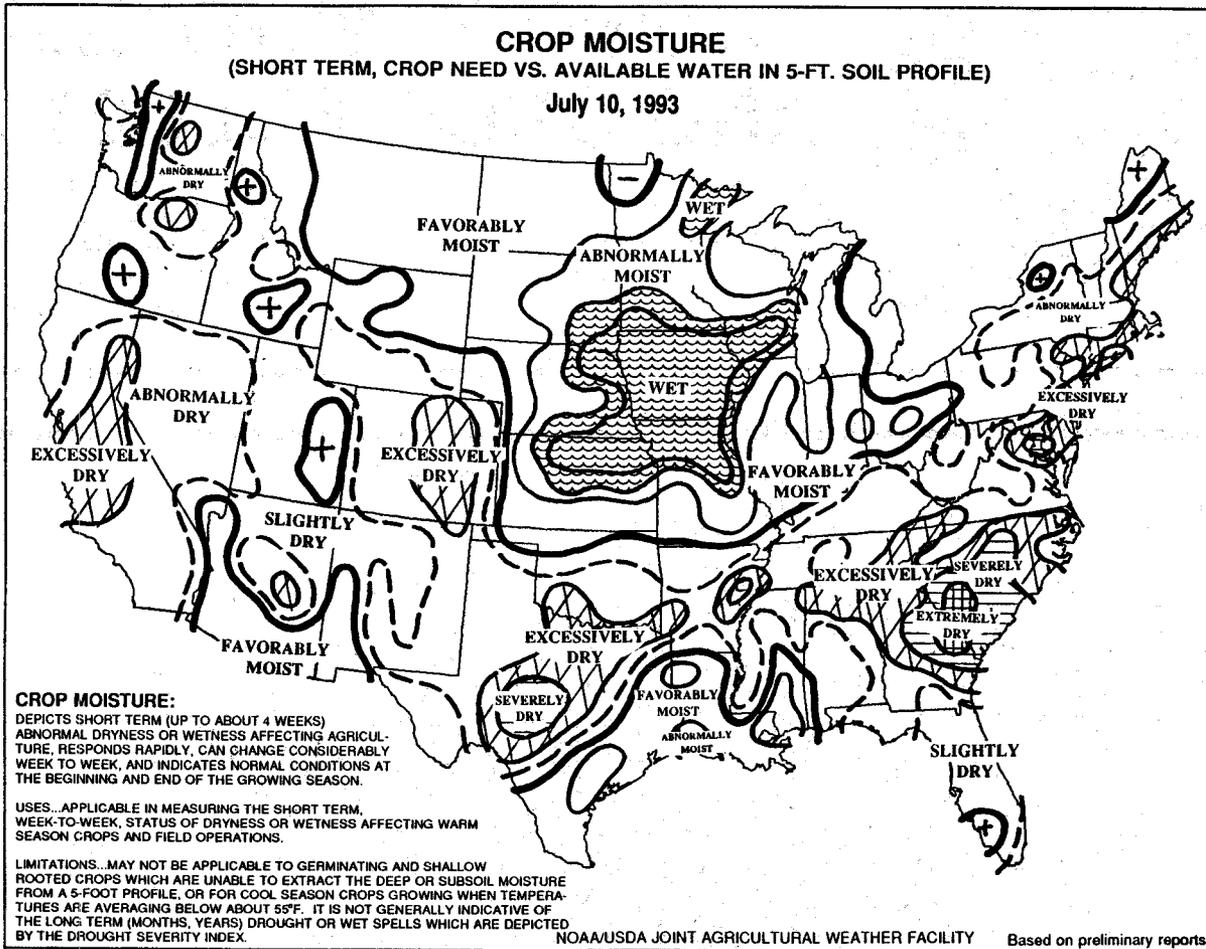
## HIGHLIGHTS

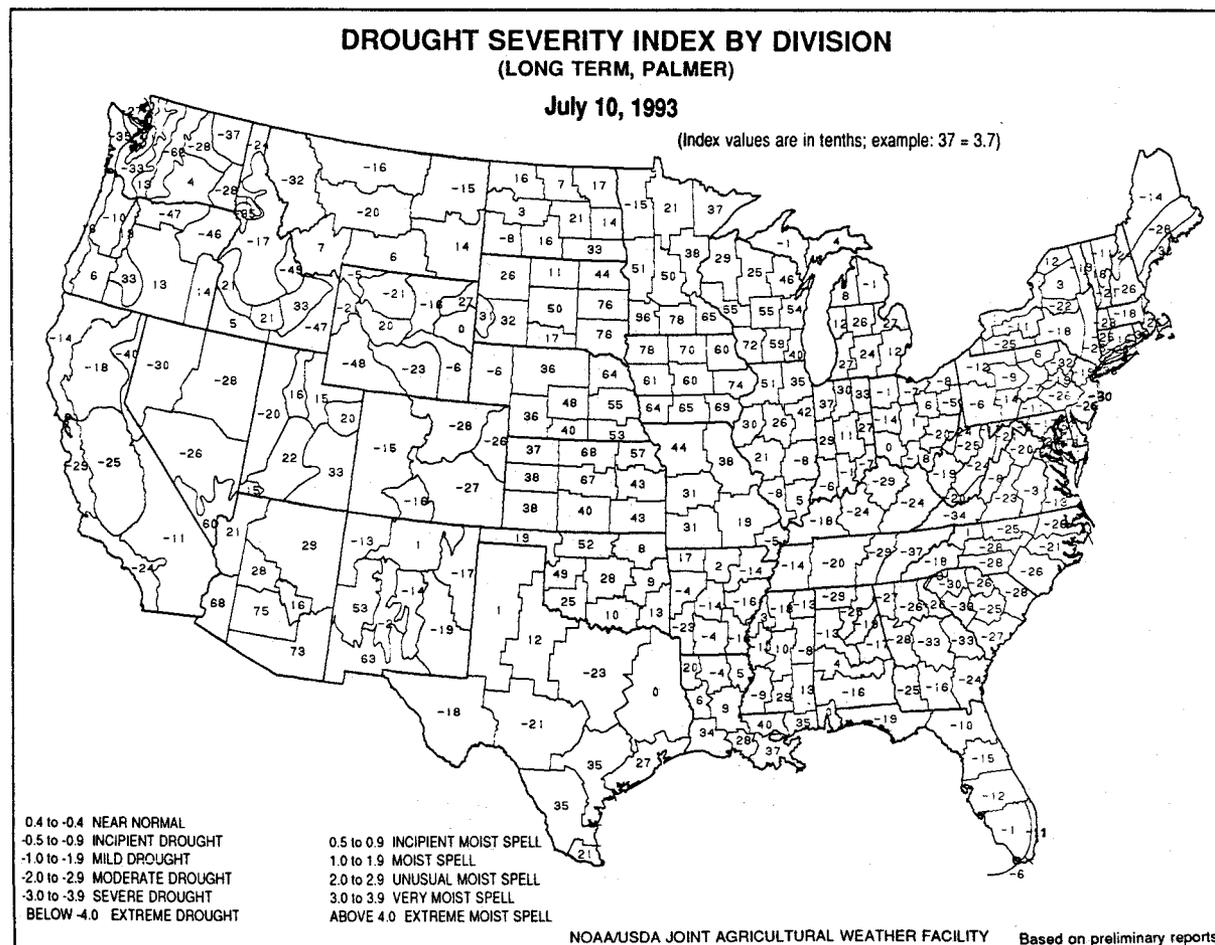
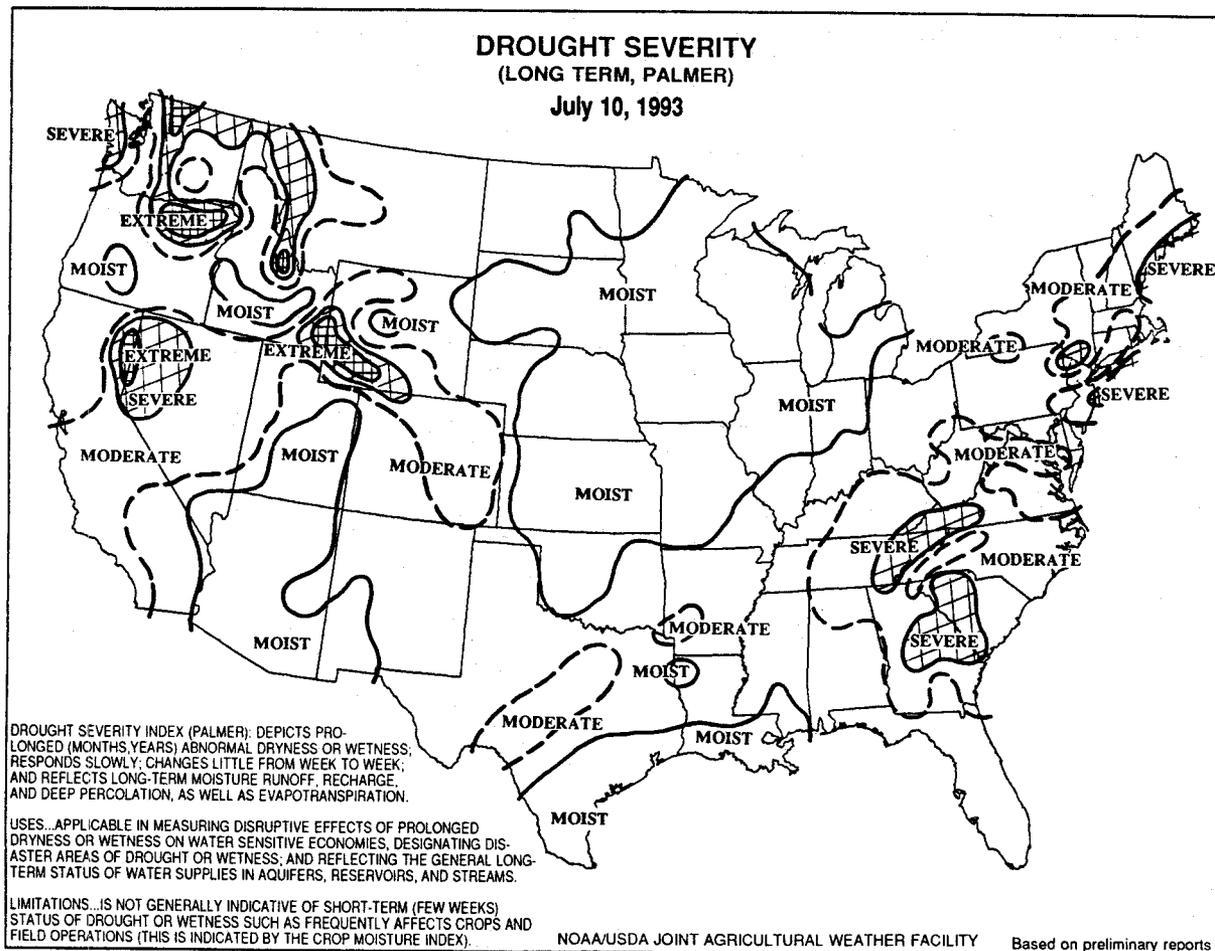
July 4 - 10, 1993

Record summer flooding intensified along the lower Missouri River and in the upper and middle Mississippi Valley. Locks remain closed on the Mississippi River on a 350-mile stretch north of St. Louis, MO, and the Missouri River is closed to traffic in most areas from Brownville, NE downstream to its confluence with the Mississippi River near St. Louis. In addition, rail traffic has been hampered in an area roughly bounded by Omaha, NE, Kansas City, MO, St. Louis, MO, Chicago, IL, and St. Paul, MN, due to both rail-bed flooding and closed river crossings. Weekly rainfall ranged from 2 to 8 inches in a broad band from central Kansas to southern Wisconsin, with local totals in excess of 10 inches in southern Iowa. In Des Moines, IA, swift rises on the Des Moines and Raccoon Rivers on Saturday night overwhelmed the city's water treatment plant,  
(Continued to back cover)

## Contents

	Page
Highlights & Total Precipitation Map .....	1
Crop Moisture Maps .....	2
Drought Severity Maps .....	3
Precipitation Needed to End Drought & Temperature Departure Map .....	4
Extreme Maximum & Minimum Temperature Maps ...	5
Growing Degree Day Table .....	6
National Weather Data for Selected Cities ....	7
<b>Historical Mississippi Floods &amp; Flood Update</b> ..	<b>10</b>
<b>June Weather in Historical Perspective</b> .....	<b>11</b>
National Agricultural Summary .....	13
Crop Progress and Condition Tables .....	14
State Summaries of Weather and Agriculture ...	16
International Weather and Crop Summary & <b>June Temperature/Precipitation Maps</b> .....	<b>22</b>
Subscription and Mailing Permit Information ..	36

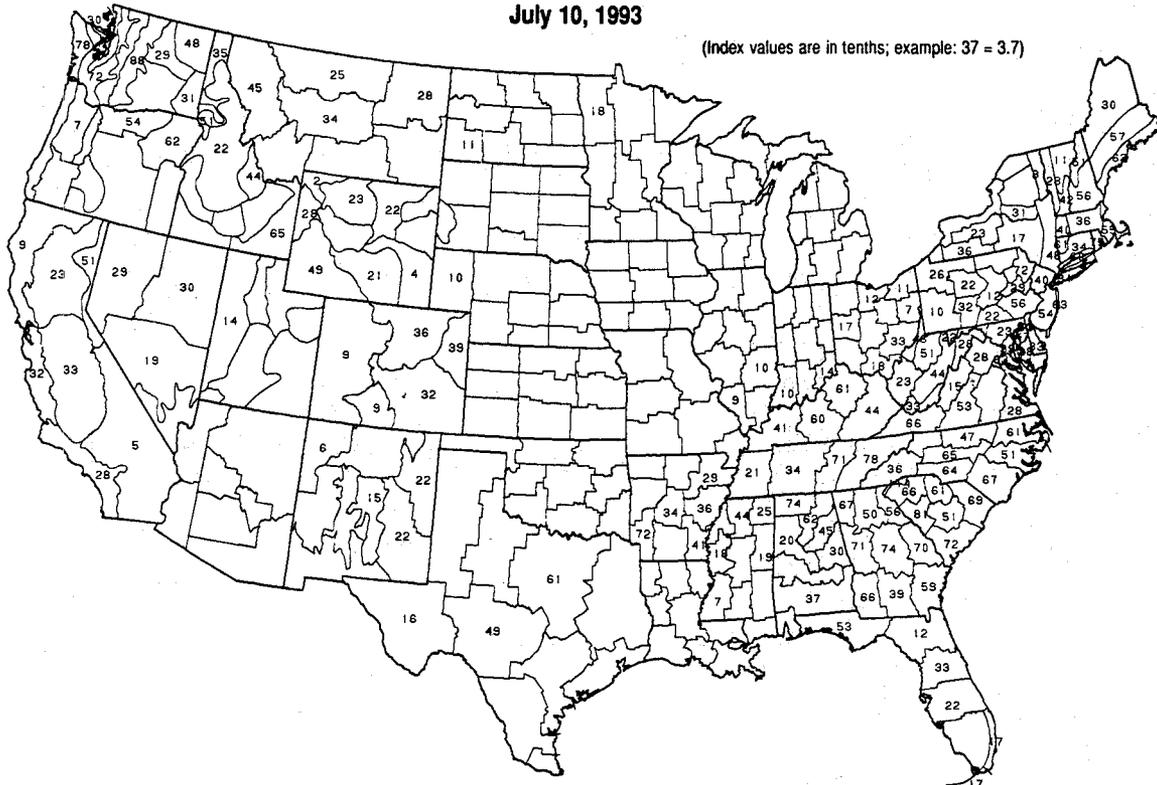




**ADDITIONAL PRECIPITATION NEEDED TO BRING INDEX NEAR ZERO  
(LONG TERM, PALMER)**

July 10, 1993

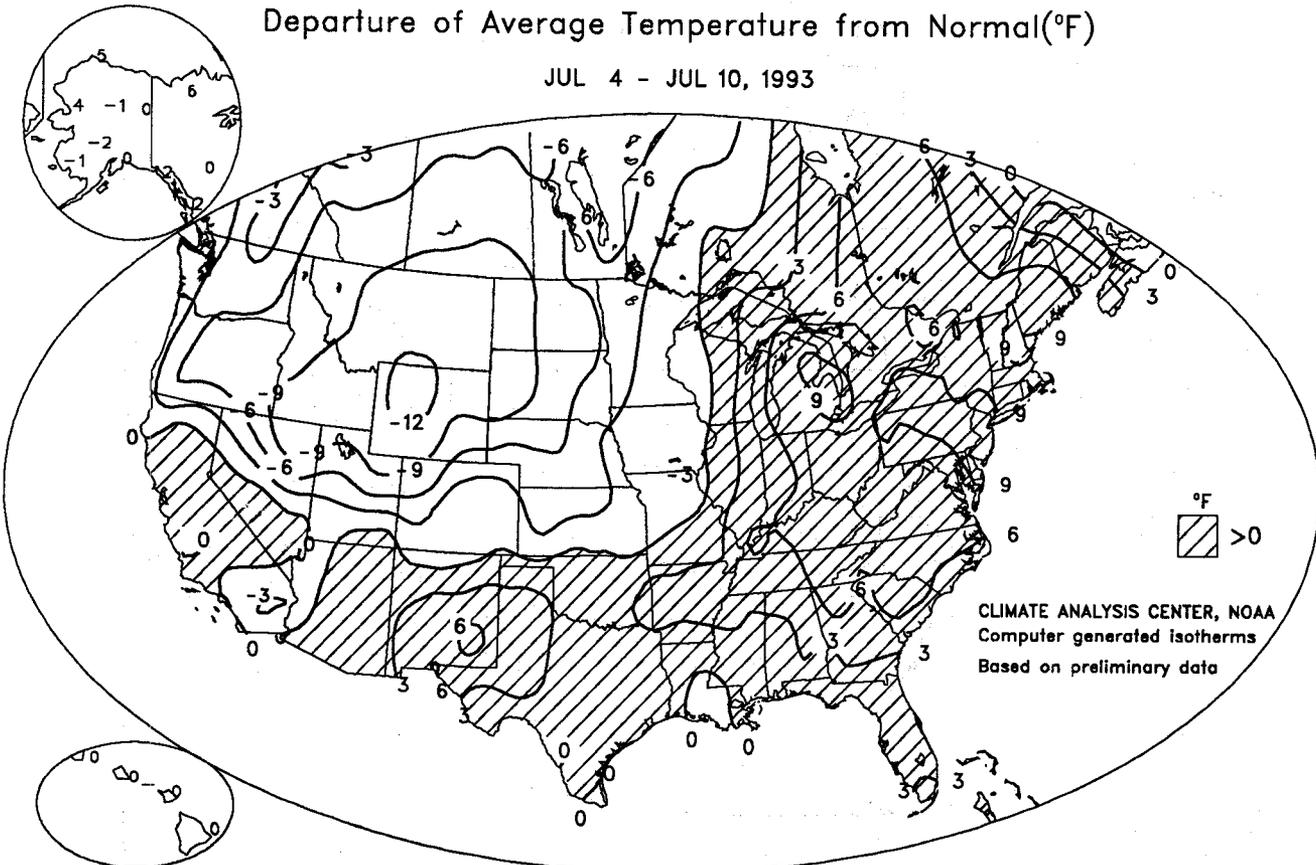
(Index values are in tenths; example: 37 = 3.7)



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

**Departure of Average Temperature from Normal(°F)**

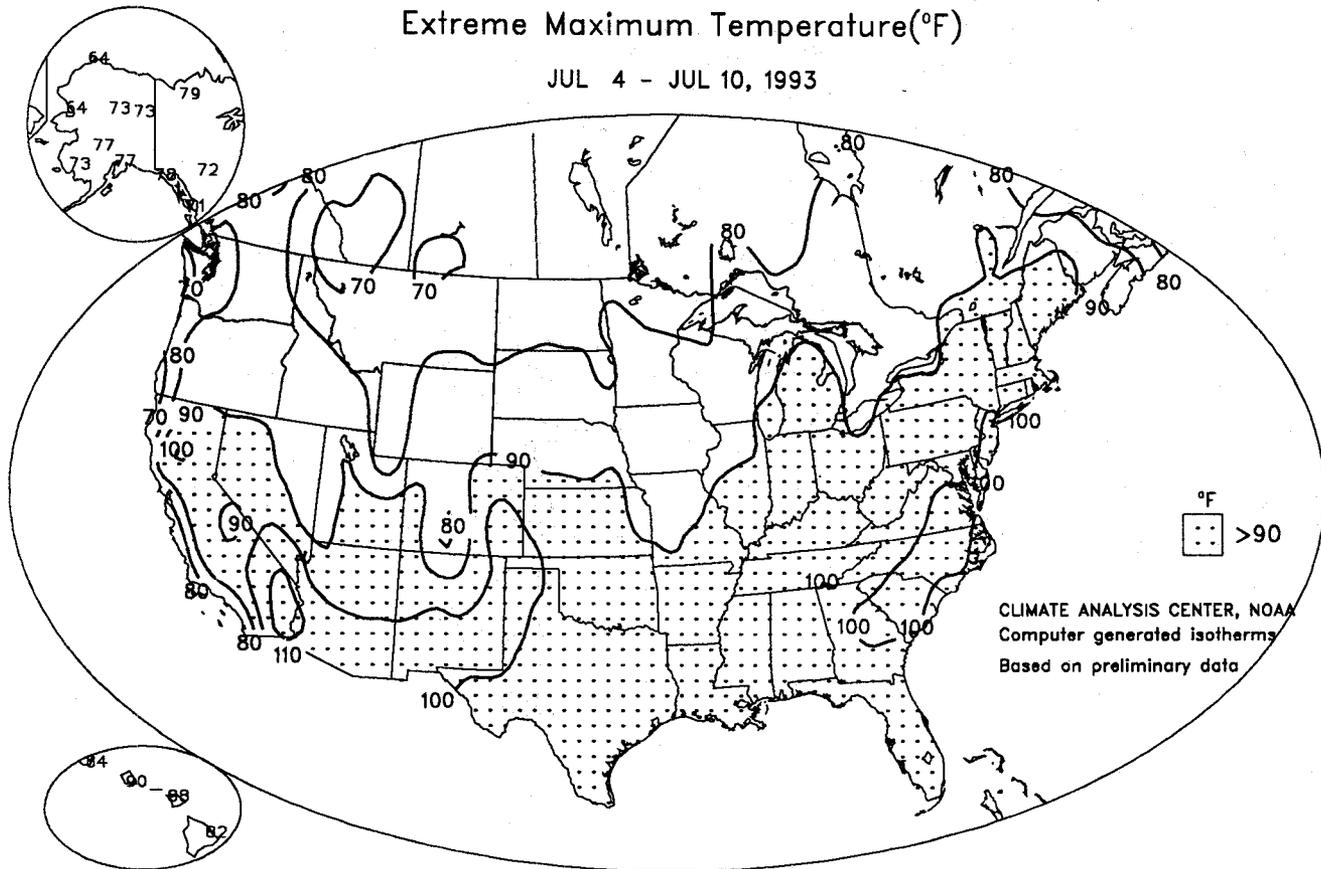
JUL 4 - JUL 10, 1993



CLIMATE ANALYSIS CENTER, NOAA  
Computer generated isotherms  
Based on preliminary data

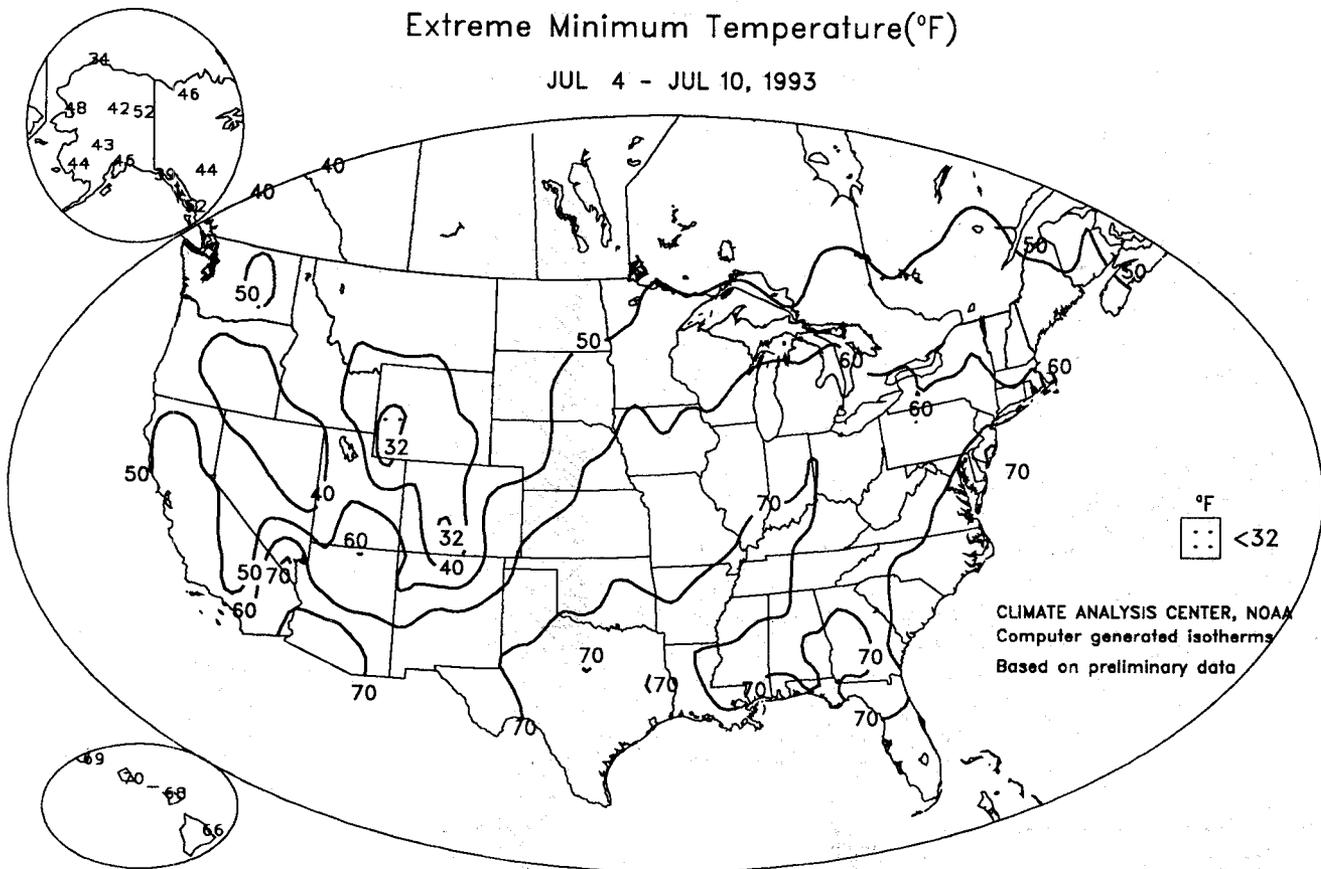
### Extreme Maximum Temperature(°F)

JUL 4 - JUL 10, 1993



### Extreme Minimum Temperature(°F)

JUL 4 - JUL 10, 1993



## CUMULATIVE GROWING DEGREE DAYS (CORN\*) April 1 - July 10, 1993

STATES AND STATIONS	TOTAL	DEP. FROM NORMAL	STATES AND STATIONS	TOTAL	DEP. FROM NORMAL	STATES AND STATIONS	TOTAL	DEP. FROM NORMAL
AL ANNISTON	1992	- 38	AL ANNISTON	1992	- 38	OK ZANESVILLE	1422	+ 65
AL BIRMINGHAM	2014	- 52	AL BIRMINGHAM	2014	- 52	OK ALTUS	2065	- 62
AL MOBILE	2225	- 189	AL MOBILE	2225	- 189	OK GAGE	1763	- 58
AL MONTGOMERY	2140	- 8	AL MONTGOMERY	2140	- 8	OK HOBART	1913	- 86
AL MUSCLE SHOALS	2006	+ 17	AL MUSCLE SHOALS	2006	+ 17	OK MCALESTER	2108	+ 40
AL OZARK	2195	- 55	AL OZARK	2195	- 55	OK PONCA CITY	1893	- 25
AL TUSCALOOSA	2101	- 53	AL TUSCALOOSA	2101	- 53	OK TULSA	1875	- 148
AZ DOUGLAS	2050	+ 173	AZ DOUGLAS	2050	+ 173	OR BAKER	868	- 34
AZ FLAGSTAFF	1128	+ 176	AZ FLAGSTAFF	1128	+ 176	OR EUGENE	956	+ 22
AZ PHOENIX	2857	+ 463	AZ PHOENIX	2857	+ 463	OR NORTH BEND	737	+ 193
AZ TUCSON	2403	+ 196	AZ TUCSON	2403	+ 196	OR FENDLETON	1142	- 7
AZ YUMA	2861	+ 385	AZ YUMA	2861	+ 385	OR REDMOND	850	- 56
AR PRESCOTT	1545	+ 233	AR PRESCOTT	1545	+ 233	OR FORTLAND	1023	+ 123
AR EL DORADO	2067	- 78	AR EL DORADO	2067	- 78	OR SALEM	1070	+ 150
AR FAYETTEVILLE	1754	- 17	AR FAYETTEVILLE	1754	- 17	OR SEXTON SUMMIT	487	- 135
AR FORT SMITH	1979	- 50	AR FORT SMITH	1979	- 50	PA ALLENTOWN	1492	+ 186
AR JONESBORO	1960	- 93	AR JONESBORO	1960	- 93	PA PHILADELPHIA	1739	+ 345
AR LITTLE ROCK	2029	- 41	AR LITTLE ROCK	2029	- 41	PA WILLIAMSPORT	1464	+ 200
AR TEXARKANA	2126	- 101	AR TEXARKANA	2126	- 101	SC BEAUFORT	2304	+ 56
CA BAKERSFIELD	2018	+ 36	CA BAKERSFIELD	2018	+ 36	SC CHARLESTON	2241	+ 59
CA BLUE CANYON	693	- 60	CA BLUE CANYON	693	- 60	SC COLUMBIA	2142	+ 24
CA DAGGETT	2253	+ 131	CA DAGGETT	2253	+ 131	SC FLORENCE	2205	+ 89
CA EUREKA	764	+ 388	CA EUREKA	764	+ 388	SD SUMNER/SHAW AFB	2107	- 16
CA FRESNO	1940	+ 183	CA FRESNO	1940	+ 183	SD ABERDEEN	1065	- 18
CA MARYSVILLE	1789	+ 86	CA MARYSVILLE	1789	+ 86	SD HURON	1072	- 137
CA MERCED	1829	+ 133	CA MERCED	1829	+ 133	SD PIERRE	1075	- 140
CA MT SHASTA	799	- 129	CA MT SHASTA	799	- 129	SD RAPID CITY	924	- 156
CA PASO ROBLES	1587	+ 165	CA PASO ROBLES	1587	+ 165	SD SIOUX FALLS	1086	- 164
CA RED BLUFF	1695	- 69	CA RED BLUFF	1695	- 69	SD WATERLOO	865	- 186
CA RIVERSIDE	1914	+ 290	CA RIVERSIDE	1914	+ 290	TN BRISTOL	1681	+ 70
CA SANTA ANA	1998	+ 483	CA SANTA ANA	1998	+ 483	TN CHATTANOOGA	1988	+ 97
CA SAN DIEGO	1684	+ 280	CA SAN DIEGO	1684	+ 280	TN CROSSVILLE	1642	+ 183
CA SACRAMENTO	1613	+ 64	CA SACRAMENTO	1613	+ 64	TN MEMPHIS	2100	- 29
CA THERMAL	2515	+ 87	CA THERMAL	2515	+ 87	TN NASHVILLE	1894	- 16
CO ALAMOSA	952	- 23	CO ALAMOSA	952	- 23	TX ABILENE	2222	- 7
CO DENVER	1241	+ 30	CO DENVER	1241	+ 30	TX AMARILLO	1736	+ 12
CO EAGLE	895	- 129	CO EAGLE	895	- 129	TX AUSTIN	2436	- 12
CO GRAND JUNCTION	1428	- 110	CO GRAND JUNCTION	1428	- 110	TX BROWNSVILLE	2792	+ 2
CO LA JUNTA	1556	- 23	CO LA JUNTA	1556	- 23	TX COLLEGE STATION	2354	- 57
DE DOVER	1580	- 23	DE DOVER	1580	- 23	TX DALHART	1640	+ 23
DE WILMINGTON	1653	+ 194	DE WILMINGTON	1653	+ 194	TX DALLAS/FT WORTH	2300	+ 40
FL DAYTONA BEACH	2332	- 117	FL DAYTONA BEACH	2332	- 117	TX GALVESTON	2504	+ 11
FL FORT MYERS	2660	+ 20	FL FORT MYERS	2660	+ 20	TX HOUSTON	2438	+ 37
FL GAINESVILLE	2237	- 188	FL GAINESVILLE	2237	- 188	TX KINGSVILLE/NAS	2747	+ 67
FL JACKSONVILLE	2270	- 123	FL JACKSONVILLE	2270	- 123	TX LAREDO	2801	+ 48
FL FORT LAUDERDALE	2927	+ 204	FL FORT LAUDERDALE	2927	+ 204	TX LUBBOCK	2069	+ 126
FL MIAMI	2900	+ 86	FL MIAMI	2900	+ 86	TX MCALLEN	2839	+ 120
FL MILTON	2282	- 28	FL MILTON	2282	- 28	TX MIDLAND	2185	+ 8
FL PENSACOLA	2325	- 118	FL PENSACOLA	2325	- 118	TX PALACIOS	2506	- 93
FL ST PETERSBURG	2611	- 131	FL ST PETERSBURG	2611	- 131	TX SAN ANTONIO	2472	- 28
FL TALLAHASSEE	2240	- 90	FL TALLAHASSEE	2240	- 90	TX VICTORIA	2513	- 7
FL TAMPA	2501	- 100	FL TAMPA	2501	- 100	TX WACO	2320	- 75
FL VERO BEACH	2521	- 34	FL VERO BEACH	2521	- 34	TX WICHITA FALLS	2066	- 98
FL W. PALM BEACH	2715	+ 20	FL W. PALM BEACH	2715	+ 20	TX WINK	2257	+ 53
GA ATHENS	2041	+ 63	GA ATHENS	2041	+ 63	UT CEDAR CITY	1237	+ 27
GA AUGUSTA	2183	+ 93	GA AUGUSTA	2183	+ 93	VT BARRÉ-MONTPELIER	960	+ 104
GA BRUNSWICK	2266	- 110	GA BRUNSWICK	2266	- 110	VT BURLINGTON	1129	+ 136
GA COLUMBUS	2206	+ 11	GA COLUMBUS	2206	+ 11	VA CHARLOTTESVILLE	1762	+ 82
GA MACON	2169	- 38	GA MACON	2169	- 38	VA HAMPTON/LANGLEY	1914	+ 173
GA SAVANNAH	2303	+ 42	GA SAVANNAH	2303	+ 42	VA LYNCHBURG	1817	+ 205
ID BOISE	1143	- 17	ID BOISE	1143	- 17	VA NORFOLK	1914	+ 151
ID BURLEY	1032	+ 16	ID BURLEY	1032	+ 16	VA RICHMOND	1843	+ 91
ID IDAHO FALLS	817	- 103	ID IDAHO FALLS	817	- 103	WA BELLINGHAM	812	+ 159
ID POCATELLO	891	- 90	ID POCATELLO	891	- 90	WA HOQUIAM	719	+ 152
IL BELLEVILLE	1693	- 19	IL BELLEVILLE	1693	- 19	WA SEATTLE-TACOMA	882	+ 123
IL CHICAGO/MIDWAY	1335	- 15	IL CHICAGO/MIDWAY	1335	- 15	WA SPOKANE	913	+ 21
IL DECATUR	1543	- 66	IL DECATUR	1543	- 66	WA TACOMA	924	+ 89
IL PEORIA	1532	+ 94	IL PEORIA	1532	+ 94	WA WALLA WALLA	1218	+ 23
IL ROCKFORD	1324	+ 53	IL ROCKFORD	1324	+ 53	WA WENATCHEE	1274	+ 3
IL SPRINGFIELD	1601	+ 24	IL SPRINGFIELD	1601	+ 24	WV YAKIMA	1208	+ 35
IL QUINCY	1520	- 18	IL QUINCY	1520	- 18	WV HUNTINGTON	1699	+ 191
IN INDIANAPOLIS	1537	+ 35	IN INDIANAPOLIS	1537	+ 35	WV MARTINSBURG	1496	+ 34
IN SOUTH BEND	1319	+ 50	IN SOUTH BEND	1319	+ 50	WV MORGANTOWN	1511	+ 84
IN TERRE HAUTE	1600	+ 59	IN TERRE HAUTE	1600	+ 59	WI EAU CLAIRE	980	- 126
IA DES MOINES	1331	- 169	IA DES MOINES	1331	- 169	WI GREEN BAY	1000	0
IA MASON CITY	1089	- 206	IA MASON CITY	1089	- 206	WI LACROSSE	1140	- 100
IA OTTUMWA	1426	- 50	IA OTTUMWA	1426	- 50	WI MADISON	1226	+ 17
KS CHANUTE	1638	- 132	KS CHANUTE	1638	- 132	WI WAUSAU	897	- 104
KS DODGE CITY	1534	- 110	KS DODGE CITY	1534	- 110	WY CASPER	949	- 21
KS GARDEN CITY	1483	- 137	KS GARDEN CITY	1483	- 137	WY LANDER	864	- 77
KS GOODLAND	1264	- 74	KS GOODLAND	1264	- 74	WY SHERIDAN	873	- 58
KS MEDICINE LODGE	1753	- 92	KS MEDICINE LODGE	1753	- 92	WY WORLAND	1081	- 5
KS RUSSELL	1512	- 100	KS RUSSELL	1512	- 100			
MO BAKERSFIELD	2018	+ 36	MO BAKERSFIELD	2018	+ 36			
MO BLUE CANYON	693	- 60	MO BLUE CANYON	693	- 60			
MO DAGGETT	2253	+ 131	MO DAGGETT	2253	+ 131			
MO EUREKA	764	+ 388	MO EUREKA	764	+ 388			
MO FRESNO	1940	+ 183	MO FRESNO	1940	+ 183			
MO MARYSVILLE	1789	+ 86	MO MARYSVILLE	1789	+ 86			
MO MERCED	1829	+ 133	MO MERCED	1829	+ 133			
MO MT SHASTA	799	- 129	MO MT SHASTA	799	- 129			
MO PASO ROBLES	1587	+ 165	MO PASO ROBLES	1587	+ 165			
MO RED BLUFF	1695	- 69	MO RED BLUFF	1695	- 69			
MO RIVERSIDE	1914	+ 290	MO RIVERSIDE	1914	+ 290			
MO SANTA ANA	1998	+ 483	MO SANTA ANA	1998	+ 483			
MO SAN DIEGO	1684	+ 280	MO SAN DIEGO	1684	+ 280			
MO SACRAMENTO	1613	+ 64	MO SACRAMENTO	1613	+ 64			
MO THERMAL	2515	+ 87	MO THERMAL	2515	+ 87			
MO ALAMOSA	952	- 23	MO ALAMOSA	952	- 23			
MO DENVER	1241	+ 30	MO DENVER	1241	+ 30			
MO EAGLE	895	- 129	MO EAGLE	895	- 129			
MO GRAND JUNCTION	1428	- 110	MO GRAND JUNCTION	1428	- 110			
MO LA JUNTA	1556	- 23	MO LA JUNTA	1556	- 23			
MO DOVER	1580	- 23	MO DOVER	1580	- 23			
MO WILMINGTON	1653	+ 194	MO WILMINGTON	1653	+ 194			
MO DAYTONA BEACH	2332	- 117	MO DAYTONA BEACH	2332	- 117			
MO FORT MYERS	2660	+ 20	MO FORT MYERS	2660	+ 20			
MO GAINESVILLE	2237	- 188	MO GAINESVILLE	2237	- 188			
MO JACKSONVILLE	2270	- 123	MO JACKSONVILLE	2270	- 123			
MO FORT LAUDERDALE	2927	+ 204	MO FORT LAUDERDALE	2927	+ 204			
MO MIAMI	2900	+ 86	MO MIAMI	2900	+ 86			
MO MILTON	2282	- 28	MO MILTON	2282	- 28			
MO PENSACOLA	2325	- 118	MO PENSACOLA	2325	- 118			
MO ST PETERSBURG	2611	- 131	MO ST PETERSBURG	2611	- 131			
MO TALLAHASSEE	2240	- 90	MO TALLAHASSEE	2240	- 90			
MO TAMPA	2501	- 100	MO TAMPA	2501	- 100			
MO VERO BEACH	2521	- 34	MO VERO BEACH	2521	- 34			
MO W. PALM BEACH	2715	+ 20	MO W. PALM BEACH	2715	+ 20			
MO ATHENS	2041	+ 63	MO ATHENS	2041	+ 63			
MO AUGUSTA	2183	+ 93	MO AUGUSTA	2183	+ 93			
MO BRUNSWICK	2266	- 110	MO BRUNSWICK	2266	- 110			
MO COLUMBUS	2206	+ 11	MO COLUMBUS	2206	+ 11			
MO MACON	2169	- 38	MO MACON	2169	- 38			
MO SAVANNAH	2303	+ 42	MO SAVANNAH	2303	+ 42			
MO BOISE	1143	- 17	MO BOISE	1143	- 17			
MO BURLEY	1032	+ 16	MO BURLEY	1032	+ 16			
MO IDAHO FALLS	817	- 103	MO IDAHO FALLS	817	- 103			
MO POCATELLO	891	- 90	MO POCATELLO	891	- 90			
MO BELLEVILLE	1693	- 19	MO BELLEVILLE	1693	- 19			
MO CHICAGO/MIDWAY	1335	- 15	MO CHICAGO/MIDWAY	1335	- 15			
MO DECATUR	1543	- 66	MO DECATUR	1543	- 66			
MO PEORIA	1532	+ 94	MO PEORIA	1532	+ 94			
MO ROCKFORD	1324	+ 53	MO ROCKFORD	1324	+ 53			
MO SPRINGFIELD	1601	+ 24	MO SPRINGFIELD	1601	+ 24			
MO QUINCY	1520	- 18	MO QUINCY	1520	- 18			
MO INDIANAPOLIS	1537	+ 35	MO INDIANAPOLIS	1537	+ 35			
MO SOUTH BEND	1319	+ 50	MO SOUTH BEND	1319	+ 50			
MO TERRE HAUTE	1600	+ 59	MO TERRE HAUTE	1600	+ 59			
MO DES MOINES	1331	- 169	MO DES MOINES	1331	- 169			
MO MASON CITY	1089	- 206	MO MASON CITY	1089	- 206			
MO OTTUMWA	1426	- 50	MO OTTUMWA	1426	- 50			
MO CHANUTE	1638	- 132	MO CHANUTE	1638	- 132			
MO DODGE CITY	1534	- 110	MO DODGE CITY	1534				

# National Weather Data for Selected Cities

Weather Data for the Week Ending July 10, 1993

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
AL BIRMINGHAM	95	71	99	69	83	4	.7	-.5	.4	2.1	39	21.7	70	89	45	7	0	0	0	0	
MOBILE	91	73	95	72	82	0	.5	-.9	.4	3.8	53	36.8	109	93	61	5	0	0	0	0	
MONTGOMERY	96	71	100	70	84	4	2.0	-.7	1.0	4.9	71	27.1	85	91	49	7	0	0	0	0	
AK ANCHORAGE	67	51	77	46	59	1	.4	.0	.3	.5	33	4.2	79	87	52	0	0	0	0	0	
BARROW	50	38	64	34	44	5	1.1	-.1	.0	.5	98	1.4	110	95	73	0	0	0	0	0	
FAIRBANKS	71	50	76	43	60	-3	1.1	-.3	.0	1.3	69	4.9	118	84	42	0	0	0	0	0	
JUNEAU	67	50	78	48	58	3	1.1	-.8	.1	3.7	85	27.5	124	92	54	0	0	0	0	0	
KODIAK	65	48	78	42	57	3	1.1	-.8	.1	4.0	67	36.0	109	90	54	0	0	0	0	0	
NOME	57	49	62	40	53	2	.8	-.3	.4	1.2	71	5.9	119	93	67	0	0	0	0	0	
AZ PHOENIX	105	82	109	77	94	1	.0	-.2	.0	.0	0	0	120	160	63	3	0	0	0	0	
PRESCOTT	89	61	93	57	75	2	.0	-.6	.0	.0	3	8.7	296	64	18	7	0	0	0	0	
TUCSON	103	75	108	73	89	2	.2	-.3	.0	.1	9	12.0	160	63	26	3	0	0	0	0	
YUMA	107	81	112	78	94	1	.0	-.3	.2	.2	24	7.6	210	61	23	7	0	0	0	0	
AR FORT SMITH	95	75	98	70	85	4	.0	-.0	.0	.0	0	3.3	324	60	21	7	0	0	0	0	
LITTLE ROCK	95	75	98	74	85	4	.0	-.7	.0	5.0	115	26.7	121	76	45	7	0	0	0	0	
CA BAKERSFIELD	100	68	102	66	84	1	.0	.0	.0	2.0	38	23.5	89	81	42	7	0	0	0	0	
EUREKA	62	51	64	49	57	0	.0	.0	.0	.5	436	6.6	172	49	18	7	0	0	0	0	
FRESNO	99	67	101	64	83	2	.0	.0	.0	1.2	222	29.4	141	86	56	0	0	0	0	0	
LOS ANGELES	75	65	78	64	70	2	.0	.0	.0	1.6	>1000	11.5	165	61	19	7	0	0	0	0	
REDDING	100	68	102	64	84	3	.0	.0	.0	.7	>1000	18.5	238	86	59	0	0	0	0	0	
SACRAMENTO	93	57	96	54	75	-1	.0	.0	.0	.0	105	35.3	187	59	15	7	0	0	0	0	
SAN DIEGO	74	66	76	64	70	0	.0	.0	.0	1.3	833	19.1	178	87	32	6	0	0	0	0	
SAN FRANCISCO	74	55	80	53	64	2	.0	.0	.0	.4	433	15.5	250	81	60	0	0	0	0	0	
CO DENVER	88	54	96	47	71	-2	.0	-.4	.0	.0	133	19.4	158	87	45	0	0	0	0	0	
GRAND JUNCTION	90	57	97	44	73	-6	.0	-.2	.0	1.7	68	6.9	78	75	19	4	0	0	0	0	
PUEBLO	93	55	101	51	74	-2	.0	-.4	.0	.0	3	7.5	147	64	14	4	0	0	0	0	
CT BRIDGEPORT	92	72	96	67	82	9	.0	-.9	.0	1.5	83	7.2	135	75	18	6	0	0	0	0	
HARTFORD	93	67	99	62	80	7	2.1	1.4	1.5	1.7	37	17.7	79	75	40	5	0	0	0	0	
DC WASHINGTON	98	77	100	72	87	8	.0	-.8	.1	5.0	104	23.8	103	92	40	5	0	0	3	1	
FL APALACHICOLA	91	72	94	69	82	0	.1	-.1	.1	2.4	54	21.4	110	87	44	7	0	0	2	0	
DAYTONA BEACH	90	72	94	69	81	1	.1	-.1	.1	2.2	33	22.1	92	87	44	6	0	0	1	0	
JACKSONVILLE	95	72	96	68	84	3	.2	-.1	.2	3.0	30	16.2	73	95	59	3	0	0	1	0	
KEY WEST	91	81	92	77	86	2	.1	-.7	.1	1.8	29	17.7	104	76	63	7	0	0	4	0	
MIAMI	92	78	93	74	85	3	1.0	-.4	.8	4.6	41	23.1	86	77	54	7	0	0	3	1	
ORLANDO	94	74	96	71	84	2	1.1	-.6	.6	5.9	60	22.6	96	88	53	7	0	0	4	1	
TALLAHASSEE	95	70	96	69	82	1	2.6	.6	1.2	5.8	59	29.0	83	92	48	7	0	0	4	2	
TAMPA	93	73	96	71	83	1	1.2	-.2	1.2	4.5	60	18.5	94	87	55	6	0	0	2	1	
WEST PALM BEACH	90	76	91	73	83	1	.9	-.5	.9	3.9	39	29.7	106	85	62	4	0	0	1	1	
GA ATLANTA	96	74	99	73	85	7	1.3	.1	1.3	7.4	143	29.1	100	77	41	7	0	0	1	1	
AUGUSTA	100	71	102	68	86	5	.1	-.9	.1	1.6	30	21.2	83	88	39	7	0	0	1	0	
MACON	96	73	100	71	85	4	.0	-.9	.0	4.3	88	28.9	111	89	45	7	0	0	2	0	
SAVANNAH	98	74	100	72	86	5	.0	-.4	.0	3.1	41	24.5	97	85	42	7	0	0	1	0	
HI HILO	82	68	83	66	75	0	1.4	-.6	.6	8.8	97	42.2	62	90	68	0	0	0	5	1	
HONOLULU	88	72	90	70	80	0	.0	-.1	.0	.1	17	1.7	15	71	45	1	0	0	0	0	
KAHULUI	86	71	88	68	79	0	.0	-.1	.0	.0	5	5.4	42	69	52	0	0	0	1	0	
LIHUE	84	72	84	69	78	-1	.1	-.4	.1	.6	27	6.8	30	79	62	0	0	0	1	0	
ID BOISE	80	49	88	44	64	-8	.1	.0	.1	2.2	233	10.3	145	92	22	0	0	0	1	0	
LEWISTON	80	55	84	53	67	-6	.0	-.2	.0	1.9	124	9.2	128	70	25	0	0	0	0	0	
POCATELLO	75	42	85	38	58	-11	.1	-.1	.1	3.2	254	12.7	181	85	25	0	0	0	1	0	
IL CHICAGO	87	70	90	66	78	6	.2	-.6	.2	10.1	206	25.7	147	89	54	3	0	0	2	0	
MOLINE	83	68	87	65	76	1	2.1	1.0	1.0	15.4	263	32.3	163	93	67	0	0	0	5	2	
PEORIA	85	70	90	65	78	2	1.2	.2	1.0	8.0	147	25.4	136	91	56	1	0	0	3	1	
QUINCY	84	69	89	65	76	0	1.4	.4	.8	9.0	169	19.7	100	88	62	0	0	0	3	1	
ROCKFORD	84	68	87	64	76	3	.9	-.1	.7	13.7	233	30.1	166	95	63	0	0	0	2	1	
SPRINGFIELD	86	71	92	67	79	2	.8	.0	.6	11.2	245	25.8	141	83	59	2	0	0	3	1	
IN EVANSVILLE	94	75	99	72	85	6	.1	-.9	.1	4.8	93	22.8	90	86	50	6	0	0	1	0	
FORT WAYNE	89	73	93	70	81	7	.7	-.1	.6	7.9	169	26.9	148	94	62	3	0	0	3	1	
INDIANAPOLIS	89	70	91	66	80	4	.1	-1.0	.0	6.5	132	22.4	106	91	57	5	0	0	3	0	
SOUTH BEND	87	71	91	67	79	7	.2	-.7	.1	11.5	213	25.6	130	88	57	3	0	0	3	0	
IA DES MOINES	81	65	85	61	73	-2	3.6	2.7	1.5	11.3	191	28.1	158	94	58	0	0	0	6	4	
STOUC CITY	82	64	85	59	73	-3	3.8	3.1	2.9	8.5	178	18.9	135	91	50	0	0	0	3	2	
WATERLOO	81	66	85	63	74	1	5.1	4.0	3.1	15.2	250	30.8	175	98	68	0	0	0	5	3	
KS CONCORDIA	85	66	91	63	75	-3	7.3	6.5	2.3	15.9	279	26.6	168	97	60	2	0	0	5	5	
DODGE CITY	91	66	97	63	78	-1	.4	-.4	.2	3.6	87	14.0	118	85	40	4	0	0	3	0	
GOODLAND	86	58	95	56	72	-3	1.4	.7	1.0	3.5	84	9.0	83	86	39	2	0	0	4	1	
TOPEKA	83	68	89	64	76	-2	3.9	3.0	1.6	7.2	105	25.6	136	94	65	0	0	0	6	3	
WICHITA	88	71	94	64	80	0	.3	-.6	.2	4.8	70	20.4	109	85	52	3	0	0	3	0	
KY BOWLING GREEN	95	71	98	68	83	6	1.6	.5	1.6	4.6	79	19.7	70	91	45	7	0	0	1	0	
LEXINGTON	94	72	96	68	83	8	.0	-1.1	.0	5.5	104	21.8	91	83	46	7	0	0	0	0	
LOUISVILLE	95	74	96	73	84	8	.3	-.7	.3	4.3	88	23.6	96	81	47	7	0	0	1	0	
LA BATON ROUGE	90	72	93	69	81	-1	1.6	.2	1.4	4.6	71	39.9	125	99	59	5	0	0	4	1	
LAKE CHARLES	89	76	91	74	83	1	.6	-.6	.4	10.4	157	41.0	152	91	63	4	0	0	3	0	
NEW ORLEANS	90	73	94	70	82	0	.5	-.9	.2	5.5	70	33.7	103	97	65	4	0	0	4	0	
SHREVEPORT	93	74	94	72	83	2	.1	-.8	.1	15.9	287	38.7	140	95	56	7	0	0	1	0	

Based on 1961-90 normals.

Weather Data for the Week Ending July 10, 1993

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		
ME CARIBOU	83	60	90	51	72	7	.2	-.6	.2	5.1	123	18.1	110	81	40		1	0	1	0		
ME PORTLAND	89	66	98	59	77	10	.3	-.4	.3	3.3	75	23.1	102	89	43		4	0	1	0		
MD BALTIMORE	98	73	100	68	85	9	T	-.8	T	2.8	58	23.8	112	80	40		7	0	0	0		
MD SALISBURY	98	74	102	70	86	10	.0	-.9	.0	2.4	49	25.9	113	98	55		7	0	0	0		
MA BOSTON	91	69	99	65	80	8	.6	-.1	.6	2.6	66	23.3	107	79	40		5	0	1	0		
MA CHATHAM	80	65	87	59	72	6	T	-.7	T	2.6	61	20.6	88	93	57		0	0	0	0		
MI ALPENA	88	66	93	60	77	10	.4	-.2	.4	4.3	109	12.5	89	93	48		2	0	2	0		
MI DETROIT	90	71	94	69	81	9	.4	-.4	.4	6.6	141	18.5	111	91	50		2	0	3	0		
MI FLINT	90	69	94	65	79	9	.3	-.4	.3	5.5	134	17.0	117	87	53		3	0	3	0		
MI GRAND RAPIDS	88	69	93	66	78	7	.2	-.6	.2	6.4	135	21.2	124	90	56		3	0	3	0		
MI HOUGHTON LAKE	86	68	91	62	77	10	.4	-.1	.4	5.3	137	14.0	105	88	54		2	0	3	0		
MI LANSING	88	69	93	65	78	8	.6	.0	.6	7.1	169	19.4	131	95	56		2	0	3	0		
MI MARQUETTE	81	60	85	57	70	6	.3	-.3	.3	2.8	64	15.6	93	87	43		0	0	2	0		
MI MUSKEGON	84	68	91	66	76	6	.3	-.1	.3	4.9	165	17.1	115	89	57		2	0	3	0		
MI SAULT ST. MARIE	79	60	88	52	69	7	1.9	1.3	.9	5.7	142	16.8	108	96	50		0	0	0	0		
MN ALEXANDRIA	75	59	83	53	67	-4	1.9	1.2	1.1	7.9	153	17.8	134	92	55		0	0	6	0		
MN DULUTH	74	56	78	53	65	0	3.3	2.5	1.3	11.8	236	21.6	152	94	51		0	0	2	0		
MN INT'L FALLS	73	57	79	53	65	-1	2.4	1.6	2.2	5.5	105	11.1	94	91	46		0	0	4	0		
MN MINNEAPOLIS	78	63	85	59	71	-3	1.4	.6	.4	10.2	195	19.1	129	92	53		0	0	6	0		
MS GREENWOOD	78	62	81	58	70	0	.4	-.6	.2	9.5	188	23.3	161	95	61		0	0	4	0		
MS JACKSON	96	74	98	71	85	4	.0	-1.0	.0	1.3	23	25.4	81	93	44		7	0	0	0		
MS MERIDIAN	92	73	95	70	82	1	.6	-.3	.3	4.3	98	24.7	78	100	51		6	0	3	0		
MS MO CAPE GIRARDEAU	94	72	95	70	83	2	T	-1.1	T	3.6	67	32.5	100	93	52		7	0	2	0		
MS COLUMBIA	95	74	97	70	84	5	T	-.8	T	4.9	107	25.6	100	81	43		7	0	1	0		
MS KANSAS CITY	85	69	89	65	77	1	5.3	4.4	3.2	13.5	262	30.4	152	92	67		0	0	4	0		
MS KANSAS CITY	83	68	89	66	76	-2	4.4	3.3	1.5	11.9	192	30.2	159	94	65		0	0	7	0		
MS SAINT LOUIS	90	73	94	68	82	2	1.1	.2	.5	8.4	168	28.1	141	81	52		4	0	4	0		
MS SPRINGFIELD	87	70	89	65	78	1	1.7	1.0	1.3	11.1	178	26.7	119	85	58		0	0	3	0		
MT BILLINGS	70	51	81	48	61	-11	.3	.1	.1	5.0	211	8.6	91	91	43		0	0	6	0		
MT GLASGOW	67	53	73	51	60	-10	1.1	.7	.9	3.0	110	5.3	85	92	59		0	0	6	0		
MT GREAT FALLS	65	47	69	41	56	-11	1.4	1.1	.6	4.5	159	13.4	143	93	50		0	0	6	0		
MT HAVRE	67	50	72	47	59	-10	1.5	1.1	1.3	1.8	82	4.6	72	92	48		0	0	3	0		
MT HELENA	68	48	72	45	58	-10	1.1	.9	.6	5.0	222	10.7	157	89	47		0	0	5	0		
MT KALISPELL	63	49	68	46	56	-7	2.4	2.1	1.2	6.6	252	13.7	148	94	60		0	0	6	0		
MT MILES CITY	70	52	80	49	61	-12	.4	-.1	.2	6.9	202	11.8	137	96	54		0	0	4	0		
MT MISSOULA	69	47	72	42	58	-8	.4	.2	.2	2.4	114	8.5	107	96	50		0	0	6	0		
NE GRAND ISLAND	83	63	87	60	73	-3	1.8	1.1	.9	7.8	158	16.4	114	94	58		0	0	4	0		
NE LINCOLN	86	66	90	62	76	-2	.1	-.7	.1	5.9	119	16.4	110	98	55		1	0	1	0		
NE NORFOLK	83	64	88	58	73	-2	4.0	3.2	3.3	11.3	200	21.6	146	87	49		0	0	4	0		
NE NORTH PLATTE	83	57	89	49	70	-3	2.5	1.8	1.4	8.8	197	15.8	133	91	46		0	0	5	0		
NE OMAHA	82	66	88	62	74	-2	2.1	1.3	1.0	10.9	218	22.4	143	93	53		0	0	5	0		
NE SCOTTSBLUFF	83	51	88	45	67	-7	.1	-.4	.1	5.6	165	12.0	123	82	27		0	0	2	0		
NE VALENTINE	81	53	85	48	67	-7	.1	-.7	.0	4.2	93	11.1	89	90	38		0	0	2	0		
NV ELY	84	37	91	32	61	-6	.0	-.2	.0	1.2	105	6.9	124	78	12		2	1	0	0		
NV LAS VEGAS	105	78	108	74	91	1	.0	-.1	.0	.1	40	4.4	215	32	11		7	0	0	0		
NV RENO	91	54	94	49	72	1	.0	-.1	.0	.4	62	4.9	110	72	17		6	0	0	0		
NV WINNEMUCCA	86	45	93	38	66	-6	.0	-.1	.0	1.0	105	6.0	124	77	14		1	0	0	0		
NH CONCORD	94	64	98	54	79	10	.0	-.7	.0	2.1	51	13.0	72	91	38		5	0	0	0		
NJ ATLANTIC CITY	94	72	101	67	83	9	T	-.8	T	1.6	44	20.0	96	91	45		5	0	0	0		
NM ALBUQUERQUE	97	66	100	59	82	3	.0	-.3	.0	.4	46	3.4	100	39	13		7	0	0	0		
NM CLOVIS	97	66	102	63	82	5	T	-.6	T	2.1	57	4.2	54	77	17		7	0	0	0		
NM ROSWELL	102	72	107	70	87	6	T	-.4	T	.6	27	3.1	64	62	17		7	0	0	0		
NY ALBANY	92	67	95	60	80	8	.6	-.1	.6	3.6	77	20.5	110	90	44		6	0	1	0		
NY BINGHAMTON	86	66	89	60	76	8	.2	-.6	.2	4.5	94	22.1	118	87	46		0	0	2	0		
NY BUFFALO	89	71	95	64	80	10	T	-.7	T	5.1	112	18.7	103	83	50		4	0	0	0		
NY NEW YORK	94	75	99	71	85	9	T	-.9	T	2.6	53	21.2	96	75	36		5	0	1	0		
NY ROCHESTER	92	69	98	58	80	10	T	-.6	T	2.8	73	13.5	86	85	44		5	0	0	0		
NY SYRACUSE	90	69	94	61	80	10	1.0	.1	.7	4.6	91	22.6	120	85	46		4	0	2	0		
NC ASHEVILLE	93	64	95	62	79	6	T	-1.0	T	1.1	17	21.0	72	87	38		7	0	0	0		
NC CHARLOTTE	99	75	100	73	87	8	.3	-.5	.3	.8	17	21.9	95	75	35		7	0	1	0		
NC GREENSBORO	96	72	101	70	84	8	T	-1.0	T	4.9	93	28.5	128	84	40		7	0	1	0		
NC HATTERAS	90	75	92	71	82	5	.5	-.6	.5	3.6	65	25.9	96	89	65		4	0	1	0		
NC NEW BERN	95	73	99	70	84	5	1.5	.0	1.5	6.3	83	28.0	101	94	53		7	0	1	0		
NC RALEIGH	96	72	99	70	84	6	.9	-.1	.5	1.6	32	22.6	101	86	43		7	0	4	0		
NC WILMINGTON	95	74	100	72	85	5	1.6	.1	1.6	5.3	76	29.0	105	95	55		7	0	1	0		
ND BISMARCK	73	51	81	43	62	-8	1.0	.4	.4	8.4	241	13.0	144	93	48		0	0	6	0		
ND FARGO	74	55	81	46	64	-6	.4	-.2	.4	5.0	134	10.2	100	92	53		0	0	3	0		
ND GRAND FORKS	71	55	80	48	63	-5	.6	.0	.5	5.1	135	7.8	83	94	58		0	0	4	0		
ND WILLISTON	70	50	78	44	60	-10	1.4	.9	1.2	7.5	250	10.1	127	92	52		0	0	3	0		
OH AKRON-CANTON	89	70	91	66	79	8	.6	-.4	.4	6.4	143	21.6	113	90	51		2	0	3	0		
OH CINCINNATI	92	71	94	69	82	7	T	-1.0	T	5.4	103	21.7	95	89	56		6	0	0	0		
OH CLEVELAND	90	71	93	68	80	9	.9	.1	.5	6.2	128	21.8	117	89	49		4	0	2	0		
OH COLUMBUS	90	70	93	68	80	8	.7	-.1	.5	7.3	146	23.8	119	92	53		5	0	3	0		
OH DAYTON	89	72	91	68	81	7	1.4	.6	.8	9.5	190	30.8	153	87	52		4	0	3	0		

Based on 1961-90 normals.

Weather Data for the Week Ending July 10, 1993

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		
TOLEDO	91	72	95	70	81	9	.3	-.5	.2	5.0	104	17.6	104	94	52	3	0	0	0	0	
YOUNGSTOWN	90	68	92	65	79	9	.2	-.7	.2	4.4	83	18.0	94	90	46	4	0	0	2	0	
OK OKLAHOMA CITY	91	73	93	67	82	1	.6	-.1	.5	4.1	61	24.0	129	81	50	7	0	2	2	0	
TULSA	91	75	94	71	83	0	.3	-.4	.3	3.2	74	23.3	107	83	51	3	0	2	2	0	
OR ASTORIA	63	53	65	50	58	-1	.1	-.3	.3	3.8	131	31.9	91	93	57	0	0	1	1	0	
BURNS	77	38	82	33	57	-8	.0	-.1	.0	1.6	63	7.2	134	83	20	0	0	0	0	0	
MEDFORD	87	44	90	42	66	-6	.0	-.1	.0	1.2	184	11.0	118	92	24	1	0	0	0	0	
PENDLETON	79	54	85	51	66	-5	.0	-.1	.0	1.8	103	8.2	124	81	25	0	0	0	0	0	
PORTLAND	74	54	81	50	64	-4	.0	-.2	.0	1.7	101	19.6	103	91	43	0	0	0	0	0	
SALEM	76	48	82	42	62	-3	.0	-.2	.0	1.7	207	24.0	117	91	37	0	0	0	0	0	
PA ALLENTOWN	93	72	95	69	82	9	.4	-.5	.4	5.2	111	25.2	114	87	49	6	0	1	1	0	
ERIE	90	73	96	69	82	11	1.3	-.5	.7	5.6	100	17.8	92	93	59	5	0	3	3	0	
HARRISBURG	93	73	95	68	83	8	1.4	-.6	.7	5.6	110	25.1	118	95	46	7	0	3	3	0	
PHILADELPHIA	98	77	101	74	88	13	.0	-1.1	.0	2.3	41	20.6	86	80	40	7	0	0	1	1	
PITTSBURGH	92	70	96	66	81	9	.9	-.5	.7	5.2	106	21.8	109	85	48	6	0	3	3	0	
SCRANTON	93	70	96	64	82	10	.1	-.8	.1	2.3	44	18.2	97	88	42	5	0	3	1	0	
RI PROVIDENCE	93	68	100	61	81	9	.1	-.6	.1	5.2	100	17.8	92	93	59	5	0	3	1	0	
SC CHARLESTON	96	75	100	73	85	4	1.9	-.4	1.3	1.9	44	22.6	95	89	38	5	0	3	3	0	
COLUMBIA	100	74	103	71	87	7	.1	-1.1	.1	5.6	65	28.8	109	91	48	7	0	3	3	2	
FLORENCE	99	74	102	72	87	6	.7	-1.6	.6	1.6	24	22.9	85	84	37	7	0	1	1	0	
GREENVILLE	99	69	100	68	84	7	.7	-1.1	.6	2.1	35	17.3	74	91	37	7	0	2	1	0	
SD ABERDEEN	75	56	81	52	66	-6	2.0	1.3	1.4	8.9	3	27.2	95	77	32	7	0	0	1	1	
HURON	78	57	81	54	68	-6	.6	-.3	.3	8.7	202	17.7	147	95	50	0	0	3	3	0	
RAPID CITY	75	49	81	44	62	-9	.6	-.0	.3	4.3	113	11.7	113	90	43	0	0	5	5	0	
SIOUX FALLS	79	61	80	58	70	-3	3.7	3.1	2.8	11.7	272	26.2	207	88	49	0	0	5	5	0	
TN CHATTANOOGA	97	72	102	70	85	6	.7	-.4	.7	2.4	47	25.3	86	90	43	7	0	2	1	1	
KNOXVILLE	97	70	100	68	83	7	.7	-1.1	.9	9	16	19.6	74	85	42	7	0	0	0	0	
MEMPHIS	94	77	95	75	86	3	.1	-.9	.9	4.2	88	24.1	84	81	48	7	0	0	0	0	
NASHVILLE	94	73	96	70	83	4	.1	-.8	.1	5.4	112	24.6	94	83	51	7	0	2	0	0	
TX ABILENE	95	74	96	72	85	1	.1	-.5	.0	3.8	107	9.8	82	78	34	7	0	0	0	0	
AMARILLO	96	67	99	63	82	3	.1	-.6	.0	2.8	60	7.5	74	78	28	7	0	0	0	0	
AUSTIN	92	76	94	74	84	0	.0	-.5	.0	4.0	89	20.9	119	90	52	7	0	0	0	0	
BEAUMONT	92	76	93	71	84	1	.1	-1.2	.1	9.4	127	40.0	143	95	61	7	0	1	0	0	
BROWNSVILLE	91	76	92	74	84	-1	.0	-.5	.0	6.7	199	17.1	154	91	60	6	0	0	0	0	
CORPUS CHRISTI	90	76	90	74	83	-1	.0	-.6	.0	12.0	286	28.4	205	97	64	5	0	0	0	0	
DEL RIO	96	75	97	73	85	2	.0	-.4	.0	5.3	153	9.1	72	81	49	7	0	0	0	0	
EL PASO	101	77	105	71	89	7	.1	-.2	.1	1.6	145	3.4	126	54	19	7	0	1	0	0	
FORT WORTH	95	77	96	74	86	3	.1	-.2	.1	3.8	92	19.5	96	82	45	7	0	0	0	0	
GALVESTON	90	81	91	80	86	3	.0	-.9	.0	3.3	58	30.0	154	78	66	6	0	1	0	0	
HOUSTON	94	77	95	72	85	3	.0	-1.1	.0	12.1	157	43.4	160	88	50	7	0	1	0	0	
LUBBOCK	96	72	99	67	84	4	.0	-.6	.0	3.8	107	8.8	100	71	30	7	0	0	0	0	
MIDLAND	96	73	98	71	85	4	.0	-.4	.0	3.1	163	7.5	118	73	32	7	0	0	0	0	
SAN ANGELO	96	75	97	71	86	3	.0	-.3	.0	.9	35	8.3	82	74	33	7	0	0	0	0	
SAN ANTONIO	93	76	95	76	85	0	.0	-.5	.0	6.4	139	27.3	167	86	52	7	0	0	0	0	
VICTORIA	92	76	93	73	84	1	.1	-1.0	.0	11.4	189	40.1	185	94	57	7	0	2	0	0	
WACO	93	76	94	73	85	0	.0	-.5	.0	2.2	53	18.5	103	89	46	7	0	0	0	0	
WICHERITA FALLS	96	75	97	74	85	2	.1	-.3	.1	3.3	73	19.1	109	83	42	7	0	1	0	0	
UT CRDAR CITY	89	54	92	45	72	-1	.0	-.2	.0	.7	104	7.5	135	51	13	4	0	0	0	0	
SALT LAKE CITY	83	52	91	48	68	-9	.0	-.2	.0	1.3	106	12.8	136	75	20	1	0	1	0	0	
VT BURLINGTON	91	67	94	57	79	9	.6	-.3	.5	3.9	85	15.5	96	90	38	6	0	2	1	0	
VA NORFOLK	96	76	100	74	86	9	.1	-1.1	.0	3.1	58	22.8	98	83	46	6	0	1	0	0	
RICEMOND	98	73	102	71	86	8	.3	-.8	.2	2.2	43	24.7	112	88	45	7	0	2	0	0	
ROANOKE	95	68	98	65	81	6	.1	-.8	.0	3.3	74	23.6	114	86	42	7	0	2	0	0	
WA QUILLAYUTE	63	50	67	43	57	-2	.0	-.6	.0	3.7	93	42.5	77	95	60	0	0	1	0	0	
SEATTLE-TACOMA	69	52	74	50	61	-4	.0	-.2	.0	2.6	146	19.3	103	90	48	0	0	0	0	0	
SPOKANE	73	47	80	44	60	-7	.4	-.2	.1	.9	57	7.5	83	94	45	0	0	6	0	0	
YAKIMA	82	49	86	45	66	-3	.0	-.0	.0	.7	120	3.9	92	83	28	0	0	0	0	0	
WV BECKLEY	87	65	91	63	76	7	.1	-1.0	.1	3.6	66	21.0	95	86	47	1	0	1	0	0	
CHARLESTON	93	70	95	65	82	7	.4	-.8	.4	6.0	117	21.4	97	92	54	7	0	1	0	0	
HUNTINGTON	93	72	96	69	83	9	.3	-.8	.3	6.2	125	22.4	100	92	52	6	0	1	0	0	
PARKERSBURG	93	69	96	67	81	7	.4	-.6	.3	3.5	67	21.0	94	96	50	7	0	2	0	0	
WI GREEN BAY	83	63	85	60	73	4	3.7	3.0	2.5	11.1	253	21.9	158	93	56	0	0	6	2	2	
LACROSSE	80	65	85	60	73	0	.9	.1	.6	8.4	164	25.3	167	97	64	0	0	3	1	2	
MADISON	81	66	84	62	74	2	6.6	5.7	3.8	13.4	268	28.7	182	91	59	0	0	6	2	2	
MILWAUKEE	84	67	90	65	75	5	2.2	1.4	1.1	9.0	207	24.1	147	89	55	1	0	3	2	2	
WAUSAU	79	61	82	57	70	0	.3	-.6	.1	9.0	171	21.9	142	98	62	0	0	4	0	0	
WY CASPER	79	45	86	39	62	-7	.0	-.3	.0	2.8	146	10.2	133	84	23	0	0	0	0	0	
CHEYENNE	79	47	91	41	63	-4	.0	-.5	.0	3.3	119	9.5	114	82	23	1	0	0	0	0	
LANDER	75	43	84	39	59	-11	.2	-.1	.2	5.2	290	11.7	139	76	25	0	0	1	0	0	
SHERIDAN	70	46	83	42	58	-10	.6	.3	.2	4.4	167	10.9	120	94	47	0	0	5	0	0	

Based on 1961-90 normals.

# Update on the "Great Flood of '93"

The "Great Flood of '93" continues to break records as the damage toll mounts.

As of Monday, July 12, the National Weather Service's Office of Hydrology reported that a record flood crest was occurring along the Middle Mississippi River from roughly Keithsburg, IL (about 20 miles north of Burlington, IA), downstream to at least Keokuk, IA (Figure 1). Additionally, below Keokuk, a record crest was anticipated all the way down the Mississippi to at least Chester, IL (about half way between St. Louis and Cape Girardeau), and possibly all the way to the Cape Girardeau, MO area. Moderate flooding was expected further downstream to as far down as Cairo, IL, while minor flooding should take place as far down as about Caruthersville, MO. Farther downstream, no flooding (with the exception of some minor agricultural flooding) was anticipated from near Memphis, TN, all the way down to New Orleans, though a significant rise (below flood stage) is expected along that stretch of the Mississippi.

St. Louis, MO, is included in the record flood crest forecast. The newest forecast for St. Louis indicated a crest of 45.0 feet for Sunday, July 18. The old record is 43.2 feet set during the spring floods of 1973 (Table 1). The recent reading of 43.1 feet on July 12, 1993, is the second highest on record.

Even without additional rain, crests will be very slow to recede: major flooding is expected to continue on larger rivers for a week or more after the crest passes. Less severe flooding will continue well into next month on the larger rivers.

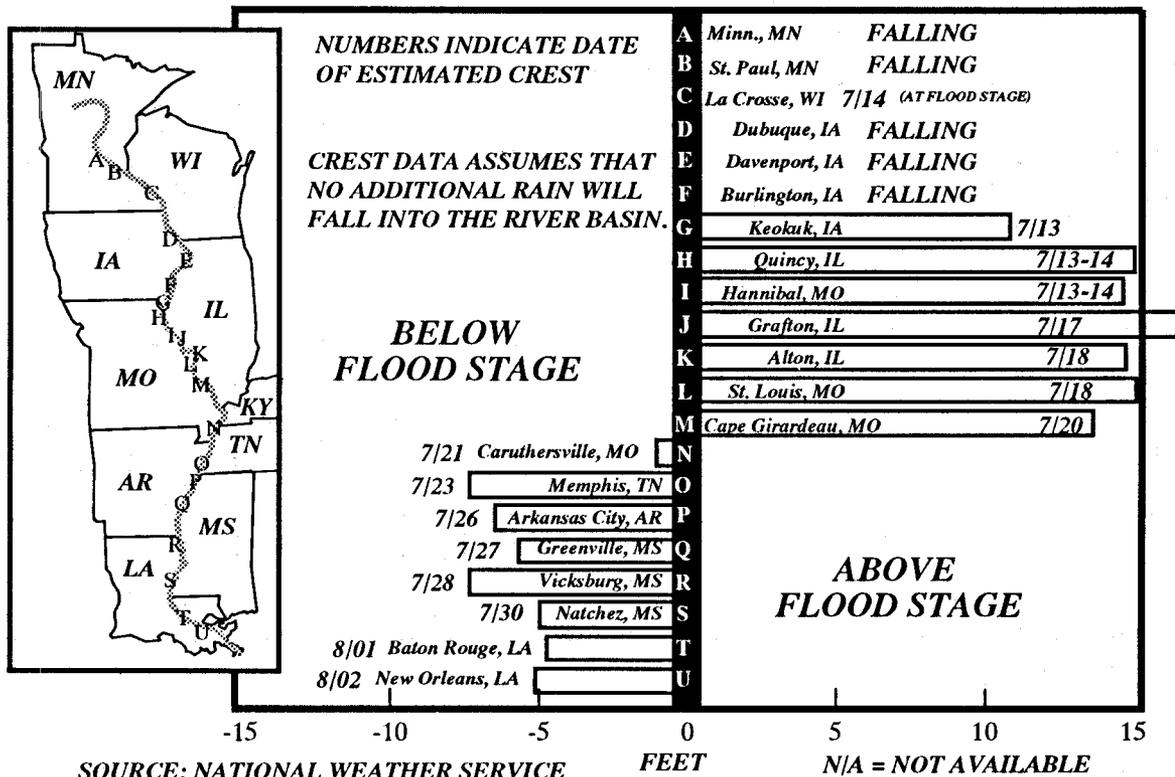
With simultaneous flooding occurring in eight States (IA, MO, SD, MN, WI, IL, KS, NE) and the most conservative estimates of property and crop damage starting at \$2 billion, this flood is already one of the most damaging floods this century along the Mississippi River basin (Table 1). In fact, this is already the most devastating flood on record in the upper Mississippi basin. When the final costs are added up, this could easily become the second costliest flood in U.S. history. The costliest was the June, 1972, flooding from Hurricane Agnes, which caused \$4 billion (1972 dollars) in damages across the eastern seaboard.

Projections released by the U.S. Department of Agriculture on July 12, 1993 reflect the impact of the excessive wetness in the Midwest along with the drought and heat in the Southeast. Corn production is projected at 7.85 billion bushels, down 8 percent from last month and 17 percent from last year's record. Soybean production is projected at 1.975 billion bushels, off 3 percent from last month and 10 percent from last year.

Figure 1

Douglas Le Comte

## MISSISSIPPI RIVER ESTIMATED CREST LEVELS Departure From Flood Stage As of July 13, 1993



# June Weather in Historical Perspective

June 1993 was a cool, wet month nationally. The contiguous States' average temperature of 68.2°F was nearly 1°F below normal (fig. 1), ranking June as the 24th coolest such month since 1895 (table 1). The national normalized precipitation index, weighted so that typically wet areas do not dominate the index, attained its 21st wettest June ranking (fig. 2).

Regional temperatures ranged from considerably below normal in the West North Central (11th coldest), Northwest (16th coldest), East North Central (20th coldest), and West (25th coldest) regions, to above normal in the Southeast (32nd warmest). Dryness accentuated the heat in the Southeast (7th driest June), severely stressing crops. Farther west, wet weather initiated record summer flooding in the upper Mississippi Valley and adversely affected crops in the western Corn Belt. The East North Central region recorded its 7th wettest June, while the Central region noted its 13th wettest June. An early-month storm was responsible for the West's 4th wettest June on record.

Record precipitation drenched the upper Mississippi Valley between April 1 and June 30, 1993 (fig. 3). Prior to 1993, the five wettest such periods (in descending order of wetness) occurred in 1947, 1990, 1908, 1945, and 1957. Longer-term data in table 2 shows that the 9 months leading up to the "Mississippi Flood of '93" were also the wettest on record in the upper Mississippi Basin.

In the South Atlantic Gulf Basin, rainfall accumulated at its ninth lowest rate on record between April 1 and June 30 (fig. 4), which represents the eighth time since 1977 that this region has experienced a significant precipitation deficit during this portion of the year. By the end of June, dryness had not yet, however, pushed the Southeastern States into severe drought, leaving the Nation with only 1.3 percent of its area in severe to extreme drought (fig. 5). The portion of the Nation experiencing a severe to extreme wet spell (Palmer indices above +3.0) increased about 5 percent during June to encompass 34.2 percent of the country.

Figure 1

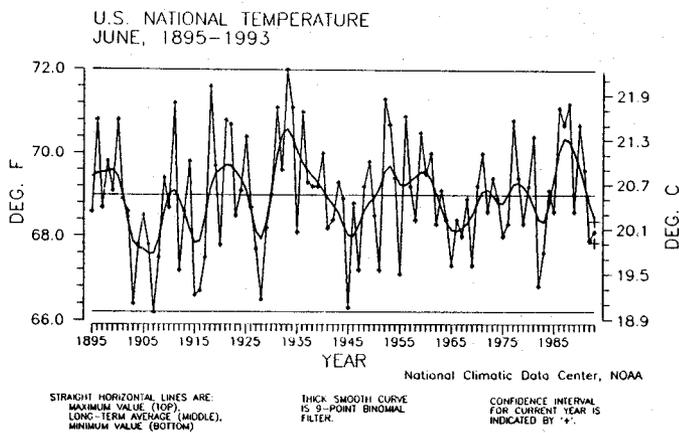


Figure 2

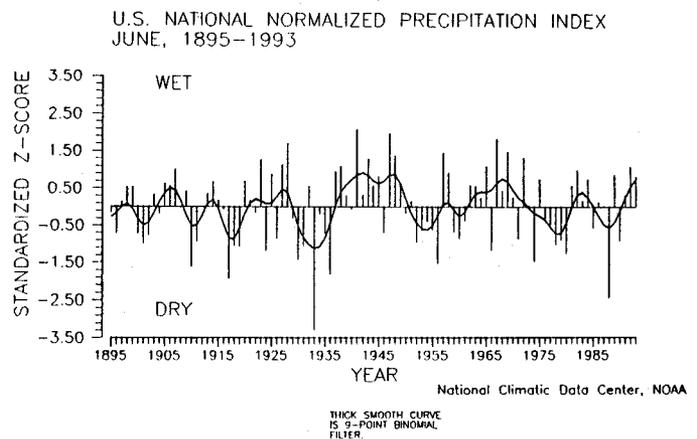


TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR JUNE 1993, BASED ON THE PERIOD 1895-1993. 1 = DRIEST/COLDEST, 99 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	36	54
EAST NORTH CENTRAL	93	20
CENTRAL	87	51
SOUTHEAST	7	68
WEST NORTH CENTRAL	84	11
SOUTH	79	61
SOUTHWEST	14	41
NORTHWEST	82	16
WEST	96	25
NATIONAL	79	24

Figure 3

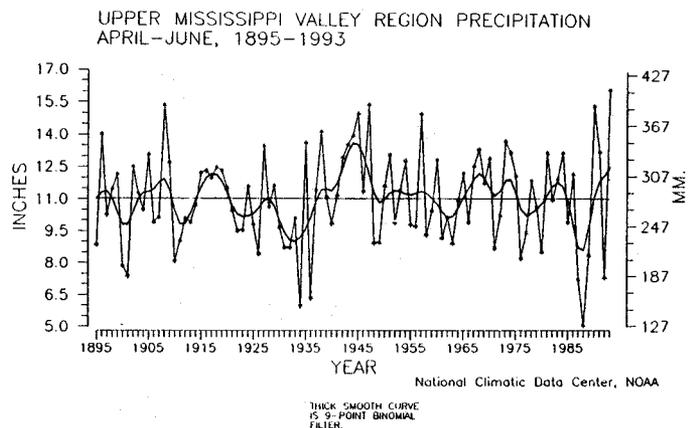


TABLE 2.  
STATISTICS FOR SELECTED RIVER BASINS: PRECIPITATION RANKING FOR OCT-JUN 1992-93, WHERE RANK OF 1 = DRIEST, 98 = WETTEST, BASED ON THE PERIOD 1895 TO 1993; AREAL PERCENT OF THE BASIN EXPERIENCING SEVERE OR EXTREME LONG-TERM (PALMER) DROUGHT, AND AREAL PERCENT OF THE BASIN EXPERIENCING SEVERE OR EXTREME LONG-TERM (PALMER) WET CONDITIONS, AS OF JUN 1993. RIVER BASIN REGIONS AS DEFINED BY THE U.S. WATER RESOURCES COUNCIL.

RIVER BASIN	PRECIPITATION RANK	% AREA DRY	% AREA WET
MISSOURI BASIN	86	8.4%	27.9%
PACIFIC NORTHWEST BASIN	51	.0%	28.4%
CALIFORNIA RIVER BASIN	88	.0%	50.1%
GREAT BASIN	86	.0%	20.4%
UPPER COLORADO BASIN	82	.0%	25.0%
LOWER COLORADO BASIN	94	.0%	100.0%
RIO GRANDE BASIN	54	.0%	38.4%
ARKANSAS-WHITE-RED BASIN	91	.0%	72.9%
TEXAS GULF COAST BASIN	82	.0%	70.3%
SOURLS-RED-RAINY BASIN	41	.0%	16.7%
UPPER MISSISSIPPI BASIN	98	.0%	79.3%
LOWER MISSISSIPPI BASIN	52	.0%	15.5%
GREAT LAKES BASIN	92	.0%	50.3%
OHIO RIVER BASIN	42	.0%	10.8%
TENNESSEE RIVER BASIN	32	.0%	.0%
NEW ENGLAND BASIN	38	.0%	.0%
MID-ATLANTIC BASIN	84	.0%	24.4%
SOUTH ATLANTIC-GULF BASIN	80	.0%	6.9%

Figure 4

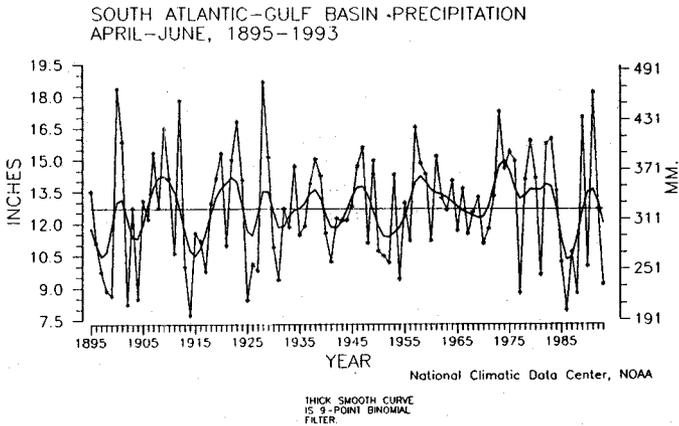
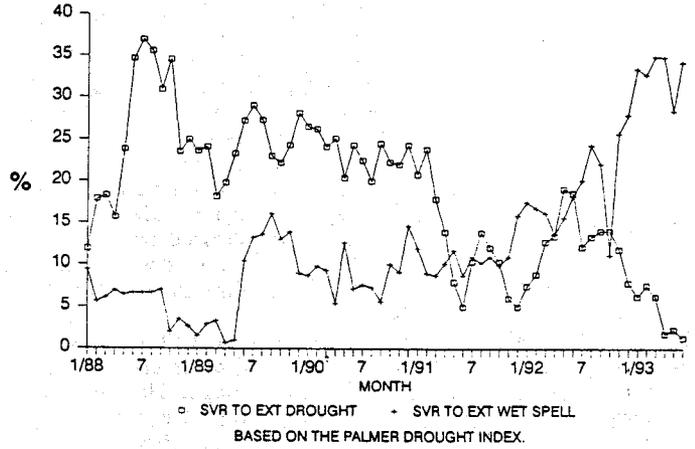


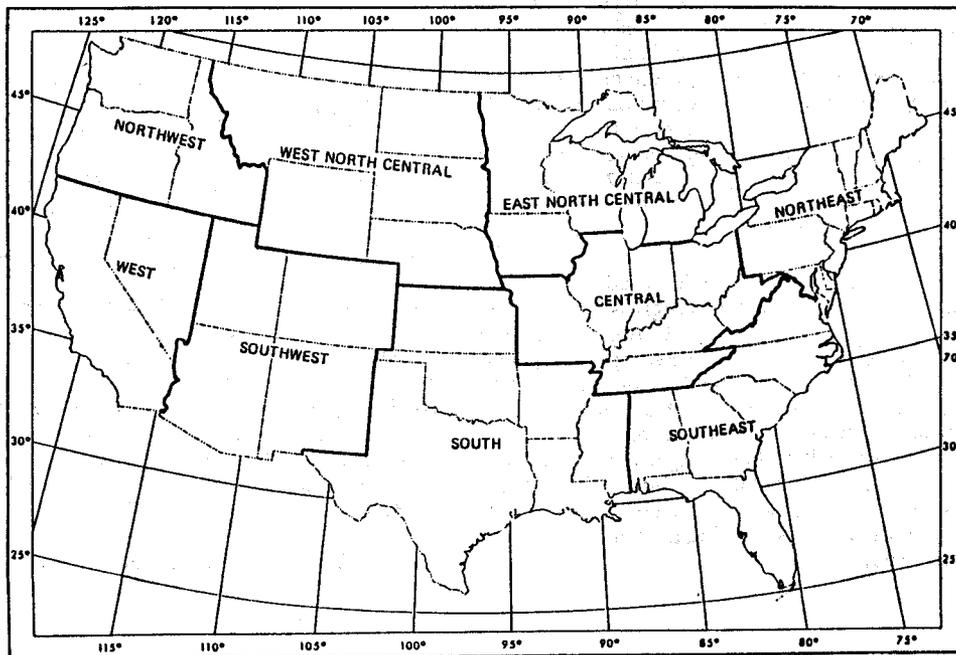
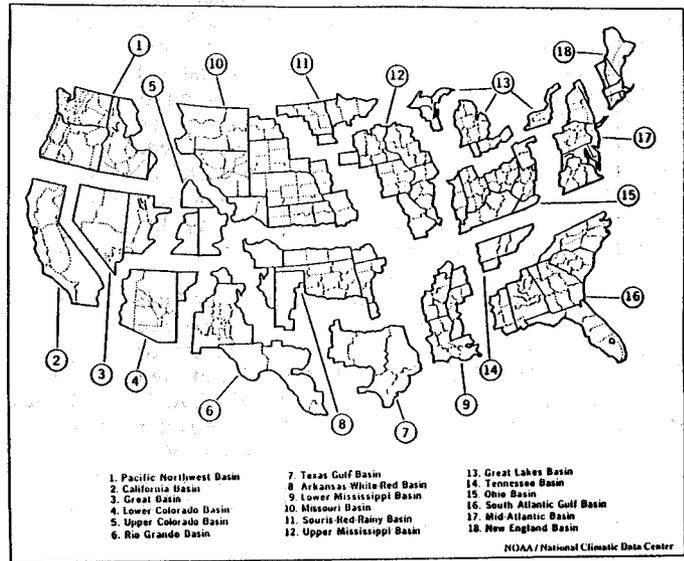
Figure 5

U.S. PERCENT AREA DRY AND WET

JANUARY 1988 THROUGH JUNE 1993



National Climatic Data Center, NOAA



## National Agricultural Summary

July 5 - 11, 1993

**HIGHLIGHTS:** Rainfall continued to fall over the central part of the Nation, with very heavy amounts across Iowa, eastern Kansas, and western Missouri. The additional rainfall added to the flood and crop damage from previous weeks. Precipitation across the upper Great Plains continued to hamper weed control and hinder hay harvest. Rainfall also occurred along the Gulf Coast, the Northwest, and scattered showers fell in the East. Temperatures were below normal across the Northwest and northern Great Plains, above normal across the southern half of the Nation, and well above normal in the middle Atlantic and Northeastern States. Hot, humid conditions stressed crops in the Tennessee Valley and caused pastures in the Southeast to deteriorate. Warm, humid conditions boosted crop prospects in the Ohio Valley.

**SMALL GRAINS:** Winter wheat harvest in the 19 major wheat-producing States advanced to 54 percent(%) complete, compared with 62% at this time in 1992 and 71% average. Harvest in the Southeast remained ahead of average and normal due to the hot, dry conditions. Rains hindered harvest in Kansas and Missouri. Weeds were a problem in some Kansas fields. Drier conditions allowed good progress Illinois and Texas. Spring wheat development was more than 1 week behind average. About 69% of the crop was headed, compared with 83% last year and 89% average. Cool conditions delayed development of spring wheat and other small grains in the Dakotas. Spring wheat condition improved slightly, with 85% of the crop rated good to excellent, compared with 82% last week. Continued wet weather delayed weed control and promoted root rot and tan spot in some South Dakota small grain fields. New Jersey small grain fields needed more rain. Continued hot, dry conditions allowed the oats, barley, and rye harvests to near completion in the Southeast.

**CORN:** Corn silking progress in the 17 major producing States was 6%, compared with 11% a year ago and 20% average. Crop development is behind in all States except for Kentucky and Georgia. Corn condition declined, with 51% of the crop good to excellent, compared with 54% last week. The hot, dry conditions stressed the crop in the Southeast, while excessive moisture and below-normal temperatures hindered the crop in Minnesota. Last week's warm, humid conditions allowed the crop to advance in Indiana, although progress still lags normal. In Texas and New York, the crop needed more moisture.

**SOYBEANS:** Soybean planting in the 19 major producing States reached 95% complete, compared with 99% last year and 98% average. Little progress was made in the rain-soaked Midwest, but good progress was made in the South. Only 83% of the crop was planted in South Dakota, when normally all of the crop would be planted. Poor stand development due to the previous week's dry weather in Tennessee caused some fields to be replanted. Soybeans blooming averaged slightly more than 1 week behind normal with 11% bloomed, compared with 22% last year and 28% average. Condition of the crop continued to decline with 46% rated good to excellent, compared with 49% last week.

**COTTON:** Cotton squaring in the 14 major producing States remained ahead of last year and average with progress at 78%. This compared with 66% last year and 72% average. Cotton setting bolls was 22%, compared with 23% last year and average. In Texas, insect control continued. Although most fields in the Texas plains looked good, some showed stress from heat. Hot winds over the Texas Low Plains hampered young plant development. Damage to the crop in the Rio Grande Valley from tropical storm Arlene appeared less than originally anticipated. Nationally, cotton condition declined with 62% of the crop rated good to excellent, compared with 66% last week. Cotton in South Carolina suffered from the dry, hot conditions.

**SORGHUM:** Grain sorghum headed at 24%, compared with 27% last year and 26% average. Sorghum condition declined, with 63% of the crop good to excellent, compared with 69% last week. Wet conditions delayed the planting of some fields in southeast Kansas. Damage to the crop in the Rio Grande Valley from tropical storm Arlene was less than anticipated. Other sorghum growing areas of Texas needed more rain.

**RICE:** Rice heading in the five major producing States reached 10%, compared with 19% last year and 18% average. Rice condition improved slightly with 65% good, compared with 63% good last week. Fertilizers were applied to fields in Texas and Arkansas.

**OTHER FIELD CROPS:** Continued wet conditions hampered hay harvest in the central part of the Nation. The California hay harvest advanced with good quality forage. The New York dry bean crop was in good condition but needed more moisture. Dry conditions in Tennessee hurt development of late-transplanted tobacco. Hot, dry wind stressed late-planted peanuts in the Cross Timbers and Low Plains regions of Texas. Potato producers in northeastern Oregon were concerned about possible potato "hollow heart" problems due to the wet conditions.

**FRUIT AND NUTS:** Rain over the Florida citrus groves promoted abundant foliage and good fruit condition. The Texas peach harvest continued. Previous dry conditions limited the size of some fruit. The stone fruit harvest continued in California, with almost a third of the plums and half of the nectarines completed. The table grape harvest advanced in California. In New York, winter damage on vinifera grapes became evident. Although the winter pear crop was in good condition, the continued wet weather caused marks on some fruit.

**VEGETABLES:** The vegetable harvests in Georgia and Florida decreased seasonally and also due to hot, dry conditions. In California, continued favorable conditions allowed the vegetable harvest to advance. The celery harvest was heavy in the Santa Marie and Salinas areas. The bell pepper harvest was very active in Merced, Kern, and Fresno counties. The vegetable harvests continued in Texas and New Jersey. In east Texas, damage from previous excessive rains was evident, but may not be as great as originally expected.

**PASTURE AND LIVESTOCK:** Hot weather and mostly dry conditions caused pastures to deteriorate in the Southeast, Northeast, and middle Atlantic States. Rain over the central part of the Nation and the upper Great Plains allowed pastures to stay in excellent condition. In California, dry weather caused pasture conditions to decline slightly. Supplemental feeding continued and increased in those areas of poor pastures. Feed supplies were generally adequate with some spot shortages in Delaware. In Tennessee, some producers let their cattle graze on hay fields. Livestock condition across the Nation was generally good with some insect and parasite problems reported in Arkansas and Oregon.

**Crop Progress**

for the Week Ending July 11, 1993

**COTTON  
(Percent Squaring)**

	Current	Last Wk	1992	Avg.
AL	76	63	89	91
AZ	97	94	94	96
AR	93	76	96	93
CA	85	60	90	86
GA	92	81	89	89
LA	91	72	96	85
MS	83	76	96	88
MO	94	72	86	87
NM	78	43	70	81
NC	61	58	47	65
OK	56	47	29	39
SC	80	61	81	76
TN	95	83	80	78
TX	69	59	38	56

14 States 78 66 66 72  
 These 14 States produced 99 of the 1992 cotton crop.

**COTTON  
(Percent Setting Bolls)**

	Current	Last Wk	1992	Avg.
AL	22	7	23	27
AZ	70	57	55	65
AR	23	3	26	24
CA	15	5	20	14
GA	32	21	28	36
LA	47	20	60	40
MS	23	10	42	41
MO	4	2	11	15
NM	19	3	22	29
NC	22	9	11	21
OK	3	0	0	6
SC	40	12	5	25
TN	7	0	13	13
TX	19	15	15	15

14 States 22 13 23 23  
 These 14 States produced 99% of the 1992 cotton crop.

**GRAIN SORGHUM  
(Percent Headed)**

	Current	Last Wk	1992	Avg.
AR	10	6	44	21
CO	0	0	0	0
IL	2	0	8	7
KS	0	0	1	3
LA	43	16	67	48
MS	20	14	69	41
MO	0	0	10	8
NE	0	0	0	0
NM	0	0	0	NA
OK	6	2	3	7
SD	0	0	0	0
TX	59	54	61	60

12 States 23 20 27 NA  
 Excl. States with NA 24 21 27 26  
 These 12 States produced 99% of the 1992 grain sorghum crop.

**SOYBEANS  
(Percent Planted)**

	Current	Last Wk	1992	Avg.
AL	95	90	97	94
AR	98	92	95	94
GA	99	93	100	96
IL	98	97	100	100
IN	99	99	100	100
IA	93	92	100	100
KS	97	96	97	97
KY	98	89	100	99
LA	97	92	99	95
MI	100	100	100	100
MN	90	88	99	99
MS	90	81	96	90
MO	90	87	97	98
NE	99	98	100	100
NC	95	93	93	94
OH	100	100	100	100
SC	95	89	94	96
SD	83	80	100	100
TN	98	92	99	95

19 States 95 93 99 98  
 These 19 States produced 95% of the 1992 soybean crop.

**SOYBEANS  
(Percent Blooming)**

	Current	Last Wk	1992	Avg.
AL	14	8	14	14
AR	22	17	12	8
GA	14	5	26	17
IL	13	3	35	44
IN	19	3	28	30
IA	6	5	28	34
KS	5	3	10	25
KY	9	0	12	14
LA	20	8	27	14
MI	20	10	10	15
MN	0	0	15	32
MS	5	2	15	15
MO	5	1	21	22
NE	4	0	9	23
NC	5	2	12	8
OH	31	12	31	31
SC	9	5	4	5
SD	6	0	19	27
TN	5	1	12	8

19 States 11 4 22 28  
 These 19 States produced 95% of the 1992 soybean crop.

**SPRING WHEAT  
(Percent Headed)**

	Current	Last Wk	1992	Avg.
ID	44	25	88	82
MN	86	64	88	95
MT	57	24	75	82
ND	63	39	78	87
SD	88	64	100	100

5 States 69 44 83 89  
 These 5 States produced 96% of the 1992 spring wheat crop.

**CORN  
(Percent Silking)**

	Current	Last Wk	1992	Avg.
CO	0	0	0	0
GA	95	88	95	95
IL	3	1	20	35
IN	3	0	11	20
IA	0	0	0	15
KS	15	5	30	40
KY	38	12	39	36
MI	3	0	0	5
MN	0	0	1	1
MO	11	5	28	37
NE	0	0	5	17
NC	62	36	65	63
OH	2	0	7	12
PA	3	0	0	3
SD	0	0	0	4
TX	64	57	70	73
WI	0	0	0	5

17 States 6 4 11 20  
 These 17 States produced 94% of the 1992 corn crop.

**WINTER WHEAT  
(Percent Harvested)**

	Current	Last Wk	1992	Avg.
AR	98	93	100	99
CA	80	65	90	84
CO	27	2	55	40
GA	100	99	100	99
ID	0	0	3	2
IL	67	19	65	88
IN	38	16	28	65
KS	70	40	85	95
MI	0	0	0	20
MO	36	23	70	95
MT	0	0	0	5
NE	2	0	24	55
NC	98	94	88	92
OH	18	1	4	45
OK	94	80	90	100
OR	1	0	3	8
SD	0	0	1	21
TX	91	81	90	94
WA	0	0	13	3

19 States 54 38 62 71  
 These 19 States produced 90% of the 1992 winter wheat crop.

**RICE  
(Percent Headed)**

	Current	Last Wk	1992	Avg.
AR	0	0	4	4
CA	0	0	0	0
LA	36	29	55	44
MS	9	0	19	13
TX	11	7	33	49

5 States 10 7 19 18  
 These 5 States produced 97% of the 1992 rice crop.

### Crop Condition (Percent)

for the Week Ending July 11, 1993

#### RICE

State	VP	P	F	G	EX
AR	0	0	18	82	0
CA	0	0	30	70	0
LA	0	2	66	32	0
MS	0	0	75	25	0
TX	0	0	18	78	4
5 State	0	0	35	65	0
Prev Week	0	1	36	63	0
Prev Year	0	0	28	69	3

#### WINTER WHEAT

State	VP	P	F	G	EX
AR	0	1	45	54	0
CA	0	0	25	65	10
CO	2	4	13	64	17
GA	0	7	63	30	0
ID	0	3	19	66	12
IL	0	3	45	49	3
IN	0	1	24	66	9
KS	1	5	18	60	16
MI	3	7	30	45	15
MO	0	12	67	21	0
MT	1	3	15	54	27
NE	1	3	23	70	3
NC	0	0	50	50	0
OH	1	6	30	49	14
OK	0	0	56	44	0
OR	0	2	11	49	38
SD	0	7	7	60	26
TX	21	6	25	43	5
WA	0	0	9	91	0
19 State	3	4	28	55	10
Prev Week	3	4	29	55	9
Prev Year	N/A	N/A	N/A	N/A	N/A

#### CORN

State	VP	P	F	G	EX
CO	1	2	13	64	20
GA	10	17	53	18	2
IL	0	2	25	66	7
IN	0	1	31	54	14
IA	1	8	58	30	3
KS	4	4	24	44	24
KY	0	3	37	49	11
MI	2	8	25	45	20
MN	15	37	39	7	2
MO	3	7	52	35	3
NE	0	3	24	65	8
NC	14	45	34	5	2
OH	1	4	21	51	23
PA	0	3	22	50	25
SD	3	15	39	37	6
TX	1	3	26	58	12
WI	3	22	44	29	2
17 State	3	10	36	43	8
Prev Week	2	9	35	46	8
Prev Year	1	4	29	55	11

#### SPRING WHEAT

State	VP	P	F	G	EX
ID	0	1	14	71	14
MN	2	7	32	50	9
MT	1	4	17	53	25
ND	0	0	7	74	19
SD	0	1	7	56	36
5 State	0	2	13	64	21
Prev Week	1	3	14	65	17
Prev Year	1	7	30	51	11

#### SORGHUM

State	VP	P	F	G	EX
AR	0	0	39	61	0
CO	0	6	21	66	7
IL	0	8	22	66	4
KS	1	2	22	50	25
LA	0	3	74	23	0
MS	0	0	83	17	0
MO	0	9	58	33	0
NE	0	10	30	50	10
NM	17	19	38	26	0
OK	0	0	31	69	0
SD	2	4	34	57	3
TX	0	6	29	44	21
12 State	1	5	31	47	16
Prev Week	0	5	26	56	13
Prev Year	0	4	25	59	12

#### COTTON

State	VP	P	F	G	EX
AL	0	2	57	40	1
AZ	0	0	10	85	5
AR	0	0	24	76	0
CA	0	0	5	90	5
GA	0	6	41	53	0
LA	0	10	48	42	0
MS	0	7	56	31	6
MO	0	9	46	45	0
NM	0	3	49	48	0
NC	0	9	53	35	3
OK	0	0	38	62	0
SC	11	37	52	0	0
TN	0	0	10	90	0
TX	0	2	34	58	6
14 State	0	4	34	58	4
Prev Week	0	1	33	61	5
Prev Year	5	11	37	42	5

#### SOYBEANS

State	VP	P	F	G	EX
AL	0	11	62	27	0
AR	0	0	36	64	0
GA	4	19	62	14	1
IL	0	3	29	63	5
IN	1	2	34	57	6
IA	2	18	56	23	1
KS	0	9	14	56	21
KY	0	0	38	51	11
LA	0	15	52	33	0
MI	0	5	30	50	15
MN	16	39	36	8	1
MS	0	0	63	37	0
MO	3	12	55	29	1
NE	0	2	27	67	4
NC	4	22	47	27	0
OH	1	5	26	49	19
SC	1	57	42	0	0
SD	3	22	41	31	3
TN	0	0	27	71	2
19 State	3	12	39	41	5
Prev Week	2	10	39	45	4
Prev Year	1	2	33	57	7

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 none to 1.12 in. north; none to 1.95 in. central; 0.10 to 3.19 in. south. Temperatures 1° below normal to 4° above normal north, central; 1° below normal to 3° above normal south. Lows 62 to 69° north; 65 to 70° central; 65 to 71° south. Highs 94 to 99° north; 94 to 100° central; 94 to 96° south.

Days suitable for fieldwork 6.4. Soil moisture 74% short, 26% adequate. Corn silked 75%, 88% 1992, 85% avg.; dented 23%, 30% 1992, 38% avg.; 12% very poor, 29% poor, 42% fair, 17% good. Sorghum planted 86%, 99% 1992, 95% avg.; 5% poor, 71% fair, 19% good, 5% excellent. Peanuts pegged 44%, 60% 1992, 69% avg.; 84% fair, 2% good, 14% excellent. Wheat harvested 93%, 98% 1992, 94% avg. Hay harvested 97%, 97% 1992, 98% avg. Pasture 4% very poor, 27% poor, 47% fair, 22% good. Primary activities: Cultivating, spraying fields, harvesting vegetables, wheat, general care of livestock, poultry, catfish.

**ALASKA:** Below normal rainfall continued to deplete already short soil moisture supplies in most parts of the State. Record high temperatures were set in many areas over the weekend.

Days suitable for making hay 5. First crop hay harvest was nearly 40% complete down 20% from this time a year ago. Crop growth was 25% slow, 50% moderate, 25% rapid. Barley headed 85%, 95% 1992. Oats 90% headed, 70% 1992. Barley 10% poor, 30% fair, 50% good, 10% excellent. Commercial potato 50% average, 50% above average. Topsoil moisture 65% short, 35% adequate. Subsoil moisture 75% short, 25% adequate.

**ARIZONA:** Precipitation limited to mostly southeastern areas, mid to late week. Temperatures 4° below to 3° above normal. Extremes 43°; 101° higher elevations; 59°; 113° deserts.

Cotton squaring 97%, 94% 1992, 96% avg.; setting bolls 70%, 55% 1992, 65% avg. Activities included: Irrigating, fertilizing, pesticide applications, pest monitoring, cultivating. Cotton 10% fair, 85% good, 5% excellent. Insects, weeds mostly light. Alfalfa continues good to excellent. Harvest active all areas. Weeds light to moderate, insects mostly light; disease light. Small grains harvested 99%, 98% 1992, 98% avg. Remaining fields good to excellent. Grapes, watermelons, honeydews, cantaloupes, harvested western areas. Watermelon, cantaloupe, honeydew, cabbage, sweet corn, chile peppers, green onions, dry onions, grapes, kale, mixed greens, grapefruit harvested central areas. Tomatoes, dry onions, harvested eastern.

**ARKANSAS:** Hot week, temperatures a little above normal. Scattered showers occurred in northwest region first part of week. Extremes 58°; 99°. Rainfall none to 0.45 in.

Days suitable for fieldwork 7. Moderate rate of crop growth. Soil moisture 80% short, 20% adequate. Wheat, oats harvests almost completed. Fruit harvests continued. Soybeans planting nearing completion. Cotton, soybeans cultivation continued. Producers continued to spray cotton fields for weevils. Nematodes reported in some soybeans fields. Producers continued to apply fertilizer to cotton, rice, soybeans fields. Corn 31% fair, 59% good, 10% excellent. Sunflowers good. Fruit, vegetable crops good. Livestock excellent, external parasites reported in some areas. Hay cuttings continued. Pastures good.

**CALIFORNIA:** High pressure continued over State through week with near to above normal temperatures many areas. No rain showers reported statewide. Fog low clouds dominant along much of coast.

Field activities progressed rapidly. Wheat harvest winding down. Straw baling harvested fields. Rice behind normal growth, broadleaf weed treatments applied. Cotton development near normal, treated mites, aphids, lygus. Whitefly infestations reported. Seed alfalfa fields blooming, seed maturing. Sunflowers for seed good condition. Sugarbeets harvested. Emerging crop developing rapidly. Corn planting winding down, irrigated, sprayed weeds. Safflower fields in bloom, drying for harvest scattered areas. Alfalfa hay harvest progressed, good quality reported. Picking, packing stonefruit continued. Thirty percent plum crop harvested. Nectarine harvest

45%. Half Freestone peach crop picked. Brown rot, peaches, prunes. Table grape harvest ended Coachella Valley; began Fresno County. Apricot harvest neared completion. Apples, walnuts treated for codling moth; almonds for navel orange worm, borers, mites. Valencia orange harvest continued. Grapefruit, avocado harvests continued, San Jacinto area. Broccoli harvest light San Benito County, light to moderate central coast. Bell pepper harvest full swing Merced, Kern, Fresno counties. Central coast cauliflower harvest light. Santa Maria celery harvest heavy, Salinas area fairly heavy. Fresh market tomato harvest continued Kern, Merced, Tulare, Fresno counties. Processing tomato harvest seasonally increasing San Joaquin, Sacramento valleys. Sweet corn harvest Fresno, Kern, San Benito, Tulare counties. Garlic harvest continued Tulare, San Benito counties. Head lettuce harvest fairly light to moderate central coast, light San Benito county. Harvest of romaine, leaf lettuce central coast moderate. Onions harvested Kern, San Joaquin counties. Honeydews, cantaloupes harvested Riverside, Fresno, Kern counties. Watermelon harvest progressed Fresno, Tulare counties, almost complete Imperial County, began San Joaquin County. Other harvests: Chili peppers, cucumbers, eggplant, green beans, green onions, squash, and oriental vegetables. Range, pasture conditions deteriorated somewhat, mostly fair to good. Valley, foothill ranges very dry, fire threat rapidly increasing. Water, feed supplies adequate most areas, some supplemental feeding. Cattle movement summer pastures tapering off. Livestock good. Bees active seed alfalfa, melon fields.

**COLORADO:** Most of the significant weather during the period was in the Eastern Plains. Beginning on the 6th, hail up to the size of baseballs was reported in Yuma county. Severe weather continued on the 7th with two tornadoes reported in the Burlington area. Numerous tornadoes, funnel clouds were reported in the east on the 9th, along with more baseball sized hail near Stratton. A strong cold front on the 10th brought strong winds to much of State with 81 mile per hour winds at Fort Collins. This was followed on the 11th by locally heavy rains in parts of the northeast. Except for the Kansas River Basin, avg. rainfall in major river basins in State was 0.10 in. or less. Temperatures a little above normal in the Arkansas River Basin, 2 to 4° below normal in other major River Basins.

Days suitable for fieldwork 5.9. Soil moisture 11% very short, 52% short, 35% adequate, 2% surplus. Tornadoes, hail damaged some crops, personal property in Kit Carson county. Hail also caused localized crop damage in southeastern Sedgwick county. Alfalfa 1st cutting 94%, 94% 1992, 88% avg.; 2nd cutting 22%, 20% 1992, 14% avg. Spring barley headed 91%, 90% 1992, 89% avg.; turning color 34%, 38% 1992, 44% avg. Oats headed 87%, 92% 1992, 81% avg.; turning color 51%, 41% 1992, 39% avg. Dry Beans emerged 98%, 98% 1992, 97% avg. Sorghum emerged 97%, 94% 1992, 91% avg. Winter wheat ripe 68%, 83% 1992, 64% avg.; harvested 27%, 55% 1992, 40% avg. Winter wheat 2% very poor, 4% poor, 13% fair, 64% good, 17% excellent. Fall potato 3% poor, 23% fair, 59% good, 15% excellent. Dry onion 1% very poor, 2% poor, 11% fair, 80% good, 6% excellent. Corn 1% very poor, 2% poor, 13% fair, 64% good, 20% excellent. Sugarbeet 2% poor, 12% fair, 76% good, 10% excellent. Livestock mostly good to excellent. Pasture, range feed condition declined this week, were rated mostly good.

**FLORIDA:** Scattered showers, thunderstorms each day of week. Most stations reported some rain. Rainfall under 0.50 in. to locally 1.00 to 3.00 in. Temperatures 1 to 2° above normal. Highs; upper 90s Panhandle, mid 90s elsewhere, except low 90s mid, lower Atlantic Coast. Lows; mostly upper 60s to mid 70s.

Soil moisture short to adequate. Tobacco, hay harvest continued. Cotton, peanut, sugarcane growth normal. Corn condition improved. Citrus groves, trees, new crop fruit very good condition as a result of hard rains. Abundant new foliage. New crop fruit sizes vary depending on bloom date. Valencia harvest all but complete. Grapefruit harvest down to last few blocks. Caretakers cutting cover crops, herbiciding, spraying, fertilizing. Hot temperatures all vegetable areas. Northern harvest of sweet corn, tomatoes, watermelons winding down. Tomato growers preparing fields for fall plantings. State's

pastures poor to excellent. Pasture 10% poor, 40% fair, 40% good, 10% excellent. State's cattle herds poor to good.

**GEORGIA:** Rain one to four days at number of locations, none some places. Most weekly rain totals under 0.33 in., 1.00 to 2.00 in. amounts only isolated spots. Temperatures 5 to 7° above normal north, to 4° above elsewhere. Afternoon temperatures to middle 90s northeast mountains to near 100° remainder State. Lows cooled to around 60° northeast mountains, around 70° over rest of State.

Days suitable for fieldwork 6.1. Soil moisture 32% very short, 45% short, 23% adequate. Corn 62% dough, 78% 1992, 79% avg.; 31% dent, 46% 1992, 50% avg.; 3% mature, 7% 1992, 11% avg. Sorghum 18% poor, 59% fair, 23% good; 95% planted, 99% 1992, 96% avg. Peanuts 1% poor, 38% fair, 58% good, 3% excellent; 93% blooming, 96% 1992, 94% avg.; 67% pegging, 68% 1992, 70% avg. Soybeans 4% very poor, 19% poor, 62% fair, 14% good, 1% excellent. Tobacco 13% poor, 50% fair, 37% good; 11% harvested, 27% 1992, 29% avg. Watermelons 1% very poor, 22% poor, 57% fair, 20% good; 64% harvested, 74% 1992, 69% avg. Other vegetables 1% very poor, 21% poor, 45% fair, 30% good, 3% excellent; volume decreasing some markets due hot, dry weather. Apples 10% fair, 90% good. Peaches 16% very poor, 15% fair, 69% good; 73% harvested, 76% 1992, 80% avg. Hay, pastures poor to fair, supplemental feeding hay increasing. Reports of culling increasing. Cattle, hogs fair to good.

**HAWAII:** Weather sunny, warm with variable showers. Light to moderate trade winds brought some relief. Temperatures mid 60s to low 90s. Rainfall none to 2.10 in.

Weather beneficial to development summer crops, orchards. Irrigation, pest control ensured crop growth. Banana plantings fair to good. Papaya picking heavy. Watermelon shipments still active, off from holiday peak harvesting.

**IDAHO:** Temperatures 4 to 12° below normal. Frost scattered throughout eastern areas. Caribou county frost damaged potatoes, cereals. Precipitation none to 1.48 in. north; none to 0.14 in. southwest; none to 0.12 in. south central; none to 0.57 in. east.

Days suitable for fieldwork 6. Soil moisture 9% short, 86% adequate, 5% surplus. Winter wheat 20% turning color; 68% headed, 11% booted, 1% jointed. Spring wheat 5% not yet jointed, 18% jointed, 33% booted, 44% headed. Spring barley 4% not yet jointed, 19% jointed, 32% booted, 45% headed. Potatoes emerged 99%, 100% 1992, 100% avg. Potatoes not yet 12 in. high 31%, 12 in. high 47%, closing middles 22%. Potatoes 3% poor, 16% fair, 65% good, 16% excellent. Sugarbeets thinned 98%, 100% 1992, 100% avg. Dry beans planted 100%, 100% 1992, 100% avg.; emerged 99%, 100% 1992, 100% avg. Alfalfa first cutting 90%, 96% 1992, 93% avg. Alfalfa second cutting 5%, 22% 1992, NA avg. Cherries harvested 58%, 97% 1992, 92% avg. Irrigation water supplies 5% fair, 73% good, 22% excellent. Activities: Haying, weed control, irrigation, cultivation, preparation of cereal harvest equipment, storage facilities. Winter wheat harvest just getting underway, Nez Perce county. Pasture, range 98% of normal. Livestock good to excellent.

**ILLINOIS:** Warmer, more humid weather than normal occurred across much of State over weekend. Rainfall 0.40 to 2.00 in. across State. Temperatures slightly above normal. High temperatures low to mid 80s to low to mid 90s. Low temperatures mid to upper 60s to the mid 70s.

Continued rains, increased flooding across the northwest, west, west southwest parts of the State are causing increased concern for crop conditions, as thousands of acres are under water, with more acres affected daily. Wheat harvest, planting of double cropped soybeans made good progress with three, one quarter days suitable for fieldwork. Other farm activities included: Spraying herbicides, pesticides, cultivation, cutting hay, baling straw, tending livestock. Pasture 96% of normal.

**INDIANA:** Temperatures 3 to 7° above normal. High temperatures middle 80s to lower 90s. Mean lows upper 60s to middle 70s. Rainfall varied across State. Many central areas recorded over an inch of rain. Some northwest, southern areas had 0.75 in. or less, a few reported under 0.25 in.

Days suitable for fieldwork 4. Crop conditions showed slight improvement. Corn silking, soybeans blooming are both behind normal. Pastures 95% of normal, 97% last week. Wheat crop ratings

increased to 75% good to excellent. Topsoil 7% short, 63% adequate, 30% surplus. Subsoil 3% short, 63% adequate, 34% surplus. Corn 46 in. high, 50 in. 1992, 50 in. avg. Soybean 13 in. high, 15 in. 1992, 14 in. avg. Oats headed 82%, 98% 1992, 99% 1992. Alfalfa hay 2nd cutting 35%, 34% 1992, 50% avg.

**IOWA:** Office closed due to floods. No weather data available.

**KANSAS:** Temperatures normal southeast, 1 to 2° below normal rest of State. Heavy precipitation 0.39 in. southwest to 6.63 in. north central. Several counties over 7.00 in.

Days suitable for fieldwork 3.0. Topsoil 8% short to very short, 38% adequate, 54% surplus. Subsurface moisture 6% short to very short, 54% adequate, 40% surplus. Only southwest short. Four northeast districts inundated with surplus water. Mostly favorable weather west enabled wheat harvest to progress past two-thirds. Heavy rains continued north central, central, northeast, east central. Muddy conditions, flooding allowed very little headway. Weeds becoming problem in wet fields. Harvest west central, south winding down, custom crews moving northward. Wheat harvested 70%, 85% 1992, 95% avg. Corn silking 15%, 30% 1992, 40% avg.; declined, 68% good to excellent, 24% fair, 8% poor to very poor. Sorghum planted except few southeast localities; headed 0%, 1% 1992, 3% avg.; 75% good to excellent, 22% fair, 3% poor to very poor. Soybeans planted 97%, 97% 1992, 97% avg.; only double-crop soybeans remain to be planted southern areas; blooming 5%, 12% 1992, 25% avg.; declined significantly, 77% good to excellent, 14% fair, 9% poor to very poor. Second cutting alfalfa 50%, 65% 1992, 75% avg. Rains still delaying second cutting. Third cutting just starting south central, 10% avg. Pastures mostly good to excellent.

**KENTUCKY:** Hot week. Highs 90s with overnight lows upper 60s, lower 70s. Temperatures lower 80s, 3 to 5° above normal. Most stations received rain in scattered thunderstorms, amounts generally less than 0.50 in. One station received over 1.00 in.

Days suitable for fieldwork 5.9. Soil moisture 22% very short, 54% short, 24% adequate. Hot, humid weather stressed crops. Tobacco 2% very poor, 4% poor, 42% fair, 47% good, 5% excellent. Wheat harvest 98%, 94% 1992, 98% avg. Pasture mostly good to fair.

**LOUISIANA:** Temperatures 0.7° below to 1.4° above normal. Extremes 53°; 96°. Rainfall 0.10 in. north central to 2.42 in. southeast.

Days suitable for fieldwork 5.6. Soil moisture 12% short, 85% adequate, 3% surplus. Corn 8% poor, 50% fair, 42% good; 97% silked, 100% 1992, 99% avg.; 70% dough stage, 83% 1992, 76% avg.; 5% mature, 17% 1992, 13% avg. Corn mostly fair to good. Hay 95% first cutting, 92% 1992, 84% avg.; 6% final cutting, 2% 1992, 0% avg. Second cutting began in a few fields. Peaches 5% very poor, 10% poor, 36% fair, 49% good; 71% harvested, 74% 1992, 64% avg. Rice 0% ripe, 3% 1992, 3% avg. Sorghum 100% planted, 100% 1992, 99% avg.; 99% emerged, 100% 1992, 99% avg.; 4% turning color, 1% 1992, 3% avg. Soybeans 92% emerged, 98% 1992, 90% avg.; 8% setting pods, 2% 1992, 1% avg. Planting coming to a close. Sweet potatoes 13% poor, 35% fair, 52% good; 85% planted, 96% 1992, 93% avg. A few acres left to be planted. Wheat 98% harvested, 100% 1992, 99% avg. Sugarcane 1% poor, 4% fair, 85% good, 10% excellent. Livestock 21% fair, 76% good, 3% excellent. Pastures 3% very poor, 1% poor, 4% fair, 92% good. Pastures looking good. Vegetables 12% poor, 50% fair, 38% good.

**MARYLAND & DELAWARE:** **MARYLAND:** Precipitation 0.38 in. Temperature 83.1°, normal 75.7°. Extremes 59°; 101°.

Days suitable for fieldwork 6.6. Topsoil 40% very short, 40% short, 20% adequate. Subsoil 20% very short, 45% short, 35% adequate. Small grains mostly good. Wheat 84% harvested, 57% 1992, 75% avg. Rye 71% harvested, 47% 1992, 65% avg. Oats 62% turned, N/A 1992, N/A avg.; 14% harvested, 16% 1992, 16% avg. Corn, soybeans fair. Corn 15% silked, 8% 1992, 21% avg. Soybeans 89% planted, 81% 1992, 87% avg. Pasture good, needs rain; hay supplies adequate. Alfalfa hay 75% second cut, 58% 1992, 65% avg. Other hay 39% second cut, 20% 1992, 25% avg. Sweet corn 5% harvested, 7% 1992, 13% avg. Cantaloupes 9% harvested, 2% 1992, 10% avg. Potatoes 9% harvested, 11% 1992, 14% avg. Peaches, apples good.

**DELAWARE:** Precipitation 0.55 in. Temperature 83.6°, normal 76.4°. Extremes 70°; 98°.

Days suitable for fieldwork 7.0. Topsoil 83% very short, 17% short. Subsoil 83% very short, 17% short. Small grains mostly fair to good.

Wheat 94% harvested, 77% 1992, 87% avg. Oats 39% harvested, 22% 1992, 19% avg. Corn, soybeans poor to fair. Corn 30% silked, 2% 1992, 23% avg. Soybeans 86% planted, 89% 1992, 89% avg. Alfalfa hay 91% second cut, 65% 1992, 72% avg. Other hay 58% second cut, 15% 1992, 31% avg. Pasture condition, drought; hay supplies short to adequate. Sweet corn 7% harvested, 12% 1992, 10% avg. Cantaloupes 4% harvested, 1% 1992, 7% avg. Peach, apple crop fair to good. Peaches 6% harvested, 1% 1992, 12% avg.

**MICHIGAN:** Extremes 54°; 95°. Precipitation 0.06 to 2.70 in. across State.

Days suitable for fieldwork 6.5. Soil moisture 15% short, 70% adequate, 15% surplus. Dry beans 95% emerged, 95% 1992, 90% avg.; 5% very poor, 10% poor, 30% fair, 40% good, 15% excellent. Oats 55% headed, 75% 1992, 90% avg.; 10% turning, 5% 1992, 30% avg.; 2% very poor, 8% poor, 30% fair, 45% good, 15% excellent. Wheat 70% turning, 75% 1992, 90% avg.; 5% ripe, 0% 1992, 35% avg. Hay 90% first cutting, 90% 1992, 95% avg.; 15% second cutting, 15% 1992, 15% avg.; 4% very poor, 11% poor, 30% fair, 40% good, 15% excellent. Pasture condition 90% of normal. Major activities included: Spraying trees, mowing orchards, sidedressing corn, haying, cultivating.

**MINNESOTA:** Temperatures 1 to 7° below normal for the State. Extremes 44°; 86°. Precipitation 0.05 to 0.26 in. below normal for the north central, northwest, 0.18 to 1.45 in. above normal elsewhere. Precipitation 0.42 to 2.26 in. Greatest weekly precipitation 4.19 in.

Days suitable for fieldwork 1.5. Topsoil 13% adequate, 87% surplus. Spring wheat 86% heading, 88% 1992, 95% avg. Oats 80% heading, 95% 1992, 96% avg. Barley 90% heading, 86% 1992, 95% avg. Alfalfa 84% first cutting, 93% 1992, 97% avg. Corn 45% cultivated once, 95% 1992, 97% avg.; 20 in. height, 40 in., 1992, 46 in. avg. Soybeans 90% planted, 99% 1992, 99% avg.; 89% emerged, 99% 1992, 99% avg.; 22% cultivated once, 99% 1992, 93% avg.; 8 in. height, 13 in. 1992, 15 in. avg.; 0% blooming, 15% 1992, 32% avg. Spring wheat 2% very poor, 7% poor, 32% fair, 50% good, 9% excellent. Oats 2% very poor, 8% poor, 34% fair, 48% good, 8% excellent. Barley 2% very poor, 7% poor, 31% fair, 49% good, 11% excellent. Corn 15% very poor, 37% poor, 39% fair, 7% good, 2% excellent. Soybeans 16% very poor, 39% poor, 36% fair, 8% good, 1% excellent.

**MISSISSIPPI:** Temperatures 82°, 1.6° above normal. Extremes 52°; 98°. Coastal area experienced over 2.00 in. rainfall while the remaining sections acquired roughly an inch. Rainfall 0.89 in., 0.17 in., below normal. Soil temperature 88°.

Days suitable for fieldwork 6.6, 6.2 1992, 4.6 avg. Soil moisture 6% very short, 65% short, 29% adequate. Corn 64% silked, 91% 1992, 85% avg.; 23% dough, 45% 1992, 47% avg.; 3% dent, 17% 1992, 25% avg.; 4% silage harvested, 12% 1992, 13% avg.; 4% poor, 62% fair, 32% good, 2% excellent. Cotton 83% squaring, 96% 1992, 88% avg.; 23% setting bolls, 42% 1992, 41% avg.; 7% poor, 56% fair, 31% good, 6% excellent. Rice 9% heading, 19% 1992, 13% avg.; 75% fair, 25% good. Sorghum 20% heading, 69% 1992, 41% avg.; 83% fair, 17% good. Soybeans 90% planted, 96% 1992, 90% avg.; 84% emerged, 91% 1992, 83% avg.; 5% blooming, 15% 1992, 15% avg.; 63% fair, 37% good. Sweet potatoes 97% planted, 97% 1992, 96% avg.; 67% fair, 33% good. Watermelons 17% harvested, 26% 1992, 31% avg.; 17% poor, 83% fair. Wheat 90% harvested, 99% 1992, 99% avg.; 8% poor, 75% fair, 17% good. Hay 68% harvested, 65% 1992, 54% avg. Peaches 57% harvested, 70% 1992, 71% avg.; 5% very poor, 11% poor, 26% fair, 58% good. Livestock 5% fair, 92% good, 3% excellent. Pasture 90% of normal. Activities: Insect control.

**MISSOURI:** Temperatures near normal most of State to 5° above normal southeast. Rainfall 3.33 in., ranging from less than 0.10 in. southeast to over 5.00 in. northwestern, north central districts. Many northern counties received 5.00 to 10.00 in.

Days suitable for fieldwork 2.0. Topsoil 10% short, 13% adequate, 77% surplus. Moisture shortages developing southeast, but northern, central districts mostly surplus. Heavy rains preventing completion of late soybean, sorghum planting, delaying wheat harvest, haying. Corn silking mostly limited to southeastern district with 56%. Other major corn districts range none to 6 percent. Sorghum planting 96%, 100% 1992, 100% avg. Single-crop soybean planting 94%, 100% 1992, 99% avg. Double-crop soybean planting 56%, 75% 1992, 86% avg. Wheat harvest virtually complete southeast, less than 10% northern third of State. Oat harvest 15%, 27% 1992, 56% avg. Alfalfa second crop 31%, 57% 1992, 66% avg. Other hay cut 68%, 81% 1992, 83% avg. Pasture 1% poor, 14% fair, 56% good, 29% excellent.

**MONTANA:** Temperatures were well below normal. Precipitation moderate to heavy statewide, most areas received over 1.00 in. with the northeast averaging 1.60 in.

Days suitable for fieldwork slightly over 1.0. Topsoil 1% short, 71% adequate, 28% surplus. Subsoil 16% short, 70% adequate, 14% surplus. Barley 1% very poor, 3% poor, 17% fair, 54% good, 25% excellent. Oats 1% poor, 16% fair, 60% good, 23% excellent. Sugarbeet 4% fair, 71% good, 25% excellent. First cutting alfalfa hay 43% complete, 73% 1992, 80% avg. Other hay 25% complete, 53% 1992, 61% avg. Pasture, range feed condition 94% of normal, up 10 points from last week.

**NEBRASKA:** Temperatures 2 to 7° below normals. Precipitation 0.10 in. northwest to 3.70 in. northeast. Severe storms brought damage to crops, buildings, trees, grain storage facilities from winds approaching 100 miles per hour.

Days suitable for fieldwork 2.6. Topsoil 5% short, 32% adequate, 63% surplus. Subsoil 3% short, 53% adequate, 44% surplus. Winter wheat 1% very poor, 3% poor, 23% fair, 70% good, 3% excellent; 98% turning, 100% 1992, 100% avg.; 40% ripe, 76% 1992, 80% avg.; 2% harvested, 24% 1992, 55% avg. Corn 3% poor, 24% fair, 65% good, 8% excellent. Soybeans 2% poor, 27% fair, 67% good, 4% excellent; 4% blooming, 9% 1992, 23% avg. Sorghum 10% poor, 30% fair, 50% good, 10% excellent. Alfalfa 1% poor, 10% fair, 73% good, 16% excellent; 19% second cutting, 36% 1992, 43% avg. Wild hay 2% fair, 58% good, 40% excellent. Pasture, range 105% of normal.

**NEVADA:** Temperatures generally near or slightly below normal across the State. Gusty winds were common in the northern part of the State. A few scattered thundershowers visited the northeast, little precipitation was received.

Irrigation water supplies 15% short, 75% adequate, 10% surplus. Most crops slightly behind normal growth, development. Winter wheat 80% headed, 100% 1992, 95% avg. Spring wheat 45% headed, 85% 1992, 70% avg. Barley 75% headed, 85% 1992, 75% avg. First cutting alfalfa 75% complete, 85% 1992, 80% avg.; second cutting 10%, 10% 1992, 15% avg. Pasture, range mostly good. Stockwater supplies mostly adequate.

**NEW ENGLAND:** Precipitation none to 1.20 in. north; none to 3.38 in. south. Temperatures 71 to 79° north; 76 to 82° south. Maximum temperatures 90 to 98° north; 93 to 100° south. Minimum temperatures 44 to 57° north; 53 to 68° south.

Days suitable for fieldwork 6.7. Soil moisture 36% very short, 50% short, 14% adequate. Available grazing 11% very short, 76% short, 13% adequate. Fieldwork progress 1 day behind schedule most of region, 4 days behind in Vermont. Pasture condition 65% of normal. Potatoes across the region good to fair. Maine oats good to fair. Field corn fair to good. First cutting hay 95% harvested, 85% 1992, 90% avg.; good. Second cutting 10% harvested, 15% 1992, 10% avg.; fair. Shade, outdoor tobacco good. Sweet corn harvested 5%; fair to good. Peach, pear, highbush blueberry set average. Highbush blueberries 10% harvested. Cranberry set heavy to average. Apple set and fruit drop average; scab infection light. Strawberry set average; harvested 70%. Major farm activities: Irrigating fields, applying herbicides, insecticides, top, side dressing fields. Nitrate tests on corn fields, tying

up shade tobacco. Finishing first cutting of hay and starting second. Harvesting vegetables. Finishing strawberry harvest, beginning blueberry harvest. Dry: All farmers equipped to do so are irrigating.

**NEW JERSEY:** Temperatures much above normal. Extremes 60°; 104°. Rainfall 0.39 in. north, none central, 0.10 in. south. Heaviest 24 hour total 1.23 in. on 6th, 7th. Estimated soil moisture, in percent field capacity 60% north, 42% central, 21% south. Four inch soil temperatures 77° north, 79° central, 81° south.

Soil moisture content is very short. Rain needed in most areas. Irrigation of crops being widely used. Dry weather is slowing down growth of some crops. Good, moderate volume of beans, cabbage, cucumbers, peppers, squash are available. Light harvest of eggplant is increasing. Sweet corn, pepper volume is also increasing. Blueberry harvest is nearing its peak with volume increasing. Quality of blueberries are good. Light harvest of peaches. Thinning of apples reported. Harvest of wheat reported. Second cutting of hay. All grain crops, pastures need rain desperately.

**NEW MEXICO:** Warm weather continued across the State with averages about 2° above normal north, 5° above normal south. Temperatures reached at least 100° every day of the week in the southeast. About two-thirds of all reporting stations recorded measurable rainfall with several areas receiving over 1.00 in.

Days suitable for fieldwork 6.8. Soil moisture 86% short, 14% adequate. Crop conditions: Alfalfa 23% fair, 63% good, 14% excellent. Corn 4% poor, 25% fair, 67% good, 4% excellent. Wheat harvest 97% complete; remaining crop very poor to excellent. Chile 7% poor, 27% fair, 66% good. Onions mostly fair to good with harvest continuing. Apples poor to good with light to average fruitset. Pecans fair to good. Cattle, sheep very poor to excellent. Range, pasture 66% of normal.

**NEW YORK:** Hot, dry week. Temperatures 7 to 10° above normal statewide. Rainfall highly variable. Many locations zero, others between 1.00 to 2.00 in. Most rainfall occurred with scattered thundershowers in 7th, 8th.

Days suitable for fieldwork 6.7. Soil moisture supplies were mostly short to adequate. Pasture conditions 85% of normal. Corn stands 10 to 24 in. high: good color. Needs rain. Hay in fair to mostly good condition. First cut alfalfa 97% complete, 90% 1992, 87% avg. Clotim 87% harvested, 81% 1992, 81% avg. Second cuttings continue. Potatoes flowering, setting tubers. Dry beans look good. Needs rain. Tree fruit good to excellent. Winter damage on vinifera grape now evident. Onions good. Strawberry harvest winding down. Yield qualities good. Early sweet corn moved to market. Spinach planting continued.

**NORTH CAROLINA:** Temperatures 3 to 8° above normal. Precipitation 2.02 in. at Cherry Point to no rain at many locations.

Days suitable for fieldwork 6.2. Soil moisture 51% very short, 36% short, 11% adequate, 2% surplus. Crop condition: Pasture 15% very poor, 33% poor, 46% fair, 4% good, 2% excellent; winter wheat 50% fair, 50% good; field tobacco 14% poor, 67% fair, 17% good, 2% excellent; Irish potatoes 79% fair, 21% good; corn 14% very poor, 45% poor, 34% fair, 5% good, 2% excellent; hay 12% very poor, 29% poor, 51% fair, 6% good, 2% excellent; peaches 50% fair, 50% good; truck crops 5% very poor, 25% poor, 56% fair, 14% good; cotton 9% poor, 53% fair, 35% good, 3% excellent. Peanuts 5% poor, 57% fair, 38% good; soybeans 4% very poor, 22% poor, 47% fair, 27% good; sweet potatoes 17% poor, 53% fair, 27% good, 3% excellent; apples 60% fair, 40% good; hay, roughage supplies 6% very short, 21% short, 65% adequate, 8% surplus. Sorghum planted 95%, 91% 1992, 94% avg.; soybeans planted 95%, 93% 1992, 94% avg.; wheat harvested 98%, 88% 1992, 92% avg.; oats harvested 94%, 84% 1992, 93% avg.; barley harvested 96%, 82% 1992, 96% avg.; rye harvested 96%, 90% 1992, 92% avg. Irish potatoes harvested 67%, 62% 1992, 72% avg.; peaches harvested 40%, 67% 1992, 55% avg. Cotton squared 61%, 47% 1992, 65% avg.; cotton setting bolls 22%, 11%

1992, 21% avg.; corn silked 62%, 65% 1992, 63% avg.; second cutting of the hay crop is 60% completed. Major activities: Irrigating crops; topping, spraying tobacco. Other activities included: Planting soybeans; harvesting cucumbers; harvesting small grains; cutting hay; tending livestock; general farm maintenance.

**NORTH DAKOTA:** Cool, unsettled weather continued across the State. Scattered showers, thunderstorms were reported nearly every day last week. Precipitation 0.63 in. east central to 1.79 in. west central. Temperatures 7 to 10° below normal. Extremes 40° northwest, north central; 83° south central.

Days suitable for fieldwork 3.7. Topsoil 71% adequate, 29% surplus. Subsoil 5% short, 86% adequate, 9% surplus. Small grains mostly good, development behind last year and average due to lack of warm temperatures. Spring wheat 7% fair, 74% good, 19% excellent; durum 6% fair, 79% good, 15% excellent; barley 5% fair, 76% good, 19% excellent; oats 18% fair, 71% good, 11% excellent; winter wheat 17% fair, 74% good, 9% excellent. Hard red spring wheat 15% milk and beyond, 34% 1992, 51% avg. Durum wheat 5% milk and beyond, 14% 1992, 34% avg. Oats 19% milk and beyond, 36% 1992, 54% avg. Barley 23% milk and beyond, 41% 1992, 62% avg. Winter wheat 7% turning and beyond, 27% 1992, 55% avg. Cool wet weather is affecting the development of late season crops, with the exception of potatoes. Corn 7% very poor, 13% poor, 60% fair, 20% good; flax 17% fair, 75% good, 8% excellent; sugarbeets 5% fair, 95% good; potatoes 1% fair, 99% good; dry beans 3% very poor, 10% poor, 60% fair, 27% good; soybeans 11% very poor, 12% poor, 75% fair, 2% good; sunflowers 16% poor, 43% fair, 36% good, 5% excellent. Dry beans 8 in. avg. height, 10 in. 1992, 12 in. avg.; flax 10 in. avg. height, 10 in. 1992, 11 in. avg.; soybeans 8 in. avg. height, 11 in. 1992, 14 in. avg.; sunflowers 14 in. avg. height, 15 in. 1992, 22 in. avg.; potatoes 22 in. avg. height, 13 in. 1992, 15 in. avg.; corn 15 in. avg. height, 23 in. 1992, 33 in. avg.; sugarbeets 14 in. avg. height, 14 in. 1992. Flax 15% blooming and beyond, 21% 1992, 35% avg.; dry beans 4% blooming and beyond, 10% 1992, 28% avg.; soybeans 0% blooming and beyond, 9% 1992, 31% avg. Potatoes 55% blooming and beyond, 28% 1992, 53% avg. Post emerged herbicide application for broadleaf control 94% complete, wild oats 97%. Range, pasture 94% of normal. Hay crop 83% of normal. Alfalfa hay first cutting 44% complete, other hay 23%. Stockwater supplies 3% short, 89% adequate, 8% surplus.

**OHIO:** Unseasonably warm, humid air dominated State during the period with the close proximity of a stationary frontal system resulting in daily thunderstorm development. Excessive rainfall of more than 1.00 in. proved common under some of the storms. Crop growth was lifted as highs ranged the upper 80s to low 90s, lows ranged near 70°. Mean weekly temperatures upper 70s to low 80s were 6 to 10° above normal. Precipitation was spotty with central State generally receiving the most rainfall. Rainfall 1.00 to 2.00 in. central areas, around 0.50 in. outlying areas of the State.

Days suitable for fieldwork 5.6. Topsoil 11% short, 75% adequate, 14% surplus. Strawberries harvested 98%; oats headed 95%, oats ripe 9%, oats harvested 1%. Alfalfa 2nd cut harvested 35%, other hay 1st cut harvested 97%, 2nd cut harvested 16%. Hay 3% poor, 24% fair, 61% good, and 12% excellent. Pasture 1% very poor, 4% poor, 24% fair, 57% good, 14% excellent. Oats 1% very poor, 9% poor, 34% fair, 51% good, 5% excellent. Some potato leaf hopper damage has been reported in alfalfa. Potatoes are in bloom and are ripening. Sweet corn is tasseling across State, harvest has begun in some areas.

**OKLAHOMA:** Temperatures 1° above normal north central to 3° above normal east central. Precipitation none in east central, southeast to 2.13 in. west central.

Days suitable for fieldwork 6.2. Topsoil 36% short, 56% adequate, 8% surplus. Subsoil 14% short, 86% adequate. Wheat 94% harvested, 90% 1992, 100% avg. Corn 50% tasselling, 86% 1992, 52% avg.; 8% milk to soft, 13% 1992, 16% avg. Sorghum 31% fair, 69% good; 93% up to stand, 84% 1992, 93% avg; 6% heading, 3% 1992, 7% avg. Soybeans 81% planted, 66% 1992, 97% avg.; 65% up to stand, 53%

1992, 85% avg.; 5% flowering, 7% 1992, 6% avg. Peanuts 4% fair, 96% good; 97% up to stand, 88% 1992, 90% avg.; 20% pegging, 39% 1992, 26% avg.; none setting pods, none 1992, 2% avg. Cotton 38% fair, 62% good; 99% up to stand, 83% 1992, 93% avg.; 56% squaring, 29% 1992, 39% avg.; 3% setting bolls, none 1992, 6% avg. Alfalfa 89% 2nd cut, 63% 1992, 91% avg.; 19% 3rd cut, 4% 1992, 24% avg. Pastures 96% of normal. Cattle prices steady to slightly higher. Marketings average.

**OREGON:** Temperatures western areas 3° below normal, eastern areas 5 to 6° below normal. Overnight lows dipped into 30s, south central. Precipitation southeastern areas 0.10 in., elsewhere dry. Soil moisture 6% short, 92% adequate, 2% surplus. Winter wheat 2% poor, 11% fair, 49% good, 38% excellent. Wheat harvested 1%. Barley harvested 5%. Hay harvest continued, statewide. Mint, grass seed harvest underway, Willamette Valley. Willamette Valley snap beans, broccoli, root crop plantings continued. Potato "hollow-heart" condition concerns in northeast area potatoes, wet conditions. Early variety potato harvest underway, green pea harvest moving to higher elevations; Columbia Basin. Cranberry fruit set, sizing continued, girdler moths, black-headed fireworm larvae, black vine weevil active; southern coast. Strawberry harvest complete, raspberry harvest underway, blackberries showing color, blueberry harvest underway, sweet, tart cherry harvest winding down; Willamette Valley. Brine cherry harvest nearly complete, fresh market sweet cherry harvest progressing, hand pruning Bartlett pears, Bartlett harvest expected August 20th, winter pears good condition with marking due to wet weather, irrigation of trees underway; Hood River, The Dalles district. Livestock good to excellent. Ranges, pastures excellent. Sheep shearing underway, southwestern section. Flies causing cattle producers problems in western locations. Range, pasture 110% of normal.

**PENNSYLVANIA:** Above normal temperatures, below normal precipitation. Temperature 86°, 17° above normal. Extremes 56°; 101°. Precipitation 0.36 in., 0.54 in. below normal.

Days suitable for fieldwork 6. Soil moisture 60% short, 40% adequate. Average corn height 36 in., 27 in. 1992, 28 in. avg. Soybeans 100% planted, 96% 1992, 95% avg.; 4% very poor, 5% poor, 22% fair, 51% good, 18% excellent. Barley 89% turning yellow, 88% 1992; 75% ripe, 60% 1992; 59% harvested, 39% 1992. Wheat 87% turning yellow, 79% 1992; 51% ripe, 27% 1992; 16% harvested, 3% 1992; 3% very poor, 2% poor, 25% fair, 56% good, 14% excellent. Oats 47% turning yellow, 25% 1992; 3% ripe, 5% 1992; 1% very poor, 11% poor, 33% fair, 49% good, 6% excellent. Alfalfa first cutting 97% complete, 97% 1992. Second cutting alfalfa 48% complete, 29% 1992. Quality of hay made 7% poor, 45% fair, 48% good. First cutting of timothy clover 93% complete, 89% 1992. Feed from pastures poor to fair. Peach 20% below avg., 70% avg., 10% above avg. Apple 6% below avg., 64% avg., 30% above avg. Activities: Making hay, filling silos; baling straw; harvesting barley, wheat; spraying, side dressing, cultivating corn; hauling manure; caring for livestock.

**PUERTO RICO:** Island rainfall 1.03 in. was 0.17 in. below normal. Highest rainfall 2.92 in. at Dorado 3WNW, 2.60 in. at Maunabo, 2.15 in. at Juncos 1NNE. Highest 24 hour total 1.96 in. at Dorado 3WNW on 3rd. Island temperatures 80 to 81° on the coasts, 76 to 77° interior with mean station temperature 85.1° at Guayama to 64.8° at Cerro Maravilla. Extremes 59°; 95°.

**SOUTH CAROLINA:** Rainfall 0.60 in. Temperatures 6° above normal.

Days suitable for fieldwork 6.5. Soil moisture 57% very short, 41% short, 2% adequate. Corn poor; 92% silked, 93% 1992, 89% avg.; 52% dough, 56% 1992, 53% avg.; 17% mature, 0% 1992, 0% avg. Sorghum poor; 90% planted, 74% 1992, 80% avg. Tobacco poor to fair; 80% topped, 80% 1992, 81% avg.; 6% harvested, 16% 1992, 14% avg. Cantaloupes poor to fair; 58% harvested, 63% 1992, 60%

avg. Watermelons poor to fair; 57% harvested, 68% 1992, 65% avg. Cucumbers poor to fair; 75% harvested, 79% 1992, N/A avg. Tomatoes fair; 92% harvested, 84% 1992, 86% avg. Oats 96% harvested, 90% 1992, 95% avg. Rye fair; 91% harvested, 92% 1992, 95% avg. Fall Hay poor; 20% harvested, 12% 1992, 12% avg. Peaches fair; 35% harvested, 40% 1992, 44% avg. Pasture poor.

**SOUTH DAKOTA:** Temperatures 4 to 13° below normal. Extremes 33°; 86°. Rainfall was widespread across the State varying 0.12 to 3.62 in.

Days suitable for fieldwork 2. Topsoil 1% short, 45% adequate, 54% surplus. Subsoil 1% very short, 3% short, 51% adequate, 45% surplus. Rye 12% fair, 45% good, 43% excellent. Oats 1% very poor, 2% poor, 15% fair, 62% good, 20% excellent. Barley 2% poor, 12% fair, 51% good, 35% excellent. Flax 2% poor, 17% fair, 38% good, 43% excellent. Sunflowers 5% very poor, 1% poor, 20% fair, 56% good, 18% excellent. Weeds continue to be a problem as rains across the State made cultivating, spraying difficult. Cool weather continues to keep crop progress behind normal. Tan spot, root rot were being reported in some small grain fields. Livestock 2% fair, 67% good, 31% excellent. Pasture conditions 100% of normal. Haying continues to be difficult, what was baled is of poor quality.

**TENNESSEE:** Temperatures around 5° above normal across the State except for the Cumberland Plateau which was normal. Chattanooga had the highest reading at 102°, lows were reported in the upper 60s to mid 70s. Precipitation 0.67 to 100 in. below normal. Memphis, Jackson, Knoxville recorded no rainfall while Crossville recorded 0.83 in. on 9th.

Days suitable for fieldwork 6.3. Soil moisture 27% very short, 59% short, 14% adequate. Corn 47% tasseling, 72% 1992, 55% avg.; 4% poor, 34% fair, 55% good, 7% excellent. Cotton 95% squaring, 80% 1992, 78% avg.; 7% setting bolls, 13% 1992, 13% avg.; 10% fair, 90% good. Sorghum 5% headed, 22% 1992, 13% avg.; 1% poor, 23% fair, 69% good, 7% excellent. Soybeans 98% planted, 99% 1992, 95% avg.; 5% blooming, 12% 1992, 8% avg.; 27% fair, 71% good, 2% excellent. Tobacco 1% very poor, 8% poor, 58% fair, 33% good. Wheat 97% harvested, 98% 1992, 96% avg. Alfalfa hay 87% 2nd cutting harvested, 87% 1992, 80% avg. Pastures 6% very poor, 12% poor, 50% fair, 31% good, 1% excellent. Cattle 5% poor, 32% fair, 59% good, 4% excellent. Boll weevil counts are still high, but control measures appear to be working. A few counties are finding an increasing amount of tobacco bud worms in cotton which are harder to kill. The crop is thriving with plenty of DD60's. Reports of black shank continue to mount in the major tobacco-producing areas. Late-transplanted tobacco is suffering from the lack of rain, some fields have died. Growers were busy with herbicide applications in soybeans during the week. Most soybeans are planted, a few fields are being re-planted because of poor stand development. The lack of pasture growth during the recent dry spell has prompted farmers to let cattle graze on some hay fields. Wheat harvest should be completed this week.

**TEXAS:** Precipitation below normal across entire State except Trans-Pecos where totals slightly above normal. Lower Valley, South Texas, Edwards Plateau, Blacklands did not receive any rainfall last week. Northern High Plains received most precipitation with an average of 0.55 in. Greatest total at a regular reporting station was 2.75 in. at Dalhart. Temperatures generally ran below normal in southern half of State, above normal in north, east Texas. Crop districts with largest departures above normal were northern High Plains, Blacklands at +4°. District with largest departure below normal was Cross Timbers at -4°.

**Crops:** Corn fields had another good week of maturing. Most producers geared up for harvest in South Texas, some harvesting already completed. Crop was good in most areas, but rain is needed. Corn 82% normal, 92% 1992. Cotton fields looked good most parts of Plains, hot spots were beginning to show in dry fields. Hot dry winds have prevented young cotton from getting good start in parts of Low Plains. Rio Grande Valley, damage to crop from Tropical Storm Arlene less than anticipated and good yields expected if future weather

conditions are favorable. Statewide cotton condition 80% normal, 51% 1992. Rice producers applied fertilizers, herbicides along Upper Coast, where disease pressure heavy in some fields. Fields continued to head; crop remains behind normal progress. Rice condition 85% normal, 88% 1992. Grain sorghum planting virtually completed as High Plains producers finished up. Some Blacklands fields being treated for midge, yellow sugarcane aphids. Harvest underway Coastal Bend, where yields were good. Rio Grande Valley, some damage from Tropical Storm Arlene has hurt yields, damage less than anticipated. Rest of state could use rain to promote growth. Statewide sorghum condition 82% normal, 83% 1992. Small grain harvest rapidly winding down as open conditions allowed producers to harvest grain in Plains, where some good yields were being obtained. Some producers waiting for slow soaking rain to allow them to plow harvested fields. Statewide wheat condition 62% normal, 78% 1992. Peanut planting winding down Central Texas. Irrigation steady in Low Plains. Hot, dry winds stressed late planted fields in Cross Timbers, Low Plains. Some thrip damage occurred in Blacklands. Statewide peanut condition 86% normal, 83% 1992. Soybean planting virtually complete, High Plains. Stands look good across State. Blacklands, early varieties blooming, setting fruit. Producers could use more rain to promote growth.

**Commercial Vegetables:** Rio Grande Valley, farmers continued preparing land for fall vegetable planting. San Antonio-Winter Garden, some watermelon fields still being harvested. Cantaloupe harvesting winding down, while pepper harvesting continued. East Texas, sweet corn, cucumber, okra, pea, squash, tomato, watermelon harvest continued. Damage from excess rain still evident some areas, overall damage may not be as great as first expected. High Plains, producers preparing to harvest potatoes. Pumpkin planting winding down. Onion harvest full swing, peppers setting fruit. Trans-Pecos, cantaloupe, onion harvest continued. Peppers nearing harvest. Peach harvest continued most areas. Some smaller sizes showing up due dry weather. Pecan trees continued to set potentially good crop of nuts across State. Blacklands, Cross Timbers, producers checking for second generation casebearers. **Range and Livestock:** Range, pasture conditions for much of State remained good, however, more moisture needed to stimulate growth. Livestock conditions good for most part. Haying operations continued in full swing.

**UTAH:** Temperature maximums 4 to 5° below normal, minimums 5° below normal. Precipitation was light to moderate in the North, Northern Mountains, extremely light across the rest of the State except for Dixie, the Uinta Basin which reported zero precipitation. Days suitable for fieldwork 6.9. Soil moisture 17% short, 83% adequate. Winter wheat ripe 34%, 73% 1992, 38% avg. Spring wheat headed or better 93%; ripe 8%, 43% 1992, 17% avg. Barley headed or better 92%; ripe 10%, 53% 1992 23% avg. Oats headed or better 70%, 86% 1992, 77% avg.; harvested for hay/silage 20%. Corn height 29 in., 37 in. 1992, 28 in. avg. Alfalfa hay 2nd cutting 19% complete, 39% 1992, 27% avg. Other hay cut 54%, 60% 1992, 53% avg. Sweet cherries 76% picked. Tart cherries 8% picked. Pasture, range good to excellent.

**VIRGINIA:** Temperatures 6 to 9° above normal. Extremes 54°, 102°. Precipitation was variable ranging from none to over 2.00 in. Days suitable for fieldwork 6.0. Topsoil 24% very short, 58% short, 18% adequate. Pasture 8% very poor, 31% poor, 53% fair, 6% good, 2% excellent. Alfalfa 4% very poor, 9% poor, 50% fair, 36% good, 1% excellent. Other hay 9% very poor, 13% poor, 61% fair, 17% good. Barley 99% harvested, 98% 1992, 98% avg. Oats 86% harvested, 71% 1992, 82% avg. Wheat 90% harvested, 80% 1992, 89% avg. Apple 6% poor, 19% fair, 69% good, 6% excellent. Potatoes 25% harvested. Corn silked 35%, 27% 1992, 32% avg. Corn in dough stage 10%, 4% 1992, 9% avg.; 2% very poor, 19% poor, 60% fair, 18% good, 1% excellent. Peanut 25% fair, 75% good. Soybeans 93% planted, 88% 1992, 93% avg. Soybeans blooming 6%, 1% 1992, 11% avg.; 8% poor, 76% fair, 16% good. All tobacco 22% poor, 66% fair, 12% good. Livestock 2% poor, 43%

fair, 53% good, 2% excellent. Harvesting hay, topping, irrigating tobacco, spraying fruit, harvesting snapbeans, tomatoes, cucumbers, peppers.

**WASHINGTON:** Temperatures 6° below normal to 1° below normal west; 10° below normal to 2° below normal east. Precipitation none to 0.08 in. west; none to 0.73 in. east.

Days suitable for fieldwork totaled 6.2. Soil moisture 28% short, 64% adequate, 8% surplus. Irrigation water supply 19% short, 81% adequate. Hay, other roughage 2% short, 96% adequate, 2% surplus. Range, pasture 5% poor, 32% fair, 59% good, 4% excellent. Winter wheat dryland 10% fair, 90% good; irrigated 100% good. Spring wheat dryland 20% fair, 75% good, 5% excellent; irrigated 5% fair, 90% good, 5% excellent. Barley dryland 40% fair, 60% good; irrigated 5% fair, 90% good, 5% excellent. Winter wheat, winter barley harvests just barely underway in a few areas. Drier weather helped hay producers as they tried to catch up with the late spring. Most reports of hay quality were low. Raspberry harvest continued, blueberry harvest began. Cherry harvest was nearing completion in most areas. Cool weather, the rains over the past month have helped the mountain pastures as most of them looked good.

**WEST VIRGINIA:** Temperature 79°. Extremes 59°, 99°. Precipitation 0.27 in.

Days suitable for fieldwork 6.0. Soil moisture, 10% very short, 65% short, 25% adequate. Wheat, 5% fair, 95% good; 93% ripe, 24% harvested. Barley, 92% fair, 8% good; 100% harvested. Oats, 6% fair, 94% good; 38% ripe. Corn, 5% poor, 6% fair, 87% good, 2% excellent. Soybeans, 100% good; 97% planted, 95% emerged. Hay, 7% very poor, 8% poor, 23% fair, 56% good, 6% excellent; 89% 1st cut, 13% 2nd cut. Apples, good. Peaches, good. Tobacco, 2% fair, 98% good. Pastures, 15% very poor, 9% poor, 18% fair, 54% good, 4% excellent; 83% of normal. Cattle, 8% poor, 2% fair, 87% good, 3% excellent. Sheep, 1% poor, 29% fair, 69% good, 1% excellent. Gardens, 5% very poor, 20% fair, 65% good, 10% excellent. Farm activities: General maintenance, moving livestock, planting soybeans, cutting hay, combining wheat.

**WISCONSIN:** Heavy precipitation continued to soak the State. Temperature 70°; at normal. Extremes 46°, 90°. Precipitation 0.90 to 4.00 in.

Days suitable for fieldwork 2.4. Soil moisture 17% adequate, 83% surplus. Pasture 90% of normal, 55% 1992, 62% avg. General condition of crops 1% very poor, 14% poor, 47% fair, 37% good, 1% excellent. Oats headed 50% headed, 78% 1992, 88% avg.; 5% very poor, 14% poor, 35% fair, 40% good, 6% excellent. Corn 3% very poor, 22% poor, 44% fair, 29% good, 2% excellent; height 20 in., 30 in. 1992, 40 in. avg. Soybean 1% very poor, 10% poor, 54% fair, 32% good, 3% excellent. 1st cut alfalfa 72% harvested; 2nd cut alfalfa 3% harvested, 11% 1992, 17% avg. Special survey shows 15% of acres lost (not planted or drowned out) due to excess moisture. Primary activities: Hay harvesting, pea harvesting.

**WYOMING:** Temperatures generally 4 to 13° below normal. Precipitation was near to above normal in the northern part of the State, below normal in the southern part of the State.

Days suitable for fieldwork 6.4. Topsoil 20% short, 80% adequate. Subsoil 10% short, 90% adequate. Spring wheat 7% turning color, 27% 1992, 28% avg. Oats 5% turning color, 10% 1992, 14% avg. Barley 16% turning color, 47% 1992, 31% avg. Winter wheat 56% turning color, 71% 1992, 69% avg.; 1% mature, 7% 1992, 20% avg. Sugarbeets 94% thinned, 99% 1992, 100% avg. Corn height 21 in. Dry beans 1% in bloom, 15% 1992, 17% avg. Potatoes 30% in bloom, 12% 1992, 33% avg. Alfalfa 1st cutting completed 60%, 71% 1992, 78% avg. Other hay harvested 27%, 25% 1992, 36% avg. Crops in mostly good condition. Stockwater supplies adequate or surplus across entire State.

## International Weather and Crop Summary HIGHLIGHTS

July 4 - 10, 1993

**FSU:** In western areas, light to moderate rain maintained adequate to abundant moisture for crops. In the New Lands, widespread showers benefited spring grains in or nearing the heading stage.

**EUROPE:** Rain in England, southern France, and Poland slowed winter grain harvesting.

**SOUTH ASIA:** The monsoon intensified over central and northern crop areas, but an unfavorable drying trend persisted in southern India.

**EASTERN ASIA:** Widespread rain favored summer crops in Manchuria and the North China Plain. Drier weather brought relief to flooded areas of southern China.

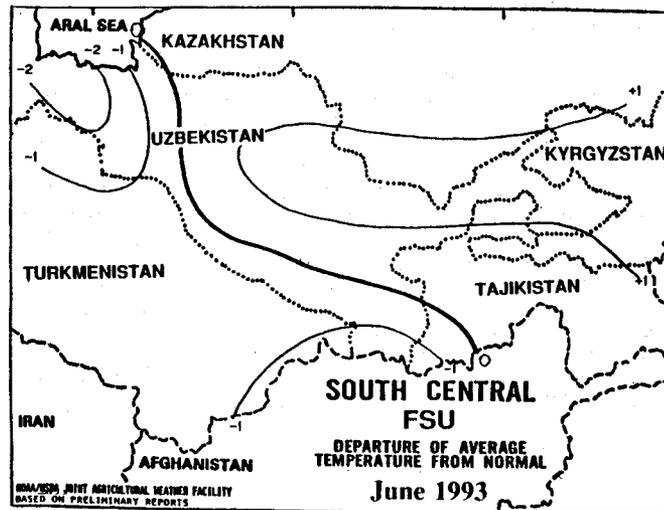
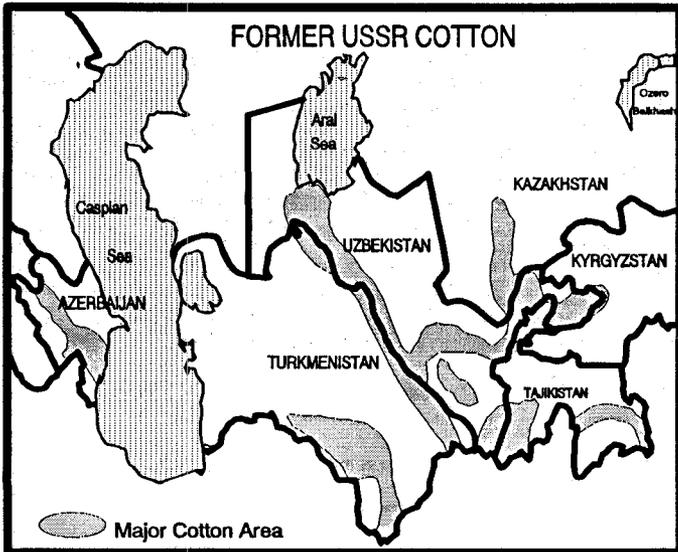
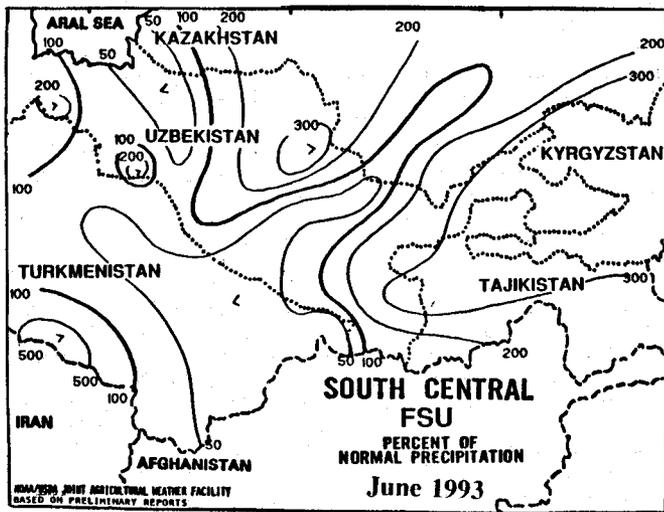
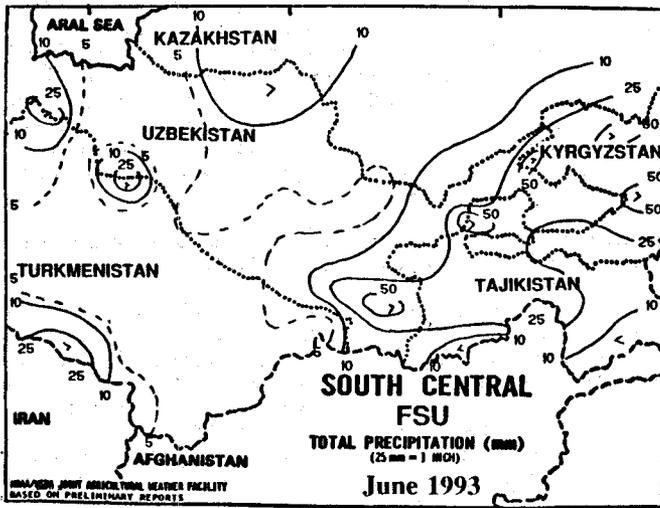
**SOUTHEAST ASIA:** Showers brought relief to Thai grains advancing through reproduction. Much-needed rain continued over the Philippines.

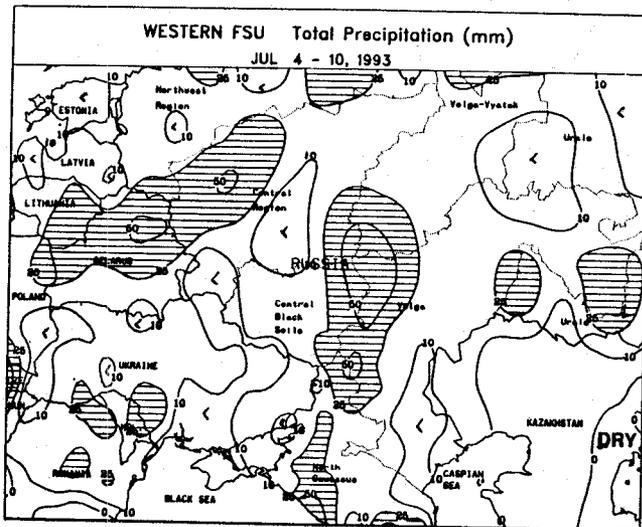
**AUSTRALIA:** Highly beneficial rains fell across eastern and southern Australia, favoring germinating to vegetative winter wheat.

**SOUTH AMERICA:** Dry weather continued to favor fieldwork across central Argentina.

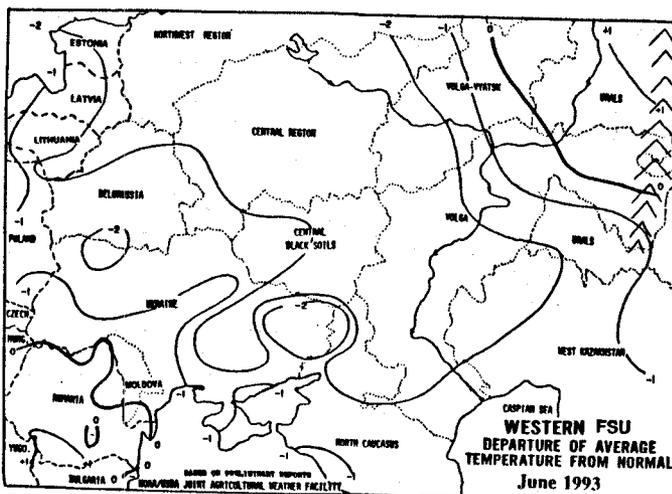
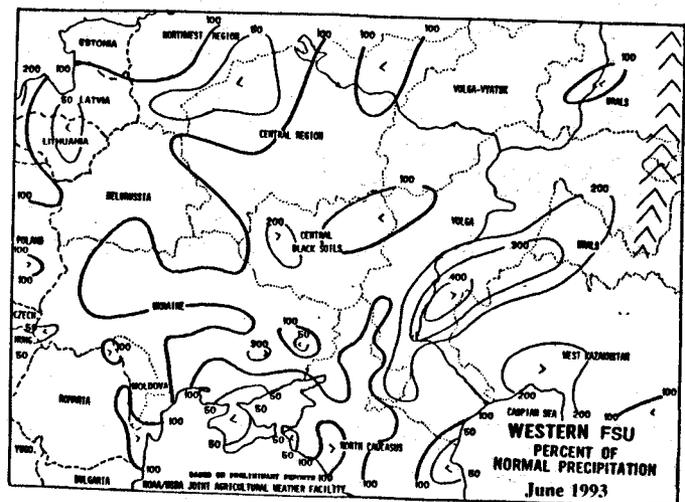
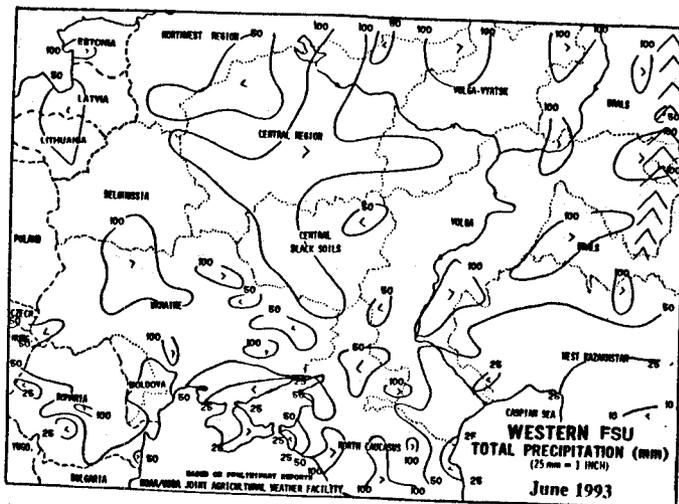
**MEXICO:** Hurricane Calvin brought heavy tropical showers to the southern coast, causing additional flooding. The main corn belt continued to receive seasonable rainfall.

**CANADA:** Soaking rain increased Prairie moisture reserves, but persistent coolness slowed grain and oilseed development.

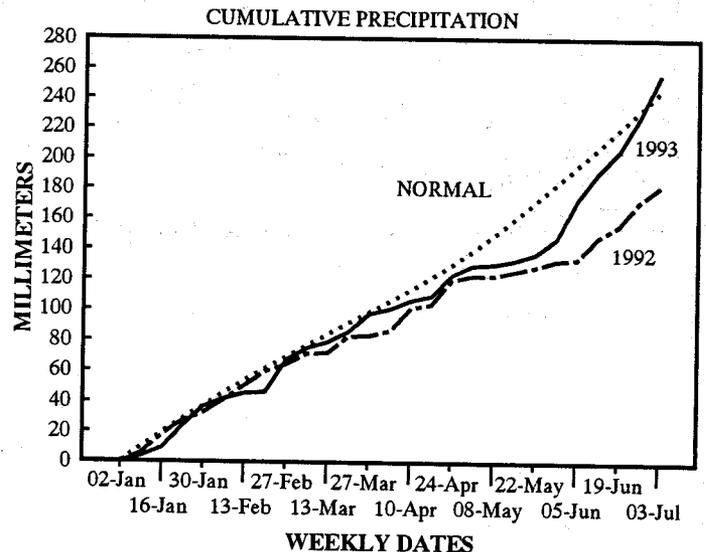




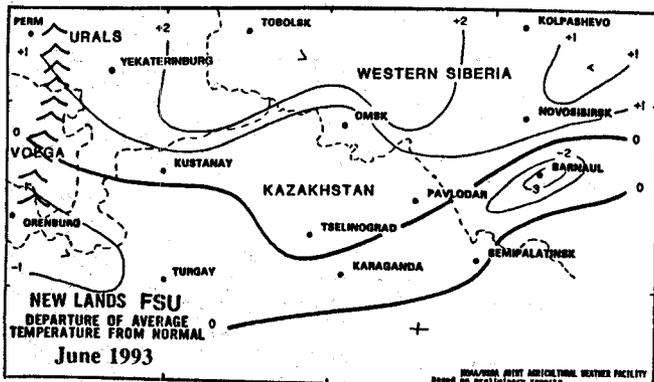
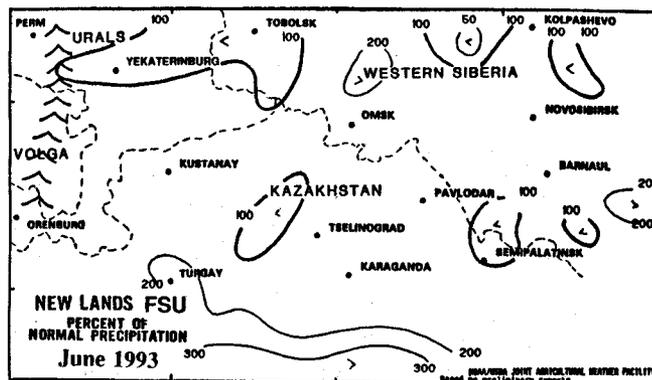
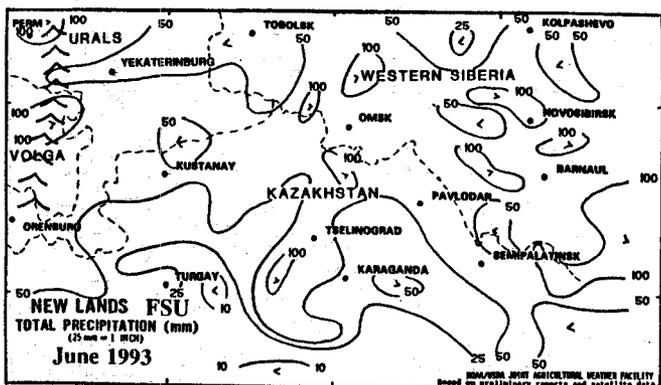
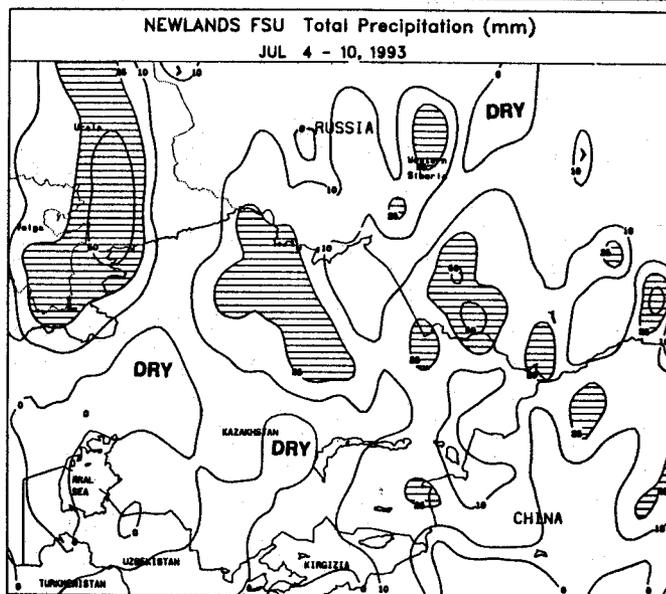
**FSU-WESTERN:** Widespread light to moderate rain continued to dampen most crop areas. Precipitation amounts generally ranged from 10 to 48 mm, with greatest rainfall (25-60 mm) covering Lithuania, northern Belarus, the western portion of the Central Region, the western Volga Valley, and parts of the North Caucasus. Although the rain was overall beneficial for crop growth, it slowed winter grain harvesting just beginning in the south. Weekly average temperatures were 2-4 degrees Celsius (C) below normal, further slowing the development of corn, sunflowers, and sugar beets. In June, numerous showers and thunderstorms followed an April-May dry pattern in the Baltic States, Belarus, and Russia. Most of Russia received above-normal rainfall in June, especially in the Volga Valley, where localized areas received more than twice the normal amount of rain. Ukraine also received near- to above-normal rainfall in June, except for the Crimea and the southeast, where precipitation continued below normal. June's overall precipitation favored winter grains in the reproductive to filling stages, spring grains in or nearing reproduction, as well as corn in the vegetative stage. However, reports indicate localized crop lodging due to excessive rainfall. Monthly average temperatures in June were 1-3 degrees C below normal over most areas. While the cool weather benefited winter and spring grains, it slowed corn growth and development.



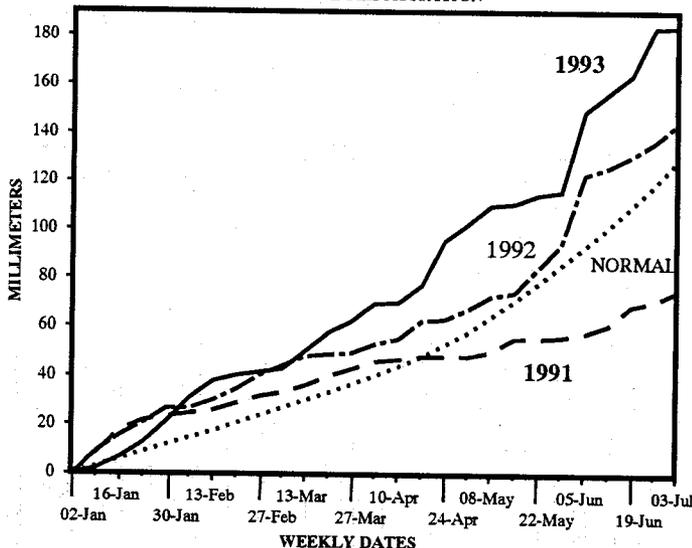
**CENTRAL BLACK SOILS REGION**

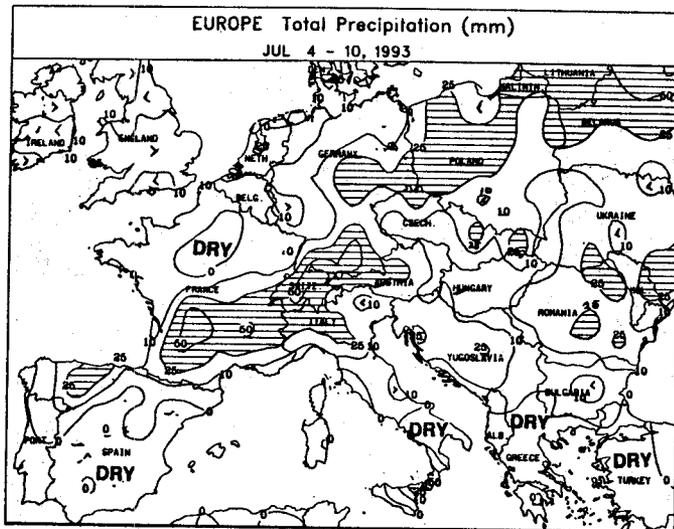


**FSU-NEW LANDS:** Showers returned to spring grain areas in Kazakhstan, accompanied by cooler weather. Precipitation amounts generally ranged from 8 to 21 mm, with local amounts ranging from 25 to 69 mm. The rain benefited spring grains in or nearing the heading stage. Further north, widespread wet weather (10-25 mm, with local amounts in excess of 30 mm) covered the Urals and Siberia, maintaining abundant moisture for spring grains nearing the heading stage. Weekly average temperatures were near normal in Kazakhstan and 1-4 degrees C above normal in the Urals and Siberia. In June, above-normal precipitation covered the Urals, Siberia, and Kazakhstan, providing generous moisture for spring grains in the vegetative stage. Although a brief episode of hot weather on June 28-30 (maximum temperatures ranging from 31 to 36 degrees C) covered crop areas in Kazakhstan and Western Siberia, moisture reserves were adequate to meet increasing crop-water requirements.

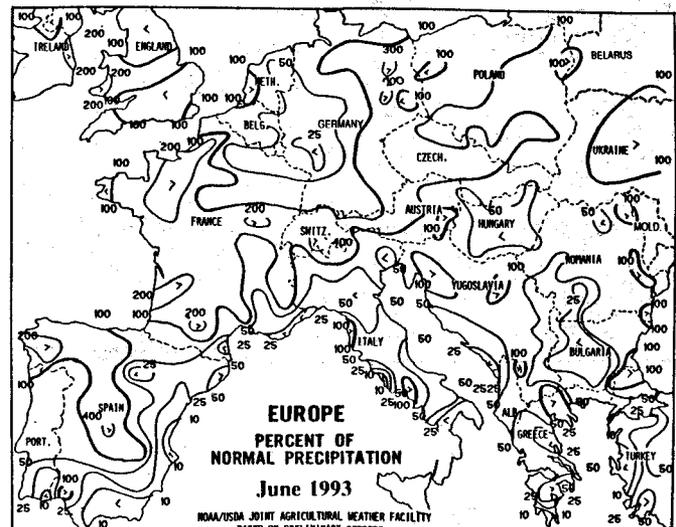
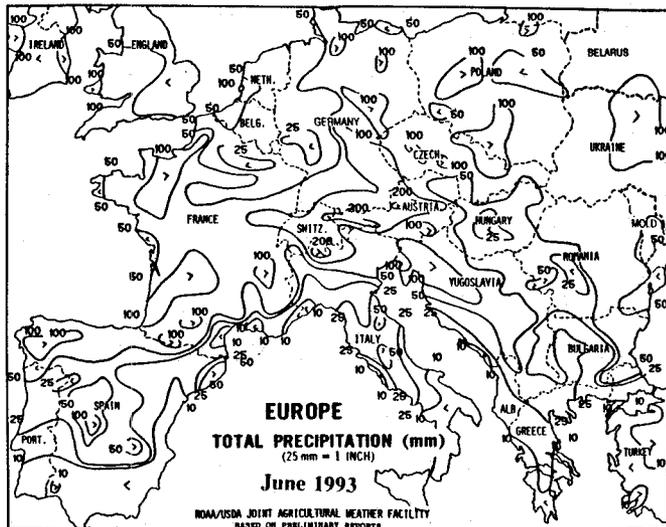


**CENTRAL KAZAKHSTAN**  
CUMULATIVE PRECIPITATION

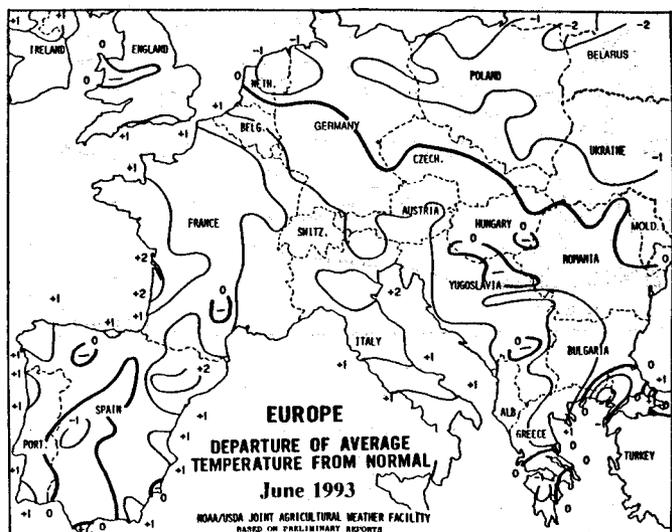
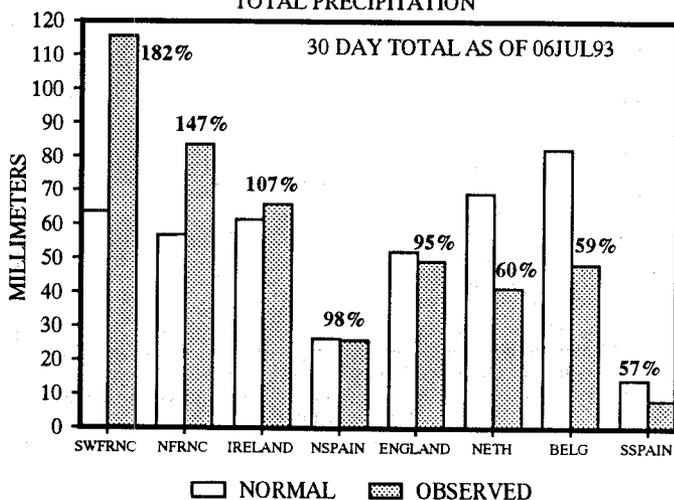




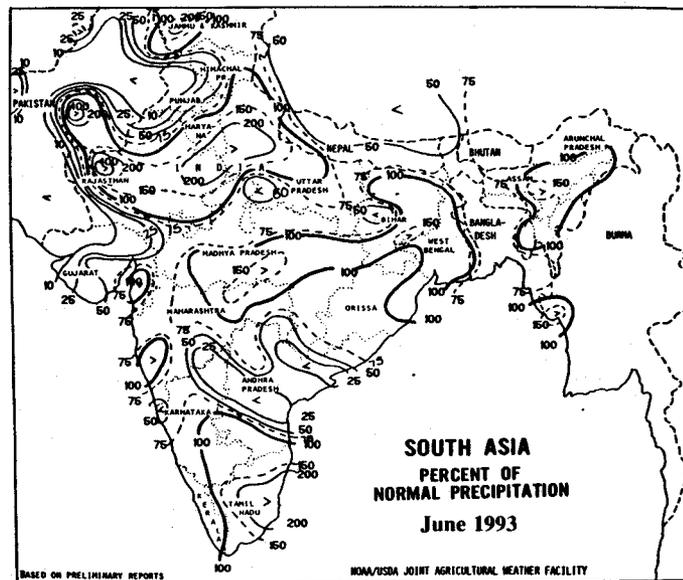
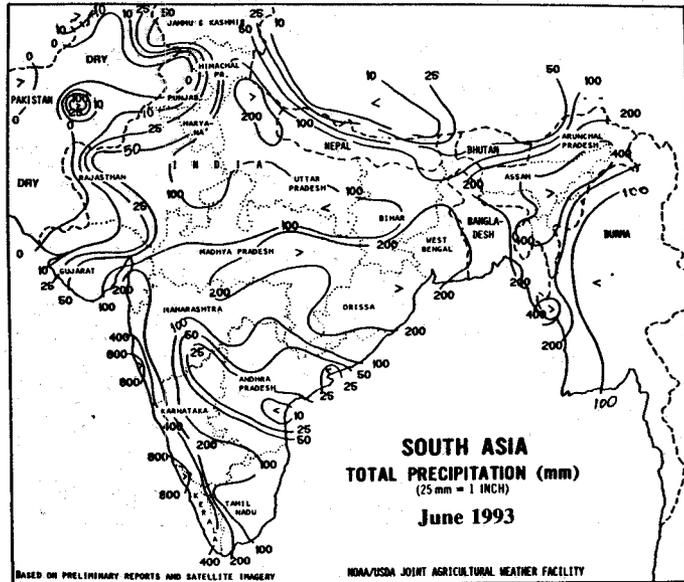
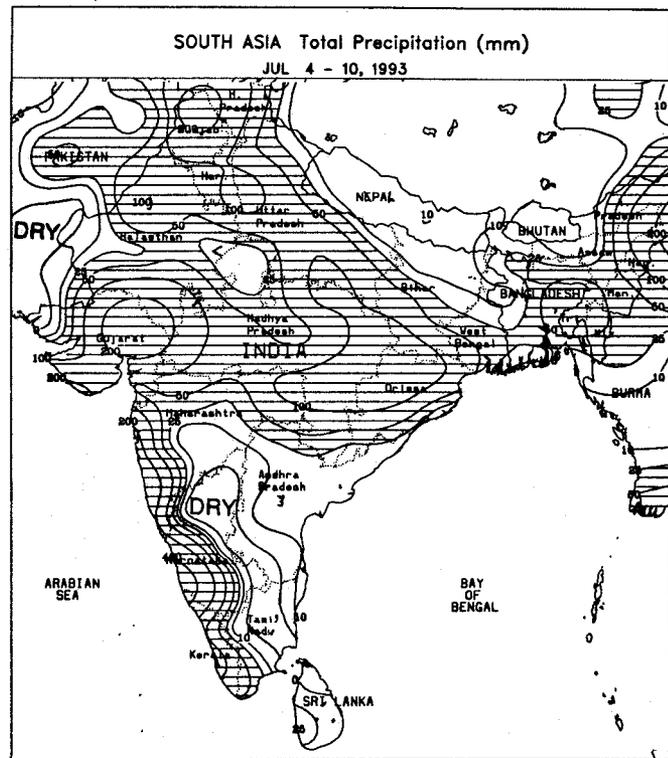
**EUROPE:** Drier weather during midweek eased excessive wetness in southern France, but rain (25-60 mm) returned over the weekend. Showers (10-44 mm) from England to Poland slowed winter grain and oilseed harvesting, especially in western Poland. Moisture is generally adequate for summer crop development across Europe, except in Hungary and southern Slovakia, where a drying trend has reduced soil moisture reserves for corn, sunflower, and sugar beet development. Beneficial rain fell this week in Romania, while dry weather prevailed across the Mediterranean region. June rainfall averaged well below normal over much of east-central and southeastern Europe. While moisture supplies were diminishing in the southeast, ample June rainfall soaked much of France and eastern Germany. Northwestern and central Spain also benefited from unusually heavy June rainfall, easing irrigation demands for summer crops. During the 30-day period ending July 6, 1993, total rainfall in France averaged nearly 190 percent of normal in the southwestern corn area and nearly 150 percent of normal in northern winter grain areas. In Scandinavia, periodic showers kept topsoils moist, except for unfavorable dryness in Denmark.



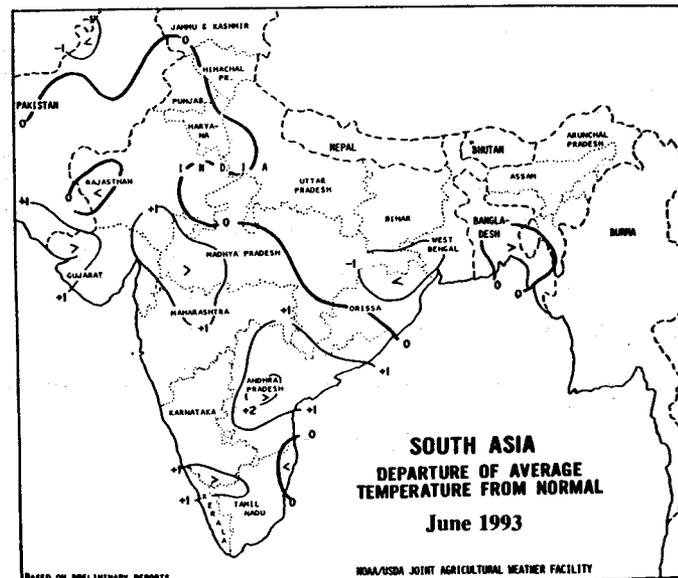
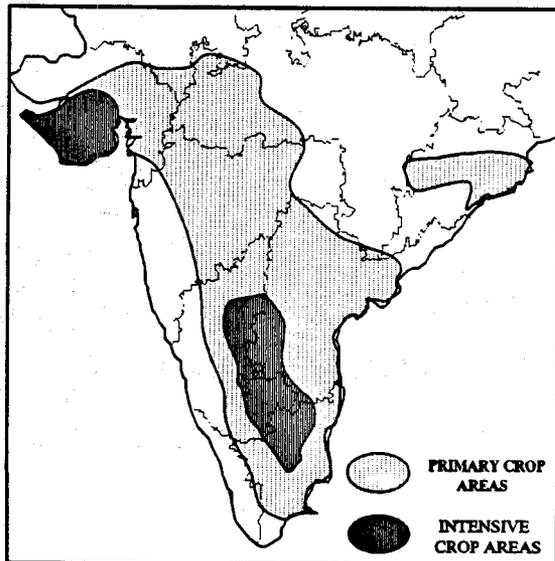
**WESTERN EUROPE**  
TOTAL PRECIPITATION

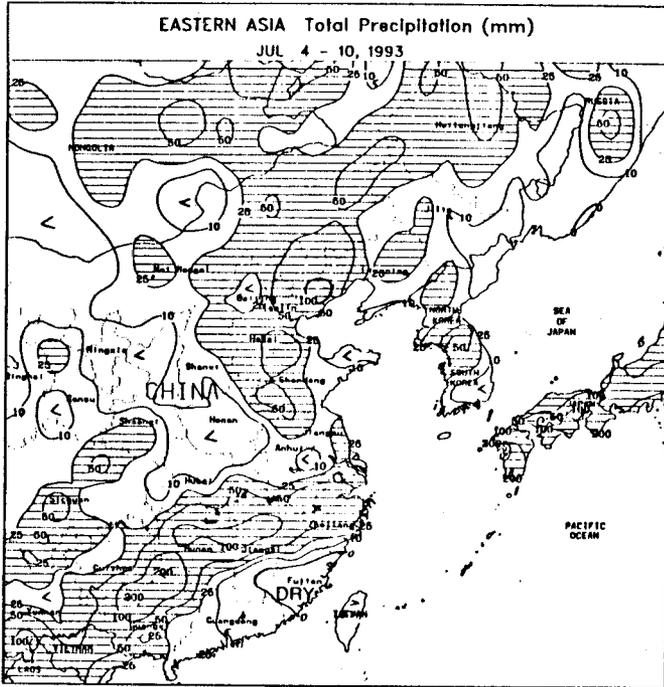


**SOUTH ASIA:** Seasonable showers (25-100 mm, with isolated totals of 150-300 mm) over central and northern India and Pakistan improved conditions for main-season grain, oilseed, and cotton establishment. Amounts ranged from 31 to 100 mm or more in primary rainfed oilseed areas of Gujarat and western Madhya Pradesh, with local totals of 200 mm or more resulting in some local flooding. Although inundating rains (100-300 mm or more) continued along India's southwest coast, mostly dry, warm weather persisted in the southern interior, reducing moisture for main-season crops. Light to moderate showers (10-40 mm, with isolated amounts exceeding 100 mm) covered flood-stricken regions of eastern India and Bangladesh. During June, the southwest monsoon became established over southern India and advanced northward about on schedule. Monthly rainfall was near to above normal throughout the region, except for portions of the southern interior which have experienced unseasonably dry weather since the monsoon's onset. Flooding was a problem in eastern rice areas for winter wheat and rice harvests and main season plantings. In the north, periodic showers, related to lingering westerly storms, brought some relief from the heat to cotton and livestock.

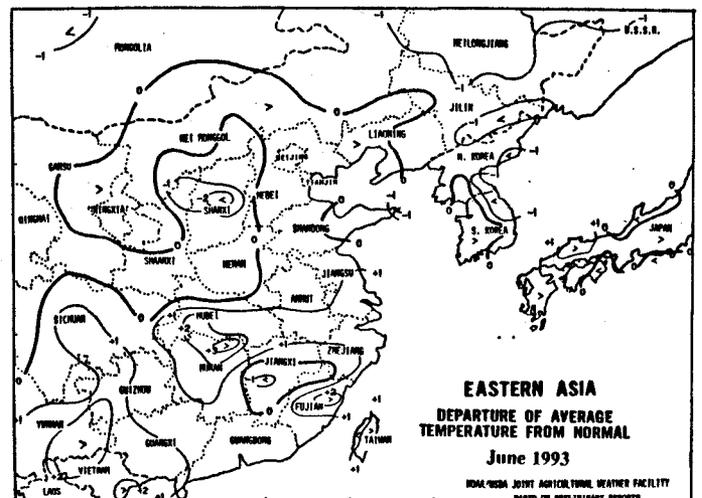
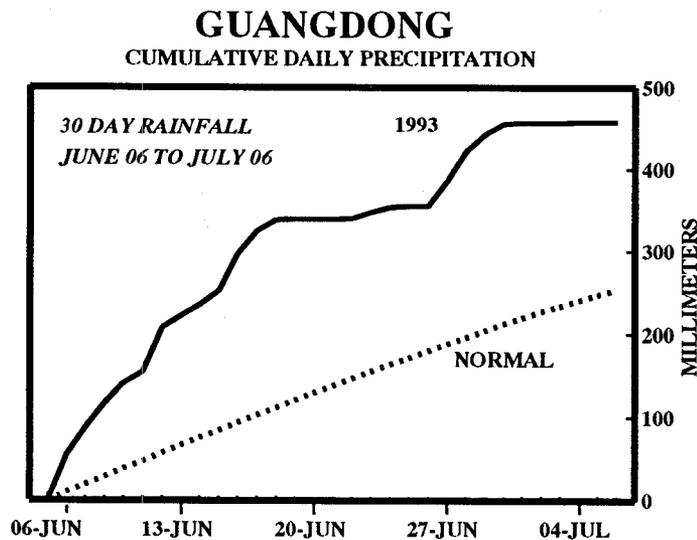
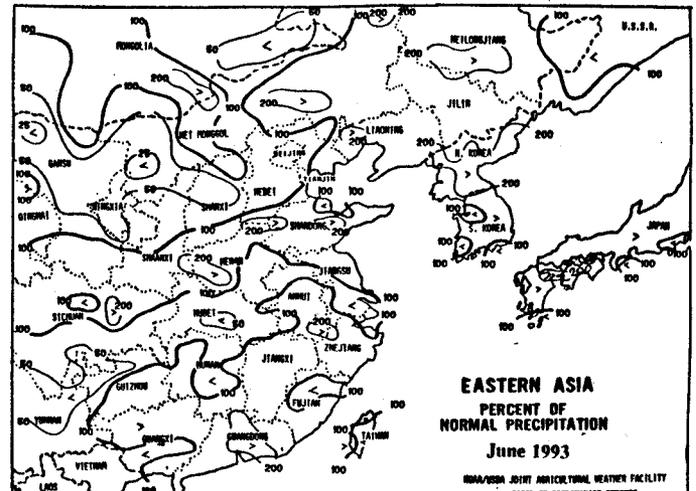
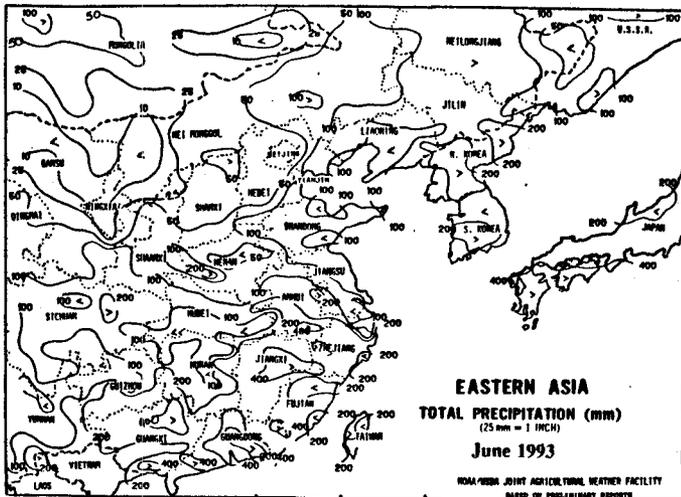


**INDIA GROUNDNUT REGION**

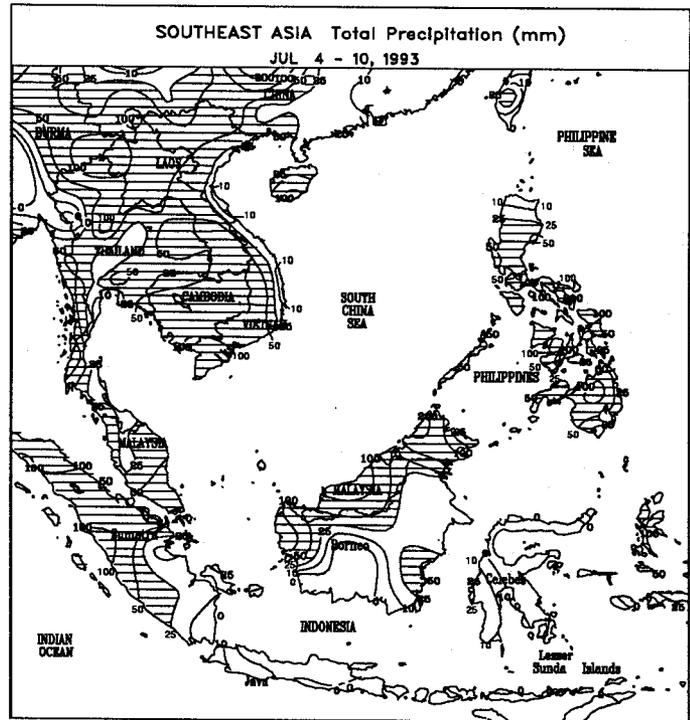




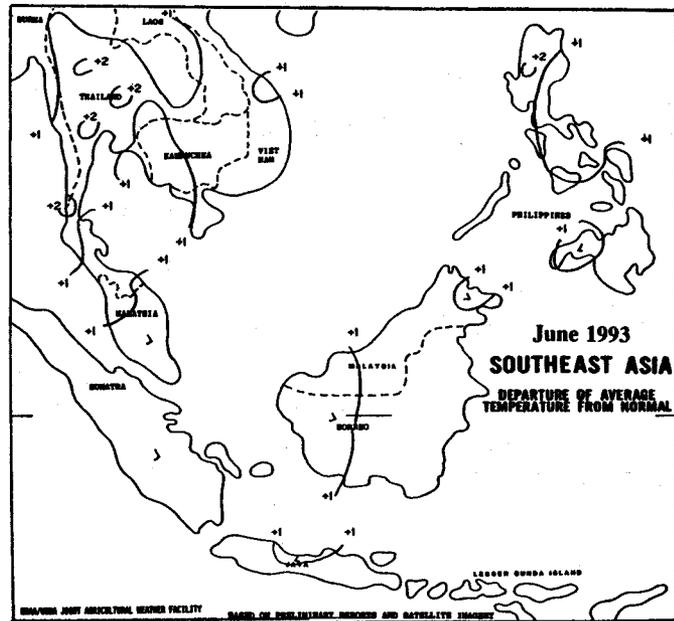
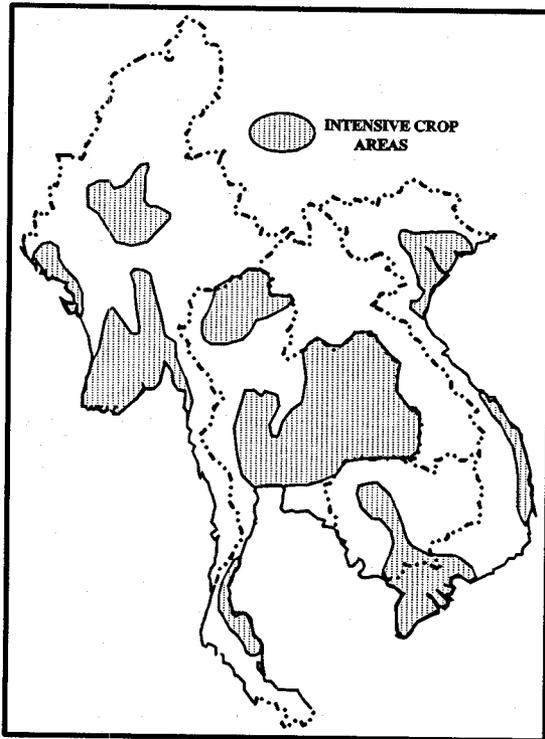
**EASTERN ASIA:** Widespread moderate to heavy rains (18-75 mm) fell across the North China Plain and Manchuria, aiding irrigation supplies and rainfed corn, cotton, soybeans, and spring wheat. The rains delayed late winter wheat harvesting. Portions of central China (Henan and Hubei) received light rain (2-13 mm), where additional rain is needed to reduce accumulating moisture deficits. Somewhat drier weather (2-20 mm) prevailed across extreme southern China (Guangdong and Fujian), alleviating flooding problems and favoring late double-crop rice transplanting. Abundant showers (20-90 mm) covered southwest China (Yunnan and Guizhou) eastward into the lower Yangtze Valley, keeping irrigation levels favorable. However, isolated heavy showers (145-225 mm) fell across portions of Guangxi, Hunan, and Jiangxi, causing local flooding. During June, rainfall averaged near to above normal across Manchuria, the North Plain, and southern China. In southern China, Guangdong received 150 to 250 percent of normal rainfall, causing flooding and fieldwork delays. Only portions of central and northern China received less than 75 percent of normal June rainfall.

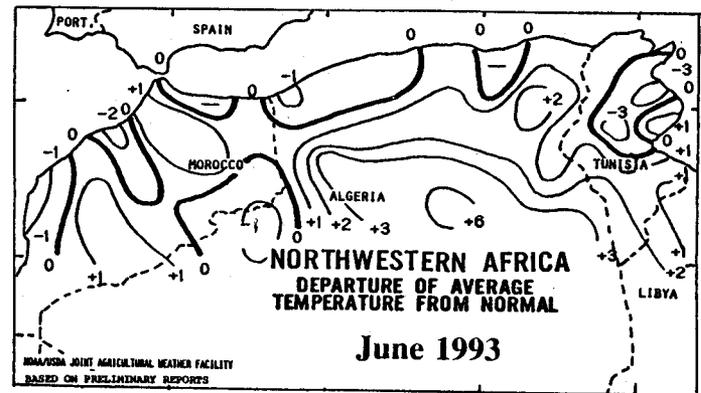
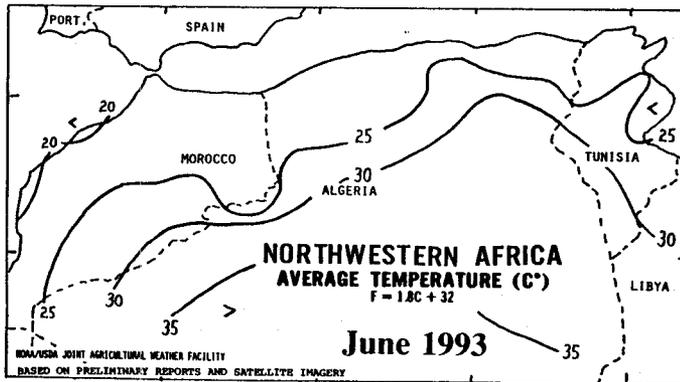
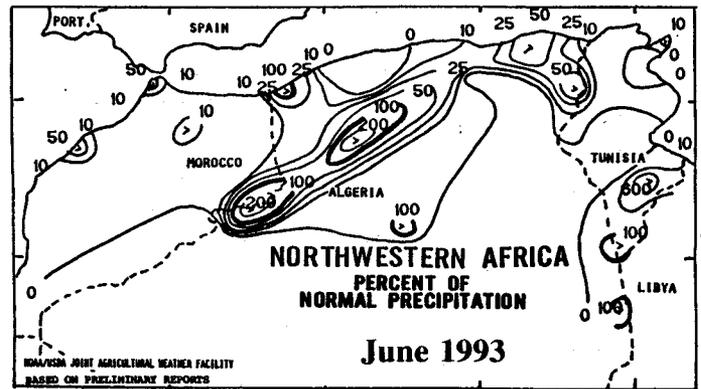
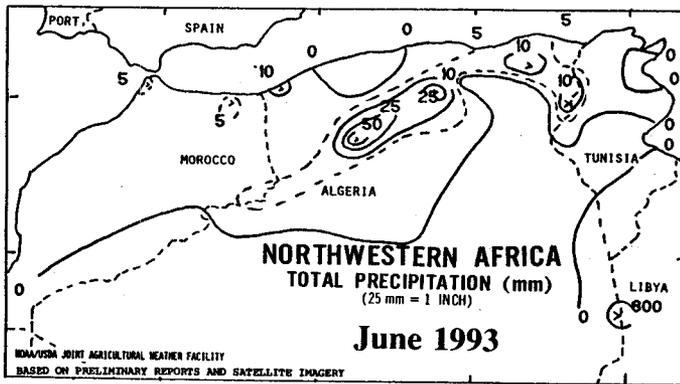
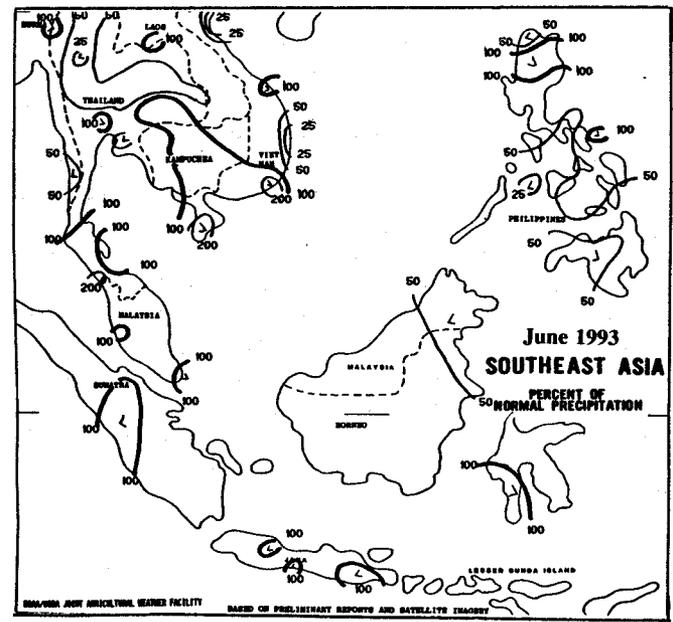
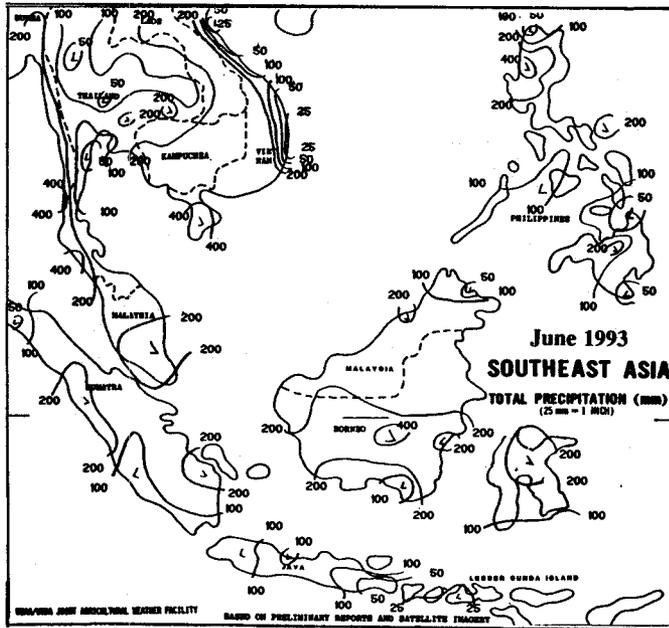


**SOUTHEAST ASIA:** Widespread showers (10-116 mm) across Thailand's rainfed rice and corn areas brought some relief to vegetative to reproductive crops. Unseasonable warmth continued, however, maintaining high crop moisture demands. Moderate to heavy showers (25-144 mm) fell over the Malay Peninsula and primary rice areas of northern Vietnam and the Mekong Delta. Moderate to heavy rain (25-100 mm, with local amounts exceeding 200 mm) improved grain and sugarcane prospects throughout the Philippines. In June, a drying developed over Thailand, reducing moisture for grain development, with hot weather stressing reproductive crops by month's end. June rainfall was near to above normal in rice and oil palm areas of the southern Malay Peninsula and from Bangkok to southern Vietnam. Early June shower activity was sparse over the Philippines, resulting in mostly well-below-normal rainfall. However, following the passage of Typhoon Koryn on the 26th, frequent activity has improved conditions for main-season crop development and encouraged late rice and corn planting.

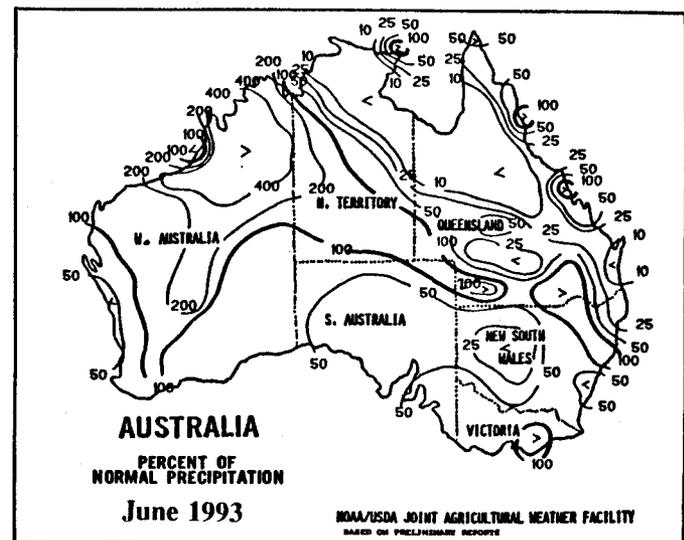
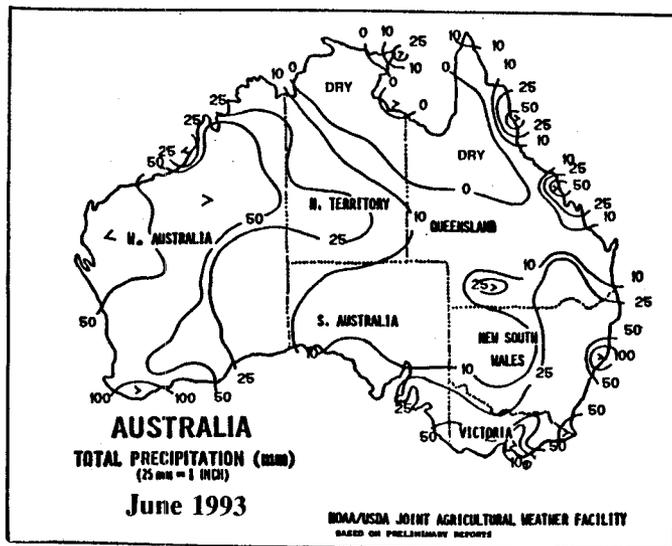
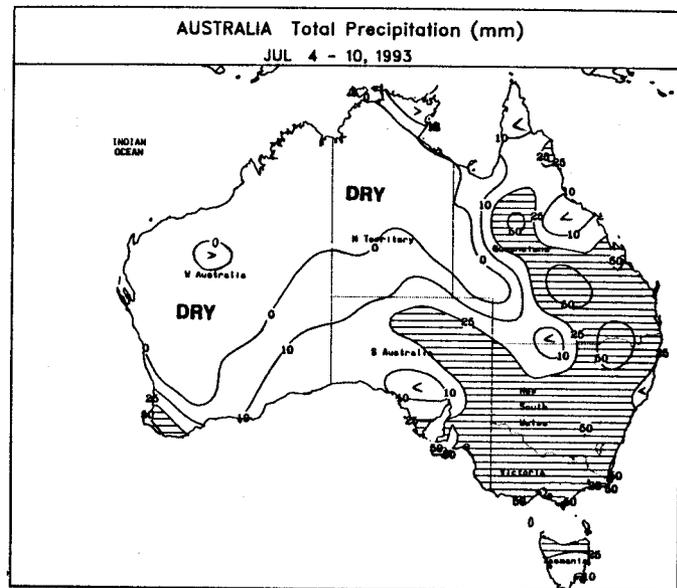


**INDOCHINA: PRIMARY RICE AREAS**

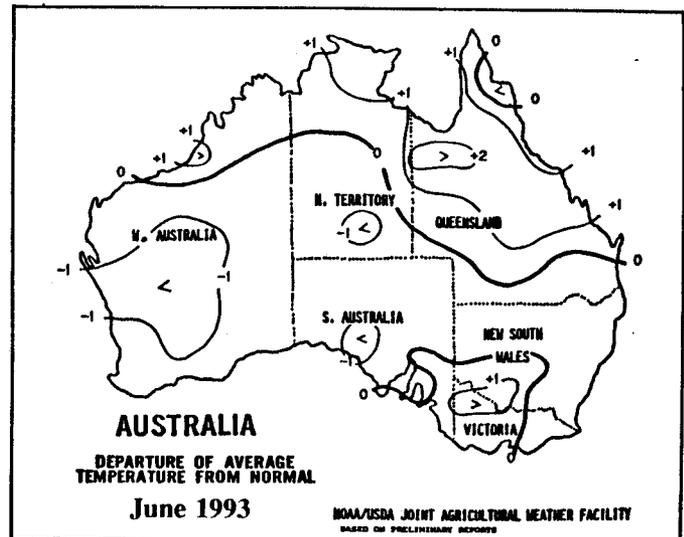
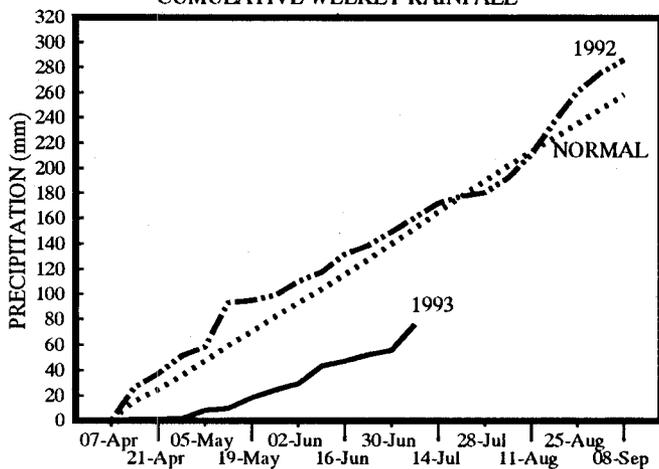


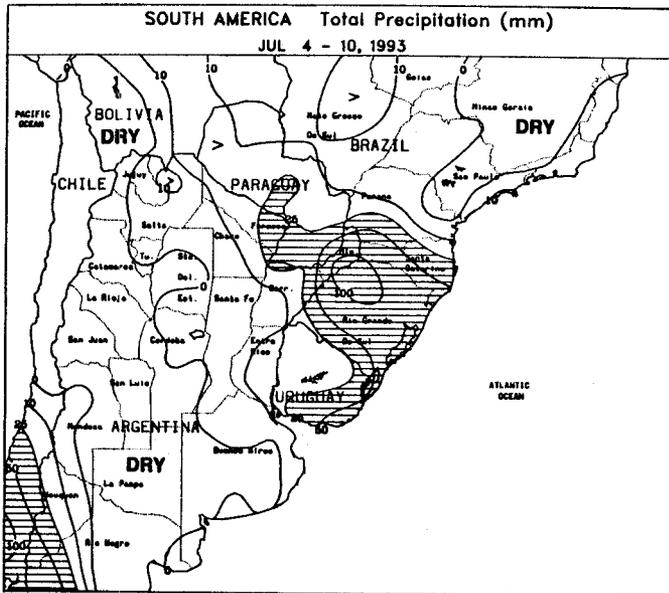


**AUSTRALIA:** Highly beneficial rain (15-65 mm) fell across most of eastern and southern Australia, favoring germinating to vegetative winter wheat. The rain reduced long-term moisture deficits across southern Queensland and northern New South Wales. However, additional significant rains are still needed to eliminate moisture deficits and ensure adequate early wheat growth. During the last several weeks, increased rainfall across southern Australia wheat areas has improved early crop growth. Weekly temperatures averaged 2-5 degrees C above normal across eastern Australia and near normal elsewhere. During June, rainfall averaged near to above normal across portions of southern Queensland and northern New South Wales, while the remaining areas of eastern and southern Australia averaged below-normal rainfall. The western wheat areas received near-normal June rainfall.

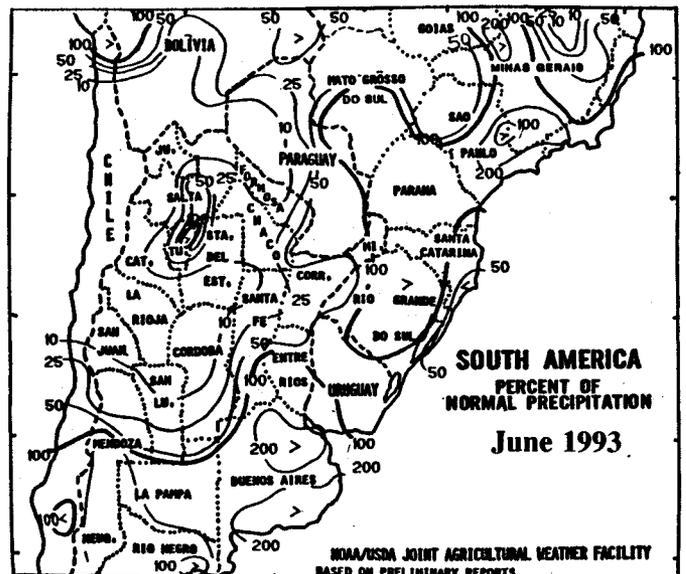
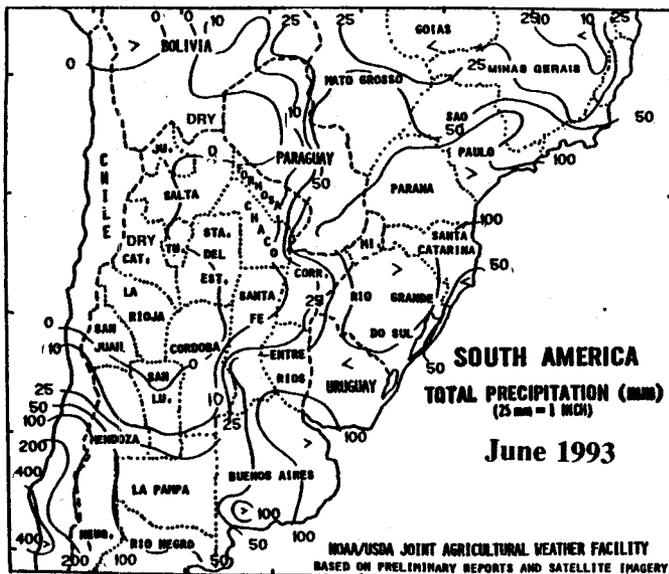


**SOUTH AUSTRALIA**  
CUMULATIVE WEEKLY RAINFALL

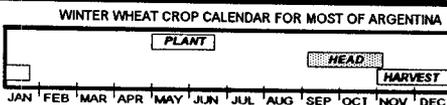
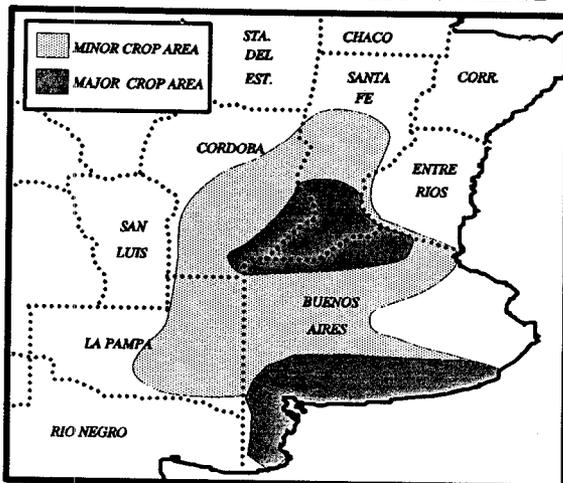




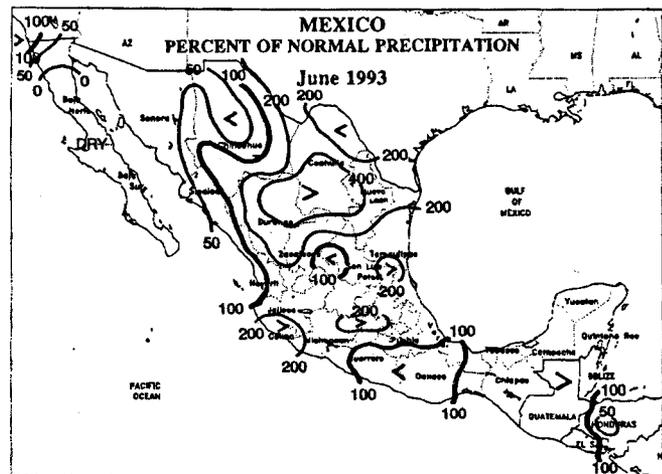
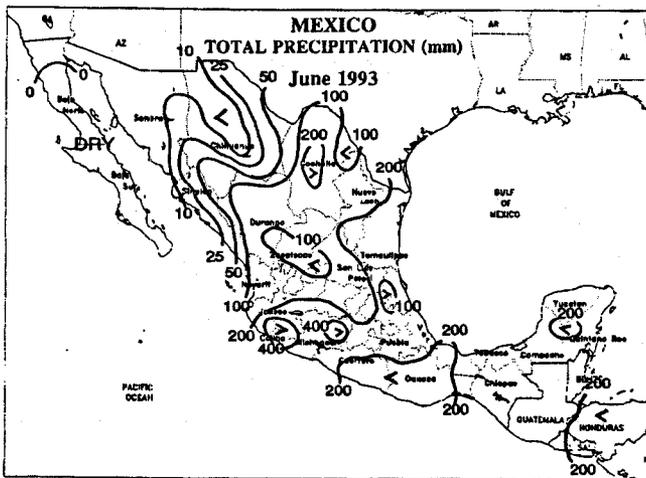
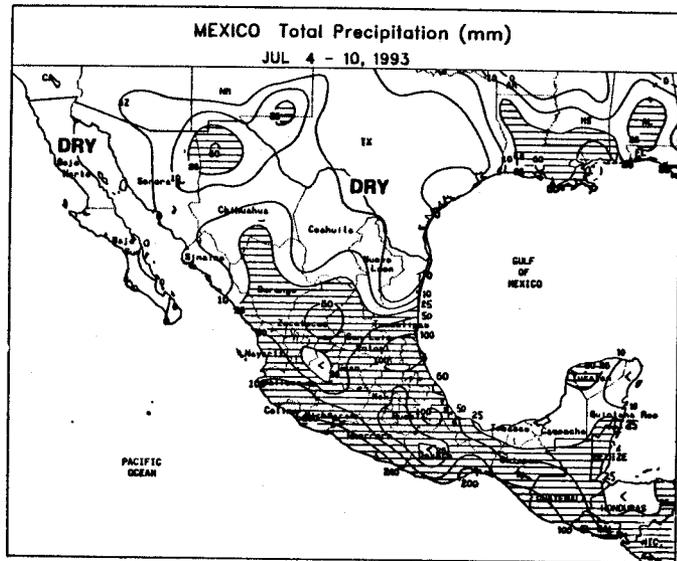
**SOUTH AMERICA:** Across central Argentina, dry weather continued to favor soybean harvesting, which should be nearing completion, and winter wheat planting. Temperatures averaged near normal across central Argentina, with minimum temperatures ranging from -1 to -5 degrees C. Southern Brazil (from southern Parana southward) received light to moderate rain (15-60 mm), providing beneficial moisture for vegetative winter wheat. Scattered frost and freezing temperatures (2- to -1 degrees C) were reported across Santa Catarina and southern Parana, burning back wheat. In June, abundant showers (averaged 100-300 percent of normal for the month) fell across central Argentina during the first half of the month, delaying fieldwork and causing additional flooding. However, drier weather the latter half of June favored fieldwork. In southern Brazil, rainfall averaged near to above normal, slowing coffee, citrus, and sugarcane harvesting.



**ARGENTINA WINTER WHEAT**

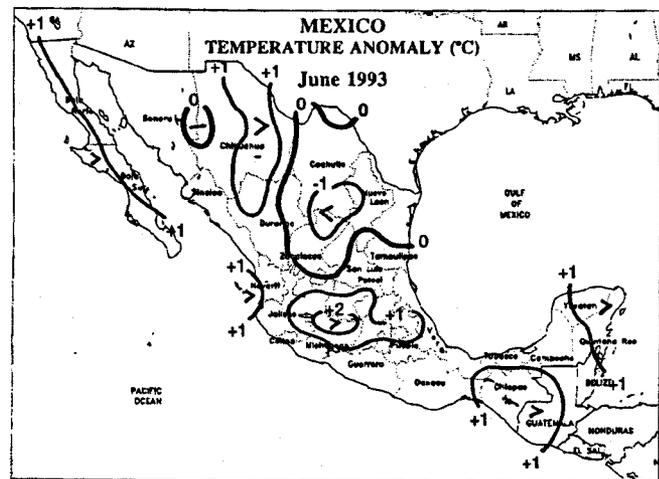
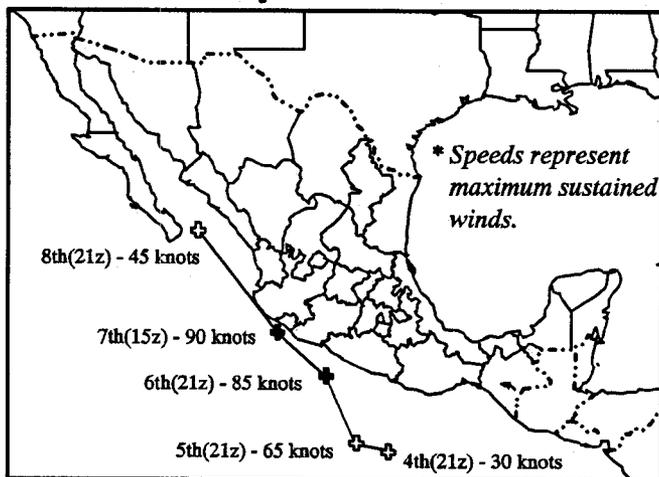


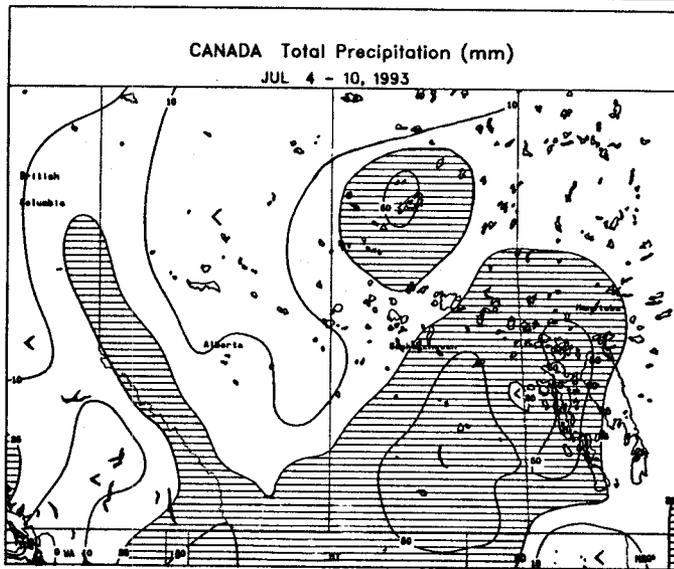
**MEXICO:** Hurricane Calvin brushed the southwest coast of Mexico (near Manzanillo) with 90-100 mph winds on July 6 and 7. The storm produced heavy showers (73-200 mm), with isolated amounts greater than 300 mm) from southern Jalisco state along the coast eastward to Chiapas, causing additional flooding to already rain-soaked areas. The southern Plateau received moderate to heavy showers (21-75 mm), favoring irrigation levels and vegetative to reproductive corn. Light to moderate rain (10-35 mm) fell across the western Sierra Madre, increasing reservoir levels. During June, most of Mexico except for the northwest received near- to above- normal rainfall, favoring summer crops which experienced dryness during May.



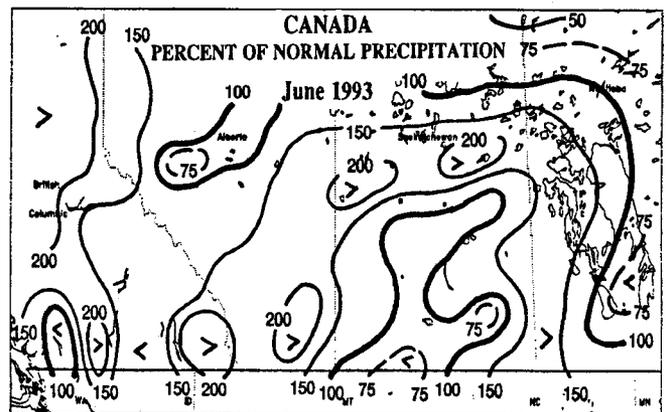
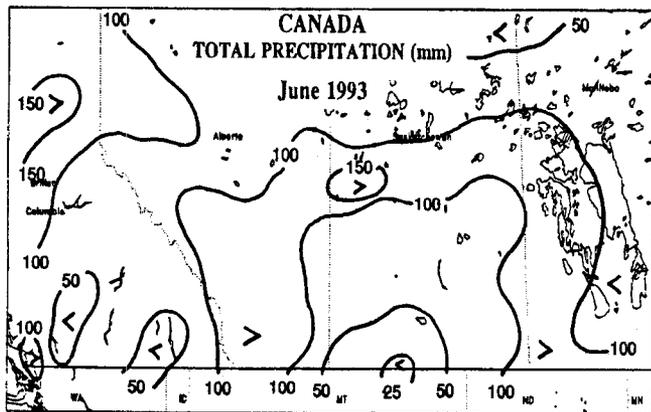
### HURRICANE "CALVIN"

July 4th to 8th

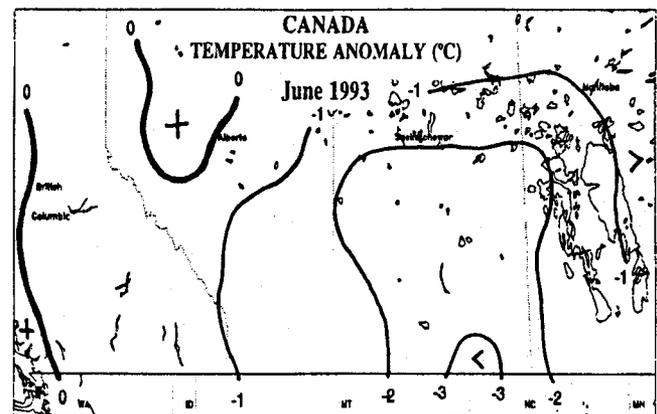
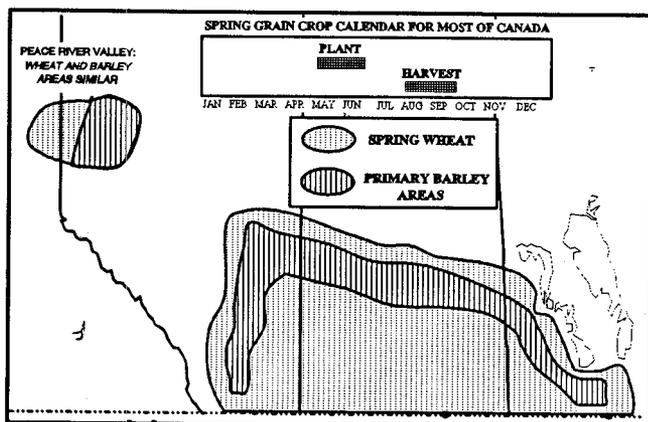




**CANADA:** Moderate to heavy rain (25-118 mm) covered most crop areas of Saskatchewan and Manitoba, greatly increasing soil moisture for vegetative to reproductive spring grains and oilseeds. Light to moderate rain (6-45 mm) fell across Alberta. Temperatures again averaged 3 to 5 degrees C below normal, slowing crop development and, in the east, raising disease concerns. Light rain (5-23 mm) and warm weather in Ontario hastened development of heading to filling wheat and vegetative corn. In June, rainfall was near to above normal over most Prairie crop areas, improving moisture reserves for spring crop establishment. A drying trend developed over southern Saskatchewan. Cooler-than-normal weather slowed Prairie crop development but, unlike last year, late frost did not pose widespread problems.

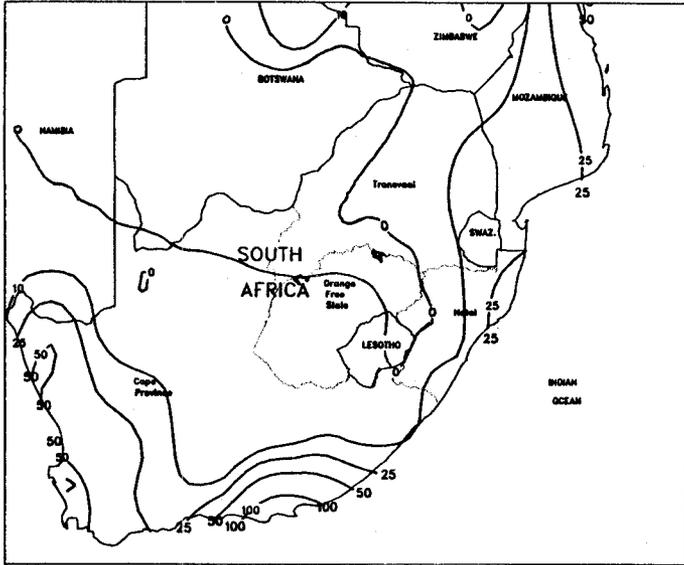


**CANADA: PRAIRIE SPRING GRAINS**



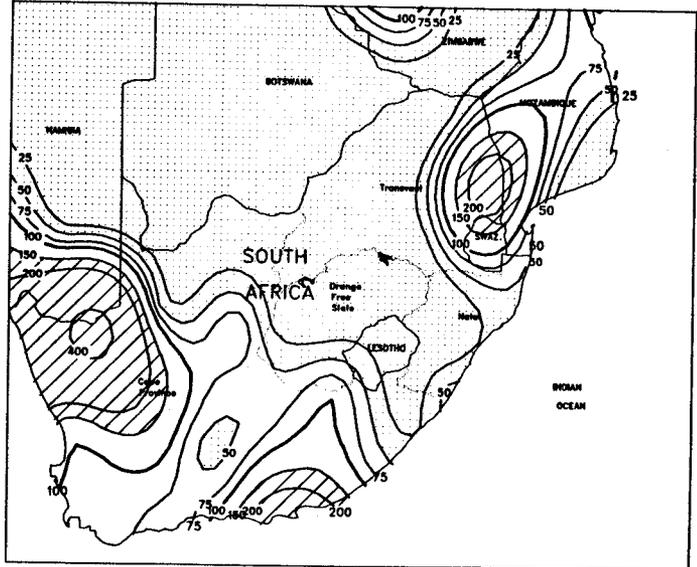
SOUTH AFRICA...TOTAL PRECIPITATION (mm)

JUN 1993



SOUTH AFRICA...PERCENT OF NORMAL PRECIPITATION

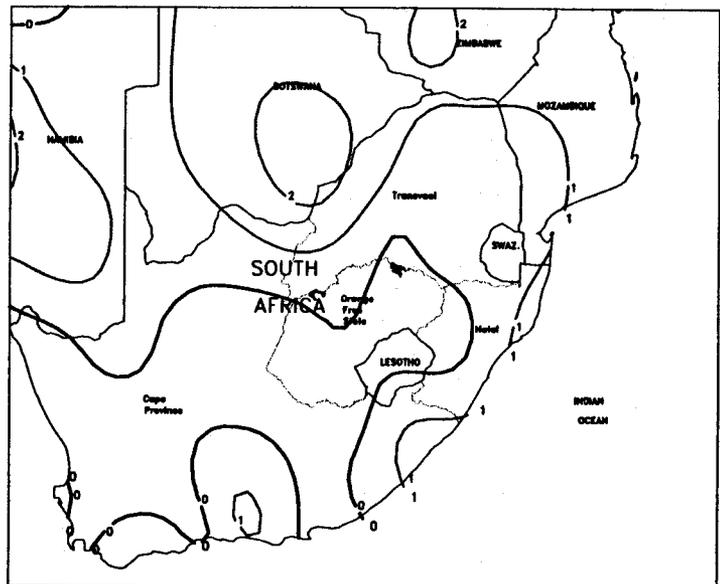
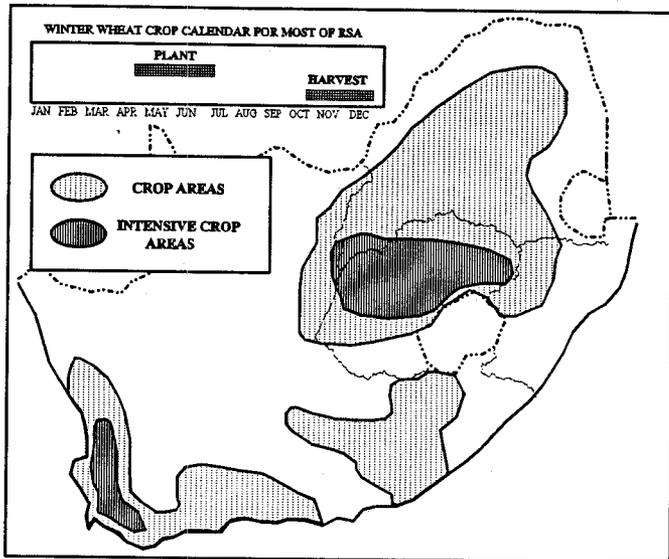
JUN 1993



**SOUTH AFRICA WINTER WHEAT**

SOUTH AFRICA...TEMPERATURE ANOMALY (°C)

JUN 1993



(Continued from p. 10)

Table 1

### Some Outstanding Mississippi Floods this Century

Date	Location	Property	
		Deaths	Damage (mil\$)
1903 May-June	Lower Missouri, and Upper Mississippi Rivers in KS	100	40
1927 Apr-Jun	Mississippi Valley	313	284
1943 Apr-Jun	Maumee, Wabash, Upper Mississippi, Missouri, White, and Arkansas River Basins	60	173
1947 May-Jul	Lower Missouri and Middle Mississippi River Basins	29	235
1951 Jun-Jul	Kansas and Missouri	60	935
1965 Mar-May	Upper Mississippi, Missouri, and Red River of the North River Basins	16	181
1973 Mar-May	Missouri and Mississippi Rivers	33	1154
1983 Apr-May	Lower Mississippi Basin	17	800
1986 Sep-Oct	Missouri, Kansas, Oklahoma	4	3000
1993 Jun-Jul	Upper Mississippi, Lower Missouri River Basins	17+	2000+

Sources: *Climatological Data, National Summary* (National Climatic Data Center), *Climates of the United States* (John L. Baldwin, DOC/NOAA/EDS, 1973), *The American Weather Book* (David M. Ludlum, Houghton Mifflin Co., 1982), *Weatherwise* magazine (Heldref Publications), NWS Office of Hydrology (1993 flood data).

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(Continued from front cover)

leaving a quarter million residents without drinking water, according to press reports. The additional downpours caused the Mississippi to crest a second time in many locations, including Davenport, IA, which after a near-record crest of 22 feet during the Independence Day weekend, broke a 28-year record (April 28, 1965) with a 22.5-foot reading on July 8. Record flooding was also observed late in the week at several lower Missouri gauging stations, including Jefferson City, MO (13 feet above flood stage, and a foot higher than the previous record set on July 18, 1951). Only two other times this century has summer flooding on a regional scale affected the Nation's mid-section. In 1951, record June rainfall and mid-July downpours resulted in extensive flooding along the lower Missouri River and its tributaries. And in 1947, flooding occurred during June and July in the lower Missouri and middle Mississippi basins.

Meanwhile, a heatwave gripped the East, resulting in more than 6 dozen daily record highs, and record coolness blanketed the Northwest. Philadelphia, PA, with 3 consecutive 100°F days, and Portland, ME, with 5 consecutive 90°F days, tied records for excessive heat duration. For locations such as Boston, MA (99°F) and Burlington, VT (94°F), temperatures reached the highest levels since July 20, 1991. But for others, including Greenville-Spartanburg, SC (100°F), Buffalo, NY (95°F), and Bristol, TN (97°F), such intense heat had not been observed since August 1988. Columbia, SC concluded the week having noted 100°F or higher readings on 6 of the past 8 days. And Newark, NJ registered 105°F maxima on Thursday and Saturday, tying the station's all-time record. But in the Northwest, Worland, WY concluded its week with 5 consecutive daily record lows. Selected daily records included lows of 39°F on Wednesday in both Casper, WY and Pocatello, ID.

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