

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

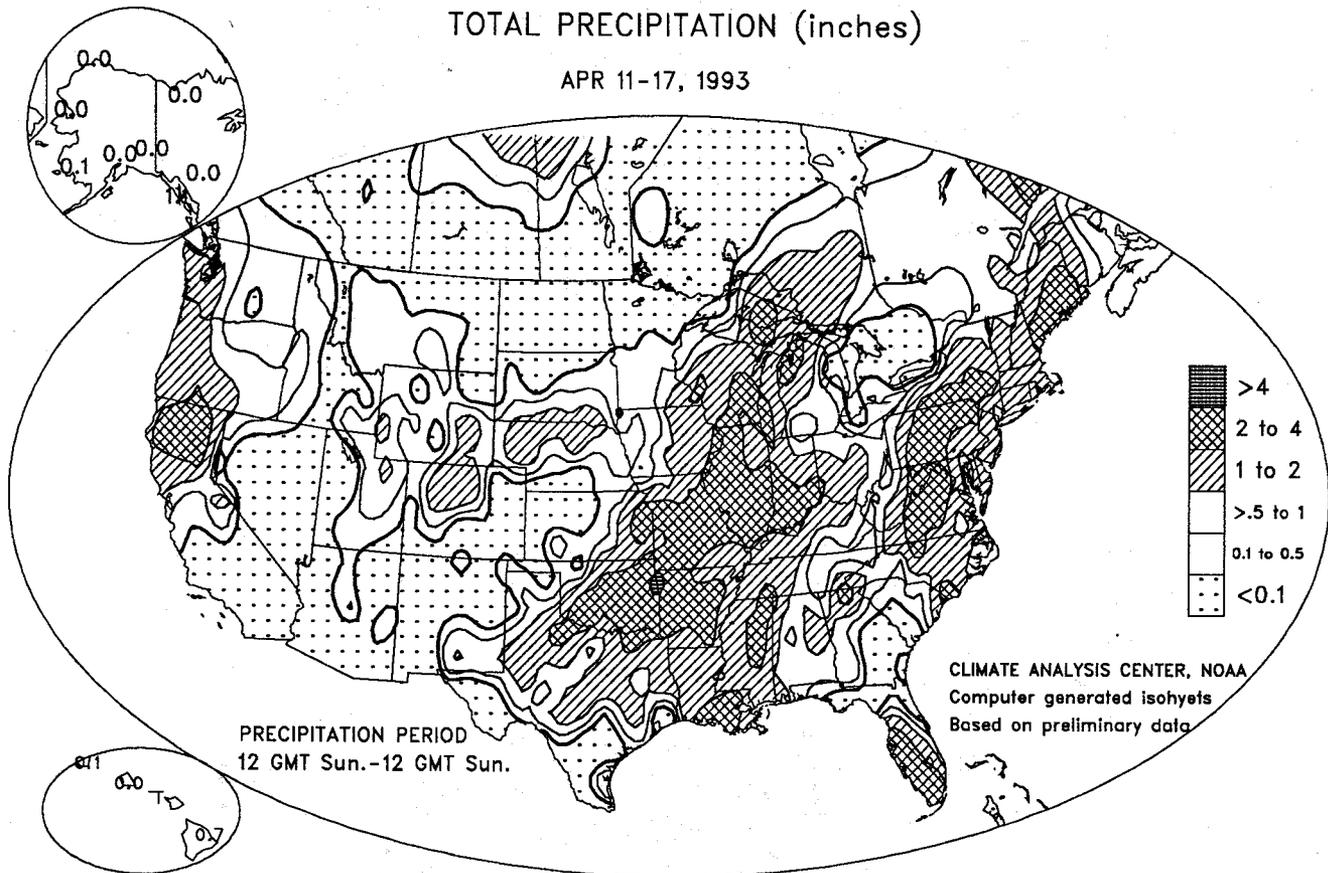
Volume 80, No. 16

Washington, D.C.

April 20, 1993

TOTAL PRECIPITATION (inches)

APR 11-17, 1993



HIGHLIGHTS

April 11 - 17, 1993

Heavy midweek rains kept fields wet from the southeastern Plains to the Corn Belt, and substantial late-week rainfall renewed flooding from the Middle Atlantic States to New England. Farther west, a late-season snowfall blanketed areas from the central Rockies to the western Great Lakes. Early in the week, a lingering storm system near Cape Cod, MA brought widespread flooding to New England, as river ice and mountain snowmelt joined forces with up to 2 inches of rainfall. Snow lingered over the western Great Lakes, as storm totals reached 12 inches in Eagle River, WI and 7 inches near Iron River, MI. Meanwhile, heat built across the Southern States in advance of a new storm system crossing the Rockies. On Sunday, Del Rio, TX recorded 99°F, and on Monday, Charleston, SC registered 87°F. But winter-like conditions prevailed in the Rockies, where

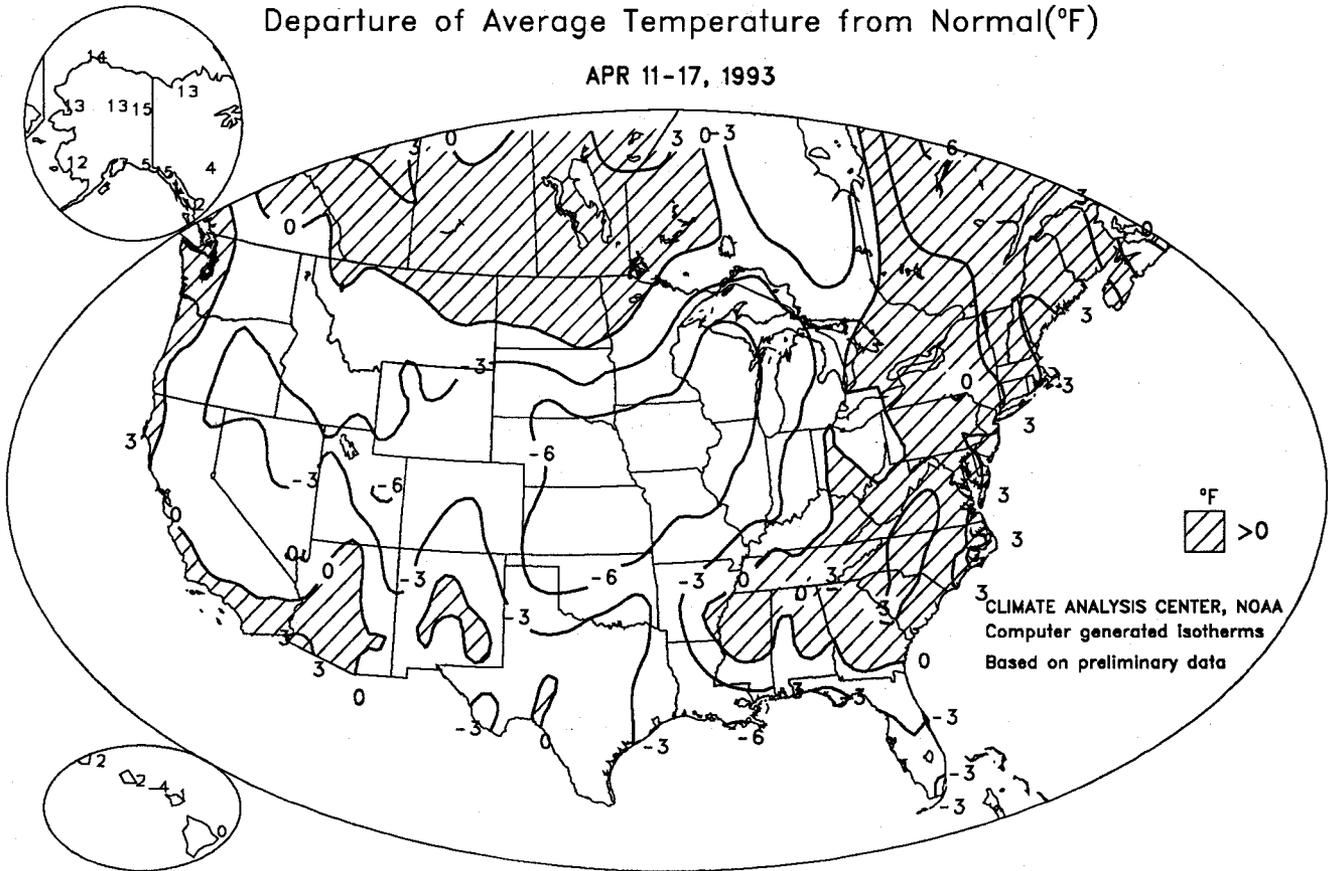
(Continued to p. 15)

Contents

	Page
Highlights & Total Precipitation Map	1
Temperature Departure & Soil Temperature Maps	2
Extreme Maximum & Minimum Temperature Maps ...	3
Drought Severity Maps	4
The S.O.I. and U.S. Wetness	5
National Weather Data for Selected Cities	6
National Agricultural Summary	9
Crop Progress and Condition Tables	10
State Summaries of Weather and Agriculture ...	11
International Weather and Crop Summary & March Temperature/Precipitation Maps	16
Subscription and Mailing Permit Information ..	28

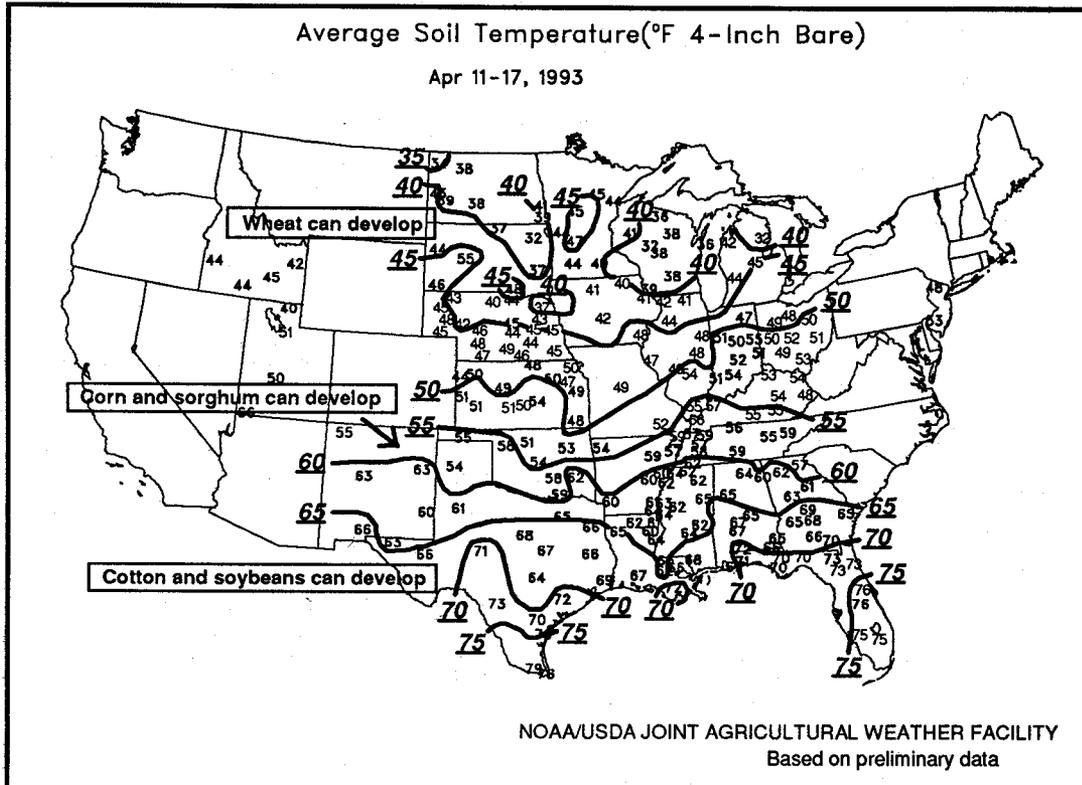
Departure of Average Temperature from Normal(°F)

APR 11-17, 1993



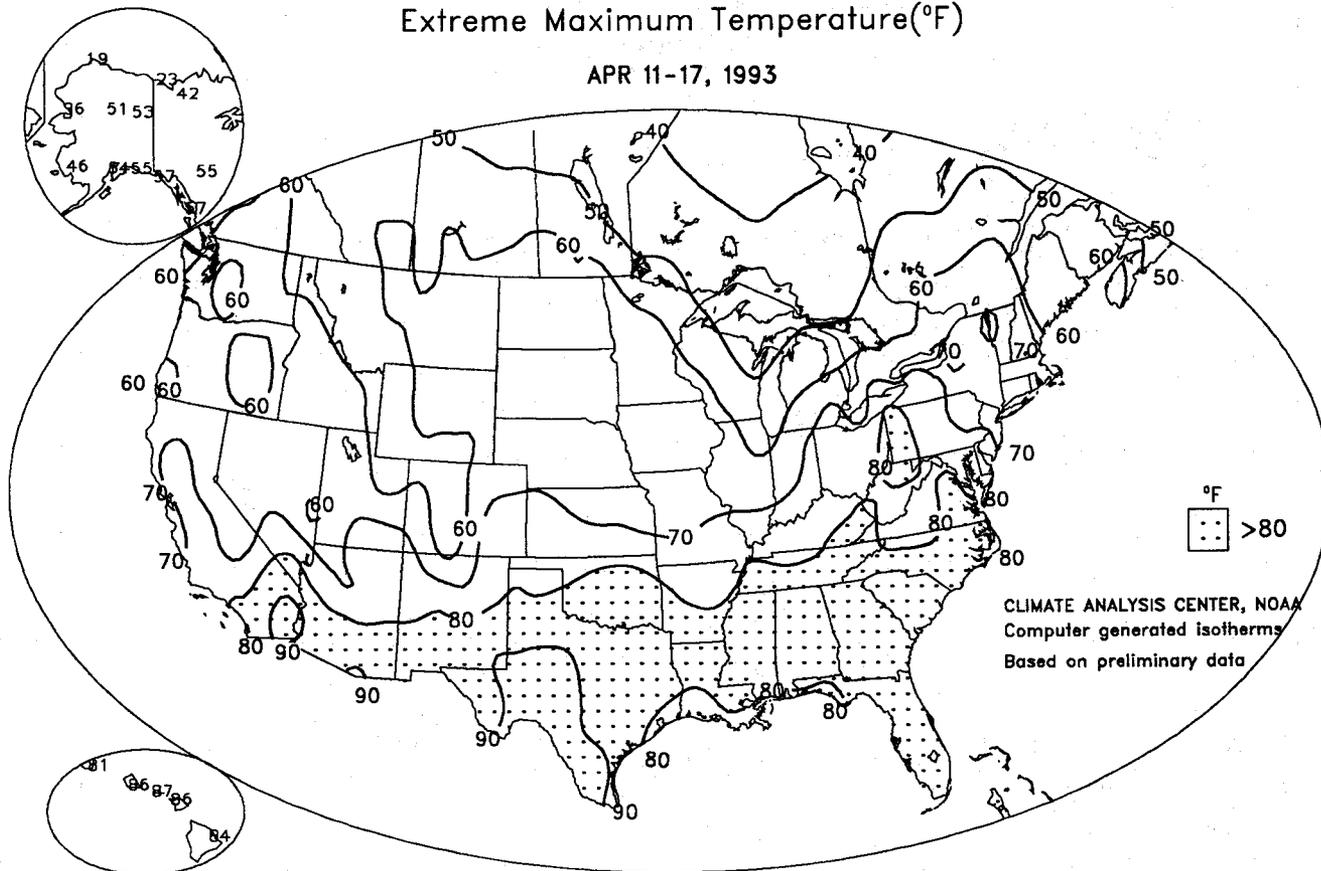
Average Soil Temperature(°F 4-Inch Bare)

Apr 11-17, 1993



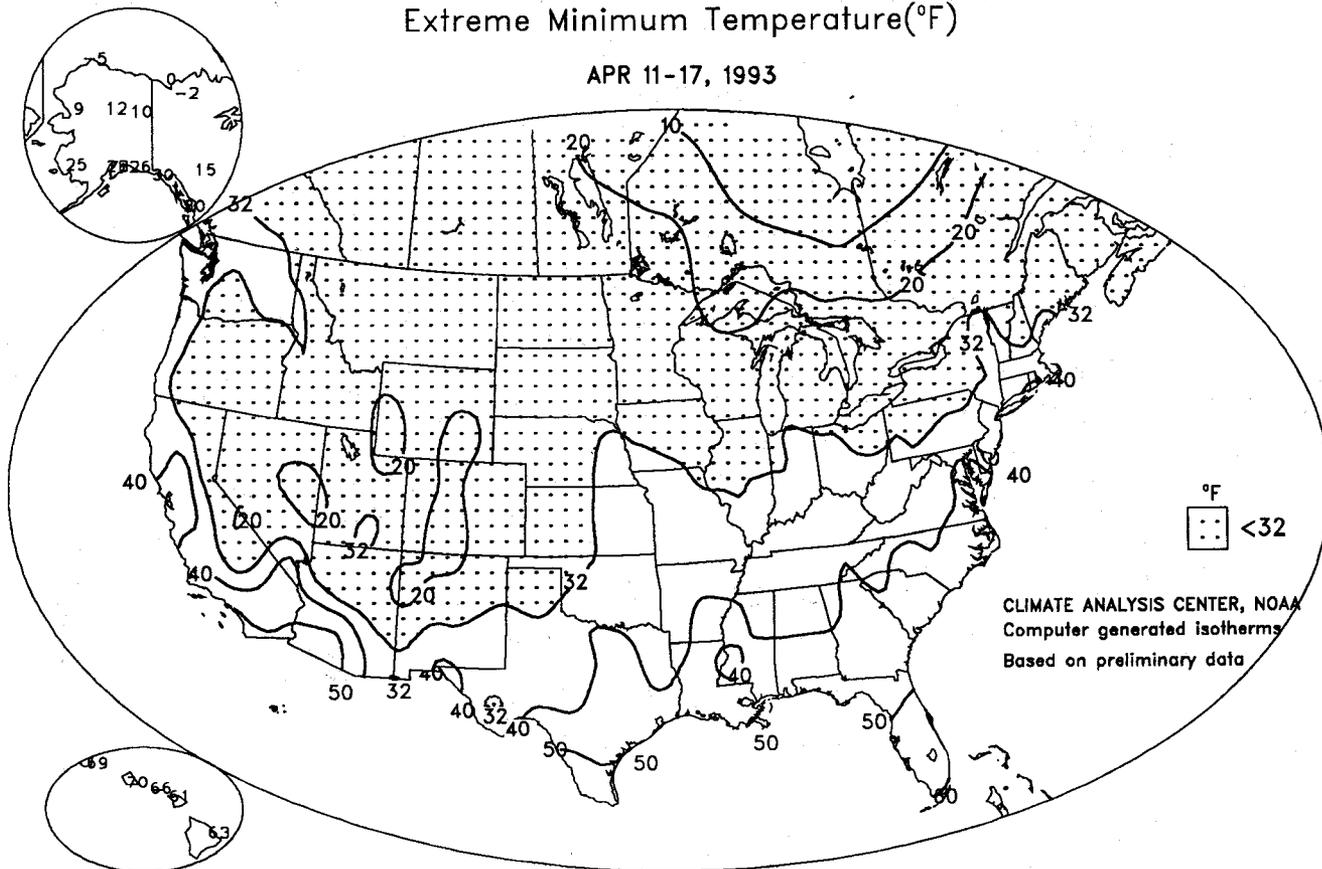
Extreme Maximum Temperature(°F)

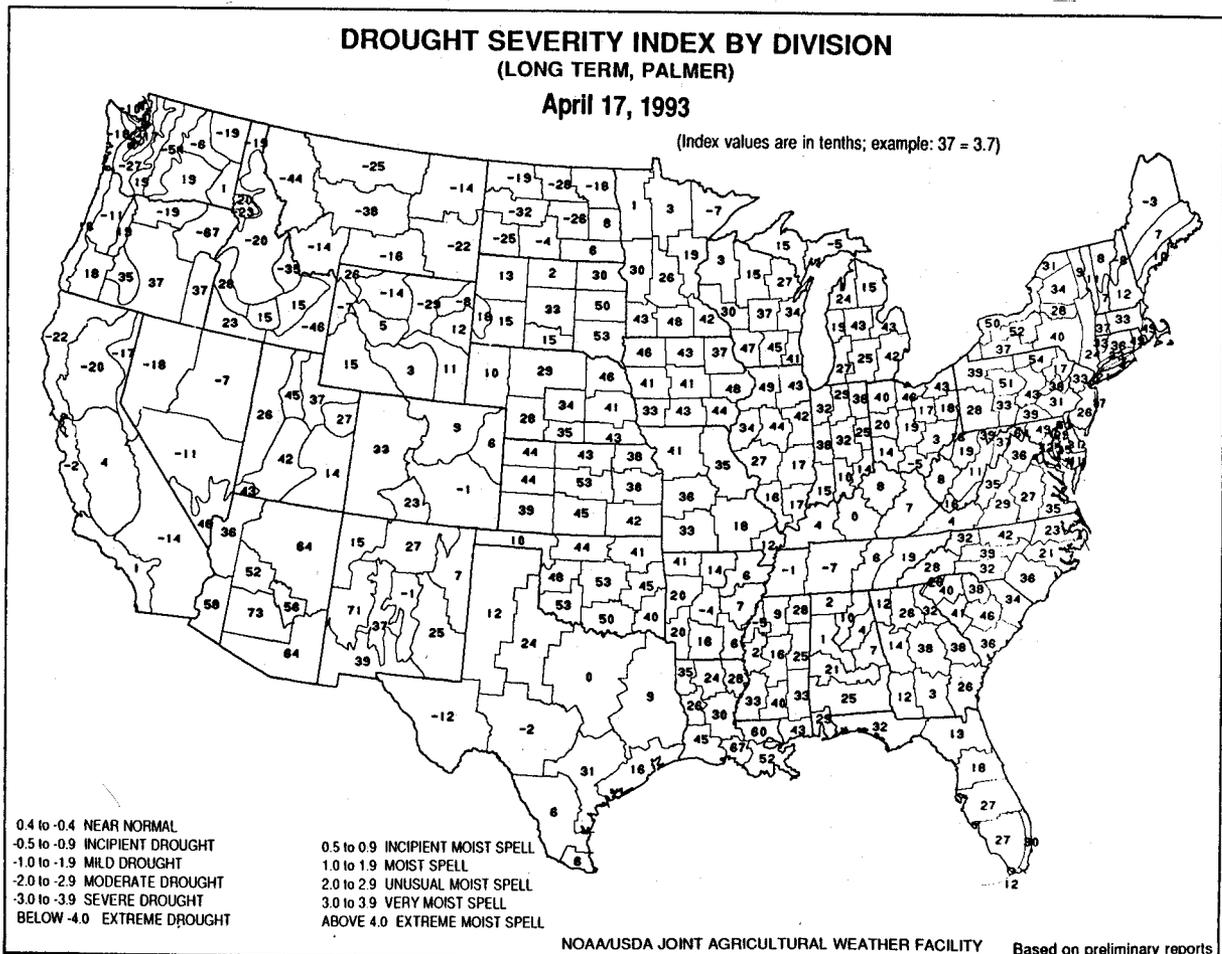
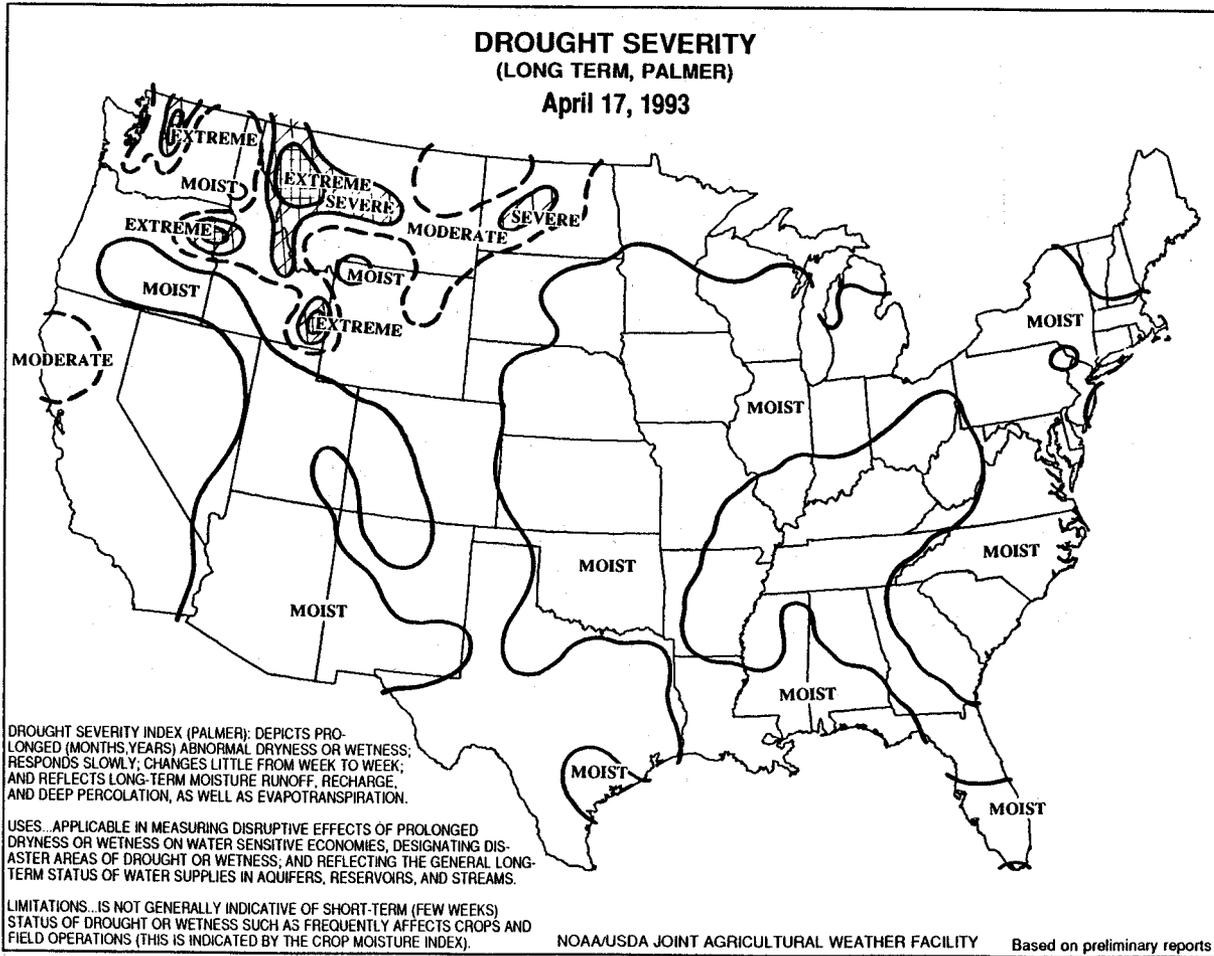
APR 11-17, 1993



Extreme Minimum Temperature(°F)

APR 11-17, 1993





The Southern Oscillation Index and U.S. Wetness

This is the first of an irregular series of articles that will examine relationships between the Southern Oscillation Index and moisture conditions in all, or part, of the United States.

Spring moisture conditions in the contiguous United States are strongly influenced by oceanic and atmospheric conditions several thousand miles to the southwest, over the central equatorial Pacific. Spring wetness can often be attributed to the atmospheric perturbations associated with an El Niño event.

Every 2 to 7 years, a condition popularly known as an El Niño (technically referred to as the warm phase of the Southern Oscillation) develops, resulting in enhanced thunderstorm activity and lower barometric pressures over the central equatorial Pacific Ocean. A corresponding decrease in convection and higher-than-normal pressures are noted over the western Pacific and eastern Indian Ocean basins.

The Southern Oscillation Index (SOI) is actually a measure of barometric pressure differences between Darwin, Australia, which is on the rim of the eastern Indian Ocean, and Tahiti, in the central equatorial Pacific. The SOI has become an important historical record for El Niño researchers because of the reliability of weather data at those two stations dating back to the late 19th century. Today many other research tools exist, such as sea-surface temperature (SST) readings and outgoing long-wave radiation (OLR) measurements.

The mechanism that transports moisture to the United States from the central equatorial Pacific is called the subtropical jet

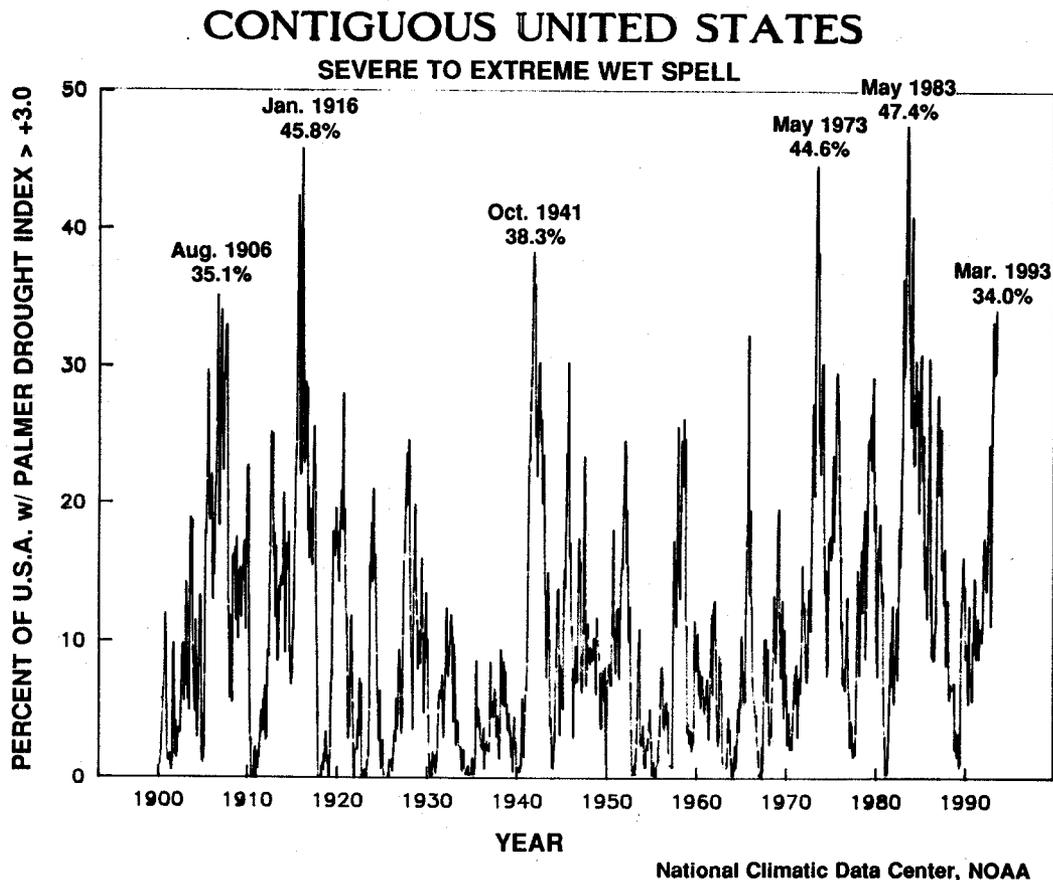
stream (STJ). Mid-latitude storm systems occasionally brush the tropics, and during an El Niño, a storm's STJ will readily strip moisture from central equatorial thunderstorms and transport it toward northwestern Mexico and the southern United States. From there, the path of the STJ moisture is governed by prevailing atmospheric flow patterns. El Niño events often peak during the late winter and early spring before ending during the summer, resulting in a peak transport of moisture to the United States during the spring.

Figure 1 shows a historical record of areal wetness (January 1900 to March 1993), and figure 2 focuses on the past 13 years of record. In the graph on the back cover (fig. 2), the SOI has been multiplied by 10 to more closely mirror the areal percentage of the contiguous United States enduring a severe to an extreme wet spell (Palmer Drought Index greater than +3.0). Since 1980, increases in the areal coverage of wetness have been observed on three occasions (1982-83, late 1986, and 1991-93). The wet spells correspond well with low values of the SOI (El Niño in progress). However, because of the mathematical nature of the SOI (an index calculated from only two stations' data), it should be used as guidance rather than a forecast tool when studying U.S. wet spells.

It is important to note that spring wet spells do not affect the entire United States during an El Niño event. In fact, much of the Pacific Northwest is nearing the end of a seventh consecutive drier-than-normal rainy season. It is also important to mention that wet springs do not necessarily correspond to favorably cool, moist summers. For example, hot, dry conditions withered crops in the Corn Belt in 1983.

Brad Rippey

Figure 1



National Weather Data for Selected Cities

Weather Data for the Week Ending April 17, 1993

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT	NUMBER OF DAYS									
	AVERAGE	MAXIMUM	MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1		TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE		.50 INCH OR MORE
													90 AND ABOVE								32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	77	47	83	35	62	0	.2	-1.9	.2	5.4	59	13.7	72	89	37	0	0	0	0	1	0		
MOBILE	76	52	81	44	64	-3	1.1	-1.0	1.1	12.6	140	25.1	131	95	47	0	0	0	0	1	1		
MONTGOMERY	79	49	85	42	64	0	.6	-1.4	.6	9.6	108	19.2	100	91	38	0	0	0	0	1	1		
AK ANCHORAGE	48	34	55	29	41	5	.0	-1.2	.0	.3	27	2.4	91	86	50	0	0	0	2	0	0		
BARROW	15	6	20	-5	11	14	.0	-1.1	.0	.1	44	.7	144	85	78	0	0	0	7	0	0		
FAIRBANKS	54	30	59	26	42	12	.0	-1.1	.0	.3	46	3.0	201	91	35	0	0	0	5	0	0		
JUNEAU	50	37	57	34	44	4	.3	-1.3	.0	4.0	83	22.2	169	96	54	0	0	0	0	0	0		
KODIAK	44	37	45	33	40	3	4.3	-3.3	1.9	14.8	213	25.1	128	94	80	0	0	0	4	6	3		
NOME	38	27	42	6	33	16	.1	-1.1	.1	1.8	189	4.1	175	82	68	0	0	0	5	2	0		
AZ PHOENIX	84	59	88	53	71	2	.0	-1.1	.0	1.6	150	8.6	353	37	11	0	0	0	0	0	0		
PRESCOTT	66	39	71	30	52	4	.0	-1.2	.0	2.5	104	10.9	200	50	19	0	0	0	2	0	0		
TUCSON	82	49	88	43	65	0	.0	-1.1	.0	.5	52	6.8	276	38	11	0	0	0	0	0	0		
YUMA	88	60	93	55	74	3	.0	-1.0	.0	.4	115	3.3	370	30	13	3	0	0	0	0	0		
AR FORT SMITH	68	49	83	38	59	3	2.5	1.6	2.1	5.7	93	12.8	121	88	54	0	0	0	0	4	1		
LITTLE ROCK	71	53	80	41	62	-1	2.0	1.0	1.7	6.4	87	13.4	96	81	43	0	0	0	0	3	1		
CA BAKERSFIELD	75	47	78	41	61	-2	T	-1.1	T	1.8	124	6.1	183	45	19	0	0	0	0	0	0		
EUREKA	60	46	67	39	53	3	1.3	-1.6	.6	9.0	124	22.0	123	84	52	0	0	0	0	4	1		
FRESNO	73	47	77	41	60	-1	.1	-1.2	.1	2.0	77	9.6	153	78	31	0	0	0	0	1	0		
LOS ANGELES	69	55	77	52	62	2	.0	-1.2	.0	1.9	73	17.7	239	85	62	0	0	0	0	0	0		
REDDING	68	46	72	42	57	-1	2.4	1.9	2.3	9.2	158	27.1	166	81	33	0	0	0	2	1	0		
SACRAMENTO	68	46	72	41	57	-1	.5	-1.2	.5	3.0	88	16.7	167	87	42	0	0	0	0	1	0		
SAN DIEGO	69	58	76	56	63	2	.0	-1.2	.0	1.2	53	15.0	265	81	60	0	0	0	0	0	0		
SAN FRANCISCO	63	50	67	45	57	1	.3	-1.0	.3	2.7	67	18.6	161	85	55	0	0	0	0	0	0		
CO DENVER	57	33	67	30	45	-3	.6	-1.2	.4	2.6	119	3.9	121	83	33	0	0	0	4	2	0		
GRAND JUNCTION	60	35	66	28	48	-6	.1	-1.1	.1	2.7	167	5.2	192	73	31	0	0	0	3	3	0		
PUEBLO	64	34	74	27	49	-3	T	-1.2	T	2.2	176	2.8	149	76	29	0	0	0	0	0	0		
CT BRIDGEPORT	58	44	66	39	51	3	.7	-1.2	.4	8.9	151	14.1	116	91	52	0	0	0	0	6	0		
HARTFORD	57	44	67	38	51	3	1.2	-1.3	.6	9.2	159	14.8	119	93	57	0	0	0	0	5	1		
DC WASHINGTON	66	47	79	41	57	1	1.0	-1.4	1.0	8.8	191	14.0	139	86	54	0	0	0	0	2	1		
FL APALACHICOLA	74	55	80	50	65	-2	.1	-1.5	.1	4.4	73	14.7	108	88	54	0	0	0	0	0	0		
DAYTONA BEACH	79	55	84	50	67	-2	.1	-1.4	.1	5.9	142	13.2	132	92	40	0	0	0	0	1	0		
JACKSONVILLE	82	53	86	46	67	-1	T	-1.5	T	6.8	135	13.6	112	86	34	0	0	0	0	1	0		
KEY WEST	80	67	83	62	74	-3	1.2	-1.9	1.1	3.2	125	11.5	179	80	60	0	0	0	0	2	1		
MIAMI	82	65	85	58	74	-1	2.0	1.4	1.6	8.8	234	16.0	203	83	52	0	0	0	0	2	1		
ORLANDO	82	57	87	54	70	-1	.7	-1.3	.7	8.0	187	14.3	150	88	37	0	0	0	0	1	1		
TALLAHASSEE	81	48	88	41	64	-1	.1	-1.7	.1	7.1	83	21.2	113	93	35	0	0	0	0	1	0		
TAMPA	79	55	85	50	67	-4	1.6	1.3	1.6	6.3	173	12.2	140	94	47	0	0	0	0	1	1		
WEST PALM BEACH	80	61	82	55	70	-4	.6	-1.0	.4	12.5	288	22.6	232	90	52	0	0	0	0	2	0		
GA ATLANTA	76	52	84	40	64	3	.6	-1.4	.6	8.1	98	16.5	93	76	35	0	0	0	0	1	1		
AUGUSTA	81	50	89	40	66	3	T	-1.8	T	8.9	136	18.1	121	81	32	0	0	0	0	0	0		
MACON	78	51	86	40	64	1	.2	-1.6	.2	11.6	170	21.3	132	87	38	0	0	0	0	1	0		
SAVANNAH	79	56	86	47	67	2	T	-1.7	T	11.1	202	20.0	162	77	36	0	0	0	0	1	0		
HI HILO	82	65	85	63	74	1	.7	-3.0	.3	14.0	61	18.9	44	88	59	0	0	0	0	4	0		
HONOLULU	85	72	86	70	78	3	.1	-1.4	T	T	1	1.1	13	73	47	0	0	0	0	0	0		
KARULUI	85	66	86	61	76	1	.4	-1.4	T	1.6	40	4.0	36	73	52	0	0	0	0	1	0		
LIHUE	80	71	81	69	76	2	.1	-1.7	.1	.7	12	1.9	13	78	59	0	0	0	0	2	0		
ID BOISE	57	36	63	31	47	-2	.4	-1.1	.2	3.9	193	6.5	144	91	33	0	0	0	3	3	0		
LEWISTON	59	40	65	35	50	-1	.1	-1.2	.1	2.1	122	3.5	91	82	45	0	0	0	0	3	0		
POCATELLO	53	32	62	25	43	-2	.3	-1.0	.3	2.8	145	7.1	183	85	34	0	0	0	4	2	0		
IL CHICAGO	50	35	57	30	42	-6	1.9	1.1	1.1	7.4	156	12.0	158	90	46	0	0	0	2	5	2		
MOLINE	52	36	66	26	44	-6	2.2	1.3	1.1	7.8	153	10.7	136	90	54	0	0	0	1	4	2		
PEORIA	54	37	62	31	46	-5	2.7	1.8	1.1	7.9	157	13.1	165	92	55	0	0	0	2	4	3		
QUINCY	53	37	64	32	45	-8	1.6	-1.7	.7	3.6	70	6.9	87	87	66	0	0	0	2	1	5		
ROCKFORD	48	34	60	28	41	-6	1.4	-1.5	.6	7.0	156	10.3	149	93	62	0	0	0	3	5	1		
SPRINGFIELD	55	39	62	30	47	-6	2.2	1.4	.9	5.1	97	10.6	123	88	52	0	0	0	1	5	2		
IN EVANSVILLE	64	43	72	34	53	-4	1.3	-1.4	.8	6.7	92	12.9	94	86	48	0	0	0	0	5	1		
FORT WAYNE	57	40	72	33	48	0	.6	-1.2	.3	5.7	118	12.7	148	88	50	0	0	0	0	6	0		
INDIANAPOLIS	59	42	68	32	50	-2	1.5	-1.7	.6	6.6	112	12.2	115	88	56	0	0	0	1	3	2		
SOUTH BEND	53	39	64	33	46	-2	.8	-1.1	.4	3.7	70	9.2	98	89	46	0	0	0	0	4	0		
IA DES MOINES	49	35	62	31	42	-8	1.0	-1.2	.4	5.7	138	8.8	145	90	46	0	0	0	1	5	0		
STOUC CITY	50	35	62	32	42	-7	.9	-1.4	.4	2.1	67	4.9	112	89	46	0	0	0	1	5	0		
WATERLOO	51	34	69	27	42	-5	1.0	-1.3	.6	6.3	154	8.1	137	94	56	0	0	0	2	4	1		
KS CONCORDIA	54	38	68	32	46	-6	.1	-1.4	.0	3.7	108	6.2	132	89	49	0	0	0	1	2	0		
DODGE CITY	58	36	72	28	47	-7	.7	-1.2	.4	3.0	113	6.8	182	90	38	0	0	0	2	3	0		
GOODLAND	58	30	72	24	44	-5	T	-1.3	T	1.1	63	2.5	99	87	35	0	0	0	4	0	0		
TOPEKA	54	40	66	36	47	-7	1.6	-1.9	1.4	7.7	189	11.2	185	88	56	0	0	0	0	2	1		
WICHITA	58	41	72	32	50	-7	.3	-1.3	.3	2.8	67	5.7	93	84	48	0	0	0	1	1	0		
KY BOWLING GREEN	69	44	78	34	57	0	1.0	-1.0	.8	5.7	75	11.5	74	88	42	0	0	0	0	4	1		
LEXINGTON	64	43	75	36	54	-1	1.1	-1.3	.6	5.9	89	12.4	98	86	48	0	0	0	0	4	1		
LOUISVILLE	66	45	78	37	56	0	1.4	-1.4	.6	7.9	112	15.6	118	87	45	0	0	0	0	5	1		
LA BATON ROUGE	77	53	84	43	65	-3	2.9	1.7	2.9	16.7	213	32.9	180	96	45	0	0	0	0	1	1		
LAKE CHARLES	73	55	77	43	64	-4	2.1	1.4	2.1	12.5	250	23.6	180	93	57	0	0	0	0	1	1		
NEW ORLEANS	75	52	80	47	64	-4	1.3	-1.3	1.2	10.0	134	18.6	100	90	52	0	0	0	0	2	1		
SHREVEPORT	73	51	83	39	62	-3	1.1	-1.2	1.1	9.5	154	18.9	130	90	52	0	0	0	0	2	1		

Weather Data for the Week Ending April 17, 1993

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS								
	AVERAGE	MAXIMUM	MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																				.01 INCH OR MORE	.50 INCH OR MORE		
ME CARIBOU	49	36	53	30	42	5	1.0	.5	.5	3.4	90	7.7	94	89	61	0	0	0	2	3	1	1	
PORTLAND	51	39	55	35	45	2	2.2	1.2	1.5	10.1	168	16.7	130	95	63	0	0	0	0	6	1	1	
MD BALTIMORE	64	45	76	41	54	2	.6	-2	.5	10.3	201	15.9	140	83	51	0	0	0	0	3	1	1	
SALISBURY	66	45	77	39	56	3	1.3	.6	1.2	9.4	156	15.9	121	93	53	0	0	0	2	2	1	1	
MA BOSTON	57	45	70	42	51	3	1.4	.6	.9	10.7	187	17.8	138	88	65	0	0	0	0	4	2	2	
CHATHAM	49	41	53	40	45	1	.6	-2	.3	7.9	133	14.0	102	96	59	0	0	0	4	4	0	0	
MI ALPENA	46	30	53	22	38	-2	.9	-4	.9	1.9	57	4.0	64	90	42	0	0	5	2	2	1	1	
DETROIT	56	37	73	32	47	0	.5	-2	.3	4.2	100	9.4	122	83	38	0	0	1	1	5	0	0	
FLINT	55	33	70	28	44	-2	1.0	.3	.4	3.2	85	7.2	112	87	38	0	0	4	5	5	0	0	
GRAND RAPIDS	52	34	62	28	43	-3	1.0	.2	.5	3.9	87	9.3	119	90	42	0	0	2	5	6	0	0	
HOUGHTON LAKE	47	29	54	22	38	-4	1.2	.6	.8	2.1	66	4.8	80	86	42	0	0	4	5	6	1	0	
LANSING	54	33	66	25	44	-1	.6	-1	.3	2.9	75	7.3	112	89	51	0	0	4	6	6	0	0	
MARQUETTE	36	25	41	19	30	-6	2.2	1.6	1.1	3.9	91	7.0	85	92	64	0	0	7	2	2	2	2	
MUSKEGON	50	35	59	31	43	-2	1.4	.7	1.0	3.9	94	7.4	92	84	48	0	0	1	4	4	1	1	
SAULT ST. MARIE	44	26	51	24	35	-2	1.3	.8	1.0	2.6	71	5.0	64	94	46	0	0	6	3	3	1	1	
MN ALEXANDRIA	50	31	66	26	41	-1	.1	-4	.1	2.5	98	3.5	85	88	46	0	0	5	1	1	0	0	
DULUTH	41	28	49	21	35	-4	.3	-2	.3	1.5	49	3.8	73	81	49	0	0	6	3	3	0	0	
INT'L FALLS	50	28	55	24	39	0	.4	T	T	.7	37	1.5	44	83	35	0	0	6	1	1	0	0	
MINNEAPOLIS	51	33	67	28	42	0	.6	.1	.3	2.5	77	4.1	82	88	38	0	0	1	4	0	0	0	
ROCHESTER	46	31	62	30	39	0	1.1	.5	.3	4.9	153	6.9	146	96	54	0	0	5	5	0	0	0	
MS GREENWOOD	74	52	81	40	63	0	1.5	.4	1.5	8.2	94	13.9	77	92	48	0	0	0	2	2	1	1	
JACKSON	77	50	84	39	64	0	1.3	.1	1.3	7.7	84	15.8	81	89	42	0	0	0	2	1	1	1	
MERIDIAN	78	50	84	40	64	0	1.6	.3	1.4	10.0	100	24.4	119	92	39	0	0	0	2	1	1	1	
MO CAPE GIRARDEAU	66	45	80	33	56	-2	1.2	.2	.9	6.3	83	15.0	109	88	52	0	0	0	5	1	1	1	
COLUMBIA	56	39	65	33	47	-6	3.4	2.6	1.1	6.0	120	10.4	125	93	53	0	0	0	5	4	1	1	
KANSAS CITY	53	39	64	36	46	-8	1.9	1.2	.8	6.5	157	9.7	154	90	54	0	0	0	6	1	1	1	
SAINT LOUIS	60	43	69	36	51	-5	3.2	2.4	1.2	6.9	124	13.2	139	85	54	0	0	0	5	4	1	1	
SPRINGFIELD	60	43	72	36	52	-4	1.6	.7	1.0	5.3	88	10.8	112	84	59	0	0	0	4	1	1	1	
MT BILLINGS	54	34	65	30	44	-4	1.0	.6	.9	1.6	78	2.4	66	86	33	0	0	3	2	1	1	1	
GLASGOW	58	32	65	26	45	0	.0	-2	.0	.9	126	1.4	107	82	30	0	0	5	0	0	0	0	
GREAT FALLS	52	31	60	27	42	-1	.4	-1	.4	1.9	105	3.8	115	85	37	0	0	6	2	0	0	0	
HAVRE	56	31	61	27	44	T	T	-2	T	.9	83	1.6	78	87	34	0	0	5	0	0	0	0	
HELENA	52	33	60	28	42	-1	.5	.3	.3	1.6	130	3.4	150	87	38	0	0	3	2	0	0	0	
KALISPELL	52	33	56	29	43	0	.5	-2	.0	1.5	99	3.8	91	90	37	0	0	4	3	0	0	0	
MILES CITY	56	35	65	30	46	0	.3	-1	.2	1.0	80	2.0	86	94	39	0	0	2	4	0	0	0	
MISSOULA	53	34	57	25	44	0	T	-2	T	1.9	129	3.4	97	87	36	0	0	2	1	0	0	0	
NE GRAND ISLAND	52	35	64	30	43	-7	.1	-5	.1	1.5	47	4.1	94	95	50	0	0	2	2	0	0	0	
LINCOLN	51	36	63	35	43	-8	.8	-2	.3	3.2	89	4.4	91	93	62	0	0	0	4	0	0	0	
NORFOLK	50	35	63	33	43	-6	.7	-2	.3	2.9	97	5.9	137	89	44	0	0	0	5	0	0	0	
NORTH PLATTE	54	31	67	23	43	-5	.4	.0	.3	1.4	66	3.6	119	90	39	0	0	4	3	0	0	0	
OMAHA	49	37	62	33	43	-8	1.0	.4	.3	3.9	111	5.7	116	88	48	0	0	0	5	0	0	0	
SCOTTSBLUFF	54	31	68	26	45	0	.9	.5	.5	3.0	162	5.1	182	91	41	0	0	5	3	0	0	0	
VALENTINE	50	30	66	23	40	-2	1.1	.7	.9	2.8	117	4.0	117	93	56	0	0	5	5	1	1	1	
NV ELY	55	22	67	16	39	-8	T	-2	T	1.3	85	4.8	166	75	22	0	0	7	1	0	0	0	
LAS VEGAS	76	52	83	44	64	0	.0	-1	.0	.2	27	4.3	288	33	13	0	0	0	0	0	0	0	
RENO	60	33	68	25	47	-2	T	-1	T	.6	61	4.3	142	72	22	0	0	5	1	0	0	0	
WINNEMUCCA	59	31	65	22	45	-1	.1	-1	.1	1.7	135	4.2	160	84	22	0	0	5	2	0	0	0	
NE CONCORD	57	36	71	29	47	4	1.4	.7	.8	5.5	126	8.6	91	96	62	0	0	2	5	1	1	1	
NJ ATLANTIC CITY	63	42	68	33	53	3	.4	-5	.3	10.3	182	15.3	126	90	47	0	0	0	4	0	0	0	
NM ALBUQUERQUE	69	40	80	29	55	0	.0	-1	.0	T	0	2.8	159	48	15	0	0	1	0	0	0	0	
CLOVIS	70	42	81	33	56	0	T	-1	T	.4	39	1.3	68	60	18	0	0	0	0	0	0	0	
ROSWELL	76	46	89	38	61	1	.5	.4	.5	.7	119	1.6	117	58	17	0	0	0	4	2	0	0	
NY ALBANY	57	42	67	34	49	3	1.3	.6	.9	7.6	164	12.6	136	88	50	0	0	0	4	1	1	1	
BINGHAMTON	48	35	64	28	42	-2	1.4	.7	.8	8.4	184	13.2	142	95	47	0	0	4	6	1	1	1	
BUFFALO	58	35	81	28	47	2	.3	-4	.2	4.2	98	10.5	113	84	41	0	0	2	3	0	0	0	
NEW YORK	59	46	62	41	53	2	.2	-7	.2	8.8	153	15.1	130	90	55	0	0	0	2	0	0	0	
ROCHESTER	56	38	80	30	47	2	.6	-1	.4	4.6	124	8.5	107	87	43	0	0	1	2	0	0	0	
SYRACUSE	53	38	74	30	46	1	1.7	.9	.9	7.9	170	13.4	146	91	45	0	0	1	5	1	1	1	
NC ASHEVILLE	70	44	78	39	57	2	.3	-6	.3	8.8	111	14.7	90	80	34	0	0	0	1	0	0	0	
CHARLOTTE	76	52	83	44	64	2	.1	-5	.1	8.9	148	17.8	131	69	33	0	0	0	2	0	0	0	
GREENSBORO	73	49	81	39	61	4	2.4	1.8	2.4	13.1	247	20.1	171	72	42	0	0	0	1	1	1	1	
HATTERAS	69	51	76	43	60	2	.4	-5	.4	10.0	159	21.0	134	85	49	0	0	0	1	0	0	0	
NEW BERN	75	50	80	46	63	1	.5	-2	.5	9.1	160	18.0	127	89	37	0	0	0	1	1	1	1	
RALEIGH	74	47	80	39	60	2	1.2	.6	1.2	10.9	208	17.6	142	78	36	0	0	0	1	1	1	1	
WILMINGTON	76	52	85	45	64	3	1.5	.8	1.5	12.1	195	20.9	137	89	43	0	0	0	0	1	1	1	
ND BISMARCK	58	29	69	25	43	1	T	-4	T	1.0	64	1.7	66	91	33	0	0	6	0	0	0	0	
FARGO	57	31	71	27	44	2	T	-4	T	1.2	58	2.2	69	86	38	0	0	5	1	0	0	0	
GRAND FORKS	57	29	66	26	43	2	T	-3	T	.4	27	.8	29	89	36	0	0	6	0	0	0	0	
WILLISTON	58	31	68	29	44	2	T	-3	T	1.2	89	1.7	72	87	33	0	0	5	1	0	0	0	
OH AKRON-CANTON	56	36	79	29	46	-2	.7	.0	.4	5.9	115	11.8	125	94	50	0	0	2	5	0	0	0	
CINCINNATI	62	43	75	35	53	0	1.2	.4	.7	5.5	86	12.7	110	81	50	0	0	0	3	1	1	1	
CLEVELAND	56	36	79	29	46	-1	.5	-3	.3	5.6	119	12.6	142	88	45	0	0	2	3	0	0	0	
COLUMBUS	60	40	77	35	50	2	.7	-2	.3	5.1	99	11.0	119	84	45	0	0	0	3	0	0	0	

Weather Data for the Week Ending April 17, 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 Mar 1	PCT. NORMAL SINCE Mar 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	57	39	73	33	48	1	.7	.0	.6	5.2	120	10.1	129	90	45	0	0	0	0	0	0	0
YOUNGSTOWN	56	34	81	27	45	-2	.4	-.3	.2	5.2	107	10.9	120	92	47	0	0	4	4	0	0	0
OK OKLAHOMA CITY	66	43	86	34	55	-5	1.2	.6	1.1	4.2	104	8.8	130	85	47	0	0	0	0	0	0	0
TULSA	66	45	81	36	56	-6	2.2	1.4	1.2	5.8	108	10.8	121	86	46	0	0	0	0	0	0	0
OR ASTORIA	56	41	63	35	48	0	1.7	.6	.6	12.8	129	20.4	74	97	60	0	0	0	0	0	0	0
BURNS	49	30	56	25	39	-3	.6	.5	.5	3.2	228	5.6	177	91	47	0	0	0	0	0	0	0
MEDFORD	61	40	68	32	51	0	.6	.3	.5	2.8	110	6.8	95	95	45	0	0	0	0	0	0	0
PENDLETON	57	39	63	35	48	-1	.1	-.1	.1	2.8	156	5.4	121	77	43	0	0	0	0	0	0	0
PORTLAND	60	43	64	39	52	1	1.2	.7	.4	8.6	172	12.4	87	96	51	0	0	0	0	0	0	0
SALEM	60	41	64	30	51	2	1.0	.5	.4	9.2	161	15.6	96	90	45	0	0	0	0	0	0	0
PA ALLENTOWN	59	42	67	32	50	1	.8	.0	.8	10.9	210	15.7	139	85	56	0	0	0	0	0	0	0
ERIE	55	37	85	31	46	0	.2	-.5	-.2	4.3	90	9.7	105	98	58	0	0	0	0	0	0	0
HARRISBURG	62	45	73	37	54	3	.2	-.2	-.2	---	---	---	---	81	50	0	0	0	0	0	0	0
PHILADELPHIA	65	46	77	41	55	5	1.4	.5	1.4	9.9	177	14.9	123	73	49	0	0	0	0	0	0	0
PITTSBURGH	60	38	84	32	49	0	.8	.1	.5	5.7	109	11.6	115	90	44	0	0	0	0	0	0	0
SCRANTON	55	40	69	31	48	0	1.7	1.1	1.6	8.6	207	11.6	137	90	53	0	0	0	0	0	0	0
RI PROVIDENCE	58	45	68	41	52	5	1.7	.8	.9	10.8	169	18.3	132	94	59	0	0	0	0	0	0	0
SC CHARLESTON	77	55	87	47	66	2	.5	-.1	.5	8.5	143	20.5	162	80	42	0	0	0	0	0	0	0
COLUMBIA	79	51	87	39	65	2	.1	-.7	.1	7.6	111	18.3	119	83	33	0	0	0	0	0	0	0
FLORENCE	79	51	87	42	65	2	.3	-.4	.3	5.1	88	14.1	113	81	32	0	0	0	0	0	0	0
GREENVILLE	74	46	83	38	60	1	.6	-.3	.4	12.9	168	23.6	146	78	37	0	0	0	0	0	0	0
SD ABERDEEN	56	33	68	28	44	1	.1	-.4	.0	2.6	126	3.7	113	92	39	0	0	0	0	0	0	0
HURON	53	34	65	29	43	-3	.1	-.1	.1	4.0	144	4.9	127	93	40	0	0	0	0	0	0	0
RAPID CITY	51	30	65	24	41	-4	.6	.2	.2	4.4	119	3.7	128	96	42	0	0	0	0	0	0	0
SIoux FALLS	50	34	64	30	42	-4	.4	-.2	.2	3.5	116	5.0	121	92	39	0	0	0	0	0	0	0
TN CHATTANOOGA	76	48	85	39	62	3	.4	-.6	.3	9.0	105	17.9	98	87	32	0	0	0	0	0	0	0
KNOXVILLE	73	46	84	41	60	2	.3	-.6	.3	7.7	106	14.0	90	81	37	0	0	0	0	0	0	0
MEMPHIS	74	52	81	40	63	1	1.0	-.2	.3	6.3	74	12.4	74	81	47	0	0	0	0	0	0	0
NASHVILLE	71	47	80	34	59	0	.7	-.3	.7	1.2	99	13.1	89	81	39	0	0	0	0	0	0	0
TX ABILENE	78	50	89	38	64	-1	.4	.0	.4	7.5	64	3.6	80	84	39	0	0	0	0	0	0	0
AMARILLO	67	35	78	28	51	-5	.4	-.2	.4	1.3	92	2.4	97	80	30	0	0	0	0	0	0	0
AUSTIN	78	55	85	46	67	-3	.4	-.2	.4	3.5	113	10.0	144	83	48	0	0	0	0	0	0	0
BEAUMONT	75	55	79	43	65	-4	.4	-.7	.4	11.7	230	25.7	194	93	57	0	0	0	0	0	0	0
BROWNSVILLE	83	64	86	52	73	-2	.1	-.3	.1	1.9	154	6.6	170	85	49	0	0	0	0	0	0	0
CORPUS CHRISTI	80	60	89	49	70	-2	.4	-.1	.4	4.0	230	6.1	113	89	52	0	0	0	0	0	0	0
DEL RIO	85	58	99	47	72	1	T	-.5	T	2	22	1.9	39	74	42	2	0	0	0	0	0	0
EL PASO	78	53	86	45	65	3	T	-.1	T	T	2	1.7	135	36	14	0	0	0	0	0	0	0
FORT WORTH	74	53	85	42	64	0	1.1	-.3	1.0	5.1	104	12.7	138	89	55	0	0	0	0	0	0	0
GALVESTON	72	60	76	49	66	-3	.3	-.3	.3	8.2	235	21.2	235	85	64	0	0	0	0	0	0	0
HOUSTON	77	55	83	43	66	-2	.5	-.3	.3	12.9	261	21.4	173	87	48	0	0	0	0	0	0	0
LUBBOCK	75	44	87	34	59	-1	1.2	1.0	1.2	1.5	116	2.9	124	64	22	0	0	0	0	0	0	0
MIDLAND	79	46	90	36	62	-2	.4	-.2	.3	.7	95	2.8	157	77	22	2	0	0	0	0	0	0
SAN ANGELO	83	51	97	34	67	0	.3	-.1	.3	.8	46	2.5	71	82	32	2	0	0	0	0	0	0
SAN ANTONIO	80	56	88	43	68	-1	T	-.6	T	2.8	101	7.8	125	82	43	0	0	0	0	0	0	0
VICTORIA	80	58	87	47	69	-1	.1	-.5	.1	5.0	138	11.8	121	89	46	0	0	0	0	0	0	0
WACO	76	54	84	41	65	-2	1.2	.5	1.2	6.9	175	13.2	172	86	52	0	0	0	0	0	0	0
WICHITA FALLS	73	49	91	40	61	-2	1.0	.3	1.0	4.6	115	9.1	125	87	46	1	0	0	0	0	0	0
UT CEDAR CITY	59	30	67	22	44	-3	T	-.2	T	1.9	94	6.2	173	73	27	0	0	0	0	0	0	0
SALT LAKE CITY	57	37	70	31	47	-2	.4	-.1	.2	2.2	71	6.8	124	80	30	0	0	0	0	0	0	0
VT BURLINGTON	56	38	73	33	47	3	.9	.2	.3	3.2	85	7.2	100	90	47	0	0	0	0	0	0	0
VA NORFOLK	71	52	82	47	61	5	.9	.2	.9	8.5	157	15.8	125	72	43	0	0	0	0	0	0	0
RICHMOND	70	46	82	37	58	2	.6	-.1	.6	9.9	188	17.2	148	75	44	0	0	0	0	0	0	0
ROANOKE	70	48	78	43	59	4	.8	.1	.7	10.0	189	17.2	157	65	41	0	0	0	0	0	0	0
WA QUILLAYUTE	53	40	59	35	46	0	2.4	.7	.9	17.5	109	26.3	61	97	53	0	0	0	0	0	0	0
SEATTLE-TACOMA	57	42	62	39	49	1	.5	-.1	.2	7.5	151	11.9	83	89	44	0	0	0	0	0	0	0
SPOKANE	52	35	58	32	44	-2	.2	-.1	.1	2.3	105	4.6	81	94	41	0	0	0	0	0	0	0
YAKIMA	60	33	64	25	46	-3	.1	.0	.1	1.1	112	2.7	92	86	32	0	0	0	0	0	0	0
WV BECKLEY	64	41	77	34	52	2	.4	-.4	.3	7.7	145	12.1	109	85	46	0	0	0	0	0	0	0
CHARLESTON	69	43	82	35	56	1	.3	-.5	.2	7.3	133	12.2	106	79	38	0	0	0	0	0	0	0
HUNTINGTON	67	44	80	35	56	3	.6	-.2	.5	6.6	118	12.5	107	81	44	0	0	0	0	0	0	0
PARKERSBURG	62	41	77	34	51	-2	.5	-.3	.5	9.1	155	13.6	114	89	47	0	0	0	0	0	0	0
WI GREEN BAY	41	30	49	24	35	-8	1.3	.8	1.0	3.1	91	4.8	87	97	53	0	0	0	0	0	0	0
LACROSSE	47	31	63	27	39	-8	1.6	.9	.9	5.8	164	8.2	152	94	52	0	0	0	0	0	0	0
MADISON	45	32	58	27	39	-7	2.3	1.6	1.4	6.6	170	9.4	154	93	48	0	0	0	0	0	0	0
MILWAUKEE	42	34	52	30	38	-6	2.1	1.3	1.4	6.8	147	10.4	135	95	51	0	0	0	0	0	0	0
WAUSAU	43	28	54	23	36	-7	1.5	.9	.9	3.1	91	4.9	94	94	58	0	0	0	0	0	0	0
WY CASPER	51	29	64	18	40	-2	1.2	.9	1.0	2.4	136	4.1	142	84	36	0	0	0	0	0	0	0
CHEYENNE	48	28	60	22	38	-4	.7	.4	.6	2.6	154	3.8	153	86	39	0	0	0	0	0	0	0
LANDER	52	30	66	25	41	-2	.6	.1	.4	2.6	116	3.9	119	86	32	0	0	0	0	0	0	0
SHERIDAN	52	31	64	25	41	-2	.4	.0	.2	1.5	79	2.3	72	94	42	0	0	0	0	0	0	0

Based on 1961-90 normals.

National Agricultural Summary

April 12 - 18, 1993

HIGHLIGHTS: More wet weather over the Nation raised the prospects of a delayed planting season. A storm the early part of the week brought snow to the upper Midwest. Another storm midweek brought more precipitation to the Midwest, South, New England and the Atlantic Coast. At the end of the week, another storm brought moisture to the Pacific Northwest. Temperatures were below normal in the western two-thirds of the Nation. The cool conditions continued to delay crop development.

SMALL GRAINS: Winter wheat condition rated mostly good in the 19 major producing States. More than 30 percent (%) of the wheat in California, Oregon, and Kansas rated excellent. More than 10% of the wheat in Georgia rated poor to very poor. Progress of this year's crop is behind normal. Heading of the winter wheat crop stood at 1%, compared with 10% last year and the 5-year average of 6%. Below-normal temperatures hampered wheat growth in Kansas. Although Kansas wheat has minor disease problems, the potential for foliar diseases is great due to the wet conditions. In Texas, insect activity increased with growing populations of green bugs and Russian wheat aphids. Texas wheat condition rated 76% of normal, compared with 85% last year. Nationally, the wet conditions delayed planting of spring wheat. Planting progress of spring wheat in the five major producing States was 3% planted, compared with 32% last year and 27% average. Planting progress was well behind in all five States, but relatively good progress was made in Idaho and Montana. Wet conditions again delayed planting progress of other small grains. Only 1% of the oats crop was planted in South Dakota, North Dakota, and Minnesota. Barley planting progress was only 2% complete in North Dakota and 11% complete in Montana. Rye condition rated good in Georgia and South Dakota.

CORN: Corn planting progress advanced fractionally from last week with wet conditions causing delays. Corn planting was 2% complete in the 17 major corn-producing States, compared with 8% last year and 7% average. Cool, moist conditions delayed planting activities in Texas. Corn planting activities in Kansas were limited to the southern districts. Dry weather was needed across the Midwest before planting activities could begin.

COTTON: Warm, dry conditions allowed cotton planting to progress well in California, Arizona, and New Mexico. In the South, progress remained delayed by the wet conditions. Blowing sand damaged some cotton fields in the Coastal Bend of Texas. Nationally, cotton planting was 12% completed, compared with 14% last year and 14% average.

SORGHUM: Planting of the sorghum crop remained delayed in most areas by wet conditions. Planting progress in the 12 major States reached 18%, compared with 23% last year and 21% average. Texas planting was delayed by cool, wet conditions. Sorghum in some fields in the Texas Blacklands had emergence problems.

RICE: Rice planting in the five major States reached 13% complete, compared with 46% last year and 26% average. Land preparation continued in California. Louisiana rice received treatment for water mold and leaf miners. Earlier planted rice emerged in Texas.

OTHER FIELD CROPS: Maple syrup harvest in southern New England was concluding. Cold weather and rapid warming reduced yield expectations. Georgia onions are in good condition. Onion harvest was active in Texas and California but had not begun in Georgia. Onion planting in Colorado and Idaho continued but progress was behind normal. Potato planting remained active in California but was delayed by wet conditions in Texas and Oregon. Planting progress in Idaho, at 2%, was behind last year's 10% progress and 9% average. Sugarbeet planting was active in the Northwest, upper Plains, and Upper Midwest. Progress lagged the 5 year average. Over-winter sugarbeet harvest was active in California. The tobacco crop rated fair to good in the Southeast. Emergence of the crop in Tennessee and Kentucky was behind last year and average. Peanut planting was active in Georgia and Alabama but progress lagged last year and average.

FRUIT AND NUTS: The citrus harvest remained slow in central and western Arizona. In Florida, the cool weather prolonged the bloom cycle. New growth was abundant and the citrus trees remained in near excellent condition due to the rain. Grapefruit and Valencia orange harvests advanced. The California Valencia orange and lemon harvests were also active. Navel orange harvest in California was 80% complete but with heavy grade-out. Peaches rated good in Georgia and were doing well in Texas. Stone fruit bloom continued in the Northwest. The Washington growing season has been mild thus far with few critically cold nights. Grapes and walnuts were treated for insects and diseases in California. Shot hole fungus plagued plums in California. In Texas, producers grafted pecan trees and sprayed nutrients on orchards.

VEGETABLES: The Arizona vegetable harvest moved toward completion. Harvest in the Homestead area of Florida neared completion. Celery planting was completed in Florida. Planting in central and northern Florida neared completion. Planting in New Jersey, Delaware, and Maryland continued 1 to 2 weeks late. Wet conditions delayed planting in the High Plains of Texas. Watermelons in Georgia were in fair condition. The Texas watermelon crop was sprayed for diseases. Other melons progressed well in Texas, but were stressed by winds and dry conditions. Asparagus harvest continued in California. Broccoli, celery, cauliflower, and lettuce harvests remained active. Carrot harvest was active in Texas and California. The cabbage harvest advanced in the Rio Grande Valley.

PASTURE AND LIVESTOCK: Pasture and livestock conditions rated good across the Nation. California pastures were in especially good condition. Mud caused stress to livestock in outside feedlots, especially in South Dakota and Indiana. Supplemental feeding continued in the northern Plains, but feed supplies were adequate.

Crop Progress

for the Week Ending April 18, 1993

COTTON (Percent Planted)

	Current	Last Wk	1992	Avg.
AL	8	3	23	22
AZ	38	24	37	58
AR	0	0	1	1
CA	45	10	50	59
GA	5	1	5	3
LA	0	0	11	6
MS	0	0	6	5
MO	0	0	2	1
NM	31	20	40	47
NC	0	0	0	0
OK	0	0	0	1
SC	3	0	1	5
TN	0	0	0	0
TX	15	13	14	13
14 States	12	7	14	14

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

WINTER WHEAT (Percent Headed)

	Current	Last Wk	1992	Avg.
AR	7	4	18	14
CA	75	50	75	68
CO	0	0	0	0
GA	20	10	49	63
ID	0	0	0	0
IL	0	0	0	0
IN	0	0	0	0
KS	0	0	0	1
MI	0	0	0	0
MO	0	0	0	0
MT	0	0	0	0
NE	0	0	0	0
NC	3	2	9	19
OH	0	0	0	0
OK	1	0	30	10
OR	0	0	0	0
SD	0	0	0	0
TX	9	4	27	18
WA	0	0	0	0
19 States	3	1	10	6

These 19 States produced 90% of the 1992 winter wheat crop.

GRAIN SORGHUM (Percent Planted)

	Current	Last Wk	1992	Avg.
AR	7	6	39	15
CO	0	0	0	0
IL	0	0	0	0
KS	0	0	0	0
LA	2	2	25	25
MS	7	3	26	23
MO	0	0	4	1
NE	0	0	0	0
NM	0	0	1	NA
OK	1	1	3	3
SD	0	0	0	0
TX	47	42	56	52
12 States	18	16	23	NA
Excl. States with NA	18	16	23	21

These 12 States produced 99% of the 1992 grain sorghum crop.

CORN (Percent Planted)

	Current	Last Wk	1992	Avg.
CO	0	0	2	1
GA	66	45	89	87
IL	0	0	11	8
IN	0	0	1	1
IA	0	0	2	3
KS	3	0	20	15
KY	4	1	28	11
MI	0	0	0	0
MN	0	0	0	1
MO	2	2	22	17
NE	0	0	3	2
NC	21	5	50	40
OH	0	0	4	2
PA	0	0	0	1
SD	0	0	0	0
TX	49	41	61	67
WI	0	0	0	0
17 States	2	2	8	7

These 17 States produced 94% of the 1992 corn crop.

RICE (Percent Planted)

	Current	Last Wk	1992	Avg.
AR	3	2	53	15
CA	0	0	0	0
LA	42	26	56	46
MS	5	3	38	22
TX	22	15	55	63
5 States	13	8	46	26

These 5 States produced 97% of the 1992 rice crop.

SPRING WHEAT (Percent Planted)

	Current	Last Wk	1992	Avg.
ID	9	4	78	56
MN	1	0	19	22
MT	8	3	48	39
ND	2	0	14	15
SD	2	1	79	56
5 States	3	1	32	27

These 5 States produced 96% of the 1992 spring wheat crop.

Crop Condition (Percent)

for the Week Ending April 18, 1993

WINTER WHEAT

State	VP	P	F	G	EX
AR	0	0	15	81	4
CA	0	0	5	50	45
CO	0	0	12	58	30
GA	0	12	61	27	0
ID	2	2	19	59	18
IL	0	0	16	76	8
IN	0	1	23	68	8
KS	0	1	5	49	45
MI	2	8	35	45	10
MO	1	10	55	34	0
MT	0	1	19	50	30
NE	0	0	21	61	18
NC	0	1	31	66	2
OH	2	8	32	45	13
OK	0	0	30	70	0
OR	0	1	8	48	43
SD	0	2	11	59	28
TX	1	3	44	43	9
WA	0	0	13	87	0
19 State	0	2	21	56	21
Prev Week	0	2	19	61	18
Prev Year	3	9	37	45	6

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: 0.22 to 1.37 in. north; 0.24 to 1.38 in. central; 0.43 in. to 1.05 in. south. Temperatures: 5° below to 1° above normal north and central; 2 to 4° below normal south. Lows 30 to 42° north; 31 to 42° central; 36 to 46° south. Highs 80 to 84° north; 81 to 85° central; 79 to 84° south.

Days suitable for fieldwork 4.5. Soil moisture 55% adequate, 45% surplus. Acreage prepared 60%, 73% 1992, 67% avg. Corn planted 46%, 72% 1992, 68% avg. Sorghum planted 5%, 12% 1992, 15% avg. Peanuts planted 4%, 10% 1992, 10% avg. Wheat headed 30%, 49% 1992, 54% avg. Wheat turning color 4%, 4% 1992, 10% avg. Wheat 4% poor, 45% fair, 51% good. Pasture 2% poor, 47% fair, 45% good, 6% excellent. Primary activities: Harvesting timber; land preparation; soil testing; planting corn, cotton, peanuts, spring vegetables; applying fertilizer; spraying fruit; marketing cattle; general care of livestock, poultry, catfish.

ARIZONA: Sunny, warm throughout period, statewide. Temperatures 2° below to 2° above normal. Extremes 18°; 85°, higher elevations; 32°; 93° deserts.

Cotton field preparations active. Planting continued 38%, 37% 1992, 58% avg. Activities included: Pre-irrigation, laser leveling, listing. Alfalfa condition mostly good. Harvest activities moderate west, heavy central, east. Weeds, light; insect infestations moderate to heavy south central, east; disease light. Small grains jointing 99%, 99% 1992, 100% avg. Heading 83%, 79% 1992, 82% avg. Fields in good to excellent condition. Arizona vegetable harvest wrapping up. Asparagus, broccoli, cauliflower, cabbage, romaine, lettuce, kohlrabi, savoy, available western areas. Broccoli, cabbage, carrots, cauliflower, cilantro, dill, fava beans, mixed greens, kale, head, leaf lettuce, green onions, parsley, rapini, rutabagas, spinach, turnips, available, central. Citrus harvest continued slow central, western areas. Valencia oranges, lemons, grapefruit, tangerines, tangelos available both western and central areas.

ARKANSAS: Cool week, temperatures averaging below normal. Scattered showers throughout the week. Extremes 31°; 86°. Rainfall 1.04 to 3.78 in.

Days suitable for fieldwork 3. Soil moisture 10% adequate, 90% surplus. Producers continued to prepare land for planting as weather allowed. Wheat fair to good, needs sunshine, dry weather. Some wheat fields saturated. Producers continued to apply fertilizer to wheat in dry areas. Septoria leaf blotch, rust in some wheat fields. Corn 22% planted, 77% 1992, 55% avg. Corn, sorghum planting continued as weather conditions allowed. Livestock excellent condition. Pastures good. Producers feeding hay supplies, adequate.

CALIFORNIA: Basic weather pattern for the week over State was warm, dry. Northernmost portion of the State received some light amounts of precipitation near the end of the week.

Good progress field activities until rain 16th. Small grains excellent growth. Some fields irrigated, others sprayed broadleaf weeds. Rice stubble burned where conditions, regulations allowed. Many fields leveled, fertilized, rolled, planting preparation. Cotton planting gained momentum San Joaquin Valley. Desert area planting winding down. Alfalfa, oats, forages cut hay, green chopped. Established alfalfa treated weevils. Corn, safflower emerging; some planted. New crop sugarbeets irrigated; over-wintered crop harvest ongoing. Grapes irrigated, treated for mildew, nematodes; bunches developed. Kiwifruit bloomed. Stonefruit thinned; shot hole fungus plaguing plums. Almonds irrigated. Walnuts sprayed for codling moth. Navel orange picking active; 80% harvested; heavy gradeout. Valencia orange harvest active; good quality. Lemon picking active in south coast area. Avocado picking active. Asparagus harvest full swing Joaquin Delta. Westside harvest slow pace. Harvest underway Sutter County. Broccoli harvest heavy Salinas-Watsonville, moderate Santa Maria. Westside harvest continued. Celery harvest active south, central coastal areas. Carrot harvest continued. Central

coast cauliflower harvest moderate. Fresh market tomato harvest continued Riverside. Planting continued other areas. Lettuce harvest active central coast, westside, Riverside desert areas. Leaf type harvest winding down, westside. Yellow onion harvest began. Potato planting San Jacinto district. Processing tomatoes thinned, weeded westside, planting continued other areas. Westside sweet corn seeding continued. Other crops harvested include: cabbage, radishes, green onions, eggplant, green beans, summer squash, turnips, oriental vegetables. Pasture and range conditions rated good to excellent. Rangeland at lower elevations showed signs of maturing. Quality, quantity of feed best in years. Grasses higher elevations just beginning to green up. Numbers of stocker cattle increasing.

COLORADO: Most of the precipitation at lower elevations during the period fell on the 13th. Precipitation generally in the 0.10 to 0.30 in. range. A freeze advisory was issued for the west central valleys on the 14th, where temperatures fell to the mid 20s. A storm on the 18th prompted a high wind watch for northern, central mountains where winds up to 60 mph were reported. Temperatures a little cooler than normal. Most stations recorded temperatures to 2° below normal, except for the Eastern Plains which were mostly 2 to 4° below normal.

Days suitable for fieldwork 3.9. Soil moisture 7% short, 73% adequate, 20% surplus. Spring barley seeded 43%, 48% 1992, 46% avg.; emerged 8%, 30% 1992, 24% avg. Oats seeded 30%, 54% 1992, 44% avg.; emerged 6%, 26% 1991, 21% avg. Spring wheat seeded 15%, 31% 1992, 23% avg. Sugarbeets planted 41%, 60% 1992, 52% avg. Dry onions planted 39%, 76% 1992, 69% avg. Corn planting has not started yet. Winter wheat jointed 9%, 27% 1992, 9% avg. Winter wheat 12% fair, 58% good, 30% excellent. Cows calved 79%, 81% 1992, 76% avg.; ewes lambled 81%, 86% 1992, 81% avg. Livestock mostly good to excellent. Pasture, range feed condition good.

FLORIDA: Temperatures 2 to 5° below normal. Highs; middle, upper 80s statewide. Lows; lower 40s north, lower 50s central, interior south. Rain one day except south, two to three days. Rain generally under 0.33 in. north with 1.00 to 2.00 in. amounts central, south.

Soil moisture mostly adequate throughout State. Peanut planting active weather permitting. Preparing to plant cotton. Winter wheat starting to head. Corn, tobacco, sugarcane making good progress. Citrus trees near excellent condition. Rain beneficial. New growth abundant. Bloom continues in all stages. Cool weather prolonging bloom cycle. Valencia harvest active all areas. Grapefruit harvest heavy for processing. Temple, Honey tangerines harvest almost complete. Caretakers cutting cover crops, hedging, topping. Applying post bloom nutritional spray. Warm days, cooler than normal nights in major vegetable producing areas. Rainfall; 1.00 to 2.00 in. central, south, under 1.00 in. north, locally heavy rains, high winds Ruskin/Plant City area. Harvesting near complete Homestead, planting almost complete central, north. Celery planting complete. Sweet corn picking increasing Everglades. Volume leaders: Tomatoes, potatoes, cucumbers, peppers, cabbage. Also available: Snap beans, carrots, celery, chinese cabbage, sweet corn, eggplant, escarole, romaine lettuce, specialty lettuces, radishes, squash, strawberries, cherry tomatoes. State's pastures fair to excellent. Pasture ratings, 25% fair, 70% good, 5% excellent. State's cattle herds good condition.

GEORGIA: Most of week dry. Rain 0.50 in. or less, several areas east, south less than 0.25 in. Temperatures wide range, 1 to 3° cooler than normal. Warmest temperatures near 80° mountains, to mid or upper 80s south two-thirds. Coolest from mid 30s mountains, northwest to mostly upper 30s to mid 40s elsewhere.

Days suitable for fieldwork 4.6. Soil moisture 76% adequate, 24% surplus. Corn 3% poor, 51% fair, 46% good; planting active, conditions improved. Cotton 2% poor, 60% fair, 36% good, 2% excellent. Sorghum 8% planted, 10% 1992, 9% avg. Peanuts 39% fair, 61% good; 5% planted, 7% 1992, 6% avg. Tobacco 27% poor, 33% fair, 40% good; 71% transplanted, 94% 1992, 92% avg. Wheat 12%

poor, 61% fair, 27% good; 95% jointing, 99% 1992, 99% avg.; 63% boot, 85% 1992, 89% avg.; farmers applying fungicides. Other small grains 11% poor, 59% fair, 29% good, 1% excellent. Onions 6% fair, 90% good, 4% excellent; 0% harvested, 7% 1992, 10% avg. Watermelons 2% very poor, 2% poor, 77% fair, 18% good, 1% excellent; 69% planted, 86% 1992, 86% avg. Other vegetables 14% poor, 57% fair, 29% good. Apples 23% fair, 77% good; 16% blooming, 85% 1992, 91% avg. Peaches 7% very poor, 1% poor, 26% fair, 66% good; 99% blooming, 99% 1992, 100% avg. Pasture 2% poor, 30% fair, 60% good, 8% excellent. Cattle, hogs good.

HAWAII: Warm, sunny conditions with some showers, locally gusty winds during week. Weather warmed to record high 87° in Honolulu on 11th. Hawaii island received needed rainfall while other islands were mostly dry. Temperatures low 60s to high 80s. Rainfall none 1.10 in.

Weather was beneficial for most farming activities. Irrigation still essential for crop development many areas. Banana production lower, papaya output declined seasonally. Watermelon, sweet corn plantings underway.

IDAHO: Temperatures 5° below normal to 4° above normal throughout State. Precipitation fell across the State, with areas of the north receiving more than 0.50 in.

Days suitable for fieldwork 3. Soil moisture 0% very short, 2% short, 69% adequate, 29% surplus. Winter wheat mostly good, some snow mold, mice damage reported. Spring barley planted 8%, 73% 1992, 50% avg. Oats planted 4%, 63% 1992, 34% avg. Potatoes planted 2%, 10% 1992, 9% avg. Sugarbeets planted 8%, 94% 1992, 80% avg. Onions planted 10%, 92% 1992, 88% avg. Dry peas planted 1%, 73% 1992, 31% avg. Irrigation water supplies 2% very poor, 4% poor, 16% fair, 62% good, 16% excellent. Hay, roughage supplies 5% very short, 14% short, 80% adequate, 1% surplus. Activities: Applying fertilizers, pesticides, plowing, disking, some planting in areas with relatively dry soil conditions, some cases of reseeded winter wheat, shipping seed potatoes, fencing, some branding. Pasture, range condition 93% of normal. Calving completed 98%. Lambing completed 95%. Livestock reported in mostly good condition. Scours remains a problem with calf crop.

ILLINOIS: Unseasonably cold, damp weather returned last week, as temperatures 3 to 6° below normal, excessive precipitation 1.50 to 2.00 in. Highs low 50s; lower 60s. Lows mid 30s; mid 40s.

Days suitable for fieldwork 0.75. Soil moisture 3% adequate, 97% surplus. Oats planted 7%, 76% 1992, 68% avg. Alfalfa 1% excellent, 76% good, 23% fair. Frost damage to apples 82% no damage, 14% light damage, 4% moderate damage. Frost damage to peaches 74% no damage, 20% light damage, 6% moderate damage. Fieldwork remains minimal as farmers continue waiting for drier conditions. Pasture condition 86% of normal.

INDIANA: High temperatures 50s in the north to the low to mid 60s in the south. These readings were mostly 2 to 7° below normal across the State. Lows upper 30s to low 40s in the central, north to the 40s in the south. Low readings averaged within a few degrees of normal across the State. Precipitation 0.25 to 0.70 in. over the northeast to 1.20 to 2.50 in. over the central, south, far northwest.

Same broken record keeps playing. Rain halts any attempts at fieldwork. Livestock stress remains high on outside feedlots. Pastures are rated 81% of normal, 77% last week. Wheat crop ratings improved slightly from last week. Topsoil rated 7% adequate, 93% surplus. Subsoil moisture 22% adequate, 78% surplus. Oats seeded 11%, 54% 92, 54% avg. Spring tillage 42%, 73% 92, 74% avg.

IOWA: Temperatures 4 to 7° below normal. Extremes 24°; 71°. Precipitation 0.49 to 2.48 in.; average 1.19 in. (normal 0.65 in.). Moderate to heavy snow northeast, 15th, 16th.

Days suitable for fieldwork 0.1. Topsoil 4% adequate, 96% surplus. Subsoil 18% adequate, 82% surplus. Fertilizer application 21%, 68% 1992, 67% normal. Primary seedbed preparation completed 22%, 64% 1992, 67% normal. Oats sown 1%, 83% 1992, 78% normal. Winter wheat 1% very poor, 5% poor, 48% fair, 44% good, 2% excellent. Mud, cold weather causing above average calf loss.

KANSAS: Temperatures 3 to 7° below normal over State. Significant precipitation received eastern districts.

Days suitable fieldwork 1.5. Fieldwork progress behind normal. Farmers far behind spring seedbed preparation because wet field conditions. State topsoil moisture 42% adequate, 58% surplus. Subsurface moisture 56% adequate, 44% surplus. Wheat 94% good excellent, 5% fair, 1% poor. Below normal temperatures past week continued to hamper wheat growth. Wheat progress behind normal. Only 15% of States wheat acreage jointed, compared avg. 50%. Diseases reported include WSM, WSSM, SBM, LR & Snow Mold. Disease intensity light. Because of wet conditions, foliar disease potential great. Corn planting 3% complete, avg. 15%. Most corn planted is in southern districts. Oats planting 55% complete, avg. 97%. Mud remains a problem for livestock, stockmen many areas. Pastures providing about 25% cattle roughage requirements. Some shortages hay because high usage.

KENTUCKY: Near normal temperatures and rainfall. Highs mid 60s, lows mid 40s. Precipitation 1.30 in. west, around 1.00 in. central, northeast, 0.50 in. southeast. Statewide avg. 0.90 in.

Days suitable for fieldwork 2.7. Soil moisture 61% surplus, 39% adequate. Wheat 1% very poor, 2% poor, 24% fair, 70% good, 3% excellent. Barley 13% fair, 80% good, 7% excellent. Tobacco beds 80% seeded, 95% 1992, 100% avg. Tobacco plants 34% emerged, 68% 1992, 65% avg. Pastures good condition. Fruit, strawberry crops good to excellent condition.

LOUISIANA: Temperatures 2.6° to 5.0° below normal. Extremes 34°; 85°. Rainfall 0.46 in. west central to 1.93 in. east central.

Days suitable for fieldwork 2.5. Soil moisture 24% adequate, 76% surplus. Corn 6% very poor, 29% poor, 65% fair; 63% planted, 92% 1992, 83% avg.; 46% emerged, 76% 1992, 66% avg. Some corn replanted due to poor stands. Cotton 0% planted, 11% 1992, 6% avg.; 0% emerged, 2% 1992, 1% avg. Cotton planting delayed. Hay 1% first cutting, 2% 1992, 2% avg. Rice 42% planted, 56% 1992, 46% avg.; 22% emerged, 40% 1992, 32% avg. Water mold, leaf miners required pesticide treatment. Sorghum 2% planted, 25% 1992, 25% avg.; 0% emerged, 10% 1992, 15% avg. Delayed due to rain. Spring plowing 53% plowed, 77% 1992, 67% avg. Progressed slowly. Sweet potatoes 0% planted, 0% 1992, 2% avg. Wheat 8% very poor, 36% poor, 42% fair, 14% good; 59% headed, 85% 1992, 82% avg.; 6% turning color, 5% 1992, 3% avg. Wheat crop behind schedule on maturation. Sugarcane 2% poor, 70% fair, 28% good. Very little fieldwork done. Livestock 3% poor, 52% fair, 43% good, 2% excellent. Pastures 13% very poor, 4% poor, 6% fair, 77% good. Farmers fertilized pastures. Vegetables 8% very poor, 14% poor, 70% fair, 8% good. Planting continues, harvested some strawberries.

MARYLAND & DELAWARE: MARYLAND: Precipitation 1.92 in. Temperature 55.2°, normal 54.4°. Extremes 29°; 81°.

Days suitable for fieldwork 3.4. Topsoil, 10% adequate, 90% surplus. Subsoil moisture 15% adequate, 85% surplus. Small grains fair to mostly good condition, need top dressing. Light disease problems, scouting fields. Field corn 2% planted, 8% 1992, 6% avg. Pasture in excellent condition. Potatoes nearly half planted, about 1 week behind. Melon, sweet potato planting just beginning. Planting of green peas past halfway, nearly 2 weeks behind. Peach bloom at 14%, 43% 1992, 80% avg. Apples, strawberries just beginning to bloom, 2 weeks behind normal.

DELAWARE: Precipitation 1.63 in. Temperature 54.4°, normal 54.3°. Extremes 34°; 78°.

Days suitable for fieldwork 4.7. Topsoil 43% adequate, 57% surplus. Subsoil 17% adequate, 83% surplus. Small grains fair to good. Corn for grain 2% seeded, 12% 1992, 6% avg. Sweet corn 3% planted, 13% 1992, 11% avg. High numbers of slugs, eggs noted, scouting. Potatoes 1/4 planted, green peas 1/3 planted, both 2 weeks behind. Peach bloom 50%, 64% 1992, 91% avg. Apples, strawberries behind, not yet blooming. Pasture excellent condition. Activities: Harvesting hay, vegetables; repairing fence; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

MICHIGAN: Extremes 18°; 73°. Precipitation 0.28 to 2.27 in. across the State. Corn harvest advanced to 98%. Clouds covered the State

much of the week bringing rainfall, even some light snow by the weekend.

The muddy fields were drying slowly. Livestock condition was good. Feed supplies remained adequate to short. Major activities included last minute tax filing, preparing machinery for spring, spreading fertilizer, manure, removing brush from orchards.

MINNESOTA: Temperatures 5° below normal to 2° above normal for the State. Extremes 21°; 72°. Precipitation 0.01 to 1.59 in. Greatest weekly total 3.74 in. Small grain, sugarbeet seeding started this week in the northwest district. Snow fell in southern parts of the State during the weekend.

Topsoil 37% adequate, 63% surplus. Subsoil 4% short, 55% adequate, 41% surplus. Spring wheat is estimated at 1% planted compared to 19% in 1992, 22% normal. Oats 1% seeded, 20% 1992, 29% normal. Barley 1% seeded, 9% 1992, 14% normal. Sugarbeets 1% planted, 2% 1992, 9% normal. Green peas 0% planted, 14% 1992, 16% normal. Ground prepared for corn; 0%, 9% 1992, 9% normal. Soybean ground prepared 0%, 3% 1992, 3% normal. Fall seeded small grains 66% dormant, 6% poor, 26% good, 2% excellent. Date estimated for full scale fieldwork to begin is 26th.

MISSISSIPPI: Temperature 62°, 1.2° below normal. Extremes 24°; 85°. Entire State received near normal rainfall. State average 1.21 in. 0.01 in. below normal. Soil temperatures 64°.

Days suitable for fieldwork 2.4, 5.6 1992, 3.3 avg. Soil moisture 12% adequate, 65% surplus, 23% excessive. Corn 30% planted, 72% 1992, 53% avg.; 14% emerged, 41% 1992, 38% avg.; 3% very poor, 33% poor, 56% fair, 8% good. Cotton 0% planted, 6% 1992, 5% avg. Peanuts 2% planted, 8% 1992, 7% avg. Rice 5% planted, 38% 1992, 22% avg.; 2% emerged, 16% 1992, 7% avg. Sorghum 7% planted, 26% 1992, 23% avg.; 5% emerged, 6% 1992, 10% avg. Watermelons 31% planted, 55% 1992, 49% avg. Wheat 85% jointing, 95% 1992, 95% avg.; 14% heading, 50% 1992, 58% avg.; 8% poor, 76% fair, 16% good. Peaches 24% very poor, 23% poor, 18% fair, 35% good. Livestock 1% poor, 35% fair, 59% good, 5% excellent. Pasture 82% of normal. Activities: Land preparation, waiting for dry weather.

MISSOURI: Temperatures about normal southeast to 9° below normal northwest. Rainfall 2.12 in., ranging 1.31 in. northwestern district to 2.81 in. east central. Many central, east central counties received over 3.00 in. Rivers, creeks at flood stage throughout State.

Days suitable for fieldwork 0.5. Topsoil 9% adequate, 91% surplus. Ground worked at least once for spring crops 33%, 71% 1992, 67% avg. Corn planting not begun except southern districts. Oats sown 17%, 86% 1992, 83% avg. Wheat condition declining slightly due to excessive moisture, some low fields yellowing. Pasture 2% very poor, 12% poor, 38% fair, 46% good, 2% excellent.

MONTANA: Temperatures normal. Precipitation light northern third, good precipitation central, southern areas.

Days suitable for fieldwork 3.7. Topsoil moisture 7% short, 74% adequate, 19% surplus. Subsoil moisture 36% short, 57% adequate, 7% surplus. Field tillage work progress 49% none, 30% just started, 21% well underway. Winter wheat 3% still dormant, 48% greening, 49% green and growing. Barley planted 11%, 54% 1992, 35% avg. Oats planted 9%, 52% 1992, 44% avg. Sugarbeets planted 40%, 50% 1992, 43% avg. More than 89% of livestock receiving supplemental feed. Current rate of range grass growth compared to normal 42% slow, 53% average, 5% above average. Calving 87% complete, lambing 73% complete.

NEBRASKA: Temperatures 2 to 7° below normal. Scattered precipitation occurred throughout the week varying from 0.05 in. west to over 1.00 in. north central.

Days suitable for fieldwork 0.8. Topsoil moisture 40% adequate, 60% surplus. Subsoil moisture 68% adequate, 32% surplus. Wheat 21% fair, 61% good, 18% excellent. Oat planting 4% complete, 86% 1992, 83% avg. Pasture, range condition 99% of normal. Spring calving 82% complete. Monitoring, working with farm stored grain.

NEVADA: Weather systems brought gusty winds to most of State. Precipitation limited to extreme western mountains, extreme north,

across northwest. Amounts generally quite light. Temperatures averaged near normal to below normal. Extremes 15°; 87°.

Irrigation water allocations from surface sources should be close to normal this year. Spring work continues with seedbed preparation, planting. Shearing of range flocks continues. Cattle, sheep movement to spring, summer ranges underway.

NEW ENGLAND: Precipitation 0.72 to 1.19 in. Vermont; 1.00 to 2.72 in. elsewhere. Temperatures 42 to 52° across the region. Maximum temperatures 53 to 74°. Minimum temperatures 23 to 41°.

Major farm activities: General repairs, maintenance, tending livestock, moving crops from storage. Maple sugaring drawing to close in south. This year's crop is expected to be smaller than previous due to prolonged cold weather followed by rapid warming.

NEW JERSEY: Temperatures near normal. Extremes 28°; 77°. Rainfall 1.50 in. north, 0.85 in. central, 0.89 in. south. Heaviest 24 hour total 1.75 in. on 16th, 17th. Estimated soil moisture, in percent field capacity, averaged 98% north, 94% central, 93% south. Four inch soil temperatures averaged 49° north, 51° central, 53° south.

Planting, ground preparation 2 to 3 weeks behind due to excessive topsoil moisture, rains. Some planting of various types of lettuce, escarole, endive, spring spinach, snap beans. Planting of other early vegetables about 2 weeks behind due to wet ground conditions. Limited supplies of vegetables from storage moving through markets. Peaches just starting to bloom.

NEW MEXICO: Temperatures 1 to 2° above normal for the State. Extremes 6° northwestern mountains; 93° southeastern desert. Southeastern corner of the State received up to 0.80 in. precipitation, while rainfall was light, spotty throughout the rest of the State.

Days suitable for fieldwork 6.1. Soil moisture 44% short, 50% adequate, 6% surplus. Crop conditions: Alfalfa 3% very poor, 3% poor, 28% fair, 59% good, 7% excellent; continued reports of insect problems. Corn planting continues in southern and central counties. Irrigated wheat 20% fair, 75% good, 5% excellent. Dryland wheat 10% very poor, 10% poor, 50% fair, 30% good with additional moisture needed. Chile 17% fair, 66% good, 17% excellent; some transplanting in central counties. Onions 80% good, 20% excellent. Lettuce good to excellent condition. Cattle, sheep fair to good condition. Range, pasture 78% of normal.

NEW YORK: Temperatures fluctuated dramatically. Week started with temperatures well below normal, warmed to normal by midweek. By week's end it was unseasonably warm as highs soared into the 70s. Extremes 27°; 81°. It was a wet week with 1.00 to 2.00 in. of rain over the northern, eastern half of the State. Other areas were slightly drier.

Major activities: Caring for livestock, spreading manure, spring plowing, orchard maintenance, cleaning, storing maple syrup equipment, preparing to plant field crops. Early vegetable crops being planted where fields permit. Fields in many areas continue too wet to support machinery.

NORTH CAROLINA: Temperatures 1 to 5° above normal. Precipitation 2.53 in. at Whiteville to no precipitation at several locations.

Days suitable for fieldwork 3.7. Soil moisture 45% adequate, 55% surplus. Crop condition: Pasture 3% poor, 25% fair, 68% good, 4% excellent. Winter wheat 1% poor, 31% fair, 66% good, 2% excellent. Oats 2% poor, 30% fair, 67% good, 1% excellent. Barley 2% poor, 32% fair, 66% good. Rye 2% poor, 28% fair, 69% good, 1% excellent. Tobacco plant beds 1% very poor, 2% poor, 35% fair, 59% good, 3% excellent. Irish potatoes 6% very poor, 7% poor, 39% fair, 48% good. Peaches 4% poor, 25% fair, 68% good, 3% excellent. Truck crops 5% very poor, 11% poor, 33% fair, 51% good. Hay, roughage supplies 3% very short, 9% short, 82% adequate, 6% surplus. Tobacco plant bed supply 2% very short, 22% short, 76% adequate. Irish potatoes planted 85%, 98% 1992, 90% avg. Cabbage transplanted 85%, 100% 1992, 90% avg. Corn planted 21%, 50% 1992, 40% avg. Flue-cured tobacco transplanted 5%, 9% 1992, 13% avg. Major activities: Tobacco plant bed maintenance; fertilizing, liming in preparation for planting; planting corn. Other activities: Planting potatoes, cabbage; transplanting tobacco; tending livestock; general farm maintenance.

NORTH DAKOTA: Temperatures near normal despite snow, rain early in week. Temperatures 2° below normal north central, southeast to 1° above normal northwest. Extremes 21° northeast; 73° central. Precipitation 0.04 in. south central to 0.32 in. northwest.

Days suitable for fieldwork 3.7. Topsoil mostly adequate, above average. Topsoil none very short, 3% short, 92% adequate, 5% surplus. Subsoil 4% very short, 51% short, 43% adequate, 2% surplus. Average statewide starting date for fieldwork was 18th. Planting progress behind last year and average. Hard red spring wheat 2% planted, 14% 1992, 15% avg.; durum wheat none, 2% 1992, 5% avg.; barley 2%, 9% 1992, 13% avg.; oats 1%, 13% 1992, 12% avg.; sugarbeets 2%, 1% 1992, 6% avg. Winter wheat condition none very poor or poor, 35% fair, 65% good, none excellent; 37% dormant, 63% green. Livestock condition mostly good; nearly all received supplemental feed. Calving 80% complete, lambing 87%, shearing 92%. Pasture condition 84% of normal, 83% still dormant. Stockwater supplies none very short, 9% short, 91% adequate and none surplus.

OHIO: Temperatures near normal, with a wide range between the warmest days, coolest nights. High temperatures averaged in the mid 50s to low 60s while low temperatures averaged mid 30s to mid 40s. Temperatures climbed as high as the low 80s on the warmest day while dropping to near or below freezing on the coldest night. Weekly precipitation ranged from 0.25 in. to 1.50 in. with most of the State receiving 0.50 to 0.75 in. A little snow fell in northern areas near week's end. The cloudy skies, wet weather prevented saturated fields from drying or gaining warmth. Four-inch soil maximums averaged in the low and mid 50s; minimums averaged in the 40s.

Days suitable for fieldwork 2.6. Soil moisture 27% adequate, 73% surplus. Oats planted 5%, 1992 54%, average 44%. Tobacco beds sown 55%. Pasture 1% very poor, 5% poor, 34% fair, 51% good, 9% excellent. Hay 5% very poor, 8% poor, 31% fair, 52% good, 8% excellent. Fruit development continues to be slow. Weekend sun aided winter wheat development.

OKLAHOMA: Temperatures 5° below normal north central, central to 2° below normal southwest, southeast. Precipitation 0.02 in. Panhandle to 2.88 in. southeast.

Days suitable for fieldwork 3.8. Topsoil 34% adequate, 66% surplus. Subsoil moisture 100% adequate. Wheat 30% fair, 70% good; 78% jointing, 97% 1992, 81% avg.; 1% heading, 30% 1992, 10% avg. Oats 19% jointing, 71% 1992, 46% avg. Barley 24% jointing, 63% 1992, 47% avg. Corn 84% seedbed prepared, 86% 1992, 89% avg.; 29% planted, 29% 1992, 27% avg.; 13% up-to stand, 9% 1992, 8% avg. Sorghum 16% seedbed prepared, 41% 1992, 51% avg.; 1% planted, 3% 1992, 3% avg. Soybeans 24% seedbed prepared, 53% 1992, 46% avg.; 10% planted, 2% 1992, 3% avg. Peanuts 48% seedbed prepared, 58% 1992, 53% avg. Cotton 65% seedbed prepared, 64% 1992, 60% avg. Pastures 92% of normal. Livestock 48% fair, 52% good. Prices for feeder steers \$1.00 to \$2.00 per cwt. higher, feeder heifers steady to \$1.00 per cwt. higher. Marketings average.

OREGON: Temperatures 2 to 4° below normal eastern areas, 1 to 2° above normal western areas. Precipitation coastal areas 1.75 to 2.75 in., Willamette Valley 1.00 to 1.50 in., elsewhere up to 0.75 in.

Soil moisture 82% adequate 18% surplus. Winter wheat condition: 1% poor, 8% fair, 48% good, 43% excellent. Barley planted 51%. Fieldwork, plantings delayed, wet conditions; statewide. Fruit trees in full bloom or near full bloom, statewide. Frost protection measures used in many areas. Fungicides applied on fruit trees, strawberries, caneberries growing well, Willamette Valley. Scab sprays applied in Hood River Valley. Vegetable plantings delayed, wet conditions; Willamette Valley. Malheur County onion 25% complete, potato seedings 5% complete; delay wet conditions. Hermiston area potato seeding in full swing, snap peas, asparagus emerging, melon field preparation underway. Livestock good. Supplemental feeding, western portions, wet conditions. Calving mostly complete, branding, range turnout underway. High calf mortality rates, scours; eastern areas. Range, pasture condition 90% of normal.

PENNSYLVANIA: Temperatures, precipitation were above normal. Temperature 52°, 7° above normal. Extremes: 24°, 85°. Precipitation 1.63 in., 0.81 in. above normal.

Days suitable for fieldwork 3. Soil moisture 0% short, 12% adequate, 88% surplus. Plowing 7% complete, 35% 1992, 39% avg. Corn 0% planted, 0% 1992, 1% avg. Oats 7% planted, 31% 1992, 38% avg. Potatoes 0% planted, 9% 1992, 18% avg. Tobacco beds 50% planted, 71% 1992, 71% avg. Barley 0% boot, 1% 1992, 2% avg. Wheat 0% boot, 1% 1992, 1% avg. Wheat crop condition 5% very poor, 2% poor, 27% fair, 51% good, 15% excellent. Hay stands mostly fair to good. Feed from pastures poor to fair. Peaches 5% pink, 10% 1992, 37% avg.; 0% full bloom or past, 0% 1992, 14% avg. Cherries 5% pink, 9% 1992, 29% avg.; 0% full bloom or past, 0% 1992, 9% avg. Apples 2% pink, 5% 1992, 13% avg. 0% full bloom or past, 0% 1992, 1% avg. Activities: Hauling manure; maintaining machinery; fixing fence; preparing for spring work; pruning fruit trees, caring for livestock.

PUERTO RICO: Island rainfall of 2.10 in. was 1.02 in. above normal. Highest rainfall 10.76 in. at Negro Corozal, 7.53 in. at Corozal Aes, 6.00 in. at Adjuntas Aes. Highest 24 hour total 4.52 in. at Negro Corozal. Island temperatures about 78 to 79° on the coasts, 72 to 73° in the interior. Extremes 55°, 91°.

SOUTH CAROLINA: Temperatures across the State 1 to 3° above normal. Average precipitation 0.30 in.

Days suitable for fieldwork 4.9. Soil moisture 96% adequate, 4% surplus. Tobacco fair to good; 34% planted, 37% 1992, 52% avg. Corn good; 61% planted, 84% 1992, 81% avg. Cantaloupes fair to good; 40% planted, 55% 1992, 58% avg. Watermelons fair to good; 52% planted, 73% 1992, 74% avg. Cucumbers good; 51% planted, 58% 1992, 66% avg. Snapbeans fair to good; 47% planted, 41% 1992, 46% avg. Tomatoes fair to good; 82% planted, 88% 1992, 89% avg. Oats fair to good; 19% headed, 31% 1992, 44% avg. Wheat fair to good; 15% headed, 21% 1992, 41% avg. Peaches fair. Pastures fair to good.

SOUTH DAKOTA: Temperatures 30s west to the mid 40s central; this was slightly below normal. Extremes 11°, 69°. Precipitation was light near the northern border while the rest of the State received generally a half inch to an inch. Maximum 1.28 in.

Days suitable for fieldwork 0.4. Topsoil 2% short, 41% adequate, 57% surplus. Subsoil 1% very short, 7% short, 64% adequate, 28% surplus. Rye 3% very poor, 0% poor, 11% fair, 59% good, 27% excellent. Barley 2% planted, 64% 1992, 44% avg. Oats 1% planted, 71% 1992, 56% avg. Due to wet conditions very little spring field work can be done. Livestock 1% very poor, 0% poor, 9% fair, 78% good, 12% excellent. The cool wet weather and muddy feedlots continue to make conditions hard on livestock. Higher than normal calf death losses have been reported. Lambing was 77% complete, calving was 63% complete. Pasture conditions 85% of normal.

TENNESSEE: Rainfall for the week was heaviest in West. Both Dyersburg and Jackson recorded nearly 1.50 in. East, however, remained unusually dry. Less than half the normal rain fell in the east. Most locations in the east received less than 0.33 in. On average, temperatures were cooler than normal. Memphis was an exception with 4° above normal. Most other locations ran 1 to 2° colder than usual. Crossville, however, was 5° below normal.

Days suitable for fieldwork 2.7. Soil moisture 58% adequate, 42% surplus. Corn 3% planted, 44% 1992, 19% avg. Sorghum 0% planted, 9% 1992, 3% avg.; Tobacco 91% seeded, 99% 1992, 99% avg.; 59% plants up, 84% 1992, 84% avg. Wheat 39% jointed, 76% 1992, 77% avg.; 4% poor, 15% fair, 77% good, 4% excellent. Apples 85% budding or beyond, 94% 1992, 91% avg.; 33% blooming or beyond, 70% 1992, 72% avg. Peaches 98% budding or beyond, 100% 1992, 97% avg.; 91% blooming or beyond, 99% 1992, 96% avg. Pastures 1% poor, 21% fair, 66% good, 12% excellent. Cattle 20% fair, 77% good, 3% excellent.

TEXAS: Warm, dry weather ruled early in the week. Then midweek cold front, strong upper air disturbance triggered thunderstorms over much of State. Cooling followed front. Some additional showers fell across northern sections after midweek. Strong warming occurred over weekend. For week, temperatures averaged slightly below normal for most sections. Readings were slightly above normal southern High Plains, Trans-Pecos, Edwards Plateau areas. Rainfall below normal except for West Texas, Low Plains.

Crops: Corn planting slowed due to cool, moist weather in Plains. Some replanting occurred Blacklands, Central Texas due excess moisture. South Texas, corn will soon need rain. Statewide corn condition 77% normal, 88% 1992. Sorghum planting continued, slowed most areas due rain, cool temperatures. High Plains, land preparation continued. Some stands sorghum Blacklands having problems with emergence. Sorghum 71% normal, 79% 1992. High, low Plains land preparation cotton limited due wet fields. Coastal Bend emerged cotton suffered damage from blowing sand, some replanting necessary. Cotton planting continued Blacklands, Central Texas behind schedule. Rice planting activities continued. Earlier planted rice emerged. Soybean planting continued Central Texas where conditions allowed. Small grains in Plains experienced increased insect activity, with greenbug, Russian wheat aphid populations on rise. Some hail damage occurred. Wheat maturing well, but rust problem in Blacklands, Central Texas. Wheat condition 76% normal, 85% 1992.

Commercial Vegetables: Rio Grande Valley, onion, cabbage harvests continued. Melons progressing well, some stress from high winds, dry conditions. High Plains, vegetable planting slowed due cool, wet conditions. East Texas squash, tomatoes still being planted, watermelons being sprayed for diseases. Producers would like warmer temperatures. Trans-Pecos, chile pepper planting nearing completion. Some plants damaged by wind. Cabbage being treated for Diamond Back Moth. Peaches doing well. Only minimal damage resulted from frost during middle last week. Fruit thinning, spraying for disease continued. Leaf Curl showing up Hill Country. South Texas should have some early peaches three, four weeks. Some pecans being grafted East Texas. Producers continued spray nutrients on trees. Trees pollination stage Upper Coast.

Range and Livestock: Supplemental feeding decreasing, pastures continued green, provide forage grazing. Cross Timbers, Blacklands, weed infestation problem, particularly broomweeds. Pasture, Range land in Trans-Pecos area needs moisture to reduce fire hazards. Lice continued be problem Blacklands, East Texas, Trans Pecos. Horn flies, ticks increasing Hill Country. Cattle good condition overall.

UTAH: Temperature 3° below normal, minimums were between 1 to 2° below normal. Precipitation light throughout the State, except moderate in north central, Uinta Basin.

Days suitable for fieldwork 5.4. Soil moisture 61% adequate, 39% surplus. Winter wheat condition 30% good, 70% fair. Fall barley condition 49% good, 50% fair, 1% poor. Alfalfa hay height 3.5 in., 7.8 in. 1992. Spring wheat planted 39%, 98% 1992, 83% avg.; emerged; 11%, 77% 1992, 66% avg. Barley planted 45%, 94% 1992, 81% avg.; emerged 13%, 79% 1992. Oats planted 24%, 66% 1992, 63% avg.; emerged 5%, 33% 1992. Apricots full bloom or past 60%. Pears full bloom or past 8%. Cows calved 81%, 90% 1992. Lambing on farm 84%, 93% 1992; range 58%, 47% 1992. Sheep sheared on farm 76%, 89% 1992; on range 60%, 70% 1992. Pasture, range condition good to excellent.

VIRGINIA: Temperatures 3 to 5° above normal. Extremes 29°; 84°. Precipitation above normal 1.50 to 2.50 in.

Days suitable for fieldwork 3.0. Topsoil 54% adequate, 46% surplus. Pasture 28% fair, 72% good. Alfalfa 3% poor, 41% fair, 56% good. Other hay condition 43% fair, 57% good. Wheat 6% poor, 35% fair, 59% good. Barley 4% poor, 39% fair, 57% good. Peach 23% fair 69% good, 8% excellent. Apple 50% fair, 40% good, 10% excellent. Tobacco planted 4% very poor, 39% poor, 27% fair,

30% good. Potato planting continued. Corn 5% planted, 25% 1991, 25% avg. Corn 17% very poor, 33% poor, 50% fair. Liming, fertilizing land, spraying fruit trees, planting snapbeans, cucumbers.

WASHINGTON: Temperatures 3 to 8° above normal west; 6 to 11° above normal east. Precipitation 0.23 in. to 2.33 in. west; 0.01 to 0.67 in. east.

Days suitable for fieldwork 3.9. Soil moisture 9% short, 72% adequate, 19% surplus. Irrigation water supply 38% short, 62% adequate. Hay, other roughage 31% very short, 29% short, 40% adequate. Range, pasture 12% very poor, 8% poor, 56% fair, 24% good. Winter wheat dryland 15% fair, 85% good; irrigated 100% good. Spring wheat dryland 4% fair, 96% good; irrigated 5% fair, 95% good. Barley dryland 20% fair, 80% good; irrigated 5% fair, 95% good. Warm, wet spring continued; rains limited field work. Many Palouse grain growers still waiting for fields to dry; spring grain yields expected to decline unless field conditions improve soon. Planting of potatoes, vegetables advanced slowly. Stone fruits blooming, apples leafing out; frost season mild thus far with few critically cold nights. Livestock grazed spring pastures, ranges.

WEST VIRGINIA: Temperature 52°. Extremes 27°; 85°. Precipitation 0.76 in.

Days suitable for fieldwork 3.4. Soil moisture 52% adequate, 48% surplus. Wheat good. Barley good. Oats 20% planted. Hay 8% poor, 21% fair, 71% good. Apples good. Peaches good. Soil prepared, 20%. Tobacco beds planted, 84%. Pastures 18% poor, 41% fair, 41% good; 4% still dormant, 96% growing; 81% of normal. Cattle 10% poor, 20% fair, 70% good. Sheep 41% fair, 59% good. Hay feed supplies, 34% short, 66% adequate. Other feed supplies, 18% short, 82% adequate. Farm activities: General maintenance, feeding livestock, fencing, spreading fertilizer, bookkeeping.

WISCONSIN: Temperature 39°; 6° below normal. Extremes 5°; 68°. Many locations across the southern part of the State received 2.00 in. rain. Western, northern parts of the State were experiencing heavy snow. Much of the far northeast received over 10 in. of snow.

Days suitable for fieldwork 0.4. Soil moisture 1% short, 24% adequate, 75% surplus. Intended spring tillage 5% complete, 10% in 1992, 13% avg. Oats 0% planted, 8% in 1992, 16% avg.

WYOMING: Cool week across the State with wet weather in the east. Temperatures 2 to 5° below normal across most of the State. Precipitation was well above normal for the eastern part of the State. Central, west varied from a little below normal to a little above normal. The driest area was the southwest where little or no precipitation.

Days suitable for fieldwork 2.8. Topsoil 3% short, 80% adequate, 17% surplus. Subsoil moisture 15% short, 78% adequate, 7% surplus. Spring wheat 10% planted, 54% 1992, 41% avg. Oats 11% planted, 36% 1992, 35% avg. Barley 43% planted, 75% 1992, 70% avg. Sugarbeets 21% planted, 59% 1992, 48% avg. Winter wheat condition 5% fair, 95% good. Alfalfa prospects 2% fair, 89% good, 9% excellent. Irrigation supplies 10% percent short, 90% adequate. Spring calves born 80%, 75% 1992, 78% avg. Calf death losses 13% light, 56% normal, 31% heavy. Farm flock ewes lambed 83%, 86% 1992, 85% avg; shorn 80%, 82% 1992, 77% avg. Range flock ewes lambed 29%, 35% 1992, 41% avg.; shorn 49%, 62% 1992, 58% avg. Lamb death losses 18% light, 73% normal, 9% heavy. Hay, roughage supplies 59% short, 37% adequate, 4% surplus. Pastures, ranges 90% of normal.

(Continued from front cover)

more than 18 inches of snow buried Casper, WY and up to 4 inches covered northern New Mexico. Heavy snow spread across northern Nebraska on Tuesday and reached the western Great Lakes after midweek. Accumulations included 8 inches in Ainsworth, NE and 18 inches near Marquette, MI. Farther south, severe thunderstorms and heavy rain plagued the east-central and southeastern Plains. Midweek rainfall exceeded 2 inches from the Texas-Oklahoma border northeastward through the central Corn Belt. Unseasonably cold air trailed

the storm into the Rockies and the Plains, while warm air pushed northward in the East. On Thursday, a sampling of highs included 39°F in Columbia, MO and 85°F in Erie, PA. Late in the week, heavy rain and flooding returned to the Middle Atlantic States and southern New England. Rainfall topped 2 inches from Virginia's piedmont to central New York. By Saturday, the East turned drier and cooler, and a new storm began to organize over the Northwest. The temperature slipped to 33°F in Huntsville, AL. Farther west, Redding, CA received 1.78 inches of rain, and Sierra Ski Ranch, CA collected 6 inches of new snow.

International Weather and Crop Summary HIGHLIGHTS

April 11 - 17, 1993

FSU-WESTERN: Unseasonably cool weather accompanied rain and wet snow. The cool, wet weather slowed greening and fieldwork in the south.

EUROPE: Widespread showers promoted early-spring growth, although dry, cool weather persisted in the northeast.

SOUTH ASIA: Showers hampered winter wheat harvests and raised quality concerns.

EASTERN ASIA: Favorable weather existed for summer crop planting.

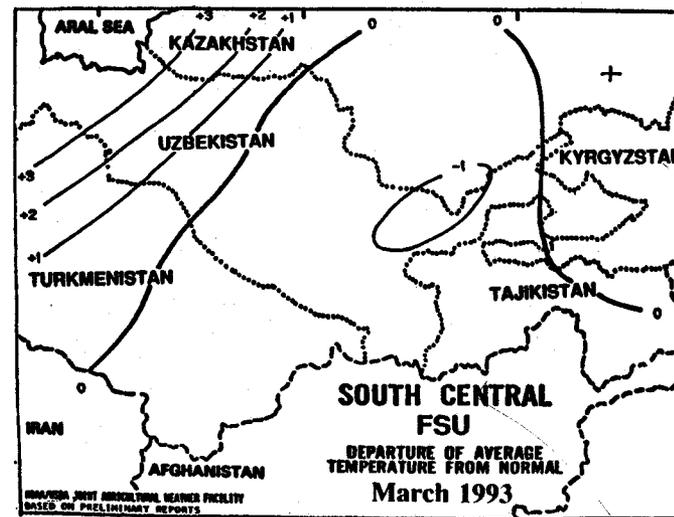
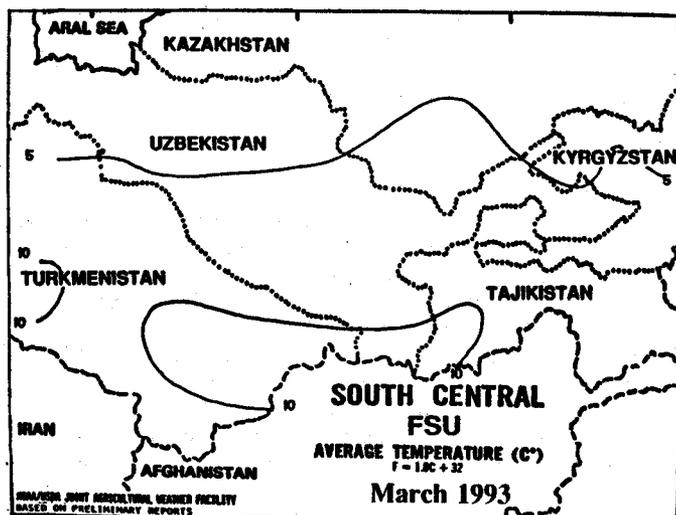
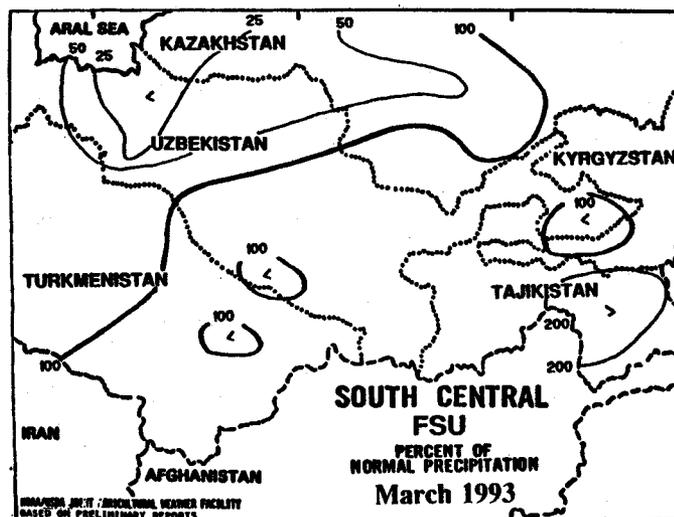
SOUTHEAST ASIA: Showers helped Indochina's immature dry-season rice, and improved planting conditions for Thailand's rainfed corn.

AUSTRALIA: Dryness favored summer crop harvesting but limited pasture growth.

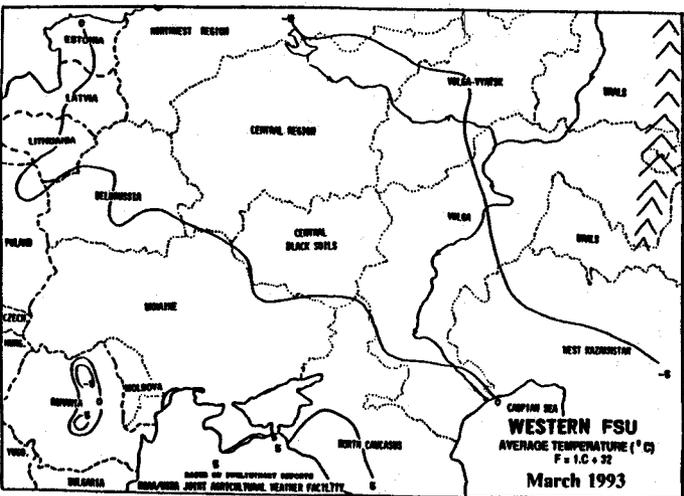
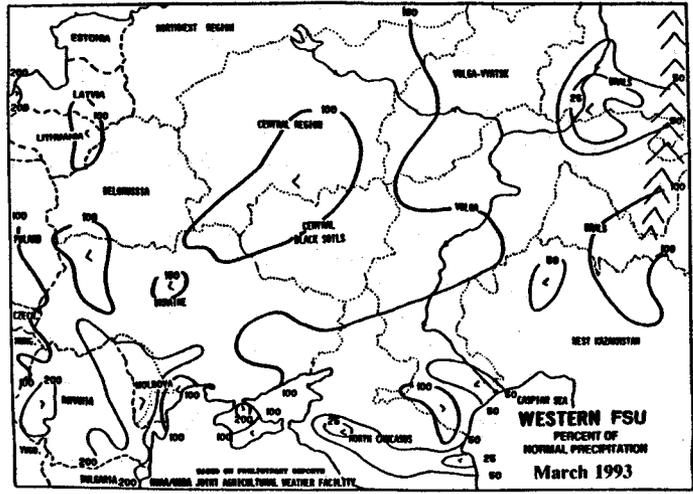
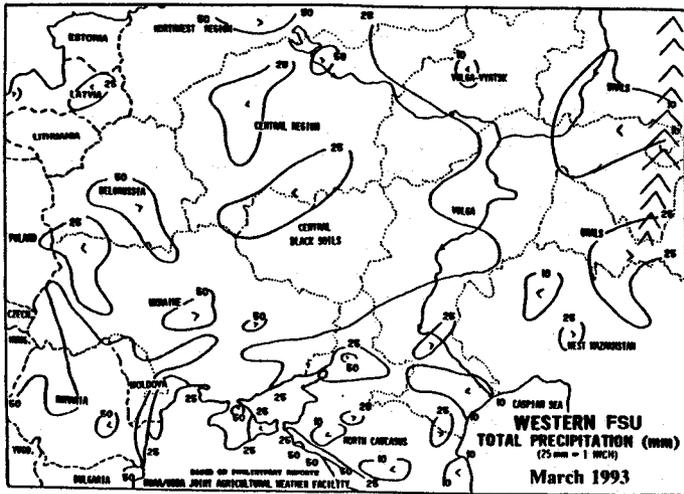
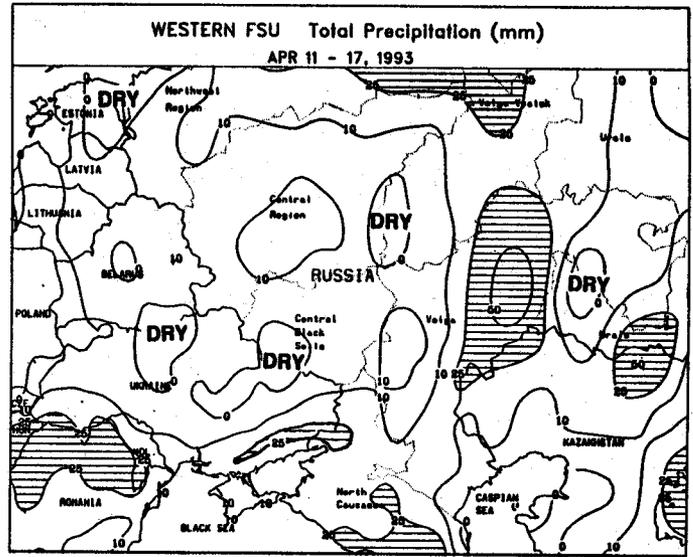
SOUTH AMERICA: Rains delayed summer crop harvesting in Argentina. Drier weather allowed harvesting to progress across southern Brazil.

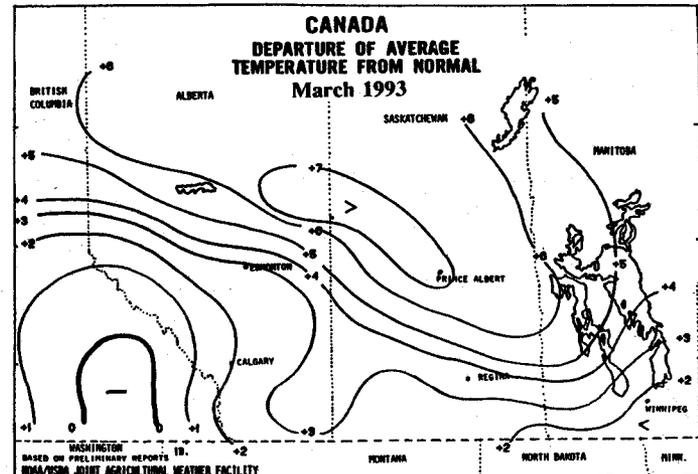
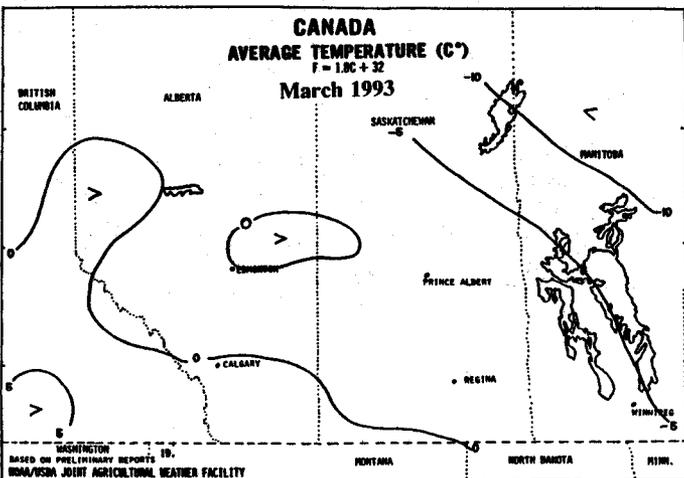
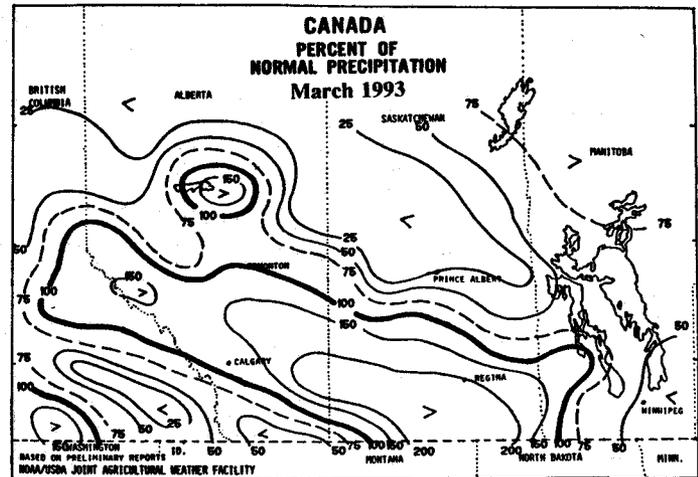
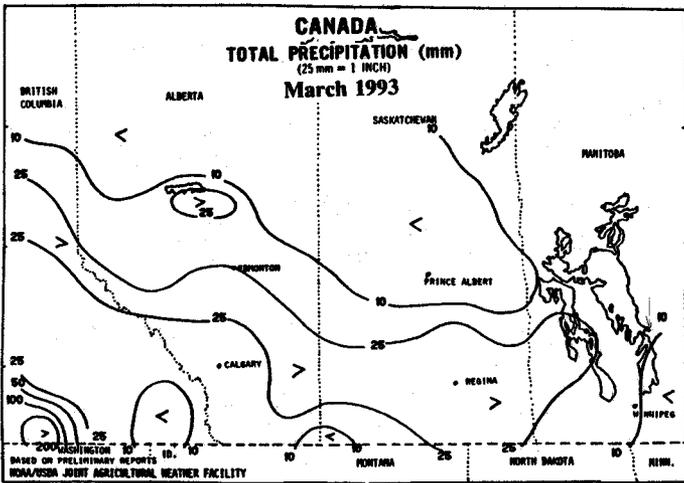
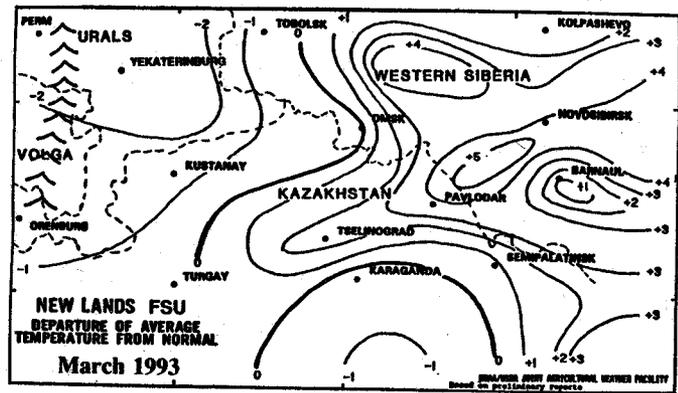
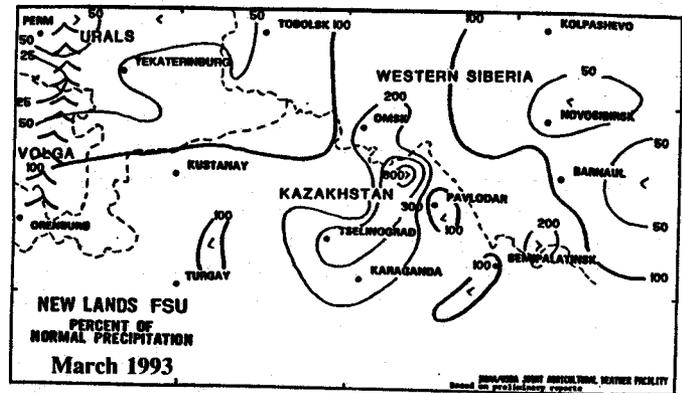
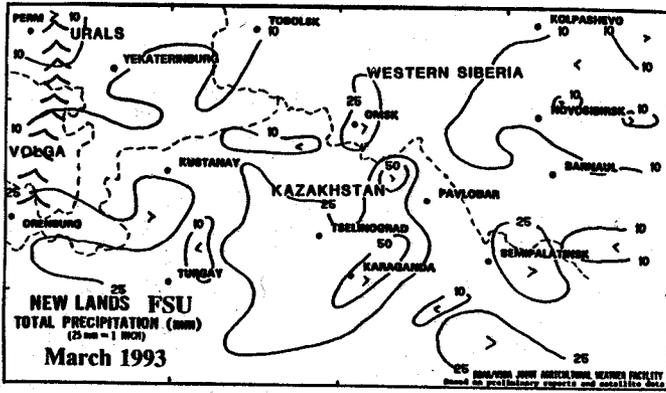
NORTHWESTERN AFRICA: Light showers dampened Moroccan winter grain areas, providing only temporary relief to drought-stressed crops.

SOUTH AFRICA: Timely rain improved winter wheat planting prospects.

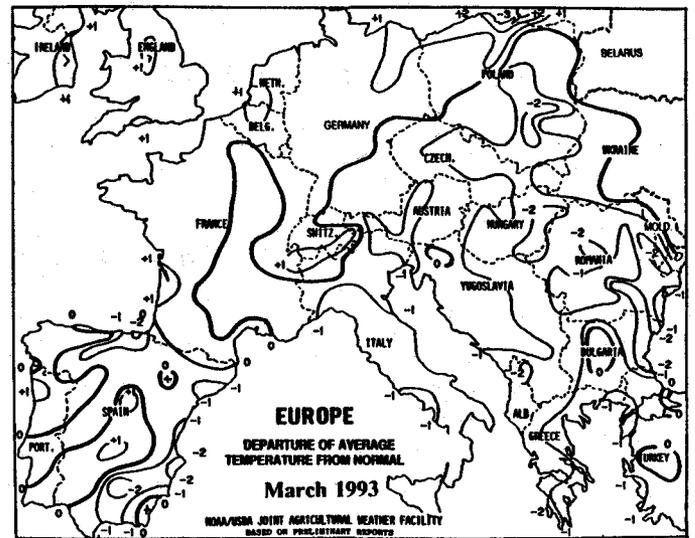
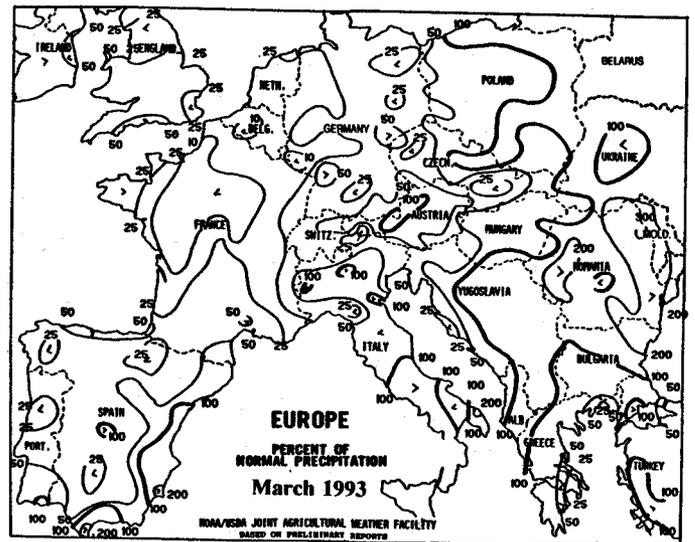
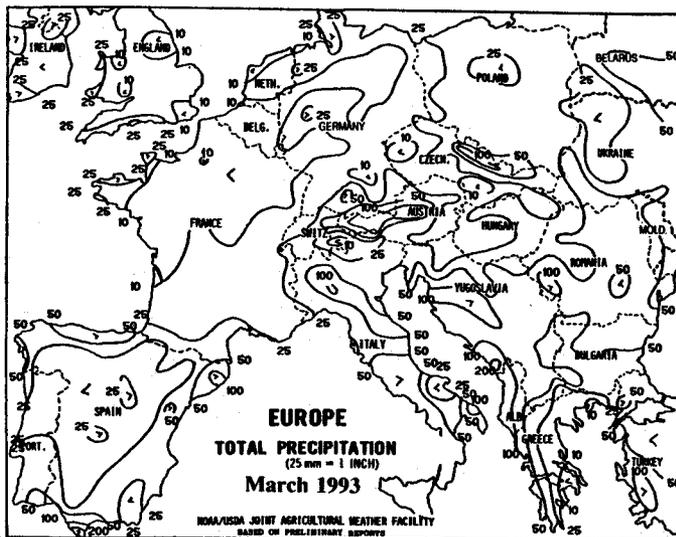
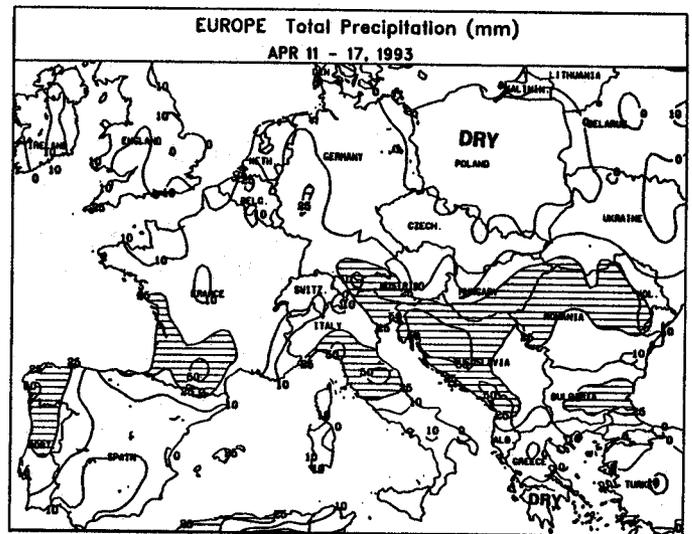


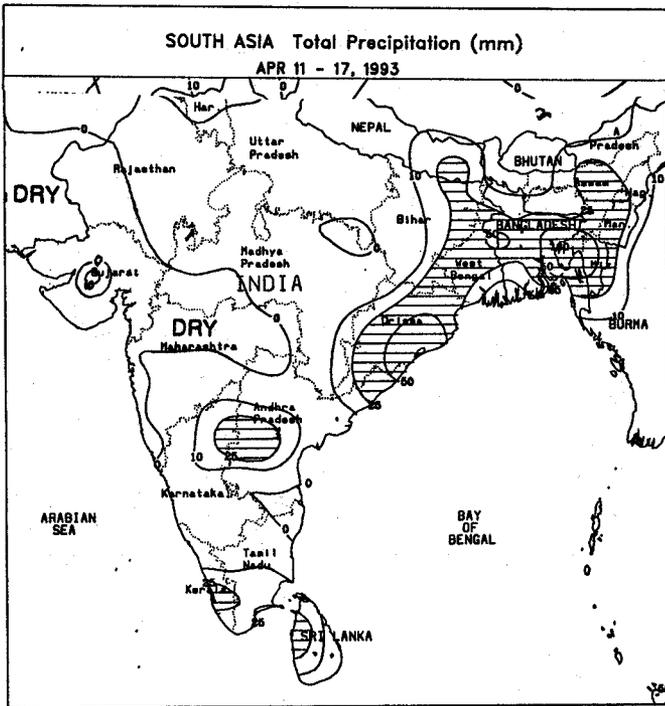
FSU-WESTERN: The weather turned colder over most of the region, following 3 weeks of unseasonable warmth. Mixed rain and snow covered northern winter grain areas, with rain confined to crop areas in southern Ukraine and North Caucasus. The rain (10-31 mm) interrupted fieldwork, but increased soil moisture supplies. Average temperatures ranged from 1 to 4 degrees Celsius (C) below normal, keeping winter grains in dormancy in the north and slowing greening in Ukraine and North Caucasus. Extreme minimum temperatures ranging from -3 to -7 degrees C in the north were not low enough to harm crops. In March, above-normal precipitation over Moldova, Belarus, and the Baltic States increased moisture for winter grains. Below-normal precipitation over most of North Caucasus and lower Volga Valley helped to dry topsoils for spring grain planting, which reportedly began the second half of the month. Following relatively cold weather during the first half of March, a period of unseasonably warm weather began over most of the FSU about March 16 and continued until month's end. The mild weather diminished snow cover 2-3 weeks earlier than usual in the north, and promoted greening of wheat in Ukraine and North Caucasus.



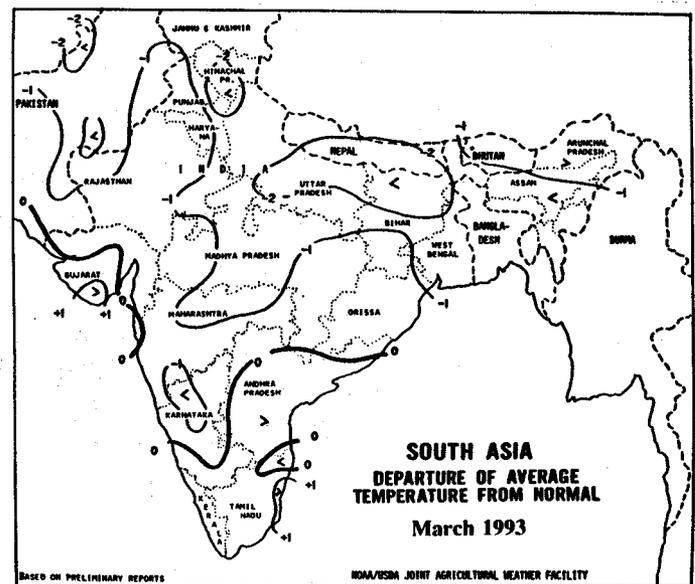
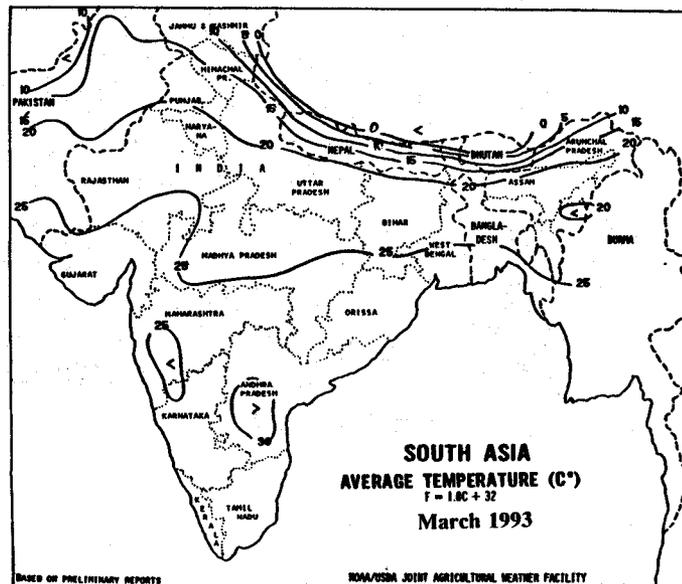
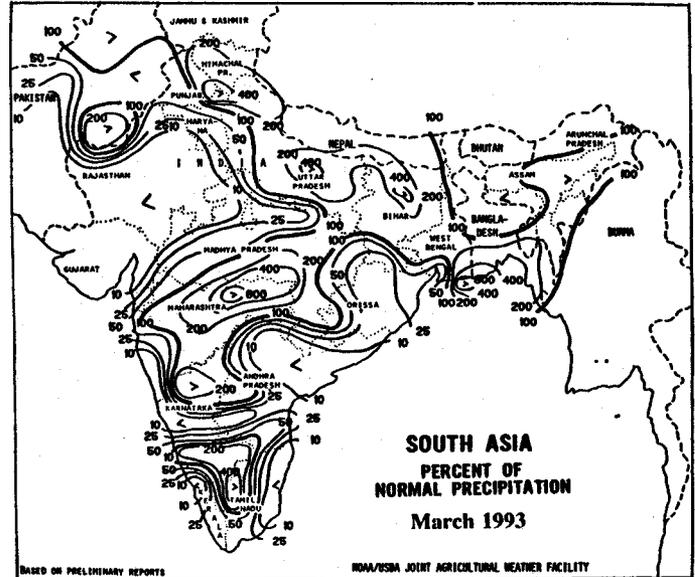
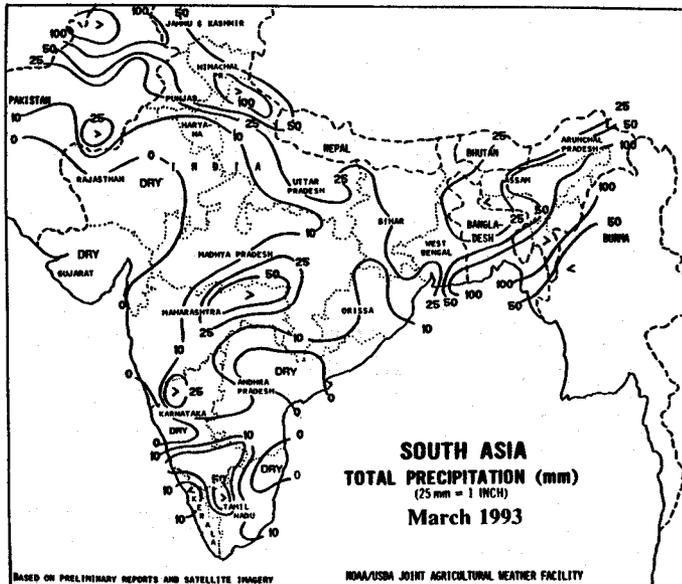


EUROPE: Widespread rain (20-75 mm) covered northwestern Iberian peninsula, southwestern France, central Italy, and much of the Balkans, providing favorable planting moisture and promoting winter crop growth. Beneficial rain (15-45 mm) also moistened topsoils in Hungary, which was timely for early-spring growth. Lighter, variable showers (2-15 mm) helped greening winter grains in the northwest but brought little drought relief to Spain. Dry weather was restricted to northeastern Europe and Greece. Average temperatures of 4-7 degrees C in Poland, the Czech Republic, and Slovakia kept early-season growth to a minimum. The recent topsoil moisture was especially beneficial throughout western Europe because of dry weather in March. March rainfall averaged less than 50 percent of normal from England to Germany and southward through France to the Iberian Peninsula. Dryness also extended into east-central Europe. Near seasonal precipitation helped soil moisture in Poland, while locally heavy March rainfall (greater than 200 percent of normal) likely caused some flooding in Romania and northeastern Bulgaria. Monthly temperatures averaged slightly below normal in the east and slightly above normal in the west.

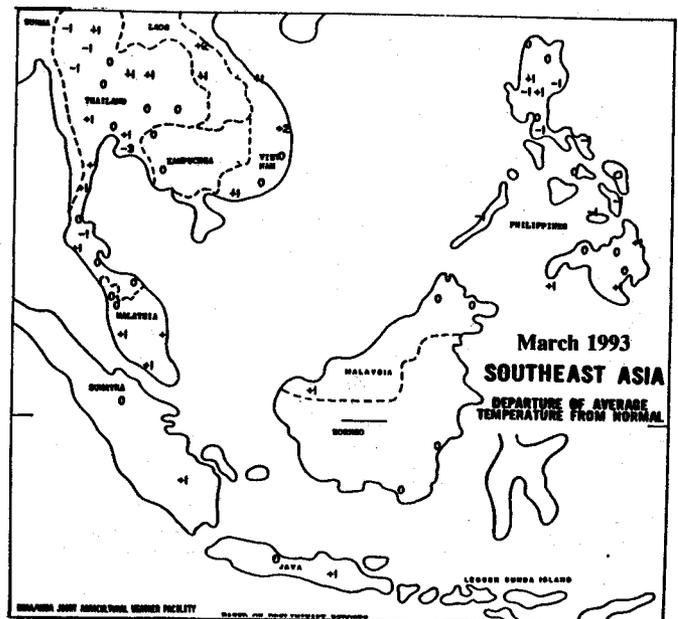
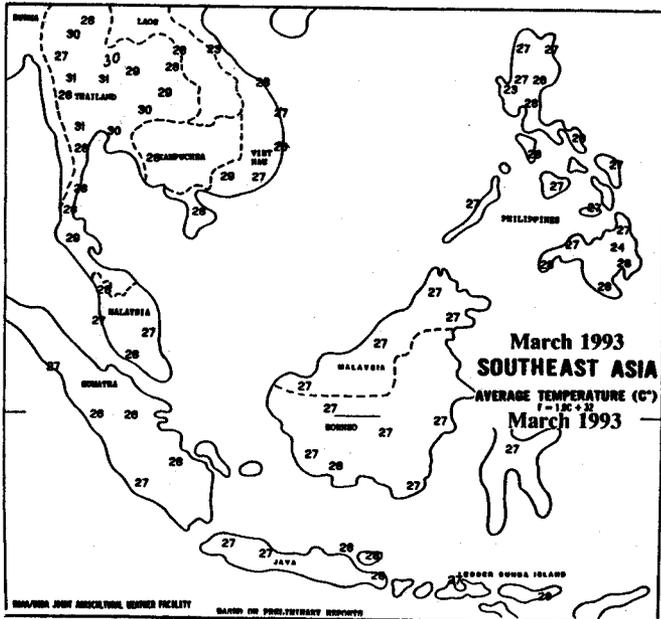
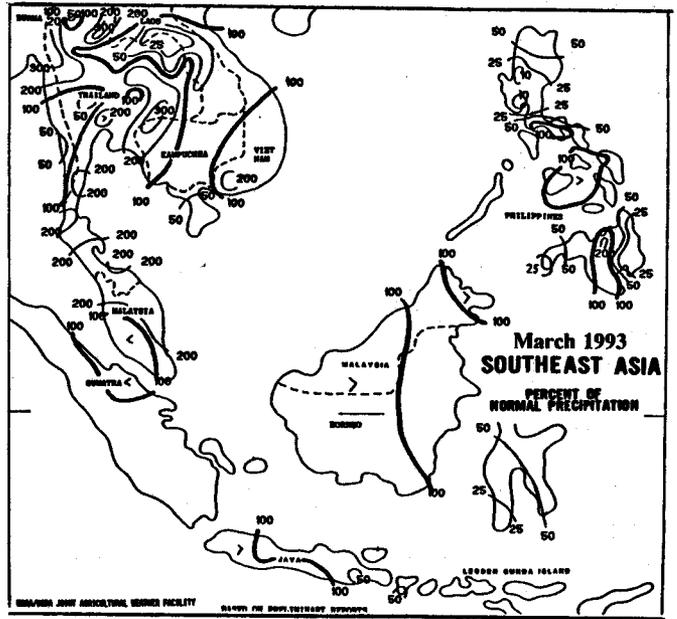
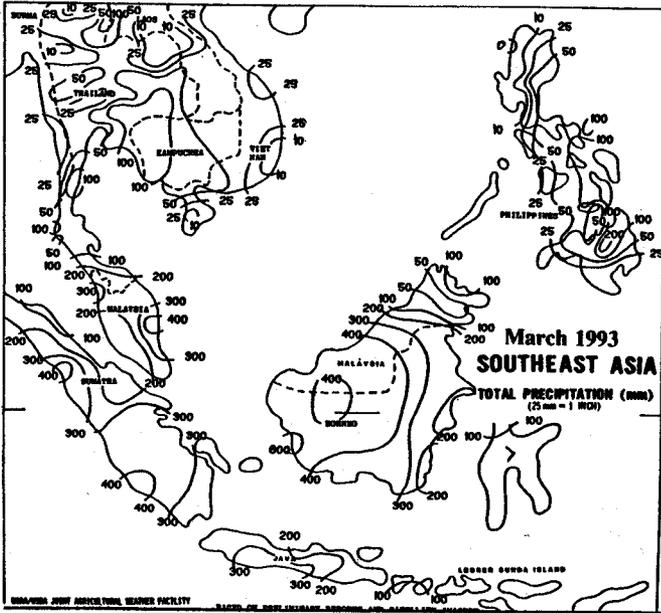
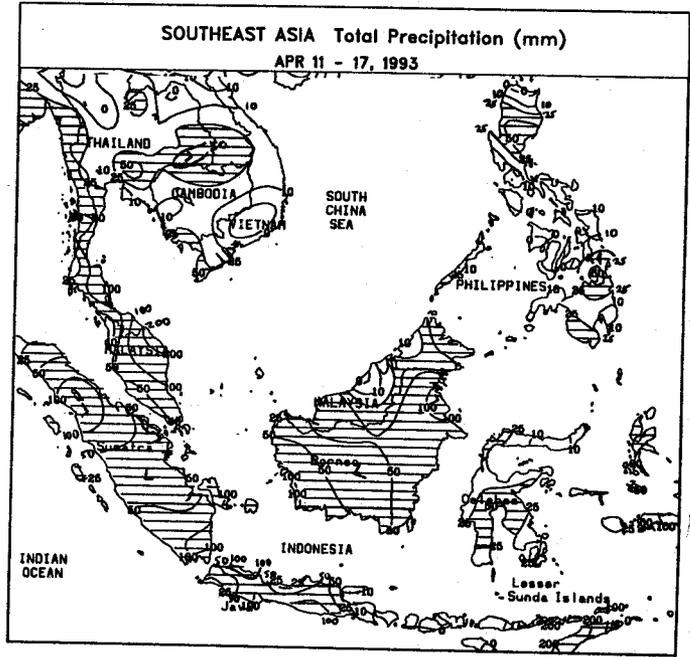


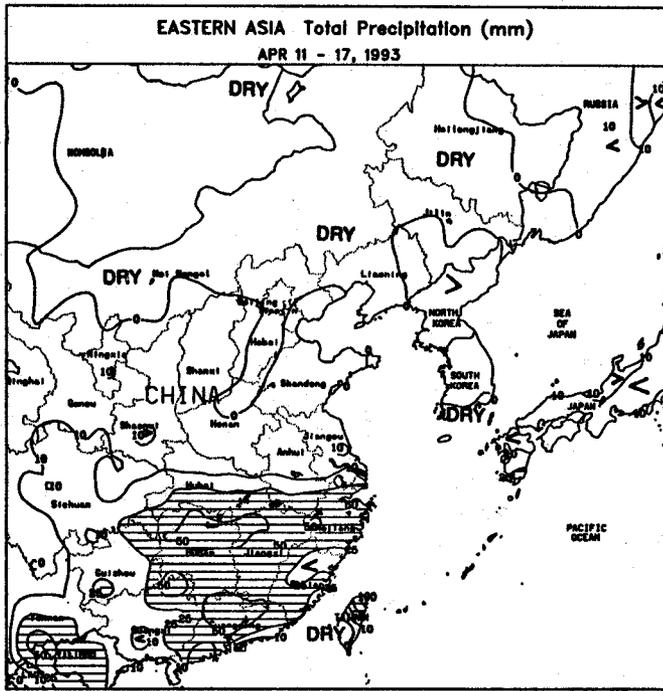


SOUTH ASIA: Light to moderate rain (2-20 mm) fell across Pakistan and India's primary winter grain and oilseed regions, slowing harvests. A return to drier and warmer weather is needed to prevent a decline in quality and pest damage. Farther east, showers (10-70 mm) from Orissa through Bangladesh to Assam increased irrigation for spring crop planting, but hampered winter wheat and rice harvests. Highly variable showers (2-57 mm) dotted India's southern interior, accompanied by seasonably warm weather. During March, mostly dry, mild weather favored winter crop development in Pakistan and northern India. However, a late-month outbreak of rain and local severe weather stretched from northern Pakistan to India's eastern states, causing local damage to mature stands. Periodic hot weather stressed southern India's heavily irrigated dry-season rice. Although the summer monsoon usually becomes established over India's southern tip in early June, showers typically develop over the southwest coast by late April, with rice planting underway during May.

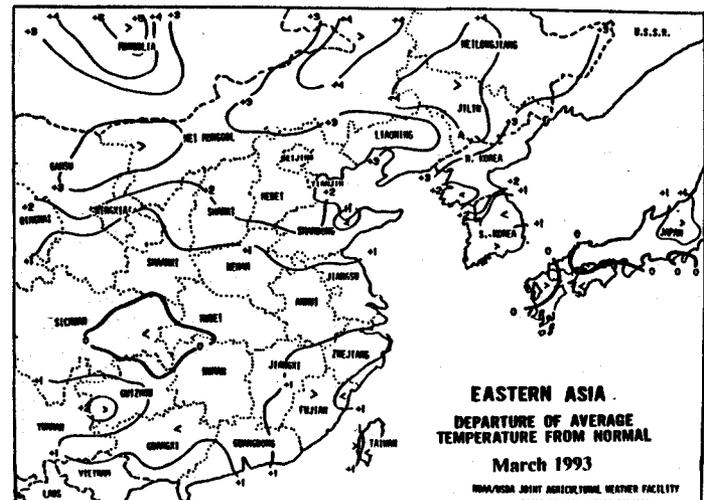
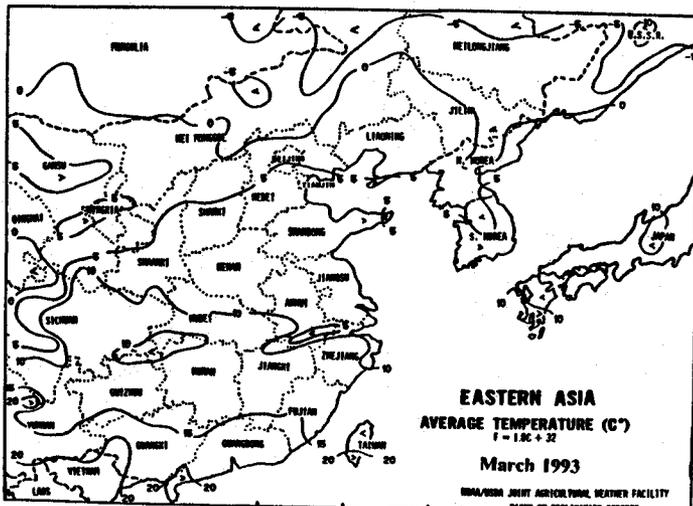
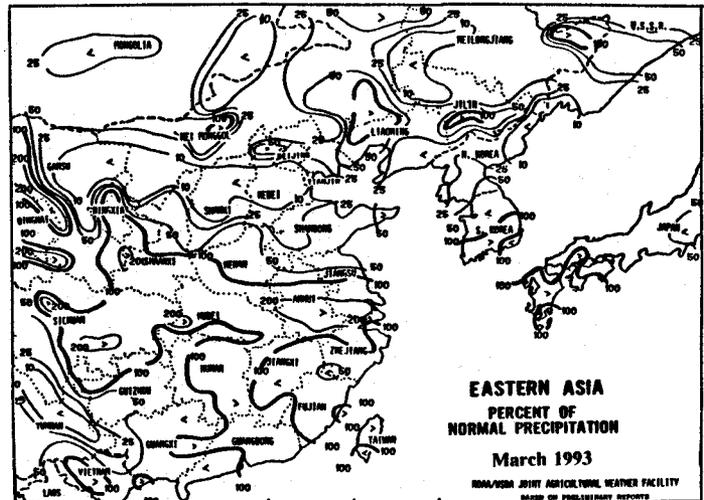
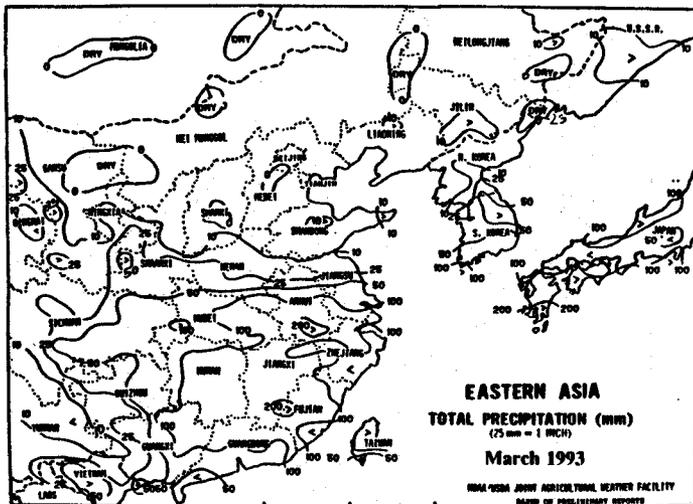


SOUTHEAST ASIA: Rainfall was variable (10-110 mm) over Indochina, benefiting immature dry-season rice and increasing reservoir levels for spring plantings. The rain improved Thailand's corn planting prospects, although seasonably warm weather maintained high evaporation rates. Planting usually begins in late April to early May, with the commencement of the rainy season. Farther south, heavy showers (100 mm or more) likely caused some flooding along the east coast of the Malay Peninsula, as Malaysia and Indonesia continued to receive moderate to heavy showers (25-100 mm or more). Scattered, light to moderate rain (10-52 mm) fell over the Philippines. During March, rainfall was near to above normal over primary rice and plantation crop regions of Indonesia, Malaysia, and Indochina. Unseasonably heavy rain (50-150 mm or more) brought some relief from the unseasonable heat to Thailand's immature second crop rice. Sporadic rains over the Philippines resulted in near- to below-normal rainfall across most primary grain regions along the east coast.

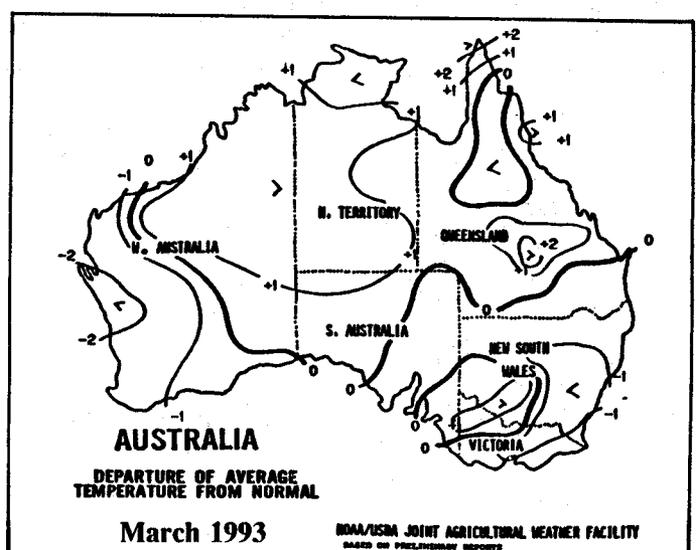
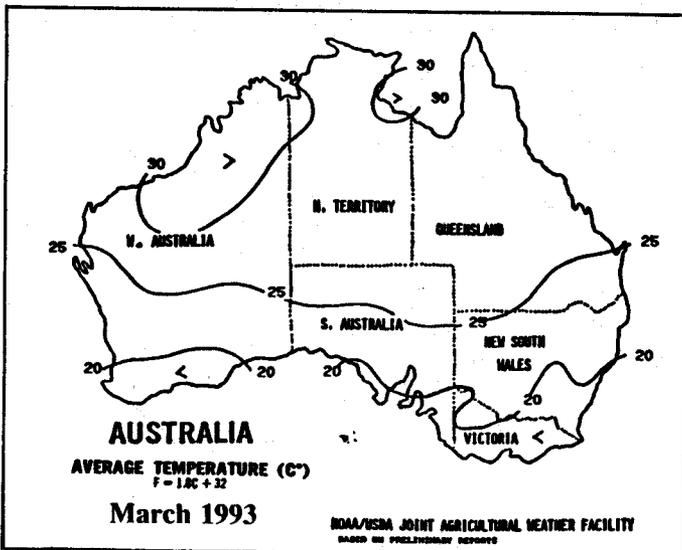
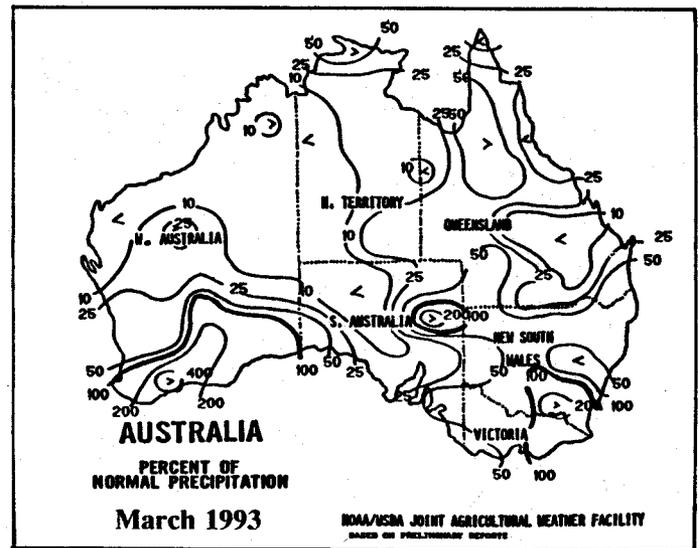
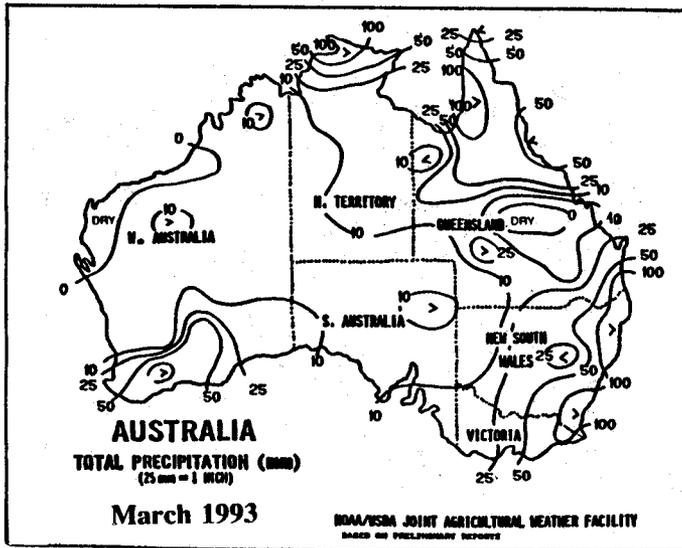
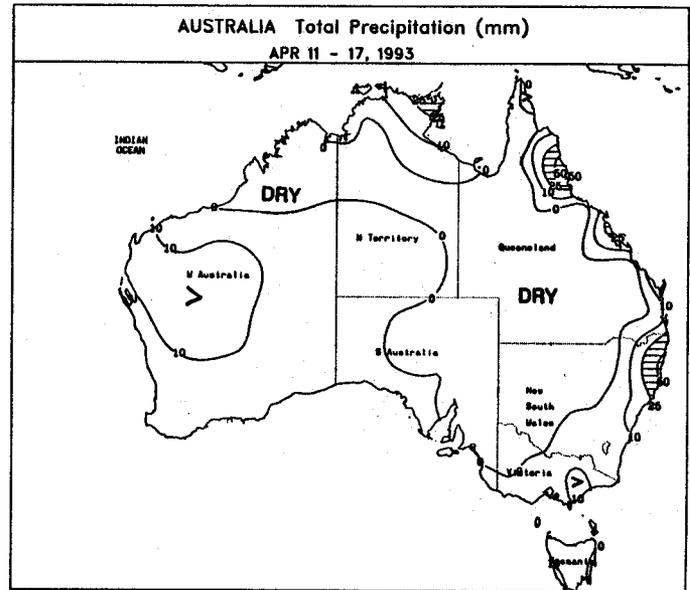


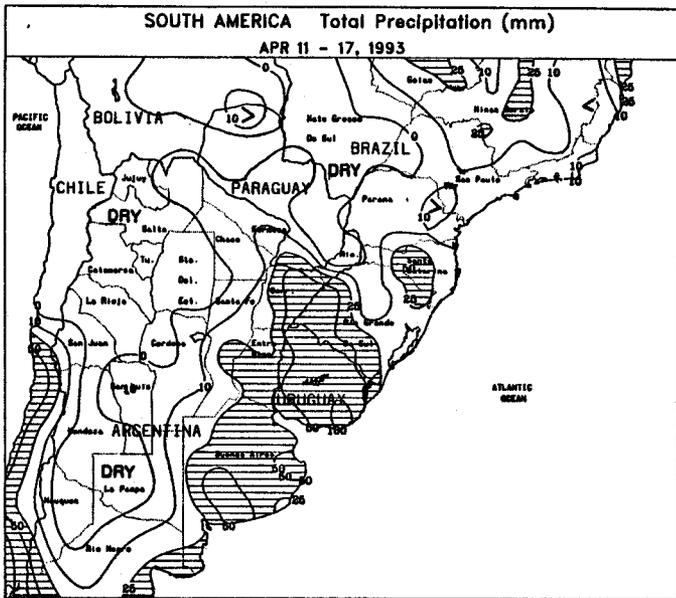


EASTERN ASIA: Dry weather across Manchuria and the North China Plain allowed early corn, soybean, and spring wheat planting to progress. Late-week scattered light rain (2-11 mm) favored vegetative winter wheat. Moderate to heavy showers (15-70 mm) covered the Yangtze basin southward to the coast, favoring winter grains, moistening topsoils for summer grain planting, and boosting rice irrigation supplies. Temperatures averaged 2-4 degrees C above normal in Manchuria and 2-4 degrees C below normal across central and southern China. During March, rainfall averaged below normal in Manchuria and most of the North China Plain, but in these areas normal March rainfall ranged from 7 to 15 mm. The Yangtze basin (Jiangsu and Anhui westward to Sichuan) received near- to above-normal March rainfall. Portions of southeastern China (Jiangxi and Fujian) reported near- to below-normal rainfall.

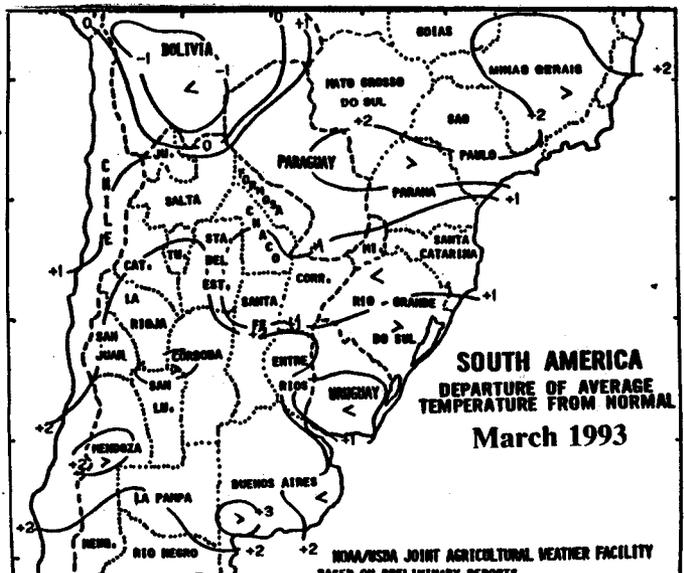
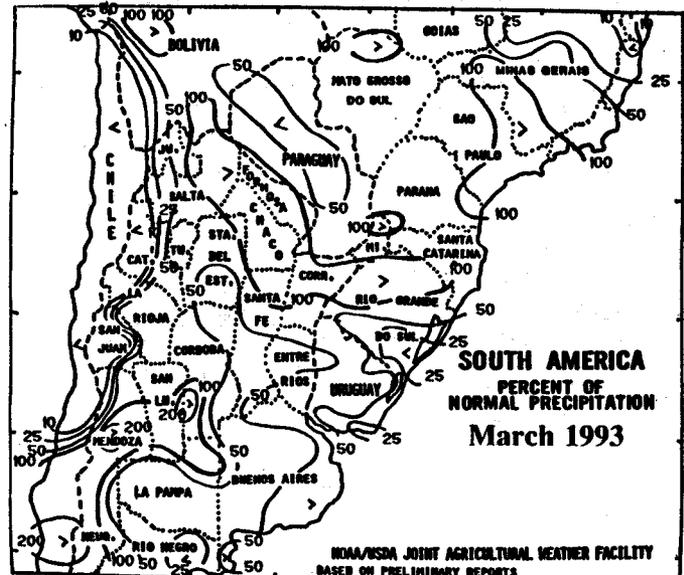
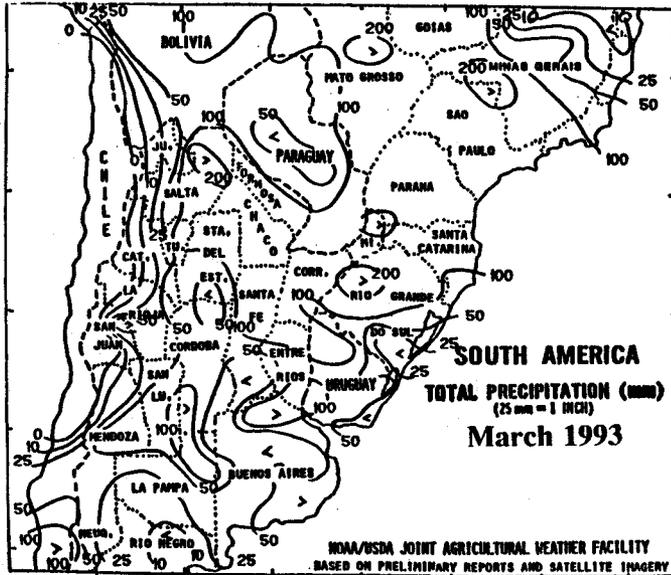


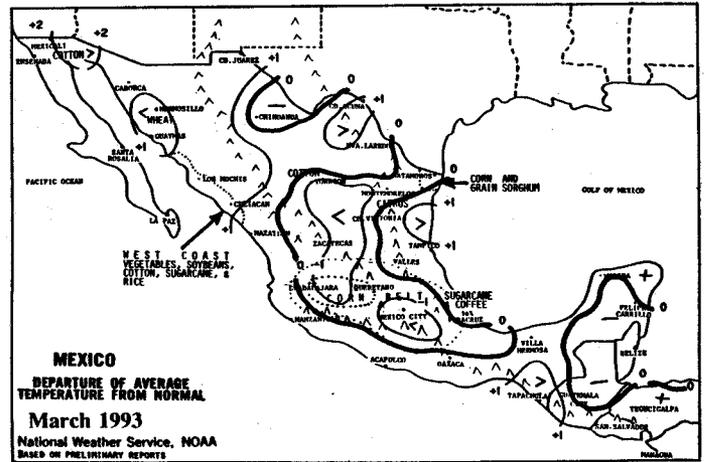
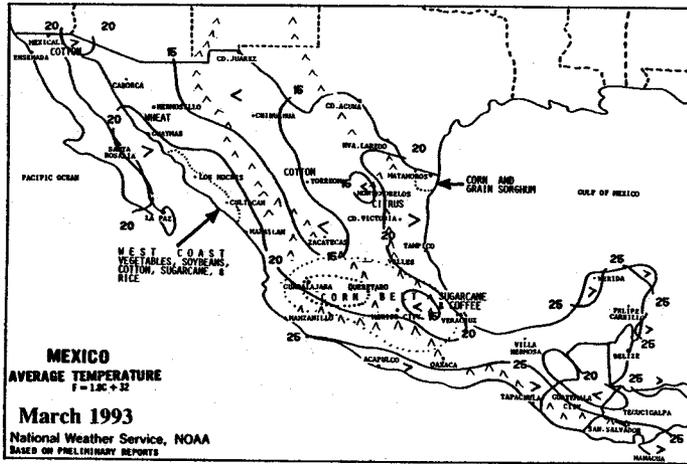
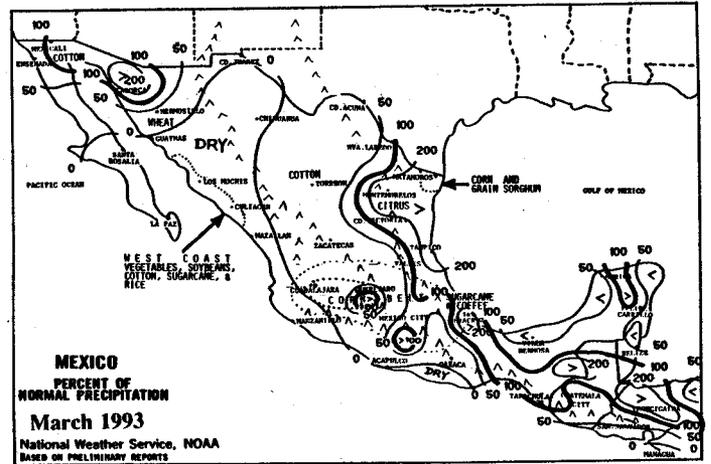
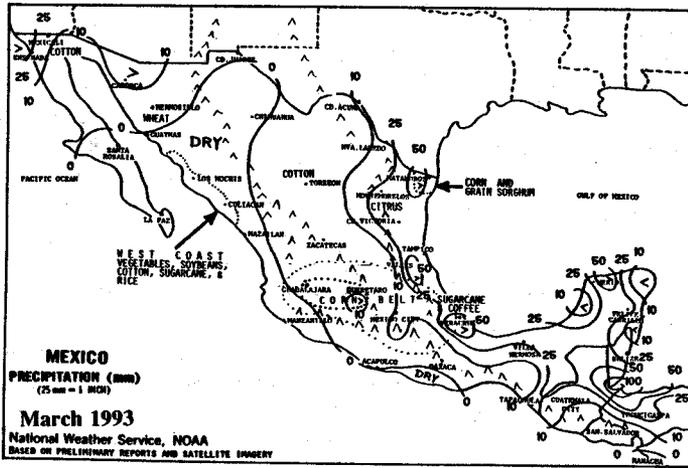
AUSTRALIA: Dry weather continued across eastern Australia, favoring cotton and sorghum harvesting, but limiting pasture growth. Scattered showers (5-60 mm) fell across coastal Queensland and New South Wales, aiding sugarcane, but the region received much below-normal (10 to 30 percent of normal) March rainfall. Since the rainy season typically ends across northeastern Australia by mid to late April, the dry spell during February and March will probably reduce sugarcane yield potential. March rainfall averaged near- to above-normal across the western wheat areas, favoring subsoil moisture reserves.

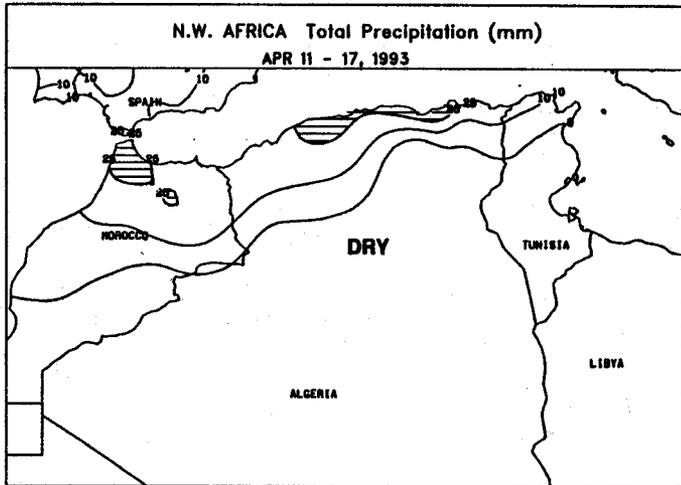




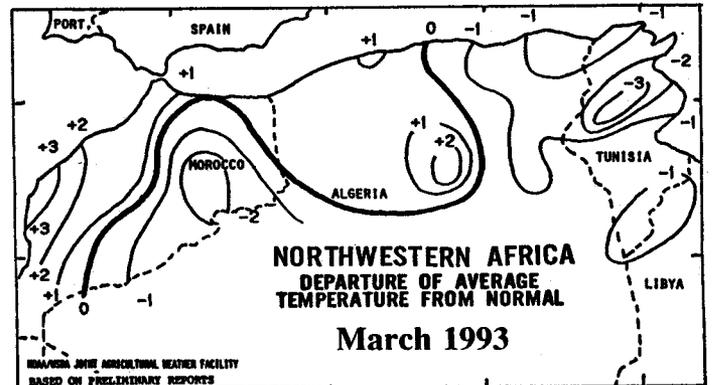
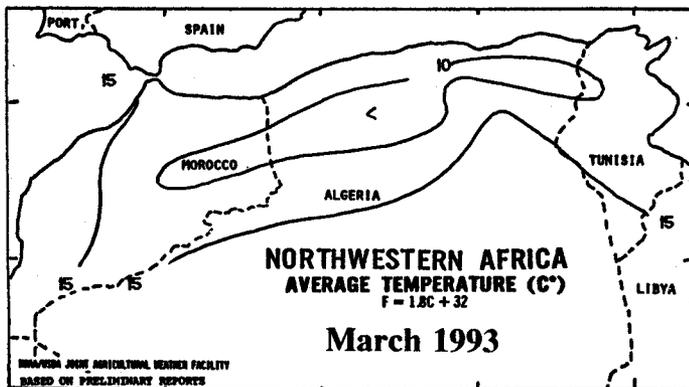
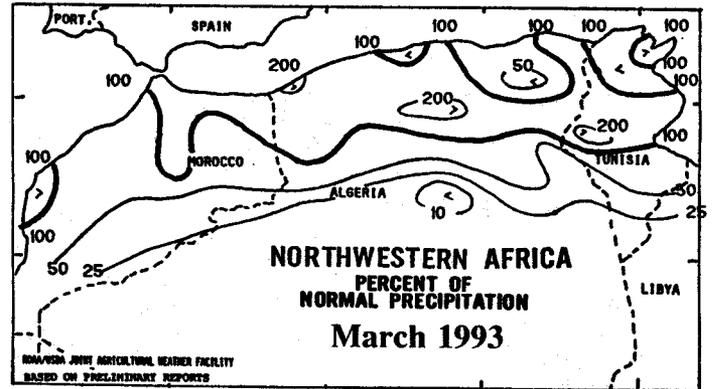
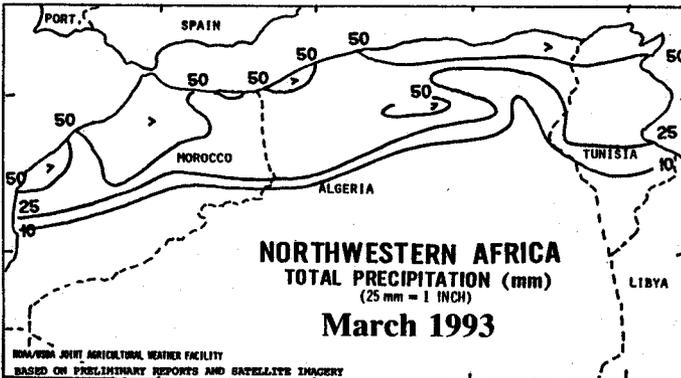
SOUTH AMERICA: In Argentina, moderate to heavy showers (13-77 mm) fell across southern Santa Fe southward into Buenos Aires, delaying most harvesting. Weekly temperatures averaged 2-3 degrees C above normal. During March, rainfall averaged below normal (30-75 percent of normal) across most of central Argentina. The western summer crop areas (Cordoba and La Pampa) and the northern cotton region received near- to above-normal rainfall, causing harvesting delays and possible cotton damage in the north. March temperatures averaged 2-3 degrees C above normal which, coupled with below-normal rainfall, caused some stress to second-season soybeans. For the week, most of southern Brazil received light, scattered rain (3-15 mm), causing only minor soybean harvesting delays. About 40-50 percent of the soybeans have been harvested, with the bulk still to be cut in Rio Grande do Sul. Heavier showers (20-60 mm) fell across eastern Santa Catarina and northeastern Rio Grande do Sul, benefiting germinating winter wheat. The coastal areas of southern Bahia received beneficial showers (20-60 mm), favoring cocoa. However, drought conditions continued in the interior sections of Bahia. During March, southern Brazil received near-normal rainfall except for western Rio Grande do Sul and eastern Sao Paulo, which received above-normal rain. Harvesting did progress at a normal pace.



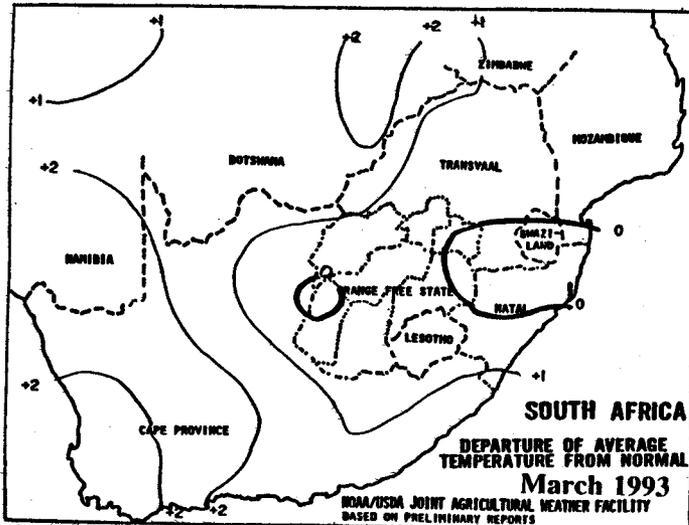
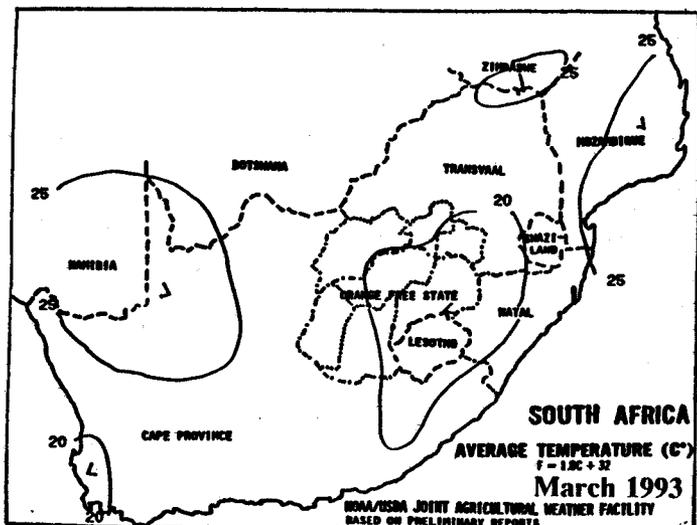
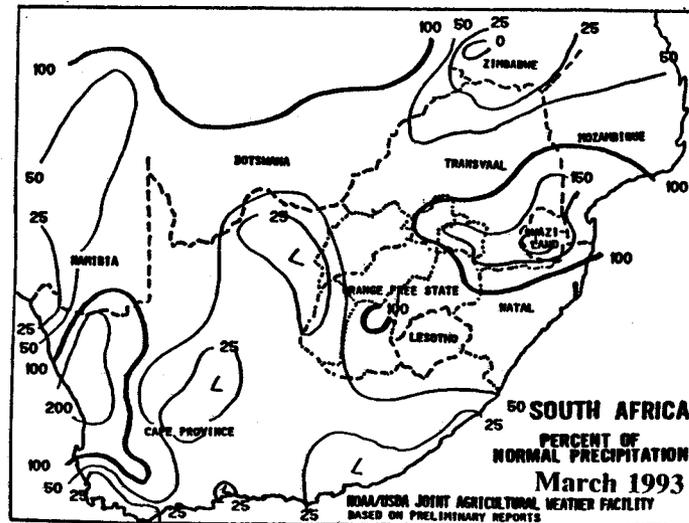
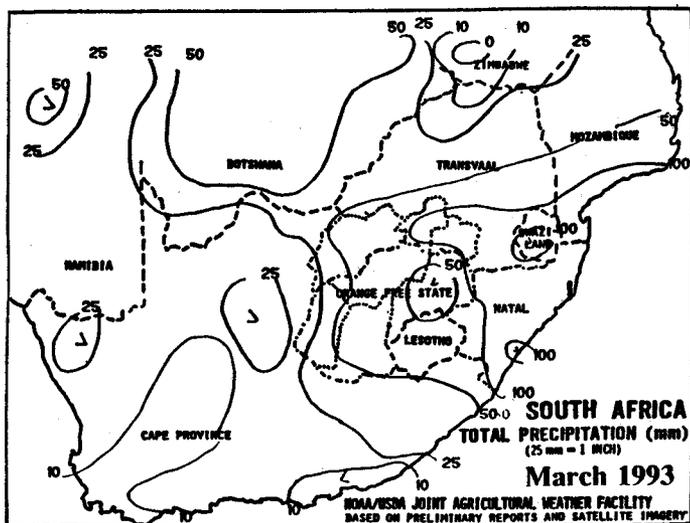
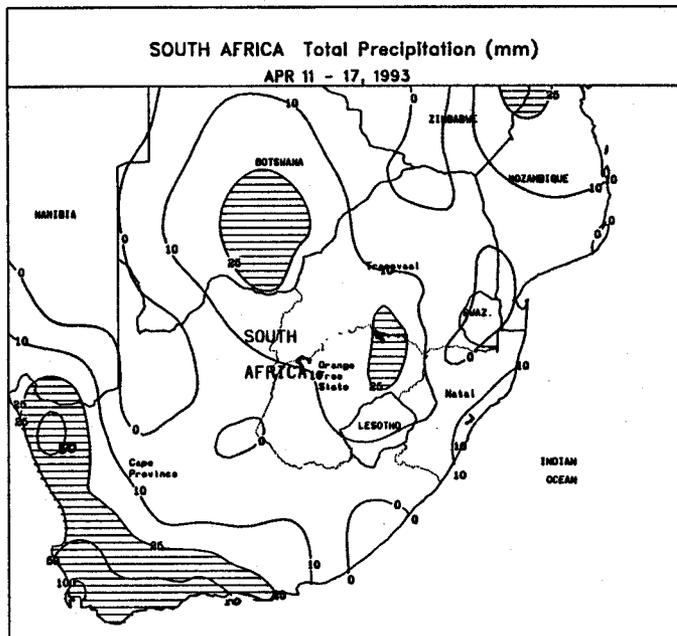




NORTHWESTERN AFRICA: Light showers dampened Moroccan winter grain areas. Greatest amounts of rain (10-30 mm) were confined to crop areas in the extreme north. Unrelenting drought continued to adversely affect crop growth in central and southern crop areas, where less than 10 mm of rain fell. Widespread showers (10-28 mm) covered winter grain areas in western Algeria, stabilizing conditions for crops in the filling stage. Further east, significant rain (10-25 mm, with local amounts in excess of 30 mm) fell along coastal winter grain areas in central and eastern Algeria and Tunisia, benefiting grain-fill. In contrast, dry weather prevailed over crop areas further inland. In March, widespread moderate to heavy precipitation covered winter grain areas in Morocco and western Algeria early in the month, easing drought conditions. However, about March 9, dry weather returned to these areas, continuing until month's end. Farther east, intermittent rain provided near- to above-normal precipitation in central and eastern Algeria, and Tunisia, benefiting winter grains entering the heading stage. Greatest amounts of moisture in March (50-96 mm) fell over crop areas near the coast, with lesser amounts of rain (20-40 mm) falling further inland.



SOUTH AFRICA: Timely, soaking rain (22-98 mm) spread across winter wheat areas of southern Cape Province, improving moisture levels for germination and establishment. The rainfall ended a spell of unseasonably dry, warm weather that began in late-February and depleted topsoil moisture. Light to moderate rain (10-33 mm) covered winter grain areas of Transvaal and Orange Free State, boosting topsoil moisture for early growth. Rainfall continued unseasonably light (6-19 mm) over Natal's sugarcane region. In March, rainfall was near to above normal over primary corn and winter wheat areas of Orange Free State and Transvaal, due mainly to rain received the first and last weeks of the month. Corn harvest should be in full swing by next month.



The Weekly Weather and Crop Bulletin is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the Weekly Weather Chronicle. It is issued under general authority of the Act of January 12, 1895 (44- USC 213), 53d Congress, 3d Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

Annual subscriptions: domestic first class \$45, foreign \$55 (in U.S. funds by international money order or check drawn on U.S. bank) payable to U.S. Department of Commerce, NOAA. POSTMASTER: Send address changes to Weekly Weather and Crop Bulletin, NOAA/USDA, Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, DC 20250. Order subscriptions from the office and address listed above. First class postage paid at Washington, DC, and additional mailing offices.

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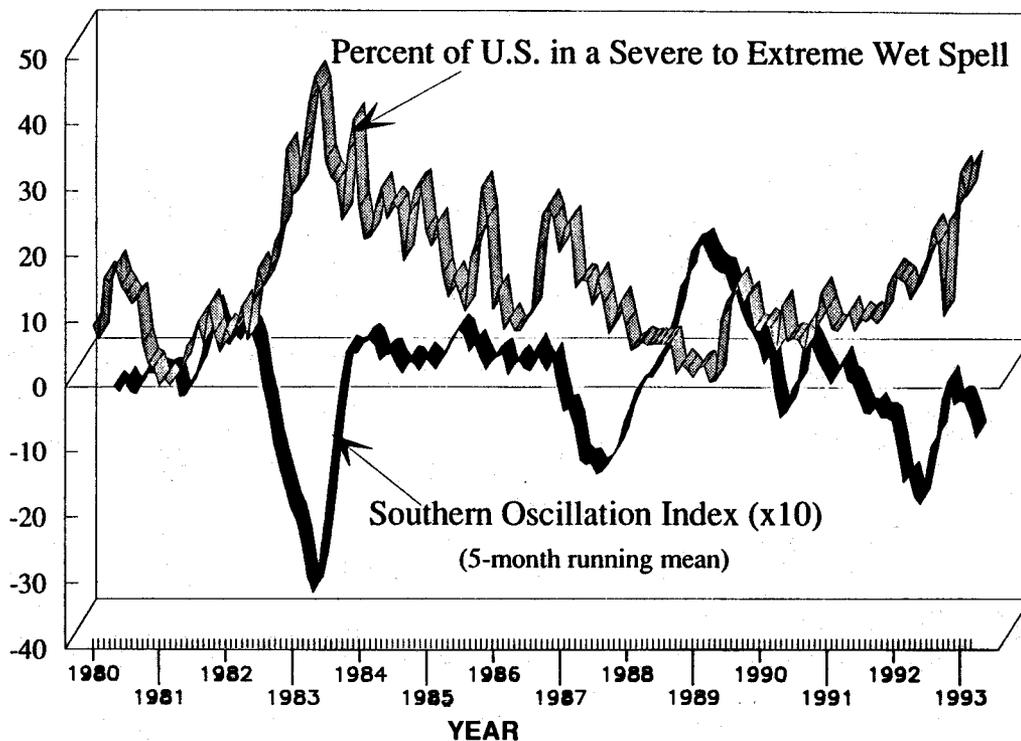
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Figure 2 SOI vs. U.S.A. SEVERE/EXTREME WETNESS



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