

# 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

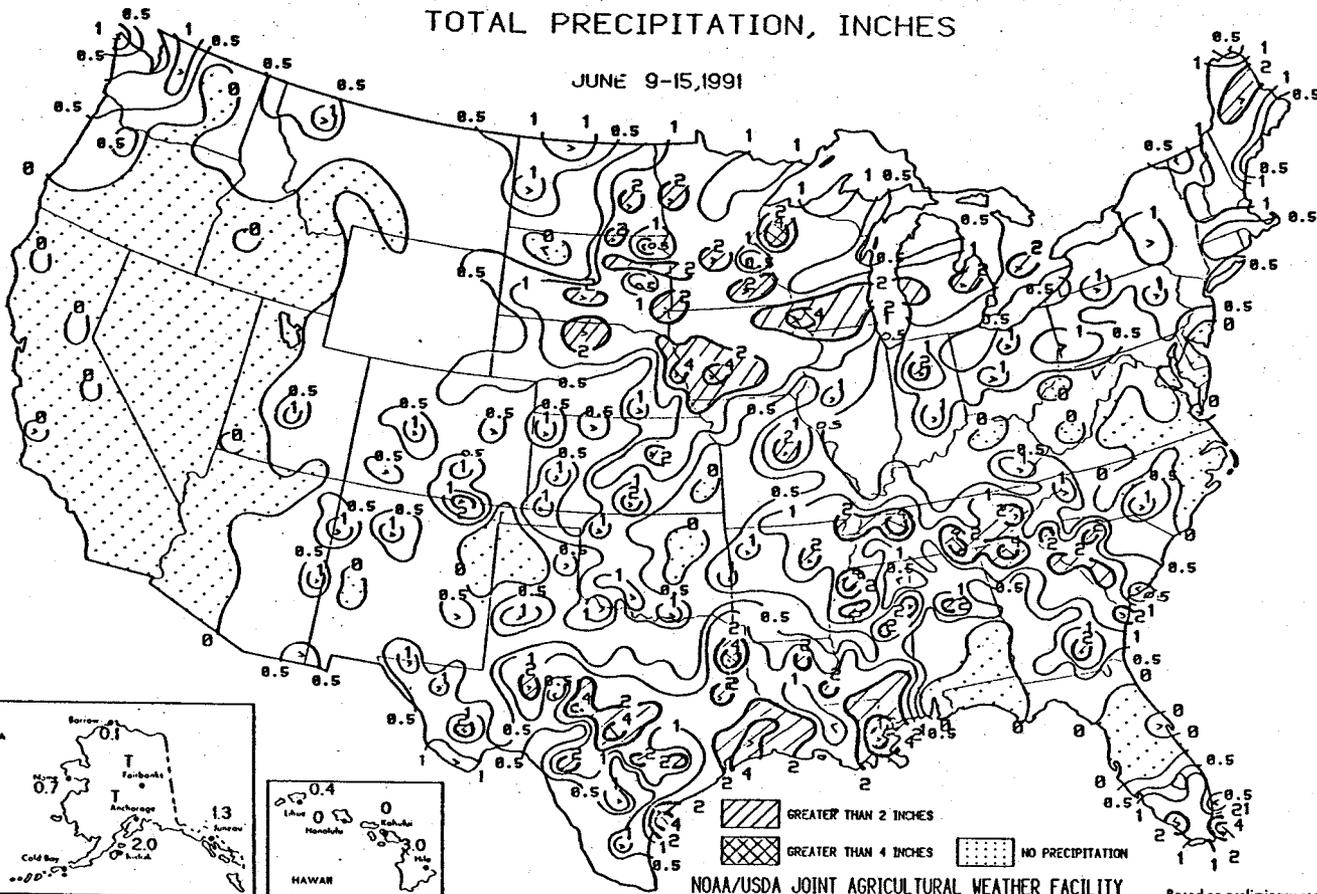
Volume 78, No. 24

Washington, D.C.

June 18, 1991

## TOTAL PRECIPITATION, INCHES

JUNE 9-15, 1991



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

## HIGHLIGHTS

June 9-15, 1991

Frequent thunderstorms assailed much of the Nation from the Rockies eastward, although the mid-Atlantic region remained unseasonably dry. At the start of the week, greater than 4 inches of rain effected flash flooding in southern Florida and southeastern Texas. Up to 10 inches of rain drowned New Orleans, LA, on Monday, followed by additional downpours the next day. Locally heavy rain soaked an area from Kansas to the Great Lakes. Hilly terrain and rainfall caused local flooding in portions of Idaho and New Mexico. At midweek, thunderstorms shifted temporarily eastward, pounding the Tennessee and lower Mississippi Valleys and the Northeast. Parts of Tennessee and New York reported flash flooding. Heat built briefly into the northern Plains. Billings, MT, and Williston, ND, both reached 93° F. On Thursday, thunderstorms exploded in the upper Mississippi Valley.

(Continued to back cover)

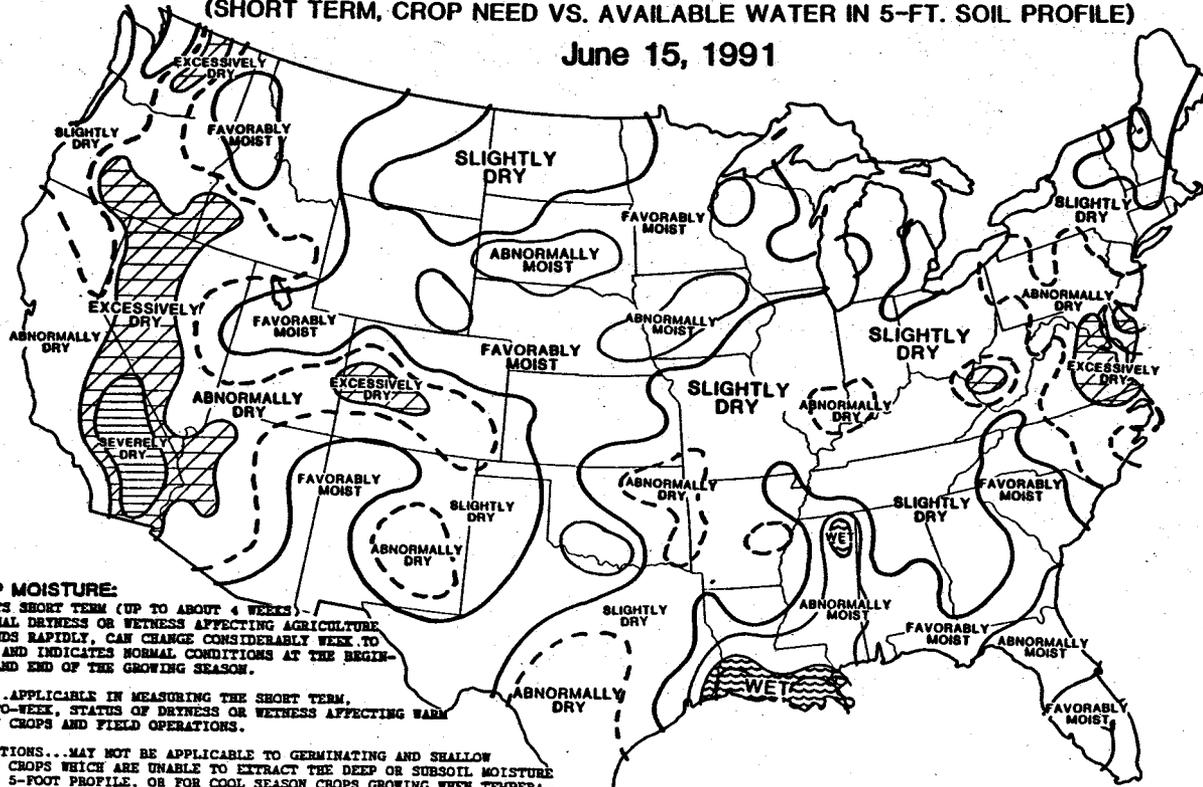
## Contents

Contents	Page
Highlights & Total Precipitation .....	1
Crop Moisture Maps .....	2
Drought Severity Maps .....	3
Precipitation Needed to End Drought & Extreme Maximum Temperature Map .....	4
Temperature Departure & Extreme Minimum Temperature Maps .....	5
Total Growing Degree Days & Departure Maps .....	6
National Weather Data for Selected Cities .....	7
Spring Weather Review .....	10
Spring Precipitation & Temperature Maps .....	11
Spring 1991 in Historical Perspective .....	13
National Agricultural Summary .....	14
Crop Progress and Condition Tables .....	15
State Summaries of Weather and Agriculture .....	17
International Weather and Crop Summary & May Precipitation and Temperature Maps .....	24
Subscription and Mailing Permit Information .....	36

### CROP MOISTURE INDEX

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

June 15, 1991



**CROP MOISTURE:**

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

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

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

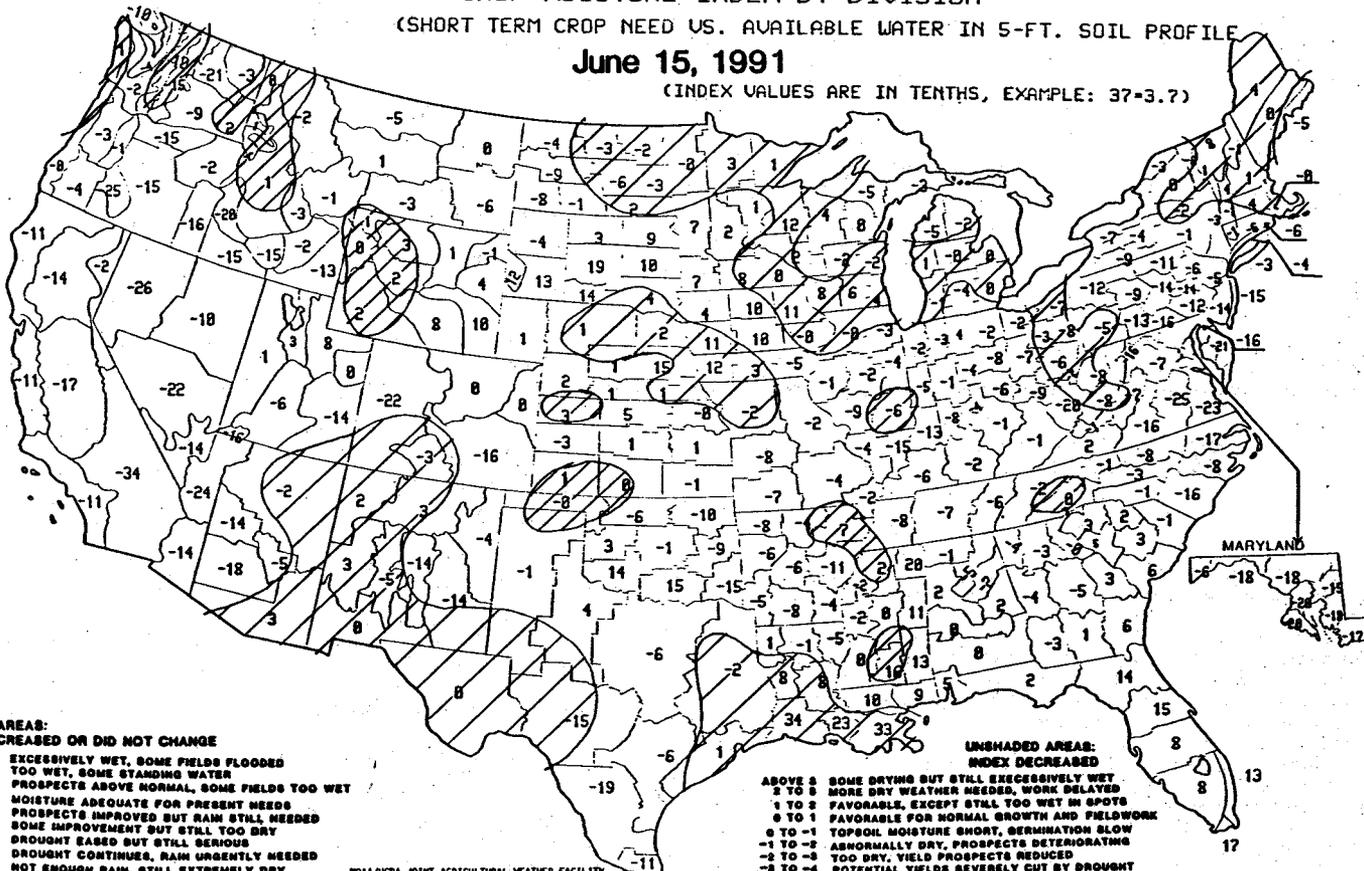
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

### CROP MOISTURE INDEX BY DIVISION

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

June 15, 1991

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



**SHADED AREAS:**

INDEX INCREASED OR DID NOT CHANGE

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

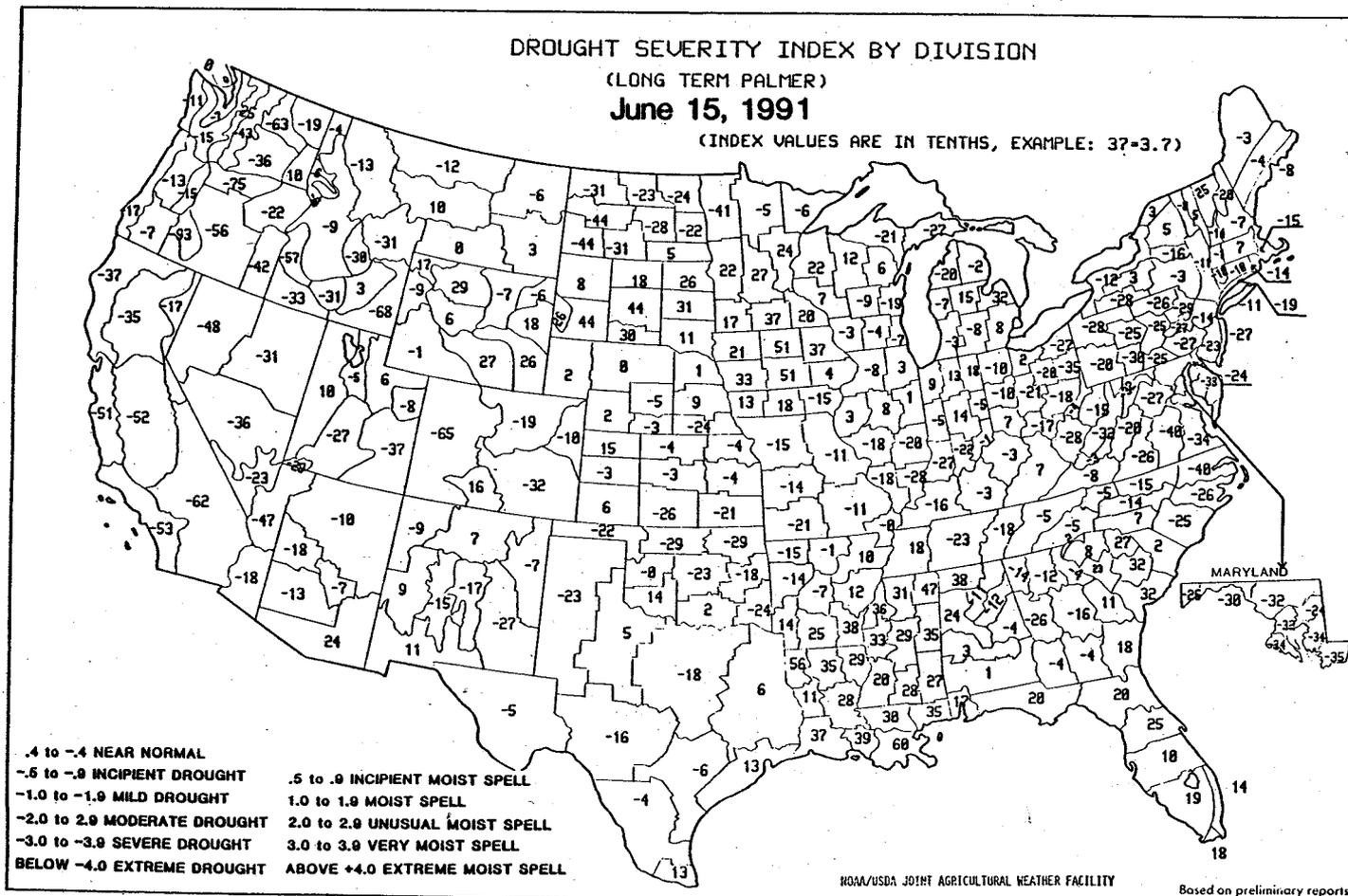
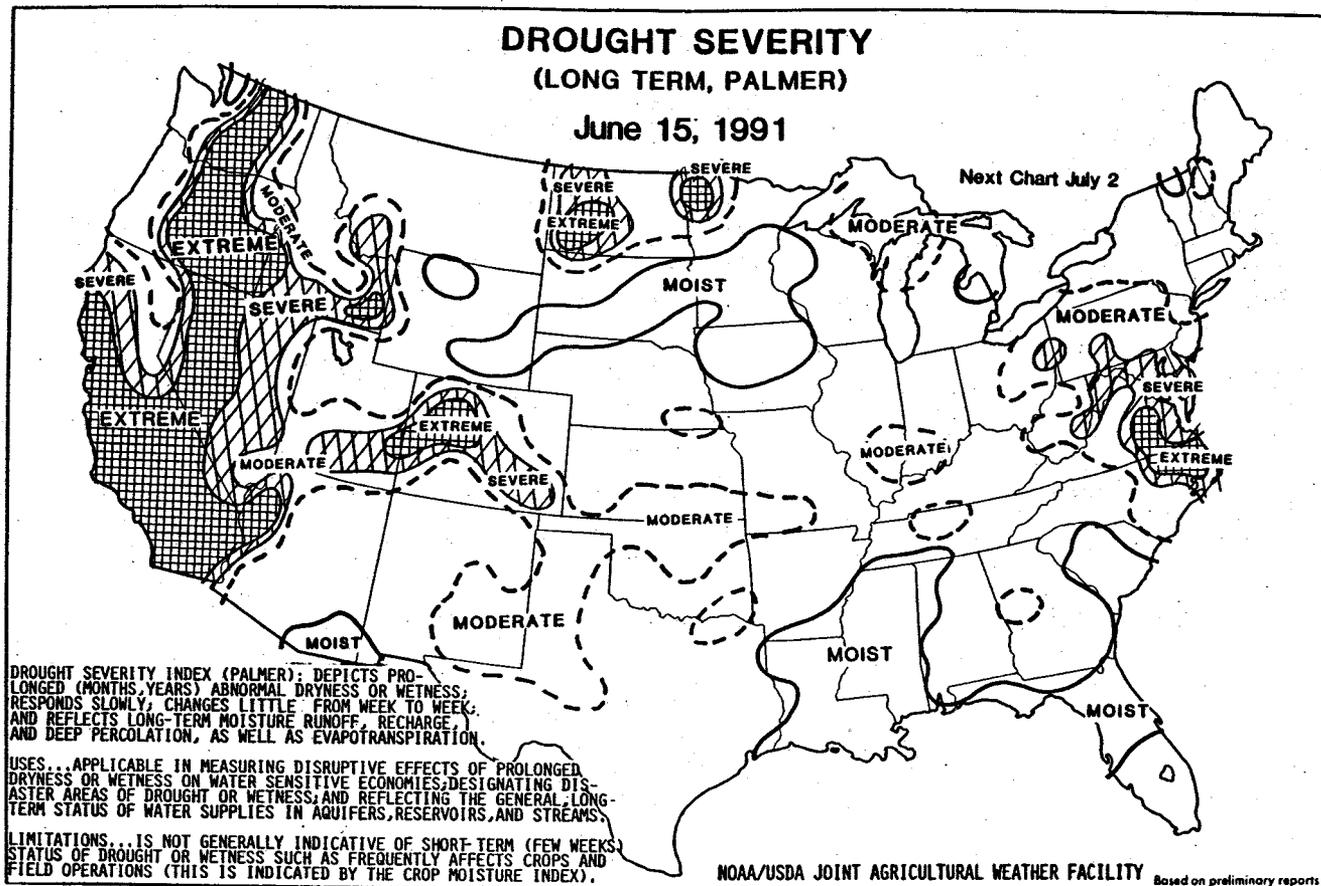
**UNSHADED AREAS:**

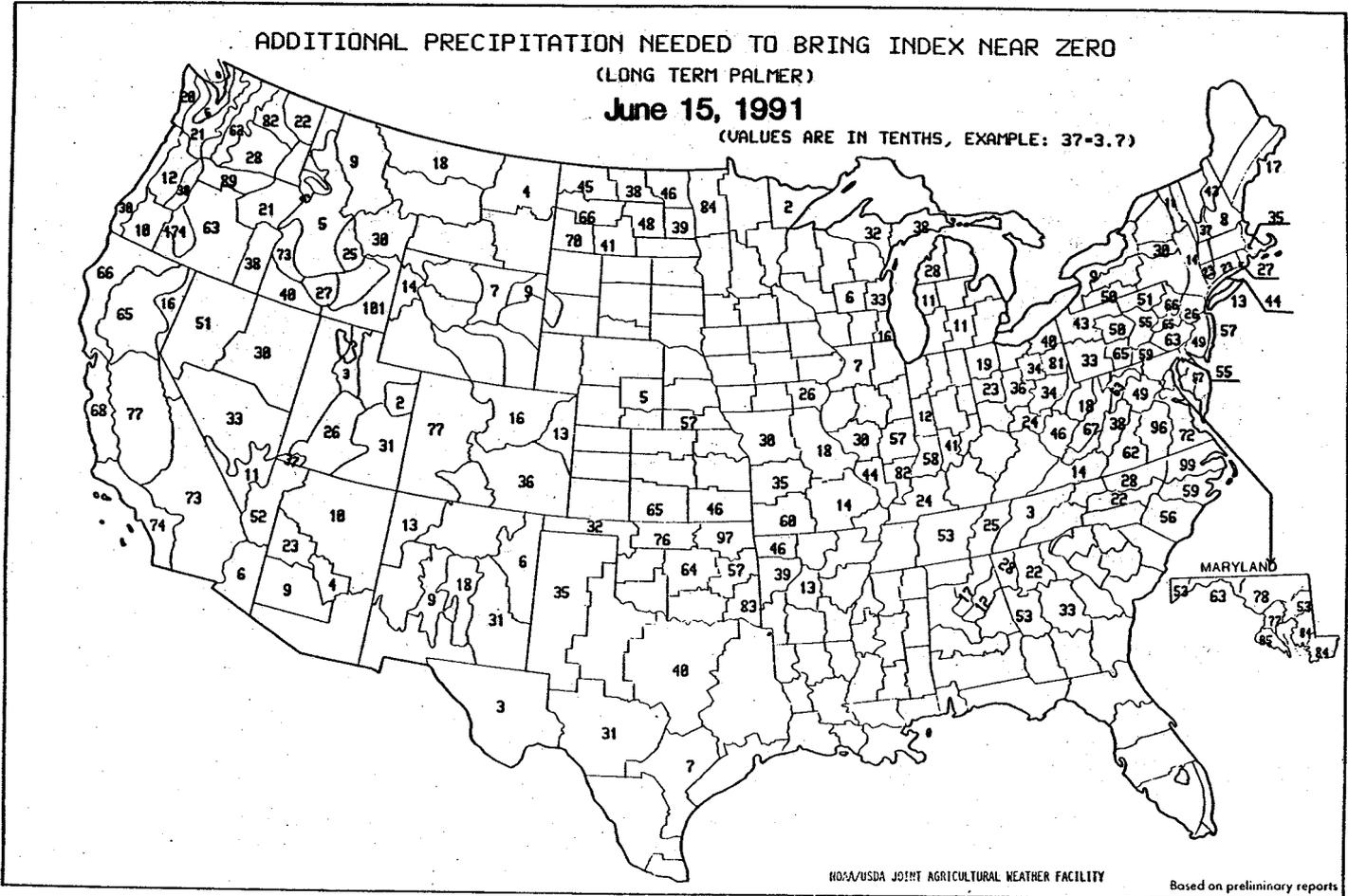
INDEX DECREASED

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

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

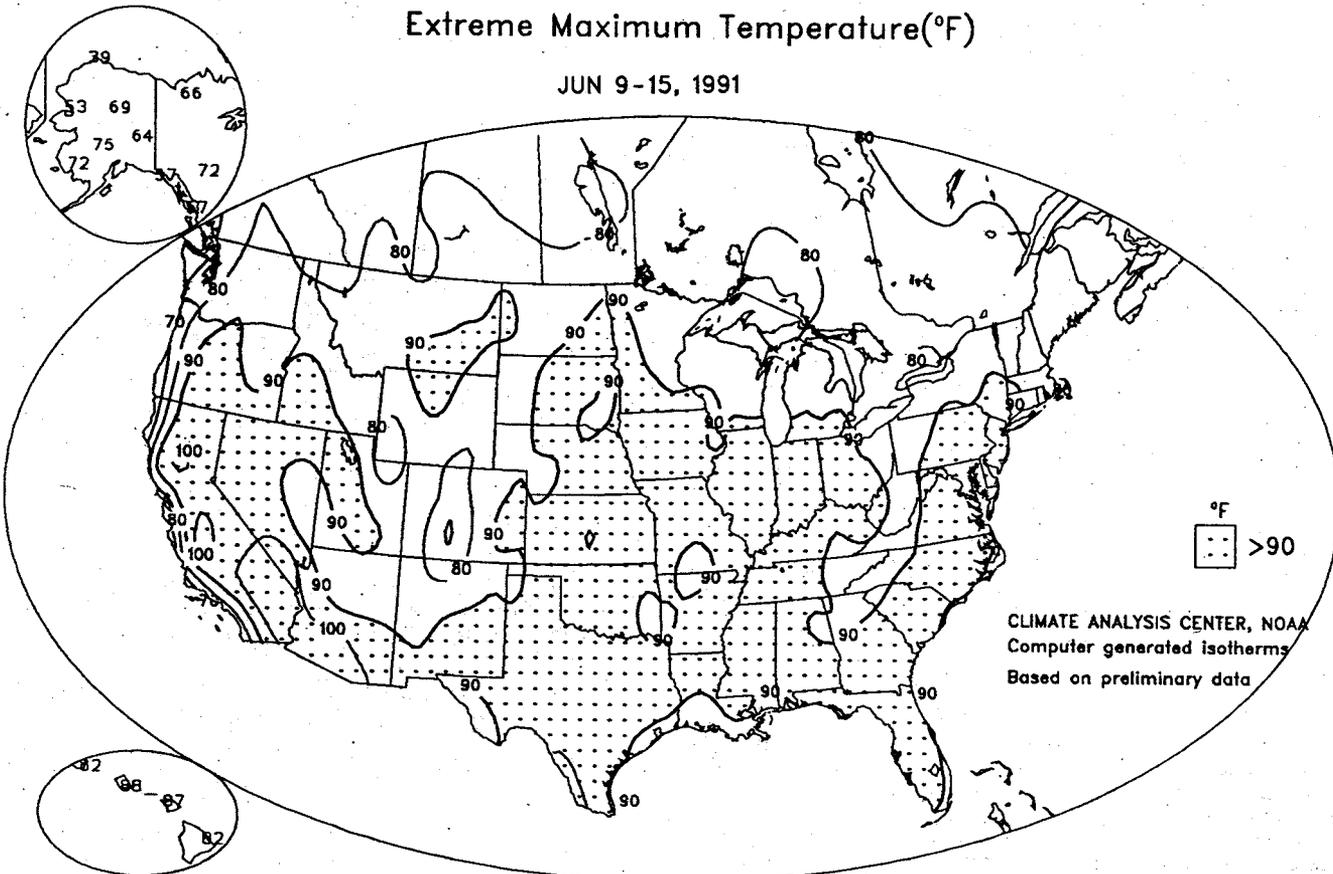
Based on preliminary reports





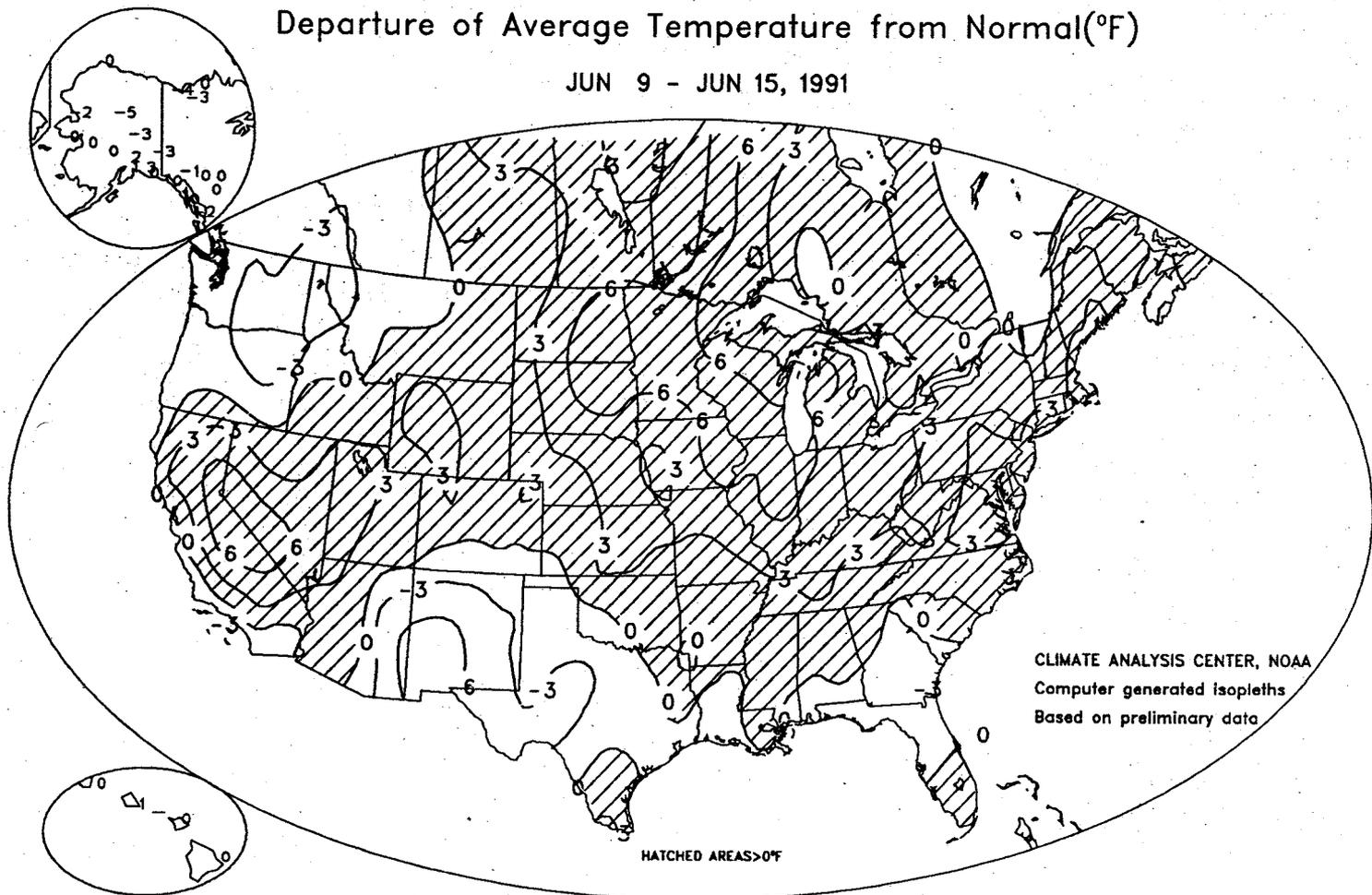
### Extreme Maximum Temperature(°F)

JUN 9-15, 1991



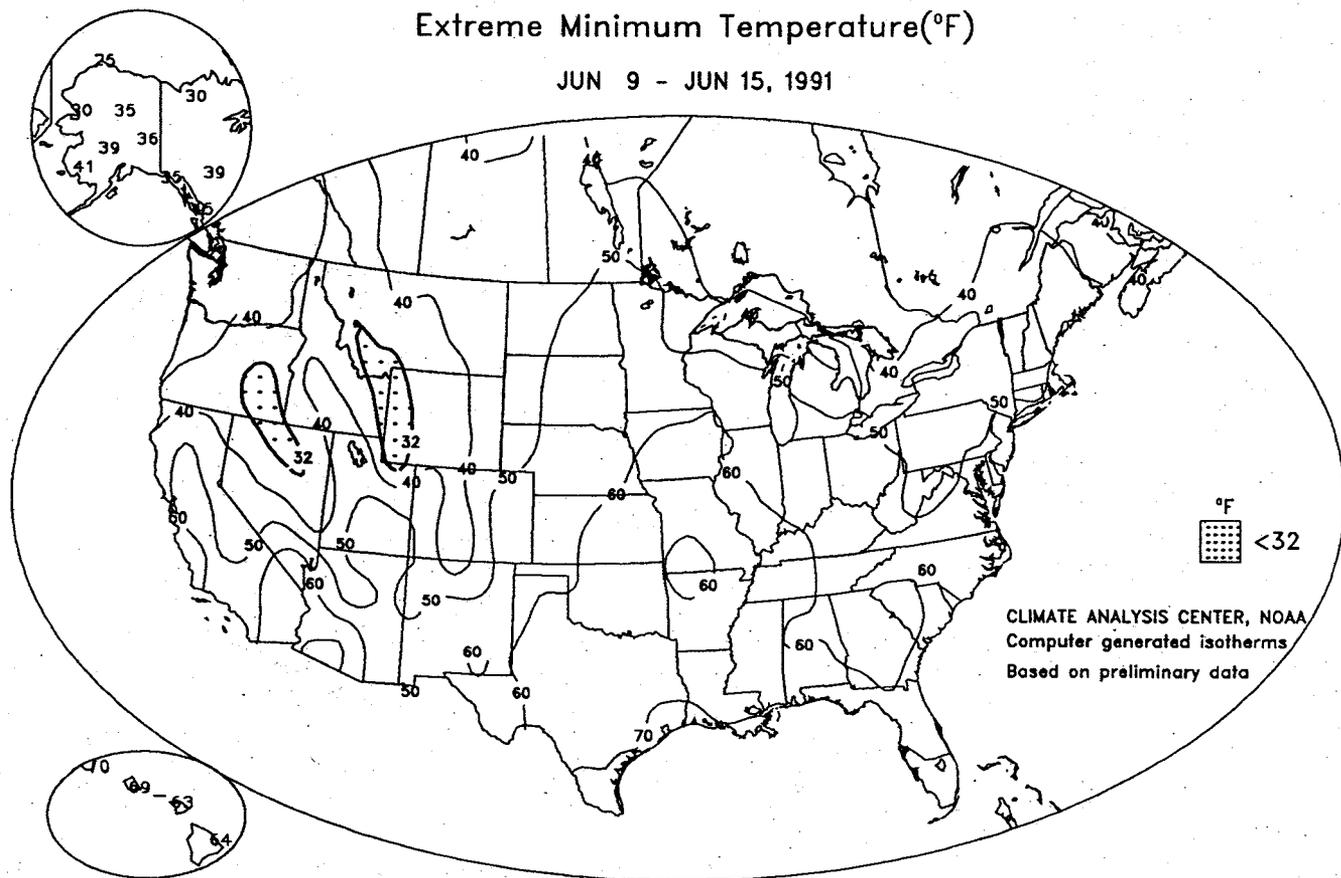
### Departure of Average Temperature from Normal(°F)

JUN 9 - JUN 15, 1991

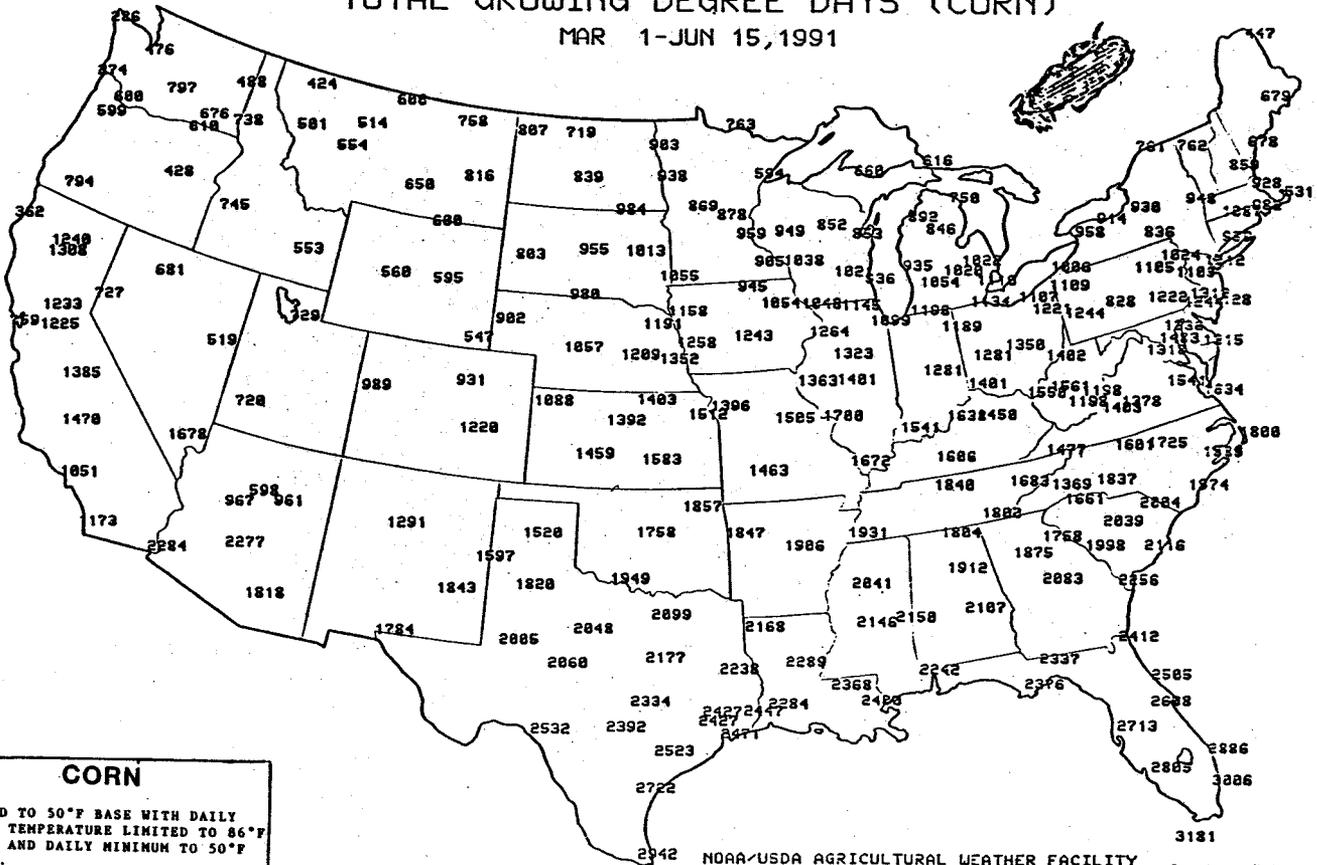


### Extreme Minimum Temperature(°F)

JUN 9 - JUN 15, 1991



TOTAL GROWING DEGREE DAYS (CORN)  
MAR 1-JUN 15, 1991



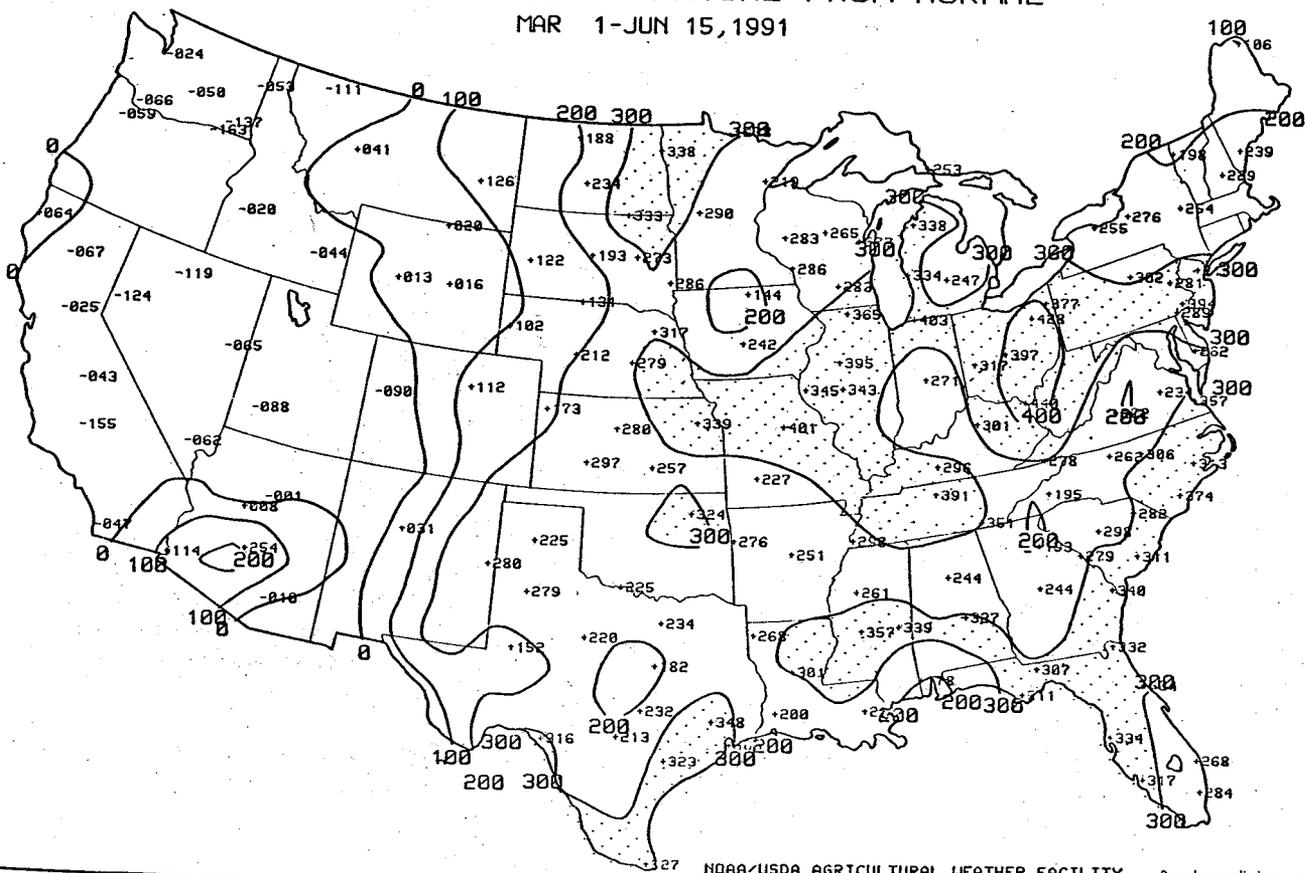
CORN

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

NOAA/USDA AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

GROWING DEGREE DEPARTURE FROM NORMAL  
MAR 1-JUN 15, 1991



NOAA/USDA AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

# National Weather Data for Selected Cities

Weather Data for the Week Ending June 15, 1991

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY, PERCENT	NUMBER OF DAYS							
	AVERAGE	MAXIMUM	AVERAGE	MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jan 1		PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	AVERAGE	MINIMUM	TEMP. °F		PRECIP.
															90 AND ABOVE						32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	87	66	90	59	77	0		.8	.0	.7	1.2	71	27.4	99	94	50	1	0	2	1	0	0	
MOBILE	88	70	90	66	79	1		-1.1	-1.1	0	1.4	18	50.1	173	92	51	1	0	0	0	0	0	
AL MONTGOMERY	89	66	92	58	78	1		-1.1	-1.1	0	1.1	65	38.7	158	95	46	2	0	0	0	0	0	
AK ANCHORAGE	65	46	71	43	56	0		.0	.0	0	1.1	2	2.1	53	82	46	0	0	0	0	0	0	
BARROW	36	28	39	25	32	1		.1	.1	0	1.1	46	.5	48	95	75	0	0	0	0	0	0	
FAIRBANKS	65	45	72	40	55	1		.1	.1	0	1.1	60	4.0	146	82	33	0	0	0	0	0	0	
JUNEAU	57	46	64	44	51	1		1.3	.7	3	3.0	206	27.2	147	90	65	0	0	0	0	0	0	
KODIAK	61	44	73	38	52	1		2.0	1.1	2	3.0	163	42.8	166	91	59	0	0	0	0	0	0	
WOME	48	39	66	32	44	1		.7	.5	2	1.9	188	4.0	116	90	68	0	0	0	0	0	0	
AZ PHOENIX	99	78	103	74	88	3		.1	.0	0	.2	314	6.4	105	55	21	0	0	0	0	0	0	
PRESCOTT	83	54	88	49	69	3		.1	.0	0	.2	0	3.2	129	32	14	7	0	0	0	0	0	
TUCSON	96	65	102	59	81	2		.2	.2	1	.2	0	6.4	105	55	21	0	0	0	0	0	0	
YUMA	101	75	103	71	88	1		.0	.0	0	.2	>1000	3.7	144	48	14	7	0	0	0	0	0	
AR FORT SMITH	88	68	93	63	78	1		.9	.0	0	1.0	0	1.8	203	41	14	7	0	0	0	0	0	
LITTLE ROCK	87	71	91	66	79	1		.0	.0	0	1.4	70	19.1	100	97	53	3	0	0	0	0	0	
CA BAKERSFIELD	97	66	106	62	82	4		1.9	1.1	1.7	2.1	107	27.5	110	86	59	2	0	0	0	0	0	
FURCO	57	48	61	45	53	2		.0	.0	0	.0	0	4.6	118	47	20	6	0	0	0	0	0	
FRESNO	97	63	105	58	80	6		.0	.0	0	.0	0	16.0	73	90	72	0	0	0	0	0	0	
LOS ANGELES	68	59	71	58	64	1		.0	.0	0	.0	0	8.5	121	61	14	7	0	0	0	0	0	
REDDING	96	63	103	51	79	4		.0	.0	0	.0	0	7.9	95	88	63	0	0	0	0	0	0	
SACRAMENTO	95	57	102	52	76	5		.0	.0	0	.0	0	17.2	71	53	13	5	0	0	0	0	0	
SAN DIEGO	69	60	71	59	65	0		.0	.0	0	.0	0	10.2	96	78	22	6	0	0	0	0	0	
SAN FRANCISCO	69	51	74	50	60	0		.0	.0	0	.0	0	10.5	163	82	62	0	0	0	0	0	0	
CO DENVER	81	54	88	51	67	1		.0	.0	0	.0	0	10.9	88	89	51	0	0	0	0	0	0	
GRAND JUNCTION	88	58	91	52	73	2		.0	.0	0	2.0	246	8.0	108	80	29	0	0	0	0	0	0	
PUEBLO	87	55	91	52	71	1		.0	.0	0	.3	129	3.1	88	54	17	4	0	0	0	0	0	
CT BRIDGEPORT	80	60	86	52	70	3		.0	.0	0	.9	169	3.3	79	80	22	3	0	0	0	0	0	
HARTFORD	85	56	93	50	70	3		.0	.0	0	1.4	95	17.1	91	85	42	3	0	0	0	0	0	
DC WASHINGTON	90	66	98	59	78	4		.0	.0	0	.3	19	17.8	90	86	31	2	0	0	0	0	0	
FL APALACHICOLA	86	68	89	66	77	3		.0	.0	0	.6	39	11.8	70	76	30	5	0	0	0	0	0	
DAYTONA BEACH	86	69	93	63	78	1		.0	.0	0	.8	40	56.8	291	95	58	0	0	0	0	0	0	
JACKSONVILLE	89	68	94	65	78	1		.0	.0	0	7.0	229	31.4	183	91	53	2	0	0	0	0	0	
KEY WEST	88	80	89	78	84	1		.0	.0	0	6.5	235	41.2	207	95	47	4	0	0	0	0	0	
MIAMI	87	76	91	74	82	1		.0	.0	0	1.9	76	16.9	138	82	63	0	0	0	0	0	0	
ORLANDO	90	70	93	67	80	0		.0	.0	0	1.6	34	15.2	75	86	61	1	0	0	0	0	0	
TALLAHASSEE	91	66	96	63	79	1		.0	.0	0	1.2	39	28.5	160	93	42	4	0	0	0	0	0	
TAMPA	91	70	93	65	81	1		.0	.0	0	1.0	33	49.0	179	96	42	5	0	0	0	0	0	
WEST PALM BEACH	87	75	89	74	81	1		.0	.0	0	.1	6	16.1	100	92	44	5	0	0	0	0	0	
GA ATLANTA	86	68	89	63	77	2		.0	.0	0	2.0	51	39.2	185	89	62	0	0	0	0	0	0	
AUGUSTA	90	64	93	55	77	0		.0	.0	0	1.2	76	28.6	113	86	49	0	0	0	0	0	0	
MACON	89	65	93	55	77	0		.0	.0	0	1.2	104	28.9	133	97	45	4	0	0	0	0	0	
SAVANNAH	89	66	94	61	78	1		.0	.0	0	1.9	107	31.4	136	97	45	3	0	0	0	0	0	
HI HILO	82	68	83	65	75	1		.0	.0	0	2.2	116	35.5	173	96	46	3	0	0	0	0	0	
HONOLULU	87	72	88	69	80	1		.0	.0	0	3.0	196	76.1	123	95	62	0	0	0	0	0	0	
KAHULUI	86	72	87	63	77	0		.0	.0	0	1.1	10	10.6	82	78	43	0	0	0	0	0	0	
LISIEU	81	72	82	70	76	1		.0	.0	0	1.1	0	7.9	69	86	49	0	0	0	0	0	0	
ID BOISE	81	49	93	41	65	1		.0	.0	0	3.1	354	18.6	87	84	66	0	0	0	0	0	0	
LEWISTON	73	48	87	42	61	1		.0	.0	0	.1	17	5.3	81	61	17	1	0	0	0	0	0	
POCATELLO	78	45	88	36	62	0		.0	.0	0	.5	68	6.6	100	81	30	0	0	0	0	0	0	
IL CHICAGO	87	63	93	56	75	7		.0	.0	0	.5	88	9.3	162	68	21	0	0	0	0	0	0	
MOLINE	88	66	91	56	77	6		.0	.0	0	1.0	45	15.7	108	88	46	1	0	0	0	0	0	
PEORIA	87	65	93	57	76	6		.0	.0	0	1.1	55	16.6	105	96	51	2	0	0	0	0	0	
QUINCY	87	67	92	63	77	6		.0	.0	0	.6	30	14.9	96	94	50	1	0	0	0	0	0	
ROCKFORD	87	64	90	57	75	7		.0	.0	0	.1	4	18.1	112	83	47	1	0	0	0	0	0	
SPRINGFIELD	89	68	95	64	78	6		.0	.0	0	2.6	116	13.8	90	91	46	1	0	0	0	0	0	
IN EVANSVILLE	89	67	93	60	78	4		.0	.0	0	.4	22	14.4	93	94	48	4	0	0	0	0	0	
FORT WAYNE	87	62	93	58	75	6		.0	.0	0	.3	3	16.0	77	98	51	3	0	0	0	0	0	
INDIANAPOLIS	86	64	91	55	75	4		.0	.0	0	.9	51	20.7	131	91	41	2	0	0	0	0	0	
SOUTH BEND	86	64	92	55	75	4		.0	.0	0	.5	27	19.4	109	92	46	1	0	0	0	0	0	
IA DES MOINES	86	66	91	63	76	5		.0	.0	0	.6	31	15.4	95	86	44	2	0	0	0	0	0	
SIoux CITY	84	63	90	56	73	3		.0	.0	0	2.4	131	23.3	172	94	52	1	0	0	0	0	0	
WATERLOO	86	66	90	60	76	7		.0	.0	0	1.2	150	13.2	120	96	54	1	0	0	0	0	0	
KS CONCORDIA	88	66	97	62	77	4		.0	.0	0	1.1	104	23.5	172	94	55	2	0	0	0	0	0	
DODGE CITY	90	64	97	58	77	3		.0	.0	0	.5	159	11.4	97	90	41	3	0	0	0	0	0	
GOODLAND	83	59	90	57	71	2		.0	.0	0	.2	21	4.8	54	85	32	3	0	0	0	0	0	
TOPEKA	88	67	93	61	78	4		.0	.0	0	1.3	22	4.8	54	80	32	3	0	0	0	0	0	
WICHITA	91	67	97	63	79	4		.0	.0	0	.8	3.2	226	9.5	132	90	38	1	0	0	0	0	
KY BOWLING GREEN	86	67	94	60	77	3		.0	.0	0	.7	9	34	15.3	111	92	52	1	0	0	0	0	
LEXINGTON	86	65	90	56	76	4		.0	.0	0	.4	4	8.5	72	89	42	4	0	0	0	0	0	
LOUISVILLE	90	68	94	59	79	6		.0	.0	0	1.7	81	20.6	94	95	48	1	0	0	0	0	0	
LA ALEXANDRIA	87	73	90	70	80	0		.0	.0	0	.1	4	18.6	87	89	42	4	0	0	0	0	0	
BATON ROUGE	88	72	91	66	80	0		.0	.0	0	.7	33	47.7	179	93	57	2	0	0	0	0	0	
LAKE CHARLES	84	73	88	70	79	1		.0	.0	0	2.7	199	43.2	167	96	61	2	0	0	0	0	0	
NEW ORLEANS	87	73	90	70	80	0		.0	.0	0	4.8	227	45.4	201	99	71	0	0	0	0	0	0	

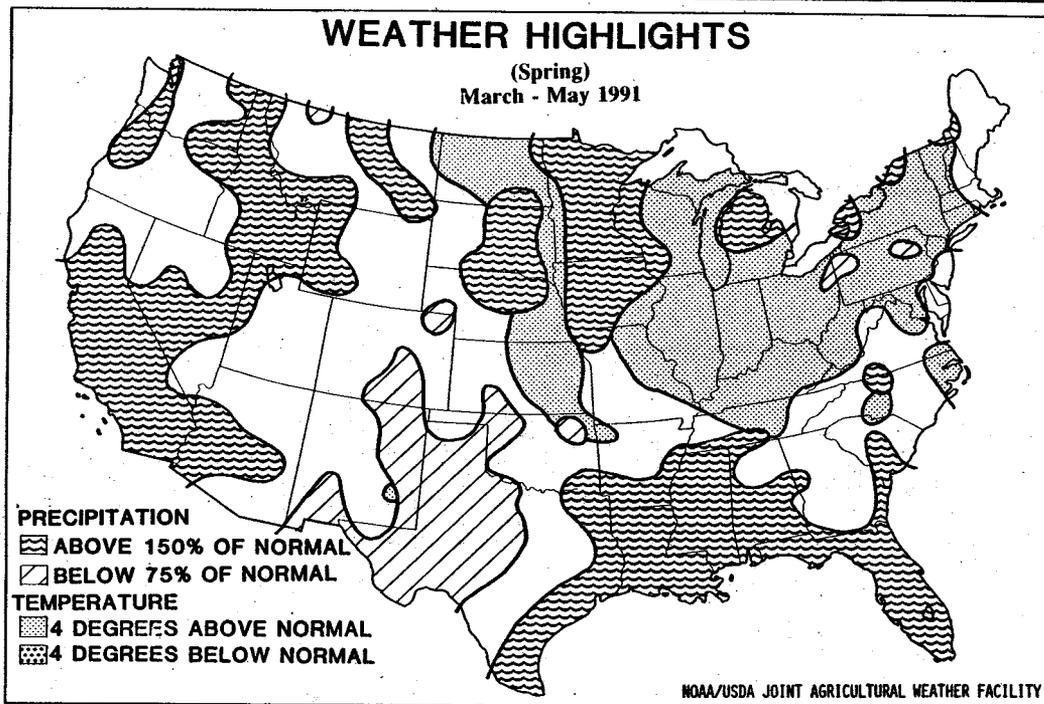
Weather Data for the Week Ending June 15, 1991

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 Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP	
																				.01 INCH OR MORE	.50 INCH OR MORE	.01 INCH OR MORE	.50 INCH OR MORE
SRREVEPORT	88	71	93	66	80	0	1.4	-.6	-.7	1.4	78	49.7	221	96	59	3	0	0	4	1	0	0	
ME CARIBOU	70	52	83	42	61	1	.4	-.3	-.4	.5	31	14.5	105	78	46	0	0	0	2	2	0	0	
PORTLAND	77	55	87	49	66	4	.3	-.4	-.2	1.0	68	22.5	113	89	40	0	0	0	1	4	0	0	
MD BALTIMORE	90	62	97	55	76	4	.3	-.6	-.3	.3	17	13.2	72	80	28	4	0	0	4	1	0	0	
SALISBURY	88	59	94	49	74	3	.0	-.8	-.0	.3	19	17.9	94	93	33	2	0	0	0	0	0	0	
MA BOSTON	83	60	92	54	72	4	1.4	-.7	-.9	2.0	133	16.9	83	81	35	2	0	0	3	1	0	0	
CHATRAM	71	58	74	54	65	4	.1	-.6	-.1	1.7	115	17.0	79	86	63	0	0	0	1	0	0	0	
MI ALPENA	80	51	87	39	65	4	.2	-.5	-.2	.2	12	13.5	115	97	41	0	0	0	2	0	0	0	
DETROIT	83	60	92	53	71	4	.7	-.1	-.4	1.6	96	14.3	105	87	46	1	0	0	3	0	0	0	
FLINT	82	56	87	47	69	4	2.1	1.3	1.0	2.4	149	14.7	118	93	48	0	0	0	4	2	0	0	
GRAND RAPIDS	84	60	90	52	72	5	1.2	-.3	-.8	1.2	65	16.8	117	91	46	1	0	0	3	1	1	0	
HOUGHTON LAKE	80	58	86	43	69	7	.8	-.1	-.6	1.2	78	15.8	139	92	44	0	0	0	2	1	1	0	
LANSING	84	56	90	47	70	4	1.3	-.4	1.2	1.7	89	13.7	109	95	48	1	0	0	3	1	1	0	
MARQUETTE	75	52	81	40	63	5	1.3	-.4	-.8	1.3	66	13.9	85	87	53	0	0	0	2	2	2	0	
MUSKEGON	80	59	89	49	70	5	2.7	2.1	1.9	2.7	217	16.3	121	97	51	0	0	0	3	2	2	0	
SAULT ST. MARIE	74	47	81	39	61	3	.4	-.3	-.3	.4	26	11.3	89	95	54	0	0	0	3	0	0	0	
MN ALEXANDRIA	81	63	91	57	72	8	1.3	-.4	1.2	1.9	92	11.7	119	90	47	1	0	0	2	1	1	0	
DULUTH	72	52	81	42	62	4	1.5	-.6	1.2	1.5	80	13.8	125	96	53	0	0	0	3	1	1	0	
INT'L FALLS	79	57	88	52	68	7	1.9	1.1	1.1	2.1	122	11.5	138	95	47	0	0	0	5	2	2	0	
MINNEAPOLIS	84	64	90	57	74	7	.3	-.7	-.1	.3	13	14.0	133	90	45	1	0	0	4	0	0	0	
ROCHESTER	83	62	90	56	72	6	2.1	1.2	-.8	2.2	119	15.2	138	93	50	1	0	0	4	3	3	0	
MS GREENWOOD	88	70	91	62	79	0	1.9	1.1	1.6	2.2	131	41.4	148	93	54	3	0	0	2	1	1	0	
JACKSON	88	69	91	62	79	0	.4	-.3	-.3	.7	42	41.5	154	96	54	3	0	0	3	0	0	0	
MERIDIAN	89	67	91	58	78	0	.3	-.5	-.2	.3	19	40.8	149	95	49	2	0	0	2	0	0	0	
MO CAPE GIRARDEAU	88	70	95	66	79	—	.3	-.6	-.3	.6	33	20.0	91	94	51	2	0	0	2	1	1	0	
COLUMBIA	87	65	92	62	76	4	2.6	1.7	2.6	2.7	136	15.1	87	93	51	3	0	0	2	0	1	0	
KANSAS CITY	86	67	92	62	77	2	1.0	-.1	-.8	2.5	106	15.1	100	95	56	1	0	0	2	1	1	0	
SAINT LOUIS	90	71	95	67	81	7	.4	-.5	-.4	.4	22	13.3	83	83	44	4	0	0	1	1	0	0	
SPRINGFIELD	85	64	90	59	75	2	.1	-1.0	-.1	1	4	15.9	89	97	51	2	0	0	2	0	0	0	
MT BILLINGS	78	51	93	40	64	2	T	-5	T	1.4	124	9.5	117	82	28	1	0	0	1	0	0	0	
GLASGOW	77	52	90	46	64	1	.4	-.2	-.2	2.4	193	6.1	137	87	32	1	0	0	4	0	0	0	
GREAT FALLS	73	45	83	38	59	-2	T	-7	T	.9	62	6.1	76	62	23	0	0	0	1	0	0	0	
HAVRE	72	48	80	43	60	-2	T	-5	T	.4	39	6.8	123	72	29	0	0	0	1	0	0	0	
HELENA	75	46	85	42	60	1	T	-5	T	1.1	103	4.8	85	67	24	0	0	0	0	0	0	0	
KALISPELL	65	42	77	32	54	-4	.9	-.4	-.9	1.5	127	7.6	102	92	40	0	0	1	1	1	1	0	
MILES CITY	79	53	92	42	66	1	.4	-.3	-.4	1.4	99	9.2	134	84	39	1	0	0	1	0	0	0	
MISSOULA	70	41	84	31	55	-3	.1	-.4	-.1	1.1	114	5.8	88	85	29	0	0	1	1	0	0	0	
NE GRAND ISLAND	86	63	93	56	74	4	.3	-.6	-.3	4.8	246	16.1	146	91	40	2	0	0	3	0	0	0	
LINCOLN	88	64	97	59	76	4	1.0	-.1	-.9	2.7	136	12.0	98	94	44	2	0	0	3	0	1	0	
NORFOLK	86	62	92	54	74	4	.2	-.4	-.2	6.0	268	19.6	180	91	45	2	0	0	2	0	0	0	
NORTH PLATTE	83	57	87	51	70	3	.5	-.4	-.4	1.4	76	11.4	126	93	44	0	0	0	3	0	0	0	
OMAHA	84	65	91	62	75	2	3.7	2.7	2.0	6.0	282	20.8	161	88	55	2	0	0	4	0	3	0	
SCOTTSDUFF	83	53	88	46	68	1	.3	-.4	-.2	1.9	125	8.8	118	91	34	0	0	0	4	0	0	0	
VALENTINE	85	59	93	53	72	5	2.3	1.6	1.5	4.5	293	14.5	185	89	35	2	0	0	2	0	2	0	
NV ELY	83	44	87	33	63	5	T	-2	T	.4	102	5.8	123	63	17	0	0	0	0	0	0	0	
LAS VEGAS	100	73	105	69	87	4	.0	-.0	-.0	.2	>1000	2.0	116	25	16	7	0	0	0	0	0	0	
RENO	87	51	95	46	69	7	.0	-.1	-.0	T	0	2.6	62	54	11	3	0	0	0	0	0	0	
WINNEMUCCA	86	44	94	32	65	2	.0	-.2	-.0	.0	0	4.0	94	53	11	3	1	0	0	0	0	0	
NH CONCORD	81	50	89	43	66	2	1.1	-.4	-.8	1.3	90	12.7	82	93	33	0	0	0	3	1	1	0	
NJ ATLANTIC CITY	87	56	93	47	72	3	T	-.6	T	.7	54	16.5	90	95	35	3	0	0	0	0	0	0	
NM ALBUQUERQUE	81	56	87	54	68	-6	.6	-.5	-.3	.6	332	2.6	113	83	30	0	0	0	4	0	0	0	
CLOVIS	84	60	88	58	72	-1	T	-.6	T	1.6	131	3.6	64	79	32	0	0	0	0	0	0	0	
ROSBELL	88	62	94	59	75	-2	.3	-.0	-.2	1.0	223	2.6	94	68	23	4	0	0	2	0	0	0	
NY ALBANY	82	53	90	48	67	1	.8	-.0	-.4	.8	46	14.0	91	92	38	1	0	0	2	0	0	0	
BINGHAMTON	77	52	87	43	65	1	1.4	-.6	-.8	2.4	134	16.2	103	84	41	0	0	0	2	2	2	0	
BUFFALO	78	56	86	46	67	1	.8	-.1	-.4	.9	63	19.9	128	91	43	0	0	0	3	0	0	0	
NEW YORK	86	65	94	58	75	5	1.2	-.5	1.1	2.7	175	17.4	92	74	33	3	0	0	2	1	1	0	
ROCHESTER	79	55	90	46	67	1	1.0	-.3	-.6	1.0	69	15.0	109	88	40	1	0	0	2	1	1	0	
SYRACUSE	79	53	90	48	66	0	1.2	-.4	-.6	1.3	73	17.1	104	95	40	1	0	0	3	2	2	0	
NC ASHEVILLE	82	58	85	49	70	1	.4	-.5	-.2	.4	22	19.3	94	98	49	0	0	0	4	0	0	0	
CHARLOTTE	87	67	92	62	77	3	.0	-.8	-.0	2.0	114	24.9	119	85	-43	2	0	0	0	0	0	0	
GREENSBORO	88	64	91	57	76	3	T	-.9	T	.7	35	24.6	129	89	41	2	0	0	0	0	0	0	
HATTERAS	85	65	86	53	75	1	.0	-1.0	-.0	1	7	22.7	103	87	44	0	0	0	0	0	0	0	
NEW BERN	89	64	91	56	77	1	.0	-1.2	-.0	.8	31	19.4	91	93	44	2	0	0	0	0	0	0	
RALEIGH	88	64	92	58	76	3	T	-.8	T	1.5	82	14.8	78	95	43	3	0	0	0	0	0	0	
WILMINGTON	88	65	91	57	77	0	.0	-1.3	-.0	.9	34	24.4	117	95	45	3	0	0	0	0	0	0	
ND BISMARCK	83	56	90	49	70	6	.1	-.6	-.1	.8	51	6.8	99	92	40	1	0	0	2	0	0	0	
FARGO	85	60	95	54	73	8	2.0	1.3	1.2	2.5	176	10.6	146	91	40	2	0	0	4	2	2	0	
GRAND FORKS	83	60	93	51	72	9	.4	-.2	-.2	.6	44	8.9	133	92	40	2	0	0	4	0	0	0	
WILLISTON	80	52	93	46	66	3	.9	-.2	-.5	1.8	132	6.9	117	92	33	1	0	0	3	0	0	0	
OH AKRON-CANTON	85	60	90	53	73	5	.7	-.0	-.7	.7	46	12.3	75	88	40	1	0	0	2	1	1	0	
CINCINNATI	87	64	91	55	75	4	.2	-.8	-.1	.8	40	20.9	109	93	43	2	0	0	2	0	0	0	
CLEVELAND	84	59	92	50	72	4	1.1	-.3															

Weather Data for the Week Ending June 15, 1991

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Jun 1	PCT. NORMAL SINCE Jun 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE		.50 INCH OR MORE	
																		OR MORE	OR MORE	OR MORE	OR MORE
DAYTON	87	63	91	56	75	5	1.0	.1	.7	1.2	60	20.6	123	87	41	1	0	2	1	0	0
TOLEDO	86	59	94	52	73	3	.7	-.5	.2	.5	28	13.8	99	94	44	1	2	2	1	1	0
YOUNGSTOWN	84	54	91	41	69	3	.3	-.1	.7	.7	44	11.5	70	93	36	0	0	0	0	0	0
OK OKLAHOMA CITY	88	68	91	63	78	3	.3	-.6	.3	2.9	136	13.8	94	93	49	3	0	0	1	2	1
TULSA	88	70	93	66	79	2	.3	-.1	.3	3.0	124	13.5	76	88	49	3	0	0	0	0	0
OR ASTORIA	61	48	68	47	54	2	.8	-.2	.4	.9	65	34.1	98	88	67	0	0	0	0	0	0
BURNS	74	39	87	29	56	3	.0	-.2	.0	.6	170	4.1	78	96	67	0	0	0	6	0	0
MEDFORD	81	48	94	38	64	0	.0	-.2	.0	.0	0	8.6	87	75	20	0	1	0	0	0	0
FENDLETON	72	48	84	44	60	0	.1	-.2	.1	1.1	260	7.6	82	23	0	2	0	0	0	0	0
PORTLAND	70	52	83	50	61	1	.3	-.1	.2	.3	40	18.6	99	71	29	0	0	0	1	0	0
SALEM	72	47	84	43	59	1	.1	-.2	.1	.1	23	19.8	95	85	46	0	0	0	2	1	0
PA ALLENTOWN	86	58	92	51	72	3	.3	-.5	.2	.2	23	14.0	73	85	34	0	0	0	0	0	0
ERIE	79	59	91	48	69	5	.2	-.7	.7	.7	34	12.5	78	84	42	1	1	0	2	1	0
HARRISBURG	88	60	95	50	74	4	.3	-.5	.3	.5	29	13.7	77	79	30	3	0	0	2	0	0
PHILADELPHIA	90	64	98	58	77	6	.1	-.8	.1	.1	20	14.0	76	78	28	4	0	0	2	2	0
PITTSBURGH	84	57	88	51	71	3	1.5	-.7	1.3	1.5	88	14.7	85	85	36	0	0	0	2	1	0
SCRANTON	83	54	90	45	68	2	.7	-.1	.5	.9	50	12.2	82	86	36	1	0	0	2	0	0
RI PROVIDENCE	83	57	90	51	70	4	.1	-.5	.1	.5	31	20.9	100	88	38	1	0	0	2	0	0
SC CHARLESTON	87	67	91	62	77	0	.0	-.8	.8	1.6	53	25.0	119	94	54	2	0	0	2	1	0
COLUMBIA	90	66	95	56	78	1	.1	-.7	.3	1.8	86	28.4	123	92	44	4	0	0	1	0	0
FLORENCE	90	65	94	58	77	1	.1	-.1	.3	.9	41	18.0	93	93	39	3	0	0	1	0	0
GREENVILLE	86	62	91	57	74	0	.2	-.8	.2	.4	18	25.2	101	97	46	1	0	0	1	0	0
SD ABERDEEN	84	63	90	55	73	8	.2	-.5	.2	.4	81	14.0	171	89	47	1	0	0	3	0	0
HURON	86	64	92	56	75	8	.2	-.5	.2	1.3	81	14.0	171	89	47	1	0	0	3	0	0
RAPID CITY	79	55	84	45	67	3	.3	-.7	.7	4.5	269	15.5	178	90	41	2	0	0	2	0	0
STIOUX FALLS	83	63	91	56	73	6	2.8	2.0	.9	2.3	139	11.4	139	87	46	0	0	0	4	1	1
TN CHATTANOOGA	88	66	92	61	77	3	1.1	.3	1.1	5.1	271	15.0	144	92	51	1	0	0	5	4	4
KNOXVILLE	84	65	89	58	75	1	1.4	.3	1.1	1.8	115	30.6	116	96	47	1	0	0	1	1	1
MEMPHIS	89	71	92	65	80	2	.7	.5	1.1	2.7	143	25.7	108	97	52	0	0	0	3	1	1
NASHVILLE	87	69	93	64	78	3	.4	-.2	.4	.7	36	37.9	141	88	52	3	0	0	2	0	0
TX ABILENE	88	67	93	63	77	3	.4	-.4	.2	.5	24	22.1	88	95	63	2	0	0	2	0	0
AMARILLO	86	61	91	60	74	1	.1	-.8	.1	6.5	483	12.6	126	87	44	3	0	0	1	0	0
AUSTIN	89	71	93	69	80	1	.7	-.1	.5	1.5	88	5.9	79	86	34	2	0	0	0	0	0
BEAUMONT	85	75	89	72	80	1	3.6	2.5	.5	2.1	125	24.1	164	96	56	4	0	0	4	0	0
BROWNSVILLE	94	76	95	73	85	2	.5	-.2	.4	4.4	186	46.1	202	97	71	0	0	0	5	2	2
CORPUS CHRISTI	91	75	92	72	83	1	1.0	.1	1.0	.5	35	16.8	202	94	55	7	0	0	3	0	0
DEL RIO	92	70	97	64	81	2	.4	.0	.4	1.6	77	17.1	154	98	63	6	0	0	1	1	1
EL PASO	88	62	93	55	75	1	.4	.0	.4	1.9	211	7.5	111	73	39	4	0	0	2	0	0
FORT WORTH	90	71	94	66	81	0	.0	-.1	.0	.0	0	1.8	108	61	20	4	0	0	0	0	0
GALVESTON	85	75	87	72	80	1	.0	-.6	.6	2.4	179	19.6	126	91	50	5	0	0	1	0	0
HOUSTON	89	73	92	71	81	0	3.2	2.3	.9	3.2	184	34.8	229	89	69	0	0	0	6	3	3
LUBBOCK	89	63	94	60	76	0	3.4	2.4	2.3	4.7	202	34.1	168	100	67	4	0	0	5	2	1
MIDLAND	91	65	97	61	78	1	1.4	.8	1.3	3.5	248	7.2	106	90	33	4	0	0	2	1	1
SAN ANGELO	87	65	92	63	76	2	1.4	1.0	1.3	2.4	315	4.9	98	86	27	4	0	0	3	1	0
SAN ANTONIO	93	71	98	67	82	0	.3	-.1	.2	3.9	370	8.5	113	95	47	3	0	0	4	0	0
VICTORIA	89	73	92	70	81	0	.4	-.4	.2	.5	28	19.2	151	94	47	5	0	0	5	0	1
WACO	91	70	95	66	80	1	.8	-.4	.6	1.4	56	28.7	192	100	59	4	0	0	3	1	1
WICHITA FALLS	89	68	95	64	79	1	.6	.0	.6	2.1	138	16.2	103	95	52	5	0	0	2	1	0
UT CEDAR CITY	84	54	88	49	69	4	.0	-.7	.7	2.7	166	11.2	89	89	45	4	0	0	0	0	0
SALT LAKE CITY	84	56	93	46	70	3	.4	-.1	.1	.3	155	4.3	95	47	15	0	0	0	0	0	0
VT BURLINGTON	77	50	89	42	64	3	.0	-.2	.2	1.1	202	9.4	110	65	22	2	0	0	0	0	0
VA NORFOLK	88	67	94	63	77	4	.4	-.4	.3	.4	24	11.7	89	97	43	0	0	0	4	0	0
RICHMOND	91	62	97	56	77	4	.0	-.8	.8	1.2	70	18.4	97	82	36	4	0	0	0	0	0
ROANOKE	87	61	93	53	74	3	.0	-.8	.8	1.1	65	13.5	75	88	35	5	0	0	1	0	0
WA QUILLAYUTE	59	47	69	44	53	3	.0	.0	.0	.3	20	18.9	106	86	38	1	0	0	0	0	0
SEATTLE-TACOMA	68	50	76	48	59	1	1.1	.4	.3	1.4	89	49.8	95	99	67	0	0	0	6	0	0
SPokane	68	44	82	39	56	5	.1	-.2	.1	.4	51	22.1	119	91	49	0	0	0	2	0	0
YAKIMA	75	43	90	35	59	5	.1	-.1	.1	.5	69	8.3	97	85	31	0	0	0	1	0	0
WV BECKLEY	82	57	87	50	70	4	.0	-.9	.0	.8	280	3.4	85	87	29	1	0	0	0	0	0
CHARLESTON	88	60	94	52	74	3	.0	-.7	.7	.3	18	17.0	88	94	43	0	0	0	0	0	0
HUNTINGTON	89	61	94	52	75	4	.1	-.7	.1	.9	53	19.4	102	94	38	2	0	0	1	0	0
PARKERSBURG	86	59	90	52	73	2	.0	-.9	.9	.9	45	17.2	97	93	41	1	0	0	0	0	0
WI GREEN BAY	79	59	83	53	69	5	.3	-.4	.2	.8	47	9.8	85	88	53	0	0	0	2	0	0
LACROSSE	85	65	93	59	75	7	.6	-.3	.4	.7	34	17.1	139	90	47	1	0	0	0	0	0
MADISON	85	62	90	54	73	7	2.2	1.3	1.4	2.3	121	15.2	121	93	51	1	0	0	3	5	1
MILWAUKEE	84	64	92	57	74	10	1.1	.3	1.0	1.7	98	15.6	118	85	46	1	0	0	0	2	1
WAUSAU	80	59	86	52	70	6	1.2	.3	1.0	1.3	69	14.9	121	93	52	0	0	0	2	1	1
WY CASPER	80	49	86	41	65	3	.1	-.2	.1	1.6	238	9.2	147	85	25	0	0	0	2	0	0
CHEYENNE	74	50	80	44	62	1	.6	-.1	.3	3.8	360	9.7	151	83	34	0	0	0	2	0	0
LANDER	81	51	87	42	66	5	.1	-.3	.1	.7	77	9.5	120	67	21	0	0	0	2	0	0
SHERIDAN	76	48	90	38	62	2	.4	-.2	.3	.8	66	9.8	119	88	43	1	0	0	1	0	0

Based on 1951-80 normals



### Spring Weather Review

March - May 1991

**HIGHLIGHTS:** Warm weather prevailed east of the Rockies, but the West was colder than normal. Individual monthly temperature anomaly distributions were nearly identical, resulting in strong positive departures of +4° F or greater from the northern Plains to the Northeast and negative anomalies of -2° F in the Great Basin. The Nation largely escaped spring freeze damage, except for portions of the inland Pacific Northwest. Cool spells in the East were infrequent and short-lived. An early season heat wave scorched the East during the latter half of May. Remarkably, 24 States from Kansas eastward had one of their three warmest springs on record, and 9 States had their warmest spring ever.

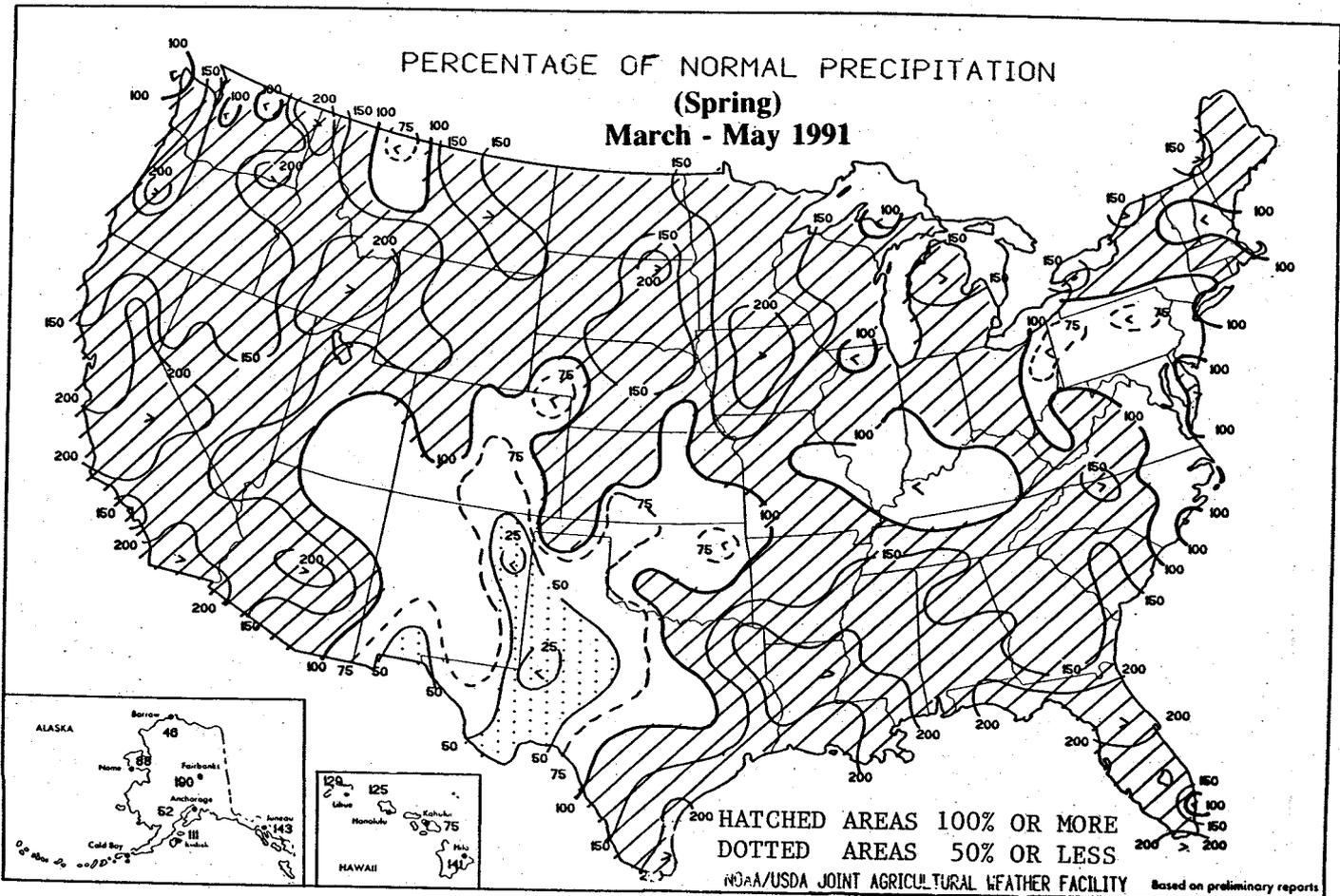
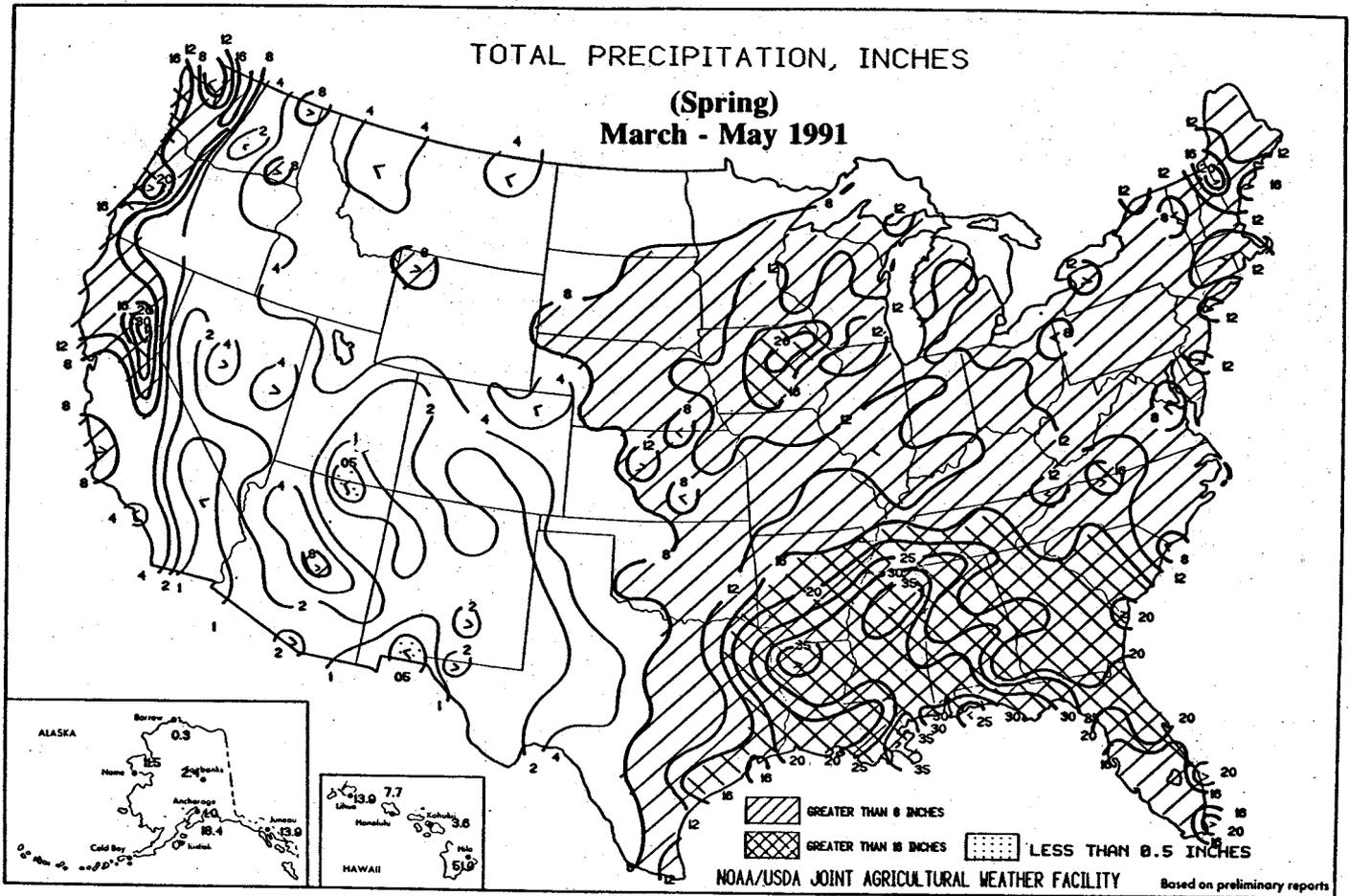
Three consecutive months of above-normal rainfall led to excessive wetness in parts of the western Corn Belt, most notably in northern Iowa. Incessant rains during April in the lower Mississippi Valley wreaked havoc with spring planting, and generally wet conditions persisted through May. Thunderstorms in April and May vanquished winter dryness in much of the Plains. Only the southern High Plains received much below-normal rainfall, but conditions improved toward the end of May. Precipitation dwindled after the end of March in the mid-Atlantic region and, coupled with warm weather, has led to worsening drought conditions. California turned seasonably dry after March's drenching storms and concluded a fifth consecutive drier-than-normal rainy season.

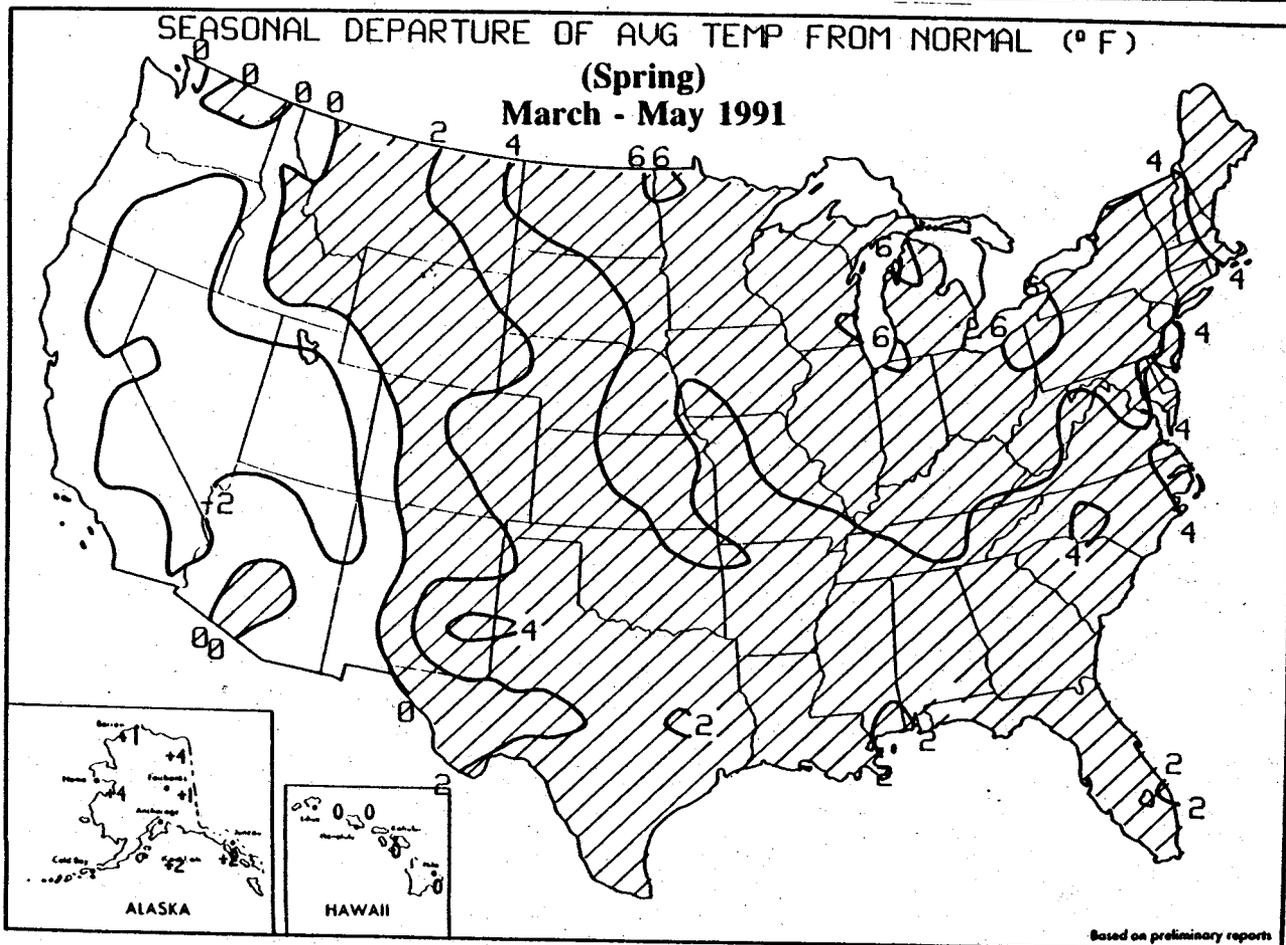
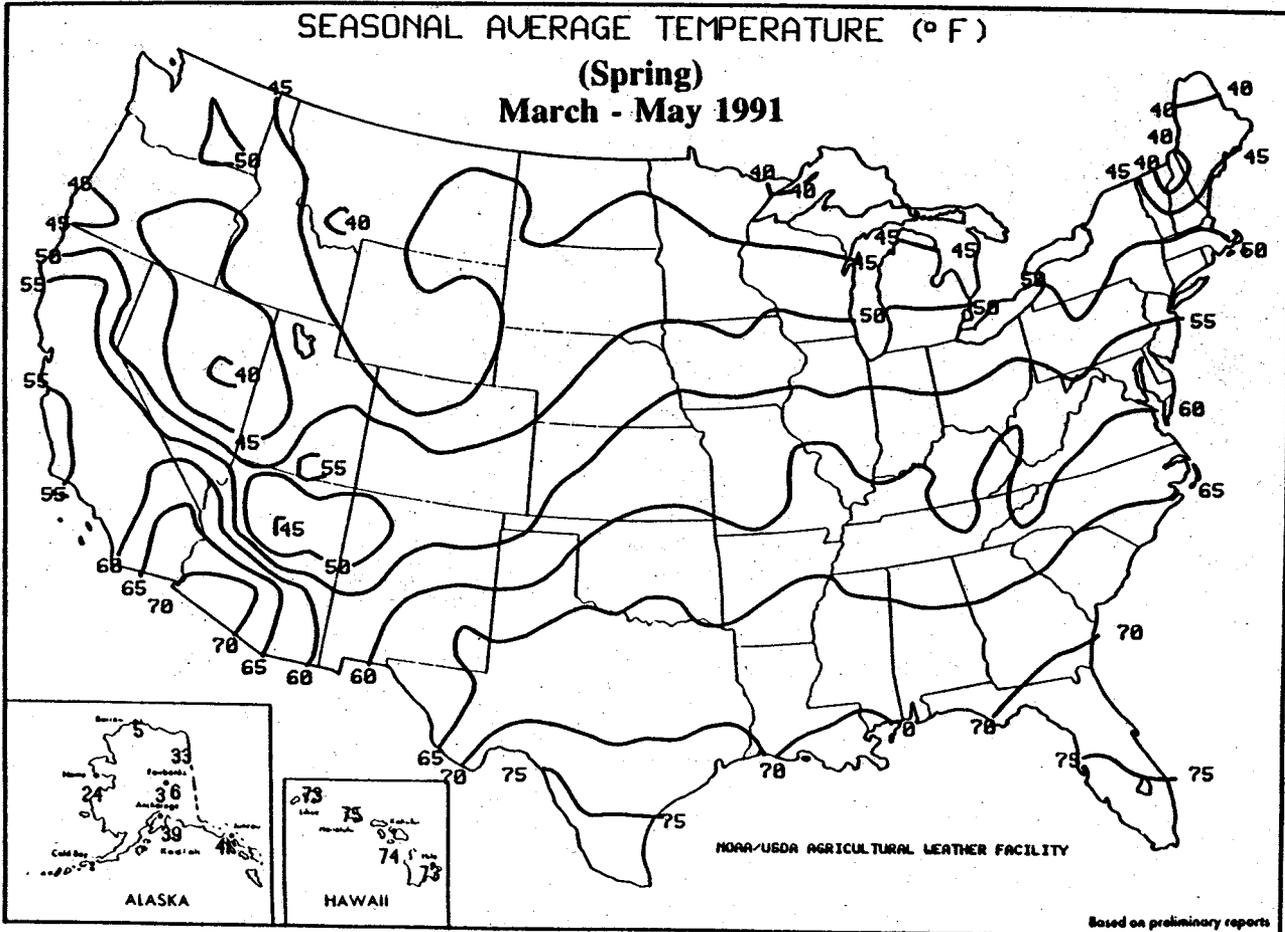
**MARCH:** California's rain and snow highlighted an active weather month. After a nearly rain-free winter, five rounds of storms pounded the State, an assuaging but by no means ending the drought. An early month storm raked the Southeast with tornadoes and flooding rain and concurrently glazed New York State with a damaging ice accumulation. A minor cold snap followed the storm, sending temperatures into the upper twenties as far south as Tallahassee, FL. Strong winds occasionally raised dust from the Southwest to the Plains. Kansas endured dust storms on the 12th and the 27th. Three mid- to late-month storms deposited

heavy snow in the western Corn Belt and upper Great Lakes. Tornado activity increased toward the month's end. Numerous twisters struck the Corn Belt, and flooding accompanied tornadoes in the Southeast.

**APRIL:** Relentless storms soaked the lower Mississippi Valley and the western Corn Belt. Five episodes of heavy rain in the Delta brought fieldwork to a standstill. Monthly rainfall exceeded 30 inches near Shreveport, LA. In Brownsville, TX, a 1-day storm dumped more than 9 inches of rain on the 5th. Early month storms in the Pacific Northwest were sufficient to establish several April rainfall records. Severe weather was commonplace in the Plains. The month's deadliest tornadoes struck near Wichita, KS, on the 26th, killing more than 2 dozen people. In the East, a memorable line of thunderstorms caused wind damage from New York to Mississippi on the 9th. Abnormally dry weather persisted in the southern High Plains. The first half of the month was exceptionally mild from the northern Plains to New England. Cool air frequently settled across the West.

**MAY:** A late-spring heat wave and dry spell made late May feel like mid-summer in the East. More than 3 dozen cities, mainly from Wisconsin to the mid-Atlantic coast, set records for their hottest May average temperature. Early month temperatures flirted with the freezing mark on a few occasions in the central Plains, including a 32° F reading in Goodland, KS, on the 6th. Cold mornings in interior Oregon toward the end of May caused some freeze damage. In terms of storminess, May remained quite active. Although thunderstorms became more isolated, their frequency made up for lack of coverage. Storm outbreaks were noted in the Plains and the Southeast on nearly every day, causing spotty flash flooding. The southern Plains area of dryness continued to shrink as storms reached previously parched portions of New Mexico and northern Texas. Heavy rain and moderating temperatures caused spring runoff flooding in the northern Rockies and Pacific Northwest ranges. Spring planting progressed gradually during breaks in the rain in Iowa and the Delta region.





Spring 1991 in Historical Perspective

Warm and wet describes this spring's weather for the Nation as a whole. Spring 1991 ranked as the ninth warmest in the past 97 years (table 1), and the seventh consecutive March-May period with above-normal temperatures (fig. 1). It was the fourth wettest spring on record based on areally averaged data. Taking the local normal climate into account, this spring was the 11th wettest (fig. 2).

All but the Southwest, West, and Northwest regions experienced a warmer-than-normal spring. The dividing line between warm and cool conditions was roughly the Rocky Divide. The Northeast, East North Central, Central, and Southeast regions had near-record warmth. Nine States from the central Plains eastward established a spring record for warmth (table 2), and 15 additional States ranked second or third. In the West, both California and Oregon reported their 11th coldest spring since 1895.

The East North Central region had its alltime wettest spring. It was the second wettest on record in the Southeast. March precipitation contributed heavily to the West's sixth wettest ranking. No region reported below-normal precipitation, although a few individual States were drier than normal (table 3). Florida, Iowa, and Louisiana suffered through a record wet spring.

The northern Great Plains were warm (fig. 3) and wet. Spring 1991 was the 10th warmest and 5th wettest on record. Corn and Soybean Belt precipitation was much above normal, ranking as the seventh wettest March-May (fig. 4). Bountiful thunderstorms spawned hundreds of tornadoes. The preliminary spring count of 884 surpassed the normal by 275 percent. The former spring record of 537 was notched in 1982 (fig. 5).

TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR MARCH-MAY 1991, BASED ON THE PERIOD 1895-1991. 1 = DRIEST/COLDEST, 97 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	64	96
EAST NORTH CENTRAL	97	94
CENTRAL	67	96
SOUTHEAST	96	95
WEST NORTH CENTRAL	93	85
SOUTH	83	93
SOUTHWEST	65	46
NORTHWEST	90	20
WEST	92	13
NATIONAL	94	89

Figure 1

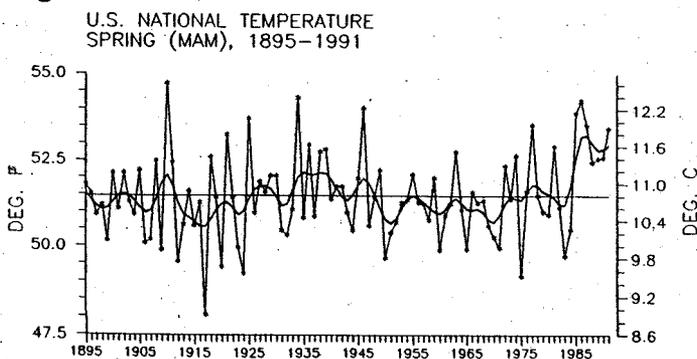


Figure 2

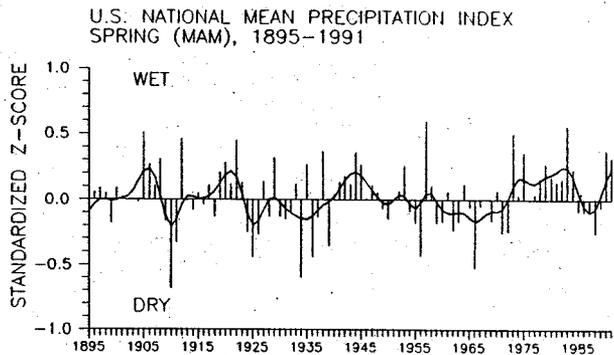


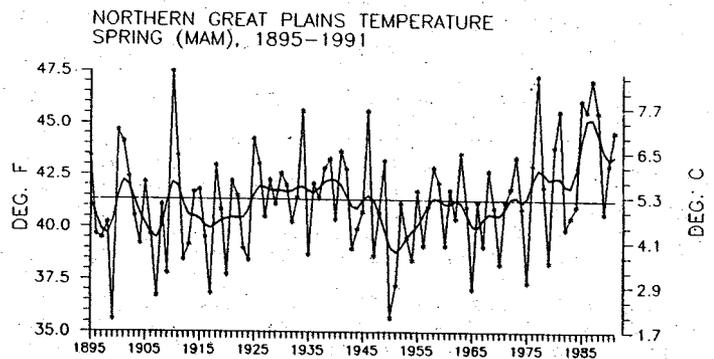
TABLE 2. TEMPERATURE RANKINGS FOR MARCH-MAY 1991, BASED ON THE PERIOD 1895 TO 1991. 1 = COLDEST, 97 = WARMEST.

STATE	RANK	STATE	RANK	STATE	RANK	STATE	RANK
AL	87	IA	94	NE	90	RI	97
AZ	27	KS	97	NV	22	SC	95
AR	90	KY	97	NH	97	SD	83
CA	11	LA	91	NJ	96	TN	96
CO	71	ME	88	NM	65	TX	90
CT	96	MD	95	NY	96	UT	21
DE	93	MA	95	NC	97	VT	97
FL	95	MI	95	ND	91	VA	97
GA	95	MN	93	OH	97	WA	18
ID	42	MS	94	OK	97	WV	96
IL	96	MO	95	OR	11	WI	94
IN	95	MT	66	PA	96	WY	68

TABLE 3. PRECIPITATION RANKINGS FOR MARCH-MAY 1991, BASED ON THE PERIOD 1895 TO 1991. 1 = DRIEST, 97 = WETTEST.

STATE	RANK	STATE	RANK	STATE	RANK	STATE	RANK
AL	95	IA	97	NE	72	RI	83
AZ	84	KS	58	NV	84	SC	80
AR	79	KY	58	NH	49	SD	95
CA	92	LA	97	NJ	67	TN	79
CO	28	ME	67	NM	27	TX	38
CT	77	MD	17	NY	78	UT	82
DE	51	MA	75	NC	72	VT	57
FL	97	MI	92	ND	82	VA	51
GA	92	MN	94	OH	46	WA	83
ID	88	MS	94	OK	28	WV	51
IL	79	MO	57	OR	83	WI	88
IN	70	MT	72	PA	38	WY	86

Figure 3



(Continued to p. 23)

## National Agricultural Summary

June 10 - 16, 1991

**HIGHLIGHTS:** Farmers across most of the Nation enjoyed several days suitable for fieldwork, with rainfall limiting work to less than 4 days only in Tennessee and Louisiana. Cooler weather checked crop development in the Pacific Northwest, while above-normal temperatures in the eastern half of the Nation encouraged growth. Severe flooding was reported in parts of Iowa.

**SMALL GRAINS:** Harvest of winter wheat progressed to 23 percent (%) complete in the 19 major producing States, 8 percentage points ahead of last year and 7 points ahead of the 5-year average. California's harvest, at 20% complete, was 20 points behind last year and 25 points behind normal. Georgia's harvest, at 85% complete, was 6 points behind last year and 4 points behind normal. Harvest progress in all other major States was ahead of normal, with Arkansas, North Carolina, and Oklahoma each over 20 points ahead of the historic averages. Only 19% of Idaho's winter wheat acreage had headed, compared with 48% for both last year and the 5-year average. Thirty-seven percent of Montana's winter wheat acreage had headed, as was 80% of the acreage in Washington. All or nearly all of the acreage in the other major States had headed. The Arkansas winter wheat crop was in mostly poor or very poor condition, with 82% of the crop rating less than fair. Seventy-one percent of Missouri's acreage rated poor or very poor, as did 66% of the acreage in Illinois. Spring wheat heading progress reached 16% in the five major producing States, 10 points ahead of last year and 3 points ahead of the average. Progress was ahead of normal in Minnesota and the Dakota's but behind normal in Idaho and Montana. Spring wheat condition continued to be rated mostly good in all major producing States.

**CORN:** Corn planting reached 95% complete in Minnesota and was virtually complete in all other States. Crop condition rated mostly good in all States, with 35% or more of the acreage rating excellent in Georgia, Kansas, and Michigan. Corn earworm and European corn borer required control in northeast Kansas.

**SOYBEANS:** Planting progress remained ahead of normal from Illinois through the Ohio Valley, but lagged behind normal across the southeastern part of the Nation. Planting was 83% complete in the 19 major producing States, compared with 77% last year and 85% average. Progress was 38 points behind normal in Louisiana, 27 points in Tennessee, and 24 points in Mississippi.

**COTTON:** Cotton planting was 92% complete nationwide, 6 points behind last year and 1 point behind the average. Planting was 85% complete in Texas, 87% in Oklahoma, and over 95% in the Delta and Southeast. Eighteen percent of the acreage was showing squares, compared with 22% last year and 25% average. Crop condition rated mostly good in the Southwest, Oklahoma, Georgia, and North Carolina and generally fair elsewhere. Over 20% of the acreage in Missouri and Oklahoma rated poor. Early cotton fields were blooming in southern California and irrigation and insect controls were active. Texas Plains' cotton producers battled sand

storms, rainstorms, and potential weed problems, making little progress during the week.

**GRAIN SORGHUM:** Planting progress advanced to 85% complete in the 12 major producing States, slightly ahead of both last year and the average. Progress continued to lag in South Dakota and the Delta, but was well ahead of normal in Illinois and Oklahoma. Texas fields continued improvement with timely rains.

**RICE:** Planting progress gained 28 points in Mississippi, reaching 85% complete. Planting was near completion in Arkansas, California, and Louisiana. Over 90% of the acreage had emerged in all States except Mississippi, which showed just 60% emergence, compared with 96% for the 5-year average. Forty-one percent of Mississippi's acreage rated poor or very poor, while condition in the other principal States rated mostly good. Texas rice fields finally received badly needed sunshine, and herbicides and insecticides were aerially applied.

**OTHER FIELD CROPS:** Alfalfa cutting got underway in Montana and remained active nationwide. Dry bean planting was 68% complete in Colorado, 77% in Idaho, and 75% in Michigan. Potato planting was completed. Sugarbeet thinning was underway in Idaho. Peanut planting was virtually complete in the Southeast and past the midpoint in Mississippi, Oklahoma, and Texas. Red clover cutting continued ahead of normal in Illinois. Sunflower planting was 58% complete in Texas.

**FRUIT AND NUTS:** Grapefruit, table grapes, peaches, apricots, and figs were being picked in Arizona. Southern California Valencia orange, grapefruit, lemon, and table grape harvests were active. California's Central Valley cherry, peach, nectarine, and plum harvests continued. In Florida, new crop fruit continued to progress well. Valencia and grapefruit harvests were nearly over. Peach harvest continued in Georgia, Louisiana, and Mississippi. Blueberry harvest was underway in New Jersey. New York's June apple drop was nearly complete in the Hudson Valley and the State's grapes, pears, peaches, and apples showed good crop potential. Harvest of New York's early variety sweet cherries began. Light fruit sets were reported in Oregon's peach, cherry, and caneberry crops. Most fruit crops were behind normal in Washington and fire blight was starting to show on pears in the Chelan area. The State's apple crop was progressing well and thinning was in progress. Sweet cherry picking got underway, but untimely rain damaged some early cherries.

**VEGETABLES:** Onion, lettuce, sweet corn, and melon harvests continued in Arizona. California

(Continued to back cover)

**CROP PROGRESS**

FOR WEEK ENDING JUNE 16, 1991

**WINTER WHEAT  
% HEADED**

	1991	1990	AVG.
AR	100	100	100
CA	99	99	100
CO	97	97	96
GA	100	100	100
ID	19	48	48
IL	100	100	100
IN	100	100	100
KS	100	100	100
MI	95	90	95
MO	100	100	100
MT	37	24	43
NE	100	97	98
NC	100	100	100
OH	100	98	95
OK	100	100	100
OR	88	93	87
SD	90	86	84
TX	100	100	100
WA	80	82	86

19 STATES 93 93 94

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

**WINTER WHEAT  
% HARVESTED**

	1991	1990	AVG.
AR	72	57	48
CA	20	40	45
CO	0	0	0
GA	85	91	89
ID	0	0	0
IL	20	1	7
IN	16	0	0
KS	15	4	10
MI	0	0	0
MO	32	5	16
MT	0	0	0
NE	0	0	0
NC	70	60	40
OH	0	0	0
OK	56	46	35
OR	0	0	0
SD	0	0	0
TX	42	39	37
WA	0	0	0

19 STATES 23 15 16

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

**SPRING WHEAT  
% HEADED**

	1991	1990	AVG.
ID	5	13	16
MN	24	3	18
MT	2	4	8
ND	13	2	8
SD	38	23	28

5 STATES 16 6 13

THESE 5 STATES PRODUCED 97% OF THE 1990 SPRING WHEAT CROP

**COTTON  
% PLANTED**

	1991	1990	AVG.
AL	98	100	100
AZ	100	100	100
AR	99	100	100
CA	100	100	100
GA	100	100	99
LA	98	100	100
MS	96	100	100
MO	100	100	100
NM	100	100	100
NC	100	100	100
OK	87	92	76
SC	100	100	99
TN	100	100	100
TX	85	96	87

14 STATES 92 98 93

THESE 14 STATES PRODUCED 99% OF THE 1990 COTTON CROP.

NA - NOT AVAILABLE.

**COTTON  
% SQUARING**

	1991	1990	AVG.
AL	31	32	34
AZ	45	56	80
AR	22	0	21
CA	25	40	40
GA	34	52	45
LA	12	54	42
MS	25	33	38
MO	16	0	14
NM	39	18	31
NC	30	13	15
OK	1	1	2
SC	35	14	21
TN	10	4	17
TX	13	13	13

14 STATES 18 22 25

THESE 14 STATES PRODUCED 99% OF THE 1990 COTTON CROP.

**Soybeans  
% Planted**

	1991	1990	Avg.
AL	58	81	74
AR	57	49	64
GA	66	82	79
IL	99	76	94
IN	99	79	86
IA	90	95	98
KS	85	70	75
KY	60	43	65
LA	40	85	78
MI	95	100	100
MN	85	96	98
MS	41	64	65
MO	73	39	73
NE	98	96	98
NC	75	83	66
OH	100	82	82
SC	69	76	70
SD	91	91	90
TN	40	58	67

19 STATES 83 77 85

THESE 19 STATES PRODUCED 95% OF THE 1990 SOYBEANS CROP.

**RICE  
% PLANTED**

	1991	1990	AVG.
AR	98	96	99
CA	99	100	100
LA	95	100	100
MS	85	99	100
TX	100	100	100

5 STATES 97 98 100

THESE 5 STATES PRODUCED 98% OF THE 1990 RICE CROP.

**RICE  
% EMERGED**

	1991	1990	AVG.
AR	92	89	96
CA	95	95	97
LA	94	97	99
MS	60	90	96
TX	97	98	100

5 STATES 91 93 97

THESE 5 STATES PRODUCED 98% OF THE 1990 RICE CROP.

**Grain Sorghum  
% Planted**

	1991	1990	Avg.
AR	95	89	95
CO	68	81	79
IL	99	36	80
KS	80	75	70
LA	76	96	96
MS	77	97	95
MO	81	53	85
NE	98	96	97
NM	53	73	NA
OK	87	72	59
SD	57	74	79
TX	88	94	88

12 STATES 84 83 NA

EXCL. STATES WITH NA 85 83 82

THESE 12 STATES PRODUCED 98% OF THE 1990 GRAIN SORGHUM CROP

**CROP CONDITION**

PERCENT

FOR WEEK ENDING JUNE 16, 1991

**SOYBEANS**

STATE	VP	P	F	G	EX
AL	0	0	55	45	0
AR	0	0	37	63	0
GA	0	2	17	81	0
IL	0	0	16	72	12
IN	0	0	31	65	4
IA	0	3	32	57	8
KS	0	0	4	54	42
KY	0	0	23	69	8
LA	NA				
MI	0	5	20	55	20
MN	3	5	34	53	5
MS	1	18	49	31	1
MO	0	0	48	50	2
NE	0	0	11	77	12
NC	0	3	36	61	0
OH	3	5	26	51	15
SC	0	0	62	38	0
SD	0	0	11	54	35
TN	0	0	50	50	0
19 STATE	1	2	29	59	9
PREV WEEK	NA				
PREV YEAR	1	5	36	54	4

**RICE**

STATE	VP	P	F	G	EX
AR	0	5	43	52	0
CA	0	0	10	85	5
LA	0	0	42	58	0
MS	20	21	49	10	0
TX	0	0	27	60	13
5 STATE	2	4	37	55	2
PREV WEEK	2	8	38	48	4
PREV YEAR	0	3	35	54	8

**WINTER WHEAT**

STATE	VP	P	F	G	EX
AR	37	45	17	1	0
CA	0	0	10	85	5
CO	3	8	26	50	13
GA	9	40	40	11	0
ID	5	3	30	49	13
IL	30	33	30	6	1
IN	7	23	36	34	0
KS	0	7	38	46	9
MI	0	5	15	50	30
MO	33	38	23	6	0
MT	1	5	19	58	17
NE	1	1	34	61	3
NC	0	4	23	68	5
OH	1	6	26	53	14
OK	0	22	60	17	1
OR	4	6	26	59	5
SD	0	5	12	58	25
TX	4	23	46	25	2
WA	0	24	49	27	0
19 STATE	5	16	36	36	7
PREV WEEK	5	14	44	33	4
PREV YEAR	1	5	25	53	16

**SPRING WHEAT**

STATE	VP	P	F	G	EX
ID	0	1	13	63	23
MN	0	9	27	58	6
MT	0	2	18	53	27
ND	0	0	5	80	15
SD	0	0	7	58	35
5 STATE	0	2	12	68	18
PREV WEEK	0	1	14	71	14
PREV YEAR	1	4	20	55	20

**COTTON**

STATE	VP	P	F	G	EX
AL	0	5	63	32	0
AZ	0	0	20	70	10
AR	0	5	54	41	0
CA	0	0	10	85	5
GA	0	0	9	74	17
LA	3	5	52	40	0
MS	8	5	53	33	1
MO	0	25	50	25	0
NM	0	17	25	58	0
NC	0	0	19	74	7
OK	0	24	27	49	0
SC	0	0	72	28	0
TN	4	14	58	24	0
TX	0	3	55	40	2
14 STATE	1	5	47	45	2
PREV WEEK	1	6	39	52	2
PREV YEAR	1	6	34	56	3

**SORGHUM**

STATE	VP	P	F	G	EX
AR	0	2	75	23	0
CO	0	0	26	64	10
IL	0	0	15	73	12
KS	0	0	11	54	35
LA	0	38	52	10	0
MS	1	12	68	19	0
MO	0	1	54	45	0
NE	0	0	16	76	8
NM	0	0	0	100	0
OK	0	0	16	84	0
SD	NA				
TX	0	2	20	61	17
12 STATE	0	1	21	60	18
PREV WEEK	NA				
PREV YEAR	2	4	26	57	11

**CORN**

STATE	VP	P	F	G	EX
CO	0	2	19	65	14
GA	0	0	18	45	37
IL	0	0	5	73	22
IN	0	1	24	65	10
IA	0	3	31	53	13
KS	0	0	2	57	41
KY	0	2	31	58	9
MI	0	5	15	45	35
MN	3	4	35	46	12
MO	0	0	35	62	3
NE	0	0	7	75	18
NC	1	10	38	50	1
OH	1	4	23	51	21
PA	3	16	33	38	10
SD	0	0	12	62	26
TX	0	2	19	57	22
WI	0	1	11	69	19
17 STATE	0	2	20	61	17
PREV WEEK	0	2	17	61	20
PREV YEAR	1	5	31	56	7

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

## State Summaries of Weather and Agriculture

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

**ALABAMA:** Rainfall less than 0.50 in. north, 1.00 to 2.00 in. local areas; mostly under 0.30 in. elsewhere, over 1.00 in. isolated areas. Temperatures 1 to 3° above normal.

Days suitable for fieldwork 6.2. Soil moisture 32% short, 62% adequate, 6% surplus. Acreage intended for spring planting 95% prepared, 100% 1990, 100% avg. Corn 63% silked, 75% 1990, 62% avg.; 4% poor, 29% fair, 51% good, 16% excellent. Sorghum 74% planted, 91% 1990, 79% avg.; 37% fair, 51% good, 12% excellent. Cotton 98% planted, 100% 1990, 100% avg.; 31% squaring, 32% 1990, 34% avg.; 5% poor, 63% fair, 32% good. Peanuts 99% planted, 100% 1990, 100% avg.; 13% pegging, 27% 1990, 14% avg.; 1% poor, 27% fair, 72% good. Soybeans 58% planted, 81% 1990, 74% avg.; 55% fair, 45% good. Winter wheat 66% harvested, 73% 1990, 65% avg.; 10% very poor, 52% poor, 20% fair, 18% good. First hay 75% harvested, 87% 1990, 79% avg. Pastures 2% poor, 7% fair, 65% good, 26% excellent. Livestock 1% fair, 72% good, 27% excellent.

**ALASKA:** Railbelt temperatures were near or in excess of 70°, some shower activity, generally it was a temperate week to begin first cutting hay. Highs normal to 10° above normal. Lows 2 to 12° below normal. Seasonal precipitation drier than normal, some more than an inch, at all stations except Homer.

Days suitable for fieldwork 6.0. Topsoil 56% short, 44% adequate. Subsoil 30% short, 65% adequate, 5% surplus. Small grain in pre boot stage, heights 2 to 8 in. Last year, 40% of barley, 90% of oats were in boot stage. Crop growth; 45% slow, 49% moderate, 6% rapid.

**ARIZONA:** Cloudy, windy, scattered showers, thunderstorms statewide 9th to 13th; sunny, warm 14th, 15th. Temperatures 6° below normal to 3° above normal. Extremes 37°; 96° higher elevations, 59°; 104° desert. Rainfall trace central to 0.91 in. southeast.

Small grains harvested 68%, 80% 1990, 78% avg.; small grains good statewide. Cotton squaring, further advanced 45%, 56% 1990, 80% avg.; setting bolls 4%, 18% 1990; cotton 20% fair, 70% good, 10% excellent; weeds, insects light to moderate. Alfalfa good statewide; weeds, insects light; harvest active statewide. Grapefruit, watermelon, cantaloupe, table grapes, sweet corn harvested west, central; honeydews harvested west; dry onions harvested east, central; mixed vegetables, peaches, apricots, figs, harvested central; spring lettuce harvested east.

**ARKANSAS:** Temperatures slightly above normal with scattered showers statewide, heaviest in the northeast. Extremes 56°; 95°. Rainfall 0.01 to 3.63 in.

Days suitable for fieldwork 6. Soil moisture 15% short, 83% adequate, 2% surplus. Oats harvested 50%, 55% 1990, 48% avg. Corn planted 100%, 99% 1990, 100% avg. Disease problems in wheat remained light to medium. Pasture 7% fair, 79% good, 14% excellent. Livestock excellent.

**CALIFORNIA:** Tropical hot early summer weather prevailed with 11th being the warmest day. Weak high pressure remained over the area. No precipitation.

Good progress field activities. Rice seeding virtually completed. Herbicide applications tapered off. Early cotton fields southern areas blooming. Irrigation, insect controls active. Early small grain harvest increased. Seeding field corn, dry beans increased. Early safflower fields drying. Sugarbeet harvest progressed, some treated mildew. Hay crop harvest seasonally normal. Seed alfalfa, good bee activity, normal pesticide application. Valencia orange, grapefruit, lemon, table grape harvests active. Central valley cherry, peach, nectarine, plum harvests continued. Avocado, pomegranate trees in bloom. Citrus treated thrips, cutworm. Apple, walnut treated codling moth. Cling peach treated oriental fruit moth. Grape leaf skeletonizer, leafhopper, mildew treated. Celery moderate supply central coast, generally good quality. Potato harvest continued Hemet San Jacinto area. Sweet potato, tomato, melon planting continued, Merced area. Pastures fair to good northern half to excellent northeast poor to fair southern State. Water supplies adequate.

**COLORADO:** Rainfall decreased significantly. Few severe thunderstorms in the east on the 10th, most of State received little or no rain. From the 12th through the 14th, scattered showers, thunderstorms affected most of the State with very little significant rainfall. San Luis Valley, southeastern areas received some moderate rain the 14th, 15th. Temperatures 3° above normal except in the Rio Grande River Basin where they were 2° below normal.

Days suitable for fieldwork 5.5. Soil moisture 2% very short, 33% short, 61% adequate, 4% surplus. First cutting alfalfa 32% complete, 49% 1990, 60% avg. Sorghum 68% planted, 81% 1990, 79% avg.; dry beans 68% planted, 81% 1990, 83% avg. Winter wheat 97% headed, 29% turning color. Winter wheat 3% very poor, 8% poor, 26% fair, 50% good, 13% excellent; corn 2% poor, 19% fair, 65% good, 14% excellent; spring barley 5% poor, 33% fair, 54% good, 8% excellent. Livestock mostly good. Pasture, range feed mostly good.

**FLORIDA:** Very little rain north, variable amounts to 2.00 in. south.

Soil moisture northern Peninsula adequate to surplus, other areas of State mostly adequate. Soybean planting active. Peanut, cotton planting virtually complete. Tobacco harvest active. Winter wheat harvest complete. Haying active. Corn, cotton, peanuts made good progress. Sugarcane made rapid growth. States pastures mostly good to excellent. Pasture 50% good, 50% excellent. States herds mostly good to excellent. Near excellent citrus grove tree condition. Scattered rains. Valencia harvest almost over. Very little grapefruit movement. Caretakers cutting cover crops, spraying, fertilizing, cleaning ditches. Hot, humid days, mild nights vegetable areas. Volume leaders: Watermelons, sweet corn, potatoes, tomatoes, peppers, cucumbers, celery. Lesser volume

eggplant, radishes, carrots, squash, snap beans, cabbage. Season complete for Hastings potatoes.

**GEORGIA:** Rainfall 1.00 in. most locations, with 2.00 to 3.00 in. elsewhere. Driest area southwest, less than 1.00 in. fell. Greatest total was 3.25 in. at Dalton. Rain 3 days most locations. Temperatures 2° above normal. Extremes 53°; 96°.

Days suitable for fieldwork 5.8. Soil moisture 39% short, 59% adequate, 2% surplus. Corn 90% silked, 80% 1990, 72% avg.; 49% dough, 36% 1990, 28% avg.; 13% dent, 10% 1990, 5% avg.; good crop prospects. Cotton 2% setting bolls, 4% 1990, 2% avg. Sorghum 5% fair, 90% good, 5% excellent; 83% planted, 91% 1990, 86% avg. Peanuts 15% fair, 81% good, 4% excellent; 100% planted, 100% 1990, 100% avg.; 52% blooming, 74% 1990, 54% avg.; 18% pegging, 29% 1990, 17% avg. Good soybean planting progress, still behind normal. Tobacco 65% fair, 35% good; 9% harvested, 4% 1990, 2% avg. Watermelons 61% fair, 39% good; 7% harvested, 5% 1990, 4% avg. Good week for wheat harvest, progress near normal. Rye 18% very poor, 33% poor, 38% fair, 11% good. Other small grains 6% very poor, 37% poor, 32% fair, 25% good. Apples 5% fair, 95% good. Peaches 3% very poor, 10% poor, 13% fair, 74% good; 56% harvested, 66% 1990, 53% avg. Hay 22% fair, 70% good, 8% excellent; Hay harvest active. Pasture 9% fair, 78% good, 13% excellent. Cattle, hogs mostly good.

**HAWAII:** Favorable weather prevailed over Island Chain. Mostly sunny, some occasional showers evenings, mornings. High pressure system northeast of State caused light to moderate trade winds 5 to 25 mph. Temperatures low 60s to high 80s. Rainfall none to 3.00 in.

Days suitable for fieldwork 7.0. Most crops made good progress with irrigation necessary many areas. Papaya output remains low levels due to tree loss from disease. Watermelon harvesting active. Sugar, pineapple operations normal.

**IDAHO:** Temperatures below normal in north, southwest, slightly above normal in south central, east. State received no precipitation except for north, few selected areas of east.

Days suitable for fieldwork 6. Soil moisture 2% very short, 8% short, 87% adequate, 3% surplus. Winter wheat 4% not yet jointed, 44% jointed, 33% boot stage, 19% headed. Spring wheat 34% not yet jointed, 44% jointed, 17% boot stage, 19% headed. Spring barley 97% emerged, 100% 1990, 100% avg.; 41% not yet jointed, 41% jointed, 13% boot, 5% headed. Oats 100% planted, 100% 1990, 99% avg.; 94% emerged, 98% 1990, 98% avg. Potatoes 100% planted, 100% 1990, 99% avg.; 63% emerged, 71% 1990, 80% avg. Sugarbeets thinned 73%, 90% 1990, 88% avg. Dry peas 100% emerged, 100% 1990, 100% avg. Lentils 100% emerged, 100% 1990, 100% avg. Field corn 100% planted, 98% 1990, 99% avg.; 89% emerged, 88% 1990, 96% avg. Dry beans 77% planted, 90% 1990, 90% avg.; 38% emerged, 43% 1990, 64% avg. Alfalfa hay 34% harvested, 30% 1990, 47% avg. Apple crop development normal. Livestock good to excellent. Pasture, range 96% percent of normal.

**ILLINOIS:** Temperatures 4 to 7° above normal across most of the State, while the southern area 2 to 3° warmer than normal. Precipitation quarter inch or less to over an inch.

Days suitable for fieldwork 6.50. Soil moisture 53% short, 45% adequate, 2% surplus.

Corn height 31 in., most advanced 49 in. Winter wheat filled 99%, 94% 1990, 98% avg.; turning yellow 98%, 68% 1990, 84% avg. Winter wheat ripe 84%, 9% 1990, 36% avg. Oats 31% fair, 68% good, 1% excellent. Pasture as a % of normal, where 100% = normal, was 89%. Alfalfa first cutting 99%, 69% 1990, 88% avg. Soybeans 16% fair, 72% good, 12% excellent. Sorghum 15% fair, 73% good, 12% excellent. Alfalfa 10% fair, 71% good, 19% excellent. Red clover cut 83%, 43% 1990, 68% avg.; 7% fair, 84% good, 9% excellent.

**INDIANA:** Temperatures around normal. Lows in the 60s, highs in the 80s. Precipitation 0.30 to 0.67 in.

Days suitable for fieldwork 6.7. Topsoil 63% short, 36% adequate, 1% surplus. Subsoil 21% short, 76% adequate, 3% surplus. Corn 31 in. high, 11 in. 1990, 20 in. avg. Soybeans 94% emerged, 68% 1990, 83% avg.; 8 in. high, 3 in. 1990, 5 in. avg. Wheat ripe 37%, 12% 1990, 20% avg. Oats headed 94%, 39% 1990, 63% avg. Tobacco plants set 97%, 44% 1990, 70% avg. Alfalfa hay 1st cutting 95%, 66% 1990, 78% avg. Pasture 89% of normal. Corn, soybean fields showing stress from hot, dry weather some areas. Rain brought some relief in central areas.

**IOWA:** Temperatures 4 to 6° above normal. Extremes 52°; 94°. Precipitation 0.17 to 5.68 in.; average 1.83 in. Severe flooding parts of northeast, southwest, west central.

Days suitable for fieldwork 5.0. Topsoil 1% short, 57% adequate, 42% surplus. Subsoil 1% short, 46% adequate, 53% surplus. Winter wheat 24% poor, 16% fair, 53% good, 7% excellent. Hay 1% poor, 16% fair, 63% good, 20% excellent. Pasture 96% of normal. Oats 65% headed, 38% 1990, 65% avg.; 4% poor, 26% fair, 61% good, 9% excellent. Corn 93% emerged, 97% 1990, 99% avg.; 45% cultivated first time, 32% 1990, 65% avg. Soybeans 66% emerged, 76% 1990, 91% avg. First cutting alfalfa 60% harvested, 49% 1990, 74% avg. First cutting clover hay 30% harvested, 5% 1990, 39% avg. Livestock mostly good.

**KANSAS:** Temperatures 3° above normal across State. Rainfall all areas; heaviest avg. 1.56 in. northwest. Shortest 0.32 to 0.26 in. southeast, north central respectively. Elsewhere rainfall 0.50 to 1.10 in.

Days suitable for fieldwork 5.0. Surface moisture 16% short, 80% adequate, 4% surplus. Subsurface moisture 38% short, 60% adequate, 2% surplus. Wheat harvest off to good start even with scattered rain, high humidity. Corn planting complete; early growth good. Corn earworm, European corn borer causing problems northeast; control measures necessary. Corn good to excellent. Sorghum, soybeans good to excellent. Plantings of both crops ahead of schedule. Range, pastures good condition for time of year furnishing good grazing. First cutting alfalfa complete; second cutting satisfactory progress.

**KENTUCKY:** Very warm, humid. Temperatures 5 to 10° above normal, highs lower 90s, lows 70s. Scattered showers highly variable averaged 0.50 in.

Days suitable for fieldwork 5.5. Soil moisture 10% very short, 43% short, 44% adequate, 3% surplus. Corn avg. height 26 in., most advanced 41 in.; earliest corn tasseling. Sorghum 73% planted. Barley 78% combined. Wheat harvest 35%, 5% 1990, 16% avg. Burley tobacco 96% set, Dark tobacco 88% set. Tobacco 2% poor, 44% fair, 52% good, 2% excellent. Pastures excellent.

**LOUISIANA:** Temperatures 1.5° below normal to .2° above normal. Extremes 62°; 94°. Rainfall 0.41 in. northeast to 3.83 in. southeast.

Days suitable for fieldwork 3.3. Soil moisture 2% short, 31% adequate, 67% surplus. Spring plowing 87%, 96% 1990, 99% avg. Corn 11% very poor, 43% poor, 35% fair, 11% good; 89% silked, 88% 1990, 67% avg.; 25% dough stage, 18% 1990, 19% avg. Cotton 96% emerged, 100% 1990, 99% avg. Hay 38% first cutting, 78% 1990, 74% avg. Peaches 7% poor, 53% fair, 40% good; 24% harvested, 33% 1990, 27% avg. Rice 9% headed, 3% 1990, 5% avg. Sorghum 69% emerged, 95% 1990, 94% avg. Fungicides applied, southwest, to control sheath blight, blast. Soybeans 34% emerged, 78% 1990, 67% avg. Sweet potatoes 35% poor, 30% fair, 35% good; 65% planted, 71% 1990, 72% avg. Sugarcane 3% poor, 50% fair, 47% good. Wheat 53% very poor, 22% poor, 25% fair; 86% harvested, 93% 1990, 87% avg. Vegetables 12% very poor, 39% poor, 32% fair, 15% good, 2% excellent. Pastures 7% very poor, 6% poor, 10% fair, 36% good, 41% excellent. Livestock 44% fair, 54% good, 2% excellent.

**MARYLAND & DELAWARE:** MARYLAND: Precipitation .033 in. Temperature 73.3°, normal 70.8°. Extremes 38°; 94°.

Days suitable for fieldwork 6.8. Topsoil 50% very short, 50% short. Subsoil 18% very short, 68% short, 14% adequate. Small grains good. Winter wheat 29% harvested, 0% 1990, 2% avg. Barley 82% harvested, 18% 1990, 30% avg. Rye 92% turning, 74% 1990, 80% avg.; 35% harvested, 21% 1990, 17% avg. Oats 85% headed, 66% 1990, 61% avg.; 22% turning, 11% 1990, 13% avg. Soybeans 67% planted, 64% 1990, 62% avg. Sorghum 94% planted, N/A 1990, N/A avg. Tobacco 91% transplanted, 82% 1990, 76% avg. Sweet corn 90% planted, 92% 1990, 91% avg. Snap beans 86% planted, 81% 1990, 85% avg. Other hay first cut 95% complete, 77% 1990, 75% avg. Alfalfa hay second cut 24% complete, 13% 1990, 12% avg. Pasture very poor.

DELAWARE: Precipitation 0.036 in. Temperature 74.3°, normal 71.1°. Extremes 48°; 93°.

Days suitable for fieldwork 7. Topsoil 100% very short. Subsoil 58% very short, 42% short. Small grains fair. Barley 76% harvested, 41% 1990, 39% avg. Soybeans 69% planted, 85% 1990, 69% avg. Sweet corn 88% planted, 100% 1990, 96% avg. Cucumbers 72% planted, 89% 1990, 90% avg. Lima beans 63% planted, 56% 1990, 68% avg. Snap beans 82% planted, 98% 1990, 85% avg. Alfalfa second cutting 24% complete, 0% 1990, 12% avg. Hay supplies adequate. Pasture very poor. Strawberries 87% harvested, 98% 1990, 94% avg.

**MICHIGAN:** Temperatures 1 to 5° above normal. Extremes not available. Precipitation none to 3.14 in. across State.

Days suitable for fieldwork 6. Soil moisture 20% short, 75% adequate, 5% surplus. Corn 5% poor, 15% fair, 45% good, 35% excellent. Soybeans 95% planted, 95% 1990, 95% avg.; 5% poor, 20% fair, 55% good, 20% excellent. Winter wheat 95% headed, 90% 1990, 95% avg.; 0% harvested, 0% 1990, 0% avg. Dry beans 75% planted, 70% 1990, 55% avg. Pasture 95% of normal.

**MINNESOTA:** Temperatures 3 to 9° above normal. Extremes 41°; 96°. Precipitation 0.51 to 2.69 in. Greatest weekly total 5.61.

Days suitable for fieldwork 4.5. Topsoil 2% very short, 8% short, 52% adequate, 38% surplus. Spring wheat 30% not jointing, 37% 1990, 33% avg.; 70% jointing, 63% 1990, 67% avg.; 24% heading, 3% 1990, 18% avg. Oats 35% not

jointing, 26% 1990, 24% avg.; 65% jointing, 74% 1990, 76% avg.; 22% heading, 12% 1990, 32% avg. Barley 37% not jointing, 46% 1990, 38% avg.; 63% jointing, 54% 1990, 62% avg.; 29% heading, 6% 1990, 19% avg. Field corn 95% acreage planted, 100% 1990, 100% avg.; 91% emerged 95% 1990, 97% avg.; 36% cultivated once, 37% 1990, 60% avg. Soybeans 85% acreage planted, 96% 1990, 98% avg.; 67% emerged, 83% 1990, 90% avg.; 22% cultivated once, 16% 1990, 37% avg. Sweet corn 84% planted, 86% 1990, 93% avg. Alfalfa Hay 68% cut, 23% 1990, 61% avg. Field corn 3% very poor, 4% poor, 35% fair, 46% good, 12% excellent. Soybeans 3% very poor, 5% poor, 34% fair, 53% good, 5% excellent. Spring wheat 9% poor, 27% fair, 58% good, 6% excellent. Barley 6% very poor, 30% fair, 57% good, 7% excellent. Oats 2% very poor, 5% poor, 28% fair, 56% good, 9% excellent.

**MISSISSIPPI:** Temperatures 78°, .4° below normal. Extreme 55°; 95°. Rainfall 1.28 in., 0.46 in. above normal. Soil temperatures 83°. Rainfall either well above or below normal all areas.

Days suitable for fieldwork 4.5, 6.0 1990, 4.1 avg. Soil moisture 9% short, 62% adequate, 26% surplus, 3% excessive. Corn 92% planted, 100% 1990, 100% avg.; 88% emerged, 99% 1990, 100% avg.; silking 35%, 30% 1990, 30% 5 yr avg.; 16% very poor, 18% poor, 33% fair, 33% good. Cotton 96% planted, 100% 1990, 100% avg.; 94% emerged, 98% 1990, 98% avg.; 25% squaring, 33% 1990, 38% avg.; 8% very poor, 5% poor, 53% fair, 33% good, 1% excellent. Peanuts 77% planted, 87% 1990, 93% avg. Rice 85% planted, 99% 1990, 100% avg.; 60% emerged, 90% 1990, 96% avg.; 20% very poor, 21% poor, 49% fair, 10% good. Sorghum 77% planted, 97% 1990, 95% avg.; 67% emerged, 95% 1990, 93% avg.; 1% very poor, 12% poor, 68% fair, 19% good. Soybeans 41% planted, 64% 1990, 65% avg.; 25% emerged, 46% 1990, 50% avg.; 1% very poor, 18% poor, 49% fair, 31% good, 1% excellent. Sweet potatoes 70% planted, 86% 1990, 86% avg. Watermelons 95% planted, 100% 1990, 97% avg. Wheat 97% mature, 97% 1990, 96% avg.; harvested 73%, 66% 1990, 59% avg.; 71% very poor, 18% poor, 8% fair, 3% good. Hay harvested 31%, 35% 1990, 33% avg. Peaches harvested 25%; 50% 1990, 28% 5 yr avg.; 12% very poor, 17% poor, 26% fair, 40% good, 5% excellent. Pecans 15% very poor, 27% poor, 39% fair, 19% good. Livestock 2% poor, 9% fair, 68% good, 21% excellent. Pasture 86% of normal.

**MISSOURI:** Temperatures 1° above normal in the Bootheel to 8° above normal northeast. Rainfall over 1.00 in., over 5.00 in. localized areas of Bootheel.

Days suitable for fieldwork 5.7. Topsoil 25% short, 66% adequate, 9% surplus. Single crop soybeans planted 61% southeast district to 90% central district. Double crop soybeans less than 10% planted northern districts, 11% to 26% other districts, highest southeast. Sorghum plantings 72% northeast to 90% southwest. Alfalfa first cutting 88%, 56% 1990, 86% avg. Other hay 57%, 30% 1990, 54% avg. Pasture 5% poor, 20% fair, 65% good, 10% excellent.

**MONTANA:** Temperatures below normal west, near normal rest of State. Record cold widespread on 15th. Precipitation mostly less than 0.50 in.

Days suitable fieldwork 5.4. Topsoil 6% short, 92% adequate, 2% surplus. Subsoil 25% short, 73% adequate, 2% surplus. Spring wheat boot 28%, 21% 1990, 24% avg. Barley headed 4%, 4% 1990, 5% avg.; boot 27%, 20% 1990, 23% avg.; 1% poor, 13% fair, 54% good, 32% excellent. Oats boot 24%, 22% 1990, 25% avg.; 1% very poor, 2% poor, 13% fair, 60% good, 24% excellent. Sugarbeets 1% poor, 11% fair, 70% good, 18% excellent. First cutting

alfalfa 4% cut, 8% 1990, 14% avg. Other hay harvested 6%, 4% 1990, 7% avg. Pasture, range feed condition 93%. Cattle, calves moved to summer pastures 84%. Sheep, lambs moved 83%.

**NEBRASKA:** Temperatures 1 to 5° above normals. Precipitation 0.07 to 3.70 in.

Days suitable for fieldwork 5.5. Topsoil 8% short, 67% adequate, 25% surplus. Subsoil 12% short, 82% adequate, 6% surplus. Wheat 1% very poor, 1% poor, 34% fair, 61% good, 3% excellent; 49% turning, 42% 1990, 49% avg. Corn 7% fair, 75% good, 18% excellent. Sorghum 16% fair, 76% good, 8% excellent; 98% planted, 96% 1990, 97% avg.; 89% emerged, 83% 1990, 89% avg. Soybean 11% fair, 77% good, 12% excellent; 98% planted, 96% 1990, 98% avg.; 91% emerged, 75% 1990, 88% avg. Alfalfa 1% poor, 13% fair, 67% good, 19% excellent; 70% first cutting, 70% 1990, 80% avg. Pasture, 97% of normal.

**NEVADA:** Temperatures above normal. Extremes 25°; 108°. Precipitation none to trace. Most precipitation resulted from widely scattered thunderstorms northwest, east central. Gusty winds prevalent across the State.

Irrigation, hay harvest, weed control, caring for livestock, maintenance.

**NEW ENGLAND:** Precipitation 0.10 to 0.50 in. Connecticut, Rhode Island; Massachusetts, north 0.20 to 2.85 in. Temperatures low to mid 60s northern Maine, low to high 60s elsewhere north, mid 60s to low 70s south; 1 to 5° above normal. Maximum temperatures low 80s to mid 90s; minimum temperatures mid 30s to low 50s.

Days suitable for fieldwork 6.0. Soil moisture 10% very short, 33% short, 40% adequate, 17% surplus. Grazing availability 3% very short, 10% short, 82% adequate, 5% surplus. Fieldwork 6.1 days ahead of schedule. Maine potatoes 73 percent emerged, 60% 1990, 65% avg.; good. Rhode Island potatoes 100% emerged, 93% 1990, 97% avg.; good. Connecticut Valley potatoes 100% emerged, 85% 1990, 92% avg.; good. Maine oats good to excellent. Field corn 99% planted, 95% 1990, 93% avg.; 92% emerged, 79% 1990, 81% avg.; good. Sweet corn 94% planted, 84% 1990, 87% avg.; 87% emerged, 73% 1990, 77% avg.; good. First cut hay 61% complete, 40% 1990, 44% avg.; good. Connecticut Valley shade tobacco 100% transplanted; outdoor tobacco 85% transplanted. Apples fruit set average, scab light. Strawberry fruit set heavy.

**NEW JERSEY:** Temperatures above normal. Extremes 41°; 102°. Rainfall 0.57 in. north, 0.64 central, 0.13 south. Heaviest 24 hour total 0.65 in. on 12th, 13th. Estimated soil moisture percent field capacity, 60% north, 48% central, 16% south. Four inch soil temperature averaged 68° north, 71° central, 72° south.

Scattered showers beneficial but most areas need good rain. Irrigation in use; pond levels dropping. Spring vegetable harvest near completion. Summer vegetable harvest began. Strawberry picking about complete. Blueberry harvest underway. Apples, peaches sizing. Barley combining active. wheat harvest began in southern areas. Field corn, soybeans need rain. Hay, straw baling active. Pasture growth limited.

**NEW MEXICO:** Scattered to numerous thunderstorms continued across State, weakened 15th, 16th. Temperatures generally cooler than normal. Northern, south central mountains, plus central, southwest valleys 3 to 6° below normal, while drier areas were 1 to 3° below normal.

Days suitable for fieldwork 5.9. Soil moisture 52% short, 42% adequate, 6% surplus. Alfalfa 7% poor, 26% fair, 67% good. Corn 25% fair, 75% good. Irrigated wheat 10% poor, 40% fair, 50% good. Dryland wheat 20% very poor, 50% poor, 10% fair, 20% good. Chile 40% fair, 60% good. Onions, good. Sorghum planting behind due to lack of soil moisture. Wheat, 100% headed, 25% harvested. Onion harvest progress good; yields good. Cattle, sheep poor to good. Range, pasture 69% of normal, ranging from 30% to 150%.

**NEW YORK:** Temperatures near normal to 3° above normal. Extremes 35°; 94°. Rainfall 0.09 to 2.12 in. Some areas received enough to cause minor flooding while others in the vicinity got none.

Days suitable for fieldwork 5.8. Soil moisture short. Dry weather pushed fieldwork ahead rapidly. Pastures 81% of normal. Hay, wheat fair to good. Corn 98% planted, 90% 1990, 92% average. Alfalfa first cutting 75% complete, 22% 1990, 33% avg. Clo tim harvest 71% finished, 40% 1990, 37% avg. Grain silage 80% complete, 29% 1990, 37% avg. June drop nearly complete for apples in the Hudson Valley. Grapes, pears, peaches, apples show good crop potential. Sweet cherry harvest began on early varieties. Vegetable planting continued active. Early crops were being harvested. Irrigation necessary many regions.

**NORTH CAROLINA:** Temperatures above normal across State. Precipitation none to 1.94 in.

Days suitable for fieldwork 6.3. Soil moisture 18% very short, 61% short, 21% adequate. Wheat 4% poor, 23% fair, 68% good, 5% excellent; pasture 2% very poor, 7% poor, 41% fair, 48% good, 2% excellent; tobacco 1% poor, 27% fair, 70% good, 2% excellent; corn 1% very poor, 10% poor, 38% fair, 50% good, 1% excellent; cotton 19% fair, 74% good, 7% excellent; peanuts 39% fair, 61% good; soybeans 3% poor, 36% fair, 61% good; hay 2% poor, 30% fair, 63% good, 5% excellent; Soybeans planted 75%; Wheat harvested 70%; oats harvested 74%; barley harvested 77%; rye harvested 60%. Cotton squared 30%.

**NORTH DAKOTA:** Temperatures 4° above normal southwest to 10° above normal northeast, east central, southeast. Extremes 42° west central; 96° southeast. Precipitation 0.70 in. southwest to 2.32 in. northeast.

Days suitable for fieldwork 5.4. Soil moisture above 1990 and avg. Topsoil 12% short, 86% adequate, 2% surplus. Subsoil 2% very short, 59% short, 39% adequate. Spring wheat 5% fair, 80% good, 15% excellent; 46% boot and beyond, 18% 1990, 28% avg. Durum wheat 6% fair, 71% good, 23% excellent; 21% boot and beyond, 6% 1990, 17% avg. Oats 8% fair, 80% good, 12% excellent; 31% boot and beyond, 20% 1990, 30% avg. Barley 3% fair, 77% good, 20% excellent; 53% boot and beyond, 24% 1990, 35% avg. Winter wheat 11% fair, 83% good, 6% excellent; 65% heading and beyond, 47% 1990, 64% avg. Corn 7% fair, 88% good, 5% excellent; 13 in. avg. height, 5 in. 1990, 8 in. avg. Flax 3% fair, 80% good, 17% excellent; 4 in. avg. height, 3 in. 1990, 4 in. avg. Potatoes 100% good; 6 in. avg. height, 5 in. 1990, 6 in. avg. Soybeans 98% good, 2% excellent; 6 in. avg. height, 4 in. 1990, 5 in. avg. Dry beans 2% fair, 87% good, 11% excellent; 5 in. avg. height, 4 in. 1990, 5 in. avg. Sugarbeets 100% good; 6 in. avg. height. Pasture conditions 83% of normal, furnished 98% roughage requirements. Alfalfa hay first cutting 13% complete, other hay 7%. Stockwater supplies 7% very short, 41% short, 51% adequate, 1% surplus.

**OHIO:** Temperatures 3 to 6° warmer than normal with average highs mostly in the mid 80s, average

lows generally in the 60s. Precipitation was scattered and quite variable. Rainfall 0.25 to over 2.00 in. with many amounts between 0.25 to 0.75 in.

Days suitable for fieldwork 6.5. Soil moisture 51% short, 45% adequate, 4% surplus. Activities: Cultivating, applying fertilizer, post emergence herbicides, harvesting hay, vegetables. Corn borer infestations; some at levels high enough to justify spraying. Corn development averaged eight leaves fully emerged. Soybeans good; some replanting. Winter wheat good; combining started in several dry localities. Statewide 80% coloring, 38% 1990, 40% avg. Oat good; under attack by cereal leaf beetle. First cutting alfalfa 100%, 64% 1990, 72% avg.; second cutting 12% complete, 0% 1990, 0% avg. First cutting other hay 90% complete, 44% 1990, 74% avg.; second cutting 4%, 0% 1990, 0% avg. Early plantings of sugarbeets good, later plantings poorer. Vegetable growers irrigating crops. Strawberry harvest 92% complete compares with 44% 1990, 41% avg.

**OKLAHOMA:** Temperatures 1° above normal southwest to 6° above normal northeast. Precipitation 0.09 in. north central to 0.88 in. east central.

Days suitable for fieldwork 4.1. Topsoil 5% short, 61% adequate, 34% surplus. Subsoil 16% short, 84% adequate. Wheat 22% poor, 60% fair, 17% good 1% excellent; 56% harvested, 46% 1990, 35% avg.; 15% plowed, 14% 1990, 9% avg. Cotton 87% planted, 92% 1990, 76% avg.; 70% up to stand, 70% 1990, 56% avg.; 1% squaring, 1% 1990, 2% avg. Sorghum 87% planted, 72% 1990, 59% avg.; 77% up to stand, 53% 1990, 34% avg. Corn 8% tasseling, 3% 1990, 12% avg. Soybeans 63% planted, 59% 1990, 68% avg.; 40% up to stand, 15% 1990, 45% avg. Peanuts 72% planted, 75% 1990, 77% avg.; 50% up to stand, 51% 1990, 55% avg. Pasture 99%. Cattle good, marketings average, prices higher.

**OREGON:** Temperatures near normal statewide; 3 to 6° below normal northeast mountains, Columbia Basin some areas. Eastern areas high 80s, 90s first part of period, 50s, 60s mid period. Precipitation 0.20 in. along coast, 0.10 in. Willamette Valley., 0.40 north Cascades. Coast received high, low for State; Astoria 0.59 in., Brookings none in.

Soil moisture 34% short, 64% adequate, 2% surplus. Red clover, grass, alfalfa haying weather permitting, west. Filed corn planting for silage underway, Washington Co. Haying underway, east. Strawberry harvest progressing, west; three, four year fields disappointing yields, Washington Co. Light fruit sets, peach, cherry, caneberry crops; grape bloom delayed; red raspberries, cherries sprayed, Willamette Valley. Bartlett, Anjou pears 5 days behind, Hood River Valley.; lower valley growers first cover spray on, thinning Bartletts. Sweet cherries ripening, harvest one to two weeks, Wasco Co. Cranberry bloom various stages, blackheaded fireworm moths active. Green pea harvest underway, late potatoes final cultivation, Umatilla Co. Green peas blooming, early summer cabbage, cauliflower being harvested; cucumbers, snap beans, sweet corn delayed by cool weather, Willamette Valley. Seed potatoes planted, Wallowa Co. Potatoes still emerging late plantings; irrigation for frost protection, Klamath Co. Livestock good to excellent, all areas. Recent rains provided much needed forage, east. Good calving season, low losses, Deschutes Co. Cattle being contracted for fall delivery, Morrow, Wallowa

Co. Stockwater still limited some areas, Harney Co. Range, pasture 4% poor, 10% fair, 54% good, 32% excellent.

**PENNSYLVANIA:** Dry, hot conditions prevailed across State. Temperature 70°, 6° above normal. Extremes 38°; 98°. Precipitation 0.54 in., 0.33 in. below normal.

Days suitable for fieldwork 6. Soil moisture 91% short, 9% adequate, 0% surplus. Corn 98% planted, 91% 1990, 92% avg.; height 14 in., 7 in. 1990, 9 in. avg.; 3% very poor, 16% poor, 33% fair, 38% good, 10% excellent. Tobacco 86% transplanted, 65% 1990, 64% avg. Soybeans 88% planted, 72% 1990, 72% avg.; 4% very poor, 14% poor, 38% fair, 38% good, 6% excellent. Barley 0% boot, 1% 1990; 21% heading or headed, 47% 1990; 33% turning yellow, 46% 1990; 26% ripe, 5% 1990; 20% harvested, 0% 1990. Wheat 0% boot, 1% 1990; 48% heading or headed, 86% 1990; 46% turning yellow, 13% 1990; 4% ripe, 0% 1990; 2% harvested, 0% 1990; 1% very poor, 5% poor, 30% fair, 52% good, 12% excellent. Oats 0% boot, 6% 1990; 91% heading or headed, 94% 1990; 8% turning yellow, 0% 1990; 1% ripe, 0% 1990; 4% very poor, 17% poor, 34% fair, 36% good, 9% excellent. Alfalfa first cutting 88% complete, 56% 1990. Second cutting alfalfa 11% complete, 1% 1990. First cutting clover timothy 75% complete, 40% 1990. Feed from pastures 36% very poor, 44% poor, 15% fair, 5% good. Peach 13% below avg., 60% avg., 27% above avg. Apple 7% below avg., 76% avg., 17% above avg.

**PURTO RICO:** Rainfall 0.37 in. was 0.95 in. below normal. Highest rainfall 2.17 in. Pico Del Este Luquillo, 0.79 in. Cayey, 0.77 in. Juncos. Highest 24 hour total 1.08 in. Pico Del Este Luquillo. Divisional temperatures 82° on Coast, 76 to 79° Interior with Mean Station temperature 67.6° at Pico Del Este Luquillo to 84.2° at Guayama. Extremes 52°; 95°.

**SOUTH CAROLINA:** Temperatures 2° above normal. Rainfall 0.20 in. northeast to 1.10 in. southern.

Days suitable for fieldwork 6.0. Soil moisture 2% very short, 63% short, 35% adequate. Cotton 72% fair, 28% good; 35% squaring, 14% 1990, 21% avg. Sweet potatoes fair to good; 88% planted, 90% 1990, 72% avg. Watermelons fair to good; 8% harvested, 3% 1990, 2% avg. Cantaloupes fair to good; 17% harvested, 9% 1990, 4% avg. Peaches fair to good; 14% harvested, 26% 1990, 20% avg. Cucumbers fair to good; 56% harvested, 0% 1990, 0% avg. Snap beans fair to good; 84% planted, 95% 1990, 96% avg.; 26% harvested, 0% 1990, 0% avg. Sorghum fair to good; 63% planted, 75% 1990, 65% avg. Soybeans 62% fair, 38% good; 69% planted, 76% 1990, 70% avg. Barley fair to good; 90% ripe, 93% 1990, 88% avg.; 71% harvested, 73% 1990, 60% avg. Oats fair to good; 92% ripe, 97% 1990, 93% avg.; 77% harvested, 79% 1990, 64% avg. Rye fair to good; 87% ripe, 83% 1990, 88% avg.; 65% harvested, 61% 1990, 57% avg. Wheat fair; 97% ripe, 100% 1990, 96% avg.; 79% harvested, 79% 1990, 66% avg. Tobacco fair; 28% topped, 31% 1990, 12% avg. Corn fair to good; 63% silked, 35% 1990, 26% avg.; 11% dough stage, 6% 1990, 4% avg. Tomatoes fair to good; 27% harvested, 15% 1990, 9% avg. Grain hay fair to good; 84% harvested, 93% 1990, 92% avg. Pastures fair to good.

**SOUTH DAKOTA:** Scattered precipitation occurred mainly in the central, eastern counties. Below normal rainfall. Northwest, southwest corners of the State remain dry. Temperatures 5° above normal. Extremes 31°; 94°.

Days suitable for fieldwork 4.6. Topsoil 6% short, 63% adequate, 31% surplus. Subsoil 2%

very short, 9% short, 73% adequate, 16% surplus. Rye 3% fair, 54% good, 43% excellent. Oats 1% poor, 5% fair, 64% good, 30% excellent. Flax 7% poor, 8% fair, 63% good, 22% excellent. Soybeans 11% fair, 54% good, 35% excellent. Livestock 1% fair, 63% good, 36% excellent.

**TENNESSEE:** Temperatures slightly below normal northeast, 5° above normal southwest. Precipitation below normal west, middle, Cumberland Plateau; above normal Tennessee Valley.

Days suitable for fieldwork 3.9. Soil moisture 5% short, 75% adequate, 20% surplus. Corn 8% tasseling, 4% 1990, 8% avg.; 3% very poor, 7% poor, 36% fair, 51% good, 3% excellent. Cotton 100% planted, 100% 1990, 100% avg.; 4% very poor, 14% poor, 58% fair, 24% good. Sorghum 68% planted, 84% 1990, 89% avg.; 1 very poor, 2% poor, 34% fair, 61% good, 2% excellent. Soybeans 40% planted, 58% 1990, 67% avg. Tobacco 90% transplanted, 96% 1990, 90% avg.; 2% poor, 36% fair, 59% good, 3% excellent. Wheat 94% turning color, 100% 1990, 100% avg.; 80% ripe, 65% 1990, 73% avg.; 19% very poor, 33% poor, 27% fair, 21% good. Alfalfa 94% 1st cutting, 100% 1990, 100% avg.; hay 1% very poor, 3% poor, 12% fair, 69% good, 15% excellent. Pastures 3% fair, 62% good, 35% excellent.

**TEXAS:** Early period rather quite for weather standpoint. Temperatures started rather mild, warmed weekend. Rainfall above normal over Upper Coast, East Texas, Trans Pecos near to below normal elsewhere. Temperatures within 2° of normal statewide.

**Crops:** Small grain harvest on High Plains off to slow start. Corn fields in excellent shape. Some producers in High Plains started furrow watering. Dryland fields Central, South Texas feeling stress from hot, dry weather. Corn 61% silked, 48% 1990, 56% avg. Corn 28% dough, 32% 1990, 30% avg. Corn 1% dented, 2% 1990, 4% avg. Sorghum planting on High Plains continued where field conditions allowed. Sorghum fields continued improvement with timely rains. Sorghum 46% headed, 39% 1990, 48% avg. Sorghum 22% turning color, 16% 1990, 16% avg. Sorghum 0% mature, 2% 1990, 2% avg. Both High, Low Plains cotton producers battled sandstorms, rainstorms, potential weed problems last week. Planting, replanting progressed slowly. Irrigation started in Trans Pecos. Many fields other areas of State excessively wet, some infested with insects. Cotton 9% setting bolls, 7% 1990, 8% avg. Rice fields finally receiving badly needed sunshine. Rice 10% headed, 0% 1990, 4% avg. Soybean fields continued good progress last week. Blacklands producers continued report heavy pod, bean set. Some Northern Low Plains peanut fields damaged by excessive rain. Cross Timbers, Blacklands fields too wet for planting to resume. Peach harvest began in High Plains last week. Harvest in other areas continued as weather permitted. Peaches are abundant most areas. Other Field Crops: Oats 50% harvested, 63% 1990, 54% avg. Peanuts 51% planted, 54% 1990, 53% avg. Soybeans 78% planted, 84% 1990, 83% avg. Sunflowers 58% planted, 70% 1990, 50% avg.

**Commercial Vegetables:** Rio Grande Valley, melon harvest was slow. San Antonio Winter Garden, onion harvest continued full swing. Cabbage harvest began winding down. Beet harvest for processing continued. Tomato, bean harvest well underway. East Texas, spraying for insects increased. Tomatoes continued ripening. Watermelon replanting winding down. High Plains, onion crops continued maturing

quickly, harvest expected to start soon. Potato, other vegetable crops continued good progress with recent rainfall. Trans Pecos, large hail destroyed some cantaloupe fields, only few producers plan to replant. Some watermelon, pepper fields experienced minor damage. Onion harvest continued full swing.

**Range and Livestock:** Haying operations continued with steady progress. Range, pastures made increasing progress most areas. Livestock good shape. Range, pasture 8% poor, 30% fair, 46% good, 16% excellent.

**UTAH:** Maximum temperatures 3° above normal, minimums 4° above normal for State. No precipitation western half of the State; elsewhere, precipitation was light.

Days suitable for fieldwork 6.5. Soil moisture 22% short, 78% adequate. Winter wheat 79% booted, 98% 1990, 100% avg.; 53% headed, 88% 1990, 86% avg. Spring wheat 61% booted, 84% 1990, 81% avg.; 32% headed, 51% 1990, 48% avg. Barley 72% booted, 79% 1990, 80% avg.; 29% headed, 60% 1990, 56% avg. Oats 69% jointed, 89% 1990, 79% avg.; 35% booted, 47% 1990, 50% avg. Corn 88% emerged, 100% 1990, 100% avg.; height 6.3 in., 9.9 in. 1990, 11.3 in. avg. Alfalfa first cutting 28% complete, 64% 1990, 60% avg. Other hay cutting 10% complete. Cattle movement to summer range 68% complete, 100% 1990, 86% avg. Sheep movement to summer range 63% complete, 100% 1990, 80% avg. Pasture; range mostly good to excellent.

**VIRGINIA:** Temperatures overall normal. High pressure dominated weather. Extremes 43°; 94°. Very dry.

Days suitable for fieldwork 6.1. Topsoil 43% very short, 41% short, 10% adequate, 6% surplus. Corn 99% planted, 99% 1990, 97% avg.; 7% very poor, 38% poor, 37% fair, 17% good, 1% excellent. Soybeans 60% planted, 67% 1990, 57% avg.; 3% very poor, 45% poor, 50% fair, 2% good. Fire cured tobacco 99% transplanted, 100% 1990, 92% avg. Burley tobacco 95% transplanted, 90% 1990, 80% avg. Tobacco 14% poor, 34% fair, 48% good, 4% excellent. Peanut 80% fair, 20% good. Wheat 40% harvested, 23% 1990, 12% avg. Barley 75% harvested, 50% 1990, 31% avg. Apples fair to good. Alfalfa 4% very poor, 17% poor, 36% fair, 35% good, 8% excellent. Other hay 9% very poor, 24% poor, 29% fair, 24% good, 14% excellent. Pasture 14% very poor, 37% poor, 28% fair, 15% good, 6% excellent.

**WASHINGTON:** Temperatures normal to 7° below normal east; 3° above normal to 4° below normal west. Precipitation none to 0.13 in. east; 0.17 to 1.31 in. west.

Days suitable for fieldwork 6.1. Soil moisture 30% very short, 60% short, 10% adequate. Hay, other roughage 12% short, 79% adequate, 9% surplus. Range, pasture 15% poor, 16% fair, 68% good, 1% excellent. Wheat 24% poor, 49% fair, 27% good. Barley 3% poor, 40% fair, 57% good. Potato 100% good. Dry bean 100% good. Corn 4% poor, 96% good. Winter wheat headed 80%. Spring wheat headed 55%. Barley headed 55%. Potatoes emerged 100%. Dry beans planted 98%. Processing green peas harvested 1%. Corn planted 100%. Alfalfa hay, 1st cutting 72%. Alfalfa hay, 2nd cutting 1%. Sweet cherry picking was started in Benton County. Yakima cherries nearly ready. Raspberries were doing well. Strawberry harvest is scheduled to start June 24th in Thurston County. Sweet corn planting continued. Corn, potato crops were doing well. Processing pea harvest started in Walla Walla County, onion harvest will start within a week. Asparagus

harvest was nearing completion. Winter wheat started to turn color in southern areas. Root disease was evident in some areas. Moisture stress was showing in the central counties. Ranges, pastures doing well. Cattle continued to move on to mountain pastures. Early lambs moving to market.

**WEST VIRGINIA:** Temperature 71°. Extremes 42°; 99°. Precipitation avg. 0.71 in.

Days suitable for fieldwork 6.0. Soil moisture 41% very short, 55% short, 4% adequate. Wheat good; 99% headed, 75% ripe. Barley good; 65% ripe, 35% harvested. Corn fair; 98% planted, 90% emerged. Oats fair; 100% emerged. Gardens, 5% poor, 50% fair, 45% good; 87% planted, 80% emerged. Tobacco, 94% fair, 6% good; 95% set. Hay, 3% very poor, 5% poor, 27% fair, 56% good, 9% excellent; 74% first cutting. Apples, peaches good. Pastures, 7% very poor, 14% poor, 40% fair, 39% good; 101% of normal. Cattle, good. Sheep, good.

**WISCONSIN:** Temperature 70°, 4° above normal. Extremes 40°; 94°. Precipitation 0.8 to 2.8 in.

Days suitable for fieldwork 5.3. Soil moisture 17% short, 69% adequate, 14% surplus. Pasture 87% of normal, 85% 1990, 75% avg. General condition of crops 1% poor, 8% fair, 79% good,

12% excellent. Winter wheat 2% very poor, 11% fair, 61% good, 26% excellent. Corn 1% poor, 11% fair, 69% good, 19% excellent; 98% planted, 98% 1990, 100% avg.; height 15 in., 6 in. 1990, 11 in. avg. Soybean 7% fair, 80% good, 13% excellent; 96% planted, 87% 1990, 92% avg. First crop hay 63% harvested, 37% 1990, 57% avg. Oats 20% headed, 3% 1990, 25% avg.

**WYOMING:** Temperatures above normal. Precipitation below normal.

Days suitable for fieldwork 5.0. Topsoil 97% adequate, 3% surplus. Subsoil 85% adequate, 15% surplus. Winter wheat 15% not jointed, 20% 1990, 10% avg.; 15% jointed, 25% 1990, 15% avg.; 40% boot, 35% 1990, 35% avg.; 30% headed, 20% 1990, 40% avg. Barley 75% not jointed, 20% 1990; 15% jointed, 15% 1990; 10% boot, 35% 1990; 0% headed; 30% 1990. Spring wheat 40% not jointed, 55% 1990; 30% jointed, 25% 1990; 30% boot, 10% 1990; 0% headed, 10% 1990. Oats 65% not jointed, 65% 1990; 20% jointed, 20% 1990; 15% boot, 10% 1990; 0% headed, 5% 1990. Potatoes 50% emerged, 80% 1990, 75% avg. Dry beans 25% emerged, 60% 1990, 60% avg. Sugarbeets 55% thinned, 75% 1990, 60% avg. Alfalfa first cutting 5% complete, 5% 1990. Livestock moved to summer ranges; cattle 75%, sheep 75%. Stockwater supplies 2% short, 98% adequate. Ranges, pastures good to excellent.

(Continued from p. 13)

Figure 4

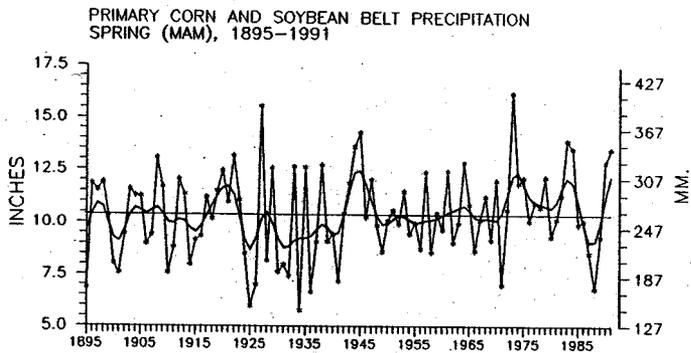
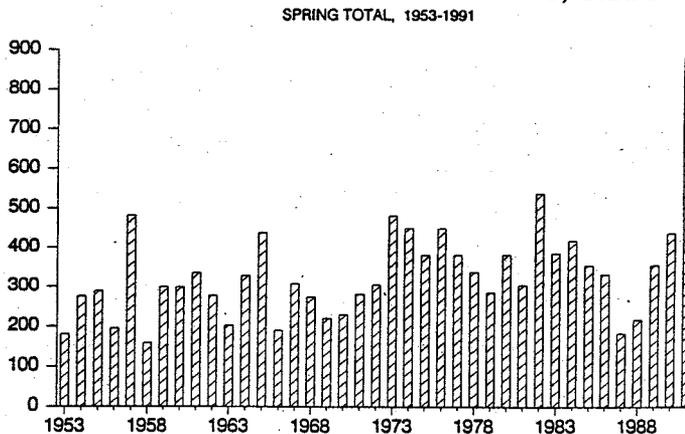


Figure 5

TOTAL NUMBER OF TORNADES, U.S.A.



### International Weather and Crop Summary

June 9 - 15, 1991

#### HIGHLIGHTS

**USSR** ... In Western USSR, the combination of warm weather and ample moisture favors crop development. In the New Lands, continued hot, dry weather increases stress on vegetative spring grains.

**EUROPE** ... Showers in the north help crop growth. Dry weather favors winter grain harvesting in the south.

**EASTERN ASIA** ... Mostly dry conditions continue to aid maturing winter wheat, but heavy rains cause flooding and lodging in some areas. Beneficial rains fall in southwest provinces.

**SOUTHEAST ASIA** ... A tropical storm rolls through the central Philippines, causing local flooding.

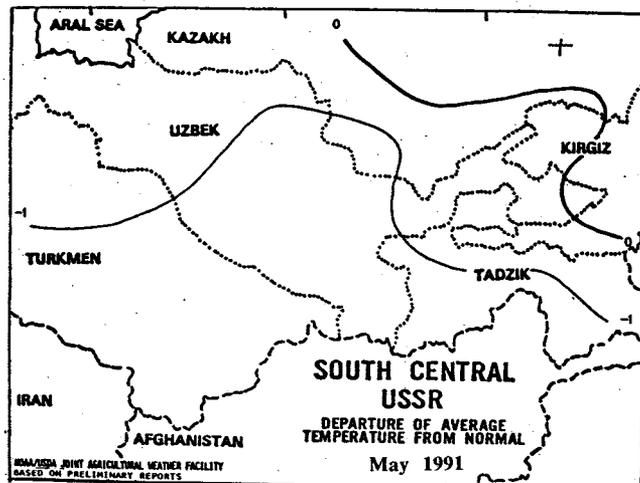
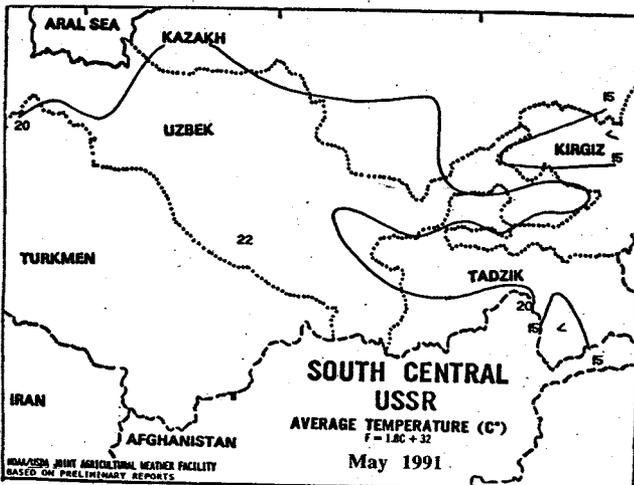
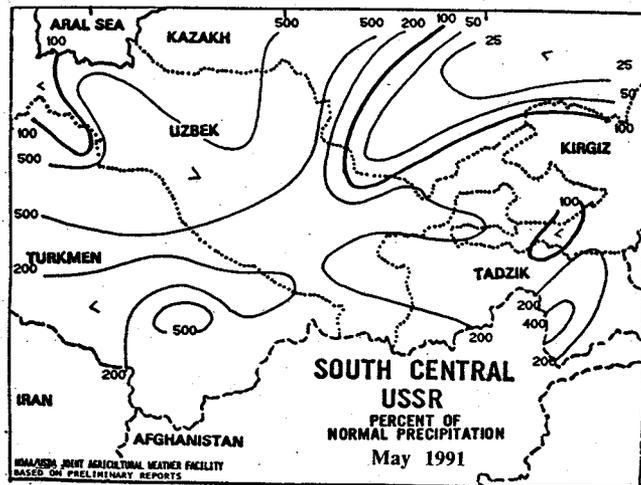
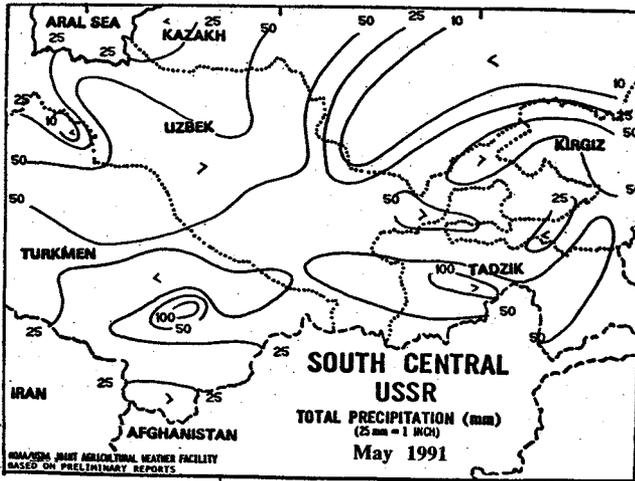
**SOUTH ASIA** ... Beneficial showers improve main season planting conditions.

**SOUTH AMERICA** ... Dry weather promotes fieldwork in Argentina and Brazil.

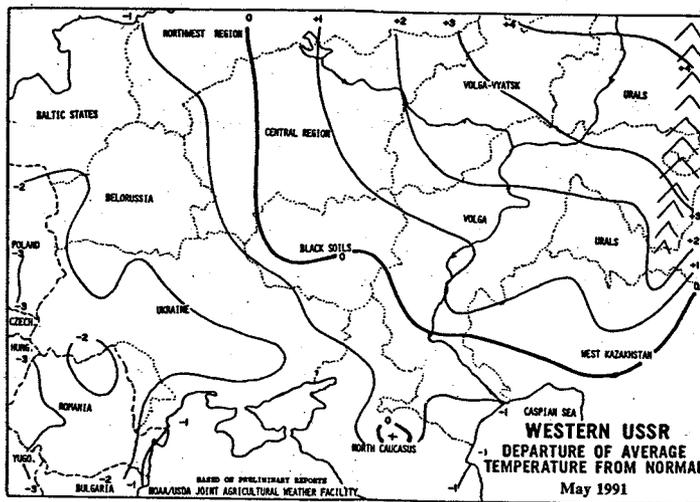
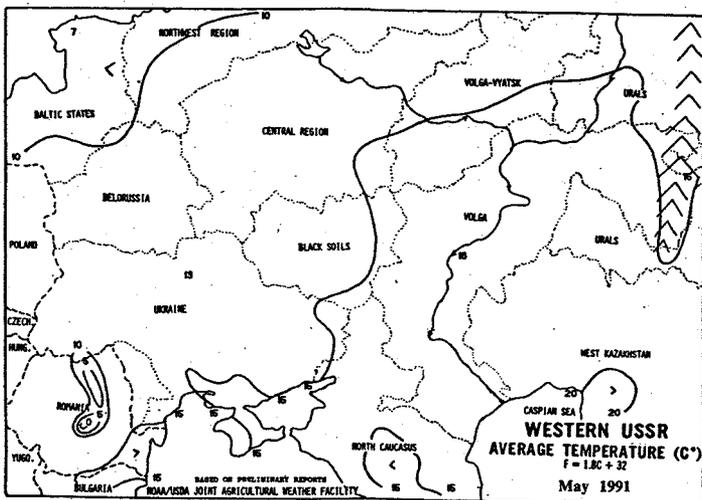
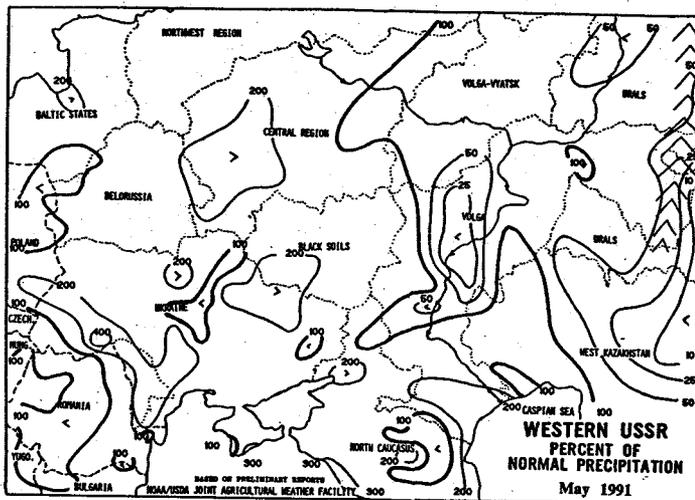
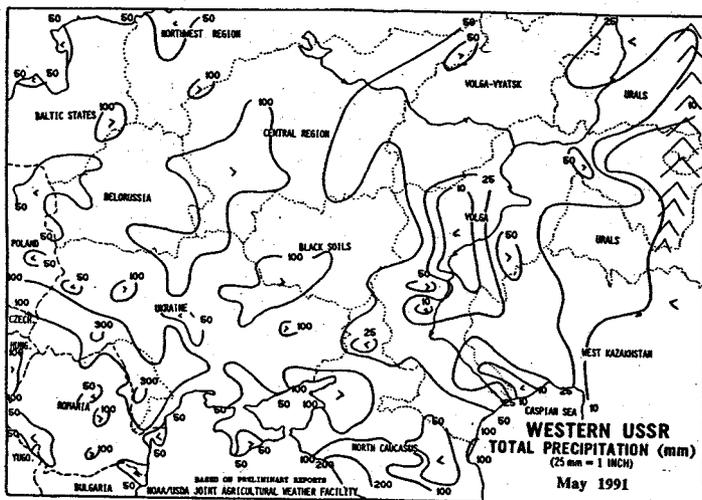
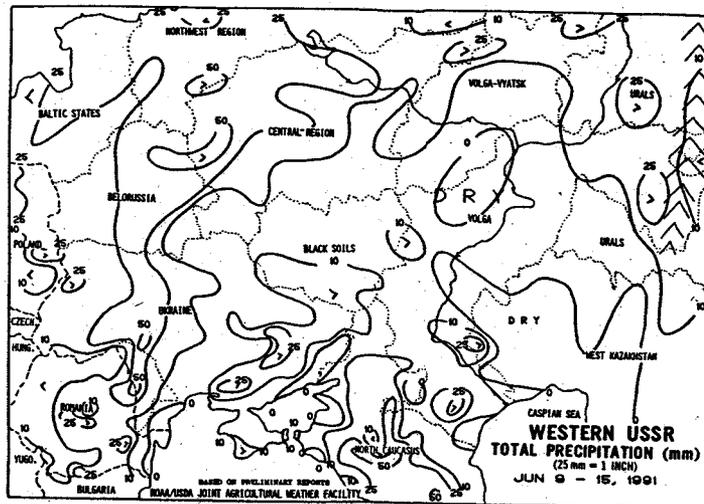
**AUSTRALIA** ... Beneficial rains aid winter grains.

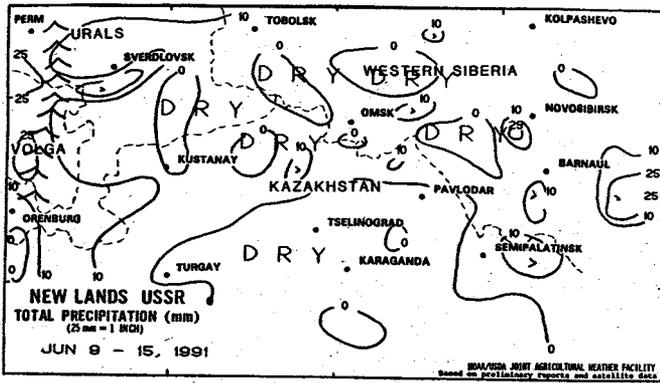
**CANADA** ... Conditions are favorable for emerging to vegetative spring grains.

**MEXICO** ... Beneficial rains boost topsoil moisture for corn planting.

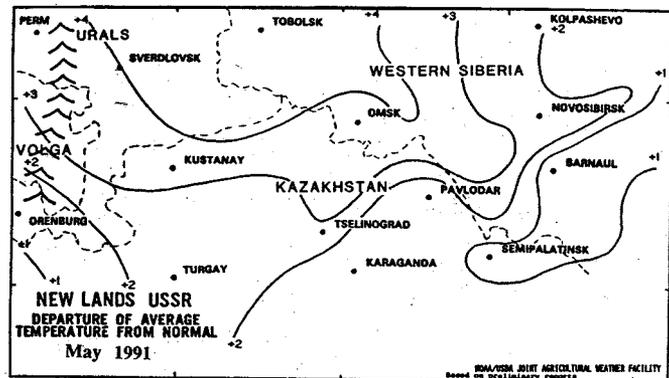
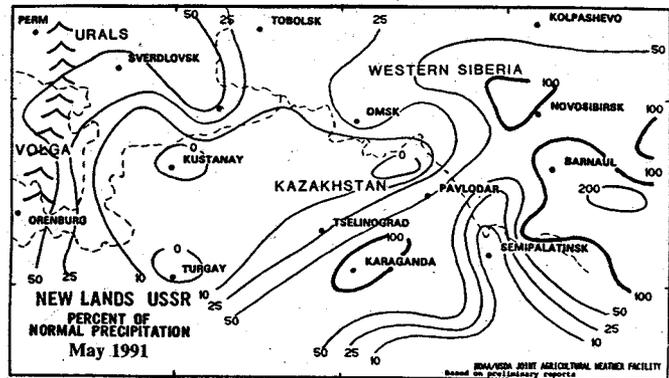
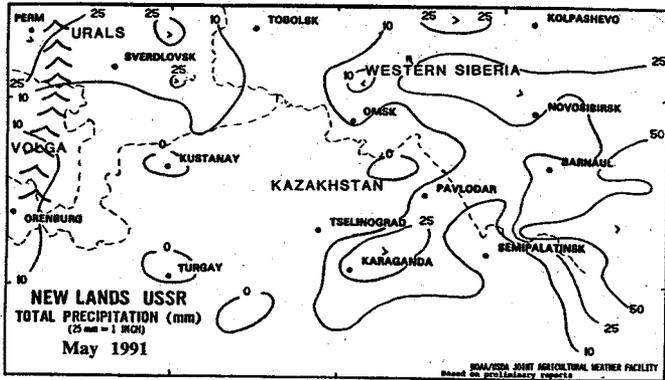


USSR ... Substantial rain (10-50mm) over western and northern crop areas was followed by warmer weather. Rainfall over the remainder of the region was mostly light (less than 10mm), although heavier showers (10-35mm) fell in the North Caucasus. This past week's warming trend, along with ample moisture reserves, favored crop growth and development. Weekly average temperatures were below normal from the Baltics to the western Ukraine and slightly above normal over the remainder of the region. In May, above-normal precipitation covered crop areas in the Baltic States, Belorussia, the Central Region, Black Soils Region, Ukraine, and the North Caucasus, providing ample moisture for crop growth. While the precipitation was especially beneficial in easing persistent dryness in Moldova and the southern Ukraine, it slowed corn planting. Although May's precipitation was below normal in the Volga Vyatsk and the Volga, adequate moisture reserves met increasing crop-moisture demands. Monthly average temperatures were 1-3 degrees Celsius (C) below normal over the west and south, slowing crop development.

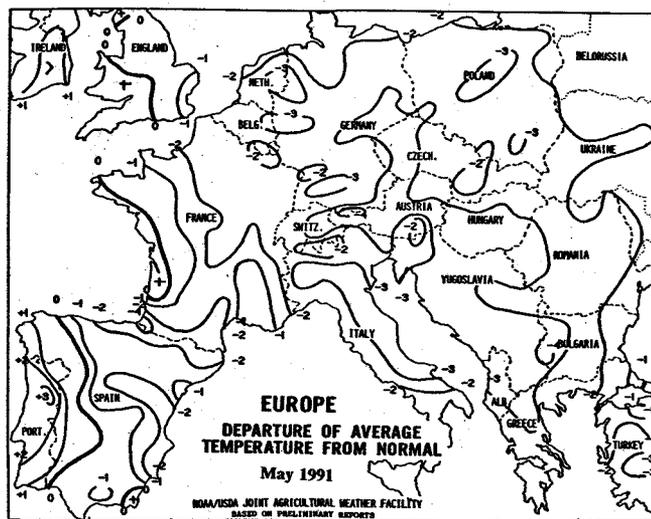
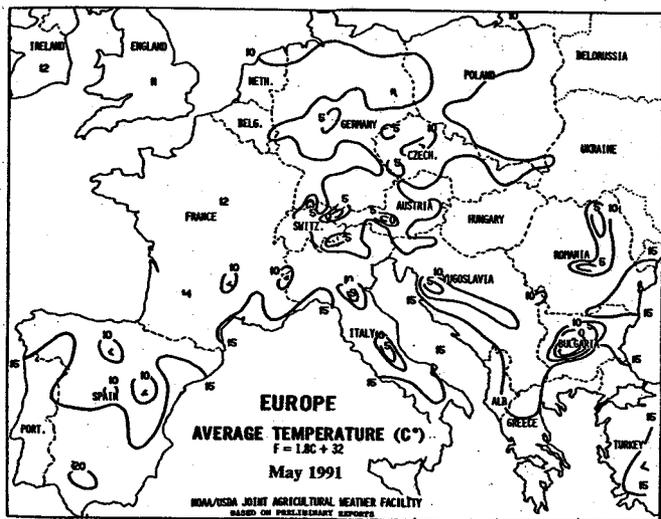
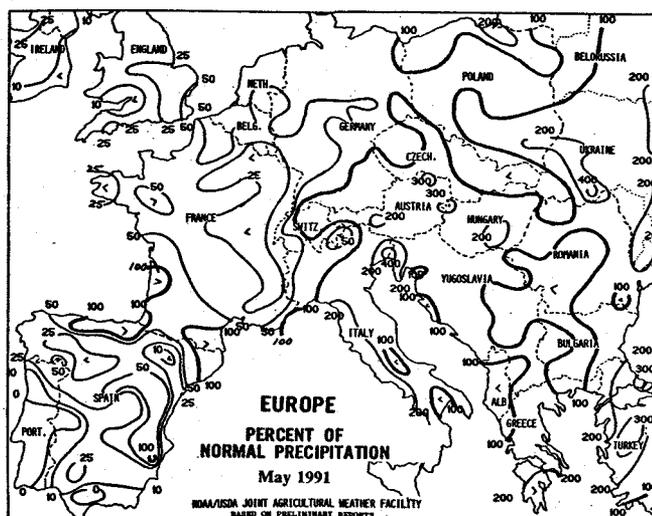
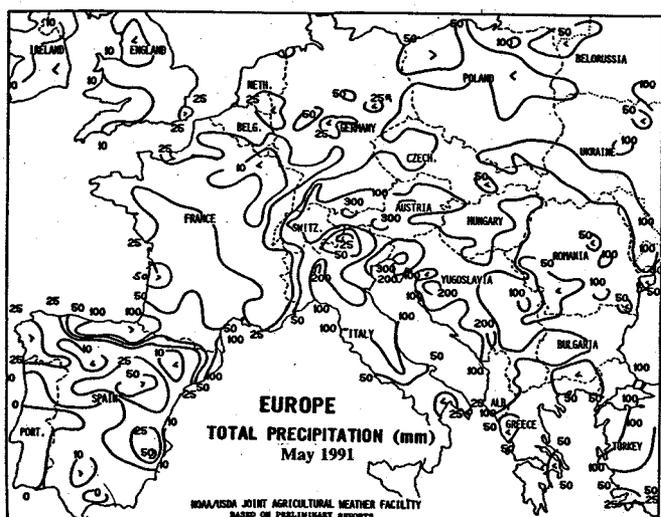
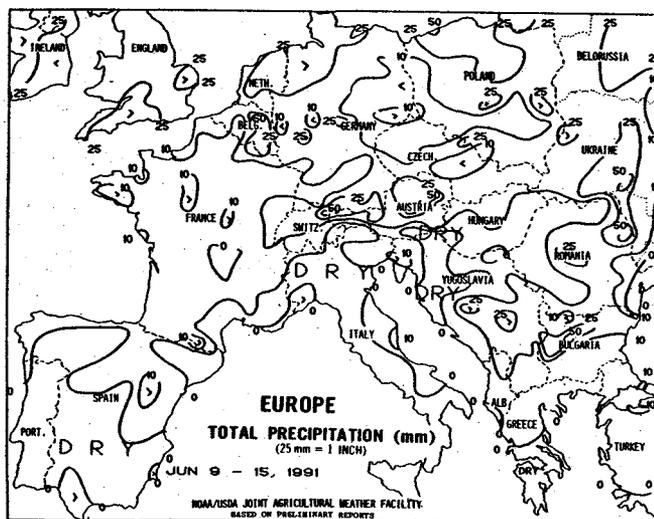


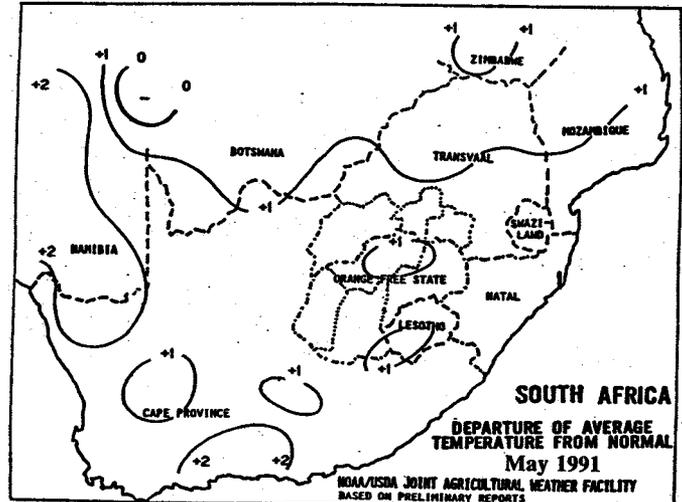
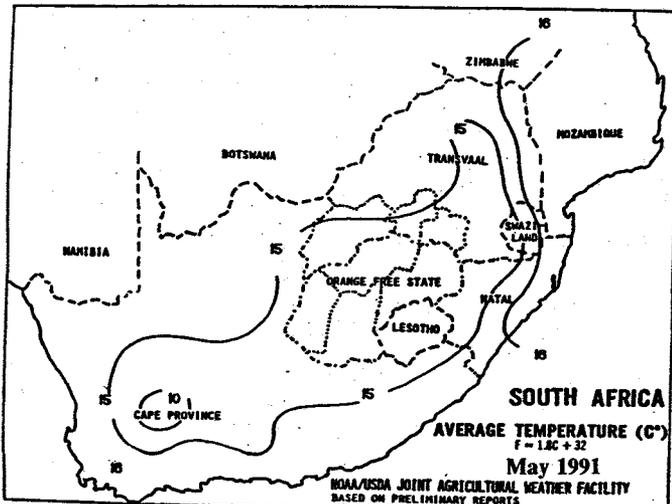
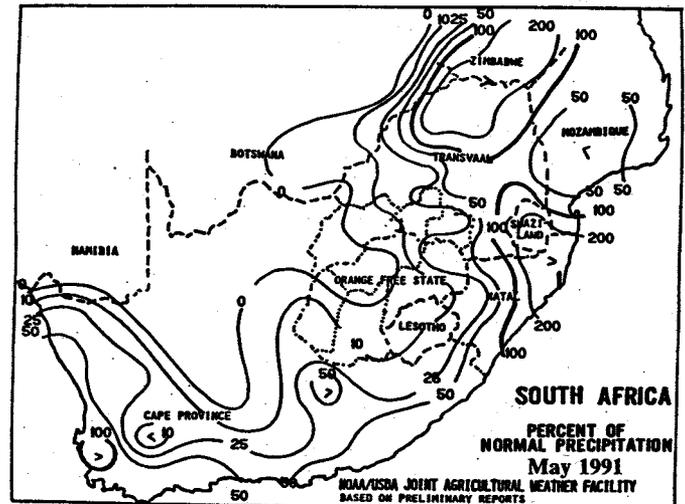
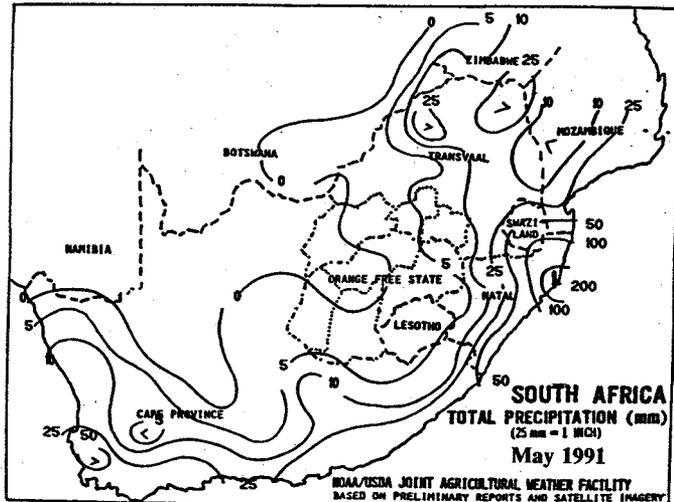
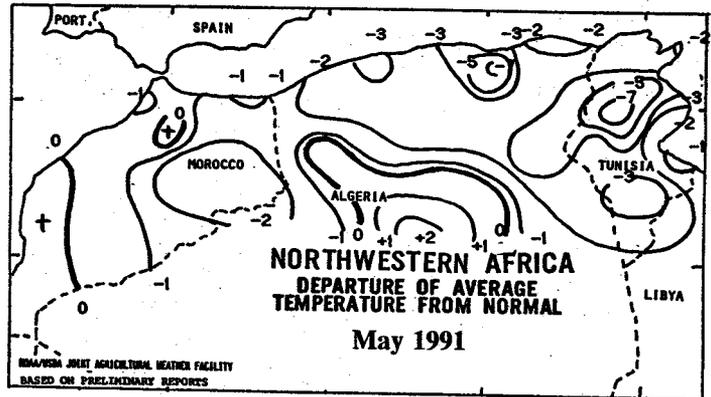
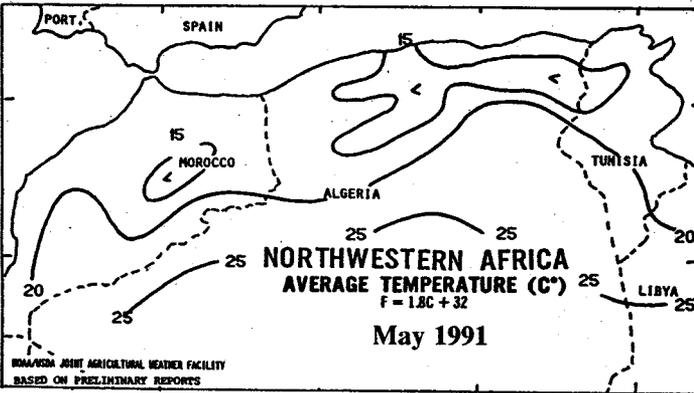
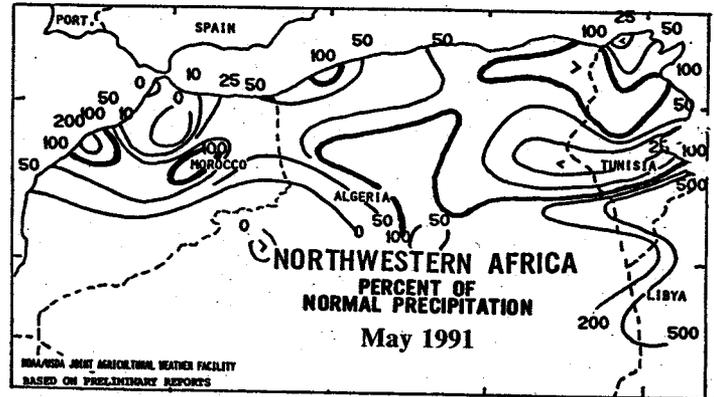
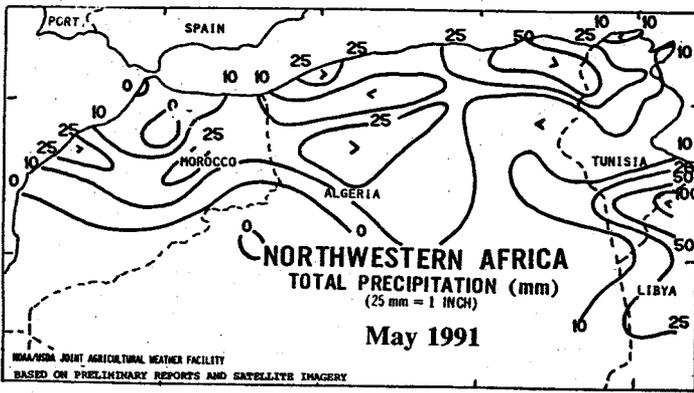


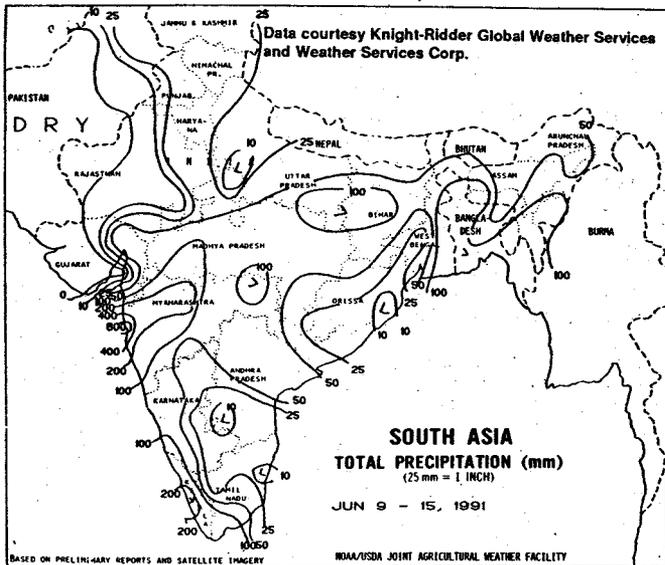
**NEW LANDS ...** Unseasonably warm, dry weather continued to increase stress on spring grains in the vegetative stage. Most crop areas in Kazakhstan, the eastern Urals, and the western half of West Siberia have received little, if any, rain for the past 10 weeks, creating drought conditions. In addition, maximum temperatures on most days during the week ranged from 30 to 36 degrees C, increasing evaporation rates. Brief showers (7-24mm, with isolated amounts of 25-49mm) over the eastern Volga and western Urals brought temporary relief from persistent dryness. In May, spring grains are normally planted throughout the region. The combination of well below-normal precipitation in April and May, along with above-normal temperatures, diminished topsoil moisture and created unfavorable conditions for spring grain plantings and crop establishment.



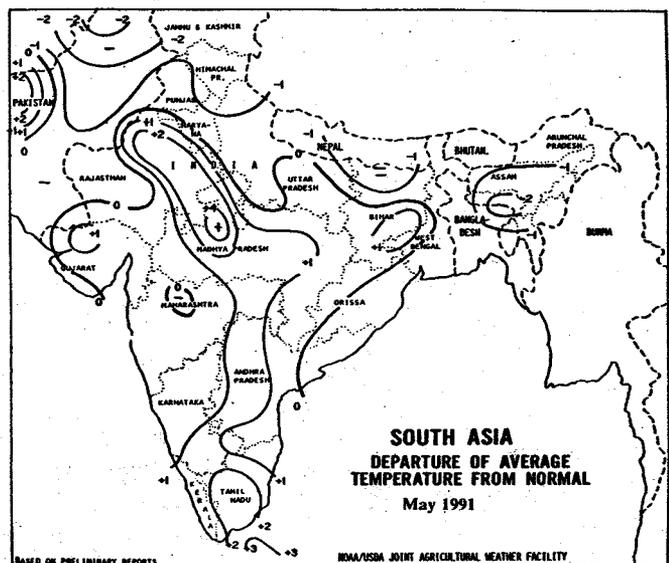
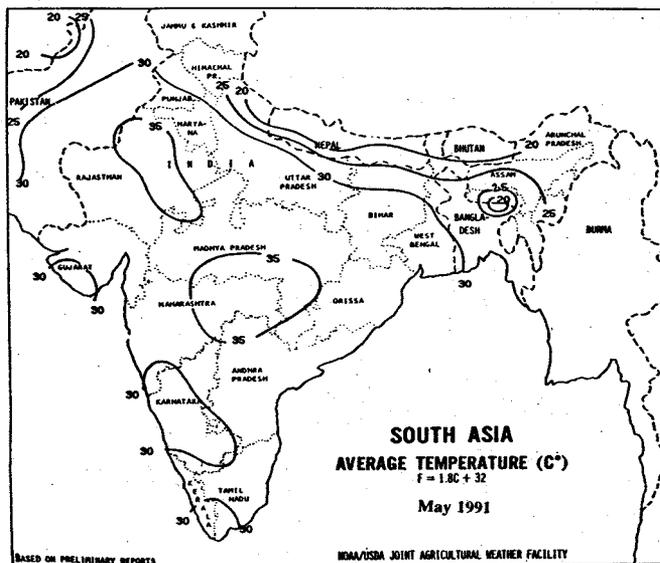
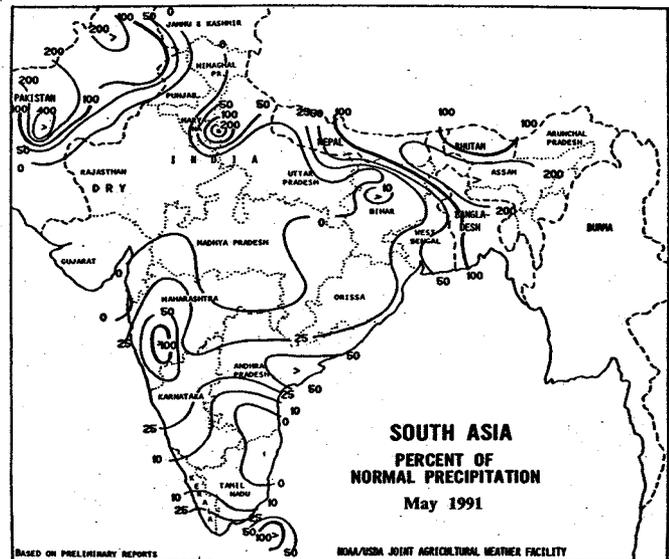
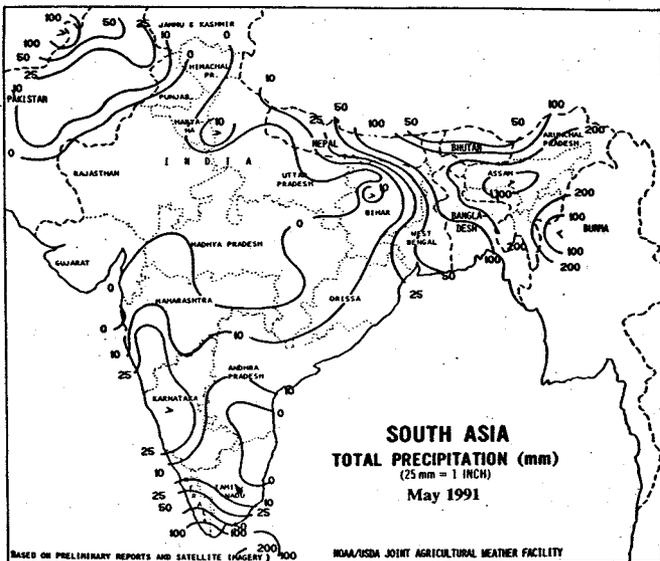
**EUROPE** ... Significant showers (10-25mm, with scattered heavier amounts) helped immature winter crops and vegetative summer crops across the north from the United Kingdom to Poland, and maintained favorable moisture for corn growth from southern Yugoslavia to eastern Romania. Dry weather favored winter grain harvesting over most of the Mediterranean region. Light rain (mostly 5mm or less) in France forced crops to draw from soil moisture reserves for growth. Highly variable rainfall generally provided beneficial moisture across central Europe. Weekly temperatures generally averaged near to slightly below normal. In May, below-normal rainfall prevailed across western Europe from Germany to the Iberian peninsula. Monthly rainfall averaged near to above normal from Italy through central to eastern Europe, maintaining favorable early season moisture conditions. Below-normal May temperatures throughout Europe slowed early growth of summer crops, which also slowed the demand for the limited topsoil moisture in the west. However, recent warmer weather has increased evapotranspiration rates in southern France and Spain.



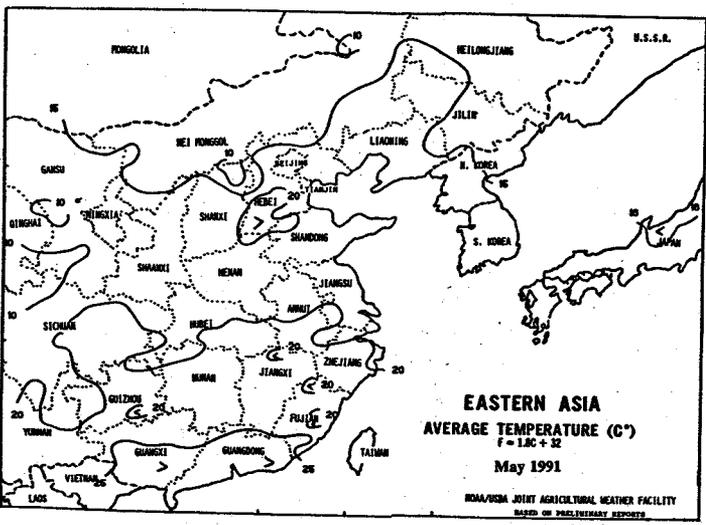
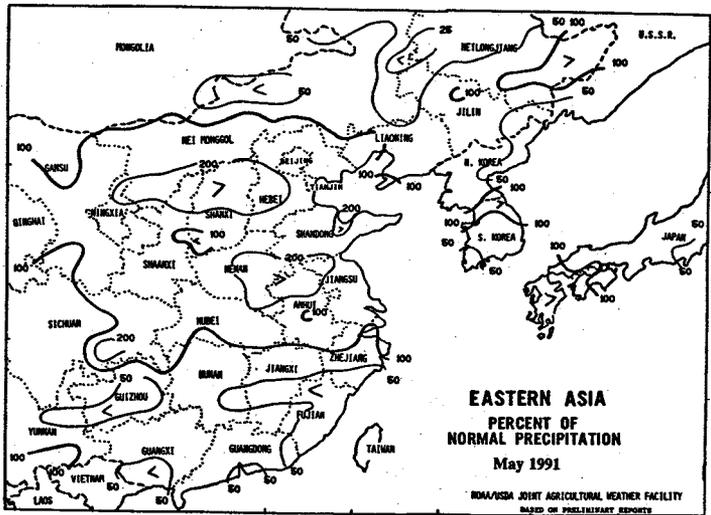
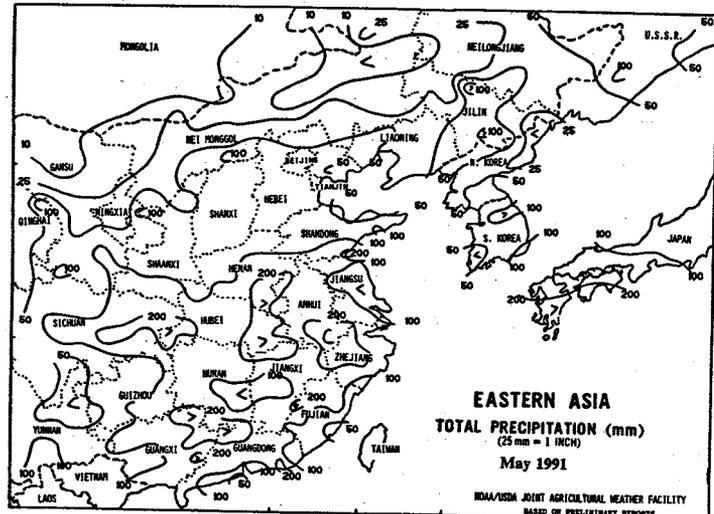
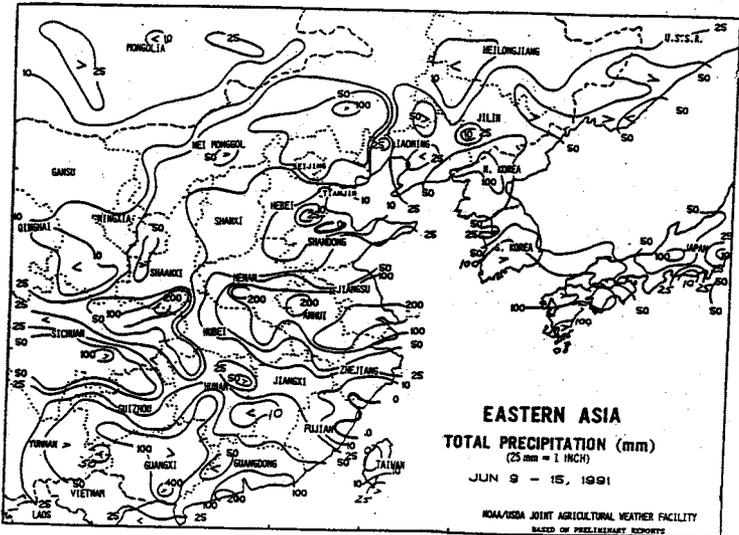




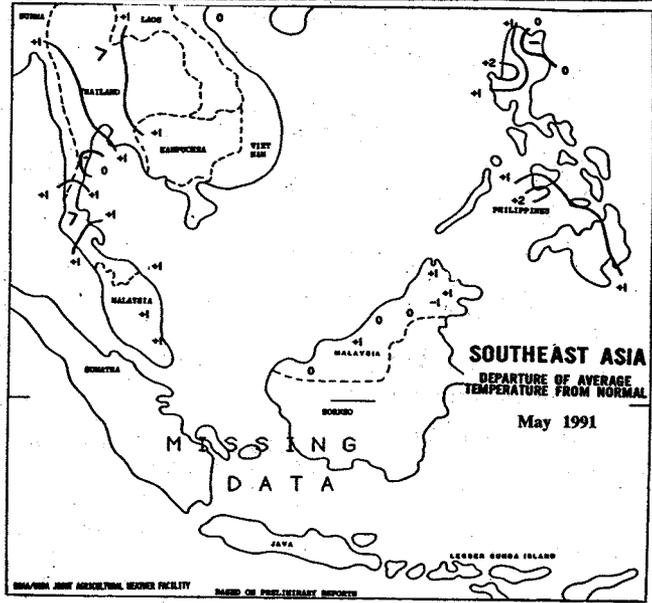
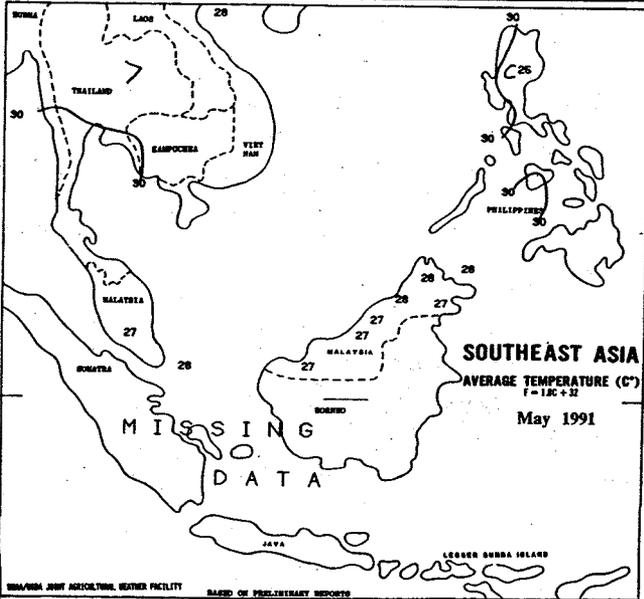
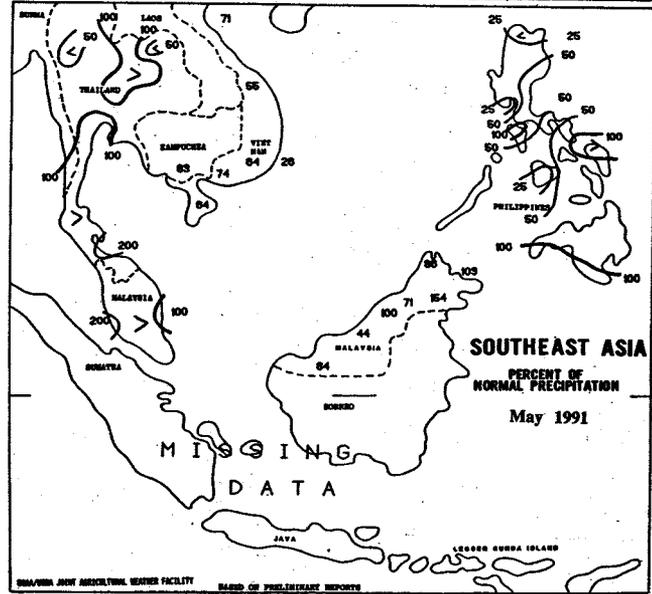
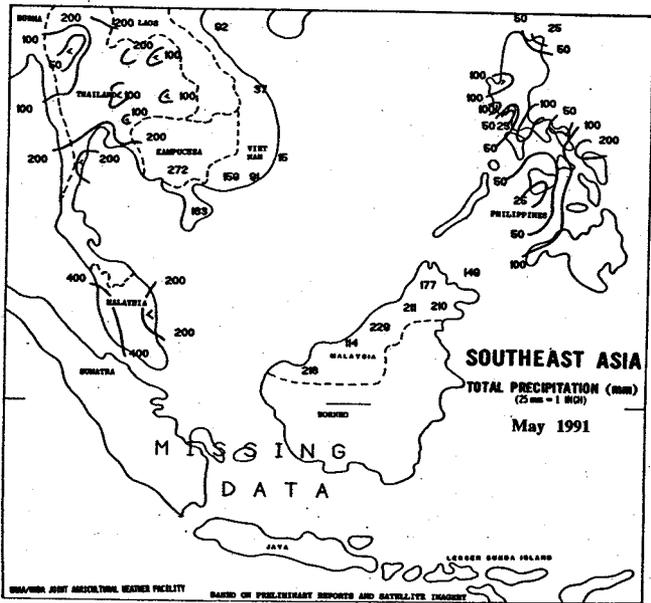
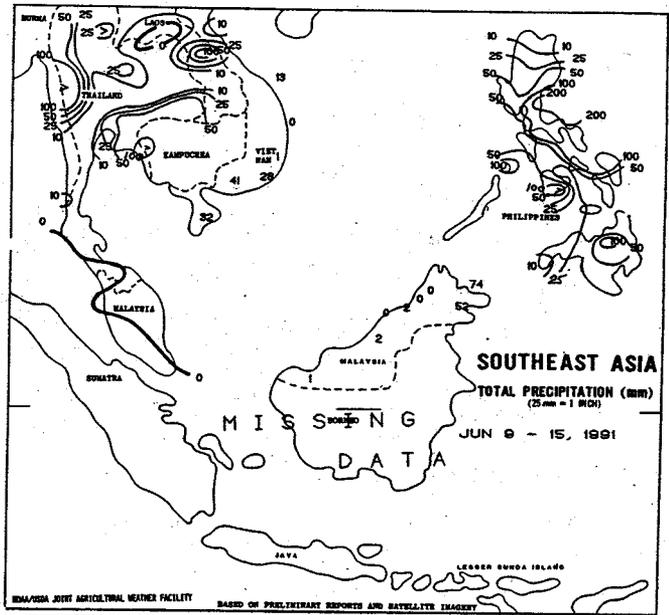
**SOUTH ASIA** ... Widespread showers and milder temperatures improved planting conditions over large areas of southern and central India. However, heavy rain (200-400mm or more) along the west coast caused some flooding, with heaviest rain reported at Bombay (over 600mm). In the east, highly variable rainfall continued over Bangladesh and adjacent areas in eastern India, adding to this season's abundant moisture accumulations. During May, frequent tropical showers over Bangladesh and India's eastern States maintained unfavorably wet conditions, caused initially by the cyclone that hit the area in late April. The persistent wet weather likely caused some damage to Bangladesh's fall planted boro rice crop, usually harvested in April to May. Seasonably dry weather dominated most other regions of India during May, but light to moderate rain over Pakistan possibly caused some wheat harvest delays.

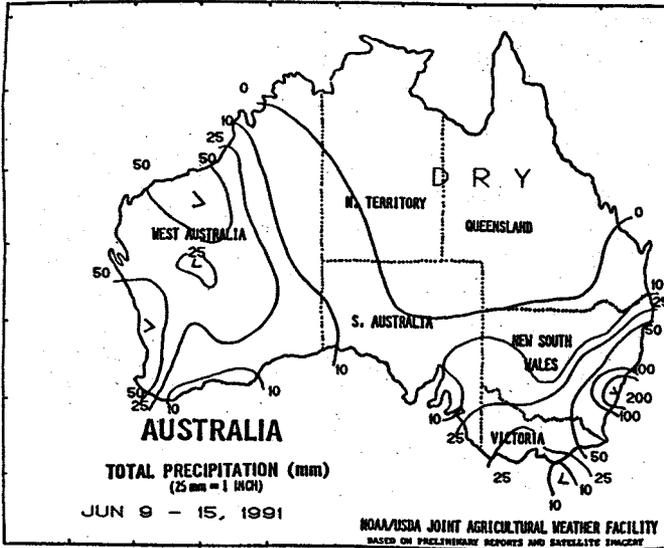


**EASTERN ASIA ...** Light to moderate rains (14-71mm) fell across Manchuria, with heavier amounts (107-142mm) in southeastern Liaoning, Jilin, and North Korea. Portions of northern Hebei again received moderate to heavy rain (46-96mm), causing some local flooding and crop damage to maturing winter wheat. Further south, drier conditions prevailed in the North China Plain, aiding in the drydown of winter wheat and early harvesting. However, continued frontal activity in Jiangsu, Anhui, Hubei, and southern Henan brought heavy rains (107-281mm), which would negatively impact on mature winter wheat. Portions of Jiangxi and Fujian received only scattered light to moderate showers (2-35mm), aiding maturing early double-crop rice, but below-normal rains during the last several weeks increased stress on single-season rice. Monsoonal moisture brought beneficial moderate to heavy rains (51-179mm) to Guangxi and Guangdong. In May, near- to above-normal rainfall soaked most areas north of the Yangtze Valley to southern Manchuria. However, half of the normal rainfall reduced reservoir levels and stressed single-season rice in portions of the Chinese southern rice areas. Additionally, areas of western Manchuria received below-normal rainfall, but those areas are traditionally minor regions. Temperatures for the month were 1-2 degrees C below normal in central China due to above-normal rainfall, with near-normal temperatures elsewhere.

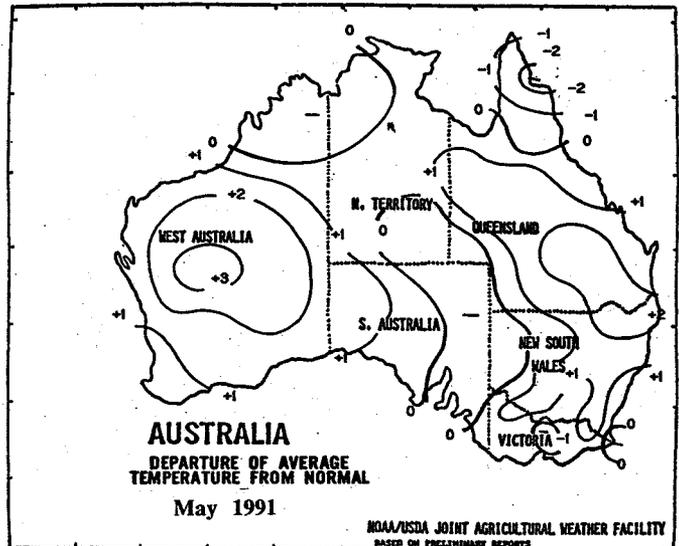
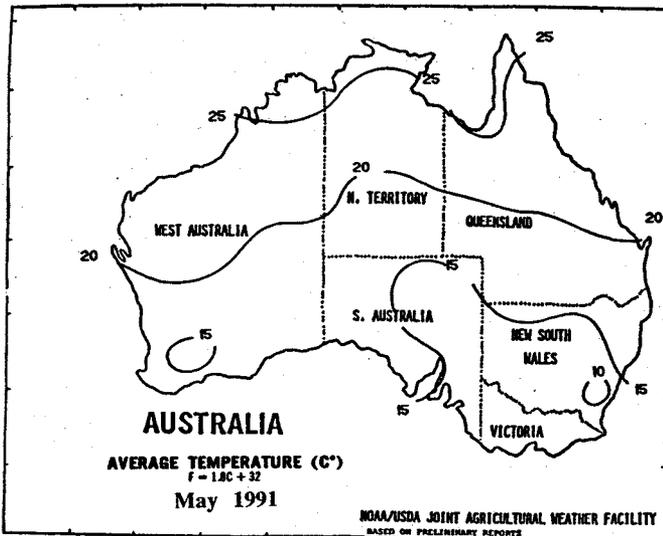
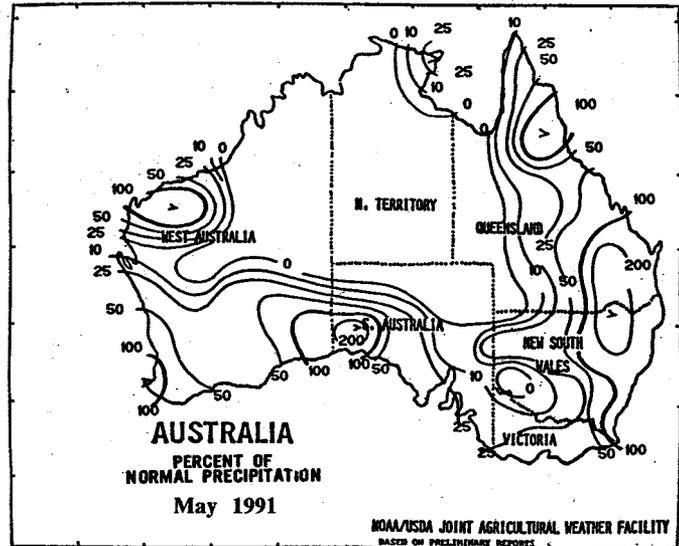
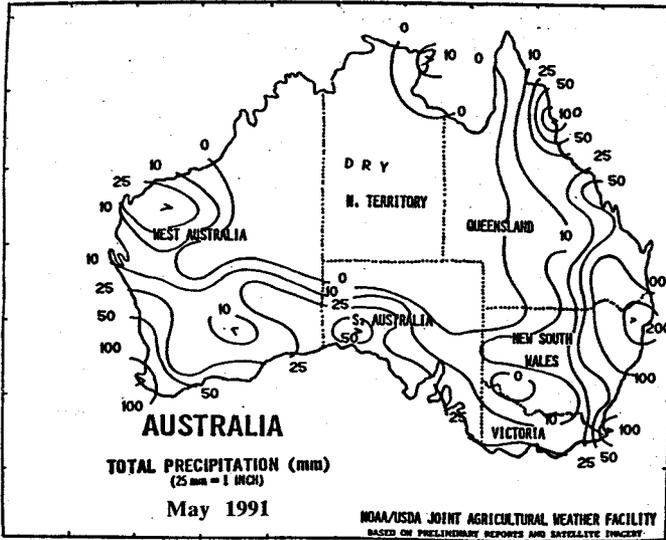


**SOUTHEAST ASIA** ... A tropical storm brought moderate to heavy showers (50-200mm or more) to the central Philippines from southern Luzon to northern Mindanao, increasing reservoir levels but causing some flooding. The rainfall was especially welcomed in the central islands, where the failure of the rainy season to develop has caused some planting delays. In Thailand, variable showers continued over most primary grain areas, but pockets of light rain (10mm or less) returned to corn and rice regions of central and eastern Thailand. Temperatures averaged near normal, but seasonable daytime highs in the mid 30's C maintained high moisture demands on vegetative crops. In May, increasing showers and somewhat milder temperatures brought relief to Thailand's newly planted rice and corn following this season's late start to the growing season. For the month, rainfall was near normal over most grain areas and temperatures averaged slightly above normal. In contrast, the rainy season had yet to develop fully over the Philippines, where May rainfall was less than 50 percent of normal in the north and west.

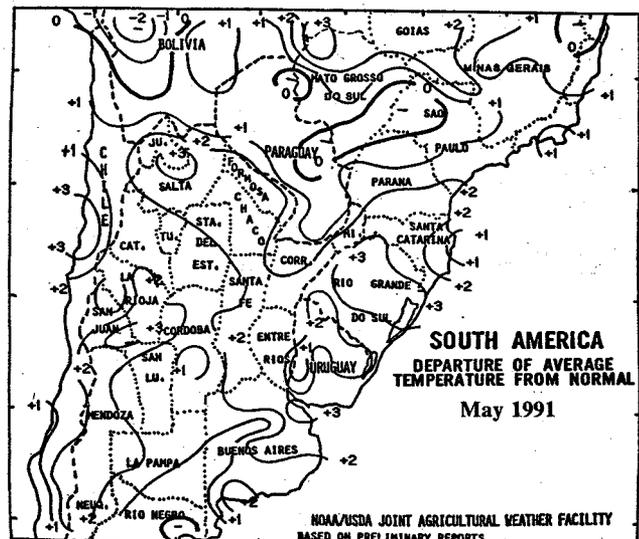
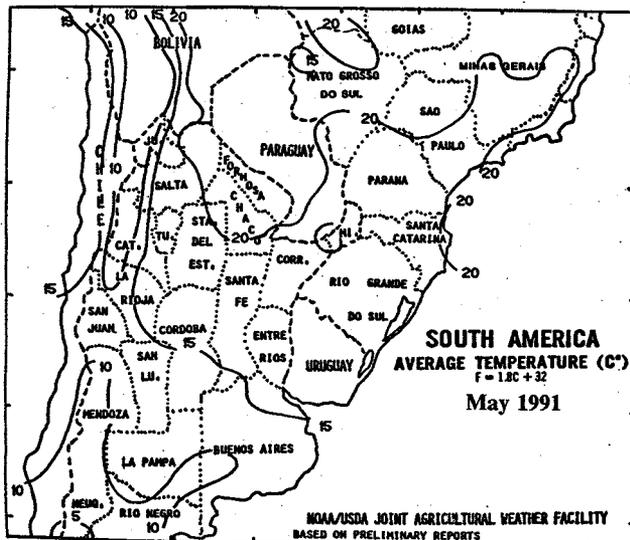
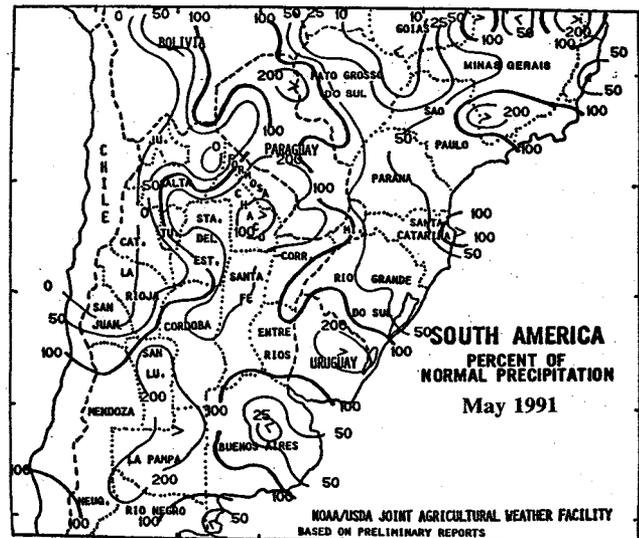
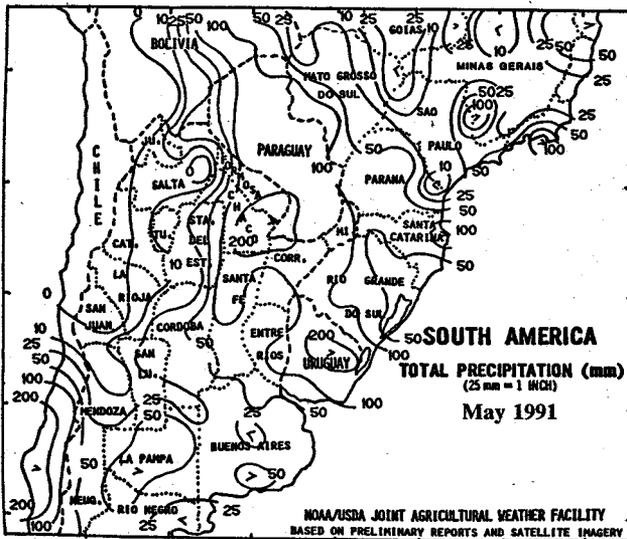
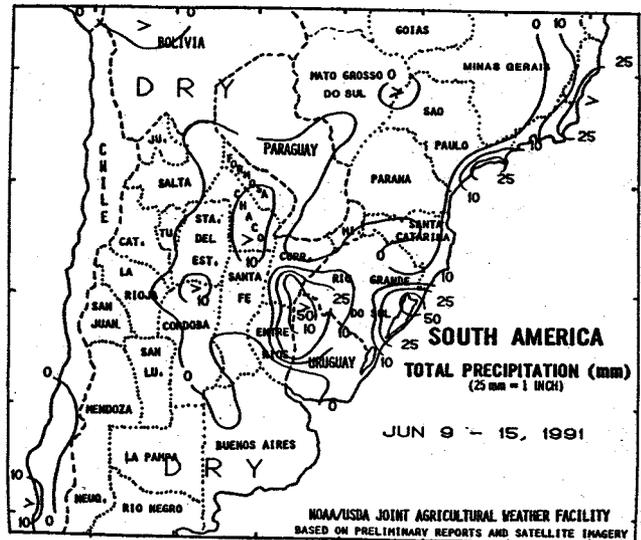


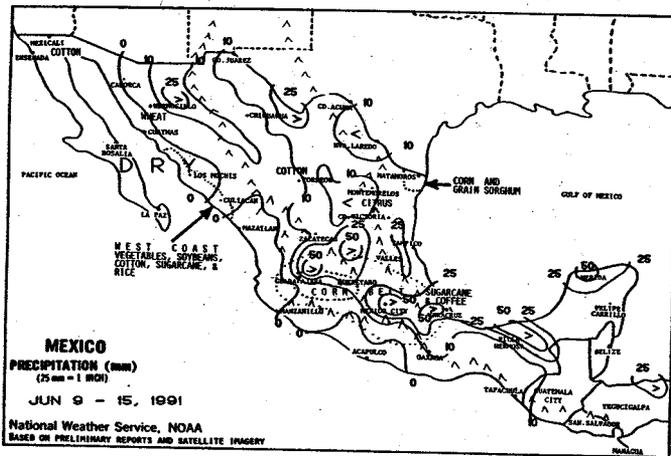


**AUSTRALIA ...** Moderate rains (17-49mm) fell across the winter grain areas of central and southern New South Wales, Victoria, and Western Australia, boosting soil moisture reserves. The rains were beneficial for the germination of newly sown winter grains. Drier conditions in South Australia should enable planting to progress. Rainfall was below normal in portions of New South Wales and Victoria for May, delaying winter grains planting. Western Australia also received below-normal rains, but previous March and April rainfall had produced favorable moisture conditions which enabled planting during May.

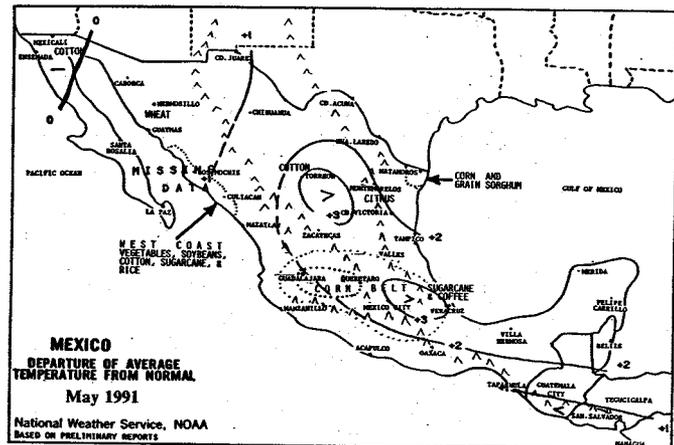
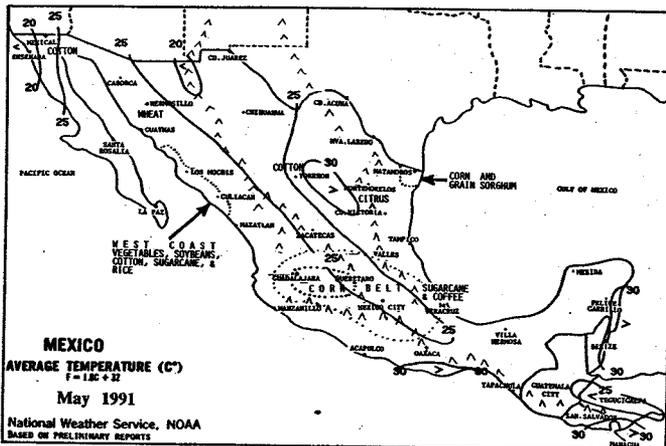
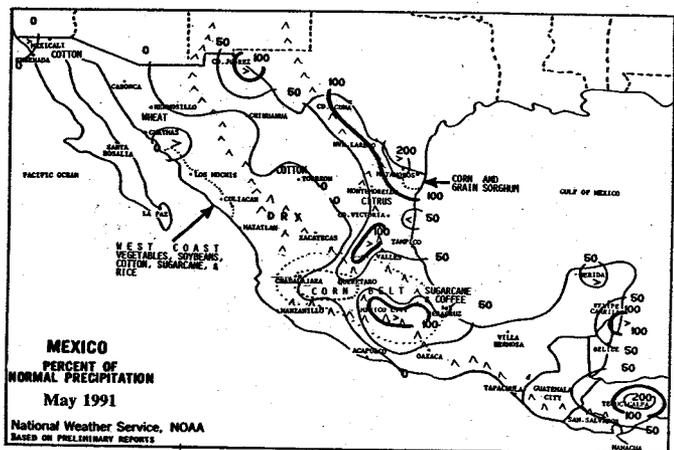
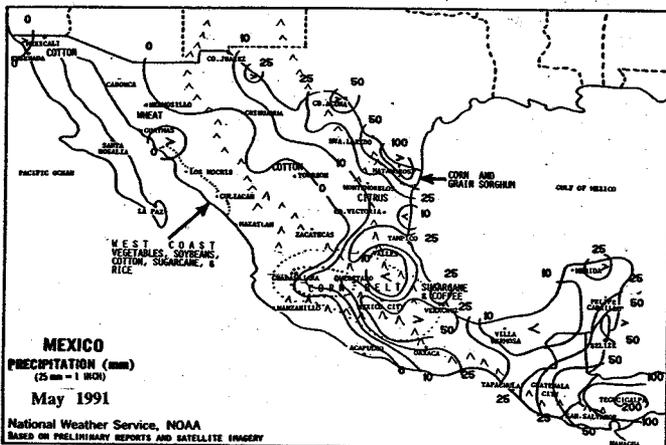


**SOUTH AMERICA** ... Mostly dry conditions aided soybean harvesting and winter wheat planting in Argentina. Soil moisture for winter wheat germination and growth should be adequate to favorable. In Brazil, winter wheat planting continued as the soybean harvest neared completion. In Sao Paulo, Minas Gerais, and Espirito Santo, favorable harvest conditions continued as light coastal showers produced only minor delays in coffee and citrus harvesting. Above- to much above-normal rain fell across northern and central Argentina in May, damaging mature cotton and delaying soybean harvesting. Dry conditions favored fieldwork in Brazil. Temperatures were mostly above normal throughout the region.

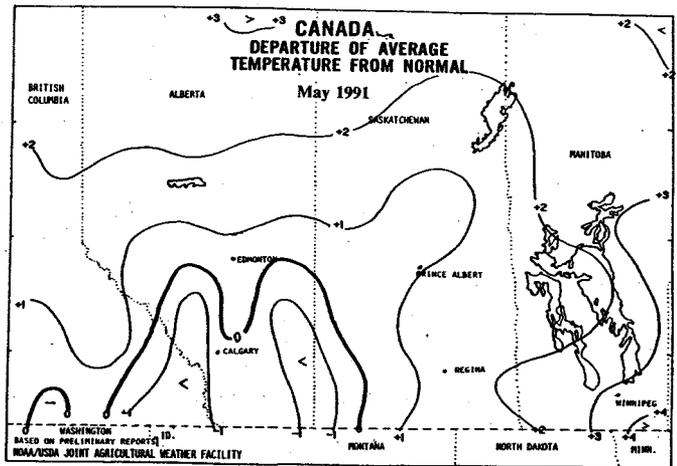
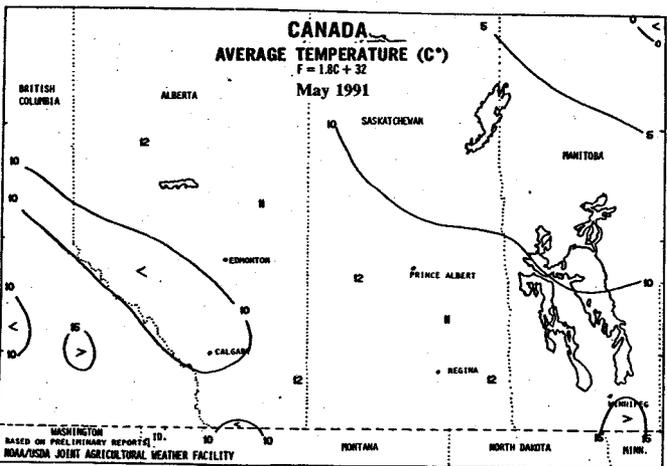
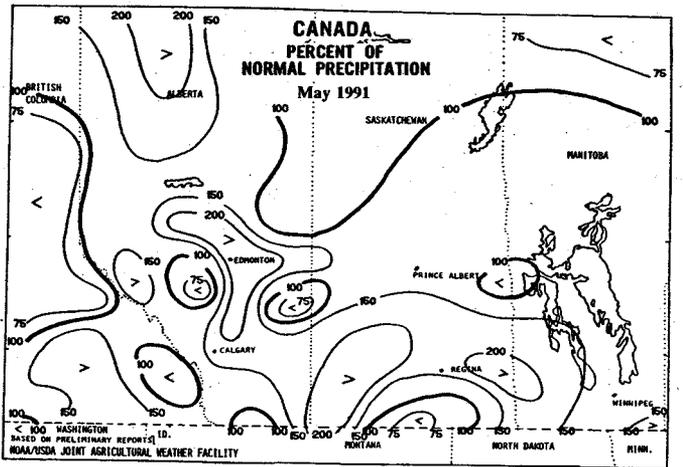
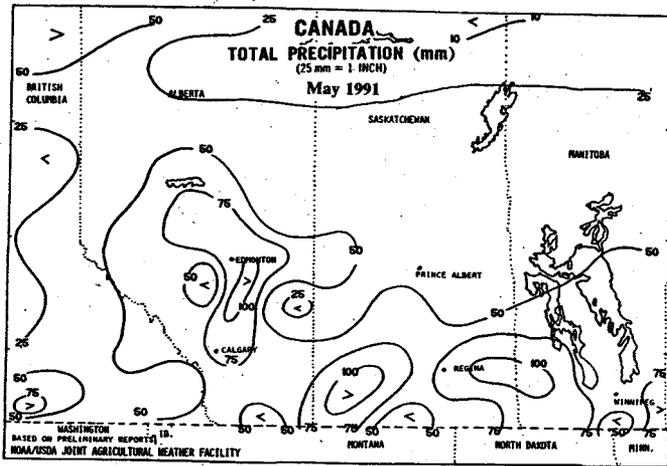
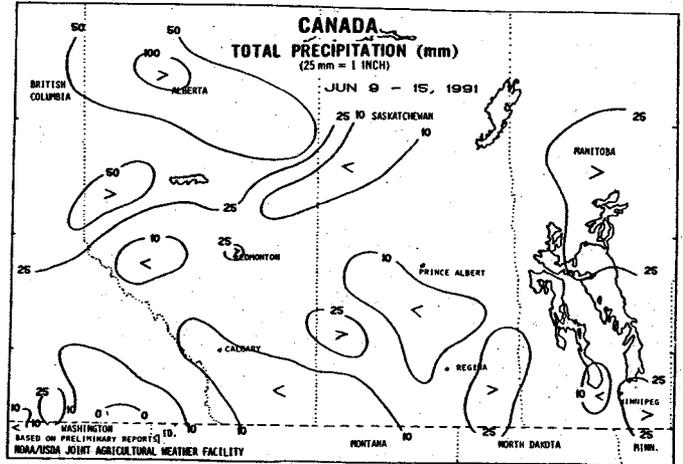




**MEXICO ...** Widespread light to moderate showers (15-50mm) fell across most areas, signaling a start to the already late rainy season. Corn planting should begin in the south. During May, most areas received below-normal rainfall and above-normal temperatures, delaying planting of corn and other crops.



**CANADA** ... Light to moderate rain (5-32mm) continued across the Prairies, benefiting emerging to vegetative spring wheat. Temperatures averaged near to slightly below normal in the west and near to above normal in the east, maintaining favorable growing conditions. In May, precipitation was near to above normal, greatly improving topsoil moisture for spring plantings. The moisture was accompanied by periods of warm, dry weather, favoring rapid planting progress.



The Weekly Weather and Crop Bulletin (ISSN 0043-1974) 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 second class \$35, first class \$50, foreign \$50 (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, D.C. 20250. Order subscriptions from the office and address listed above. Second class postage paid at Washington, D.C. and additional mailing offices.

U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service/Climate Analysis Center  
Managing Editor . . . . . Douglas Le Comte  
Meteorologists . . . . . Brad Rippey (202)382-1444  
Vilhelm Bjerknes and Wes Byrd.

Subscriptions (202) 447-7917 . . . Joyce Houston

U.S. DEPARTMENT OF AGRICULTURE  
Economics Management Staff  
Editor . . . . . Sharon Lee  
National Agricultural Statistics Service  
Agricultural Statistician . . . Martin Owens (202) 447-2157  
World Agricultural Outlook Board  
Agricultural Weather Analysts . . . Ray Motha (202) 447-5716  
Tom Puterbaugh, Mark Brusberg and Bob Stefanski.

(Continued from front cover)

causing some flooding in Iowa and Wisconsin. Cool weather settled into the Northwest. Late-week minimums included a 30° F reading in Klamath Falls, OR, and a frosty 26° F mark in Butte, MT. Strong storms returned to the Great Lakes and the Northeast. Another band of convection stretched from the Corn Belt to Texas. Heat built into the East in advance of the storms. On Saturday, the mercury climbed to 98° F in Philadelphia, PA.

(Continued from p. 14)

reported heavy supplies of broccoli and lettuce, and moderate supplies of cauliflower and celery. Harvest of onions for dehydrating continued in the Imperial Valley and harvest of tomatoes for processing began. Strawberries remained in fairly heavy supply on California's central coast. Florida's volume leaders were watermelons, sweet corn, potatoes, tomatoes, peppers, cucumbers, and celery. Idaho strawberry harvest progressed with disappointing yields in Washington County. Green pea, cabbage, and cauliflower harvests were underway in Oregon, while the State's cucumbers, snap beans, and sweet corn were delayed by cool weather. Texas' Rio Grande Valley melon harvest was slow, while the San Antonio-Winter Garden onion harvest continued in full swing. Cabbage harvest was winding down, and harvest of beets for processing continued. Texas' tomato and bean harvests were well underway. Large hail destroyed some cantaloupe fields in the Trans-Pecos region, and some watermelon and pepper fields experienced minor damage. Processing pea harvest started in Walla Walla County, WA, and the State's asparagus harvest was nearing completion.

**PASTURES AND LIVESTOCK:** Pasture and range feed condition remained mostly good across the Nation. Movement of livestock to summer ranges continued.

NOAA/USDA Joint Agricultural  
Weather Facility  
Room 5844 USDA South Building  
Washington, D.C. 20250

SECOND CLASS MAIL  
POSTAGE AND FEES PAID  
NOAA PERMIT NO.  
ISSN 0043 1974

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

WEEKLY NEWS BULLETIN  
SECOND CLASS