

# 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

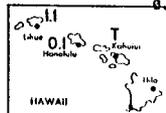
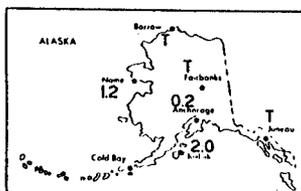
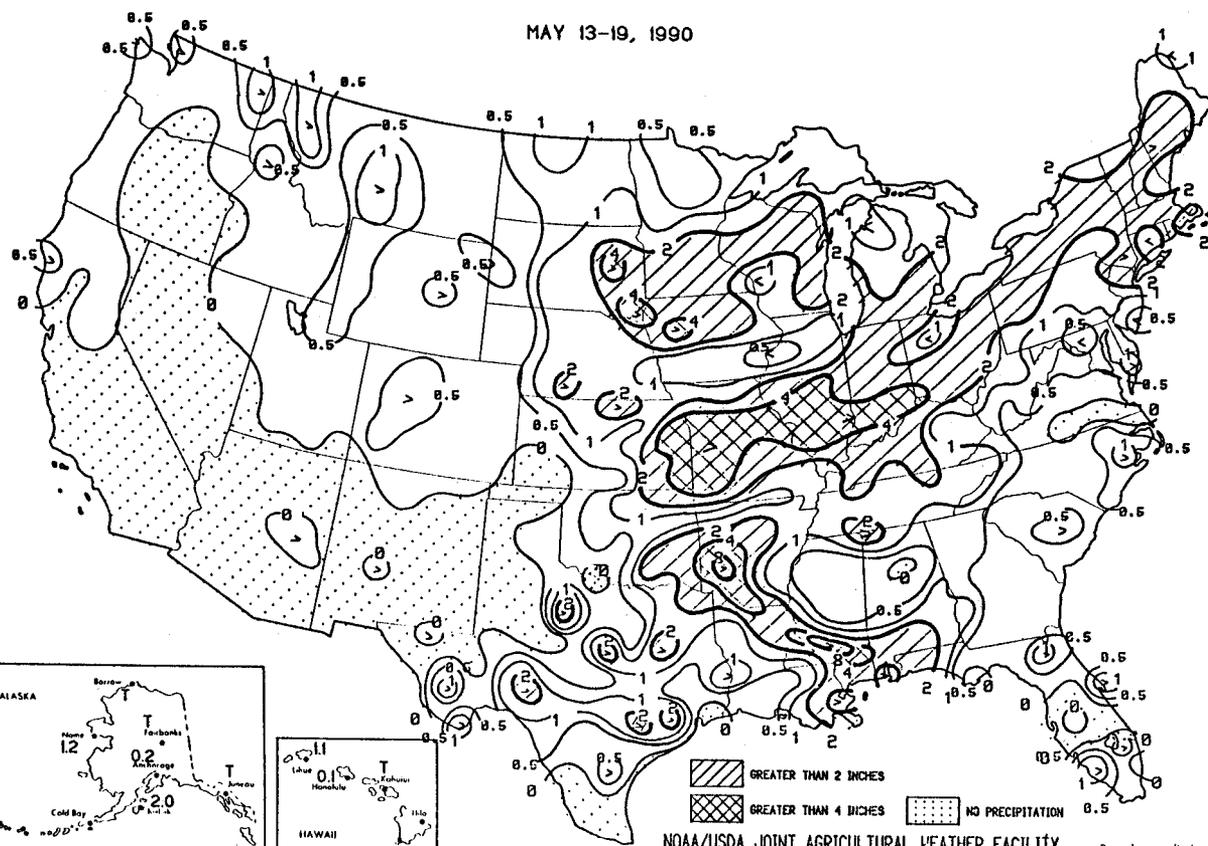
Volume 77, No. 20

Washington, D.C.

May 22, 1990

## TOTAL PRECIPITATION, INCHES

MAY 13-19, 1990



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY  
Based on preliminary reports

## HIGHLIGHTS

May 13-19, 1990

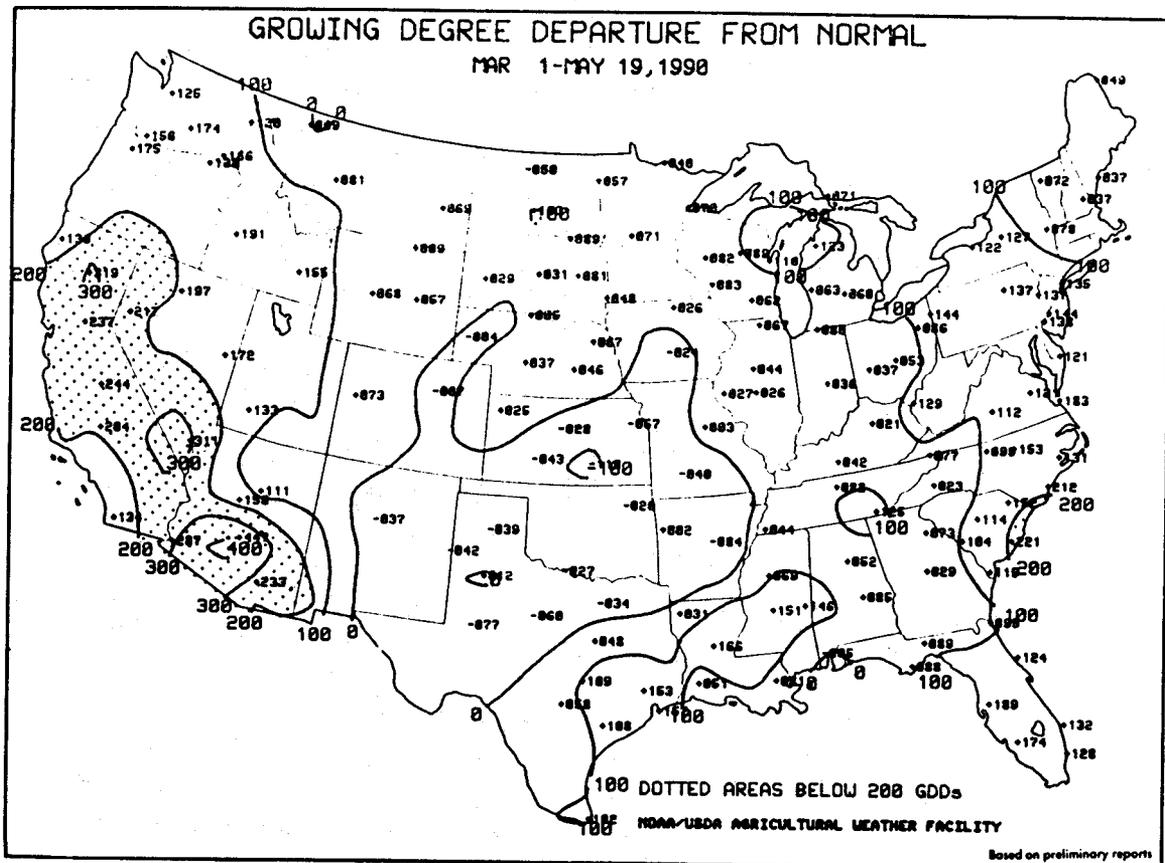
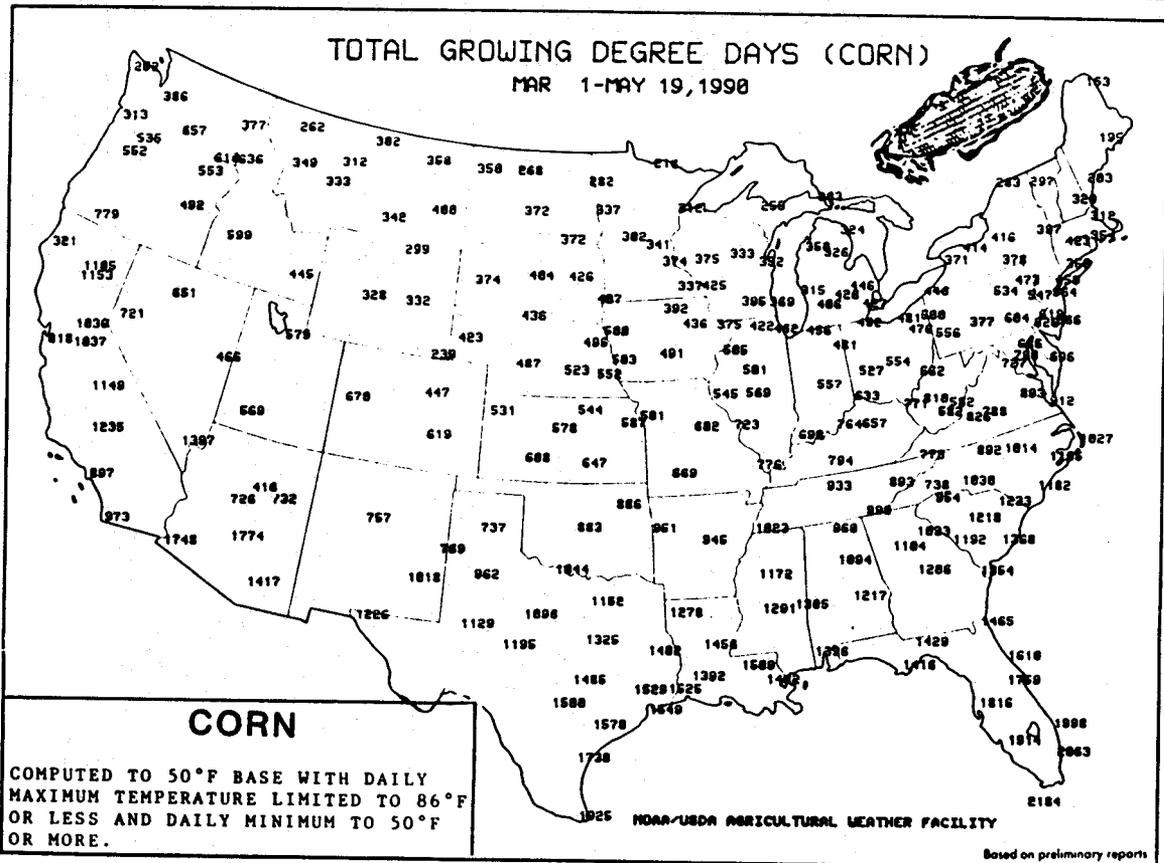
Heavy rain, floods, and severe weather prevailed over much of the **Great Plains**, the **Mississippi and Ohio Valleys**, and the **Northeast** throughout the week as a series of frontal systems trekked across the eastern half of the Nation. The week started with a frontal system causing soaking rains from the **central Gulf coast** to the **Northeast**. A line of thunderstorms drenched **southern Mississippi** with up to 10 inches of precipitation, while tornadoes struck in **North Carolina, Maryland, and Pennsylvania**. Cold air pushing into the **northern and central Plains** triggered showers and thunderstorms as well as several tornadoes. At midweek, an extensive storm system generated more tornadoes and torrential rain, which resulted in severe flooding across the **lower** (Continued to back cover)

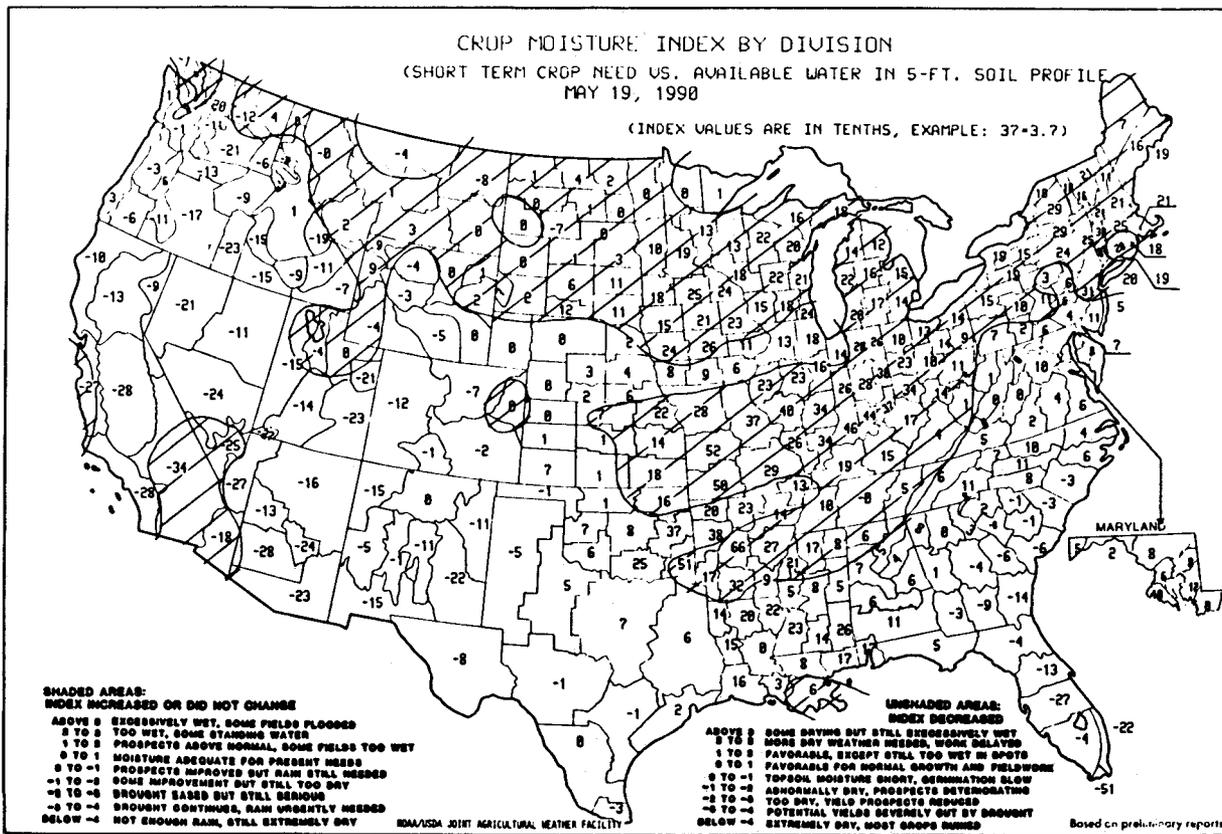
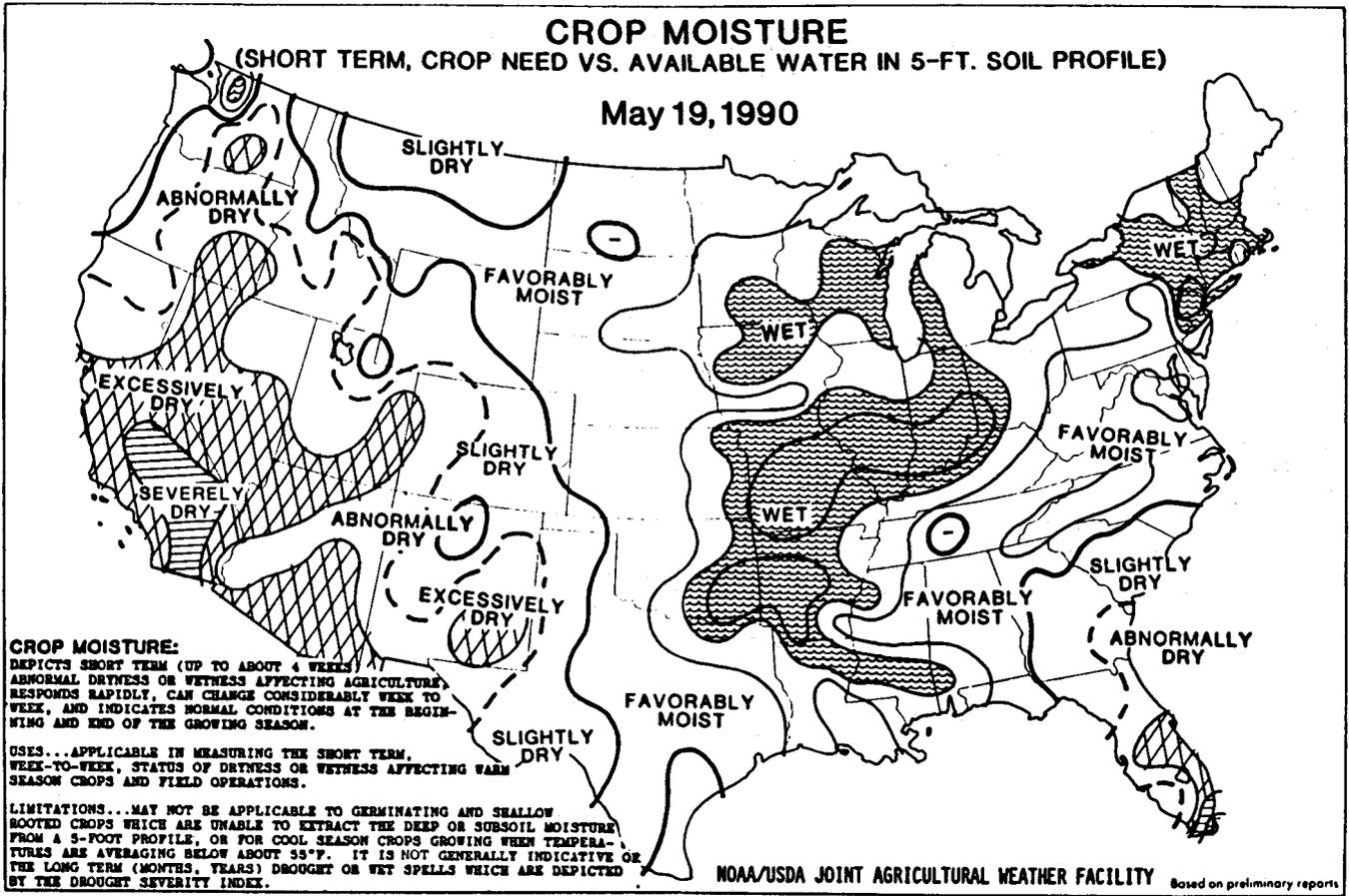
## Contents

Page

Highlights & Total Precipitation .....	1
Temperature Departure and Soil Temperature ...	2
Growing Degree Days and Departures .....	3
Crop Moisture Maps .....	4
<b>Major Flooding in the South</b> .....	5
National Weather Data for Selected Cities ....	7
National Agricultural Summary .....	10
Crop Progress and Condition Tables .....	11
State Summaries of Weather and Agriculture ...	13
Average Temperature Map .....	19
International Weather and Crop Summary .....	20
Subscription and Mailing Permit Information ..	24







### Major Flooding in the South

Torrential downpours battered portions of the middle and lower Mississippi Valley this past week, adding to the heavy rains of the 4 previous weeks. Some areas in the Arkansas and Red River Valleys have accumulated over 20 inches during this 5-week period (fig. 1).

Major flooding continued along the Red River, from southeastern Oklahoma, northeastern Texas, and western Arkansas downstream into central Louisiana. Extensive flooding continued along the Trinity River in northeastern Texas, downstream from Dallas, especially near and downstream of Lake Livingston in southeastern Texas. Flooding also continued on the Leon River and along the Arkansas River. Extensive to near-record flooding occurred

along some rivers and streams in southern Indiana, while heavy rains caused substantial flash flooding in central Illinois and throughout Missouri. Thunderstorms produced isolated rainfall of a foot or more in the Hot Springs, AR area, Saturday evening and night, causing severe flash flooding. Generally minor flooding took place in isolated locations in Kentucky, West Virginia, Michigan, Ohio, Pennsylvania, and New York.

This wet weather has delayed corn planting in much of the Corn Belt (fig. 2). Missouri has only 42 percent planted versus 94 percent that is normally planted by this time of year. Missouri, Wisconsin, Michigan, Illinois, Indiana, and Kentucky are all 15 percent or more behind their average progress.

Figure 1

#### TOTAL PRECIPITATION (INCHES) APRIL 15 - MAY 19, 1990

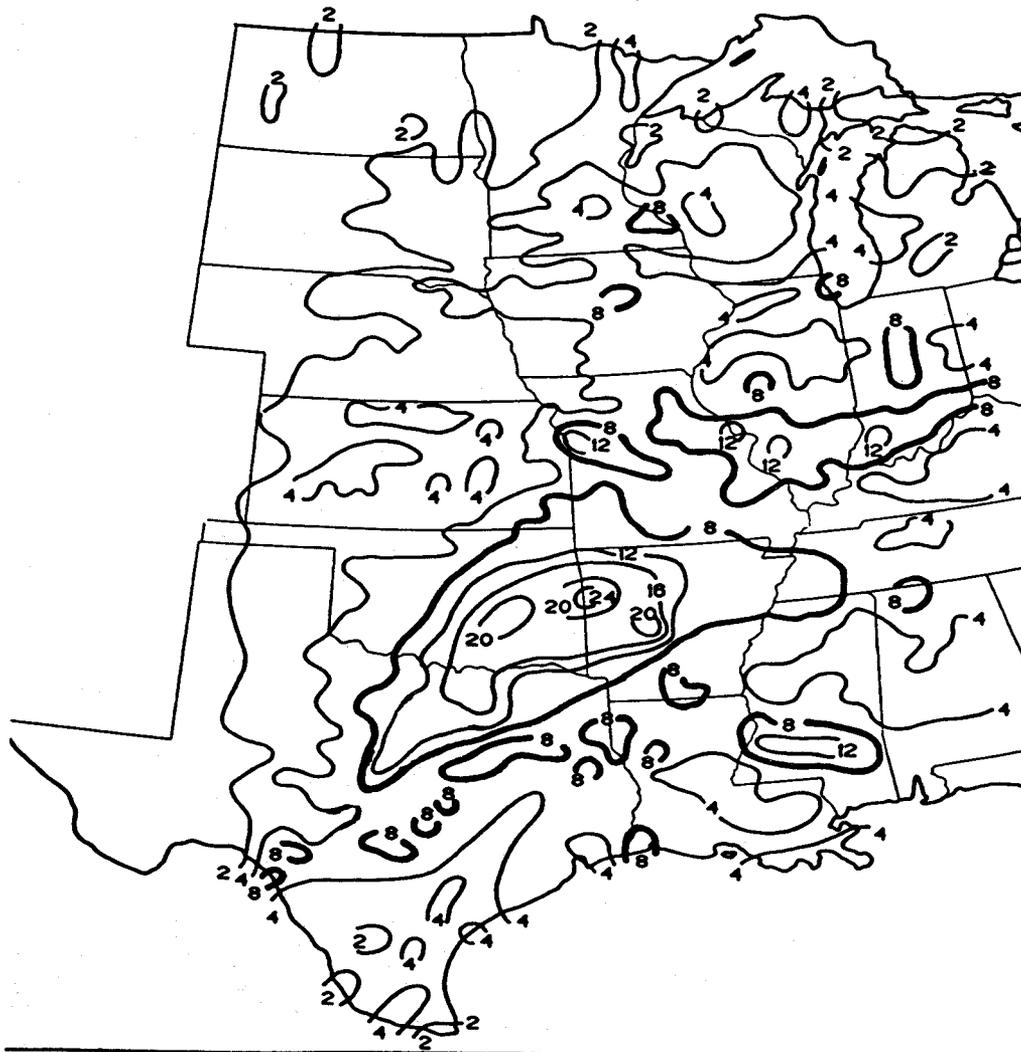
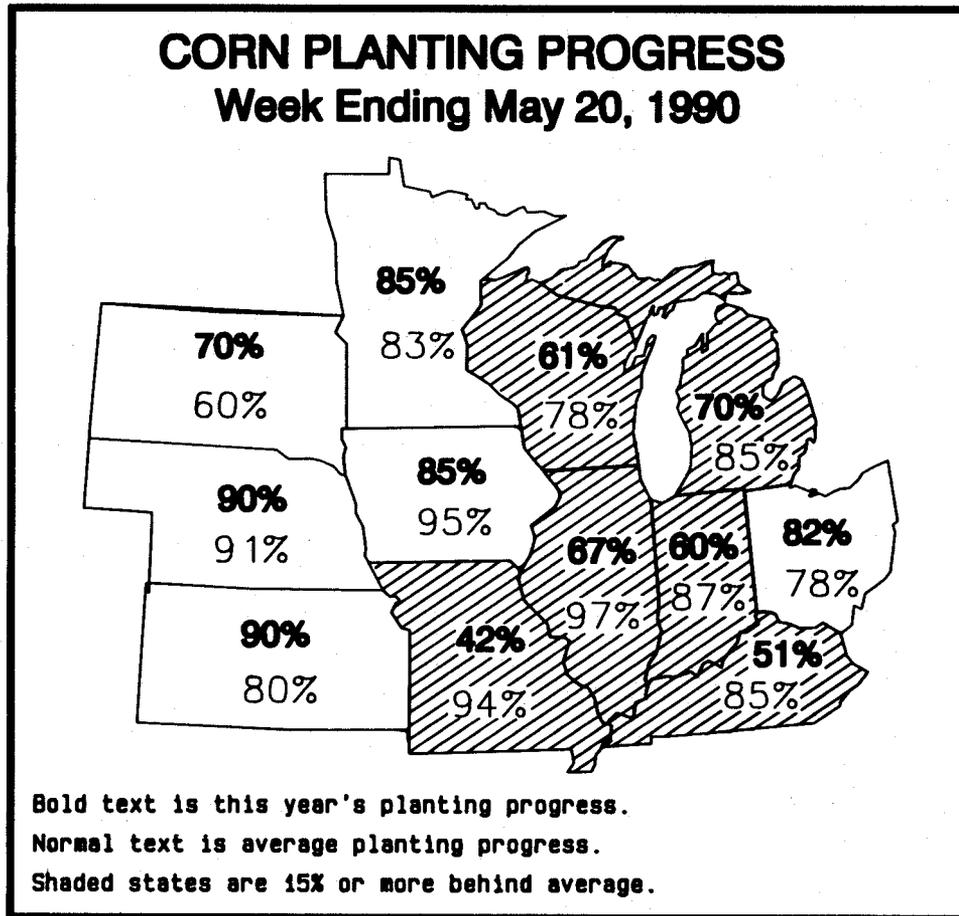


Figure 2



# National Weather Data for Selected Cities

## Weather Data for the Week Ending May 19, 1990

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS						
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE		.50 INCH OR MORE	
																		0	1	2	3
AL BIRMINGHAM	84	60	87	50	72	2	T	-1.0			11.6	80	25.8	106	92	46	0	0	0	0	
MOBILE	83	66	87	62	74	-1	3.1	1.9	3.1	22.6	149	38.1	155	96	59	0	0	0	0	1	
MONTGOMERY	85	60	89	54	72	0	.5	-.4	.4	18.4	144	36.2	169	97	50	0	0	2	2	1	
AK ANCHORAGE	58	45	65	42	52	5	.2	-.1	.2	1.2	78	4.1	128	89	56	0	0	0	0	0	
BARROW	34	27	37	23	31	11	T	0	.2	.2	52	3.3	40	100	88	0	0	7	0	0	
FAIRBANKS	70	45	77	42	57	9	T	-.1	.2	24	1.4	76	77	28	0	0	0	0	0	0	
JUNEAU	53	44	59	42	49	2	T	-.8		10.6	128	18.8	120	89	60	0	0	0	0	0	
KODIAK	50	44	61	43	47	4	2.0	.8	1.2	14.4	134	24.0	111	98	73	0	0	1	1	0	
NOME	46	37	49	34	42	6	1.2	1.0	.4	3.2	222	4.6	170	99	77	0	0	0	2	0	
AZ PHOENIX	95	69	101	67	82	5	0	0	0	5	48	2.0	84	25	12	6	6	0	0	0	0
PRESCOTT	75	45	79	41	60	3	0	-.1	0	1.8	70	4.4	74	40	9	0	0	0	0	0	0
TUCSON	93	59	98	55	76	3	0	0	0	5	46	2.2	86	37	9	0	0	0	0	0	0
YUMA	93	64	99	61	79	0	0	0	0	2	76	4	40	31	11	6	6	0	0	0	0
AR FORT SMITH	82	58	91	50	70	1	2.2	1.1	1.3	24.4	221	35.5	231	94	52	2	2	0	0	0	2
LITTLE ROCK	80	62	86	56	71	1	2.3	1.1	2.3	22.5	168	32.2	152	81	52	2	0	0	3	2	1
CA BAKERSFIELD	82	53	86	50	67	-3	0	-.1	0	.6	37	2.4	63	68	25	0	0	0	0	0	0
EUREKA	56	47	57	43	52	0	.3	-.1	.3	5.0	55	16.7	79	85	69	0	0	0	0	0	0
FRESNO	82	52	88	49	67	-1	0	-.1	0	1.6	53	5.7	84	71	21	0	0	0	0	0	0
LOS ANGELES	66	56	69	54	61	-1	0	0	0	.5	17	4.3	51	84	59	0	0	0	0	0	0
REDDING	79	53	85	48	66	-3	.1	-.2	.1	3.1	36	12.5	53	65	22	0	0	0	0	0	0
SACRAMENTO	79	50	85	47	64	-1	.1	0	.1	1.7	46	9.5	91	86	29	0	0	0	0	0	0
SAN DIEGO	68	59	71	56	64	0	T	0	T	1.0	35	4.6	71	77	55	0	0	0	0	0	0
CO DENVER	61	50	68	47	56	-2	.2	-.1	T	1.0	23	6.3	52	87	58	0	0	0	0	0	0
GRAND JUNCTION	73	41	83	37	57	0	.2	-.3	.2	4.5	99	5.8	102	74	19	0	0	0	0	0	0
PUEBLO	75	47	81	35	61	-1	T	-.2	T	1.8	95	2.9	96	48	13	0	0	0	0	3	0
CT BRIDGEPORT	77	41	86	37	59	-2	.1	-.2	.1	4.4	172	5.7	187	87	18	1	0	0	0	0	0
HARTFORD	66	53	72	50	59	1	1.8	1.0	1.1	11.6	119	17.4	109	92	58	0	0	0	0	1	4
DC WASHINGTON	67	50	76	46	58	-1	1.7	1.0	.7	11.2	109	18.5	110	95	52	0	0	0	0	2	2
FL APALACHICOLA	79	59	85	54	69	3	.3	-.5	.3	9.4	111	13.6	99	85	46	0	0	0	0	1	0
DAYTONA BEACH	86	66	89	61	76	2	0	-.6	0	6.7	75	13.1	81	98	53	0	0	0	0	0	0
JACKSONVILLE	88	70	94	67	79	4	.2	-.5	.2	4.8	68	11.8	95	95	51	3	0	0	0	1	0
KEY WEST	90	65	94	57	78	3	.1	-.9	0	3.0	34	8.9	58	92	40	5	0	0	0	2	0
MIAMI	87	79	88	79	83	3	T	-.7	T	2.1	48	3.2	39	79	61	0	0	0	0	0	0
ORLANDO	88	76	89	76	82	3	0	-1.5	0	10.7	124	12.1	95	82	51	0	0	0	0	0	0
TALLAHASSEE	91	61	93	54	76	2	T	-.8	T	3.8	51	8.1	64	93	39	7	0	0	0	0	0
TAMPA	92	72	96	70	82	5	T	-.8	T	3.6	63	18.4	83	99	37	5	0	0	0	3	0
WEST PALM BEACH	88	74	92	70	81	3	0	-1.4	0	5.6	50	8.7	71	93	43	7	0	0	0	0	0
GA ATLANTA	83	62	89	55	72	3	.9	-.1	.7	13.9	109	32.2	145	88	42	1	0	0	0	2	1
AUGUSTA	88	58	93	51	73	2	-.1	-.7	.1	4.2	40	9.6	52	96	37	3	0	0	0	0	0
MACON	87	60	92	53	73	1	-.1	-.7	.1	8.5	77	16.5	84	96	42	2	0	0	2	0	0
SAVANNAH	89	65	92	59	77	3	.2	-.9	.1	6.0	62	13.0	81	90	37	2	0	0	0	0	0
HI HILO	80	66	81	63	73	-1	1.2	-1.0	.6	18.0	55	62.4	112	88	63	0	0	0	3	2	1
HONOLULU	85	70	86	68	77	0	.1	-.2	0	1.4	24	9.7	80	78	48	0	0	0	0	0	0
KAHULUI	83	68	84	64	75	0	T	-.1	T	2.2	53	13.1	118	92	59	0	0	0	0	2	0
LIHUE	79	69	80	67	74	-1	1.1	.5	.6	7.6	78	18.2	93	87	67	0	0	0	0	3	1
ID BOISE	68	41	76	28	54	-3	T	-.3	T	2.9	100	4.5	81	67	20	0	0	1	0	0	0
LEWISTON	67	48	73	42	58	-1	.1	-.3	0	3.2	107	3.9	74	70	32	0	0	0	2	0	0
POCATELLO	65	38	76	29	51	-3	.1	-.2	.1	3.9	138	4.6	98	70	22	0	0	1	1	0	0
IL CHICAGO	67	51	73	46	59	0	.7	0	.5	11.0	131	15.2	136	93	58	0	0	0	5	0	0
MOLINE	72	52	79	44	62	1	.4	-.5	.3	15.9	172	19.5	161	90	53	0	0	0	2	0	0
PEORIA	72	53	77	46	62	1	.9	0	.4	10.3	114	15.7	130	96	59	0	0	0	5	0	0
QUINCY	70	52	78	45	61	-2	2.5	1.5	1.4	10.1	105	15.0	120	95	62	0	0	0	4	2	2
ROCKFORD	67	49	71	44	58	-1	1.3	.5	.9	10.2	113	13.2	114	91	57	0	0	0	3	1	2
SPRINGFIELD	71	55	78	49	63	0	4.6	3.8	3.5	12.9	140	19.2	155	92	57	0	0	0	0	3	2
IN EVANSVILLE	74	57	81	50	66	0	3.9	2.9	2.7	13.1	115	23.0	132	92	60	0	0	0	4	2	1
FORT WAYNE	69	51	76	43	60	0	1.7	1.0	1.2	10.1	117	19.1	151	92	58	0	0	0	4	1	2
INDIANAPOLIS	70	55	77	51	63	0	2.5	1.6	1.3	10.9	115	17.7	122	91	58	0	0	0	4	1	2
SOUTH BRND	68	50	72	44	59	0	3.1	2.5	1.9	11.5	131	17.5	133	95	55	0	0	0	5	2	2
IA DES MOINES	72	49	79	41	60	0	.6	-.3	.3	11.8	152	14.1	144	90	49	0	0	0	2	0	0
SIOUX CITY	69	46	82	37	58	-4	2.4	1.6	1.1	8.1	136	8.7	116	89	53	0	0	0	4	3	3
WATERLOO	68	46	74	37	57	-2	2.6	1.6	1.7	11.9	144	12.7	128	95	55	0	0	0	3	2	2
KS CONCORDIA	72	51	79	44	61	-2	2.3	1.4	1.6	10.0	155	10.7	136	95	54	0	0	0	5	1	2
DODGE CITY	76	49	87	42	63	-2	.8	-.8	T	7.4	143	10.2	166	93	40	0	0	0	0	0	0
GOODLAND	73	44	88	39	59	0	.0	-.2	.4	4.1	106	5.2	114	93	39	0	0	0	2	0	0
TOPEKA	73	51	78	43	62	-3	2.0	1.1	1.4	8.5	113	12.1	127	98	60	0	0	0	3	1	1
WICHITA	79	54	89	43	67	1	.0	-.7	.1	4.3	64	8.2	100	93	48	0	0	0	4	0	0
KY BOWLING GREEN	80	54	86	45	67	1	1.3	.3	1.2	7.4	60	19.7	95	98	59	0	0	0	2	1	1
LEXINGTON	75	56	79	50	66	1	.7	-.2	.4	7.1	62	14.7	80	90	51	0	0	0	4	0	0
LOUISVILLE	76	58	83	55	67	2	3.8	2.9	2.9	12.0	106	22.7	126	90	53	0	0	0	4	2	2
LA ALEXANDRIA	87	71	91	65	79	4	.6	-.6	.6	11.8	86	29.3	128	83	52	2	0	0	1	1	1
BATON ROUGE	89	70	92	64	79	4	.2	-.9	.1	10.0	75	29.3	128	94	52	3	0	0	2	0	0
LAKE CHARLES	85	72	86	65	78	4	.1	-.2	.1	12.2	117	26.2	143	96	66	0	0	0	1	0	0
NEW ORLEANS	84	71	87	68	78	3	2.6	1.4	2.6	14.9	121	37.3	166	94	65	0	0	0	1	1	1

Based on 1951-80 normals

Weather Data for the Week Ending May 19, 1990

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS						
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		.01 INCH OR MORE	.50 INCH OR MORE	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	85	67	88	61	76	3	.9	-.2	.7	14.4	126	31.3	166	96	58	0	0	2	1		
ME CARIBOU	58	41	69	37	49	-1	.8	-.1	.4	5.1	76	10.3	92	87	45	0	0	4	0		
PORTLAND	60	45	75	43	53	0	1.6	-.9	1.0	9.9	100	15.6	91	96	59	0	0	2	0		
MD BALTIMORE	77	55	84	47	66	3	.5	-.3	.2	8.9	98	14.1	93	86	43	0	0	3	0		
SALISBURY	77	53	83	44	65	2	.6	-.2	.6	8.8	94	14.8	92	94	51	0	0	1	1		
MA BOSTON	64	49	78	45	56	-2	2.2	1.4	1.1	11.4	114	18.8	106	92	57	0	0	5	1		
CHATHAM	61	48	67	45	54	1	2.0	1.1	.9	11.1	107	20.6	110	90	69	0	0	4	2		
MI ALPENA	62	41	68	34	52	0	1.7	1.1	.9	7.2	119	10.7	118	97	48	0	0	5	2		
DETROIT	65	47	73	39	56	-2	2.2	1.6	.8	8.1	111	15.0	138	94	55	0	0	5	2		
FLINT	65	45	73	37	55	-1	2.3	1.7	1.2	6.5	96	11.0	112	95	54	0	0	5	1		
GRAND RAPIDS	62	48	68	40	55	-3	2.0	1.3	.9	8.1	103	12.6	110	90	60	0	0	5	2		
HOUGHTON LAKE	62	44	68	37	53	-1	.8	.2	.5	4.5	74	7.1	81	92	48	0	0	4	0		
LANSING	64	45	73	36	54	-2	1.4	.8	.7	6.7	102	10.9	114	97	58	0	0	5	1		
MARQUETTE	55	38	66	27	47	-4	1.3	.4	.8	8.4	95	12.1	95	94	62	0	1	4	1		
MUSKOGON	61	46	69	39	54	-3	2.1	1.5	1.3	10.2	141	14.3	127	95	57	0	0	5	2		
SAULT ST. MARIE	56	40	65	33	48	-2	1.9	1.2	1.0	7.5	123	12.0	121	98	57	0	0	4	2		
MN ALEXANDRIA	56	43	64	32	49	-6	.7	.1	.3	5.1	101	5.5	84	97	61	0	1	6	0		
DULUTH	54	38	67	32	46	-4	.7	-.1	.4	7.9	139	8.9	115	88	53	0	1	4	0		
INT'L FALLS	57	37	63	32	47	-4	.6	.1	.3	3.4	85	4.6	82	97	46	0	1	3	0		
MINNEAPOLIS	60	45	68	37	53	-6	2.2	1.5	.7	10.2	185	11.1	155	94	54	0	0	6	3		
ROCHESTER	60	43	67	36	52	-5	1.9	1.2	.9	13.9	221	15.2	195	97	61	0	0	5	2		
MS GREENWOOD	85	64	89	55	74	2	.2	-1.0	.1	10.0	67	23.7	96	92	50	0	0	2	0		
JACKSON	87	63	91	56	75	3	.2	-1.0	.2	10.5	73	30.9	131	97	52	2	0	3	0		
MERIDIAN	88	63	92	52	75	3	.1	-.9	.1	14.6	99	41.8	172	97	48	2	0	1	0		
MO CAPE GIRARDEAU	77	58	84	47	67	-1	1.8	.7	1.7	12.3	99	25.6	139	96	60	0	0	4	1		
COLUMBIA	71	52	79	45	62	-3	5.7	4.6	3.0	19.4	193	25.2	185	97	60	0	0	4	3		
KANSAS CITY	73	53	79	46	63	-3	4.3	3.3	3.2	13.3	155	16.7	151	93	55	0	0	3	2		
SAINT LOUIS	73	57	80	51	65	-1	5.2	4.4	2.8	13.9	155	18.8	147	90	55	0	0	3	3		
SPRINGFIELD	75	53	85	46	64	-1	5.7	4.7	2.3	20.1	199	31.0	224	94	59	0	0	5	3		
MT BILLINGS	59	39	67	34	49	-6	.9	.3	.4	5.8	131	6.6	109	90	46	0	0	5	0		
GLASGOW	64	39	70	32	51	-4	.2	-.1	.2	1.5	79	1.9	75	86	32	0	1	3	0		
GREAT FALLS	58	36	64	32	47	-6	.6	0	.3	3.3	85	3.7	67	88	37	0	1	4	0		
HAVRE	61	38	67	29	50	-6	T	-.3	T	1.6	59	1.6	43	90	36	0	1	1	0		
HELENA	59	37	65	34	48	-5	.5	.2	.4	2.1	79	2.8	72	88	38	0	0	4	0		
KALISPELL	56	39	59	33	47	-5	.6	.2	.2	3.7	130	6.4	116	94	53	0	0	6	0		
MILES CITY	63	40	70	36	51	-6	.1	-.4	.1	3.2	96	3.3	74	84	36	0	0	1	0		
MISSOULA	59	37	65	32	48	-4	1.1	.7	.6	3.5	128	4.7	95	94	44	0	1	6	1		
NE GRAND ISLAND	70	46	76	39	58	-3	1.4	.5	1.0	6.8	108	7.6	100	94	50	0	0	3	1		
LINCOLN	72	49	80	40	60	-2	.7	-.2	.5	7.6	107	8.2	95	92	48	0	0	3	1		
NORFOLK	67	44	80	36	56	-5	1.2	.3	.5	6.0	102	7.1	100	93	51	0	0	4	0		
NORTH PLATTE	71	44	82	37	58	-1	1.2	.4	.6	5.4	112	5.9	103	94	42	0	0	3	2		
OMAHA	69	50	80	45	60	-4	.4	-.6	.3	6.6	89	7.7	85	88	58	0	0	2	0		
SCOTTSBLUFF	71	39	82	30	55	-2	.2	-.4	.1	5.6	142	6.9	145	89	26	0	1	2	0		
VALENTINE	68	43	80	34	55	-2	1.1	.4	.4	4.3	99	4.8	94	90	45	0	0	4	0		
NV ELY	66	36	73	24	51	1	T	-.3	T	2.2	87	4.1	105	58	13	0	1	0	0		
LAS VEGAS	87	63	92	60	75	2	0	-.1	0	.2	24	1.7	105	25	8	2	0	0	0		
RENO	72	41	78	36	57	2	0	-.2	0	.4	25	3.0	80	62	14	0	0	0	0		
WINNEMUCCA	69	34	75	26	51	-3	T	-.2	T	1.9	102	2.8	83	57	17	0	3	0	0		
NH CONCORD	64	44	77	38	54	-2	1.5	-.9	.7	8.0	103	13.5	104	95	50	0	0	3	2		
NJ ATLANTIC CITY	74	51	84	45	62	2	.3	-.4	-.2	8.6	94	12.3	77	93	50	0	0	3	0		
NM ALBUQUERQUE	81	52	85	47	67	2	0	-.1	0	2.6	222	3.2	170	40	9	0	0	0	0		
CLOVIS	85	53	89	45	69	4	0	-.5	0	1.5	58	3.6	107	63	16	0	0	0	0		
ROSWELL	89	60	94	56	74	5	0	-.2	0	1.8	148	2.4	120	39	9	5	0	0	0		
NY ALBANY	66	48	76	43	57	0	2.2	1.5	.9	12.0	151	19.8	158	95	52	0	0	4	0		
BINGHAMTON	63	47	71	42	55	0	1.6	-.9	.7	8.3	105	14.9	117	95	63	0	0	5	2		
BUFFALO	63	49	74	44	56	0	3.5	2.9	1.9	11.8	152	20.4	155	96	67	0	0	6	2		
NEW YORK	68	54	73	51	61	-1	3.1	2.4	2.7	13.5	135	19.2	119	92	57	0	0	4	1		
ROCHESTER	64	48	76	41	56	0	3.2	2.6	1.2	9.8	146	15.3	135	96	64	0	0	5	3		
SYRACUSE	66	49	77	42	57	0	2.3	1.6	1.1	11.8	142	17.9	132	97	62	0	0	4	2		
NC ASHEVILLE	79	53	84	48	66	2	.4	-.5	.4	11.0	103	22.3	131	95	39	0	0	2	0		
CHARLOTTE	83	61	87	54	72	3	T	-.8	T	7.1	69	15.6	93	82	37	0	0	1	0		
GREENSBORO	82	58	86	49	70	4	T	-.8	T	9.0	100	17.1	108	84	41	0	0	2	0		
HATTERAS	78	65	81	57	71	4	.5	-.4	.5	13.3	139	22.1	120	93	56	0	0	1	0		
NEW BERN	83	61	90	56	72	2	1.0	0	1.0	13.9	151	19.3	113	94	47	1	0	2	1		
RALEIGH	83	60	88	49	71	4	T	-.8	T	11.1	126	18.0	114	90	46	0	0	2	1		
WILMINGTON	84	63	92	55	74	3	.8	-.2	.7	9.4	100	14.0	85	98	45	1	0	2	1		
ND BISMARCK	61	41	70	33	51	-4	.8	-.3	.6	1.7	51	2.2	51	86	42	0	0	3	1		
FARGO	60	42	70	27	51	-5	.8	-.3	.6	4.1	103	4.7	95	91	49	0	1	3	1		
GRAND FORKS	61	37	70	29	49	-5	.7	-.3	.7	4.7	147	5.1	115	89	45	0	1	3	1		
WILLISTON	62	39	73	30	51	-4	.5	.1	.4	1.9	69	5.1	62	89	34	0	1	3	1		
OH AKRON-CANTON	68	47	75	35	58	-1	2.4	1.6	.9	10.8	124	18.0	134	94	54	0	0	4	3		
CINCINNATI	73	57	80	53	65	2	4.4	3.6	2.8	13.3	136	21.7	139	88	54	0	0	4	3		
CLEVELAND	68	49	75	37	58	0	2.4	1.7	.8	10.0	121	17.1	132	94	56	0	0	6	3		
COLUMBUS	71	53	79	44	62	1	2.5	1.6	1.1	8.9	101	16.5	120	96	56	0	0	5	2		

Based on 1951-80 normals

Weather Data for the Week Ending May 19, 1990

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS						
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		01 INCH OR MORE	.50 INCH OR MORE	01 INCH OR MORE	.50 INCH OR MORE
DAYTON	68	55	77	48	62	0	2.9	2.1	1.1	13.7	157	21.8	163	90	59	0	0	4	3		
TOLEDO	67	48	73	38	58	-1	2.2	1.6	1.2	9.6	131	17.2	154	97	54	0	0	6	1		
YOUNGSTOWN	69	47	75	33	58	1	2.1	1.4	.9	7.4	85	14.0	103	96	54	0	0	6	1		
OK OKLAHOMA CITY	84	61	90	51	73	4	.1	-1.2	.1	13.1	159	19.6	186	91	47	1	0	1	0		
TULSA	82	59	88	52	71	1	.9	-.2	.5	15.9	153	23.0	171	89	51	0	0	3	0		
OR ASTORIA	58	46	60	41	52	0	.4	-.3	.2	10.1	73	38.1	118	94	62	0	0	5	0		
BURNS	63	32	71	25	48	-5	0	0	0	.8	39	1.9	41	76	20	0	5	0	0		
MEDFORD	72	40	79	36	56	-2	T	T	T	2.3	65	6.3	70	83	26	0	0	1	0		
PENDLETON	67	44	72	41	56	-3	T	T	T	2.7	100	3.7	68	62	26	0	0	0	0		
PORTLAND	62	47	68	44	55	-3	.3	-.1	.5	5.3	74	16.7	97	92	56	0	0	4	0		
SALEM	65	43	70	38	54	-1	1.2	-.3	.1	4.2	53	17.9	92	81	50	0	0	1	0		
PA ALLENTOWN	72	52	80	48	62	2	.1	.4	1.1	7.3	73	14.2	87	87	51	0	0	2	1		
ERIE	63	50	72	37	56	0	2.3	1.6	.9	9.7	117	17.7	139	95	66	0	0	5	3		
HARRISBURG	74	55	81	48	64	2	1.1	.3	.7	8.2	92	15.1	104	90	50	0	0	3	1		
PHILADELPHIA	75	53	83	48	64	1	.9	-.2	.6	8.9	97	14.4	95	91	51	0	0	3	1		
PITTSBURGH	71	50	77	41	61	1	1.8	1.0	.7	8.1	90	14.7	103	94	49	0	0	4	2		
SCRANTON	69	51	76	47	60	1	1.3	-.6	.6	7.7	102	14.2	120	90	55	0	0	5	1		
RI PROVIDENCE	67	50	76	47	58	1	1.7	-.9	.7	11.6	112	19.5	108	94	56	0	0	5	1		
SC CHARLESTON	86	66	91	62	76	4	.1	-.9	.1	9.4	101	15.1	94	93	46	1	0	1	0		
COLUMBIA	88	59	93	54	74	2	.1	-.8	.1	6.1	55	11.1	57	94	37	3	0	1	0		
FLORENCE	88	63	92	56	75	4	T	T	T	5.5	61	8.3	52	93	37	2	0	1	0		
GREENVILLE	82	55	86	48	69	0	.1	-.8	.1	10.8	85	21.2	99	94	42	0	0	1	0		
SD ABERDEEN	60	42	67	30	51	-6	1.3	-.7	.8	4.0	91	4.5	82	94	55	0	1	4	1		
HURON	62	45	69	39	53	-4	4.5	3.9	3.2	8.1	170	8.7	148	90	56	0	0	5	5		
RAPID CITY	63	39	68	34	51	-4	.6	0	.4	3.1	69	3.7	68	87	43	0	0	4	2		
SIOUX FALLS	63	44	73	37	53	-5	2.5	1.8	.9	7.0	121	7.4	103	93	57	0	0	5	0		
TN CHATTANOOGA	83	58	87	52	70	2	.7	-.2	.4	17.2	128	34.4	147	97	43	0	0	3	1		
KNOXVILLE	81	57	86	51	69	1	1.1	-.2	1.1	11.8	102	24.6	121	94	41	0	0	1	1		
MEMPHIS	82	62	87	55	72	1	1.5	-.3	1.5	15.6	108	28.6	122	93	48	0	0	2	1		
NASHVILLE	83	59	87	49	71	3	1.0	0	.8	6.9	53	14.4	67	90	43	0	0	3	1		
TX ABILENE	89	66	95	55	78	5	T	-.7	T	12.1	223	16.4	222	83	37	3	0	0	0		
AMARILLO	83	52	89	43	68	2	T	-.6	T	4.7	137	7.5	169	82	19	0	0	1	0		
AUSTIN	90	73	93	67	81	6	.7	-.3	.7	8.3	113	13.1	115	95	56	4	0	1	0		
BEAUMONT	86	75	88	70	81	6	0	-1.1	0	17.6	172	33.7	182	93	68	0	0	1	0		
BROWNSVILLE	91	78	92	76	85	5	0	-.5	0	3.9	120	5.0	84	93	56	6	0	0	0		
CORPUS CHRISTI	88	77	89	75	82	4	0	-.8	0	7.6	167	12.0	157	97	69	0	0	0	0		
DEL RIO	92	72	94	68	82	4	.9	-.5	.9	9.7	261	11.6	226	75	35	5	0	1	0		
EL PASO	90	61	94	51	75	3	T	-.1	T	.8	127	1.2	84	43	13	4	0	0	0		
FORT WORTH	87	67	91	58	77	4	.2	-.8	-.2	19.4	210	28.6	224	90	51	2	0	2	0		
CALVESTON	84	77	85	75	80	5	0	-.8	0	10.9	162	18.1	150	96	77	0	0	0	0		
HOUSTON	89	75	91	72	82	7	T	-1.1	T	13.0	141	21.6	134	91	54	3	0	0	0		
LUBBOCK	90	60	97	48	75	6	0	-.6	0	3.3	96	5.8	133	78	14	4	0	0	0		
MIDLAND	94	64	100	54	79	6	T	-.5	T	3.1	124	4.4	127	74	20	4	0	0	0		
SAN ANGELO	89	67	96	53	78	4	.4	-.2	.4	7.1	176	10.3	188	85	44	4	0	2	0		
SAN ANTONIO	92	74	95	67	83	7	.5	-.3	.5	12.4	198	16.2	169	91	50	6	0	1	1		
VICTORIA	89	75	91	74	82	6	.4	-.6	.4	7.7	118	11.5	108	97	60	3	0	2	0		
WACO	89	69	93	59	79	5	.3	-.8	.2	14.2	163	19.7	159	91	56	5	0	2	0		
WICHITA FALLS	89	64	95	52	77	5	T	-1.0	T	16.7	224	23.6	252	89	42	3	0	0	0		
UT CEDAR CITY	71	43	77	32	57	0	0	-.2	0	2.7	102	5.4	134	44	14	0	1	0	0		
SALT LAKE CITY	69	46	81	39	58	-1	.7	.4	.4	4.0	83	4.9	66	70	24	0	0	5	0		
VT BURLINGTON	62	46	71	42	54	-2	1.3	.6	.7	7.2	108	12.4	122	95	51	0	0	6	1		
VA NORFOLK	80	60	88	53	70	3	.4	-.4	.4	8.5	95	14.7	92	84	46	0	0	1	0		
RICMOND	81	59	87	50	70	4	.1	-.7	.1	7.0	82	12.2	82	83	41	0	0	1	0		
ROANOKE	80	58	86	54	69	4	.1	-.8	0	6.7	75	11.8	79	82	42	0	0	3	0		
WA QUILLAYUTE	56	43	59	37	49	-2	.6	-.6	.5	15.5	69	48.5	99	99	66	0	0	4	0		
SEATTLE-TACOMA	60	45	64	43	53	-3	.1	-.3	.1	5.7	82	18.9	110	94	57	0	0	2	0		
SPOKANE	61	40	66	37	50	-4	1.2	-.9	.8	3.6	112	7.1	97	95	41	0	0	4	1		
YAKIMA	70	36	73	32	53	-5	T	-.1	T	.4	29	2.0	58	84	26	0	1	0	0		
WV BECKLEY	74	54	81	50	64	4	.3	-.5	.2	6.7	70	14.4	89	84	46	0	0	2	0		
CHARLESTON	79	56	88	49	68	4	.6	-.3	.3	6.4	65	13.0	80	91	43	0	0	3	0		
HUNTINGTON	77	57	84	52	67	3	1.1	-.2	.5	8.1	82	14.6	92	87	43	0	0	3	0		
PARKERSBURG	75	53	80	47	64	1	1.6	.8	.8	7.9	98	14.3	99	92	49	0	0	4	1		
WI GREEN BAY	59	45	68	37	52	-3	2.3	1.6	1.2	8.5	132	9.7	112	94	58	0	0	4	2		
LACROSSE	61	47	71	42	54	-5	1.8	1.0	1.2	9.2	131	10.6	121	93	53	0	0	3	1		
MADISON	62	46	69	35	54	-3	2.0	1.2	.9	10.8	150	13.4	144	93	57	0	0	5	2		
MILWAUKEE	62	47	71	43	54	0	2.1	1.5	1.6	12.6	167	17.0	163	91	58	0	0	4	1		
WAUSAU	58	44	67	36	51	-4	2.1	1.2	1.3	8.5	121	10.0	133	93	53	0	0	5	1		
WY CASPER	65	33	75	28	49	-4	.5	0	.3	3.5	93	4.5	94	92	29	0	3	4	0		
CHEYENNE	63	35	75	28	49	-3	.2	-.4	.2	6.2	171	7.2	165	92	29	0	2	2	0		
LANDER	63	37	71	30	50	-2	T	T	T	3.8	75	3.9	64	75	24	0	2	1	0		
SHERIDAN	59	37	67	28	48	-5	.3	-.3	.2	4.2	92	5.5	92	94	50	0	2	3	0		

Based on 1951-80 normals

## National Agricultural Summary

May 14-20, 1990

**HIGHLIGHTS:** Rain and wet field conditions slowed row crop plantings in the central Great Plains, Corn Belt, and portions of the Delta. The number of days suitable for fieldwork averaged one or less in Missouri, Illinois, Wisconsin, Indiana, and Ohio. Soil moisture was mostly surplus to adequate in the Corn Belt and adequate to surplus in the Delta. In the Southeast, soil moisture was adequate to short. Florida's citrus and vegetable producing areas needed rain. Soil moisture was adequate in the Great Plains except in North Dakota and Colorado, where additional moisture was needed. Rain was still needed in most of the West.

**SMALL GRAINS:** Winter wheat was mostly good to fair with 59 percent (%) of the acreage headed, 5 percentage points behind the 5-year average. Heading lagged behind normal in Colorado, Nebraska, and the Corn Belt but was near or ahead of normal elsewhere. Crop condition was good to excellent in Kansas and mostly good in Oklahoma. In Oklahoma, hot, dry winds caused some root rot problems to appear. Rust problems were increasing. Texas' winter wheat was good to fair. Harvest activity increased in the Blacklands and southern Texas. Continued wet weather was causing disease problems in Arkansas and Missouri. Cool weather slowed heading in Nebraska, where crop condition was good to fair. Russian wheat aphid damage was severe in some western counties. Winter wheat was good to fair in Colorado, Montana, and South Dakota. Crop condition was mostly good to fair in the Pacific Northwest. Lack of moisture stressed winter wheat in portions of eastern Oregon. Harvest activity increased in southern California. In the Corn Belt and Southeast, winter wheat was good to fair. In Ohio, powdery mildew problems were widespread. Harvest continued in Georgia.

Spring wheat was mostly good to fair. Seeding was 96% complete, 6 points ahead of normal. Seventy-six percent of the crop was emerged, 6 points ahead of normal. Seeding and emergence were ahead of normal in all five major producing States. North Dakota's crop was in good to fair condition.

**CORN:** Corn planting was 76% complete, 12 points behind normal. Rain and wet field conditions nearly halted planting in Illinois, Indiana, Missouri, and Ohio. In Illinois, planting was 67% complete, 30 points behind normal. Planting lagged 27 points behind the 87% average in Indiana. In Missouri, planting lagged 52 points behind the 94% average. Flooding was expected to force some replanting in Indiana and Missouri. Cool weather slowed growth and emergence in Nebraska. Lack of moisture stressed corn in southern Georgia.

**SOYBEANS:** Soybean planting was 17% complete, 26 points behind normal. Rain and wet field conditions slowed planting in the Corn Belt and Delta. Planting lagged 35 or more points behind normal in Illinois, Indiana, Iowa, and Missouri. Soybean planting did not progress in Indiana and Missouri. Planting lagged 25 points behind normal in Nebraska and Ohio. Planting was normal or ahead of normal in the Southeast.

**COTTON:** Cotton planting was 72% complete, 5 points ahead of normal. Rain and wet field conditions slowed planting in portions of the Delta. Planting lagged behind normal in Arkansas,

Missouri, and Tennessee but was near or ahead of normal in the other major producing States. In Texas, planting was 58% complete, 14 points ahead of normal. Fields were setting bolls in the Rio Grande Valley. Planting was active in Georgia and condition of the emerged crop was good to fair. Planting was complete in California and nearly complete in Arizona and Louisiana, but flooding was expected to force some replanting in southern Louisiana. In Mississippi, planting was 91% complete, 5 points ahead of normal.

**SORGHUM:** Sorghum planting was 30% complete, 10 points behind normal. Rain slowed planting in the central Great Plains and Corn Belt. In Nebraska, planting was 9% complete, 28 points behind normal. Planting also lagged behind normal in Arkansas, Colorado, Illinois, and Missouri. Kansas' planting was 10% complete, 5 points behind normal. In Texas, planting was 73% complete, 3 points ahead of normal.

**OTHER FIELD CROPS:** Rice seeding was 73% complete, 17 points behind normal. Rice condition was good to fair with 47% of the crop emerged, 26 points behind normal. Seeding lagged 36 and 20 points behind normal in Arkansas and Mississippi, respectively. Arkansas's rice was mostly fair to good. Peanut planting was over 90% complete in Alabama and Georgia and was virtually complete in Florida and Virginia. Crop condition was good in Georgia and good to excellent in Alabama. Peanut planting continued in North Carolina, Oklahoma, and Texas. Tobacco transplanting continued in Kentucky and Tennessee. Wet field conditions slowed transplanting in Kentucky. Tobacco transplanting was nearly complete in North Carolina. Sweetpotato planting lagged behind normal in Louisiana.

**FRUIT AND NUTS:** Rain was needed in Florida's citrus producing areas. Continued irrigation kept the new crop fruit in good condition. Grapefruit harvest was virtually complete. Peach harvest continued in Georgia and Mississippi and was underway in Alabama and South Carolina. Peaches were in good to excellent condition in Arkansas. In Texas, peach harvest increased in the Hill Country and Cross Timbers areas and was nearly complete in the Rio Grande Valley. Pecan sets were good. Orange and grapefruit harvests continued in central Arizona. In California, early variety apricot, nectarine, and peach harvests continued. Navel and Valencia orange harvests were active. Fruit was in good condition in the Hood River Valley, Oregon. In New York, fruit set was excellent for apples in the Lake Ontario area and moderate to heavy in the Hudson Valley.

**VEGETABLES:** Above-normal temperatures stressed vegetables in Florida. Spring crop harvests declined seasonally in the central area but were increasing in the north. Early vegetable harvest was underway in Alabama. Onion harvest was 92% complete in Georgia. Vegetables were in good to fair condition in Louisiana. Onion harvest was nearly complete in the Rio Grande Valley, Texas. In east Texas, excessive moisture slowed vegetable growth. In the High Plains, onions and potatoes were in good condition. In eastern Arizona, head lettuce harvest began. Potato harvest was underway in western Arizona. Onion harvest began in Riverside County, California. Potato planting continued in Klamath County, Oregon, but was

(Continued to back cover)

**Crop Progress**

FOR WEEK ENDING MAY 20, 1990

	CORN % PLANTED		
	1990	1989	AVG.
CO	84	87	90
GA	99	99	99
IL	67	94	97
IN	60	65	87
IA	85	98	95
KS	90	95	80
KY	51	76	85
MI	70	85	85
MN	85	83	83
MO	42	96	94
NE	90	93	91
NC	99	65	91
OH	82	19	78
PA	54	19	57
SD	70	75	60
TX	98	99	99
WI	61	76	78

17 STATES            76   83   88

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

	GRAIN SORGHUM % PLANTED		
	1990	1989	AVG.
AR	47	84	84
CO	6	15	27
IL	3	37	44
KS	10	20	15
LA	84	76	81
MS	64	65	71
MO	10	54	51
NE	9	30	37
NM	60	NA	NA
OK	5	20	15
SD	10	13	12
TX	73	70	70

12 STATES            31   NA   NA

EXCL. STATES  
WITH NA            30   40   40

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

NA - NOT AVAILABLE.

	SOYBEANS % PLANTED		
	1990	1989	AVG.
AL	28	31	29
AR	5	17	20
GA	30	26	31
IL	12	59	67
IN	11	21	50
IA	20	58	55
KS	20	20	20
KY	6	22	24
LA	31	17	29
MI	15	40	30
MN	36	50	48
MS	22	13	22
MO	2	40	37
NE	16	41	41
NC	26	6	19
OH	25	3	50
SC	25	9	15
SD	15	29	25
TN	5	23	23

19 STATES            17   36   43

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

	COTTON % PLANTED		
	1990	1989	AVG.
AL	86	96	92
AZ	99	99	98
AR	70	73	87
CA	100	100	99
GA	87	75	78
LA	98	75	86
MS	91	66	86
MO	49	93	95
NM	90	97	89
NC	90	43	74
OK	20	25	25
SC	83	60	86
TN	60	89	90
TX	58	35	44

14 STATES            72   59   67

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

	RICE % PLANTED		
	1990	1989	AVG.
AR	53	87	89
CA	85	85	81
LA	94	86	93
MS	76	90	96
TX	94	99	99
5 STATES	73	88	90

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

	RICE % EMERGED		
	1990	1989	AVG.
AR	23	60	67
CA	45	50	49
LA	87	79	86
MS	44	68	83
TX	75	97	94
5 STATES	47	68	73

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

	WINTER WHEAT % HEADED		
	1990	1989	AVG.
AR	100	100	99
CA	98	98	99
CO	8	16	38
GA	100	100	100
ID	3	1	1
IL	60	65	79
IN	27	25	48
KS	80	85	75
MI	0	0	2
MO	64	88	90
MT	0	0	0
NE	6	30	37
NC	98	96	NA
OH	7	10	20
OK	90	99	95
OR	48	30	26
SD	0	1	9
TX	90	92	90
WA	12	9	6
19 STATES	60	65	NA

	SPRING WHEAT % PLANTED		
	1990	1989	AVG.
ID	99	95	93
MN	99	95	87
MT	96	80	90
ND	93	90	90
SD	100	99	96
5 STATES	96	90	90

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

	SPRING WHEAT % EMERGED		
	1990	1989	AVG.
ID	84	75	78
MN	87	81	75
MT	73	34	64
ND	67	60	65
SD	100	87	86
5 STATES	76	62	70

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

EXCL. STATES WITH NA 59 65 64

THESE 19 STATES PRODUCED 88% OF THE 1989 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

### Crop Condition PERCENT

FOR WEEK ENDING MAY 20, 1990

STATE	RICE				
	VP	P	F	G	EX
AR	0	0	56	44	0
CA	0	0	10	80	10
LA	0	0	33	60	7
MS	NA				
TX	1	0	20	66	13
5 STATE	0	0	38	57	5
PREV WEEK	NA				
PREV YEAR	0	6	49	39	6

STATE	SPRING WHEAT				
	VP	P	F	G	EX
ID	0	1	26	65	8
MN	1	3	26	56	14
MT	2	4	28	50	16
ND	1	6	19	73	1
SD	2	1	34	58	5
5 STATE	1	4	24	64	7
PREV WEEK	NA				
PREV YEAR	0	1	26	67	6

STATE	WINTER WHEAT				
	VP	P	F	G	EX
AR	0	21	58	21	0
CA	0	0	15	75	10
CO	3	5	18	56	18
GA	0	3	47	49	1
ID	0	0	12	67	21
IL	0	1	31	63	5
IN	1	4	28	65	2
KS	0	0	14	47	39
MI	1	4	15	55	25
MO	0	1	49	48	2
MT	2	4	23	51	20
NE	0	5	26	61	8
NC	0	1	21	75	3
OH	1	6	40	46	7
OK	0	0	13	86	1
OR	0	10	56	33	1
SD	1	3	36	54	6
TX	3	9	35	47	6
WA	0	0	37	58	5
19 STATE	1	3	25	56	15
PREV WEEK	0	2	24	59	15
PREV YEAR	22	18	35	22	3

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 1.00 to 3.00 in. north; less than 0.50 in. south. Temperatures 1 to 4° above normal.

Days suitable for fieldwork 4.9. Soil moisture 1% short, 82% adequate, 17% surplus. Acreage intended for spring planting 95% prepared, 96% 1989, 96% avg. Fieldwork progress 21% behind schedule, 77% on schedule, 2% ahead of schedule. Timely rains helped growth, development all crops. Corn 98% planted, 97% 1989, 98% avg.; 3% silked, 2% 1989, 5% avg.; 4% fair, 80% good, 16% excellent. Sorghum 62% planted, 52% 1989, 45% avg.; 94% good, 6% excellent. Cotton 86% planted, 96% 1989, 92% avg.; some acres replanted Tennessee Valley area due to rain, wind damage; 54% fair, 46% good. Peanuts 90% planted, 87% 1989, 75% avg.; 51% good, 49% excellent. Soybeans 28% planted, 31% 1989, 29% avg. Winter wheat 99% headed, 99% 1989, 99% avg.; 75% turning color, 73% 1989, 69% avg.; 17% harvested, 22% 1989, 14% avg.; 1% poor, 27% fair, 72% good. First hay 43% harvested, 42% 1989, 33% avg. Pastures 19% fair, 77% good, 4% excellent. Livestock 18% fair, 76% good, 6% excellent. Primary activities: Planting cotton, soybeans, peanuts; cultivating row crops, vegetables; harvesting small grains, peaches, early vegetable crops; fertilizing summer pastures; cutting, baling hay; monitoring fish ponds; general care of livestock, poultry.

**ALASKA:** Warm temperatures prevailed throughout the railbelt. Highs 3 to 13° above normal. Lows 4 to 11° above normal. Seasonal precipitation 0.29 in. Below normal at Fairbanks to 0.94 in. Above normal at Kenai.

Days suitable for fieldwork 7.0. Topsoil 1% short, 97% adequate 2% surplus. Subsoil 1% short, 98% adequate, 2% surplus. Small grain seeding 80% oats complete; 70% barley. Commercial potato, 25% done. Hardy vegetable seeding; transplanting continues. Progress of fieldwork on schedule. Livestock good to excellent.

**ARIZONA:** Sunny, warm early in period; low pressure system brought strong, gusty winds 14th, 15th; isolated showers north. Cooler 18th, 19th; winds 40 to 50 mph north, southeast; 20 to 30 mph southwest. Temperatures 3° below to 5° above normal.

Cotton 99% planted, 99% 1989, 98% avg.; squaring 15%, good; post emergence irrigation continued. Small grains turning color 89%, 84% 1989, 82% avg.; jointing 14%, 11% 1989, 14% avg.; strong winds caused lodging; good. Alfalfa hay harvest moderate; 2nd cutting; good; gusty winds hindered baling. Potato, honeydew harvest began west. Dry onion, potato harvest active central; mixed vegetable harvest continued. Valencia orange, grapefruit harvest continued central, head lettuce harvest began east.

**ARKANSAS:** Mild week. Temperatures 2 to 4° above normal. Thunderstorms, showers statewide; heaviest central, southwest. Extremes 43°; 91°. Rainfall 0.17 to 13.46 in.

Days suitable for fieldwork 4.0. Soil moisture 41% adequate, 59% surplus. Main activities: Planting cotton, rice, grain sorghum; cutting, baling hay; repairing fences; fertilizing, spraying forages; working, moving livestock from flooded areas; sprigging bermudagrass. Corn 89% planted, 98% 1989, 96% avg.; 2% poor, 48% fair,

50% good. Oats 98% headed, 99% 1989, 97% avg.; 46% fair, 54% good. Cotton 33% emerged, 54% 1989, 69% avg.; 7% poor, 64% fair, 22% good, 7% excellent. Sorghum 31% emerged, 65% 1989, 68% avg.; 70% fair, 30% good. Many wheat acres lost due to flood, diseases, armyworms increasing. Cotton spraying for weeds, insects. Rice herbicide spraying for weeds, grass. Tomato fruit set improved. Bermudagrass forage being renovated, established. Peaches good to excellent. Livestock good; under stress, being sold in flooded areas.

**CALIFORNIA:** Weak low pressure systems moved through State, bringing cooler temperatures, no significant rain. Large pressure differential produced some very gusty winds, Sacramento Delta, westside. By weekend, storm nearing coast began producing light rain north end of State.

Field activities good progress, open weather entire week. Grain matured, dried. Harvest increased south. Harvest hay, green chop active. Rice seeding full swing, weed controls applied. Cotton fertilized, thinned, treated for mites, aphids. Seeding corn, dry beans active. Harvest overwintered sugarbeets. Alfalfa harvest active. Sudan, native grass hays cut. Normal cultural, pest control activities continued. Almonds, peaches sprayed, peach twig borer. Apples orchards thinned, treated, codling moth. Cherry harvest continued. Control of grape leaf skeletonizer, mildew continued, vineyards. Desert perlette grape harvest progressed. Grapevine suckering continued. Kiwifruit shipped, older lots repacked. Lemons packed, shipped. Harvesting continued, early varieties apricots, nectarines, peaches. Olive bloom progressed. Harvest active, navel, valencia oranges. Oranges treated, thrips. Plums treated, red humped caterpillar. Walnuts treated, codling moth. Artichoke harvest, moderate, variable quality, Salinas. Asparagus harvest active, Delta. Snap bean picked Westside, desert. Broccoli fairly heavy Salinas, good quality; moderate Santa Maria, variable quality. Cauliflower moderate, variable quality. Celery fairly light, good quality. Sweet corn harvest continued desert. Lettuce fairly heavy, variable quality Salinas. Watermelon harvest progressed Imperial, Coachella Valley, Westside. Cantaloupe planting, pollination continued, Westside. Onion harvest began Riverside, continued Imperial Valley, good quality. Green pea harvest completed Modesto Turlock. Pepper harvest active desert, planting on going Delta, Westside. Spring potato harvest continued southern areas, planting fall potato progressed, Tullake Butte Valley. Strawberry picking heavy, variable quality Salinas. Fresh Market tomatoes harvested, desert. Processing tomatoes, central valley transplanted, treated insects. Livestock good, active movement to summer pastures. Feeder, marketing cattle lighter than normal. Water supplies adequate north, marginally sufficient supplies diminishing quickly central, southern areas.

**COLORADO:** Clear sunny dry weather, alternating with short periods of cloudy weather with light precipitation. Temperatures slightly below normal.

Days suitable for fieldwork 5.0. Soil moisture 10% very short, 42% short, 46% adequate, 2% surplus. Winter wheat 84% jointed; 8% headed; 3% very poor, 5% poor, 18% fair, 56% good, 18%

excellent. Barley 77% emerged; oats 75% emerged. Spring wheat 85% seeded; 55% emerged. Dry beans 6% planted; sugarbeets 2% thinned. First cutting alfalfa 4% complete. Corn 84% planted; 26% emerged. Sorghum 6% planted; 1% emerged. Summer potatoes 88% planted; 55% emerged, with fall potatoes 60% planted. Dry onions good. Range, pasture, livestock remains mostly good to fair.

**FLORIDA:** Hot, humid week. Temperatures 3 to 6° above normal. Highs into low, mid 90s common interior, western Peninsula. Hottest 99° Lake Alfred. Coolest temperatures mostly 60s to low 70s, some 50s north. Thunderstorms widely scattered; only local totals of 0.50 in. or more. Much of Peninsula reported no rain.

Soil moisture Panhandle short to adequate; Peninsula short. Planting cotton, soybeans active; peanut planting virtually complete. Winter wheat harvest underway. Corn, sugarcane, tobacco good progress. Panhandle pastures fair to excellent; northern, central Peninsula very poor to fair; southern Peninsula poor to good. Cattle continue poor to good. Weather hot, dry citrus areas; rain needed. Irrigation all areas. Some wilt on trees without irrigation. New crop fruit good, due to irrigation. Valencia harvest slowing as few supplies remain. Grapefruit harvest virtually completed. Hot temperatures throughout major vegetable producing areas stressed most crops. Rainfall again limited to widely scattered showers. Harvest spring crops past peak central areas, gaining slowly northern areas. Volume leaders: Potatoes, watermelons, tomatoes, sweet corn, peppers, cucumbers, celery. Also available squash, radishes, carrots, eggplant, cabbage, snap beans. Sweet corn shipments at near record level. Season complete, Immokalee cucumbers, squash.

**GEORGIA:** Warm week. Temperatures 2 to 5° above normal. Extreme highs 80s north, low to mid 90s central, south. Coolest lows upper 40s mountains, mid 50s elsewhere. Rainfall 1.00 to 2.00 in. many locations north, most areas southeast under 0.25 in. Elsewhere under 0.50 in. Some local areas under 0.10 in.

Days suitable for fieldwork 5.8. Soil moisture 7% very short, 40% short, 51% adequate, 2% surplus. Corn 4% poor, 32% fair, 57% good, 7% excellent; 99% planted, 99% 1989, 99% avg.; 3% silked, 1% 1989, 7% avg. Soil moisture short south, southeast stressing crop. Cotton 2% poor, 30% fair, 68% good; 87% planted, 75% 1989, 78% avg.; planting very active. Sorghum 64% planted, 39% 1989, 53% avg.; good; planting very active. Peanuts 5% poor, 9% fair, 82% good, 4% excellent; 92% planted, 92% 1989, 86% avg.; planting slowed some areas dry soils. Soybeans 3% poor, 22% fair, 72% good, 3% excellent; 30% planted, 26% 1989, 31% avg. Tobacco 35% fair, 64% good, 1% excellent. Watermelons variable, down from last week. Wheat 3% poor, 47% fair, 49% good, 1% excellent; 7% harvested for grain, 4% 1989, 9% avg. Rye 3% poor, 47% fair, 50% good. Apples fair to good. Peaches 1% very poor, 17% poor, 10% fair, 72% good; 23% harvested, 4% 1989, 5% avg. Onions 12% fair, 87% good, 1% excellent; 92% harvested. Hay, pastures good. Livestock good. Main activities: Planting peanuts, cotton, soybeans; harvesting small grains, hay; irrigating corn drier areas; weed control in row crops, pastures.

**HAWAII:** Mostly sunny, dry weather prevailed. Moderate trade winds brought some passing showers windward, higher elevation areas. Winds 10 to 25 mph. Temperatures high 60s to mid 80s. Rainfall none to 5.50 in.

Days suitable for fieldwork 7.0. Weather was favorable for most crop development. Irrigation was required in many major growing areas to ensure

normal crop progress. Banana, papaya production increased, weather beneficial to orchards. Watermelon harvesting gained momentum.

**IDAHO:** Temperatures about 5° below normal statewide. Below normal precipitation fell in the north, east while the southwest, south central mostly dry.

Days suitable for fieldwork 6.0. Soil moisture 3% very short, 29% short, 67% adequate, 1% surplus. Winter wheat improved mostly good statewide, good to excellent north, headed 3% 90, 1% 1989, 1% avg.; 16% not yet jointed, 60% jointed, 21% boot, 3% headed. Spring wheat planted 99%, 95% 1989, 93% avg.; emerged 84%, 75% 1989, 78% avg.; fair to good; 82% not yet jointed, 18% jointed. Spring barley planted 99%, 96% 1989, 90% avg.; emerged 89%, 76% 1989, 74% avg.; 86% not yet jointed, 14% jointed. Potatoes planted 82%, 84% 1989, 73% avg.; emerged 16%, 12% 1989, 11% avg. Oats planted 92%, 92% 1989, 84% avg.; emerged 80%, 68% 1989, 64% avg. Sugarbeets emerged 89%, 94% 1989, 89% avg.; thinned 22%, 20% 1989, 21% avg. Dry peas planted virtually complete; emerged 94%. Lentils planted virtually complete; emerged 93%. Field corn planted 74%, 70% 1989, 81% avg.; emerged 32%, 33% 1989, 41% avg. Dry beans planted 11%, 13% 1989, 12% avg. Fruit tree good, thinning apples, plums southwest, past full bloom north. Frost damage to alfalfa south central, east. First cutting began warmer areas. Russian wheat aphids sprayed southern areas. Other pests north: foliar disease, Hessian flies, cabbage seedpod weevils, wheat rust; southwest: cutworms, fungus; south central: grasshoppers; east: Mormon crickets, grasshoppers. Irrigation water supplies good to fair. Turning out livestock to range. Sheep, cattle good to excellent. Branding, shearing continued few areas. No major problems. Range, pasture good to fair. Slow growth grass due to lack of moisture, cold temperatures south central.

**ILLINOIS:** Temperatures normal to 6° below normal across State. Precipitation 0.50 to 1.50 in. north, 1.50 to 3.00 in. central, 2.25 to 5.50 in. south.

Days suitable for fieldwork 0.50. Soil moisture 1% short, 22% adequate, 77% surplus. Corn 4% very poor, 7% poor, 40% fair, 49% good. Corn average height 2 in., 3 in. 1989, 4 in. avg. Wheat filled 9%, 17% 1989, 25% avg. Oats 5% fair, 85% good, 10% excellent. Alfalfa 6% poor, 28% fair, 53% good, 13% excellent. Alfalfa hay first cutting 4%, 18% 1989, 25% avg. Red clover 2% poor, 20% fair, 71% good, 7% excellent. Clover hay cut 1%, 6% 1989, 17% avg. Pasture 7% fair, 71% good, 22% excellent.

**INDIANA:** Temperatures slightly below normal. Lows 50s, highs upper 60s to low 70s. Precipitation 1.00 to 6.00 in.

Days suitable for fieldwork 0.1. Topsoil 3% adequate, 97% surplus. Subsoil 20% adequate, 80% surplus. Spring cropland 90% tilled, 93% 1989, 96% avg. Corn 48% emerged, 30% 1989, 66% avg. Wheat 20 in. high, 20 in. 1989, 21 in. avg. Oats 6 in. high, 6 in. 1989, 8 in. avg. Pasture 1% poor, 14% fair, 73% good, 12% excellent. Fieldwork at a standstill. Heavy showers, flooding southern areas. Replanting necessary in many fields.

**IOWA:** Temperatures normal to 5° below normal. Extremes 37°; 82°. Precipitation 0.28 to 4.87 in., average 1.75 in. Widespread soil erosion northwest high winds 17th; localized flooding west central, central 19th.

Days suitable for fieldwork 2.1. Topsoil 76% adequate, 24% surplus. Subsoil 31% short, 63% adequate, 6% surplus. Winter wheat mostly good to excellent. Hay 4% poor, 15% fair, 63% good, 18%

excellent. Pasture 2% poor, 17% fair, 63% good, 18% excellent. Oats 2% poor, 18% fair, 63% good, 17% excellent. Corn 40% emerged, 59% 1989, 72% avg. Soybeans 5% emerged, 7% 1989, 14% avg. Livestock good to excellent. Muddy feedlots, variable temperatures continued to stress cattle, hogs with slow weight gains.

**KANSAS:** Temperature 2 to 3° above normal northwest, south central, northeast; 1 to 2° below normal southwest, north central, northeast. Rainfall all areas; average 0.05 in. southwest to 2.96 in. northeast.

Days suitable for fieldwork 3.0. Topsoil 7% short, 64% adequate, 18% surplus. Subsoil 22% short, 70% adequate, 8% surplus. Wheat good to excellent. Wheat heading 80%, 85% 1989, 75% avg. Insect, disease problems light to severe across State. Corn planting good progress; behind last year, ahead of average. Early emergence has been good, some replanting may be needed following last weeks rain. Sorghum, soybean planting reached 10% to 20% completion at State level. As fields dry out, progress should be rapid with good moisture conditions. Ranges, pastures good growth. First cutting alfalfa hay 10% complete.

**KENTUCKY:** Temperatures near normal; highs upper 80s, overnight lows 40s, lower 50s. Temperatures mid to upper 60s. Storm system 16th produced heavy rains western, northern areas. Rainfall east 0.75 to 1.00 in.

Days suitable fieldwork 2.6. Little or no fieldwork some areas. Soil moisture 3% short, 45% adequate, 52% surplus. Corn planting 2 to 3 weeks behind normal some areas, becoming major concern. Burley setting 10% complete. Plants ready to set, many fields too wet. Early set tobacco fair to good. Winter wheat 95% headed; fair to good, showing improvement. Haying made difficult by wet conditions. Pasture 1% poor, 19% fair, 58% good, 22% excellent.

**LOUISIANA:** Temperatures 2 to 4° above normal. Extremes 56°; 92°. Rainfall 0.09 to 1.86 in.

Days suitable for fieldwork 3.6. Soil moisture 2% short, 60% adequate, 38% surplus. Spring plowing 91%, 95% 1989, 98% avg. Corn emerged 100%, 98% 1989, 98% avg.; 21% fair, 62% good, 17% excellent. Cotton planted 98%, 75% 1989, 86% avg.; emerged 96%, 66% 1989, 76% avg.; 54% fair, 46% good. Hay first cutting 32%, 24% 1989, 40% avg. Rice planted 94%, 86% 1989, 93% avg.; emerged 87%, 79% 1989, 86% avg.; 33% fair, 60% good, 7% excellent. Sorghum planted 84%, 76% 1989, 81% avg.; emerged 80%, 67% 1989, 70% avg.; 56% fair, 44% good. Soybeans planted 31%, 17% 1989, 29% avg.; emerged 25%, 9% 1989, 17% avg. Sweet potatoes planted 22%, 18% 1989, 37% avg. Sugarcane 15% very poor, 15% poor, 39% fair, 31% good. Wheat turning color 98%, 80% 1989, 90% avg.; harvested 22%, 15% 1989, 17% avg.; 4% poor, 36% fair, 56% good, 4% excellent. Harvesting was delayed in several areas due to high moisture. Yields very good. Livestock 25% fair, 70% good, 5% excellent. Pasture 27% fair, 68% good, 5% excellent. Vegetable 3% poor, 27% fair, 59% good, 11% excellent. Flooding in south has caused losses to crops, particularly rice, cotton, soybeans. Replanting will occur where possible as time permits.

**MARYLAND & DELAWARE:** **MARYLAND:** Precipitation 0.69 in. Temperature 64°, normal 63°. Extremes 32°; 86°.

Days suitable for fieldwork 4.1. Topsoil 63% adequate, 37% surplus. Subsoil 79% adequate, 21% surplus. Acreage prepared for planting 91%, 68% 1989, 86% avg. Field corn 78% planted, 45% 1989, 76% avg. Snap beans planted 58%, 44% 1989, 54%

avg. Oats 99%, 93% 1989, 98% avg. Small grains good. Wheat 78% headed, 52% 1989, 67% avg. Barley 97% headed, 100% 1989, 100% avg. Rye 97% headed, 100% 1989, 100% avg.

**DELAWARE:** Precipitation 0.50 in. Temperature 64°. Extremes 40°; 84°.

Days suitable for fieldwork 5.7. Topsoil 100% adequate. Subsoil 67% adequate, 33% surplus. Acreage prepared for planting 94%, 80% 1989, 88% avg. Field corn 91% planted, 58% 1989, 78% avg. Soybeans 9% planted, 2% 1989, 8% avg. Sweet corn 64% planted, 54% 1989, 74% avg. Small grains good. Wheat 98% headed, 80% 1989, 79% avg. Barley 100% headed, 98% 1989, 98% avg. Rye 100% headed, 100% 1989, 92% avg. Lima beans 15% planted, 8% 1989, 36% avg.

**MICHIGAN:** Temperatures 1 to 5° below normal. Extremes 41°; 68°. Precipitation 0.88 to 3.06 in. across the State.

Days suitable for fieldwork 2.0. Soil moisture 35% adequate, 65% surplus. Corn 70% planted, 85% 1989, 85% avg. Soybeans 15% planted, 40% 1989, 30% avg. Wheat 0% headed, 0% 1989, 2% avg.; 1% very poor, 4% poor, 15% fair, 55% good, 25% excellent. Major activities: Limited spring planting, tillage, fertilizer, herbicide application, machinery repair. Too wet for orchard work. Fungicides going on between showers. Most farmers skeptical about fruit potential because of poor pollination. Limited vegetable planting being done. Asparagus harvest 45% complete.

**MINNESOTA:** Temperatures 4 to 6° below normal. Extremes 27°; 72°. Precipitation 0.40 to 2.60 in. Greatest weekly total 3.59 in.

Days suitable for fieldwork 2.5. Topsoil 2% very short, 10% short, 66% adequate, 22% surplus. Subsoil 17% very short, 44% short, 36% adequate, 3% surplus. Spring wheat 99% planted, 95% 1989, 87% avg.; 87% crop emerged, 81% 1989, 75% avg.; 2% jointing, 2% 1989, 3% avg. Oats 96% planted, 98% 1989, 92% avg.; 81% crop emerged, 77% 1989, 81% avg.; 2% jointing, 2% 1989, 4% avg. Barley 99% planted, 96% 1989, 85% avg.; 88% crop emerged, 68% 1989, 69% avg.; 6% jointing, 1% 1989, 2% avg. Corn 94% land prepared, 91% 1989, 89% avg.; 85% planted, 83% 1989, 83% avg.; 27% crop emerged, 29% 1989, 47% avg. Soybeans 64% land prepared, 73% 1989, 70% avg.; 36% planted, 50% 1989, 48% avg.; 4% crop emerged, 2% 1989, 10% avg. Sugarbeets 98% planted, 99% 1989, 92% avg. Dry beans 34% planted, 44% 1989, 42% avg. Potatoes 61% planted, 60% 1989, 63% avg. Flax 47% planted, 42% 1989, 45% avg. Sunflowers 46% planted, 35% 1989, 41% avg. Sweet corn 57% planted, 49% 1989, 54% avg. Green peas 83% planted, 80% 1989, 83% avg. Spring wheat 1% very poor, 3% poor, 26% fair, 56% good, 14% excellent.

**MISSISSIPPI:** Temperatures 2° above normal. Extremes 48°; 92°. Wet north, dry central, south. Rainfall 1.00 in., 0.12 in. below normal. Soil temperatures 76°.

Days suitable for fieldwork 3.7, 2.0 1989, 4.3 avg. Soil moisture 63% adequate, 31% surplus, 6% excessive. Wheat 100% heading, 99% 1989, 99% avg.; 2% very poor, 33% poor, 45% fair, 19% good, 1% excellent; 23% mature, 15% 1989, 21% avg. Cotton 91% planted, 66% 1989, 86% avg.; 70% emerged, 49% 1989, 68% avg.; 5% very poor, 4% poor, 35% fair, 48% good, 8% excellent. Corn 87% planted, 90% 1989, 95% avg.; 84% emerged, 80% 1989, 87% avg.; 21% fair, 72% good, 7% excellent. Rice 76% planted, 90% 1989, 96% avg.; 44% emerged, 68% 1989, 83% avg. Soybeans 22% planted, 13% 1989, 22% avg.; 13% emerged, 8% 1989, 11% avg. Sorghum 64% planted, 65% 1989, 71% avg.; 56% emerged, 55% 1989, 60% avg.; 18% fair, 82% good.

Peanuts 42% planted, 48% 1989, 56% avg. Sweet potatoes 27% planted, 33% 1989, 45% avg. Watermelons 84% planted, 85% 1989, 83% avg. Peaches 6% harvested; 14% very poor, 30% poor, 23% fair, 33% good. Hay 22% harvested, 17% 1989, 21% avg. Pasture, livestock fair to good. Activities: Planting fields crops, flushing rice, cultivating crops.

**MISSOURI:** Temperatures 2° below normal. Precipitation 2.00 in. northwestern, north central, northeastern, southeastern districts, 3.00 to 8.00 elsewhere. Most rivers overflowed.

Days suitable for fieldwork 0.5. Topsoil 16% adequate, 84% surplus, with northwestern district at 62% surplus being the only district with less than 85% surplus. Ground worked at least once for spring crops 75%, 97% 1989, 95% avg. Corn planting 22% west central, south central to 66% southeast, most areas over 3 weeks behind avg. Some corn in flooded areas drowned, replanting necessary. Wet weather causing mildew, septoria in wheat, damage not yet major. Alfalfa hay first cutting 4%, 41% 1989, 39% avg. Other hay 1% harvested, 12% 1989, 18% avg. Pastures 1% poor, 14% fair, 69% good, 16% excellent.

**MONTANA:** Temperatures 3 to 7° below normal all divisions. Rainfall all areas. Most amounts in central, south central, southwest.

Days suitable for fieldwork 4.3. Topsoil 29% short, 60% adequate, 11% surplus. Subsoil 30% short, 63% adequate, 7% surplus. Barley 1% very poor, 2% poor, 17% fair, 60% good, 20% excellent; planted 92%, 75% 1989, 88% avg.; emerged 61%, 34% 1989, 63% avg. Oats 1% very poor, 4% poor, 25% fair, 56% good, 14% excellent; planted 91%, 69% 1989, 84% avg.; emerged 55%, 21% 1989, 60% avg. Sugarbeets 2% very poor, 12% poor, 16% fair, 61% good, 9% excellent. Corn planted 57%, 40% 1989, 57% avg.; emerged 17%. Dry beans planted 51%, 31% 1989, 69% avg. Potatoes planted 27%, 30% 1989, 33% avg. Pasture, range feed 7% very poor, 11% poor, 24% fair, 45% good, 13% excellent. Cattle, calves moved to summer ranges 51%, 46% 1989, 55% avg. Sheep, lambs moved 51%, 50% 1989, 65% avg.

**NEBRASKA:** Temperatures 1 to 5° below normal. Extremes 30°; 87°. Precipitation occurred beginning, weekend. Rainfall 0.10 in. north central up to 2.00 in. southwest.

Days suitable for fieldwork 2.6. Topsoil 11% short, 81% adequate, 8% surplus. Subsoil 76% short, 24% adequate. Winter wheat 98% jointed, 93% 1989, 92% avg. Cool weather slowed heading. Russian wheat aphids causing severe damage some western counties, some fields beyond help. Many producers continue spraying. Treating powdery mildew southeast. Chinch bugs causing damage east, southeast. Corn 51% fair, 49% good; 45% emerged, 58% 1989, 57% avg. Cool weather slowed emergence, caused some yellowing around State. Cutworms causing concern eastern third of State. Sorghum 2% emerged, 9% 1989, 10% avg. Soybeans 2% emerged, 9% 1989, 12% avg. Alfalfa hay 34% fair, 66% good. First cutting getting underway east, north. Moderate to high infestations clover leaf, alfalfa weevils northeast, east, some fields being sprayed. Wild hay 4% poor, 85% fair, 11% good. Pasture, range feed supplies 44% short, 56% adequate. Pastures responding to recent moisture, short, needing warmer weather to promote growth. Cattle moving to pastures across State. Limited liquidation some herds due to short feed supplies.

**NEVADA:** Temperatures seesawed above, below normal. No precipitation, only gusty winds. Extremes 14°; 96°.

Most oats, barley heading extreme south. Although no rain this season, irrigation water supplies adequate at present time. Second cutting

alfalfa hay underway extreme south. Due cool weather this spring very small average potatoes emerged to date. Some early emerged acres frosted, not expected to hurt the 1990 potato crop significantly. Ranges drier than normal. Livestock mostly good.

**NEW ENGLAND:** Precipitation 1.00 to 3.00 in. Northern Maine driest, under 1.00 in. Temperatures upper 40s north, mid 50s south; normal over Maine, below normal elsewhere.

Days suitable for fieldwork 3.5. Soil moisture north 30% adequate, 70% surplus; south 31% adequate, 69% surplus. Grazing availability 8% short, 65% adequate, 27% surplus. Maine potatoes 63% planted, 22% 1989, 48% avg.; good. Connecticut River Valley potatoes 65% planted, 95% 1989, 82% avg.; 18% emerged, 50% 1989, 48% avg.; good. Maine oats 63% sown, 23% 1989, 66% avg.; good. Field corn 30% planted, 30% 1989, 45% avg.; 10% emerged, 6% 1989, 17% avg.; good. Sweet corn 35% planted, 43% 1989, 48% avg.; 23% emerged, 15% 1989, 28% avg.; good. Connecticut shade tobacco good to excellent. Hay good. Apples early to full bloom. Connecticut, Massachusetts peaches full bloom to fruit set. Connecticut pears petal fall. Blueberry, cranberry bud stage to early bloom. Major farm activities: Corn planting, seeding, manure spreading, fencing, spraying fruit trees.

**NEW JERSEY:** Temperatures near normal. Extremes 42°; 85°. Rainfall 2.46 in. north, 1.57 in. central, 0.44 in. south. Heaviest 24 hour total 2.75 in. on 16th, 17th. Estimated soil moisture percent field capacity averaged 97% north, 95% central, 83% south. Four inch soil temperatures 60° north, 62° central; 63° south.

Frequent rain halted fieldwork. Big Boston, bibb, romaine, leaf lettuce, endive continued to move to market. Greens in light to moderate supply. Apples, peaches, strawberries, blueberries continued to make good early size, some fruit sets very light. Corn planting delayed; early sown corn for grain up 2 to 3 inches. Wet conditions delayed soybean planting. Fall sown grains well headed. Hay, pasture growth good. Warmer, dryer weather would be beneficial for hay making.

**NEW MEXICO:** Temperatures normal. Second successive week of very dry conditions. Wind damage.

Days suitable for fieldwork 6.7. Soil moisture 71% short, 29% adequate. Cotton planted 90%; cool soil temperatures slowing planting on High Plains. Milo planted jumped to 60% complete. Cattle poor to good; sheep fair to good; range poor to good.

**NEW YORK:** Temperatures near normal. Lows fell to near freezing early in week. Highs in mid 70s. Very wet. Rainfall up to 3.00 in. across State.

Days suitable for fieldwork 1.4. Soil moisture mostly surplus. Standing water in many fields. Planting progress delayed. Oats 81% seeded, 79% 1989, 83% avg. Corn 28% planted, 20% 1989, 46% avg. Pastures, hay good, wheat fair to good. Hay ready to be cut in some areas. Drying weather needed. Lake Ontario apples show excellent fruit set. Peaches in shuck split stage. Heavy Bartlett pear set. Hudson Valley apples moderate to heavy set. Some winter injury to peaches. Onions good. Strawberries beginning to bloom. Planting slowed by wetness.

**NORTH CAROLINA:** Temperatures 2 to 4° above normal across the State. Extremes 43°; 93°. Precipitation none to 1.03 in.

Days suitable for fieldwork 5.6. Soil moisture 8% short, 89% adequate, 3% surplus. Pasture 11%

fair, 80% good, 9% excellent. Livestock feed from pasture 79%. Hay first cutting 37%. Corn planted 99%; cotton planted 90%; sorghum planted 46%; soybeans planted 26%; peanuts planted 75%. Sweet potatoes transplanted 30%. Burley tobacco transplanted 22%. Flue cured tobacco transplanted 97%. Tobacco plant bed supplies 2% very short, 7% short, 88% adequate, 2% surplus. Wheat headed 98%. Crop condition: Wheat 1% poor, 21% fair, 75% good, 3% excellent; oats 5% poor, 16% fair, 78% good, 1% excellent; barley 2% poor, 24% fair, 74% good; rye 5% poor, 17% fair, 75% good, 3% excellent; corn 1% poor, 11% fair, 83% good, 5% excellent; flue cured tobacco 18% fair, 79% good, 3% excellent; irish potatoes 4% very poor, 16% fair, 68% good, 12% excellent; peaches 19% very poor, 19% poor, 44% fair, 15% good, 3% excellent; truck crops 3% very poor, 15% fair, 77% good, 5% excellent; hay 17% fair, 75% good, 8% excellent. Major activities: Planting corn, soybeans, land preparation, transplanting, cultivating tobacco, planting sorghum, cotton, and peanuts. Other activities included: Hay harvesting, planting truck crops, tending tobacco beds, tending livestock, transplanting sweet potatoes, spraying, cultivating corn, harvesting vegetables, general farm maintenance.

**NORTH DAKOTA:** Cool, scattered precipitation. Temperatures 4 to 6° below normal statewide. Extremes 24° west central; 73° east central, northwest. Precipitation 0.35 in. southwest to 1.45 in. north central.

Days suitable for fieldwork 5.4. Soil moisture supplies well below five year (1985-89) average. Topsoil 26% very short, 47% short, 27% adequate. Subsoil 71% very short, 24% short, 5% adequate. Most crops fair to good. Spring wheat 1% very poor, 6% poor, 19% fair, 73% good, 1% excellent; durum wheat 2% very poor, 2% poor, 21% fair, 71% good, 4% excellent; oats 3% very poor, 9% poor, 28% fair, 58% good, 2% excellent; barley 1% very poor, 3% poor, 22% fair, 72% good, 2% excellent. Crop development near average. Spring wheat 67% emerged and beyond, 60% 1989, 65% avg.; durum wheat 46%, 42% 1989, 50% avg.; oats 66%, 52% 1989, 64% avg.; barley 70%, 61% 1989, 66% avg.; winter wheat 28% jointing and beyond, 34% 1989, 54% avg.; corn 58% planted, 55% 1989, 55% avg.; flaxseed 39%, 32% 1989, 44% avg.; potatoes 45%, 59% 1989, 65% avg.; soybeans 28%, 27% 1989, 35% avg.; dry edible beans 14%, 15% 1989, 25% avg.; sunflower 16%, 14% 1989, 19% avg. Pastures 30% very poor, 39% poor, 30% fair, 1% good; furnished 54% roughage requirements. Stockwater supplies 12% very short, 59% short, 32% adequate, 2% surplus; quality mostly fair to good. Grasshopper hatch slowed as below normal temperatures prevailed. High winds caused erosion in some areas.

**OHIO:** High temperatures low 70s. Lows 50s. Daytime temperatures near normal, nighttime above normal. Soil temperatures upper 50s; a few degrees subnormal. Rainfall exceeded 1.00 in. statewide; 2.00 in. common.

Days suitable for fieldwork 0.8. Soil moisture 24% adequate, 76% surplus; more rain on weekend. Field activities: Limited planting, spraying pesticides when possible. Cold, wet conditions slowed germination, emergence of recently planted crops. Emerged crops have yellow cast. Flooded fields already planted to corn may need to be replanted to corn or switched to soybeans. Winter wheat starting to head; fair to good, down from previous week. Powdery mildew prevalent, not yet at flag leaf. Grasslands fair to mostly good. Pastures becoming too wet for grazing. Tobacco plant setting under way. Processing tomato transplanting struggling along.

**OKLAHOMA:** Temperatures 2° above normal Panhandle to 6° above normal southwest. Precipitation none Panhandle to 3.93 in. southeast.

Days suitable for fieldwork 4.4. Topsoil 7% short, 45% adequate, 48% surplus. Subsoil 3% short, 97% adequate. Wheat 13% fair, 86% good, 1% excellent; 90% heading, 99% 1989, 95% avg.; 15% soft dough, 40% 1989, 40% avg. Hot, dry winds caused root rot problems to appear. Rust increasing. Some wheat hay baled. Cotton 20% planted, 25% 1989, 25% avg. Sorghum 5% planted, 20% 1989, 15% avg. Soybeans 10% planted, 40% 1989, 25% avg. Peanuts 25% planted, 40% 1989, 30% avg. Corn 85% up to stand, 95% 1989, 75% avg. Recent wet weather delayed row crop plantings a week to ten days behind 5 year average. Pastures good. Cattle good; marketings stable, prices firm to moderately higher than preceding week. Insect activity moderately heavy east, south.

**OREGON:** Temperatures below normal. Southwest interior, extreme southeast warmest. Highest temperature 81° at Grants Pass. Light precipitation. Rainfall greatest in west, extreme northeast.

Soil moisture 52% short, 48% adequate. Barley 93% planted, 92% 1989, 98% avg. Many small grain fields, particularly on shallow soils, stressed east. Wet, cool weather slowed crop development, fieldwork. Some alfalfa hay, clover for silage was cut. Early fresh market strawberries picked Washington County; processing season to begin in two weeks Willamette Valley. Blueberry freeze damage high elevations of Lane County. Cranberries in hook stage, except Stevens showed scattered blossoms Coos, Curry counties. Tree fruit sizing well, good condition Hood River. Pears look good Medford. Many orchards severely frost damaged Blue Mountains. Planting of snap beans, sweet corn continued. Sweet corn 40% planted Malheur County. Fresh market vegetable crops planted Willamette Valley. Potato planting preceded Klamath County. Onions in three leaf stage Malheur County. Livestock excellent. Pastures good west, southwest needs more rain. Ranges, pastures poor to fair east. Livestock producers need more moisture for forage in area from The Dalles to Bend east to Burns. Stockwater short Harney County. Heavy demand for pasture Deschutes County.

**PENNSYLVANIA:** Wet with slightly above normal temperatures, across State. Temperature 60°; 30 above normal. Extremes 36°; 83°. Precipitation 1.32 in., 0.50 in. above normal.

Days suitable for fieldwork 2.0. Soil moisture 0% short, 48% adequate, 52% surplus. Plowing 87% complete, 76% 1989, 88% avg. Corn 54% planted, 19% 1989, 57% avg. Soybeans 13% planted, 7% 1989, 22% avg. Oats 93% planted, 85% 1989, 95% avg. Potatoes 69% planted, 56% 1989, 79% avg. Tobacco Beds 100% planted, 100% 1989, 100% avg. Barley 24% pre boot, 45% 1989, 23% avg.; 24% boot, 27% 1989, 25% avg.; 52% heading or headed, 38% 1989, 52% avg. Wheat 46% pre boot, 59% 1989, 44% avg.; 40% boot, 34% 1989, 38% avg.; 14% heading or headed, 7% 1989, 18% avg.; 7% poor, 17% fair, 57% good, 19% excellent. Oats 5% poor, 18% fair, 55% good, 22% excellent. Hay stands mostly fair to good. Alfalfa hay harvested 4%, 0% 1989, 9% avg. Quality of hay made 37% poor, 44% fair, 19% good. Feed from pastures mostly average. Peaches 0% pre pink, 8% 1989, 2% avg.; 5% pink, 8% 1989, 3% avg.; 95% full bloom or past, 84% 1989, 95% avg. Cherries 0% pre pink, 13% 1989, 3% avg.; 1% pink, 11% 1989, 4% avg.; 99% full bloom or past, 76% 1989, 93% avg. Apples 4% pre pink, 20% 1989, 5% avg.; 7% pink, 19% 1989, 7% avg.; 89% full bloom or past, 61% 1989, 88% avg. Activities: Spring plowing; planting corn, oats, soybeans, potatoes,

vegetables; repairing fence; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

**PUERTO RICO:** Rainfall 0.81 in. was 0.74 in. below normal. Highest rainfall 4.55 in. Pico Del Este Luquillo; 2.06 in. Rio Blanco Lower; 1.90 in. Rio Piedras Aes. Temperatures 79° on Coasts, 73 to 76° at Pico Del Este Luquillo, 82° at Roosevelt Roads N.S. Extremes 58°; 92°.

**SOUTH CAROLINA:** Temperatures 1° above normal in northwest to 5° above normal near the south coast. statewide rainfall generally less than .50 in.

Days suitable for fieldwork 6.0. Soil moisture 12% very short, 58% short, 30% adequate. Cotton 34% fair, 66% good; 83% planted, 60% 1989, 86% avg. Soybeans 25% planted, 9% 1989, 15% avg. Corn good. Watermelons fair to good; 89% planted, 90% 1989, 92% avg. Cantaloupes good; 86% planted, 85% 1989, 87% avg. Peaches fair; 4% harvested, 0% 1989, 0% avg. Oats good; 80% turning color, 54% 1989, 58% avg.; 26% ripe, 11% 1989, 15% avg.; 2% harvested, 0% 1989, 0% avg. Wheat fair to good; 84% turning color, 61% 1989, 61% avg.; 28% ripe, 12% 1989, 12% avg.; 1% harvested, 0% 1989, 0% avg.

**SOUTH DAKOTA:** Temperatures 0 to 5° below normal. Extremes 22°; 79°. Precipitation widespread rainfall, heaviest central, east. Maximum 4.74 in. Growing season precipitation below normal west, north; above normal elsewhere. Growing degree days 78 units above to 73 units below normal.

Days suitable for fieldwork 3.4. Subsoil 23% critically short, 60% short, 17% adequate. Topsoil 6% critically short, 28% short, 63% adequate, 3% surplus. Cool wet weather slowing planting and crop progress. Small grain good to fair, livestock mostly good, range, pasture fair to good. Major activities: Planting row crops, fieldwork, working cattle, branding, fencing.

**TENNESSEE:** Series fronts brought rainfall all sections mainly mid week, weekend. Temperatures warmer than normal west, cooler across Cumberland Plateau. Lows mid 50s, highs lower 80s. Rain east 1.25 in., west 2.00 in.

Days suitable for fieldwork 3.0. Soil moisture 1% short, 70% adequate, 29% surplus. Corn 70% planted, 89% 1989, 89% avg.; 1% very poor, 10% poor, 39% fair, 48% good, 2% excellent. Cotton 60% percent planted, 89% 1989, 90% avg.; 3% very poor, 28% poor, 62% fair, 7% good. Sorghum 30% planted, 51% 1989, 59% avg.; 2% very poor, 0% poor, 71% fair, 21% good, 6% excellent. Soybeans 5% planted, 23% 1989, 23% avg. Tobacco 30% transplanted, 18% 1989, 31% avg.; 36% fair, 63% good, 1% excellent. Wheat 13% turning color, 9% 1989, 26% avg.; 6% poor, 52% fair, 42% good. Alfalfa 50% 1st cutting, 56% 1989, 69% avg. Insects, diseases, weeds continue to cause problems. Cattle good.

**TEXAS:** Windy, warm, unsettled week. Frontal boundary stalled, moved northward again, setting off thunderstorms weekend. Summer like temperatures south, east. Some flooded areas north, eastern parts of State picked up more rain. Tornadoes, severe weather, some heavy rain amounts. Temperatures above normals all areas. Although rain occurred all areas, totals still below usual amounts.

**Crops:** Small grain harvest increased Blacklands south under open conditions. Producers Plains irrigating fields soils dried out. Insect damage light. Isolated wind, hail damage parts Low Plains. Fields turning color, temperatures warmed. Wheat 3% harvested, 2% 1989, 3% avg. Corn growth, progress good over most State last week.

Planting wind down Plains. Color looked good emerged fields. Producers central, Blacklands busy cultivating many fields. Fields Valley good progress; another rain would help. Fields Valley, Coastal Bend silking. Corn 4% silked, 13% 1989, 16% avg. Grain sorghum producers Plains responded open weather, increased planting activity. Planted fields Blacklands, central responding favorably to warmer weather. Cultivation activities increased. Fields head Coastal Bend, Valley. Planting active Upper Coast most week. Sorghum 8% headed, 15% 1989, 13% avg. Cotton planting increased High Plains, producers beginning to plant Low Plains, Cross Timbers. Early planted fields High Plains drying slightly. Cultivation activities active. Producers spraying Coastal Bend, Valley. Fields Valley beginning to set bolls. Cotton 8% squaring, 7% 1989, 6% avg. Soybean planting increased Plains, along Upper Coast. Emergence good. Stands northeast good; some yellowing from too much water. Rice planting few delays Upper Coast. Warmer temperatures beneficial to planted fields. Peanut planting central, south little delay last week. Land preparations increasing Cross Timbers, Low Plains. Other Field Crops: Peanuts planted 9%, 10% 1989, 19% avg. Soybeans planted 40%, 29% 1989, 30% avg. Sunflowers 26% planted, 4% 1989, 12% avg. Oats harvested 3%, 1% 1989, 7% avg.

**Commercial Vegetables:** Rio Grande Valley, Melon harvest peaking. Yields, quality low. Onion harvest nearing completion. Cucumber harvest continued. San Antonio Winter Garden, onion harvest continued. Eastern areas, cool temperatures early season, excessive rains slowed growth. Diseases increasing tomatoes. High Plains, onions, potatoes good growth. Irrigation underway. Some carrot planting continued. Trans Pecos, most planting completed. Onion harvest nearing. Peach harvest increasing parts Hill Country, Cross Timbers. Leaf curl caused problems. Harvest about over Valley. Pecan sets looked good most areas. Casebearer spraying, scouting programs continued.

**Range and Livestock:** Hot, drying winds started to stress native pastures parts of State. Hay baling activities increasing. Producers spraying weeds, fertilizing. Much grazing land under water parts east. Sheep shearing, lamb marking continued. Cattle continued good gains.

**UTAH:** Temperatures 30° below normal in northern half, about normal in southern half of State; precipitation was moderate in mountainous portion on north, zero to light elsewhere.

Days suitable for fieldwork 6.5. Soil moisture 80% short, 20% adequate. Farm activities included irrigation, planting corn, spraying weeds in spring grains. Crop growth ahead of normal, has been slowed by recent frost, cool weather. Oat acreage 84% emerged, 80% 1989, 77% avg. Corn acreage 78% planted, 88% 1989, 76% avg.; 52% emerged, 72% 1989, 60% avg. Average height winter wheat 16 in. 64% jointed, 46% boot stage. Average height alfalfa hay 17 in., first cutting underway Box Elder, Utah, Washington Counties. Cattle, sheep being moved to summer ranges. Feed adequate now, expected short later. Livestock flesh good.

**VIRGINIA:** Temperatures normal to 2° above normal. Extremes 35°; 90°. Scattered showers, thunderstorms. Precipitation 0.25 to 0.50 in.

Days suitable for fieldwork 5.0. Topsoil 6% surplus, 82% adequate, 12% short. Corn planted 80% completed, 50% 1989, 71% avg.; 6% excellent, 60% good, 32% fair, 2% poor. Soybeans planted 21% completed, 1% 1989, 9% avg. Peanuts virtually all planted. Cotton planting complete. Flue tobacco 90% completed, 5% 1989, 31% avg. Fire tobacco 50%

planted, 0% 1989, 12% avg. Burley 7% completed, 0% 1989, 4% avg. Sun tobacco 16% planted, 0% 1989, 5% avg. Barley 41% fair, 54% good, 5% excellent. Wheat 47% fair, 51% good, 2% excellent. Apples poor to fair, peaches mostly very poor. Potatoes equally fair to good. Alfalfa 25% fair, 67% good, 8% excellent. Other hay 26% fair, 57% good, 17% excellent. Pastures 13% fair, 59% good, 28% excellent. Harvesting hay, barley silage, sheep shearing, suckering tomatoes, vegetable care. Colorado potato beetle active in white potatoes, cereal leaf beetle in wheat. Strawberry picking active. Fruit tree spraying.

**WASHINGTON:** Temperatures 3 to 9° below normal, east; normal to 6° below normal, west. Precipitation none to 1.35, east; 0.06 to 0.68, west.

Days suitable for fieldwork 5.3. Soil moisture 60% short, 40% adequate. Range, pasture 50% short, 50% adequate. Hay, other roughage 5% very short, 60% short, 30% adequate, 5% surplus. Continued cool, wet weather slowed plant growth. Winter wheat development remained ahead of normal. Spring wheat planted 100%, 100% 1989, 100% avg.; emerged 99%, 97% 1989, 95% avg. Barley planted 100%, 100% 1989, 100% avg.; emerged 99%, 96% 1989, 94% avg.; headed 5%, 2% 1989, 3% avg. Potatoes planted 97%, 95% 1989, 97% avg. Cherry harvest began. Asparagus harvest continued. Pasture growth was good on west side, extreme east side. Otherwise, range, pasture growth was short.

**WEST VIRGINIA:** Temperature 64°, 2 to 5° above normal. Extremes 39°; 88°. Precipitation 0.81 in.; 0.48 in. below to 0.52 in. above normal.

Days suitable for fieldwork 3.5. Soil moisture 4% short, 69% adequate, 27% surplus. Cattle good, sheep good to fair. Feed supplies adequate to surplus. Wheat, barley fair to good. Oats good,

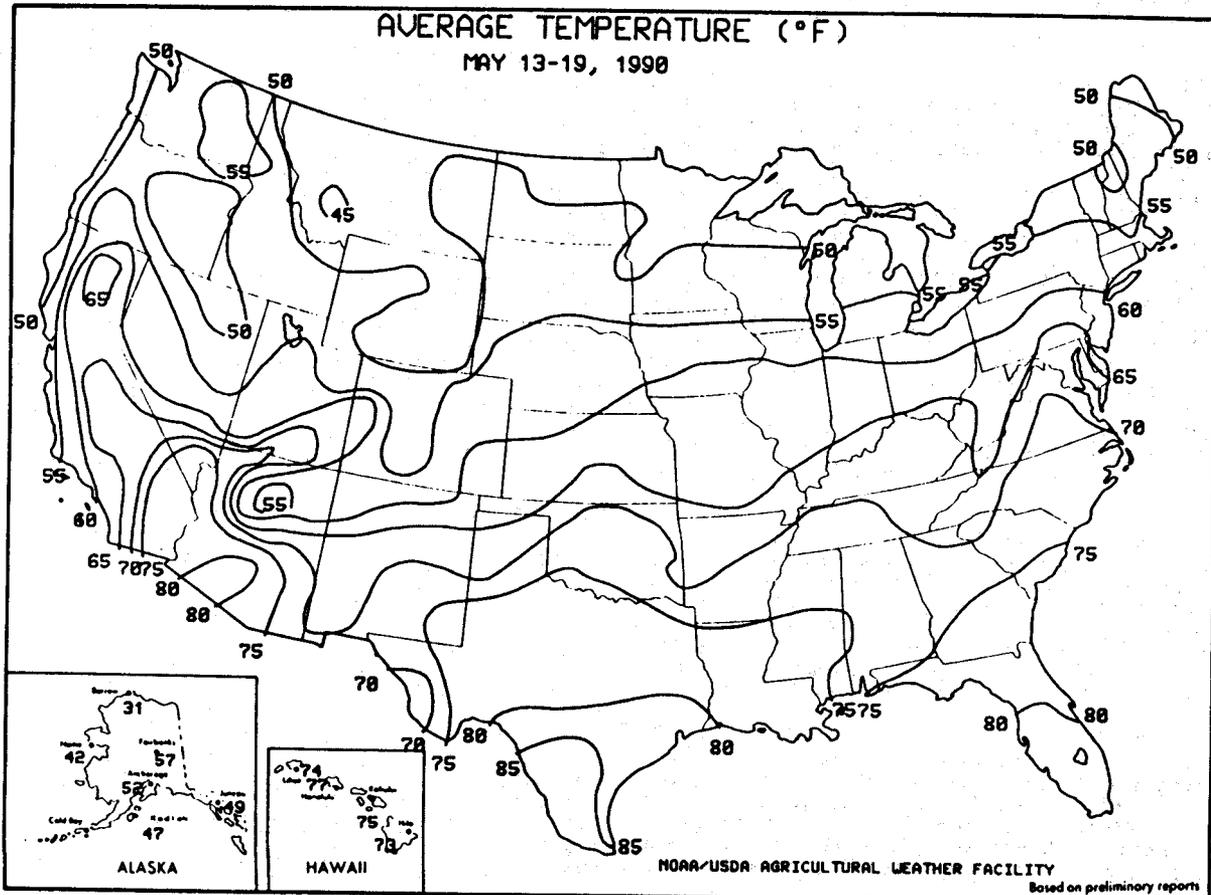
planting complete; 74% emerged. Corn good to fair; planting 70% complete, 47% emerged. Hay good to fair. Apples, peaches poor. Tobacco beds good. Farm activities: Corn planting, preparation for first cutting of hay, livestock care.

**WISCONSIN:** Temperature 52°, 6° below normal. Extremes 30°; 80°. Precipitation 1.20 to 2.50 in.

Days suitable for fieldwork 1.0. Soil moisture 8% short, 61% adequate, 31% surplus. Pasture conditions 84% of normal, 66% 1989, 78% avg. General condition of crops 2% poor, 14% fair, 77% good, 7% excellent. Winter wheat 1% very poor, 6% poor, 13% fair, 65% good, 15% excellent. Corn 1% very poor, 10% poor, 37% fair, 51% good, 1% excellent.; planted 61%, 76% 1989, 78% avg. Soybeans planted 13%, 31% 1989, 34% avg. Rain kept most planters out of fields.

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

Days suitable for fieldwork 5.0. Topsoil 27% short, 70% adequate, 3% surplus. Subsoil 42% short, 55% adequate, 3% surplus. Spring wheat planted 95%, 95% 1989, 85% avg.; emerged 65%, 65% 1989, 60% avg. Oats planted 85%, 80% 1989, 80% avg.; emerged 60%, 50% 1989, 50% avg. Barley planted 95%, 90% 1989, 90% avg.; emerged 85%, 80% 1989, 70% avg. Sugarbeets mostly planted; emerged 50%, 65% 1989, 60% avg. Corn planted 60%, 60% 1989, 60% avg.; emerged 15%, 25% 1989, 10% avg. Potatoes planted 50%, 65% 1989, 45% avg.; emerged 30%, 35% 1989. Dry beans planted 10%, 10% 1989, 15% avg.; emerged 5%. Winter wheat mostly good, heavy russian aphid infestations in southeastern growing area, spraying continues. Livestock good. Calf, lamb losses light to normal. Ranges, pastures good. Stockwater short 30%, adequate 70% State.



## International Weather and Crop Summary

### HIGHLIGHTS

May 13-19, 1990

**SOUTH AMERICA** ... Widespread, variable showers cause minor delays in crop harvests but maintain moist topsoils for wheat planting and emergence.

**AUSTRALIA** ... Widespread rain improves planting conditions in the south. Rain benefits winter grains in the east.

**NORTHWESTERN AFRICA** ... Mostly dry weather in Morocco and Algeria benefits winter grain maturation and early harvesting. Light showers cause only brief delays in Tunisia.

**MEXICO** ... Early-season moisture favors corn planting and emergence in the Southern Plateau.

**CANADA** ... Cool, wet weather causes more spring wheat planting delays.

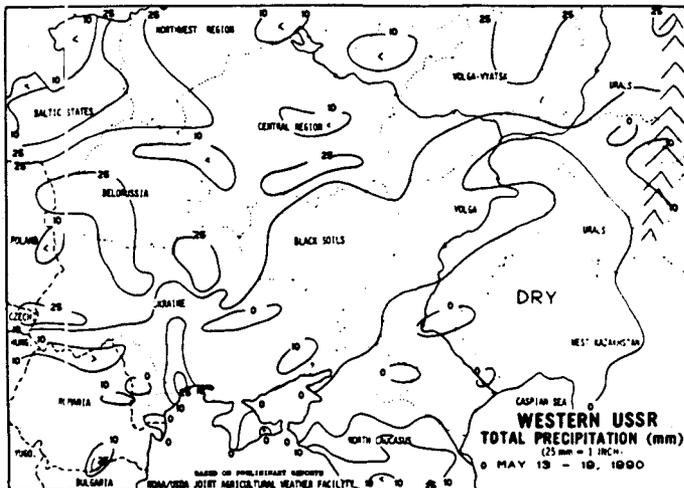
**USSR** ... In Western USSR, winter grains continue to enter the heading stage in the southern Ukraine and the North Caucasus. In the New Lands, light precipitation in the south causes only brief delays in spring grain planting.

**EUROPE** ... Rain benefits winter and summer crops in northern growing areas. Moderate to heavy rain falls in sections of the south.

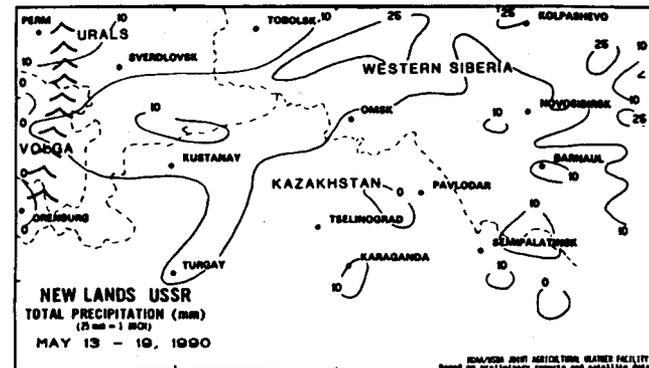
**SOUTH ASIA** ... Remnants of a tropical cyclone bring beneficial rain to the east but cause some local flooding and crop damage.

**EASTERN ASIA** ... Heavy rains cover most crop areas. Tropical Cyclone Marian hits Taiwan.

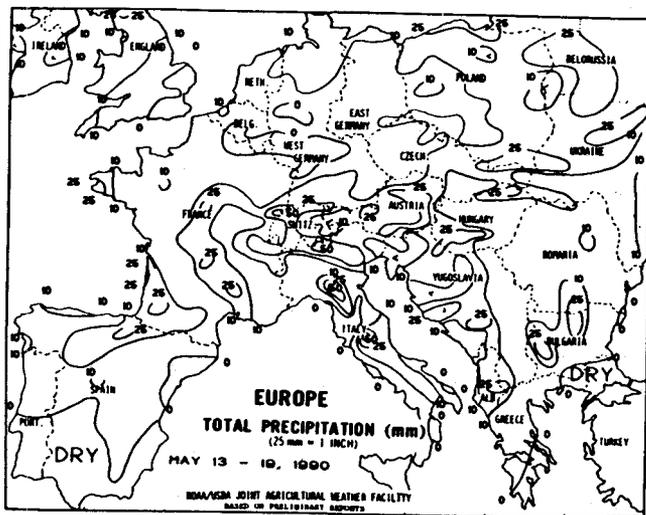
**SOUTHEAST ASIA** ... Widespread, locally heavy showers cover Thailand and all but the northernmost Philippines.



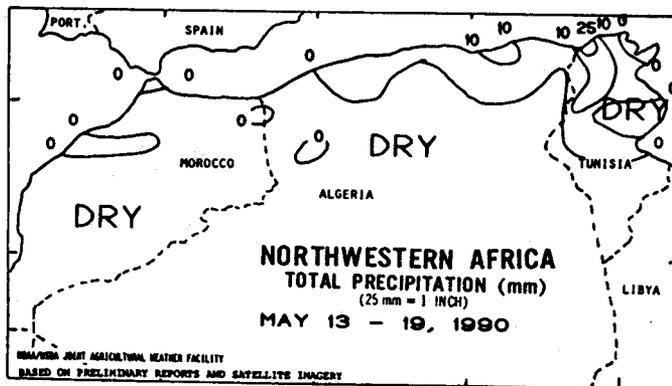
**USSR** ... In Western USSR, winter grains were entering the heading stage in the southern Ukraine and the North Caucasus. Spring grain crop progress ranged from jointing in the south to emergence across the north. Widespread precipitation (10-37mm) covered the Baltic States, Belorussia, and western Ukraine, benefiting winter grains in the jointing stage and spring grains in the tillering stage. Although dry weather covered the North Caucasus and the lower Volga, adequate moisture reserves met the increasing moisture demands of winter grains entering the heading stage. Light precipitation (generally less than 10mm) fell over Moldavia and the southern Ukraine. Timely rain will be needed in these areas during the growing season because moisture reserves are limited due to winter and early spring dryness. Weekly average temperatures were 2-4 degrees Celsius (C) below normal over most areas except for the central and western Ukraine, where temperatures were 1-3 degrees C above normal. Extreme minimum temperatures ranging from 0 to -1 degrees C over the lower Volga and North Caucasus were not low enough to significantly damage jointing winter grains.



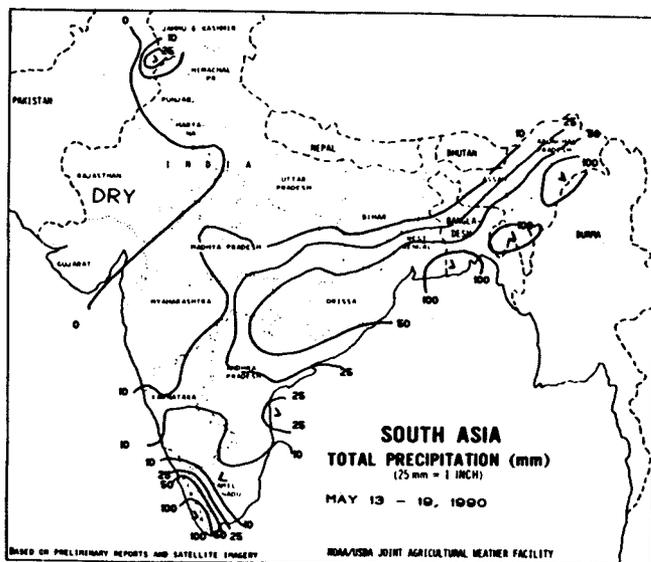
In the New Lands, spring grain planting normally begins over the southern portion of the region. Light precipitation (generally less than 10mm) over the southern Urals and Kazakhstan caused only brief delays in early planting. Widespread, light precipitation (10-25mm) over West Siberia increased topsoil moisture. Weekly average temperatures were 3-5 degrees C above normal in the east and 2-4 degrees C below normal in the west.



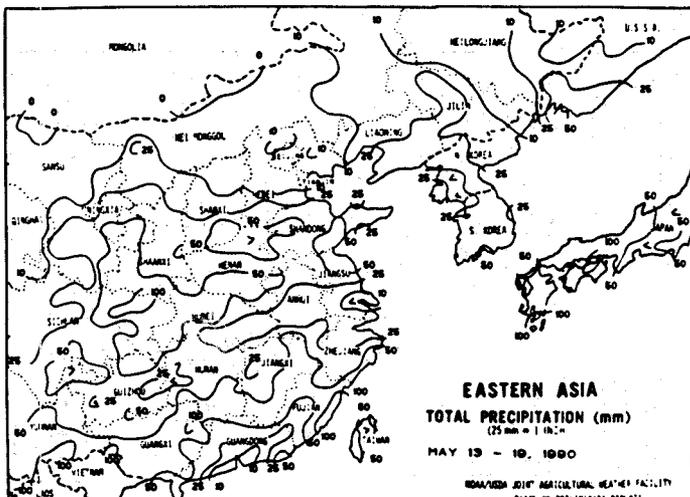
**EUROPE** ... Light to moderate rain (5-20mm, with scattered amounts greater than 25mm) fell from Ireland and northern Great Britain eastward to northern Poland, greatly benefiting jointing to heading winter grains and vegetative summer crops. Scattered, light rain (less than 10mm) brought only minor relief from dryness to southern Great Britain. In the south, moderate to heavy rain (10-40mm, with isolated amounts in excess of 40mm) favored winter and spring-planted crops in sections of northern Spain, southern France, northern and central Italy, and Yugoslavia, while scattered, light rain (less than 10mm) covered the remainder of the region. Persistent dryness in sections of southern Italy and the southern Balkans has likely reduced yield potential of winter grains.



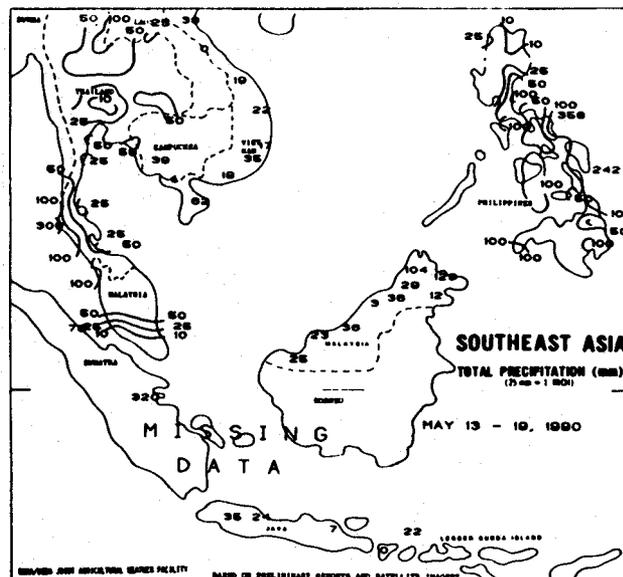
**NORTHWESTERN AFRICA** ... Mostly dry weather covered winter grains in Morocco and Algeria, benefiting crop maturation and early harvesting. Light showers (around 10mm) in western Tunisia caused only minor delays in harvesting. Weekly coverage of this region will be discontinued until next autumn when sowing of next year's crop is scheduled to begin.



**SOUTH ASIA** ... Variable, locally heavy showers (25-50mm or more) fell from eastern Madhya Pradesh and Orissa eastward through Bangladesh and the eastern states as the remnants of a tropical cyclone moved through the region. Rainfall exceeding 100mm over local areas from West Bengal eastward caused flooding and damage to unharvested grains. Showers lingered elsewhere over central and southern India, with heaviest accumulation (10-56mm) in Andhra Pradesh, Karnataka, and Maharashtra. Heavy showers (60-136mm) covered Kerala, reflecting the recent seasonable increase in rainfall. Local showers (5-33mm) dotted the northern wheat belt, causing some delays in late wheat harvesting.

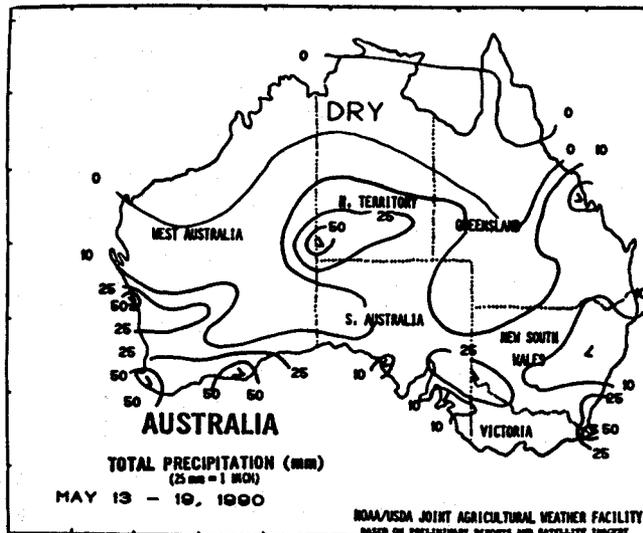


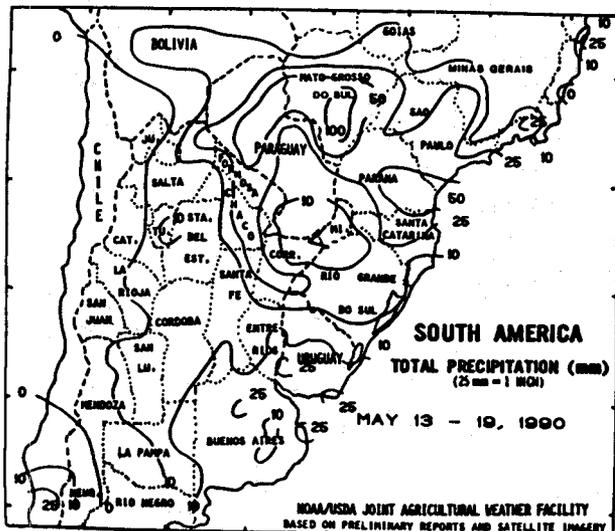
**EASTERN ASIA** ... Residual remnants of a tropical cyclone in the Bay of Bengal brought widespread, heavy rain (25-70mm, with scattered amounts greater than 70mm) to all but northeastern Chinese crop areas, greatly benefiting spring crops in normally semiarid western growing areas but possibly causing localized flooding in upper sections of the Yangtze Valley and spring planting delays in the North China Plain. On the 19th, a rapidly weakening Tropical Cyclone Marian moved across southern and eastern Taiwan, bringing gusty winds, heavy rain (40-80mm), and localized flooding to much of the island. In the east, moderate to heavy rain (15-50mm, with scattered rainfall in excess of 50mm) caused spring planting delays in most crop areas across Japan and the Korean Peninsula. Mean weekly temperatures were near normal to below normal across all but extreme eastern crop areas, which were above normal.



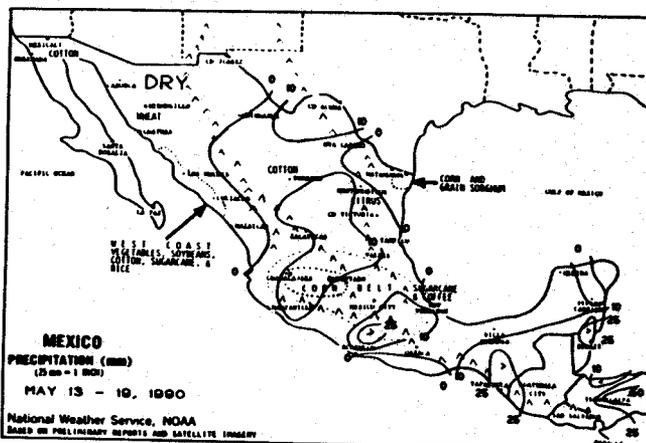
**SOUTHEAST ASIA** ... Moderate to heavy showers (25-50mm or more) covered most primary grain regions of Thailand, improving moisture levels for planting and vegetative growth of main season crops. However, minimal rain (4-12mm) covered local crop areas north of Bangkok that have been trending drier than normal for most of the early rainy season. Temperatures averaged 1-2 degrees C above normal over the driest areas but near normal elsewhere. In the Philippines, widespread, moderate to heavy rain (25-50mm or more) fell as far north as southern Luzon, greatly improving moisture reserves for main season plantings. Rainfall exceeded 100mm throughout the area, with excessive amounts (200-358mm) in southeastern Luzon and the central islands causing local flooding. To the south, heavy rain (100-381mm) caused local flooding in peninsular Thailand and northernmost areas of Malaysia but seasonal dryness continued elsewhere.

**AUSTRALIA** ... A frontal system brought widespread rain to much of the south, including moderate to heavy amounts (15-70mm) in Western Australia and light to moderate amounts (5-20mm, with isolated amounts in excess of 20mm) in South Australia and Victoria. The rain was the most widespread in South Australia since early January and will allow some progress in winter grain planting, which has been delayed due to persistent dryness. In the east, scattered rain (5-30mm, with isolated rainfall greater than 30mm) greatly favored emergence and early vegetative growth of winter grains after 3 consecutive mostly dry weeks. Mean weekly temperatures were above normal in all but southeastern crop areas, which were below normal.

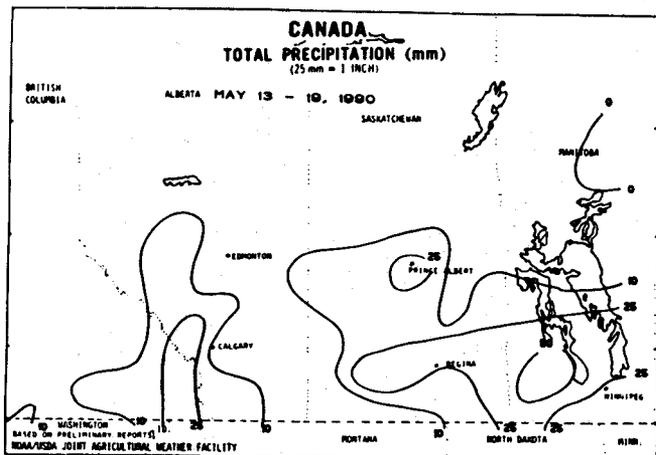




**SOUTH AMERICA** ... In Argentina, light to moderate showers caused minor delays in crop harvesting but moistened topsoils for wheat planting. Weekly rainfall generally averaged 10-22mm in the primary corn and soybean areas, with isolated heavier amounts (34-36mm) in Buenos Aires and lighter rain (less than 10mm) in northern corn areas of Cordoba and Santa Fe. The soybean harvest has nearly reached the halfway point. In south-central Brazil, showers (7-19mm) slowed late soybean harvesting in Rio Grande do Sul, where moisture has been abundant for the start of wheat planting. Heavier rain (25-62mm) maintained moist conditions for emerging wheat in Parana. Locally inundating rain (100-147mm) soaked Mato Grosso do Sul. Variable showers (1-20mm) caused some minor delays in early harvesting of coffee and citrus in Sao Paulo and Minas Gerais.



**MEXICO** ... Beneficial showers (10-22mm) in western and north-central portions of the Southern Plateau helped corn planting and emergence in the driest portion of the corn belt. Substantial showers (10-42mm) also maintained favorable early-season moisture in the southeast of the Plateau. Minimal rain (8mm or less) fell over the remainder of the Plateau corn belt (south-central to northeast). Significant showers (10-18mm) benefited pastures, cotton, and citrus areas of east-central Mexico, but rainfall diminished to 4mm or less along the east coast from Matamoros in the northeast to the Yucatan peninsula. Mostly dry weather continued over northwestern Mexico.



**CANADA** ... Unseasonable, moderate to heavy precipitation (10-25mm or more) covered most wheat regions of Saskatchewan and Manitoba, improving soil moisture levels but causing further fieldwork delays. However, rainfall averaged less than 10mm over local areas of southern and western Saskatchewan and all but westernmost Alberta. Temperatures continued to average 1-4 degrees C below normal, maintaining cool, locally wet soil conditions. A return to warmer weather is needed in upcoming weeks to ensure normal germination and establishment. Plantings usually last until late May or early June, but later plantings increase the risk of crop damage caused by early autumn frost.

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 \$35, 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 . . . . . Tom Heddinghaus (202) 382-1444  
Vilhelm Bjerknes, Bob Stefanski, 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 . . . Tom Kurtz (202) 447-2157  
World Agricultural Outlook Board  
Agricultural Weather Analysts. . Ray Motha (202) 447-5716  
Tom Puterbaugh, Mark Brusberg, and Jeff Andresen

(Continued from front cover)

**Missouri Valley** and into the **Ohio Valley**. At week's end, yet another storm system soaked the **central and southern Plains, western Corn Belt, and middle Mississippi Valley** with additional rain. Torrents of rain deluged **Arkansas** as **Hot Springs** reported on Sunday morning over 12 inches in 24 hours. Meanwhile, a late-season spring storm brought beneficial rain showers with snow in the higher elevations to the **northern and central Pacific seaboard**.

(Continued from p. 10)

nearly complete in Washington. **Potato planting** lagged behind normal in North Dakota.

**PASTURES AND LIVESTOCK:** Pastures were in mostly good to fair condition except in North Dakota and portions of the West. Stock water supplies were still mostly short in North Dakota. Lack of moisture and cool weather slowed pasture growth in portions of Idaho.

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

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300

WEEKLY NEWS BULLETIN  
SECOND CLASS

SECOND CLASS MAIL  
POSTAGE AND FEES PAID  
NOAA PERMIT NO. 1  
ISSN 0043 1974