

# WEEKLY WEATHER AND CROP BULLETIN

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

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

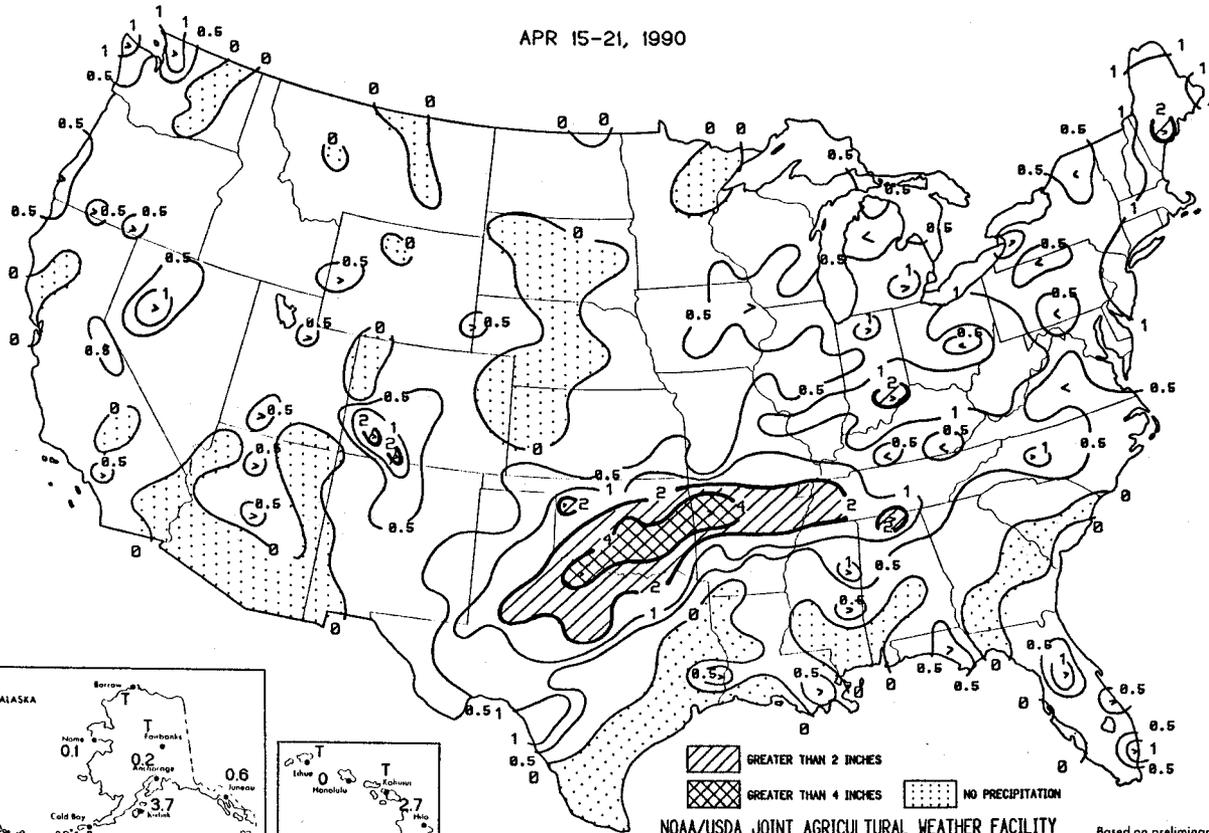
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April 24, 1990

## TOTAL PRECIPITATION, INCHES

APR 15-21, 1990



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

## HIGHLIGHTS

April 15-21, 1990

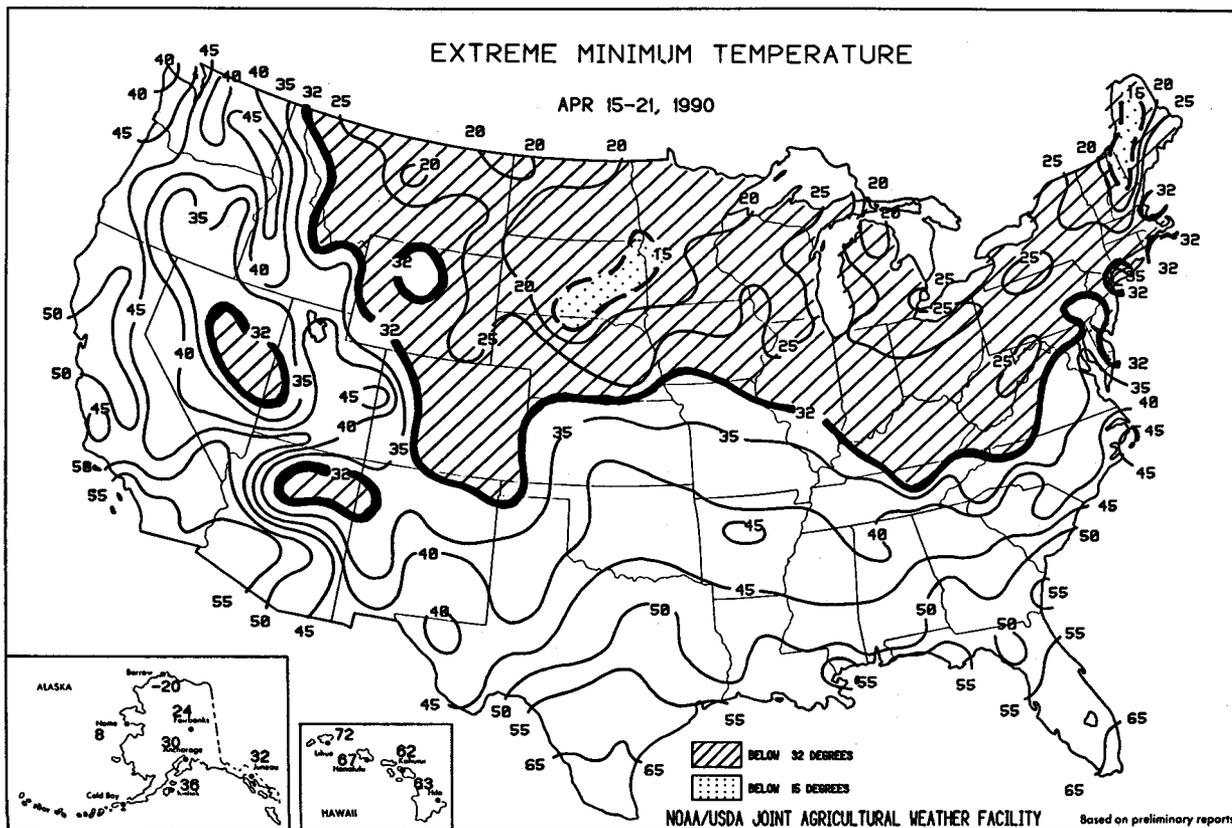
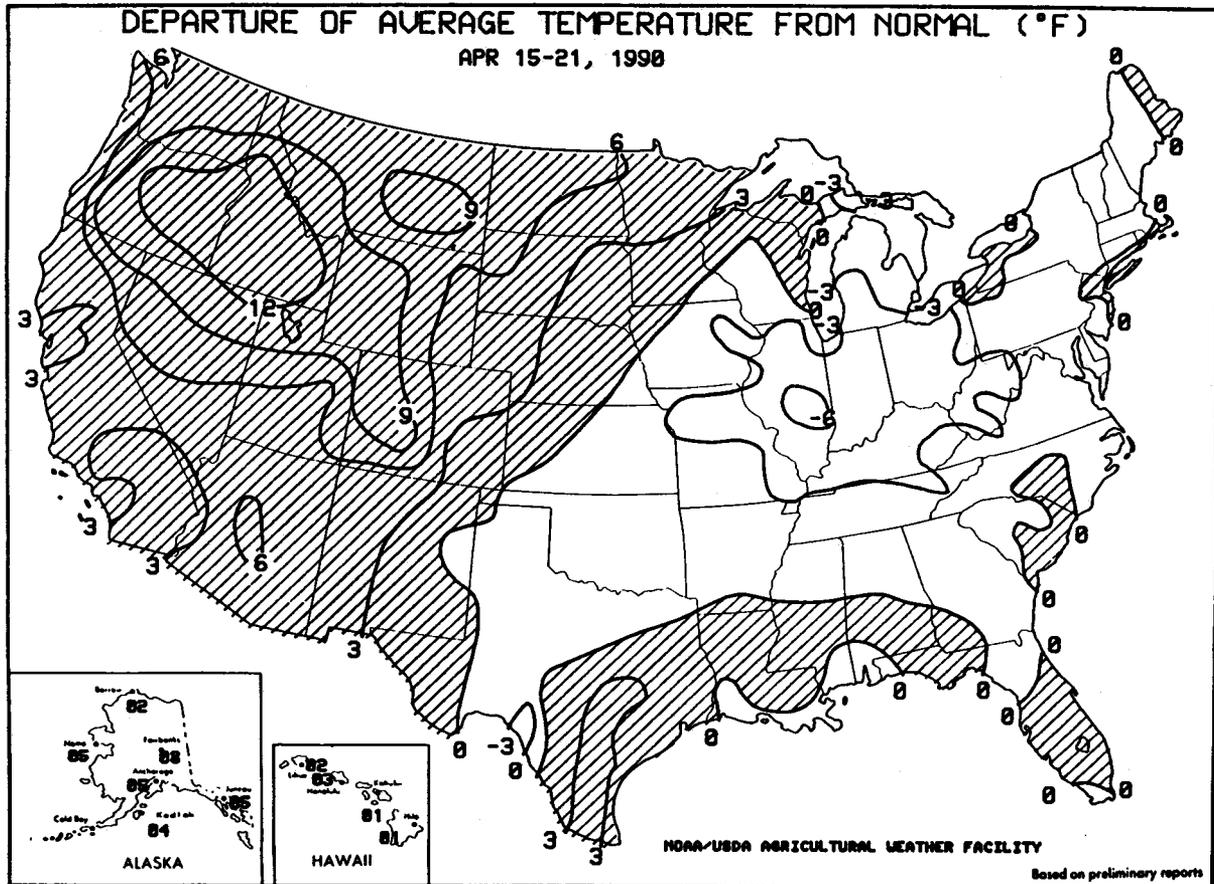
During the first part of the week, a strong cold front traveled southeastward out of the northern Plains and became stationary along the Gulf coast by Wednesday. The front spread precipitation over much of the eastern half of the Nation, with heavy amounts over Oklahoma into eastern Tennessee. A large cold air mass moved in behind the front as record-low temperatures for the date were set from the middle Missouri Valley to the middle and northern Atlantic coast from Tuesday to Thursday. During the latter part of the week, showers and thunderstorms progressed from the southern Plains into the Northeast and drenched north-central Texas to northwestern Arkansas with more heavy rain. Showers were widely scattered in the West as dry conditions again generally prevailed. Abnormally warm weather also continued in the West as

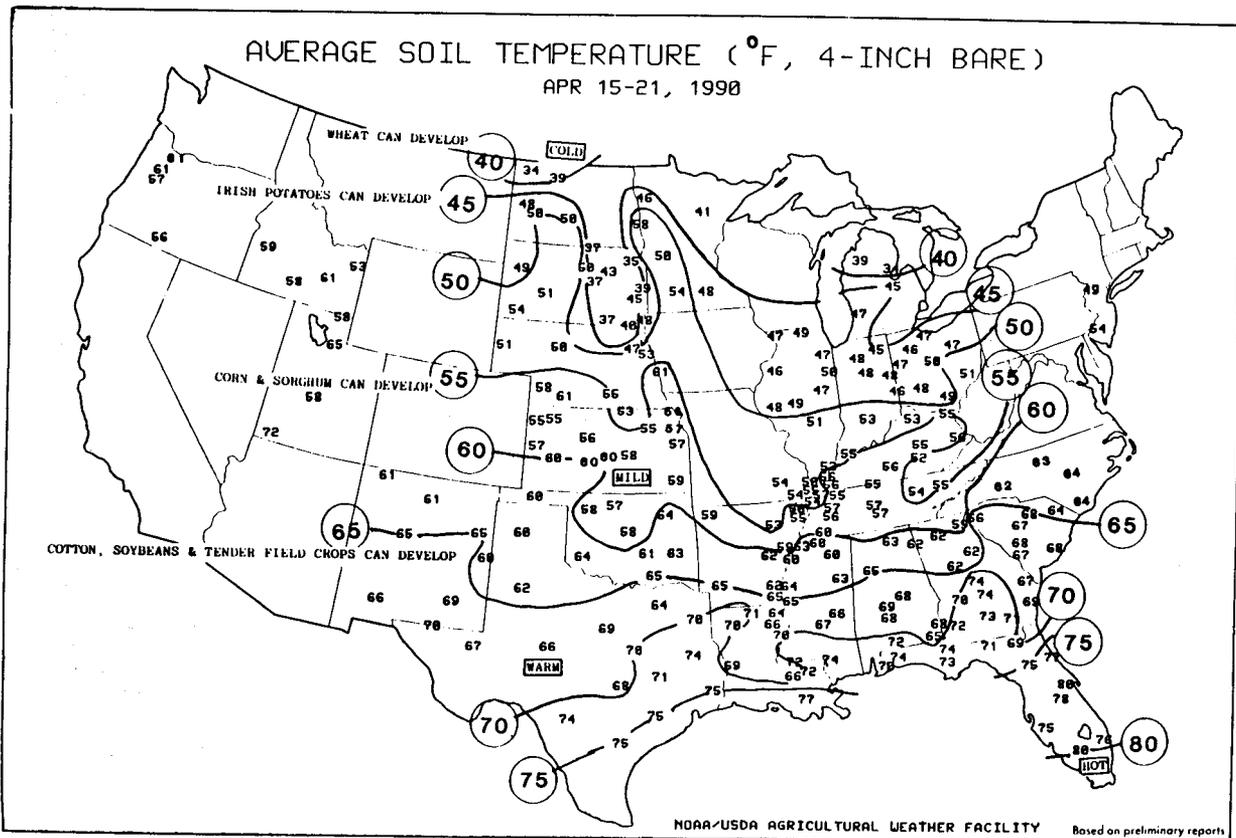
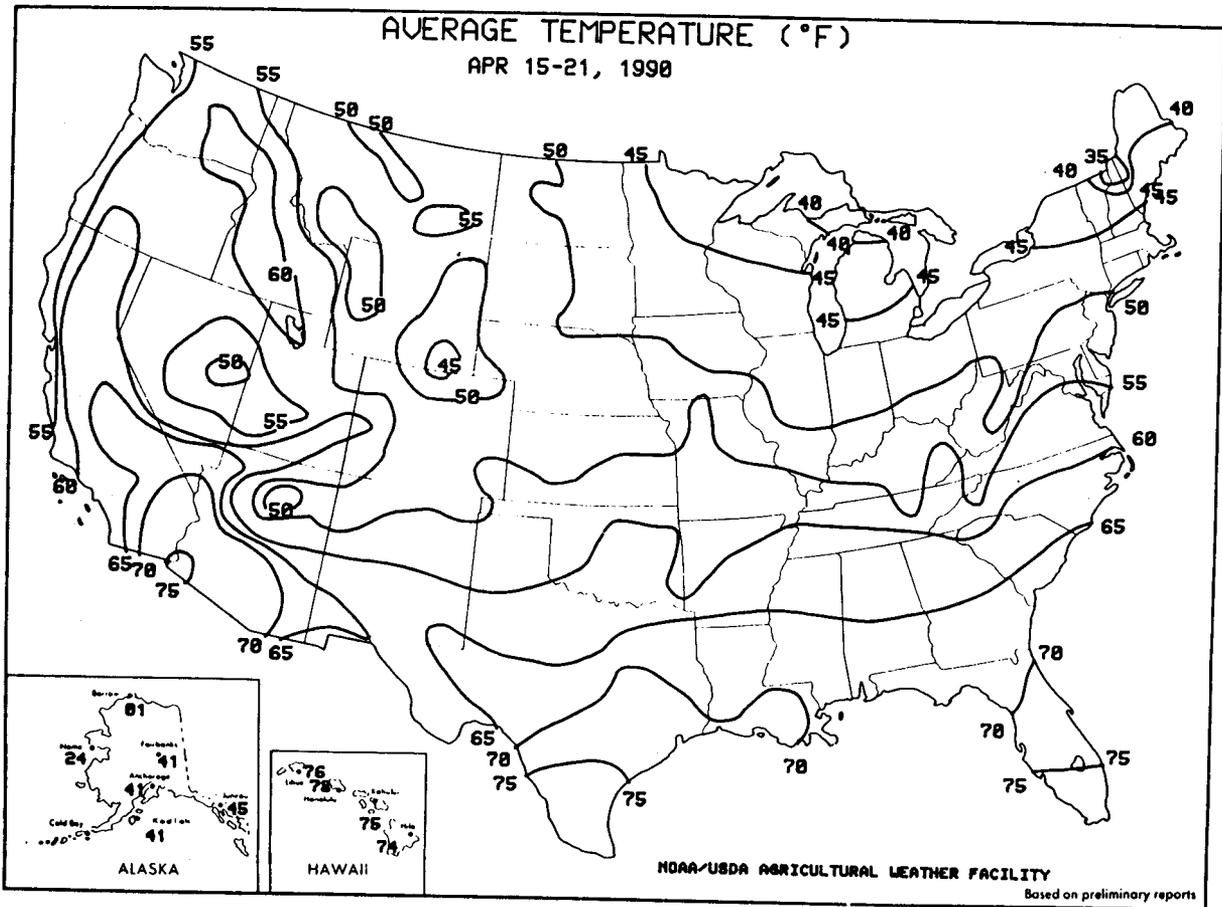
temperatures averaged 12 degrees Fahrenheit above normal in the northern Intermountain Plateau. The mild weather covered most of the Nation by week's end.

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# National Weather Data for Selected Cities

## Weather Data for the Week Ending April 21, 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	0.50 INCH OR MORE		
AL BIRMINGHAM	75	49	81	40	62	-1	.1	-1.0	.1	6.8	66	20.9	104	93	48	0	0	2	0		
MOBILE	76	56	82	48	66	-3	.1	-1.2	.1	14.2	139	29.7	151	96	53	0	0	0	0		
MONTGOMERY	77	52	82	47	65	-2	.1	-1.0	.1	15.8	173	33.5	189	93	48	0	0	0	0		
AK ANCHORAGE	50	33	54	30	41	5	.2	.1	.2	.7	68	3.6	133	90	49	0	4	2	0		
BARRROW	10	-7	21	-20	1	2	.2	.1	.1	.5	55	.3	37	91	76	0	7	1	0		
FAIRBANKS	50	31	53	24	41	9	.9	.0	.1	.1	23	1.4	88	83	41	0	4	1	0		
JUNEAU	50	39	61	32	45	5	.8	.1	.3	5.8	108	14.0	110	96	60	0	2	6	0		
KODIAK	44	38	49	36	41	4	3.7	2.8	1.4	11.6	182	21.1	123	97	82	0	0	6	6		
NOME	32	16	39	8	24	5	.1	-1.1	.1	1.4	148	2.8	126	94	65	0	6	2	0		
AZ PHOENIX	90	65	100	61	78	9	0	-1.1	0	.4	34	1.8	80	43	18	4	0	0	0		
PRESCOTT	69	43	77	35	56	6	.2	0	.2	1.5	69	4.0	74	61	24	0	0	1	0		
TUCSON	87	54	95	47	71	5	0	-1.1	0	.1	41	2.0	87	39	13	3	0	0	0		
YUMA	86	63	94	60	75	4	0	0	0	.1	35	.2	26	47	20	0	0	0	0		
AR FORT SMITH	70	50	85	44	60	-2	5.8	4.9	1.7	12.2	182	23.3	211	99	54	1	0	0	4		
LITTLE ROCK	72	51	81	41	62	-2	1.7	.5	.6	14.0	167	23.7	147	87	54	0	0	7	4		
CA BAKERSFIELD	77	55	81	50	66	3	.3	-2	.2	.5	33	2.2	64	84	37	0	0	4	2		
EUREKA	59	50	63	47	54	5	.3	-3	.2	3.7	51	15.4	79	94	74	0	0	1	0		
FRESNO	76	54	79	51	65	5	.2	-1.1	.2	.3	33	5.0	78	91	39	0	0	1	0		
LOS ANGELES	69	58	74	56	64	4	.3	-2	.2	.3	13	4.1	51	84	56	0	0	0	0		
REDDING	75	54	80	51	64	4	.4	-2	.2	3.3	46	12.6	58	86	42	0	0	0	0		
SACRAMENTO	73	51	77	49	62	4	.4	-3	.2	.9	29	8.7	88	93	45	0	0	0	0		
SAN DIEGO	67	59	69	57	63	2	.4	.2	.4	.8	37	4.5	74	84	62	0	0	1	0		
SAN FRANCISCO	63	53	66	50	58	3	.3	-3	.4	.8	21	6.1	53	89	63	0	0	0	0		
CO DENVER	65	38	75	32	52	4	.3	-1.1	.3	3.8	162	5.1	146	89	34	0	1	2	0		
GRAND JUNCTION	75	49	82	45	62	9	.2	-2	.2	1.6	128	2.7	113	61	17	0	0	0	0		
PUEBLO	69	39	79	29	54	2	.3	0	.2	1.5	117	2.8	155	85	31	0	0	0	0		
CT BRIDGEPORT	57	41	62	31	49	0	2.0	1.1	1.3	6.1	93	11.9	93	84	48	0	1	3	1		
HARTFORD	59	38	66	29	49	-1	1.2	.3	.8	6.3	90	13.7	100	85	43	0	2	3	1		
DC WASHINGTON	66	45	73	36	56	-2	1.0	.3	.7	5.4	99	9.7	90	84	45	0	0	3	1		
FL APALACHICOLA	78	61	83	59	69	1	.5	-3	.5	6.3	99	12.7	93	95	55	0	0	1	0		
DAYTONA BEACH	81	62	86	59	72	1	.1	-4	.1	3.2	70	10.2	102	93	50	0	0	2	0		
JACKSONVILLE	81	57	89	54	69	-1	.1	-6	.1	2.0	36	7.9	66	95	46	0	0	1	0		
KEY WEST	83	70	85	64	77	-1	.1	-4	.1	.8	36	1.8	61	82	56	0	0	0	0		
MIAMI	83	70	86	67	77	1	1.2	.4	.9	9.0	234	10.4	132	87	50	0	0	0	0		
ORLANDO	83	63	90	60	73	1	.7	-2	.7	3.2	66	7.6	75	93	44	1	0	2	1		
TALLAHASSEE	84	54	89	50	69	1	0	-9	.2	4.3	51	14.7	81	97	40	0	0	0	0		
TAMPA	84	62	89	56	73	1	0	-4	0	2.4	51	7.5	76	93	43	0	0	0	0		
WEST PALM BEACH	82	67	85	64	75	1	.4	-4	.2	3.6	51	6.1	61	87	53	0	0	4	0		
GA ATLANTA	72	52	84	46	62	0	.2	-8	.2	9.9	108	28.1	153	83	41	0	0	2	0		
AUGUSTA	77	49	87	45	63	-1	.7	-7	.2	2.4	33	7.8	51	84	35	0	0	0	0		
MACON	76	53	87	47	64	-2	.7	-8	.2	5.8	76	13.9	84	91	41	0	0	1	0		
SAVANNAH	78	56	87	52	67	0	0	-7	0	4.6	77	11.6	94	89	39	0	0	0	0		
HI HILO	81	67	82	63	74	1	.3	-2	.1	12.4	54	56.8	124	92	63	0	0	6	0		
HONOLULU	85	71	86	67	78	3	0	-3	0	1.0	22	9.4	85	74	48	0	0	0	0		
KAHULUI	83	68	84	62	75	1	.1	-2	.1	1.5	41	12.4	118	91	60	0	0	0	0		
LIHUE	80	72	81	72	76	2	.1	-7	.1	4.4	65	15.1	90	81	65	0	0	0	0		
ID BOISE	76	48	85	45	62	13	.3	0	.2	1.5	84	3.2	70	81	31	0	0	0	0		
LEWISTON	74	51	78	46	62	12	.1	-2	.1	1.2	69	1.9	47	79	36	0	0	1	0		
POCATELLO	74	41	80	34	57	12	.1	-2	.1	2.8	162	3.5	98	82	23	0	0	0	0		
IL CHICAGO	58	38	66	28	48	-2	.7	-2	.7	4.8	89	9.0	110	88	41	0	2	3	1		
MOLINE	59	37	67	23	48	-3	.7	-2	.7	8.8	161	12.4	149	92	46	0	3	4	1		
PRORIA	60	38	66	27	49	-4	.2	-7	.1	5.1	93	10.4	123	94	51	0	3	3	0		
QUINCY	61	42	69	31	51	-3	.6	-4	.3	4.1	71	9.0	105	89	52	0	1	4	0		
ROCKFORD	58	35	68	22	46	-3	1.0	-1	.9	4.5	83	7.5	93	89	40	0	3	4	1		
SPRINGFIELD	57	40	66	28	49	-6	.3	-7	.1	4.4	76	10.8	119	96	65	0	2	4	0		
IN EVANSVILLE	63	42	71	31	52	-7	.7	-3	.3	4.8	65	14.7	109	94	56	0	1	5	0		
FORT WAYNE	58	36	70	23	47	-3	.6	-2	.6	5.4	99	14.4	152	88	44	0	3	4	1		
INDIANAPOLIS	59	38	66	26	49	-5	.6	-3	.5	4.3	70	11.1	99	88	46	0	2	4	1		
SOUTH BEND	57	36	69	24	46	-3	.8	-1	.7	5.3	90	11.4	110	88	43	0	3	2	1		
IA DES MOINES	61	40	73	26	50	-1	.5	-2	.5	6.9	160	9.2	144	83	40	0	1	3	0		
SIOUX CITY	64	38	80	24	51	0	.3	-3	.3	3.5	110	4.1	87	82	34	0	2	1	0		
WATERLOO	58	35	70	22	46	-2	.7	-2	.3	6.1	134	7.0	111	92	44	0	3	3	0		
KS CONCORDIA	63	44	77	32	54	-1	.1	-5	.1	4.9	148	5.6	117	86	53	0	1	2	0		
DODGE CITY	65	42	81	36	53	-2	.1	-4	.1	1.9	74	4.8	133	92	46	0	0	1	0		
GOOLAND	66	39	81	33	53	3	0	-3	0	1.9	109	3.0	124	93	35	0	0	0	0		
TOPEKA	65	42	80	34	54	-2	.1	-6	.1	4.3	101	7.9	127	87	48	0	0	2	0		
WICHITA	65	47	78	39	56	-1	.1	-5	.1	3.2	87	7.1	138	86	52	0	0	3	0		
KY BOWLING GREEN	67	43	74	31	55	-3	.5	-5	.3	5.0	59	17.4	101	95	61	0	1	4	0		
LEXINGTON	62	41	71	27	52	-4	1.1	.2	.7	4.0	52	11.6	80	87	49	0	2	3	1		
LOUISVILLE	65	42	75	30	53	-4	1.5	.6	.7	6.2	81	16.8	119	86	45	0	1	4	1		
LA ALEXANDRIA	80	57	84	50	69	1	.1	-1.3	.1	8.3	95	25.8	144	88	50	0	0	0	0		
BATON ROUGE	83	59	88	54	71	2	.3	-1.1	.3	7.4	87	26.7	148	93	46	0	0	1	0		
LAKE CHARLES	78	58	82	50	68	-1	.1	-9	.1	6.7	119	20.8	153	97	58	0	0	0	0		
NEW ORLEANS	79	59	83	52	69	0	.8	-2	.8	9.1	116	31.5	175	96	54	0	0	1	1		

Based on 1951-80 normals

Weather Data for the Week Ending April 21, 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	80	56	88	47	68	2	T	-1.1	T	7.9	113	24.8	172	88	49	0	0	0	0		
ME CARIBOU	47	31	61	23	39	1	T	.8	.2	3.5	82	8.7	100	84	46	0	0	4	0		
PORTLAND	53	35	64	25	44	1	0	1.8	.9	1.1	92	11.9	85	87	46	0	3	4	0		
MD BALTIMORE	66	43	71	31	54	-1	0	.9	.1	.5	89	10.6	88	83	43	0	1	3	0		
SALISBURY	65	43	74	30	54	-1	0	.9	.1	.3	96	12.1	93	94	47	0	2	4	0		
MA BOSTON	57	41	65	35	49	0	0	1.7	.9	1.0	99	14.0	97	82	46	0	0	3	1		
CHATHAM	52	39	61	31	46	0	0	1.3	.4	.8	6.9	101	16.4	107	87	66	0	1	3	2	
MI ALPENA	51	29	65	21	40	0	0	.3	-.3	.1	4.8	134	8.4	126	85	44	0	5	4	0	
DETROIT	58	35	68	25	46	-2	2	.9	.2	.9	4.6	98	11.5	139	88	45	0	5	3	1	
FLINT	57	33	62	22	45	-2	2	.7	0	0	.5	83	7.9	110	87	44	0	5	3	0	
GRAND RAPIDS	54	34	70	26	44	-4	4	.8	0	.6	4.2	82	8.7	101	85	41	0	5	4	1	
HOUGHTON LAKE	51	32	66	18	42	-2	2	.2	-.4	.1	3.0	81	5.6	87	86	43	0	4	3	0	
LANSING	56	32	68	21	44	-2	2	.7	0	.6	3.4	77	7.6	102	90	42	0	5	2	1	
MARQUETTE	51	29	69	21	40	2	2	.1	-.8	.1	3.9	73	7.6	82	80	45	0	5	3	0	
MUSKEGON	51	34	62	28	42	-4	4	.7	0	.6	4.4	94	8.5	98	88	46	0	5	3	1	
SAULT ST. MARIE	45	25	64	17	35	-4	4	.8	-.2	.5	4.1	112	8.6	115	93	52	0	6	4	0	
MN ALEXANDRIA	62	33	82	19	48	4	4	.1	-.4	-.1	2.4	92	2.9	70	83	34	0	4	1	0	
DULUTH	56	32	76	18	44	4	4	.7	-.5	.2	3.6	112	4.6	88	67	26	0	3	0	0	
INT' L FALLS	57	28	83	15	43	3	3	.1	-.3	.1	1.8	83	2.9	79	73	32	0	4	1	0	
MINNEAPOLIS	59	36	79	25	48	1	1	.6	-.3	.1	4.3	141	5.1	110	77	29	0	4	1	0	
ROCHESTER	57	34	75	22	45	-1	1	.1	0	.3	4.6	135	5.9	119	90	38	0	4	2	0	
MS GREENWOOD	76	52	82	43	64	-1	1	.5	.8	.3	7.4	73	21.0	106	92	49	0	0	2	0	
JACKSON	79	52	86	45	66	1	1	.7	-.5	.7	10.6	100	37.8	187	95	42	0	0	2	1	
MERIDIAN	65	47	74	36	56	1	1	.9	-.2	.4	5.9	72	19.2	136	97	58	0	0	5	0	
MO CAFE GIRARDEAU	64	43	75	34	53	-3	3	.5	-.4	.2	9.5	159	15.3	160	91	46	0	0	6	0	
COLUMBIA	65	43	77	33	54	-3	3	.7	-.8	.2	4.6	94	7.9	108	84	44	0	0	1	0	
KANSAS CITY	62	46	72	38	54	-3	3	.6	-.3	.5	5.0	87	9.9	104	88	49	0	0	5	0	
SAINT LOUIS	67	47	81	37	57	0	0	.4	-.5	.2	9.7	156	20.7	207	86	48	0	0	4	0	
SPRINGFIELD	69	40	80	29	55	9	9	.1	-.3	.1	2.8	125	3.6	92	85	33	0	2	2	0	
MT BILLINGS	71	34	87	23	53	8	8	.1	-.1	.4	51	.8	57	70	20	0	4	2	0	0	
GLASGOW	67	35	79	28	51	7	7	.2	-.2	.1	2.0	106	2.4	68	82	31	0	2	2	0	
GREAT FALLS	68	35	79	21	51	7	7	0	-.3	0	.8	61	.8	35	83	27	0	3	0	0	
HAVRE	68	35	77	26	52	9	9	.7	-.2	.2	1.0	77	1.7	67	87	28	0	1	1	0	
HELENA	65	36	72	31	51	7	7	T	-.2	T	1.5	95	4.1	99	82	34	0	3	0	0	
KALISPELL	71	41	85	27	56	9	9	.1	-.2	.1	.3	22	.4	17	73	24	0	1	3	0	
MILES CITY	68	39	74	33	54	9	9	.4	-.2	.4	1.7	117	2.9	80	83	33	0	0	2	0	
MISSOULA	66	39	80	23	53	2	2	T	-.6	T	3.4	103	4.2	92	86	40	0	1	1	0	
NE GRAND ISLAND	64	41	79	24	52	0	0	T	-.7	T	3.3	87	4.0	73	85	43	0	0	0	0	
LINCOLN	63	38	81	21	51	1	1	T	-.5	T	3.0	101	4.1	98	82	35	0	3	1	0	
NORFOLK	65	37	81	27	51	3	3	T	-.4	T	1.9	87	2.4	76	84	36	0	1	1	0	
NORTH PLATTE	61	42	78	27	52	-2	2	.1	-.6	.1	3.6	94	4.6	85	77	44	0	1	0	0	
OMAHA	66	37	81	32	52	4	4	.5	-.2	.3	4.1	222	5.4	202	92	35	0	2	4	0	
SCOTTSBLUFF	68	31	85	10	50	3	3	T	-.5	T	1.3	66	1.9	67	77	27	0	2	0	0	
VALENTINE	65	34	75	26	49	8	8	.1	-.1	.1	1.4	93	3.3	114	75	23	0	2	1	0	
NV ELY	81	55	91	51	68	4	4	.2	.1	.2	.2	32	1.7	118	51	20	1	0	0	0	
LAS VEGAS	66	46	83	42	56	9	9	.3	-.2	.3	.4	36	3.0	93	75	39	0	0	1	0	
REMO	70	41	84	33	56	10	10	.8	-.7	.4	1.6	136	2.5	93	85	37	0	0	3	0	
WINNEMUCCA	56	32	64	17	44	-1	1	.9	-.2	.6	4.3	84	9.7	94	92	42	0	0	5	0	
NH CONCORD	63	40	75	28	52	0	0	1.3	.6	.9	5.7	90	9.4	72	92	51	0	4	3	1	
NJ ATLANTIC CITY	73	45	84	38	59	3	3	.6	.5	.4	1.2	160	1.9	125	71	20	0	0	4	0	
NM ALBUQUERQUE	68	45	86	37	57	-1	1	.6	.4	.4	1.0	101	3.2	169	95	40	0	0	4	0	
CLOVIS	77	49	91	44	63	2	2	.6	.5	.5	1.6	260	2.3	158	65	25	2	0	0	3	0
ROSWELL	57	35	63	26	46	-1	1	.8	.1	.3	7.4	148	15.2	158	85	40	0	2	4	0	
NY ALBANY	53	36	59	28	45	-1	1	.6	-.2	.2	4.5	89	11.1	112	87	42	0	3	4	0	
BINGHAMTON	55	38	66	30	47	0	0	1.1	.4	.8	6.3	124	14.9	143	88	40	0	1	3	1	
BUFFALO	62	45	67	38	54	1	1	2.0	1.1	1.6	6.7	100	12.4	96	83	50	0	0	4	1	
NEW YORK	57	37	66	31	47	0	0	.8	-.2	.7	5.1	118	10.7	119	87	39	0	3	3	1	
ROCHESTER	57	38	65	30	47	0	0	.6	-.2	.3	7.3	134	13.3	126	85	39	0	2	4	0	
SYRACUSE	67	43	77	31	55	-1	1	T	-.8	T	6.5	90	17.8	131	88	34	0	1	1	0	
NC ASHEVILLE	72	51	83	41	62	0	0	.5	-.2	.5	4.7	66	14.2	97	80	37	0	0	1	1	
CHARLOTTE	70	47	79	33	59	-1	1	.8	.1	.8	5.1	84	13.2	102	90	40	0	0	2	1	
GREENSBORO	69	52	76	47	61	1	1	.4	-.4	.4	9.1	147	17.9	119	95	54	0	0	3	0	
HATTERAS	73	48	84	41	61	-2	2	.4	-.3	.2	8.3	148	13.7	101	94	41	0	0	3	0	
NEW BERN	73	47	84	35	60	0	0	.5	-.2	.2	6.7	117	13.6	107	95	39	0	0	5	0	
RALEIGH	74	50	85	42	62	-2	2	.1	-.6	.6	6.9	113	11.5	87	94	45	0	0	1	0	
WILMINGTON	69	31	87	18	50	6	6	T	-.1	T	.8	49	1.3	51	78	21	0	5	1	0	
ND BISMARCK	66	30	85	17	48	4	4	.1	-.2	.1	1.9	91	2.4	82	69	21	0	3	1	0	
FARGO	65	31	85	19	48	6	6	.1	-.3	.1	2.5	154	3.0	102	73	23	0	4	1	0	
GRAND FORKS	69	33	88	18	51	8	8	.1	-.2	.1	.7	50	1.1	47	78	21	0	4	2	0	
WILLISTON	58	36	65	25	47	-2	2	2.0	1.2	1.5	6.4	115	13.6	132	91	39	0	2	3	1	
OH AKRON-CANTON	63	39	71	29	51	-4	4	1.3	.5	.8	5.7	89	14.1	116	83	41	0	2	3	1	
CINCINNATI	58	35	65	24	46	-3	3	1.2	.8	.8	5.4	103	12.5	126	91	44	0	4	3	1	
CLEVELAND	61	37	69	27	49	-3	3	.4	-.4	.4	4.0	71	11.6	111	91	42	0	3	4	0	

Based on 1951-80 normals

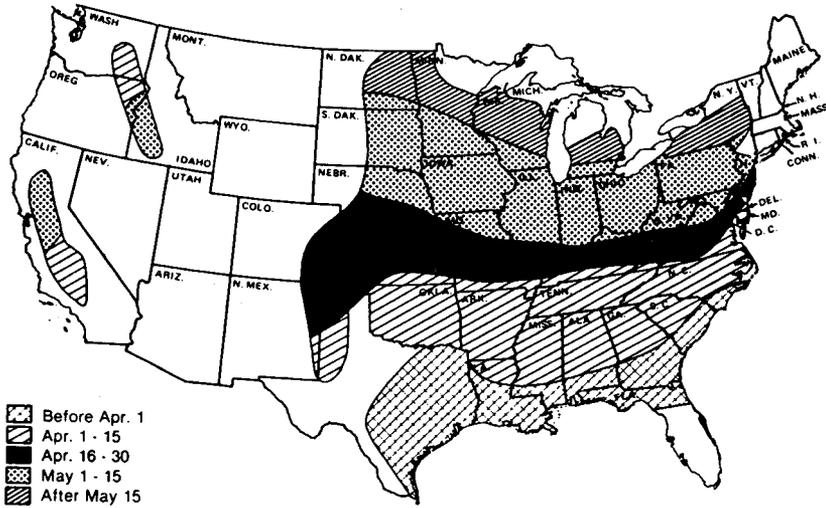
Weather Data for the Week Ending April 21, 1990

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	
																		01 INCH OR MORE	.50 INCH OR MORE		
DAYTON	61	37	68	26	49	-4	.7	-1	.5	6.5	119	14.5	144	86	42	0	3	2	1		
TOLEDO	59	33	69	20	46	-3	.6	-2	.6	5.5	116	13.0	153	94	36	0	5	1	1		
YOUNGSTOWN	59	35	65	24	47	-1	.8	0	.7	4.3	76	10.9	104	90	39	0	3	3	1		
OK OKLAHOMA CITY	68	51	85	42	60	-2	3.3	2.6	1.2	8.7	224	15.1	247	94	55	0	0	5	2		
TULSA	70	51	82	43	61	-2	2.6	1.6	1.4	10.4	176	17.4	194	95	53	0	0	6	2		
OR ASTORIA	58	46	62	36	52	4	.4	-7	.2	5.9	55	33.9	116	97	70	0	0	3	0		
BURNS	71	43	81	36	57	13	T	-1	T	.8	55	1.8	47	84	28	0	0	1	0		
MEDFORD	71	50	86	46	61	10	.4	-2	.3	1.9	73	5.9	73	88	42	0	0	4	0		
PENDLETON	73	48	78	44	61	10	T	-2	T	1.2	72	2.3	51	69	28	0	0	1	0		
PORTLAND	66	51	82	46	58	8	.1	-4	.1	2.8	53	14.2	93	92	58	0	0	3	0		
SALEM	66	49	81	47	58	8	.2	-4	.1	2.6	43	16.3	92	95	58	0	0	3	0		
PA ALLENTOWN	63	40	66	30	51	0	.7	-2	.3	3.7	56	10.6	82	83	42	0	2	4	0		
ERIE	57	38	67	31	47	1	.8	0	.7	4.6	86	12.6	128	84	43	0	1	3	1		
HARRISBURG	63	40	67	32	52	-2	.3	-4	.2	4.0	69	10.9	96	81	36	0	2	3	0		
PHILADELPHIA	64	43	68	36	53	-1	1.0	-2	.7	5.5	88	11.1	90	85	44	0	0	3	1		
PITTSBURGH	61	38	68	28	50	-2	1.1	-3	.5	4.9	83	11.5	103	89	34	0	3	3	1		
SCRANTON	59	37	63	29	48	-2	.6	-1	.3	4.2	89	10.8	120	85	40	0	3	3	0		
RI PROVIDENCE	57	39	66	28	48	-1	1.9	1.0	1.2	7.0	99	14.9	101	86	50	0	2	3	1		
SC CHARLESTON	78	56	85	51	67	2	T	-5	T	7.5	122	13.2	103	84	36	0	0	1	0		
COLUMBIA	78	51	87	43	64	0	T	-8	T	2.6	33	7.6	47	82	32	0	0	1	0		
FLORENCE	77	51	86	39	64	0	T	-6	T	3.0	48	5.8	44	89	36	0	0	1	0		
GREENVILLE	71	47	82	35	59	-3	T	-1.0	T	7.6	83	18.0	101	87	38	0	0	1	0		
SD ABERDEEN	66	30	84	17	48	2	.1	-4	.1	1.0	46	1.6	47	80	24	0	4	2	0		
HURON	67	28	85	15	48	1	T	-5	T	1.4	54	2.0	55	77	22	0	4	0	0		
RAPID CITY	69	34	82	18	52	6	.1	-4	.1	1.4	60	2.0	60	80	29	0	4	2	0		
SIOUX FALLS	64	33	82	18	48	0	.1	-5	.1	1.8	58	2.2	48	81	27	0	3	2	0		
TN CHATTANOOGA	72	49	78	40	61	0	.8	-2	.6	11.2	116	28.4	145	93	43	0	0	2	1		
KNOXVILLE	70	46	75	36	58	-2	.8	-1	.5	7.9	95	20.6	121	89	44	0	0	2	0		
MEMPHIS	73	51	80	41	62	-2	2.1	-7	.7	9.1	97	22.1	120	89	48	0	0	3	3		
NASHVILLE	70	47	74	36	58	-2	.5	-5	.3	4.5	52	12.0	70	90	48	0	0	3	0		
TX ABILENE	74	53	89	45	64	-2	2.0	1.4	1.1	4.6	179	8.9	196	95	62	0	0	4	1		
AMARILLO	68	44	85	35	56	-1	.5	-2	.2	3.1	210	5.9	237	95	38	0	0	3	0		
AUSTIN	81	64	87	58	72	3	.1	-6	.1	2.8	77	7.7	100	97	60	0	0	1	0		
BEAUMONT	80	61	85	51	71	1	T	-1.0	T	7.3	125	23.4	165	95	57	0	0	0	0		
BROWNSVILLE	85	69	86	64	77	2	0	-4	0	2.2	150	3.3	79	95	58	0	0	0	0		
CORPUS CHRISTI	82	69	84	65	75	2	0	-5	0	4.2	221	8.6	172	98	66	0	0	0	0		
DEL RIO	76	63	81	53	69	-3	1.2	-7	.7	5.0	273	6.9	212	82	63	0	0	3	2		
EL PASO	82	50	91	44	66	2	.3	-2	.2	.7	150	1.1	88	60	17	1	0	2	0		
FORT WORTH	73	57	82	49	65	-2	1.2	-2	.9	9.8	193	19.1	221	94	68	0	0	3	1		
GALVESTON	75	66	79	61	70	1	0	-6	0	5.2	134	12.4	134	97	75	0	0	0	0		
HOUSTON	81	63	85	53	72	2	T	-9	T	7.5	146	16.0	134	95	55	0	0	0	0		
LUBBOCK	74	49	90	38	61	0	1.1	.9	.6	2.2	144	4.7	193	96	44	1	0	4	1		
MIDLAND	78	52	95	40	65	0	.8	.6	.7	2.8	289	4.0	213	99	48	2	0	3	1		
SAN ANGELO	75	57	87	45	66	-2	1.6	1.2	1.5	3.3	178	6.5	197	96	65	0	0	4	1		
SAN ANTONIO	81	65	85	59	73	3	.1	-6	.1	6.0	195	9.9	153	95	58	0	0	0	0		
VICTORIA	81	66	84	63	74	2	T	-6	T	4.0	135	7.8	110	98	60	0	0	2	0		
WACO	79	60	88	53	70	2	T	-9	T	6.0	134	11.5	141	93	58	0	0	1	0		
WICHITA FALLS	73	52	88	45	63	-2	4.4	3.7	2.4	10.8	291	17.7	315	97	59	0	0	1	0		
UT CEDAR CITY	66	39	77	33	53	5	.2	0	.2	1.8	99	4.5	142	75	25	0	0	4	3		
SALT LAKE CITY	73	48	80	43	60	11	.1	-5	0	2.9	87	3.8	64	72	26	0	0	4	0		
VT BURLINGTON	52	35	59	23	44	0	.6	0	.3	4.6	113	9.8	128	77	40	0	3	4	0		
VA NORFOLK	67	48	84	36	58	-2	.9	.3	.5	6.0	104	12.2	96	94	45	0	3	4	0		
RICHMOND	69	45	79	33	57	-2	.7	0	.5	4.9	87	10.1	85	94	51	0	0	2	1		
ROANOKE	68	44	75	31	56	-1	.3	-5	.3	5.0	86	10.1	85	81	40	0	1	1	0		
WA QUILLAYUTE	58	45	75	37	52	6	1.2	-3	.8	10.9	63	43.9	100	98	65	0	0	5	1		
SEATTLE-TACOMA	63	48	77	46	56	6	.3	-2	.2	3.5	65	16.7	107	96	63	0	0	3	0		
SPOKANE	67	42	71	35	54	8	.3	-1	.3	1.4	66	4.9	79	85	34	0	0	1	0		
YAKIMA	73	43	79	33	58	9	T	-1	T	.3	32	1.9	62	86	31	0	0	1	0		
WV BECKLEY	61	39	70	26	50	-2	1.3	.5	1.0	5.5	85	13.2	101	82	40	0	2	2	1		
CHARLESTON	67	42	75	29	54	-2	1.1	.3	.7	4.5	70	11.1	85	92	38	0	2	3	1		
HUNTINGTON	66	41	76	32	54	-3	1.2	.4	.6	5.2	80	11.7	94	87	37	0	2	3	1		
PARKERSBURG	64	40	69	30	52	-3	.8	.1	.3	4.7	79	11.1	98	94	40	0	2	3	0		
WI GREEN BAY	56	34	70	26	45	0	.5	-2	.2	4.3	117	5.5	94	85	38	0	3	4	0		
LACROSSE	58	36	77	25	47	-2	.4	-4	.3	3.8	98	5.3	93	88	33	0	3	1	0		
MADISON	58	35	69	21	46	-1	.4	-3	.3	5.6	132	8.2	129	86	39	0	3	4	0		
MILWAUKEE	57	37	63	31	47	2	.8	0	.8	5.4	109	9.8	125	80	42	0	2	4	1		
WAUSAU	55	35	72	25	45	0	.3	-4	.2	3.0	79	4.6	80	83	34	0	3	3	0		
WY CASPER	65	35	75	31	50	7	.1	-2	.1	2.0	102	2.9	100	88	33	0	3	2	0		
CHEYENNE	60	33	72	25	46	4	.1	-2	.1	4.3	247	5.3	213	99	44	0	3	3	0		
LANDER	66	38	74	32	52	9	.1	-5	.1	2.5	97	2.6	72	81	28	0	2	2	0		
SHERIDAN	65	36	80	30	51	7	.3	-2	.3	1.9	80	3.3	85	88	41	0	3	1	0		

Based on 1951-80 normals

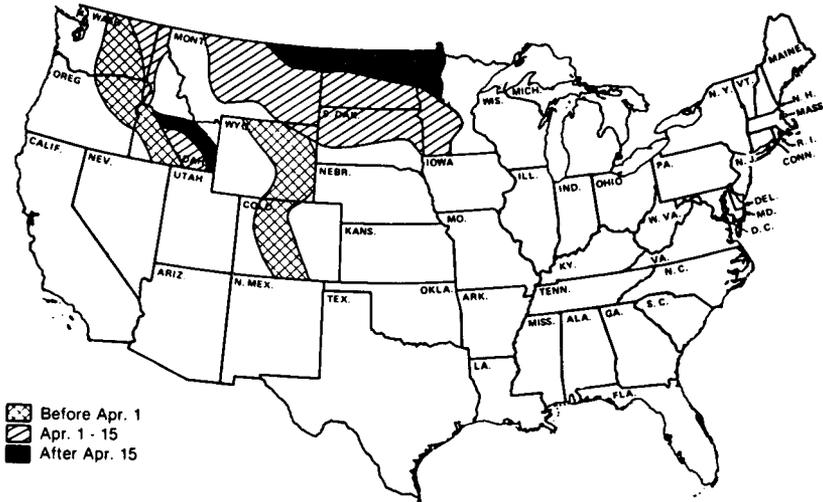
**Corn for Grain**

Usual Start of Planting, Principal Areas in the United States



**Spring Wheat**

Usual Start of Planting, Principal Areas in the United States



## National Agricultural Summary

April 16-22, 1990

**HIGHLIGHTS:** Lack of moisture stressed small grains in the northern Great Plains and Pacific Northwest. Rains benefited the central and southern Great Plains. Rain slowed fieldwork in the eastern Corn Belt. Wet field conditions slowed fieldwork in portions of the Delta. Soil moisture was generally adequate or adequate to surplus in the Delta and the East, adequate in the central and southern Great Plains, and short or short to adequate in the northern Great Plains, portions of the western Corn Belt, and most of the West.

**SMALL GRAIN:** Winter wheat was mostly good to fair. In Kansas, winter wheat was good to excellent. Disease and insect problems remain light. Winter wheat was good to fair in Oklahoma and fair to good in Texas, where fields were beginning to head in the Low Plains and Cross Timbers. In Arkansas, excess moisture caused yellowing in some fields. Crop condition was good to fair in Colorado and Nebraska. Russian wheat aphids were a continuing problem in the Panhandle. High winds damaged some fields in the western area. Winter wheat was good to fair in Montana and fair to good in South Dakota. Lack of moisture stressed winter wheat in the Pacific Northwest. Crop condition was good to fair in Idaho and Washington and fair to good in Oregon. In California, winter wheat was good but Russian wheat aphid damage was severe in some areas. Crop condition was good to fair in the Corn Belt and most of the Southeast.

Spring wheat seeding was 36 percent (%) complete, 10 percentage points ahead of normal. Seeding was ahead of normal in all five major producing States. Seeding was 23 and 34 points ahead of normal in Idaho and South Dakota, respectively.

**OTHER FIELD CROPS:** Cotton planting was 20% complete, 2 points behind normal. Planting began in Mississippi and North Carolina. Planting lagged behind normal in the Delta and Southeast except in Alabama. Alabama producers planted one-fourth of their crop during the week. Planting progressed well in the Blacklands and central Texas. Fields were beginning to square in the Rio Grande Valley. Warmer soil temperatures were needed before planting could begin in the Plains. Planting was 75% complete in California and 82% complete in Arizona. Arizona's crop was in good to excellent condition.

Corn planting was 6% complete, 4 points behind normal. Wet field conditions slowed planting in Kentucky and Missouri. Planting lagged 17 and 22 points behind normal in Kentucky and Missouri, respectively. Planting also lagged behind normal in Illinois and Indiana. North Carolina producers planted nearly one-fourth of their acreage during the week.

Sorghum planting was 15% complete, 3 points behind normal. In Texas, wet field conditions

slowed planting in the Plains and Cross Timbers. Planting was complete in the Blacklands. Soybean planting was underway in Georgia and Mississippi. Rice seeding was 19% complete, 16 points behind normal. Seeding was underway in Arkansas and California. Seeding lagged 23 and 33 points behind normal in Arkansas and Mississippi, respectively. Peanut planting was active in Alabama, Georgia, and Florida. Tobacco was good in North Carolina. Transplanting was 30% complete. Tobacco was good to fair in Georgia and Virginia and fair to good in South Carolina.

**FRUIT AND NUTS:** Florida's citrus groves were in good condition but needed rain. Valencia orange harvest was active in the southern and coastal areas. Grapefruit harvest was almost complete. Georgia's peaches were good to fair. Apples were blooming and in fair to good condition. Peaches were fair in South Carolina and fair to good in North Carolina. Peach harvest was underway in the Rio Grande Valley, Texas. In Arizona, Valencia orange and grapefruit harvests were active. Avocado harvest was steady in California. Lemon and orange harvests were active.

**VEGETABLES:** Warm days and mild nights prevailed over Florida's major vegetable producing areas. Spring vegetable harvests were active. Watermelons were fair to good in Georgia and South Carolina. In Georgia, onions were in excellent condition with harvest 28% complete. Carrot and onion harvests continued in the Rio Grande Valley, Texas. Cucumber harvest was underway. Onion and potato plantings were nearly complete in the High Plains. Chili planting was underway in the Trans-Pecos area. Spring vegetable harvests were complete in western Arizona. Spinach harvest was underway in the east. In California, artichoke, asparagus, broccoli, and cauliflower harvests were active. Spring potato, dry onion, and bell pepper harvests began in the desert area. Dry onion planting was 70% complete in Colorado. Potato planting was 20% complete in Idaho. In Oregon, onion planting was active in Malheur County.

**PASTURES AND LIVESTOCK:** Pastures were good to fair in the East and fair to good in most of the West. In California, range and pasture condition continued to decline in the central valley and southern areas. Some movement to summer ranges has begun.

Crop Progress

FOR WEEK ENDING APRIL 22, 1990

GRAIN SORGHUM  
% PLANTED

	1990	1989	AVG.
ARK	1	23	27
COLO	0	0	0
ILL	0	0	0
KANS	0	0	0
LA	31	31	34
MISS	12	29	24
MO	0	1	2
NEER	0	0	0
N MEX	8	NA	NA
OKLA	1	5	2
S DAK	0	0	0
TEX	51	57	57

12 STATES	15	NA	NA
EXCL. STATES WITH NA	15	18	18

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

NA - NOT AVAILABLE.

WINTER WHEAT  
% HEADED

	1990	1989	AVG.
ARK	37	23	27
CALIF	85	85	82
COLO	0	0	0
GA	88	93	74
IDAHO	0	0	0
ILL	0	1	0
IND	0	0	0
KANS	0	0	0
MICH	0	0	0
MO	0	0	1
MONT	0	0	0
NEER	0	0	0
N C	41	25	NA
OHIO	0	0	0
OKLA	10	10	10
OREG	0	0	0
S DAK	0	0	0
TEX	24	17	30
WASH	0	0	0

19 STATES	9	7	NA
EXCL. STATES WITH NA	8	7	9

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

NA - NOT AVAILABLE.

CORN  
% PLANTED

	1990	1989	AVG.
COLO	2	9	15
GA	93	88	91
ILL	2	6	11
IND	0	3	8
IOWA	1	3	4
KANS	15	15	15
KY	4	8	21
MICH	0	0	0
MINN	7	1	3
MO	7	25	29
NEER	1	7	6
N C	51	15	52
OHIO	6	1	6
PA	1	3	5
S DAK	0	0	0
TEX	74	84	80
WIS	0	0	0

17 STATES	6	8	10
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THESE 17 STATES PRODUCED 95% OF THE 1989 CORN CROP.

COTTON  
% PLANTED

	1990	1989	AVG.
ALA	46	15	31
ARIZ	82	84	79
ARK	0	0	5
CALIF	75	75	73
GA	7	4	14
LA	2	12	15
MISS	3	6	9
MO	0	0	3
N MEX	35	65	43
N C	5	4	13
OKLA	0	2	1
S C	7	1	27
TENN	0	2	6
TEX	14	14	14

14 STATES	20	20	22
THESE 14 STATES PRODUCED	99% OF THE 1989 COTTON CROP.		

SPRING WHEAT  
% PLANTED

	1990	1989	AVG.
IDAHO	77	50	54
MINN	34	13	30
MONT	32	12	29
N DAK	23	6	17
S DAK	76	30	42

5 STATES	36	13	26
THESE 5 STATES PRODUCED	89% OF THE 1989 SPRING WHEAT CROP.		

RICE  
% PLANTED

	1990	1989	AVG.
ARK	1	21	24
CALIF	1	1	3
LA	51	52	55
MISS	7	36	40
TEX	60	75	76

5 STATES	19	32	35
THESE 5 STATES PRODUCED	97% OF THE 1989 RICE CROP.		

Crop Condition  
PERCENT

FOR WEEK ENDING APRIL 22, 1990

WINTER WHEAT

STATE	VP	P	F	G	EX
ARK	0	8	40	45	7
CALIF	0	0	10	80	10
COLO	0	4	22	61	13
GA	3	5	48	42	2
IDAHO	0	2	18	64	16
ILL	0	4	30	63	3
IND	1	5	34	55	5
KANS	0	0	16	52	32
MICH	NA				
MO	0	6	61	32	1
MONT	3	6	27	47	17
NEB	0	1	34	64	1
N C	0	1	22	70	7
OHIO	0	5	25	58	12
OKLA	0	0	18	80	2
OREG	0	19	44	37	0
S DAK	2	15	58	24	1
TEX	1	11	39	43	6
WASH	0	0	39	61	0
19 STATE	0	4	28	56	12
PREV WEEK	1	3	25	60	11
PREV YEAR	18	17	39	24	2

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 2.00 in. Tennessee Valley area; 0.50 to 1.00 remainder north, west; light Wiregrass area. Temperatures within degree of normal.

Days suitable for fieldwork 5.1. Soil moisture 83% adequate, 17% surplus. Acreage intended for spring planting 67% prepared, 64% 1989, 79% avg. Fieldwork progress 53% behind normal, 47% on schedule. Corn 75% planted, 62% 1989, 74% avg. Sorghum 25% planted, 16% 1989, 15% avg. Cotton 46% planted, 15% 1989, 31% avg. Peanuts 8% planted, 12% 1989, 14% avg. Winter wheat 65% headed, 63% 1989, 58% avg.; 22% turning color, 19% 1989, 8% avg.; 1% poor, 37% fair, 62% good. Pastures 5% poor, 24% fair, 65% good, 6% excellent. Livestock 20% fair, 80% good. Primary activities: Planting row crops, sweet potatoes, watermelons, other vegetables; applying fertilizer, lime, herbicides to cropland; spraying, thinning peaches; maintaining equipment, repairing fences; cleaning poultry houses, spreading litter on cropland, pastures; monitoring fish ponds, feeding, harvesting catfish; general care of livestock, poultry.

**ARIZONA:** Sunny, hot 14th, 15th; cooler, gusty winds 16th, 17th; precipitation north 18th. Temperatures 2 to 9° above normal. Extremes 51°; 100° deserts, 28°; 88° higher elevations. Precipitation none to 1.00 in.

Cotton planted 82%, 84% 1989, 79% avg.; 75% good, 25% excellent. Wheat, barley conditions 70% good, 30% excellent; heading 95%, 94% 1989, 88% avg.; turning color 36%, 28% 1989, 24% avg. Alfalfa hay harvest active; 64% good, 36% excellent. Spring vegetable season completed west; artichoke harvest continued Poston area; spring lettuce, mixed vegetable harvests continued central; valencia orange, grapefruit harvests continued; spinach harvest underway east.

**ARKANSAS:** Cool, wet weather continued with heavy rain across the northwest. Extremes 37°; 87°. Rainfall none to 5.83 in.

Days suitable for fieldwork 3.0. Soil moisture 9% adequate, 91% surplus. Main activities: Limited rice, sorghum, corn planting; pasture fertilization; bermuda sprigging; applying fungicides to wheat; scouting for wheat diseases; cutting ditches to drain fields; livestock chores. Corn 61% planted, 71% 1989, 74% avg.; 5% poor, 56% fair, 39% good. Oats 8% headed, 20% 1989, 28% avg.; 49% fair, 51% good. Land preparation limited to lighter textured soils. Excessive water causing yellow spots in some wheat fields; diseases building due to dampness; fungicide applications continued. Some corn replanted. Tomato growth slowed. Grapes being sprayed. Peach crop good. Pastures supplying average feed. Some alfalfa weevil damage. Cattle good, except for some tetany problems.

**CALIFORNIA:** Low pressure system tracked through southern area bringing scattered light rain to some parts of the State. Temperatures also began to cool back to nearly normal. Another trough developed along the coast later in the week bringing further light rain amounts especially to northern area, the Sierra.

Open weather most agricultural areas, rapid progress field activities. Controls Russian wheat aphid continued. Damage severe parts western

Kern, eastern Santa Barbara counties. Rice stubble burning about completed. Discing, other rice seeding preparation active. First fields seeded. Seeding cotton, corn, sunflowers progressed normally. Overwintered sugarbeets harvested. alfalfa hay harvest active. Green chopping alfalfa, grain active. Sheep grazed alfalfa seed fields. Thinning, fertilizing, weed control active. Almonds sizing. Avocado harvest steady; new crop blooming. Grape activities; irrigation, suckering, applying materials to control mildew, weeds. Lemon, orange harvests progressed. Some freeze damaged oranges. Nectarine, peach thinning active. Prune set light. Walnuts sprayed for codling moth. Artichokes continued heavy supply, generally good quality. Asparagus harvest active excellent quality. Broccoli fairly heavy supply central coast, generally good quality. Cauliflower fairly heavy supply central coast, variable quality. Cantaloupe, bell pepper planting ongoing. Spring potato, dry onion, bell pepper harvest started desert. Strawberries moderate supply, variable quality Santa Maria area. Sweet potato planting Atwater Livingston area. Other vegetables harvested included freezer peas, spinach, zucchini, yellow crookneck squash, radishes, leaf lettuce, etc. Livestock good, statewide. Range, pasture conditions worsened central valley, southern area as dry weather continued. Grasses upper elevations fair but lack of water forced cattle from foothill ranges to summer pastures. Supplemental feeding continued.

**COLORADO:** Cool temperatures brought gusty winds, fog, scattered thunderstorms. Precipitation was light in most areas. Temperatures 1 to 5° above normal.

Days suitable for fieldwork 5.0. Soil moisture 5% very short, 34% short, 60% adequate, 1% surplus. Barley 65% seeded, 30% emerged. Oats 58% seeded, 26% emerged. Spring wheat 46% seeded, 14% emerged. Winter wheat 4% poor, 22% fair, 61% good, 13% excellent, 18% jointed. Corn plantings started with 2% planted. Dry onions 70% planted, sugarbeets 52% planted. Summer potatoes 31% planted, 7% emerged. Cows calved 83%, ewes lambed 90%. Death losses below normal. Stored feed supplies below normal. Ranges, pasture mostly fair to good.

**FLORIDA:** Temperatures around normal, north; 1 to 3° above normal central, south. Extreme highs reached mid upper 80s most of State; some low 90s interior Peninsula. Coolest temperatures around 50° north to mid 50s central, interior south with lows in low or mid 60s southeast coast. Showers, thundershowers most numerous north; most totals under 0.50 in. Over 1.00 in. amounts occurred only isolated areas. Elsewhere, showers much more widely scattered; most totals under 0.25 in. Almost no rain occurred along southwest quarter of Peninsula.

Soil moisture Panhandle short to adequate; Peninsula mostly short. Peanut planting active. Corn planting continued slow. Land preparation cotton, soybeans active. Some seed wheat fields irrigated. Tobacco, sugarcane good progress. Pastures dry; Panhandle, poor to good, Peninsula conditions vary, severe to good. Cattle fair to good. Citrus groves good; however, rain needed all areas. Irrigation widespread. New crop fruit

good progress. Most young trees producing much new growth. Valencia harvest still active southern, coastal areas. Grapefruit harvest almost complete. Warm days, mild nights prevailed over major vegetable producing areas. Rainfall limited. Many crops declining seasonally, southern areas. Spring harvest active. Volume leaders: Tomatoes, potatoes, watermelons, cucumbers, sweet corn, cabbage, peppers, squash, celery, snap beans. Also good volume carrots, radishes, lettuce, eggplant. Light harvest ruskin tomatoes.

**GEORGIA:** Temperatures within degree of normal. Extremes 40°; 90°. Most rain confined northwest counties, 1.00 in. or less. Light amounts most other locations. Greatest weekly total 1.66 in. Crawfish Creek, Dade County. Rain one or two days.

Days suitable for fieldwork 5.8. Soil moisture 41% short, 58% adequate, 1% surplus. Corn 26% fair, 65% good, 9% excellent; 93% planted, 88% 1989, 91% avg.; planting slowed dry soils east central. Cotton 6% poor, 56% fair, 38% good; 7% planted, 4% 1989, 14% avg. Sorghum 10% planted, 5% 1989, 14% avg. Peanuts 58% fair, 42% good; 11% planted, 9% 1989, 19% avg. Soybeans 1% planted, 2% avg.; soybean planting just underway. Tobacco 47% fair, 47% good, 6% excellent; 100% transplanted, 98% 1989, 92% avg.; few reports of spotted tomato wilt virus. Watermelons 83% fair, 16% good, 1% excellent; 92% planted, 93% 1989, 91% avg. Wheat 3% very poor, 5% poor, 48% fair, 42% good, 2% excellent; 99% boot, 99% 1989, 93% avg.; 88% headed, 93% 1989, 74% avg. Rye, other small grains fair to good, mostly good. Apple freeze damage 5% poor, 72% fair, 23% good; 99% blooming, 95% 1989, 98% avg. Peaches 2% very poor, 12% poor, 18% fair, 68% good. Onions 13% fair, 4% good, 83% excellent; 28% harvested. Pastures good. Cattle, hogs good. Main activities: Dry soils slowing planting. Cool soils slowing germination.

**HAWAII:** High pressure center sustained favorable weather. Days mostly sunny, scattered showers. Winds variable 5 to 20 mph with temperatures low 60s to low 80s. Rainfall none to 1.70 in.

Days suitable for farm work 7.0. Weather generally favorable to crop progress. Papaya production steady. Sugar, pineapple harvesting continuous.

**IDAHO:** Temperatures very warm statewide. Departures from normal 6 to 16° above normal. Precipitation fell in all locations, below normal levels.

Days suitable for fieldwork 6.0. Soil moisture 22% very short, 32% short, 45% adequate, 1% surplus. Winter wheat headed 0%, 0% 1989, 0% avg.; mostly good with 83% not yet jointed, 17% jointed. Spring wheat planted 77%, 50% 1989, 54% avg.; emerged 45%, 15% 1989, 20% avg. Spring barley planted 77%, 43% 1989, 46% avg.; emerged 46%, 12% 1989, 17% avg. Potatoes planted 20%, 13% 1989, 10% avg. Sugarbeets planted 98%, 62% 1989, 75% avg. Oats planted 54%, 22% 1989, 30% avg. Dry peas planted 70%. Lentils planted 75%. Field corn planted 16%. Irrigation water supply mostly good. Calving complete 96%. Lambing complete 97%. Hay, roughage supply mostly adequate, very short areas of south central, east. Pest problems continued. Russian wheat aphids increased slightly, spotty throughout State. Other pests: pea leaf weevils, cabbage seedpod weevils, fungus, cutworms. Spring planting continued 1 to 2 weeks ahead of average. Fruit trees warmer areas, mid to late bloom, cooler areas bud to early bloom.

**ILLINOIS:** Temperatures normal to 4° below normal north, south, 4 to 6° below normal south central. Precipitation generally 0.25 to 0.75 in., 1.00 in. or more far south.

Days suitable for fieldwork 2.0. Soil moisture 11% short, 62% adequate, 27% surplus. Oats seeded 72%, 80% 1989, 86% avg. Livestock roughage requirements from pasture 38%, 46% 1989, 50% avg. Alfalfa 8% poor, 40% fair, 52% good. Pasture 2% poor, 37% fair, 58% good, 3% excellent. Assessing freeze damage wheat, alfalfa, fruits.

**INDIANA:** Temperatures up to 6° below normal. Lows upper 30s to mid 40s, highs upper 50s to mid 60s. Precipitation 0.50 to 1.50 in.

Days suitable for fieldwork 2.3. Topsoil 64% adequate, 36% surplus. Subsoil moisture 82% adequate, 18% surplus. Spring cropland 74% tilled, 73% 1989, 78% avg. Wheat 9 in. high, 8 in. 1989, 8 in. avg. Wheat 37% jointed, 28% 1989, 27% avg. Oats 61% seeded, 51% 1989, 74% avg. Clover 81% seeded, 73% 1989, 83% avg. Pasture 3% poor, 44% fair, 48% good, 5% excellent. Mid week drying allowed some farmers to resume fieldwork.

**IOWA:** Temperatures 2° below normal east to 5° above normal northwest. Extremes 16°; 89°. Precipitation 0.01 to 0.97 in.; average 0.34 in.

Days suitable for fieldwork 4.2. Topsoil 20% short, 79% adequate, 1% surplus. Subsoil 68% short, 32% adequate. Winter wheat 4% poor, 37% fair, 57% good, 2% excellent. Hay 4% very poor, 12% poor, 44% fair 37% good, 3% excellent. Pasture 4% very poor, 15% poor, 43% fair, 35% good, 3% excellent. Oats 86% sown, 90% 1989, 86% avg. Oats 12% emerged, 15% 1989, 35% avg. Seedbed preparation 73% completed. Fertilizer application 72% completed, 75% 1989, 68% avg. Livestock mostly good. Some respiratory problems in hogs due to the fluctuating temperature extremes. Some farmers have started moving cattle to pasture.

**KANSAS:** Temperature 7° above normal northwest; near normal all other areas. Precipitation less than 0.10 in. most districts except southwest, east central, southeast where precipitation over 0.25 in.

Days suitable for fieldwork 4.0. Topsoil 17% short, 77% adequate, 6% surplus. Subsoil 32% short, 66% adequate, 2% surplus. Wheat making excellent growth under generally adequate moisture. Jointing 65%, 40% 1989, 60% avg. Insect, disease problems light, foliar disease increasing east, central, southern counties. Corn planting good progress, on schedule with last year, average. Seedbed preparation for sorghum, soybean planting on schedule. Alfalfa greening up, alfalfa weevil, aphid infestations need monitoring, control some areas. Range, pasture generally good to excellent, forage adequate. Feedlots current.

**KENTUCKY:** During first half week, temperatures 5 to 10° below normal. Last half week, 12° above normal. Coolest occurred northeast with temperatures lower 50s. Warmest temperatures west with upper 50s. Heaviest precipitation recorded north, 1.00 to 1.50 in., 0.50 in. above normal. Amounts across south 0.25 to 0.50 in., 0.50 in. below normal. Majority precipitation fell latter half week.

Days suitable for fieldwork 2.7. Farmers almost 4 days behind schedule, 10 days west, 6 days west central. Soil moisture 7% short, 68% adequate, 25% surplus. Tobacco plants emerged 75% beds, 68% 1989, average. Corn planting 4% complete, 8% 1989, 21% avg. Winter wheat 6% very poor, 21% poor, 50% fair, 22% good, 1% excellent. Average height 12 in. with most advanced 17 in. Damage to crop varies by location, planting date, variety, runs

from none to severe. Damage includes head, stem, virus, mildew. Pastures fair to good. Alfalfa weevils active with damage none to severe. Farmers spraying as needed.

**LOUISIANA:** Temperatures normal to 1° below normal. Extremes 43°; 88°. Rainfall none to 2.30 in.

Days suitable for fieldwork 5.2. Soil moisture 3% short, 87% adequate, 10% surplus. Spring plowing 62%, 79% 1989, 80% avg. Corn planted 90%, 88% 1989, 86% avg.; emerged 74%, 69% 1989, 70% avg.; 60% fair, 40% good. Cotton planted 3%, 12% 1989, 15% avg.; emerged 0% 2% 1989, 4% avg. Hay first cutting 1%, 5% 1989, 3% avg. Rice planted 51%, 52% 1989, 55% avg.; emerged 37%, 40% 1989, 40% avg. Growth was slow due to cool night temperatures. Water mold was a problem in some fields. Sorghum planted 31%, 31% 1989, 34% avg.; emerged 16%, 17% 1989, 19% avg. Sweet potatoes planted 4%, 5% 1989, 9% avg. Sugarcane 22% very poor, 67% fair, 11% good. Wheat headed 92%, 88% 1989, 84% avg.; turning color 4% 5% 1989, 8% avg.; 56% fair, 38% good, 6% excellent. Livestock 41% fair, 56% good, 3% excellent. Pasture 6% poor, 44% fair, 47% good, 3% excellent. Vegetable 61% fair, 35% good, 4% excellent.

**MARYLAND & DELAWARE:** **MARYLAND:** Precipitation 0.79 in. Temperature 52°, normal 54°. Extremes 22°; 80°.

Days suitable for fieldwork 3.7. Topsoil 5% short, 67% adequate, 28% surplus. Acreage prepared for planting 49%, 40% 1989, 48% avg. Subsoil 67% adequate, 33% surplus. Wheat, barley, oats, rye good.

**DELAWARE:** Precipitation 0.77 in. Temperature 52°, normal 54°. Extremes 29°; 76°.

Days suitable for fieldwork 4. Topsoil 100% adequate, Subsoil 83% adequate, 17% surplus. Potatoes planted 84%, 50% 1989, 79% avg. Wheat, barley, good condition. Rye fair.

**MICHIGAN:** Temperatures 3° below to 2° above normal. Extremes 16°; 79°. Precipitation 0.01 to 1.36 in. across the State.

Major activities: Field activities limited by cool, wet conditions. Some spring tillage, fertilizer application, oat seeding, sugarbeet planting pruning, spraying orchards. Livestock good. Calving active. Feed supplies good. Slow growth on pastures, winter wheat.

**MINNESOTA:** Temperatures 2 to 8° above normal. Extremes 15°; 89°. Precipitation none to 0.45 in. Greatest weekly total 0.86 in.

Days suitable for fieldwork 4.4. Subsoil 56% very short, 35% short, 9% adequate. Topsoil 22% very short, 43% short, 35% adequate. Spring wheat 34% acres planted, 13% 1989, 30% avg. Oats 49% planted, 29% 1989, 43% avg. Barley 19% planted, 2% 1989, 20% avg. Corn 24% land prepared, 13% 1989, 20% avg.; 7% planted, 1% 1989, 3% avg. Soybeans 5% land prepared, 2% 1989, 8% avg. Potatoes 2% planted, 1% 1989, 2% avg. Sugarbeets 21% planted, 3% 1989, 19% avg. Green peas 28% planted, 22% 1989, 25% avg. Sweet corn 2% planted, 0% 1989, 1% avg. Fall seeded small grain 66% of normal condition. Winter freeze damage compared to normal; Alfalfa 7% none, 41% light, 51% moderate, 1% severe, Winter wheat 8% none, 39% light, 43% moderate, 10% severe. Rye 12% none, 45% light, 35% moderate, 8% severe.

**MISSISSIPPI:** Temperatures 1° below normal. Extremes 36°; 86°. Mostly dry statewide. Rainfall 0.58 in., 0.72 in. below normal. Soil temperature 63°.

Days suitable for fieldwork 3.6, 5.5 1989, 4.7 avg. Soil moisture 69% adequate, 26% surplus, 5% excessive. Wheat 95% jointing, 98% 1989, 98% avg.; 5% poor, 73% fair, 22% good; 68% heading, 65% 1989, 52% avg. Corn 46% planted, 42% 1989, 62% avg.; 36% emerged, 31% 1989, 40% avg. Livestock, Pasture fair to good. Cotton 3% planted, 6% 1989, 9% avg. Hay 4% harvested. Peanuts 3% planted. Rice 7% planted, 36% 1989, 40% avg. Sorghum 12% planted, 29% 1989, 24% avg.; 7% emerged, 0% 1989, 6% avg. Sweet potatoes 6% planted, 5% 1989, 10% avg. Watermelons 44% planted, 43% 1989, 45% avg. Peaches 25% very poor, 20% poor, 39% fair, 16% good. Activities: Soybean planting underway, buying supplies for fieldwork, some equipment repair.

**MISSOURI:** Temperatures 1 to 6° below normal. Rainfall 0.25 in. northern third to around 1.50 in. south central, southeast. Most central counties less than 0.75 in.

Days suitable for fieldwork 1.3. Topsoil 3% short, 61% adequate, 36% surplus. Subsoil 28% short, 58% adequate, 14% surplus. Ground worked at least once for spring crops 59%, 71% 1989, 67% avg. Oats sown 75%, 96% 1989, 92% avg. Rice 5% planted. Wheat, pasture growth slowed by cool weather. Pastures 11% poor, 45% fair, 40% good, 4% excellent.

**MONTANA:** Scattered showers brought light rainfall mostly less than 0.10 in. Temperatures 6 to 11° above normal. Mid week surge of cooler air lowered temperatures east of divide into the teens. By weekend temperatures warmed to 90°.

Topsoil 31% short, 66% adequate, 3% surplus. Subsoil 35% short, 61% adequate, 4% surplus. Soil moisture eastern third of State critically short. Field tillage 14% not started, 38% just started, 48% well underway. Barley planted 27%, 12% 1989, 30% avg. Oats planted 25%, 7% 1989, 21% avg. Sugarbeets planted 30%, 5% 1989, 27% avg. Calving 86% done, lambing 76% complete.

**NEBRASKA:** Temperatures 2 to 5° above normal. Extremes 10°; 93°. Rainfall traces up to 0.25 in.

Days suitable for fieldwork 6.2. Topsoil 33% short, 67% adequate. Subsoil 90% short, 10% adequate. Winter wheat 9% jointed, 6% 1989, 5% avg. Oats 90% seeded, 90% 1989, 85% avg. Russian wheat aphids heavy throughout most of Panhandle, growers applying insecticides. Smaller populations southwest. Army cutworms causing damage to wheat, alfalfa west, southwest. High winds damaged some wheat west. Drier areas of Panhandle will show stress if moisture not received soon. Some wheat yellowing, East, most caused by streak mosaic. High winds, west, stopped fieldwork for a time. Irrigating wheat, alfalfa southwest. Sugarbeet planting nearing completion. Pasture, range feed supplies rated 60% short, 40% adequate. High hay prices forced many operators to put cattle on pastures, which were already short. Southwest, cattle grazing wheat, crop residues. Main activities: Applying fertilizer, herbicides; shredding stalks; disking; seeding small grains, alfalfa. Western growers working summer fallow.

**NEVADA:** Warm, dry early. Rain, snow showers widespread mid week. Moist, unstable air mass continued to produce clouds, scattered showers remainder of week. Daytime temperatures above normal early. By mid week highs near normal. Extremes 25°; 96°.

Progress fieldwork, planting operations curtailed by widespread showers. Alfalfa harvest delayed by inclement weather. Planting fall potato crop good progress until interrupted by storms.

**NEW ENGLAND:** Precipitation (rainfall and water equivalent of snow) 1.89 in. Maine coast, 0.59 in. southern Vermont. Temperatures upper 30s over northern Maine to middle, upper 40s over south. Temperatures were normal.

Major farm activities: Spreading manure, mending fences, plowing, repairing machinery.

**NEW JERSEY:** Temperatures below normal. Extremes 23°; 75°. Rainfall 0.39 in. north, 0.43 in. central, 0.48 in. south. Heaviest 24 hour total 0.44 in. on 21st, 22nd. Estimated soil moisture percent field capacity averaged 99% north, 97% central, 96% south. Four inch soil temperatures averaged 48° north, 50° central, 51° south.

Frost continued to further damage. Fruit blossomed. Fieldwork became active as soil conditions permitted. Most progress is behind schedule. White potato planting about complete. Sweet corn planting under plastic well advanced. Preparations for field corn active. Lime, fertilizer application active on fall sown grains, hay, pastures. Fruit spraying active.

**NEW MEXICO:** Temperatures variable across State; most locations recorded some precipitation.

Days suitable for fieldwork 6.5. Soil moisture 79% short, 21% adequate. Cotton planted 35%; milo planting continues few locations. Cattle poor to good; sheep poor to good; range very poor to good.

**NEW YORK:** Temperatures near normal. Extremes 17°; 69°. Rainfall below normal all areas except Coastal Division. Rainfall 1.14 in. at Bridgehampton, 1.09 in. at Buffalo to only 0.15 in. at Elizabethtown.

Days suitable for fieldwork 3.5. Soil moisture mostly surplus. Hay, pastures mostly fair, wheat fair to good. Cool, wet weather hindered fieldwork. Early planting underway on limited basis in southeastern areas. Seed supplies ample. Early, mid blooming apple varieties in green tip stage. Fruit growers removing prunings, performing fertilization, weed control. Tree planting active. Limited planting of early season vegetables active as fields dry. Some sweet corn planted under plastic. Strawberries good condition, starting to leaf.

**NORTH CAROLINA:** Temperatures normal to 2° below normal across the State. Precipitation none to 3.12 in.

Days suitable for fieldwork 5.0. Soil moisture 5% short, 87% adequate, 8% surplus. Pasture 19% fair, 71% good, 10% excellent. Livestock feed from pasture 66%. Corn planted 51%, cotton planted 5%, sorghum planted 5%. Crop condition: Wheat, 1% poor, 22% fair, 70% good, 7% excellent; oats 3% poor, 23% fair, 71% good, 3% excellent; barley 2% poor, 26% fair, 72% good; rye 2% poor, 24% fair, 70% good, 4% excellent; tobacco plant beds 23% fair, 64% good, 13% excellent; irish potatoes 7% poor, 23% fair, 64% good, 6% excellent; peaches 9% very poor, 27% poor, 44% fair, 17% good, 3% excellent; truck crops 3% very poor, 32% fair, 63% good, 2% excellent. Flue cured tobacco transplanted 30%. Tobacco plant supplies 5% short, 86% adequate, 9% surplus. Hay, roughage supplies 3% short, 88% adequate, 9% surplus. Feed grain supplies 7% short, 91% adequate, 2% surplus. Major activities: Land preparation, planting corn, tending livestock, transplanting tobacco. Other activities included: Tending tobacco beds, transplanting Christmas trees, truck crops, hay harvesting, general farm maintenance.

**NORTH DAKOTA:** Cool early, warm late. Temperatures 3° above normal north central to 7°

above normal south central. Extremes 12° south central, 16th; 90° northeast, 21st. Light precipitation 0.05 to 0.10 in.

Days suitable for fieldwork 6.2. Soil moisture supplies remained well below normal. Topsoil 42% very short, 51% short, 7% adequate. Subsoil 70% very short, 24% short, 6% adequate. Warm temperatures advanced spring planting progress. Hard red spring wheat 23% planted, durum wheat 7%, oats 19%, barley 19%, sugarbeets 13%. Winter wheat 9% very poor, 29% poor, 55% fair, 7% good; 20% dormant, 80% green. Livestock mostly good, calving 85% completed, lambing 92%, shearing 90%. Pastures 20% dormant, 73% poor, 6% fair, 1% good; furnished 20% roughage requirements. Stockwater supplies 14% very short, 41% short, 45% adequate.

**OHIO:** High temperatures low 60s; near to slightly below normal. Low temperatures mid to high 30s; 3 to 5° subnormal. Precipitation widespread 0.50 to 1.50 in. Soil temperatures under bare soils upper 40s; 3 to 7° subnormal. Soil temperature under sod mid 40s; near normal.

Days suitable for fieldwork 2.9. Soil moisture 70% adequate, 30% surplus. Farm activities: Spreading fertilizer, applying pesticides, general maintenance, machinery preparation. Winter wheat greening in response to warm, sunshine; mostly good. Oat planting 66% complete; cold weather slowed emergence of earlier plantings. Corn planting underway as soils warm. Frosty nights early in period may have damaged some tree fruits; no assessment for several weeks. Bedding plant shipments slow volume building as weather conditions improved.

**OKLAHOMA:** Temperatures 3° below normal southwest to 2° above Panhandle. Precipitation 0.30 to 4.36 in. east central.

Days suitable for fieldwork 3.9. Topsoil 50% adequate, 50% surplus. Subsoil 100% adequate. Wheat 18% fair, 80% good, 2% excellent; 10% heading, 10% 1989, 10% avg. Cool, wet weather aided filling of wheat heads. Foliar diseases increasing. Cotton none planted, 2% 1989, 1% avg. Sorghum 1% planted, 5% 1989, 2% avg. Pastures good, growth slowed by cool, wet weather. Cattle good; marketings, prices steady to slightly higher than preceding week.

**OREGON:** Temperatures well above normal. Very warm weather 15th through 17th. Record maximums Portland, Burns, a few others on 15th. Weekend, cool unstable air, most of State. Significant rainfall southern half of State which has been extremely dry for water year. Few spots north central area no precipitation, in general welcome rains everywhere.

Winter wheat 19% poor, 44% fair, 37% good. Barley 81% seeded, 76% 1989, 87% avg. Statewide, soil moisture 84% short, 16% adequate. Drought stress visible some eastern area wheat fields; irrigation water short some areas. Fruit trees in western area full to late bloom. Eastern area fruit orchards blooming much earlier than normal. Western area onions nearly all planted. Planting onions Malheur County. Early potatoes emerged. Klamath potato growers preparing seedbeds. Both western, eastern pastures needed rain. Livestock in good to excellent. Baker calving well finished, branding started. Cattle movement into Klamath continued.

**PENNSYLVANIA:** Dry week with near normal temperatures across the Commonwealth. Temperature 49°; 1° above normal. Extremes 22°; 68°. Precipitation 0.45 in., 0.37 in. below normal.

Days suitable for fieldwork 4.0. Soil moisture 4% short, 75% adequate, 21% surplus. Plowing 43% complete, 34% 1989, 48% avg. Corn 1% planted, 3%

1989, 5% avg. Soybeans 0% planted, 0% 1989, 0% avg. Oats 37% planted, 41% 1989, 54% avg. Potatoes 21% planted, 12% 1989, 24% avg. Tobacco Beds 85% planted, 82% 1989, 69% avg. Barley 98% pre boot, 99% 1989, 96% avg.; 2% boot, 1% 1989, 4% avg.; 0% heading or headed, 0% 1989, 0% avg. Wheat 98% pre boot, 100% 1989, 99% avg.; 2% boot, 0% 1989, 1% avg. 0% heading or headed, 0% 1989, 0% avg. Wheat 4% very poor, 3% poor, 22% fair, 52% good, 19% excellent. Oats 7% very poor, 4% poor, 27% fair, 52% good, 10% excellent. Hay stands mostly fair. Feed from pastures mostly average to below average. Peaches 48% pre pink, 49% 1989, 54% avg.; 30% pink, 28% 1989, 19% avg.; 22% full bloom or past, 23% 1989, 27% avg. Cherries 66% pre pink, 54% 1989, 51% avg.; 23% pink, 28% 1989, 24% avg.; 11% full bloom or past, 18% 1989, 25% avg. Apples 82% pre pink, 81% 1989, 76% avg.; 16% pink, 18% 1989, 18% avg.; 2% full bloom or past, 1% 1989, 6% avg. Activities: Spring plowing; planting corn, oats, potatoes, hay; repairing fence; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

**PUERTO RICO:** Rainfall 1.48 in., 0.40 in. above normal. Highest weekly total 5.25 in. at Lares, 4.33 in. at Adjuntas, 3.96 in. at Corral Viejo. Highest 24 hour total 4.00 in. at Lares. Temperatures 79° on the coasts, 72 to 74° in interior, Meag Station 63° at Pico Del Este Luquillo to 80° at Roosevelt Roads N.S. Extremes 48; 92°.

**SOUTH CAROLINA:** Temperatures 2° below normal UpState to 2° above normal near the coast. Precipitation 0.04 in. UpState to 0.10 in. in the northeast.

Days suitable for fieldwork 6.1. Soil moisture 62% short, 38% adequate. Cotton 7% planted, 1% 1989, 27% avg. Tobacco fair to good; 91% planted, 48% 1989, 54% avg. Corn good; 92% planted, 72% 1989, 83% avg. Watermelons fair to good; 72% planted, 79% 1989, 79% avg. Cantaloupes fair to good; 60% planted, 67% 1989, 63% avg. Peaches fair. Tomatoes fair to good; 95% planted, 88% 1989, 93% avg. Oats good; 71% headed, 73% 1989, 48% avg.; 2% turning color, 1% 1989, 1% avg. Wheat good; 78% headed, 63% 1989, 46% avg.; 1% turning color, 1% 1989, 1% avg.

**SOUTH DAKOTA:** Temperatures mostly above normal, 5° below to 9° above normal. Extremes 80; 86°. Precipitation below normal, generally less than 0.10 in., maximum 0.63 in. Yearly precipitation generally below normal, 0.81 in. above to 3.09 in. below normal.

Winter wheat fair to good, winterkill 11%. Major activities: Fieldwork, chemical application, seeding, calving, lambing, fencing, working calves.

**TENNESSEE:** Cold front brought showers 16th. On 20th, an upper level disturbance caused scattered thundershowers. Temperatures slightly below normal east, middle, plateau; slightly above normal west. Precipitation above normal west, below normal elsewhere.

Days suitable for fieldwork 3.7. Soil moisture 3% short, 76% adequate, 21% surplus. No cotton, sorghum planting yet. Corn planting very slow. Wheat diseases heavy. Freeze damage to wheat, fruit. Pasture growth slowed. Livestock mostly good.

**TEXAS:** Wet week Low Plains, Cross Timbers, north central, series upper air disturbances moved across State. Disturbances interacted with cold front mid week set up overrunning rainfall pattern. Surge cold air following front dropped

temperatures near freezing Panhandle, cooling western, central areas. Temperatures below normal southern High Plains, Low Plains, Cross Timbers south central, southern eastern State; near normal elsewhere. Rainfall over one inch above normal Low Plains, Cross Timbers; near to slightly above normal High Plains, Trans Pecos, Blacklands; below normal elsewhere.

**Crops:** Small grains continued good progress; open weather needed most areas. Continued cloudy conditions increase in disease problems. Aphid controls Plains continuing weather permitted. Some widespread hail damage Plains front passed through. Fields beginning head Low Plains, Cross Timbers. Fields blooming Blacklands. Corn planting underway Plains, weather delayed progress. Some cultivating occurred Blacklands, central. Growth good. Planting completed Upper Coast; warmer, open weather needed. Fields Valley making good growth. Open conditions needed east. Grain sorghum planting slow progress Plains, Cross Timbers because wet conditions. Planting completed Blacklands. Some cultivating central, growth good. Growth improved Upper Coast. Fields Valley improving. Cotton planting forged ahead Blacklands, central. Soil temperatures need to warm up Plains for planting to begin. Some replanting Coastal Bend. Fields beginning to square Valley. Cotton 1% squaring, none 1989, none avg. Soybean planting underway Upper Coast. Early fields slow to emerge. Open weather needed. Rice planting behind schedule, making rapid progress Upper Coast. Open weather help emergence. Rice emerged 36%, 59% 1989, 44% avg. Sugarbeets emerging good stands High Plains. Planting slightly behind normal. Other Field Crops; Peanuts planted none, 2% 1989, 1% avg. Soybeans planted 5%, 1% 1989, 2% avg. Sugarbeets planted 65%, 85% 1989, 76% avg.

**Commercial Vegetables:** Rio Grande, carrot, onion harvest continued. Melons, peppers good progress. Some cucumber harvest underway. San Antonio, Winter Garden, watermelon growth slow. Cabbage harvest light. Onions continued look good. Eastern areas, open weather would benefit crops. High Plains, most onion, potato planting complete. Carrot planting continued. Trans Pecos, chili planting underway. Onions, melons look good. Peach producers continued thin, spray most areas. Insects increasing some areas. Harvest underway Valley. Pecan trees continued slowly bud out across State. Zinc spraying occurring. Trees blooming many areas.

**Range and Livestock:** Ranges, pastures continued improve across much of State. Growth, greening increased with rainfall; weeds also increased. Some producers spraying weeds. Some fertilizing occurred. Livestock conditions steady. Sheep shearing full swing Hill Country.

**UTAH:** Temperatures 10° above normal. Two third stations light precipitation, rest zero or trace.

Days suitable for fieldwork 6.5. Soil moisture 74% short, 26% adequate. Planting, emergence of spring crops continued ahead of normal. Spring wheat planted 93%, 85% 1989, 76% avg.; emerged 61%, 46% 1989, 32% avg. Barley planted 91%, 86% 1989, 79% avg.; emerged 58%, 50% 1989, 44% avg. Oat acreage planted 66%, 71% 1989, 56% avg.; emerged 38%. Corn planted 12%. Average height for winter wheat 7 in., alfalfa 8 in. Percentage fruit in or past full bloom: Sweet cherries 100%, tart cherries 56%, apples 52%, peaches 100%. Range grasses growing most areas, quality, quantity below average in Uintah Basin, other eastern areas. Spring calving 82% completed, 79% 1989, 81% avg. Lambing, shearing continued near normal rate.

**VIRGINIA:** Temperatures below normal. Extremes 20°; 48°. Precipitation near normal, 0.09 to 1.89 in. Widespread rain on 21st.

Days suitable for fieldwork 4.1. Topsoil 92% adequate, 8% surplus. Pastures 12% excellent, 66% good, 22% fair. Alfalfa 5% excellent, 57% good, 34% fair, 4% poor. Other hay 6% excellent, 72% good, 22% fair. Winter wheat 5% excellent, 50% good, 45% fair. Barley 2% excellent, 55% good, 43% fair. Corn 15% planted, 2% in 1989, 19% 5-yr Avg. Apples mostly poor to fair. Peaches mostly very poor. Tobacco plantbeds, 8% excellent, 53% good, 11% fair, 28% poor. Some frost damage to tomatoes and strawberries. Land preparation in full swing, clipping tobacco beds, applying lime, fertilizer. Some spraying for alfalfa weevil, wheat for powdery mildew.

**WASHINGTON:** Temperatures 6 to 10° above normal, east; 3 to 8° above normal, west. Precipitation none to 0.53 in., east; 0.37 to 1.12 in., west.

Days suitable for fieldwork 6.2. Soil moisture 60% short, 40% adequate. Range, pasture 60% short, 40% adequate. Hay, other roughage 20% very short, 35% short, 40% adequate, 5% surplus. Fieldwork continued across the State. Crop development was ahead of normal. Spring wheat planted 90%, 78% 1989, 78% avg. Spring wheat emerged 70%, 46% 1989, 57% avg. Barley planted 82%, 62% 1989, 69% avg. Potatoes planted 60%, 40% 1989, 48% avg. There has been a strong bloom on fruit trees, chemical thinning was underway. Dry conditions prevailed in many areas of the State, small grains, ranges were beginning to show stress.

**WEST VIRGINIA:** Temperature 51°, 3° below to 1° above normal. Extremes 20°; 77°. Precipitation 0.98 in., 0.44 in. below to 0.57 in. above normal.

Days suitable for fieldwork 3.7. Soil moisture 13% short, 78% adequate, 9% surplus. Cattle, calves good. Sheep, lambs good to fair. Calving 86% complete; lambing 86% complete. Feed supplies adequate to surplus. Wheat, barley good to excellent. Oat planting 65% complete with 13% emerged. Corn planting 6% complete. Tobacco beds fair; 100% planted, 56% emerged. Hay good to fair. Apples, peaches poor. Farm activities: Corn planting, plowing, fertilizing, livestock care.

**WISCONSIN:** Temperature 48°, 1° above normal. Extremes 16°; 84°. Precipitation 0.20 to 0.70 in.

Days suitable for fieldwork 4.9. Soil moisture 56% short, 42% adequate, 2% surplus. Spring plowing 27% complete, 16% 1989, 27% avg. Oats planted 22%, 22% 1989, 33% avg. Alfalfa, winter wheat winterkill mostly light to moderate.

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

Days suitable for fieldwork 6.0. Topsoil 17% short, 82% adequate, 1% surplus. Spring wheat planted 50%, 40% 1989, 35% avg.; emerged 15%, 5% 1989, 10% avg. Oats planted 45%, 35% 1989, 30% avg.; emerged 20%, 5% 1989, 5% avg. Barley planted 70%, 70% 1989, 55% avg.; emerged 40%, 25% 1989, 15% avg. Sugarbeets planted 40%, 40% 1989, 40% avg.; emerged few, few 1989, 5% avg. Potatoes planted 15%, 10% 1989, 5% avg. Winter wheat mostly good. Alfalfa prospects good. Russian aphids, army cutworms continue to be a problem in eastern areas. Livestock mostly good. Spring calves born 80%, 80% 1989, 70% avg. Farm flock: Ewes lambed 85%, 90% 1989, 80% avg.; shorn 85%, 85% 1989, 70% avg. Range flock: Ewes lambed 40%, 50% 1989, 45% avg.; shorn 70%, 55% 1989, 45% avg. Calf, lamb losses light to normal. Ranges, pastures mostly fair to good.

## International Weather and Crop Summary

April 15-21, 1990

### HIGHLIGHTS

**USSR** ... Unseasonably warm weather returns to most of the region. Winter grains have broken dormancy in most areas.

**EUROPE** ... Heavy rain persists in sections of the south, benefiting winter grains but causing localized flooding. Widespread rain favors crops in the northwest.

**SOUTH ASIA** ... Mostly dry, warm weather favors maturing wheat. Showers in the east benefit immature rice.

**EASTERN ASIA** ... Heavy rain in the Yangtze Valley favors early crop rice but delays spring planting.

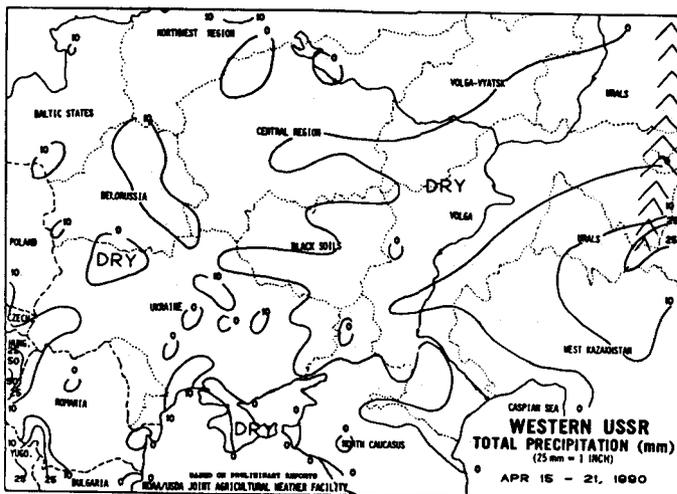
**SOUTHEAST ASIA** ... Hot weather dominates Thailand. Hot, dry weather persists in the Philippines.

**SOUTH AMERICA** ... Wetness aggravates harvest delays in Argentina and south-central Brazil.

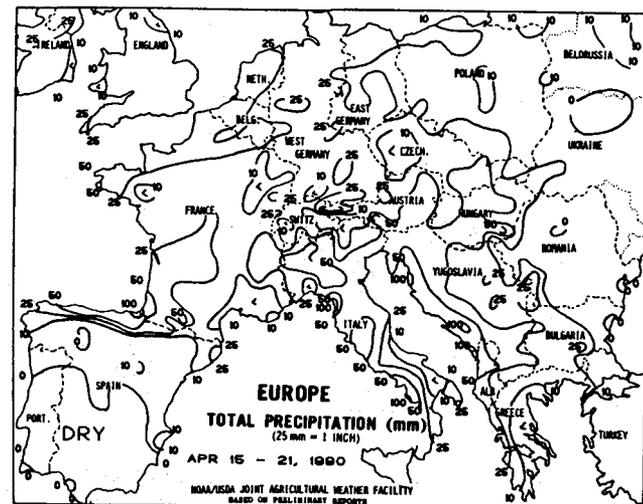
**SOUTH AFRICA** ... Favorably drier weather benefits filling to maturing corn.

**AUSTRALIA** ... Torrential rain continues flooding and summer crop harvest delays in the east.

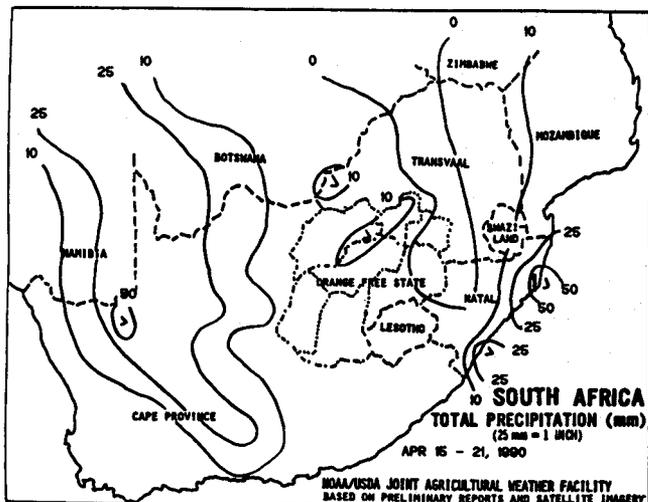
**NORTHWESTERN AFRICA** ... Dry weather returns to most winter grain areas in Morocco, Algeria, and Tunisia. Winter grains, mostly in the filling stage, could still benefit from additional moisture.



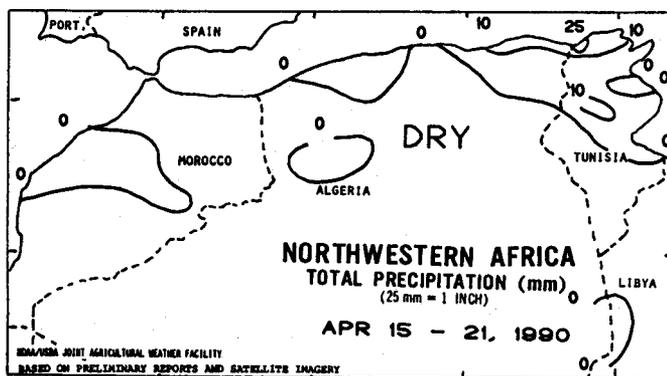
**WESTERN USSR** ... Unseasonably warm weather returned to most of the region. Weekly average temperatures were 2-4 degrees Celsius (C) above normal in the south and 3-5 degrees C above normal in the north. Winter grains have broken dormancy over most of the region, and were advancing into the jointing stage as far north as Belorussia, the Black Soils Region, and the lower Volga. Spring grain planting continued to progress northward, helped by generally dry weather. Greatest amounts of rain (10-17mm) covered central Belorussia and localized areas in the Ukraine. Although reports indicate most winter grain crops are in excellent condition, widespread rain will be needed in upcoming weeks to maintain current conditions, especially in the southern Ukraine and the western North Caucasus, where soil moisture reserves are limited.



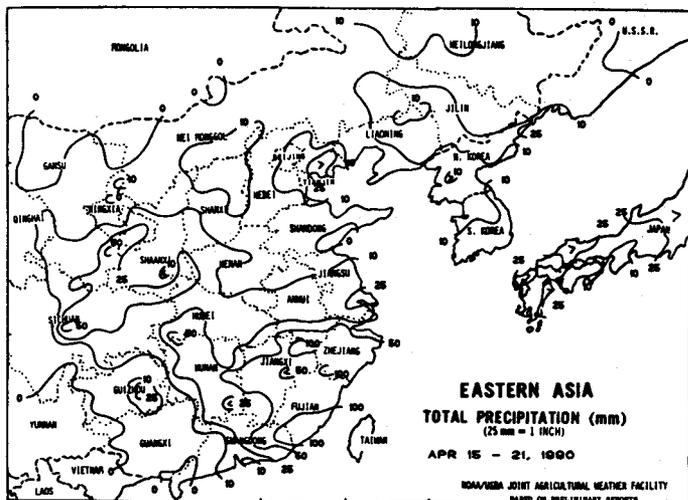
**EUROPE** ... Heavy rain (20-60mm, with scattered amounts greater than 60mm) persisted for the third consecutive week in sections of Italy and Yugoslavia, continuing to improve growing conditions for winter crops. However, isolated very heavy rain (100-170mm) likely caused localized flooding in sections of western Italy and western Yugoslavia. In the north, widespread rain (10-30mm, with isolated rainfall in excess of 30mm) from Ireland eastward to East Germany favored winter grains and spring planted crops, following below-normal precipitation since early March. Light to moderate rain (5-15mm, with isolated amounts greater than 15mm) fell across the remainder of the northeast. Below-normal temperatures (2-4 degrees C below normal) continued in the west, slowing germination and establishment of recently planted summer crops.



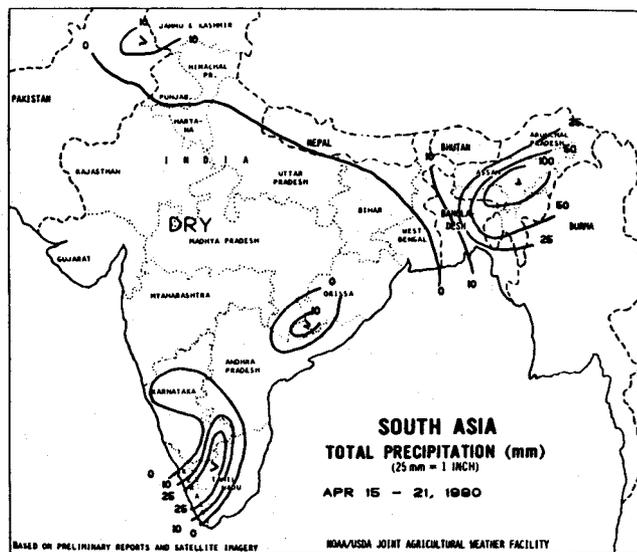
**SOUTH AFRICA** ... Early-week dry, seasonably warm weather benefited filling to maturing crops across the Maize Triangle. Light rain (2-14mm) fell late in the week in the west, but dry weather continued in the east, favoring crops that had been delayed in development by persistent, wet weather. Heavier rain (20-68mm) returned to Natal's sugar region, but rainfall continued to be light (2-21mm) over primary crop areas of the Cape Province.



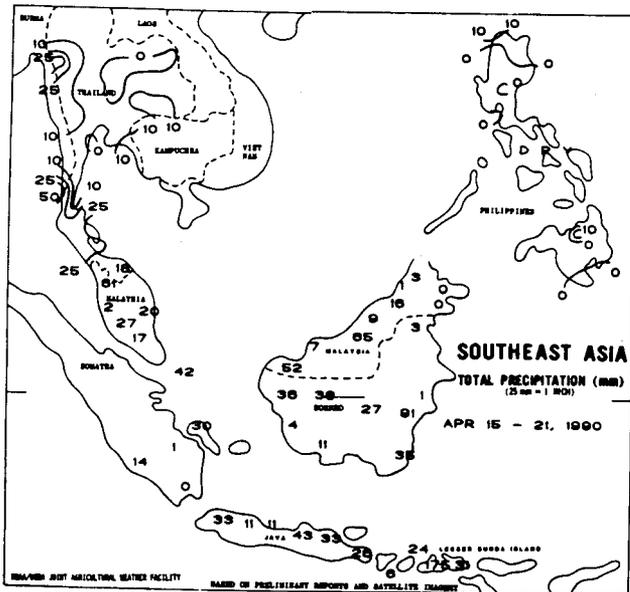
**NORTHWESTERN AFRICA** ... Dry weather returned to most winter grain areas, except for those along coastal areas of northeastern Algeria and northern Tunisia, which received 10-27mm of precipitation. Winter grains, mostly in the filling stage, would still benefit from additional moisture. Weekly average temperatures were 2-6 degrees C below normal in Algeria and Tunisia, keeping heat stress to a minimum and lowering evapotranspiration rates. Weekly average temperatures in Morocco were 1-2 degrees C below normal in the north and 1-3 degrees C above normal in the south.



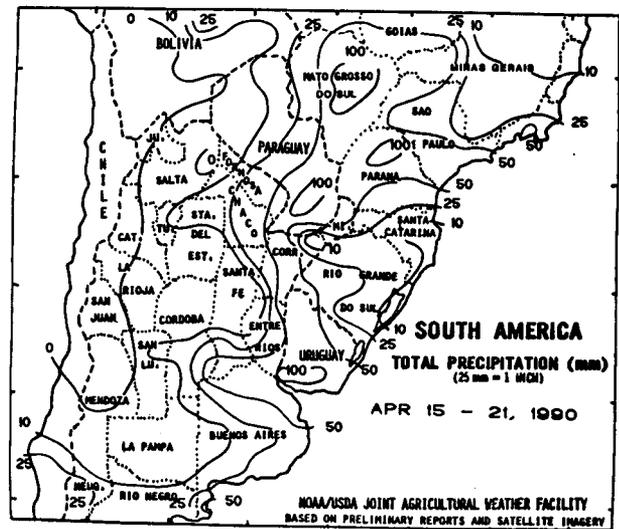
**EASTERN ASIA** ... Widespread rain (20-60mm, with scattered rainfall greater than 60mm) fell across much of the Yangtze Valley, favoring vegetative early-crop rice but delaying planting of single-season rice, corn, and soybeans. Very heavy rain (100-160mm) in sections of Jiangxi, Fujian, and eastern Guangdong likely caused localized flooding. In contrast, mostly dry weather covered extreme southern Chinese crop areas. In the North China Plain, scattered light to moderate rain (5-20mm) favored vegetative to booting winter grains but delayed spring planting. Rain (5-30mm) in northwestern Chinese crop areas brought soil moisture up to favorable levels for spring crop planting. In Manchuria, scattered, mostly light rain (less than 10mm) caused only minor delays in spring wheat planting.



**SOUTH ASIA** ... Light rain (2-12mm) was again limited to the northernmost wheat areas of Pakistan and India as dry, seasonably warm weather dominated the region. Seasonably hotter weather, especially the latter part of the week, reached into the far north, benefiting maturing wheat. In the east, continued showers (25-50mm or more) from eastern Bangladesh eastward benefited irrigation reserves for immature and newly planted rice, but local excessive amounts (100-118mm) in Assam likely caused local flooding. Heavy rain (32-49mm) fell locally in the south from Kerala to southern Karnataka, but only scattered, light rain fell elsewhere. Temperatures were near to above normal in southern and central India, with highs of 38-44 degrees C common over all but the southwest coast.

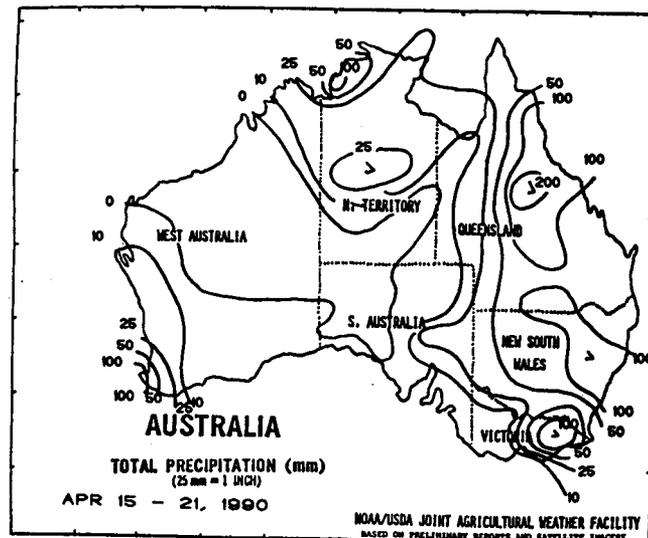


**SOUTHEAST ASIA** ... Temperatures averaged 2-3 degrees C above normal from eastern Thailand to Vietnam, with highs of 38-41 degrees C occurring daily. Rainfall ranged from 10 to 32mm in local areas of the southern Khorat Plateau and areas west and southeast of Bangkok, but minimal rain (9mm or less) elsewhere brought little relief to newly planted crops accelerated by the hot weather. In the Philippines, dry weather, accompanied by periodically high temperatures (35-40 degrees C), dominated the islands. Greatly reduced water supplies due to the persistent dryness since last fall delayed early plantings of main-season grain, necessitating a timely start to the rainy season in May. Elsewhere, variable showers (10-50mm or more) continued over the Malay Peninsula, eastern Malaysia and, as depicted by satellite imagery, most of Indonesia.



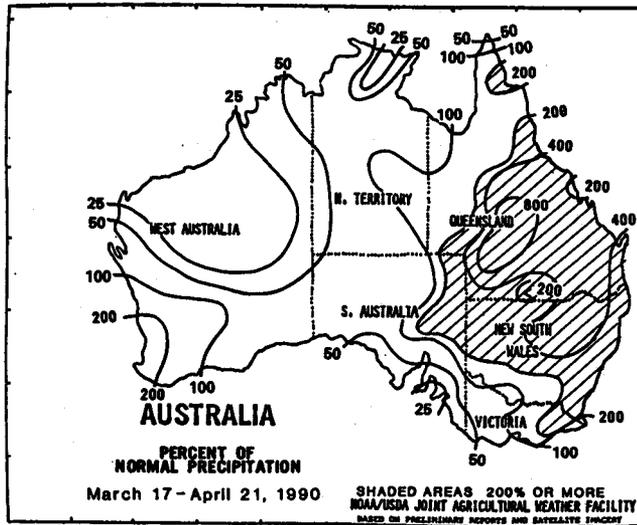
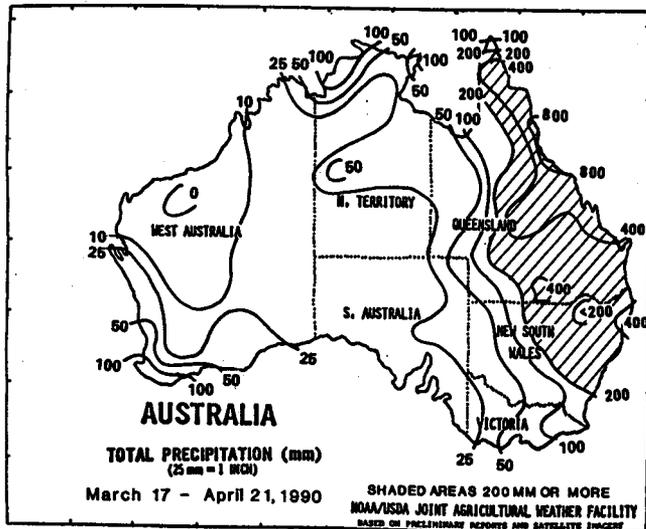
**SOUTH AMERICA** ... A frontal system brought substantial rain again to numerous crop areas. In Argentina, weekly rainfall averaged 50-76mm in northern Buenos Aires during early to midweek, aggravating wet harvest conditions. Rainfall diminished over southern Cordoba and southern Santa Fe, where 10-39mm of rain caused some harvest delays. Corn and sorghum harvesting has fallen well behind last year's pace. The soybean harvest has begun, with about 10 percent of Santa Fe's crop harvested. Scattered frost covered portions of Buenos Aires after the frontal passage. Showers (20-42mm) also slowed cotton harvesting in eastern Chaco. In south-central Brazil, widespread rain fell over all crop areas. Weekly rainfall averaged 10-28mm in Rio Grande do Sul, but late-week dryness improved soybean harvest conditions. Heavier rain (50-141mm) soaked Parana, Mato Grosso do Sul, western Sao Paulo, and across the border into southern Paraguay as well. Harvest progress has been hampered throughout the region by persistent wetness.

**AUSTRALIA** ... Torrential rain (40-150mm, with isolated amounts in excess of 150mm) continued over much of central and eastern Queensland, most of New South Wales, and eastern Victoria, causing widespread flooding, property damage, and extensive summer crop harvest delays. Due to the persistent nature of the rainfall during the past 3-5 weeks, quality degradation of cotton, sorghum, and corn crops is possible in southeastern Queensland and northeastern New South Wales. Heavy rain (20-60mm, with isolated rainfall greater than 100mm) also continued in western crop areas of Western Australia, providing abundant preplanting soil moisture for winter grains. In contrast, only scattered, light rain (less than 10mm) fell in crop areas of South Australia and northwestern Victoria, leaving soils abnormally dry.



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY  
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY

### HEAVY RAINS INUNDATE EASTERN AUSTRALIA



On April 22, dry weather finally returned to the sodden areas of eastern Australia. Over the previous 5 weeks, heavy rains had inundated portions of Queensland, New South Wales, and eastern Victoria, causing widespread flooding and property and crop damage. The Australian state of Queensland was hardest hit, with reports that a third of the state was flooded by late last week. Some areas of Queensland have received 200-400mm (8-16 inches) of rain during the last 5 weeks, with some sections of the northeastern coast receiving up to 800mm (32 inches) (fig. 1).

During March and April, the northern rainy season usually tapers off. This year, however, was highly unusual. Rainfall ranged from 200 to 800 percent of normal for the period (fig. 2). In contrast, the normal rainy season (December - March) in much of

Queensland was abnormally dry, which severely stressed vegetative sugarcane and delayed planting of summer sorghum. While the recent rains have eradicated dryness in that area, the excess rainfall is likely causing extensive harvest delays and quality problems for cotton, corn, and spring sorghum grown in Queensland and New South Wales. On a positive note, soil moisture should be abundant for the upcoming winter grains season.

The heavy rains started when a weak tropical cyclone slowly moved along the northeastern coast of the continent during mid to late March. Subsequently, a nearly stationary high pressure system in the Tasman Sea brought a persistent low-level, easterly flow, which supplied the region with ample moisture through mid-April.

Bob Stefanski and Jeff Andresen

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