

WEEKLY WEATHER AND CROP BULLETIN

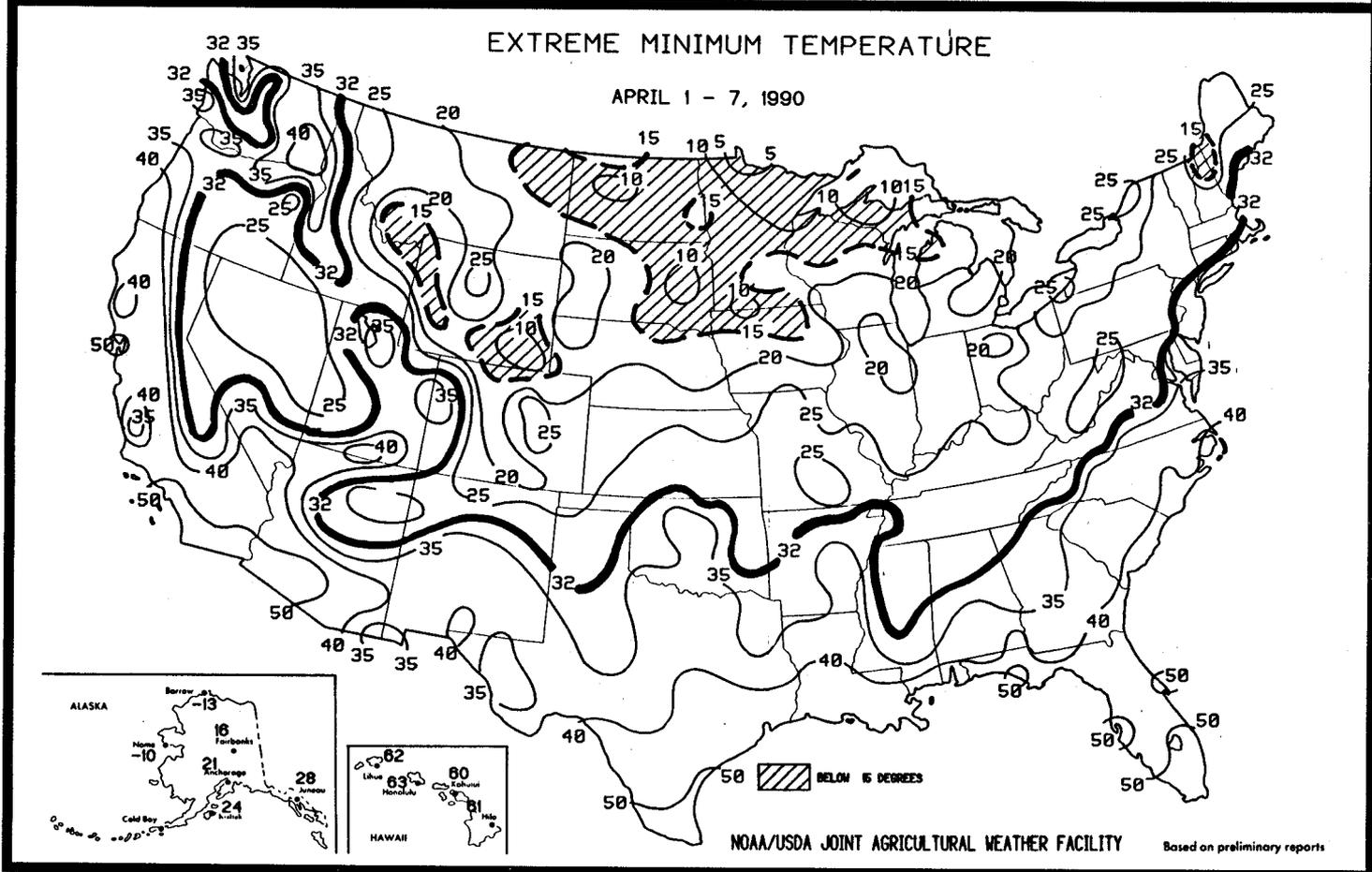
U.S. DEPARTMENT OF COMMERCE
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HIGHLIGHTS

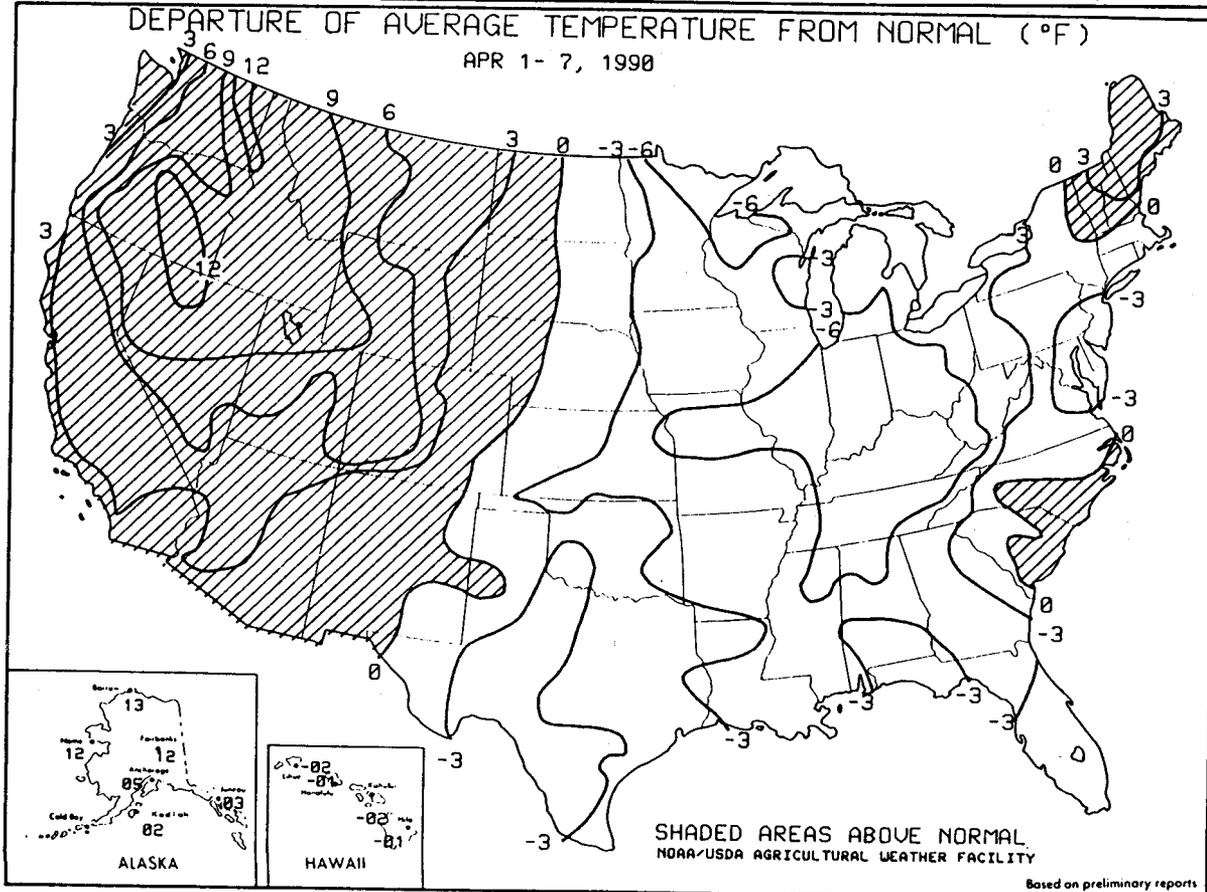
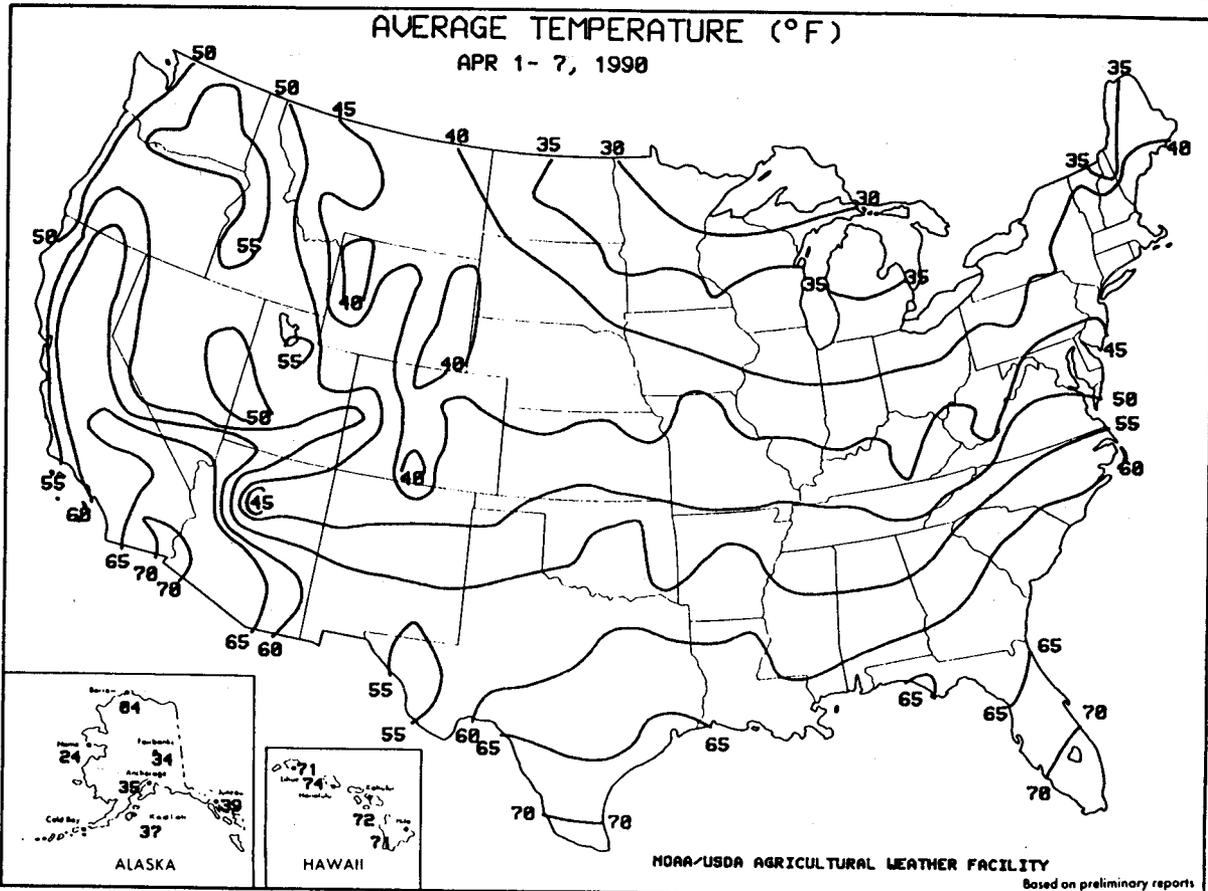
April 1-7, 1990

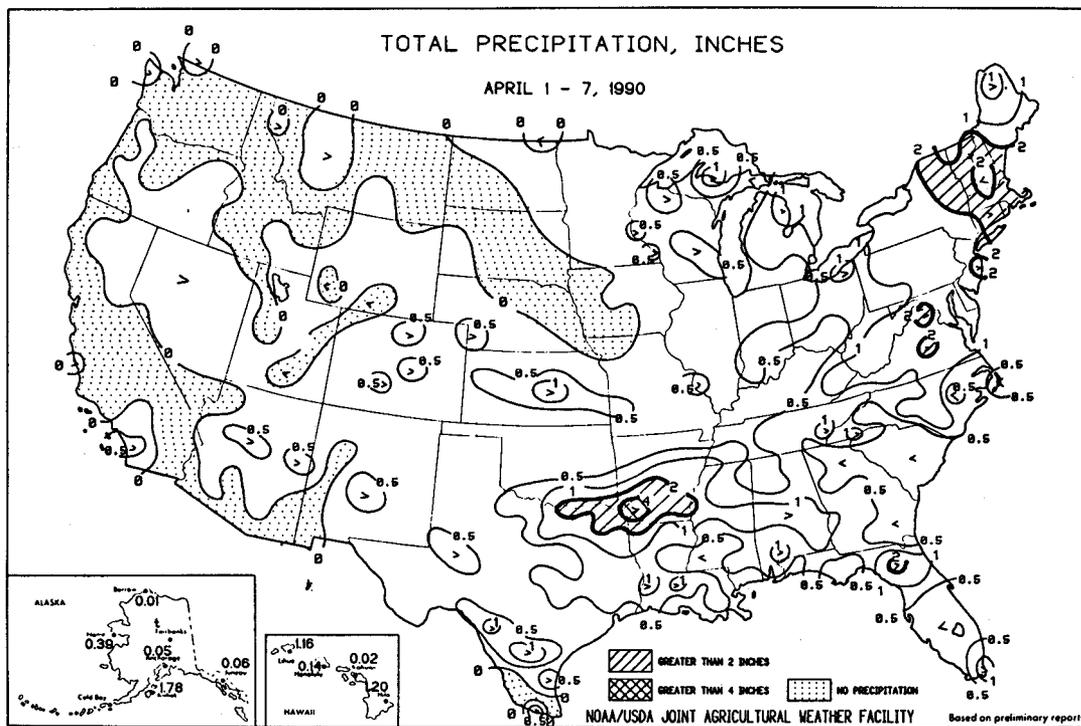
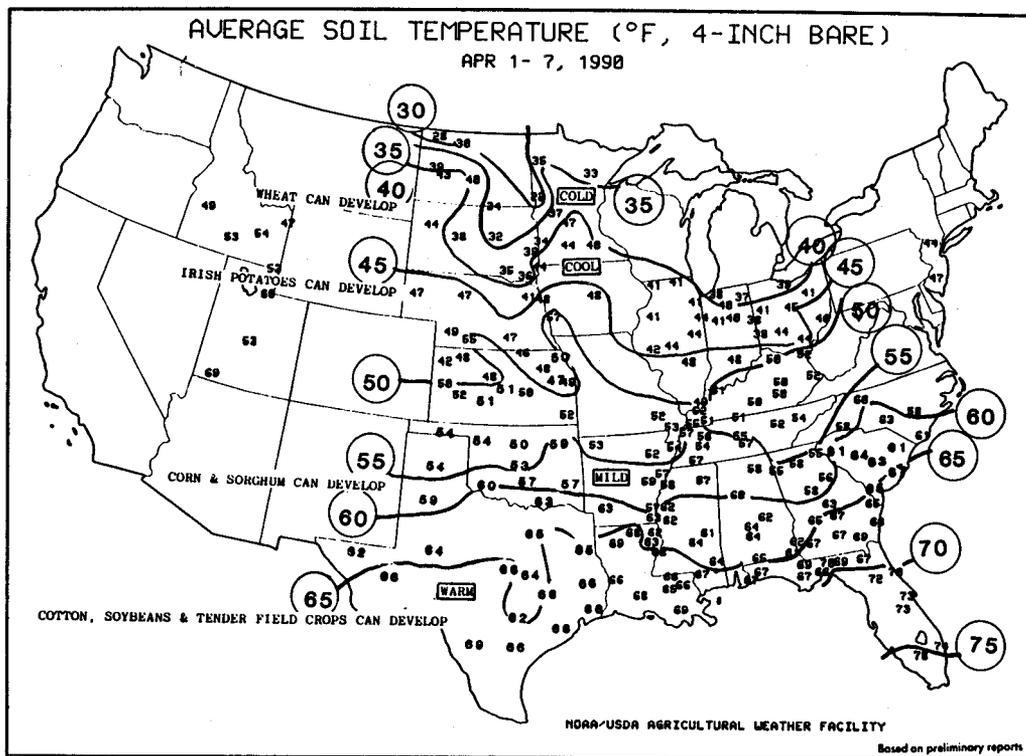
During the first of the week, a frontal system swept across the northern Plains to the northern and middle Atlantic coast with gusty winds, rain, and snow. Heavy rains soaked the Northeast before the system moved over the Atlantic. Scattered thunderstorms rumbled across the southern United States, accompanied by large hail and damaging winds. During the latter part of the week, a strong cold front swung southeastward causing extensive precipitation from the central and southern Plains to the Atlantic coast. Severe thunderstorms dumped heavy rain from the southern Plains into the northern Delta and spawned a tornado near Roby, TX. The cold front also brought heavy snow to the Appalachians. At week's end, a large cold dome of high pressure settled over the eastern half of the Nation behind the front. A number of record low temperatures for the date were set as

temperatures dropped into the low 20's in the eastern Corn Belt. On Saturday morning, temperatures at Evansville, IN (23° F) and Puducah, KY (24° F) were the lowest on record for so late in the season.

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National Weather Data for Selected Cities

Weather Data for the Week Ending April 7, 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	TEMP. °F		PRECIP.	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	67	40	78	29	54	-6	.4	-.9	.3	6.1	77	20.3	114	94	45	0	1	3	0
MOBILE	73	49	80	41	61	-1.4	.5	-.8	.4	12.8	164	28.2	164	90	43	0	0	2	1
MONTGOMERY	71	44	81	36	58	-1.4	1.4	-.3	1.2	13.8	196	31.6	201	91	43	0	0	2	1
AK ANCHORAGE	42	29	50	21	35	5	.1	-.1	0	.5	65	3.4	139	92	51	0	6	2	0
BARRROW	12	-3	14	-13	4	13	T	-.1	T	.2	83	1.2	43	92	77	0	7	1	0
FAIRBANKS	45	23	49	16	34	12	T	T	T	.2	24	1.3	93	83	36	0	6	0	0
JUNEAU	45	33	48	28	39	3	.1	-.5	.1	5.0	125	13.2	116	93	51	0	2	2	0
KODIAK	42	31	50	24	37	2	1.8	1.0	.6	7.2	153	16.7	108	95	66	0	2	2	0
NOME	33	17	39	-10	24	12	.4	-.3	.3	1.1	159	2.5	129	94	71	0	3	5	2
AZ PHOENIX	83	60	86	54	72	7	T	-.1	T	.4	38	3.8	84	62	26	0	3	3	0
PRESCOTT	63	37	68	31	50	3	.3	0	.1	1.3	72	1.8	76	92	32	0	0	4	0
TUCSON	80	50	85	45	65	3	0	0	0	1.1	44	2.0	93	71	22	0	0	0	0
YUMA	83	59	88	54	71	3	T	0	0	.1	44	.2	28	60	23	0	0	0	0
AR FORT SMITH	70	40	83	29	55	-3	.2	-.7	.2	4.8	101	15.9	174	89	26	0	1	1	0
LITTLE ROCK	67	45	79	38	56	-3	1.4	-.2	1.1	11.5	195	21.1	155	75	29	0	0	2	1
CA BAKERSFIELD	80	51	86	47	65	5	0	0	0	.2	43	2.2	70	75	29	0	0	0	0
EUREKA	55	48	59	45	51	3	0	-.9	0	3.3	56	15.0	83	93	78	0	0	0	0
FRESNO	78	49	86	43	64	6	0	-.3	0	.7	35	4.8	83	83	31	0	0	0	0
LOS ANGELES	67	55	79	53	61	2	.2	-.1	.2	.3	35	4.1	57	94	60	0	0	1	0
REDDING	78	48	88	42	63	5	T	-.8	T	2.4	42	11.8	54	87	35	0	0	1	0
SACRAMENTO	74	47	82	42	61	5	T	-.4	T	.9	35	8.7	94	88	39	0	0	1	0
SAN DIEGO	68	58	82	55	63	3	.3	0	.3	.5	26	4.1	72	89	61	0	0	0	0
SAN FRANCISCO	66	49	77	46	58	4	.3	-.5	.3	.8	26	6.2	56	88	53	0	0	2	0
CO DENVER	59	34	72	26	47	3	T	-.1	T	.3	219	4.7	174	87	36	0	4	1	0
GRAND JUNCTION	68	42	69	37	55	7	.1	-.1	.1	1.2	131	2.3	113	67	22	0	1	0	0
PUEBLO	63	33	74	26	48	1	1	-.1	.1	1.3	148	2.6	189	91	35	0	3	2	0
CT BRIDGEPORT	48	40	55	32	44	-1	1.7	-.8	1.5	3.8	79	9.6	87	89	61	0	1	5	1
HARTFORD	49	37	54	30	43	-1	2.4	1.4	2.1	4.8	95	12.2	104	87	55	0	1	4	1
DC WASHINGTON	57	41	66	34	49	-4	1.5	-.8	.6	4.1	98	8.3	88	93	51	0	0	6	1
FL APALACHICOLA	75	53	81	41	64	-1	.1	-.1	.1	4.2	86	10.6	88	95	46	0	0	2	1
DAYTONA BEACH	78	54	86	46	66	-1	.7	-.1	.6	2.6	73	9.6	107	94	39	0	0	2	1
JACKSONVILLE	76	51	83	41	64	-3	.2	-.5	.2	1.8	43	7.6	72	92	38	0	0	1	0
KEY WEST	81	68	86	64	75	-1	0	-.3	0	.8	50	1.8	35	83	54	0	0	0	0
MIAMI	84	61	91	54	73	-1	.1	-.7	.7	3.0	123	4.4	68	86	41	1	0	1	0
ORLANDO	79	57	84	48	68	-2	.1	-.5	.1	2.0	52	6.4	70	91	37	0	0	1	0
TALLAHASSEE	77	46	86	36	61	-3	.4	-.7	.4	3.8	57	14.2	87	99	35	0	0	1	0
TAMPA	78	58	82	50	68	-1	.4	-.1	.4	2.1	55	7.3	80	90	48	0	0	2	0
WEST PALM BEACH	82	60	88	53	71	-2	.1	-.9	.1	2.0	62	4.6	53	89	46	0	0	1	0
GA ATLANTA	68	43	80	34	56	-3	.2	-.1	.2	8.6	122	26.8	164	84	38	0	0	1	0
AUGUSTA	74	44	84	36	59	-1	.1	-.9	.2	2.0	62	4.6	53	89	46	0	0	1	0
MACON	71	43	82	34	57	-5	.6	-.3	.5	5.1	84	13.2	89	91	39	0	0	2	0
SAVANNAH	75	50	83	40	63	-1	.1	-.6	.1	3.9	86	10.9	101	86	33	0	0	2	0
HI HILLO	79	63	81	61	71	-1	1.2	-.7	.7	12.1	72	56.4	142	92	60	0	0	4	1
HONOLULU	82	65	84	63	74	-1	.1	-.3	.1	1.0	26	9.4	90	85	53	0	0	1	0
KAHULUI	81	62	83	60	72	-2	T	-.4	T	1.5	48	12.4	123	91	58	0	0	1	0
LIHUE	77	65	78	62	71	-2	1.2	-.3	.8	4.1	77	14.7	97	91	67	0	0	4	1
ID BOISE	74	39	78	34	57	11	0	-.3	0	.8	61	2.4	61	65	18	0	0	0	0
LEWISTON	75	45	77	43	60	13	0	-.3	0	1.1	83	1.8	49	69	28	0	0	0	0
POCATELLO	68	32	75	25	50	9	T	-.2	T	2.3	197	3.1	100	75	20	0	3	1	0
IL CHICAGO	47	30	55	22	39	-6	.2	-.7	.2	3.3	92	7.5	118	88	49	0	5	3	0
MOLINE	50	30	62	20	40	-5	.2	-.7	.1	6.9	191	10.5	162	86	40	0	5	2	0
PEORIA	51	30	63	21	40	-6	.1	-.8	.1	4.0	109	9.4	139	85	45	0	5	1	0
QUINCY	52	31	68	23	42	-6	.1	-.8	.1	2.9	73	7.8	115	80	39	0	4	1	0
ROCKFORD	47	28	57	16	37	-6	.3	-.6	.3	2.9	84	5.9	98	85	42	0	6	2	0
SPRINGFIELD	52	31	65	20	42	-7	.1	-.8	.1	3.5	89	9.9	137	87	44	0	5	1	0
IN EVANSVILLE	56	35	68	23	45	-7	.3	-.7	.3	2.5	44	12.3	106	89	45	0	3	3	0
FORT WAYNE	47	31	53	23	39	-6	.2	-.6	.2	3.3	88	12.3	158	90	57	0	5	3	0
INDIANAPOLIS	51	32	62	22	41	-6	.5	-.3	.5	2.5	57	9.4	98	88	50	0	4	2	1
SOUTH BEND	44	29	56	21	36	-7	.5	-.5	.2	3.3	82	9.3	110	93	54	0	5	5	0
IA DES MOINES	54	29	62	21	41	-3	T	-.7	T	5.8	205	8.1	166	77	26	0	5	0	0
STOUC CITY	56	26	69	17	41	-3	0	-.5	0	2.2	101	2.8	75	75	23	0	5	0	0
WATERLOO	49	27	59	14	38	-4	.1	-.6	.1	4.6	155	5.4	116	81	34	0	5	1	0
KS CONCORDIA	59	33	65	25	46	-3	.1	-.3	.1	4.2	180	4.8	129	81	36	0	5	2	0
DODGE CITY	61	33	75	27	47	-3	.1	-.2	.1	1.8	98	4.6	167	88	35	0	4	1	0
GOODLAND	58	30	73	22	44	0	.1	-.1	.1	1.8	146	2.9	151	92	42	0	4	1	0
TOPEKA	59	29	69	23	44	-6	.1	-.6	.1	3.8	134	7.3	154	87	30	0	5	1	0
WICHITA	62	33	73	29	48	-4	.1	-.4	.1	2.8	108	6.7	165	87	34	0	3	1	0
KY BOWLING GREEN	58	36	74	26	47	-6	.2	-.9	.2	3.7	56	16.0	106	92	41	0	2	2	0
LEXINGTON	53	35	66	22	44	-7	.2	-.9	.1	2.1	36	9.7	77	91	45	0	2	4	0
LOUISVILLE	56	38	67	28	47	-6	.2	-.8	.2	3.0	52	13.6	111	83	41	0	1	2	0
LA ALEXANDRIA	73	49	80	41	61	-3	.5	-.8	.5	6.6	107	24.1	158	89	47	0	0	1	0
BATON ROUGE	75	49	83	40	62	-4	.4	-.9	.2	6.2	106	25.5	166	92	45	0	0	3	0
LAKE CHARLES	73	52	79	42	62	-3	.7	-.1	.5	6.0	154	20.1	169	95	51	0	0	2	0
NEW ORLEANS	74	52	78	45	63	-3	.9	-.1	.9	6.9	120	29.3	185	89	49	0	0	1	1

Based on 1951-80 normals

Weather Data for the Week Ending April 7, 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
																		90 AND ABOVE	32 AND BELOW	
SHREVEPORT	72	48	83	36	60	.2	1.1	.1	.9	6.0	125	23.0	187	93	38	0	0	2	1	
ME CARIBOU	43	32	49	24	38	.7	.7	.1	.7	1.9	62	7.1	95	89	64	0	3	3	1	
PORTLAND	47	36	56	31	41	.3	2.2	1.3	1.1	3.7	75	9.3	76	89	59	0	1	3	2	
MD BALTIMORE	54	40	63	31	47	-.3	1.4	.6	.6	3.9	86	9.1	87	94	57	0	1	6	2	
SALISBURY	53	41	64	33	47	-.3	1.3	.5	.5	4.7	97	10.7	93	97	60	0	0	5	1	
MA BOSTON	46	37	55	31	42	-.3	3.0	2.1	2.6	4.7	94	12.1	95	92	60	0	1	3	1	
CHATAM	42	38	46	33	39	-.2	2.2	1.3	1.5	5.2	105	14.7	109	***	***	0	0	4	1	
MI ALPENA	38	23	45	16	31	-.5	1.2	.7	.9	4.1	171	7.6	140	86	51	0	7	3	1	
DETROIT	44	31	54	23	38	-.5	.5	-.2	.2	2.4	74	9.3	137	97	64	0	4	5	0	
FLINT	43	28	53	17	36	-.5	.5	-.1	.2	2.0	71	6.4	111	95	59	0	6	5	0	
GRAND RAPIDS	44	28	52	18	36	-.5	.4	-.4	.2	2.4	69	6.8	99	89	53	0	6	4	0	
HOUGHTON LAKE	38	26	44	17	32	-.4	.7	.1	.6	2.2	89	4.8	92	86	57	0	6	2	1	
LANSING	43	27	51	18	35	-.6	.6	-.1	.3	2.0	64	6.1	101	94	60	0	6	4	0	
MARQUETTE	35	17	45	4	26	-.6	1.1	.3	.6	3.0	82	6.7	89	89	63	0	7	4	1	
MUSKOGON	43	29	49	20	36	-.4	.5	-.2	.4	2.9	90	7.0	97	89	56	0	6	3	0	
SAULT ST. MARIE	36	22	41	17	29	-.4	.3	-.2	.2	2.7	106	7.2	113	91	54	0	7	2	0	
MN ALEXANDRIA	43	21	52	13	32	-.4	.3	-.4	.4	2.3	144	2.8	89	87	46	0	7	0	0	
DULUTH	37	17	48	7	27	-.6	.2	-.3	.1	3.5	160	4.6	107	92	48	0	7	3	0	
INT'L FALLS	37	14	49	5	26	-.6	-.1	-.2	.1	1.5	106	2.6	89	87	43	0	7	2	0	
MINNEAPOLIS	46	25	57	17	36	-.4	.3	-.1	.3	4.0	189	4.9	130	78	36	0	5	1	0	
ROCHESTER	43	25	55	15	34	-.5	.2	-.3	.2	3.8	166	5.1	134	83	43	0	5	3	0	
MS GREENWOOD	66	43	77	31	55	-.6	.6	-.7	.5	6.4	84	20.0	116	96	45	0	1	3	1	
JACKSON	71	42	82	31	57	-.5	.2	-.1	.1	3.8	54	24.2	150	98	43	0	1	2	0	
MERIDIAN	73	44	84	33	59	-.3	1.0	-.4	.9	7.8	97	35.0	199	95	42	0	0	2	1	
MO CAPE GIRARDEAU	61	38	73	26	49	-.1	.1	-.0	.0	3.0	49	16.3	135	87	42	0	1	1	0	
COLUMBIA	56	31	71	25	44	-.7	.3	-.6	.3	7.5	179	13.3	170	76	37	0	4	1	0	
KANSAS CITY	58	31	67	22	44	-.7	.3	-.7	.7	3.9	117	7.2	125	72	29	0	5	1	0	
SAINT LOUIS	57	36	72	29	47	-.5	.3	-.5	.3	3.0	73	7.9	100	72	34	0	2	1	0	
SPRINGFIELD	61	33	74	25	47	-.5	.5	-.9	.7	7.9	181	18.8	233	85	29	0	3	1	0	
MT BILLINGS	58	33	75	22	45	.5	.1	-.3	.0	1.8	129	2.6	85	81	30	0	3	3	0	
GLASGOW	56	26	73	14	41	.3	.0	-.1	.0	.3	69	.7	66	74	26	0	6	0	0	
GREAT FALLS	60	32	75	20	46	.8	.5	-.2	.7	1.7	146	2.2	76	84	30	0	3	1	0	
HAVRE	57	28	76	18	43	.5	.8	-.2	.7	.8	107	.8	47	86	32	0	5	0	0	
HELENA	62	33	76	22	48	.9	.9	-.2	.7	.9	105	1.6	78	80	27	0	2	1	0	
KALISPELL	63	33	72	25	48	.9	.9	-.2	.7	1.1	107	3.8	102	82	29	0	5	0	0	
MILES CITY	58	31	76	18	44	.5	.0	-.2	.0	.2	18	.3	14	66	28	0	4	0	0	
MISSOULA	67	33	75	25	50	.9	.0	-.2	.0	.7	72	1.9	60	77	21	0	4	0	0	
NH GRAND ISLAND	59	27	68	20	43	-.2	.2	-.5	.7	3.0	149	3.8	115	81	26	0	6	1	0	
LINCOLN	59	27	66	18	43	-.3	.0	-.6	.0	2.9	114	3.5	85	80	23	0	5	0	0	
NORFOLK	58	27	70	17	42	-.1	.0	-.4	.0	2.3	119	3.4	107	77	23	0	5	0	0	
NORTH PLATTE	57	29	75	21	43	.0	.1	-.2	.1	1.9	132	2.3	100	88	28	0	6	2	0	
OMAHA	56	31	65	23	44	-.3	.0	-.6	.0	3.2	131	4.3	105	73	36	0	5	0	0	
SCOTTSBLUFF	58	29	77	20	44	.2	.3	.0	.2	2.9	237	4.2	205	90	38	0	5	2	0	
VALENTINE	58	24	81	15	41	.0	.7	-.3	.7	1.3	113	1.9	95	78	23	0	5	0	0	
NV BLY	63	29	67	22	46	.9	.3	-.1	.2	1.0	95	2.9	119	82	22	0	5	4	0	
LAS VEGAS	79	53	82	49	66	.6	.6	-.1	.7	.7	0	1.6	113	55	17	0	0	0	0	
RENO	73	35	78	31	54	1.0	.7	-.1	.7	.1	10	2.7	90	74	19	0	1	1	0	
WINNEMUCCA	73	35	79	23	54	1.2	.2	-.2	.7	.6	74	1.5	65	67	19	0	2	1	0	
NH CONCORD	48	35	53	31	41	.2	1.0	.3	.7	2.7	73	8.1	91	88	57	0	3	4	1	
NJ ATLANTIC CITY	49	39	60	32	44	-.3	1.5	.7	.6	4.1	84	7.8	67	95	65	0	1	6	1	
NM ALBUQUERQUE	62	41	71	37	51	.0	.2	.1	.1	.6	100	1.3	94	90	34	0	0	3	0	
CLOVIS	66	40	75	32	53	.0	.2	.1	.2	.4	64	2.6	168	84	31	0	1	1	0	
ROSWELL	68	44	79	38	56	.3	.3	.2	.3	1.1	235	1.7	135	66	25	0	0	1	0	
NY ALBANY	48	37	50	29	42	.0	2.3	1.6	1.7	5.9	162	13.7	166	87	55	0	2	4	2	
BINGHAMTON	43	32	58	25	38	-.8	1.3	.6	.7	3.0	84	9.6	114	96	63	0	5	5	1	
BUFFALO	43	33	54	24	38	-.8	1.6	.9	.9	3.1	85	11.7	130	94	64	0	3	6	1	
NEW YORK	50	41	57	33	46	-.5	1.5	.5	1.2	4.2	84	9.9	89	91	59	0	0	3	3	
ROCHESTER	42	32	54	24	37	-.8	1.5	.9	.9	3.0	96	8.6	110	97	69	0	3	5	1	
SYRACUSE	45	34	54	25	40	-.4	2.0	1.2	.8	5.7	146	11.7	129	98	67	0	2	6	1	
NC ASHEVILLE	62	36	73	27	49	-.3	.1	-.8	.1	6.1	107	17.4	144	88	35	0	1	2	0	
CHARLOTTE	70	44	80	37	57	.5	.9	-.4	.2	4.0	71	13.5	102	83	29	0	0	4	0	
GREENSBORO	66	42	77	35	54	-.1	.5	-.2	.6	3.6	77	11.7	102	83	35	0	0	4	1	
HATTERAS	66	51	75	45	59	.3	.7	-.7	.7	7.0	148	15.7	116	86	58	0	0	2	0	
NEW BERN	68	49	82	40	59	.0	.8	.4	.7	7.3	171	12.8	104	91	44	0	0	4	1	
RALEIGH	69	44	80	36	56	.1	1.1	-.4	.4	6.1	139	13.0	114	93	38	0	0	3	0	
WILMINGTON	71	52	80	41	61	.2	.6	-.2	.3	5.7	119	10.3	87	89	44	0	0	2	0	
ND BISMARCK	53	21	66	13	37	.7	.2	-.3	.7	.6	58	1.1	56	80	25	0	6	0	0	
FARGO	45	23	59	15	34	-.2	.2	-.1	.2	1.8	151	2.3	111	87	50	0	7	2	0	
GRAND FORKS	42	22	52	13	32	-.2	.2	.0	.2	2.5	240	2.9	127	87	47	0	7	1	0	
WILLISTON	53	24	64	12	39	.3	.2	-.2	.7	.4	56	.8	49	80	26	0	6	0	0	
OH AKRON-CANTON	47	32	57	24	39	-.8	.8	-.1	.5	2.1	51	9.2	105	93	55	0	5	5	0	
CINCINNATI	53	34	64	23	43	-.8	1.2	-.6	.2	3.0	62	11.4	107	85	44	0	4	1	0	
CLEVELAND	46	32	58	26	39	-.6	1.0	-.2	.3	1.9	50	8.9	107	93	55	0	3	7	0	
COLUMBUS	50	33	58	25	41	-.6	.3	-.2	.2	1.6	39	9.2	103	94	52	0	3	3	0	

Based on 1951-80 normals

Weather Data for the Week Ending April 7, 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	49	33	59	24	41	-6	.6	-.2	.3	4.3	111	12.3	145	93	56	0	4	4	0	0	
TOLEDO	46	31	56	23	39	-5	.2	-.5	.1	3.7	112	11.2	159	92	52	0	4	4	3	0	
YOUNGSTOWN	47	32	60	24	40	-3	.9	-.1	.5	2.0	48	8.6	96	94	54	0	4	6	0	0	
OK OKLAHOMA CITY	69	42	80	37	55	-1	.1	-.4	.1	4.6	176	11.0	227	73	25	0	4	1	0	0	
TULSA	69	41	81	34	55	-2	.2	-.1	.1	6.5	164	13.6	192	73	22	0	4	1	0	0	
OR ASTORIA	57	40	65	33	48	2	.2	-.3	.1	5.2	60	33.1	123	94	65	0	0	0	0	0	
BURNS	71	31	74	26	51	11	.1	-.3	.0	.7	67	1.8	50	73	17	0	4	1	0	0	
MEDFORD	77	41	80	38	59	11	.0	-.3	.0	1.5	71	5.5	72	85	24	0	0	0	0	0	
PENDLETON	71	42	73	38	57	9	.0	-.2	.0	1.1	89	2.2	53	67	25	0	0	0	0	0	
PORTLAND	67	42	75	39	55	7	.0	-.6	.0	2.5	60	13.9	98	92	45	0	0	0	0	0	
SALEM	67	36	74	34	52	5	.0	-.7	.0	2.4	48	16.1	97	97	50	0	0	0	0	0	
PA ALLENTOWN	48	38	57	32	43	-3	1.3	-.3	.6	2.8	58	9.7	87	93	59	0	1	6	1	0	
ERIE	44	33	52	26	38	-3	1.8	-.9	.2	2.1	56	10.0	124	92	61	0	2	5	0	0	
HARRISBURG	51	39	59	31	45	-3	1.6	-.9	.7	3.4	79	10.4	104	93	53	0	1	6	1	0	
PHILADELPHIA	50	39	60	33	45	-4	1.8	-.6	.6	4.1	86	9.6	90	95	62	0	0	6	1	0	
PITTSBURGH	49	34	62	26	42	-4	.8	-.1	.3	2.3	53	8.9	93	95	51	0	4	7	0	0	
SCRANTON	48	36	61	30	42	-2	1.3	-.3	.7	3.2	95	9.7	128	92	54	0	1	7	1	0	
RI PROVIDENCE	49	37	56	31	43	-1	2.6	1.7	2.5	4.7	89	12.6	97	94	57	0	1	4	1	0	
SC CHARLESTON	75	53	82	43	64	2	.2	-.2	.1	6.7	134	12.4	106	86	35	0	0	1	0	0	
COLUMBIA	74	47	85	37	61	1	.1	-.7	.1	2.5	41	7.5	52	90	32	0	0	3	0	0	
FLORENCE	74	48	82	39	61	1	.3	-.5	.2	2.9	59	5.7	48	86	32	0	0	2	0	0	
GREENVILLE	69	42	80	36	56	-1	.3	-.9	.2	6.9	97	17.3	109	81	32	0	0	2	0	0	
SD ABERDEEN	53	21	72	12	37	-1	.1	-.3	.1	.9	67	1.4	58	87	26	0	6	1	0	0	
HURON	56	21	77	8	38	-2	.2	-.4	.1	1.3	82	1.9	71	79	21	0	7	0	0	0	
RAPID CITY	56	28	74	20	42	-2	.2	-.4	.1	1.2	87	1.8	76	76	26	0	4	2	0	0	
SIOUX FALLS	54	21	72	12	38	-2	.3	-.5	.1	1.6	77	2.0	57	86	21	0	7	0	0	0	
TN CHATTANOOGA	68	41	81	29	54	-2	.4	-.8	.4	9.9	131	27.1	155	90	34	0	1	1	1	0	
KNOXVILLE	62	38	78	28	50	-5	.7	-.4	.7	6.4	98	19.2	125	87	36	0	1	1	1	0	
MEMPHIS	65	42	79	31	54	-4	1.1	-.2	.7	6.8	100	19.7	126	89	31	0	1	2	1	0	
NASHVILLE	62	37	77	29	50	-6	.5	-.6	.5	3.8	57	11.3	74	85	33	0	3	1	1	0	
TX ABILENE	72	45	83	35	58	-1	.1	-.4	.1	2.5	166	6.8	195	86	33	0	0	1	0	0	
AMARILLO	65	36	75	29	51	-2	.4	-.2	.4	2.6	255	5.4	266	88	29	0	2	1	0	0	
AUSTIN	76	53	82	45	65	-1	.1	-.2	.4	2.5	109	7.3	116	86	45	0	0	1	0	0	
BRAUNMONT	76	54	82	45	65	-1	.3	-.5	.3	6.9	175	23.0	188	95	52	0	0	1	0	0	
BROWNSVILLE	81	63	86	56	72	-1	.1	-.3	.1	.8	108	1.9	55	93	63	0	0	0	0	0	
CORPUS CHRISTI	76	60	81	51	68	-3	.1	-.2	.1	3.1	285	7.4	179	98	60	0	0	2	0	0	
DEL RIO	73	55	82	44	64	-4	.3	-.2	.3	3.5	363	5.4	226	73	44	0	0	3	0	0	
EL PASO	74	48	80	42	61	-5	.0	-.1	.1	.4	114	.8	72	65	21	0	0	0	0	0	
FORT WORTH	73	46	83	36	60	-3	.6	-.2	.6	6.5	204	15.7	234	84	33	0	0	2	1	0	
GALVESTON	71	60	76	50	66	-2	.3	-.3	.1	4.3	163	11.5	144	89	62	0	0	2	0	0	
HOUSTON	76	54	83	42	65	-2	.6	-.2	.4	5.7	168	14.2	140	93	46	0	0	2	0	0	
LUBBOCK	72	42	85	32	57	-2	.2	-.4	.1	1.1	101	3.6	181	85	28	0	1	2	0	0	
MIDLAND	72	44	85	37	58	-8	.8	-.7	.8	1.8	295	3.1	197	91	35	0	0	1	1	0	
SAN ANGELO	74	45	84	34	59	-5	.5	-.2	.4	1.3	125	4.6	181	91	36	0	0	3	0	0	
SAN ANTONIO	74	53	79	40	64	-4	.1	-.4	.1	5.3	291	9.1	177	91	48	0	0	2	0	0	
VICTORIA	74	55	79	43	65	-4	.1	-.3	.1	3.1	177	6.9	118	95	53	0	0	3	0	0	
WACO	74	49	85	38	62	-2	.4	-.3	.2	5.5	203	11.0	172	88	37	0	0	4	0	0	
WICHITA FALLS	71	43	84	36	57	-3	.7	-.1	.5	6.0	256	12.9	302	88	32	0	0	2	0	0	
UT CEDAR CITY	64	35	68	30	50	-6	.1	-.2	.1	1.1	86	3.9	143	91	30	0	2	3	0	0	
SALT LAKE CITY	69	43	72	38	56	11	.1	-.5	.1	2.2	100	3.1	65	71	28	0	0	1	0	0	
VT BURLINGTON	46	35	52	28	41	-3	1.1	-.5	.6	2.9	104	8.1	128	94	57	0	2	6	1	0	
VA NORFOLK	60	45	71	39	53	-2	1.4	-.7	1.1	4.9	109	11.1	97	90	53	0	0	5	1	0	
RICHMOND	61	42	70	31	51	-3	1.5	-.8	.8	4.0	94	9.2	87	89	49	0	1	4	1	0	
ROANOKE	61	40	77	31	51	-2	1.2	-.4	1.0	4.6	104	9.7	93	87	38	0	1	4	1	0	
WA QUILLAYUTE	57	36	65	29	46	2	.2	-.1	.1	8.7	62	41.7	103	98	59	0	3	1	0	0	
SEATTLE-TACOMA	62	42	66	40	52	5	.7	-.7	.7	2.6	61	15.8	109	97	49	0	0	0	0	0	
SPOKANE	68	39	71	33	53	11	.0	-.3	.0	.9	53	4.3	77	79	28	0	0	0	0	0	
YAKIMA	75	34	77	30	55	8	.0	-.1	.0	.2	29	1.8	64	85	21	0	2	0	0	0	
WV BECKLEY	51	33	68	24	42	-5	1.2	-.3	.9	3.4	71	11.1	97	95	48	0	4	5	1	0	
CHARLESTON	55	37	72	28	46	-6	1.0	-.2	.5	3.0	61	9.6	84	97	47	0	3	5	1	0	
HUNTINGTON	54	38	68	28	46	-6	.7	-.2	.3	3.1	64	9.6	88	89	43	0	1	6	0	0	
PARKERSBURG	52	35	66	27	44	-6	.5	-.3	.3	2.8	63	9.2	84	95	46	0	3	5	0	0	
WI GREEN BAY	43	26	53	19	35	-3	.4	-.2	.2	3.7	150	4.9	105	88	44	0	0	5	0	0	
LACROSSE	46	28	57	21	37	-5	.3	-.3	.2	3.5	141	5.0	116	88	42	0	0	5	0	0	
MADISON	48	27	60	21	38	-3	.3	-.4	.1	4.4	159	7.0	143	86	38	0	6	3	0	0	
MILWAUKEE	46	29	57	23	37	-3	.7	-.1	.4	3.5	104	7.9	126	85	46	0	6	5	0	0	
WAUSAU	43	26	53	17	34	-3	.2	-.4	.1	2.5	102	4.1	94	93	48	0	5	4	0	0	
WY CASPER	58	28	72	18	43	5	.1	-.2	.1	1.2	98	2.2	97	86	34	0	5	3	0	0	
CHEYENNE	52	26	67	6	39	2	.4	-.2	.3	4.0	339	5.1	259	96	50	0	5	3	0	0	
LANDER	59	33	71	24	46	8	.7	-.4	.1	1.6	104	1.7	66	72	29	0	3	1	0	0	
SHERIDAN	55	29	72	16	42	3	.7	-.4	.1	1.0	70	2.4	81	81	35	0	4	1	0	0	

Based on 1951-80 normals

March Weather Summary

HIGHLIGHTS: Storm systems spread abundant precipitation across the Great Plains into parts of the Mississippi Valley and the Southeast. These systems continued to provide beneficial moisture for much of the winter wheat and alleviated long-term dryness in the North Central States but again brought severe weather with tornadoes and local flooding from eastern Texas to the Carolina coast. During the middle of the month, torrential rains of over 10 inches caused severe flooding in Alabama and Georgia. Thunderstorms eased extreme drought in southern Florida, but warm dry weather aggravated persistent dryness in the West and portions of the spring wheat regions in the northern Plains. Unseasonably warm weather dominated the Nation for the third month in a row. During the latter part of the month, however, a blast of arctic air plunged across the hard red winter wheat in the central and southern Plains and over blooming peach trees in the East.

MARCH 1-3: A storm system moved slowly eastward, spreading heavy rain across the lower Mississippi Valley to the mid-Atlantic coast. Warm and dry weather continued to prevail over the North Central States and southern Florida.

MARCH 4-10: A storm system developed over the Southwest on the 5th and then drifted eastward during the remainder of the week, spreading abundant precipitation across the central Rockies, central and southern Plains, and into the Mississippi, Ohio, and Tennessee Valleys. The storm gave much needed rainfall of more than 2 inches to portions of the central Plains and western Corn Belt plagued by long-term drought. Severe thunderstorms dumped torrential rain across Arkansas and caused flooding, while heavy snow blanketed the central Rockies and High Plains. A band of freezing rain extended from Nebraska into the upper Mississippi Valley. In Iowa, the ice storm was described as the worst in a century, downing power lines and trees and closing businesses. At week's end, isolated thunderstorms brought heavy rain and flooding to the southern Delta. Seasonably wet weather remained along the northern Pacific coast, while dry conditions again prevailed over much of the North Central States and down the Atlantic seaboard. Abnormally high temperatures dominated most of the United States except in the Northeast, where low-temperature records for the date were broken or tied on the 7th. A number of record-high temperatures were broken during the latter part of the week from the central and northern Plains to the Piedmont and central Appalachians.

MARCH 11-17: A record heat wave in the East, flooding in the South, and severe storms in the Plains headlined an extraordinary week of weather.

A powerful frontal system edged eastward during the week, spreading heavy rain and severe weather from the Great Plains to the Atlantic coast. Early in the week, severe thunderstorms developed in the unseasonably warm moist air ahead of the system and produced high wind, hail, and tornadoes from the southern Plains to the upper Mississippi Valley. Snow fell across the northern Plains into the Great Lakes behind the system. By Friday, Fargo, ND, had 11 inches of snow on the ground. On Wednesday and Thursday, thunderstorms spawned more tornadoes, including one which remained on the ground in

Kansas for over 2 hours. Torrential rains triggered flooding in the Southeast on Thursday and Friday. Over 10 inches of rainfall caused severe flooding in parts of Alabama and Georgia. Beneficial rains soaked the eastern seaboard at week's end.

Numerous record-high temperatures for the date were broken daily in advance of the slow-moving cold front. Some stations broke their previous records by as much as 23° F as temperatures averaged from 3 to 30° F above normal over the eastern two-thirds of the Nation. From March 12 through 15, temperatures soaring into the 70's and 80's set at least 250 daily records across the eastern half of the country. On Tuesday, Washington, DC's 100-year maximum temperature record of 74° F was already broken at 8:01 a.m. On Wednesday, Charleston, WV's record high of 89° F was the highest in the Nation. (By the following Monday, winter returned--2 inches of snow were on the ground.) Flooding resulted from the unseasonably high temperatures melting the snow across New England. Much cooler air moved into the central and eastern portions of the country behind the cold front at the end of the week.

MARCH 18-24: At the first of the week, the strong frontal system (responsible for the previous week's unstable weather) brought heavy rain across New England and much needed rain to southern Florida, before moving into the Atlantic. A following cold front then caused light to moderate rain and snow over the northeastern quarter of the Nation on Monday and early Tuesday. Late Tuesday, low pressure along the front intensified off the New England coast, bringing heavy rain and snow to New England and the Hudson Valley. Montpelier, VT, reported 17 inches of snow on the ground Wednesday morning. At midweek, another frontal system developed over the northern Plains and swung southeastward. The system left moderate to heavy snow from the central Plains to the middle Atlantic coast as amounts of 7-9 inches fell from Kansas City to Saint Louis, MO.

The Southeast was favorably dry, following the torrential downpours and severe floods of the previous week, while unfavorably warm and dry conditions persisted over California and the Southwest. Temperatures were unseasonably cool in the middle Mississippi Valley and along the eastern Gulf coast, ranging from 3 to 6° F below normal. Frost and freezing temperatures encompassed most of the Southeast on Wednesday morning, dipping all the way into northern Florida. Very cold air that invaded the northern Plains late Wednesday dominated most of the country by Saturday. Subfreezing temperatures penetrated deep into the southern Plains' crop areas on Saturday.

MARCH 25-31: Quiet spring weather continued to dominate much of the Nation early in the week as only light to moderate precipitation fell along a stationary front stretching from the central Plains to the middle Atlantic coast. By Tuesday, however, precipitation spread from the central Rockies to the lower Mississippi Valley as a major storm system developed. The system drifted eastward, causing widespread rainfall from the central and southern Rockies to the Atlantic coast during the remainder of the week. Heavy snow blanketed the

Rockies, while severe thunderstorms caused heavy rain and spawned tornadoes from eastern Texas into Louisiana. Torrential rains caused local flooding along the Carolina coast during the latter part of the week. Thunderstorms brought rain and some drought relief to southern Florida at week's end, but warm dry weather continued to plague the West. The abnormally warm weather over the West moved into the North Central States, while unseasonably cool air remained over the southern Plains and the northern and middle Atlantic Coast States. During the first of the week, temperatures dipped into the low 20's over the hard red winter wheat regions in southwestern Kansas and the Texas and Oklahoma panhandles, and dove into the teens over the blossoming peach trees in the Appalachians.

WINTER WHEAT

Precipitation and warm weather improved winter wheat prospects in the central and southern Great Plains during most of March. The northern Great Plains received some beneficial moisture, but more was needed. In the Great Plains, cold weather slowed growth during the third week of March but caused little or no freeze damage. By month's end, winter wheat was mostly good to fair in the central and southern Great Plains and fair to good in the northern Great Plains. Excess moisture caused some yellowing and hampered fertilizer application in portions of the southern Great Plains. In Texas, rust was a problem in the Blacklands area. Disease and insect problems were light in Kansas. In Nebraska, Russian wheat aphids and armyworm infestations were heavy in the Panhandle area. Crop condition was mostly good in the Corn Belt and good to fair in the Southeast. Powdery mildew was widespread in Georgia at month's end. In the

Pacific Northwest, winter wheat was mostly good to fair. Some reseeded occurred in the Columbia Basin of Oregon. Russian wheat aphids were a problem in eastern Washington and portions of California.

MARCH FIELDWORK

Rain slowed fieldwork in the central and southern Great Plains, Delta, and Southeast during most of March. The northern Great Plains and western Corn Belt received some beneficial moisture. Fieldwork was limited to spreading fertilizer in the Corn Belt during most of March.

As March began, cotton planting was underway in Arizona, California, and Texas. Rain slowed planting in Arizona and Texas during the last week of March. Planting was nearly complete in the Coastal Bend and Rio Grande Valley of Texas. As March ended, cotton fields were germinating in southern California and planting was underway in Georgia. During March, corn planting progressed, as weather permitted, in the Delta and Southeast. By mid-month, planting was underway in Kansas. In Alabama, corn planting was over a third finished but flooding was expected to force some replanting. By the end of March, corn planting was over half finished in Georgia and was underway in North and South Carolina. Rain slowed corn and sorghum planting in Texas during March. By month's end, corn planting was nearly complete in the Coastal Bend and Rio Grande Valley. Rice seeding began in Louisiana in early March and was underway in Mississippi and Texas by month's end. By the end of March, tobacco plant bed seeding was active in Kentucky and Tennessee and transplanting was over half finished in Georgia.

March Weather in Historical Perspective

March 1990 was mild and wet across much of the United States. National temperatures averaged well above the long-term mean and ranked as the 10th warmest on record (fig. 1). The national mean precipitation index makes this March the 35th wettest (fig. 2).

Regional rankings show the unusual warmth across the Nation (table 1). Every region (fig. 3) except the South had March temperatures ranked in the upper third of the distribution. Unusually dry conditions prevailed over the Northeast, Northwest, and West regions.

The year so far has been unusually warm over the Nation. January-March mean temperature ranks 1990 as the second warmest such period (fig. 4). The smooth line shows the longer term variations and indicates the last 10 years have had a slow warming trend. January-March statewide precipitation rankings for the lower 48 States are shown in table 2. Alabama, Arkansas, Iowa, Kansas, Louisiana, Mississippi, Missouri, Oklahoma, and Texas have had the 10th wettest, or wetter such period on record. For Alabama, Louisiana, and Oklahoma, 1990 ranked as the wettest January-March.

Rainfall during the past 3 months has erased the moisture deficit accumulated in late 1989 across most of the primary hard red winter wheat region (southern and western Nebraska to the Texas Panhandle). Total October-March precipitation across this region for 1989-90 averaged near the long-term mean (fig. 5).

In contrast to the wetness of the southern and central States, the West has had an unusually dry rainy season. October-March 1989-90 ranks as the third driest such period on record (fig. 6). The past 4 years have had extremely dry October-March periods.

There were 130 tornadoes across the contiguous United States in March 1990 (fig. 7). This is the second highest figure for March since 1953.

Figure 1

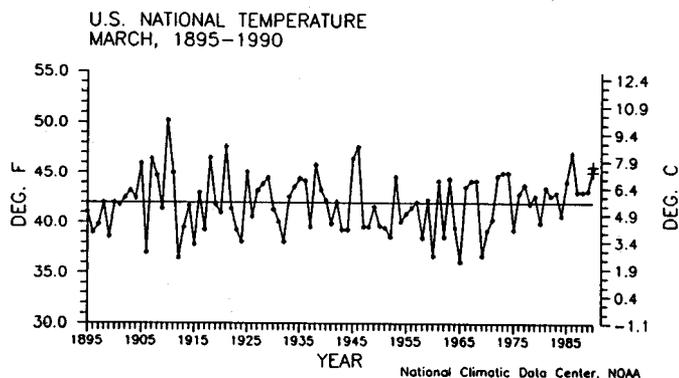


Figure 2

U.S. NATIONAL MEAN PRECIP INDEX

MARCH, 1895-1990

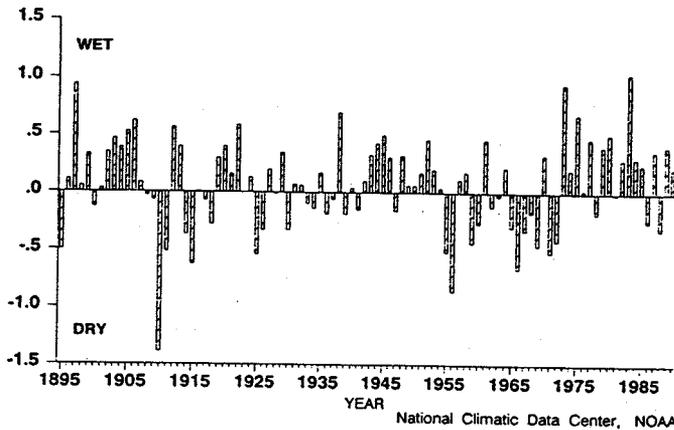


Figure 4

U.S. NATIONAL TEMPERATURE
JANUARY-MARCH, 1895-1990

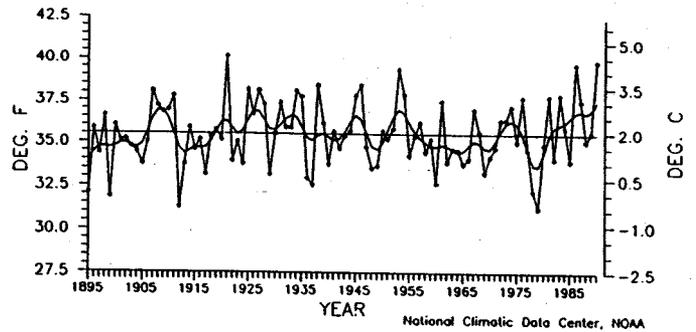


TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR MARCH 1990, BASED ON THE PERIOD 1895-1990. 1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	7	80
EAST NORTH CENTRAL	90	79
CENTRAL	39	81
SOUTHEAST	65	79
WEST NORTH CENTRAL	80	85
SOUTH	91	64
SOUTHWEST	42	83
NORTHWEST	28	78
WEST	14	79

TABLE 2. PRECIPITATION RANKINGS FOR JAN-MAR 1990, BASED ON THE PERIOD 1895 TO 1990. 1 = DRIEST, 96 = WETTEST.

STATE	RANK	STATE	RANK	STATE	RANK	STATE	RANK
AL	96	IA	87	NE	77	RI	44
AZ	35	KS	91	NV	39	SC	47
AR	95	KY	63	NH	31	SD	38
CA	21	LA	96	NJ	37	TN	68
CO	56	ME	19	NM	63	TX	89
CT	67	MD	34	NY	85	UT	49
DE	39	MA	46	NC	74	VT	70
FL	37	MI	62	ND	34	VA	52
GA	70	MN	77	OH	55	WA	84
ID	55	MS	95	OK	96	WV	32
IL	83	MO	92	OR	51	WI	67
IN	69	MT	19	PA	40	WY	35

Figure 3

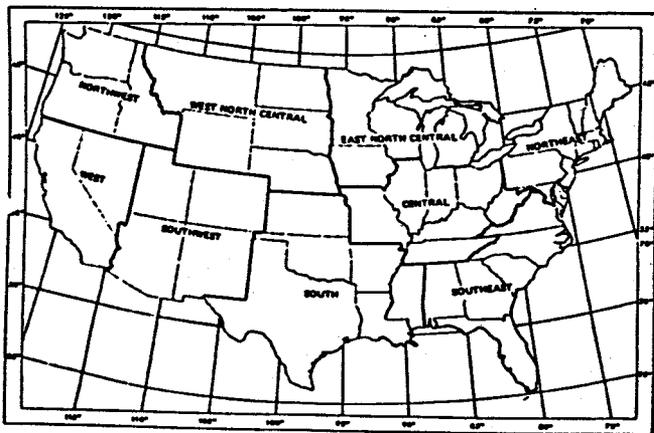


Figure 5

PRIMARY HARD RED WINTER WHEAT BELT PRECIPITATION
OCTOBER-MARCH, 1895-96 to 1989-90

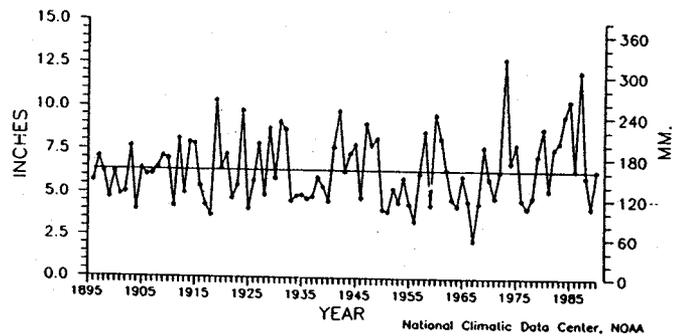


Figure 6

WEST REGION PRECIPITATION
OCTOBER-MARCH, 1895-95 to 1989-90

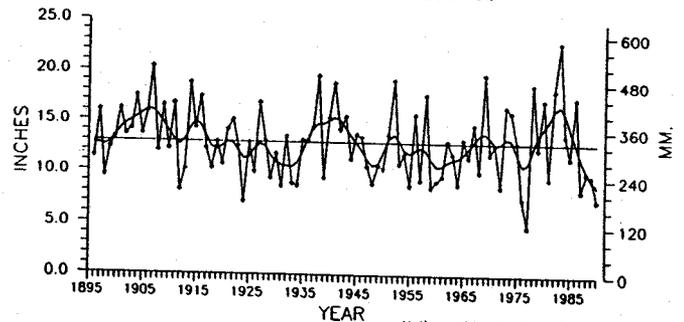
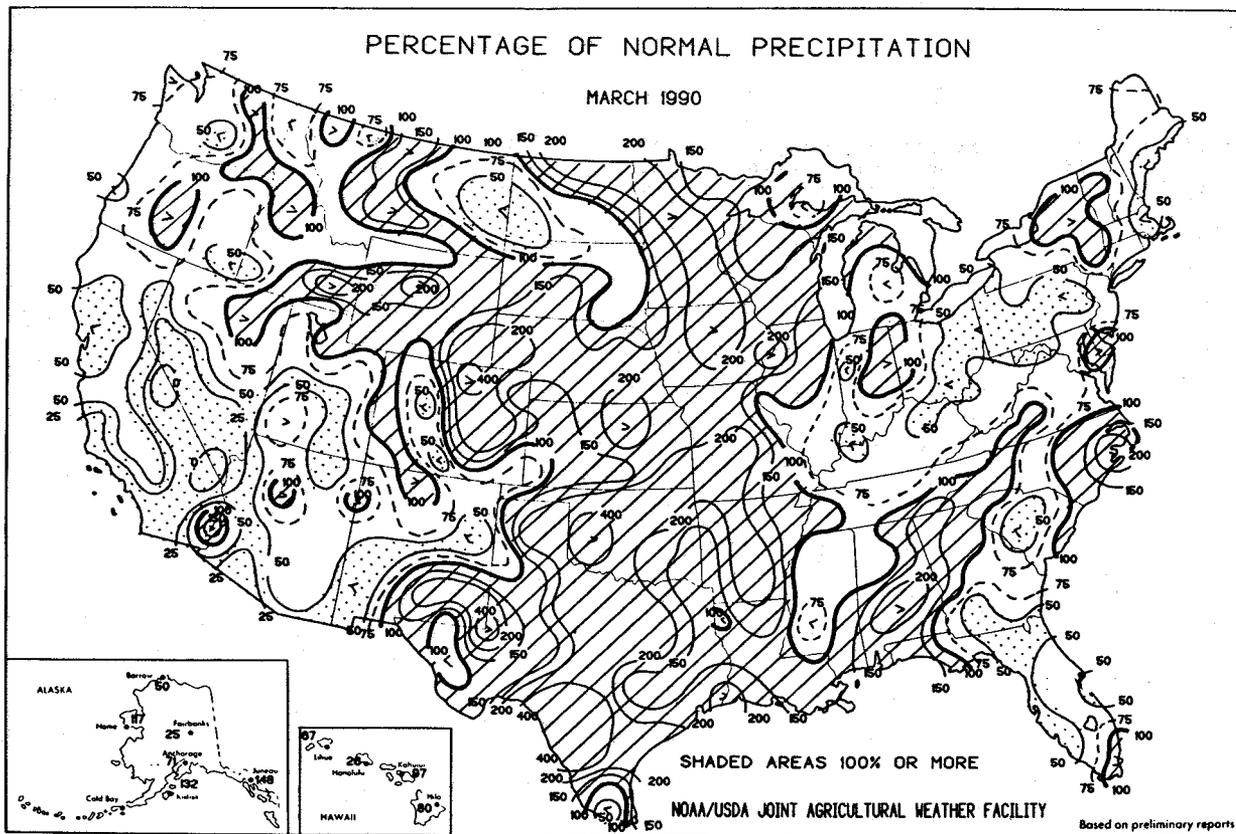
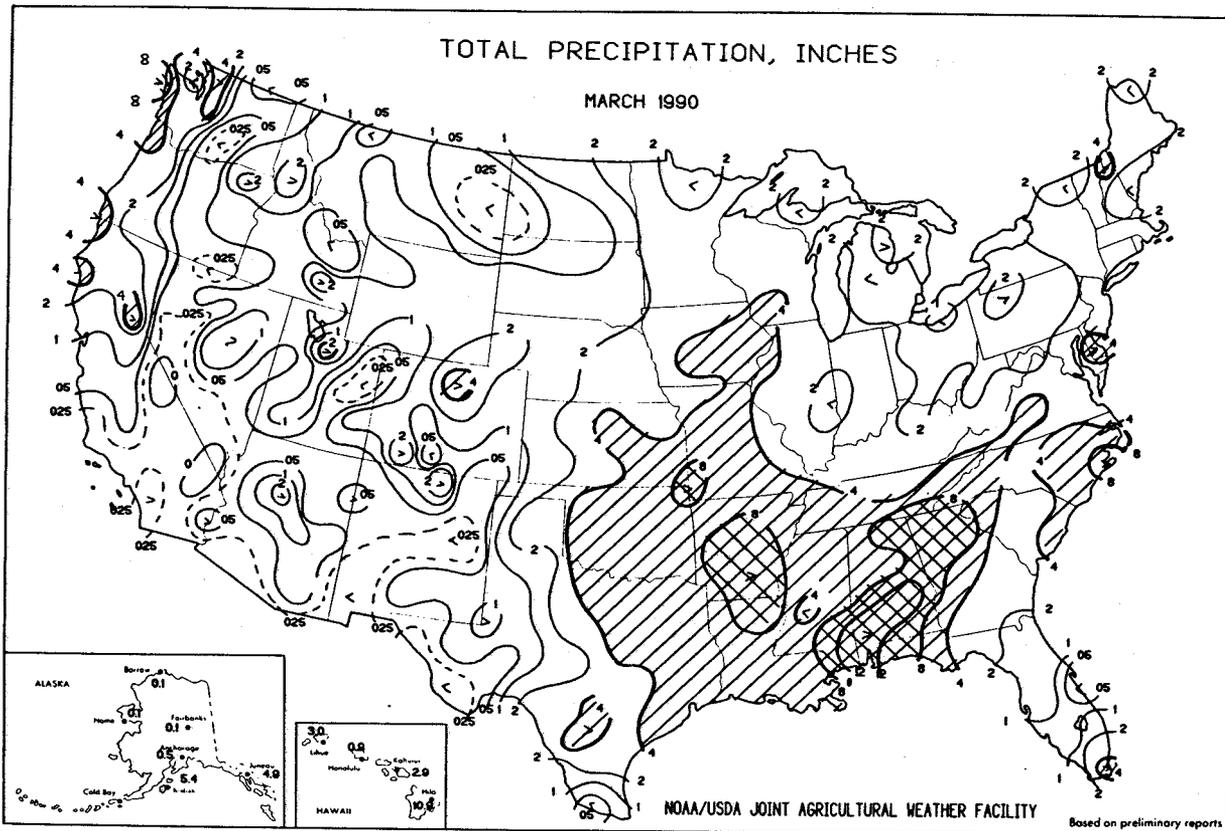
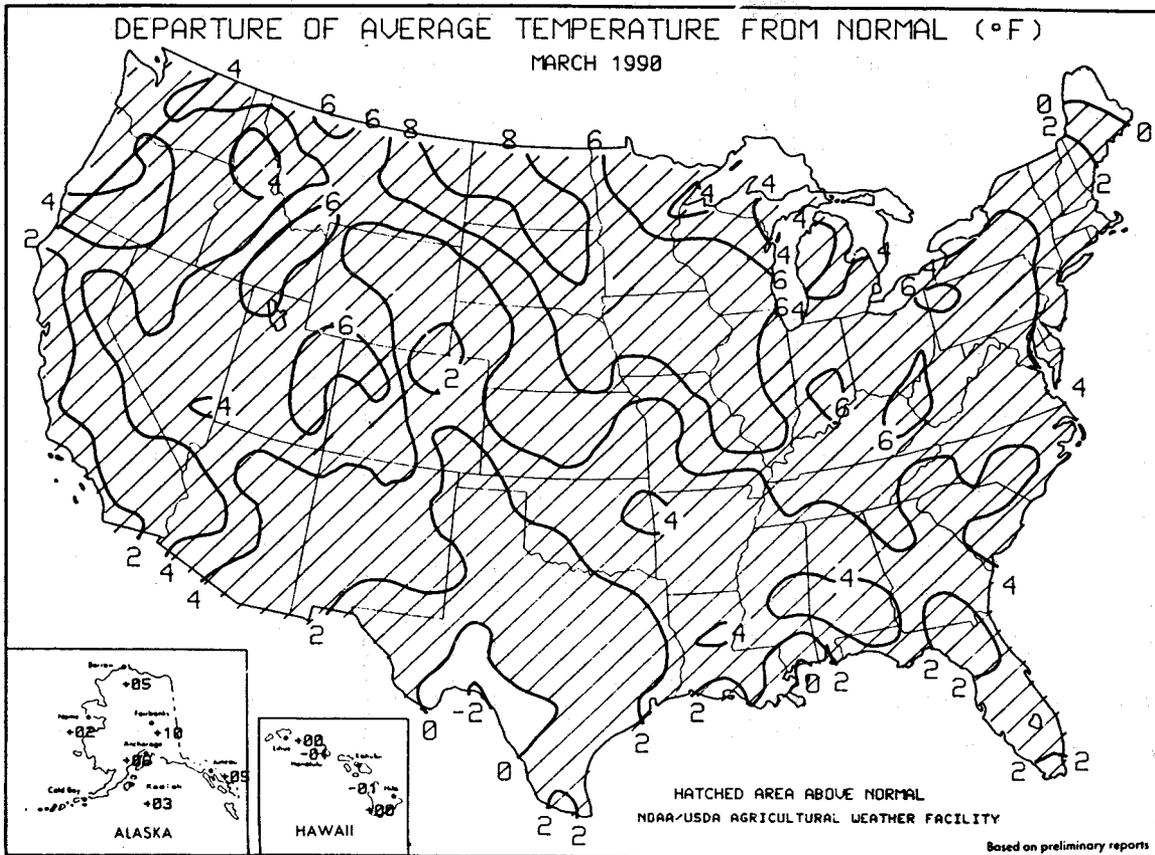
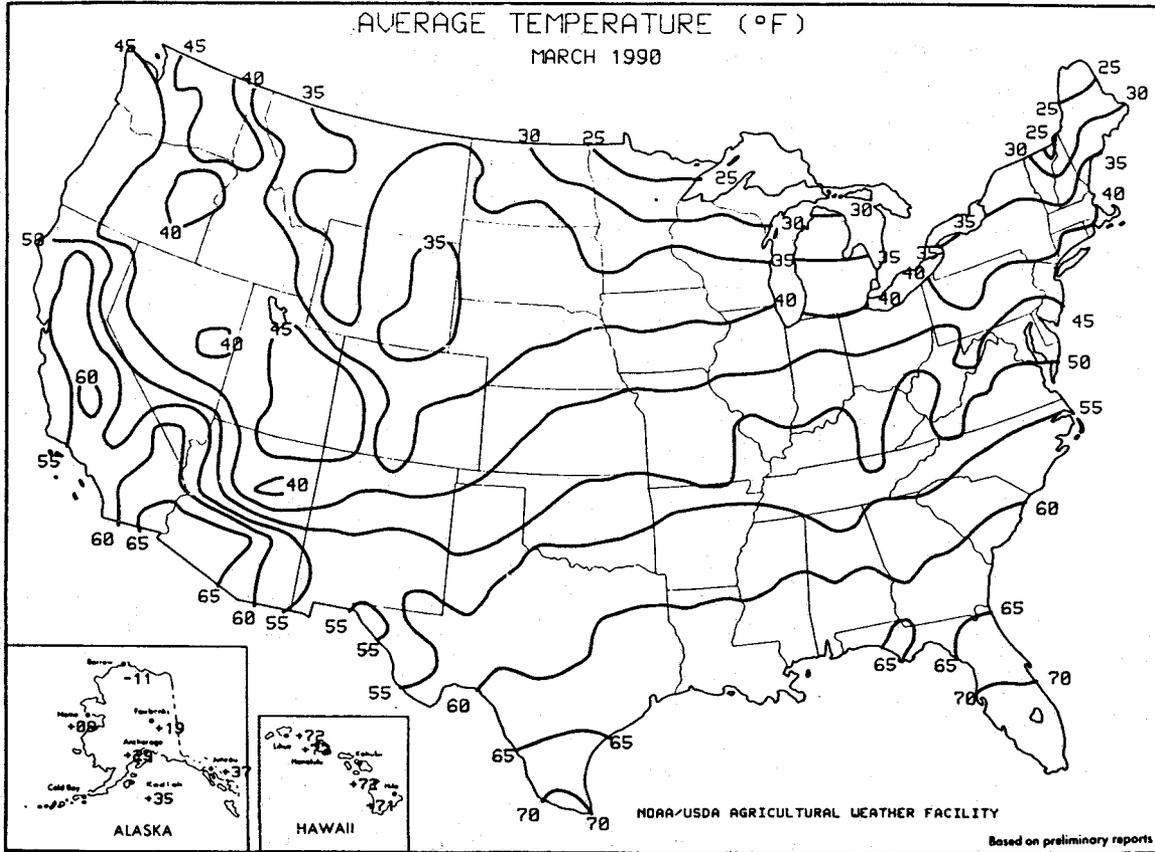


FIG. 10





Temperature and Precipitation Data for March 1990

States and Stations	Temperature of		Precipitation Inches		States and Stations	Temperature of		Precipitation Inches		States and Stations	Temperature of		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	57	3	5.7	-0.9	LA PADUCAH	52	6	3.7	-1.3	DAYTON	45	5	3.7	0.6
HUNTSVILLE	54	3	8.9	2.1	ALEXANDRIA	63	5	6.1	1.2	TOLEDO	41	6	3.5	0.9
MOBILE	62	2	12.2	5.8	BATON ROUGE	63	3	5.8	1.3	MANSFIELD	42	5	1.7	-1.3
MONTGOMERY	60	3	12.4	6.5	LAKE CHARLES	62	1	5.3	2.2	YOUNGSTOWN	41	6	1.1	-2.2
AK ANCHORAGE	29	6	0.5	-0.2	NEW ORLEANS	63	2	6.0	1.3	OK OKLAHOMA CITY	53	3	4.4	2.4
BARROW	-11	5	0.1	0.0	SHREVEPORT	59	2	4.9	1.1	TULSA	53	4	6.5	3.4
FAIRBANKS	19	10	0.1	-0.3	ME CARIBOU	26	0	1.2	-1.3	OR ASTORIA	48	3	5.2	-2.1
JUNEAU	36	5	4.9	1.5	PORTLAND	35	3	1.4	-2.5	BURNS	39	3	0.5	-0.4
KODIAK	35	3	5.4	1.5	MD BALTIMORE	47	4	2.5	-1.2	EUGENE	49	3	3.4	-1.7
NIJME	9	2	0.7	0.2	MA SALISBURY	48	4	3.4	-0.7	MEDFORD	49	4	1.5	-0.3
AZ FLAGSTAFF	38	3	2.2	0.1	MA BOSTON	40	2	1.7	-2.4	PENLETON	46	2	1.1	0.1
PHOENIX	67	7	0.4	-0.5	MI CHATHAM	38	1	2.9	1.1	PORTLAND	50	4	2.5	-1.1
PRESCOTT	47	5	1.0	-0.5	MI ALPENA	31	3	2.9	1.0	SALEM	48	3	2.4	-1.9
TUCSON	62	4	0.4	-0.3	MI DETROIT	39	4	1.9	-0.6	PA ALLENTOWN	43	5	1.5	-2.3
WINSLOW	48	3	0.3	-0.2	FLINT	38	5	1.5	-0.7	ERIE	40	6	1.3	-1.6
YUMA	69	4	0.1	-0.1	GRAND RAPIDS	37	4	2.0	-0.6	HARRISBURG	45	4	1.8	-1.7
AR PORT SMITH	55	4	4.6	0.8	HOUGHTON LAKE	32	5	1.5	-0.4	PHILADELPHIA	46	4	2.6	-1.3
LITTLE ROCK	55	2	10.1	5.4	LANSING	37	4	1.4	-1.0	PITTSBURGH	44	5	1.5	-2.1
BISHOP	51	4	0.0	-0.4	MARQUETTE	27	4	1.9	-1.0	SCHANTON	40	4	1.9	-0.7
CA BAKERSFIELD	59	2	0.5	-0.4	MUSKEGON	37	4	2.4	-0.1	WILLIAMSPORT	41	4	1.5	-2.2
EUREKA	50	2	3.3	-1.7	SAULT ST. MARIE	26	2	2.4	0.4	RI PROVIDENCE	40	3	2.0	-2.3
PRESNO	57	3	0.7	-0.9	MN ALEXANDRIA	31	7	2.3	1.1	SC CHARLESTON	62	6	6.6	2.2
LOS ANGELES	58	0	0.1	-1.6	DULUTH	27	4	3.4	1.6	COLUMBIA	59	5	2.3	-2.9
REDDING	55	1	2.4	-2.6	INT'L FALLS	27	6	1.4	0.3	FLORENCE	59	4	2.6	-1.5
SACRAMENTO	56	2	0.9	-1.2	MINNEAPOLIS	36	7	3.7	2.0	GREENVILLE	55	3	6.7	0.7
SAN DIEGO	59	0	0.3	-1.3	ROCHESTER	35	6	3.6	1.8	SD ABERDEEN	36	8	0.8	-0.2
SAN FRANCISCO	53	1	0.8	-1.8	ST. CLOUD	32	6	3.1	1.7	HURON	37	8	1.3	0.1
STOCKTON	56	2	0.9	-0.9	MS GREENWOOD	58	3	5.7	-0.5	RAPID CITY	37	4	1.2	0.2
CO ALAMOSA	36	4	0.4	-1.0	JACKSON	60	4	3.6	-2.0	SIOUX FALLS	37	6	1.6	0.0
CO. SPRINGS	39	2	1.8	1.0	MERIDIAN	61	5	6.8	0.2	TN BRISTOL	51	5	4.0	-0.3
DENVER	40	2	3.1	1.9	MO TUPELO	56	3	6.4	-0.5	CHATTANOOGA	55	5	9.5	3.2
GRAND JUNCTION	47	5	1.1	0.3	MO CAPE GIRARDEAU	51	—	3.0	-2.0	KNOXVILLE	54	4	5.7	0.3
PUEBLO	42	1	1.1	0.4	COLUMBIA	46	4	7.2	3.9	MEMPHIS	55	4	5.7	0.2
CT BRIDGEPORT	40	2	2.1	-1.8	KANSAS CITY	46	3	3.9	1.3	NASHVILLE	54	5	3.3	-2.3
HARTFORD	40	3	2.5	-1.7	SAINT LOUIS	50	7	2.7	-0.6	TX ABILENE	56	1	2.4	1.3
DC WASHINGTON	50	4	2.6	-0.9	SPRINGFIELD	48	4	7.9	4.4	AMARILLO	47	1	2.6	1.7
FL APALACHICOLA	63	2	4.2	0.1	MT BILLINGS	38	4	1.7	0.7	AUSTIN	62	1	2.1	0.4
DAYTONA BEACH	66	2	1.9	-1.1	GLASGOW	35	8	0.3	0.0	BEAUMONT	64	3	6.5	3.5
FT. MYERS	72	3	0.9	-2.0	GREAT FALLS	36	4	1.7	0.8	BROWNSVILLE	70	2	0.8	0.3
JACKSONVILLE	65	3	1.6	-1.9	HAVRE	34	5	0.8	0.3	CORPUS CHRISTI	67	1	3.0	2.2
KEY WEST	75	1	0.8	-0.5	HELENA	35	3	0.9	0.2	DEL RIO	61	-2	3.2	2.6
MIAMI	74	2	2.3	0.4	KALISPELL	37	4	1.1	0.3	EL PASO	56	1	0.4	0.1
ORLANDO	69	3	1.9	-1.4	MILES CITY	38	7	0.2	-0.4	FURT WORTH	58	2	5.9	3.5
TALLAHASSEE	63	3	3.4	-2.2	MISSOULA	38	4	0.7	-0.1	GALVESTON	64	3	4.1	2.0
TAMPA	70	3	1.7	-1.7	NE GRAND ISLAND	42	6	3.0	1.5	HOUSTON	63	1	5.1	2.5
WEST PALM BEACH	73	3	1.9	-0.8	LINCOLN	43	7	2.9	0.9	LAREDO	68	0	1.6	1.2
GA ATHENS	56	4	8.2	2.4	NORFOLK	40	7	2.3	0.8	LUBBOCK	52	1	0.9	0.0
ATLANTA	58	5	8.4	2.5	NORTH PLATTE	40	5	1.8	0.7	MIDLAND	55	0	0.9	0.4
AUGUSTA	59	4	2.0	-2.9	OMAHA	42	5	3.2	1.4	SAN ANGELO	58	0	0.9	0.1
MACON	60	3	4.6	-0.6	SCOTTSBUFF	38	2	2.6	1.7	SAN ANTONIO	62	0	5.2	3.9
SAVANNAH	63	4	3.8	0.0	VALENTINE	37	5	1.3	0.5	VICTORIA	64	0	3.0	1.7
HI HILO	71	0	10.9	-2.7	NV ELKO	41	5	1.1	0.2	WACO	60	2	5.1	3.1
HONOLULU	73	-1	0.9	-2.6	ELY	39	5	0.8	-0.1	WICHITA FALLS	55	2	5.4	3.6
KAHULUI	72	-1	2.9	-0.1	LAS VEGAS	61	5	0.0	-0.4	UT BLANDING	—	—	0.6	-0.2
LIHUE	72	-1	3.0	-1.6	RENO	46	5	0.1	-0.7	CEDAR CITY	44	4	1.0	0.0
ID BOISE	45	3	0.8	-0.3	WINNEMUCCA	43	4	0.6	-0.1	SALT LAKE CITY	45	5	2.2	0.5
LEWISTON	49	6	1.1	0.0	NH CONCORD	35	3	1.6	-1.3	VT BURLINGTON	34	4	1.8	-0.4
POCATTELLO	40	5	2.3	1.4	NJ ATLANTIC CITY	44	3	2.6	-1.4	VA LYNCHBURG	51	5	4.0	0.3
IL CAIRO	—	—	3.7	-1.3	NM ALBUQUERQUE	49	2	0.4	-0.1	NORFOLK	53	4	3.5	-0.3
CHICAGO	41	5	3.1	0.4	NY CLOVIS	49	3	0.2	-0.4	RICHMOND	52	5	2.5	-1.0
MOLINE	43	7	6.7	3.9	ROSWELL	53	2	0.7	0.4	ROANOKE	51	6	3.4	-0.3
PEORIA	43	6	4.0	1.1	ALBANY	38	4	3.7	0.7	WA COLVILLE	39	2	0.7	-0.5
QUINCY	45	7	2.9	-0.3	BINGHAMTON	37	5	1.7	-1.2	QUILLAYUTE	45	2	8.7	-3.3
ROCKFORD	40	6	2.7	0.1	BUFFALO	37	4	1.5	-1.5	SEATTLE-TACOMA	47	3	2.6	-1.0
SPRINGFIELD	45	6	3.4	0.4	NEW YORK	44	3	2.7	-1.3	SPOKANE	41	3	0.9	-0.5
IN EVANSVILLE	50	5	2.2	-2.4	ROCHESTER	37	4	1.6	-1.0	WALLA WALLA	47	2	1.7	0.3
FORT WAYNE	42	5	3.1	0.2	SYRACUSE	37	4	3.7	0.6	YAKIMA	44	2	0.2	-0.4
INDIANAPOLIS	46	6	3.9	0.3	ASHVILLE	50	4	6.0	1.2	WV BECKLEY	46	5	2.3	-1.7
SOUTH BEND	41	5	2.8	-0.2	CHARLOTTE	56	5	3.6	-1.2	CHARLESTON	52	7	1.9	-2.0
IA DES MOINES	42	7	5.8	3.6	GREENSBORO	52	4	2.6	-1.2	ELKINS	44	5	2.3	-1.4
DUBUQUE	39	7	4.6	1.7	HATTIESBURG	57	5	6.9	3.0	HUNTINGTON	51	6	2.4	-1.6
SIOUX CITY	40	6	2.2	0.5	NEW BERN	57	4	6.6	2.9	PARKERSBURG	49	5	2.2	-1.3
WATERLOO	40	8	4.5	2.2	RALEIGH	55	5	5.0	1.4	WI GREEN BAY	34	5	3.3	1.4
KS OMAHA	45	5	4.1	2.2	WILMINGTON	58	4	5.1	1.1	LA CROSSE	38	7	3.2	1.3
DODGE CITY	46	3	1.6	0.2	ND BISMARCK	35	9	0.6	-0.1	MADISON	38	6	4.2	2.1
GOODLAND	42	4	1.6	0.6	FARGO	31	7	1.5	0.7	MILWAUKEE	39	6	2.8	0.2
TUPEKA	46	4	3.8	1.6	GRAND FORKS	29	7	2.2	1.5	WAUSAU	33	6	2.4	0.5
WICHITA	47	3	2.7	0.6	WILLISTON	35	9	0.4	-0.1	WY CASPER	36	3	1.1	0.2
KY HOWLING GREEN	51	5	3.5	-2.1	OH AKRON-CANTON	42	5	1.3	-2.1	CHEYENNE	32	0	3.7	2.7
JACKSON	52	11	3.2	1.4	CINCINNATI	48	6	2.8	-1.2	LANDER	37	5	1.6	0.4
LEXINGTON	49	5	1.9	-2.9	CLEVELAND	42	5	0.9	-2.1	SHERIDAN	36	4	1.0	-0.1
LOUISVILLE	51	6	2.8	-1.9	COLUMBUS	45	5	1.3	-1.9	PR SAN JUAN	77	-1	3.1	1.4

Based on 1951-80 normals.

Heating Degree Days (Base 65°) For March 1990

States and Stations	TOTAL	Depart Normal	States and Stations	TOTAL	Depart Normal	States and Stations	TOTAL	Depart Normal
AL. Birmingham	258	-110	MD. Baltimore	552	-121	OK. Okla. City	387	-119
AL. Mobile	128	-63	MA. Boston	762	-63	OK. Tulsa	376	-124
AL. Montgomery	177	-107	MI. Chatham	825	-49	OR. Astoria	533	-106
AK. Anchorage	1121	-159	MI. Alpena	1045	-139	OR. Burns		-884
AK. Barrow	2372	-136	MI. Detroit	785	-145	OR. Medford	489	-116
AK. Fairbanks	1431	-321	MI. Flint	829	-191	OR. Pendleton	591	-63
AK. Nome	1679	-131	MI. Grand Rapids	865	-124	OR. Portland	476	-116
AZ. Flagstaff	825	-121	MI. Houghton Lake	1009	-157	OR. Salem	527	-99
AZ. Phoenix	76	-111	MI. Lansing	869	-123	PA. Allentown	670	-152
AZ. Tucson	156	-90	MI. Marquette	1123	-173	PA. Erie	773	-204
AZ. Winslow	530	-93	MI. S. Ste. Marie	1186	-88	PA. Harrisburg	629	-127
AZ. Yuma	52	-52	MN. Duluth	1166	-139	PA. Philadelphia	588	-131
AR. Fort Smith	333	-128	MN. Internatl Falls	1171	-209	PA. Pittsburgh	657	-165
AR. Little Rock	334	-83	MN. Minneapolis	899	-211	PA. Scranton	757	-139
CA. Bakersfield	187	-68	MI. Rochester	912	-235	RI. Providence	761	-95
CA. Eureka	453	-65	MI. St. Cloud	1010	-208	SC. Charleston	137	-149
CA. Fresno	236	-100	MS. Jackson	209	-94	SC. Columbia	220	-126
CA. Los Angeles	223	-17	MS. Meridian	185	-127	SC. Greenville	333	-109
CA. Redding	301	-32	MO. Columbia	590	-132	SD. Aberdeen	900	-256
CA. Stockton	269	-81	MO. Kansas City	601	-128	SD. Huron	848	-256
CA. San Diego	185	-8	MO. St. Louis	496	-180	SD. Rapid City	880	-124
CA. San Francisco	356	-22	MO. Springfield	521	-119	SD. Sioux Falls	871	-202
CO. Denver	278	-559	MT. Billings	829	-138	TN. Chattanooga	325	-153
CO. Pueblo	695	-61	MT. Glasgow	912	-291	TN. Knoxville	358	-125
CO. Bridgeport	766	-65	MT. Great Falls	902	-140	TX. Memphis	321	-112
CO. Hartford	763	-111	MT. Havre	958	-177	TX. Nashville	373	-137
DC. Washington	481	-114	MT. Helena	925	-110	TX. Abilene	293	-28
FL. Apalachicola	87	-81	NE. Kalispell	877	-149	TX. Amarillo	551	-26
FL. Jacksonville	70	-46	NE. Miles City	830	-215	TX. Austin	154	-49
FL. Key West	0	-39	NE. Missoula	832	-126	TX. Beaumont	108	-59
FL. Miami	0	-14	NE. Grand Island	717	-185	TX. Brownsville	25	-28
FL. Orlando	11	-57	NE. Lincoln	680	-207	TX. Corpus Christi	59	-38
FL. W. Palm Beach	0	-18	NE. Norfolk	759	-218	TX. Del Rio	133	-12
FL. Tallahassee	97	-94	NE. North Platte	771	-168	TX. El Paso	271	-47
FL. Tampa	13	-74	NE. Omaha	696	-228	TX. Fort Worth	251	-62
GA. Atlanta	250	-150	NE. Valentine	864	-165	TX. Galveston	76	-84
GA. Augusta	202	-130	NV. Ely	812	-168	TX. Houston	122	-53
GA. Macon	192	-95	NV. Las Vegas	172	-141	TX. Lubbock	411	-59
GA. Savannah	135	-108	NV. Reno	590	-166	TX. Midland	324	-5
ID. Boise	633	-99	NH. Winnemucca	690	-125	TX. San Angelo	259	-15
ID. Lewiston	508	-177	NH. Concord	933	-87	TX. San Antonio	154	-24
ID. Pocatello	766	-149	NJ. Atlantic City	630	-114	TX. Victoria	100	-40
IL. Chicago	733	-166	NM. Albuquerque	501	-82	TX. Waco	195	-62
IL. Moline	691	-217	NY. Albany	839	-134	TX. Wichita Falls	316	-72
IL. Peoria	672	-187	NY. Binghamton	873	-169	UT. Salt Lake City	612	-141
IL. Rockford	775	-192	NY. Buffalo	886	-106	VT. Burlington	961	-149
IL. Springfield	613	-174	NY. New York	645	-99	VA. Lynchburg	456	-142
IL. Fort Wayne	712	-168	NY. Rochester	853	-130	VA. Norfolk	410	-102
IL. Indianapolis	588	-187	NY. Syracuse	849	-134	VA. Richmond	436	-116
IL. South Bend	751	-148	NC. Asheville	446	-131	VA. Roanoke	441	-145
IA. Des Moines	703	-224	NC. Charlotte	307	-152	WA. Quillayute	610	-97
IA. Dubuque	805	-218	NC. Greensboro	397	-136	WA. Seattle-Tacoma	547	-98
IA. Sioux City	759	-208	NC. Hatteras	289	-148	WA. Spokane	733	-116
KS. Concordia	606	-172	NC. Raleigh	357	-139	WA. Walla Walla	542	-53
KS. Dodge City	596	-114	NC. Wilmington	233	-117	WA. Yakima	634	-82
KS. Goodland	723	-139	ND. Bismark	916	-293	WV Beckley	574	-170
KS. Topeka	600	-119	ND. Fargo	1034	-237	WV Charleston	446	-180
KS. Wichita	555	-101	ND. Williston	927	-304	WV Huntington	457	-160
KY. Lexington	505	-156	OH. Akron-Canton	707	-170	WI. Green Bay	952	-176
KY. Louisville	445	-179	OH. Cincinnati	531	-188	WI. La Crosse	818	-230
LA. Baton Rouge	126	-61	OH. Cleveland	718	-162	WI. Madison	835	-213
LA. Lake Charles	150	-34	OH. Columbus	613	-162	WI. Milwaukee	805	-215
LA. New Orleans	101	-70	OH. Dayton	628	-163	WY Casper	912	-114
LA. Shreveport	216	-66	OH. Toledo	742	-176	WY Cheyenne	1021	1
ME. Caribou	1241	-21	OH. Youngstown	731	-190	WY Lander	860	-160
ME. Portland	935	-85			WY Sheridan	885	-141	

National Agricultural Summary

April 2-8, 1990

HIGHLIGHTS: Rain and wet field conditions slowed fieldwork in the Delta and most of the East. Soil moisture remained short to adequate in the northern Great Plains and most of the West. Cool weather slowed winter wheat growth in the central and southern Great Plains. Freezing temperatures damaged fruit in portions of the Delta and Southeast.

SMALL GRAINS: Winter wheat was mostly good to fair. In Kansas, crop conditions were good but cool, wet weather slowed growth. Earlier freeze damage was becoming more evident. Oklahoma's crop was good to fair with ample moisture to promote growth. In Texas, winter wheat was fair. Freezing temperatures slowed growth and may have caused some damage in the High Plains, but the cold weather is expected to slow insect activity. Freezing temperatures caused some damage in Missouri. In Arkansas, disease controls for septoria leaf blotch, rust, and powdery mildew were being applied. Winter wheat was good to fair in Nebraska and fair to good in South Dakota. Army cutworms and Russian wheat aphids were a continuing problem in western Nebraska. Winter wheat was good to fair in the Corn Belt. Cold, wet soil conditions caused some yellowing in Ohio. Warmer temperatures were needed to promote growth in Michigan. Winter wheat was good to fair in the Southeast. Powdery mildew and rust were still problems in Georgia. Winter wheat was good to fair in the Pacific Northwest, but moisture was needed. Some reseeded continued in Malheur County, OR. Wind caused some damage in Idaho. In California, Russian wheat aphids were a continuing problem. Crop condition was mostly good.

Spring wheat seeding was 5 percent (%) complete, 2 percentage points ahead of the 5-year average. Seeding was underway in all five major producing States and was 19 points ahead of normal in Idaho.

OTHER FIELD CROPS: Cotton planting was 11% complete, 1 point ahead of normal. Planting was underway in 5 of the 14 major producing States. Early planted fields were emerging in Arizona and California. Warmer soil temperatures were needed in the Trans-Pecos and Plains area of Texas before planting could begin. Planting progressed well in the southern and coastal areas.

Corn planting was 2% complete, 1 point behind normal. Planting was underway in 5 of the 17 major producing States. Sorghum planting was 11% complete, 3 points behind normal. Planting was underway in 3 of the 12 major producing States. Showers slowed corn and sorghum planting in the Texas Blacklands.

Peanut planting was underway in Alabama and Georgia. Rice seeding was 11% complete, 1 point

behind normal. Seeding was a third complete in Louisiana and Texas and just beginning in Mississippi. Cool weather slowed growth in Louisiana. Tobacco plant bed seeding continued in Kentucky and Tennessee. Transplanting was active in the Southeast. Tobacco plant bed condition was good to fair in Georgia, North Carolina, and Virginia, and fair to good in South Carolina.

FRUIT AND NUTS: Rain promoted new foliage growth in Florida's citrus groves. The new crop fruit was sizing well. Valencia orange and grapefruit harvests were slow. Apples and peaches were good to fair in Georgia, but freezing temperatures damaged early variety peaches in the north. Freezing temperatures damaged fruit in Kentucky and Tennessee. Freezing temperatures again caused some peach crop damage in the Plains and Cross Timbers areas of Texas and in northwestern Arkansas. No damage occurred in the Hill Country of Texas. Grapefruit and Valencia orange harvests were active in Arizona. Almonds were sizing well in California. Cherry trees were in full bloom. Desert grapefruit harvest was nearly complete. Navel orange and lemon harvests were active in the Central Valley and southern California. Late variety walnuts were blooming. In Oregon, apple and pear orchards were blooming up to 10 days early in the Hood River Valley. Idaho's fruit trees were blooming and in good condition.

VEGETABLES: Cool temperatures slowed vegetable growth in Florida. Spring harvest volumes increased seasonally. Watermelon harvest began in the Immokalee area. Onion harvest was underway in Georgia. Watermelons were good to fair. Freezing temperatures forced some replanting. Irish potatoes were good in North Carolina. Vegetables were fair to good in Louisiana. Onion and cabbage harvests progressed well in the Rio Grande Valley, TX. Cool weather slowed watermelon growth in the San Antonio-Winter Garden area. Wet field conditions slowed vegetable planting in the east. In the High Plains, onion and carrot plantings were underway. Spring lettuce and mixed vegetable harvests continued in Arizona. In California, iceberg lettuce harvest began in the Huron District. Asparagus harvest was very active in the central area and nearly complete in the southern California. In Oregon, potato planting was nearly complete in the Hermiston-Boardman area. Onion, green peas, and potato plantings continued in Washington. Onion planting was nearly complete in Idaho and nearly a third complete in Colorado.

PASTURES AND LIVESTOCK: Pastures were good to fair in the Corn Belt and the East and fair to good in the Delta. Lack of moisture stressed pastures and ranges in the West. Stockwater supplies were short in portions of eastern Oregon. Fluctuating temperatures stressed livestock in the northern Great Plains.

Crop Progress

FOR WEEK ENDING APRIL 8, 1990

	CORN % PLANTED		
	1990	1989	AVG.
COLO	0	0	0
GA	79	71	74
ILL	0	0	0
IND	0	0	0
IOWA	0	0	0
KANS	1	3	1
KY	0	0	0
MICH	0	0	0
MINN	0	0	1
MO	1	1	4
NEBR	0	0	0
N C	12	4	18
OHIO	0	0	0
PA	0	0	0
S DAK	0	0	0
TEX	55	62	61
WIS	0	0	0

17 STATES 2 2 3

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

	COTTON % PLANTED		
	1990	1989	AVG.
ALA	7	1	6
ARIZ	50	60	49
ARK	0	0	0
CALIF	35	25	32
GA	0	0	3
LA	0	0	1
MISS	0	0	0
MO	0	0	0
N MEX	3	10	2
N C	0	0	0
OKLA	0	0	0
S C	0	0	3
TENN	0	0	1
TEX	11	11	10

14 STATES 11 10 10

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

	GRAIN SORGHUM % PLANTED		
	1990	1989	AVG.
ARK	0	0	5
COLO	0	0	0
ILL	0	0	0
KANS	0	0	0
LA	12	7	9
MISS	0	0	0
MO	0	0	0
NEBR	0	0	0
N MEX	4	0	0
OKLA	0	0	0
S DAK	0	0	0
TEX	39	45	49

12 STATES 11 13 14

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

	RICE % PLANTED		
	1990	1989	AVG.
ARK	0	0	2
CALIF	0	0	0
LA	32	32	28
MISS	4	0	0
TEX	38	50	43

5 STATES 11 13 12

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

WINTER WHEAT
% HEADED

	1990 1989 AVG.		
	1990	1989	AVG.
ARK	4	0	2
CALIF	40	35	46
COLO	0	0	0
GA	36	60	37
IDAHO	0	0	0
ILL	0	0	0
IND	0	0	0
KANS	0	0	0
MICH	0	0	0
MO	0	0	0
MONT	0	0	0
NEBR	0	0	0
N C	7	5	NA
OHIO	0	0	0
OKLA	3	1	5
OREG	0	0	0
S DAK	0	0	0
TEX	6	3	10
WASH	0	0	0

19 STATES 3 2 NA

EXCL. STATES WITH NA 2 2 3

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

NA - NOT AVAILABLE.

FOR WEEK ENDING APRIL 8, 1990

Crop Condition

STATE	WINTER WHEAT				
	VP	P	F	G	EX
ARK	0	0	16	79	5
CALIF	0	0	10	80	10
COLO	0	6	22	57	15
GA	0	5	35	54	6
IDAHO	1	7	14	65	13
ILL	0	3	16	71	10
IND	1	2	30	61	6
KANS	0	3	23	45	29
MICH	N/A				
MO	0	4	51	44	1
MONT	1	6	23	54	16
NEB	0	9	37	54	0
N C	0	0	16	83	1
OHIO	0	2	21	64	13
OKLA	0	0	12	83	5
OREG	0	3	42	47	8
S DAK	0	9	44	47	0
TEX	3	24	35	34	4
WASH	0	0	35	65	0

19 STATE 0 6 26 56 12

PREV YEAR 14 19 34 31 2

	SPRING WHEAT % PLANTED		
	1990	1989	AVG.
IDAHO	38	1	19
MINN	3	3	4
MONT	5	0	3
N DAK	2	0	1
S DAK	10	4	8

5 STATES 5 1 3

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

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

State Summaries of Weather and Agriculture

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

ALABAMA: Rainfall 0.50 in. or less; 1.50 to 2.00 in. isolated areas. Temperatures 7 to 10° below normal.

Days suitable for fieldwork 4.2. Soil moisture 56% adequate, 44% surplus. Acreage intended for spring planting 49% prepared, 46% 1989, 63% avg. Fieldwork progress 75% behind normal, 25% on schedule. Corn 59% planted, 50% 1989, 57% avg. Sorghum 7% planted, 4% 1989, 5% avg. Cotton 7% planted, 1% 1989, 6% avg. Peanuts 4% planted, 4% 1989, 2% avg. Winter wheat 40% headed, 38% 1989, 26% avg.; 4% turning color, 4% 1989, 2% avg.; 1% very poor, 1% poor, 37% fair, 59% good, 2% excellent; Hessian fly some fields south. Pastures 2% poor, 49% fair, 49% good. Feed supplies from pastures 13% short, 87% adequate. Livestock 27% fair, 73% good. Primary activities: Preparing land, repairing flood damaged fields; planting row crops, spring vegetable crops; applying fertilizer, lime, herbicides; spraying fruit, pecan trees; thinning peaches; general care of livestock, poultry, catfish.

ARIZONA: First, 2nd showers, thunderstorms north, east, central; drier, warmer, sunnier 3rd; showers most areas 4th, 5th, 6th. Thunderstorms north, central; rainfall for period 0.10 in. to 0.60 in. northern two thirds, little to none elsewhere. Temperatures north to 7° above normal. Extremes 23°; 80° high elevations; 45°; 88° desert.

Cotton planted 50%, 60% 1989, 49% avg.; began to emerge; activities planting, irrigating. Alfalfa 67% good, 33% excellent; harvest active; first cuttings completed west central; Egyptian alfalfa weevil, pea aphid controls applied. Wheat, barley 100% jointing, 100% 1989, 99% avg.; 75% heading, 72% 1989, 67% avg.; turning color 8%, 4% 1989; 1% avg.; 56% good, 44% excellent. Spring lettuce, mixed vegetables harvested central, west. Grapefruit, valencia orange harvest, shipping central, west.

ARKANSAS: Temperatures 3 to 8° below normal. Scattered thunderstorms latter part of week, heaviest activity south. Extremes 22°; 84°. Rainfall none to 3.35 in.

Days suitable for fieldwork 4.0. Soil moisture 31% adequate, 69% surplus. Main activities were: Limited land preparation; fertilizing wheat, pastures; applying fungicides to wheat; planting corn, setting tomato plants; sprigging Bermuda grass; performing livestock chores. Corn planting 7%, none 1989, 2% avg.; 4% poor, 38% fair, 58% good. Wet, soggy soils prevented land preparations. Excessive water damage spots in wheat, fungicides applied for septoria leaf blotch, rust, powdery mildew. Peach crop suffered severe damage northwest, minor damage other areas. Tomato crop 50% set, condition good. Alfalfa weevils. Pastures good. Livestock good.

CALIFORNIA: Rain received south coast mid week. General cooling of temperatures received.

Relative dry weather most agricultural areas permitted rapid progress field activities. Most small grain good condition. Moisture stress increased dryland. Russian wheat aphid forcing aphid control early. Green chopping grains increased. Burning rice stubble, preparing fields new crop. Cotton seeding rapid progress. Early fields emerging good stands. Overwintered

sugarbeet harvest active. Seeding safflower, field corn, Sudan grass. Alfalfa harvest increased. Cutting more general central valleys. Normal fruit cultural activities continued. Almond nuts sizing well, good condition. Avocado harvest progressed. Cherries in full bloom. Kiwifruit flower buds swelling. Nectarine, peach set good. Prune bloom nearly finished. Desert grapefruit picking near completion. Central Valley, southern area lemon, navel orange harvests active. Desert valencia orange harvest continued. Late variety walnuts blooming. Potato packing sheds ran nearly full time. Demand light, prices steady. Fifth last years crop remains. Fumigation, planting full swing fresh market tomatoes, beans, sweet peas, bell peppers, cantaloupe, sweet potatoes. Processing tomatoes, squash, carrots, peppers, garlic, processing onions irrigated, weeded. Iceberg lettuce harvest begun Huron district, excellent quality. Asparagus harvest very active central portions, nearly complete southern areas. Oriental vegetables growing very well, warm weather. Other summer vegetables exhibiting excellent growth. Harvested vegetables radishes, green onions, various leaf lettuces, lobok, turnips other greens. South area harvests carrots, squash ongoing, potato harvest should finish mid April, shortly before desert harvest begins. Livestock good condition, statewide. Range, pasture conditions worsened lack of rainfall. Pastures few Sacramento Valley areas good condition. Northern counties received good calf crop with limited problems despite unusual snow, rain at calving.

COLORADO: Cooler weather with isolated rain, snow showers across the State. Precipitation for the week was scattered amounts none to 0.58 in. Little moisture over the western Valleys. Temperatures within 1 to 2° of normal in south; 3 to 6° above normal in north.

Days suitable for fieldwork 3.9. Soil moisture 5% very short, 25% short, 61% adequate, 9% surplus. Spring barley 22% seeded, 9% emerged. Spring wheat 9% seeded, 2% emerged. Oats 17% seeded, 8% emerged. Sugarbeets 5% planted. Dry onions 30% planted. Range, pasture mostly fair to good. Cows, 68% calved, lambing is 81% complete.

FLORIDA: Temperatures 7 to 9° below normal across north, 2 to 5° below normal over Peninsula. Extremes low to mid 30s interior Panhandle, Big Bend, 50s along southeast coast, 40s elsewhere. Highs 80° north, low to mid 80s central, upper 80s south. Rain occurred across State, most totals under 0.50 in. with only isolated areas 1.00 to 2.00 in. One to 4.00 in. common along the southeast coast.

Soil moisture Panhandle adequate to surplus; northern Peninsula short to adequate; southern Peninsula mostly short. Tobacco transplanting complete. Corn planting active; peanut planting becoming more active. Land preparation other spring sown crops active. Winter wheat, sugarcane made good progress. Panhandle pastures fair. North Peninsula pastures good to excellent. South Peninsula pastures poor to good. Cattle, calves mainly good. Recent rain producing new foliage, freeze damaged groves progressing slowly. Young tree groves making good progress. New crop fruit doing well. Valencia harvest limited with some growers waiting for higher pounds solids.

Grapefruit movement limited as few supplies remain. Cool temperatures, much of week over major vegetable producing areas slowed growth, development most crops. Spring harvest continued increase. Volume leaders: Tomatoes, potatoes, sweet corn, peppers, cukes, cabbage, squash, celery, snap beans. Also good volume lettuce, radishes, carrots, eggplant, strawberries, escarole. First Immokalee watermelons harvested.

GEORGIA: Late season cold snap. Freezing temperatures north, central, southern areas 7th, 8th. Scattered frost 8th except southeast minimum temperatures near 40°. Temperatures 5 to 10° below normal. Warmest temperatures low 70s mountains, low 80s central, south. Rain 0.50 in. or less. Locally 0.50 to 1.00 in. Albany to Macon areas.

Days suitable for fieldwork 5.1. Soil moisture 5% very short, 88% short, 7% surplus. Corn 11% fair, 76% good, 13% excellent; planting active, stands good. Cotton planting began, less than 1%, 3% avg. Sorghum 4% planted, 1% 1989, 4% avg. Some peanuts planted, 2% avg. Tobacco 22% fair, 77% good, 1% excellent; 81% transplanted, 75% 1989, 66% avg. Watermelons 5% poor, 25% fair, 69% good, 1% excellent; 76% planted, 72% 1989, 80% avg.; replanting because of cold damage. Wheat 97% jointing, 100% 1989, 95% avg.; 74% boot, 89% 1989, 72% avg.; powdery mildew, rust becoming more prevalent. Rye 3% poor, 17% fair, 72% good, 8% excellent. Other small grains 1% poor, 11% fair, 77% good, 11% excellent; silage harvest. Apples 18% fair, 82% good; 80% blooming, 65% 1989, 46% avg. Peaches 1% very poor, 4% poor, 10% fair, 72% good, 13% excellent; 100% blooming, 99% 1989, 100% avg.; frost damage to early varieties, northern third. Onions 71% good, 29% excellent; harvest underway, 1% complete. Pasture 11% fair, 82% good, 7% excellent. Cattle, hogs mostly good.

HAWAII: Weather mostly sunny, some passing showers. Trade winds 10 to 20 mph early part of week becoming light, variable weekend. Temperatures low 60s to low 80s. Rainfall none to 2.50 in.

Days suitable for fieldwork 7.0. Weather was beneficial for crop development. Papaya production increasing. Sugarcane harvesting active all islands.

IDAHO: Temperatures quite warm up to 15° above normal. Only very spotty precipitation occurred with most of the State remaining dry.

Days suitable for fieldwork 7.0. Soil moisture 8% very short, 22% short, 69% adequate, 1% surplus. Winter wheat mostly good; headed 0%, 0% 1989, 0% avg. Spring wheat planted 38%, 1% 1989, 19% avg.; emerged 10%, 0% 1989, 4% avg. Potatoes planted 5%, 0% 1989, 0% avg. Sugarbeets planted 55%, 4% 1989, 28% avg. Onions planted 98%, 4% 1989, 51% avg. Barley planted 38%, 1% 1989, 14% avg.; emerged 8%, 0% 1989, 3% avg. Calving complete 83%. Lambing complete 87%. Seed bed preparation, planting main activities. Some well irrigation southern half of State. Irrigation water supplies good to fair. Some concerns for lack of irrigation water noted southwest, south central. Some damage to winter wheat from wind, lack of moisture, fungus. Russian wheat aphids several areas, infestations very light. Planting of spring crops approximately two weeks ahead of average. Apples starting to bloom warmer areas. Cherries, plums, pears, peaches, apricots were starting or were blooming. Fruit trees mostly good. Hay, roughage supplies short to adequate south central, mostly adequate elsewhere.

ILLINOIS: Temperatures 6 to 9° below normal across State. Precipitation 0.10 or less northeast, generally none elsewhere.

Days suitable for fieldwork 2.25. Soil moisture 17% short, 69% adequate, 14% surplus. Oats seeded 30%, 28% 1989, 44% avg. Livestock roughage requirements from pasture 25%, 19% 1989, 23% avg. Alfalfa 28% fair, 69% good, 3% excellent. Pasture 2% poor, 28% fair, 66% good, 4% excellent.

INDIANA: Temperatures 6 to 11° below normal. Lows mid 20s to around 30°, highs mid 40s to mid 50s. Precipitation up to 0.25 in.

Days suitable for fieldwork 0.8. Topsoil 48% adequate, 52% surplus. Subsoil 77% adequate, 23% surplus. Spring cropland 66% tilled, 62% 1989, 65% avg. Wheat 1% very poor, 2% poor, 30% fair, 61% good, 6% excellent. Wheat 6 in. high, 5 in. 1989, 5 in. avg. Wheat 16% jointed, 7% 1989, 5% avg. Oats 38% seeded, 21% 1989, 38% avg. Clover 60% seeded, 51% 1989, 62% avg. Pasture 3% very poor, 2% poor, 35% fair, 54% good, 6% excellent. Wet soils limited fieldwork most areas.

IOWA: Temperatures 0 to 5° below normal. Extremes 10°; 73°. Precipitation none to 0.27 in.; 0.03 in.

Days suitable for fieldwork 5.5. Topsoil 31% short, 69% adequate. Subsoil 77% short, 23% adequate. Winter wheat 5% very poor, 19% poor, 43% fair, 31% good, 2% excellent. Pasture 1% poor, 31% fair, 64% good, 4% excellent. Oats 42% sown, 35% 1989, 38% avg. Seedbed preparation 56% completed. Fertilizer application 48% completed, 48% 1989, 41% avg. Livestock mostly good to excellent condition. Calving, lambing still running good. Fluctuating temperatures causing some stress in cattle. Several reports about pseudorabies in hogs.

KANSAS: Temperatures 3 to 5° below normal all areas except northwest, west central near normal. Precipitation most areas; lowest average southwest 0.12 in.; highest northwest 0.71 in.

Days suitable for fieldwork 2.5. Topsoil 6% short, 71% adequate, 23% surplus. Subsoil 28% short, 68% adequate, 4% surplus. Cool wet weather slowed wheat; jointing still ahead schedule. Freeze damage more evident from low temperatures late March. Foliar diseases central, east; damage light. Corn planting started most areas; progress slow; pace should quicken as fields dry. Oat, barley seeding essentially complete. Range, pastures good growth. Ranchers still burning old growth. Army cutworm noted many alfalfa fields.

KENTUCKY: Cool, dry weather. Temperatures 7 to 10° below normals. Morning lows 20s over weekend. Highs only in 40s, lower 50s. Precipitation below normal with less than 0.10 in. in some areas. Greatest rainfall over south central, southeast 0.50 to 1.00 in.

Days suitable for fieldwork 3.2. Soil moisture 6% short, 77% adequate, 17% surplus. Fieldwork more than 1 day behind normal. Tobacco beds 90% seeded, 87% 1989, 88% avg. Plants up 38% seeded beds, 37% 1989, 30% avg. Condition beds 2% poor, 30% fair, 66% good, 2% excellent. Very little corn planted. Wheat 7% poor, 35% fair, 54% good, 4% excellent. Average height 9 in. Concern over frost damage. Amount unknown this time. Barley fair to good condition. Fruit trees blooming, damaged by warming then freezing temperatures. Pastures 1% poor, 26% fair, 53% good, 20% excellent. Farmers checking for alfalfa weevil with some spraying.

LOUISIANA: Temperatures 2 to 3° below normal. Extremes 31°; 84°. Rainfall 0.25 to 1.12 in.

Days suitable for fieldwork 3.7. Soil moisture 51% adequate, 49% surplus. Spring plowing 47%, 56% 1989, 54% avg. Corn planted 78%, 53% 1989, 53% avg., emerged 56%, 38% 1989, 39% avg. Rice planted 32%, 32% 1989, 28% avg., emerged 17%, 23% 1989,

17% avg. Cool nights were slowing growth of emerged fields. Sorghum planted 12%, 7% 1989, 9% avg., emerged 3%, 1% 1989, 2% avg. Sugarcane 23% very poor, 31% poor, 46% fair. Wheat headed 78%, 54% 1989, 46% avg., 50% fair, 46% good, 4% excellent. Fungicide applications active in effort to control rust diseases, septoria blight, bacterial streak. Livestock 51% fair, 47% good, 2% excellent. Pasture 4% poor, 56% fair, 38% good, 2% excellent. Vegetables 6% poor, 77% fair, 17% good.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 1.52 in. Temperature 47^o, normal 50^o. Extremes 26^o; 70^o.

Days suitable for fieldwork 0.9. Topsoil 25% adequate, 75% surplus. Subsoil 56% adequate, 44% surplus. Wheat, barley, rye good. Oats fair condition.

DELAWARE: Precipitation 1.96 in. Temperature 46^o, normal 50^o. Extremes 33^o; 62^o.

Days suitable for fieldwork 0.7. Topsoil 33% adequate, 67% surplus. Subsoil 67% adequate, 33% surplus. Potatoes planted 50%, 30% 1989. Wheat, barley, rye good.

MICHIGAN: Temperatures 3 to 11^o below normal. Extremes 18^o; 44^o. Precipitation none to 0.89 in. across State.

Major activities: Pruning orchards, applying lime, fertilizer, marketing hay, grain, preparing machinery for spring fieldwork. Spring tillage delayed by wet fields. Spring lambs, calves good condition. Calving still active. Livestock moving to pastures. Feed supplies good. Warmer weather needed for pastures, winter wheat.

MINNESOTA: Temperatures 3 to 6^o below normal for State. Extremes 5^o; 70^o. Precipitation 0.01 to 0.18 in. for State. Greatest weekly total 0.42 in.

Expected full fieldwork to begin April 16th. Spring Wheat 3% planted, 3% 1989, 4% avg. Oats 5% planted, 10% 1989, 10% avg. Corn 1% land prepared, 0% 1989, 1% avg. Soybean 1% land prepared, 0% 1989, 1% avg. Green peas 1% planted, 0% 1989, 1% avg. Fall seeded small grain 68% dormant, 12% poor 19% good, 1% excellent. Topsoil 6% very short, 43% short, 47% adequate, 4% surplus.

MISSISSIPPI: Temperatures 4^o below normal. Extremes 25^o; 84^o. Wet north, dry central, south. Rainfall 0.61 in., 0.76 below normal. Soil temperatures 61^o.

Days suitable for fieldwork 3.1, 1.8 1989, 3.8 avg. Soil moisture 55% adequate, 34% surplus, 11% excessive. Wheat 89% jointing, 86% 1989, 85% avg.; 7% poor, 57% fair, 31% good, 5% excellent, 29% heading. Corn 29% planted, 25% 1989, 38% avg.; 19% emerged. Watermelons 41% planted, 23% 1989, 28% avg. Livestock 36% fair, 61% good, 3% excellent. Rice 5% planted. Sorghum 7% planted, 2% emerged. Pasture 3% poor, 51% fair, 46% good. Peaches 28% very poor, 19% poor, 50% fair, 3% good. Activities: Land preparation for cotton, corn planting continued, some equipment repair.

MISSOURI: Temperatures 5 to 8^o below normal, hard freeze April 6th, 7th. Rainfall less than 0.25 in. west central, central, virtually none elsewhere.

Days suitable for fieldwork 2.2. Topsoil 2% short, 66% adequate, 32% surplus. Subsoil 32% short, 54% adequate, 14% surplus. West central, central, southeast main surplus moisture areas. Many fields still too muddy for fieldwork. Oats sown 44%, 65% 1989, 65% avg. Ground worked at least once for spring crops 50%, 53% 1989, 47% avg. Some wheat showing frost damage. Wheat,

pasture growth slowed by cool weather. Alfalfa hurt by freeze. Pastures 9% poor, 43% fair, 44% good, 4% excellent.

MONTANA: Warm, dry. Temperatures 4 to 11^o above normal. Entire State had below normal precipitation.

Topsoil 28% short, 66% adequate, 6% surplus. Subsoil 34% short, 62% adequate, 4% surplus. Soil moisture in eastern third of State about 75% short. Winter wheat 16% still dormant, 60% greening, 24% green, growing. Field tillage work progress 68% none, 26% just started, 6% well underway. Barley 3% planted, 0% 1989, 4% avg. Oats 2% planted, 0% 1989, 3% avg. Sugarbeets 2% planted, 0% 1989, 2% avg. Calving 69% done, lambing 59% complete. Range grass growth compared with normal: 28% slow, 63% avg., 9% above avg.

NEBRASKA: Temperatures near normal. Extremes 14^o; 78^o. Western half of State 0.30 in. of precipitation, remainder of State dry.

Days suitable for fieldwork 5.7. Topsoil 19% short, 79% adequate, 2% surplus. Subsoil 94% short, 6% adequate. Oats 60% seeded, 47% 1989, 46% avg. Sugarbeet, barley seeding also underway. Significant numbers of army cutworm in wheat, alfalfa west, southwest. Russian wheat aphid far west. Pasture, range feed supplies 66% short, 34% adequate. Pastures greening up, short. Some northern cattle already moved to pasture, as hay supplies have been very short. Cattle central, southwestern districts still grazing crop residues, while some cattle in southwest grazing wheat. Calving continued with good conditions over most of State. Wet conditions caused some stress to newborn calves, lambs in Panhandle, few reports of scour problems. Feedlots muddy in most eastern, central counties. Main activities: Cutting, shredding stalks; disking; applying fertilizer; preparing seed beds; seeding small grains. Some operators in southwest irrigating alfalfa.

NEVADA: High pressure system dominated most of period. However, low pressure system sneaked in mid week produced afternoon, evening thunderstorms. Precipitation amounts generally light. Only trace amount rain reported extreme south. Temperatures for period well above normal all areas. Extremes 16^o; 88^o.

Good progress fieldwork all areas. Alfalfa forage harvesting started extreme south. Cattle, sheep starting to move summer ranges. Ranges mostly fair.

NEW ENGLAND: Precipitation (rainfall and water equivalent of snow) 0.50 to 1.50 in. north, 1.50 to over 3.00 in. south. Temperatures mid 30s over northern Maine to low 40s south coast. Temperatures few degrees warmer than normal north, few degrees cooler than normal south.

Major farm activities: Spreading manure, mending fences, maple sugaring.

NEW JERSEY: Temperatures much below normal. Extremes 21^o; 62^o. Rainfall 1.14 in. north, 1.76 in. central, 1.48 in. south. Heaviest 24 hour total 1.48 in. 2nd, 3rd. Estimated soil moisture percent field capacity 100% north, central, south. Four inch soil temperatures 42^o north, 43^o central, 45^o south.

Frost occurred several mornings. Cool, wet weather continued to hamper fieldwork, slowed crop growth. Very limited amounts of wintered cover spinach, early greens moved to market. Progress about on schedule to slightly behind.

NEW MEXICO: Temperatures slightly above normal; precipitation recorded most areas.

Days suitable for fieldwork 6.6. Soil moisture 87% short, 13% adequate. Wheat 5% very poor, 20% poor, 45% fair, 30% good. Cattle poor to good; sheep poor to good; range poor to good.

NEW YORK: Very cold, damp. Rain began on 3rd, turned to snow on 4th in western areas. Several inches accumulated, especially in the hills. High temperatures in 40s, lows in the 40s early week, 20s late week. Extremes 18° at Ellenburg Depot, Messena; 58° at Binghamton.

Outside activities made difficult by wet conditions. Maple sugaring season continued active. Farmers making plans for spring fieldwork. Crops being moved from storage.

NORTH CAROLINA: Temperatures 2 to 4° below normal in the Mountains. Elsewhere 1 to 4° above normal. Extremes 20°; 82°. Precipitation 0.02 to 2.50 in.

Days suitable for fieldwork 3.1. Soil moisture 1% short, 63% adequate, 36% surplus. Pasture 10% fair, 79% good, 11% excellent. Livestock feed from pasture 57%. Corn planted 12%. Crop condition: Wheat, 16% fair, 83% good, 1% excellent; oats 15% fair, 85% good; barley 13% fair, 87% good; rye 11% fair, 89% good; tobacco plant beds 23% fair, 70% good, 7% excellent; Irish potatoes 32% fair, 68% good; peaches 10% very poor, 20% poor, 43% fair, 27% good; truck crops 33% fair, 67% good. Irish potatoes planted 93%; cabbage transplanted 87%; flue cured tobacco transplanted 5%. Tobacco plant supplies 2% short, 88% adequate, 10% surplus. Hay, roughage supplies 4% short, 90% adequate, 6% surplus. Feed grain supplies 6% short, 94% adequate. Major activities: Land preparation, tending tobacco beds, topdressing small grains, planting corn, transplanting tobacco. Other activities included: Fertilizing pastures, tending livestock, equipment repair, general farm maintenance.

NORTH DAKOTA: Temperatures 4° below normal northeast to 2° above normal northwest, southwest. Extremes 4° southwest; 70° northwest. Precipitation below normal, none southwest to 0.33 in. north central.

Soil moisture remained well below average. Topsoil 43% very short, 41% short, 16% adequate. Subsoil 69% very short, 28% short, 3% adequate. Small grain seeding isolated areas. Average expected starting date for spring fieldwork is April 15th. Winter wheat 3% very poor, 36% poor, 55% fair, 6% good; 24% green, 76% dormant. Winter kill 2% less than normal, 37% normal, 61% more than normal. Livestock mostly good, calving 67% completed, lambing 80%, shearing 78%. Hay, roughage supplies mostly adequate. Pastures 89% poor; 75% still dormant, 25% open for grazing.

OHIO: Temperatures mid 40s to low 50s. Low temperatures upper 20s. Readings ran 3 to 11° subnormal. Precipitation (water equivalent) 0.25 to 0.50 in. east, less west; mostly 0.40 to 0.80 in., subnormal.

Days suitable for fieldwork 1.3. Soil moisture 2% short, 59% adequate, 39% surplus. Winter wheat fair to good; some yellowing in cold, wet soils. Few acres of corn planted. Oats 32% planted. Few potatoes, sugarbeets, carrots, red beets, sweet corn planted. Apples, peaches fair to good; some concern cold weather could cause additional damage to crops.

OKLAHOMA: Temperatures 5° below normal north central to 1° below normal Panhandle. Precipitation none Panhandle to 0.79 in. south central.

Days suitable for fieldwork 3.3. Topsoil 45% adequate, 55% surplus. Subsoil 100% adequate. Wheat 12% fair, 83% good, 5% excellent; 65%

jointing, 55% 1989, 55% avg.; 3% heading, 1% 1989, 5% avg. Growth aided by recent wet weather. Insect activity increasing south. Cotton 0% planted, 0% 1989, 0% avg. Sorghum 0% planted, 0% 1989, 0% avg. Pastures good, forage supplies adequate. Cattle good; marketings stable, prices mixed from preceding week.

OREGON: Above normal temperatures entire State; 10° above normal southwest, south central; 8° above normal north central; 2 to 5° above normal coast range, Willamette Valley. Slight rainfall: 0.20 in. high plateau; less than 0.10 in. south central; no precipitation north Cascades, north central, southeast; remaining areas recorded traces.

Soil moisture 68% short, 32% adequate. Barley 69% seeded, 65% 1989, 78% avg. Fieldwork in full swing: Plowing, tilling, fertilizing, spraying, planting spring grains. Some reports of reseeding poorly emerged winter wheat to spring grains in Malheur County. Began stringing hop yards. Early tree fruit bloom, excellent pollination. Most pear varieties in full bloom Medford, good bloom except Bosc, Bartlett. Apple, pear bloom up to 10 days early Hood River. Cherries, prunes, peaches bloomed Willamette Valley. Strawberry development good; ground preparation for new strawberry, caneberry plantings continued. Green peas, onions, early potatoes planted Willamette Valley. Potato planting nearly completed Hermiston Boardman. Dry conditions beginning to show Pendleton. Livestock good to excellent. Above normal calf, lamb crops Wallowa mountains, most sheep sheared. Driest areas east of Cascades continue short of stockwater. Ranges, pastures drier than normal nearly all of State; mostly good west, need rain to improve growth; poor to good east. Many eastern ranges greened up early, grass season likely will be short.

PENNSYLVANIA: Wet, mild at beginning of week; wet, freezing weekend. Temperature 41°, 2° below normal. Extremes 21°; 64°. Precipitation 1.15 in., 0.34 in. above normal.

Days suitable for fieldwork 1.0. Soil moisture 2% short, 72% adequate, 26% surplus. Plowing 31% complete, 8% 1989, 21% avg. Corn 0% planted, 0% 1989, 0% avg. Soybeans 0% planted, 0% 1989, 0% avg. Oats 26% planted, 8% 1989, 19% avg. Potatoes 12% planted, 0% 1989, 0% avg. Tobacco Beds 65% planted, 0% 1989, 33% avg. Barley 100% pre boot, 100% 1989, 100% avg.; 0% boot, 0% 1989, 0% avg.; 0% heading or headed, 0% 1989, 0% avg. Wheat 100% pre boot, 100% 1989, 100% avg.; 0% boot, 0% 1989, 0% avg.; 0% heading or headed, 0% 1989, 0% avg. Wheat 0% very poor, 4% poor, 20% fair, 57% good, 19% excellent. Oats 0% very poor, 1% poor, 3% fair, 65% good, 31% excellent. Hay stands mostly fair. Feed from pastures mostly average to below average. Peaches 63% pre pink, 100% 1989, 100% avg.; 25% pink, 0% 1989, 0% avg.; 12% full bloom or past, 0% 1989, 0% avg. Cherries 88% pre pink, 100% 1989, 100% avg.; 10% pink, 0% 1989, 0% avg.; 2% full bloom or past, 0% 1989, 0% avg. Apples 93% pre pink, 100% 1989, 100% avg.; 7% pink, 0% 1989, 0% avg.; 0% full bloom or past, 0% 1989, 0% avg. Activities: Spring plowing; planting crops, repairing fence; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

PUERTO RICO: Rainfall 0.28 in. was 0.47 in. below normal. Highest rainfall 1.42 in. Pico Del Este Luquillo 1.21 in. at Lares, 1.18 in. at San Sebastian. Highest 24 hour 0.87 in. at Fajardo. Divisional temperatures 77 to 79° on the coasts, 69 to 73° in the Interior with mean station temperatures 62° at Pico Del Este Luquillo to 79° at Roosevelt Roads N.S. Extremes 58°; 93°.

SOUTH CAROLINA: Temperatures 1° below normal in northwest to 1° above normal in southern portion of the State. Precipitation, light.

Days suitable for fieldwork 5.3. Soil moisture 9% short, 84% adequate, 7% surplus. Tobacco fair to good; 34% planted, 10% 1989, 11% avg. Corn fair to good; 71% planted, 40% 1989, 53% avg. Watermelons fair to good; 51% planted, 60% 1989, 58% avg. Cantaloupes fair to good; 29% planted, 48% 1989, 40% avg. Tomatoes good; 90% planted, 56% 1989, 80% avg. Oats good; 22% headed, 14% 1989, 8% avg. Wheat good; 28% headed, 17% 1989, 8% avg.

SOUTH DAKOTA: Temperatures 3° below to 8° above normal. Extremes 6°; 81°. Precipitation below normal, confined to northeast, Black Hills. No precipitation or trace amounts elsewhere. Maximum melted precipitation 0.15 in. Yearly precipitation above normal Black Hills, below normal elsewhere 1.23 in. above to 2.05 in. below normal.

Winter wheat good to fair.

TENNESSEE: High pressure brought cool, dry weather early in week followed by warmer weather mid week. Cold front brought rain 5th, 6th followed by much colder temperatures. Record lows occurred statewide 7th, 8th. Temperatures below normal statewide. Departures west 3 to 7°, middle 10°, east 5 to 15°. Precipitation below normal statewide 0.50 to 1.00 in.

Days suitable for fieldwork 3.7. Soil moisture 2% short, 73% adequate, 25% surplus. Little or no corn, cotton planting underway. Wheat mostly fair to good. Fruit severely damaged by freezes. Pastures growing well. Livestock good.

TEXAS: Early week cold front brought cooler temperatures to State along with light to moderate showers. Temperatures warmed above normal mid week before next cold front arrived triggering showers. Freezing temperatures Panhandle, northern south Plains following second front. Return of Gulf moisture resulted some showers south late weekend. Temperatures, rainfall below normal across State.

Crops: Rains promoted good progress most small grain fields across State. Cooler weather weekend slowed progress some. Below freezing temperatures High Plains may have damaged some fields. Aphids, some streak mosaic plaguing some fields. Cold weather may slow problems. Most fields Blacklands, central, south heading. Warmer weather needed. Showers once again delayed corn planting Blacklands after mid week. Producers completed most planting central, many fields emerging. Emergence rapid Coastal Bend, Valley under good conditions. Some cultivating occurring. Isolated hail damaged some fields Coastal Bend. Soil temperatures need to warm up Plains for planting to begin. Grain sorghum producers trying to catch up planting Blacklands. Wet conditions stalled progress again mid week. Fields good progress throughout central, south, along Upper Coast, down to Valley. Some cultivating occurred early week. Producers Cross Timbers trying to start planting. Cotton planting some progress early week central, Blacklands. Progress southern, coastal areas good. Land preparations virtually complete Trans-Pecos, Plains. Planting begin as soon as weather permits. Soil temperatures need to warm up. Rice planting slowed late week. Early planted fields good emergence. Rice 9% emerged; 17% 1989; 9% avg. Sugarbeet planting underway High Plains.

Commercial Vegetables: Rio Grande Valley, onion, cabbage harvest continued without much delay. Melons made good progress. More citrus groves look like they will not come back from freeze. San Antonio-Winter Garden, cooler

temperatures slowed watermelon growth. Onions look good. Most spinach harvest over. Some cabbage harvested. Eastern area, planting progress remained slow because wet conditions. Warmer, open weather needed. High Plains, some onions, carrots planted. Trans-Pecos, producers irrigating onions, melons. Pepper, cabbage planting continued. Onions making good progress. Peach crop continued good major areas. Cooler weather Hill Country did not cause serious damage. Thinning, spraying continued east. Producers Plains, Cross Timbers expected losses.

Range and Livestock: Colder weather slowed growth ranges, pastures midweek; many areas continued green. Some fertilization, weed spraying early week east. Livestock conditions remained good. Lambing, calving parts of State.

UTAH: Temperatures 7° above normal. Light precipitation 1/3 stations.

Days suitable for fieldwork 6.5. Soil moisture 77% short, 23% adequate. Spring land preparations 54% completed. Winter wheat 59% good, 24% fair, 17% poor. Spring plantings progressing ahead of average. Spring wheat planted 64% Barley planted 62%. Oats planted 38%. Army worms, Russian wheat aphids problem some areas. Early fruit blossom underway. Spring calving 64% completed. Lambing 56% completed. Shearing 54% completed. Pasture, range 84% growing, 16% dormant.

VIRGINIA: Temperatures near normal. Extremes 24°; 78°. Precipitation 2.46 in. at Dulles to 0.12 in. at Gathright Dam. Cold front moved through the State triggering severe thunderstorms which produced large hail.

Days suitable for fieldwork 2.0. Topsoil 56% surplus, 44% adequate. Pasture 23% excellent, 64% good, 13% fair. Alfalfa 12% excellent, 74% good, 8% fair, 5% poor, 1% very poor. Barley 5% excellent, 81% good, 14% fair. Wheat 12% excellent, 74% good, 14% fair. Apples 35% good, 42% fair, 23% poor. Recent cold temperature does not seem to have damaged the apple crop significantly. Peaches 18% good, 14% fair, 41% poor, 27% very poor. Tobacco planted 2% excellent, 55% good, 30% fair, 13% poor. Corn planting is still just getting started. Activities included: Fertilizing, liming, spraying alfalfa for weevils, fence building, equipment repairs. Powdery mildew appearing in wheat, apples coming into full bloom. Some tobacco plantbeds being clipped.

WASHINGTON: Temperatures 5 to 11° above normal, east; 1° below normal to 6° above normal, west. Precipitation none, east; none, west.

Days suitable for fieldwork 7. Soil moisture 54% short, 45% adequate, 1% surplus. Range, pasture 50% short, 50% adequate. Hay, other roughage 30% very short, 25% short, 40% adequate, 5% surplus. Fieldwork continued with good weather. Plowing, planting, fertilizing, weeding continued. Plantings included wheat, barley, onions, green peas, potatoes, dry peas. Winter wheat growth was good with some moisture shortages in the central part of the State. Spring wheat 60% planted, 37% 1989, 45% avg. Fruit trees, caneberrys continued bloom. Pastures, ranges greening up, cattle were turned out.

WEST VIRGINIA: Temperature 41°, 4 to 10° below normal. Extremes 14°; 75°. Precipitation 0.89 in., 0.42 in. below to 0.45 in. above normal.

Days suitable for fieldwork 2.3. Soil moisture 74% adequate, 26% surplus. Livestock good. Calving 80% complete; lambing 77% complete. Feed supplies adequate to surplus. Wheat, barley good. Oat planting 22% complete. Tobacco beds fair to good; 80% planted, 18% emerged. Hay good to fair.

Farm activities: Plowing, fertilizing, fencing, calving, lambing.

WISCONSIN: Temperatures 35°, 6° below normal. Extremes 8°; 70°. Precipitation trace to 0.20 in. Days suitable for fieldwork 4.0. Soil moisture 58% short, 42% adequate. Spring plowing 6% complete, 0% 1989, 4% avg. Oats planted 2%, 0% 1989, 2% avg. Cold weather delaying fieldwork.

WYOMING: Temperatures 2 to 10° above normal. Precipitation below normal. Days suitable for fieldwork 5.0. Topsoil 28%

short, 64% adequate, 8% surplus. Subsoil 53% short, 42% adequate, 5% surplus. Spring wheat 10% planted, 10% 1989, 5% avg. Oats 5% planted, 10% 1989, 5% avg. Barley 35% planted, 35% 1989, 25% avg. Sugarbeets 5% planted, 10% 1989, 5% avg. Winter wheat 10% fair, 90% good. Wind, freeze damage light to moderate. Livestock mostly good. Spring calves born 65%, 70% 1989, 55% avg. Farm flock: Ewes lambed 65%, 65% 1989, 60% avg.; shorn 60%, 60% 1989, 50% avg. Range flock: Ewes lambed 25%, 30% 1989, 20% avg.; shorn 40%, 35% 1989, 25% avg. Calf, lamb losses light to normal. Ranges, pastures mostly fair to good.

International Weather and Crop Summary

April 1-7, 1990

HIGHLIGHTS

WESTERN USSR ... The 13th consecutive week of unseasonably warm weather causes winter grains to break dormancy as far north as the southern portion of the Central Region.

EUROPE ... Rain brings relief to winter grains in the southwest. Unfavorable dryness continues in sections of the Balkans.

SOUTH ASIA ... Showers in the far north improve irrigation but soak maturing winter wheat.

EASTERN ASIA ... Widespread rain continues in southern China. Beneficial pre-season rain reduces dryness in southern Manchuria.

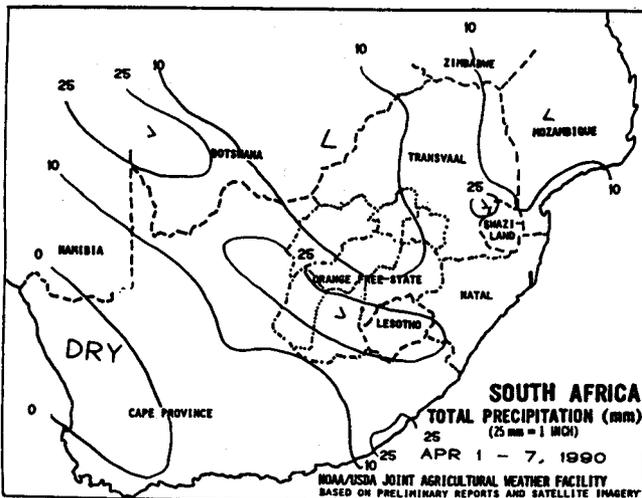
SOUTHEAST ASIA ... Showers return to northern Thailand but dry, warm weather dominates most eastern and southern rice areas.

SOUTH AMERICA ... Widespread rain slows corn and cotton harvesting in Argentina, and early soybean harvesting in southern Brazil.

SOUTH AFRICA ... Periodic drier weather benefits late-filling to maturing corn.

AUSTRALIA ... Heavy rain, flooding, and harvest delays continue in the east.

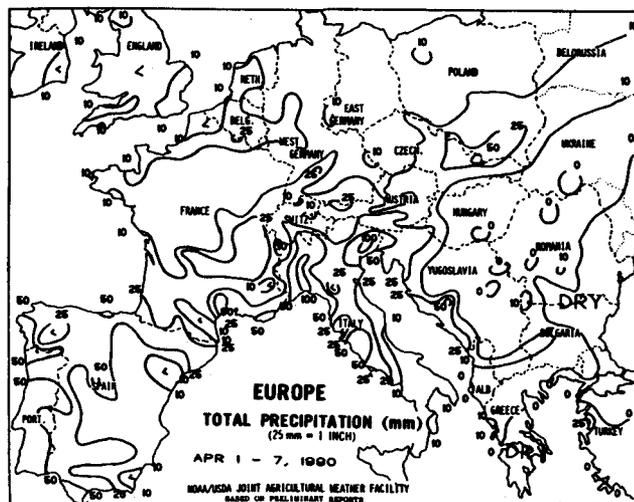
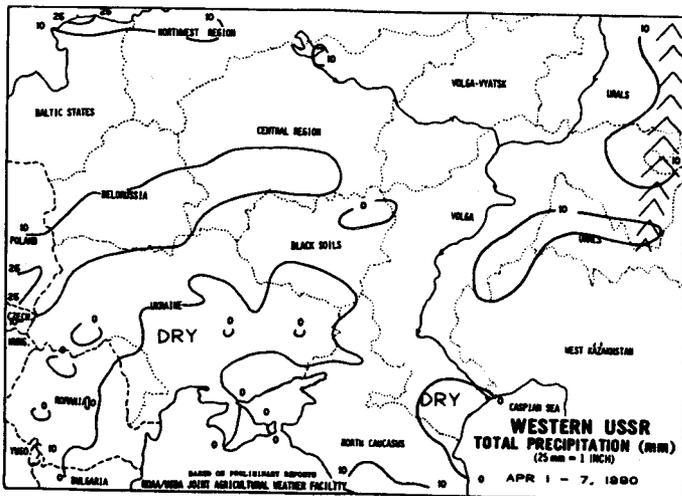
NORTHWESTERN AFRICA ... Showers in northern Morocco and western Algeria benefit winter grains in the filling stage. Dry weather in southern Morocco and eastern Algeria limit moisture for grain filling.



SOUTH AFRICA ... Showers (10-33mm) covered portions of the western and southern Maize Triangle, but periods of drier weather brought some relief to maturing corn. Rainfall totaled less than 10mm over most areas in the eastern two-thirds of the Triangle, although moderate rain (17-39mm) continued near the eastern tip, northwest of Swaziland. Temperatures averaged near normal across the primary corn areas, favoring crops in or nearing maturity. In contrast to last week's excessive rainfall, only light to moderate rain (7-28mm) covered coastal areas of the eastern Cape Province and Natal, bringing some relief to flooded areas.

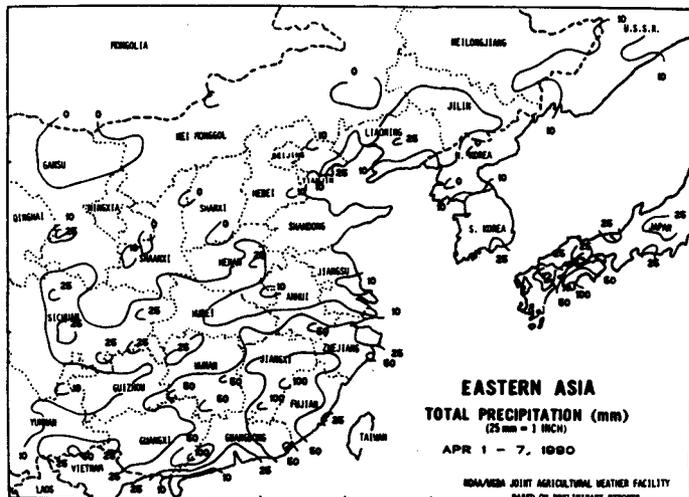


SOUTH AMERICA ... In Argentina, widespread showers produced substantial rainfall amounts (15-67mm) over the primary corn and soybean areas of southern Cordoba, southern Santa Fe, and northern Buenos Aires. The wetness continued to slow harvest progress. Light showers (less than 10mm) over central and southern Buenos Aires and western Cordoba favored sunseed and sorghum harvesting. Locally heavy rain (50-100mm or more) delayed cotton harvesting in Chaco. In south-central Brazil, persistent soaking rain (65-199mm) delayed early soybean harvesting in Rio Grande do Sul. Showers diminished further north, with 20-47mm of rain in most of Parana, and generally less than 100mm of weekly rainfall throughout far northern soybean areas. Early soybean harvesting advanced in the north.

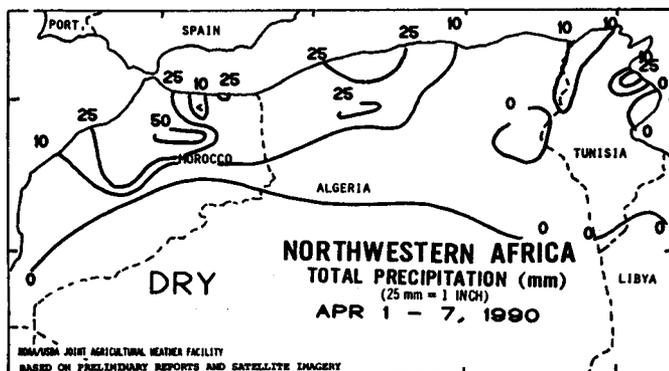


WESTERN USSR ... The 13th consecutive week of unseasonably warm weather continued over the region. Weekly average temperatures ranged from 3 to 5 degrees Celsius (C) above normal in the Volga Vyatsk, the upper Volga, and the North Caucasus, and 5 to 10 degrees C above normal over the remainder of the region. Winter grains have likely broken dormancy as far north as the southern portion of the Central Region. Generally dry weather continued over the Ukraine, the southern Black Soils Region, and the North Caucasus. Although the continued warm, dry weather in these areas has created favorable conditions for planting early spring crops, rain is needed, especially in the southwestern Ukraine where topsoils are becoming unfavorably dry.

EUROPE ... A weak area of low pressure moved slowly through southwestern Europe, bringing widespread moderate to heavy rain (15-40mm, with scattered amounts in excess of 40mm) to much of the region. Very heavy rain (100-158mm) in sections of northern Italy may have caused localized flooding. The precipitation greatly relieved moisture stress for winter grains in Spain, southern France, and northwestern Italy which were largely missed by last week's rainfall. However, scattered light rain (generally less than 10mm) provided only limited relief to moisture stressed winter crops in southern and eastern sections of the Balkans. In the north, widespread light rain (less than 10mm) fell in the northwest while scattered light to moderate rain (5-20mm, with isolated amounts greater than 20mm) covered crop areas in the northeast. Mean temperatures ranged from below normal in the west to above normal in the east.



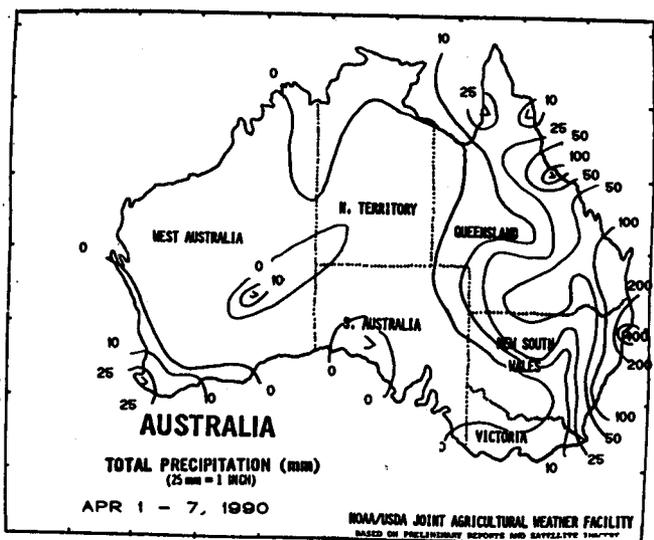
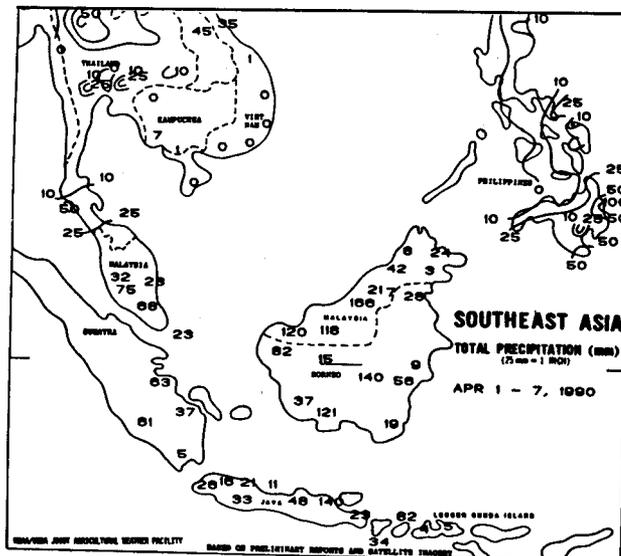
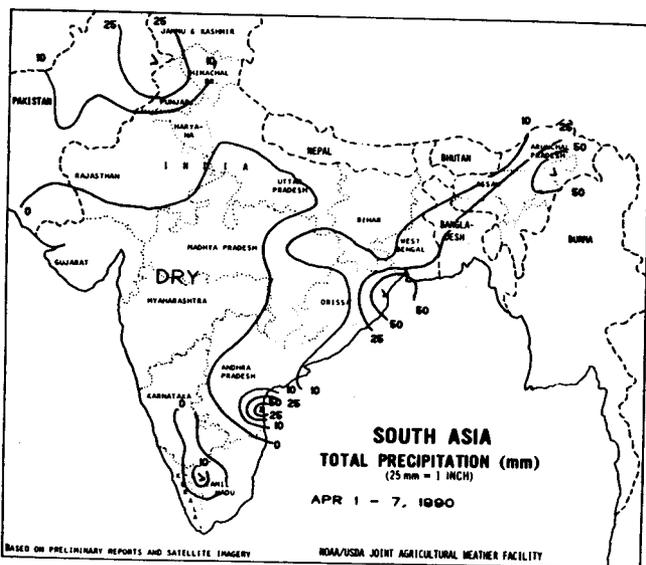
EASTERN ASIA ... Widespread rain (10-40mm, with scattered amounts greater than 40mm) persisted over much of southern China and the Yangtze Valley, favoring early crop rice but delaying spring planting of single season rice, corn, and cotton. Continuing very heavy rain (75-150mm, with isolated totals in excess of 150mm) likely caused localized flooding in sections of eastern Guangxi, southern Hunan, and southern Jiangxi. Light rain (less than 10mm) favored winter grains in the North China Plain while light to moderate rain (5-20mm, with scattered amounts greater than 20mm) continued to reduce the effects of last year's long-term dryness in southern Manchuria. Mean temperatures ranged from below normal in western crop areas to above normal in the east.



NORTHWESTERN AFRICA ... Winter grains were mostly in the early grain filling stage over the region. Although widespread, beneficial showers (25-30mm) soaked winter grain areas in northern Morocco, dry weather continued to stress crops in the south. In Algeria, variable showers (10-33mm) favored grain filling in the west, while mostly dry weather limited moisture for grain filling in the east. In Tunisia, drier weather (precipitation amounts ranging from 1-10mm) returned to winter grain areas following last week's beneficial precipitation.

SOUTH ASIA ... Moderate rain (10-37mm) returned to northernmost regions of Pakistan and India, improving irrigation reserves for upcoming plantings but soaking maturing winter wheat as far south as India's Punjab state. Dry weather favored harvesting over most other primary wheat areas. Temperatures averaged 2-4 degrees C below normal across the wheat belt, continuing the trend of mild, wet weather that has slowed crop maturation and threatened reductions in crop quality. In the east, variable rain (10-50mm or more) from northern Orissa to the eastern states continued to improve irrigation reserves over primary rice areas. Only scattered, infrequent showers (11-70mm) dotted India's southern tip.

SOUTHEAST ASIA. Variable showers (10-50mm or more) returned to Thailand's Northern Hills region and from northeastern Thailand to northern Vietnam, increasing pre-planting irrigation reserves. Temperatures averaged 1-2 degrees C below normal in northern Thailand but near to slightly above normal elsewhere in Thailand as only widely scattered showers (21-40mm) continued from the previous week. Moderate to heavy rain (25-50mm or more) continued for the second week over Malaysia with amounts exceeding 100mm over large areas of the east and local areas of the west. Mostly moderate showers (25-50mm or more) continued over southern Indonesia. In the Philippines, scattered showers (10-37mm) covered the east with local heavy amounts (59-102mm) in eastern Mindanao.



AUSTRALIA ... A near stationary area of high pressure in the Tasman Sea brought continued easterly onshore flow, torrential rain (75-200mm), with isolated amounts greater than 200mm, and flooding to much of eastern coastal Queensland and New South Wales. Further inland, scattered moderate to heavy rain (10-60mm), with isolated amounts in excess of 100mm increased soil moisture for rangeland and soon to be planted winter grains, but delayed harvest of cotton, sorghum, and corn crops. It was the third consecutive week of heavy rain in eastern Queensland. In the south, beneficial pre-season rain (5-25mm) continued across southern sections of Western Australia while crop areas in South Australia and Victoria were mostly dry.

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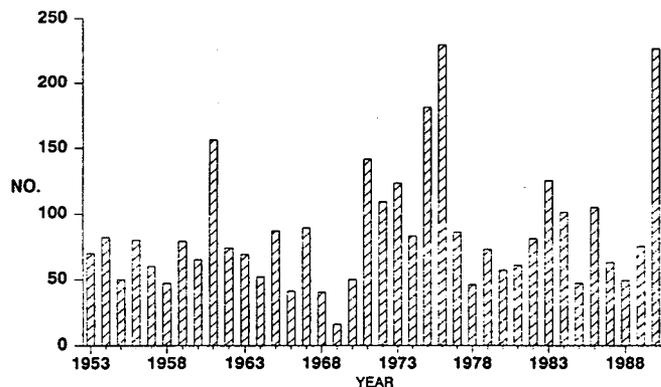
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March Weather in Historical Perspective--Continued from p. 9

Figure 7

TOTAL NUMBER OF TORNADES, U.S.

JANUARY-MARCH TOTAL, 1953-1990



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