

WEEKLY WEATHER AND CROP BULLETIN

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

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

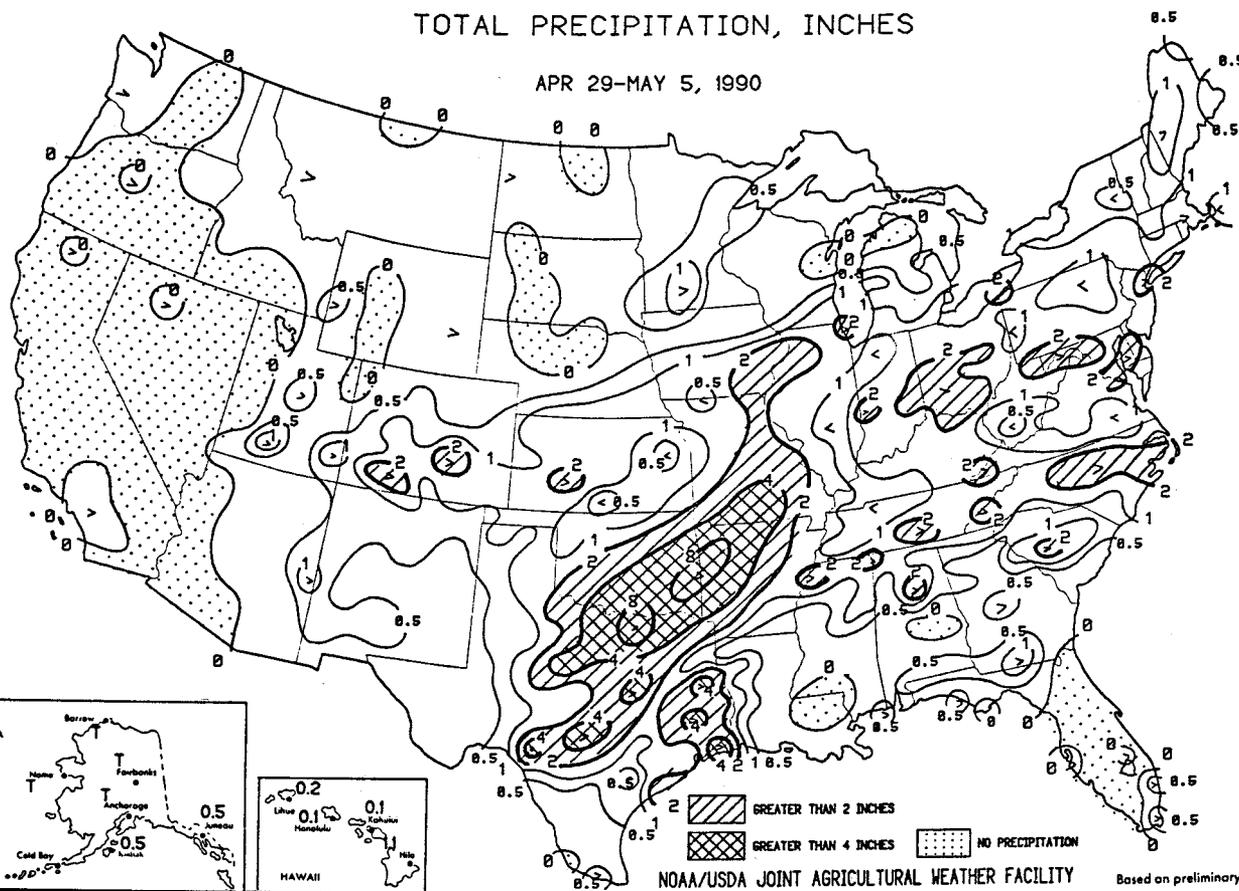
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Washington, D.C.

May 8, 1990

TOTAL PRECIPITATION, INCHES

APR 29-MAY 5, 1990



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

HIGHLIGHTS

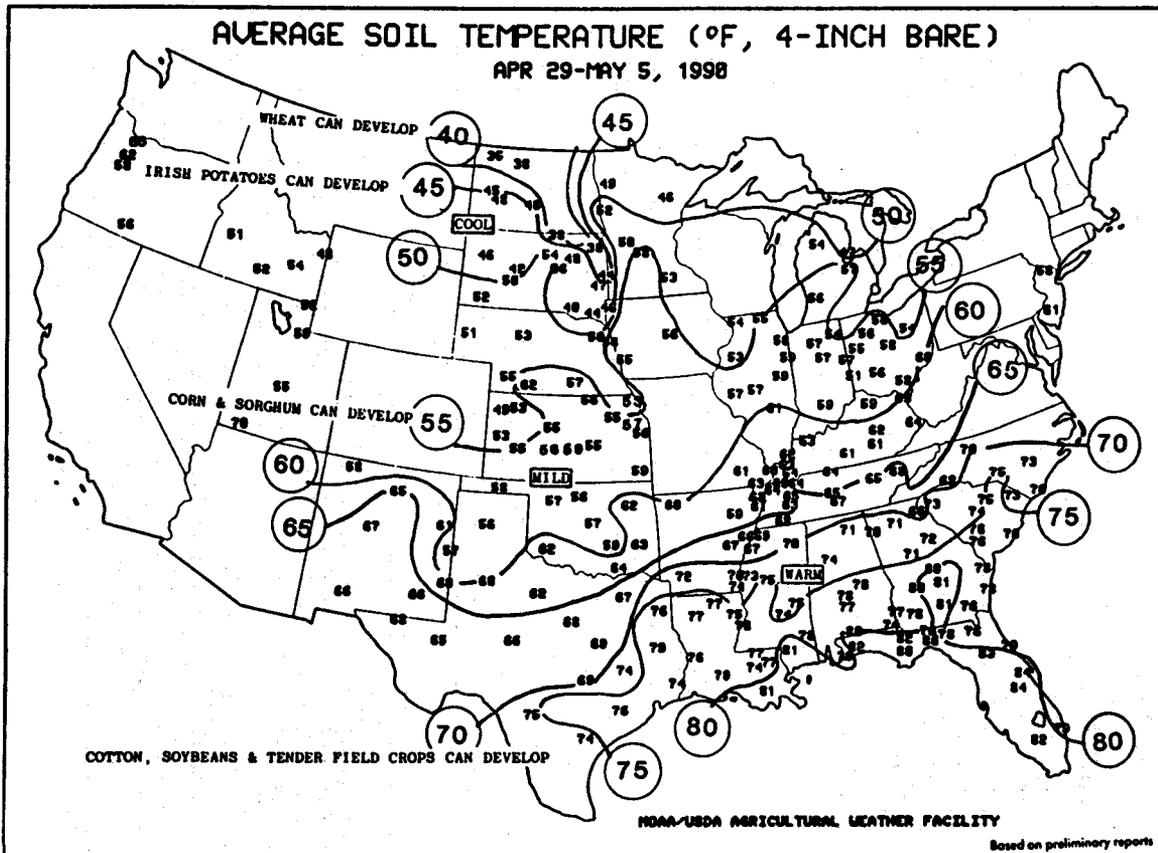
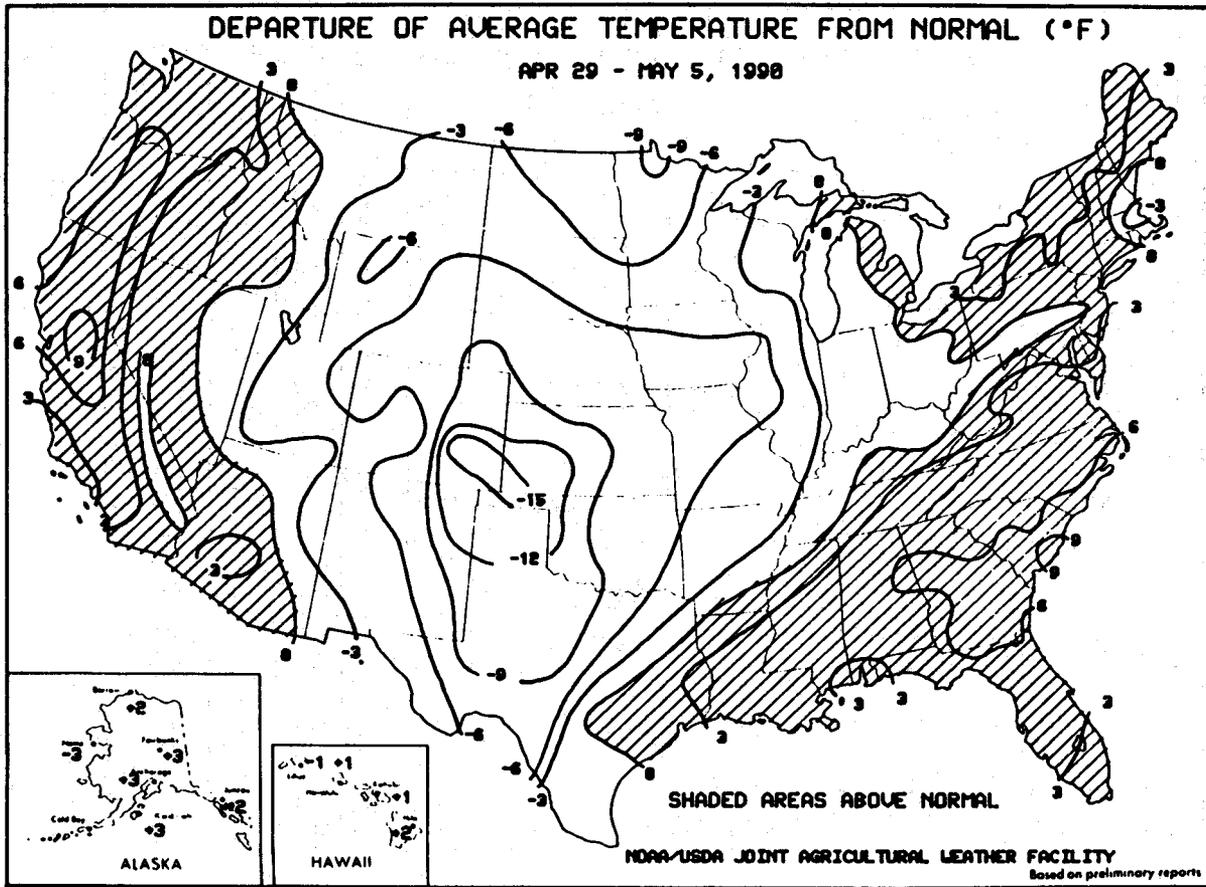
April 29 - May 5, 1990

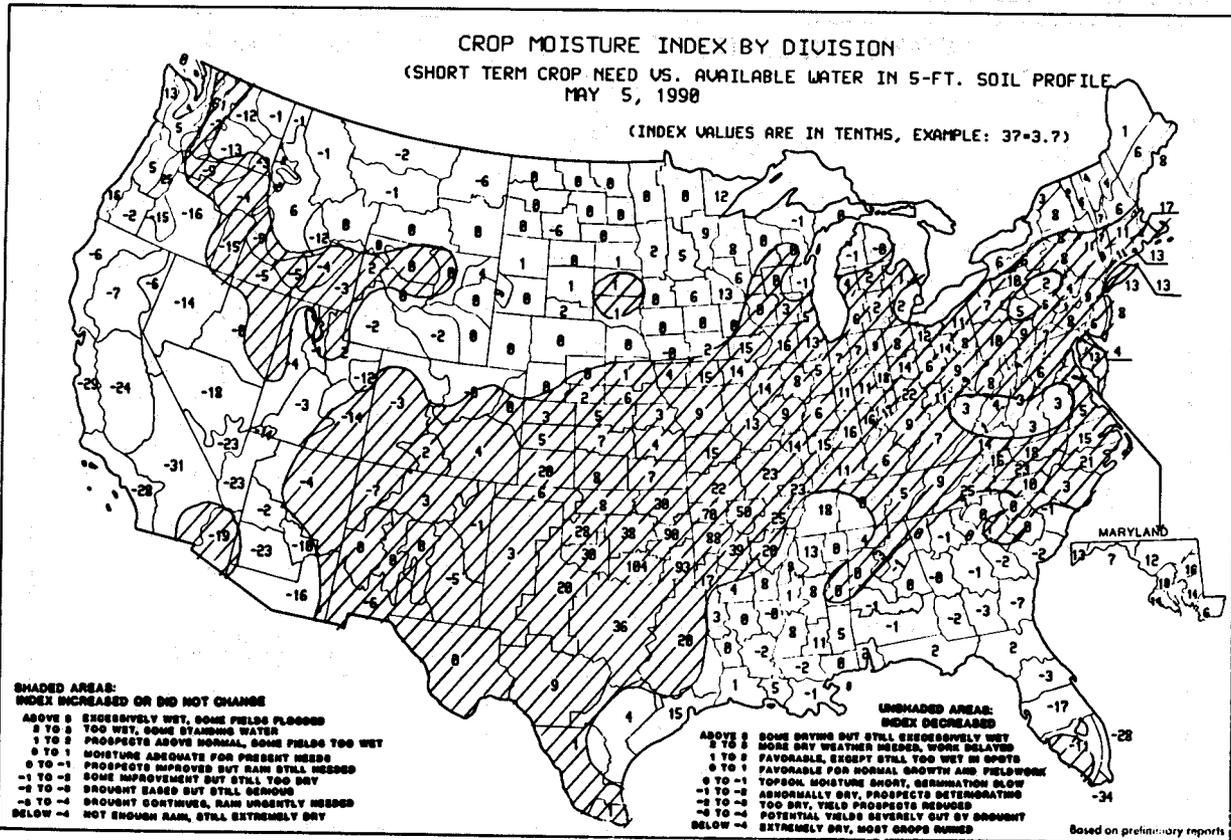
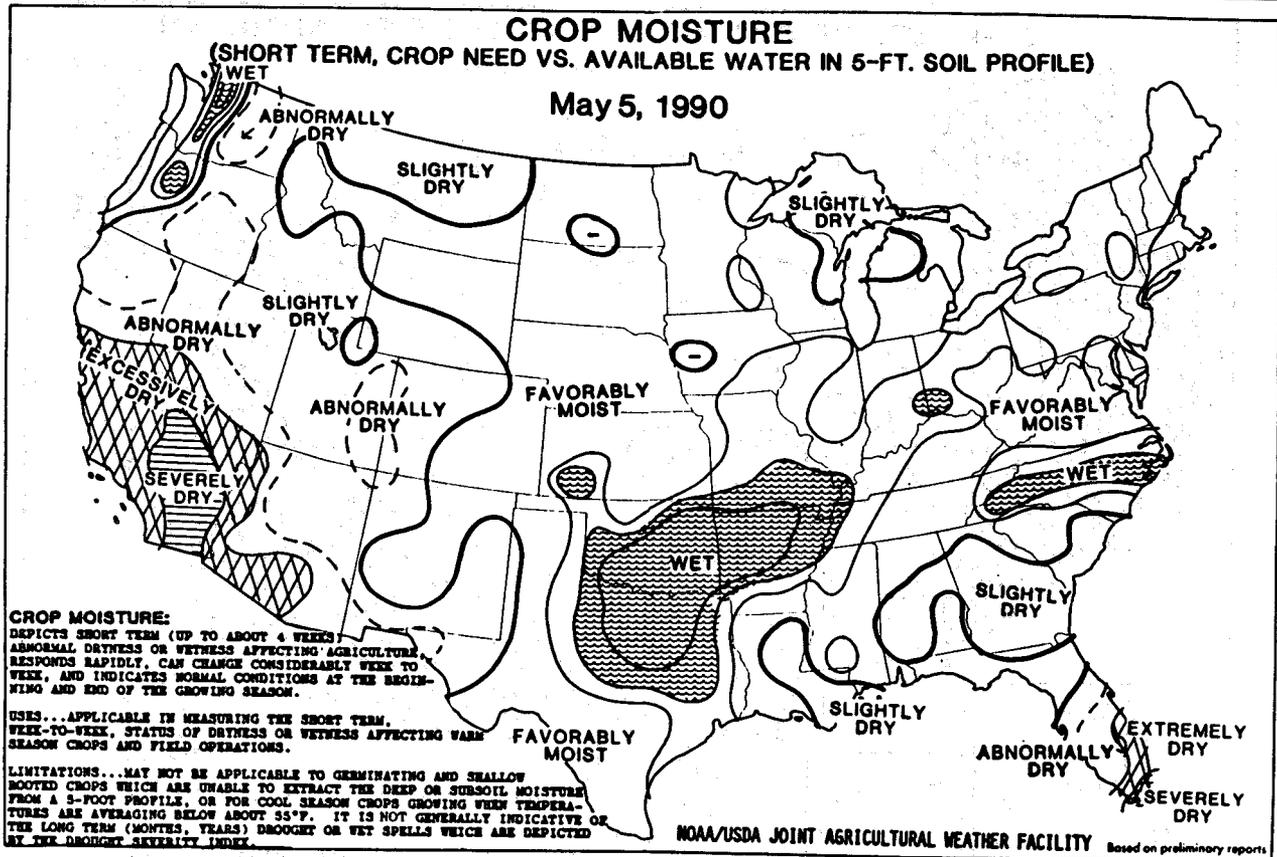
At the first of the week, the warm, dry weather in the **East** was replaced by cooler and wetter conditions as thunderstorms rumbled across the **middle Atlantic States**. A strong frontal system ushered colder air into the Nation's midsection, with rain in the **upper Mississippi Valley** and snow over the **central Rockies**. **Pueblo, CO**, received 9.4 inches of snow and established a new snowfall record of 69.6 inches for the winter season. During the middle of the week, an extensive storm system brought severe weather and dumped more heavy rain over the **southern Plains** and into the **Ozark plateau**. The drenching rains caused widespread flooding in **Texas, Oklahoma, and Arkansas**. On Thursday, **Springfield, MO**, reported 24.33 inches of precipitation for the year.
(Continued to p. 15)

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The Crop Moisture Index

Palmer (1968) developed the Crop Moisture Index from moisture accounting procedures used in calculations of the Drought Severity Index to measure the degree to which moisture requirements of growing crops were met during the previous week. The Drought Severity Index (Palmer, 1965) evaluates prolonged meteorological dry or wet spells (see Weekly Weather and Crop Bulletin, May 1, 1990, Vol. 77, No. 17). The Crop Moisture Index gives the status of purely agricultural drought or moisture surplus affecting warm-season crops and field activities and can change rapidly from week to week. Calculations are made for 344 climatic divisions in the United States using weekly average temperatures and precipitation totals as input.

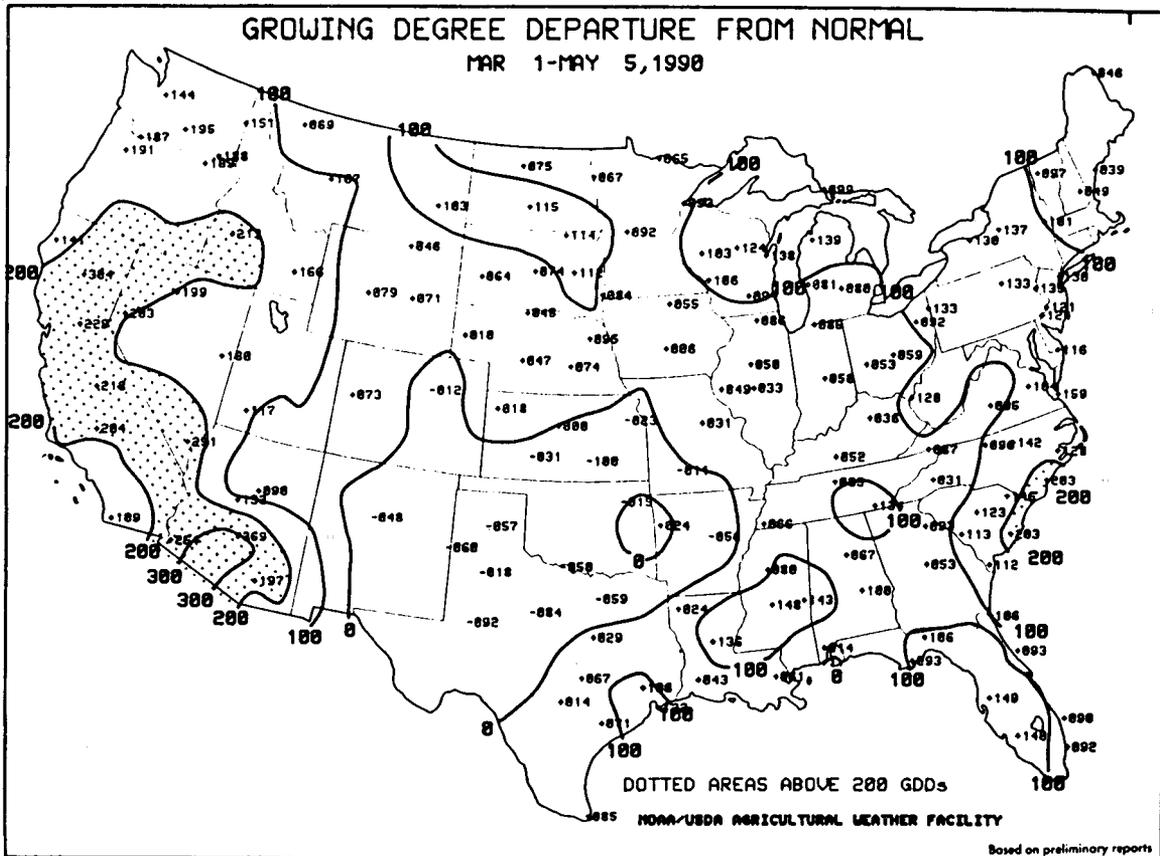
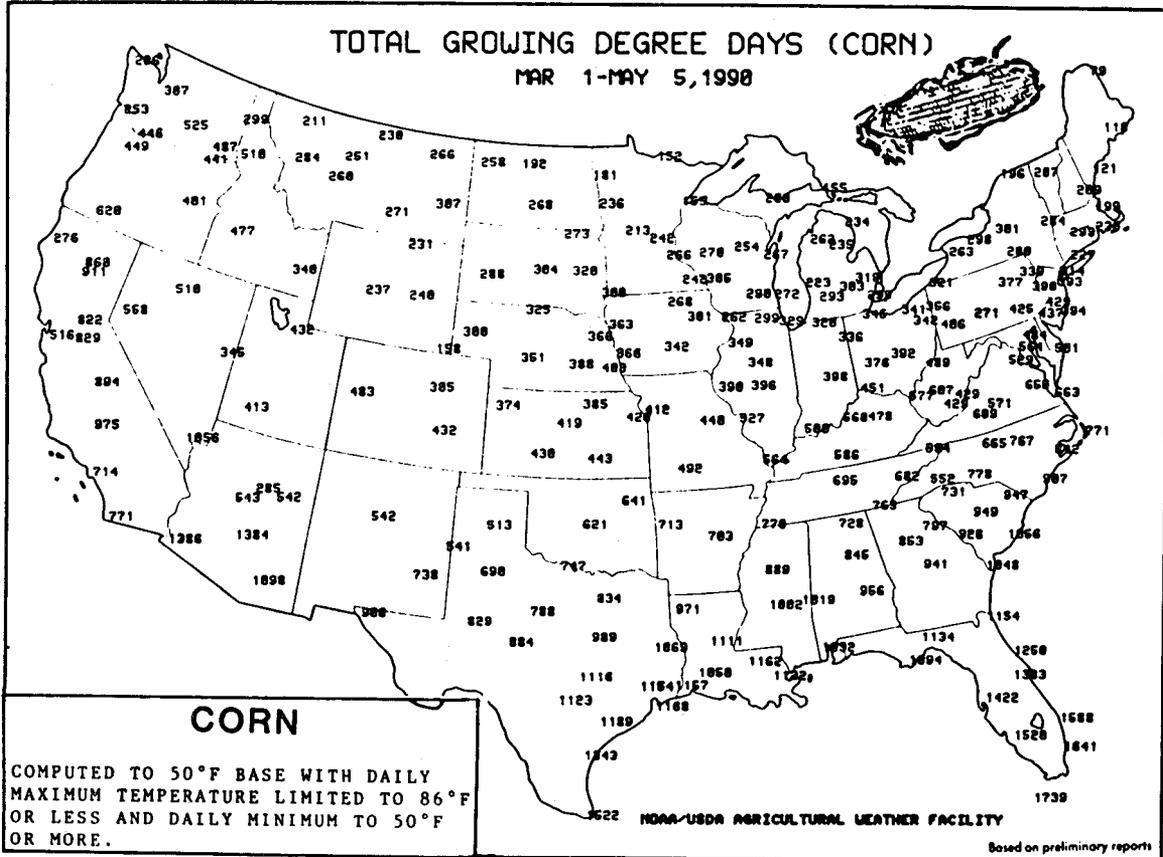
The index is the sum of the evapotranspiration anomaly, which is negative or slightly positive, and the moisture excess (either zero or positive). Both terms take into account the value of the previous week. The evapotranspiration anomaly is weighted to make it comparable for different locations and time of year. If the potential moisture demand exceeds available moisture supplies, the index is negative. If moisture meets or exceeds demand, the index is positive. It is necessary to use two separate interpretations because the resulting effects are different when the moisture supply is improving than when it is deteriorating (table of values are given with the accompanying map).

General conditions are indicated and not local variations caused by isolated rains. The stage of crop development and soil type should also be considered in using this index. In irrigated regions, only departures from ordinary irrigation requirements are reflected. The index may not be applicable for seed germination, for shallow-rooted crops which are unable to extract the deep or subsoil moisture from a 5-foot profile, or for cool-season crops growing when temperatures are averaging below 55° F.

References:

- Palmer, W.C., 1965: Meteorological Drought, Weather Bureau Research Paper No. 45, U.S. Dept. of Commerce, Washington, DC, 58pp.
- Palmer, W.C., 1968: "Keeping Track of Crop Moisture Conditions, Nationwide: The New Crop Moisture Index," Weatherwise, 21, pp. 156-161.

Tom Heddinghaus



National Weather Data for Selected Cities

Weather Data for the Week Ending May 5, 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	
																		1	2	3	4
AL BIRMINGHAM	83	61	90	48	72	5	2.1	1.0	1.6	10.4	84	24.5	110	94	51	1	0	3	1		
MOBILE	83	66	88	58	75	3	.3	-1.0	.2	17.0	134	32.5	147	99	57	0	0	2	0		
MONTGOMERY	86	60	94	49	73	4	.4	-1.9	.4	16.1	147	33.9	173	97	47	2	0	0	0		
AK ANCHORAGE	52	37	54	31	44	3	.4	-1.1	.4	.8	56	3.6	122	85	47	0	2	1	0		
BARROW	18	5	23	-3	12	2	.2	0	.2	.2	61	.3	43	95	82	0	7	0	0		
FAIRBANKS	54	34	58	28	44	2	.3	-1.1	.4	.2	25	1.4	83	78	30	0	4	0	0		
JUNEAU	50	40	53	36	45	2	.5	-2.2	.3	6.4	95	14.6	103	97	62	0	0	4	0		
KODIAK	50	36	54	32	43	3	.5	-1.6	.2	12.4	148	21.9	114	92	60	0	2	4	0		
NOME	31	19	34	12	25	-3	.3	-1.1	.4	1.8	148	3.2	129	86	63	0	7	0	0		
AZ PHOENIX	88	67	96	60	78	5	.5	0	.5	.5	50	2.0	86	38	14	4	0	1	0		
PRESCOTT	68	41	77	32	55	1	.1	-1.1	.1	1.8	77	4.4	78	62	19	0	1	1	0		
TUCSON	84	59	91	49	71	2	.2	0	.5	.5	50	2.2	89	46	15	2	0	1	0		
YUMA	90	63	104	55	77	2	0	0	.2	.2	76	.4	40	42	13	5	0	0	0		
AR FORT SMITH	70	53	90	44	61	-5	8.4	7.3	3.8	21.5	244	32.6	248	94	64	1	0	4	3		
LITTLE ROCK	72	55	88	48	64	-3	2.7	1.5	1.8	18.8	171	28.4	152	84	63	0	0	2	2		
CA BAKERSFIELD	87	56	100	45	72	5	0	-1.1	0	.6	39	2.4	65	53	17	3	0	0	0		
EUREKA	63	47	76	44	55	4	0	-1.5	0	4.7	57	16.4	80	88	63	0	0	0	0		
FRESNO	87	54	99	46	70	6	0	-1.1	0	1.6	56	5.7	86	67	19	3	0	0	0		
LOS ANGELES	70	57	82	52	63	2	.1	0	.1	.5	18	4.3	52	88	56	0	0	1	0		
REDDING	89	55	98	47	72	7	0	-1.4	0	3.1	38	12.4	54	52	13	3	0	0	0		
SACRAMENTO	88	56	98	50	72	11	0	-2.2	0	1.6	47	9.4	92	55	15	4	0	0	0		
SAN DIEGO	69	57	81	53	63	1	0	-1.1	0	1.0	36	4.6	72	84	54	0	0	0	0		
SAN FRANCISCO	75	51	81	48	63	6	0	-2.2	0	1.0	23	6.3	52	86	36	0	0	0	0		
CO DENVER	54	33	64	30	44	-9	.2	-1.3	.2	4.2	124	5.5	121	90	34	0	3	2	0		
GRAND JUNCTION	62	37	74	31	50	-7	.1	-1.1	.1	1.8	114	2.9	107	77	29	0	2	1	0		
PUEBLO	50	31	65	27	41	-16	2.4	2.1	1.3	4.3	224	5.6	232	97	55	0	4	5	2		
CT BRIDGEPORT	61	50	72	46	56	2	1.8	.9	.8	8.1	99	13.9	96	78	55	0	0	4	1		
HARTFORD	63	46	81	39	54	0	.9	-1.1	.6	7.9	90	15.3	99	83	49	0	0	4	1		
DC WASHINGTON	71	56	81	53	64	2	2.0	1.2	1.0	7.5	109	11.8	96	91	57	0	0	4	2		
FL APALACHICOLA	84	66	86	62	75	3	T	-1.6	T	6.4	83	12.8	86	98	64	0	0	0	0		
DAYTONA BEACH	89	67	94	62	78	5	T	-1.6	T	3.4	61	10.4	94	96	50	3	0	0	0		
JACKSONVILLE	91	65	96	61	78	6	0	-1.8	0	2.9	41	8.8	65	95	38	4	0	0	0		
KEY WEST	85	76	87	74	80	1	T	-1.5	T	2.1	68	3.2	47	82	60	0	0	0	0		
MIAMI	86	73	88	68	79	2	.2	-1.9	.2	9.2	156	10.7	107	85	52	0	0	1	0		
ORLANDO	91	67	95	65	79	4	0	-1.6	0	3.7	61	8.0	71	95	36	5	0	0	0		
TALLAHASSEE	90	63	96	60	77	6	.4	-1.6	.4	7.2	69	17.6	88	99	41	3	0	1	0		
TAMPA	91	70	97	65	81	6	.1	-1.5	.1	3.3	58	8.4	78	95	42	6	0	2	0		
WEST PALM BEACH	86	71	88	65	78	2	T	-1.1	T	4.7	71	7.3	61	90	56	0	0	0	0		
GA ATLANTA	85	63	90	52	74	8	.8	-2.2	.8	11.9	108	30.1	148	86	41	2	0	1	1		
AUGUSTA	86	62	94	57	74	6	.4	-1.4	.3	3.5	40	8.9	53	94	45	2	0	2	0		
MACON	89	61	94	52	75	6	.7	-2.2	.3	7.3	78	15.3	85	95	36	4	0	2	0		
SAVANNAH	89	65	96	58	77	7	.1	-1.8	.1	5.6	73	12.6	90	90	38	3	0	1	0		
HI HILO	82	67	84	64	75	2	1.1	-1.5	.6	15.9	56	60.3	118	93	57	0	0	5	1		
HONOLULU	85	70	89	69	78	1	.1	-2.2	0	1.2	24	9.6	83	80	46	0	0	2	0		
KAHULUI	84	66	89	63	75	0	.2	-1.1	.2	1.8	45	12.7	117	94	53	0	0	2	0		
LIHUE	77	69	80	67	73	-1	.9	-2.2	.5	6.4	77	17.0	94	92	68	0	0	4	0		
ID BOISE	68	38	86	28	53	0	T	-1.3	T	2.9	123	4.5	90	88	30	0	2	1	0		
LEWISTON	73	46	92	39	60	5	T	-1.3	T	3.1	133	3.8	82	78	32	1	0	0	0		
POCATELLO	64	32	76	25	48	-2	T	-1.3	T	3.7	165	4.5	106	80	22	0	3	1	0		
IL CHICAGO	62	43	70	38	52	-2	1.8	1.0	1.7	6.7	94	10.9	111	79	44	0	0	3	1		
MOLINE	60	40	70	34	50	-6	3.4	2.4	2.2	13.5	184	17.2	168	91	48	0	0	3	2		
PEORIA	62	42	73	35	52	-6	1.3	.4	.8	7.6	104	12.9	125	94	46	0	0	3	1		
QUINCY	61	42	73	39	52	-7	1.3	.3	.7	5.7	74	10.6	101	89	51	0	0	3	2		
ROCKFORD	61	41	72	35	51	-4	1.8	.9	1.5	7.3	99	10.3	103	89	44	0	0	3	1		
SPRINGFIELD	64	42	73	36	53	-6	1.5	.6	.7	6.2	81	12.5	115	97	50	0	0	3	2		
IN EVANSVILLE	67	51	78	47	59	-2	2.0	1.0	1.1	7.9	84	17.7	115	93	58	0	0	6	2		
FORT WAYNE	64	44	78	35	54	-1	1.7	.9	1.4	7.2	101	16.2	145	93	47	0	0	3	1		
INDIANAPOLIS	66	49	74	45	57	-1	1.5	.7	1.1	6.0	77	12.8	99	85	48	0	0	3	1		
SOUTH BEND	61	42	69	38	52	-2	.7	0	.7	6.2	83	12.3	103	85	47	0	0	3	1		
IA DES MOINES	61	39	66	32	50	-7	1.1	.3	.7	10.4	174	12.7	158	84	40	0	1	3	1		
STOUCX CITY	65	36	75	28	50	-6	.2	-1.1	.1	3.8	85	4.4	73	84	28	0	2	1	0		
WATERLOO	64	36	68	32	50	-4	.2	-1.1	.1	7.5	118	8.4	103	84	35	0	1	4	0		
KS CONCORDIA	61	43	68	38	52	-7	1.4	-1.7	1.3	6.6	141	7.3	119	83	45	0	0	3	1		
DODGE CITY	55	38	65	31	47	-13	2.0	1.4	1.5	7.3	197	10.2	217	94	52	0	1	2	1		
GOODLAND	54	34	64	30	44	-10	.9	-1.6	.2	5.0	85	8.5	109	92	52	0	0	3	0		
TOPEKA	61	39	69	33	50	-10	.2	-1.6	.2	3.2	126	4.4	134	93	43	0	3	2	1		
WICHITA	63	44	68	36	53	-8	.5	-1.3	.2	5.0	85	7.8	120	82	52	0	0	3	0		
KY BOWLING GREEN	72	53	82	44	62	0	.5	-1.4	.3	3.9	78	7.8	120	85	47	0	0	2	0		
LEXINGTON	68	50	80	43	59	-1	1.5	.6	.8	5.8	60	13.4	82	96	73	0	0	4	0		
LOUISVILLE	70	53	80	48	61	0	1.3	.3	.7	7.5	79	18.2	113	91	56	0	0	4	1		
LA ALEXANDRIA	84	67	90	56	76	4	.3	-1.0	.3	9.4	83	26.9	132	78	49	2	0	1	0		
BATON ROUGE	85	69	91	60	77	5	T	-1.3	T	8.6	77	27.9	135	93	53	1	0	0	0		
LAKE CHARLES	80	69	84	58	75	2	.2	-1.0	.2	9.0	115	23.1	146	96	67	0	0	2	0		
NEW ORLEANS	83	71	86	66	77	5	T	-1.1	T	10.6	106	33.0	164	95	63	0	0	1	0		

Based on 1951-80 normals

Weather Data for the Week Ending May 5, 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
SHREVEPORT	82	62	92	50	72	2	.2	-.9	.2	9.4	102	26.4	158	93	54	1	0	2	0
ME CARIBOU	59	39	71	29	49	4	.7	-.4	.1	3.7	68	8.9	90	82	41	1	2	2	0
PORTLAND	55	40	66	34	47	-1	.7	-.1	.5	7.1	84	12.7	81	96	56	0	0	3	4
MD BALTIMORE	69	53	79	48	61	-2	2.0	1.2	1.3	7.4	98	12.6	93	91	57	0	0	4	2
SALISBURY	71	54	79	49	63	3	1.8	1.0	1.0	7.8	100	13.8	95	96	57	0	0	3	2
MA BOSTON	56	45	68	42	51	-3	1.7	0	.9	7.8	100	15.8	98	95	62	0	0	2	2
CHATHAM	54	44	65	42	49	0	.9	0	.7	7.8	91	17.3	98	95	62	0	0	5	2
MI ALPENA	62	35	75	25	48	1	1.1	-.6	.9	7.8	91	17.3	101	93	75	0	0	3	2
DETROIT	64	45	74	37	55	1	1.1	-.4	.4	5.7	107	8.7	111	87	33	0	2	5	1
FLINT	64	43	75	35	54	2	1.1	-.3	.4	3.9	93	12.6	131	88	40	0	0	2	1
GRAND RAPIDS	62	41	75	32	51	-1	.9	-.2	.9	5.1	70	8.4	97	86	39	0	0	2	1
HOUGHTON LAKE	61	39	73	26	50	-1	.8	-.5	.9	5.1	76	9.5	94	84	39	0	0	2	1
LANSING	63	41	73	33	52	0	1.1	-.2	.4	3.4	69	6.0	79	73	36	0	2	1	1
MARQUETTE	55	32	64	25	44	-1	.1	-.8	.8	4.5	81	8.7	101	89	41	0	0	1	1
MUSKEGON	59	40	67	34	49	-2	.9	-.3	.1	4.2	60	7.9	72	79	38	0	5	2	1
SAULT ST. MARIE	61	34	76	25	47	2	1.1	-.5	.9	5.3	88	9.4	93	81	45	0	0	1	1
MN ALEXANDRIA	55	34	70	26	44	-6	.2	-.2	.1	4.2	88	8.8	101	86	37	0	4	2	1
DULUTH	53	29	64	24	41	-4	.9	-.3	.3	4.3	115	4.8	90	84	44	0	7	1	0
INT'L FALLS	49	28	61	19	39	-7	.2	-.2	.9	7.2	165	8.2	128	89	39	0	4	2	1
MINNEAPOLIS	60	37	71	28	49	-5	.4	-.2	.2	2.8	94	4.0	87	89	46	0	5	2	0
ROCHESTER	61	35	67	26	48	-4	.4	-.2	.4	7.5	181	8.4	145	81	37	0	3	2	0
MS GREENWOOD	81	63	88	49	72	3	1.1	-.6	.1	10.0	210	11.3	179	85	38	0	3	1	0
JACKSON	85	65	90	52	75	6	1.1	-.1	.1	9.6	76	23.3	104	90	57	0	0	1	0
MERIDIAN	86	63	90	51	74	1	1.1	-.3	.1	7.2	60	27.7	130	96	52	1	1	1	0
MO CAPE GIRARDEAU	70	51	79	47	61	1	1.1	-.1	.1	11.6	91	38.8	173	95	49	2	0	1	0
COLUMBIA	64	44	80	39	54	-7	1.2	.1	.6	8.7	85	22.0	136	97	61	0	0	4	1
KANSAS CITY	60	41	70	34	50	-12	2.0	1.0	1.2	12.1	152	17.9	155	90	52	0	0	4	2
SAINT LOUIS	68	49	78	47	59	-3	1.3	.5	.3	7.2	108	10.5	116	87	52	0	0	4	0
SPRINGFIELD	65	47	82	41	56	-3	1.3	.5	1.1	7.0	95	12.0	107	85	46	0	0	3	1
MT BILLINGS	59	36	74	23	47	-5	3.0	2.1	2.1	13.3	164	24.3	204	92	51	0	6	2	0
GLASGOW	60	34	76	24	47	-1	1.1	-.1	.1	3.8	115	4.6	93	79	34	0	3	3	0
GREAT FALLS	59	34	78	21	47	-1	1.1	-.2	0	1.0	83	1.4	76	83	29	0	2	2	0
HAVRE	60	34	78	26	47	-3	1.1	-.4	.1	2.6	95	3.1	69	82	36	0	2	2	0
HELENA	61	33	80	25	47	-1	1.1	-.3	.1	1.4	70	1.4	47	86	37	0	3	0	0
KALISPELL	61	31	77	15	46	-2	1.1	-.2	.1	1.5	75	2.1	68	84	29	0	4	1	0
MILES CITY	60	37	75	27	48	-4	1.1	-.2	.1	2.7	126	5.4	112	94	39	0	1	1	0
MISSOULA	65	35	82	29	50	1	1.1	-.4	.1	3.0	132	3.1	91	79	34	0	2	2	0
NE GRAND ISLAND	63	39	73	29	51	-6	1.0	-.2	.2	2.3	112	3.5	82	89	31	0	3	1	0
LINCOLN	64	40	70	30	52	-6	1.0	.5	.9	4.2	89	5.0	84	83	34	0	2	3	1
NORFOLK	64	35	75	27	50	-6	1.0	.2	.9	4.5	85	5.2	75	81	33	0	1	2	1
NORTH PLATTE	61	34	71	27	47	-7	1.1	-.7	.1	3.0	72	4.1	76	77	24	0	3	1	0
OMAHA	63	40	68	32	52	-7	1.0	-.6	.1	3.3	98	3.8	88	88	30	0	3	2	0
SCOTTSDUFF	58	29	68	22	44	-9	1.1	-.1	.9	4.5	83	5.6	79	76	37	0	1	2	1
VALENTINE	60	31	69	23	44	-7	1.1	-.4	.1	4.4	161	5.8	161	80	29	0	5	1	0
NV ELY	61	28	76	23	45	-1	1.0	-.2	0	1.9	97	3.8	114	70	17	0	6	0	0
LAS VEGAS	81	58	92	49	70	1	1.1	-.1	0	2	29	1.7	112	35	14	1	0	0	0
RENO	71	37	87	30	54	3	1.0	-.2	0	.4	30	3.0	87	61	16	0	2	0	0
MINNEAPOLIS	69	32	87	25	51	1	1.1	-.2	0	1.9	123	2.8	92	68	19	0	4	1	0
NH CONCORD	59	39	68	32	49	-2	1.1	.8	.1	5.2	81	10.7	91	96	53	0	1	4	0
NJ ATLANTIC CITY	68	51	77	48	59	3	1.3	.6	.9	7.2	94	10.9	75	93	50	0	0	4	1
NM ALBUQUERQUE	65	43	82	37	54	-6	1.5	.4	.3	2.6	273	3.2	192	71	29	0	0	3	0
CLOVIS	59	41	71	39	50	-11	1.1	-.3	.1	1.5	91	3.6	146	77	39	0	0	2	0
ROSWELL	68	48	88	39	58	-7	1.1	0	.1	1.8	201	2.4	142	63	28	0	0	1	0
NY ALBANY	66	44	79	37	55	2	1.1	-.3	.6	8.6	134	16.4	149	83	43	0	0	2	1
BINGHAMTON	62	44	71	37	53	3	1.0	-.3	.9	5.8	90	12.4	110	88	48	0	0	3	1
BUFFALO	65	46	81	36	55	4	1.1	.5	.6	7.9	122	16.5	139	79	37	0	0	2	2
NEW YORK	64	51	80	47	57	0	2.1	1.3	1.0	8.9	106	14.6	100	84	53	0	0	4	2
ROCHESTER	64	45	81	36	55	2	.9	-.3	.5	6.1	109	11.6	114	85	37	0	0	2	0
SYRACUSE	65	44	79	35	55	2	.9	-.2	.6	8.7	126	14.8	122	87	42	0	0	2	1
NC ASHEVILLE	76	53	83	46	65	4	1.4	.5	1.1	9.2	104	20.6	135	100	53	0	0	7	1
CHARLOTTE	79	60	88	54	70	4	1.7	0	.4	6.3	73	15.8	97	97	56	0	0	4	0
GREENSBORO	76	56	86	51	66	3	2.6	1.9	.8	7.9	105	16.0	111	98	61	0	0	7	3
BATTERAS	77	62	80	59	70	6	3.4	2.6	1.8	12.5	161	21.3	128	98	66	0	0	5	2
NEW BERN	81	61	87	57	71	5	3.0	2.2	1.4	11.3	157	16.7	110	94	58	0	0	4	2
RALEIGH	78	58	88	55	68	4	2.9	2.2	1.0	9.6	135	16.5	117	98	63	0	0	7	2
WILMINGTON	84	65	96	58	74	7	1.5	.7	.8	8.4	111	13.0	89	98	57	0	0	4	1
ND BISMARCK	58	29	73	21	43	-6	.1	-.4	0	.9	38	1.4	42	86	30	0	5	4	0
FARGO	58	32	74	27	45	-6	.2	-.3	.2	3.3	109	3.9	98	86	34	0	4	2	0
GRAND FORKS	53	31	71	25	42	-7	.1	-.3	.1	4.0	167	4.4	121	87	37	0	3	2	0
WILLISTON	59	32	72	23	45	-4	.2	-.2	.1	1.2	58	1.6	53	87	27	0	4	3	0
OH AKRON-CANTON	63	46	75	40	55	0	1.4	.6	1.0	7.8	109	15.0	126	85	54	0	0	3	1
CINCINNATI	65	50	82	47	58	-1	1.7	.9	1.1	7.7	95	16.1	116	87	57	0	0	4	1
CLEVELAND	64	46	74	37	55	1	1.7	1.0	1.5	7.2	105	14.2	124	93	51	0	0	3	1
COLUMBUS	65	48	79	43	57	0	1.7	.9	1.4	5.8	81	13.4	111	90	54	0	0	3	1

Based on 1951-80 normals

Weather Data for the Week Ending May 5, 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	64	47	79	45	56	-2	2.5	1.7	2.2	9.2	131	17.3	148	82	49	0	0	0	0	1	1
TOLEDO	65	43	80	32	54	0	1.2	1.5	1.1	6.7	110	14.3	145	93	39	0	0	1	2	3	1
YOUNGSTOWN	65	45	74	38	55	0	.6	.2	.6	4.9	68	11.5	95	88	50	0	0	0	0	3	1
OK OKLAHOMA CITY	66	49	76	46	57	-1	3.4	2.3	3.0	12.9	224	19.4	242	84	49	0	0	0	0	3	1
TULSA	67	51	80	44	59	-1	2.9	1.8	2.7	14.7	182	21.7	196	88	53	0	0	0	0	3	1
OR ASTORIA	63	45	78	34	54	-4	.1	.7	0	9.6	77	37.6	121	97	61	0	0	0	0	2	0
BURNS	68	34	87	22	51	0	0	0	0	.8	47	1.9	44	80	22	0	1	3	0	0	0
MEDFORD	81	42	94	31	61	0	T	-3	T	2.3	75	6.3	74	74	23	2	0	0	0	0	0
PENDLETON	70	45	85	35	57	0	.1	-2	.1	2.7	123	3.7	75	76	35	0	0	0	1	1	0
PORTLAND	73	43	86	39	60	0	.1	-4	0	4.9	78	16.3	100	93	45	0	0	0	2	0	0
SALEM	73	43	86	32	58	0	T	-5	T	4.1	58	17.8	96	93	48	0	1	1	0	0	0
PA ALLENTOWN	67	49	75	46	58	2	.8	0	.8	4.6	55	11.5	79	89	49	0	0	0	4	4	1
ERIE	62	47	75	39	55	0	2.0	1.3	1.9	6.8	99	14.8	130	85	44	0	0	0	2	5	1
HARRISBURG	65	50	74	48	57	0	1.6	.8	.7	5.6	77	12.5	97	92	59	0	0	0	5	1	1
PHILADELPHIA	67	51	76	48	59	0	1.4	.7	.6	6.7	86	12.3	89	90	52	0	0	0	5	1	1
PITTSBURGH	65	48	76	43	56	0	.8	0	.6	5.7	77	12.3	98	87	50	0	0	0	3	1	1
SCRANTON	64	47	75	38	55	0	.8	0	.7	5.1	83	11.6	112	87	48	0	0	0	3	1	1
RI PROVIDENCE	60	46	70	43	53	-1	1.3	.5	.4	8.4	96	16.3	99	94	59	0	0	0	5	1	0
SC CHARLESTON	88	67	95	57	78	0	T	T	T	8.3	111	14.0	99	95	45	3	0	0	1	2	0
COLUMBIA	86	63	95	58	75	0	2.0	1.2	1.5	5.6	59	10.6	60	95	46	3	0	0	2	2	2
FLORENCE	86	64	93	57	75	0	1.2	.5	.9	5.1	67	7.9	54	94	44	2	0	0	2	1	1
GREENVILLE	79	57	87	51	68	0	.6	-3	.6	9.5	86	19.8	101	98	58	0	0	0	2	1	0
SD ABERDEEN	59	33	72	28	46	-6	.3	-2	.3	2.7	83	3.2	74	92	35	0	0	0	2	1	0
HURON	61	34	72	28	48	-5	.3	-3	.3	3.2	91	3.9	82	87	34	0	4	2	1	0	0
RAPID CITY	59	30	67	22	45	-6	.2	-3	.2	2.2	66	2.8	64	86	32	0	0	0	4	2	0
SIOUX FALLS	62	34	73	28	48	-5	.7	.1	.7	3.4	79	3.8	66	85	31	0	4	1	2	1	1
TN CHATTANOOGA	81	58	87	47	69	0	2.0	1.0	.9	14.3	124	31.5	147	99	53	0	0	0	3	2	2
KNOXVILLE	79	57	83	44	68	4	1.6	.7	.7	9.9	99	22.6	121	96	56	0	0	0	3	2	2
MEMPHIS	74	58	82	50	66	0	1.0	-3	.5	13.6	112	26.5	127	91	65	0	0	0	3	1	1
NASHVILLE	75	56	84	42	66	-1	.6	-4	.4	5.5	51	13.0	67	91	61	0	0	0	5	1	0
TX ABILENE	66	49	91	44	58	-12	4.9	4.2	4.7	11.9	301	16.2	274	90	52	1	0	0	2	1	1
AMARILLO	57	38	71	32	47	-14	1.0	.6	1.0	4.7	209	7.5	229	83	43	0	1	1	1	1	1
AUSTIN	83	62	93	55	72	0	2.2	1.3	2.2	7.4	137	12.3	130	90	51	1	0	0	1	1	1
BEAUMONT	81	70	85	59	75	3	4.5	3.4	2.6	15.2	190	31.3	192	92	69	0	0	0	2	2	2
BROWNSVILLE	82	70	93	57	76	-1	.5	0	.2	2.8	120	4.0	78	94	69	1	0	0	3	0	0
CORPUS CHRISTI	79	69	87	58	74	-2	.5	-1	.3	6.9	223	11.2	183	98	72	0	0	0	2	0	0
DEL RIO	77	53	96	54	68	-7	.8	.3	.5	8.8	313	10.6	253	78	41	1	0	0	3	1	0
EL PASO	77	53	88	47	65	-3	.1	.1	.1	.8	155	1.2	92	56	21	0	0	0	1	0	0
PORT WORTH	74	56	95	51	65	-5	5.7	4.7	3.1	18.6	258	27.8	259	93	58	1	0	0	3	3	3
GALVESTON	79	71	83	60	75	2	1.7	1.0	1.7	9.0	170	16.2	153	93	71	0	0	0	3	1	0
HOUSTON	82	68	90	57	75	2	1.3	.3	1.3	12.6	177	21.1	152	91	59	1	0	0	1	1	1
LUBBOCK	64	43	80	39	54	-11	.9	.5	.9	3.3	144	5.8	181	80	41	0	0	0	1	1	1
MIDLAND	70	46	94	41	58	-11	.2	-2	.2	3.1	193	4.4	172	88	39	1	0	0	1	0	0
SAN ANGELO	71	50	97	44	60	-10	1.0	.5	1.0	6.0	209	9.2	213	93	52	1	0	0	2	1	1
SAN ANTONIO	82	64	93	54	73	0	2.1	1.3	2.1	11.8	257	15.7	197	92	51	1	0	0	3	1	0
VICTORIA	80	68	87	59	74	0	.3	-6	.3	6.9	152	10.7	124	96	65	0	0	0	1	0	0
WACO	78	58	95	49	68	-3	3.1	2.0	2.6	11.3	172	16.8	164	95	55	1	0	0	3	1	0
WICHITA FALLS	66	50	78	46	58	-10	4.4	3.4	3.3	16.7	307	23.6	321	91	55	0	0	0	2	2	2
UT CEDAR CITY	62	34	75	32	48	-4	T	-2	T	2.6	116	5.4	147	68	23	0	1	0	0	0	0
SALT LAKE CITY	64	37	76	29	51	-3	T	-4	T	3.3	79	4.2	62	76	23	0	2	0	0	0	0
VT BURLINGTON	66	43	78	32	54	4	.5	-1	.5	5.1	95	10.3	115	84	41	0	1	2	0	0	0
VA NORFOLK	75	57	82	53	66	3	1.7	.9	1.0	7.7	106	13.9	98	93	60	0	0	0	4	2	2
RICHMOND	76	56	86	51	66	3	.7	-1	.5	5.6	79	10.8	81	90	48	0	0	0	3	0	0
ROANOKE	73	53	81	50	63	2	.7	-1	.4	6.1	83	11.2	84	100	56	0	0	0	5	0	0
WA QUILLAYUTE	63	44	76	34	53	5	.3	-1.1	.2	14.5	72	47.5	102	96	54	0	0	0	4	0	0
SEATTLE-TACOMA	67	46	77	40	57	4	.2	-2	.1	5.2	84	18.5	112	97	47	0	0	0	2	0	0
SPOKANE	67	40	83	30	54	3	.1	-2	.1	2.2	86	5.7	86	88	34	0	2	1	0	0	0
YAKIMA	76	38	89	29	57	3	0	-1	0	.4	35	2.0	61	85	23	0	2	0	0	0	0
WV BECKLEY	69	50	77	41	60	3	.4	-3	.2	6.0	75	13.7	94	93	52	0	0	0	4	0	0
CHARLESTON	71	50	84	45	60	0	.7	-1	.3	5.5	68	12.1	83	100	58	0	0	0	5	0	0
HUNTINGTON	71	50	84	46	60	0	1.0	.1	.6	6.6	81	13.1	93	95	55	0	0	0	4	1	1
PARKERSBURG	67	48	81	44	58	-2	1.4	.6	1.2	6.1	82	12.5	97	98	57	0	0	0	3	1	1
WI GREEN BAY	61	37	71	29	49	-1	0	-7	0	4.6	90	5.8	80	86	31	0	2	0	0	0	0
LACROSSE	63	39	69	32	51	-3	.1	-7	.1	5.9	108	7.3	101	86	30	0	1	1	0	0	0
MADISON	61	37	68	31	49	-4	.6	-1	.6	6.7	117	9.3	119	88	39	0	2	2	1	1	0
MILWAUKEE	56	44	65	41	50	0	1.5	.9	1.5	7.0	109	11.4	123	78	45	0	0	0	3	1	1
WAUSAU	60	37	67	29	49	-2	T	-8	T	4.4	83	5.9	82	84	28	0	3	1	0	0	0
WY CASPER	54	26	67	16	40	-8	.3	-2	.2	2.7	97	3.7	97	90	32	0	5	3	0	0	0
CHEYENNE	49	27	61	19	38	-9	.3	-2	.2	5.5	217	6.6	198	98	45	0	5	4	0	0	0
LANDER	55	32	69	20	43	-5	T	-6	T	3.4	90	3.6	73	72	28	0	4	0	0	0	0
SHERIDAN	56	30	69	20	43	-5	.1	-4	.1	3.4	98	4.8	96	85	37	0	4	2	0	0	0

Based on 1951-80 normals

April Weather and Crop Summary

HIGHLIGHTS: A series of storm systems developed over the country's midsection, then rapidly intensified as they moved eastward. These storms gave abundant rainfall to the southern Plains and across the northern Delta. Toward the end of the month, a stagnant weather pattern dampened the Plains and Mississippi Valley with beneficial rain, but locally torrential amounts inundated portions of north-central Texas with amounts of over 16 inches. Parts of the central and northern Plains and Pacific coast remained dry. Most of the Corn Belt and Southeast also received less than their normal rainfall for the month. Above-normal rainfalls, however, did relieve extreme drought in southern Florida. Unseasonably warm conditions continued to prevail over the western third of the Nation, but much of the Ohio and middle Mississippi Valleys and central and southern Plains experienced cool weather for much of the month.

APRIL 1-7: 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 degrees Fahrenheit) and Paducah, KY (24 degrees Fahrenheit) were the lowest on record for so late in the season.

APRIL 8-14: Cooler-than-normal conditions persisted across the eastern two-thirds of the Nation, while more summer-like weather dominated west of the Rockies, where well-above-normal temperatures and little or no precipitation occurred. Twice during the week, storm systems developed over the country's midsection, then rapidly intensified as they moved eastward. Ahead of these systems, showers and thunderstorms afflicted scattered portions of the Southeast, while heavier, more widespread rainfall dampened much of the East from the east-central Plains to New England. These disturbances generated some severe weather as they trekked through the southern Plains, creating softball-sized hail, hurricane-force wind gusts, and a few tornadoes in isolated locations through Texas and Oklahoma. Heavy thunderstorms also developed in southeastern Florida, dumping up to 5.3 inches of rain on the parched Miami area. Other portions of peninsular Florida, however, remained relatively dry. Considerably north and west of the systems, light to moderate snows blanketed portions of the northern Plains and Great Lakes with a few inches of snow.

APRIL 15-21: During the first part of the week, a strong cold front traveled southeastward out of the northern Plains and became stationary along the Gulf coast by Wednesday. The front spread precipitation over much of the eastern half of the Nation, with heavy amounts over Oklahoma into eastern Tennessee. A large cold air mass moved in behind the front as record-low temperatures for the

date were set from the middle Missouri Valley to the middle and northern Atlantic coast from Tuesday to Thursday. During the latter part of the week, showers and thunderstorms progressed from the southern Plains into the Northeast and drenched north-central Texas to northwestern Arkansas with more heavy rain. Showers were widely scattered in the West as dry conditions again generally prevailed. Abnormally warm weather also continued in the West as temperatures averaged 12 degrees Fahrenheit above normal in the northern Intermountain Plateau. The mild weather covered most of the Nation by week's end.

APRIL 22-28: At the first of the week, welcome rains moved into the West, while thunderstorms were scattered across the Great Plains, upper Mississippi Valley, and the Southeast. Temperatures soared into the 90's as far north as Fargo, ND, with balmy weather spreading over much of the eastern half of the Nation. A stagnant weather pattern developed during the remainder of the week, as a large high pressure system centered on the middle Atlantic coast brought dry conditions and record heat to the East and pumped abundant moisture from the Gulf into the midsection of the Nation. Moderate to heavy rains dampened much of the Plains and Mississippi Valley. The rainfall was much needed over the northern and central Plains and western Corn Belt. Thunderstorms, however, caused severe weather with damaging wind, large hail, tornadoes, and drenching rain in the southern Plains. Locally torrential rains produced flooding in Texas, where De Leon was pounded with 17.5 inches while Brownwood was deluged with over 16 inches. At week's end, the heavy rain shifted eastward into the Southeast as snow blanketed parts of the northern Plains and northern Rockies. Above-average temperatures prevailed across most of the Nation as record-high temperatures for the date were broken daily. Conditions were unseasonably hot from the upper Mississippi Valley to the Northeast, where over 35 records were broken or tied on Friday. Cold air dipped into the North Central States toward the end of the week.

APRIL 29-30: The warm, dry weather in the East was replaced by cool and wet conditions. A strong frontal system brought colder air into the Nation's midsection as snow blanketed the central Rockies.

FIELDWORK

Rain and wet field conditions slowed fieldwork in the Delta and central and southern Great Plains during most of April. Soil moisture was adequate or adequate to surplus in those areas. The northern Great Plains and Pacific Northwest were dry during most of April but did receive some beneficial rains near the end of the month. Soil moisture was short or short to adequate in the northern Great Plains and most of the West. At the end of April, soil moisture was adequate in the eastern Corn Belt, but portions of the western Corn Belt needed rain. In the Southeast and East, soil moisture was mostly adequate except in Georgia, Florida, and South Carolina, where additional moisture was needed.

Corn planting lagged behind normal during April. Rain slowed planting in the Delta and portions of the Corn Belt during the month. By April 29, planting was underway in all 17 major producing States and was 21 percent (‡) complete, 5 percentage points behind the 5-year average. Planting lagged more than 15 points behind normal in Illinois, Kentucky, and Missouri. North Carolina producers planted one-half of their crop during the last 2 weeks of April. Planting was nearly complete in Georgia by month's end.

April Weather in Historical Perspective

Temperatures for April 1990 averaged over the Nation were above the long-term mean (fig. 1). The national mean precipitation index makes this April the 45th driest on record (fig. 2). The two driest Aprils (as measured by this index) occurred in 1987 and 1989.

Regional rankings (table 1) for the nine climatically homogeneous regions (fig. 3) show the unusual warmth across the three Western regions and in the Northeast. The Southeast and Central regions were dry as their precipitation ranked in the lower third of the distribution.

According to preliminary data, there were 121 tornadoes across the contiguous United States in April 1990. The January-April total for the Nation is a near-record (fig. 4).

Figure 1

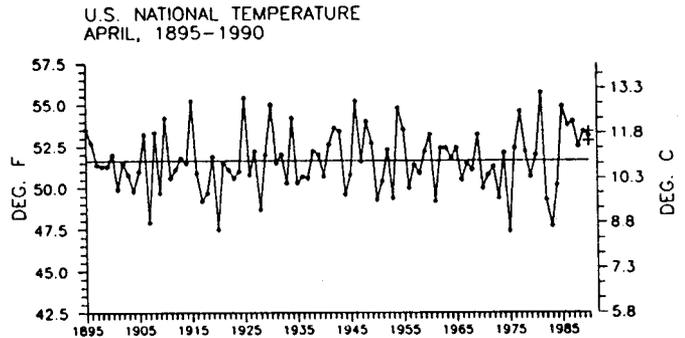


Figure 2

U.S. NATIONAL MEAN PRECIP INDEX
APRIL, 1895-1990

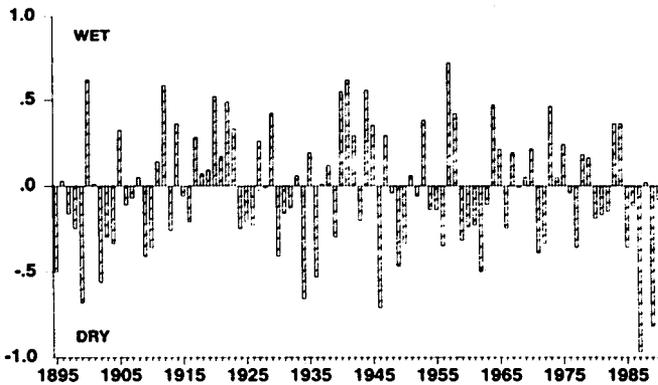


TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR APRIL 1990, BASED ON THE PERIOD 1895-1990. 1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	65	75
EAST NORTH CENTRAL	44	66
CENTRAL	21	38
SOUTHEAST	22	42
WEST NORTH CENTRAL	38	65
SOUTH	63	47
SOUTHWEST	47	88
NORTHWEST	62	90
WEST	39	92

Figure 3

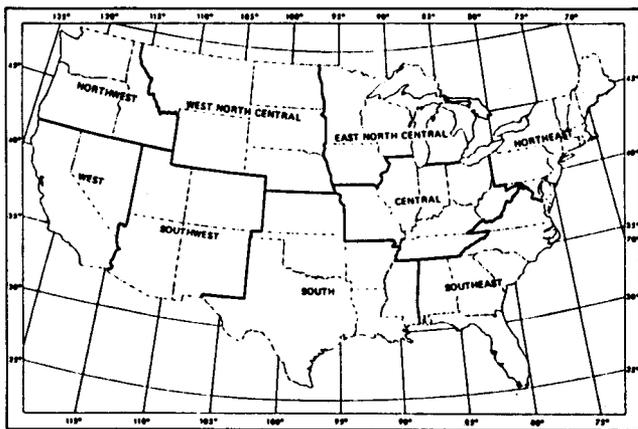
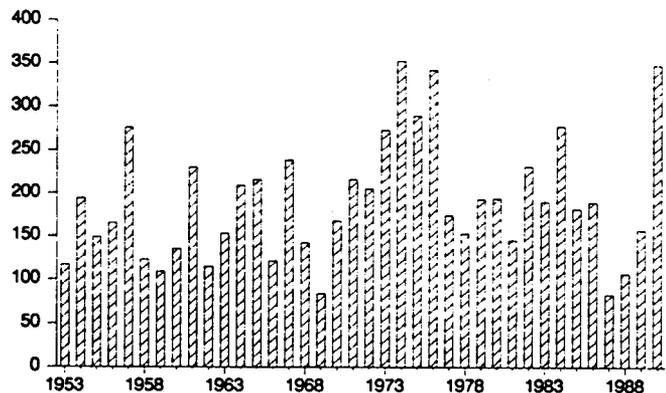
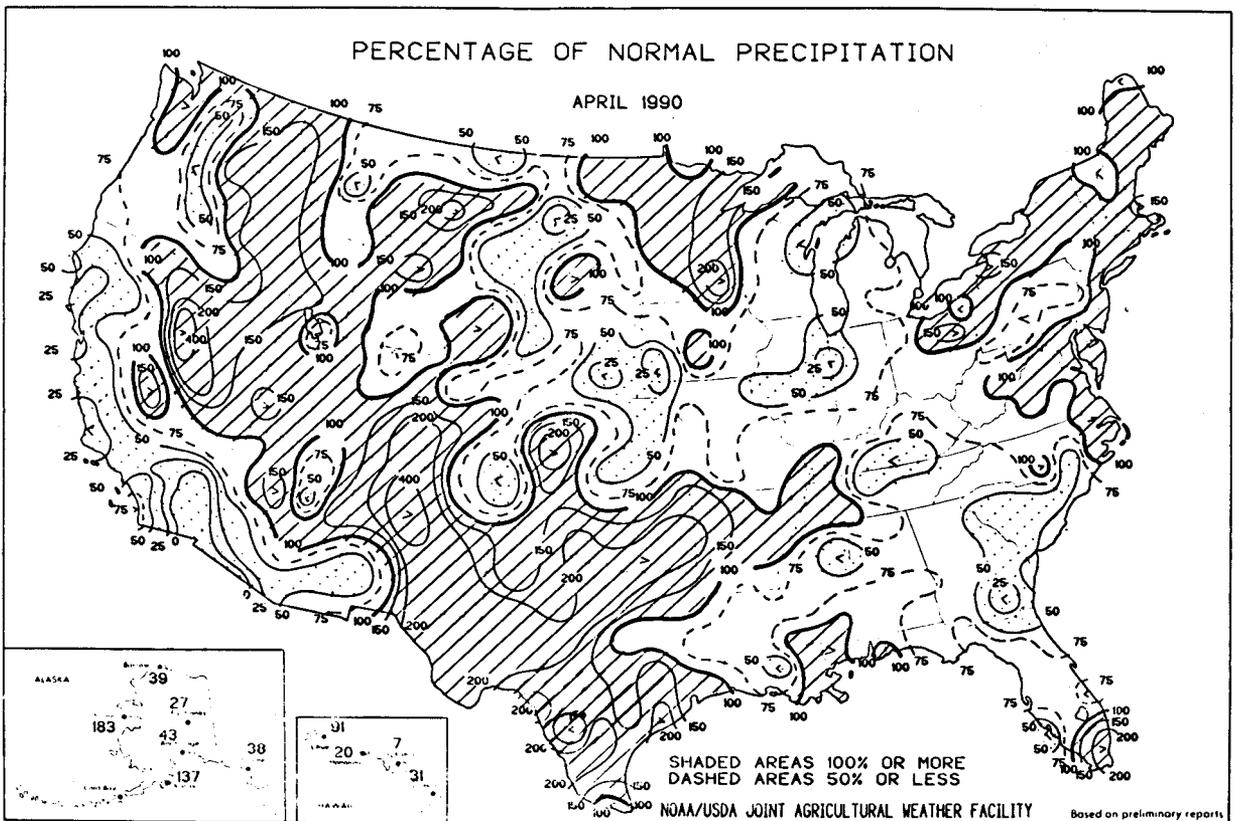
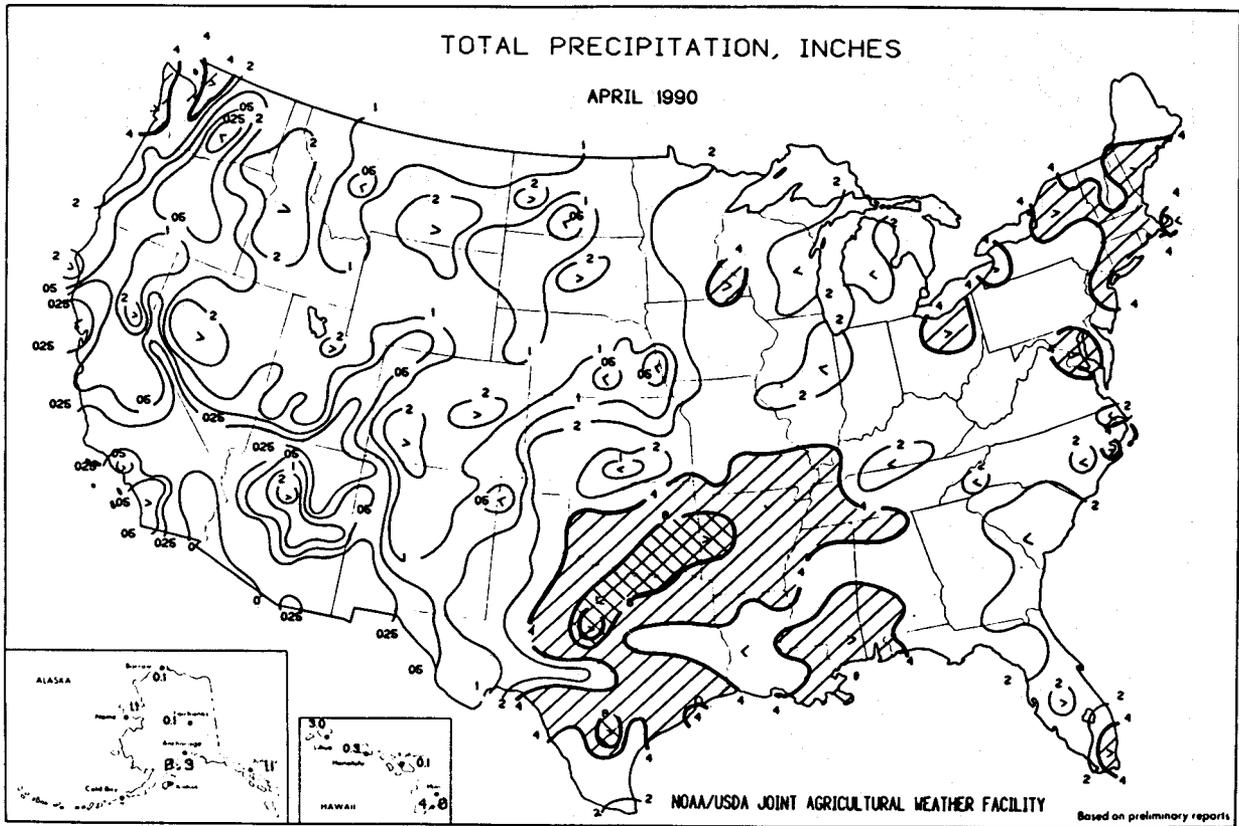
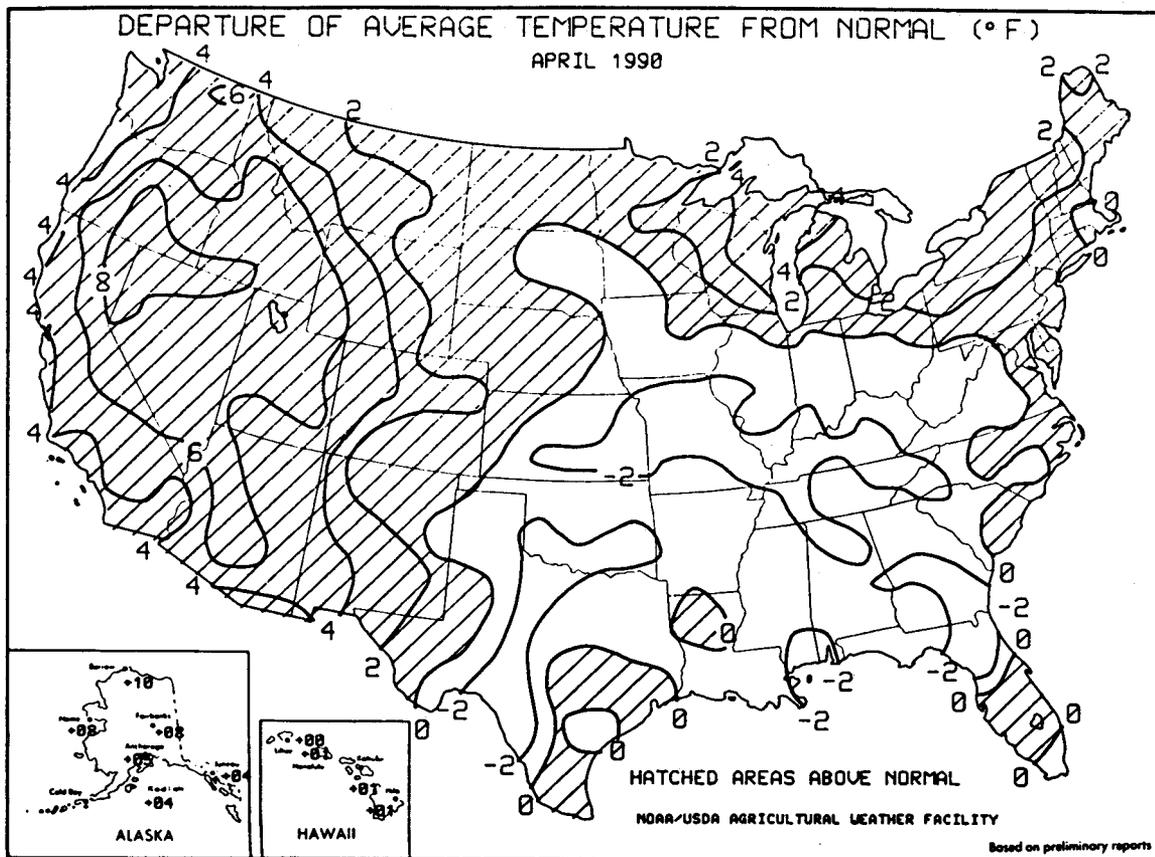
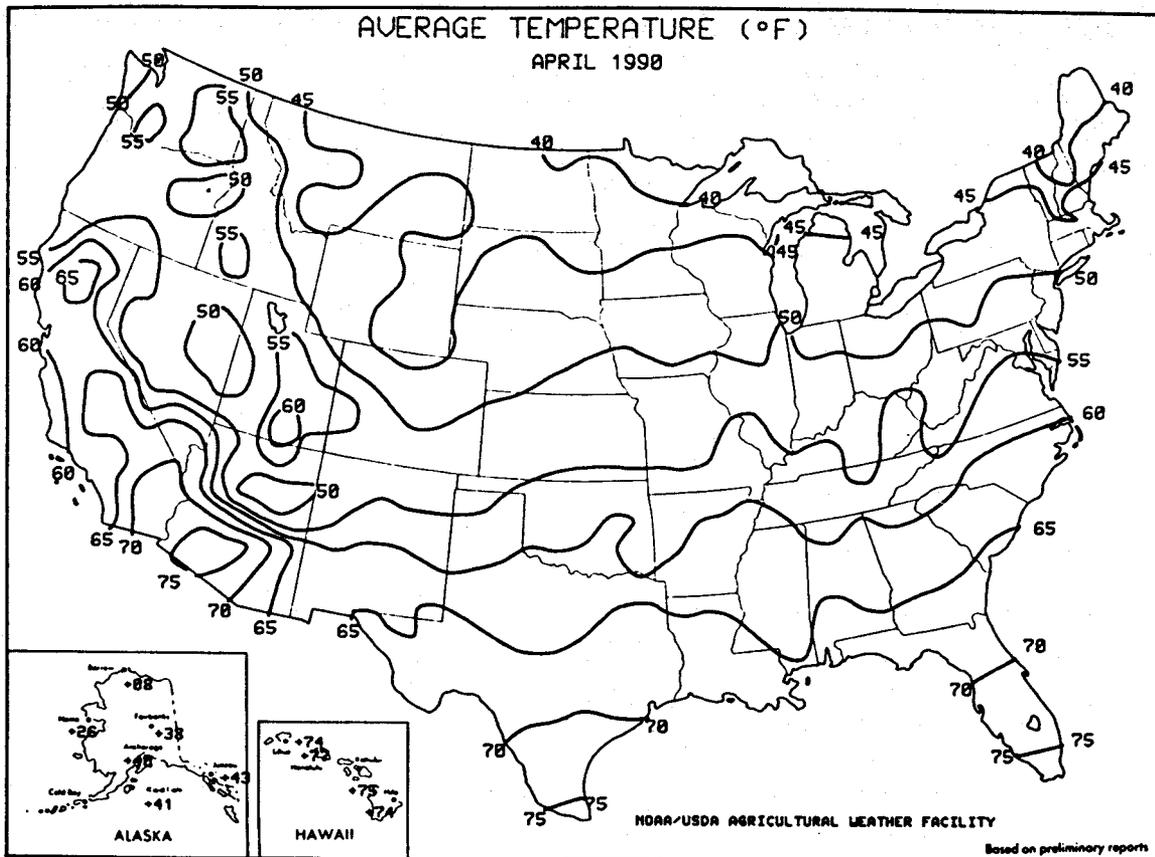


Figure 4

TOTAL NUMBER OF TORNADES, U.S.
JANUARY-APRIL TOTAL, 1953-1990







Temperature and Precipitation Data for APRIL 1990

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
AL BIRMINGHAM	61	-2	2.6	-2.4	PAIDCAH	56	-2	4.6	0.0	DAYTON	51	-1	3.0	-0.4
HUNTSVILLE	60	-2	4.5	-0.4	LA ALEXANDRIA	67	0	3.0	-2.5	MANSFIELD	49	0	4.6	1.0
MOBILE	65	-3	4.5	-0.8	BATON ROUGE	68	0	2.7	-2.9	TOLEDO	49	1	2.1	-0.9
MONTGOMERY	63	-2	3.7	-0.7	LAKE CHARLES	67	-2	3.6	-0.3	YOUNGSTOWN	50	2	3.2	-0.2
ANCHORAGE	40	5	0.3	-0.4	NEW ORLEANS	68	-1	4.6	0.1	OK OKLAHOMA CITY	59	-1	5.1	2.2
BARRON	8	10	0.1	-0.1	SHREVEPORT	66	0	4.3	-0.4	TULSA	60	-1	5.3	1.2
FAIRBANKS	38	8	0.1	-0.2	ME CARIBOU	40	3	2.3	-0.3	OR ASTORIA	51	3	4.4	-0.3
JUNEAU	43	4	1.1	-1.8	PORTLAND	44	2	5.2	1.3	BURNS	50	7	0.3	-0.4
KODIAK	41	4	6.6	3.0	MD BALTIMORE	55	1	4.2	0.9	MEDFORD	58	7	0.8	-0.2
NOME	26	8	1.1	0.5	MA SALISBURY	54	0	3.4	0.3	PENDLETON	55	5	1.5	0.6
AZ FLAGSTAFF	46	4	2.3	0.9	MI ALPENA	44	3	2.3	-0.2	PORTLAND	55	4	2.3	0.0
PHOENIX	76	8	0.2	-0.1	DETROIT	49	1	2.7	-0.4	PA SALEM	53	4	1.7	-0.7
PRESKOTT	55	6	0.8	0.0	FLINT	48	2	2.1	-0.9	ALLENTOWN	52	2	2.3	-1.6
TUCSON	70	5	0.1	-0.2	GRAND RAPIDS	48	1	2.2	-1.3	ERIE	49	4	3.5	0.0
WINSTON	55	2	0.1	-0.2	HUGHTON LAKE	45	3	1.8	-0.8	HARRISBURG	53	1	2.6	-0.6
YUMA	75	5	0.0	0.0	LANSING	48	2	2.4	-0.5	PHILADELPHIA	53	0	3.2	-0.3
AR FORT SMITH	60	-1	8.5	4.3	MARQUETTE	42	5	2.3	-1.3	PITTSBURGH	51	1	3.5	0.2
LITTLE ROCK	61	-1	5.9	0.5	MUSKOGEE	46	1	2.0	-1.1	SCRANTON	50	2	2.5	-0.5
CA BAKERSFIELD	67	4	0.2	-0.5	SAULT ST. MARIE	41	3	1.8	-0.6	WILLIAMSPORT	52	2	2.6	-1.0
BISHOP	58	5	0.6	0.3	MN ALEXANDRIA	43	2	2.0	-0.2	RI PROVIDENCE	48	0	5.6	1.6
EUREKA	53	3	1.4	-1.5	DULUTH	40	2	3.8	1.6	SC CHARLESTON	66	2	1.7	-0.9
FRESNO	66	6	0.9	-0.2	INT'L FALLS	39	1	1.5	-0.1	COLUMBIA	63	0	1.3	-2.3
LOS ANGELES	63	3	0.3	-0.6	MINNEAPOLIS	47	1	3.8	1.8	FLORENCE	64	0	1.3	-1.7
REDDING	65	5	0.7	-2.2	ROCHESTER	46	1	6.5	3.9	GREENVILLE	59	-2	2.2	-2.1
SACRAMENTO	63	5	0.9	-0.4	ST. CLOUD	44	1	2.7	0.4	SD ABERDEEN	44	-1	1.9	0.0
SAN DIEGO	63	2	0.8	0.0	GREENWOOD	63	-1	3.8	-1.7	HUNTON	45	0	1.9	-0.1
SAN FRANCISCO	59	4	0.2	-1.3	JACKSON	64	-1	3.7	-2.0	RAPID CITY	45	1	0.8	-1.2
STOCKTON	64	5	0.5	-0.9	MERIDIAN	64	-1	4.7	-0.7	STIOUX FALLS	46	0	1.9	-0.5
(X) ALAMOGA	48	1	2.9	-0.7	TUPELO	61	-2	2.5	-3.2	TN BRISTOL	55	-1	2.4	-1.1
CO. SPRINGS	47	1	2.0	0.6	ND CAPE GIRARDEAU	57	-	4.6	0.1	CHATTANOOGA	60	0	2.9	-1.7
DENVER	49	2	1.0	-0.8	COLUMBIA	53	-2	2.8	-1.1	KNOXVILLE	58	-2	2.6	-1.3
GRAND JUNCTION	56	4	0.7	0.0	KANSAS CITY	53	-3	2.5	-0.9	MEMPHIS	61	-1	6.9	1.2
PUEBLO	52	1	1.6	0.6	SAINT LOUIS	56	0	3.1	-0.5	NASHVILLE	58	-1	1.6	-2.9
CT BRIDGEPORT	49	1	4.9	1.2	SPRINGFIELD	55	-1	2.5	-1.5	TX ARLINGE	63	-3	4.6	2.2
HARTFORD	49	0	4.6	0.6	MT BILLINGS	46	2	2.1	0.2	AMARILLO	56	-1	1.1	0.1
DC WASHINGTON	57	0	4.1	1.2	GLASGOW	44	1	0.7	0.0	AUSTIN	70	1	3.1	0.0
FL APALACHICOLA	67	-1	2.2	-1.0	GREAT FALLS	45	2	0.8	-0.6	BEAUMONT	69	0	4.2	0.0
DAYTONA BEACH	70	0	1.5	-0.8	HAVRE	44	0	0.6	-0.5	BROWNSVILLE	76	1	1.6	0.0
FT. MYERS	75	2	0.4	-1.1	HELENA	46	4	0.4	-0.6	CORPUS CHRISTI	73	0	3.4	1.6
JACKSONVILLE	67	-2	1.3	-1.7	KALISPELL	45	2	1.5	0.4	DEL RIO	69	-3	4.8	3.0
KEY WEST	77	-1	1.4	-0.1	MILES CITY	47	2	2.8	1.5	EL PASO	67	3	0.3	0.1
MIAMI	75	0	7.0	3.7	MISSOULA	48	4	1.4	0.4	PURT WORTH	64	-1	6.9	2.8
ORLANDO	72	-1	1.7	-0.5	NE GRAND ISLAND	50	0	0.5	-2.2	GALVESTON	70	1	3.2	0.5
TALLAHASSEE	66	-1	3.4	-0.7	LINCOLN	51	0	0.7	-2.2	HOUSTON	69	0	6.2	2.5
TAMPA	72	0	1.5	-0.3	NORFOLK	49	1	0.7	-1.5	LAREDO	76	0	2.7	0.5
WEST PALM BEACH	74	0	2.8	-0.4	NORTH PLATTE	49	1	1.5	-0.3	LUBBOCK	62	1	1.4	0.4
GA ATHENS	61	-1	2.2	-1.8	OMAHA	51	-1	0.3	-2.6	MIDLAND	65	1	2.0	1.2
ATLANTA	62	0	2.8	-1.7	SCOTTSDUFFY	47	1	1.8	0.3	SAN ANGELO	65	-2	4.1	2.4
AUGUSTA	62	-1	1.1	-2.2	VALENTINE	46	0	1.2	-0.6	SAN ANTONIO	70	0	4.5	1.8
MACON	63	-3	2.1	-1.4	NV ELKO	50	7	1.5	0.7	VICTORIA	71	-1	3.6	1.0
SAVANNAH	65	-1	1.8	-1.4	ELY	47	6	1.1	0.2	WACO	67	0	3.1	-0.7
HI HILO	74	1	4.0	-9.1	LAS VEGAS	69	5	0.2	0.0	WICHITA FALLS	62	-2	7.0	4.0
HONOLULU	77	1	0.3	-1.2	RENO	55	8	0.3	-0.1	BLANDING	—	-	0.8	0.1
KAHULUI	75	1	0.1	-1.0	WINNEMUCA	53	8	1.3	0.5	CDAR CITY	51	4	1.5	0.6
LITHUE	74	0	3.0	-0.3	NH CONCORD	46	1	3.0	0.0	SALT LAKE CITY	55	6	1.1	-1.1
ID BOISE	55	6	2.1	1.0	NJ ATLANTIC CITY	51	0	3.6	0.4	BURLINGTON	46	3	2.8	0.0
LEWISTON	57	7	2.1	1.0	NM ALBUQUERQUE	57	2	1.7	1.3	LYNCHBURG	56	0	3.1	0.2
POCATELLO	50	6	1.4	0.3	CLOVIS	57	0	1.2	0.4	NORFOLK	59	0	3.6	0.7
IL CAIRO	—	—	5.3	0.9	ROSWELL	63	3	0.8	0.4	RICHMOND	58	0	2.8	-0.1
CHICAGO	50	1	1.8	-2.1	NY ALBANY	49	2	3.9	1.0	ROANOKE	56	-1	2.1	-1.0
MOLINE	50	0	3.5	-0.4	BINGHAMTON	47	3	3.1	0.0	COLUMBIA	47	1	1.1	0.0
PEORIA	50	-1	2.3	-1.5	BUFFALO	48	3	5.2	2.2	QUILLAYUTE	49	3	5.5	-1.7
QUINCY	51	-2	1.6	-2.3	NEW YORK	53	1	5.3	1.6	SEATTLE-TACOMA	52	3	2.5	0.2
ROCKFORD	48	0	2.8	-1.4	ROCHESTER	49	3	3.6	0.9	SPOKANE	50	4	1.3	0.3
SPRINGFIELD	51	-3	1.3	-2.7	SYRACUSE	49	3	4.1	0.8	WALLA WALLA	57	5	2.5	1.1
EVANSVILLE	54	-3	3.8	-0.3	NC ASHEVILLE	54	-2	2.0	-1.5	YAKIMA	54	5	0.2	-0.3
PORT WAYNE	50	0	2.4	-1.2	CHARLOTTE	61	1	2.0	-1.2	WV BECKLEY	51	0	3.3	-0.1
INDIANAPOLIS	51	-1	2.4	-1.2	GREENSBORO	58	0	2.9	-0.2	CHARLESTON	55	-1	2.9	-0.6
SOUTH BEND	48	0	2.9	-1.3	HATTERAS	61	2	3.5	0.3	ELKINS	48	-1	3.7	0.0
IA DES MOINES	50	0	3.4	0.2	NEW BERN	62	0	4.4	1.4	HUNTINGTON	55	-1	3.2	-0.3
DUBUQUE	48	1	2.3	1.9	HALEIGH	60	1	2.2	-0.7	PARKERSBURG	53	-1	2.5	-0.9
STIOUX CITY	49	0	1.6	-0.7	WILMINGTON	63	0	2.2	-0.8	GREEN BAY	48	4	1.3	-1.4
WATERLOO	48	0	2.9	-0.7	ND BISMARCK	44	1	0.3	-1.2	LA CROSSE	49	2	2.6	-0.4
KS CONCORDIA	52	-1	1.2	-1.1	FARGO	44	1	1.8	-0.1	MADISON	49	2	1.9	-1.2
DOUGD CITY	52	-2	3.6	1.8	GRAND FORKS	42	1	1.7	0.4	MILWAUKEE	49	5	2.7	-0.7
GOOULAND	50	2	0.8	-0.4	WILLISTON	43	1	0.6	-0.7	WAUSAU	47	3	2.0	-0.8
TOPEKA	52	-3	1.0	-2.1	OH AKRON-CANTON	49	1	5.1	1.9	CASPER	44	2	1.4	-0.1
WICHITA	54	-2	0.8	-1.6	CINCINNATI	53	-1	3.2	-0.3	CHEYENNE	43	1	1.7	0.4
KY BOWLING GREEN	56	-2	1.7	-2.5	CLEVELAND	49	1	4.6	1.3	LANDER	47	4	1.9	-0.3
JACKSON	57	4	3.0	-1.0	COLUMBUS	51	-1	2.8	-0.6	SHERIDAN	44	1	2.3	0.3
LEXINGTON	53	-2	2.4	-1.6										
LOUISVILLE	55	-1	3.5	-0.6										

Based on 1951-80 normals.

Heating Degree Days (Base 65°) For

APRIL 1990

States and Stations	TOTAL	Depart Normal	States and Stations	TOTAL	Depart Normal	States and Stations	TOTAL	Depart Normal
AL. Birmingham	168	58	MD. Baltimore	341	7	OK. Okla. City	202	18
Mobile	71	28	MA. Boston	524	35	Tulsa	194	26
Montgomery	119	47	Chatham	604	-8	OR. Astoria	435	-87
AK. Anchorage	746	-142	MI. Alpena	639	-102	Burns	442	-215
Barrow	1720	-281	Detroit	506	-22	Medford	221	-220
Fairbanks	798	-246	Flint	529	-47	Pendleton	299	-142
Nome	1164	-249	Grand Rapids	549	-12	Portland	308	-130
AZ. Flagstaff	558	-144	Houghton Lake	627	-66	Salem	363	-120
Phoenix	0	-52	Lansing	546	-15	PA. Allentown	416	-34
Tucson	16	-70	Marquette	702	-126	Erie	500	-103
Winslow	287	-73	S. Ste. Marie	719	125	Harrisburg	385	1
Yuma	0	-37	MN. Duluth	745	-56	Philadelphia	375	12
AR. Fort Smith	180	33	Internatl Falls	796	-8	Pittsburg	439	-8
Little Rock	168	44	Minneapolis	569	-1	Scranton	465	-36
CA. Bakersfield	22	-115	Rochester	596	-16	RI. Providence	511	-2
Eureka	356	-112	St. Cloud	652	-8	SC. Charleston	67	-2
Fresno	52	-135	MS. Jackson	125	48	Columbia	115	28
Los Angeles	35	-145	Meridian	110	25	Greenville	199	45
Redding	52	-158	MO. Columbia	390	74	SD. Aberdeen	639	27
Stockton	63	-243	Kansas City	398	84	Huron	611	29
San Diego	52	-72	St. Louis	327	48	Rapid City	597	-15
San Francisco	189	-117	Springfield	336	57	Sioux Falls	586	25
CO. Denver	469	-59	MT. Billings	560	-52	TN. Chattanooga	171	0
Pueblo	394	-27	Glasgow	626	-49	Knoxville	239	58
CO. Bridgeport	476	-16	Great Falls	613	-56	Memphis	181	55
Hartford	478	-8	Havre	642	-27	Nashville	245	59
DC. Washington	285	28	Helena	573	-108	TX. Abilene	123	25
FL. Apalachicola	39	9	Kalispell	589	-83	Amarillo	276	5
Jacksonville	49	28	Miles City	532	-71	Austin	26	-15
Key West	0	0	Missoula	512	-121	Beaumont	26	3
Miami	0	0	NE. Grand Island	456	9	Brownsville	2	2
Orlando	5	5	Lincoln	443	26	Corpus Christi	8	1
W. Palm Beach	1	1	Norfolk	500	11	Del Rio	30	15
Tallahassee	68	20	North Platte	502	-20	El Paso	45	-48
Tampa	5	5	Omaha	460	22	Fort Worth	102	17
GA. Atlanta	150	17	Valentine	555	-21	Galveston	16	-3
Augusta	118	26	NV. Ely	547	-176	Houston	34	2
Macon	119	59	Las Vegas	12	-119	Lubbock	147	-31
Savannah	81	39	Reno	312	-246	Midland	105	3
ID. Boise	303	-189	Winnemucca	360	-231	San Angelo	95	22
Lewiston	233	-211	NH. Concord	585	-42	San Antonio	32	4
Pocatello	438	-174	NJ. Atlantic City	421	1	Victoria	23	5
IL. Chicago	491	5	NM. Albuquerque	233	-69	Waco	64	-7
Moline	483	45	NY. Albany	500	-52	Wichita Falls	154	36
Peoria	475	64	Binghamton	549	-72	UT. Salt Lake City	297	-177
Rockford	534	21	Buffalo	518	-70	VT. Burlington	577	-92
Springfield	459	105	New York	367	-26	VA. Lynchburg	302	39
Fort Wayne	479	5	Rochester	520	-50	Norfolk	234	15
Indianapolis	432	50	Syracuse	496	-71	Richmond	258	32
South Bend	521	26	NC. Asheville	321	38	Roanoke	297	29
IA. Des Moines	469	34	Charlotte	158	-28	WA. Quillayute	477	-93
Dubuque	547	13	Greensboro	237	82	Seattle-Tacoma	379	-110
Souix City	500	37	Hatteras	159	-56	Spokane	454	-122
KS. Concordia	404	37	Raleigh	186	5	Walla Walla	250	-131
Dodge City	384	53	Wilmington	114	20	Yakima	342	-132
Goodland	444	-45	ND. Bismark	650	-25	WV Beckley	427	22
Topeka	413	92	Fargo	666	-21	Charleston	323	25
Wichita	332	57	Williston	649	-47	Huntington	331	38
KY. Lexington	378	72	OH. Akron-Canton	494	2	WI. Green Bay	547	-92
Louisville	320	56	Cincinnati	390	40	La Crosse	504	-72
LA. Baton Rouge	57	25	Cleveland	492	-15	Madison	519	-57
Lake Charles	57	28	Columbus	444	36	Milwaukee	502	-110
New Orleans	41	16	Dayton	450	45	WY Casper	614	-73
Shreveport	92	23	Toledo	492	-24	Cheyenne	662	-34
ME. Caribou	759	-72	Youngstown	488	-40	Lander	552	-129
Portland	607	-59			Sheridan	632	-43	

Based on 1951-80 normals.

National Agricultural Summary

April 30-May 6, 1990

HIGHLIGHTS: Rain and wet field conditions continued to slow fieldwork in Arkansas, Missouri, Kentucky, and Tennessee. Rain also hampered fieldwork in portions of the central and southern Great Plains and Corn Belt. Soil moisture was adequate or adequate to surplus in those areas. Dry weather prevailed over most of the northern Great Plains and the West, where soil moisture was generally short to adequate. In the East, soil moisture was mostly adequate except in Georgia, Florida, and South Carolina, where rain was needed. Irrigation was extensive in Florida's citrus and vegetable producing areas. Pasture conditions continued to decline in California and North Dakota. Flooding caused some livestock losses in Texas.

SMALL GRAIN: Winter wheat was good to fair with 23 percent (%) of the acreage headed, 6 percentage points behind the 5-year average. The percent of acreage headed lagged 10 or more points behind normal in Illinois, Kansas, and Missouri. In Kansas, insect and disease problems were light to moderate and crop condition was good to excellent. Oklahoma's crop was rated good, but heavy rains have flooded some low lying areas. Heavy rains have caused flooding along the Arkansas River in Arkansas, where crop condition was fair to good. In western Nebraska, Russian wheat aphids continued to cause heavy damage. Crop condition was fair to good. Winter wheat was good to fair in Montana and South Dakota and good in Colorado. In Texas, winter wheat was fair to good. Heavy rain and hail caused some damage in the Cross Timbers and Blacklands. Recent rains improved condition in the High Plains. Harvest was underway in southern Texas. In the Corn Belt, winter wheat was good to fair. Georgia's crop was fair to good. Rust, mildew, and Hessian fly problems were widespread. Harvest was underway in southern California. Some frost damage occurred in Washington. Lack of moisture continued to stress winter wheat in portions of both Oregon and Washington. Idaho's crop was mostly good, but producers were spraying for Russian wheat aphids in some areas.

Spring wheat seeding was 75% complete, 10 points ahead of normal. Thirty-five percent of the crop was emerged, 6 points ahead of normal. Seeding was complete in South Dakota and nearly complete in Idaho. In North Dakota, seeding was 62% complete, 3 points ahead of normal.

CORN: Corn planting was 50% complete, 3 points behind normal. Producers planted over one-third of their crop in Iowa, Nebraska, and Ohio. Rain slowed planting in Kentucky and Missouri. Planting lagged 41 points behind the 76% average in Missouri. Planting also lagged behind normal in Illinois and Colorado.

COTTON: Cotton planting was 39% complete, 5 points behind normal. Rain and wet field conditions continued to slow planting in Arkansas, Missouri, Tennessee, and Texas. Planting lagged 38 and 49 points behind normal in Missouri and Tennessee, respectively. Planting progressed rapidly in Georgia, Louisiana, Mississippi, and the Carolinas. Planting was nearly complete in Arizona and California. Arizona's crop was in good condition.

OTHER FIELD CROPS: Soybean planting was 5% complete, 3 points behind normal. Planting was

underway in all 19 major producing States except Arkansas. Rice seeding was 34% complete, 33 points behind normal. Twenty-three percent of the crop was emerged, 17 points behind normal. Rain slowed seeding in Arkansas. Arkansas' seeding lagged 52 points behind the 64% average. High winds slowed aerial seeding in California. Sorghum planting was 21% complete, 3 points behind normal. Rain slowed planting in Arkansas, Missouri, Oklahoma, and Texas. Flooding damaged sorghum fields in portions of the Blacklands and Cross Timbers areas of Texas. In Georgia, dry soil conditions slowed peanut planting. Rain slowed peanut planting in the Cross Timbers area of Texas. Sugarbeet planting was nearly complete in Colorado. Freezing temperatures were expected to force some sugarbeet replanting in the Nebraska Panhandle. Tobacco was good to fair in Kentucky and North Carolina.

FRUIT AND NUTS: Irrigation was extensive in Florida's citrus producing areas. Grapefruit harvest was nearly complete and Valencia orange harvest slowed. Peach harvest continued in Alabama and Georgia. Hail caused some peach crop damage in Georgia. In Texas, citrus groves with younger trees continued to recover from the winter freeze while older trees showed little or no regrowth. Early peach harvest continued. In Arizona, Valencia orange and grapefruit harvests continued. In California, high winds caused some almond nut drop in the northern Sacramento Valley. High winds also damaged some of the early cherry crop in Riverside County. In the Central Valley, early variety peaches and nectarines were coloring. In Oregon, freezing temperatures may have caused some fruit crop damage in the Willamette Valley. In New York, fruit set was good to excellent for peaches and pears. In New England, fruit trees were in the bud to early bloom stage.

VEGETABLES: Summer-like temperatures with limited rainfall prevailed over Florida's vegetable producing areas. Harvest declined seasonally in southern Florida but increased in central areas. Above-normal temperatures stressed vegetables in Georgia. Georgia's onion harvest was 64% complete. In South Carolina, watermelons and cantaloupe were fair to good. In Louisiana, vegetables were in good to fair condition. In Texas, onion, melon, and cucumber harvests continued in the Rio Grande Valley. Onion harvest was underway in the San Antonio-Winter Garden area. Cool temperatures slowed vegetable growth in the Trans-Pecos, High Plains, and the eastern part of the State. Lettuce harvest was complete in central Arizona. In California, asparagus and broccoli supplies were heavy in the central coast area. Spring potato crop harvest was underway in the Kern District. Potato planting continued in Idaho and Colorado.

PASTURES AND LIVESTOCK: Pasture and range condition was mostly good to fair except in the northern Great Plains and portions of the West. Range condition continued to deteriorate in California. In North Dakota, pastures were in mostly poor condition. Stockwater supplies remained short. In Texas, flooding caused some livestock losses and damaged fences.

(Continued from front cover)

which is more than twice the amount normally received by this time of year. The system rolled northeastward and brought soaking rains from the central Plains to the northern and middle Atlantic coast by week's end. Abnormally warm weather remained over the West and Southeast as record-high temperatures for the date were set daily. In contrast, unseasonably cold air prevailed over much of the central States as the central High Plains averaged more than 15 degrees Fahrenheit below normal.

Crop Progress

FOR WEEK ENDING MAY 6, 1990

	RICE % PLANTED		
	1990	1989	AVG.
ARK	12	69	64
CALIF	10	40	31
LA	73	72	80
MISS	40	74	77
TEX	78	95	93

5 STATES 34 69 67

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

	RICE % EMERGED		
	1990	1989	AVG.
ARK	8	23	29
CALIF	1	2	3
LA	57	64	68
MISS	16	32	44
TEX	54	85	75

5 STATES 23 36 40

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

CORN
% PLANTED

	1990 1989 AVG.		
	1990	1989	AVG.
COLO	46	65	61
GA	97	97	97
ILL	49	58	72
IND	46	25	51
IOWA	64	43	59
KANS	50	60	50
KY	28	51	57
MICH	35	30	30
MINN	42	23	39
MO	35	79	76
NEBR	60	56	47
N C	90	47	76
OHIO	62	9	51
PA	21	14	23
S DAK	15	17	15
TEX	91	95	95
WIS	20	12	24

17 STATES 50 42 53

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

SPRING WHEAT
% PLANTED

	1990 1989 AVG.		
	1990	1989	AVG.
IDAHO	95	87	82
MINN	84	59	68
MONT	77	36	63
N DAK	62	40	59
S DAK	100	72	80

5 STATES 75 48 65

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

GRAIN SORGHUM
% PLANTED

	1990 1989 AVG.		
	1990	1989	AVG.
ARK	17	64	60
COLO	0	0	0
ILL	0	5	7
KANS	3	5	3
LA	72	55	63
MISS	46	45	51
MO	3	24	20
NEBR	1	6	4
N MEX	13	NA	NA
OKLA	1	8	5
S DAK	1	2	1
TEX	62	63	63

12 STATES 21 NA NA

EXCL. STATES WITH NA 21 25 24

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

NA - NOT AVAILABLE.

COTTON
% PLANTED

	1990 1989 AVG.		
	1990	1989	AVG.
ALA	71	78	72
ARIZ	96	92	90
ARK	17	38	42
CALIF	95	96	93
GA	40	37	43
LA	89	59	61
MISS	53	53	54
MO	6	39	44
N MEX	75	93	79
N C	49	16	45
OKLA	1	20	8
S C	52	19	55
TENN	8	64	57
TEX	17	17	22

14 STATES 39 42 44

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

SPRING WHEAT
% EMERGED

	1990 1989 AVG.		
	1990	1989	AVG.
IDAHO	74	53	53
MINN	34	19	35
MONT	23	3	25
N DAK	26	6	21
S DAK	76	42	49

5 STATES 35 14 29

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

Crop Condition

FOR WEEK ENDING MAY 6, 1990

	WINTER WHEAT % HEADED		
	1990	1989	AVG.
ARK	89	84	86
CALIF	95	95	94
COLO	4	1	5
GA	99	100	97
IDAHO	0	0	0
ILL	6	7	16
IND	3	1	2
KANS	5	35	20
MICH	0	0	0
MO	15	17	29
MONT	0	0	0
NEBR	0	0	0
N C	86	80	NA
OHIO	0	0	0
OKLA	50	85	55
OREG	2	1	2
S DAK	0	0	1
TEX	60	61	62
WASH	0	0	0

19 STATES 24 37 NA

EXCL. STATES WITH NA 23 36 29

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

NA - NOT AVAILABLE.

SOYBEANS
% PLANTED

	1990 1989 AVG.		
	1990	1989	AVG.
ALA	10	10	9
ARK	0	4	5
GA	10	6	8
ILL	5	8	15
IND	7	3	12
IOWA	6	2	6
KANS	4	5	3
KY	1	5	5
LA	7	3	5
MICH	2	5	1
MINN	6	2	7
MISS	8	7	6
MO	1	9	10
NEBR	3	4	3
N C	10	0	5
OHIO	11	1	12
S C	2	1	2
S DAK	1	1	2
TENN	1	10	7

19 STATES 5 4 8

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

WINTER WHEAT

STATE	VP	P	F	G	EX
ARK	0	4	63	33	0
CALIF	0	0	15	75	10
COLO	0	5	11	65	19
GA	3	10	42	45	0
IDAHO	0	0	17	54	29
ILL	0	0	20	74	6
IND	0	3	22	70	5
KANS	0	0	16	52	32
MICH	0	5	15	45	35
MO	1	3	47	46	3
MONT	1	4	22	58	15
NEB	0	1	59	37	3
N C	0	1	24	73	2
OHIO	0	4	25	56	15
OKLA	0	0	6	85	9
OREG	0	17	56	27	0
S DAK	0	7	36	54	3
TEX	1	11	37	41	10
WASH	0	0	30	65	5
19 STATE	0	3	25	57	15
PREV WEEK	0	3	21	63	13
PREV YEAR	22	19	39	18	2

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

State Summaries of Weather and Agriculture

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

much of State. Very dry conditions accompanied by gradual warming trend. By weekend, temperatures warmed to near record levels.

Open weather, good progress field activities. Some dryland grain cut for hay, grazed. Strong, dry winds caused lodging many grain fields. Early wheat harvested for grain southern areas. Aerial rice seeding progressed, although winds slowed pace. Some cotton fields cultivated, breaking crust previous week's showers. Few cotton, bean fields may need reseeded. Corn seeding continued. Harvest grain hay, green chop, alfalfa hay active. Fertilization, irrigation, pest control ongoing. Normal orchard cultural practices continued. High winds, northern Sacramento Valley, caused some almond nut drop. Central valley asian pear orchards pruned, fire blight damage. Riverside avocado harvest steady. High winds damaged early cherries. Grape bunch thinning, sucker removal, mildew control progressed. Desert grapefruit harvest continued. Kiwifruit, olives, pomegranates blooming. Navel, Valencia oranges packed, showing good quality, maturity. Central valley early variety peaches, nectarines were coloring. Desert peaches, nectarines were picked. Early plum varieties light, later varieties good set. Walnuts treated for blight. Asparagus supply fairly heavy central coast, excellent quality. Broccoli continued heavy supply central coast generally good quality. Cauliflower heavy supply Salinas area, moderate Santa Maria area, variable quality at both. Iceberg head lettuce moderate to heavy supply, central coast, variable quality. Harvest spring potato crop began Kern district. Strawberries fairly good supply central coast. Sweet potato planting continued. Livestock mostly good, active movement summer pastures. Sporadic showers helped little; range, pasture conditions continued to deteriorate. Stockwater currently sufficient. Below average snow pack causing concern about summer water supplies.

COLORADO: Heavy rain, snow over southern half of State, afternoon thunderstorms in the north limited fieldwork. Precipitation a trace in northwest to 2.50 in. southern part of the State. Temperatures 10 to 13° below normal in south, 5 to 7° below normal in north.

Days suitable for fieldwork 3.2. Soil moisture 19% short, 65% adequate, 16% surplus. Barley 88% seeded, 66% emerged. Oats 94% planted, 59% emerged. Spring wheat 70% seeded, 47% emerged. Corn 46% planted, 5% emerged. Dry onions 87% planted. Summer potatoes 65% planted, 14% emerged. Fall potatoes 8% planted. Sugarbeets 95% planted. Winter wheat mostly good. Range, pasture fair to good. Livestock mostly good.

FLORIDA: Rain spread across most of State; generally rather light, under 0.35 in., only isolated locations over 1.00 in. Temperatures generally 3 to 5° above normal. Warmest highs low 90s western Panhandle, southeast to upper 90s elsewhere. Coolest lows, low 50s north to mostly mid 60s central, south. Some locations interior of central, southern Peninsula lows into mid to upper 50s.

Soil moisture Panhandle short to adequate, Peninsula short. Planting cotton, peanuts active. Preparations underway for harvest winter wheat, planting soybeans. Corn, sugarcane, tobacco good

ALABAMA: Rainfall 0.50 to 1.00 in. north; under 0.05 in. elsewhere. Temperatures 3° above normal.

Days suitable for fieldwork 5.7. Soil moisture 23% short, 72% adequate, 5% surplus. Warm, dry weather allowed rapid pace of all field activities. Acreage intended for spring planting 87% prepared, 84% 1989, 89% avg. Fieldwork progress 22% behind schedule, 76% on schedule, 2% ahead of schedule. Corn 96% planted, 84% 1989, 91% avg. Sorghum 54% planted, 34% 1989, 27% avg. Cotton 71% planted, 78% 1989, 72% avg. Peanuts 56% planted, 39% 1989, 42% avg. Soybeans 10% planted, 10% 1989, 9% avg. Winter wheat 93% headed, 92% 1989, 88% avg.; 44% turning color, 48% 1989, 30% avg.; 1% very poor, 2% poor, 24% fair, 73% good. First hay 22% harvested, 14% 1989, 10% avg. Peach, strawberry harvest continued south. Pastures 2% poor, 29% fair, 66% good, 3% excellent. Livestock 19% fair, 78% good, 3% excellent. Primary activities: Preparing land, planting spring crops; applying fertilizers, lime, herbicides to cropland; cultivating row crops, applying side dressings; cutting, baling hay; repairing machinery; monitoring fish ponds; general care of livestock, poultry.

ARIZONA: Strong gusty winds, cool 29th; rain, snow over extreme north 30th. Scattered showers, thunderstorms 1st, 2nd; clearing 3rd; precipitation east 4th; sunny statewide 5th. Temperatures 3° below normal to 5° above; precipitation 0.50 to 0.75 in. higher elevations; 0.10 to 0.25 in. northeast, southeast; little to none elsewhere.

Cotton 96% planted, 92% 1989, 90% avg.; 100% good. Small grains heading 99%, same 1989, 99% avg.; 72% turning color, 56% 1989, 52% avg.; 63% good, 37% excellent. Alfalfa 55% good, 45% excellent; active to moderate activity. Valencia oranges, grapefruit harvested west, central. Artichoke, cabbage, few peaches harvested west. Potatoes, peaches harvested central. Lettuce harvest completed central. Mixed vegetables shipped central. Ranges in very poor; 56% normal, 75% 1989. Cattle fair. Sheep, lambs poor to fair. Stockwater short to adequate. Late rains higher elevations stimulated some growth.

ARKANSAS: Heavy rainfall, flooding in northwest. Showers statewide. Extremes 42°; 89°. Rainfall none to 9.36 in.

Days suitable for fieldwork 3.0. Soil moisture 4% adequate, 96% surplus. Main activities: Limited rice seeding; corn, cotton, sorghum, soybean planting in dry areas; spraying for diseases in wheat; fertilizing pastures, spraying for weed control; establishing ditches for water drainage; equipment maintenance, fence repair; livestock chores. Corn 70% planted, 96% 1989, 90% avg.; 2% very poor, 5% poor, 47% fair, 46% good. Oats 80% headed, 85% 1989, 83% avg.; 9% very poor, 23% poor, 35% fair, 33% good. Water seeding rice. Wheat along Arkansas River under water; wheat diseases worsen. Strawberry harvest starting. Peaches good. Tomatoes continued blooming, fruit set. Some hay under water. Livestock good, some cattle evacuated to higher ground due to flooding.

CALIFORNIA: Strong high pressure built along west coast, with low pressure to south. Produced very long siege of dry, gusty offshore winds over

progress. Panhandle pastures poor to good. Peninsula pastures fair. Nearly all areas need rain. Cattle mostly good. No rain citrus areas; drought continues, irrigation extensive all areas. Valencia harvest slowed; supplies short. Grapefruit harvest almost completed. Caretakers controlling cover crops, major pruning, hedging, topping harvested groves. Summer like temperatures prevailed over major vegetable producing areas. Rainfall limited. Irrigation active. Harvest declining seasonally southern, increasing central areas. Volume leaders: Tomatoes, potatoes, watermelons, sweet corn, peppers, cucumbers. Also available good volume celery, cabbage, squash, snap beans, lettuce, radishes, carrots, eggplant. Homestead tomato season completed.

GEORGIA: Temperatures 5° above normal. Extremes 37°; 100°. Rain 1.00 in. or less most locations. Rain two days. Greatest total 2.22 in Morgan County.

Days suitable for fieldwork 5.9. Soil moisture 14% very short, 44% short, 41% adequate, 1% surplus. Corn 4% poor, 18% fair, 77% good, 1% excellent; weekend rain helped, more needed. Cotton 26% fair, 71% good, 3% excellent; planting active. Sorghum 29% fair, 68% good, 3% excellent; 25% planted, 20% 1989, 29% avg. Peanuts 1% poor, 25% fair, 74% good; 55% planted, 46% 1989, 51% avg.; plantings delayed few locations, dry soils. Soybeans 25% fair, 75% good. Tobacco 43% fair, 55% good, 2% excellent. Tomato spotted wilt virus in many fields. Watermelons 21% fair, 79% good; 5% planted, 96% 1989, 96% avg. Wheat 3% very poor, 10% poor, 42% fair, 45% good; weekend rains beneficial; rust, mildew, hessian fly widespread. Rye 3% poor, 41% fair, 56% good. Other small grains 8% poor, 28% fair, 64% good. Apples 1% very poor, 68% fair, 31% good. Peaches 2% very poor, 16% poor, 9% fair, 73% good; 9% harvested, 0% 1989, 1% avg.; hail damage. Onions 18% good, 82% excellent; 64% harvested; other vegetables stressed from high temperatures. Hay harvest active. Pasture 4% poor, 23% fair, 70% good, 3% excellent. Cattle, hogs good.

HAWAII: Weather hot, humid, with haze caused by volcano beginning of week. Shower band passing through Island chain mid week brought light showers, gusty winds, cooler temperatures. Temperatures low 60s to high 80s. Rainfall 0.10 to 2.90 in.

Days suitable for farm work 7.0. Weather was generally favorable for crop progress. Soil moisture adequate in most areas. Papaya production increased. Sugar, pineapple harvesting active. Planting of next season's ginger root crop made good progress.

IDAHO: Temperatures above normal in north, below normal in the southern half of the State. Light amounts of precipitation fell statewide, levels below the weekly average.

Days suitable for fieldwork 4.0. Soil moisture 10% very short, 20% short, 62% adequate, 8% surplus. Winter wheat good; 32% not yet jointed, 61% jointed, 7% boot. Spring wheat planted 95%, 87% 1989, 82% avg.; emerged 74%, 53% 1989, 53% avg. Spring barley planted 96%, 86% 1989, 76% avg.; emerged 78%, 51% 1989, 44% avg. Sugarbeets planted 100%, 99% 1989, 96% avg.; emerged 90%, 41% 1989, 63% avg. Oats planted 84%, 69% 1989, 64% avg.; emerged 52%, 33% 89, 35% avg. Potatoes planted 66%, 53% 1989, 41% avg.; emerged 4%, 3% 1989, 2% avg. Dry peas planted 91%, 70% 1989, 73% avg.; emerged 72%, 15% 1989, 20% avg. Lentils planted 95%, 65% 1989, 67% avg.; emerged 73%, 24% 1989, 25% avg. Field corn planted 41%, 25% 1989, 35% avg. Irrigation slowed; supplies fair to

good. Frost damage to sugarbeets, replanted. Russian wheat aphids sprayed southwest, south central. Fruit trees southwest small fruit stage; other areas late bloom, mostly good condition. Livestock to summer range. Moisture improved prospects for range. Hay, roughage mostly adequate; very short, short areas south central, east. Livestock good to excellent. Branding, shearing, bull grading, fence repairing main activities.

ILLINOIS: Temperatures 3 to 8° below normal north, central, 2 to 4° below normal south. Precipitation 1.00 to 2.00 in., isolated areas 2.00 to 3.00 in.

Days suitable for fieldwork 3.25. Soil moisture 8% short, 57% adequate, 35% surplus. Oats seeded 95%, 99% 1989, 99% avg. Livestock roughage requirements from pasture 67%, 73% 1989, 75% avg. Alfalfa 9% poor, 23% fair, 64% good, 4% excellent. Alfalfa hay first cutting 1%, 4% 1989, 4% avg. Weevils in alfalfa. Pasture 14% fair, 78% good, 8% excellent.

INDIANA: Temperatures 2 to 5° below normal. Lows upper 40s to upper 50s, highs in 60s. Precipitation 0.75 to 2.50 in.

Days suitable for fieldwork 4.2. Topsoil 5% short, 52% adequate, 43% surplus. Subsoil 1% short, 86% adequate, 13% surplus. Spring cropland 88% tilled, 85% 1989, 90% avg. Wheat 14 in. high, 14 in. 1989, 14 in. avg.; 80% jointed, 66% 1989, 67% avg. Oats 91% seeded, 82% 1989, 92% avg. Oats 4 in. high, 4 in. 1989, 5 in. avg. Clover 94% seeded, 91% 1989, 94% avg. Pasture 15% fair, 77% good, 8% excellent. Southern third of the State continues to lag behind in tillage, plantings due to wet field conditions.

IOWA: Temperatures 2 to 6° below normal. Extremes 25°; 78°. Precipitation none northwest; 0.25 to 3.35 in. southeast; average 0.75 in.

Days suitable for fieldwork 4.5. Topsoil 24% short, 71% adequate, 5% surplus. Subsoil 59% short, 40% adequate, 1% surplus. Winter wheat 2% poor, 24% fair, 68% good, 6% excellent. Hay 5% poor, 31% fair, 55% good, 9% excellent. Pasture 6% poor, 40% fair, 49% good, 5% excellent. Oats 3% poor, 22% fair, 62% good, 13% excellent. Oats 94% emerged, 86% 1989, 85% avg. Seedbed preparation 93% completed. Fertilizer application 95% completed, 95% 1989, 90% avg. Livestock mostly good to excellent. Some scours in calves. Some stress noted from the fluctuating temperatures.

KANSAS: Temperature 12° below normal southwest, 7 to 8° below normal elsewhere. Rainfall all areas; averaged 0.72 in. northeast to 1.81 in. southwest.

Days suitable for fieldwork 3.0. Topsoil 16% short, 49% adequate, 35% surplus. Subsoil 28% short, 65% adequate, 7% surplus. Wheat good to excellent; growth well ahead of schedule. Jointing 98%, 90% 1989, 85% avg. Insect, disease problems light to moderate. Corn planting good progress; behind 1989, par with average. Sorghum, soybean planting underway; about on schedule with 1989, average. Range, pastures good growth. Cutting of alfalfa hay underway central, eastern areas of State.

KENTUCKY: Cool, wet. Temperatures 4 to 6° below normal. Highs most days 60s, lows around 50°. Warmer 30th, near 80° 4th. Precipitation every day 1.20 to 1.50 in. Scattered 1.75 to 2.00 in.

Days suitable for fieldwork 1.7. Soil moisture 2% short, 56% adequate, 42% surplus. Corn planting delayed. Corn emerged 20%. Tobacco plant beds 5% poor, 45% fair, 48% good, 2% excellent. Plant height 9% greater than 4 in.,

32% 2 to 4 in. Winter wheat 42% headed, 46% 1989, 47% avg.; 1% very poor, 18% poor, 56% fair, 25% good, 0% excellent. Hay 2% very poor, 10% poor, 42% fair, 42% good, 4% excellent. Pastures 3% poor, 33% fair, 46% good, 18% excellent. Fruit prospects; apples fair, peaches very poor, strawberries fair to good.

LOUISIANA: Temperatures 3 to 5° above normal. Extremes 50°; 89°. Rainfall 0.91 to 2.01 in.

Days suitable for fieldwork 5. Soil moisture 2% short, 93% adequate, 5% surplus. Spring plowing 87%, 91% 1989, 94% avg. Corn planted 99%, 98% 1989, 97% avg.; emerged 98%, 94% 1989, 92% avg.; 19% fair, 81% good. Cotton planted 89%, 59% 1989, 61% avg.; emerged 57%, 40% 1989, 39% avg. Hay first cutting 10%, 13% 1989, 16% avg. Rice planted 73%, 72% 1989, 80% avg.; emerged 57%, 64% 1989, 68% avg. Strong winds made herbicide applications difficult. Sorghum planted 72%, 55% 1989, 63% avg.; emerged 56%, 44% 1989, 49% avg. Soybeans planted 7%, 3% 1989, 5% avg.; emerged 4%, 1% 1989, 1% avg. Sweet potatoes planted 8%, 11% 1989, 20% avg. Sugarcane 18% very poor, 28% poor, 27% fair. Cultivating, herbicide applications active. Wheat headed 98%, 99% 1989, 97% avg.; turning color 61%, 43% 1989, 48% avg.; 4% poor, 50% fair, 41% good, 5% excellent. Livestock 2% poor, 33% fair, 57% good, 8% excellent. Pasture 2% poor, 30% fair, 60% good, 8% excellent. Vegetable 3% poor, 26% fair, 65% good, 6% excellent.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 1.35 in. Temperatures 64°, normal 59°. Extremes 41°; 94°.

Days suitable for fieldwork 2.7. Topsoil 63% adequate, 37% surplus. Subsoil 68% adequate, 32% surplus. Acreage prepared for planting 80%, 61% 1989, 77% avg. Field corn 45% planted, 19% 1989, 44% avg. Snap beans planted 41%, 18% 1989, 32% avg. Oats 95%, 86% 1989, 91% avg. Small grains good. Wheat 35% headed, 11% 1989. Barley 81% headed, 70% 1989.

DELAWARE: Precipitation 1.12 in. Temperatures 63°. Extremes 48°; 95°.

Days suitable for fieldwork 4.6. Topsoil 83% adequate, 17% surplus. Subsoil 83% adequate, 17% surplus. Acreage prepared for planting 81%, 53% 1989, 73% avg. Field corn 55% planted, 23% 1989, 54% avg. Potatoes planted 99%, 83% 1989, 95% avg. Sweet corn 46% planted, 37% 1989, 52% avg. Small grains fair to good. Wheat 16% headed, 17% 1989. Barley 88% headed, 90% 1989, 65% avg.

MICHIGAN: Temperatures 1° above to 6° below normal. Extremes 31°; 65°. Precipitation none to 2.03 in. across State.

Days suitable for fieldwork 6.0. Soil moisture 35% short, 60% adequate, 5% surplus. Corn 35% planted, 30% 1989, 30% avg. Oats 85% planted, 85% 1989, 80% avg. Potatoes 25% planted, 20% 1989, 20% avg. Soybeans 2% planted, 5% 1989, 1% avg. Wheat 5% poor, 15% fair, 45% good, 35% excellent. Major activities: Spring planting, tillage, equipment repair, vegetable planting. Below freezing temperatures at mid week apparently did little damage to fruits, vegetables, except in the northwest. Asparagus harvest advanced to 10% complete.

MINNESOTA: Temperatures 2 to 5° below normal. Extremes 19°; 83°. Precipitation none to 0.40 in. Greatest weekly total 0.57 in.

Days suitable for fieldwork 2.9. Topsoil 1% very short, 16% short, 79% adequate, 4% surplus. Spring wheat 84% acres planted, 59% 1989, 68% avg.; 34% crop emerged, 19% 1989, 35% avg. Oats 86% planted, 68% 1989, 77% avg.; 62% crop emerged, 35% 1989, 51% avg. Barley 81% planted, 37% 1989, 61% avg.; 23% crop emerged, 4% 1989, 27% avg. Corn 68% land

prepared, 53% 1989, 61% avg.; 42% planted, 23% 1989, 39% avg. Soybeans 26% land prepared, 17% 1989, 30% avg.; 6% planted, 2% 1989, 7% avg. Sugarbeets 80% planted, 49% 1989, 67% avg. Potatoes 30% planted, 17% 1989, 27% avg. Dry Beans 8% planted, 1% 1989, 8% avg. Flax 8% planted 2% 1989, 13% avg. Sunflowers 4% planted, 1% 1989, 9% avg. Sweet corn 22% planted, 11% 1989, 18% avg. Green peas 57% planted, 51% 1989, 58% avg. Winter freeze damage compared to normal; alfalfa 3% none, 28% light, 4% moderate, 28% severe. Winter wheat 3% none, 30% light, 41% moderate 26% severe. Rye 7% none, 43% light, 33% moderate, 17% severe. Pastures 73% of normal.

MISSISSIPPI: Temperatures 3° above normal. Extremes 49°; 91°. Scattered showers north, mostly dry central, south. Rainfall 0.36 in., 0.87 in. below normal. Soil temperature 73°.

Days suitable for fieldwork 3.7, 3.1 1989, 4.6 avg. Soil moisture 3% short, 54% adequate, 36% surplus, 7% excessive. Wheat 98% heading, 91% 1989, 88% avg.; 7% very poor, 19% poor, 61% fair, 13% good. Corn 75% planted, 76% 1989, 85% avg.; 7% poor, 23% fair, 70% good; 68% emerged, 58% 1989, 69% avg. Livestock good. Pasture fair. Cotton 53% planted, 53% 1989, 54% avg.; 33% emerged, 26% 1989, 27% avg. Hay 9% harvested. Peanuts 19% planted, 25% 1989, 32% avg. Rice 40% planted, 74% 1989, 77% avg.; 16% emerged, 32% 1989, 44% avg. Sorghum 46% planted, 45% 1989, 51% avg.; 32% emerged, 33% 1989, 33% avg. Sweet potatoes 10% planted, 22% 1989, 27% avg. Watermelons 73% planted, 76% 1989, 68% avg. Peaches 31% very poor, 16% poor, 38% fair, 10% good, 5% excellent. Activities: Planting crops, harvesting hay, general maintenance.

MISSOURI: Temperatures 4° below normal southeast to 9° below normal west. Precipitation 3.00 in. south western, south central districts, 2.00 in. northeast, central, over 1.00 in. elsewhere.

Days suitable for fieldwork 1.7, varying 3.3 northeast to 0.1 southeast. Topsoil 1% short, 40% adequate, 59% surplus, main surplus southern half, particularly southeast. Ground worked at least once for spring crops 71%, 89% 1989, 86% avg. Corn planting ranges less than 20% completed west central, east central, south central to 59% south east, all districts well behind normal. No significant planting progress for sorghum, soybeans, cotton, rice. Alfalfa hay first cutting 1%, 2% 1989, 2% avg. Alfalfa weevils, frost hurt first cutting alfalfa. Pastures 1% very poor, 2% poor, 25% fair, 64% good, 8% excellent.

MONTANA: Temperatures cool first of week except southwest. Rain and snow fell over entire State, amounts below normal.

Days suitable for fieldwork 3.7. Topsoil 21% short, 65% adequate, 14% surplus. Subsoil 30% short, 65% adequate, 5% surplus. Barley planted 72%, 33% 1989, 64% avg. Barley emerged 16%, 4% 1989, 25% avg. Corn planted 30%, 40% 1989, 36% avg. Dry beans planted 17%, 22% 1989, 17% avg. Oats planted 67%, 24% 1989, 57% avg.; emerged 18%, 1% 1989, 22% avg. Potatoes planted 8%, 2% 1989, 8% avg. Sugarbeets planted 99%, 54% 1989, 78% avg.; sugarbeets emerged 19%. Pasture, range feed 3% very poor, 8% poor, 30% fair, 48% good, 11% excellent. Cattle, calves moved to summer ranges 20%, 25% 1989, 32% avg. Sheep, lambs moved to summer ranges 20%, 25% 1989, 40% avg.

NEBRASKA: Temperatures 3 to 6° below normal. Extremes 22°; 86°. Precipitation occurred mid week, a trace up to 1.00 in., east central.

Days suitable for fieldwork 6.1. Topsoil 29% short, 70% adequate, 1% surplus. Subsoil 96% short, 4% adequate. Winter wheat 75% jointed, 56%

1989, 54% avg. Russian wheat aphids causing heavy damage to some fields, west, southwest. Dry, windy conditions also hurting crop, west. Corn 5% emerged, 13% 1989, 10% avg. Cutworms causing concern to early planted corn, northeast. Alfalfa hay 2% very poor, 11% poor, 48% fair, 39% good. Pennycress, cutworms central area. Weevils causing trouble northeast, east. Wild hay 10% very poor, 46% poor, 35% fair, 97% good. Frost damaged sugarbeets, several thousand acres to be replanted, Panhandle. Many irrigation systems operating to encourage corn germination, activate chemicals. Pasture, range feed 81% short, 19% adequate. More cattle moved to pastures as feed supplies run out. Calving season about finished. Problems with scours, north, central, southwest. Main activities: Planting corn; preparing seedbeds; applying fertilizer, herbicides, insecticides; working calves; working summer fallow, west.

NEVADA: Low pressure system first half produced only light rain or snow. Remainder of week mostly dry. Temperatures near normal at end of period. Progress most irrigated crops near normal. First crop alfalfa hay cut some southern areas, army cutworms caused some problems. Garlic crop fair, most onions planted. Ranges, pastures mostly fair, drying rapidly.

NEW ENGLAND: Precipitation 1.25 to 1.75 in. south, less than 1.25 in. north. Temperatures 48 to 53° except coastal Connecticut with an average of 55°. Temperatures near normal.

Days suitable for fieldwork 5.0. Soil moisture 8% short, 75% adequate, 17% surplus. Grazing availability 3% very short, 41% short, 50% adequate, 6% surplus. Fieldwork progress .5 days ahead. Rhode Island potatoes 45% planted, 40% 1989, 39% avg.; fair to good. Connecticut River Valley potatoes 58% planted, 30% 1989, 30% avg. Field corn 5% planted, 3% 1989, 9% avg.; good. Sweet corn 6% planted, 3% 1989, 9% avg.; fair to good. Hay fair to good. Fruit trees in bud to early bloom State. Blueberries, strawberries in bud stage. Cranberries in bud stage; no frost damage to date. Major farm activities: Plowing, spreading manure, fertilizing, field preparation.

NEW JERSEY: Temperatures near normal. Extremes 34°; 81°. Rainfall 1.11 in. north, 1.23 in. central, 0.96 in. south. Heaviest 24 hour total 1.40 in. on 4th, 5th. Estimated soil moisture percent field capacity averaged 92% north, 83% central, 81% south. Four inch soil temperatures averaged 58°, 60° central; 61° south. Rain hampered fieldwork.

Summer vegetable planting advanced as conditions permitted. Warmer weather needed to increase growth rate. Irish potato planting continued. Fruit spraying active as conditions permitted. Oat planting complete. Field corn planting advanced. Rye pastured, cut for livestock feed. Hay, pasture growth slowed again by cooler temperatures.

NEW MEXICO: Temperatures well below normal. Precipitation nearly every location. Hail, wind, freeze damage.

Days suitable for fieldwork 5.7. Soil moisture 56% short, 44% adequate. Cotton planted 75%. Milo planting 13% complete. Cattle fair to good; sheep fair to good; range poor to good.

NEW YORK: Summer heat of previous week ended as cool ocean air moved into State. Week featured typical spring weather. Temperatures near or slightly above normal. Highs upper 50s to low 70s, lows from 30s to 40s. Rainfall was above normal. Most areas received more than 1.00 in.

Days suitable for fieldwork 6.1. Soil moisture mostly adequate. Pasture, hay fair to mostly good, wheat mostly good. Oats 33% seeded, 61% 1989, 46% avg. Corn planting gaining momentum; 7% of crop in ground, 10% 1989, 8% avg. Spring plowing well underway except on poorly drained soils. Fertilizer, lime being spread. Most apple varieties in the Hudson Valley have set fruit, are developing rapidly. Peaches in the Valley have good to excellent fruit set. Most trees reached petal fall stage. Bartlett pears show good to excellent set. Onion planting near completion. Most up, good condition. Carrot planting underway. UpState cabbage direct seeded, transplanting active. Fresh market green peas up, doing well. Strawberry plants in early bloom.

NORTH CAROLINA: Temperatures 1 to 5° below normal across the State. Precipitation 0.35 to 4.46 in.

Days suitable for fieldwork 4.3. Soil moisture 3% short, 62% adequate, 35% surplus. Pasture 4% poor, 22% fair, 65% good, 9% excellent. Livestock feed from pasture 49%. Corn planted 10%. Crop condition: Wheat 16% fair, 82% good, 2% excellent; oats 1% poor, 22% fair, 76% good, 1% excellent; barley 18% fair, 81% good, 1% excellent; rye 16% fair, 83% good, 1% excellent; tobacco plant beds 33% fair, 60% good, 7% excellent; Irish potatoes 53% fair, 44% good, 3% excellent. Irish potatoes planted 91%; cabbage transplanted 79%. Hay, roughage 6% short, 91% adequate, 3% surplus. Feed grain supplies 6% short, 93% adequate, 1% surplus. Major activities: Land preparation, tending tobacco beds, top dressing small grains, planting corn. Other activities included: Fertilizing pastures, tending livestock, planting Christmas trees, general farm maintenance.

NORTH DAKOTA: Temperatures 10° below normal north central, northeast to 6° below normal northwest, southwest. Extremes 16°; 77°. Precipitation 0.07 in. north central, central to 0.27 in. southeast.

Days suitable for fieldwork 5.7. Topsoil 26% very short, 33% short, 41% adequate. Subsoil 66% very short, 30% short, 4% adequate. Hard red spring wheat 62% planted, 40% 1989, 59% avg.; durum wheat 35%, 23% 1989, 42% avg.; barley 58%, 39% 1989, 58% avg.; oats 61%, 33% 1989, 56% avg.; sugarbeets 76%, 64% 1989, 72% avg.; corn 9%, 6% 1989, 15% avg.; flax 5%, 1% 1989, 12% avg.; potatoes 2%, 7% 1989, 16% avg. Winter wheat 15% very poor, 25% poor, 53% fair, 7% good; 98% stooling or earlier, 2% jointing. Pastures 36% very poor, 33% poor, 30% fair, 1% good; furnished 34% roughage requirements. Stockwater 16% very short, 48% short, 36% adequate.

OHIO: High temperatures low to mid 60s; 1 to 7° subnormal. Low temperatures low to mid 40s; close to normal. Rain 1.25 to 2.50 in; 0.50 to 1.00 in. above normal. Soil temperatures in 50s.

Days suitable for fieldwork 4.9. Soil moisture 7% short, 74% adequate, 19% surplus. Farm activities: planting spring crops, spraying pesticides, applying fertilizer, preparing seedbeds. Corn planting ahead of average progress; seeds germinating, emerging rapidly. Some farmers finished corn, began planting soybeans. Winter wheat mostly good; some powdery mildew. Oat planting almost finished; good. Pasture, hay stands mostly good; alfalfa weevils reported statewide. Processing tomato transplanting 4% complete. Bedding plant shipments increased. Canola blooming.

OKLAHOMA: Temperatures 11° below normal south central to 6° below normal southeast.

Precipitation 0.95 in. north central to 7.89 in. southeast.

Days suitable for fieldwork 2.2. Topsoil 20% adequate, 80% surplus. Subsoil 100% adequate. Wheat 6% fair, 85% good, 9% excellent; 50% heading, 85% 1989, 55% avg. Heavy rains, flooding trimmed acreage for harvest in low lying areas. Late week sunshine, warm temperatures benefitted crop growth. Cotton 1% planted, 5% 1989, 7% avg. Sorghum 1% planted, 8% 1989, 5% avg. Soybeans 1% planted, 15% 1989, 10% avg. Peanuts 1% planted, 5% 1989, 7% avg. Corn 70% planted, 85% 1989, 75% avg. Some producers considering substituting soybeans for corn on acreage unplanted. Pastures improving with rain, warm temperatures. Cattle good; marketings average, prices steady to slightly lower. Insect activity increasing.

OREGON: Temperatures 4° above normal west, 2° above normal east except extreme northeast slightly below normal. Daytime highs 50s to 60s warmed to upper 70s to mid 90s on the 4th west. Eastern highs 40s to mid 60s early in week warming to 70s, 80s on the 4th, 5th. Precipitation 0.10 in. along coast, 0.50 in. north Cascades, up to 0.25 in. northeast. Elsewhere precipitation none or less than 0.10 in.

Soil moisture 34% short, 66% adequate. Barley 90% planted, 87% 1989, 95% avg. Field crops generally responded to recent rains, drought stress still showed some eastern counties. Mint field burning nearly completed, first alfalfa cutting started, Crimson clover in full bloom Willamette Valley. Frost mornings 29th, 30th required fans, heaters in Hood River orchards; first heating of season Medford orchards; sprinkling in south coast cranberry bogs. Frost effects on tree fruit, berries unknown Willamette Valley. Codling moths emerged, sprayed. Hazelnut sucker control. Cherries developing rapidly the Dalles. Post bloom thinning sprays applied to apples Willamette Valley. Potato planting started Klamath County, continued Malheur County where some early plantings emerged. Seed potato ground work started Wallawa County. Early seeded green peas in bloom Umatilla County. Green peas, snap beans growing well Willamette Valley; some early kale, spinach harvested; planting other vegetables. Livestock excellent. Range, pasture conditions quite variable; good to excellent. Range, pasture conditions quite variable; good to excellent west; poor to fair in Columbia Basin Counties where rains came too late to save annual grasses; generally good other eastern areas where concern for future forage supplies is extreme. Cattle movement to grazing allotments began.

PENNSYLVANIA: Wet week with slightly above normal temperatures across State. Temperature 54°; 2° above normal. Extremes 30°; 78°. Precipitation 1.23 in., 0.41 in. above normal.

Days suitable for fieldwork 5.0. Soil moisture 31% short, 68% adequate, 1% surplus. Plowing 75% complete, 67% 1989, 75% avg. Corn 21% planted, 14% 1989, 23% avg. Soybeans 2% planted, 0% 1989, 7% avg. Oats 83% planted, 75% 1989, 84% avg. Potatoes 44% planted, 43% 1989, 58% avg. Tobacco beds 95% planted, 100% 1989, 97% avg. Barley 73% pre boot, 74% 1989, 72% avg.; 19% boot, 17% 1989, 18% avg.; 8% heading or headed, 9% 1989, 10% avg. Wheat 86% pre boot, 89% 1989, 88% avg.; 13% boot, 11% 1989, 11% avg. 1% heading or headed, 0% 1989, 1% avg. Wheat 2% very poor, 4% poor, 26% fair, 55% good, 13% excellent. Oats 0% very poor, 4% poor, 28% fair, 52% good, 16% excellent. Hay stands mostly fair to good. Feed from pastures mostly average. Peaches 28% pre pink, 13% 1989, 14% avg.; 9% pink, 17% 1989, 15% avg.; 63% full bloom or past, 70% 1989, 71% avg. Cherries 27% pre pink, 20% 1989, 9% avg.; 5% pink, 23% 1989,

16% avg.; 68% full bloom or past, 57% 1989, 75% avg. Apples 30% pre pink, 40% 1989, 21% avg.; 17% pink, 27% 1989, 25% avg.; 53% full bloom or past, 33% 1989, 54% avg. Activities: Spring plowing; planting corn, oats, soybeans, potatoes, tobacco, hay, vegetables, fruit trees, christmas trees; repairing fence; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock; soil terracing; cutting hay.

PUERTO RICO: Precipitation 0.34 in., 1.07 in. below normal. Rainfall was 1.68 in. at Morovis, 1.34 in. at Yauco, 1.16 in. at San Juan City. Highest 24 hour total 1.55 in. at Morovis. Temperatures 78° on the coast, 69° interior; mean station temperature 58° at Cerro Maravilla to 81° at San Juan City. Extremes 51°; 92°.

SOUTH CAROLINA: Temperatures 5 to 9° above normal. Rainfall 0.30 in. southern part of State to 1.20 in. in central areas.

Days suitable for fieldwork 5.7. Soil moisture 5% very short, 60% short, 33% adequate, 2% surplus. Cotton 52% planted, 19% 1989, 55% avg. Soybeans 2% planted, 1% 1989, 2% avg. Tobacco fair to good. Corn good. Watermelons fair to good; 85% planted, 87% 1989, 87% avg. Cantaloupes fair to good; 78% planted, 80% 1989, 77% avg. Peaches fair. Tomatoes good. Oats fair to good; 92% headed, 100% 1989, 87% avg.; 32% turning color, 15% 1989, 16% avg. Wheat fair to good; 97% headed, 92% 1989, 87% avg.; 33% turning color, 12% 1989, 14% avg. Pasture fair to good.

SOUTH DAKOTA: Temperatures 3 to 10° below normal. Extremes 15°; 76°. Precipitation mostly below normal, maximum 1.25 in. Yearly precipitation above normal south Black Hills, central areas, below normal elsewhere, 1.76 in. above to 2.70 in. below normal. Growing degree days range 89 units above to 11 units below normal.

Winter wheat mostly good to fair, spring seeded grains fair to good. Major activities: Row crop preparation, chemical application, working cattle, fencing.

TENNESSEE: Cold front moved through State early week, became stationary south of State. Front returned at mid week as warm front. Another cold front moved through State over weekend. Temperatures slightly above normal east, below normal Plateau, normal west, middle. Rainfall above normal Plateau, east; below normal west, middle.

Days suitable for fieldwork 3.3. Soil moisture 7% short, 49% adequate, 44% surplus. Little fieldwork possible. Corn 32% planted, 59% 1989, 69% avg. Cotton 8% percent planted, 64% 1989, 57% avg. Sorghum 5% planted, 20% 1989, 29% avg. Soybeans 1% planted, 10% 1989, 7% avg. Tobacco 5% transplanted, 2% 1989, 3% avg. Wheat 68% headed, 37% 1989, 65% avg.; 4% very poor, 3% poor, 51% fair, 41% good, 1% excellent. Alfalfa 8% 1st cutting, 18% 1989, 21% avg.; 2% very poor, 6% poor, 57% fair, 34% good, 1% excellent. Insects, diseases, weeds prevalent. Cattle mostly good.

TEXAS: Several upper air disturbances interacted with good flow of moist, Gulf air, slow moving cold front to trigger another round of very heavy rains across north, central, southeast, middle week. Serious flooding parts northeast. Strong surge of cold air moved into northern, western areas midweek, spread south weekend. Rainfall much above normal Cross Timbers, Blacklands; near or slightly above normal elsewhere, slightly below normal totals Trans Pecos, Coastal Bend, south. Temperatures below normal statewide.

Crops: Small grain fields High Plains good condition, recent rains helped progress. Warmer weather needed. Insects, diseases light. Cross Timbers, parts Blacklands, heavy rains, hail damaged many fields, producers assessing extent of damage. Armyworms increasing, producers spraying when weather permitted. Rain slowed harvest south. Harvest moved into south central. Some lodging problems. Corn planting slowed through mid week by rain Plains. Planted fields slow to emerge because of cool temperatures. Some fields Blacklands washed out. Fields central, south look very good. Fields silking Valley. Planting again slowed along coast. Corn none silked, none 1989, 2% avg. Grain sorghum planting slowed by showers Plains. Floods damaged fields Cross Timbers, northern Blacklands. Fields remainder State benefitted from rainfall, look good. Weeds increasing Coastal Bend. Planting delayed along Upper Coast. Sorghum none headed, 2% 1989, 3% avg. Few more cotton producers Plains trying to start planting, wet conditions slowed progress. Land preparations remained behind schedule Cross Timbers. Little planting activity Blacklands, planted fields slow to emerge. Warmer temperatures needed. Some replanting may be necessary parts east. Progress good Coastal Bend, Valley. Producers spraying for insects. Planting continued Trans Pecos. Cotton 4% squaring, 2% 1989, 1% avg. Soybean planting underway, moving slowly Plains. Emergence slow. Growth slow Blacklands. Planting operations delayed Upper Coast. Many rice fields Upper Coast showing signs of stress from high humidity, excessive rain. Some replanting may be necessary. Many fields very weedy, producers spraying. Emergence behind normal. Peanut planting some progress south central between showers. Drier weather needed Cross Timbers. Other Field Crops: Peanuts planted 3%, 3% 1989, 7% avg. Soybeans planted 22%, 18% 1989, 15% avg. Sugarbeets planted 92%, 98% 1989, 97% avg. Sunflowers 12% planted, 0% 1989, 5% avg. Oats harvested 0%, 0% 1989, 1% avg.

Commercial Vegetables: Rio Grande Valley, onion harvest continued wind down. Melon harvest increasing. Some cucumber harvest continued. Younger citrus groves continued to show good regrowth, older trees slow or no recovery. San Antonio-Winter Garden, onion harvest just getting underway. Cabbage harvest about over. Eastern areas rain caused additional rotting some sweet potato fields. Cooler temperatures slowing growth other vegetables. High Plains, cooler weather slowed growth, development. Trans Pecos, onions, peppers showing slowed growth from cooler temperatures. Harvest early peaches continued. Growers reporting good yields, quality. Isolated hail, excessive water caused some drop parts Blacklands. Hill Country crop continued look very good. Pecans continued to look good across State. Excessive rainfall not seem to have any serious effect so far. Producers started spray first generation casebearers central, southern areas.

Range and Livestock: Ranges, pastures benefit from rain. Excessive rain, left some pastures under water, status unknown. Producers lost some livestock from flooding. Many washed out fences need repair as flood waters recede. Tank levels improved many areas. Sheep shearing behind Hill Country. All classes livestock good condition.

UTAH: Temperatures 4° below normal; precipitation generally moderate, individual stations none to heavy.

Days suitable for fieldwork 6.0. Soil moisture 49% short, 51% adequate. Frost damage assessment ongoing; fruit damage varied moderate to severe; hay, corn also affected. Irrigation, insect spraying continued. Spring farm activities

winding down. Spring wheat acreage 92% emerged, 88% 1989, 74% avg. Barley emerged 90%, 83% 1989, 79% avg. Oats planted 90%, 88% 1989, 77% avg.; emerged 58%, 56% 1989, 55% avg. Corn planted 40%, 48% 1989, 41% avg.; emerged 24%, 33% 1989, 29% avg. Potato acreage planted 20%, 27% 1989, 26% avg. Winter wheat height 10.0 in. Alfalfa height 12.0 in. Spring calving, lambing death loss continued below normal. Recent moisture improved range, pasture conditions.

VIRGINIA: Temperatures 5° above normal in the lower to mid 60s. Extremes 39°; 96°. Precipitation well above normal 0.50 to 0.75 in. Severe weather on 4th in central areas with tornadoes causing extensive damage in a few locations.

Days suitable for fieldwork 4.0. Topsoil 5% short, 83% adequate, 12% surplus. Pastures 15% fair, 65% good, 20% excellent. Alfalfa 6% poor, 17% fair, 70% good, 7% excellent. Spraying for alfalfa weevils. Other hay 20% fair, 65% good, 15% excellent. Corn planting 50% complete, 26% 1989, 40% avg.; 2% very poor, 9% poor, 28% fair, 52% good, 9% excellent. Soybeans planting just getting started. Peanut planting 31% complete, 1% 1989, 7% avg. Cotton planting 85% complete. Flue tobacco 16% complete, 0% 1989, 5% avg. Fire, burley tobacco planting just getting started. Potatoes 1% poor, 50% fair, 49% good. Barley, wheat mostly good. Spraying cereal leaf beetle, powdery mildew. Harvesting rye silage. Peaches mostly very poor. Apples mostly fair. Fruit tree spraying commencing. Strawberries ready to pick on Eastern Shore. While some picking already begun. Sheep shearing, livestock care.

WASHINGTON: Temperatures 5° below normal to 10° above normal, east; 3° below normal to 4° above normal, west. Precipitation none to 1.85 in. east; 0.18 to 0.71 in. west.

Days suitable for fieldwork 5.8. Soil moisture 58% short, 42% adequate. Range, pasture 55% short, 45% adequate. Hay, other roughage 5% very short, 40% short, 50% adequate, 5% surplus. Crop progress continued ahead of normal. Rainfall helped in many dry areas, although central area is still very dry. Spring wheat planted 98%, 98% 1989, 95% avg. Spring wheat emerged 94%, 82% 1989, 80% avg. Barley planted 98%, 89% 1989, 89% avg. Barley emerged 87%, 77% 1989, 74% avg. Potatoes planted 82%, 79% 1989, 82% avg. Scattered frost damage to winter wheat, fruit trees. Berry crops were developing, vegetable planting, harvesting continued. Asparagus harvest continued.

WEST VIRGINIA: Temperature 58°, 3° below to 4° above normal. Extremes 34°; low 84°. Precipitation 1.07 in., 0.23 in. below to 0.49 in. above normal.

Days suitable for fieldwork 2.7. Soil moisture 10% short, 57% adequate, 33% surplus. Cattle, sheep good. Calving 93% complete; lambing 92% complete. Feed supplies adequate to surplus. Wheat, barley good. Oats good to fair; 91% planted, 43% emerged. Corn planting 33% complete. Tobacco beds fair to good; 84% emerged. Hay fair to good. Apples, peaches poor. Farm activities: Corn, oats planting, fertilizing, plowing, fencing, livestock care.

WISCONSIN: Temperature 48°, 5° below normal. Extremes 16°; 83°. Precipitation trace to 1.30 in.

Days suitable for fieldwork 5.8. Soil moisture 46% short, 50% adequate, 4% surplus. Oats planted 84%, 69% 1989, 78% avg. Early oats have emerged. Corn planted 20%, 12% 1989, 24% avg. Spring tillage 67% complete, 55% 1989, 66% avg. Fieldwork very active.

(Continued to back cover)

April 1990

MONTHLY DATA FROM SELECTED FOREIGN CITIES
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
*** = DATA NOT AVAILABLE

International Weather and Crop Summary

April 29 - May 5, 1990

HIGHLIGHTS

USSR ... Soaking rain over the Crimea, western North Caucasus, and the lower Volga benefits winter grains approaching the heading stage.

EUROPE ... Unseasonably warm and dry weather covers the northwest. Rain reduces dryness in sections of the southeast.

SOUTH ASIA ... Beneficial rain falls in eastern rice areas, but locally wet weather in the north is unfavorable for unharvested wheat.

EASTERN ASIA ... Widespread rain favors winter and spring crops in the North China Plain. Heavy rain causes localized flooding in sections of the Yangtze Valley and southern Japan.

SOUTHEAST ASIA ... Much needed rain brings relief to both Thailand and the southern Philippines.

SOUTH AMERICA ... Dry harvest weather prevails over most of Argentina. Drier weather late in the week eases wetness in south-central Brazil.

SOUTH AFRICA ... Cool, wet weather is unfavorable for maturing corn but provides abundant moisture for winter wheat planting.

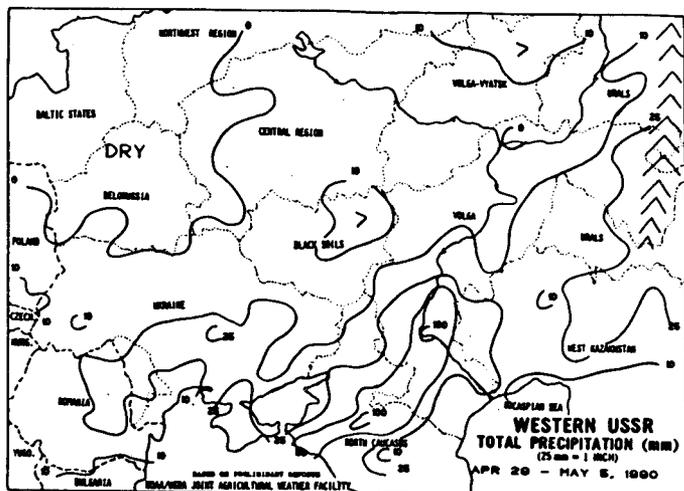
AUSTRALIA ... Continued dryness favors harvest and planting in the east but slows planting in sections of the south.

NORTHWESTERN AFRICA ... Widespread precipitation slows winter grain maturation but benefits that portion of the crop which remains in the filling stage.

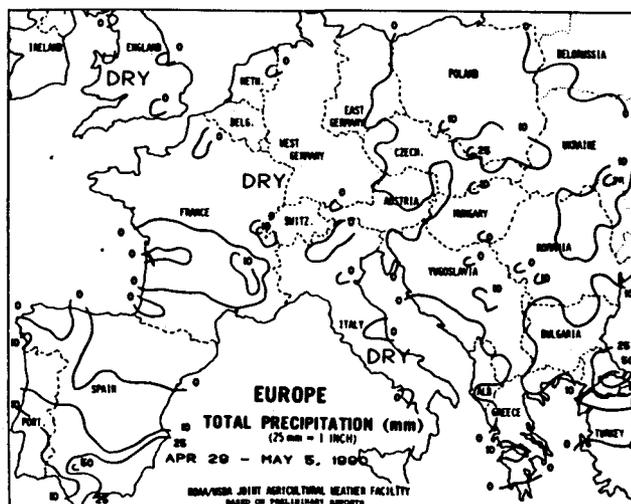
COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		
	AVG MAX	AVG MIN	HI	LO	AVG	DPART F/NRM	DPART F/NRM	
NORWAY OSLO	10	1	19	-11	5	2.6	78.9	30.3
SWEDEN STOCKHOLM	12	2	23	-5	7	2.5	14.3	-17.5
FINLND HELSINKI	12	1	21	-5	6	3.7	17.2	-23.7
U KING GLASGOW	12	3	21	-4	8	-0.7	76.2	13.2
EDINBURGH	12	4	22	-4	8	0.3	20.2	-18.3
BIRMINGHAM	14	2	23	-7	8	0.3	21.6	-22.0
LONDON	14	3	21	-5	8	0.5	46.0	-10.1
IRELND DUBLIN	12	5	17	-3	8	0.4	23.1	-24.0
ICELND REYKJAVIK	3	-2	8	-12	0	-2.9	49.9	-7.4
DENMRK COPENHAGEN	13	4	20	-4	8	1.4	34.7	-3.4
LUXEMB LUXEMBOURG	12	4	22	-2	8	-0.2	35.1	-13.6
SWITZL ZURICH	11	4	20	1	8	-0.3	63.1	-28.3
GENEVA	13	4	21	0	9	-0.3	85.4	27.0
FRANCE PARIS	14	4	23	-2	9	-0.3	36.5	0.8
STRASBOURG	13	5	21	0	9	-0.4	30.7	-12.2
BOURGES	14	5	23	-1	10	-0.2	24.6	-22.0
BORDEAUX	16	7	25	2	12	0.5	45.6	-13.8
TOULOUSE	15	7	24	-1	11	0.0	23.7	-32.2
MARSEILLE	18	9	25	3	13	0.0	68.7	26.3
SPAIN VALLADOLID	15	4	23	-2	9	-0.5	50.7	15.0
MADRID	16	6	21	0	11	-1.3	28.1	-15.2
SEVILLE	22	10	27	6	16	0.3	81.7	29.4
E GRMNY LEIPZIG	13	4	21	-4	8	0.4	51.7	10.9
DRESDEN	13	4	21	-4	9	0.3	63.2	17.2
W GRMNY HAMBURG	13	4	21	-4	9	1.4	34.4	-12.6
BERLIN	14	5	21	-3	10	1.0	23.1	-17.2
DUSSELDORF	14	5	22	-2	10	-0.2	43.9	-7.2
STUTTGART	12	4	20	0	8	-0.9	63.6	9.1
NURNBERG	13	4	21	-2	8	0.1	60.1	16.5
MUNICH	11	3	19	-2	7	-0.4	97.4	24.9
AUSTRI VIENNA	14	5	23	-2	9	-0.6	89.8	46.9
INNSBRUCK	13	3	22	-2	8	-0.6	81.4	15.7
CZECH PRAGUE	12	2	21	-5	7	-0.3	57.4	19.4
POLAND WARSAW	14	4	22	-5	9	1.4	47.1	12.8
LODZ	13	4	21	-3	9	1.3	43.8	-6.2
KATOWICE	12	4	21	-4	8	0.7	74.5	20.4
PRZEMYSL	13	5	21	-4	9	0.7	100.4	52.7
HUNGAR BUDAPEST	16	6	21	1	11	0.1	61.3	22.2
YUGOSL SARAJEVO	15	4	22	-2	10	0.5	46.0	-29.9
ROMANI BUCHAREST	18	5	25	1	12	0.3	27.7	-16.9
BULGAR SOFIA	15	7	23	1	11	0.5	99.7	52.6
ITALY MILAN	16	6	23	1	11	-1.2	256.2	178.6
VERONA	17	7	25	1	12	-0.4	91.0	30.4
VENICE	16	8	20	4	12	-0.2	115.0	43.2
GENOA	17	11	25	7	14	-0.9	183.1	97.5
ROME	17	8	21	4	13	-0.6	141.3	92.0
NAPLES	19	10	24	7	15	1.6	210.3	136.2
GREECE THESSALONIKA	20	10	25	4	15	1.0	20.1	-16.0
LARISSA	22	8	28	2	15	0.8	16.4	-12.0
ATHENS	20	13	25	9	17	0.3	22.3	5.2
TURKEY ISTANBUL	17	10	25	5	13	2.7	52.6	14.6
ANKARA	15	3	23	-4	9	-2.4	78.0	52.0
CYPRUS LARNACA	23	11	31	6	17	0.3	7.3	-12.8
USSR TALLINN	12	2	19	-3	7	4.0	30.6	-4.8
LENINGRAD	13	4	18	-4	9	5.2	12.3	-23.0
KAUNAS	14	2	20	-8	8	2.3	16.1	-23.4
MINSK	14	3	20	-5	9	2.9	29.9	-10.5
KAZAN	11	2	19	-5	7	2.6	37.1	5.5
MOSCOW	12	4	21	-3	8	2.6	22.0	-15.9
SVERDLOVSK	10	0	17	-8	5	0.9	32.5	7.0
OMSK	11	-1	22	-4	5	2.0	7.8	-11.9
KUSTANAY	12	2	23	-7	7	2.2	11.4	-10.2
NOVOSIBIRSK	9	-1	18	-8	4	5.0	3.9	-8.8
BARNAUL	10	-1	17	-8	4	1.7	10.3	-17.2
KHABAROVSK	12	0	20	-5	6	2.5	49.6	12.2
VLADIVOSTOK	10	3	17	-2	6	2.1	65.1	2.7
KIEV	14	6	25	-2	10	1.5	91.8	51.9
LVOV	14	4	22	-3	9	1.4	82.1	34.1
KIROVOGRAD	14	5	24	-1	10	1.4	64.6	33.3

BASED ON PRELIMINARY REPORTS

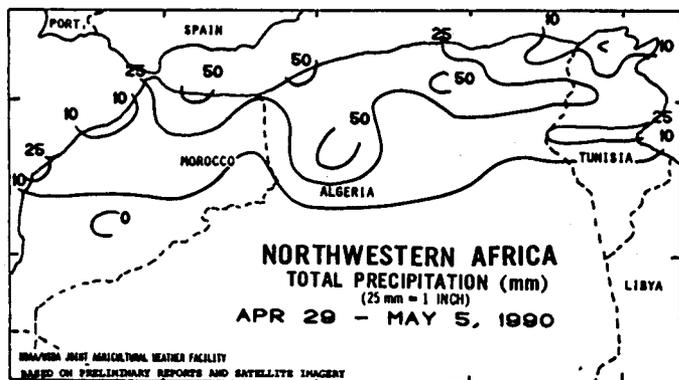
COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)		COUNTRY CITY	TEMPERATURE (C)					PRECIPITATION (MM)			
	AVG	AVG	HI	LO	DPART	F/NRM	TOTAL		F/NRM	AVG	AVG	HI	LO	DPART	F/NRM	TOTAL	F/NRM
April 1990								April 1990									
USSR ODESSA	14	7	21	-1	10	1.5	42.2	11.1	TANZAN DAR ES SALAAM	31	23	33	21	27	0.3	241.2	-29.2
YALTA	15	8	21	6	12	1.5	23.2	-8.8	GABON LIBREVILLE	31	25	32	22	28	0.8	276.9	-69.7
VORONEZH	15	4	24	-2	10	2.2	61.5	26.0	TOGO LOME	32	25	39	22	29	1.1	130.6	31.0
SARATOV	15	6	23	0	10	3.7	42.6	15.5	B FASO OUAGADOUGOU	39	28	42	19	34	1.2	15.2	-6.8
KHARKOV	15	6	24	1	11	2.1	70.6	41.1	IVRY C ABIDJAN	32	26	33	22	29	1.1	73.3	-89.7
VOLGOGRAD	16	6	22	-1	11	2.4	24.4	1.1	MOZAMB MAPUTO	29	20	33	15	24	1.2	23.6	-35.6
ROSTOV	17	7	21	1	12	1.3	44.4	6.1	ZAMBIA KABWE	27	15	29	13	21	1.0	20.2	-3.2
ASTRAKHAN	18	7	22	-3	13	2.0	13.7	-1.8	ZIMBAB HARARE	26	15	28	13	20	2.0	108.6	62.3
KRASNODAR	18	6	24	-1	12	0.7	51.0	-1.9	S AFRI PRETORIA	25	14	29	10	19	2.1	111.1	53.0
ORENBURG	14	4	20	-4	9	1.5	33.6	10.2	KROONSTAD	23	11	29	5	17	0.5	113.5	60.5
TSELINOGRAD	11	0	20	-8	5	2.4	18.8	4.7	JOHANNESBURG	21	9	25	5	15	-0.1	107.1	49.6
KARAGANDA	14	1	20	-3	8	3.1	16.0	-7.7	BETHAL	22	9	27	2	16	0.3	98.0	52.0
TBILISI	17	8	23	1	13	0.0	57.8	6.7	DURBAN	26	19	29	15	23	1.4	37.9	-48.7
TASHKENT	20	10	29	5	15	-0.2	186.8	127.5	CAPE TOWN	22	13	31	8	18	1.0	133.5	88.9
ASHKHABAD	22	11	39	5	16	-0.3	49.9	6.6	CANADA TORONTO	14	3	31	-5	9	2.3	53.4	-16.6
SYRIA DAMASCUS	24	7	34	1	16	-0.3	35.0	22.0	MONTREAL	11	2	30	-6	7	0.8	96.4	22.2
ISRAEL JERUSALEM	21	9	31	0	15	-0.9	64.3	36.1	WINNIPEG	9	-3	31	-13	3	-0.6	20.6	-17.9
PAKIST KARACHI	34	23	42	16	29	0.4	0.1	-1.5	REGINA	11	-2	28	-10	4	0.9	22.7	-1.1
INDIA AMRITSAR	33	17	41	10	25	-0.2	37.8	25.7	SASKATOON	10	-3	26	-10	4	0.5	23.5	2.7
NEW DELHI	36	21	42	14	28	-0.5	6.3	-0.3	LETHBRIDGE	13	0	23	-19	6	1.4	35.8	-6.9
AHMEDABAD	40	24	43	20	32	0.7	0.1	0.1	CALGARY	11	-2	21	-15	5	1.5	21.6	-11.0
INDORE	39	21	43	15	30	0.2	0.1	-1.9	EDMONTON	10	-1	22	-12	5	0.5	41.9	20.2
CALCUTTA	34	25	38	16	30	-1.2	11.9	-22.9	VANCOUVER	14	7	19	3	10	1.4	90.8	31.2
VERAVAL	31	22	36	16	26	-0.5	0.1	0.1	MEXICO GUADALAJARA	31	12	35	8	21	-0.6	0.1	-8.3
BOMBAY	32	23	36	21	28	-0.6	0.1	-0.3	MEXICO CITY	25	13	28	9	19	1.0	46.0	33.0
POONA	38	18	41	14	28	-1.1	0.1	-16.3	ACAPULCO	33	24	34	22	29	1.1	0.1	-5.1
BEGAMPET	39	26	41	22	32	1.4	1.3	-20.2	BERMUD ST. GEORGES	23	18	26	13	21	1.8	60.5	-20.1
MADRAS	36	27	41	25	32	0.9	0.5	-15.0	BAHAMA NASSAU	28	20	32	13	24	0.4	16.9	-37.8
MANGALORE	34	25	36	23	30	0.3	0.1	-39.8	CUBA HAVANA	29	22	31	18	25	0.6	21.0	-29.3
H KONG HONG KONG	24	20	29	17	22	-0.3	254.5	115.0	JAMAIC KINGSTON	32	24	34	21	28	1.0	6.6	-32.2
N KREA PYONGYANG	14	2	26	-5	8	-0.4	88.8	26.8	P RICO SAN JUAN	31	26	32	22	27	0.8	0.0	-91.0
S KREA SEOUL	16	7	26	2	12	1.2	87.2	19.1	GUADEL RAIZET	30	22	32	20	26	1.1	55.4	-2.7
JAPAN SAPPORO	12	4	22	0	8	2.1	88.0	21.9	MARTINQ LAMENTIN	30	23	31	21	27	1.7	53.2	-24.9
NAGOYA	20	10	27	4	15	1.4	110.5	-44.1	BARBAD BRIDGETOWN	30	23	30	4	26	-0.2	43.3	-3.1
TOKYO	19	12	24	6	15	1.2	156.0	29.8	TRINID PORT OF SPAIN	33	23	35	21	28	1.7	26.3	-23.9
YOKOHAMA	19	11	24	5	15	1.2	218.5	75.8	COLOMB BOGOTA	19	9	26	5	14	0.7	178.1	84.9
KYOTO	19	9	27	3	14	2.1	118.0	-22.8	VENEZU CARACAS	30	24	32	22	27	1.0	60.7	37.9
OSAKA	20	11	26	6	15	1.0	100.0	-48.3	F GUIA CAYENNE	28	24	31	22	26	0.1	796.5	367.1
THAILN PHETCHABUN	37	24	41	20	31	-0.1	35.1	-32.9	BRAZIL PORTALEZA	31	24	32	22	27	0.7	246.6	-111.0
BANGKOK	36	27	40	25	32	1.2	15.5	-48.7	RECIFE	30	23	33	21	27	0.4	390.6	109.3
MALAYS KUALA LUMPUR	33	25	35	22	29	1.9	274.3	-4.1	BELO HORIZONTE	29	20	31	18	24	2.9	62.2	-2.9
VIETNM HANOI	27	22	37	16	25	0.8	112.7	31.4	CAMPO GRANDE	30	21	34	14	25	3.4	94.3	-6.8
CHINA HARBIN	13	1	26	-7	7	1.3	16.8	-7.0	FRANCA	27	18	30	16	23	2.8	26.0	-55.0
HAMI	20	4	26	-4	12	-1.1	3.8	1.7	RIO DE JANEIRO	29	24	35	22	27	2.4	104.8	-9.4
LANCHOW	17	5	24	-2	11	-0.7	19.4	1.9	LONDRINA	30	19	33	15	24	3.3	186.8	86.5
BEIJING	19	8	26	2	13	0.2	78.2	58.8	SANTA MARIA	24	17	32	7	21	1.9	255.8	113.8
TIENTSIN	19	9	26	2	14	0.5	79.6	58.6	PORTO ALEGRE	26	18	33	10	22	2.3	114.9	11.8
LHASA	14	0	20	-4	7	-0.7	7.6	3.6	PERU LIMA	25	18	27	16	21	0.8	0.1	-0.5
KUNMING	23	10	27	5	16	0.1	24.4	3.2	BOLIVI LA PAZ	15	2	18	-1	9	-0.2	33.5	3.6
CHENGCHOW	20	9	26	1	15	0.0	49.1	-4.6	CHILE SANTIAGO	23	7	31	-1	15	0.9	0.1	-13.3
YEHCHANG	20	13	29	8	17	0.1	122.9	18.4	ARGENT IGUAZU	27	19	33	10	23	*****	317.9	*****
HANKOW	21	12	27	7	16	0.5	199.7	59.6	FORMOSA	28	20	35	12	24	2.4	304.7	167.7
CHIHKIANG	20	13	31	7	16	0.0	145.8	-22.4	CERES	24	16	30	4	20	0.8	38.9	-33.4
SHANGHAI	19	11	29	6	15	1.3	77.3	-26.1	CORDOBA	23	13	31	2	18	1.3	50.6	4.0
NANCHANG	20	14	33	8	17	0.4	102.3	-123.1	RIO CUARTO	21	12	28	2	16	0.4	104.6	53.7
TAIPEI	24	19	31	15	21	0.7	501.1	333.2	ROSARIO	22	13	29	4	18	1.3	98.9	13.9
CANTON	25	19	32	14	22	-0.1	163.6	-15.1	BUENOS AIRES	22	12	29	4	17	0.8	139.1	53.0
NANNING	26	20	37	13	23	0.7	79.6	-10.3	SANTA ROSA	21	9	33	0	15	0.1	15.2	-36.4
CNRY I LAS PALMAS	22	16	27	13	19	0.2	4.4	-1.7	TRES ARROYOS	20	6	27	1	13	-1.0	34.1	-29.9
MOROCC CASABLANCA	19	11	22	7	15	-0.4	50.9	12.6	MIDW I MIDWAY ISLAND	22	17	26	13	19	-0.3	84.6	23.0
MARRAKECH	24	11	30	7	17	0.5	25.9	-8.7	N CALD NOUMEA	29	22	31	20	25	1.7	18.9	-95.8
ALGER ALGER	20	10	26	6	15	0.3	59.5	-22.1	FIJI NAUSORI	28	22	31	18	25	-0.9	219.6	-119.7
BATNA	18	7	27	0	12	0.5	32.6	4.7	SAMOA PAGO PAGO	30	25	31	22	27	0.0	316.0	23.4
TUNISI TUNIS	21	11	29	7	16	1.2	11.9	-36.0	TAHITI PAPEETE	32	24	33	22	28	1.1	50.1	-63.7
NIGER NIAMEY	42	27	44	21	35	1.0	0.1	-5.6	N ZEAL AUCKLAND	21	14	23	9	18	1.1	111.2	0.4
MALI TIMBUKTU	39	26	43	18	33	1.4	0.1	-1.3	PA N G PORT MORESBY	30	24	33	21	27	0.1	43.6	-74.5
BAMAKO	39	28	42	22	33	1.9	20.4	3.2	AUSTRAL DARWIN	32	25	35	20	28	0.1	150.8	53.0
MAURIT NOUAKCHOTT	34	18	40	14	26	1.0	0.1	0.1	MOREE	23	16	29	7	20	-0.3	131.0	106.8
SENEGL DAKAR	24	19	27	17	22	0.1	0.1	0.1	BRISBANE	25	18	26	8	21	-0.8	217.6	145.5
CHAG A DIEGO GARCIA	31	27	32	24	29	0.7	214.1	32.6	PERTH	24	14	29	9	19	0.1	70.6	23.2
LIBYA TRIPOLI	27	14	40	7	20	2.0	47.0	28.0	CEDUNA	23	12	33	7	18	-0.1	6.9	-15.0
BENHAZI	25	14	35	1	19	0.1	4.1	-3.1	ADELAIDE	22	12	30	6	17	-0.1	8.5	-37.9
EGYPT CAIRO	29	16	39	11	22	1.1	2.0	1.2	MELBOURNE	20	12	28	7	16	0.5	69.0	16.4



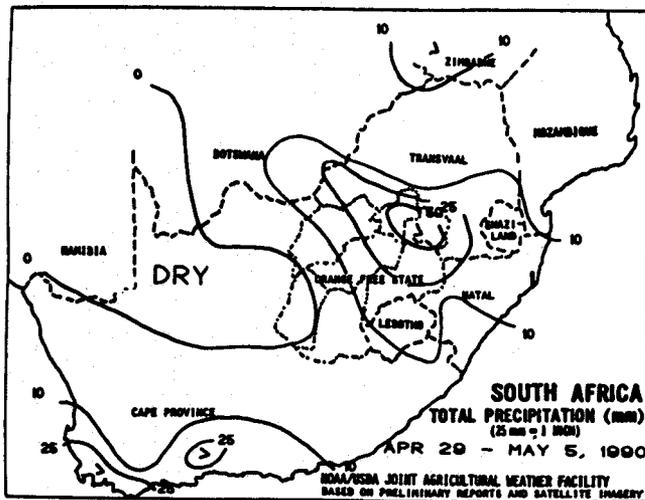
WESTERN USSR ... The second consecutive week of soaking rain (30-60mm, with local amounts in excess of 75mm) covered crop areas in the western North Caucasus and spread west and northeastward into the Crimea and the lower Volga, respectively. The rain in these areas was very timely for winter grains, as the crop was approaching the heading stage. Following last week's beneficial rain, drier weather (precipitation ranging from 5 to 20mm) returned to crop areas in the southwestern Ukraine. Generally dry weather (precipitation less than 10mm) continued over the northern half of the region, allowing spring grain planting to progress at a rapid pace. Weekly average temperatures ranged from 2 to 4 degrees Celsius (C) below normal in the south and 1-3 degrees C above normal in the north. Lowest minimum temperatures around -1 degrees C as far south as the western Ukraine had minimal impact on jointing wheat, but may have caused some localized damage to early sown summer crops in the vegetative stage.



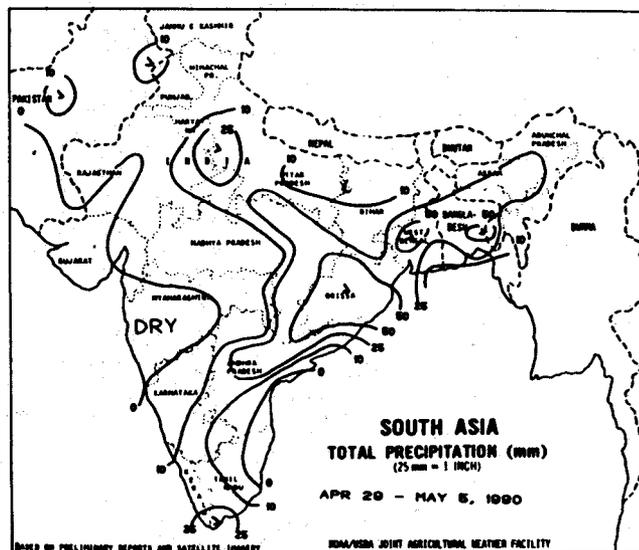
EUROPE ... Unseasonably warm (mean temperatures from 4 to 7 degrees C above normal) and dry weather covered much of the northwest, accelerating growth of winter- and spring-planted crops. However, the warm temperatures also increased demand for soil moisture reserves, which are becoming low in some areas, especially in Great Britain. In contrast, moderate to heavy rain (10-50mm, with isolated amounts greater than 50mm) and cooler-than-normal temperatures (2-4 degrees C below normal) reduced long-term dryness in eastern sections of the Balkans. Moderate to heavy rain (10-50mm) also fell over southern sections of the Iberian Peninsula, favoring reproductive winter and vegetative spring planted crops.



NORTHWESTERN AFRICA ... Widespread precipitation (10-25mm, with local amounts in excess of 25mm) continued over winter grain areas in Algeria, benefiting that portion of the crop still in the filling stage. Since most of the crop in Algeria was approaching maturity, the rain came too late to significantly improve yield prospects. Although heaviest amounts of rain (50-72mm) in north-central Algeria caused local flooding, it fell south of the principal growing areas. In Tunisia, generally light precipitation (4-10mm) favored crop maturation. In Morocco, widespread rain (10-34mm) slowed crop maturation but was beneficial for those winter grains still in the filling stage.

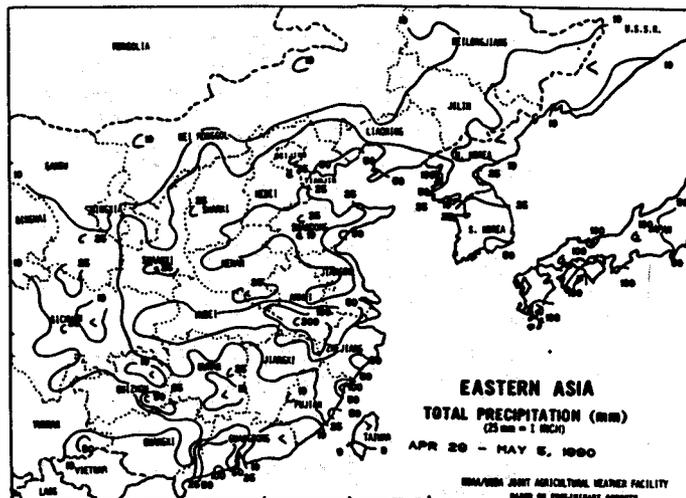


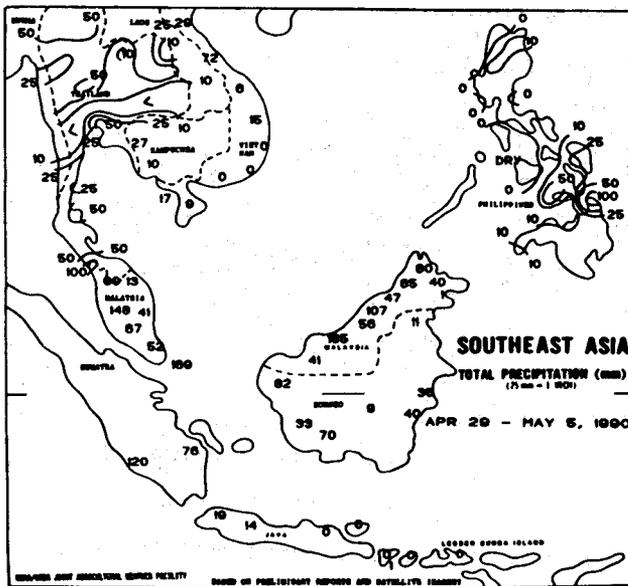
SOUTH AFRICA ... Unseasonable rain (6-21mm) continued early in the week over the western half of the Maize Triangle before moving eastward, where unfavorably heavy showers (36-53mm) covered the east. Beneficially dry weather dominated the region the remainder of the week, but temperatures were below normal, slowing the drying process. Coldest temperatures occurred at midweek, with lows across the Triangle ranging from 0 to 3 degrees C. Dry, warmer weather is needed across the Triangle to prevent quality reductions and further corn harvest delays and, in the east, to promote wheat planting. Elsewhere, moderate to heavy rain (11-42mm) continued across primary winter wheat areas of the southern Cape Province, where recent weeks of wet weather have provided highly beneficial topsoil moisture for planting and early growth.



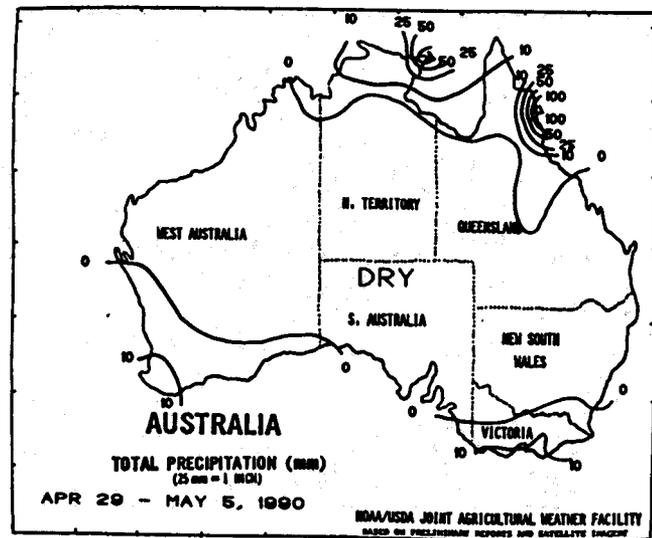
SOUTH ASIA ... Beneficial showers (10-25mm or more) continued to improve irrigation reserves in the eastern rice areas, with the heaviest rainfall (36-99mm) concentrated over eastern Madhya Pradesh and Orissa. Main-season rice planting in the east is normally underway during June but can begin as early as May in local areas. Harvest of the fall crop is usually complete in most areas by the end of May. Scattered showers (5-25mm or more), accompanied by somewhat cooler weather, fell in the south from Kerala through western Andhra Pradesh. In the north, a pocket of moderate rain (10-39mm) covered winter wheat areas of southern Haryana, eastern Rajasthan, and northern Madhya Pradesh, creating unfavorably wet conditions for unharvested crops. By week's end, a Tropical Cyclone in the Bay of Bengal was approaching India's southeast coast.

EASTERN ASIA ... Widespread rain (10-40mm, with isolated amounts greater than 40mm) fell over Manchuria, the North China Plain, and northwestern Chinese crop areas, ending up to 2 consecutive dry weeks and maintaining favorable conditions for winter and spring crops. However, below-normal temperatures (1-3 degrees C below normal) slowed growth and development of jointing to reproductive winter grains in the North China Plain. Heavy seasonal rain (15-80mm, with scattered rainfall in excess of 100mm) favored early crop and single season rice in middle and lower sections of the Yangtze Valley, although very heavy rains (100-250mm) in sections of southern Anhui, northern Jiangxi, and western Hubei likely caused localized flooding. Flooding was also possible in southern sections of Kyushu and Honshu in Japan, where persistent, heavy rain (100-170mm) fell.

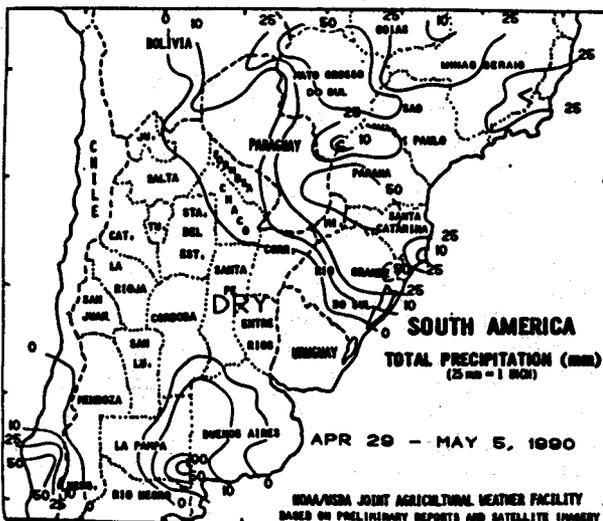




SOUTHEAST ASIA ... Highly beneficial, but variable rainfall (15-50mm or more) covered most Thai rainfed grain areas, boosting preplanting moisture reserves and bringing some relief from the excessive heat. Driest areas, however, were the central corn areas and most primary rice areas of the Khorat Plateau. Weekly temperatures persisted above normal, maintaining high evaporative losses. In the Philippines, moderate showers (25-50mm or more) continued over the east-central islands and northernmost Mindanao, improving moisture reserves for planting. Rainfall tapered off elsewhere in Mindanao, following last week's beneficial rain, with most areas receiving 10-15mm. Rainfall was also sparse over the west-central islands and Luzon, although scattered showers (10-32mm) in western and northern Luzon brought some relief from the persistent hotter-than-normal weather. To the south, seasonably drier weather moved into southern Indonesia as moderate to heavy showers (25-50mm or more) advanced into Malaysia and peninsular Thailand, causing some local flooding.



AUSTRALIA ... Dry weather continued across most crop areas of southern Queensland and New South Wales for the second consecutive week, allowing rapid progress in harvest of cotton, sorghum, and corn, and planting of wheat and barley. Heavy rain (20-160mm) fell in coastal sections of northern Queensland, possibly causing some localized flooding. In the south, scattered, mostly light rain (less than 10mm) fell in sections of southwestern Western Australia and central Victoria, while South Australia remained mostly dry. Much warmer-than-normal temperatures (2-5 degrees C above normal) accelerated soil moisture losses in crop areas of South Australia and extreme northwestern Victoria, where soil moisture in some areas remains abnormally low for winter grains planting.



SOUTH AMERICA ... In Argentina, mostly dry weather over northern and eastern Buenos Aires, Cordoba, Santa Fe, and Chaco favored more rapid harvest progress as fields dried out. Sunny skies improved cotton harvest conditions in the north. Late-week showers and thunderstorms developed over eastern La Pampa and western Buenos Aires, generally producing 10-20mm of rain with an isolated report of 110mm in southeastern La Pampa. In south-central Brazil, lingering early-week rain (25-85mm) aggravated wet field conditions in most areas. However, much needed drier weather during the latter half of the week brought a respite from the recent wetness. The greatest advances in soybean harvesting likely occurred in northwestern Parana, Goias, and western Minas Gerais, where weekly rainfall averaged less than 25mm. Brazil's soybean harvest lags behind the pace of last year and the average for this time.

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(Continued from p. 9)

During April, cotton planting progressed at a near normal pace. Early in April, planting lagged behind normal in most of the Delta and Southeast. About midmonth, fields began squaring in the Rio Grande Valley of Texas. Producers in the Plains area were waiting for warmer soil temperatures before planting. The last week of April, planting progressed rapidly in Alabama, California, Louisiana, Mississippi, and the Carolinas. Louisiana producers planted over one-half of their crop during that week. Dry soil conditions slowed planting in Georgia, while rain and wet field conditions slowed planting in Arkansas, Missouri, and portions of Texas. By April 29, planting was 31% complete, 1 point behind normal in the 14 major producing States. Planting had not started in Oklahoma.

By April 29, sorghum planting was 18% complete, 2 points behind normal. Planting was underway in 7 of the 12 major producing States. Planting lagged behind normal in Arkansas and Mississippi but was near or ahead of normal in the other States.

Rice seeding was 28% complete, 24 points behind normal by April 29. Seeding lagged behind normal in Arkansas, Mississippi, and Texas but was near normal in California and Louisiana.

Soybean planting was underway by mid-April in the Delta and Southeast. By the end of April, planting had started in portions of the Corn Belt.

At the beginning of April, spring wheat seeding was underway in all five major producing States. Seeding advanced rapidly during the month and was 54% complete, 9 points ahead of normal, by April 29. Seeding was 95% complete, 32 points ahead of normal in South Dakota. In North Dakota, seeding was 37% complete, 1 point ahead of normal.

(Continued from p. 22)

WYOMING: Temperatures mostly below normal. Precipitation variable across State. Days suitable for fieldwork 5.0. Topsoil 20% short, 74% adequate, 6% surplus. Spring wheat planted 85%, 70% 1989, 65% avg.; emerged 35%, 25% 1989, 30% avg. Oats planted 65%, 65% 1989, 55% avg.; emerged 35%, 25% 1989, 20% avg. Barley planted 85%, 85% 1989, 75% avg.; emerged 70%, 45% 1989, 45% avg. Sugarbeets planted 85%, 90% 1989, 85% avg.; emerged 30%, 15% 1989, 15% avg. Frost damage in north central growing area, some replanting necessary. Corn planted 15%, 25% 1989, 20% avg. Potatoes planted 40%, 25% 1989, 20% avg. Winter wheat mostly good. Russian aphids, army cutworms continue to be a problem eastern areas. Livestock good. Spring calves born 90%, 90% 1989, 85% avg. Farm flock: Ewes lambed 95%, 95% 1989, 90% avg.; shorn 95%, 90% 1989, 85% avg. Range flock: Ewes lambed 55%, 60% 1989, 55% avg.; shorn 75%, 75% 1989, 60% avg. Calf, lamb losses light to normal. Ranges, pastures greening up, fair to mostly good.

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