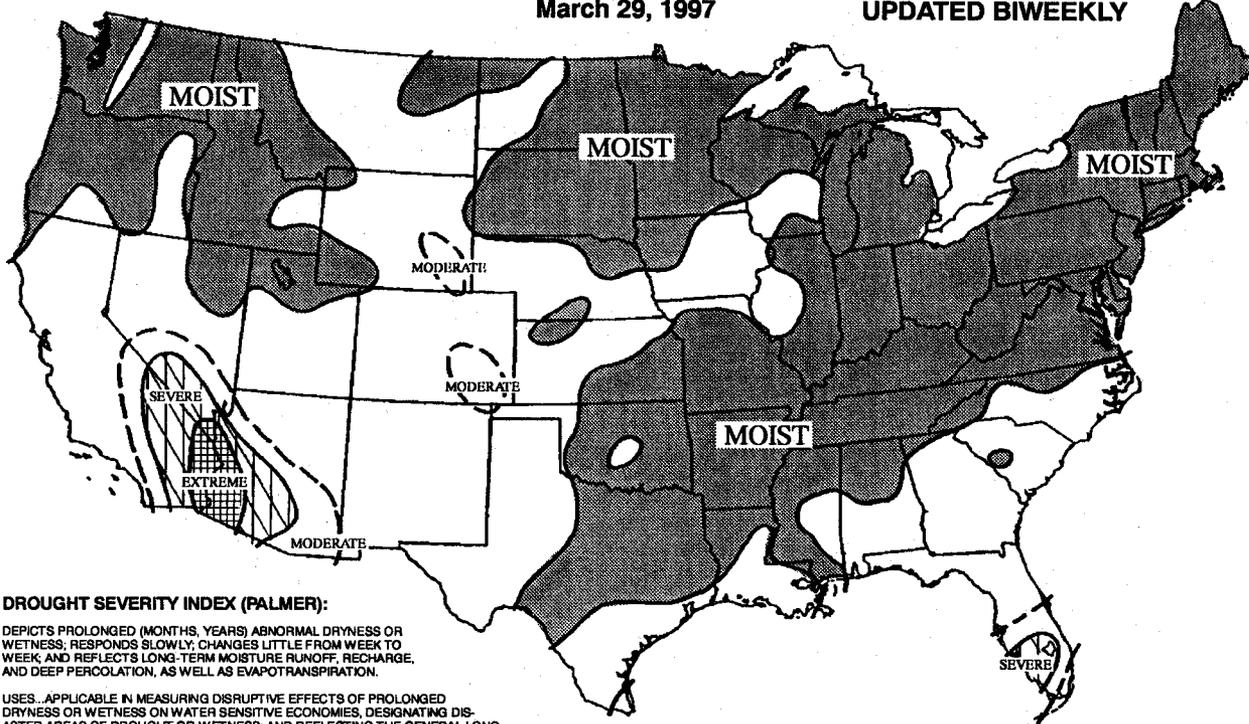


DROUGHT SEVERITY
(LONG TERM PALMER)

March 29, 1997

UPDATED BIWEEKLY



DROUGHT SEVERITY INDEX (PALMER):

DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY, CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG-TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.

USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES, DESIGNATING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL LONG-TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS, AND STREAMS.

LIMITATIONS... IS NOT GENERALLY INDICATIVE OF SHORT-TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

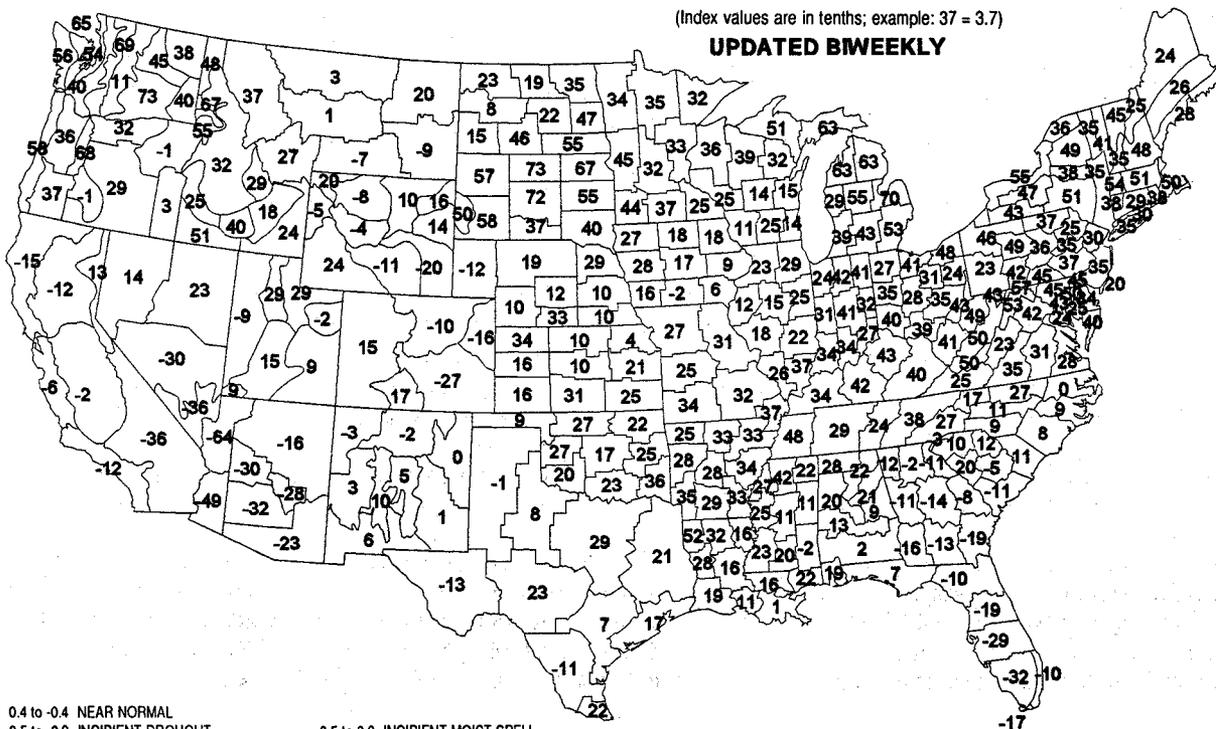
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

DROUGHT SEVERITY INDEX BY DIVISION
(LONG TERM, PALMER)

March 29, 1997

(Index values are in tenths; example: 37 = 3.7)

UPDATED BIWEEKLY

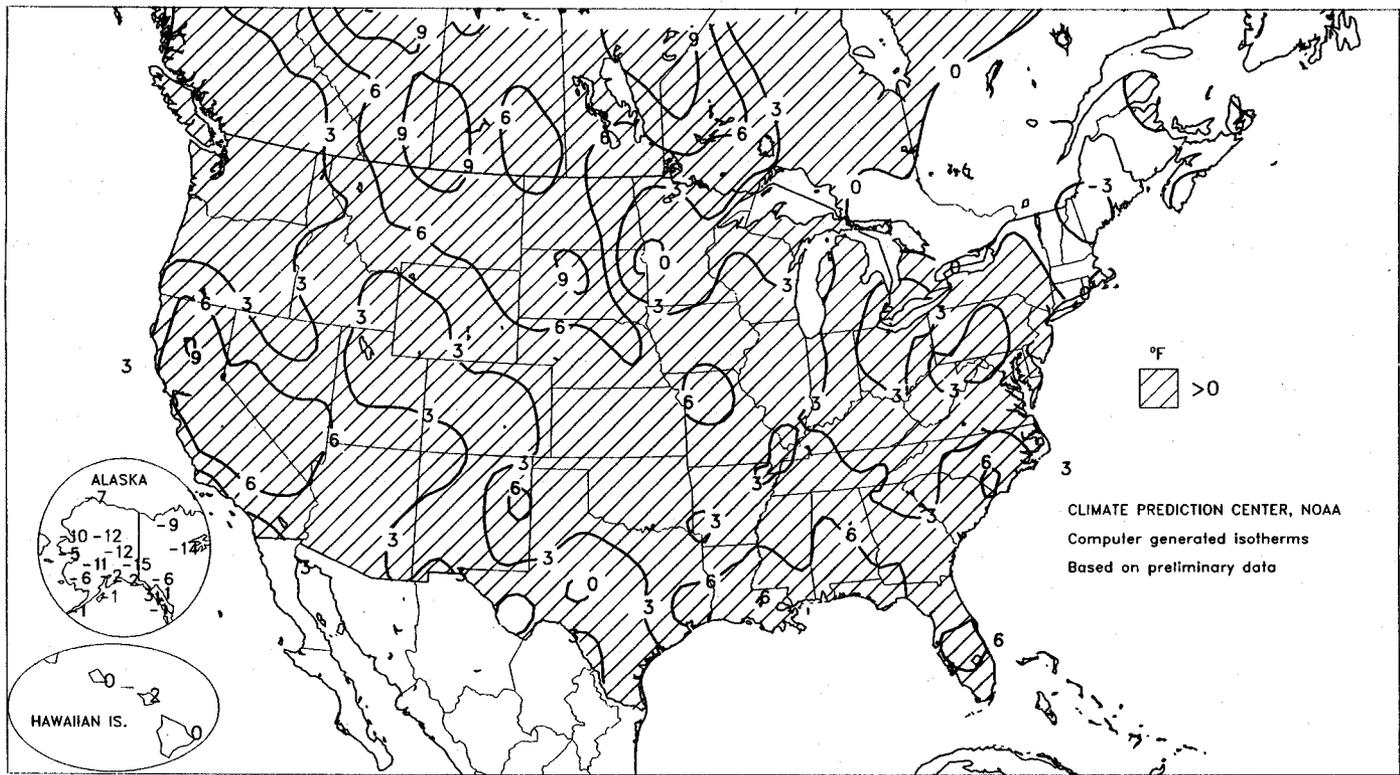


- | | |
|--------------------------------|----------------------------------|
| 0.4 to -0.4 NEAR NORMAL | 0.5 to 0.9 INCIPIENT MOIST SPELL |
| -0.5 to -0.9 INCIPIENT DROUGHT | 1.0 to 1.9 MOIST SPELL |
| -1.0 to -1.9 MILD DROUGHT | 2.0 to 2.9 UNUSUAL MOIST SPELL |
| -2.0 to -2.9 MODERATE DROUGHT | 3.0 to 3.9 VERY MOIST SPELL |
| -3.0 to -3.9 SEVERE DROUGHT | ABOVE 4.0 EXTREME MOIST SPELL |
| BELOW -4.0 EXTREME DROUGHT | |

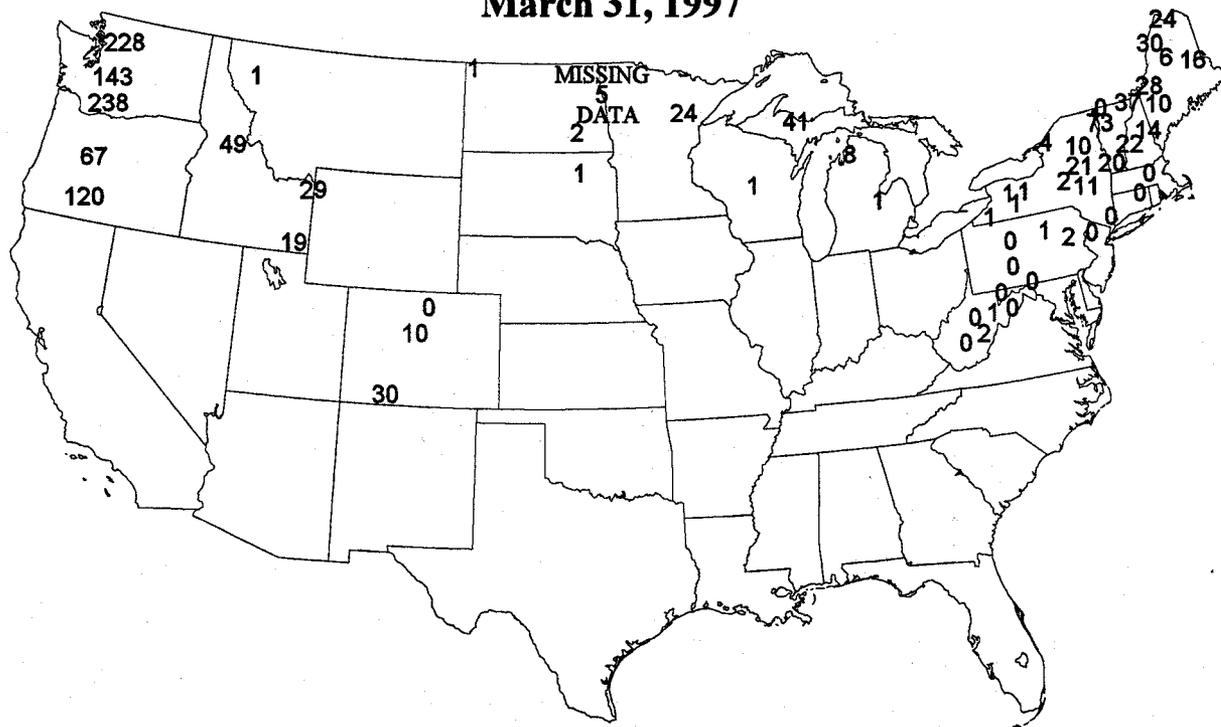
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

Departure of Average Temperature from Normal (°F)

MAR 23 - 29, 1997



**SNOW DEPTH (Inches)
March 31, 1997**



Experimental product based on preliminary data
 NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Due to continuing problems resulting from the conversion to a new computer system at NCEP, data coverage is incomplete in some areas.

National Weather Data for Selected Cities

Weather Data for the Week Ending March 29, 1997

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	82 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	75	47	81	38	61	4	0.65	-0.75	-	3.23	56	14.35	92	-	-	0	0	0	0
MOBILE	79	59	81	52	69	6	0.03	-1.35	0.01	5.39	90	15.95	98	87	45	0	0	3	0
MONTGOMERY	79	53	85	46	66	7	0.04	-1.31	0.02	1.47	25	14.42	89	82	42	0	0	2	0
AK ANCHORAGE	34	18	39	11	26	-2	0.00	-0.14	0.00	0.08	12	0.71	32	58	35	0	7	0	0
BARROW	-12	-28	-3	-33	-20	-7	0.01	-0.03	0.01	0.04	33	0.13	37	74	70	0	7	1	0
FAIRBANKS	23	-12	34	-25	5	-12	0.01	-0.07	0.01	0.06	18	0.66	53	66	34	0	7	1	0
JUNEAU	40	32	46	27	38	1	-	-	-	-	-	-	-	-	-	0	4	-	-
KODIAK	38	28	40	19	33	-1	0.95	-0.05	0.61	1.53	35	18.44	108	81	58	0	5	4	1
NOME	15	-4	22	-18	6	-5	0.00	-0.14	0.00	0.15	31	2.04	109	70	53	0	7	0	0
AZ PHOENIX	81	58	84	58	70	6	0.00	-0.18	0.00	0.00	0	1.46	66	39	14	0	0	0	0
PRESCOTT	64	33	68	27	49	5	0.00	-0.37	0.00	0.00	0	3.06	64	-	-	0	3	0	0
TUCSON	78	51	85	49	64	4	0.09	-0.05	0.09	0.09	14	1.70	77	44	13	0	0	1	0
YUMA	84	58	87	54	71	4	0.00	-0.06	0.00	0.00	0	0.47	59	-	-	0	0	0	0
AR FORT SMITH	75	43	81	35	59	4	0.66	-0.28	0.65	4.01	109	11.07	135	89	37	0	0	2	1
LITTLE ROCK	73	47	82	41	60	4	0.24	-0.95	-	7.84	169	15.11	133	-	-	0	0	-	-
CA BAKERSFIELD	80	51	90	45	65	6	0.00	-0.22	0.00	0.21	21	2.99	103	84	16	1	0	0	0
EUREKA	58	44	64	38	51	2	0.19	-0.94	0.17	2.62	52	14.00	89	93	53	0	0	2	0
FRESNO	78	53	85	45	65	9	0.08	-0.31	0.08	0.09	5	3.48	63	84	16	0	0	1	0
LOS ANGELES	65	55	67	53	60	1	0.24	-0.13	0.08	0.69	37	4.90	72	89	42	0	0	3	0
REDDING	76	51	80	46	63	10	0.00	-0.90	0.00	2.30	55	12.02	82	-	-	0	0	0	0
SACRAMENTO	78	48	82	46	63	8	0.00	-0.52	0.00	0.58	19	8.52	98	-	-	0	0	0	0
SAN DIEGO	65	58	69	57	62	2	0.00	-0.37	0.00	0.00	0	3.27	65	82	44	0	0	0	0
SAN FRANCISCO	69	50	78	47	59	6	0.00	-0.62	0.00	0.20	7	8.00	77	87	27	0	0	0	0
CO DENVER	58	28	70	19	43	1	0.10	-0.23	0.08	0.20	17	0.86	38	-	-	0	5	2	0
GRAND JUNCTION	63	31	75	20	47	1	0.42	0.20	0.38	0.48	56	1.19	62	58	22	0	4	2	0
PUEBLO	63	26	78	19	44	0	0.25	0.06	0.11	0.48	67	1.07	80	70	22	0	7	3	0
CT BRIDGEPORT	51	33	65	22	42	0	0.63	-0.25	0.36	3.14	90	8.24	84	-	-	0	3	4	0
HARTFORD	52	29	69	19	41	-1	0.60	-0.25	0.37	2.44	72	7.01	70	71	38	0	4	3	0
DC WASHINGTON	63	41	77	35	52	2	0.48	-0.22	0.34	3.76	127	8.76	104	77	37	0	0	2	0
FL PANAMA CITY	77	61	79	50	69	8	-	-	-	-	-	-	-	-	-	0	0	-	-
DAYTONA BEACH	81	62	85	59	72	6	0.15	-0.45	0.06	1.81	66	4.29	50	-	-	0	0	3	0
JACKSONVILLE	79	58	85	46	68	4	0.52	-0.22	0.51	1.58	46	5.75	55	95	55	0	0	2	1
KEY WEST	83	72	85	70	78	3	0.00	-0.37	0.00	1.88	118	6.21	114	88	65	0	0	0	0
MIAMI	85	69	86	63	77	4	0.30	-0.25	0.30	2.04	91	5.27	83	89	55	0	0	1	0
ORLANDO	85	64	87	61	74	6	0.50	-0.15	0.49	3.45	113	6.96	83	94	49	0	0	2	0
TALLAHASSEE	80	56	83	45	68	6	0.19	-1.11	0.16	1.58	27	11.00	68	94	53	0	0	4	0
TAMPA	84	66	87	62	75	7	0.00	-0.57	0.00	1.19	41	2.80	35	94	60	0	0	0	0
WEST PALM BEACH	84	68	89	60	76	3	0.44	-0.19	0.31	3.52	128	12.23	150	92	54	0	0	3	0
GA ATLANTA	71	49	79	40	60	4	0.70	-0.57	0.36	2.17	40	14.81	99	84	37	0	0	2	0
AUGUSTA	76	46	88	38	61	3	0.68	-0.32	0.59	2.23	51	10.73	84	91	44	0	0	3	1
MACON	78	49	86	37	63	4	0.36	-0.66	0.27	0.93	21	11.41	83	94	44	0	0	3	0
SAVANNAH	77	54	82	46	66	4	0.24	-0.60	0.16	1.11	31	6.50	63	97	49	0	0	2	0
HI HILO	78	67	81	64	73	0	8.95	5.56	3.11	18.71	145	28.87	87	93	77	0	0	7	4
HONOLULU	81	70	83	66	75	0	2.48	2.00	2.18	4.90	237	12.77	163	88	63	0	0	5	1
KAHULUI	82	68	83	66	75	2	-	-	-	-	-	-	-	88	62	0	0	-	-
LIHUE	-	-	-	-	-	-	-	-	-	-	-	-	-	89	77	-	-	-	-
ID BOISE	60	36	74	29	48	3	0.18	-0.12	0.16	0.52	43	3.39	91	66	22	0	1	2	0
LEWISTON	59	37	70	31	48	2	0.19	-0.06	0.14	1.73	173	5.37	168	-	-	0	2	2	0
POCATELLO	55	27	68	19	41	2	0.11	-0.19	0.08	0.53	45	2.50	79	80	29	0	7	2	0
IL CHICAGO	53	35	75	23	44	3	1.12	0.41	0.41	1.55	63	7.33	136	89	51	0	3	4	0
MOLINE	57	36	75	26	47	5	0.25	-0.53	0.23	1.10	42	6.59	120	-	-	0	3	2	0
PEORIA	59	36	73	29	47	4	0.57	-0.19	0.47	1.01	38	7.27	129	84	44	0	3	3	0
QUINCY	62	36	70	30	50	5	-	-	-	-	-	-	-	-	-	0	1	-	-
ROCKFORD	53	34	74	25	43	4	0.71	0.05	0.63	1.28	57	5.24	111	-	-	0	3	3	1
SPRINGFIELD	61	39	74	28	50	5	0.51	-0.30	0.32	2.40	80	6.49	103	-	-	0	1	3	0
IN EVANSVILLE	63	38	75	30	51	1	0.57	-0.52	0.41	6.74	153	13.71	134	88	45	0	2	3	0
FORT WAYNE	55	36	70	21	45	3	0.87	0.16	0.38	3.12	116	8.87	137	88	57	0	2	4	0
INDIANAPOLIS	58	37	69	27	48	2	0.98	0.07	0.76	4.34	123	11.74	141	85	43	0	2	2	1
SOUTH BEND	53	35	73	21	44	3	1.14	0.35	0.48	2.02	70	6.83	98	-	-	0	2	4	0
IA DES MOINES	57	36	75	27	47	5	0.22	-0.38	0.17	0.86	43	1.77	45	83	42	0	3	2	0
SIOUX CITY	59	31	79	26	45	5	0.05	-0.45	0.05	0.47	26	1.41	46	90	49	0	4	1	0
WATERLOO	53	32	75	25	42	3	0.39	-0.22	0.32	1.48	70	3.23	81	-	-	0	4	3	0
KS CONCORDIA	64	37	76	30	51	5	0.06	-0.49	0.06	0.17	8	1.70	50	70	29	0	2	1	0
DODGE CITY	67	36	73	29	51	4	0.00	-0.41	0.00	0.00	0	1.22	48	64	24	0	2	0	0
GOODLAND	63	30	76	21	47	5	0.00	-0.26	0.00	0.00	0	1.05	55	67	22	0	4	0	0
TOPEKA	66	38	77	29	52	4	0.11	-0.52	0.10	0.24	11	3.11	73	70	27	0	2	2	0
WICHITA	67	37	77	31	52	2	0.34	-0.31	0.23	0.47	19	2.99	68	74	32	0	1	3	0
KY BOWLING GREEN	66	41	77	32	54	3	-	-	-	-	-	-	-	-	-	0	1	-	-
LEXINGTON	80	38	70	28	49	0	1.74	-0.73	1.14	13.23	321	21.24	208	86	36	0	2	3	2

Weather Data for the Week Ending March 29, 1997

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	92 AND BELOW	TEMP. °F		PRECIP.	
																		01 INCH OR MORE	50 INCH OR MORE	01 INCH OR MORE	50 INCH OR MORE
ME CARIBOU	36	18	44	3	27	-2	0.44	-0.14	0.21	2.29	101	8.13	123	82	51	0	6	3	0	0	0
ME PORTLAND	42	24	50	13	33	-4	0.90	-0.03	0.41	3.35	98	8.38	82	79	43	0	5	3	0	0	0
MD BALTIMORE	63	36	78	28	49	2	0.59	-0.17	0.43	5.01	158	10.08	108	-	-	0	3	3	0	0	0
MD SALISBURY	62	36	78	27	49	1	1.28	0.36	0.81	4.35	111	10.16	92	-	-	0	4	2	1	1	1
MA BOSTON	51	32	62	23	41	0	0.87	0.04	0.54	3.18	93	6.68	63	69	40	0	3	2	1	1	1
MA WORCESTER	48	28	63	15	38	1	1.39	0.48	1.00	3.47	94	8.53	79	-	-	0	4	3	1	1	1
MI ALPENA	41	24	54	3	33	1	0.55	0.03	0.51	2.48	127	8.62	176	88	55	0	6	3	1	1	1
MI DETROIT	51	34	71	19	43	3	0.89	0.26	0.34	3.08	131	8.71	149	84	58	0	2	5	0	0	0
MI FLINT	49	33	68	13	41	3	1.18	0.82	0.61	1.80	90	6.77	146	89	59	0	2	5	1	1	1
MI GRAND RAPIDS	49	34	66	20	41	3	0.75	0.07	0.35	1.32	55	8.07	142	87	57	0	2	4	0	0	0
MI HOUGHTON LAKE	43	25	60	4	34	1	0.73	0.23	0.44	1.50	80	5.78	127	90	51	0	5	6	0	0	0
MI LANSING	49	32	69	11	40	4	1.01	0.44	0.54	2.05	100	7.12	151	90	-	0	2	5	1	1	1
MI MARQUETTE	40	18	49	-4	29	1	0.67	0.01	0.23	3.63	140	11.23	173	97	53	0	7	4	0	0	0
MI MUSKOGON	48	32	63	19	40	3	0.32	-0.31	0.17	0.93	40	6.21	101	-	-	0	2	4	0	0	0
MI SAULT ST. MARIE	-	-	-	-	-	-	-	-	-	2.59	-	7.49	-	-	-	-	-	-	-	-	-
MN ALEXANDRIA	38	24	47	13	31	-1	-	-	-	-	-	-	-	-	-	0	6	-	-	-	-
MN DULUTH	38	24	48	11	31	2	0.19	-0.30	0.12	0.54	31	2.04	54	92	50	0	6	2	0	0	0
MN INT'L FALLS	42	21	53	-4	31	4	0.30	0.02	0.28	1.14	118	2.05	82	90	45	0	7	2	0	0	0
MN MINNEAPOLIS	48	29	66	21	39	3	0.30	-0.20	0.30	1.20	67	3.02	83	91	57	0	5	1	0	0	0
MN ROCHESTER	46	31	65	25	38	3	0.12	-0.36	0.09	1.57	96	4.00	127	-	-	0	4	3	0	0	0
MS GREENWOOD	78	51	82	42	64	5	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
MS JACKSON	78	52	85	44	65	6	0.19	-1.19	0.11	2.24	40	13.43	85	92	39	0	0	3	0	0	0
MS MERIDIAN	79	50	86	40	64	5	0.67	-0.85	0.58	3.67	58	14.25	84	96	42	0	0	3	1	1	1
MO CAPE GIRARDEAU	67	39	78	30	53	2	0.75	-0.42	0.59	4.11	87	11.74	107	-	-	0	2	3	1	1	1
MO COLUMBIA	66	39	72	28	52	6	0.76	0.00	0.47	1.72	60	8.65	144	79	39	0	1	3	0	0	0
MO KANSAS CITY	64	39	74	34	52	5	0.83	0.19	0.63	1.13	48	4.44	98	77	39	0	0	4	1	1	1
MO SAINT LOUIS	67	41	78	30	54	5	0.59	-0.26	0.33	2.59	78	9.37	129	81	39	0	1	3	0	0	0
MO SPRINGFIELD	67	38	75	29	53	4	1.15	0.21	1.08	4.06	114	9.18	127	83	41	0	1	3	1	1	1
MT BILLINGS	58	34	74	28	46	7	0.33	0.02	0.31	0.81	78	1.77	67	70	29	0	4	2	0	0	0
MT GLASGOW	54	30	70	27	42	8	0.22	0.11	0.19	0.49	132	0.84	83	87	49	0	6	2	0	0	0
MT GREAT FALLS	54	31	68	24	43	7	0.06	-0.22	0.03	0.50	49	0.94	38	83	29	0	5	2	0	0	0
MT HAVRE	57	32	72	27	44	9	0.00	-0.17	0.00	0.10	16	0.30	20	81	33	0	6	0	0	0	0
MT HELENA	58	30	72	28	43	6	0.03	-0.16	0.01	0.10	15	0.46	27	78	28	0	6	3	0	0	0
MT KALISPELL	47	28	56	17	38	1	0.24	0.02	0.24	1.76	190	4.79	135	86	49	0	6	1	0	0	0
MT MILES CITY	59	32	79	24	46	8	0.13	-0.05	0.06	0.35	61	0.64	41	-	-	0	4	3	0	0	0
MT MISSOULA	52	30	66	24	41	3	0.11	-0.11	0.08	1.76	193	4.21	142	87	42	0	4	4	0	0	0
NE GRAND ISLAND	61	32	79	23	47	5	0.17	-0.32	0.10	0.21	12	1.27	43	81	38	0	4	2	0	0	0
NE LINCOLN	63	34	79	26	48	5	0.11	-0.44	0.09	0.18	9	1.11	35	-	-	0	3	2	0	0	0
NE NORFOLK	61	33	80	26	47	7	0.06	-0.42	0.04	0.58	34	1.57	52	79	35	0	4	2	0	0	0
NE NORTH PLATTE	61	24	76	20	43	3	0.04	-0.29	0.02	0.07	6	0.74	39	84	26	0	7	2	0	0	0
NE OMAHA	60	35	79	27	48	5	0.18	-0.35	-	0.59	31	1.75	51	82	38	0	2	-	-	-	-
NE SCOTTSBLUFF	61	25	75	18	43	4	0.02	-0.26	0.02	0.17	17	0.80	41	-	-	0	7	1	0	0	0
NE VALENTINE	60	28	81	22	44	6	0.00	-0.28	0.00	0.00	0	0.51	31	-	-	0	6	0	0	0	0
NV ELY	59	24	65	15	42	5	0.00	-0.22	0.00	0.00	0	1.89	83	68	18	0	6	0	0	0	0
NV LAS VEGAS	78	54	83	49	66	7	0.00	-0.08	0.00	0.00	0	0.20	15	30	9	0	0	0	0	0	0
NV RENO	66	34	72	25	50	6	0.00	-0.13	0.00	0.00	0	4.02	146	68	18	0	2	0	0	0	0
NV WINNEMUCCA	62	25	74	15	44	2	0.05	-0.14	0.05	0.07	10	1.72	82	75	19	0	6	1	0	0	0
NH CONCORD	44	23	61	8	34	-3	0.97	0.34	0.37	2.75	108	8.20	108	-	-	0	5	3	0	0	0
NJ ATLANTIC CITY	57	34	68	25	46	1	0.97	0.13	0.68	4.75	141	11.05	112	78	36	0	4	2	1	1	1
NM ALBUQUERQUE	64	39	78	30	52	2	0.11	-0.02	0.08	0.11	22	0.78	56	56	17	0	2	2	0	0	0
NM CLOVIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NM ROSWELL	74	42	85	37	58	3	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-
NY ALBANY	50	27	67	16	39	0	0.45	-0.24	0.23	1.96	72	4.33	59	83	43	0	5	3	0	0	0
NY BINGHAMTON	48	27	68	11	38	1	0.76	0.09	0.34	2.76	105	5.63	77	86	42	0	5	4	0	0	0
NY BUFFALO	48	31	70	17	39	2	1.24	0.61	0.93	4.17	167	11.39	151	87	48	0	3	3	1	1	1
NY NEW YORK	56	37	69	27	46	2	0.83	-0.02	0.43	3.27	98	9.67	105	69	33	0	2	2	0	0	0
NY ROCHESTER	50	29	74	16	40	1	0.85	0.11	0.57	3.22	151	7.74	123	-	-	0	4	2	1	1	1
NY SYRACUSE	50	29	73	14	40	2	0.67	-0.01	0.29	2.89	112	6.32	89	80	42	0	4	3	0	0	0
NC ASHEVILLE	62	39	75	31	51	0	0.57	-0.66	0.34	5.39	101	15.04	110	-	-	0	1	4	0	0	0
NC CHARLOTTE	71	48	82	41	59	5	0.51	-0.42	0.19	2.58	62	9.94	85	81	31	0	0	4	0	0	0
NC GREENSBORO	65	41	78	33	53	2	0.75	-0.05	0.46	3.95	114	9.72	97	84	34	0	0	4	0	0	0
NC HATTERAS	61	47	70	39	54	0	0.01	-0.93	0.01	4.49	112	11.98	89	84	59	0	0	1	0	0	0
NC NEW BERN	73	48	87	40	61	5	0.06	-0.77	0.04	2.12	58	9.31	76	-	-	0	0	2	0	0	0
NC RALEIGH	71	41	82	32	56	3	0.39	-0.40	0.31												

Weather Data for the Week Ending March 29, 1997

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	92 AND BELOW	TEMP, °F		PRECIP.	
																		01 INCH OR MORE	50 INCH OR MORE	01 INCH OR MORE	50 INCH OR MORE
OK TOLEDO	65	34	71	17	46	4	0.81	-0.04	0.22	2.08	84	8.69	146	86	57	0	2	5	0		
OK YOUNGSTOWN	53	33	70	13	43	3	0.38	-0.36	0.36	2.79	96	4.17	59	88	53	0	2	2	0		
OK OKLAHOMA CITY	71	43	80	32	57	3	0.59	-0.04	0.51	0.59	23	3.20	61	76	32	0	1	2	1		
OR TULSA	71	44	80	35	57	3	1.02	0.19	0.87	1.41	44	5.08	76	76	30	0	0	3	1		
OR ASTORIA	54	40	57	37	47	1	1.23	-0.26	0.62	15.11	227	31.26	129	93	57	0	0	5	1		
OR BURNS	57	24	70	15	41	2	0.00	-0.22	0.00	0.22	23	3.04	113	-	-	0	7	0	0		
OR MEDFORD	68	38	80	31	53	5	0.04	-0.34	0.04	0.90	52	5.43	86	88	27	0	1	1	0		
OR PENDLETON	59	37	68	32	48	1	0.09	-0.16	0.09	1.16	106	2.58	89	77	33	0	1	1	0		
OR PORTLAND	61	40	72	35	50	2	0.24	-0.51	0.18	6.70	200	15.49	123	88	34	0	0	3	0		
OR SALEM	60	36	72	30	48	1	0.42	-0.44	0.24	7.08	180	18.23	127	-	-	0	3	3	0		
PA ALLENTOWN	57	30	71	21	43	0	0.34	-0.43	0.28	2.59	84	6.56	71	75	39	0	4	2	0		
PA ERIE	52	35	72	17	43	4	1.01	0.29	0.56	4.46	180	9.77	134	89	54	0	2	2	1		
PA HARRISBURG	60	35	74	25	48	3	0.30	-0.44	0.23	2.75	89	6.62	70	-	-	0	3	2	0		
PA PHILADELPHIA	60	37	73	27	49	3	0.58	-0.24	0.53	3.37	104	8.84	96	82	41	0	2	3	1		
PA PITTSBURGH	57	35	72	16	48	3	0.93	0.13	0.74	3.11	97	6.17	78	85	39	0	2	4	1		
PA SCRANTON	53	31	70	19	42	2	0.73	0.12	0.45	2.08	88	4.70	71	74	34	0	4	3	0		
RI PROVIDENCE	51	31	59	22	41	1	1.22	0.28	0.67	3.16	84	9.28	82	68	45	0	4	3	1		
SC CHARLESTON	76	54	84	44	65	5	0.48	-0.45	0.40	1.82	44	6.71	62	90	46	0	0	3	0		
SC COLUMBIA	76	48	86	37	62	4	0.40	-0.64	0.37	1.20	26	10.33	79	82	38	0	0	2	0		
SC FLORENCE	75	50	86	45	63	5	-	-	-	-	-	-	-	-	0	0	-	-	-		
SC GREENVILLE	69	45	80	38	57	3	0.73	-0.45	0.31	2.58	51	13.44	99	85	37	0	0	4	0		
SD ABERDEEN	43	30	52	27	36	3	0.14	-0.16	0.14	0.85	83	3.07	137	90	60	0	7	1	0		
SD HURON	51	33	75	27	42	5	0.06	-0.37	0.06	0.20	13	1.54	59	85	56	0	3	1	0		
SD RAPID CITY	60	28	77	21	44	7	0.11	-0.18	0.08	0.14	15	1.01	55	81	28	0	6	3	0		
SD SIOUX FALLS	52	30	74	25	41	4	0.14	-0.30	0.14	0.24	16	2.02	76	90	52	0	4	1	0		
TN CHATTANOOGA	70	46	75	36	58	4	0.81	-0.52	0.64	4.96	82	16.04	104	83	38	0	0	3	1		
TN KNOXVILLE	67	44	75	35	56	4	1.10	-0.02	0.39	6.01	125	16.10	124	90	40	0	0	4	0		
TN MEMPHIS	72	48	81	40	60	4	0.98	-0.29	0.98	9.12	181	21.11	161	-	-	0	0	2	1		
TN NASHVILLE	70	43	81	35	57	3	0.96	-0.14	0.63	9.53	210	16.63	139	85	34	0	0	2	1		
TX ABILENE	75	47	87	37	61	2	0.21	-0.12	0.20	0.93	74	4.51	131	75	30	0	0	2	0		
TX AMARILLO	71	37	80	31	54	4	0.01	-0.21	0.01	0.01	1	1.11	55	59	19	0	1	1	0		
TX AUSTIN	76	57	86	50	67	2	0.47	0.05	0.47	1.50	86	6.47	115	87	53	0	0	1	0		
TX BEAUMONT	78	63	83	58	71	7	0.73	-0.01	0.56	3.42	112	14.02	125	-	-	0	0	3	1		
TX BROWNSVILLE	79	65	85	58	72	1	0.02	-0.13	0.01	4.60	958	5.63	182	97	45	0	0	2	0		
TX CORPUS CHRISTI	76	62	82	56	69	1	0.11	-0.08	0.10	4.54	516	5.93	131	96	46	0	0	2	0		
TX DEL RIO	81	56	90	50	68	2	0.08	-0.12	0.04	2.62	413	4.76	225	83	36	1	0	2	0		
TX EL PASO	72	48	83	41	60	3	0.54	0.48	0.40	0.85	232	1.36	124	60	20	0	0	3	0		
TX FORT WORTH	74	50	82	41	62	4	0.67	-0.05	0.67	2.21	79	9.89	140	86	46	0	0	1	1		
TX GALVESTON	74	66	78	61	70	6	4.28	3.77	4.21	9.17	443	16.14	213	-	-	0	0	2	1		
TX HOUSTON	80	62	86	54	71	8	0.83	0.17	0.82	7.51	274	16.18	180	93	60	0	0	2	1		
TX LUBBOCK	74	43	84	33	59	4	0.00	-0.19	0.00	0.03	4	1.61	87	67	17	0	0	0	0		
TX MIDLAND	75	46	86	40	61	2	0.25	0.14	0.23	0.28	61	2.17	145	77	24	0	0	2	0		
TX SAN ANGELO	75	47	85	41	61	-1	0.90	0.68	0.87	2.49	300	7.37	273	86	40	0	0	3	1		
TX SAN ANTONIO	77	56	88	49	67	2	0.04	-0.33	0.03	1.89	134	4.61	93	90	48	0	0	2	0		
TX VICTORIA	77	61	81	53	69	3	0.69	0.33	0.67	11.57	809	17.02	303	97	58	0	0	2	1		
TX WACO	75	50	80	43	62	1	0.78	0.22	0.60	3.74	172	14.06	238	92	53	0	0	3	1		
TX WICHITA FALLS	77	46	88	35	61	5	0.12	-0.44	0.10	0.23	11	3.44	76	79	28	0	0	2	0		
UT CEDAR CITY	63	30	69	19	47	4	0.09	-0.21	0.09	0.17	13	2.58	91	-	-	0	4	1	0		
UT SALT LAKE CITY	58	33	68	27	46	1	0.07	-0.40	0.05	0.81	46	4.70	114	69	26	0	4	2	0		
VT BURLINGTON	43	23	59	9	33	-2	0.32	-0.23	0.23	2.11	102	4.98	91	82	44	0	5	3	0		
VA NORFOLK	64	43	81	35	53	2	0.67	-0.14	0.56	3.06	88	7.94	74	89	56	0	0	2	1		
VA RICHMOND	65	39	81	31	52	1	0.36	-0.44	0.36	2.67	79	8.31	85	80	26	0	2	1	0		
VA ROANOKE	64	41	72	33	52	2	0.20	-0.58	0.20	3.07	94	8.62	97	79	32	0	0	1	0		
WA QUILLAYUTE	51	38	54	35	45	0	2.34	-0.06	1.01	19.79	183	46.53	123	96	64	0	0	5	2		
WA SEATTLE-TACOMA	54	40	62	36	47	1	0.23	-0.51	0.10	7.85	236	16.87	133	93	58	0	0	4	0		
WA SPOKANE	54	32	63	26	43	2	0.12	-0.21	0.12	2.40	170	5.48	113	83	37	0	5	1	0		
WA YAKIMA	62	34	70	29	48	3	0.00	-0.14	0.00	0.60	95	1.94	75	81	30	0	3	0	0		
WV BECKLEY	59	35	71	24	47	2	0.74	-0.03	0.35	5.50	174	10.03	111	83	34	0	2	4	0		
WV CHARLESTON	63	38	77	29	51	1	1.07	0.24	0.50	7.93	233	11.20	120	78	34	0	2	4	1		
WV HUNTINGTON	62	39	76	29	51	4	0.92	0.10	0.45	8.11	246	11.70	125	77	37	0	1	4	0		
WV PARKERSBURG	59	37	73	24	49	2	1.43	0.65	0.87	6.53	183	10.12	106	-	-	0	2	4	1		
WI GREEN BAY	43	29	57	14	36	1	0.39	-0.13	0.29	1.64	86	4.24	104	94	66	0	4	2	0		
WI LACROSSE	52	33	75	27	43	5	0.61	0.08	-	3.07	171	6.03	166	-	-	0	3	-	-		
WI MADISON	49	32	73	21	40	3	0.68	0.10	0.31	1.45	73	4.88	116	89	51	0	3	4	0		
WI MILWAUKEE	52	36	75	26	44	7	0.17	-0.53	0.11	0.63	26	4.61	94	-	-	0	2	3	0		
WI WAUSAU	44	29	60	16	37	3	0.54	0.02	0.39	1.76	97	4.18	116	-	-	0	4	3	0		
WY CASPER	53	24	65	18	38	2	0.41	-0.16	0.31	0.70	80	1.81	90	87	33	0	6	3	0		
WY CHEYENNE	55	26	65	17	41	5	0.09	-0.18	0.07	0.43	45	1.14	66	79	23	0	6	2	0		
WY LANDER	54	26	67	19	40	3	0.16	-0.16	0.13	0.54	52	1.14	54	77	24	0	6	2	0		
WY SHERIDAN	55	28	74	21	41	4	0.14	-0.12	0.07	0.35	39	1.24	54	-	-	0	6	4	0		
PR SAN JUAN	84	70	86	69	77	-1	0.08	-0.49	0.07	1.80	85	10.39	108	86	66	0	0	2	0		

Based on 1961-90 normals

Note: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations have been incomplete.

State Agricultural Summaries

These summaries, issued weekly in April through November and monthly in the other months, 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. The crop weather reports are also available on the Internet through the NASS Home Page on the World Wide Web at <http://www.usda.gov/nass/> or from JAWF at <http://www.usda.gov/oce/waob/jawf>.

ALABAMA: Days suitable for fieldwork 5.3. Topsoil moisture 15% short, 74% adequate and 11% surplus. Spring plowing complete 38%, 32% 1996, 40% avg. Corn planted 33%, 19% 1996, 28% avg. Wheat headed 17%, 8% 1996, 13% avg. Wheat condition was rated 2% poor, 21% fair, 62% good, and 15% excellent. Livestock condition 2% poor, 22% fair, 73% good, and 3% excellent. Mild weather conditions allowed spring plowing and planting to progress close to normal in most areas.

ARIZONA: Temperatures during March provided plenty of suitable days for cotton planting and boosted small grain development. Cotton was 24% planted compared with 24% last year and 15% avg. Small grains development moved ahead of last year and average. Specifically, small grains were 55% heading compared with 49% last year and 48%. Condition rated none very poor or poor, 6% fair, 73 good and 21 excellent. Alfalfa condition: very poor or poor, 2% fair, 36 good and 62 excellent. First cutting continued moderate to active in the western and central parts of the State, while harvest was several weeks away in the southeast. Winter vegetables continued in good supply throughout the month with the western deal just starting to tail off somewhat at month's end. Above normal temperatures the latter part of the month, accelerated growth of many crops. Iceberg, Boston, leaf, romaine and specialty lettuces along with cauliflower, endive, escarole, and salad savoy were shipped from the western area throughout the month. Growers from both the western and central areas shipped broccoli, cabbage, kale and spinach. In addition, central growers shipped a continuous supply of carrots, Swiss chard, green onions and radishes. Grapefruit, lemons, tangerines and tangelos were being shipped the entire month. Valencia orange harvest was underway in both production areas however, volume has been a bit slow waiting for navel harvest in a neighboring State to be completed. Above normal temperatures improved grazing conditions from a month ago. Upper elevation pastures were rated mostly fair to good, while low to mid-elevation pastures were rated mostly poor to fair. Supplemental feeding was still necessary in a few areas due to elk predation. More precipitation is needed to sustain growth of grasses. Cattle and calves continued in mostly fair condition. Stock water and soil moisture supplies were rated short to adequate overall depending on elevation. Lower elevation pastures were drying rapidly, but higher elevation rangeland had mostly adequate supplies of water. Insect damage remained virtually nonexistent.

ARKANSAS: Most of the State crop land too wet for fieldwork. Dry weather over past week has helped. Winter wheat looks good with little disease problems. Some corn planting being reported in Southeast. Pastures and hay ground in good condition. Livestock in good condition.

CALIFORNIA: Spring fieldwork was progressing normally in most areas. March weather conditions were ideal for growth. Small grains were irrigated and treated for broadleaf weeds. Head development continued in small grain fields in the southern and central counties. Later in the month some dryland wheat, barley and oat fields showed signs of needing moisture. Rice seedbed preparation and stubble burning continued where conditions permitted. Corn, safflower and sunflower were being planted. Early planted sugarbeets and corn were showing excellent growth. By mid-March cotton planting began in the San Joaquin and Sacramento valleys. In the desert areas cotton planting was complete by month's end. Alfalfa and winter forage were cut for hay or greenchopped. Some alfalfa and oat hay suffered rain damage from storms in Kings and Tulare Counties on March 22. California's fruit growers were pruning and applying weed control in vineyards and orchards. The warm and dry spring had stone fruit and grape development ahead of normal. Some growers were thinning the fruit on apricot and early variety nectarine trees. Cherries and strawberries were in full bloom as the month ended. Bees were pollinating citrus trees. The warm weather improved growing conditions for vegetables. Asparagus harvest continued in southern and central California. Cauliflower and broccoli harvesting continued in the central and south coast areas. Harvest of lettuce

picked up in Fresno County. Lettuce was weeded and thinned in the San Joaquin Valley. Artichokes were harvested in the Castrovilla area. Carrot harvest progressed in Kern and Kings Counties. Potatoes were harvested in southern counties. Cabbage and lettuce harvests were winding down in the Imperial Valley. Celery was harvested along the south coast. Onion harvest continued in the Antelope Valley and in Monterey County. Some processing tomato fields were fumigated in preparation for planting, while transplanting continued in other fields. Garlic fields were treated for weeds. Grass on lower foothill pastures was beginning to dry. Rangeland feed conditions remained good, but rain was needed to prolong the season. Supplemental feeding continued in some areas. Cattle and sheep were in good condition.

COLORADO: Mountain areas still under snowpack with trace amounts of snowfall still being recorded. The second half of March saw warm spring weather with occasional precipitation consisting of mixtures of rain and snow. Major farm activities: Finishing income tax forms, attending producer meetings, calving and lambing, general farm maintenance and purchasing for spring planting. Some early progress has been made in seeding of small grain crops and planting of onions due to the positive weather conditions. Winter wheat fields are greening up and the crop is rated in mostly good condition. Additional spring moisture will be needed to maintain favorable crop prospects following a rather dry and mild winter. Both calving and lambing were more than 50 percent complete by month's end.

DELAWARE: Small grains generally in fair to good condition. Hay supplies adequate to above adequate. Livestock and poultry in good condition with no major problems. Wet fields in south have limited field preparation and planting of peas. Activities: Applications of fertilizer and herbicides on small grains is on schedule, planting early season vegetables, including peas, potatoes, and cabbage transplants.

FLORIDA: Topsoil moisture was short to adequate throughout the State, with scattered areas having surplus moisture. Tobacco transplanting was active. Field corn planting was active. Field preparations for spring planted crops was active. Small grains were heading. Hot weather accelerated vegetable plant growth and fruit development. Gusting winds accompanying scattered storms caused only minor damage to vegetables. Vegetable volume leaders were cabbage, peppers, tomatoes, cucumbers, potatoes, sweet corn, snap beans, strawberries, celery, squash, carrots, eggplant, lettuce, and endive/escarole. Mostly dry weather, with rain near end of week. Citrus growers were irrigating. Abundant new foliage, bloom virtually complete. Valencia harvest was active most areas. Seedless grapefruit was going to fresh and process markets. Honey tangerine and temple harvest was almost over. Caretakers were cutting cover crops, post bloom spraying hedging, and topping. Pasture feed was poor 15%, fair 60%, good 25%. Northern counties' pasture condition improved, though some hay feeding continues. Pastures have been fertilized and starting to grow. Spring pasture condition improved the central area due to the recent rain and warmer weather. Grass growth is still slow. Mole cricket damage and weed problems are appearing. General condition of cattle is poor to good, unchanged from last week. Condition of cattle herds is poor 5%, fair 45%, and good 50%.

GEORGIA: Days suitable for fieldwork 5.6. Soil moisture 5% very short; 23% short, 62% adequate, 10% surplus. Corn 1% poor, 12% fair, 79% good, 8% excellent; 62% planted, 27% 1996, 44% avg. Cotton 1% planted, 0% 1996, 0% avg. Peanuts 0% planted, 0% 1996, 0% avg. Tobacco 13% fair, 71% good, 16% excellent; 43% transplanted, 13% 1996, 18% avg. Wheat 5% poor, 23% fair, 64% good, 8% excellent; 95% jointing, 82% 1996, 82% avg.; 59% boot, 19% 1996, 26% avg.; 15% headed, 0% 1996, 4% avg. Onions 2% fair, 65% good, 33% excellent. Watermelons 1% poor, 25% fair, 71% good, 3% excellent; 49% planted, 19% 1996, 29% avg. Apples 7% fair, 93% good; 14% blooming, 1% 1996, 8% avg. Peaches 5% fair, 50% good,

45% excellent; 99% blooming, 93% 1996, 93% avg. Pasture feed 1% very poor, 4% poor, 25% fair, 64% good, 6% excellent. Activities: Crop conditions were variable from last week but continued generally good to excellent. Most areas of the State have adequate soil moisture, but a few areas are getting dry. The warm spring temperatures have boosted land preparation, planting and crop progress well ahead of normal. Fertilizing, liming and applying herbicides to pastures and hay fields, preparing fields for planting, irrigating vegetables and winter pastures, spraying pecan trees, and repairing equipment.

HAWAII: Daily showers mostly unfavorable for agriculture. Muddy fields slowed planting and harvesting activities. Rainy weather encouraged disease and reduced effectiveness of spraying. Cloudy skies slowed crop progress. Banana production steady but seasonally light. Papaya production light, rains beneficial to some fields. Head cabbage output steady, crop in good condition. Tomato harvesting active. Ginger root harvesting and planting active.

IDAHO: Days suitable for fieldwork 3.3. Flooding is possible in low-lying areas of the North and Southwest. Stone fruits are blooming in the Southwest. Topsoil moisture 31% surplus, 65% adequate, 4% short. Spring wheat emerged 2%. Barley planted 10%, emerged 1%. Sugarbeets planted 25%, emerged 3%. Dry peas planted 1%. Oats planted 2%. Onions planted 44%. Hay and roughage supplies improved slightly to 24% adequate, 56% short, and 20% very short. Calving has progressed to 77% complete, while lambing is now 79% complete. Activities: Spring plowing and tillage, preparing ditches for irrigation, planting spring wheat, barley, onions, potatoes, and sugarbeets, fertilizing, sorting potatoes, feeding livestock, lambing, calving, branding, and equipment repair.

ILLINOIS: Topsoil moisture 25% surplus, 70% adequate, 5% short. Farmers preparing for planting. Fertilizer and chemicals being spread. Pastures beginning to green up. Other activities included vehicle maintenance, planting vegetables, and tending livestock. Winter wheat 14% excellent, 63% good, 19% fair, 2% poor, and 2% very poor. Oats planted 17%, 10% 1996, 17% avg.

INDIANA: Rainy weather and wet field conditions have prevented use of heavy equipment in most areas of the State. Farmers have only had a few days to accomplish any field activities. Top-dressing of winter wheat and spreading of fertilizer have occurred on some fields. Farmers have been busy moving grain to market as country road conditions have improved during the last two weeks. Standing water remains in many low lying areas of fields. A few fields of corn and scattered fields of soybeans from last year's crop remain for harvest. Winter wheat looks good over most of the State. Wheat is rated in mostly fair to good condition. Standing water has caused some damage to wheat. Very little nitrogen has been applied to the winter wheat. Cool, wet, muddy conditions continue to place stress on livestock. Calving and lambing is in full swing. Hay supplies are very short. Pasture growth is slow. Major activities: hauling manure, seeding forages, spreading fertilizer and lime, tiling fields and tile line repair, purchasing supplies, attending meetings, refurbishing buildings, equipment repair, mending fence, soil testing and care of livestock.

IOWA: Fertilizer application completed 34% compared with 43% in 1996 and 34% for the 5-year avg. Average depth of snow cover 0 inches; avg. depth of frost penetration 4 in. Farmers in the south have started sowing oats and other field preparations. Soil erosion 67% light to none, 31% moderate, 2% severe. Grain movement was rated 4% none, 35% light, 53% moderate, 8% heavy. Availability of hay and roughage for livestock feed short 17%, adequate 79%, surplus 4%. Quality of hay and roughage was rated poor 10%, fair 56%, good 34%. A steady spring warmup has allayed fears of widespread flooding. Flood potential at the end of the month was rated 45% none, 44% limited, 10% moderate, 1% extensive. Livestock seemed to be in very good condition, and the weather has been great for calving. Hog and pig losses 15% below avg., 82% avg., 3% above avg.; cattle and calf losses 19% below avg., 78% avg., 3% above avg.

KANSAS: Winter wheat received little rain during March and is breaking dormancy in mostly good to excellent condition across the State. Wheat condition improved during the month and is currently rated 20 percent excellent, 65% good, 13% fair, and only 2% poor. The crop received little freeze or wind damage during February. Insect and disease damage is very minimal. Wheat jointing 23%, 2% 1996, 15% avg. Oats planted 98%, 84% 1996, 75% avg. Topsoil moisture has declined, and is currently rated 2% very short, 34% short, 59% adequate, 2% surplus. The decline in topsoil moisture is starting to cause some stress to the wheat crop. Major activities: Top-dressing of wheat, seedbed preparation, and spraying for weeds. Spring calving is well underway, as is lambing. The burning of pastures has begun in the Flint Hills region. Cattle are moving off wheat to summer pastures. Feed and stock water supplies are mostly adequate and pasture conditions are mostly good.

KENTUCKY: March came in with record rainfall that saturated soils and caused extensive flooding. Rainfall made during March the second wettest on record for some central reporting stations. Floods brought water levels higher than they had been in 30 years for the Ohio River and its tributaries. Farmers with bottom land fields were left with considerable debris along with silt and sand deposits to clean up. Generally, not a lot of winter wheat is sown in river bottoms but some acres on higher ground had water in low areas which may have killed some winter wheat. Saturated soils in most areas has limited fertilizing and field preparation for spring planting. Above normal temperatures stimulated pasture and winter wheat growth statewide. Pastures provided some nutrient value late in the month but supplemental feeding remained necessary. Cattle remained in fair to generally good condition with a few producers experiencing some livestock losses due to flash flooding.

LOUISIANA: Days suitable for fieldwork 10.1. Soil moisture supplies were surplus. Rains continued throughout March, keeping most farmers out of their fields. Sugarcane weed populations were a problem as fields were too wet to allow the application of herbicides. Rice planting began, but was slowed due to wet conditions. Blackbirds were taking a heavy toll on emerging rice. Wheat producers were busy applying fertilizer to their fields. Most applications were done by airplane due to wet conditions. Corn planting was significantly behind schedule due to excessive soil moisture. Vegetable producers were preparing to plant bell peppers. Strawberry harvest began. Livestock producers continued supplemental feeding due to short forage supplies as pasture growth was limited by wet conditions. Dwindling hay supplies remained a concern. Crawfish harvest continued at a brisk pace.

MARYLAND: Small grain condition continues to range from adequate to good with reports of grains greening nicely. Some fields still too wet to work. Hay supplies short to adequate with quality hay still in short supply in many areas. Livestock in good condition due to mild weather. Activities: spreading manure and fertilizer, seeding of spring oats and alfalfa, and land preparation.

MICHIGAN: Field activities were very limited in March due to wet fields. Sheets of ice and lack of snow cover on wheat and alfalfa fields were a concern with producers. Some pruning of fruit trees continued as weather permitted. Livestock conditions were normal with no unusual problems. Calving is underway, but most lambing was successfully completed. Livestock producers reported a shortage of feeding supplies and high hay prices. Major activities: Top-dressing, hauling manure, repairing equipment, and planning for the spring planting.

MINNESOTA: March was a seasonably cool month with average amounts of precipitation over most of the State. The prevalence of below-freezing nights and daytime temperatures only moderately above freezing was helpful for slowly reducing the heavy snowpack and lowering the potential for severe flooding, particularly in the southern half of the State. The northwestern portion of the State, notably the valleys of the Red River and its tributaries, has the prospect of record to near-record floods. Thick, wide snowdrifts along field edges are common in southwestern and south-central counties, and will be keeping soils too soft to work for at least a couple of more weeks, even if a rapid thaw begins. In southwestern counties, which had heavy layers of ice deposited before snow cover came, a widespread winter kill of

alfalfa is likely. Local supplies of hay are very short, and livestock operations needing it are having to pay high prices. Calving is in full swing, with livestock condition in the State generally good. However, in some areas which had the most severe January weather, the cows are still recovering from the cold stress, so there is concern whether the calving season will be successful.

MISSISSIPPI: Main farming activities: Planting corn, ground preparation for other crops, feeding and tending livestock. The wheat crop is in mostly fair to good condition. The crop has begun to look better, even though nitrogen was applied late in some areas and in others it was lost due to excessive rainfall. Cattle are in good condition. Winter grasses are looking good. Summer pastures are beginning to green-up. Hay supplies are adequate to surplus with some producers having plenty left-over.

MISSOURI: Topsoil moisture supply, 3% short, 74% adequate, 23% surplus. Below normal precip during March allowed many areas of the State to begin to dry out from the extremely wet weather experienced during the winter months. The drier weather conditions helped reduce most of the excess moisture supplies which all regions of the State had carried into the month. However, wet weather has continued to persist in the Bootheel, limiting fieldwork in this area of Missouri, which is anxious to begin corn planting. As weather and field conditions permitted elsewhere, farmers performed some tillage and fertilizer applications. Condition of winter wheat, 9% poor, 29% fair, 52% good, 10% excellent, improved from a month earlier, with the most favorable ratings found middle third of the State and southwest. Oats sown 38%, 39% 1996, 34% avg. Ground tilled for spring crops 39%, 46% 1996, 41% avg. Supply of hay and other roughage, 5% very short, 18% short, 71% adequate, 6% surplus. Some significant hay supply shortages are noted in the central, east-central, southwestern and south-central areas of the State, but as pasture growth soon resumes, problems in these areas should be alleviated. Stock water supplies, 1% short, 83% adequate, 16% surplus. General condition of livestock, 3% poor, 22% fair, 68% good, 7% excellent.

MONTANA: Days suitable for fieldwork 1.7. Topsoil 4% short, 61% adequate, 35% surplus. Subsoil moisture was rated at 2% very short, 12% short, 68% adequate, and 18% surplus. Very few reports indicated seeding for barley, oats, spring wheat and sugar beets. Winter wheat condition was reported at 7% poor, 22% fair, 64% good and 7% excellent. Emergence of winter wheat was rated at 76% still dormant, 23% greening, and 1% green and growing. Some wind damage to winter wheat was reported with 40% of the acreage showed no damage, 38% of the acreage had light damage, 18% moderate damage, and 4% heavy wind damage. No freeze or drought damage was reported for 50% of the acreage while 26% had light freeze damage, 18% moderate freeze damage and 6% had heavy freeze damage. Field tillage work in progress was rated at 87% none, 12% just started, and 1% well under way. Calving completed was reported at 63% and lambing completed was rated at 34%. Supplemental feed was provided to 95% of cattle and 97% of sheep.

NEBRASKA: Day suitable for fieldwork 5.8. Topsoil 6% very short, 34% short, 55% adequate, 5% surplus. Subsoil 14% short, 77% adequate, 9% surplus. Moisture supplies in the southwest and parts of the Panhandle were short. Additional moisture is needed to aid germination of spring planted crops. Winter wheat condition 6% poor, 38% fair, 53% good, 3% excellent; the crop reportedly came through the winter in better condition than last year, but moisture is needed to aid development. Oats 18% seeded, 10% 1996, 14% avg; 1% emerged, 0% 1996; seeding was least advanced in the northeast part of the State due to wet field conditions. Cattle 64% cows calved since January 1, 66% 1996; above normal temperatures and limited precipitation provided excellent calving and lambing conditions and has helped keep spring losses to a minimal. Pasture and range condition 3% poor, 28% fair, 67% good, 2% excellent. Activities; oats seeding, spring tillage, stalk shredding, fertilizer applications, spring equipment preparation, and livestock care.

NEVADA: Potential for spring flooding, particularly in the Carson and Walker River watersheds, remains. Repairs to ditches and levees damaged in January flooding continued, as irrigation season was commencing in

central districts. Surface irrigation water deliveries to the Smith and Mason valleys began in early March. Sod harvest was underway in the extreme south. Fields were being prepared for planting central and spring grain planting was underway. Weed burning underway. Calving, lambing well along. Castrating, branding of calves underway. Main farm, ranch activities: Ditch repair, working livestock, grain planting, field leveling, and irrigation.

NEW ENGLAND: Maple sugaring operation active throughout the States during March, regionally the quantity of the sap runs varies. Operators tending livestock, some spring lambings taking place. Farm operators continue to plow snow, repair machinery, and plan for spring planting. Emptying manure pits on to well-drained fields. By mid-March chick, poult, and duckling orders were being placed. Growers moving apples and potatoes out of storage.

NEW JERSEY: Farmers were busy clearing land, removing brush, caring for livestock, maintaining equipment, digging nursery stock and pruning fruit trees. Vegetable farmers were establishing transplants in greenhouses as well as planting potatoes, greens and turnips.

NEW MEXICO: Rainfall during March was mostly limited to the southwest quarter of the State. Farmers continued land preparation for planting, irrigating, fertilizing and ditch maintenance. By the end of March cotton planting was beginning, while the planting of potatoes, onions and lettuce was drawing to a close. Ranchers continued to maintain their herds with supplemental feeding and watering while calving was taking place.

NEW YORK: Outside activities made easier by warmer than normal weather and less snowfall. Livestock producers tending annuals, spreading manure. Apple growers busy finishing winter pruning, cleaning orchards, grading and packing apples. Maple syrup season off to slow start. Warmer days needed for good sap flow. Quality of syrup has been good so far. Potatoes, onions being moved from storage, graded and packed.

NORTH CAROLINA: Days suitable for fieldwork 4.4, some areas of the State still experienced wet conditions that hampered fieldwork, most areas had excellent conditions that allowed farmers to make significant headway in preparing fields for spring plantings. Thus far there have been no significant reports of freeze damage to the fruit or vegetable crops as many areas of the State approach the last frost date. Soil moisture is rated 1% short, 58% adequate and 41% surplus. Activities: Planting corn, cabbage, and Irish potatoes; top dressing small grains and pastures; land preparation for spring planting; tending tobacco beds (greenhouse and outside); maintaining pastures; tending livestock; repairing equipment; and general farm maintenance.

NORTH DAKOTA: Mud, rather than snow, caused difficulties in accessing feed supplies and hauling grain during the latter part of March. State average snow depth at 3.6 in., melted down from 14.6 in. last month, down from 7.1 in. last year. Livestock condition improved slightly from previous month, death loss rate for cattle and sheep declined. Cattle: 3% very poor, 13% poor, 32% fair, 49% good, 3% excellent; sheep: 1% very poor, 9% poor, 28% fair, 59% good, 3% excellent. Cattle and calf death loss: 47% above normal; sheep and lamb death loss: 35% above normal. Spring calving advanced to 34% complete, behind last year's 46%; lambing at 43%. Hay, forage supplies: 9% very short, 30% short, 60% adequate, 1% surplus. Pasture and ranges were 57% open, though 99% still dormant. Cattle sales: 4% below normal, 84% normal, 12% above normal.

OHIO: Topsoil moisture is adequate or surplus. Heavy soils with poor drainage are saturated. Winter wheat is greening up. Stands are mostly fair, but more variable than usual. Some top dressing on drier fields. Hay supplies are still very tight across most of the State.

OKLAHOMA: Days suitable for fieldwork 5.2. Topsoil moisture 6% very short, 27% short, 61% adequate, 6% surplus. Subsoil moisture 1% very short, 10% short, 85% adequate, 4% surplus. Wheat 68% jointing, 19% 1996, 54% avg.; Oats 100% planted, 99% 1996, 99% avg.; 40% jointing,

15% 1996, 27% avg.; Corn 80% seedbed prepared, 68% 1996, 65% avg.; 14% planted, 9% 1996, 9% avg.; Sorghum 41% seedbed prepared, 13% 1996, 23% avg.; Soybeans 21% seedbed prepared, 30% 1996, 26% avg.; Peanuts 35% seedbed prepared, 22% 1996, 31% avg.; Cotton 38% seedbed prepared, 14% 1996, 38% avg.; Livestock 3% poor, 23% fair, 68% good, 6% excellent. Pasture and range 6% poor, 36% fair, 50% good, 8% excellent. Feeder steers and heifers were firm to \$1/cwt higher.

OREGON: Activities: Growers fertilizing grass seed and small grain crops, statewide. Christmas tree planting underway. Aphid problems in southern coast Easter lilies. Much winter and flooding damage to central section vegetable seed crops. Willamette Valley: Hazelnut foliage growth underway, vineyard pruning winding down, most fruit crops near bud break, some blackberry fields being torn up. Rogue River Valley: Peaches at blossom stage, frost protection devices in place. Mid-Columbia region: Planting potatoes and green peas, some cherries in bloom stage mostly at bud stage. Western pasture regrowth continued. Eastern pasture regrowth underway, still feeding supplemental feeds.

PENNSYLVANIA: Major activities for March: Hauling manure, fixing fence, caring for livestock, and attending farm organization meetings. Some spring fieldwork started but too wet for extensive fieldwork.

SOUTH CAROLINA: Soil moisture adequate to surplus across the State. Small grains condition good to excellent; development two weeks ahead of normal. Tobacco beds in good condition. Peaches in good condition. Pastures and livestock in mostly good condition.

SOUTH DAKOTA: March cooler than normal. Winter rye 1% poor, 11% fair, 72% good, 16% excellent. Hay and roughage supplies 8% very short, 18% short, 66% adequate, 8% surplus. Grain and concentrate supplies 1% very short, 17% short, 69% adequate, 13% surplus. Cattle condition 1% very poor, 5% poor, 28% fair, 60% good, 6% excellent. Calving 24% complete. Newborn calf death losses since March 1st 7% below normal, 75% normal, 16% above normal, 2% severe. Cattle moved to pasture 4% completed. Sheep condition 3% poor, 24% fair, 62% good, 11% excellent. Lambing 39% completed. Newborn lamb death losses since March 1st 7% below normal, 77% normal, 14% above normal, 2% severe. County road conditions as of March 28th 80% open, 17% difficult, 3% closed. Township road conditions as of March 28th 69% open, 20% difficult, 11% closed.

TENNESSEE: Days suitable for fieldwork 3.0. Topsoil moisture 42% adequate, 58% surplus. Subsoil moisture 37% adequate, 63% surplus. Corn 1% planted, 0% 1996, 3% avg. Tobacco 66% seeded, 68% 1996, 72% avg.; 25% plants up, 21% 1996, 24% avg. Wheat 4% poor, 24% fair, 54% good, 18% excellent; 46% jointed, 12% 1996, 18% avg. Apples 62% budding or beyond, 54% 1996, 54% avg.; 12% blooming or beyond, 10% 1996, 11% avg. Peaches 84% budding or beyond, 63% 1996, 74% avg.; 61% blooming or beyond, 29% 1996, 54% avg. Pasture 3% poor, 28% fair, 55% good, 14% excellent. Cattle 1% very poor, 5% poor, 28% fair, 54% good, 12% excellent.

TEXAS: Weather conditions improved during early March, allowing spring planting to progress. However, overall progress is behind schedule in northern, central, and southern areas. Some replanting maybe necessary in the Rio Grande Valley because of heavy rains. Wet fields along the Upper Coast have left producers critically behind schedule on planting activity. The middle of the month brought wet conditions, again stalling planting progress. The rainfall with milder temperatures helped small grain progress. Insect activity was increasing in some fields by the end of the month. Dryland fields in the High Plains are in need of moisture, while irrigated fields are in good condition. Livestock conditions were very good during March, with markets improving in all areas.

UTAH: Major farm activities: Plowing, spreading fertilizer, preparing for planting, and planting barley and onions. Major ranch activities: Calving, lambing, and in some areas, shearing. Livestock death losses are average. Alfalfa and other hay supplies are short but winter range is in good condition and pastures are starting to grow. Fall grains look very good. Early apricots are starting to bloom and some cherries are starting to swell.

VIRGINIA: Crop and farm activities: Small grain, grazing crop condition relatively good. Late planted small grains slower developing and maturing. Many operators actively scouting wheat, barley for aphids, cereal leaf beetles. Alfalfa being sprayed for weevils. Farmers actively top dressing small grains with nitrogen. Other fields, pastures being limed, fertilized. Corn planting getting underway. Most tobacco plantbeds, greenhouses already seeded. Plants appear mostly good condition. Fruit budding slightly ahead of schedule, trees in process of being sprayed.

WASHINGTON: Days suitable for fieldwork 1.0. Topsoil moisture 75% adequate and 25% surplus; subsoil 5% short, 85% adequate, and 10% surplus. Winter wheat, dryland 10% poor, 30% fair, and 60% good; irrigated 100% good. Winter wheat mostly good considering late fall seedings and early winter conditions. Corn grain 70% harvested, 95% 1996, 94% avg. Hay, other roughage supplies, 20% short, 75% adequate, 5% surplus. Kittitas and Grant Counties reported widespread feeding of hay due to early, heavy snowfall which depleted hay stocks. Kittitas timothy hay producers also extremely concerned as early snow cover increased vole population. In western Washington, saturated pastures caused extremely muddy conditions for grazing. Heavy snow slowed fruit tree pruning in some areas.

WEST VIRGINIA: Activities: Repairing damaged fences and cleaning up fields flooded during last high water episode. Field activities were done, but wet soil conditions continued to hamper seed bed preparation. Some producers spreading lime and fertilizer. For week ending March 30th, winter wheat reported poor to excellent condition with most good. Tobacco beds being seeded. Cattle and sheep mostly good condition. Percent calved 73%. Percent lambed 67 percent. Feed grain supplies mostly adequate. Hay and roughage supplies mostly adequate. Pasture growth coming on strong.

WISCONSIN: As of late March, frost depths average 5.4 in. compared with the 35-year average of 10.6 in. The snow depth was 7.1 in. compared with the normal average of 3.8 in. Adequate to surplus moisture levels exist in most areas of the State. Even though sunshine and warm weather melted the snow in the south, the north still had inches of snow remaining. Most reporters noted that soils were moist or damp. Farmers continued general chores under somewhat muddy conditions during the month.

WYOMING: Topsoil moisture supplies 6% very short, 9% short, 68% adequate, 17% surplus. Subsoil moisture supplies 2% very short, 12% short, 73% adequate, 13% surplus. Shortages mostly in the Southeast. Average depth of snow cover: 2.3 in., many areas with none. Winter wheat condition 11% poor, 49% fair, 40% good. Moisture needed. Winter wheat wind damage 2% none, 58% light, 39% moderate, 1% severe. Winter wheat freeze damage 14% none, 77% light, 9% moderate. Barley planted 48%, 1% 1996, 23% avg. Oats planted 4%, 1% 1996, 6% avg. Spring wheat planted 10%, 4% 1996, 8% avg. Hay and roughage supplies 11% very short, 35% short, 52% adequate, 2% surplus. Stock water supplies adequate. Cattle and sheep in mostly good condition. Spring calves born 51%, 56% 1996, 58% avg. Farm flock ewes lambed 61%, 68% 1996, 70% avg.; shorn 65%, 73% 1996, 72% avg. Range flock ewes lambed 4%, 10% 1996, 11% avg.; shorn 22%, 26% 1996, 32% avg. Calf and lamb losses light to normal.

International Weather and Crop Summary

March 23 - 29, 1997

HIGHLIGHTS

FSU-WESTERN: Continued cold, wet weather halted early season fieldwork and prevented further greening of winter grains.

EUROPE: Persistent dryness in Spain increased stress on winter grains and newly emerged spring-planted crops.

NORTHWESTERN AFRICA: Light, scattered showers brought temporary relief to drought-stressed winter grains in Morocco. Drought continued to worsen conditions for crops in Algeria and Tunisia.

AUSTRALIA: Heavy rain continued along Queensland's coast, hampering sugarcane recovery efforts and locally affecting cotton and sorghum quality.

SOUTH AFRICA: Persistent showers kept filling to maturing corn unseasonably wet.

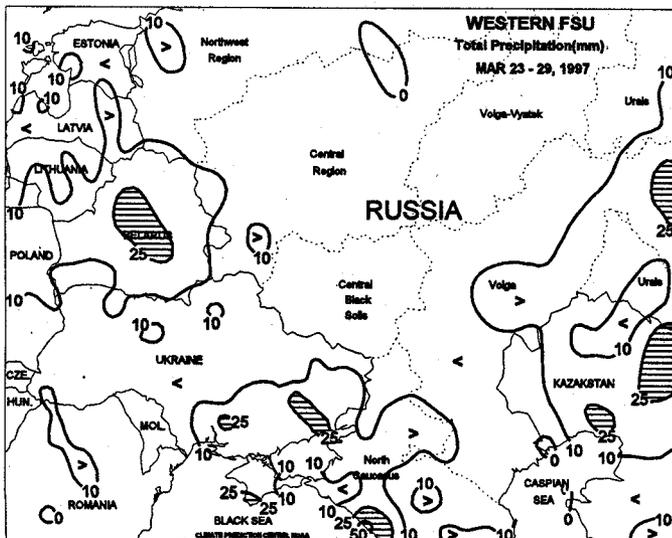
SOUTHEAST ASIA: Early-season showers aided rainfed second-crop rice in Thailand.

EASTERN ASIA: Widespread showers covered southern China, slowing early rice planting but increasing irrigation supplies. Warmer weather favored winter wheat growth across the North China Plain.

SOUTH AMERICA: In central Argentina, warm, dry weather favored corn and sunflower harvesting but increased stress to second-crop soybeans. In southern Brazil, scattered showers allowed soybean harvesting to progress.

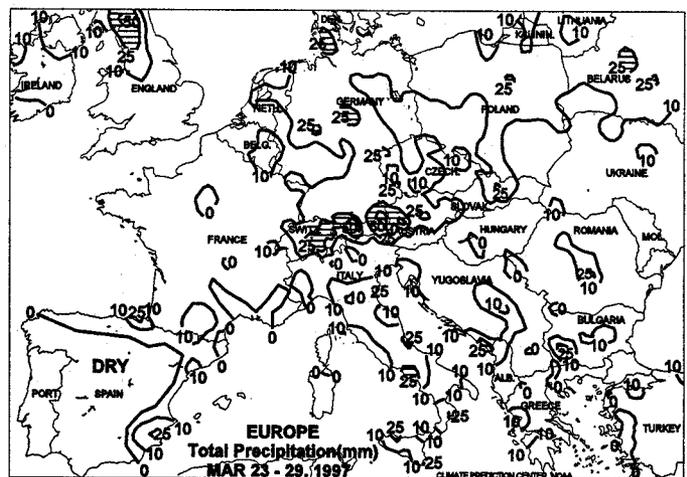
FSU-WESTERN

Unseasonably cold weather continued over Russia, Ukraine, the Baltics, and Belarus and was accompanied by light rain and snow. Precipitation amounts generally ranged below 10 mm, with greatest amounts of moisture (10-37 mm) occurring in southeastern Ukraine, the North Caucasus region in Russia, and Belarus. The cold, wet weather halted early season fieldwork previously underway in southern areas. Typically, spring grain planting begins in southern Ukraine and southern Russia in April, advancing northward and eastward during the month. Weekly temperatures averaged 2 to 7 degrees C below normal over most of the region. Lowest temperatures (-10 to -20 degrees C) occurred in winter grain areas in northern Russia, northern Belarus, and the Baltics, where there was a protective snow cover. The cold weather prevented further greening of winter grains in Ukraine and kept winter grains dormant in Russia, Belarus, and the Baltics. Winter grains normally resume spring growth in the extreme south in late March, with growth resuming over the remainder of the region during April.

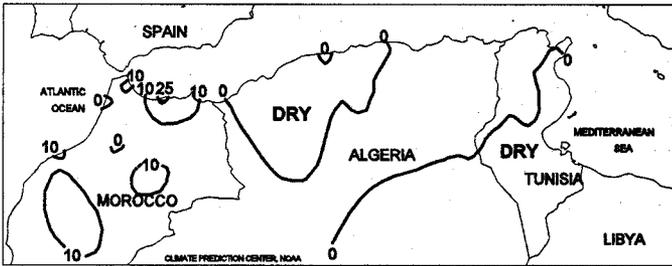


EUROPE

Dryness persisted in Spain, increasing stress on winter grains and newly emerging spring grains. Furthermore, the dryness extended northward into southwestern France, where topsoil moisture remained limited for developing winter grains and summer crop planting, which typically begins in April. Farther east, showers (10-25 mm) benefited winter grains in central and southern Italy. In northern Europe, generally dry weather prevailed over the United Kingdom and northern France, favoring fieldwork. Light showers in Germany favored winter grain development and increased topsoil moisture for spring-planted crops. In eastern Europe, unseasonably cold weather spread from Poland, southward through Hungary and Romania, into Bulgaria, halting growth of winter grains. Light showers (4-25 mm) increased topsoil moisture in Poland, while little, if any, precipitation occurred in the remainder of eastern Europe. Weekly temperatures averaged 2 to 4 degrees C above normal in western Europe and 2 to 5 degrees C below normal in eastern Europe.



NORTHWEST AFRICA TOTAL PRECIPITATION (mm)
MAR 23 - 29, 1997

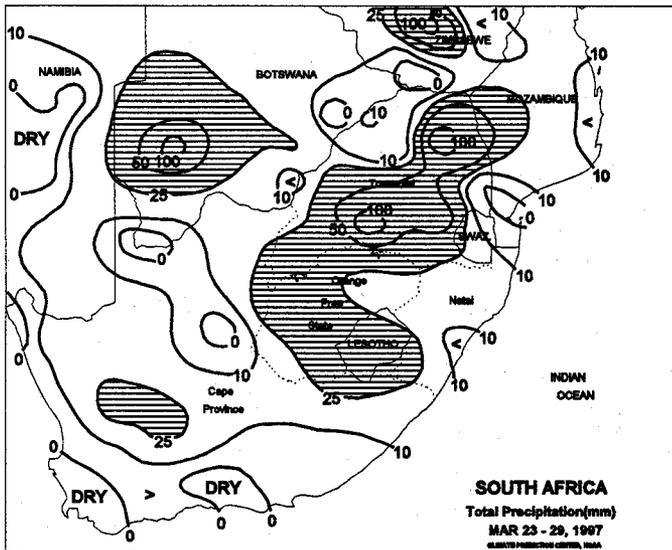


NORTHWESTERN AFRICA

In Morocco, light, scattered showers (mostly less than 5 mm with local amounts in excess of 10 mm) fell over most winter grain areas, bringing only temporary relief to drought-stressed crops in the reproductive phase of development. Farther east, mostly dry weather prevailed over winter grain areas in Algeria and Tunisia, continuing to reduce yield prospects for drought-stressed crops. Weekly temperatures averaged 1 to 4 degrees C above normal in Morocco and 1 to 2 degrees C below normal in northeastern Algeria and Tunisia.

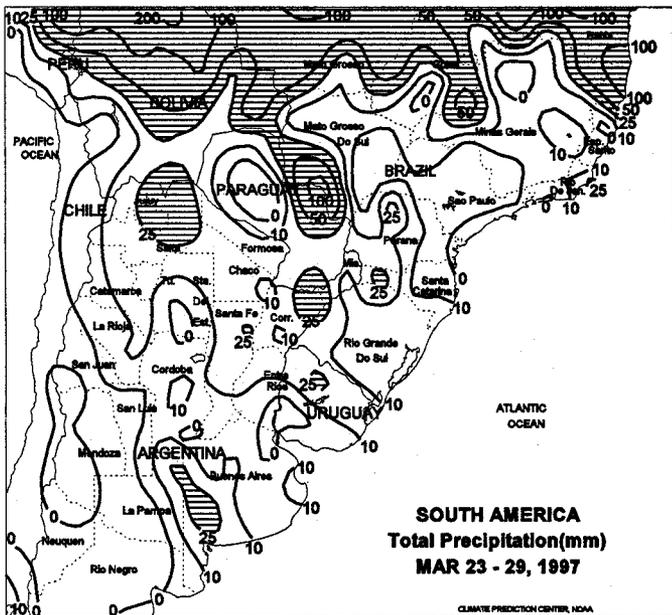
SOUTH AFRICA

Showers continued across the corn belt, keeping filling to maturing corn unseasonably wet. Rainfall totaled 16 to 40 mm in most areas, with northern crop areas from Johannesburg eastward receiving heavier amounts (50-100 mm or more). Temperatures averaged near to below normal, with highs ranging from the mid to upper 20's C. Although the recent rainy weather has improved moisture reserves for winter wheat, drier conditions are needed for summer crop maturation and dry down. Light, scattered showers (20 mm or less) covered coastal crop areas of Kwazulu-Natal and Eastern Cape.



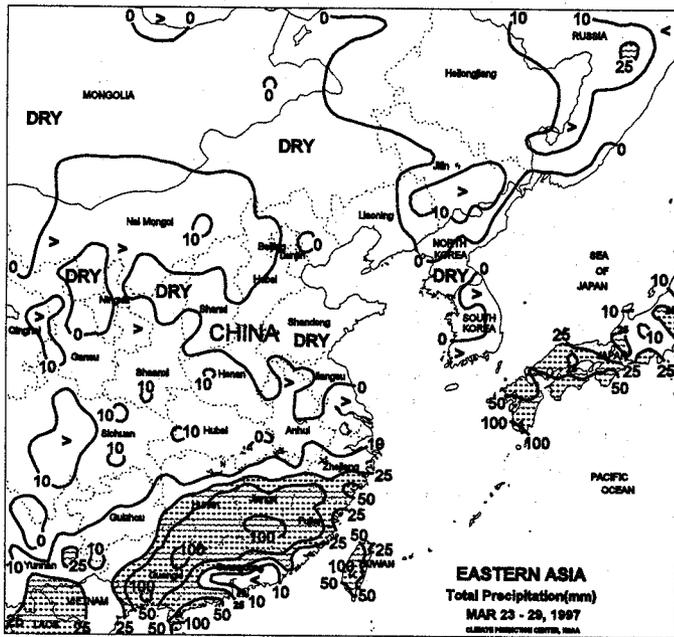
SOUTH AMERICA

Warm, dry weather returned to central Argentina, favoring corn and sunflower harvesting, but increasing stress on second-crop soybeans. Only widely scattered showers (5-20 mm) fell early in the week (March 23). As of March 14, reports indicated that 20 percent of the corn crop and 50 percent of the sunflower crop have been harvested. In northern Argentina, early-week rain (5-25 mm) gave way to favorably dry harvesting weather for cotton. In southern Brazil, scattered showers (5-50 mm) allowed soybean harvesting to progress. As of mid-March, about 20 percent of soybeans had been harvested, with harvesting in Rio Grande do Sul to commence in early April.



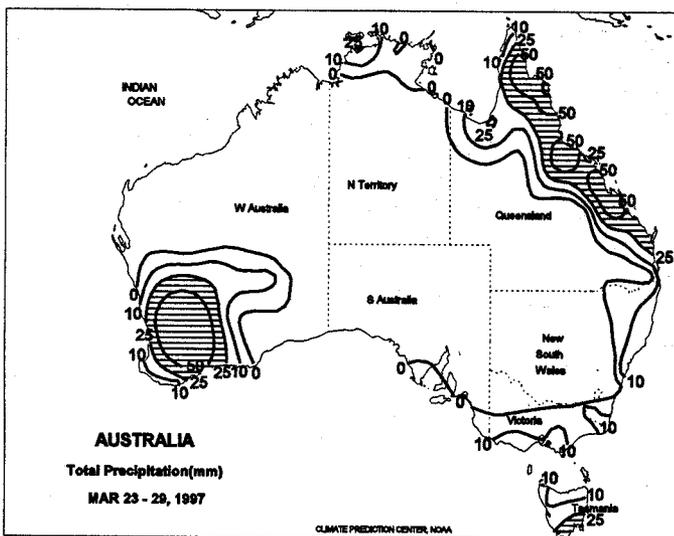
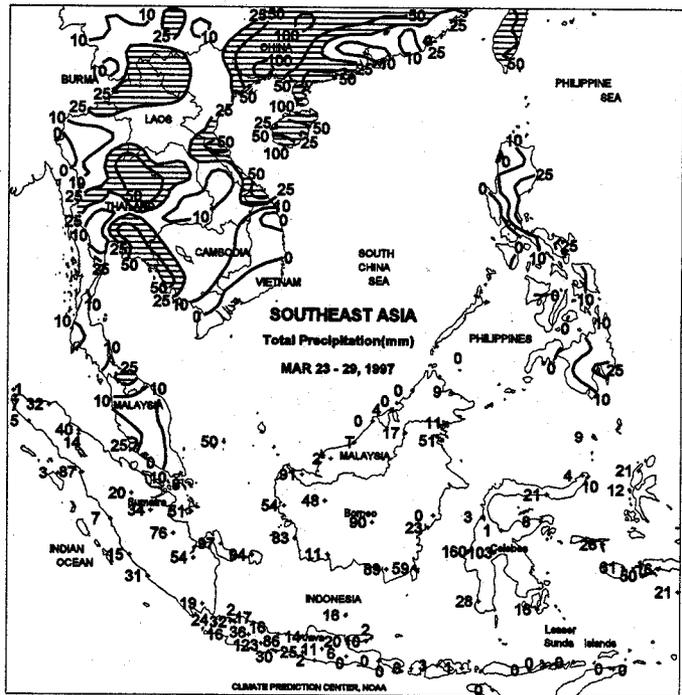
EASTERN ASIA

Widespread showers (25-80 mm, with isolated amounts greater than 100 mm) covered the southern quarter of China, increasing irrigation supplies for rice, but slowing early double-crop rice planting. Dry, warm weather (2-3 degrees C above normal) favored vegetative winter wheat growth across the North China Plain. In Manchuria, warm temperatures (3-6 degrees C above normal) allowed field preparations to begin.



SOUTHEAST ASIA

Early-season showers (10-45 mm) fell across Thailand, aiding rainfed second-season rice and increasing irrigation supplies for the upcoming main-season crop. Temperatures averaged 1 to 3 degrees C below normal across eastern Thailand, reducing water demands of rainfed crops. Showers (less than 25 mm) benefited winter-spring rice across the Red River Delta of northern Vietnam. Light showers (10-25 mm) prevailed across the eastern Philippines, slowing second-season crop harvesting, but increasing moisture for main-season crops.



AUSTRALIA

Moderate to heavy rain (50-100 mm or greater) continued along Queensland's coast, hampering recovery efforts in sugarcane areas affected last week by Cyclone Justin. Showers also lingered early in the week over portions of the sorghum and cotton areas closest to the coast, threatening crop quality. Elsewhere in the east, dry weather aided summer crop maturation, but pastures and grazing areas needed more rain. In Western Australia, late-week heavy showers (25-60 mm) increased moisture reserves in southern agricultural areas. Winter grain planting is over a month away.

The *Weekly Weather and Crop Bulletin* is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the *Weekly Weather Chronicle*. It is issued under general authority of the Act of January 12, 1895 (44-USA 213), 53rd Congress, 3rd Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

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Spring Flood Update

Rapid snowmelt during the last week of March induced severe flooding in the James River basin. As expected, record levels were achieved at several gauging stations. Farther north, in the Red River basin, levels rose steadily in ice-free areas and erratically where ice remains. In a few weeks, crests along the Red River are still expected to approach or exceed records set mostly in late-April 1979. Record crests are also anticipated along several Red River tributaries, including the Sheyenne River and Two Rivers. The following is a list of record crests already established:

River	Location	Crest (feet above flood stage)/Date	Old Record (feet above flood stage)/Date
James River	Columbia	6.7 feet (and rising) on April 1	6.1 feet on April 22, 1969
	Ashton	11.7 feet (and rising) on April 1	9.4 feet on May 18, 1995
	Redfield	8.5 feet (and rising) on April 1	6.3 feet on May 15, 1995
	Huron	7.3 feet (and rising) on April 1	5.9 feet on May 19, 1995
	Forestburg	6.5 feet (and cresting) on April 1	5.3 feet on April 22, 1995
	Mitchell	6.8 feet (and rising) on April 1	6.4 feet on April 23, 1995
Turtle Creek	Redfield	11.1 feet on March 30	8.9 feet on April 7, 1969

Major flooding was also in progress in southeastern South Dakota and northwestern Iowa along the Big Sioux River, where crests are expected during the first week in April. In Brookings, SD, the river stood 3.6 feet above flood stage on April 1, within 2.2 feet of the record set on April 9, 1969. The river level was 5.3 feet above flood stage in Akron, IA, 1.8 feet below the May 10, 1993, record. On March 26-27, an ice jam on the Redwood River near Redwood Falls, MN forced an 8.5-foot rise in 24 hours, sending the water level briefly 9.4 feet above flood stage. In south-central North Dakota, Apple Creek crested at 2.0 feet above flood stage on March 28, a half-foot shy of the 1979 record.

Farther south, meanwhile, the crest from the early-March Ohio Valley flood coursed through the lower Mississippi River. On March 26, the flat crest was in the vicinity of Vicksburg, MS (about 6 feet above flood stage). At Red River Landing, LA, the river reached a height of 13 feet above flood stage between March 24-28, topping by a few inches the record level set during the Great Flood of May 1927. According to the National Weather Service in New Orleans, improvements to the levee system since 1927 have brought ever-increasing river heights. In Baton Rouge, LA, the river crested at about 8.4 feet above flood stage, more than 4 feet above the decade's previous highest level, on June 18, 1995. High river levels at New Orleans, LA led to the opening of the Bonnet Carre Spillway on March 17, allowing the Mississippi to remain at least 3 feet below the city's flood wall.

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