

WEEKLY WEATHER AND CROP BULLETIN

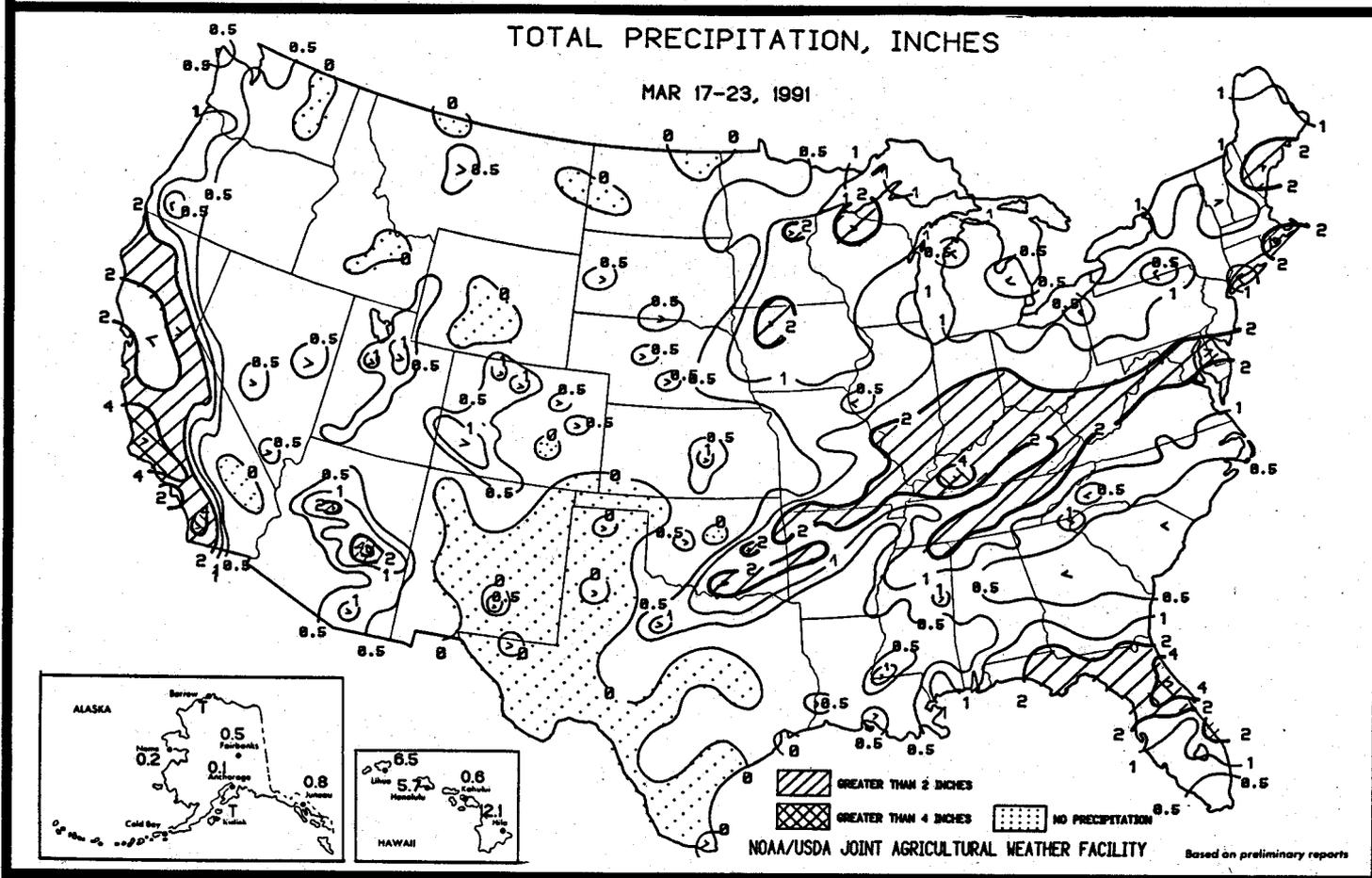
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HIGHLIGHTS

March 17 - 23, 1991

Strong spring storms continued to rampage across the Nation, aiding reservoir level and snowpack in California, but engendering flooding and tornadic destruction in parts of the East. Most of the Nation basked in early-season warmth as mild air was pumped northward from the Gulf of Mexico. Early in the week, one storm tracked from Kansas to Maine, while a Pacific storm churned into California. Light rain fell from the middle Mississippi Valley eastward. Heavier rain developed in coastal New England as the storm intensified. Thunderstorms dumped more than 4 inches of rain in northern Florida. Early week snowfall exceeded 6 inches in northern Maine and western Montana. The Pacific storm first unleashed its wrath on California, dumping 2 feet of snow on the Sierra Nevada. Greater than 4 inches of rain inundated parts of the central and

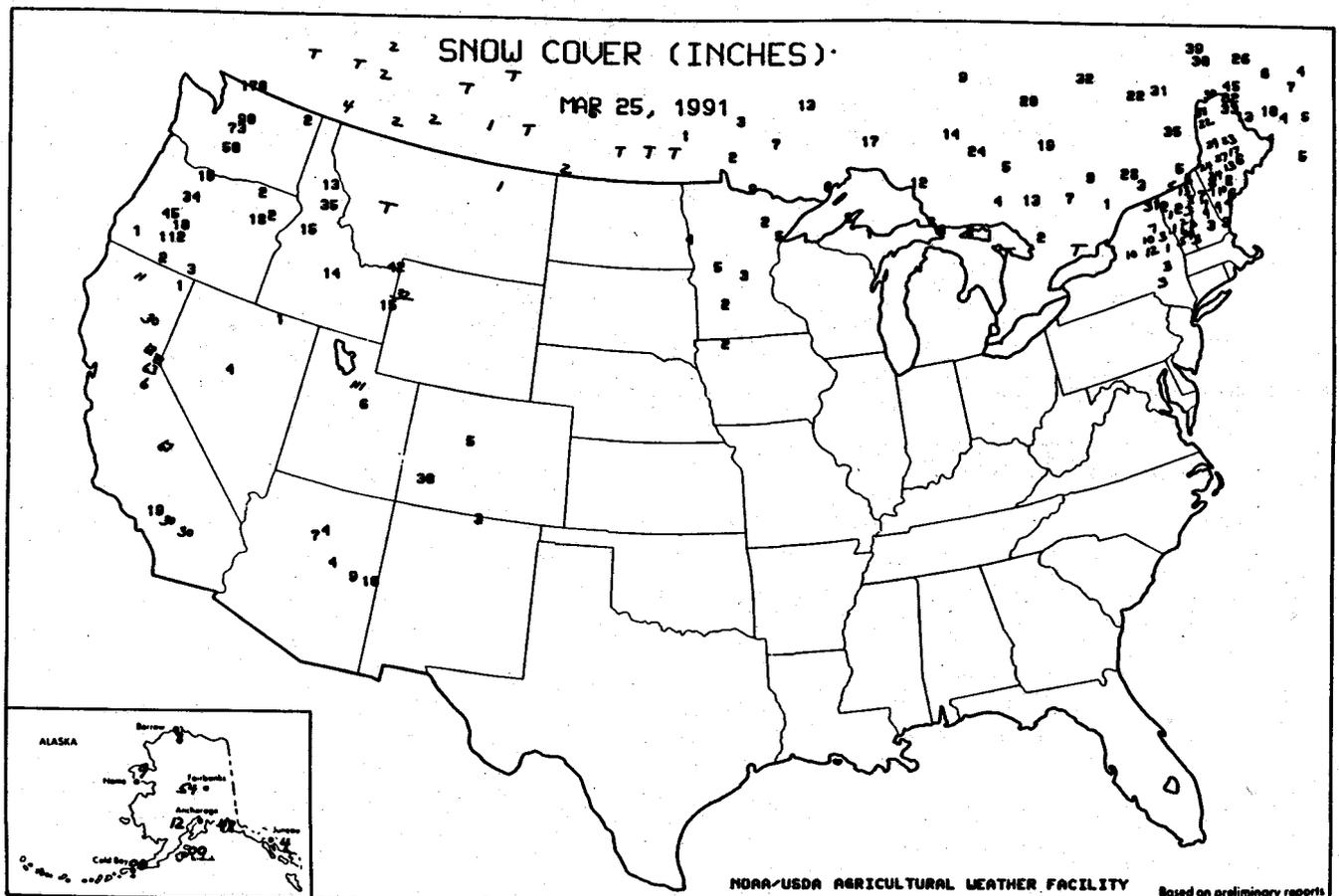
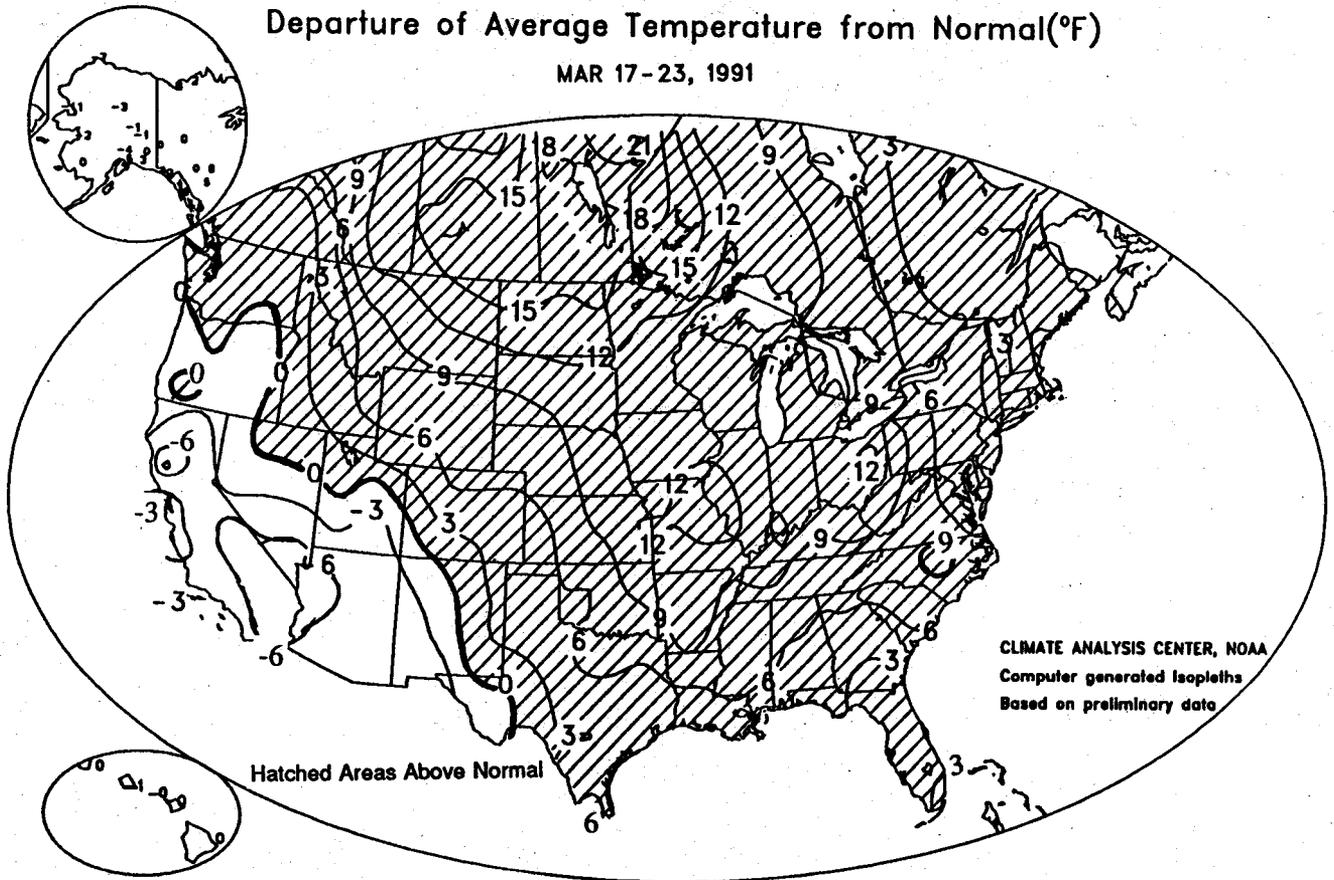
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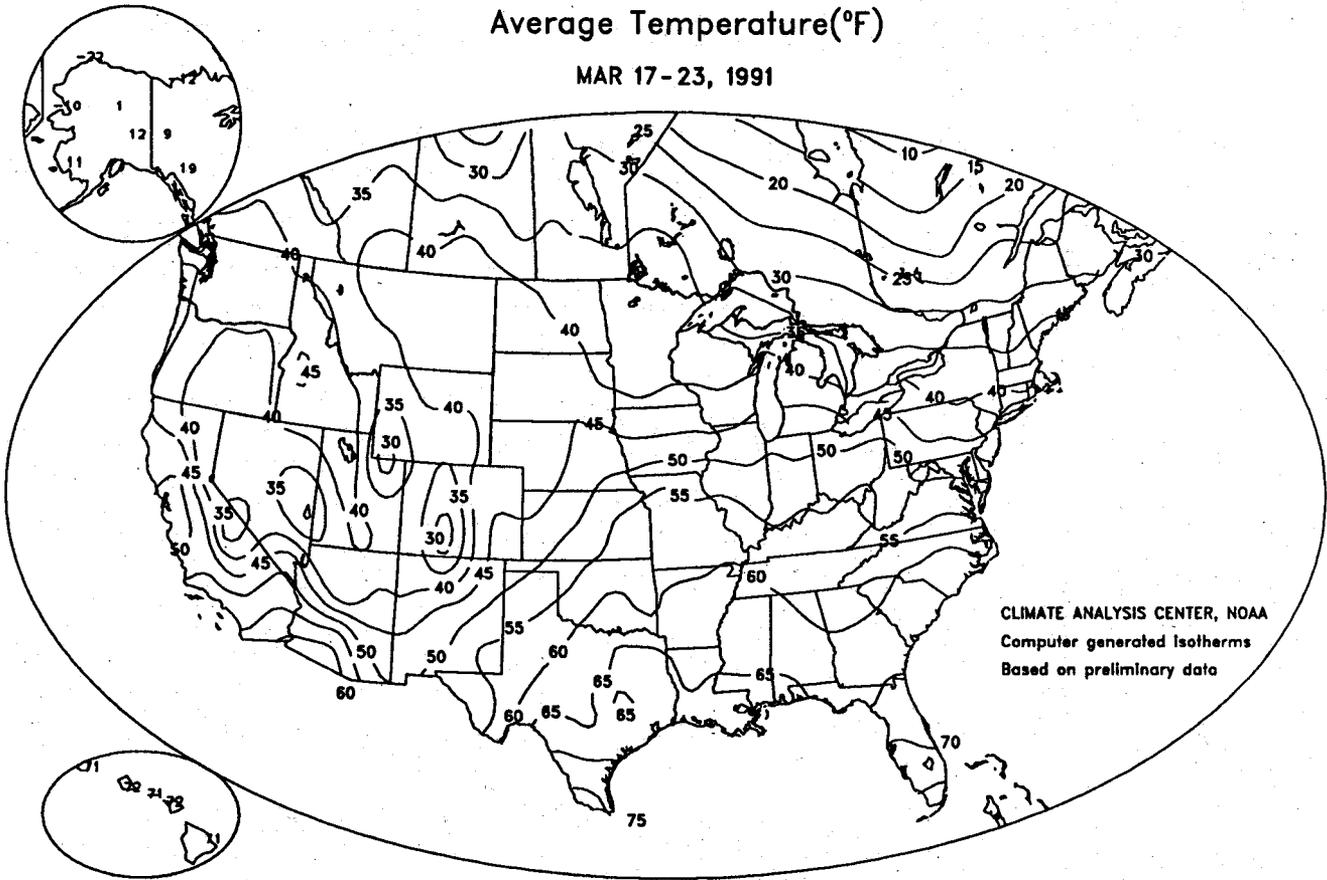
Departure of Average Temperature from Normal(°F)

MAR 17-23, 1991



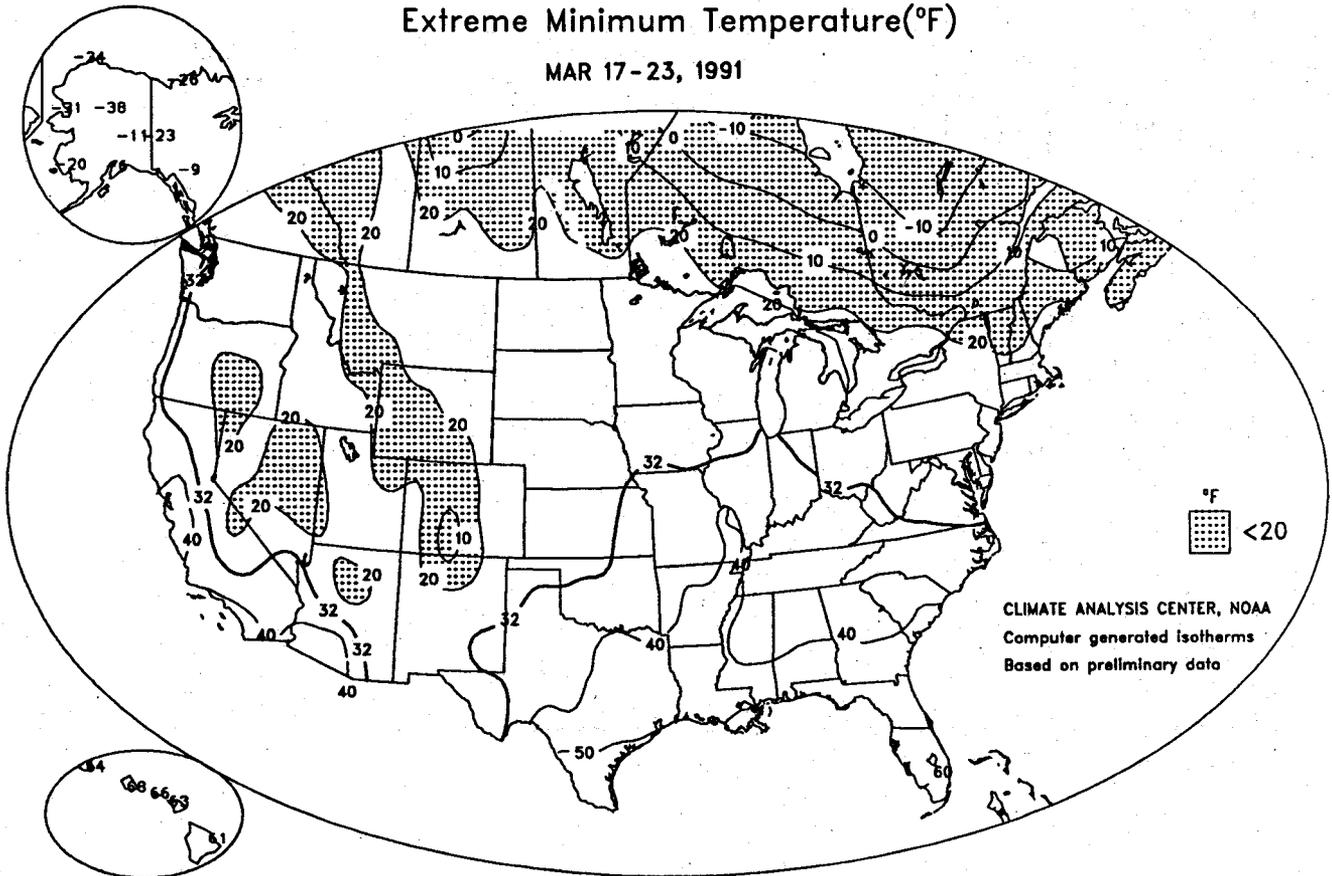
Average Temperature(°F)

MAR 17-23, 1991



Extreme Minimum Temperature(°F)

MAR 17-23, 1991



Weather Data for the Week Ending March 23, 1991

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	77	53	83	41	65	7	.1	-.8	.1	1.4	51	14.2	139	86	36	0	0	2	0
ME CARIBOU	35	15	47	1	25	-1	.9	-.4	.8	3.5	198	6.7	108	81	44	0	7	3	1
PORTLAND	46	28	55	22	37	4	2.3	1.4	.9	5.2	177	9.9	97	85	35	0	6	3	3
MD BALTIMORE	58	41	68	29	49	5	3.2	2.4	2.3	4.6	168	8.9	103	88	53	0	1	3	2
SALISBURY	60	40	66	26	50	4	1.8	.8	1.4	4.4	143	11.3	115	95	54	0	1	3	1
MA BOSTON	49	35	58	33	42	3	1.3	.3	.7	3.8	124	8.6	80	90	44	0	0	5	1
CHATHAM	47	36	53	30	42	4	1.7	.8	.9	3.9	130	9.2	80	86	56	0	2	4	2
MI ALPENA	43	30	50	23	37	7	.9	.5	.5	2.3	175	3.7	86	93	56	0	4	4	1
DETROIT	58	36	73	28	47	11	.6	.0	.2	1.1	63	3.5	66	91	48	0	2	4	0
FLINT	57	33	72	25	45	11	.4	-.1	.2	1.2	83	3.4	76	91	49	0	3	3	0
GRAND RAPIDS	56	33	73	28	45	10	.8	.2	.4	2.0	110	3.9	75	94	53	0	3	4	0
HOUSTON LAKE	48	28	55	22	38	10	.8	.4	.4	2.2	165	4.0	98	94	53	0	5	4	0
LANSING	57	33	72	25	45	10	.8	.2	.4	2.5	147	4.6	97	96	52	0	3	5	0
MARQUETTE	40	27	46	20	34	9	1.2	.5	.6	2.4	122	5.1	87	95	72	0	7	4	1
MUSKEGON	54	34	65	26	44	10	.7	-.1	.3	1.8	103	3.9	69	97	55	0	3	5	0
MN SAULT ST. MARIE	40	28	45	22	34	8	1.3	.8	.8	2.7	187	4.8	91	92	43	0	6	3	1
ALEXANDRIA	43	32	62	30	37	11	.5	.2	.2	.6	74	2.1	88	97	69	0	5	3	0
DULUTH	41	31	55	28	36	11	.9	.5	.4	1.1	90	2.2	67	95	67	0	6	5	0
INT'L FALLS	44	29	52	25	37	14	.5	.2	.4	1.0	132	2.7	117	89	49	0	7	3	0
MINNEAPOLIS	46	34	62	30	40	9	1.2	.8	.8	1.8	149	3.3	117	97	68	0	1	4	1
ROCHESTER	49	34	58	31	41	10	1.5	.9	.9	2.3	186	3.4	124	98	70	0	2	4	1
MS GREENWOOD	74	51	83	38	63	7	.5	-1.0	.4	3.0	66	16.0	112	92	49	0	0	2	0
JACKSON	76	53	86	38	64	7	.3	-1.0	.3	2.7	65	12.9	98	94	48	0	0	1	0
MERIDIAN	75	52	82	37	63	6	.4	-1.1	.4	4.1	84	17.3	120	95	47	0	0	1	0
MO CAPE GIRARDEAU	67	50	75	41	58	—	2.3	1.2	1.3	3.0	83	9.1	95	91	52	0	0	3	2
COLUMBIA	66	47	80	40	56	12	1.1	.3	1.0	2.0	84	3.7	61	84	40	0	0	3	1
KANSAS CITY	66	44	78	35	55	11	.5	-.2	.3	1.8	99	3.4	79	87	40	0	0	4	0
SAINT LOUIS	66	50	83	43	58	14	2.1	1.4	1.1	3.2	135	5.7	92	84	41	0	0	3	2
SPRINGFIELD	67	46	75	38	56	11	.4	-.4	.3	1.0	41	4.9	80	91	39	0	0	3	0
MT BILLINGS	55	33	65	29	44	9	.3	.0	.2	.5	75	1.8	78	82	33	0	3	3	0
GLASGOW	58	30	65	24	44	14	T	-.1	T	.2	100	.7	85	85	33	0	5	1	0
GREAT FALLS	52	31	61	27	41	9	.8	.6	.5	1.0	153	1.8	79	83	36	0	5	2	1
HAVRE	58	28	65	22	43	12	.1	.0	.1	.2	65	.7	53	84	32	0	5	1	0
HELENA	52	27	62	20	40	7	.1	-.1	.1	.5	104	.8	51	84	37	0	6	3	0
KALISPELL	49	26	58	21	38	5	.1	-.1	.1	.8	125	3.0	91	94	39	0	6	1	0
MILES CITY	56	31	65	25	44	11	.1	-.1	.1	.1	28	1.1	71	84	39	0	5	2	0
MISSOULA	51	27	62	21	39	4	.1	-.1	.1	1.1	181	1.9	69	89	37	0	6	1	0
NE GRAND ISLAND	59	34	68	26	47	9	.6	-.2	.2	1.2	119	1.8	79	94	45	0	2	5	0
LINCOLN	62	37	73	29	50	12	.9	.5	.6	2.2	160	3.2	106	91	48	0	2	4	1
NORFOLK	56	35	63	25	46	10	.6	.3	.3	1.3	122	2.6	113	94	53	0	1	4	0
NORTH PLATTE	58	30	66	21	44	8	.4	.1	.3	.6	80	1.2	70	96	37	0	5	2	0
OMAHA	57	37	66	32	47	9	1.3	.8	.7	3.4	258	4.7	162	92	59	0	1	4	1
SCOTTSBLUFF	58	30	63	24	44	7	.2	-.1	.2	.3	49	1.2	79	87	29	0	5	1	0
VALENTINE	51	31	62	21	41	8	.8	.6	.7	1.6	286	2.3	175	95	50	0	4	3	1
NV ELY	43	23	51	14	33	-1	.3	.4	.5	1.6	238	1.8	90	87	47	0	7	3	0
LAS VEGAS	60	39	69	37	49	-7	.3	.2	.2	.6	200	1.4	112	81	33	0	0	2	0
RENO	48	31	55	23	40	-1	.3	.1	.2	1.3	223	1.5	55	87	35	0	3	3	0
WINNEMUCCA	50	30	55	25	40	1	.2	.1	.1	1.1	233	1.7	88	87	41	0	6	3	0
NE CONCORD	45	27	56	17	36	2	.9	.2	.4	2.3	108	5.6	76	92	38	0	6	4	0
NJ ATLANTIC CITY	53	37	56	25	45	3	1.9	1.0	1.1	4.8	160	11.2	114	92	53	0	1	3	2
NM ALBUQUERQUE	60	31	68	25	45	-2	T	-.1	T	.6	167	1.3	114	67	15	0	5	0	0
CLOVIS	66	37	73	33	52	4	T	-.1	T	.0	0	.7	52	58	20	0	0	0	0
ROSWELL	70	40	77	34	55	3	.0	-.1	.0	.0	0	.5	50	44	14	0	0	0	0
NY ALBANY	45	29	56	21	37	2	.7	.0	.3	2.1	95	5.9	87	92	39	0	5	4	0
BINGHAMTON	45	30	50	27	38	4	.8	.1	.3	2.7	129	7.0	101	90	51	0	4	4	0
BUFFALO	49	33	60	27	41	7	1.4	.8	.7	4.3	200	8.4	112	91	54	0	2	3	2
NEW YORK	52	41	60	39	47	4	.8	-.1	.4	3.3	108	8.2	90	79	41	0	0	4	0
ROCHESTER	46	32	55	26	39	4	1.2	.6	.9	3.1	165	5.9	91	93	51	0	4	4	1
SYRACUSE	46	31	56	26	38	4	1.0	.2	.7	2.9	127	6.9	92	94	50	0	4	4	1
NC ASHEVILLE	67	44	78	32	56	8	.4	-.8	.2	2.2	62	7.1	72	93	34	0	1	3	0
CHARLOTTE	72	49	83	39	61	9	.7	-.4	.7	4.9	136	12.3	110	78	31	0	0	1	1
GREENSBORO	69	46	80	35	58	8	.9	.0	.8	4.1	141	9.8	100	83	36	0	0	4	1
HATTERAS	67	52	75	34	60	8	.7	-.2	.7	5.1	171	18.6	157	87	51	0	0	1	1
NEW BERN	73	49	85	37	61	7	.2	-.6	.2	2.8	101	12.0	112	86	38	0	0	1	0
RALEIGH	73	49	81	35	61	10	.9	.0	.9	3.4	121	8.2	84	78	34	0	0	1	1
WILMINGTON	74	52	83	38	63	8	.1	-.9	.1	3.8	123	15.6	154	90	38	0	0	1	0
ND BISMARK	54	28	66	21	41	13	.1	-.1	.1	.6	124	1.0	70	96	43	0	5	2	0
FARGO	47	33	61	28	40	14	.6	.4	.4	1.0	190	2.5	176	92	64	0	3	3	0
GRAND FORKS	49	31	57	28	40	16	.1	-.1	.1	.4	68	1.4	81	93	54	0	6	2	0
WILLISTON	58	27	70	20	43	15	.1	-.1	.1	.2	61	.8	58	89	28	0	5	1	0
OH AKRON-CANTON	60	43	70	34	52	13	.6	-.2	.2	2.3	93	6.7	94	88	49	0	0	5	0
CINCINNATI	63	44	75	31	54	10	2.5	1.6	1.7	4.9	172	11.8	135	92	54	0	1	4	2
CLEVELAND	60	38	71	26	49	11	1.0	.3	.4	2.8	129	7.2	107	89	48	0	2	5	0
COLUMBUS	62	43	72	32	53	11	1.4	.7	.9	3.4	147	7.7	106	88	50	0	1	4	1

Based on 1951-80 normals

Weather Data for the Week Ending March 23, 1991

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	61	42	74	32	52	11	2.4	1.7	1.7	4.3	196	9.4	137	90	55	0	1	3	2	0	
TOLEDO	59	36	74	26	48	11	.7	1.1	.3	1.1	57	3.9	69	96	48	0	2	5	4	0	
YOUNGSTOWN	60	39	71	25	50	13	.4	1.4	.2	2.3	95	5.9	81	92	46	0	0	4	0	0	
OK OKLAHOMA CITY	70	46	80	34	58	8	.4	1.5	.4	1.0	70	2.0	53	88	32	0	0	0	0	0	
TULSA	71	52	81	38	61	11	1.1	1.7	.3	.7	32	2.5	48	83	39	0	0	3	0	0	
OR ASTORIA	52	35	60	32	44	1	1.5	1.1	.3	5.6	102	21.0	87	97	58	0	1	4	0	0	
BURNS	46	25	55	18	35	1	1.1	1.1	.1	.4	65	1.5	46	89	44	0	7	3	0	0	
MEDFORD	57	38	64	30	47	1	.3	1.1	.2	2.4	167	5.6	81	90	42	0	1	5	0	0	
PENDLETON	51	34	57	29	43	2	1.1	1.1	.1	.8	95	2.3	64	85	47	0	3	2	0	0	
PORTLAND	54	38	62	32	46	0	1.5	1.7	.1	4.4	160	10.6	83	91	51	0	1	5	1	1	
SALEM	54	35	64	29	44	1	1.1	1.2	.2	4.9	148	11.0	74	95	61	0	2	5	0	0	
PA ALLENTOWN	51	35	59	25	43	4	1.1	1.2	.6	3.1	111	7.0	77	86	43	0	1	4	1	1	
ERIE	53	33	66	24	43	8	1.9	1.5	.5	2.4	119	6.2	96	93	54	0	2	3	1	1	
HARRISBURG	53	38	62	27	46	4	1.6	.8	.7	2.9	113	6.9	83	89	51	0	1	4	2	1	
PHILADELPHIA	54	42	60	37	48	5	1.6	.7	1.0	3.4	119	8.2	94	82	46	0	0	3	1	1	
PITTSBURGH	62	41	72	27	52	11	.7	1.3	.3	2.6	102	7.1	91	90	44	0	1	6	0	0	
SCRANTON	50	33	57	26	42	4	.9	.3	.3	2.5	131	5.4	87	88	45	0	3	5	0	0	
RI PROVIDENCE	49	33	55	26	41	2	2.7	1.7	1.3	5.8	184	11.6	106	88	44	0	3	4	2	0	
SC CHARLESTON	73	53	82	41	63	6	1.1	1.1	.1	3.2	97	12.0	120	94	47	0	0	0	0	0	
COLUMBIA	76	48	86	35	62	7	1.2	1.0	.2	4.2	108	11.5	94	88	32	0	0	1	0	0	
FLORENCE	75	50	85	37	63	7	1.1	1.1	.1	3.7	118	10.3	103	89	35	0	0	1	0	0	
GREENVILLE	70	46	80	34	58	6	1.4	1.0	.3	3.3	73	10.2	78	88	32	0	0	2	0	0	
SD ABERDEEN	49	34	64	27	41	12	1.5	.2	.4	.6	92	1.4	81	96	57	0	2	4	0	0	
HURON	50	35	65	28	43	11	2.2	1.1	.1	.6	75	1.6	83	93	54	0	3	2	0	0	
RAPID CITY	53	31	68	23	42	8	1.5	.2	.2	.6	94	1.7	104	89	48	0	4	4	0	0	
SIOUX FALLS	52	34	62	29	43	11	.3	.0	.2	.6	57	1.2	47	97	57	0	2	4	0	0	
TN CHATTANOOGA	70	49	81	36	59	8	.8	1.5	.5	5.0	107	15.9	109	88	41	0	0	3	1	1	
KNOXVILLE	68	48	76	38	58	7	1.5	.2	.8	3.8	93	13.3	103	90	42	0	0	4	1	1	
MEMPHIS	72	55	79	44	63	10	1.6	1.7	.3	1.6	41	11.0	86	80	43	0	0	3	0	0	
NASHVILLE	69	49	80	33	59	9	1.1	1.2	.6	2.3	56	10.7	85	93	39	0	0	3	2	0	
TX ABILENE	74	50	87	40	62	5	1.4	1.1	.3	.5	62	3.3	123	75	23	0	0	2	0	0	
AMARILLO	67	37	75	32	52	5	1.0	1.2	.0	1.1	23	1.0	60	64	19	0	1	0	0	0	
AUSTIN	75	55	80	48	65	4	1.1	1.3	.1	.7	62	12.9	246	89	40	0	0	2	0	0	
BEAUMONT	75	57	81	45	66	5	1.1	1.6	.1	2.2	99	21.6	205	96	59	0	0	1	0	0	
BROWNSVILLE	84	63	94	51	73	4	1.1	1.1	.1	1.1	6	3.0	98	89	49	1	0	1	0	0	
CORPUS CHRISTI	79	61	87	52	70	4	1.1	1.2	.1	1.4	255	5.2	143	93	49	0	0	0	0	0	
DEL RIO	80	54	89	44	67	3	1.1	1.1	.1	1.1	8	1.4	75	64	24	0	0	0	0	0	
EL PASO	67	37	76	26	52	4	1.1	1.1	.1	1.1	42	1.6	150	62	17	0	2	0	0	0	
FORT WORTH	75	52	84	42	63	6	1.1	1.4	.1	.4	27	5.8	111	86	35	0	0	2	0	0	
GALVESTON	72	61	77	54	67	4	1.1	1.5	.1	1.1	70	18.1	264	90	60	0	0	0	0	0	
HOUSTON	77	53	82	44	65	3	1.1	1.6	.1	1.1	55	16.6	191	93	43	0	0	1	0	0	
LUBBOCK	69	41	77	33	55	4	1.1	1.2	.1	1.1	2	1.7	110	57	16	0	0	1	0	0	
MIDLAND	71	42	81	33	57	1	1.1	1.1	.1	1.1	0	2.0	155	51	17	0	0	0	0	0	
SAN ANGELO	74	48	85	37	61	3	1.1	1.2	.1	1.1	8	2.4	121	77	22	0	0	1	0	0	
SAN ANTONIO	76	53	80	43	65	2	1.1	1.3	.1	1.1	80	8.2	191	92	39	0	0	1	0	0	
VICTORIA	78	58	83	50	68	3	1.1	1.3	.1	2.9	297	13.7	271	94	46	0	0	0	0	0	
WACO	76	53	83	44	65	5	1.1	1.5	.1	1.1	51	5.3	104	87	34	0	0	0	0	0	
WICHITA FALLS	73	48	82	36	61	6	1.1	1.4	.1	1.1	46	3.2	104	82	30	0	0	1	0	0	
UT CEDAR CITY	48	27	59	23	38	2	1.1	1.1	.1	1.1	31	1.3	60	87	32	0	6	2	0	0	
SALT LAKE CITY	54	35	63	31	45	3	1.1	1.2	.1	1.1	92	2.8	74	82	33	0	2	2	0	0	
VT BURLINGTON	44	26	56	20	35	4	1.0	.4	.9	2.2	140	4.4	86	91	33	0	6	4	1	1	
VA NORFOLK	67	44	76	31	56	6	1.0	1.1	.8	2.7	94	8.3	84	90	45	0	1	3	1	1	
RICHMOND	65	43	76	29	54	6	1.2	1.4	1.0	2.9	110	7.7	85	90	56	0	1	5	1	1	
ROANOKE	65	44	80	32	55	8	1.5	1.5	.5	5.1	184	10.7	122	83	40	0	1	5	0	0	
WA QUILLAYUTE	53	36	60	31	44	1	1.5	1.2	.2	6.3	69	35.7	100	99	55	0	1	5	0	0	
SEATTLE-TACOMA	55	39	60	36	47	2	1.3	1.5	.2	4.4	159	13.5	104	92	51	0	0	4	0	0	
SPOKANE	51	29	56	24	40	2	1.1	1.2	.0	2.2	210	4.7	93	90	42	0	5	3	0	0	
YAKIMA	55	29	60	25	42	1	1.3	1.1	.2	1.1	204	1.5	58	93	37	0	6	3	0	0	
WV BECKLEY	60	43	72	34	52	10	2.2	1.3	1.0	4.8	162	11.4	120	94	43	0	0	6	2	1	
CHARLESTON	68	43	78	32	56	9	2.1	1.1	1.3	4.5	153	10.2	107	90	38	0	2	7	1	1	
HUNTINGTON	68	47	77	35	57	11	3.1	2.1	2.4	6.0	203	11.7	130	86	35	0	0	5	1	1	
PARKERSBURG	66	43	74	30	54	10	1.4	1.5	.9	3.7	141	9.1	113	92	42	0	2	4	1	1	
WI GREEN BAY	48	33	56	27	40	10	1.9	1.4	.3	2.2	172	3.2	92	94	66	0	3	6	0	0	
LACROSSE	51	34	61	30	42	9	1.4	1.9	1.0	1.8	141	3.2	104	98	65	0	3	3	1	1	
MADISON	55	32	69	26	44	10	1.9	1.5	.5	2.7	182	4.3	120	94	59	0	4	3	1	1	
MILWAUKEE	54	36	71	31	45	11	1.1	1.5	.5	2.1	117	4.0	85	95	61	0	1	5	0	0	
WAUSAU	44	31	54	28	38	9	1.4	1.9	.6	2.1	163	3.4	107	100	71	0	5	5	1	0	
WY CASPER	54	26	65	22	40	7	1.1	1.1	.1	.3	51	1.3	75	90	30	0	7	1	0	0	
CHEYENNE	51	28	56	24	40	7	1.1	1.2	.1	.4	55	.9	60	78	25	0	6	1	0	0	
LANDER	53	27	57	24	40	7	1.0	1.3	.0	.3	40	1.4	78	64	24	0	6	0	0	0	
SHERIDAN	56	29	65	24	42	9	1.3	1.2	.2	.8	110	2.2	100	85	32	0	6	2	0	0	

Based on 1951-80 normals

National Agricultural Summary

March 18 - 24, 1991

HIGHLIGHTS: The winter wheat crop showed improvement in most areas due to favorable moisture and warmer temperatures. **Kansas** winter wheat was in mostly good to excellent condition. The **West Coast** continued to receive needed moisture. Wet conditions, in **California** slowed field preparation and most vegetable harvest. Spring planting was active in most **Southern States**.

SMALL GRAINS: Rains boosted the wheat condition to 52 percent (%) good to excellent in Kansas. Army cutworms continued to be a problem, but control measures were reducing the numbers. Irrigated wheat fields in Texas showed good growth, while the dryland fields continued to endure drought-like conditions. Oklahoma wheat conditions improved with recent rains. Thirty percent of the crop was jointed, 10 points ahead of normal. Winter wheat in Alabama was 12 percent (%) headed same as the 5-year average. Arkansas winter wheat was in good condition. Warm, wet weather in Kentucky caused the winter wheat to grow rapidly. Most of the Montana winter wheat broke dormancy due to favorable moisture and weather. New Mexico irrigated winter wheat was poor to good and the dryland was very poor to fair. Ohio winter wheat continued to green due to warmer weather. Winter wheat in Arizona was 18% headed, 13 points below normal. Washington spring wheat and barley were 39% and 17% planted, respectively. Small grain growth was excellent in California due to the continued moisture.

OTHER FIELD CROPS: Alabama corn was 30 % planted, 4 points behind normal. Land preparation for rice and cotton planting was 45% complete in Arkansas. Corn planting and tobacco transplanting continued in Florida. Sugarcane harvest was winding down, while most areas prepared for cotton and peanut planting. Georgia corn and watermelon crops were 16% and 28% planted, 24 and 30 points behind normal, respectively. Mississippi corn was 19% planted, 5 points ahead of normal. Warm days and cool nights in New York was conducive to maple sap flow. Virginia tobacco plantbeds were over 80% seeded. South Carolina watermelon and cantaloupe crops were fair to good with 15% and 11% planted, respectively. Arizona cotton was only 5% planted because cool weather and precipitation delayed seeding. Louisiana rice was 9% planted and 4% emerged. Blackbirds continued to be a problem in newly planted rice fields. Texas cotton was 6% planted, 1 point behind normal. Recently planted safflower fields began to emerge in California.

FRUIT AND NUTS: Citrus trees in Florida were in good to excellent condition. Valencia orange harvest remained active. The tangelo and honey tangerine harvests were almost complete. California cherry, peach, and prune trees were in full bloom. Citrus picking was active in the southern areas. Georgia apple trees were in good condition with 20% bloomed. Valencia orange and grapefruit harvests continued in Arizona. Peach trees in the central and eastern areas of Texas began to set fruit. Virginia apple and peach trees were in mostly good condition. Peach bud development was earlier than normal.

VEGETABLES: Florida spring vegetable planting was almost complete in the southern areas. The winter vegetable harvest continued at a rapid pace. Onions in Georgia were 93% fair, with some cold weather and bacteria damage. Lettuce and onion conditions in New Mexico were generally fair. Harvests of onion and cole crops continued with good yields in the Texas Rio Grande Valley. The San Antonio Winter Garden cabbage, carrot and asparagus harvests continued. Potato and cool season vegetable planting continued and chili planting began in the Trans Pecos area. Vegetable harvest in California was slowed due to wet conditions. Sliming was reported in some asparagus fields due to continued rain. North Carolina Irish potatoes were 67% planted and the cabbage crop was 51% transplanted. Washington potato crop was 2% planted. Arizona mixed vegetables and spring lettuce harvests continued. Colorado onion and sugarbeet crops were 16% and 10% planted, respectively.

PASTURES AND LIVESTOCK: Pasture and livestock were in mostly fair to good condition. Pasture conditions continued to improve in the West coast and the eastern States due to recent rains and warmer weather. Calving and lambing continued in most areas. The Texas Hill Country lamb crop was in good condition. Sheep shearing continued in Wyoming.

State Summaries of Weather and Agriculture

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

ALABAMA: Dry weather prevailed through mid week. Late week rainfall under 0.50 in. north, near 1.00 in. isolated areas; elsewhere scattered showers mostly under 0.15 in. Temperatures 5 to 9° above normal. Days suitable for fieldwork 4.3. Soil moisture 3% short, 76% adequate, 21% surplus. Acreage intended for spring planting 38% prepared, 31% 1990, 36% avg. Fieldwork progress 38% behind, 62% on schedule. Corn 30% planted, 37% 1990, 34% avg. Winter wheat 12% headed, 19% 1990, 12% avg.; 23% fair, 70% good, 7% excellent. Feed supplies from pastures 51% short, 47% adequate, 2% surplus. Pastures 13% poor, 58% fair, 26% good, 3% excellent. Livestock 47% fair, 53% good. Primary activities: Breaking land; applying fertilizer, lime, herbicides; planting corn; setting vegetables; harvesting, stocking fish; moving livestock; general care of livestock, poultry, catfish.

ARIZONA: Sunny, warmer early in period; colder 17th to 23rd scattered rainfall deserts, snow higher elevations. Temperatures 2 to 7° below normal. Extremes 34°; 80° desert, 3°; 74° higher elevations. Rainfall 0.09 in. southwest to 1.82 in. central. Cotton planted 5%, 10% 1990; cool temperatures, precipitation delayed seeding. Small grains jointed 78%, 95% 1990, 91% avg.; headed 18%, 33% 1990, 31% avg.; progress slow; crop good. Alfalfa good. Harvest moderate. Mixed vegetables, spring lettuce, valencia oranges, grapefruit harvested west, central.

ARKANSAS: Mild week with temperatures well above normal. Scattered thundershowers late 21st, 22nd brought locally heavy rain, mainly across northwest areas. Extremes 30°; 89°. Rainfall 0.05 to 3.10 in. First fertilization of wheat complete, condition good. Land preparation for rice and cotton 45% complete. Reports of limited rice planting. Fruit prospects excellent, peaches in full bloom. Pastures starting to provide adequate forage. Livestock good.

CALIFORNIA: Cold low pressure systems brought more rain all areas, snow low elevations. Temperatures continued below normal. Storms interspersed shower thundershower activity. Reports small hail, light frost. Field activities slowed; continued rainfall, wet soils statewide. Growth small grains excellent. Low lying fields may suffer damage, excessive moisture. Broadleaf weed controls applied, conditions allowed. Oats received aphid treatments. Alfalfa weevil spraying continued. Harvest over wintered sugarbeets limited progress. Ground preparation corn, cotton slow. Newly planted safflower emerging. Rain, wet ground slowed cultural activities. Cherries, peaches, prunes in full bloom. Apple bloom began. Fungicide, weed control active. New shoots in grape vineyards. Citrus picking active in southern areas. Asparagus harvest slowed, cool temperatures, some slimming due to rain. Broccoli, cauliflower light supply, variable quality. Winter potato harvest continued Hemet San Jacinto area. Strawberry

harvest most areas slowed by rain. Tomato planting delayed, wet conditions. Recent precipitation improved pastures statewide. Conditions good to fair most areas. Poor to fair condition southern areas. Water supplies improved.

COLORADO: Eastern Plains received some much needed moisture as storms on 20th, 22nd left 0.25 in. to 0.50 in. of moisture in some areas, lesser amounts in other areas. Most mountain areas received from one half to a foot of new snow. High winds were common along the front range. Temperatures were mostly near or a little below normal for the week except along the eastern foothills where temperatures 2 to 4° above normal. Days suitable for fieldwork 3.8. Soil moisture supplies, 15% very short, 48% short, 33% adequate, 4% surplus. Oats, 16% seeded while barley was 15% seeded. Onions, sugarbeets 16%, 10% planted, respectively. Winter wheat 3% very poor, 11% poor, 48% fair, 34% good, 4% excellent.

FLORIDA: Almost all rain for week fell 18th, central localities, totalling 1.00 to 3.00 in. Rain other areas mostly less than 0.50 in. Temperatures 4 to 6° above normal, northwest; 2 to 4° above normal elsewhere; reached mid 80s, low 90s late week. Soil moisture adequate to surplus, Panhandle; short to adequate, central Peninsula; mostly adequate southern Peninsula. Corn planting, tobacco transplanting active. Sugarcane harvest winding down, some mills closed for season. Farmers preparing for cotton, peanut planting. Panhandle, northern Peninsula pastures fair to good condition; central Peninsula, improved, fair to good. Southern pastures good to excellent. Pastures 5% poor, 25% fair, 55% good, 15% excellent. Cattle fair to good condition, some excellent. Citrus grove trees very good. Rain all areas, surface moisture adequate. Blooming all stages. Valencia harvest active. Grapefruit movement mostly limited to east coast. Tangelo, Honey tangerine harvest about complete. Temple movement slowing. Caretakers cutting cover crops, preparing for post bloom sprays. Warmer temperatures over major vegetable areas improved plant growth, development. Spring crop planting nearing end, southern area. Winter crop harvest increasing. Volume leaders: Tomatoes, potatoes, cabbage, peppers, celery, strawberries, cucumbers, squash, sweet corn, lettuce, carrots, snap beans, radishes. Belle Glade sweet corn picking underway.

GEORGIA: Warm week. Temperatures 5 to 9° above normal. Afternoon highs mid 70s northeast mountains to mid 80s central, south. Lows around 30° north to around 40° central, low to mid 40s south. Rain extreme northwest totals generally under 0.50 in. Elsewhere widely scattered rain under 0.20 in., Nashville 1.40 in. Days suitable for fieldwork 4.2. Soil moisture 1% short, 75% adequate, 24% surplus. Corn 7% poor, 41% fair, 49% good, 3% excellent; 16% planted, 50% 1990, 40% avg.; Planting progress slow. Tobacco 71% fair, 29% good; 7% transplanted, 29% 1990, 19% avg. Watermelons 28% fair, 72% good; 11% planted, 57% 1990, 41% avg. Wheat 33% fair, 58% good, 9%

excellent; Wheat development ahead of average; few reports of mildew problems. Rye, other small grains fair to mostly good. Apples good, 20% blooming, 29% 1990, 14% avg. Peaches good to excellent, 59% blooming, 100% 1990, 93% avg. Onions 93% fair, 7% good; Cold damage, seed pods, severe bacteria outbreak. Pastures improving, fair to mostly good. Livestock good. Activities: Fertilizing, spraying pastures, hay fields. Land preparation, planting early spring row crops where conditions permit.

HAWAII: Heavy rain deluged State during week causing flooding on the Island of Oahu. Some minor agricultural damage. Heavy rain on already saturated soil resulted flash flooding early in week. Some clearing by mid week, thunderstorms returned on weekend. In general, wet, muddy conditions interrupted or halted field activities. Vegetable planting, harvesting disrupted. Temperatures high 60s to low 80s. Rainfall 0.60 to 18.40 in. Days suitable for fieldwork 7.0. Fieldwork at stand still many areas. Cool temperatures slowed plant growth. Papaya output low. Vegetable supplies interrupted. Sugar harvesting slowed or halted several areas.

IDAHO: Temperatures below normal across State. Most of State received precipitation, below normal levels. Soil moisture was adequate in north, short for remainder of State. Major farm activities for week included attending meetings, shop work, livestock care, some planting of spring grains, sugarbeets, sorting, shipping of seed by potato producers. Livestock were in good condition. Calving, lambing were progressing well. Hay, roughage supplies were adequate.

ILLINOIS: Temperatures 8 to 11° above normal. Precipitation generally less than 1.00 in. north, 1.00 to 2.00 in. central, south. Soil moisture adequate to surplus. Winter wheat fair to good.

INDIANA: Temperatures 7 to 11° above normal. Lows upper 30s to upper 40s, highs mid 50s to mid 60s. Precipitation 0.25 to 2.50 in. Wet soils limited fieldwork. Other activities: Plowing, topdressing wheat, applying fertilizer, seeding clover, selling grain, hauling manure, cleaning ditches, mending fences, attending farm auctions, machinery maintenance, purchasing supplies, tobacco bed preparation, care of livestock. Hay supplies adequate. Livestock mostly good condition. Wheat mostly good condition. Mild week, rain, soils warming up.

IOWA: Temperatures 10 to 14° above normal. Extremes 24°; 77°. Precipitation 0.11 to 2.58 in.; average 1.06 in. Northwest gets needed rain; east two thirds very wet with some flooding. Feed lots continue to be very muddy. Rain still hampering fieldwork. Much ponding of fields. Small streams, rivers running over into fields.

KANSAS: Temperatures 5° above normal west, 8° above central, 11° east. Precipitation widespread; 1.20 in. central, 0.60 to 0.90 in. elsewhere. Days suitable for fieldwork 4.0. Surface moisture 46% short, 54% adequate. Subsurface moisture 74% short, 26% adequate. Rains boosted wheat, growth excellent. Condition 52% good to excellent, 37% fair, 11% poor. Army cutworm still a problem many areas, control measures reducing numbers. Farmers

preparing spring seedbed; tilling to control erosion; spraying to control army worm. Range, pasture condition improved; many cattle still on wheat pasture. Lambing, calving no problems.

KENTUCKY: Warm, wet. High temperatures 65 to 70°, 10° above normal, extremes near 80° on 21st. Low temperatures 45 to 50°, 15° above normal. Precipitation 2.00 to 2.50 in., almost twice the normal. Majority rain thunderstorms 20th, 21st. Soils saturated from heavy rains. Field activity halted most areas. Tobacco bed preparation and seeding limited. Warm, wet conditions caused rapid winter wheat, pasture growth.

LOUISIANA: Temperatures 3.3° to 6.5° above normal. Extremes: 38°; 85°. Rainfall 0.01 in. northeast to 0.23 in. north central. Days suitable for fieldwork 3.7. Soil moisture 70% adequate, 30% surplus. Spring plowing 30%, 21% 1990, 31% avg. Corn planted 53%, 31% 1990, 25% avg.; emerged 17%, 8% 1990, 12% avg. Rice planted 9%, 8% 1990, 8% avg.; emerged 4%, 4% 1990, 4% avg. Blackbird problem continued in newly planted fields, south. Sorghum planted 9%, 0% 1990, 1% avg. Wheat 5% poor, 42% fair, 42% good, 11% excellent; headed 20%, 31% 1990, 12% avg. Fungicides applied in some fields, south. Sugarcane 27% fair, 64% good, 9% excellent. Warm weather has been favorable for growth. Vegetables 12% poor, 50% fair, 38% good. Pasture 3% very poor, 12% poor, 43% fair, 42% good. Livestock 30% fair, 70% good. Crawfishing continued, quantities improved.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 1.06 in. Temperature 47.9°, normal 42.2°. Extremes 9°; 71°. Activities for the week: Repairing fence; hauling manure; spreading fertilizer; pruning fruit trees; maintaining machinery; tax preparation; caring for livestock. **DELAWARE:** Precipitation 1.13 in. Temperature 48.0°, normal 42.7°. Extremes 25°; 67°. Activities for the week: Repairing fence; hauling manure; spreading fertilizer; pruning fruit trees; maintaining machinery; tax preparation; caring for livestock.

MICHIGAN: Temperatures 7 to 13° above normal. Extremes 74°; 18°. Precipitation 0.34 to 1.58 in. across the State. Above average temperatures, little precipitation were prevalent throughout most of the week. Conditions enabled farmers to engage in some outdoor activities. Livestock is in good shape, there are more reports of calves, lambs born this week. Feed supplies are in good shape. Major activities included: Purchasing seed for spring planting, repairing fences, tuning up equipment, looking after newborn, preparing fields, caring for and marketing livestock.

MINNESOTA: Mild temperatures prevailed across the State. Temperatures 13 to 18° above normal in the northwest, 7 to 11° above normal for remaining areas of the State. Extremes 21° Itasca; 67° Browns Valley. Heavy precipitation, both snow, rain, was recorded in most locations. Unfortunately the lightest precipitation was in northwest areas where conditions remain dry. Montevideo received 4.61 in. for the week including 17.0 in. of snow. Lamberton received 2.66 in. Nearly three fourths of the reporting stations received 1.00 in. or more precipitation.

MISSISSIPPI: Temperature 63°, 7° above normal. Extremes 30°; 87°. Mostly dry statewide with very little precipitation. Rainfall 0.48 in., 0.91 in. below normal. Soil temperature 60°.

Days suitable for fieldwork 4.3, 3.1 1990, 2.9 avg. Soil moisture 85% adequate, 13% surplus, 2% excessive. Pasture 12% poor, 34% fair, 46% good, 8% excellent. Wheat 12% poor, 63% fair, 23% good, 2% excellent. Wheat jointing 50%, 71% 1990, 59% avg. Hay supply 74% short, 26% adequate. Watermelons 16% planted, 8% 1990, 10% avg. Livestock 8% poor, 20% fair, 63% good, 9% excellent. Feed grain 35% short, 65% adequate. Corn planted 19%, 9% 1990, 14% avg, emerged 2%. Activities: Spring tillage, continued wheat fertilizing, seed bed preparation.

MISSOURI: Temperatures 9° above normal Bootheel to 13° above normal north. Precipitation less than 0.50 in. northern half to over 2.00 in. southeast. Early tillage getting started, but muddy fields holding up progress southeast. Winter wheat, pastures showing good growth most areas. Wheat stands below average extreme southeast.

MONTANA: Temperatures 4 to 16° above normal with warmest readings in northeast. Precipitation light most areas except central district had up to 0.88 in. Much of the winter wheat crop has broken dormancy and is greening. Soil moisture improving winter wheat in most areas. Fieldwork underway in many locations. Grazing open, but livestock still receiving supplemental feed. Calving, lambing weather ideal.

NEBRASKA: Temperatures 7 to 12° above normal. Precipitation 0.16 in. northwest to 0.73 in. northeast, north central.

NEVADA: Temperatures below normal. Extremes 10°; 76°. Precipitation 0.02 to 1.65. Winter storms continued to cross State during week. Most moisture deposited in southern areas. Livestock conditions remain good. Calving, lambing continue. Farmers analyzing acreage program options. Irrigation water allocations reduced most areas, uncertain all areas.

NEW ENGLAND: Precipitation 0.40 to 1.92 in., up to 2.65 in. selected stations Maine, Rhode Island. Temperatures low 20s northern Maine, lower to upper 30s New Hampshire, Vermont, Massachusetts, lower 40s Connecticut, Rhode Island. Maximum temperatures mid 50s north to upper 50s south; minimum temperatures -4° north to 19° south. Major farm activities: General repairs, maintenance, tending livestock, moving crops from storage, maple tapping beginning in south.

NEW JERSEY: Temperatures near normal. Extremes 27°; 66°. Rainfall 0.95 in. north, 1.09 in. central, 1.49 in. south. Heaviest 24 hour total 1.04 in. on 23rd, 24th. Estimated soil moisture percent field capacity, averaged 100% north, 97% central, 98% south. Four inch soil temperature 41° north, 44° central, 46° south. Cold temperatures, wet fields continued to delay early preparation, planting. Bud swelling, pastures greening advanced slowly. Warmer weather needed for earlier planted white potatoes, vegetables.

NEW MEXICO: Temperatures near seasonable normals across the west, north, Rio Grande Valley, 3 to 5° above normal over the eastern plains. Precipitation generally moderate across the southwestern desert, south central mountains, far northern mountains; light to scant elsewhere. Days suitable for fieldwork 5.4. Soil moisture 70% short, 30% adequate.

Irrigated wheat poor to good, dryland wheat very poor to fair. Lettuce, onion conditions generally fair. Cattle 5% poor, 53% fair, 42% good. Sheep 6% poor, 56% fair, 38% good. Range 47% poor, 37% fair, 16% good.

NEW YORK: Week fairly mild, wet. Started with a dry mild day on 17th as temperatures reached the 50s, lower 60s. First wet weather spell of the week occurred 18th to 19th with mostly light rain. While most places got only about a 0.10 in. Buffalo, Poughkeepsie had over a 0.50 in. A couple of inches of snow fell at some higher elevations. After a dry day 20th, scattered rain, snow returned 21st to 22nd widespread rain, sleet, snow; freezing rain, even thunderstorms on 23rd. Temperatures 4 to 6° above normal. Extremes 12°; 65°. Rainfall around an inch, was quite variable. Rainfall 1.97 at Bridgehampton to 0.35 at Ellenburg depot. Maple season well underway. Warm days, cool nights conducive to good sap flows. Caring for livestock, spreading manure, moving crops from storage major activities.

NORTH CAROLINA: Temperatures 8 to 10° above normal across the State. Precipitation 0.08 to 1.35 in. Days suitable for fieldwork 4.1. Soil moisture 2% short, 76% adequate, 22% surplus. Pasture 10% poor, 19% fair, 65% good, 6% excellent. Crop condition: Wheat 14% fair, 81% good, 5% excellent; oats 1% poor, 15% fair, 82% good, 2% excellent; barley 1% poor, 15% fair, 82% good, 2% excellent; rye 1% poor, 13% fair, 83% good, 3% excellent; Irish potatoes 39% fair, 61% good. Tobacco plant beds 27% fair, 70% good, 3% excellent. Irish potatoes planted 67%; cabbage transplanted 51%. Hay, roughage supplies 2% very short, 10% short, 83% adequate, 5% surplus. Feed grain supplies 2% very short, 6% short, 91% adequate, 1% surplus. Activities: tending livestock; preparing, seeding tobacco plant beds; pruning trees; equipment repair; topdressing small grains, pastures; land preparation; planting Irish potatoes, cabbage; general farm maintenance.

NORTH DAKOTA: Temperatures 12 to 16° above normal. Precipitation none north central to 0.33 in. southeast. Snow melted in most areas. Livestock in generally good condition. Hay supplies mostly adequate.

OHIO: Much warmer weather prevailed for most of the period. Intense low pressure brought rain, thunderstorms, gusty winds at the end of the period. High temperatures upper 50s to the low 60s; 5 to 12° above normal. Lows upper 30s to mid 40s; 9 to 14° above normal. Warmest temperatures reached into the 70s as the period ended. Precipitation as water equivalent 0.40 to 1.00 in. north, 0.75 to 2.00 in. in the central, south. Northern areas remained drier than normal, elsewhere precipitation was 0.25 to 1.00 in. above normal. Winter wheat continued to green with the encouragement of warmer temperatures. Soil temperatures mid to upper 40s. Snow cover was absent, strong winds helped dry surface moisture from fields. Farmers prepared soils for planting where conditions permitted.

OKLAHOMA: Temperatures 7° above normal southwest to 11° above normal central. Precipitation none northwestern third to 1.83 in. south east. Days suitable for fieldwork 6.1. Topsoil 55% short, 45% adequate. Subsoil 55% short, 45% adequate. Wheat 20% poor, 35% fair, 45% good; 30% jointing, 45% 1990, 20% avg. Wheat condition improved with rainfall. Additional moisture needed as moisture supplies mostly

short. Insect activity moderate to severe west. Corn 85% seedbed prepared, 30% 1990, 65% avg. Sorghum 30% seedbed prepared, 30% 1990, 25% avg. Soybeans 30% seedbed prepared, 20% 1990, 18% avg. Peanuts 15% seedbed prepared, 10% 1990, 25% avg. Cotton 55% seedbed prepared, 35% 1990, 20% avg. Pastures 20% poor, 72% fair, 5% good, 3% excellent. Cattle good; marketings average, prices mixed.

OREGON: Near normal temperature entire State; departures 3° or less plus or minus. All areas received precipitation. Amounts were over 1.50 in. coast, coastal range; 0.67 to over 1.00 in. northern Willamette Valley; just measurable amounts to 0.33 in. elsewhere. Soil moisture adequate Willamette Valley, surplus coast, short to adequate east. Fertilizing, weed spraying continued on wheat, grass seed Willamette Valley. Fertilizing underway northeast. Fertilizing berries Willamette Valley. Bloom sprays applied in fruit orchards. Eastern filbert blight sprays applied in hazelnut orchards. Some work began in hop yards. Cranberry frost protection needed south coast. Livestock mostly good. Lambing winding down, calving continued. Range, pasture condition fair to mostly good west; poor to fair east.

PENNSYLVANIA: Mild temperatures over Commonwealth with above normal precipitation. Temperature 44°, 7° above normal. Extremes 16°; 72°. Precipitation 1.08 in, 0.27 in. above normal. Activities: Hauling manure; maintaining machinery; caring for livestock; early spring activities.

PUERTO RICO: Island rainfall 0.74 in. was 0.14 in. above normal. Highest rainfall was 4.10 in. at Pico Del Este Luquillo, 1.41 in. at Arecibo 3 ESE, and 1.37 in. at Trujillo Alto. Highest 24 hour total 2.00 in. at Pico Del Este Luquillo. Divisional temperature 77 to 78° on the Coasts, 70 to 76° in the Interior with mean station temperature 63.9° at Pico Del Este Luquillo to 79.5° at San Juan WSFO. Extremes 55°; 92°.

SOUTH CAROLINA: Temperatures 8 to 9° above normal. Rainfall 0.10 in. northeast to 0.70 in. mountains. Days suitable for fieldwork 5.1. Soil moisture 2% very short, 2% short, 91% adequate, 5% surplus. Tobacco fair to good; 1% planted, 4% 1990, 0% avg. Corn fair to good; 12% planted, 25% 1990, 12% avg. Watermelons fair to good; 15% planted, 12% 1990, 18% avg. Cantaloupes fair to good; 11% planted, 2% 1990, 4% avg. Tomatoes fair to good; 9% planted, 22% 1990, 27% avg. Cucumbers fair to good; 6% planted, 8% 1990, 12% avg. Snap beans fair to good; 6% planted, none 1990, 35% avg. Pastures fair to good.

SOUTH DAKOTA: Temperatures 6 to 13° above normal. Extremes 14°; 73°. Rain fell statewide. Rainfall 0.25 to 0.50 in. Precipitation for the year was generally below normal in the east central, southeast, above normal in the west.

TENNESSEE: Storms locally severe in some areas, especially southwest. Temperatures 5 to 15° above normal. Precipitation below normal statewide. Soil moisture mostly adequate. Land preparation continues. Routine chores, livestock care, soil testing, equipment preparation main activities.

TEXAS: Windy conditions were rule for much of week for western, northern counties as upper air disturbances, then cool front moved across State. Early in week, upper air disturbance produced few showers over south Plains, south central areas. At midweek, dry line cool front triggered thunderstorms over north central, northeast districts, some very large hail reported on northern Rolling Plains. In general, nighttime temperatures cool early in week but warmed. Daytime readings mostly mild, became quite warm in South after mid week. Late week period dry, very pleasant temperatures. For week, temperatures ran above normal. statewide readings much above normal over Panhandle, parts of north. Precipitation below normal across State, moisture confined mainly to northern, central areas.

Crops: Small grains on Plains still in desperate need of drink last week. Irrigated wheat fields showing good signs of growth while dryland fields continued to endure drought like conditions, dust storms. Fertilize applications increased on wheat fields in Cross Timbers, Blackland. Most fields reached joint stage. Some fields approached boot stage. Statewide wheat 66% of normal compared with 65% 1990. Corn planting slightly delayed most areas last week due scattered showers. Plains producers able to continue pre planting operations. Some producers began pre watering practices. Plant emergence common most areas of Blacklands, Central areas, while south areas producers continued to wait for more rain. Corn planted 48% 1991, 32% 1990, 47% avg. Sorghum planting also slightly delayed last week, resumed in areas with lighter rainfall amounts. South areas producers need more moisture to promote emergence. Sorghum planted 33% 1991, 20% 1990, 33% avg. Cotton producers on Plains, Trans Pecos continued pre planting operations, need moisture to activate herbicides. Planting in southern areas continued on limited basis. Cotton planted: 6% 1991, 6% 1990, 7% avg. Rice planting remained slow in Upper Coast due continued showers, some producers able to continue field preparations on limited basis. Rice planted: 6% 1991, 13% 1990, 9% avg. Peach trees in variable stages across State. In north, trees continued to bloom while trees in Blacklands, Hill Country, east areas dropped blooms, set fruit. Limited spraying started some south areas trees, fruit size reportedly reached one inch.

Commercial Vegetables: Rio Grande Valley, onion, cold crop harvest continued. Yield expectation remained good. Melon cultivation started. San Antonio Winter Garden, majority of transplants set. Cabbage, carrot, asparagus harvest continued. Watermelons emerging. Onions continued good progress. East areas, land preparation winding down. Potato, cold crop planting continued some areas. Some tomato plants set. High Plains, land preparation continued. Some pre watering occurred. Onion sets continued good progress. Cool season vegetable planting continued. Some tomato plants set. Trans Pecos, onion crops doing good. Potato, cool season vegetable planting continued. Chili planting started.

Range and Livestock: Dry rangelands on Plains continued to pose threat of fires, wind erosion. Dusty conditions also problem to some livestock. Generally, livestock remained fair, good shape across State. Many pastures still need moisture to promote spring forage production. Weight gains on grazed wheat fields continued good, grazing becoming limited. Hill Country lamb crop off to good start, no problems reported. Range, pasture conditions: 0% very poor, 8% poor, 58% fair, 28% good, 6% excellent.

UTAH: Precipitation all divisions. Rainfall moderate to heavy in mountainous part of State, light in the west, southeast. Temperature maximums 3° less than normal, minimums 2° above normal throughout the State. Fall seeded wheat in mostly fair condition. Winter range feed in poor to fair condition. Calving, lambing in full swing in most areas. Early tillage beginning in most areas. Some fields being planted.

VIRGINIA: Temperatures about 3° above normal. Extremes 19°; 81°. Precipitation 0.27 to 1.31 in. Days suitable for fieldwork 2.6. Topsoil moisture 3% short, 75% adequate, 22% surplus. Wheat 4% poor, 44% fair, 46% good, 6% excellent. Barley 4% poor, 38% fair, 48% good, 10% excellent. Apples, peaches mostly good condition. Peach bud development earlier than normal. Applying dormant sprays to peach trees. Tobacco planted 4% very poor, 17% poor, 38% fair, 40% good, 1% excellent. Plantbeds over 80% seeded. Wet soil conditions in the southwest has hampered plantbed making. Potato planting neared 75% completed. Pasture, alfalfa condition both mostly good condition. Liming, fertilizing for spring planting, topdressing small grains. Sheep shearing, livestock care active.

WASHINGTON: Temperatures 3° below to 4° above normal, east; 1° below to 3° above normal, west. Precipitation none to 0.23 in., east; none to 0.77 in., west. Days suitable for fieldwork 3.8. Soil moisture 59% short, 40% adequate, 1% surplus. Range, pasture 11% very poor, 39% poor, 28% fair, 22% good. Hay and other roughage 16% short, 78% adequate, 6% surplus. Winter wheat condition 63% very poor, 24% poor, 11% fair, 2% good. Winter barley condition 84% very poor, 7% poor, 7% fair, 2% good. Potatoes planted 2%. Spring wheat planted 39%. Spring barley planted 17%. Dry peas planted 2%. Temperatures averaged near normal across the

State. Field preparation is in progress. Spring wheat, spring barley, potatoes, carrots, dry peas, sweet corn are being planted. Onions and radishes for seed are also being planted in Grant County. Irrigation water was put in main canals in the Columbia Basin. The glassy cutworm is causing damage to bluegrass stands in Adams, Lincoln counties. Calving, lambing is starting to taper off. A few herds of cattle are starting to move from wintering areas to early spring pastures.

WEST VIRGINIA: Temperature 52°. Extremes 21°; 78°. Precipitation avg. 1.75 in. Days suitable for fieldwork 1.4. Soil moisture 30% adequate, 70% surplus. Wheat, barley good. Cattle, sheep good. Calving 60% complete. Lambing 61% complete. Hay supplies 51% adequate, 49% surplus. Other feed 92% adequate, 8% surplus. Farm activities: General maintenance, feeding livestock, calving, lambing, fieldwork preparation.

WISCONSIN: Temperature 41°. Extremes 20°; 74°. Overall, temperatures were above normal during the week. Light rain showers across State on 18th. Rain showers spread across the State on 20th, becoming more numerous overnight in northern, central areas with some areas receiving more than 0.50 in. On the 21st, north got cold rain, snow. On 22nd, 23rd, northwest had snow, freezing rain, with 1.00 to 3.00 in. of snow accumulating. South had showers, thunderstorms. Frost depth 8.10 in.; 29 year avg. 10.8 in. Snow depth .050 in.; 29 year avg. 4.30 in. Depths as of 22nd.

WYOMING: Temperatures above normal. Precipitation above normal northeast. Below normal elsewhere. Winter wheat fair to good. Additional moisture needed. Spring land preparation, fieldwork continuing. Livestock mostly good. Calving, lambing, shearing continuing.

International Weather and Crop Summary

HIGHLIGHTS

March 17 - 23, 1991

WESTERN USSR ... Little, if any, precipitation falls over the region. Snow cover continues to retreat north and eastward.

NORTHWESTERN AFRICA ... Showers continue to benefit winter grains, approaching reproduction.

EUROPE ... Significant rain and mild weather across the north promote rapid greening of winter grains.

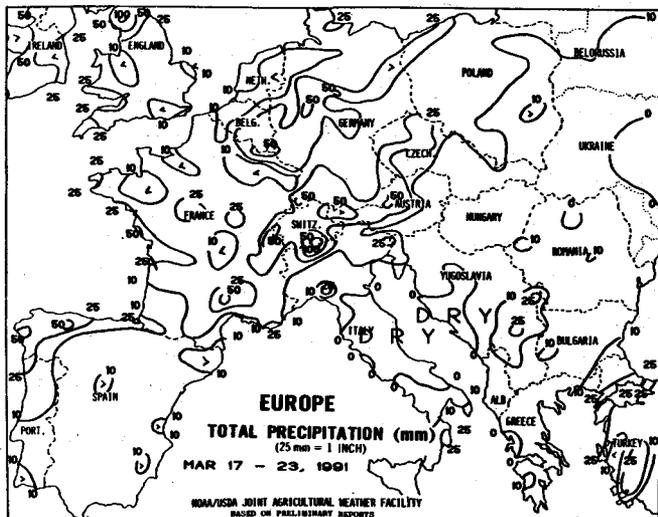
EASTERN ASIA ... Warm, mostly dry weather in the North China Plain spurs winter wheat growth. Much needed rain helps south-coastal rice planting.

SOUTHEAST ASIA ... Showers boost irrigation reserves in Indonesia and the Malay Peninsula. Drier weather returns to the Philippines.

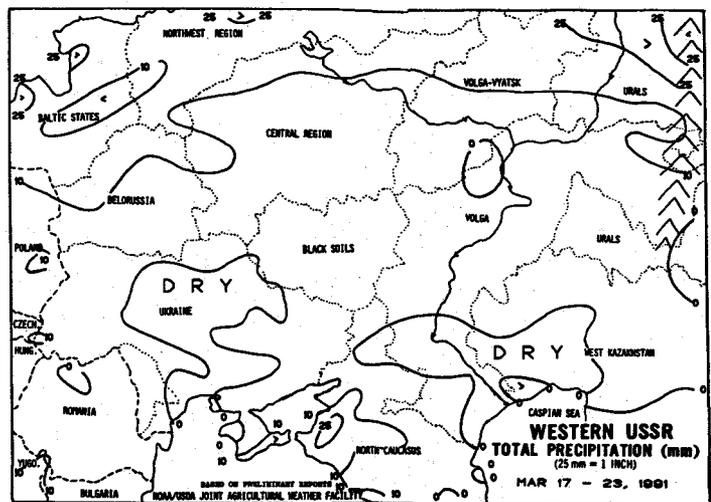
SOUTH AFRICA ... Unseasonable wetness persists but temperatures favor crop growth.

SOUTH AMERICA ... Wetness slows early harvesting in Brazil's northern soybean area. Dryness favors Argentina's crop harvests.

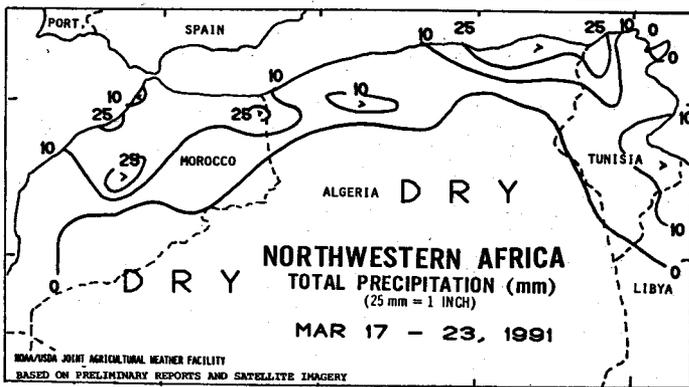
AUSTRALIA ... Mostly dry weather prevails.



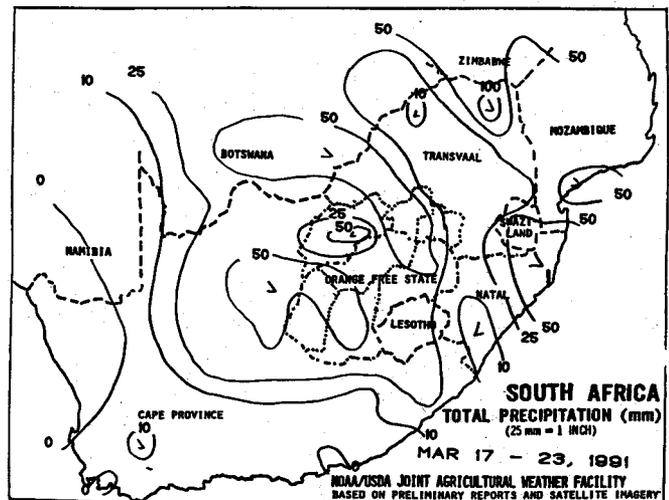
EUROPE ... Significant rain spread eastward from England, through France, Germany, Czechoslovakia, and western Poland, and was accompanied by continued unseasonably mild weather. Rainfall amounts generally ranged from 12-22mm in England, 12-31mm in France, 18-59mm in Germany, and 10-25mm in Czechoslovakia and western Poland. The warm, moist conditions in these areas promoted rapid greening of winter grains and increased topsoil moisture for spring planted crops. Light, scattered precipitation (generally less than 10mm) covered Hungary and Romania, where rain is needed for winter grains breaking dormancy. Further south, little, if any, precipitation fell over Mediterranean winter grains nearing reproduction.



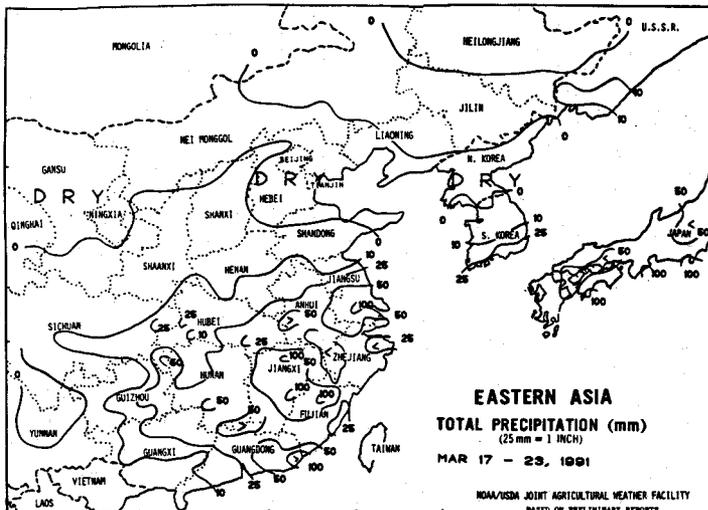
WESTERN USSR ... Little, if any, precipitation covered most of the region, except for winter grains areas in northern Belorussia, the Baltic States, and the western North Caucasus, where rainfall ranged from 10 to 28mm. Dry weather covered the central Ukraine and the lower Volga. Unseasonably warm weather continued over the region, with weekly average temperatures ranging 3-6 degrees Celsius (C) above normal. Snow cover continued to retreat north and eastward. By week's end, the only winter grain areas that had a protective snow cover were those in the eastern portions of the Central Region, the upper Volga, and the Volga Vyatsk. Although winter grains remained dormant in most areas, some greening may have occurred in western and southern areas where weekly temperatures averaged above 5 degrees C.



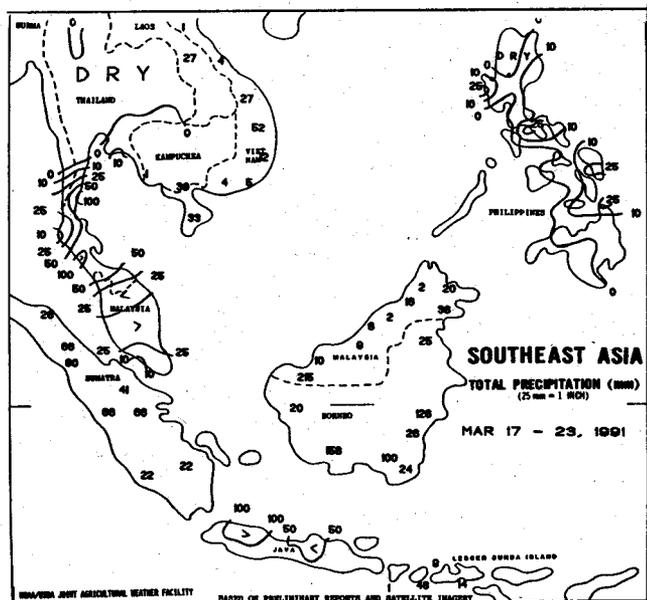
NORTHWESTERN AFRICA ... Precipitation continued widespread, although amounts were less than those of last week. Light precipitation (around 10mm) in western Algeria was welcomed, following last week's moderate to heavy rains. Light to moderate rain (7-31mm) in Morocco maintained adequate moisture for winter grains approaching reproduction. Further east, beneficial precipitation (10-27mm) continued over winter grains in eastern Algeria and Tunisia.



SOUTH AFRICA ... Unseasonably heavy rains (25-83mm) continued over much of the Maize Triangle, although pockets of light rain (10mm or less) occurred in the southern Transvaal. Temperatures averaged near normal, with daytime highs in the low- to mid-20's C, favoring growth of late planted crops. Warmer and drier weather is needed throughout the region to ensure normal development of January planted crops.



EASTERN ASIA ... Unseasonably warm weather (1 to 3 degrees C above normal) spurred vegetative growth of winter wheat across the North China Plain. Moderate showers (10-25mm or more) benefited most crops south of Shandong, with unseasonably heavy rain (50-107mm) concentrated over southern Jiangsu. Continued seasonably drier weather, however, from Shandong northward provided little benefit to crops breaking dormancy. Although the winter season is usually a relatively dry period across the northern wheat areas, this year's accumulations were much below normal, necessitating more rain soon for normal crop growth. In southern China, widespread showers (10-50mm) continued over primary spring crop areas, maintaining generally favorable pre-planting conditions. The rains reached coastal rice areas of Guangdong and Fujian, providing much needed moisture for planting.



SOUTHEAST ASIA ... Moderate to heavy showers (25-100mm or more) continued over southern and western Indonesia and returned to local crop regions of western Malaysia, boosting irrigation reserves. Dry weather persisted over much of eastern Malaysia. Further north, showers (25-118mm) from the remnants of Tropical Storm Sharon covered plantation crop areas of the southern Thai peninsula. In contrast, drier and unseasonably warm weather dominated northern Thailand's rainfed grain areas. In the Philippines, drier weather returned to most regions, although light to moderate rain (10-31mm) fell from central Luzon to northern Mindanao.

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(Continued from front cover)

southern coast, resulting in flooding and mudslides. And four tornadoes touched down in **Southern California**. Heavy snow and high winds hit the **central and southern Rockies** by midweek, including snowfall of nearly 26 inches in **Flagstaff, AZ**, and wind gusts to 90 miles per hour at **Rollinsville, CO**. Violent thunderstorms developed on Thursday from northeastern **Texas** to **Missouri**. The severe weather included 15 tornadoes and 150 occurrences of damaging winds or large hail. The storm also produced heavy snow from **Minnesota** to **Maine**, with the accumulation totaling 17 inches in **Watson, MN**. Ice glazed the valleys of eastern **New York**. Destructive thunderstorms returned on Friday, resulting in 13 tornadoes in **Iowa**, and more than a dozen in the **lower Mississippi and Tennessee Valleys**. Heavy rain produced localized flooding in parts of seven States from **southern Illinois** to **Virginia**. High winds swept from the **Plains** to the **east coast**, fanning wildfires in **Oklahoma** and **South Carolina**. By week's end, rain and snow moved into the **Northeast**, and a new Pacific storm spread rain and snow into coastal **Oregon** and **northern California**.

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