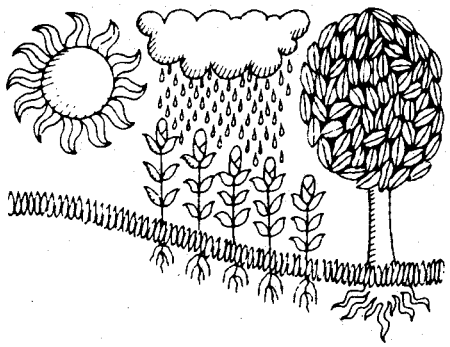

WEEKLY WEATHER AND CROP BULLETIN

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

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

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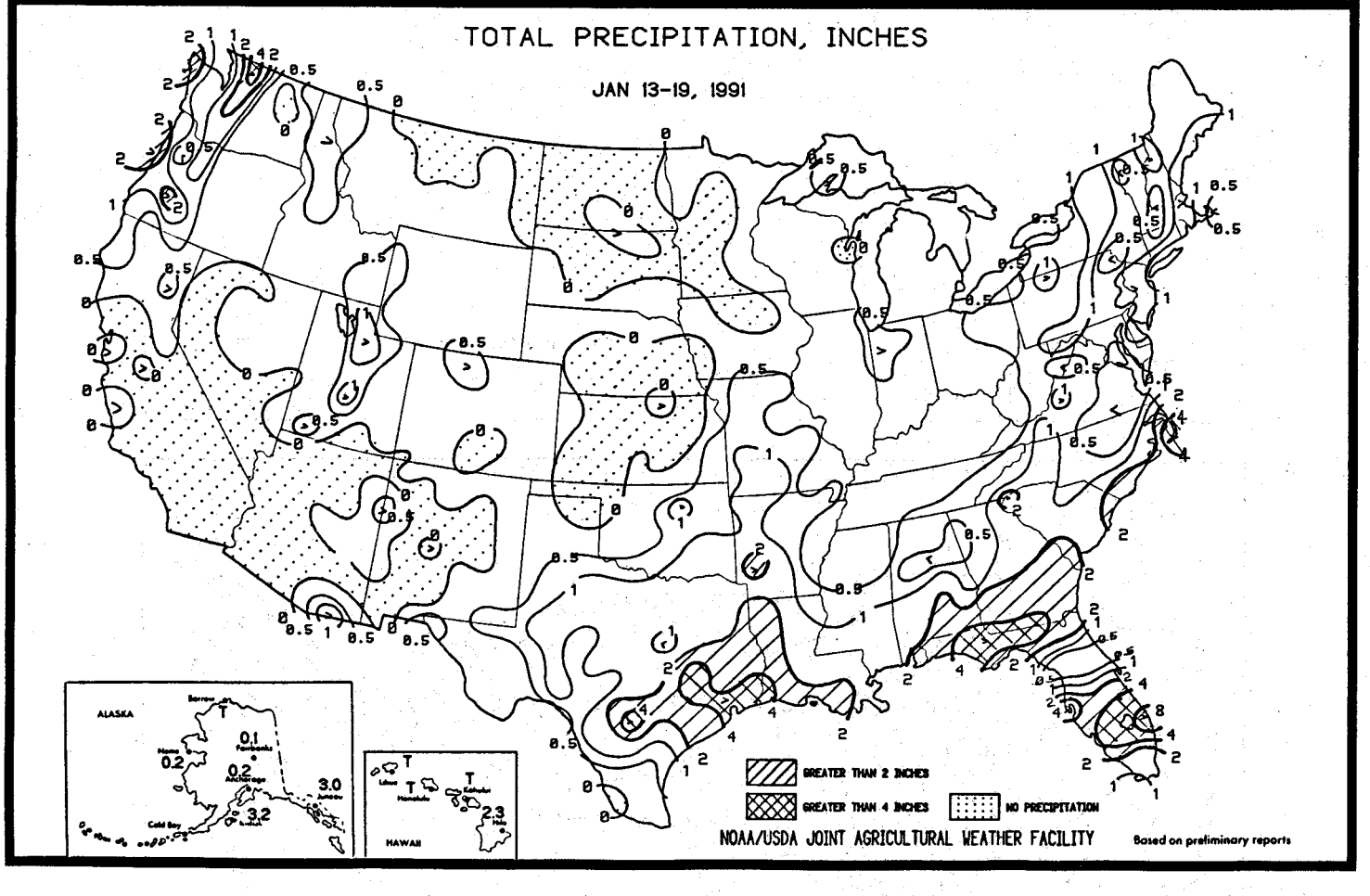

HIGHLIGHTS

January 13-19, 1991

A pair of strong upper air disturbances cut a stormy path from the **Pacific Northwest** to the **Gulf coast.** Meanwhile, arctic air remained locked in **Canada** until late in the week, assuring most of the contiguous States of an abnormally mild week. The first storm system began to tap **Gulf of Mexico** moisture on Monday, igniting thunderstorms and spawning tornadoes in **eastern Texas.** Heavy rain and tornadic activity reached **Florida** on Tuesday; **West Palm Beach** was awash in 8 inches of rain. A shield of precipitation spread up the **east coast** at midweek. In the **West,** favored mountain locations in the **Rockies** were beset by heavy snow and high winds during the first half of the week. On Tuesday, **Alta, UT** had a 14-inch snowfall. An offshore, easterly air flow

(Continued to p. 15)

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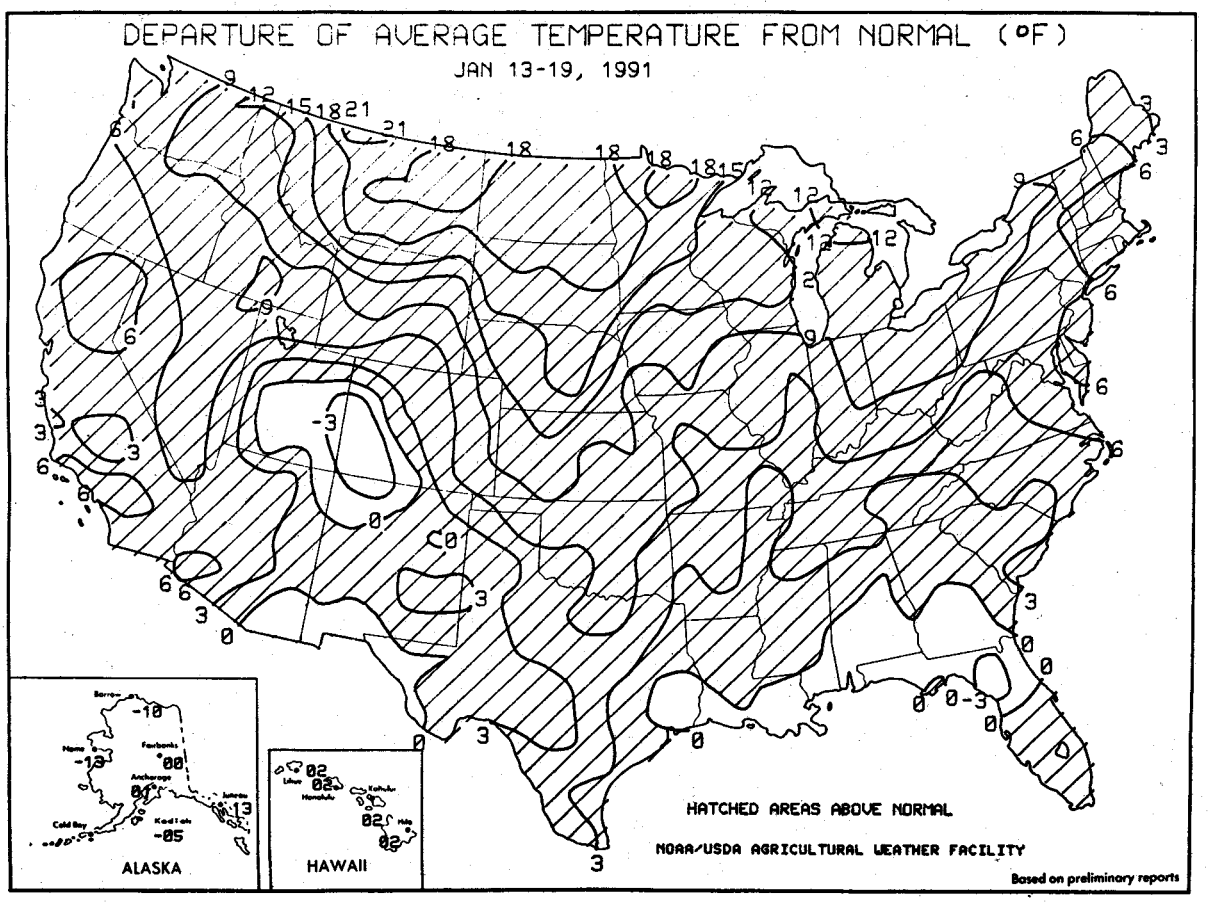
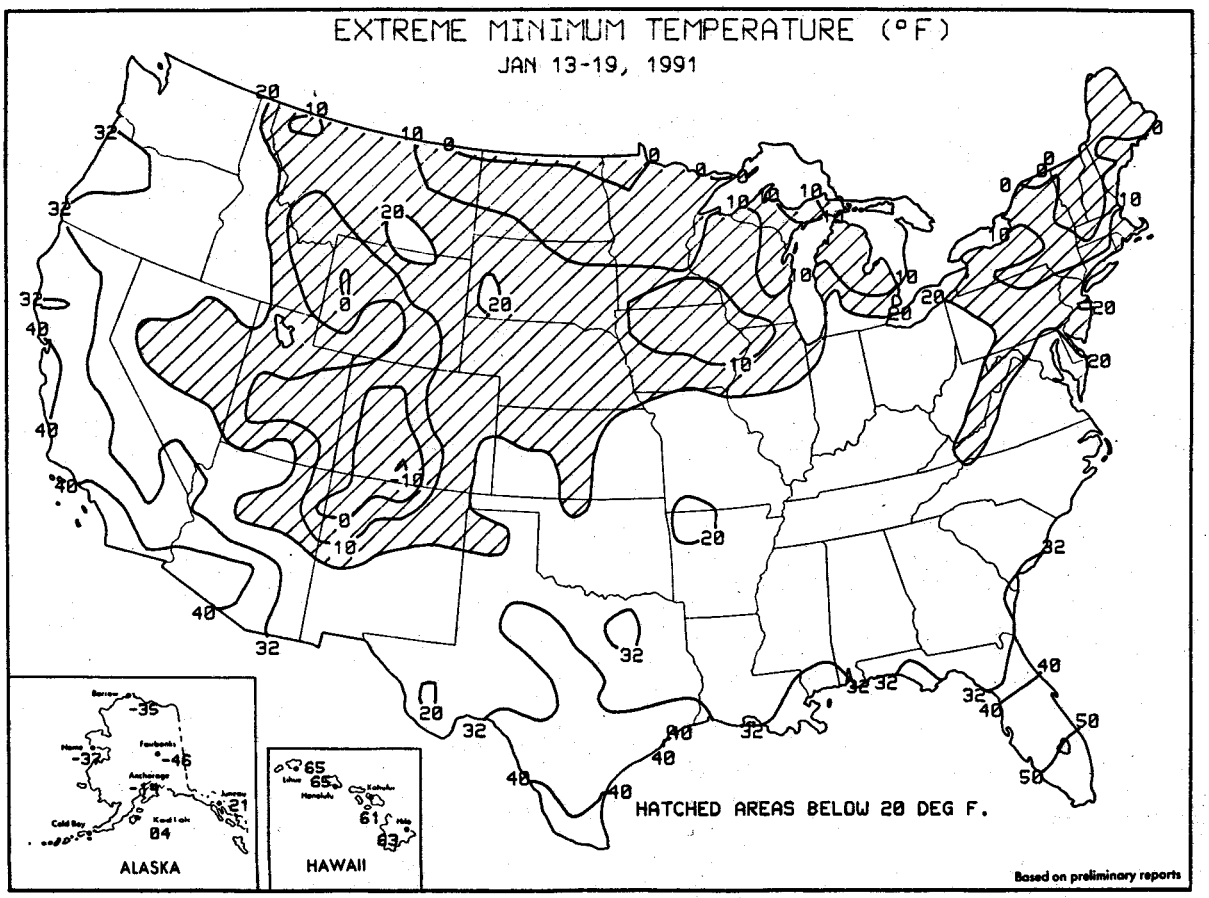
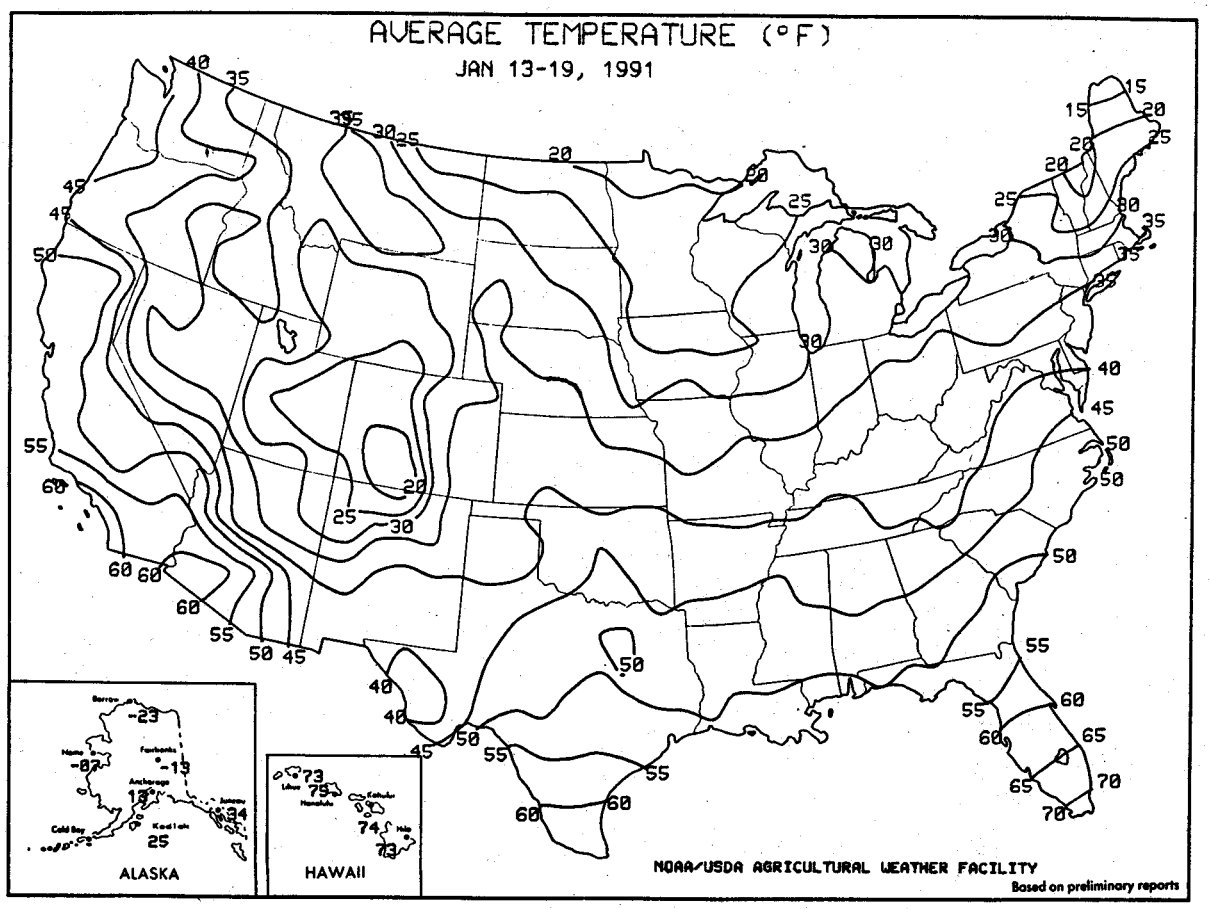
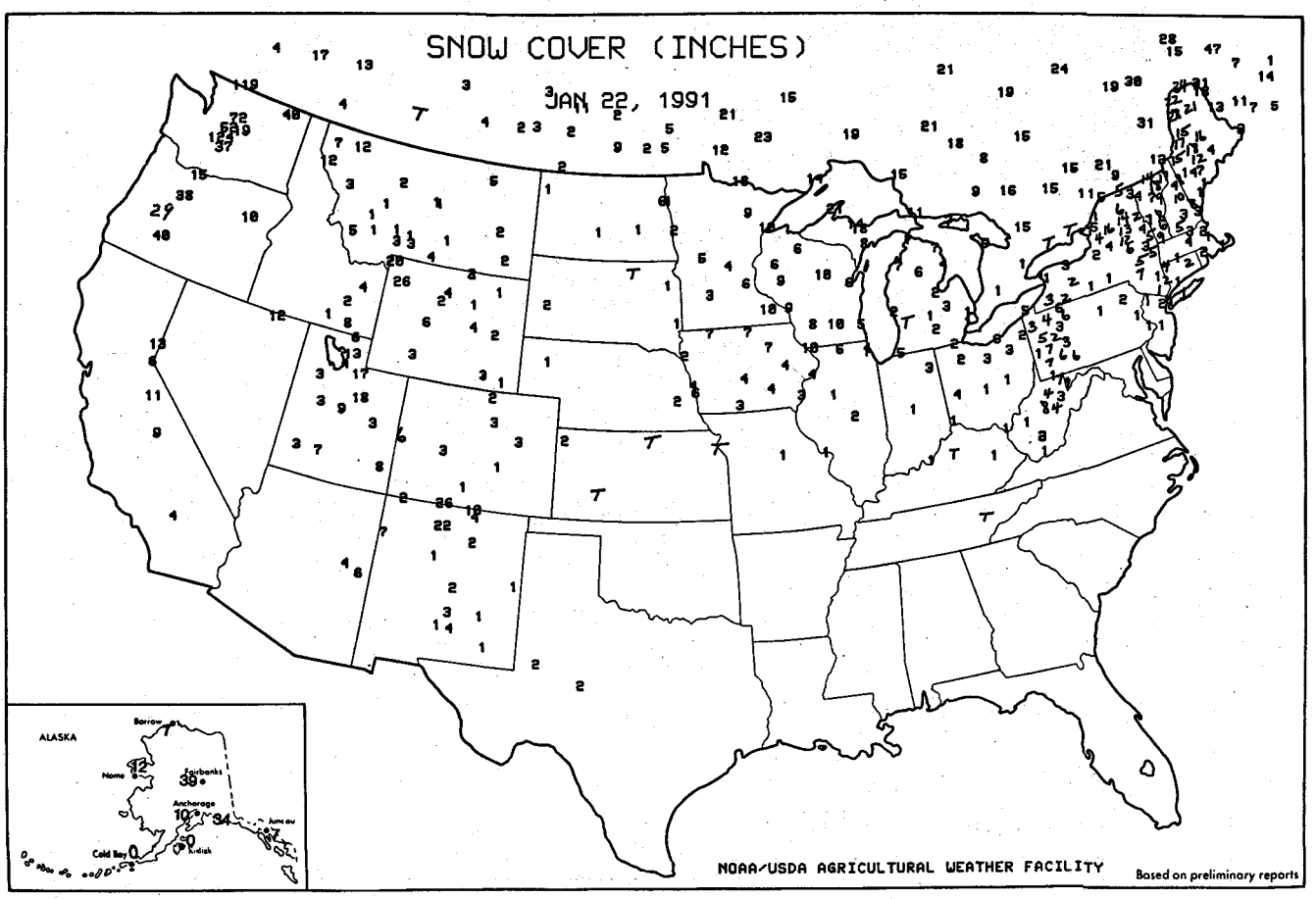

DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
JAN 13-19, 1991
HATCHED AREAS ABOVE NORMAL
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports
ALASKA
HAWAII


EXTREME MINIMUM TEMPERATURE (°F)
JAN 13-19, 1991
HATCHED AREAS BELOW 20 DEG F.
Based on preliminary reports
ALASKA
HAWAII

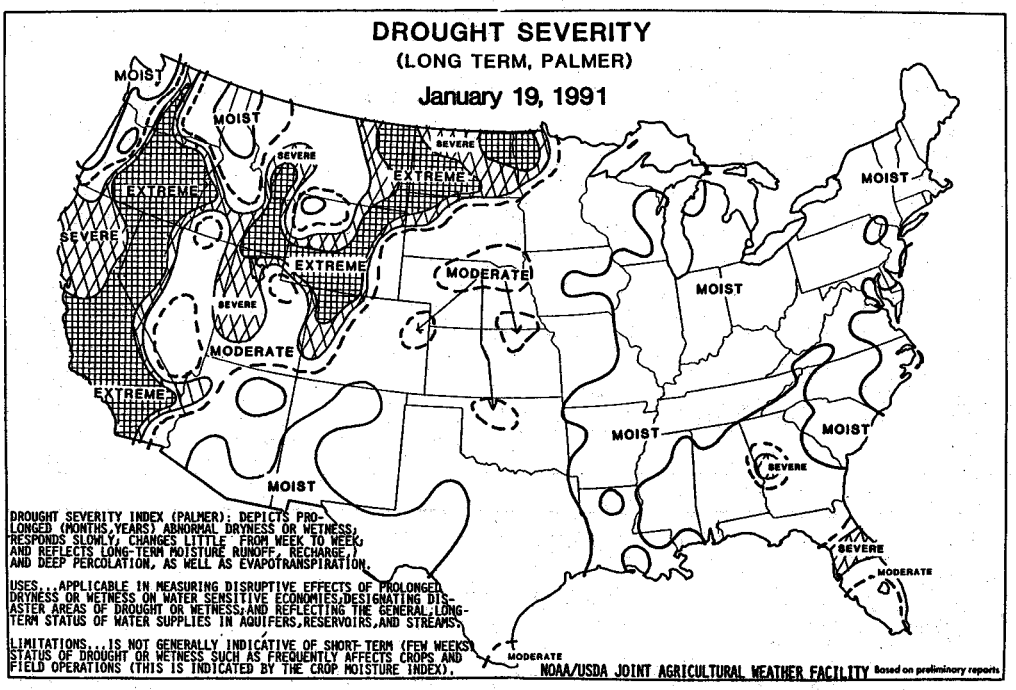

AVERAGE TEMPERATURE (°F)
JAN 13-19, 1991
ALASKA
HAWAII
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

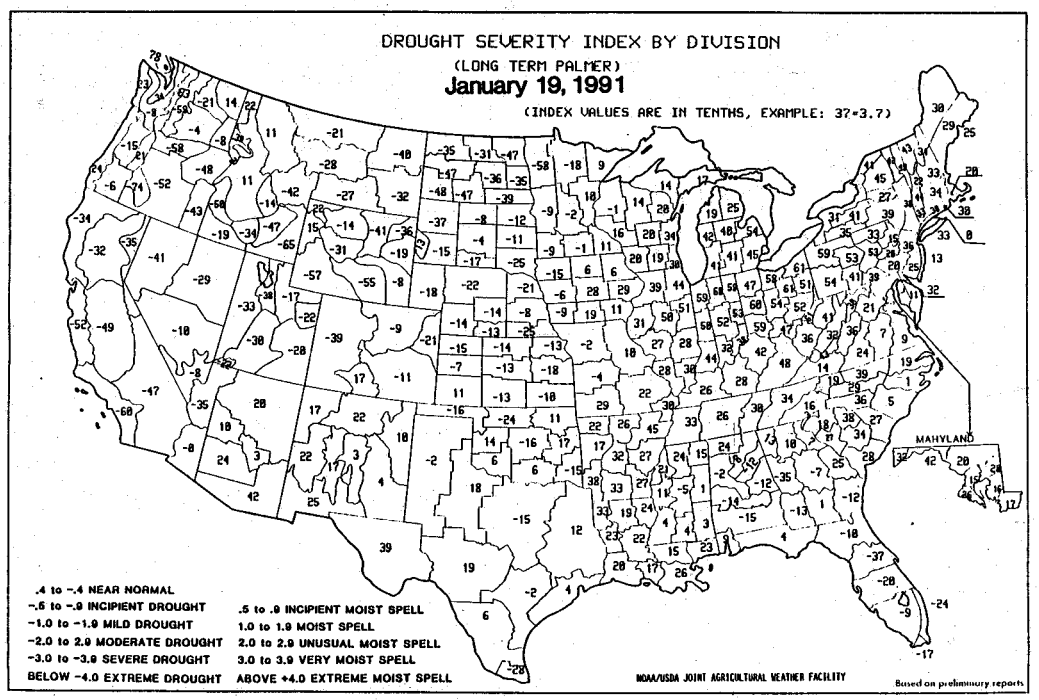

SNOW COVER (INCHES)
JAN 22, 1991
ALASKA
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

Long-Term Drought Update

A recent 6-week spate of heavy precipitation soaked much of the Ohio and Tennessee Valleys, saturating soils in many already moist areas. Since the beginning of 1991, frequent heavy rains have drenched the Gulf Coast States, replenishing low water tables and easing drought conditions in the Southeast. According to the Palmer Index, only small pockets of Georgia and Florida remain in a severe drought (fig. 1 and 2).

Severe to extreme drought persists in the northern Plains from eastern Montana to northwestern Minnesota. Mild to moderate drought lingers southward into winter wheat growing areas of the central Plains. California, eastern Oregon, and central Washington remain very dry. California is well into its fifth consecutive drier-than-normal rainy season. Elsewhere in the West, drought conditions have improved markedly in the past 3 months, especially in the central Rockies. (Compare with the last Drought Chart of the season, *Weekly Weather and Crop Bulletin*, Vol. 77, No. 43, page 4.) In western Washington, soil moisture remains extremely high due to a wet autumn.





National Weather Data for Selected Cities

Weather Data for the Week Ending January 19, 1991

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	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 Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	54	34	60	23	44	1	.4	-.8	.2	7.0	86	1.5	47	91	46	0	3	3	0
MOBILE	59	42	65	31	50	0	1.5	.5	.6	14.3	172	9.1	315	95	51	0	1	3	1
MONTGOMERY	56	36	63	22	46	-1	1.7	.8	1.2	7.9	107	4.6	177	97	51	0	2	3	1
AK ANCHORAGE	21	5	46	-14	13	1	.2	.0	.1	2.4	154	.6	132	86	62	0	7	3	0
BARROW	-15	-32	-7	-35	-24	-10	T	-.1	T	.1	50	T	7	73	55	0	7	1	0
FAIRBANKS	-3	-23	32	-46	-13	0	.1	.0	.1	3.4	315	.4	118	81	69	0	7	2	0
JUNEAU	38	30	44	21	34	13	3.2	2.4	1.5	9.2	133	3.7	161	99	71	0	5	5	2
KODIAK	33	17	42	4	25	-5	3.2	1.9	1.1	15.3	169	10.4	292	93	61	0	6	6	4
NOME	1	-16	31	-37	-7	-13	.2	.0	.1	1.5	130	.2	34	79	58	0	7	3	0
AZ PHOENIX	70	45	73	43	58	5	.0	-.2	.0	1.1	85	.6	137	61	19	0	0	0	0
PRESCOTT	53	24	60	20	39	3	.0	-.4	.0	.8	31	.6	55	70	29	0	7	0	0
TUCSON	64	37	72	35	51	0	.2	.0	.2	2.7	183	1.1	215	85	26	0	0	1	0
YUMA	74	51	78	45	62	7	.0	-.1	.0	1.4	262	1.4	650	48	17	0	0	0	0
AR FORT SMITH	49	32	56	22	41	3	.9	.6	.6	7.1	178	2.2	191	99	74	0	4	4	1
LITTLE ROCK	50	36	57	27	43	4	.6	-.3	.4	13.7	207	5.6	233	86	63	0	2	3	0
CA BAKERSFIELD	57	42	72	35	49	1	.0	-.2	.0	.9	73	.6	111	99	70	0	0	0	0
EUREKA	56	46	65	39	51	4	.7	-.9	.5	4.6	43	1.7	38	98	81	0	0	4	0
FRESNO	58	40	68	34	49	4	T	-.5	T	.8	29	.1	10	97	60	0	0	0	0
LOS ANGELES	73	50	79	48	62	6	.0	-.7	.0	1.4	41	1.4	76	78	24	0	0	0	0
REDDING	63	45	73	34	54	7	.1	-1.9	.1	1.4	12	.9	16	83	44	0	0	1	0
SACRAMENTO	61	42	70	34	52	7	.0	-.9	.0	1.8	34	.4	14	94	55	0	0	0	0
SAN DIEGO	72	49	79	47	60	5	.0	-.5	.0	1.6	51	1.1	83	75	27	0	0	0	0
SAN FRANCISCO	62	46	70	43	54	6	T	-1.1	T	2.1	32	.2	8	93	53	0	0	2	0
CO DENVER	47	22	55	15	34	5	.4	.3	.2	.7	88	.5	150	83	32	0	6	3	0
GRAND JUNCTION	30	13	33	1	21	-4	.3	.2	.2	1.8	188	.8	219	96	68	0	7	4	0
PUEBLO	53	20	65	8	36	7	T	-.1	T	.2	50	T	0	86	25	0	6	0	0
CT BRIDGEPORT	42	28	51	16	35	6	.8	.1	.8	5.1	89	1.6	77	84	59	0	4	1	1
HARTFORD	38	20	45	1	29	4	.5	-.3	.5	6.8	106	1.9	85	85	53	0	6	1	0
DC WASHINGTON	50	34	59	29	42	7	.6	-.1	.5	7.6	156	2.9	168	86	47	0	3	2	1
FL APALACHICOLA	63	44	68	35	54	1	4.0	3.2	2.4	12.4	219	10.8	498	96	54	0	0	3	2
DAYTONA BEACH	70	46	82	41	58	0	.4	-.1	.2	1.5	42	1.2	85	93	57	0	0	2	0
JACKSONVILLE	66	40	75	31	53	-1	3.2	2.5	3.0	8.0	191	6.0	352	94	53	0	2	2	1
KEY WEST	78	69	85	64	73	3	.2	-.2	.1	3.3	119	1.9	193	88	66	0	0	2	0
MIAMI	76	62	84	57	69	2	1.1	.6	.8	2.5	80	1.4	115	91	61	0	0	4	1
ORLANDO	71	50	81	44	61	1	1.9	1.5	1.4	2.8	90	2.0	163	92	54	0	0	3	1
TALLAHASSEE	63	38	71	26	51	-1	5.7	4.6	4.9	15.8	214	11.3	399	99	45	0	2	2	2
TAMPA	71	51	81	45	61	1	1.2	.7	.9	2.0	60	1.9	148	95	56	0	0	3	1
WEST PALM BEACH	74	59	80	53	66	1	8.6	7.9	6.9	11.6	301	9.7	596	92	61	0	0	2	2
GA ATLANTA	53	35	58	24	44	2	.9	-.3	.6	5.2	72	2.2	73	92	47	0	2	3	1
AUGUSTA	60	34	72	24	47	2	1.8	.9	.9	5.7	103	3.8	156	97	45	0	4	3	2
MACON	58	34	67	24	46	0	1.4	.5	.8	7.1	106	3.6	136	98	50	0	3	2	2
SAVANNAH	63	41	75	32	52	3	2.3	1.6	2.2	6.6	141	4.5	237	93	40	0	1	3	1
HI HILO	81	65	82	63	73	2	2.3	.3	1.9	33.2	179	3.1	54	96	68	0	0	4	1
HONOLULU	83	66	85	65	75	2	T	-.9	T	5.0	86	T	2	90	56	0	0	0	0
KAHULUI	84	63	88	61	74	2	T	-.9	T	6.0	115	T	1	96	59	0	0	0	0
LIHUE	79	67	83	65	73	2	T	-1.4	T	3.4	36	T	0	90	68	0	0	0	0
ID BOISE	43	29	49	24	36	7	.3	.0	.3	1.9	81	1.0	93	95	64	0	5	2	0
LEWISTON	49	37	57	30	43	11	.1	-.3	.1	.5	23	.1	10	67	45	0	1	1	0
POCATELLO	36	25	40	9	31	7	.5	.3	.2	1.7	108	.6	87	95	72	0	5	4	0
IL CHICAGO	35	21	44	14	28	8	.5	.1	.4	3.3	96	1.4	126	97	73	0	7	2	0
MOLINE	35	19	43	8	27	8	.3	-.1	.2	4.2	141	1.1	107	97	75	0	7	2	0
PEORIA	37	23	44	18	30	9	.1	-.3	.0	4.8	156	1.1	102	98	78	0	7	2	0
QUINCY	37	27	44	23	32	9	.3	.0	.3	2.3	89	.6	69	95	75	0	6	1	0
ROCKFORD	34	17	41	8	26	8	.2	-.1	.2	3.4	122	1.0	111	95	76	0	7	3	0
SPRINGFIELD	37	28	42	24	33	9	.2	-.1	.2	5.9	188	.9	89	99	82	0	6	3	0
IN EVANSVILLE	43	31	49	28	37	7	.2	-.5	.1	9.6	180	2.2	116	95	73	0	5	3	0
FORT WAYNE	38	29	46	23	33	10	.5	.0	.2	8.7	231	1.1	86	95	74	0	6	3	0
INDIANAPOLIS	40	29	47	26	35	9	.2	-.4	.2	8.6	185	.8	51	95	75	0	5	2	0
SOUTH BEND	37	27	44	18	32	9	.3	-.2	.3	6.2	138	1.2	73	91	69	0	7	2	0
IA DES MOINES	35	21	44	13	28	10	T	-.2	T	3.0	183	.8	137	95	74	0	7	1	0
SIOUX CITY	36	17	44	12	26	11	T	-.1	T	1.1	98	.3	84	96	73	0	7	1	0
WATERLOO	31	17	38	1	24	10	T	-.2	T	2.0	121	.7	143	99	80	0	7	0	0
KS CONCORDIA	45	26	50	20	35	10	T	-.1	T	1.0	91	.5	141	93	62	0	7	1	0
DODGE CITY	53	26	60	23	40	11	T	-.1	T	.8	106	.2	81	92	35	0	7	0	0
GOODLAND	51	23	59	20	37	10	.1	.1	.1	.3	51	.2	73	81	31	C	7	1	0
TOPEKA	44	27	52	21	35	10	T	-.2	T	1.3	71	.3	55	98	72	0	6	0	0
WICHITA	47	27	53	21	37	8	T	-.1	T	1.2	82	.4	84	96	61	0	7	0	0
KY BOWLING GREEN	47	30	54	26	38	5	.3	-.8	.2	14.3	193	2.9	100	92	68	0	6	2	0
LEXINGTON	45	31	54	27	38	7	.1	-.7	.1	12.1	200	1.9	84	90	62	0	4	3	0
LOUISVILLE	46	32	54	28	39	7	.2	-.5	.2	11.2	201	2.3	112	91	63	0	3	3	0
LA ALEXANDRIA	58	40	64	29	49	1	1.6	.7	1.6	16.4	215	8.2	295	95	50	0	1	1	1
BATON ROUGE	61	40	71	29	50	0	1.4	.4	1.0	11.6	148	6.8	243	94	46	0	2	2	1
LAKE CHARLES	59	40	65	31	50	0	3.5	2.5	2.5	16.3	204	12.3	418	97	57	0	1	2	2
NEW ORLEANS	60	44	70	33	52	0	2.0	.9	1.4	21.0	253	11.3	373	95	55	0	0	3	2

Based on 1951-80 normals

Weather Data for the Week Ending January 19, 1991

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	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 Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	57	37	64	26	47	1	2.9	1.9	1.2	11.3	176	7.3	290	98	57	0	1	4	3
ME CARIBOU	21	7	33	-8	14	4	.8	.3	.4	7.1	152	1.5	97	90	71	0	7	6	0
PORTLAND	36	18	46	1	27	6	1.0	.2	1.0	10.0	146	2.2	91	88	48	0	7	3	1
MD BALTIMORE	49	28	56	19	39	6	.5	-.1	.5	8.2	156	3.4	180	82	48	0	6	1	1
SALISBURY	51	30	62	20	40	6	.8	.0	.8	9.1	157	5.1	241	94	48	0	5	1	1
MA BOSTON	39	26	48	18	33	3	1.0	.2	.8	5.8	83	2.6	104	85	50	0	6	2	1
CHATHAM	42	30	54	23	36	5	.4	-.6	.3	6.3	82	2.5	91	87	63	0	4	2	0
MI ALPENA	36	25	45	3	30	12	.3	-.1	.1	2.6	87	.8	77	91	68	0	7	3	0
DETROIT	38	28	46	17	33	10	.4	-.1	.3	5.4	146	1.1	88	91	69	0	6	2	0
FLINT	36	25	44	-1	31	9	.3	.0	.3	3.8	126	1.3	129	90	69	0	5	2	0
GRAND RAPIDS	36	27	46	20	32	9	.3	-.1	.2	4.0	103	1.0	80	94	72	0	6	3	0
HOUGHTON LAKE	34	22	41	-2	28	11	.5	.1	.2	2.9	101	1.3	139	94	77	0	7	4	0
LANSING	36	26	44	13	31	11	.3	-.1	.3	3.9	109	1.1	97	94	72	0	6	1	0
MARQUETTE	29	17	37	9	23	11	.1	-.4	.0	2.1	55	.4	28	94	81	0	7	4	0
MUSKEGON	36	31	42	27	33	11	.1	-.4	.1	3.7	91	1.1	74	94	70	0	4	3	0
SAULT ST. MARIE	32	21	37	3	26	13	.4	-.1	.2	3.2	82	.8	54	94	71	0	7	4	0
MN ALEXANDRIA	31	14	38	4	23	18	T	-.2	T	.7	55	.2	35	94	76	0	7	0	0
DULUTH	28	14	38	8	21	15	.2	-.1	.1	.8	40	.3	45	93	70	0	7	4	0
INT'L FALLS	28	12	37	4	20	20	.2	.0	.2	1.8	123	.6	102	93	72	0	7	3	0
MINNEAPOLIS	33	17	39	11	25	14	T	-.2	T	1.3	94	.3	48	91	71	0	7	1	0
ROCHESTER	29	16	37	7	23	14	T	-.2	T	2.2	155	.5	104	95	79	0	7	2	0
MS GREENWOOD	54	37	58	27	45	2	.3	-.9	.2	11.4	132	2.7	82	94	61	0	2	3	0
JACKSON	57	37	64	30	47	2	.8	-.3	.5	8.9	104	3.2	101	97	57	0	2	3	1
MERIDIAN	57	34	64	26	46	0	1.0	-.1	.6	6.7	76	3.1	97	98	53	0	3	3	1
MO CAPE GIRARDEAU	44	32	52	28	38	—	.4	-.3	.4	11.9	213	2.8	154	98	76	0	4	2	0
COLUMBIA	40	29	46	24	34	6	.3	-.1	.3	4.4	144	.9	86	94	79	0	6	3	0
KANSAS CITY	37	28	44	22	33	5	.4	.1	.4	1.9	86	.8	105	97	83	0	7	2	0
SAINT LOUIS	42	32	49	26	37	9	.3	-.1	.2	7.5	230	1.1	99	90	69	0	3	2	0
SPRINGFIELD	44	30	53	22	37	6	1.3	.9	.5	8.7	244	2.6	258	98	75	0	4	4	1
MT BILLINGS	47	32	52	20	40	19	.2	.0	.2	.9	63	.4	65	74	40	0	3	1	0
GLASGOW	32	15	44	4	24	16	T	-.1	T	.7	133	.2	73	94	70	0	7	2	0
GREAT FALLS	44	28	52	12	36	17	.2	.0	.2	1.1	80	.3	57	84	45	0	5	2	0
HAVRE	39	25	45	19	32	21	.0	-.1	.0	.4	43	T	11	89	67	0	7	0	0
HELENA	43	30	47	15	37	19	.1	-.1	.0	.6	56	.1	25	83	51	0	4	3	0
KALISPELL	38	28	42	8	33	14	.5	.1	.3	6.0	231	1.6	155	97	77	0	5	4	0
MILES CITY	40	24	45	16	32	19	.1	-.1	.1	.6	64	.4	111	89	62	0	7	1	0
MISSOULA	40	29	46	17	34	14	.2	-.1	.1	1.4	69	.3	37	96	67	0	5	7	0
NE GRAND ISLAND	48	23	52	15	35	15	.0	-.1	.0	1.0	106	.3	83	92	54	0	7	0	0
LINCOLN	40	17	52	9	29	10	T	-.1	T	1.3	130	.6	151	94	69	0	7	0	0
NORFOLK	42	22	51	12	32	15	T	-.1	T	.9	95	.4	117	97	69	0	7	0	0
NORTH PLATTE	50	21	59	18	36	15	T	-.1	T	.3	52	.2	109	93	39	0	7	0	0
OMAHA	37	20	44	13	29	9	T	-.2	T	1.4	118	.7	147	90	72	0	7	0	0
SCOTTSBLUFF	48	21	56	16	35	11	.1	.0	.1	.5	67	.2	57	88	39	0	7	1	0
VALENTINE	46	20	55	15	33	15	T	.0	T	.3	60	T	20	94	50	0	7	1	0
NV ELY	42	22	49	16	32	8	T	-.1	T	.4	36	.1	24	85	47	0	7	1	0
LAS VEGAS	64	40	71	35	52	7	.0	-.1	.0	.2	36	.2	72	58	24	0	0	0	0
RENO	53	24	58	19	39	7	.0	-.3	.0	.4	22	T	1	90	32	0	7	0	0
WINNEMUCCA	47	28	50	22	38	8	T	-.2	T	1.0	70	.4	67	91	52	0	5	2	0
NH CONCORD	34	13	42	-9	23	3	.5	-.2	.4	5.4	104	1.3	71	93	57	0	7	3	0
NJ ATLANTIC CITY	47	24	56	14	35	3	.9	.1	.9	8.4	146	4.8	224	92	50	0	7	1	1
NM ALBUQUERQUE	47	27	51	21	37	2	T	-.1	T	1.1	153	.5	217	77	34	0	7	0	0
CLOVIS	50	31	62	26	41	4	T	-.1	T	.9	97	.5	150	85	42	0	6	1	0
ROSWELL	55	31	67	26	43	4	.1	.0	.0	.5	86	.2	82	85	32	0	4	3	0
NY ALBANY	36	19	43	4	28	7	.5	.0	.4	5.3	118	1.8	117	91	62	0	6	3	0
BINGHAMTON	35	24	44	11	30	8	1.0	.4	.9	7.1	158	1.8	115	90	64	0	6	4	1
BUFFALO	38	29	45	17	34	10	.6	-.1	.5	10.0	188	1.3	68	90	63	0	4	5	1
NEW YORK	46	34	56	25	40	8	.7	.0	.7	7.3	131	2.5	126	79	52	0	2	1	1
ROCHESTER	38	29	46	18	33	10	.4	-.1	.3	5.3	132	1.2	80	91	66	0	5	4	0
SYRACUSE	38	25	46	14	31	9	.9	.4	.8	7.3	152	2.1	128	90	64	0	7	5	1
NC ASHEVILLE	49	26	61	19	37	1	1.0	.3	.8	7.6	148	3.1	159	97	47	0	6	3	1
CHARLOTTE	55	33	65	26	44	3	1.0	.2	.8	8.3	146	5.1	221	93	44	0	4	3	1
GREENSBORO	53	32	64	22	42	5	.8	.0	.6	7.9	143	3.7	172	88	44	0	4	3	1
HATTERAS	59	43	67	29	51	6	6.2	5.1	6.0	13.4	181	8.3	277	92	54	0	1	2	1
NEW BERN	59	36	72	29	48	4	1.4	.5	1.1	6.5	105	4.5	186	95	44	0	3	2	1
RALEIGH	56	32	66	24	44	4	.2	-.6	.2	6.7	126	3.6	166	91	45	0	5	2	0
WILMINGTON	61	37	74	29	49	3	3.5	2.6	1.8	9.1	160	6.5	288	94	44	0	2	2	2
ND BISMARCK	38	15	46	8	26	20	T	-.1	T	.6	72	.1	20	95	69	0	7	1	0
FARGO	32	14	39	4	23	19	T	-.1	T	.9	96	.1	40	92	74	0	7	1	0
GRAND FORKS	31	12	40	1	21	20	.2	.0	.2	.8	72	.3	60	93	75	0	7	1	0
WILLISTON	36	13	45	3	25	18	T	-.1	T	.5	61	.1	27	93	70	0	7	0	0
OH AKRON-CANTON	42	28	54	22	35	10	.6	.0	.4	8.4	195	1.6	101	93	66	0	6	4	0
CINCINNATI	43	31	50	28	37	8	.3	-.5	.2	9.7	197	1.7	89	91	64	0	5	2	0
CLEVELAND	42	29	52	25	36	10	.5	.0	.4	9.8	228	1.2	75	91	60	0	6	4	0
COLUMBUS	43	30	51	25	36	9	.3	-.3	.2	8.0	186	1.0	59	92	58	0	6	3	0

Based on 1951-80 normals

Weather Data for the Week Ending January 19, 1991

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTRME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	42	30	50	27	36	10	.5	-.1	.3	11.5	282	1.5	90	91	66	0	5	2	0
TOLEDO	40	29	49	24	34	11	.4	-.1	.2	6.8	173	1.0	81	93	68	0	6	2	0
YOUNGSTOWN	40	28	53	23	34	10	.6	-.1	.5	7.9	179	1.4	82	91	65	0	6	4	0
OK OKLAHOMA CITY	55	32	59	28	44	8	.2	.0	.1	2.2	123	.7	117	96	48	0	3	3	0
TULSA	53	34	59	28	44	9	.5	.2	.3	4.3	161	1.3	154	96	56	0	3	4	0
OR ASTORIA	52	41	56	31	47	6	1.3	-1.2	1.0	11.3	61	6.2	90	99	76	0	1	4	1
BURNS	43	27	53	21	35	7	.1	-.2	.1	.7	25	.5	48	91	59	0	6	3	0
MEDFORD	49	35	58	27	42	4	.3	-.5	.2	2.7	47	1.6	71	100	78	0	3	2	0
PENDLETON	47	35	54	28	41	9	.4	.0	.3	1.8	66	1.0	89	91	62	0	2	2	0
PORTLAND	54	40	61	33	47	8	.8	-.6	.6	4.7	45	2.3	58	93	67	0	0	2	1
SALEM	51	40	61	34	45	6	.5	-1.1	.4	4.8	41	2.0	44	97	73	0	0	2	0
PA ALLENTOWN	42	25	47	12	33	6	.7	-.1	.7	8.1	139	2.4	115	90	55	0	6	1	1
ERIE	41	30	51	22	36	11	.3	-.2	.1	7.8	163	.9	57	88	60	0	5	3	0
HARRISBURG	43	27	50	16	35	6	1.0	.3	1.0	7.8	153	2.1	116	85	52	0	4	1	1
PHILADELPHIA	47	30	58	22	38	7	.7	-.1	.7	7.3	135	3.6	178	93	58	0	5	1	1
PITTSBURGH	43	30	56	25	36	10	.6	-.1	.4	10.2	236	1.7	97	89	61	0	5	4	0
SCRANTON	40	24	48	9	32	7	.4	-.1	.4	5.2	133	.9	62	85	55	0	5	1	0
RI PROVIDENCE	42	24	49	13	33	5	1.3	.4	1.3	8.4	120	2.9	115	88	53	0	6	1	1
SC CHARLESTON	62	41	73	33	52	4	1.3	.6	.9	5.4	105	2.7	134	92	47	0	0	3	1
COLUMBIA	59	33	71	25	46	1	1.1	.1	.7	4.2	68	2.5	95	96	48	0	4	3	1
FLORENCE	59	36	72	27	47	3	1.2	.4	.9	5.3	103	2.8	129	92	48	0	3	3	1
GREENVILLE	53	29	63	23	41	0	1.3	.3	.9	7.0	105	3.7	142	93	44	0	5	3	1
SD ABERDEEN	36	18	46	7	27	20	T	-.1	T	.4	56	.1	23	92	71	0	7	1	0
HURON	36	20	49	16	28	18	T	-.1	T	.5	71	.1	36	97	73	0	7	0	0
RAPID CITY	47	26	54	22	37	16	.1	.0	.1	.5	68	.1	55	83	42	0	7	2	0
SIOUX FALLS	34	19	42	11	27	15	T	-.1	T	.8	79	.2	57	98	78	0	7	2	0
TN CHATTANOOGA	51	32	59	24	41	3	.6	-.6	.2	12.7	150	2.3	71	94	53	0	4	3	0
KNOXVILLE	48	32	53	23	40	2	.5	-.5	.2	10.9	146	1.9	65	95	56	0	3	3	0
MEMPHIS	52	37	58	31	44	5	.2	-.9	.1	13.7	177	3.1	108	93	57	0	2	2	0
NASHVILLE	50	33	55	28	42	5	.4	-.6	.4	13.5	182	2.8	99	94	57	0	4	2	0
TX ABILENE	58	38	65	34	48	5	.8	.6	.6	3.2	218	2.4	400	88	47	0	0	2	1
AMARILLO	49	25	63	19	37	2	.1	.0	.1	1.1	139	.9	287	91	46	0	7	1	0
AUSTIN	64	41	70	32	53	4	1.5	1.2	1.5	9.0	302	8.3	897	94	42	0	1	2	1
BEAUMONT	60	42	66	34	51	-1	5.6	4.7	3.5	17.5	235	13.7	541	99	59	0	0	3	3
BROWNSVILLE	75	51	78	42	63	3	.1	-.2	.1	.3	17	.3	44	89	49	0	0	1	0
CORPUS CHRISTI	70	48	75	37	59	5	.3	.0	.2	2.0	94	1.6	167	92	53	0	0	3	0
DEL RIO	66	41	73	35	54	3	.3	.2	.3	.8	93	.6	190	75	34	0	0	2	0
EL PASO	55	31	62	22	43	-1	.6	.5	.4	1.0	163	.6	273	81	33	0	3	2	0
FORT WORTH	59	40	65	30	50	6	1.0	.6	.6	4.0	143	2.5	241	97	53	0	2	5	1
GALVESTON	60	49	65	44	55	1	4.4	3.8	1.9	11.9	217	10.1	530	93	65	0	0	3	3
HOUSTON	62	40	67	31	51	-1	3.5	2.7	2.1	11.0	186	9.2	429	96	50	0	1	3	2
LUBBOCK	52	30	63	28	41	3	.6	.5	.6	1.5	254	1.1	495	94	48	0	7	3	1
MIDLAND	56	32	66	25	44	1	1.3	1.3	1.0	2.2	339	1.6	705	91	41	0	5	2	1
SAN ANGELO	59	36	68	29	47	2	.8	.7	.4	1.8	181	1.6	435	90	46	0	2	2	0
SAN ANTONIO	65	41	73	32	53	3	2.7	2.3	2.3	4.4	197	4.2	472	90	44	0	1	2	1
VICTORIA	66	45	72	36	55	3	1.8	1.3	1.4	8.2	250	7.3	655	97	56	0	0	2	1
WACO	61	39	65	31	50	4	1.0	.6	.6	4.3	149	3.0	301	98	53	0	1	3	1
WICHITA FALLS	56	36	65	31	46	6	.8	.7	.6	3.6	206	2.7	467	96	55	0	2	3	1
UT CEDAR CITY	42	17	48	9	29	0	.1	-.1	.1	1.8	179	.8	208	97	55	0	7	2	0
SALT LAKE CITY	40	25	43	18	32	4	.8	.5	.7	1.7	77	1.1	134	96	64	0	7	4	1
VT BURLINGTON	33	19	39	6	26	10	.5	.1	.4	5.0	139	1.4	118	90	63	0	5	5	0
VA NORFOLK	56	37	72	26	47	7	.2	-.6	.1	6.7	124	4.1	178	88	43	0	1	3	0
RICHMOND	54	32	65	23	43	7	.3	-.5	.3	6.8	126	3.3	165	93	51	0	6	3	0
ROANOKE	51	31	57	20	41	6	.6	-.1	.5	7.2	155	3.4	196	84	43	0	3	2	1
WA QUILLAYUTE	48	41	51	29	45	6	2.2	-1.0	1.0	27.4	103	10.6	115	100	86	0	1	5	2
SEATTLE-TACOMA	50	42	53	33	46	7	.6	-.8	.3	7.5	74	3.9	101	97	78	0	0	3	0
SPOKANE	40	30	43	22	35	10	.1	-.4	.1	3.4	83	1.7	108	97	71	0	4	2	0
YAKIMA	48	28	59	21	38	10	T	-.3	T	.6	27	.3	38	93	51	0	6	1	0
WV BECKLEY	44	28	57	20	36	6	.4	-.4	.2	8.1	155	2.8	134	91	54	0	6	4	0
CHARLESTON	48	32	58	27	40	7	.3	-.5	.3	8.7	161	1.7	79	93	52	0	4	5	0
HUNTINGTON	47	32	56	29	40	7	.1	-.6	.1	9.8	190	1.7	83	88	50	0	5	3	0
PARKERSBURG	46	32	57	26	39	8	.3	-.4	.1	9.4	207	2.3	127	90	58	0	4	3	0
WI GREEN BAY	32	21	40	4	27	13	T	-.3	T	2.6	122	.6	73	91	68	0	7	0	0
LACROSSE	32	18	42	11	25	11	T	-.2	T	3.7	220	.8	127	93	69	0	7	1	0
MADISON	34	21	41	12	27	12	.2	.0	.2	4.5	203	1.1	146	94	72	0	7	3	0
MILWAUKEE	35	24	44	14	30	11	.2	-.2	.1	4.1	132	1.4	132	93	72	0	7	3	0
WAUSAU	29	19	38	15	24	14	T	-.2	T	2.2	121	.3	46	97	80	0	7	1	0
WY CASPER	38	21	46	9	29	7	.4	.2	.2	1.0	124	.4	117	85	52	0	7	3	0
CHEYENNE	40	20	50	13	30	4	.2	.1	.1	.5	92	.2	68	80	40	0	7	3	0
LANDER	40	19	47	13	29	10	.2	.1	.2	.6	73	.2	67	84	44	0	7	1	0
SHERIDAN	45	26	56	20	36	16	.2	.1	.2	.7	55	.3	56	85	50	0	6	1	0

Based on 1951-80 normals

National Agricultural Summary

January 14-20, 1991

HIGHLIGHTS: Warmer-than-normal weather in the **Plains States** and the **Northwest** caused the protective snow cover to melt and made the small grain crops vulnerable to winter kill. The warm weather caused greening of wheat fields in **Texas** and **Oklahoma**. Greater-than-normal rainfall in the **Mississippi** and **Ohio Valleys** caused flooding of fields and waterlogged crops. The moderate temperatures over most of the **Nation** eased stress on livestock and benefited newborn animals.

SMALL GRAINS: Indiana wheat was in good condition in spite of wet fields. Wind erosion was limited by snow cover on wheat fields in Iowa. Winter wheat in Montana was fair to good, with spotty snow cover due to strong winds. Arizona wheat and barley were in good condition, with planting continuing in dry areas. Some Arkansas wheat was waterlogged due to wet conditions and poor drainage. Illinois wheat was mostly fair to good, with concern over ice and standing water. Snow cover in Ohio protected the wheat crop as cold weather descended on the State. Warm weather in Oklahoma and Texas produced greening of many wheat fields. Wheat in Kansas was in mostly good condition. Warm weather in Washington caused a loss of snow cover, and the runoff caused some soil erosion. Winter wheat and barley damage estimates continued to increase. Seeding of small grains continued in California, while rain early in the week aided emerged fields.

OTHER FIELD CROPS: Seeding of tobacco beds was virtually complete in Florida and Georgia, but continued in South Carolina as weather permitted. Sugarcane planting and harvest were active in Florida. In Hawaii, papaya production declined while sugar, pineapple, and ginger root harvests progressed well. Wet conditions in the Low Plains of Texas continued to delay the harvest of the few remaining cotton fields.

FRUIT AND NUTS: In California, desert grapefruit harvest was active while the mandarin and minneolas harvests were slow. Many orchards were irrigated because of lack of rain. Central Valley navel orange and lemon harvests were at a standstill except for selective picking. Arizona citrus harvest continued in the west and central areas, while the pecan harvest continued in the central and east. The Texas pecan harvest continued slowly due to wet conditions, with poor to good yields. Most citrus areas of Florida received rain. Soil moisture and tree conditions were good. In Oregon, sweet cherries in the Dalles area and hazelnuts in the Willamette Valley were impacted by the cold weather.

VEGETABLES: Arizona mixed vegetable harvest continued in the west and central areas. Heavy rain in the southern vegetable-producing areas of Florida slowed field activity and temporarily reduced supplies of many crops. Some flooding was reported, but damage was limited. Cool, humid weather in Georgia caused problems for the onion crop; however, the crop remained in fair to good condition. In the Texas Rio Grande Valley, cabbage, broccoli, and celery harvests continued. Fall onions continued to progress well, although some disease problems occurred due to damp conditions. In the San Antonio Winter Garden area, cabbage harvest continued and the fall onion crop was good. California broccoli and cauliflower supplies were seasonally light, with fair quality. Potato movement from storage was active.

PASTURES AND LIVESTOCK: Pasture and livestock were in mostly fair to good condition. Hay and roughage supplies were mostly adequate. Calving and lambing continued in many areas, while the warmer-than-normal weather eased the stress of newborn animals. Range conditions in California were poor to very poor in the southern two-thirds of the State and poor to good in the northern third.

State Summaries of Weather and Agriculture

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

ALABAMA: Rainfall 1.00 to 3.00 in. east central, south; near 0.50 in. elsewhere. Temperatures 4 to 7° above normal north; 2 to 4° above normal south.

Wet conditions continued to limit field activities. Wheat conditions mostly good. Primary activities: Cleaning fence lines; equipment maintenance, repair; working farm records, making plans; general care, feeding of livestock, poultry, catfish.

ARIZONA: Sunny, mild 14th through 16th, except cold northeast. Rainfall 0.25 to 1.25 in. east, southeast, snow 10.0 to 16.0 in. mountains, southeast 17th; sunshine, normal temperatures 18th, 19th. Temperatures 1° below to 6° above normal.

Cotton stalk shredding, disking, plow down continued where soil conditions allow. Problem, wet soils south. Wheat, barley good, some planting resumed, wet fields continued, south delaying planting wrap up; 97% seeded, 100% 1990, 91% avg.; 87% established, 94% 1990, 77% avg. Alfalfa good; sheeping off light to moderate. Mixed vegetable, citrus harvest continued west, central. Apple shipping limited scale. Pecan harvest continued central, east.

ARKANSAS: Cold week with temperatures a little above normal. Mostly cloudy with precipitation Statewide. Extremes 20°; 63°. Rainfall 0.25 to 2.24 in.

Wet conditions continued. Some browning, water logging of wheat in poor drainage areas. No cold weather damage reported. Poultry good. Livestock good. Hay supply good.

CALIFORNIA: High pressure, dry mild conditions prevailed. Light frost in most areas. Strong off shore winds middle of week, light rain over weekend.

Open weather permitted good progress field activities. Small grain seeding continued. Earlier rains aided emergence seeded fields. More rain still needed. Newly emerged alfalfa, oats, wheat recovering from freeze stress, temperatures warmed. Established alfalfa received weed treatment. Forage crops green chopped. Ground preparation 1991 corn, cotton, sugarbeets active. General activities included pre irrigation, cultivation, herbicide application, soil fumigation. Winter dormant activities continued; orchards, vineyards. Many orchards irrigated because lack rainfall. Almonds, irrigated as buds swell. Riverside County: Harvest desert grapefruit active, Mandarin, Minneolas slow. Navels, avocados picked, southern areas. Central valley: Navel, lemon harvest at standstill except for selective picking. Local fruit picking for processing continued, Tulare County. Broccoli, cauliflower seasonally light supply, fair quality. Potato movement from storage was active. Cattle on supplemental feed. Below average to average condition. Range conditions poor to very poor southern two thirds of State poor to good northern third. Poor feed condition caused some herd cutting. Sheep continued grazing crop residues.

COLORADO: Light snow was reported Statewide on 14th to 15th, moisture amounts were mostly 0.10 in. or less. Snowcovered much of the State on 19th, 3.00 in. to 6.00 in. over much of the State. Most river basins 0.10 to 0.20 in. of moisture for the week. Temperatures 2 to 4° above normal in the west, 5 to 8° above normal in the east.

FLORIDA: Temperatures near normal north, mostly 2 to 4° above normal elsewhere. Highs upper 60s Panhandle to low, mid 80s central, south. Lows around freezing, north to low 50s along southeast coast. Rain fell 2 to 4 days over State. Weekly totals generally between 1.00 to 3.00 in., local areas recorded over 5.00 in.

Soil moisture adequate Panhandle, continued mostly short northern, central Peninsula, generally adequate to temporarily surplus few localities southern Peninsula. Planting tobacco beds virtually complete. Sugarcane planting, harvesting active. Pastures 15% poor, 40% fair, 40% good, 5% excellent. Panhandle, northern Peninsula cattle mostly fair to good; southern Peninsula, good. Rain most citrus areas. Soil moisture, tree condition good. Some new growth from prior warm temperatures. Rain slowed harvest two days. Caretakers cutting cover crops, working irrigation ditches. Heavy rainfall slowed field activity, most southern vegetable production areas. Some flooding but damage limited. Cooler temperatures following rains generally beneficial. Supplies many crops temporarily reduced. Volume leaders: Tomatoes, peppers, cabbage, celery, snap beans, sweet corn, squash, carrots, radishes. Also eggplant, escarole, lettuce, strawberries. Ground preparation, planting active Hastings spring potatoes.

GEORGIA: Rain totals 0.50 in. or less northwest, 1.00 to 2.00 in. north, central, 3.00 to 5.00 in. south. Temperatures 2 to 5° above normal. Warmest upper 50s north, low to mid 70s southeast. Coolest 20s to 30s.

Soil moisture adequate north central, surplus elsewhere. Wet soils limited most field activities. Tobacco bed preparation nearly complete. Cool, humid weather still causing problems for onions, mostly fair to good. Small grains good, southwest still planting. Some land preparation, top dressing of small grains. Pruning peach trees, central. Livestock fair north central, good elsewhere.

HAWAII: Increased sunshine with cool, light evening showers benefitted island agriculture. Skies were partially overcast. Southerly winds brought "vog" clouds. Winds variable 5 to 20 mph with temperatures low 60s to high 80s. Rainfall varied none to 1.40 in.

Days suitable for farm work 7.0. Papaya production declining. Sugar, pineapple harvest continuous. Ginger root harvesting made good progress.

IDAHO: Temperatures above normal statewide. Precipitation varied across State with only south central area above normal.

Soil moisture adequate in north; remainder of State short. Activities included cleaning corrals, feeding livestock, commodity meetings, shop work, grain marketing. Livestock good to excellent condition. Lambing, calving continuing slowly. Hay, roughage supplies adequate.

ILLINOIS: Temperatures 5 to 9° above normal for the week. Precipitation generally 0.20 to 0.50 in. across State.

Soil moisture 44% adequate, 56% surplus. Winter wheat 6% poor, 48% fair, 45% good, 1% excellent. Ice, water cover causing concern over possible wheat damage. Hay supplies adequate, quality beginning to decline.

INDIANA: Temperatures 4 to 8° above normal. Lows mid 20s to low 30s, highs mid 30s to 40. Precipitation 0.20 to 0.70 in.

Wet weather limited field activities. Other activities: Hauling grain, spreading fertilizer, hauling manure, machinery maintenance, purchasing supplies, cutting wood, clearing fence rows, attending meetings, tobacco processing, tax preparation, care of livestock. Livestock mostly good condition. Wheat fair to good condition. Mild week, field conditions wet.

IOWA: Temperatures 8 to 10° above normal. Extremes -16°; 48°. Precipitation trace to 0.45 in.; average 0.07 in. No significant precipitation northwest two thirds.

Variable temperatures causing stress on livestock. Main activities include: Tending livestock, machinery repair, bookkeeping. Snowcover limiting wind erosion.

KANSAS: Temperatures 11° above normal western third; 7° above central third; 5° above eastern third. Precipitation 0.10 to 0.50 in. eastern, to less than 0.02 remainder.

Wheat vulnerable winter kill; no snowcover. Wheat looks good. Cold weather increased supplemental feeding livestock.

KENTUCKY: High temperatures 47°, 5 to 8° above seasonal mean; average lows 33°, 10 to 12° above seasonal mean. Precipitation 0.28 in., 0.64 in. below average mean.

Soil moisture adequate to surplus. Farm ponds, stock dams full. Livestock stressed by wet conditions. Hay supply adequate. Burley tobacco sales lighter. Prices remain relatively steady.

LOUISIANA: Temperatures 2.1° below normal west central to 1.1° above normal north central. Extremes 23°; 71°. Rainfall 1.03 in. northeast to 2.51 in. northwest.

Main activities: Livestock care, crawfishing, routine chores.

MARYLAND & DELAWARE: MARYLAND: Precipitation 0.78 in. Temperature 39.5°, normal 32.6°. Extremes 15°; 64°.

Activities for the week: Repairing fence; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

DELAWARE: Precipitation 1.40 in. Temperature 40.7°, normal 33.5°. Extremes 19°; 62°.

Activities for the week: Repairing fence; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

MICHIGAN: Temperatures 10 to 15° above normal. Extremes 6°; 49°. Precipitation 0.05 to 0.58 in. across the State. Brief warm spell during week created a brief thawing period which was quickly halted by freezing temperatures across the State. Some snow over most of State during the latter part of the week. Livestock still in good shape, feed stocks continue to be adequate.

Major activities included: Removing snow, purchasing seed for spring planting, caring for livestock, making winter repairs on equipment.

MINNESOTA: Temperatures 12 to 19° above normal for the State. Extremes 17° Crookston; 44° above at Browns Valley, Winona. Precipitation none to 0.28 in. across the State. Greatest weekly total 0.28 in. at Grand Rapids.

MISSISSIPPI: Temperature 1° above normal. Extremes 24°; 71°. Rainfall 0.69 in., 0.48 in. below normal. Soil temperature 47°.

Days suitable for fieldwork 0.6, 2.5 1989, 1.8 avg. Soil moisture 30% adequate, 59% surplus, 11% excessive. Pasture 35% poor, 32% fair, 17% good, 16% excellent. Livestock 66% fair, 34% good. Hay, roughage 71% short, 29% adequate. Feed grain 12% short, 88% adequate. Wheat 9% very poor, 60% poor, 23% fair, 8% good. Activities: Farm planning for 1991, feeding livestock.

MISSOURI: Temperatures 4° above normal Bootheel to 9° above normal northeast. Precipitation 1.00 in. southwest, 0.50 in. elsewhere.

Snowcover gone most areas. Farmers caring for livestock, doing taxes, planning for new crop season.

MONTANA: Temperatures 13 to 23° above normal Statewide. Warmest temperatures in north central. Snow fall most areas with precipitation amounts 0.02 to 0.58 in. Highest amounts in northwest.

Winter wheat 25% poor, 35% fair, 35% good, 5% excellent. Areas of poor condition result of last fall's drought. Soils remain mostly dry. Snowcover protection spotty due to strong winds. Grazing closed to difficult most areas. Hay supplies adequate.

NEBRASKA: Warm, mild. Temperatures 7 to 13° above normal. Only light amounts of precipitation occurred. Extremes 7°; 56°.

NEVADA: Temperatures above normal. Extremes 10°; 71°. Precipitation none to 0.34.

Warmer temperatures Statewide reduced stress on livestock, winter crops. Moisture fell in most northern areas. Main farm, ranch activities include caring for livestock, general maintenance. No major weather related livestock losses.

NEW ENGLAND: Precipitation 0.20 to 1.45 in. Temperatures 10 to 16° northern Maine, low 20s to high 20s rest of north, mid 20s to mid 30s south. Maximum temperatures mid 30s north to low 50s south; minimum temperatures -15° north to 16° south.

Major farm activities: General repairs, maintenance, tending livestock, moving crops from storage.

NEW JERSEY: Temperatures much above normal, 40° south, 36° north,
42° coastal. Extremes 7°; 64°. Precipitation slightly above normal, 1.10 in.north, 1.09 in.south, 0.91 in. coastal. Heaviest 24 hour total 1.74 in. on 16th, 17th.

Farmers caring for livestock, tending to other normal winter chores.

NEW MEXICO: Temperatures over the State were generally below normal, 5° below normal at Los Alamos to 1° above at Clovis. Some precipitation was recorded over the State trace at Farmington to 0.70 in. at Carlsbad.

NEW YORK: Mild week. Temperatures above normal. Extremes -7°; 56°. Most precipitation confined to the 14th with a storm bringing rain Statewide. Heaviest amounts in excess of 1.00 in. from south central to St. Lawrence Valley, extreme southeast.

Mild weather made outside activities easier than usual for this time of year. Major activities: Caring for livestock, repairing, maintenance of machinery, attending meetings.

NORTH CAROLINA: Temperatures 1° below normal in the mountains, 2° above in the Piedmont, 3° above at the Coast. Precipitation 0.15 to 5.95 in.

Days suitable for fieldwork 2.4. Soil moisture 3% short, 47% adequate, 50% surplus. Pasture 2% very poor, 13% poor, 41% fair, 42% good, 2% excellent. Crop condition: Wheat 2% poor, 23% fair, 75% good; oats 25% fair, 75% good; barley 26% fair, 74% good; rye 26% fair, 74% good. Hay, roughage supplies 15% short, 81% adequate, 4% surplus. Feed grain supplies 2% very short, 8% short, 90% adequate. Activities: Tending livestock; preparing tobacco plant beds; cutting wood; equipment repair; general farm maintenance.

NORTH DAKOTA: Temperatures 18 to 20° above normal. Extremes 11°; 53°. Precipitation none to 0.50 in. Statewide.

Snowcover was depleted in many ares. Livestock in mostly good condition. Hay supplies adequate.

OHIO: Unseasonably mild with temperatures 8 to 12° above normal. Highs mostly in the 40s; average lows in the upper 20s to mid 30s. Cold front on 20th dropped temperatures into the teens. Precipitation 0.33 to almost 1.00 in. with most areas getting 0.50 in. Precipitation came in the form of snow, rain. Snowcover measured 1 to 3 in. with greater amounts in the northeast snowbelt off Lake Erie.

Plenty of soil moisture available. Soil temperatures at the 4.00 in. depth averaged above freezing. Snowcovered wheat stands as cold weather descended into the Buckeye State. Most activities were conducted indoors.

OKLAHOMA: Temperatures 3° above normal southeast to 7° above normal central. Precipitation none Panhandle to 1.00 in. east central.

Warm weather produced greening of wheat, late week cold snap curtailed growth. Cattle good; feeder steer prices down $2 to $5 per cwt. from preceding week.

OREGON: Temperatures above normal Statewide: 6° above west, 10° above east. Precipitation abundant: avg. 2.10 in. along coast; 0.60 to 0.90 in. western interior valleys; 0.30 to 0.50 in. Cascades, high plateau; 0.10 to 0.30 in. most of east except 0.70 to 1.25 north central, some parts of northeastern mountains.

Soil moisture short to adequate east, mostly surplus west. Some cold damage to grains continues to show Columbia Basin. Willamette Valley clover fields also showing some cold damage. Fruit growers very concerned about bud damage. Sweet cherries at The Dalles were especially hard hit. Strawberries, hazelnuts also impacted Willamette Valley. Harvesting, shipping shade trees. Greenhouse preparations for bedding plant production underway. Cranberry pruning as needed south coast. Some freeze damage to late cabbage, carrots west. Livestock fair to good. Lambing, calving moving into full swing. Range, pasture mostly fair; conditions are generally normal for the season.

PENNSYLVANIA: Slightly wet week with mostly mild temperatures. Temperature 34°, 8° above normal. Extremes -2°; 58°. Precipitation 0.74 in, 0.09 in. above normal.

Activities: Spreading manure; maintaining machinery; caring for livestock.

PUERTO RICO: Rainfall 0.41 in. was 0.25 in. below normal. Highest weekly total 2.27 in. at Pico Del Est Luquillo, 0.84 in. at Humacao, 0.81 in. at Rio Piedras Aes. Highest 24 hour total was 0.82 in. at Pico Del Este Luquillo. Divisional temperature about 77 to 78° on the coasts, 66 to 72° in the interior with mean station temperature 61° at Pico Del Este Luquillo to 80° at Roosevelt Roads N.S. Extremes 51°; 88°.

SOUTH CAROLINA: Temperatures near normal northwest to 2 to 3° above normal along the coast. Rainfall 1.50 in. UpState to 2.20 in. south.

Farm activities: Wet fields slowed fieldwork; however, planting tobacco seed beds, land preparation for spring planting continued as weather permitted. Applying nitrogen to small grains.

SOUTH DAKOTA: Started cold, ended warm to mild. Temperature generally 30°. Extremes -8°; 59°. Precipitation was light during the week. Most significant amounts in Black Hills, southwest. Snowcover decreased significantly. Only drifts remaining. Black Hills still reports 2.00 to 5.00 in.

TENNESSEE: Frontal systems moved through State mid week, weekend, brought light rainfall most sections. Temperatures between 2 to 7° above normal. High temperatures near 50°. Low temperatures lower 30s northeast to mid 30s west. Extremes 21° Bristol; 59° Chattanooga. Rainfall light, 0.25 in. west to 0.50 in. east. Precipitation 0.50 to 0.75 in. below normal.

Soil moisture mostly adequate. Winter feed supplies adequate. Primary activities: Hauling manure, moving grain, income tax preparation, attending meetings, soil sampling, machinery repair, clearing fence rows, caring for livestock.

TEXAS: Strong upper air disturbances deluged parts of State again during week. Week started mild, dry, then first disturbance spread heavy rains over northeast, southeast parts of south central. Second disturbance brought rain to much of State at mid week with very heavy rains over south central counties. Toward weekend, third

disturbance triggered severe weather, heavy rains over southeast. Early weekend brought quiet, mild weather, cold front dropped temperatures over most areas late weekend, produced snow over parts west. For week, temperatures ran above normal most districts, below normal in southern high plains. Precipitation above normal except lower valley with much above normal amounts recorded east, south central, upper coastal areas.

Crops: Wet weather continued delay harvest of few remaining cotton fields in the low plains. Small grains making good recovery from recent cold weather. Warmer temperatures, with light precipitation increased greening many fields. However, some later planted wheat fields lost in Plains. Insect problems significantly reduced in affected areas by cold temperatures. Statewide wheat condition is rated at 64% of normal compared with 34% last year. Other field crops: Pecans 98% harvested, 100% 1989, 98% avg.

Commercial Vegetables: Rio Grande Valley, land preparation continued for spring crops. Cabbage, broccoli, celery, cole crops continued harvest. Fall onions continued good progress. Some disease problems with damp weather reported. San Antonio Winter Garden, cabbage harvest continued. Land preparation for spring crops increased. Fall onions doing well. Pecan harvest continued slowly. Wet conditions continued the delaying factor. Yields fair; poor, good yields.

Range and Livestock: Livestock remained good shape signs of weight gains appear as normal feeding continued. Ranges, winter pastures greening up under warmer temperatures. Grazing continued limited in northern region. Heavier cattle made way to market. Supplemental feeding, haying continued, not as widespread as during colder weather. Wet conditions hampered livestock grazing east. No major disease health problems reported. Range, pasture conditions 1% very poor, 15% poor, 51% fair, 29% good, 4% excellent.

UTAH: Precipitation heavy to moderate in the mountainous areas of the State, to scattered, light elsewhere. Temperature maximums about 2° below normal, minimums were about 5° above average throughout the State.

Livestock fair to good condition. Snow pack less than average. Major farm activities: Care of cattle, sheep, equipment, building maintenance, income tax preparation.

VIRGINIA: Temperatures 3 to 9° above normal. Extremes 12°; 72°. Precipitation 0.10 to 1.00 in.

Days suitable for fieldwork 0.9. Topsoil moisture 28% adequate, 72% surplus. Winter grains, grazing crops 2% very poor, 12% poor, 37% fair, 49% good. Winter grazing crops, dairy cattle 11%, beef cattle 23%, sheep 22%. Feed supply adequate to surplus. Lambing, calving good to excellent. Equipment repaired, being prepared for spring planting.

WASHINGTON: Temperatures 9 to 13° above normal, east; 9 to 10° above normal, west. Precipitation none to 0.57 in. east; 1.05 to 2.38 in. west.

Days suitable for fieldwork 1.3. Soil moisture 60% short, 32% adequate, 8% surplus. Range, pasture 20% very poor, 25% poor, 35% fair, 20% good. Hay, other roughage 5% short, 95% adequate. Winter wheat 10% very poor, 65% poor, 25% fair. Barley 34% very poor, 50% poor, 15% fair, 1% good. Temperatures warmed across the State, causing a thaw, a loss of snowcover. Soil erosion occurred with the runoff. Winter wheat, barley damage estimates continue to increase. Damage estimates were as high as 80 to 85% of winter barley in Whitman County. Pruning activities on fruit trees, canes continued across the State. Livestock producers were able to lighten winter rations due to the warmer temperatures. Early lambing, calving activities continued.

WEST VIRGINIA: Temperature 39°, 7 to 9° above normal. Extremes 15°; 61°. Precipitation 0.75 in.

Days suitable for fieldwork 1.3. Soil moisture 16% adequate, 84% surplus. Wheat, barley good. Cattle, sheep good condition. Hay feed supplies 72% adequate, 28% surplus. Other feed supplies adequate. Farm activities: Feeding livestock, general maintenance.

WISCONSIN: Temperature 23°. Extremes 5°; 46°. Above normal temperatures most of week. Northern areas daily flurries. Snowfall 2.00 in. Madison area 15th. Over weekend lake effect snow of 1.00 to 12.0 in. across Lake Superior snowbelt.

WYOMING: Temperatures 4 to 12° above normal, precipitation below normal.

Winter wheat fair to good. Additional moisture needed for good development. Livestock mostly good. Early calving, lambing starting. Warmer temperatures reducing stress.

International Weather and Crop Summary

HIGHLIGHTS

January 13-19, 1991

WESTERN USSR ... Light precipitation accompanies a cooling trend. Overwintering conditions for winter grains continue favorable.

NORTHWESTERN AFRICA ... For the fourth consecutive week, dry weather covers Moroccan winter grains. Light to moderate rain benefits winter grains in Tunisia and eastern Algeria.

EUROPE ... High pressure in the north keeps most areas seasonably cool and dry.

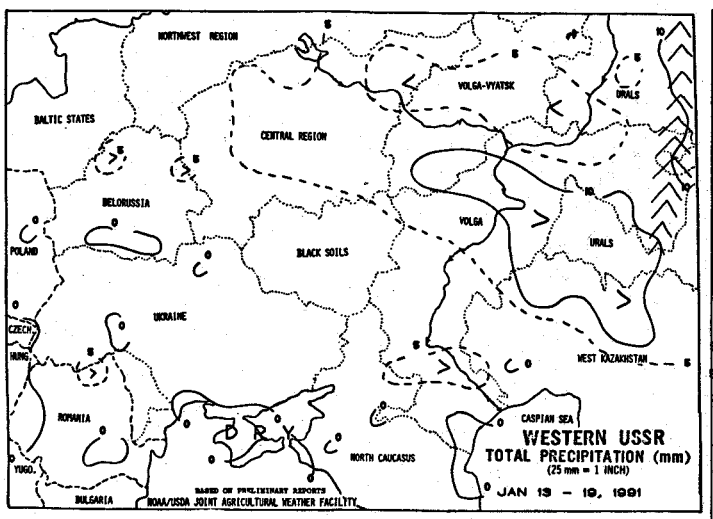
EASTERN ASIA ... Beneficial rain continues over southern China.

SOUTHEAST ASIA ... Moderate to heavy showers increase irrigation reserves in Indonesia and most of Malaysia.

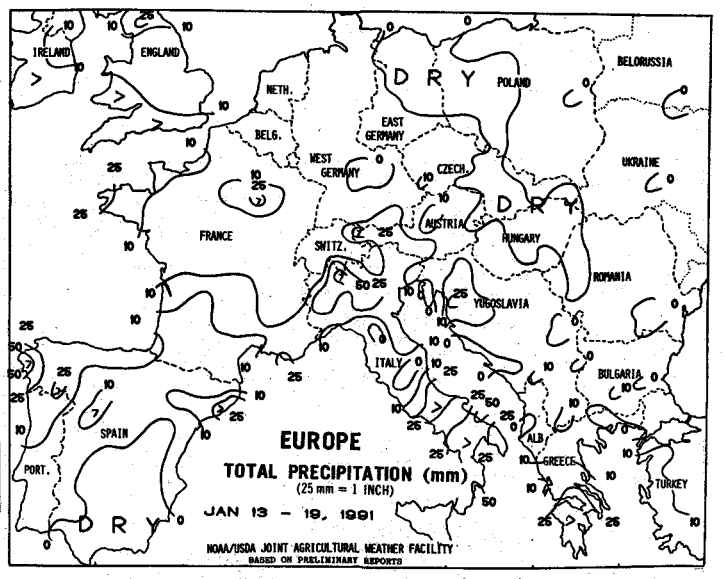
SOUTH AFRICA ... Light rain covers vegetative to reproductive corn.

SOUTH AMERICA ... Prolonged dryness stresses flowering soybeans in southern Brazil. Favorable growing conditions prevail in Argentina.

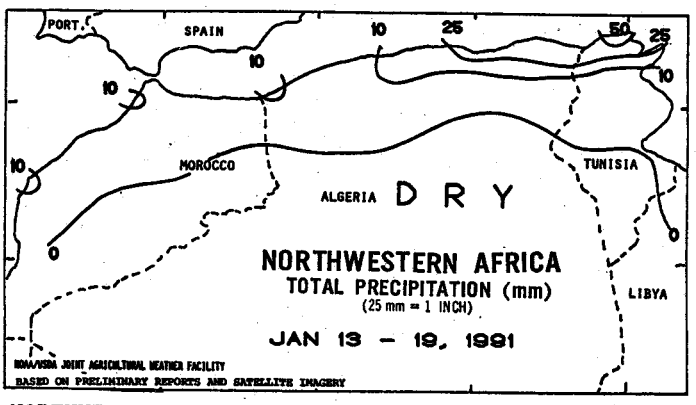
AUSTRALIA ... Tropical showers continue in the north, but only light rain reaches eastern summer crop areas.



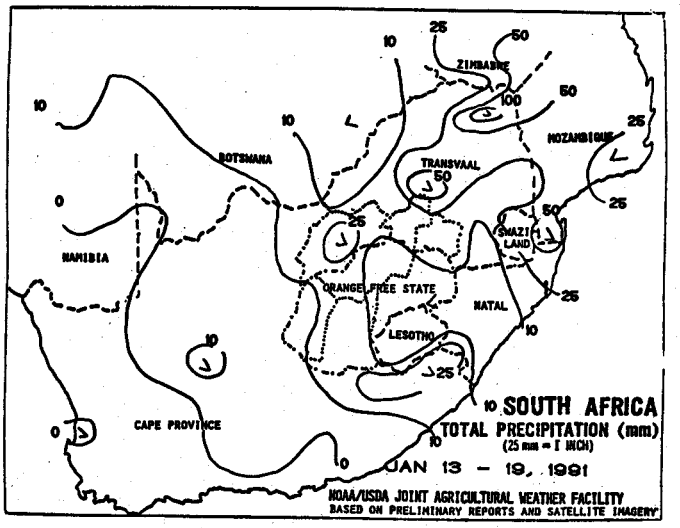
WESTERN USSR ... A cooling trend covered the region, with daily temperatures declining to more seasonable levels by midweek. Mostly light precipitation (2-10mm) accompanied the cooler weather. The precipitation fell mainly as snow in the west and north and rain in the extreme south. In winter grain areas of the eastern Ukraine, southern Black Soils Region, and the northern North Caucasus, snow cover increased slightly this week. However, winter grain areas in the western Baltic States, western Belorussia, the western and southern Ukraine, and the western North Caucasus remained snow free. Lowest temperatures (-15 to -22 degrees Celsius (C)) covered winter grain areas in the eastern portions of the Central Region, the Black Soils Region, and the middle Volga, where a sufficient snow cover protected crops.



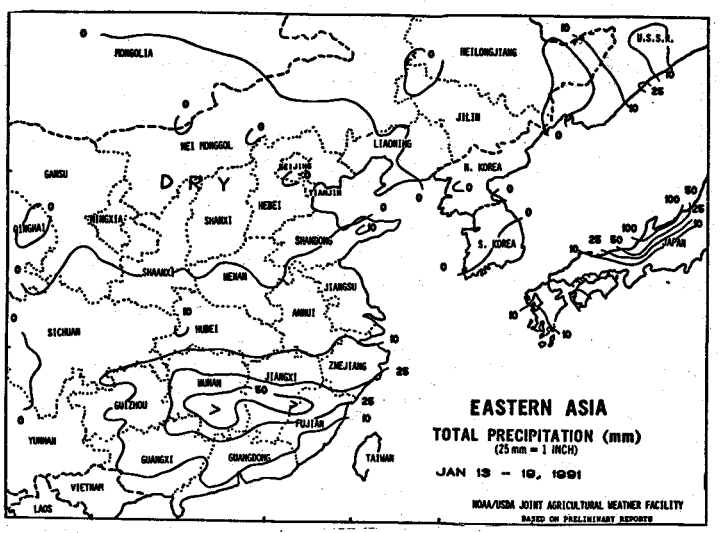
EUROPE ... The strong west to east flow which had covered northern Europe for the past several weeks diminished as high pressure prevailed during the week. The high pressure area kept most of northern Europe seasonably cool and dry. Greatest amounts of rain (7-15mm) covered southern England and northern France. Mostly dry weather covered winter grain areas in Germany, Poland, Czechoslovakia, Hungary, and Romania. Wet weather (15-50mm) benefited winter grains in Italy and Greece. In Spain, generally dry weather in the south continued to limit moisture for vegetative winter grains. Weekly average temperatures were 1-2 degrees C below normal in southern Spain, lowering evaporation rates.



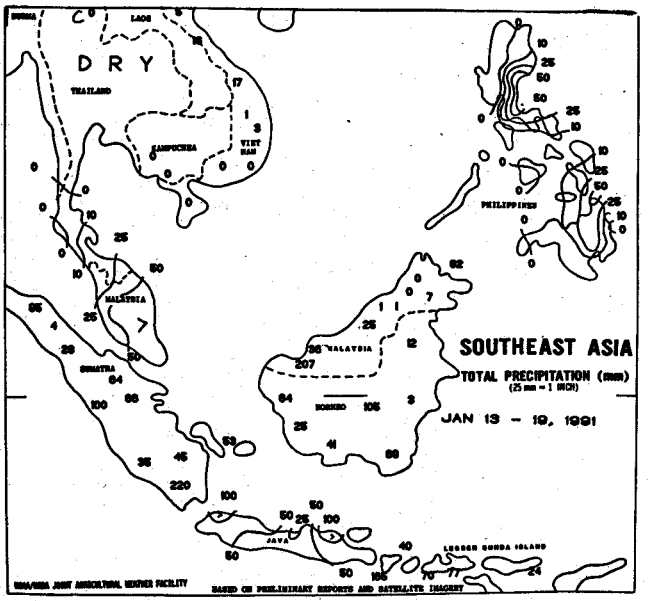
NORTHWESTERN AFRICA ... Widespread light to moderate precipitation benefited vegetative winter grains in Tunisia and northeastern Algeria. Rainfall ranging from 5 to 40mm decreased from north to south. For the fourth consecutive week, generally dry weather has covered Moroccan winter grain areas. Topsoil moisture was becoming limited for vegetative crops. Weekly average temperatures were 1-4 degrees C below normal over the region.



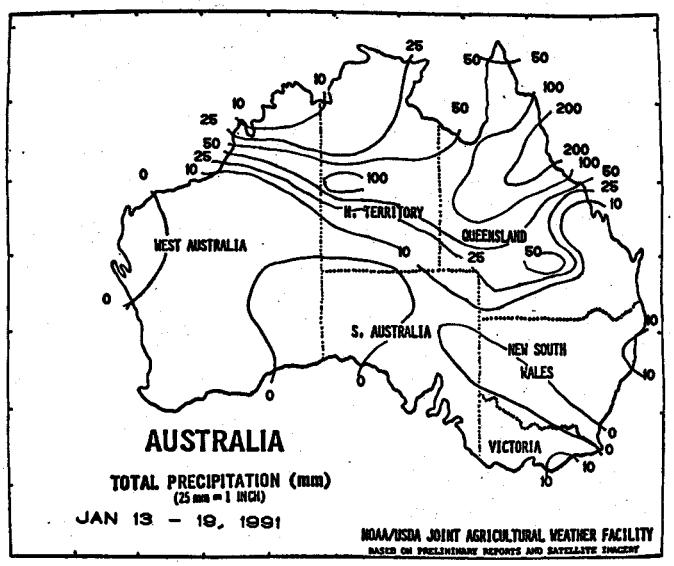
SOUTH AFRICA ... Rainfall tapered off across South Africa, with primary corn regions of the Maize Triangle receiving 3-27mm. Heavier rain (35-85mm) was limited to local fringe corn areas of the Transvaal and Cape Province. Temperatures averaged 1-3 degrees C above normal across the region, but maximum temperatures were below 35 degrees C over all but the westernmost corn areas. Crops are advancing through reproduction in the eastern Maize Triangle, while western crops, planted late due to earlier dryness, are vegetative. In Natal, rainfall was light (10mm or less) over most crop areas.

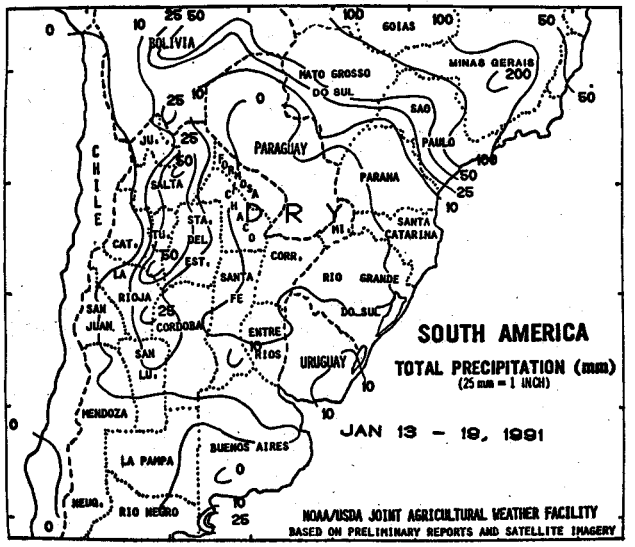


EASTERN ASIA ... Beneficial showers (10-62mm) continued over southern China, further improving conditions for spring plantings, which usually begin as early as March. The rainfall reached as far north as the middle Yangtze Valley in northern Hunan and northern Jiangxi. However, rainfall totaled less than 10mm in southern coastal areas. Further north, mostly dry weather stretched from the North China Plain eastward through Manchuria. Temperatures again averaged above normal but were sufficiently cool to keep winter wheat dormant. In Japan, locally heavy showers (50-125mm) continued along the west coast.



SOUTHEAST ASIA ... Moderate to heavy showers (25-50mm or more) continued over Indonesia and, following recent weeks of lighter-than-usual rainfall, returned to Malaysia, increasing irrigation reserves. Local excessive amounts (100-287mm) over Java and southern areas of eastern Malaysia caused some flooding. In contrast, drier-than-normal weather continued over northern crop areas of eastern Malaysia. In the Philippines, seasonal showers continued over eastern crop areas but moderate amounts (25-60mm) were limited to crop regions of southern Luzon and Mindanao. Although moisture conditions have improved in Mindanao, most fall grain areas need rain for normal crop development due to the continuing drying trend that developed in early December.





AUSTRALIA ... Tropical showers continued across the north, with widespread rain over most of Queensland. Weekly rainfall ranged from 75 to 200mm or more in the northern half of Queensland, including coastal sugarcane areas. Rainfall diminished further south, with only light rain (less than 10mm) over southern sugarcane areas and southeastern summer crop areas. The light showers in southeastern Queensland and northern New South Wales provided minimal relief for crops, stressed by hot, dry weather earlier in the growing season.

SOUTH AMERICA ... In south-central Brazil, dry weather persisted throughout the primary soybean areas of Rio Grande do Sul, Santa Catarina, and Parana. While weekly average temperatures ranged from near to slightly below normal, prolonged dryness is increasing stress on corn and soybeans, which are in weather-sensitive reproductive phases of development. Warmer weather late in the week aggravated worsening growing conditions. Further north, shower activity continued over western and northern soybean and coffee areas, with locally heavy rain (100-150mm or more) soaking southern Minas Gerais. In Argentina, light showers (1-11mm) covered the major corn and soybean areas while dry weather prevailed in northern cotton areas. Weekly temperatures averaged 2-4 degrees C below normal, generally maintaining favorable growing conditions.

(Continued from front cover)
developed over **California**, fueling more than a dozen high-temperature records. Heavy rain and tornadoes returned to **Texas** on Friday. Another soaking rain in the **Southeast** assuaged long-term drought. Nearly 5 inches of rain deluged **Tallahassee, FL**. At week's end, a pool of arctic air over **Canada** was dislodged by a southeastward-racing disturbance. Cold air rushed into the **northern Plains** and **upper Great Lakes States**, and snow squalls developed downwind of the **upper Great Lakes**.

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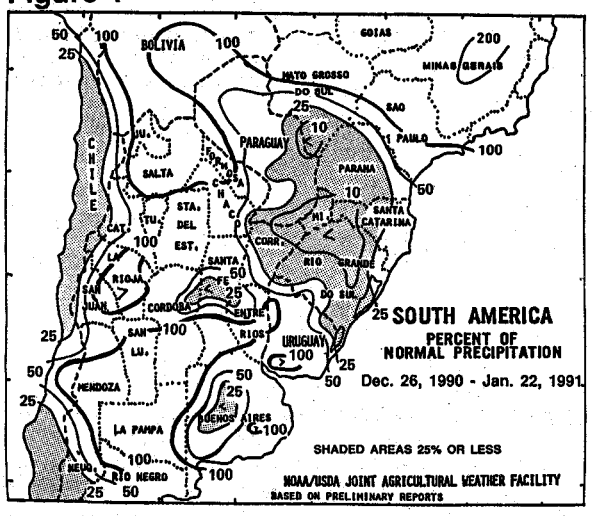
Persistent Dryness in the Southern Brazilian Soybean Region

Dry weather has persisted since late December in many areas of southern Brazil. Figure 1 shows the areas most affected. Most of Rio Grande do Sul, western Santa Catarina, and southwestern Parana have received less than a quarter of their normal rainfall during the period from December 26, 1990 to January 22, 1991. In the heart of the affected region, rainfall has been less than 25mm (1 inch) and in some cases less than 15mm (0.5 inch). Warm weather has aggravated the situation with temperatures reaching 38° C (over 100° F) on a few days.

This region includes one of the most important soybean-growing areas in Brazil. At this point in the growing season, soybeans in this part of Brazil are flowering. The unfavorable dryness is increasing stress on the soybeans, which could abort early flowering. With significant rains in the next couple of weeks, the deteriorating crop conditions could be stabilized.

Figure 1



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