

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

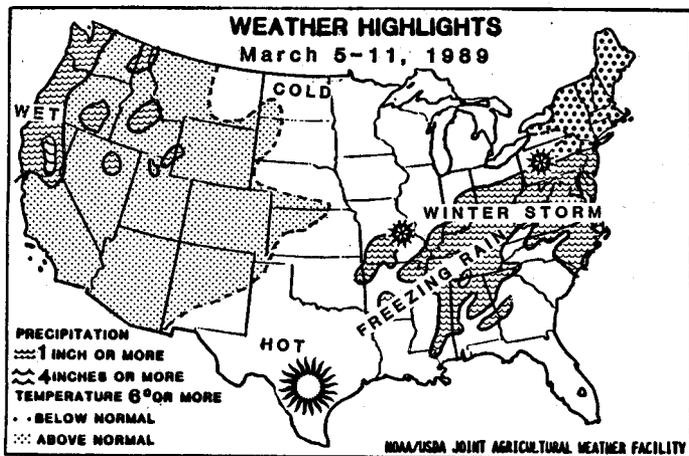
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National Weather Summary

March 5-11, 1989



IN THIS ISSUE: LATEST DROUGHT SEVERITY MAP. ALSO, WINTER WEATHER SUMMARY AND INTERNATIONAL SUMMARY FOR FEBRUARY

sleet fell across southern New England and the Mid-Atlantic States. Portions of Pennsylvania received 6-8 inches of snow. Rain was scattered along the Pacific coast from Washington to central California. Bitter cold temperatures chilled most of the northern and central Plains.

HIGHLIGHTS: A major, late-season winter storm buffeted the eastern half of the country, bringing heavy snow from Texas through Missouri and also to Pennsylvania. Freezing rain associated with the storm fell from Arkansas through the Tennessee Valley and into the Mid-Atlantic States. As the storm moved slowly off the east coast it brought rain, sleet, and snow to the Carolinas. Bitter cold temperatures behind the storm were felt in the northern and central Plains. South Florida experienced showers and thunderstorms, the first time in several months. The Pacific Northwest and the northern half of California received plentiful rains during the week. The western half of the country began to warm up at mid-week due to a high pressure ridge. Record-high temperatures were reported throughout the Southwest and central Plains the last 3 days of the week, and warm weather spread east of the Mississippi on Saturday.

TUESDAY: Record-low temperatures were common in Texas and low temperatures were prevalent throughout the eastern half of the country. The cold front associated with the winter storm brought showers and thunderstorms, the first in almost 3 months, to southern Florida. The western half of the country began to warm up and scattered showers continued in the Pacific Northwest.

WEDNESDAY: The winter storm still lingered off the mid-Atlantic coast, bringing combinations of rain, freezing rain, sleet, and snow to coastal regions and the interior Carolinas. Snow also fell along portions of the New England coast and across the upper Mississippi Valley. Rain was spread across northern California and mild temperatures were felt from central California to the central High Plains.

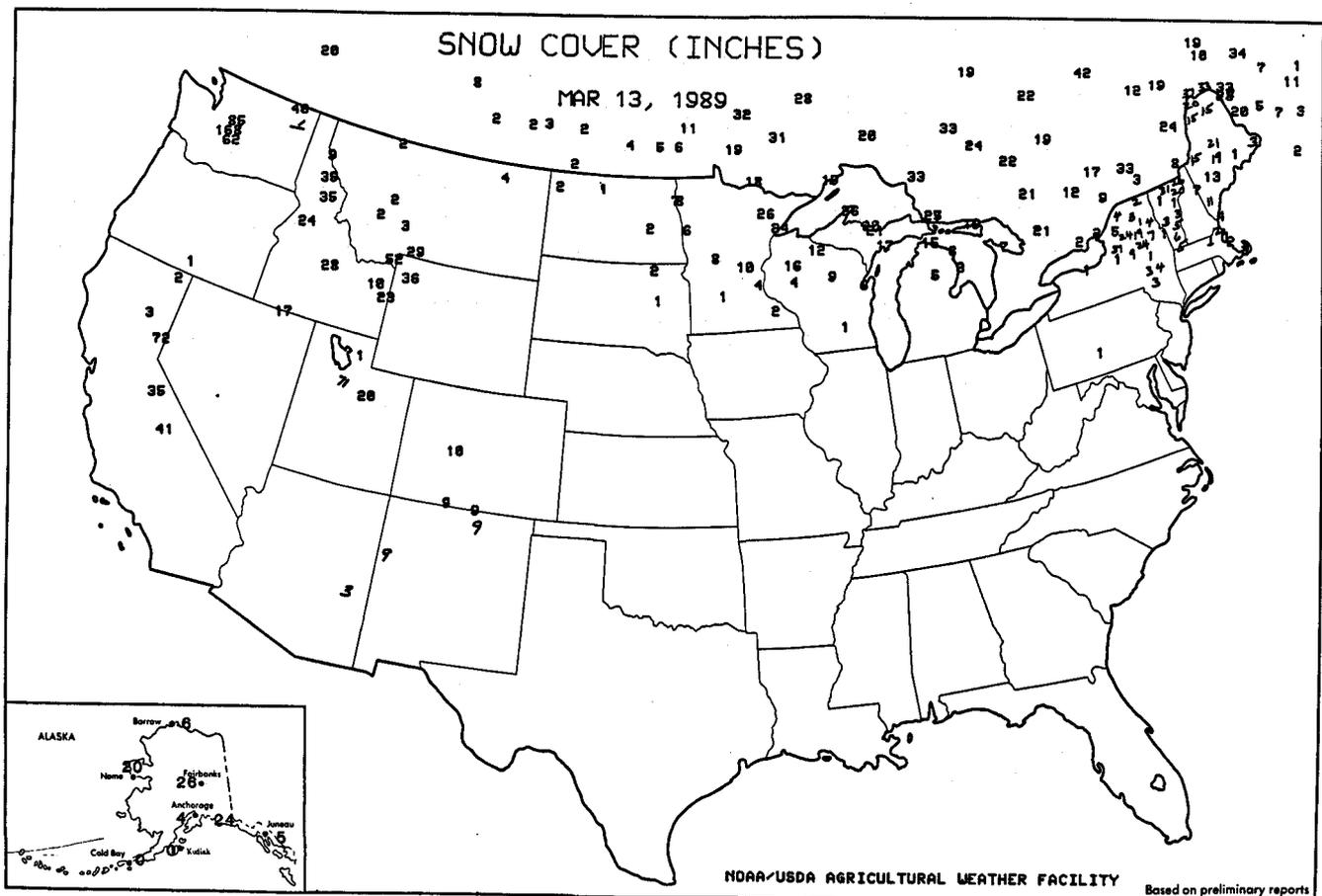
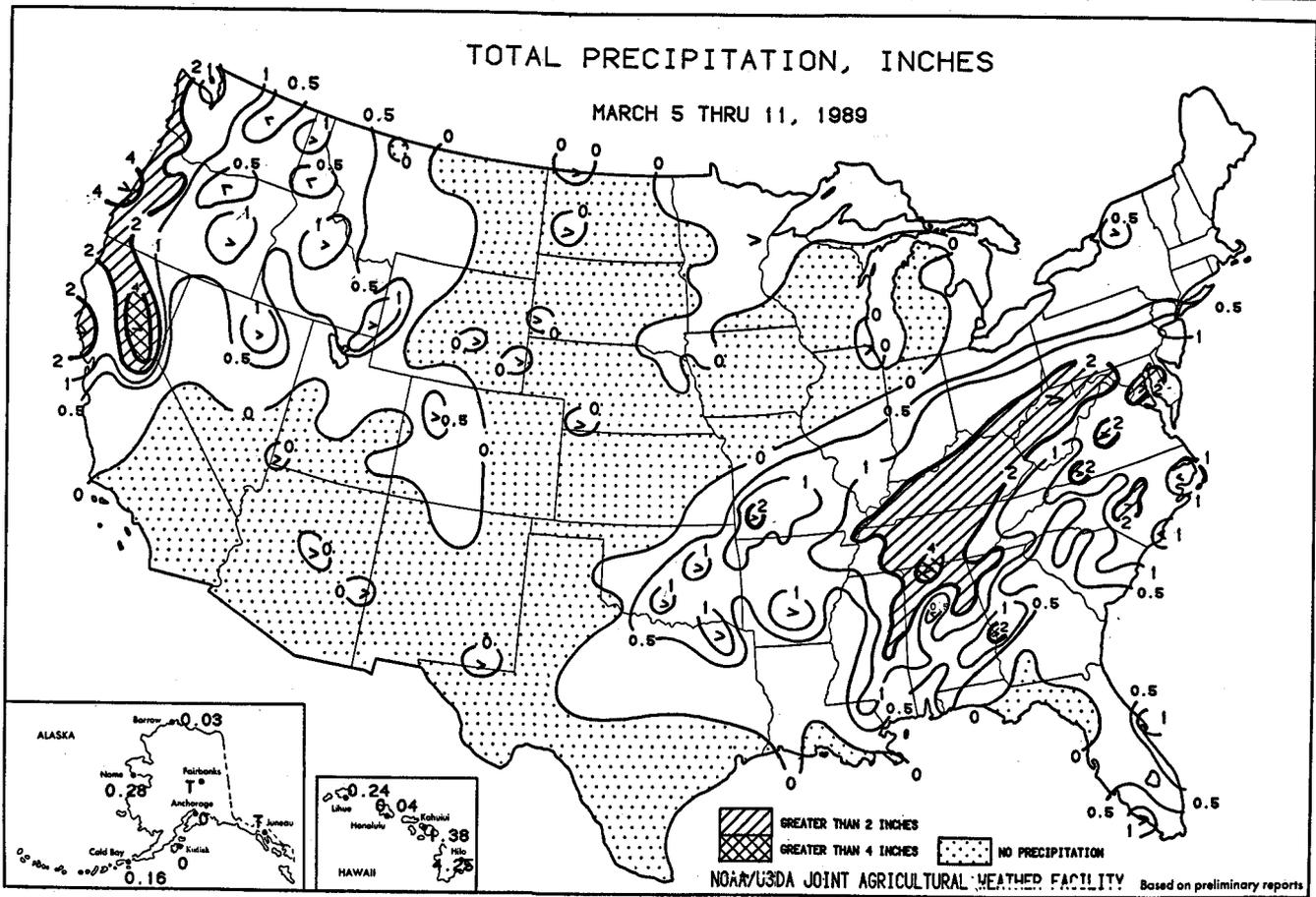
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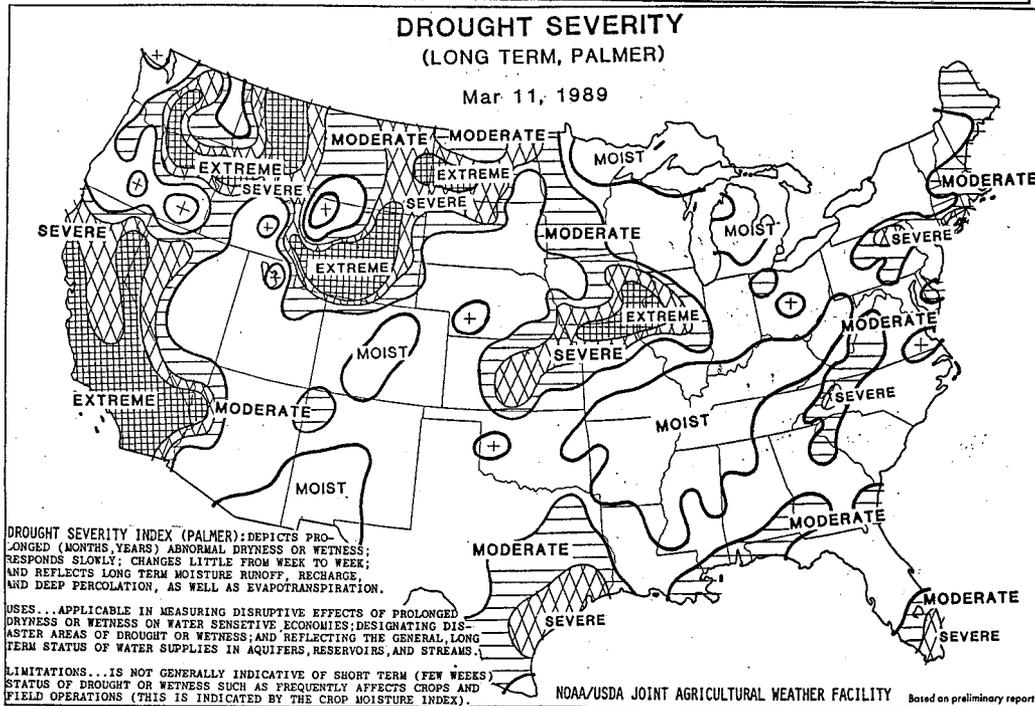
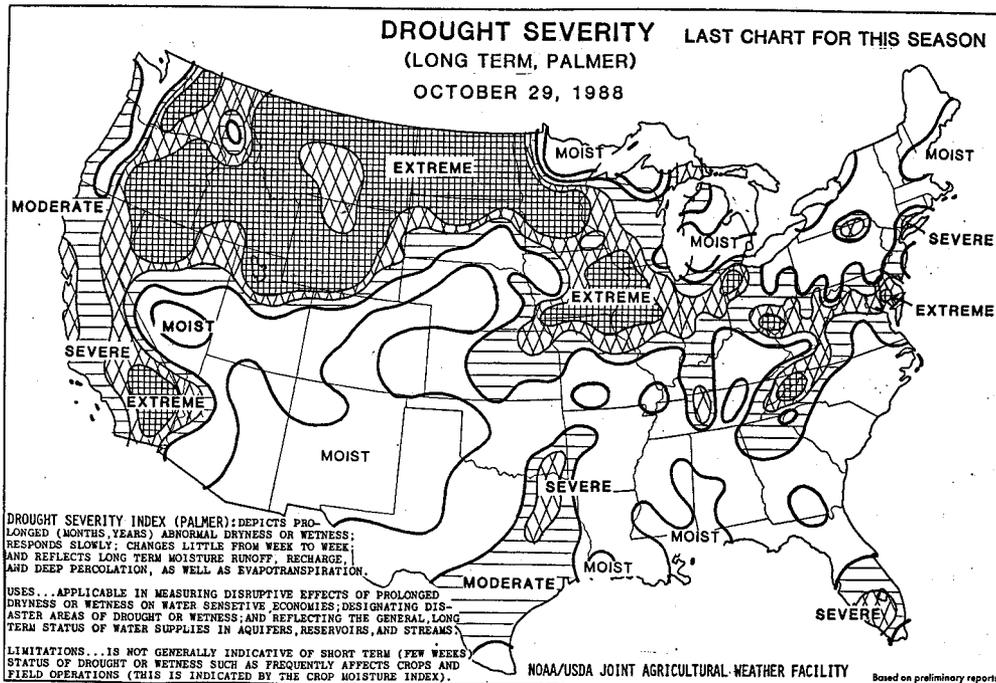
SUNDAY: A late-season winter storm brought snow to the south-central Plains and heavy accumulations of freezing rain and sleet to portions of Oklahoma and Arkansas, with lesser amounts into the Ohio Valley. Snow amounts of up to 8-11 inches were reported in some areas of Texas and Oklahoma. This storm also produced several tornadoes in the lower Mississippi Valley. Locally heavy rain of 2-3 inches fell in the Tennessee Valley. Another storm off the Pacific coast gave moderate rains to Oregon and Washington. Several cities in the Southeast experienced record-high temperatures.

MONDAY: The winter storm moved into the Carolinas after giving areas of Missouri more than a foot of snow and lesser amounts throughout the Midwest and Ohio Valley. This storm triggered severe thunderstorms in the Carolinas and the southern Appalachians. Snow, freezing rain, and

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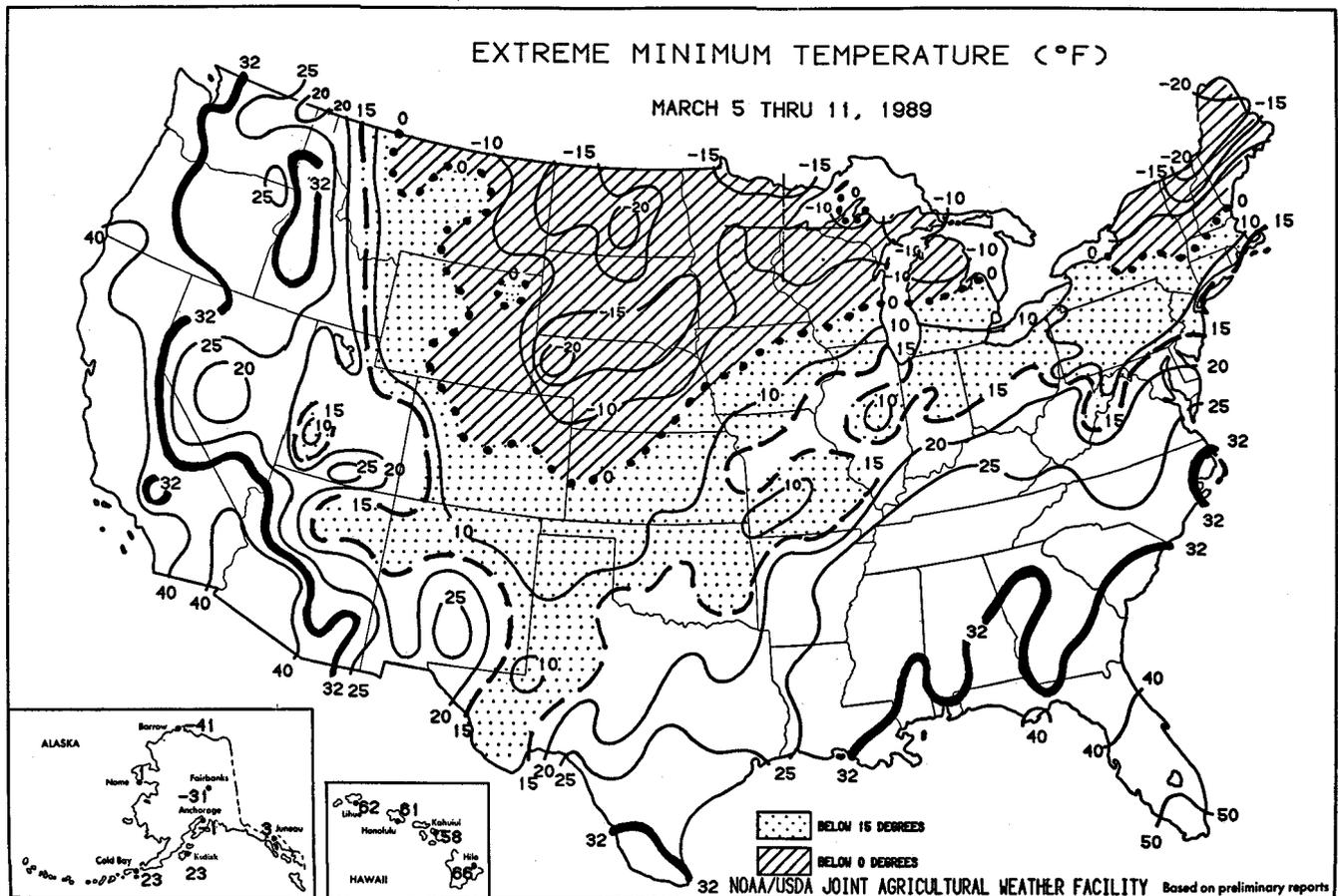
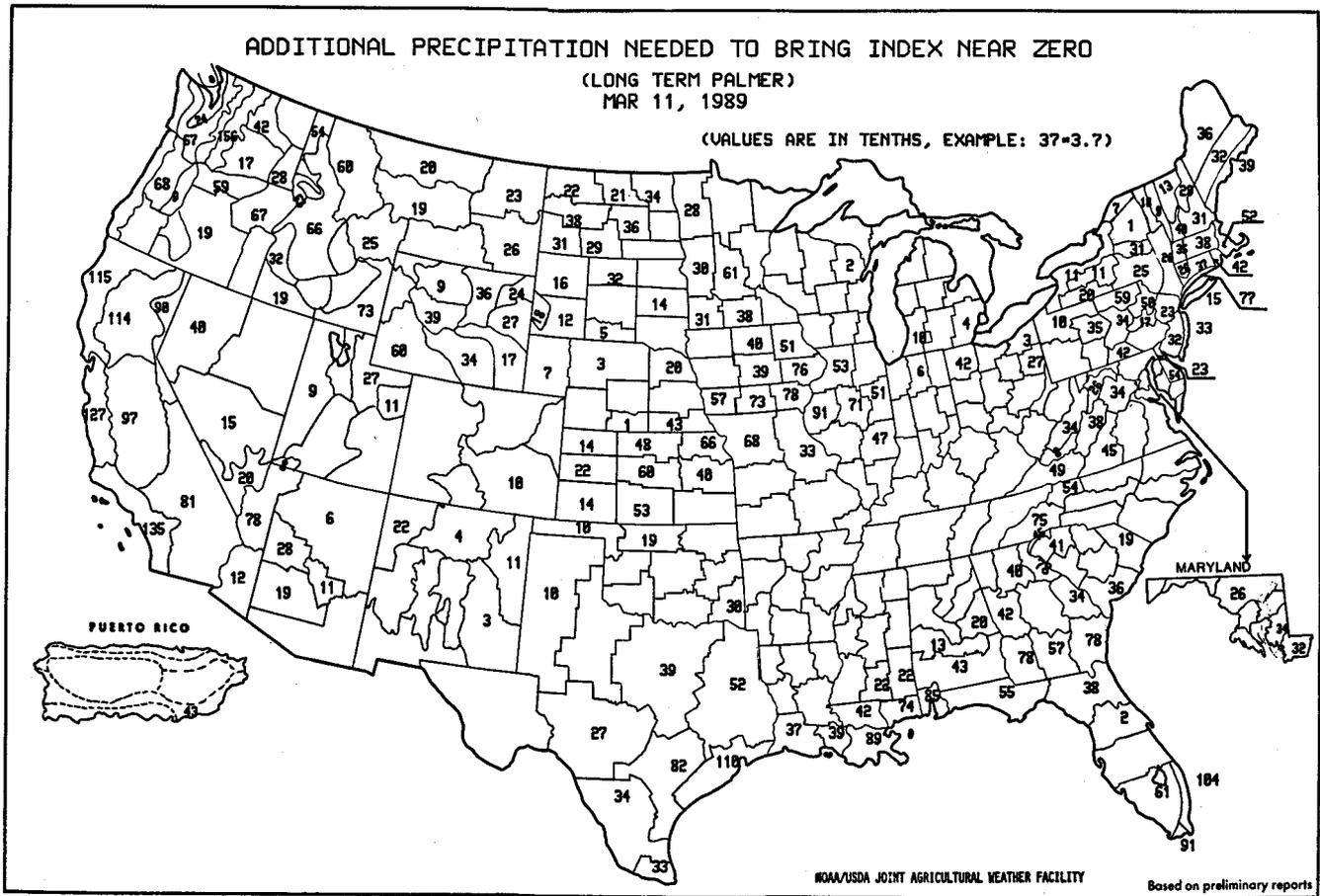
Palmer Drought Maps: Current Versus Autumn

Our last routinely published Drought Severity map, which illustrated the Palmer Drought Index as of the end of October 1988, revealed widespread drought continuing across the northern Plains, northern Rockies, West coast, Midwest, and Appalachians. The Index also indicated dryness in east Texas and south Florida. At the time, there was much concern over whether or not winter precipitation would be sufficient to relieve long-term drought in California and other important farming areas of the country.

To show the effect of this past winter's precipitation on the long-term drought situation, we are publishing the current Drought Severity map alongside last autumn's map. The good news is that winter storms have diminished the severity and extent of drought in the northern Plains and northern Rockies, though dryness still exists in these regions. Abundant moisture has eliminated drought in the

Ohio Valley and greatly reduced the drought in the Appalachians. The bad news is that below-normal precipitation has worsened drought in California, east Texas, and Kansas. In addition, dryness in Pennsylvania and New York has raised concerns for water supplies in the New York City area.

The lingering drought depicted by this index in the western Corn Belt has raised concerns about summer crops in this area. However, it is important to emphasize that the index depicts long-term dryness and is not meant to represent surface soil moisture supplies. For this reason, the index often does not represent crop growth potential very well. The Crop Moisture Index is designed for this purpose and is scheduled to be published beginning in May. The Palmer Index will be routinely published every 2 weeks beginning in mid-April.



National Weather Data for Selected Cities

Weather Data for the Week Ending March 11, 1989

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	TEMPERA- TURE °F		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	61	35	78	30	48	-4	.4	-1.1	.4	2.0	88	10.3	84	92	47	0	2	1	0
MOBILE	63	39	82	33	51	-7	.3	-1.2	.3	1.3	56	4.9	42	85	46	0	0	1	0
MONTGOMERY	64	39	85	35	52	-3	.3	-1.2	.3	1.3	56	4.9	42	85	46	0	0	1	0
AK ANCHORAGE	27	5	32	-1	16	-5	.0	.0	.0	2.5	119	7.4	69	90	43	0	0	1	0
BARROW	2	2	31	-1	16	-5	.0	.0	.0	8	8	.5	24	70	34	0	7	0	0
FAIRBANKS	9	9	31	-1	16	-5	.0	.0	.0	0	0	.4	93	77	70	0	0	2	0
JUNEAU	23	10	28	3	16	-14	.0	.0	.0	.1	275	1.6	139	87	36	0	7	7	0
KODIAK	39	27	43	23	33	2	.0	.0	.0	.3	23	7.1	82	77	40	0	7	7	0
NOME	22	10	28	1	16	-11	.0	.0	.0	0	0	4.0	32	66	34	0	6	6	0
AZ PHOENIX	88	56	95	44	72	13	.0	.0	.0	.3	200	3.3	226	96	81	0	7	4	0
PRESCOTT	75	34	81	21	55	13	.0	.0	.0	7	7	1.2	76	38	11	4	0	0	0
TUCSON	87	48	97	32	67	11	.0	.0	.0	7	7	1.7	44	58	15	4	0	2	0
YUMA	87	55	93	48	71	8	.0	.0	.0	0	0	1.2	71	40	9	4	1	1	0
AR FORT SMITH	55	27	87	21	41	-7	.6	-2	.6	0	0	.6	88	44	13	4	0	0	0
LITTLE ROCK	51	30	84	24	41	-9	.5	-2	.5	2.5	194	12.5	222	94	45	0	5	1	1
CA BAKERSFIELD	79	53	83	41	66	10	.0	.0	.0	2.3	148	14.1	152	87	58	0	5	1	1
EUREKA	61	51	68	46	56	8	1.9	.7	.6	.3	91	1.3	54	81	34	0	0	0	0
FRESNO	72	53	76	41	63	9	.1	-3	.1	1.1	174	2.7	60	95	48	0	0	7	1
LOS ANGELES	67	52	73	48	60	2	.0	-4	.0	.3	42	2.6	42	97	61	0	0	0	0
REDDING	58	48	66	37	53	0	4.0	2.8	1.4	6.3	323	9.5	57	98	76	0	0	0	3
SACRAMENTO	64	53	73	43	59	6	2.2	1.7	.8	3.3	404	5.2	68	99	72	0	0	7	2
SAN DIEGO	68	52	74	47	60	2	.0	-4	.0	.1	9	1.2	27	89	53	0	0	0	0
SAN FRANCISCO	62	52	66	49	57	5	1.4	.7	.6	2.0	196	4.5	51	97	77	0	0	7	1
CO DENVER	65	28	79	-5	46	10	.0	-2	.0	.3	86	2.1	139	81	25	0	3	0	0
GRAND JUNCTION	63	36	76	19	49	10	.0	-2	.0	.3	128	2.7	188	78	32	0	3	0	0
PUEBLO	71	25	86	3	48	10	.0	-1	.0	0	0	1.1	162	74	15	0	3	0	0
CT BRIDGEFORD	38	23	45	13	31	-5	.2	-7	.2	.2	11	4.0	53	67	42	0	7	7	0
HARTFORD	39	17	50	8	28	-6	.0	-9	.0	.1	5	2.8	35	71	32	0	0	2	0
DC WASHINGTON	41	28	50	20	35	-9	1.3	-6	1.1	1.4	118	6.7	102	85	60	0	6	3	1
FL APALACHICOLA	63	45	74	40	54	-5	.0	-9	.0	1.1	72	4.2	49	91	54	0	0	0	0
DAYTONA BEACH	65	51	87	42	58	-4	.3	-5	.1	1.2	104	8.6	131	94	64	0	0	2	0
JACKSONVILLE	65	44	87	35	55	-6	.1	-7	.1	.9	67	4.4	56	96	54	0	0	3	0
KEY WEST	74	64	84	59	69	-4	.7	-4	.7	.7	146	1.5	36	86	85	0	0	2	1
MIAMI	75	58	83	48	67	-4	.2	-2	.1	.3	48	1.7	36	89	59	0	0	3	0
ORLANDO	67	52	87	44	60	-5	.4	-4	.4	1.0	82	5.0	77	96	60	0	0	2	0
TALLAHASSEE	63	41	80	32	52	-6	.0	-3	.0	.7	34	4.1	35	92	50	0	2	0	0
TAMPA	72	51	85	41	61	-4	.0	-8	.0	1.5	112	3.4	52	89	45	0	0	1	0
WEST PALM BEACH	73	57	85	48	65	-4	.8	-2	.4	1.4	145	3.4	54	93	62	0	0	4	0
GA ATLANTA	61	39	75	34	50	0	.2	-1	.2	.7	35	7.6	67	82	53	0	0	2	0
AUGUSTA	62	37	79	31	50	-3	.1	-1	0	1.8	99	6.5	66	91	52	0	2	3	0
MACON	63	38	83	31	51	-3	.2	-1	.2	2.4	127	8.8	83	96	47	0	1	2	0
SAVANNAH	62	40	83	34	51	-5	.2	-7	.1	.5	39	1.7	22	92	49	0	0	2	0
HI HILO	77	65	82	60	71	-1	4.3	-1.2	2.9	5.0	102	38.9	141	96	65	0	0	6	1
HONOLULU	81	65	82	61	73	-1	1.4	-8	.0	2.6	203	11.2	144	97	56	0	0	1	0
KAHULUI	78	63	79	58	70	-2	1.4	-7	1.4	2.5	234	9.5	118	92	62	0	0	2	1
LIHUE	76	66	77	62	71	-1	.2	-8	.2	8.0	506	26.4	230	88	62	0	0	1	0
ID BOISE	60	40	68	33	50	10	.4	-2	.3	.9	260	3.2	106	87	46	0	0	2	0
LEWISTON	58	43	68	38	51	9	.1	-1	.1	.4	117	2.2	84	80	50	0	0	1	0
POCATELLO	53	31	63	18	42	8	.6	-4	.3	1.4	463	3.4	151	95	47	0	4	5	0
IL CHICAGO	40	23	59	16	31	-2	.0	-5	.0	.5	66	2.1	59	81	47	0	6	1	0
MOLINE	41	23	59	17	32	0	.0	-5	.0	.7	87	3.1	85	85	51	0	6	0	0
PEORIA	42	24	65	16	33	-1	.0	-6	.0	.5	55	2.6	68	87	50	0	5	0	0
QUINCY	46	25	69	17	35	0	.0	-6	.0	.3	35	1.6	43	95	53	0	5	0	0
ROCKFORD	36	20	52	13	28	-2	.0	-5	.0	.7	94	2.1	64	86	58	0	6	0	0
SPRINGFIELD	40	22	68	11	31	-5	.4	-2	.4	.7	71	2.8	67	92	60	0	5	1	0
IN EVANSVILLE	45	28	72	22	37	-5	1.5	.5	1.5	2.2	145	12.6	167	93	63	0	5	2	1
FORT WAYNE	40	20	62	12	30	-3	.1	-5	.1	.3	37	3.4	69	86	49	0	7	1	0
INDIANAPOLIS	40	24	66	14	32	-5	1.2	.5	.8	1.7	146	4.8	77	86	61	0	6	2	1
SOUTH BEND	39	20	56	11	30	-3	.0	-6	.0	.3	28	2.9	54	83	43	0	6	0	0
IA DES MOINES	46	24	68	9	35	4	.0	-4	.0	.2	38	2.6	96	80	46	0	5	0	0
STOUC CITY	44	19	65	-8	31	1	.0	-4	.0	.4	81	1.7	83	87	50	0	6	0	0
WATERLOO	36	18	50	6	27	-1	.0	-4	.0	.5	74	1.8	78	91	66	0	6	0	0
KS CONCORDIA	58	26	80	5	42	5	.0	-4	.0	.0	3	1.1	56	72	24	0	4	0	0
DODGE CITY	64	25	93	1	45	5	.0	-3	.0	.0	0	.5	38	64	19	1	4	0	0
GOODLAND	63	23	87	-4	43	8	.0	-2	.0	.1	16	.4	40	69	26	0	4	0	0
TOPEKA	58	24	83	13	41	2	.0	-4	.0	.1	14	2.2	84	80	28	0	5	0	0
WICHITA	61	24	89	9	43	1	.0	-4	.0	.0	0	1.2	55	74	22	0	5	0	0
KY BOWLING GREEN	51	30	75	26	41	-3	2.1	.8	2.0	2.9	151	20.0	191	96	53	0	5	2	1
LEXINGTON	47	27	72	21	37	-4	2.2	1.1	2.2	2.3	137	16.3	193	89	60	0	6	1	1
LOUISVILLE	50	29	74	22	39	-3	1.7	.7	1.6	1.9	117	14.5	178	88	55	0	5	2	1
LA ALEXANDRIA	56	32	82	28	44	-12	.2	-9	.2	1.5	87	15.7	146	79	40	0	5	1	0
BATON ROUGE	62	36	82	30	49	-10	.1	-1	.1	.9	53	6.4	57	87	47	0	1	1	0
LAKE CHARLES	60	32	77	25	46	-12	.0	-7	.0	.7	62	5.9	65	88	37	0	3	1	0
NEW ORLEANS	61	38	80	33	50	-10	.5	-6	.5	.7	39	3.3	28	87	48	0	0	1	0

Based on 1951-80 normals

Weather Data for the Week Ending March 11, 1989

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	72 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	56	29	86	24	43	-12	.1	-.8	.1	.7	56	12.0	137	91	43	0	5	1	0
ME CARIBOU	24	-4	38	-19	10	-11	.3	-.3	.2	.3	31	3.6	68	82	44	0	7	1	0
PORTLAND	33	11	42	-3	22	-7	.1	-.8	.1	.1	4	3.6	41	78	37	0	7	1	0
MD BALTIMORE	40	26	47	19	33	-8	1.5	.7	1.2	1.6	124	8.0	111	91	61	0	6	3	1
SALISBURY	41	28	51	23	35	-7	2.0	1.1	1.9	2.1	148	6.7	82	93	68	0	6	3	1
MA BOSTON	35	20	47	9	27	-8	.1	-.8	0	.1	6	3.2	35	81	41	0	7	3	0
CHATHAM	35	26	41	15	31	-4	.1	-.7	.1	.1	15	5.4	54	83	62	0	6	4	0
MI ALPENA	29	6	47	-12	18	-7	.2	-.4	.1	.2	130	2.8	77	92	52	0	7	0	0
DETROIT	39	18	59	10	29	-3	.7	-.5	.7	.2	29	2.3	54	85	47	0	7	2	0
FLINT	38	16	56	6	27	-8	.7	-.4	.7	.3	42	2.1	58	81	44	0	7	1	0
GRAND RAPIDS	34	15	48	3	24	-6	.7	-.5	.7	.4	55	2.4	56	83	48	0	7	0	0
HOUGHTON LAKE	32	8	48	-12	20	-4	.7	-.4	.7	.9	153	2.6	76	81	42	0	7	1	0
LANSING	37	17	54	6	27	-3	.7	-.5	.7	.3	35	2.1	56	84	46	0	7	0	0
MARQUETTE	26	6	40	-12	16	-4	.2	-.4	.1	.3	83	4.3	89	94	62	0	7	2	0
MUSKOGON	35	16	47	4	25	-4	.7	-.5	.7	.5	69	3.2	67	81	44	0	7	0	0
SAULT ST. MARIE	25	7	40	-9	16	-6	.1	-.3	.1	.7	107	4.8	106	84	46	0	7	2	0
MN ALEXANDRIA	33	15	42	-8	24	-4	.7	-.3	.7	.2	73	1.2	61	89	64	0	7	0	0
DULUTH	30	10	41	-14	20	0	.1	-.3	.1	.2	44	2.4	94	88	56	0	7	1	0
INT'L FALLS	32	12	41	-15	22	5	.1	-.2	.1	.2	12	1.8	94	85	55	0	7	2	0
MINNEAPOLIS	34	18	46	-3	26	1	.1	-.3	.1	.7	138	2.3	105	84	51	0	7	1	0
ROCHESTER	31	16	41	-2	23	0	.2	-.3	.2	.7	142	1.5	77	87	61	0	5	0	0
MS GREENWOOD	53	32	78	29	43	-10	.2	-1.2	.2	.3	16	14.1	119	90	53	0	5	1	0
JACKSON	59	33	82	30	46	-8	.5	-.7	.5	1.8	99	8.7	79	96	65	0	5	1	0
MERIDIAN	61	34	82	32	48	-6	1.0	-.5	1.0	3.0	131	10.0	84	91	47	0	4	1	1
MO CAPE GIRARDEAU	42	27	75	14	35	-1	1.2	-.1	1.2	3.0	181	16.4	215	95	66	0	6	2	1
COLUMBIA	47	23	78	10	35	-4	.6	-.1	.4	.8	73	3.7	78	86	45	0	5	2	0
KANSAS CITY	45	28	79	14	41	1	.7	-.5	.7	.4	4	1.6	50	78	34	0	5	0	0
SAINT LOUIS	42	25	71	15	34	-6	.8	-.1	.6	1.0	92	5.0	102	88	53	0	5	2	1
SPRINGFIELD	45	23	72	8	34	-7	1.8	1.1	1.3	3.0	276	6.6	137	83	47	0	5	2	1
MT BILLINGS	47	26	61	-3	36	5	.7	-.2	.7	.5	179	2.3	120	80	48	0	4	1	0
GLASGOW	36	17	51	-10	26	2	.7	-.1	.7	.4	33	1.3	174	96	72	0	7	0	0
GREAT FALLS	49	28	62	-2	38	8	.7	-.2	.7	.4	157	2.6	130	85	57	0	4	0	0
HAVRE	43	21	59	-9	32	5	.7	-.1	.7	.6	0	.8	68	88	64	0	7	0	0
HELENA	43	23	52	2	33	3	.1	-.1	.0	.8	287	2.8	211	94	59	0	7	2	0
KALISPELL	41	27	51	12	34	4	.7	-.5	.4	.8	257	3.5	117	92	55	0	7	5	0
MILES CITY	40	22	48	-12	31	3	.7	-.1	.7	.3	147	1.6	117	73	53	0	7	0	0
MISSOULA	43	28	50	18	35	3	.8	-.4	.3	.9	362	2.2	88	98	62	0	7	4	0
NE GRAND ISLAND	51	19	84	-10	35	2	.0	-.3	.0	.3	67	1.6	95	86	44	0	5	0	0
LINCOLN	51	22	76	3	36	3	.0	-.4	.0	.1	14	2.0	91	90	45	0	6	0	0
NORFOLK	45	18	73	-11	31	1	.0	-.3	.0	.6	128	2.4	137	91	54	0	6	0	0
NORTH PLATTE	54	15	80	-12	35	3	.0	-.2	.0	.2	75	1.5	126	91	36	0	7	0	0
OMAHA	48	24	74	3	36	2	.0	-.4	.0	.3	53	1.8	83	75	52	0	4	0	0
SCOTT'S BLUFF	52	16	74	-21	34	1	.0	-.2	.0	.4	129	1.4	125	93	39	0	7	0	0
VALENTINE	50	14	77	-16	32	3	.7	-.2	.7	.3	143	1.1	121	75	38	0	6	0	0
NV ELY	63	36	68	21	50	18	.7	-.2	.7	.2	77	1.2	70	71	29	0	1	1	0
LAS VEGAS	81	52	87	35	67	13	.0	-.1	.0	.2	0	.6	52	32	14	0	0	0	0
RENO	62	44	68	32	53	13	.1	-.1	.1	.7	59	1.2	48	76	33	0	1	2	0
WINNEVOCCA	61	38	71	32	50	12	.2	-.1	.1	.4	191	1.3	75	90	40	0	1	4	0
NH CONCORD	35	8	49	-2	22	-7	.7	-.6	.7	.6	6	2.9	46	85	34	0	7	1	0
NJ ATLANTIC CITY	37	23	44	16	30	-9	1.5	.5	1.4	1.5	102	7.3	89	91	62	0	6	2	1
NM ALBUQUERQUE	72	35	84	20	54	9	.0	-.1	.0	.1	29	1.0	104	53	14	0	2	0	0
CLOVIS	69	30	88	10	49	5	.0	-.1	.0	.1	41	.8	72	61	18	0	4	0	0
ROSWELL	73	32	92	17	53	4	.0	-.1	.0	.1	64	.9	94	68	17	1	3	0	0
NY ALBANY	34	9	46	-5	22	-9	.1	-.5	.1	.2	16	2.2	40	81	36	0	7	1	0
BINGHAMTON	33	12	47	2	23	-6	.2	-.4	.2	.3	27	3.7	65	77	43	0	7	2	0
BUFFALO	33	16	49	3	25	-6	.2	-.4	.2	.3	35	4.7	74	86	48	0	7	1	0
NEW YORK	39	24	46	14	32	-7	.4	-.5	.3	.4	29	5.8	76	75	43	0	6	2	0
ROCHESTER	32	14	44	2	23	-7	.3	-.2	.3	.7	76	3.4	61	89	50	0	7	1	0
SYRACUSE	34	12	49	-1	23	-7	.2	-.5	.2	.4	38	3.2	51	85	40	0	7	1	0
NC ASHEVILLE	60	34	70	29	47	3	.5	-.6	.3	.9	55	7.2	89	87	41	0	5	2	0
CHARLOTTE	53	34	68	27	44	-4	.5	-.6	.3	1.3	73	7.6	82	83	54	0	3	2	0
GREENSBORO	49	29	67	22	39	-6	1.9	1.1	1.8	2.4	175	7.8	95	89	60	0	5	2	1
HATTERAS	54	42	74	35	48	-1	1.0	.1	.5	1.2	82	7.6	74	96	75	0	0	4	1
NEW BERN	55	38	79	32	46	-4	.6	-.3	.5	.7	52	7.3	78	92	62	0	2	2	0
RALEIGH	49	30	71	24	40	-7	.9	0	.7	1.7	125	9.4	114	90	64	0	5	4	1
WILMINGTON	57	38	78	31	48	-4	.9	0	.4	1.7	114	5.9	69	93	62	0	4	4	0
ND BISMARCK	35	13	59	-21	24	2	.7	-.1	.7	.1	72	.9	85	95	66	0	7	0	0
FARGO	30	16	38	-11	23	3	.7	-.1	.7	.4	226	2.5	223	94	73	0	7	0	0
GRAND FORKS	29	13	36	-13	21	4	.7	-.1	.7	.1	32	1.8	124	90	72	0	7	1	0
WILLISTON	37	14	47	-18	25	3	.7	-.1	.7	.1	20	1.4	128	94	61	0	6	0	0
OH AKRON-CANTON	43	20	60	13	31	-2	.8	.1	.7	.8	72	5.1	88	83	47	0	7	3	1
CINCINNATI	46	25	69	18	36	-3	1.3	.5	1.2	1.5	109	9.4	131	86	58	0	6	2	1
CLEVELAND	40	19	63	11	29	-5	.3	-.4	.3	.3	32	4.1	74	89	47	0	7	1	0
COLUMBUS	44	22	65	17	33	-4	1.1	.4	.9	1.1	103	6.1	103	88	50	0	7	3	1

Weather Data for the Week Ending March 11, 1989

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	TEMPERA- TURE °F		PRECIPI- TATION		
															90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
DAYTON	43	23	65	15	33	-4	1.6	1.0	1.3	1.8	182	7.2	127	87	56	0	6	3	1
TOLEDO	40	18	62	12	29	-3	.2	-.3	.2	.3	39	2.9	62	85	40	0	7	1	0
YOUNGSTOWN	41	18	60	9	29	-3	.4	-.3	.4	.4	36	4.2	71	84	42	0	7	1	0
OK OKLAHOMA CITY	55	28	87	13	41	-5	.3	-.2	.3	.6	89	4.0	135	78	38	0	5	1	0
TULSA	50	26	84	12	38	-8	.8	.1	.8	1.4	144	6.6	163	87	46	0	5	1	1
OR ASTORIA	55	42	58	37	48	4	2.3	.6	1.0	2.7	99	17.5	83	95	70	0	0	6	1
BURNS	50	34	61	28	42	7	.6	.4	.5	.6	177	1.2	40	84	56	0	2	2	2
MEDFORD	61	43	67	40	52	8	1.6	1.2	.7	2.5	357	5.4	87	96	52	0	0	4	2
PENDLETON	54	38	65	26	46	3	.4	.1	.2	.6	162	3.9	122	92	60	0	2	3	0
PORTLAND	56	40	64	34	48	3	1.7	.8	1.0	2.6	192	8.7	77	96	61	0	0	5	1
SALEM	59	40	64	34	50	6	1.8	.8	1.3	2.5	155	8.9	67	97	62	0	0	4	1
PA ALLENTOWN	37	18	46	7	27	-8	.9	.1	.9	.9	71	4.9	64	83	48	0	6	2	1
ERIE	35	18	57	11	27	-4	.2	-.4	.2	.2	24	5.2	96	85	45	0	7	1	0
HARRISBURG	37	18	46	8	28	-10	1.4	.6	1.3	1.4	118	5.6	82	91	54	0	6	3	1
PHILADELPHIA	39	24	47	17	31	-6	1.1	.3	1.1	1.1	88	6.8	94	79	50	0	6	3	1
PITTSBURGH	41	21	61	14	31	-5	1.6	.8	.8	1.6	133	7.0	109	82	47	0	7	3	2
SCRANTON	37	18	48	9	27	-6	.2	-.4	.1	.2	26	3.0	58	75	38	0	7	2	0
RI PROVIDENCE	35	20	41	12	28	-7	.3	-.7	.1	.3	18	4.0	43	86	46	0	7	4	0
SC CHARLESTON	60	41	80	33	51	-4	.6	-.4	.4	1.9	117	5.1	61	87	56	0	0	4	0
COLUMBIA	59	37	77	30	48	-4	.7	-.5	.5	1.7	91	6.8	66	92	54	0	3	4	1
FLORENCE	58	36	82	30	47	-5	1.0	0	1.0	1.9	126	6.4	76	90	55	0	4	1	1
GREENVILLE	58	35	66	29	46	-2	.2	-.2	.1	.9	43	7.3	68	91	49	0	3	2	0
SD ABERDEEN	32	13	41	-14	23	-1	0	0	.3	1.26	1.2	89	92	71	0	7	0	0	
HURON	35	15	51	-17	25	-1	0	0	.9	244	1.9	127	92	68	0	7	0	0	
RAPID CITY	50	23	78	-11	37	7	T	T	T	.5	182	.9	69	89	49	0	5	0	0
STOUX FALLS	41	18	62	-13	30	3	T	T	T	.5	113	1.3	68	88	57	0	7	1	0
TN CHATTANOOGA	61	38	75	31	49	2	.9	-.5	.8	1.8	83	14.3	118	91	50	0	1	2	1
KNOXVILLE	61	37	76	31	49	2	.5	-.8	.4	.5	27	11.7	109	92	47	0	1	2	0
MEMPHIS	50	31	82	27	41	-8	.7	-.5	.7	1.4	79	19.8	185	90	58	0	6	1	1
NASHVILLE	55	32	80	27	43	-3	2.8	1.5	2.8	3.3	173	17.2	166	92	54	0	4	1	1
TX ABILENE	61	31	88	16	46	-7	.3	.1	.3	.6	187	4.2	184	73	25	0	4	1	0
AMARILLO	70	28	92	6	49	5	0	0	0	T	0	.7	54	54	14	2	4	0	0
AUSTIN	64	34	83	27	49	-10	T	T	T	.4	68	5.1	109	76	27	0	4	0	0
BEAUMONT	59	31	78	23	45	-13	T	-.7	T	.8	74	7.8	83	94	35	0	4	0	0
BROWNSVILLE	69	38	80	32	54	-13	0	-.1	0	T	15	2.1	70	85	29	0	1	0	0
CORPUS CHRISTI	66	36	82	29	51	-13	T	-.2	T	T	0	2.9	87	78	28	0	2	0	0
DEL RIO	66	37	84	29	51	-10	0	-.1	0	0	0	2.0	127	53	19	0	3	0	0
EL PASO	75	33	89	22	54	1	0	-.1	0	T	0	.8	88	53	14	0	3	0	0
FORT WORTH	57	29	86	20	43	-11	.1	-.4	.1	.2	29	6.4	152	78	34	0	4	1	0
GALVESTON	55	37	69	27	46	-14	T	-.5	T	.1	11	6.5	107	85	49	0	2	0	0
HOUSTON	61	31	81	25	46	-14	T	-.6	T	.9	99	6.6	86	92	35	0	5	0	0
LUBBOCK	69	29	95	11	49	1	0	-.2	0	.3	97	1.8	150	60	15	1	4	0	0
MIDLAND	69	29	91	11	49	-4	0	-.1	0	.2	88	1.7	147	73	18	1	4	0	0
SAN ANGELO	65	28	88	20	47	-9	0	-.1	T	.2	73	3.8	228	76	20	0	5	1	0
SAN ANTONIO	66	32	84	26	49	-11	0	-.3	0	T	9	3.3	87	72	19	0	5	0	0
VICTORIA	64	34	81	27	49	-12	T	-.3	T	.1	18	4.5	98	81	25	0	3	0	0
WACO	60	29	87	21	44	-11	T	-.4	T	.6	93	5.3	123	87	34	0	5	1	0
WICHITA FALLS	56	25	89	8	41	-10	.9	.5	.9	.9	181	5.5	226	87	37	0	5	1	1
UT CEDAR CITY	65	36	73	10	51	13	0	-.2	0	.6	156	1.8	102	73	29	0	2	0	0
SALT LAKE CITY	61	37	76	22	49	10	T	-.3	T	.8	144	2.8	88	79	36	0	2	1	0
VT BURLINGTON	27	4	38	-14	15	-11	.3	-.2	.3	.5	66	1.6	37	84	45	0	7	2	0
VA NORFOLK	44	34	57	29	39	-7	1.9	1.1	1.6	2.7	194	11.8	141	93	73	0	2	4	1
RICHMOND	44	28	54	22	36	-8	1.4	.6	1.4	1.7	132	7.9	104	94	64	0	5	5	1
ROANOKE	48	29	59	23	39	-4	.8	0	.8	1.0	75	4.3	59	89	56	0	5	2	1
WA QUILLAYUTE	49	39	51	32	44	1	2.8	0	1.0	3.1	69	24.9	80	100	80	0	1	7	2
SEATTLE-TACOMA	54	40	59	34	47	4	1.7	.9	.5	2.5	184	8.8	75	97	60	0	0	7	1
SPOKANE	48	34	59	27	41	5	1.3	1.0	.9	1.6	304	3.7	81	96	61	0	3	6	1
YAKIMA	51	32	62	26	41	1	.8	.6	.4	.8	373	1.7	72	92	52	0	4	2	0
WV BECKLEY	51	28	67	22	40	2	1.1	.2	.6	1.1	76	7.3	91	88	57	0	4	3	1
CHARLESTON	50	29	71	23	40	-2	2.9	2.0	1.5	2.9	212	11.9	150	95	51	0	5	2	2
HUNTINGTON	50	28	73	24	39	-3	3.0	2.1	2.4	3.0	217	15.2	206	95	49	0	5	2	2
PARKERSBURG	46	26	68	21	36	-5	2.5	1.7	1.3	2.5	210	10.7	160	92	52	0	6	3	2
WI GREEN BAY	32	10	50	-3	21	-5	0	-.4	0	1.6	279	2.3	85	93	55	0	7	0	0
LACROSSE	37	14	54	-6	26	-2	0	-.4	0	1.5	272	2.3	98	82	43	0	7	0	0
MADISON	34	14	49	2	24	-4	T	-.4	T	.8	134	2.0	72	87	60	0	7	0	0
MILWAUKEE	34	22	51	14	28	-1	T	-.5	T	1.2	162	2.8	75	86	59	0	6	1	0
WAUSAU	34	9	47	-5	22	-1	0	-.4	0	.7	130	2.0	81	87	47	0	7	0	0
WY CASPER	57	31	70	-3	44	14	T	-.2	T	.1	39	1.6	126	76	36	0	2	0	0
CHEYENNE	59	28	72	-1	43	13	0	-.2	0	.1	27	1.6	150	81	33	0	4	0	0
LANDER	60	29	72	7	45	15	T	-.2	T	.1	17	.8	60	72	27	0	4	0	0
SHERIDAN	50	25	61	-4	38	8	0	-.2	0	T	13	.9	48	90	51	0	4	0	0
PR SAN JUAN	83	70	86	68	76	-1	.7	.4	.7	.7	106	5.1	89	87	65	0	0	5	0

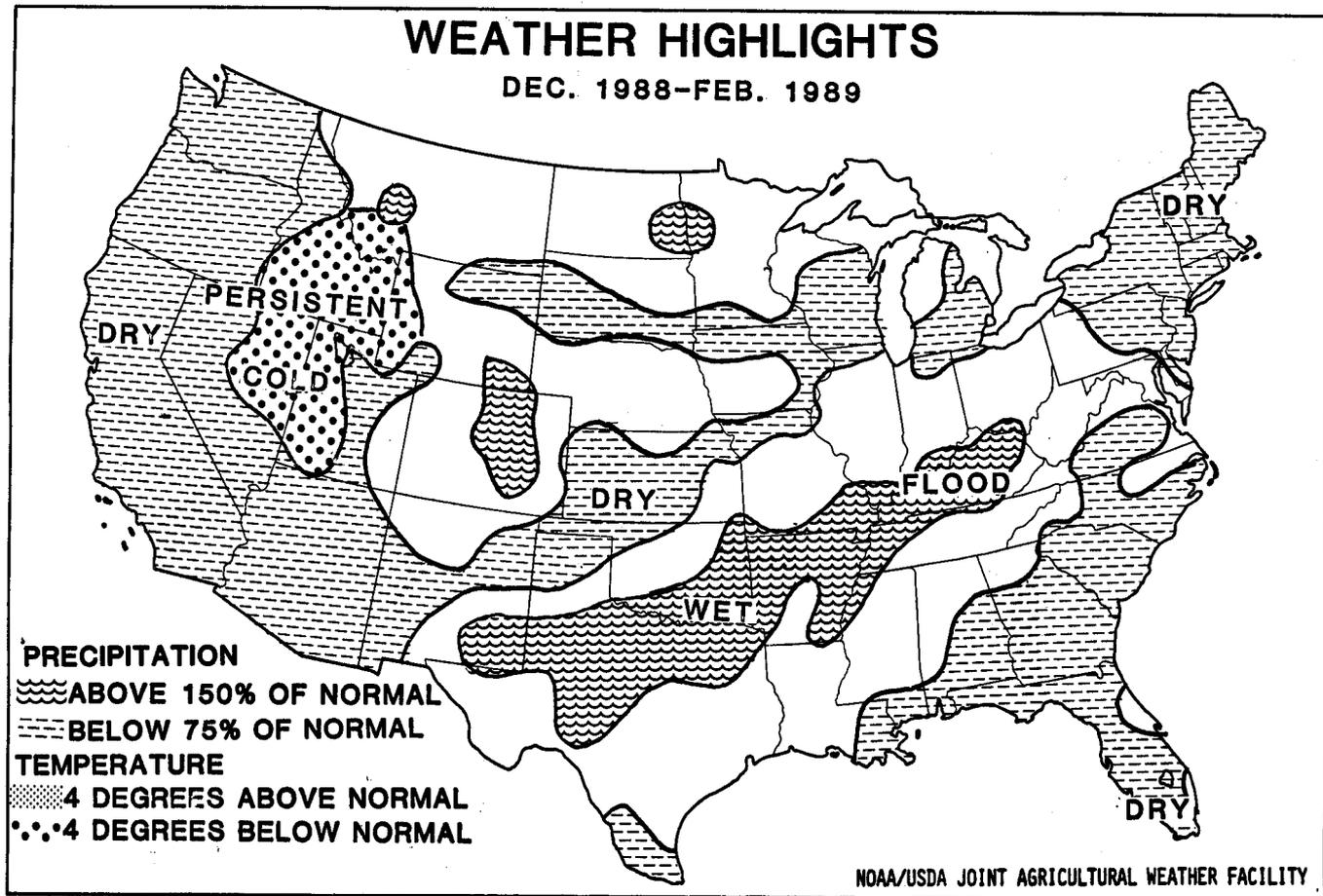
Heating Degree Days Summary

CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 3-11-1989
ACCUMULATIONS ARE FROM JULY 1
** - NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK DEV FROM NORM, WEEK DEV FROM L YR, CUM TOTAL, CUM DEV FROM NORM, CUM DEV FROM L YR, CUM DEV FROM NORM PRCT, CUM DEV FROM L YR PRCT. Lists cities from AL BIRMINGHAM to MT KALISPELL.

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK DEV FROM NORM, WEEK DEV FROM L YR, CUM TOTAL, CUM DEV FROM NORM, CUM DEV FROM L YR, CUM DEV FROM NORM PRCT, CUM DEV FROM L YR PRCT. Lists cities from MT MILES CITY to WY SHERIDAN.



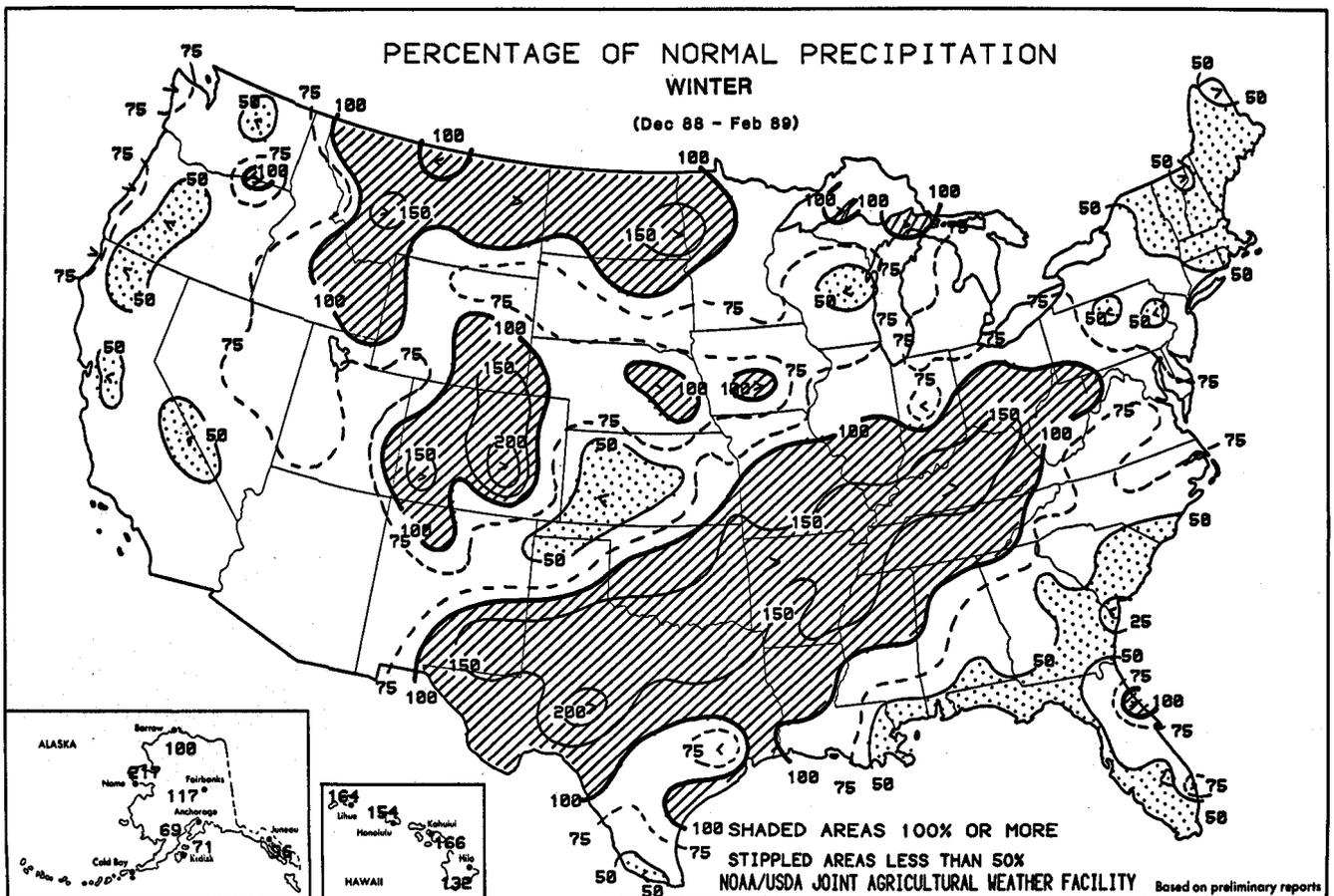
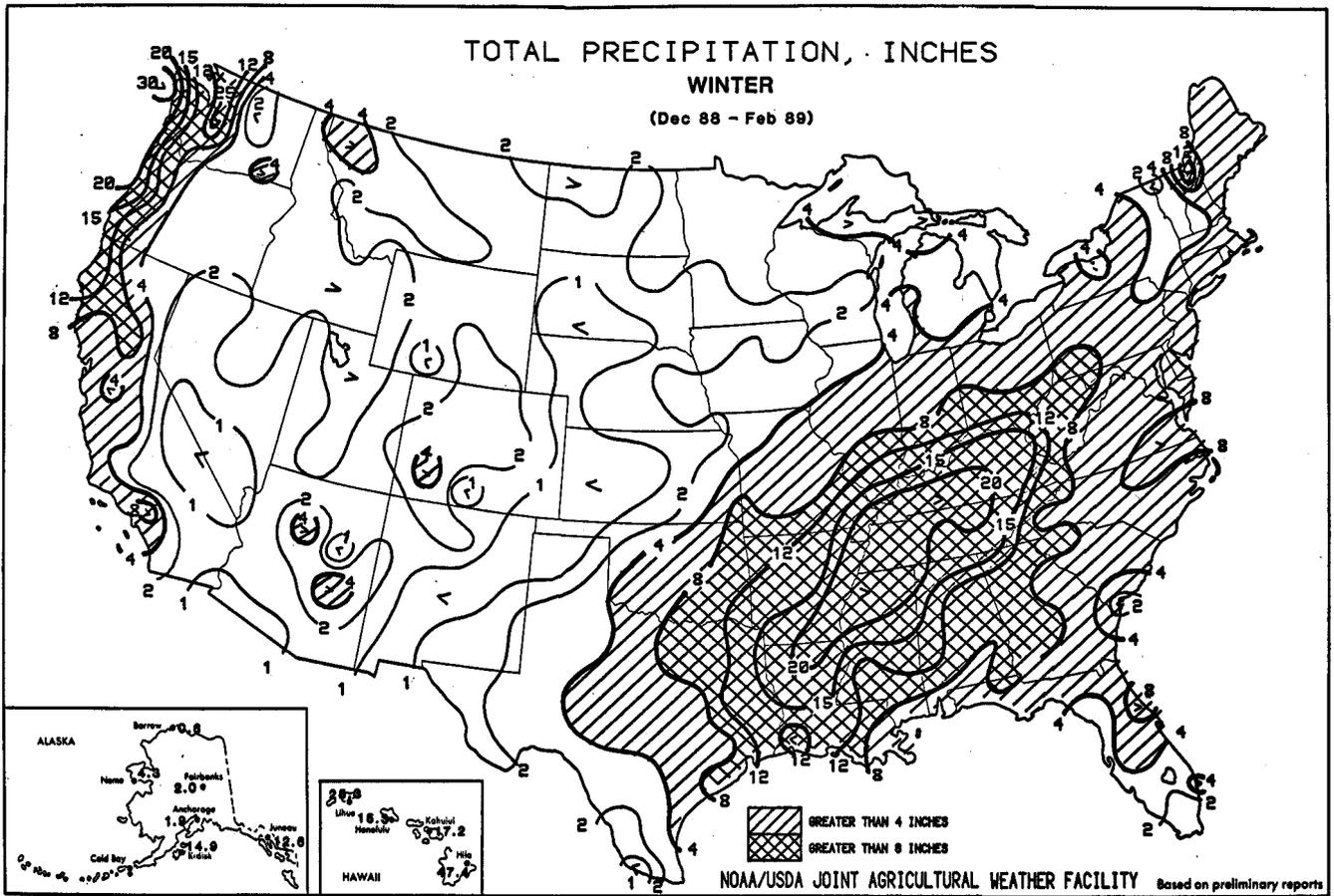
Winter Weather Review

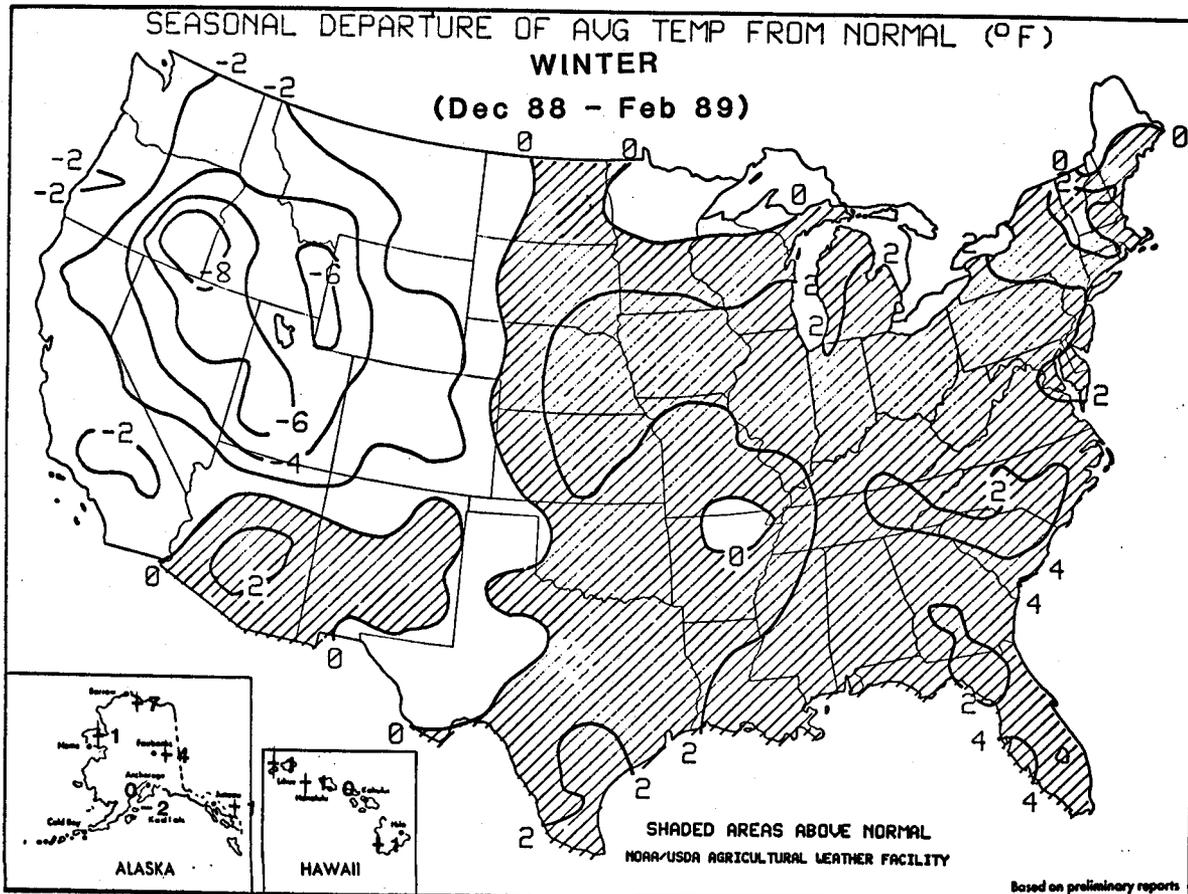
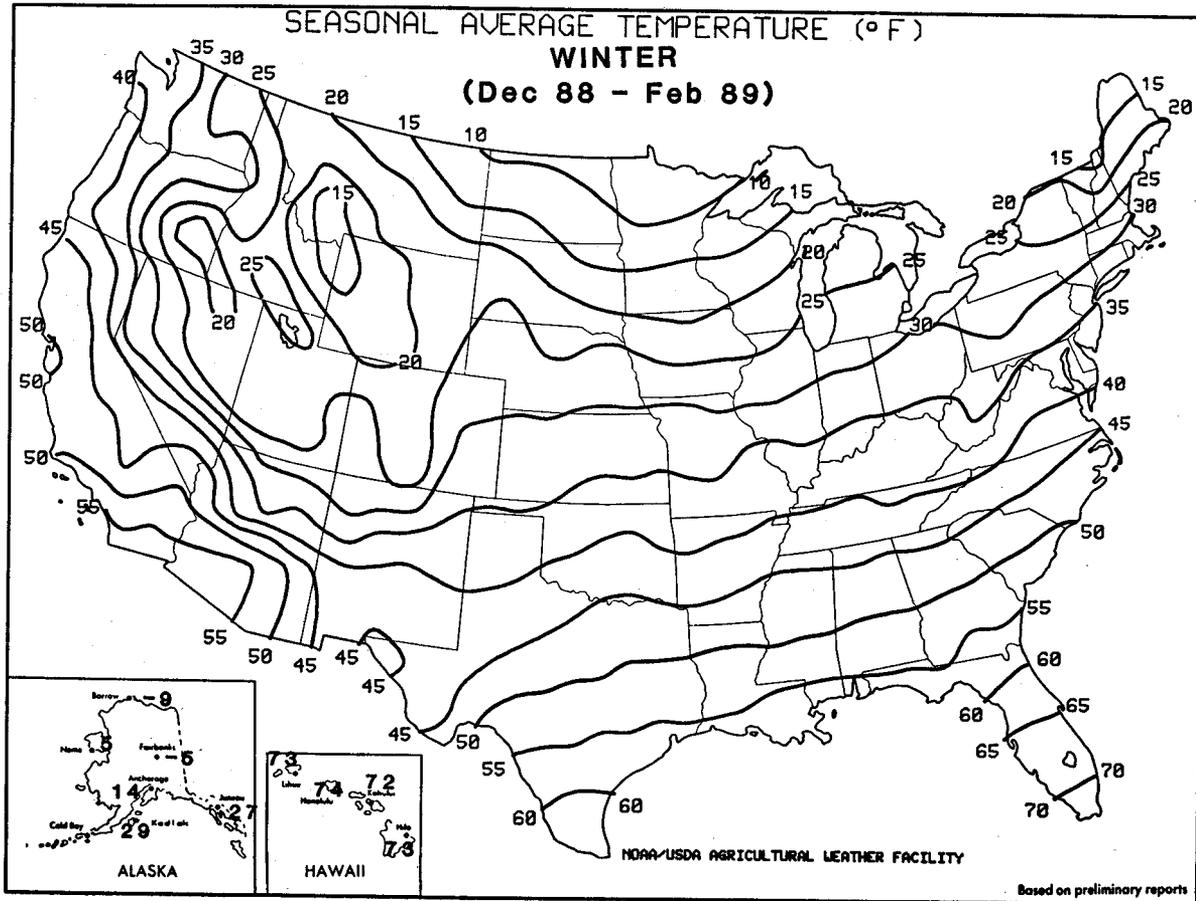
HIGHLIGHTS: The winter of 1988-89 was unusually mild and dry in large parts of the country. Nationally, it was the 9th driest winter since records began in 1895, with much of the Northeast and south Atlantic regions recording less than 50 percent of normal precipitation. The Northeast had its third driest winter of record. Burlington, Vermont, measured just under 2 inches of precipitation for the entire 3-month period. Precipitation was also well below normal in some important wheat growing areas of the Great Plains, as well as in southeast Texas and most of the Pacific States. Wheat growing areas of central and western Kansas recorded less than 1 inch of precipitation. The third consecutive year of below-average precipitation threatened irrigation water supplies in California. In contrast, precipitation was above normal in some of the northern Plains areas affected by extreme dryness last spring and summer. Unusually wet weather extended in a broad band from central Texas northeastward through the Tennessee and Ohio Valleys. Temperatures were above normal east of the Continental Divide and below normal in the West, but record cold covered Alaska during the second half of January and plunged southward into the contiguous United States during the first week of February. Temperatures as low as -50 degrees were the lowest recorded in the last 4 years.

DECEMBER: Dryness prevailed across the winter wheat areas of the Great Plains and along the southern Atlantic seaboard. Precipitation totaled less than one-quarter of an inch in western portions of Nebraska, Kansas, and Oklahoma. Dryness also occurred over the northern Atlantic seaboard, the western Corn Belt, and the interior of the Pacific Northwest. Winter storms brought near- to above-normal precipitation into most of the Mississippi and Ohio Valleys. Heavy snow fell in the northern and central Rockies. Cold weather prevailed over the northern and central Intermountain Plateau, while above-normal temperatures persisted in the central and southern Great Plains.

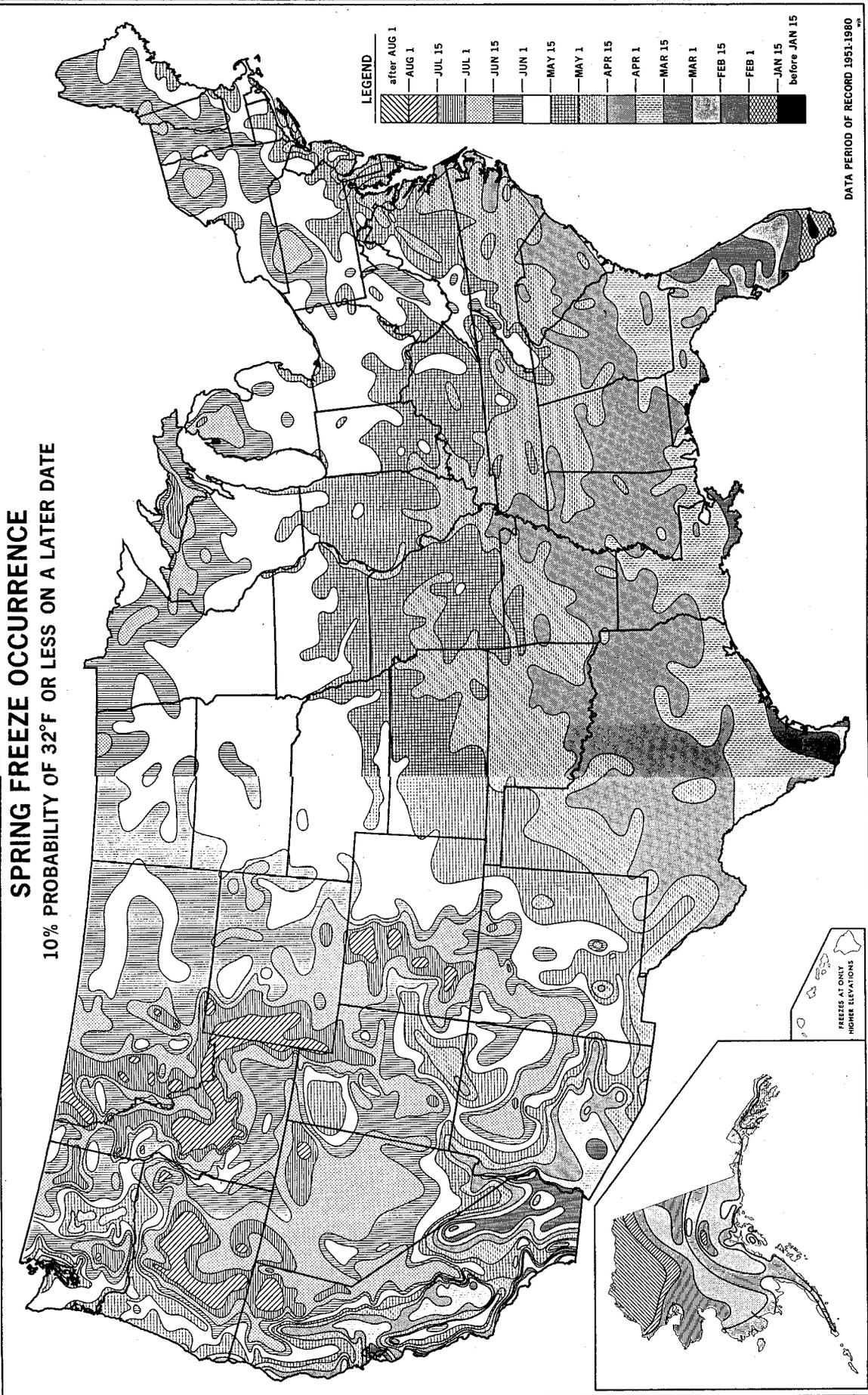
JANUARY: Mild weather dominated much of the Nation, particularly the Corn Belt, where temperatures were as much as 14 degrees above normal. Temperatures were especially high in the Northwest and eastern two-thirds of the country during the latter part of the month. Nationally, 1989 had the second warmest January in the last 35 years. In contrast, abnormally cold weather settled over the Great Basin and Alaska. Official readings dipped to as low as -76 degrees in Alaska, which is just 5 degrees higher than the all-time record for the continent. The cold mass of air did set a new record for the highest pressure ever observed in North America, 31.85 inches. Precipitation was above normal across large areas of Nebraska, Kansas, and Oklahoma, bringing some relief to the winter wheat crop. Wet weather again extended from Texas northeastward to the Ohio Valley. The South Atlantic region and New England remained dry.

FEBRUARY: Bitter arctic air poured into the Central States during the first few days of the month and then spread outward to cover much of the Nation by February 6. Scores of temperature records were broken during the first 9 days of the month, as readings dropped to -30 degrees or lower in the northern Plains, the central and northern Rockies, and even the Great Basin. The media blamed at least 65 deaths on the weather, which also took its toll on livestock and crops. Winter grains that lacked sufficient snow cover sustained freeze damage as thermometers dipped to -10 or lower in the central Plains and the Pacific Northwest. For the month as a whole, only the Eastern seaboard and the Southwest averaged above-normal temperatures. Nationally, this February was the 8th coldest since 1895. Below-normal precipitation occurred on the West coast, the central Plains, and along the Gulf coast. Southern Florida registered its driest September-February period ever. Once again, unusually wet weather prevailed in a wide zone extending from central Texas northeastward into the Ohio Valley.



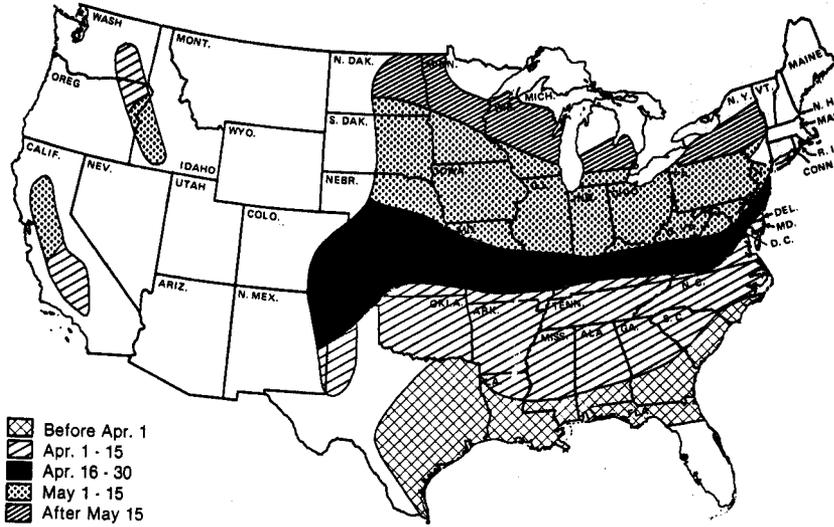


SPRING FREEZE OCCURRENCE
10% PROBABILITY OF 32°F OR LESS ON A LATER DATE



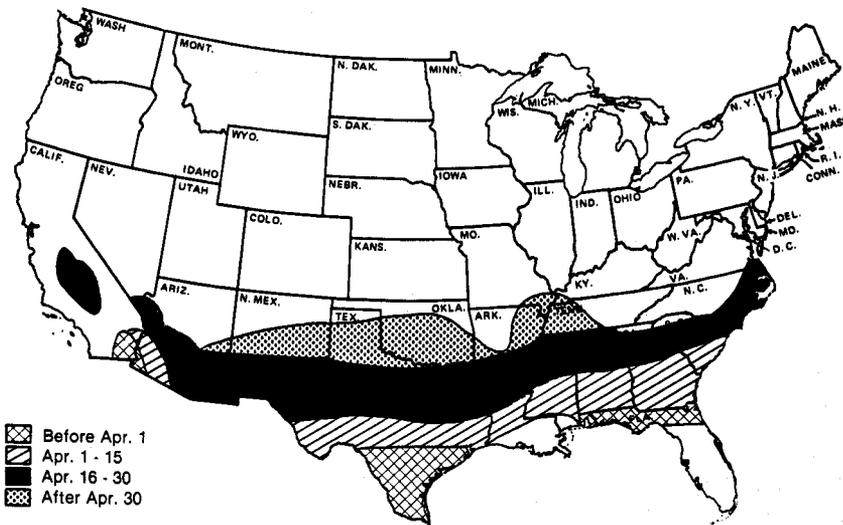
Corn for Grain

Usual Start of Planting, Principal Areas in the United States



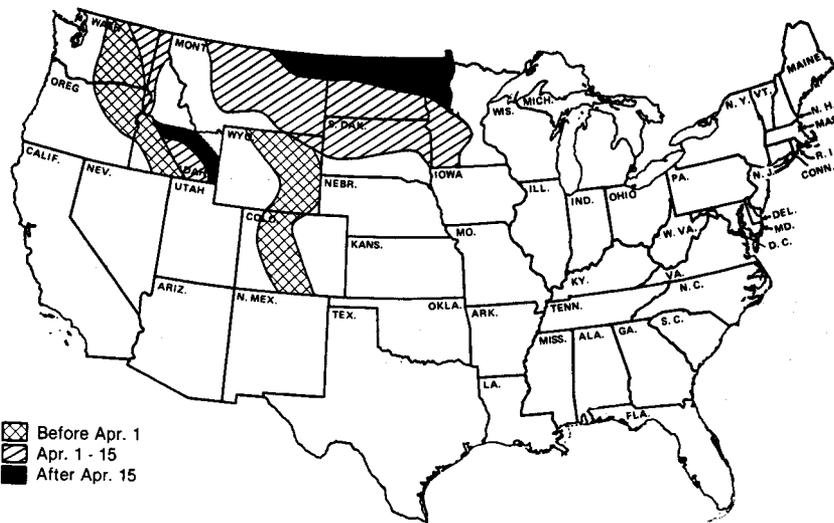
Cotton

Usual Start of Planting, Principal Areas in the United States



Spring Wheat

Usual Start of Planting, Principal Areas in the United States



National Agricultural Summary

March 6-12, 1989

HIGHLIGHTS: Moisture was needed for winter wheat in Kansas. Warmer temperatures improved small grain growth in the southern Plains and decreased snow cover in the northern Plains. Winter wheat was mostly good in the Corn Belt and fair to good in the Delta and Southeast. Rain limited fieldwork in the Delta and portions of the East. Corn planting continued as weather permitted. Sorghum and cotton plantings were underway in Texas. Florida's citrus groves were mostly good. Cold temperatures damaged some peach trees in east Texas. Hail and wind damaged some almonds and stone fruit in California. Cold, wet weather stressed newborn calves and lambs in Louisiana and Texas.

SMALL GRAINS: In Kansas, most winter wheat fields survived earlier cold temperatures and were showing signs of recovery. Inadequate soil moisture limited growth. Light to moderate wind damage occurred in the central and western areas. Spring small grain seeding began in the southern counties. Winter wheat was mostly fair to good in Oklahoma. The extent of freeze damage from the previous week was still unknown. In Texas, warmer temperatures at mid-week improved small grain condition. Russian wheat aphid populations were increasing in the Low Plains area. Winter wheat fields were beginning to head in the Coastal Bend area. Warm temperatures decreased snow cover in the northern Plains. Winter wheat in South Dakota was mostly good, with very little winterkill apparent. Winter wheat was mostly fair to good in Wyoming. Additional moisture was needed. In Montana and Colorado, winter wheat was mostly fair. Producers were reseeding some wheat in the Columbia Basin of Oregon. Rain improved small grain growth in California. Winter wheat was mostly good in the Corn Belt and fair to good in the Delta and Southeast. Cool temperatures slowed growth in portions of the Delta.

OTHER FIELD CROPS: Rain limited fieldwork in the Delta and portions of the East. Tobacco plant bed preparation and seeding continued as weather permitted. Tobacco plant beds were mostly good in Georgia and North Carolina. Tobacco transplanting was underway in Georgia. Rice producers flooded fields in preparation for planting in Louisiana. Corn planting continued in portions of the Delta and Southeast as weather permitted. In Texas, corn planting was 18 percent (%) complete, 8 percentage points behind the 5-year average.

Sorghum planting was 10% complete, 6 points behind the average. Cotton planting continued in the Rio Grande Valley and the Coastal Bend area. Corn planting was 9% complete, 4 points behind the average in Alabama. Corn planting progressed well in central and western Arizona.

FRUIT AND NUTS: Florida's citrus groves were mostly good with abundant new growth. Early orange harvest was nearly complete. Valencia orange harvest increased. Grapefruit harvest was active in all areas. Valencia orange harvest continued in central and western Arizona. Small volumes of grapefruit were also harvested. A few kinnow tangerines were harvested in the central area. Citrus harvest continued in the Rio Grande Valley of Texas. Cold temperatures damaged some peach trees in the east. Hail and wind damaged some almonds and stone fruit in Tulare County, California. Almond bloom was nearly complete and early variety trees leafed out. Rain damage on pollination was undetermined. Orange, lemon, and tangelo harvests continued.

VEGETABLES: Rain and cool weather covered most of Florida's vegetable producing areas. Spring crop planting and replanting were very active. Winter crop harvests continued. Harvest volume leaders were tomatoes, cabbage, celery, peppers, strawberries, potatoes, and lettuce. Plant City strawberry harvest was at its peak. Harvest and shipment of lettuce, broccoli, cauliflower, and other mixed vegetables continued in central and western Arizona. Vegetable harvest continued in the Rio Grande Valley and the San Antonio-Winter Garden area of Texas. Onion harvest increased in the Rio Grande Valley. Onion transplanting began in the High Plains. Land preparation for spring plantings continued in the Trans-Pecos. Broccoli supplies were heavy and of variable quality in the Salinas-Watsonville and Santa Maria areas of California. Lettuce planting continued in the central valley. Celery harvest continued along the south coast. Artichoke supplies were moderate and of varying quality in the Salinas-Watsonville area. In North Carolina, Irish potato planting was 18% complete, 18 points behind the average.

PASTURES AND LIVESTOCK: Livestock was in mostly good condition. Pastures were mostly fair to good in the Delta and Southeast. Cold, wet weather stressed newborn calves and lambs in Louisiana and Texas. Rain improved range conditions in California.

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: No significant rainfall. Temperatures 2 to 5° below normal.

Days suitable for fieldwork 2.0. Soil moisture 2% short, 56% adequate, 42% surplus. Fieldwork progress 44% behind schedule, 49% on schedule, 7% ahead of normal. Acreage intended for spring planting 22% prepared, 27% 1988, 27% avg. Corn 19% planted, 8% 1988, 13% avg. Winter wheat 10% poor, 38% fair, 50% good, 2% excellent. Some freeze damage on early wheat varieties. Livestock good to fair. Stored feed 17% short, 81% adequate, 2% surplus. Pastures fair to good. Pasture feed 40% short, 60% adequate. Primary activities: Preparing land for spring planting; planting corn, spring vegetables; pruning, spraying fruit trees; soil testing; topdressing small grains; providing supplemental feed to cattle; routine care of livestock, poultry.

ARIZONA: Mostly sunny skies statewide 5th. Warming trend continued 6th to 10th. From 8th through 10th, high temperature readings broken. High pressure weakened on 11th, considerable high cloudiness developed. No precipitation statewide. Temperatures 6 to 13° above normal.

Cotton field preparation continued statewide. Seedbed preparation, furrowing, pre-plant herbicide applications, listing, pre-irrigation continued. Wheat, barley progressed well; 75% jointing stage, 7% heading stage. Irrigation continued. Corn planting progressed well central, western areas. Alfalfa harvest continued, favorable curing conditions west. Fields monitored for Egyptian alfalfa weevils east. First cuttings expected central end of month. Valencia oranges, few grapefruit harvested west. Head lettuce, broccoli, cauliflower, boston, leaf, romaine lettuce; cabbage, kale, napa, escarole, bok choy, endive, celery, spinach, anise, asparagus harvest continued. Valencia oranges, grapefruit, few kinnow tangerines harvested central. Greens, leaf lettuce, broccoli, cabbage, bok choy, rapini, green onions, parsley, cauliflower, beets, turnips, spinach, leeks, carrots harvested Salt River Valley.

ARKANSAS: Started cold, warmer weekend. Temperature extremes 14°; 92°. Precipitation light early week. Rainfall none to 1.55 in.

Soil moisture adequate to surplus. Most wheat fertilized. Land preparation hampered by surplus moisture. No apparent damage to fruit trees from cold weather. Pastures making good progress. Hay adequate. Poultry losses high from collapsed building due to ice, snow. Cattle good.

CALIFORNIA: Sub-tropical moisture with Pacific storm systems brought rain, showers northern, central areas. Temperatures mild northern State. Southern mostly dry, warm temperatures.

Rain, wet soils greatly curtailed field activities northern half. Small grains good growth response rain, warmer temperatures. Weed controls small grains, weather, soil conditions permitted. Alfalfa growth increased rapidly southern San Joaquin Valley. South harvest alfalfa, winter grains for green-chop continued. Sheep grazed established alfalfa central, southern areas. Preplant activities continued cotton, sugarbeet, corn, other spring seeded crops. Rain slowed field activities. Spotty hail, wind damage to Tulare County almonds, stone fruit. Almond bloom neared completion. Rain increased petal fall. Early

varieties leafed out. Extent of rain damage on pollination undetermined. Stone fruits bloomed. Navel, valencia oranges harvested. Lemons, tangelos picked. Broccoli Salinas-Watsonville, Santa Maria heavy, variable quality. Potatoes continued movement to market. Packing sheds operating full-time, prices remained good. Sweetpotatoes, yams Kingsburg-Dinuba hotbed preparation. Lettuce plantings central valley continued, fields thinned, irrigated, fertilized. Celery harvest continued south coast, good quality. Artichokes Salinas-Watsonville moderate supply, varying quality. Peas good growth Merced-Atwater due recent rains. Broccoli, napa, swiss chard, bok choy, diakon continued to be harvested, packed Kingsburg-Dinuba. Livestock fair to good statewide. Range, pasture conditions improved greatly due to rainfall. Supplemental feeding continued, started to decline northern counties. Livestock movement very light. Water supply improved, still low most areas. Feed mostly adequate, except hay shortages some foothill areas.

COLORADO: Northerly flow prevailed across State early part week, while Arctic air lingered northeast. High pressure moved into area late week resulted in above normal temperatures most areas. Departures from normal -9 to +10°. Precipitation light, spotty; none to 0.20 in.

Days suitable for fieldwork 3.7. Seedbed preparation limited to southern areas due to ground frost. Soil moisture 9% very short, 36% short, 40% adequate, 15% surplus. Winter wheat mostly fair. Some greening result recent warm weather. Calving 32%, lambing 20% well underway. Livestock good; ranges, pastures mostly fair to good. Stored feed mostly adequate.

FLORIDA: Cool, temperatures 6 to 9° below normal. Lows low, mid 30s north to 40° central, mid to upper 40s south. Warmest readings occurred, weekend; from mid to upper 80s north to low, mid 80s Peninsula. No significant rain Panhandle; generally under 0.10 in. Big Bend, northeast. Many areas central, south less than 0.25 in. but some areas over 1.00 in.

Soil moisture continued mostly short; few widely scattered areas adequate. Growers continued setting tobacco. Corn planting active. Farmers worked ground for other spring crops. Sugarcane harvest winding down; one mill remained open. Cool temperatures again delayed pasture recovery from last cold, frost, but warming weekend beneficial. Pastures mostly poor to fair western Panhandle, very poor to fair extending into central Peninsula; poor to good, lower Peninsula depending largely on topsoil moisture supplies. Cattle generally fair central area northward; fair to good elsewhere. Citrus groves good. Abundant new growth, bloom progressing; some tight buds, open flowers. Moisture generally adequate. Early harvest almost over. Valencia movement increased. Grapefruit harvest very active all areas. Most temples going to processors. Honey tangerine harvest slowed. Caretakers cultivated, sprayed, hedged, topped. Cool weather much of week, major vegetable producing areas accompanied by rain. Planting, replanting spring crops very active. Harvest winter crops regaining momentum. Volume leaders: Tomatoes, cabbage, celery, peppers, strawberries, potatoes, lettuce. Also available good volume: Carrots, snap beans, sweet corn, squash, radishes, eggplant. Plant City strawberry volume near peak level.

GEORGIA: Temperatures 3 to 7° below normal except north, near normal. Cold early, mid week; lows 30s except 20s mountains. Warmed to above normal late weekend. Maximum temperatures low, and mid 80s central, south on 12th. Rain limited to eastern half, under 0.50 in.

Soil moisture surplus north central; adequate elsewhere. Tobacco beds mostly good, transplanting beginning. Small grains fair to mostly good. Recent rains have improved small grains. Corn planting south. Pastures poor to mostly good. Cattle, hogs fair to good. Land preparation, small grain topdressing final stages.

HAWAII: Mostly sunny, cool. Light to moderate rains early week. Cold front brought cool temperatures, including record lows overnight second half of week. Winds variable 5 to 25 mph. Temperatures low 60s to low 80s. Rainfall none to 5.10 in.

Days suitable for fieldwork 7.0. Farmers very busy catching up on chores delayed by last weeks adverse weather. Cool temperatures slowed plant development, most crops improved. Head cabbage output steady, good quality. Chinese cabbage production below year ago, overall supplies moderate. Tomato production expected to increase. Head lettuce supplies light, fields improved. Overall tomato production higher. Head lettuce production very light, disease plagued fields. Banana, papaya production seasonally light. Ginger root harvesting active.

IDAHO: Temperatures above normal except some northern, southeastern areas. Precipitation well above normal most areas.

Wet conditions prevented fieldwork. Main farm activities revolved around livestock care, such as feeding, calving, lambing, milking. Wet weather caused some livestock problems, otherwise livestock good. Hay, roughage mostly adequate. Other activities included sorting, shipping seed potatoes, pruning orchards, shopwork.

ILLINOIS: Temperatures near normal north, 4 to 7° below normal south. Precipitation little to none north, 0.10 to 0.75 in. central, south. Central 1 to 5 in. snow.

Winter wheat mostly good. Livestock good to excellent.

INDIANA: Temperatures 1 to 6° below normal. Lows single digits, highs 60s. Precipitation less than 0.25 in. most areas.

Snow, wet fields limited field activities. Activities included: Topdressing wheat, hauling manure, hauling grain, pruning fruit trees, equipment repair, attending meetings, purchasing supplies, cleaning fence rows, care of livestock. Wheat fair to good. Livestock mostly good. Hay short to adequate.

IOWA: Temperatures none to 8° above normal; extremes -2° 7th Decorah to 74° 10th Omaha-Council Bluffs. Precipitation negligible; maximum total 0.07 in.

Main activities include feeding livestock, getting machinery ready for plowing, planting, bookkeeping. Livestock mostly good. Some TGE, pseudorabies in hogs.

KANSAS: Temperatures 10 to 13° above normal west, 9 to 10° above normal, central, east; southeast only 4° above normal. Precipitation only few hundredths central, west; up to 1.00 in. southeast from weekend snowstorm.

Days suitable for fieldwork 4.0. Topsoil moisture 73% short, 19% adequate, 8% surplus. Subsurface moisture 86% short, 14% adequate. Most wheat stands survived, showing signs of recovery.

Short moisture will limit growth. Light to moderate wind damage central, western areas. Applications fertilizer continued where weather conditions permit. Seeding oats, barley central, southern counties, no emergence yet. Pre-plant irrigation underway. Heavy feeding of livestock, hay, forage supplies mostly adequate.

KENTUCKY: Cold, wet early; warm, dry over weekend. Temperatures 3 to 6° below normal. High temperatures 30s early, 70s 11th. Precipitation southeast 6th. Amounts 1.50 to 3.00 in. southeast, 0.50 to 1.00 in. elsewhere.

Soil moisture adequate to surplus. Considerable standing water. Wheat green, showing some growth. Tobacco seedbeds being prepared. Other land preparation minimal. Livestock satisfactory.

LOUISIANA: Temperatures 12 to 15° below normal west, north; 8 to 12° below remainder State. Extremes 22°; 86°. Rainfall mostly under 0.25 in. Trace amounts snow flurries southeast.

Days suitable for fieldwork 2.9. Soil moisture 2% very short, 5% short, 55% adequate, 38% surplus. Spring plowing 16%, 9% 1988, 18% avg. Corn 1% planted, 4% 1988, 11% avg.; none emerged, 1% 1988, 2% avg. Wheat 1% headed, none 1988, 1% avg., cold delayed recovery in wheat, aerial fertilizing continued, scouting for disease. Flooding rice fields for planting. Weed control activities in sugarcane. Strawberry harvesting slowed by cold. Most field activities slowed by continued cold, wet. Livestock feeding continued, some hay running low, some new calves lost to cold. Producers working on equipment, farm programs, operating loans for 1989. Pasture growth slow. Crawfish harvesting.

MARYLAND & DELAWARE: MARYLAND: Precipitation 1.78 in. Temperature 32°, normal 40°. Temperature extremes 9°; 60°.

Main farm activities caring for livestock, maintaining machinery.

DELAWARE: Precipitation 1.73 in. Temperature 33°, normal 41°. Temperature extremes 16°; 49°.

Main farm activities caring for livestock, maintaining machinery.

MICHIGAN: Temperatures 2 to 6° below normal. Temperature extremes -12°; 62°. Precipitation none to 0.24 in.

Limited snow cover for wheat southern counties. Activities: Normal fieldwork resumed; spreading manure, fertilizer. Weather good for cattle, starting to calf. Lambing very active. Feed adequate. Much marketing of crops, livestock.

MINNESOTA: Temperatures 2 to 8° above normal. Extremes -19°; 62°. Precipitation near normal to 0.35 in. below normal. Precipitation trace to 0.12 in. Greatest weekly total 0.20 in. Snowfall 18 to 27 in. north, trace to 8 in. south. Moderate temperatures melted much snow from last weeks storm. Snow seems to have less moisture than normal.

MISSISSIPPI: Cool changing to mild. Temperature 45°, 8° below normal. Extremes 20°; 84°. Rainfall 0.45 in., 0.91 in. below normal. Maximum weekly rainfall 2.44 in.

Days suitable for fieldwork 1.2, 1.2 1988, 2.7 avg. Soil moisture 30% adequate, 50% surplus, 20% excessive. Still some standing water northern counties. Wheat fair to good; 37% jointing, 16% 1988, 21% avg. Some freeze damage recently to wheat that had jointed. Pastures fair to good. Livestock good to fair. Watermelons 2% planted, 1% 1988, 3% avg. Small amounts of corn planted southern counties. Soils still too saturated for

fieldwork most areas. Hay, roughage less than adequate. Activities: Paper work, shopwork, feeding cattle; some tillage southern counties, some fertilizing of wheat, oats.

MISSOURI: Temperatures above normal, no precipitation north. Below Joplin to St. Louis snow of week ago, temperatures 5 to 15° below normal, scattered precipitation, some counties more than 1.00 in.

Farmers preparing for fieldwork, no significant tillage yet. Wheat fertilizing well along.

MONTANA: Temperatures mostly above normal. Highs climbed into 50s, 60s. West up to 1.57 in. precipitation. Lesser amounts southwest. All other areas dry.

Topsoil moisture improved. Subsoil still frozen. Winter wheat mostly fair. Warmer temperatures aiding livestock care. Rapid thawing caused some local flooding.

NEBRASKA: Warm, dry midweek on. Temperatures none to 7° above normal. Only trace amounts precipitation recorded central areas. Extremes -18°; 84°.

NEVADA: Cool beginning, cloudy, damp north, central while extreme south enjoyed cool, dry weather. Rainfall early spotty most areas, moderate northeast. Warming trend first half with above seasonal normals by midweek. High snow levels high elevation, rain valley floors. Latter half continued windy, warm, dry resulting in rapid melting lower snowpack. Many streams, smaller rivers saw rapid increase in flows with minor flooding low areas.

Scattered showers, gusty winds again delayed fieldwork last half. Mild weather favorable calving, lambing operations.

NEW ENGLAND: Precipitation (rainfall, water equivalent of snow) less than 0.25 in. across area. Temperatures 10° near Canadian border to 30° southern coast. Temperatures below normal.

Major farm activities: Tending livestock, machinery repair, preparing equipment for maple season.

NEW JERSEY: Temperatures much below normal. Extremes 0°; 52°. Rainfall 0.36 in. north, 0.71 in. central, 0.86 in. south. Heaviest 24-hour total 1.32 in. on 6th, 7th. Estimated soil moisture percent field capacity 100% north, central, south. Four inch soil temperatures 32° north, 34° central, south.

Farmers cared for livestock, pruned fruit, repaired machinery, plowed snow.

NEW MEXICO: Record high temperatures throughout State; no precipitation.

Days suitable for fieldwork 6.1. Soil moisture 90% short, 10% adequate. Irrigated wheat 25% poor, 50% fair, 25% good; dryland wheat 80% poor, 20% fair. Moisture needed statewide. Cattle 56% fair, 44% good. Sheep 29% fair, 71% good. Range 22% poor, 70% fair, 8% good.

NEW YORK: Cold air settled slowly south across State 5th, 6th. Mixture of rain, snow brought 0.10 to 0.25 in. of water upstate 5th. Precipitation changed to heavy snow down State 6th, dumped 2 to 4 in. city, on Long Island. Water equivalents 0.25 to 0.50 in. Record cold over State on 7th, 8th as high pressure slid south from Canada. Massena in St Lawrence Valley high reading on 7th zero after low of -14°. Temperatures upstate failed to reach 20s. Below zero readings rule upstate again 8th. Albany set record this time -2°. Old record 8th zero set in 1890.

Temperatures moderated during later part week. Daytime highs 35 to 45° lots of sunshine, overnight lows 20s. New surge of cold air brought light snow inland 4th.

Warm days, cool nights during later part week ideal for maple syrup runs. Producers readying equipment for upcoming maple season. Other activities included caring for livestock, spreading manure, machinery repair, attending meetings.

NORTH CAROLINA: Temperatures 5° below normal to 4° above normal. Temperature extremes 14°; 82°. Precipitation 0.41 to 2.77 in.

Days suitable for fieldwork 0.9. Soil moisture 2% short, 39% adequate, 59% surplus. Pasture 2% very poor, 12% poor, 39% fair, 46% good, 1% excellent. Oats 1% poor, 30% fair, 68% good, 1% excellent. Barley 29% fair, 70% good, 1% excellent. Rye 3% poor, 27% fair, 68% good, 2% excellent. Wheat 1% poor, 27% fair, 70% good, 2% excellent. Tobacco plant beds 8% poor, 41% fair, 51% good. Feed grains 1% very short, 7% short, 92% adequate, 2% surplus. Irish potatoes 18% planted, 50% 1988, 36% avg. Cabbage 26% transplanted, 36% 1988. Major farm activities: General maintenance; equipment repair, tending livestock. Other activities: Preparing land for planting; topdressing small grains; pruning fruit trees; tending tobacco plant beds.

NORTH DAKOTA: Temperatures near normal east central, southeast to 5° above normal northwest. Precipitation very light, most areas none.

Soil moisture below normal. Warm temperatures decreased field snow cover. Livestock fair to good, receiving supplemental feed. Calving, lambing kept ranchers busy. Hay short to adequate. Some farmers adjusted rations to prolong forage supplies.

OHIO: Temperatures subnormal early, warming by end of period. Temperatures 2 to 5° subnormal. Lows in 20s, highs 40s. Extremes low teens to 70s. Precipitation confined to central, south; some snow central. Water equivalent 0.10 to 1.00 in.

Snow cover early period central; melted by weekend. Soil warming slowly, impeded by abundant soil moisture. Temperatures 4 in. ranged low 30s to low 40s. No fieldwork; soils too soft, wet.

OKLAHOMA: Temperatures 1° below normal southeast to 12° above normal Panhandle. No precipitation.

Days suitable for fieldwork 4.8. Topsoil moisture 15% short, 55% adequate, 30% surplus. Subsoil moisture 20% short, 80% adequate. Wheat 75% fair, 25% good; 10% jointing, 3% 1988, 5% avg. Freeze damage late last week but extent unknown. Sorghum 30% seedbed preparation, 5% 1988, 10% avg. Cotton 15% seedbed preparation, 15% 1988, 10% avg. Cattle good; marketings average, prices down from last week. Heavy snowfall last week caused building damage east, particularly poultry houses.

OREGON: Warmer than normal, southwestern valley 8° above normal; south central 6° above normal; coast, Willamette Valley 4° above normal. Considerable precipitation, 4.00 in. high plateau; 3.00 to 3.70 in. coast, north Cascades; Laurel Mountain in coast range 7.25 in.; 2.10 to 2.60 in. Willamette Valley, southwest; less than 1.00 in. rest of State.

Soil moisture mostly adequate. Some damage to winter wheat Columbia Basin, some reseeding underway; other spring fieldwork started. Fall grains look good west; some spring grain being planted as weather permits Umpqua Valley. Delayed dormant sprays going on apples, peaches, cherries; all orchard crops received fertilizer applications. Livestock fair to good. Calving, lambing continued Columbia Basin with spring branding underway; main

calving season just began southeast. Range, pasture fair to good. Hay supplies neared zero most of east. Winter feed nearly gone southwest. Pasture growth poorer than normal west, warmer temperatures should mean better growth in future. Water outlook continued to improve with good spring precipitation.

PENNSYLVANIA: Started cold, messy; ended cold, dry. Large amounts of snow most of State on first day of week. Temperature 27°, 5° below normal. Temperature extremes 2°; 63°. Precipitation 0.83 in., 0.09 in. above normal.

Activities: Hauling manure; caring for livestock; maintaining machinery; fixing fences; grading potatoes; cutting firewood.

PUERTO RICO: Island rainfall 0.62 in., 0.08 in. above normal. Highest weekly rainfall 3.13 in. San Lorenzo, 2.80 in. Pico Del Este-Luquillo, 1.55 in. Maunabo 2Se. Highest 24-hour total 1.24 in. Maunabo 2Se. Total rainfall since January 1st 7.77 in., 26% above normal. San Juan WSFO temperature 77°, 1° below normal. Total rainfall 0.31 in., 0.18 in. above normal. Divisional temperature 76 to 77° on coasts, 70 to 74° interior with mean station temperature 77° Ponce 4e to 62° Pico Del Este-Luquillo. Lowest minimum temperature 58° Pico Del Este-Luquillo. Highest maximum temperature 93° Coloso.

SOUTH CAROLINA: Temperatures fluctuated widely, 4 to 6° below normal. Rainfall less than 0.50 in. west to near 1.00 in. east.

Farm activities included applying herbicides, topdressing to small grains.

SOUTH DAKOTA: Temperatures normal east, above normal west. Extremes -28°; 83°. Precipitation trace south, none elsewhere. Late week warmup melted snow cover over State except 2 to 4 in. snow cover remaining northeast.

Winter wheat appears good with very little winterkill or damage apparent. Few north central counties, with dry soils last fall show slight damage.

TENNESSEE: Light precipitation early week, most 0.65 in. Temperatures near normal, cold early week, warm weekend. Extremes mid-20s; 84°.

Wet fields limited preparing tobacco beds, tilling fields, topdressing winter wheat, renovating pastures, planting early vegetables. Winter wheat stands good. Livestock good, adequate feed.

TEXAS: Information not available.

Crops: Small grains once again frozen back many areas early last week. Latest cold may have caused further losses weak oat fields. Many weaker wheat fields may also be lost. Warmer temperatures midweek helped some fields recover. Some new greening High Plains. Producers resumed some irrigating late week. Fields Blacklands, east should begin growing again with ample moisture available. Increased Russian wheat aphids Low Plains. Fields beginning to head Coastal Bend. Corn planting increased most southern areas. Planting increased Upper Coast. More planting underway central, Blacklands as weather allowed. Some pre-watering High Plains. Corn 18% planted, 40% 1988, 26% avg. Grain sorghum producers busy planting Coastal Bend, Rio Grande Valley. Planting about to begin south central. Land preparation continued midweek many northern areas. Sorghum 10% planted, 23% 1988, 16% avg. Cotton planting increased Valley, Coastal Bend. Land preparation increased elsewhere. Cotton 1% planted, 2% 1987, 1% avg.

Commercial Vegetables: Rio Grande Valley harvest continued vegetables, citrus. Onion harvest increased. Melon replanting almost complete. San Antonio-Winter Garden harvest continued most week. Spinach quality improved. High Plains onion transplanting beginning. Land preparation potatoes continued. Trans-Pecos lettuce, onions good progress. Chili planting beginning soon. Peach trees east suffered some damage from cold weather. Additional chill did not cause serious damage Hill Country. Buds swelling on trees many other areas.

Range and Livestock: Ranges, pastures slowly improving midweek many parts. Many areas still need rain for further improvement. Producers continued pulling cattle off wheat Plains. Young calves, lambs suffered from latest cold, many died. Feeding continued, some hay running short. Milk production dropped some early week because cold weather.

UTAH: Precipitation light south, moderate to heavy north. Temperatures 1 to 5° above normal.

Calving, lambing started. Livestock fair to good. Snow cover gone. Major farm activities: Livestock care, purchasing seed, supplies; machinery maintenance, farm records.

VIRGINIA: Cloudy, cool, wet most of week. Temperatures 6° below normal. Precipitation 1.50 in.

Days suitable for fieldwork 0.4. Topsoil moisture 33% adequate, 67% surplus. Wet weather delayed fieldwork. Topdressing winter wheat behind schedule. Livestock mostly good to excellent, weaning fall calves for spring feeder sales.

WASHINGTON: Temperatures zero to 2° above normal west; zero to 7° below normal east. Precipitation 0.29 to 1.96 in. west; 0.26 to 1.66 in. east.

Days suitable for fieldwork 1.3. Soil moisture 51% short, 49% adequate. Range, pasture 58% short, 42% adequate. Hay, other roughage 54% adequate, 46% surplus. Field activities limited by either frozen or saturated soils. Growers concerned about run-off where soil frozen. Christmas tree planting continued west. Growers still assessing winterkill. Pruning, orchard cleanup continued. Calving, lambing neared completion some areas.

WEST VIRGINIA: Temperature 37°. Extremes 10° Terra Alta; 75° Creston. Some flooding south central, north 6th. Precipitation generally below normal rest of week. Precipitation 0.50 in. Greatest precipitation 1.90 in. Weston, least 0.03 in. Parkersburg.

Days suitable for fieldwork 1.9. Soil moisture 5% short, 52% adequate, 43% surplus. Wheat, barley fair to good. Livestock good to fair. Feed 25% short, 75% adequate. Farm activities: General farm maintenance, feeding livestock, lambing, calving, fruit tree pruning, manure spreading.

WISCONSIN: Temperature 26°. Extremes -25°; 56°. Precipitation none to 0.10 in. Snowfall minor.

Frost depth 29 in., normal 16 in. Snow cover 12 in. on 10th, normal 8 in. Frost hard. Subsoil moisture dry.

WYOMING: Temperatures above normal. Precipitation below normal.

Winter wheat fair to good, very little snow cover. Additional moisture needed for good development. Farmers starting to prepare land for spring planting. Livestock fair to good with supplemental feeding most areas. Calving, lambing, shearing continued. Warmer weather reduced stress on new born calves, lambs.

International Weather and Crop Summary

March 5-11, 1989

HIGHLIGHTS

WESTERN USSR ... Continued unseasonably mild weather causes snow cover to retreat further northward, while winter grains in the extreme south begin breaking dormancy about 3-4 weeks earlier than usual.

EUROPE ... Moderate to heavy rain helps reduce dryness in sections of the southeast. Much-above-normal temperatures continue across much of the continent.

SOUTH ASIA ... Scattered rain boosts irrigation reserves for heading to filling wheat. Unseasonable showers over southern India help jointing to heading rice.

EASTERN ASIA ... Dryness returns to most Chinese crop areas. Rain continues in Japan and the Korean Peninsula.

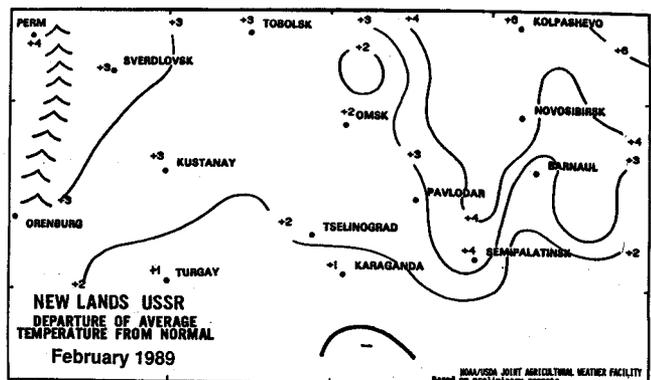
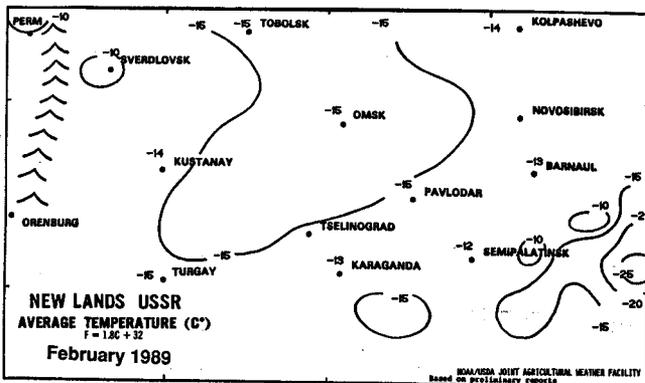
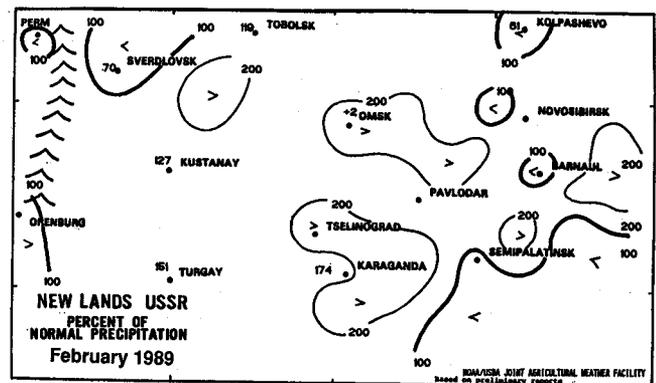
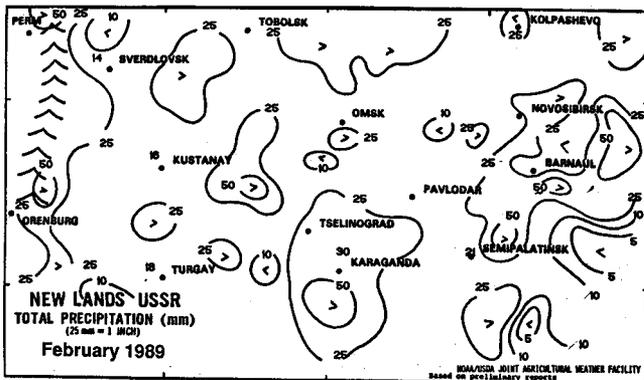
SOUTHEAST ASIA ... Showers and cooler weather improve conditions for Thailand's second rice crop.

SOUTH AMERICA ... Showers fall over Argentina's crop areas as the harvest season begins. In south-central Brazil, rain helps late maturing soybeans in the south, while drier weather favors early harvesting in the north.

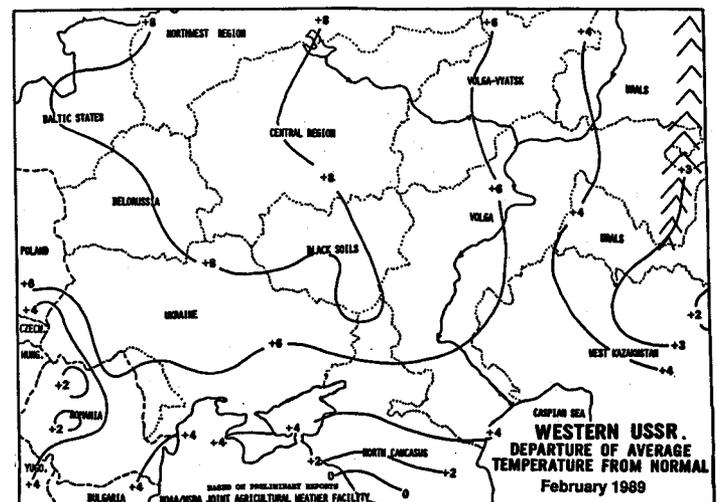
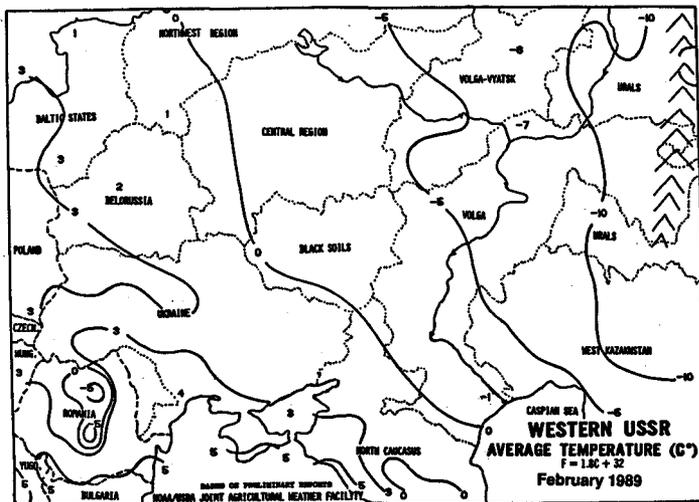
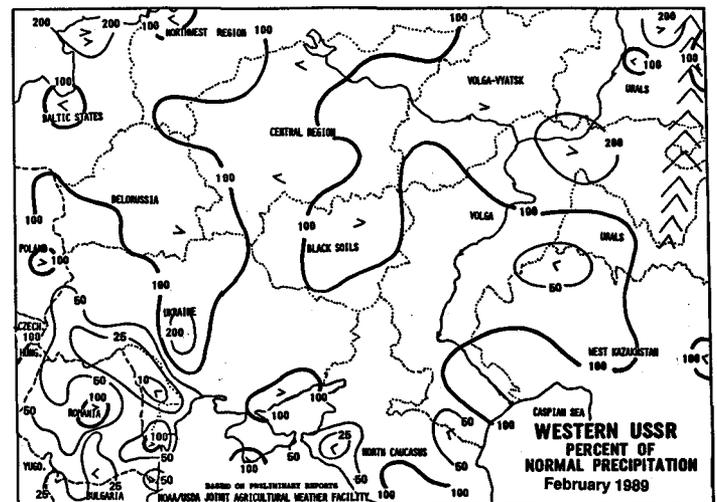
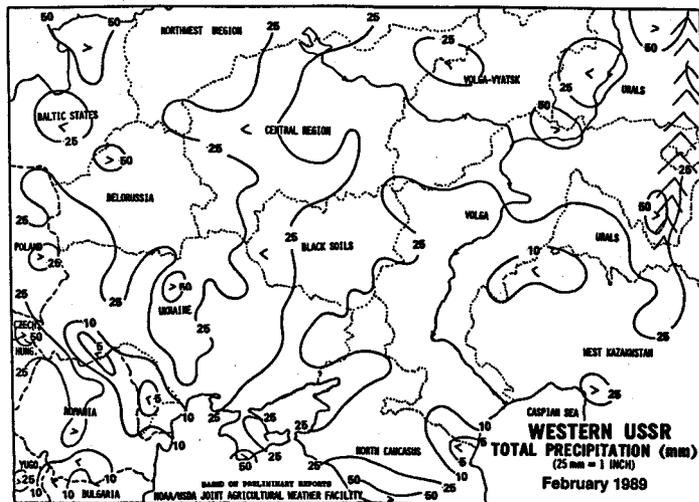
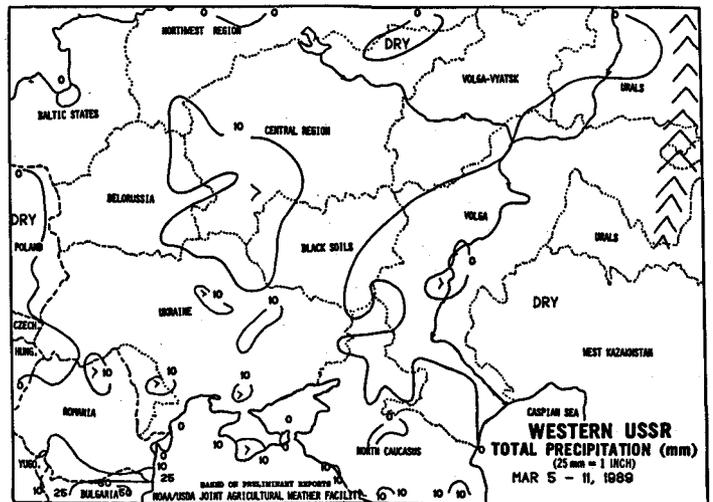
AUSTRALIA ... A tropical disturbance brings rain to much of the northwest. Heavy rain falls across the southeast.

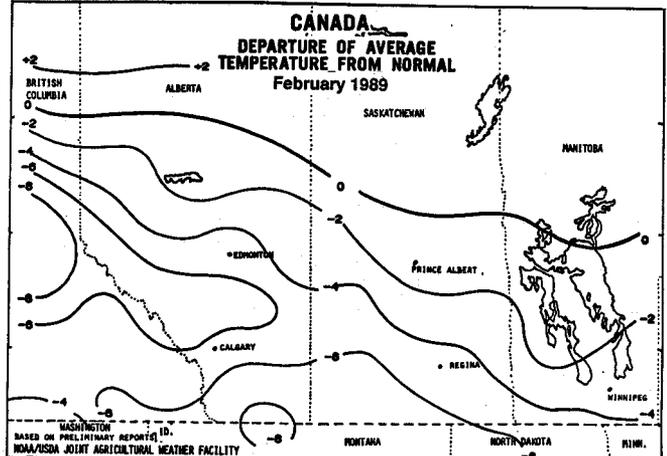
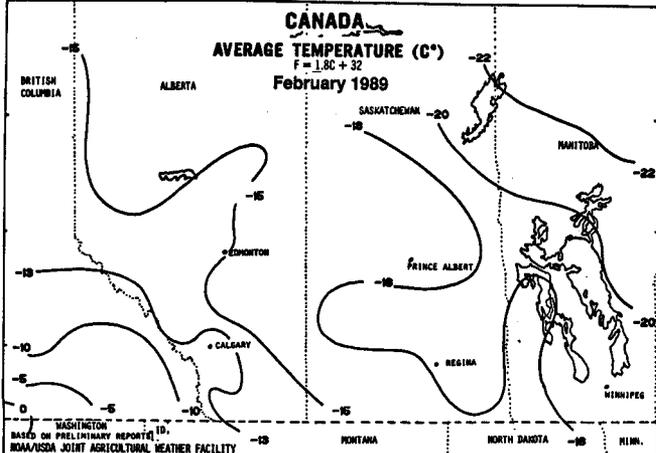
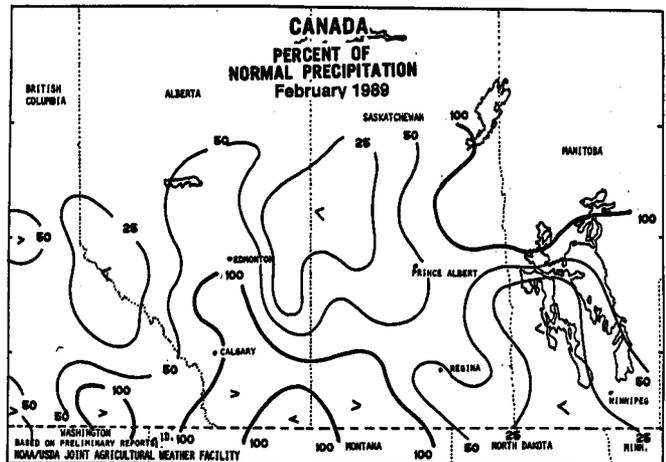
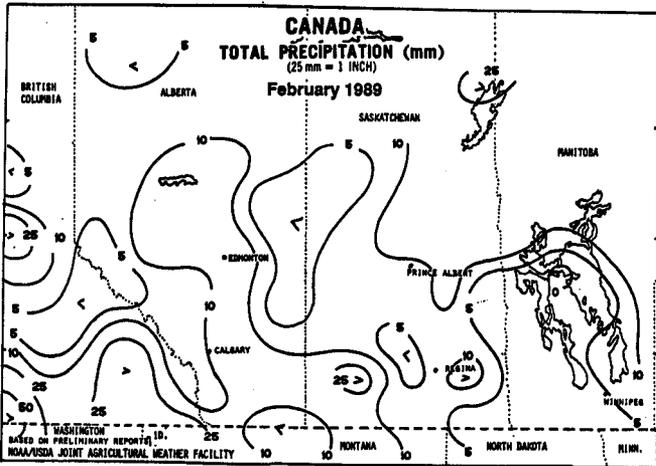
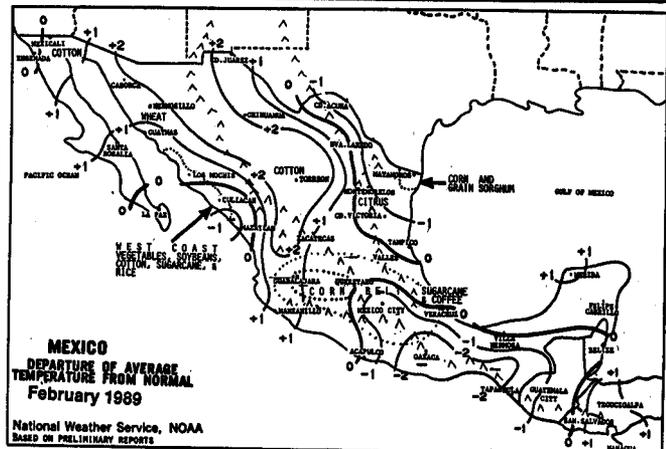
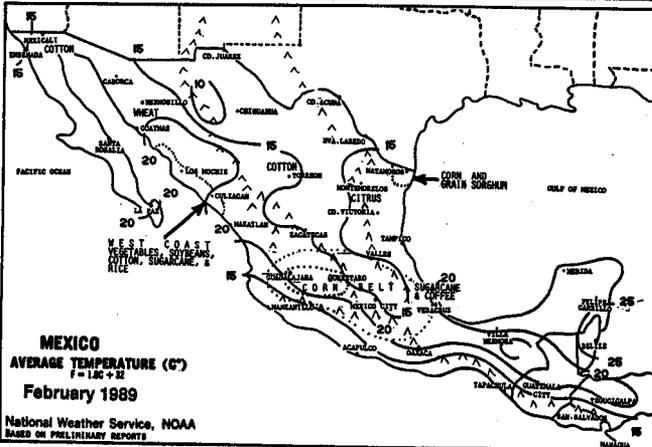
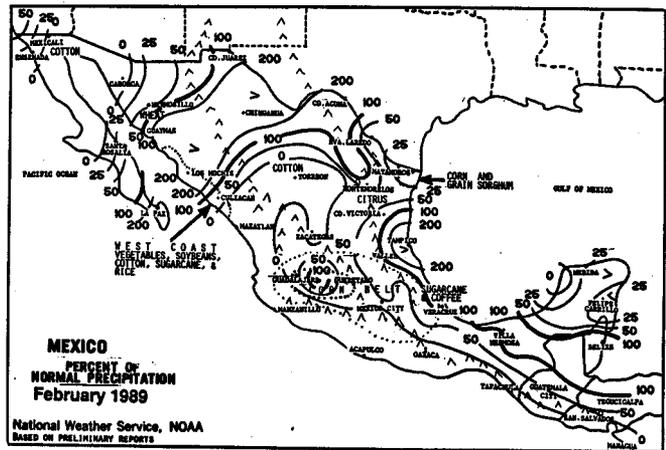
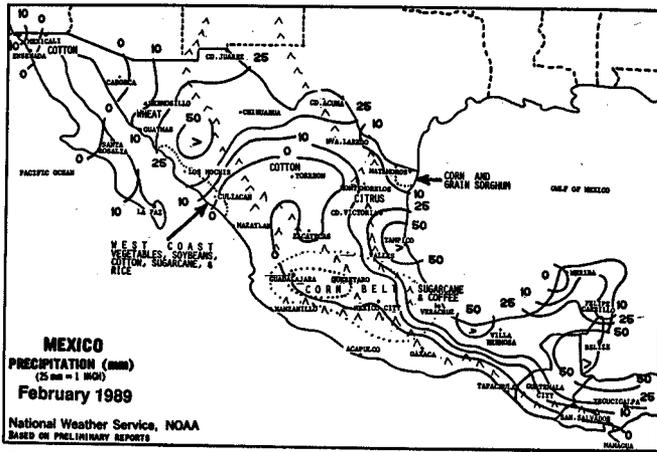
SOUTH AFRICA ... Warmer, drier weather continues, benefiting filling to maturing corn.

NORTHWESTERN AFRICA ... Showers in extreme eastern Algeria and Tunisia bring some relief to winter grains entering reproduction. Dry weather stresses crops over the remainder of the region.

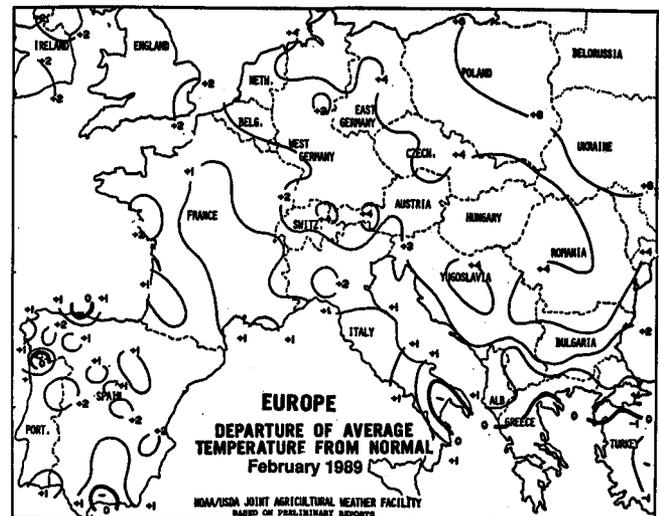
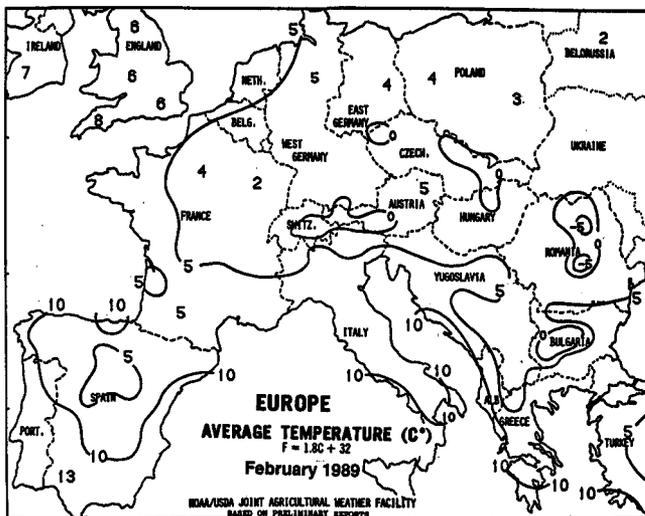
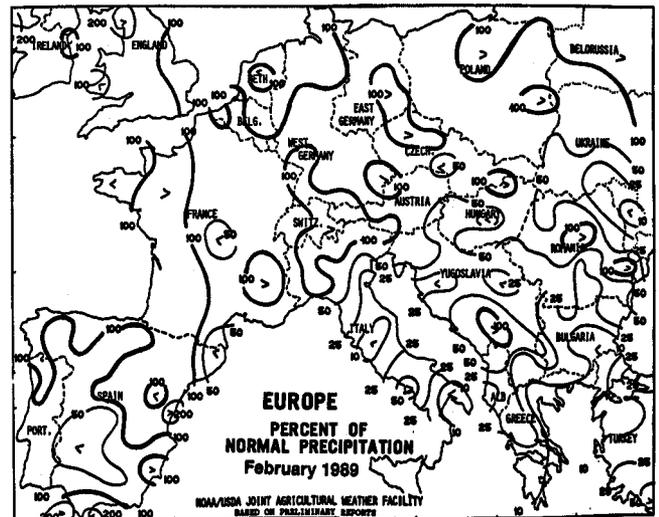
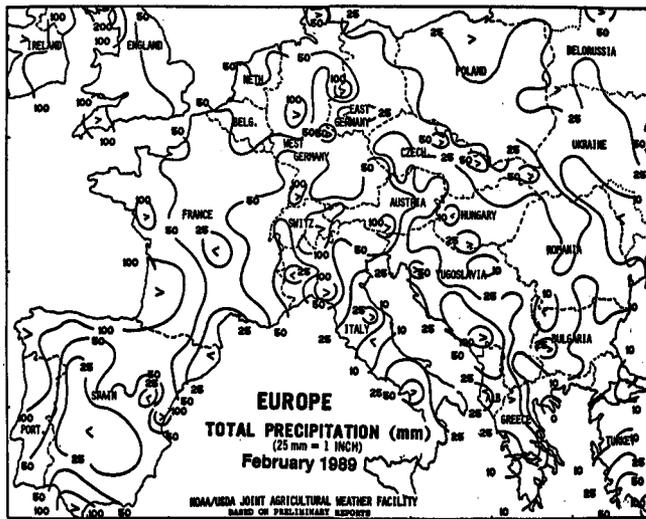
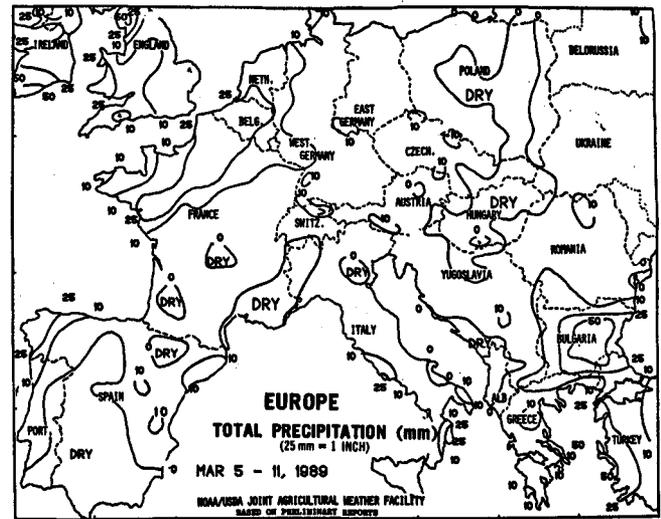


WESTERN USSR ... The twelfth consecutive week of unseasonably warm weather covered most of the region, although the weather was cooler than the previous week. Weekly average temperatures were 3-7 degrees Celsius (C) above normal. The continued mild weather has caused snow cover to retreat northward at earlier than usual dates. As of March 11, the southward extent of sustained snow cover had retreated as far north and east as the western half of the Central Region, the Black Soils Region, and the lower Volga which is about 3-4 weeks earlier than usual. In addition, the warm weather caused winter grains in the southern Ukraine and the central North Caucasus to begin greening 3-4 weeks earlier than usual. Precipitation was generally light (about 2-13mm), with mostly dry weather covering the northern North Caucasus and the Volga. In February, above-normal temperatures covered most of the region. February's precipitation was generally below normal except for the Baltic States, Belorussia, the central Ukraine, the eastern Black Soils Region, and the Volga Vyatsk, where precipitation was above normal.

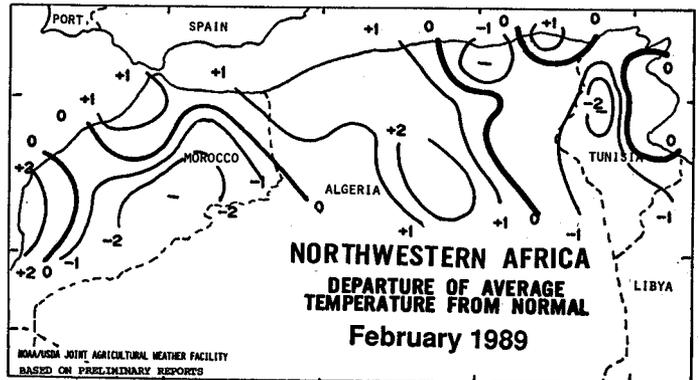
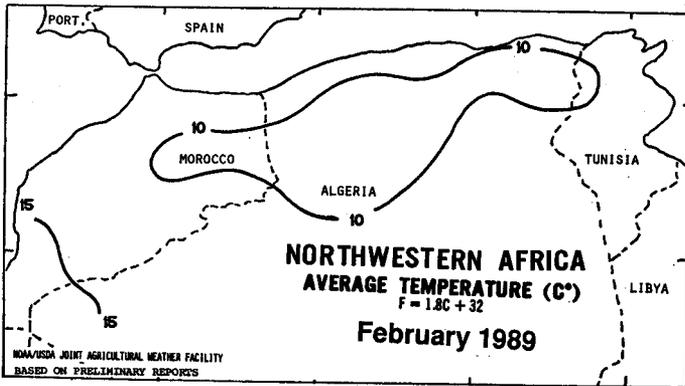
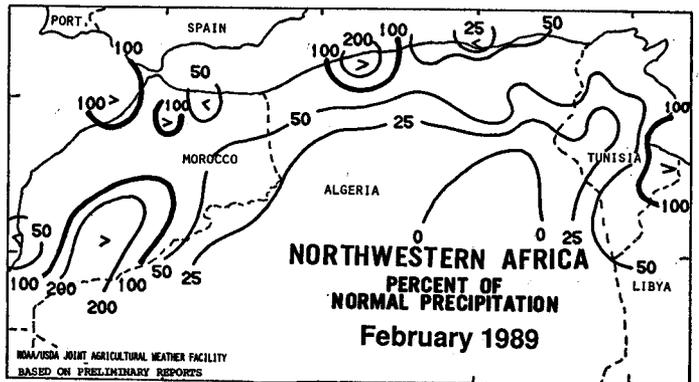
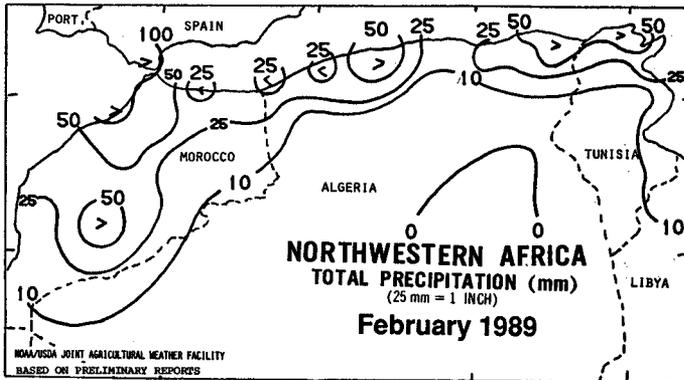
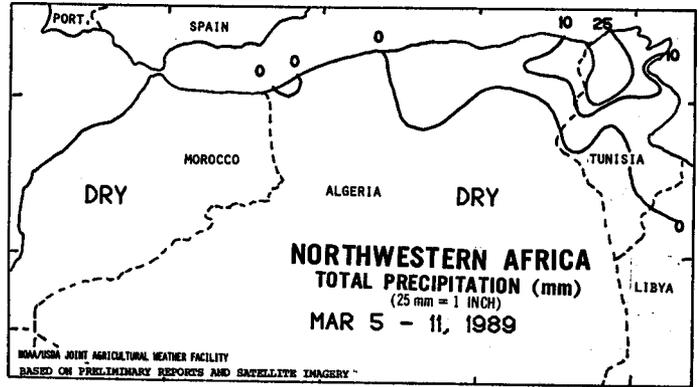




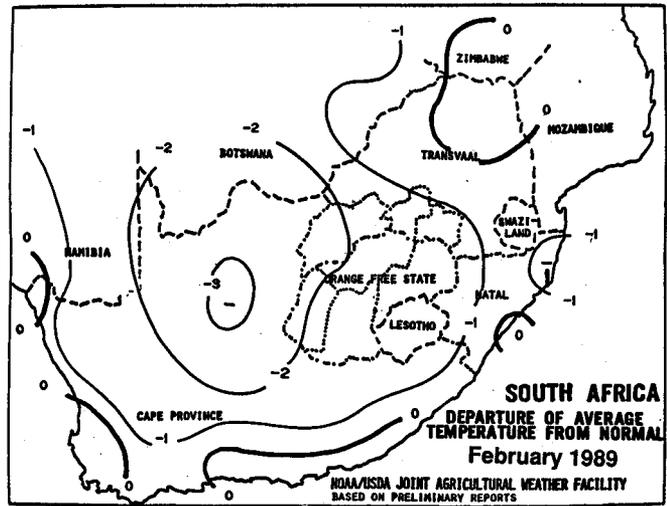
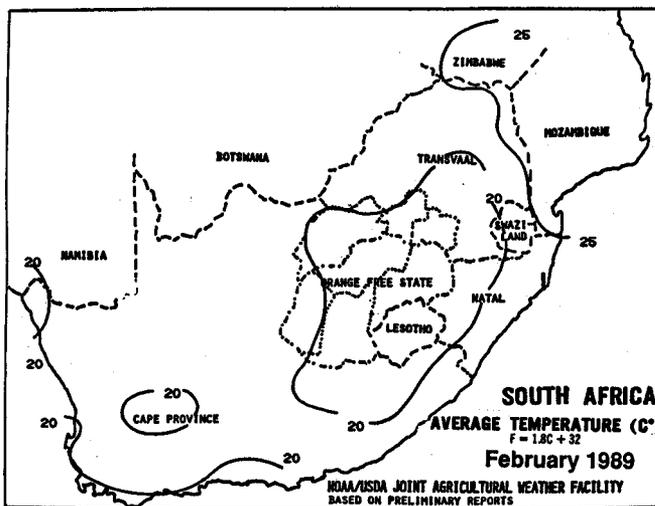
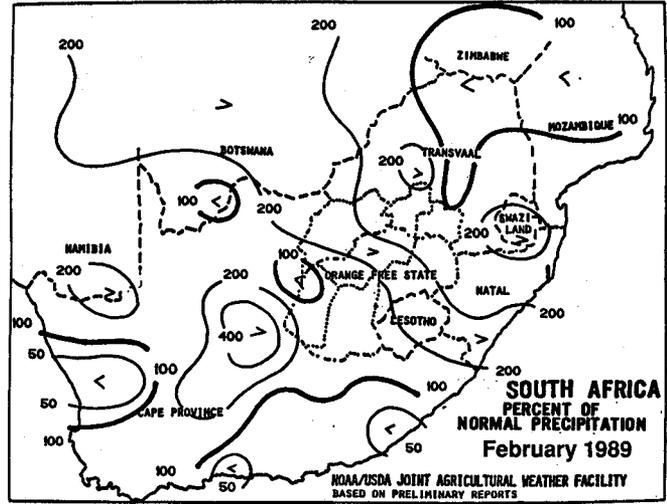
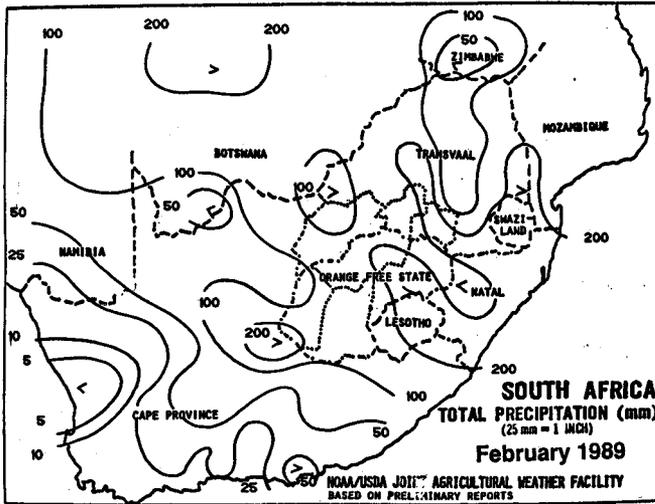
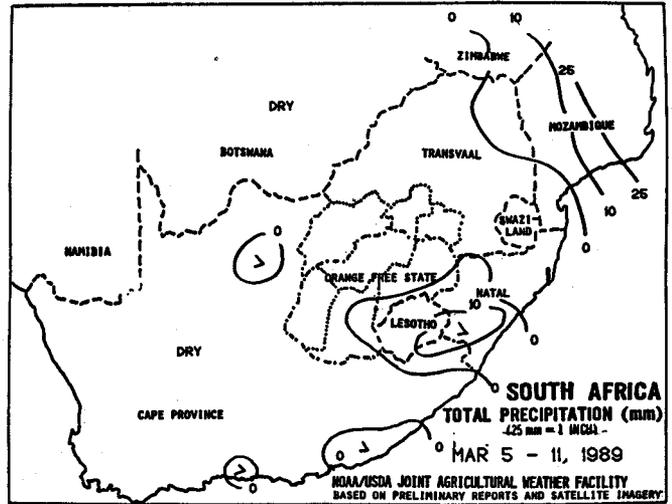
EUROPE ... Moderate to heavy rain (15-40mm) returned late in the week across sections of northern France, Belgium, the Netherlands, and western England. Mostly light rain (less than 10mm) covered the remainder of northern Europe. In the south, moderate to heavy rain (15-60mm) helped reduce dryness in Bulgaria and southern Romania, while light to moderate rain (5-20mm) was scattered across most other southern crop areas. Much above-normal temperatures (as much as 7 degrees C above normal in northern West Germany) covered nearly all of Europe, continuing a trend established early in the winter. The abnormal warm weather has caused winter grains to become actively vegetative ahead of normal and allow some early planting of spring crops in northern and central growing areas. During February, precipitation in Europe was below normal over most crop areas except for the west, where it was normal to above normal.



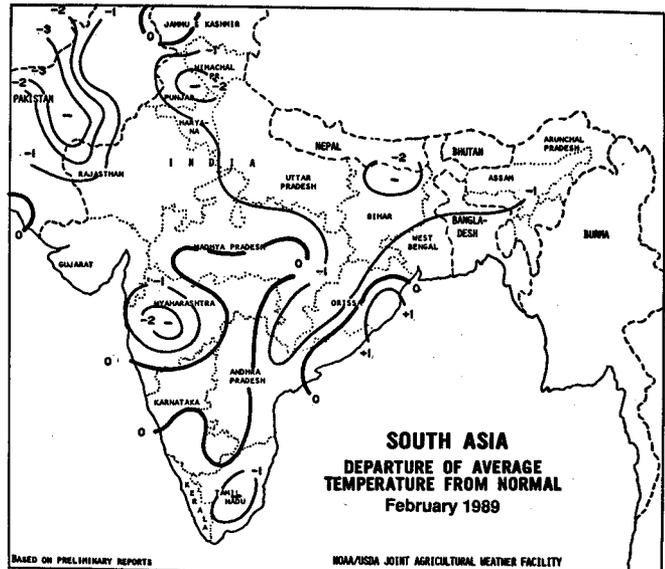
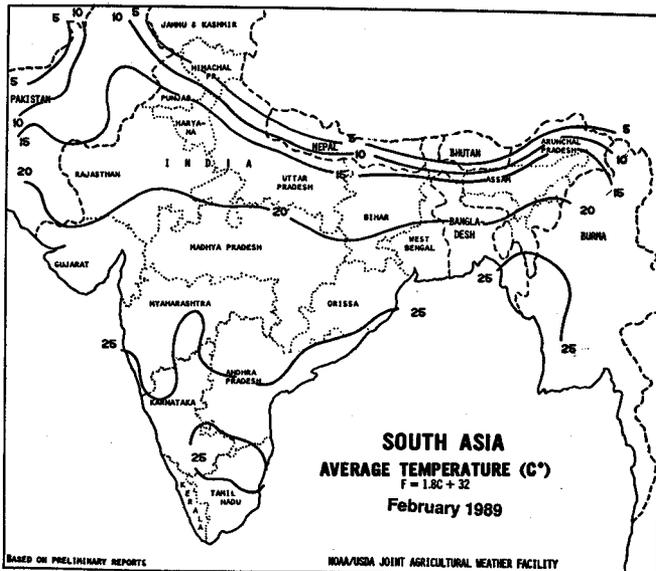
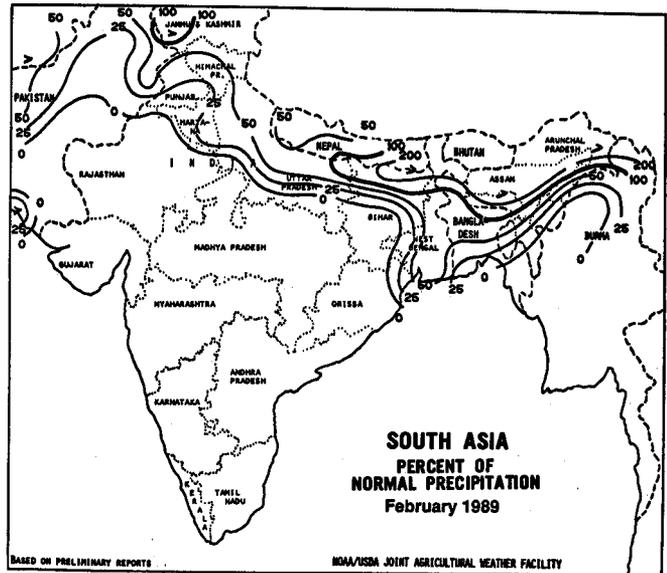
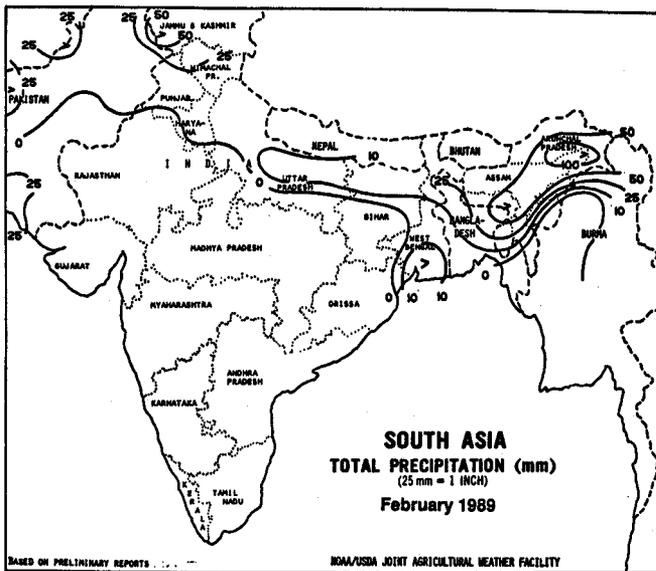
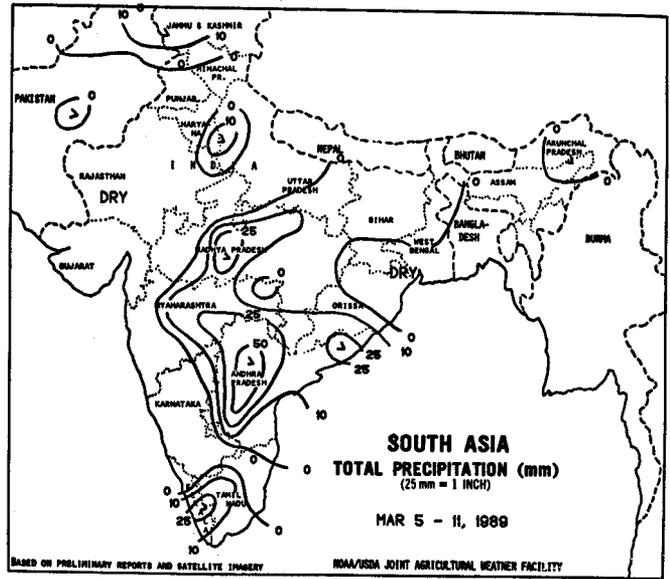
NORTHWESTERN AFRICA ... Late-week widespread rains covered winter grain areas in extreme eastern Algeria and Tunisia, bringing some relief to crops stressed by continued dryness. Rainfall amounts generally ranged from 11 to 30mm, helping to stabilize conditions for winter grains entering the reproductive phase of development. Mostly dry weather covered winter grains in central and western Algeria and Morocco, continuing February's below-normal rainfall pattern in these areas. Weather conditions across northwestern Africa have been the driest in western Algeria, where winter grain areas have received insufficient moisture since the beginning of the growing season. The persistent dryness has likely stunted vegetative growth and has reduced yield prospects. Soil moisture remained unfavorably low over the entire region. As a result, yield prospects for the winter grain crop will be highly dependent on frequent rains in upcoming weeks as the crop advances through reproduction.



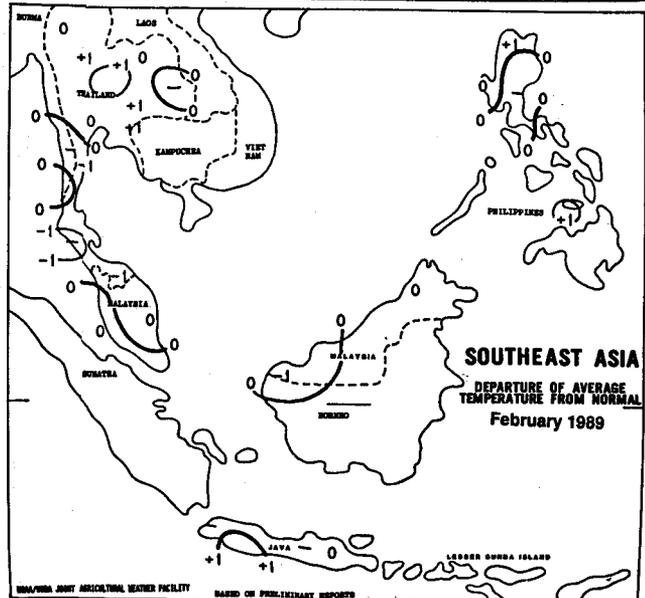
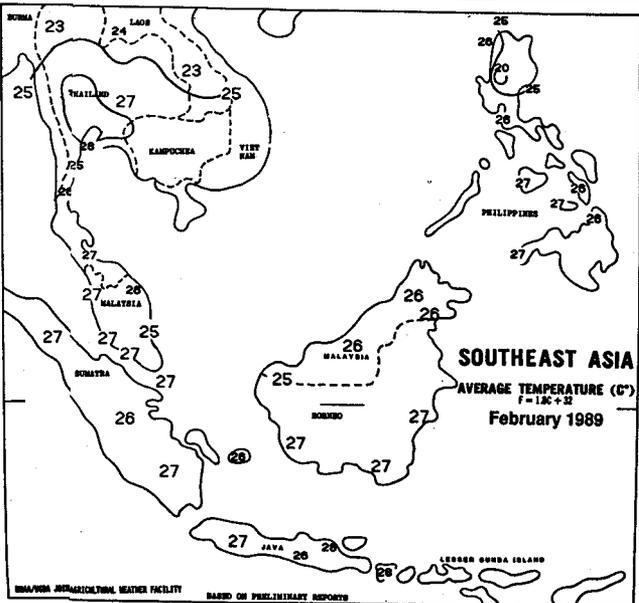
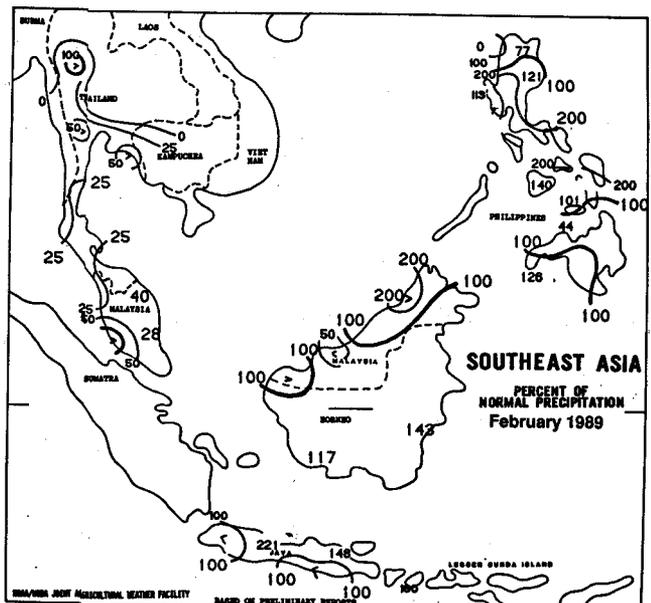
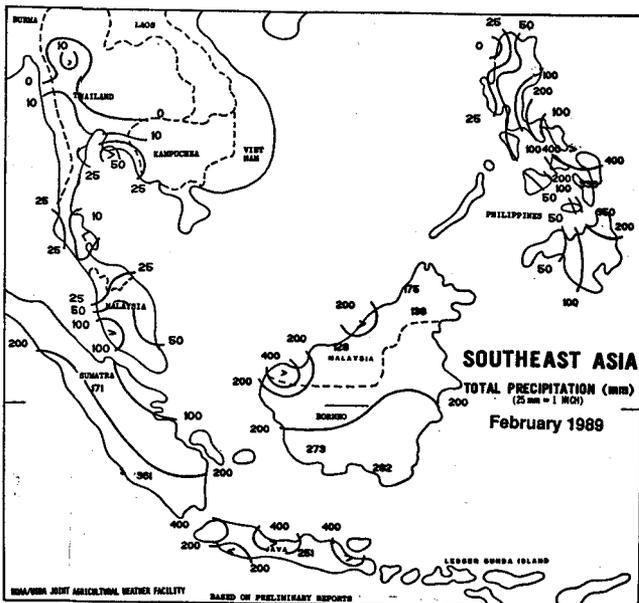
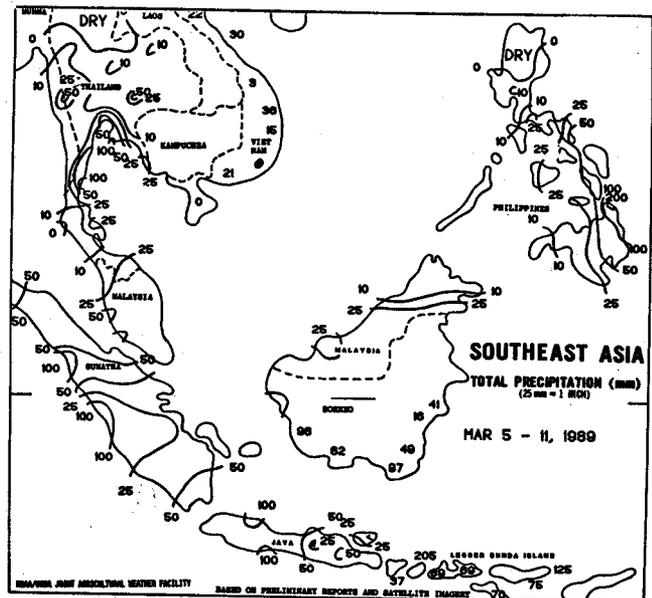
SOUTH AFRICA ... Drier, warmer weather continued across South Africa, improving conditions for filling to maturing corn. No rain fell over the primary corn regions of the Maize Triangle as maximum temperatures averaged 26-30 degrees C, further drying excessively wet fields. Elsewhere, scattered light rain (1-18mm) was limited to southern Natal. In February, rainfall was above normal across the Maize Triangle due to the frequent, widespread showers which maintained adequate to abundant moisture for reproductive to filling corn. Some fields, however, were too wet, especially in the western Maize Triangle, and local flooding was possible. Temperatures averaged 1-3 degrees C below normal across the Triangle, reducing evaporation rates, since high temperatures typically ranged from the middle 20's to lower 30's.



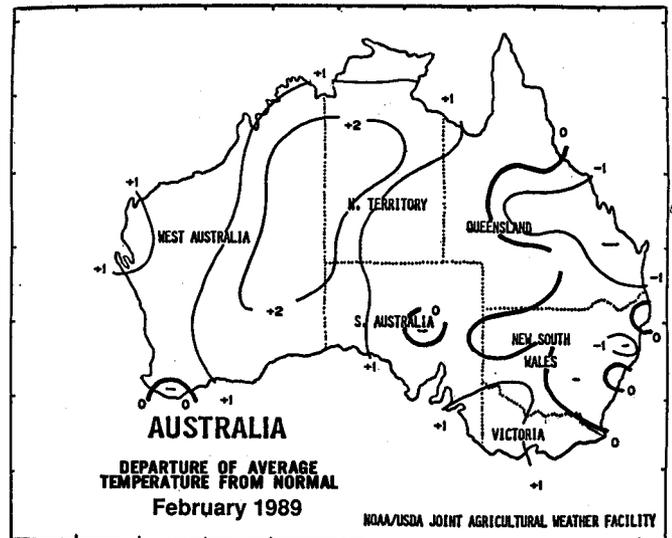
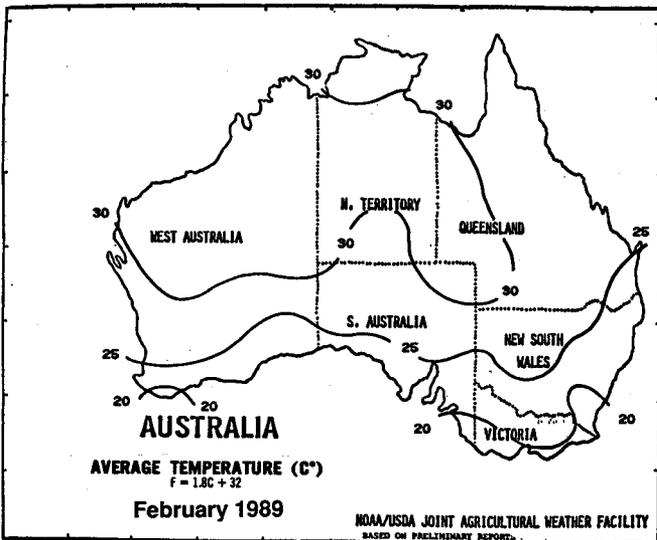
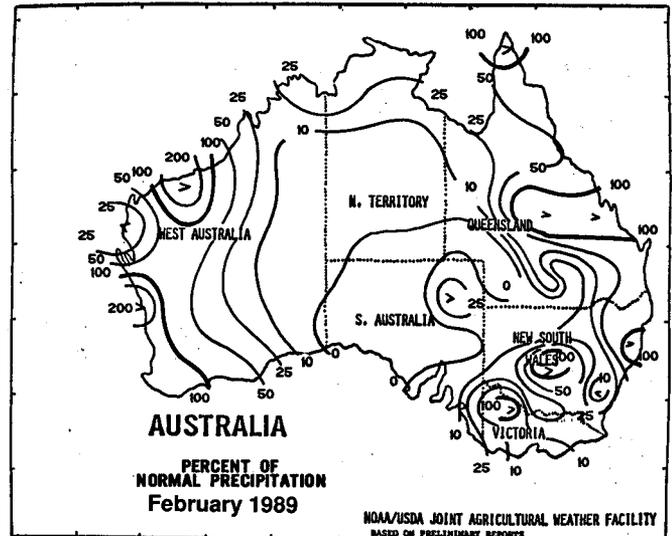
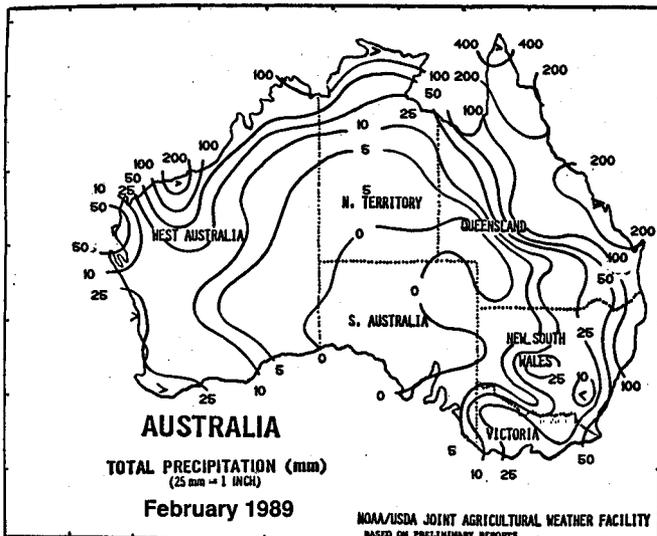
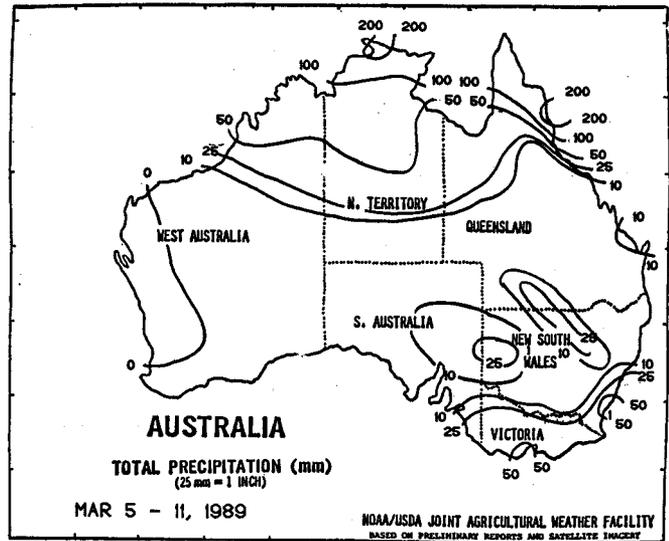
SOUTH ASIA ... Scattered, light to moderate rain (1-17mm) fell over winter wheat regions from northernmost Pakistan to Bihar, boosting irrigation reserves for the filling crop. Scattered, unseasonably heavy showers (10-50mm or more) fell over a large portion of southern India, including most rice areas and improving moisture conditions following more than 2 months of dry weather. Temperatures averaged 1-2 degrees C above normal over the northwest and near to below normal elsewhere, though maximum temperatures continued hot over much of the south. In February, scattered, locally heavy showers (50-100mm or more) fell over India's eastern states, but only light rain covered the northern wheat regions. Irrigation was adequate, however, for heading to filling wheat. Temperatures averaged below normal over most of the north, with coldest weather early in the month slowing crop growth rates. In the south, temperatures generally averaged near normal but became increasingly hotter, with highs exceeding 35 degrees C the latter half of February. Southern India's rice was jointing to heading.



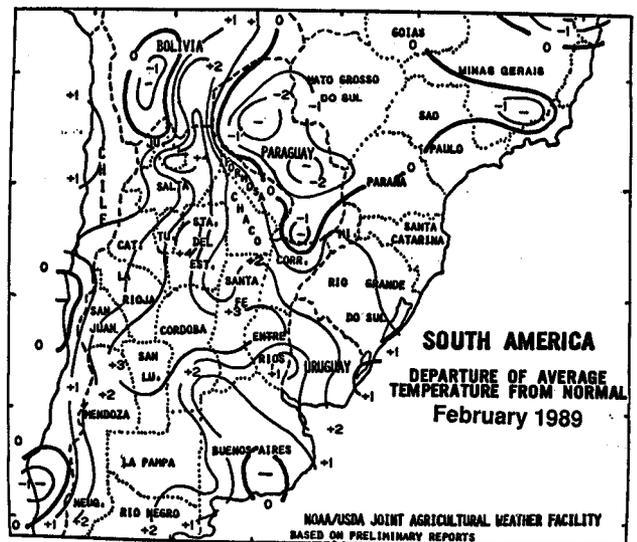
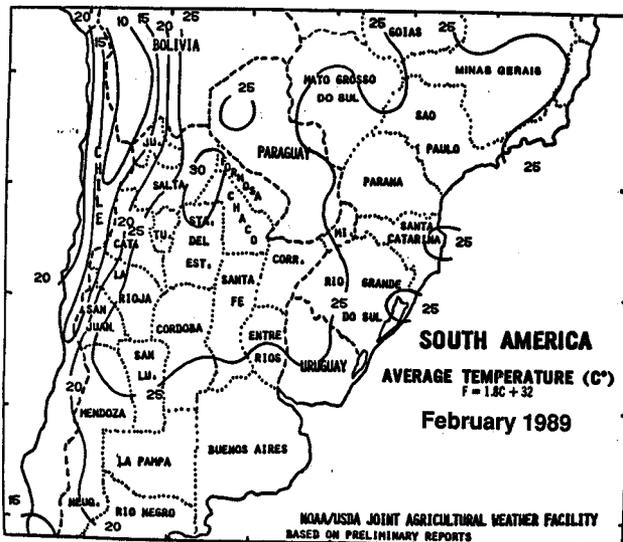
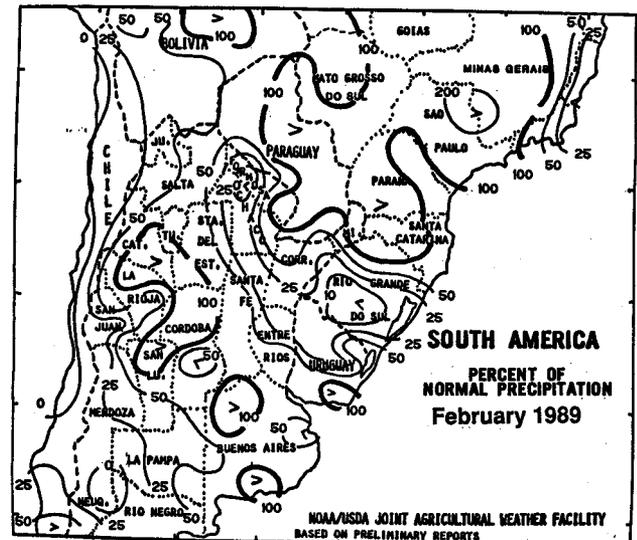
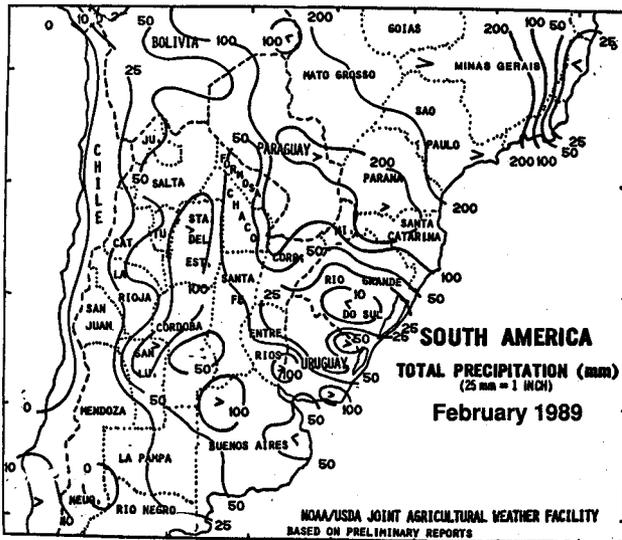
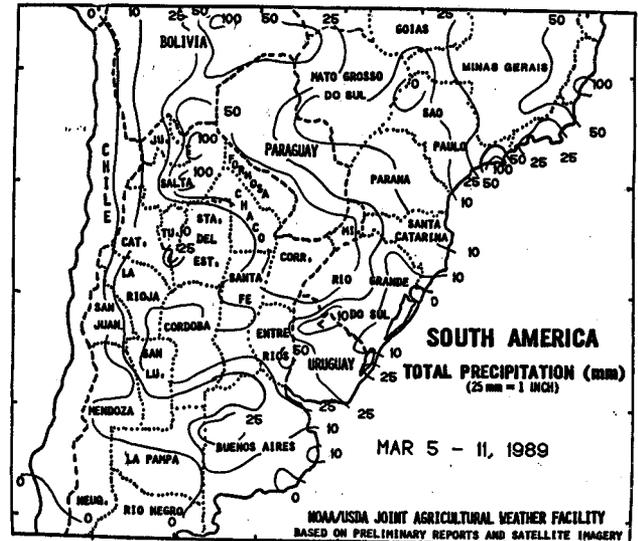
SOUTHEAST ASIA ... Widespread, variable showers (25-50mm or more) continued over Malaysia and Indonesia, maintaining favorable conditions for rice ranging in development from vegetative to filling. Rainfall was lighter than recent weeks over eastern Malaysia but increased over western Malaysia and peninsular Thailand. Rain (10-50mm or more) and cooler weather covered a large area of northern Thailand, improving conditions for secondary rice. Seasonable showers (10-50mm or more) covered all but the northernmost Philippines, with excessive rain (100-203mm) persisting over northeastern Mindanao. In February, rainfall totaled near to above normal over most of Indonesia and Malaysia, maintaining favorable irrigation levels for rice growth but causing local flooding. The east coast of western Malaysia, however, continued drier than normal. Scattered, mostly light rain boosted irrigation reserves for Thailand's secondary rice crop but late month hot weather increased evaporative losses. Near- to above-normal rainfall covered the Philippines, with excessive showers causing local flooding in the east from southern Luzon to northeastern Mindanao.

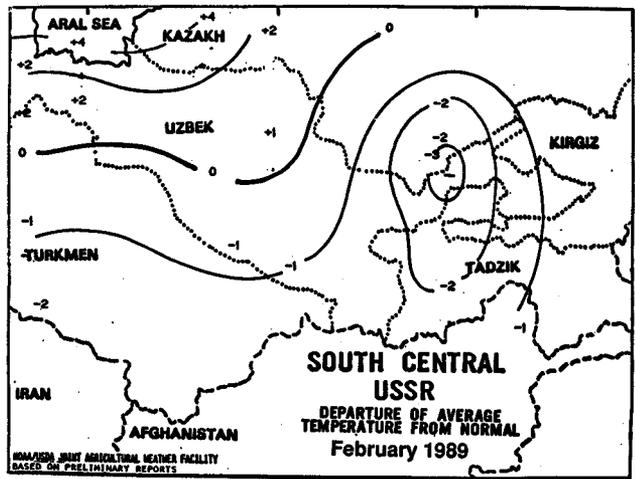
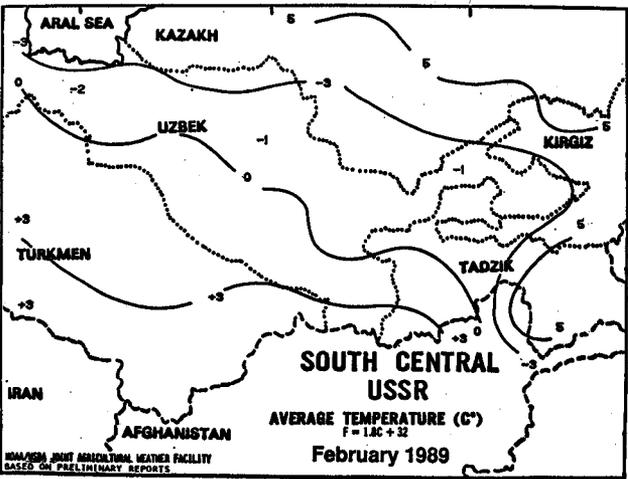
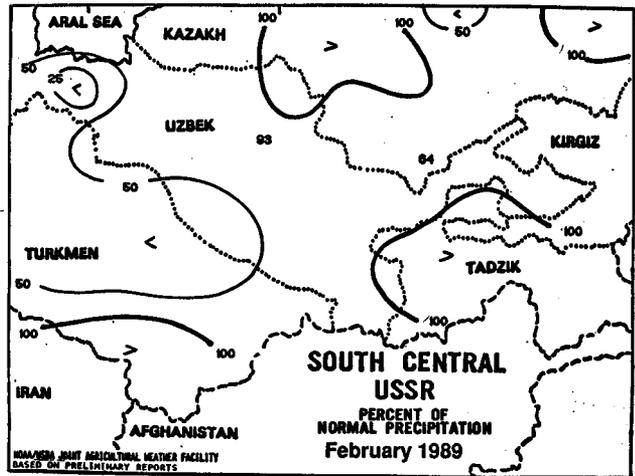
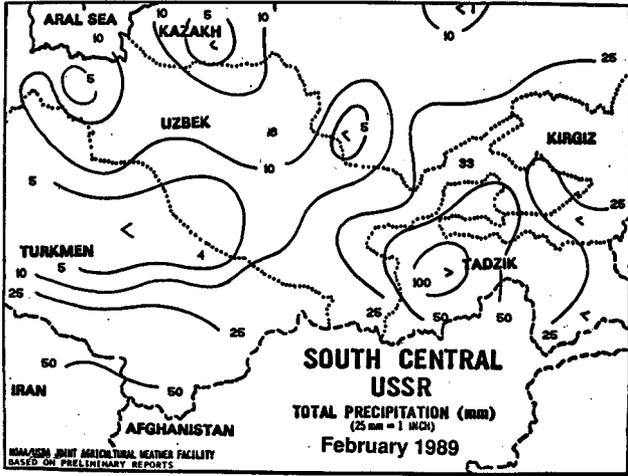


AUSTRALIA ... A weak tropical disturbance moved onshore in northwestern Western Australia on the 11th, spreading heavy rainfall (25-100mm, with isolated amounts in excess of 100mm) to coastal areas and rare heavy rain (25-60mm) to interior sections of Western Australia and Northern Territory. In the south, a slow moving frontal system caused moderate to heavy rain (15-50mm) across much of Victoria and southern New South Wales. Scattered rainfall also benefited rangeland in sections of central Queensland, while most summer crop areas remained dry. Precipitation during February was above normal in crop areas of Western Australia and sections of eastern Queensland, and below normal elsewhere. Temperatures were below normal in eastern summer crop areas and near normal over the remainder of the continent.



SOUTH AMERICA ... In Argentina, showers covered most all crop areas during the week, with highest weekly amounts (50-95mm) in northern cotton areas and lowest rainfall (7mm or less) in northwestern Buenos Aires, extreme southeastern Cordoba, and most of La Pampa. Early summer crop harvesting was slowed by the moisture, but recent rainfall has helped ease the severe moisture deficiency following the extended drought. February rainfall averaged above-normal in northwestern Buenos Aires and northern Cordoba. However, below-average rainfall persisted until early March in southern Cordoba and Santa Fe. In south-central Brazil, substantial showers (25-50mm) fell in western Rio Grande do Sul this past week, improving moisture for late maturing soybeans, following below average February rainfall in the south. Drier weather in Parana, Sao Paulo, and Mato Grosso do Sul favored early crop harvesting, following near to above-normal February rainfall. Parana's soybean harvest lags behind its normal pace due to the drought-delayed start of the growing season.





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(Continued from front cover)

THURSDAY: The storm off the east coast finally moved eastward but not before causing some beach erosion and flooding along the south Atlantic coast. Record-high temperatures were reported throughout the southwest and western Plains. A storm off the Pacific Northwest coast brought high winds and rain to that region.

FRIDAY: The storm in the Northwest produced rain across northern California and the Pacific coast region. Summer-like warmth hit the southwest, Rockies, and the Plains, with at least 34 temperature records for the data tied or broken, including 93° at Dodge City, Kansas, and 97° at Tucson, Arizona.

SATURDAY: The west coast storm continued to bring rain and high winds to the central California coast. Record heat again prevailed across the Southwest and Plain States. Temperatures reached the upper 80's in Kansas and soared into the 90's in Texas and New Mexico. Snow melt from the warm weather caused some flooding and ice jams from the Pacific Northwest to the Midwest. The Northern Plains and Northeast were still experiencing cool temperatures.

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