

WEEKLY WEATHER AND CROP BULLETIN

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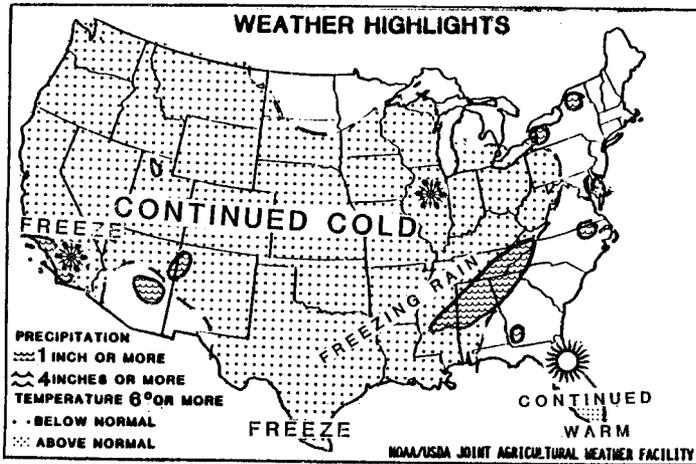
Washington, D.C.

Feb. 14, 1989

National Weather Summary

February 5-11, 1989

INSIDE: International Weather Summaries for January



HIGHLIGHTS: Frigid arctic air remained over much of the Nation. Early in the week, the cold air plunged across southern Texas into northeastern Mexico and covered much of California. Temperatures dropped into the low 20's in the San Joaquin Valley. Warm weather prevailed only along the south Atlantic coast although freezing temperatures penetrated northern Florida. Temperatures returned to above normal in Alaska and began to moderate over the lower 48 States at week's end. Moderate to heavy rain fell only in portions of the Southeast and Southwest. A low pressure system off the California coast spread rain and unusual amounts of snow over that State during the latter part of the week.

SUNDAY: Scattered rain, freezing rain, sleet and snow were widespread over much of the Nation. Temperatures were abnormally low in the Central and Western States. Florida remained in the warm dry air south of the cold front.

MONDAY: The cold arctic air continued to affect much of the Nation as numerous low temperature records were set in the western half of the country. Several stations in Utah broke all-time record lows. Scattered precipitation covered the East with heavy rain from central Mississippi into the southern Appalachians. Freezing rain iced roadways from south-central Texas into the Tennessee Valley. A band of snow covered central Illinois into Kansas. Heavy precipitation fell over west-central Arizona. Southern Georgia and Florida remained warm and dry.

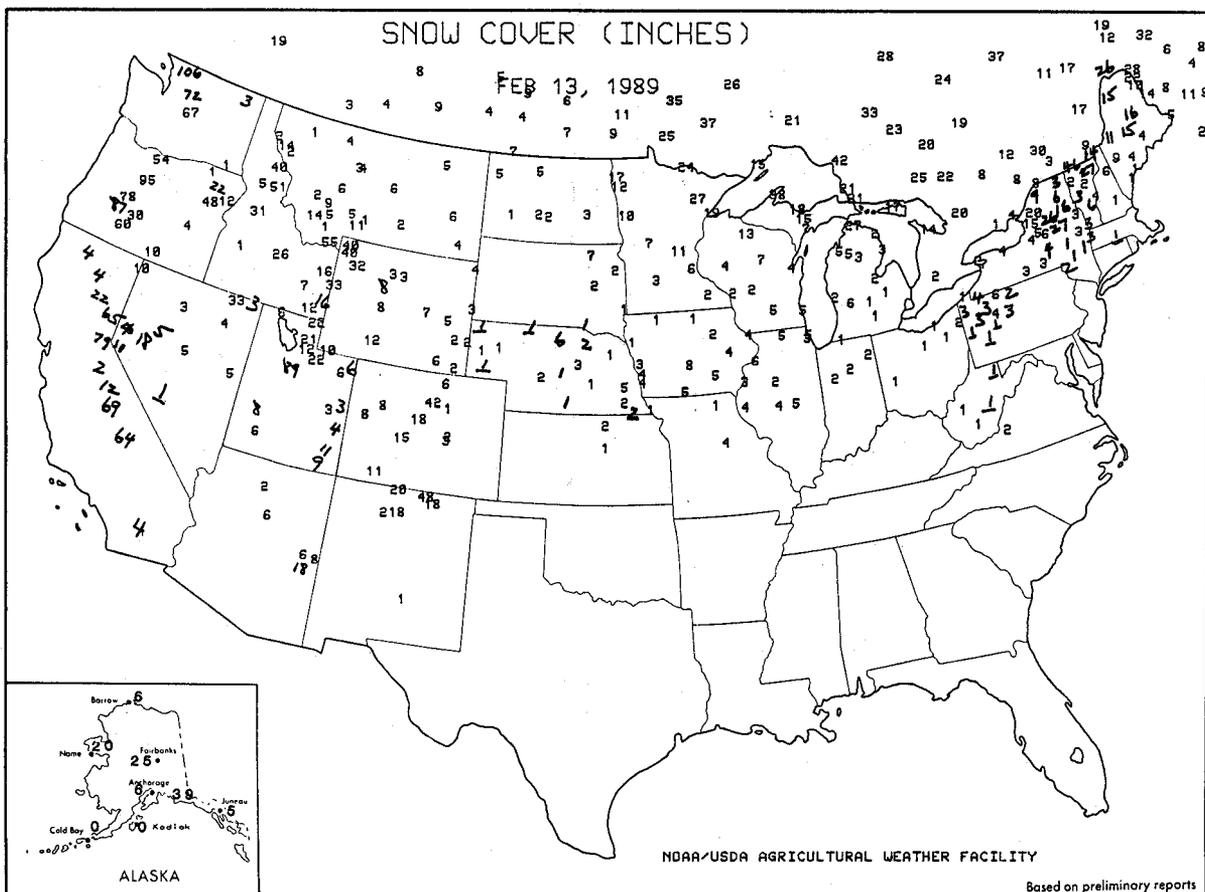
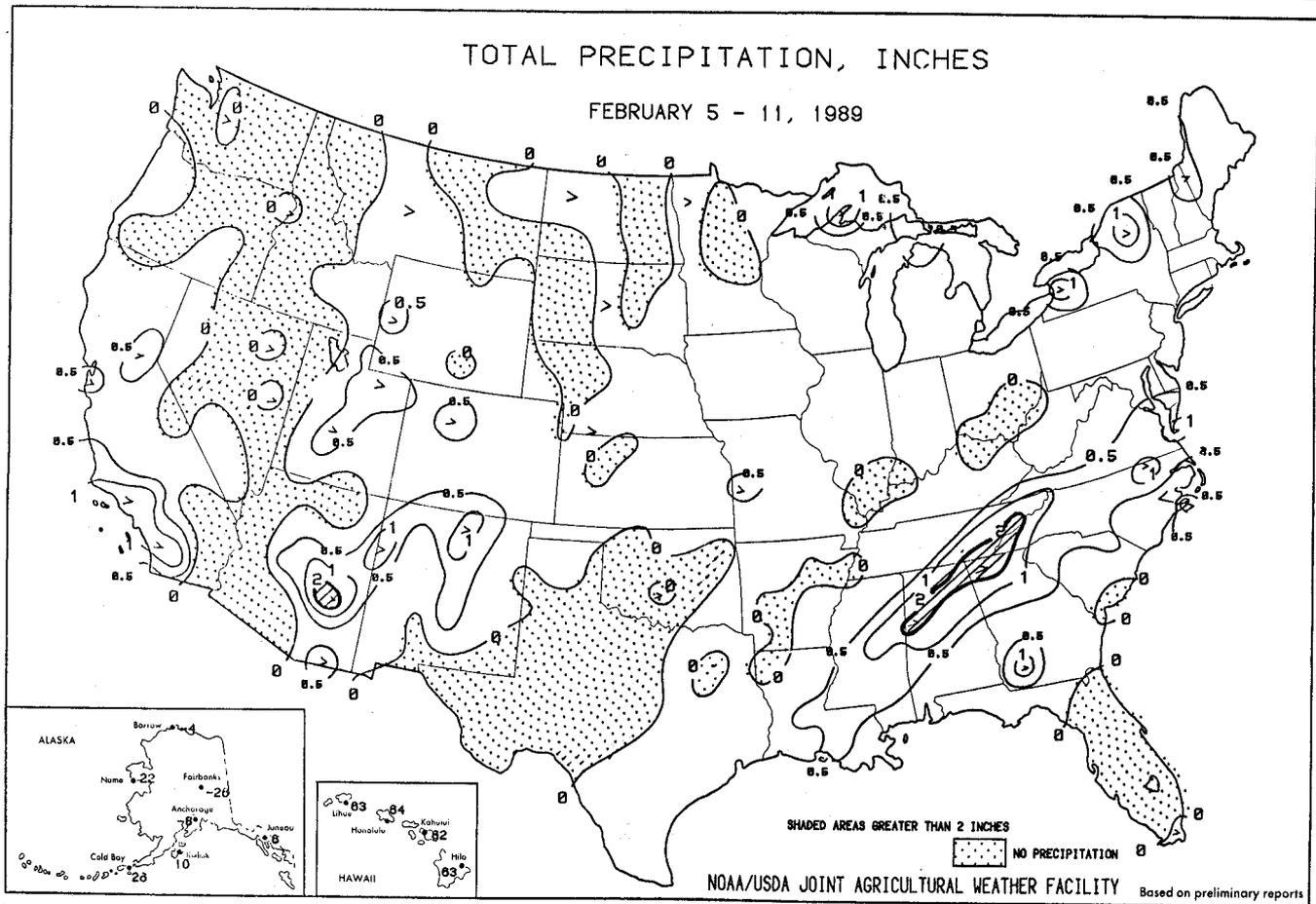
TUESDAY: The cold air extended southward into northeastern Mexico. Brownsville, Texas, had 28 consecutive hours below freezing. Numerous low temperature records were set in California as temperatures dropped well into the 20's throughout much of the State. Showers were scattered along the cold front from northern Florida up to the middle Atlantic coast. Snow continued across the Great Lakes into New England. A cold front curved across the upper Mississippi Valley and northern Plains, bringing high wind, snow, and another blast of cold air.

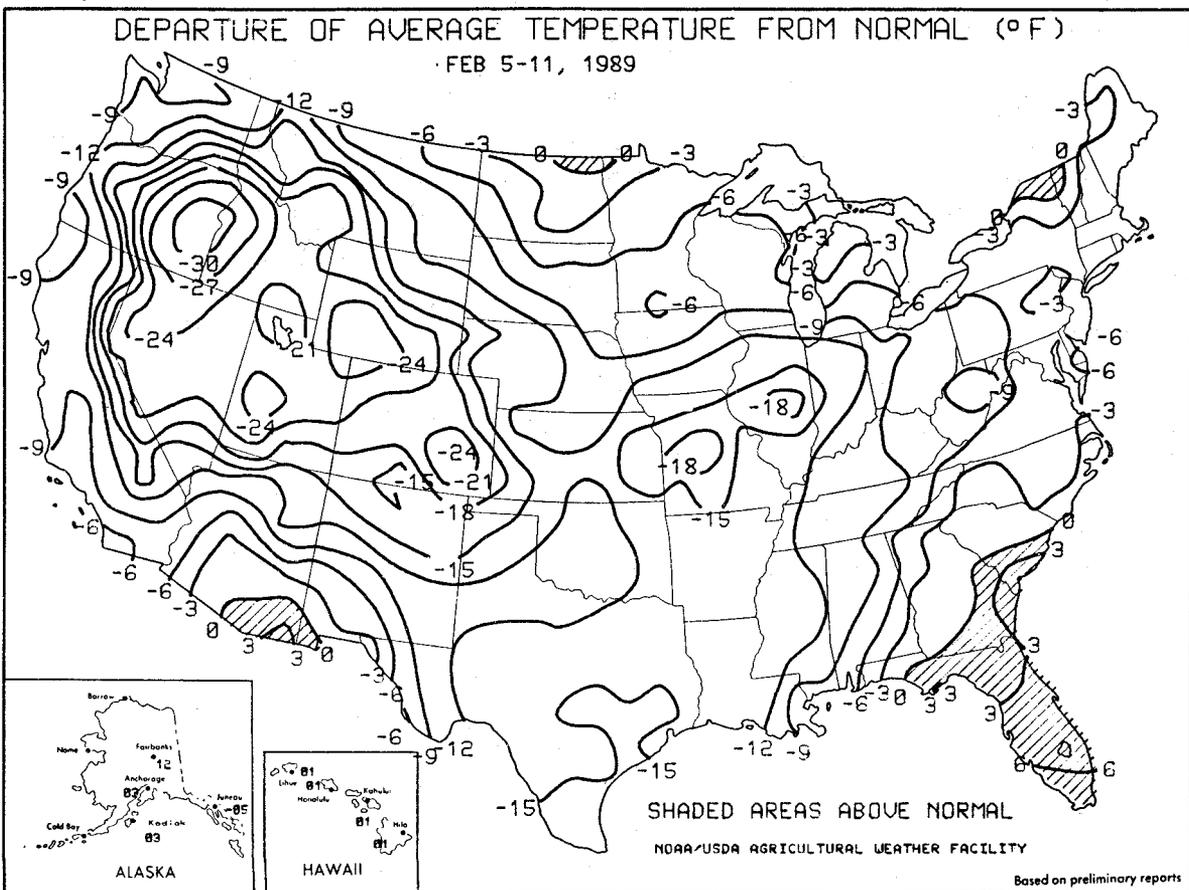
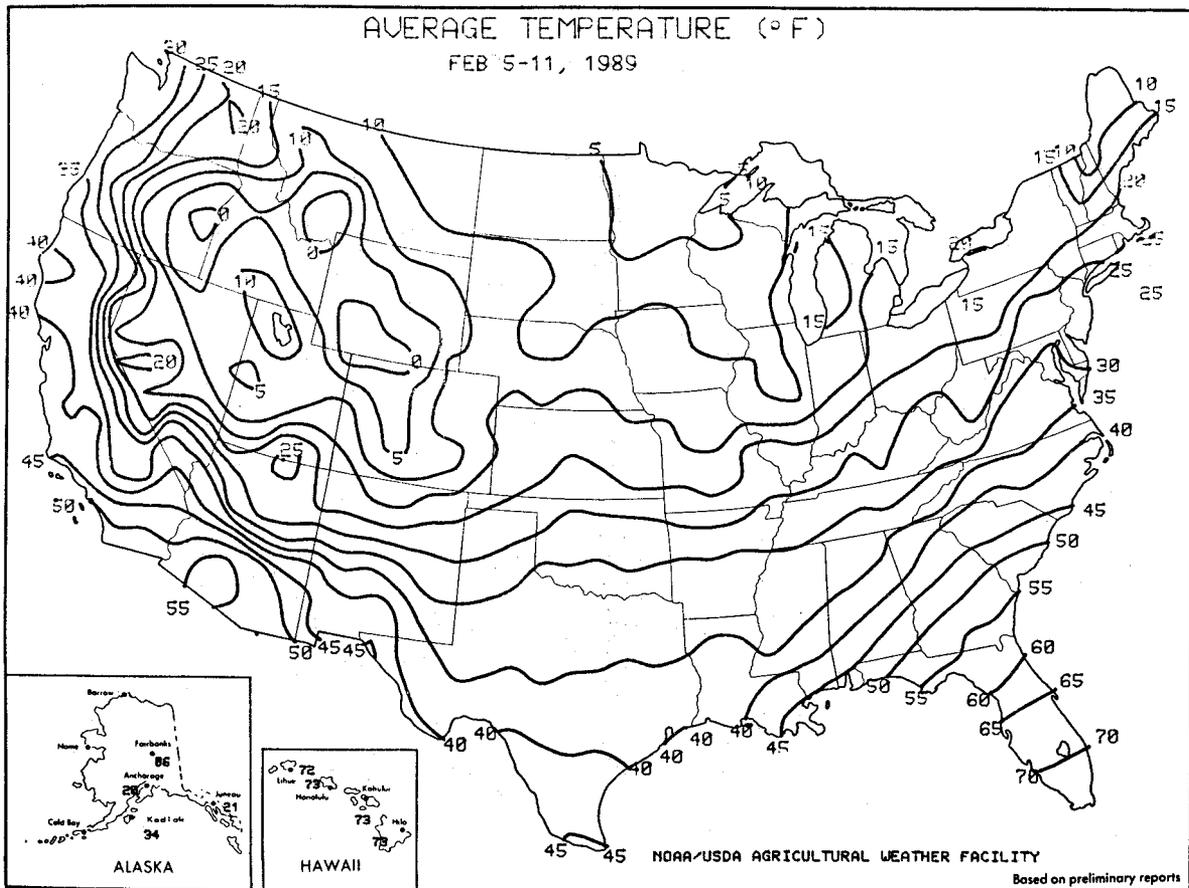
WEDNESDAY: The cold front raced across the East, producing little precipitation but ushering in much lower temperatures and high wind. Gusty wind and heavy snow prevailed across the Great Lakes. A low pressure system off the Pacific coast spread rain and unusual amounts of snow across southern California. A strong arctic high pressure system dominated the Central United States. Fairbanks, Alaska, had a temperature of 17 compared with -51 degrees reported the previous week.

THURSDAY: The low pressure system off the California coast spread rain and snow over that State. Record-low temperatures continued to be set along the West Coast. Clear and calm conditions and a snow cover produced the lowest temperatures of the season in the mid-section of the Nation. Strong westerly winds again caused lake-effect snow across the Great Lakes.

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National Weather Data for Selected Cities

Weather Data for the Week Ending February 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 DEC 1	PCT. NORMAL SINCE DEC 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	43	26	57	16	34	-11	1.0	-1	.4	8.8	74	5.4	77	93	50	0	5	3	0
MOBILE	53	34	64	27	43	-9	T	-1.1	T	3.9	33	2.1	34	83	46	0	3	1	0
MONTGOMERY	50	33	60	22	42	-7	.4	-1.7	.3	6.8	65	2.4	42	85	48	0	4	2	0
AK ANCHORAGE	27	14	36	-8	20	3	T	-1.2	T	1.8	84	.3	28	88	69	0	7	3	0
BARROW	24	6	29	-4	15	34	T	0	T	.4	80	.1	26	95	79	0	7	3	0
FAIRBANKS	17	-5	34	-26	6	12	.3	.2	T	1.3	88	.8	110	90	71	0	7	3	0
JUNEAU	30	13	37	6	21	-5	T	-1.9	T	11.6	119	6.8	132	96	81	0	7	1	0
KODIAK	39	29	41	10	34	3	.6	-1.8	.5	14.1	105	3.1	39	98	76	0	3	3	0
NOME	32	25	33	22	28	25	.5	.4	.1	3.0	182	1.6	159	98	86	0	7	5	0
AZ PHOENIX	65	44	76	33	54	-1	T	-1.1	T	1.3	76	1.2	129	56	26	0	0	0	0
PRESCOTT	47	21	61	6	34	-4	.2	-1.2	.2	2.3	57	1.7	72	77	38	0	5	1	0
TUCSON	67	41	78	31	54	1	.2	.1	.2	1.2	62	1.2	112	74	25	0	1	2	0
YUMA	61	44	75	36	52	-7	0	-1.1	0	.7	85	.6	125	42	22	0	0	0	0
AR FORT SMITH	41	17	62	11	29	-12	T	-1.5	T	7.3	133	5.6	211	81	35	0	7	1	0
LITTLE ROCK	38	20	64	12	29	-13	T	-1.9	T	8.0	83	4.8	90	65	43	0	6	1	0
CA BAKERSFIELD	50	36	64	26	43	-9	T	-1.3	T	1.5	73	.7	47	83	44	0	3	1	0
EUREKA	50	33	55	27	41	-7	.1	-1.2	.1	12.2	79	6.0	65	76	48	0	4	2	0
FRESNO	48	33	58	24	40	-9	.5	0	.2	4.1	93	1.7	59	97	56	0	4	3	0
LOS ANGELES	55	43	59	35	49	-8	1.2	.5	1.0	4.6	81	2.1	51	77	38	0	0	2	1
REDDING	48	31	59	21	40	-10	.2	-1.4	.1	6.1	33	2.4	21	54	26	0	4	2	0
SACRAMENTO	47	30	55	23	39	-11	.6	-2	.4	4.7	57	1.6	31	82	46	0	4	2	0
SAN DIEGO	59	47	64	42	53	-4	.3	-1	.3	3.3	70	1.1	39	75	39	0	0	1	0
SAN FRANCISCO	49	35	55	31	42	-9	.9	0	.5	6.2	64	2.5	42	81	48	0	3	2	1
CO DENVER	27	-2	46	-24	12	-20	.1	0	.1	2.5	202	1.5	208	90	44	0	7	2	0
GRAND JUNCTION	20	0	38	-18	10	-21	T	-1.1	T	2.2	154	2.0	235	88	57	0	7	1	0
PUEBLO	25	-6	52	-24	9	-24	.3	.2	.1	1.2	194	.6	182	95	55	0	7	2	0
CT BRIDGEPORT	31	21	39	17	26	-3	T	-1.7	T	3.1	39	1.5	34	64	46	0	7	0	0
HARTFORD	30	15	39	11	23	-4	.1	-1.7	.1	2.6	30	1.3	27	77	44	0	7	2	0
DC WASHINGTON	40	25	50	18	32	-4	.1	-1.5	.1	4.5	65	3.2	85	75	35	0	7	2	0
FL APALACHICOLA	66	48	77	34	57	3	.1	-1.8	.1	2.5	30	1.3	27	84	46	0	0	1	0
DAYTONA BEACH	74	50	86	37	62	4	T	-1.8	T	7.8	135	6.8	193	92	42	0	0	0	0
JACKSONVILLE	71	45	85	29	58	3	T	-1.9	T	2.9	42	1.7	40	95	36	0	2	0	0
KEY WEST	79	71	82	66	75	5	T	-1.5	T	.7	16	.5	19	86	68	0	0	1	0
MIAMI	82	64	85	57	73	6	0	-1.5	0	.8	17	.7	23	88	52	0	0	0	0
ORLANDO	76	55	84	43	66	5	0	-1.7	0	4.8	92	3.8	116	91	42	0	0	0	0
TALLAHASSEE	65	42	80	24	53	1	.2	-1.1	.2	1.7	15	.6	10	88	42	0	3	1	0
TAMPA	75	55	83	41	65	5	0	-1.7	0	3.2	59	1.5	48	91	43	0	0	0	0
WEST PALM BEACH	80	59	84	52	70	4	0	-1.7	0	2.9	48	1.0	26	92	52	0	0	0	0
GA ATLANTA	49	31	59	21	40	-4	1.0	-1.4	.4	4.8	45	3.6	55	76	44	0	5	3	0
AUGUSTA	57	35	65	17	47	0	.3	-1.6	.3	3.2	36	1.8	34	87	46	0	3	2	0
MACON	57	36	62	19	46	-1	.2	-1.9	.1	4.3	43	2.0	34	84	44	0	3	2	0
SAVANNAH	66	43	81	24	55	4	0	-1.8	0	1.4	20	.5	10	88	37	0	3	0	0
HI HILO	81	65	82	63	73	1	2.1	-1.1	.8	44.4	164	30.9	216	96	62	0	0	4	2
HONOLULU	81	65	85	64	73	1	3.1	2.4	2.4	14.1	170	7.3	151	95	64	0	0	4	2
KAHULUI	80	65	83	62	73	1	.5	-1.2	.3	14.6	181	4.4	84	94	65	0	0	3	0
LIHUE	79	66	81	63	72	1	.5	-1.4	.2	15.1	114	8.2	105	94	68	0	0	4	0
ID BOISE	18	-5	30	-15	6	-28	T	-1.3	T	2.0	59	1.2	57	83	51	0	7	0	0
LEWISTON	23	8	36	-5	16	-21	0	-1.2	0	2.2	72	1.7	94	85	57	0	7	0	0
POCATELLO	15	-6	32	-21	5	-24	.1	-1	0	2.3	97	1.1	78	84	63	0	7	3	0
IL CHICAGO	20	3	32	-4	11	-12	.1	-1.2	.1	3.5	80	1.1	54	82	58	0	7	1	0
MOLINE	21	0	32	-6	11	-13	.1	-1.2	.1	3.2	82	1.7	81	81	58	0	7	1	0
PEORIA	19	2	31	-6	11	-14	.1	-1.2	.1	3.5	87	1.3	63	86	59	0	7	1	0
QUINCY	21	4	32	-4	12	-15	.1	-1.2	0	2.7	77	.8	44	86	58	0	7	2	0
ROCKFORD	18	-1	30	-7	9	-13	.1	-1.2	.1	2.7	73	.9	51	83	62	0	7	1	0
SPRINGFIELD	19	-2	31	-11	9	-18	.2	-1.2	.1	4.6	108	1.4	63	84	60	0	7	2	0
IN EVANSVILLE	30	14	47	8	22	-11	T	-1.7	T	8.3	110	5.5	135	81	49	0	7	0	0
FORT WAYNE	19	5	32	-2	12	-13	.2	-1.3	.2	4.8	92	2.4	84	83	64	0	7	2	0
INDIANAPOLIS	24	7	37	0	15	-13	.1	-1.5	.1	4.8	74	2.3	65	83	57	0	7	1	0
SOUTH BEND	20	7	32	-1	13	-12	.2	-1.3	.2	4.8	79	1.9	59	87	62	0	7	3	0
IA DES MOINES	22	-1	35	-9	11	-12	T	-1.2	T	2.4	101	1.5	115	83	59	0	7	1	0
SIOUX CITY	27	0	46	-9	14	-8	.1	-1.1	.1	1.7	102	1.1	122	86	52	0	7	1	0
WATERLOO	20	-2	33	-12	9	-9	.1	-1.2	T	1.7	77	1.2	109	88	64	0	7	1	0
KS CONCORDIA	31	8	53	-4	19	-10	.1	-1.1	.1	1.3	83	.7	77	76	42	0	7	1	0
DODGE CITY	32	6	57	-10	19	-14	T	-1.1	T	.4	36	.3	50	79	37	0	7	2	0
GOODLAND	33	5	63	-11	19	-12	T	-1.1	T	.7	86	.2	52	78	34	0	7	1	0
TOPEKA	27	1	49	-10	14	-16	.2	-1.1	.1	2.3	92	1.4	116	88	49	0	7	2	0
WICHITA	33	9	54	-1	21	-12	.1	-1.1	.1	1.4	73	.8	93	78	36	0	7	1	0
KY BOWLING GREEN	34	17	53	9	25	-10	T	-1.9	T	15.0	141	8.7	143	89	57	0	7	1	0
LEXINGTON	33	15	50	5	24	-9	T	-1.8	T	9.2	107	5.5	116	81	45	0	7	0	0
LOUISVILLE	33	16	51	8	25	-10	T	-1.7	T	9.3	117	5.8	129	77	44	0	7	1	0
LA ALEXANDRIA	45	31	62	25	38	-14	.4	-1.7	.3	13.8	125	8.1	129	75	52	0	4	2	0
BATON ROUGE	49	32	66	29	41	-12	.8	-1.5	.7	12.9	112	4.8	73	88	54	0	3	2	1
LAKE CHARLES	46	32	58	27	39	-13	.4	-1.5	.4	9.9	90	5.1	85	84	53	0	4	2	0
NEW ORLEANS	52	37	63	34	45	-9	T	-1.3	T	6.4	53	2.5	36	87	55	0	0	1	0

Based on 1951-80 normals

Weather Data for the Week Ending February 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 Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	44	25	68	20	35	-14	T	-1	T	12.7	136	7.9	147	87	46	0	6	0	0
ME CARIBOU	20	-4	25	-18	8	-4	T	-1	T	3.3	53	2.3	74	93	61	0	7	2	0
PORTLAND	28	9	34	5	18	-3	T	-1	T	2.8	29	1.6	32	74	43	0	7	2	0
MD BALTIMORE	39	22	49	15	30	-3	T	-1	T	4.8	64	3.8	92	84	41	0	7	1	0
SALISBURY	37	20	45	10	29	-7	T	-1	T	2.9	35	2.2	48	89	51	0	7	2	0
MA BOSTON	31	18	38	13	25	-5	T	-1	T	1.9	19	.9	16	66	39	0	7	7	0
CHATHAM	32	20	38	13	26	-4	T	-1	T	3.4	31	2.1	34	76	50	0	7	4	0
MI ALPENA	23	7	31	-4	15	-2	T	-1	T	2.8	67	1.5	69	87	47	0	7	2	0
DETROIT	23	10	35	3	17	-8	T	-1	T	3.5	71	1.5	62	87	58	0	7	4	0
FLINT	22	8	33	-1	15	-7	T	-1	T	2.7	67	1.5	70	85	59	0	7	2	0
GRAND RAPIDS	22	8	31	-4	15	-8	T	-1	T	3.3	65	1.4	56	90	66	0	7	5	0
HOUGHTON LAKE	20	6	28	-1	13	-4	T	-1	T	3.0	79	1.2	59	90	60	0	7	4	0
LANSING	22	6	32	-2	14	-7	T	-1	T	2.6	57	1.4	64	87	60	0	7	3	0
MARQUETTE	17	-3	27	-15	7	-6	T	-1	T	4.9	96	2.6	95	95	62	0	7	5	0
MUSKOGON	26	15	33	8	20	-3	T	-1	T	4.8	86	2.0	66	87	63	0	7	6	0
SAULT ST. MARIE	20	-1	27	-17	10	-4	T	-1	T	7.0	130	3.4	119	90	59	0	7	4	1
MN ALEXANDRIA	15	-7	32	-18	4	-6	T	-1	T	1.1	59	.7	63	88	65	0	7	0	0
DULUTH	14	-7	28	-22	4	-6	T	-1	T	3.0	111	1.9	130	82	56	0	7	1	0
INT'L FALLS	14	-10	28	-25	2	-3	T	-1	T	2.2	110	1.5	131	87	62	0	7	2	0
MINNEAPOLIS	18	-3	35	-15	8	-8	T	-1	T	1.6	83	.9	86	83	57	0	7	1	0
ROCHESTER	19	-3	32	-15	8	-6	T	-1	T	1.7	87	.6	53	86	64	0	7	3	0
MS GREENWOOD	39	23	61	20	31	-14	T	-1	T	12.1	98	6.7	98	88	53	0	7	2	0
JACKSON	42	27	64	24	34	-13	T	-1	T	10.1	84	5.3	80	93	61	0	7	2	0
MERIDIAN	44	28	63	23	36	-12	T	-1	T	12.6	102	5.1	77	92	54	0	6	3	1
MO CAPE GIRARDEAU	32	14	50	8	23	-	T	-1	T	10.2	133	7.3	186	79	45	0	7	0	0
COLUMBIA	22	3	38	-7	13	-19	T	-1	T	5.4	124	2.0	84	86	55	0	7	2	0
KANSAS CITY	26	6	44	-3	16	-16	T	-1	T	2.0	66	1.2	74	92	59	0	7	2	0
SAINT LOUIS	27	10	42	2	19	-13	T	-1	T	6.4	137	3.1	127	76	44	0	7	2	0
SPRINGFIELD	30	10	47	1	20	-14	T	-1	T	5.1	105	2.0	85	79	50	0	7	1	0
MT BILLINGS	22	3	41	-19	13	-14	T	-1	T	2.1	105	1.6	126	67	47	0	7	1	0
GLASGOW	18	-4	26	-19	7	-6	T	-1	T	1.1	132	.7	134	90	64	0	7	2	0
GREAT FALLS	23	4	34	-7	14	-12	T	-1	T	2.2	104	1.2	92	82	57	0	7	2	0
HAVRE	21	-1	28	-17	10	-9	T	-1	T	.6	46	.1	17	87	60	0	7	0	0
HELENA	6	-13	17	-22	-4	-28	T	-1	T	2.0	134	1.6	193	87	70	0	7	2	0
KALISPELL	21	-4	30	-10	9	-16	T	-1	T	3.7	102	1.4	68	85	53	0	7	0	0
MILES CITY	19	-3	28	-19	8	-12	T	-1	T	1.6	113	1.0	123	72	49	0	7	0	0
MISSOULA	21	1	34	-11	11	-16	T	-1	T	1.5	52	.8	44	86	52	0	7	0	0
NE GRAND ISLAND	29	-1	51	-15	14	-11	T	-1	T	1.1	80	.8	114	81	48	0	7	1	0
LINCOLN	29	-1	50	-11	14	-10	T	-1	T	1.8	112	1.2	129	83	51	0	7	1	0
NORFOLK	27	0	47	-12	13	-8	T	-1	T	2.4	181	1.5	211	82	48	0	7	1	0
NORTH PLATTE	29	-6	51	-15	11	-14	T	-1	T	1.1	119	.7	133	90	49	0	7	1	0
OMAHA	25	1	44	-10	13	-12	T	-1	T	1.8	102	1.0	98	72	52	0	7	1	0
SCOTTSBLUFF	25	-5	45	-16	10	-19	T	-1	T	.8	74	.4	65	83	50	0	7	1	0
VALENTINE	24	-6	41	-17	9	-13	T	-1	T	.3	53	.2	41	71	37	0	7	1	0
NV ELY	20	-9	42	-30	5	-23	T	-1	T	1.6	94	.8	80	86	50	0	7	3	0
LAS VEGAS	45	28	61	16	37	-12	T	-1	T	.7	69	.6	88	69	28	0	5	2	0
RENO	23	-1	36	-16	11	-25	T	-1	T	1.7	60	.9	54	88	54	0	7	4	0
WINNEMUCCA	24	-3	35	-21	10	-24	T	-1	T	1.0	52	.5	45	81	52	0	7	0	0
NH CONCORD	27	8	33	-4	18	-3	T	-1	T	2.2	31	1.1	30	86	45	0	7	2	0
NJ ATLANTIC CITY	36	18	45	9	27	-6	T	-1	T	3.5	42	2.9	61	84	41	0	7	2	0
NM ALBUQUERQUE	43	19	61	5	31	-8	T	-1	T	.9	92	.9	171	85	44	0	6	2	0
CLOVIS	36	14	64	2	25	-15	T	-1	T	1.7	140	.2	39	76	39	0	6	1	0
ROSWELL	44	19	71	7	31	-11	T	-1	T	.9	103	.4	81	77	32	0	6	1	0
NY ALBANY	28	11	35	2	19	-3	T	-1	T	2.0	33	1.0	31	81	48	0	7	5	0
BINGHAMTON	22	11	28	4	16	-5	T	-1	T	3.3	52	2.1	62	84	57	0	7	3	0
BUFFALO	23	15	30	7	19	-5	T	-1	T	5.1	70	2.9	75	93	64	0	7	7	0
NEW YORK	34	24	41	18	29	-3	T	-1	T	3.9	50	2.7	65	64	36	0	7	2	0
ROCHESTER	24	14	31	8	19	-5	T	-1	T	2.7	47	1.6	51	88	56	0	7	5	0
SYRACUSE	25	15	30	5	20	-3	T	-1	T	3.7	54	1.7	48	88	55	0	7	5	0
NC ASHEVILLE	43	24	54	10	34	-4	T	-1	T	3.6	48	2.2	51	84	50	0	5	3	0
CHARLOTTE	51	32	63	19	42	0	T	-1	T	3.8	44	2.2	42	82	46	0	3	3	0
GREENSBORO	44	26	52	14	35	-4	T	-1	T	2.8	34	1.6	34	84	49	0	5	3	0
HATTERAS	53	34	68	21	43	-2	T	-1	T	5.2	48	4.5	69	88	50	0	3	2	0
NEW BERN	53	31	73	18	42	-3	T	-1	T	3.8	40	2.8	50	94	52	0	3	3	0
RALEIGH	46	27	57	14	37	-4	T	-1	T	3.3	42	2.3	47	85	49	0	4	3	1
WILMINGTON	57	32	76	19	44	-2	T	-1	T	2.7	32	2.1	42	93	49	0	3	2	0
ND BISMARCK	20	-1	29	-10	9	-3	T	-1	T	1.4	118	.7	98	83	59	0	7	1	0
FARGO	16	-6	27	-16	5	-4	T	-1	T	3.0	233	1.9	276	85	68	0	7	2	0
GRAND FORKS	15	-7	27	-15	4	-2	T	-1	T	3.6	232	1.7	179	83	67	0	7	1	0
WILLISTON	17	-2	25	-16	8	-5	T	-1	T	1.9	164	1.1	168	87	67	0	7	3	0
OH AKRON-CANTON	23	12	32	3	18	-8	T	-1	T	4.4	73	2.6	77	85	58	0	7	4	0
CINCINNATI	30	14	46	5	22	-9	T	-1	T	6.7	94	3.9	95	89	56	0	7	0	0
CLEVELAND	25	13	33	7	19	-7	T	-1	T	5.1	85	2.6	79	84	53	0	7	5	0
COLUMBUS	29	13	41	5	21	-7	T	-1	T	4.8	78	2.3	65	80	50	0	7	0	0

Weather Data for the Week Ending February 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 Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	26	11	39	2	18	-10	T	-1.5	T	5.8	99	3.1	94	79	55	0	7	1	0
TOLEDO	23	9	34	3	16	-9	.2	-1.3	.2	4.0	76	2.0	76	83	59	0	7	1	0
YOUNGSTOWN	23	13	30	4	18	-7	.1	-1.4	.1	4.3	69	2.4	67	87	55	0	7	3	0
OK OKLAHOMA CITY	38	17	57	3	28	-11	0	-1.3	0	2.6	99	1.2	83	61	29	0	7	0	0
TULSA	36	16	55	5	26	-13	.1	-1.4	0	4.8	131	3.0	158	70	31	0	7	0	0
OR ASTORIA	44	24	52	9	34	-10	.1	-2.0	0	15.7	61	8.4	60	80	41	0	6	0	0
BURNS	15	-11	25	-25	2	-31	T	-1.3	T	1.0	29	.3	17	73	49	0	7	2	0
MEDFORD	46	19	53	9	32	-9	T	-1.6	T	3.8	48	2.5	57	78	31	0	7	0	0
PENDLETON	24	3	36	-12	13	-25	T	-1.3	T	2.5	64	2.1	95	89	63	0	7	0	0
PORTLAND	42	23	48	9	32	-10	.1	-1.0	.1	5.8	41	3.4	44	75	33	0	7	1	0
SALEM	39	15	45	-1	27	-15	T	-1.2	T	7.5	47	4.3	48	82	47	0	6	2	0
PA ALLENTOWN	32	18	41	11	25	-3	.1	-1.6	.1	3.0	36	2.0	44	75	38	0	7	2	0
ERIE	24	14	31	8	19	-5	.4	-1.1	.2	5.8	91	3.2	102	92	57	0	7	6	0
HARRISBURG	34	20	43	12	27	-4	T	-1.6	T	3.3	46	2.4	60	73	36	0	7	2	0
PHILADELPHIA	37	22	46	16	30	-2	T	-1.6	T	3.8	50	2.8	67	70	36	0	7	2	0
PITTSBURGH	26	14	36	5	20	-7	T	-1.5	T	4.6	73	2.4	65	83	52	0	7	1	0
SCRANTON	29	17	35	11	23	-3	.1	-1.4	.1	2.3	42	1.2	41	75	45	0	7	2	0
RI PROVIDENCE	31	16	39	9	23	-5	T	-1.9	T	2.3	23	1.3	23	74	40	0	7	1	0
SC CHARLESTON	65	41	77	25	53	4	T	-1.8	T	3.0	40	2.3	51	91	41	0	3	0	0
COLUMBIA	55	34	67	17	44	-2	.3	-1.7	.2	3.0	31	2.2	37	94	54	0	3	2	0
FLORANCE	54	33	72	19	43	-2	.6	-2.2	.5	3.3	42	2.6	53	91	50	0	3	2	1
GREENVILLE	53	29	68	14	41	-1	.7	-1.4	.3	4.1	41	2.2	37	89	46	0	4	3	0
SD ABERDEEN	20	-6	33	-22	7	-6	T	-1.1	T	2.0	167	.6	89	86	63	0	7	0	0
HURON	22	-5	34	-18	9	-7	T	-1.2	T	1.1	100	.5	73	85	61	0	7	1	0
RAPID CITY	28	-1	46	-11	14	-11	T	-1.1	T	.6	62	.2	30	79	42	0	7	0	0
SIOUX FALLS	21	-4	36	-14	8	-8	.1	-1.2	0	.7	48	.4	44	88	59	0	7	2	0
TN CHATTANOOGA	43	25	57	16	34	-6	2.0	.9	1.1	10.9	89	7.3	105	82	48	0	5	3	2
KNOXVILLE	39	24	53	15	32	-8	1.8	.8	1.1	11.0	102	7.1	114	91	57	0	5	3	2
MEMPHIS	38	22	59	17	30	-12	T	-1.1	T	15.1	136	9.2	147	75	42	0	6	0	0
NASHVILLE	38	20	58	12	29	-9	T	-1.9	T	8.7	83	4.8	81	79	46	0	7	1	0
TX ABILENE	46	20	71	9	33	-14	0	-1.3	0	1.4	62	.6	43	64	25	0	6	0	0
AMARILLO	37	11	67	-4	24	-14	T	-1.1	T	.4	30	.2	25	67	33	0	7	1	0
AUSTIN	44	29	58	20	37	-15	T	-1.6	T	5.3	117	4.2	165	78	42	0	6	0	0
BEAUMONT	46	33	57	27	39	-15	.1	-1.0	0	12.6	118	6.8	118	79	46	0	6	2	0
BROWNSVILLE	52	40	78	29	46	-16	.1	-1.4	.1	2.1	69	2.0	107	90	66	0	3	1	0
CORPUS CHRISTI	48	37	67	26	42	-15	T	-1.4	T	3.8	109	2.8	124	83	58	0	4	1	0
DEL RIO	49	30	66	22	39	-15	T	-1.2	T	1.4	96	1.0	113	70	36	0	5	0	0
EL PASO	61	30	74	21	45	-2	0	-1.1	0	.6	65	.2	30	57	23	0	6	0	0
FORT WORTH	45	23	68	13	34	-13	T	-1.4	T	5.5	133	3.0	126	76	37	0	6	1	0
GALVESTON	45	36	62	28	41	-14	.1	-1.6	.1	9.2	122	6.3	159	88	61	0	4	1	0
HOUSTON	45	30	61	24	38	-16	.1	-1.8	0	6.4	75	5.2	107	91	54	0	6	2	0
LUBBOCK	43	17	68	4	30	-11	T	-1.1	T	1.1	116	.5	91	53	26	0	6	0	0
MIDLAND	49	17	78	9	33	-13	T	-1.1	T	.8	73	.3	41	66	24	0	7	0	0
SAN ANGELO	49	22	75	12	35	-13	T	-1.2	T	1.6	100	.8	82	73	28	0	6	0	0
SAN ANTONIO	46	30	57	21	38	-15	T	-1.5	T	3.7	102	3.0	132	78	40	0	5	1	0
VICTORIA	45	33	63	24	39	-15	.1	-1.5	.1	6.9	141	4.7	169	84	53	0	4	2	0
WACO	45	24	66	17	34	-15	T	-1.5	T	4.9	112	2.8	116	85	38	0	6	1	0
WICHITA FALLS	44	20	65	7	32	-12	T	-1.2	T	2.2	88	1.0	83	63	26	0	6	0	0
UT CEDAR CITY	22	-4	43	-23	9	-24	T	-2.2	T	1.9	122	1.2	130	98	63	0	7	0	0
SALT LAKE CITY	22	1	32	-14	12	-21	.1	-1.2	.1	2.1	65	1.4	79	87	55	0	7	2	0
VT BURLINGTON	26	12	30	0	19	2	.1	-1.3	.1	1.6	32	.7	28	73	45	0	7	2	0
VA NORFOLK	43	30	53	19	36	-4	.9	.1	.6	4.3	53	3.7	74	81	47	0	3	3	1
RICHMOND	41	24	53	15	32	-5	.8	0	.3	3.9	50	3.1	70	88	51	0	7	3	0
ROANOKE	40	23	53	14	31	-5	.3	-1.5	.2	3.0	44	1.7	43	75	46	0	7	3	0
WA QUILLAYUTE	46	21	51	17	34	-8	0	-3.1	0	27.8	76	15.7	82	90	40	0	7	0	0
SEATTLE-TACOMA	45	24	51	14	34	-8	0	-1.1	0	6.8	48	3.3	42	74	37	0	7	0	0
SPOKANE	29	9	35	1	19	-12	T	-1.4	T	2.6	45	.8	26	85	49	0	7	0	0
YAKIMA	33	6	39	-1	19	-15	0	-1.2	0	1.0	34	.4	20	84	44	0	7	0	0
WV BECKLEY	30	16	43	4	23	-8	.3	-1.5	.1	6.4	82	4.2	90	84	61	0	7	3	0
CHARLESTON	33	19	48	7	26	-8	T	-1.7	T	6.8	85	4.1	88	79	48	0	7	2	0
HUNTINGTON	33	18	49	7	26	-9	T	-1.7	T	8.0	108	4.8	112	76	42	0	7	1	0
PARKERSBURG	31	15	45	6	23	-9	T	-1.6	T	6.7	103	4.2	110	78	39	0	7	0	0
WI GREEN BAY	20	1	33	-11	10	-6	T	-2.2	T	1.3	46	.5	34	80	55	0	7	1	0
LACROSSE	22	-1	35	-11	11	-7	.1	-1.1	0	1.3	54	.5	39	78	50	0	7	2	0
MADISON	20	0	34	-9	10	-8	.1	-1.1	.1	2.4	81	.8	56	78	55	0	7	1	0
MILWAUKEE	19	3	33	-4	12	-10	.2	-1.1	.1	2.6	64	1.2	56	79	54	0	7	2	0
WAUSAU	18	-6	30	-20	6	-8	.1	-1.1	.1	2.5	100	1.1	90	82	48	0	7	2	0
WY CASPER	17	-3	39	-20	7	-19	.1	0	.1	1.5	134	1.0	156	79	60	0	7	1	0
CHEYENNE	24	-1	49	-22	12	-17	T	0	T	1.7	192	1.1	228	85	54	0	7	1	0
LANDER	12	-12	29	-19	0	-24	T	-1.1	T	1.2	102	.5	73	85	58	0	7	1	0
SHERIDAN	28	2	42	-13	15	-10	T	-1.2	T	.6	34	.4	36	79	37	0	7	0	0
PR SAN JUAN	82	72	82	69	76	-1	T	-1.5	T	7.2	89	3.1	83	86	65	0	0	2	0

National Agricultural Summary

February 6-12, 1989

HIGHLIGHTS: Winter wheat remained in need of moisture in portions of the central and southern Plains. Damage from cold weather was still unknown in the Plains and the Pacific Northwest, but some was expected. Winter wheat was mostly good in the Corn Belt. Small grains were good to fair in the Southeast. Florida's citrus and vegetable producing areas needed rain. Texas' citrus groves did not suffer from serious freeze damage. Cold, wet weather delayed vegetable harvest and caused some damage to citrus crops in California. Below-normal temperatures continued to stress livestock in the Corn Belt, Plains, and the West.

SMALL GRAINS: Small grains remained stressed due to a shortage of soil moisture in portions of the central and southern Plains. Some damage from cold temperatures is expected, but the extent is still unknown. Precipitation was needed, especially in the western areas of Kansas and Oklahoma, and the Plains and Cross Timbers areas of Texas. Cold weather slowed small grain growth in Texas but reduced insect activity. Oats showed signs of freeze damage in the Blacklands, Hill Country, and central areas. Some freeze damage to winter wheat was expected in the Plains and Cross Timbers areas. Snow cover was mostly adequate in Montana and North Dakota but was limited in portions of South Dakota and much of Colorado. Some damage to winter wheat from cold temperatures was expected in Oregon and Washington. Winter wheat was mostly good in the Corn Belt. It was still too early to assess damage, if any, from cold temperatures. Small grains in the Southeast were mostly good to fair. Producers continued to topdress as weather permitted.

OTHER FIELD CROPS: Cotton field preparation continued in Arizona. Furrowing, pre-irrigation, and preplant herbicide applications were the dominant activities. Rain and snow limited land preparation in California. Land preparation for spring planted crops continued in the Southeast. Fieldwork was limited to spreading fertilizer in the Corn Belt.

Tobacco plant bed preparation and seeding continued in the Southeast. Georgia's tobacco plants were mostly good. Plant bed preparation began in Tennessee.

FRUIT AND NUTS: Florida's citrus groves were good but needed rain. Producers were irrigating in all areas. Warm temperatures promoted new foliage growth. Early orange harvest slowed, but grapefruit movement continued active. Honey tangerine and Temple orange harvests were active. In Arizona, grapefruit, lemon, and tangerine harvests continued on a limited scale. Citrus groves suffered no damage in the Rio Grande Valley, Texas. Valenica orange harvest increased at midweek. Cold temperatures damaged some peach trees in the east. Cold temperatures caused some damage to citrus crops in California. In the San Joaquin Valley, stem damage to unharvested lemons may result in a 25 percent loss. About one-third of the crop was harvested prior to the cold weather. Navel orange foliage was damaged where no frost prevention measures were taken. Overall production was not greatly affected, but freeze damage may result in more oranges for processing. Almond bloom was delayed by cold weather. Crops harvested were grapefruit, lemons, navel oranges, and minneola tangelos.

VEGETABLES: Spring crop planting was active in Florida. Lack of precipitation forced producers to irrigate in all areas. Winter crop harvest was active. Volume leaders were tomatoes, cabbage, celery, peppers, lettuce, and squash. Spring cucumber harvest was underway. Watermelon planting began in western Arizona. Vegetable harvest continued. Vegetables suffered some freeze damage in the San Antonio-Winter Garden area of Texas. The extent of the damage was still unknown. Harvest resumed about midweek. Cold, wet weather delayed vegetable harvest and damaged some spring crop plantings in California. Newly emerged broccoli and carrot plantings suffered freeze and wind damage in the Salinas-Watsonville area and the Coachella Valley. Some replanting may be necessary. Lettuce and asparagus harvests in the Desert area may be delayed 2-3 weeks due to freeze damage. Replanting may be necessary in the Salinas-Watsonville area. Cold temperatures damaged artichokes in the Salinas-Watsonville area. Strawberries were in the early stages of development and suffered no serious damage. Some bloom loss may result in lower yields. Celery harvest came to a standstill in the Coachella Valley and Ventura County.

PASTURES & LIVESTOCK: Below-normal temperatures continued to stress livestock in the Corn Belt, the Plains, and the West. Limited livestock water supplies was a continuing problem in southeastern Iowa and northern Missouri. Pastures were mostly fair to good in the South.

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 under 0.33 in.; 0.50 to 1.00 in. common west central, northeast. Temperatures 8 to 12° below normal over north, west; 2 to 5° below normal wiregrass area.

Soil moisture adequate. Primary activities: General care of livestock, poultry; repairing equipment, fences; pruning fruit trees; soil testing; fieldwork, as weather permits.

ARIZONA: Winter storm, rain, snow showers northwest, southeast 5th. Snow, 25 to 35 mph winds 6th. Warm air 7th. Cloudy, milder weather 8th. Light rain, snow showers, afternoon temperatures rising 9th. Cloudy skies, isolated showers, warming trend 10th. Sunny skies, mild temperatures 11th. Temperatures 12° below to 4° above normal.

Cotton field preparation continued with preliminary seedbed preparation, furrowing, pre-irrigation, preplant herbicide applications. Some preparation for corn, sorghum plantings. Wheat, barley seedings virtually complete except eastern area; 35% jointing. Advanced seeding western areas boot stage, heads emerging. Southeastern area fields monitored for Russian wheat aphid, no infestation. Freeze protection against cooler temperatures. Harvest grapefruit, lemons, tangerines limited scale. Increased harvest, shipping head lettuce, broccoli, cauliflower. Boston, leaf, romaine lettuce; cabbage, kale, napa, escarole, bok choy, endive, celery, spinach, anise, green onion, parsley, beet, turnip, spinach, leek, carrot harvest limited west central. Melon planting west. Apples shipped east.

ARKANSAS: Very cold, very little precipitation. Temperature extremes 4°; 68°. Rainfall none to 0.07 in.

Soil moisture adequate. No damage to early seeded wheat fields from freeze. Apple, peach trees suffered none to very little freeze damage. Farming activities limited to routine livestock chores. Feed adequate.

CALIFORNIA: Strong low pressure beginning week brought precipitation most areas. Midweek low pressure picked up extremely cold air plunging down from Alaska. Setting record lows over much State no precipitation. By weekend warm moist air replaced cold air warming temperatures bringing some precipitation.

Rain, snow, cold curtailed most field activities. Precipitation timely dryland grains. Cold temperatures slowed growth. Some early plantings tillering. Herbicide applied small grain, alfalfa, cotton, sugarbeet seedbeds. Sheep grazed mature alfalfa; alfalfa, barley green chopped southern areas. Pruning, spraying ongoing. Cold temperatures 5th to 8th. Northern central valley low to upper teens, south low 20s. Deciduous trees low moisture content may be damaged. Almond buds swelling, bloom delayed due to cold weather. Avocados injured, very isolated areas. Grapefruit, lemons, navel oranges, minneola tangelos harvested. Stem damage may cause 25% or more loss San Joaquin Valley lemons, 33% harvested before freeze. Navel orange foliage damaged where no frost prevention. Production not affected. External, internal damage will result in more oranges for juice. Livestock fair to good statewide. Rain, snow benefited range pasture scattered areas. Record cold temperatures caused freeze damage grass some calf losses. Supplemental feeding continued. Livestock movement light. Water improved due to rain, snow melt.

Lambing completed some areas. Cold wet weather hit most major vegetable areas delaying harvest early planted fields. Cold trend limited activity, central southern most concern. Newly emerged broccoli, carrot Salinas-Watsonville, Coachella Valley experienced cold wind; replanting may be necessary. Growers not assess damage hoping some crops diverted processing. Lettuce, asparagus desert tip burn delayed harvest 2 to 3 weeks. Young plants Salinas-Watsonville probably replanting. White fly virus minimum Imperial Valley. Celery harvest Ventura County, Coachella Valley standstill. Quality variable, skinning problem. Artichokes Salinas-Watsonville continued suffer frost. Strawberries Salinas-Watsonville early stages development not affected, further south doing well. No damage to crown of plants. Some bloom loss, reduced volume. Rain high winds more damage. Pockets lower elevations might experience greater damage.

COLORADO: Week began sub-zero low temperatures, below freezing highs. Midweek warmed above freezing, by 10th portions east highs around 50°. Cooler air returned State weekend. Even with midweek warm up, temperatures well below normal. Generally dry, exception scattered mountain showers. Weekend system brought some measurable snow Colorado Basin.

Much of winter wheat lacked protective snow cover during recent cold period, very little damage expected to have occurred most crop remained dormant. Additional moisture still needed large portion acreage vulnerable to wind damage if topsoils remain dry. Livestock remained good, despite some stress from frigid cold.

FLORIDA: Cold north; temperatures 6 to 8° below normal Panhandle, 2 to 3° below Big Bend, northeast. Peninsula temperatures 1 to 2° above normal; 4 to 6° above along southeast coast. Extremes north low to mid 20s Panhandle, Big Bend to upper 20s northeast. Lows cooled to low to mid 30s some north central counties with upper 30s central, 50s along southeast coast. Rain north mostly under 0.20 in. but Quincy over 1.00 in. Dry weather prevailed central, south except few showers of under 0.20 in. along east coast.

Soil moisture mostly short except few widely scattered areas adequate. No major frost damage 9th to 10th, except small peach areas. Tobacco growers concerned tobacco bed plants getting too large. Growers worked ground for spring sown crops, cared for tobacco beds, harvested sugarcane. Late week cold slowed permanent pasture development, especially Panhandle, upper Peninsula areas frost. Showers, some areas very beneficial. Topsoil moisture shortages, however, continued to limit forage growth much of lower Peninsula, Panhandle. Grazing varied widely, very poor to good, depending on moisture supplies; extent of late week frost north. Cattle, calves fair to good. Calving increased, marketings active. Citrus trees good. Rain, irrigation needed. Warm temperatures produced new growth, bloom buds, some full open bloom. Early orange harvest slowed, grapefruit movement increased. Honey tangerine, temple harvest active, fresh use. Tangelo harvest slowed. Spring-like winter interrupted by late week cold front vegetable areas, no damage; planting active, irrigation heavy. Harvest winter crops steady. Volume leaders: Tomatoes, cabbage, celery, peppers, lettuce, squash. Also available: Snap beans, carrots, sweet corn, radishes,

escarole, endive, potatoes, eggplant. Harvest spring cucumbers underway.

GEORGIA: Temperatures 2 to 5° below normal. Extreme northwest 5 to 10° below normal. Extreme south temperatures near normal. Freezing temperatures statewide 10th to 11th. Coldest mostly teens mountains, east central; mostly mid, upper 20s extreme south. Rain under 0.50 in., several areas 0.25 in.

Soil moisture adequate north central, short elsewhere. Land preparation activities increased. Tobacco plants good. Small grains fair to mostly good, growing fast but susceptible to freeze damage. Freeze damage early peach varieties, extent unknown. Inadequate chill hours concern high chill hour varieties. Pastures mostly fair to good. Cattle, hogs fair to good. Main activities: Land preparation, final pruning of peach trees, fertilizing small grains, routine care of livestock.

HAWAII: Southeasterly winds 10 to 20 mph brought variable weather to island chain. Rains beginning, end week, sometimes heavy. Temperatures low 60s to low 80s. Rainfall 0.40 to 6.50 in.

Days suitable for fieldwork 7.0. Soil moisture ample. Muddy field conditions hampered fieldwork. Rainfall, lack of strong winds benefited major banana orchards. Papaya production seasonally low level. Ginger root harvesting aided by sunny periods. Sugarcane benefited from mixture of sun, rain.

IDAHO: Temperatures up to 36° below normal as Arctic cold blanketed State. Precipitation remained well below normal.

Severe cold broke early week; farmers, ranchers cleaning up after Arctic blizzard. Livestock deaths, more anticipated. Conditions improved for calving, lambing toward weekend. Farm activities included marketing, shipping farm products, shop work, taxes, planning spring seeding. Hay, roughage mostly adequate; some short.

ILLINOIS: Temperatures 10 to 15° below normal. Overnight lows northern two-thirds below zero. Precipitation generally 0.20 to 0.30 in.

Winter wheat mostly good. Snow cover 3 to 6 in. parts north, central provided some protection winter wheat. Hay mostly adequate. Livestock good.

INDIANA: Temperatures 15° below normal. Lows, single digits below 0°, highs mid 30s to mid 40s. Precipitation light. Totals less than 0.20 to 0.90 in.

Snow, cold slowed field activities. Other activities: Hauling grain, spreading fertilizer, hauling manure, topdressing wheat, repairing machinery, processing tobacco, farm program sign-up, clover seeding, spreading lime, preparing taxes, care of livestock. Wheat mostly good. Hay short some areas.

IOWA: Temperatures 4 to 10° below normal; extremes -12° 9th Ames to 46° 10th Sioux City. Precipitation 12th to 13th light northwest half to above normal elsewhere; 0.01 to 0.56 in., average 0.20 in.

Livestock mostly good. Grain movement light. Soil erosion little to none except on mold board plowed fields. Water shortage for livestock southeast still exists.

KANSAS: Temperatures 20° northeast, 25° south central. Departure 5° below north central to 12° below northeast. Most State 0.10 in., 0.20 in. moisture. Southeast 0.25 in. Snow early week eastern third virtually melted weekend.

Lack snow cover leaves wheat vulnerable future freeze damage. Additional moisture needed relieve moisture deficits all areas except southeast. Heavier supplemental feeding livestock necessary east, snow covering pastures.

KENTUCKY: Cool, dry; lows in teens, highs 30s. Coldest day 9th single digits, highs 20s. Weekend lows 20s, highs 40s. Little, precipitation southeast 0.10 in.

Soil moisture generally adequate. Cold, sunny days. Coldest temperatures of season placed limited stress on winter grains, livestock. Burley sales mostly finished. Plans underway for 1989 plantings. Routine chores major activity.

LOUISIANA: Temperatures 10 to 15° below normal. Extremes 17°; 68°. Rainfall trace to 0.50 in. Some freezing rain caused icing on trees, plants north, central.

Main activities: Caring for livestock, routine chores.

MARYLAND & DELAWARE: MARYLAND: Precipitation 0.32 in. Temperature 30°, normal 33°. Temperature extremes 1°; 61°.

Main farm activities caring for livestock, maintaining machinery.

DELAWARE: Precipitation 0.30 in. Temperature 29°, normal 34°. Temperature extremes 11°; 52°.

Main farm activities caring for livestock, maintaining machinery.

MICHIGAN: Temperatures 8° below to 1° above normal. Temperature extremes -17°; 35°. Precipitation none to 0.92 in. across State.

Recent snowfall increased snow cover winter wheat. Activities: Bitter cold slowed farm activities including marketing, pruning orchards, caring for livestock. Extra effort required to keep water pipes thawed for livestock needs. Spring calving, lambing underway. Feed adequate. Greenhouses starting early plantings.

MINNESOTA: Temperature 5° below normal to 2° above normal. Extremes -24°; 38°. Precipitation 0.04 to 0.19 in. below normal, total trace to 0.14 in. Greatest weekly total 0.47 in. Snowfall trace to 2 in. Snow depth weekend trace south to 27 in. north.

Moderate temperatures welcomed by livestock farmers. Hay, forage prices extremely high due to drought of 1988.

MISSISSIPPI: Very cold; sleet, freezing rain, some snow flurries. Power lines down almost statewide. Temperature 12° below normal. Extremes 11°; 69°. Rainfall 0.81 in. below normal. Maximum weekly precipitation 1.91 in.

Days suitable for fieldwork 0.9, 1.8 1988, 1.6 avg. Soil moisture adequate to surplus. Wheat good. Ice storm damaged timber; not severely damaged wheat. Pastures fair. Livestock fair to good. Feed grains mostly adequate. Hay adequate to short.

MISSOURI: Temperatures 13 to 20° below normal, largest deviation south. Precipitation light, mostly less than 0.50 in.

Cold weather limited farm activity to care of livestock. Too early to determine effect of sharp temperature change on wheat. Water for livestock continued to be major concern northern counties.

MONTANA: Temperatures 6 to 28° below normal. Light snow over most of State, little moisture.

Topsoil moisture 50% short. Subsoil moisture 85% short. Winter wheat mostly fair to good. Snow

cover protection mostly adequate. Livestock care difficult due to cold. Hay requirements increased.

NEBRASKA: First few days cold, warming set in; by weekend snow spread across State. Temperatures 4 to 14° below normal. Precipitation few hundredths northwest to 0.50 in. southeast. Extremes -17°; 54°.

NEVADA: Bitter cold air mass originating near Arctic circle plunged temperatures steep nose dive. Low temperature records shattered through midweek as readings dipped well below zero, afternoon highs reached only single digits and teens across northern, central. Low temperatures 15 to 35° below zero common. Bitter cold brought host of weather problems including frozen water pipes, automobiles that refused to start. Some warming end of period but still well below normal. Precipitation light, most southern half.

Snow, cold hampered livestock feeding operations. Chopping ice required all areas.

NEW ENGLAND: Precipitation (rainfall, water equivalent of snow) less than 0.10 in. south, 0.10 to 0.40 in. north. Temperatures single digits northern Maine to mid 20s southern coast. Temperatures few degrees below normal north to 7° below normal south.

Major farm activities: Tending livestock, machinery repair.

NEW JERSEY: Temperatures below normal, 25° north, 27° south, 3° coastal. Extremes 9° several areas 10th; 48° Hammonton 12th. Precipitation below normal; none north, 0.04 in. south, 0.05 in. coastal. Heaviest 24-hour total 0.10 in. 6th to 7th.

Farmers caring for livestock, tending to normal inter chores.

NEW MEXICO: Temperatures well below normal over most areas of State. Overnight minimum temperatures near or below zero, except lower elevations south. Snow over most of State. Some mountains 1 ft. or more of new snow.

NEW YORK: Temperatures well below normal. Arctic outbreak 9th resulted in high temperatures 5 to 15°. Readings low 20s lower Hudson Valley to Long Island. Low temperatures during outbreak -5 to 10° above. However cold brief. By 10th high temperatures rose to 20s; 11th highs 30s, low 40s. Precipitation variable. Heaviest amounts occurred snow belt areas of Lakes Erie, Ontario. Liquid equivalent 1.00 in. Buffalo to 2.00 in. Boonesville. Snowfall 1 to 2 ft. Elsewhere 0.50 to 1.00 in. precipitation western Mohawk Valley, Adirondacks, St. Lawrence Valley. Series of weak storms which passed through northern area. Precipitation continued to be well below normal Champlain Valley, Hudson Valley, Susquehanna, Catskills, Long Island. Eastern precipitation under 0.25 in.

Major activities: Caring for livestock, hauling manure, machinery repair, winter chores, attend meetings, cutting firewood.

NORTH CAROLINA: Temperatures 1 to 6° below normal across State. Temperature extremes 1°; 78°. Precipitation 0.06 to 3.20 in.

Days suitable for fieldwork 3.7. Soil moisture 1% very short, 40% short, 56% adequate, 3% surplus. Pasture 2% very poor, 11% poor, 34% fair, 51% good, 2% excellent. Oats 2% poor, 21% fair, 72% good, 5% excellent. Barley 2% poor, 19% fair, 73% good, 6% excellent. Rye 2% poor, 20% fair, 71% good, 7% excellent. Wheat 1% poor, 18% fair, 75% good, 6% excellent. Feed grains 4% short, 96% adequate. Hay, roughage 2% short, 97% adequate, 1%

surplus. Major farm activities: Preparing land for spring planting; tending livestock; repairing equipment; general farm maintenance. Other activities: Preparing, seeding tobacco plant beds; pruning fruit trees; topdressing small grains.

NORTH DAKOTA: Extremely cold early week, warmer late week. Temperatures 3 to 8° below normal. Extremes -35° northeast; 35° south central. Light precipitation 0.01 to 0.07 in.

Soil moisture short. Warm temperatures reduced snow cover, remained mostly adequate. Hay, feed mostly adequate, some feedlots having health problems caused by feeding kochia. Calving, lambing, shearing underway.

OHIO: Temperatures dropped from abnormal highs, 5 to 10° subnormal. Soil temperatures 4 in. depth mid to upper 20s. Precipitation light; water equivalent less than 0.10 in.

Livestock required more care, feeding as temperatures plunged. Too early to determine damage, if any, to fruit crops or winter wheat.

OKLAHOMA: Temperatures 10° below normal Panhandle to 5° below normal southeast. Precipitation 0.01 in. Panhandle, west central to 0.49 in. east central.

Dry weather promoted fieldwork. Weekend showers benefited wheat, pasture growth eastern half. Dry conditions prevailed west. Cattle good, prices steady to slightly lower than last week.

OREGON: Cold air mass which moved over Pacific northwest 1st continued to blanket State with bitter cold. Minimum temperatures 25 to 30° below zero common northeast where ground remained completely snow covered. Significant snow cover remained many parts west; coldest minimum temperature 1° below zero Salem. Precipitation light, greatest amounts along coast, coast range, higher elevations of Cascades, east.

Soil moisture mostly adequate east, mostly surplus west. No fieldwork, except Willamette Valley after warming began. Winter grains which lacked snow cover may have suffered damage from extreme cold and wind, but extent cannot be assessed at this time. Damage also possible in berry, nursery, fruit crops. Livestock fair to good. Lambing, calving in progress; cold caused greater than normal losses. Range, pasture mostly poor to fair. Many western pastures snow covered, not normal occurrence. Snowpack improved water supply prospects for next spring, summer especially east.

PENNSYLVANIA: Unseasonably cold, very dry throughout week. Temperature 22°, 4° below normal. Temperature extremes 0°; 46°. Precipitation 0.05 in., 0.56 in. below normal.

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

PUERTO RICO: Island rainfall 0.57 in., 0.02 in. below normal. Highest weekly total 2.74 in. Pico Del Este-Luquillo, 1.73 in. Rio Blanco Lower, 1.14 in. Toa Baja. Highest 24-hour total 1.05 in. Pico Del Este-Luquillo. Total rainfall since January 1st 3.54 in., 10% below normal. San Juan WSFO temperature 76°, 1° below normal. Total rainfall 0.71 in., 0.20 in. above normal. Divisional temperature 75 to 76° on coasts, 69 to 74° interior, station temperatures 61° Pico Del Este-Luquillo to 77° San Juan City. Lowest minimum temperature 57° Gurabo. Highest maximum temperature 90° San Sebastian.

SOUTH CAROLINA: Temperatures 1 to 4° below normal. Coldest 10th, some stations temperatures

in teens. Rainfall disappointingly low with some areas only trace. Largest total 0.10 in. Salem.

Early blooming peach varieties Ridge, Coastal areas suffered damage from sub-freezing temperatures. Too early to determine full extent of damage. Some vegetable, wheat suffered light cold burn.

SOUTH DAKOTA: Temperatures 6 to 12° below normal. Extremes -25°; 46°. Precipitation light, spotty. Snow cover 3 to 7 in. northeast, 1 to 2 in. east, north central; less than 1 in. rest of State.

TENNESSEE: Arctic cold dominated State much week. More moderate temperatures late week. Variety of precipitation rain, freezing rain, sleet, snow occurred statewide 6th, east 7th. Dry weather 8th to 11th. Rain west 12th, return of southerly wind flow. Temperatures 5 to 10° below normal. Lows in teens along Cumberland Plateau, 20s elsewhere. Highs upper 30s to mid 40s. Precipitation mostly less than 0.10 in. west, middle; 0.50 to 1.50 in. common east, mostly rain.

Main activities included calving, lambing, plowing, topdressing small grains, fertilizing, liming, preparing tobacco seedbeds. Some freezing of prematurely blooming fruit. Damage expected to be minimal.

TEXAS: Arctic outbreak brought extreme cold western, northern areas early week. Light snow Panhandle, all but west covered with glaze of ice from freezing rain, drizzle 4th, 5th. Morning 7th minimum temperatures below freezing statewide. Thawing started midweek, weak cool surge moved in toward weekend. Upper air disturbance triggered drizzle, light showers eastern half 11th.

Crops: Small grains across State seemed to survive bitter cold; some losses expected poorer fields. Oats usually adversely affected by very cold temperatures, some losses showing up Blacklands, central, Hill Country. Many other fields burned back by cold. Too early to tell extent; some damage expected to wheat fields Plains, Cross-Timbers. State growth slowed extensively. Cold temperatures slowed insect activity. Dryland fields Plains provided little grazing. Some early fields Blacklands that were jointing may have been hurt by cold weather. Warmer temperatures, rain many areas would greatly improve crops.

Commercial Vegetables: Rio Grande Valley most vegetables escaped serious damage from cold temperatures; some later melon fields required replanting. Most harvest activities increased midweek. No damage occurred fruit or trees citrus groves. Harvest valencia oranges increased midweek. Damage minimal early blooms, new growth. San Antonio-Winter Garden some freeze damage occurred; extent still not yet known. Harvest resumed many vegetables midweek. Cold temperatures helped peach trees still dormant; some early blooming, budding trees east hurt. Pruning activities increased.

Range and Livestock: Native forages remained short most areas, producers supplement livestock,

especially during last cold spell. Breaking ice major activity. Some losses newborn calves, lambs. Grazing small grains light Plains, movement livestock to markets, feedlots continued. Most ranges, pastures northern, western, central need moisture. East farmers need drier, warmer weather for pastures.

UTAH: Precipitation moderate to heavy. Temperatures 15 to 23° below normal.

Snow cover good on fall seeded grains. Winter range feeds generally fair. Scattered supplemental feeding underway. Major farm activities livestock chores, equipment maintenance, summarizing tax records, attending farm meetings.

VIRGINIA: Seasonable temperatures rainfall near normal. Cold beginning, series cold fronts, sunny warmer end. Temperature 4 to 81°. Precipitation 0.05 to 1.22 in.

Days suitable for fieldwork 2.0. Topsoil moisture 13% very short, 31% short, 51% adequate, 5% surplus. Feeding, caring for livestock, topdressing small grains, pruning orchards, routine winter activities.

WASHINGTON: Temperatures 6 to 14° below normal west; 7 to 30° below normal east. No precipitation across State.

Days suitable for fieldwork less than 1.0. Soil moisture 20% short, 80% adequate. Range, pasture 50% short, 50% adequate. Hay, other roughage 40% short, 60% adequate. Field activities limited due to cold. Pruning cautiously resumed Yakima County. Some damage to stone fruit flower buds, overwintering onions. Field crop damage, due to cold temperatures, lack of snow cover, certain areas. Russian wheat aphids active. Some calves have frozen ears, tails. Coyote problem some areas.

WEST VIRGINIA: Temperature 24°, 3 to 8° below normal. Extremes -2° Greenbank; 52° Williamson. Precipitation 0.05 in., well below normal.

Days suitable for fieldwork 4.0. Soil moisture 78% short, 22% adequate. Wheat, barley mostly fair. Livestock mostly good. Feed 30% short, 70% adequate. Farm activities: Feeding livestock, general farm maintenance.

WISCONSIN: Below normal temperatures 12°. Extremes -19°; 40°. Precipitation 0.10 in. Snowfall trace to 2 in. 7th.

Soil moisture very dry to moist. Snow cover 5 in., normal 11 in. Frost depth 23 in., normal 17 in.

WYOMING: Temperatures much below normal. Southern half State above normal precipitation, northern half below normal.

Snow cover over much of winter wheat growing area helped protect crop from bitter cold temperatures. Livestock fair to good with supplemental feeding. Early calving, lambing started. No unusual losses thus far. Bitter cold temperatures increased stress, feed requirements.

SATURDAY: Clear skies and fair weather prevailed over much of the Nation as temperatures continued to moderate, although freezing temperatures dropped into northern Florida. Snow spread from the Great Basin into the central Rockies and lingered across the Great Lakes and Northeast. Precipitation was widely scattered in the Northwest. The flow of warm moist air over the western Gulf Coast caused light rain and drizzle.

(Continued from front cover)

FRIDAY: Scattered rain and snow remained over California while snow showers spread from the Great Lakes into New England. High pressure and clear weather spanned much of the Nation as temperatures moderated.

International Weather and Crop Summary

February 5-11, 1989

HIGHLIGHTS

WESTERN USSR ... Light precipitation and above-average temperatures persist throughout the winter grain areas.

EUROPE ... Mild, dry weather continues in most crop areas. Much needed rain falls across sections of Spain and Portugal.

SOUTH ASIA ... Cooler-than-normal weather returns to the northwest. Winter wheat is reproductive to filling.

EASTERN ASIA ... Heavy rainfall continues in sections of southeastern China, Taiwan, and Japan.

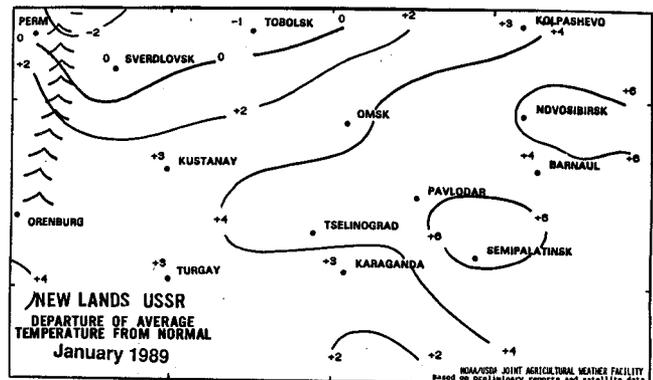
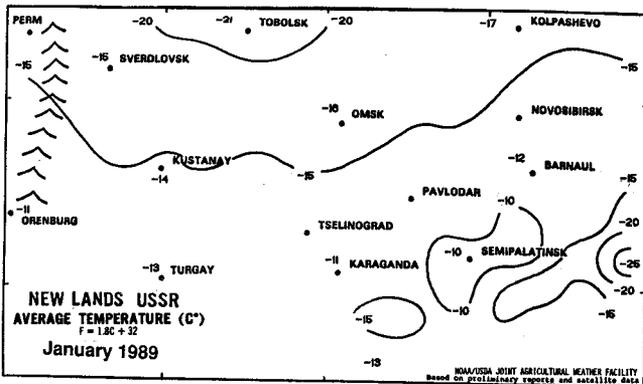
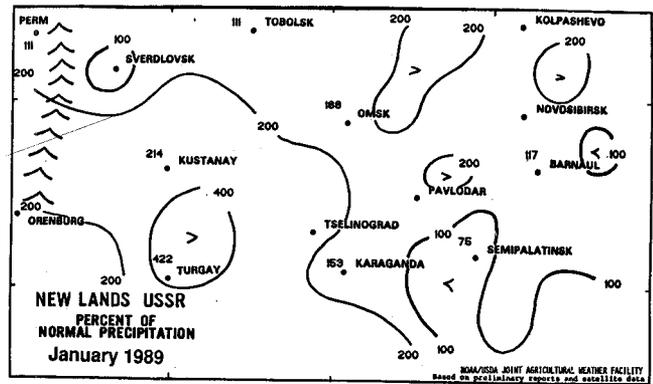
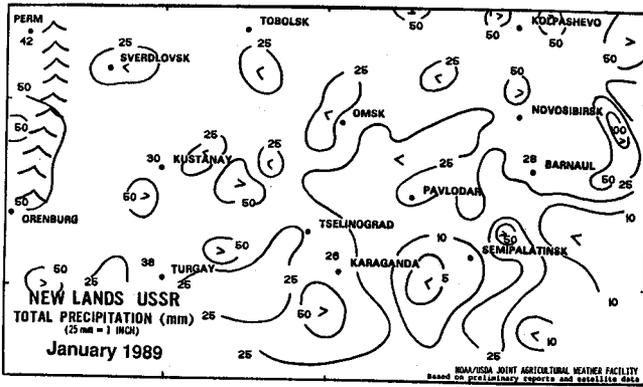
SOUTHEAST ASIA ... Locally heavy showers return to eastern Malaysia and western Indonesia, likely causing flooding. Much needed, drier weather helps the eastern Philippines.

SOUTH AMERICA ... Dry, warm weather returns to Argentina's crop areas. Light rain falls over Brazil's major soybean areas.

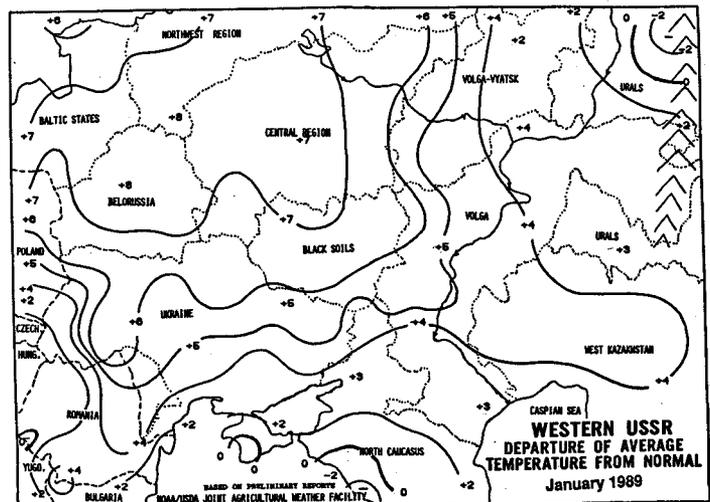
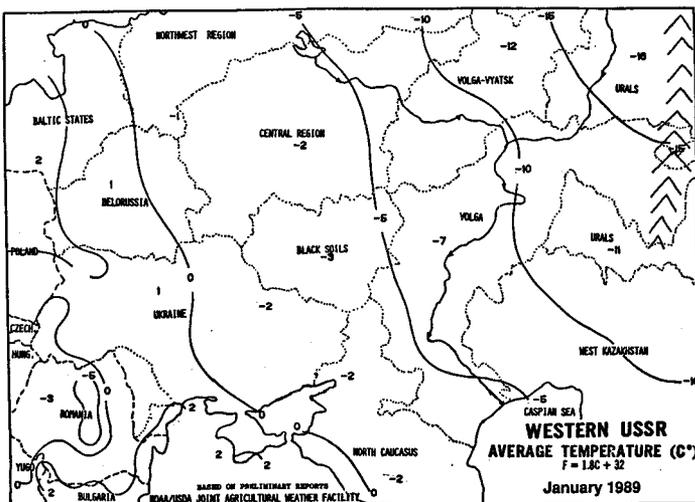
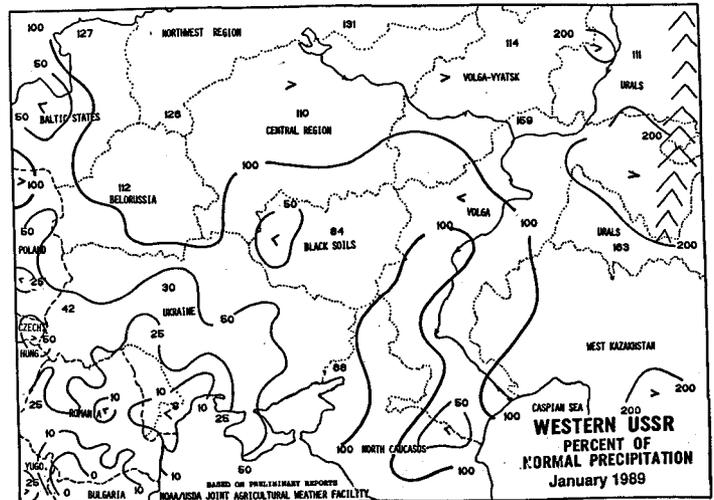
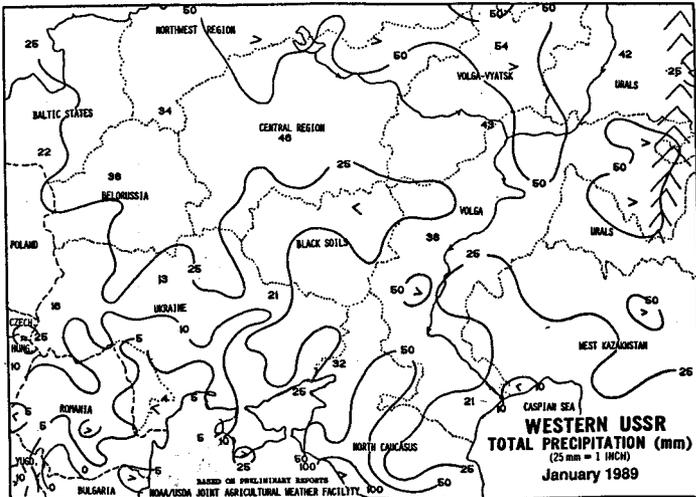
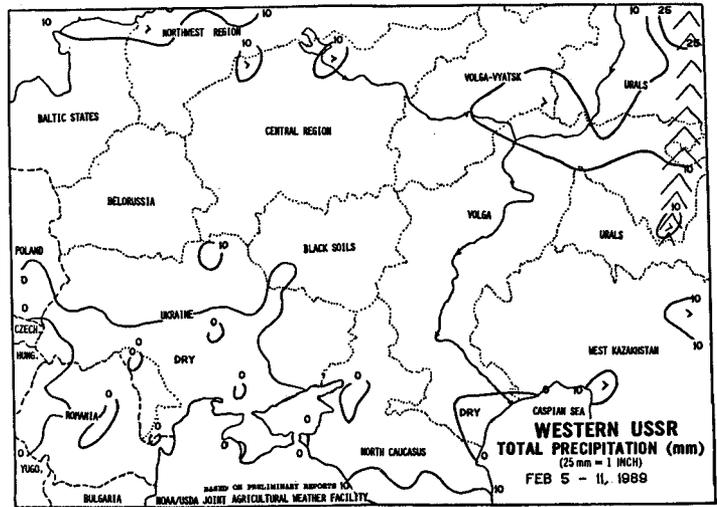
AUSTRALIA ... Beneficial rain falls in summer crop areas.

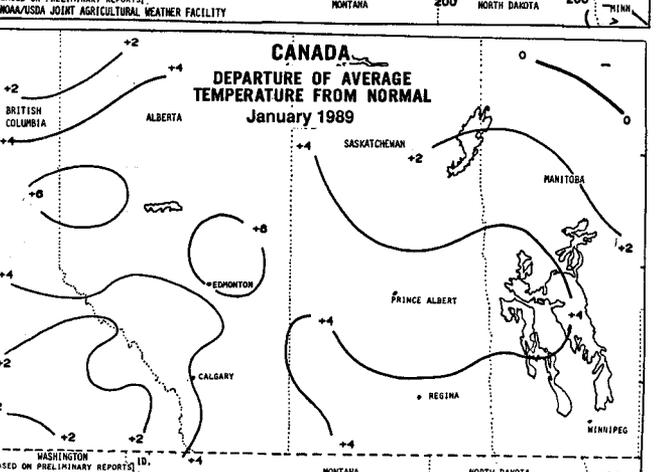
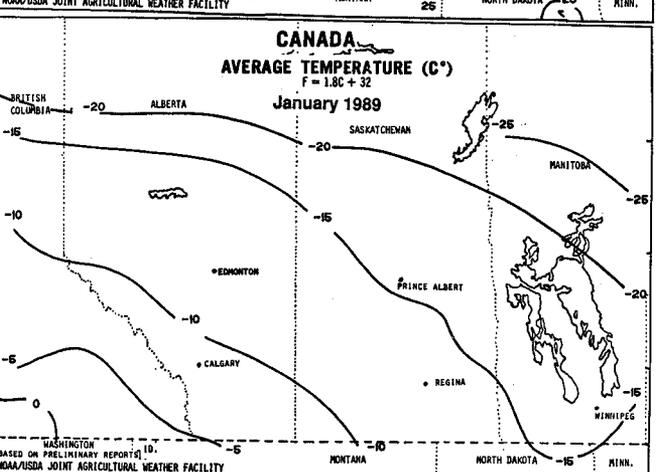
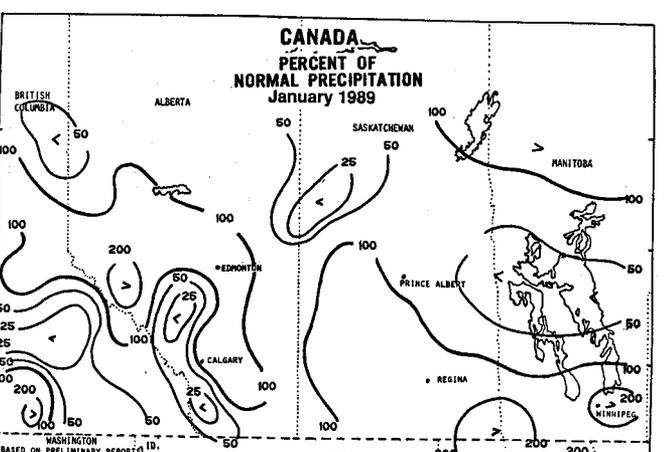
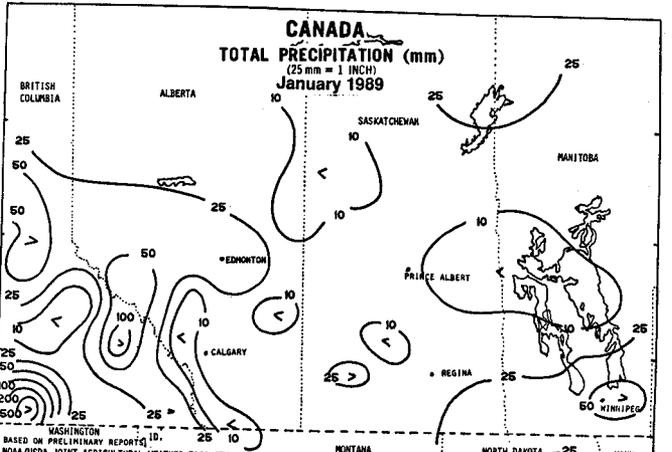
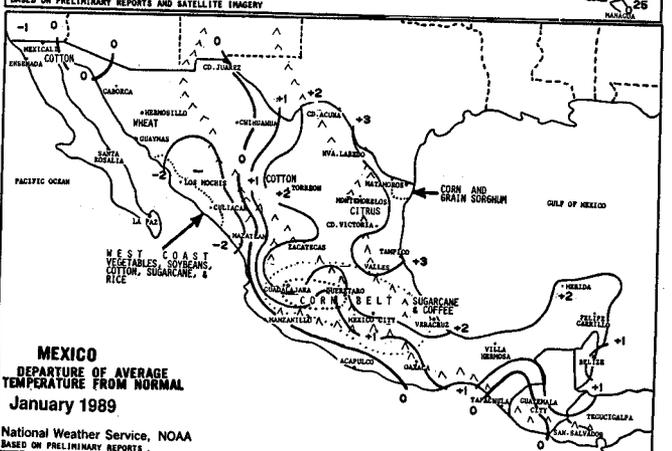
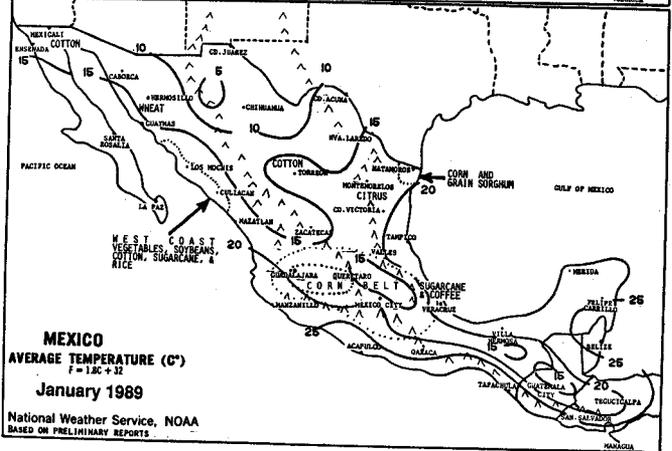
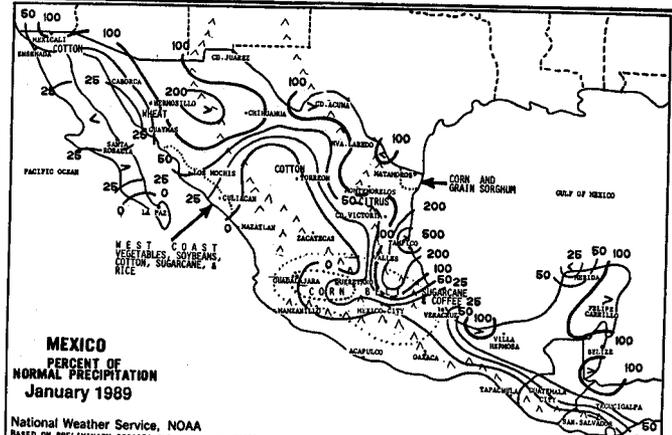
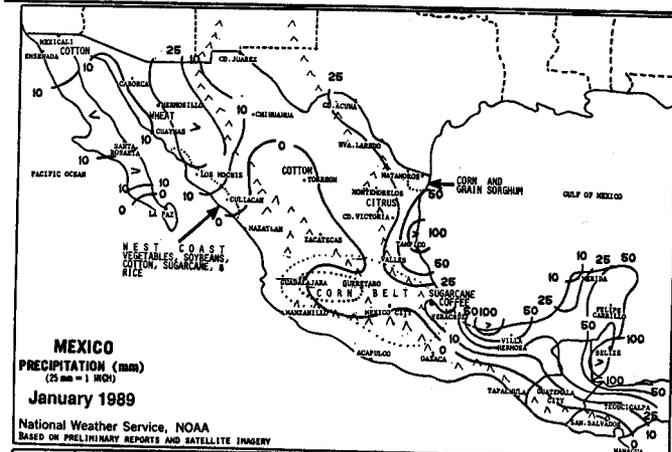
SOUTH AFRICA ... Widespread showers and cool temperatures cover reproductive to filling corn across the region.

NORTHWESTERN AFRICA ... Some beneficial rain in Morocco and western Algeria helps winter grains, but minimal showers increase moisture stress in eastern Algeria and Tunisia.

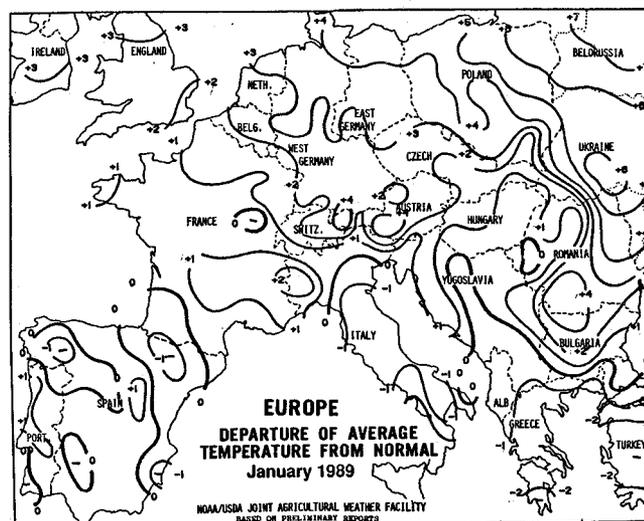
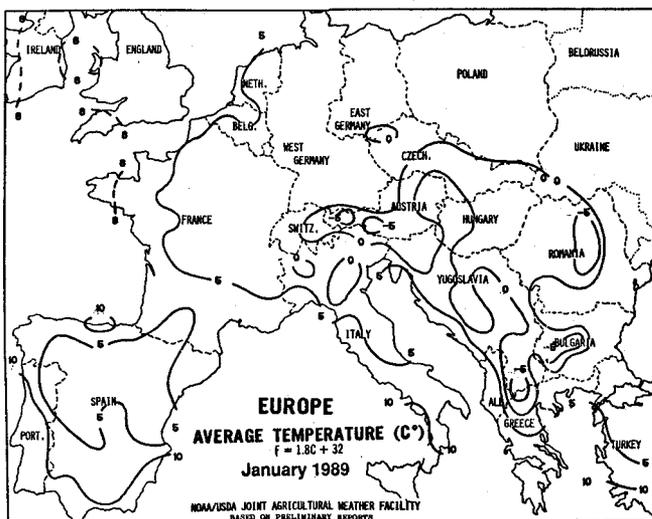
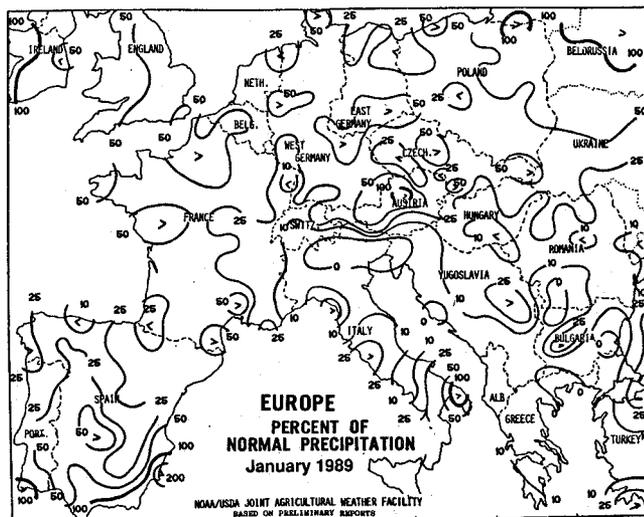
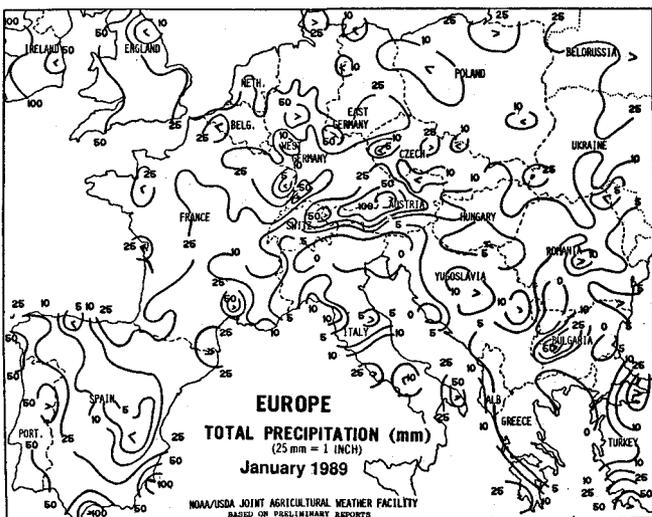
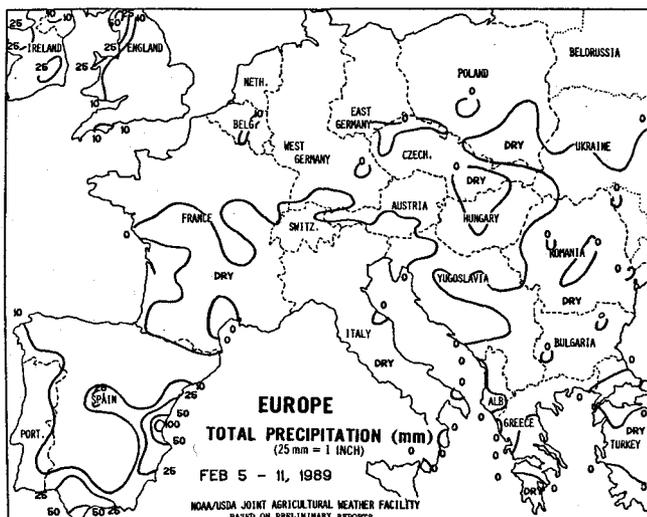


WESTERN USSR ... Light precipitation and above-average temperatures persisted throughout the winter grain areas. Weekly precipitation totals generally averaged 6mm or less, with somewhat heavier amounts (7-15mm) confined to the northern tip of the Baltic States and Northwest Region, and the upper Volga and northern Urals Regions. Dry weather prevailed in the southwestern Ukraine. Weekly temperatures generally averaged 3-7 degrees Celsius (C) above normal. January average temperatures were 6-8 degrees C above normal in northern winter grain area and 2-6 degrees C above normal in the south. Although winter grains remained dormant, the persistent unseasonably mild weather has restricted snow cover to crop areas in the Central, Black Soils, Volga Vyatsk, and upper Volga Regions and caused winter grains to lose some winter hardiness in the south and west. January precipitation was below normal in the western Baltic States, the Ukraine, and Black Soils Region. Above-normal, monthly precipitation increased moisture reserves in Belorussia, the Central Region, the western Volga, and the North Caucasus.

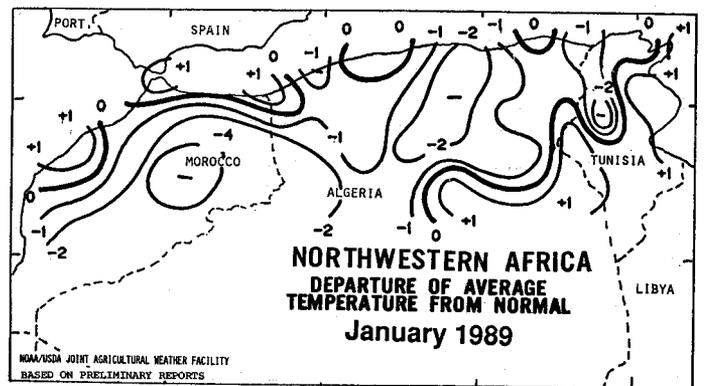
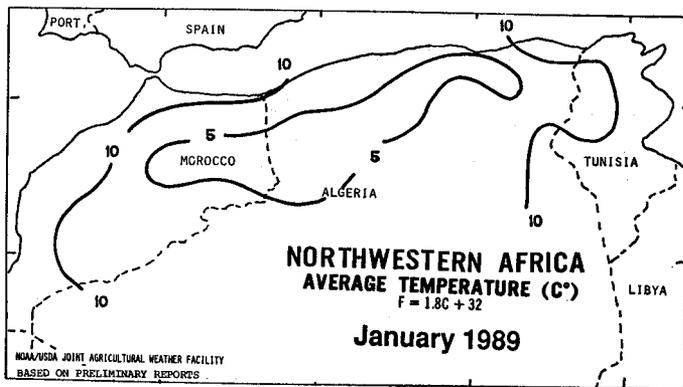
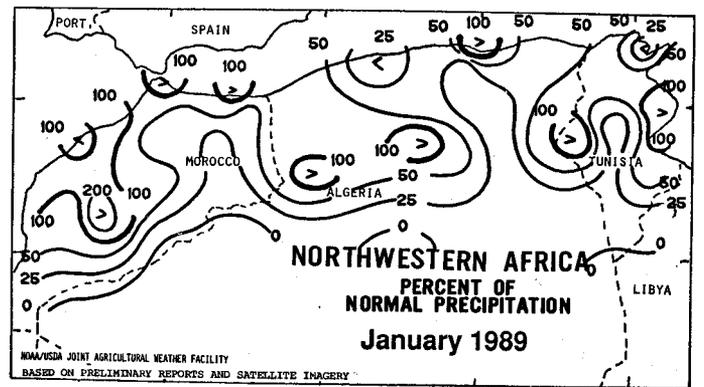
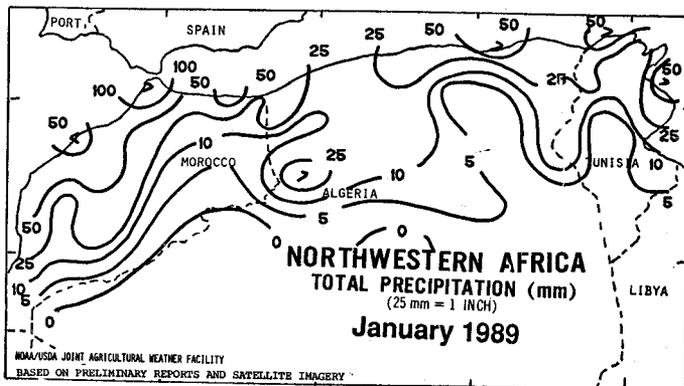
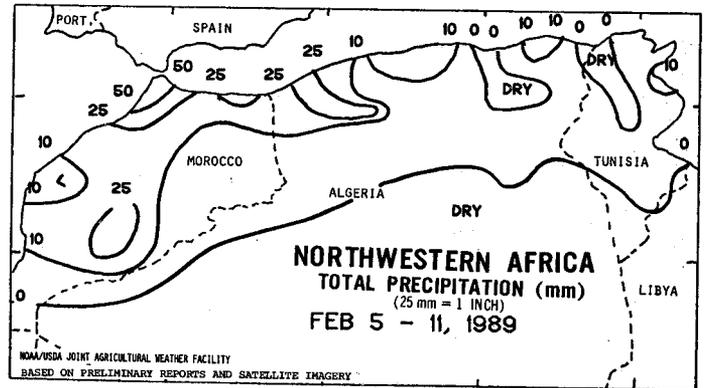




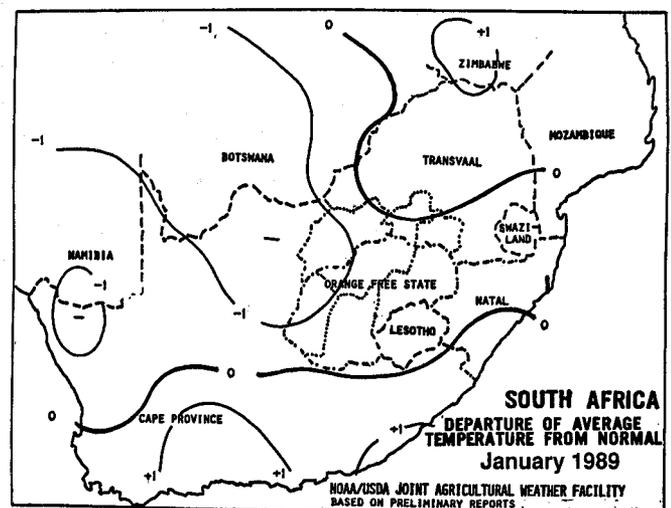
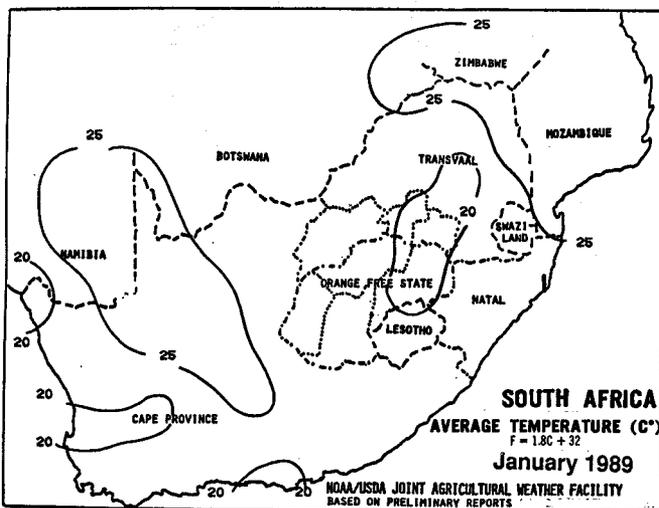
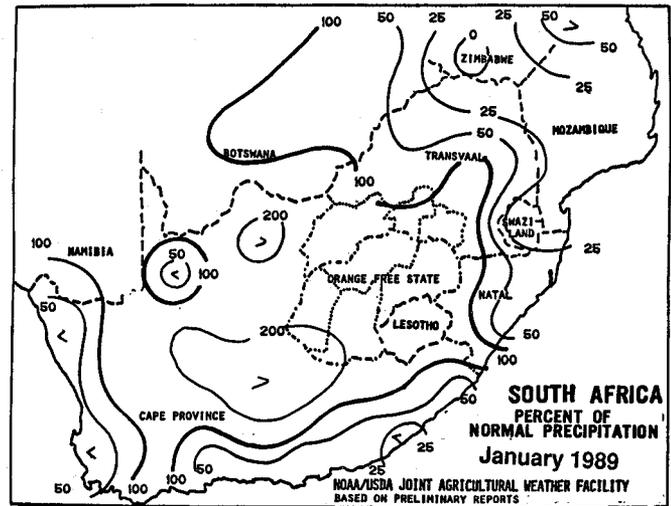
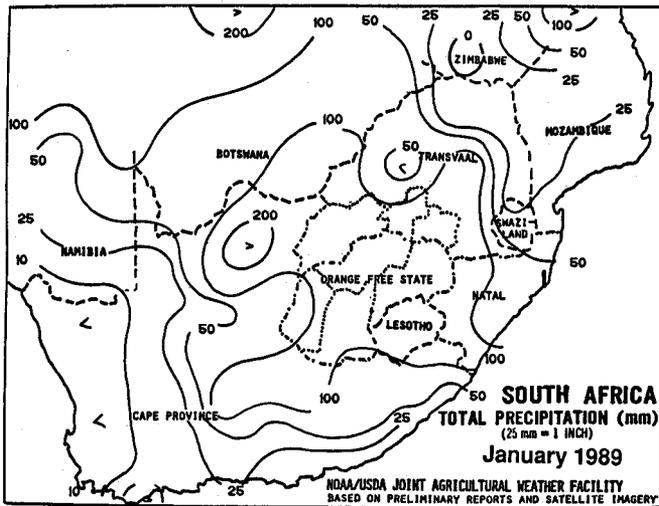
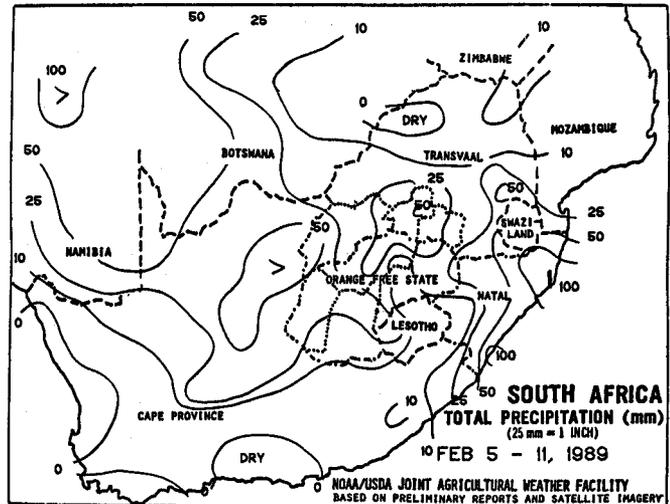
EUROPE ... A near stationary high pressure ridge remained over Europe, continuing drier than normal and unseasonably warm weather (as much as 9 degrees C above normal in Poland) for most growing areas. A late-week frontal system brought much needed rain to the Iberian Peninsula, with light to moderate amounts (5-20mm, with isolated rainfall in excess of 20mm) in northern and central crop areas, and moderate to heavy amounts (15-40mm, with isolated amounts in excess of 50mm) in the south and along the eastern coast. Much of the remainder of the south remained unfavorably dry, however. In the north, light rain (less than 10mm) fell over most crop areas. Below-normal precipitation persisted over much of Europe during January. Mean temperatures for the month were normal to above normal over all but extreme southern sections, where they were slightly below normal.



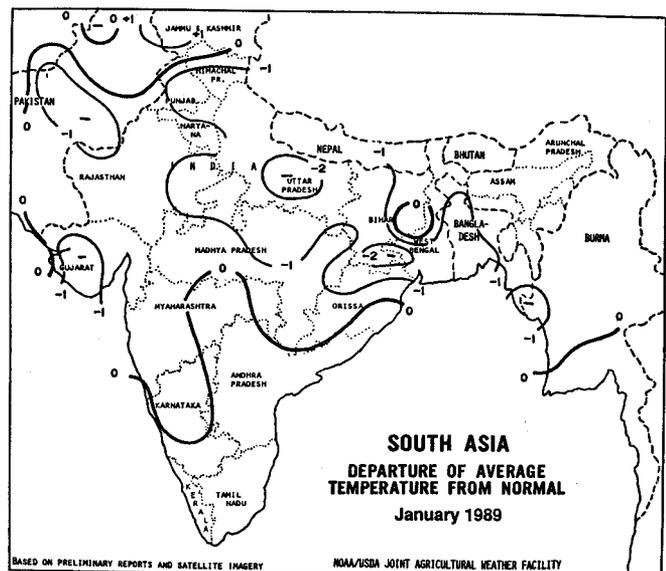
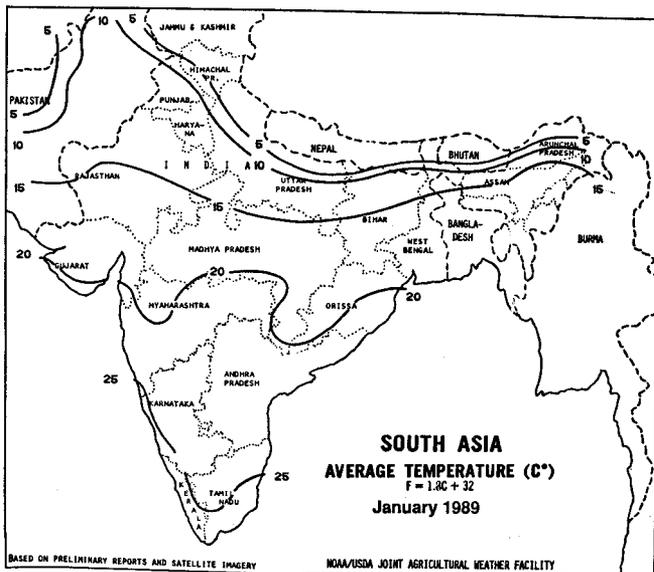
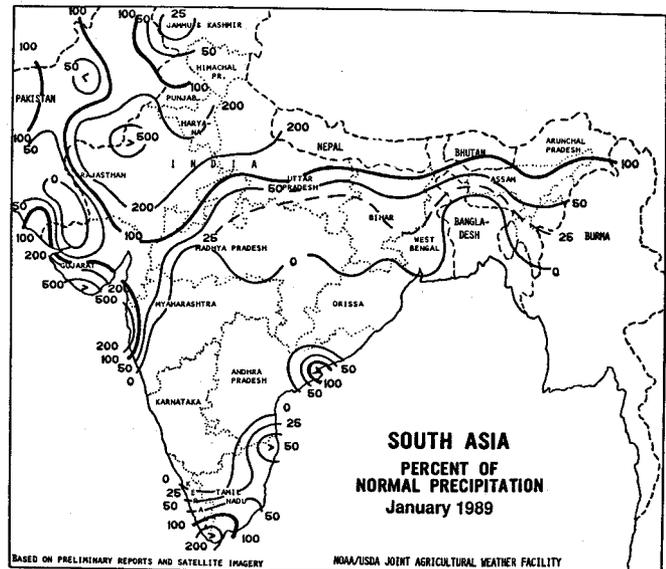
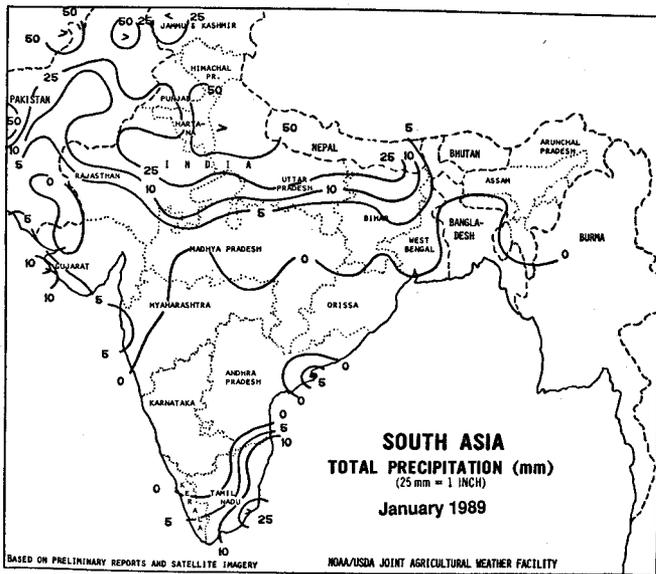
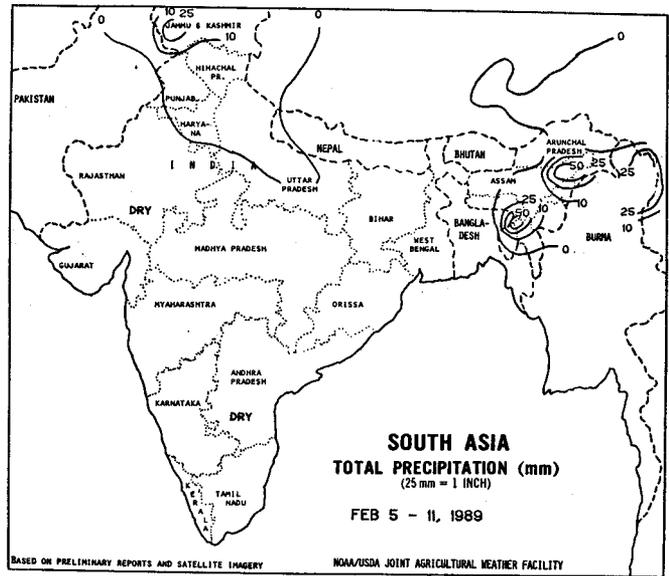
NORTHWESTERN AFRICA ... Beneficial showers fell over crop areas of Morocco and western Algeria, helping vegetative growth of winter grains. Weekly rainfall totals ranged from 10 to 20mm, with locally heavier amounts (25-74mm) in the vicinity of Tangier and in far western Algeria. In contrast, mostly light showers produced minimal rainfall (1-5mm) over eastern Algeria and Tunisia, with only isolated heavier amounts of 10-12mm scattered over the region. Near-normal January rainfall was confined mostly to west-central Morocco. Much-below-average monthly rainfall prevailed over the remainder of Morocco, Algeria, and nearly all of Tunisia except for a small area along the east coast. Winter grains in the jointing stage are likely becoming increasingly stressed by limited moisture reserves, and conditions will become more acute as the crop advances through reproduction.



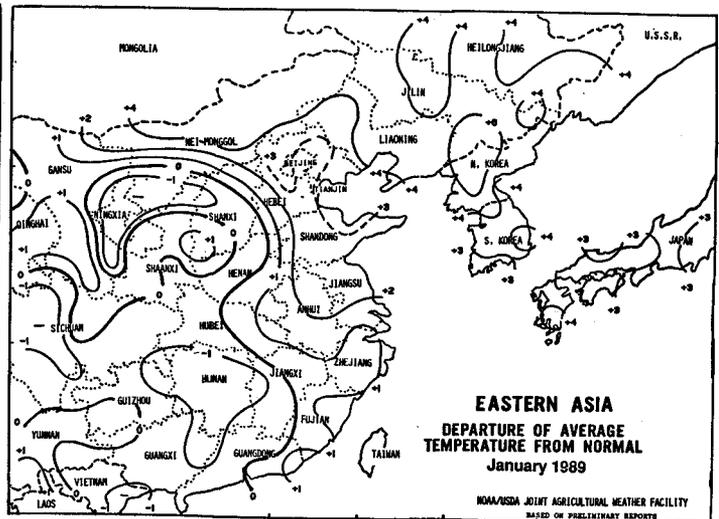
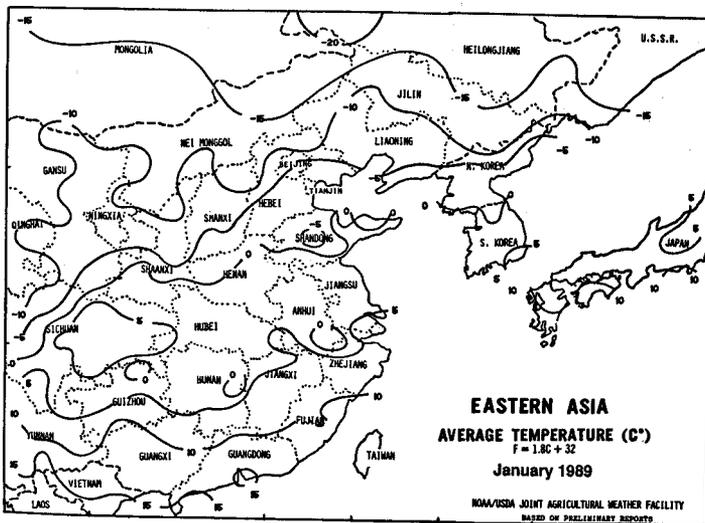
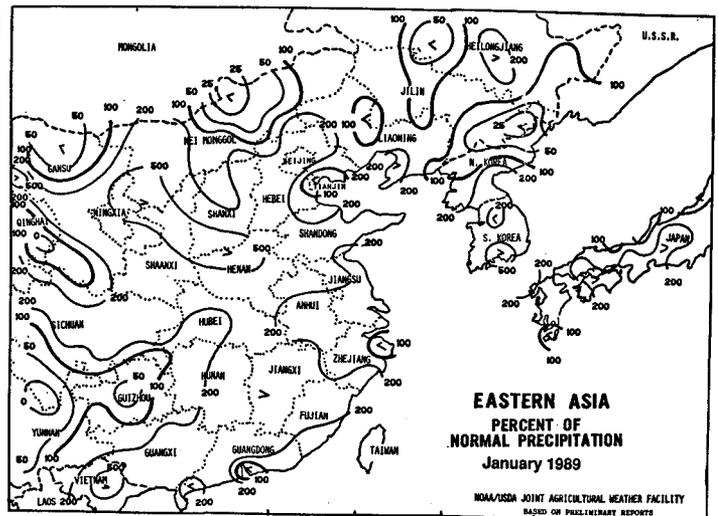
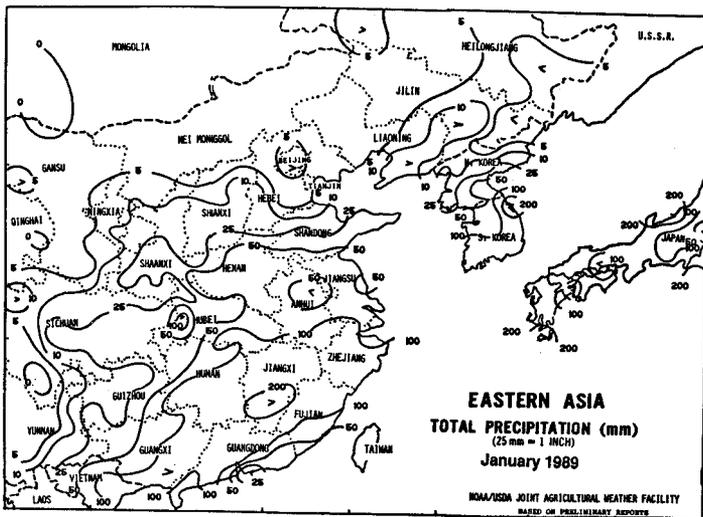
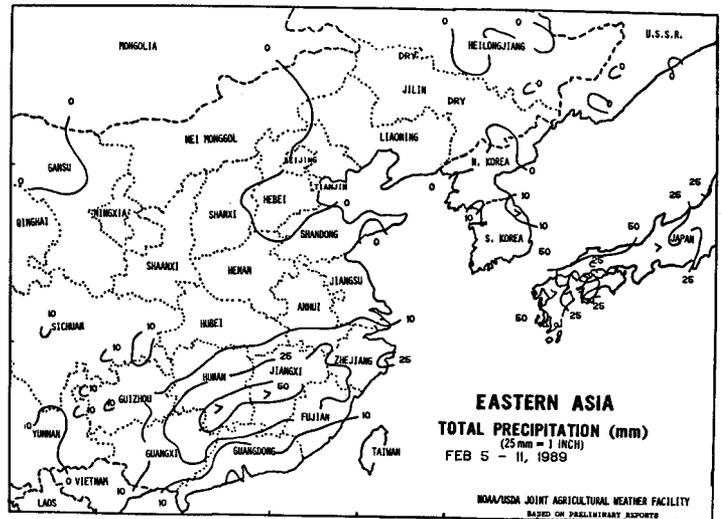
SOUTH AFRICA ... Widespread, variable showers swept across South Africa, maintaining generally favorable conditions for reproductive to filling corn. A pocket of light rain (less than 10mm) covered a portion of the central Maize Triangle, but elsewhere, rainfall ranged from 15-50mm or more, including areas of the northeastern Triangle which had been trending dry since late January. Temperatures averaged 2-4 degrees C below normal over the primary corn regions, reducing evaporation rates. In January, frequent rain and seasonable temperatures maintained favorable conditions for corn in or nearing reproduction. Rainfall totals were near to above normal over most primary crop regions, though portions of southern Transvaal received about 50 percent of normal (50-77mm). Temperatures averaged 1-2 degrees C above normal along the southern coast but near normal elsewhere.



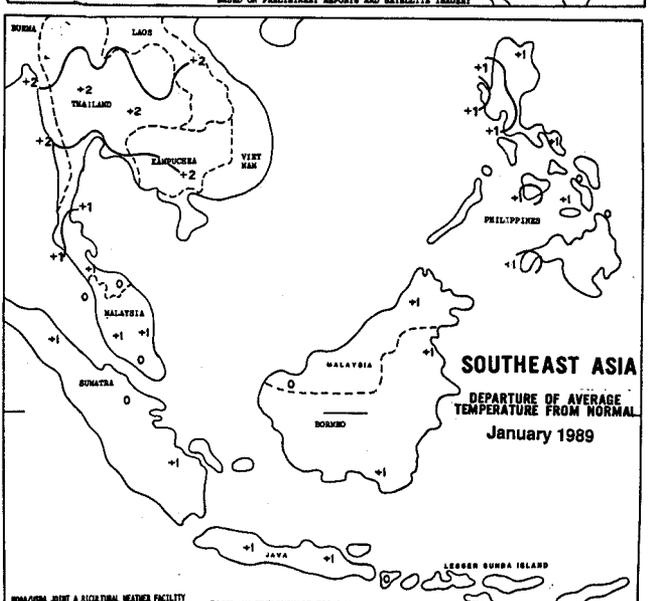
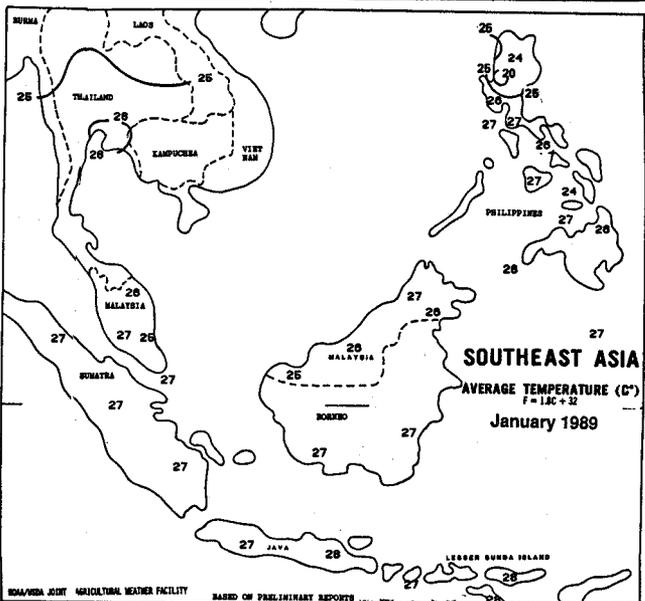
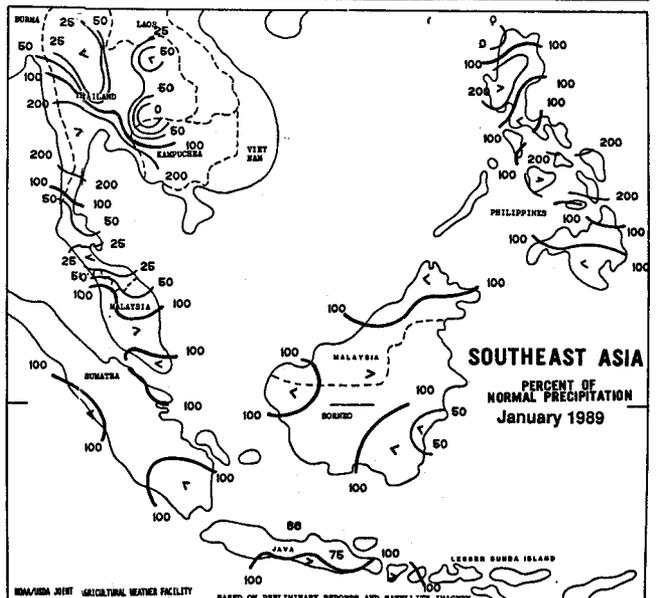
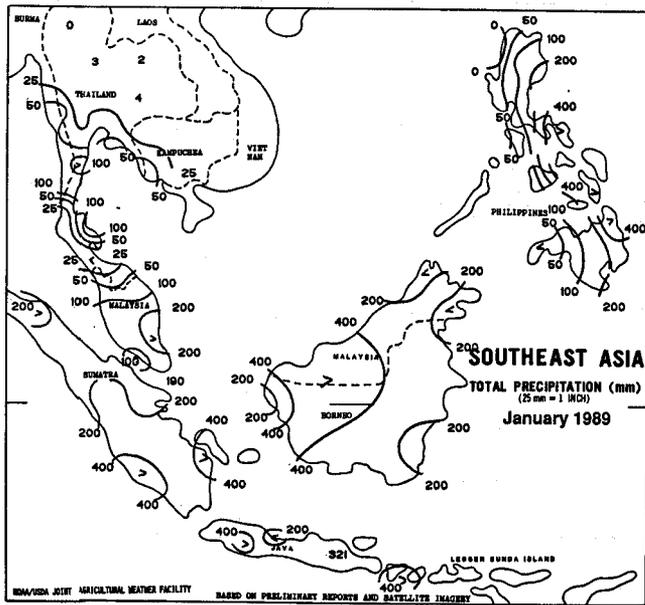
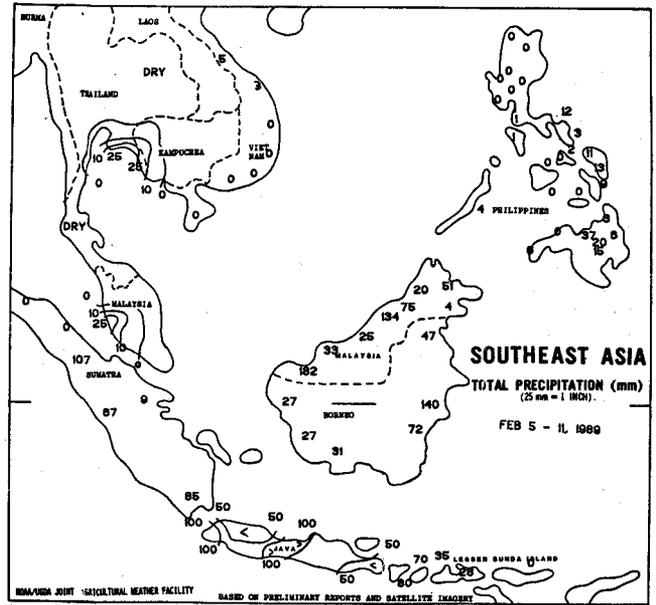
SOUTH ASIA ... Cooler-than-normal weather returned to a large section of northwestern India and Pakistan, with low minimum temperatures over the major winter wheat regions ranging from 3-6 degrees C. Only scattered, light rain (1-8mm) fell over the region. Winter wheat ranges from heading to filling across the north. Elsewhere in India, dry, warmer weather stimulated growth of vegetative to heading rice, while locally heavy rain (25-50mm or more) fell in India's eastern states. In January, cooler-than-normal weather slowed the development of vegetative to heading wheat as showers early in the month boosted irrigation reserves over most areas. In the south, scattered, light rain fell over coastal areas, but seasonable temperatures favored vegetative rice.



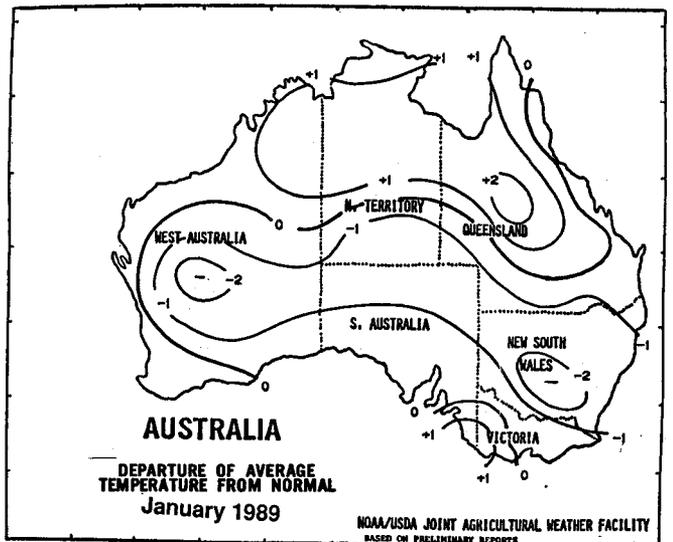
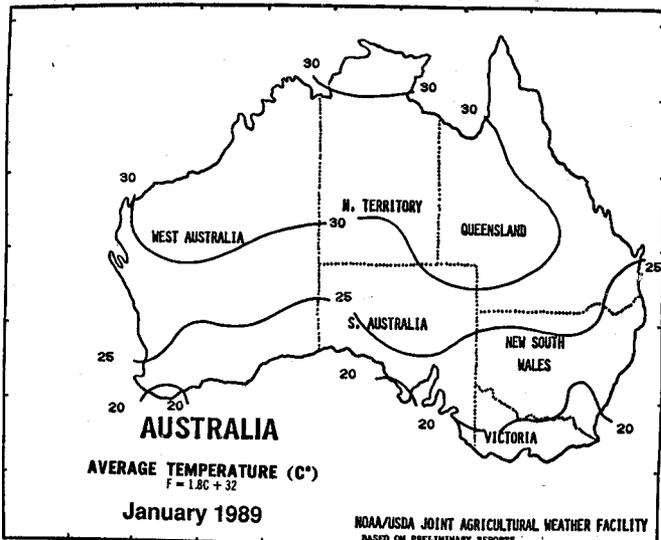
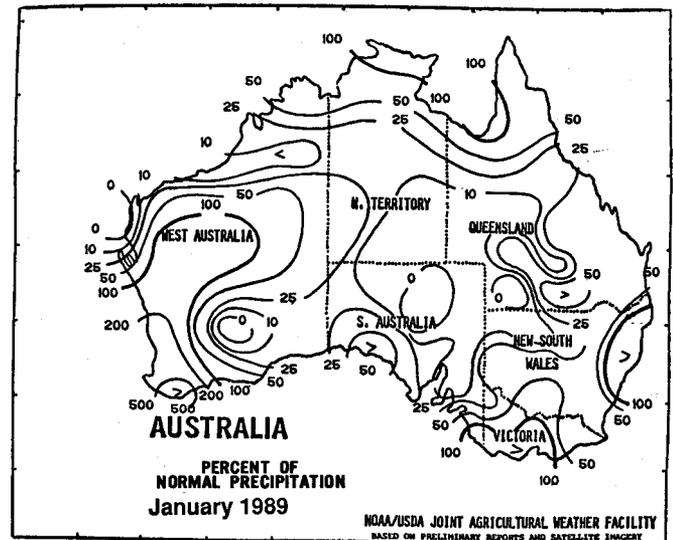
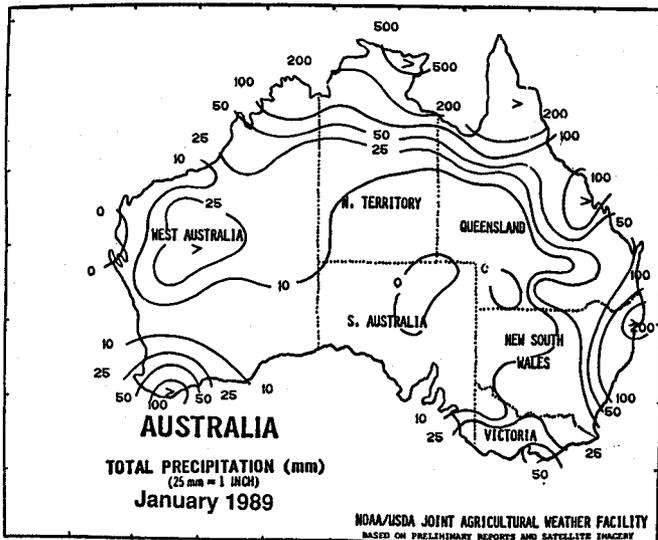
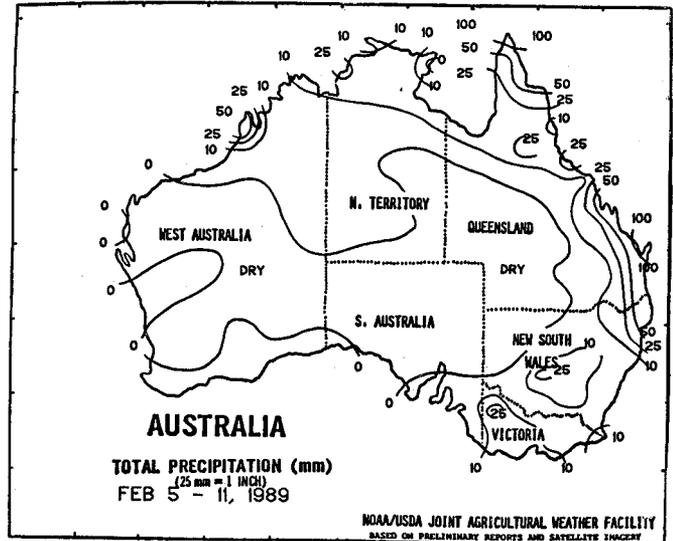
EASTERN ASIA ... Moderate to heavy rain (20-50mm, with scattered rainfall in excess of 50mm) continued over sections of Guangxi, Hunan, northern Guangdong, Jiangxi, and western Fujian, with light to moderate rain (5-15mm) over the remainder of southeastern China. Preplanting fieldwork will begin over the next few weeks in southern China. Heavy rain (25-50mm, with isolated rainfall in excess of 50mm) also fell over northern sections of Taiwan and much of Japan. The wet weather continues a wetter-than-normal trend since January, when much-above-normal precipitation fell over nearly all growing areas, including the North China Plain which was mostly dry this past week. Mean temperatures in January were above normal in northern and eastern sections, and below normal in the south and west.

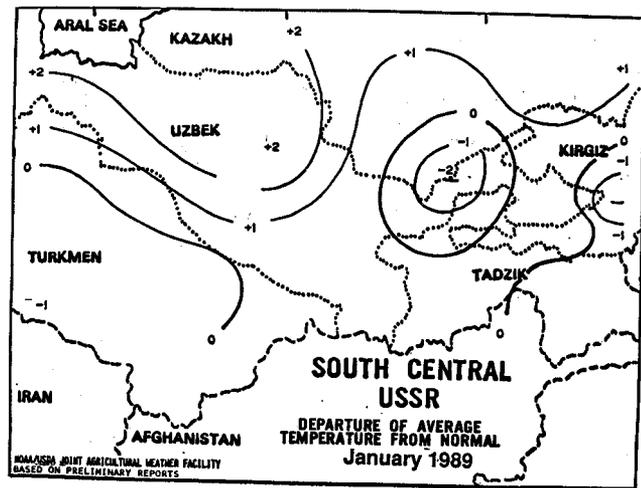
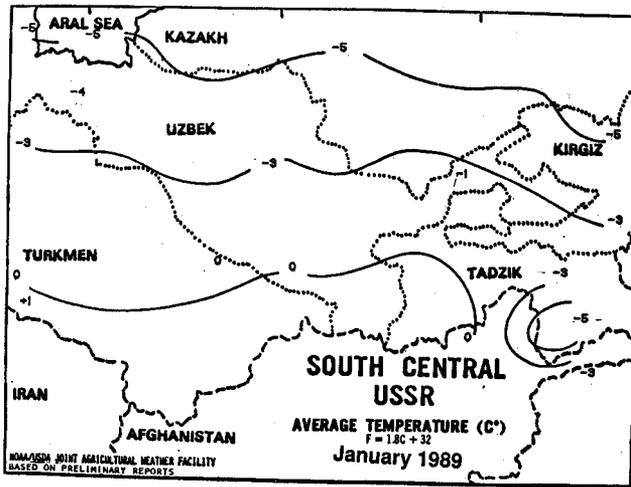
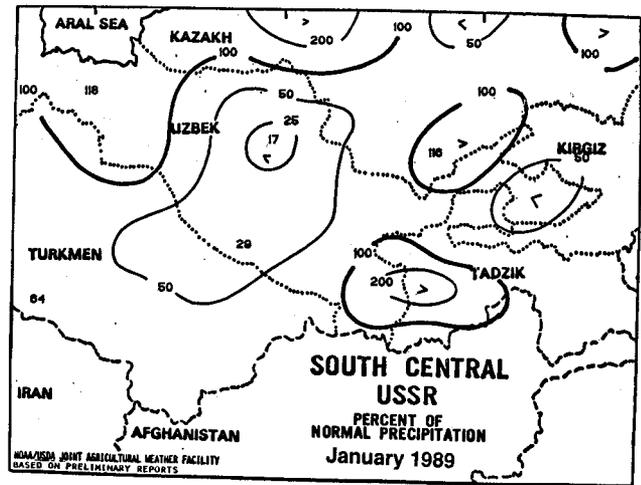
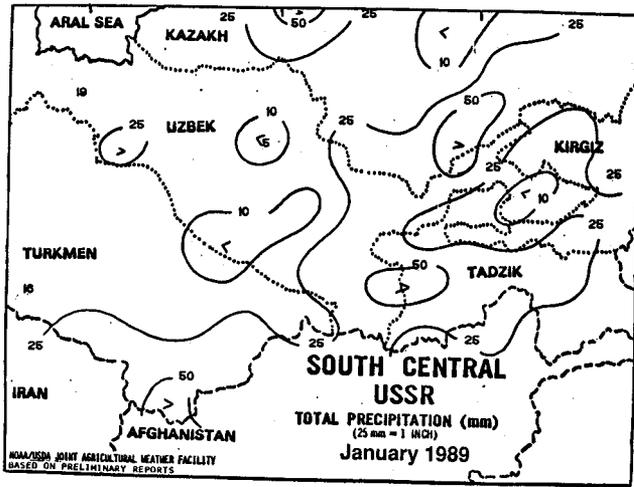


SOUTHEAST ASIA ... Moderate to heavy showers (25-50mm or more) covered eastern Malaysia and much of Indonesia, with heavy showers (85-182mm) returning to regions of Sumatra and eastern Malaysia that experienced flooding the latter half of January. Rainfall over Java ranged from 28-144mm, maintaining favorable irrigation levels. Western Malaysia was mostly dry. In the Philippines, much needed drier weather brought some relief to east-central regions that had been much wetter than normal since early January. Rainfall ranged from 1-35mm in the affected area. During January, rainfall was near to above normal over most of Malaysia and Indonesia, boosting irrigation reserves for rice planting and vegetative growth but causing local flooding. Excessive, frequent showers from the remnants of a tropical low caused flooding over the east-central Philippines from southern Luzon to northeastern Mindanao.



AUSTRALIA ... Scattered rain (5-30mm, with isolated amounts greater than 30mm) benefited reproductive to filling summer crops across growing areas of southeastern Queensland and northeastern New South Wales. Non-irrigated crops in the region have been under some moisture stress during the past several weeks due to increasing crop water demands and below-normal rainfall. Precipitation during January was below normal in all crop areas except sections of Western Australia, where it was above normal. Elsewhere, scattered showers (10-75mm, with isolated amounts greater than 100mm) fell across sections of Victoria, southern New South Wales, and coastal Queensland. Other crop areas were mostly dry. Mean temperatures during January were near normal to below normal over most growing areas except central Queensland, where they were above normal.





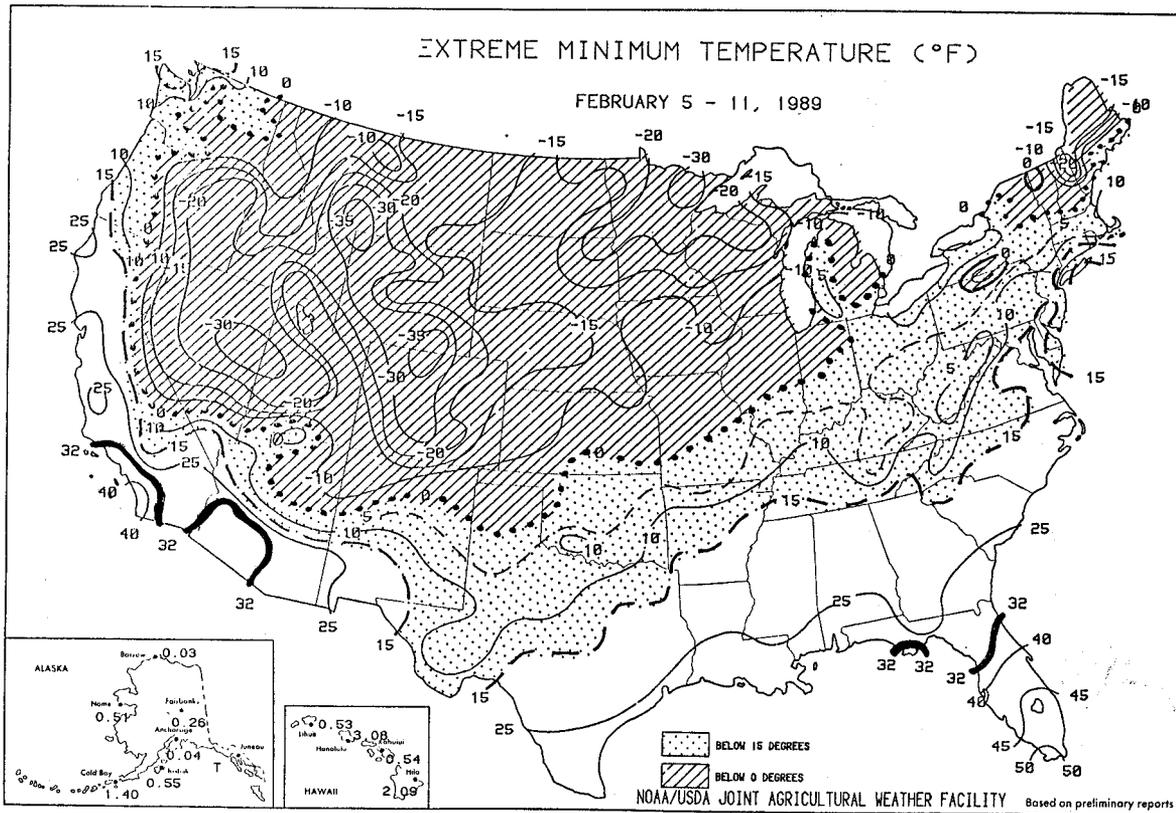
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