

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

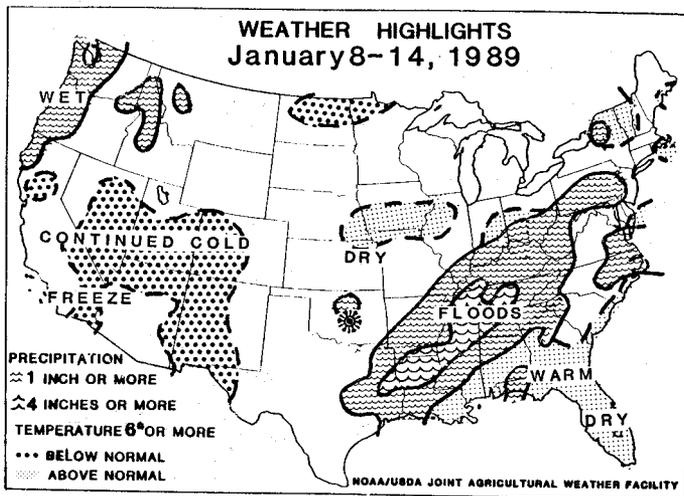
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National Weather Summary

January 8-14, 1989



central Gulf Coast States, and in southern Florida. Bitter arctic air settled over the northern Plains and upper Mississippi Valley.

WEDNESDAY: The northward flow of moisture out of the Gulf of Mexico produced precipitation over much of the eastern third of the country. Locally heavy amounts fell in the lower Mississippi and Tennessee Valleys. Snow showers were spread across the northern Plains to the Great Lakes and scattered over the Rockies. A large high pressure system off the Pacific coast caused gusty winds over the Southwest.

THURSDAY: Rain and snow were widespread ahead of a frontal system, extending from the Great Lakes into eastern Texas. Freezing rain, mixed with snow, rain, and sleet, fell from Pennsylvania into New England, while thunderstorms produced heavy rain across the Southeast. Rain showers extended down the northern Pacific coast. High wind continued across the northern Rockies and Southwest. The Gulf Coast States remained warm.

FRIDAY: The frontal system moved into the Atlantic and across the Southeast, causing widespread rain from eastern Texas to the middle and southern Atlantic coast. A band of snow fell across the southern Plains. Rain, with snow in the higher elevations, was scattered over the Pacific Northwest.

SATURDAY: Precipitation covered much of the East. Snow, sleet, and freezing rain spread from the middle Mississippi and Ohio Valleys into the Appalachians and the Northeast. The steady rain caused flooding in the Tennessee and lower Mississippi Valleys. A Pacific storm brought more wet weather into the Northeast.

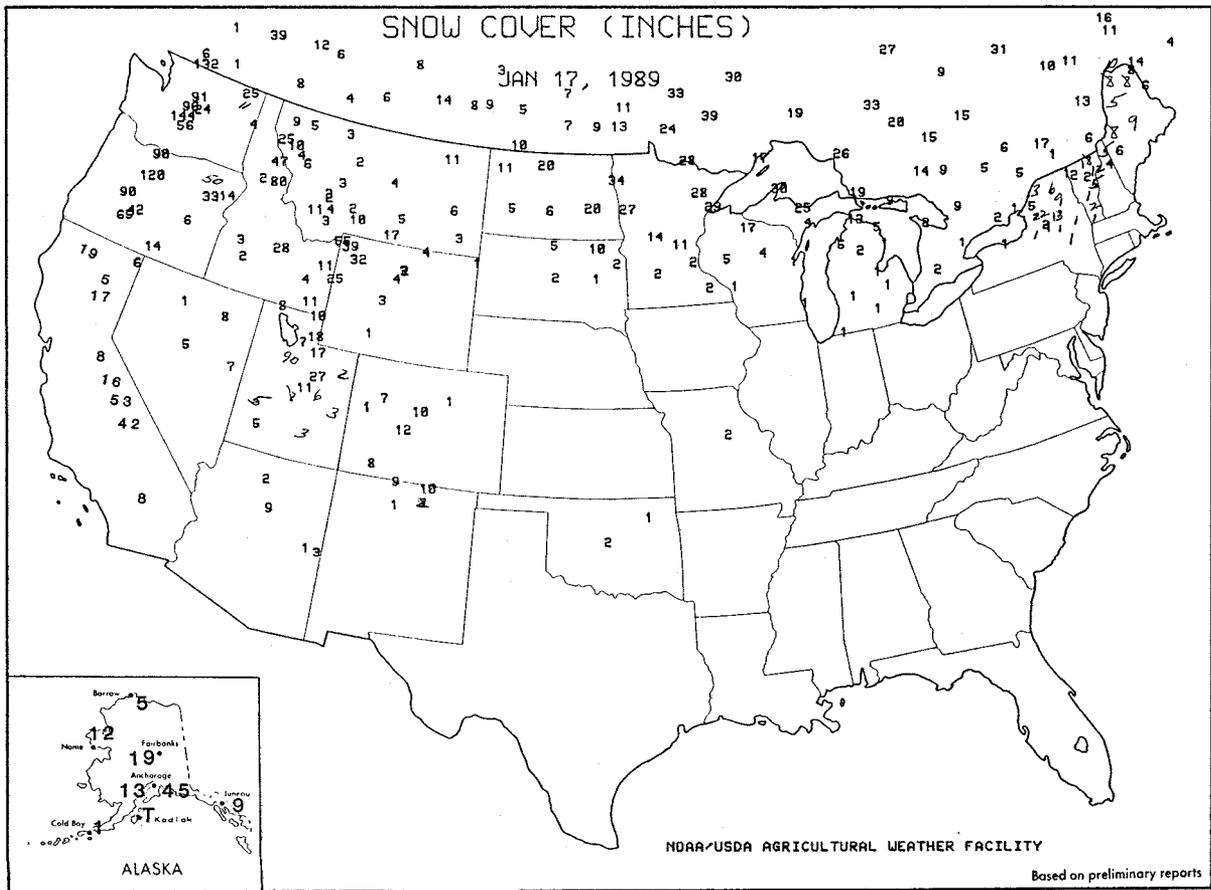
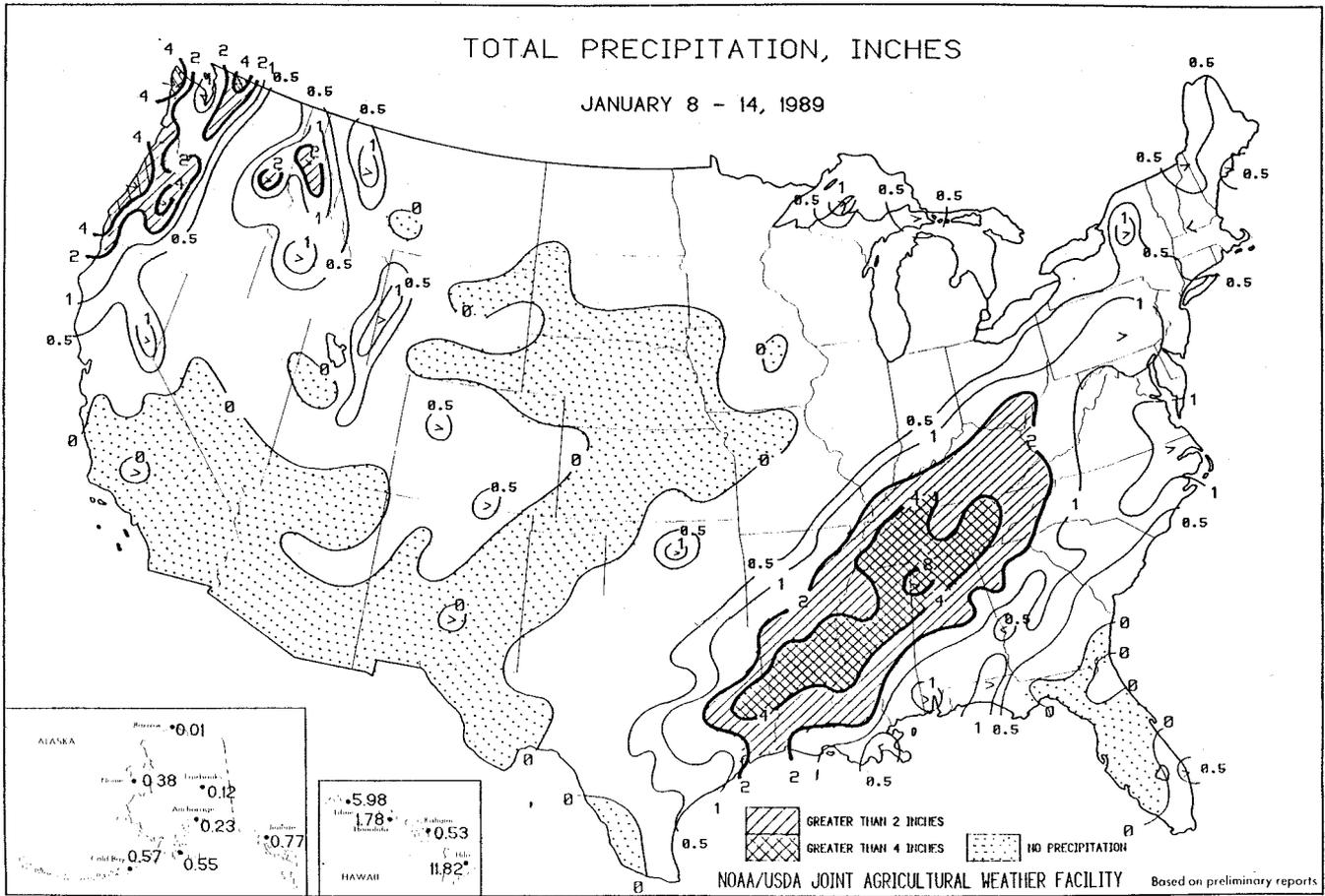
HIGHLIGHTS: Substantial rain fell from eastern Texas into the middle Atlantic Coast States. The persistent rains caused flooding in the lower Mississippi and Tennessee Valleys. Wet weather also covered much of the Pacific Northwest and northern Rockies. The central Great Plains, Florida, and much of the western Corn Belt again received little or no precipitation. Mild weather continued in the East, middle Mississippi Valley, and central Plains, while the Great Basin and Southwest remained cold. Temperatures again dropped below freezing in much of California.

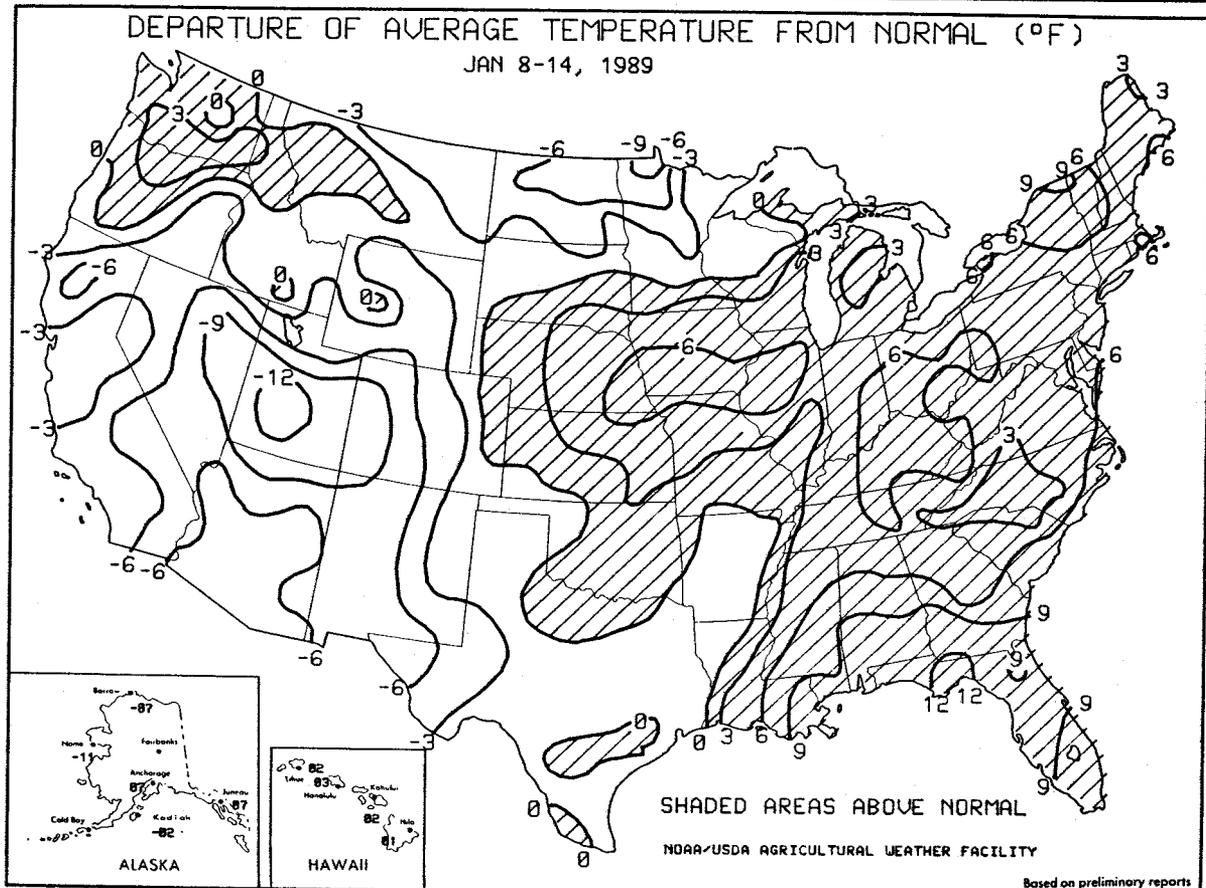
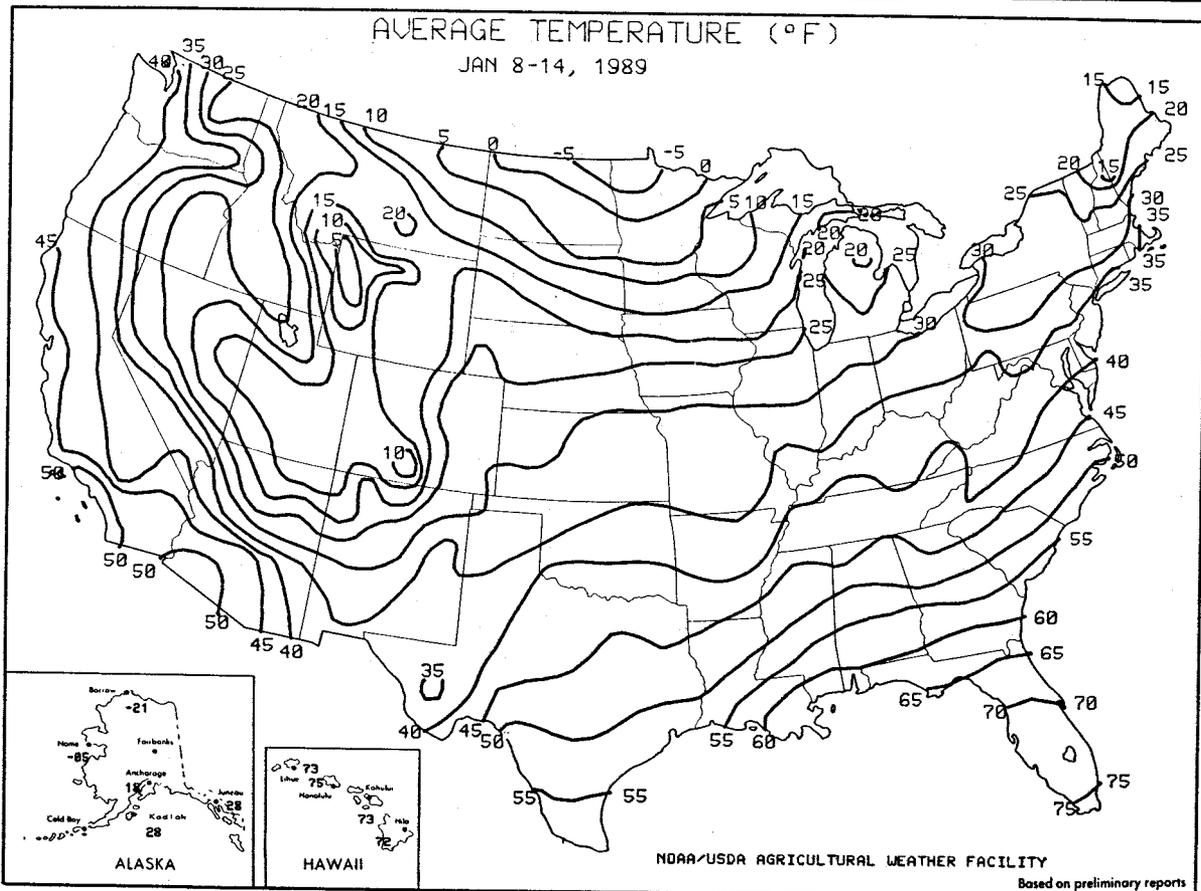
SUNDAY: A powerful blizzard crossed the Great Lakes into eastern Canada and left deep snow over the upper Mississippi Valley and upper Great Lakes. Fargo, North Dakota, reported 37 inches of snow on the ground. Snow and rain spread across the eastern third of the Nation. Frigid air poured into the central States behind the system. A Pacific storm brought rain, snow, and high winds into the Northwest.

MONDAY: Moist Gulf air, riding over the cool surface air, produced rain showers from east Texas to the mid-Atlantic coast. The Pacific storm brought more precipitation to the Northwest and spread to the northern Rockies. Snow showers continued over the Great Lakes. Bitter cold continued to grip the North Central States.

TUESDAY: A frontal system brought snow and gusty wind into the northern Rockies and Great Basin. Rain showers were scattered along the northern and central Pacific coasts, across the

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National Weather Data for Selected Cities

Weather Data for the Week Ending January 14, 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
AL BIRMINGHAM	56	43	68	35	50	7	3.6	2.4	1.0	7.6	104	4.2	174	100	77	0	0	7	3
MOBILE	68	52	76	47	60	9	1.1	0	.8	3.2	42	1.4	65	98	71	0	0	2	1
MONTGOMERY	62	49	70	42	55	9	1.0	.1	.9	5.4	81	1.0	52	98	67	0	0	5	1
AK ANCHORAGE	25	12	40	-2	18	7	.2	.1	.1	1.8	123	.2	69	86	67	0	0	6	0
BARROW	-12	-30	12	-41	-21	-7	T	T	T	.3	117	T	9	82	66	0	0	1	0
FAIRBANKS	9	-9	29	-19	0	13	.1	0	.1	.9	95	.5	173	85	70	0	0	7	5
JUNEAU	32	25	38	14	28	7	1.5	.7	.8	7.2	114	2.4	139	98	82	0	6	6	1
KODIAK	33	22	40	17	27	-2	.6	-.8	.4	12.2	149	1.2	46	80	49	0	7	4	0
NOME	3	-13	15	-27	-5	-11	.4	.2	.2	2.2	221	.8	224	83	66	0	7	3	0
AZ PHOENIX	60	36	65	33	48	-4	0	-.2	0	.8	67	.6	188	62	19	0	0	0	0
PRESCOTT	44	17	57	13	30	-5	-1	-.3	.1	1.8	76	1.2	160	76	30	0	7	1	0
TUCSON	58	30	70	24	44	-7	0	-.2	0	.7	55	.7	172	72	19	0	5	0	0
YUMA	62	41	71	36	52	-4	0	-.1	0	.7	136	.6	347	46	18	0	0	0	0
AR FORT SMITH	46	29	56	21	37	0	.2	-.2	.1	2.3	63	.7	76	95	52	0	6	5	0
LITTLE ROCK	45	32	58	26	39	-1	1.8	.9	1.0	5.3	88	2.1	118	92	65	0	5	2	0
CA BAKERSFIELD	51	32	59	28	41	-6	.1	-.1	.1	1.0	99	.2	54	93	53	0	5	2	0
EUREKA	52	40	55	35	46	-1	1.5	-.1	.7	9.7	102	3.4	106	85	70	0	0	5	1
FRESNO	49	30	57	28	40	-5	0	-.5	0	2.9	117	.5	53	98	59	0	6	0	0
LOS ANGELES	61	41	63	36	51	-5	0	-.7	0	3.1	106	.6	44	67	29	0	0	0	0
REDDING	48	31	59	26	39	-7	.7	-1.2	.3	5.1	46	1.4	36	96	56	0	4	3	0
SACRAMENTO	51	34	55	28	43	-2	-1	-.9	.1	3.5	75	.5	28	92	52	0	3	1	0
SAN DIEGO	62	41	67	37	51	-4	0	-.5	0	2.5	86	.3	29	77	30	0	0	0	0
SAN FRANCISCO	53	41	56	36	47	-1	-1	-1.0	0	4.4	77	.7	33	86	54	0	0	3	0
CO DENVER	40	13	59	0	26	-3	.2	.1	.2	1.4	192	.4	186	75	30	0	7	1	0
GRAND JUNCTION	25	3	31	-6	14	-11	.2	0	.2	.5	56	.3	96	87	47	0	7	1	0
FUERO	42	8	62	-11	25	-4	.1	0	.1	.7	168	.1	64	81	34	0	7	1	0
CT BRIDGEPORT	41	29	47	22	35	5	.4	-.4	.3	2.1	41	.5	33	71	55	0	6	2	0
HARTFORD	39	21	49	16	30	5	.3	-.5	.2	1.7	29	.3	20	82	38	0	7	3	0
DC WASHINGTON	46	32	52	24	39	4	.8	.1	.4	3.1	70	1.8	138	95	49	0	3	4	0
FL APALACHICOLA	69	60	73	57	65	12	.2	-.6	.2	1.4	28	.3	16	98	83	0	0	1	0
DAYTONA BEACH	78	59	83	54	69	11	T	-.5	T	1.9	29	T	0	100	62	0	0	0	0
JACKSONVILLE	73	56	81	53	64	10	.1	-.6	.1	1.9	50	.7	58	100	64	0	0	1	0
KEY WEST	80	72	82	71	76	6	.1	-.3	.1	.3	11	.1	11	90	69	0	0	1	0
MIAMI	81	67	83	63	74	7	.4	-.1	.4	.6	20	.4	46	91	56	0	0	2	0
ORLANDO	81	61	83	57	71	11	T	-.5	T	1.0	35	T	0	100	51	0	0	0	0
TALLAHASSEE	73	55	79	52	64	13	T	-1.1	T	1.1	16	T	1	98	66	0	0	0	0
TAMPA	82	61	84	57	71	12	T	-.5	T	1.6	54	T	0	97	49	0	0	0	0
WEST PALM BEACH	80	66	82	59	73	8	.5	-.1	.5	2.4	70	.5	42	93	57	0	0	3	0
GA ATLANTA	53	41	65	36	47	5	1.3	.2	.8	3.4	53	2.2	98	98	66	0	0	6	1
AUGUSTA	56	44	71	36	50	5	.8	-.1	.4	2.7	54	1.4	79	99	72	0	0	4	0
MACON	59	46	71	41	53	6	1.2	.2	.6	3.7	62	1.5	77	100	72	0	0	6	1
SAVANNAH	65	50	79	45	57	8	T	-.7	T	1.1	26	.1	7	98	66	0	0	1	0
HI HILO	78	67	80	65	72	1	11.8	9.8	3.1	29.4	173	15.9	379	95	73	0	0	7	7
HONOLULU	81	69	85	65	75	3	1.8	.9	.9	8.6	166	1.9	109	88	58	0	0	5	1
KAHULUI	79	67	82	64	73	2	.5	-.4	.2	10.8	234	.6	31	92	63	0	0	6	0
LIHUE	77	69	79	66	73	2	6.0	4.5	3.9	13.2	157	6.3	216	93	71	0	0	5	3
ID BOISE	36	21	44	9	28	-1	.6	.2	.3	1.8	85	.9	124	94	61	0	7	4	0
LEWISTON	40	29	44	19	34	3	1.0	.7	.7	1.7	86	1.2	176	86	57	0	6	2	1
POCATELLO	29	13	40	-1	21	-2	.1	-.2	0	1.7	115	.5	94	91	65	0	7	4	0
IL CHICAGO	34	18	44	6	26	6	.1	-.3	0	2.9	92	.5	62	85	54	0	7	3	0
MOLINE	35	18	43	5	26	7	T	-.4	T	2.1	78	.6	70	85	56	0	7	1	0
PEORIA	36	21	44	7	28	7	.1	-.3	0	2.7	96	.5	59	89	55	0	7	2	0
QUINCY	38	22	46	12	30	7	.1	-.2	.1	2.0	84	.1	17	86	54	0	7	1	0
ROCKFORD	31	15	39	3	23	5	T	-.3	T	2.1	79	.3	43	89	60	0	7	1	0
SPRINGFIELD	37	22	45	13	30	6	T	-.3	T	3.7	127	.4	55	89	52	0	7	2	0
IN EVANSVILLE	45	26	57	22	36	5	1.5	.8	.9	5.3	109	2.6	182	91	55	0	6	3	1
FORT WAYNE	37	20	45	13	28	5	.3	-.2	.1	3.7	107	1.2	120	91	61	0	7	3	0
INDIANAPOLIS	40	23	50	20	32	6	.4	-.2	.2	3.7	89	1.2	98	88	54	0	7	3	0
SOUTH BEND	36	20	43	9	28	5	.3	-.3	.2	4.1	100	1.2	98	87	53	0	7	3	0
IA DES MOINES	36	15	44	4	25	7	T	-.2	T	1.2	82	.3	77	81	45	0	7	2	0
SIOUX CITY	31	12	45	2	22	6	T	-.1	T	1.3	126	.7	250	86	54	0	7	0	0
WATERLOO	28	10	36	0	19	5	T	-.2	T	1.3	85	.8	197	88	65	0	7	0	0
KS CONCORDIA	42	20	47	10	31	6	0	-.1	0	.7	77	.1	39	73	30	0	7	0	0
DODGE CITY	46	15	58	7	31	2	0	-.1	0	.1	14	T	0	68	19	0	7	0	0
GOODLAND	44	11	58	1	28	1	T	-.1	T	.6	111	.1	76	77	22	0	7	1	0
TOPEKA	44	19	62	10	32	6	T	-.2	T	1.0	57	.1	24	85	36	0	7	0	0
WICHITA	44	19	59	12	32	2	T	-.1	T	.5	47	T	9	82	34	0	7	1	0
KY BOWLING GREEN	49	31	62	27	40	6	3.6	2.5	1.6	11.4	171	5.1	240	92	63	0	5	3	3
LEXINGTON	47	29	61	25	38	6	2.5	1.6	1.3	7.2	132	3.6	214	89	55	0	6	4	2
LOUISVILLE	48	29	57	23	39	7	1.7	.9	1.0	6.6	133	3.2	206	88	52	0	6	3	2
LA ALEXANDRIA	57	44	77	38	50	2	3.8	2.8	1.1	10.3	149	4.5	219	96	78	0	0	7	4
BATON ROUGE	67	49	80	43	58	8	2.9	1.9	1.4	11.1	157	2.9	141	99	77	0	0	6	3
LAKE CHARLES	61	46	78	42	54	4	1.3	.3	.8	6.1	84	1.3	61	97	75	0	0	6	1
NEW ORLEANS	70	55	80	47	63	10	.3	-.8	.2	4.8	64	.9	40	99	73	0	0	3	0

Based on 1951-80 normals

Weather Data for the Week Ending January 14, 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	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	53	37	68	32	45	-1	3.3	2.4	1.8	8.6	150	3.9	210	97	72	0	1	5	2
ME CARIBOU	26	1	37	-12	13	2	.3	-2	.2	1.6	37	.6	51	84	58	0	7	5	0
PORTLAND	38	17	43	10	27	6	.4	-5	.2	1.6	25	.4	21	84	37	0	7	3	0
MD BALTIMORE	45	29	50	18	37	4	1.2	.5	.5	3.3	69	2.3	167	95	46	0	4	4	1
SALISBURY	52	31	60	17	41	6	.6	-1	.3	2.0	37	1.3	83	96	57	0	4	5	0
MA BOSTON	45	25	54	20	35	5	.2	-7	.2	1.2	20	.2	11	73	31	0	7	3	0
CHATAM	42	30	48	24	36	4	.4	-6	.3	1.9	27	.5	26	87	55	0	4	3	0
MI ALPENA	32	14	44	12	23	4	.1	-3	.1	2.0	72	.8	93	89	58	0	7	0	0
DETROIT	37	19	55	13	28	4	.1	-3	.1	2.7	78	.7	76	90	59	0	7	4	0
FLINT	35	16	52	10	26	4	.3	-1	.2	2.3	84	1.0	136	84	53	0	7	0	0
GRAND RAPIDS	33	16	41	10	25	2	.3	-2	.1	2.5	70	.6	60	87	62	0	7	5	0
HOUGHTON LAKE	26	12	36	2	19	2	.2	-2	.1	2.6	98	.7	96	87	65	0	7	6	0
LANSING	34	17	43	9	25	5	.2	-2	.2	2.1	64	.8	99	85	58	0	7	5	0
MARQUETTE	23	4	32	-4	13	1	.1	-3	.1	3.4	101	1.0	108	92	73	0	7	3	0
MUSKOGON	35	17	40	12	26	3	.3	-3	.1	4.0	106	1.1	108	87	61	0	7	2	0
SAULT ST. MARIE	26	5	39	-10	15	2	.6	-1	.3	4.9	137	1.3	125	93	64	0	7	6	0
MN ALEXANDRIA	13	-7	31	-25	3	-2	.1	-1	.1	.9	75	.5	118	88	72	0	7	2	0
DULUTH	16	-5	31	-26	6	-1	.3	0	.2	2.4	130	1.2	225	87	61	0	7	2	0
INT'L FALLS	11	-15	31	-31	-2	-2	.3	.1	.2	2.2	170	1.5	363	89	65	0	7	4	0
MINNEAPOLIS	20	0	37	-14	10	-1	.1	-1	.1	1.1	88	.4	103	85	60	0	7	0	0
ROCHESTER	24	2	33	-10	13	3	.1	-1	.1	1.3	103	.2	46	88	67	0	7	2	0
MS GREENWOOD	55	40	69	35	48	4	3.8	2.6	1.6	9.7	123	4.3	179	92	66	0	0	2	0
JACKSON	59	43	79	37	51	6	3.5	2.3	1.3	8.4	108	3.6	151	99	77	0	0	6	4
MERIDIAN	63	46	75	36	54	9	2.5	1.3	.8	10.0	123	2.5	104	96	74	0	0	7	2
MO CAPR GIRARDEAU	45	28	56	24	36	-1	1.0	.4	.5	5.8	114	2.9	209	93	57	0	7	3	0
COLUMBIA	41	22	52	12	32	4	.2	-2	.2	4.3	153	.9	105	89	48	0	7	1	0
KANSAS CITY	42	21	57	14	31	4	T	-3	T	1.0	47	.1	18	87	41	0	7	1	0
SAINT LOUIS	42	26	51	21	34	5	.1	-3	.1	5.0	169	1.8	228	80	49	0	7	2	0
SPRINGFIELD	44	23	54	13	33	2	.1	-3	.1	3.3	99	.2	21	90	40	0	6	1	0
MT BILLINGS	29	13	34	-11	21	0	.1	-1	.1	1.0	84	.5	105	73	45	0	7	2	0
GLASGOW	14	-6	35	-29	4	-4	.2	.1	.1	.9	190	.5	300	85	65	0	7	3	0
GREAT FALLS	30	11	39	-18	21	2	.1	-2	0	1.6	133	.7	148	81	57	0	7	2	0
HAVRE	16	-3	39	-32	6	-5	.1	-1	.1	.6	73	.1	39	79	62	0	7	1	0
HELENA	28	10	37	-16	19	1	.2	0	.2	.9	100	.6	191	89	58	0	7	2	0
KALISPELL	28	11	38	4	20	0	.6	-2	.2	3.0	129	.7	92	91	66	0	7	1	0
MILES CITY	19	1	34	-22	10	-4	T	-1	T	1.1	119	.5	164	70	52	0	7	4	0
MISSOULA	28	13	40	0	21	0	.4	0	.2	1.2	67	.5	74	99	64	0	7	1	0
NE GRAND ISLAND	37	14	51	6	26	5	0	-1	0	.4	47	.1	64	83	40	0	7	0	0
LINCOLN	38	17	46	9	27	8	0	-1	0	.8	86	.2	79	85	40	0	7	0	0
NORFOLK	33	12	47	0	22	5	0	-1	0	1.8	214	.9	409	84	45	0	7	0	0
NORTH PLATTE	39	9	49	-1	24	3	0	-1	0	.5	96	.2	88	84	34	0	7	0	0
OMAHA	36	17	45	7	26	6	T	-2	T	1.0	95	.2	73	71	46	0	7	0	0
SCOTT'S BLUFF	42	7	52	-7	25	1	0	-1	0	.4	56	T	0	70	21	0	7	0	0
VALENTINE	37	6	46	-4	21	3	T	-1	T	.2	56	T	18	74	31	0	7	0	0
NV ELY	31	-4	43	-16	14	-10	.1	-1	.1	1.2	111	.4	106	84	47	0	7	2	0
LAS VEGAS	48	29	50	25	38	-6	0	-1	0	.6	122	.5	252	65	25	0	5	0	0
RENO	41	18	50	10	30	-2	T	-3	T	1.0	53	.1	21	88	42	0	7	1	0
WINNEVOCCA	36	11	45	-1	23	-6	T	-2	T	.6	46	.1	13	88	51	0	7	1	0
NH CONCORD	36	12	45	2	24	4	.1	-5	.1	1.2	25	.1	10	90	40	0	7	3	0
NJ ATLANTIC CITY	49	27	58	14	38	5	.6	-2	.5	2.0	38	1.3	84	90	44	0	4	3	0
NM ALBUQUERQUE	41	15	55	7	28	-6	.1	0	.1	.2	31	.2	95	71	29	0	7	1	0
CLOVIS	49	18	63	14	33	-4	T	-1	T	1.5	180	T	5	67	21	0	7	0	0
ROSWELL	53	19	72	12	36	-3	T	-1	T	.5	94	T	0	63	16	0	7	0	0
NY ALBANY	38	17	47	9	27	6	.1	-5	.1	1.1	28	.1	10	84	39	0	7	1	0
BINGHAMTON	34	17	43	11	25	4	.6	0	.3	2.2	55	1.1	89	90	41	0	7	3	0
BUFFALO	38	22	51	16	30	6	.3	.4	.2	2.8	57	.6	41	81	43	0	7	3	0
NEW YORK	43	31	49	28	37	5	.9	.2	.5	2.8	55	1.6	110	81	41	0	7	4	0
ROCHESTER	38	20	46	16	29	5	.1	-4	.1	1.5	40	.4	35	81	43	0	5	4	0
SYRACUSE	39	20	49	13	29	6	.3	-3	.1	2.4	54	.4	35	84	41	0	7	2	0
NC ASHEVILLE	47	33	58	27	40	3	1.3	.6	.5	3.0	65	1.6	110	100	61	0	7	4	0
CHARLOTTE	50	38	67	32	44	4	.8	0	.5	3.1	61	1.5	89	97	61	0	4	7	0
GREENSBORO	46	33	55	24	39	2	.7	-1	.2	2.1	42	.9	58	98	63	0	1	6	1
HATTERAS	65	46	71	40	56	10	1.2	.1	1.1	3.4	51	2.6	121	97	71	0	0	3	6
NEW BERN	59	42	78	32	50	6	.6	-3	.2	2.1	39	1.2	66	98	69	0	1	5	0
RALEIGH	52	36	69	26	44	5	.7	-1	.2	2.3	49	1.3	79	95	63	0	2	6	0
WILMINGTON	63	42	76	32	53	7	.1	-7	.1	1.4	27	.8	48	98	67	0	1	3	0
ND BISMARCK	16	-11	37	-31	3	-4	.1	-1	.1	1.2	162	.4	200	87	62	0	7	2	0
FARGO	11	-12	31	-29	-1	-5	.4	.3	.4	2.8	320	1.7	633	89	71	0	7	3	0
GRAND FORKS	6	-18	30	-33	-6	-8	.3	.1	.2	3.2	333	1.2	373	88	69	0	7	2	0
WILLISTON	10	-9	31	-31	0	-6	.2	.1	.2	1.6	222	.8	368	84	66	0	7	2	0
OH AKRON-CANTON	41	22	56	17	32	6	.8	.2	.3	3.3	85	1.5	124	86	49	0	7	3	0
CINCINNATI	45	25	61	21	35	6	1.2	.5	.6	5.6	126	2.8	192	91	57	0	7	3	0
CLEVELAND	41	21	57	15	31	5	.3	-3	.2	3.3	85	.8	72	88	46	0	7	4	1
COLUMBUS	43	24	59	19	34	6	1.0	.4	.5	4.3	111	1.8	142	92	53	0	7	3	0

Weather Data for the Week Ending January 14, 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	72 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	42	23	58	20	33	6	.9	-.3	.5	4.9	135	2.3	190	87	56	0	7	3	0
TOLEDO	38	19	52	13	28	5	.4	-.1	.2	3.0	83	1.0	103	90	55	0	7	3	0
YOUNGSTOWN	40	19	54	12	30	5	.6	0	.3	3.0	75	1.1	83	88	45	0	7	3	0
OK OKLAHOMA CITY	47	28	67	23	37	2	.3	.1	.2	1.7	108	.4	80	81	39	0	6	2	0
TULSA	46	28	63	22	37	2	.3	0	.3	2.2	90	.4	58	90	41	0	6	2	0
OR ASTORIA	48	37	50	33	43	2	3.3	.8	1.0	11.9	71	4.6	90	95	77	0	0	7	3
BURNS	31	13	42	-4	22	-4	.1	-.3	.1	.9	41	.2	31	82	62	0	7	2	0
MEDFORD	44	31	50	24	38	0	1.1	.2	.6	2.8	55	1.5	92	97	65	0	5	4	1
PENDLETON	45	32	51	25	39	6	.9	.5	.5	1.6	65	1.3	151	84	55	0	3	4	1
PORTLAND	47	37	52	34	42	4	1.3	-.1	.7	4.6	49	2.2	75	93	74	0	0	5	1
SALEM	47	36	52	33	41	3	1.9	.3	.9	5.9	56	2.6	78	94	77	0	0	5	1
PA ALLENTOWN	39	26	42	17	33	5	1.0	.3	.4	2.3	44	1.3	83	85	38	0	6	3	0
ERIE	40	20	52	13	30	5	.4	-.1	.2	3.4	77	.8	66	85	41	0	7	4	0
HARRISBURG	41	25	46	15	33	4	1.3	.6	.5	2.7	59	1.8	133	89	40	0	7	3	1
PHILADELPHIA	44	30	49	20	37	5	1.0	.3	.7	2.6	53	1.6	107	89	43	0	5	3	1
PITTSBURGH	44	23	57	15	34	7	.8	.1	.4	3.5	91	1.4	102	86	50	0	6	4	0
SCRANTON	37	23	44	15	30	5	.5	0	.3	1.7	49	.6	61	88	38	0	6	3	0
RI PROVIDENCE	45	24	55	19	35	6	.4	-.6	.3	1.4	22	.4	19	80	34	0	7	3	0
SC CHARLESTON	64	47	78	41	56	8	.4	-.3	.4	2.4	53	1.7	117	98	63	0	0	2	0
COLUMBIA	55	43	71	34	49	4	1.0	0	.4	2.4	44	1.7	85	98	74	0	0	7	0
FLORENCE	58	42	75	32	50	5	.7	-.1	.2	2.5	54	1.7	108	98	66	0	1	5	0
GREENVILLE	48	39	62	32	44	3	.9	-.1	.4	3.3	55	1.4	71	99	69	0	1	7	0
SD ABERDEEN	17	-9	35	-29	4	-4	.4	.3	.3	1.9	268	.5	241	88	70	0	7	2	0
HURON	24	2	40	-14	13	2	T	-.1	T	.9	131	.2	124	88	60	0	7	1	0
RAPID CITY	32	8	48	-7	20	-1	T	-.1	T	.5	78	T	0	80	44	0	7	0	0
SIOUX FALLS	25	4	40	-8	14	2	T	-.1	T	.5	59	.2	77	86	60	0	7	0	0
TN CHATTANOOGA	50	38	68	33	44	6	4.2	3.0	1.2	8.4	110	4.8	200	96	66	0	0	7	5
KNOXVILLE	49	36	68	31	43	5	3.5	2.4	1.1	8.2	122	4.2	196	98	70	0	2	7	4
MEMPHIS	51	36	64	31	44	4	5.8	4.7	2.5	12.7	182	6.8	317	95	55	0	1	4	3
NASHVILLE	51	35	64	32	43	6	3.2	2.1	1.5	7.8	116	3.9	185	93	60	0	1	4	3
TX ABILENE	54	32	74	24	43	0	T	-.2	T	.8	63	T	7	74	26	0	5	2	0
AMARILLO	51	16	68	8	33	-2	T	-.1	T	.2	24	T	0	71	17	0	7	0	0
AUSTIN	56	40	64	35	48	-1	.8	.5	.5	2.0	73	.8	124	93	57	0	0	4	0
BEAUMONT	59	44	77	40	51	0	2.8	1.9	1.4	8.7	129	2.9	154	97	78	0	0	6	3
BROWNSVILLE	68	48	85	42	58	-2	.4	.1	.3	.4	27	.4	73	98	65	0	0	4	0
CORPUS CHRISTI	62	46	78	36	54	-1	.4	.1	.1	1.4	74	.4	61	97	65	0	0	5	0
DEL RIO	59	40	72	24	49	-1	T	-.1	T	.4	51	T	5	70	28	0	1	1	0
EL PASO	51	20	68	11	36	-8	0	-.1	0	.4	83	T	6	55	20	0	6	0	0
PORT WORTH	52	36	66	27	44	0	.5	.1	.3	3.0	120	.5	66	93	51	0	1	3	0
GALVESTON	59	46	74	42	53	-1	2.6	1.9	1.8	5.4	108	2.6	177	96	80	0	0	6	1
HOUSTON	60	43	80	32	52	0	1.2	.4	.7	2.5	46	1.2	76	94	67	0	1	5	1
LUBBOCK	54	23	71	13	38	0	.1	.1	.1	.7	132	.2	88	60	13	0	7	1	0
MIDLAND	53	24	74	19	39	-4	.1	0	.1	.6	95	.1	35	73	18	0	7	1	0
SAN ANGELO	57	32	77	20	44	-1	.1	0	.1	.9	101	.1	43	81	27	0	3	1	0
SAN ANTONIO	59	41	72	33	50	0	.3	-.1	.2	.9	47	.3	39	85	46	0	0	2	0
VICTORIA	60	45	77	36	53	1	.5	.1	.3	2.8	93	.5	61	94	66	0	0	5	0
WACO	53	37	64	30	45	-1	.3	-.1	.2	2.3	89	.3	42	94	60	0	1	2	0
WICHITA FALLS	53	29	75	25	41	1	.1	-.1	.1	1.3	79	.2	37	78	31	0	6	2	0
UT CEDAR CITY	30	2	40	-8	16	-13	.1	0	.1	1.7	180	1.0	343	96	55	0	7	2	0
SALT LAKE CITY	32	15	43	8	24	-4	.2	-.1	.2	1.2	59	.5	82	95	56	0	7	4	0
VT BURLINGTON	37	15	43	9	26	9	.1	-.3	.1	1.1	32	.2	18	88	45	0	7	3	0
VA NORFOLK	54	37	67	30	46	6	1.5	.7	.6	3.0	63	2.4	142	97	67	0	1	6	1
RICHMOND	50	33	64	21	42	5	1.1	.3	.6	2.5	51	1.7	115	98	60	0	3	7	1
ROANOKE	47	29	61	18	38	3	.5	-.1	.2	2.6	62	1.3	101	94	51	0	4	4	0
WA QUILLAYUTE	45	36	47	31	40	2	5.2	1.9	2.2	19.6	80	7.5	108	100	86	0	3	7	4
SEATTLE-TACOMA	45	36	47	31	40	1	.8	-.6	.4	5.3	57	1.8	63	98	79	0	1	5	0
SPOKANE	30	20	36	13	25	0	.5	-.1	.3	2.4	66	.7	58	98	81	0	7	4	0
YAKIMA	41	23	47	18	32	5	T	-.3	T	.9	44	.2	26	96	60	0	7	2	0
WV BECKLEY	44	28	56	22	36	5	1.5	.8	.7	4.6	98	2.4	155	95	55	0	6	6	2
CHARLESTON	49	29	66	21	39	6	1.5	.7	.6	5.0	103	2.4	148	94	52	0	5	4	1
HUNTINGTON	48	30	63	24	39	5	2.7	2.0	.9	6.6	142	3.4	228	88	52	0	4	4	3
PARKERSBURG	46	26	57	18	36	5	1.7	1.0	.8	5.3	132	2.8	214	90	52	0	5	4	2
WI GREEN BAY	30	8	36	-2	19	5	.2	-.1	.2	1.0	53	.2	38	86	66	0	7	2	0
LACROSSE	27	5	36	-7	16	2	T	-.2	T	.9	59	.1	25	81	57	0	7	2	0
MADISON	29	11	38	-1	20	4	.1	-.1	.1	2.0	96	.4	72	83	59	0	7	1	0
MILWAUKEE	32	15	40	2	24	5	.2	-.2	.1	2.0	70	.5	64	93	62	0	7	2	0
WAUSAU	22	0	32	-10	11	0	.1	-.1	.1	1.8	105	.4	91	87	57	0	7	2	0
WY CASPER	29	6	40	-11	17	-5	.1	0	.1	.6	90	.1	59	75	39	0	7	2	0
CHEYENNE	35	13	48	3	24	-2	T	-.1	T	.5	96	T	0	68	28	0	7	0	0
LANDER	31	6	42	-9	19	0	T	-.1	T	.8	103	T	14	82	31	0	7	1	0
SHERIDAN	29	9	33	-13	19	-1	.1	0	.1	.4	41	.2	58	81	44	0	7	1	0
PR SAN JUAN	81	71	83	69	76	-1	1.9	1.2	.9	6.2	107	2.1	143	88	65	0	0	6	1

National Agricultural Summary

January 9-15, 1989

HIGHLIGHTS: Lack of precipitation continued to stress winter wheat in the central and southern Plains. Snow cover was adequate in the northern Plains. Winter wheat was mostly good to fair in the Corn Belt and the South. Rain limited fieldwork in the Delta and portions of the Corn Belt and the Southeast. Soil moisture was mostly adequate to surplus in the Delta. Florida's citrus and vegetable producing areas remained dry. Light freeze damage occurred in portions of Arizona and California. Livestock was in mostly good condition.

SMALL GRAINS: Insect damage and lack of moisture continued to stress winter wheat in the central and southern Plains. In Kansas, greenbug damage and lack of moisture were a problem in the west, central, and northeastern areas. Snowfall provided needed moisture and protection for winter wheat in portions of central Oklahoma. Precipitation was needed in the west. Mild temperatures have allowed greenbug populations to increase. Moisture improved small grain condition in eastern Texas. Dryland fields continued under stress from lack of moisture in the Plains area. Greenbugs were a continuing problem. Snow cover was adequate in the northern Plains. Additional snow cover was needed in portions of Colorado and Wyoming. Winter wheat was mostly good in the Corn Belt but needed snow cover. Ice covered some fields in southern Wisconsin. Snow cover was limited in Michigan. Small grains were mostly good to fair in the Delta and Southeast. Seeding was nearly complete in Georgia. In Arkansas, standing water could cause damage in some fields. Small grain seeding was slowed by wet field conditions in California. Seeding continued in Arizona. Condition of the emerged small grains was good.

OTHER FIELD CROPS: A few cotton fields remained for harvest in Arizona and California. Land preparation for the 1989 crop continued. Rain slowed fall plowing and fertilizer application in the Delta, portions of the Corn Belt, and the Southeast. Tobacco plant bed preparation continued in the Southeast.

FRUIT AND NUTS: Florida's citrus producing areas remained dry. Producers irrigated extensively in all areas. Fruit size was smaller than normal. Early orange harvest was active. Grapefruit movement continued strong. Texas' citrus harvest progressed well. Producers slowed irrigation to limit new growth. Pecan harvest continued in the west. Peach producers were pruning trees in the east. In western Arizona, some citrus groves suffered freeze damage. Tangerine, grapefruit, and lemon harvests continued in the central and western areas. California's citrus harvest continued. Light freeze and wind damage occurred in Riverside County.

VEGETABLES: In Florida, winter vegetable harvest continued. Volume leaders were tomatoes, peppers, cabbage, celery, squash, and lettuce. Lesser supplies of snap beans, strawberries, carrots, radishes, sweet corn, eggplant, and endive were available. Spring crop planting activities increased. Ruskin tomato planting was underway. In Texas, winter vegetable harvest continued in the Rio Grande Valley and the San Antonio-Winter Garden areas. Primary crops harvested were carrots, cabbage, lettuce, and onions. Land preparation for spring planting was active. Arizona's vegetable harvest continued. Crops harvested included lettuce, broccoli, cauliflower, and carrots. Artichokes showed signs of frost damage in the Salinas area of California. Cold weather in the Coachella Valley slowed asparagus harvest. Broccoli and cauliflower harvests continued with light to moderate supplies available. Kingsburg-Dinuba area producers were planting the spring lettuce crop.

PASTURES AND LIVESTOCK: Pastures in the South were mostly fair to good. Livestock was mostly good. Mild weather has allowed Iowa producers to continue using crop residue for grazing. Pasture conditions continued to decline in Florida due to the lack of rain. Rain improved pasture conditions in portions of central Texas. Range and pasture conditions continued to improve in California.

Highlights

ALL COTTON production in 1988 is forecast at 15.4 million bales, up 5 percent from 1987 and up 2 percent from the December 1 forecast.

CITRUS production is forecast at 13.2 million tons, 6 percent higher than last season and 13 percent above the 1986-87 season.

ORANGE production is forecast at 215 million boxes, virtually unchanged from December 1 but 7 percent above last season.

GRAPEFRUIT production, including California's "Desert" grapefruit but excluding California's "Other Areas" grapefruit is forecast at 63.7 million boxes, unchanged from December 1 but 1 percent above last season.

LEMON production, at 22.4 million boxes, is down 1 percent from the previous forecast but 8 percent above last season.

WINTER POTATO production for 1989 is forecast at 2.74 million cwt, up 5 percent from last year and 10 percent above 1987.

HAY STOCKS on farms December 1, 1988 totaled 90.9 million tons, 24 percent below holdings on the same date in 1987 and 25 percent below December 1, 1986.

State Summaries of Weather and Agriculture

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

ALABAMA: Rainfall 1.00 to 1.50 in. southwest quarter to less than 0.50 in. southeast. Temperatures 3 to 7° above normal northern half; 5 to 10° above normal southwest; 10 to 13° above normal southeast.

Soil moisture mostly adequate. Small grains mostly good. Livestock, pastures mostly fair. Primary activity: Routine care of livestock, poultry.

ARIZONA: Sunny skies, warming trend dominated weather statewide 8th to 10th. Upper level low pressure, cold front crossed State 11th; lowered afternoon temperatures 10 to 22° north, 3 to 10° south. Snow rim country, northeast plateau. Gusty northerly winds brought further cooling 12th. Afternoon readings 4 to 18° lower than previous day; teens, lower 20s northern mountains; middle 30s central basins. Wind chill index northern mountains 25° below zero. Sunshine, warmer afternoon temperatures prevailed 13th. Sunny skies, warmer conditions continued 14th. Temperatures 4 to 11° below normal.

Wheat, barley 94% seeded, 85% stands established. Earlier seeded crops in elongation stage; late plantings jointing stage. Crops very good. Cotton harvest final stages, plowdown active. Stalk shredding, disking west, central. Alfalfa grazed heavily by sheep. Light reseeding due to freeze out by winter storm. Citrus groves protected against freeze central, west. Some damage west. Harvest tangerines, grapefruit, lemons west, central. Mixed vegetables harvested included boston, leaf, romaine, head lettuce; broccoli, cauliflower, cabbage, kale, napa, escarole, bok choy, endive, rapini, green onions, parsley, carrots west, central. Pecan harvest completed statewide.

ARKANSAS: Temperatures below normal southwest to above normal elsewhere. Rainfall light northwest to heavy southeast. Temperature extremes 17°; 67°. Rainfall 0.09 to 5.94 in.

Very little farm activity. Soil moisture adequate to surplus. Small grains progressed normally. Water standing in some fields, could cause problems for small grains. Pastures fair. Livestock fair to good.

CALIFORNIA: Small amounts of rainfall, cold temperatures early week gradually started warming by late week.

Precipitation, wet soils slowed field activities. Seeding small grains progressed slowly. Some broadleaf weed control. Few cotton fields remained, wet soils. Weed controls some alfalfa hay. Sheep grazed alfalfa seed fields. Harvest barley, alfalfa green-chop southern areas continued. Wet soils delayed seedbed preparations spring crops. Normal cultural practices continued fruit beekeepers prepared for upcoming pollination. Citrus harvest ongoing. Light freeze, wind damage to citrus, avocados Riverside County. Artichokes Salinas showing signs frost damage. Broccoli moderate, variable quality, Salinas-Watsonville, Santa Maria. Broccoli Palo Verde light demand, quality excellent. Cauliflower light Santa Maria, variable quality. Celery seasonally decreasing supplies, good quality. Asparagus harvest Coachella Valley interrupted cold weather. Lettuce growers plant for spring season, Kingsburg-Dinuba, previously planted fields being thinned, cultivated. Western end, potato quality good,

small sizes. Winter peas continued develop Merced. Livestock fair to good. Range, pasture conditions improve due to additional rainfall. Feed adequate, water levels low, most areas. Supplemental feeding continued. Sheep being grazed on alfalfa.

COLORADO: Snowy conditions in mountains most of week. Precipitation lower elevations midweek limited to traces to 0.20 in. of moisture with some higher amounts along eastern foothills. Temperatures 7 to 10° below normal San Luis Valley, west of Continental Divide; 2 to 4° below normal elsewhere.

Seasonal temperatures keeping most winter wheat in dormancy but lack of snow cover, topsoil moisture growing concern. Livestock continued excellent.

FLORIDA: Temperatures 10 to 14° above normal except south 9° above. Extremes 40° Milton to 87° Moorehaven Lock, Clewiston. Most rainfall totals under 0.67 in. Many locations remained dry. Rain 2 days west, up to 5 days lower east coast, 1 day elsewhere.

Soil moisture decreased. Most areas short. All areas need rain. Tobacco bed work, sugarcane harvest active. Except driest areas, wheat grew rapidly from warm temperatures. Despite warm temperatures conducive to growth, many pastures declined due to inadequate moisture; western Panhandle fair to good, central Panhandle, mostly fair. Farther east extending into extreme northern Peninsula, very poor to fair, elsewhere, Peninsula mostly poor to fair, few lower areas good. Cattle herds declined somewhat, mostly fair. Citrus groves dry, rain needed; extensive irrigation. First sizes lagging; fruit drop average. Early orange harvest very active. Grapefruit movement strong with moderate fresh demand. Temple harvest increased all areas. Warm days, mild nights vegetable producing areas. Precipitation continued very limited. Spring planting increased. Harvest winter crops active. Volume leaders: Tomatoes, peppers, cabbage, celery, squash, lettuce. Lesser supplies available snap beans, strawberries, carrots, radishes, sweet corn, eggplant, escarole, endive. Planting spring crop ruskin tomatoes underway.

GEORGIA: Warm; temperatures 2 to 5° above normal north, 5 to 8° above normal central, 9 to 15° above normal south. Lows 30s mountains, around 50s southern border. Highs upper 50s to low 60s north, mid to upper 60s central, mid 70s to low 80s south. Wet northern half. Rain 5 to 6 days. Totals 1.00 to 3.00 in., local areas over 5.00 in. Rain 4 to 6 days central, 1 to 4 days south. Amounts under 0.75 in. central, under 0.25 in. extreme south.

Soil moisture short southeast, southwest; adequate north, central. Showers limited field activities, but benefited small grains. Harvest of all crops virtually complete. Wheat, rye, other small grains good, nearly all seeded. Pastures fair to good. Cattle, hogs good.

HAWAII: Unfavorable weather. Heavy rains, gusty winds. Tropical low pressure area engulfed State. Flooding many low lying areas. Winds gusty 5 to 35 mph. Temperatures mid 60s to low 80s. Rainfall 0.10 to 20.80 in.

Days suitable for fieldwork 7.0. Fieldwork hampered by constant muddy conditions. Pesticide spraying rendered ineffective due to gusty winds. Crops fair to poor. Chinese cabbage production

steady, moderate volume. Head cabbage output steady, good quality. Tomato steady. Banana production continued seasonal decline. Orchards fair. Papaya production seasonally low. Ginger root harvesting hampered by heavy rains.

IDAHO: Temperatures below normal except south central where temperatures near or above normal. Precipitation below normal except various areas of Panhandle, southwest.

Limited farm activity due to weather. Seed potato market quite active. Marketing, shipping of other farm products continued. Other activities included caring for livestock, shopwork, attending seminars, conferences, making plans for upcoming season. Early lambing, calving underway. Livestock good. Hay, roughage mostly adequate. Some cattle affected by poor quality feed.

ILLINOIS: Temperature lows near normal, highs 5 to 10° above normal north, 3 to 5° above normal south. Precipitation 0.20 to 0.40 in. nearly all of State, except up to 2.00 in. southern tip.

Winter wheat mostly good. Livestock good to excellent.

INDIANA: Temperatures 3 to 7° above normal. Lows teens to low 20s. Highs 40s to low 50s. Precipitation light 0.20 north to 1.50 in. southern areas.

Wet soils limited field activities. Other activities: Hauling grain, spreading manure, processing tobacco, machinery repair, attending meetings, purchasing supplies, tax preparation, feeding, care of livestock. Wheat mostly good. Hay short some areas.

IOWA: Another mild week, temperatures 7 to 12° above normal; extremes -2°, 10th Algona to 45°, 14th Sioux City. Precipitation confined 11th, maximum totals 0.13 in. Dubuque.

Livestock mostly good. Cattle, hog losses average. Farmers taking advantage of excellent weather for grazing of stubble fields. Availability of hay, roughage mostly adequate.

KANSAS: Temperatures middle 30s, 31° northwest to 36° southeast. Southeast 3° above normal, northeast 11° above. Pittsburgh 0.25 in. otherwise no significant rain.

Greenbugs continued problem in wheat due to mild temperature. Wheat suffers moisture stress western, central, northeast areas.

KENTUCKY: Mild, very wet; temperatures 3 to 6° above normal, highs mid 40s and mid 50s. Precipitation 1.00 to 3.50 in., greatest 11th, 12th, 14th. Heaviest rainfall west, south central.

Topsoil moisture generally ample, standing water some low areas. Soil unfrozen so water penetrating. Winter grains satisfactory, fields continued to be quite green. Mild winter helping to conserve hay supplies. Livestock wintering well. Coyote problems beginning to surface.

LOUISIANA: Temperatures 1° above normal north to 10° above southeast. Extreme 30°; 82°. Rainfall above normal; 1.00 in. southeast to over 6.00 in. central, northeast.

Main activities: Wet soils prevented most fieldwork. Caring for livestock, routine chores. Some drainage work.

MARYLAND & DELAWARE: MARYLAND: Precipitation 0.95 in. Temperature 38°, normal 33°. Temperature extremes 17°; 64°.

Main farm activity caring for livestock.

DELAWARE: Precipitation 0.51 in. Temperature 39°, normal 34°. Temperature extremes 17°; 59°. Main farm activity caring for livestock.

MICHIGAN: Temperatures 1 to 5° above normal. Temperature extremes -9°; 44°. Precipitation 0.11 to 0.60 in. across State. Very heavy snow northern counties early week, little or none elsewhere. Temperatures hovering at freezing point, making for messy weather and farm activities down State.

Winter wheat good, snow cover limited. Activities: Standing 1988 crops being harvested on fields with light snow cover, frozen ground. Grain marketing limited. Some manure, fertilizer being spread. Cutting wood. Maintaining equipment. Hay movement high to shortage areas. Caring for cattle. Cattle going to market as well as few hogs.

MINNESOTA: Temperatures 3° below to 5° above normal. Temperature extremes -38°; 41°. Precipitation trace to 0.29 in. Greatest weekly total 0.42 in. Snowfall none to 4 in. Snow depth 2 to 34 in. Most farmers spent week digging out from last weeks storm. Overall warm, wet winter so far very beneficial to everyone.

Hay remained low.

MISSISSIPPI: Warm, very wet. Rainfall 4.30 in.; maximum rainfall 3.80 in. Temperatures 6° above normal. Extremes 29°; 82°.

Days suitable for fieldwork 0.3, 0.9 1988, 1.9 avg. Soil moisture mostly excessive. Standing water common. Wheat, pasture, livestock good. Some pastures becoming boggy. Feed grains short to adequate. Hay, roughage adequate. Activities: Feeding livestock, ASCS sign-ups.

MISSOURI: Temperatures 4 to 6° above normal. Precipitation light except Bootheel over 1.50 in.

Weather favorable for livestock. Soil moisture, water still short north. Some farmers hauling hay, spreading fertilizer.

MONTANA: Temperatures near normal all areas. West general precipitation. Southwest, south central precipitation spotty. Southeast dry.

Topsoil moisture 55% short, 40% adequate, 5% surplus. Subsoil moisture 85% short, 15% adequate. Winter wheat 5% poor, 50% fair, 45% good. Snow cover protection on winter wheat 10% poor, 35% fair, 45% good, 10% excellent. Grazing 15% open, 65% difficult, 20% closed. Nearly 100% livestock on supplemental feed.

NEBRASKA: Mild, dry weather prevailed with no measurable precipitation. Temperatures 3 to 11° above normal. Extremes -7°; 52°.

NEVADA: Series systems dumped widespread showers with snow in mountains; rain, snow valleys. Temperatures normal to 10° below. Temperature extremes 10° below zero; 56°.

Main farm, ranch activities limited to caring, feeding livestock. Chopping ice for cattle still necessary. Movement potatoes to market good.

NEW ENGLAND: Precipitation (rainfall, water equivalent of snow) 0.25 to 0.75 in. across area. Temperatures teens near Canadian border to mid 30s south coast. Temperatures slightly above normal.

Major farm activities: Tending livestock, machinery repair.

NEW JERSEY: Temperatures above normal, 32° north, 35° south, 38° coastal. Extremes 12°; 53°. Precipitation above normal, 0.84 in. north, 1.08 in. south, 1.03 in. coastal. Heaviest 24-hour total 1.01 in., 14th, 15th.

Farmers caring for livestock, tending to normal winter chores.

NEW MEXICO: Temperatures below normal over State. Actual temperatures -11 to 72°. Precipitation light.

NEW YORK: Temperatures normal to above normal. Precipitation generally light. Most precipitation rain, freezing rain, sleet. Little snowfall.

Major activities: Caring for livestock, machinery repair, winter chores. Mild weather made activities little easier.

NORTH CAROLINA: Temperatures 1° above normal Mountain area, none to 2° above normal Piedmont, 5 to 6° above normal along coast. Temperature extremes 19°; 78°. Precipitation 0.14 to 2.98 in. across State.

Days suitable for fieldwork 1.4. Soil moisture 9% short, 70% adequate, 21% surplus. Pasture 2% very poor, 14% poor, 34% fair, 50% good. Oats 2% poor, 24% fair, 71% good, 3% excellent. Barley 28% fair, 68% good, 4% excellent. Rye 2% poor, 28% fair, 67% good, 3% excellent. Wheat 2% poor, 26% fair, 68% good, 4% excellent. Feed grains 7% short, 92% adequate, 1% surplus. Hay, roughage 6% short, 90% adequate, 4% surplus. Major farm activities: Tending livestock, general farm maintenance. Other activities: Repairing equipment; tobacco plantbed preparation; cutting firewood.

NORTH DAKOTA: Extremely cold early week, mild late week. Temperatures 3 to 7° below normal. Extremes -41° north central; 38° south central. Precipitation 0.08 in. southwest to 0.45 in. east central.

Soil moisture below normal. Snow cover provided adequate protection for winter seedlings, alfalfa. Hay, feed mostly short to adequate, farmers adjusting rations to accommodate current hay supplies. Livestock good, receiving supplemental forages. Some county, township roads drifted with snow. Main activities: Removing snow from feedlots, haylots, wintering livestock, end of year book work.

OHIO: Temperatures 3 to 8° above normal. Extremes teens to mid 50s. Precipitation near normal 0.30 to 1.70 in. Soil temperatures 4 in. depth lower to upper 30s.

Soil moisture improving; some ponding.

OKLAHOMA: Temperatures 1° above normal southeast to 4° above normal Panhandle. Precipitation none Panhandle, north central to 0.33 in. central.

Weekend snowfall blanketed central counties. Precipitation needed for western wheat fields. Mild weather brought increased greenbug infestations. Cattle good; prices up slightly.

OREGON: Temperatures near normal coast; slightly above normal western interior, north central area; well below normal east. All of State received precipitation. Blizzard conditions Wallowa, Blue Mountains of northeast stopped all travel, brought heavy precipitation amounting to nearly entire monthly normal. Snow depths more than doubled most of Cascade range since Christmas, despite heavy melt on 10th.

Soil moisture surplus west, adequate to surplus east. Fields snow covered northeast, southeast, south central areas. Pruning, dormant spraying continued on fruits west. Livestock mostly good. Western pastures poor to fair due to heavy rains, winter temperatures. Winter ranges east mostly good. Routine winter feeding continued east, hay appear adequate.

PENNSYLVANIA: Mild, wet. Temperature 30°, 4° above normal. Temperature extremes 6°; 56°. Precipitation 0.92 in., 0.25 in. above normal.

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

PUERTO RICO: Island rainfall 1.46 in., 0.76 in. above normal. Highest weekly rainfall 5.16 in. Pico Del Este-Luquillo, 4.08 in. Toa Baja, 4.07 in. Rio Blanco Lower. Highest 24-hour 1.83 in. Pico Del Este-Luquillo. Total rainfall since January 1st 1.67 in., 14% above normal. San Juan WSFO temperature 76°, 1° above normal. Total rainfall 2.03 in., 1.30 in. above normal. Divisional temperature 74 to 75° on coasts, 69 to 70° interior. Station temperature 78° Roosevelt Roads to 62° Pico Del Este-Luquillo. Lowest minimum temperature 43° Adjuntas. Highest maximum temperature 89° San Sebastian.

SOUTH CAROLINA: Temperatures 2 to 4° above normal. Cloudy, humid conditions each day with rainfall all areas. Heaviest in mountains, Salem 2.68 in. Light freezing rain upstate on evening of 14th.

Farm activities confined to mostly equipment repair, care of livestock, poultry, general farm chores.

SOUTH DAKOTA: Temperatures below normal north, normal south; 7° below to 6° above. Extremes -31°; 59°. Precipitation confined to northeast up to 6 in. snow. Snow cover 3 to 5 in. northwest; 5 to 16 in. northeast; traces south.

Crop conditions unchanged from last week.

TENNESSEE: Moist southerly flow overriding frontal system northern Gulf caused wet week across State. Cold front 12th brought additional moisture. Temperatures 2° above normal Plateau; 5° above normal middle, east. Lows 35°, highs mid to upper 40s. Precipitation above normal; ranged 1.50 in. east to over 4.00 in. west. Some areas west over 5.00 in.

Topsoil moisture levels replenished. Annual rainfall surplus most areas. Wheat progressed normally. Main activities: Machinery repair, feeding livestock, purchasing supplies, attending meetings, record keeping, tax preparation caring for livestock. Herds good. Feed mostly adequate.

TEXAS: Over running pattern early week, widespread heavy fog, light rains eastern half State. Strong front moved in 12th, combined with upper air disturbance to produce good rains eastern, central sections. Precipitation west central, north central. Drier, warmer weather moved in weekend. Temperatures below normal most areas; some above normal north central, northeastern areas. Precipitation generally below normal. Edwards Plateau, east some above normal totals.

Crops: Small grains Plains little or no rain, snow; dryland fields critical. Some stands dead. Greenbug activity increased early week with milder weather. Irrigated fields provided good grazing, producers reducing stocking. Blacklands some recent moisture, warmer temperatures through midweek helped wheat, oats. Producers continued fight greenbugs, topdress with nitrogen until wet weather arrived late week. Mild days, some late week moisture may save many fields central; many stands still weak. Improvements seen Upper Coast, east. Other Field Crops: Pecans 99% harvested, 98% 1987, 97% avg.

Commercial Vegetables: Rio Grande Valley harvest celery, carrots, cabbage, lettuce continued, good yields. Onions good progress. Cooler weather late week may help slow new citrus growth. Citrus harvest proceeding little problems. Producers slowed irrigation to prevent too much new growth. San Antonio-Winter Garden harvest spinach

slowed, market demand decreased. Harvest carrots, cabbage continued. Land preparations continued until midweek other areas. Pecan harvest lingered west. Prices remained too low for many producers to harvest. Peach producers beginning prune trees east.

Range and Livestock: Ranges, pastures much needed moisture central; still providing little grazing. Stocking being reduced wheat pastures Plains because lack of growth. Feeding operations increased late week as cooler temperatures arrived. Cooler weather stressed livestock. Market activities strong.

UTAH: Precipitation light to heavy. Temperatures 5 to 11° below normal.

Moderate snow cover, soil moisture mostly adequate. Winter wheat fair to good. Winter range feed mostly good. Major farm activities; livestock chores, equipment maintenance, hauling manure, summarizing tax records, attending farm meetings, new year planning.

VIRGINIA: Temperatures 4° above normal, mostly 40s. Precipitation almost daily due to rapidly moving weather systems. Precipitation 0.60 to 1.50 in.

Days suitable for fieldwork 1.6. Rain severely limited fieldwork. Topsoil moisture 15% short, 41% adequate, 44% surplus. Winter grains, grazing crops 11% poor, 58% fair, 31% good. Calving, lambing active. Other activities: Livestock care, meeting attendance, record keeping, tobacco marketing.

WASHINGTON: Temperatures 1° below to 3° above normal west, 6° below to 3° above east. Precipitation 0.81 to 1.75 in. west, none to 1.95 in. east. Most precipitation snow, east.

Snow flurries kept field activity minimal across State. Snow covered fields east. Planting Christmas trees west. Pruning orchards, vineyards continued. Livestock on winter feed. Calving, lambing continued. Okanogan, Pend Oreille Counties short soil moisture.

WEST VIRGINIA: Temperature 37°, 4 to 9° above normal. Extremes 8° Greenbank; 60° Creston. Precipitation 1.58 in.

Days suitable for fieldwork 2.5. Soil moisture 25% short, 50% adequate, 25% surplus. Wheat, barley good. Livestock good to fair. Feed 42% short, 58% adequate. Farm activities: Livestock feeding, general farm maintenance.

WISCONSIN: Mild temperatures 18°. Extremes -26°; 42°. Precipitation trace to 0.20 in. Snow 1 to 2 in. southeast 7th.

Snow cover 5 in., normal 9 in. Frost depth 17.7 in., normal 10.5 in. Ice covers many fields central, southwest, south central; potential hazard to hay, winter wheat.

WYOMING: Temperatures below normal. Precipitation generally below normal.

Winter wheat fair to good. Additional snow cover needed for protection from sub-zero temperatures, additional moisture for good development. Livestock fair to good. Supplemental feeding most areas. Wind, colder temperatures increased feed requirements.

International Weather and Crop Summary

January 8-14, 1989

HIGHLIGHTS

WESTERN USSR ... Winter grains remain dormant. Winter grains in the west and south lack a protective snow cover.

EUROPE ... Light to moderate rain and above-normal temperatures cover the north. Dryness continues in much of the south.

SOUTH ASIA ... Showers over northern India maintain favorable conditions for vegetative to heading winter wheat. Cool temperatures, however, cover the region.

EASTERN ASIA ... Moderate to heavy rain continues across southern and eastern crop areas.

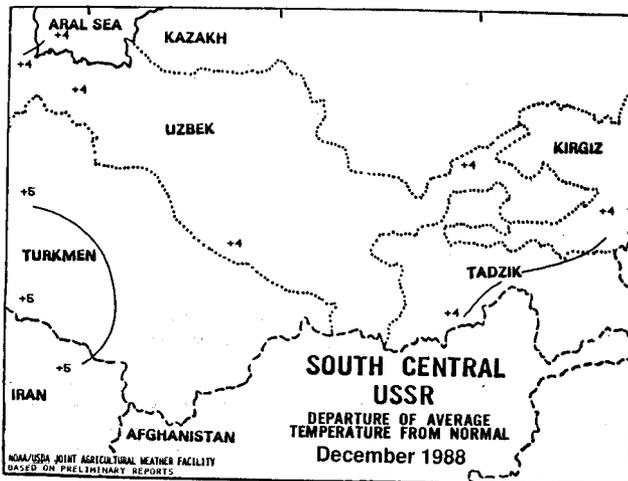
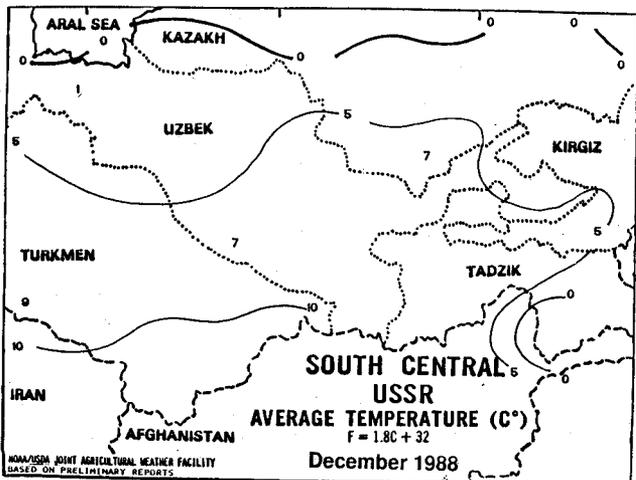
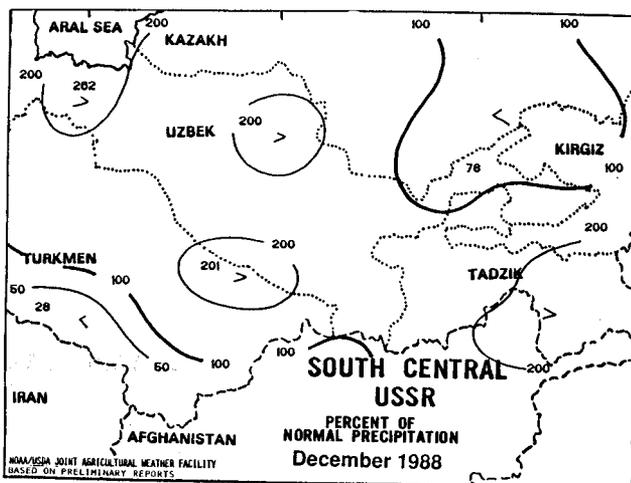
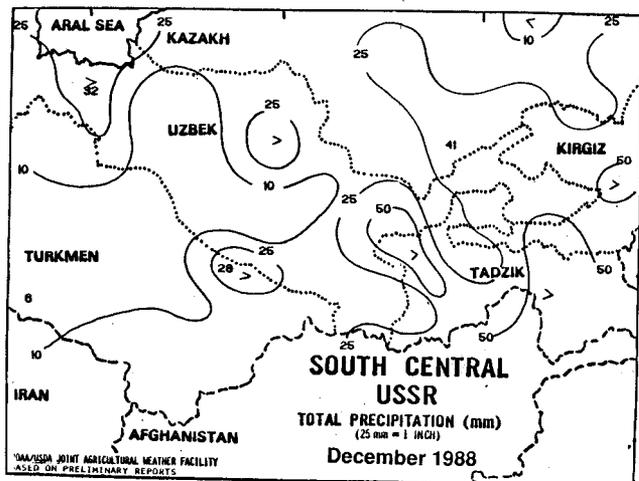
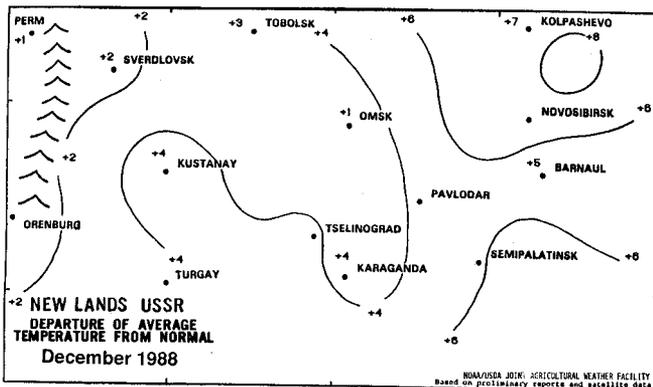
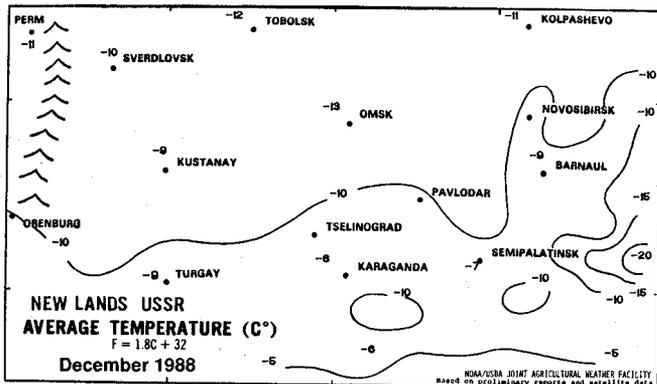
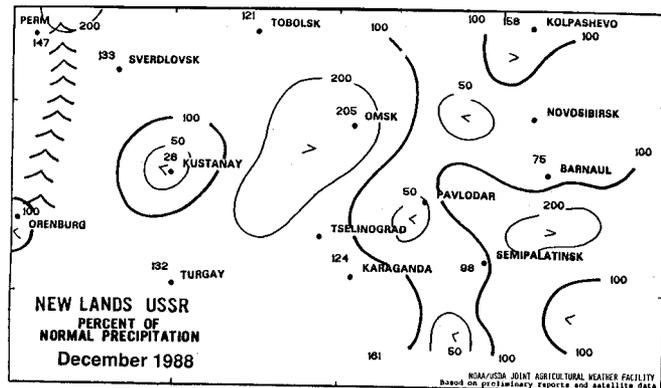
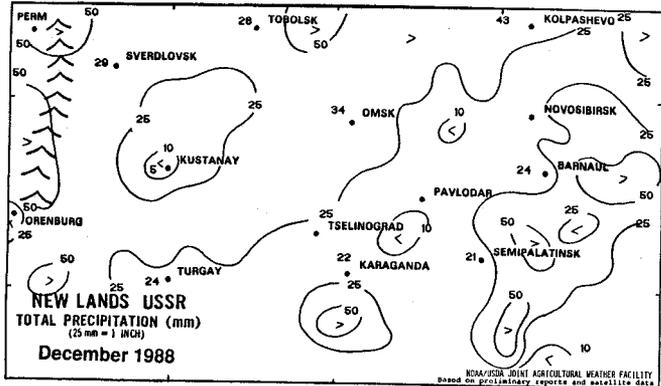
SOUTHEAST ASIA ... Widespread showers continue across Indonesia and Malaysia, maintaining irrigation reserves for vegetative rice.

SOUTH AMERICA ... Light showers provide minimal relief to drought-stressed crops in Argentina. Widespread rain in south-central Brazil helps southern soybeans but soaks northern crop areas.

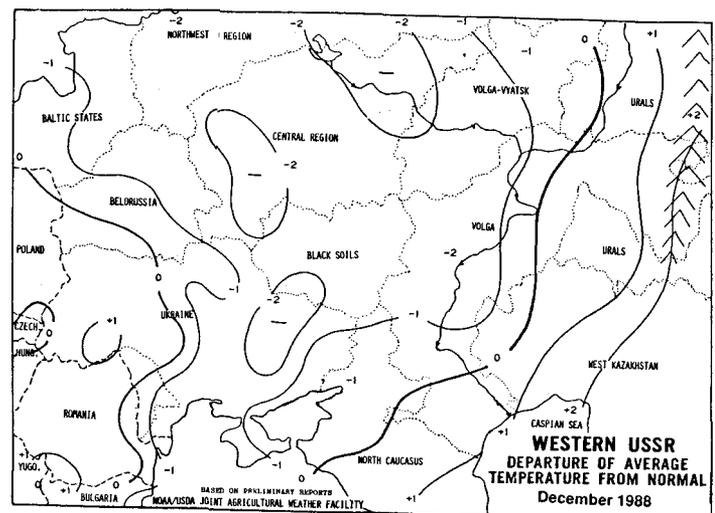
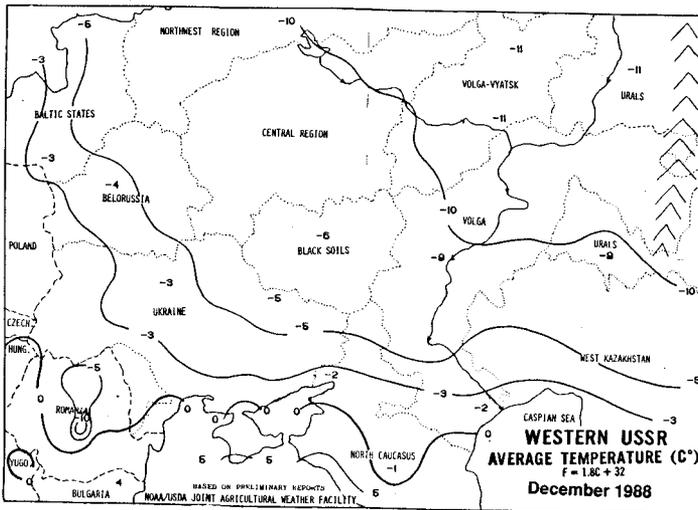
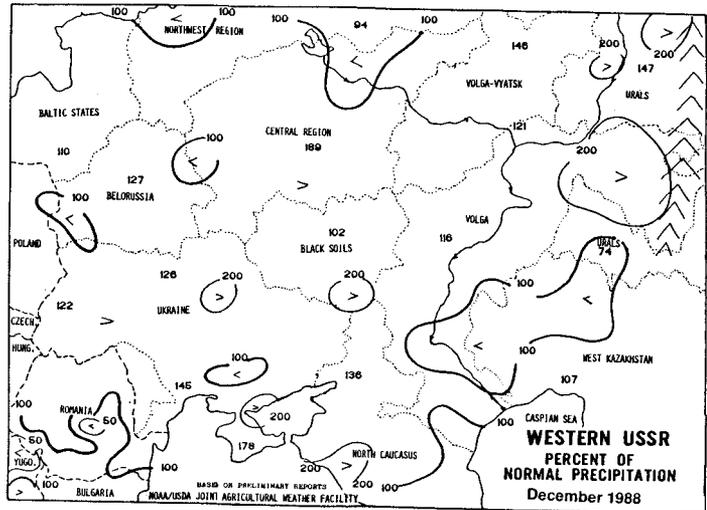
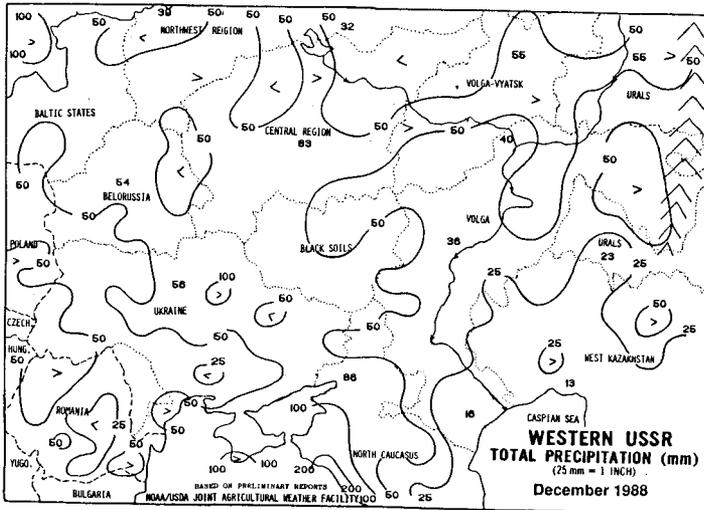
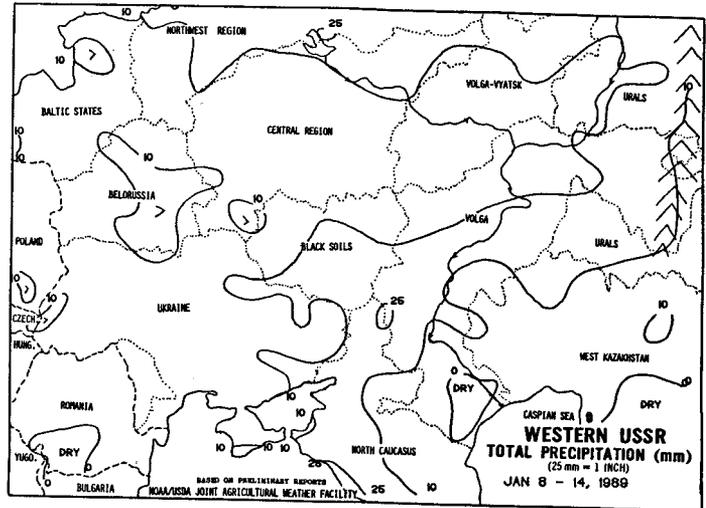
AUSTRALIA ... Light to moderate rain favors vegetative to reproductive crops in sections of the east.

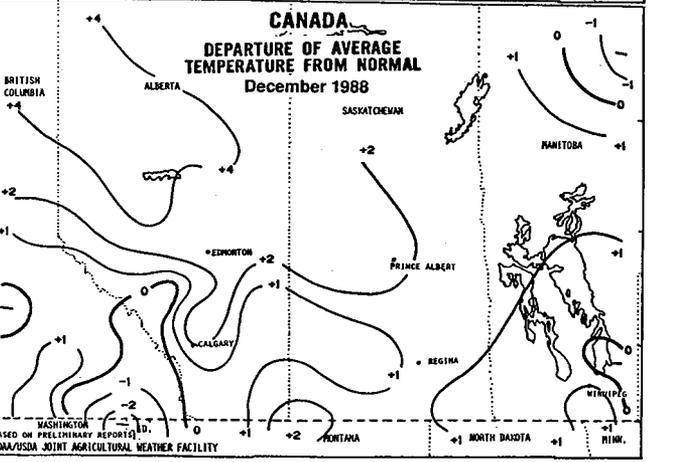
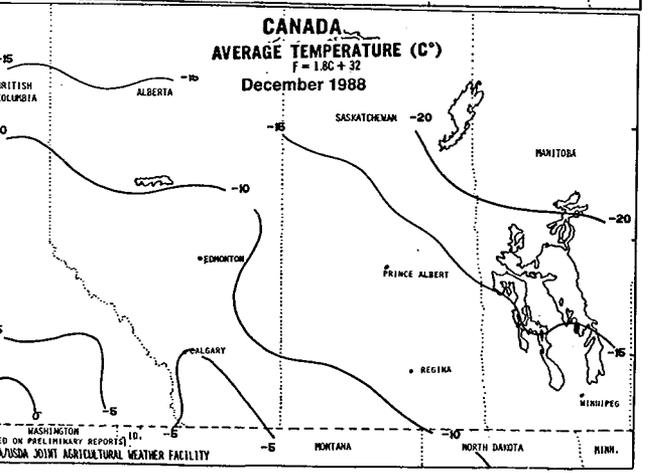
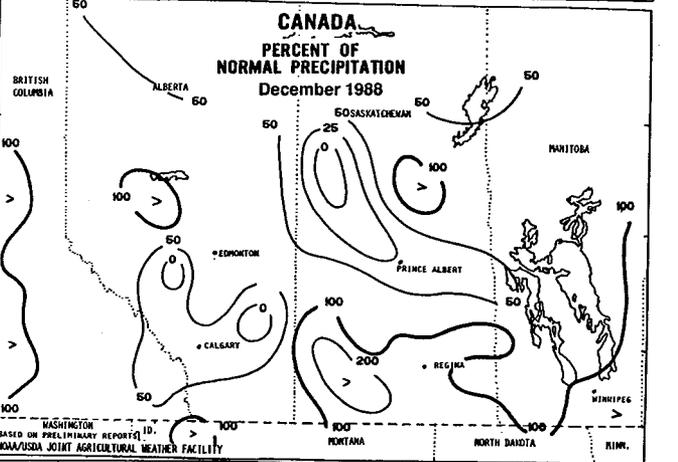
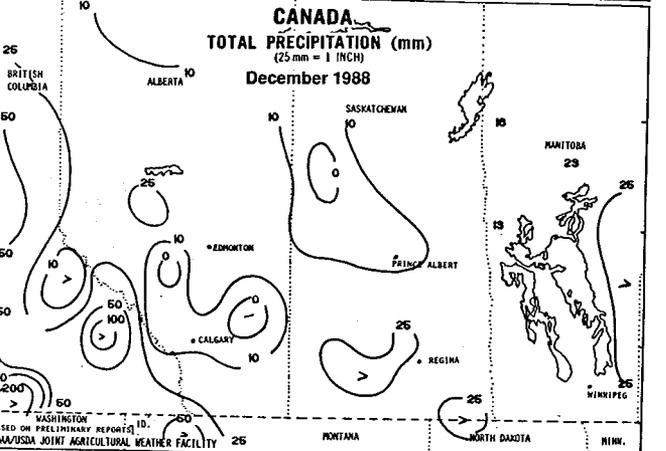
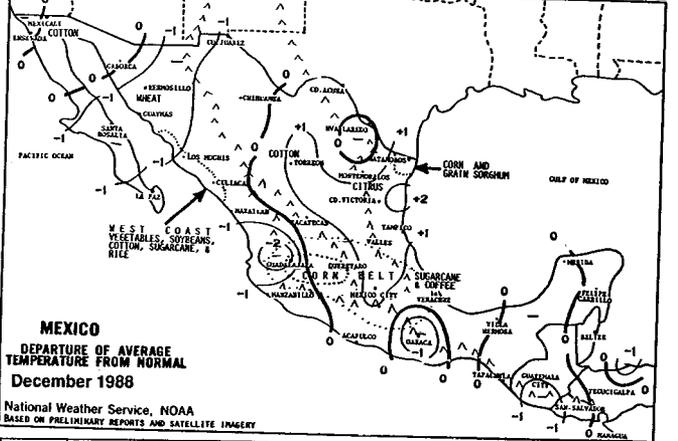
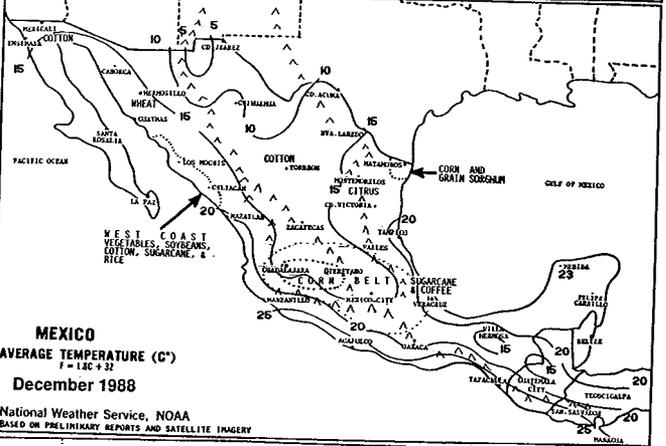
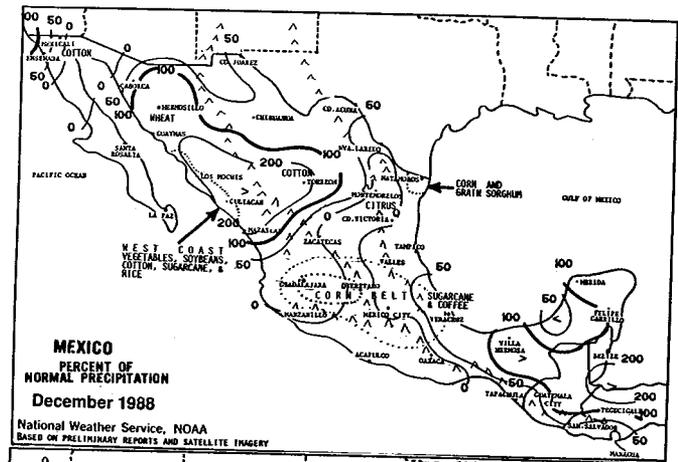
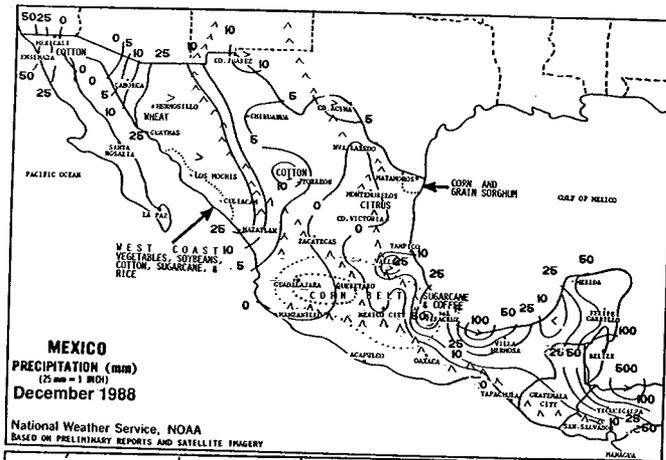
SOUTH AFRICA ... Drier weather covers the western half of the Maize Triangle, but showers continue to the east. Corn is vegetative to reproductive.

NORTHWESTERN AFRICA ... Rain benefits Moroccan winter grains in the vegetative stage. Dry weather covers crops in Algeria and Tunisia.

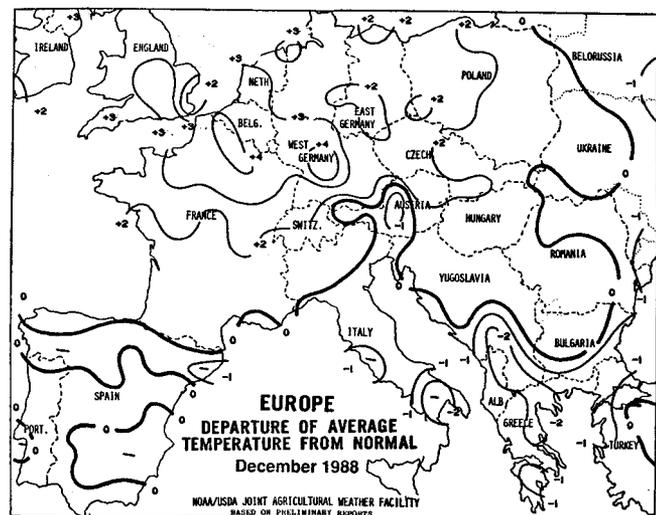
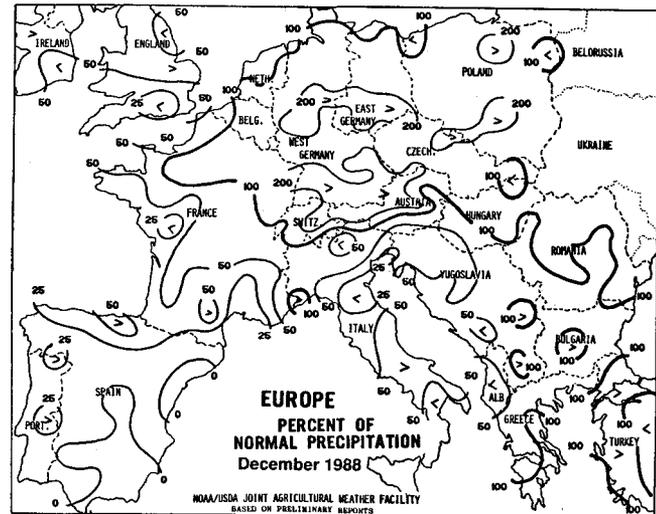
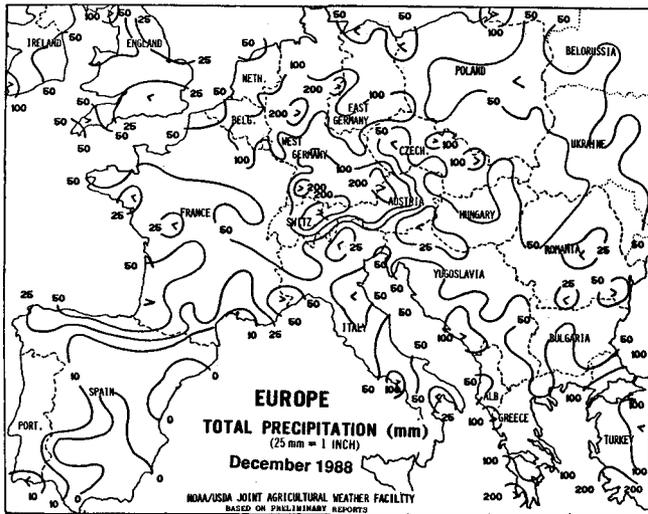
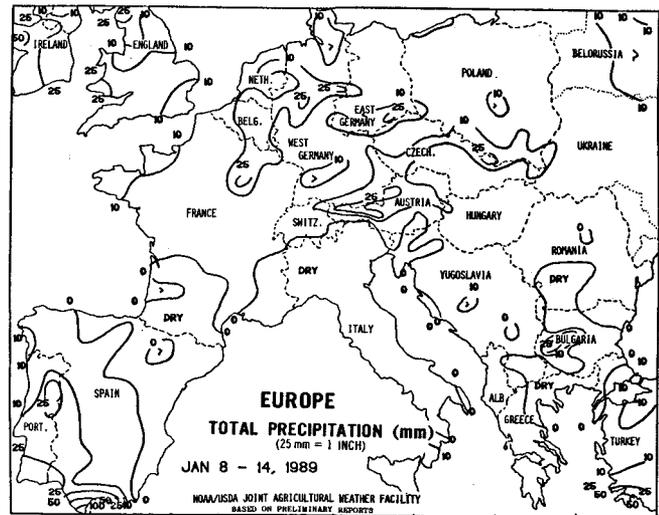


WESTERN USSR ... Widespread, light precipitation continued to increase moisture reserves over most of the region. Greatest amounts of precipitation (10-25mm) covered crop areas in Belorussia, the central Black Soils Region, the eastern Ukraine, the northern North Caucasus, and the Volga. Unusually mild weather covered most winter grain areas. Weekly average temperatures were 6-8 degrees Celsius (C) above normal in northern areas and 3-5 degrees C above normal in the south. By week's end, most winter grain areas in the Baltic States, Belorussia, the Ukraine, and the western North Caucasus lacked a protective snow cover, leaving winter grains vulnerable to extreme cold. In December, above-normal precipitation covered most of the region, increasing moisture reserves. Above-normal temperatures early in the month were replaced by a steady warming trend which began on December 16 and continued until month's end. In early January, reports indicated that an ice crust developed in Latvia, northern and eastern Belorussia, the northern Ukraine, the southern Black Soils Region, the northern North Caucasus, and the southern Volga.

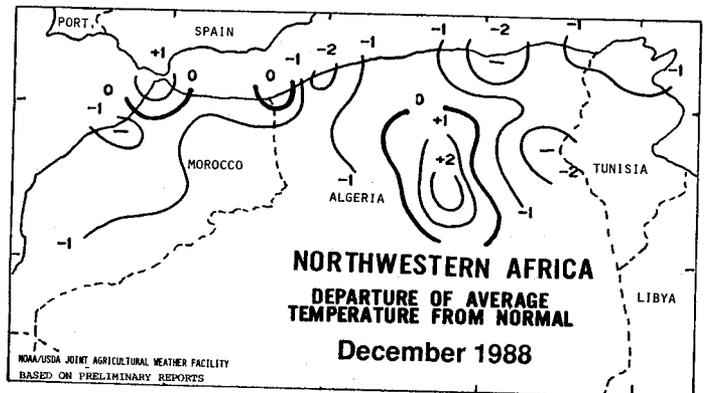
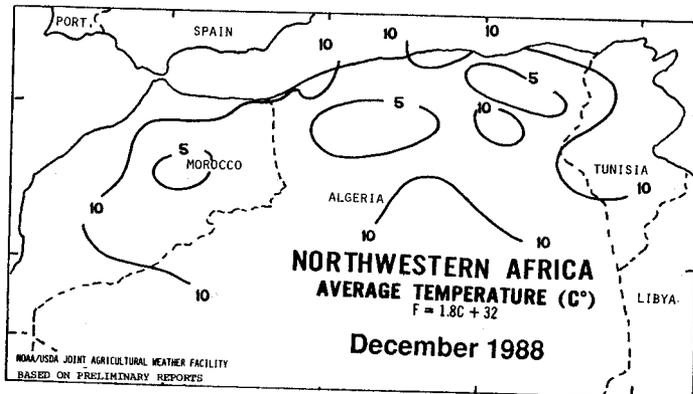
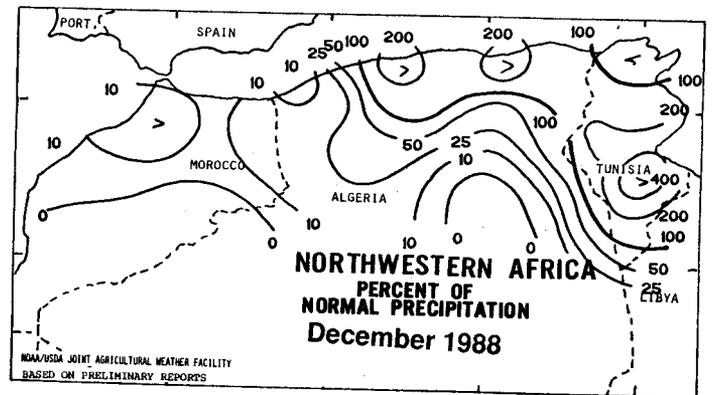
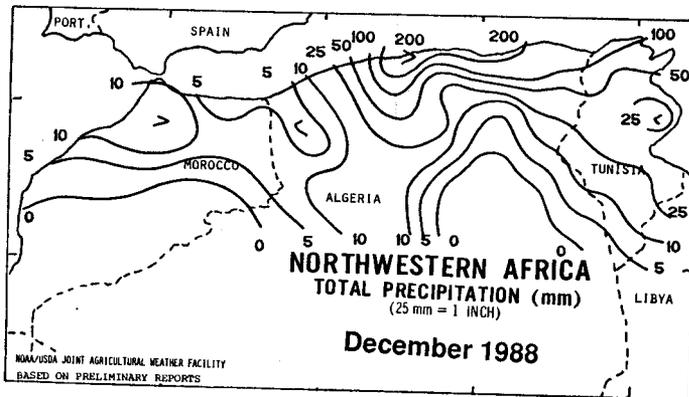
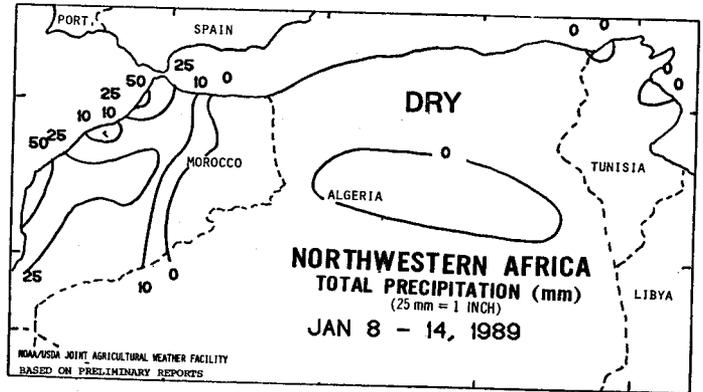




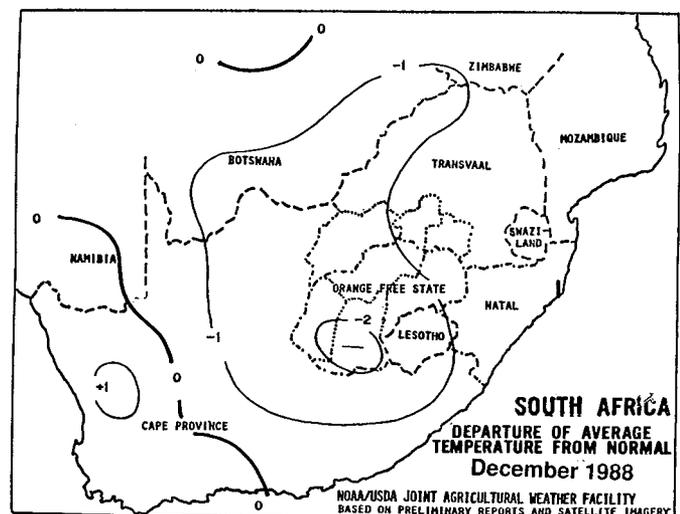
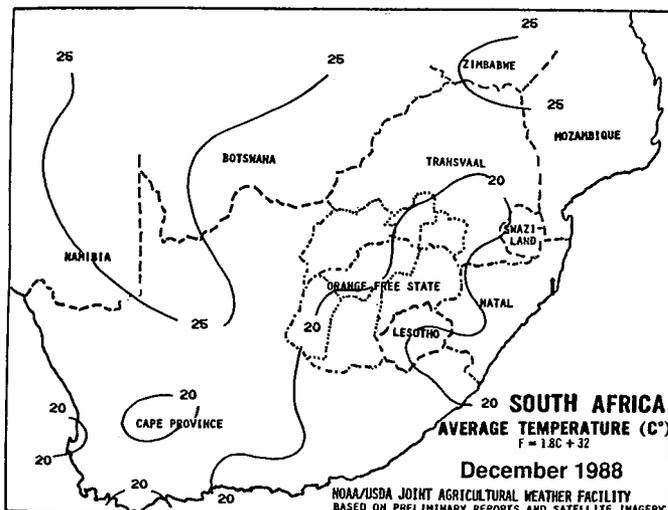
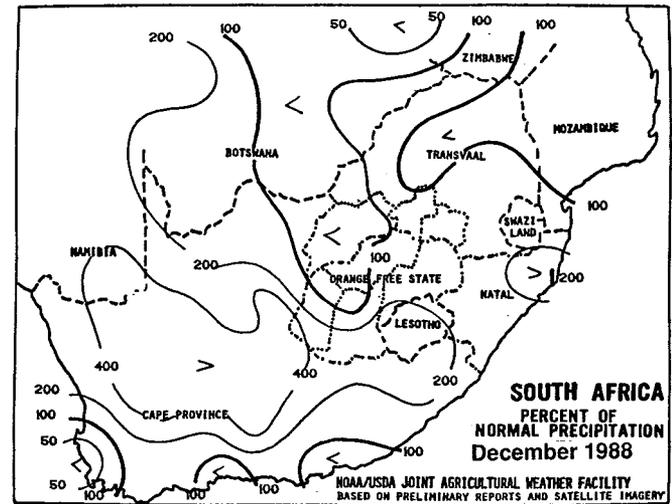
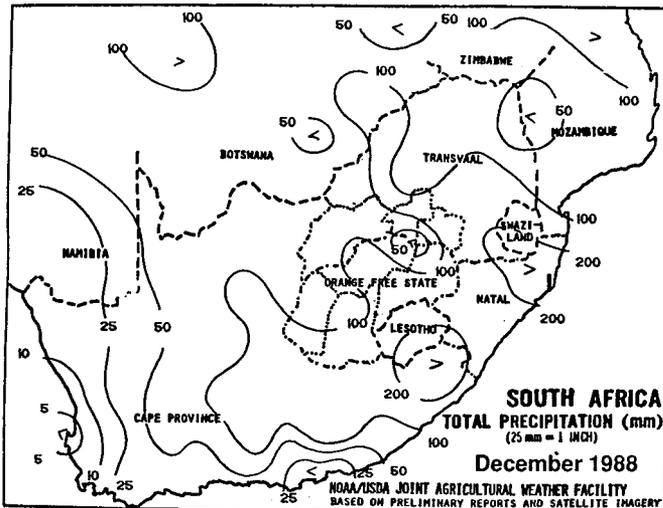
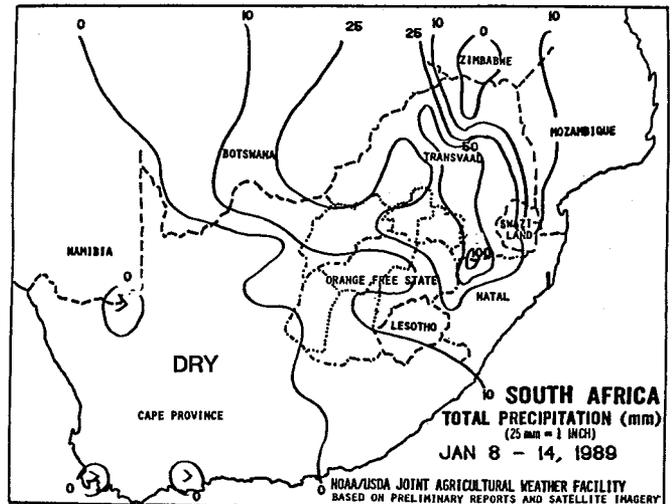
EUROPE ... A late-week frontal system brought light to moderate rain (5-20mm, with isolated amounts in excess of 20mm) to much of northern and central Europe, maintaining generally favorable soil moisture levels. In the south, heavy rain (25-50mm, with isolated rainfall in excess of 100mm) fell across sections of Portugal and extreme southern Spain, while other areas remained mostly dry. Dryness in Italy's Po Valley since the middle of the fall has decreased soil moisture to unfavorably low levels. Mean temperatures across Europe ranged from much above normal in northern and central sections to near normal in the south, continuing a trend since early December. Precipitation in December was above normal in north-central and northeastern crop areas and below normal elsewhere.



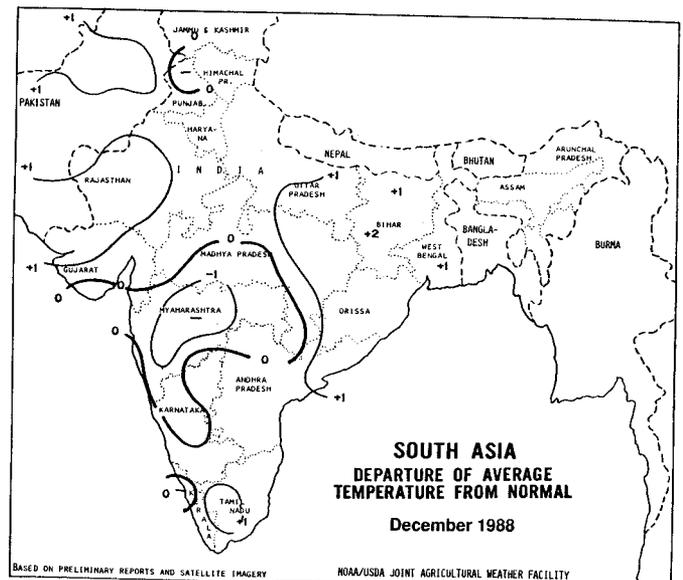
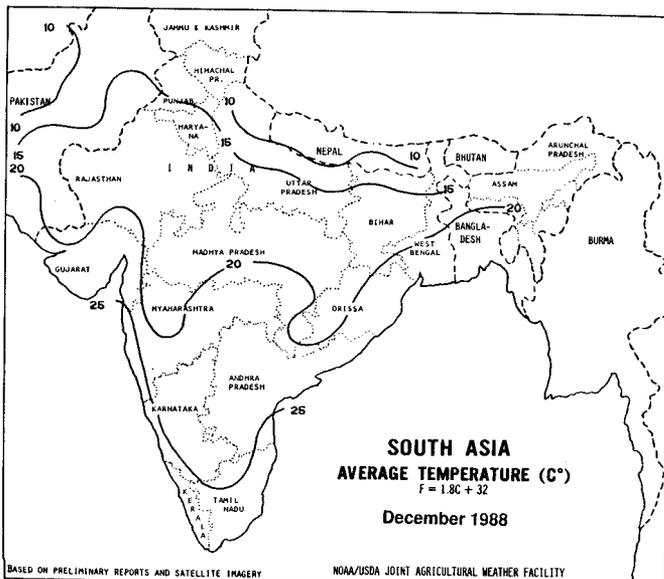
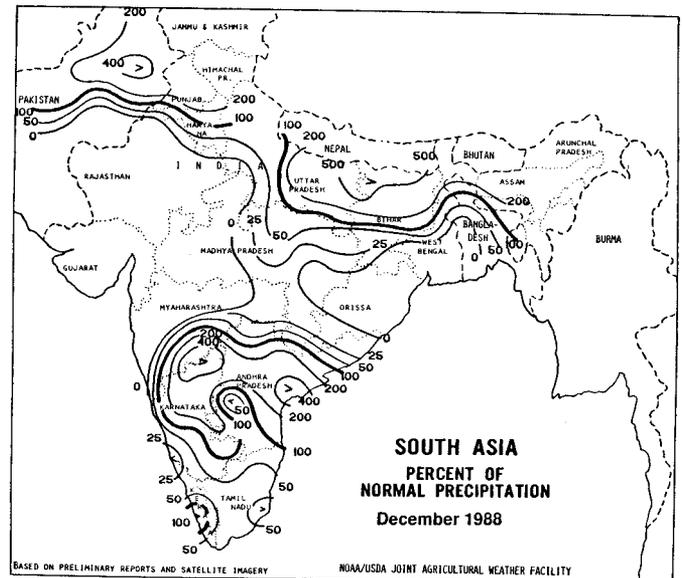
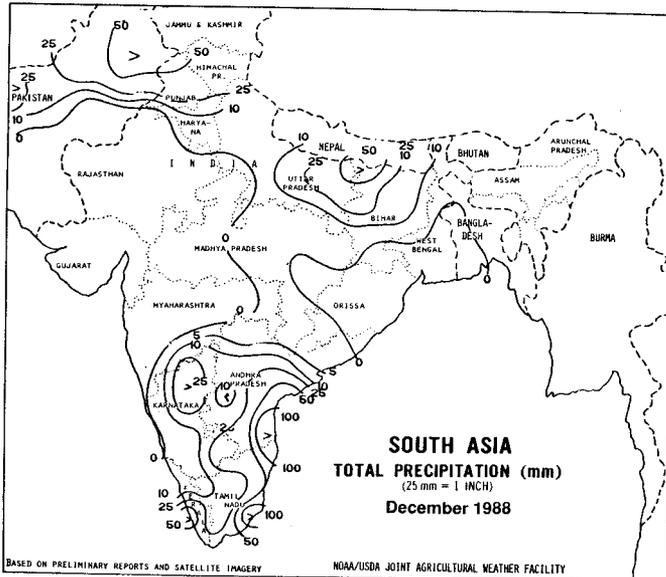
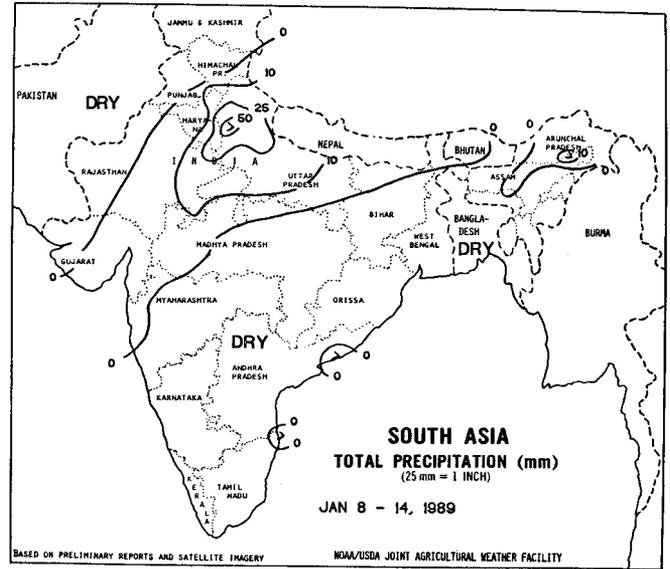
NORTHWESTERN AFRICA ... Widespread beneficial rain (17-50mm) covered winter grains in Morocco, improving moisture conditions for vegetative growth. Below-normal December precipitation in Morocco caused winter grains to rely on soil moisture reserves to meet increasing crop moisture demands. As a result, subsoil moisture supplies were reduced to unfavorably low levels. In Algeria and Tunisia, dry weather covered winter grains in the vegetative stage. Following a late start in the autumn rainy season which delayed planting, above-normal December precipitation allowed winter grain planting to begin. Dry weather returned to Algeria and Tunisia in late December, continuing through this past week. As a result, moisture reserves are limited throughout most crop areas and widespread rain is needed soon to prevent the potential for significant stress.



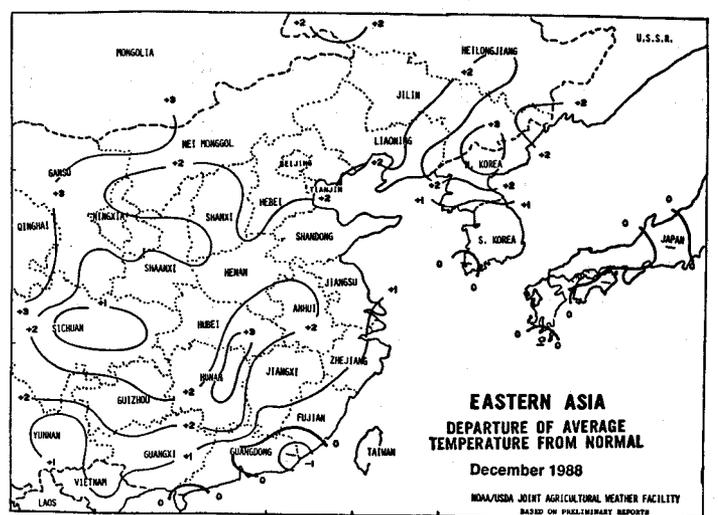
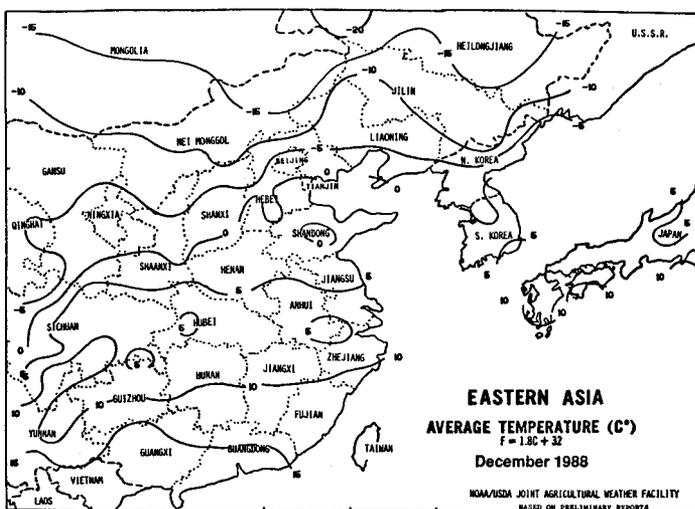
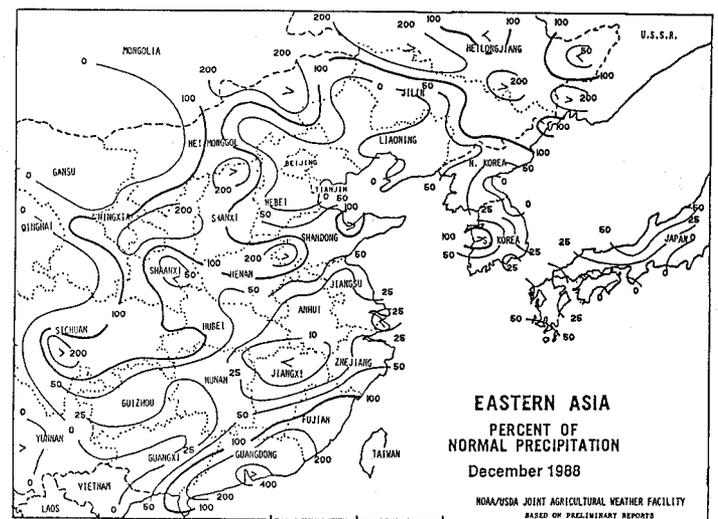
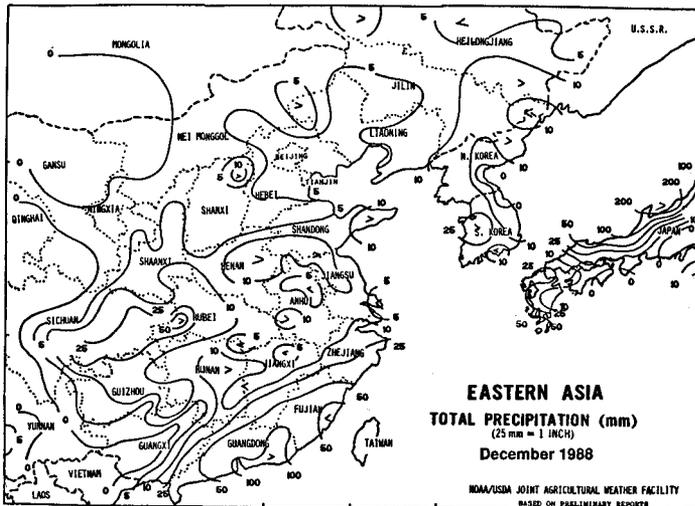
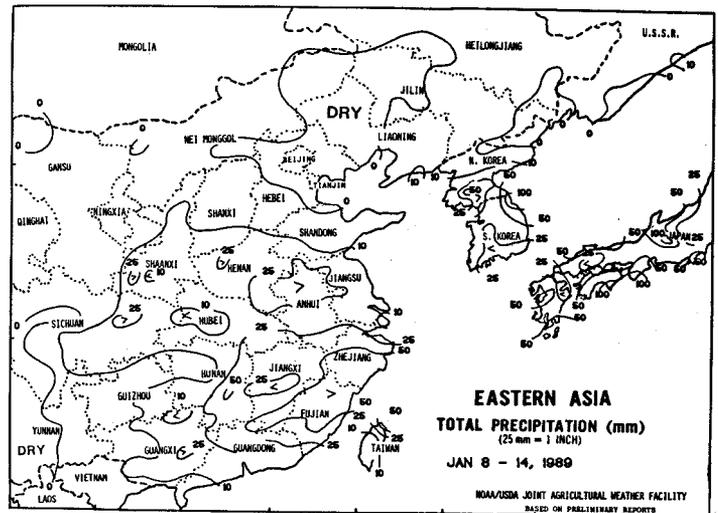
SOUTH AFRICA ... Rainfall averaged less than 15mm over the western half of the Maize Triangle and crop regions of the Cape Province, bringing some relief to areas hit by last week's excessive rainfall. Mostly moderate showers (10-25mm or more) continued over the eastern half of the Triangle and Natal, maintaining generally favorable moisture conditions for vegetative to reproductive corn. Locally heavy rain, however, (83-133mm) likely caused local flooding. Temperatures continued mild across the region. In December, frequent showers brought slightly below-normal rainfall (63-100mm) to the western Maize Triangle and the central Transvaal and above-normal rainfall elsewhere across the country, maintaining generally favorable moisture conditions for vegetative crops. Temperatures for December averaged 1-2 degrees C below normal over most growing regions, slowing evaporation rates but also slowing crop growth rates.



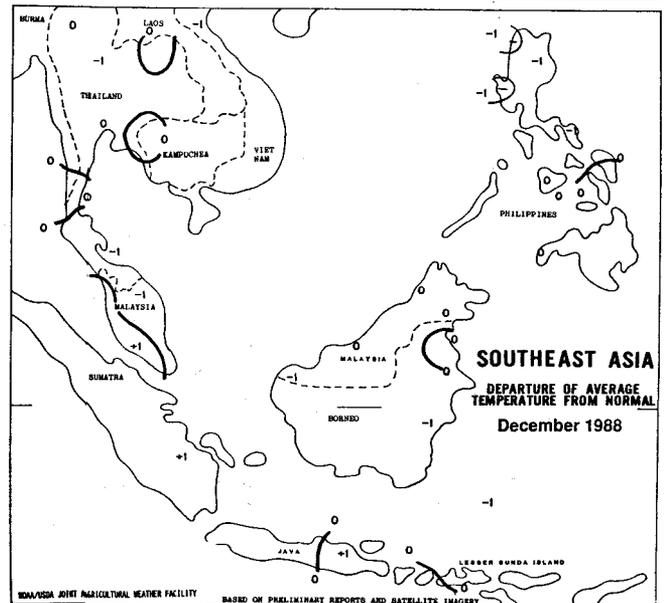
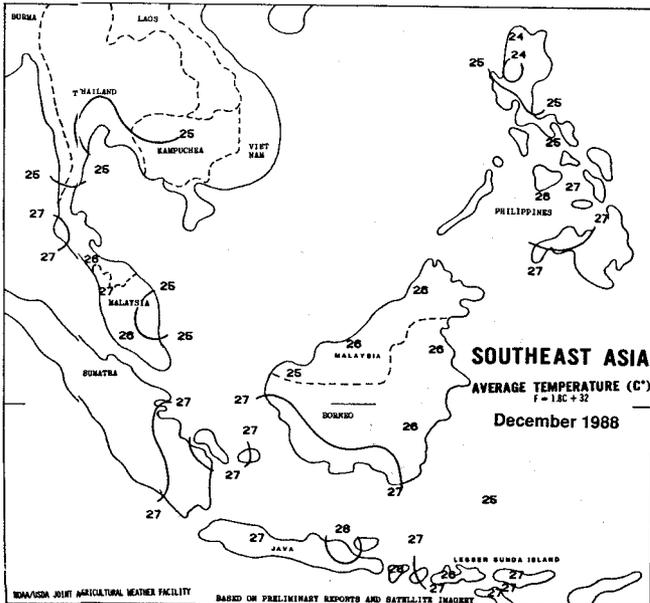
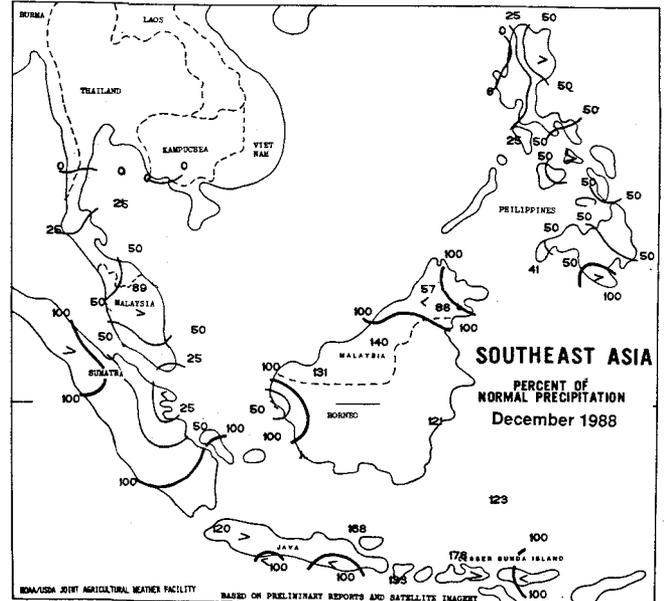
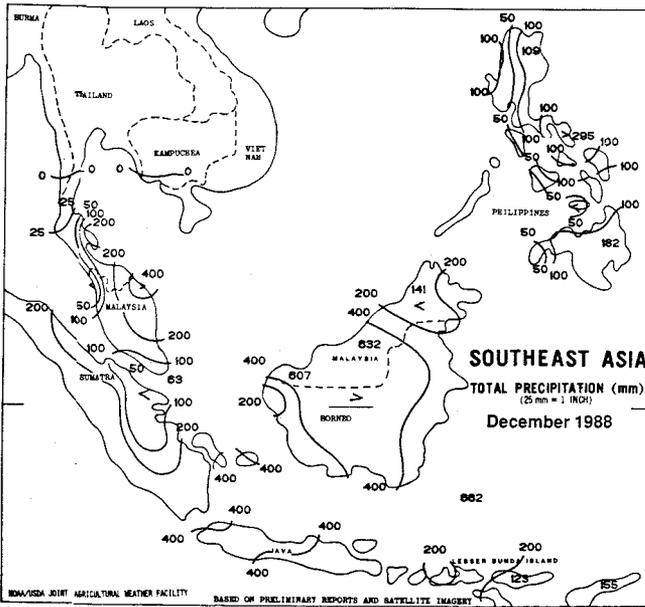
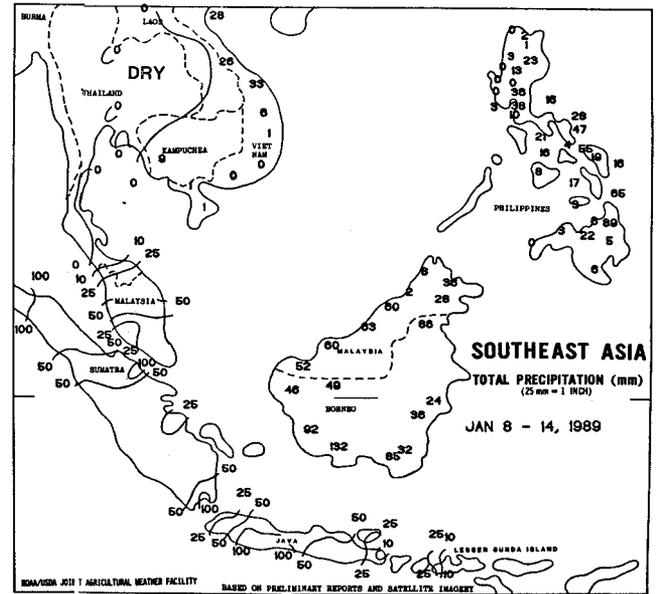
SOUTH ASIA ... Light to moderate showers (1-25mm or more) continued over the winter wheat regions of northern India, maintaining favorable irrigation reserves for vegetative to heading crops. The rainfall extended as far south as Gujarat and Madhya Pradesh and as far east as eastern Uttar Pradesh. Dry weather returned to Pakistan and continued elsewhere over India. Temperatures averaged 1-4 degrees C below normal, with minimum temperatures dipping below 5 degrees C across most northern growing regions. In December, rainfall totaled above normal over large portions of the northern wheat belt and southern India. The rain in the south fell early in the month, slowing summer crop harvests but improving conditions for secondary rice planting. In the north, showers fell in the latter half of the month, boosting irrigation reserves for vegetative wheat and providing timely moisture for rainfed wheat germination. December temperatures averaged near to slightly above normal over the grain regions.



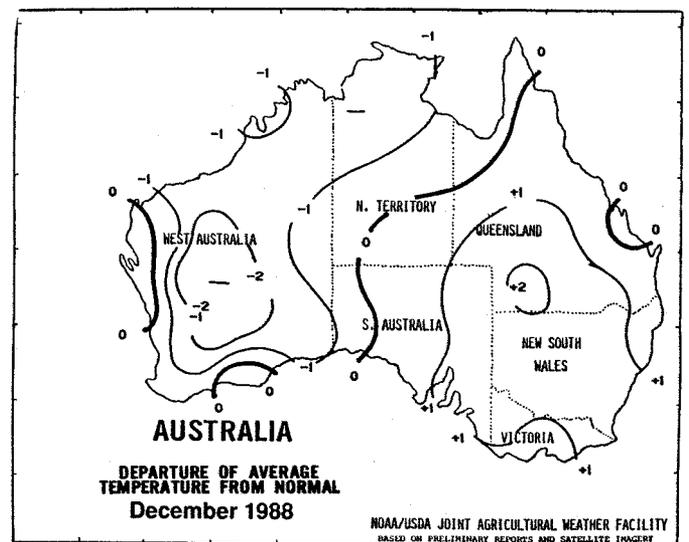
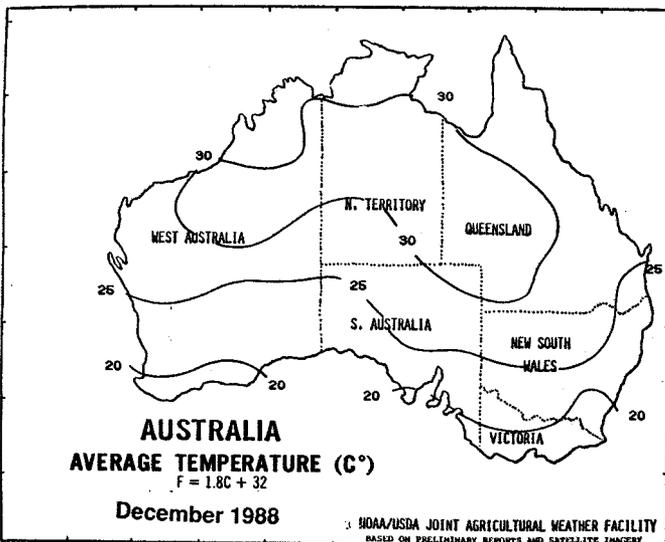
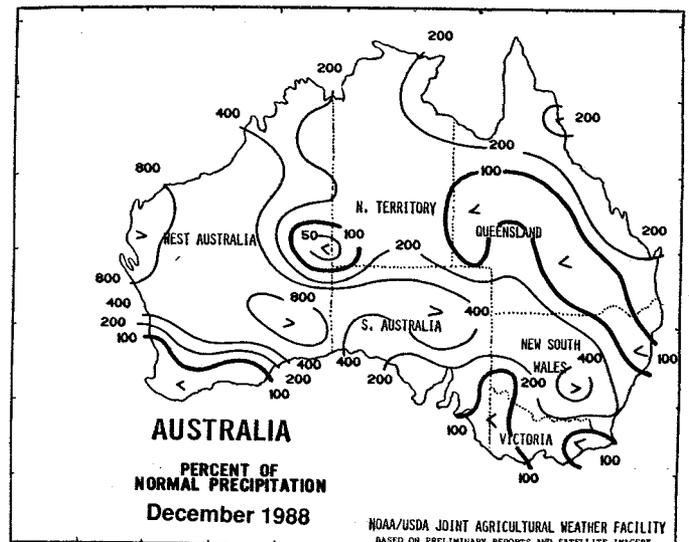
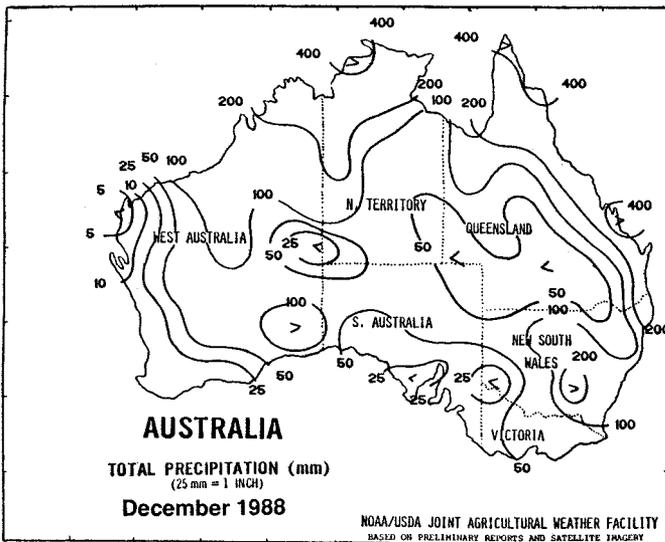
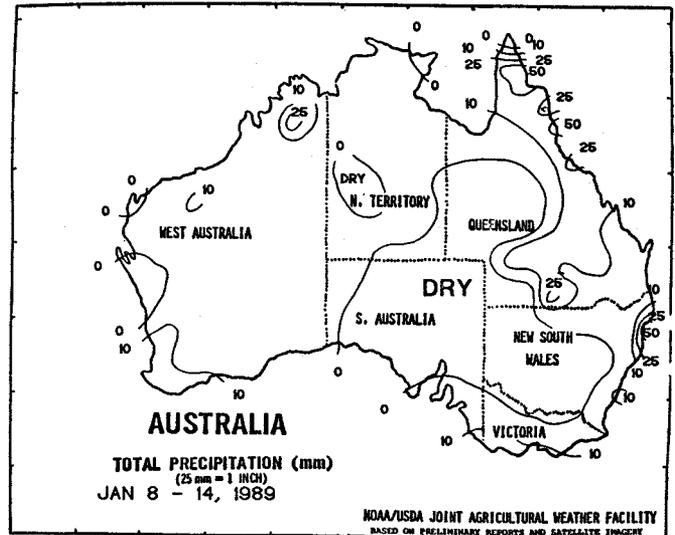
EASTERN ASIA ... Moderate to heavy rain (15-50mm, with scattered rainfall in excess of 50mm) continued for the third consecutive week in southeastern China and the Yangtze Valley, possibly causing flooding in sections of Jiangxi, Fujian, and Zhejiang. Heavy rain (greater than 25mm) also fell across sections of Taiwan, the Korean Peninsula, and western Japan. In the North China Plain, light to moderate rain and snow (5-20mm) continued to benefit soil moisture and irrigation reservoir levels across southern sections, while the north remained seasonably dry. Mean temperatures ranged from much above normal in the north and east to below normal in the west. In December, precipitation was below normal over southern and eastern crop areas, especially across lower sections of Yangtze and Yellow River Valleys. Above-normal precipitation fell in western Chinese crop areas and in northern sections of Manchuria. Mean temperatures for the month were near normal to above normal over all crop areas.



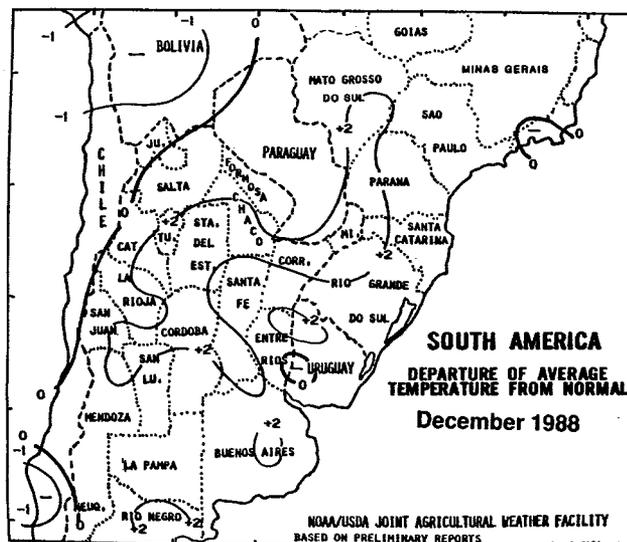
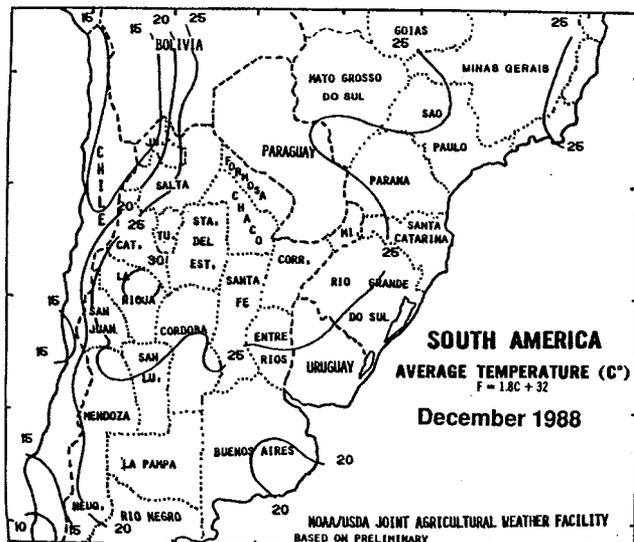
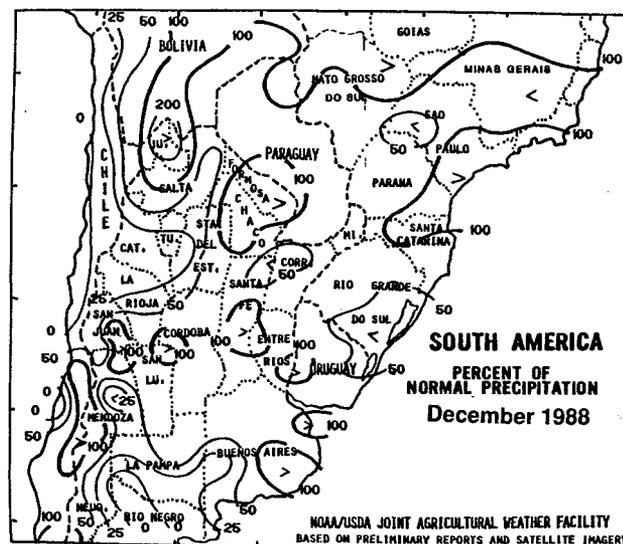
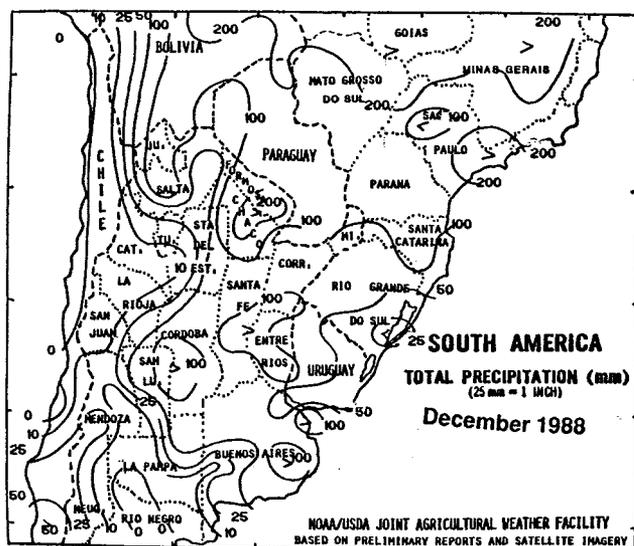
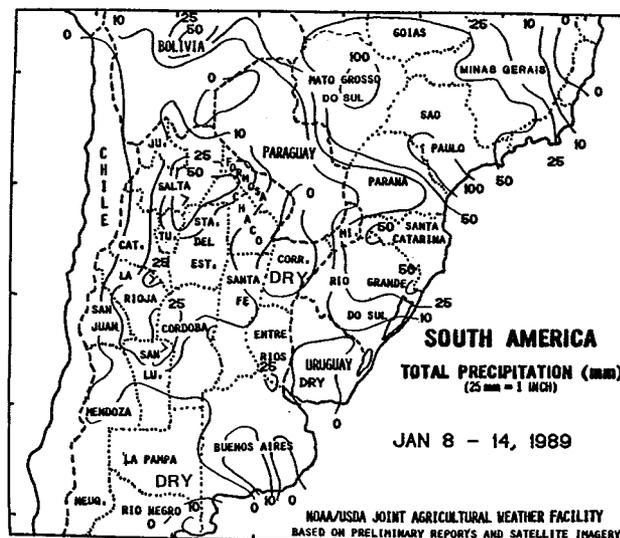
SOUTHEAST ASIA ... Widespread showers (25-50mm or more) continued over Malaysia and Indonesia, maintaining irrigation reserves for rice planting and vegetative growth. Locally heavy showers (100-192mm) occurred over Indonesia, including central Java, likely causing flooding. In the Philippines, moderate showers (25-50mm or more) continued in eastern growing regions from southern Luzon to northeastern Mindanao. In December, rainfall tapered off to below-normal levels over the Malay Peninsula, bringing relief to previously flooded regions. To the north, dry weather benefited Thailand's maturing grains. Frequent showers brought above-normal rainfall to eastern Malaysia and Indonesia, boosting irrigation reserves but at times hindering rice planting. Local flooding was likely over Java and some copra and palm oil regions of eastern Malaysia. In the Philippines, December rainfall was below normal over all but southernmost Mindanao, but periodic heavy showers occurred within the period. Tropical Storm Val brushed the northeastern Philippines in late-December, likely damaging maturing rice in northeastern Luzon.



AUSTRALIA ... Light to moderate rain (5-15mm) favored vegetative to reproductive summer crops across growing areas in southeastern Queensland and extreme northeastern New South Wales, while central New South Wales was mostly dry. Scattered showers (10-70mm) in coastal sections of eastern Queensland benefited vegetative sugarcane. In the south, light to moderate rain (5-23mm) fell over winter crop areas in Western Australia and Victoria. Mean temperatures were below normal in all growing areas except central and northern Queensland, where they were above normal. During December, precipitation was above normal in South Australia, central New South Wales, and coastal Queensland. Below-normal precipitation fell in southern Western Australia and central Queensland. Mean temperatures for the month were normal to above normal in sections of the west and below normal elsewhere.



SOUTH AMERICA ... In Argentina, light showers (1-11mm) fell over the major crop areas, providing minimal relief from moisture stress but reducing heat stress with the resulting lower temperatures. However, a brief midweek warming trend again plagued corn in the critical reproductive phase of development. Below-average December rainfall, much of which fell during the first half of the month, and above-average December temperatures caused rapid soil moisture loss. In early January, growing conditions deteriorated with the unrelenting heat wave broken only last week with more seasonable temperatures. Significant showers (10-50mm or more) fell recently in northwestern Argentina, outside the primary growing areas. In south-central Brazil, beneficial rain (25-50mm or more) helped flowering soybeans in Rio Grande do Sul, where drier, warmer weather in recent weeks increased evapotranspiration rates. Locally heavy rain (50-126mm) persisted over soybean areas of northern Parana, Mato Grosso do Sul, and Sao Paulo, saturating the region where crops were stressed by dryness through mid-December. Substantial showers also fell over northern coffee areas of Minas Gerais.



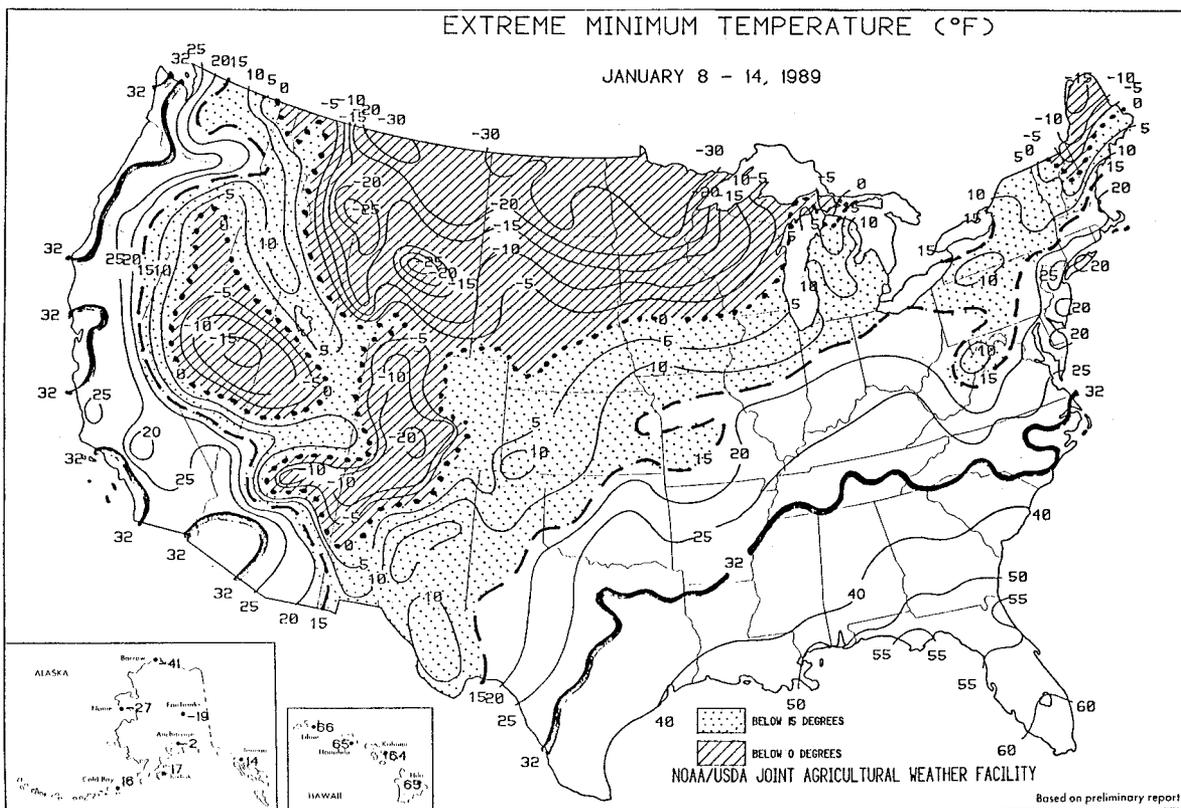
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