

WEEKLY WEATHER AND CROP BULLETIN

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

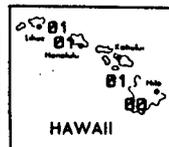
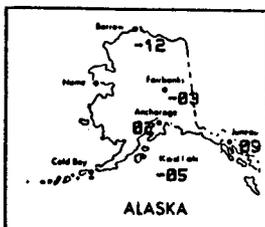
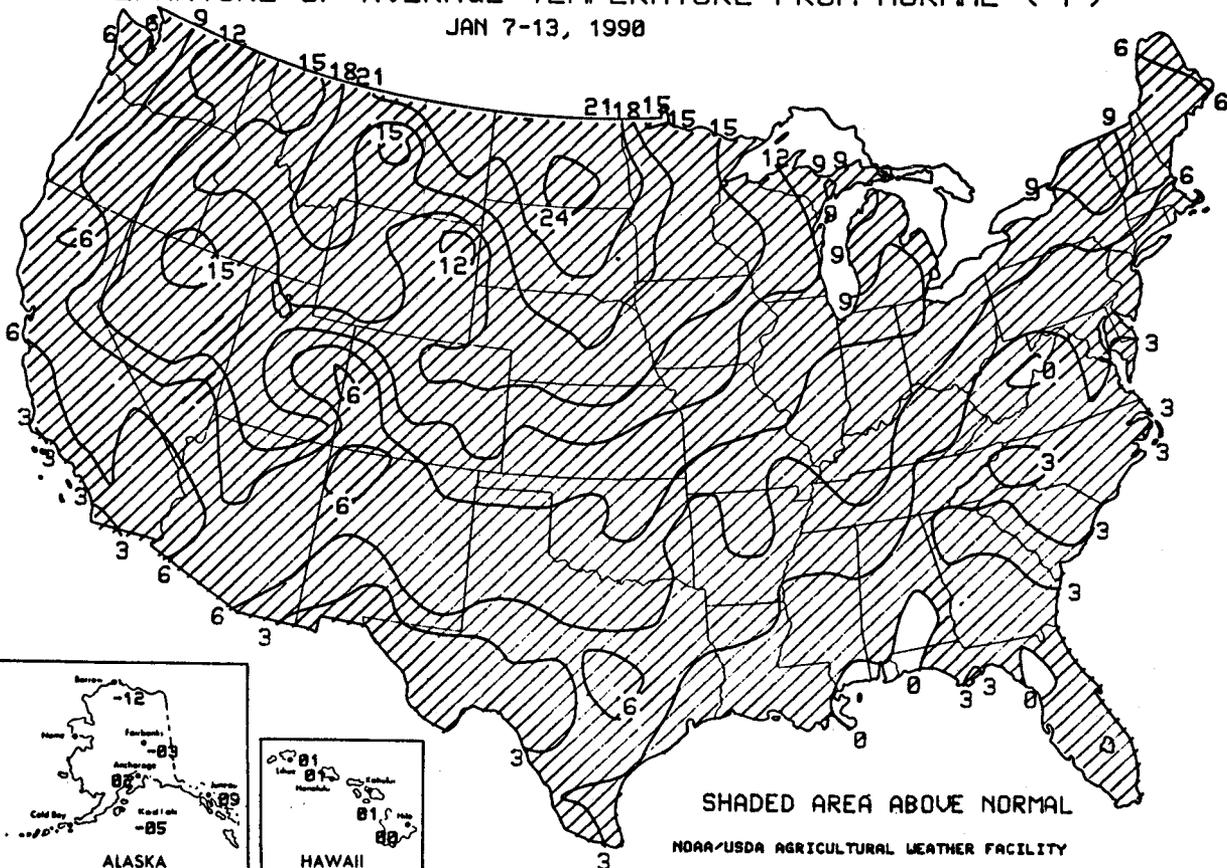
U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service and World Agricultural Outlook Board

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Jan. 17, 1990

DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
JAN 7-13, 1990



NOAA/USDA AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

HIGHLIGHTS

January 7-13, 1989

A series of storms pounded the northern Pacific Coast with torrential rain and high wind during the first part of the week. The persistent heavy rains caused severe flooding along the northern Oregon seaboard. A frontal system brought moderate to heavy precipitation from the Delta, across the Southeast, and up the middle Atlantic coast early in the week. Another system spread light to moderate rain and snow from the middle Mississippi Valley, across the Great Lakes, into the Northeast during the latter part of the week. At week's end, much needed rain fell across California, with snow in the higher elevations. Dry conditions again prevailed over the Great Plains. Abnormally warm weather continued over the Nation, as record-high temperatures for the date were set in the western two-thirds of the country and in Florida. Temperatures were unseasonably high in the North Central

States, which also had gusty winds throughout the week. On January 10, Devils Lake, ND, and Grand Island, Lincoln, and North Platte, NE, established record-high temperatures for the month.

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1989 WEATHER REVIEW

In contrast with 1988, much of the country had stormy, wet weather during 1989. Despite lingering dryness from 1988, timely summer rainfall allowed corn and soybean yields to return to levels close to the long-term trend. Severe drought, however, decimated the winter wheat crop in the **central and southern Plains**, and dryness in the spring and early summer hurt the spring wheat crop. More than 800 tornadoes ripped across the landscape in 1989, the most in 5 years. The most talked-about storm of the year, however, was Hurricane Hugo, which struck **South Carolina** in late September after devastating the northeast **Caribbean**. Total damage figures were the highest ever recorded.

Winter (December 1988 - February 1989)

The winter was dry **along both coasts of the country** and the **central Plains**. Lack of snow and rain reduced reservoir levels in the **Northeast**, as precipitation totals were the third lowest of this century. **Albany, NY**, measured its lowest snowfall total in 50 years. Drought also affected **California** for the third consecutive year, though heavy March precipitation alleviated water shortages. **Florida's south coast** had the driest September-February period ever. In the **Central United States**, key winter wheat areas in **Kansas** measured half their normal winter precipitation.

A cold wave in **Alaska** during the last 2 weeks of January set over 20 all-time low-temperature records, including -76°F at **Tanana** on the 26th. The high pressure system associated with the cold air broke the North American record for the all-time highest barometer reading when **Northway** measured 31.85 inches on January 31. At the end of January, the frigid air mass surged southward into the **northern Great Plains** and then dominated U.S. weather the first 9 days of February. Observers measured the lowest temperatures seen in the country since 1985. On February 3, **Wisdom**, in southwest **Montana**, reported a minimum temperature of -53°F . On February 5, **Denver, CO**, recorded -24°F , the coldest reading in 26 years. Readings as low as -16°F damaged the wheat crop in **Kansas**. Overall winter temperatures, however, averaged slightly above normal **east of the Rockies** and up to 8°F below normal in the **West**.

Spring (March-May)

Heavy spring precipitation erased water shortages in the **Northeast**, which endured the second wettest May in more than 90 years. Severe storms battered parts of the country, with the fourth highest tornado count in 37 years. Drought through April, however, contributed to the worst **Kansas** wheat yields since 1967. This was the second driest October-April period this century in **Kansas**. Dryness also affected **southern Texas** and the **Southwestern States**, as spring precipitation totaled under 50 percent of normal. The **Southwest** region had its warmest spring since at least 1895.

Summer (June-August)

Summer rainfall was more than 50 percent above normal across most of the **eastern third of the country** and the **central and southern Plains**. The **South** had its wettest June of the century, with

Tropical Storm Allison and Hurricane Cosme contributing to the hefty rainfall totals. Though summer heat in the **Central and Eastern United States** was not as extreme as in 1988, some impressive hot spells remained. On July 4, readings rose well above 100°F in **North Dakota**. **Scottsbluff, NE** baked with a reading of 109°F on July 7, and **Rapid City, SD**, simmered with a new July record of 110°F on July 8. Mile-high **Denver** experienced a remarkable string of 5 consecutive days of 100°F weather from July 4 to 8. High temperatures combined with early summer dryness irreparably damaged **North Dakota's** spring wheat crop. In the **Corn Belt**, ample rains in mid-July brought valuable moisture to the corn crop.

In August, unseasonable cold highlighted the weather, as polar air sweeping southward from Canada into the **Central and Eastern States** brought readings down into the 40's and 50's during the 6th-11th. Over 240 temperature records were set or equaled, including 99 on the 8th. Overall summer temperatures averaged about 2°F above normal in the **northern Plains** and parts of the **West**, and $2-4^{\circ}\text{F}$ degrees below normal in the **South Central States**. Elsewhere, readings averaged close to normal.

Autumn (September-November)

Autumn precipitation was unusually abundant in the **eastern third of the country** but varied widely elsewhere. Mean temperatures were below normal in the **Midwest** and slightly above normal over the rest of the Nation, but the averages hide the fact that readings fluctuated enormously, with numerous bouts of record-high temperatures interspersed with spells of record low-temperatures. Hurricane Hugo contributed to the hefty rainfall totals along the **East coast**. The storm carried winds of 140 mph before striking **Guadeloupe** in the West Indies on September 17. The storm raked **St. Thomas, St. Croix**, and **Puerto Rico** with over 100 mph winds on the 18th, causing extensive damage. Hugo struck the **South Carolina coast** near **Charleston** on the night of the 21st. The highest official wind gust measured at **Charleston's** National Weather Service station was 108 mph, though there were reports of gusts to 140 mph on shipboard anemometers near the shore. Damage to buildings, trees, and crops was enormous, with damage estimates in **South Carolina** up to \$5.9 billion. Total damage estimates for the **U.S. mainland** and the **Caribbean** range up to \$10 billion, making this easily the most expensive Atlantic storm ever.

In contrast, October's weather highlight occurred when record early snow struck the **Midwest** on October 19-21. **Cincinnati, Indianapolis**, and **St. Louis** all set records for the earliest measurable snowfall.

In November, record dryness prevailed across the winter wheat region in the **central and southern Plains**. **Kansas City's** monthly precipitation of a trace was the lowest November total in at least 100 years.

December 1989

The last month of the year will be remembered as one of the coldest Decembers ever. The highlight

was a cold wave of historic proportions which surged south from **Canada** into the **northern Plains** on December 20 and proceeded to rewrite the record books over the next few days. From December 22 to 24, nearly 300 daily temperature records were set from the **Canadian border** to the **Gulf of Mexico**. Six cities reported all-time record-low temperatures during the outbreak, including **Kansas City** (-23° F), **Topeka** (-26° F), and **New Orleans** (11° F). The freeze extensively damaged fruit and vegetables in **Texas** and **Florida**, with the cold air cutting Florida orange production estimates by 29 percent. On the **West coast**, lack of rain was the primary concern, with some areas receiving negligible precipitation for the entire month. **Sacramento, CA**, had its first December with no measurable precipitation since 1876.

Summary

By one measure, 1989 was drier than normal, though not nearly as arid as in 1988 (fig. 1). Temperatures were lower than in 1988, with 1989 the coldest year since 1985 (fig. 2). Since 1986, one of the warmest years on record, annual temperatures have declined each year. Thanks to the unusually cold December of 1989, annual temperatures even

dipped below the long-term mean. Looking at the geographic distribution of precipitation, dryness prevailed in the **Southwestern States**, **southern Texas**, **southern Florida**, and the **western Corn Belt** (figs. 3 and 4). For parts of **Illinois** and **Iowa**, this was the second consecutive year of unusual dryness. Much of the **eastern third of the country** had well-above-normal precipitation, as did an area extending from **Louisiana** northwestward through **Texas** and **western Oklahoma**. Annual temperatures tended to be slightly below normal **east of the Rockies** and above normal in the **Southwest** (fig. 5).

Regional rankings show that 1989 was unusually cold in the **Northeast**, **East North Central**, **Central**, and **South** regions (table 1). In contrast, the **Southwest** region had the 7th warmest year on record as well as the 5th driest year. The **Southeast** had its 9th wettest year on record.

Delaware and **West Virginia** had the 2nd wettest year on record (table 2). As for statewide extremes, 15 States had the coldest December (table 3). Nine States experienced the wettest May-September period.

Douglas Le Compte
Managing Editor

Figure 1

U.S. NATIONAL MEAN PRECIP INDEX

ANNUAL, 1895-1989

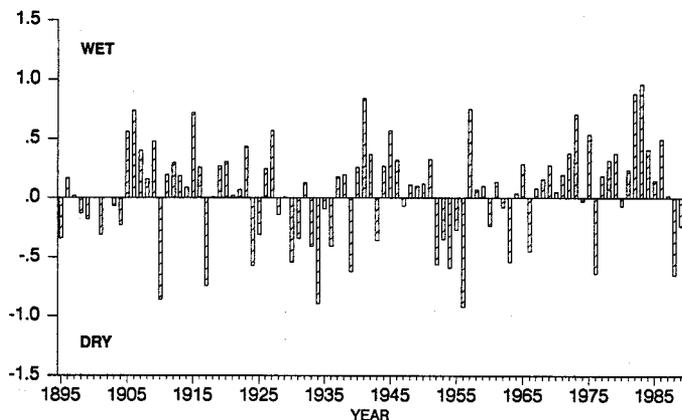


Figure 2

U.S. NATIONAL TEMPERATURE

ANNUAL, 1895-1989

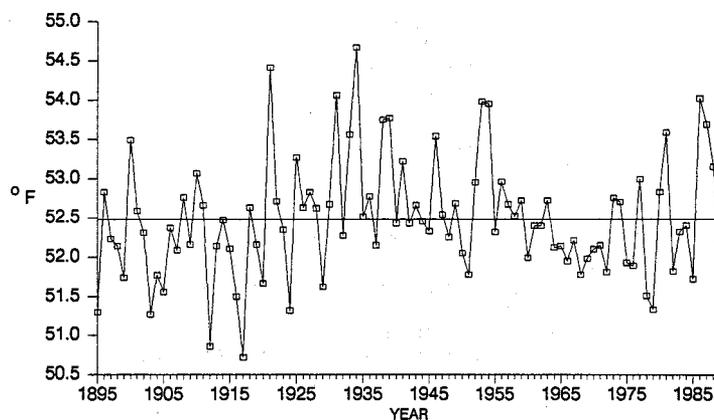


Figure 3

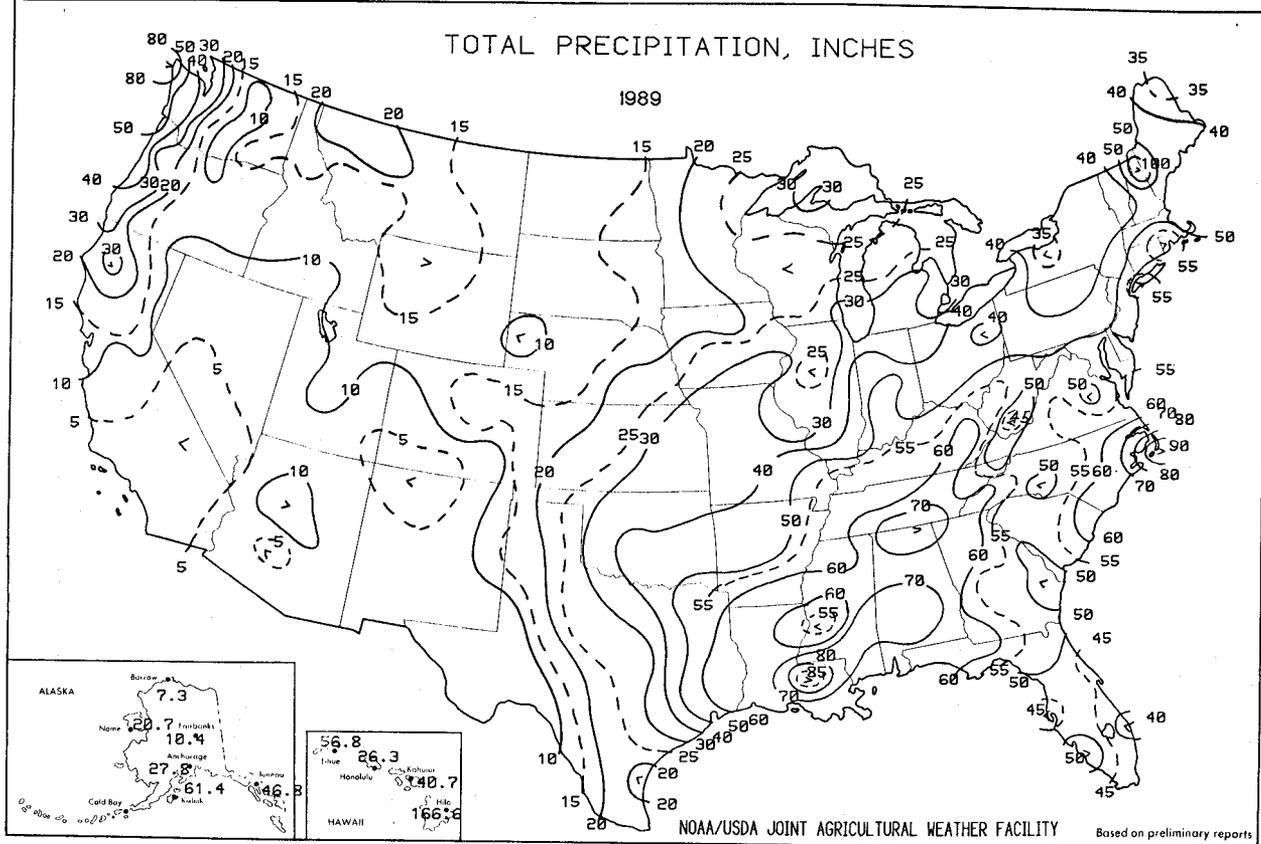


Figure 4

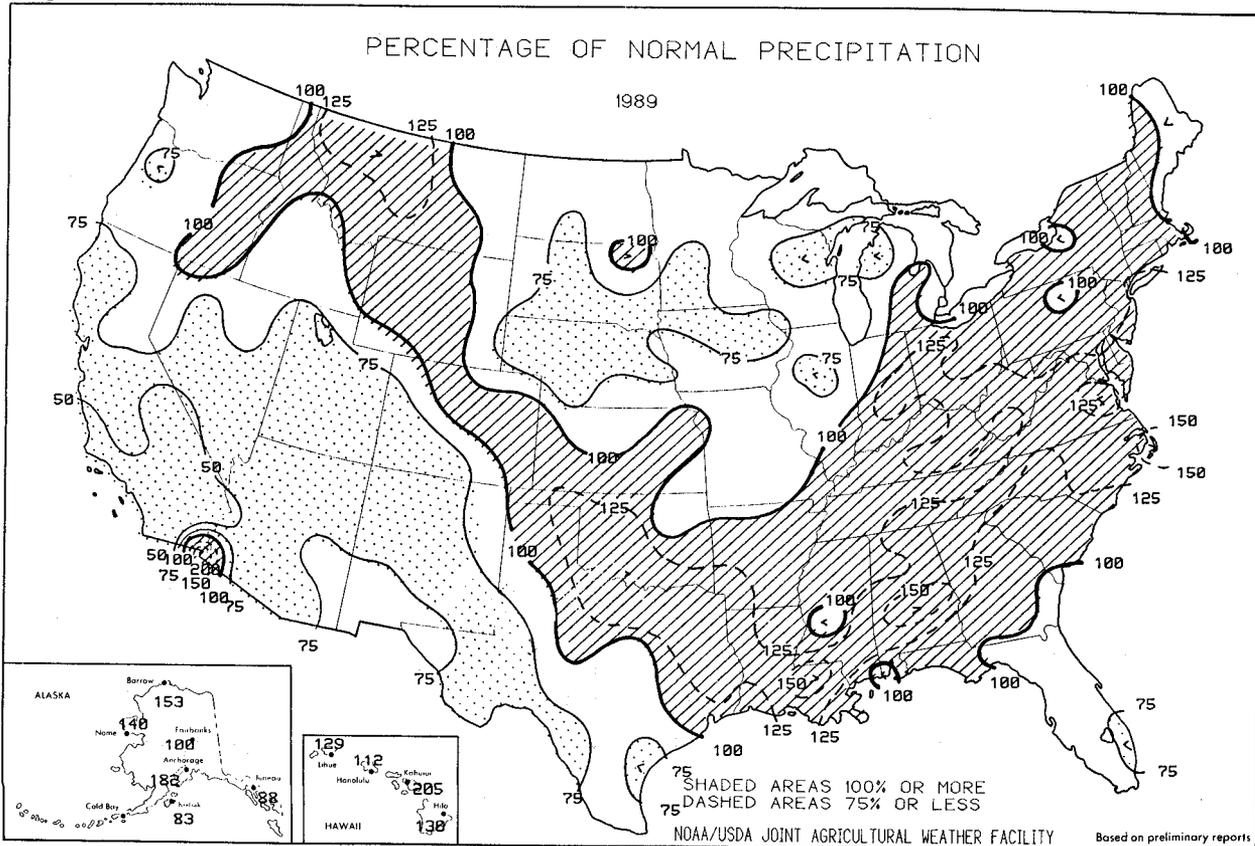


Figure 5

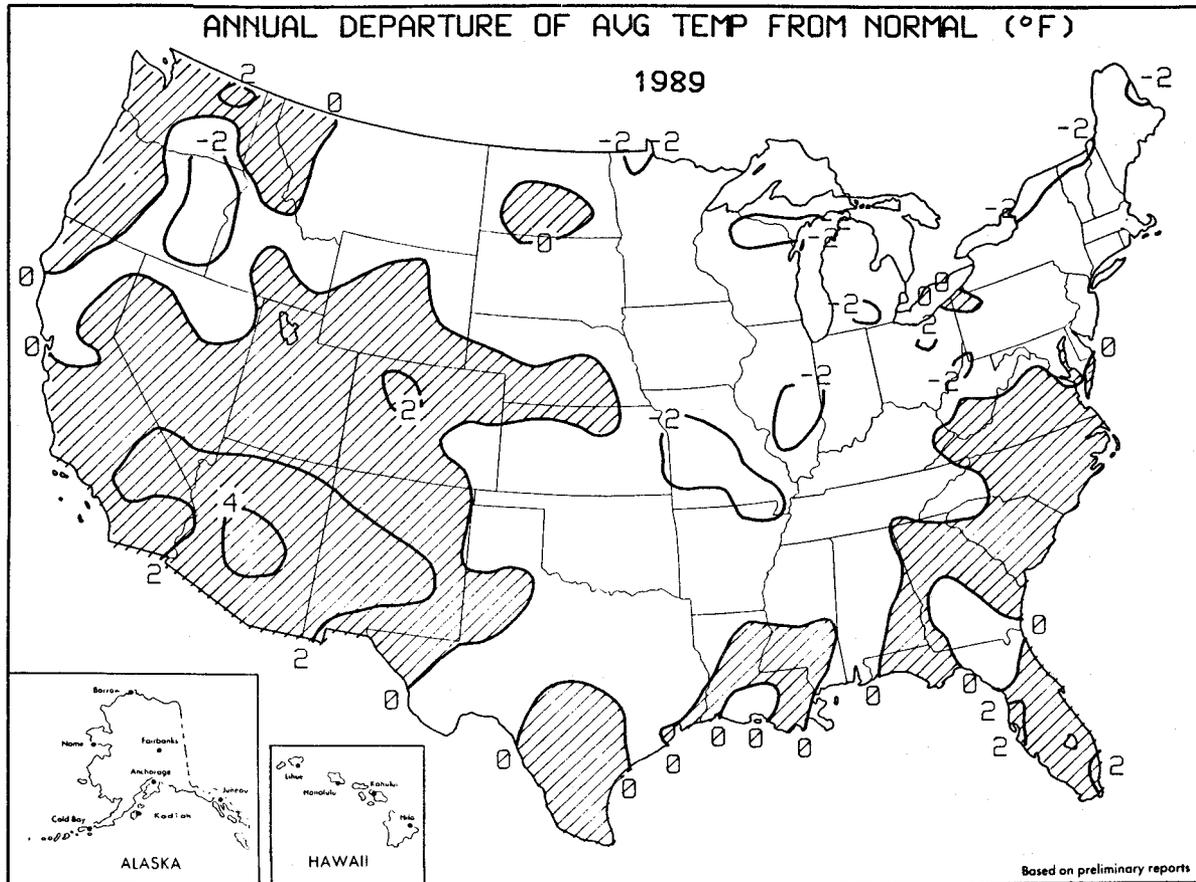


TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR JAN-DEC 1989, BASED ON THE PERIOD 1895-1989. 1 = DRIEST/COLDEST, 95 = WETTEST/HOTTEST.

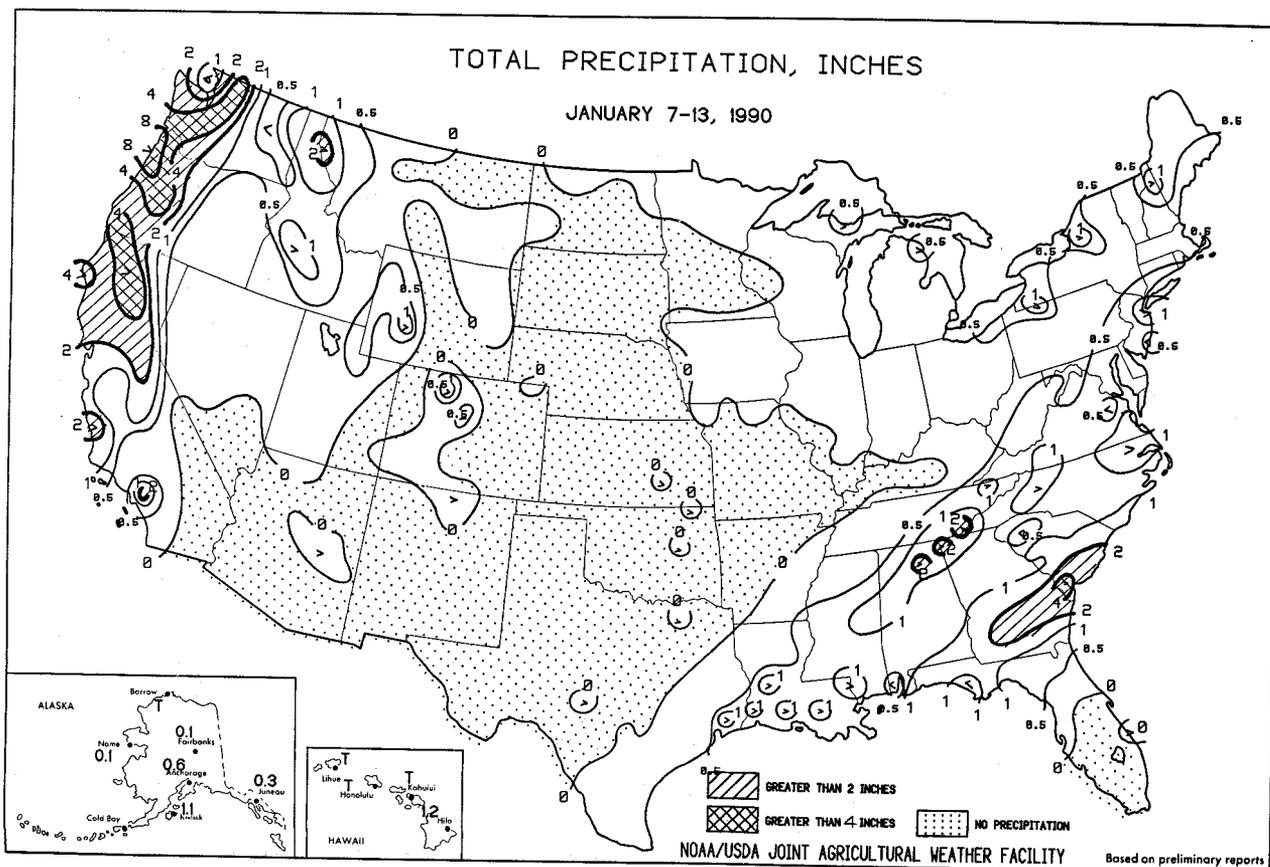
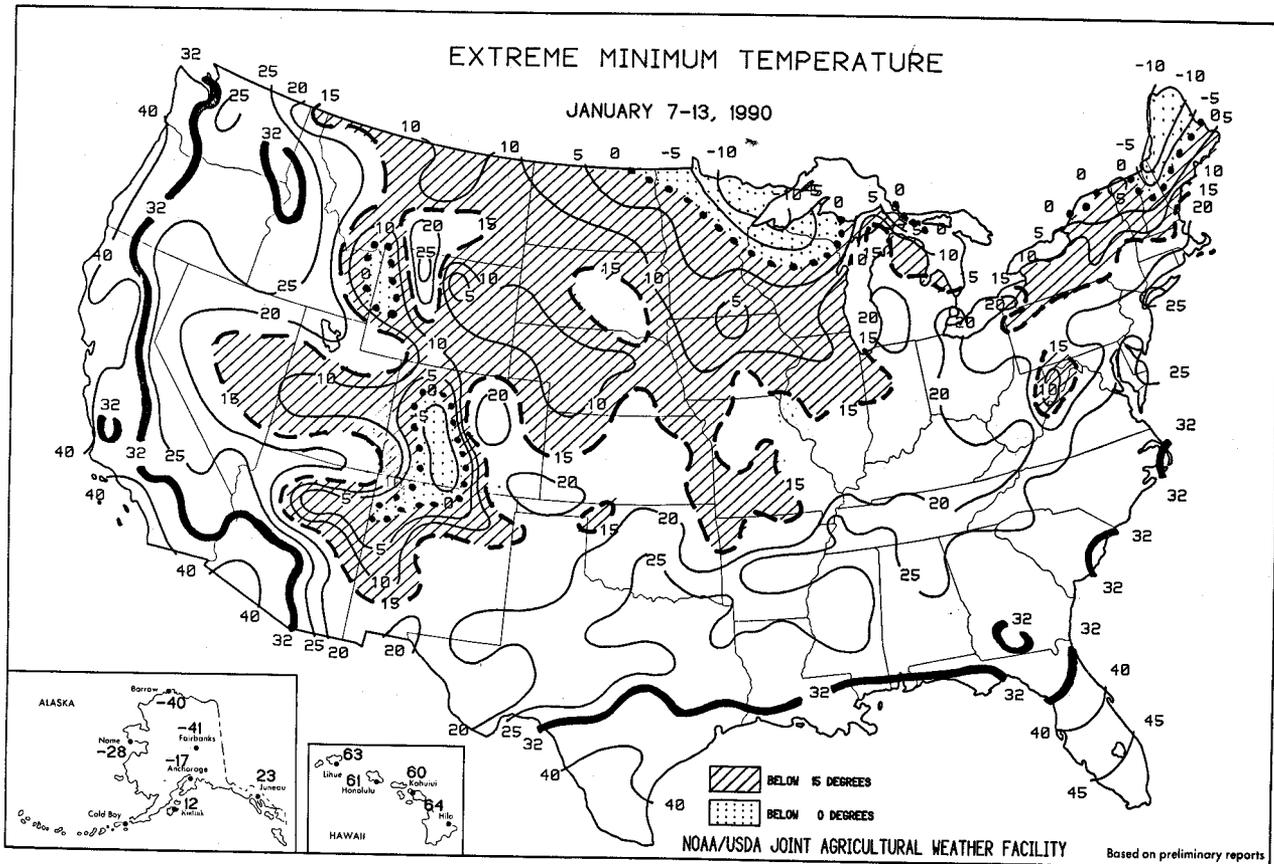
REGION	PRECIPITATION	TEMPERATURE
NATIONAL	33	36
NORTHEAST	82	16
EAST NORTH CENTRAL	7	13
CENTRAL	69	11
SOUTHEAST	87	32
WEST NORTH CENTRAL	26	46
SOUTH	56	17
SOUTHWEST	5	89
NORTHWEST	21	54
WEST	6	72

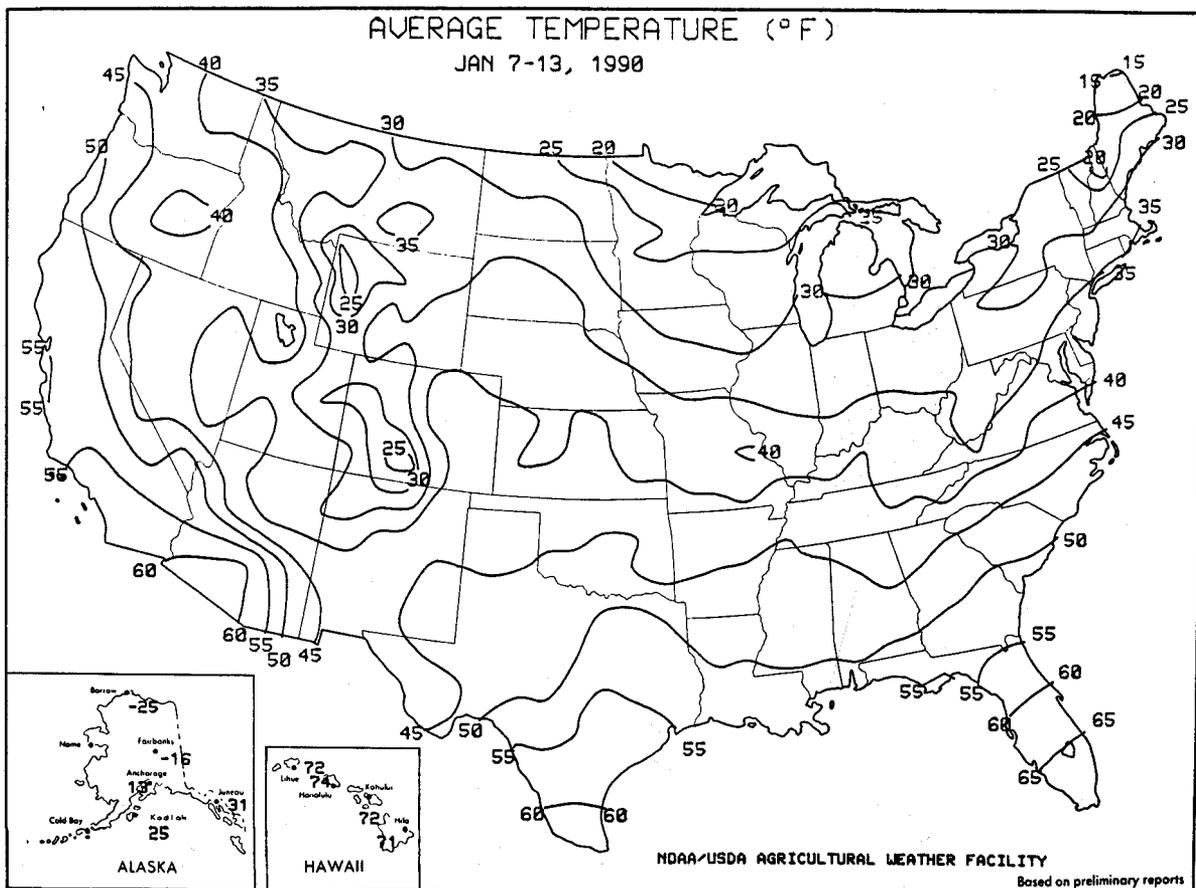
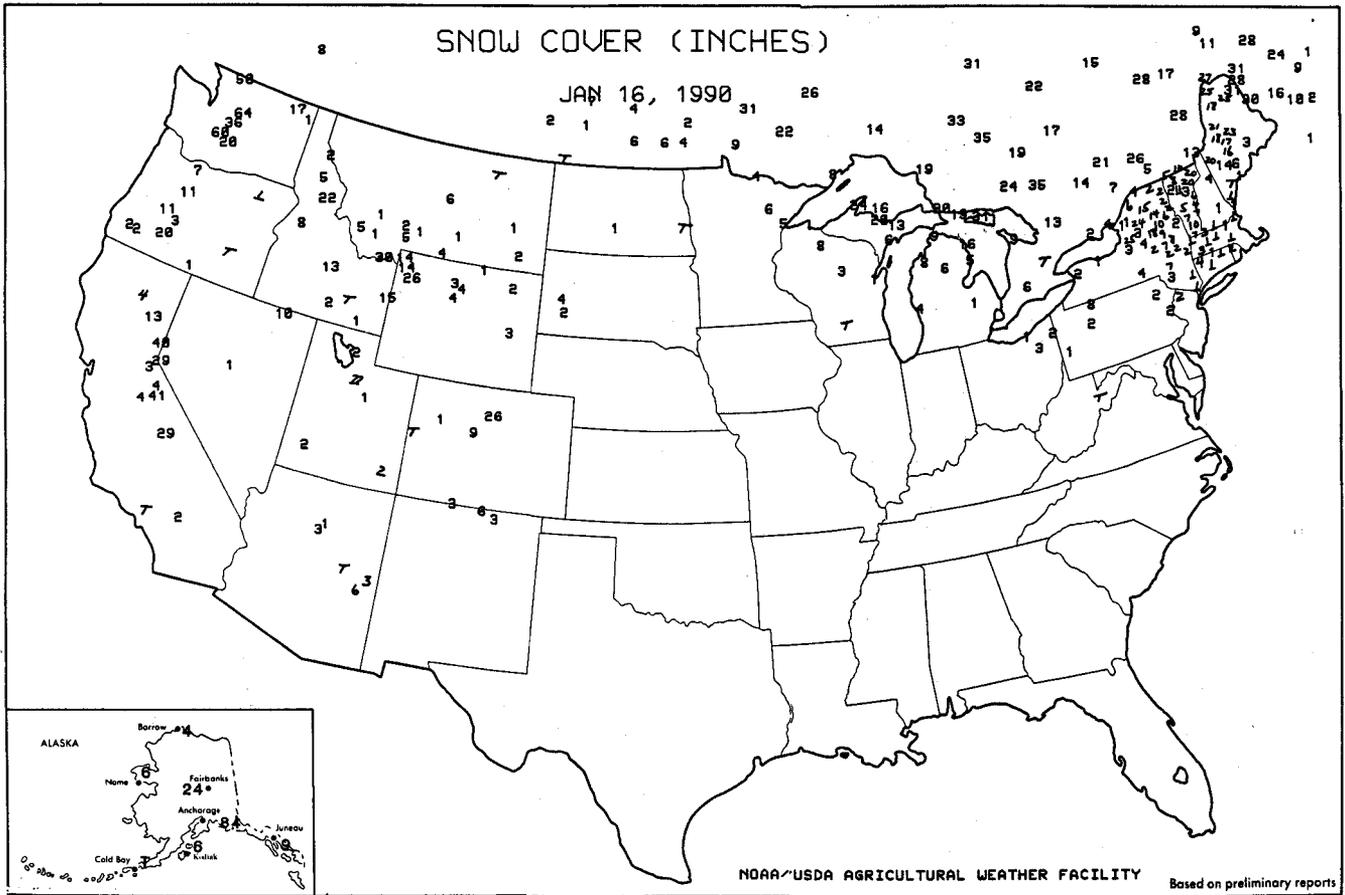
TABLE 2. PRECIPITATION RANKINGS FOR JAN-DEC 1989, BASED ON THE PERIOD 1895 TO 1989. 1 = DRIEST, 95 = WETTEST.

STATE	RANK	STATE	RANK	STATE	RANK	STATE	RANK
AL	88	IA	7	NE	7	RI	91
AZ	5	KS	45	NV	20	SC	80
AR	65	KY	93	NH	64	SD	35
CA	7	LA	76	NJ	91	TN	91
CO	8	ME	36	NM	17	TX	34
CT	92	MD	90	NY	82	UT	5
DE	94	MA	80	NC	93	VT	73
FL	34	MI	12	ND	11	VA	91
GA	78	MN	23	OH	85	WA	24
ID	27	MS	85	OK	63	WV	94
IL	13	MO	12	OR	13	WI	7
IN	78	MT	79	PA	81	WY	28

TABLE 3. STATEWIDE RECORDS IN 1989: THE DRIEST, WETTEST, COLDEST, HOTTEST BASED ON STATEWIDE-AVERAGED DATA SPANNING THE LAST 95 YEARS.

RECORD	STATES
WETTEST FEBRUARY	KENTUCKY
DRIEST APRIL	ARIZONA, KANSAS, MISSOURI, OKLAHOMA
HOTTEST APRIL	ARIZONA, UTAH
WETTEST MAY	MARYLAND, PENNSYLVANIA
WETTEST JUNE	ALABAMA, LOUISIANA
HOTTEST JULY	UTAH
DRIEST NOVEMBER	KANSAS, OKLAHOMA
DRIEST DECEMBER	CALIFORNIA, MASSACHUSETTS
COLDEST DECEMBER	CONNECTICUT, DELAWARE, INDIANA, KENTUCKY, MAINE, MARYLAND, MICHIGAN, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, OHIO, PENNSYLVANIA, RHODE ISLAND, VERMONT, WEST VIRGINIA
WETTEST JANUARY-NOVEMBER	DELAWARE, WEST VIRGINIA
WETTEST FEBRUARY-SEPTEMBER	DELAWARE, NEW JERSEY, TENNESSEE, VIRGINIA, WEST VIRGINIA
WETTEST MAY-SEPTEMBER	DELAWARE, LOUISIANA, MISSISSIPPI, NEW JERSEY, NEW YORK, RHODE ISLAND, TENNESSEE, VIRGINIA, WEST VIRGINIA





National Weather Data for Selected Cities

Weather Data for the Week Ending January 13, 1990

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	57	34	71	24	45	3	.9	-.4	.8	6.0	84	2.4	105	88	44	0	2	2	1
MOBILE	61	39	72	29	50	0	.4	-.7	.4	10.6	143	3.4	169	97	45	0	1	1	0
MONTGOMERY	59	36	74	27	47	1	.7	-.3	.7	11.5	175	2.4	130	94	44	0	1	2	1
AK ANCHORAGE	21	5	39	-17	13	2	.6	.5	.3	2.5	174	.8	252	89	60	0	7	4	0
BARROW	-20	-30	-15	-40	-25	-11	T	-.1	T	.2	92	T	10	78	64	0	7	1	0
FAIRBANKS	-8	-24	7	-41	-16	-3	.1	0	.1	.7	71	.1	52	80	60	0	7	2	0
JUNEAU	35	27	38	23	31	9	.6	-.3	.3	8.7	140	2.0	123	98	84	0	7	3	0
KODIAK	32	18	38	12	25	-5	1.1	-.2	.5	15.0	188	2.7	112	90	58	0	7	7	0
NOME	3	-10	24	-28	-5	-10	.1	-.1	.1	1.0	108	.3	94	85	65	0	5	6	0
AZ PHOENIX	75	48	84	39	61	9	0	0	0	.4	34	.2	61	61	22	0	6	0	0
PRESCOTT	63	28	69	18	45	10	0	0	0	.4	19	.1	17	74	24	0	6	0	0
TUCSON	75	41	83	31	58	8	0	0	0	.6	44	.4	106	62	17	0	2	0	0
YUMA	75	47	82	39	61	6	0	0	0	.1	17	.1	53	48	19	0	2	0	0
AR FORT SMITH	60	24	75	13	42	5	0	0	0	1.1	30	.3	42	91	23	0	6	0	0
LITTLE ROCK	56	37	67	27	47	7	0	0	0	2.0	34	.4	26	67	38	0	2	0	0
CA BAKERSFIELD	68	42	80	34	55	7	.1	-.1	.1	.3	33	.3	89	95	42	0	0	2	0
EUREKA	60	51	62	49	56	9	3.2	1.6	1.6	5.3	58	4.5	150	94	73	0	0	4	3
FRESNO	65	40	74	36	53	8	1.1	.6	.8	1.1	47	1.1	137	98	50	0	0	2	1
LOS ANGELES	67	51	75	47	59	3	.3	-.4	.3	.4	15	.4	34	99	60	0	0	1	0
REDDING	55	44	63	40	50	4	6.7	4.7	3.9	6.9	65	6.9	191	98	76	0	0	5	3
SACRAMENTO	62	47	69	40	55	10	3.2	2.3	2.4	3.8	84	3.8	229	98	72	0	0	3	1
SAN DIEGO	68	49	72	43	59	3	.1	-.4	.1	1.5	55	.5	61	94	52	0	0	1	0
SAN FRANCISCO	60	50	64	46	55	7	1.6	.5	.9	2.1	39	2.1	108	98	73	0	0	3	2
CO DENVER	59	30	71	22	45	15	0	0	0	.8	112	T	0	62	22	0	4	0	0
GRAND JUNCTION	42	16	49	4	29	4	0	0	0	1.1	0	.4	43	108	87	0	7	0	0
PUEBLO	58	24	74	15	41	12	0	0	0	.9	231	T	30	86	26	0	6	0	0
CT BRIDGEPORT	40	30	44	22	35	5	.6	-.2	.6	1.5	30	.7	49	86	58	0	5	1	1
HARTFORD	39	26	42	19	33	7	.2	-.7	.1	1.7	30	.3	16	87	57	0	5	3	0
DC WASHINGTON	45	31	53	27	38	3	.5	-.1	.5	2.8	64	.7	59	86	52	0	6	2	1
FL APALACHICOLA	66	47	72	38	57	4	1.8	1.0	1.8	9.2	184	2.1	139	96	54	0	0	1	1
DAYTONA BEACH	69	48	81	37	59	1	.1	-.4	.1	5.0	158	1.0	110	94	48	0	1	1	0
JACKSONVILLE	66	44	72	30	55	1	.6	-.1	.3	4.3	119	.9	78	95	44	0	0	2	0
KEY WEST	75	64	83	58	70	0	0	0	0	1.7	69	T	0	90	64	0	0	0	0
MIAMI	80	60	86	49	70	3	0	0	0	.7	25	.1	7	92	46	0	0	0	0
ORLANDO	71	51	83	39	61	1	T	-.5	T	4.5	165	T	0	94	44	0	0	0	0
TALLAHASSEE	67	40	73	25	54	2	1.0	-.1	1.0	6.4	98	1.8	90	98	43	0	1	1	1
TAMPA	70	53	76	40	61	1	T	-.5	T	5.2	176	.5	61	95	49	0	0	1	0
WEST PALM BEACH	77	57	87	46	67	2	0	0	0	2.7	82	.8	71	92	45	0	0	0	0
GA ATLANTA	56	36	72	27	46	4	.6	-.5	.5	6.2	100	1.8	85	81	44	0	1	2	0
AUGUSTA	61	37	75	29	49	4	.7	-.2	.7	6.0	125	1.3	82	84	40	0	2	2	1
MACON	59	37	73	29	48	2	1.5	.5	1.4	11.3	193	2.4	134	88	44	0	1	2	1
SAVANNAH	62	43	71	31	53	4	2.4	1.8	2.4	7.8	193	2.6	204	84	38	0	1	1	1
HI HILO	78	65	83	64	71	0	1.2	-.9	.5	14.3	.86	8.6	221	92	60	0	0	4	2
HONOLULU	82	66	85	61	74	1	T	-.9	T	1.4	27	T	0	79	45	0	0	0	0
KAHULUI	80	65	86	60	72	1	T	-.9	T	4.9	110	.2	9	89	56	0	0	1	0
LIHUE	77	67	80	63	72	1	T	-.5	T	3.0	37	.1	2	75	57	0	0	0	0
ID BOISE	51	37	58	31	44	14	.3	-.1	.3	.6	29	.5	69	86	51	0	1	2	0
LEWISTON	53	40	62	35	47	15	.4	-.1	.1	.7	36	.4	64	80	52	0	0	5	0
POCATELLO	49	29	55	14	39	16	.1	-.1	.1	.4	26	.3	63	85	45	0	4	3	0
IL CHICAGO	39	26	47	14	33	12	.1	-.3	.1	.8	27	.4	46	86	58	0	6	1	0
MOLINE	40	23	45	13	32	12	.1	-.3	.1	1.6	62	.9	120	91	53	0	7	1	0
PEORIA	41	24	49	13	33	11	.1	-.3	.1	1.2	45	.4	49	91	59	0	7	1	0
QUINCY	45	26	51	17	36	12	T	-.3	T	.9	39	.2	35	80	43	0	7	0	0
ROCKFORD	37	22	44	10	30	11	.1	-.2	.1	1.2	49	.8	115	93	60	0	7	1	0
SPRINGFIELD	43	26	50	14	34	10	T	-.4	T	.8	28	.2	29	87	49	0	7	1	0
IN EVANSVILLE	47	29	54	17	38	7	T	-.7	T	1.6	33	.2	13	84	46	0	5	0	0
FORT WAYNE	38	27	45	17	33	9	.3	-.2	.2	2.1	62	.9	98	93	63	0	6	2	0
INDIANAPOLIS	41	27	49	15	34	8	.1	-.5	.1	2.7	65	.6	50	88	55	0	5	1	0
SOUTH BEND	38	27	47	22	33	9	.2	-.4	.1	2.6	64	.7	66	89	61	0	6	3	0
IA DES MOINES	40	23	48	15	31	13	T	-.2	T	1.2	86	.7	159	80	50	0	7	1	0
ST LOUIS	45	20	64	11	33	17	T	-.1	T	.4	39	T	0	79	39	0	7	0	0
KS CONCORDIA	52	29	74	20	41	15	T	-.2	T	.3	18	.1	14	84	49	0	7	1	0
DODGE CITY	55	28	74	19	41	12	0	-.1	0	.5	57	.1	46	64	26	0	4	0	0
GOODLAND	57	25	74	11	41	14	0	-.1	0	.8	108	.2	110	70	30	0	5	0	0
TOPEKA	52	23	71	12	38	11	T	-.2	T	.2	44	T	0	68	23	0	6	0	0
WICHITA	53	26	67	17	39	10	0	-.2	0	.9	52	.3	67	88	29	0	7	0	0
KY BOWLING GREEN	50	31	62	18	41	7	T	-.1	T	.7	51	.2	65	75	25	0	5	0	0
LEXINGTON	45	29	56	16	37	5	T	-.8	T	2.6	40	.4	21	83	43	0	3	0	0
LOUISVILLE	48	31	55	20	39	7	.1	-.7	.1	1.6	33	.2	11	74	39	0	4	1	0
LA ALEXANDRIA	63	37	74	27	50	2	.8	-.2	.8	4.4	65	2.4	127	85	43	0	2	1	1
BATON ROUGE	64	41	73	30	52	2	.9	-.1	.9	9.5	138	3.2	166	94	47	0	1	1	1
LAKE CHARLES	62	40	70	31	51	1	.9	-.2	.9	5.3	75	3.2	156	99	49	0	2	1	1
NEW ORLEANS	63	43	72	35	53	1	.7	-.5	.7	9.8	134	3.6	170	96	49	0	0	1	1

Based on 1951-80 normals

Weather Data for the Week Ending January 13, 1990

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
SHREVEPORT	64	36	76	26	50	4	T	-.9	T	4.7	84	1.4	80	80	30	0	3	1	0
ME CARIBOU	23	10	34	-8	17	6	.8	-.2	T	3.5	84	1.2	110	88	68	0	7	6	0
PORTLAND	38	24	43	13	31	9	.1	-.8	.1	2.4	39	.1	8	87	52	0	6	2	0
MD BALTIMORE	44	29	51	23	37	4	.8	-.1	.8	3.1	66	1.0	75	89	54	0	6	1	1
SALISBURY	47	29	53	24	38	3	.7	-.1	.7	4.5	88	2.0	135	87	49	0	5	1	1
MA BOSTON	41	30	44	20	36	6	.1	-.8	.1	1.0	16	.2	9	93	64	0	5	2	0
CHATHAM	40	31	44	21	35	4	.8	-.2	.6	3.5	52	1.8	93	89	61	0	4	3	1
MI ALPENA	33	19	40	10	26	7	.6	-.2	.4	2.6	94	1.0	134	91	68	0	7	3	0
DETROIT	38	27	44	22	32	9	.3	-.1	.2	2.0	59	.7	86	94	64	0	6	3	0
FLINT	38	25	46	18	31	9	.3	0	.2	1.9	70	.9	127	92	62	0	6	4	0
GRAND RAPIDS	35	25	44	19	30	7	.2	-.3	.1	1.7	47	.7	74	88	61	0	6	4	0
HOUGHTON LAKE	32	20	38	11	26	9	.3	-.1	.1	1.6	63	.7	104	94	74	0	7	4	0
LANSING	36	25	46	19	30	10	.3	-.2	.2	1.6	48	.7	89	94	67	0	6	2	0
MARQUETTE	31	14	42	0	22	10	.6	-.1	.3	3.3	98	.7	74	94	70	0	7	3	0
MUSKEGON	35	26	40	22	30	7	.2	-.4	.1	2.6	70	.7	64	92	68	0	6	3	0
SAULT ST. MARIE	31	16	39	0	23	9	.4	-.1	.2	2.3	65	.5	55	91	65	0	7	4	0
MN ALEXANDRIA	34	15	47	3	24	19	T	-.2	T	.2	17	T	0	91	63	0	7	0	0
DULUTH	33	10	45	-6	22	15	.1	-.2	0	.7	39	.1	16	89	58	0	7	2	0
INT'L FALLS	28	5	39	-14	17	17	.2	0	.1	.6	47	.2	46	90	66	0	7	3	0
MINNEAPOLIS	37	17	49	6	27	16	T	-.2	T	.4	36	T	0	82	53	0	7	0	0
ROCHESTER	36	18	44	6	27	18	.1	-.1	.1	.5	40	.1	28	88	59	0	7	2	0
MS GREENWOOD	56	35	66	24	46	2	.9	-.3	.9	5.9	77	2.5	110	94	48	0	2	1	1
JACKSON	60	34	76	24	47	2	.8	-.4	.8	8.3	109	4.1	185	95	42	0	2	1	1
MERIDIAN	61	34	76	24	47	2	1.0	-.2	1.0	9.1	116	2.4	109	93	39	0	2	1	1
MO CAPE GIRARDEAU	51	29	62	17	40	—	T	-.7	T	2.1	41	.5	38	88	47	0	5	0	0
COLUMBIA	51	25	63	13	38	10	0	-.4	0	1.2	43	.4	53	80	32	0	5	0	0
KANSAS CITY	49	26	63	14	37	10	T	-.3	T	1.0	50	.4	80	78	34	0	6	0	0
SAINT LOUIS	50	29	61	19	40	11	T	-.4	T	.8	27	.2	23	72	32	0	5	0	0
SPRINGFIELD	53	25	69	13	39	8	0	-.4	0	1.5	47	.7	101	75	27	0	5	0	0
MT BILLINGS	47	29	55	16	38	17	T	-.2	T	1.4	121	.1	12	72	35	0	3	0	0
GLASGOW	40	21	49	11	31	23	T	-.1	T	.4	89	.1	40	87	53	0	7	0	0
GREAT FALLS	49	28	58	13	39	20	T	-.2	T	1.4	115	T	7	69	37	0	4	0	0
HAVRE	40	24	47	10	32	21	T	-.1	T	1.9	249	T	15	90	59	0	5	1	0
HELENA	47	27	59	17	37	19	.3	-.1	.2	.8	83	.3	90	88	40	0	6	3	0
KALISPELL	40	27	47	17	34	14	.6	-.2	.3	3.0	130	.7	101	89	57	0	4	5	0
MILES CITY	42	26	51	15	34	20	T	-.1	T	1.4	156	T	15	84	53	0	6	1	0
MISSOULA	43	29	53	23	36	15	.6	-.3	.5	1.3	69	.6	103	91	55	0	4	5	1
NE GRAND ISLAND	53	23	76	15	38	18	T	-.1	T	.4	48	T	5	74	24	0	7	0	0
LINCOLN	51	22	73	11	37	17	0	-.1	0	.6	67	T	8	80	29	0	7	0	0
NORFOLK	49	21	70	10	35	18	T	-.1	T	.8	94	T	0	81	31	0	7	0	0
NORTH PLATTE	55	20	73	7	37	16	T	-.1	T	.3	52	T	0	83	21	0	7	0	0
OMAHA	46	26	65	19	36	16	0	-.2	0	.5	47	T	0	75	40	0	7	0	0
SCOTTSBLUFF	55	22	66	10	39	15	T	-.1	T	.7	94	T	0	81	26	0	5	0	0
VALENTINE	52	24	68	14	38	20	T	-.1	T	.3	72	T	0	70	26	0	7	0	0
NV ELY	55	22	63	12	38	14	.1	-.1	.1	.2	18	.2	55	79	28	0	7	1	0
LAS VEGAS	65	37	69	27	51	7	0	-.1	0	T	2	T	5	51	22	0	1	0	0
RENO	60	29	68	20	44	13	T	-.3	T	.1	5	.1	17	74	27	0	5	1	0
WINNEMUCCA	56	34	66	23	45	16	.2	0	.1	.4	29	.2	64	77	39	0	4	2	0
NH CONCORD	37	19	44	9	28	8	T	-.6	T	1.0	21	.1	6	92	53	0	6	1	0
NJ ATLANTIC CITY	44	28	54	19	36	4	.4	-.4	.4	2.6	51	1.0	65	83	49	0	6	1	0
NM ALBUQUERQUE	56	27	63	17	42	7	0	-.1	0	.4	55	.1	47	62	24	0	6	0	0
CLOVIS	62	28	73	19	45	8	0	-.1	0	.5	67	T	0	62	21	0	4	0	0
ROSWELL	65	28	72	18	47	8	0	-.1	0	.1	13	0	0	47	16	0	6	0	0
NY ALBANY	38	25	46	16	31	10	.1	-.5	.1	.9	23	.2	17	87	56	0	5	2	0
BINGHAMTON	34	22	42	10	28	6	.1	-.5	.1	1.8	44	.2	14	90	63	0	7	2	0
BUFFALO	37	26	44	13	32	7	.8	-.1	.3	3.3	69	.9	71	92	65	0	6	5	0
NEW YORK	42	33	47	25	38	6	.9	-.2	.9	1.8	36	1.0	74	79	50	0	3	2	1
ROCHESTER	38	24	45	10	31	7	.3	-.2	.1	2.0	55	.4	39	89	61	0	6	4	0
SYRACUSE	38	23	43	15	30	7	.4	-.2	.2	2.6	61	.5	43	92	61	0	6	5	0
NC ASHEVILLE	51	29	68	21	40	3	.5	-.2	.3	4.5	100	1.2	92	86	38	0	6	2	0
CHARLOTTE	54	34	68	27	44	4	.6	-.3	.4	5.0	101	1.3	85	83	40	0	2	2	0
GREENSBORO	51	30	62	25	40	3	.5	-.3	.4	4.8	100	1.3	86	84	46	0	5	2	0
HATTERAS	57	41	67	34	49	3	.8	-.3	.5	8.2	128	1.8	87	87	55	0	0	2	1
NEW BERN	58	35	65	26	46	2	.7	-.2	.4	7.7	143	1.6	96	91	44	0	2	2	0
RALEIGH	52	31	64	24	42	2	.6	-.2	.5	4.0	88	1.0	69	83	45	0	4	2	0
WILMINGTON	59	38	68	28	48	2	1.1	-.2	.8	8.5	171	1.4	91	89	43	0	2	2	1
ND BISMARCK	41	22	54	10	31	25	0	-.1	0	.3	45	T	0	84	46	0	7	0	0
FARGO	34	18	47	6	26	22	T	-.1	T	.3	29	T	0	88	62	0	7	0	0
GRAND FORKS	34	14	52	4	24	22	T	-.2	T	.3	31	.1	26	89	54	0	7	1	0
WILLISTON	39	20	47	9	29	23	T	-.1	T	.5	69	.1	35	90	53	0	7	0	0
OH AKRON-CANTON	38	25	45	17	32	6	.5	-.1	.2	2.7	70	.7	61	92	59	0	6	4	0
CINCINNATI	45	26	53	15	36	6	.1	-.7	.1	2.2	50	.2	15	84	45	0	6	1	0
CLEVELAND	41	28	47	17	34	8	.6	0	.2	2.5	66	.8	74	90	56	0	6	3	0
COLUMBUS	42	27	49	22	35	7	.1	-.5	.1	2.1	55	.3	23	92	57	0	6	3	0

Weather Data for the Week Ending January 13, 1990

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
DAYTON	42	27	49	20	34	7	.1	-.5	.1	2.2	61	.3	27	91	58	0	6	2	0
TOLEDO	39	27	46	18	33	10	.3	-.2	.3	2.0	56	.7	73	93	59	0	6	2	0
YOUNGSTOWN	39	24	47	14	32	7	.4	-.3	.3	2.0	52	.6	48	92	59	0	6	2	0
OK OKLAHOMA CITY	59	32	75	25	46	10	0	0	0	.3	21	T	0	0	0	0	3	0	0
TULSA	59	32	76	20	45	10	0	0	0	.3	28	.4	67	57	18	0	4	0	0
OR ASTORIA	53	44	56	40	49	8	6.2	3.6	4.9	17.1	104	9.7	203	93	73	0	0	0	0
BURNS	47	33	57	30	40	13	.2	-.2	.2	.3	15	.3	37	94	57	0	3	2	0
MEDFORD	52	40	60	36	46	9	2.0	1.2	1.8	2.9	58	2.2	146	98	74	0	0	4	1
PENDLETON	50	38	67	30	44	12	.5	.1	.2	.7	30	.5	68	84	56	0	3	5	0
PORTLAND	52	41	61	37	46	8	3.0	1.5	1.2	7.4	81	4.4	158	95	65	0	0	7	3
SALEM	53	42	61	35	48	9	3.1	1.4	1.7	8.5	83	4.6	145	97	71	0	0	6	2
PA ALLENTOWN	40	27	43	23	33	6	.6	-.2	.5	1.9	38	.7	45	87	56	0	6	2	0
ERIE	39	29	46	22	34	9	.6	.1	.2	4.0	91	.7	65	89	58	0	6	5	0
HARRISBURG	40	26	44	20	33	4	.3	-.4	.3	1.7	37	.4	32	88	53	0	5	2	0
PHILADELPHIA	43	29	48	22	36	4	.9	.1	.8	2.3	47	1.0	75	85	54	0	5	2	0
PITTSBURGH	40	25	52	17	33	5	.2	-.4	.1	2.8	75	.4	35	91	54	0	7	4	0
SCRANTON	38	25	46	19	31	6	.1	-.4	.1	1.1	32	.2	15	88	55	0	6	4	0
RI PROVIDENCE	40	28	44	20	34	6	.5	-.5	.4	2.4	38	.7	40	89	51	0	5	3	0
SC CHARLESTON	60	42	66	32	51	3	2.9	2.1	2.7	8.5	191	3.8	275	88	48	0	1	2	1
COLUMBIA	60	36	74	27	48	4	.8	-.2	.7	6.7	127	1.4	80	90	40	0	2	2	1
FLORENCE	59	36	71	28	48	3	1.0	.2	.7	5.8	130	1.5	99	85	38	0	2	2	1
GREENVILLE	56	31	67	23	43	2	.3	-.7	.2	5.9	102	1.2	65	85	39	0	5	2	0
SD ABERDEEN	40	22	55	11	31	23	0	-.1	0	.2	22	T	0	82	50	0	7	0	0
HURON	43	24	57	15	33	22	T	-.1	T	.2	30	T	0	76	44	0	6	0	0
RAPID CITY	50	25	66	12	38	17	0	-.1	0	.8	139	0	0	73	29	0	7	0	0
SIoux FALLS	42	20	56	10	31	19	T	-.1	T	.3	30	T	15	84	46	0	7	1	0
TN CHATTANOOGA	53	32	67	24	43	4	1.1	-.1	.6	6.5	87	2.8	123	89	41	0	4	2	2
KNOXVILLE	49	32	63	21	41	3	.8	-.3	.5	4.7	71	1.9	95	82	47	0	4	2	1
MEMPHIS	55	37	67	26	46	7	.2	-.9	.2	3.0	44	.9	45	81	38	0	2	1	0
NASHVILLE	53	33	65	21	43	6	T	-1.0	T	2.6	40	.7	35	77	36	0	3	2	0
TX ABILENE	65	33	73	25	49	6	0	-.2	0	.2	16	0	0	50	16	0	3	0	0
AMARILLO	60	26	74	18	43	8	0	-.1	0	.5	71	T	0	55	19	0	6	0	0
AUSTIN	71	42	85	33	57	8	0	-.3	0	.6	21	.4	63	72	21	0	0	0	0
BEAUMONT	66	41	74	33	54	2	.7	-.2	.7	7.4	111	4.2	240	97	44	0	0	1	1
BROWNSVILLE	75	49	83	43	62	2	.1	-.2	.1	1.9	119	.2	38	98	46	0	0	1	0
CORPUS CHRISTI	71	46	82	36	59	4	.2	-.1	.2	1.8	97	.3	45	98	39	0	0	1	0
DEL RIO	68	38	79	34	53	3	T	-.1	T	.8	100	.5	225	66	20	0	0	0	0
EL PASO	62	26	69	20	44	0	0	-.1	0	.2	42	.1	40	71	21	0	6	0	0
FORT WORTH	66	34	75	24	50	6	0	-.4	0	.6	25	.3	38	71	18	0	3	0	0
GALVESTON	62	48	69	43	55	2	.5	-.2	.5	2.2	45	1.7	125	97	54	0	0	1	1
HOUSTON	68	41	77	33	55	3	.2	-.5	.2	2.5	47	1.7	111	92	32	0	0	1	0
LUBBOCK	64	28	75	17	46	7	0	-.1	0	.3	62	T	0	51	16	0	5	0	0
MIDLAND	65	29	74	21	47	4	0	-.1	0	.1	24	0	0	56	17	0	4	0	0
SAN ANGELO	68	31	79	21	49	4	0	-.1	0	.2	26	T	0	65	16	0	5	0	0
SAN ANTONIO	69	39	79	32	54	4	T	-.3	T	.9	48	.6	98	77	23	0	1	0	0
VICTORIA	69	45	78	35	57	5	.3	-.1	.3	2.3	77	1.1	145	95	40	0	0	1	0
WACO	70	33	82	23	52	6	0	-.4	0	.5	21	T	0	73	18	0	3	0	0
WICHITA FALLS	64	30	78	24	47	7	0	-.2	0	.3	19	T	2	63	16	0	4	0	0
UT CEDAR CITY	60	26	70	15	43	14	T	-.1	T	.3	33	.3	115	77	26	0	6	1	0
SALT LAKE CITY	51	31	58	17	41	13	.1	-.2	.1	.4	22	.3	52	89	46	0	3	2	0
VT BURLINGTON	36	21	42	6	28	11	.1	-.3	0	1.4	44	.1	17	90	57	0	7	4	0
VA NORFOLK	51	33	59	26	42	2	.6	-.2	.6	5.9	125	2.0	131	87	48	0	3	2	1
RICHMOND	50	31	58	25	40	4	.5	-.3	.5	3.8	80	1.2	84	84	49	0	5	1	0
ROANOKE	48	28	60	24	38	3	.6	0	.6	3.5	86	.9	79	83	43	0	6	1	1
WA QUILLAYUTE	48	40	53	34	44	6	2.2	-1.2	1.1	16.9	71	8.1	126	98	75	0	0	7	1
SEATTLE-TACOMA	50	41	53	36	45	6	4.0	2.6	2.9	10.7	119	6.0	223	97	68	0	0	6	2
SPOKANE	43	32	52	25	37	12	1.1	.6	.5	2.5	70	1.6	143	94	60	0	4	4	0
YAKIMA	47	33	54	27	40	13	1.0	.7	.6	1.4	73	1.1	187	94	52	0	3	5	1
WV BECKLEY	40	22	52	16	31	1	.7	-.1	.6	3.3	72	.9	61	92	49	0	7	5	1
CHARLESTON	44	27	58	24	36	3	.7	-.1	.6	2.9	61	1.0	70	90	50	0	6	3	1
HUNTINGTON	45	28	58	23	36	3	.1	-.6	.1	2.8	61	.5	33	84	48	0	7	3	0
PARKERSBURG	44	26	54	22	35	3	.1	-.6	.1	1.9	48	.3	22	86	50	0	7	2	0
WI GREEN BAY	35	20	41	6	27	13	T	-.3	T	.6	32	.1	12	81	56	0	7	1	0
LACROSSE	39	21	47	8	30	16	.1	-.1	.1	.6	39	.1	22	87	52	0	7	2	0
MADISON	37	20	42	10	29	13	.2	0	.2	1.1	53	.8	160	87	58	0	7	2	0
MILWAUKEE	38	25	44	14	31	12	.2	-.2	.1	1.3	48	.9	115	85	56	0	7	2	0
WAUSAU	35	17	44	0	26	15	T	-.2	.1	.5	27	.1	12	88	63	0	7	1	0
WY CASPER	47	24	59	7	36	14	T	-.1	T	.4	64	.1	60	73	35	0	7	0	0
CHEYENNE	50	28	60	14	39	13	T	-.1	T	.7	137	T	0	70	33	0	4	0	0
LANDER	47	26	55	19	37	17	T	-.1	T	.4	54	T	0	73	36	0	6	0	0
SHERIDAN	46	21	56	11	34	14	.1	0	.1	2.6	248	.2	58	84	39	0	7	1	0

National Agricultural Summary

January 8-14, 1990

HIGHLIGHTS: Mostly dry weather and above-normal temperatures prevailed across the Nation during the second week of the new year. However, in the **Pacific Northwest**, a strong storm system, packing high winds and heavy precipitation caused flooding in some areas **west of the Cascades**. Snow cover was still scarce on cropland in the **Great Plains** and **Corn Belt**. Some rain fell in the **Delta and Southeast**. Moderate temperatures eased stress to livestock and promoted early greening of pastures where moisture was adequate.

SMALL GRAIN: Snow cover on winter wheat fields was scarce across the Great Plains and Corn Belt, continuing grower concerns over potential freeze damage. Warmer-than-normal temperatures during the week in most winter wheat States created concerns of wheat breaking dormancy too early, making them vulnerable to a freeze. All winter wheat areas had little or no precipitation during the week, except the Pacific Northwest. In Texas, field activities centered around irrigating and greenbug spraying. Winter wheat condition was fair to good in Montana, Oregon, and Washington. In California, irrigation and fertilization were common on winter wheat fields. Condition of winter wheat in Illinois and Indiana was mostly good. Georgia wheat fields were rated good, and North Carolina winter wheat condition was fair to good. Virtually all winter wheat States are anxious for precipitation to help replenish short subsoil moisture supplies.

OTHER FIELD CROPS: Favorable conditions allowed an increase in land preparation activities and soil testing in Alabama. High winds caused concern of erosion on plowed fields in Iowa. Thawing soils in Indiana limited fieldwork. Tobacco plantbed preparation continued in the southeast, with over 90 percent (%) complete in Georgia.

FRUIT AND NUTS: Considerable citrus tree defoliation occurred in Florida. There was heavy fruit drop in the north and central districts, with some dropped fruit decaying. Salvage harvest was at a peak. About half of the fresh fruit packing houses were

operating. Grapefruit movement was light. In the Texas Rio Grande Valley, the last of the citrus was brought to juice plants, bringing an end to this season's crop. Roughly half of the total Texas crop was lost to the December freeze. Peach tree pruning increased in the eastern part of the State and some new tree plantings occurred. In Arizona, harvest and packing of lemons, oranges, grapefruit, and tangerines continued. Valencia harvest and packing began in the west. Orange and lemon harvest continued in California. Growers were pruning and tying vines. Dormant sprays were applied to fruit and nut crops.

VEGETABLES: Warm, mostly dry weather continued until the weekend over Florida's major vegetable producing areas. Reduced supplies continued for most crops. There was a fair volume of cabbage, carrots, and strawberries. Only a limited volume of tomatoes, peppers, celery, radishes, squash, and eggplant was available. Planting of spring crop tomatoes was underway in the Ruskin area. In Texas, the production of cabbage and some greens was slowly beginning again following the freeze. Very little celery and lettuce survived. Carrots are still several weeks away from any significant supplies. Damage to the onion crop varied and some replanting occurred. Supplies of spinach were increasing as young fields were slowly recovering some losses in the San Antonio-Winter Garden area. In Arizona Boston, leaf, romaine, and head lettuce were harvested. Some mixed vegetables were harvested. California artichokes were in moderate supply with variable quality. Broccoli supplies were light to moderate, with variable quality along the central coast.

PASTURES AND LIVESTOCK: Above-normal temperatures reduced livestock stress. Pasture growth was slowed by extreme dryness in the southern Plains. Heavy winter feeding continued across Texas; forage supplies remained light on many pastures. In Florida, pastures continued the recovery from the Christmas freeze. Range and pasture conditions improved for the West Coast States and the Southeast.

State Summaries of Weather and Agriculture

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

ALABAMA: Dry most areas; light rainfall north. Temperatures 3 to 6° above normal north, west central; near to slightly below normal extreme east, south.

Favorable conditions allowed increase in land preparation, soil testing, other field activities. Primary activity: Routine care of livestock, poultry, catfish.

ARIZONA: Unseasonably mild middle of period, record highs set at Flagstaff, Phoenix, Tucson, cooling trend 12th. Temperatures 3 to 10° above normal; lows 3°, 39°; highs 59°, 84°. Rainfall none to 0.05 in.

Small grains 98% seeded, 93% 1989, 86% avg.; 86% stands established, 79% 1989, 50% avg.; good. Alfalfa mostly good; green chop, grazing activities continued. Harvest, packing lemons, oranges, grapefruit, tangerines continued west, central; valencia harvest, packing began west; Boston, leaf, romaine, head lettuce harvested west; mixed vegetables harvested west, central. Apple shipping continued east. Pecan harvest nearly completed.

ARKANSAS: Mild dry week. Temperatures well above normal. Scattered light showers southwest first part of week. Extremes 8°, 75°. Rainfall none to 0.41 in.

Soil moisture remains short northwest. Wheat crop good, moisture needed. Hay supply good. Livestock good.

CALIFORNIA: Storm brought rain to northern area early in week. Up to 3.00 in. fell coastal mountain, northern stations. Another system arrived 12th, brought significant amounts over north half, lighter amounts over southern areas. Temperatures near seasonal normal.

Rain northern half early, most of State late, interrupted field activities. Some small grains seeded. Fertilization, irrigation, weed control active small grains. Sheep grazed alfalfa fields. Land preparations spring crops active, conditions allowing. Normal cultural practices continued. Pruning, tying of vines, vineyards, weed control, floor work in orchards. Dormant sprays applied to fruit, nut crops. Early grape bud break, Riverside County. Desert citrus movement progressed. Navels, lemons harvest continued. Artichokes moderate supply, variable quality. Broccoli light to moderate supply, variable quality central coast. Garlic, onion plantings treated weed control, irrigated. Livestock good, statewide. Range, pasture fair to poor, with improvement some areas due to recent rainfall. Snow pack far below normal. Supplemental feeding continued. Livestock movement light.

COLORADO: Winds up to 90 mph in the northern mountains, along the front range with lighter, still substantial winds in most areas of the State on 8th. Northern, central mountains received generally 2.00 to 5.00 in. of new snow with this system, almost none was recorded at the lower elevations. Following days were dry, occasionally windy with above seasonal temperatures statewide. Weak system brought 3.00 to 6.00 in. of new snow to mountain areas, again mostly just traces at lower elevations. Temperatures were mostly 6 to 10° above normal for the period.

FLORIDA: Temperatures most areas 1 to 3° below normal. Warmest highs mid 70s north to upper 70s central; low, mid 80s south. Coldest lows mid to upper 20s north to mid 30s interior areas central Peninsula to upper 40s southeast coast. Rainfall very widely scattered; most weekly totals under 0.10 in. except some areas south around 0.20 in.

Soil moisture Panhandle varied adequate to surplus; northern Peninsula adequate; central, southern Peninsula short to adequate. Sugarcane harvest active. Pastures statewide continued recovery from Christmas freeze. Panhandle, northern Peninsula pastures poor to fair; central Peninsula extreme (cold, frost damage) to fair; southern Peninsula very poor to good. Cattle fair to good. Calving active. Considerable citrus tree defoliation, heavy fruit drop north, central areas. Some dropped fruit decaying. Salvage harvest at peak. One half fresh fruit packing houses running. Grapefruit movement limited. Warm, mostly dry weather continued until weekend over major vegetable producing areas. Reduced supplies continue most crops except fair volume cabbage, carrots, strawberries. Limited volume tomatoes, peppers, celery, radishes, squash, eggplant available. Planting spring crop tomatoes underway Ruskin.

GEORGIA: Temperatures slightly above normal. Coldest 12th, 13th nights, freezing nearly statewide. Lowest teens in mountains to mostly upper 20s to low 30s extreme south. Warmest readings mid, upper 60s north to low, mid 70s south. Week dry only light rain northern areas State.

Soil moisture adequate to surplus. Limited fieldwork except southeast where significant progress. Small grains good, some topdressing. Cotton, soybean, pecan harvest complete except few scattered fields, groves. Tobacco bed preparation over 90% complete, good. Pastures poor to fair. Cattle, hogs good.

HAWAII: High pressure system, weakening cold front brought thundershowers, gusty winds. Rains light to moderate; becoming thundershowers by weekend. Winds variable 5 to 30 mph. Temperatures low 60s to mid 80s. Rainfall none to 3.80 in.

Days suitable for farm work 7.0. Overcast skies, gusty winds hampered crop progress. Papaya production declined seasonally. Pineapple harvesting continuous. Irrigation restrictions Waimea, Island of Hawaii lifted with advent of rain.

IDAHO: Temperatures 10 to 20° above normal statewide. Precipitation near to below normal southwest, east; two to three tenths of an inch above normal south central; up to 1.00 in. above normal north.

Farm activity limited to livestock care. Marketing, shipping farm products continued. Other activities: Shopwork, attending meetings, repairing machinery, planning for upcoming season. Early calving, lambing underway most areas of State. Livestock, feeding, calving, lambing conditions good to excellent. Hay, roughage supplies adequate for all areas except far north, far southeast.

ILLINOIS: Temperatures 6 to 10° above normal. Limited precipitation north, generally none elsewhere.

Winter wheat mostly good. Livestock good.

INDIANA: Temperatures 4 to 13° above normal. Lows mid 20s to low 30s, highs upper 30s to mid 40s. Precipitation up to 0.50 in. Most rain in middle of period.

Thawing limited fieldwork. Other activities: Hauling grain, moving hay, processing tobacco, spreading manure, machinery repair, tax preparation, attending meetings, purchasing supplies, care of livestock. Hay supplies adequate. Warmer temperatures helped livestock. Wheat survived freezing temperatures in mostly good condition.

IOWA: Temperatures 13 to 20° above normal. Extremes 4°; 65°. Precipitation on 8th, 9th, none to 0.45 in.; average 0.04 in. Wind gusts over 50 mph causing considerable blowing dust north two thirds on 11th.

Concerns of wind erosion on plowed fields. Livestock mostly good. High hopes for good spring rains to replenish subsoil moisture levels expressed.

KANSAS: Temperatures continue above normal with 11 to 16° above. No precipitation received.

Lack snow cover leaves wheat vulnerable possible freeze damage. Concern warm weather cause wheat to break dormancy. Warmer temperatures reduced supplemental feeding.

KENTUCKY: Dry, mild weather. Temperatures 4 to 8° above seasonal normals, highs mid 40s, 50s, lows mostly 30s. Temperatures turned cooler, then warmed 14th. Scattered showers early, most amounts less than 0.10 in., southeast, amounts averaged 0.20 in.

Soil moisture adequate. Field activity minimal. Burley market price about same as pre Christmas, season average price to date \$167.31. Cattle gleaning fields. Many new calves on ground.

LOUISIANA: Temperatures 2 to 3° above normal north, central to normal in south. Extremes 20°; 76°. Rainfall 0.06 to 0.63 in.

Main activities: Crawfishing; livestock care; routine chores.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 0.67 in. Temperature 38°, normal 33°. Extremes 12°; 54°.

DELAWARE: Precipitation 0.86 in. Temperature 38°, normal 35°. Extremes 21°; 54°.

MICHIGAN: Temperatures 8 to 11° above normal. Extremes 1°; 47°. Precipitation 0.19 to 0.65 in. across State. Most areas received rain, snow, sleet. Warmer temperatures end of week reduced or eliminated snow cover in southern areas.

Major activities: Caring for livestock, marketing grain, hay, cutting wood, pruning orchards, attending farm meetings. Livestock good. Feed, roughage supplies plentiful. Lambing has started some areas.

MINNESOTA: Temperatures 14 to 21° above normal for State. Extremes -14°; 56°. Precipitation trace to 0.16 in. for State. Greatest weekly total 0.35 in. at Hallock.

Snowfall 1.00 to 3.00 in. for the north central, northeast, a trace or less elsewhere.

MISSISSIPPI: Dry week. Soil moisture adequate to surplus. Wheat fair; possible damage from recent freezes in northern areas. Pastures fair. Livestock good. Hay supply adequate.

MISSOURI: Temperatures 8° above normal south to 12° above normal north. Virtually no precipitation.

Continued dry weather causing concern for new crop season. Livestock water supplies limited in many areas. Some fertilizer being applied. Favorable weather for barnyard work.

MONTANA: Temperatures much above normal statewide, 15 to 24° warmer than usual. West had up to 2.00 in. moisture. East remained dry.

Winter wheat remains mostly fair to good. Snowcover protection fair. Mild weather reducing stress on livestock. Feed supplies adequate most areas.

NEBRASKA: Very mild, dry weather continued throughout the week. Temperatures 17 to 20° above normal. No measurable precipitation occurred.

NEVADA: Record high temperatures various areas. Snow showers early north. Rest of period had record high temperatures. Widespread precipitation all areas end of period. Temperatures well above normal most sections.

Main farm, ranch activities limited to caring for, feeding livestock. Snow slowed movement potatoes to market.

NEW ENGLAND: Precipitation (rainfall and water equivalent of snow) 0.25 to 0.50 in. Maine, Connecticut, less than 0.25 in. remainder. Temperatures teens near Canadian border to mid 30s south coast. Temperatures near normal.

Major farm activities: Tending livestock, machinery repair, moving crops from storage.

NEW JERSEY: Temperatures above normal; 32° north, 35° south, coastal. Extremes 18°; 55°. Precipitation near normal; 0.77 in. north, 1.04 in. south, 0.74 in. coastal. Heaviest 24 hour total 1.17 in. on 8th, 9th. Heaviest 24 hour snowfall 6.00 in. on 8th, 9th. Depth of snow on ground 3.00 to 5.00 in. north, none central, south.

Farmers performed machinery maintenance, repair; livestock tending; normal winter chores.

NEW MEXICO: Daytime temperatures well above normal. Precipitation was limited to the northwest, north central areas of State.

NEW YORK: Temperatures 5 to 15° above normal. Extremes -10°; 48°. Precipitation below normal most places, except in areas downwind of Lake Erie, Ontario.

Grading, packing fruit, vegetables. Caring for livestock.

NORTH CAROLINA: Temperatures 1° above normal across State. Precipitation 0.51 to 2.06 in.

Days suitable for fieldwork 2.5. Soil moisture 1% short, 50% adequate, 49% surplus. Pasture 2% very poor, 24% poor, 44% fair, 29% good, 1% excellent. Livestock feed from pasture 36%. Crop condition: Wheat, 3% poor, 46% fair, 51% good; oats 4% poor, 51% fair, 45% good; barley 1% poor, 46% fair, 53% good; rye 3% poor, 44% fair, 52% good, 1% excellent; hay, roughage supplies 1% short, 87% adequate, 12% surplus. Feed grain supplies 4% short, 94% adequate, 2% surplus. Activities: Cutting wood, tending livestock, preparing tobacco beds, general farm maintenance.

NORTH DAKOTA: Mild, dry week. Temperatures 20° above normal southwest to 24° above normal northwest, central. Extremes -2° north central, 12th; 60° south central, 10th. Precipitation none to 0.02 in.

Soil moisture below normal. Snowcover inadequate to protect winter seedings, alfalfa. Extreme winds caused soil erosion to open fields 10th, 11th. Livestock mostly good, receiving supplemental forages. Hay, roughage supplies mostly adequate. Main activities: Attending winter meetings, end of year tax accounting.

OHIO: Highs mid 30s to mid 40s. Lows mid to upper 20s. Temperatures overall 5 to 8° above normal. Rainfall 0.10 to 0.50 in. Few inches of snow only in northeast snowbelt.

Very little fieldwork accomplished. Most activity involved caring for animals. No snowcover on wheat. Soil temperatures low to mid 30s.

OKLAHOMA: Temperatures 10° above normal southeast to 15° above normal Panhandle. No precipitation.

Warm weather increased need for moisture. Pasture growth slowed by extreme dryness. Cattle good; prices mixed from preceding week.

OREGON: Series of storms brought high winds, very heavy rainfall to west during the period. Major flooding occurred Tillamook, Clatsop Counties. Precipitation 6th to 10th 11.00 in. this area; a total of 17.00 in. some spots of coast range. Rainfall 24 hour 6.50 in. occurred Seaside ending at 3:00 pm. on 9th; 4.85 in. Astoria ending at 4:00 pm. The Nehalem river crested at highest level on record. Although major flooding did not occur in south coastal streams, the highest recorded 5 day rainfall 19.50 in. fell near Agnes. Rainfall for the week in west 7.00 to 7.50 in. along coast, north Cascades; 4.50 in. Willamette Valley, high plateau; 2.50 in. southwest valleys, average 0.50 to 1.50 in. fell east of Cascades. Temperatures very mild; average readings 8° above normal west; 12° above normal east.

Soil moisture adequate to surplus west, short to adequate east. Winter wheat mostly fair to good. Some cold weather would control Russian wheat aphids in Columbia Basin counties. Livestock good. Early lambing went very well under beautiful weather west. Range, pasture vary from fair to excellent. Excellent pasture growth south coast due to soil temperatures well above normal in November, December. Mild temperatures helped cattle maintain good condition with minimal feed east.

PENNSYLVANIA: Warm, dry week across State. Temperatures 31°, 5° above normal. Extremes 4°; 56°. Precipitation 0.33 in., 0.34 in. below normal.

Activities: Spreading manure, caring for livestock; maintaining machinery; fixing fences; cutting firewood; attending State Farm Show.

PUERTO RICO: Rainfall 0.41 in. was 1.05 in. below normal. Highest rainfall was 0.94 in. Maunabo 2SE, 0.93 in. Pico Del Este Luquillo, 0.89 in. San Juan WSFO. Highest 24 hour total 0.74 in. Maunabo 2SE. Temperature 75 to 77° on coasts, 68 to 72° interior. Mean station 61° at Pico Del Este Luquillo to 81° at San Juan City. Extremes 54°; 90°.

SOUTH CAROLINA: Rainfall 1.00 in. statewide. Temperatures 3 to 5° higher than normal.

SOUTH DAKOTA: Temperatures 12 to 23° above normal. Extremes 4°; 69°. Precipitation below normal. Less than 0.10 in. parts of southeast, north central, west. Maximum melted precipitation 0.09 in. Precipitation for the year below normal statewide. Range 0.09 in. to 0.59 in. below normal. Snowcover: 1.00 to 3.00 in. west, 8.00 in. Black Hills.

TENNESSEE: Low pressure early week brought some rain. Midwest State was under circulation of intense low pressure in Ohio Valley. High pressure built during weekend. Temperatures slightly above normal over the Plateau to much above normal over the west. Below normal rainfall near 0.75 in. over the Plateau to 0.25 in. over the west.

Mild weather helped livestock condition improve. Maintenance of equipment, fences continued. Electricity, pipe repairs continued during thaw after frigid December. Farmers gathering records for tax preparation. Caring for livestock, routine chores, cutting wood main activities. Spring planning underway.

TEXAS: Weak high pressure surface, upper levels brought mostly fair skies, warming conditions. Temperatures above normal. Late week back door cold front moved through State, dropping temperatures near normal, few showers south. Precipitation below normal. Temperatures above normal.

Crops: Wheat fields Plains, Cross Timbers suffer through another week of dry weather. Producers concerned warmer temperatures force fields out of dormancy, vulnerable to another freeze. Irrigation very active. Grazing remained very light. Fields Blacklands, central improvement, some greening noticed. Greenbug spraying continued. Many oat fields not survive cold weather; ones that did very weak. Good rain could still help. Other crops: Pecans 100%, 99% 1988, 97% avg.

Commercial Vegetables: Rio Grande Valley, last citrus brought to juice plant, bringing end to this seasons crop. Roughly half total citrus crop lost to December freeze. Production cabbage, some greens slowly beginning again. Very little celery, lettuce survived freeze. Carrots still several weeks from any significant supplies. Damage onion crop varied. Some replanting occurred; production down many fields. San Antonio Winter Garden, supplies spinach slowly increasing. Younger fields slowly recovering, some losses. Onion tops coming back up. With the exception of few groves, all pecans harvested. West crop good, fair prices. Peach tree pruning increasing east. Some planting new trees also occurred.

Range and Livestock: Heavy winter feeding continued across State, forage supplies remained light to none many pastures, ranges. Warmer weather promote better gains for livestock. Stockers arrived large numbers during first full week since holidays. Tank levels critically low many areas. Slight greening of grasses where some rain fell.

UTAH: Precipitation light to heavy northern half, mostly zero south. Maximum temperatures 10° above normal except 4° above southeast. Minimums 6° above normal except Dixie, southeast 2° below.

Snowcover light, negligible most cropping areas. Concern growing over poor water supplies. Repair, maintenance work continued. Feed supplies short some areas. Calving underway. Ranges mostly fair, poor.

VIRGINIA: Temperatures 5° above normal. Extremes 17°; 62°. Precipitation near normal, mostly rain. Extremes 1.40 to 2.30 in.

Days suitable for fieldwork 0.7. Topsoil 42% adequate, 58% surplus. Winter grains, grazing crops 2% very poor, 18% poor, 45% fair, 35% good. Forage from pastures, dairy cattle 3%, beef cattle 18%; sheep 18%. Calving, lambing, marketing tobacco.

WASHINGTON: Temperatures 9 to 16° above normal, east; 5 to 8° above normal, west. Precipitation 0.77 to 2.05 in., east; 1.11 to 7.47 in., west.

Days suitable for fieldwork 1.1. Soil moisture 32% short, 66% adequate, 2% surplus. Range, pasture 85% short, 15% adequate. Hay, other roughage 5% very short, 30% short, 65% adequate. Heavy rainfall in western areas caused extensive flooding with the Chehalis River causing the most property damage. Moisture in eastern areas was welcomed although some areas continue to be dry. Mild temperatures continued, caused thawing, some greening of grasses. Livestock have been doing well with mild winter. Activity in the west included pruning fruit trees, caneberreries; feeding livestock; managing flood water. East, livestock feeding continued with some calving activity beginning. Winter wheat 3% poor, 27% fair, 70% good. Fruit tree pruning continued.

WEST VIRGINIA: Temperatures 33°, 1 to 5° above normal. Extremes -4°; 58°. Precipitation 0.53 in. below normal. Heavy snows central, northern on 8th north, mountains on 12th.

Days suitable for fieldwork 1.4. Soil moisture 6% short, 65% adequate, 20% surplus. Livestock good to fair. Feed supplies adequate. Wheat good, barley fair. Farm activities: Feeding livestock, calving, lambing, general farm maintenance, machinery repair.

WISCONSIN: Temperature 28°. Extremes -14°; 50°. Precipitation trace to 0.20 in. Snow 4.00 to 6.00 in. near Lake Superior 11th.

Record frost 26.2 in., 1962-1989 average 10.8. Snow depth 3.50 in., 8.60 in. average. Subsoil dry.

WYOMING: Temperatures above normal. Precipitation below normal.

Winter wheat fair to good. Snow pack below normal most areas. Livestock mostly good. Warm temperatures reducing stress, feed requirements. Supplemental feeding continues most areas. Sheep producers preparing for early lambing, shearing.

International Weather and Crop Summary

HIGHLIGHTS

January 7-13, 1990

WESTERN USSR ... Unseasonable warm weather returns to dormant winter grains. At week's end, however, the weather turned sharply colder in northeastern crop areas.

NORTHWESTERN AFRICA ... Showers continue over winter grain areas in Algeria and Tunisia.

EUROPE ... Beneficial drier weather develops in sections of the Iberian Peninsula. Unseasonable cold covers sections of the Balkans.

SOUTH ASIA ... Drier, warmer weather returns to all but northernmost wheat areas.

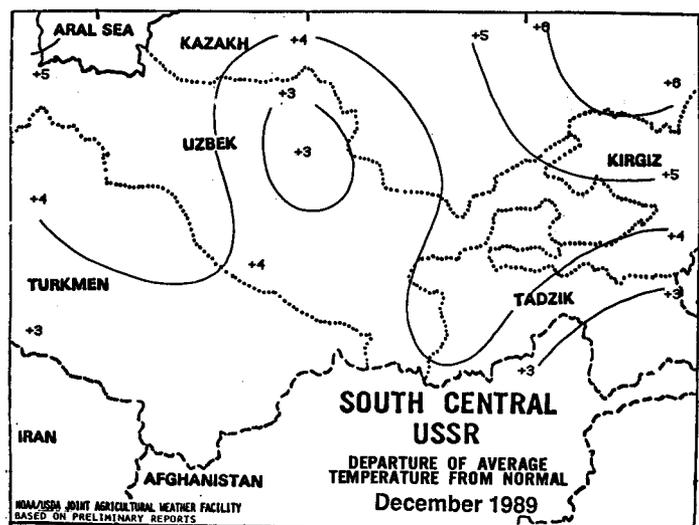
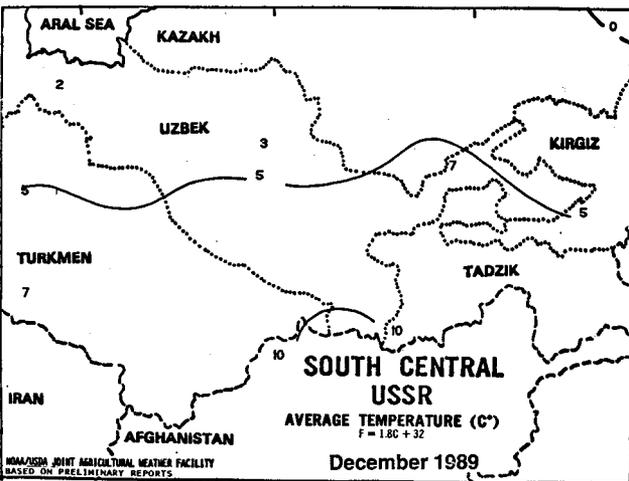
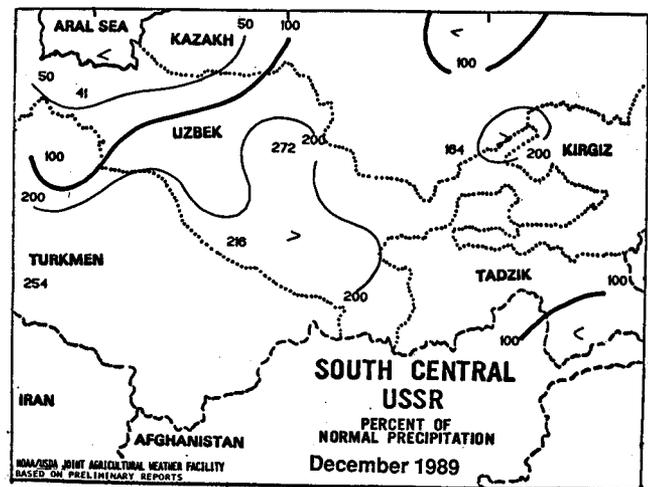
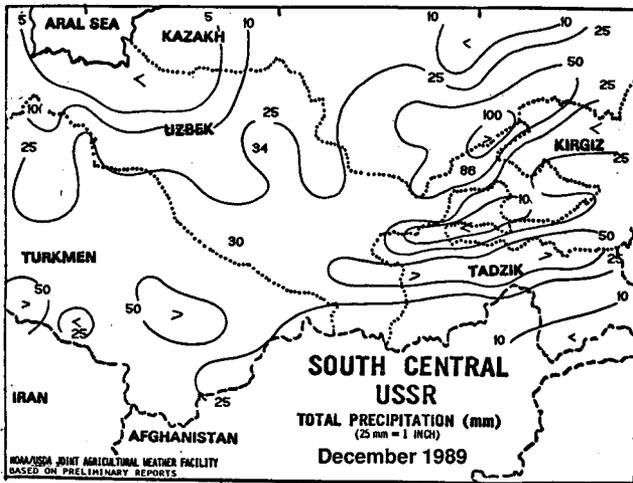
EASTERN ASIA ... Beneficial rain continues in southern China.

SOUTHEAST ASIA ... Seasonable rains continue, but local flooding occurs in western Malaysia and the Philippines.

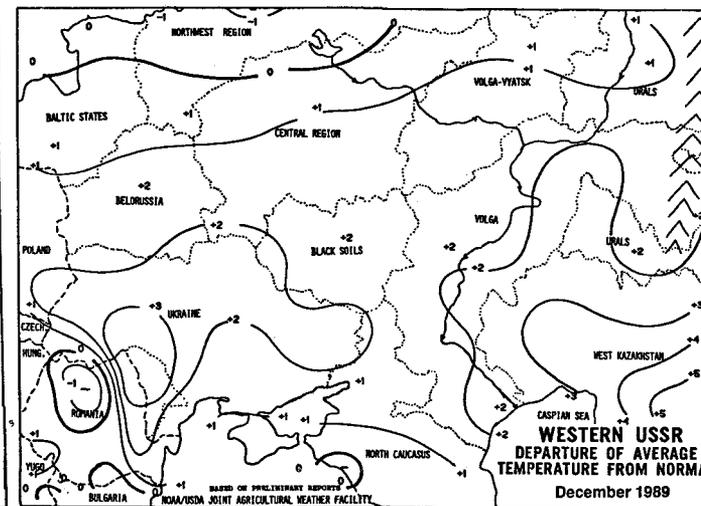
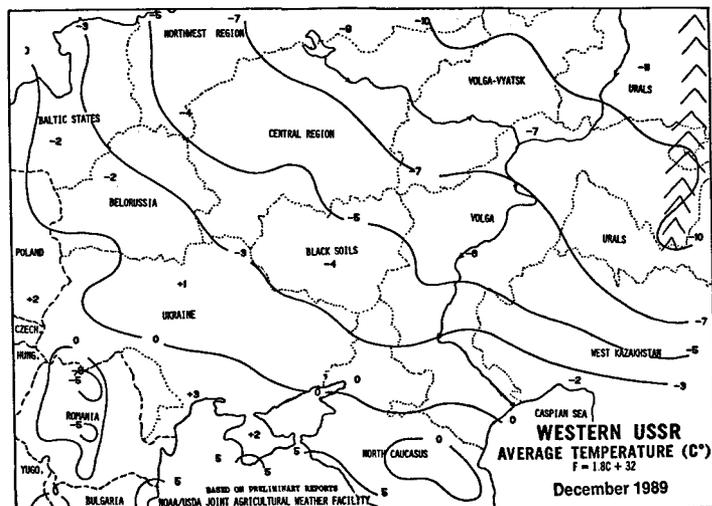
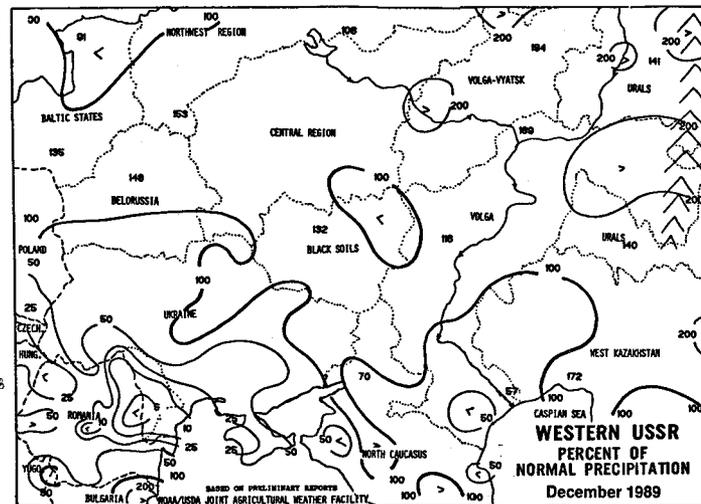
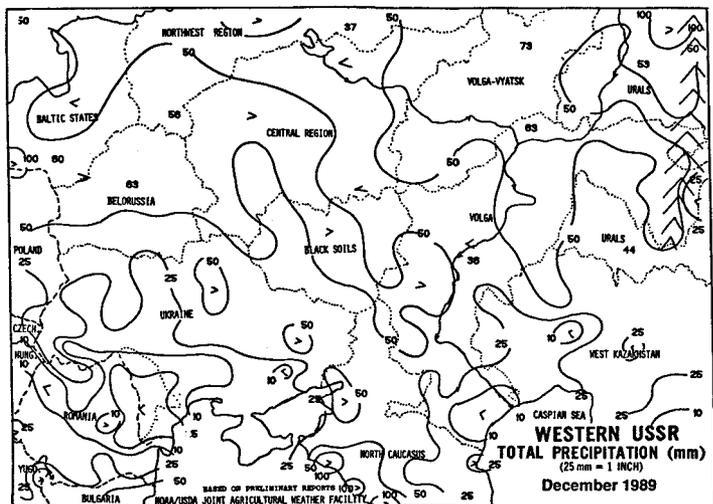
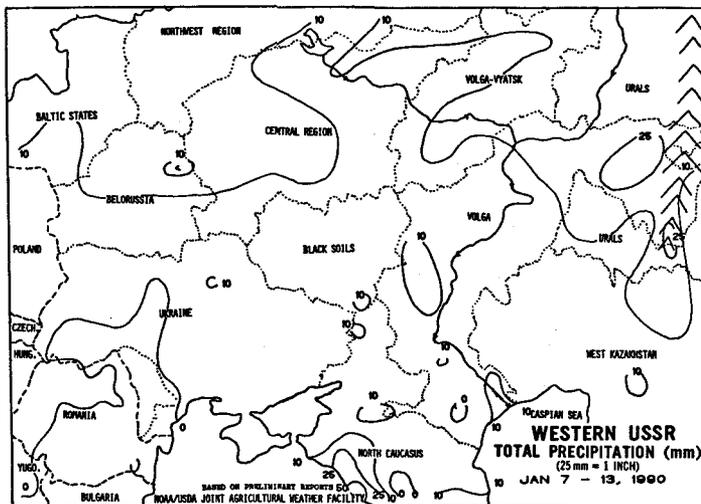
SOUTH AFRICA ... Much needed rain brings relief to corn advancing through reproduction.

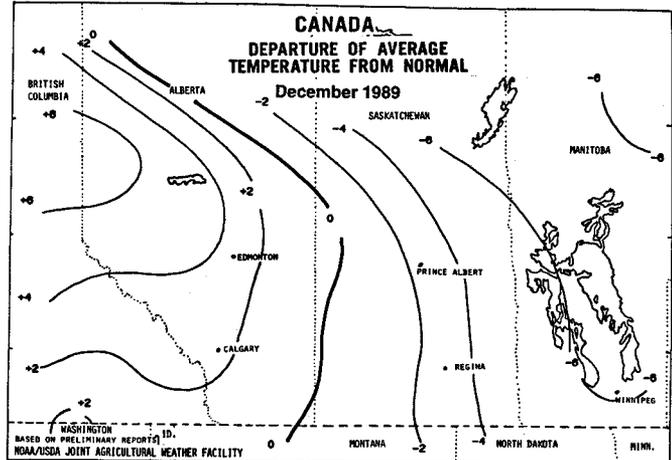
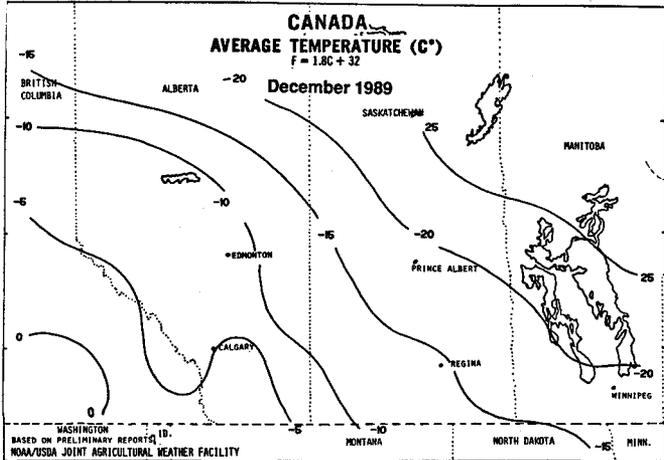
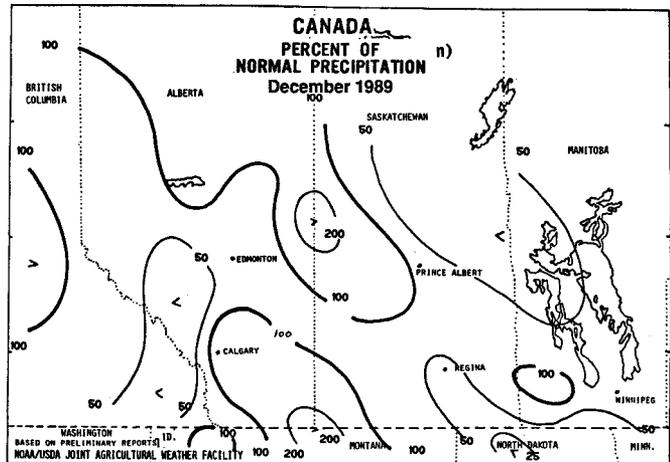
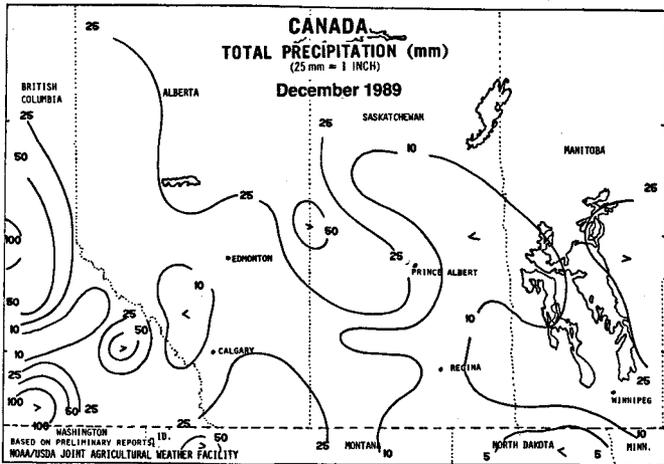
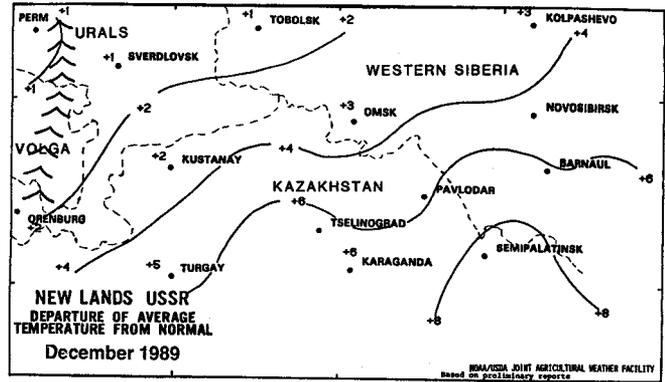
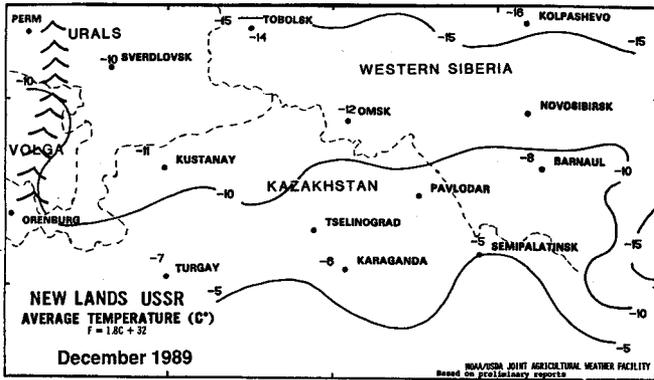
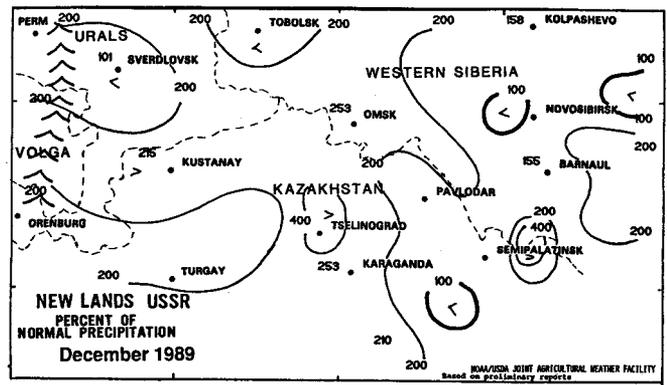
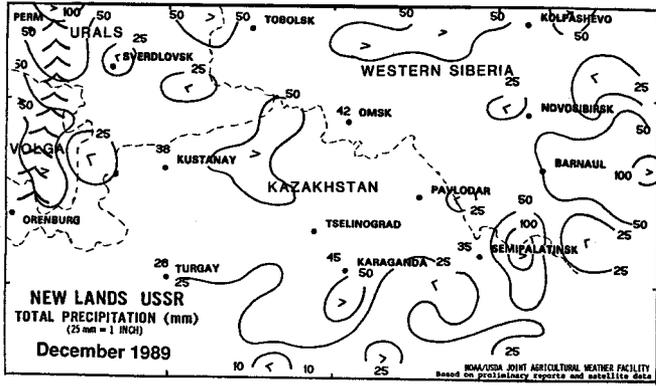
SOUTH AMERICA ... In south-central Brazil, more heavy rain falls in the north, while dryness persists in the south. In Argentina, variable rain helps summer crops.

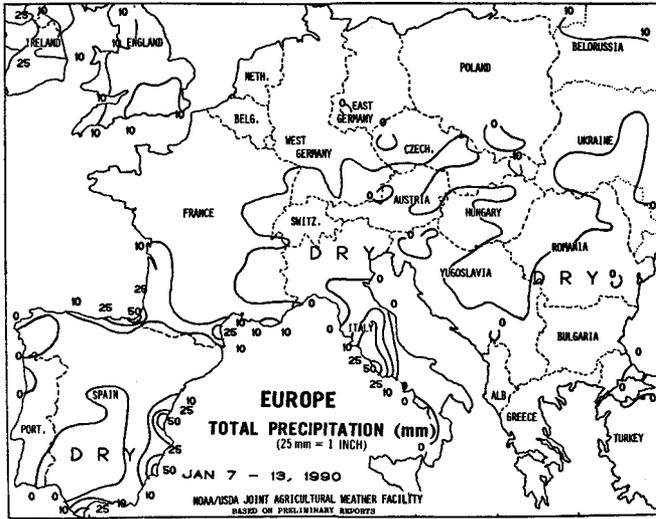
AUSTRALIA ... Much needed rain relieves moisture stress in eastern summer crop areas.



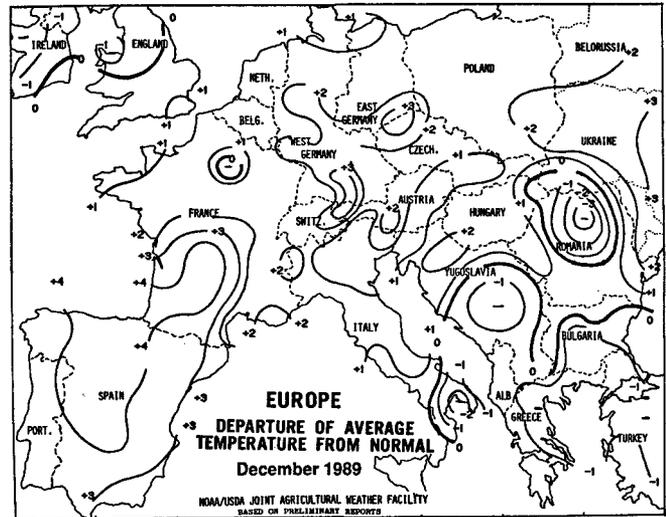
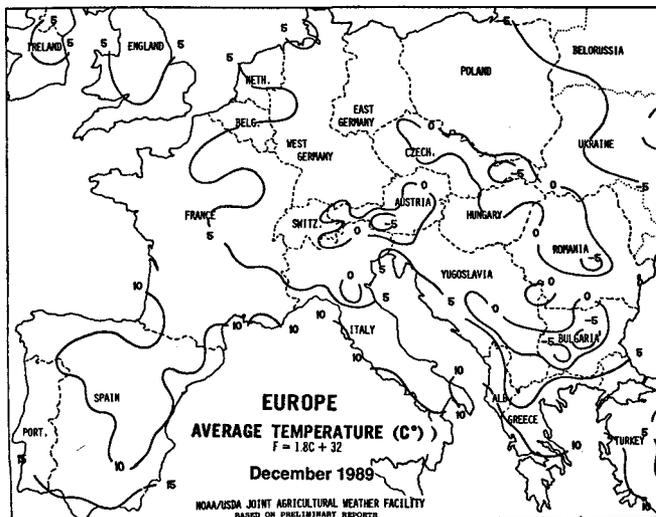
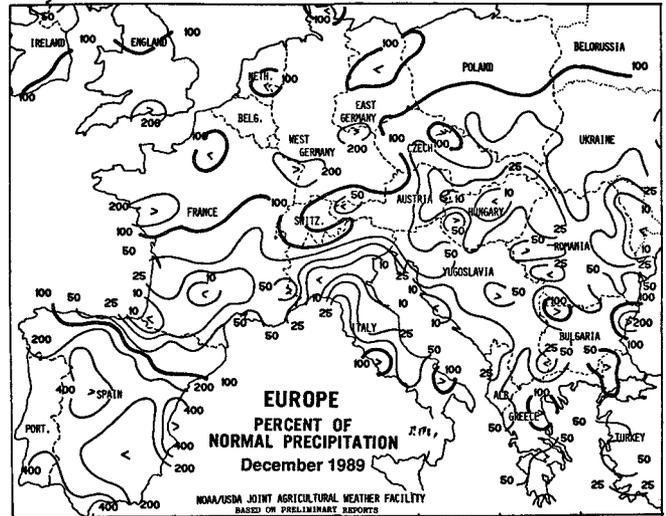
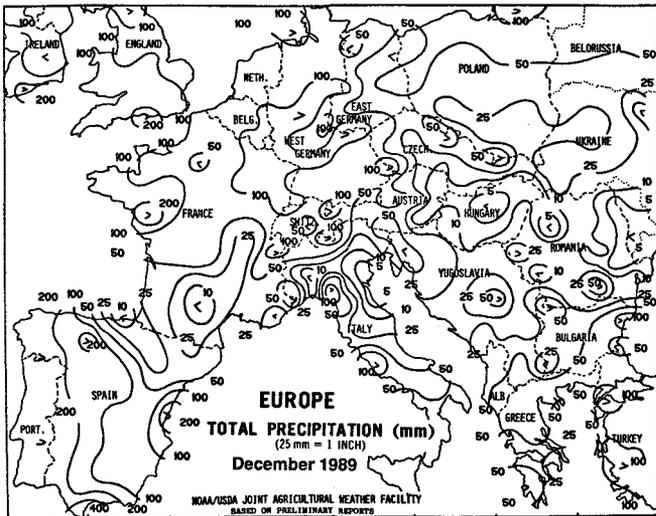
WESTERN USSR ... Unseasonable warm weather returned to the region, lasting most of the week. Weekly average temperatures ranged from 4 to 7 degrees Celsius (C) above normal in the west and 1 to 3 degrees C above normal in the east. Precipitation was generally light (1-10mm, with local amounts in excess of 10mm), falling as snow in the Central and Volga Vyatsk Regions and mixed rain and snow over remaining crop areas. On January 12, bitter cold air from Siberia spread westward into the Central and Volga Vyatsk Regions, pushing southward into the Volga and Black Soils Region on January 13. The bitter cold caused temperatures to drop sharply, with minimum temperatures ranging from -20 to -31 degrees C. Snow cover was shallow in the Black Soils Region. In December, near- to above-normal precipitation covered most winter grain areas, increasing moisture for next spring's growth. Below-normal precipitation in the southwestern Ukraine continued a drying trend which began in November. Below-normal temperatures early in the month were followed by a steady warming trend which began around December 14. The unusually mild weather melted much of the snow cover in the west and south and produced an ice crust in the Black Soils Region.



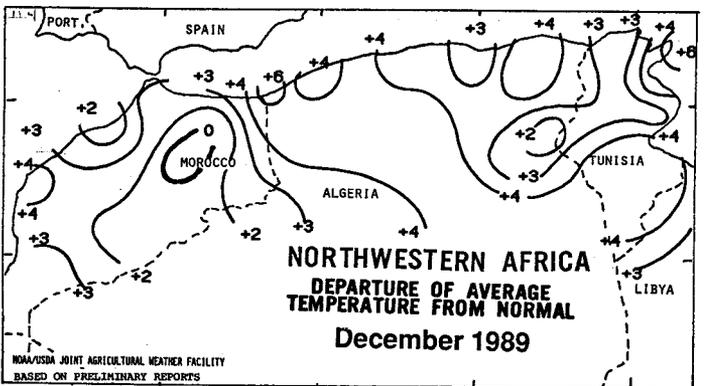
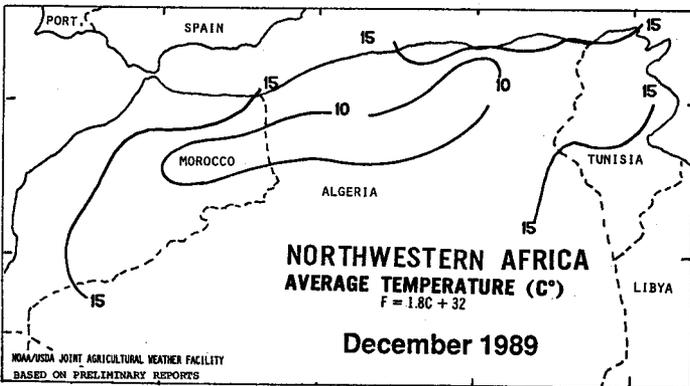
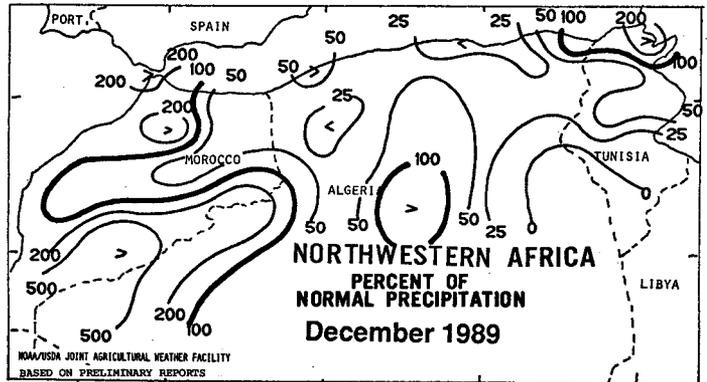
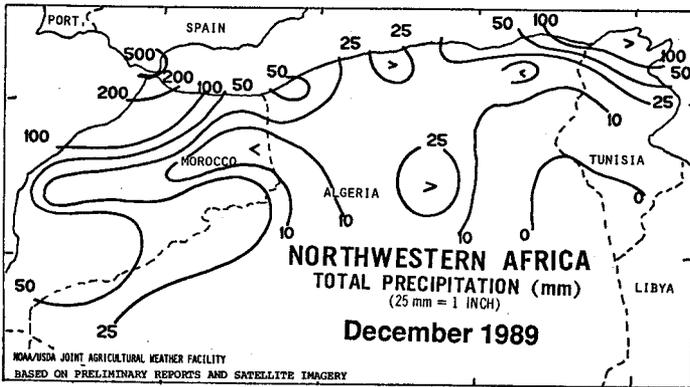
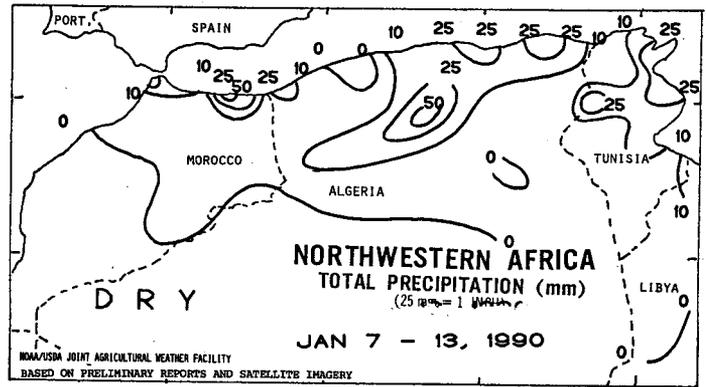


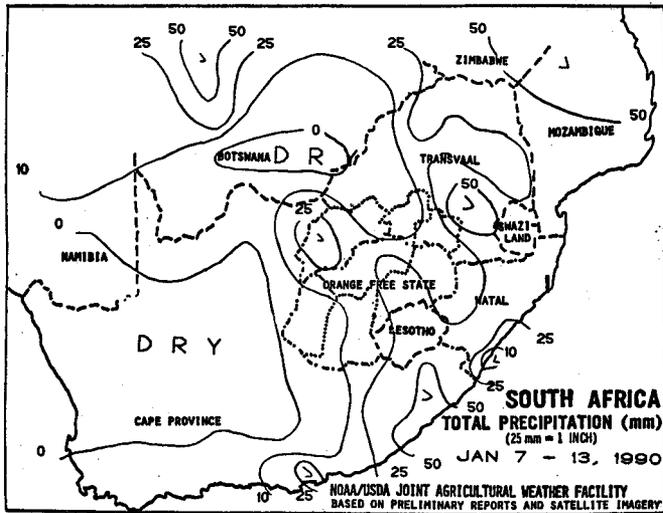


EUROPE ... Beneficial drier weather developed over much of Spain and Portugal, although scattered showers (5-60mm, with isolated amounts in excess of 60mm) persisted in some northern and coastal eastern areas of Spain. Up to 8 consecutive weeks of above-normal rainfall (December rainfall reached 500 percent of normal in some southern and western areas) in the Peninsula caused flooding and extensive delays in winter grain planting. In contrast, scattered light to moderate rain (5-20mm, with isolated rainfall in excess of 20mm) offered only limited relief to sections of southern France and northern Italy, where much below-normal precipitation during December continued a drier-than-normal trend since early fall that has caused mountain snowpack and irrigation reservoir levels to remain abnormally low. Elsewhere, scattered rain (5-20mm) fell over northwestern Europe, while southeastern crop areas remained mostly dry. Unseasonably low temperatures (minimum temperatures -15 to -25 degrees C and mean weekly temperatures from 4-9 degrees C below normal) in sections of Romania, eastern Yugoslavia, and northern Bulgaria stressed dormant winter grains due to limited protective snow cover.

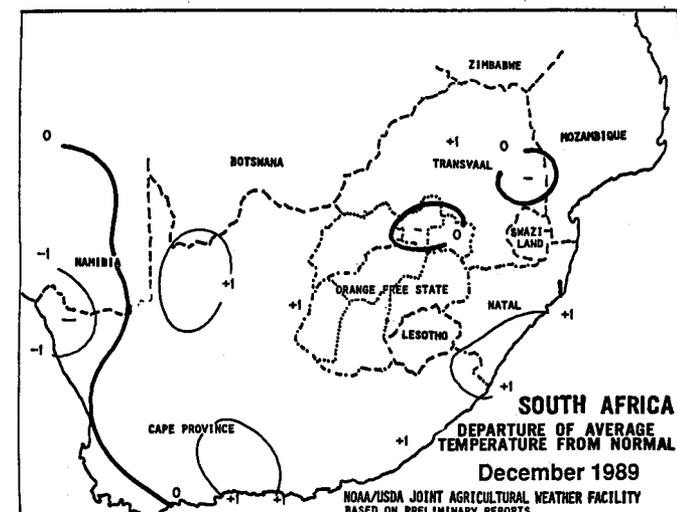
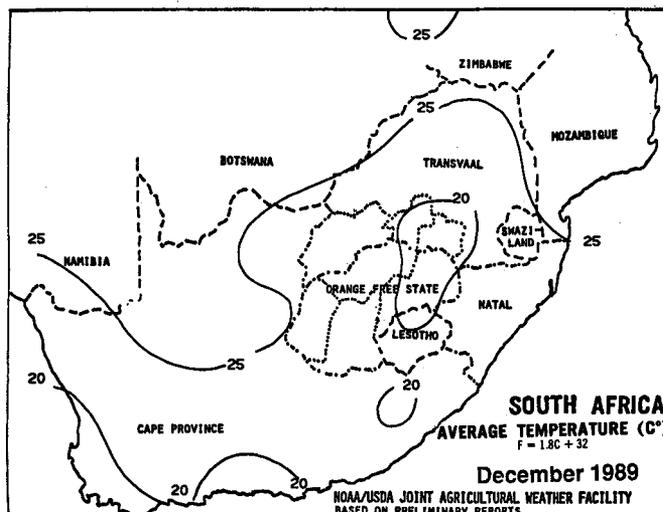
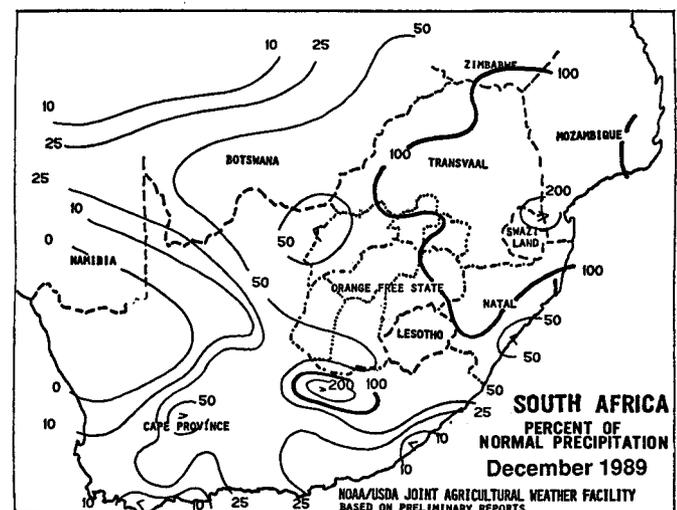
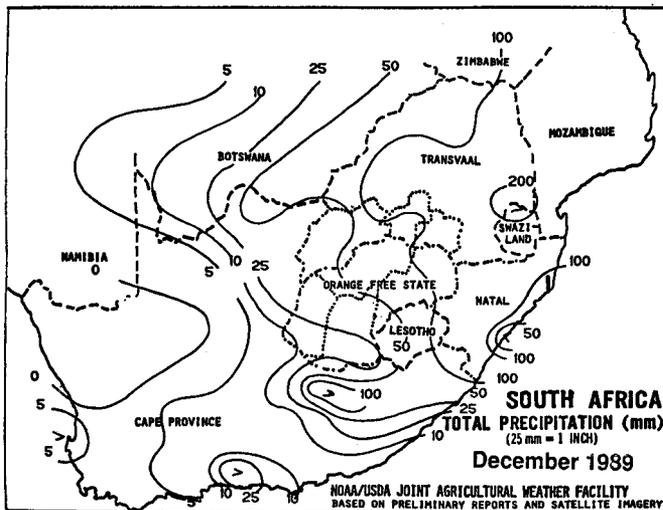


NORTHWESTERN AFRICA ... Dry weather covered Moroccan winter grains, reversing December's above-normal precipitation pattern. Moisture reserves were adequate to meet the moisture demands of winter grains in the vegetative stage. The second consecutive week of widespread precipitation (10-25mm) covered winter grain areas in Algeria and Tunisia although rainfall amounts were less than those of last week. The recent precipitation in Algeria and Tunisia has likely prompted widespread planting, delayed by well-below-normal precipitation in December.

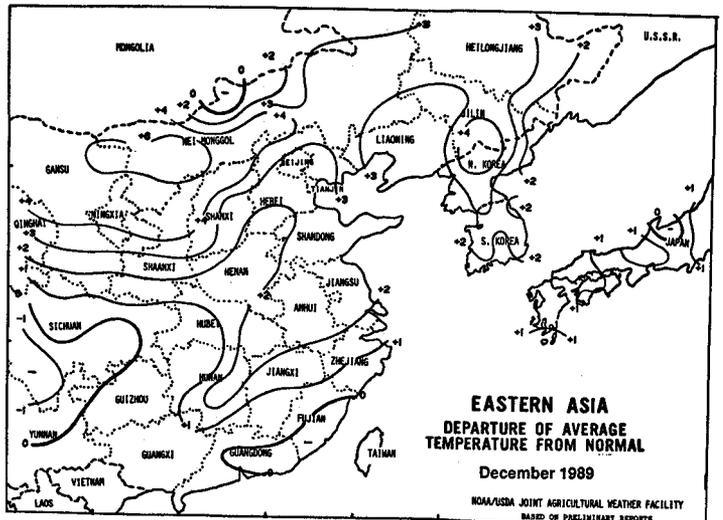
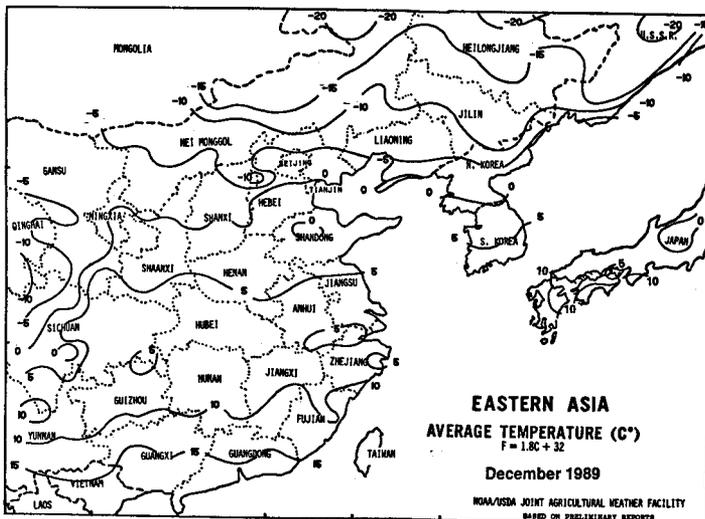
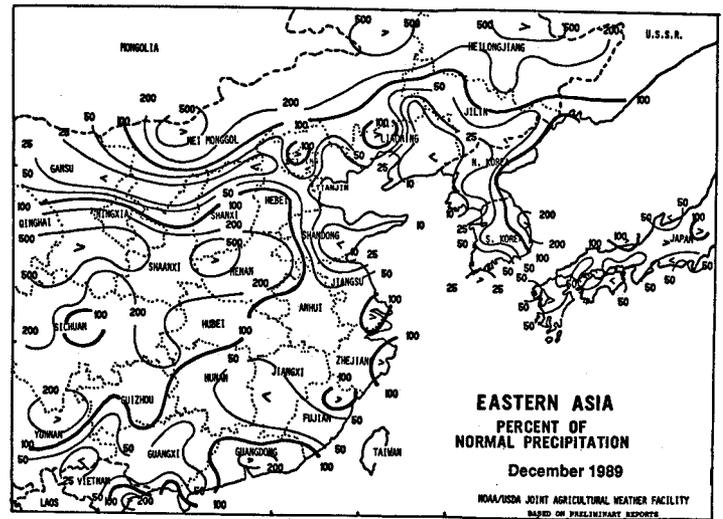
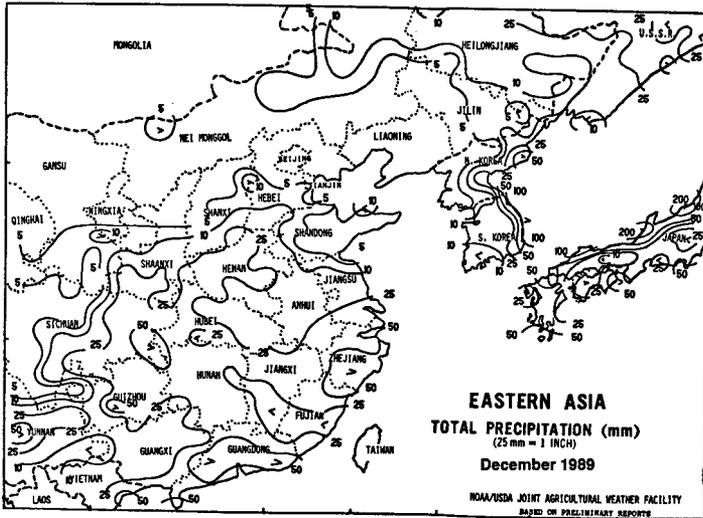
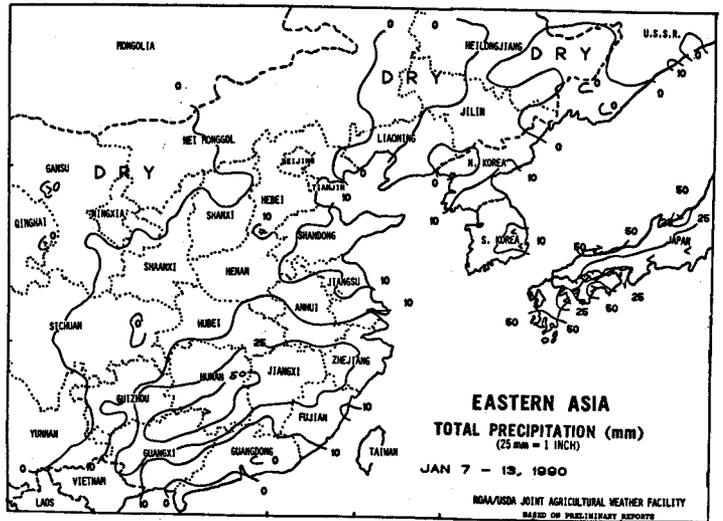


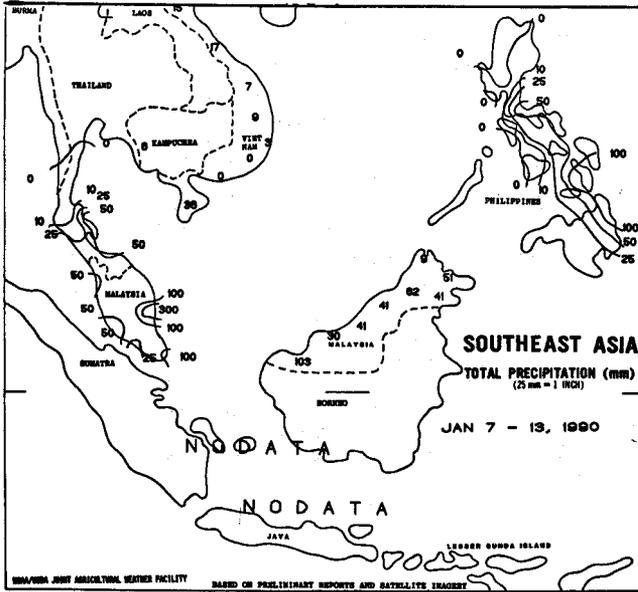


SOUTH AFRICA ... Light to moderate showers (10-39mm) and seasonable temperatures covered chronically dry areas of the western Maize Triangle, bringing some relief to corn advancing through reproduction. Rainfall totaled approximately 25mm for the second week in primary crop regions of the southwestern Transvaal. Elsewhere, rainfall ranged from 15 to 50mm over all but the north-central Triangle, maintaining generally favorable growing conditions. Below-normal rainfall (7-14mm), however, continued over Natal's southern sugarcane areas. In December, rainfall was below normal over much of the western Maize Triangle, providing insufficient moisture for vegetative crops. Near- to above-normal rainfall elsewhere maintained favorable conditions for most summer crops, although a drying trend developed late in the month over Natal's sugarcane regions. December temperatures averaged near normal, but by month's end, seasonal warming brought highs in the mid 30's C to local areas.

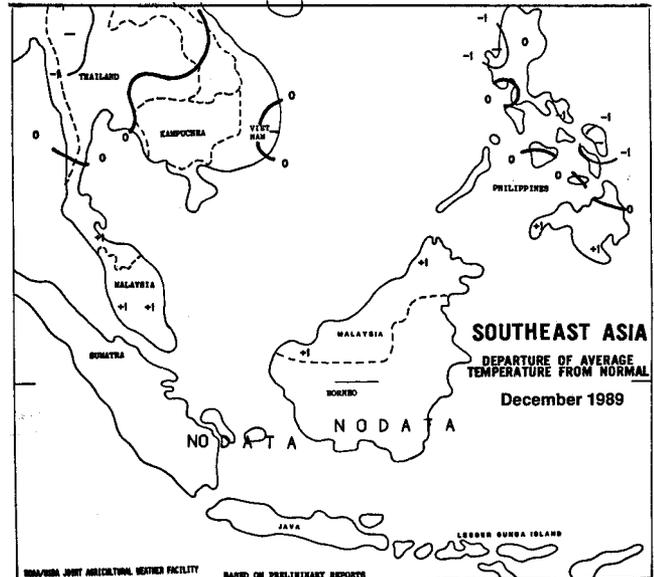
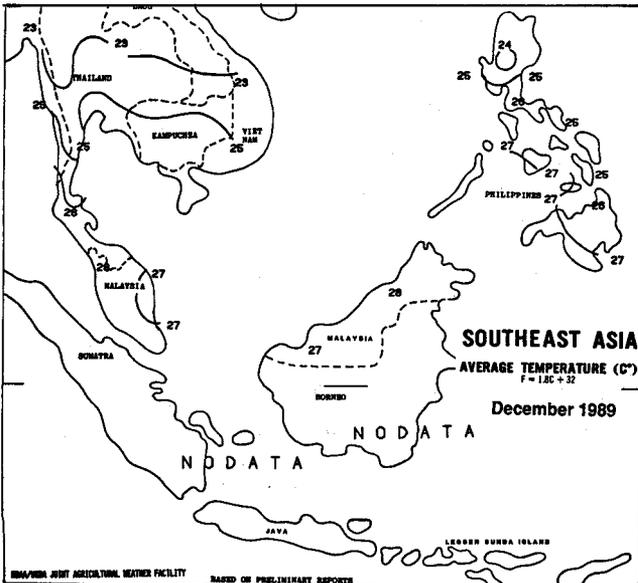
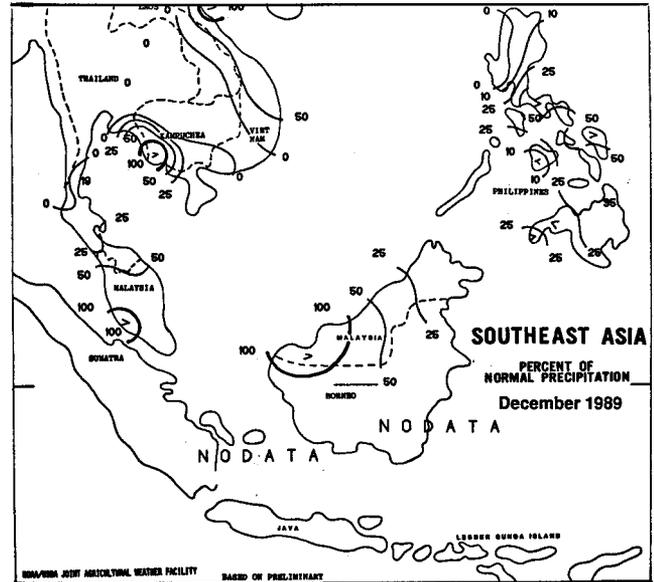
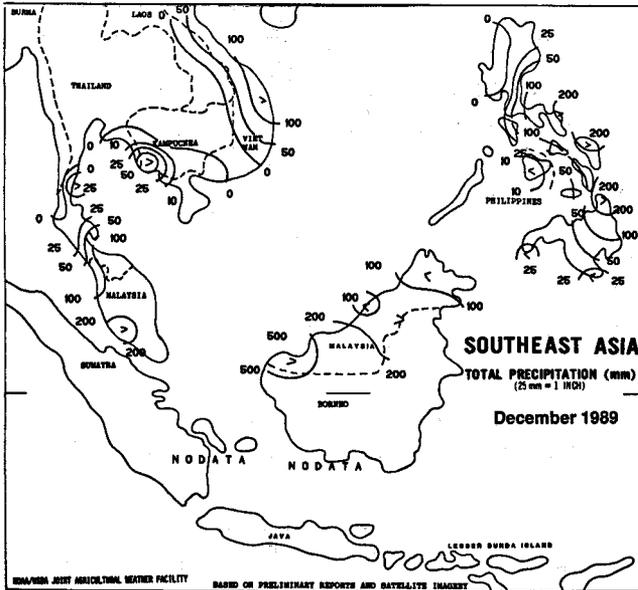


EASTERN ASIA ... Moderate to heavy rain (10-50mm, with isolated amounts in excess of 50mm) continued in interior sections of southern China and Taiwan, further increasing soil moisture and irrigation reservoir levels following below-normal rainfall in December and much of the fall. Moderate to heavy rain and snow (10-40mm, with scattered amounts greater than 40mm) also fell across sections of the Korean Peninsula and Japan. Light to moderate rain and snow (5-20mm) fell over much of the North China Plain, while Manchuria remained seasonably dry. Above-normal mean temperatures persisted over nearly all winter grain areas, continuing a warmer-than-normal pattern for December and much of the winter thus far. Precipitation during December was above normal in the north and west, and below normal in interior southern and eastern China, and western portions of the Korean Peninsula.

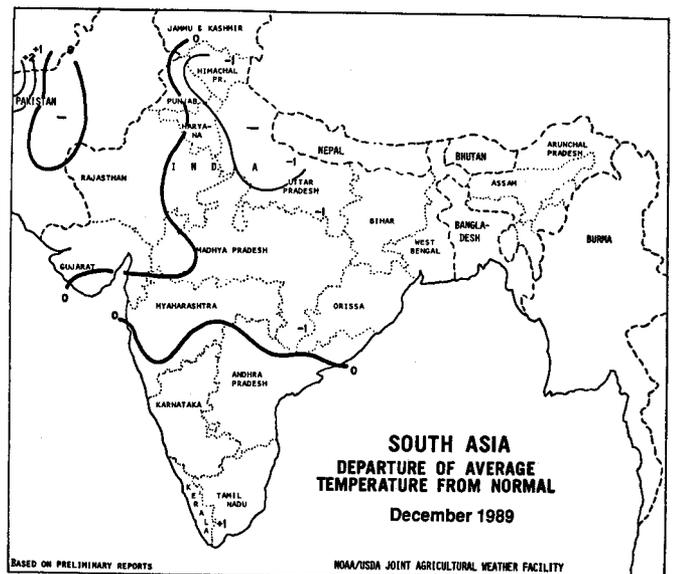
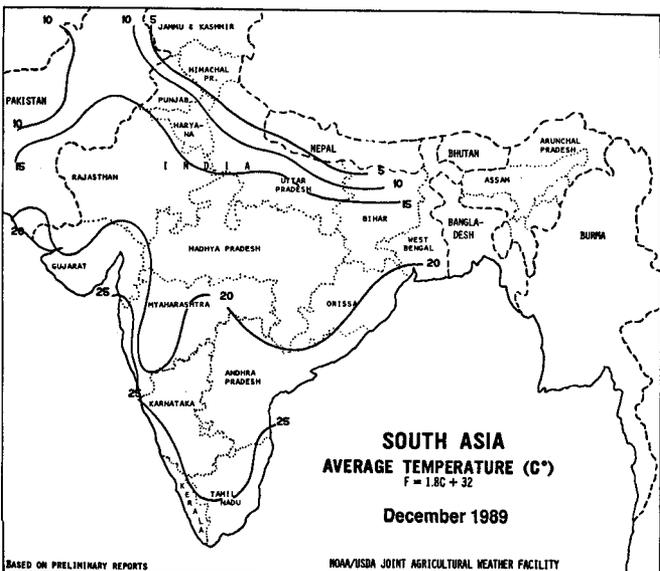
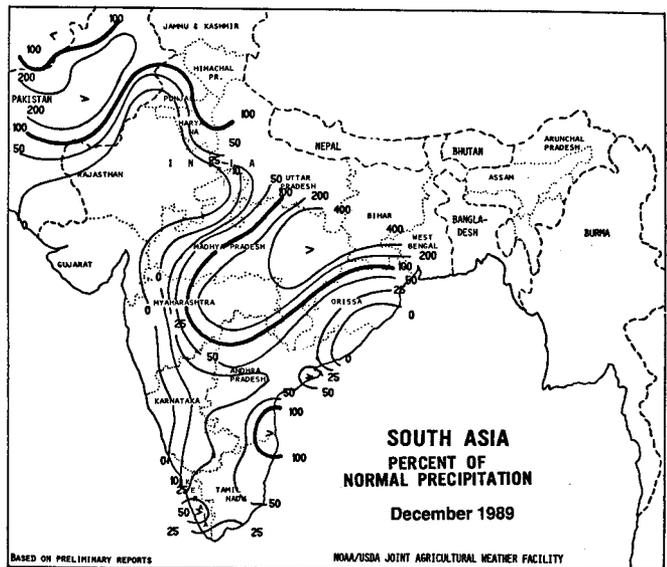
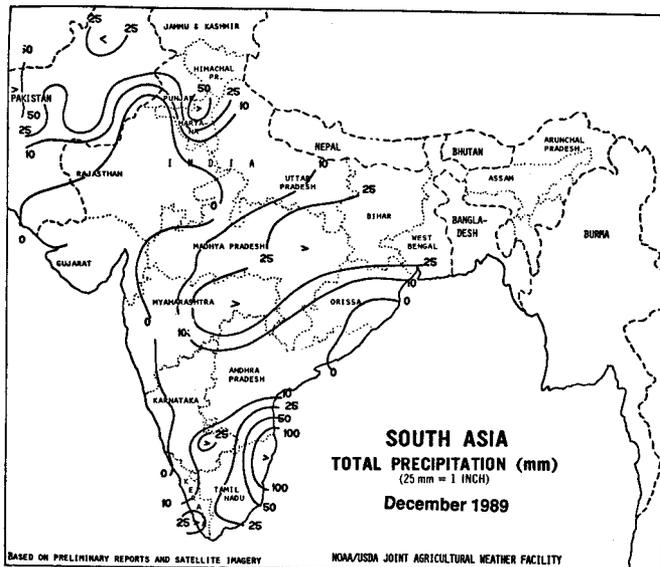
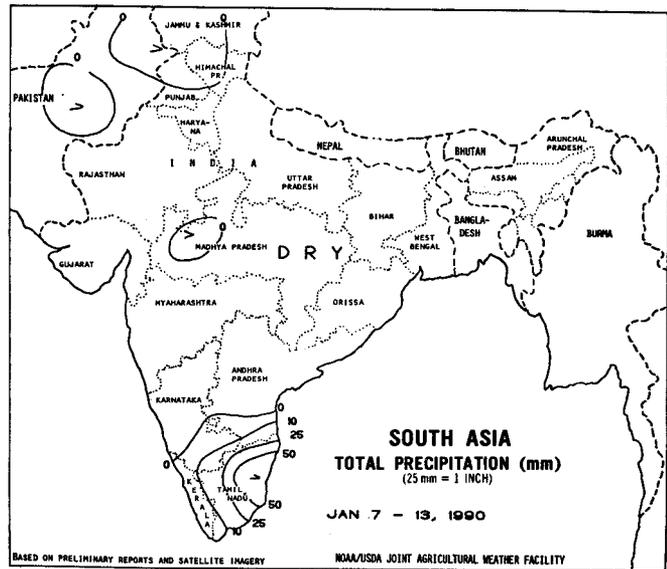




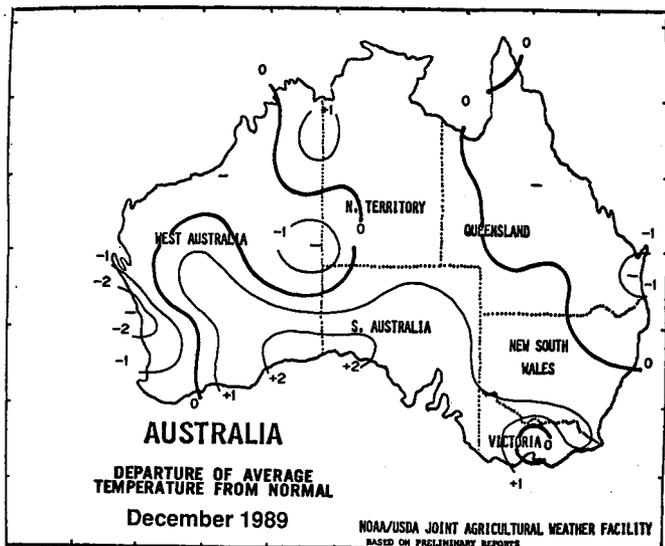
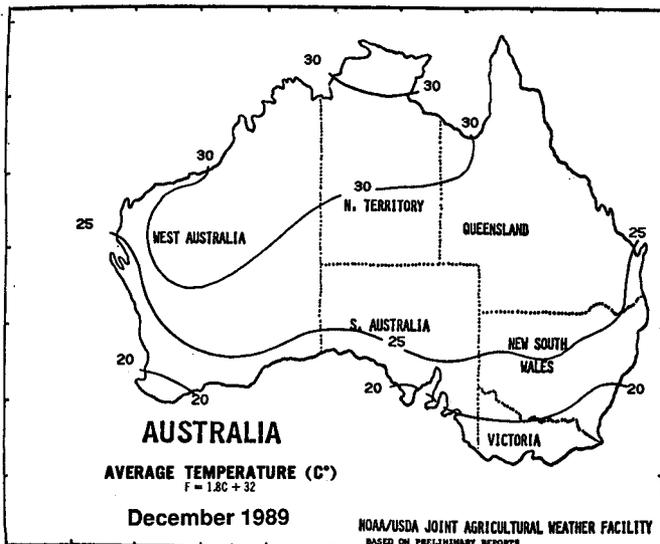
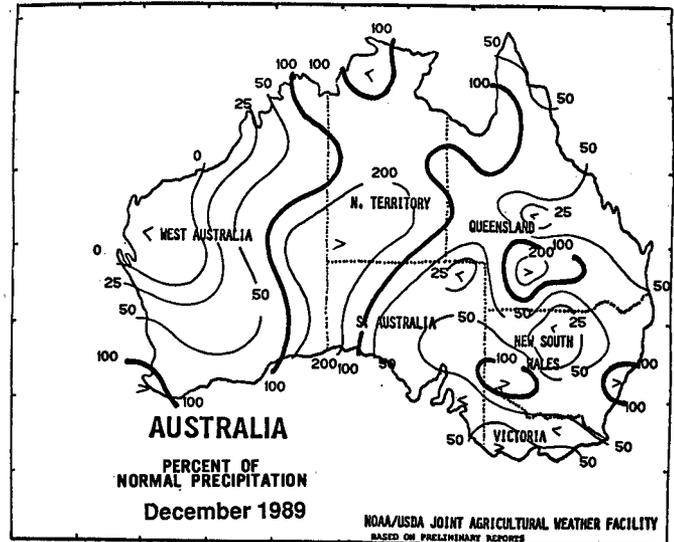
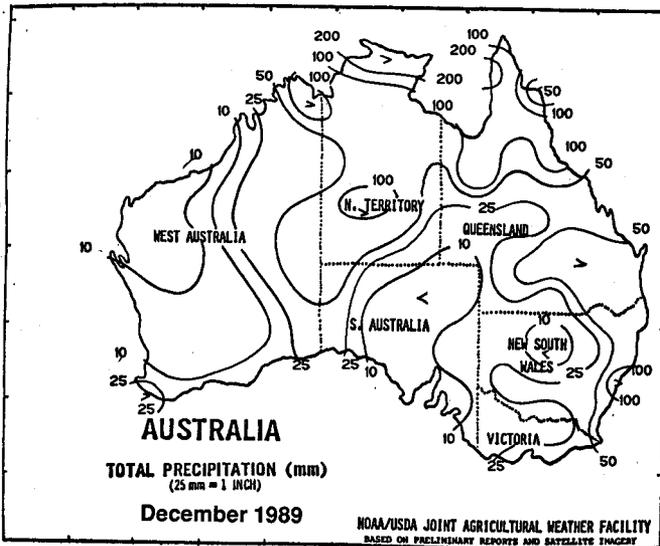
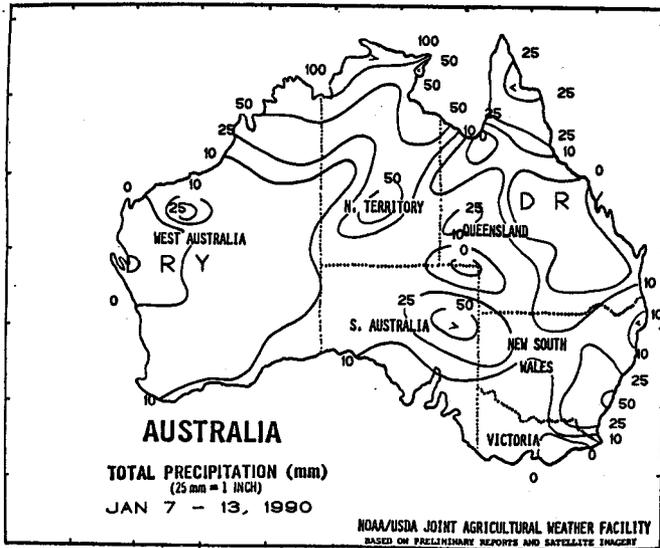
SOUTHEAST ASIA ... Seasonable showers (25-50mm or more) continued over Malaysia and, as depicted by satellite imagery, Indonesia and spread northward into southern portions of the Thai peninsula. In the Philippines, seasonable showers (25-50mm or more) continued from southern Luzon to northern Mindanao, causing local flooding but maintaining favorable conditions for secondary crops. In December, frequent showers provided near- to above-normal rainfall to much of eastern Malaysia and Indonesia, but except for local areas, western Malaysia was drier than normal. December rainfall totaled 100-300mm or more in the Philippines from southern Luzon to northeastern Mindanao, which is below normal for this time of year in most areas.



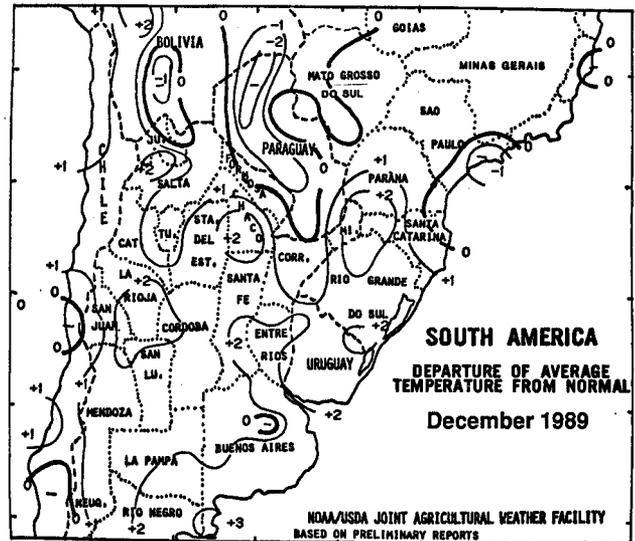
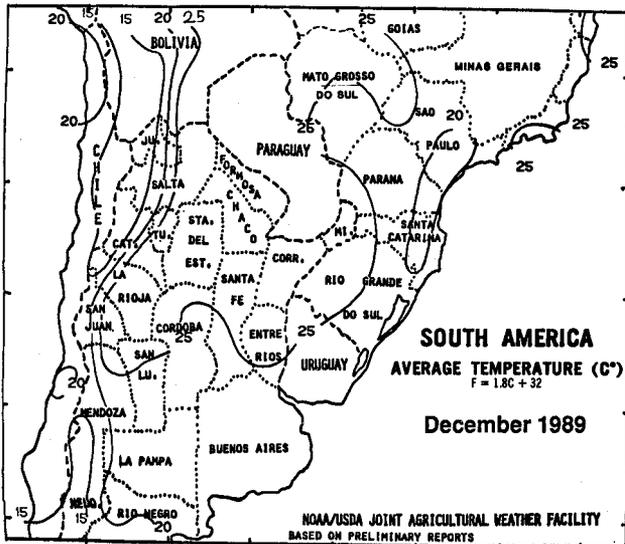
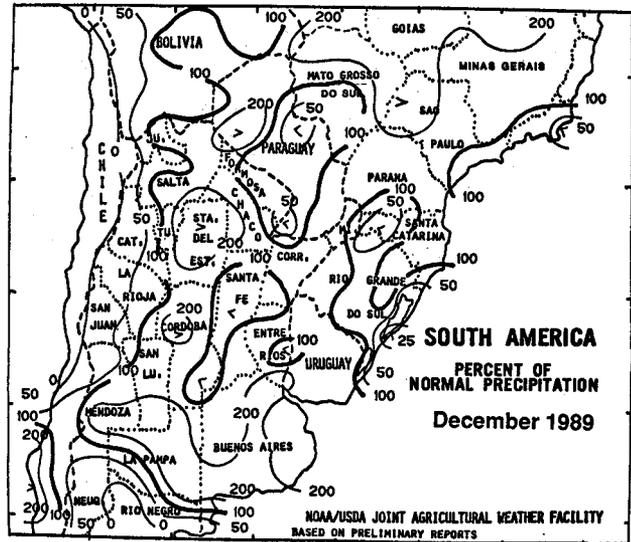
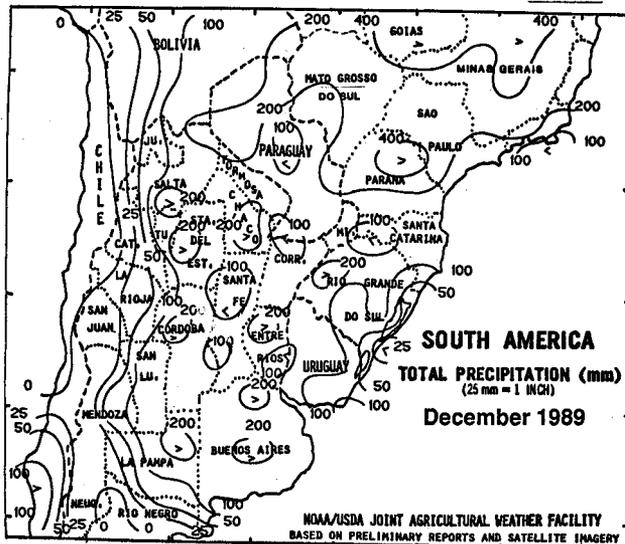
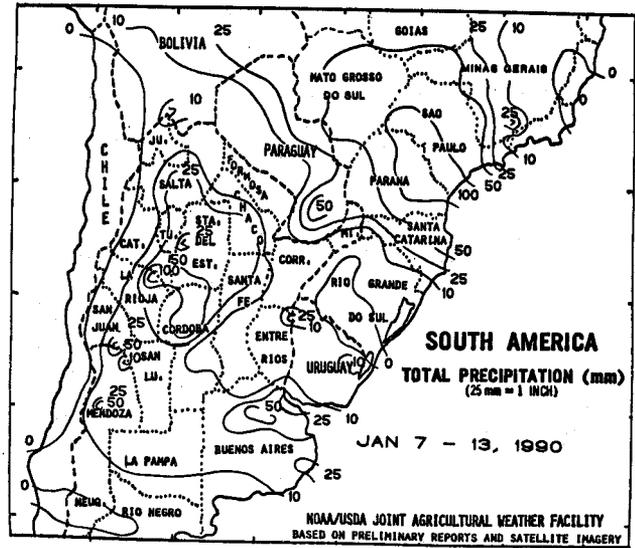
SOUTH ASIA ... Drier weather returned to the winter wheat regions of central India and Pakistan, although scattered, light rain (2-7mm) returned to northernmost crop regions. Temperatures continued cooler than normal early in the week across the north, with freezing temperatures reported in northern Bihar. By week's end, however, temperatures moderated to more seasonable levels, with cooler weather (minimum temperatures less than 5 degrees C) limited to northernmost areas. In southern India, showers (10-77mm) fell early in the week over Tamil Nadu, increasing irrigation reserves. In December, unseasonable showers benefited jointing to heading wheat in central India. Showers also boosted irrigation reserves for fall grains over Pakistan and northern and southeastern India. December temperatures were near normal, but periodic cold weather affected northernmost wheat areas.

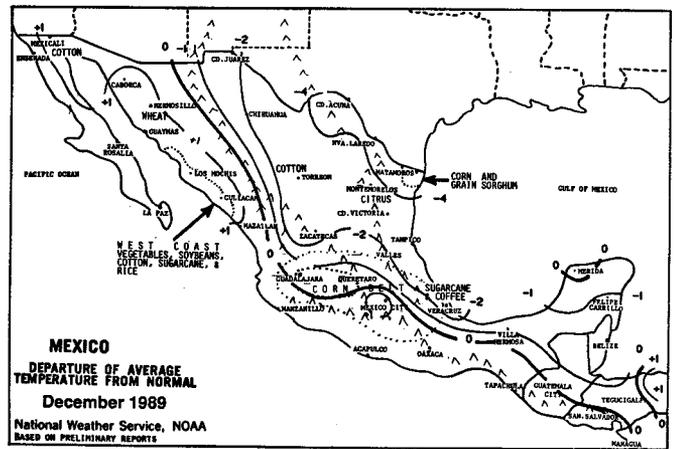
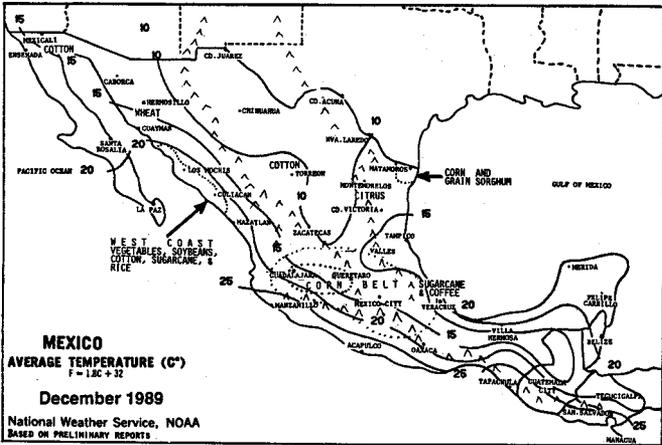
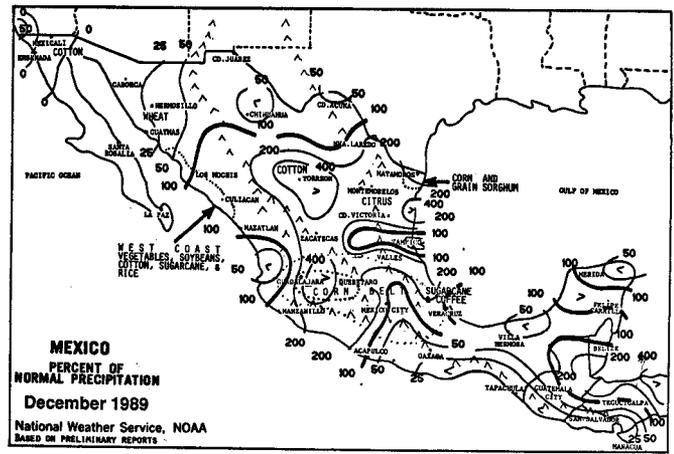
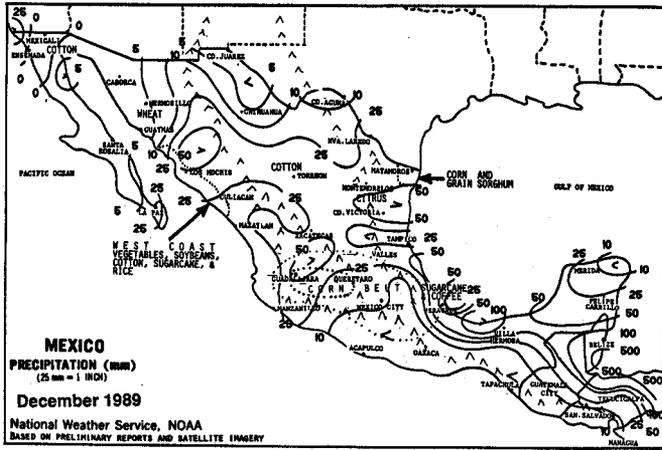


AUSTRALIA ... Early-week moderate to heavy rain (10-40mm) brought much needed relief from earlier heat and moisture stress to summer crop areas of New South Wales and extreme southern Queensland, while crop areas of central Queensland remained hot and mostly dry. Lower, more seasonable temperatures also returned to much of the east by week's end, although mean weekly temperatures still averaged 2-4 degrees C above normal. The rain and cooler weather benefited vegetative to reproductive cotton and corn and allowed planting of summer sorghum, which has been delayed by drier-than-normal weather in December and much of the late spring. Elsewhere, scattered light to moderate rain (5-15mm) fell across southern Australia, while sugarcane growing areas of eastern Queensland continued mostly dry. During December, rainfall was below normal across much of the east and south. In addition, above-normal monthly temperatures across most southern crop areas allowed rapid progress and an early completion of winter grain harvest.



SOUTH AMERICA ... In south-central Brazil, locally heavy rain (100-199mm) fell again over eastern Parana and southern Sao Paulo, aggravating already soaked field conditions. Substantial rain (50-100mm) covered most northern soybean areas, maintaining adequate to abundant moisture in the north, where December rainfall averaged well above normal. In the south, showers diminished over Rio Grande do Sul, where only light rain fell last week and December rainfall averaged near to below normal. Soil moisture is limited in the south and recent warm weather has hastened evapotranspiration. In Argentina, mostly light showers (10mm or less) fell over southern portions of Cordoba and Santa Fe, favoring late wheat harvesting. Heavier showers (10-35mm, with isolated amounts up to 70mm) fell over northern Buenos Aires, providing favorable moisture for summer crops entering reproduction. December rainfall averaged near to above normal throughout Argentina's summer crop areas, providing ample topsoil moisture for growth. The only exception was central Santa Fe and Formosa, where December rainfall was below average. Drier weather this past week in southern Buenos Aires favored wheat harvesting, following earlier delays due to December's soaking rains.





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