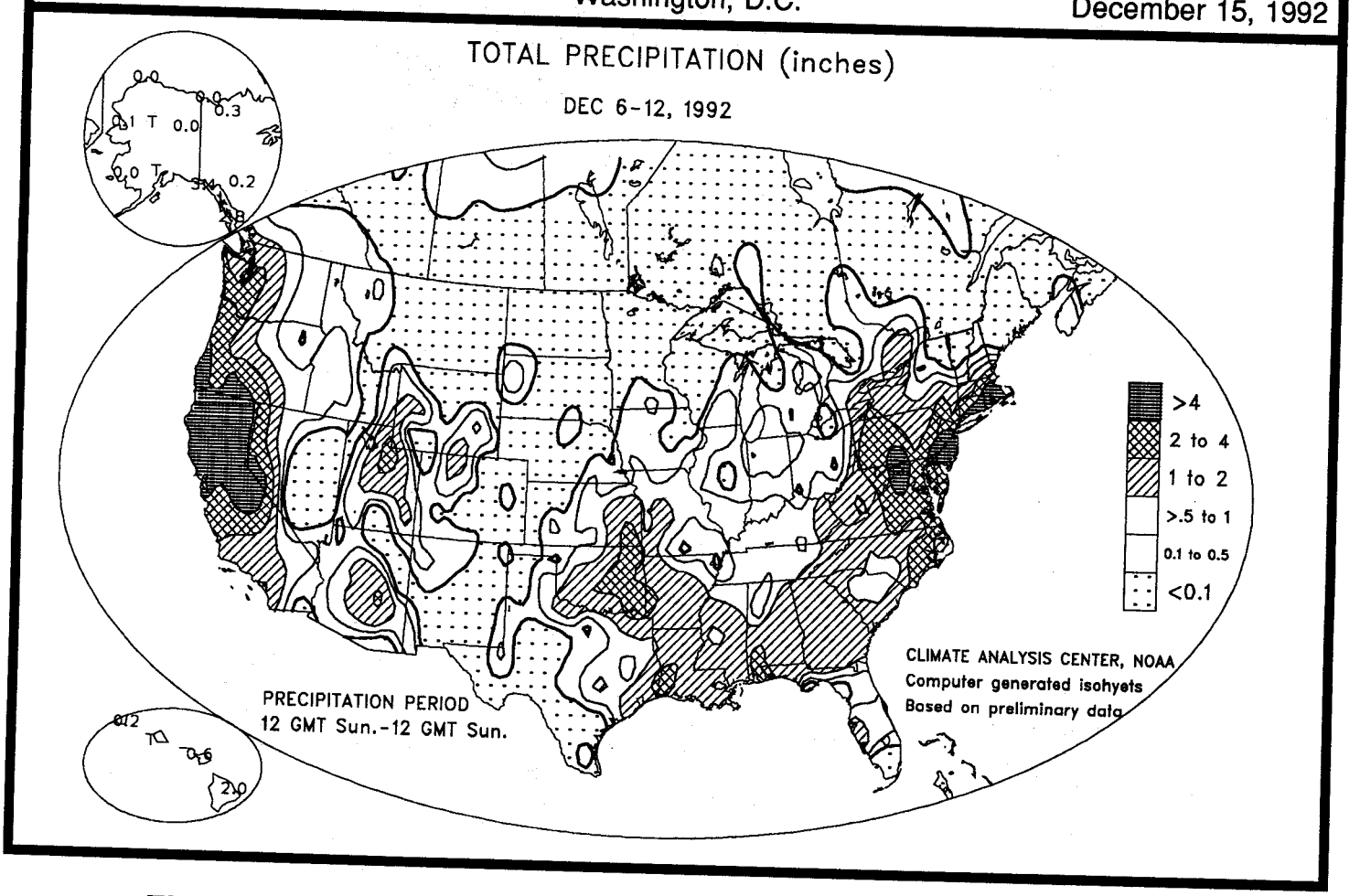
WEEKLY WEATHER AND CROP BULLETIN

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

Volume 79, No. 50 | Washington, D.C. | December 15, 1992



HIGHLIGHTS

December 6 - 12, 1992

Two storms separately produced heavy precipitation in **California** before combining to form a massive winter storm along the **middle Atlantic coast**. Early in the week, a departing storm drew cold air across the eastern two-thirds of the United States, dropping temperatures to 6°F in **Dubuque, IA**, and 16°F in **Greensboro, NC**. Sleet and freezing rain was reported as far south as **northern Georgia**. Meanwhile, a Pacific storm dropped southward through **California**, generating 30 inches of snow at **Donner Summit** and **Mammoth Lakes** in the **Sierra Nevada**. Some areas between **Santa Barbara** and **Los Angeles** received more than 5 inches of rain, causing local flooding. As the storm system swung toward the **southern Rockies**, it dumped 19 inches of snow on **Mt. Charleston**, near **Las Vegas, NV**, and 12 inches in **Pinetop, AZ**. By Tuesday, another impressive storm arrived in the

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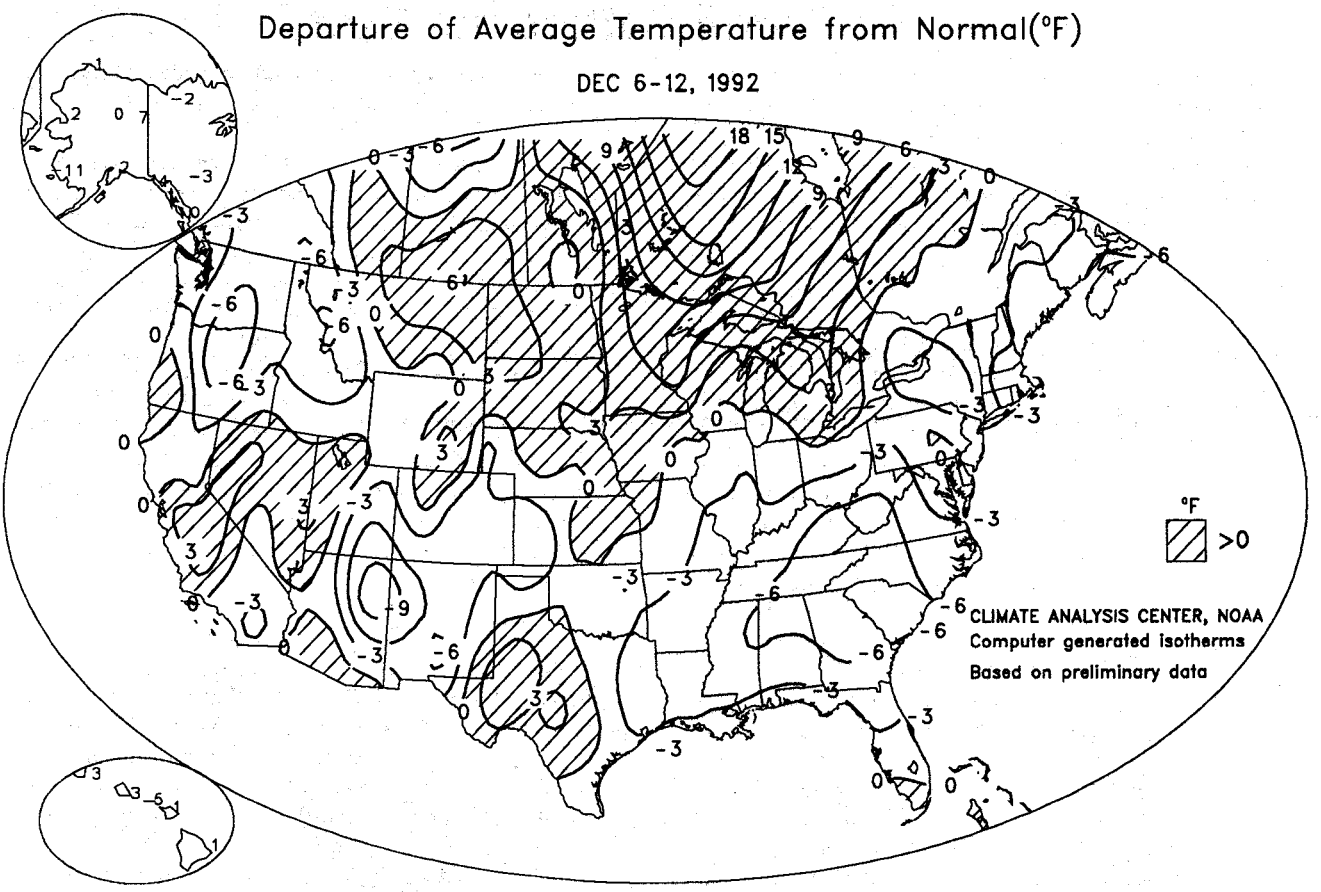
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DEC 6-12, 1992
°F
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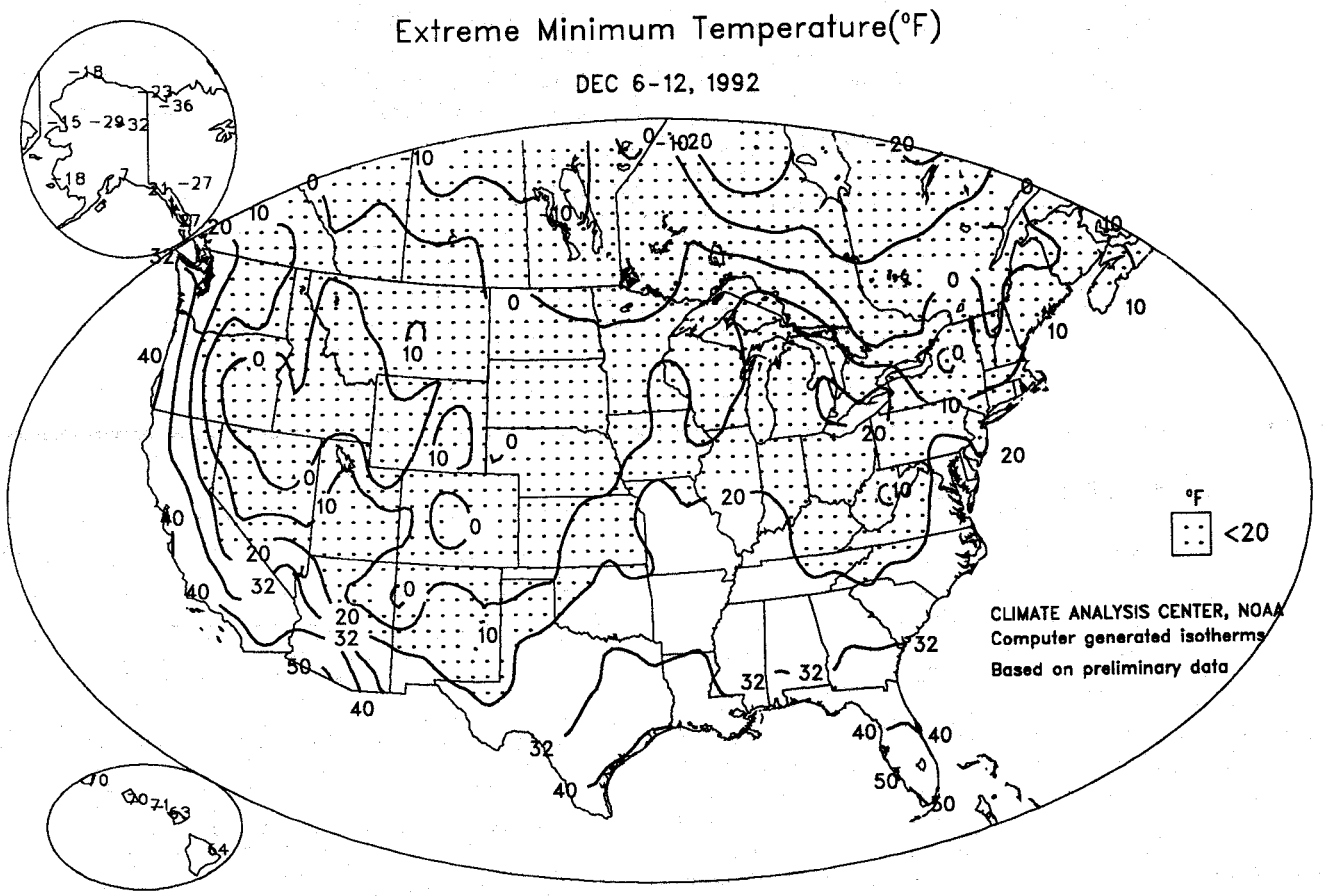
CLIMATE ANALYSIS CENTER, NOAA
Computer generated isotherms
Based on preliminary data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DEC 6-12, 1992
°F
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CLIMATE ANALYSIS CENTER, NOAA
Computer generated isotherms
Based on preliminary data

Major Storm Batters the East

One of the fiercest "Nor'easters" in memory battered the mid-Atlantic and Northeastern States during December 10-13. The storm produced hurricane-force wind gusts, heavy rains, river and tidal flooding, and massive snowfalls from West Virginia to Massachusetts. The storm has been blamed for at least 18 deaths and has caused considerable damage to coastal property.

The storm which struck the East is the same system that produced heavy snow and rain in California a few days earlier on December 7. By Wednesday, December 9, the low pressure center was located near New Orleans and moving eastward toward southern Georgia. The low rapidly intensified on December 10 as it traveled northward up through the Carolinas. By rush hour, Thursday morning, snow was falling across the Washington, DC area. Slippery roads caused hundreds of accidents in the metropolitan area, but the snow turned to rain within hours. In the mountains of Virginia, West Virginia, Maryland, and Pennsylvania, the precipitation stayed all snow. Lasting all day Thursday and Friday and, in some spots, continuing into Saturday, the storm racked up impressive accumulations (table 1). Hardest hit was the eastern slope of the Allegheny plateau, where final totals reached 20-35 inches, with isolated higher totals. The 42-inch accumulation reported from Piney Dam, in western Maryland, was the highest one-storm snow total ever recorded in that State. During Friday, the storm was located in the Chesapeake Bay-Delmarva area, and nearly stationary (figure 1). With high pressure to the north causing a sharp pressure gradient, and a long fetch of wind over the Atlantic, destructive winds and waves lashed the coast from Delaware to New York (table 2). By Saturday, the storm was bringing blizzard-like conditions to interior New York and New England and flooding to the coast. As the storm slowly moved eastward out to sea, the high winds and tides subsided on Sunday.

The combination of a recently full moon and several days of high winds out of the northeast created mammoth waves along the Atlantic coast. With seas reportedly 20 to 25 feet high off the coast on Friday, the Coast Guard was conducting rescue operations from North Carolina to Massachusetts. Waves swept over roads, destroying seawalls and battering houses, boats, and businesses. In Marshfield, south of Boston, the water level in some streets reached 4 to 5 feet. On Nantucket, at least five homes reportedly were washed away by the tides. Near Truro, Cape Cod, a number of cottages were either half buried in sand or washed out to sea. Surf destroyed the century-old fishing pier at Ocean Grove, NJ. At Dewey Beach, DE, the storm reportedly destroyed the entire dune line and beach.

High winds caused power outages up and down the coast, while the heavy rains caused flooding. The East River flooded Manhattan's FDR Drive, stranding drivers in their cars. Gusts of 58 mph or higher blew windows out of skyscrapers. In Philadelphia, winds broke the steeple off the St. Augustine's Roman Catholic Church, closing the Ben Franklin Bridge to New Jersey.

Whether measured by the 3-foot snowfalls in the mountains of Maryland, Pennsylvania, New York, and Massachusetts, or the near-record tides along the Atlantic coast, or the 90-mph wind gusts along the coast of New Jersey, this was one of the mightiest winter storms to strike the mid-Atlantic and Northeast regions this century.

Douglas Le Comte

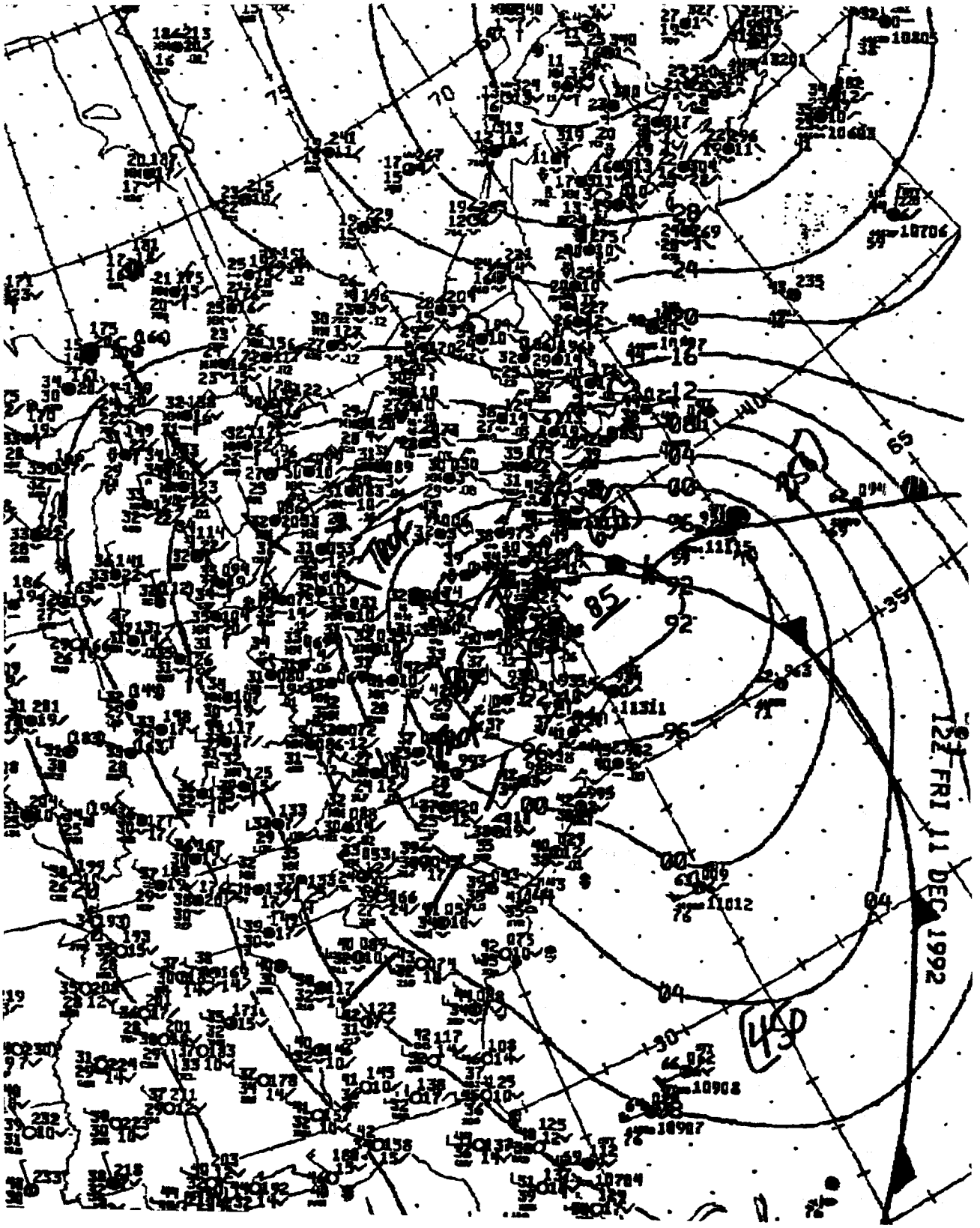
Table 1
Selected Storm Snowfall Totals, December 10-12, 1992

Total (in.)	Location
20	Canaan Valley, WV
23	Romney, WV
25	Petersburg, WV
32	Mount Storm, WV (elev. 2750 ft.)
1	Washington, DC
35	Grantsville, MD
42	Piney Dam, MD
36	Ogletown, PA (elev. 2800 ft.)
30	Windham, NY
36	Westkill, NY
37	Stamford, NY
14	Niagara Falls, NY
7	Boston, MA (Logan AP)
20	Great Barrington, MA
30	Pittsfield, MA
32	Worcester, MA
33	Otis, MA
36	Adams, MA
48	Peru, MA
24	Litchfield, CT
20	North Foster, RI

Table 2
Selected Peak Wind Gusts, December 11, 1992

Gust (mph)	Location
61	Vienna, VA
71	Damascus, MD
62	Lancaster, PA
82	New Holland, PA
58	New York City, (Manhattan) NY
77	LaGuardia AP, NY
86	Montauk Point, (Long Island) NY
80	Wildwood, NJ
90	Wildwood Crest, NJ

Figure 1.
Surface weather map for 7 AM EST, Friday, December 11, 1992.



National Weather Data for Selected Cities

Weather Data for the Week Ending December 12, 1992

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	46	33	52	25	40	-7	.9	-.2	.4	1.7	92	53.0	103	91	54	0	2	4	0
MOBILE	64	40	70	35	52	-2	1.6	.3	1.0	1.6	79	66.8	109	90	48	0	0	3	2
MONTGOMERY	53	37	61	29	45	-5	.9	-.1	.7	1.3	71	59.1	128	92	47	0	1	4	1
AK ANCHORAGE	22	12	23	7	17	2	T	-.2	T	.1	21	13.8	97	91	70	0	7	1	0
BARROW	-10	-17	-8	-19	-14	-2	T	.0	T	T	50	2.5	57	81	73	0	7	0	0
FAIRBANKS	-1	-16	8	-28	-9	0	T	-.2	T	.3	107	11.9	119	83	74	0	7	0	0
JUNEAU	37	31	40	29	34	6	1.0	-.1	.8	2.2	118	75.6	150	98	74	0	4	2	1
KODIAK	30	21	37	12	26	-5	1.1	-.1	.5	3.3	157	55.8	97	86	64	0	7	5	1
NOME	7	-7	21	-19	0	-5	.3	.1	.1	.8	321	12.2	87	85	73	0	7	3	0
AZ PHOENIX	64	47	70	44	55	1	1.1	.9	1.1	2.2	727	13.3	207	87	44	0	0	1	1
PRESCOTT	49	27	63	21	38	-2	.2	-.1	.1	1.2	295	19.8	163	95	52	0	7	2	0
TUCSON	64	39	76	37	51	-1	.1	-.1	.1	2.5	732	15.5	148	91	34	0	0	2	0
YUMA	67	49	70	46	58	1	.3	.2	.3	2.2	>1000	5.7	255	72	34	0	0	1	0
AR FORT SMITH	48	33	57	28	40	-2	1.1	.4	1.1	1.6	131	44.8	117	96	57	0	4	2	1
LITTLE ROCK	47	35	58	28	41	-3	1.0	.0	.9	1.2	69	42.7	92	83	60	0	2	2	1
CA BAKERSFIELD	61	45	68	42	53	4	1.2	1.0	1.0	1.2	504	7.8	151	91	53	0	0	3	1
EUREKA	56	45	62	40	50	2	4.3	3.0	.9	5.1	217	25.0	72	91	68	0	0	7	5
FRESNO	58	43	65	35	50	4	1.8	1.5	.9	1.8	321	13.3	141	92	66	0	0	3	2
LOS ANGELES	62	50	66	48	56	-2	2.5	2.2	2.2	2.7	506	15.1	139	87	48	0	0	3	1
REDDING	52	37	57	28	45	-3	7.4	5.8	2.6	7.8	306	35.2	96	100	76	0	1	5	4
SACRAMENTO	56	43	63	34	49	3	2.6	2.0	.6	3.4	337	15.1	100	98	67	0	0	6	4
SAN DIEGO	63	51	67	47	57	-1	1.2	.9	1.0	1.6	358	11.8	142	87	54	0	0	3	1
SAN FRANCISCO	58	48	62	44	53	3	3.1	2.4	1.0	3.8	310	18.5	107	95	69	0	0	6	3
CO DENVER	41	16	60	2	29	-5	.1	.0	.1	.4	152	15.4	104	89	46	0	7	1	0
GRAND JUNCTION	37	18	40	14	27	-2	T	-.1	T	.2	105	9.0	120	97	67	0	7	1	0
PUEBLO	48	16	64	1	32	-2	.0	-.1	.0	.1	100	12.0	113	94	42	0	7	0	0
CT BRIDGEPORT	39	27	43	18	33	-2	1.8	.9	1.5	2.3	155	44.2	113	72	51	0	5	3	1
HARTFORD	35	22	41	11	28	-3	1.4	.4	1.0	2.8	167	40.4	97	75	52	0	6	2	1
DC WASHINGTON	45	33	52	26	39	-1	1.5	.8	1.0	1.6	131	35.2	95	78	52	0	4	3	2
FL APALACHICOLA	65	44	76	37	54	-1	.9	.1	.9	1.1	80	55.9	106	--	--	0	0	1	1
DAYTONA BEACH	69	49	78	39	59	-1	.2	-.3	.2	.2	24	46.1	98	94	53	0	0	2	0
JACKSONVILLE	63	41	75	35	52	-4	.5	.0	.5	.5	62	63.1	126	93	51	0	0	1	1
KEY WEST	78	67	83	58	72	1	.1	-.4	.0	.1	7	37.1	97	87	64	0	0	2	0
MIAMI	77	62	82	51	69	0	T	-.4	T	T	0	55.9	99	91	56	0	0	0	0
ORLANDO	70	50	79	43	60	-2	.7	.3	.7	.7	103	52.8	110	94	52	0	0	1	1
TALLAHASSEE	64	40	75	32	52	-2	1.0	.0	.9	1.0	61	62.5	101	88	47	0	1	3	1
TAMPA	71	52	77	42	61	-1	1.8	1.3	1.8	1.9	239	36.7	81	91	55	0	0	1	1
WEST PALM BEACH	75	58	82	46	67	-1	.1	-.4	.1	.1	8	59.3	102	92	51	0	0	1	0
GA ATLANTA	43	33	51	30	38	-7	1.0	.1	.4	1.4	92	55.1	120	95	64	0	2	4	0
AUGUSTA	50	33	59	26	42	-6	.8	.1	.4	.8	69	49.9	122	89	50	0	3	3	0
MACON	49	34	57	31	42	-8	1.4	.5	.7	1.5	103	56.3	134	91	54	0	3	4	1
SAVANNAH	53	39	58	33	46	-6	1.4	.8	1.2	1.4	138	58.3	121	87	55	0	0	2	1
HI HILO	81	67	82	64	74	2	2.0	-1.1	.5	4.1	75	107.0	88	96	62	0	0	7	1
HONOLULU	83	72	84	70	78	3	T	-.7	T	.3	27	12.8	60	80	53	0	0	1	0
KAHULUI	82	69	85	63	75	2	.6	.0	.3	.6	65	14.8	90	87	58	0	0	4	0
LIHUE	80	72	80	70	76	3	.2	-1.0	.2	5.5	268	30.7	76	83	62	0	0	1	0
ID BOISE	38	24	54	0	31	-2	.4	.2	.2	.6	130	7.4	70	99	70	0	5	5	0
LEWISTON	39	26	46	11	33	-3	.1	-.2	.0	.1	17	10.3	86	82	54	0	5	2	0
POCATELLO	35	18	47	-5	27	-1	.4	.2	.2	1.0	303	8.2	81	91	65	0	6	3	0
IL CHICAGO	33	24	39	18	28	-1	.4	-.2	.2	.4	45	28.1	86	95	72	0	7	3	0
MOLINE	34	20	39	14	27	-2	.6	.2	.6	.7	92	36.7	102	96	73	0	7	3	1
PEORIA	35	23	39	16	29	-1	.5	.0	.4	.5	61	30.1	89	99	73	0	7	3	0
QUINCY	34	24	39	20	29	-3	.4	.0	.3	.4	60	28.7	78	90	68	0	7	2	0
ROCKFORD	32	18	41	10	25	-2	.6	.2	.3	.8	97	28.8	81	98	75	0	7	3	0
SPRINGFIELD	37	25	41	20	31	-2	.3	-.2	.2	.3	38	27.5	84	98	69	0	6	3	0
IN EVANSVILLE	39	27	44	21	33	-4	.5	-.3	.3	.5	39	34.6	87	93	63	0	6	3	0
FORT WAYNE	33	26	37	17	30	-1	.8	.2	.4	.8	81	42.7	129	89	69	0	6	3	0
INDIANAPOLIS	35	28	40	18	31	-2	.5	-.2	.3	.5	44	42.8	115	91	69	0	7	3	0
SOUTH BEND	34	25	42	14	30	-1	.7	.0	.4	1.0	88	35.7	99	92	70	0	7	3	0
IA DES MOINES	35	24	40	16	29	1	.3	.0	.1	.3	79	31.9	106	96	68	0	6	3	0
SIOUX CITY	36	17	44	2	27	1	.1	-.1	.1	.2	50	29.3	117	97	72	0	7	1	0
WATERLOO	32	22	37	10	27	2	.2	-.1	.1	.5	94	29.8	93	100	87	0	7	3	0
KS CONCORDIA	42	26	51	14	34	1	.2	.1	.2	.3	90	40.3	151	88	58	0	5	1	0
DODGE CITY	39	21	46	10	30	-5	.2	.1	.2	.6	290	22.2	110	91	62	0	7	1	0
GOODLAND	37	16	46	5	26	-5	T	-.1	T	T	0	25.5	161	87	57	0	7	0	0
TOPEKA	45	27	54	18	36	2	.2	-.1	.1	.2	44	34.2	105	92	57	0	5	2	0
WICHITA	44	26	54	16	35	-1	.1	-.2	.1	.2	41	34.1	122	92	62	0	6	2	0
KY BOWLING GREEN	40	29	44	20	35	-5	.6	-.4	.5	.8	46	36.7	79	93	67	0	5	4	0
LEXINGTON	35	28	42	16	32	-6	.5	-.4	.3	.6	40	47.9	110	91	73	0	6	2	0
LOUISVILLE	39	31	44	19	35	-4	.4	-.4	.2	.4	29	39.6	96	94	69	0	3	3	0
LA BATON ROUGE	61	41	70	33	51	-3	1.6	.5	1.3	2.1	112	67.7	128	98	55	0	0	3	1
LAKE CHARLES	62	42	74	38	52	-3	1.5	.4	1.4	2.1	107	60.9	119	99	55	0	0	3	1
NEW ORLEANS	64	43	70	35	54	-1	1.4	.2	.9	1.7	87	78.1	139	97	56	0	0	3	1
SHREVEPORT	55	37	64	33	46	-4	.9	.0	.8	1.0	67	46.6	112	94	52	0	0	3	1

Based on 1951-80 normals.

Weather Data for the Week Ending December 12, 1992

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
ME CARIBOU	22	9	30	0	16	-2	T	-.7	T	.1	9	34.9	101	83	56	0	7	1	0
PORTLAND	33	19	42	10	26	-2	.2	-.9	.2	.2	13	36.7	90	73	43	0	7	2	0
MD BALTIMORE	44	32	51	24	38	0	3.3	2.5	1.6	3.4	257	37.7	95	83	59	0	4	3	2
SALISBURY	47	30	56	23	38	-2	2.9	2.1	1.7	3.3	233	44.0	102	86	55	0	4	3	2
MA BOSTON	37	25	43	16	31	-4	5.7	4.6	3.9	6.6	379	42.1	103	73	53	0	5	2	2
CHATHAM	40	30	44	23	35	-2	2.5	1.3	1.5	4.3	224	65.4	149	77	55	0	5	2	2
MI ALPENA	33	25	35	16	29	3	.3	-.1	.3	.5	68	25.7	93	93	69	0	5	1	0
DETROIT	35	30	38	19	32	2	.4	-.1	.4	.5	47	35.5	121	87	64	0	5	1	0
FLINT	34	29	36	20	31	2	.2	-.2	.2	.3	41	35.2	127	88	69	0	5	4	0
GRAND RAPIDS	33	26	38	18	30	0	.4	-.2	.3	.6	57	39.4	123	93	76	0	7	2	0
HOUGHTON LAKE	32	23	35	9	28	3	.3	-.2	.2	.9	112	28.2	105	95	73	0	7	3	0
LANSING	33	28	37	19	30	2	.4	-.2	.3	.5	46	33.2	117	90	68	0	7	3	0
MARQUETTE	31	15	35	10	23	4	.1	-.4	.1	.4	42	29.3	82	93	76	0	7	2	0
MUSKEGON	35	26	42	17	30	0	.5	-.1	.3	1.1	106	28.2	94	91	68	0	7	3	0
SAULT ST. MARIE	32	22	36	16	27	5	.2	-.4	.2	.7	66	33.1	104	86	65	0	7	1	0
MN ALEXANDRIA	28	17	34	6	22	6	T	-.2	T	T	0	17.5	72	95	82	0	7	0	0
DULUTH	29	17	33	6	23	6	.1	-.2	.1	.1	25	27.6	96	91	74	0	7	2	0
INT'L FALLS	26	13	31	-5	19	8	T	-.2	T	.2	39	21.9	93	93	72	0	7	0	0
MINNEAPOLIS	32	23	37	17	27	6	T	-.2	T	.2	51	28.9	112	95	75	0	7	2	0
ROCHESTER	29	22	33	14	25	5	.2	-.1	.1	.4	111	26.2	94	98	82	0	7	2	0
MS GREENWOOD	49	35	60	30	42	-5	1.4	.2	1.3	2.0	98	43.0	86	91	49	0	3	3	1
JACKSON	52	37	62	28	45	-5	.9	-.3	.8	1.8	91	46.0	94	97	49	0	1	3	1
MERIDIAN	52	36	62	29	44	-5	1.1	-.2	.6	2.6	122	62.1	124	94	46	0	1	3	1
MO CAPE GIRARDEAU	40	28	45	22	34	--	.5	-.4	.5	.5	31	37.3	88	94	63	0	6	2	0
COLUMBIA	41	27	48	20	34	-1	.8	.3	.7	.8	99	32.6	91	95	57	0	6	3	1
KANSAS CITY	44	28	53	22	36	1	.3	-.1	.2	.3	51	47.2	134	93	57	0	5	3	0
SAINT LOUIS	38	29	44	25	34	-2	.4	-.2	.4	.4	42	30.2	93	91	59	0	6	2	0
SPRINGFIELD	43	29	53	21	36	-1	1.1	.5	1.1	1.1	105	44.9	118	91	53	0	4	2	1
MT BILLINGS	38	24	44	17	31	2	.1	-.1	.1	.3	100	11.3	78	74	48	0	7	2	0
GLASGOW	36	15	46	4	26	7	.0	-.1	.0	T	0	9.0	85	83	48	0	7	0	0
GREAT FALLS	40	22	48	10	31	3	T	-.2	T	T	7	14.2	98	70	35	0	7	0	0
HAVRE	35	16	45	4	25	4	T	-.1	T	T	0	9.1	80	79	52	0	7	0	0
HELENA	33	10	47	0	21	-3	T	-.1	T	.2	71	9.0	81	86	57	0	7	1	0
KALISPELL	31	12	40	-1	21	-5	.2	-.1	.2	.2	41	15.4	104	95	66	0	7	2	0
MILES CITY	40	16	45	4	28	4	T	-.1	T	T	0	14.3	103	84	42	0	7	0	0
MISSOULA	29	8	38	-5	18	-8	.1	-.1	.1	.1	31	10.5	85	92	68	0	7	4	0
NE GRAND ISLAND	39	18	46	4	28	0	.2	.0	.1	.2	64	30.8	136	87	61	0	7	2	0
LINCOLN	40	18	51	0	29	0	.2	.0	.1	.2	78	25.1	94	90	59	0	6	3	0
NORFOLK	39	18	47	3	28	2	.2	.1	.2	.4	162	28.6	123	89	58	0	7	1	0
NORTH PLATTE	40	15	51	5	27	0	T	-.1	T	.1	59	22.8	120	92	51	0	7	1	0
OMAHA	39	24	46	11	32	2	.4	.2	.2	.4	129	34.5	116	86	65	0	5	3	0
SCOTTSBLUFF	36	9	43	-7	22	-7	.2	.1	.1	.5	247	15.6	109	93	61	0	7	2	0
VALENTINE	41	14	53	3	28	2	T	-.1	T	.1	36	18.2	108	83	49	0	7	0	0
NV ELY	39	20	50	8	30	3	.1	.0	.1	.2	68	9.1	107	83	42	0	7	2	0
LAS VEGAS	53	40	59	37	47	0	.9	.8	.6	1.1	991	9.2	241	92	52	0	0	3	1
RENO	45	29	59	19	37	3	.7	.4	.3	.7	160	4.1	64	91	54	0	5	5	0
WINNEMUCCA	44	28	56	5	36	4	.7	.5	.3	.7	197	3.8	52	87	52	0	4	5	0
NH CONCORD	31	16	39	1	24	-3	.6	-.2	.4	.8	57	28.3	82	83	55	0	7	3	0
NJ ATLANTIC CITY	44	27	53	16	36	-2	2.5	1.7	1.5	2.7	193	35.7	90	81	54	0	5	3	2
NM ALBUQUERQUE	40	22	50	17	31	-5	.3	.1	.3	.8	432	11.7	154	94	59	0	7	1	0
CLOVIS	53	25	65	10	39	-1	T	-.1	T	T	18	19.6	118	90	35	0	5	0	0
ROSWELL	56	25	67	8	41	0	T	-.1	T	.5	371	13.1	127	92	38	0	4	1	0
NY ALBANY	33	18	40	5	26	-3	.4	-.3	.2	1.6	138	30.0	89	85	52	0	7	3	0
BINGHAMTON	30	18	34	4	24	-4	.9	.2	.4	1.0	86	39.1	111	92	63	0	7	5	0
BUFFALO	34	24	37	19	29	-2	1.1	.3	.8	1.5	108	45.3	128	90	65	0	7	6	1
NEW YORK	40	30	45	21	35	-3	3.6	2.7	2.6	3.8	262	35.8	88	78	57	0	4	3	1
ROCHESTER	33	20	36	12	26	-4	1.2	.6	.8	1.5	143	34.8	117	97	65	0	7	5	1
SYRACUSE	33	19	39	6	26	-4	.5	-.3	.2	.8	58	41.8	113	92	57	0	7	5	0
NC ASHEVILLE	36	27	40	18	32	-9	.6	-.2	.5	.6	45	50.8	121	87	62	0	7	2	1
CHARLOTTE	44	32	54	25	38	-6	.7	.0	.7	.7	58	51.7	127	84	45	0	4	1	1
GREENSBORO	42	27	50	16	35	-7	1.3	.5	1.2	1.3	102	42.8	106	83	48	0	6	2	1
HATTERAS	51	40	63	34	46	-4	1.8	.8	1.7	1.8	107	58.2	110	89	56	0	0	3	1
NEW BERN	51	35	62	25	43	-5	1.7	.9	1.6	1.7	126	48.9	96	87	44	0	4	2	1
RALEIGH	48	30	55	19	39	-4	1.2	.5	1.2	1.3	110	42.0	106	87	49	0	5	3	1
WILMINGTON	52	34	65	25	43	-6	2.3	1.6	1.9	2.3	178	64.0	125	86	50	0	3	2	1
ND BISMARCK	33	12	39	4	22	4	.1	.0	.1	.1	58	12.4	83	92	58	0	7	1	0
FARGO	25	11	31	-1	18	2	T	-.1	T	.1	33	20.0	105	91	77	0	7	1	0
GRAND FORKS	23	11	26	0	17	3	.1	.0	.1	.2	79	16.5	92	95	80	0	7	1	0
WILLISTON	30	11	39	-2	21	3	T	-.1	T	T	0	12.1	92	91	64	0	7	0	0
OH AKRON-CANTON	32	27	36	17	29	-2	.4	-.2	.3	.7	71	43.6	128	89	68	0	7	2	0
CINCINNATI	35	28	40	16	32	-4	.5	-.2	.4	.6	49	36.7	96	88	64	0	6	2	0
CLEVELAND	34	28	38	16	31	-2	.4	-.2	.2	.7	66	44.9	134	86	64	0	5	4	0
COLUMBUS	35	29	40	17	32	-2	.5	-.1	.4	.5	53	38.8	110	89	68	0	4	3	0
DAYTON	34	26	37	15	30	-3	.4	-.2	.3	.4	37	39.4	119	90	67	0	5	3	0

Based on 1951-80 normals.

Weather Data for the Week Ending December 12, 1992

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMP. °F		PRECIP.	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTRME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
TOLEDO	34	29	37	18	31	1	.6	.0	.5	.7	71	34.2	114	89	72	0	5	2	0
YOUNGSTOWN	32	26	37	16	29	-2	.6	.0	.5	1.2	106	40.3	114	93	71	0	7	2	1
OK OKLAHOMA CITY	49	32	56	24	40	-1	1.3	1.0	.7	1.6	338	41.9	139	94	61	0	4	3	1
TULSA	45	30	56	20	38	-4	1.4	1.0	1.1	1.7	217	40.0	106	93	65	0	4	3	1
OR ASTORIA	46	37	51	34	41	-2	1.8	-.8	.9	2.4	55	45.2	72	93	70	0	0	5	2
BURNS	32	16	41	-6	24	-4	.5	.2	.3	.9	153	9.0	97	90	69	0	7	4	0
MEDFORD	48	35	55	32	42	3	1.9	1.2	.7	2.2	166	13.6	77	100	74	0	2	6	2
PENDLETON	37	25	46	13	31	-6	.1	-.2	.0	.4	57	8.3	76	94	68	0	6	4	0
PORTLAND	43	35	48	30	39	-2	2.1	.7	1.6	2.7	112	26.8	80	94	70	0	2	7	1
SALEM	45	34	50	30	40	-2	3.1	1.6	1.9	4.6	172	30.1	84	92	67	0	3	7	2
PA ALLENTOWN	38	26	40	17	32	-1	1.8	1.0	.9	1.9	132	37.4	89	77	53	0	5	3	2
ERIE	35	30	37	25	32	0	.5	-.3	.3	.9	65	41.6	109	85	61	0	5	3	0
HARRISBURG	38	31	43	25	35	0	1.1	.3	1.0	1.1	84	31.7	85	81	52	0	3	2	1
PHILADELPHIA	43	31	52	24	37	0	3.4	2.6	2.0	3.6	270	29.4	75	73	51	0	4	3	2
PITTSBURGH	33	27	37	18	30	-3	1.0	.5	.9	1.4	149	35.2	101	87	63	0	6	3	1
SCRANTON	35	24	39	16	30	-2	1.0	.4	.6	1.0	102	27.6	83	84	56	0	6	3	1
RI PROVIDENCE	37	25	42	15	31	-3	3.9	2.8	2.5	4.6	263	45.2	106	73	52	0	5	2	2
SC CHARLESTON	53	38	66	29	46	-5	1.1	.4	1.0	1.1	99	53.6	108	87	52	0	1	2	1
COLUMBIA	48	33	57	22	41	-7	.7	.0	.4	.7	57	47.5	101	92	49	0	3	3	0
FLORENCE	49	35	57	25	42	-6	.7	.1	.4	.7	67	47.0	112	87	51	0	1	3	0
GREENVILLE	45	28	54	19	37	-8	.9	.0	.8	.9	58	56.3	116	92	50	0	7	3	1
SD ABERDEEN	30	13	38	9	22	3	T	-.1	T	.1	37	16.7	96	96	76	0	7	1	0
HURON	33	14	41	6	24	2	T	-.1	T	.1	25	22.3	123	94	66	0	7	0	0
RAPID CITY	40	17	50	4	29	1	.2	.1	.2	.4	221	13.4	85	86	46	0	7	1	0
SIOUX FALLS	34	17	40	7	26	4	T	-.1	T	.1	38	31.8	135	91	69	0	7	1	0
TN CHATTANOOGA	42	34	45	27	38	-4	.6	-.6	.3	1.0	51	51.3	103	92	62	0	3	4	0
KNOXVILLE	38	32	42	22	35	-7	.6	-.5	.4	1.1	62	38.6	87	94	69	0	3	4	0
MEMPHIS	47	34	56	29	41	-4	.8	-.3	.7	1.1	61	45.1	93	90	54	0	3	2	1
NASHVILLE	41	32	45	24	36	-6	.4	-.6	.4	.5	30	37.5	82	89	60	0	4	2	0
TX ABILENE	61	37	67	26	49	2	.1	-.1	.1	.2	50	27.0	119	87	39	0	2	2	0
AMARILLO	50	25	67	14	38	-2	T	-.1	T	.4	211	20.5	110	90	43	0	7	0	0
AUSTIN	65	43	73	33	54	1	.6	.1	.5	.7	85	43.5	144	89	45	0	0	2	0
BEAUMONT	62	42	74	39	52	-3	2.0	.8	1.9	3.4	179	62.2	119	96	55	0	0	4	1
BROWNSVILLE	72	52	85	43	62	-1	T	-.2	T	.1	16	31.1	127	98	60	0	0	1	0
CORPUS CHRISTI	70	49	82	40	60	0	.2	-.1	.1	.4	82	40.8	135	94	53	0	0	4	0
DEL RIO	67	42	77	31	55	1	.1	-.1	.0	.1	21	20.1	119	69	32	0	1	2	0
EL PASO	51	32	64	26	41	-4	T	.0	T	1.1	786	11.2	152	93	54	0	4	1	0
FORT WORTH	57	39	67	33	48	-1	.4	.0	.4	.4	60	38.4	128	94	54	0	0	2	0
GALVESTON	62	50	71	42	56	-2	.8	.0	.8	.8	59	49.7	129	85	63	0	0	2	1
HOUSTON	63	42	75	37	53	-3	1.1	.3	1.0	1.2	82	50.1	114	93	52	0	0	2	1
LUBBOCK	59	32	68	21	46	3	.4	.3	.4	.6	429	21.7	126	84	35	0	3	1	0
MIDLAND	65	35	70	20	50	4	T	-.1	T	T	5	20.8	157	83	29	0	2	1	0
SAN ANGELO	65	38	69	27	52	3	.1	.0	.1	.1	48	20.4	116	87	36	0	3	1	0
SAN ANTONIO	68	41	76	33	54	0	.1	-.2	.1	.2	40	44.5	158	91	39	0	0	2	0
VICTORIA	67	46	76	39	56	-1	.2	-.3	.1	.3	34	49.6	139	95	50	0	0	2	0
WACO	61	39	68	32	50	-1	.5	.0	.5	.5	64	35.8	121	94	46	0	1	1	0
WICHITA FALLS	56	33	62	27	45	0	.9	.6	.5	.9	191	27.7	107	96	50	0	3	2	0
UT CEDAR CITY	45	24	57	17	35	3	.3	.2	.2	.3	122	10.7	108	91	51	0	6	2	0
SALT LAKE CITY	41	26	49	9	33	2	.4	.1	.3	.4	83	11.4	80	94	55	0	6	3	0
VT BURLINGTON	31	16	37	6	23	-1	T	-.6	T	.1	12	30.0	93	82	56	0	7	2	0
VA NORFOLK	47	37	58	28	42	-3	1.9	1.2	1.6	2.0	170	46.1	107	77	50	0	1	3	1
RICHMOND	46	30	54	23	38	-3	1.4	.6	1.1	1.4	105	40.3	96	85	47	0	5	3	1
ROANOKE	41	26	47	15	34	-6	.8	.2	.8	.8	74	41.1	110	76	48	0	5	1	1
WA QUILLAYUTE	43	35	47	29	39	-2	2.1	-1.9	1.3	2.2	33	82.8	86	96	77	0	1	7	1
SEATTLE-TACOMA	43	35	47	32	39	-2	1.9	.5	1.2	1.9	79	30.7	88	91	61	0	1	5	1
SPOKANE	32	19	39	3	26	-4	.4	-.2	.3	.4	42	12.8	85	96	78	0	7	3	0
YAKIMA	33	16	42	9	25	-8	1.0	.7	.6	1.0	217	6.9	99	95	71	0	7	4	1
WV BECKLEY	32	23	36	10	28	-7	.9	.2	.5	1.4	121	35.5	88	92	71	0	7	5	0
CHARLESTON	36	28	42	15	32	-6	.9	.2	.5	1.4	116	38.0	94	94	67	0	5	5	0
HUNTINGTON	37	29	42	15	33	-6	.9	.2	.6	1.2	102	35.9	92	91	68	0	5	3	1
PARKERSBURG	36	29	40	15	32	-5	.8	.2	.8	1.1	104	33.9	94	88	64	0	4	4	1
WI GREEN BAY	32	16	39	6	24	1	.4	.1	.2	.7	125	28.8	107	95	71	0	7	2	0
LACROSSE	31	23	37	12	27	3	.1	-.2	.1	.5	104	30.9	105	91	74	0	7	2	0
MADISON	31	18	39	11	25	0	.5	.1	.2	.5	83	30.3	102	89	70	0	7	3	0
MILWAUKEE	33	25	41	16	29	2	.4	.0	.2	.5	68	32.1	108	90	71	0	6	3	0
WAUSAU	30	16	34	6	23	2	.1	-.2	.1	.2	44	31.9	103	97	78	0	7	2	0
WY CASPER	38	23	49	19	30	4	.3	.1	.3	.4	211	8.9	82	77	56	0	7	1	0
CHEYENNE	40	22	54	16	31	1	T	.0	T	.3	179	12.7	97	71	40	0	7	1	0
LANDER	33	10	48	-7	21	-3	.3	.2	.3	.6	281	12.9	102	82	52	0	7	1	0
SHERIDAN	32	11	39	-3	21	-5	.4	.2	.2	.6	214	14.4	99	85	55	0	7	2	0

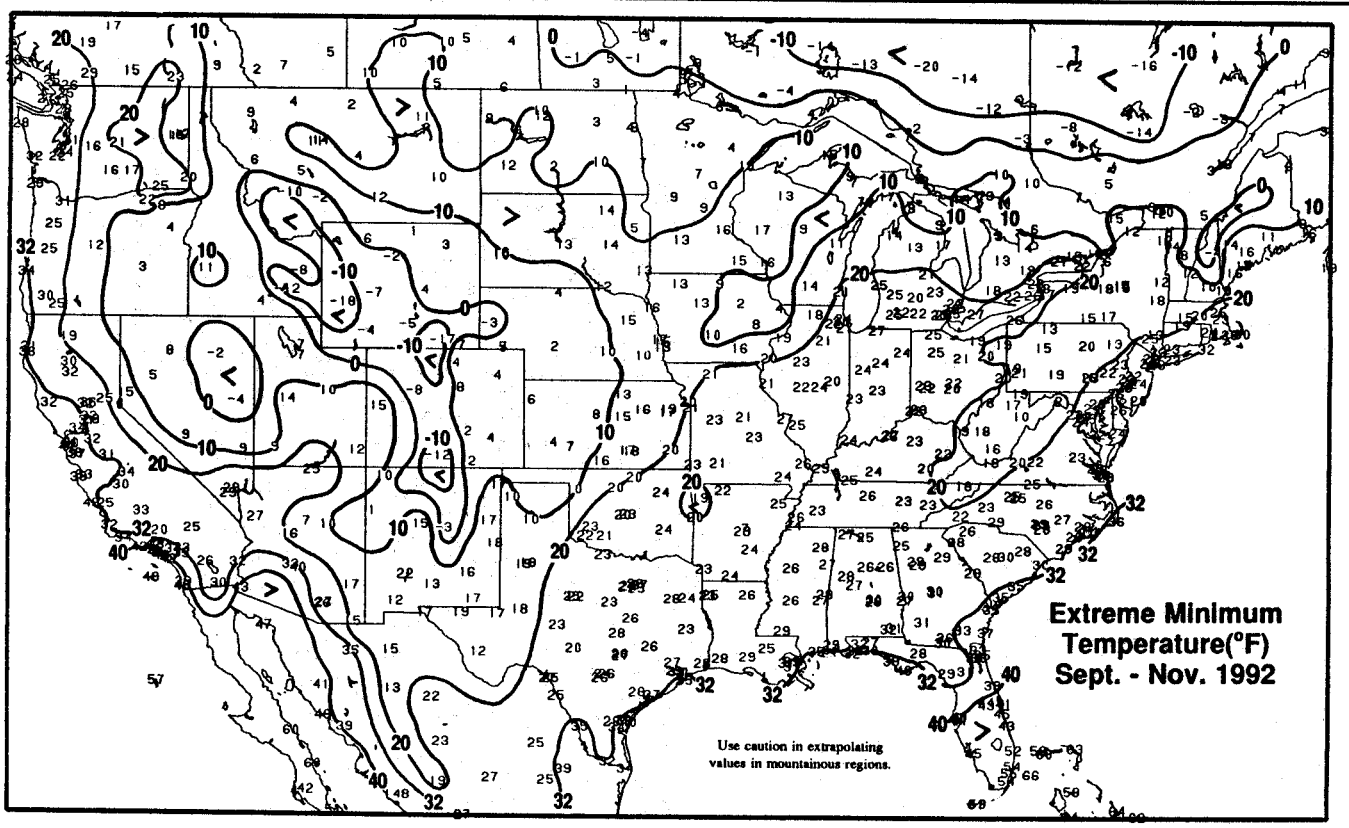
Based on 1951-80 normals.

HEATING DEGREE DAYS (Base 65° F)
December 6 - 12, 1992

(Cumulative totals and departures from normal are for the period July 1 - December 12, 1992)

STATES AND STATIONS	WEEKLY TOTAL	WEEKLY DEPARTURE	CUMULATIVE TOTAL	CUMULATIVE DEPARTURE	CUMULATIVE DEP. from '91
AL BIRMINGHAM	175	47	804	59	86
MOBILE	90	13	452	57	-35
MONTGOMERY	136	30	612	43	15
AK ANCHORAGE	335	-17	3814	-14	220
BARROW	545	6	7192	47	-58
FAIRBANKS	513	1	5111	158	247
JUNEAU	214	-42	2967	-239	-83
KODIAK	275	27	3231	40	253
NOME	450	30	5339	423	1043
AZ FLAGSTAFF	254	14	2068	-90	183
PHOENIX	68	-9	235	-66	06
PRESCOTT	188	-1	1165	-155	-11
TUCSON	93	7	408	33	45
WINSLOW	294	76	1500	191	71
YUMA	47	-14	174	-23	32
AR FORT SMITH	173	16	904	31	37
LITTLE ROCK	166	23	827	33	41
CA BAKERSFIELD	84	-28	423	-80	-119
EUREKA	101	-11	1304	-396	-186
FRESNO	100	-31	506	-157	-64
LOS ANGELES	61	5	165	-178	-19
REDDING	125	2	580	-64	43
SACRAMENTO	109	-21	550	-112	-1
SAN DIEGO	58	8	153	-87	-9
SAN FRANCISCO	82	-24	521	-390	-105
STOCKTON	102	-28	506	-137	-55
CO DENVER	253	14	1831	121	-9
GRAND JCT.	260	15	1546	-17	-22
PUEBLO	230	14	1893	349	120
CT BRIDGEPORT	219	16	1407	152	224
HARTFORD	254	16	1782	185	322
DE WILMINGTON	190	-5	1276	52	179
DC WASHINGTON	181	9	1130	145	225
FL APALACHICOLA	76	11	276	-7	-48
DAYTONA BEACH	45	3	163	9	25
FORT MYERS	11	-10	43	-15	-4
JACKSONVILLE	88	20	328	26	33
KEY WEST	0	-4	0	-6	00
MIAMI	8	1	10	-6	02
ORLANDO	38	8	119	20	14
TALLAHASSEE	88	9	399	21	-16
TAMPA	30	-5	122	2	05
W. PALM BEACH	15	1	31	3	02
GA ATLANTA	186	50	812	55	151
AUGUSTA	163	43	672	28	41
MACON	162	54	667	103	113
SAVANNAH	133	41	462	13	75
ID BOISE	236	14	1852	154	219
LEWISTON	224	21	1641	-9	154
POCATELLO	265	6	2267	171	191
IL CHICAGO	256	11	1869	252	60
MOLINE	265	12	1862	211	23
PEORIA	251	6	1681	86	-49
QUINCY	252	22	1669	212	41
ROCKFORD	278	13	2036	224	78
SPRINGFIELD	237	13	1460	44	-79
IN EVANSVILLE	222	29	1199	-18	-39
FORT WAYNE	245	7	1726	93	80
INDIANAPOLIS	233	11	1512	54	92
SOUTH BEND	246	8	1769	140	64
IA DES MOINES	248	-10	1869	210	-99
DUBUQUE	276	-3	2257	313	75
SIOUX CITY	265	-9	2034	217	-156
WATERLOO	266	-19	2132	127	-143
KS CONCORDIA	214	-11	1675	238	51
DODGE CITY	242	35	1648	330	117
GOODLAND	269	35	1972	262	245
TOPEKA	204	-13	1484	110	06
WICHITA	208	6	1302	85	-56
KY BOWLING GREEN	211	33	1196	67	86
LEXINGTON	231	39	1329	80	111
LOUISVILLE	211	28	1136	-20	62
LA BATON ROUGE	97	18	458	62	20
LAKE CHARLES	90	19	421	51	07
NEW ORLEANS	76	8	365	35	-51
SHREVEPORT	132	25	638	92	57
ME CARIBOU	343	15	2788	-2	137
PORTLAND	272	12	2071	47	203
MD BALTIMORE	187	-2	1244	79	113
SALISBURY	185	12	1165	84	157
MA BOSTON	238	31	1574	222	292
CHATHAM	208	12	1522	81	264
MI ALPENA	250	-26	2543	231	265
DETROIT	227	-16	1793	74	167
FLINT	234	-16	1998	150	127
GRAND RAPIDS	246	-5	2016	198	136
HOUGHTON LAKE	260	-20	2420	114	139
LANSING	240	-12	2126	287	178
MARQUETTE	291	-24	3088	331	86
MUSKEGON	241	-4	1981	182	134
SAULT ST MARIE	264	-37	2879	270	288
MN ALEXANDRIA	297	-37	2627	131	-156
DULUTH	295	-45	3033	195	-153
INT'L FALLS	318	-58	3171	102	-141
MINNEAPOLIS	261	-40	2280	149	-279
ROCHESTER	278	-29	2508	277	-181
SAINT CLOUD	290	-38	2635	162	-176
MS GREENWOOD	157	34	688	-14	35
JACKSON	142	34	645	51	40
MERIDIAN	145	34	636	-8	19
MO CAPE GIRARDEAU	213	23	1190	68	69
COLUMBIA	219	9	1475	156	47
KANSAS CITY	203	-14	1498	180	-41
SAINT LOUIS	218	16	1238	-10	36
SPRINGFIELD	201	11	1257	57	32
MT BILLINGS	236	-16	2083	18	-16
GLASGOW	274	-43	2476	-53	-39
GREAT FALLS	235	-25	2412	148	124
HAVRE	276	-30	2575	46	91
HELENA	303	26	2521	5	219
KALISPELL	304	29	2723	-2	132
MILES CITY	257	-31	2138	-110	-117
MISSOULA	324	53	2598	100	353
NE GRAND ISLAND	256	4	1946	188	17
LINCOLN	252	0	1812	147	-39
NORFOLK	256	-15	1988	89	-132
NORTH PLATTE	262	0	2098	124	100
OMAHA	229	-18	1800	208	-130
SCOTTSBLUFF	295	45	2194	253	215
VALENTINE	261	-13	2254	200	24
NV ELY	245	-20	2223	-80	17
LAS VEGAS	127	-3	600	-26	16
RENO	196	-25	1446	-392	134
WINNEMUCCA	204	-32	1864	-93	188
NH CONCORD	289	19	2227	177	339
NJ ATLANTIC CITY	203	10	1389	161	206
NM ALBUQUERQUE	235	36	1266	48	94
CLOVIS	177	4	1177	62	-111
ROSWELL	169	17	934	49	-73
NY ALBANY	274	19	1991	176	288
BINGHAMTON	286	27	2276	311	492
BUFFALO	252	12	1904	168	247
NEW YORK	211	22	1229	98	271
ROCHESTER	268	30	2024	312	295
SYRACUSE	272	30	1976	247	308
NC ASHEVILLE	232	60	1289	100	174
CAPE HATTERAS	133	26	487	-41	94
CHARLOTTE	189	39	861	8	175
GREENSBORO	210	45	1129	126	238
NEW BERN	156	29	667	-8	115
RALEIGH-DURHAM	180	27	957	56	158
WILMINGTON	151	42	621	51	65
ND BISMARCK	300	-28	2674	118	-66
FARGO	327	-18	2703	148	-121
GRAND FORKS	337	-18	2823	60	-188
WILLISTON	308	-23	2793	139	55
OH AKRON-CANTON	247	16	1833	219	242
CLEVELAND	235	11	1701	131	216
COLUMBUS	229	11	1525	36	106
CINCINNATI	232	26	1492	131	165
DAYTON	244	25	1601	136	107
TOLEDO	235	-10	1776	48	143
YOUNGSTOWN	250	14	1905	178	285
OK OKLAHOMA CITY	172	7	992	71	06
TULSA	190	26	1049	138	120
OR ASTORIA	164	17	1729	51	124
BURNS	284	28	2523	396	449
MEDFORD	162	-25	1130	-280	32
PENDLETON	234	38	1679	89	271
PORTLAND	180	18	1246	-143	183
SALEM	173	7	1296	-208	128
PA ALLENTOWN	230	8	1646	143	262
ERIE	226	-5	1623	-87	169
HARRISBURG	211	1	1490	128	204
PHILADELPHIA	194	-1	1185	-20	148
PITTSBURGH	241	18	1664	84	217
SCRANTON	245	10	1721	41	160
RI PROVIDENCE	238	21	1548	74	282
SC CHARLESTON	135	37	498	-2	67
COLUMBIA	170	49	743	81	106
FLORENCE	160	44	668	55	98
GREENVILLE	197	53	1026	194	223
SD ABERDEEN	300	-21	2523	179	-8
HURON	287	-16	2363	156	-36
RAPID CITY	251	-9	2212	151	18
SIOUX FALLS	274	-25	2271	134	-175
TN CHATTANOOGA	186	29	995	49	108
KNOXVILLE	209	51	1088	122	120
MEMPHIS	169	26	818	20	33
NASHVILLE	198	40	1000	31	39
TX ABILENE	108	-14	644	-17	-110
AMARILLO	190	11	1319	186	-5
AUSTIN	75	-7	407	13	-3
BEAUMONT	88	21	415	78	46
BROWNSVILLE	31	3	129	27	-22
CORPUS CHRISTI	42	0	216	17	-16
DEL RIO	69	-12	361	-2	-15
EL PASO	164	25	796	59	65
FORT WORTH	116	9	588	58	-30
GALVESTON	62	6	275	34	-2
HOUSTON	85	13	409	50	16
LUBBOCK	135	-22	920	-9	-122
MIDLAND-ODESSA	103	-24	730	30	-133
SAN ANGELO	91	-20	592	5	-123
SAN ANTONIO	73	-5	395	26	03
VICTORIA	60	-2	304	33	04
WACO	105	5	524	48	-1
WICHITA FALLS	141	4	761	15	-37
UT BLANDING	228	-11	1589	-130	98
CEDAR CITY	210	-19	1639	-42	-16
SALT LAKE CITY	219	-16	1692	66	124
VT BURLINGTON	290	10	2185	63	211
VA LYNCHBURG	210	32	1188	62	168
NORFOLK	159	18	800	19	106
RICHMOND	189	24	1063	60	203
ROANOKE	218	40	1281	137	264
WA COLVILLE	283	29	2363	70	267
QUILLAYUTE	180	14	1895	-111	99
SEATTLE-TACOMA	179	17	1401	-211	146
SPOKANE	273	30	2200	56	259
YAKIMA	281	56	1899	24	247
WV BECKLEY	259	50	----	--	---
CHARLESTON	230	44	1323	68	186
HUNTINGTON	224	38	1290	43	130
PARKERSBURG	228	34	1417	128	112
WI GREEN BAY	283	-9	2355	179	39
LA CROSSE	262	-24	2159	180	-188
MADISON	282	1	2170	108	-5
MILWAUKEE	250	-14	1944	70	95
WAUSAU	295	-14	2598	248	-55
WY CASPER	241	-26	2159	-92	-91
CHEYENNE	235	-8	2258	99	58
LANDER	304	21	2354	-18	09
SHERIDAN	305	35	2384	57	85

Based on 1951-80 normals.



The coldest autumn airmasses plunged southward through the Rockies, sparing much of the East from unusual cold. After Springfield, IL, attained its earliest sub-20°F reading on record on October 19, temperatures remained above 20°F until December 5. Western valleys from the Snake River Plain in Idaho to the San Luis Valley in Colorado and New Mexico endured the most extreme cold, especially in November after snow cover became established. But farther north and east, frequent downslope (westerly) winds kept minimum temperatures above normal in the northern Plains. For example, the extreme minimum reading of 11°F in Glasgow, MT, was warmer than the value of 10°F in Amarillo, TX.

Autumn Weather Review

HIGHLIGHTS: Most of the Corn Belt enjoyed 7 weeks of freeze-free weather to start autumn, helping late-developing crops to mature. However, persistent November precipitation caused considerable harvest delays in the Midwest and the Southeast. By the end of November, 25 percent of the corn and 19 percent of the cotton remained in the fields. Farther west, California entered a potential 7th year of drought by notching its 10th driest autumn since 1895. An otherwise dry weather pattern in California was broken only by late-October storms.

SEPTEMBER: The 49th and 50th States grabbed weather headlines as a brutal cold snap hit Alaska, and Hurricane "Iniki" devastated Kauai, HI. Fairbanks, AK, had its coldest September since 1908, and endured more than 2 feet of snow. Hurricane "Iniki" tore across Kauai Island on September 11 with 130 miles per hour sustained winds, damaging crops and buildings. "Iniki" was the strongest hurricane to strike Hawaii since the National Weather Service opened offices there during World War II.

In the conterminous States, little rain fell on the West, while damp, cool conditions carried over from the summer east of the Rockies. Locally excessive rain caused flash flooding from eastern Oklahoma to Wisconsin. On the night of September 14-15, Thayer, IA, reported 16 inches. Farther north, the Dakotas, Minnesota, Wisconsin, and northern Iowa were nipped by a late-month freeze. St. Cloud, MN, registered 22°F on September 29. Along the east coast, Tropical Storm "Danielle" caused minor damage as it moved ashore in eastern Virginia on September 25. A few days later, a tropical depression, which was later upgraded to Tropical Storm "Earl," caused coastal flooding and beach erosion along the southern Atlantic coast.

OCTOBER: Long stretches of favorable fieldwork and harvest weather were interrupted by occasional, but intense, storms. Separate storms pulled sub-freezing cold into the southern Plains on October 8, and ended the growing season across the eastern Corn Belt on October 19.

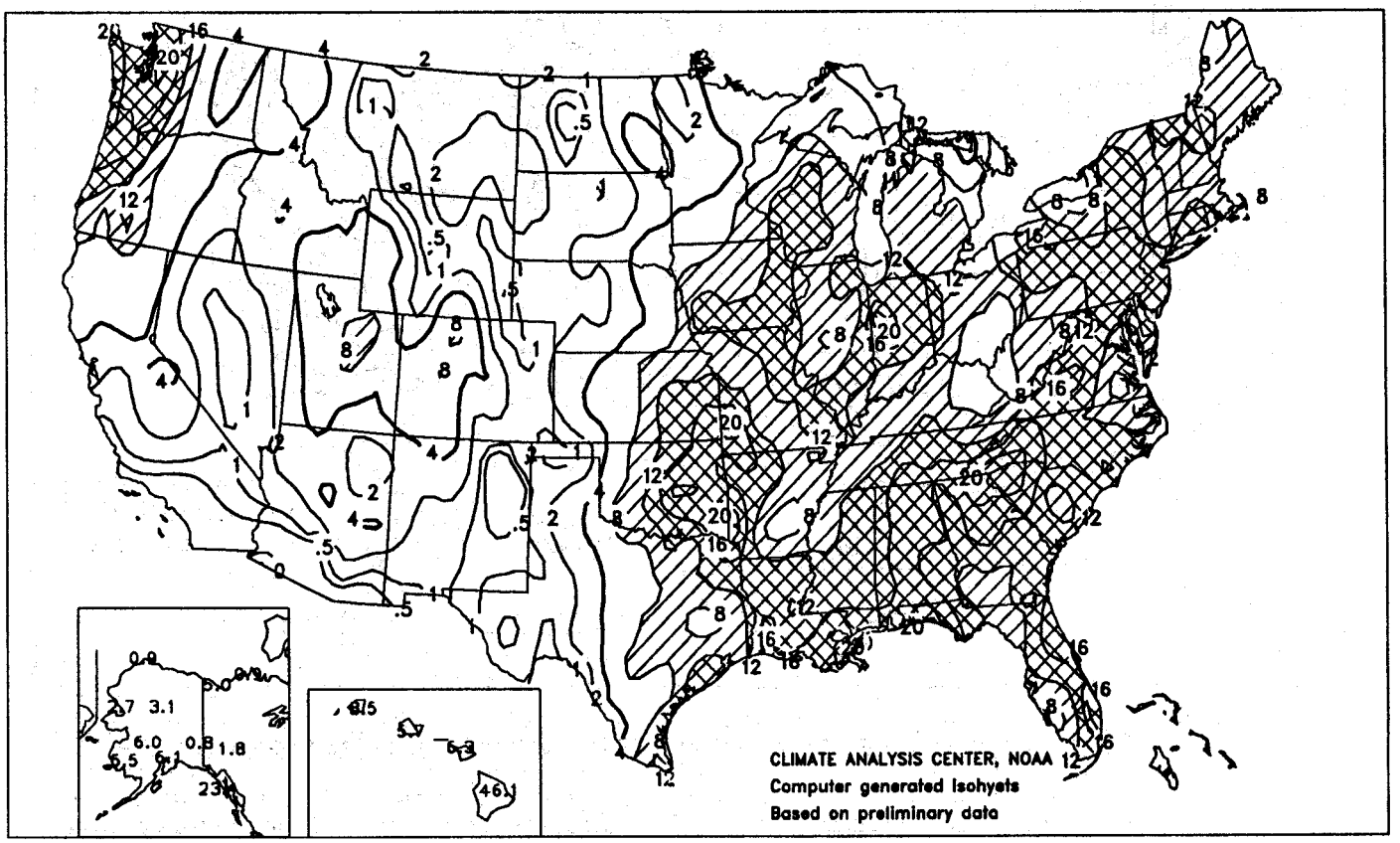
The first storm lowered temperatures to 27°F as far south as Dalhart, TX, and produced heavy rain and wet snow in the east-central Plains and western Corn Belt. It also caused flash flooding in South Carolina. An early-month storm had already lashed the Southeast with heavy rain, high winds, and coastal beach erosion from October 2-4. Farther west, the first significant rains of the season arrived in California on October 20 and 29-30.

NOVEMBER: Six major storms followed similar tracks, blanketing the Intermountain West with snow, and drenching the Midwest and the Southeast. However, the storms bypassed California, which received only 20 percent of its normal monthly precipitation.

The series of storms built snowpack in the upper Colorado River Valley and eroded an area of dryness in the southern High Plains. But they also hampered the corn harvest, and to a lesser degree, the Southeast's cotton harvest. The fifth storm raked the Gulf Coast States and lower Ohio Valley with dozens of tornadoes on November 21 and 22. A few days later, the sixth storm buried the central Rockies with up to 4 feet of snow, and left a streak of heavy snow from northern Texas to Wisconsin. It also dragged sub-freezing cold as far south as the lower Rio Grande Valley of southern Texas.

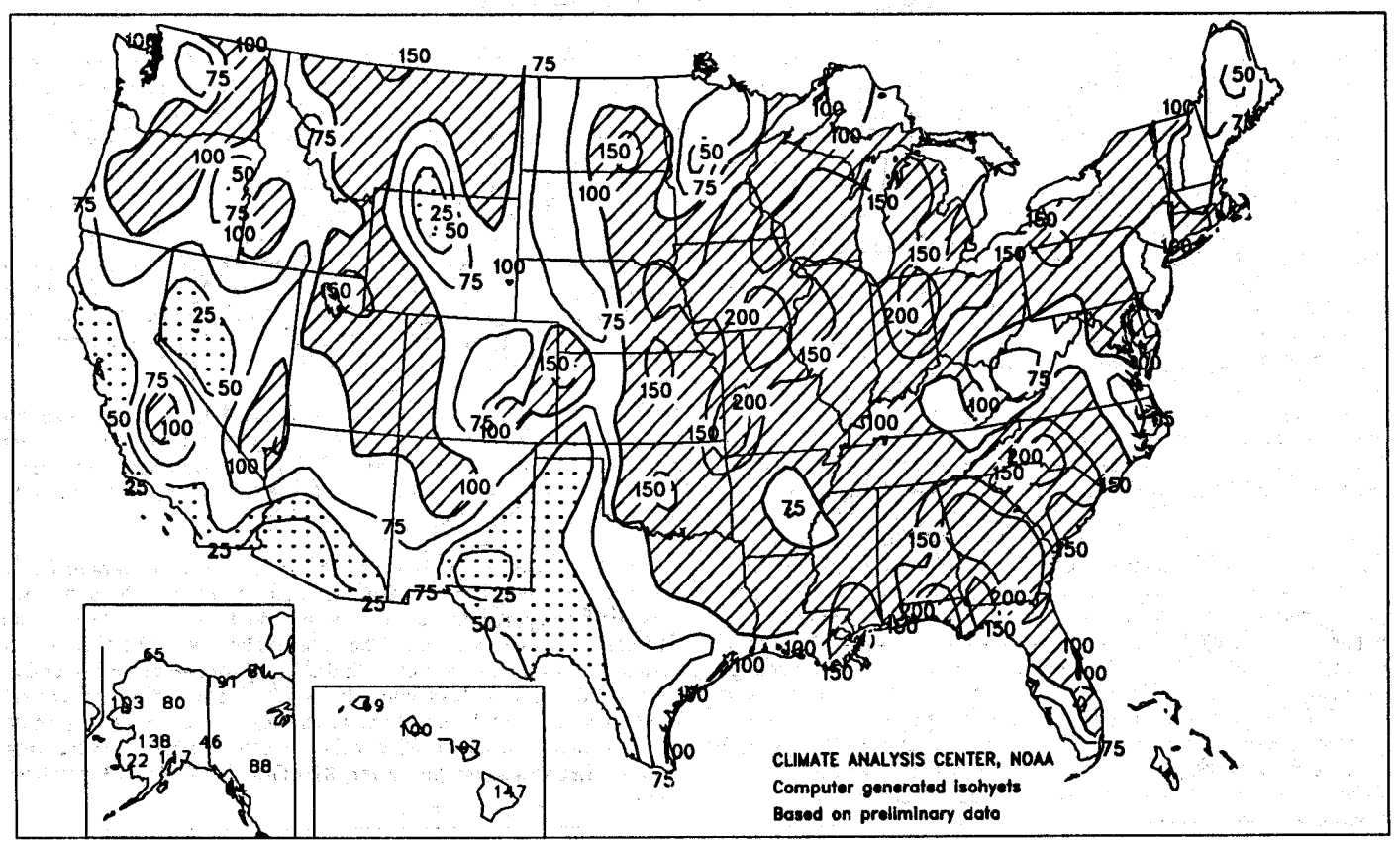
FALL TOTAL PRECIPITATION (inches)

SEP-NOV 1992



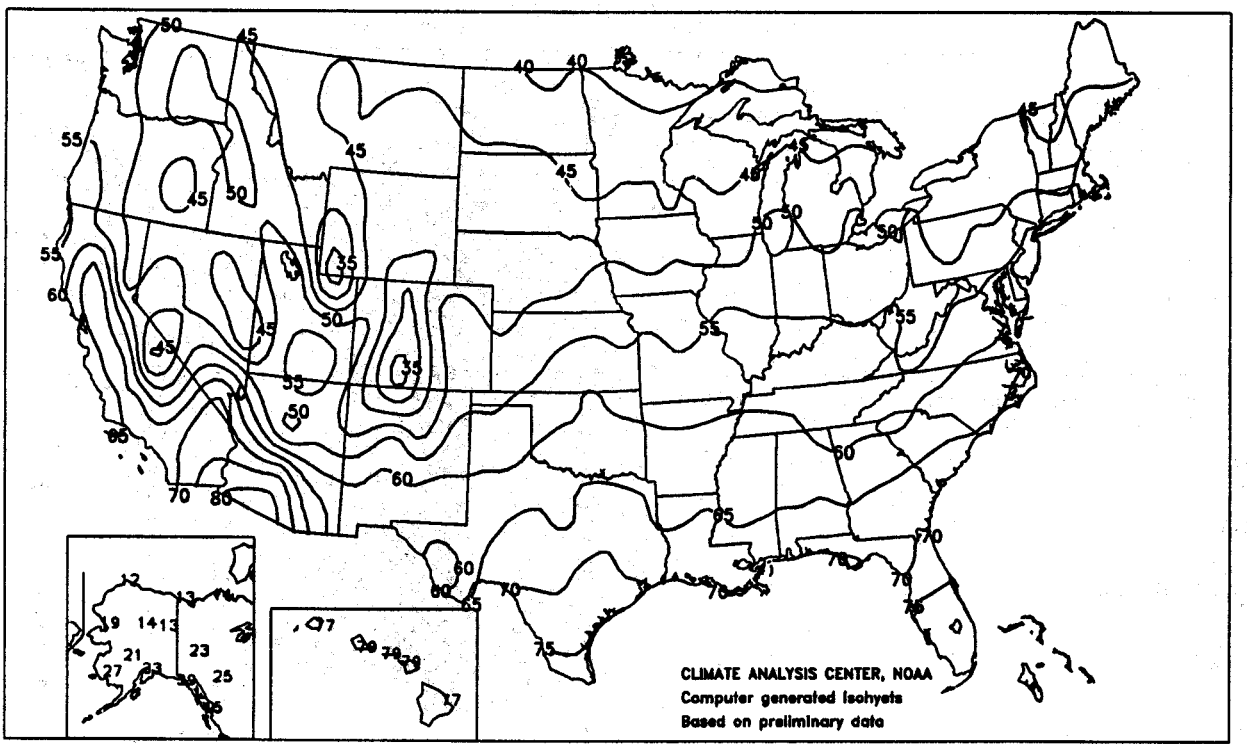
FALL PERCENT OF NORMAL PRECIPITATION

SEP-NOV 1992



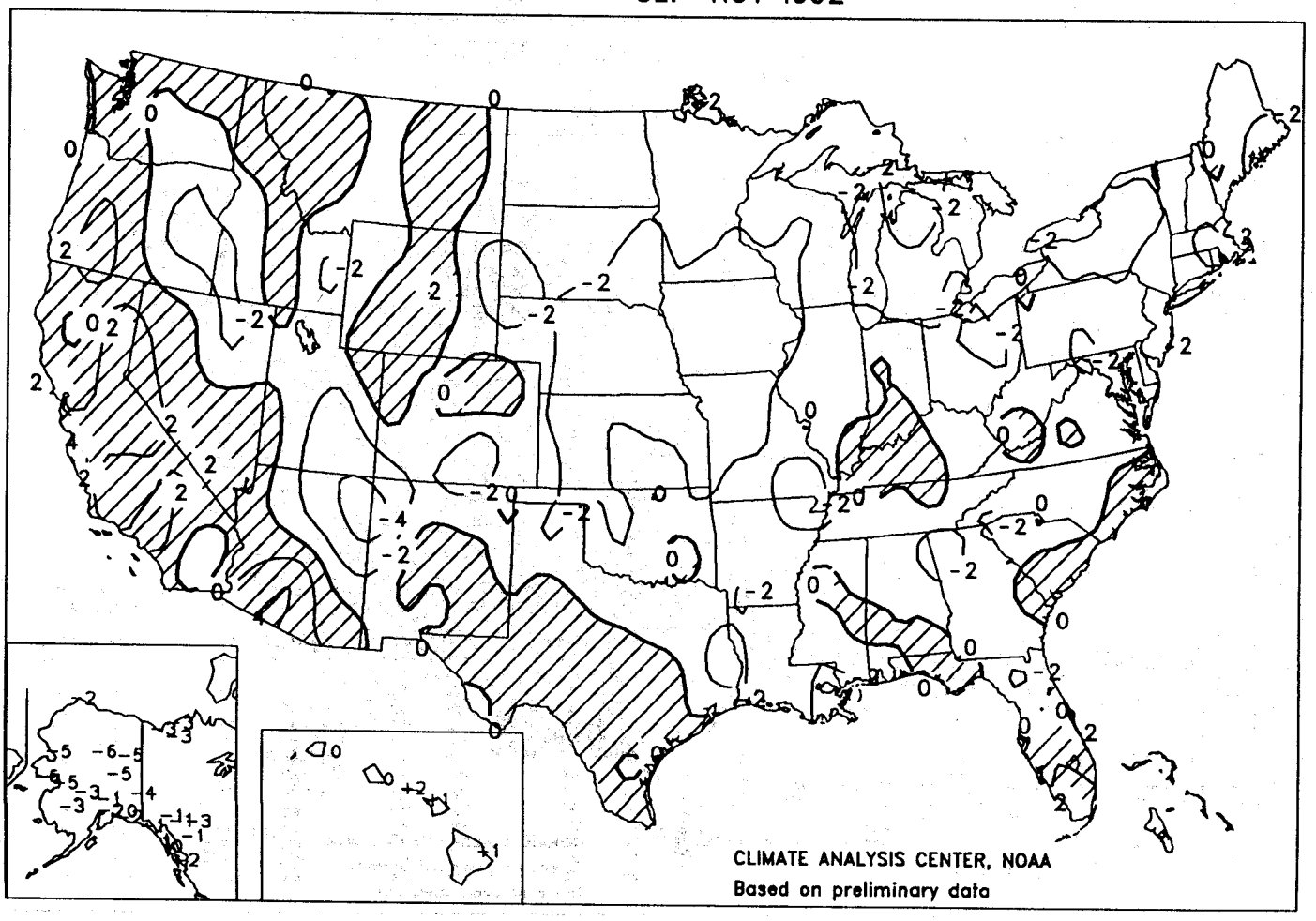
FALL Average Temperature(°F)

SEP-NOV 1992



FALL Departure from Normal Average Temperature(°F)

SEP-NOV 1992



Autumn Weather in Historical Perspective

The autumn of 1992 was cooler than normal with near-normal precipitation in the contiguous United States. A cold November offset near-normal temperatures in September and October to yield the 30th coldest autumn since 1895 (table 1). The national average temperature of 53.6°F was about 0.5°F below normal (fig. 1). Similarly, a wet November offset below-normal precipitation in September and October, resulting in the 46th wettest autumn in the past 98 years (fig. 2).

Regional temperature extremes were headed by the West (19th warmest autumn) and the Northeast (17th coldest). California was the warmest-ranking State (11th warmest), while Massachusetts (6th coldest) and Connecticut (9th coldest) were the coldest-ranking States (table 2).

The West also reigned as the driest-ranking region (11th driest autumn), while the Southeast slogged through its 9th wettest autumn on record. California received less than 50 percent of its usual autumn precipitation allotment (fig. 3) en route to its 10th driest autumn. Meanwhile, three States--Alabama, Georgia, and Iowa--logged their 10th wettest, or wetter, autumn on record (table 3).

TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR SEP-NOV 1992, BASED ON THE PERIOD 1895-1992. 1 = DRIEST/COLDEST, 98 = WETTEST/HOTTEST.

REGION	PRECIPITATION	TEMPERATURE
NATIONAL	53	30
NORTHEAST	52	17
EAST NORTH CENTRAL	83	20
CENTRAL	79	23
SOUTHEAST	90	31
WEST NORTH CENTRAL	33	48
SOUTH	55	28
SOUTHWEST	23	49
NORTHWEST	27	45
WEST	11	80

TABLE 2. TEMPERATURE RANKINGS FOR SEP-NOV 1992, BASED ON THE PERIOD 1895 TO 1992. 1 = COLDEST, 98 = WARMEST.

STATE	RANK	STATE	RANK	STATE	RANK	STATE	RANK
AL	21	IA	20	NE	18	RI	31
AZ	80	KS	14	NV	67	SC	13
AR	15	KY	24	NH	26	SD	32
CA	88	LA	21	NJ	38	TN	27
CO	33	ME	18	NM	28	TX	37
CT	9	MD	21	NY	15	UT	50
DE	16	MA	6	NC	40	VT	35
FL	67	MI	14	ND	40	VA	33
GA	29	MN	28	OH	22	WA	44
ID	43	MS	23	OK	26	WV	35
IL	28	MO	18	OR	45	WI	24
IN	36	MT	58	PA	22	WY	64

Figure 1

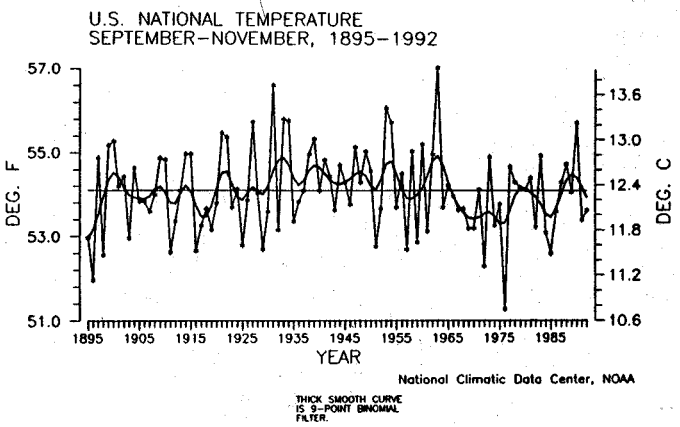


Figure 2

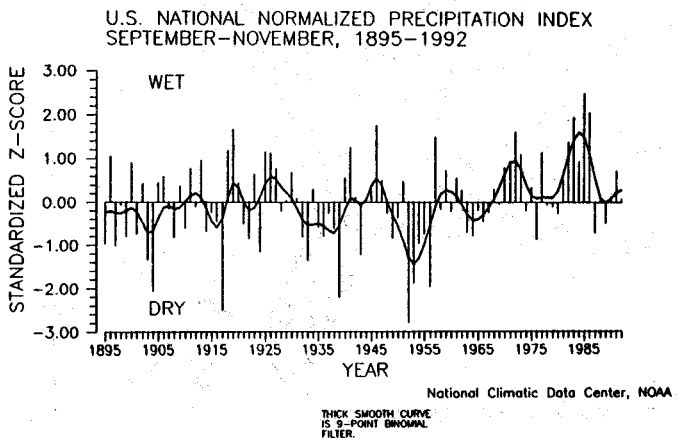


Figure 3

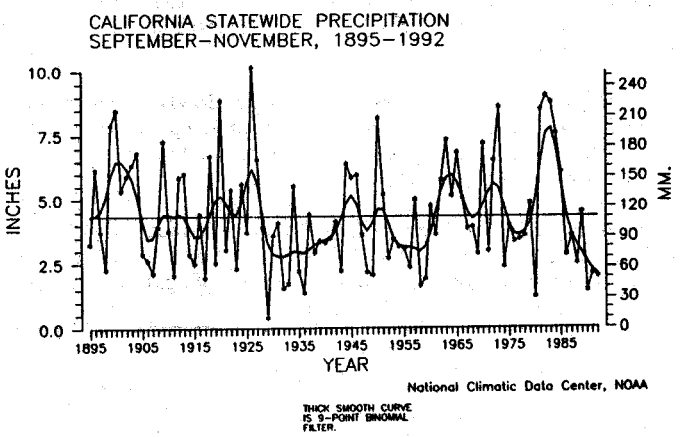


TABLE 3. PRECIPITATION RANKINGS FOR SEP-NOV 1992, BASED ON THE PERIOD 1895 TO 1992. 1 = DRIEST, 98 = WETTEST.

STATE	RANK	STATE	RANK	STATE	RANK	STATE	RANK
AL	91	IA	93	NE	53	RI	61
AZ	35	KS	72	NV	17	SC	84
AR	50	KY	50	NH	39	SD	48
CA	10	LA	76	NJ	39	TN	73
CO	37	ME	25	NM	18	TX	35
CT	44	MD	60	NY	73	UT	42
DE	44	MA	35	NC	80	VT	54
FL	53	MI	86	ND	33	VA	61
GA	93	MN	47	OH	70	WA	33
ID	41	MS	83	OK	75	WV	16
IL	87	MO	83	OR	21	WI	85
IN	88	MT	35	PA	64	WY	15

National Agricultural Summary

December 7 - 13, 1992

HIGHLIGHTS: A storm early in the week brought welcomed precipitation to the Pacific coast. By midweek, this storm had moved to the central and eastern parts of the country, ending harvest activities there for the rest of the week. At week's end, another Pacific storm had moved across the country, and brought still more rain and snow to many areas of the Nation.

SMALL GRAINS: The winter wheat crop was reported in generally good condition across the Southeast. More snow cover was needed for the crop in Montana, while most winter wheat in Washington enjoyed good cover. Weather conditions in North Dakota had left the crop in generally good condition. In Texas, insect problems were in the Blacklands and disease problems were in the Cross Timbers area. Barley, oats, and rye were in generally good condition nationwide.

CORN: Corn harvest advanced slowly as wet conditions and snow continued to hamper progress. Harvest was 88 percent (%) complete in the 17 major producing States, compared with 100% last year and the 5-year average. Harvest advanced in the Midwest the first part of the week. A midweek storm, which brought rain and snow to the region, halted harvest for the rest of the period. Quality of the unharvested crop was becoming a concern to producers.

SOYBEANS: Soybeans continued being harvested in the Southeast, but was delayed by wet fields and rain. Harvest was nearly 70% completed in South Carolina, almost 80% finished in North Carolina and 90% completed in Georgia. Quality was declining in the unharvested fields of Georgia.

COTTON: Cotton harvest was 90% complete nationally, 3% ahead of last year but 3% behind the 5-year average. Rain across the South delayed harvest, which allowed that region to fall behind the 5-year average. Quality concerns for unharvested fields were reported in Georgia.

SORGHUM: Sorghum harvest advanced slowly in the major producing areas as rain and snow continued to be a problem. Muddy fields impeded progress in Kansas. In Nebraska, the standing crop was in good condition.

OTHER FIELD CROPS: Hay harvest remained light in all regions of Arizona. Sunflower harvest advanced slowly in North Dakota as wet grain continued to be a problem. Sugarcane harvest and planting continued in Florida, while muddy fields remained an obstacle to harvest in Louisiana. Tobacco seedbeds were being prepared in Florida and Georgia.

FRUIT AND NUTS: The citrus harvests remained active in central and western Arizona, Florida, and California. Citrus groves, trees, and fruit continued in near excellent condition in Florida. Producers in California and Florida prepared orchards for possible cold weather. The orange harvest advanced in California and Florida. Dates, avocados, and persimmons were harvested in California, while the early tangerine harvest neared completion in Florida. The pecan harvest continued across the Southwest and South. Few harvest delays were reported due to rain in Texas.

VEGETABLES: Favorable growing conditions remained in the major vegetable areas of Florida, though some light frost was in the central areas. Broccoli harvest advanced in western and central Arizona and in California. Cabbage harvest remained active in Arizona, California, Florida, Georgia, and Texas. Cauliflower harvest was light in Salinas-Watsonville and moderate in the Santa Maria area of California. Celery harvest was moderate, with good quality in the Salinas-Watsonville area, and moderate, with variable quality in the Santa Maria area. Lettuce plants in the Westside area of California have started to emerge. The strawberry harvest was gaining momentum in Florida.

PASTURES AND LIVESTOCK: Pasture conditions in California improved as rain fell over most of the State. Pastures elsewhere in the Nation remained in fair to good condition. Moisture in the Northwest improved livestock water supplies. Cattle continued to graze on stubble in the Plains States as conditions permitted. Normal to below-normal death losses were reported for Iowa livestock. Cattle losses from blizzard-like conditions earlier in the month, continued to rise in Texas. Elsewhere, cattle were in generally good condition. Supplemental feeding increased, especially in the areas where the weather turned colder. A large supply of livestock feed exists in Minnesota, due to low test weight and high-moisture corn.

Crop Progress

for the Week Ending December 13, 1992

CORN
(Percent Harvested)

	Current	Last Wk	1991	Avg.
CO	89	88	100	100
GA	100	100	100	100
IL	91	88	100	100
IN	89	79	100	100
IA	91	85	100	100
KS	97	95	100	100
KY	100	99	100	100
MI	50	40	100	99
MN	95	92	99	99
MO	90	85	100	100
NE	92	84	100	100
NC	100	100	100	100
OH	85	75	100	100
PA	72	65	100	98
SD	82	77	100	100
TX	100	100	100	100
WI	61	59	100	100
17 States	88	83	100	100

These 17 States produced 94% of the 1991 corn crop.

COTTON
(Percent Harvested)

	Current	Last Wk	1991	Avg.
AL	92	90	99	99
AZ	100	99	99	98
AR	100	99	100	100
CA	99	99	99	99
GA	86	83	98	97
LA	100	100	100	100
MS	100	100	100	100
MO	99	97	100	100
NM	90	78	84	80
NC	79	71	95	98
OK	55	53	46	61
SC	89	86	99	100
TN	98	97	100	100
TX	84	80	75	87
14 States	90	88	87	93

These 14 States produced 99% of the 1991 cotton crop.

This is the last compilation of national crop progress statistics for the 1992 crop year. Presentation of this data will resume in early April of 1993. For information on those States that have a significant amount of corn, cotton, or grain sorghum unharvested, please consult the "State Summaries of Weather and Agriculture," which will continue to be published in the *Weekly Weather and Crop Bulletin.*

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 0.15 to 1.78 in. north; 0.24 to 0.89 in. central; 0.59 to 1.57 in. south. Temperatures 3 to 8° below normal north; 4 to 8° below normal central; 2 to 6° below normal south; lows 22 to 31° north; 21 to 31° central; 26 to 37° south. Highs 46 to 58° north; 53 to 62° central; 61 to 70° south.

Days suitable for fieldwork 2.4. Soil moisture 27% adequate, 73% surplus. Winter wheat 89% seeded, 93% 1991, 93% avg. Pasture 2% very poor, 14% poor, 35% fair, 41% good, 8% excellent. Livestock 30% fair, 59% good, 11% excellent. Primary activities: Harvesting cotton, soybeans, timber; planting small grains; marketing cattle; maintaining farm records, equipment; repairing machinery, fences; general care of livestock, poultry, catfish.

ARIZONA: Storm systems early, late week brought rain lower elevations, snow higher elevations. Largest rainfall 1.34 in. Buckeye. Temperatures 1° above to 11° below normal. Extremes 4°; 71° higher elevations, 30°; 71° deserts.

Cotton harvested 100%, 100% 1991, 98% avg.; stalk shredding, plowdown slowed by wet weather. Alfalfa mostly good; harvest, light all areas. Small grains planted 60%, 60% 1991, 53% avg.; stands established 42%, 45% 1991, 27% avg.; field preparations limited. Fruit, vegetable harvest active. Broccoli, cabbage, green onions, lettuce, napa, spinach available western, central areas. Also available west: Cauliflower, escarole, endive. Squash, sweet corn, leeks available, central. Citrus harvest active central, western areas. Pecan harvest active.

ARKANSAS: Temperatures below normal, rain statewide, middle of week. Extremes 19°; 68°. Rainfall 0.57 to 1.43 in.

Days suitable for fieldwork 2.0. Soil moisture adequate to surplus. Main farming activities: Harvesting cotton, planting wheat, oats, marketing calves, working cattle. Wheat planted 100%, 100% 1991, 100% avg. Cotton harvest complete. As of December 10, the cotton classing office reported 1,526,561 bales of Arkansas cotton had been classed. Livestock good. Pastures good. Pastures were supplying average forage for herds.

CALIFORNIA: Low pressure allowed series of systems into State bringing moisture all zones. Many areas climbed above normal season to date totals. Snow fell at 4000 foot level. Temperatures near or below normal.

Field activities virtual standstill, general rains. Rice stubble burning halted until soils dry. Few fields cotton standing for harvest. Plowdown for pink bollworm control slowed considerably, wet conditions. Most growers in compliance plowdown regulations. Ground preparation next year's crop ongoing. Dryland small grains, winter forages excellent growth following rains. Seedbed preparation, seeding barley, oats, wheat underway, limited areas. Stone fruit, nut, grape growers continued weed spraying, pruning. Navel orange harvest continued. Orange growers prepared groves possibility frost. Granny Smith, Fuji apples packed. Dates, avocados, persimmons being harvested. Strawberry plantings progressing Riverside. Fall potato storage Tulelake moderate, good. Broccoli movement moderate, quality variable Salinas-Watsonville, Santa Maria. Cauliflower shipments fairly light, variable quality Salinas-Watsonville; moderate Santa Maria. Celery harvesting moderate, generally good quality Salinas-Watsonville; moderate volume, variable quality Santa Maria. Fall lettuce harvest almost complete Westside. Spring lettuce seedlings Westside emerging. Broccoli, freezer cabbage continued. Sweet potato harvest ended Merced. Modesto land preparation peas, spinach. Palo Verde cabbage, head lettuce, broccoli, oriental vegetables, spinach harvested. Coachella Valley head lettuce harvested. Other vegetables harvested: Leaf lettuce, radishes, beets, turnips. Rangeland, pasture conditions improved. Overall good to poor. Rain or snow all areas. Runoff light to moderate. Supplemental feeding active, movement light. Lambing active. Sheep grazed alfalfa.

COLORADO: Storm on the 6th dropped up to 6 in. of snow in the east. State was cold early in the week, warming was felt in most areas later in the week. Snow developed over most of southern, eastern areas on the 12th. Accumulations of up to 6 in. occurred at lower elevations; 6 to 8 in. of snow fell over the southern mountains.

Limited progress made in harvest of late season row crops. Care, feeding of livestock was main activity.

FLORIDA: Temperatures 3 to 7° below normal north, 2 to 5° below normal central, near to slightly below normal south. Lows occurred over weekend, upper 20s to low 30s north, mid, upper 30s central; interior south, 40s lower southeast coast. Scattered frost colder locations central areas. Highs mid 60s to near 70 Panhandle, low 80s southern areas. Rain 1.00 to 1.50 in. northwest areas, 0.50 to 1.00 in. elsewhere, except little to none extreme southern areas.

Soil moisture mostly adequate to surplus Panhandle, short to adequate Peninsula. Cotton, soybean harvest virtually complete. Winter wheat for grain planting winding down. Sugarcane harvest, planting active. Starting tobacco plant bed preparation. Citrus groves, trees very good to excellent condition. Some rain most areas. Coldest temperatures of the season this week. Early orange harvest for processing increasing. Grapefruit movement active on lower east coast. Early tangerine harvest almost over. Dancy tangerine movement increasing. Caretakers clean cutting cover crops, placing cold protection around young trees. Growing conditions generally good over major vegetable growing areas. Some patchy frost central area locations over weekend. West central, southwest areas received some needed rain. Strawberry harvest pace increasing at Plant City. Volume leaders: Tomatoes, peppers, cucumbers, squash, snap beans.

Also available: Cabbage, carrots, celery, sweet corn, eggplant, escarole, iceberg lettuce, specialty lettuces, radishes, strawberries, cherry tomatoes. State's pastures poor to excellent. Pasture 20% poor, 35% fair, 40% good, 5% excellent. Moisture levels mostly short to adequate. State's cattle herds mostly good.

GEORGIA: Temperatures 4 to 9° below normal except southwest, 0 to 5° below. Warmest for week in mid 50s north, upper 50s to low 60s center, low 70s extreme south. Coolest readings low to mid 20s northeast mountains, upper 20s to low 30s elsewhere. Rained 2 days most stations. Rain 0.50 to 1.00 in. north, 1.00 to 1.75 in. south.

Days suitable for fieldwork 2.8. Soil moisture 37% adequate, 63% surplus. Cotton 2% very poor, 1% poor, 41% fair, 52% good, 4% excellent; 86% harvested, NA 1991 and avg.; quality decreasing. Boll rot reported few unharvested fields south. Sorghum 97% harvested for grain, NA 1991 and avg. Soybeans 14% poor, 46% fair, 40% good; 90% harvested, NA 1991 and avg.; Quality decreasing. Few reports soybeans rotting in fields south. Wheat 3% poor, 30% fair, 66% good, 1% excellent; 78% planted, NA 1991 and avg.; 64% emerged, NA 1991 and avg. Rye 97% planted, NA 1991 and avg. Other small grains 4% poor, 26% fair, 69% good, 1% excellent; 94% planted, NA 1991 and avg. Onions 7% fair, 93% good; 71% planted, NA 1991 and avg.; Wet fields slowing transplanting. Other vegetables 1% very poor, 3% poor, 63% fair, 31% good, 2% excellent. Pecans 13% very poor, 59% poor, 18% fair, 10% good; 88% harvested, NA 1991 and avg. Pastures fair to good. Cattle, hogs good. Activities included harvesting cabbage, spraying winter vegetables, planting tobacco beds, feeding cattle, routine farm chores.

HAWAII: A high pressure system moved through the State during the week bring gusty trade winds and passing showers. Shower activity was variable, falling mainly on windward, higher elevations. Temperatures mid 60s to mid 80s. Rainfall none to 5.30 in.

Days suitable for fieldwork 7.0. Wet weather affected vine growth, fruit development. Orchard growers increased spraying controls to minimize disease damage. Banana, papaya harvesting continued active.

ILLINOIS: Wintry weather blasted the State bringing reports of 3 to 5 in. of snow accumulation, as temperatures averaged from the mid 20s to upper 30s. Precipitation 0.25 to 0.60 in.

The corn harvest progressed slightly, as farmers harvested early in the week, halted by mid-week snow.

INDIANA: Temperatures 0 to 2° below normal. Highs were high 20s to 30s. Lows, low 20s. Precipitation 0.25 to 0.75 in., mostly snow. First major snow storm of season.

Topsoil 47% adequate, 53% surplus. Subsoil 4% short, 55% adequate, 41% surplus. Corn moisture content 22%, same as last week. Wheat 3% poor, 24% fair, 69% good, 4% excellent. Corn harvest advanced until midweek when snowfall occurred. Other activities: plowing, stripping tobacco, machinery repair, hauling grain, fence repair, bookkeeping, care of livestock.

IOWA: Temperatures 5° above normal west, near normal southeast. Extremes 5°; 46°. Precipitation 0.08 northeast to 2.06 in. south central; average 0.57 in. 1 to 2 in. new snow far northwest; 4 to 6 in. new snow far southeast; decreasing snowcover elsewhere.

Days suitable for fieldwork 2.4. Topsoil 50% adequate, 50% surplus. Subsoil 72% adequate, 28% surplus. Grain storage space problem still easing, with 30% short, 70% adequate. Corn lodging 8% none, 67% light, 23% moderate, 2% heavy. Grain movement was reported as 3% none, 74% limited, 23% moderate. Livestock showing normal to below normal death losses.

KANSAS: Temperatures normal over State. Precipitation received all districts.

Days suitable for fieldwork 2.0. Surface moisture 4% short, 37% adequate, 59% surplus. Subsurface moisture 8% short, 73% adequate, 19% surplus. Limited sorghum harvest progress made past week. Muddy fields continue to impede harvest. Harvest hampered by avg. 2.5 days or less suitable for fieldwork weekly for State past five weeks. Wheat planting for State for all practical purposes complete. Pastures providing forage; snow cover limiting grazing. Cattle grazing corn, sorghum stubble, wheat pasture. Supplemental feeding of livestock necessary.

KENTUCKY: Cooler, drier than normal. High temperatures upper 30s, 4° below normal. Low temperatures around 30°, about normal. Precipitation 0.25 in., 0.33 in. west, 0.10 in. east.

Kentucky burley sales totaled 257.0 million lbs. thru 10th, avg. price $183.33 per cwt. Both prices, quality were a little lower. Government pool received 10% of sales thru 10th. Livestock satisfactory. Supplemental feeding greatly increased with cold temperatures.

LOUISIANA: Temperatures 1.9 to 5.8° below normal. Extremes 28°; 74°. Rainfall 0.93 in. northwest, north central to 1.78 in. south central.

Days suitable for fieldwork 2.0. Soil moisture 24% adequate, 76% surplus. Pecans 95% harvested, 86% 1991, 88% avg. Wheat 12% poor, 57% fair, 31% good; 92% planted, 92% 1991, 95% avg.; 89% emerged, 92% 1991, 92% avg. Very little additional acreage expected to be planted. Sugarcane 84% harvested, 89% 1991, 92% avg. Harvest continues in the mud, expensive. Sweetpotatoes 100% harvested, 99% 1991, 100% avg. Livestock 3% poor, 45% fair, 52% good. Pastures 1% very poor, 8% poor, 13% fair, 78% good. Vegetables 14% poor, 63% fair, 23% good. Harvesting citrus, southeast.

MARYLAND & DELAWARE: MARYLAND: Precipitation 2.53 in. Temperature 36.0°, normal 37.5°. Extremes 16°; 56°. Heavy snow in western areas.

Pastures, cattle, mostly excellent. Hay supplies adequate. Small grains good. Corn, soybean harvest virtually complete. Holiday preparations. Cutting firewood, scraping roads.

DELAWARE: Precipitation 1.76 in. Temperature 36.6°, normal 38.7°. Extremes 22°; 53°.

Hay supplies adequate. Pastures, livestock mostly excellent. Small grains good. Holiday preparations. Cutting firewood.

MICHIGAN: Extremes 9°; 43°. Precipitation none to 0.55 in. across the State.

Days suitable for fieldwork 3.5. Soil moisture 15% adequate, 85% surplus. Soybeans 90% harvested, 100% 1991, 99% avg. Corn 10% very poor, 25% poor, 30% fair, 30% good, 5% excellent. Major activities: Harvesting when possible, repairing machinery, spreading manure.

MINNESOTA: Temperatures 7 to 13° above normal. Extremes 5°; 39°. Precipitation 0.07 to 0.18 in., 0.03 to 0.14 in. below normal. Snowfall 1 to 6 in.; snow depth averaging 1 to 8 in.

Continued seasonably mild but cloudy weather. Corn harvested increased to 95% complete. Field, grain moisture remain high. Some corn will not be harvested till spring. Mold is appearing in some of the standing corn. A big supply of livestock feed exists due to low test weight, high moisture corn. High quality hay is not so plentiful.

MISSISSIPPI: Temperatures 43°, 5.2° below normal. Extremes 21°; 73°. Northern half of the State received slightly below normal rainfall, southern half received slightly above normal. Rainfall 1.04 in., 0.20 below normal. Soil temperatures 46°.

Days suitable for fieldwork 1.1, 2.5 1991, 3.8 avg. Soil moisture 29% adequate,50% surplus, 21% excessive. Soybeans 97% harvested, 99% 1991, 99% avg. Wheat planted 99%, 99% 1991, 97% avg.; 94% emerged, 95% 1991, 91% avg.; 35% fair, 64% good, 1% excellent. Pecans 81% harvested, 83% 1991, 85% avg.; 40% very poor, 45% poor, 11% fair, 4% good. Livestock 12% fair, 76% good, 12% excellent. Pasture 90% of normal. Activities: Finishing harvest, feeding livestock.

MISSOURI: Temperatures 7° below normal Bootheel to 2° above normal northwest. Precipitation 1.16 in., varying from about 0.50 in. eastern third to over 2.00 in. western third.

Harvesting progress limited by damp weather, high moisture grain. Many northern counties still have 25% of corn left in fields. Recent additional rain causing continued delay.

MONTANA: Precipitation light in northwest, southwest, southeast. Temperatures below normal west, near to above normal east.

The protectiveness of snow cover for winter wheat is 80% poor, 17% fair, 3% good. Grazing was 79% open, 18% difficult, 3% closed. Supplemental feed given to 56% of the cattle, calves; 58% sheep, lambs.

NEBRASKA: Temperatures 7° below normal northwest to 6° above normal east central. Precipitation latter part of week ranging from 0.10 in. west to 0.50 in. east.

Some progress last week, continued weather delays in completing harvest. Corn 92% harvested, 100% 1991, 100% avg. Sorghum 96% harvested, 100% 1991, 100% avg. Crops remaining in fields are holding up well. Corn on-farm storage was receiving special care.

NEVADA: Series of winter storms moved across State 7th, 8th bringing precipitation, over 0.50 in. some western valleys, up to foot or more new snow northeast. Moist westerly flow over northern, central areas produced nearly 1.00 in. of rain some western, northern valleys, up to 5 in. new snow northeast. Another storm system 11th to 12th brought precipitation, mostly under 0.25 in. Temperatures generally near or little above seasonal normals. Extremes -7°; 64°. Recent storms bringing precipitation have brightened the outlook for relief from the drought.

Supplemental feeding livestock continuing. Farm, ranch activities: Caring for livestock, routine winter chores, hunting, attending winter meetings.

NEW ENGLAND: Precipitation none to 0.68 in. Maine, New Hampshire, Vermont; 1.07 to 5.56 in. elsewhere. Temperatures mid teens to low 30s. Maximum temperatures low 30s to mid 40s. Minimum temperatures -4 to 10° north, 2 to 18° south.

Major farm activities: Tending livestock, cutting firewood, making general repairs.

NEW JERSEY: Temperatures near normal, averaged 31° north, 36° south, 38° coastal. Extremes 10°; 55°. Precipitation above normal; 2.65 in. north, 3.91 in. south, 2.67 in coastal. Heaviest 24 hour total 3.70 in. on 10th, 11th. Heaviest 24 hour snowfall 6 in. on 12th, 13th. Maximum depth of snow on ground 14th: 7 in.

Farmers busy deer hunting, cutting, digging, selling Christmas trees, pruning fruit, caring for livestock.

NEW MEXICO: Unusually cold temperatures 4 to 11° below normal continued across western, northern areas where snowcover was persistent. Southwest winds warmed temperatures across the south, east at midweek, colder air returned to these areas with a strong cold front, more snow by the weekend. Showers at midweek were a mix of rain, snow that produced heavier totals of over 0.50 in. for the southern desert, central valley districts.

Farm activity was restricted statewide due to adverse weather. Ranchers kept busy feeding livestock along with general farm maintenance chores.

NEW YORK: Seasonably cold week. Highs 25 to 35°, lows 10 to 20°. First half of week dry. Powerful storm formed night of 10th, raged through 12th, bringing a variety of weather. Noteworthy was heavy rain, high wind along Atlantic Coast; heavy snow in Catskills, parts of Western New York.

Major activities: Caring for livestock, winter chores, attending meetings, hunting. Cold weather, snow made outside activities difficult.

NORTH CAROLINA: Temperatures 4 to 9° below normal. Smallest departures were found in the southern one-third of the State. Precipitation 4.44 in. at New River Marine Corps Air Station to 0.18 in. at Black Mountain.

Days suitable for fieldwork 3.4. Soil moisture 50% adequate, 50% surplus. Crop condition: Pasture 5% poor, 35% fair, 57% good 3% excellent. Cotton 3% very poor, 11% poor, 64% fair, 22% good. Soybeans 7% poor, 49% fair, 42% good 2% excellent; Winter wheat 22% fair, 73% good, 5% excellent. Oats 24% fair, 74% good, 2% excellent. Barley 25% fair, 73% good, 2% excellent. Rye 30% fair, 66% good 4% excellent. Wheat

81% emerged, 76% 1991, 82% avg. Sorghum for grain harvested 96%, 99% 1991, 98% avg. Cotton harvested 79%, 95% 1991, 98% avg. Soybeans harvested 78%, 89% 1991, 91% avg. Winter wheat planted 89%, 96% 1991, 94% avg. Oats planted 94%, 100% 1991, 100% avg. Barley planted 97%, 100% 1991, 100% avg. Rye planted 97%, 100% 1991, 100% avg. Hay, roughage supplies 2% short, 92% adequate, 6% surplus. Feed grain supplies 3% short, 89% adequate, 8% surplus. Major activities: Harvesting soybeans, cotton. Other activities: Harvesting sorghum; seeding small grains; tending livestock; ditch maintenance; applying lime; equipment repair.

NORTH DAKOTA: Dry with temperatures slightly above average. Temperatures 1 to 4° above normal across State. Extremes -7° northeast; 47° southwest. Precipitation none to 0.04 in. across State.

Snowcover none to moderate. Corn, sunflower harvest progressed slowly due to high grain moisture content. The combination of good snowcover in part of the State, lack of cold temperatures left winter wheat, rye generally good. Livestock generally good health. Some reports of grain storage problems due to high moisture content at harvest.

OHIO: High temperatures mid 30s, 3 to 6° below normal. Maximum temperatures held in the 40s over most of the State, limited to the upper 30s in the north. Lows upper 20s to around 30°, 3 to 8° above normal. Coldest mornings produced readings from the low 20s north to the upper 20s in the south. Precipitation was widespread although totals for the 7 days were under 0.50 in. most areas. Snowfall was limited to northern counties with heaviest amounts in the northeast.

Days suitable for fieldwork 4.4. Topsoil 50% adequate, 50% surplus. Corn harvest continues to be 4 weeks behind normal. Greenhouses are busy making cuttings of mother plants. Sugarbeet harvest is virtually complete.

OKLAHOMA: Temperatures 2° below normal Panhandle to 1° above normal southwest. Precipitation 0.40 Panhandle to 4.67 in. northeast.

Cotton harvest slowed due to heavy precipitation. Cattle good. Prices steady to lower for calves, steady to higher for yearling steers, heifers.

OREGON: Below normal temperatures, statewide, except southwestern areas a few degrees above; 3° below normal western areas, 3 to 9° below normal eastern areas. Abundant precipitation, statewide. Coastal Range, coastal areas 2.00 to 7.00 in., western areas 2.00 to 4.75 in., eastern areas 0.10 to 0.50 in., south central 2.00 in. High coastal winds, 50 to 80 mph; Portland recorded 50 mph winds.

Soil moisture mostly adequate to surplus west, short to adequate east. Fruit, nut orchard winter activities continue, Willamette Valley. Pruning cranberry fields, southern coast. Winter cabbage, table beet harvest slowing, Willamette Valley. Christmas tree harvest winding down. Livestock good. Western pastures continue improvement. Some pasture flooding southern coast. Rains, snows have improved eastern stockwater supplies; pastures, ranges dormant, continued supplemental feeding. Some frozen stockwater problems northeastern areas.

PENNSYLVANIA: Below normal temperature, above normal precipitation. Measurable snowfall in all areas except the southeast corner. Western areas received 2 to 3 feet. Temperature 33°, 2° below normal. Extremes 4°; 52°. Precipitation 1.77 in., 1.04 in. above normal.

Soybean harvest 88% complete, 100% 1991. Activities: Hauling manure; maintaining machinery; harvesting soybeans, grain corn; fixing fence; preparing for winter; caring for livestock.

PUERTO RICO: Island rainfall 0.28 in. was 0.78 in. below normal. Highest rainfall was 2.73 in. at Paraiso, 1.30 in. at Rio Blanco lower, 1.26 in. at Pico Del Este-Luquillo. Highest 24 hour total 2.50 in. Paraiso. Temperatures 76 to 77° on the coasts, 71° in the interior with mean station temperature 63.6° at Pico Del Este Luquillo to 81.1° at Guayama. Extremes 52°; 91°.

SOUTH CAROLINA: Temperatures across the State 5° below normal. Rainfall 0.80 in. statewide.

Days suitable for fieldwork 3.7. Soil moisture 12% short, 69% adequate, 19% surplus. Cotton fair; 89% harvested, 99% 1991, 100% avg. Soybeans fair; 69% harvested, NA 1991, NA avg. Oats fair to good; 95% planted, NA 1991, NA avg.; 90% emerged, NA 1991, NA avg. Rye fair to good; 95% planted, NA 1991, NA avg.; 90% emerged, NA 1991, NA avg. Winter grazing fair to good; 95% emerged, NA 1991, NA avg. Barley fair to good; 95% emerged, NA 1991, NA avg. Wheat fair to good; 70% planted, NA 1991, NA avg.; 59% emerged, NA 1991, NA avg. Rain slowed soybean, cotton harvesting, small grain planting.

SOUTH DAKOTA: Temperatures 4 to 8° above normal in the northwest, southeast, 0 to 5° above normal over the rest of the State. Extremes -5°; 59°. Precipitation amounts were generally less than 0.10 with some local amounts up 0.25 in.

Days suitable for fieldwork 3.8. Topsoil 5% very short, 20% short, 61% adequate, 14% surplus. Subsoil 13% very short, 27% short, 49% adequate, 11% surplus. Winter rye 28% fair, 69% good, 3% excellent. Wet, snow covered fields continue to slow the progress of the corn harvest. Livestock 5% fair, 87% good, 8% excellent. Pasture 78% of normal.

TENNESSEE: Temperatures below normal statewide; 1 to 5° below normal in west, middle, southeast, almost 10° below normal in northeast. Precipitation around 0.40 to 0.67 in. below normal statewide.

Cotton 98% harvested, 100% 1991, 100% avg.; harvest is nearing completion, with mostly scrapings remaining. Soybean harvest continues to be active. Tobacco is being marketed, 51.3 million pounds of burley had been sold as of the 7th.

TEXAS: Frontal system produced precipitation Statewide during early, midweek, light snow over Northern Panhandle. Dry weather, strong warming trend followed. Powerful upper air storm, cold front triggered precipitation late-week; snow developed across West Texas. Snow accumulations 7 in. Crosbyton, Matador. Temperatures averaged close normal. However, departures ranged from -4° on Southern High Plains to +8° South Central. Precipitation reported all districts; below normal South; totals over 1.00 in. above normal Cross Timbers.

Crops: Cotton harvest continued Cross Timbers, Plains, weather permitting. Harvest remaining late fields Blacklands limited, poor results, 84% harvested, 75% 1991, 87% avg. Small grain stands improved most areas. Some late wheat planted South Texas. Occurrences greenbugs, winter grain mites increasing Blacklands. Some pressure from disease fields Cross Timbers. Peanut harvest Low Plains, South Texas was virtually complete with a few remaining fields to be harvested. 98% harvested, 89% 1991, 94% avg.

Commercial Vegetables: Rio Grande Valley, onions, tomatoes progressed well. Citrus harvest continued. East Texas, some greens signs aphid, lice infestation. Pecan harvest winding down East, Central, South Texas, few delays from rain. Across most State, prices good, quality variable, production down. Cross Timbers, early season insect pressure severely affected production, quality.

Range and Livestock: Death losses, from blizzard like conditions High Plains earlier in month, continued to rise. Condition of cattle High Plains declined with arrival of winter weather. Winter pastures improving with moisture. Some cattle moved onto winter pasture as growth occurred. Livestock conditions remained fair, good.

UTAH: Temperature maximums 5° less than normal, average minimums were in the normal range. Moderate precipitation was reported throughout the State.

Major farm activities are hauling manure, equipment maintenance, livestock feeding, vaccinations, getting cattle settled on winter range, onion shipping, marketing.

VIRGINIA: Temperatures below normal. Extremes 11°; 58°. Precipitation above normal; 0.60 to 3.22 in. Some heavy snow in northwestern localities.

Days suitable for fieldwork 3.2. Topsoil 55% adequate, 45% surplus. Soybeans harvested 87%, 97% 1991, 95% avg. Cotton harvested 86%, 98% 1991, 98% avg. Winter grains, grazing crops 2% very poor, 4% poor, 45% fair, 45% good, 4% excellent. Forage from pastures, grazing crops dairy cattle 15%, beef cattle 44%, sheep 45%. Seeding winter wheat, cover crops. Marketing dark-fired, burley tobacco, peanuts. Liming, taking soil samples. Livestock fall calving, lambing, active.

WASHINGTON: Temperatures 1 to 7° below normal west; 2 to 12° below normal east. Rainfall 0.48 to 2.51 in. west; 0.15 to 1.22 in. east.

Days suitable for fieldwork 1.0. Soil moisture 43% short, 56% adequate, 1% surplus. Hay, other roughage 11% short, 74% adequate, 15% surplus. Range, pasture 25% very poor, 31% poor, 38% fair, 6% good. Winter wheat dryland 73% fair, 27% good; irrigated 100% good. Barley dryland 92% fair, 8% good; irrigated 100% good. Rain, snow; little outdoor farming activity, other than feeding livestock. Winter wheat insulated by snow most areas. Pruning activities continued, but slowed due to snow, rain. Christmas tree harvest continued, but finishing up some western areas.

WEST VIRGINIA: Temperature 32°. Extremes 11°; 44°. Precipitation 1.37 in.

Days suitable for fieldwork 2.1. Soil moisture 75% adequate, 25% surplus. Corn virtually harvested. Cattle 9% fair, 91% good. Sheep 4% fair, 96% good. Hay feed supplies 80% adequate, 20% surplus. Other feed supplies 83% adequate, 17% surplus. Soybeans virtually harvested. Farm activities: General maintenance, feeding livestock.

WISCONSIN: Temperature 26°; 5° above normal. Extremes 0°; 44°. Light rain, snow, freezing drizzle all week. Heavy snow on the 9th, 10th; 3 to 9 in. fell across the southeastern half of the State with lesser amounts in the northwest. Mid-December snow, frost depths: Snow: 3.9 in., 3.3 in. 1991, 4.5 in. 31-year avg. Frost: 1.7 in., 1.1 in. 1991, 4.6 in. avg. Data relates to December 11, 1992.

Corn for grain 61% harvested, 100% 1991, 100% avg. Comments from ag agents indicate that corn harvest is progressing slowly. There was a problem of snow on the ears causing the combines to plug up. The lack of frost is still a problem when it comes to holding up equipment. Of course, this is better where snowcover is less.

WYOMING: Cold, dry weather across State last week. Temperatures 5 to 10° below normal across most of the northwest, while the rest of the State 2 to 5° below normal. Precipitation amounts were very widespread with most locations below normal. Only the southeast corner, midwestern areas received above normal precipitation.

1993 Winter wheat fair to good; snowcover adequate in most areas. Livestock mostly good, shipping, supplemental feeding continuing. Shortage of feed reported in some counties in the northeast and southwest. Preparation for calving, lambing, tax season.

International Weather and Crop Summary
HIGHLIGHTS

December 6 - 12, 1992

FSU: Milder weather provided favorable overwintering conditions for winter grains.

EUROPE: Beneficial precipitation covered most winter crop areas. Dryness persisted in Spain.

SOUTH ASIA: Winter plantings and summer harvests progressed.

EASTERN ASIA: Rain benefited reservoirs across central China.

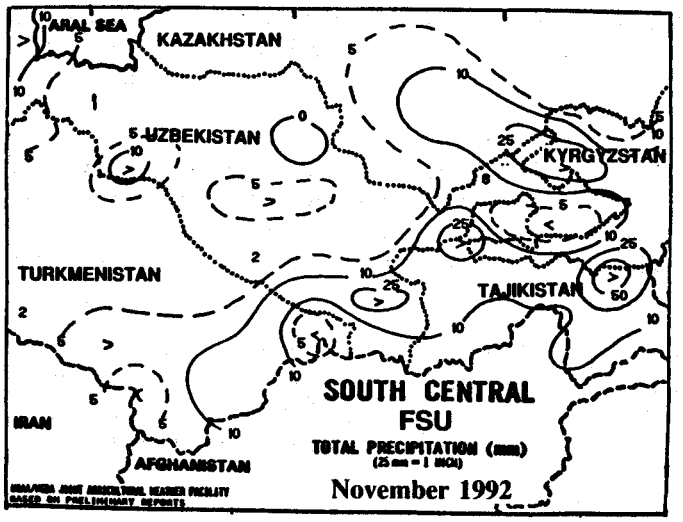
SOUTHEAST ASIA: Moderate to heavy showers continued over Malaysia and Indonesia, benefiting rice and oil palm.

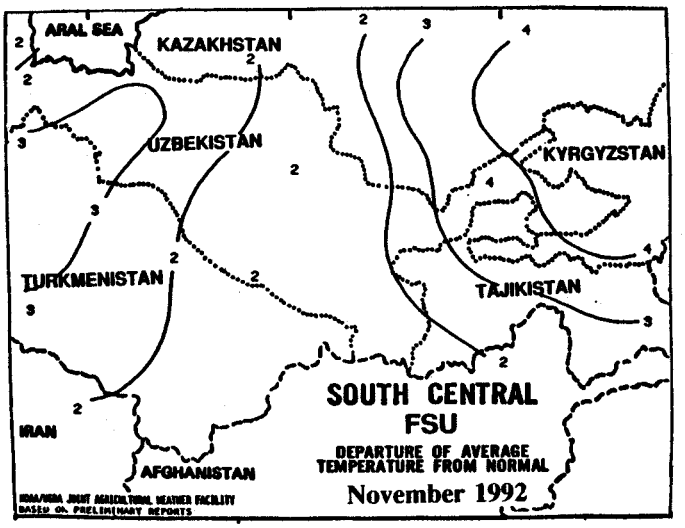
AUSTRALIA: Mostly dry weather favored maturing winter wheat.

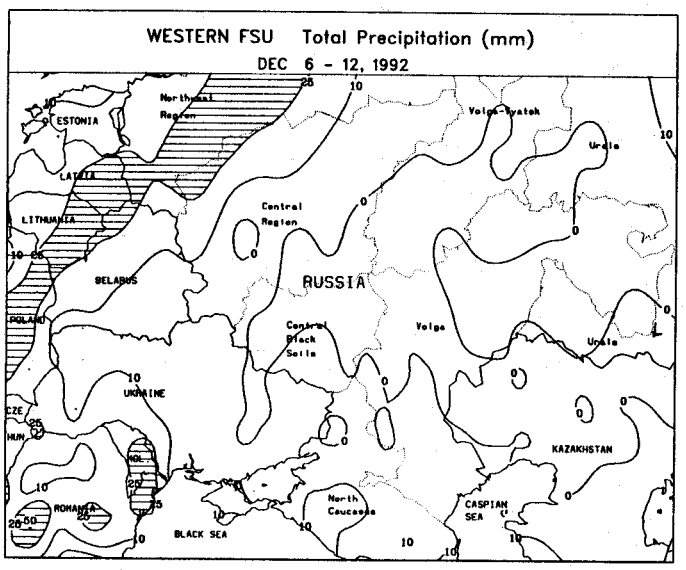
SOUTH AMERICA: Heavy rains continued across portions of Argentina, adversely impacting winter wheat and cotton.

NORTHWESTERN AFRICA: Persistent dryness continued over winter grain areas in Morocco and western Algeria. Soaking rain covered northernmost crop areas in eastern Algeria and Tunisia.

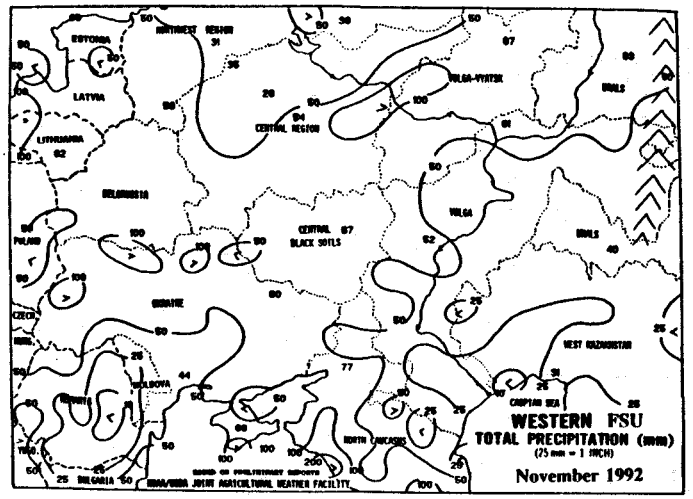
SOUTH AFRICA: Showers favored corn establishment in the east, but western crop areas were becoming too dry.

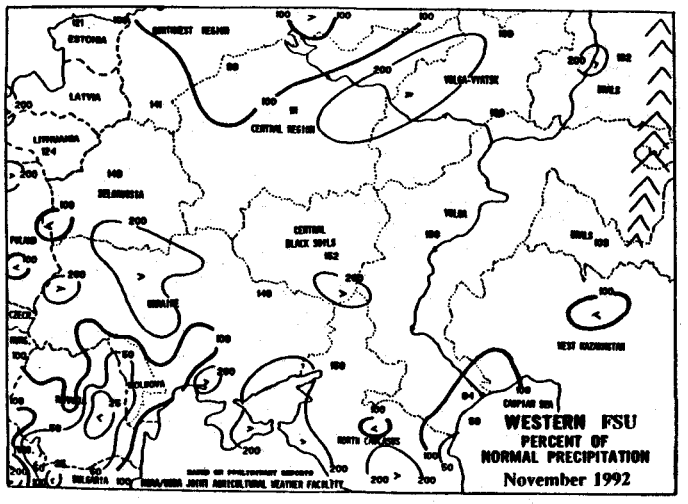


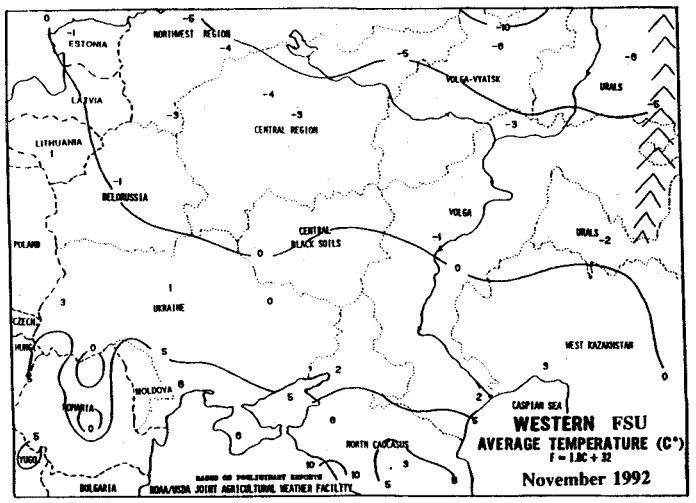


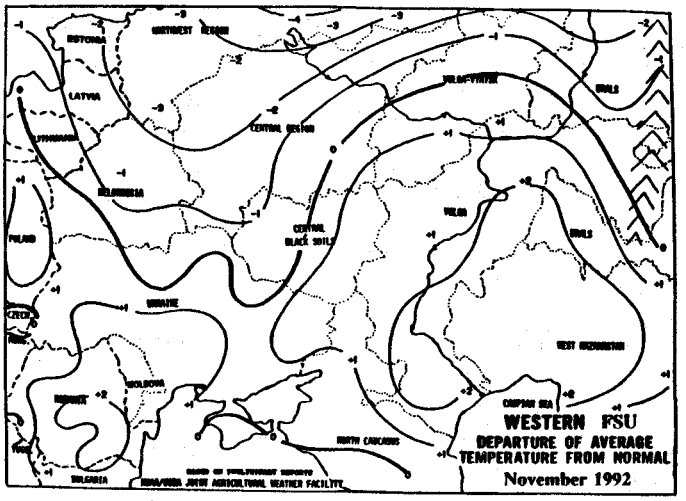


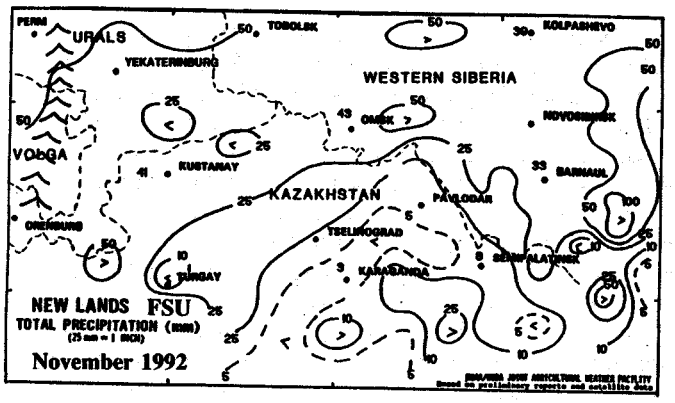
FSU-WESTERN: Westerly winds from Europe ushered in unseasonably warm weather, reversing last week's bitter cold. Extreme maximum temperatures ranged from 1 to 3 degrees Celsius (C) in the north and 4-10 degrees C in the south. Lowest minimum temperatures ranged from -5 to -10 degrees C in the north and -3 to -6 degrees C in the south. Although the mild weather pattern provided favorable overwintering conditions for winter grains, it diminished snow cover in central and southern areas. Little, if any, precipitation covered the region, except for the Baltic States, northern Belarus, and Northwest Region, where precipitation ranged from 10 to 35 mm. In November, above-normal precipitation covered most areas, increasing moisture reserves for overwintering crops. Winter grains remained dormant in the north and entered dormancy in the south. A brief episode of bitter cold in late November covered winter grains in eastern Belarus, Central Region, Volga Vyatsk, Central Black Soils, eastern Ukraine, Volga Valley, and North Caucasus. While minimum temperatures ranging from -15 to -28 degrees C reached the threshold for winterkill, the combination of snow cover and short duration of extreme cold minimized the potential for significant damage.

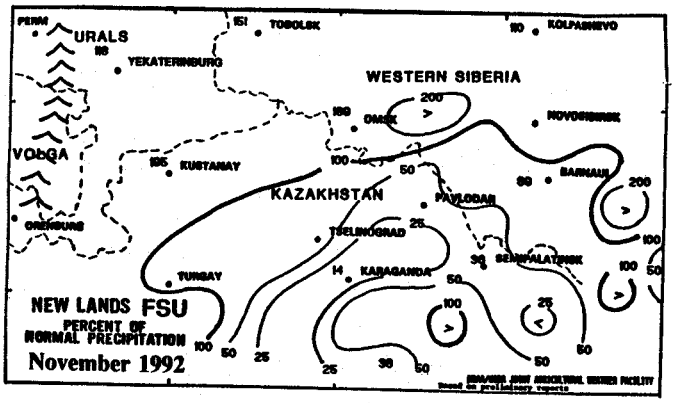


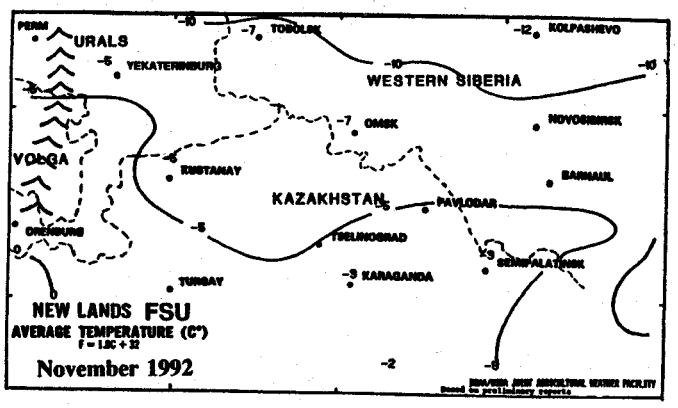


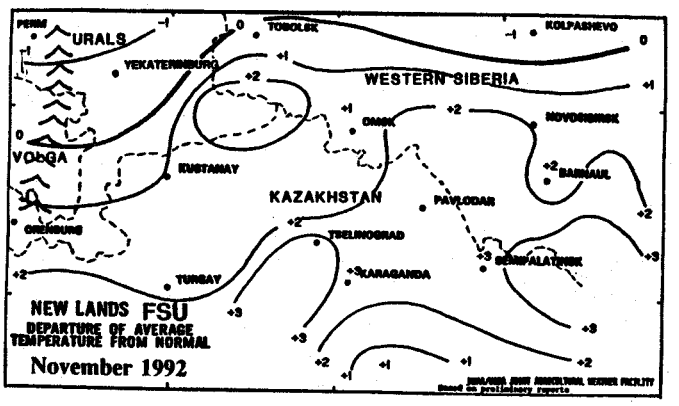


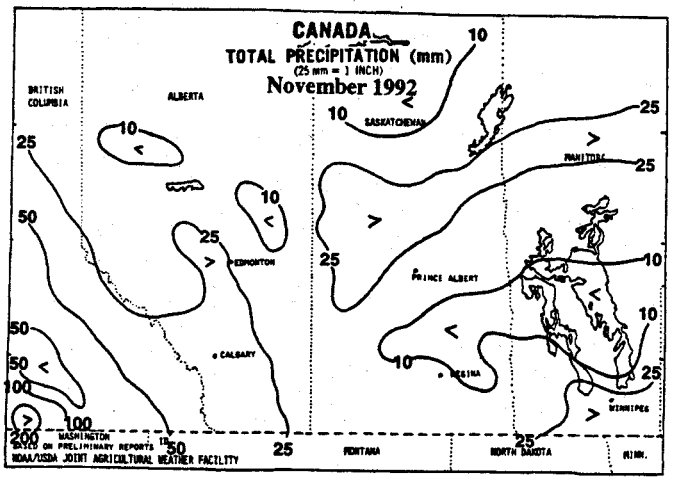


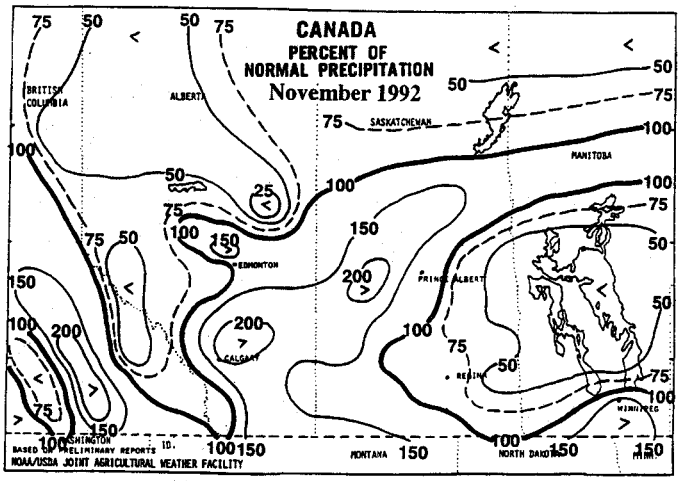

NEW LANDS FSU
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
November 1992
URALS
WESTERN SIBERIA
KAZAKHSTAN
VOLGA
PERM
TOBOLSK
KOLPASHEVO
YEKATERINBURG
OMSK
NOVOSIBIRSK
KUSTANAY
BARNAUL
ORENBURG
PAVLODAR
TSELINOGRAD
SEMIPALATINSK
TURGAY
KARAGANDA

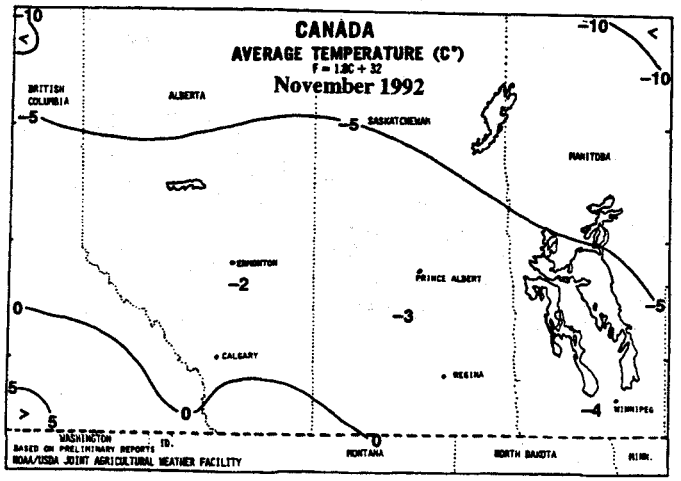

NEW LANDS FSU
PERCENT OF NORMAL PRECIPITATION
November 1992
URALS
WESTERN SIBERIA
KAZAKHSTAN
VOLGA
PERM
TOBOLSK
KOLPASHEVO
YEKATERINBURG
OMSK
NOVOSIBIRSK
KUSTANAY
BARNAUL
ORENBURG
PAVLODAR
TSELINOGRAD
SEMIPALATINSK
TURGAY
KARAGANDA

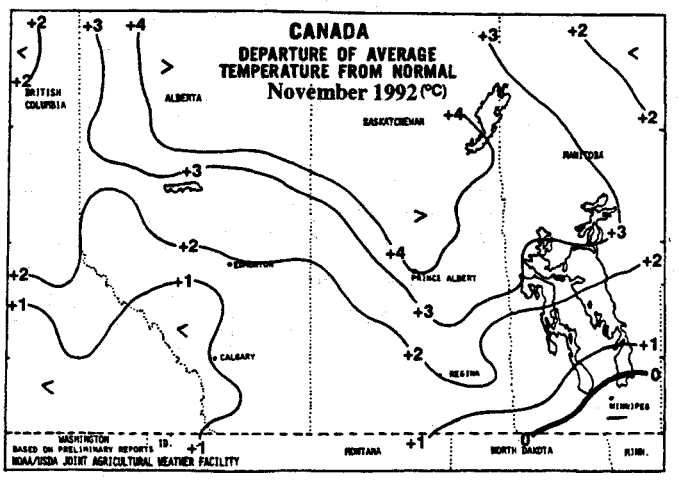

NEW LANDS FSU
AVERAGE TEMPERATURE (C°)
F = 1.8C + 32
November 1992
URALS
WESTERN SIBERIA
KAZAKHSTAN
VOLGA
PERM
TOBOLSK
KOLPASHEVO
YEKATERINBURG
OMSK
NOVOSIBIRSK
KUSTANAY
BARNAUL
ORENBURG
PAVLODAR
TSELINOGRAD
SEMIPALATINSK
TURGAY
KARAGANDA

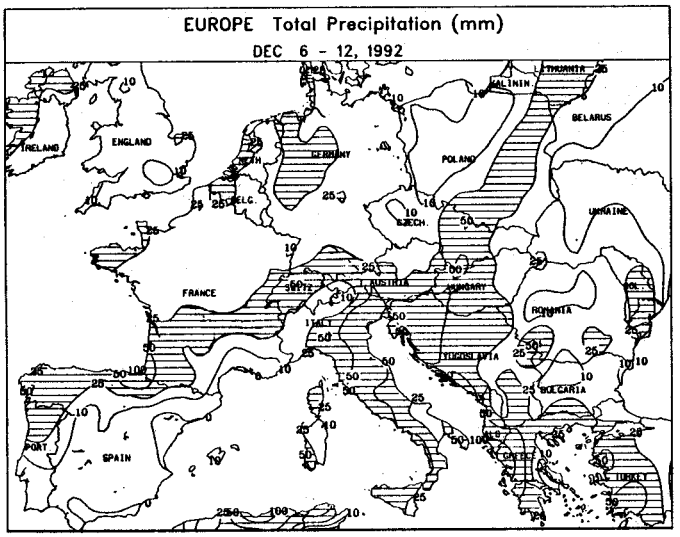

NEW LANDS FSU
DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL
November 1992
URALS
WESTERN SIBERIA
KAZAKHSTAN
VOLGA
PERM
TOBOLSK
KOLPASHEVO
YEKATERINBURG
OMSK
NOVOSIBIRSK
KUSTANAY
BARNAUL
ORENBURG
PAVLODAR
TSELINOGRAD
SEMIPALATINSK
TURGAY
KARAGANDA


CANADA
TOTAL PRECIPITATION (mm)
(25 mm = 1 INCH)
November 1992
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
EDMONTON
PRINCE ALBERT
CALGARY
REGINA
WINNIPEG
MONTANA
NORTH DAKOTA
MINN.
WASHINGTON
BASED ON PRELIMINARY REPORTS
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

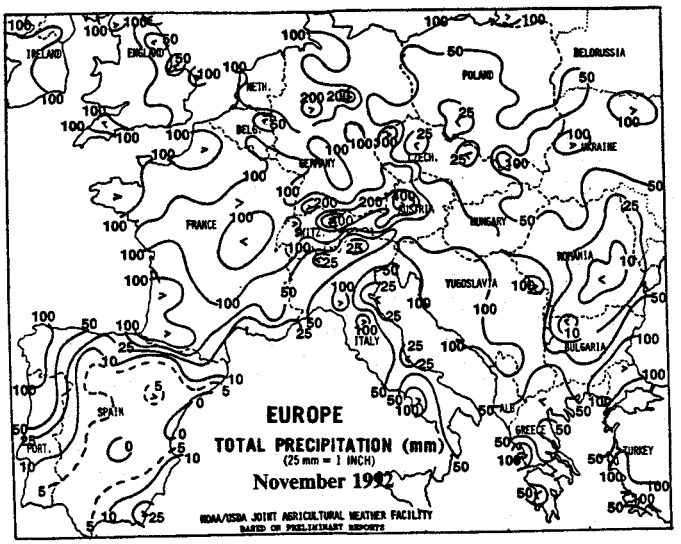

CANADA
PERCENT OF NORMAL PRECIPITATION
November 1992
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
EDMONTON
PRINCE ALBERT
CALGARY
REGINA
WINNIPEG
MONTANA
NORTH DAKOTA
MINN.
WASHINGTON
BASED ON PRELIMINARY REPORTS
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

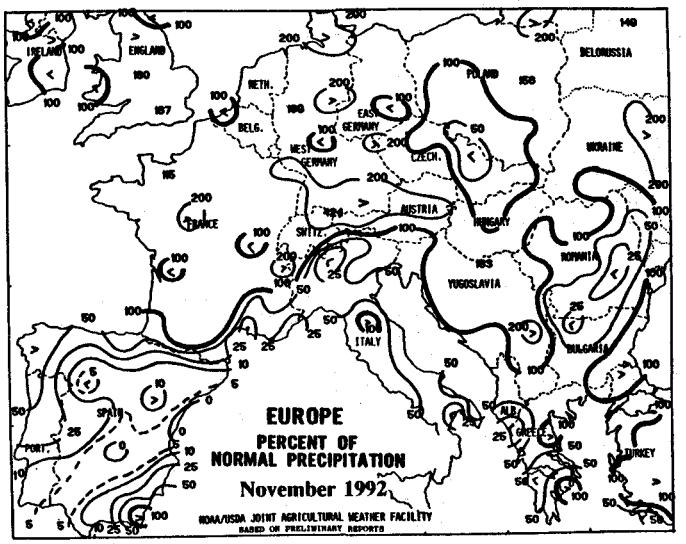

CANADA
AVERAGE TEMPERATURE (C°)
F = 1.8C + 32
November 1992
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
EDMONTON
PRINCE ALBERT
CALGARY
REGINA
WINNIPEG
MONTANA
NORTH DAKOTA
MINN.
WASHINGTON
BASED ON PRELIMINARY REPORTS
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

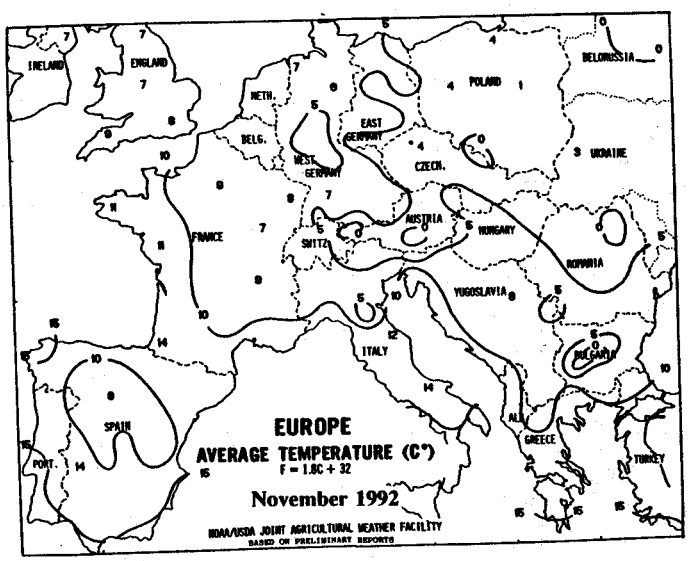

CANADA
DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL
November 1992 (°C)
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
EDMONTON
PRINCE ALBERT
CALGARY
REGINA
WINNIPEG
MONTANA
NORTH DAKOTA
MINN.
WASHINGTON
BASED ON PRELIMINARY REPORTS
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

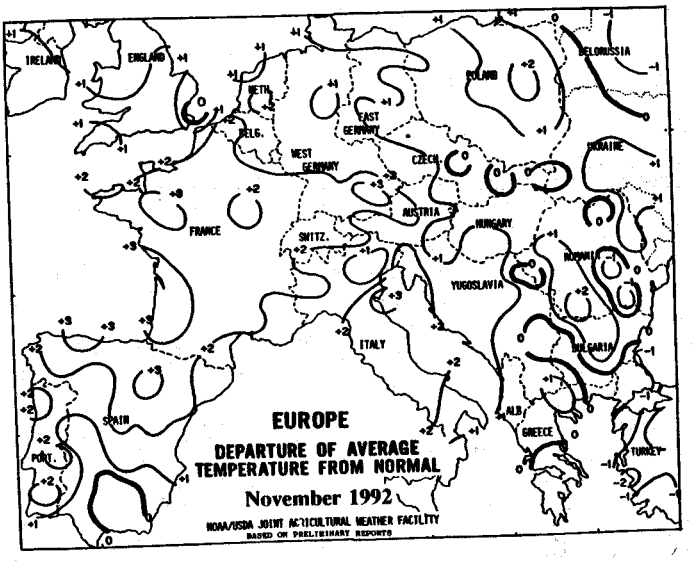


EUROPE: Rain covered crop areas of Europe. Beneficial moisture (15-47 mm) helped winter grains from eastern Poland through most of Czechoslovakia, Hungary, former Yugoslavia, and Italy. Similar amounts also fell in southern France, northwestern Spain, and northwestern Germany. Elsewhere, rainfall averaged 10-25 mm, although amounts diminished to less than 10 mm in western Poland and much of Spain. The moisture was especially helpful to build reserves for winter crops in Czechoslovakia where November rainfall was below average and less than 50 percent of normal in areas where it rained recently. November rainfall was near to above average over much of Europe, providing ample moisture for late autumn development of winter crops and improving moisture reserves for spring growth. Well-below-average monthly rainfall over the Iberian peninsula, Italy, and southeastern Europe signaled a poor start to the Mediterranean winter rainy season.

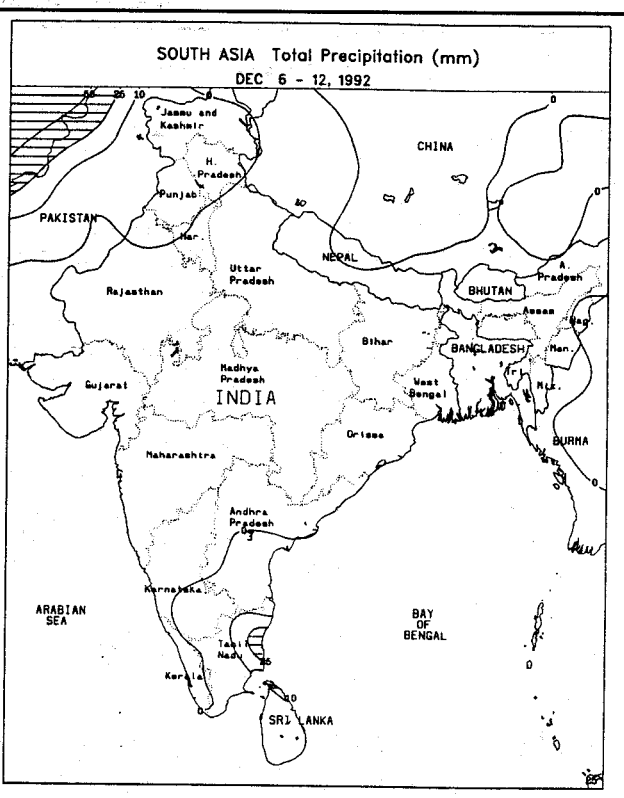


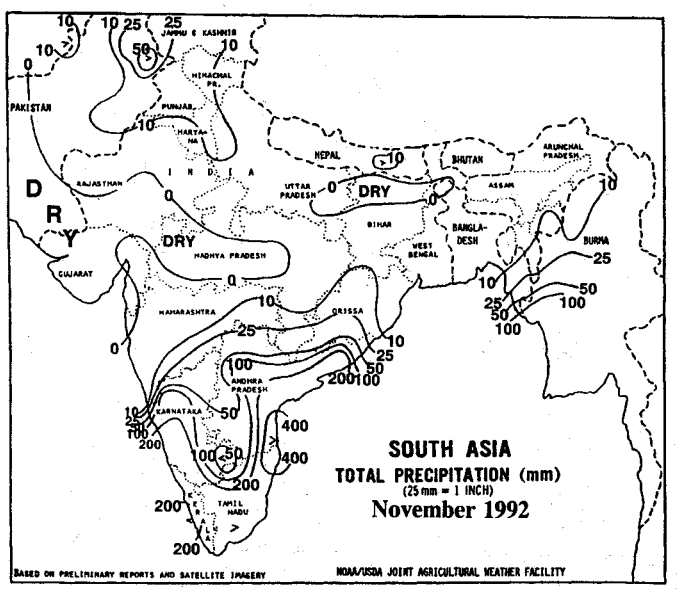


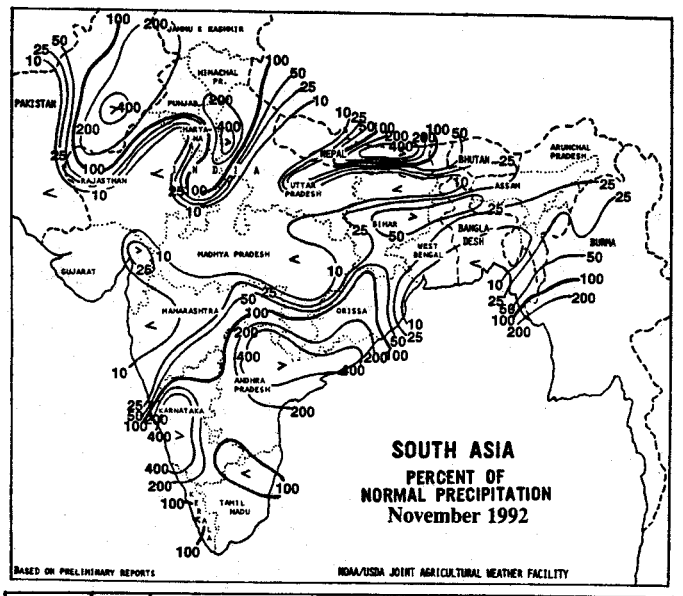


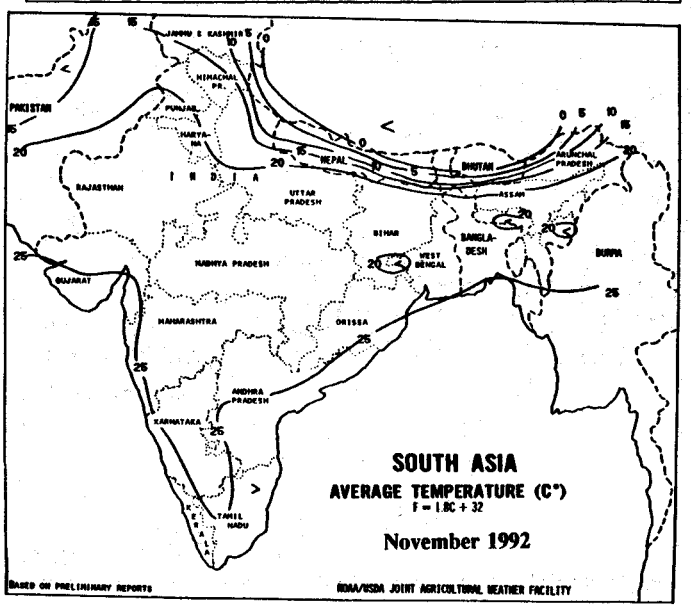


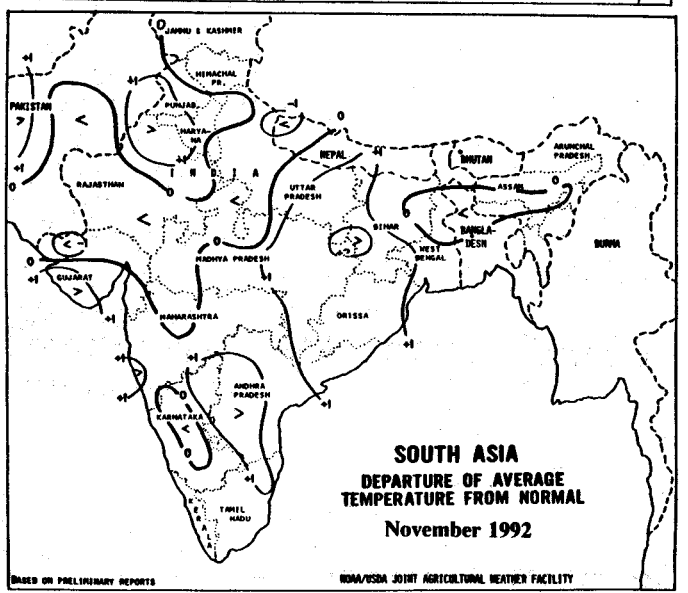
SOUTH ASIA: Mostly mild, seasonably dry weather dominated the region, favoring winter grain and oilseed plantings across the north. Summer grain and oilseed harvests progressed under favorable conditions. In mid-November, a tropical cyclone brought much-needed moisture to fall-crop regions of India's southern interior. However, the storm caused flooding and some rice damage in Sri Lanka and along India's southern coast. In the north, a mid-latitude storm brought moderate to heavy showers (10-50 mm or more) to northern Pakistan and north-central India, boosting reservoirs for winter grain and oilseed planting. Virtually no rain fell during the month from western India to the far eastern States, favoring summer harvests. However, the continued dryness from Bihar eastward taxed irrigation reserves. Monthly rainfall in this region averages 5-25 mm per month during January and February.

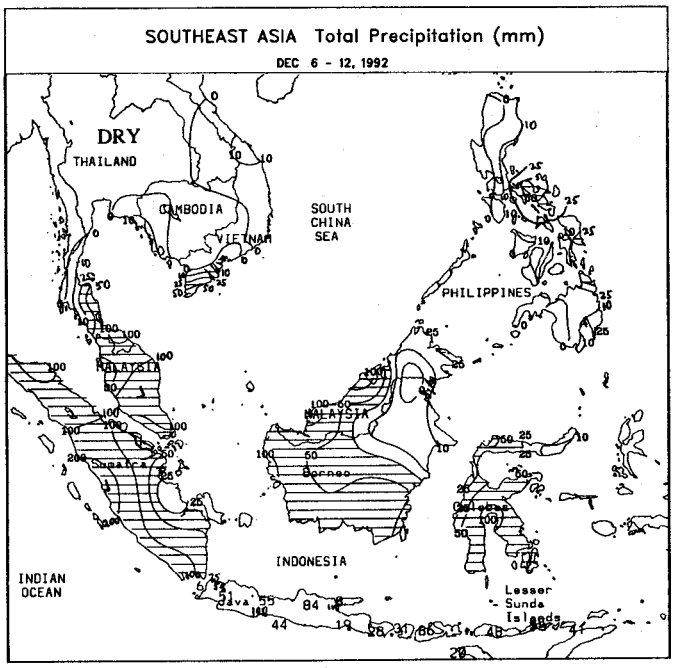




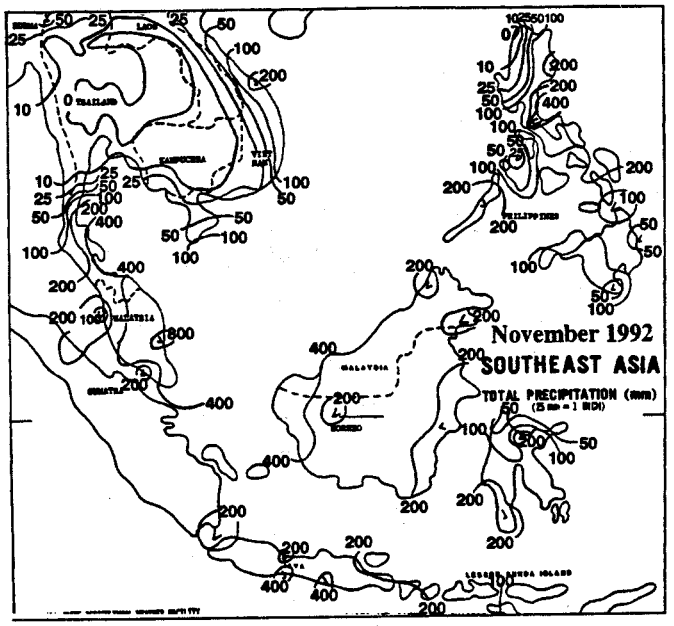




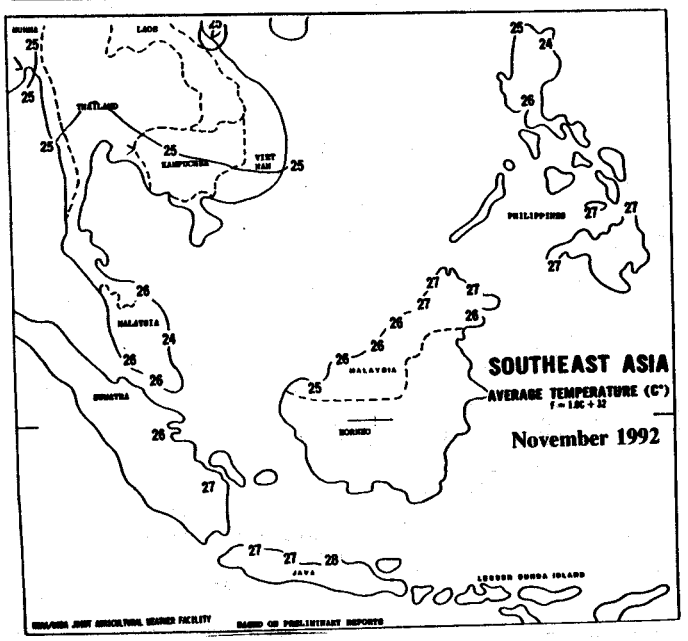


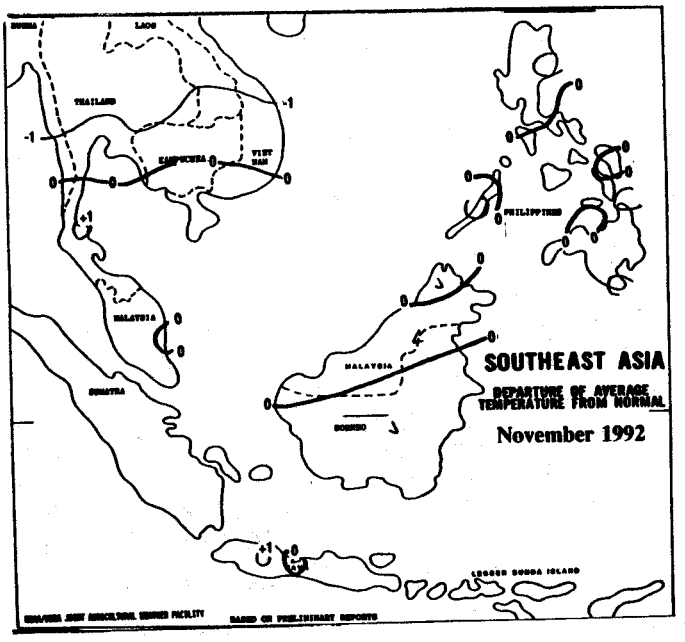


SOUTHEAST ASIA: Moderate to heavy showers (50-100 mm or more) continued over primary oil palm and rice areas of Malaysia and Indonesia, reflecting November's pattern of frequent showers that boosted irrigation but resulted in some flooding. While the seasonal rainfall pattern is highly variable along the Malay Peninsula, January is the peak month of the rainy season for most of Java. Showers tapered off over the Philippines, with only isolated locations receiving more than 25 mm. During the first 3 weeks of November, frequent, scattered showers benefited fall-planted grain in the eastern half of the islands. Monthly rainfall was near to below normal, however, due to the scattered nature of the showers and dryness that developed at the end of the month.

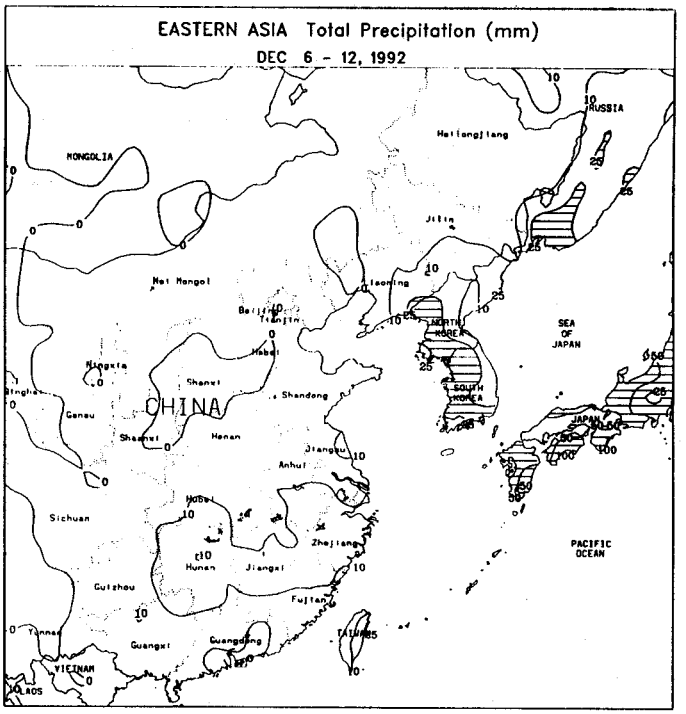


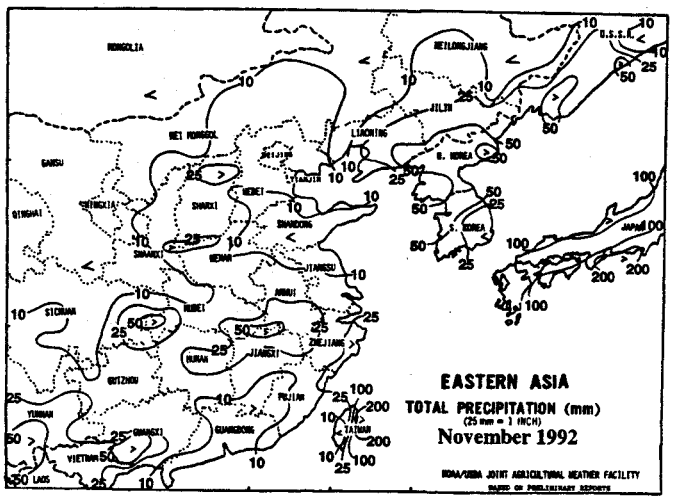
November percent of normal map not available.

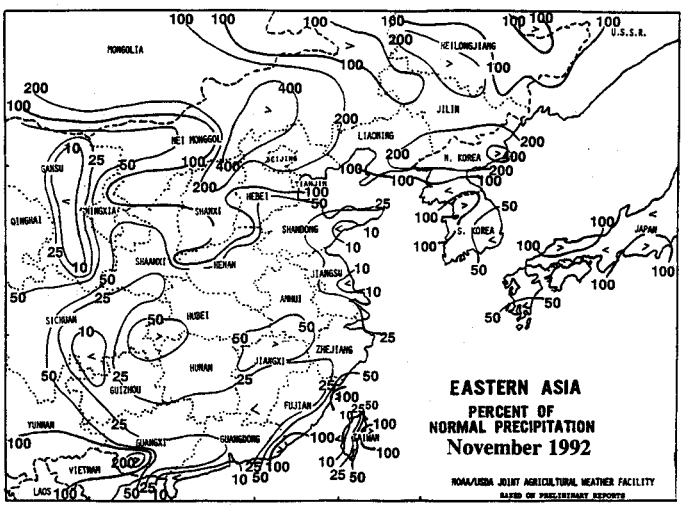


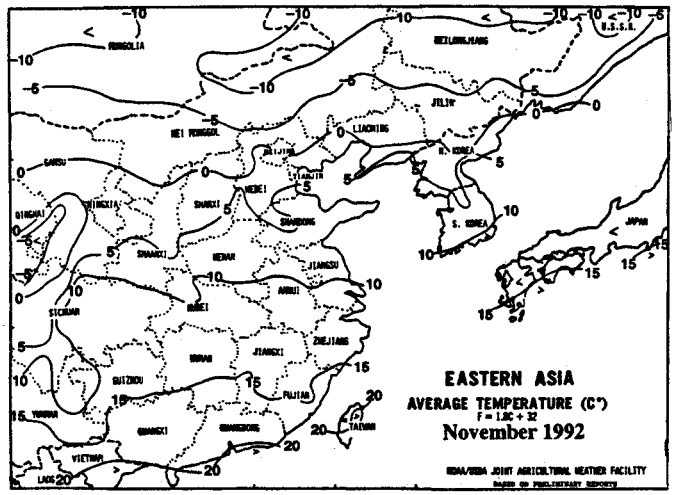


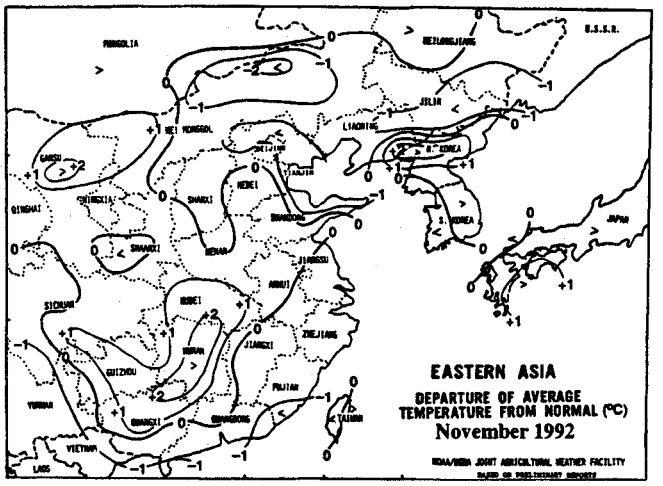
EASTERN ASIA: Seasonably dry weather prevailed across the North China Plain. Light rain (6-20 mm) fell across the Yangtze Valley, aiding depleted reservoirs and topsoils for winter crops. Temperatures averaged 1-2 degrees C above normal across China, keeping winter wheat vegetative. In November, near- to above-normal rainfall prevailed across the western and northern North China Plain, while eastern portions reported below-normal rainfall. Below-normal rainfall also occurred across central and southern China, where moisture is needed to replenish reservoirs.

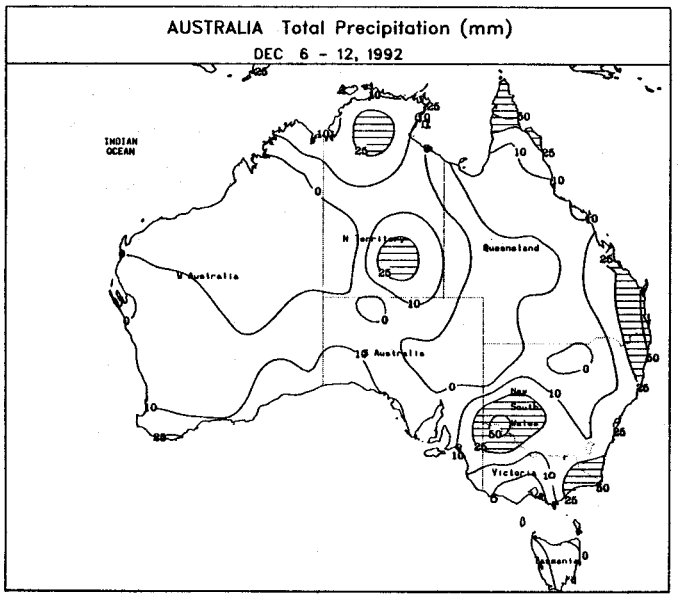




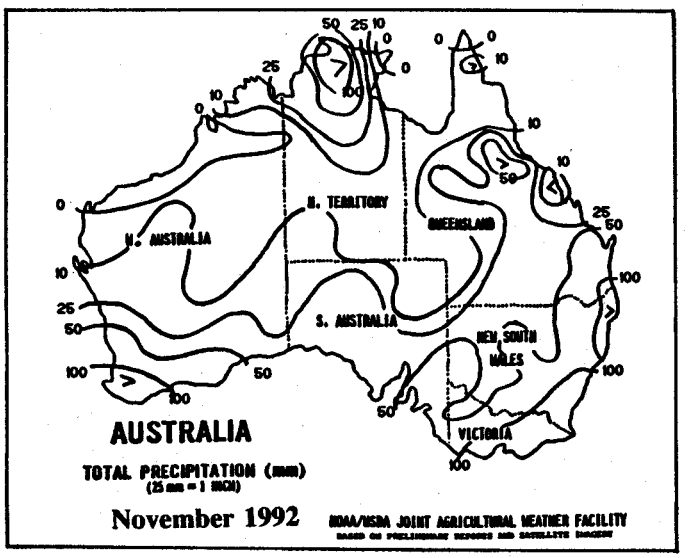


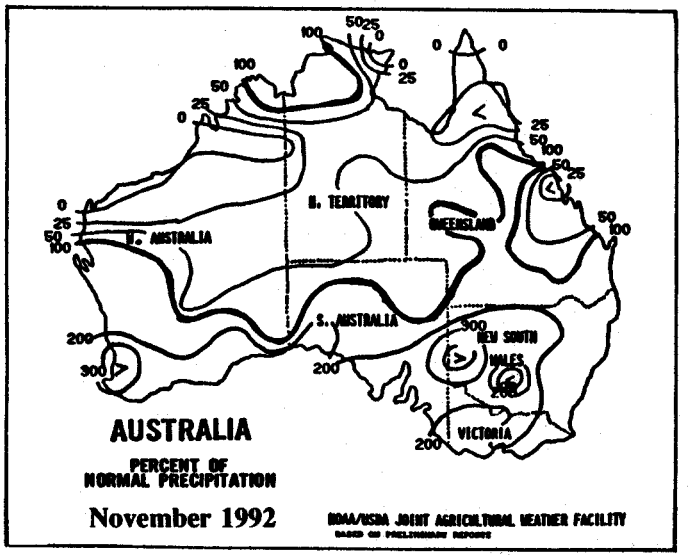


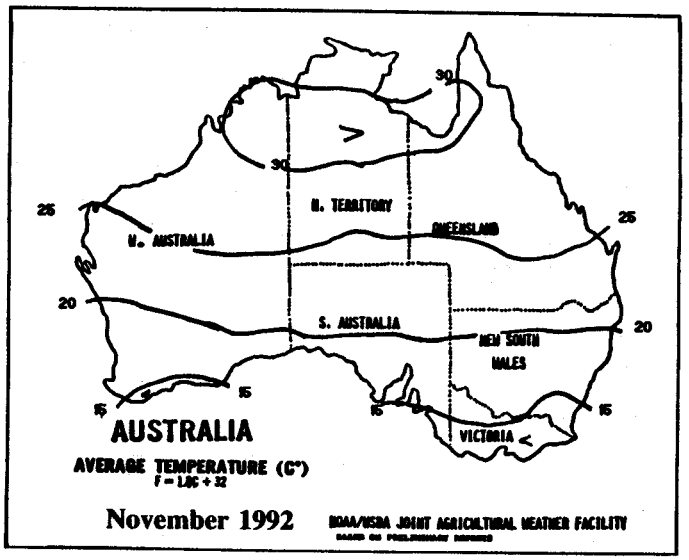


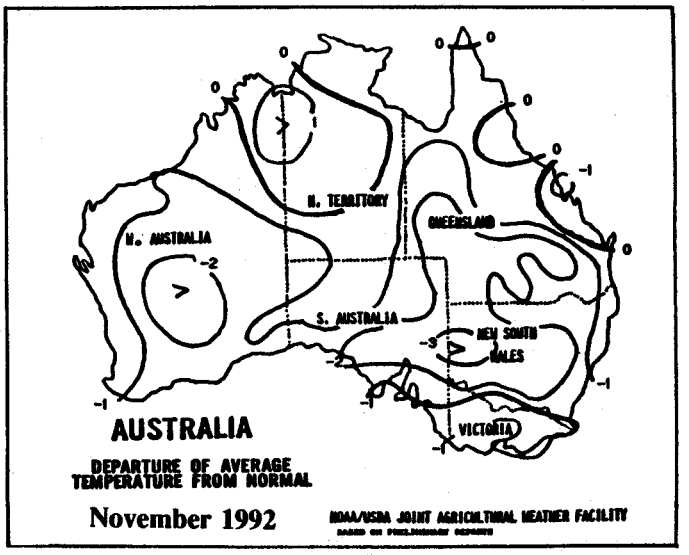


AUSTRALIA: Mostly dry weather, with only a few days of rain (weekly totals of 4-14 mm), prevailed across the wheat areas of Western and South Australia, favoring maturing wheat and harvesting. Moderate rain (10-30 mm) fell across Victoria and southwestern New South Wales, delaying early wheat harvesting. Moderate showers fell along the eastern coasts of Queensland and northern New South Wales, aiding sugarcane. Temperatures averaged near normal across the southern wheat growing areas, which favored maturing wheat. During November, the major crop areas received above-normal rains, with portions of South Australia and New South Wales reporting 200-400 percent of monthly rainfall. The rains favored filling winter wheat and soil moisture for eastern summer crops, but the wetness and cool weather were conducive to wheat disease problems across the south.

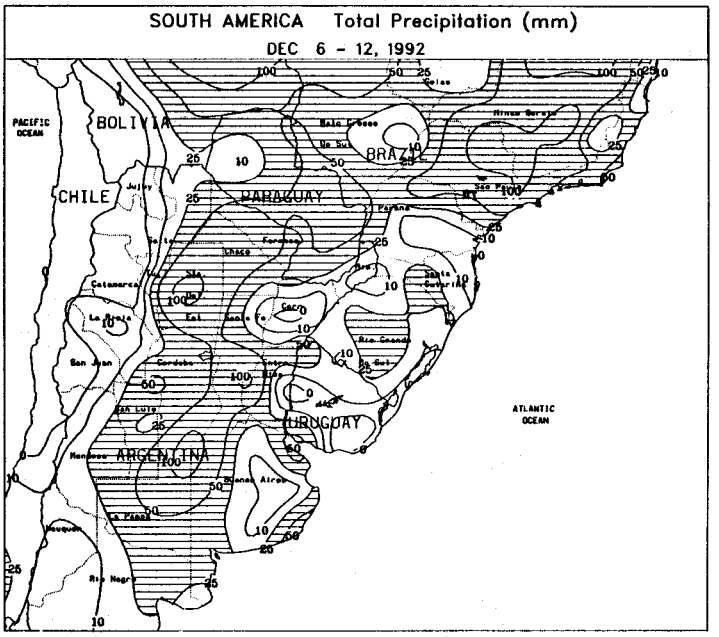


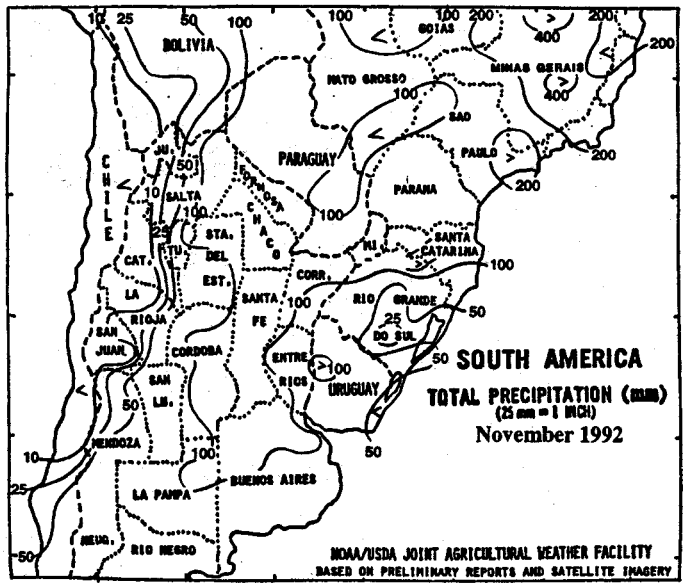


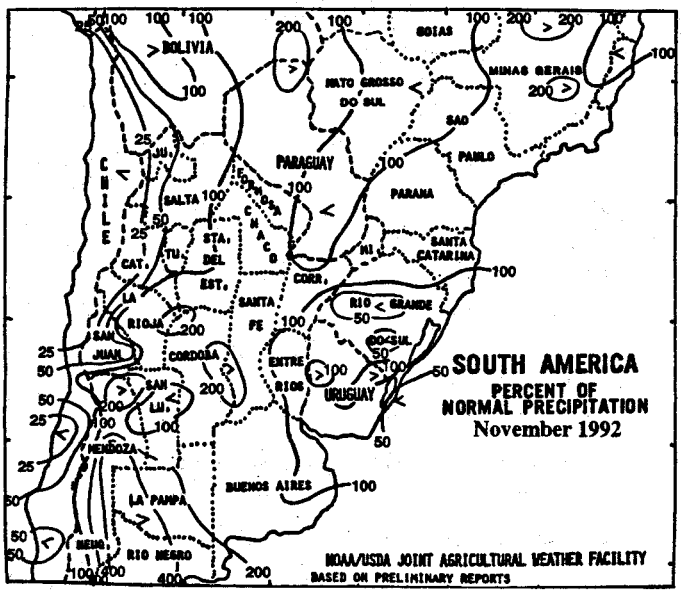


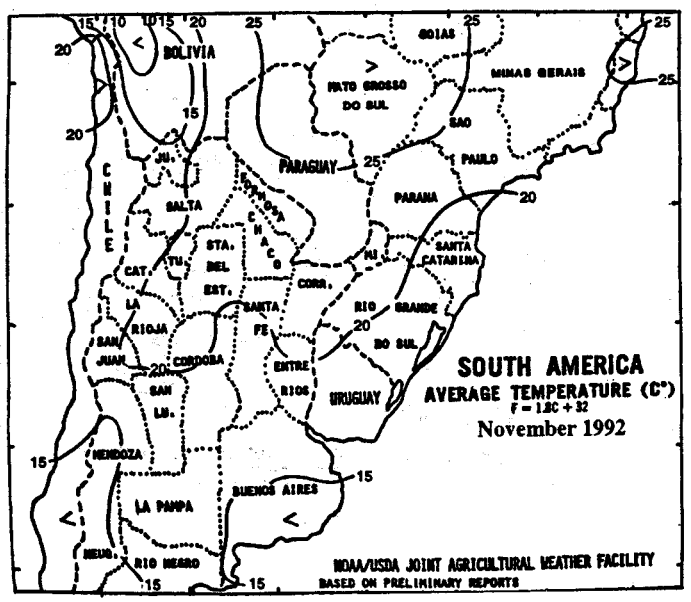


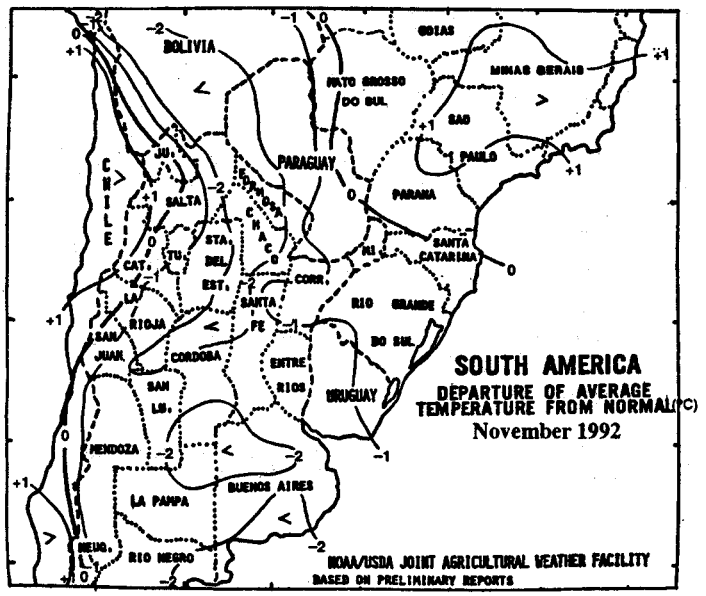
SOUTH AMERICA: Across western Argentina, persistent showers and thunderstorms (44-106 mm) during December 8-10, covered northwestern Buenos Aires, northeastern La Pampa, southern Cordoba, and southern Santa Fe. The wetness delayed summer crop planting, caused possible lodging to filling and maturing wheat, and produced additional flooding. The remainder of Buenos Aires received light to moderate rain (15-46 mm), slowing summer crop planting, but favoring soil moisture reserves. Moderate to heavy rain (37-108 mm) fell across northern Argentina, where persistent wetness stressed cotton. The same weather pattern has continued since November, when most of Argentina received above-normal rain, benefiting soil moisture. A majority of the summer crops still need to be planted. Scattered showers (15-60 mm) fell across southern Brazil, keeping topsoils moist for germinating and vegetative summer crops. Reports from Brazil indicated that 70-90 percent of the soybeans have been planted. Heavy rains (52-165 mm) fell across northeastern Sao Paulo and southern Minas Gerais, causing local flooding. Temperatures averaged slightly below normal across Argentina and 1-2 degrees C above normal in southern Brazil. Most of southern Brazil received near- to above-normal November rain, while portions of Minas Gerais received much above-normal rain.

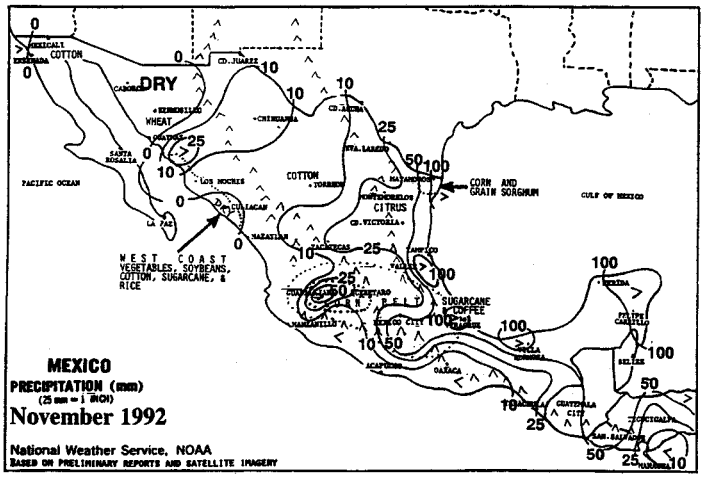


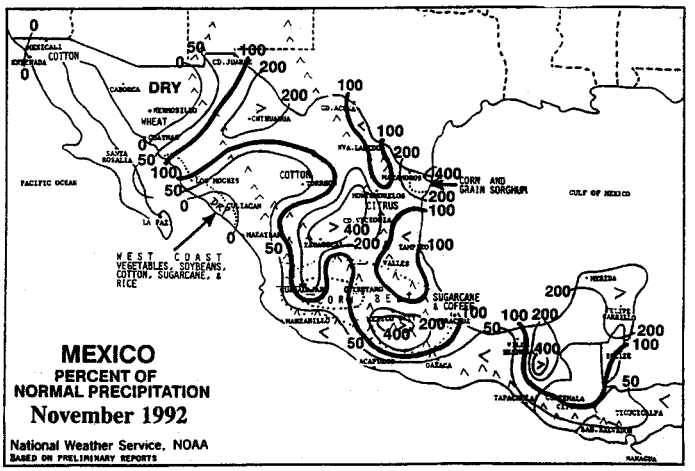


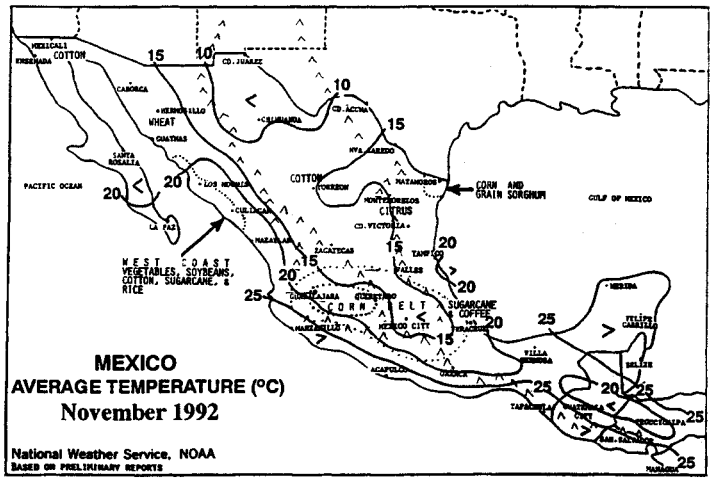


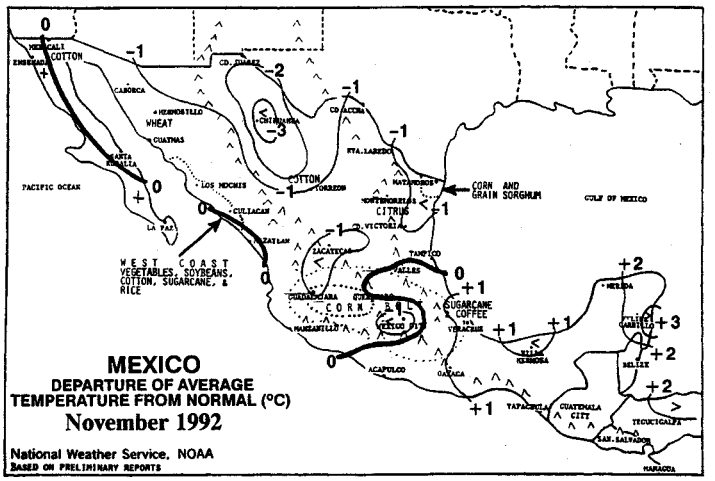




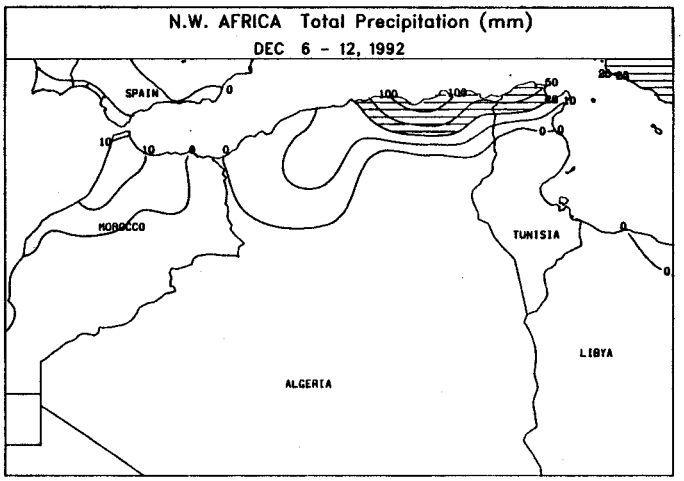

MEXICO
PRECIPITATION (mm)
(25 mm = 1 INCH)
November 1992
National Weather Service, NOAA
BASED ON PRELIMINARY REPORTS AND SATELLITE IMAGERY
DRY
WHEAT
COTTON
CITRUS
CORN AND GRAIN SORGHUM
SUGARCANE & COFFEE
CORN BELT
WEST COAST VEGETABLES, SOYBEANS, COTTON, SUGARCANE, & RICE
PACIFIC OCEAN
GULF OF MEXICO

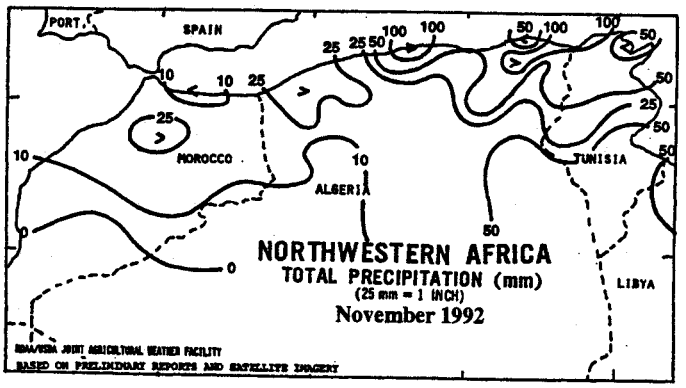

MEXICO
PERCENT OF NORMAL PRECIPITATION
November 1992
National Weather Service, NOAA
BASED ON PRELIMINARY REPORTS
DRY
WHEAT
COTTON
CITRUS
CORN AND GRAIN SORGHUM
SUGARCANE & COFFEE
CORN BELT
WEST COAST VEGETABLES, SOYBEANS, COTTON, SUGARCANE, & RICE
PACIFIC OCEAN
GULF OF MEXICO

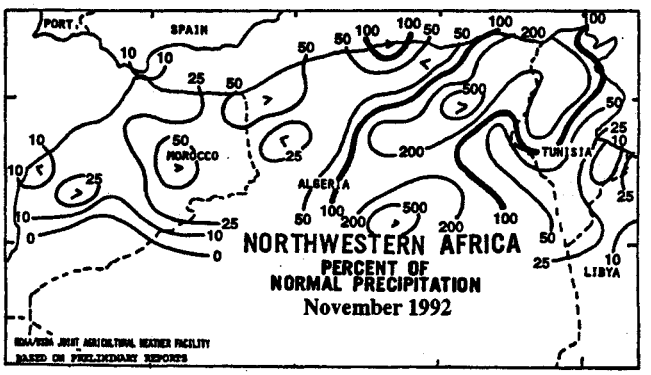

MEXICO
AVERAGE TEMPERATURE (°C)
November 1992
National Weather Service, NOAA
BASED ON PRELIMINARY REPORTS
WHEAT
COTTON
CITRUS
CORN AND GRAIN SORGHUM
SUGARCANE & COFFEE
CORN BELT
WEST COAST VEGETABLES, SOYBEANS, COTTON, SUGARCANE, & RICE
PACIFIC OCEAN
GULF OF MEXICO

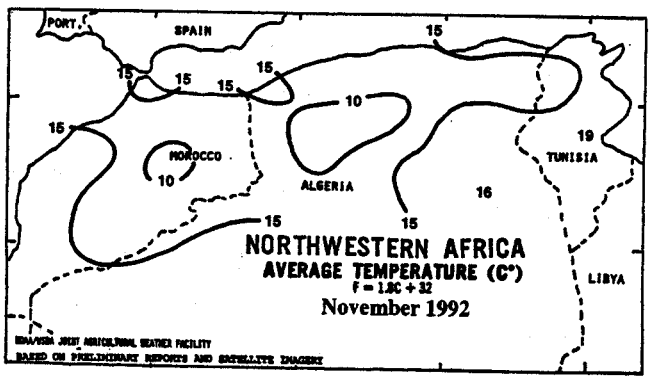

MEXICO
DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°C)
November 1992
National Weather Service, NOAA
BASED ON PRELIMINARY REPORTS
WHEAT
COTTON
CITRUS
CORN AND GRAIN SORGHUM
SUGARCANE & COFFEE
CORN BELT
WEST COAST VEGETABLES, SOYBEANS, COTTON, SUGARCANE, & RICE
PACIFIC OCEAN
GULF OF MEXICO

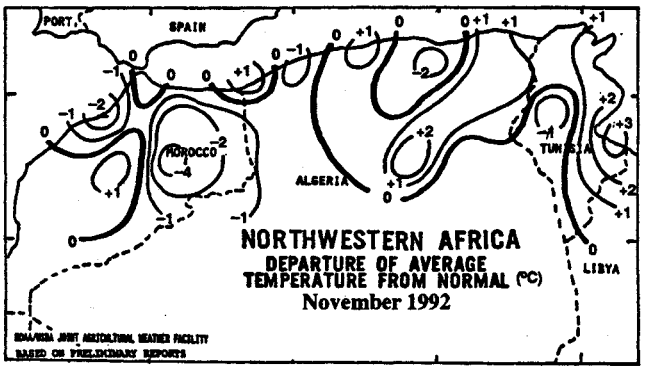
NORTHWESTERN AFRICA: Little, if any, precipitation covered winter grain areas in Morocco and western Algeria, continuing November's well-below-normal precipitation pattern. The persistent dryness has likely slowed winter grain planting, especially in southern Morocco where conditions have been the driest. Although the bulk of winter grains is usually planted from mid-November to mid-December, planting can extend into early January. Therefore, sufficient time remains for planting. Further east, soaking rain (25-100 mm) covered northernmost winter grain areas in eastern Algeria and Tunisia, continuing November's beneficial rainfall. In contrast, southernmost crop areas received little, if any, rain, and moisture is becoming limited for emergence and plant establishment.

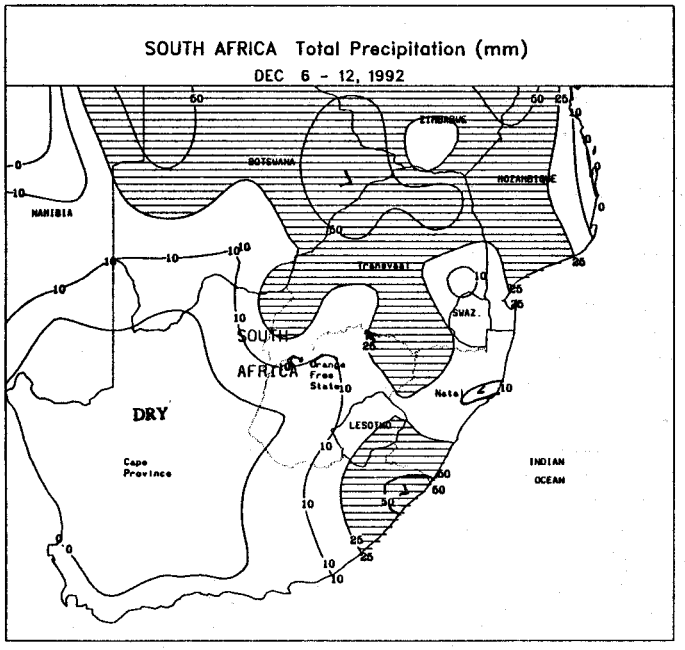




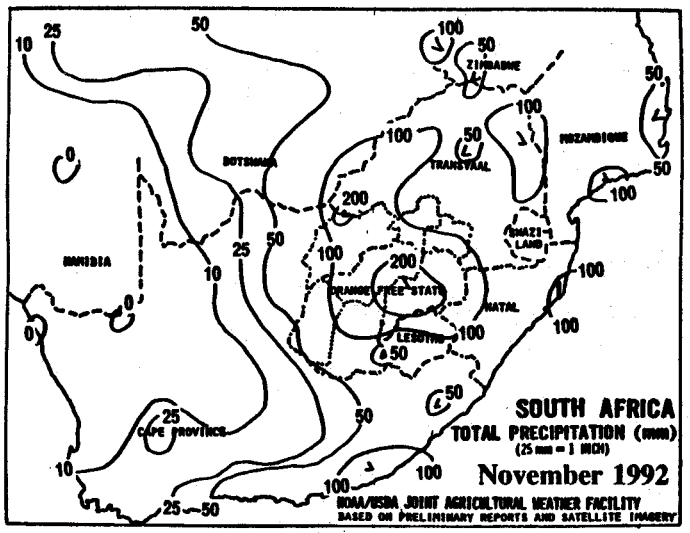


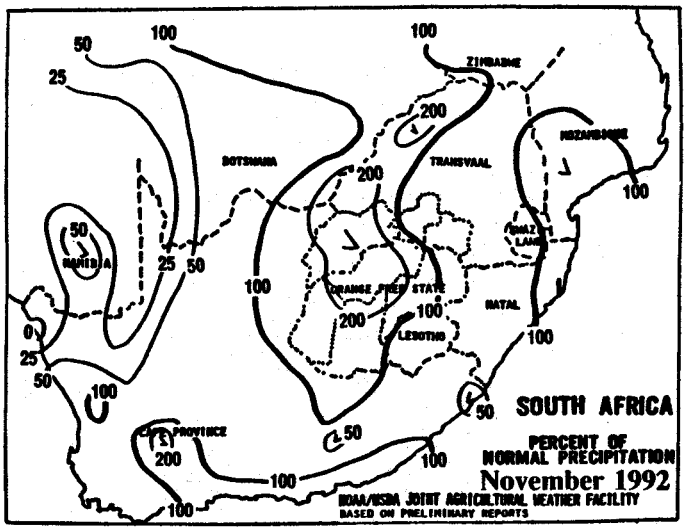


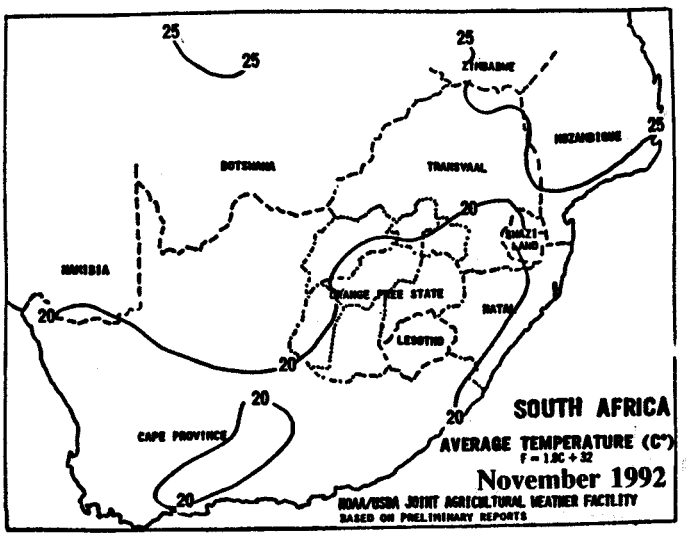


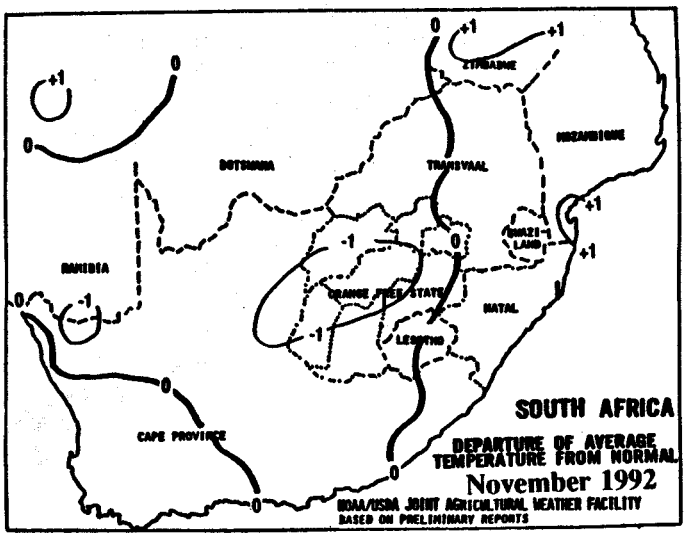


SOUTH AFRICA: Moderate showers (10-40 mm) covered the eastern half of the Corn Belt, as well as most crop regions of Natal and eastern Cape Province. Scattered showers fell over southwestern Transvaal. However, drier, seasonably warmer weather continued from central Orange Free State westward. The recent drying trend, at first beneficial for planting, has reduced topsoil moisture in this region for normal corn establishment. Except for some dry pockets in the east, November rainfall was near to above normal across the Corn Belt, with a large area of western Transvaal and Orange Free State receiving more than 200 percent of normal rainfall. However, this area was hardest hit by last year's drought, resulting in low soil moisture reserves.

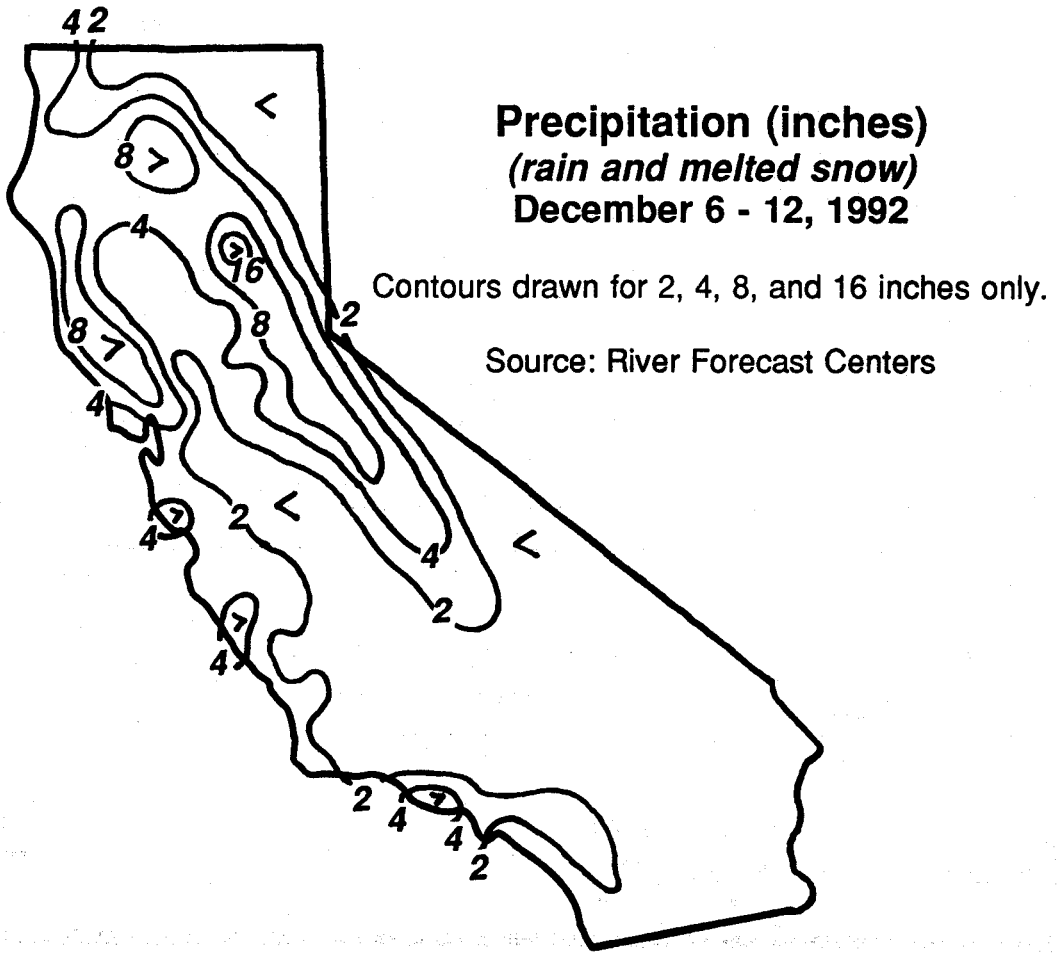








(Continued from front cover)
Pacific Northwest. Ahead of the system, winds gusted to 101 miles per hour (mph) atop **Mt. Ogden** in **northern Utah**, and to 62 mph in **Casper, WY**. Heavy rain and snow resumed in **northern California**, greatly boosting snowpack in the **Sierra Nevada**. Weekly precipitation (rainfall and melted snow) totals reached 12 inches near **Mt. Shasta, CA**, and topped 10 inches west of **Lake Tahoe**. One weather station near **Lake Almanor**, in **Plumas County, CA**, recorded 17.20 inches. Heavier snowfall totals from the second storm included 40 inches in **Kirkwood, CA**, and 17 inches near **Chiloquin, OR**. Meanwhile, the first storm dropped widespread rain across the **South** and the **Midwest**, again delaying corn and cotton harvest activities. By Thursday, rain, snow, and wind arrived in the **Northeast** as the two storms began to coalesce. Snowfall topped 2 feet in a narrow band in the **Appalachians** from **northern West Virginia** to **Massachusetts**. Farther east, in the **Piedmont**, locally heavy rainfall of up to 6 inches produced flash flooding. Snowfall totals included 25 inches in **Petersburg, WV**, 33 inches in **Dubois, PA**, and 32 inches in **Worcester, MA**. Along the coast, northeasterly winds gusting as high as 80 mph and tides up to 6 feet above normal caused extensive beach erosion from **Delaware** to **Cape Cod, MA**. Late in the week, the massive storm eased slowly out to sea, while a new storm moved into the **Great Basin**.



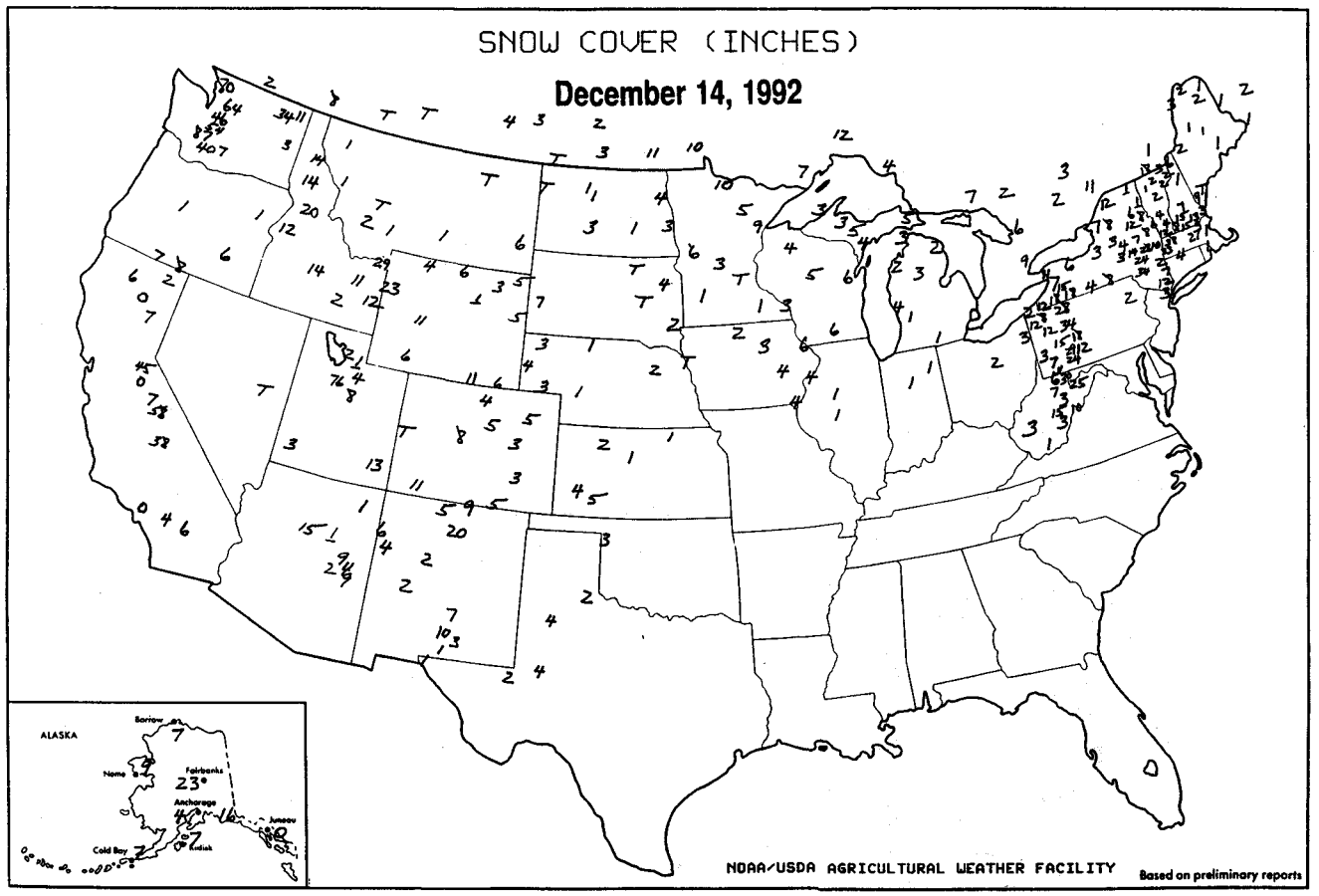
The Weekly Weather and Crop Bulletin is published weekly and jointly prepared by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of Agriculture (USDA). Publication began in 1872 as the Weekly Weather Chronicle. It is issued under general authority of the Act of January 12, 1895 (44-USC 213), 53d Congress, 3d Session. NOAA is responsible for managing, printing, and distributing the bulletin. The contents may be reprinted freely, with proper credit.

Annual subscriptions: domestic first class **$45**, foreign **$55** (in U.S. funds by international money order or check drawn on U.S. bank) payable to **U.S. Department of Commerce, NOAA.** POSTMASTER: Send address changes to **Weekly Weather and Crop Bulletin, NOAA/USDA Joint Agricultural Weather Facility, USDA South Building, Room 5844, Washington, DC 20250.** Order subscriptions from the office and address listed above. First class postage paid at Washington, DC, and additional mailing offices.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Climate Analysis Center
Managing Editor . . . . . ***Douglas Le Comte***
Meteorologists . . . . . ***Brad Rippey*** (202) 720-1444
Vilhelm Bjerknes, David Secora, Wes Byrd, and Brian Morris.

Subscriptions . . . . . ***Joyce Houston*** (202) 720-7917

U.S. DEPARTMENT OF AGRICULTURE
Economics Management Staff
Editor . . . . . ***Sharon Lee***
National Agricultural Statistics Service
Agricultural Statistician . . .***David Mueller*** (202) 720-2157
World Agricultural Outlook Board
Agricultural Weather Analysts . ***Ray Motha*** (202) 720-9805
Tom Puterbaugh, Mark Brusberg, and Bob Stefanski.



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