

WEEKLY WEATHER AND CROP BULLETIN

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

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

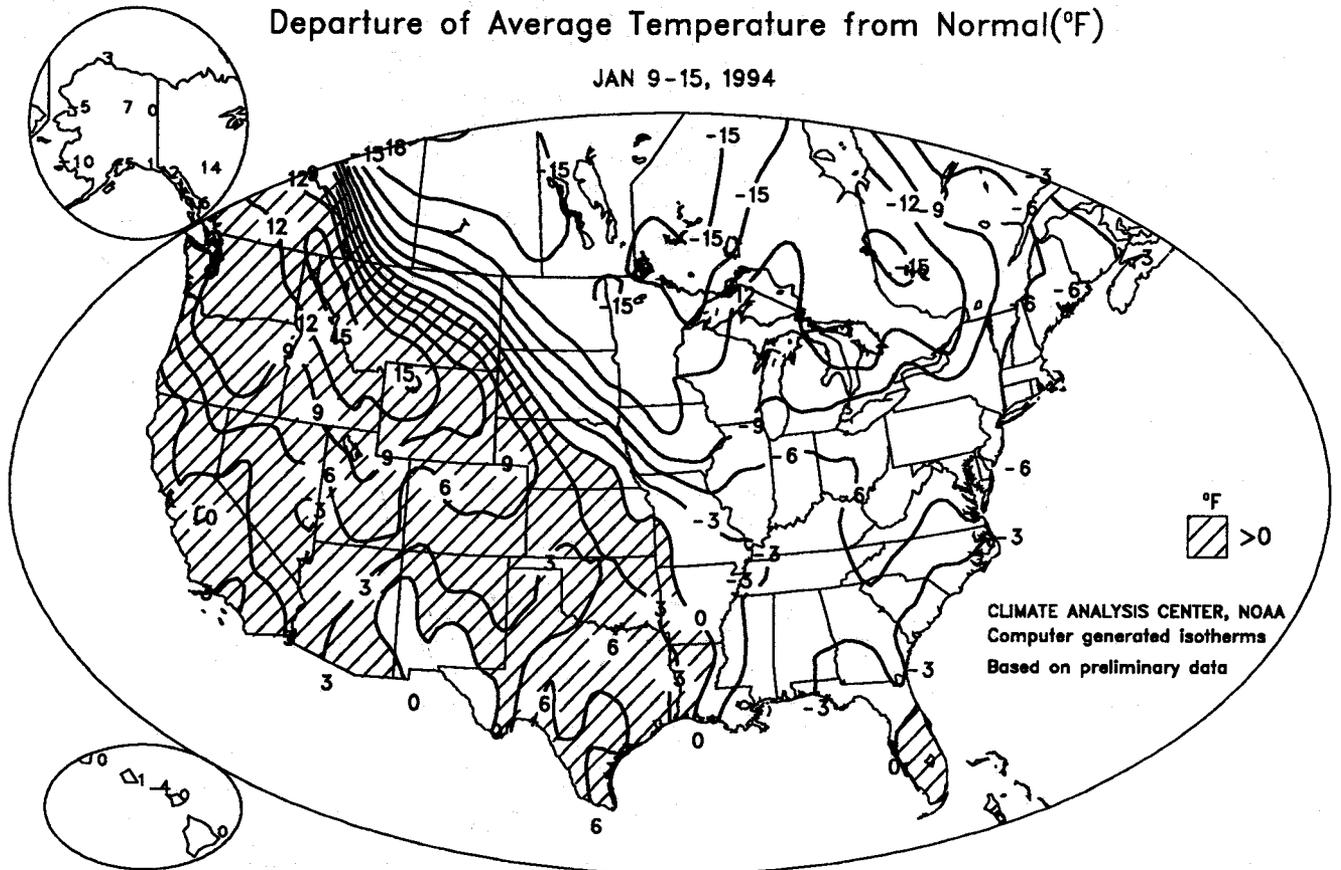
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January 19, 1994

Departure of Average Temperature from Normal(°F)

JAN 9-15, 1994



HIGHLIGHTS

January 9 - 15, 1994

Arctic high pressure systems twice plunged southeastward across the Dakotas and the Midwest before turning eastward toward the northern Atlantic Coast States. The latter blast delivered the coldest air to the aforementioned areas since at least December 1989, and in some cases since January 1985. Between the highs, abundant Gulf of Mexico moisture streamed northward, producing heavy rain in the Southeast, and yet another wintry mix of ice and snow from the Middle Atlantic States northward. Freezing rain first appeared on Tuesday in parts of North Carolina, and became more widespread on Wednesday from Virginia northward into southern New England. Snow fell in some areas, accumulating 6 inches in Hancock, MD and 7 inches in Allentown, PA. Farther south, more than 2 inches of rain drenched locations such as Charleston, SC and Mobile, AL. Prior to the

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National Weather Data for Selected Cities

Weather Data for the Week Ending January 15, 1994

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS							
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE		.50 INCH OR MORE	
																			.01 INCH OR MORE	.50 INCH OR MORE		
AL BIRMINGHAM	45	31	50	18	38	-4	1.6	.4	1.6	6.8	89	2.8	110	84	48	0	0	0	0	0	0	0
MOBILE	54	36	61	26	45	-4	2.1	1.0	1.8	5.9	78	2.3	97	88	50	0	0	4	2	1	1	1
MONTGOMERY	49	35	52	25	42	-3	.6	.5	.6	6.0	79	1.3	52	86	48	0	0	3	3	1	1	1
AK ANCHORAGE	18	9	27	-14	14	-1	.4	.4	.4	.6	41	.3	76	82	64	0	0	0	0	0	0	0
BARROW	-5	-13	0	-17	-9	4	.4	.0	.1	.67	0	0	77	73	73	0	0	7	7	2	0	0
FAIRBANKS	-8	-23	2	-36	-16	5	.4	.0	.4	.39	0	0	71	61	61	0	0	7	7	0	0	0
JUNEAU	26	20	34	9	23	-1	1.1	.0	.4	8.2	123	2.3	100	93	78	0	0	5	5	4	0	0
KODIAK	37	27	41	12	32	2	2.1	.4	1.1	14.1	134	3.3	89	95	84	0	0	7	7	4	0	0
NOME	10	-2	15	-6	4	3	.1	.1	.1	2.0	159	.1	29	74	55	0	0	0	0	0	0	0
AZ PHOENIX	69	42	76	38	56	3	.0	.1	.2	0	2	0	0	49	16	0	0	0	0	0	0	0
PRESCOTT	56	24	60	17	40	4	.0	.4	.0	.5	20	0	0	62	22	0	0	7	7	0	0	0
TUCSON	69	36	76	30	53	2	.0	.0	.1	.9	0	0	0	40	13	0	0	0	0	0	0	0
YUMA	73	48	78	40	60	4	.0	.1	.1	0	0	0	0	35	15	0	0	2	2	0	0	0
AR FORT SMITH	46	31	54	21	39	2	.3	.1	.2	3.4	85	.5	51	84	50	0	0	4	4	2	2	0
LITTLE ROCK	44	31	51	19	38	0	1.1	.4	1.1	5.5	88	1.1	74	78	52	0	0	4	4	2	2	1
CA BAKERSFIELD	59	36	63	33	47	0	.0	.0	.6	62	0	0	0	81	25	0	0	0	0	0	0	0
EUREKA	55	42	56	38	48	1	.1	-1.3	.1	8.6	95	1.5	49	94	70	0	0	0	0	0	0	0
FRESNO	58	34	62	31	46	1	.0	-1.4	.0	1.1	48	.1	10	97	26	0	0	0	0	0	0	0
LOS ANGELES	73	48	81	43	60	4	.0	-1.4	.0	1.0	36	0	0	67	20	0	0	0	0	0	0	0
REDDING	65	34	72	29	50	5	.0	-1.4	.0	3.8	44	.6	20	92	37	0	0	0	0	0	0	0
SACRAMENTO	57	36	60	33	46	2	.0	-1.9	.0	1.9	44	.2	9	100	64	0	0	2	2	0	0	0
SAN DIEGO	72	47	77	43	59	2	.0	-1.4	.0	.8	31	0	0	76	19	0	0	0	0	0	0	0
SAN FRANCISCO	59	43	63	41	51	3	.0	-1.0	.0	2.3	44	.1	4	72	33	0	0	0	0	0	0	0
CO DENVER	51	24	57	18	37	8	.0	-1.1	.0	.4	49	.1	0	84	50	0	0	0	0	0	0	0
GRAND JUNCTION	42	19	48	15	31	4	.0	-1.1	.0	.6	61	.0	8	62	21	0	0	7	7	0	0	0
PURDLO	52	13	64	7	32	3	.0	-1.1	.0	0	0	0	0	75	31	0	0	0	0	0	0	0
CT BRIDGEPORT	30	16	40	6	23	0	.3	-1.4	.3	6.7	131	2.2	135	83	51	0	0	7	7	0	0	0
HARTFORD	28	8	38	-4	18	0	.1	-1.7	.1	6.8	120	2.6	152	76	52	0	0	7	7	2	2	0
DC WASHINGTON	34	21	42	6	27	0	.7	.1	.6	6.7	149	2.3	169	78	56	0	0	6	6	2	2	1
FL APALACHICOLA	61	43	71	32	52	1	1.2	.3	1.1	5.2	86	2.4	126	86	60	0	0	1	1	3	3	1
DAYTONA BEACH	68	51	79	39	59	2	.8	.8	4.0	105	105	2.2	171	90	57	0	0	0	0	1	1	1
JACKSONVILLE	59	42	72	30	51	1	1.2	.2	1.1	4.3	100	2.5	170	88	60	0	0	1	1	2	2	1
KEY WEST	74	63	80	59	68	0	.1	-1.3	.1	4.5	148	2.3	227	91	67	0	0	0	0	3	3	0
MIAMI	74	60	83	51	67	0	1.2	.8	.7	3.5	124	3.0	317	92	61	0	0	0	0	5	5	1
ORLANDO	70	51	80	41	61	1	1.1	.6	1.1	2.7	85	2.0	189	95	62	0	0	0	0	3	3	1
TALLAHASSEE	60	40	69	28	50	0	.9	-2.2	.8	6.3	86	3.3	143	85	52	0	0	2	2	1	1	1
TAMPA	70	51	76	40	60	0	.7	-1.3	.7	2.8	93	1.6	175	91	61	0	0	0	0	1	1	1
WEST PALM BEACH	73	58	82	42	65	0	1.6	1.1	.8	4.4	129	3.6	310	96	61	0	0	0	0	5	5	1
GA ATLANTA	45	30	53	15	38	0	1.3	.2	1.3	5.4	82	2.9	125	80	48	0	0	4	4	3	3	1
AUGUSTA	50	32	60	21	41	1	1.3	.4	1.2	5.4	101	2.6	138	78	43	0	0	0	0	3	3	1
MACON	50	33	55	21	42	0	.6	-1.4	.5	4.4	67	1.6	71	80	45	0	0	3	3	3	3	0
SAVANNAH	55	39	66	28	47	0	.5	-1.3	.3	3.8	80	1.6	93	85	51	0	0	3	3	3	3	0
HI HILLO	81	63	83	61	72	0	.1	-2.2	.1	16.7	98	.6	11	89	64	0	0	0	0	2	2	0
HONOLULU	82	66	84	63	74	1	.0	-1.8	.0	.3	5	0	0	87	59	0	0	0	0	0	0	0
KAHULUI	83	62	85	59	73	1	.0	-1.0	.0	.6	10	0	0	86	56	0	0	0	0	0	0	0
LIHUE	80	66	82	63	73	1	.3	-1.9	.5	3.5	42	.7	23	86	62	0	0	0	0	1	1	1
ID BOISE	38	30	42	27	34	6	.2	-2.2	.1	2.2	105	1.2	168	99	67	0	0	7	7	2	2	0
LEWISTON	49	36	55	33	43	10	.1	-1.3	.0	1.4	74	.6	91	86	57	0	0	0	0	2	2	0
POCATELLO	40	31	47	26	36	13	.2	-2.1	.1	1.0	61	.3	62	88	64	0	0	6	6	2	2	0
IL CHICAGO	21	3	35	-17	12	0	.2	-2.2	.2	1.5	47	.6	66	82	53	0	0	7	7	2	2	0
MOLINE	19	3	35	-21	11	0	.1	-2.2	.1	1.7	57	.6	73	83	61	0	0	7	7	2	2	0
PEORIA	22	9	35	-17	16	0	.3	.0	.3	1.6	49	.4	50	87	64	0	0	7	7	2	2	0
QUINCY	24	11	35	-12	17	0	.2	-2.1	.1	1.1	37	.2	33	85	69	0	0	7	7	2	2	0
ROCKFORD	17	0	33	-21	9	0	.1	-2.2	.1	1.6	58	.4	53	88	60	0	0	7	7	1	1	0
SPRINGFIELD	25	13	37	-11	19	0	.2	-1.1	.2	1.3	37	.3	33	87	65	0	0	6	6	2	2	0
IN EVANSVILLE	33	20	45	-3	27	4	.4	-1.3	.3	3.3	63	.6	43	87	58	0	0	5	5	4	4	0
FORT WAYNE	27	9	37	-10	18	0	.2	-1.3	.1	2.0	52	.5	54	90	67	0	0	7	7	3	3	0
INDIANAPOLIS	28	14	41	-9	21	1	.1	-1.4	.0	2.4	53	.2	20	86	62	0	0	5	5	5	5	0
SOUTH BEND	25	5	37	-16	15	0	.5	.0	.3	2.5	55	1.0	80	91	64	0	0	7	7	4	4	0
IA DES MOINES	17	2	35	-18	10	-10	.2	-1.1	.1	1.3	67	.4	80	83	63	0	0	7	7	3	3	0
SIOUX CITY	20	1	37	-13	11	-7	.1	-1.1	.1	.9	86	.4	131	82	59	0	0	7	7	2	2	0
WATERLOO	14	-5	33	-25	4	-10	.2	.0	.1	1.2	70	.4	107	86	63	0	0	7	7	2	2	0
KS CONCORDIA	35	18	50	10	26	1	.1	-1.1	.0	1.2	105	.1	27	86	56	0	0	7	7	2	2	0
DODGE CITY	45	18	55	13	32	2	.0	-1.1	.0	1.0	115	0	0	87	42	0	0	7	7	0	0	0
GOODLAND	44	20	50	16	32	4	.0	-1.1	.0	0	7	0	0	16	83	46	0	0	7	7	0	0
TOPEKA	34	18	49	7	26	0	0	-2.2	0	1.0	53	.1	26	89	57	0	0	7	7	0	0	0
WICHITA	40	23	53	15	31	1	0	-2.2	0	.4	20	0	2	84	57	0	0	7	7	0	0	0
KY BOWLING GREEN	36	20	46	0	28	-5	.4	-1.5	.3	8.0	115	1.8	92	94	61	0	0	5	5	2	2	0
LEXINGTON	32	17	41	-7	25	-6	.3	-1.3	.2	4.8	88	1.5	100	88	60	0	0	5	5	4	4	0
LOUISVILLE	34	19	44	-3	27	-5	.2	-1.5	.1	3.2	63	.6	45	85	56	0	0	5	5	5	5	0
LA BATON ROUGE	55	38	62	27	47	-3	.2	-1.9	.1	3.9	49	.6	26	94	52	0	0	2	2	2	2	0
LAKE CHARLES	60	43	66	30	52	1	.8	-1.3	.6	3.4	46	.9	39	91	57	0	0	1	1	2	2	1
NEW ORLEANS	56	40	63	30	48	-3	.7	-1.4	.4	3.9	48	1.0	41	89	51	0	0	1	1	3	3	0
SERVEPORT	58	38	69	26	48	3	.7	-2.2	.7	2.4	35	1.0	46									

Weather Data for the Week Ending January 15, 1994

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION								RELATIVE HUMIDITY, PERCENT	NUMBER OF DAYS					
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE		MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	92 AND BELOW	.01 INCH OR MORE	
															.50 INCH OR MORE					OR MORE	
ME CARIBOU	13	-3	23	-16	5	-4	.5	-.1	.4	5.5	123	1.5	121	85	64	0	7	3	0	0	
PORTLAND	27	8	35	-3	18	-3	.4	-.4	.3	7.3	115	1.9	107	84	51	0	7	3	0	0	
MD BALTIMORE	34	18	44	5	26	-6	.5	-.2	.5	6.7	136	2.2	148	81	51	0	7	2	1	0	
SALISBURY	36	21	44	8	29	-6	.6	-.2	.4	6.8	124	2.1	116	88	63	0	5	3	0	0	
MA BOSTON	30	16	37	1	23	-5	.2	-.6	.1	9.5	165	2.9	165	77	49	0	7	2	0	0	
CRATHAM	32	20	36	4	26	-5	.4	-.5	.2	11.2	176	3.6	191	85	65	0	7	2	0	0	
MI ALPENA	17	-8	31	-23	4	-13	.4	-.4	.1	1.2	41	.8	91	85	63	0	7	0	0	0	
DETROIT	26	6	39	-7	16	-7	.1	-.3	.1	1.7	44	.9	93	84	53	0	7	2	0	0	
FLINT	22	1	35	-9	12	-10	.1	-.3	.0	.8	29	.3	41	89	60	0	7	3	0	0	
GRAND RAPIDS	24	0	34	-16	12	-10	.2	-.3	.1	2.1	56	.7	68	90	62	0	7	5	0	0	
HOUGHTON LAKE	19	-1	31	-14	9	-8	.4	-.3	.1	1.4	51	.7	84	85	60	0	7	1	0	0	
LANSING	23	-1	34	-9	11	-9	.1	-.3	.1	1.2	44	.5	69	91	60	0	7	1	0	0	
MARQUETTE	12	-6	27	-19	3	-9	.2	-.4	.1	2.4	63	1.1	94	81	53	0	7	2	0	0	
MUSKEGON	24	6	35	1	15	-9	.4	-.2	.2	2.1	49	1.0	81	90	61	0	7	4	0	0	
SAULT ST. MARIE	10	-9	27	-29	1	-12	.5	-.0	.3	3.7	88	1.1	87	82	56	0	7	4	0	0	
MN ALEXANDRIA	2	-18	20	-33	-8	-14	-.1	-.2	.1	.9	77	.2	45	84	64	0	7	2	0	0	
DULUTH	0	-20	22	-32	-10	-16	.2	-.1	.1	2.1	109	.8	119	77	51	0	7	4	0	0	
INT'L FALLS	-3	-25	17	-36	-14	-15	.2	-.0	.1	.8	60	-.3	76	79	59	0	7	3	0	0	
MINNEAPOLIS	11	-8	32	-25	1	-10	.1	-.2	.0	1.0	63	.4	87	76	57	0	7	2	0	0	
ROCHESTER	9	-9	30	-27	0	-11	.1	-.1	.1	1.2	84	.5	112	84	66	0	7	2	0	0	
MS GREENWOOD	47	33	58	23	40	-3	.4	.7	.4	3.8	46	.8	32	86	50	0	3	1	0	0	
JACKSON	48	32	53	21	40	-3	.2	-.1	.2	4.3	47	1.4	50	88	52	0	3	1	0	0	
MERIDIAN	49	34	55	24	41	-3	.2	.9	.2	4.6	53	1.3	52	89	47	0	3	1	0	0	
MO CAPE GIRARDEAU	36	23	45	4	29	-2	.4	.2	.4	3.4	57	.6	40	85	58	0	5	3	0	0	
COLUMBIA	30	17	38	-1	24	-2	.2	.2	.2	1.8	53	.3	36	89	70	0	7	1	0	0	
KANSAS CITY	31	17	45	4	24	-1	.4	.2	.2	1.2	58	.1	23	85	62	0	7	3	0	0	
SAINT LOUIS	31	20	40	-2	26	-3	.2	.2	.2	1.9	48	.4	46	81	59	0	5	2	0	0	
SPRINGFIELD	38	23	48	7	31	1	.1	.3	.1	1.9	53	.3	31	85	58	0	4	3	0	0	
MT BILLINGS	45	19	54	7	32	10	.4	.2	.2	.2	19	.4	9	78	41	0	7	0	0	0	
GLASGOW	11	-1	19	-3	5	-5	.2	.1	.1	.5	100	.4	228	80	67	0	7	3	0	0	
GREAT FALLS	43	16	51	4	29	9	.4	.2	.2	.5	35	.2	34	81	53	0	5	1	0	0	
HAVRE	19	2	37	-6	11	-3	.4	.1	.1	.5	0	.2	0	85	71	0	7	0	0	0	
HELENA	47	30	55	23	39	20	.4	.1	.1	.2	24	.1	24	74	49	0	4	1	0	0	
KALISPELL	42	32	48	27	37	17	.1	-.2	.1	2.4	97	.9	106	91	73	0	3	2	0	0	
MILES CITY	32	8	44	2	20	4	.4	-.2	.1	.6	63	.5	160	87	66	0	7	3	0	0	
MISSOULA	45	31	54	27	38	16	.4	-.3	.2	.6	33	.2	31	87	66	0	5	1	0	0	
NE GRAND ISLAND	34	12	53	6	23	1	.4	-.1	.1	.4	45	.4	0	87	54	0	7	0	0	0	
LINCOLN	32	11	50	-2	21	0	.4	-.1	.1	.5	40	.1	18	86	49	0	7	0	0	0	
NORFOLK	29	6	49	-7	17	-1	.4	-.1	.1	.5	48	.1	19	83	52	0	7	0	0	0	
NORTH PLATTE	38	16	47	11	27	6	.2	.1	.1	.5	77	.3	150	91	61	0	7	3	0	0	
OSAMA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SCOTTSBLUFF	41	22	48	17	31	7	.1	.0	.1	.9	111	.3	133	90	55	0	7	1	0	0	
VALENTINE	34	10	49	2	22	0	.4	-.1	.1	.5	72	.4	10	82	53	0	7	1	0	0	
NV ELY	43	12	55	7	28	4	.4	-.2	.2	.3	24	.1	29	82	37	0	7	1	0	0	
LAS VEGAS	62	38	66	30	50	5	.0	-.1	.0	.2	35	.0	0	41	21	0	2	0	0	0	
RENO	52	21	61	19	37	4	.0	-.3	.0	.2	11	.4	0	79	24	0	7	0	0	0	
WINNEVOCCA	48	19	54	15	34	5	.4	-.2	.1	.5	40	.2	42	91	49	0	7	1	0	0	
NE CONCORD	24	4	36	-10	14	-5	.2	-.4	.1	4.5	102	1.2	93	83	50	0	7	2	0	0	
NJ ATLANTIC CITY	34	17	43	6	26	-5	.3	-.5	.3	6.0	118	1.7	102	82	53	0	7	2	0	0	
NM ALBUQUERQUE	51	24	54	16	37	4	.0	-.1	.0	.4	4	.0	0	50	21	0	7	0	0	0	
CLOVIS	54	25	61	23	39	3	.0	-.1	.0	.5	67	.4	0	59	21	0	7	0	0	0	
ROSWELL	59	22	66	18	40	1	.0	-.1	.0	.1	17	.0	0	62	24	0	7	0	0	0	
NY ALBANY	23	6	32	-8	14	-6	.3	-.2	.2	4.9	119	1.9	155	78	60	0	7	3	0	0	
BINGHAMTON	22	9	32	-8	16	-5	.2	-.3	.1	5.2	122	1.9	152	86	69	0	7	4	0	0	
BUFFALO	26	11	39	-4	19	-5	.3	-.3	.1	4.9	96	1.3	93	85	57	0	7	4	0	0	
NEW YORK	31	20	40	6	26	-6	.4	-.3	.4	5.8	118	1.4	91	76	52	0	7	2	0	0	
ROCHESTER	23	8	36	-5	16	-8	.4	-.1	.2	3.3	88	1.7	163	88	62	0	7	4	0	0	
SYRACUSE	22	4	34	-10	13	-10	.3	-.3	.1	4.7	107	1.5	127	88	70	0	7	4	0	0	
NC ASHEVILLE	38	22	51	2	30	-6	1.2	.3	.6	6.1	97	2.6	134	89	48	0	5	3	2	1	
CHARLOTTE	44	28	50	12	36	-3	.8	.0	.8	5.4	103	2.1	118	73	43	0	5	2	1	1	
GREENSBORO	40	23	51	5	32	-5	1.0	.3	1.0	5.5	111	2.2	144	82	48	0	5	2	1	1	
HATTERAS	51	38	67	20	45	0	1.9	.6	1.0	7.4	104	3.3	126	82	51	0	1	4	1	1	
NEW BERN	49	31	66	15	40	-3	2.0	1.1	1.6	5.0	87	3.4	165	87	51	0	4	3	1	1	
RALEIGH	41	26	50	8	34	-5	.6	-.2	.6	5.9	120	2.2	130	80	51	0	5	2	1	1	
WILMINGTON	52	34	65	19	43	0	1.2	.1	.8	5.1	80	2.4	104	82	50	0	4	3	1	1	
ND BISMARCK	6	-13	14	-29	-4	-13	.1	.0	.1	1.4	192	.6	229	90	66	0	7	3	0	0	
FARGO	1	-18	14	-33	-8	-14	.1	-.1	.0	1.5	154	.5	151	75	64	0	7	4	0	0	
GRAND FORKS	-2	-22	13	-34	-12	-16	.4	-.1	.1	1.0	100	.6	157	80	62	0	7	2	0	0	
WILLISTON	8	-12	25	-20	-2	-10	.4	-.1	.1	1.2	132	.8	275	78	63	0	7	2	0	0	
OH AKRON-CANTON	26	12	43	-7	19	-5	.2	-.3	.1	3.9	95	1.1	101	90	62	0	7	3	0	0	
CINCINNATI	30	16	45	-8	23	-5	.4	-.2	.3	3.5	79	1.0	78	84	61	0	5	4	0	0	
CLEVELAND	27	10	39	-5	19	-6	.1	-.4	.1	3.2	78	1.0	97	88	59	0	7	3	0	0	
COLUMBUS	28	14	39	-6	21	-3	.2	-.3	.1	3.0	75	.8	82	86	63	0	6	4	0	0	
DAYTON	27	14	40	-10	21	-5	.1	-.4	.1	3.2	80	.4	39	86	61	0	6	3	0	0	

Based on 1961-90 normals.

Weather Data for the Week Ending January 15, 1994

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS						
	AVERAGE	MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Dec 1	PCT. NORMAL SINCE Dec 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	AVERAGE MINIMUM	TEMP. °F		PRECIP.	
																		90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
TOLEDO	25	5	36	-9	15	-7	.2	.2	.1	2.2	56	.9	95	89	66	0	7	3	4	0	
YOUNGSTOWN	26	11	43	-8	19	-5	.3	.2	.1	3.7	91	1.1	95	91	61	0	7	4	0	0	
OK OKLAHOMA CITY	51	27	60	17	39	3	.0	.3	.0	1.3	68	.7	87	42	0	6	0	0	0	0	
TULSA	46	28	60	17	37	2	.0	.3	.0	1.9	64	.1	13	90	51	0	4	0	0	0	
OR ASTORIA	52	45	54	42	49	7	2.0	.4	.0	14.8	95	5.2	104	99	86	0	0	6	0	2	
BURNS	44	24	52	18	34	11	.7	.2	.7	1.0	59	.1	27	91	60	0	1	1	0	0	
MEDFORD	44	35	55	30	39	2	.7	.4	.7	3.1	65	.6	45	98	80	0	1	2	0	0	
FENDLTON	52	38	61	35	45	12	.3	.0	.2	2.5	105	1.6	208	88	51	0	0	4	0	0	
PORTLAND	54	45	56	41	49	10	.4	.0	.9	7.8	88	2.8	101	94	54	0	0	0	5	0	
SALEM	54	44	58	37	49	10	.2	.2	.3	10.6	107	3.8	123	93	48	0	0	0	4	0	
PA ALLENTOWN	28	14	37	2	21	-5	.7	.0	.1	7.0	138	2.0	127	84	60	0	0	7	2	1	
ERIE	27	13	40	-1	20	-4	.5	.0	.2	4.5	94	1.6	135	89	61	0	7	5	0	0	
HARRISBURG	29	17	39	2	23	-5	1.1	.5	.6	6.3	137	2.4	174	85	59	0	7	0	0	0	
PHILADELPHIA	33	21	41	6	27	-2	.5	.3	.4	5.3	99	1.6	95	75	57	0	5	2	0	0	
PITTSBURGH	27	11	37	-5	19	-7	.3	.3	.1	3.9	94	1.8	142	86	61	0	6	4	0	0	
SCRANTON	26	12	36	0	19	-6	.3	.2	.2	4.5	126	1.4	138	87	59	0	7	3	0	0	
RI PROVIDENCE	30	14	38	1	22	-4	.1	.8	.1	8.0	126	2.2	114	81	56	0	7	1	0	0	
SC CHARLESTON	53	38	67	27	45	-2	2.6	1.8	2.3	6.6	137	4.3	259	80	48	0	3	3	1	1	
COLUMBIA	50	33	60	19	41	-2	1.2	.2	1.2	4.7	82	2.3	108	81	45	0	3	3	1	1	
FLORENCE	49	33	60	18	41	-2	.9	.1	.8	4.3	89	2.4	139	78	47	0	3	3	1	1	
GREENVILLE	43	27	57	10	35	-5	1.1	.2	.7	5.2	85	2.3	114	77	39	0	5	2	1	1	
SD ABERDEEN	8	-12	16	-30	-2	-12	1.1	.0	.1	1.3	164	.8	250	80	58	0	7	3	0	0	
HURON	13	-5	20	-23	4	-9	1.1	.0	.1	1.0	155	.3	150	82	66	0	7	1	0	0	
RAPID CITY	37	12	50	4	25	3	.2	.2	.1	.8	119	.2	133	86	58	0	7	2	0	0	
STOUK FALLS	14	-4	27	-21	5	-8	1.1	.0	.1	.6	58	.3	96	81	59	0	7	1	0	0	
TN CHATTANOOGA	42	27	50	10	34	-3	1.9	.8	1.9	8.5	112	3.2	134	87	46	0	4	2	1	1	
KNOXVILLE	39	22	47	5	31	-5	1.0	.1	.8	11.9	180	3.8	186	87	57	0	5	3	1	1	
MEMPHIS	43	30	54	17	37	-3	.3	.6	.3	6.5	84	.9	47	80	53	0	4	2	0	0	
NASHVILLE	39	24	49	5	32	-4	1.1	.7	.1	8.5	133	1.9	106	86	52	0	5	3	0	0	
TX ABILENE	60	35	69	30	47	5	.7	.2	.7	.9	61	.7	0	93	38	0	3	0	0	0	
AMARILLO	53	23	60	16	38	3	.0	.1	.0	.9	145	.7	0	69	27	0	7	0	0	0	
AUSTIN	66	46	73	33	56	8	1.2	.2	.2	1.4	51	.2	28	92	51	0	0	4	0	0	
BEAUMONT	62	45	67	34	54	3	1.2	.1	.9	3.3	45	1.3	55	93	60	0	0	3	1	1	
BROWNSVILLE	75	52	79	41	64	4	1.6	1.3	1.6	3.9	194	1.6	213	95	49	0	0	2	1	1	
CORPUS CHRISTI	72	50	78	40	61	6	.8	.4	.6	5.6	277	.8	104	93	52	0	0	2	1	1	
DEL RIO	70	43	75	34	57	8	.0	.3	.0	.2	11	.0	0	84	39	0	0	0	0	0	
EL PASO	61	25	64	23	43	1	.0	.1	.0	.7	89	.0	0	55	16	0	7	0	0	0	
FORT WORTH	59	40	72	29	49	8	.3	.1	.3	2.8	95	.3	31	93	56	0	1	2	0	0	
GALVESTON	61	53	63	48	57	4	.9	.1	.4	3.5	67	1.0	62	93	63	0	0	4	0	0	
HOUSTON	64	44	71	33	54	4	.5	.3	.5	3.2	48	.6	29	96	58	0	0	3	0	0	
LOBBOCK	57	23	66	19	40	2	.0	.1	.0	.3	46	.0	0	93	27	0	7	0	0	0	
MIDLAND	63	29	69	26	46	3	.0	.1	.0	.3	47	.0	0	93	23	0	7	0	0	0	
SAN ANGELO	65	35	70	30	50	6	.1	.0	.1	.9	80	.1	40	92	32	0	3	1	0	0	
SAN ANTONIO	69	42	77	28	56	7	.3	.1	.2	.7	31	.3	35	91	40	0	1	2	0	0	
VICTORIA	69	48	75	37	58	7	1.1	.3	.6	5.1	110	1.1	66	95	52	0	0	2	1	1	
WACO	60	38	69	29	49	4	.7	.3	.5	2.2	83	.7	88	96	66	0	2	2	1	1	
WICHITA FALLS	57	29	66	20	43	4	.0	.0	.0	2.6	121	.7	0	95	45	0	6	0	0	0	
UT CEDAR CITY	49	20	53	14	35	6	.0	.2	.0	.4	35	.7	0	86	34	0	7	0	0	0	
SALT LAKE CITY	45	30	54	26	38	11	.4	.1	.3	1.5	73	.6	104	87	56	0	5	2	0	0	
VT BURLINGTON	19	0	32	-16	10	-7	.3	.1	.3	3.0	89	1.4	150	84	57	0	7	2	0	0	
VA NORFOLK	39	26	49	10	33	-6	.9	.0	.6	5.4	106	2.0	113	85	60	0	5	3	1	0	
RICHMOND	38	24	47	9	31	-4	.5	.3	.4	5.3	108	1.5	93	83	41	0	5	3	0	0	
ROANOKE	37	19	48	1	28	-6	1.2	.6	1.0	7.8	184	2.5	198	76	45	0	5	2	0	0	
WA QUILLAYOTE	50	44	54	39	47	7	2.6	.7	1.2	19.3	85	6.7	93	99	94	0	0	6	5	1	
SEATTLE-TACOMA	51	44	55	39	47	8	.4	.9	.2	6.0	70	1.5	56	97	81	0	0	0	0	0	
SPOKANE	43	35	49	23	39	13	.1	.4	.1	3.1	89	1.3	122	97	82	0	0	0	0	0	
YAKIMA	47	29	61	25	38	9	.7	.3	.7	1.2	60	.2	35	96	67	0	6	0	0	0	
WV BECKLEY	31	14	49	-9	23	-6	1.0	.4	.5	7.7	164	3.2	222	88	62	0	6	4	1	0	
CHARLESTON	33	17	45	-5	25	-7	.6	.0	.3	7.7	159	4.5	310	85	57	0	6	4	0	0	
HUNTINGTON	32	17	43	-4	24	-6	.6	.0	.3	6.5	130	3.2	219	87	60	0	5	3	0	0	
PARKERSBURG	29	13	39	-3	21	-9	.6	.2	.4	5.2	115	3.1	200	94	59	0	5	3	0	0	
WI GREEN BAY	14	-7	31	-21	3	-11	1.1	.2	.1	1.1	50	.6	102	79	56	0	7	1	0	0	
LACROSSE	14	-7	32	-24	4	-10	.7	.2	.7	.7	0	.7	0	81	52	0	7	0	0	0	
MADISON	17	-4	32	-21	7	-9	.1	.2	.0	1.0	45	.7	108	83	53	0	7	2	0	0	
MILWAUKEE	21	3	34	-17	12	-7	.1	.3	.1	1.5	47	.8	95	83	53	0	7	2	0	0	
WAUSAU	11	-9	29	-26	1	-11	.1	.2	.1	1.0	51	.4	84	68	34	0	7	1	0	0	
WY CASPER	41	25	48	19	33	11	.7	.7	.7	1.0	100	.3	97	81	51	0	6	1	0	0	
CHEYENNE	43	23	49	18	33	7	.0	.1	.0	.4	63	.1	39	80	33	0	6	0	0	0	
LANDER	45	21	53	16	33	14	.0	.1	.0	.4	49	.0	0	70	34	0	7	0	0	0	
SHERIDAN	42	20	49	11	31	11	.3	.1	.3	1.0	91	.5	149	86	57	0	6	1	0	0	

Based on 1961-90 normals.

HEATING DEGREE DAYS (Base 65° F) January 9 - 15, 1994

(Cumulative totals and departures from normal are for the period July 1, 1993 - January 15, 1994)

STATES AND STATIONS	WEEKLY		CUMULATIVE			STATES AND STATIONS	WEEKLY		CUMULATIVE			STATES AND STATIONS	WEEKLY		CUMULATIVE		
	TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP fm 92-93		TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP fm 92-93		TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP fm 92-93
AL BIRMINGHAM	190	22	1582	95	240	LA BATON ROUGE	126	11	1129	252	407	TULSA	194	-16	2073	197	57
AL HUNTSVILLE	216	29	1797	121	241	LA LAKE CHARLES	93	-19	905	73	192	OR ASTORIA	114	-47	2482	2	-168
AL MOBILE	134	22	1074	193	351	LA NEW ORLEANS	119	14	941	167	382	OR EUGENE	128	-45	2321	118	22
AL MONTGOMERY	160	23	1326	180	301	LA SHREVEPORT	118	-29	1303	134	112	OR MEDFORD	178	-15	2231	-88	146
AK ANCHORAGE	357	1	4752	-744	-749	ME BANGOR	375	44	3737	66	-19	OR NORTH BEND	111	-29	2170	0	39
AK BARROW	510	-36	8787	-1008	-690	ME PORTLAND	329	21	3360	-29	-13	OR PENDLETON	138	-86	2597	-119	-400
AK BETHEL	474	68	5760	-691	-496	ME BALTIMORE	272	40	2331	110	242	OR PORTLAND	109	-73	1994	-223	-208
AK COLD BAY	216	-36	4221	-464	-411	MA BOSTON	291	39	2628	128	09	OR REDMOND	172	-66	3426	121	-190
AK FAIRBANKS	554	22	6795	-634	-520	MI ALPENA	421	90	4028	247	99	OR SALEM	110	-72	2123	-247	-146
AK JUNEAU	293	6	3748	-796	-721	MI DETROIT	339	45	3018	-42	107	PA ALLENTOWN	305	37	2803	85	119
AK KING SALMON	351	1	4819	-942	-631	MI FLINT	370	66	3601	375	404	PA BRADFORD	344	22	3794	7	222
AK KOTzebue	486	31	6877	-618	-701	MI GRAND RAPIDS	368	67	3507	241	264	PA ERIE	316	41	2998	253	364
AK MCGRATH	588	70	6607	-940	-433	MI LANSING	376	68	3568	248	232	PA PHILADELPHIA	263	20	2086	-205	32
AK NOME	425	26	6261	-567	-929	MI MUSKOGON	350	57	3396	252	188	PA PITTSBURGH	318	45	2844	31	219
AK ST PAUL ISLAND	313	49	4751	-462	-526	MI TRAVERSE CITY	373	58	3575	90	-20	PA SCRANTON	320	40	3084	153	297
AK YAKUTAT	259	-21	4047	-709	-893	MI DULUTH	516	106	5073	323	183	PA WILLIAMSPORT	330	50	3049	179	357
AZ FLAGSTAFF	220	-37	3220	-159	-131	MI INT'L FALLS	545	91	5443	263	78	RI PROVIDENCE	299	40	2727	91	115
AZ PHOENIX	62	-22	509	-173	-88	MI MINNEAPOLIS	442	65	4145	229	167	SC CHARLESTON	135	9	1025	15	192
AZ TUCSON	84	-14	699	-129	-141	MI ROCHESTER	449	71	4273	252	48	SC COLUMBIA	165	12	1413	65	149
AR FORT SMITH	183	-20	1828	54	114	MS JACKSON	171	19	1518	249	432	SC GREENVILLE	209	34	1787	156	90
AR LITTLE ROCK	189	0	1739	98	103	MS MERIDIAN	164	17	1337	72	274	SD ABERDEEN	465	74	4448	248	-51
CA FRESNO	132	-8	1219	-129	-6	MO COLUMBIA	289	23	2779	223	151	SD HURON	423	57	4224	293	33
CA LOS ANGELES	32	-26	326	-247	-178	MO KANSAS CITY	285	5	2785	121	52	SD PIERRE	379	36	3881	221	-125
CA SACRAMENTO	130	-15	1338	-31	14	MO SAINT LOUIS	275	23	2392	69	89	SD RAPID CITY	279	-22	3441	-142	-578
CA SAN DIEGO	39	-17	432	-73	-69	MO SPRINGFIELD	239	1	2467	174	185	TX SIOUX FALLS	415	51	4095	208	54
CA SAN FRANCISCO	94	-25	1107	-312	-14	MT BILLINGS	232	-69	3415	-145	-469	TX BRISTOL	250	33	2226	68	185
CO COLORADO SPRINGS	215	-41	3181	66	-88	MT GLASGOW	418	33	4449	65	-166	TX CHATTANOOGA	212	16	1720	-72	91
CO DENVER	193	-59	2913	-34	-340	MT GREAT FALLS	247	-67	3922	75	-458	TX KNOXVILLE	240	36	2010	58	207
CO GRAND JUNCTION	239	-48	2952	87	63	MT HAVRE	380	19	4264	-25	-440	TX MEMPHIS	197	15	1645	82	109
CT HARTFORD	327	44	3054	159	114	MT HELIENA	184	-138	3941	-152	-525	TX NASHVILLE	233	30	1995	137	264
DE WILMINGTON	278	37	2301	2	143	MT KALISPELL	194	-122	4157	-158	-379	TX ARLIENE	121	-40	1437	94	117
DC WASHINGTON	263	50	2081	171	130	MT MISSOULA	188	-113	3852	-161	-458	TX AMARILLO	185	-25	2278	132	-147
FL DAYTONA BEACH	48	-17	478	52	264	NE GRAND ISLAND	296	-12	3207	-11	-300	TX AUSTIN	59	-66	846	-26	00
FL FORT MYERS	22	-13	156	-42	104	NE NORTH PLATTE	264	-44	3341	-115	-375	TX BROWNSVILLE	17	-39	343	0	85
FL JACKSONVILLE	99	1	790	74	301	NE OMAHA	357	42	3350	164	67	TX CORPUS CHRISTI	31	-46	496	-25	64
FL KEY WEST	3	-4	19	-15	16	NE SCOTTSBLUFF	234	-53	3476	136	-375	TX DALLAS FT WORTH	108	-46	1299	80	124
FL MIAMI	14	-7	61	-26	48	NV ELKO	239	-47	3988	449	-193	TX EL PASO	152	-9	1356	-103	-12
FL ORLANDO	37	-19	346	16	191	NV ELY	258	-29	3978	273	233	TX HOUSTON	75	-37	865	50	140
FL PENSACOLA	121	10	895	71	330	NV LAS VEGAS	102	-39	1225	-48	-125	TX LUBBOCK	171	-15	1819	34	41
FL TALLAHASSEE	102	-6	942	74	375	NV RENO	197	-34	2419	-469	-376	TX LUFKIN	107	-19	1174	158	116
FL TAMPA	37	-19	328	-30	180	NV WINNEMUCCA	217	-39	3185	-16	-154	TX MIDLAND ODESSA	129	-32	1475	5	66
FL WEST PALM BEACH	21	-7	115	-32	79	NH CONCORD	358	33	3627	57	53	TX SAN ANGELO	105	-49	1253	-40	61
GA ATHENS	197	31	1593	132	157	NJ ATLANTIC CITY	274	36	2489	126	206	TX SAN ANTONIO	65	-47	860	-5	82
GA ATLANTA	191	22	1464	-48	74	NH NEWARK	278	38	2257	41	192	TX VICTORIA	46	-51	682	-3	99
GA AUGUSTA	167	18	1338	26	186	NM ALBUQUERQUE	192	-28	2177	-118	-77	TX WACO	111	-32	1314	203	240
GA MACON	162	17	1382	173	264	NY ALBANY	352	42	3401	177	189	TX WICHITA FALLS	152	-30	1699	133	196
GA SAVANNAH	129	8	962	7	206	NY BINGHAMTON	341	33	3663	283	150	UT CEDAR CITY	211	-41	2882	-37	-91
ID BOISE	214	-45	2942	-48	-228	NY BUFFALO	322	34	3252	210	222	UT SALT LAKE CITY	188	-78	2834	-37	-237
ID POCATELLO	205	-91	3715	164	-67	NY MASSENA	432	76	3932	49	83	VT BURLINGTON	384	43	3751	115	224
IL CHICAGO	366	57	3238	146	102	NY NEW YORK	275	37	2191	1	41	VA LYNCHBURG	253	36	2159	53	186
IL MOLINE	372	54	3240	118	57	NY ROCHESTER	341	53	3370	301	171	VA NORFOLK	223	41	1627	30	179
IL PEORIA	342	35	3011	58	85	NY SYRACUSE	362	63	3452	326	306	VA RICHMOND	235	30	1904	-21	71
IL ROCKFORD	390	61	3441	118	49	NC ASHEVILLE	244	39	2268	152	251	VA ROANOKE	256	41	2291	161	210
IL SPRINGFIELD	317	30	2836	102	231	NC CAPE HATTERAS	140	-6	961	-200	86	WA OLIMPIA	125	-64	2527	-286	-163
IN EVANSVILLE	267	22	2358	49	227	NC CHARLOTTE	202	20	1601	-38	89	WA QUILLAYUTE	123	-52	2674	-182	-227
IN FORT WAYNE	329	35	2997	54	125	NC GREENSBORO	231	31	1987	96	84	WA SEATTLE TACOMA	122	-53	2233	-158	-132
IN INDIANAPOLIS	302	23	2840	137	252	NC RALEIGH DURHAM	218	36	1786	90	143	WA SPOKANE	180	-92	3394	-98	-354
IN SOUTH BEND	348	54	3217	245	264	NC WILMINGTON	154	7	1170	-17	110	WA YAKIMA	186	-66	3084	-41	-319
IA DES MOINES	384	62	3414	234	140	ND BISMARCK	476	81	4718	258	-62	WV BECKLEY	294	42	2687	-2	240
IA MASON CITY	443	79	4074	234	63	ND FARGO	505	86	4728	172	-59	WV CHARLESTON	280	49	2334	85	225
IA SIOUX CITY	376	40	3710	264	100	ND MINOT	482	84	4845	290	-111	WV HUNTINGTON	283	52	2359	89	256
IA WATERLOO	420	63	3650	-6	09	ND WILLISTON	461	62	4816	203	-166	WI KAU CLAIRE	460	75	4282	216	252
KS CONCORDIA	270	-10	2798	61	-259	OH AKRON CANTON	317	37	3091	229	217	WI GREEN BAY	426	69	3889	47	50
KS DODGE CITY	230	-22	2656	165	-387	OH CLEVELAND	322	42	2974	154	248	WI MADISON	404	59	3652	-29	71
KS GOODLAND	229	-30	3099	135	-392	OH COLUMBUS	307	36	2710	-6	205	WI MILWAUKEE	369	45	3145	-243	-89
KS RUSSELL	248	-18	2687	41	-300	OH CINCINNATI	290	31	2707	181	266	WI CASPER	224	-77	3490	-262	-217
KS TOPEKA	268	-5	2746	108	25	OH DAYTON	308	35	2890	178	239	WY CHEYENNE	220	-53	3676	160	06
KS WICHITA	234	-18	2439	50	-67	OH TOLEDO	346	49	3170	79	294	WY LANDER	223	-99	3871	-64	-295
KY LEXINGTON	280	41	2490	176	302	OH YOUNGSTOWN	322	34	3172	146	203	WY ROCK SPRINGS	260	-55	4274	176	-51
KY LOUISVILLE	267	32	2338	144	354	OK OKLAHOMA CITY	182	-28	2029	176	107	WY SHERIDAN	239	-76	3787	-104	-490

Based on 1961-90 normals.

National Agricultural Summary

January 10 - 16, 1994

HIGHLIGHTS: Winter wheat in the upper Great Plains and upper Midwest was well protected by snow from bitterly cold weather. Winter wheat in the lower Ohio Valley did not receive cover from the cold until late Sunday, when a storm brought large amounts of snow from the Ohio Valley to the Northeast. In the West, dry conditions stressed small grains and pastures. Rain over the Southeast at midweek hindered fieldwork.

SMALL GRAINS: Snow cover across the upper Great Plains and Midwest was thickened, and cover was extended across the southern Ohio Valley by a late-week snow storm. Snow cover for wheat in the Northwest and the eastern edge of the Rockies was light to non-existent. However, mild temperatures have protected the wheat. In the central Mississippi Valley, the cold weather caused concern to those producers whose winter wheat did not enjoy snow cover. In the southern Great Plains and California, winter wheat and small grains suffered from lack of moisture. In California, small grains and wheat needed more rain to promote good germination and growth. The condition of some dry-land wheat fields in Texas continued to deteriorate due to lack of moisture. Some Texas oat fields have not emerged due to dryness. Small grains and wheat in the South and Southeast needed warmer conditions to promote growth.

OTHER FIELD CROPS: The Georgia onion crop tolerated cold weather well. In east Texas, onion planting started but was delayed by rain. The sugarcane harvest continued, and sugarcane planting advanced in Florida. Sugarbeets were thinned and weeded in California. Tobacco bed preparation made progress in Georgia and North Carolina. Planting of tobacco plant beds neared completion in Florida.

FRUITS AND NUTS: The pecan harvest neared completion in Texas and some areas of Georgia. Citrus harvests continued in Arizona, California, and Florida. No freezing temperatures were

reported in the Florida citrus areas. Rain delayed the Florida grapefruit harvest. The fancy tangerine harvest in Florida was slowed by small-sized fruit. Pruning of deciduous trees continued in the Northwest and California, and started in Georgia.

VEGETABLES: The vegetable harvest advanced in California, Florida, Texas, and Arizona. Rain hampered fieldwork in some areas of Florida. Rains delayed fieldwork in northern Florida and eastern Texas. Low temperatures slowed crop growth in Florida. Blowing sand damaged some crops in southwestern Florida. Low prices slowed the broccoli harvest in California. Preparations for the planting of spring vegetables advanced across the Nation where conditions allowed.

PASTURE AND LIVESTOCK: Bitter cold weather stressed livestock in the upper Great Plains, the Midwest, the Ohio Valley, and the Northeast. Pressure on hay supplies in these areas increased as the cold conditions required increased amounts of supplemental feeds. Weight gains on livestock in Iowa and Illinois have been slowed by the cold weather. In the West, mild conditions limited livestock stress and the need for supplemental feeding. Nationally, hay supplies were adequate, but livestock producers in the Midwest continued to watch their supplies closely. Pasture feed condition for the Nation was generally fair. Pastures in California and the southern Great Plains needed rain to promote growth. Livestock condition for the Nation was fair to good.

(Continued from front cover)

arrival of the storm, barometric pressures rose to January-record levels on Monday in several locations, including Asheville, NC (30.73 inches of mercury, adjusted to sea-level) and Wilmington, DE (30.82 inches). Also on Monday, daily record lows were established in Williamsport, PA (-4°F) and Syracuse, NY (-10°F). In contrast, conditions west of the Rocky Divide remained very warm and dry, except in the Pacific Northwest, which received light precipitation at regular intervals, and in interior valleys, which experienced fog. Among the half-dozen daily records set in the West Coast States on Thursday were highs of 61°F in Yakima, WA, 61°F in Pendleton, OR, and 65°F in Oakland, CA. Meanwhile, the coldest in a month-long series of arctic high pressure systems

surged into the Dakotas and northeastern Montana. On Friday in Montana, temperatures fell below 0°F at Glasgow, while across the State, Helena warmed to a daily record 55°F. By Saturday, arctic air was firmly entrenched from North Dakota to the upper Midwest as temperatures plunged below -20°F. Mason City, IA recorded -28°F. Rockford, IL reported a maximum temperature of -13°F. Frigid air continued to stream eastward during the day, and by midnight, sub-zero temperatures covered areas northeast of a line from northeastern Montana to northeastern Nebraska to southern Kentucky. Possible adverse impacts on winter wheat were confined to portions of the lower Ohio Valley, where, without the benefit of protective snow cover, temperatures slipped slightly below 0°F.

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: Cold week. Temperatures 5 to 9° below normal. Highs around 50° across the north, ranged to the middle 60s near the coast. Lows 10 to 15° were common in the north. Lows around 20° central to lower 20s south and around 30° near the coast. Rain 3 to 5 days across the Tennessee Valley, 2 to 3 days elsewhere. Rain totals of 1.00 to 2.00 in. were common in extreme northeast, and Mobile, Baldwin counties. Elsewhere only isolated spots over 1.00 in. rain. Activities: cultivating fields, care of livestock, poultry, catfish.

ARIZONA: Normal to above normal temperatures most areas. Temperatures -1° below normal to 5° above normal. Extremes 10°, 71° higher elevations; 19°, 78° deserts. No precipitation.

Small grains field preparations, planting near complete. Small grain seeded 96%, 82% 1993, 92% avg.; established 90%, 71% 1993, 71% avg. Alfalfa mostly good. Harvest, sheepling off activities light; stand renovation, new stand establishment mostly normal. Citrus harvest continued active. Grapefruit, navel, sweet oranges, lemons available central, western areas. Tangerines, tangelos, also available central area. Winter vegetable harvest steady. Available from both western, central areas: Broccoli, cabbage, cauliflower, leaf, romaine lettuces, spinach. Western harvest also included: Iceberg, Boston lettuce, endive, escarole. Central crops also available included: beets, carrots, mixed greens, green onions, radishes, swiss chard, rapini, turnips. Pecans, tomatoes continued harvested eastern areas.

ARKANSAS: Cool, cloudy week, temperatures averaging a little below normal. Widespread precipitation first part of week. Extremes 10°, 60°. Precipitation 0.02 to 1.35 in.

Soil moisture supplies adequate to surplus. Wheat condition fair to good, needs sunshine, dry weather. Livestock good condition. Producers feeding hay, supplies adequate. Pastures good condition.

CALIFORNIA: Light rainfall northern locations. Totals less than 0.20 in. Dense fog persisted through midday central valley. Cool, dry weather prevailed.

Fieldwork progressed quickly most areas. Planting small grains, forage crops, alfalfa ongoing. Additional precipitation needed good germination small grains. Emerged crops mostly good, excellent. Small grain, alfalfa fields sprayed weed control. Cotton producers irrigating, applying pre-emergence herbicides. Alfalfa, sudangrass cut greenchop. Sugarbeets thinned, weeded many areas. Orchard pruning, spraying, weed control, other cultural practices active. Pruning, fertilizing, tying of vines continued vineyards. Date harvest completed Coachella valley. Granny Smith, Fuji apples packed. Lemon, tangerine, grapefruit, tangelo, Navel orange harvest continued. Asparagus fields sprayed control weeds Sutter County. Harvest broccoli slowed central valley due poor prices. Broccoli coming Riverside County good quality. Along central coast, broccoli fields irrigated for plant germination. Cabbage central valley moved local markets limited volume. Harvest carrots desert valleys. The cauliflower harvest drawing to close Tulare County. Celery along central coast harvested. Lettuce treated control mildew Fresno County. Lettuce San Joaquin Valley progressing normally in the 4 to 5 leaf stage. Head, leaf lettuce harvested desert valleys. Winter potato movement Riverside County continued. Harvest spinach Coachella Valley. Ground preparation, preplant weed control took place San Joaquin Valley. Other crops being harvested: sweet potatoes, taro root, turnips, various oriental vegetables. Moisture in foothill range areas being rapidly depleted. Limited grass growth. Rainfall badly needed to sustain growth. Supplemental feeding continued. Calves in good shape. Branding started. Sheep grazing alfalfa fields.

COLORADO: Dry, cool conditions on the 10th, 11th gave way to increasing winds, snow showers in the northern mountains by late on the 12th. Light snow continued on the 13th, 14th; 3 to 6 in. recorded in the northern, central mountains, although lower elevations reported very little. A high wind watch was posted in the northeast foothills where winds reached up to 50 mph. The 14th

saw decreasing clouds and windy conditions. Moisture during the period was less than 0.10 in. in all major River Basins. Temperatures mostly 3 to 6° above normal, a little higher near the eastern foothills and a little lower in the San Luis Valley.

Care, feeding of livestock was the main producer activity this week.

FLORIDA: Temperatures 1 to 7° below normal. Highs 60s Panhandle to mid 80s central, south. Lows mid to upper 20s north to low 50s southeast coast. Rain on 2 to 4 days most locations. Rain totals near or above normal, ranging from 0.66 in. to 3.00 in.

Soil moisture mostly short to adequate with areas of surplus moisture. Sugarcane harvest, planting active. Planting of tobacco beds winding down. Maintaining tobacco beds. Making preparations for spring planted crops. Citrus trees, remaining fruit very good condition. Projected freezing temperatures failed to arrive. Rain 2 or more days enhances surface moisture. Early, mid orange harvesting very active. Grapefruit movement slowed by rain. Early tangerine harvest almost complete. Dancy tangerine movement slower than normal due to small sizes. Processors using most of current tangelo movement. Temple harvest just starting. Major vegetable growing regions received 1.00 to 4.00 in. rain. Moisture hampered field activity North. Some wind, blowing sand damaged several crops Southwest. Temperatures near freezing several locations over weekend but no frost damage reported. Cooler weather slowing plant growth. Leading vegetable shipments: Tomatoes, peppers, cabbage, squash, cucumber. Also available: Snap beans, carrots, celery, chinese cabbage, sweet corn, eggplant, escarole, iceberg, leaf, romaine, specialty lettuces, radishes, strawberries, cherry tomatoes. Pasture 20% poor, 50% fair, 30% good. Cattle herds mostly fair to good condition.

GEORGIA: Temperatures 7 to 10° below normal, except southeast 2 to 5° below normal. Highs around 50 north, middle 50s central, middle 60s south, extreme southeast. Lows into single digits north of Atlanta, Athens. Blairsville coldest, 3° recorded. Middle to upper teens common through central counties, low to middle 20s south. Rain 1 to 4 days over State. Rainfall 1.00 to 2.00 in. typical in northern third, around 0.50 in. elsewhere, near 1.00 in. isolated spots near Florida border.

Soil moisture adequate to surplus, mostly adequate, throughout the State. Field preparation was limited due to the rains during the week. Pecan harvest steady some areas nearing completion. Soybean, cotton harvest complete. Onion planting nearly complete. Onions tolerating cold weather nicely. Tobacco bed preparation making steady progress. Pruning of peach trees began this week. Topdress application of nitrogen fertilizer to small grains began in some areas. All crop conditions fair to good, pastures rated fair. Routine care of livestock, poultry. Cattle, hogs good.

HAWAII: Cool, dry weather prevailed most of week. Rainfall continued light, none to 3.20 in. Drought forced Hawaii island officials to place five districts under a State of emergency. Dry weather created possible fire hazards, burning ban in effect, affecting sugarcane harvesting. Temperatures low 60s to mid 80s.

Sunny, dry weather helped field preparations, planting. Growers increased irrigation to compensate for lower rainfall. Most insect, disease infestations controlled with regular spraying, few exceptions. Banana, papaya output near last week's level.

IDAHO: Weather data not available.

Soil moisture adequate. Hay, roughage supplies adequate. Activities: Marketing, educational meetings, taxes, shop activities, livestock care. Livestock good condition with early calving, lambing.

ILLINOIS: Bitterly cold arctic air plunged into the State, with temperatures 4 to 12° below normal. Highs teens to mid 30s. Lows near zero to low 20s. Snow fall of 3.00 to 8.00 in. fell over the south on 16th, as precipitation was near 0.25 in. north; near 1.25 in. south.

Winter wheat 1% excellent, 24% good, 54% fair, 21% poor. Soil moisture 59% adequate, 41% surplus. Farmers reported concerns for winter wheat exposed to cold with little to no snowcover, livestock

concerns such as frozen water, some respiratory problems and slow weight gains. In addition, supplies of quality hay continue to be of concern to farmers. Grain movement was moderate to heavy, as many farmers marketed grains due to favorable prices.

INDIANA: Arctic air prevailed for most of the past week. High temperatures low to mid 20s in the north to the upper 20s, lower 30s in the south, which was mostly 7 to 10° below normal across the State. Lows single digits, teens in the north, central to teens, lower 20s in the south. Coldest readings reached below zero across all areas of the State. Precipitation, water equivalent, 0.25 to 0.75 in. north to 0.80 to 1.90 in. south. Snow depth is now 3 to 10 in. north to 5 to 13 in. south.

Cold weather halted any farm activity. Wheat condition remains adequate to good, with good to excellent snowcover. Hay supplies remain adequate to good, with increased feeding activity. Livestock stressed by colder weather. Other activities; grain marketing, fixing machinery, tax preparation.

IOWA: Bitter cold air dominated weather last half of week, wind chills -40 to -65° at weekend. Temperatures 3° below normal southwest to 11° below normal northeast. Extremes -28°; 46°. Series of Alberta Clippers left up to 6 in. new snow northeast. Snowcover: none far southwest; up to 10 to 14 in. far north and northeast. Precipitation 0.01 in. southwest to 0.39 in. northeast; average 0.11 in. (normal 0.19 in.).

The extreme cold very hard on livestock, especially where shelter is limited. Weight gains for cattle and hogs intended for slaughter are being severely reduced.

KANSAS: Temperature above normal last week. Western third was warmest with 6° above normal. Central third 5° above normal, eastern one-third 4° above normal. Weekend temperatures plunged to single digit lows as a cold front moved into the State. Little or no precipitation fell. Snowcover is virtually non-existent with the exception of the north central district where snow cover is light.

KENTUCKY: Weather data not available.

Cold weather during the week caused stress to livestock.

LOUISIANA: Temperatures 3.2° below to 2.5° above normal. Extremes 28°; 71°. Rainfall 0.18 in. northeast to 0.89 in. southeast.

Northern parishes experienced some rain early in the week which delayed fieldwork. Main activities were equipment repair, winter feeding; tending of cattle. Farmers attended extension service meetings. Southern parishes also had limited days suitable for fieldwork because of rain. Activities were winter wheat fertilization, equipment repair, maintenance, end of the year bookkeeping, tending of cattle. Farmers attended various extension meetings in their areas. Vegetable harvest was active in Plaquemine parish.

MARYLAND & DELAWARE: **MARYLAND:** Precip 0.79 in., normal 0.74 in. Temperature 27.5°, normal 32.8°. Extremes -9°; 51°.

Activities: Attending meetings. Caring for livestock.

DELAWARE: Precipitation 0.90 in., normal 0.75 in. Temperature 29.1°, normal 34.0°. Extremes 11°; 42°.

Activities: Attending meetings. Caring for livestock.

MICHIGAN: Extremes -28°; 39°. Precipitation none to 0.72 in. across the State. Frigid temperature were present throughout the State. Snow fell across the State over the weekend. Feed supplies are adequate, livestock are in good condition. The cold weather has made it hard on dairy farms with keeping newborns warm. Major activities included: Spreading manure (if it was not frozen), pruning, hauling corn, soybeans to the elevator, doing taxes, fixing machinery, cutting wood, plowing snow, trying to stay warm.

MINNESOTA: Temperatures 9 to 14° below normal for the State. Extremes -36°; 32°. Precipitation averaged 0.02 in. below normal for the west central, 0.04 to 0.17 in. above normal elsewhere. Precipitation 0.15 to 0.36 in. for the State. Precipitation 0.40 in. Snowfall averaged a 3 to 9 in. for the State. Snow depth at week's end averaged 9 to 11 in. for the southern third of the State, 14 to 26 in. elsewhere.

Unrelenting cold spell continues to stress livestock, press on feed supplies throughout the State. Farmers are busy with chores, ordering supplies for the 1994 growing season.

MISSISSIPPI: Temperatures 40°, 3.0° below normal. Extremes 13°; 64°. Minimal amounts of rainfall. Coastal district received just over 1.00 in. State 0.38 in., 0.76 in. below normal. Soil temperatures 42°.

Days suitable for fieldwork 0.5, 0.2 1993, 0.6 avg. Soil moisture 45% adequate, 55% surplus. Hay supply 18% short, 82% adequate. Feed grain supply 15% short, 85% adequate. Livestock conditions 20% fair, 80% good. Pasture 80% of normal. Feeding livestock.

MISSOURI: Temperatures 3 to 7° below normal most areas, except Bootheel, 1° above normal. Most locations received less than 0.25 in. precipitation, expect Bootheel up to 0.75 in.

Some recent snow, colder weather causing increased feed requirements for livestock. Farmers planning for new crop season.

MONTANA: Temperatures above normal; west 20° above normal. Precipitation 0.10 in. or less statewide, 0.20 to 0.30 in. east.

Protectiveness of snowcover for winter wheat is 48% poor, 25% fair, 26% good, 1% excellent. Wind damage to winter wheat 38% none, 47% light, 15% moderate. Grazing is 33% open, 64% difficult, 3% closed. Supplemental feed was given to 95% of the livestock.

NEBRASKA: Temperatures 8° above normal in the northwest to 7° below normal in the northeast. Only light amounts of precipitation occurred across the State averaging less than 0.10 in.

Farm, ranch activities included livestock care, grain handling, machinery preparations.

NEVADA: High pressure dominated with most stations reporting above-normal temperatures, no precipitation. Extremes 6°; 72°.

Mild weather easy on livestock, feeding requirements. Lack of precipitation becoming a concern to farmers/ranchers. Major activities include care, feeding of livestock, general maintenance.

NEW ENGLAND: Precipitation 0.02 to 0.53 in. regionwide. Temperatures 2 to 15° north; 12 to 21° south. Maximum temperatures 37 to 41° north; 38 to 44° south. Minimum temperatures -27 to -23° north; -3 to -16° south.

Major farm activities: Removing snow from barnyards, tending livestock, preparing for lambing.

NEW JERSEY: Temperatures were much below normal, 18° north, 23° south 25° coastal. Extremes -5°; 45°. Precipitation was below normal; averaging 0.58 in north, 0.47 in. south 0.41 in coastal. Heaviest 24 hour total 0.67 in on the 12th, 13th. Heaviest 24-hour snowfall 5 inches on the 12th, 13th. Snow on ground on 17th: a trace in south, 1 to 3 in. ice in central, 6 to 10 in. north.

Farmers caring for livestock, plowing snow, other winter chores.

NEW MEXICO: Dry winter weather continued. Only precipitation was around week's end with several hundredths of an inch of moisture at several locations on the high plains. Temperatures for the week were within a couple of degrees of normal at most locations, averaged 1° above normal for the State. Extremes -2° northwest; 73° southeast.

Farming activities have slowed considerably with land preparation, pecan tree pruning the main activities during the week. Ranching activities mainly focused on supplemental feeding.

NEW YORK: Precipitation below normal though snow fell each day. Weekly totals ranged from 24% of normal in east to 65% in the Great Lakes area. It was unusually cold, especially at end of week. Temperatures varied from 6° to 13° below normal. Extremes -41°; 44°.

Major activities: Tending livestock, maintenance work, machinery repair, attending meetings, moving crops from storage. Extreme coldness, snow made outside chores difficult.

NORTH CAROLINA: Temperatures near normal. Largest negative departures were in the mountains. Precipitation for the week ranged from 3.06 in. at Mount Mitchell to 0.01 in. at Pope Air Force Base.

Activities included: Tobacco plant bed preparation; tending livestock; general farm maintenance, cutting wood.

NORTH DAKOTA: Temperatures 8 to 14° below normal. Extremes -37° east central; 36° southwest. Precipitation was below normal. Windchills -50 to -90°.

Snowcover sufficient to protect fall seeded crops. Cattle, sheep in good condition; feeding up due to severe cold. Feed, forage supplies still adequate. Secondary roads drifted; considerable blowing snow.

OHIO: Seasonable temperatures at times gave no indication of the arctic air that would overtake the State. Bitterly cold air with dangerously low wind chills were in place by the 15th. A winter storm developed in the mid-Mississippi valley on the 15th, spread ice and snow into the State on the 16th. Week averaged 6 to 10° below normal. Highs were in the middle to upper 20s. Lows ranged in the single digits to mid teens. Coldest temperatures occurred over the weekend with lows in the minus teens at many spots. Precipitation was greatest in the south due to a winter storm on the 16th that deposited 5 to 12 in. of snow on some localities by the 17th. Liquid amounts varied from under 0.20 in. to almost 1.00 in.

Snow cover protected fall-seeded grains such as wheat, rye, speltz from extreme low temperatures. Livestock was sheltered, required large amounts of hay and/or other roughage.

OKLAHOMA: Temperatures 2° below normal central to 3° above normal southwest. Precipitation: none Panhandle, north central to 2.62 in southeast. State received zero or minimal moisture except in the southeast, east-central where 2.50 in., 1.00 in. fell respectively.

Western half continues dry; more rain needed for small grain plant development. Livestock markets active with feeder steers, steer calves steady, feeder heifers, heifer calves steady to \$2.00 higher.

OREGON: Temperatures above normal; 13° above normal north-central area, 10° above normal Willamette Valley, south-central areas, elsewhere 3 to 8° above normal. Northern Cascades 2.00 in. (20 inches snow), southwestern valleys 0.60 in., elsewhere 0.50 in.

Soil moisture adequate. Winter orchard pruning continued. Livestock good to excellent. Supplemental feeding continued, statewide.

PENNSYLVANIA: Several inches of snow early in the week. End of week brought Arctic air, coldest temperatures of the season. Temperature 19°, 7° below normal. Extremes -20°; 41°. Precipitation 0.34 in., 0.33 in. below normal.

Activities: Attending PA State Farm Show; hauling manure; fixing fence; caring for livestock.

PUERTO RICO: Island rainfall 0.89 in, was 0.19 in. above normal. Highest rainfall 2.63 in. at San Lorenzo 3S, 2.18 in. at Rio Blanco Lower, 1.90 in. Canovanas. Highest 24 hour total was 1.40 in. at Toa Baja 1SSW on 11th. At San Juan, mean temperature 77.1° which is 0.1° above normal, rainfall 1.29 in. which is 0.57 in. above normal. Island temperatures 76° on Coasts, 71 to 72° in the Interior with mean station temperature from 78.4° at central Aguirre to 67.5° at Adjuntas AES. Extremes 49°; 91°.

SOUTH CAROLINA: Temperatures 4 to 7° below normal across State. Average precipitation 1.20 in. statewide.

Farm activities: Wet soil limited farm activities; tobacco beds virtually seeded; few soil samples taken; wheat stands good, developing well; livestock good.

SOUTH DAKOTA: Temperatures 2 to 16° below normal across most of the State, except in the extreme west central where average temperatures were up to 9° above normal. Extremes -36°; 50°. Precipitation generally above normal. Maximum 1.22 in; amounts ranging from 0.81 in. above normal to 0.30 in. below normal.

Activities: livestock care and sales, farm shows, routine chores.

TENNESSEE: Temperatures 5 to 10° below normal across the State, with coldest readings on the Plateau. Warmest temperatures occurred in west on the 10th, with highs climbing into the mid 50s. Coldest weather took place on the 15th, with highs only around 15 to 25°. Temperatures fell slightly below zero in the northeast on the morning of the 16th. Almost 2.00 in. of rain fell at Chattanooga on the 11th, with other areas of the east receiving around an inch.

Soil moisture levels are adequate. Main activities are livestock chores, farm maintenance, production meetings.

TEXAS: Mild winter weather ended as a surge of arctic air pushed into State late last week. This surge, however, was fairly weak. A stronger push of cold air moved through State late in weekend, lowered temperatures considerably. Moisture was limited with intrusion of arctic air. Cold was preceded by several days of quite mild weather. Departures of +2° in High Plains and Trans-Pecos; up to +7° Lower Valley. Only Southern Low Plains had a negative departure with -1°. Rainfall was below average in northern, western

portions of State. Highest rain amounts occurred in Coastal Plains, South Texas. Departures were -0.10 to -0.20 in. below normal in western, northern areas while departures were above normal in rest of State ranging from +0.02 up to +0.99 in.

Crops: Small grains fields across much of State suffered through another week of dry weather. High, Low Plains were both in need of moisture as dryland wheat conditions continued to deteriorate. In Blacklands, some producers were applying top dressing to wheat crop. In Cross Timbers, some fields were sprayed for greenbugs. In South Texas, oat crop continued to suffer. Some fields there have not germinated and a number of fields appear to have died from lack of rain. Wheat 55% normal, 63% 1992.

Commercial Vegetables: In Rio Grande Valley, cabbage, carrot, celery harvest was active. Some watermelon acreage was planted. In East Texas, land preparation was active prior to rains there. Planting of cabbage, onions began. Some tomato transplants and potato sprouts were being readied to put out next month. In High Plains, where soil moisture continued to be in short supply, only a limited amount of land preparation was done. In Trans-Pecos, land preparation continued. Irrigation was active along Rio Grande River. Pecans: Harvest was winding down across State.

Range and Livestock: Livestock condition remained steady as supplemental feeding continued across most of Texas. Water levels in stock tanks declined further. Range and winter pastures continued to decline across most of the State due to a lack of rain. Some lambing occurred in the Edwards Plateau.

UTAH: Temperature maximums 5° above normal, minimums 3° above normal. Precipitation was zero for Dixie, Uinta Basin, Southeast Divisions. Other areas received light to moderate precipitation.

Activities: marketing onions, hay, grains; maintenance; bookkeeping.

VIRGINIA: Temperatures near normal until weekend arctic air set record lows. Extremes -12°; 66°. Precipitation near or above normal. Water equivalent was 0.71 to 1.78 in.

Days suitable for fieldwork 0.6. Topsoil moisture 25% adequate, 75% surplus. Winter grains, grazing crops 2% very poor, 10% poor, 51% fair, 35% good, 2% excellent. Forage from pastures, grazing crops; dairy cattle 3% beef cattle 8%, sheep 8%. Extreme cold, ice, snow hampering calving, lambing. Farmers concerned about winter feed supplies. Other activities scouting small grains, pesticide recertification, repairs farm records, meetings.

WASHINGTON: Temperatures 6 to 11° above normal west; 7 to 18° above normal east. Precipitation 0.40 to 1.92 in. west; none to 0.55 in. east. Seasonal precipitation accumulations (since Sept. 1, 1993) ranged from 35% to 74% of normal across the State.

Days suitable for fieldwork 5.3. Soil moisture 29% short, 70% adequate, 1% surplus. Hay, other roughage supplies 10% short, 90% adequate. Range, pasture 25% very poor, 15% poor, 45% fair, 15% good. Winter wheat dryland 1% very poor, 1% poor, 37% fair, 60% good, 1% excellent; irrigated 2% fair, 95% good, 3% excellent. Barley dryland 95% fair, 5% good; irrigated 10% fair, 90% good. Snow cover for winter grains was lacking in many locations, it has resulted in little damage thus far due to the mild weather. Pruning of fruit trees, caneberrys was the major activity for fruit growers. Forced rhubarb harvest start in the western part of State. Mild winter so far has kept livestock maintenance low, has improved the outlook for hay supplies, which were tight going in to the feeding season.

WEST VIRGINIA: Temperature 23°. Extremes -17°; 49°. Precipitation 0.89 in. Temperatures 6 to 8° below normal. Precipitation averaged above normal.

Farm activities: feeding livestock, bookkeeping, maintenance.

WISCONSIN: Temperatures below normal with extreme windchills. Temperature -1°. Extremes -36°; 34°. Precipitation 0.50 in.

There was very little outside activity during the week because of the extreme cold weather. Most farmers concentrated on keeping warm.

WYOMING: Temperatures above normal; 2° above normal in Deaver to 12° above normal in Cody. Precipitation below normal in all areas except the northeast which was above normal. Alva, Sundance received the largest amount of precipitation with 0.50 in.

Winter wheat mostly fair to good. Snowcover protection on winter wheat mostly short. Livestock: good condition. Hay, roughage supplies mostly adequate. Starting to shear sheep in some farm flocks.

International Weather and Crop Summary

HIGHLIGHTS

January 9 - 15, 1994

FSU-WESTERN: Unseasonably warm weather continued over winter grain areas.

EUROPE: Light showers lingered over western areas, keeping soils saturated. Unseasonably warm weather reduced winter grain hardness in the north but promoted vegetative growth in the south.

SOUTH ASIA: Beneficial showers helped winter grains and oilseeds in northern and central India.

EASTERN ASIA: The North China Plain remained seasonably dry, while rain benefited the Yangtze Valley's reservoirs.

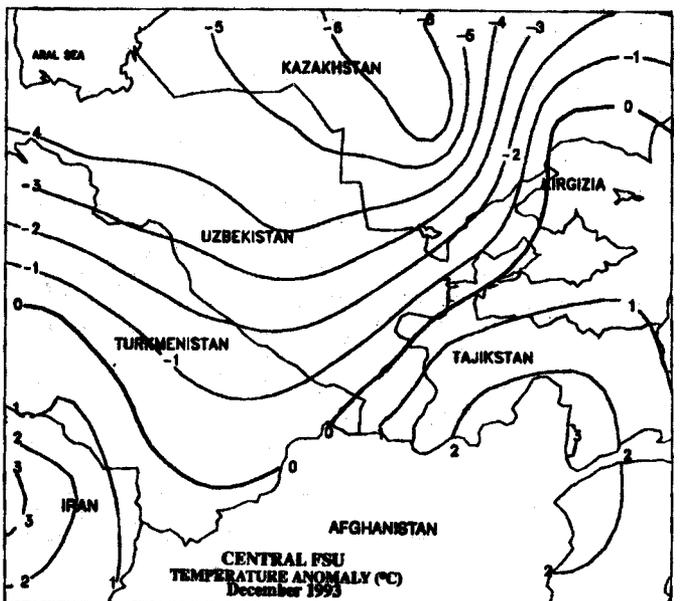
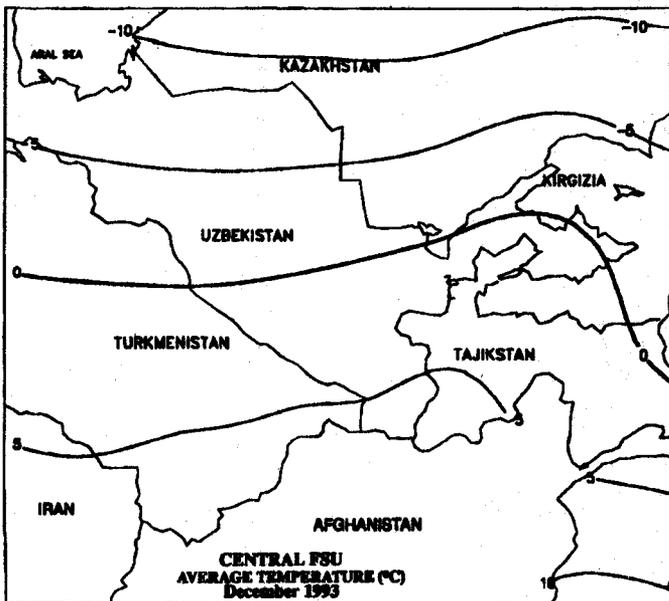
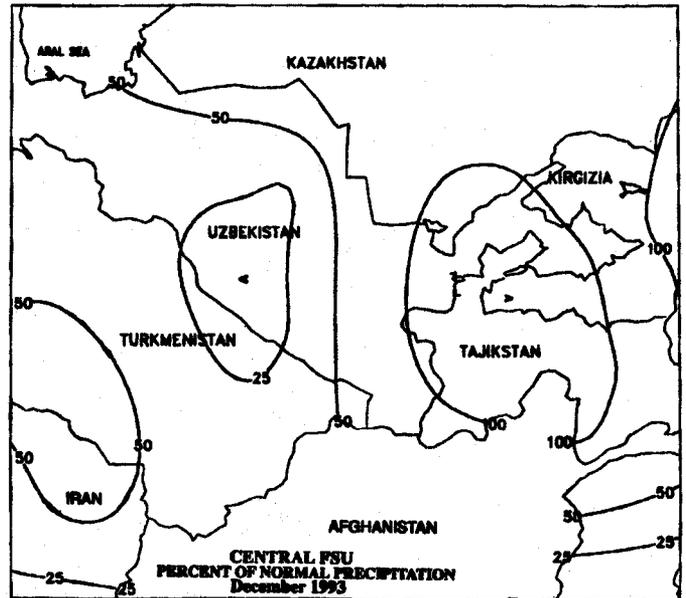
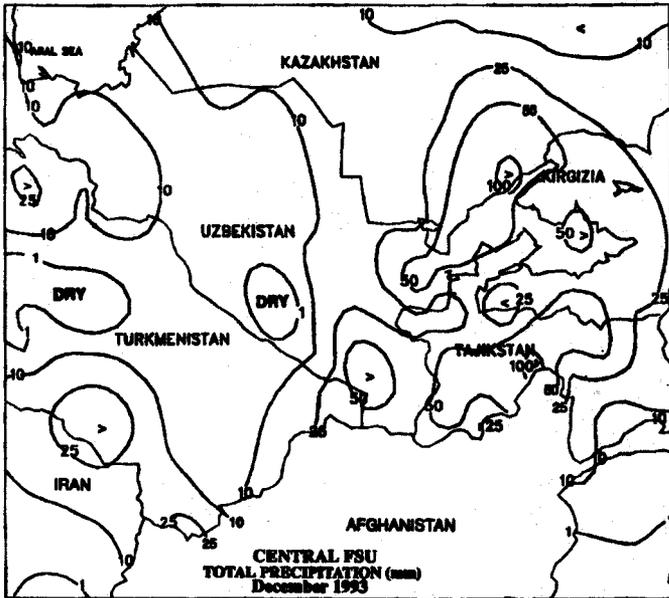
SOUTHEAST ASIA: Heavy showers covered Java's rice areas, causing some flooding but boosting irrigation reserves.

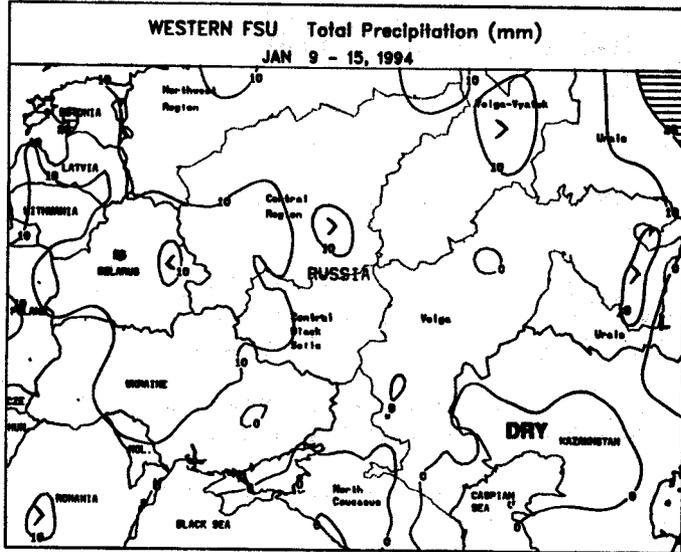
AUSTRALIA: Rains brought relief to eastern summer crops, but additional rain is still needed.

SOUTH AMERICA: In Argentina, mostly dry weather favored soybean planting and southern wheat harvesting. Across southern Brazil, widespread showers benefited soybeans.

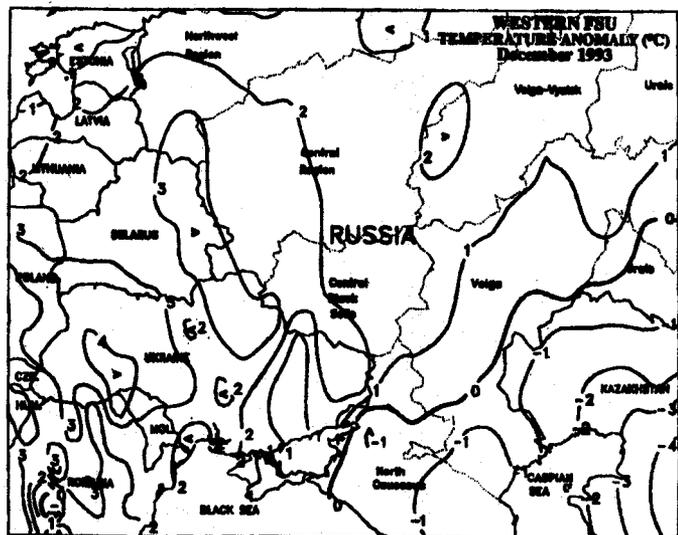
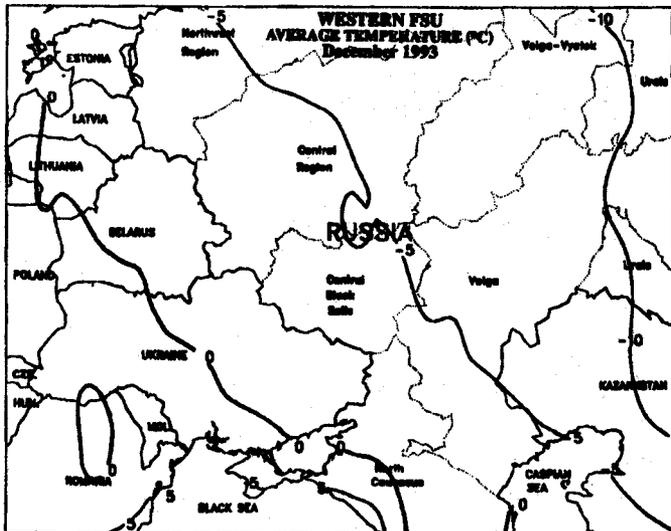
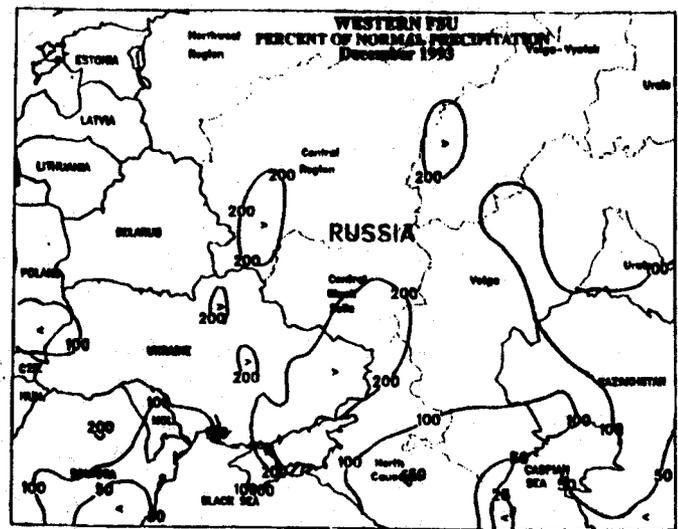
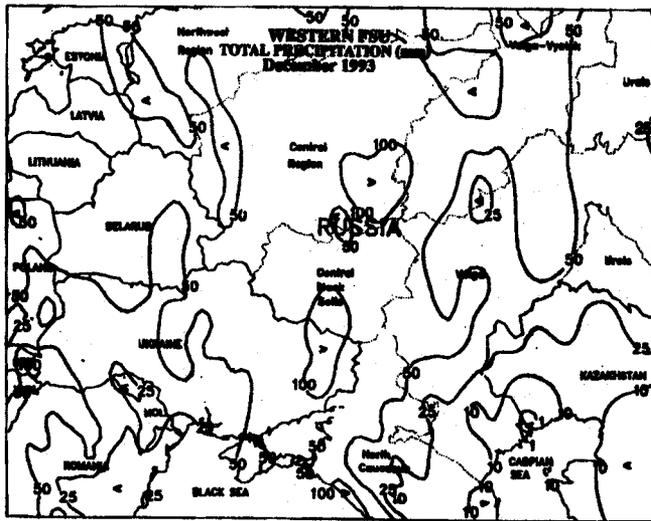
NORTHWESTERN AFRICA: Beneficial rain covered winter grains in Tunisia, reversing persistent dryness.

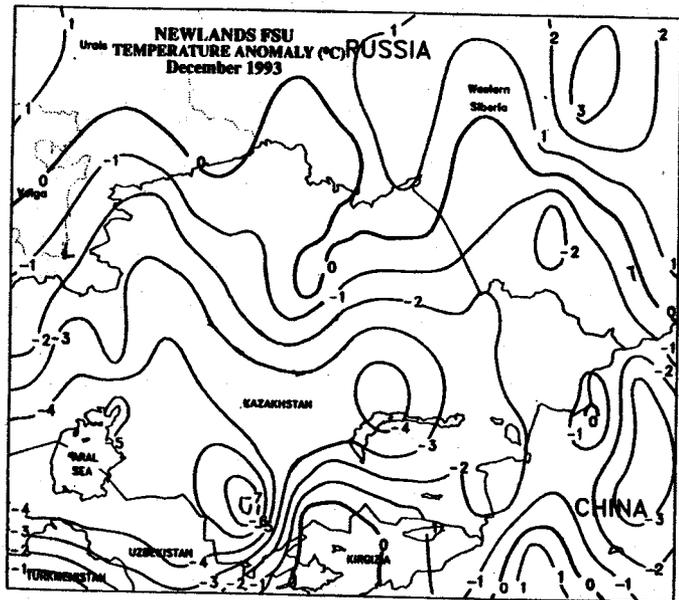
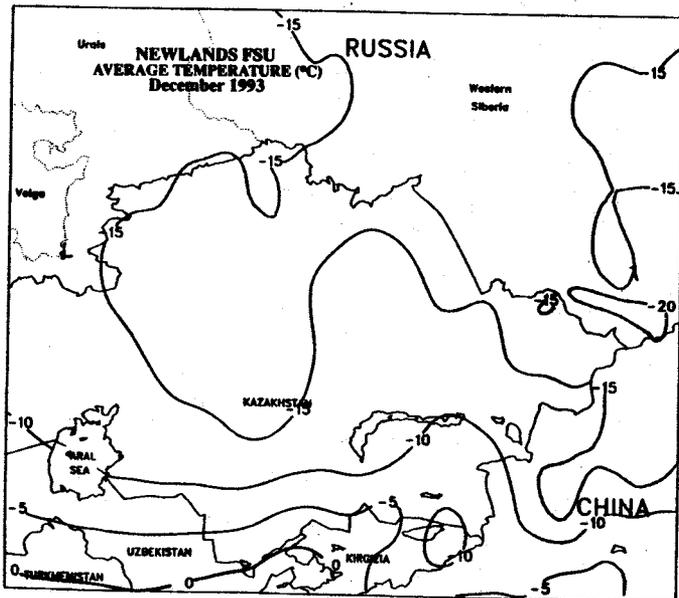
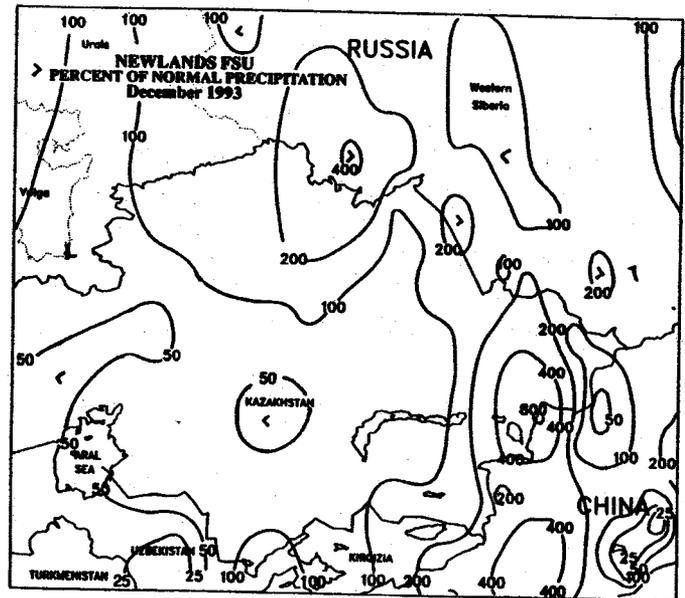
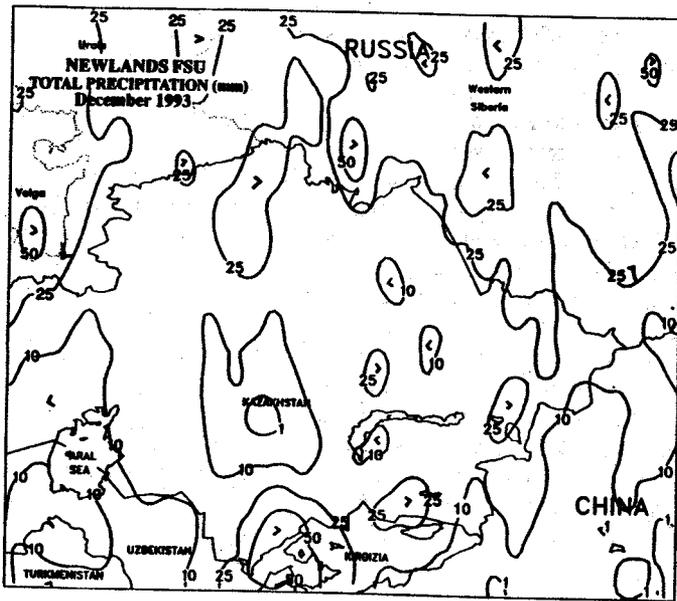
SOUTH AFRICA: Soaking rain increased moisture for previously dry western corn areas.

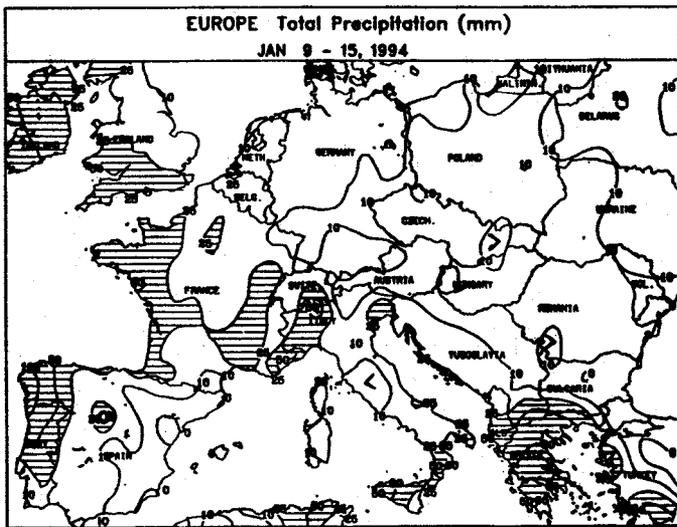




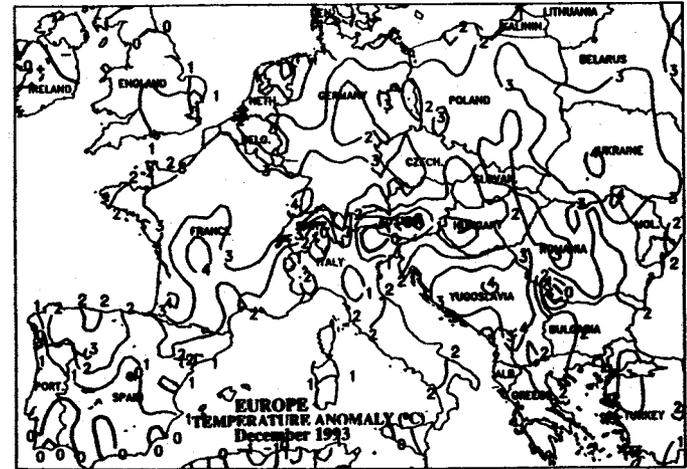
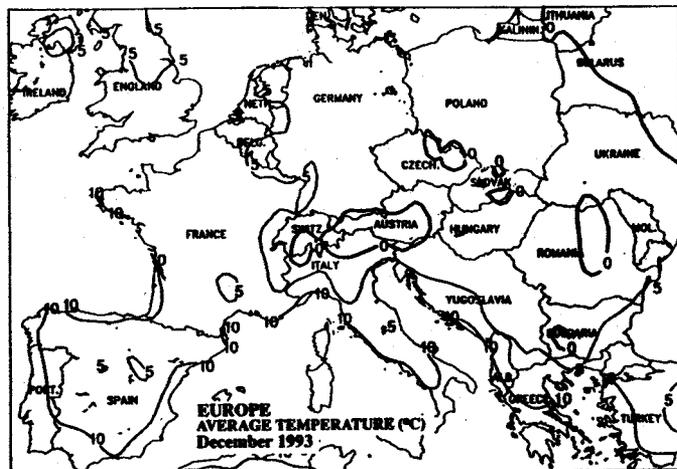
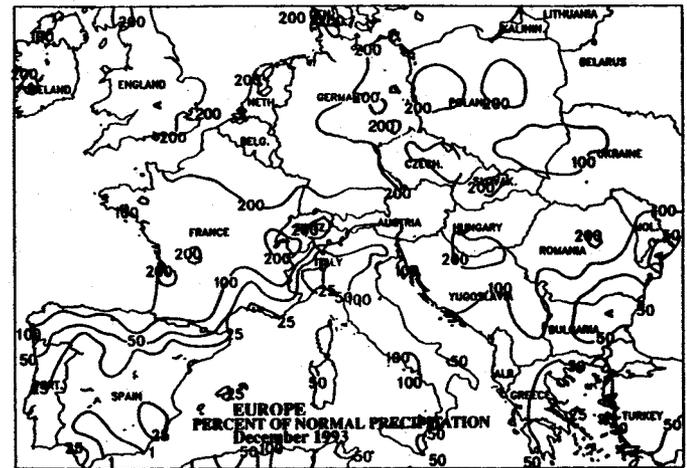
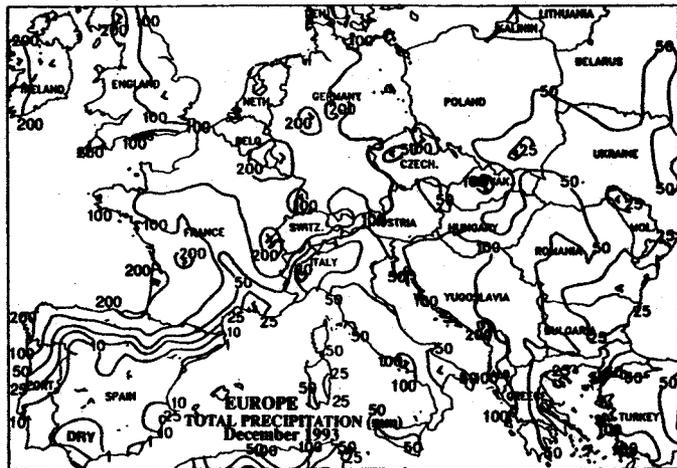
FSU-WESTERN: Unusually mild weather continued over winter grain areas. Light rain (around 10 mm) fell over the Baltic States, Belarus, and central Ukraine. Generally dry weather prevailed over eastern Ukraine and most of Russia. Lowest temperatures during the week ranged from -5 to 1 degrees Celsius (C) over Belarus, Ukraine, and North Caucasus, Russia, favoring overwintering crops. Coldest weather covered northern Russia (Central Region, Volga Vyatsk, and upper Volga Valley) where lowest temperatures ranging from -23 to -12 degrees C occurred over a protective snow cover. In December, abundant moisture and unusually mild weather covered winter grain areas in the Baltic States, Belarus, Ukraine, and Russia, following November's bitterly cold weather. Most areas received near- to above-normal precipitation. The mild weather in December provided generally favorable overwintering conditions for crops. However, considerable melting of protective snow cover occurred in Ukraine and southern Russia, leaving winter grains vulnerable to potential extreme cold.

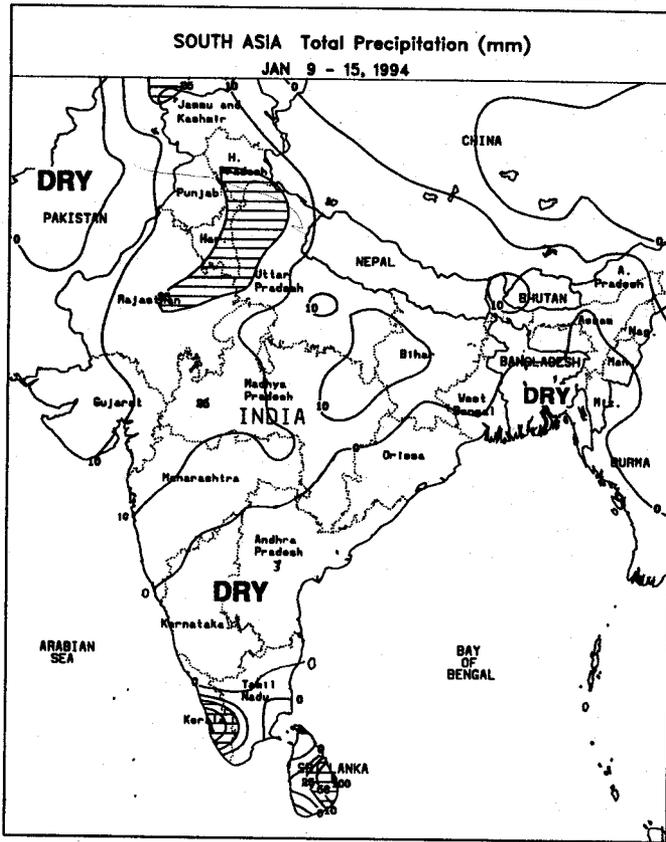




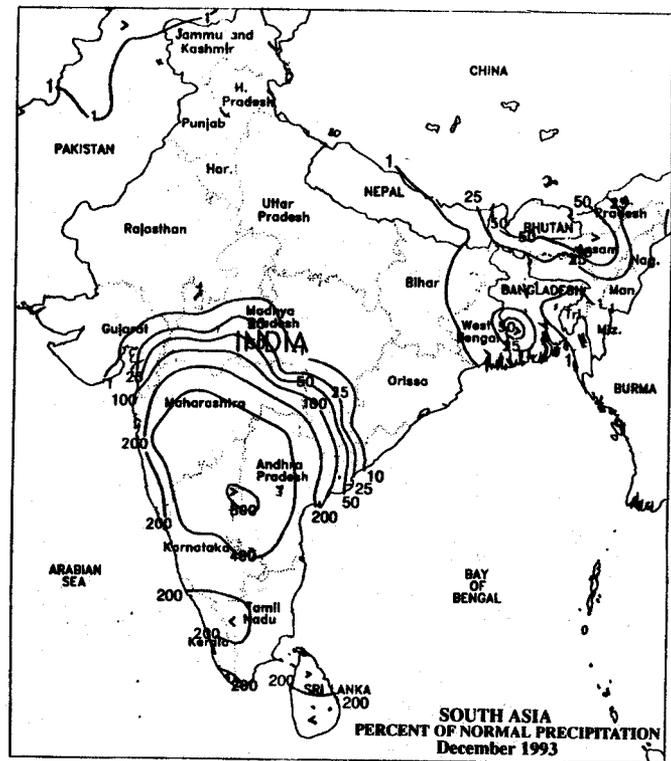
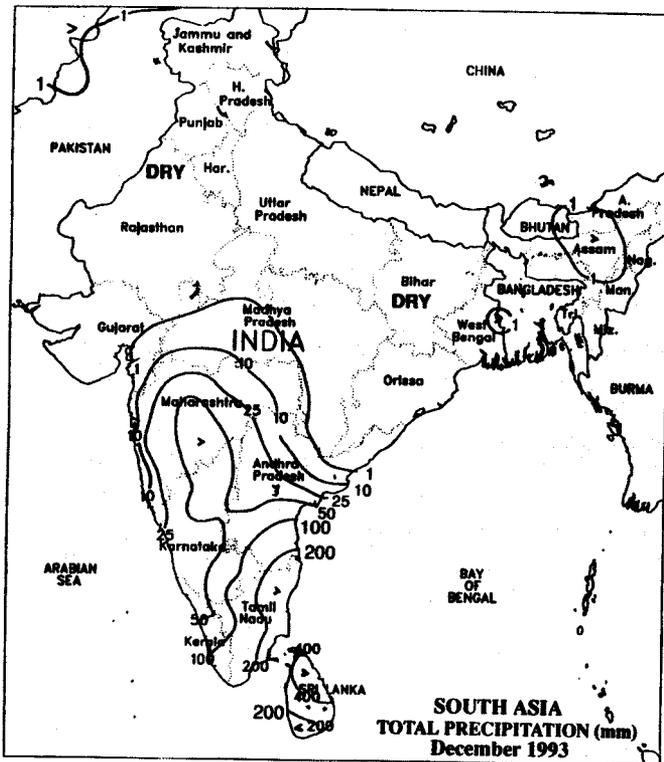


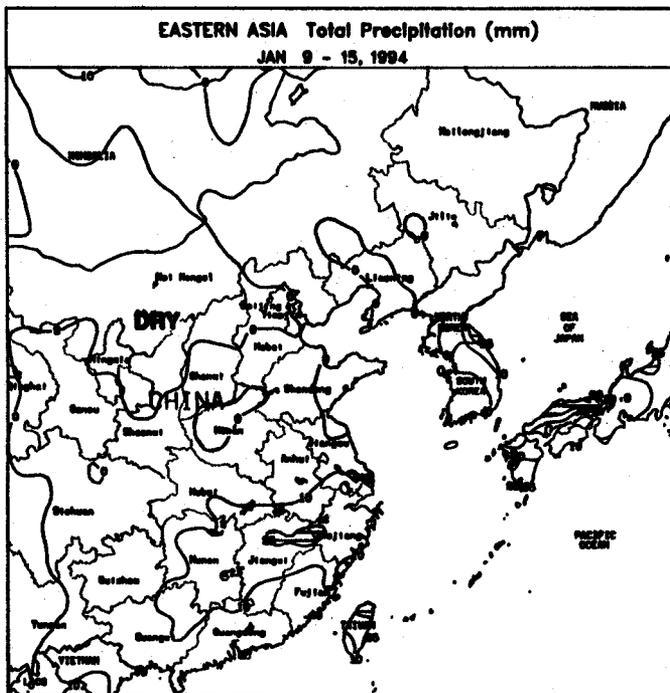
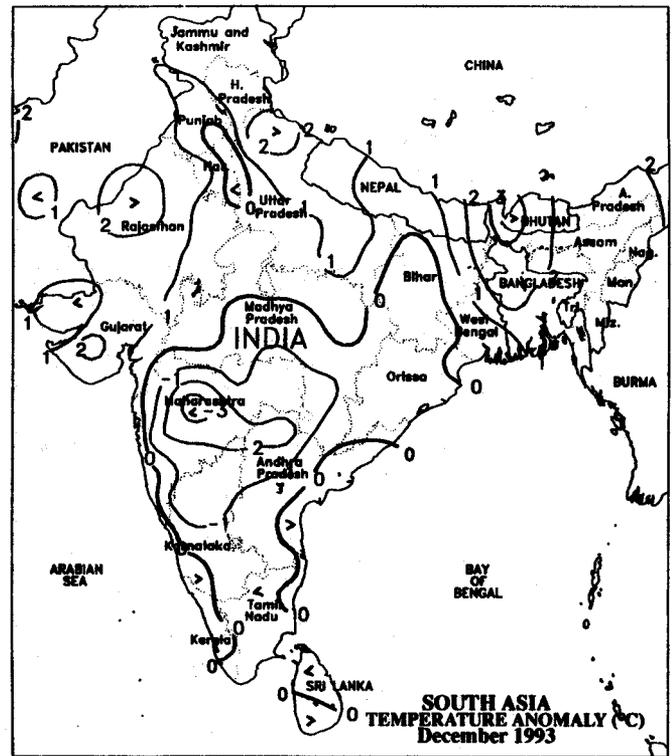
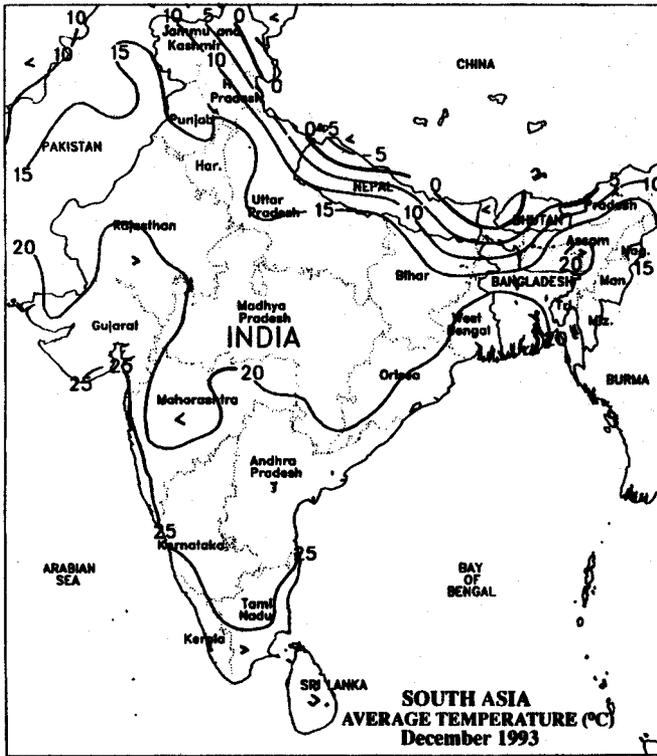
EUROPE: Widespread light to moderate precipitation (10-25 mm, with local amounts in excess of 25 mm) lingered over France, Belgium, and Germany, keeping soils saturated but allowing floodwaters to recede. Further east, light precipitation (generally less than 10 mm) covered Poland, the Czech and Slovak republics, Hungary, and Romania. Moderate to heavy rain (30-50 mm, with local amounts in excess of 50 mm) covered Portugal, southern Italy, and Greece, benefiting winter grains in the vegetative stage. Unseasonably mild weather continued across the region, reducing winter grain hardiness in the north, and promoting vegetative growth across the Mediterranean region. In December, persistent heavy rain caused extensive flooding in France, Belgium, and Germany. In eastern Europe, above-normal precipitation in December increased moisture reserves for next spring's growth. Dry weather in southern Spain limited moisture for winter grains in the early vegetative stage. While above-normal temperatures in December provided generally favorable overwintering conditions for crops, the mild weather caused considerable melting of protective snow cover in the northeast.



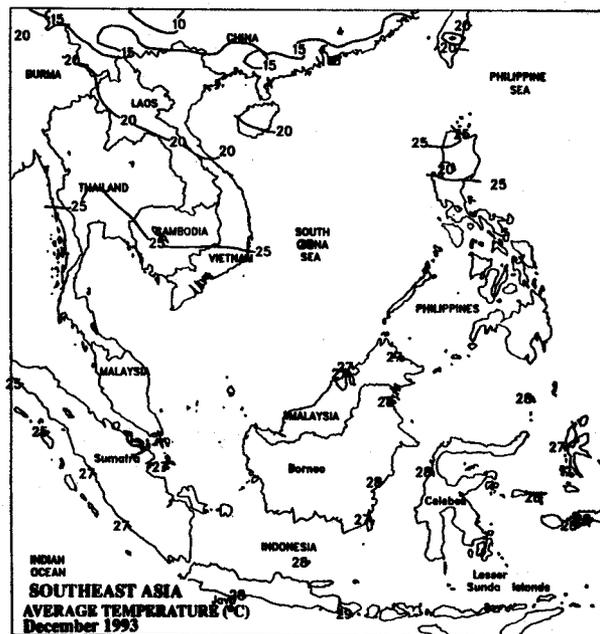
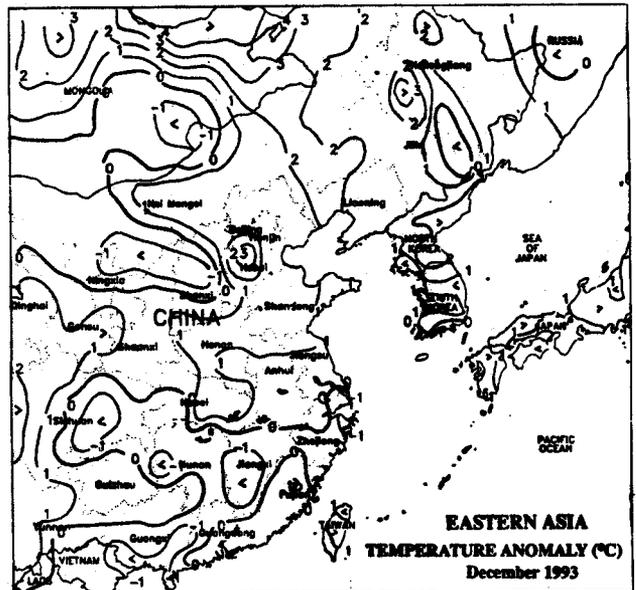
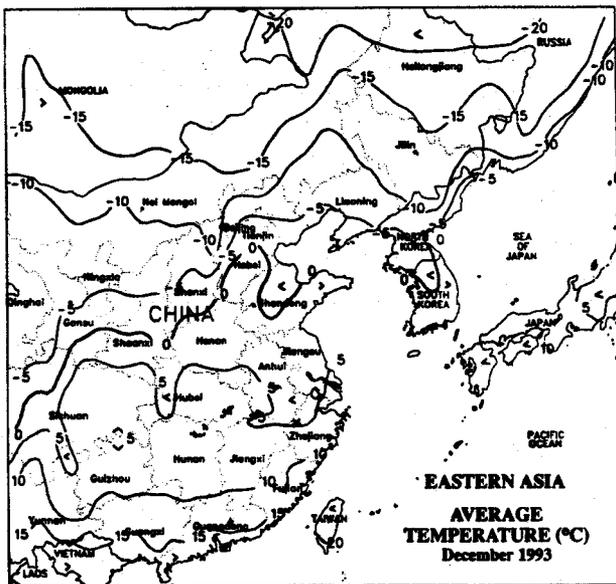
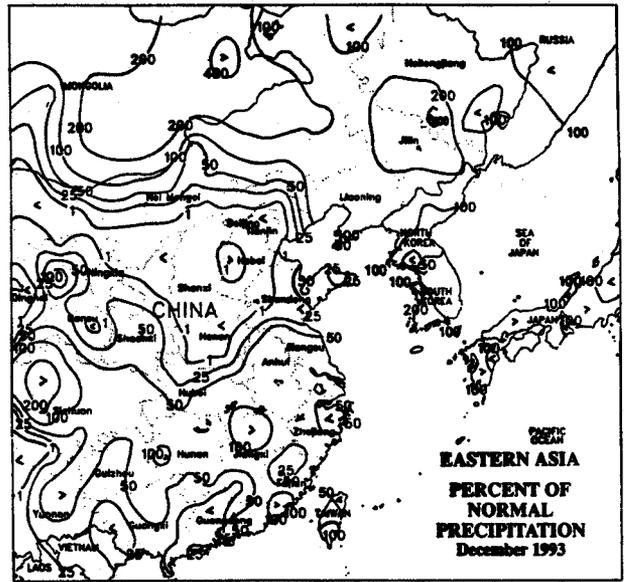
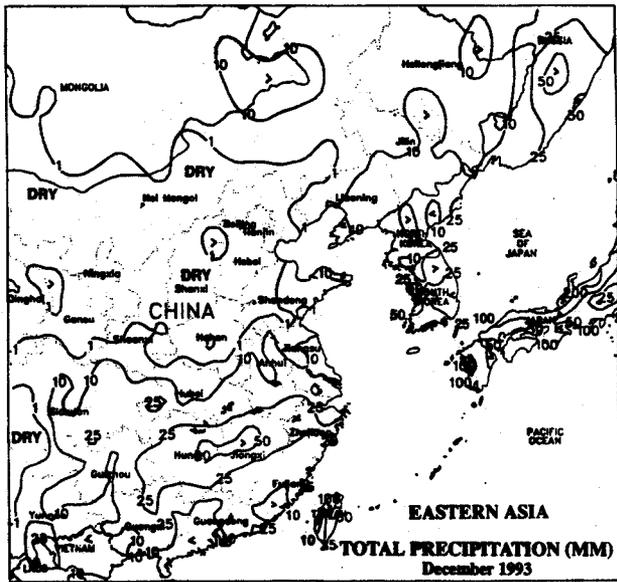


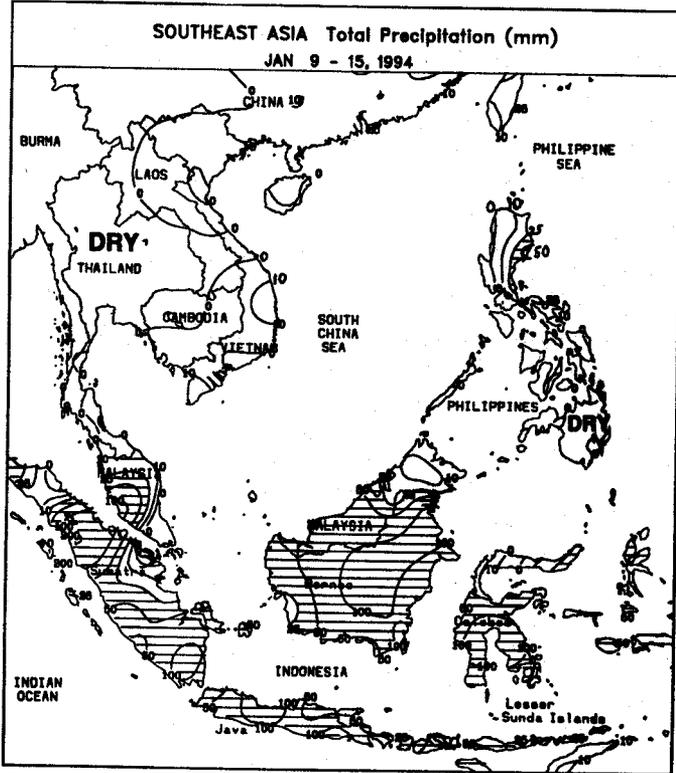
SOUTH ASIA: Beneficial showers (10-32 mm) boosted moisture reserves for winter grains and oilseeds in central and northern India. The rain was especially welcomed for rainfed crops following a protracted dry spell. Dry weather continued over Pakistan, as well as most of eastern and southern India, as temperatures generally averaged 1-2 degrees C above normal. In early December, a cyclone struck near Madras and dissipated over the southern interior, bringing heavy showers (25-100 mm) to fall crop areas as far north as Maharashtra. Aside from coastal flooding as the storm made landfall, some damage was reported to fall-planted groundnuts in southern Andhra Pradesh. Dry, warm December weather in Pakistan and India's northern half aided winter grain and oilseed planting but reduced moisture for rainfed crops.



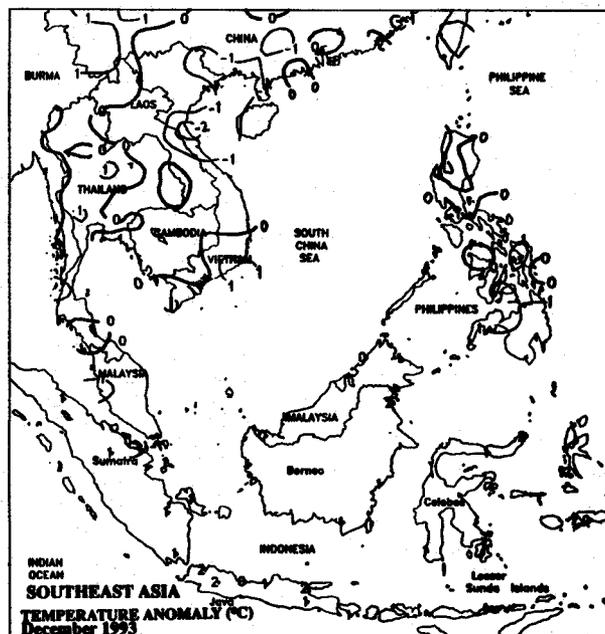
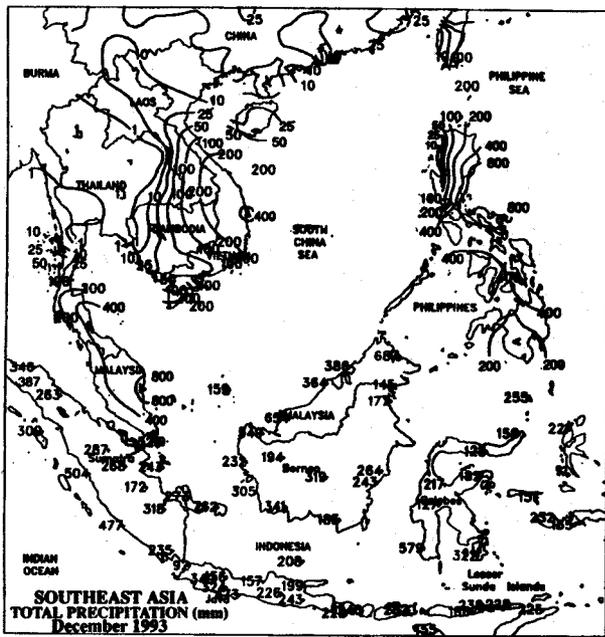
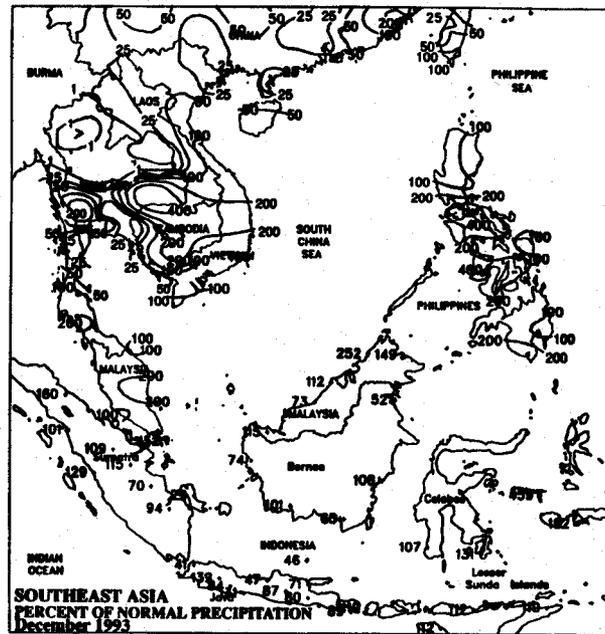


EASTERN ASIA: Seasonably dry weather continued across the North China Plain. Winter wheat remained dormant over most areas despite above-normal temperatures (3-5 degrees C). However, the continued unseasonably warm weather diminished the wheat's winter hardiness. Light to moderate rain (7-25 mm) fell across the Yangtze Valley, replenishing reservoir levels. During December, seasonably dry weather prevailed across the North China Plain, while the Yangtze Valley received near- to slightly below-normal rainfall.

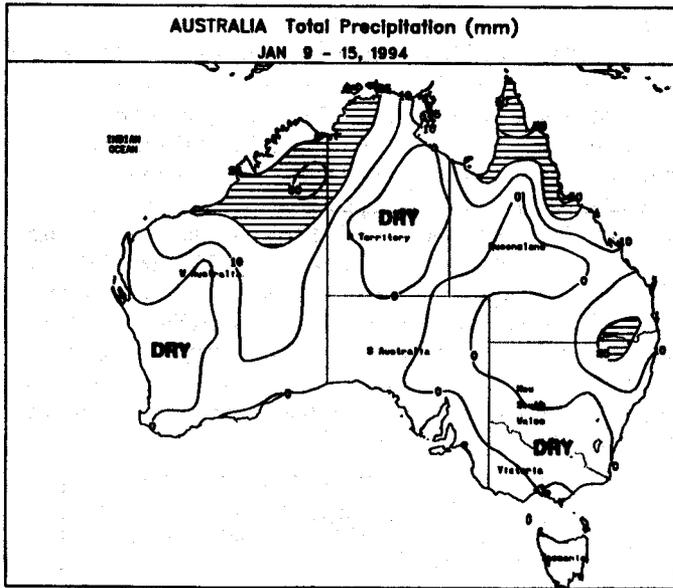




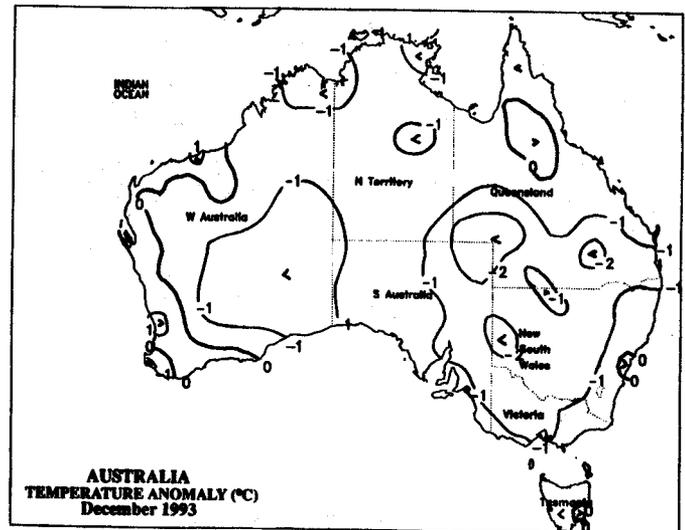
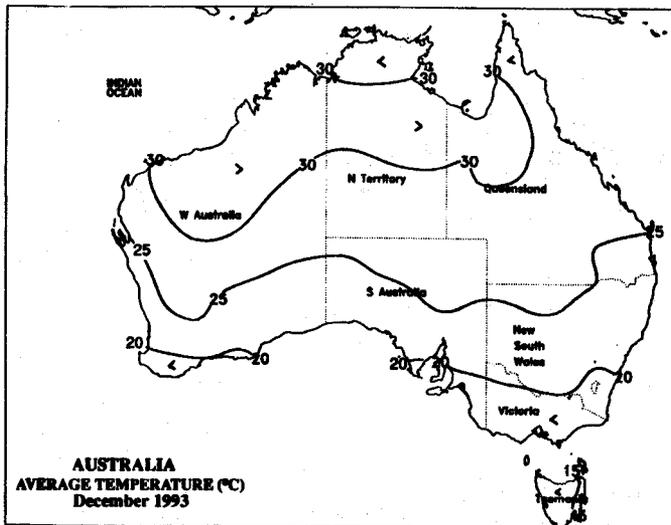
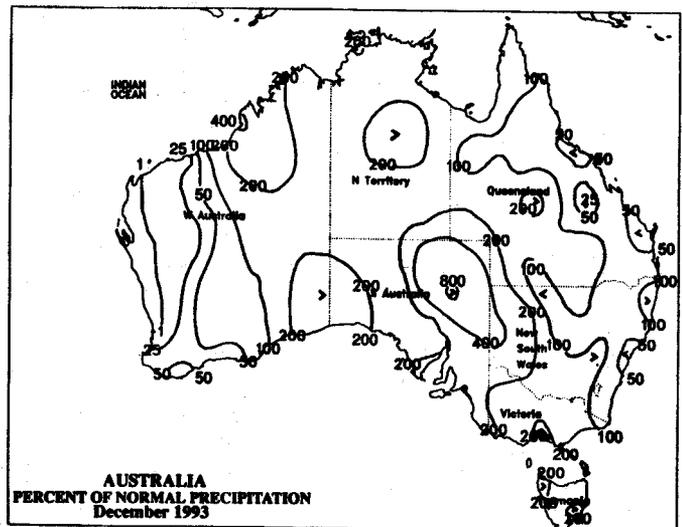
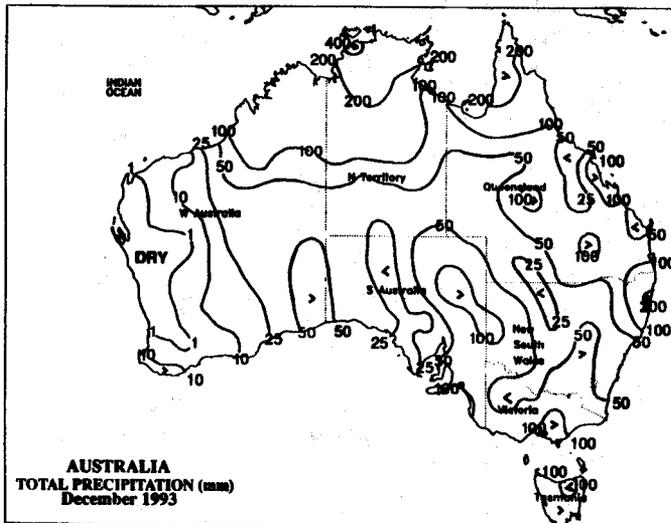
SOUTHEAST ASIA: Moderate to heavy showers (50-100 mm or more) covered most Javan rice areas, boosting irrigation reserves but causing additional flooding. Moderate to heavy showers (25-135 mm) fell elsewhere in Indonesia and much of Malaysia, although dry weather prevailed along the eastern Malay Peninsula. Mostly dry weather dominated the Philippines, providing a needed break from the recent inundating rains. In December, an unusually high number of tropical systems plagued the Philippines, bringing inundating rains and high winds to rice, corn, copra, and sugarcane regions. Remnants of the storms affecting the Philippines brought heavy showers to Vietnam's central coast, likely causing some damage to winter-spring rice, as well as sections of western Malaysia. December rainfall was generally near normal in eastern Malaysia and Indonesia.

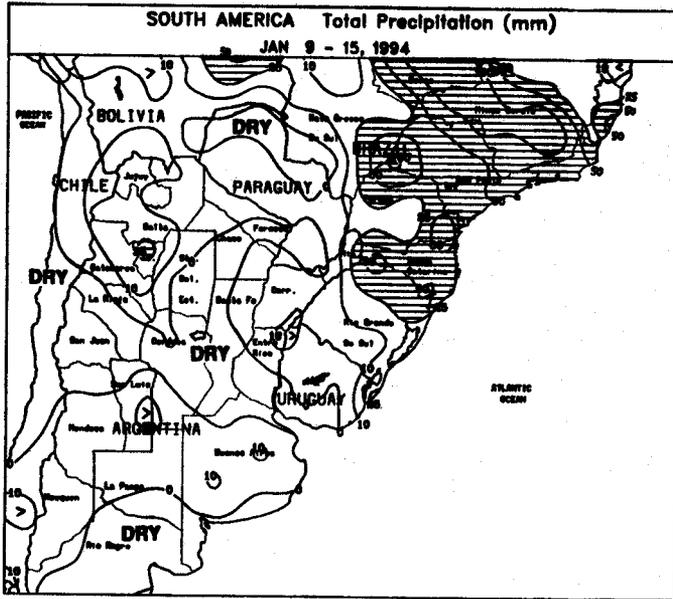


The Southeast Asia monthly average temperature map appears on the previous page.

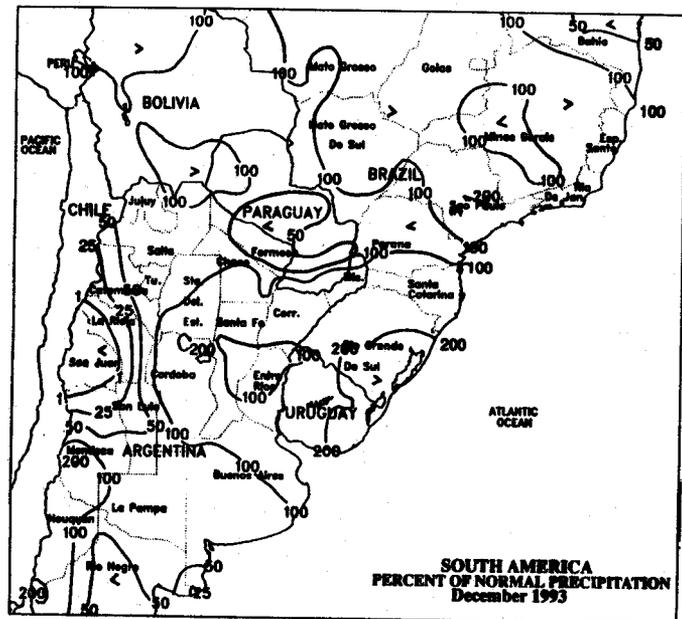
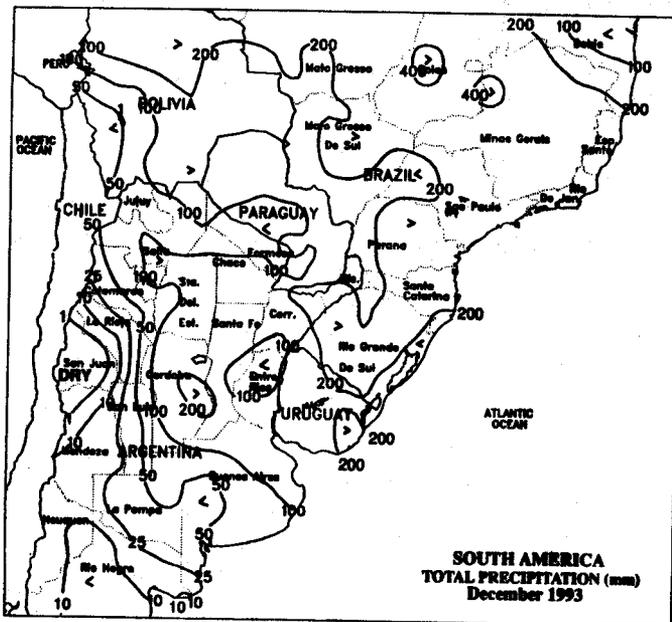


AUSTRALIA: Late-week rain (5-30 mm) brought relief to eastern summer crops, but additional rain is still needed. The rains ended a 2-week hot, dry spell that stressed eastern sorghum and cotton. Weekly temperatures averaged 1-2 degrees C above normal, with early-week maximum temperatures ranging from 36 to 40 degrees C. Light to moderate showers (10-50 mm) fell across northeastern Queensland, benefiting sugarcane. Dry weather favored late winter wheat harvesting across the south. During December, above-normal rainfall across the south slowed wheat harvesting. The eastern summer crop region received near- to slightly below-normal December rainfall.

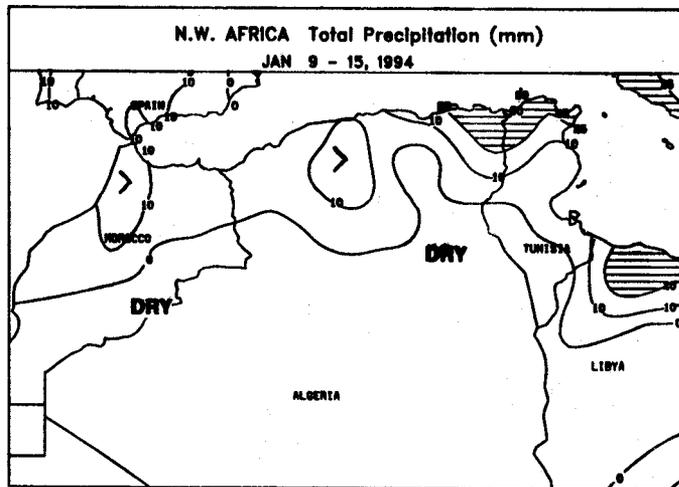
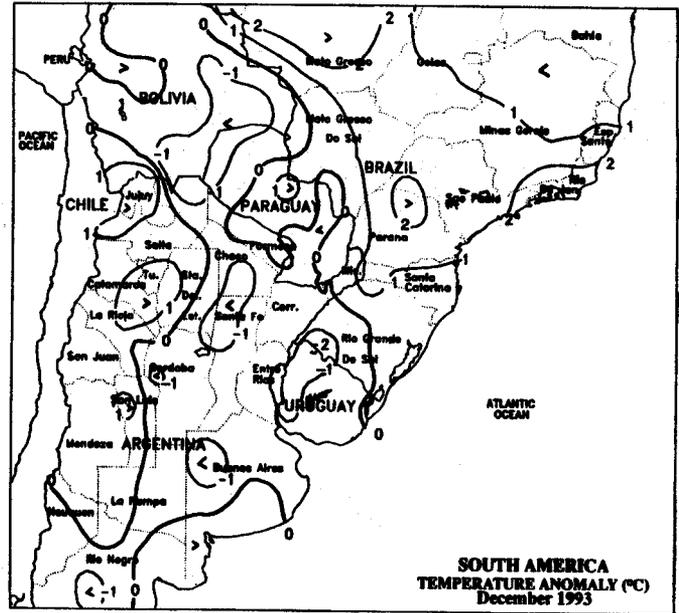
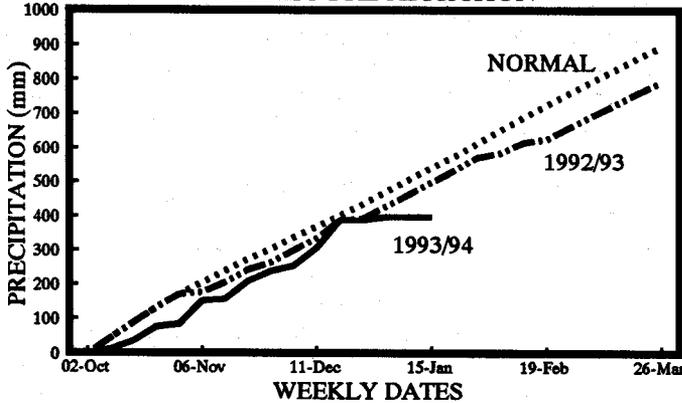




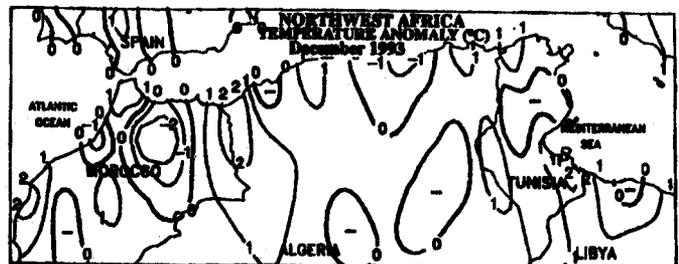
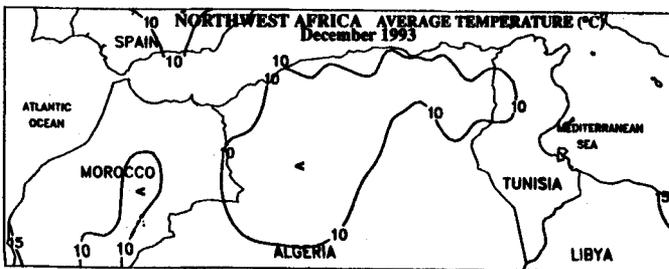
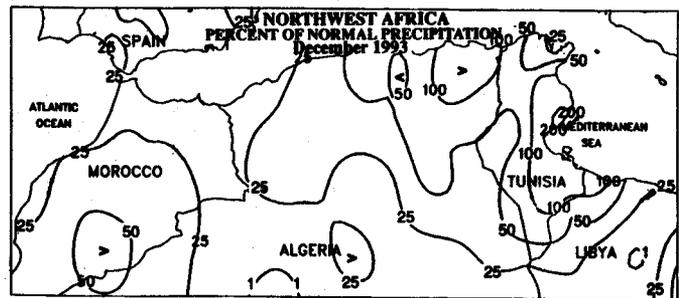
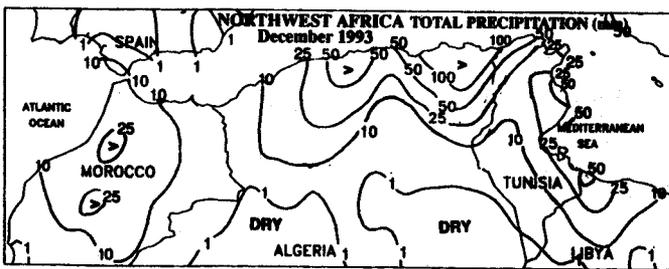
SOUTH AMERICA: In Argentina, light rain (3-12 mm) fell across central and northern Buenos Aires and southern Cordoba, keeping soils moist for germinating soybeans and vegetative corn. Elsewhere, dry weather prevailed-allowing winter wheat harvesting to progress across southern Buenos Aires and soybean planting in southern Santa Fe. Winter wheat harvesting and soybean planting is about 60-70 percent completed. Dry weather also prevailed across the northern cotton areas. Despite a wet start to the growing season, the cotton areas of eastern Formosa are becoming dry. Weekly temperatures averaged 1-2 degrees below normal across central Argentina. Across southern Brazil, widespread showers (10-60 mm) covered most crop areas, favoring vegetative soybeans and corn. Heavier showers (75-150 mm) fell across portions of Sao Paulo, Goias, and Minas Gerais, keeping soils well watered for soybeans, cotton, coffee, citrus, and sugarcane. The southern Bahian cocoa region received only light rain (5-23 mm). Southern Paraguay received little or no rain during the past 4 weeks (since mid-December), raising concerns for soybeans and cotton. Rainfall from October to mid-December had been adequate. In December, near- to above-normal rainfall covered most of southern Brazil and central Argentina. The rains benefited Brazilian crops, but caused summer crop planting and wheat harvesting delays in Argentina. Southern Paraguay received near- to below-normal December rainfall.

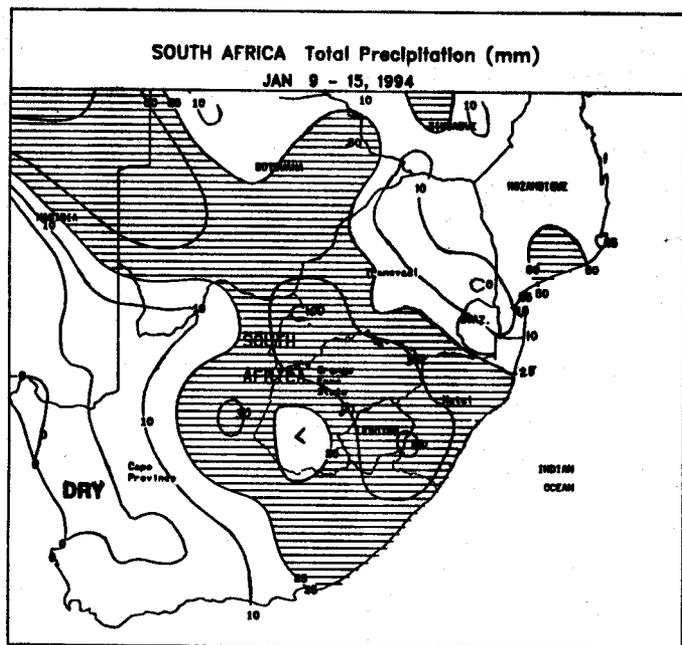


SOUTHERN PARAGUAY WEEKLY PRECIPITATION

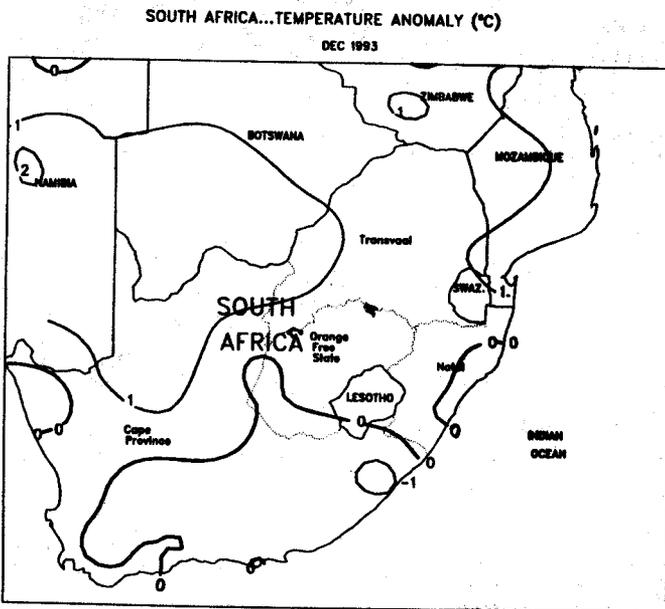
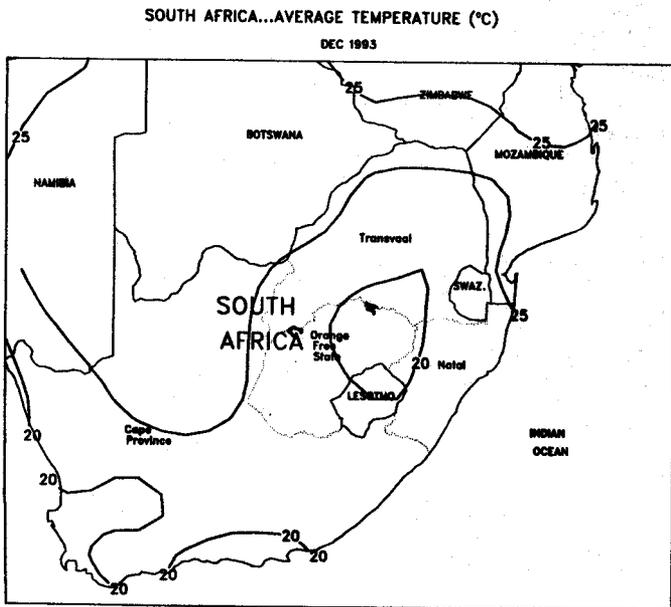
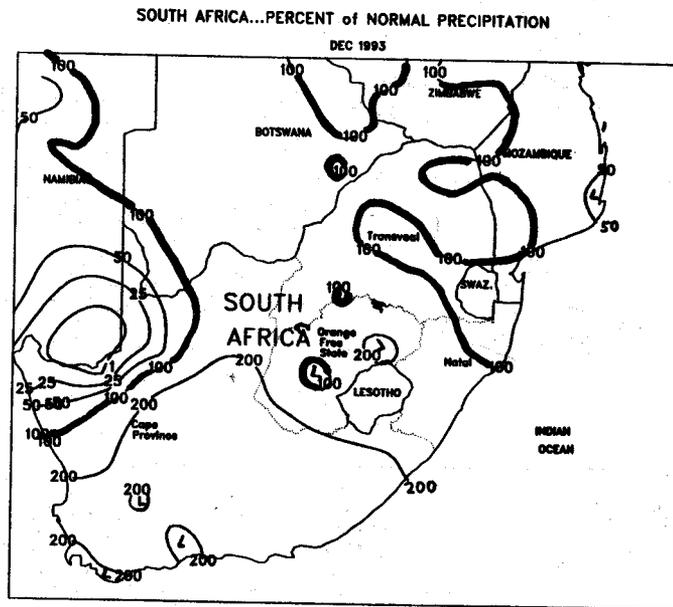
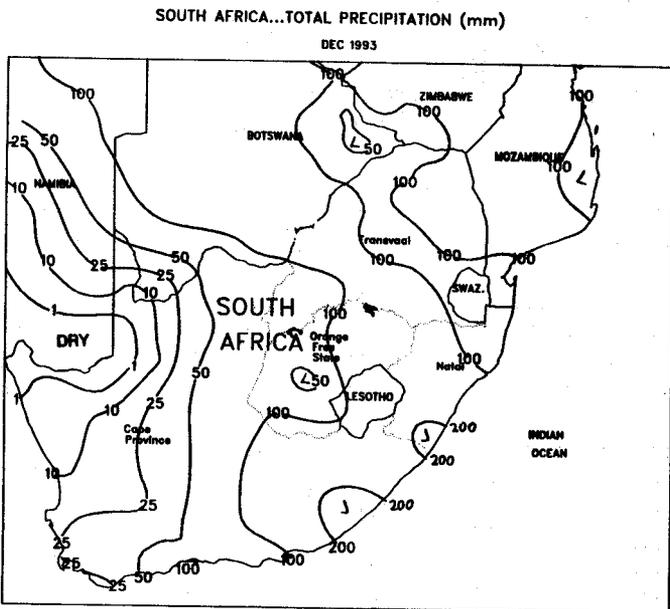


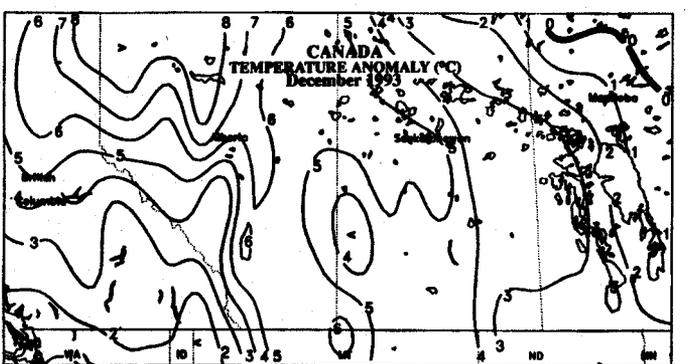
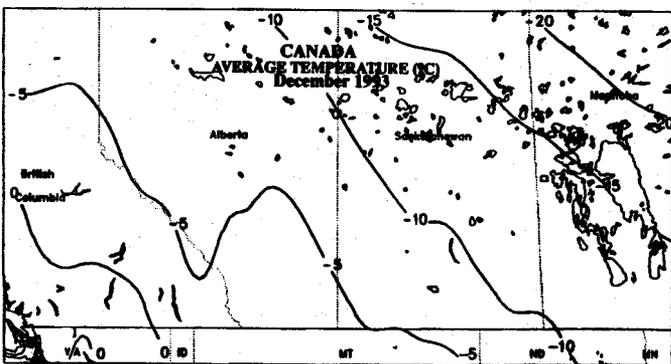
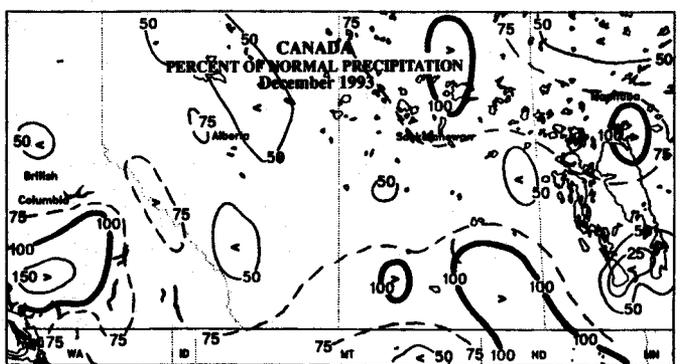
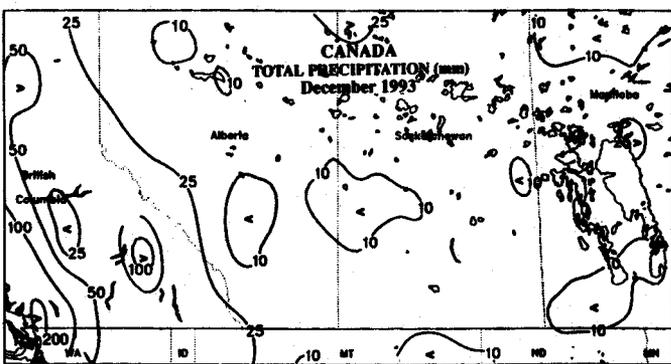
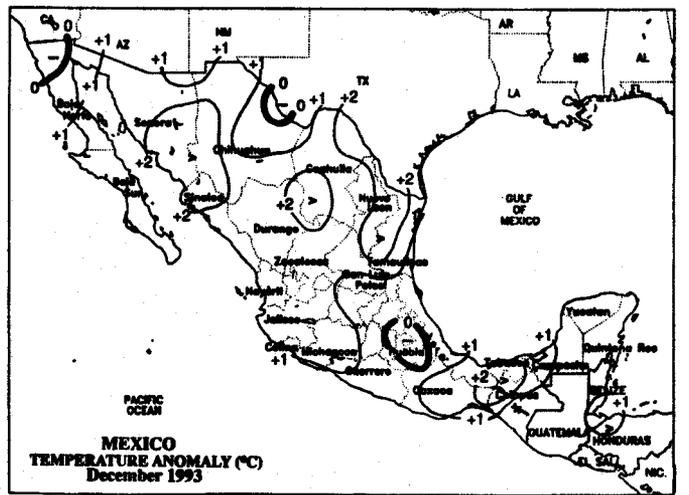
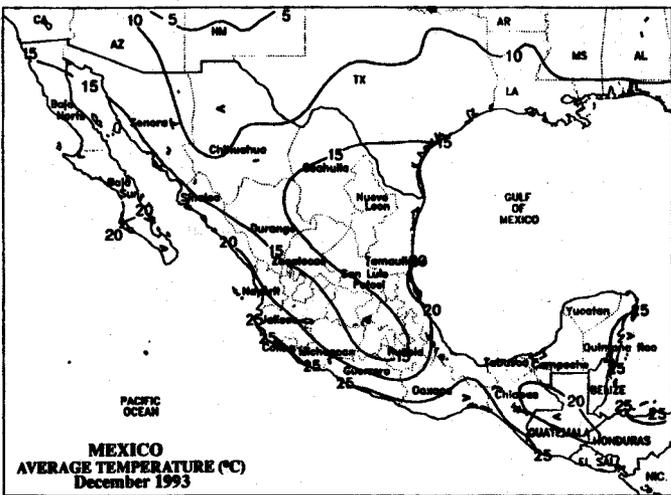
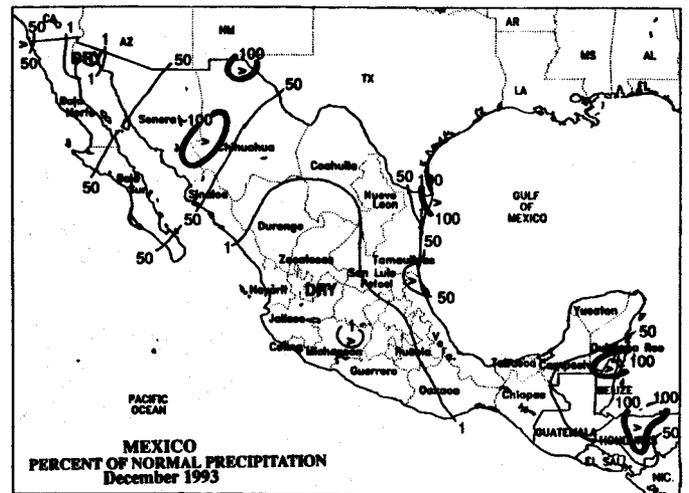
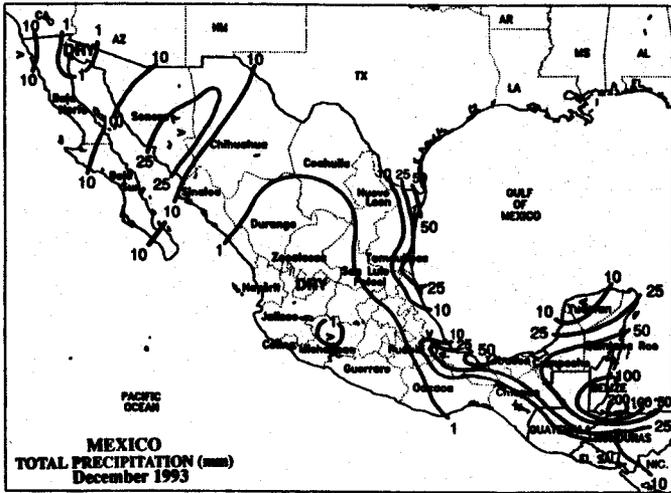
NORTHWESTERN AFRICA: Intermittent showers (10-47 mm) covered winter grains in eastern Algeria and northern Tunisia, improving conditions for crop emergence and establishment. Light, scattered precipitation (2-20 mm) over Morocco and western Algeria followed last week's abundant rainfall, maintaining adequate moisture for winter grains in the vegetative stage. In December, well-below-normal precipitation covered winter grain areas in Morocco, Algeria, and Tunisia. Moisture reserves in Morocco and western Algeria were adequate to meet the crop water requirements of winter grains in the early vegetative stage. However, in Tunisia, continued dry weather in December created unfavorable conditions for seed germination and plant establishment.





SOUTH AFRICA: Soaking rains (50-117 mm) stretched from southwestern Transvaal to Natal, greatly increasing moisture reserves across the western corn areas. Rainfall elsewhere ranged from 15 to 40 mm, including coastal sugarcane regions. Weekly temperatures averaged near to below normal. In December, rainfall averaged near to below normal over most primary corn and sugarcane areas and warmer-than-normal conditions (1-2 degrees C above normal) enhanced evapotranspiration rates of establishing corn. December rainfall was above normal throughout crop regions of the Cape Province and southern Natal.





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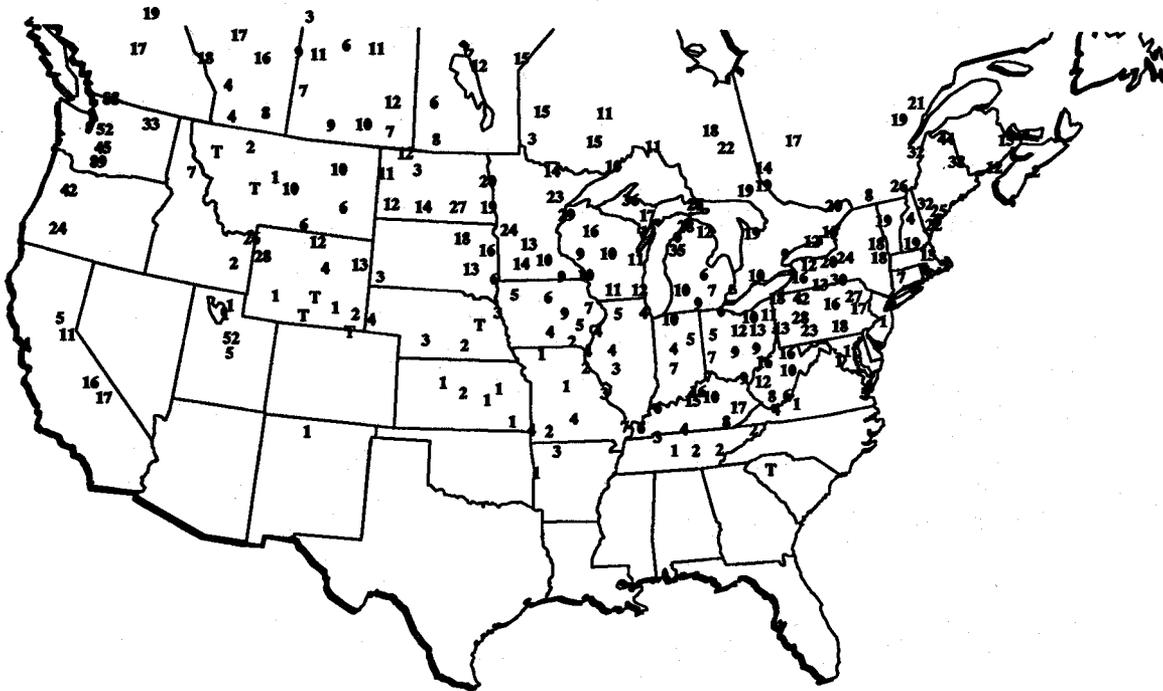
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Tom Puterbaugh, Mark Brusberg, and Bob Stefanski

Total Snow Cover (Inches) January 18, 1994



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

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