

# WEEKLY WEATHER AND CROP BULLETIN

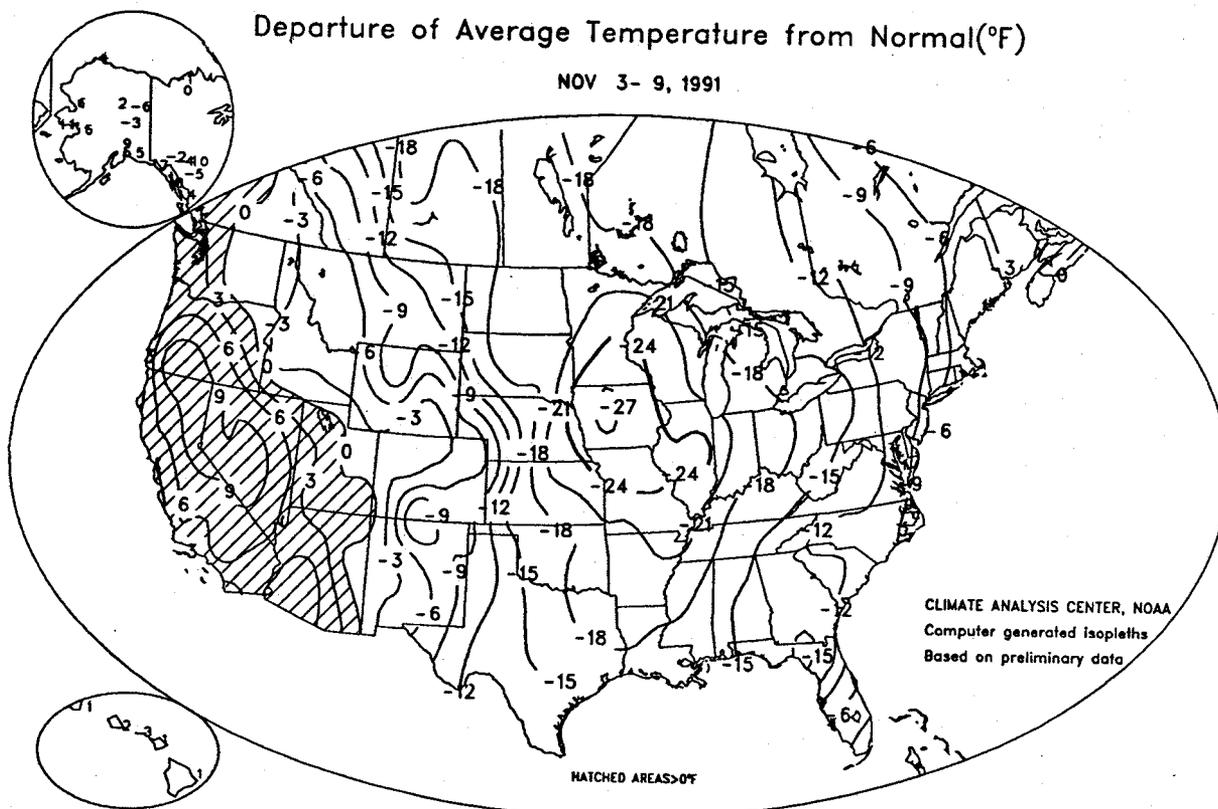
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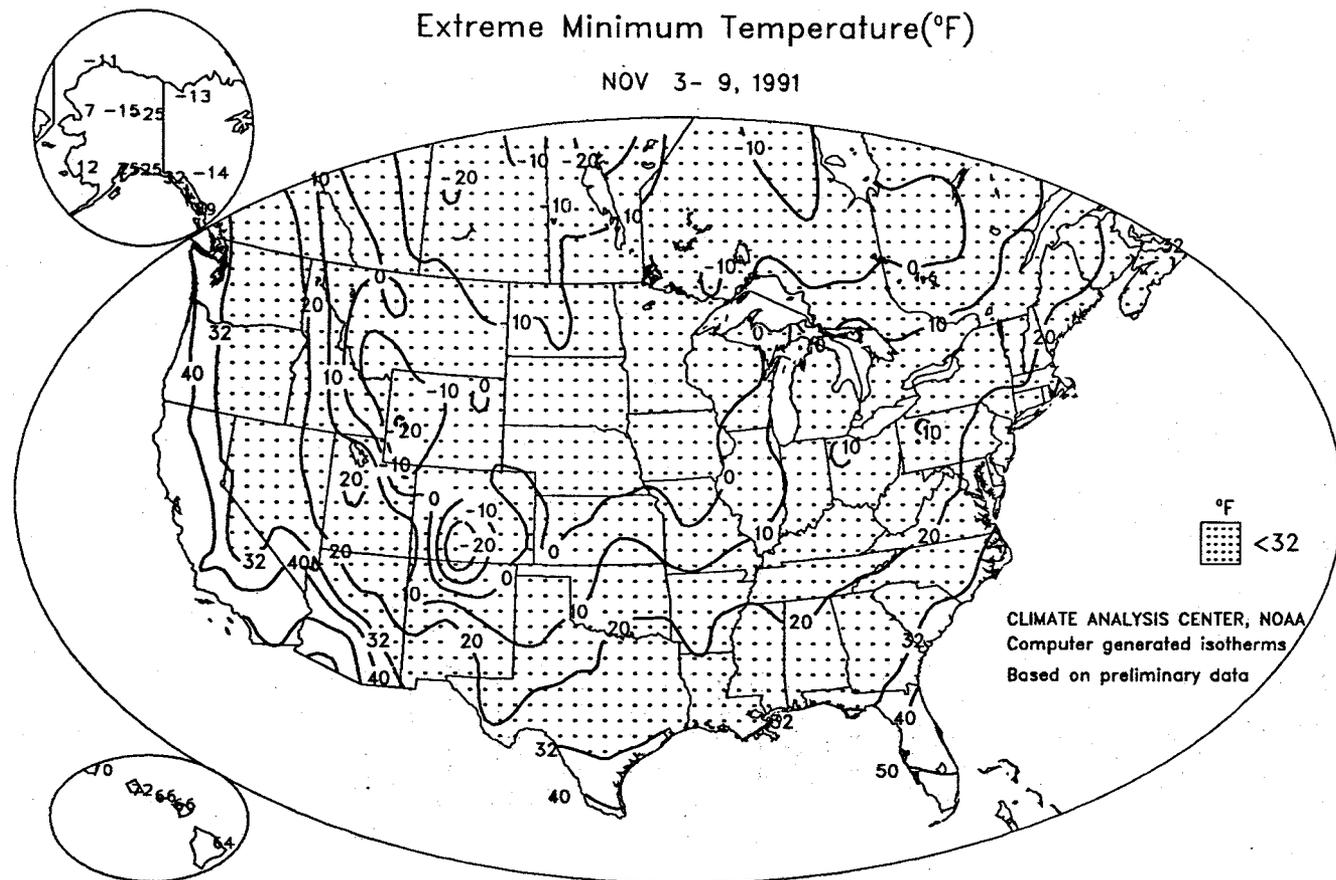
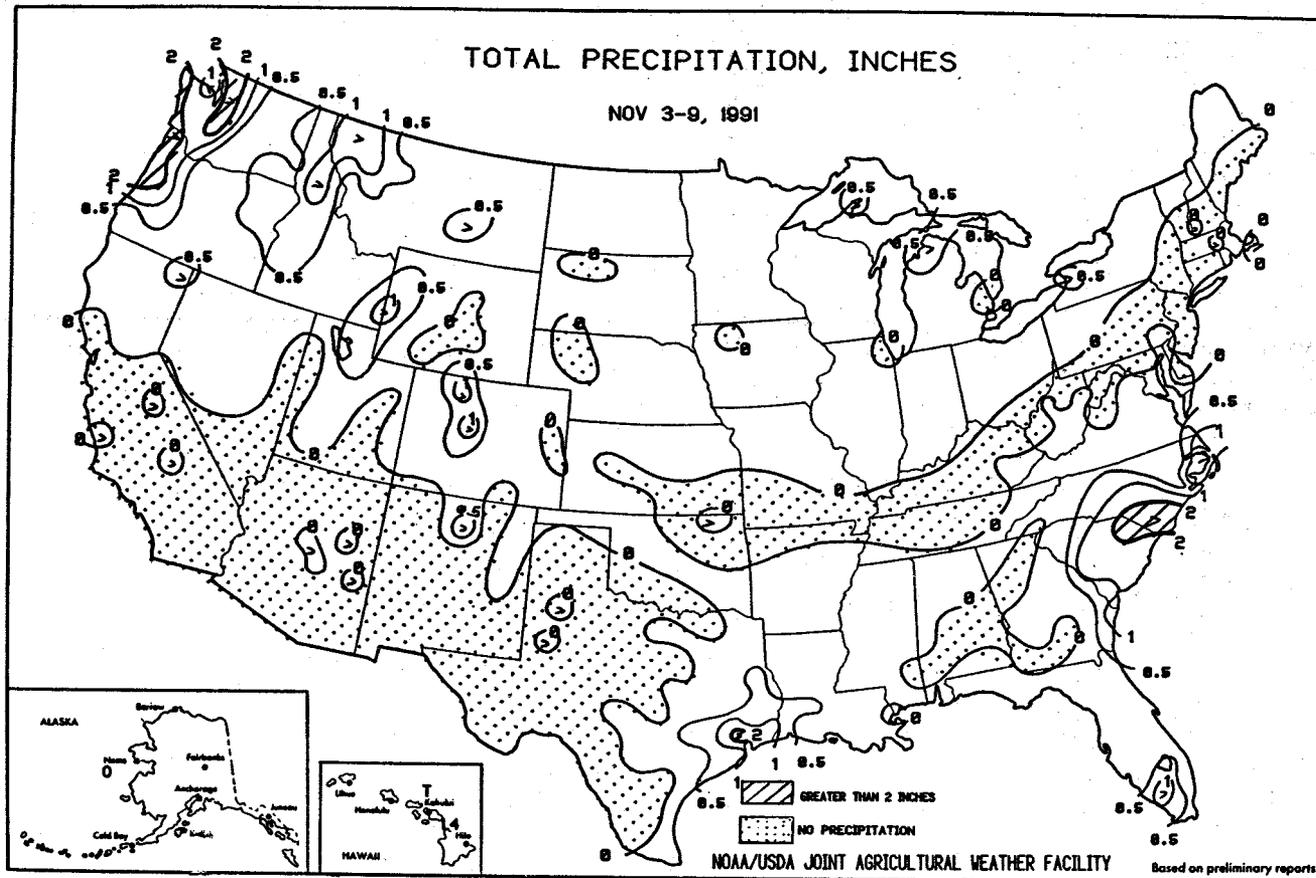
## HIGHLIGHTS

November 3 - 9, 1991

Arctic cold gripped the eastern two-thirds of the Nation, setting nearly 500 daily record-low temperatures. Weekly temperatures averaged more than 15° F below normal from the northern Plains to the Gulf coast, reaching 27° F below normal in Iowa. As the week began, an arctic high pressure system was firmly entrenched from the Rockies eastward. It was responsible for more than 250 of the daily record lows, including 100 on Monday morning. The mercury plunged to -26° F in Alamosa, CO. In Pueblo, CO, the minimum of -17° F on Sunday smashed the former daily record low by 28°. Lubbock, TX, bottomed out at 7° F. Significant precipitation was confined to the Pacific Northwest until midweek, when a reinforcing arctic front took aim on the eastern half of the Nation. Snow powdered areas from the Rockies to the Ohio Valley. Storm totals reached 6 inches in western Nebraska.

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# National Weather Data for Selected Cities

Weather Data for the Week Ending November 9, 1991

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 Sept 1	PCT. NORMAL SINCE Sept 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE	MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																			.01 INCH OR MORE	.50 INCH OR MORE		
AL BIRMINGHAM	53	27	64	21	40	-15	.1	-.7	.1	4.4	56	46.7	100	84	33	0	7	4	1	0	0	
MOBILE	58	31	70	27	45	-16	.1	-.7	.1	3.0	30	73.1	130	80	27	0	4	1	1	0	0	
MONTGOMERY	57	30	68	22	43	-15	.2	-.6	.1	5.6	73	57.2	137	82	27	0	4	5	0	0	0	
AK ANCHORAGE	36	29	40	24	33	7	.2	-.1	.2	5.5	123	14.1	108	81	60	0	4	1	0	0	0	
BARROW	16	0	26	-11	8	4	.1	-.2	.1	1.9	65	1.7	41	90	76	0	7	2	0	0	0	
FAIRBANKS	19	-5	26	-17	7	3	.1	-.2	.1	1.9	90	7.9	86	87	55	0	7	0	0	0	0	
JUNEAU	39	32	43	25	35	0	1.6	-.2	.9	25.1	158	66.6	148	100	90	0	3	4	1	0	0	
KODIAK	46	43	47	38	44	0	4.9	3.5	3.1	30.1	200	85.0	166	98	89	0	0	0	0	0	0	
NOME	37	26	42	16	32	12	.0	-.2	.0	5.0	130	13.6	102	51	22	0	6	0	0	0	0	
AZ PHOENIX	85	59	90	54	72	8	.0	-.1	.1	2.0	142	5.5	95	51	19	1	0	0	0	0	0	
PRESCOTT	71	36	77	30	53	6	.0	-.3	.0	1.9	61	11.6	71	67	25	0	3	0	0	0	0	
TUCSON	82	49	88	43	66	4	.0	-.1	.0	2.3	96	8.5	88	59	17	0	0	0	0	0	0	
YUMA	89	63	95	58	76	9	.0	-.1	.0	.5	86	2.3	117	45	17	3	0	0	0	0	0	
AR FORT SMITH	47	23	58	19	35	-19	.0	-.8	.1	13.7	183	37.9	110	87	38	0	7	0	0	0	0	
LITTLE ROCK	45	25	57	19	35	-19	.1	-.9	.1	10.0	121	50.3	121	63	41	0	6	1	0	0	0	
CA BAKERSFIELD	77	50	86	44	64	4	.0	-.1	.0	.3	53	4.9	109	72	36	0	0	0	0	0	0	
FRESNO	58	50	66	46	54	1	.1	-.2	.0	1.3	25	19.0	68	99	85	0	0	0	2	0	0	
LOS ANGELES	76	51	84	45	64	7	.1	-.2	.1	.8	92	9.3	118	90	44	0	0	0	0	0	0	
REDDING	77	48	84	43	62	5	.0	-.3	.0	.2	20	8.2	90	87	46	0	0	0	0	0	0	
SACRAMENTO	77	49	80	44	63	6	.0	-.8	.2	2.2	49	19.5	66	97	42	0	0	0	1	0	0	
SAN DIEGO	75	56	80	50	65	2	T	-.4	T	1.3	78	14.0	113	96	39	0	0	0	0	0	0	
SAN FRANCISCO	69	51	79	47	60	4	T	-.2	T	1.0	128	11.8	169	85	44	0	0	0	0	0	0	
CO DENVER	56	24	70	4	40	-2	.1	-.1	.1	1.7	71	17.7	127	84	34	0	5	3	0	0	0	
GRAND JUNCTION	53	29	62	15	41	-3	T	-.2	T	3.6	201	7.7	112	81	37	0	4	1	0	0	0	
PUEBLO	53	17	75	-17	35	-8	T	-.1	T	2.1	118	11.4	111	81	43	0	6	1	0	0	0	
CT BRIDGEPORT	49	36	58	29	43	-6	.0	-.9	.0	5.4	70	33.4	96	67	40	0	2	0	0	0	0	
HARTFORD	48	30	59	21	39	-7	.0	-.9	.0	8.8	103	40.3	109	79	34	0	4	0	0	0	0	
DC WASHINGTON	48	33	56	27	41	-12	T	-.6	T	5.5	80	23.8	71	73	39	0	3	0	0	0	0	
FL APALACHICOLA	62	41	70	35	51	-12	.1	-.6	.1	2.9	23	88.7	179	83	32	0	0	1	1	0	0	
DAYTONA BEACH	67	51	74	44	59	-8	.4	-.3	.2	8.9	73	65.5	147	94	61	0	0	2	2	0	0	
JACKSONVILLE	63	43	72	39	53	-12	.5	-.1	.4	13.1	121	78.9	164	90	44	0	0	0	0	0	0	
KRY WEST	78	72	83	64	75	-2	T	-.9	T	12.5	101	40.4	114	84	70	0	0	0	3	0	0	
MIAMI	80	65	84	54	73	-2	.2	-.7	.1	33.0	202	70.3	130	92	64	0	0	0	0	0	0	
ORLANDO	70	54	80	44	62	-7	.1	-.3	.1	9.4	94	60.5	131	92	56	0	0	0	2	1	0	
TALLAHASSEE	62	35	70	28	48	-13	.1	-.6	.1	2.4	23	70.4	123	93	34	0	0	0	1	0	0	
TAMPA	71	53	79	46	62	-7	.1	-.4	.0	4.3	47	41.3	96	91	49	0	2	0	1	0	0	
WEST PALM BEACH	79	63	86	49	71	-3	.1	-.9	.1	14.1	77	73.3	132	94	64	0	0	2	0	0	0	
GA ATLANTA	52	33	63	26	42	-13	T	-.7	T	2.9	45	50.5	121	77	37	0	2	0	0	0	0	
AUGUSTA	56	31	66	25	43	-13	1.2	-.8	1.2	3.3	54	53.8	141	92	39	0	5	2	1	0	0	
MACON	56	32	67	24	44	-14	.1	-.3	.1	1.2	20	48.1	124	88	36	0	4	2	0	0	0	
SAVANNAH	59	40	66	35	50	-10	1.2	-.8	1.2	3.2	40	66.6	146	82	39	0	0	2	1	0	0	
HI HILO	84	68	86	65	76	2	1.4	-1.9	1.1	16.0	77	132.4	127	95	65	0	0	5	1	0	0	
HONOLULU	87	73	89	72	80	3	T	-.7	T	4.0	120	15.1	86	81	49	0	0	1	0	0	0	
KARULUI	87	68	89	66	78	1	T	-.4	T	1.3	80	10.6	77	85	54	0	0	0	0	0	0	
LIHUE	82	73	83	70	78	2	.7	-.6	.4	4.8	58	29.0	84	87	71	0	0	3	0	0	0	
ID BOISE	46	33	55	23	39	-4	.9	-.6	.4	2.1	126	8.3	90	94	65	0	2	5	0	0	0	
LEWISTON	49	37	54	25	43	0	.4	-.2	.4	.8	39	9.3	87	92	61	0	1	3	0	0	0	
POCATELLO	46	27	60	-6	36	-3	.2	-.0	.1	1.9	104	12.3	135	94	66	0	5	2	0	0	0	
IL CHICAGO	31	14	38	11	23	-22	T	-.5	T	10.3	154	30.7	101	83	40	0	7	0	0	0	0	
MOLINE	30	12	42	5	21	-23	.1	-.4	.1	9.3	132	28.6	85	82	46	0	7	2	0	0	0	
PEORIA	30	11	43	5	21	-23	.2	-.2	.2	11.8	173	31.4	99	82	47	0	7	3	0	0	0	
QUINCY	30	10	45	0	20	-26	.1	-.4	.1	10.6	130	33.2	96	89	46	0	7	1	0	0	0	
ROCKFORD	30	11	40	7	21	-22	T	-.6	T	9.9	135	26.9	81	78	38	0	7	1	0	0	0	
SPRINGFIELD	31	13	43	1	22	-24	.2	-.2	.1	11.6	180	34.0	111	81	45	0	7	2	0	0	0	
IN EVANSVILLE	37	22	45	16	30	-19	.1	-.6	.1	5.9	97	25.5	72	84	50	0	6	1	0	0	0	
FORT WAYNE	32	16	38	10	24	-20	.1	-.5	.1	11.5	196	39.9	132	84	51	0	7	2	0	0	0	
INDIANAPOLIS	35	19	44	13	27	-19	.2	-.5	.1	6.9	114	32.4	96	78	47	0	7	2	0	0	0	
SOUTH BEND	32	17	39	15	25	-20	.1	-.6	.0	11.8	163	32.3	98	82	53	0	7	3	0	0	0	
IA DES MOINES	29	7	41	-4	18	-26	.3	-.1	.3	6.7	116	34.8	122	80	52	0	7	2	0	0	0	
SIOUX CITY	27	5	41	-9	16	-25	.1	-.2	.1	4.4	96	22.8	95	86	67	0	7	1	0	0	0	
WATERLOO	26	8	37	-1	17	-23	.1	-.4	.1	9.0	142	39.0	128	82	56	0	7	1	0	0	0	
KS CONCORDIA	33	14	45	4	24	-22	.1	-.2	.1	1.9	37	17.1	66	85	60	0	7	2	0	0	0	
DODGE CITY	43	18	56	3	31	-16	.1	-.2	.1	1.6	47	8.7	45	89	54	0	7	1	0	0	0	
GOODLAND	51	21	74	1	36	-6	.1	-.1	.0	1.7	67	20.8	136	81	47	0	6	2	0	0	0	
TOPEKA	37	15	52	4	26	-21	.1	-.4	.1	5.6	81	24.8	80	87	50	0	7	1	0	0	0	
WICHITA	41	21	56	12	31	-18	T	-.4	T	3.1	48	22.3	84	84	54	0	7	0	0	0	0	
KY BOWLING GREEN	44	23	55	17	33	-16	T	-.7	T	7.0	99	38.3	92	93	57	0	7	0	0	0	0	
LEXINGTON	39	21	52	16	30	-18	T	-.7	T	4.8	75	33.3	84	81	46	0	6	0	0	0	0	
LOUISVILLE	41	24	51	18	33	-17	.1	-.7	.1	5.4	79	31.5	84	80	41	0	6	1	0	0	0	
LA ALEXANDRIA	55	30	68	25	42	-17	T	-.8	T	8.0	113	67.0	151	86	33	0	6	1	0	0	0	
BATON ROUGE	58	31	72	26	44	-17	.2	-.7	.1	9.2	114	66.3	139	81	35	0	5	2	0	0	0	
LAKE CHARLES	55	35	64	28	45	-17	.4	-.5	.4	7.4	70	65.4	143	88	38	0	4	2	0	0	0	
NEW ORLEANS	57	35	68	29	46	-16	T	-.8	T	5.5	58	97.8	191	83	37	0	3	0	0	0	0	

Based on 1951-80 normals

Weather Data for the Week Ending November 9, 1991

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 Sept 1	PCT. NORMAL SINCE Sept 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.	
																		.01 INCH OR MORE	.50 INCH OR MORE		
SHREVEPORT	51	28	63	23	39	-19	.4	-1.4	.4	7.4	107	70.9	191	93	35	0	6	1	0	0	
ME CARIBOU	39	26	46	14	32	-3.3	.1	-1.7	.0	8.0	106	31.7	102	83	49	0	6	2	0	0	
PORTLAND	46	31	59	24	39	-3.3	.1	-1.1	.0	8.3	99	48.8	138	84	49	0	6	0	0	0	
MD BALTIMORE	48	30	56	22	39	-11	.1	-1.7	.0	6.3	84	24.5	168	69	38	0	4	0	0	0	
SALISBURY	51	32	57	21	42	-9	.1	-1.7	.0	7.1	83	39.5	100	83	39	0	3	0	0	0	
MA BOSTON	48	38	60	32	43	-4	.1	-1.9	.0	11.6	147	36.6	101	74	42	0	0	0	0	0	
CHATHAM	53	42	56	39	48	-18	.1	-1.8	.0	9.3	107	31.6	82	86	42	0	0	0	0	0	
MI ALPENA	33	17	41	12	25	-15	.1	-1.4	.1	9.1	156	31.1	123	85	46	0	7	2	2	0	
DETROIT	35	19	42	14	27	-16	.1	-1.5	.1	5.2	105	25.4	96	77	42	0	7	1	1	0	
FLINT	33	17	41	12	25	-18	.1	-1.5	.1	4.3	85	26.7	105	84	47	0	7	1	1	0	
GRAND RAPIDS	30	18	37	14	24	-19	.4	-1.2	.3	9.4	139	36.7	127	93	61	0	7	3	3	0	
Houghton Lake	29	18	38	16	24	-15	.1	-1.4	.1	13.1	229	34.0	139	87	53	0	7	3	3	0	
LANSING	32	17	41	11	24	-18	.1	-1.5	.0	5.1	93	25.9	101	87	44	0	7	3	3	0	
MARQUETTE	25	8	34	2	17	-18	.3	-1.5	.1	8.6	106	30.4	93	89	59	0	7	4	4	0	
MUSKEGON	33	22	39	21	27	-16	.3	-1.4	.1	11.2	170	35.8	134	84	57	0	7	3	3	0	
SAULT ST. MARIE	31	16	39	7	23	-14	.4	-1.3	.1	10.8	140	28.2	99	91	59	0	7	6	6	0	
MN ALEXANDRIA	21	6	35	-2	13	-21	.2	-1.2	.2	5.4	119	27.3	118	88	66	0	7	2	2	0	
DULUTH	19	6	27	-1	13	-21	.4	-1.0	.2	13.6	228	39.3	146	81	59	0	7	2	2	0	
INT'L FALLS	19	3	30	-5	11	-20	.3	-1.1	.2	7.5	141	26.2	117	85	60	0	7	4	3	0	
MINNEAPOLIS	22	5	35	-6	13	-25	.3	-1.0	.3	10.3	216	32.6	133	84	61	0	7	3	3	0	
ROCHESTER	21	3	34	-5	12	-26	.1	-1.3	.1	6.7	107	31.9	120	86	70	0	7	1	1	0	
MS GREENWOOD	49	26	65	22	37	-19	.7	-1.9	.7	6.7	92	56.2	127	93	34	0	7	1	1	0	
JACKSON	53	27	67	23	40	-18	.1	-1.7	.0	6.5	94	55.5	127	90	37	0	7	2	2	0	
MERIDIAN	54	28	66	24	41	-16	.7	-1.6	.7	7.9	112	62.4	139	83	31	0	7	1	1	0	
MO CAPR GIRARDEAU	39	21	49	12	30	-	.1	-1.7	.1	8.2	115	36.3	95	79	43	0	6	1	1	0	
COLUMBIA	34	12	47	0	23	-25	.5	-1.1	.4	7.9	101	29.8	89	75	39	0	7	2	2	0	
KANSAS CITY	35	14	50	1	24	-25	.2	-1.3	.2	6.0	74	24.8	74	80	46	0	7	1	1	0	
SAINT LOUIS	35	17	49	8	26	-22	.3	-1.3	.2	9.7	169	29.2	98	75	41	0	7	2	2	0	
SPRINGFIELD	41	17	50	7	29	-20	.7	-1.7	.7	7.3	88	30.3	87	75	38	0	7	0	0	0	
MT BILLINGS	39	22	50	7	31	-8	.6	-1.3	.2	5.0	185	20.0	148	78	52	0	5	3	3	0	
GLASGOW	34	10	50	-11	22	-12	.3	-1.3	.3	1.1	70	10.8	104	87	61	0	7	2	2	0	
GREAT FALLS	42	21	58	9	31	-7	.5	-1.4	.3	2.4	116	13.8	100	86	60	0	6	5	5	0	
HAVRE	34	11	45	-15	22	-13	.1	-1.0	.1	.5	31	9.0	83	94	71	0	7	2	2	0	
HELENA	42	20	55	-8	31	-5	.2	-1.0	.1	2.1	125	10.4	100	89	60	0	7	2	2	0	
KALISPELL	32	25	37	4	28	-6	1.2	1.0	.6	2.7	113	13.6	102	97	85	0	7	3	1	0	
MILES CITY	35	14	49	-7	25	-12	.4	-1.2	.2	4.6	210	19.9	151	87	59	0	7	4	4	0	
MISSOULA	38	24	48	0	31	-4	.4	-1.2	.3	1.0	48	9.5	84	95	67	0	7	3	3	0	
NE GRAND ISLAND	33	10	44	-3	21	-21	.1	-1.1	.1	2.7	72	26.4	121	90	60	0	7	2	2	0	
LINCOLN	32	9	44	-4	20	-23	.3	-1.1	.3	3.4	69	21.5	84	85	58	0	7	1	1	0	
NORFOLK	29	5	42	-9	17	-24	.4	-1.2	.4	4.1	113	26.8	119	89	63	0	7	1	1	0	
NORTH PLATTE	44	11	68	-6	28	-11	.1	-1.1	.1	3.9	144	19.0	103	93	54	0	7	1	1	0	
OMAHA	30	10	44	-1	20	-24	.2	-1.2	.2	5.4	90	34.1	119	83	60	0	7	1	1	0	
SCOTTSBLUFF	50	17	64	-4	34	-6	.4	-1.2	.4	2.4	123	14.0	102	88	44	0	6	2	2	0	
VALENTINE	37	7	56	-7	22	-16	.4	-1.3	.3	2.4	102	21.0	127	94	57	0	7	2	2	0	
NV ELY	59	29	65	21	44	7	.1	-1.1	.1	2.4	164	9.3	120	94	52	0	6	1	1	0	
LAS VEGAS	77	51	83	43	64	6	.0	-1.1	.0	.1	18	3.5	102	55	25	0	0	0	0	0	
RENO	70	38	76	34	54	11	.1	-1.0	.1	1.0	143	4.3	77	82	33	0	0	2	1	0	
WINNEMUCCA	65	35	71	29	50	9	.2	-1.0	.2	1.6	142	6.5	103	90	42	0	2	1	1	0	
NH CONCORD	46	25	59	19	35	-6	.0	-1.8	.0	8.8	121	31.0	101	92	40	0	6	0	0	0	
NJ ATLANTIC CITY	51	30	58	23	41	-9	.0	-1.8	.0	4.0	57	29.9	84	73	39	0	4	0	0	0	
NM ALBUQUERQUE	61	31	70	19	46	-2	.0	-1.1	.0	1.7	95	8.2	115	75	29	0	5	0	0	0	
CLOVIS	55	27	75	8	41	-9	.7	-1.2	.7	3.9	98	20.1	124	92	42	0	5	0	0	0	
ROSWELL	60	30	78	17	45	-6	.0	-1.1	.0	4.2	143	17.7	177	85	36	0	5	0	0	0	
NY ALBANY	45	24	53	20	34	-9	.7	-1.7	.7	7.2	102	28.1	92	80	34	0	7	0	0	0	
BINGHAMTON	37	23	44	19	30	-12	.7	-1.7	.7	4.3	59	26.2	83	79	39	0	7	1	1	0	
BUFFALO	35	24	41	18	30	-15	.9	-1.0	.5	7.3	100	33.4	107	92	51	0	7	4	4	1	
NEW YORK	49	39	56	35	44	-7	.0	-1.9	.0	4.8	62	33.0	91	61	35	0	0	0	0	0	
ROCHESTER	38	25	46	17	32	-13	.1	-1.5	.1	4.6	77	24.0	89	83	49	0	7	1	1	0	
SYRACUSE	42	26	48	21	34	-10	.7	-1.8	.7	6.9	93	31.3	94	85	38	0	7	1	1	0	
NC ASHEVILLE	48	28	58	20	38	-11	.7	-1.7	.7	1.6	20	35.6	93	80	37	0	7	1	1	0	
CHARLOTTE	52	35	64	28	44	-10	.8	-1.2	.8	3.0	43	40.2	107	84	36	0	2	2	2	1	
GREENSBORO	51	31	61	26	41	-10	.5	-1.1	.4	6.1	81	37.9	102	80	34	0	4	2	2	0	
HATTERAS	61	52	66	47	56	-3	.5	-1.6	.5	9.8	81	59.4	124	90	64	0	0	3	3	1	
NEW BERN	57	42	64	36	49	-8	1.4	-1.7	1.2	9.6	96	46.6	99	90	52	0	4	3	3	1	
RALEIGH	52	32	62	23	42	-11	.3	-1.4	.3	4.8	71	32.4	89	88	39	0	4	2	2	0	
WILMINGTON	57	40	65	35	49	-9	2.6	-1.9	2.6	6.8	71	54.9	115	90	50	0	0	3	3	1	
ND BISMARCK	25	0	40	-15	12	-22	.2	-1.1	.1	5.2	223	16.2	113	90	64	0	7	3	3	0	
FARGO	23	4	33	-4	13	-21	.2	-1.1	.1	2.3	66	20.3	111	83	66	0	7	2	2	0	
GRAND FORKS	23	4	34	-2	14	-19	.7	-1.2	.7	5.6	164	21.0	123	83	61	0	7	2	2	0	
WILLISTON	30	2	47	-15	16	-18	.4	-1.3	.3	3.6	161	17.4	138	88	62	0	7	2	2	0	
OH AKRON-CANTON	35	20	43	13	28	-17	.7	-1.6	.7	4.0	68	18.8	60	82	45	0	7	1	1	0	
CINCINNATI	37	20	45	14	28	-19	.2	-1.5	.2	4.2	67	33.3	96	84	45	0	6	1	1	0	
CLEVELAND	35	24	43	16	30	-16	.1	-1.5	.1	6.2	101	27.6	91	78	47	0	6	1	1	0	
COLUMBUS	37	21	44	14	29	-17	.7	-1.6	.7	5.9	109	27.7	86	82	43	0	6	1	1	0	

Based on 1951-80 normals

Weather Data for the Week Ending November 9, 1991

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 Sept 1	PCT. NORMAL SINCE Sept 1	TOTAL, IN., SINCE Jan 1		PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	TEMP. °F		PRECIP.
													.01 INCH OR MORE						.50 INCH OR MORE	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	34	17	42	11	26	-20	.1	-.5	.1	5.0	98	31.7	105	82	47	0	7	1	0	0	
TOLEDO	33	17	38	9	25	-19	.1	-.4	.1	6.5	128	23.8	88	81	45	0	7	1	0	0	
YOUNGSTOWN	36	21	43	13	28	-16	.1	-.6	.1	4.1	63	21.3	66	81	45	0	7	1	0	0	
OK OKLAHOMA CITY	48	25	59	11	36	-16	.1	-.3	.1	16.0	239	36.0	126	81	46	0	6	1	0	0	
TULSA	47	24	57	16	36	-18	.0	-.7	.0	11.3	132	27.0	77	78	38	0	6	0	0	0	
OR ASTORIA	56	46	58	41	51	2	3.2	1.0	1.7	5.7	47	43.4	86	95	83	0	0	6	2	2	
BURNS	50	34	57	26	42	3	.1	-.3	.1	2.2	13	4.6	59	95	65	0	2	0	0	0	
MEDFORD	67	48	75	44	58	11	.1	-.5	.1	1.5	16	11.1	79	96	60	0	0	2	0	0	
PENDLETON	50	37	57	26	44	0	.8	-.5	.6	1.7	88	10.9	117	93	74	0	2	3	1	1	
PORTLAND	56	46	62	39	51	3	1.5	.4	.8	3.0	51	24.4	91	94	71	0	0	4	2	2	
SALEM	57	47	62	39	52	5	1.5	.3	.8	3.2	51	25.2	88	96	80	0	0	5	2	2	
PA ALLENTOWN	45	27	51	19	36	-10	.0	-.8	.0	5.9	73	28.4	75	75	32	0	5	0	0	0	
ERIE	37	27	43	21	32	-13	.2	-.7	.2	6.5	74	25.6	75	71	40	0	6	2	0	0	
HARRISBURG	44	29	51	24	36	-11	.0	-.7	.0	4.6	63	26.3	78	70	34	0	5	0	0	0	
PHILADELPHIA	48	34	54	28	41	-8	.0	-.7	.0	5.2	72	30.8	87	56	32	0	3	0	0	0	
PITTSBURGH	37	22	48	11	30	-16	.0	-.5	.0	4.1	69	26.5	83	79	46	0	7	1	0	0	
SCRANTON	42	25	48	19	34	-11	.0	-.7	.0	5.0	72	23.7	79	74	34	0	7	0	0	0	
RI PROVIDENCE	51	36	64	30	43	-4	.0	-.9	.0	8.1	95	38.2	102	79	42	0	2	0	0	0	
SC CHARLESTON	58	42	67	38	50	-9	1.4	.9	1.4	4.5	53	47.8	102	75	44	0	0	2	1	1	
COLUMBIA	55	32	66	27	44	-13	1.3	.7	1.1	4.3	58	59.7	136	97	47	0	5	2	1	1	
FLORENCE	56	36	66	30	46	-12	2.8	2.3	2.7	5.8	82	42.4	108	83	44	0	1	2	1	1	
GREENVILLE	53	32	64	23	43	-12	.4	-.3	.4	2.3	25	43.6	98	86	37	0	4	1	0	0	
SD ABERDEEN	29	4	42	-9	16	-19	-.1	-.1	.1	1.7	64	22.7	136	88	58	0	7	1	0	0	
HURON	31	7	48	-4	19	-18	.0	-.2	.0	2.9	98	22.5	128	88	52	0	7	1	0	0	
RAPID CITY	38	11	53	-2	24	-15	.2	.1	.1	1.8	90	16.7	109	88	51	0	7	2	0	0	
SIoux FALLS	25	3	40	-9	14	-24	.0	-.2	.0	5.9	127	25.7	114	90	64	0	7	1	0	0	
TN CHATTANOOGA	50	29	60	22	39	-13	.1	-.8	.1	3.5	42	44.0	99	82	37	0	6	1	0	0	
KNOXVILLE	47	29	57	21	38	-14	.4	-.4	.4	4.8	72	43.4	109	82	43	0	4	2	0	0	
MEMPHIS	45	25	58	20	35	-19	-.1	-.8	.1	6.2	88	48.8	113	76	35	0	7	1	0	0	
NASHVILLE	46	26	55	18	36	-16	.0	-.7	.0	9.6	133	36.4	89	83	39	0	6	0	0	0	
TX ABILENE	56	29	65	21	42	-14	.0	-.4	.0	8.5	145	26.7	124	87	41	0	5	0	0	0	
AMARILLO	54	25	75	7	39	-10	.0	-.2	.0	2.7	81	13.0	72	95	44	0	6	0	0	0	
AUSTIN	58	36	71	29	47	-15	.0	-.6	.0	5.3	69	37.2	134	79	38	0	0	0	0	0	
BEAUMONT	57	38	64	29	48	-15	1.0	.1	1.0	11.8	115	66.9	142	82	41	0	3	1	1	1	
BROWNSVILLE	63	47	79	40	55	-15	-.1	-.3	.0	9.1	97	29.5	127	94	52	0	4	0	0	0	
CORPUS CHRISTI	61	45	77	34	53	-15	.0	-.4	.0	10.2	104	37.9	132	79	50	0	2	0	0	0	
DEL RIO	61	37	71	30	49	-13	.0	-.3	.0	7.2	136	17.6	108	73	40	0	0	0	0	0	
EL PASO	67	34	78	27	50	-5	.0	-.1	.0	2.0	92	8.4	119	78	31	0	3	0	0	0	
FORT WORTH	52	28	64	25	40	-19	.0	-.5	.0	13.9	196	43.7	157	86	39	0	6	0	0	0	
GALVESTON	57	43	68	35	50	-15	1.0	.3	1.0	8.7	91	53.7	155	76	51	0	0	1	1	1	
HOUSTON	58	37	68	28	47	-16	1.5	.6	1.5	6.8	68	48.2	120	84	43	0	3	1	1	1	
LUBBOCK	57	28	73	7	43	-9	.0	-.2	.0	7.4	181	20.8	124	94	46	0	5	1	0	0	
MIDLAND	58	29	73	18	44	-12	.0	-.2	.0	4.5	123	20.7	163	89	37	0	3	0	0	0	
SAN ANGELO	59	29	72	21	44	-14	.0	-.3	.0	8.1	149	20.1	120	91	41	0	6	0	0	0	
SAN ANTONIO	59	38	72	28	48	-14	.0	-.6	.0	2.3	31	28.4	109	79	41	0	2	1	0	0	
VICTORIA	61	43	78	32	52	-13	.3	-.3	.3	6.5	63	49.9	150	76	43	0	1	2	0	0	
WACO	56	30	71	23	43	-17	.0	-.6	.0	7.4	106	35.5	130	86	37	0	5	0	0	0	
WICHITA FALLS	53	27	63	19	40	-16	.0	-.4	.0	12.2	188	28.2	116	83	39	0	6	0	0	0	
UT CEDAR CITY	59	30	66	14	44	2	.0	-.2	.0	2.9	148	10.8	120	92	46	0	3	1	0	0	
SALT LAKE CITY	54	37	63	20	45	2	.5	.3	.3	5.4	229	15.9	123	85	55	0	1	3	0	0	
VT BURLINGTON	42	25	51	16	33	-7	.0	-.6	.0	10.3	150	29.7	102	93	42	0	6	1	0	0	
VA NORFOLK	53	40	60	30	47	-8	.5	-.1	.5	7.2	85	39.2	99	89	58	0	2	3	0	0	
RICHMOND	50	31	58	22	41	-12	.1	-.7	.1	5.3	64	30.7	80	83	36	0	4	2	0	0	
ROANOKE	48	27	58	19	38	-12	.1	-.5	.1	.3	4	30.8	90	71	30	0	5	2	0	0	
WA QUILLAYUTE	55	45	57	37	50	4	3.7	.9	1.5	6.8	34	73.9	93	99	87	0	0	6	3	3	
SEATTLE-TACOMA	56	47	61	42	52	5	1.3	.1	.5	2.6	37	28.0	100	94	76	0	0	6	0	0	
SPOKANE	40	32	49	22	36	-2	.8	.4	.4	1.1	48	10.8	86	94	77	0	3	3	0	0	
YAKIMA	45	34	50	29	39	-2	.2	.1	.1	1.1	105	6.4	111	96	78	0	3	6	0	0	
WV BECKLEY	40	21	50	11	30	-14	.0	-.6	.0	3.5	49	29.9	81	77	38	0	7	1	0	0	
CHARLESTON	42	25	54	15	33	-15	.0	-.6	.0	6.6	103	31.6	86	83	38	0	7	0	0	0	
HUNTINGTON	43	24	54	14	33	-16	.0	-.6	.0	3.3	54	30.2	85	79	36	0	7	0	0	0	
PARKERSBURG	41	23	52	12	32	-16	.0	-.6	.0	5.1	86	35.3	106	84	41	0	7	0	0	0	
WI GREEN BAY	27	10	35	-3	19	-20	.1	-.4	.1	6.4	110	22.7	90	83	46	0	7	1	0	0	
LACROSSE	26	8	36	-3	17	-23	.1	-.2	.1	5.2	86	30.7	110	79	52	0	7	1	0	0	
MADISON	28	11	37	1	20	-20	.1	-.4	.1	10.1	174	34.3	123	82	47	0	7	1	0	0	
MILWAUKEE	32	15	41	9	23	-19	.1	-.4	.1	11.9	209	34.6	127	75	37	0	7	1	0	0	
KAUSAU	23	8	35	-1	15	-21	.1	-.3	.1	8.2	122	33.8	116	86	60	0	7	2	0	0	
WY CASPER	46	24	58	1	35	-2	.1	-.1	.1	1.2	65	11.1	108	83	49	0	6	1	0	0	
CHEYENNE	51	24	65	2	38	0	.1	.0	.1	2.5	130	17.9	142	77	35	0	5	2	0	0	
LANDER	39	16	47	-12	27	-8	.1	-.1	.1	2.0	86	12.7	106	88	57	0	7	1	0	0	
SHERIDAN	42	19	57	0	31	-6	.2	.0	.1	2.5	98	13.2	96	83	51	0	6	2	0	0	

Based on 1951-80 normals

# October Weather in Historical Perspective

October's national average temperature and precipitation were near normal, but varied widely regionally. Nationally, temperatures were slightly above the long-term mean, making this month the 41st warmest October in 97 years of recordkeeping (table 1, fig. 1). Areally averaged precipitation was slightly below normal, with this month ranking as the 44th driest October on record (table 1). The areally weighted precipitation index, which provides a more accurate comparison to local normal climate, also ranked October 1991 as drier than normal (36th driest; see fig. 2).

Despite a late-month cold snap, this month ranked among the warmest Octobers in the West (8th warmest) and Southwest (23rd warmest). (For a map of the 9 climatic regions, see the *Weekly Weather and Crop Bulletin*, Vol. 78, No. 40, Oct. 8, 1991, p. 13.) It was unusually cool in the East North Central (29th coldest) and West North Central regions (21st coldest).

**TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR OCT 1991, BASED ON THE PERIOD 1895-1991. 1 = DRIEST/COLDEST, 97 = WETTEST/HOTTEST.**

REGION	PRECIPITATION	TEMPERATURE
NORTHEAST	43	63
EAST NORTH CENTRAL	81	29
CENTRAL	77	62
SOUTHEAST	16	56
WEST NORTH CENTRAL	38	21
SOUTH	64	65
SOUTHWEST	40	75
NORTHWEST	10	35
WEST	45	90
NATIONAL	44	57

**TABLE 2. TEMPERATURE RANKINGS FOR JAN-OCT 1991, BASED ON THE PERIOD 1895 TO 1991. 1 = COLDEST, 97 = WARMEST.**

STATE	RANK	STATE	RANK	STATE	RANK	STATE	RANK
AL	73	IA	84	NE	86	RI	96
AZ	72	KS	88	NV	69	SD	84
AR	76	KY	96	NH	95	SC	90
CA	71	LA	73	NJ	96	TN	82
CO	70	ME	71	NM	35	TX	57
CT	97	MD	97	NY	95	UT	54
DE	95	MA	94	NC	94	VT	93
FL	95	MI	91	ND	93	VA	95
GA	78	MN	90	OH	96	WA	74
ID	74	MS	73	OK	83	WV	95
IL	91	MO	88	OR	70	WI	89
IN	96	MT	86	PA	96	WY	85

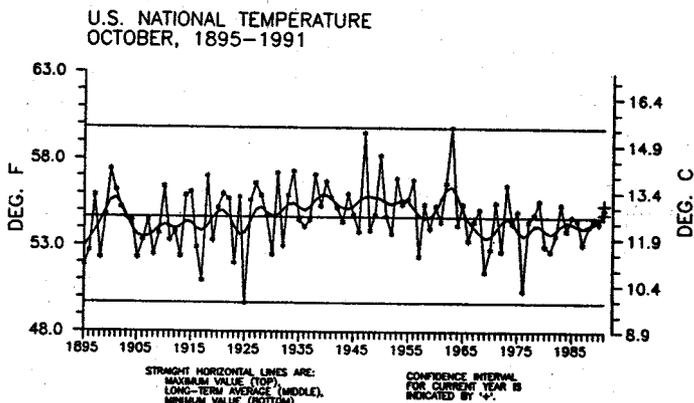
**TABLE 3. PRECIPITATION RANKINGS FOR JAN-OCT 1991, BASED ON THE PERIOD 1895 TO 1991. 1 = DRIEST, 97 = WETTEST.**

STATE	RANK	STATE	RANK	STATE	RANK	STATE	RANK
AL	89	IA	78	NE	38	RI	71
AZ	27	KS	12	NV	56	SC	83
AR	83	KY	28	NH	61	SD	83
CA	51	LA	97	NJ	44	TN	75
CO	65	ME	62	NM	75	TX	88
CT	71	MD	7	NY	18	UT	64
DE	54	MA	75	NC	45	VT	68
FL	95	MI	80	ND	74	VA	20
GA	91	MN	91	OH	10	WA	50
ID	21	MS	96	OK	66	WV	7
IL	40	MO	21	OR	30	WI	74
IN	22	MT	75	PA	4	WY	64

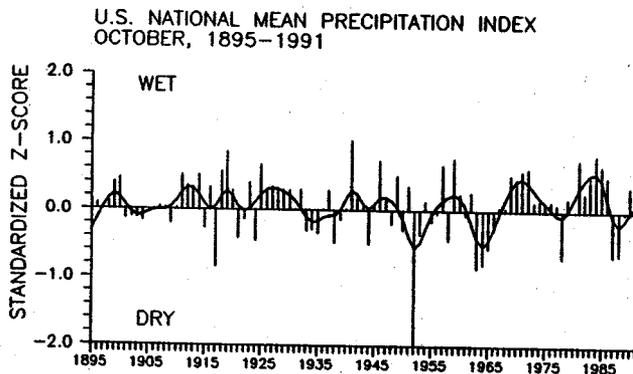
Extremely dry weather covered the Northwest (10th driest) and the Southeast (16th driest), which contributed to the ignition and spread of wildfires. Only the East North Central, Central, and South regions received above-normal precipitation. Despite late-month rain and snow, October precipitation in the primary Hard Red Winter Wheat Belt (central Plains) was below normal for the fifth year in a row (fig. 3).

For the year to date, every contiguous State but New Mexico has had above-normal temperatures, and 16 States in the Eastern United States have had one of their warmest four January to October spans (table 2). It has been one of the five wettest starts to a year in Louisiana (wettest ever), Mississippi, and Florida. In contrast, Maryland, Pennsylvania, and West Virginia have endured excessive dryness this year (table 3).

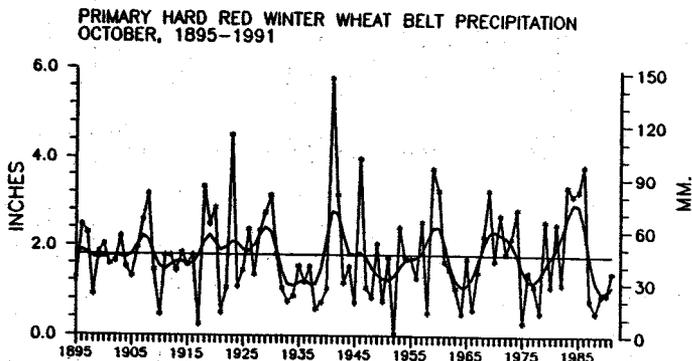
**Figure 1**



**Figure 2**



**Figure 3**



## October Crop Summary

**Winter Wheat Seeding:** Seeding of 1992 crop winter wheat was well along in the Great Plains by October and past 50 percent (%) complete for the 19 major producing States. Rains from the Great Plains through the Ohio Valley early in the month benefited seedings, while continued dry weather in Kansas hindered germination and emergence. Seeding was gaining momentum in California and the Southeast by the end of the month, and was complete in the northern Great Plains. Nationwide, seeding was 91% complete by November 3, 1 percentage point ahead of both last year and the 5-year average.

**October Crop Development:** October commenced with the Nation's principal grain and oilseed harvests in full swing. Rain was welcomed in the eastern Corn Belt early in the month, while heavy rains caused some coastal flooding in eastern Florida. Most of the Nation, however, received little precipitation and harvests continued to progress ahead of schedule. Warm, dry weather prevailed over the western half of the Nation until late in the month when storms bearing colder, moist air pushed the warm weather to the East. Most of the East, meanwhile, experienced periodic light rains and below-normal temperatures through most of October, replaced by Indian summer conditions at month's end. Soils remained excessively dry in Kansas throughout the month, and soil moisture remained short to adequate across the Midwest.

**Corn** harvest was progressing much faster than normal entering October, particularly in South Dakota and the eastern Corn Belt. Rains early in the month provided beneficial soil moisture to the eastern Cornbelt, but the crop was generally too mature to benefit. Harvest was in full swing throughout the month and continued to progress much faster than usual. Harvest was over 90% complete in most of the major producing States by the end of the month. States with over 10% of the corn acreage remaining to be harvested after November 3 were Colorado, Michigan, Pennsylvania, and Wisconsin.

**Soybean** harvest was in full swing in the Northern States, and getting underway in the lower Mississippi Valley and Gulf coast at the beginning of October. Harvest had progressed much earlier than normal in the eastern Cornbelt and South Dakota during September. Colder-than-normal weather in the eastern half of the Nation during much of October encouraged leaf drop, and weather conditions allowed harvest to progress rapidly. Harvest was nearly complete in the Northern States and in full swing in the lower Mississippi Valley and Gulf coast at the end of October.

**Cotton** progress was a little behind schedule entering October due to the combined effects of late seeding in the Delta, and cool weather early in the season in the West and at mid-season in the East. Picking was in full swing in the East and getting underway in California. Warm weather in the West promoted crop maturity during the month and harvest progressed well. Fifty-seven percent of the crop was harvested by November 3, compared with 60% last year and 54% for the average.

**Grain sorghum** maturity and harvest were ahead of schedule entering October, with progress most advanced in the Midwest. Harvest was getting underway in New Mexico and Oklahoma and was in full swing in the other major producing States. Lack of rainfall during the growing season had stressed crop condition in Kansas, Nebraska, and Missouri. Harvest progressed rapidly with mostly dry weather until late in the month. Harvest was complete, or nearly so, by the end of the month in all States except New Mexico and Oklahoma. New Mexico's crop was 19% harvested, and Oklahoma's was 41% harvested by November 3.

The initial harvest of **rice** was complete in Texas and nearly complete in Louisiana prior to October. Harvest was in full swing in Arkansas and Mississippi and gaining momentum in California. Dry weather allowed California growers to harvest virtually their entire crop during the month, while the Arkansas and Mississippi harvests drew to completion. Harvest of the ratoon crop was active in Louisiana and Texas.

## Crop Production Highlights

**CORN FOR GRAIN** production, as of November 1, is forecast at 7.49 billion bushels, up slightly from last month but 6 percent below the 1990 crop. The U.S. average yield per acre is forecast at 108.9 bushels. The corn crop was aided by good maturing and harvesting weather during October.

**SOYBEAN** production is forecast at 1.96 billion bushels, up 1 percent from October and 2 percent above the 1990 production. If realized, this level would be the fifth highest on record. Yield is expected to average 33.5 bushels per acre, 0.5 bushel above the October forecast.

**ALL COTTON** production for 1991 is forecast at 18.2 million bales, up 3 percent from October 1, and up 18 percent from last year. Beneficial weather during October permitted rapid crop development. Louisiana expects a record-high yield and production.

**SORGHUM FOR GRAIN** production is forecast at 578 million bushels, up 2 percent from October 1 and up 1 percent from 1990. The average yield, at 59.4 bushels per acre, is 1.2 bushels higher than last month but off 3.5 bushels per acre from last season.

## National Agricultural Summary

November 4 - 10, 1991

**HIGHLIGHTS:** Record-low temperatures across much of the Central United States slowed farm activities and stalled emergence of fall-seeded grains. Precipitation slowed fieldwork in the Northwest, central Rocky Mountains, southeast Texas, and the central Atlantic coast.

**SMALL GRAINS:** Winter wheat seeding continued to progress slowly as completion neared. Seeding was 93 percent (%) complete in the 19 major producing States, matching both last year and the 5-year average. Checked by cold weather across much of the Nation, crop emergence advanced only 4 percentage points to 78% complete, compared with 84% for last year and the average. Progress remained ahead of normal in the eastern Corn Belt and Ohio Valley, but behind normal in the Northwest. Extreme cold kept winter wheat from emerging in Kansas and slowed emergence in Oklahoma. Most Kansas wheat stands withstood extreme low temperatures as adequate snow and ice cover was present. Crop condition ratings remained mostly fair to good for the major producing States, with 58% of Kansas' acreage rating poor or very poor.

**CORN:** Corn harvest reached 96% complete in the 17 major States, 10 points ahead of last year and 8 points ahead of the average. Harvest was complete in Georgia, Kansas, South Dakota, and Texas and nearly complete in the eastern Corn Belt. Extreme cold limited progress in the central Corn Belt.

**SOYBEANS:** Mostly dry weather in the Southeast allowed harvest to progress well, while frigid conditions in the northern producing States slowed harvest. Harvest reached 90% complete in the 19 major producing States, matching last year and 2 points ahead of the average.

**COTTON:** Dry weather across most producing regions allowed harvest to continue at a near-normal pace. Harvest was 64% complete in the 14 major producing States, compared with 67% last year and 61% average. The first picking was nearing completion in the southern Mississippi Valley, and the second picking was active. Late-planted cotton in the Central States may have been damaged by freeze, since bolls may not open.

**GRAIN SORGHUM:** Sorghum harvest was slowed by inclement weather across the Great Plains, but advanced to 95% complete in the 12 major States, compared with 93% last year. Harvest was 23% complete in New Mexico but over 85% complete in the other 11 States.

**OTHER FIELD CROPS:** Rice harvest lingered in Arkansas, California, and Mississippi, with few

unharvested fields remaining. Many California rice growers were discing rice straw, as regulations limit burning. Alfalfa harvest remained active in Arizona and California. Dry bean harvest continued in California. Peanut digging was completed in Georgia but was slowed by rains in North Carolina and Texas. Potato harvest was nearing completion in Oregon, Washington, and Pennsylvania. Sugarbeet harvest remained active in California and Colorado. Sweetpotato digging continued in California and the Southeast.

**FRUIT AND NUTS:** Lemons, grapefruits, oranges, and tangerines were being harvested in western and central Arizona. Apples and pistachio picking continued in eastern Arizona. California's harvests of apples, dates, olives, persimmons, pomegranates, and walnuts were decreasing. Avocado, kiwifruit, navel orange, desert grapefruit, lemon, and tangerine picking remained active in California's desert area. Fall variety apple harvest progressed in New Jersey, while cranberry harvest declined. Cranberry harvest continued along Oregon's southern coast. Apple harvest was complete in Washington, where an estimated 5,000 bins of Granny Smith apples were lost to frost in the north-central part of the State. Pecan picking was active across the southern tier States.

**VEGETABLES:** Lettuce harvest continued in western and eastern Arizona. Fall asparagus harvest was winding down in the Imperial Valley area of California. Broccoli, carrot, cauliflower, celery, and sweet corn harvests were active in California, while lettuce movement seasonally declined. Melon supplies were very limited in the Imperial Valley area due to white fly infestation. Fall vegetable harvests were complete in northern Florida, active in the central part of the State, and becoming active in the southern part. Florida's volume leaders were tomatoes, cucumbers, squash, peppers, and sweet corn. Cauliflower, broccoli, and fall cole crop harvests slowed in the Willamette Valley of Oregon.

**PASTURES AND LIVESTOCK:** Ice, wind, and cold weather were causing major stress to Iowa livestock, and many farms in the State were still without electricity. Snow cover and cold temperatures increased demands for supplemental feed in the Midwest.

Crop Progress

For Week Ending November 10, 1991

	Cotton % Harvested		
	1991	1990	Avg.
AL	94	98	91
AZ	73	83	70
AR	91	93	91
CA	75	70	72
GA	79	91	80
LA	93	97	96
MS	91	96	93
MO	94	92	94
NM	50	33	33
NC	77	80	68
OK	19	50	24
SC	77	89	78
TN	90	84	89
TX	41	44	34

14 States 64 67 61

These 14 states produced 99% of the 1990 cotton crop.

	Grain Sorghum % Harvested		
	1991	1990	Avg.
AR	98	99	100
CO	89	77	77
IL	99	77	92
KS	98	98	85
LA	100	97	99
MS	100	100	100
MO	91	88	90
NE	100	99	95
NM	23	65	NA
OK	87	77	63
SD	100	100	92
TX	91	89	86

12 States 95 93 NA  
Excl. States with NA 95 93 87

These 12 states produced 98% of the 1990 grain sorghum crop.

NA - Not available.

	Corn % Harvested		
	1991	1990	Avg.
CO	86	71	81
GA	100	100	100
IL	99	88	95
IN	99	73	84
IA	92	95	94
KS	100	99	95
KY	97	81	90
MI	95	45	65
MN	95	94	93
MO	95	93	92
NE	99	95	90
NC	96	98	95
OH	96	63	70
PA	77	49	56
SD	100	97	82
TX	100	100	100
WI	84	58	78

17 States 96 86 88

These 17 states produced 95% of the 1990 corn crop.

	Soybeans % Harvested		
	1991	1990	Avg.
AL	71	77	70
AR	65	68	70
GA	65	66	61
IL	99	97	98
IN	99	96	96
IA	100	100	98
KS	97	97	80
KY	82	67	74
LA	77	94	86
MI	98	90	85
MN	99	99	99
MS	71	78	73
MO	87	89	85
NE	100	99	99
NC	38	38	32
OH	100	90	92
SC	35	32	30
SD	100	100	97
TN	62	66	74

19 States 90 90 88

These 19 states produced 95% of the 1990 soybeans crop.

Crop Condition

PERCENT

For Week Ending November 10, 1991

	Winter Wheat % Planted		
	1991	1990	Avg.
AR	68	59	71
CA	15	25	32
CO	100	100	100
GA	18	22	27
ID	98	100	100
IL	98	94	97
IN	99	92	95
KS	98	99	97
MI	100	95	95
MO	89	89	85
MT	100	100	100
NE	100	100	100
NC	53	50	52
OH	100	90	94
OK	93	98	96
OR	89	97	89
SD	100	100	100
TX	92	89	93
WA	92	100	98

19 States 93 93 93

These 19 states produced 91% of the 1990 winter wheat crop.

	Winter Wheat % Emerged		
	1991	1990	Avg.
AR	61	42	54
CA	1	5	8
CO	97	100	100
GA	13	14	18
ID	74	89	91
IL	97	69	86
IN	94	67	82
KS	75	96	90
MI	95	85	80
MO	73	74	72
MT	85	92	91
NE	100	100	100
NC	37	36	38
OH	86	60	74
OK	73	86	84
OR	51	85	70
SD	100	100	100
TX	79	79	84
WA	85	95	92

19 States 78 84 84

These 19 states produced 91% of the 1990 winter wheat crop.

State	Winter Wheat				
	VP	P	F	G	EX
AR	0	1	26	73	0
CA	0	0	10	85	5
CO	1	5	32	55	7
GA	0	25	47	28	0
ID	0	5	46	49	0
IL	0	1	10	71	18
IN	0	0	31	66	3
KS	16	42	22	15	5
MI	0	0	15	50	35
MO	1	7	62	28	2
MT	1	1	30	63	5
NE	2	15	49	34	0
NC	3	13	33	51	0
OH	1	4	30	55	10
OK	0	4	64	32	0
OR	NA				
SD	3	11	35	45	6
TX	0	10	37	50	3
WA	2	14	80	4	0
19 State	4	15	38	39	4
Prev Week	5	12	39	39	5
Prev Year	0	3	30	53	14

VP - Very Poor P - Poor F - Fair  
G - Good EX - Excellent

## 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 none to light central, south; 0.25 in. local areas northwest. Temperatures 15° below normal; freezing temperatures common statewide, light snow northwest.

Days suitable for fieldwork 5.9. Soil moisture 60% short, 37% adequate, 3% surplus. Additional moisture still needed for planting, germination of small grains. Sorghum 95% harvested, 100% 1990, 95% avg. Cotton 94% harvested, 98% 1990, 91% avg. Soybeans 99% dropping leaves, 99% 1990, 98% avg.; 94% mature, 97% 1990, 93% avg.; 71% harvested, 77% 1990, 70% avg.; 1% very poor, 5% poor, 47% fair, 47% good. Winter wheat 49% seeded, 54% 1990, 59% avg. Pastures 3% very poor, 19% poor, 46% fair, 32% good. Livestock 25% poor, 69% fair, 6% good. Activities: Harvesting cotton, sorghum, soybeans, fall vegetables, pecans; shredding, destroying cotton stalks; seeding small grains; preparing land for winter grazing; soil testing; repairing fences, farm machinery; general care of livestock, poultry, catfish.

**ARIZONA:** Sunny, warmer 3rd through 7th. Cloudy, 8th; scattered showers statewide, 9th. Precipitation, none to 0.18 in. central. Temperatures 1° below to 8° above normal. Extremes 19°; 83° higher elevations, 30°; 92° deserts.

Cotton harvested 73%, 83% 1990, 70% avg.; stalk shredding, plow down, active southwest, moderate central, light southeast. Alfalfa harvest moderate; Alfalfa condition good. Small grains seedbed preparation, planting. Peanuts harvested west. Lemons, grapefruits, oranges, tangerines harvested west, central. Watermelons, pecans, harvested central. Apples, pistachio harvest, east. Mixed vegetables harvested west, central, east. Lettuce harvested west, east.

**ARKANSAS:** Temperatures below normal. Cold front middle of the week brought light showers and record breaking low temperatures. Snow flurries toward the weekend. Extremes 8°; 63°.

Days suitable for fieldwork 4. Soil moisture 57% adequate, 43% surplus. Pasture 5% poor, 50% fair, 44% good, 1% excellent. Alfalfa 85% fair, 15% good. Other hay 56% fair, 44% good. Livestock good. Activities: Harvesting rice, cotton, grain sorghum, hay; seeding supplemental cool season forage. Cotton harvest past peak. Some producers second picking cotton, with most gins running 24 hours a day.

**CALIFORNIA:** Strong high pressure dominated State for most of week. Dry, warmer conditions provided stagnant air most areas. Weak system brushed north end of State with light rain.

Field activities progressed, mostly open weather. Rice harvest virtually complete. Stubble burned as allowed. Many growers discing rice straw, not burning. Cotton harvest active; shredding, plow down after harvest, pink bollworm control. Ground preparation next years crop underway. Final cutting alfalfa. New fields seeded. Corn grain, silage harvests winding down. Dry bean, sugarbeet harvests continued. Small grain field preparation, seeding progressed. Few fields emerging. Weed control, pruning active. Harvest winding down for apples, dates, olives, persimmons, pomegranates, walnuts. Avocado, kiwifruit, navel

orange, desert grapefruit, lemon, tangerine picking active in desert area. Fall asparagus harvest winding down, Imperial Valley area. Broccoli volume moderate, Salinas Watsonville area; fairly light, Santa Maria area, good quality. Fall harvest underway, Fresno area. Kern Tulare area fields benefitted from recent rains. Carrots, Westside area, progressing well. Cauliflower supplies moderate, Salinas Watsonville area; fairly heavy Santa Maria area, variable quality. Harvest active Patterson Newman area, Kern Tulare area plantings progressing, helped by recent rains. Celery harvest continued fairly heavy, Salinas Watsonville area; moderate Santa Maria area, good quality. Fall sweet corn picking going on Kern Tulare, Imperial Valley areas. Lettuce movement seasonally light, winding down, Santa Maria area, variable quality. Westside area, fall harvest slower than normal, spring harvest beds being pre irrigated. Planting, field preparations started for spring desert crop, fall harvest approaches. Melon volume very limited, Imperial Valley area due to white fly infestation. Onion, garlic planting continued, westside area. Fall potatoes to storages, Tulelake Butte Valley area, completed. Sweet potato harvest on going, Merced Atwater area. Fall quarter fresh market tomato harvest continued, westside area. Other vegetables harvested: beans, cabbage, cucumbers, eggplant, peppers, pumpkins, spinach. Range conditions very poor to good. Supplemental feeding continued. Pastures improved after rainfall. Fall calving underway.

**COLORADO:** A storm front on the 6th brought light rain, snow to the north, up to 10.0 in. snow in mountains. On the 9th, 10th a storm system produced light rain and snow over much of State. Temperatures considerably below normal. Southeast temperatures 12 to 18° below normal, northeast 8 to 13° below normal, west of Divide temperatures 3 to 6° below normal.

Days suitable for fieldwork 2.4. Soil moisture 3% very short, 25% short, 68% adequate, 4% surplus. Sorghum 89% harvested, 77% 1990, 77% avg. Corn for grain 86% harvested, 71% 1990, 81% avg. Sugarbeets 95% harvested, 96% 1990, 97% avg. Winter wheat seeding is complete. Winter wheat 97% emerged, 100% 1990, 100% avg. Livestock mostly good. Pasture, range feed good.

**FLORIDA:** Temperatures 10 to 16° below normal northern two thirds of State, 4 to 9° below normal interior south. Warmest highs around 70 Panhandle, near 80 south. Lows middle to upper 20s Panhandle, upper 20s Big Bend, low to middle 30s, northeast. Central Peninsula lows upper 30s. South, low to middle 40s with upper 30s in colder locations. Rain widely scattered. Weekly totals mostly under 0.25 in. Few spots in south near 0.50 in. Many locations, Big Bend, no precipitation.

Soil moisture Panhandle mostly short, Peninsula short to adequate. Sugarcane, small grain planting active. Dry soil delayed planting small grains some areas. Freezing temperatures 3rd to 4th damaged some immature cotton. Sugarcane, cotton harvest active. Peanut harvest complete. States pastures poor to excellent. Pasture ratings 10% poor, 20% fair, 60% good and 10% excellent. States cattle herds mostly fair to good. Citrus groves, trees near excellent condition. Surface moisture short some areas.

Low volume irrigation many areas. Cold temperatures slowed growth. Fruit condition very good. Early harvest very active for fresh use, few more processing plants opening. Caretakers cutting cover crops, placing cold protection devices, fueling heaters. Cool, mostly dry weather prevailed over major vegetable production areas. Fall harvest complete north, active central, becoming active south. Volume leaders: Tomatoes, cucumbers, squash, peppers, sweet corn. Also available snap beans, carrots, eggplant, specialty lettuce, radishes. First celery, strawberries harvested.

**GEORGIA:** Cold week. Temperatures 10 to 15° below normal. Coldest early, mid week, many locations record low temperatures. Freezing temperatures most of State, lows teens colder locations mountains, to mid, upper 30s coast. Warmest temperatures upper 50s to low 60s north, mostly mid to upper 60s elsewhere. Rain north, east early weekend. Heaviest extreme east, 0.50 to 1.00 in. Little rain south central, west.

Days suitable for fieldwork 6.2. Soil moisture 38% very short, 52% short, 10% adequate. Cotton 9% fair, 49% good, 42% excellent; 99% bolls open, 99% 1990, 98% avg. Sorghum 3% poor, 29% fair, 64% good, 4% excellent; 92% harvested for grain, 96% 1990, 93% avg. Peanuts 100% threshed, 99% 1990, 98% avg. Soybeans 1% very poor, 4% poor, 48% fair, 40% good, 7% excellent. Rye 25% poor, 57% fair, 17% good, 1% excellent; 70% planted, 79% 1990, 74% avg. Other small grains 27% poor, 53% fair, 20% good; 46% planted, 54% 1990, 54% avg. Apples 97% harvested, 100% 1990, 99% avg. Pecans 11% very poor, 19% poor, 56% fair, 14% good; 48% harvested, 43% 1990, 37% avg. Pasture 3% very poor, 22% poor, 45% fair, 29% good, 1% excellent. Cattle 18% fair, 81% good, 1% excellent. Hogs 17% fair, 80% good, 3% excellent.

**HAWAII:** Warm, sunny weather prevailed, 89° high recorded in Honolulu. Another high pressure system brought moderate trades, showers after midweek, relieving humid conditions. Cooler evening temperatures slowed progress in some seasonal crops. Rainfall none to 1.90 in.

Days suitable for fieldwork 7.0. Cabbage plantings affected by irrigation restriction on Hawaii island. Papaya orchards passed peak production, lowering production. Cucumber pickings active. Tomato seedlings progressed well.

**IDAHO:** Precipitation fell Statewide with most in north. Temperatures 4° below normal to 3° above normal.

Soil moisture varied across State. Adequate amounts east and southwest; remainder of State short. Activities: Fall plowing, repairing equipment, hauling grain. Winter wheat planting nearly complete; condition fair to good. Hay, roughage supplies adequate. Cattle are being moved to winter ranges. Weaning calves, selling calves, vaccinations, pregnancy checking also taking place. Livestock good.

**ILLINOIS:** Temperatures 15 to 22° below normal. Precipitation generally 0.10 to 0.25 in. above normal across the State.

**INDIANA:** Temperatures 12 to 21° below normal. Highs 30s to near 40°. Lows teens to low 20s. Precipitation 0.20 in. or less. First widespread snowfall of 1 to 2 in. evening of 6th, 7th.

Rain, snow delayed completion of corn, soybean harvest. Other activities included processing tobacco, hauling manure, hauling grain, fixing

fence, care of livestock, building repairs, bookwork. Wet soil conditions limited field activities.

**IOWA:** Record cold week for early November. Temperatures 20 to 23° below normal. Extremes: -15°; 44°. Precipitation trace to 0.39 in.; average 0.13 in.

Days suitable for fieldwork 0.8. Topsoil 9% short, 71% adequate, 20% surplus. Subsoil 37% short, 60% adequate, 3% surplus. Fall row crop tilling 32% complete, 42% 1990, 45% avg. Fall fertilizer application 23% complete, 34% 1990, 35% avg. Winter wheat 4% excellent, 40% good, 43% fair, 13% poor. Stubble field utilization 15% none, 63% limited, 20% moderate, 2% extensive. Ice, wind, cold weather causing major stress in livestock. Many farms still without electricity, experiencing farrowing losses.

**KANSAS:** Temperatures 20° below normal west, 24° below normal central, east. Record lows for date posted many areas. Precipitation light; avg. 0.10 to 0.30 in. most areas.

Days suitable for fieldwork 0.5. Topsoil 39% short, 61% adequate. Subsoil 93% short, 7% adequate. Record low temperatures for date curtailed outdoor activity. Corn harvest complete. Only few scattered sorghum, soybean fields left for harvest. Wheat seeding nearly complete; some reseeding may occur where seed failed to germinate. Most wheat stands withstood extreme low temperatures under adequate cover of ice, snow. Range, pasture grazing short. Feed grain, hay, forage supplies adequate. most areas; short some localities. Livestock generally fair to good. Heavy feeding during cold weather.

**KENTUCKY:** Temperatures 10 to 15° cooler than normal. Highs between 35 and 47°; lows 15 to 25°. Precipitation sparse. Northern areas received most, average 0.10 in.

Days suitable for fieldwork 5.3. Soil moisture 14% very short, 57% short, 27% adequate, 2% surplus. Corn harvest nearing completion. Stripped tobacco quality good. Burley stripping advanced to 41%, 29% 1990, 32% avg. Hay being fed to livestock in drier areas. Wheat 90% seeded, 78% 1990, 82% avg. Forest fires continue in eastern areas. Pastures mostly fair.

**LOUISIANA:** Temperatures 16 to 19° below normal. Extremes 20°; 72°. Rainfall 0.04 in. southeast to 0.43 in. southwest.

Days suitable for fieldwork 4.0. Soil moisture 6% short, 56% adequate, 38% surplus. Hay 98% final cutting, 99% 1990, 100% avg. Pecans 5% very poor, 29% poor, 48% fair, 18% good; 36% harvested, 38% 1990, 33% avg. Soybeans 100% leaves turning color, 100% 1990, 100% avg.; 98% shedding leaves, 99% 1990, 99% avg. Sugarcane 45% fair, 55% good; 45% harvested, 19% 1990, 38% avg. Some damage from freezes reported, particularly thin stubble cane, harvested cane laying on the ground. Sweet potatoes 92% harvested, 89% 1990, 93% avg. Wheat 53% planted, 43% 1990, 48% avg.; 34% emerged, 27% 1990, 29% avg. Planting progressed rapidly due to favorable soil moisture supplies. Vegetables 9% very poor, 28% poor, 44% fair, 16% good, 3% excellent. Pastures 12% very poor, 7% poor, 7% fair, 20% good, 54% excellent. Damage from freezes was reported statewide. Livestock 2% poor, 24% fair, 70% good, 4% excellent. Producers were feeding hay to herds where pastures were killed by freezes. Crawfish pond management continued.

**MARYLAND & DELAWARE:** **MARYLAND:** Precipitation 0.01 in. Temperature 43.1°, normal 49.5°. Extremes 7°; 75°.

Days suitable for fieldwork 6.0. Topsoil 19% very short, 48% short, 33% adequate. Subsoil 29%

very short, 42% short, 29% adequate. Field corn was in fair condition; soybeans fair to good; small grains fair to good. Field corn 94% harvested for grain, 91% 1990, 90% avg. Soybeans 78% harvested, 68% 1990, 61% avg. Wheat 88% seeded, 85% 1990, 84% avg. Barley seeding virtually complete. Rye 88% seeded, 95% 1990, 89% avg. Freeze has virtually ended hay harvest. Hay short to adequate. Pasture fair. Activities: Active soybean harvest; small grain seeding winding down; stripping tobacco; caring for livestock.

**DELAWARE:** Precipitation 0.02 in. Temperature 42.6°, normal 50.4°. Extremes 20°; 72°.

Days suitable for fieldwork 6.1. Topsoil 50% short, 50% adequate. Subsoil 17% short, 83% adequate. Soybeans fair to good. Sorghum, small grains good. Soybeans 70% harvested, 84% 1990, 64% avg. Sorghum 93% harvested, N/A 1990, N/A avg. Wheat 84% seeded, 83% 1990, 72% avg. Barley 95% seeded, 98% 1990, 95% avg. Rye 85% seeded, 94% 1990, 81% avg. Oats 87% seeded, N/A 1990, N/A avg. Freeze has virtually ended hay harvest. Hay supplies adequate. Pasture good. Activities: Harvesting soybeans, sorghum; planting small grains; caring for livestock.

**MICHIGAN:** Temperatures 12 to 19° below normal. Extremes 1°; 57°. Precipitation 0.01 to 0.89 in.

Days suitable for fieldwork 4.5. Soil moisture 65% adequate, 35% surplus. Corn 95% harvested, 45% 1990, 65% avg. Soybeans 98% harvested, 90% 1990, 85% avg. Winter wheat 100% planted, 95% 1990, 95% avg.; 95% emerged, 85% 1990, 80% avg.; 15% fair, 50% good, 35% excellent. Pasture condition 65% of normal. Activities: Harvesting corn, soybeans; cutting wood; repairing, storing equipment; getting ready for deer season.

**MINNESOTA:** Record cold temperatures followed on the heels of the last week's record snowfall. Temperatures 17 to 27° below normal. Extremes -14°; 43°. Precipitation 0.07 to 0.36 in.; 0.04 to 0.21 in. below normal. Greatest 0.46 in. at Hibbing. Snow depth at weekend averaged 1 in. northwest, southwest, 4 to 20 in. elsewhere.

**MISSISSIPPI:** Temperatures 39°, 18° below normal. Extremes 11°; 72°. Mostly dry Statewide. State 0.12 in. 0.73 below normal. Soil temperatures 50°.

Days suitable for fieldwork 4.4, 4.8 1990, 4.8 avg. Soil moisture 26% short, 46% adequate, 25% surplus, 5% excessive. Corn 98% harvest, 100% 1990, 98% avg. Cotton 91% harvest, 96% 1990, 93% avg.; 24% poor, 12% fair, 48% good, 16% excellent. Rice 98% harvest, 99% 1990, 100% avg.; 24% poor, 48% fair, 28% good. Soybeans 71% harvest, 78% 1990, 73% avg.; 5% poor, 33% fair, 62% good. Wheat planted 64%, 63% 1990, 60% avg.; 49% emerged, 41% 1990, 49% avg.; 4% poor, 60% fair, 36% good. Pecans 45% harvest, 21% 1990, 28% avg.; 2% very poor, 36% poor, 46% fair, 14% good, 2% excellent. Livestock 6% poor, 8% fair, 73% good, 13% excellent. Pasture 82% of normal. Activities: Harvesting crops and planting wheat.

**MISSOURI:** Temperatures 21 to 26° below normal with record lows. Precipitation 0.17 in. Virtually none southern third, less than 0.33 in. elsewhere. Snow over northern half 2 to 5 in.

Days suitable for fieldwork 1.8. Topsoil 15% short, 72% adequate, 13% surplus. Corn harvest 92% northern third, nearing completion elsewhere. Sorghum less than 85% harvested northeast, east central, southwest, over 90% elsewhere. Soybean harvest least advanced southeast at 77%, most advanced west central, northern districts, over 90%. Some reporters

indicate cold weather limiting additional wheat seeding. Ground worked at least once for spring crops 35%, 39% 1990, 43% avg. Pasture 12% very poor, 27% poor, 45% fair, 16% good.

**MONTANA:** Extreme cold first of week followed by warmer air. Temperatures rose 2 to 15° above normal. Precipitation fell most areas with amounts near .25 in.

Snowcover protection for winter wheat 12% poor, 24% fair, 36% good, 28% excellent. However late week warm temperatures quickly eroding snow cover. Pasture, range feed condition 85%. Cattle, calves receiving supplemental feed 50%. Sheep, lambs receiving supplemental feed 60%. Cattle, calves moved from summer pastures 91% Sheep, lambs moved 98%.

**NEBRASKA:** Temperatures 4° below normal west to 19° below normal eastern half. Precipitation between 0.25 to 0.50 in. across the State.

Days suitable for fieldwork 0.5. Topsoil 43% short, 54% adequate, 3% surplus. Subsoil 83% short, 17% adequate. Corn 99% harvested, 95% 1990, 90% avg. Wheat 2% very poor, 15% poor, 49% fair, 34% good. Early winter conditions prompted extra livestock care, feeding.

**NEVADA:** Temperatures above normal. Extremes 5°; 89°. Precipitation trace to 0.65.

Preparations for winter continue. Activities: General maintenance, caring for livestock. Poor range conditions will result in supplemental feeding earlier than normal.

**NEW ENGLAND:** Precipitation none to 0.05 in. Temperatures high 20s to high 30s north, mid 30s to low 40s south. Maximum temperatures mid 40s north to mid 60s south; minimum temperatures 9° north to low 30s south.

Activities: Plowing fields, cutting firewood, making general repairs.

**NEW JERSEY:** Temperatures much below normal, 36° north, 39° south, 42° coastal. Extremes 16°; 57°. Precipitation below normal north, south; above normal coastal; averaged 0.48 in. north, 0.53 in. south, 1.01 in. coastal. Heaviest 24 hour total 1.35 in. on 3rd, 4th.

Harvest of corn, soybeans declining. Sweet potato digging continued active. Fall variety apple harvest progressed. Cranberry harvest declining. Planting active for cover crops.

**NEW MEXICO:** Temperatures for week generally near or slightly above normal for much of the State. A few mountain stations were several degrees below normal while cool fronts caused the east central, southeast plains to be 3 to 7° below. Precipitation scarce until 9th, 10th with Grants, Gallup, Taos all receiving nearly 0.50 in.

Days suitable for fieldwork 5.6. Soil moisture 35% short, 65% adequate. Crop conditions: Alfalfa 44% fair, 56% good. Cotton 20% poor, 40% fair, 40% good. Corn in good condition with grain harvest progressing. Irrigated sorghum 13% poor, 87% good. Dryland sorghum 17% poor, 33% fair, 50% good. Irrigated wheat 17% fair, 83% good. Dryland wheat 50% fair, 50% good. Pecans 20% poor, 40% fair, 40% good. Chile 43% fair, 57% good, with red harvest active. Lettuce harvest still active with crop in good shape. Cattle, sheep, fair to good. Range condition 88% of normal.

**NEW YORK:** Weather data not available.

Activities: Combing grain corn, orchards clean up, fall plowing, planting, maintaining machinery, caring for livestock, cutting firewood.

**NORTH CAROLINA:** Temperatures 9 to 12° below normal. Precipitation none to 1.66 in.

Days suitable for fieldwork 6.3. Soil moisture 25% very short, 50% short, 24% adequate, 1% surplus. Crop condition: wheat 3% very poor, 13% poor, 33% fair, 51% good; oats 2% very poor, 16% poor, 36% fair, 46% good; barley 3% very poor, 19% poor, 38% fair, 40% good; rye 1% very poor, 13% poor, 36% fair, 50% good; soybeans 33% fair, 65% good, 2% excellent; Pasture 4% very poor, 21% poor, 50% fair, 25% good. Corn for Grain harvested 96%, 98% 1990, 95% avg.; sorghum for grain harvested 86%, 85% 1990, 82% avg.; sweet potatoes harvested 95%, 98% 1990, 93% avg.; cotton harvested 77%, 80% 1990, 68% avg.; soybeans harvested 38%, 38% 1990, 32% avg.; wheat emerged 37%, 36% 1990, 38% avg. Wheat planted 53%, 50% 1990, 52% avg.; oats planted 79%, 73% 1990, 76% avg.; barley planted 89%, 71% 1990, 78% avg.; rye planted 80%, 61% 1990, 67% avg. Activities: Harvesting cotton, corn, sorghum, sweet potatoes, soybeans, truck crops, peanuts; planting small grains. Other activities: Land preparation; seeding pastures; shearing Christmas trees; tending livestock; cutting Christmas trees; equipment repair; general farm maintenance.

**NORTH DAKOTA:** Temperatures 26° below normal north central to 19° below normal southwest. Extremes -24° west central; 48° southwest. Precipitation 0.09 in. east central to 0.24 in. northwest, west central.

Soil moisture mostly short to adequate. Harvesting complete. Fieldwork complete or halted due to frozen soil. Many pastures snow covered.

**OHIO:** High temperatures 30° to the low 40s. Distribution of precipitation was characterized by extremes. Rainfall 0.30 to 1.00 in. Some areas were dry, muddy, while some remained extremely dry.

Days suitable for fieldwork 3.0. Fall harvest is done. Soil moisture 58% short, 36% adequate, 5% surplus. Pastures 14% very poor, 28% poor, 34% fair, 21% good, 3% excellent. Winter wheat planted 100% complete, 90% in 1990, 94% avg. Winter wheat emerged 86% complete, 60% in 1990, 74% avg. Activities: Hauling manure, fall tillage, chiseling, winterizing, repairing machinery, working, preparing livestock for the winter, spreading lime, fertilizing, finishing up harvesting of corn, soybeans. Many farmers are still scavenging for extra winter feed supplies.

**OKLAHOMA:** Temperatures 17° below normal southeast, north central, south central to 10° below normal Panhandle. Precipitation none several districts to 0.07 in. north central.

Days suitable for fieldwork 3.9. Topsoil 92% adequate, 8% surplus. Subsoil moisture 22% short, 78% adequate. Wheat 93% planted, 98% 1990, 96% avg.; 73% emerged, 86% 1990, 84% avg.; 6% grazed, none 1990, 18% avg. Wheat fair. Cotton 83% open bolls, 98% 1990, 92% avg.; 19% harvested, 50% 1990, 24% avg. Cotton fair. Sorghum 97% mature, 97% 1990, 99% avg.; 87% harvested, 77% 1990, 63% avg. Soybeans 77% harvested, 66% 1990, 50% avg. Peanuts 80% harvested, 85% 1990, 74% avg. Pasture 91%. Cattle good; marketings average; prices lower.

**OREGON:** Temperatures mild statewide. Temperature departures 10° above normal, inland southwest, to 4° below normal, north central. Precipitation abundant across State; heaviest northern coast, 3.00 in. Willamette Valley recorded 1.50 to 2.50 in. Cascades received rainfall; due to very high snow level, earlier snows melted. Eastern areas received 0.25 to 0.75 in. precipitation. Southernmost sections received less than 0.10 in.

Soil moisture; short to adequate. 1992 winter wheat planted, 89%. 1992 winter wheat emerged, 51%. Rain slowing field work, some planting will wait until spring, eastern areas. Cranberry harvest continued, southern coast. Orchard cleanup, continued. Wine grapes, hazelnut, fall cole crop, cauliflower, broccoli winding down, Willamette Valley. Potato harvest nearing completion, some digging in Klamath County. Livestock condition was mostly good. Fall activities continued, statewide. Supplementary feeding underway, due to earlier winter conditions. Range, pasture, poor to good.

**PENNSYLVANIA:** Cold, dry across the Commonwealth. Temperature 32°; 15° below normal. Extremes 3°; 54°. Precipitation 0.03 in., 0.65 in. below normal.

Days suitable for fieldwork 6. Soil moisture 88% short, 12% adequate. Corn 100% mature, 95% 1990, 96% avg.; 77% harvested, 49% 1990, 56% avg.; 18% very poor, 23% poor, 29% fair, 22% good, 8% excellent. Soybean harvest 75% complete, 63% 1990, 62% avg.; 9% very poor, 21% poor, 33% fair, 31% good, 6% excellent. Potato harvest 99% complete, 97% 1990, 98% avg. Fall plowing 87% complete, 88% 1990, 95% avg. Winter wheat 98% planted, 97% 1990, 97% avg. Fourth cutting alfalfa 87% complete, 83% 1990. Quality of hay made mostly fair. Amount of feed being obtained from pastures 44% very poor, 28% poor, 20% fair, 8% good. Apple harvest 99% complete, 94% 1990. Activities: Repairing fence; hauling manure; harvesting corn, soybeans; maintaining machinery; caring for livestock; fall plowing.

**PUERTO RICO:** Island rainfall 2.34 in. was 0.80 in. above normal. Highest rainfall 11.97 in. at Pico Del Este Luquillo, 8.06 in. at Rio Blanco, 5.09 in. Paraiso. Divisional temperatures 80 to 81° on Coasts, 73 to 76° in Interior with mean station temperatures 65.2° at Pico Del Este Luquillo to 85° at Vieques. Extremes 57°; 94°.

**SOUTH CAROLINA:** Temperatures below normal. Rainfall none mountains to 0.40 in. northeast.

Days suitable for fieldwork 5.9. Soil moisture 2% very short, 60% short, 38% adequate, 2% surplus. Cotton 13% fair, 87% good; 77% harvested, 89% 1990, 78% avg. Fall hay fair to good; 95% harvested, 91% 1990, 95% avg. Sorghum fair to good; 83% harvested, 83% 1990, 74% avg. Soybeans 1% poor, 46% fair, 53% good; 90% shedding leaves, 88% 1990, 90% avg; 82% mature, 84% 1990, 85% avg.; 35% harvested, 32% 1990, 30% avg. Sweet potatoes fair to good; 86% harvested, 84% 1990, 79% avg. Winter grazing fair; 76% planted, 85% 1990, 84% avg.; 62% emerged, 75% 1990, 70% avg. Pastures 24% poor, 61% fair, 15% good.

**SOUTH DAKOTA:** Temperatures 5° below normal west to 25° below normal east. Temperatures teens in the east to the twenties in the west. Extremes -16°; 63°. Precipitation fell over most of the State; the Black Hills received up to 1.19 in., the southwest third of the State 0.25 to 0.50 in. rest of State received 0.25 in. or less. Maximum 1.19 in.

**TENNESSEE:** Record breaking cold replaced by warming late week. Temperatures 15 to 20° below normal. Scattered light showers statewide, 6 in. snow in eastern mountains. Precipitation 0.75 in., below normal statewide.

Days suitable for fieldwork 5.4. Soil moisture 14% very short, 39% short, 46% adequate, 1% surplus. Cotton 90% harvested, 84% 1990, 89% avg. Soybeans 62% harvested, 66% 1990, 74% avg. Burley tobacco 54% stripped, 56% 1990, 59% avg. Wheat 74% seeded, 66% 1990, 78% avg. Pastures 5% very poor, 12% poor, 50% fair, 33% good. Cattle 3% poor, 20% fair, 76% good, 1% excellent.

**TEXAS:** Cold weather past week brought cold reinforcing air that kept chill over most of State. Nighttime temperatures dropped in eastern portions of State during early part of week, clearing skies allowed temperatures to drop rapidly. Return of gulf moisture 7th triggered rain over Coastal Plains. Warm, dry spell dominated South Texas over most recent weekend. Extreme cold this time of year at beginning of week kept averages below normal. Departures of temperatures 7° below normal in Trans Pecos to 15° in Lower Valley. Rainfall below normal in nearly all areas. Departures -0.11 in. Trans Pecos to -0.57 in. north central areas of State. Heavy rains around Houston area Thursday gave Upper Coast the only above normal total for week. Departure was +0.19 in.

**Crops:** Sorghum harvest wind down across State with most activity occurring on the Plains. Yields on some fields excellent. Cotton harvest adversely affected by damp, cold weather over past week, activities delayed in most areas. Warmer temperatures, no rain over the next few weeks would help producers accelerate activities. Late planted cotton severely affected by freeze, many large, unopened green bolls will not open. Rainfall early in week helped improve small grain stands. Many wheat fields continued to grow although rust, worm damage hampered some fields. Some fields showed little growth from the cold weather. Statewide wheat condition 73% of normal compared with 77% 1990. Soybean harvest interrupted early in week by rain. Reported yields good. Peanut harvest also delayed by wet, cold conditions, some fields suffering losses because of pod slippage. Extended cold temperatures may cause major freeze damage to unharvested fields. Peanut condition rated at 74% of normal.

**Commercial Vegetables:** Rio Grande Valley, activities slowed by misting, drizzling, cold weather. Some producers harvesting green peppers. East Texas, harvest of cole crops continued with some disease problems evident. Trans Pecos, onions being watered although some fields remained flooded. Some pecan trees received hail damage on Plains. Shuckworm damage caused some yield reduction in the Upper Coast and Low Plains.

**Range and Livestock:** Range, cattle continued to handle cold weather relatively well. Pasture quality continued to decline, some grasses turning color. Recent rainfall may improve conditions. Forage supplies remained abundant, decreasing in areas with limited moisture. Supplemental feeding active.

**UTAH:** Temperature maximums 6° below normal, minimums about 1° below normal. Moderate precipitation northern mountains, north central regions, light precipitation south central, Uinta Basin region. No precipitation in Dixie, southeast.

Showers helped improve soil moisture in some areas. Minimal field activities. Activities: Clean up, equipment maintenance.

**VIRGINIA:** Cold period with temperatures falling below freezing statewide. Extremes 11°, 81°. Rainfall widely scattered with the Southwest averaging 0.15 in.

Days suitable for fieldwork 6.5. Topsoil moisture 67% very short, 26% short, 7% adequate. Corn for grain 95% harvested, 91% 1990, 87% avg. Soybeans 57% harvested, 61% 1990, 44% avg. Cotton 70% harvested. Wheat 71% seeded, 68% 1990, 64% avg. Barley 96% seeded, 94% 1990, 90% avg. Oats 94% seeded, 94% 1990, 94% avg. Winter grains, grazing crops condition 32% very poor, 27% poor, 25% fair, 16% good. Pasture 43% very poor, 30% poor, and 27% fair. Forage from pastures, winter grazing crops dairy cattle 17%, beef cattle 54%, sheep 60%. Stripping burley tobacco.

**WASHINGTON:** Weather data not available.

Days suitable for fieldwork 2.0. Soil 45% short, 55% adequate. Hay, other roughage 1% very short 12% short, 60% adequate, 27% surplus. Range, pasture 13% very poor, 19% poor, 48% fair, 20% good. Winter wheat 2% very poor, 14% poor 80% fair, 4% good. Potatoes 100% good. Corn 100% good. Winter wheat 92% planted, 85% emerged. Potatoes 92% harvested. Corn for grain 48% harvested. Rain, snow fall has relieved the drought conditions. Some winter wheat remained to be planted, will be planted if conditions allow. Some wheat has not emerged yet, however moisture, favorable soil temperatures are probably going to allow germination yet this fall. Apple harvest was complete across the State. An estimated 5,000 bins of Granny Smith apples were lost to the frost in north central areas. The last of the cattle returned from the mountain ranges. Calves were being weaned, preconditioned, sent to lots or sold.

**WEST VIRGINIA:** Temperature 32°. Extremes 5°, 58°. Precipitation 0.80 in.

Days suitable for fieldwork 5.8. Soil moisture 67% very short, 25% short, 8% adequate. Corn, 6% very poor, 25% poor, 4% fair, 53% good, 12% excellent; 91% harvested. Hay, 42% very poor, 30% poor, 9% fair, 19% good; 90% third cutting. Wheat, 36% sown. Apples, 100% harvested. Pastures, 49% very poor, 20% poor, 31% fair; 40% of normal. Cattle, good. Sheep, very poor. Activities: General maintenance, fencing, cutting hay, harvesting corn, chopping silage, planting wheat, marketing livestock.

**WISCONSIN:** Temperature 17°, 19° below normal. Extremes -10°, 42°. Precipitation 0.10 to 0.50 in. Daily record low temperatures were shattered by more than 10°. On the 5th, the State received snowfall, 1 to 3 in. Northwest received 2 to 4 in. of snow on the 10th, while other areas received 0.5 to 1.0 in.

Days suitable for fieldwork 2.4. Soil moisture 1% short, 45% adequate, 54% surplus. Corn for grain 84% harvested, 58% 1990, 78% avg. Soybeans 97% harvested, 91% 1990, 91% avg. Fall tillage 52% complete, 44% 1990, 54% avg. Frost depths 2.00 to 6.00 in. different areas across the State, which brought most fall tillage to a halt.

**WYOMING:** Temperatures well below normal statewide. Precipitation mostly above normal east, extreme northwest, below normal elsewhere. 1992 winter wheat fair to good, some wind, freeze damage. Livestock mostly good, some supplemental feeding. Movement to markets, winter ranges continuing.

## International Weather and Crop Summary

### HIGHLIGHTS

November 3 - 9, 1991

**WESTERN USSR** ... Unseasonable cold continues over the region, prompting winter grains to enter dormancy as far south as the southern Ukraine.

**EUROPE** ... Widespread rain across the north slows sugarbeet harvesting but helps winter crop establishment.

**EASTERN ASIA** ... Winter wheat areas receive beneficial rain for germination. Favorable harvest weather prevails elsewhere.

**SOUTHEAST ASIA** ... Rain finally reaches Java, helping rice planting efforts. Tropical Storm Thelma hits the central Philippines.

**SOUTH ASIA** ... Showers in southeastern India boost irrigation for dry season rice but cause more coastal flooding.

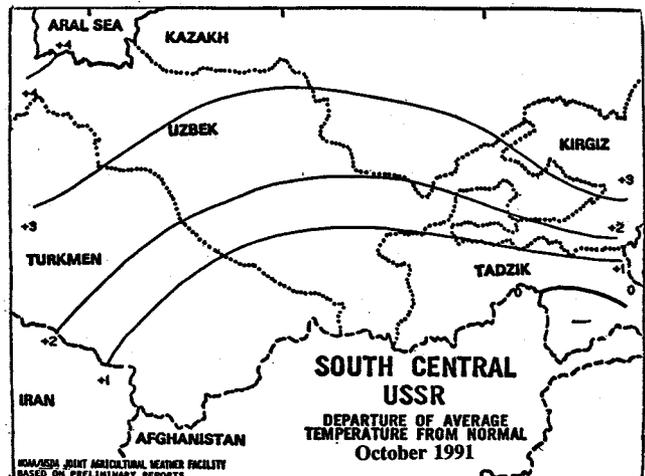
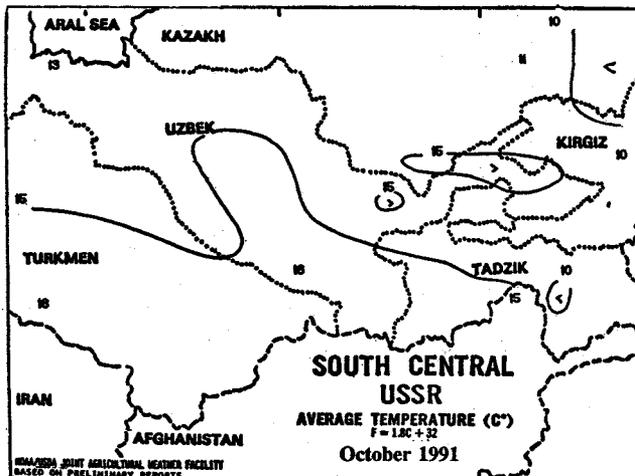
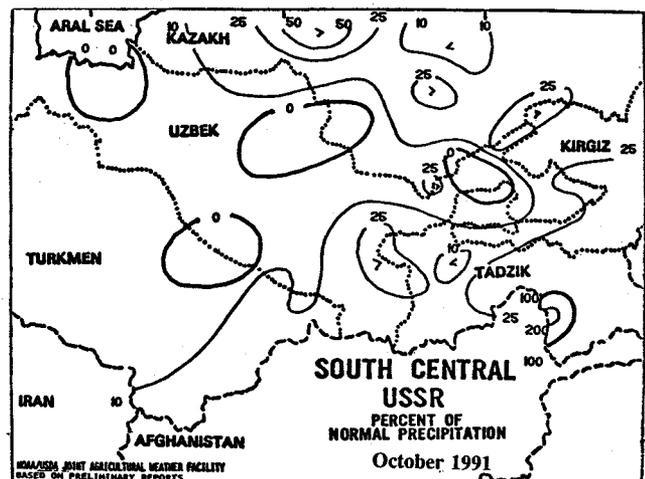
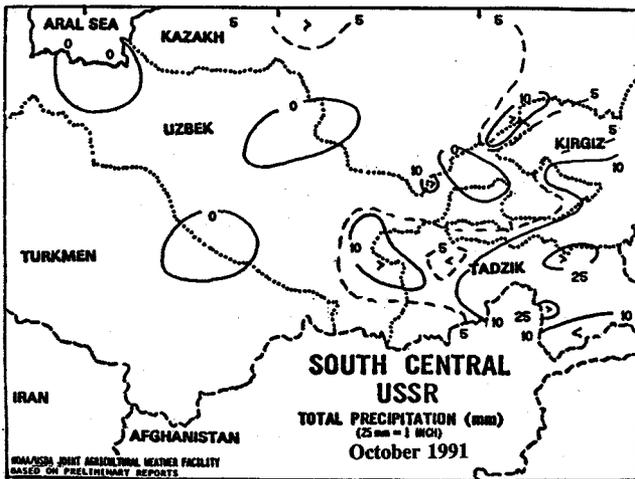
**SOUTH AMERICA** ... In Argentina, widespread rain aids summer crop germination but delays planting. Scattered light rains fall across Brazil, allowing planting to continue.

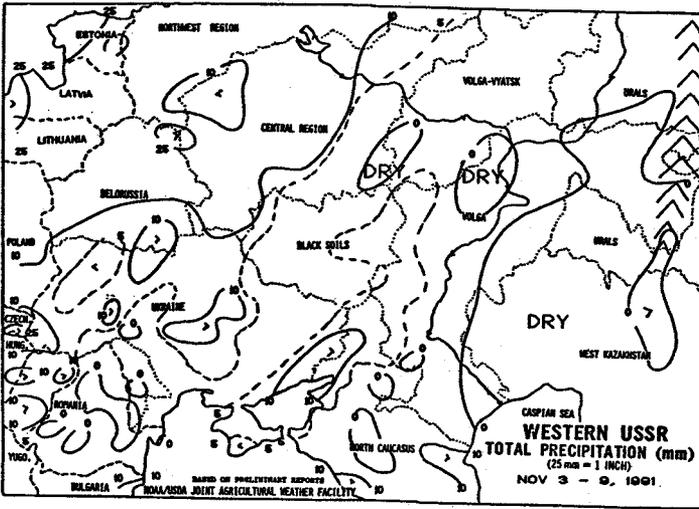
**AUSTRALIA** ... Winter wheat harvesting begins across northern grain areas. Scattered rains benefit crop planting in the east. Pasture lands and sugarcane areas need rain.

**MEXICO** ... Moderate rain delays summer crop harvesting in the east.

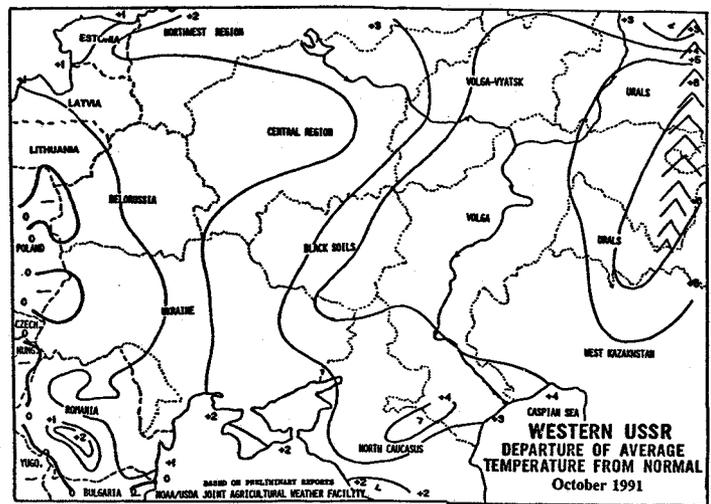
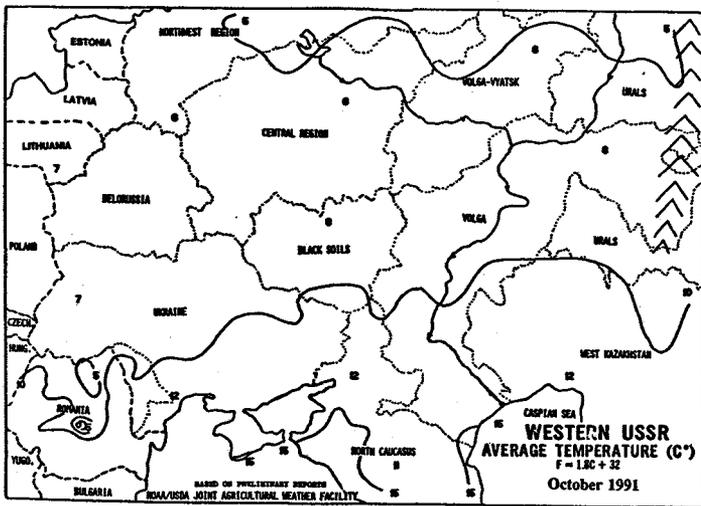
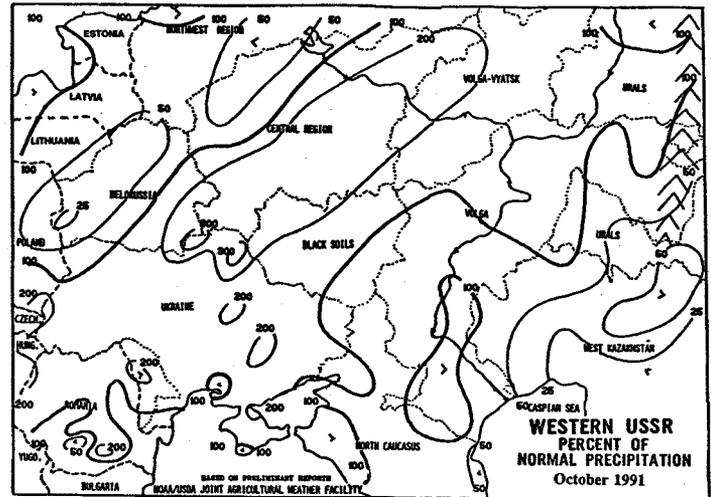
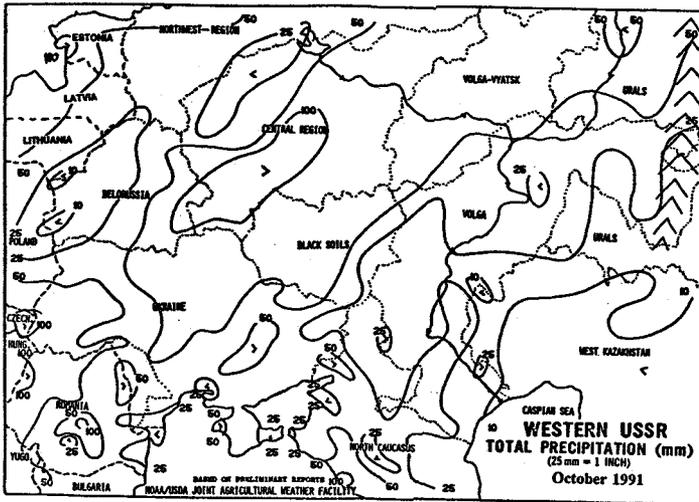
**NORTHWESTERN AFRICA** ... Dry weather covers most winter grain areas in Morocco, Algeria, and Tunisia.

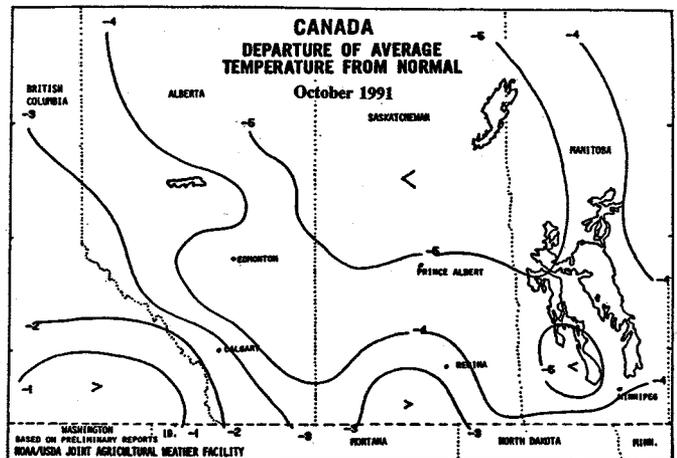
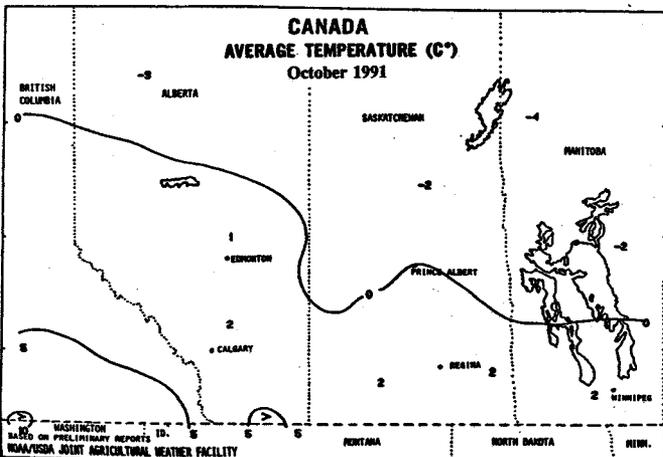
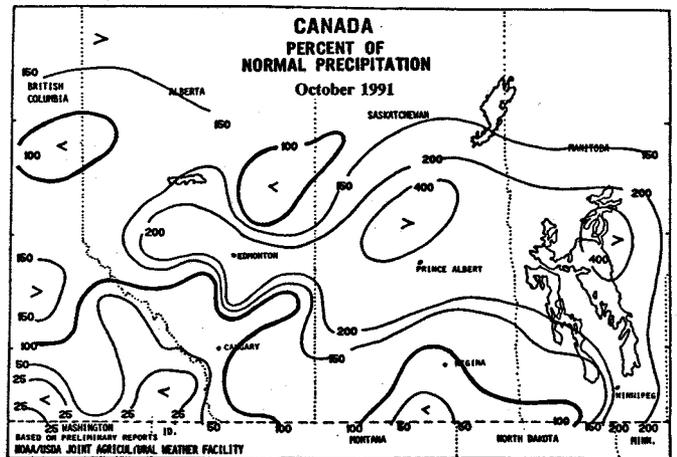
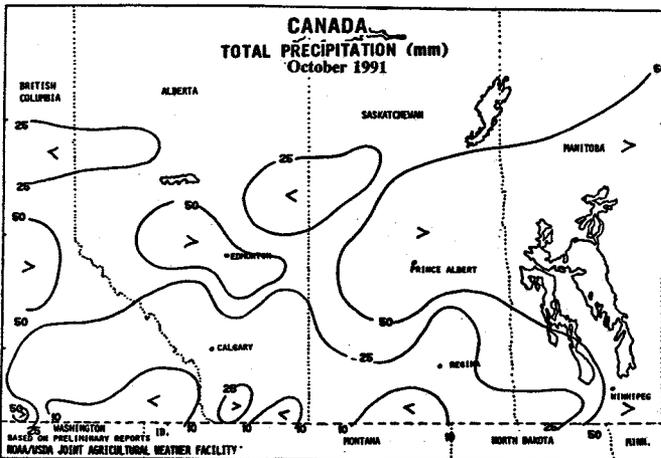
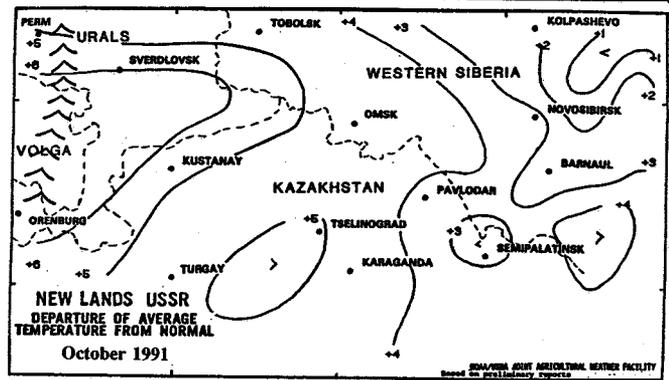
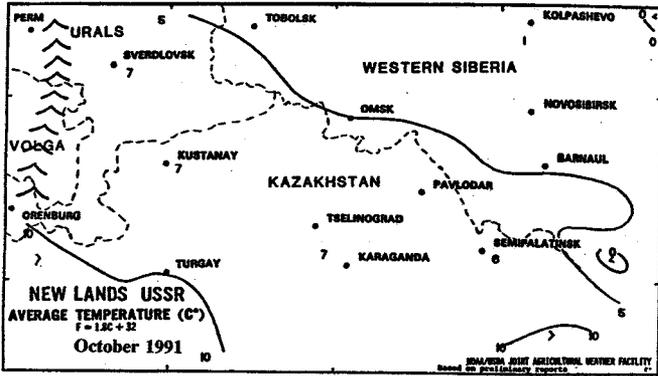
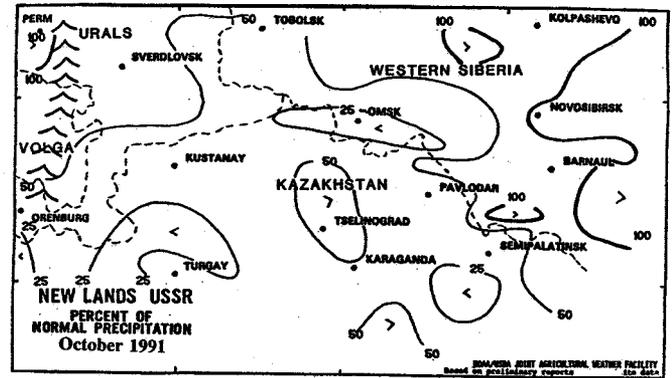
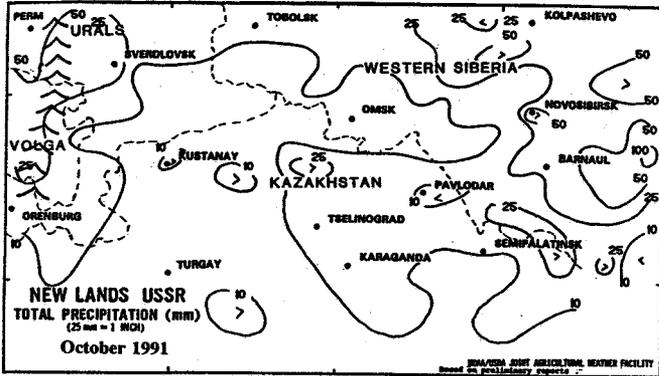
**SOUTH AFRICA** ... Corn planting progresses.

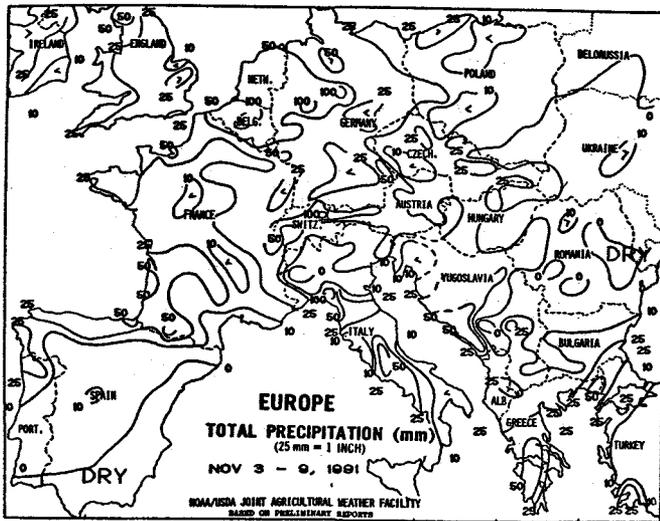




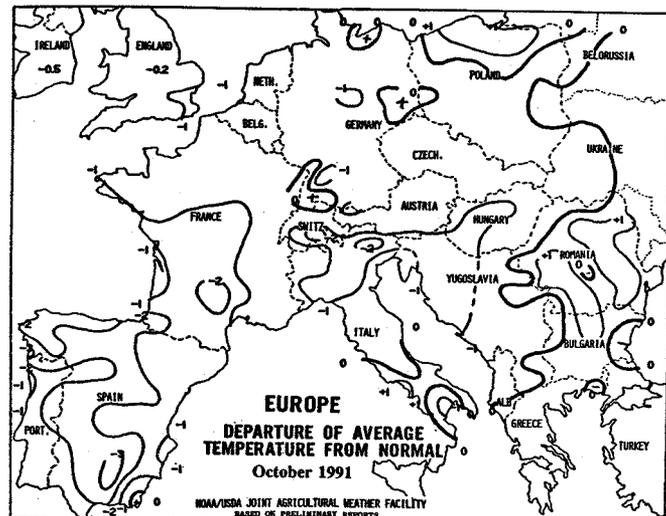
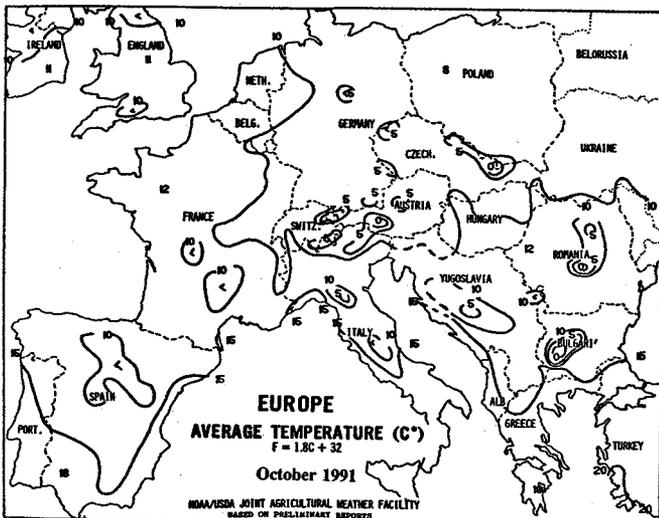
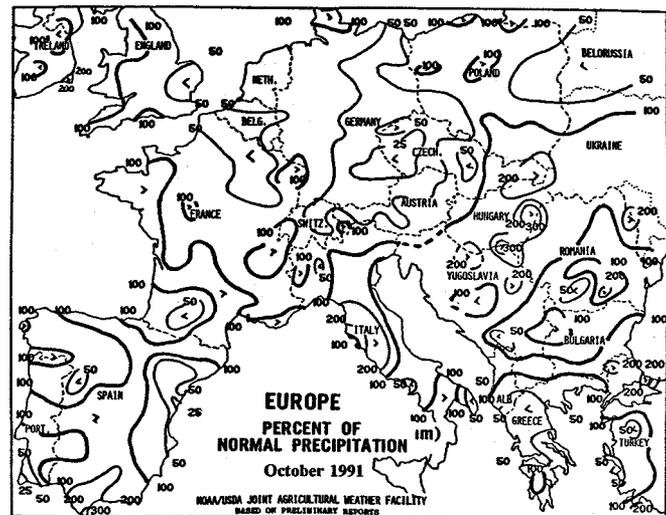
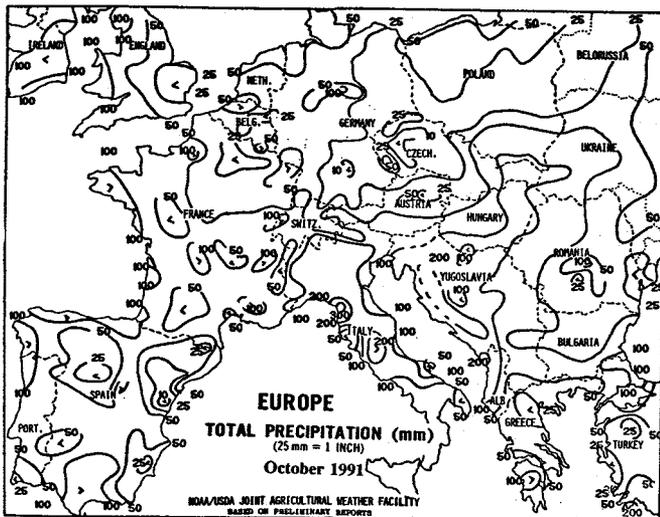
**WESTERN USSR** ... Unseasonably cold weather continued over the region, prompting winter grains to begin entering dormancy as far south as the southern Ukraine. Weekly average temperatures were near normal in Belorussia and 2-4 degrees Celsius (C) below normal over the remainder of the region. Light precipitation (generally less than 10mm) over Ukraine and North Caucasus caused only minor delays in late corn harvesting. In October, monthly average temperatures ranged from 2 to 5 degrees C above normal, because the weather was unseasonably warm early in the month. The warm weather promoted further vegetative growth in winter grains, especially in northern and western areas where adequate moisture favored growth. However, dry weather since September over southern Ukraine, northern North Caucasus, the southeastern portion of the Black Soils Region, and lower Volga created unfavorable conditions for winter grain emergence and plant establishment. While widespread precipitation began over these areas about October 22, and lasted until month's end, sharply colder weather accompanied the moisture, halting crop growth.



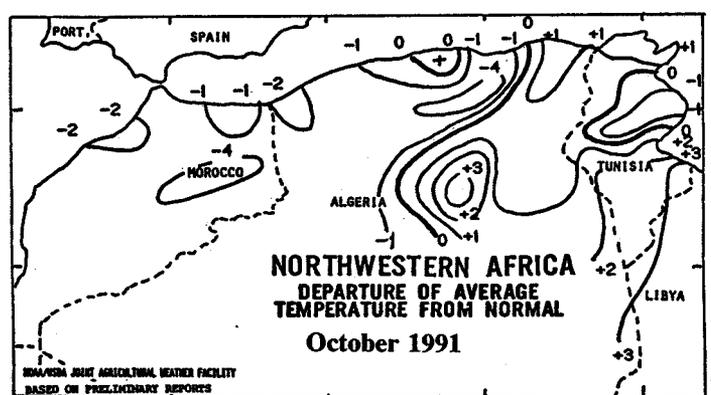
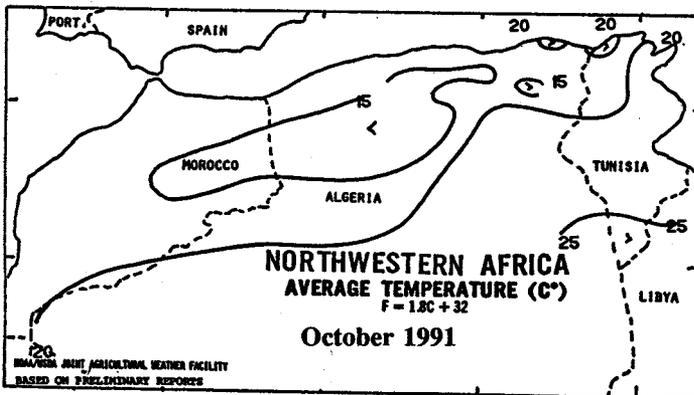
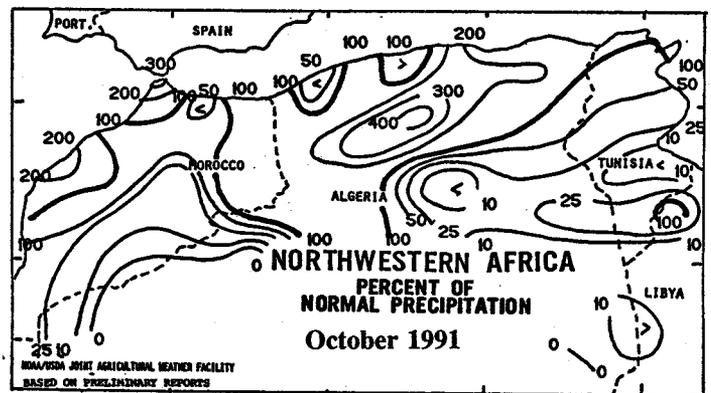
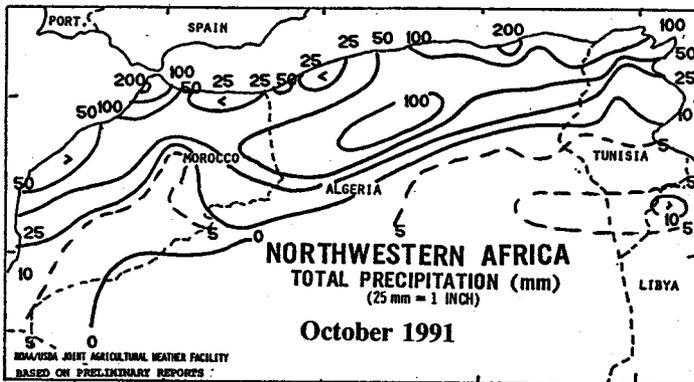
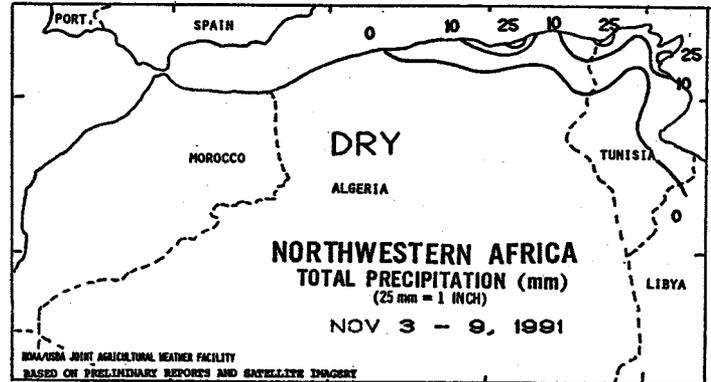


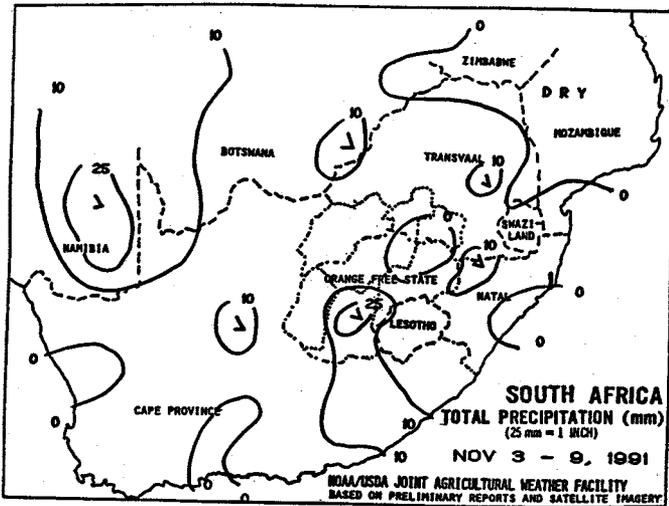


**EUROPE** ... Soaking rain (50-80mm) delayed sugarbeet harvesting in the Benelux countries and northwestern Germany. Widespread rainfall (15-50mm) covered much of Europe, slowing late corn harvesting in southern France and harvest activities throughout western and central Europe. The moisture was especially beneficial in the northeast, however, for winter grain establishment. Dry weather was confined to southern Spain and eastern Romania. Locally heavy showers (50-89mm) also fell in scattered areas of southern Italy, western Yugoslavia, and Greece, providing favorable moisture for winter crops. Seasonal temperatures continued in the west, while milder weather returned to eastern Europe. The recent moisture was helpful in most areas for winter crops because October rainfall was below average across northern Europe. Near-normal monthly rainfall was confined to the United Kingdom, southwestern France, and along much of the Mediterranean region except for Greece. Above-average October rains interfered with harvesting in east-central Europe, particularly in eastern Hungary.

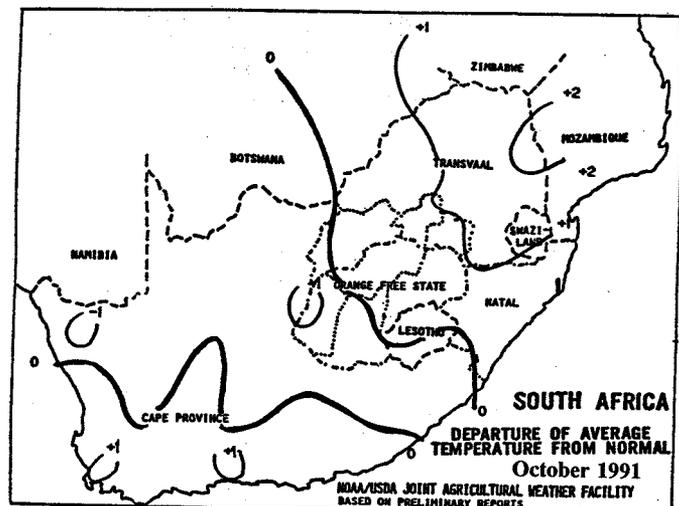
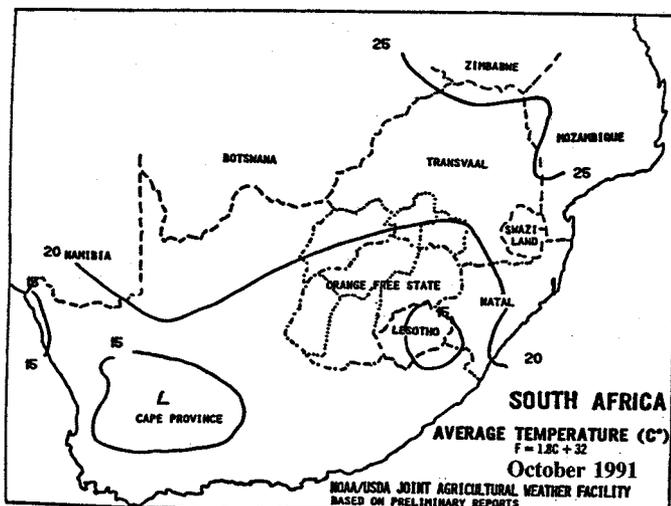
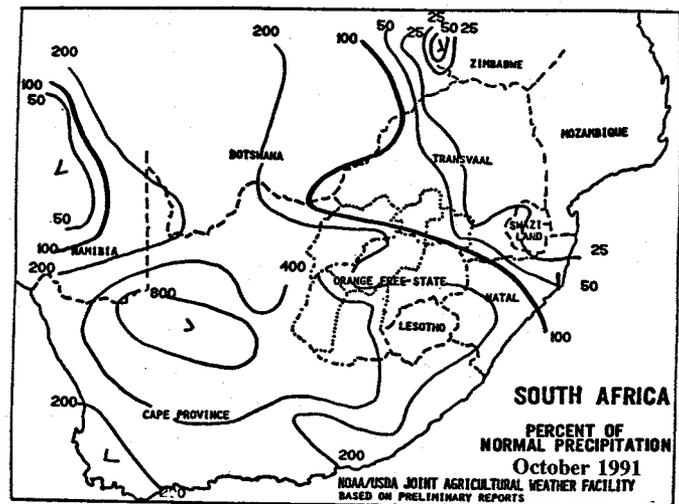
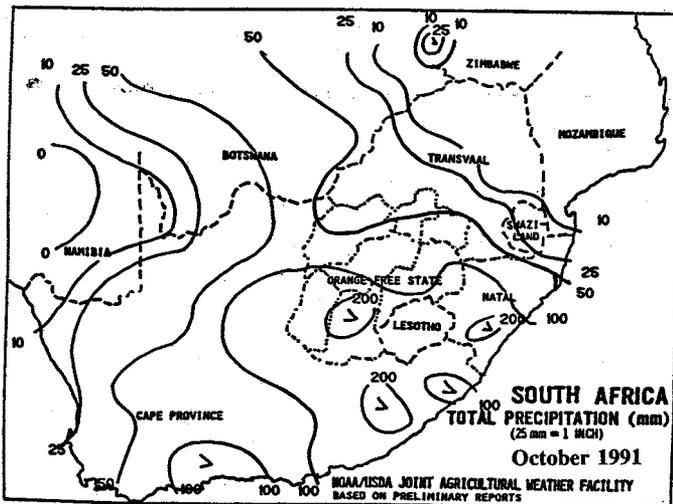


**NORTHWESTERN AFRICA** ... Dry weather covered winter grain areas in Morocco, Algeria, and Tunisia. An exception was northernmost crop areas in eastern Algeria and Tunisia, where light showers (10-25mm) kept topsoils moist for winter grain planting. Following widespread rain in early October, the third consecutive week of dry weather covered Moroccan winter grain areas, slowing early planting. October's precipitation was well above normal (100-400 percent of normal) in Algeria, providing adequate topsoil moisture for early planting.

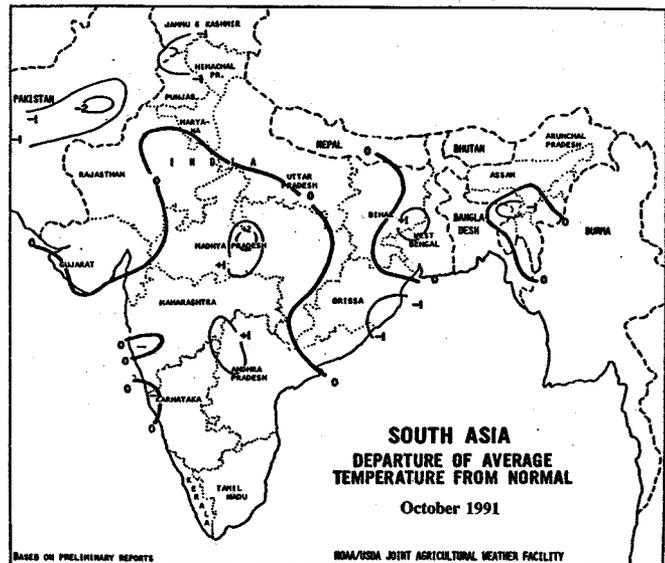
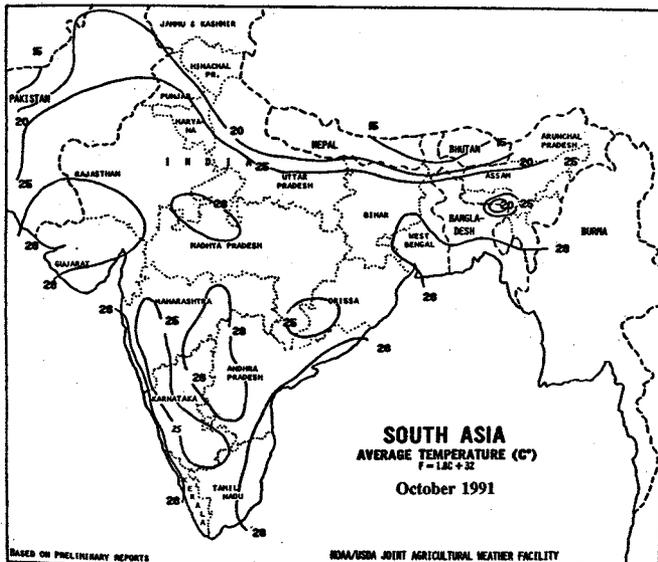
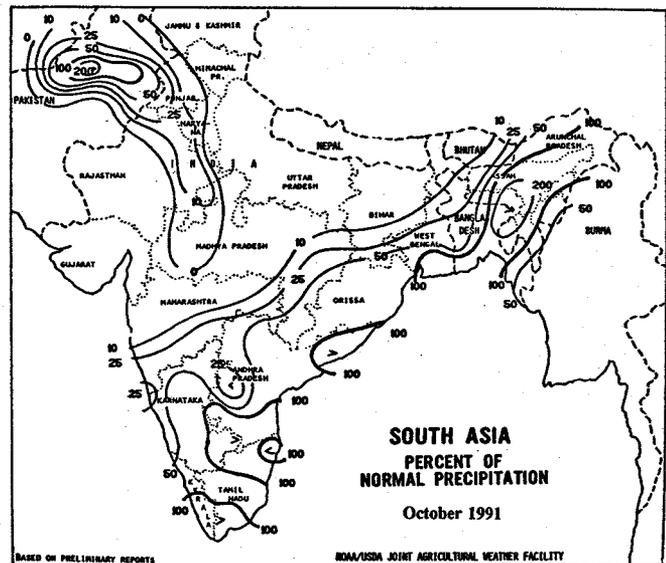
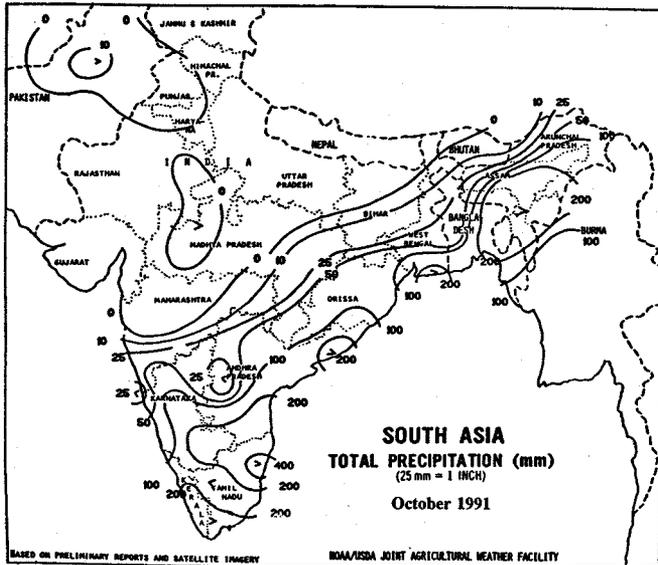
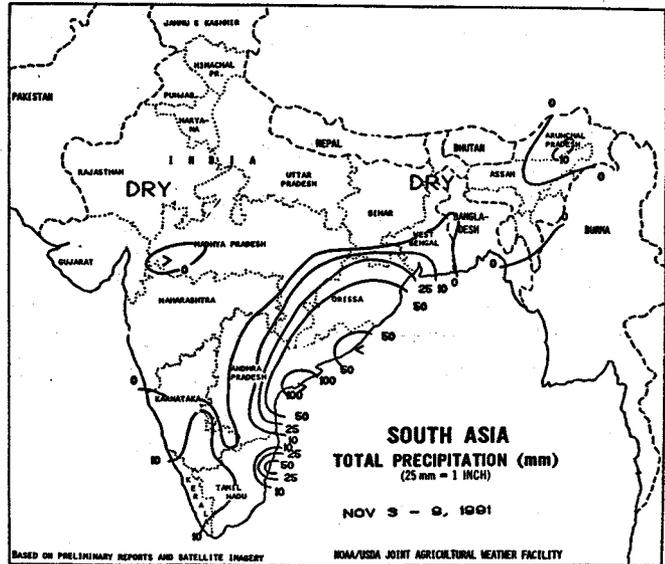


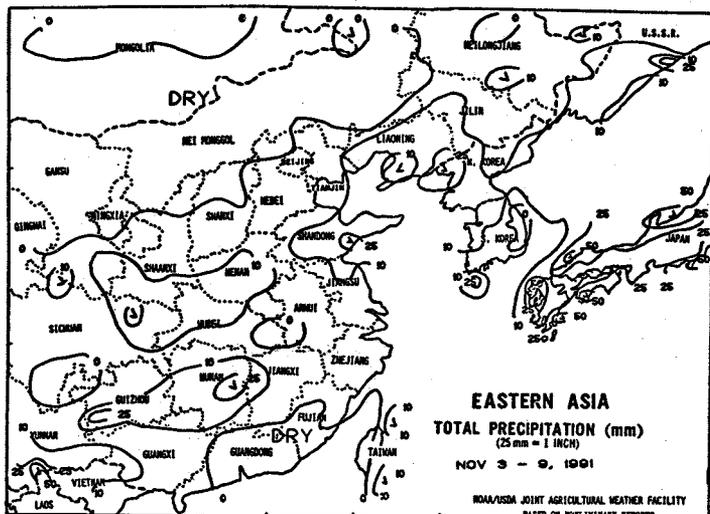


**SOUTH AFRICA** ... Drier and warmer weather favored corn planting across the region. October was the second consecutive month of near- to above-normal rainfall in primary crop areas of Orange Free State and southwestern Transvaal, typically drier than crop areas further east. The moisture greatly improved soil moisture reserves, and dry weather the past few weeks has allowed rapid planting progress. However, rainfall continued below normal in October in crop areas of the south-central Transvaal and more rain is needed to ensure proper crop establishment.

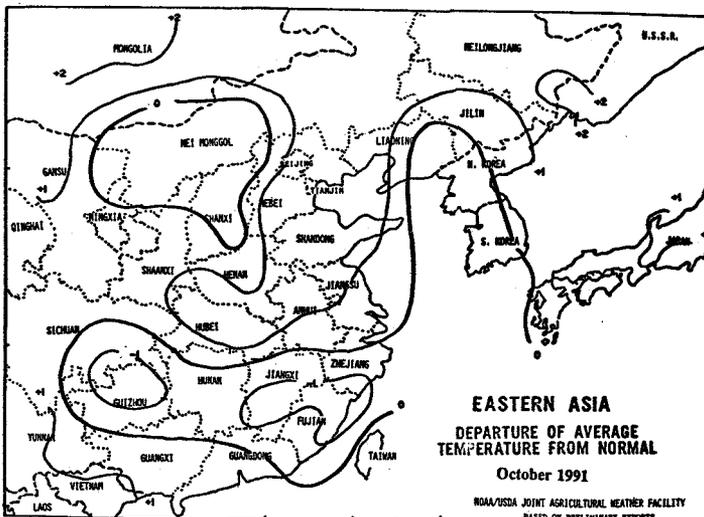
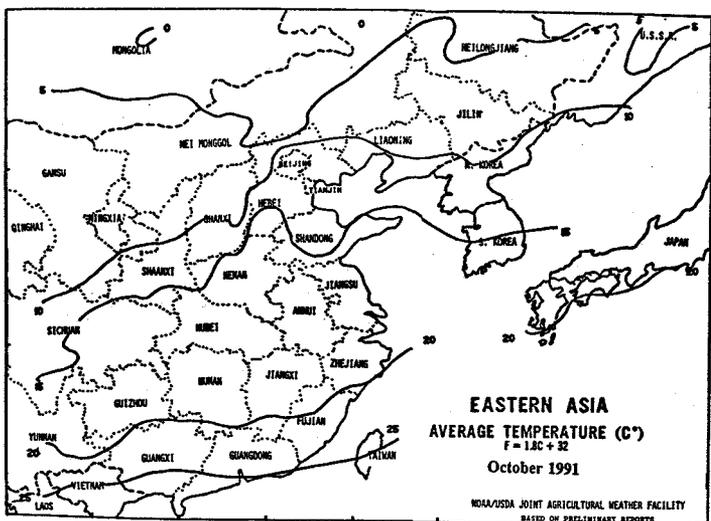
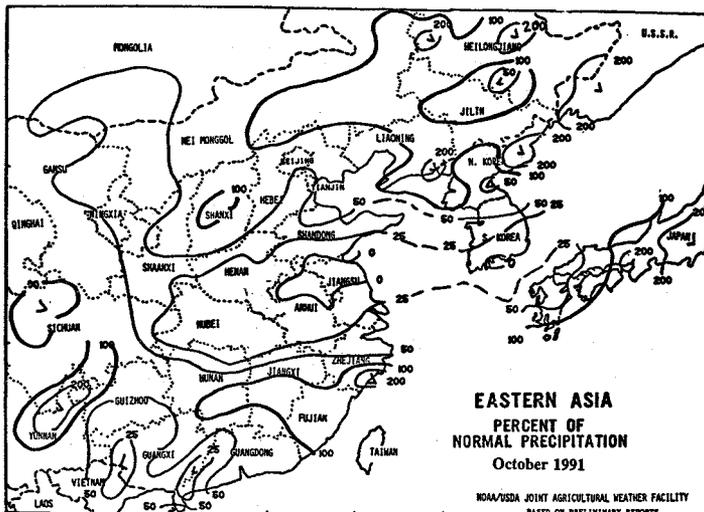
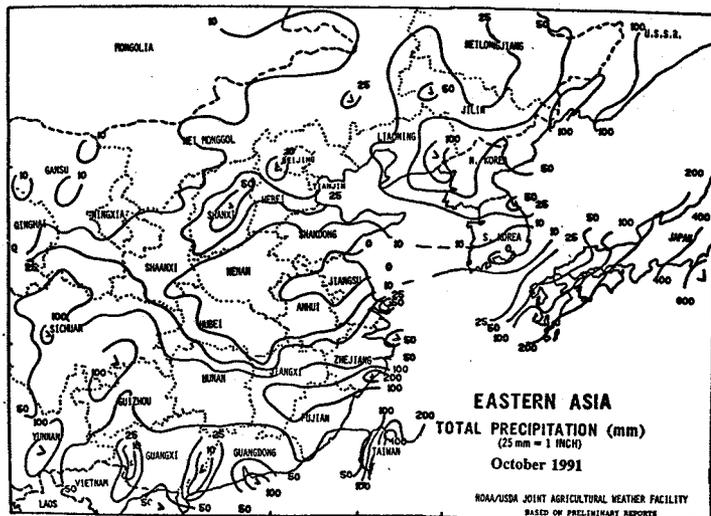


**SOUTH ASIA ...** Heavy showers (50-150mm) continued along India's southeastern coast, increasing irrigation for upcoming rice plantings but causing more flooding. Rainfall elsewhere in the southern interior, as well as primary eastern rice areas, was light and scattered. During October, the monsoon continued its seasonal retreat, resulting in beneficially warm and dry weather for summer crop maturation and winter crop planting. Frequent showers in the south and east improved planting prospects for dry-season grains and oilseed but amounts in most areas totaled near to below normal.

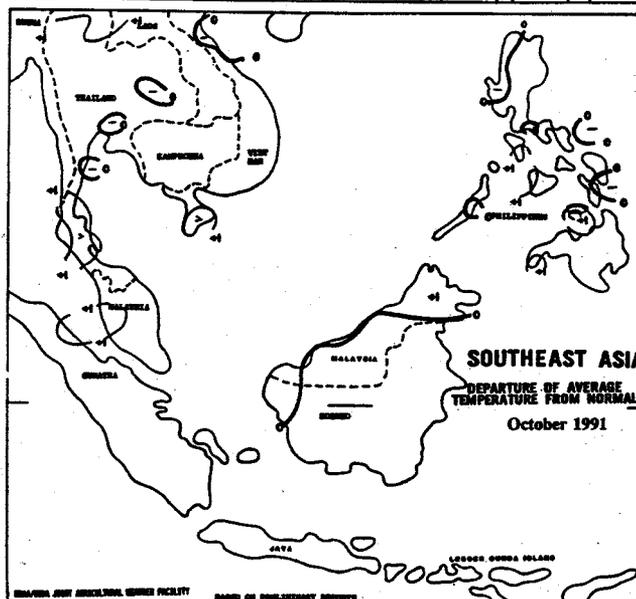
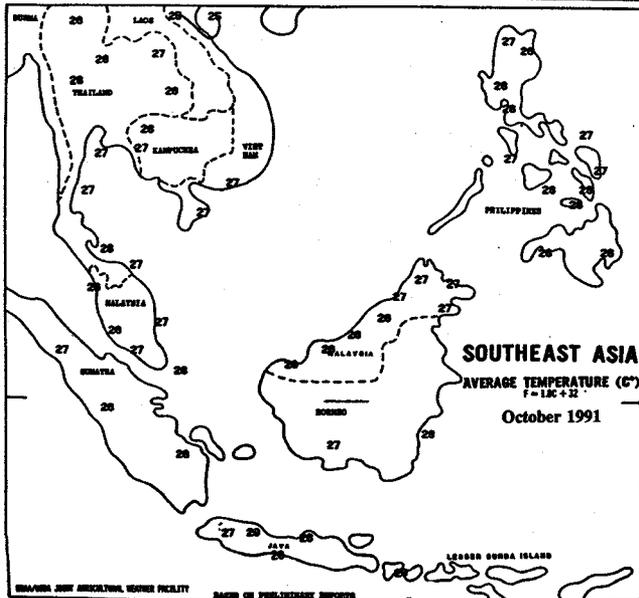
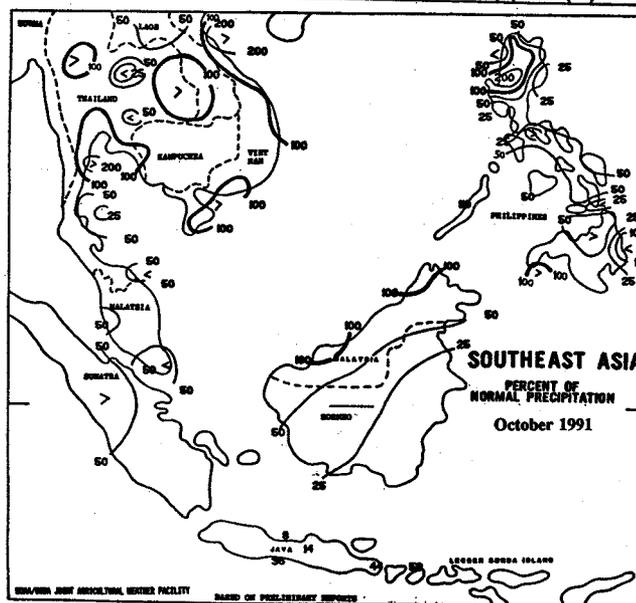
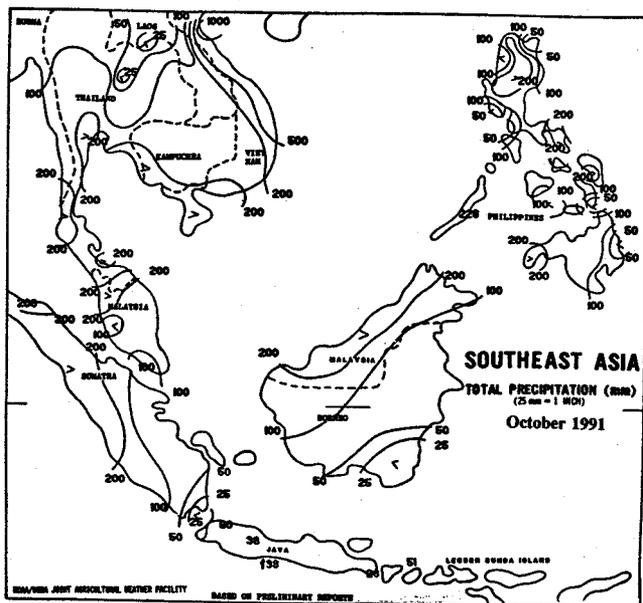
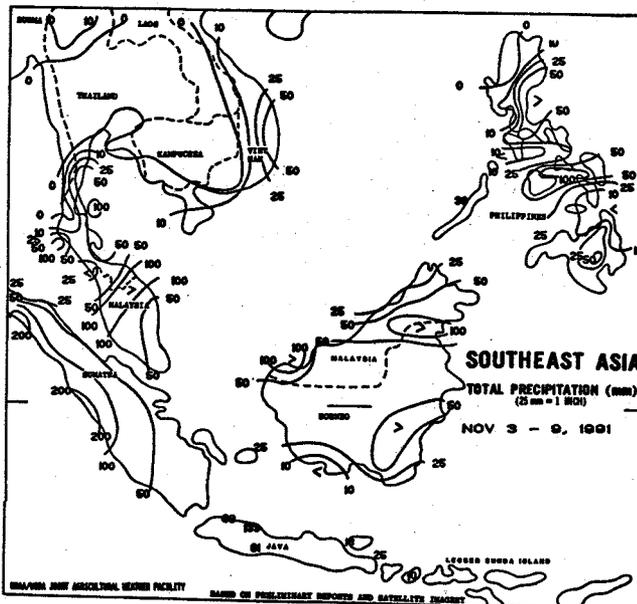




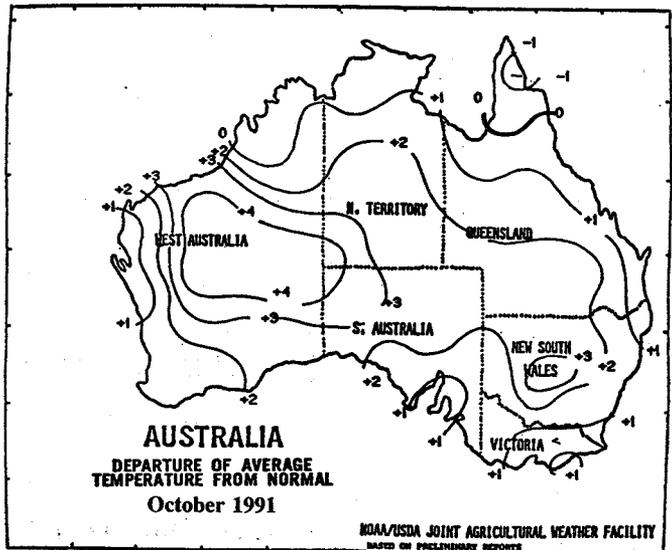
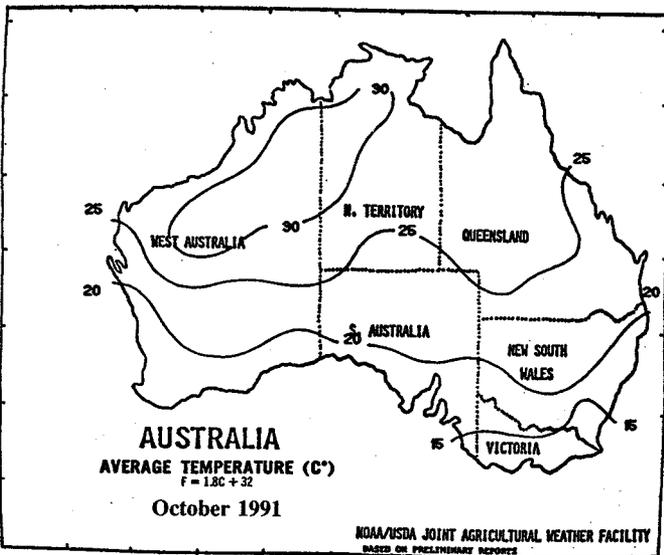
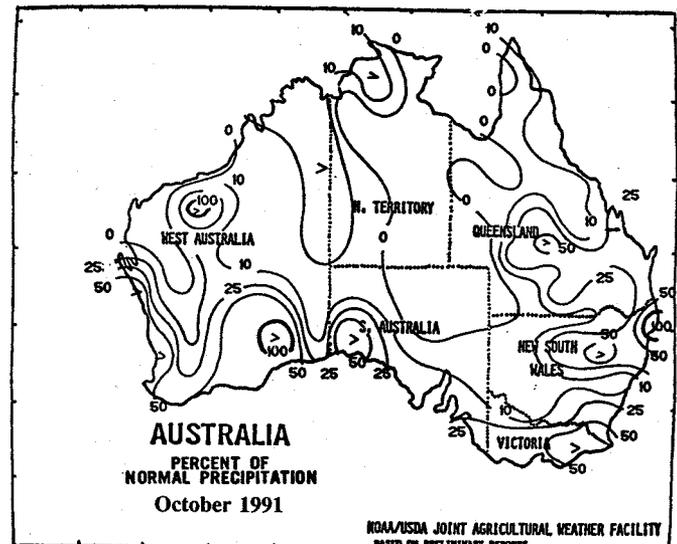
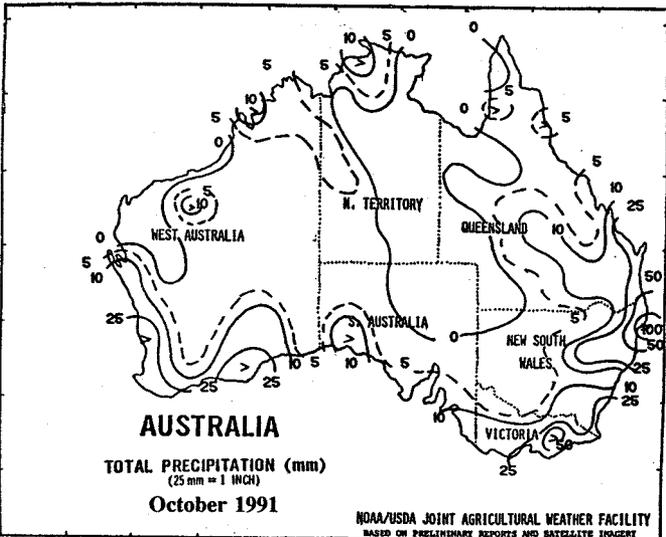
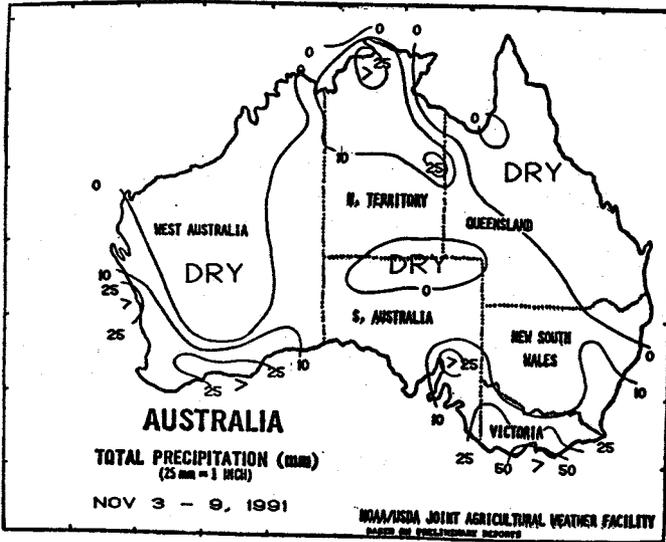
**EASTERN ASIA** ... Light to moderate rain (8-28mm) fell across the North China Plain (Henan and Shandong) aiding winter wheat germination. However, more rain is needed across the region, especially to the south in Anhui and Jiangsu. Portions of interior southern China (Hunan, Guizhou, and Jiangxi) received light to moderate rain (6-31mm) delaying late rice harvesting, but replenishing depleted reservoirs for next season. Elsewhere, favorable harvest weather continued. For October, the North China Plain received below-normal rainfall, with northern Anhui and Jiangsu receiving little or no rainfall. The dryness delayed winter wheat planting and stressed germinating plants. In Manchuria near to above-normal rainfall delayed summer crop harvesting. Favorably dry weather aided late rice maturation and harvesting across southwest China. In the southeast, near-normal rainfall replenished depleted reservoirs but delayed late rice harvesting. A series of typhoons swept near and across Japan, bringing above-normal rainfall that caused flooding and damage to rice paddies.



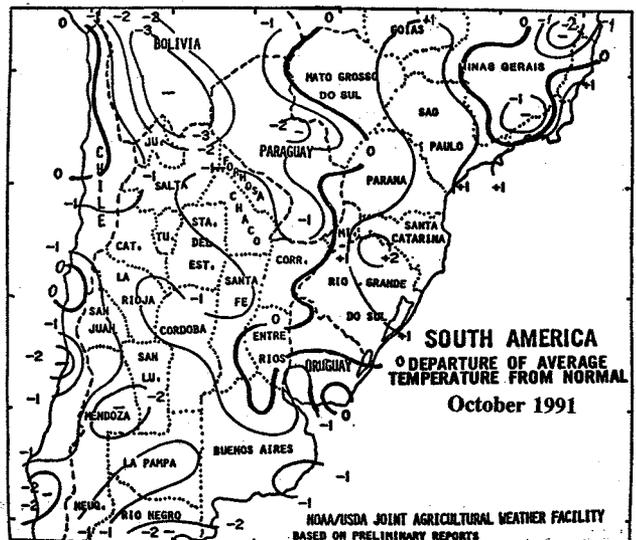
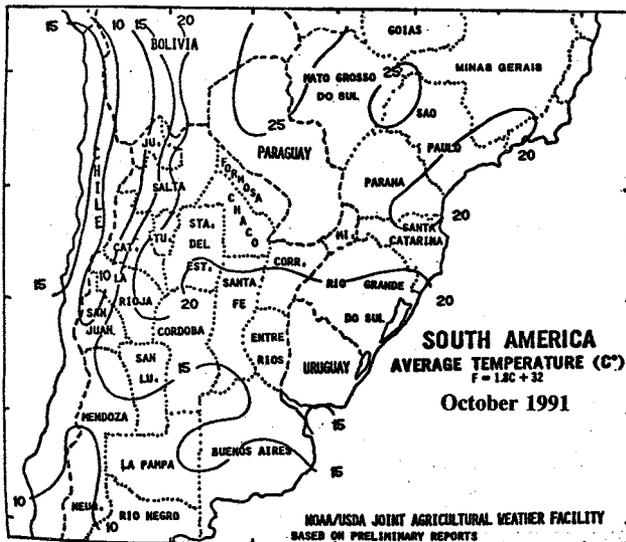
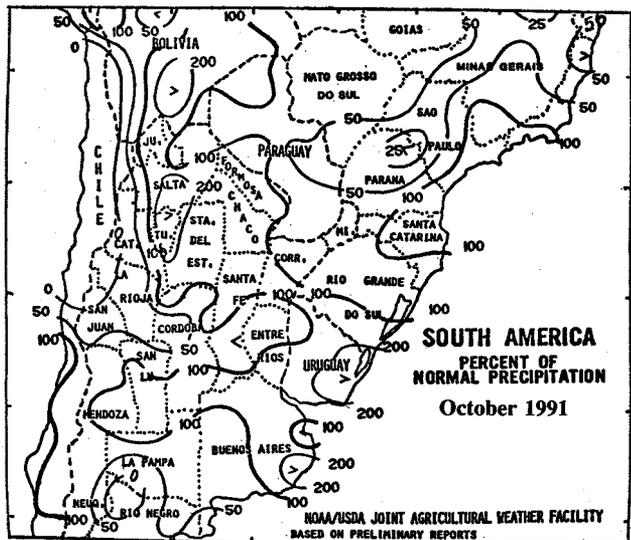
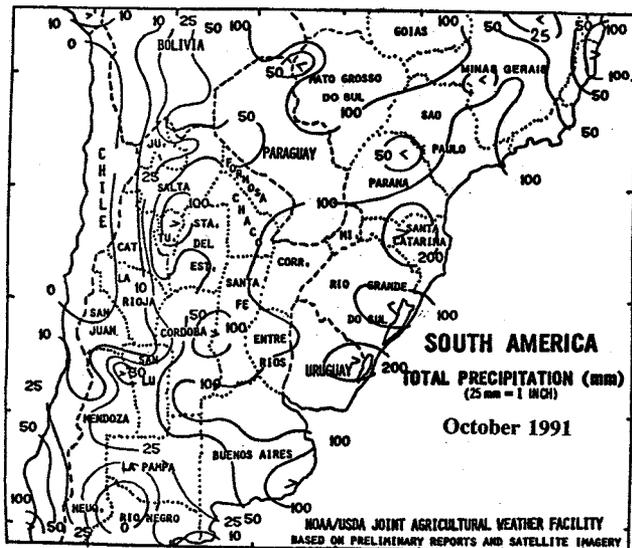
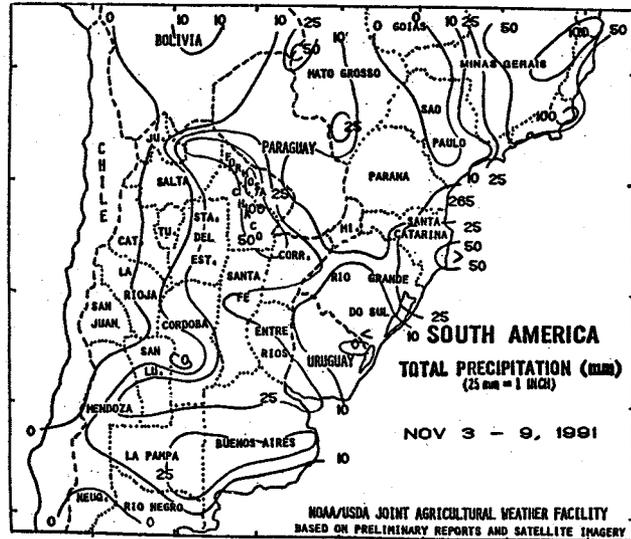
**SOUTHEAST ASIA** ... Widespread, moderate to heavy showers (50-201mm) covered primary crop regions of Malaysia and Indonesia. Java's rice areas received the heaviest rainfall of the season (10-133mm), greatly improving irrigation for rice planting delayed by months of below-normal rainfall. Further north, seasonably dry weather dominated Thailand's rice areas, although light rain (2-14mm) lingered over the Northern Hills. Light to moderate showers (10-90mm), due mainly to the remnants of Tropical Storm Thelma, fell along Vietnam's central coast. In October, rainfall was near to above normal over most Indochinese crop areas, but by month's end, seasonably drier weather was advancing throughout the region. October's rainfall was timely for dry-season rice planting, but flooding and crop damage occurred along Vietnam's coast and in the Mekong Delta. In the Philippines, showers (25-165mm) from Tropical Storm Thelma caused some flooding in the central islands, but the moisture was welcome in most grain and rice areas. Showers during October improved fall grain planting prospects, although Typhoon Ruth caused some flooding in western Luzon late in the month.

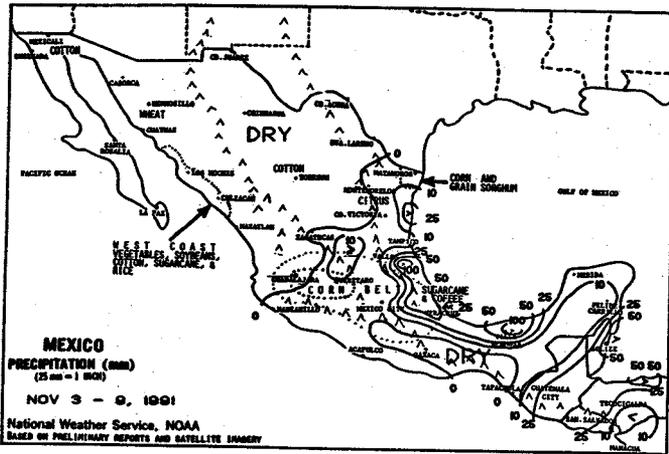


**AUSTRALIA** ... The summer crop areas of New South Wales, Victoria, and South Australia received light to moderate rain (5-33mm), increasing topsoil moisture for summer crops and late grain-filling winter wheat. However, most of Queensland remained dry, delaying summer crop planting and stressing sugarcane along the northeast coast. Moderate rains fell along the northern coast, bringing the first showers of the upcoming monsoon. Monsoon rains normally reach the northeastern sugarcane areas by mid to late December. Light to moderate rains (19-32mm) fell across Western Australia, aiding late grain-filling wheat, but delaying early harvest. In October, all crop areas received below-normal rainfall, with portions of Western and South Australia crop areas receiving less than 5mm. Winter wheat conditions worsened in most areas except in Victoria. The dryness also delayed summer crop planting in the east, stressing sugarcane in northeast Queensland and most pasture lands. Monthly temperatures averaged 1-3 degrees C above normal across the crop areas.

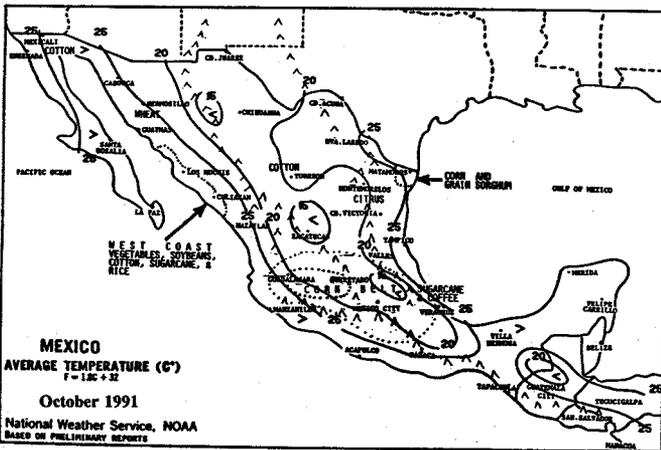
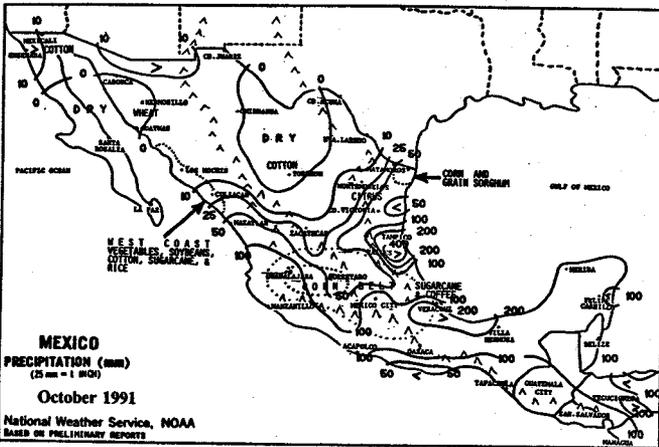


**SOUTH AMERICA** ... In Argentina, widespread moderate rain (22-66mm) covered most of the country, aiding corn, soybean, and cotton germination, but delaying planting. Heavier rain (greater than 100mm) fell in northern Argentina (Formosa) possibly causing some flooding. In southern Brazil, despite scattered light rains (3-20mm), summer crop planting continued. Moderate to heavy rain (31-110mm) fell across Minas Gerais aiding coffee and citrus flowering. In October, eastern Argentina received normal to above-normal rainfall, delaying summer crop planting. Most of southern Brazil received below-normal rainfall, with driest areas in northern Parana and southern Sao Paulo. While rainfall was below normal, showers increased toward the end of the month, favoring soil moisture for summer crop planting. Monthly temperatures averaged near to slightly below normal in Argentina and 1-2 degrees C above normal in southern Brazil.





**MEXICO** ... Moderate to heavy rain (30-141mm) fell along the eastern coast, between Tampico and Villahermosa, delaying late summer crop harvesting. Favorable winter wheat conditions exist across the northwest. During October, above-normal rains delayed corn harvesting across the Southern Plateau corn belt, while favoring grain-filling corn in the southeast.



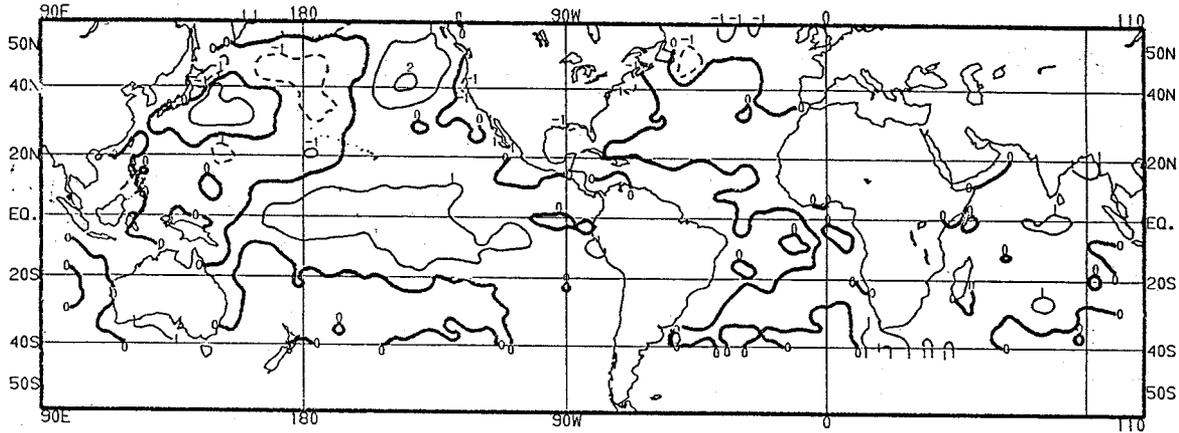
## El Niño Update

During October, Pacific ocean data continued to "show a strong evolution toward a warm (ENSO) episode," according to the latest El Niño/Southern Oscillation (ENSO) Diagnostic Advisory issued by the Climate Analysis Center on November 8, 1991. The October monthly sea surface temperature map shows a large area of anomalous warmth in the eastern Pacific tropics (fig. 1). The area of contiguous warmth has increased since September (fig. 2).

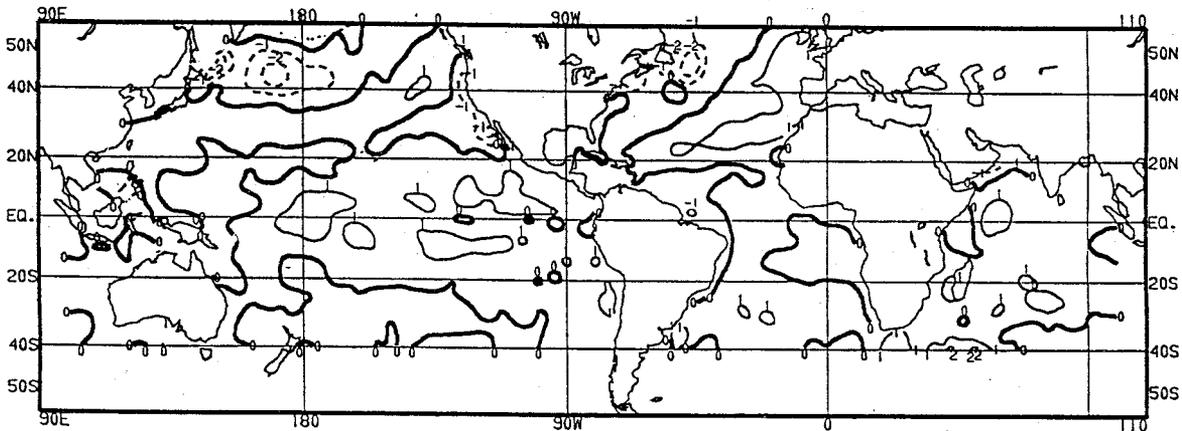
Historically, El Niño is associated with dry weather in Indonesia and Australia, and drought did persist in both countries during October (though recent rainfall has offered some relief in both countries). If El Niño conditions continue, other parts of the world will likely experience unusual weather conditions. Figure 3, taken from the Climate Analysis Center's Diagnostic Advisory, shows those anomalies which have been correlated with El Niño in the past during the November-March period.

Douglas Le Conte

**Figure 1** October Sea Surface Temperature Anomalies (° C).

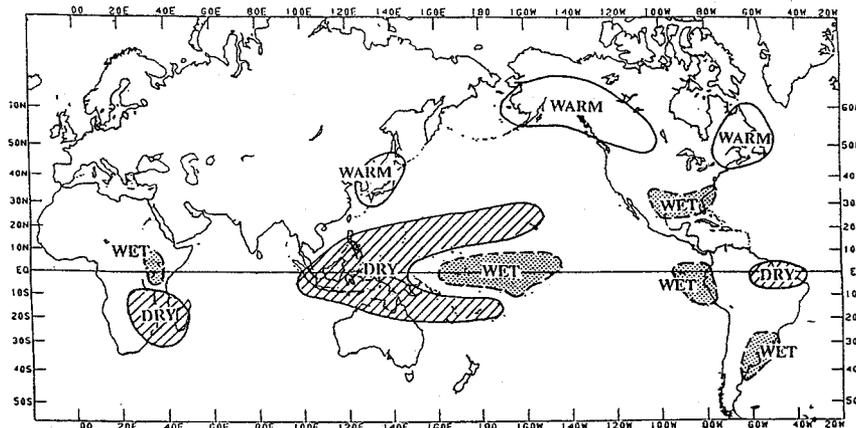


**Figure 2** September Sea Surface Temperature Anomalies (° C).



**Figure 3** Temperature and precipitation anomaly patterns generally found during November - March in warm (ENSO) episodes.

### NORTHERN HEMISPHERE WINTER



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**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, and Wes Byrd.**

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

**U.S. DEPARTMENT OF AGRICULTURE**

Economics Management Staff  
Editor . . . . . **Sharon Lee**  
National Agricultural Statistics Service  
Agricultural Statistician . . . . . **Martin Owens** (202) 720-2157  
World Agricultural Outlook Board  
Agricultural Weather Analysts . . . **Ray Motha** (202) 720-9805  
**Tom Puterbaugh, Mark Brusberg, and Bob Stefanski.**

(Continued from front cover)  
and northern Missouri. Meanwhile, the West warmed rapidly, and a dozen daily record highs were established at midweek from California to Washington. The second infusion of bitter cold air took its toll farther east, hitting the Midwest especially hard. In all, an additional 220 daily record lows were demolished. Peoria, IL, set 6 consecutive daily record lows between November 4 and 9, including a 5° F mark on Friday. Temperatures plummeted to -15° F in Sheldon, IA, and to -5° F in St. Joseph, MO. Toward week's end, a sizable storm system began to organize in the Gulf coast region, dampening southeastern Texas. As the storm intensified near the southeastern Atlantic coast, fierce winds and waves battered the mid-Atlantic shoreline for the second time in 2 weeks. Inland, the season's first snowfall whitened the southern and central Appalachians, helping to douse dozens of wildfires. Up to 3 inches blanketed North Carolina's Blue Ridge mountains. By week's end, winter slowly relaxed its hold on the East, but temperatures remained unseasonably low. Meanwhile, an upper air disturbance moved into the West, spreading light rain, ice, and snow from the Great Basin to the western Great Lakes.

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