

WEEKLY WEATHER AND CROP BULLETIN

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

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

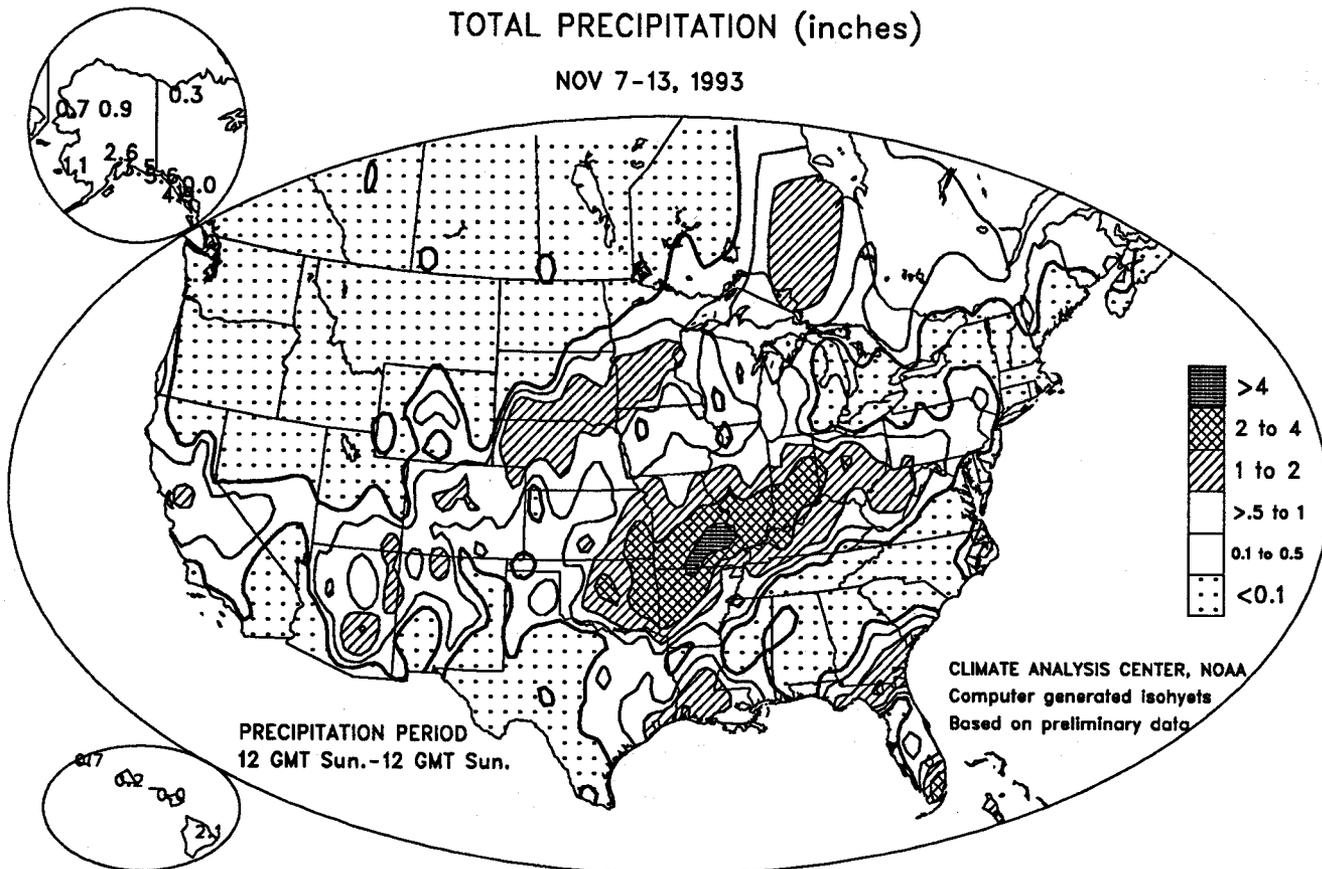
Volume 80, No. 46

Washington, D.C.

November 16, 1993

TOTAL PRECIPITATION (inches)

NOV 7-13, 1993



HIGHLIGHTS

November 7 - 13, 1993

Cool, tranquil weather covered the Nation until late in the week, when a series of winter storms plunged southward into the West. Early-week temperatures dipped below 20°F as far south as the Great Basin, the southern Rockies, and the middle Mississippi Valley. Lows on Sunday reached 4°F in Gallup, NM and 17°F in Paducah, KY. Farther south, Baton Rouge, LA reported 28°F. The only significant rain during the first half of the week fell across parts of the Gulf Coast and Southern Atlantic Coast States. Nearly 6 inches of rain drenched Miami, FL, while more than an inch dampened Port Arthur, TX. Meanwhile in Alaska, an intensifying ridge spread unseasonably mild air into arctic regions (weekly temperatures averaged up to 20°F above normal), forcing cold air and storminess to buckle southward into the West. By midweek, the first of back-to-back storms

(Continued to back cover)

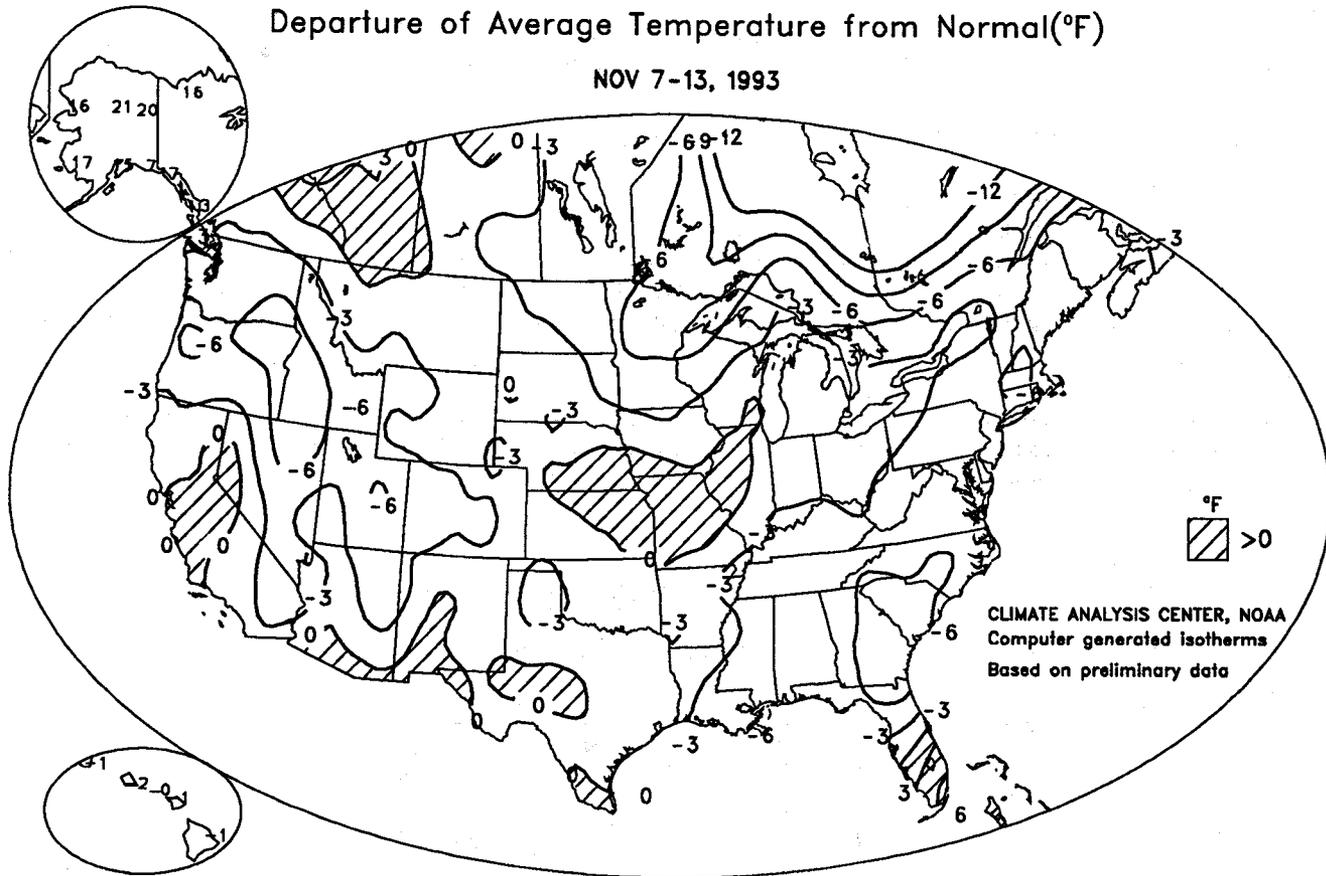
Contents

Page

Highlights & Total Precipitation Map	1
Temperature Departure & Extreme Minimum Temperature Maps	2
U.S. Crop Production Highlights	3
National Weather Data for Selected Cities	4
Weekly Heating Degree Table	7
National Agricultural Summary	8
Crop Progress and Condition Tables	9
State Summaries of Weather and Agriculture	10
International Weather and Crop Summary	15
1993 Indian Monsoon Summary	18
Subscription and Mailing Permit Information ..	20

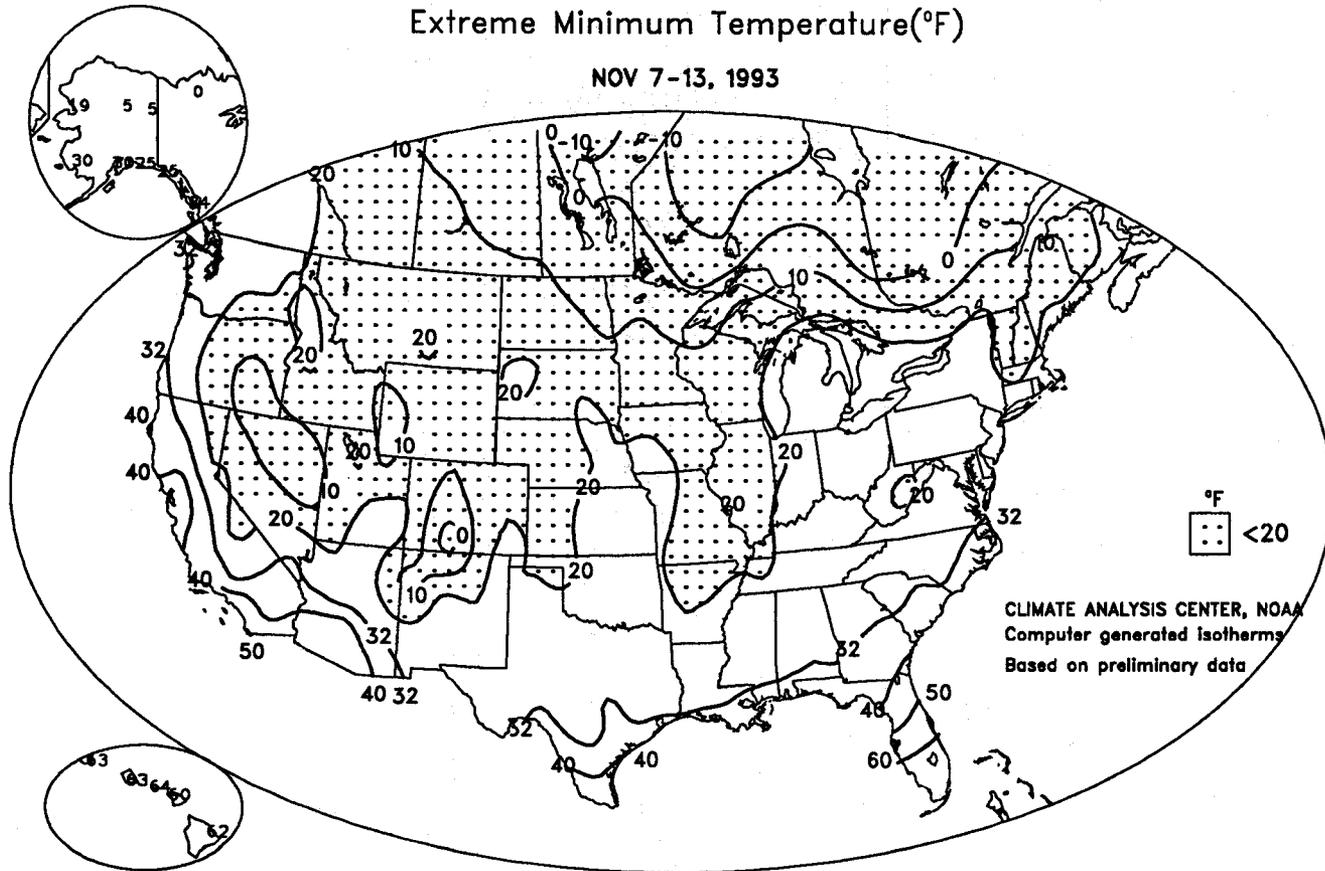
Departure of Average Temperature from Normal(°F)

NOV 7-13, 1993



Extreme Minimum Temperature(°F)

NOV 7-13, 1993



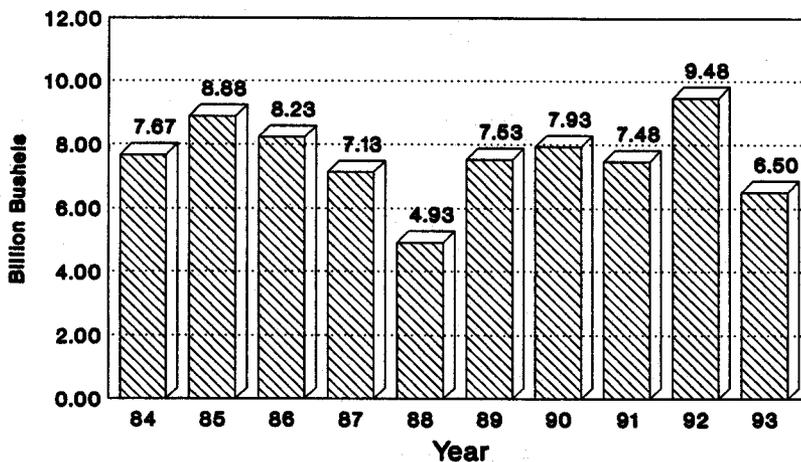
U.S. Crop Production Highlights

The following information was released by USDA's Agricultural Statistics Board on November 9, 1993.

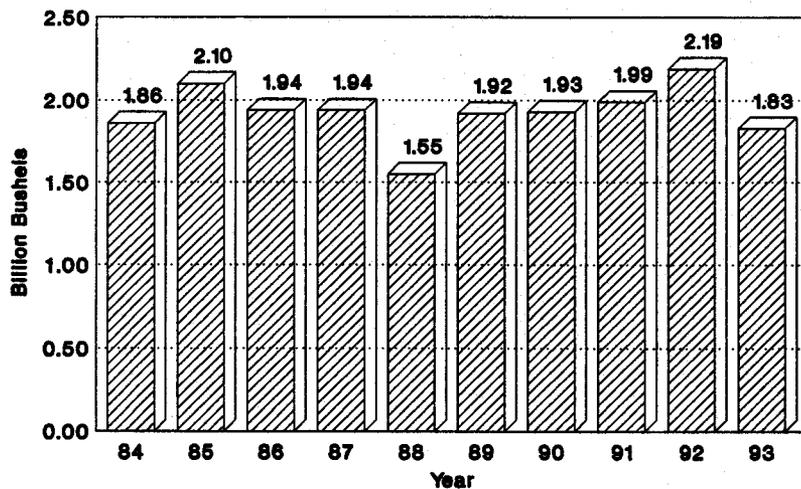
Corn production is forecast at 6.50 billion bushels, down 7 percent from the October 1 forecast and 31 percent below the record high production of 1992. Yields are expected to average 103.1 bushels per acre, down 7.2 bushels from last month and 28.3 bushels below the record high yield of 131.4 bushels set last year. Acreage for harvest as grain is estimated at 63.1 million acres, down 15,000 acres from last month. Yields are down sharply from last month in the western Corn Belt as the late-maturing crop was hit hard by an early October frost. Low grain weights per ear and low test weights resulted in much lower yields than previously expected.

Soybean production is forecast at 1.83 billion bushels as of November 1, down 3 percent from the October 1 forecast and 16 percent below 1992. If realized, this would be the lowest production since 1988. Yield is forecast at 32.7 bushels per acre, 1.0 bushel below October 1 and 4.9 bushels below 1992. Area to be harvested, at 56.0 million acres, is down 10,000 acres from the October 1 estimate.

U.S. Corn Production 1984 - 1993



U.S. Soybean Production 1984 - 1993



National Weather Data for Selected Cities

Weather Data for the Week Ending November 13, 1993

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	63	38	77	24	51	-4	.0	-1.0	.0	8.6	102	33.6	72	85	44	0	3	0	0	0		
MOBILE	65	46	75	31	55	-2	.2	-1.6	.2	9.3	89	54.5	97	91	57	0	1	2	0	0		
MONTGOMERY	68	40	84	32	54	-3	.0	-1.0	.0	10.6	135	45.5	96	88	41	0	1	0	0	0		
AK ANCHORAGE	44	34	48	32	39	17	.9	.7	.2	7.5	144	16.0	112	91	62	0	1	6	0	0		
BARRROW	19	12	27	2	16	15	T	T	T	2.1	178	5.0	123	89	82	0	7	0	0	0		
FAIRBANKS	31	18	36	9	25	19	.4	.2	.2	3.6	168	10.4	109	92	81	0	7	4	0	0		
JUNEAU	45	39	53	33	42	9	3.9	2.7	1.9	20.1	119	51.7	109	98	83	0	0	7	2	0		
KODIAK	49	37	53	32	43	7	.2	-1.2	.2	18.2	108	64.3	112	88	59	0	1	1	0	0		
NOME	36	31	39	25	33	15	.9	.6	.3	7.8	183	16.9	125	98	87	0	4	7	0	0		
AZ PHOENIX	73	52	82	48	63	-1	.6	.5	.5	2.0	110	11.2	177	72	29	0	0	3	0	0		
PRESCOTT	59	32	68	26	45	0	.3	-1.1	.1	2.0	52	15.5	90	74	34	0	4	2	0	0		
TUCSON	74	47	86	42	61	0	.4	.3	.4	1.7	56	14.3	135	73	28	0	0	0	0	0		
YUMA	79	55	85	50	67	0	T	-1.1	T	.2	32	3.7	145	59	19	0	0	0	0	0		
AR FORT SMITH	65	40	77	22	52	0	1.3	.4	1.1	12.8	147	42.2	118	91	56	0	2	3	1	1		
LITTLE ROCK	63	44	77	26	54	0	1.3	.2	.7	8.1	78	37.9	91	72	48	0	2	3	2	0		
CA BAKERSFIELD	69	46	79	41	57	0	.2	-1.1	.2	.4	54	7.0	149	66	37	0	0	0	0	0		
EUREKA	58	44	63	40	51	-2	.2	-1.3	.2	.8	13	31.1	113	89	60	0	0	2	1	1		
FRESNO	68	44	76	39	56	0	.9	.6	.8	1.0	76	12.5	150	87	45	0	0	0	0	0		
LOS ANGELES	68	56	70	47	62	-1	.2	-2.0	.2	.3	24	18.8	203	84	59	0	0	1	0	0		
REDDING	65	39	76	34	52	-2	.1	-1.0	.1	3.1	59	39.3	160	84	35	0	0	0	0	0		
SACRAMENTO	65	43	74	37	54	-1	.9	.2	.5	1.3	53	20.4	153	98	50	0	0	0	0	0		
SAN DIEGO	68	56	71	51	62	-1	.2	-1.1	.1	.4	39	15.9	214	86	64	0	0	0	0	0		
SAN FRANCISCO	65	50	71	44	57	1	.2	-1.5	.2	.6	24	20.0	135	83	59	0	0	0	0	0		
CO DENVER	52	26	67	21	39	-2	.5	.3	.5	5.3	200	13.7	96	85	31	0	7	0	0	0		
GRAND JUNCTION	50	26	57	19	38	-7	.3	.1	.3	2.1	77	11.1	120	84	34	0	6	3	0	0		
PUEBLO	56	20	68	14	38	-5	T	-1.1	T	1.2	72	13.5	128	92	32	0	0	0	0	0		
CT BRIDGEPORT	54	32	61	27	43	-5	T	-1.9	T	11.0	141	31.6	88	80	39	0	7	4	0	0		
HARTFORD	50	24	57	22	37	-7	T	-1.9	T	10.1	112	38.3	101	85	40	0	7	1	0	0		
DC WASHINGTON	57	37	69	31	47	-5	.1	-1.6	.1	6.5	85	32.5	96	93	49	0	1	1	0	0		
FL APALACHICOLA	68	49	77	42	59	-5	.6	-1.1	.4	13.2	108	47.4	97	91	69	0	0	0	0	0		
DAYTONA BEACH	74	54	80	50	64	-3	.9	.2	.8	9.1	78	32.9	75	98	66	0	0	2	1	1		
JACKSONVILLE	67	48	82	42	58	-8	1.0	.5	.6	19.2	162	45.3	100	97	68	0	0	0	0	0		
KEY WEST	84	75	86	73	80	3	.1	-1.6	.1	11.9	102	33.7	93	90	74	0	0	2	1	1		
MIAMI	84	72	87	69	78	4	5.8	5.1	5.7	25.6	175	60.2	114	91	69	0	0	0	0	0		
ORLANDO	77	57	86	53	67	-2	.1	-1.5	.0	10.0	106	43.7	98	92	62	0	0	2	0	0		
TALLAHASSEE	69	42	82	34	55	-6	.6	-2.2	.3	9.0	90	49.3	84	93	50	0	0	2	0	0		
TAMPA	79	58	89	51	68	-1	T	-1.4	T	10.9	125	36.1	89	86	61	0	0	0	0	0		
WEST PALM BEACH	83	73	85	69	78	4	.8	-2.7	.7	19.4	116	58.3	105	90	70	0	0	2	1	1		
GA ATLANTA	62	41	74	31	52	-3	.0	-1.9	.0	9.5	118	43.3	98	81	42	0	1	0	0	0		
AUGUSTA	66	37	79	31	52	-5	T	-1.6	T	8.2	119	34.5	87	92	40	0	2	0	0	0		
MACON	65	37	77	31	51	-6	T	-1.6	T	9.5	158	45.5	118	91	42	0	2	0	0	0		
SAVANNAH	65	44	82	37	55	-6	.9	.4	.7	13.3	171	44.5	99	92	52	0	0	0	0	0		
HI HILO	80	66	82	62	73	-2	2.1	-1.3	1.6	20.0	83	89.9	83	87	61	0	0	5	1	1		
HONOLULU	83	68	86	63	76	-2	.2	-1.4	.2	2.0	46	5.4	33	79	53	0	0	2	0	0		
KAHULUI	82	68	84	60	75	-1	T	-1.6	T	2.7	106	10.2	63	76	53	0	0	0	0	0		
LIHUE	80	70	82	63	75	-1	.7	-1.4	.5	7.4	81	17.6	51	77	61	0	0	3	0	0		
ID BOISE	50	22	55	18	36	-6	T	-1.3	T	.5	22	11.4	115	87	36	0	7	0	0	0		
LEWISTON	47	26	53	24	37	-6	.1	-2.1	.1	.9	39	11.7	110	82	47	0	6	1	0	0		
POCATELLO	47	17	53	10	32	-10	.0	-3.0	.0	1.3	58	16.7	162	85	36	0	7	0	0	0		
IL CHICAGO	53	30	65	16	41	-1	.5	-2.2	.5	7.2	97	42.9	136	86	56	0	5	2	0	0		
MOLINE	54	29	61	18	42	-1	.6	.0	.6	5.1	63	48.8	138	91	52	0	6	1	1	1		
PEORIA	56	33	67	19	45	1	.5	-1.1	.5	10.6	137	51.3	159	88	53	0	3	2	1	1		
QUINCY	54	28	61	18	45	0	.9	-2.2	.9	9.4	100	34.8	97	80	48	0	2	1	1	1		
ROCKFORD	52	28	63	14	40	-1	.5	-2.5	.5	5.1	64	40.0	122	90	49	0	5	1	0	0		
SPRINGFIELD	56	35	70	16	46	0	.5	-1.1	.4	9.5	136	44.0	142	81	50	0	3	2	0	0		
IN EVANSVILLE	58	34	69	24	46	-4	1.1	.1	1.0	10.7	137	37.9	96	86	47	0	5	2	1	1		
FORT WAYNE	54	32	65	22	43	-1	.5	-1.1	.4	6.8	108	37.3	124	86	57	0	5	2	0	0		
INDIANAPOLIS	55	33	66	21	44	-1	1.0	.3	.9	9.1	134	41.5	120	82	49	0	4	2	1	1		
SOUTH BEND	52	31	66	21	41	-2	.4	-1.3	.4	12.6	155	43.5	128	87	52	0	6	2	0	0		
IA DES MOINES	55	28	58	20	42	1	.5	.1	.5	8.0	107	54.5	172	89	52	0	6	1	1	1		
SIoux CITY	53	24	56	18	38	-1	.6	.4	.6	3.8	72	31.6	129	94	49	0	7	2	1	1		
WATERLOO	50	25	54	18	38	-1	.4	.0	.4	5.1	73	51.7	165	92	53	0	6	1	0	0		
KS CONCORDIA	58	31	66	22	44	0	.4	.1	.4	4.4	78	43.2	158	88	42	0	4	1	0	0		
DODGE CITY	58	29	69	20	44	-2	.2	.0	.2	2.1	58	25.1	123	89	40	0	4	1	0	0		
GOODLAND	55	26	63	17	40	0	.4	.3	.4	2.7	97	19.8	114	88	37	0	7	2	0	0		
GOODYEAR	59	35	64	25	47	1	.8	.3	.7	9.2	118	46.0	140	98	51	0	4	3	1	1		
TOPEKA	59	34	71	26	47	-1	.3	-1.2	.2	3.7	47	31.2	97	91	48	0	4	2	0	0		
NICHITA	59	34	71	26	47	-1	.3	-1.2	.2	3.7	47	31.2	97	91	48	0	4	2	0	0		
KY BOWLING GREEN	58	31	69	19	44	-5	.5	-1.5	.5	7.2	84	29.7	69	99	48	0	5	1	1	1		
LEXINGTON	56	34	65	24	45	-3	1.5	.8	1.5	9.0	126	38.7	100	82	45	0	4	1	1	1		
LOUISVILLE	58	34	68	24	46	-3	1.0	.1	1.0	9.0	122	42.7	111	87	48	0	4	1	1	1		
LA BATON ROUGE	65	46	80	28	55	-6	.6	-1.3	.6	8.0	80	55.0	104	96	56	0	1	3	1	1		
LAKE CHARLES	68	51	83	31	59	-2	1.2	.2	.7	7.1	63	52.0	110	94	59	0	1	2	1	1		
NEW ORLEANS	67	48	80	38	57	-5	.5	-1.5	.5	7.2	70	48.4	91	95	65	0	0	2	0	0		
SHREVEPORT	68	45	85	24	57	0	.2	-1.8	.1	8.5	91	51.4	122	95	55	0	2	3	0	0		

Based on 1961-90 normals.

Weather Data for the Week Ending November 13, 1993

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	.01 INCH OR MORE		.50 INCH OR MORE	
																		OR MORE	OR MORE	OR MORE	OR MORE
ME CARIBOU	38	24	47	16	31	-3	.2	-.6	.1	11.1	138	34.7	111	83	55	0	7	4	0	0	
PORTLAND	49	24	55	19	37	-1	.2	-1.1	.1	9.2	100	35.7	97	84	44	0	7	2	0	0	
MD BALTIMORE	57	33	66	27	45	-1	.1	-.6	.1	7.4	96	35.3	99	87	43	0	5	1	0	0	
SALISBURY	59	31	68	25	45	-5	.5	-1.7	.4	8.4	99	42.0	106	93	37	0	5	0	0	0	
MA BOSTON	52	34	56	31	43	-5	.4	-1.0	.4	8.8	107	34.2	98	71	42	0	1	1	0	0	
CHATHAM	51	37	55	32	44	-2	.4	-1.0	.4	9.3	98	32.4	85	84	61	0	1	0	0	0	
MI ALPENA	42	32	57	25	37	-1	.2	-.3	.2	5.0	81	24.4	96	89	59	0	5	2	0	0	
DETROIT	53	33	62	28	43	0	.1	-.1	.1	6.7	111	28.4	101	82	46	0	4	1	0	0	
FLINT	48	29	60	24	39	-3	.3	-.5	.1	7.2	105	29.6	111	87	57	0	5	1	0	0	
GRAND RAPIDS	47	30	63	23	38	-2	.4	-.3	.3	13.3	157	43.7	140	89	61	0	5	3	0	0	
HOUGHTON LAKE	43	31	55	26	37	-1	.2	-.4	.2	4.5	69	25.0	100	89	60	0	5	2	0	0	
LANSING	48	28	60	20	38	-1	.2	-.1	.4	8.2	105	33.7	121	94	54	0	6	2	0	0	
MARQUETTE	34	23	44	11	28	-4	.6	-.1	.4	9.6	107	30.8	99	90	66	0	7	4	0	0	
MUSKEGON	46	30	57	23	38	-3	.4	-.3	.2	7.0	87	33.8	122	92	69	0	6	4	0	0	
SAULT ST. MARIE	37	27	47	20	32	-4	.5	-.3	.4	10.0	119	30.0	102	88	62	0	6	3	0	0	
MN ALEXANDRIA	33	20	36	14	27	-6	.6	-.3	.6	3.1	56	25.4	105	97	74	0	7	1	1	1	
DULUTH	31	16	36	7	23	-8	.1	-.3	.1	3.3	47	29.5	106	90	66	0	7	5	0	0	
INT'L FALLS	31	13	39	6	22	-6	.2	-.1	.1	3.1	54	20.5	90	91	64	0	7	4	0	0	
MINNEAPOLIS	39	25	43	18	32	-4	.6	-.2	.4	3.9	68	31.2	118	86	60	0	6	4	0	0	
ROCHESTER	42	24	52	13	33	-3	.4	-.0	.3	4.1	63	37.3	134	92	58	0	6	4	0	0	
MS GREENWOOD	69	41	83	24	55	-1	.0	-1.1	.0	7.3	81	37.2	82	88	34	0	6	4	0	0	
JACKSON	64	41	74	24	53	-4	.1	-1.0	.0	6.4	78	40.1	87	98	47	0	2	2	0	0	
MERIDIAN	67	40	77	29	54	-3	.1	-.8	.1	8.5	102	47.2	99	93	44	0	2	2	0	0	
MO CAPE GIRARDEAU	58	36	73	18	47	1	.1	-.7	.1	10.9	133	41.8	106	88	47	0	3	3	0	0	
COLUMBIA	58	35	61	16	47	1	1.1	-.3	.6	15.2	176	57.9	169	90	48	0	2	2	1	1	
KANSAS CITY	58	37	61	25	47	1	1.4	-.9	1.3	10.8	119	49.7	142	87	53	0	4	3	1	1	
SAINT LOUIS	60	40	75	22	50	1	1.2	-.5	.8	13.1	182	49.7	153	82	44	0	1	2	1	1	
SPRINGFIELD	60	37	65	19	49	1	2.2	1.3	1.4	21.2	209	52.5	136	90	55	0	2	2	2	2	
MT BILLINGS	48	27	54	22	38	0	.7	-.2	.7	4.0	139	15.4	111	82	40	0	6	1	0	0	
GLASGOW	43	21	49	17	32	-.1	.1	-.0	.1	1.2	67	15.7	150	91	58	0	7	1	0	0	
GREAT FALLS	43	24	52	15	34	-.2	.2	-.0	.2	3.5	154	22.5	161	84	54	0	7	1	0	0	
HAVRE	44	21	51	13	33	-.0	.1	-.1	.4	2.2	112	18.5	173	82	46	0	6	1	0	0	
HELENA	45	24	54	17	34	-.2	.1	-.1	.4	2.6	100	20.6	148	92	58	0	7	1	0	0	
KALISPELL	42	20	45	17	31	-.3	.1	-.3	.1	1.3	55	18.4	140	92	48	0	7	1	0	0	
MILES CITY	46	23	53	20	35	-.2	.1	-.1	.1	1.3	55	18.4	140	92	48	0	7	1	0	0	
MISSOULA	41	23	49	16	32	-.2	.1	-.2	.4	1.0	110	13.3	112	95	64	0	7	0	0	0	
NE GRAND ISLAND	57	26	60	20	41	1	.7	-.4	.7	3.7	79	32.5	137	90	43	0	5	1	1	1	
LINCOLN	56	27	61	20	42	0	.4	-.1	.4	5.5	89	25.3	94	94	42	0	5	1	0	0	
NORFOLK	54	25	58	20	40	1	.5	-.2	.5	5.0	111	33.5	140	91	45	0	6	1	0	0	
NORTH PLATTE	56	22	63	14	39	1	.8	-.7	.8	3.1	108	25.5	138	91	38	0	7	1	1	1	
OMAHA	55	32	60	24	44	2	.5	-.1	.5	5.5	82	41.2	148	84	50	0	4	1	0	0	
SCOTTSBLUFF	48	20	56	14	34	-.4	1.5	1.3	1.4	6.0	276	23.5	164	85	33	0	7	2	1	1	
VALENTINE	49	18	63	15	34	-.6	.7	-.5	.7	3.6	90	20.0	93	85	40	0	7	1	1	1	
NV ELY	47	17	56	4	32	-4	.6	-.4	.5	1.7	78	9.8	107	86	31	0	6	3	0	0	
LAS VEGAS	65	42	71	37	53	-4	.1	-.0	.1	1.1	17	4.8	138	72	24	0	0	2	0	0	
RENO	60	31	66	23	46	4	.7	-.2	.7	1.4	134	6.3	106	76	26	0	4	2	0	0	
WINNEMUCCA	55	18	63	6	37	-3	.1	-.2	.1	.6	42	6.8	100	87	20	0	7	1	0	0	
NH CONCORD	48	17	54	12	33	-7	.1	-.8	.1	8.2	108	25.2	81	91	39	0	7	1	0	0	
NJ ATLANTIC CITY	56	28	65	21	42	-6	.7	-.8	.7	6.9	95	33.8	97	92	48	0	5	1	0	0	
NM ALBUQUERQUE	61	32	67	25	47	0	.5	-.4	.4	1.7	79	8.3	103	79	24	0	4	2	0	0	
CLOVIS	62	34	67	23	48	-1	.3	-.1	.2	2.1	55	14.0	84	79	32	0	4	2	0	0	
ROSWELL	67	34	75	20	51	-2	.1	-.1	.1	1.5	44	9.8	83	84	36	0	3	1	0	0	
NY ALBANY	48	25	54	21	36	-6	.1	-.7	.0	7.1	99	34.9	111	88	45	0	7	2	0	0	
BINGHAMTON	44	28	50	25	36	-4	.1	-.6	.1	8.1	106	36.3	113	81	48	0	6	2	0	0	
BUFFALO	50	32	62	28	41	-1	.1	-.8	.1	9.9	121	34.2	105	77	47	0	5	2	0	0	
NEW YORK	55	39	62	33	47	-2	.7	-.9	.7	9.8	122	37.9	104	70	45	0	0	1	0	0	
ROCHESTER	50	32	58	27	41	-2	.1	-.5	.1	8.3	124	24.9	90	83	45	0	5	1	0	0	
SYRACUSE	50	30	58	27	40	-3	.2	-.7	.1	13.0	150	43.4	129	88	48	0	7	3	0	0	
NC ASHVILLE	57	29	66	23	43	-6	.0	-1.0	.0	3.1	29	31.5	64	90	40	0	6	0	0	0	
CHARLOTTE	61	37	71	33	49	-5	.0	-.7	.0	4.1	49	30.7	81	84	37	0	0	0	0	0	
GREENSBORO	59	32	68	25	46	-6	.0	-.7	.0	5.3	63	37.7	100	89	44	0	4	0	0	0	
HATTERAS	64	50	78	46	57	-1	2.0	-.8	1.1	17.1	137	53.5	110	91	60	0	0	2	2	0	0
NEW BERN	62	41	77	35	52	-5	.1	-.6	.1	9.1	96	42.1	87	97	49	0	0	2	0	0	
RALEIGH	61	33	76	29	47	-6	.0	-.7	.0	7.3	100	32.5	89	92	39	0	4	0	0	0	
WILMINGTON	64	42	78	34	53	-4	.1	-.6	.1	16.9	147	57.0	112	95	46	0	0	2	0	0	
ND BISMARCK	38	21	41	19	29	-2	.7	-.1	.7	.4	14	25.2	171	97	62	0	7	1	0	0	
FARGO	35	18	40	9	27	-5	.1	-.1	.1	1.2	30	19.6	106	87	62	0	7	2	0	0	
GRAND FORKS	32	15	36	6	23	-7	.7	-.2	.7	1.3	34	20.3	117	94	67	0	7	0	0	0	
WILLISTON	39	19	45	13	29	-1	.1	-.0	.0	.6	27	17.9	139	92	64	0	7	4	0	0	
OH AKRON-CANTON	50	33	59	24	42	-3	.3	-.3	.3	9.2	133	33.4	104	82	48	0	4	1	0	0	
CINCINNATI	55	32	65	22	44	-3	.9	-.1	.9	6.5	90	33.1	91	79	47	0	4	2	1	1	
CLEVELAND	53	34	63	26	43	-2	.1	-.6	.1	10.0	136	34.9	110	83	47	0	4	1	0	0	
COLUMBUS	53	33	60	24	43	-1	1.3	-.6	1.3	6.3	92	32.7	100	87	52	0	5	1	1	1	
DAYTON	54	34	64	24	44	-1	1.3	-.6	1.3	9.4	149	44.9	141	81	51	0	4	2	1	1	

Based on 1961-90 normals.

Weather Data for the Week Ending November 13, 1993

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	MINIMUM	90 AND ABOVE		32 AND BELOW	
													90 AND ABOVE					32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
TOLEDO	52	31	63	24	41	-1	.1	-1.5	.1	6.2	101	26.1	92	87	54	0	0	5	1	0	0
YOUNGSTOWN	51	35	61	23	42	-1	.1	-1.6	.1	6.7	91	29.6	91	82	47	0	0	4	1	0	0
OK OKLAHOMA CITY	60	38	68	23	49	-1	.9	.4	.5	4.7	58	31.2	101	96	50	0	0	3	3	2	1
TULSA	62	39	67	28	50	-1	.9	.2	.8	9.0	91	36.6	100	96	59	0	0	3	2	3	1
OR ASTORIA	53	32	56	30	42	-1	.1	-2.2	.0	3.1	24	37.3	75	97	71	0	0	5	2	0	0
BURNS	49	15	55	8	32	-1	.3	-1.3	.4	22	8.4	104	77	30	0	0	7	2	0	0	
MEDFORD	55	28	62	25	42	-1	.4	-1.7	.7	19	13.6	100	91	46	0	0	6	1	0	0	
PENDLETON	47	28	49	21	36	-1	.2	-1.3	.2	12	12.0	126	87	51	0	0	7	1	0	0	
PORTLAND	52	32	56	28	42	-1	.2	-1.2	.7	17	24.0	89	98	56	0	0	5	1	0	0	
SALEM	51	31	59	27	41	-1	.1	-1.3	.1	1.3	19	26.7	93	93	54	0	0	4	2	0	0
PA ALLENTOWN	52	27	61	21	39	-1	.2	-1.7	.2	13.4	158	45.5	120	91	48	0	0	5	1	0	0
ERIE	51	35	62	27	43	-1	.3	-1.6	.2	9.8	99	31.9	90	79	42	0	0	3	2	0	0
HARRISBURG	53	31	64	24	42	-1	.3	-1.5	.3	11.1	140	40.7	115	89	42	0	0	5	1	0	0
PHILADELPHIA	58	37	67	31	47	-1	.1	-1.8	.1	9.7	108	36.7	92	86	47	0	0	1	1	0	0
PITTSBURGH	52	32	60	22	42	-1	.9	-1.3	.9	7.8	120	33.0	102	79	45	0	0	4	1	1	1
SCRANTON	48	29	54	24	39	-1	.7	-1.7	.7	10.9	146	33.5	105	81	50	0	0	5	1	0	0
RI PROVIDENCE	53	28	58	24	40	-1	.5	-1.0	.5	8.3	92	33.7	87	79	44	0	0	6	0	0	0
SC CHARLESTON	64	43	80	37	54	-1	.5	.0	.4	10.5	121	49.3	105	91	50	0	0	0	2	0	0
COLUMBIA	64	35	76	29	49	-1	.0	-1.7	.0	8.5	107	35.0	78	93	41	0	0	3	0	0	0
FLORENCE	65	39	81	32	52	-1	.0	-1.6	.0	6.2	88	30.6	78	93	39	0	0	1	0	0	0
GREENVILLE	61	33	70	27	47	-1	.0	-1.8	.0	5.0	53	33.9	75	88	36	0	0	3	0	0	0
SD ABERDEEN	40	22	43	17	31	-1	.5	-1.3	.5	2.2	58	26.3	130	92	63	0	0	7	3	0	0
BURON	44	23	54	19	34	-1	1.0	-1.8	1.0	3.4	96	28.6	148	94	56	0	0	7	2	1	0
RAPID CITY	50	26	59	22	38	-1	.1	-1.1	.1	2.4	92	18.7	118	83	35	0	0	7	1	0	0
SIoux FALLS	45	24	53	19	35	-1	.9	-1.7	.8	3.5	65	35.3	156	96	54	0	0	7	2	2	1
TN CHATTANOOGA	62	35	71	27	48	-1	.4	-1.0	.4	4.6	50	32.6	72	96	45	0	0	4	0	0	0
KNOXVILLE	58	32	75	26	45	-1	.0	-1.8	.0	8.0	108	35.7	88	95	53	0	0	5	0	0	0
MEMPHIS	63	41	77	25	52	-1	.5	-1.7	.3	6.2	72	34.8	80	85	41	0	0	2	2	0	0
NASHVILLE	60	34	74	23	47	-1	.1	-1.8	.1	5.4	70	35.3	88	85	44	0	0	5	1	0	0
TX ABILENE	66	46	77	30	56	-1	.1	-1.4	.1	5.6	87	17.5	77	95	55	0	0	1	0	0	0
AMARILLO	58	32	64	23	45	-1	.4	-2.2	.2	1.9	51	17.2	92	94	45	0	0	4	2	0	0
AUSTIN	68	52	82	31	60	-1	.1	-1.5	.0	3.3	42	24.9	87	96	66	0	0	1	3	0	0
BEAUMONT	79	62	82	31	61	-1	1.5	-1.4	1.4	10.1	80	61.6	124	96	62	0	0	1	2	1	0
BROWNSVILLE	69	65	85	47	72	-1	.2	-2.2	.1	7.5	79	24.6	100	93	73	0	0	0	3	0	0
CORPUS CHRISTI	74	60	86	40	67	-1	.4	-1.0	.3	3.6	39	32.7	116	97	68	0	0	0	2	0	0
DEL RIO	69	53	81	35	61	-1	.1	-1.3	.0	1.5	24	14.2	62	92	62	0	0	0	4	0	0
EL PASO	72	43	78	31	57	-1	.1	-1.0	.1	1.6	60	8.6	106	74	27	0	0	1	1	0	0
FORT WORTH	66	50	79	29	58	-1	.3	-1.6	.7	8.7	88	29.0	85	94	67	0	0	1	2	0	0
GALVESTON	68	59	76	41	64	-1	.9	-1.1	.6	13.1	129	43.7	119	96	76	0	0	0	2	1	1
HOUSTON	68	53	83	29	61	-1	.8	-1.4	.8	7.6	61	53.2	115	95	69	0	0	1	2	0	0
LUBBOCK	62	38	70	29	50	-1	.1	-1.1	.1	.8	17	12.2	69	90	44	0	0	3	1	0	0
MIDLAND	69	43	75	26	56	-1	.1	-1.1	.1	3.3	66	16.1	112	93	46	0	0	1	1	0	0
SAN ANGELO	69	49	81	32	59	-1	.2	-1.3	.2	3.1	48	14.9	77	94	53	0	0	1	1	0	0
SAN ANTONIO	71	54	85	28	62	-1	.2	-1.5	.1	4.0	51	31.4	111	96	64	0	0	1	0	0	0
VICTORIA	70	56	81	34	63	-1	.4	-1.5	.2	5.1	41	47.1	116	97	70	0	0	1	4	0	0
WACO	65	49	80	26	57	-1	.1	-1.5	.1	9.2	115	28.6	99	99	66	0	0	0	2	0	0
WICHITA FALLS	63	44	75	28	53	-1	.1	-1.4	.1	5.3	64	28.6	99	99	66	0	0	1	3	0	0
UT CEDAR CITY	55	28	64	18	41	-1	.6	-1.4	.5	1.8	74	9.7	95	94	52	0	0	2	0	0	0
SALT LAKE CITY	51	28	56	24	40	-1	.0	-1.3	.0	3.0	91	17.5	124	90	29	0	0	4	3	1	0
VT BURLINGTON	47	30	51	20	38	-1	.0	-1.7	.7	8.4	111	31.1	103	77	46	0	0	7	0	0	0
VA NORFOLK	60	39	75	32	49	-1	.4	-1.3	.3	8.1	97	32.3	81	92	45	0	0	3	1	0	0
RICHMOND	61	35	72	29	48	-1	.4	-1.7	.7	6.9	72	35.9	94	88	40	0	0	4	0	0	0
ROANOKE	58	30	67	23	44	-1	.5	-1.8	.8	6.6	79	32.0	88	83	41	0	0	5	0	0	0
WA QUILLAYUTE	52	31	56	28	42	-1	.3	-1.3	.3	3.1	51.3	63	98	66	0	0	5	2	0	0	
SEATTLE-TACOMA	50	36	52	33	43	-1	.0	-1.3	.0	1.6	22	22.2	80	97	69	0	0	0	0	0	0
SPOKANE	44	19	50	17	32	-1	.5	-1.5	.5	.7	29	11.2	88	93	58	0	0	7	0	0	0
YAKIMA	52	18	55	15	35	-1	.0	-2.0	.0	.5	43	5.2	87	91	43	0	0	7	0	0	0
WV BRICKLEY	53	31	63	20	42	-1	.1	-1.6	.1	7.9	105	33.6	93	81	34	0	0	5	1	0	0
CHARLESTON	57	32	66	22	45	-1	1.1	-1.3	1.1	11.1	146	36.1	97	88	39	0	0	5	2	1	1
HUNTINGTON	58	32	66	20	45	-1	1.2	-1.3	1.2	9.2	119	36.5	97	85	35	0	0	5	1	1	1
PARKERSBURG	55	31	64	20	43	-1	.8	-1.1	.7	7.4	109	34.2	94	89	38	0	0	5	2	1	1
WI GREEN BAY	44	29	57	19	36	-1	.5	-1.1	.3	6.0	89	32.7	125	83	60	0	0	5	4	0	0
LACROSSE	45	28	53	17	36	-1	.4	-1.4	.4	2.7	40	39.5	139	93	57	0	0	4	0	0	0
MADISON	50	27	60	18	38	-1	.4	-1.1	.3	5.0	71	41.9	143	85	53	0	0	6	3	0	0
MILWAUKEE	51	34	65	20	42	-1	.5	-1.2	.4	4.9	70	34.7	119	87	58	0	0	3	2	0	0
WAUSAU	39	27	51	13	33	-1	.4	-2.0	.3	7.4	93	35.0	115	86	53	0	0	6	2	0	0
WY CASPER	47	22	58	14	34	-1	.4	-2.2	.2	2.7	121	15.0	131	86	34	0	0	7	2	0	0
CHEYENNE	45	23	57	16	34	-1	.8	-1.6	.8	5.9	259	18.3	134	86	32	0	0	7	2	1	0
LANDER	40	20	45	14	30	-1	.5	-1.3	.4	3.0	116	15.8	131	82	47	0	0	7	2	0	0
SHERIDAN	46	22	57	18	34	-1	.1	-1.1	.1	2.6	88	16.5	123	88	46	0	0	7	1	0	0

Based on 1961-90 normals.

HEATING DEGREE DAYS (Base 65° F) November 7 - 13, 1993

(Cumulative totals and departures from normal are for the period July 1 - November 13, 1993)

STATES AND STATIONS	WEEKLY		CUMULATIVE			STATES AND STATIONS	WEEKLY		CUMULATIVE			STATES AND STATIONS	WEEKLY		CUMULATIVE		
	TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP from 92		TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP from 92		TOTAL	DEPARTURE	TOTAL	DEPARTURE	DEP from 92
AL BIRMINGHAM	103	30	357	72	75	LA BATON ROUGE	77	39	222	111	113	TULSA	103	13	553	238	170
AL HUNTSVILLE	110	26	430	97	92	LAKE CHARLES	56	20	167	72	72	OR ASTORIA	158	38	1142	43	37
AL MOBILE	72	33	194	78	72	NEW ORLEANS	64	32	154	69	69	EUGENE	174	51	768	26	148
AL MONTGOMERY	81	25	264	80	82	SHREVEPORT	74	22	290	142	126	MEDFORD	162	27	607	-63	135
AK ANCHORAGE	180	-117	1972	-477	-703	ME BANGOR	209	29	1256	122	-60	NORTH BEND	124	26	1013	0	145
AK BARRON	342	-109	4300	-789	-825	PORTLAND	197	29	1131	79	-52	PENDLETON	203	50	804	-40	42
AK BETHEL	202	-122	2470	-500	-702	MD BALTIMORE	137	23	609	104	07	PORTLAND	160	37	590	-119	05
AK COLD BAY	156	-54	2222	-337	-441	MA BOSTON	154	32	746	132	-87	REDMOND	217	40	1391	119	248
AK FAIRBANKS	281	-139	2560	-403	-859	MI ALPENA	194	5	1452	194	-116	SALEM	164	32	697	-144	64
AK JUNEAU	160	-63	1700	-463	-437	DETROIT	154	-4	861	28	-107	PA ALLENTOWN	178	40	840	132	-33
AK KING SALMON	183	-106	2142	-592	-753	FLINT	184	21	1190	259	68	BRADFORD	202	15	1332	5	-57
AK KOTZEBUE	266	-119	3057	-395	-681	GRAND RAPIDS	185	11	1144	193	22	ERIE	150	12	878	164	44
AK MCCRATH	229	-177	2574	-573	-840	LANSING	187	16	1174	202	-45	PHILADELPHIA	122	5	484	-36	-81
AK NOME	220	-109	2915	-387	-775	MUSKOGON	185	20	1120	204	16	PITTSBURGH	158	13	836	65	-27
AK ST PAUL ISLAND	176	-42	2506	-471	-512	TRVERSE CITY	181	3	1179	107	-114	SCRANTON	185	35	971	161	42
AK YAKUTAT	177	-52	1955	-427	-566	MN DULUTH	290	56	1871	295	23	WILLIAMSSPORT	187	40	934	149	63
AZ FLAGSTAFF	194	7	1152	-64	64	INT'L FALLS	298	43	1985	316	70	RI PROVIDENCE	172	39	807	116	00
AZ PHOENIX	21	-3	21	-33	01	MINNEAPOLIS	228	27	1292	238	67	SC CHARLESTON	81	37	187	37	48
AZ TUCSON	30	-3	44	-38	-30	ROCHESTER	221	16	1389	266	-24	COLUMBIA	110	44	306	47	47
AR FORT SMITH	89	3	427	133	126	MS JACKSON	93	33	350	138	164	GREENVILLE	123	40	433	108	07
AR LITTLE ROCK	84	5	395	126	123	MERIDIAN	87	23	289	51	105	SD ABERDEEN	235	14	1329	154	-72
CA FRESNO	62	-5	93	-108	-22	MO COLUMBIA	126	-3	766	205	100	HURON	216	8	1293	212	05
CA LOS ANGELES	21	-3	28	-67	23	KANSAS CITY	123	-12	753	179	79	PIERRE	212	14	1176	194	51
CA SACRAMENTO	76	7	139	-68	11	SAINT LOUIS	106	-9	582	126	72	RAPID CITY	188	-6	1203	96	22
CA SAN DIEGO	18	-2	28	-37	15	SPRINGFIELD	113	-5	664	168	130	STOUC FALLS	211	8	1228	167	27
CA SAN FRANCISCO	52	-11	242	-241	34	MT BILLINGS	191	-3	1284	149	170	TN BRISTOL	150	36	633	108	54
CO COLORADO SPRINGS	197	20	1144	175	205	GLASGOW	227	-3	1519	174	105	CHATTANOOGA	115	26	385	33	-24
CO DENVER	178	9	991	120	195	GREAT FALLS	217	16	1730	405	279	KNOXVILLE	139	36	521	86	78
CO GRAND JUNCTION	187	31	804	147	207	HAVRE	225	-4	1622	241	123	MEMPHIS	94	17	370	99	104
CT HARTFORD	191	45	942	185	-24	HELENA	214	-4	1640	217	264	NASHVILLE	126	34	495	120	114
DE WILMINGTON	135	18	587	58	-49	KALISPELL	237	11	1791	78	200	TX ABILENE	63	0	336	152	179
DC WASHINGTON	126	33	488	118	-35	MISSOULA	228	14	1540	64	158	AMARILLO	139	20	644	188	170
FL DAYTONA BEACH	16	2	51	29	37	NE GRAND ISLAND	163	-10	964	148	15	AUSTIN	53	22	171	106	89
FL FORT MYERS	0	-3	14	11	14	NORTH PLATTE	183	-8	1114	136	60	BROWNSVILLE	7	0	62	52	42
FL JACKSONVILLE	55	28	109	33	48	OMAHA	149	-14	932	185	74	CORPUS CHRISTI	19	3	82	58	39
FL KEY WEST	0	0	0	0	00	SCOTTSBLUFF	214	29	1217	230	182	DALLAS FT WORTH	65	11	291	153	157
FL MIAMI	0	0	4	4	04	NV ELKO	235	46	1540	374	259	EL PASO	53	-22	251	39	54
FL ORLANDO	7	0	38	25	31	ELY	229	27	1543	238	359	HOUSTON	52	20	172	87	85
FL PENSACOLA	58	24	142	45	57	LAS VEGAS	79	21	148	-4	18	LUBBOCK	104	12	446	119	170
FL TALLAHASSEE	68	28	164	51	64	RENO	133	-28	663	-273	41	LUFKIN	70	28	252	133	110
FL TAMPA	5	-8	35	16	22	WINNEMUCCA	196	19	1043	-15	85	MIDLAND ODESSA	59	-17	348	104	169
FL WEST PALM BEACH	0	0	10	10	10	NH CONCORD	225	46	1237	137	-51	SAN ANGELO	50	-9	285	112	135
GA ATHENS	112	40	349	83	57	NJ ATLANTIC CITY	157	35	724	132	04	SAN ANTONIO	43	10	175	93	87
GA ATLANTA	92	16	307	27	37	NEWARK	135	25	559	90	04	VICTORIA	36	9	130	72	66
GA AUGUSTA	92	25	250	8	33	NM ALBUQUERQUE	126	-4	532	29	118	WACO	73	29	298	188	181
GA MACON	94	34	280	68	71	NY ALBANY	199	38	1049	152	-65	WICHITA FALLS	83	7	410	174	207
GA SAVANNAH	77	39	177	48	63	BINGHAMTON	201	30	1247	209	-78	UT CEDAR CITY	166	4	850	13	126
ID BOISE	203	42	927	44	95	BUFFALO	164	8	1023	163	-21	SALT LAKE CITY	176	23	813	64	129
ID POCATELLO	230	40	1352	233	308	MASSENA	191	3	1200	20	-196	VT BURLINGTON	186	6	1164	76	-103
IL CHICAGO	165	8	983	214	27	NEW YORK	124	15	529	58	-49	VA LYNCHBURG	136	28	563	71	36
IL MOLINE	163	4	902	169	-20	ROCHESTER	166	10	1065	178	-69	NORFOLK	107	29	346	37	19
IL PEORIA	140	-8	832	164	28	SYRACUSE	176	20	1052	155	-56	RICHMOND	118	23	461	38	-33
IL ROCKFORD	172	2	1046	208	-9	NC ASHEVILLE	151	40	627	66	43	ROANOKE	146	35	618	101	27
IL SPRINGFIELD	134	-3	778	174	117	CAPE HATTERAS	53	1	119	-58	-30	WA OLYMPIA	172	22	1002	-162	80
IN EVANSVILLE	131	14	609	106	111	CHARLOTTE	109	30	356	53	39	WA QUILLAYUTE	160	20	1260	-73	32
IN FORT WAYNE	153	4	870	129	-6	GREENSBORO	134	37	505	94	11	SEATTLE TACOMA	155	25	818	-71	80
IN INDIANAPOLIS	144	6	835	198	115	RALEIGH DURHAM	125	40	445	99	39	SPOKANE	232	35	1269	61	133
IN SOUTH BEND	165	12	969	191	64	WILMINGTON	82	30	207	18	-10	YAKIMA	209	38	1042	45	107
IA DES MOINES	161	0	962	227	81	ND BISMARCK	248	15	1550	197	07	WV BECKLEY	159	20	793	0	35
IA MASON CITY	214	19	1251	227	07	FARGO	267	32	1487	172	02	CHARLESTON	140	26	650	106	44
IA SIOUX CITY	186	6	1072	228	35	MINOT	263	25	1663	242	69	HUNTINGTON	138	21	642	83	65
IA WATERLOO	190	6	1035	79	-40	WILLISTON	250	7	1717	268	129	WI EAU CLAIRE	229	22	1393	252	107
KS CONCORDIA	144	-4	786	190	28	OH AKRON CANTON	163	16	950	175	-32	GREEN BAY	200	6	1267	147	-13
KS DODGE CITY	146	11	786	261	128	CLEVELAND	153	11	859	111	-31	MADISON	184	-3	1136	88	-4
KS GOODLAND	170	1	1019	204	125	COLUMBUS	155	15	756	55	-6	MILWAUKEE	156	-17	881	-44	-137
KS RUSSELL	143	-1	763	187	99	CINCINNATI	149	18	771	163	55	WY CASPER	212	4	1211	-32	147
KS TOPKA	126	-11	738	163	80	DAYTON	147	7	834	154	52	CHYENNE	215	19	1469	237	261
KS WICHITA	125	1	637	174	134	TOLEDO	164	5	931	88	-14	LANDER	242	23	1380	137	281
KY LEXINGTON	139	20	666	124	78	YOUNGSTOWN	163	9	1001	134	-52	ROCK SPRINGS	238	12	1693	247	328
KY LOUISVILLE	131	19	605	120	140	OK OKLAHOMA CITY	109	17	521	213	188	SHERIDAN	214	2	1507	206	243

Based on 1961-90 normals.

National Agricultural Summary

November 8 - 14, 1993

HIGHLIGHTS: Cold weather and dry conditions occurred over much of the Nation early in the week, allowing the fall harvests to make good gains. A large storm at midweek brought snow to the Rockies, and rain across the middle and lower Mississippi and Ohio Valleys by the end of the week. Locally heavy rains brought flooding to parts of Missouri. California received precipitation at midweek which reduced the fire hazard and hindered harvests and fieldwork. Conditions in the Northwest remained mostly dry. Temperatures moderated and by the end of the week were well above normal across the South and the East. This week's conditions allowed the harvests of all major crops to equal or exceed the average.

SMALL GRAINS: Winter wheat emergence was at 88 percent (%), compared with 85% last year and an 88% average. Emergence was generally behind average in the Northwest, the middle Mississippi Valley, and Texas. Winter wheat condition was rated at 68% good to excellent, down slightly from last week. Where precipitation occurred last week, soil moisture increased and improved the winter wheat prospects. Wheat in the Northwest showed stress from dryness. Insect damage occurred in the Northwest, but the cool weather and spraying have limited the damage. The cool, dry conditions limited wheat emergence in Missouri. Small grain planting in the South and Southeast continued with progress generally ahead of last year and average.

CORN: Corn harvest in the 17 major producing States reached 86% complete, compared with 58% last year and an 86% average. Favorable conditions the early part of the week allowed good progress to be made across the central Great Plains, the central Corn Belt, and the upper Great Lakes region.

SOYBEANS: In the 19 major producing States, soybean harvest moved to 92% complete, compared with 91% last year and a 92% average. The harvest made good gains in Mississippi, Georgia, and the Tennessee Valley.

COTTON: Cotton harvest in the 14 producing States advanced to 83%, compared with 70% last year and a 73% average. The previous week's freeze in New Mexico and Oklahoma allowed their harvests to advance rapidly. The cold conditions also aided the harvest in northern Texas. Progress in the lower Mississippi Valley generally lagged average. Rains at the end of the week stopped the harvest in Arizona, and delayed it in parts of Texas.

SORGHUM: In the 12 major producing States, harvest reached 94% compared with 79% last year and a 93% average. This week's conditions allowed good progress to be made in the central and southern Great Plains.

OTHER FIELD CROPS: Weekend rains aided tobacco stripping in Kentucky, although the cool, dry conditions caused handling problems for producers in Tennessee. The sweetpotato harvest advanced in Louisiana with progress ahead of last year and equal to average. Although the late-week precipitation hindered the sunflower harvest in the northern Great Plains, progress was ahead of last year and near completion. The sugarcane harvest in Louisiana made good progress in spite of muddy conditions. The chile harvest advanced in New Mexico, with the crop rated mostly good. The peanut harvest advanced in Oklahoma and Texas. This summer's hot, dry conditions and the recent freeze have caused damage to the crop in parts of Texas.

FRUITS AND NUTS: Rains slowed the citrus harvests in Arizona and California. In Florida, the citrus groves were in good condition. Maturity lagged on some early citrus in Florida. The pecan harvest continued in the South and started in New Mexico. High winds caused some nuts to drop in parts of Texas. Freeze damage occurred to some grapes in Washington. The cranberry harvest ended in New England. Berries were generally medium in size.

VEGETABLES: Rains hampered the vegetable harvests in California and Arizona, and hindered field work in California and the Homestead area of Florida. However, the midweek rains in California encouraged the planting of winter crops. The vegetable crops in Texas made good progress. The harvest of cole crops in Oregon ended due to the recent frost.

PASTURE AND LIVESTOCK: Pasture feed conditions continued generally fair to good across the Nation. The mild conditions in the South and Southeast helped the growth of small grain pastures. In Iowa, a surplus of low test-weight corn has stimulated the demand for feeder cattle. Hay supplies were generally adequate across the country, but shortages remain in parts of Texas. Livestock condition was generally good across the Nation. Supplemental feeding continued where needed.

Crop Progress

for the Week Ending November 14, 1993

SOYBEANS (Percent Harvested)

	Current	Last Wk	1992	Avg.
AL	72	67	64	71
AR	74	57	84	78
GA	57	42	56	60
IL	98	97	96	99
IN	98	94	94	96
IA	100	99	100	100
KS	98	95	90	97
KY	79	63	77	79
LA	91	88	92	90
MI	100	95	75	90
MN	99	97	99	99
MS	81	65	81	81
MO	92	85	91	93
NE	100	99	100	100
NC	26	17	35	40
OH	99	98	96	95
SC	27	17	27	35
SD	100	99	100	100
TN	75	59	65	78
19 States	92	88	91	92

These 19 States produced 95% of the 1992 soybean crop.

COTTON (Percent Harvested)

	Current	Last Wk	1992	Avg.
AL	87	83	70	87
AZ	90	85	92	78
AR	89	82	85	91
CA	95	90	98	96
GA	85	84	57	75
LA	96	94	96	96
MS	90	83	92	94
MO	94	87	79	92
NM	69	58	55	44
NC	81	75	42	69
OK	67	51	37	35
SC	88	74	64	78
TN	92	88	79	87
TX	70	63	45	45
14 States	83	77	70	73

These 14 States produced 99% of the 1992 cotton crop.

SORGHUM (Percent Harvested)

	Current	Last Wk	1992	Avg.
AR	99	97	100	100
CO	75	52	63	77
IL	90	77	84	93
KS	95	80	55	96
LA	100	100	100	100
MS	100	100	100	100
MO	92	85	84	93
NE	93	86	82	94
NM	55	39	80	56
OK	70	59	76	72
SD	96	85	84	97
TX	97	93	91	92
12 States	94	86	79	93

These 12 States produced 99% of the 1992 grain sorghum crop.

Crop Condition (Percent)

for the Week Ending Nov. 14, 1993

CORN (Percent Harvested)

	Current	Last Wk	1992	Avg.
CO	81	58	76	77
GA	100	99	100	100
IL	96	86	70	92
IN	85	70	52	78
IA	92	75	58	90
KS	95	85	90	99
KY	94	89	91	91
MI	65	40	15	65
MN	80	67	48	88
MO	92	84	73	92
NE	80	69	56	89
NC	98	96	96	96
OH	80	73	35	68
PA	61	40	43	58
SD	77	54	39	86
TX	100	100	100	100
WI	70	55	34	75
17 States	86	73	58	86

These 17 States produced 94% of the 1992 corn crop.

WINTER WHEAT (Percent Emerged)

	Current	Last Wk	1992	Avg.
AR	58	44	67	62
CA	15	8	10	11
CO	99	97	99	98
GA	18	16	19	16
ID	90	86	93	91
IL	71	67	94	94
IN	87	78	86	84
KS	96	95	95	95
MI	90	80	80	90
MO	65	54	76	81
MT	83	74	98	94
NE	100	100	100	100
NC	43	30	51	44
OH	93	88	88	83
OK	93	88	69	88
OR	94	88	98	87
SD	100	100	100	100
TX	79	75	69	81
WA	92	89	98	94
19 States	88	84	85	88

These 19 States produced 90% of the 1992 winter wheat crop.

WINTER WHEAT

State	VP	P	F	G	EX
AR	0	0	15	77	8
CA	0	0	10	85	5
CO	0	3	9	61	27
GA	0	6	41	53	0
ID	0	3	26	64	7
IL	2	9	30	57	2
IN	0	9	23	63	5
KS	0	0	14	44	42
MI	2	8	25	45	20
MO	2	5	53	40	0
MT	0	8	35	42	15
NE	0	0	6	77	17
NC	0	5	35	60	0
OH	1	2	25	56	16
OK	0	0	52	48	0
OR	0	0	21	70	9
SD	0	0	19	68	13
TX	1	12	46	37	4
WA	0	0	27	72	1
19 State	0	3	29	52	16
Prev Week	0	2	29	52	17
Prev Year	2	8	32	43	15

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 3.07 in. north; 0.03 to 2.78 in. central; 0.17 to 2.72 in. south. Temperatures 4° below normal to 7° above normal north; 2 to 7° above normal central; 1 to 5° above normal south. Lows 21 to 38° north; 24 to 39° central; 30 to 43° south. Highs 75 to 81° north; 78 to 85° central; 80 to 83° south.

Days suitable for fieldwork 5.3. Soil moisture 18% short, 82% adequate. Sorghum harvested 85%, 95% 1992, 96% avg. Wheat seeded 61%, 61% 1992, 59% avg. Pasture 2% very poor, 23% poor, 52% fair, 23% good. Primary activities: Harvesting sorghum, cotton, soybeans, land preparation for seeding small grains, general care of livestock, poultry, catfish.

ARIZONA: Sunny statewide, 7th to 10th. Cloudy, rainy, snow higher elevations 11th to 13th. Temperatures varied from 4° below to 2° above normal. Extremes 14°; 77° higher elevations; 27°; 88° deserts.

Cotton harvest continued active through midweek, stopped due to rain weekend; 90% harvested, 92% 1992, 78% avg. Stalk shredding, plow down active west, central, light east; activity halted end of week. Cotton condition 15% fair, 75% good, 10% excellent. Small grains field preparations continued through mid week. Alfalfa condition good. Harvest light to moderate all areas. Sheeping off activities increasing western, central areas. End of week rains curtailed harvest of fruits, vegetables statewide. Lemons, grapefruits, naval oranges, broccoli harvested western, central areas. Central areas, tangerines, tangelos, cantaloupe, honeydews, mixed greens, parsley, green onions, beets, bok choy, cabbage, cilantro, dill, kale, leeks, swiss chard, pecans harvested. Apples, tomatoes harvested eastern production areas. Lettuce harvested western, central, eastern.

ARKANSAS: Temperatures above normal. Week began cold, became unseasonably warm by weekend. Rain, thunderstorms weekend, heaviest northwest. Extremes 16°; 83°. Rainfall 0.10 to 3.71 in.

Days suitable for fieldwork 6. Moderate rate of crop growth. Soil moisture 2% short, 90% adequate, 8% surplus. Main farming activities: Wheat seedbed preparation; shredding cotton stalks; harvesting cotton, rice, sorghum, soybeans; planting wheat, oats, fall forages; working cattle. Wheat planted 71%, 71% 1992, 75% avg. Oats planted 88%, 80% 1992, 82% avg. Pecans good. Pastures supplied average feed to herds. Livestock good.

CALIFORNIA: Rain fell nearly everywhere except southern interior by mid, late week. Temperatures near normal except southern interior.

Rain slowed field activities, moderated fire hazard. Planting winter wheat continued. Field preparation, herbicide application fall, winter planted small grains progressed. Planting winter forage crops starting. Mid week precipitation encouraged producers begin planting winter crops. Rice harvest essentially finished. Producers burned straw, stubble permitted regions. Cotton harvest winding down. Producers starting second picking some areas. Dry beans windrowed, combined few areas. 1994 sugarbeets irrigated, treated herbicides. Alfalfa hay cut, baled. Harvest over for many fruit, nut crops. Picking active in kiwifruit, walnuts, persimmons, dates, pecans, avocados. Citrus harvest active in lemons, desert valley grapefruit, tangerines, Navel oranges. Pruning of trees active. Fall harvest broccoli continued, cauliflower harvest underway central valley. Celery harvest increasing south coast. Sweet corn treated Fresno County for ear worms, while harvest continued Coachella, Imperial

valleys. Growers plant spring 1994 head lettuce crop Fresno County, harvest continues Riverside County. Melons Riverside, Imperial counties harvested. Potato harvest continued Coachella Valley. Harvest sweet potatoes Merced County winding down. Late season fresh market tomatoes harvested San Joaquin Valley. Ground work continued around State. Other crops harvested: Eggplant, cucumbers, cabbage, snap beans, okra, peppers, pumpkins, squash. Rangeland, pastures feed fair to good condition. Additional rainfall beneficial. Supplemental feeding remained active. Sheep moved to Imperial Valley. Calving, lambing remained active.

COLORADO: Week began with cool dry weather over the State. Dry weather with warming temperatures continued through the 10th, by late on the 11th a strong system had moved into the State. For the next couple of days it produced widespread rain, snow statewide. Up to 1.00 in. of moisture fell at lower elevations, a foot or more of new snow fell in the mountains. Mountain snow was accompanied by high winds in several locations. Another system moved in on the night of the 13th, 14th; left up to 9 in. of new snow near the southern foothills, lesser amounts in the northern portions of the State. Temperatures continued below normal. Most areas recorded 3 to 5° below normal, locations near the Kansas border were somewhat cooler.

Days suitable for fieldwork 5.2. Soil moisture 5% very short, 23% short, 57% adequate, 15% surplus. Winter wheat emerged 99%, 99% 1992, 98% avg. Corn harvested 81%, 76% 1992, 77% avg. Sorghum harvested 75%, 63% 1992, 77% avg. Winter wheat 3% poor, 9% fair, 61% good, 27% excellent. Livestock mostly good to excellent. Pasture, range feed condition mostly fair to good.

FLORIDA: Temperatures normal to 4° below normal north, 1 to 7° above normal elsewhere. Highs; low to mid 80s Panhandle, mid to upper 80s elsewhere. Lows; mid 30s to mid 40s north, 50s central, 60s south. Rain 1 to 5 days. Rainfall 0.25 to 0.75 in. Panhandle, 1.00 to 2.00 in. northern Peninsula, southeast coast, less than 0.33 in. western central, western southern Peninsula.

Soil moisture short to adequate with scattered areas surplus. Cotton harvest active. Soybean harvest winding down. Sugarcane harvest active. Small grain, sugarcane planting active. Pecan harvest started. Citrus groves very good condition, little rain, some irrigation. Maturity lagging early fruit types. Harvest increasing, primarily fresh use. Caretakers cutting cover crops, placing heaters in cold locations. Generally clear skies, warmer than normal season over most major vegetable producing areas, except 5.00 in. rain Homestead, which delayed some fieldwork. Harvest activity nearing peak for holiday market. Available; snap beans, chinese cabbage, sweet corn, cucumbers, eggplant, specialty lettuce, peppers, radishes, squash, strawberries, tomatoes, cherry tomatoes, watermelons. Pastures feed poor to excellent. Small grain pasture growth is excellent. Pasture feed 5% poor, 30% fair, 50% good, 15% excellent. Cattle herds fair to good.

GEORGIA: Wide variety of weather. Warmest temperatures over the weekend, mid to upper 60s northeast mountains to mid 80s extreme south. Coldest temperatures mid to upper 20s mountains, low 40s along the southeast coast. Rain over southern areas early in week, over northern areas late in weekend. Remainder of week dry. Rainfall 1.00 to 2.00 in. extreme northwest, southeast with most of central half receiving little if any rain.

Days suitable for fieldwork 4.5. Soil moisture 3% very short, 15% short, 56% adequate, 26% surplus. Cotton 3% very poor, 34% poor, 55% fair, 8% good. Rain slowed harvest. Sorghum 2% very

poor, 23% poor, 64% fair, 11% good; 93% harvested for grain, 86% 1992, 91% avg. Peanuts 98% threshed, 100% 1992, 99% avg. Soybeans 9% very poor, 50% poor, 38% fair, 3% good; harvest in full swing in northern half, condition dry. Wheat 25% planted, 25% 1992, 22% avg.; planting becoming more active. Rye 87% planted, 81% 1992, 79% avg. Other small grains 4% poor, 42% fair, 54% good; 67% planted, 67% 1992, 56% avg. Onions 10% planted, 27% 1992, NA avg. Other vegetables 13% very poor, 23% poor, 44% fair, 20% good. Apples 90% harvested, 98% 1992, 98% avg. Pecans 9% fair, 88% good, 3% excellent; 30% harvested, 43% 1992, 43% avg.; harvest gaining momentum, late maturing. Pasture 5% very poor, 24% poor, 46% fair, 25% good. Cattle 1% very poor, 3% poor, 43% fair, 53% good. Hogs 22% fair, 78% good.

HAWAII: Low pressure system northwest of State brought cool, dry air causing temperatures to fall to record-breaking, record-matching lows, Oahu, Hawaii islands. Temperatures varied from the low 60s to mid 80s. Rainfall none to 4.30 in.

Chilly weather slowed progress some crops, limited insect populations. Farm operations normal in areas unaffected by heavy rains of the previous week. Some fields were still muddy with standing water. Irrigation, spraying needed in drier areas. Hawaii Island papaya growers continued to employ measures to combat spread of papaya ringspot virus. Tomato harvesting increasing.

IDAHO: Temperatures 3 to 7° below normal. Precipitation none to 0.07 in. north, none elsewhere. Freezing temperatures throughout the State.

Soil moisture adequate. Hay, roughage supplies adequate. Activities: Sugarbeet harvest complete, finishing fall plowing, fieldwork. Livestock good.

ILLINOIS: Dry, warm weather early in the week gave way to heavy rains over the weekend. Precipitation less than 1.00 in. north, exceeded 2.00 in. much of the central, southern area last week. Extreme rainfalls of over 5.00 in. were reported near Iuka, Lawrenceville. Temperatures 3 to 6° above normal. Highs low 50s, low 60s. Lows 30s to 40s. Extreme lows 16 to 22°. Extreme highs 74 to 76°

Days suitable for fieldwork 6.5. Corn, soybean, sorghum harvesting, in addition to winter wheat seeding, each reached 90% complete or better last week. The condition of winter wheat was mostly good to fair. Soil moisture continued to decrease slightly to 81% adequate, 19% surplus. Other farm activities included fall tillage, applications of anhydrous ammonia, other fertilizers, some lime, nitrogen applications, hauling grain, tending livestock. Pasture feed 92% of normal.

INDIANA: Temperatures 3 to 6° above normal. High temperatures mid 50s to low 60s. Lows from the middle 30s to middle 40s. Rainfall water equivalent, averaged over an inch for most of the State, except 0.50 to 1.00 in. parts of the far north. Four to 5.00 in. of rain was common in the central areas with extremes of 8.00 in.

Days suitable for fieldwork 6. Another good week of harvesting progress until weekend rains came. Pasture feed 90% of normal, 91% last week. Topsoil 9% short, 81% adequate, 10% surplus. Subsoil 5% short, 85% adequate, 10% surplus. Moisture content of harvested corn 20%, soybeans 13%. Tobacco processed for sale 31%.

IOWA: Temperatures 2° below normal northwest to 3° above normal southeast. Extremes 17°; 61°. Precipitation 0.27 in. west-central to 1.13 in. northwest; average 0.62 in. (0.37 in. normal).

Days suitable for fieldwork 6.3. Topsoil 90% adequate, 10% surplus. Subsoil 48% adequate, 52% surplus. Field corn average moisture content 22%. Field corn moisture content now being

harvested 20%. Grain storage availability 51% adequate, 49% surplus. 1994 Row crop acreage fall tilled 40%, 17% 1992, 42% normal. 1994 row acreage fall fertilizer 30%, 14% 1992, 35% normal. State's livestock herds in mostly good condition. There is an increasing demand for feeder cattle as a means of utilizing low test weight corn. Fall tillage is in full swing with farmers concentrating on wet spots, other areas where the ground is packed hard from the summer rains. Hay, roughage availability for livestock feed 45% short, 55% adequate. Utilization of stubble fields for grazing 1% none, 36% limited, 52% moderate, 11% extensive.

KANSAS: Temperatures 3° below normal southwest to 1° above normal northwest, near normal elsewhere. Precipitation light to moderate, 0.17 in. southwest to 0.77 in. east central.

Days suitable for fieldwork 6.0. Topsoil moisture 37% short to very short, 63% adequate. Subsurface moisture 4% short to very short, 91% adequate, 5% surplus. Soil moisture conditions continued to worsen south, west. However, rain, snow received late in week should alleviate some of the problem. Wheat planted 99%, 99% 1992, 100% avg. Only a few wheat acres in east central, southeast remain to be planted. Wheat acreage looks good in most areas, could use some moisture to thicken stands, fill in thin spots. Snow, rain received late in week should help the situation. Wheat pastured 10%, 5% 1992, 10% avg. Lack of moisture may limit grazing this year south-central. Corn harvest made excellent progress northwest, final stages rest of State. Sorghum harvest western third of State progressed well, winding down other regions. Soybean harvest complete in all but east central, southeast. Cattle moving off summer ranges, pastures to grain pastures, stalks. Sale barn activity high. Ranchers culling herds, weaning calves, addressing health problems. Fall calving underway. Pastures, ranges continue to provide forage, cattle being supplemented southern areas.

KENTUCKY: Cool, dry until weekend, then wet, very warm. Highest temperatures weekend 70s, lower 80s, lowest readings upper teens, lower 20s. Temperatures around 50°, 1 to 2° above normal. All reporting stations received some rainfall, between 2.00 to 3.00 in. Southeast amounts generally less than 0.10 in.

Day suitable fieldwork 5.2. Soil moisture 2% very short, 21% short, 76% adequate, 1% surplus. Weekend rain improved soil moisture conditions, aided wheat growth, tobacco stripping. Corn, soybean harvest very active. Burley tobacco stripping 36% complete, 36% 1992, 37% avg. Condition of stripped burley 9% fair, 85% good, 6% excellent. Burley market opens November 22nd. Winter wheat 84% seeded, 87% 1992, 88% avg. Wheat 24% fair, 65% good, 11% excellent. Pastures mostly good to excellent. Cattle good condition, calves being weaned.

LOUISIANA: Temperatures 3.8 to 6.7° below normal. Extremes 22°; 86°. Rainfall 0.22 in. northwest to 1.26 in. central, southwest.

Days suitable for fieldwork 3.6. Soil moisture 4% short, 58% adequate, 38% surplus. Hay 100% final cutting, 100% 1992, 100% avg. Pecans 46% harvested, 60% 1992, 44% avg. Harvest in full swing with excellent yields reported. Sweet potatoes 92% harvested, 89% 1992, 92% avg. Sugarcane 2% poor, 44% fair, 54% good; 48% harvested, 45% 1992, 45% avg. Made good progress in spite of muddy conditions. Sucrose content average slightly lower than the previous week. Wheat 51% planted, 50% 1992, 58% avg.; 39% emerged, 42% 1992, 41% avg. Planting slow due to wet fields. Livestock 54% fair, 46% good. Pasture feed 2% poor, 14% fair, 79% good, 5% excellent. Vegetables 3% very poor, 20% poor, 51% fair, 26% good.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 0.11 in., normal 0.76 in. Temperature 44.6°, normal 47.1°. Extremes 17°; 72°.

Days suitable for fieldwork 5.4. Topsoil 94% adequate, 6% surplus. Subsoil 28% short, 67% adequate, 5% surplus. Small grains good. Wheat 90% seeded, 76% 1992, 85% avg. Rye 93%

seeded, 84% 1992, 90% avg. Field corn 92% harvested for grain, 76% 1992, 89% avg. Soybeans 64% harvested, 59% 1992, 70% avg. Sorghum 53% harvested, 56% 1992, N/A avg. Tobacco 14% stripped, 17% 1992, 22% avg. Other hay fourth cut 86% complete, 90% 1992, 75% avg. Alfalfa fifth cut 66% complete, 68% 1992, 66% avg. Hay supplies short to adequate. Pasture feed excellent.

DELAWARE: Precipitation 0.19 in., normal 0.82 in. Temperature 43.5°, normal 48.3°. Extremes 23°; 66°.

Days suitable for fieldwork 6.0. Topsoil 100% adequate. Subsoil 17% short, 83% adequate. Small grains good. Wheat 84% seeded, 74% 1992, 82% avg. Soybeans 55% harvested, 66% 1992, 71% avg. Sorghum poor to fair; 51% harvested, 66% 1992, N/A avg. Other hay fourth cut 92% complete, 100% 1992, N/A avg. Alfalfa hay fifth cut 86% complete, 100% 1992, 86% avg. Hay supplies short. Pasture feed poor to fair.

MICHIGAN: Extremes 13°; 57°. Precipitation 0.10 to 1.11 in.

Days suitable for fieldwork 6.0. Soil 85% adequate, 15% surplus. Pasture feed 75% of normal. Activities: fall tillage, harvesting corn, hauling manure, pruning fruit trees, making cider.

MINNESOTA: Temperatures 2 to 8° below normal for the State. Extremes 2°; 53°. Precipitation 0.30 in. below normal to 1.60 in. above normal. Greatest weekly precipitation 1.92 in.

Days suitable for fieldwork 4.5. Topsoil 3% short, 86% adequate, 11% surplus. Subsoil 1% short, 70% adequate, 29% surplus. Sunflowers 95% harvested, 90% 1992, 97% avg. Corn 80% combined, 48% 1992, 88% avg.; 28% moisture content, 26% 1992, 19% avg.; Soybeans 99% combined, 99% 1992, 99% avg.

MISSISSIPPI: Temperatures 51°, 5.3° below normal. Extremes 17°; 83°. Precipitation was light throughout the State, 0.29 in., 0.76 below normal. Soil temperature 52°.

Days suitable for fieldwork 5.1, 2.4 1992, 4.0 avg. Soil moisture 8% short, 86% adequate, 6% surplus. Cotton 90% harvested, 92% 1992, 94% avg.; 54% poor, 40% fair, 6% good. Soybeans 81% harvested, 81% 1992, 81% avg.; 28% poor, 60% fair, 12% good. Wheat 87% planted, 78% 1992, 77% avg.; 71% emerged, 68% 1992, 56% avg.; 52% fair, 48% good. Pecans 37% harvested, 34% 1992, 36% avg.; 14% very poor 25% poor, 46% fair, 13% good, 2% excellent. Livestock 18% fair, 75% good, 7% excellent. Pasture 83% of normal. Activities: completing harvest.

MISSOURI: Temperatures near normal central, northern areas of State to 9° below normal southeastern district. Precipitation 2.76 in., varying from slightly over 1.00 in. northern districts to 5.35 in. southwest.

Days suitable for fieldwork 5.1, ranging from 4.9 west central, southeast to 5.3 northwest. Topsoil 76% adequate, 24% surplus. Farmers made some fall harvesting progress. Corn harvested by districts: 88% east central to 100% southeast. Soybean harvest by district: 84% central, to 97% north central, northeast. Sorghum harvest by district: 80% central, east central to 100% southeast. Wheat seeded 65%, 76% 1992, 81% avg. Cool, dry weather delayed wheat germination, growth. Pasture feed 3% poor, 24% fair, 67% good, 6% excellent.

MONTANA: Temperatures normal. Precipitation none to light.

Days suitable for fieldwork 5.2. Topsoil 16% short, 80% adequate, 4% surplus. Subsoil 16% short, 82% adequate, 2% surplus. Winter wheat seeded 99%, 100% 1992, 100% avg. Pasture, range feed 99% of normal, down 1 point from last week. Cattle, calves moved from summer ranges 89%, sheep, lambs moved from summer ranges 89%.

NEBRASKA: Temperatures near normal in the central, east-central, southwest. Temperatures 3 to 5° below normal over

remainder of State. Precipitation occurred last part of week in the form of rain, snow. Amounts varied from a few hundredths of an inch north-central to over 1.80 in. northwest.

Days suitable for fieldwork 6.0. Topsoil 5% short, 79% adequate, 16% surplus. Subsoil 2% short, 90% adequate, 8% surplus. Corn harvest 80%, 56% 1992, 89% avg. Sorghum harvest 93%, 82% 1992, 94% avg. Winter wheat 6% fair, 77% good, 17% excellent. Pasture, range feed 103% of normal.

NEVADA: Cold airmass covered the State with below normal temperatures in many locations. Extremes 1°; 75°.

Preparations for winter continue. Livestock good. Major activities: General maintenance, care, feeding of livestock.

NEW ENGLAND: Precipitation none to 0.36 in. region. Temperatures 30 to 39° north; 32 to 43° south. Maximum temperatures 47 to 58° north; 51 to 61° south. Minimum temperatures 12 to 23° north; 13 to 27° south.

Field corn 99% harvested, 100% 1992, 100% avg. Field corn condition good to fair. Cranberries 100% harvested, size medium, condition good. Major farm activities: Chopping field corn. Preparing for winter.

NEW JERSEY: Temperatures slightly below normal. Extremes 19°; 79°. Rainfall 0.13 in. north, 0.06 in. central, 0.09 in. south. Heaviest 24 hour total 0.27 in. on 13th, 14th. Estimated soil moisture, in percent field capacity, averaged 92% north, 92% central, 74% south. Four inch soil temperatures averaged 40° north, 43° central, 46° south.

Harvesting of late vegetables. Pumpkins, apples remain in good volume. Cranberry harvest complete in most areas. Harvesting of corn for grain, soybeans declining. Harvesting of sweet potatoes continues. Planting cover crops.

NEW MEXICO: Week began relatively warm, ended cold as a rather intense winter storm moved across the State. Temperatures slightly below normal in the north, near normal in the south. Precipitation from the winter storms was mostly in the form of snow above 6,000 feet with some of the mountainous areas receiving a couple of feet of snow. Highest water equivalents reported were over 1.00 in. at several north-central, northeast locations.

Days suitable for fieldwork 6.4. Soil moisture 67% short, 33% adequate. Crop conditions: Alfalfa harvest was completed. Cotton 20% fair, 55% good, 25% excellent. Corn harvest near end; listed at fair to excellent. Irrigated sorghum, 25% fair, 67% good, 8% excellent. Dryland sorghum 35% poor, 45% fair, 20% good. Irrigated wheat 2% poor, 39% fair, 59% good. Dryland wheat 52% poor, 33% fair, 15% good. Pecans fair to mostly good, some early harvest. Chile fair to excellent, mostly good with red harvest progressing. Lettuce mostly good, harvest slowing. Cattle, sheep poor to excellent, mostly good. Range feed conditions 69% of normal.

NEW YORK: Scattered light precipitation early week, dry midweek, scattered rain returned at weekend. Rainfall varied from less than 0.10 in. to nearly 1.00 in. Temperatures below normal. Extremes 15°; 62°.

Corn harvest continued active. Apple picking winding down. Growers packing apples, putting apples into storage, making cider. Late season vegetable crops being harvested. Potato harvest near completion. Growers grading potatoes, putting potatoes into storage. Caring for livestock was a major activity.

NORTH CAROLINA: Temperatures 1 to 7° below normal. Smallest negative departures were along the coastal plain. Precipitation 2.03 in. at Cape Hatteras to no rain at many locations.

Days suitable for fieldwork 4.9. Soil moisture 1% very short, 33% short, 60% adequate, 6% surplus. Crop condition: Pasture feed 1% very poor, 19% poor, 49% fair, 31% good. Corn 11% very poor,

41% poor, 38% fair, 10% good. Cotton 7% poor, 67% fair, 24% good, 2% excellent. Peanuts 7% very poor, 24% poor, 48% fair, 21% good. Soybeans 2% very poor, 14% poor, 67% fair, 17% good. Sweet potatoes 52% fair, 48% good. Apples 5% poor 40% fair, 50% good, 5% excellent. Sorghum 19% poor, 70% fair, 11% good. Hay, roughage supplies 4% very short, 39% short, 56% adequate, 1% surplus. Feed grain supplies 1% very short, 23% short, 75% adequate, 1% surplus. Apples harvested 97%, 100% 1992, 100% avg. Corn for grain 98%, 96% 1992, 96% avg. Sorghum for grain 87%, 80% 1992, 84% avg. Sweet potatoes harvested 88%, 91% 1992, 89% avg. Cotton harvested 81%, 42% 1992, 69% avg. Peanuts dug 96%, 100% 1992, 100% avg.; threshed 90%, 94% 1992, 97% avg. Wheat emerged 43%, 51% 1992 44% avg. Major activities: Planting small grain; harvesting soybeans, peanuts, corn for grain, cotton, sweet potatoes. Other activities included: Land preparation; tending livestock.

NORTH DAKOTA: Snowfall of 1 to 4 in. over extreme southeast. Little accumulation elsewhere. Temperatures 0 to 3° below normal. Extremes 2° east central, north central; 49° southwest. Corn, sunflower harvest was nearly complete with most remaining acreage in poor condition. Ranchers were busy weaning calves, hauling hay. Cattle, sheep in good condition.

OHIO: Mean temperatures upper 40s to low 50s, 3 to 6° above normal. High temperatures reached the upper 50s to low 60s. Lows 30s to low 40s. Precipitation generally 1.00 to 2.00 in., falling mostly on the 13th, 14th. Soil temperatures at the 4-in. depth were mostly in the 40s.

Days suitable for fieldwork 6.3. Topsoil 15% short, 82% adequate, 3% surplus. Short moisture mostly in northwest, west central. Surplus moisture mostly in southwest, extreme northeast. Sugarbeets harvested 99%. Pasture feed 3% very poor, 19% poor, 32% fair, 41% good, 5% excellent. Harvested corn moisture 21%, high variability. Remaining corn is standing well in fields. In some areas, the winter wheat is the best in years. Second-crop soybeans remain to be harvested in the south. Tobacco stripping is going well.

OKLAHOMA: Temperatures 1° below normal central to 7° above normal southwest. Precipitation 0.38 in. Panhandle to 2.09 in. east central.

Days suitable for fieldwork 6.1. Topsoil 58% short, 42% adequate. Subsoil 26% short, 74% adequate. Soybeans 80% harvested, 70% 1992, 69% avg. Peanuts 13% poor, 68% fair, 19% good; 70% harvested, 89% 1992, 84% avg.

OREGON: Temperatures 5° below normal. Exceptions: coast 2° below normal, southwestern valleys near normal. Precipitation 0.20 in. coastal areas, 0.10 in. Willamette Valley, elsewhere mostly dry.

Soil moisture short to mostly adequate. 1994 winter wheat crop 94% emerged, 21% fair, 70% good, 9% excellent. Mild Russian wheat aphid infestation some spraying continued, Columbia Basin. Willamette Valley cole crops harvest winding down, due to frost. Hood River Valley apple picking mostly complete. Willamette Valley wine grape harvest continues. Livestock good to excellent. Range, pasture feed mostly good. Weaning, processing cows, hauling calves to market continues.

PENNSYLVANIA: Dry, cool early in week. Entire State below freezing on 8th. Warm, some moisture by weekend. Temperature 43°, 1° below normal. Extremes 15°; 69°. Precipitation 0.28 in., 0.45 in. below normal.

Days suitable for fieldwork 5. Soil moisture 7% short, 82% adequate, 11% surplus. Ensilage corn harvested 100% complete, 96% 1992. Soybean harvest 72% complete, 61% 1992; 4% very poor, 6% poor, 27% fair, 47% good, 16% excellent. Potato harvest 100% complete, 99% 1992. Fall plowing 90% complete,

88% 1992. Wheat planted 100% complete, 99% 1992. Fourth cutting alfalfa 85% complete, 88% 1992. Quality of hay made 10% poor, 54% fair, 36% good. Apple harvest 96% complete, 97% 1992. Activities: Harvesting corn; harvesting soybeans; hauling manure; fixing fence; caring for livestock.

PUERTO RICO: Rainfall 0.89 in. was 0.53 in. below normal. Rainfall 2.62 in. at Pico Del Este, 1.99 in. at Rio Piedras Aes, 1.12 in. at Morovis. Island temperatures 80° on the coasts, 72 to 76° in interior with mean station temperatures 83.2° at San Juan WSFO. Island extremes 56°; 94°.

SOUTH CAROLINA: Cool, dry conditions most of week; showers, record high temperatures late week. Temperatures 3 to 6° below normal. Rainfall 0.10 in.

Days suitable for fieldwork 5.9. Soil moisture 5% very short, 46% short, 49% adequate. Barley fair to good; 70% planted, 70% 1992, 66% avg.; 60% emerged, 63% 1992, 53% avg. Oats fair to good; 75% planted, 72% 1992, 66% avg.; 62% emerged, 54% 1992, 50% avg. Rye fair; 78% planted, 76% 1992, 66% avg.; 66% emerged, 64% 1992, 53% avg. Wheat fair to good; 26% planted, 26% 1992, 28% avg.; 16% emerged, 16% 1992, 16% avg. Sorghum poor; 78% harvested, 90% 1992, 80% avg. Soybeans 15% very poor, 26% poor, 41% fair, 18% good; 96% dropping leaves, 93% 1992, 93% avg.; 84% mature, 86% 1992, 88% avg; 27% harvested, 27% 1992, 35% avg. Cotton 5% very poor, 39% poor, 55% fair, 1% good; 88% harvested, 64% 1992, 78% avg. Sweet potatoes fair; 83% harvested, 83% 1992, 83% avg. Fall hay poor to fair; 96% harvested, 97% 1992, 99% avg. Pecans poor to fair. Pasture feed 12% very poor, 38% poor, 28% fair, 22% good. Winter grazing fair; 90% planted, 88% 1992, 86% avg.; 78% emerged, 81% 1992, 75% avg.

SOUTH DAKOTA: Temperatures near normal last week. Extremes 9°; 63°. Strong storm late in the week brought a swath of snow from the southwest to the northeast. Accumulations 8 to 12 in. locally. Snow turned to rain in the southeast with amounts around an inch. Northwest had little or no precipitation. Maximum 1.79 in.

Days suitable for fieldwork 5.2. Topsoil 4% very short, 20% short, 68% adequate, 8% surplus. Subsoil 4% very short, 12% short, 69% adequate, 15% surplus. Winter rye 33% fair, 46% good, 21% excellent. Sunflowers 95% harvested, 86% 1992, 97% avg. Fall harvest made good progress until the storm late in the week. Corn quality, yields have varied greatly. Corn moisture content 15% to 25%. Corn test weights 43 to 58 pounds. Livestock 2% fair, 76% good, 22% excellent. Pasture feed 88% of normal. Cattle were being moved into harvested corn fields.

TENNESSEE: Temperatures slightly above normal for the western half, slightly below normal for the eastern half. Extremes 33°; 68°. Precipitation followed the same pattern being above normal in the west, below normal in the east.

Days suitable for fieldwork 5.4. Soil moisture 3% very short, 39% short, 56% adequate, 2% surplus. Cotton 92% harvested, 79% 1992, 87% avg. Soybeans 75% harvested, 65% 1992, 78% avg. Tobacco 58% burley stripped, 62% 1992, 64% avg. Wheat 79% seeded, 77% 1992, 82% avg. Cattle 2% poor, 28% fair, 67% good, 3% excellent. Producers had difficulty keeping tobacco in case because of cool, dry weather. Tobacco warehouses beginning to fill up, several growers will not be ready for early market. Quality is good, with reports of thick, heavy leaves. Cattle producers busy with winter culling. Movement to market is higher than normal. Some farm ponds in east are critically short for this time of year. Cotton harvest in final stages, soybean growers running at a normal pace.

TEXAS: A cold front, a series of upper level disturbances moving along it generated showers, thunderstorms. Rainfall

amounts were heaviest in eastern half, with Upper Coast division averaging 1.43 in., East Texas averaging 1.89 in. Rainfall was below normal in southern, western parts of State, with departures -0.07 in. Lower Rio Grande Valley to -0.21 in. Edwards Plateau. Some of larger totals were 3.72 in. at Beaumont/Port Arthur, 2.60 in. at Lufkin. Temperatures above normal, except for High Plains 1° below normal, Low Rolling Plains 3° below normal. Departures for other divisions +2 to +4°. Mean soil temperatures 55° at Dell City to 67° at Uvalde, Beeville. Highest maximum soil temperature was 80° at Uvalde, lowest minimum was 37° at Bushland.

Crops: Cotton: in Northern High Plains, where harvest conditions were good, some above-average yields. In Southern High Plains, Low Plains harvest was hampered by cool, damp conditions later in week. Harvest was in full swing in Trans-Pecos where weather conditions were good. Cotton 73% normal, 75% 1992. Grain sorghum harvest continued without much delay in Northern High Plains where some good dryland yields were being reported. Harvest winding down in Cross Timbers. Small grains: dryland wheat crop in High Plains was in need of moisture while Cross Timbers was in need of warmer days, sunshine. Wheat planting continued in Blacklands. Small grains have emerged to good stands with recent moisture. Wheat 68% normal, 52% 1992. Peanuts: harvest was in full swing where conditions allowed, dryland yields continued to be disappointing in many areas. Hot dry summer has taken its toll on crop. Recent freeze has also caused damage to both dryland, irrigated crops. Peanut 60% normal, 82% 1992. Soybeans harvest winding down. In Blacklands, harvest was virtually complete. Some poor yields were reported along Upper Coast.

Commercial Vegetables: Rio Grande Valley, fall vegetables made good progress, pepper harvest continued. In San Antonio-Winter Garden, winter vegetables made good progress. In East Texas, harvesting of winter vegetables continued. In High Plains, some remaining carrots were harvested. Turnip harvest was underway. In the Trans-Pecos, chile harvest winding down. Cucumber harvest continued. Some winter cabbage was planted. Pecans: Shuck split continued in Trans-Pecos. In Blacklands, South Central Texas, high winds caused increased dropping of nuts.

Range and Livestock: Limited hay baling continued. Hay supplies continued to be short in many areas. On High Plains, ranchers were moving cattle to wheat pastures, corn fields. Due to freeze, more ranchers were feeding livestock. In Trans-Pecos, some ranchers were having to contend with goats eating poisonous weeds. Livestock fair to good.

UTAH: Temperature maximums 3° below normal, minimums 4° below normal. North-central no precipitation. Precipitation across the rest of the State was light to moderate.

Activities: Marketing hay, onions, winterizing equipment, buildings. Fall tillage continues in areas where weather permits. Some pneumonia in cattle, calves; they are generally in good condition. Most areas reported adequate to surplus feed supplies.

VIRGINIA: Temperatures well below normal. Extremes 18°; 69°. Precipitation averaged above normal.

Days suitable for fieldwork 4.1. Topsoil 3% very short, 29% short, 58% adequate, 10% surplus. Pasture feed 2% very poor, 24% poor, 53% fair, 17% good, 4% excellent. Corn harvested for grain 89%, 82% 1992, 87% avg. Soybean 9% very poor, 53% poor, 36% fair, 2% good; harvested 35%, 35% 1992, 48% avg. Cotton harvesting 68% completed, 11% 1992, 41% avg. Peanuts dug 97%, 99% 1992, 99% avg.; combined 88%, 99% 1992, 99% avg. Fall apple harvest complete. Winter apples 92% harvested. Winter grains, grazing crops 3% very poor, 13% poor, 36% fair, 48% good. Winter wheat 56% seeded, 47% 1992, 61% avg. Oats 97% seeded, 90% 1992, 94% avg. Barley 91% seeded, 81% 1992, 89% avg. Forage from pastures, grazing crops dairy cattle 29%, beef cattle 71%, sheep 79%. Reseeding pastures, hayfields,

fall plowing, gassing tobacco plantbeds. Selling, buying, vaccinating cattle. Stripping, grading fire, burley tobacco. Harvesting peppers, cucumbers, snapbeans.

WASHINGTON: Temperatures 3 to 6° below normal west; 1 to 6° below normal east. Precipitation none to 0.10 in. west; none east. Freezing temperatures across entire State, as low as 12° in Omak. Some freeze damage has been reported in grape vineyards.

Days suitable for fieldwork 6.9. Soil moisture 38% short, 62% adequate. Hay, other roughage supplies 1% short, 99% adequate. Range, pasture range 26% poor, 63% fair, 11% good. Winter wheat dryland 30% fair, 70% good; irrigated 90% good, 10% excellent. Barley dryland 30% fair, 70% good; irrigated 80% good, 20% excellent. Corn 100% good. Winter grain planting was completed. Many fields were still showing moisture stress. Aphid outbreaks continued, freezing temperatures were keeping them under control. Potato harvest was nearly complete with some potatoes being pulled out of storage for both the fresh, processing markets. Grape harvest lingered on; cold weather continued to cause problems in many vineyards with grape quality falling below winery standards. Cattle continued to graze fall, winter pastures.

WEST VIRGINIA: Temperature 46°. Extremes 14°; 85°. Precipitation 0.83 in.

Days suitable for fieldwork 4.7. Soil moisture 11% short, 89% adequate. Pastures feed 6% very poor, 15% poor, 46% fair, 33% good; 79% of normal. Cattle 4% poor, 9% fair, 87% good. Sheep 10% poor, 22% fair, 68% good. Corn 83% harvested. Wheat good; 89% sown. Barley good. Soybeans 84% harvested. Activities: Moving livestock, feeding livestock, chopping silage, harvesting corn, harvesting soybeans, sowing wheat, general maintenance.

WISCONSIN: Relatively quiet week. Temperatures close to or a few degrees above mid November normals, no heavy precipitation occurred. Average temperature of 35° matched normal. Extremes 8°; 65°. Precipitation 0.40 to 0.80 in.

Days suitable for fieldwork 5.0. Soil moisture 3% short, 80% adequate, 17% surplus. Corn for grain 70% harvested, 34% 1992, 75% avg. Soybeans harvested 99%, 89% 1992, 95% avg. Fall tillage 62% complete, 38% 1992, 56% avg. Winter wheat 3% poor, 18% fair, 77% good, 2% excellent. Progress on fall activities improved again as minimal precipitation fell, temperatures averaged near normal. Farmers continued plowing, harvesting corn, soybeans. Fall tillage has progressed rapidly in the south with many farmers reporting that they have completed their tillage. However, since snow covers most of the fields in the north, farmers will have to wait until spring to complete their tillage. Farmers that have been able to complete their tillage have reported trouble with soil compaction. Dry weather has allowed farmers to continue to harvest corn. Comments from Ag Agents, farmers indicate that harvesting is winding down in the central, south; progress in the north has slowed because of the snow received 2 weeks ago. Those who have completed the corn harvest, have been busy chopping cornstalks for winter bedding supplies. Reports have indicated that winter wheat has good color, growth. Rye, alfalfa have also been reported in good condition; how well they will survive the winter is difficult to predict.

WYOMING: Cold, dry. Temperatures 2 to 7° below normal. Coldest spots were in the central areas. Precipitation was below normal. South-central, southeastern parts of the State received about a quarter to three quarters of an inch above normal. Late-week storms dumped up to a foot of snow in the southeast.

Days suitable for fieldwork 4.1. Topsoil adequate or better for 89% of the State. Subsoil adequate or better for 89% of the State. Sugarbeet harvest 93% complete. Corn harvest reached about 70% complete. Dry bean harvest 97% completed. Cattle, calves, sheep, lambs are still being moved from summer ranges. Cattle, calves, sheep, lambs are in good condition.

International Weather and Crop Summary

HIGHLIGHTS

November 7 - 13, 1993

FSU: The first cold snap of the winter covered winter grain areas.

EUROPE: Welcomed drier weather in Spain and rain in Greece favored winter grains. Much colder weather froze eastern crop areas at week's end.

SOUTH ASIA: The tropical cyclone that rolled across southern India is approaching southern Pakistan.

SOUTHEAST ASIA: Showers boosted moisture reserves for Java's rice planting. Seasonable rain aided crops in Malaysia and the central Philippines.

EASTERN ASIA: Widespread rain favored germinating to vegetative winter wheat across the North China Plain.

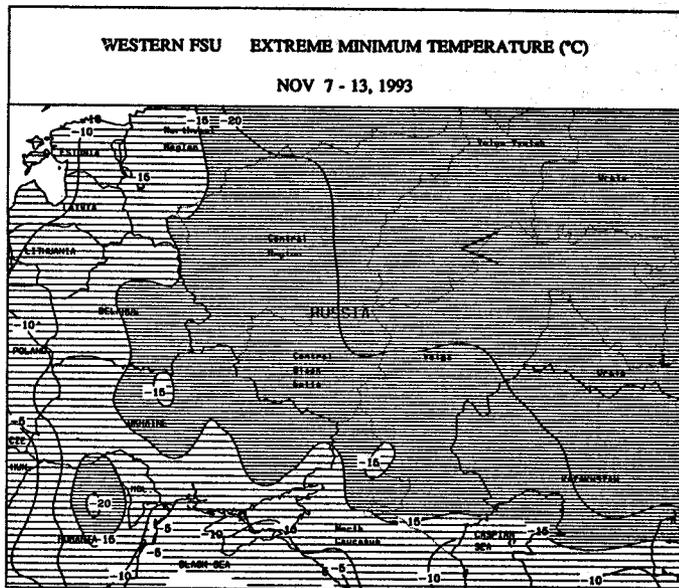
AUSTRALIA: Wet weather slowed wheat maturation and harvesting.

SOUTH AMERICA: Across Argentina, rain continued to favor winter wheat and summer crops. Scattered showers slowed summer crop planting across southern Brazil.

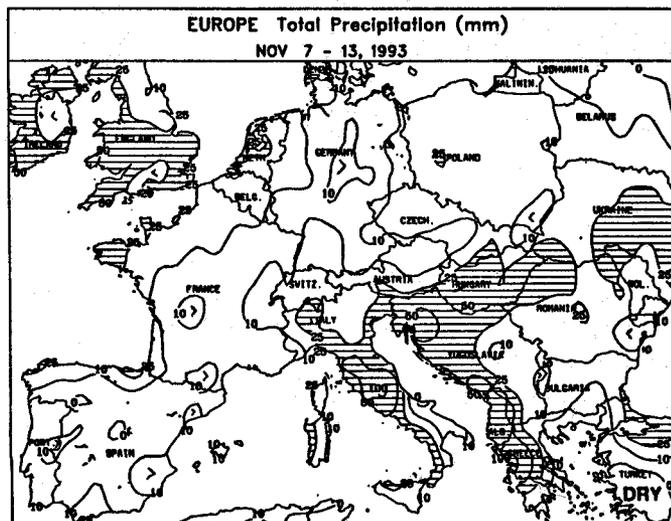
MEXICO: Dry, warm weather continued to aid maturing corn and fieldwork in the main corn belt.

NORTHWESTERN AFRICA: Continued widespread rain over Morocco provided abundant moisture for winter grain planting. Topsoils remained too dry for widespread planting in eastern Algeria and Tunisia.

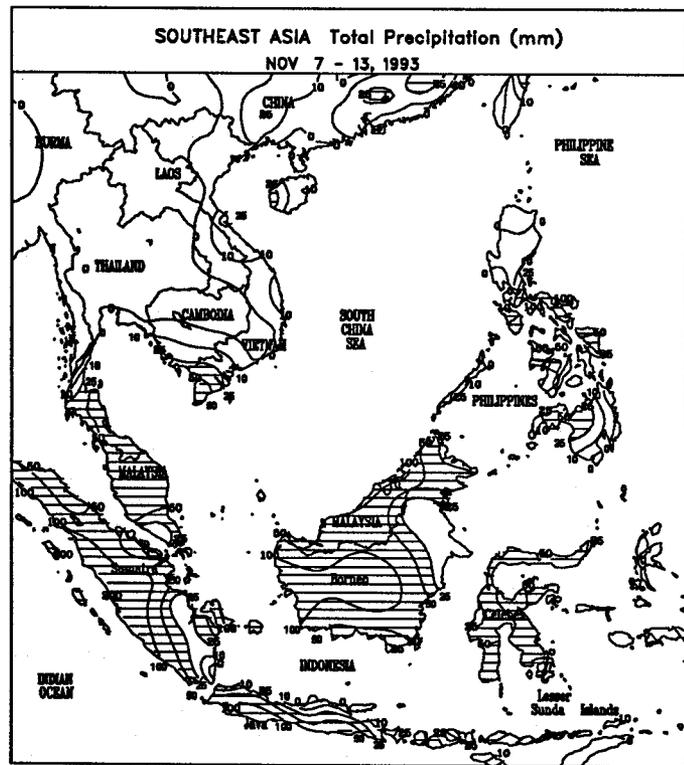
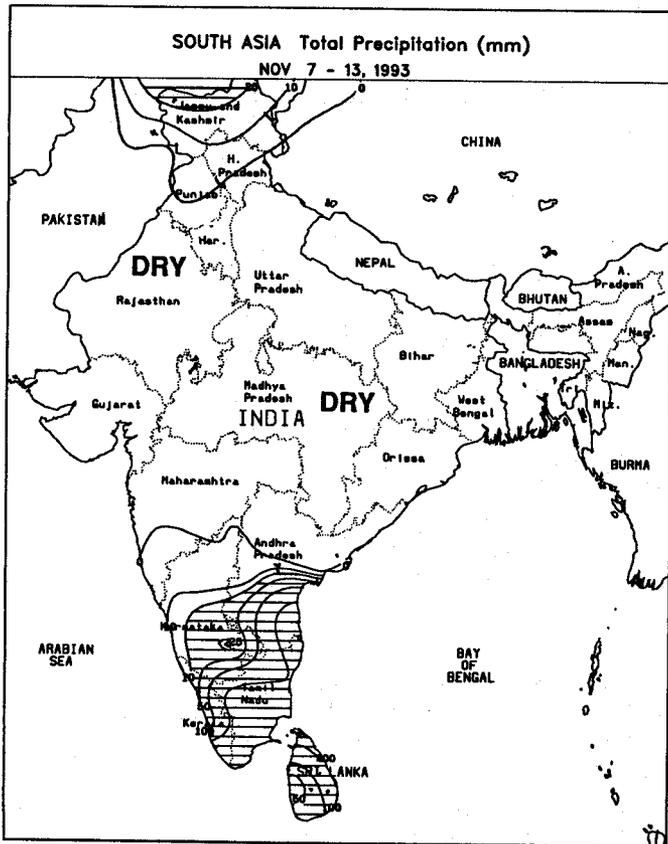
SOUTH AFRICA: Showers benefited corn establishment and boosted moisture reserves for Natal's sugarcane.



FSU-WESTERN: The first cold snap of the winter covered winter grain areas. Bitter cold air from Siberia spread westward over the region, dropping temperatures to well-below-normal readings as far south as the Black Sea coast. Weekly average temperatures over major winter wheat areas of Ukraine and North Caucasus ranged from -1 to -8 degrees Celsius (4 to 9 degrees C below normal). Extreme minimum temperatures in these areas ranged from -11 to -17 degrees C. Further north, weekly average temperatures ranged from -3 to -7 degrees C (5 to 7 degrees C below normal) in the Baltic States and Belarus, and -8 to -15 degrees C (9 to 12 degrees C below normal) in northern Russia (Northwest Region, Volga Vyatsk, Black Soils Region, and Volga Valley). Extreme minimum temperatures in northern Russia ranged from -17 to -22 degrees C. Little, if any, snow preceded the cold air over most areas. Although a patchy snow cover left winter grains vulnerable to extreme cold, especially in the north, lowest temperatures remained above the threshold for winterkill in most areas. Greatest amounts of precipitation (25-36 mm) fell mainly as rain over the central Ukraine. The combination of persistent dryness and continued cold weather in the southern Ukraine and parts of the North Caucasus has limited plant establishment, making winter grains more susceptible to potential winterkill conditions.

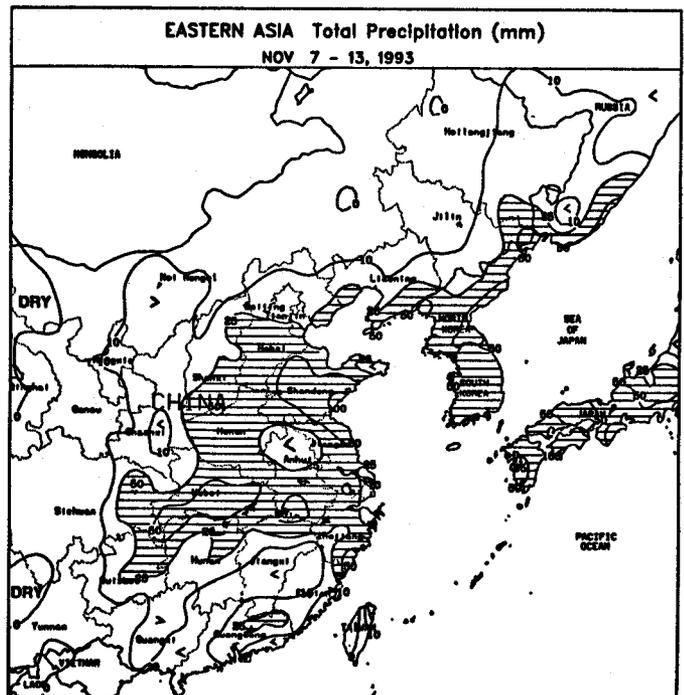


EUROPE: Drier weather over the Iberian peninsula was beneficial for fieldwork, following earlier wetness. Winter grain planting is normally underway across the Mediterranean region. Widespread showers (15-50 mm) continued to soak Italy with locally heavy rain (50-100 mm) concentrated over central Italy. Substantial rain (25-100 mm) also reached most of drought-stricken Greece, although less than 10 mm of rain provided little relief to extreme southern and eastern portions of the country. Rainfall averaged 20-55 mm in Hungary and northern Romania, improving soil moisture for winter grains. Lighter rain (6-25 mm) eased long-term dryness in Bulgaria, where soil moisture is low. In northern Europe, where sugar beet harvesting and winter grain hardening prior to dormancy are underway, wet weather (25-50 mm) slowed fieldwork in England. A general 5-20 mm rainfall from France to Poland moistened topsoils but allowed some harvesting. Colder weather late in the week plunged eastern Poland, Romania, and Bulgaria into a deep freeze, with low temperatures ranging from -5 to -19 degrees C and high temperatures reaching only -2 to -7 degrees C at week's end.

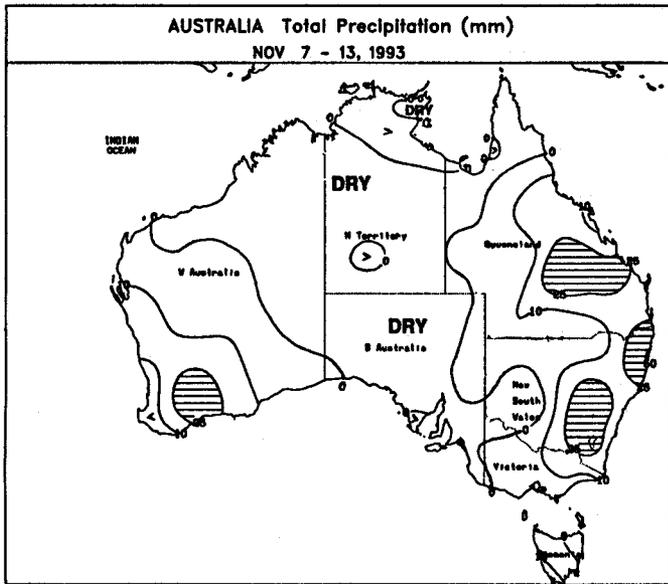


SOUTHEAST ASIA: Needed rain (15-142 mm) covered Java, boosting irrigation reserves for rice planting. To the north, moderate to heavy showers (35-100 mm or more) covered most rice and oil palm areas of Malaysia and the southern Thai peninsula. In the Philippines, moderate to heavy rain (25-50 mm or more) covered most areas from southern Luzon to northern Mindanao, aiding secondary corn and rice.

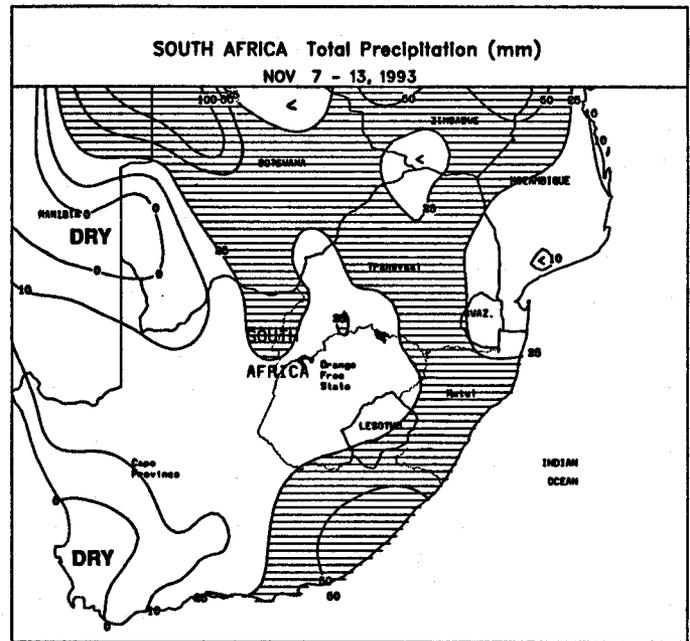
SOUTH ASIA: A tropical depression rolled across the southern tip of India, bringing inundating showers (100-200 mm or more) to southeast-coastal rice areas as well as southernmost interior fall crop regions. The rains missed primary cotton regions of central India. However, upon reaching the Arabian Sea, the storm turned northeastward and intensified to typhoon strength (sustained winds exceeding 65 knots) and on November 15, was approaching southern Pakistan. More details on rainfall from the storm and impact, if any, on unharvested cotton will be presented in next week's summary. Elsewhere, dry, warm weather aided winter plantings and summer crop drydown and harvest.



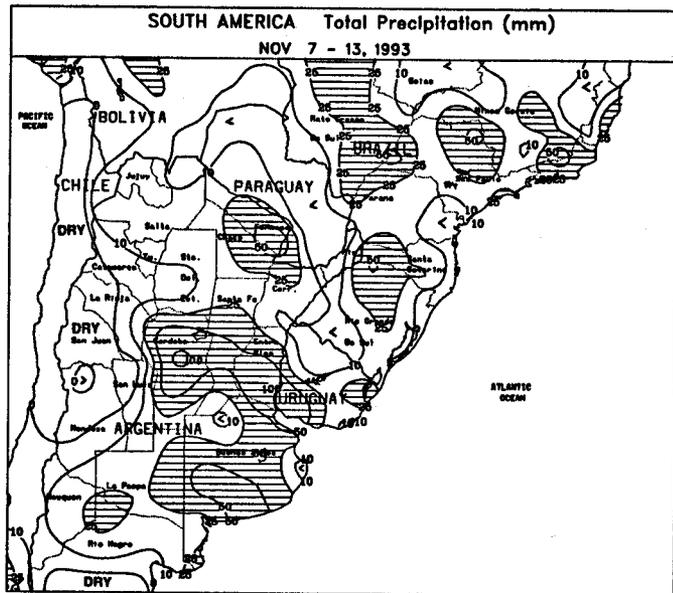
EASTERN ASIA: Mild weather coupled with widespread rain (14-60 mm) benefited germinating to vegetative winter wheat across the North China Plain. Isolated heavier rain fell over Shandong (80-140 mm), possibly causing some flooding. The rains slowed summer crop harvesting, but the harvest should be nearing completion. Widespread showers (10-50 mm) covered the Yangtze Valley, slowing late double-crop rice harvesting, but increasing reservoir levels. Temperatures averaged 1-3 degrees C above normal across the North China Plain and 3-6 degrees C above normal in southern China. South Korea and southern Japan received moderate showers (20-60 mm), slowing late rice harvesting, which should be nearing completion.



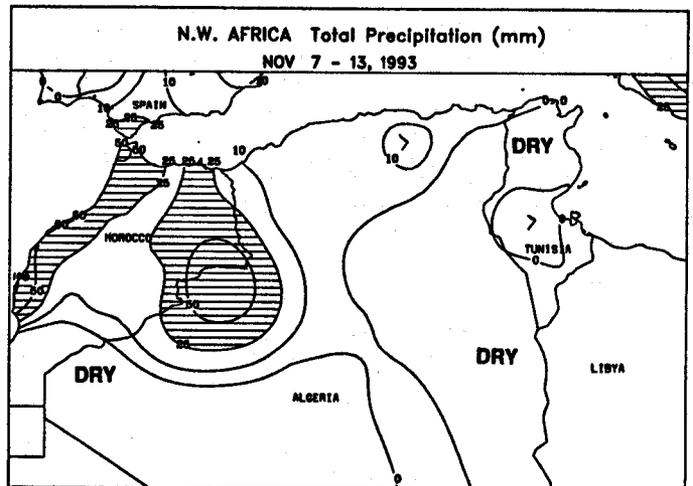
AUSTRALIA: Wet, cool weather (10-35 mm) prevailed over the western crop areas, slowing winter grain maturation and early harvesting. Drier weather is needed to prevent lower grain quality. Wheat harvesting and early summer crop planting progressed across the east, until late-week rain (5-30 mm) slowed fieldwork. Mostly dry weather favored filling to maturing winter grains in the south. Temperatures averaged 1-2 degrees C below normal in the west and near to slightly above normal in the east.



SOUTH AFRICA: Light to moderate showers (10-49 mm) benefited corn germination and establishment across the region. The rainfall covered Natal's primary sugarcane region as well, and heavy showers (32-68 mm) fell across crop areas of eastern Cape Province. Corn planting is likely well underway across the region, as most areas have already received adequate to abundant moisture for early crop development. Corn is typically planted as early as possible to reduce the risk of drought and heat stress frequently experienced in January and February.



SOUTH AMERICA: Widespread midweek showers (20-60 mm) covered central Argentina, aiding winter wheat and increasing soil moisture for summer crops. Drier weather is needed in the next few weeks for summer crop planting and maturing wheat. Showers (10-30 mm) increased topsoil moisture for cotton planting across northern Argentina. Across southern Brazil, scattered showers (5-40 mm) slowed summer crop planting in Rio Grande do Sul, Parana, and Mato Grosso do Sul. Showers (10-50 mm) aided germinating soybeans across Mato Grosso and Goias. Temperatures averaged 1-3 degrees C above normal across the region.



NORTHWESTERN AFRICA: Widespread light to moderate rain (10-25 mm, with local amounts in excess of 50 mm) continued over Morocco, providing abundant moisture for winter grain germination and establishment. Elsewhere, light rain over most of Algeria increased topsoil moisture for planting. However, in extreme eastern Algeria and Tunisia, topsoils remained too dry for uniform seed germination. As a result, farmers continued to wait for the arrival of significant autumn rains before they could begin to plant winter grains. Since the bulk of winter grains are usually planted from mid-November to mid-December over the region, substantial time remains for planting.

1993 Indian Monsoon Summary

The 1993 southwest monsoon, currently making its slow withdrawal from southern India, has been the most favorable for that country's summer agricultural production since 1989. Cumulative seasonal rainfall was near normal throughout the region (figs. 1 and 2) and nearly all crops are projected to yield higher than last year, with some crops slated at record or near-record levels. The following is an overview of this season's monsoon, and its impact on both summer and winter crops.

After a weak arrival in Indochina, the monsoon reached the southern tip of India near its usual onset date of June 1, and by the end of July had become established throughout South Asia (see *Weekly Weather and Crop Bulletin*, Vol. 80, No. 31, page 30). In August, rainfall was near to above normal in southern and eastern crop areas, aiding vegetative to reproductive crops. The rain in the east maintained reservoir levels for rice cultivation but generally did not result in additional flooding. In the south, the moisture was especially timely for rainfed grains, oilseeds, and cotton that were planted in May and June with limited moisture reserves.

In contrast, August rainfall was below normal over most central and northern crop areas. August is a critical month across the region, especially for rainfed crops that usually reach reproductive phases of development about this time. The timeliness and distribution of summer rainfall was critical in avoiding significant losses in yield potential. For example, primary soybean areas of western Madhya Pradesh received 50 to 80 percent of normal rainfall in August (fig. 3). However, this translated to 100-250 mm of rainfall for most areas, which, being evenly distributed and coupled with seasonable temperatures even during the short dry spells, allowed projected soybean yields to approach record levels (fig. 4). August rainfall was below normal in north-central crop areas, but due to the extent of irrigation in that region, the overall impact was minor. However, some stress to newly transplanted rice was reported across the northeast during this period. The greatest negative impact from the August dry spell occurred in western Gujarat's groundnut region. The mostly rainfed crop, which historically accounts for about 25

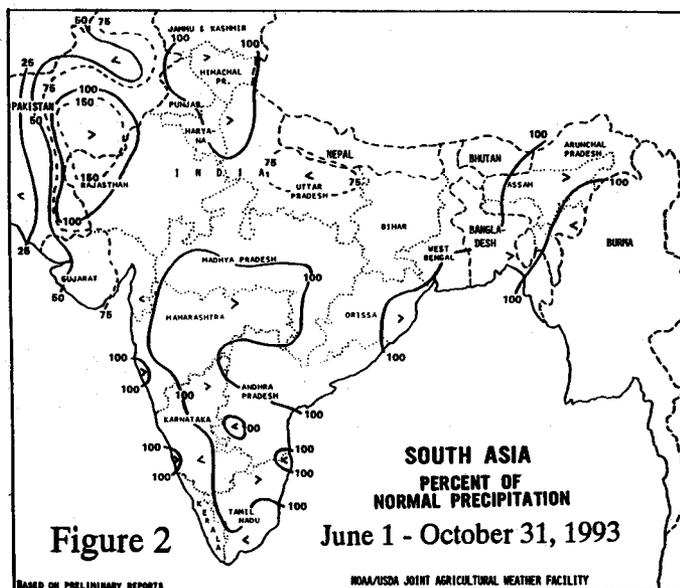
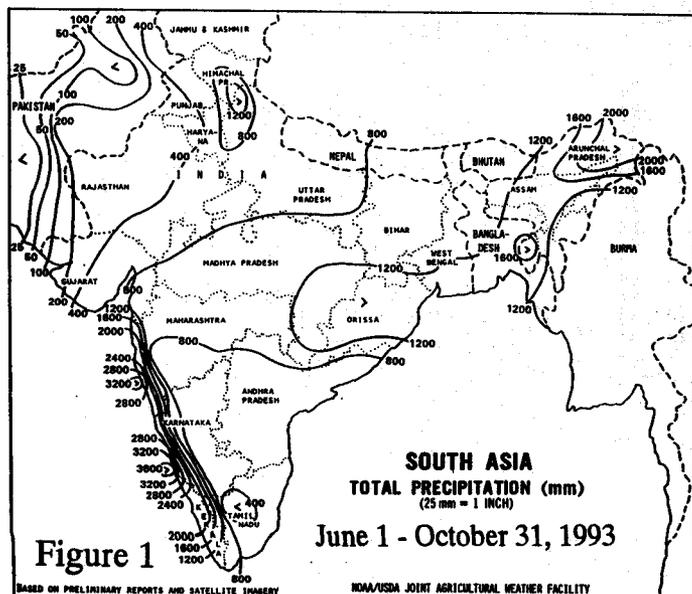
percent of India's total production, received very little rain over an 8-week period beginning in mid-July (fig. 5). Compared to last year, groundnuts were likely planted on time and well established due to the timely onset of the monsoon, advancing through reproduction during the drought. Above-average temperatures throughout the period worsened crop prospects (fig. 6).

In September, the monsoon withdrew from Pakistan and northwestern India about on schedule. However, a surge of showers early in the month in northern Pakistan and north-central India boosted moisture reserves for winter grain and oilseed planting. The heaviest rain appears to have missed primary cotton regions, which have experienced losses in recent years due to excessive late-monsoon shower activity and flooding. Dry weather in the northwest since mid-September has benefited open-boll cotton and other maturing summer crops.

Late-season surges in rainfall preceded the monsoon's southward and eastward withdrawal. In central crop areas, the rains even reached Gujarat, coming too late for groundnuts but helping immature cotton grown in the less dry, partially irrigated eastern part of the State. Late-September rainfall, while improving planting moisture in Maharashtra for rabi (fall-planted) grains, oilseeds, and cotton, raised quality concerns for cotton beginning to open. Untimely rain fell as late as mid-October in Maharashtra, although the heaviest rain was west of the most intensive cotton areas.

From October to December, winter wheat and oilseed planting is usually underway across northern growing areas. The mostly irrigated crop relies on residual moisture accumulated during the summer. Although shower activity was at times sporadic across Pakistan and northern India, accumulations were near normal in most areas, ensuring a good start to the season. Northern crop areas of Pakistan and India expect some rain during the winter months, usually coming in short bursts of light showers. Rain is expected in India's southern interior through December (fig. 7).

-- Mark Brusberg and Dave Secora



W. MADHYA PRADESH

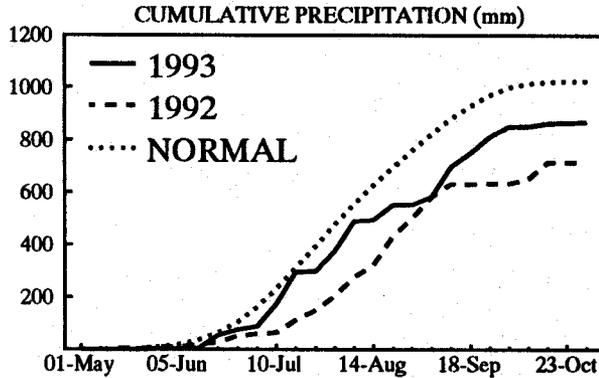


Figure 3

INDIAN SOYBEANS

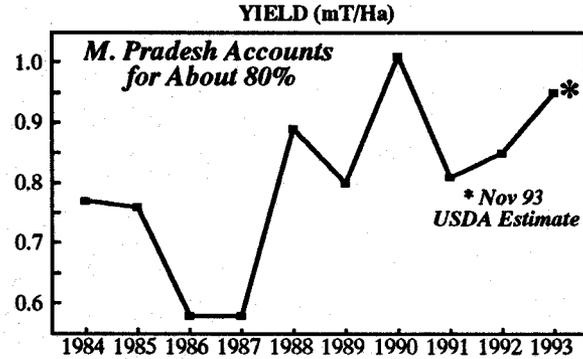


Figure 4

GUJARAT

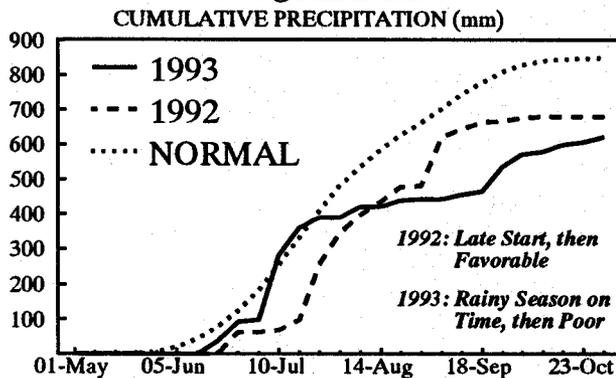


Figure 5

INDIAN GROUNDNUTS

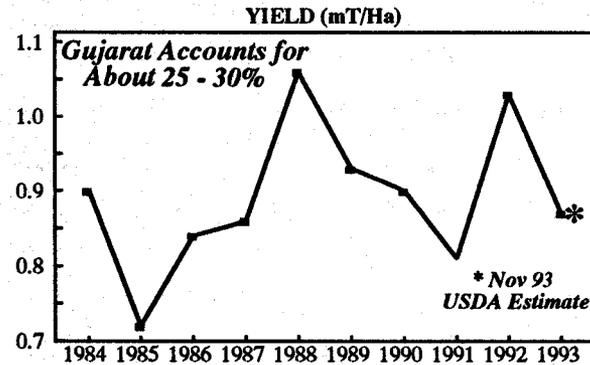


Figure 6

INDIA

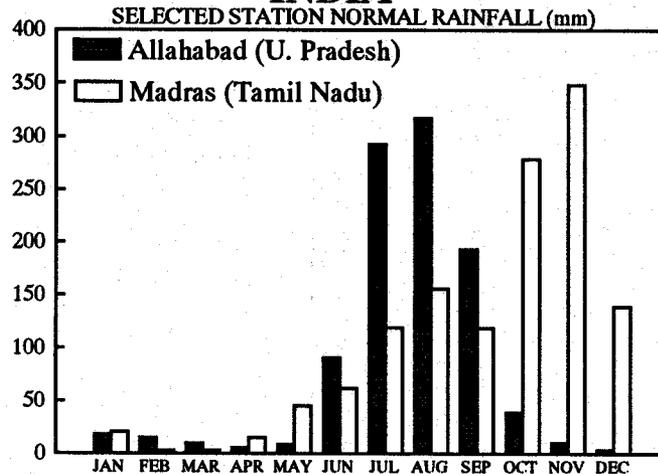


Figure 7

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

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

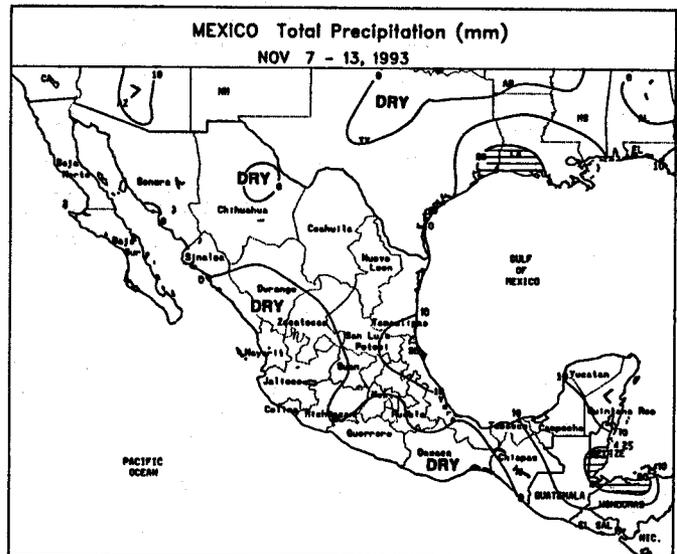
U.S. DEPARTMENT OF COMMERCE
 National Oceanic and Atmospheric Administration
 National Weather Service/Climate Analysis Center
 Managing Editor **Douglas Le Conte**
 Editor **Brad Rippey** (202) 720-1444
 Meteorologists **David Secora**
Vilhelm Bjerknes and Jeff Savadel

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

U.S. DEPARTMENT OF AGRICULTURE
 Economics Management Staff
 E.M.S. Editor **Sharon Lee**
 National Agricultural Statistics Service
 Agricultural Statistician . . **David Mueller** (202) 720-2157
 State Summaries Editor . . . **Klara Haskins** (202) 720-8033
 World Agricultural Outlook Board
 Agricultural Weather Analysts . . **Ray Motha** (202) 720-9805
Tom Puterbaugh, Mark Brusberg, and Bob Stefanski

(Continued from front cover)

pushed into California, delivering more than an inch of rain to Red Bluff and Fairfield, but sparing the recently fire-scoured hillsides surrounding the Los Angeles Basin from significant rain. Heavy snow accompanied both storms at higher elevations, resulting in snow depths by week's end of 1 foot or more at locations such as Pinetop, AZ and Chama, NM. Red River, NM recorded 22 inches. Lighter amounts of snow fell from the northern and central Rockies eastward into the western Great Lakes States. Colorado Springs, CO reported a 6-inch accumulation, while Pierre, SD received 5 inches. Farther east, heavy rain erupted across the Ozark Plateau on Saturday, and spread eastward through the lower Ohio Valley. Local rainfall topped 4 inches from eastern Oklahoma to central Indiana, causing flash flooding. Elsewhere, warm air streamed into the Southeast, pushing temperatures above 80°F as far north as South Carolina.



MEXICO: Warm, dry weather (temperatures averaged 1-3 degrees C above normal) continued to favor corn maturation and harvesting across the main corn belt.

**WEEKLY NEWS BULLETIN
 FIRST CLASS**

NOAA/USDA Joint Agricultural
 Weather Facility
 USDA South Building, Room 5844
 Washington, DC 20250

FIRST CLASS MAIL
 POSTAGE & FEES PAID
 NOAA
 PERMIT NO. G-19

OFFICIAL BUSINESS
 PENALTY FOR PRIVATE USE, \$300