

# WEEKLY WEATHER AND CROP BULLETIN

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

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

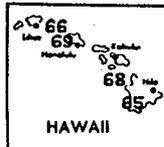
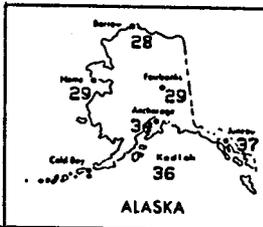
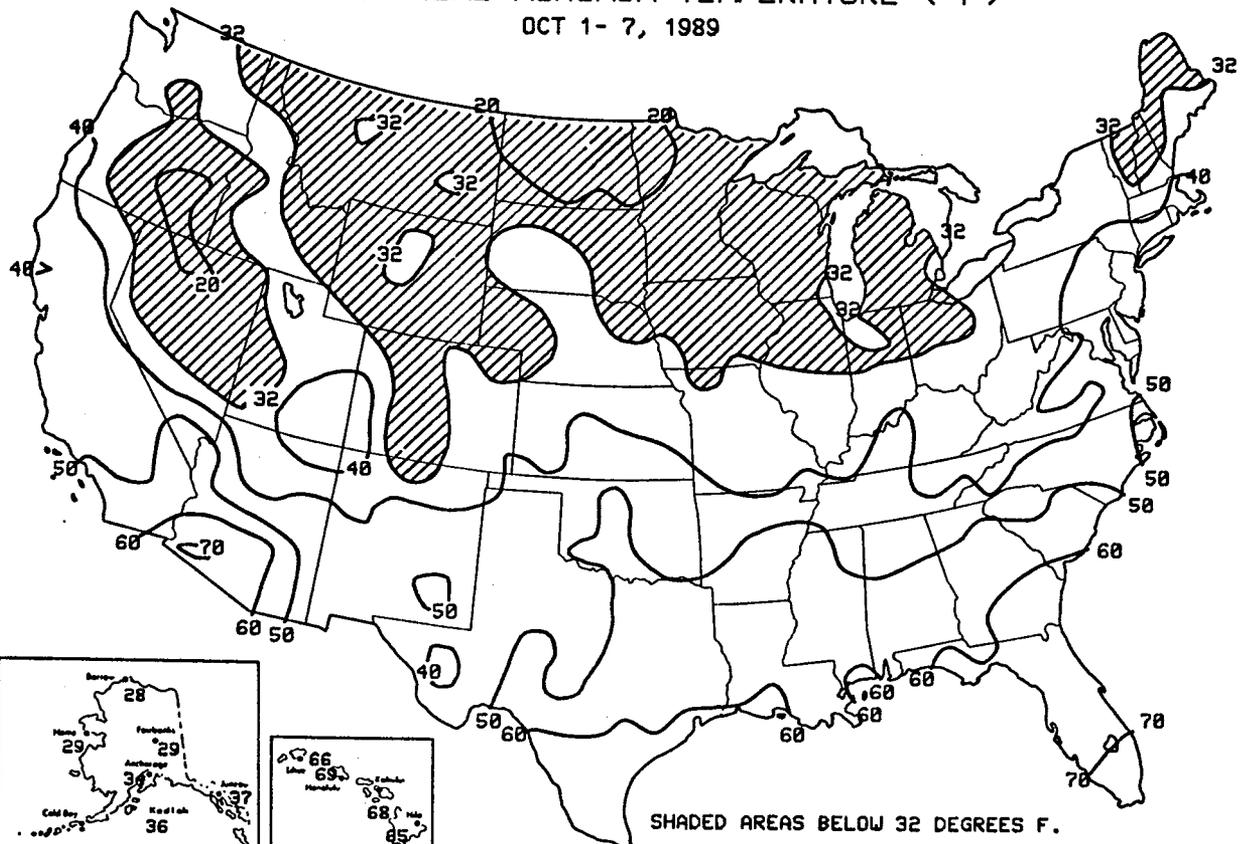
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Oct. 11, 1989

## EXTREME MINIMUM TEMPERATURE (°F)

OCT 1-7, 1989



SHADED AREAS BELOW 32 DEGREES F.

Based on preliminary reports

## HIGHLIGHTS

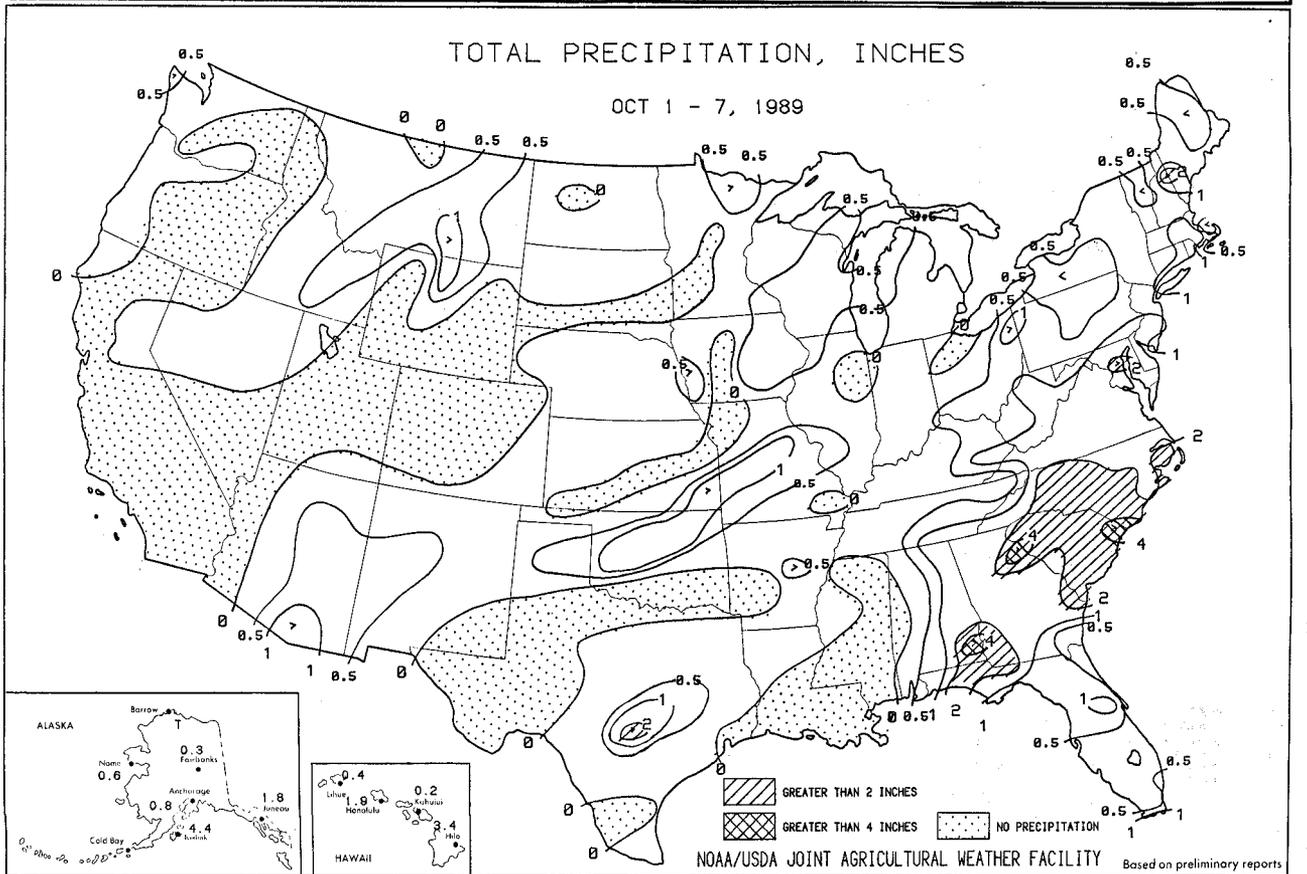
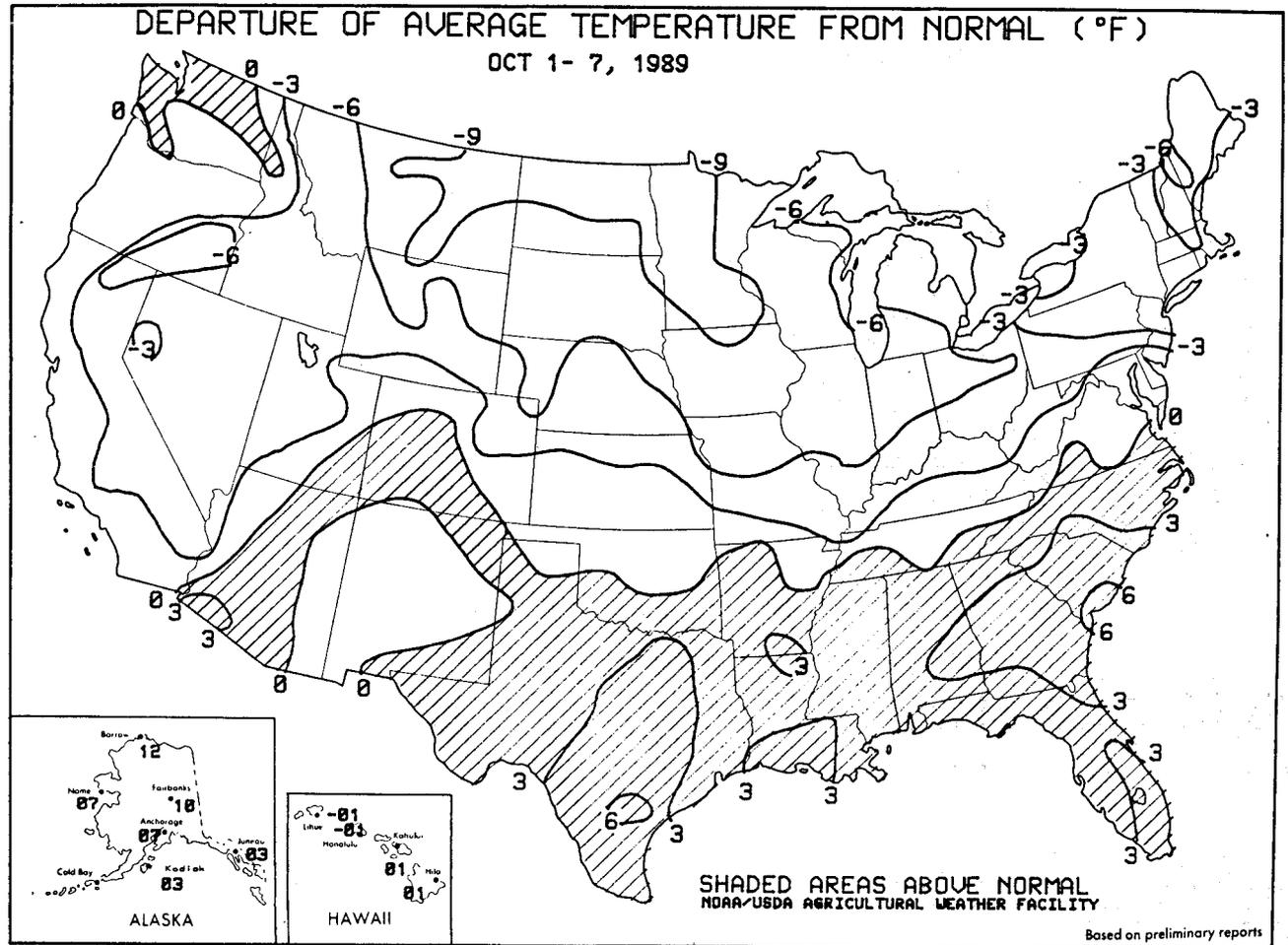
October 1-7, 1989

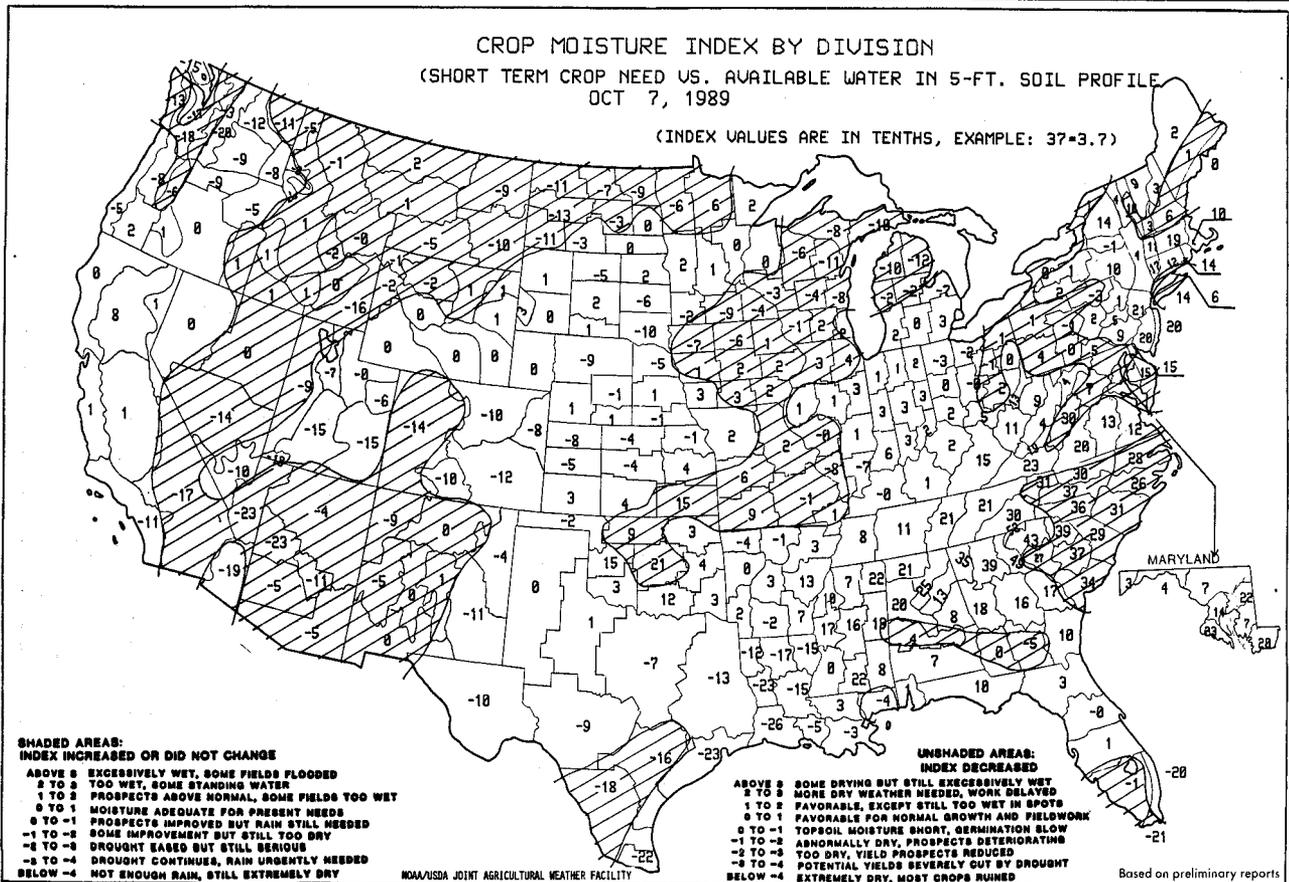
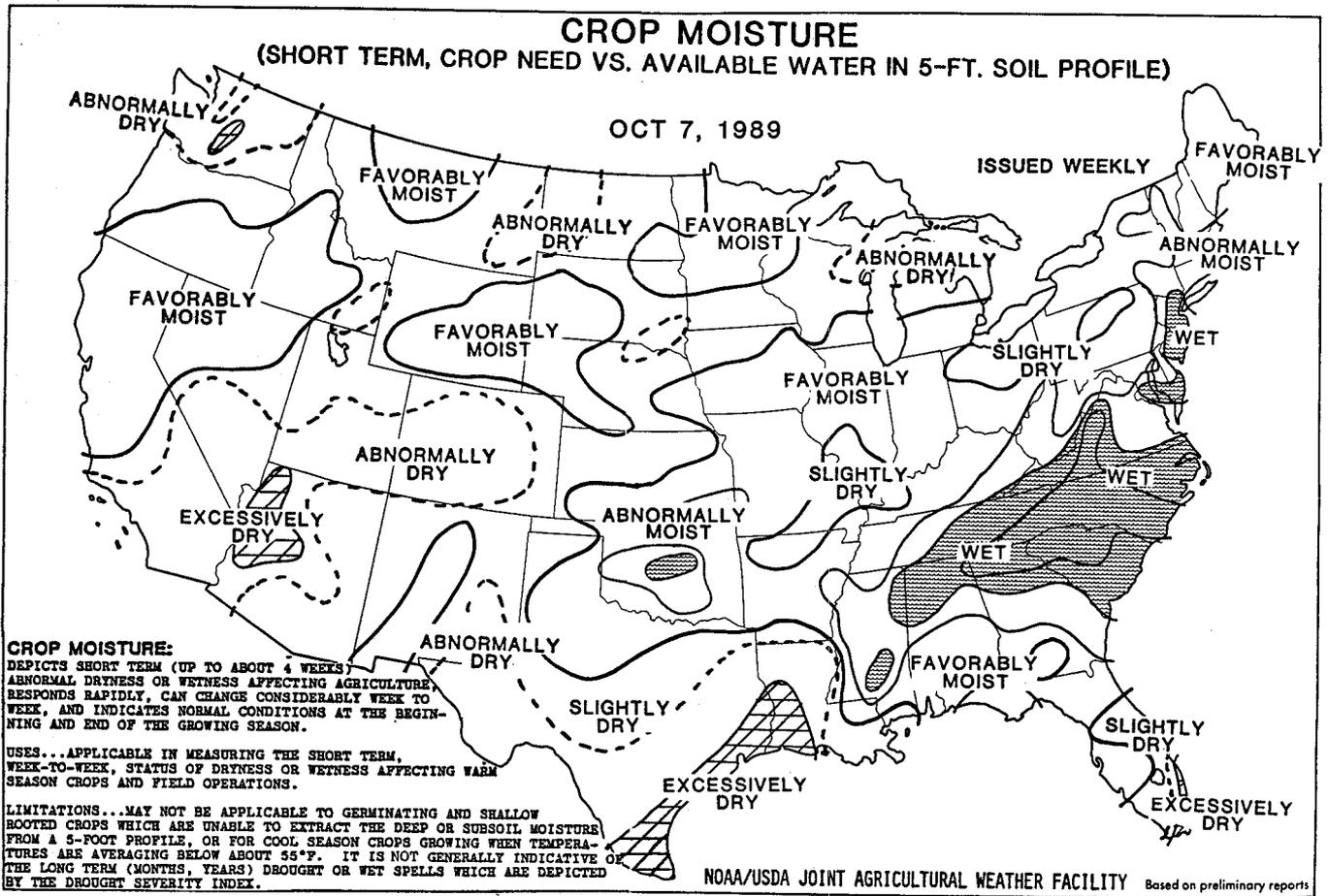
A pair of slow-moving cold fronts crossed the eastern two-thirds of the Nation. Cold air plunged southward into the **North Central States** behind the fronts, as temperatures fell below freezing across the northern half of the **Corn Belt**. Record-low temperatures for the date were broken from the **Pacific Northwest** to the **eastern Corn Belt** on the 3rd and 4th. Early in the week, showers and thunderstorms again brought substantial rain to the **Southeast** and along the **Atlantic coast**. During the latter half of the week, moisture from the remnants of **Pacific Hurricane Raymond** caused unseasonable heavy rain over the **Southwest** and contributed to heavy rain from the **Texas Panhandle** into the middle **Mississippi Valley**. Otherwise, dry conditions again covered much of the **Great Plains** and **Mississippi Valley**. Warm weather prevailed across the **South**.

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# National Weather Data for Selected Cities

## Weather Data for the Week Ending October 7, 1989

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 Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F				
																90 AND ABOVE	72 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
AL BIRMINGHAM	79	57	85	50	68	1	.4	-.3	.4	6.3	125	51.6	118	97	49	0	0	1	0	
MOBILE	86	62	89	58	74	1	.2	-.6	.2	4.8	65	44.7	84	99	51	0	0	2	0	
MONTGOMERY	87	59	91	54	73	3	1.1	.4	1.1	5.8	108	56.4	142	99	46	3	0	0	0	
AK ANCHORAGE	52	42	56	34	47	7	.8	-.3	.4	4.7	162	22.4	195	91	56	0	0	6	1	
BARROW	35	31	39	28	33	12	T	-.1	T	.7	103	6.9	187	99	86	0	0	2	0	
FAIRBANKS	52	35	57	29	44	10	.3	1.1	.2	1.0	77	7.8	93	85	43	0	6	2	0	
JUNEAU	52	43	54	37	48	3	3.3	1.5	1.2	10.6	131	31.5	85	100	80	0	0	5	3	
KODIAK	53	40	61	36	47	3	4.4	2.9	2.9	10.8	137	41.0	93	95	62	0	0	4	3	
NOME	46	36	49	29	41	2	.6	.3	.3	2.9	107	18.1	150	98	73	0	2	4	0	
AZ PHOENIX	91	70	100	66	81	2	1	-.1	0	.6	73	4.1	80	59	27	4	0	3	0	
PRESCOTT	75	47	81	42	61	2	1.1	-.2	1.1	.8	47	9.0	60	69	25	0	0	1	0	
TUCSON	86	62	97	58	74	-1	1.5	1.2	1.1	1.5	96	5.8	66	68	26	1	0	2	1	
YUMA	96	73	100	69	85	4	T	-.1	T	.1	30	6.9	400	58	21	7	0	0	0	
AR FORT SMITH	82	55	90	44	69	1	.3	-.4	.3	3.8	97	45.6	148	95	47	1	0	1	0	
LITTLE ROCK	77	58	87	52	68	0	.7	0	.7	5.2	106	44.7	117	83	56	0	0	2	1	
CA BAKERSFIELD	82	55	89	49	68	-4	0	0	0	.5	288	2.8	69	69	29	0	0	0	0	
EUREKA	60	50	64	47	55	0	T	-.4	T	.9	70	20.2	84	91	76	0	0	1	0	
FRESNO	80	52	86	50	66	-3	0	-1	0	1.1	529	6.0	83	90	32	0	0	0	0	
LOS ANGELES	74	59	82	56	67	-1	T	0	T	.3	217	3.5	41	87	55	0	0	0	0	
REDDING	79	49	89	41	64	-7	0	-3	0	.3	217	3.5	41	87	55	0	0	0	0	
SACRAMENTO	78	50	82	47	64	-4	.3	-.2	.3	3.3	917	12.4	112	97	37	0	0	1	0	
SAN DIEGO	73	63	75	58	68	0	0	0	-1	0	.2	157	2.2	33	82	59	0	0	0	0
SAN FRANCISCO	71	51	79	47	61	-2	T	-.1	T	1.2	388	8.6	68	96	54	0	0	0	0	
CO DENVER	68	39	78	34	53	-4	0	-2	0	1.5	106	13.7	105	82	29	0	0	0	0	
GRAND JUNCTION	75	48	81	40	61	1	T	-.2	T	.3	34	5.3	89	38	13	0	0	0	0	
PUEBLO	73	43	88	34	58	-1	T	-.2	T	1.0	104	6.8	72	73	25	0	0	0	0	
CT BRIDGEPORT	65	51	70	42	58	-2	.5	-.2	.5	3.7	94	39.9	128	73	50	0	0	2	1	
HARTFORD	66	45	72	40	56	-1	.8	0	.8	5.5	117	43.5	131	86	42	0	0	2	1	
DC WASHINGTON	70	53	77	46	62	-2	1.8	1.2	.9	8.5	221	42.2	138	88	51	0	0	2	2	
FL APALACHICOLA	86	69	89	65	77	3	.9	-.2	.6	11.3	116	45.6	98	96	59	0	0	2	1	
DAYTONA BEACH	89	68	92	64	79	2	.2	-1.0	.2	5.3	66	28.4	71	96	54	3	0	1	0	
JACKSONVILLE	90	69	92	66	79	6	.2	-.9	.2	14.6	193	46.3	104	97	50	5	0	3	0	
KEY WEST	89	80	91	77	85	3	1.1	-.2	.6	4.2	56	21.3	70	87	62	3	0	3	1	
MIAMI	91	78	94	76	84	4	.8	-1.1	.8	6.6	67	39.2	82	87	55	6	0	2	1	
ORLANDO	89	71	91	67	80	2	1.1	-.2	1.1	11.4	156	39.1	90	97	52	3	0	1	1	
TALLAHASSEE	87	62	91	57	75	2	2.1	1.2	1.7	6.6	90	53.1	98	100	53	2	0	2	1	
TAMPA	89	72	91	68	80	3	.1	-.6	.1	6.2	90	35.1	86	92	53	3	0	2	0	
WEST PALM BEACH	90	76	95	73	83	3	.3	-1.7	.3	4.4	39	30.0	62	89	54	3	0	1	0	
GA ATLANTA	80	61	86	55	71	4	1.6	1.0	1.6	13.3	356	54.7	141	93	53	0	0	1	1	
AUGUSTA	85	61	89	53	73	5	1.5	1.0	1.5	5.3	129	42.6	118	99	50	0	0	1	1	
MACON	84	61	89	54	73	3	1.7	1.2	1.7	4.1	108	39.0	106	97	52	0	0	1	1	
SAVANNAH	86	68	90	64	77	6	2.8	2.1	2.8	10.8	183	38.3	88	95	51	1	0	2	1	
HI HILO	83	70	84	65	76	1	3.4	1.6	1.4	13.1	156	49.3	162	97	72	0	0	4	2	
HONOLULU	87	72	89	69	79	-1	1.9	1.7	1.1	2.1	235	17.3	115	93	62	0	0	2	2	
KAHULUI	88	71	91	68	79	1	.2	.1	.2	.3	73	29.0	231	92	58	1	0	2	0	
LTHUE	84	69	88	66	77	-1	.4	-.4	.2	1.8	60	42.9	147	95	66	0	0	3	0	
ID BOISE	62	42	71	35	52	-4	.2	.1	.2	1.4	206	8.8	106	94	42	0	0	1	0	
LEWISTON	70	45	75	38	57	1	0	-2	0	.6	65	12.0	126	66	32	0	0	0	0	
POCATELLO	59	37	66	27	48	-5	.2	.1	.2	.7	87	7.8	97	93	42	0	2	2	0	
IL CHICAGO	62	40	79	32	51	-7	.2	-.4	.2	4.1	88	25.5	90	84	40	0	1	1	0	
MOLINE	64	39	82	28	51	-7	.7	0	.7	6.1	137	29.9	96	92	39	0	2	1	0	
PEORIA	64	41	79	29	52	-7	.4	-.2	.4	3.3	77	19.6	67	93	43	0	1	1	0	
QUINCY	66	42	75	34	54	-7	.3	-.6	.3	3.2	63	15.5	49	88	40	0	0	1	0	
ROCKFORD	61	37	79	24	49	-6	.4	-.3	.4	2.3	51	24.3	81	92	43	0	2	1	0	
SPRINGFIELD	66	43	77	34	54	-7	.2	-.4	.2	5.7	148	25.8	92	95	44	0	0	2	0	
IN EVANSVILLE	71	46	78	37	59	-4	.1	-.4	.1	2.3	72	42.3	129	99	47	0	0	1	0	
FORT WAYNE	64	38	73	29	51	-7	T	-.6	T	4.2	135	30.1	110	92	47	0	1	1	0	
INDIANAPOLIS	66	42	73	32	54	-6	T	-.5	T	8.1	247	43.0	139	96	48	0	1	1	0	
SOUTH BEND	62	40	79	30	51	-7	.1	-.7	.1	3.9	98	29.4	99	90	47	0	1	1	0	
IA DES MOINES	62	40	81	31	51	-8	.7	.1	.7	6.1	168	26.8	101	87	37	0	1	1	0	
ST LOUIS	62	37	84	29	50	-8	.1	-.4	.1	4.4	148	18.5	83	73	30	0	3	2	0	
WATERLOO	61	35	82	23	48	-8	.7	0	.7	3.7	92	16.4	58	89	35	0	3	1	1	
KS CONCORDIA	69	45	86	37	57	-5	.1	-.5	.1	4.3	122	23.2	97	82	36	0	0	1	0	
DODGE CITY	73	47	88	41	60	-3	T	-.3	T	2.4	109	20.1	111	79	32	0	0	1	0	
GOODLAND	68	40	80	35	54	-3	.2	0	.2	1.3	77	17.7	122	89	35	0	0	2	0	
TOPEKA	70	44	85	33	57	-6	T	-.7	T	8.7	208	34.3	122	89	39	0	0	1	0	
WICHITA	75	50	91	41	63	-2	.1	-.6	0	7.4	182	33.9	139	82	38	1	0	2	0	
KY BOWLING GREEN	74	51	81	41	63	0	.1	-.5	.1	3.5	92	52.0	135	94	51	0	0	2	0	
LEXINGTON	69	47	75	37	58	-4	.2	-.3	.2	5.2	138	45.8	124	95	54	0	0	2	0	
LOUISVILLE	70	48	77	40	59	-3	.2	-.4	.2	2.7	68	44.6	130	98	57	0	0	2	0	
LA ALEXANDRIA	84	61	90	58	73	1	T	-.6	T	.4	11	52.5	128	94	45	1	0	0	0	
BATON ROUGE	88	64	90	61	76	4	T	-.7	T	4.5	89	65.3	146	100	52	3	0	0	0	
LAKE CHARLES	89	63	92	60	76	3	0	0	0	.4	6	53.7	128	100	45	3	0	0	0	
NEW ORLEANS	86	63	88	58	74	1	0	-.7	0	4.6	69	40.9	85	100	54	0	0	0	0	

Based on 1951-80 normals

Weather Data for the Week Ending **October 7, 1989**

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 Sep 1	PCT. NORMAL SINCE Sep 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
SHREVEPORT	87	61	96	56	74														
ME CARIBOU	54	34	69	28	44	-3	.3	-3	.2	1.4	36	54.1	159	97	47	2	0	2	0
PORTLAND	62	40	75	5	51	-1	.7	-1	.5	4.2	99	25.6	93	94	59	0	4	0	0
MD BALTIMORE	69	49	75	40	59	-2	1.1	.4	.7	4.8	115	44.0	134	91	48	0	0	3	0
SALISBURY	71	51	78	42	61	-1	1.9	1.0	1.5	9.0	187	45.1	126	94	53	0	0	2	1
MA BOSTON	66	48	74	44	57	-2	.7	-1	.6	5.3	128	32.4	100	81	44	0	0	2	1
CHATHAM	64	48	76	42	56	-1	.2	-1	.2	4.7	104	35.6	103	85	59	0	0	2	0
MI ALPENA	57	34	77	26	46	-6	.3	-2	.2	2.2	62	16.2	70	94	46	0	2	4	0
DETROIT	63	40	74	32	51	-6	.1	-4	0	3.1	115	23.8	98	88	46	0	1	2	0
FLINT	61	37	76	28	49	-6	.1	-4	.1	4.5	159	25.8	112	90	46	0	2	2	0
GRAND RAPIDS	60	38	78	31	49	-7	.3	-4	.3	5.2	134	26.8	103	88	45	0	3	2	0
HOUGHTON LAKE	57	39	75	30	48	-4	.2	-4	.1	1.2	35	16.1	73	88	48	0	1	2	0
LANSING	61	37	77	28	49	-5	.2	-3	.2	3.7	107	25.1	107	88	47	0	2	2	0
MARQUETTE	53	32	78	24	42	-7	.5	-3	.3	1.7	36	20.7	70	91	50	0	5	4	0
MUSKEGON	57	40	77	31	49	-7	.6	0	.6	3.0	86	20.2	85	87	51	0	2	1	0
SAULT ST. MARIE	54	36	77	28	45	-5	1.0	.3	.7	2.1	45	18.4	73	94	57	0	1	4	1
MN ALEXANDRIA	52	31	75	25	42	-10	T	-5	T	3.5	129	18.8	89	89	42	0	4	1	0
DULUTH	52	33	80	26	42	-7	.3	-3	.2	4.7	123	23.9	96	87	46	0	4	3	0
INT'L FALLS	49	30	69	25	40	-8	.6	.1	.2	2.5	68	18.9	91	91	48	0	4	4	0
MINNEAPOLIS	57	34	85	26	46	-9	.2	-3	.1	1.4	48	21.2	93	86	37	0	4	2	0
ROCHESTER	57	32	80	22	44	-9	.6	.1	.6	1.2	30	20.3	84	88	40	0	5	2	1
MS GREENWOOD	82	59	87	55	71	2	.1	-1	.6	1.2	30	20.3	84	88	40	0	5	2	1
JACKSON	83	58	88	53	71	2	.1	-1	.6	7.3	186	58.9	144	96	50	0	0	1	0
MERIDIAN	84	58	88	52	71	2	0	0	0	5.4	133	41.3	101	100	54	0	0	0	0
MO CAPE GIRARDEAU	71	48	79	38	60	-1	.1	-1	.1	7.1	169	55.0	130	99	48	0	0	0	0
COLUMBIA	68	44	79	36	56	-7	1.1	.3	.9	2.6	56	33.1	110	90	46	0	0	2	1
KANSAS CITY	68	46	83	36	57	-7	T	-9	T	8.9	172	34.2	112	86	41	0	0	0	0
SAINT LOUIS	69	50	84	42	59	-4	.5	0	.3	2.2	69	26.9	99	80	44	0	0	2	0
SPRINGFIELD	71	49	80	38	60	-3	.6	-2	.6	3.0	60	30.0	95	87	48	0	0	1	1
MT BILLINGS	52	36	66	30	44	-10	1.4	1.1	1.0	2.1	133	12.8	103	93	64	0	2	4	1
GLASGOW	51	33	65	26	42	-10	.6	.4	.6	.8	75	9.5	96	87	44	0	3	1	1
GREAT FALLS	52	35	66	32	44	-9	.4	.2	.2	2.3	190	20.5	159	93	54	0	2	4	0
HAVRE	54	33	70	28	44	-8	T	-2	T	1.0	83	10.1	98	74	43	0	3	0	0
HELENA	54	34	68	30	44	-6	.2	0	.2	1.5	151	11.3	115	88	46	0	2	3	0
KALISPELL	56	30	61	24	43	-4	.2	-1	.1	1.7	132	16.0	132	94	45	0	5	2	0
MILES CITY	56	38	69	33	47	-7	.2	0	.2	.3	22	12.7	104	83	44	0	0	1	0
MISSOULA	56	35	65	28	46	-3	.2	0	.2	1.1	89	11.8	114	88	44	0	2	1	0
NE GRAND ISLAND	65	42	80	34	53	-5	.3	0	.3	6.8	241	20.8	100	80	32	0	0	2	0
LINCOLN	65	41	84	32	53	-6	.3	-2	.2	8.6	251	22.7	94	83	35	0	1	2	0
NORFOLK	62	39	81	30	50	-7	.2	-2	.1	3.8	155	15.6	73	79	35	0	1	3	0
NORTH PLATTE	66	37	78	32	52	-4	T	-3	T	1.1	59	13.7	77	88	34	0	1	3	0
OMAHA	61	42	83	33	52	-8	.6	0	.4	6.7	165	21.1	79	79	45	0	0	3	0
SCOTTSBLUFF	63	36	69	29	49	-6	T	-2	T	1.6	130	8.6	66	79	31	0	2	1	0
VALENTINE	61	37	73	33	49	-6	.1	-1	.1	2.1	123	11.5	74	69	34	0	0	1	0
NV ELY	64	28	71	20	46	-4	.1	-1	0	.5	60	6.3	88	76	26	0	5	2	0
LAS VEGAS	84	56	88	52	70	-3	0	0	T	0	0	2.2	71	29	12	0	0	0	0
RENO	68	36	74	32	52	-2	.4	.4	.4	1.6	548	6.8	132	89	27	0	1	1	0
WINNEMUCCA	66	31	74	20	49	-5	T	-1	T	.9	202	4.1	73	83	25	0	4	0	0
NH CONCORD	64	36	71	29	50	-3	.6	-1	.4	4.8	127	29.7	110	94	44	0	3	2	0
NJ ATLANTIC CITY	68	48	75	38	58	-3	1.4	.8	1.1	7.3	208	42.9	134	93	55	0	0	4	1
NM ALBUQUERQUE	72	50	83	46	61	-2	.9	.7	.5	1.2	121	4.7	73	77	36	0	0	3	1
CLOVIS	76	47	87	43	62	-2	.1	-4	.1	1.5	63	14.1	96	81	31	0	0	3	1
ROSWELL	84	54	94	51	69	4	T	-3	T	2.1	100	6.1	67	60	22	2	0	0	0
NY ALBANY	64	45	71	39	54	-1	.6	-1	.5	3.5	90	32.2	118	90	50	0	0	2	1
BINGHAMTON	60	42	67	36	51	-2	.3	-4	.2	4.6	115	32.1	113	91	53	0	0	3	0
BUFFALO	60	43	72	38	52	-4	.3	-4	.2	4.1	103	31.3	112	82	52	0	0	3	0
NEW YORK	68	54	74	47	61	-1	1.0	.3	1.0	6.4	153	46.9	144	75	45	0	0	1	1
ROCHESTER	62	43	75	38	53	-3	.6	0	.4	3.4	106	26.7	111	87	50	0	0	3	0
SYRACUSE	63	44	75	40	54	-2	.3	-4	.2	6.3	159	28.3	95	89	54	0	0	5	0
NC ASHEVILLE	73	49	82	36	61	0	.7	-1	.7	8.9	196	50.6	144	98	51	0	0	1	1
CHARLOTTE	80	59	86	48	70	4	2.3	1.6	2.3	9.5	226	41.2	119	89	50	0	0	1	1
GREENSBORO	76	53	83	39	65	2	2.7	2.0	2.0	8.8	200	41.9	123	93	47	0	0	2	2
HATTERAS	76	62	80	55	69	0	2.2	1.0	1.6	22.2	321	72.8	170	95	65	0	0	2	2
NEW BERN	79	59	86	48	69	1	2.5	1.5	1.7	11.1	166	53.6	122	97	57	0	0	2	2
RALEIGH	76	55	84	41	66	2	1.7	1.1	1.6	5.7	146	45.1	135	92	52	0	0	2	1
WILMINGTON	82	60	88	48	71	2	1.7	.8	1.0	11.2	171	54.7	123	94	54	0	0	2	2
ND BISMARCK	56	28	64	16	42	-9	.1	-1	.1	1.3	84	10.3	76	84	34	0	4	2	0
FARGO	54	27	70	18	41	-11	.1	-2	0	2.2	100	17.5	103	83	36	0	5	3	0
GRAND FORKS	54	25	69	15	40	-11	.1	-2	.1	.8	35	11.0	68	79	34	0	5	2	0
WILLISTON	54	28	63	16	41	-10	.1	-1	.1	.6	40	9.0	75	87	41	0	4	1	0
OH AKRON-CANTON	60	42	73	33	51	-6	1.1	.6	1.0	4.5	129	33.4	116	95	53	0	0	2	1
CINCINNATI	66	45	78	36	56	-5	.6	0	.5	3.6	103	42.0	132	93	53	0	0	3	1
CLEVELAND	63	46	77	35	54	-4	.4	-2	.4	5.0	146	34.5	124	87	49	0	0	1	0
COLUMBUS	65	44	79	33	54	-5	.1	-3	.1	2.3	72	37.0	123	93	50	0	0	3	0

Weather Data for the Week Ending **October 7, 1989**

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	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE Sep 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	64	43	78	30	54	-6	.1	-.3	.1	5.8	206	42.4	152	96	56	0	1	3	0
TOLEDO	64	37	75	27	50	-6	.1	-.4	.1	3.3	113	33.0	132	95	45	0	3	1	0
YOUNGSTOWN	62	43	73	33	52	-4	1.0	.4	.6	7.1	192	37.5	127	93	53	0	0	2	1
OK OKLAHOMA CITY	78	54	89	49	66	-1	1.8	1.1	1.4	6.3	153	39.0	149	92	46	0	0	2	1
TULSA	78	54	87	46	66	-2	1.2	.3	1.2	4.5	87	27.7	87	88	45	0	0	2	1
OR ASTORIA	63	48	70	34	55	0	.2	-.9	.2	.7	16	36.0	84	97	69	0	0	1	0
BURNS	63	30	72	18	46	-6	.2	-.1	.6	.94	8.5	125	70	25	0	0	1	0	
MEDFORD	73	40	80	33	57	-2	.2	-.2	1.9	194	12.8	107	91	29	0	6	0	0	
PENDLETON	68	43	75	34	55	-2	.2	-.2	.1	17	10.1	124	62	26	0	0	0	0	
PORTLAND	69	49	74	41	59	-1	.1	-.5	1.5	71	21.3	92	96	50	0	0	0	0	
SALEM	69	43	72	36	56	-1	.1	-.5	1.1	52	18.4	75	98	49	0	0	0	0	
PA ALLENTOWN	66	47	74	42	56	-1	.6	-.1	6.5	139	38.1	111	89	53	0	0	2	1	
ERIE	63	48	73	42	55	-1	.3	-.5	4.1	86	32.4	108	75	49	0	0	3	0	
HARRISBURG	66	48	72	43	57	-3	.7	.1	3.4	79	38.8	127	89	51	0	0	3	0	
PHILADELPHIA	68	49	74	41	59	-3	1.0	.4	6.1	150	43.3	134	91	56	0	0	4	1	
PITTSBURGH	62	45	74	36	53	-4	.6	0	5.1	155	37.0	126	91	54	0	0	3	0	
SCRANTON	63	46	70	40	55	-2	.2	-.4	4.1	107	29.9	110	87	50	0	0	2	0	
RI PROVIDENCE	66	44	74	41	55	-2	1.1	.3	5.8	134	42.6	127	89	44	0	0	2	1	
SC CHARLESTON	85	67	89	59	76	6	2.4	1.6	2.0	15.8	276	47.2	107	94	48	0	0	2	1
COLUMBIA	84	61	87	50	72	4	1.6	1.0	1.6	6.8	138	44.1	107	96	49	0	0	1	1
FLORENCE	83	61	88	51	72	4	3.6	3.0	2.7	8.7	185	44.1	119	94	51	0	0	3	2
GREENVILLE	79	56	84	44	67	2	2.4	1.5	2.4	7.8	142	41.3	100	94	51	0	0	1	1
SD ABERDEEN	56	32	67	24	44	-9	.1	-.2	.1	2.3	133	17.1	108	84	35	0	4	1	0
HURON	59	33	74	24	46	-8	.2	0	.2	3.3	274	11.1	76	89	44	0	0	4	0
RAPID CITY	59	38	72	35	49	-6	.2	0	.2	3.3	274	11.1	76	89	44	0	0	4	0
SIoux FALLS	60	34	79	26	47	-8	.2	0	.2	3.3	274	11.1	76	89	44	0	0	4	0
TN CHATTANOOGA	77	55	84	46	66	1	1.2	.5	1.2	12.4	248	62.1	151	95	53	0	0	1	1
KNOXVILLE	76	53	82	41	64	0	.3	-.3	.3	9.5	267	47.4	129	98	54	0	0	3	0
MEMPHIS	80	58	86	51	69	1	.1	-.5	.1	6.1	147	50.9	126	91	50	0	0	0	0
NASHVILLE	76	53	85	43	65	-1	.3	-.4	.3	6.6	152	47.8	125	92	47	0	0	2	0
TX ABILENE	85	60	96	48	73	2	.1	-.5	.1	4.2	114	26.4	136	77	34	1	0	1	0
AMARILLO	78	49	91	44	64	0	.7	0	.7	2.5	122	19.0	113	86	31	1	0	1	0
AUSTIN	91	66	98	59	79	5	.8	0	.8	1.1	25	23.1	94	96	40	5	0	3	1
BEAUMONT	89	64	91	59	77	3	0	-.9	0	1.2	19	58.7	136	99	48	3	0	0	0
BROWNSVILLE	92	70	94	64	81	3	.1	-1.0	.1	2.5	41	15.5	77	98	49	6	0	1	0
CORPUS CHRISTI	93	70	96	61	81	4	.1	-.9	.1	2.1	28	15.5	58	99	48	6	0	1	0
DEL RIO	90	67	96	60	79	3	.2	-.4	.2	1.4	42	7.2	51	69	31	3	0	1	0
EL PASO	87	52	82	50	69	1	.2	-.2	.5	30	6.9	107	66	21	3	0	0	0	0
FORT WORTH	89	63	97	55	76	4	.2	-.7	.2	5.8	37.0	148	82	38	3	0	1	0	0
GALVESTON	84	72	87	66	78	2	.2	-.8	.2	1.3	19	36.3	114	96	63	0	0	0	0
HOUSTON	89	64	93	56	76	2	.1	-.9	.1	2.8	46	53.0	147	98	46	4	0	2	0
LUBBOCK	82	53	93	46	68	2	0	-.5	0	3.7	149	14.7	96	80	30	1	0	0	0
MIDLAND	87	55	94	48	71	2	0	-.4	0	2.8	113	7.8	68	75	32	2	0	0	0
SAN ANGELO	88	58	97	52	73	2	0	-.6	0	2.8	78	16.5	111	76	28	2	0	0	0
SAN ANTONIO	92	67	97	58	79	5	3.1	2.4	3.1	4.7	105	17.1	74	86	38	5	0	1	0
VICTORIA	89	68	96	61	78	3	.3	-.7	.3	2.8	38	19.2	64	98	52	3	0	2	0
WACO	91	63	101	59	77	4	.2	-.6	.2	.5	12	26.9	110	88	37	5	0	1	0
WICHITA FALLS	85	56	94	49	71	1	0	-.7	0	5.3	130	34.1	155	91	38	1	0	0	0
UT CEDAR CITY	70	38	76	31	54	-3	0	-.2	0	.2	20	5.7	71	53	16	0	0	0	0
SALT LAKE CITY	67	42	76	36	55	-3	0	-.2	0	.5	43	8.0	69	80	32	0	3	0	0
VT BURLINGTON	59	42	70	36	51	-1	.5	-.2	.3	6.4	168	29.7	114	87	48	0	0	4	0
VA NORFOLK	74	58	83	50	66	1	.9	-.1	.6	6.1	118	47.9	132	88	54	0	0	2	1
RICHMOND	75	52	83	39	63	0	1.3	.5	1.2	6.6	153	41.9	122	89	48	0	0	2	1
ROANOKE	73	52	81	41	62	1	1.8	1.0	1.8	10.8	275	45.6	148	89	47	0	0	2	1
WA QUILLAYUTE	63	46	71	32	54	2	.7	-.3	.4	.9	10	50.7	75	97	62	0	1	3	0
SEATTLE-TACOMA	64	49	68	44	56	1	.1	-.6	.6	22	20.8	88	93	59	0	0	1	0	0
SPokane	63	37	71	27	50	-3	.2	-.2	.2	21	9.8	88	83	32	0	1	0	0	0
YAKIMA	70	36	75	27	53	-1	.1	-.1	.1	5	3.9	74	86	28	0	2	0	0	0
WV BECKLEY	64	45	73	31	54	-2	.7	0	.4	4.0	95	34.6	101	100	59	0	1	3	0
CHARLESTON	68	49	81	36	58	-2	.9	.3	.4	8.1	226	50.0	147	99	54	0	0	3	0
HUNTINGTON	67	48	79	34	57	-4	.8	.2	.6	7.1	200	51.8	157	96	54	0	0	2	1
PARKERSBURG	64	46	79	36	55	-5	1.6	1.1	1.1	8.2	241	47.2	153	98	62	0	0	2	2
WI GREEN BAY	59	37	81	25	48	-5	.4	-.2	.4	.9	25	14.2	61	81	35	0	2	1	0
LACROSSE	60	37	82	25	49	-7	.9	.3	.9	2.9	71	19.3	75	86	39	0	3	1	1
MADISON	61	36	79	25	48	-6	.7	-.2	.7	1.6	45	22.0	86	87	37	0	3	1	1
MILWAUKEE	60	41	71	33	51	-5	.4	-.4	.4	3.7	108	25.9	103	85	41	0	0	1	0
WAUSAU	58	35	78	27	47	-6	.5	-.2	.5	30	17.6	65	89	38	0	3	1	0	0
WY CASPER	59	34	64	28	46	-6	.2	-.2	.2	3.2	348	11.9	127	87	32	0	2	0	0
CHEYENNE	59	34	65	29	47	-5	.2	-.2	.2	1.6	131	11.5	96	96	38	0	2	0	0
LANDER	56	36	63	33	46	-6	.1	-.2	.1	2.3	204	13.6	126	83	40	0	0	2	0
SHERIDAN	55	35	65	31	45	-7	.6	-.4	.4	1.4	98	10.2	81	97	53	0	1	3	0

## National Weather Data for Selected Cities

In last week's issue (No. 39, Oct. 3, 1989), an incorrect data file was inadvertently published. The following is the correct data for the week ending September 30.

### Weather Data for the Week Ending September 30, 1989

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 Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	69	57	77	47	63	-7	3.3	2.3	1.5	5.6	129	50.9	118	83	72	0	0	4	2
MOBILE	72	63	81	55	67	-8	4.1	2.9	3.1	4.6	70	44.5	84	99	81	0	0	6	2
MONTGOMERY	71	61	79	53	66	-7	1.8	.7	1.1	4.7	100	55.3	142	97	74	0	0	6	1
AK ANCHORAGE	54	43	61	38	48	5	.7	.1	.3	3.9	159	21.6	195	97	65	0	0	3	0
BARROW	37	32	43	30	35	9	.1	-1.1	.1	.7	123	6.9	194	97	78	0	5	1	0
FAIRBANKS	53	37	64	29	45	6	.3	.1	.2	.7	66	7.5	91	91	61	0	2	3	0
JUNEAU	55	46	59	39	50	4	1.2	-1.5	.5	7.3	115	28.2	79	99	80	0	0	6	1
KODIAK	58	41	63	35	49	3	2.1	.6	1.3	6.4	101	36.6	86	97	65	0	0	4	2
NOME	47	39	50	33	43	6	.4	0	.2	2.2	94	17.4	149	95	70	0	0	3	0
AZ PHOENIX	105	78	108	72	92	10	0	-1.1	0	.5	76	4.0	80	29	11	7	0	0	0
PRESCOTT	85	53	89	48	69	7	0	-1.3	0	.7	48	8.9	60	55	17	0	0	0	0
TUCSON	99	70	103	65	85	7	0	-1.3	0	T	2	4.4	51	23	9	7	0	0	0
YUMA	105	76	109	73	91	7	0	-1.1	0	.1	38	6.9	405	54	17	7	0	0	0
AR FORT SMITH	77	47	83	36	62	-8	.1	-1.7	.1	3.5	108	45.3	150	97	40	0	0	1	0
LITTLE ROCK	69	54	77	41	62	-9	1.3	.3	.8	4.5	107	44.0	117	81	55	0	0	3	1
CA BAKERSFIELD	83	60	90	56	72	-3	T	0	T	.5	408	2.8	70	81	38	1	0	0	0
EUREKA	65	53	69	51	59	3	.7	.4	.5	.9	96	20.2	86	90	72	0	0	3	1
FRESNO	84	59	90	57	72	0	.2	.1	.2	1.1	740	6.0	84	90	38	1	0	1	0
LOS ANGELES	78	63	85	59	70	2	0	0	0	.3	186	3.5	40	91	55	0	0	0	0
REDDING	78	57	88	55	68	-5	.5	.2	.4	4.8	460	24.7	94	97	46	0	0	3	0
SACRAMENTO	79	54	81	52	66	-3	.7	.6	.4	3.0	12.1	110	95	40	0	0	2	0	
SAN DIEGO	79	65	86	62	72	4	0	0	0	.2	275	2.2	33	92	54	0	0	0	0
SAN FRANCISCO	72	55	76	54	63	0	.2	.1	.1	1.2	653	8.6	68	95	56	0	0	2	0
CO DENVER	84	49	89	44	67	8	0	-1.3	0	1.6	128	13.7	108	79	19	0	0	0	0
GRAND JUNCTION	86	54	89	49	70	7	0	-1.2	0	.3	49	5.4	93	45	14	0	0	0	0
PUEBLO	86	47	92	36	67	5	.1	0	.1	1.0	127	6.8	73	72	19	1	0	1	0
CT BRIDGEPORT	65	47	72	38	56	-7	.1	-1.6	.1	2.9	89	39.1	128	72	46	0	0	1	0
HARTFORD	66	42	76	35	54	-5	.8	-1.1	.8	4.7	119	42.6	131	88	37	0	0	1	1
DC WASHINGTON	69	51	75	46	60	-7	1.5	.8	1.0	6.7	209	40.4	135	92	48	0	0	2	1
FL APALACHICOLA	82	68	87	63	75	-2	6.8	5.1	5.7	10.3	119	44.6	98	95	77	0	0	3	2
DAYTONA BEACH	88	73	93	70	81	3	1.4	-1.1	.7	5.0	75	28.2	72	97	65	1	0	5	1
JACKSONVILLE	83	72	89	66	78	1	10.0	8.7	3.6	14.4	223	46.1	106	97	76	0	0	7	4
KEY WEST	89	79	92	77	84	2	1.4	0	.5	3.2	50	20.3	69	88	65	4	0	5	1
MIAMI	90	79	91	76	85	4	.1	-1.8	0	5.8	72	38.4	84	86	60	7	0	3	0
ORLANDO	90	74	91	72	82	3	1.2	-1.1	.5	10.3	162	38.0	89	97	61	5	0	4	1
TALLAHASSEE	78	67	88	60	73	-3	4.2	2.9	2.0	4.5	70	51.0	95	97	77	0	0	5	3
TAMPA	88	75	93	72	82	2	1.0	-1.2	.8	6.1	98	35.0	87	95	62	4	0	4	1
WEST PALM BEACH	90	78	92	75	84	3	1.6	-1.7	.6	4.1	44	29.7	64	89	62	4	0	6	2
GA ATLANTA	67	57	76	51	62	-8	10.6	9.9	4.9	11.6	370	53.1	139	94	88	0	0	5	4
AUGUSTA	73	60	83	56	67	-4	.6	-1.1	.4	3.7	106	41.1	115	92	64	0	0	5	0
MACON	70	60	80	54	65	-7	2.4	1.7	.9	2.4	73	37.3	103	96	72	0	0	6	3
SAVANNAH	77	64	87	56	70	-3	.4	-1.6	.3	8.0	154	35.5	83	95	72	0	0	3	0
HI HILO	81	68	85	65	75	-1	1.5	-1.1	.4	9.0	137	45.2	161	96	67	0	0	6	0
HONOLULU	90	74	91	71	82	2	T	-1.2	T	.2	25	15.4	104	79	47	3	0	0	0
KAHULUI	87	69	88	65	78	0	0	-1.1	0	.1	21	28.8	231	83	50	0	0	0	0
LIHUE	84	73	85	70	79	0	.2	-1.5	.2	.8	37	41.9	148	90	63	0	0	1	0
ID BOISE	84	53	92	48	68	9	.6	.4	.5	1.2	211	8.5	104	72	25	2	0	2	1
LEWISTON	82	56	87	53	69	10	.1	-1.1	.1	.6	82	12.0	129	68	32	0	0	1	0
POCATELLO	84	46	89	38	65	10	T	-1.2	T	.5	76	7.6	96	81	19	0	0	1	0
IL CHICAGO	68	41	77	35	55	-6	0	-1.8	0	3.9	96	25.3	91	91	36	0	0	0	0
MOLINE	72	38	81	30	55	-6	0	-1.8	0	5.4	146	29.2	96	93	27	0	1	0	0
PEORIA	69	41	77	33	55	-7	0	-1.8	0	2.9	79	19.2	67	88	34	0	0	0	0
QUINCY	72	41	82	33	57	-7	0	-1.0	0	2.9	70	15.3	50	84	32	0	0	0	0
ROCKFORD	69	37	76	30	53	-7	0	-1.8	0	1.9	51	23.9	81	96	33	0	2	0	0
SPRINGFIELD	71	41	80	33	56	-8	0	-1.7	0	5.5	172	25.6	93	93	35	0	0	0	0
IN EVANSVILLE	70	48	75	38	59	-6	.1	-1.5	.1	2.2	82	42.2	131	97	53	0	0	1	0
FORT WAYNE	68	39	76	32	54	-7	0	-1.6	0	4.2	165	30.0	112	92	38	0	1	0	0
INDIANAPOLIS	68	42	76	36	55	-8	0	-1.6	0	8.1	296	42.9	141	92	42	0	0	0	0
SOUTH BEND	68	39	76	34	54	-7	0	-1.7	0	3.8	118	29.3	101	87	35	0	0	0	0
IA DES MOINES	72	42	79	34	57	-3	0	-1.6	0	5.4	176	26.1	101	83	31	0	0	0	0
SIoux CITY	75	42	84	33	59	-1	0	-1.5	0	4.3	173	18.4	84	77	25	0	0	0	0
WATERLOO	71	37	79	29	54	-4	0	-1.7	0	3.1	90	15.7	57	88	29	0	1	0	0
KS CONCORDIA	77	46	85	37	62	-2	0	-1.6	0	4.2	141	23.2	98	75	28	0	0	0	0
DODGE CITY	78	44	84	33	61	-4	0	-1.4	0	2.4	128	20.1	112	74	26	0	0	0	0
GOODLAND	82	49	88	38	65	5	0	-1.3	0	1.1	75	17.4	123	67	24	0	0	0	0
TOPEKA	75	37	83	31	56	-8	0	-1.8	0	8.7	251	34.3	125	99	32	0	1	0	0
WICHITA	76	44	83	34	60	-6	0	-1.8	0	7.4	216	33.9	143	84	30	0	0	0	0
KY BOWLING GREEN	70	52	76	39	61	-5	1.3	.6	.5	3.4	107	51.9	137	92	61	0	0	4	1
LEXINGTON	67	49	73	37	58	-7	.3	-1.3	.3	5.0	152	45.6	125	90	57	0	0	2	0
LOUISVILLE	69	50	74	39	60	-6	.1	-1.6	.1	2.4	73	44.3	131	92	52	0	0	1	0
LA ALEXANDRIA	72	59	80	50	66	-9	.3	-1.4	.2	.4	14	52.5	130	85	61	0	0	2	0
BATON ROUGE	75	62	80	53	69	-7	2.6	1.7	2.4	4.5	102	65.3	148	97	73	0	0	2	1
LAKE CHARLES	80	61	85	53	70	-5	.1	-1.2	.1	.4	8	53.7	131	84	49	0	0	2	0
NEW ORLEANS	70	64	80	58	69	-7	1.9	.7	1.1	4.5	77	40.9	86	96	77	0	0	5	2

Based on 1951-80 normals

Weather Data for the Week Ending September 30, 1989

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 Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION		
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE	
SHREVEPORT	74	56	79	47	65	-9	T	-8	T	1.1	33	53.8	161	87	54	0	0	0	0	
ME CARIBOU	53	35	63	26	44	-5	.7	-1	.5	3.5	100	24.9	93	86	53	0	0	2	3	
PORTLAND	62	38	73	31	50	-5	.9	0	.9	4.5	138	30.6	101	92	41	0	2	1	1	
MD BALTIMORE	68	47	74	40	58	-7	1.1	.4	.7	3.6	106	42.9	134	95	50	0	0	0	2	
SALISBURY	69	48	74	39	58	-6	2.5	1.6	1.9	7.2	181	43.2	124	97	52	0	0	0	2	
MA BOSTON	65	47	75	42	56	-5	.6	-1	.6	4.6	136	31.7	100	82	41	0	0	0	2	
CHATHAM	61	49	66	43	55	-4	1.7	.8	1.6	4.5	121	35.4	105	83	65	0	0	0	1	
MI ALPENA	64	32	74	25	48	-6	T	T	T	1.9	62	15.9	70	89	32	0	3	0	0	
DETROIT	65	40	73	33	52	-7	0	0	0	3.0	136	23.7	99	95	45	0	0	0	0	
FLINT	64	36	70	29	50	-8	0	0	0	4.3	186	25.7	114	94	37	0	2	0	0	
GRAND RAPIDS	66	37	73	29	51	-7	0	0	0	4.9	152	26.6	105	92	34	0	2	0	0	
HOUGHTON LAKE	63	36	69	21	50	-4	T	T	T	1.0	36	15.9	74	85	34	0	3	1	0	
LANSING	65	37	72	29	51	-6	0	0	0	3.5	119	24.9	108	92	36	0	2	0	0	
MARQUETTE	62	33	75	25	48	-3	.2	-7	-1	1.2	31	20.2	71	89	41	0	3	2	0	
MUSKEGON	63	36	73	27	50	-8	0	0	0	2.4	83	19.6	85	91	41	0	2	0	0	
SAULT ST. MARIE	60	33	68	26	47	-4	T	T	T	1.1	27	17.4	71	96	42	0	4	1	0	
MN ALEXANDRIA	71	44	84	33	58	4	T	T	T	3.5	155	18.8	90	77	35	0	0	0	0	
DULUTH	65	38	78	27	52	1	0	0	0	4.4	136	23.6	97	83	34	0	2	0	0	
INT'L FALLS	66	36	82	25	51	2	.1	-6	.1	1.9	61	18.3	91	88	36	0	2	1	0	
MINNEAPOLIS	71	43	81	34	57	1	T	-5	T	1.3	52	21.0	95	77	31	0	0	0	0	
ROCHESTER	69	39	79	30	54	-2	0	-7	0	.6	18	19.7	83	84	34	0	2	0	0	
MS GREENWOOD	69	57	79	46	63	-9	2.9	2.2	1.5	7.2	216	58.8	146	94	72	0	0	3	2	
JACKSON	70	58	78	50	64	-9	2.3	1.6	1.4	5.4	153	41.3	103	97	75	0	0	5	2	
MERIDIAN	71	59	79	48	65	-7	4.6	3.8	2.6	7.1	199	55.0	132	95	74	0	0	5	3	
MO CAPE GIRARDEAU	70	50	74	40	60	-	.4	-4	.3	2.8	73	45.3	130	96	55	0	0	2	0	
COLUMBIA	72	41	80	33	56	-9	0	-9	0	1.5	40	32.0	109	88	35	0	0	0	0	
KANSAS CITY	73	43	83	35	58	-8	0	0	0	8.9	207	34.2	115	88	38	0	0	0	0	
SAINT LOUIS	73	48	80	40	60	-5	0	-6	0	1.7	63	26.4	99	81	33	0	0	0	0	
SPRINGFIELD	72	41	79	32	57	-9	0	-1	0	2.4	57	29.4	95	93	36	0	1	0	0	
MT BILLINGS	83	52	89	44	67	12	T	-3	T	.7	56	11.5	95	60	20	0	0	0	0	
GLASGOW	80	45	87	40	63	10	T	-2	T	.2	22	8.9	92	71	22	0	0	1	0	
GREAT FALLS	78	47	83	42	63	9	.6	-4	.6	1.9	185	20.1	158	83	34	0	0	1	1	
HAVRE	77	44	80	38	60	7	.1	-1	.1	1.0	98	10.1	100	68	30	0	0	1	0	
HELENA	77	44	82	40	61	9	.1	-1	.1	1.3	158	11.1	116	86	32	0	0	1	0	
KALISPELL	72	41	77	36	57	7	.2	0	-2	1.6	142	15.8	133	96	47	0	0	1	0	
MILES CITY	86	50	94	45	68	13	0	-2	0	.1	6	12.5	104	57	19	2	0	0	0	
MISSOULA	77	44	82	39	61	9	.1	-1	.1	.9	88	11.6	114	94	34	0	0	2	0	
NE GRAND ISLAND	78	44	86	36	61	1	0	-5	0	6.5	261	20.5	100	78	28	0	0	0	0	
LINCOLN	76	41	83	33	58	-3	0	-6	0	8.3	283	22.4	95	86	30	0	0	0	0	
NORFOLK	77	45	86	35	61	2	0	-4	0	3.6	174	15.4	74	73	25	0	0	0	0	
NORTH PLATTE	83	43	90	37	63	6	0	-3	0	1.1	67	13.7	79	84	25	1	0	0	0	
OMAHA	74	47	81	40	61	-1	0	-7	0	6.2	177	20.6	79	69	37	0	0	0	0	
SCOTTSBLUFF	85	46	94	36	66	8	0	-3	0	1.6	151	8.6	67	80	20	1	0	0	0	
VALENTINE	84	47	94	40	66	9	0	-3	0	.8	58	10.3	67	60	20	1	0	0	0	
NV ELY	78	42	82	35	60	7	T	-2	T	.5	68	6.2	90	63	21	0	0	1	0	
LAS VEGAS	96	69	99	63	83	7	0	-1	0	T	0	2.2	72	30	13	7	0	0	0	
RENO	77	45	86	39	61	5	.1	-1	.1	1.2	410	6.4	123	78	22	0	0	1	0	
WINNEMUCA	81	43	89	36	62	7	.3	-3	.3	.9	291	4.1	74	67	18	0	0	2	0	
NH CONCORD	64	35	75	29	49	-6	1.1	.4	1.1	4.2	135	29.1	111	97	36	0	4	1	1	
NJ ATLANTIC CITY	68	43	73	36	56	-7	1.5	.9	1.4	5.9	206	41.5	132	95	48	0	0	2	1	
NM ALBUQUERQUE	83	54	84	50	69	-3	0	-2	0	.3	37	3.7	60	47	17	0	0	0	0	
CLOVIS	76	46	84	36	61	-4	0	-4	0	1.4	76	14.1	99	72	27	0	0	0	0	
ROSWELL	84	49	92	46	66	-1	0	-4	0	2.1	118	6.1	69	62	18	1	0	0	0	
NY ALBANY	65	37	77	31	51	-6	.3	-5	.3	2.9	91	31.6	119	94	40	0	2	1	0	
BINGHAMTON	60	37	73	30	49	-7	T	-7	T	4.3	130	31.8	115	91	42	0	2	0	0	
BUFFALO	61	39	67	35	50	-8	0	-7	0	3.9	115	31.0	113	85	42	0	0	0	0	
NEW YORK	67	52	76	48	60	-5	.7	0	.6	5.4	156	45.9	144	74	41	0	0	2	1	
ROCHESTER	64	39	72	35	52	-7	T	-6	T	2.8	106	26.1	111	93	40	0	0	0	0	
SYRACUSE	64	38	73	31	51	-7	T	-7	T	6.0	182	27.9	96	90	40	0	1	0	0	
NC ASHEVILLE	63	48	73	40	56	-8	4.4	3.6	1.6	8.2	216	49.9	145	98	71	0	0	4	3	
CHARLOTTE	68	54	77	48	61	-7	2.6	1.8	1.1	7.3	204	39.0	115	89	58	0	0	4	3	
GREENSBORO	67	50	79	41	59	-7	2.5	1.7	1.5	6.1	168	39.2	118	94	59	0	0	4	2	
HATTERAS	75	65	82	60	70	-2	3.5	2.2	2.1	20.0	347	70.6	170	91	62	0	0	3	2	
NEW BERN	76	59	84	53	68	-3	3.8	2.6	2.8	8.6	150	51.1	119	93	60	0	0	3	2	
RALEIGH	70	52	78	43	61	-6	1.7	1.0	1.1	4.0	121	43.4	132	93	59	0	0	4	2	
WILMINGTON	78	60	87	53	69	-3	3.8	2.6	3.1	9.5	167	53.1	121	92	59	0	0	3	2	
ND BISMARCK	81	43	95	33	62	9	0	-3	0	1.2	90	10.2	77	78	23	2	0	0	0	
FARGO	72	44	88	30	58	4	0	-4	0	2.1	114	17.4	104	76	30	0	1	0	0	
GRAND FORKS	73	41	87	25	57	5	0	-4	0	.7	36	10.9	69	75	28	0	1	0	0	
WILLISTON	80	42	91	32	61	9	0	-3	0	.5	40	8.9	75	78	23	1	1	0	0	
OH AKRON-CANTON	64	41	71	35	52	-8	0	-6	0	3.4	115	32.4	114	94	42	0	0	0	0	
CINCINNATI	66	46	71	40	56	-7	0	-7	0	3.0	103	41.4	132	90	46	0	0	0	0	
CLEVELAND	64	43	71	37	54	-7	0	-6	0	4.6	160	34.1	125	91	46	0	0	0	0	
COLUMBUS	67	43	74	36	55	-7	0	-5	0	2.2	79	36.9	124	95	45	0	0	0	0	

Weather Data for the Week Ending September 30, 1989

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	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE Sep 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	66	42	74	34	54	-6	0	-1.5	0	5.7	239	42.3	155	98	46	0	0	0	0
TOLEDO	66	38	76	31	52	-6	0	-1.5	0	3.3	131	33.0	134	97	38	0	0	2	0
YOUNGSTOWN	65	39	73	33	52	-7	0	-1.7	0	6.1	198	36.5	128	95	41	0	0	0	0
OK OKLAHOMA CITY	75	47	81	36	61	-6	0	-1.8	0	4.5	131	37.2	147	87	31	0	0	0	0
TULSA	77	46	83	37	62	-6	0	-1.0	0	3.3	76	26.5	86	90	30	0	0	0	0
OR ASTORIA	66	52	83	46	59	2	.4	.6	.3	.5	16	35.8	86	97	66	0	0	0	3
BURNS	76	40	86	35	58	3	0	-1.1	0	.6	128	8.5	130	82	25	0	0	0	0
MEDFORD	74	52	86	47	63	1	.7	.4	.4	1.9	266	12.8	110	93	47	0	0	0	2
PENLETON	78	52	90	46	65	5	T	-2	T	.1	21	10.1	127	71	31	1	0	0	0
PORTLAND	74	54	89	50	64	4	1.1	.6	.7	1.5	93	21.3	94	96	51	0	0	0	4
SALM	74	51	90	47	62	4	1.0	.5	.7	1.0	66	18.3	76	96	53	1	0	0	3
PA ALLENTOWN	66	41	73	35	54	-7	.8	-1	.6	5.9	148	37.5	111	96	45	0	0	0	2
ERIE	62	43	66	39	52	-7	0	-1.9	0	3.8	95	32.0	109	81	43	0	0	0	0
HARRISBURG	67	43	74	37	55	-6	.7	-1	.6	2.6	73	38.1	127	95	41	0	0	0	2
PHILADELPHIA	69	48	74	42	58	-6	.7	0	.6	5.0	148	42.3	134	87	45	0	0	0	2
PITTSBURGH	66	42	72	34	54	-6	0	-1.6	0	4.6	167	36.4	126	94	43	0	0	0	0
SCRANTON	63	39	71	33	51	-8	.5	-2	.5	3.9	122	29.7	112	92	42	0	0	0	2
RI PROVIDENCE	65	45	73	38	55	-5	1.1	.3	1.1	4.8	135	41.5	127	90	42	0	0	0	1
SC CHARLESTON	77	63	83	57	70	-3	2.3	1.3	2.0	13.4	271	44.7	104	95	65	0	0	0	3
COLUMBIA	72	59	80	55	66	-5	.5	-3	.3	5.2	122	42.5	105	91	61	0	0	0	5
FLORENCE	75	57	85	51	67	-5	1.5	.6	1.3	5.1	125	40.4	111	92	56	0	0	0	3
GREENVILLE	67	54	78	48	60	-8	3.3	2.2	1.6	5.4	117	38.9	96	88	62	0	0	0	4
SD ABERDEEN	78	45	92	31	62	7	T	-3	T	2.2	151	17.0	110	79	27	1	1	0	0
HURON	81	44	92	33	63	6	T	-3	T	1.6	121	13.0	82	72	22	1	0	0	0
RAPID CITY	84	49	93	41	67	10	0	-2	0	3.1	306	10.8	76	79	25	2	0	0	0
SIOUX FALLS	74	44	85	30	59	2	T	-6	T	3.4	122	14.5	70	73	28	0	1	0	0
TN CHATTANOOGA	68	57	77	47	63	-6	6.3	5.4	2.1	11.2	261	60.9	151	95	73	0	0	0	4
KNOXVILLE	68	54	74	43	61	-7	3.5	2.8	1.3	9.2	309	47.1	131	98	72	0	0	0	4
MEMPHIS	71	57	79	44	64	-7	1.9	1.1	1.7	6.1	169	50.9	127	91	61	0	0	0	3
NASHVILLE	68	54	76	41	61	-7	2.8	2.0	2.1	6.3	171	47.5	126	91	61	0	0	0	4
TX ABILENE	78	46	84	38	62	-10	0	-7	0	4.1	134	26.3	140	81	26	0	0	0	0
AMARILLO	80	45	88	35	62	-4	0	-3	0	1.8	106	18.3	111	71	25	0	0	0	0
AUSTIN	85	59	89	53	72	-4	0	-9	0	.3	8	22.3	94	67	26	0	0	0	0
BEAUMONT	81	60	85	52	70	-6	T	-1.1	T	1.2	22	58.7	139	86	46	0	0	0	0
BROWNSVILLE	86	61	91	58	74	-6	0	-1.2	0	2.5	47	15.4	81	94	35	1	0	0	0
CORPUS CHRISTI	87	61	90	57	74	-5	0	-1.4	0	2.1	31	15.4	60	82	32	2	0	0	0
DEL RIO	84	54	90	49	69	-8	0	-7	0	1.2	45	7.0	52	47	19	1	0	0	0
EL PASO	85	48	89	43	66	-5	0	-3	0	.5	34	6.9	111	60	16	0	0	0	0
FORT WORTH	80	52	85	44	66	-8	0	-8	0	2.4	70	37.0	152	87	33	0	0	0	0
GALVESTON	79	65	82	57	72	-6	T	-1.3	T	1.3	22	36.3	117	83	47	0	0	0	0
HOUSTON	83	58	85	50	70	-6	0	-1.2	0	2.7	52	52.9	151	88	36	0	0	0	0
LUBBOCK	81	46	88	38	63	-4	0	-5	0	3.7	183	14.7	99	73	23	0	0	0	0
MIDLAND	81	45	89	36	63	-8	0	-5	0	2.8	135	7.8	70	80	29	0	0	0	0
SAN ANGELO	80	42	87	37	61	-12	0	-7	0	2.8	93	16.5	115	91	24	0	0	0	0
SAN ANTONIO	86	54	92	50	70	-6	0	-9	0	1.5	41	14.0	63	64	20	2	0	0	0
VICTORIA	84	57	87	51	70	-7	0	-1.4	0	2.4	39	18.9	65	77	30	0	0	0	0
WACO	82	50	85	43	66	-10	0	-8	0	.3	9	26.7	113	82	28	0	0	0	0
WICHITA FALLS	78	47	85	38	63	-10	0	-8	0	5.3	157	34.1	160	88	30	0	0	0	0
UT CEDAR CITY	84	52	87	47	68	9	T	-2	T	.2	23	5.7	72	47	14	0	0	0	0
SALT LAKE CITY	85	55	90	51	70	10	.1	-2	.1	.5	56	8.1	71	68	21	1	0	0	2
VT BURLINGTON	61	37	68	33	49	-6	T	-7	T	6.0	188	29.3	115	90	39	0	0	0	1
VA NORFOLK	70	58	76	53	64	-5	1.3	.4	1.1	5.1	119	47.0	132	87	58	0	0	0	3
RICHMOND	69	50	77	42	60	-7	1.6	.8	1.3	5.3	152	40.6	121	95	54	0	0	0	2
ROANOKE	67	46	74	36	56	-8	1.7	1.0	1.0	8.9	287	43.7	146	98	55	0	0	0	3
WA QUILLAYUTE	71	48	86	44	60	5	.1	-1.7	.1	.2	50.0	76	96	54	0	0	0	1	0
SEATTLE-TACOMA	70	54	82	52	62	4	.3	-3	.2	.5	27	20.8	90	94	58	0	0	0	3
SPOKANE	77	48	84	43	63	8	.1	-1	.2	27	9.8	90	85	29	0	0	0	2	0
YAKIMA	79	46	87	40	63	6	T	-1	T	6	3.9	76	90	33	0	0	0	1	0
WV BECKLEY	62	44	69	31	53	-6	1.0	.2	.6	3.4	93	33.9	101	98	67	0	0	1	2
CHARLESTON	68	46	74	38	57	-7	.5	-2	.2	7.3	243	49.2	147	99	54	0	0	0	3
HUNTINGTON	67	46	72	35	57	-8	.5	-1	.4	6.3	211	51.0	157	96	58	0	0	0	3
PARKERSBURG	67	45	73	36	56	-8	0	-6	0	6.5	232	45.5	151	99	51	0	0	0	0
WI GREEN BAY	68	37	77	28	53	-2	0	-7	0	.6	18	13.8	61	84	29	0	2	0	0
LACROSSE	70	41	81	34	55	-3	0	-7	0	2.0	56	18.4	73	89	33	0	0	0	0
MADISON	68	36	74	28	52	-5	0	-6	0	.9	29	21.3	85	86	32	0	2	0	0
MILWAUKEE	64	43	72	37	53	-5	0	-6	0	3.3	114	25.5	104	85	40	0	0	0	0
WAUSAU	66	37	75	28	52	-2	0	-8	0	.9	23	17.1	65	90	32	0	2	0	0
WY CASPER	81	47	83	40	64	10	T	-2	T	3.2	435	11.9	130	73	20	0	0	0	0
CHEYENNE	77	45	82	40	61	7	0	-2	0	1.6	153	11.5	98	93	29	0	0	0	0
LANDER	77	50	83	46	64	9	T	-2	T	2.2	258	13.6	129	67	23	0	0	0	0
SHERIDAN	85	46	91	39	66	12	0	-3	0	.8	72	9.6	78	74	18	2	0	0	0

## September Weather and Crop Summary

### Weather

**HIGHLIGHTS:** Hurricane Hugo raged across South Carolina at midmonth, with heavy rain and high wind causing widespread damage. Hugo had previously devastated Puerto Rico and the Virgin Islands. Rains from Hugo and showers and thunderstorms throughout the month kept the Southeast and Atlantic Coast States wet. Flooding resulted from torrential rain in the middle and lower Missouri Valley at the first of the month. Heavy rain fell over much of the Corn Belt and central and southern Plains during the first half of month, while dry conditions prevailed during the latter half. Early season rain, largely moisture from the remains of Pacific Hurricane Octave, brought unseasonably wet weather to California. A number of frontal systems pushed across the eastern two-thirds of the Nation. Cold air spilled in behind the systems, keeping the Central States abnormally cool with freezing temperatures dipping into the northern Corn Belt.

**SEPTEMBER 1-2:** A frontal system brought widespread showers and thunderstorms with locally heavy rain to the Midwest. The South remained hot and humid.

**SEPTEMBER 3-9:** A strong cold front pushed across the northern Rockies and stretched from the southern Plains to the lower Great Lakes at week's end. Severe thunderstorms developed in the hot, humid air ahead of the slow moving front. Abundant rainfall relieved long-term drought in the western Corn Belt but produced severe flooding around Omaha, NE, and Kansas City, MO. Showers and thunderstorms were scattered along the Gulf and southern Atlantic coasts, while dry weather again prevailed over much of the Northeast and mid-Atlantic Coast States.

**SEPTEMBER 10-16:** A series of slow moving frontal systems pushed across the eastern two-thirds of the Nation. Numerous thunderstorms developed in the warm, humid air ahead of the fronts and soaked much of the Nation from the Rio Grande Valley to the Atlantic coast. Cold air spilled into the Central United States, as early season snow fell over the Rockies and temperatures dropped below freezing in the northern and central Plains on Monday and Tuesday. Record-low temperatures for the date were reported across the central and southern Plains throughout the week. Temperatures remained abnormally high along the eastern seaboard. Dry weather prevailed over the western Corn Belt, following the heavy rains from the previous week. Moisture from the Pacific Hurricane Octave spread unseasonable rain across California, while Hurricane Hugo in the Caribbean passed over Guadeloupe Island with winds of 150 mph and roared toward Puerto Rico at week's end.

**SEPTEMBER 17-23:** Hurricane Hugo tore through the Virgin Islands and Puerto Rico with torrential rain and winds of 140 mph early in the week before crashing into the South Carolina coast at Charleston with winds of 135 mph on Thursday night. Hugo's high wind and storm surge caused widespread destruction in the Caribbean and South Carolina. Hugo tracked inland, bringing heavy rain from the Southeast, across the upper Ohio Valley, and to the lower Great Lakes. Persistent showers covered the eastern seaboard preceding Hugo due to a stalled front, while moisture from the remains of the Pacific Hurricane Octave brought continued rain across the Pacific Coast States. A cold front spread heavy rain from Wyoming to northern Minnesota on Wednesday, while a trailing cold front moved rapidly across the East at week's end, bringing more rain.

A large dome of cold air settled in behind the front as temperatures dropped below freezing from the northern Plains into the eastern Corn Belt. Numerous stations reported record lows from the Great Plains to the Ohio Valley. Cool and dry weather covered much of the southern and central Plains and Corn Belt throughout the week.

**SEPTEMBER 24-30:** A stagnant weather system caused soaking rains, with locally heavy amounts across the Southeast and along the Atlantic coast. Torrential rain inundated downtown Jacksonville, FL, at the first of the week. The Corn Belt and central and southern Plains remained cool and dry as freezing temperatures again dipped into the northern Corn Belt. Numerous record-low temperatures were reported across the East on the 25th. Warm and dry conditions prevailed from the Intermountain Plateau to the upper Mississippi Valley. Record-high temperatures were broken across the northern and central Rockies and northern Plains on the 30th. Early season rain again fell over the northern half of California.

### Winter Wheat Planting

Winter wheat planting was delayed by rain in the central and southern Great Plains early in September. By midmonth, planting progress was behind normal in most of the major producing States. During the last half of September, planting progressed rapidly, and by October 1, planting was 55% complete, 5 points ahead of normal. Twenty percent of the crop was emerged, 6 points behind normal.

Nebraska's winter wheat was 90% planted, 2 points ahead of normal. Forty-five percent was emerged, 20 points behind normal. Heavy rains early in the month forced some replanting in the Panhandle area. In Kansas, winter wheat planting was 65% complete, 10 points ahead of normal. Producers planted 45% of their crop during the last week of September. Crop emergence lagged 5 points behind the 25% average. In Oklahoma, planting was 55% complete, 10 points ahead of normal. Colorado's winter wheat planting advanced rapidly in late September but still lagged 11 points behind the 92% average on October 1. Emergence lagged 31 points behind normal.

### Row Crop Progress

Rain and cool weather slowed crop development and harvest in the central and southern Great Plains early in September. Late in the month, frost damaged late planted crops in the central and northern Great Plains and portions of the Corn Belt. In the Delta and Southeast, early September was dry but late in the month, rain and cool weather slowed crop development and hampered crop harvests. Hurricane Hugo damaged crops in North and South Carolina the third week of September. In California, heavy rains late in September slowed harvest activity and damaged some fruit and nut crops.

Corn was 84% mature, 6 points behind normal on October 1. Harvest was 16% complete, also 6 points behind normal. Cool, wet weather slowed crop development in the central and southern Great Plains in early September. Frost damaged some corn in the central and northern Great Plains and portions of the Corn Belt during the last half of the month. Hurricane Hugo caused lodging problems in the Carolinas. Crop maturity continued to lag behind

(Continued to back cover)

## September Weather in Historical Perspective

Data for September 1989 indicate that temperatures across the contiguous United States averaged below the long-term mean (fig. 1) and rank as the 25th coldest September on record. The 1989 value is based on preliminary data, which has a standard error of estimate of 0.26 degrees F (indicated by the +).

Historical precipitation for September is shown in figure 2. The precipitation for each climatic division in the country was first standardized using the gamma distribution over the 1951-80 period. The standardized values were then weighted by area and averaged to determine a national standardized precipitation value. Negative values are dry and positive values are wet. The standardized national precipitation ranks September 1989 as the 33rd wettest on record.

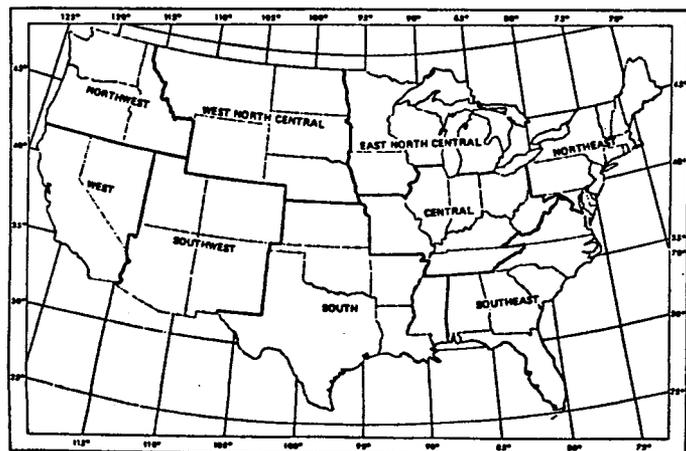
The temperature and precipitation rankings for September 1989 for the nine climatically homogeneous regions in the United States are listed in table 1. The regions are shown in figure 3. The East North Central, South, and Northwest regions were comparatively dry, while the West and the eastern third of the Nation were unusually wet.

January through September 1989 was the fifteenth driest, or worse, such period on record for seven States from the Great Lakes to the Southwest, while Delaware, Tennessee, and West Virginia had the wettest such period on record (table 2). Twenty-one States (all in the Eastern or Southern United States) had the fifteenth wettest, or wetter, such period.

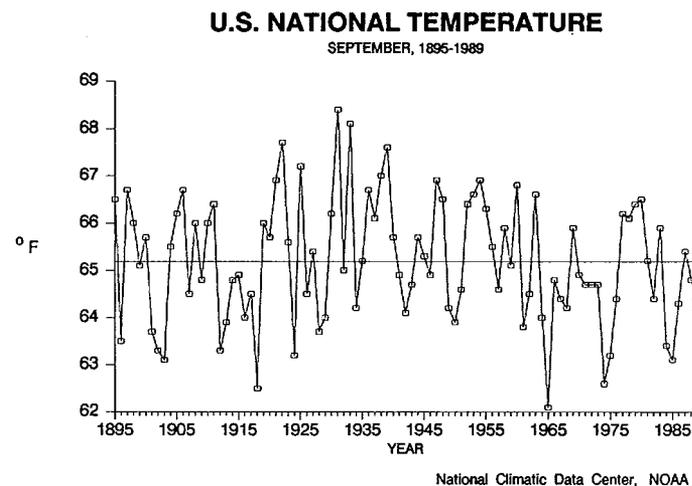
**Table 1. Temperature and Precipitation Rankings for September 1989, based on the period 1895-1989. 1 = driest/coldest, 95 = wettest/hottest.**

Region	Precipitation	Temperature
National	73	25
Northeast	77	46
East North Central	22	33
Central	78	14
Southeast	88	42
West North Central	67	52
South	55	5
Southwest	24	63
Northwest	23	62
West	88	51

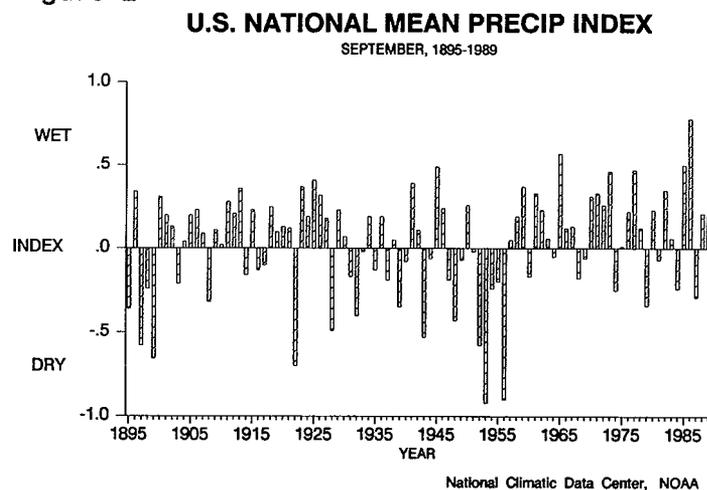
**Figure 3**



**Figure 1**

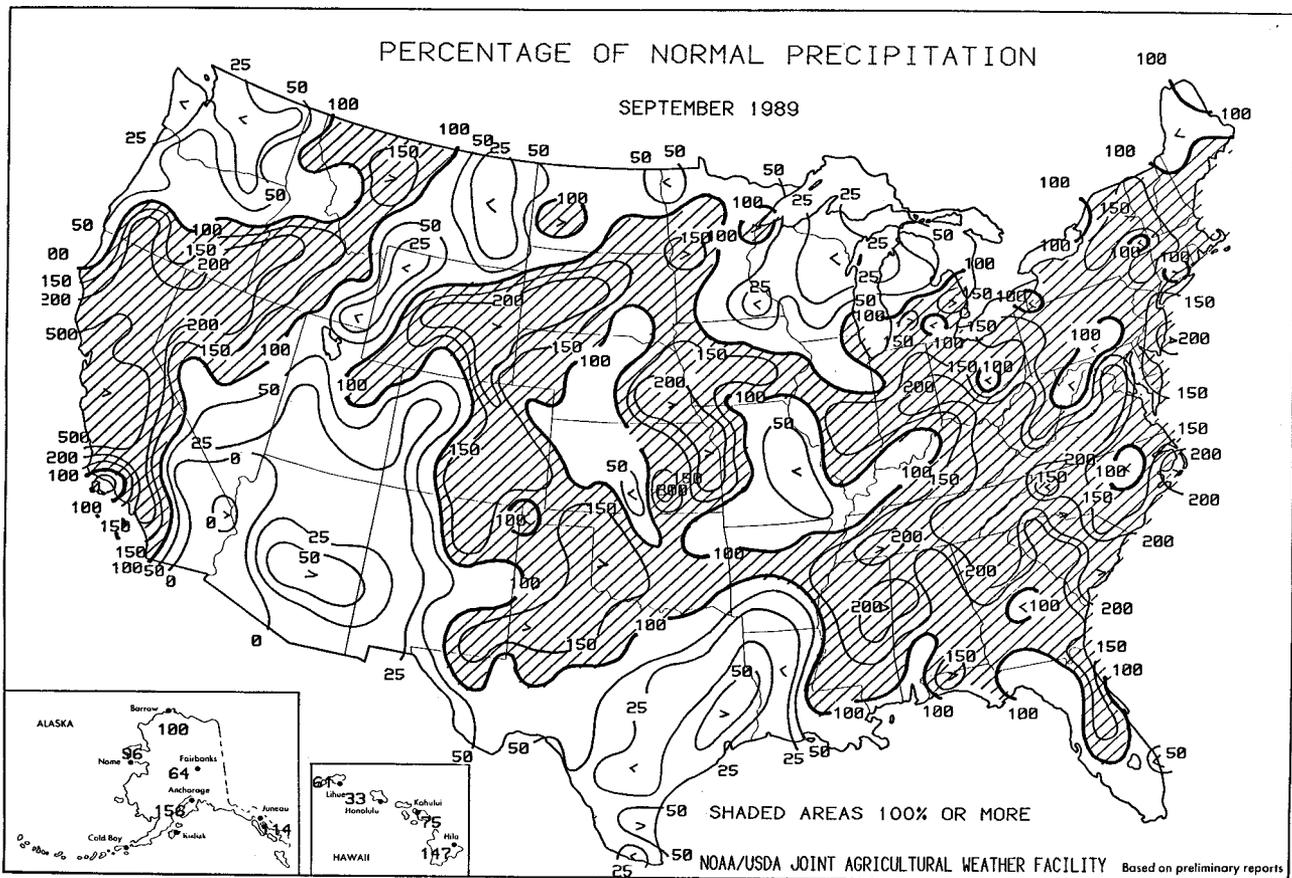
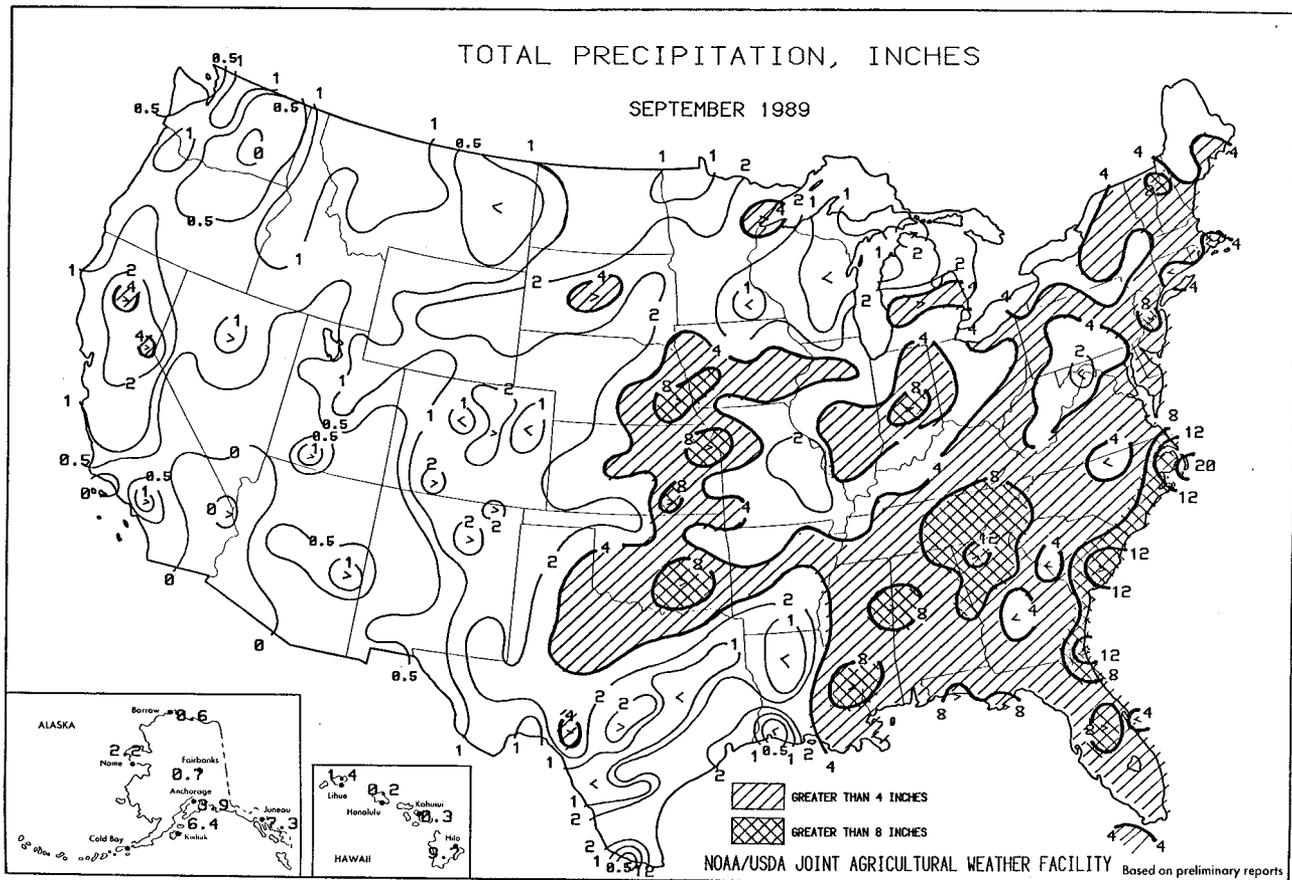


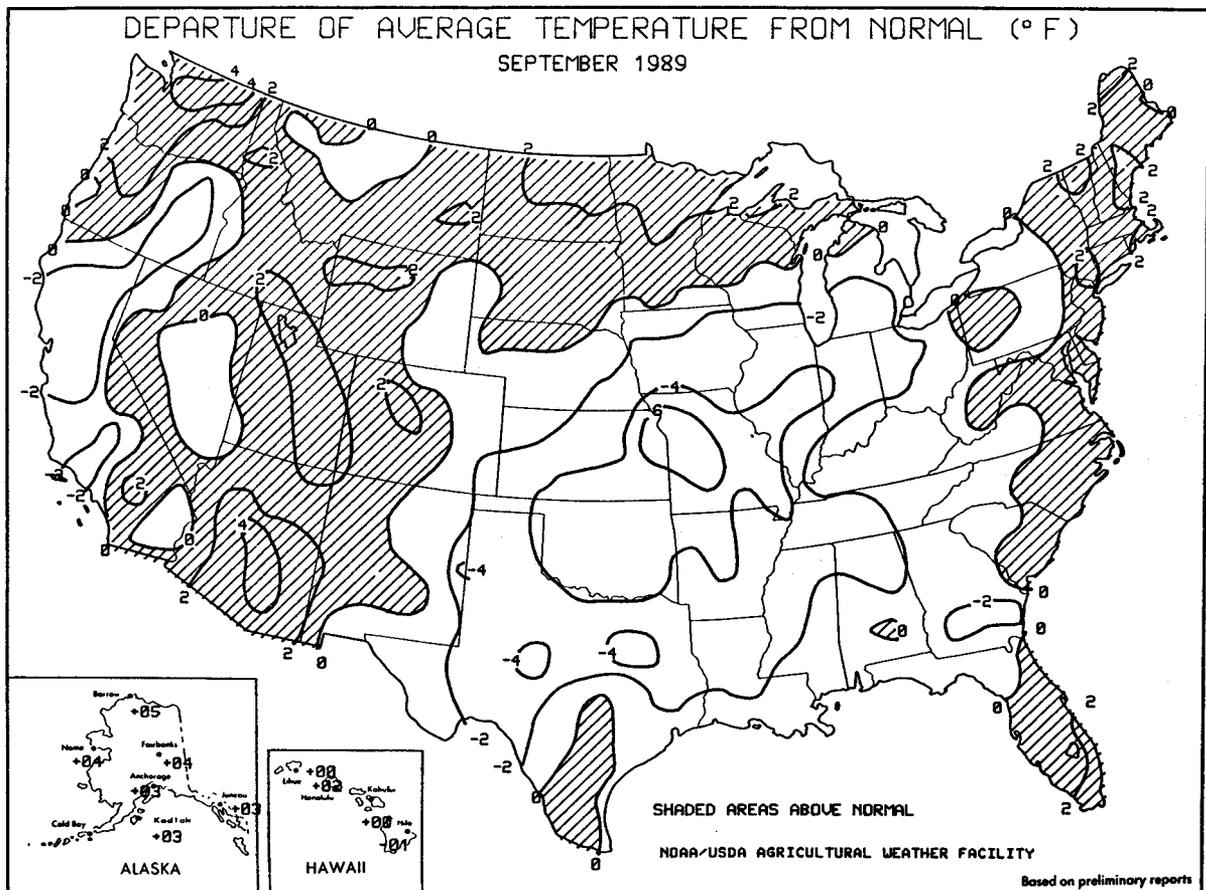
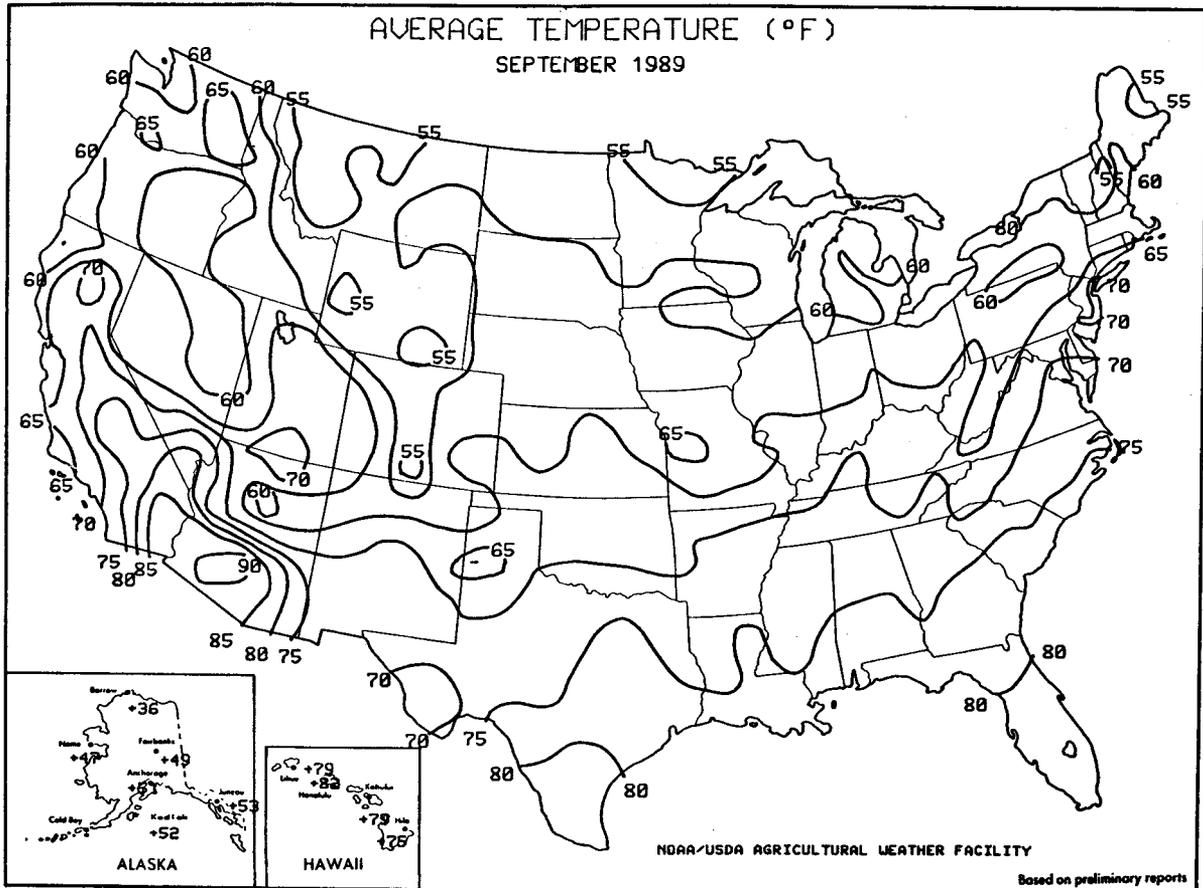
**Figure 2**



**Table 2. Precipitation Rankings for January-September 1989, based on the period 1895 to 1989. 1 = driest, 95 = wettest.**

State	Rank	State	Rank	State	Rank	State	Rank
AL	86	IA	9	NE	14	RI	90
AZ	11	KS	65	NV	54	SC	81
AR	85	KY	92	NH	32	SD	43
CA	30	LA	83	NJ	94	TN	95
CO	16	ME	37	NM	13	TX	59
CT	93	MD	93	NY	85	UT	12
DE	95	MA	77	NC	94	VT	89
FL	28	MI	14	ND	21	VA	93
GA	71	MN	31	OH	89	WA	38
ID	49	MS	89	OK	90	WV	95
IL	27	MO	53	OR	51	WI	6
IN	93	MT	70	PA	89	WY	21





Temperature and Precipitation Data for September 1989

Temperature and Precipitation Data for				September 1989										
Temperature of		Precipitation Inches		Temperature of		Precipitation Inches		Temperature of		Precipitation Inches				
Average	Departure	Total	Departure	Average	Departure	Total	Departure	Average	Departure	Total	Departure			
AL BIRMINGHAM	72	-2	5.9	1.6	LA PADUCAH	69	-1	2.6	-0.9	DAYTON	64	-3	5.7	3.3
AL HUNTSVILLE	71	-2	5.2	1.2	LA ALEXANDRIA	75	-3	0.4	-2.6	MANSFIELD	63	-1	3.1	0.1
AL MOBILE	77	-2	4.6	-2.0	LA BATON ROUGE	77	-1	4.5	0.1	TOLEDO	62	-2	3.3	0.8
AK MONTGOMERY	76	-1	4.7	0.0	LA LAKE CHARLES	77	-1	0.4	-5.3	YOUNGSTOWN	63	0	6.1	3.0
AK ANCHORAGE	51	3	3.9	1.5	LA NEW ORLEANS	77	-2	4.5	-1.3	OK OKLAHOMA CITY	68	-6	4.5	1.1
AK BARRROW	36	5	0.6	0.0	ME SHREVEPORT	74	-3	1.1	-2.2	OR TULSA	69	-5	3.3	-1.0
AK FAIRBANKS	49	4	0.7	-0.4	ME CARIBOU	56	2	3.5	0.0	OR ASTORIA	61	2	0.5	-2.7
AK JUNEAU	53	3	7.3	0.9	MD PORTLAND	60	2	4.5	1.2	BURNS	56	-3	0.8	0.2
AK KODIAK	52	2	6.4	0.1	MD BALTIMORE	69	0	3.7	0.2	EUGENE	65	3	0.6	-0.9
AK NOME	47	4	2.2	-0.1	MA SALISBURY	70	1	7.2	3.2	MEDFORD	66	1	1.9	1.2
AZ FLAGSTAFF	59	1	0.3	-1.2	MA BOSTON	65	0	4.6	1.2	PENDLETON	64	0	0.1	-0.5
AZ PHOENIX	90	5	0.5	-0.2	MA CHATHAM	62	1	4.5	0.8	PORTLAND	65	3	1.5	-0.1
AZ PRESCOTT	69	4	0.7	-0.8	MI ALPENA	56	-1	1.9	-1.2	SALEM	63	2	1.0	-0.5
AZ TUCSON	85	4	T	-1.3	MI DETROIT	62	-2	3.0	0.8	PA ALLENTOWN	65	1	5.9	1.9
AZ WINSLOW	69	0	0.1	-0.7	MI FLINT	59	-2	4.3	2.0	PA ERIE	63	0	3.8	-0.2
AZ YUMA	88	1	T	-0.3	MI GRAND RAPIDS	59	-3	4.9	1.7	PA HARRISBURG	66	-1	2.6	-1.0
AR FORT SMITH	70	-4	3.5	0.3	MI HOUGHTON LAKE	57	0	1.0	-1.8	PA PHILADELPHIA	70	1	5.0	1.6
AR LITTLE ROCK	70	-4	4.5	0.3	MI LANSING	60	-2	3.5	0.6	PA PITTSBURGH	65	0	4.6	1.8
CA BAKERSFIELD	75	-2	0.5	0.4	MI MARGUETTE	55	1	1.2	-2.7	PA SCRANTON	62	-1	3.9	0.7
CA BISHOP	66	-2	0.2	0.0	MI MUSKEGON	59	-2	2.4	-0.5	PA WILLIAMSSPORT	64	0	4.3	0.7
CA EUREKA	57	0	0.9	0.0	MI SAULT ST. MARIE	56	1	1.1	-2.8	RI PROVIDENCE	65	2	4.8	1.2
CA FRESNO	74	0	1.1	1.0	MN ALEXANDRIA	59	2	3.5	1.3	SC CHARLESTON	77	1	13.4	8.4
CA LOS ANGELES	68	-2	0.3	0.1	MN DULUTH	56	2	4.4	1.2	SC COLUMBIA	75	0	5.2	0.9
CA REDDING	71	-5	4.8	3.8	MN INT'L FALLS	55	2	1.9	-1.2	SC FLORENCE	75	0	5.1	1.0
CA SACRAMENTO	70	-2	3.0	2.7	MN MINNEAPOLIS	61	0	1.3	-1.2	SD GREENVILLE	70	-2	5.4	0.8
CA SAN DIEGO	70	0	0.2	0.1	MN ROCHESTER	58	-1	2.6	-2.7	SD HURON	60	0	2.2	0.7
CA SAN FRANCISCO	62	-2	1.2	1.1	MS ST. CLOUD	58	1	2.1	-0.7	SD RAPID CITY	62	1	1.6	0.3
CA SANTA MARIA	62	-1	0.6	0.3	MS GREENWOOD	73	-2	7.2	3.8	SD ST. LOUIS	61	0	3.1	2.1
CO ALAMOSA	56	1	1.3	0.6	MS JACKSON	74	-2	5.4	1.9	SD SIOUX FALLS	60	-1	3.4	0.6
CO CO. SPRINGS	61	0	2.3	1.0	MS MERIDIAN	75	-1	7.1	3.5	TN BRISTOL	68	-1	7.0	4.0
CO DENVER	63	0	1.6	0.3	MO TUPELO	72	-2	5.5	1.8	TN CHATTANOOGA	72	-1	11.2	6.9
CO GRAND JUNCTION	68	1	0.3	-0.4	MO COLUMBIA	64	-6	1.5	-2.4	TN KNOXVILLE	71	-1	9.2	6.2
CO PUEBLO	65	-1	1.0	0.2	MO KANSAS CITY	63	-7	8.9	4.6	TN MEMPHIS	72	-2	6.1	2.5
CT BRIDGEPORT	66	0	3.2	-0.1	MO SAINT LOUIS	67	-2	1.7	-1.0	TN NASHVILLE	70	-2	6.3	2.6
CT HARTFORD	64	1	4.7	0.8	MO SPRINGFIELD	64	-6	2.4	-1.8	TX ABILENE	73	-4	4.1	1.0
DC WASHINGTON	71	0	6.7	3.5	MT BILLINGS	61	1	0.7	-0.5	TX AMARILLO	66	-3	1.8	0.1
FL APALACHICOLA	79	0	10.3	1.6	MT GLASGOW	58	1	0.2	-0.7	TX AUSTIN	79	0	0.3	-3.3
FL DAYTONA BEACH	81	1	5.0	-1.6	MT GREAT FALLS	56	-1	1.9	0.9	TX BEAUMONT	78	-1	1.2	-4.1
FL FT. MYERS	83	1	5.5	-3.1	MT HAVRE	56	-2	1.0	0.0	TX BROWNSVILLE	81	-1	2.5	-2.8
FL JACKSONVILLE	79	0	14.4	7.9	MT HELENA	56	0	1.3	0.5	TX CORPUS CHRISTI	80	-1	2.1	-4.6
FL KEY WEST	85	2	3.2	-3.1	MT KALISPELL	53	-1	1.6	0.5	TX DEL RIO	78	-2	1.2	-1.5
FL MIAMI	84	2	5.8	-2.2	MT MILES CITY	62	2	0.1	-1.0	TX EL PASO	73	-1	0.5	-0.9
FL ORLANDO	82	1	10.3	3.9	NE MISSOULA	56	0	0.9	-0.1	TX FORT WORTH	75	-3	2.4	-1.0
FL TALLAHASSEE	78	-1	4.5	-1.9	NE GRAND ISLAND	63	-2	6.5	4.0	TX GALVESTON	79	-1	1.3	-4.8
FL TAMPA	82	1	6.1	-0.1	NE LINCOLN	63	-2	8.3	5.4	TX HOUSTON	77	-2	2.7	-2.5
FL WEST PALM BEACH	83	2	4.1	-5.2	NE NORFOLK	63	-1	3.6	1.5	TX LAREDO	82	-2	1.5	-2.0
GA ATHENS	72	-1	10.3	6.7	NE NORTH PLATTE	61	-1	1.1	-0.5	TX LUBBOCK	69	-2	3.7	1.7
GA ATLANTA	73	0	11.6	8.5	NE OMAHA	64	-2	6.2	2.7	TX MIDLAND	72	-2	2.8	0.7
GA AUGUSTA	75	0	3.7	0.2	NE SCOTTSBLUFF	61	0	1.6	0.6	TX SAN ANGELO	72	-4	2.8	-0.2
GA MACON	75	-1	2.4	-0.9	NV VALENTINE	62	0	2.0	0.6	TX SAN ANTONIO	79	0	1.5	-2.2
GA SAVANNAH	77	0	8.0	2.8	NV ELKO	58	0	0.7	0.2	TX VICTORIA	79	-1	2.4	-3.8
HI HILO	75	-1	9.7	3.1	NV ELY	57	0	0.5	-0.2	TX WACO	76	-4	0.3	-2.9
HI HONOLULU	82	2	0.2	-0.5	LA LAS VEGAS	80	0	T	-0.3	UT WICHITA FALLS	72	-4	5.0	1.6
HI KAHULUI	79	0	0.3	-0.1	NH RENO	62	2	1.2	0.9	UT BLANDING	-	-	0.3	-0.6
HI LIHUE	79	0	1.4	-0.9	NH WINNEUCCA	60	1	0.9	0.6	UT CEDAR CITY	64	1	0.2	-0.7
ID BOISE	63	0	1.2	0.6	NH CONCORD	61	2	4.2	1.1	UT SALT LAKE CITY	67	2	0.5	-0.4
ID LEWISTON	66	2	0.6	-0.1	NJ ATLANTIC CITY	67	0	5.9	3.1	VT BURLINGTON	61	2	6.0	2.8
ID POCATELLO	60	1	0.5	-0.2	NM ALBUQUERQUE	70	0	0.3	-0.5	VA LYNCHBURG	68	0	9.9	6.7
IL CAIRO	-	-	2.8	-0.7	NM CLOVIS	64	-5	1.4	-0.5	VA NORFOLK	74	1	5.1	0.8
IL CHICAGO	62	-2	3.9	-0.2	NM ROSWELL	71	0	1.2	-0.5	VA RICHMOND	71	0	5.3	1.8
IL MOLINE	62	-3	5.4	1.7	NY ALBANY	62	1	2.9	-0.3	VA ROANOKE	68	0	8.9	5.8
IL PEORIA	62	-3	2.9	-0.8	NY BINGHAMTON	59	-1	4.3	1.0	WA COLVILLE	58	0	0.1	-0.8
IL QUINCY	63	-4	2.9	-1.3	NY BUFFALO	61	-1	3.9	0.5	WA QUILLYUTE	60	3	0.1	-6.0
IL ROCKFORD	61	-3	1.9	-1.8	NY NEW YORK	70	1	5.4	1.9	WA SEATTLE-TACOMA	64	4	0.5	-1.5
IL SPRINGFIELD	64	-4	5.5	2.3	NY ROCHESTER	62	-1	2.8	0.2	WA SPOKANE	60	1	0.2	-0.5
IN EVANSVILLE	68	-1	2.2	-0.5	NC RALEIGH	62	0	6.0	2.7	WA WALLA WALLA	66	0	0.4	-0.4
IN FORT WAYNE	62	-2	4.2	1.6	NC ASHEVILLE	66	-1	8.2	4.4	WA YAKIMA	61	0	0.1	-0.2
IN INDIANAPOLIS	64	-2	8.1	5.3	NC CHARLOTTE	72	0	7.3	3.7	WV BECKLEY	63	0	3.4	-0.2
IN SOUTH BEND	62	-3	3.8	0.6	NC GREENSBORO	70	0	6.1	2.5	WV CHARLESTON	67	-1	7.3	4.3
IA DES MOINES	62	-3	5.4	2.3	NC HATTERAS	75	0	20.0	142	WV ELKINS	63	1	2.2	-1.0
IA DUBUQUE	59	-3	2.4	-1.7	NC NEW BERN	75	1	8.6	2.9	WV HUNTINGTON	67	-1	6.3	3.3
IA SIOUX CITY	62	-2	4.3	1.8	NC RALEIGH	72	1	4.0	0.7	WV PARKERSBURG	66	-1	6.5	3.7
IA WATERLOO	60	-2	3.1	-0.3	ND WILMINGTON	75	0	9.5	3.8	WI GREEN BAY	59	0	0.6	-2.6
KS CONCORDIA	65	-3	4.2	1.2	ND BISMARCK	59	1	1.2	-0.1	WI LA CROSSE	61	-1	2.0	-1.5
KS DODGE CITY	65	-4	2.4	0.5	ND FARGO	59	1	2.1	0.3	WI MADISON	59	-2	0.9	-2.2
KS GOODLAND	63	-1	1.1	-0.4	ND GRAND FORKS	58	2	0.7	-1.3	WI MILWAUKEE	60	-2	3.3	0.4
KS TOPEKA	62	-6	8.7	5.2	ND WILLISTON	58	1	0.5	-0.8	WI WAUSAU	58	0	0.9	-3.0
KS WICHITA	66	-5	7.4	4.0	OH AKRON-CANTON	63	-1	3.4	0.4	WY CASPER	58	0	3.2	2.5
KY BOWLING GREEN	70	0	3.4	0.2	OH CINCINNATI	66	-1	3.0	0.1	WY CHEYENNE	58	0	1.6	0.6
KY JACKSON	67	1	7.4	4.3	OH CLEVELAND	64	-1	4.6	1.7	WY LANDER	59	0	2.2	1.3
KY LEXINGTON	68	-1	5.0	1.7	OH COLUMBUS	65	-1	2.2	-0.6	WY SHERIDAN	59	1	0.8	-0.3
KY LOUISVILLE	69	-1	2.4	-0.9						PR SAN JUAN	82	0	14.8	8.8

Based on 1951-80 normals.

## National Agricultural Summary

OCTOBER 2-8, 1989

**HIGHLIGHTS:** Rain continued to slow crop harvests in the East. Harvest progressed well in most of the Corn Belt, Great Plains, and the West. In the Delta, wet field conditions slowed crop harvests early in the week. Soil moisture was mostly adequate to surplus in the Delta and the East, adequate to short in the Corn Belt, and short to adequate in most of the Great Plains and the West.

Winter wheat planting was 71 percent (%) complete, 9 percentage points ahead of the 5-year average. Thirty-nine percent of the crop was emerged, equal to the average. Ninety-two percent of the corn crop was mature, 4 points behind normal. Corn harvest was 27% complete, 6 points behind normal. Eighty-one percent of the soybean acres was dropping leaves, 4 points behind normal. Soybean harvest was 38% complete, 3 points ahead of normal. Seventy-four percent of the cotton acres was opening bolls, 1 point behind normal. Cotton harvest was 15% complete, 10 points behind normal. Seventy-two percent of the sorghum acres was mature, 11 points behind normal. Sorghum harvest was 37% complete, 5 points behind normal.

**SMALL GRAIN:** Winter wheat planting was 71% complete, 9 points ahead of normal. Thirty-nine percent of the crop was emerged, equal to the average. Planting advanced 25 or more points in Illinois, Kansas, and Michigan. In Michigan, planting progress was 30 points ahead of normal. In Kansas, planting was 90% complete, 20 points ahead of normal. Planting was nearly complete in Nebraska and South Dakota. Earlier heavy rains and high winds forced some replanting in western and southwestern Nebraska. In Oklahoma, planting was 75% complete, 15 points ahead of normal. Rain was needed in the western area. Crop emergence lagged 21 points behind normal in Colorado.

**CORN:** Ninety-two percent of the corn crop was mature, 4 points behind normal. Harvest was 27% complete, 6 points behind normal. Harvest lagged behind normal in all the major producing States except Missouri and South Dakota. Harvest lagged 10 or more points behind normal in Illinois, Indiana, North Carolina, and Ohio. In Ohio, 34% of the crop was mature, 56 points behind normal. In Illinois, harvest was 31% complete, 12 points behind normal. Iowa's harvest was 30% complete, slightly behind the 32% average. Nebraska's harvest lagged 3 points behind the 23% average. Corn borer and stalk rot were problems in eastern and northeastern Nebraska. High grain moisture content and wet field conditions slowed harvest in Kentucky.

**SOYBEANS:** Eighty-one percent of the soybean acres was dropping leaves, 4 points behind normal. Harvest was 38% complete, 3 points ahead of normal. Harvest advanced rapidly in the western Corn Belt. Harvest progressed 25 or more points in Iowa, Minnesota, Nebraska, and South Dakota. Producers in Minnesota and South Dakota harvested approximately half of their crop. In Iowa, harvest was 80% complete, 30 points ahead of normal. Illinois' harvest was 51% complete, slightly behind the 55% average. Harvest lagged more than 20 points behind normal in Indiana and Ohio. Frost damaged late planted soybeans in Ohio. Lack of moisture caused premature leaf drop in late variety soybeans in Louisiana.

**COTTON:** Seventy-four percent of the cotton acres was opening bolls, 1 point behind normal. Harvest was 16% complete, 10 points behind normal. Harvest continued to lag behind normal in the Delta and Southeast. Harvest was more than 25 points behind normal in Alabama, Arkansas, and Mississippi. In Mississippi, harvest was 7% complete, 45 points behind normal. Texas' harvest was 18% complete, equal to the average. California's harvest was 5% complete, 4 points behind normal. In Georgia, cool weather slowed boll opening. Harvest lagged 20 points behind normal.

**SORGHUM:** Seventy-two percent of the sorghum acres was mature, 11 points behind normal. Harvest was 37% complete, 5 points behind normal. Harvest progressed well in the central and northern Great Plains. In Kansas, harvest was 15% complete, 10 points behind normal. Harvest was 25% complete, 4 points behind normal in Nebraska. Stalk rot was a problem in the eastern area. Texas' harvest was 66% complete, equal to the average.

**OTHER FIELD CROPS:** Rice harvest was 79% complete, 3 points behind normal. Harvest lagged behind normal in California and Mississippi. Peanuts were good to fair in Georgia. In Alabama, peanuts were fair to good and harvest was ahead of normal. Peanut harvest was nearly complete in Florida. In North Carolina, peanut harvest was 13% complete, 18 points behind normal. Peanut harvest lagged behind normal in Texas. Burley tobacco stripping was underway in Kentucky and Tennessee. Flue-cured tobacco harvest was nearly complete in North Carolina.

**FRUIT AND NUTS:** Florida's citrus groves were good to excellent with adequate moisture. Early variety fresh fruit harvest was active. Pecan harvest was underway in Georgia and Texas. Lemon and grapefruit harvests continued in Arizona. In California, wine grape harvest was nearly complete. Recent storms damaged the rasin crop in Fresno County. Wine grape harvest was active in New York. Apple and pear harvests continued in New England.

**VEGETABLES:** Winter crop vegetable planting was active in Florida. Snap bean harvest began in the northern area. Onion planting was underway in the Rio Grande Valley, Texas. Cucumber harvest began in the San Antonio-Winter Garden area. Vegetable harvests continued in the High Plains. Winter vegetable crop planting continued in Arizona. Melon harvests continued in the central area. In California, head lettuce harvest began in the Westside area. Dehydrated onion harvest was underway in the Tulalake area. Recent rains greatly reduced the volume of tomatoes for processing that were being harvested. Potato and onion harvests continued in Oregon. Rain slowed potato harvest in Idaho. Potato digging was nearly complete in North Dakota. Potato and dry onion harvests continued in Colorado.

**PASTURES AND LIVESTOCK:** Pastures were mostly good to fair. In the Great Plains, cattle were being moved to harvested row crop fields for foraging. Rain improved fall range conditions in Idaho and Oregon.

Crop Progress

FOR WEEK ENDING OCTOBER 8, 1989

GRAIN SORGHUM  
% MATURE

	1989	1988	AVG.
ARK	98	92	NA
ILL	88	95	NA
KANS	45	80	75
LA	100	100	100
MISS	89	97	99
MO	89	91	90
NEBR	98	99	95
OKLA	70	40	80
S DAK	99	100	85
TENN	100	100	100
TEX	83	86	83

11 STATES	73	86	NA
EXCL. STATES WITH NA	72	85	83

THESE 11 STATES PRODUCED 96% OF THE 1988 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

GRAIN SORGHUM  
% HARVESTED

	1989	1988	AVG.
ARK	86	78	86
ILL	25	39	42
KANS	15	30	25
LA	99	92	97
MISS	70	82	88
MO	47	52	51
NEBR	25	53	29
OKLA	22	10	20
S DAK	46	42	25
TENN	84	74	70
TEX	66	68	66

11 STATES	37	48	42
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THESE 11 STATES PRODUCED 96% OF THE 1988 GRAIN SORGHUM CROP.

SOYBEANS  
% DROPPING LEAVES

	1989	1988	AVG.
ALA	56	43	55
ARK	26	29	40
GA	45	43	71
ILL	96	98	97
IND	89	97	98
IOWA	99	100	98
KANS	85	95	85
KY	51	61	64
LA	76	51	60
MICH	95	90	95
MINN	99	99	99
MISS	46	52	70
MO	79	82	80
NEBR	98	100	97
N C	30	19	24
OHIO	80	94	96
S C	28	17	26
S DAK	99	100	97
TENN	64	66	68

19 STATES	81	83	85
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THESE 19 STATES PRODUCED 95% OF THE 1988 SOYBEANS CROP.

SOYBEANS  
% HARVESTED

	1989	1988	AVG.
ALA	13	7	13
ARK	2	2	10
GA	2	2	6
ILL	51	67	55
IND	19	40	40
IOWA	80	72	50
KANS	15	40	25
KY	4	8	12
LA	31	18	24
MICH	15	10	10
MINN	81	84	50
MISS	9	9	17
MO	15	23	22
NEBR	35	58	35
N C	1	3	0
OHIO	12	30	36
S C	0	0	0
S DAK	80	64	43
TENN	8	4	7

19 STATES 38 44 35  
THESE 19 STATES PRODUCED 95% OF THE 1988 SOYBEANS CROP.

WINTER WHEAT  
% PLANTED

	1989	1988	AVG.
ARK	5	2	10
CALIF	1	1	3
COLO	91	95	96
GA	3	8	8
IDAHO	74	70	70
ILL	35	43	34
IND	34	46	33
KANS	90	75	70
MICH	75	60	45
MO	29	38	30
MONT	83	88	77
NEBR	98	95	95
N C	7	10	9
OHIO	34	46	40
OKLA	75	65	60
OREG	44	34	29
S DAK	95	90	96
TEX	74	75	62
WASH	80	75	76

19 STATES	71	67	62
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THESE 19 STATES PRODUCED 87% OF THE 1989 WINTER WHEAT CROP.

WINTER WHEAT  
% EMERGED

	1989	1988	AVG.
ARK	0	0	NA
CALIF	0	0	0
COLO	59	77	80
GA	2	3	4
IDAHO	35	26	34
ILL	5	14	10
IND	8	21	20
KANS	45	45	40
MICH	40	30	NA
MO	8	20	15
MONT	56	35	36
NEBR	85	77	80
N C	4	4	NA
OHIO	6	14	10
OKLA	25	30	30
OREG	23	19	11
S DAK	86	73	82
TEX	38	38	36
WASH	52	55	55

19 STATES	38	39	NA
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EXCL. STATES WITH NA 39 40 39  
THESE 19 STATES PRODUCED 87% OF THE 1989 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

COTTON  
% BOLLS OPENING

	1989	1988	AVG.
ALA	80	99	94
ARIZ	99	100	99
ARK	80	90	93
CALIF	100	100	100
GA	79	85	87
LA	98	97	98
MISS	84	95	99
MO	88	89	93
N MEX	92	75	84
N C	90	94	98
OKLA	62	75	65
S C	90	85	92
TENN	90	95	98
TEX	57	64	51
14 STATES	74	80	75

THESE 14 STATES PRODUCED 99%  
OF THE 1988 COTTON CROP.

COTTON  
% HARVESTED

	1989	1988	AVG.
ALA	16	42	43
ARIZ	18	18	15
ARK	13	29	44
CALIF	5	5	9
GA	9	19	29
LA	39	49	57
MISS	7	31	52
MO	34	23	46
N MEX	3	2	3
N C	6	8	13
OKLA	0	5	3
S C	8	14	28
TENN	22	27	41
TEX	18	22	18
14 STATES	16	22	26

THESE 14 STATES PRODUCED 99%  
OF THE 1988 COTTON CROP.

CORN  
% MATURE

	1989	1988	AVG.
COLO	84	82	88
GA	100	100	100
ILL	100	100	100
IND	88	96	97
IOWA	100	100	100
KANS	99	99	98
KY	90	87	90
MICH	75	75	85
MINN	99	99	93
MO	99	99	99
NEBR	99	99	97
N C	100	100	100
OHIO	34	68	90
PA	41	37	63
S DAK	98	100	95
TEX	100	100	100
WIS	95	90	91
17 STATES	92	94	96

THESE 17 STATES PRODUCED 94%  
OF THE 1988 CORN CROP.

CORN  
% HARVESTED

	1989	1988	AVG.
COLO	7	11	13
GA	88	91	95
ILL	31	62	43
IND	16	24	29
IOWA	30	68	32
KANS	50	70	55
KY	46	42	50
MICH	5	10	10
MINN	17	59	23
MO	57	74	55
NEBR	20	43	23
N C	60	56	70
OHIO	5	4	20
PA	4	7	12
S DAK	23	40	18
TEX	89	93	90
WIS	10	33	17
17 STATES	27	50	33

THESE 17 STATES PRODUCED 94%  
OF THE 1988 CORN CROP.

RICE  
% HARVESTED

	1989	1988	AVG.
ARK	83	67	80
CALIF	30	50	46
LA	96	93	97
MISS	73	76	91
TEX	100	100	100
5 STATES	79	75	82

THESE 5 STATES PRODUCED 97%  
OF THE 1988 RICE CROP.

## 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 widely scattered, mostly under 0.15 in. Temperatures 1 to 3° below normal Tennessee Valley, 1 to 2° above normal elsewhere.

Days suitable for fieldwork 3.8. Soil moisture 6% short, 61% adequate, 33% surplus. Wet conditions limited field activities early in week, gained momentum weekend. Corn 77% harvested, 83% 1988, 86% avg. Cotton 80% bolls opened, 99% 1988, 94% avg.; 16% harvested, 42% 1988, 43% avg.; 2% poor, 63% fair, 35% good. Soybeans 76% turning color, 69% 1988, 81% avg.; 56% dropping leaves, 43% 1988, 55% avg.; 45% mature, 25% 1988, 33% avg.; 13% harvested, 7% 1988, 13% avg.; 5% poor, 57% fair, 38% good. Peanuts 88% dug, 62% 1988, 69% avg.; 79% combined, 36% 1988, 55% avg.; 70% fair, 30% good. Sorghum 70% harvested, 61% 1988, 71% avg. Winter wheat 26% seeded, 27% 1988, 19% avg. Livestock, pastures mostly good to fair. Primary activities: Harvesting row crops, hay, sweet potatoes, fall vegetables; seeding winter annuals; defoliating, harvesting cotton; monitoring fish ponds, marketing catfish; repairing equipment; general care of livestock, poultry.

**ARIZONA:** Temperatures 5° below to 2° above normal. Extremes 30°; 101°. Showers, thunderstorms, cooler midweek; rainfall 4.00 to 5.00 in. southeast, very little extreme west, northwest; rainfall none to 3.04 in.

Cotton defoliation continued; activity increased southeast; insects moderate, whiteflies, pink bollworms active later planted fields; weeds mostly light; 80% good, 20% excellent; some stringing. Alfalfa harvest moderately active, light weed, insect infestations; renovation, re-seeding statewide; new stand establishment normal; crop good condition; hay, roughage supplies adequate. Field corn, grain sorghum good condition; harvest continued. Lemon, grapefruit harvest continued west; fall asparagus harvested; planting, thinning, weeding, cultivating winter vegetables, established stands developing well. Watermelon, cantaloupe, honeydew melon harvest continued central; grapefruit harvest began; lemons, seedless watermelons, green onions also harvested. Apple, lettuce harvest, packing continued east; pumpkins, green chilies, winter squash harvested.

**ARKANSAS:** Temperatures remained cooler. Rainfall light during latter part of the week. Extremes 32°; 94°. Rainfall none to 0.88 in.

Days suitable for fieldwork 6.0. Soil moisture 36% short, 59% adequate, 5% surplus. Rice 97% ripe, 93% 1988, 96% avg. Soybeans 99% setting pods, 97% 1988, 99% avg.; yellowing 52%, 55% 1988, 67% avg; mature 10%, 16% 1988, 23% avg. Soybean 5% poor, 71% fair, 24% good. Cotton 8% poor, 75% fair, 17% good. Oats 5% planted, 3% 1988, 10% avg. Corn 96% harvested, 91% 1988, 93% avg. Main activities: Corn, cotton, rice, sorghum limited soybean harvest; cotton defoliation; disking rice stubble; planting wheat, oats; pasture fertilization; fall forage seeding; cutting, baling hay; livestock health activities. Cooler weather continued to slow crop growth, slowed boll opening. Some late planted sorghum had problems with worms and midge. Rain slowed peanut harvest. Hay, pasture good. Livestock in good condition.

**CALIFORNIA:** Low pressure trough moved through central, northern area early in week, producing scattered shower, thundershower activity. High pressure built slowly behind trough for warming, drying trend. Early morning fog plagued some wetter valley locations, mid week. Temperatures warmed to above normal, weekend. Open weather permitted good progress field activities. Rice harvest increased by weekend. Defoliant applications cotton, harvesting activity increased. Probable some reduction fiber grade occurred from recent rains. Harvest alfalfa hay, Sudan grass, dry beans, corn, sugarbeets active. Light damage windrowed hay, blackeye beans resulted prior rains. Fall harvest regained momentum. Late apple varieties, avocado, soft date, raisin harvests continued. Recent storms damaged Fresno County raisins. Table grape harvest continued. Wine grape harvest winding down. Packing of persimmons, pomegranates continued. Kiwi harvest continued. Almond, pistachio, walnut harvests continued; some grass problems, extra drying needed. Old crop valencia orange harvest winding down. New crop navel orange crop harvested. Olive harvest started. Desert grapefruit, lemon harvests ongoing. Asparagus supplies improved delta area. Broccoli moderate supply, variable quality, Salinas area. Cauliflower light to moderate supply, variable quality, central coast. Head lettuce harvest began westside, quality very good. Dehydrated onion harvest began Tulalake. Sweet potato harvest continued. Market tomato harvest continued, improved quality. Processing tomato harvest greatly reduced due to prior rains, some plants closed. Cattle good condition increased movement from summer ranges. Winter ranges growing well northern half, rain needed southern portions. Increased movement feedlots. Sheep continued good condition, fall lambing underway. Water supplies near normal north, subnormal south.

**COLORADO:** Scattered showers over the southwest, mountains provided some much needed moisture. Precipitation from a trace to 1.29 in. Temperatures 2 to 4° above normal except in northeast 2° below normal.

Days suitable for fieldwork 6.0. Soil moisture 17% very short, 66% short, 17% adequate. Alfalfa 3rd cutting 67% complete, 4th cutting 28% complete. Corn 84% mature, 87% silage harvested, 7% grain harvested. Dry onions 79% harvested. Dry beans 89% cut; 72% threshed. Summer potatoes 77% harvested. Fall potatoes 80% harvested. Sorghum 95% turning color, 62% mature; 16% harvested. Sugarbeets 6% harvested. Winter wheat 91% seeded; 59% emerged. Livestock mostly good with range, pasture fair to good.

**FLORIDA:** Rain 0.50 in. or less. Local rains 1.00 to 2.00 in. confined mostly central, south. Heaviest rains 2.94 in., Fort Drum. Temperatures 2 to 4° above normal; highest readings generally 90 to 95°. Coolest readings upper 40s to low 50s across Panhandle to low, mid 70s along lower southeast coast.

Panhandle soil moisture short to adequate; northern Peninsula adequate to surplus; central Peninsula mostly adequate; southern Peninsula short to adequate. Corn for grain harvest complete; peanut harvest nearly complete. Haying

active. Soybean farmers preparing to start harvest. Sugarcane good growth; planting active. Land preparation active, fall seeded crops. Panhandle, northern Peninsula grazing fair to good. Most pastures central, southern Peninsula good to excellent. Cattle good to excellent; weight gains generally good. Citrus groves, trees very good to excellent. Moisture adequate; water supply sources at highest levels this year. Fresh fruit harvest continued active all early varieties. Caretakers active cultivating, spraying, herbiciding. Temperatures cooled over major vegetable producing areas. Limited rainfall most areas allowed fields to dry. Planting winter crops active. First snap beans harvested, northern area; bell peppers, southeast. Volume increasing cucumbers, eggplant, sweet corn, squash.

**GEORGIA:** Few widely scattered showers north. More showers central, south, amounts under 0.20 in. Temperatures 1 to 3° below normal northwest, 1 to 5° above normal remainder of State. Warmest temperatures, low 80s north, near 90 central, south. Coldest lows, low 30s northeast, low, mid 50s southeast.

Days suitable for fieldwork 3.5. Soil moisture 1% short, 56% adequate, 43% surplus. Harvest still slow north, wet soils, more active south. Cotton 15% fair, 81% good, 4% excellent. Dry weather improved conditions. Sorghum grain 1% poor, 10% fair, 89% good. Peanuts 3% poor, 43% fair, 54% good. No evidence of damage from earlier rains. Soybeans 1% very poor, 4% poor, 44% fair, 46% good, 5% excellent. Wheat 12% fair, 88% good. Seeding active where soil dried. Rye 24% planted, 28% 1988, 26% avg. Other small grains 12% planted, 14% 1988, 15% avg. Apples 63% fair, 37% good, 62% harvested, 86% 1988, 87% avg. Pecans 7% poor, 65% fair, 28% good, 1% harvested, 1% 1988, 2% avg. Pastures, hay mostly fair to good. Cattle, hogs good.

**HAWAII:** Generally unfavorable weather for agriculture prevailed. Hot humid conditions with moderate to heavy showers caused minor flooding which hindered crop progress. Temperatures upper 60s to low 90s with humidity up to 97 percent. Winds variable 5 to 15 mph. Rainfall 0.10 to 10.70 in.

Days suitable for farm work 7.0. Papaya production increasing gradually. Sugar, pineapple harvesting continuous.

**IDAHO:** Temperatures near normal to 6° below normal. Rainfall above normal for most of State with up to 1.00 in. in southwest.

Days suitable for fieldwork 5.0. Soil moisture 4% very short, 22% short, 72% adequate, 2% surplus. Rain delayed harvest of potatoes, alfalfa, dry beans. No Russian wheat aphids on newly emerged wheat. Winter wheat 74% planted, 70% 1988, 70% avg.; emerged 35%. Potatoes 50% harvested, 67% 1988, 57% avg. Sugarbeets 15% harvested, 16% 1988, 21% avg. Third cutting alfalfa hay 95% harvested, 98% 1988, 85% avg. Fourth cutting alfalfa hay nearly complete, southwest. Onions 82% harvested, 96% 1988. Dry beans 88% harvested. Apples 56% harvested. Corn for grain 13% harvested. Livestock moved off range good to excellent. Improvement of range, pasture continued. Short supply of forage hay, north, southeast.

**ILLINOIS:** Temperatures 7 to 11° below normal north, central; 4 to 7° below normal south. Rainfall generally less 0.50 in., 0.50 to 1.00 in. southwest.

Days suitable for fieldwork 6.0. Soil moisture 42% short, 57% adequate, 1% surplus. Pasture 2% poor, 24% fair, 69% good, 51% excellent.

**INDIANA:** Temperatures 5 to 12° below normal. Lows low 30s to mid 40s, highs upper 50s to upper 60s. Precipitation 0.20 to 0.75 in.

Days suitable for fieldwork 6.4. Topsoil 15% short, 85% adequate. Subsoil 6% short, 90% adequate, 4% surplus. Corn 26% moisture content, soybeans 15% moisture content. Soybean 60% mature, 88% 1988, 88% avg. Silo filling 79% 1989, 94% 1988, 93% avg. Tobacco 97% harvested, 98% 1988, 98% avg. Pasture 3% poor, 29% fair, 56% good, 12% excellent. Early reports indicate that corn yields are above original expectations, are a very high quality grain.

**IOWA:** Temperatures 9 to 11° below normal. Extremes 21°; 68°. Rainfall 0.60 in.

Days suitable for fieldwork 5.7. Topsoil 52% short, 48% adequate. Subsoil 91% short, 9% adequate. Corn mostly good. Soybeans mostly good. Winter wheat 88% seeded, 82% 1988, 60% avg. Row crop acreage fall tilled 8%, 14% 1988, 7% avg. Row crop acreage with fall fertilizer applied 6%, 9% 1988, 5% avg. Livestock good. Pasture 4% very poor, 19% poor, 45% fair, 28% good, 4% excellent.

**KANSAS:** Temperatures mid 50s to 62°, 1 to 4° below normal. Most areas received little precipitation with areas 0.05 in. or less over 8 of the 9 areas. Heavier rains fell in southeastern area 1.57 in.

Days suitable for fieldwork 6.5. Topsoil 47% short, 52% adequate, 1% surplus. Subsoil 24% short, 75% adequate, 1% surplus. Corn, sorghum, soybean harvest lags behind last year. Wheat seeding excellent progress, ahead of schedule. Early harvest of sorghum, corn mostly for silage. Range, pasture adequate most areas. Movement of cattle to corn, sorghum stubble following grain harvest.

**KENTUCKY:** Dry weather with cool morning temperatures, precipitation less than 0.20 in. Northeast 0.25 to 0.50 in. Temperatures 2 to 5° below normal. Lows 30s 5th, 8th.

Days suitable for fieldwork 4.5. Soil moisture 6% short, 89% adequate, 5% surplus. Corn harvest gained momentum. High moisture content, wet fields slowed progress. Soybeans 15% green, harvest early beans getting underway. Burley cutting, housing finishing. Crop 4% stripped about average. Seeding grasses, cover crops more widespread. Pastures good to excellent.

**LOUISIANA:** Temperatures 2 to 5° above normal. Extremes 53°; 98°. Rainfall none to 0.37 in.

Days suitable for fieldwork 6.3. Soil moisture 29% very short, 40% short, 27% adequate, 4% surplus. Cotton open bolls 98%, 97% 1988, 98% avg.; harvested 39%, 49% 1988, 57% avg.; 64% fair, 36% good. Hay final cutting 91%, 84% 1988, 92% avg. Rice harvested 96%, 93% 1988, 97% avg. Second crop was over 50% headed. Sorghum harvested 99%, 92% 1988, 97% avg. Soybeans leaves turning 96%, 76% 1988, 83% avg.; shedding leaves 76%, 51% 1988, 60% avg.; harvested 31%, 18% 1988, 24% avg.; 4% very poor, 20% poor, 57% fair, 17% good, 2% excellent. Dry conditions was causing premature maturation of later varieties. Sugarcane planted 95%, 86% 1988, 88% avg.; 11% fair, 83% good, 6% excellent. Sweet potatoes harvested 64%, 72% 1988, 79% avg.; 50% fair, 50% good. Wheat planted 1%, 3% 1988, 5% avg. Planting delayed due to short moisture supplies. Livestock 18% fair, 80% good, 2% excellent. Pasture 12% poor, 52% fair, 36% good. Growth has slowed considerably. Vegetables 2% very poor, 10% poor, 59% fair, 29% good.

**MARYLAND & DELAWARE:** MARYLAND: Precipitation 1.29 in. Temperature 58°, normal 65°. Extremes 28°; 85°.

Days suitable for fieldwork 5.0. Topsoil 91% adequate, 9% surplus. Subsoil 64% adequate, 36% surplus. Field corn good; 91% mature, 94% 1988, 92% avg.; harvested for grain 50%, 49% 1988, 57% avg.; harvested for silage 91%, 93% 1988, 94% avg. Soybeans good; 74% turned, 80% 1988, 85% avg.; 42% shedding leaves, 53% 1988, 60% avg.; 5% harvested, 3% 1988, 7% avg. Apples 88% harvested, 71% 1988, 74% avg. Pasture good condition. All hay supplies adequate. Wheat 9% seeded, 19% 1988, 23% avg. Barley 28% seeded, 53% 1988, 51% avg. Rye 22% seeded, 44% 1988, 47% avg. Oats 3% seeded, 10% 1988, 20% avg.

**DELAWARE:** Precipitation 1.34 in. Temperature 59°, normal 65°. Extremes 37°; 84°.

Days suitable for fieldwork 5.7. Topsoil 83% adequate, 17% surplus. Subsoil 83% adequate, 17% surplus. Field corn good; 95% mature, 96% 1988, 99% avg.; harvested for grain 69%, 60% 1988, 60% avg.; harvested for silage 89%, 99% 1988, 98% avg. Soybeans good; 50% turned, 75% 1988, 82% avg.; 29% shedding leaves, 40% 1988, 58% avg.; 5% harvested, 3% 1988, 4% avg. Apples 77% harvested, 54% 1988, 49% avg. Pasture good condition. All hay supplies adequate. Wheat 8% seeded, 10% 1988, 6% avg. Barley 19% seeded, 26% 1988, 22% avg. Rye 19% seeded, 12% 1988, 18% avg.

**MICHIGAN:** Temperatures 3 to 6° below normal. Extremes 20°; 79°. Precipitation none to 1.01 in. across State.

Days suitable for fieldwork 6.0. Soil moisture 40% short, 60% adequate. Corn 75% mature, 75% 1988, 85% avg.; harvested 5%, 10% 1988, 10% avg. Soybeans 95% shedding, 90% 1988, 95% avg.; harvested 15%, 10% 1988, 10% avg. Dry beans harvested 65%, 40% 1988, 55% avg. Winter wheat 75% planted, 60% 1988, 45% avg.; 45% emerged, 30% 1988, NA avg. Major activities: Corn silage chopping, hay cutting, potato, dry bean, corn, soybean harvesting, wheat planting. Apple, grape harvests continued. Hard frosts end season for most vegetables. Still being harvested cole crops, pumpkins, squash.

**MINNESOTA:** Temperatures 9 to 12° below normal. Extremes 15°; 85°. Precipitation none to 0.72 in. Greatest weekly total 0.91 in.

Days suitable for fieldwork 6.0. Topsoil 12% very short, 38% short, 49% adequate, 1% surplus. Corn 99% mature, 99% 1988, 93% avg.; 17% combined, 59% 1988, 23% avg. Soybeans 99% mature, 99% 1988, 93% avg.; 81% combined, 84% 1988, 50% avg. Sugarbeets 24% harvested, 50% 1988, 49% avg. Dry Beans 94% harvested, 88% 1988, 78% avg. Potatoes 87% harvested, 85% 1988, 85% avg. Sunflowers 35% harvested, 59% 1988, 23% avg. Field Corn 91% cut for silage, 98% 1988, 77% avg. Corn 22% moisture, 20% 1988, 24% avg. Soybeans 11% moisture, 12% 1988, 13% avg. Corn 11% land plowed, 24% 1988, 5% avg. Soybeans 23% land plowed, 38% 1988, 14% avg.

**MISSISSIPPI:** Warm, dry. Temperatures 70°, 1° above normal. Extremes 45°; 90°. Rainfall 0.07 in., 0.62 in. below normal.

Days suitable for fieldwork 4.2, 4.6 1988, 4.8 avg. Soil moisture 10% short, 70% adequate, 20% surplus. Corn 67% harvested, 72% 1988, 86% avg. Cotton fair; 7% harvested, 31% 1988, 52% avg. Hay 91% harvested, 90% 1988, 93% avg. Rice 73% harvested, 76% 1988, 91% avg. Sorghum 70% harvested, 82% 1988, 88% avg. Soybeans fair; 9% harvested, 9% 1988, 17% avg. Sweet potatoes 54% harvested, 59% 1988, 65% avg. Wheat 15% planted, 17% 1988, 14% avg. Livestock, pastures good. Pecans 15% very poor, 20% poor, 55% fair, 5% good, 5% excellent. Activities: Corn, rice, sorghum harvest; some soybean harvest, wheat planting, cotton defoliation.

**MISSOURI:** Temperatures 6° below normal. Rainfall very light northwest, southeastern areas over 1.00 in. parts of southwest, central, less than 0.50 in. elsewhere.

Days suitable for fieldwork 5.8. Topsoil 35% short, 65% adequate. Corn harvest varies 39% north central to 97% southeast. Soybean harvest 10% or less west central, southwest, southeast to 23% east central. Sorghum 79% harvested southeast, 19 to 30% other areas. Fall tillage for spring crops 7%, 11% 1988, 15% avg. Pasture 6% poor, 30% fair, 55% good, 9% excellent.

**MONTANA:** Temperatures 1 to 3° below normal west, other areas 6 to 10° colder than normal. Precipitation measured all locations. Rainfall 0.08 to 1.78 in.

Days suitable for fieldwork 4.4. Topsoil 26% short, 67% adequate, 7% surplus. Subsoil 33% short, 64% adequate, 3% surplus. Corn silage harvested 94%, 96% 1988, 85% avg. Sugarbeets harvested 19%, 70% 1988, 40% avg. Potatoes harvested 78%, 87% 1988, 70% avg. Dry beans harvested 92%, 90% 1988, 82% avg. Cattle, calves moved from summer ranges 31%, 83% 1988, 63% avg. Sheep, lambs moved 39%, 88% 1988, 67% avg. Pasture, range feed 1% very poor, 6% poor, 24% fair, 59% good, 10% excellent.

**NEBRASKA:** Temperatures 4 to 10° below normal. Extremes 27°; 77°. Precipitation traces in Panhandle up to 0.5 in. extreme east.

Days suitable for fieldwork 6.6. Topsoil 59% short, 41% adequate. Subsoil 79% short, 21% adequate. Corn, 4% very poor, 15% poor, 18% fair, 44% good, 19% excellent. Corn borer, stalk rot damage east, northeast. Sorghum, 39% poor, 43% fair, 18% good. Stalk rot damage east. Soybeans, 11% very poor, 16% poor, 54% fair, 19% good. Combining hampered by low moisture beans, northeast. Winter wheat, 1% poor, 47% fair, 30% good, 22% excellent. Some replanting west, southwest due to damage from heavy rain, high winds. Pasture, range feed 21% very short, 65% short, 14% adequate. Hay, roughage 14% very short, 35% short, 51% adequate. Many cattle moved from pastures to crop residue, when row crop fields were harvested. Others moved to dry lots, feedlots, others still making adequate gains on pastures. Calves being sorted, pre-conditioned for fall sales. Rain slowed harvesting, east, boosted winter wheat crop. Dry edible bean harvest continued, west, sugarbeet harvest should get into full swing during the coming week. Eastern growers making fourth alfalfa cutting. Still cutting silage.

**NEVADA:** Cool, wet weather early. Greatest amounts precipitation north, west. Freezing temperatures common, north midweek. Temperatures below normal all areas. Extremes 20°; 96°.

Good progress potato digging, expected to be finished mid month. Late cuttings alfalfa hay still in progress some localities. Early feeding livestock common all areas.

**NEW ENGLAND:** Precipitation averaged less than 0.50 in. interior Maine, northern New Hampshire, 0.50 to 1.00 in. Vermont, southern New Hampshire, coastal Maine, Massachusetts, 1.00 to 1.25 in. Connecticut, Rhode Island. Temperatures mid 40s northern Maine to upper 50s coastal south. Temperatures slightly below normal north, near normal south.

Days suitable for fieldwork 6.0. Fieldwork progress 2.5 days behind. Soil moisture 89% adequate, 11% surplus north; 62% adequate, 38% surplus south. Grazing availability 45% short, 55% adequate north; 15% short, 81% adequate, 4% surplus south. Maine potatoes 85% harvested, 81%

1988, 76% avg.; good. Connecticut River Valley potatoes 75% dug, 75% 1988, 73% avg.; good. Rhode Island potatoes 70% dug, 97% 1988, 90% avg.; good. Maine oat harvest complete. Field corn 61% harvested, 72% 1988, 65% avg.; fair to good. Second crop hay cutting complete. Third crop hay 88% cut, 79% 1988, 81% avg.; good. Apple harvest 82% complete, 75% 1988, 71% avg.; good, medium to large sizes, fair to good color. Pears 95% harvested; good. Cranberries over 50% harvested; good. Major farm activities: Harvest of corn, potatoes, cranberries, apples, various other small vegetables.

**NEW JERSEY:** Temperatures below normal. Extremes 32°; 76°. Rainfall 0.63 in. north, 0.71 in. central, 0.52 in. south. Heaviest 24-hour total 0.98 in. on 2nd, 3rd. Estimated soil moisture percent field capacity averaged 97% north, 96% central, 93% south. Four inch soil temperatures averaged 55° north, 57° central, 59° south.

Heavy frost killed tender plants. Hardy fall vegetable harvest active. Irish potato digging complete some areas. Sweet potato harvest continued. Apple, cranberry harvest very active. Silage making well advanced. Harvest of corn for grain general. Soybean combining began. Pasture growth slow. Soil preparation, planting of cover crops, grain active. Early seedings growing well.

**NEW MEXICO:** Temperatures near normal over most of State; rainfall over all of State except extreme southeast.

Days suitable for fieldwork 6.6. Soil moisture 71% short, 29% adequate. Cotton bolls open 92%, 3% harvested. Wheat planted 96%, 91% emerged. Cattle 43% fair; 57% good. Sheep 40% fair, 60% good. Ranges, pastures 29% poor, 42% fair, 29% good.

**NEW YORK:** Temperatures near normal. Precipitation was moderate. Most areas received between 0.50, 1.00 in.

Days suitable for fieldwork 6.0. Soil moisture adequate. Hay, pastures, good, corn fair to mostly good. Corn for grain 7% harvested, 4% 1988, 4% avg. Corn for silage 53% harvested, 22% 1988, 43% avg. Warmer weather benefited winter grains. Growth, development had been slowed by cool weather. Wine grape harvest finally in full swing. Western area wine grapes 20% harvested. Apple picking continued in full swing. Empire, Cortland were major varieties being harvested. Red delicious harvest should begin soon. Hard frost ended vegetable growing season. Fall crop harvest continued active. Orange County onion harvest winding down.

**NORTH CAROLINA:** Temperatures 1 to 2° below normal across State. Extremes 31°; 88°. Precipitation 0.86 to 5.89 in.

Days suitable for fieldwork 3.1. Soil moisture 31% adequate, 69% surplus. Pasture 1% poor, 18% fair, 68% good, 13% excellent. Livestock feed from pasture 84%. Crop condition: Sweet potatoes 3% poor, 26% fair, 68% good, 3% excellent; peanuts 33% fair, 61% good, 6% excellent; sorghum 4% very poor, 10% poor, 29% fair, 54% good, 3% excellent; hay second cutting 92% completed, third cutting 64% completed. Hay, roughage 1% very short, 1% short, 86% adequate, 12% surplus. Harvesting completed: Corn silage 87%, 95% 1988, 95% avg.; apples 73%, 79% 1988, 76% avg.; sorghum 28%, 54% 1988, 50% avg.; sweet potatoes 43%, 43% 1988, 43% avg.; peanuts dug 30%, 26% 1988, 48% avg.; peanuts threshed 13%, 11% 1988, 31% avg. Plantings completed: Wheat 7%, 10% 1988, 9% avg.; oats 11%, 22% 1988, 18% avg.; barley 15%, 28% 1988, 18% avg.; rye 20%, 17% 1988, 20% avg. Major activities: completing harvest of tobacco, corn

grain. Other activities: harvesting apples, corn silage, peanuts, cotton, soybeans, sorghum; marketing tobacco; small grain planting; tending livestock; general farm maintenance. Continued rains are delaying harvest of most field crops, planting progress of the small grains.

**NORTH DAKOTA:** Temperatures 5 to 8° below normal. Extremes 9° central; 94° south central. Light scattered precipitation statewide 0.05 in. southwest to 0.20 in. northwest.

Days suitable for fieldwork 6.6. Topsoil 25% very short, 57% short, 18% adequate. Subsoil 39% very short, 54% short, 7% adequate. Dry weather has progressed natural drying of row crops. Sunflower 48% harvested, 49% 1988, 18% avg.; corn for grain 23%, 59% 1988, 24% avg.; dry edible beans 96%, 93% 1988, 77% avg.; soybeans 83%, 86% 1988, 58% avg.; flax 96%, 94% 1988, 79% avg.; potatoes 95% dug, 93% 1988, 89% avg.; sugarbeets 27% lifted, 51% 1988, 54% avg. Pasture conditions declined slightly, 13% very poor, 49% poor, 33% fair, 5% good.

**OHIO:** Temperatures low to mid 60s; 5 to 9° subnormal. Lows mid to high 30s; 3 to 6° subnormal. Frost, freezing common. Rainfall 0.25 to 0.50 in. Soil temperatures mid to upper 50s.

Days suitable for fieldwork 5.8. Soil moisture 11% short 86% adequate, 3% surplus. Farm activities: Planting winter wheat, harvesting crops, marketing feeder calves. Corn fair to good; harvested grain moisture 27 to 32%. Soybeans fair to good; harvested bean moisture 12 to 15%. Low temperatures damaged late soybean plantings; also killed weeds which improved harvest conditions. Winter wheat planting advanced as fast as fields available to plant. Vegetable harvest ending for warm season crops; continued for cool season crops.

**OKLAHOMA:** Temperatures 3° below normal southeast to 6° below normal west central. Precipitation none south central to 1.88 in. central.

Days suitable for fieldwork 6.5. Topsoil 40% short, 60% adequate. Subsoil 7% short, 93% adequate. Wheat 6% fair, 93% good, 1% excellent; 6% fair; 75% planted, 65% 1988, 60% avg.; 25% emerged, 30% 1988, 30% avg. West needs moisture for dryland wheat. Cotton 85% fair, 15% good; 62% open bolls, 75% 1988, 65% avg.; 0% harvested, 5% 1988, 3% avg. Sorghum 3% fair, 87% good, 10% excellent; 70% coloring, 40% 1988, 80% avg.; 22% harvested, 10% 1988, 20% avg. Soybeans 20% harvested, 3% 1988, 15% avg. Peanuts 10% harvested, 90% 1988, 90% avg. Pastures good. Cattle good; marketings, price down slightly from preceding week.

**OREGON:** Temperatures 3° of normal; except Klamath Falls 5° below normal, The Dalles 5° above normal. Light precipitation across State; a trace to 0.10 in. west of Cascades; nearly 0.25 in. northeast; 0.33 to 0.50 in. at eastern border.

Soil moisture 43% short, 57% adequate. Some Russian wheat aphids emerged on wheat Wasco County. Barley 27% planted, 14% 1988, 23% avg. Last of cereal grain harvest Wallowa, Klamath Counties. Corn silage harvested Washington, Umatilla Counties. Field corn harvest started Hermiston area. Fertilizing, spraying herbicides in grass seed fields Willamette Valley, also seeding Crimson clover. Sugarbeet, dry bean harvest continued Malheur County. Haying activity continued east. Pear harvest completed on 5th Medford. Anjou harvest nearly completed lower Hood River Valley, picking will continue in upper valley for a week. Harvested pear orchards receiving boron, cooper sprays both areas.

Newton, Red Delicious apple picking in full swing Hood River; size, quality excellent. Apple harvest continued Willamette Valley, Wasco County. Wine grape, filbert harvests continued Willamette Valley. Removing old canes in caneberry fields; pest control on strawberries. Cranberry harvest continued south coast, yields better than expected on early varieties. Potato harvest over 50% complete Hermiston-Boardman; yield, quality good. Potato harvest continued Willamette Valley, Malheur, Baker Counties. Onion digging continued west, Malheur County. Sweet corn, table beet harvesting winding down Willamette Valley. Livestock mostly good. Cattle shipped from northeast. Range, pasture fair to excellent. Fall feed conditions excellent northeast mountains, much improved in most western counties.

**PENNSYLVANIA:** Cold front early in week caused widespread rains, showers. Another front passed through late in week kicked off scattered showers. Cooler than normal week. Temperature 54°, 4° below normal. Extremes 29°; 75°. Precipitation 0.63 in., 0.13 in. below normal.

Days suitable for fieldwork 5.0. Soil moisture 14% short, 81% adequate, 5% surplus. Corn 96% dented 83% 1988, 95% avg.; 41% mature, 37% 1988, 63% avg.; 4% harvested, 7% 1988, 12% avg.; ensilage corn harvested 43% complete, 60% 1988, 67% avg.; 3% very poor, 10% poor, 25% fair, 44% good, 18% excellent. Soybean harvest 6% complete, 9% 1988, 14% avg.; 4% very poor, 6% poor, 22% fair, 52% good, 16% excellent. Potato harvest 75% complete, 68% 1988, 79% avg. Fall plowing 65% complete, 70% 1988, 77% avg. Winter wheat 53% planted, 53% 1988, 59% avg. Barley 66% planted, 71% 1988, 79% avg. Third cutting alfalfa 81% complete, 91% 1988. Fourth cutting alfalfa 37% complete, 49% 1988. Quality of hay made during week fair to good. Amount of feed being obtained from pastures average. Apple harvest 57% complete, 52% 1988. Grape harvest 55% complete, 47% 1988. Activities: Harvesting hay, haylage, potatoes, grapes, vegetables, corn silage; corn, fall plowing, planting; maintaining machinery, caring for livestock.

**SOUTH CAROLINA:** Rainfall 1.36 in. at Clemson to 4.95 in. at Orangeburg. Temperatures 3 to 5° warmer than normal.

Days suitable for fieldwork 4.3. Soil moisture 2% short, 81% adequate, 17% surplus. Cotton 11% very poor, 17% poor, 70% fair, 2% good, 90% open bolls, 85% 1988, 92% avg.; 8% harvested, 14% 1988, 28% avg. Soybeans 22% poor, 55% fair, 23% good, 99% setting pods, 100% 1988, 100% avg.; 53% leaves turning, 38% 1988, 56% avg.; 28% shedding leaves, 17% 1988, 26% avg. Tobacco fair to good, 99% harvested, 100% 1988, 100% avg.; 65% stalks destroyed, 69% 1988, 75% avg. Corn fair, 83% harvested, 80% 1988, 90% avg. Sorghum fair to good, 43% harvested, 45% 1988, 51% avg. Peanuts fair to good, 43% harvested, 21% 1988, 37% avg. Pasture, livestock good. Hay fair to good.

**SOUTH DAKOTA:** Temperatures 2 to 10° below normal. Extremes 18°; 95°. Fall season precipitation mostly above normal, 1.19 in. below normal to 3.65 in. above normal. Precipitation mostly 0.10 in. or less. Heavier amounts southwest, maximum 0.70 in.

Days suitable for fieldwork 6. Topsoil 12% critically short, 45% short, 43% adequate. Subsoil 35% critically short, 45% short, 20% adequate. Corn good to fair. Sorghum fair to poor, soybean good to fair. Major activities: Combining row crops, seeding fall grain, hauling hay, fencing, working cattle.

**TENNESSEE:** Dry, cool weather dominated week. Temperatures slightly below normal, coldest east. Precipitation below normal statewide.

Days suitable for fieldwork 2.7. Soil moisture 61% adequate, 39% surplus. Corn 62% harvested grain, 64% 1988, 60% avg. Burley tobacco 14% stripped, 9% 1988, 9% avg. Wheat 18% seeded, 15% 1988, 19% avg. Flooded fields from previous week kept fieldwork to minimum. Crop damage reported from flooding several areas. Some re-planting wheat, grass necessary.

**TEXAS:** Warm, dry, high pressure dominated upper atmosphere. Moisture crept in from Gulf, warm, humid conditions prevailed, approaching cool front touched off showers northwest, south, central. Temperatures below normal. Although showers, conditions dry across State. Portions south most rain.

**Crops:** Corn harvest good progress High Plains. Yields good to excellent. Warmer days helped later fields mature. Harvest completed other areas. Open weather allowed grain sorghum producers High Plains make good progress early sorghum harvest. Good early yields. Scattered fields some lodging because high winds. Harvest wind down Low Plains. Warmer days helped dry down later fields High Plains. Sorghum 96% turning color, 99% 1988, 98% avg. Cotton harvest full swing Blacklands. Producers Low Plains increasing harvest. Warmer weather helped many fields High Plains. Defoliating, harvest increasing last week. Later fields still need continued warm days. Harvest getting started Trans-Pecos. Small grain seeding active Plains with open weather. Weather conditions promoted good emergence. Armyworms increasing some fields. Planting active Blacklands, central; some producers need rain to begin planting. Peanut harvest gained momentum central. Dryland yields vary across area, some producers were plowing up poorer fields. Harvest activities increasing Low Plains, Cross Timbers. Average to above average yields irrigated fields. Soybean harvest beginning High Plains, producers reporting good yields. Harvest later varieties Blacklands, Upper Coast. High Plains good yields early sugarbeets. Harvest activities good progress. Other crops: Peanuts harvested 12%, 28% 1988, 23% avg. Pecans 1%, 3% 1988, 3% avg. Soybeans harvested 43%, 41% 1988, 31% avg. Sugarbeets 4%, 3% 1988, 11% avg. Sunflowers harvested 15%, 35% 1988, 34% avg. Oats planted 45%, 44% 1988, 46% avg.

**Commercial Vegetables:** Rio Grande Valley, all vegetables good progress under heavy irrigation. Onion planting underway. San Antonio-Winter Garden, cucumber harvest underway. Irrigation steady. Spinach, cabbage good progress. Eastern area, few sweet potatoes remained for harvest. Fall vegetables suffering from drying conditions. High Plains, harvest carrots, cabbage, broccoli, pumpkins continued. Trans-Pecos, bell pepper, cucumber harvest continued. Onion planting began Presidio. Few more pecans harvested south. Harvest just beginning other areas. Shuck split increasing. East crop additional drop as harvest beginning.

**Range and Livestock:** Forage grasses across much State could use good rain to go into winter. Many producers supplemental feed at heavy rates. Much outh not have sufficient hay supplies, producers trucking in hay. Early small grain pastures High Plains could be ready for grazing couple of weeks. Livestock markets steady; prices dropped some. Hornflies continued bother cattle some areas.

**UTAH:** Temperatures normal except 3° above normal in southeast. Precipitation was light in a few areas in northern half of State.

Days suitable for fieldwork 7.0. Soil moisture 99% short, 1% adequate. Fall fieldwork

progressing. Winter wheat 82% seeded, 82% 1988, 83% avg. Alfalfa hay fourth crop cutting ongoing. Corn silage 91% harvested, 93% 1988, 81% avg. Apple harvest 66% completed, 63% 1988, 57% avg. Storage onion harvest winding down. Potato crop 56% harvested, 83% 1988, 70% avg. Cattle moved from summer range 62%, 66% 1988, 52% avg. Sheep moved from summer range 70%, 63% 1988, 50% avg. Corn silage damaged by frost Beaver County. Winter range feed supply reported poor, very poor. Supplemental feeding underway. Orchard clean-up also underway.

**VIRGINIA:** Rain moderate to heavy, 1.00 to 3.00 in. Temperatures cool, 1 to 2° below normal. Low 28°, highs 70s to 80s begin, 50s to 60s end.

Days suitable for fieldwork 4.1. Topsoil 71% adequate, 29% surplus. Corn for grain 58% harvested, 47% 1988, 52% avg.; silage 78% harvested, 70% 1988, 82% avg.; 97% mature, 86% 1988, 92% avg. Peanut harvest active. Soybean harvest 1% complete, 0% 1988, 1% avg. Flue-cured tobacco harvest 95% complete, 82% 1988, 83% avg. Burley harvest virtually complete. Winter wheat seeding 4% complete, 4% 1988, 6% avg. Pasture 64% good, 36% excellent. Apple harvest continued.

**WASHINGTON:** Temperatures 3° above to 5° below normal, east; 2° above to 3° below normal, west. Precipitation none to 0.10 in., east; none to 0.26 in., west.

Days suitable for fieldwork 6.8. Soil moisture 55% short, 45% adequate. Range, pasture 50% short, 50% adequate. Hay, other roughage 5% short, 85% adequate, 10% surplus. Favorable weather allowed further progress with fall seeding. Winter wheat planted 80%, 75% 1988, 76% avg. Winter wheat emerged 52%, 55% 1988, 55% avg. Progress of other crop harvests: Potatoes 68%, 61% 1988, 59% avg.; dry beans 80%, 85% 1988, 90% avg.; corn silage 85%, 82% 1988, 77% avg.; corn grain 10%, 15% 1988, 21% avg.; third cutting alfalfa hay 99%, 98% 1988, 98% avg. Harvests of apples, carrots, cucumbers, onions, sweet corn, lettuce, tomatoes, squash, pumpkins, melons continued. Many areas of the State indicate pastures, ranges were dry,

livestock were being moved to other areas or supplemented with feed.

**WEST VIRGINIA:** Temperature 54°, 2 to 7° below normal. Extremes 28°; 84°. Precipitation 0.54 of an in., 0.64 of an in. below to 0.48 of an in. above.

Days suitable for fieldwork 4.3. Soil moisture 88% adequate, 12% surplus. Wheat 7% seeded. Corn excellent to good; 88% mature, 33% harvested. Tobacco fair; harvest complete. Apples fair, harvest continues. Hay good to fair; 2nd cut complete, 3rd cut 60% complete. Cattle, calves good to excellent, sheep, lambs good to fair. Farm activities: Corn silage, hay harvest; planting cover crops; clipping pastures; marketing cattle.

**WISCONSIN:** Cold week. Temperature 44°, 9° below normal. Extremes 12°; 66°. Precipitation 0.20 to 0.70 in.

Days suitable for fieldwork 6.0. Soil moisture 73% short, 27% adequate. Pasture 67% of normal, 59% 1988, 81% avg. Corn grain 10% harvested, 33% 1988, 17% avg.; silo filling 79% complete, 90% 1988, 65% avg. Soybeans 20% harvested, 22% 1988, 17% avg. Fall plowing 15% complete, 24% 1988, 18% avg. Early planted winter wheat better than late plantings that need rain.

**WYOMING:** Temperatures below normal. Precipitation above normal in north central, northwestern part of State.

Days suitable for fieldwork 6.0. Topsoil 50% short, 48% adequate, 2% surplus. 1990 winter wheat 95% seeded, 95% 1988, 95% avg.; 75% emerged, 65% 1988, 85% avg., mostly good. Corn for grain 35% dented, 15% 1988; 55% mature, 75% 1988; 10% harvested, 10% 1988, 15% avg.; silage 95% harvested, 95% 1988. Dry beans 80% combined, 90% 1988, 85% avg. Sugarbeets 30% dug, 40% 1988, 40% avg. Sugar content 16.2%. Potatoes 90% harvested, 70% 1988, 75% avg. Hay supplies for wintering livestock adequate 60% State. Livestock good.

## International Weather and Crop Summary

October 1-7, 1989

### HIGHLIGHTS

**USSR** ... In Western USSR, widespread precipitation delays late season summer crop harvesting. Below-normal temperatures slow early growth of winter grains. In the New Lands, unseasonably warm, dry weather helps late harvest efforts.

**EUROPE** ... Cool temperatures slow early growth of winter grains in the east. Light rain in the west causes only minor fall fieldwork delays.

**SOUTH ASIA** ... Scattered showers continue in the south and east. Hot weather covers immature rice and cotton.

**EASTERN ASIA** ... Dryness favors fall crop harvest across the North China Plain. Typhoon Brian brushes Taiwan and southern China.

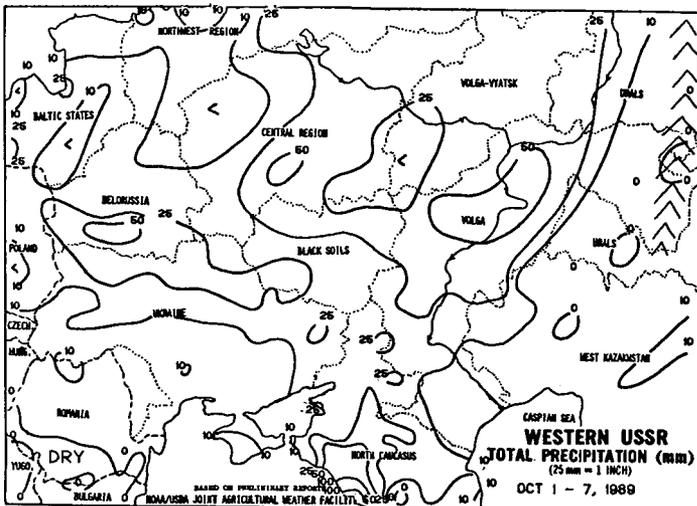
**SOUTHEAST ASIA** ... Typhoon Angela strikes the northern Philippines. Showers return to Thailand's grain regions.

**SOUTH AMERICA** ... Wetness persists in southern Brazil. Dryness continues in western crop areas of Argentina. Wheat ranges from mature in northern grain areas of Brazil to late vegetative growth in southern crop areas of Argentina.

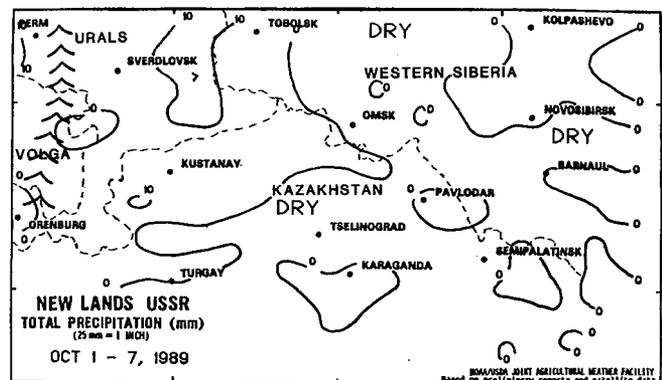
**AUSTRALIA** ... Rain favors southern winter grains. Scattered light rain helps reduce dryness in southern Queensland and northern New South Wales.

**CANADA** ... Dry but cold weather covers the Canadian Prairies.

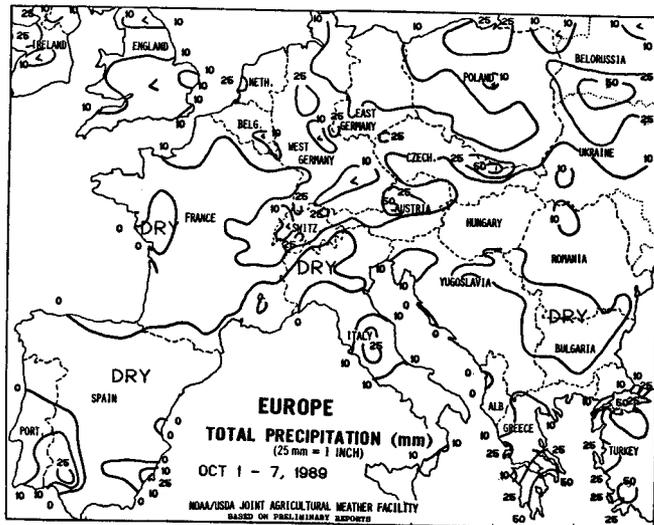
**MEXICO** ... Beneficial tropical storm rain helps wheat planting and reservoirs in the northwest. Scattered showers allow summer crop harvesting in the Southern Plateau.



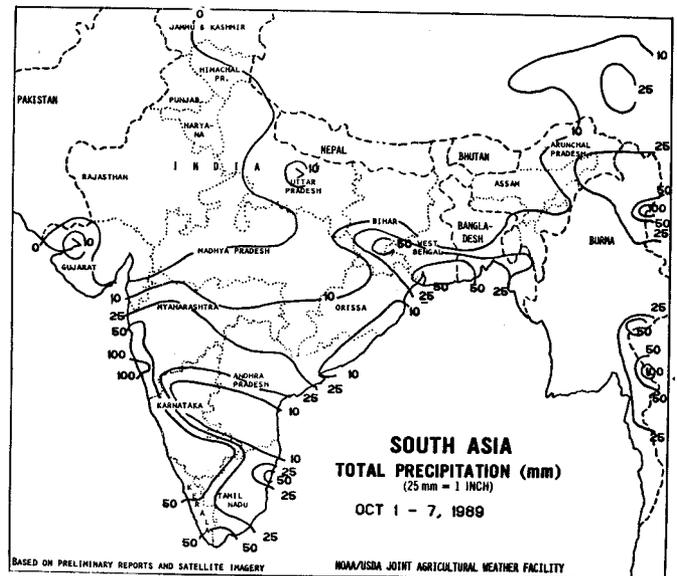
**WESTERN USSR** ... In Western USSR, a storm system developed early in the week over central areas and moved slowly northeastward. As a result, cloudy skies prevailed over the region during most of the week, creating poor conditions for drying crops. Precipitation was widespread, with heaviest rainfall (25 to 59mm) covering southern Belorussia, the northern Ukraine, Central Region, central North Caucasus, and Volga Valley. The rain in these areas caused delays in late season summer crop harvests. Crop areas in the southern Ukraine received minimal rain, allowing summer crop harvests to progress with few delays. Weekly average temperatures were 2-4 degrees Celsius (C) below normal over the region, slowing emergence and early winter grain growth in the south. Winter grains over the northern half of the region continued to harden prior to dormancy. Winter grains usually enter dormancy in mid-October in the north and mid-November in the south. Extreme minimum temperatures were below-freezing as far south as the southern Ukraine, ending the growing season.



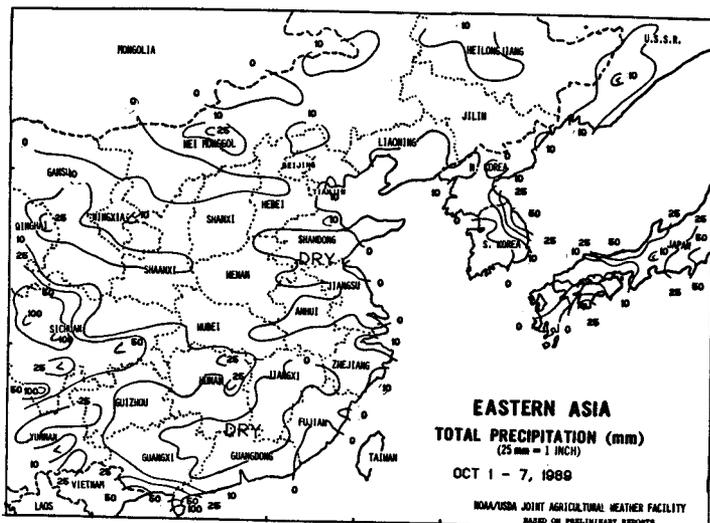
In the New Lands, unseasonably warm, dry weather allowed late harvest activities to progress without delay. Weekly average temperatures were 2-4 degrees C above normal over most of the region. In south-central USSR cotton areas, unseasonably warm and dry weather accelerated boll maturation and helped harvesting. Weekly average temperatures over most areas were 3-5 degrees C above normal.



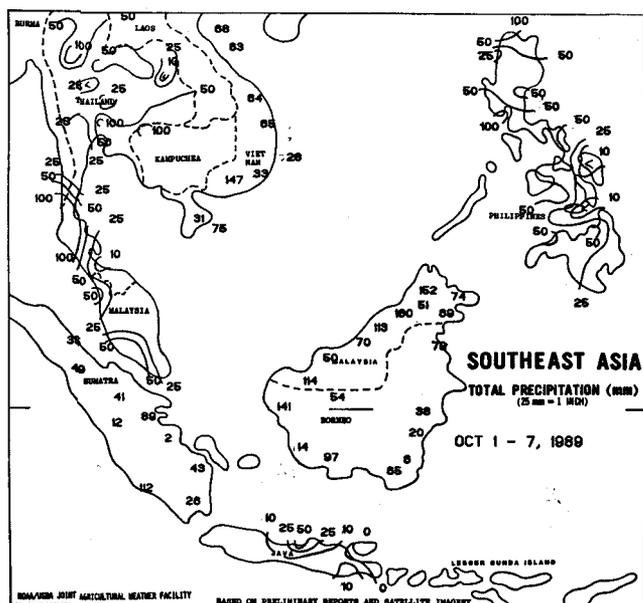
**EUROPE** ... Light to moderate rain (5-20mm, with scattered amounts in excess of 30mm) persisted through much of the week across eastern Europe except for the Lower Danube Valley, which remained mostly dry. The rain delayed sugarbeet lifting but increased soil moisture for winter crops. Below-normal temperatures (1-8 degrees C below normal) over eastern crop areas slowed emergence and establishment of winter grains. Subfreezing minimum temperatures from the 2nd to the 6th ended vegetative growth of late maturing crops in interior eastern crop areas. In the west, late week light rain (mostly less than 10mm) caused only minor delays in summer crop harvest and winter grains planting. Some northwestern soils remained too dry for early establishment of winter grains.



**SOUTH ASIA** ... Scattered rain (10-25mm or more) continued over portions of India's southern interior from western Maharashtra to central Andhra Pradesh and from southern Karnataka to northeastern Tamil Nadu. Drier weather (10mm or less) covered much of southern Andhra Pradesh and the northern two-thirds of Karnataka, favoring planting of fall crops. In the east, moderate showers (25-95mm) covered southern Bihar, eastern Orissa, southern West Bengal, and local areas of Assam and southeastern Bangladesh, boosting irrigation reserves for immature summer crops. Temperatures across the east, however, were as much as 2 degrees C above normal, increasing evapotranspiration rates. Portions of the main season rice crop in the east are advancing through the reproductive phase of development. Elsewhere, dry, warm weather dominated. Hot weather, indicative of the retreat of the southwest monsoon, covered cotton regions of Gujarat and, by week's end, eastern Maharashtra. The main season cotton crop in central India typically ranges from the flowering to boll filling stages of development at this time of year.

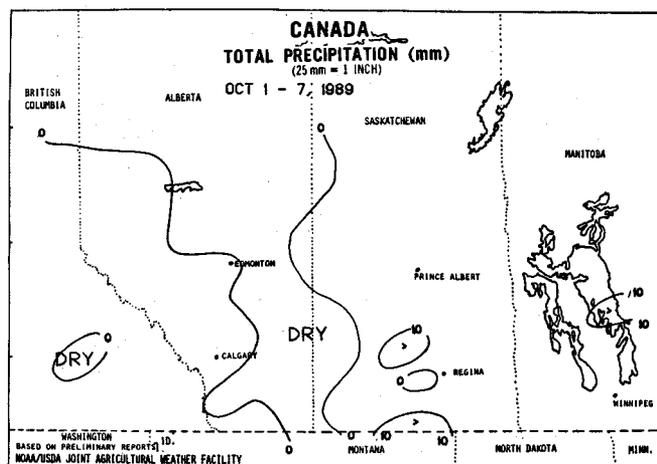


**EASTERN ASIA** ... Moderate to heavy rain (15-50mm, with isolated amounts in excess of 50mm) fell over western crop areas of China, delaying harvest of summer crops but benefiting establishing winter grains. Moderate to heavy rain (15-40mm, with isolated rainfall greater than 50mm) in northern Honshu and Hokkaido, Japan also caused fall harvest delays. Heavy rain (25-75mm, with isolated amounts greater than 100mm) may have caused localized flooding in southern Taiwan, Hainan, and Guangxi as Typhoon Brian moved past on the 1st to the 3rd. In contrast, mostly dry weather favored rapid harvest of summer crops across much of the North China Plain. Scattered light frost in sections of Hebei, Shanxi, and northern Shandong may have caused localized damage to late maturing double crop corn and soybeans.

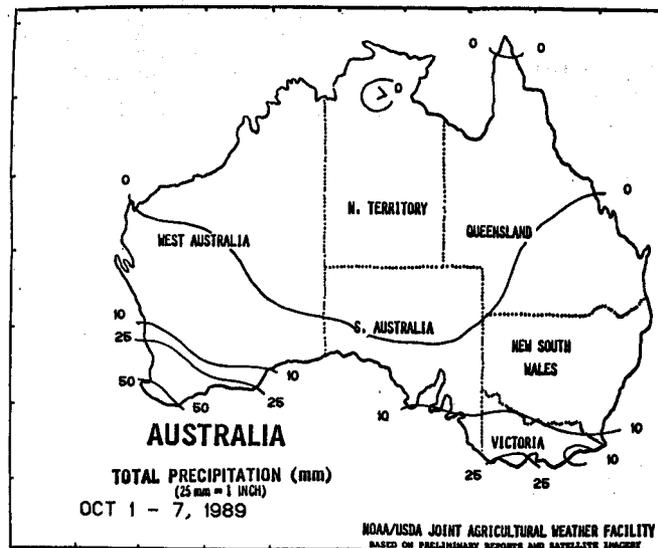


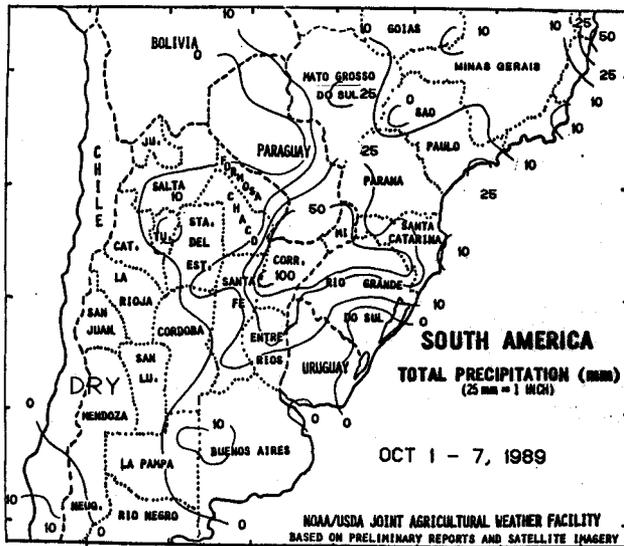
**SOUTHEAST ASIA** ... Typhoon Angela hit the northern Philippines on October 6, causing damage to rain soaked, mature grains in northern Luzon. Maximum sustained winds reached 130 knots, but the sector containing the highest winds passed north of the island. Variable, beneficial rain (25-50mm or more) covered most other crop areas. Moderate to heavy rain (25-50mm or more) returned to Thailand's main season rainfed grain areas, improving conditions for immature rice. Typhoon Brian made landfall in northern Vietnam, likely causing local flooding and crop damage. Temperatures averaged near to slightly above normal across Indochina.

**AUSTRALIA** ... Moderate to heavy rain (15-50mm) across crop areas of Western Australia benefited vegetative to reproductive winter grains. Light to moderate rain (5-20mm) also favored winter grains in much of South Australia and Victoria. Scattered light rain (less than 10mm) helped reduce moisture stress for winter grains in northern New South Wales and southern Queensland. Soils, however, remained too dry for normal crop development. In eastern coastal Queensland, mostly dry weather continued to favor sugarcane harvest which is reportedly near 65 percent complete. Mean weekly temperatures were below normal in southern crop areas and above normal in the north.

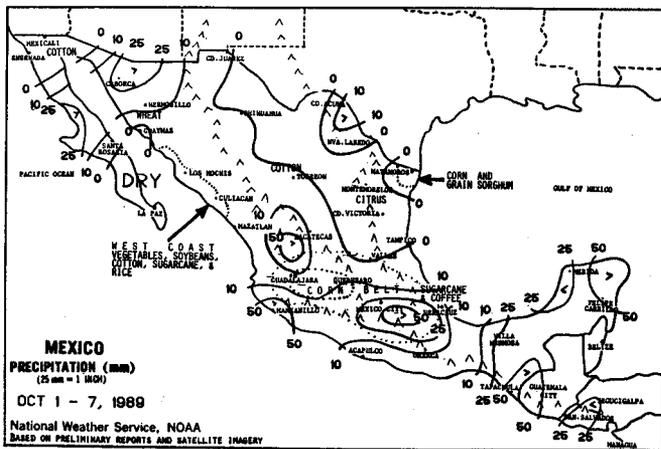


**CANADA** ... Mostly dry weather covered northern and western portions of the Canadian Prairies, allowing rapid spring crop harvesting. An outbreak of cold weather (lows ranging from -5 to -11 degrees C) early in the week likely affected any remaining unharvested spring wheat, but harvesting was reported to be virtually complete. Alberta, which had experienced earlier delays, reported most grains to be more than 90 percent harvested.





**SOUTH AMERICA** ... Locally heavy showers (25-75mm) fell again over northwestern Rio Grande do Sul and southwestern Parana in Brazil, as well as extreme southern Paraguay and extreme northeastern Argentina, maintaining wet field conditions throughout the area. Weekly rainfall generally averaged 10-25mm further north in south-central Brazil, with diminishing rainfall (5mm or less) in western Sao Paulo, Goias, and Minas Gerais. Wheat harvesting and corn planting are underway in south-central Brazil. Light showers (mostly less than 10mm) fell over Argentina's primary growing areas, with isolated heavier amounts (10-25mm) in west-central Buenos Aires and bordering areas of La Pampa. Beneficial showers in eastern and northern Santa Fe also helped early summer crop planting. Dry weather continued in western Santa Fe, Cordoba, and northwestern Buenos Aires. Wheat is advancing into reproductive phases, and corn planting has been increasing during October. A general drying trend, however, has developed in recent weeks.



**MEXICO** ... Mostly dry weather prevailed across northern Mexico, except for beneficial rain from the remnants of Hurricane Raymond, which passed over the extreme northwest. The rain helped wheat planting and provided some much needed moisture for the unseasonably low reservoirs. Elsewhere, scattered showers in the Southern Plateau corn belt caused minimal interference to summer crop harvesting. The heavier showers (20-46mm) were generally confined to the southeastern Plateau. Mostly light rain also fell in southern Mexico, except in extreme southern areas from the Yucatan peninsula to Guatemala, where 50-98mm of weekly rainfall was reported. The generally drier weather over southern Mexico helped alleviate flooding from earlier tropical downpours.

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U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service/Climate Analysis Center  
Managing Editor . . . . . Douglas Le Comte  
Meteorologists . . . . . Tom Heddinghaus (202) 382-1444  
Vilhelm Bjerknes, Bob Stefanski, Wes Byrd, and Eyad Atallah

Subscriptions (202) 447-7917 . . Jeanette Hill

U.S. DEPARTMENT OF AGRICULTURE  
Economics Management Staff  
Editor . . . . . Sharon Lee  
National Agricultural Statistics Service  
Agricultural Statistician . . . Tom Kurtz (202) 447-2157  
World Agricultural Outlook Board  
Agricultural Weather Analysts. . Ray Motha (202) 447-5716  
Tom Puterbaugh, Mark Brusberg, and Jeff Andresen

(Continued from p. 10)

normal in the Corn Belt. On October 1, corn maturity lagged 62 points behind normal in Ohio. Harvest was behind normal in all the major producing States except South Dakota.

On October 1, 69% of the soybean acres were dropping leaves, 6 points behind normal. Harvest was 18% complete, 2 points behind normal. Crop development lagged behind normal in the Corn Belt during September. The third week of September, Hurricane Hugo damaged soybeans in the Carolinas. Late in September, frost may have damaged late planted fields in the central and northern Great Plains and portions of the Corn Belt.

On October 1, 65% of the cotton acres was opening bolls, 4 points behind normal. Harvest was 12% complete, 8 points behind normal. Dry weather slowed crop development in the Delta and Southeast in early September. By mid-September, the percentage opening bolls was 30 or more points

behind normal in Alabama, Arkansas, Mississippi, and North Carolina. Hurricane Hugo caused some damage in the Carolinas. In late September, cool, wet weather slowed boll opening in the Plains area of Texas. Rain slowed defoliation and harvest in central California late in the month.

On October 1, 62% of the sorghum acreage was mature, 8 points behind normal. Harvest was 30% complete, 3 points behind normal. About mid-September, frost and high winds damaged sorghum in central Nebraska. The last week of September, frost caused some damage in portions of the central and southern Great Plains.

Rice harvest was 65% complete, 7 points behind normal on October 1. First crop harvest was complete in Texas and nearly complete in Louisiana. Harvest lagged 27 points behind normal in Mississippi. Rain slowed harvest in California in late September.

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