

# WEEKLY WEATHER AND CROP BULLETIN

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

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

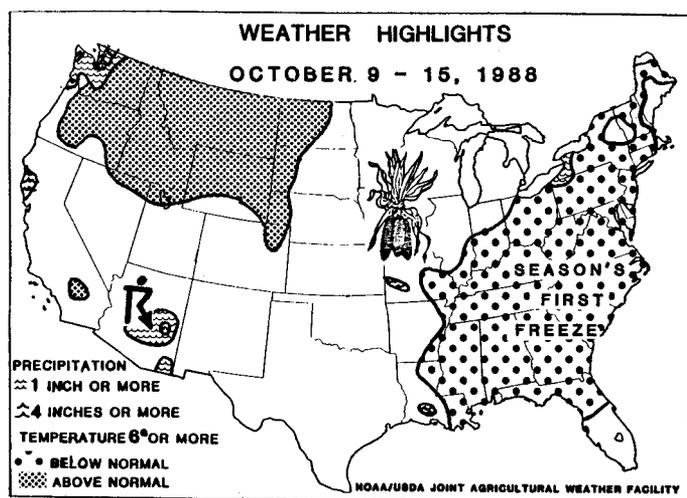
Volume 75, No. 42

Washington, D.C.

Oct. 18, 1988

## National Weather Summary

October 9-15, 1988



from northern Minnesota to northern South Carolina. The much below-normal temperatures in the East contrasted with the much above-normal temperatures in the West. The flow of cold air, picking up moisture crossing the lower Great Lakes, produced snow showers in the Appalachians. Rain showers were again scattered over the Great Basin.

THURSDAY...High pressure spanned the eastern third of the Nation. This brought clear skies and light winds, allowing temperatures to dip into the 30's as far south as Georgia and Alabama. About 50 low-temperature records were broken or tied. An approaching frontal system brought rain showers to the northern Pacific coast as dry weather prevailed elsewhere.

FRIDAY...It was another unseasonably cold morning in the East as numerous stations again reported record-low temperatures. Strong southerly winds brought warmer weather to the Central United States. Showers and thunderstorms developed over the Southwest. Hail, one inch in diameter, pelted Phoenix, Arizona. Scattered rain showers fell over the Northwest and the lower Missouri Valley.

SATURDAY...The cold spell which prevailed across the Eastern United States relaxed its grip, although clear and cool conditions still dominated the Southeast. Rain showers were scattered over the North-Central United States and the Northwest. Thunderstorms produced golfball-size hail in Missouri and southeastern Kansas. Heavy rain fell in the Cascade Mountains of western Washington as a cold front approached from the Pacific.

**HIGHLIGHTS:** The second surge of cold air of the season brought record-low temperatures for the date and/or autumn's first freeze to the eastern third of the Nation. Unseasonable, low temperatures in the East contrasted with the unseasonable, high temperatures in the West. Favorable harvest weather prevailed as light or no rain fell over most of the Nation.

**SUNDAY...**Dry weather dominated much of the Nation. Rain showers lingered from the Great Lakes region to New England and were scattered in the lower Mississippi Valley. Snow fell across northern Maine and the Vermont and New Hampshire mountains. It was a cool morning in the Northeast, with frost and freezing temperatures reaching to the Virginias. Ten low-temperature records were broken or tied.

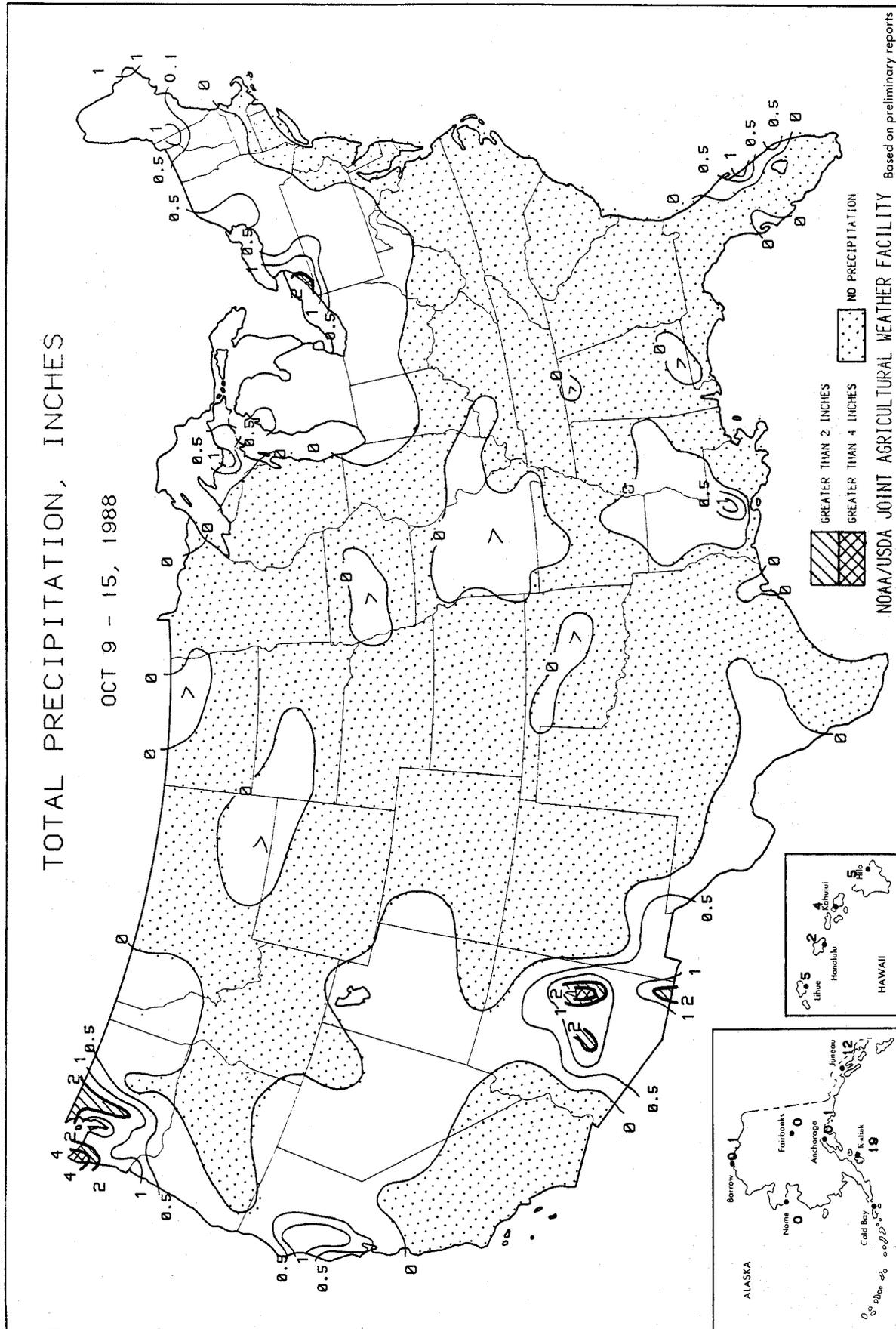
**MONDAY...**Thunderstorms and showers developed as a strong cold front pushed across the Great Lakes into the upper Ohio Valley. Cold Canadian air spread into the North Central United States behind the front. Much of the rest of the Nation enjoyed sunshine and warm weather on Columbus Day.

**TUESDAY...**The front raced southeastward as unseasonably cold air pushed into the Central and Northeastern States. Snow, sleet, and rain extended from Michigan to Maine. Showers were scattered over the Great Basin.

**WEDNESDAY...**The large high pressure mass of cold air covered the eastern half of the country. Record-low temperatures for the date were recorded

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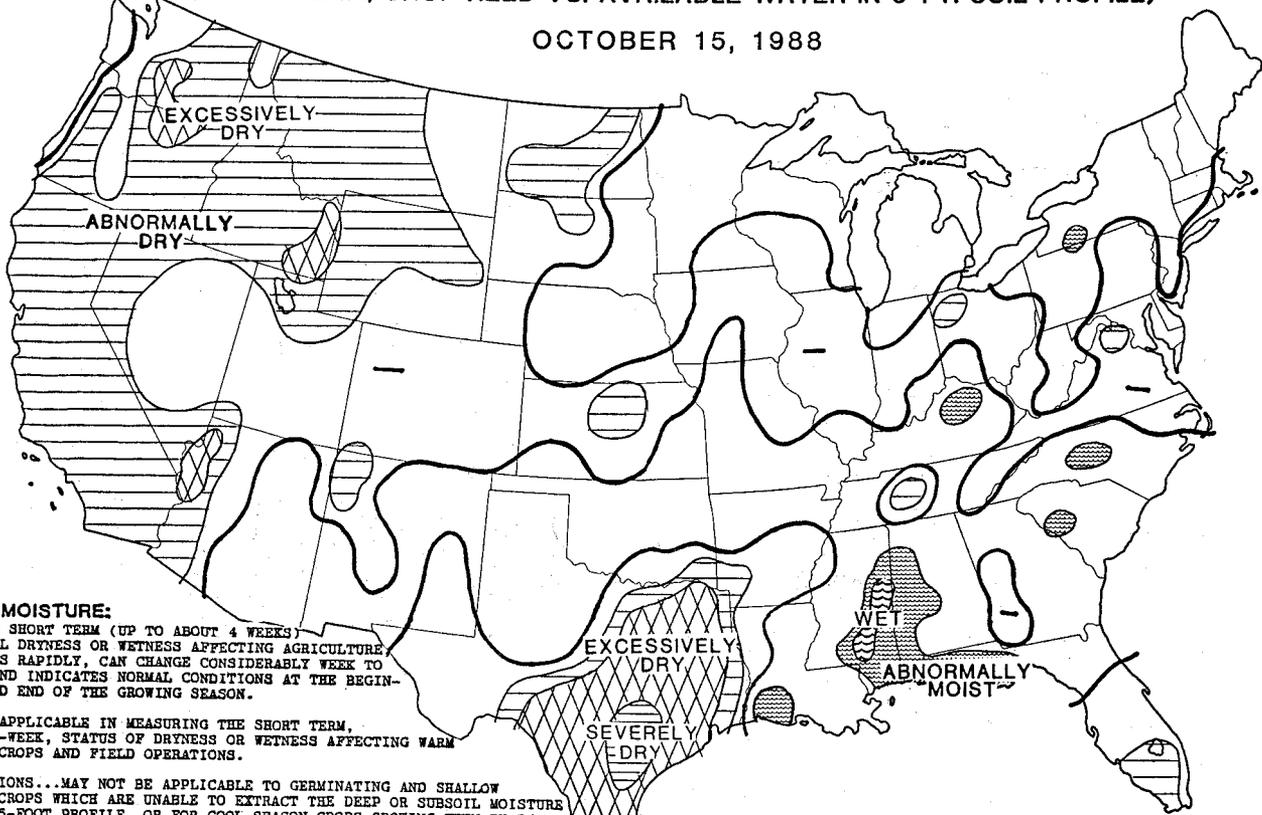
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### CROP MOISTURE

(SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)

OCTOBER 15, 1988



#### CROP MOISTURE:

DEPICTS SHORT TERM (UP TO ABOUT 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE. RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

USES...APPLICABLE IN MEASURING THE SHORT TERM, WEEK-TO-WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS.

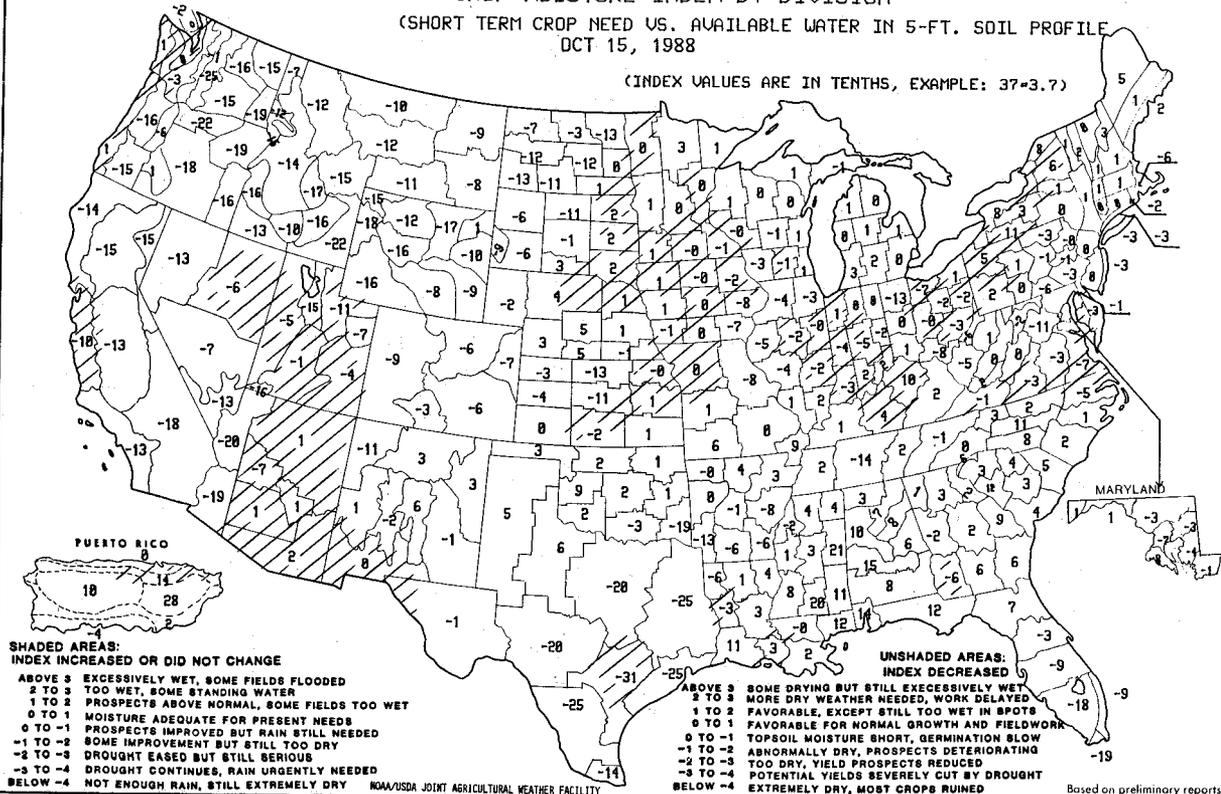
LIMITATIONS...MAY NOT BE APPLICABLE TO GERMINATING AND SHALLOW ROOTED CROPS WHICH ARE UNABLE TO EXTRACT THE DEEP OR SUBSOIL MOISTURE FROM A 5-FOOT PROFILE, OR FOR COOL SEASON CROPS GROWING WHEN TEMPERATURES ARE AVERAGING BELOW ABOUT 55°F. IT IS NOT GENERALLY INDICATIVE OF THE LONG TERM (MONTHS, YEARS) DROUGHT OR WET SPELLS WHICH ARE DEPICTED BY THE DROUGHT SEVERITY INDEX.

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

### CROP MOISTURE INDEX BY DIVISION

(SHORT TERM CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE OCT 15, 1988)

(INDEX VALUES ARE IN TENTHS, EXAMPLE: 37=3.7)



#### SHADED AREAS:

INDEX INCREASED OR DID NOT CHANGE

- ABOVE 3 EXCESSIVELY WET, SOME FIELDS FLOODED
- 2 TO 3 TOO WET, SOME STANDING WATER
- 1 TO 2 PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET
- 0 TO 1 MOISTURE ADEQUATE FOR PRESENT NEEDS
- 0 TO -1 PROSPECTS IMPROVED BUT RAIN STILL NEEDED
- 1 TO -2 SOME IMPROVEMENT BUT STILL TOO DRY
- 2 TO -3 DROUGHT EASED BUT STILL BERICIOUS
- 3 TO -4 DROUGHT CONTINUES, RAIN URGENTLY NEEDED
- BELOW -4 NOT ENOUGH RAIN, STILL EXTREMELY DRY

#### UNSHADED AREAS:

INDEX DECREASED

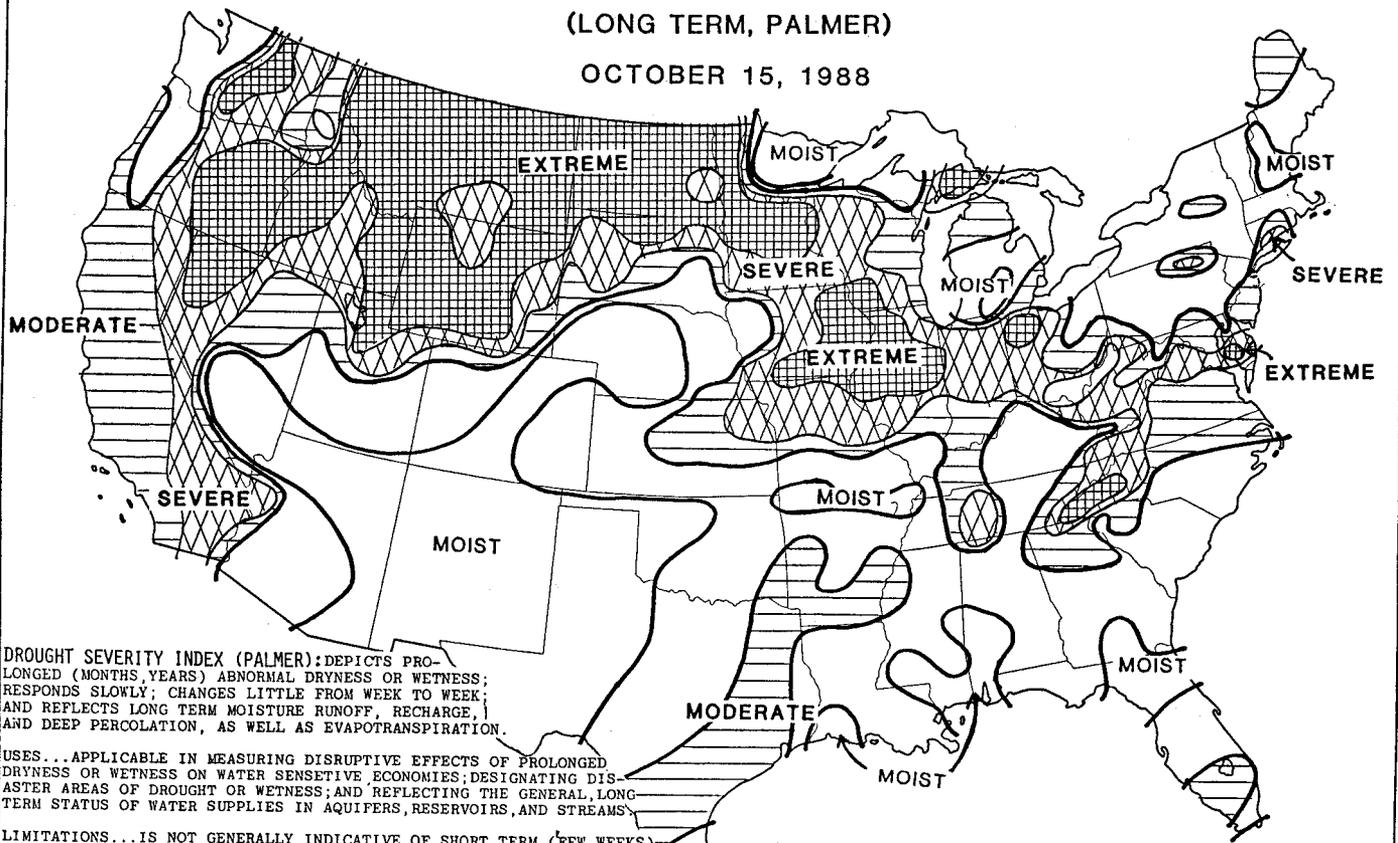
- ABOVE 3 SOME DRYING BUT STILL EXCESSIVELY WET
- 2 TO 3 MORE DRY WEATHER NEEDED, WORK DELAYED
- 1 TO 2 FAVORABLE, EXCEPT STILL TOO WET IN SPOTS
- 0 TO 1 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
- 0 TO -1 TOPSOIL MOISTURE SHORT, GERMINATION SLOW
- 1 TO -2 ABNORMALLY DRY, PROSPECTS DETERIORATING
- 2 TO -3 TOO DRY, YIELD PROSPECTS REDUCED
- 3 TO -4 POTENTIAL YIELDS SEVERELY CUT BY DROUGHT
- BELOW -4 EXTREMELY DRY, MOST CROPS RUINED

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

### DROUGHT SEVERITY (LONG TERM, PALMER)

OCTOBER 15, 1988



DROUGHT SEVERITY INDEX (PALMER): DEPICTS PROLONGED (MONTHS, YEARS) ABNORMAL DRYNESS OR WETNESS; RESPONDS SLOWLY; CHANGES LITTLE FROM WEEK TO WEEK; AND REFLECTS LONG TERM MOISTURE RUNOFF, RECHARGE, AND DEEP PERCOLATION, AS WELL AS EVAPOTRANSPIRATION.

USES... APPLICABLE IN MEASURING DISRUPTIVE EFFECTS OF PROLONGED DRYNESS OR WETNESS ON WATER SENSITIVE ECONOMIES; DESIGNATING DISASTER AREAS OF DROUGHT OR WETNESS; AND REFLECTING THE GENERAL, LONG TERM STATUS OF WATER SUPPLIES IN AQUIFERS, RESERVOIRS, AND STREAMS.

LIMITATIONS... IS NOT GENERALLY INDICATIVE OF SHORT TERM (FEW WEEKS) STATUS OF DROUGHT OR WETNESS SUCH AS FREQUENTLY AFFECTS CROPS AND FIELD OPERATIONS (THIS IS INDICATED BY THE CROP MOISTURE INDEX).

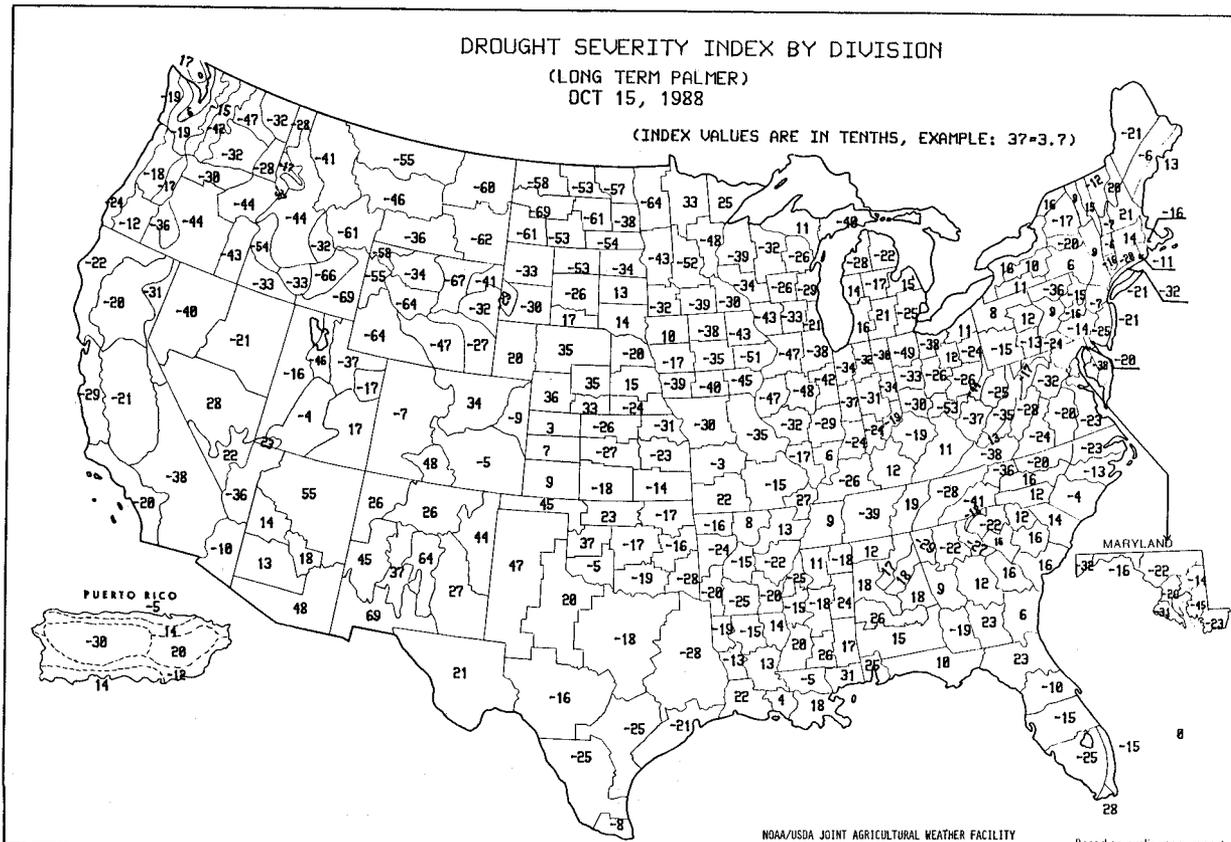
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

### DROUGHT SEVERITY INDEX BY DIVISION

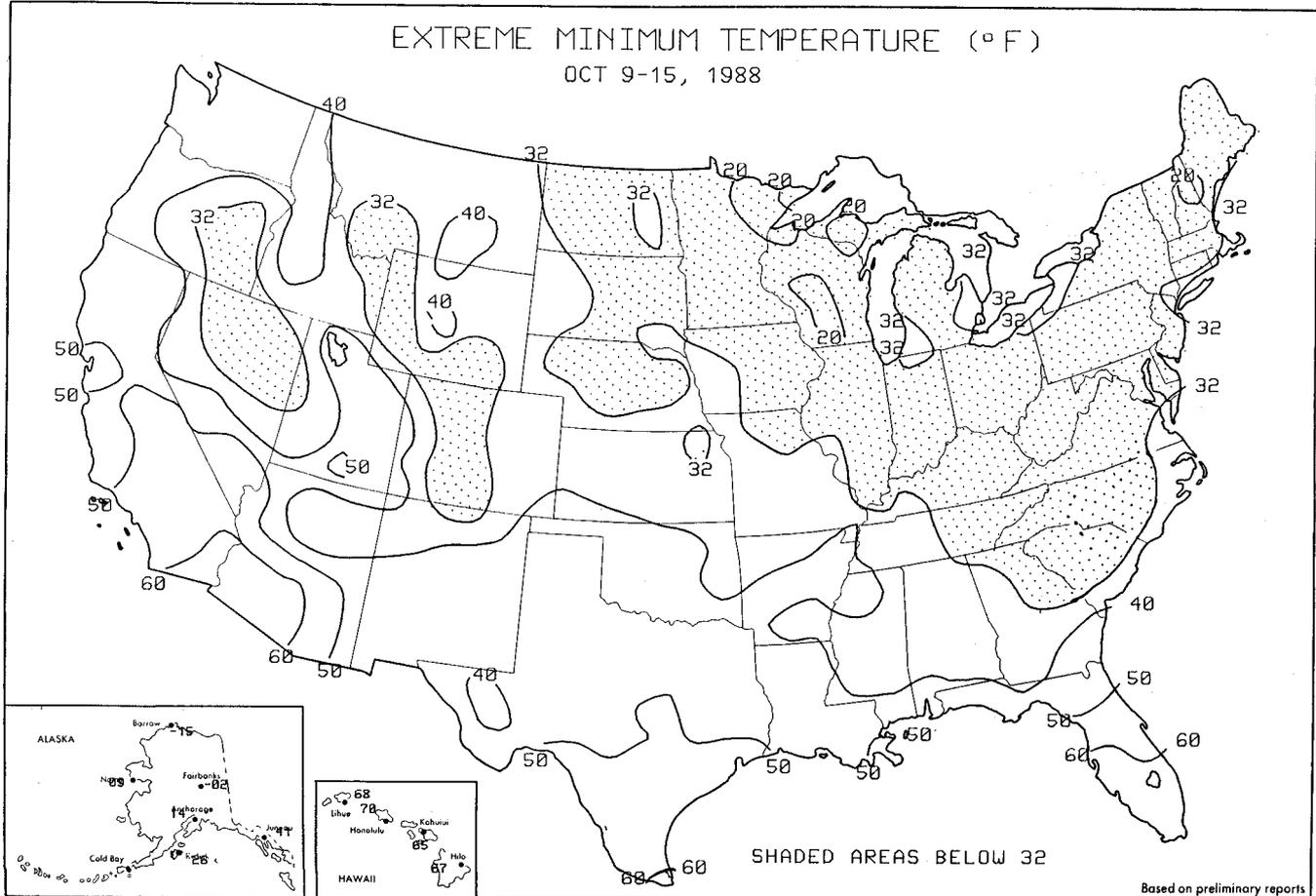
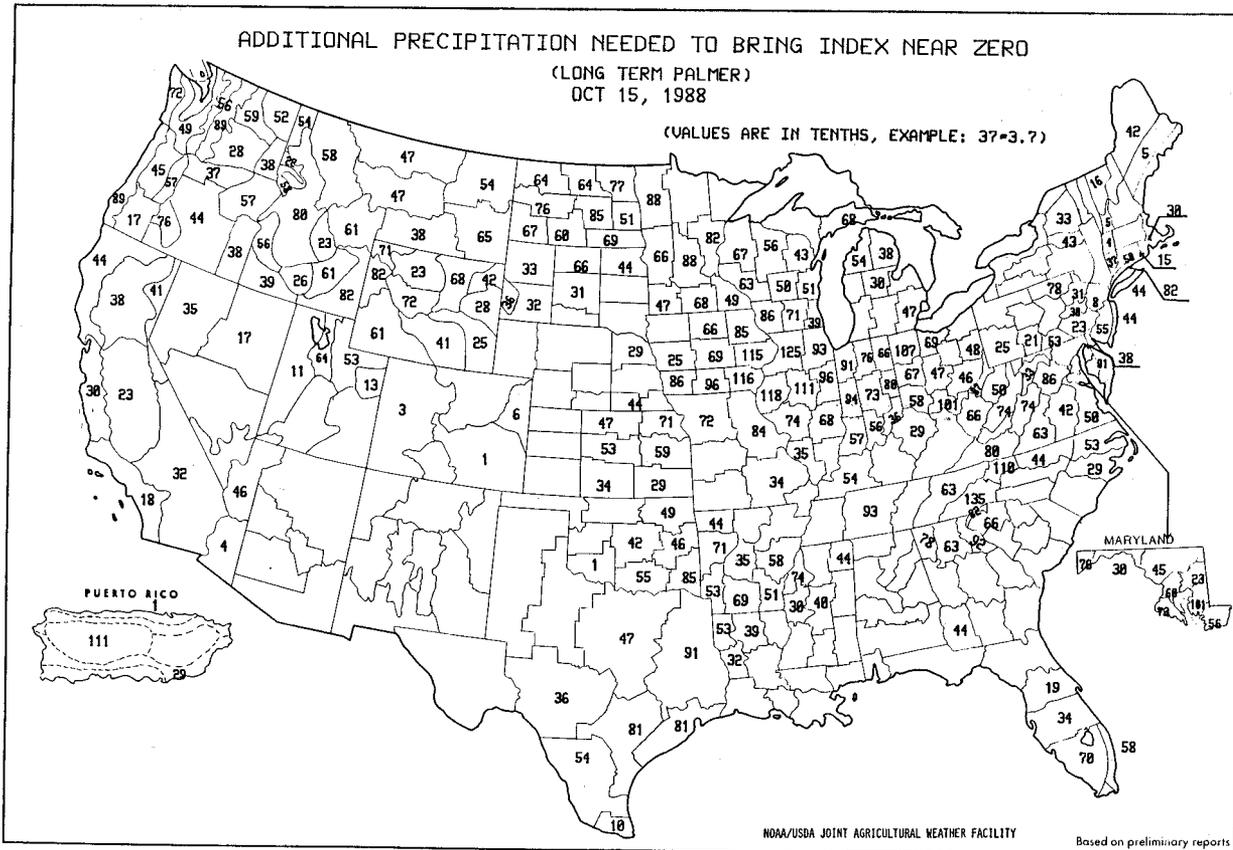
(LONG TERM PALMER)  
OCT 15, 1988

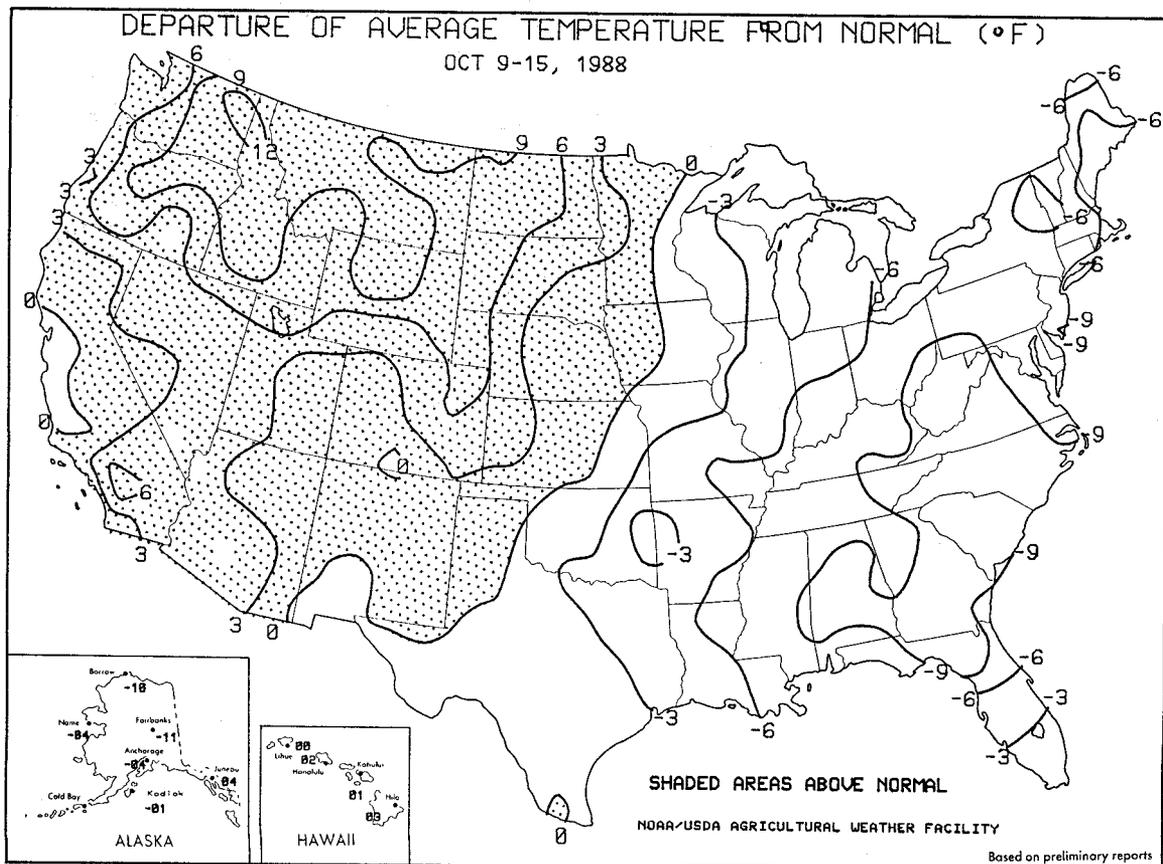
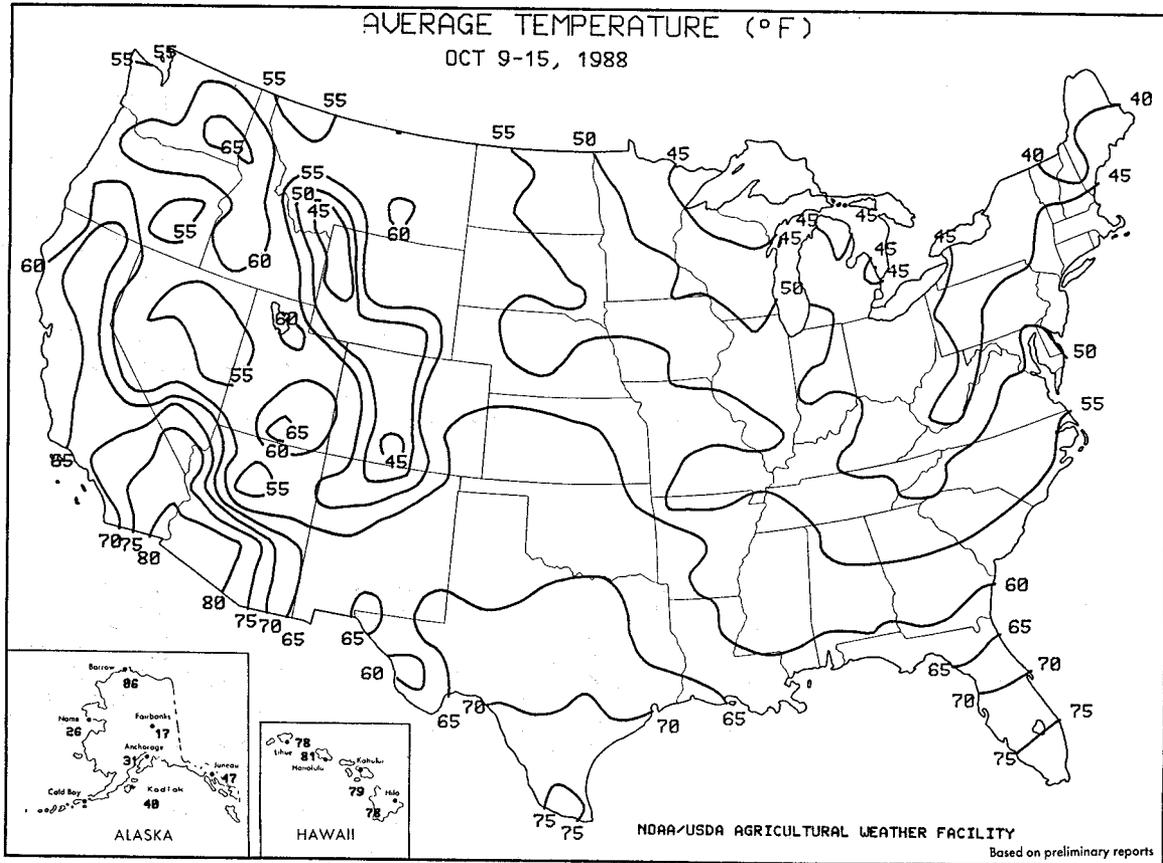
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NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports





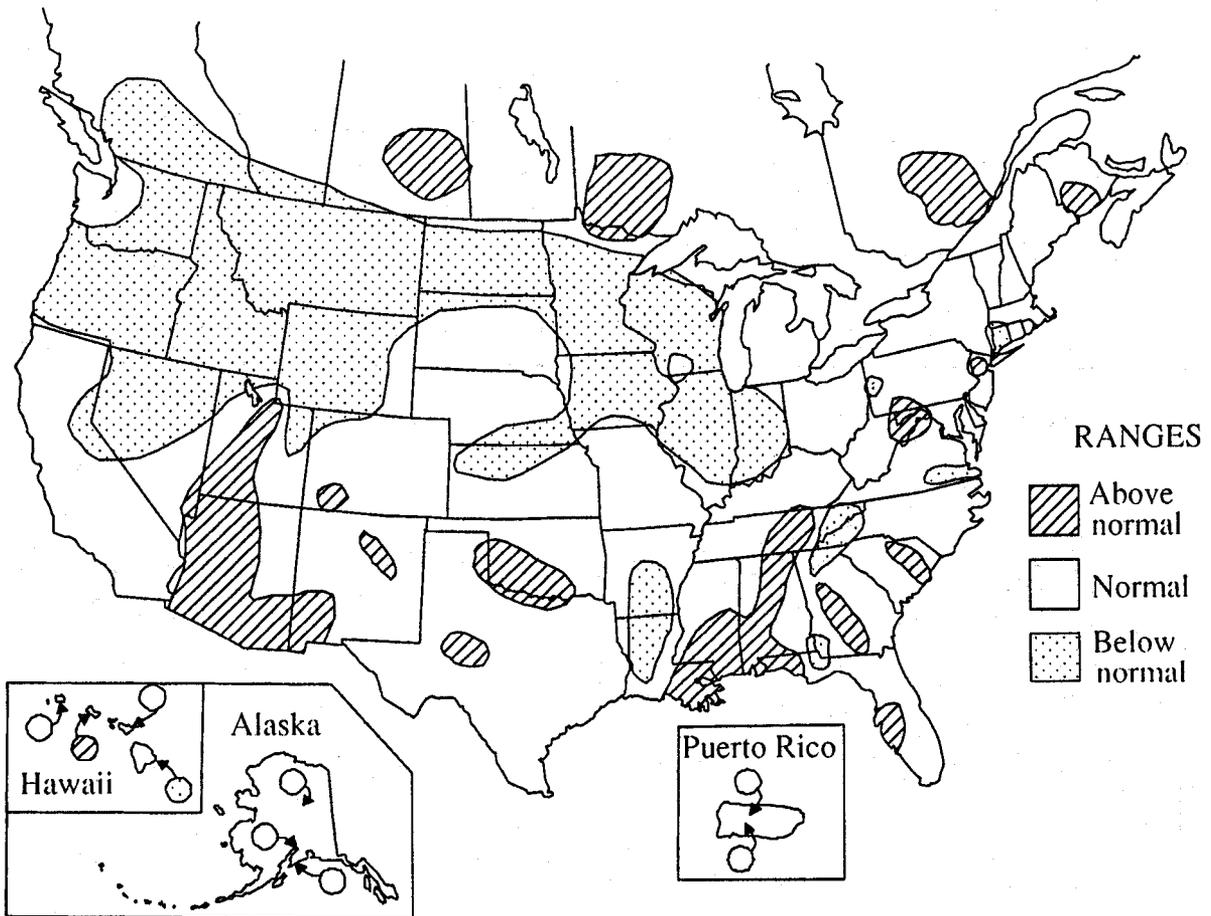
# National Water Conditions

## SEPTEMBER 1988

### STREAMFLOW DURING SEPTEMBER

UNITED STATES  
Department of the Interior  
Geological Survey

CANADA  
Department of the Environment  
Water Resources Branch



# National Weather Data for Selected Cities

## Weather Data for the Week Ending October 15, 1988

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		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	68	40	73	34	54	-10	0	-.6	0	9.0	161	30.6	69	96	36	0	0	0	0
MOBILE	74	47	78	41	61	-9	0	-.6	0	15.6	198	57.9	107	92	37	0	0	0	0
MONTGOMERY	72	42	76	34	57	-9	0	-.5	0	10.1	173	50.1	124	98	36	0	0	0	0
AK ANCHORAGE	37	26	41	14	32	-5	.1	-.3	.1	3.8	113	11.3	94	81	50	0	0	0	0
BARROW	14	-3	26	-15	6	-10	.1	-.1	0	.6	75	3.3	86	91	81	7	7	2	0
FAIRBANKS	23	10	28	-2	17	-11	T	-.2	T	1.4	97	8.9	103	87	60	0	0	3	1
JUNEAU	49	44	52	41	47	4	1.2	.6	T	10.3	100	41.6	105	98	85	0	0	4	0
KODIAK	47	34	49	26	41	-1	1.9	.3	T	12.5	129	61.3	133	90	62	0	0	4	2
NOME	34	17	36	9	26	-4	T	-.3	T	1.4	47	11.1	89	86	53	0	0	2	2
AZ PHOENIX	92	69	99	60	81	6	2.4	2.2	2.3	2.4	259	6.3	119	56	21	5	0	7	1
PRESCOTT	74	43	78	40	59	3	.3	0	.3	.5	25	13.2	87	74	29	0	0	2	2
TUCSON	88	62	95	57	75	3	.8	.6	.7	1.6	90	9.5	104	68	25	3	0	2	1
YUMA	96	70	101	66	83	5	0	0	0	T	11	2.3	129	55	19	6	0	0	0
AR FORT SMITH	78	47	85	38	63	-1	T	-.7	T	6.1	129	26.8	84	92	32	0	0	0	0
LITTLE ROCK	71	49	76	44	60	-5	T	-.6	T	1.7	30	28.6	73	66	40	0	0	1	0
CA BAKERSFIELD	83	55	90	52	69	0	0	0	0	0	0	3.0	74	81	37	1	0	0	0
EUREKA	61	52	67	50	57	2	.1	-.5	0	.5	28	16.4	67	92	76	0	0	3	0
FRESNO	82	54	90	52	68	2	0	0	0	0	0	5.5	76	88	33	1	0	0	0
LOS ANGELES	76	61	92	57	69	2	0	0	0	.1	50	4.7	55	83	49	2	0	0	0
REDDING	83	52	98	50	68	0	.1	-.3	.1	.1	6	17.0	63	86	30	2	0	2	0
SACRAMENTO	79	53	90	50	66	1	.2	0	.1	.2	34	7.1	63	91	38	1	0	2	0
SAN DIEGO	74	62	84	59	68	0	0	0	0	T	0	6.7	98	91	59	0	0	0	0
SAN FRANCISCO	69	53	79	50	61	0	.4	.2	.3	.5	79	7.7	59	97	60	0	0	2	0
CO DENVER	74	42	79	37	58	5	0	0	0	.9	55	13.5	101	69	21	0	0	0	0
GRAND JUNCTION	72	45	74	40	58	2	T	-.2	T	.8	68	6.6	106	68	27	0	0	2	0
PUEBLO	79	40	84	36	60	4	0	0	0	1.8	150	10.7	110	61	17	0	0	0	0
CT BRIDGEPORT	59	41	65	31	50	-6	0	0	0	3.7	77	27.8	86	73	41	0	1	0	0
HARTFORD	59	34	66	28	47	-7	T	-.8	T	3.0	53	29.4	86	85	34	0	3	0	0
DC WASHINGTON	63	41	75	34	52	-8	0	0	0	2.2	48	23.7	75	81	34	0	0	0	0
FL APALACHICOLA	76	52	81	44	64	-7	0	0	0	12.0	115	58.0	122	87	38	0	0	0	0
DAYTONA BEACH	79	56	82	52	67	-7	T	-.1	T	7.9	87	33.2	79	94	47	0	0	1	0
JACKSONVILLE	75	50	78	43	63	-8	0	0	0	18.7	219	55.2	120	94	50	0	0	0	0
KEY WEST	84	74	86	72	79	-1	T	-.9	T	4.1	46	35.4	110	78	56	0	0	1	0
MIAMI	85	69	87	65	77	-1	0	0	0	4.5	38	43.7	88	83	46	0	0	0	0
ORLANDO	80	60	83	57	70	-5	T	-.7	T	7.0	87	44.0	99	89	43	0	0	1	0
TALLAHASSEE	75	44	78	38	59	-10	0	0	0	6.0	75	42.9	78	93	34	0	0	0	0
TAMPA	81	59	83	58	70	-5	T	-.5	T	13.7	183	44.7	107	90	44	0	0	0	0
WEST PALM BEACH	83	68	85	64	75	-3	.8	-.1	.5	5.3	39	59.1	117	88	45	0	0	3	1
GA ATLANTA	68	44	74	40	56	-8	0	0	0	10.0	231	38.4	97	80	30	0	0	0	0
AUGUSTA	70	38	76	31	54	-10	0	0	0	8.5	187	36.0	98	95	28	0	2	0	0
MACON	71	40	76	32	56	-11	0	0	0	8.3	195	38.1	102	98	29	0	1	0	0
SAVANNAH	72	46	76	37	59	-9	T	-.5	T	11.0	171	44.3	100	90	34	0	0	0	0
HI HILO	87	70	89	67	78	3	.5	-1.6	.4	12.5	115	93.7	99	87	56	0	0	3	0
HONOLULU	89	72	92	70	81	2	.2	-.2	.2	1.0	76	8.3	53	87	53	4	0	1	0
KAHULUI	89	69	91	65	79	1	.4	.2	.4	.6	111	13.5	106	89	56	2	0	1	0
LIHUE	84	71	85	68	78	0	.5	-.5	.3	1.8	42	27.0	89	94	67	0	0	3	0
ID BOISE	78	51	83	44	64	11	0	0	0	.2	27	7.1	84	49	22	0	0	0	0
LEWISTON	78	52	84	49	65	12	.1	-.1	.1	.5	40	7.3	75	67	28	0	0	1	0
POCATELLO	73	40	78	33	56	7	0	0	0	T	4	4.6	56	73	26	0	0	0	0
IL CHICAGO	62	40	76	25	51	-4	.1	-.4	.1	4.7	91	20.4	71	77	36	0	2	1	0
MOLINE	65	40	77	26	53	-2	0	0	0	2.7	53	19.4	61	77	30	0	2	0	0
PEORIA	65	40	76	28	52	-3	0	0	0	3.1	63	15.0	50	77	33	0	2	0	0
QUINCY	68	42	77	31	55	-2	T	-.8	T	1.5	26	13.6	42	76	31	0	2	0	0
ROCKFORD	63	36	77	22	49	-4	0	0	0	2.9	57	17.3	56	88	37	0	2	0	0
SPRINGFIELD	66	41	76	29	53	-4	0	0	0	3.2	70	16.3	57	75	29	0	2	0	0
IN EVANSVILLE	68	35	77	25	51	-7	T	-.5	T	1.7	46	25.4	76	91	28	0	3	1	0
FORT WAYNE	60	38	73	26	49	-5	.1	-.5	.1	2.5	66	25.3	90	88	41	0	2	3	0
INDIANAPOLIS	63	35	77	24	49	-7	T	-.5	T	1.4	37	21.6	68	82	32	0	3	1	0
SOUTH BEND	59	42	74	33	50	-4	.2	-.5	.1	6.2	130	25.1	82	89	48	0	0	3	0
IA DES MOINES	68	42	79	31	55	0	.1	-.4	.1	2.9	71	17.3	64	79	33	0	1	1	0
STIOUX CITY	69	40	79	32	54	0	0	0	0	5.2	152	20.6	89	88	36	0	1	1	0
WATERLOO	66	35	78	22	51	-2	T	-.5	T	1.7	36	15.3	53	83	30	0	3	1	0
KS CONCORDIA	74	46	82	36	60	1	T	-.4	T	1.1	28	13.4	54	74	26	0	0	0	0
DODGE CITY	78	46	84	38	62	3	0	0	0	3.3	133	14.7	79	82	25	0	0	0	0
GOODLAND	78	41	84	35	60	5	0	0	0	2.2	118	20.0	136	69	21	0	0	0	0
TOPEKA	74	43	80	30	59	0	T	-.7	T	2.0	40	17.4	60	87	31	0	1	1	0
WICHITA	74	48	80	39	61	1	T	-.6	T	1.4	30	15.7	63	83	35	0	0	0	0
KY BOWLING GREEN	64	36	70	30	50	-9	T	-.6	T	8.2	183	31.4	80	95	33	0	3	1	0
LEXINGTON	62	37	71	26	49	-9	0	0	0	6.1	140	28.6	76	83	34	0	3	0	0
LOUISVILLE	66	39	75	31	52	-6	T	-.6	T	1.8	39	27.1	77	83	28	0	1	0	0
LA ALEXANDRIA	76	50	81	43	63	-6	.1	-.6	.1	4.9	113	34.4	82	82	39	0	0	1	0
BATON ROUGE	76	50	82	43	63	-6	T	-.6	T	11.0	194	63.7	140	92	39	0	0	0	0
LAKE CHARLES	79	52	83	46	65	-5	.2	-.7	.2	9.1	121	49.3	114	94	39	0	0	1	0
NEW ORLEANS	75	52	79	48	64	-7	T	-.6	T	7.4	103	67.2	137	93	44	0	0	0	0

Based on 1951-80 normals

Weather Data for the Week Ending October 15, 1988

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	78	46	83	39	62	-6	.1	-.5	.1	2.2	48	22.3	64	92	35	0	0	1	0
ME CARIBOU	44	32	54	25	38	-6	.5	-.2	.4	3.2	64	23.9	84	97	65	0	4	3	0
PORTLAND	54	36	61	31	45	-4	.2	-.7	.1	2.3	46	31.0	96	87	45	0	2	2	0
MD BALTIMORE	63	36	75	29	50	-8	0	-.7	0	2.3	46	25.2	75	89	32	0	2	0	0
SALISBURY	62	37	73	29	50	-8	0	-.9	0	4.5	78	37.0	100	87	36	0	2	0	0
MA BOSTON	58	41	66	35	50	-6	0	-.7	0	2.4	49	26.7	80	82	40	0	0	0	0
CHATHAM	56	42	61	33	49	-6	0	-.8	0	3.6	66	26.8	76	84	59	0	0	0	0
MI ALPENA	55	33	73	30	44	-4	.3	-.2	0	2.9	70	20.3	86	94	51	0	4	2	0
DETROIT	58	37	71	30	48	-6	.4	-.1	.2	4.9	152	18.3	74	89	46	0	3	3	0
FLINT	57	36	72	29	47	-5	.3	-.2	.2	4.0	122	19.6	83	86	49	0	2	2	0
GRAND RAPIDS	57	39	72	29	48	-5	.2	-.4	.1	9.3	205	26.1	97	86	48	0	2	2	0
HOUGHTON LAKE	53	35	68	30	44	-4	.3	-.2	.3	4.6	117	20.4	90	89	52	0	2	2	0
LANSING	56	37	71	28	47	-4	.3	-.2	.2	7.1	185	23.7	98	88	53	0	2	2	0
MARQUETTE	52	28	72	10	40	-6	.8	-.1	.2	6.2	111	28.4	94	94	51	0	4	3	0
MUSKEGON	57	40	69	29	49	-3	.1	-.5	.1	6.8	159	22.8	93	90	52	0	1	3	0
SAULT ST. MARIE	52	33	64	25	43	-4	.4	-.2	.4	4.8	90	22.8	87	89	50	0	4	1	0
MN ALEXANDRIA	64	39	77	32	51	3	T	-.4	T	4.2	130	20.4	93	86	41	0	1	0	0
DULUTH	58	33	71	18	45	0	T	-.5	T	6.3	145	26.7	105	84	40	0	3	0	0
INT'L FALLS	62	33	77	17	47	3	T	-.4	T	4.1	99	21.8	103	82	34	0	3	0	0
MINNEAPOLIS	64	38	76	27	51	0	T	-.4	T	2.8	82	14.7	63	80	37	0	1	0	0
ROCHESTER	62	35	73	23	49	-1	T	-.6	T	3.8	83	17.0	68	83	38	0	3	0	0
MS GREENWOOD	71	45	77	40	58	-7	T	-.6	T	7.9	172	25.1	60	87	35	0	0	0	0
JACKSON	72	44	81	36	58	-8	T	-.4	T	5.3	115	30.4	73	98	39	0	0	1	0
MERIDIAN	70	40	77	34	55	-10	.1	-.5	.1	10.8	223	39.1	91	99	40	0	0	1	0
MO CAPE GIRARDEAU	67	41	74	31	54	-4	T	-.5	T	9.2	188	28.2	78	91	41	0	1	0	0
COLUMBIA	68	42	78	32	55	-4	.3	-.5	.1	2.7	48	21.9	70	86	40	0	1	3	0
KANSAS CITY	70	46	76	34	58	-2	T	-.8	T	8.5	141	21.2	67	80	36	0	0	1	0
SAINT LOUIS	67	46	76	38	57	-3	T	-.5	T	2.5	66	22.7	81	77	38	0	0	1	0
SPRINGFIELD	68	42	77	33	55	-4	.1	-.6	.1	5.6	95	38.4	118	87	42	0	0	1	0
MT BILLINGS	76	46	80	40	61	10	T	-.3	T	2.1	115	8.2	65	61	21	0	0	1	0
GLASGOW	74	40	80	36	57	9	T	-.1	T	.9	80	6.8	68	68	26	0	0	0	0
GREAT FALLS	74	46	80	38	60	11	T	-.2	T	2.3	162	9.8	75	62	24	0	0	0	0
HAVRE	73	40	80	34	56	8	T	-.1	T	1.5	116	5.3	51	81	29	0	0	0	0
HELENA	72	40	76	37	56	10	T	-.2	T	2.1	182	8.3	84	80	28	0	0	0	0
KALISPELL	69	38	77	33	54	10	T	-.2	T	2.1	138	11.2	90	95	40	0	0	2	0
MILES CITY	75	43	80	39	59	9	.1	-.2	.1	1.2	75	3.5	28	62	22	0	0	1	0
MISSOULA	72	39	78	34	56	10	T	-.2	T	.5	37	9.2	86	82	31	0	0	1	0
NE GRAND ISLAND	73	39	85	32	56	1	0	-.3	0	3.3	107	20.1	95	83	28	0	1	0	0
LINCOLN	73	42	83	31	57	2	T	-.4	T	5.2	136	15.7	64	87	32	0	1	0	0
NORFOLK	72	38	83	30	55	2	T	-.3	T	5.5	197	22.8	105	86	27	0	2	0	0
NORTH PLATTE	74	34	83	28	54	2	0	-.2	0	1.6	75	18.4	103	95	26	0	3	0	0
OMAHA	71	46	80	38	59	2	T	-.5	T	3.6	79	18.6	68	73	42	0	0	1	0
SCOTT'S BLUFF	76	39	83	31	57	6	0	-.2	0	1.0	67	14.4	109	76	20	0	2	0	0
VALENTINE	74	34	83	26	54	3	T	-.2	T	1.7	90	19.1	120	76	23	0	2	0	0
NV ELY	69	34	73	27	51	4	.4	-.3	.4	.6	57	6.6	90	76	25	0	3	2	0
LAS VEGAS	89	62	92	58	75	6	0	-.1	0	T	0	2.2	70	36	15	4	0	0	0
RENO	74	38	81	34	56	5	T	-.1	T	.1	16	2.5	48	77	20	0	0	1	0
WINNEMUCCA	73	36	83	28	55	5	T	-.1	T	.3	52	4.6	79	66	21	0	1	1	0
NH CONCORD	56	32	64	25	44	-5	.1	-.6	.1	2.1	46	26.5	95	95	40	0	5	1	0
NJ ATLANTIC CITY	62	34	72	28	48	-9	0	-.7	0	4.2	99	26.5	81	92	36	0	3	0	0
NM ALBUQUERQUE	73	47	76	43	60	1	T	-.2	T	3.0	240	12.9	194	78	26	0	0	0	0
CLOVIS	75	46	81	42	61	1	0	-.4	0	2.7	96	19.4	128	82	27	0	0	0	0
ROSWELL	79	49	86	44	64	3	T	-.3	T	1.6	68	13.2	140	77	25	0	0	0	0
NY ALBANY	57	34	66	28	45	-6	.2	-.4	.2	1.8	38	22.8	81	94	44	0	3	3	0
BINGHAMTON	50	34	66	28	42	-8	.3	-.4	.1	2.4	51	27.3	93	89	54	0	5	3	0
BUFFALO	52	39	64	34	45	-8	1.3	-.7	1.2	4.7	101	29.7	103	88	56	0	0	4	1
NEW YORK	59	44	68	39	52	-7	T	-.7	T	3.8	76	29.7	88	75	38	0	0	0	0
ROCHESTER	53	36	66	32	44	-8	.1	-.5	.1	2.2	58	20.1	81	95	54	0	3	2	0
SYRACUSE	54	36	66	30	45	-7	.8	-.2	.4	3.1	65	26.2	85	89	50	0	1	6	0
NC ASHEVILLE	63	33	70	25	48	-10	0	-.7	0	5.2	97	21.0	58	96	32	0	2	0	0
CHARLOTTE	66	40	73	34	53	-9	0	-.6	0	5.7	116	27.6	78	87	33	0	0	0	0
GREENSBORO	64	37	74	29	51	-9	0	-.7	0	5.0	96	28.2	81	88	32	0	2	0	0
HATTERAS	65	49	72	38	57	-9	T	-.1	T	4.3	53	36.1	82	84	41	0	0	0	0
NEW BERN	69	42	75	33	55	-10	0	-.8	0	3.5	46	43.5	97	94	32	0	0	0	0
RALEIGH	65	37	73	29	51	-10	0	-.6	0	7.0	153	29.6	86	92	31	0	2	0	0
WILMINGTON	68	41	75	33	55	-11	0	-.7	0	3.4	47	53.0	117	90	31	0	0	0	0
ND BISMARCK	72	36	84	24	54	6	T	-.2	T	.6	35	8.8	63	78	24	0	1	0	0
FARGO	66	39	80	28	53	4	0	-.3	0	3.2	129	11.8	68	77	32	0	1	0	0
GRAND FORKS	66	35	83	24	50	4	.1	-.2	.1	2.0	78	11.0	67	84	31	0	2	1	0
WILLISTON	73	39	81	29	56	8	T	-.2	T	1.5	86	9.0	74	72	23	0	1	0	0
OH AKRON-CANTON	55	36	69	29	46	-8	.5	-.1	.5	5.6	140	25.6	87	83	49	0	3	1	0
CINCINNATI	62	35	74	25	49	-8	0	-.6	0	3.3	80	30.8	94	87	33	0	3	0	0
CLEVELAND	57	40	73	30	48	-7	.2	-.4	.1	2.4	60	20.7	73	80	46	0	2	3	0
COLUMBUS	59	36	69	28	47	-8	.3	-.1	.3	3.8	106	29.1	95	94	44	0	3	1	0

Weather Data for the Week Ending October 15, 1988

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		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	60	38	71	27	49	-7	T							80	37	0	2	1	0
TOLEDO	59	36	74	23	48	-5	.1							80	37	0	2	2	0
YOUNGSTOWN	54	36	69	30	45	-7	.4							82	50	0	3	2	0
OK OKLAHOMA CITY	74	50	81	43	62	-2	.1							101	82	0	0	0	0
TULSA	72	48	79	40	60	-4	T							82	40	0	0	1	0
OR ASTORIA	63	54	77	49	59	5	1.2							76	97	0	0	0	0
BURNS	72	35	80	32	53	4	0							71	66	0	1	3	1
MEDFORD	80	47	91	41	63	8	0							58	83	0	0	0	0
PENDLETON	76	51	86	45	64	10	T							90	68	0	0	0	0
PORTLAND	69	55	77	50	62	7	T							89	94	0	0	1	0
SALEM	69	52	75	46	60	7	T							78	94	0	0	1	0
PA ALLENTOWN	59	36	70	30	48	-7	T							90	87	0	2	0	0
BRIDGEVILLE	54	42	69	36	48	-6	2.1							92	80	0	0	4	2
HARRISBURG	61	36	75	30	49	-8	.4							92	86	0	2	2	0
PHILADELPHIA	62	38	72	30	50	-8	0							92	89	0	2	0	0
PITTSBURGH	56	35	69	26	45	-9	.3							70	91	0	3	3	0
SCRANTON	55	35	68	31	45	-7	.1							91	47	0	0	0	0
RI PROVIDENCE	59	36	64	31	48	-7	0							84	88	0	3	4	0
SC CHARLESTON	70	45	76	39	58	-9	0							90	87	0	0	0	0
COLUMBIA	70	38	76	30	54	-11	0							91	95	0	2	0	0
FLORENCE	68	40	75	32	54	-11	0							90	91	0	1	0	0
GREENVILLE	67	37	73	29	52	-10	0							73	95	0	2	0	0
SD ABERDEEN	68	37	78	29	53	3	0							104	83	0	2	0	0
HURON	69	36	79	27	53	2	T							105	85	0	1	0	0
HAPID CITY	76	43	82	36	60	8	.1							61	60	0	0	1	0
SIOUX FALLS	67	36	75	29	52	0	T							20	0	0	0	0	0
TN CHATTANOOGA	68	39	73	30	53	-8	0							77	84	0	2	0	0
KNOXVILLE	66	35	71	26	50	-10	0							82	96	0	2	0	0
MEMPHIS	69	47	75	41	58	-6	T							67	96	0	3	0	0
NASHVILLE	69	40	74	32	54	-7	0							74	81	0	0	0	0
TX ABILENE	81	52	86	41	66	-1	0							53	91	0	1	0	0
AMARILLO	78	47	85	42	62	2	0							72	76	0	0	0	0
AUSTIN	84	56	89	52	70	-1	0							140	83	0	0	0	0
BEAUMONT	79	53	84	48	66	-5	T							68	82	0	0	0	0
BROWNSVILLE	86	62	88	60	74	-2	.1							96	96	0	0	0	0
CORPUS CHRISTI	86	59	89	53	73	-2	0							100	97	0	0	0	0
DEL RIO	82	60	84	54	71	-1	0							58	93	0	0	0	0
EL PASO	77	53	84	50	65	0	.5							100	75	0	0	0	0
FORT WORTH	79	52	84	46	66	-3	0							155	93	0	0	3	0
GALVESTON	78	66	82	62	72	-2	.1							75	85	0	0	0	0
HOUSTON	84	53	88	47	68	-3	T							109	79	0	0	1	0
LUBBOCK	80	48	86	43	64	2	0							80	80	0	0	0	0
MIDLAND	80	49	86	43	65	-1	0							149	85	0	0	0	0
SAN ANGELO	81	49	84	40	65	-3	0							85	88	0	0	0	0
SAN ANTONIO	85	55	89	50	70	-1	.2							75	83	0	0	1	0
VICTORIA	86	58	89	53	72	-1	0							41	86	0	0	0	0
WACO	81	53	86	48	67	-3	0							79	86	0	0	0	0
WICHITA FALLS	78	48	85	42	63	-3	0							87	32	0	0	0	0
UT BLANDING	999	999	999	999	999	1	0							106	***	0	0	0	0
CEDAR CITY	73	42	77	35	58	4	.1							77	23	0	0	2	0
SALT LAKE CITY	73	48	77	43	60	6	T							54	69	0	0	1	0
VT BURLINGTON	50	36	63	31	43	-6	.2							76	88	0	3	2	0
VA NORFOLK	65	43	73	38	54	-8	0							86	77	0	0	0	0
RICHMOND	66	36	74	27	51	-9	0							87	91	0	2	0	0
ROANOKE	63	34	76	26	49	-10	0							80	85	0	2	0	0
WA QUILLAYUTE	60	50	68	40	55	4	4.2							96	98	0	0	5	3
SEATTLE-TACOMA	83	54	74	47	58	5	.8							80	98	0	0	3	0
SPOKANE	73	49	78	44	61	12	T							69	87	0	0	1	0
YAKIMA	76	45	83	39	61	10	T							77	81	0	3	0	0
WV BECKLEY	56	33	66	24	45	-8	T							63	87	0	0	0	0
CHARLESTON	61	34	70	26	47	-10	T							77	81	0	3	0	0
HUNTINGTON	62	34	71	25	48	-10	0							63	94	0	3	0	0
PARKERSBURG	59	34	69	24	46	-11	.2							76	89	0	3	0	0
WI GREEN BAY	58	34	72	22	46	-4	0							78	88	0	3	1	0
LACROSSE	64	37	75	21	50	-2	0							71	92	0	3	0	0
MADISON	62	34	74	20	48	-3	0							81	84	0	3	0	0
MILWAUKEE	60	41	75	29	51	-2	T							69	85	0	3	0	0
WAUSAU	58	34	73	23	46	-3	.1							87	76	0	2	0	0
WY CASPER	72	42	76	34	57	8	0							61	87	0	2	1	0
CHEYENNE	70	42	75	37	56	7	0							56	58	0	0	0	0
LANDER	71	43	74	37	57	9	0							122	61	0	0	0	0
SHERIDAN	76	41	82	32	59	10	.1							61	52	0	0	0	0
PR SAN JUAN	89	76	91	75	82	1	.4							66	67	0	0	1	0
														89	68	0	0	4	0

## National Agricultural Summary

October 10-16, 1988

**HIGHLIGHTS:** Dry weather allowed row crop harvest to progress ahead of normal. Cool temperatures slowed cotton boll opening. Soil moisture was mostly short to adequate in the Corn Belt, Plains States, and the West. Moisture was mostly adequate to short in the eastern third of the Nation. Days suitable for fieldwork averaged 6 to 7 in most areas.

Winter wheat seeding was 82 percent (%) complete, 3 percentage points behind 1987 but 9 points ahead of the 5-year average. Fifty-nine percent of the crop was emerged, 7 points behind 1987 but 7 points ahead of the average. Corn harvest was 63% complete, 8 points behind 1987 but well ahead of the 44% normal. Ninety percent of the soybean acreage reached the leaf dropping stage, 4 points and 2 points behind last year and the average, respectively. Harvest was 61% finished, 13 points behind 1987 but 13 points ahead of the average. Harvest advanced 20 or more percentage points from the previous week in 7 of the 19 major producing States. Sorghum maturity, at 91%, was normal. Harvest was 60% finished, 10 points ahead of the average. Eighty-six percent of the cotton acreage was in the boll opening stage, 7 points and 5 points ahead of last year and the average, respectively. Harvest was 33% finished, 10 points behind 1987 but normal. Rice harvest was 89% finished, slightly behind the 90% normal.

**SMALL GRAINS:** Winter wheat seeding was 82% complete, 3 points behind 1987 but 9 points ahead of the average. Seeding was nearing completion in Colorado, New Mexico, and South Dakota and was finished in Nebraska. Producers in Illinois, Indiana, and Ohio seeded roughly one-third of their crop last week. Fifty-nine percent of the crop was emerged, 7 points behind 1987 but 7 points ahead of the average. Russian wheat aphids were present in most of the wheat in the Columbia Basin of Oregon. No measurable damage has been caused so far. Producers were fighting armyworm infestations in the Texas Blacklands. Producers were pasturing early seeded fields in the Plains area.

**CORN:** Corn harvest progressed well. Harvest reached 63% completion, 8 points behind 1987 but 19 points ahead of the average. Iowa's harvest was 85% finished, nearly double the 44% average. Minnesota's harvest was 50 points ahead of the 31% normal. Harvest was 81% complete, 24 points ahead of the average in Illinois. Harvest was far ahead of normal in Nebraska, South Dakota, and Wisconsin and behind normal in the Southeast. Ohio's harvest was only 16% complete, 18 points behind the average. Harvest was nearing completion in Texas.

**SOYBEANS:** Ninety percent of the soybean acreage was in the leaf dropping stage, slightly behind last year's 94% and the 92% normal. Percent of acreage dropping leaves was more than 10 points behind normal in Alabama, Arkansas, Georgia, Mississippi, and South Carolina. Cool temperatures in Georgia slowed crop maturity. Frost damaged late planted soybeans in Kentucky and portions of North Carolina. Harvest was 61% finished, 13 points behind 1987 but 13 points ahead of normal. Harvest was far ahead of normal in the Plains States and the western Corn Belt. Illinois' harvest was 90% finished, 19 points ahead of the average. Iowa's harvest was 92% complete, 30 points ahead of normal.

**SORGHUM:** The crop was maturing at a near-normal pace in all of the major producing States except Oklahoma. The percentage of acreage mature, at 91%, was normal. Oklahoma's crop was 45% mature, only half of the 90% normal. Crop maturity in the other 10 major producing States was 90% or greater. Harvest was 60% complete, 2 points behind 1987 but ahead of the 50% normal. Harvest was over 30 points ahead of normal in Nebraska and South Dakota. Texas' harvest was 72% finished, 1 point ahead of the average. Late maturing fields need a killing frost to finish drying down. Harvest was 10 points ahead of the 30% normal in Kansas. Oklahoma's harvest was 15% finished, 10 points behind the average.

**COTTON:** Eighty-six percent of the acreage was in the boll opening stage, 7 and 5 points ahead of 1987 and the average, respectively. Cool overnight temperatures slowed boll opening in Georgia and portions of Texas. Harvest progress, at 33%, was normal but 10 points behind last year. Arizona's harvest was delayed by heavy rains late in the week. Texas' harvest was 25% finished, 5 points ahead of the average. Harvest was nearing completion in the Blacklands and just beginning in the Trans-Pecos. Arkansas' harvest was 48% finished, 13 points behind the 61% normal. Cotton gins were backlogged in the southeast. Mississippi's harvest was 65% complete, slightly ahead of the 63% normal. Cool temperatures hampered defoliation activities.

**OTHER FIELD CROPS:** Rice harvest was 89% finished, 7 points behind 1987 and 1 point behind the average. California's harvest was 75% complete, 7 points ahead of normal. Producers harvested one-fourth of their crop last week. Arkansas' harvest was 87% finished, slightly behind the 90% normal.

Peanut harvest was behind normal in the Southeast. Georgia's harvest was 66% complete, 13 points behind normal. Cool temperatures have delayed maturity. Frost damaged part of North Carolina's crop. Texas' harvest was 8 points ahead of the 31% normal.

Flue-cured tobacco harvest was 99% complete, slightly ahead of the 97% normal in North Carolina. Burley tobacco stripping was 20% complete, 2 points ahead of normal in Tennessee. Kentucky's crop continued to cure well.

**FRUITS AND NUTS:** Florida's citrus groves were in good condition but needed rain. Producers were irrigating to maintain surface moisture. Fresh fruit harvest increased as natural colorbreak became more widespread. Harvest activities included hamlin and navel oranges, grapefruit, and nova tangelos. In Texas, grapefruit harvest began and orange harvest became more active. Pecan harvest continued in the south and east and began in the central Hill Country. Grapefruit, lemon, cantaloupe, and honeydew harvests continued in Arizona. Rain benefited the maturing orange crop. Almond and pistachio harvests neared completion in California. Valencia orange and desert lemon picking continued. New crop navel oranges were turning color.

**VEGETABLES:** Florida's vegetable crop benefited from cooler temperatures. Irrigation was heavy in the southwest. Winter crop planting remained active. Fall crop harvests included cucumbers, eggplant, sweet corn, and squash. The vegetable crops were good in California. Harvest activities

(Continued to backcover)

## 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:** Dry most locations; under 0.10 in. isolated areas. Temperatures 6 to 9° below normal.

Days suitable for fieldwork 6.4. Soil moisture 23% short, 74% adequate, 3% surplus. Dry, cool conditions allowed favorable harvest progress; hastened late soybean maturity. Soybeans 82% turning yellow, 94% 1987, 93% avg.; 62% dropping leaves, 78% 1987, 74% avg.; 37% mature, 57% 1987, 52% avg.; 18% harvested, 30% 1987, 22% avg.; 2% poor, 40% fair, 58% good. Corn 90% harvested, 94% 1987, 92% avg. Sorghum 72% harvested, 73% 1987, 77% avg. Cotton 58% harvested, 82% 1987, 56% avg.; 20% poor, 60% fair, 20% good. Peanuts 80% dug, 84% 1987, 84% avg.; 64% combined, 75% 1987, 75% avg. Winter wheat 30% seeded, 33% 1987, 24% avg. Pastures, livestock mostly good. Primary activities: Harvesting row crops, sweetpotatoes, fall vegetables, hay, catfish; defoliating, picking cotton; planting small grains, annual forage crops; applying fertilizer, lime to cropland, pastures; building fish ponds; routine care of livestock, poultry.

**ARIZONA:** Sunny statewide 9th. Showers, thunderstorms spread west; widely scattered north, east portions 10th. Heaviest amounts 0.75 in., marble size hail south central. Activity redeveloped 11th north, east; isolated light showers 12th. Abundant sunshine southern deserts; partly cloudy elsewhere 13th. Pacific storm system brought sudden change 14th; thunderstorms developed central, south central, spread to most sections. Excessive rainfall 2.32 in. Phoenix, 5th greatest day precipitation. Phoenix area considerable flooding streets, low lying areas; significant hail damage to crops. Precipitation between 0.50 in. to slightly over 2.00 in. Temperatures 2° below to 5° above normal.

Torrential rains, weekend, virtually halted cotton harvest much of State. West escaped rains; harvest progressed normally. Defoliation continued statewide. Rains could decrease whitefly populations. Alfalfa hay production continued, rain damaged hay being cured central, east. Hay harvest light west; season neared completion. Limited stand renovations, new plantings continued central. Sheeping off selected fields central. Last cuttings southeast. Grapefruit, lemon harvest, packing continued west. Asparagus harvested west. Cantaloup, honeydew melon harvest underway. Planting, thinning winter vegetables active most areas. Lemon harvest progressed central areas; good size, quality. Oranges on schedule; recent rains enabling fruit to size, mature. Grapefruit maturing, sizing normally. Honeydew melons, cantaloup harvested. Fall vegetables maturing normally; no damage from recent rains. Apple harvest, packing continued east. Other crops harvested included fall lettuce, winter squash, green chilies.

**ARKANSAS:** Cool, dry; first frost northwest. Showers light, widely scattered end of week. Temperature extremes 32°; 87°. Rainfall none to 0.81 in.

Days suitable for fieldwork 7.0. Soil moisture 53% short, 46% adequate, 1% surplus. Major farming activities: Harvesting cotton, rice, soybeans; planting small grains; over seeding, fertilizing pastures; brush clipping; final hay cutting; marketing cattle. Excellent harvest weather. Cotton gins backlogged southeast part. Soybeans 29% mature, 61% 1987, 43% avg. Rice 99% ripe, 100%

1987, 98% avg. Corn 98% harvested, 100% 1987, 95% avg. Wheat 16% seeded, 33% 1987, 22% avg. Oats 20% seeded, 34% 1987, 25% avg. Peanut harvest continued. Sweetpotatoes 75% harvested. Pecan yield, nut size looked good. Scattered frost slowed pasture growth. Bermuda grass hay excellent quality. Hay, roughage supplies 11% very short, 69% short, 19% adequate, 1% surplus. Pasture range 6% very poor, 21% poor, 50% fair, 23% good. Stockwater supplies 30% short, 66% adequate, 4% surplus. Livestock good.

**CALIFORNIA:** High pressure over State allowed temperatures warm, above normal. Weak system started cooling trend, stronger frontal brought rain many locations.

Mostly excellent weather permitted rapid harvest, land preparation. Light rain northern half slowed activities. Rice harvest rapid progress. Stubble burning active. Cotton defoliation full swing central picking approached full swing. Seeding small grains slow increase. Corn, dry bean harvests full swing. Sugarbeet, alfalfa harvests normal. Some alfalfa seeded. Granny smith apples picked. Soft dates harvested Riverside County. Last raisins picked up; Fresno County less than 10% remained in fields. Table grape harvest wound down San Joaquin Valley. Wine grape, kiwifruit, olive, pomegranate, pineapple quince harvests continued. Persimmon harvest began. Almond, pistachio harvests neared completion; later variety walnuts harvested. Nut crop growers busy post harvest irrigation, pruning activities. Citrus groves irrigated; some fungicides applied to control brown rot, septoria. Valencia orange, desert lemon picking continued. New crop navel oranges showing color; Kern County picking to begin soon. Vegetables good, favorable weather. Major crops growing broccoli, cauliflower, celery, lettuce; harvested lettuce (Huron area just started, excellent quality), mixed melons, sweetpotatoes, fresh, processing tomatoes. Livestock remained fair to good. Range, pasture fair to poor. Light rainfall helped declining rangeland. Westside feedlots held below capacity. Livestock movement heavy. Cattle prices good sales from pasture. Sheep grazed alfalfa fields. Water supplies low.

**COLORADO:** Dry, windy statewide. No precipitation except few light showers extreme eastern areas on 15th. Temperatures at or slightly below normal. San Luis Valley 3 to 6° above normal northeast; 1 to 3° above normal elsewhere.

Days suitable for fieldwork 6.4. Soil moisture 6% very short, 51% short, 43% adequate. Corn 89% mature, 17% harvested. Dry beans cut 98%, 94% threshed. Dry onion harvest 76%. Summer potatoes 93% harvested; fall potatoes 98% harvested. Winter wheat 97% planted, 84% emerged. Sorghum 95% turning color, 68% mature, 30% harvested. Livestock mostly good. Ranges, pastures fair to good.

**FLORIDA:** Dry midweek cool front reinforced seasonally mild, dry, breezy air mass over State. Quite cool overnight lows north with 40s, few 30s, only light, scattered frost. Temperatures 10° below normal north, 5° below central Peninsula, 2° below south. Few spotty showers occurred middle, lower Atlantic Coast.

Soil moisture generally adequate, except short, east central Peninsula. Scattered light frost Panhandle, northern Peninsula, morning of 14th; no

damage. Cool temperatures slowed cotton, soybean development with harvest running later than normal. Peanut harvest, haymaking active. Planting fall sown grains continued. Sugarcane good progress; planting active. Cooler temperatures slowed permanent pasture growth north, east central Peninsula grazing conditions also declined because of dry soils; both areas mostly fair to good. Elsewhere in Peninsula continued good to excellent. Additional rainfall would benefit lower southwest Peninsula pastures. Cattle, calves fair to mostly good northern areas; elsewhere, good to excellent. Citrus trees, groves generally good, rain needed most producing areas. Irrigation used to maintain surface moisture. Natural color break occurred hamlin oranges, grapefruit, some tangelos. Harvest for fresh shipments increased. Varieties shipped included hamlin, navel oranges, grapefruit, nova tangelos, k-early citrus fruit. Cultivation, spraying activities continued. Cooler temperatures beneficial vegetable producing areas. Minimal rainfall. Irrigation heavy southwest. Planting active, winter crops. Harvest fall crops include: Cucumbers, eggplant, peppers, radishes, sweet corn, squash.

**GEORGIA:** Dry, except isolated showers under 0.10 in. Temperatures 7 to 10° below normal. Lows mid 20s mountains, low 30s elsewhere north, low and mid 30s central; upper 30s extreme south. Highs low and mid 70s north, upper 70s central; around 80s extreme south.

Days suitable for fieldwork 6.3. Soil moisture 2% very short, 28% short, 70% adequate. Corn harvest neared completion. Cotton harvest very active, cool temperatures slowing boll opening. Peanuts 81% dug, 91% 1987, 88% avg.; 66% threshed, 81% 1987, 79% avg. Harvest full swing, cool temperatures delaying maturity late plantings. Soybean maturity slowed by cool temperatures. Rye, other small grains seeding near average. Pecans 3% harvested, 4% 1987, 5% avg. Pastures, hay fair to good. Cattle, hogs good.

**HAWAII:** Variable weather. Mostly sunny mornings, cloudy afternoons. Shifting winds blew several shower areas onshore, resulting in moderate to heavy showers second half week. Irrigation moderate to heavy major vegetable growing areas. Temperatures low 70s to low 90s. Rainfall none to 3.10 in. Winds variable 5 to 20 mph.

Days suitable for fieldwork 7.0. Chinese cabbage production steady, moderate. Head cabbage output steady, good quality. Cucumber production heavy some areas. Snap bean production mostly light. Tomato picking moderate, increased planting for winter season. Banana harvesting up seasonally.

**IDAHO:** Temperatures 4 to 16° above normal. Very little precipitation north, east; below normal over entire State.

Days suitable for fieldwork 7.0. Potatoes 93% harvested, 93% 1987, 86% avg. Sugarbeets 35% harvested, 52% 1987, 37% avg. Winter wheat fair to good; 87% seeded, 75% 1987, 83% avg.; 51% emergence. Virtually all onions, dry beans harvested. Apples 61% harvested, 88% 1987, 75% avg. Livestock good despite dry pasture, range conditions.

**ILLINOIS:** Temperature lows 2 to 8° below normal north, south; normal central. Highs 2 to 6° below normal south, normal central, north. Precipitation 0.10 to 0.50 in. north, south; 0.10 in. or less central.

Days suitable for fieldwork 7.0. Soil moisture 82% short, 18% adequate. Pasture 9% very poor, 27% poor, 52% fair, 11% good, 1% excellent.

**INDIANA:** Temperatures 1 to 5° below normal. Lows upper 20s to 40s, highs upper 50s to low 70s. Dry, precipitation less than 0.10 to 1.00 in.

Days suitable for fieldwork 6.6. Topsoil moisture 61% short, 39% adequate. Subsoil moisture 80% short, 20% adequate. Pastures 3% very poor, 33% poor, 56% fair, 8% good. Soybeans 98% mature, 100% 1987, 96% avg. Wheatland 86% plowed, 78% 1987, 71% avg. Rye 83% seeded, 83% 1987, 70% avg. Good week for harvesting corn, soybeans, seeding winter wheat, tilling land.

**IOWA:** Temperature 4° above normal southwest to 2° below normal northeast. Extremes 20°; 80°. Rainfall 0.10 in.; extremes trace to 0.62 in.

Days suitable for fieldwork 7.0. Topsoil moisture 67% short, 33% adequate; subsoil moisture 97% short, 3% adequate. Corn lodging 7% none, 67% light, 24% moderate, 2% heavy; ear droppage 4% none, 68% light, 27% moderate, 1% heavy. Winter wheat 96% seeded, 85% 1987, 75% avg. Fall tillage 30%, 22% 1987, 13% avg. Fall fertilizer application 20%, 16% 1987, 11% avg. Livestock good. Movement to stubble fields heavy. Creeks, streams dry, farmers hauling water to cattle.

**KANSAS:** Temperatures 60° northwest to 63° southwest, south central; generally 1 to 8° above normal except southeast 1° below normal. Precipitation generally very light; less than 0.05 in. north, west; 0.07 to 0.15 in. elsewhere.

Days suitable for fieldwork 6.0. Topsoil moisture 46% short, 54% adequate. Subsoil moisture 65% short, 35% adequate. Harvest corn, sorghum, soybeans rapid progress aided by excellent weather. Corn harvest neared completion central, eastern counties. Corn reached maturity before first freeze. Wheat seeding excellent progress, good emergence most areas. Range, pastures fair; forage, hay supplies 44% short, 56% adequate.

**KENTUCKY:** Cool, dry; spotty rainfall weekend. Temperatures 5 to 8° below normal. Lows upper 30s, highs mid 60s. Rainfall 0.25 to 0.50 in.

Days suitable for fieldwork 5.9. Soil moisture 19% very short, 53% short, 28% adequate. Corn 56% harvested, progressed good. Late crop soybeans damaged by frost; 24% harvested, 85% shedding leaves or beyond. Burley 6% stripped; little houseburn, condition generally good. Winter wheat 33% seeding, 47% 1987, 38% avg. Pastures variable. Livestock generally good to excellent. Winter hay supplies barely adequate to short. Significant rain needed for stockwater south, central.

**LOUISIANA:** Temperatures 6 to 7° below normal. Temperature extremes 38°; 83°. Rainfall none to 0.80 in.

Days suitable for fieldwork 6.0. Soil moisture 1% very short, 21% short, 76% adequate, 2% surplus. Soybeans 4% poor, 30% fair, 56% good, 10% excellent; 85% turning color. Sweetpotatoes 77% harvested. Sugarcane good; 93% planted, 8% harvested. Winter wheat 7% planted; 2% emerged. Hay final cutting 91%. Hay, roughage supplies 2% very short, 26% short, 67% adequate, 5% surplus. Livestock, pecans good; pecan 1% harvested. Pastures, vegetables fair to good. Strawberry growers laying plastic, spraying plants in beds. Main activities: Harvesting cotton, hay, rice, sorghum, soybeans, sweetpotatoes, sugarcane; planting sugarcane, wheat, winter pastures.

**MARYLAND & DELAWARE:** MARYLAND: Precipitation 0.04 in. Temperature 48°, normal 59°. Temperature extremes 22°; 70°.

Days suitable for fieldwork 6.9. Topsoil moisture 5% very short, 55% short, 40% adequate. Subsoil moisture 5% very short, 35% short, 60% adequate. Hay supplies 15% short, 85% adequate. Corn 97% mature, 97% avg.; silage 98% harvested, 98% avg.; grain 70% harvested, 70% avg. Soybeans

95% turning, 95% avg.; 80% shedding leaves, 75% avg.; 15% harvested, 25% avg. Alfalfa 4th cutting 90%, 90% avg. Apples 85% harvested, 85% avg. Winter wheat 40% seeded, 45% avg. Barley 70% seeded, 70% avg. Rye 60% planted, 65% avg. Oats 25% seeded, 50% avg.

**DELAWARE:** Precipitation 0.03 in. Temperature 49°, normal 59°. Temperature extremes 26°; 69°.

Days suitable for fieldwork 7.0. Topsoil moisture 50% short, 50% adequate. Subsoil moisture 30% short, 70% adequate. Hay supplies 100% adequate. Corn 100% mature, 100% avg.; silage 100% harvested, 100% avg.; grain 75% harvested, 80% avg. Soybeans 95% turning, 95% avg.; 65% shedding leaves, 80% avg.; 10% harvested, 10% avg. Apples 80% harvested, 85% avg. Winter wheat 25% seeded, 15% avg. Barley 55% seeded, 50% avg. Rye 35% seeded, 30% avg.

**MICHIGAN:** Temperatures 2 to 5° below normal. Temperature extremes 16°; 73°. Precipitation none to 0.83 in.

Days suitable for fieldwork 5.0. Soil moisture 5% short, 80% adequate, 15% surplus. Corn 90% mature, 100% 1987, 96% avg.; 15% harvested, 35% 1987, 15% avg. Soybeans 100% shedding, 100% 1987, 100% avg.; 30% harvested, 45% 1987, 25% avg. Winter wheat 80% planted, 75% 1987, 65% avg.; 55% emerged, 40% 1987, none avg. Dry beans 45% harvested, 65% 1987, 70% avg. Pastures supplied 30% livestock feed. Major activities: Harvesting corn silage, hay, dry beans, soybeans, corn for grain, sugarbeets, fruit, vegetables; seeding winter wheat.

**MINNESOTA:** Temperatures near normal to 4° above normal. Temperature extremes 17°; 83°. Precipitation 0.01 to 0.16 in. Greatest weekly total 0.18 in.

Days suitable for fieldwork 6.5. Topsoil moisture 16% very short, 56% short, 27% adequate, 1% surplus. Corn 81% harvested, 74% 1987, 31% avg.; 18% moisture content, 17% 1987, 24% avg.; 45% land plowed, 32% 1987, 13% avg. Soybeans 95% combined, 95% 1987, 55% avg.; 11% moisture content, 11% 1987, 14% avg.; 58% land plowed, 53% 1987, 26% avg. Sunflowers 91% harvested, 57% 1987, 30% avg. Sugarbeets 89% harvested, 88% 1987, 66% avg. Potatoes 96% harvested, 98% 1987, 90% avg.

**MISSISSIPPI:** Cool, dry. Maximum weekly rainfall 0.24 in., average rainfall 0.55 in. Below normal temperature extremes 30°; 87°.

Days suitable for fieldwork 5.8, 6.8 1987, 4.1 avg. Soil moisture 10% short, 90% adequate. Dry weather allowed harvest to progress smoothly. Cool weather hampered cotton defoliation. First frosts northern counties. Corn 75% harvested, 95% 1987, 90% avg. Sorghum 91% harvested, 97% 1987, 93% avg. Cotton good; 65% harvested, 87% 1987, 63% avg. Soybeans fair to good; 16% harvested, 45% 1987, 29% avg. Rice 91% harvested, 100% 1987, 94% avg. Sweetpotatoes 69% harvested, 72% avg. Peanuts 89% harvested, 86% avg. Hay 94% harvested, 96% 1987, 95% avg. Wheat 29% planted, 14% 1987, 19% avg. Pecans good; 9% harvested, 8% 1987. Pastures good. Livestock good. Hay, roughage 25% short, 75% adequate. Activities: Harvesting cotton, soybeans, rice, corn; planting wheat.

**MISSOURI:** Temperatures 2 to 9° below normal. Rainfall mostly less than 0.10 in.

Days suitable for fieldwork 6.4. Topsoil moisture 59% short, 39% adequate, 2% short. Corn harvest virtually complete southeast, well advanced other areas. Soybean 68% harvested northwest, most advanced; northern two-thirds mostly 50%, least advanced south. Dry weather speeding harvest, but pastures, winter wheat, stock ponds need rain.

Pastures 9% very poor, 25% poor, 43% fair, 18% good, 5% excellent.

**MONTANA:** Temperatures 7° above normal. Mostly dry through 13th, then most areas received light rain. Extreme northwest received about 1.00 in.

Days suitable for fieldwork 6.8. Topsoil moisture 75% short, 25% adequate. Subsoil moisture 90% short, 10% adequate. Potatoes 87% harvested, 75% 1987, 66% avg. Sugarbeets 70% harvested, 31% 1987, 37% avg. Winter wheat 88% seeded, 95% 1987, 78% avg.; 52% emerged, 79% 1987, 51% avg.; 10% poor, 40% fair, 45% good, 5% excellent. Cattle, calves moved from summer pastures 85%, 55% 1987, 65% avg. Sheep, lambs moved 90%, 62% 1987, 72% avg.

**NEBRASKA:** Dry, warm. Temperatures 3° above normal. Little or no precipitation occurred. Extremes 26°; 85°.

Days suitable for fieldwork 6.9. Topsoil moisture 30% short, 70% adequate. Subsoil moisture 73% short, 27% adequate. Corn 65% harvested, 58% 1987, 38% avg. Soybeans 80% harvested, 84% 1987, 52% avg. Sorghum 75% harvested, 72% 1987, 42% avg. Sugarbeet, sunflower harvest still active. Winter wheat 95% emerged, 98% 1987, 93% avg. Pasture, range, feed supplies 1% very short, 35% short, 64% adequate.

**NEVADA:** Weak Pacific systems moved in early, produced locally heavy precipitation central, northeast mountains until midweek. Elsewhere, rainfall near none south, trace remainder. Temperatures 5° above normal. Below freezing minimums across north, offset by warm days. Temperature extremes 24°; 96°.

Potato harvest windup stage. Hay harvest essentially over. Livestock good despite drought conditions. Early hay feeding, hauling stockwater continued.

**NEW ENGLAND:** Precipitation 0.50 to 0.75 in. north; 0.25 in. and less south. Temperatures near 40° near Canadian border to near 50° southern coast. Temperatures slightly below normal.

Apple harvest winding down. Cranberries 70% harvested; good. Potato harvest winding down. Major farm activities: Chopping corn, harvesting potatoes, cranberries, apples, other fall vegetables.

**NEW JERSEY:** Temperatures below normal. Extremes 23°; 78°. Rainfall none north, central, south. Heaviest 24-hour total trace amounts on 13th. Estimated soil moisture percent field capacity 78% north, 66% central, 71% south. Four inch soil temperatures 46° north, 49° central, south.

Below normal temperatures continued to slow late season crop growth. Most areas received heavy frost. Topsoil moisture short some areas. Harvest hardy fall vegetables continued. Irish potato digging clean-up stage. Sweetpotato harvest continued. Apples, cranberry harvest good progress. Harvest of soybeans, corn for grain very active. Barley, rye, wheat seeding continued. Hay, roughage supplies 25% short, 75% adequate.

**NEW MEXICO:** Rainfall southern portions of State; remainder dry. Temperatures 26° Ruidoso to 89° Carlsbad.

Days suitable for fieldwork 6.5. Soil moisture 22% short, 78% adequate. Cotton 90% bolls open, 14% harvested; 29% fair, 71% good. Wheat 10% poor, 30% fair, 60% good; 96% planted, 89% emerged. Cattle 33% fair, 50% good, 17% excellent. Sheep 25% fair, 50% good, 25% excellent. Ranges 29% fair, 57% good, 14% excellent.

**NEW YORK:** Temperatures near to 8° below normal. Lows mid 20s to mid 30s. Highs upper 50s to middle 60s. Most areas below freezing temperatures at least once during week. Precipitation near normal from Finger Lakes to central southern tier, eastern Lake Ontario to St. Lawrence Valley. Above normal extreme western areas, near Tug Hill Plateau. Rainfall below normal across rest of area.

Days suitable for fieldwork 5.4. Soil moisture mostly adequate to surplus. Pasture fair to mostly good. Hay fair to good, corn fair to mostly good. Corn for silage 74% harvested, 69% 1987, 60% avg.; grain 14% harvested, 14% 1987, 12% avg. Third cutting alfalfa 84%, 75% 1987, 82% avg. Winter grain development slowed by much below normal temperatures. Growing season ended most areas. Apple harvest major growing areas neared completion. Grape harvest for wine varieties Chautauqua-Erie area finished; excellent quality. Vegetable harvest complete or nearly complete. Yields, quality most crops reduced by heat, drought stress.

**NORTH CAROLINA:** Temperatures 8 to 11° below normal, statewide. Temperature extremes 21°; 77°. Precipitation none to 0.01 in.

Days suitable for fieldwork 6.0. Soil moisture 2% very short, 16% short, 82% adequate. Pasture 4% poor, 31% fair, 62% good, 3% excellent. Flue-cured tobacco 99% harvested, 98% 1987, 97% avg. Peanuts 8% poor, 19% fair, 69% good, 4% excellent; 53% dug, 49% 1987, 62% avg.; 40% threshed, 36% 1987, 47% avg. Sweetpotatoes 24% fair, 70% good, 6% excellent; 72% harvested, 63% 1987, 56% avg. Apples 90% harvested, 80% 1987, 78% avg.; 6% poor, 44% fair, 50% good. Sorghum for grain 66% harvested, 58% 1987, 55% avg.; 8% poor, 43% fair, 47% good, 2% excellent. Hay 3d cutting 71%. Major farm activities: Planting small grains; harvesting corn for grain, tobacco; preparing land for fall seeding, marketing tobacco. Other activities: Making hay; harvesting apples, peanuts, soybeans, cotton, sweetpotatoes, vegetable harvesting; tagging, shearing Christmas trees; tending livestock, general farm maintenance. Damaging frost in major peanut counties. Harvest may have to be accelerated to avoid shedding loss. Frost also affected soybeans, cotton, tobacco.

**NORTH DAKOTA:** Warm, dry statewide. Temperatures 3° to 8° above normal.

Days suitable for fieldwork 6.9. Topsoil moisture 55% very short, 40% short, 5% adequate. Subsoil moisture 75% very short, 25% short. Harvest of early season row crops neared completion while corn for grain, sunflower harvest good progress as dry, warm weather helped crop dry down. Dry edible beans 99% combined, 98% 1987, 84% avg.; soybeans 98%, 96% 1987, 72% avg.; flax 96%, 97% 1987, 85% avg.; sunflower 81%, 55% 1987, 30% avg.; corn for grain 79% harvested, 52% 1987, 41% avg.; potatoes 100% dug, 100% 1987, 93% avg.; sugarbeets 91% lifted, 95% 1987, 75% avg. Pastures 43% very poor, 50% poor, 6% fair, 1% good, furnishing 52% roughage requirements. Main activities: Weaning, marketing calves, moving hay to winter quarters.

**OHIO:** Lows mid 30s. Highs mid 50s to lower 60s. Readings 2 to 9° subnormal. Precipitation 0.20 to 0.50 in., 0.15 to 0.50 in. subnormal.

Days suitable for fieldwork 6.4. Soil moisture 44% short, 55% adequate, 1% surplus. Harvest gaining momentum. Frost killed more crops, weeds. Grain drying slowly. No aflatoxin in corn. Soybeans fair. Grasslands fair to good. Winter wheat seeding, emergence on schedule; moisture needed for faster germination.

**OKLAHOMA:** Temperatures 1° below normal southeast to 3° above normal Panhandle. No precipitation

northern, western areas. Central 0.12 in., southeast 0.11 in., east central 0.02 in.

Days suitable for fieldwork 5.9. Topsoil moisture 25% short, 75% adequate. Subsoil moisture 25% short, 75% adequate. Wheat 15% fair, 85% good; 80% planted, 90% 1987, 65% avg.; 50% emerged, 65% 1987, 35% avg. Cotton 20% fair, 80% good; 85% open bolls, 65% 1987, 70% avg.; 10% harvested, 3% 1987, 5% avg. Sorghum 5% poor, 10% fair, 85% good; 45% mature, 90% 1987, 90% avg.; 15% harvested, 25% 1987, 25% avg. Peanuts 20% harvested, 30% 1987, 25% avg. Diseases becoming prominent. Soybeans 50% mature, 75% 1987, 70% avg.; maturity behind average; 5% harvested, 20% 1987, 20% avg. Corn 97% harvested, 97% 1987, 95% avg. Pastures good to fair. Cattle good; marketings average, prices stable.

**OREGON:** Temperatures above normal except south coast 1° below normal. Remaining coastal areas 2° above normal; western interior 7°, east 10° above normal. Precipitation along coast 1.20 in. north to 0.20 in. south. Coast up to 2.50 in.; north Cascades 0.25 to 0.50 in. Western interior, high plateau 0.10 in. or less; east trace amounts of precipitation.

Soil moisture 83% short, 17% adequate. Barley 27% planted, 42% 1987. Russian wheat aphid found in most emerged winter wheat Columbia Basin, no measurable damage, some spraying. Fall seeding slowed by dry soils, some growers dusting in. Wheat, oats, barley, grass seed sowing continued Willamette Valley. Seedbeds being prepared for winter grain, soil very dry southwest. Sugarbeet 50% harvested Malheur County; still coming on west. Grain corn harvest underway Hermiston-Boardman, growers also finishing with last hay crop. Last alfalfa hay harvest wrapped up southeast. Anjou pear harvest nearly completed Hood River. Pear harvest completion expected this week Medford. Fall sprays applied both areas. Apple harvest continued Hood River, Milton-Freewater, Wasco County. Filbert falling continued, main harvest activity about 2 weeks away. Fall training, cultural practices continued on caneberries Willamette Valley. Onion harvest done all areas, crop in storage. Potato harvest nearly completed Klamath Basin, central area. Hermiston-Boardman potatoes 67% harvested; digging completed Malheur County. Sweet corn, cauliflower harvest finishing Willamette Valley. Harvesting lima beans, applying herbicides to fall seeded onions Milton-Freewater. Livestock mostly good. Cattle being turned on to turnip pasture Hermiston-Boardman. Most herds off of fall pasture southeast, feeding starting early. Range, pasture fair to good west; poor to fair east.

**PENNSYLVANIA:** Record low temperatures. Snow northern mountains. Temperature 46°, 9° below normal. Temperature extremes 22°; 75°. Precipitation 0.32 in., 0.36 in. below normal.

Days suitable for fieldwork 5.0. Soil moisture 44% short, 56% adequate. Corn 59% mature, 91% 1987, 84% avg.; 17% harvested, 25% 1987, 19% avg.; ensilage 75% harvested, 83% 1987, 84% avg.; 18% very poor, 30% poor, 31% fair, 20% good, 1% excellent. Soybean 16% harvested, 26% 1987, 22% avg.; 6% very poor, 20% poor, 41% fair, 29% good, 4% excellent. Potatoes 84% harvested, 79% 1987, 88% avg. Fall plowing 80%, 84% 1987, 87% avg. Winter wheat 72% planted, 65% 1987, 75% avg. Barley 89% planted, 88% 1987, 91% avg. Third cutting alfalfa 95%, 86% 1987; 4th cutting 72%, 57% 1987. Quality of hay fair to good. Amount of feed being obtained from pastures average to below average. Apples 69% harvested, 72% 1987. Grapes 89% harvested, 81% 1987. Activities: Harvesting corn grain, corn silage, soybeans, hay, haylage, fruit, potatoes, other vegetables; planting wheat,

barley; fall plowing; spreading manure, fertilizer; caring for livestock; maintaining machinery.

**PUERTO RICO:** NO DATA AVAILABLE.

**SOUTH CAROLINA:** Temperatures low 50s mountains to mid 60s coastal Plains. No precipitation.

Days suitable for fieldwork 6.1. Soil moisture 43% short, 57% adequate. Cotton 91% open bolls, 97% 1987, 96% avg.; 28% harvested, 66% 1987, 52% avg.; 1% very poor, 4% poor, 95% fair. Soybeans 75% leaves turning, 79% 1987, 79% avg.; 34% leaves shedding, 39% 1987, 48% avg.; 18% matured, 25% 1987, 24% avg.; 2% harvested, 2% 1987, 4% avg.; 4% poor, 34% fair, 57% good, 5% excellent. Tobacco 77% stalks destroyed, 91% 1987, 85% avg. Corn poor to fair; 89% harvested, 96% 1987, 96% avg. Peanuts fair; 52% harvested, 56% 1987, 59% avg. Sweetpotatoes fair to good; 63% harvested, 59% 1987, 49% avg. Apples fair to good; 79% harvested, 81% 1987, 87% avg. Sorghum fair to good; 53% harvested, 68% 1987, 62% avg. Pastures fair to good. Livestock fair to good.

**SOUTH DAKOTA:** Temperatures 1° below to 13° above normal. Extremes 21°; 86°. Virtually no rainfall throughout State. Rainfall for season above east, below west.

Days suitable for fieldwork 6.2. Topsoil moisture 35% critically short, 28% short, 37% adequate. Feed supplies 12% very short, 36% short, 49% adequate, 3% surplus. Livestock feed from pastures 57%. Harvest ahead of normal corn, soybeans, sorghum, sunflowers.

**TENNESSEE:** High pressure dominated statewide. Cold front moved across State 11th no rain. Dry conditions until 16th when scattered showers, thundershowers brought light rainfall. All amounts less than 0.50 in. Temperatures below normal, 5° below normal west to 15° below normal northeast.

Days suitable for fieldwork 6.1. Soil moisture 3% very short, 38% short, 59% adequate. Pasture feed normal. Corn 80% harvested, 89% 1987, 67% avg. Burley tobacco 20% stripped, 22% 1987, 18% avg. Wheat 30% seeded, 36% 1987, 32% avg. Primary activities: Sowing small grains; harvesting cotton, soybeans; stripping tobacco. Cattle good.

**TEXAS:** Few showers, thunderstorms Lower Valley, far west, sunny days, fair nights. Temperatures beginning week rather mild, cooler air reinforced by dry cold front early week. Return moist, southern winds increased temperatures, humidity. Temperatures generally below normal because cooler air. Few areas west, south central area above normal readings. Precipitation below normal.

**Crops:** Corn harvest again full swing High Plains began winding down some areas. Yields continued good to excellent. Grain sorghum harvest good Plains, Cross-Timbers with open weather. Yields remained good. Late maturing fields need frost to fully dry down. Sorghum 100% turning color, 100% 1987, 100% avg. Cotton development Plains good, warm temperatures allowed bolls to open. Cool nights slowed progress. Additional harvesting defoliating activities occurred. Harvest began winding down Blacklands, varied yields later fields. Harvest activities began Trans-Pecos, more defoliating. Small grain planting good Plains, Cross-Timbers, central with open weather. Stands fair to good, rainfall greatly benefited some dryland fields. Warmer temperatures increased army worm activity, Blackland producers spraying. Conditions good, exception few dry spots, increased growth. Many early planted fields providing grazing Plains. Peanut harvest increased. Yields south, central continued low. As harvest increased Cross-Timbers, Low Plains, yields, grades fair to good. Warmer

days increased drying. Soybean harvest increased Plains, very good yields irrigated fields. Dryland yields good. Harvest continued Blacklands, northeast. Dry conditions hurt yields. Harvest 2nd crop rice underway Upper Coast. Sugarbeet harvest continued High Plains. Other Field Crops: Peanuts 39% harvested, 24% 1987, 31% avg. Pecans 6% harvested, 7% 1987, 7% avg. Soybeans 53% harvested, 34% 1987, 31% avg. Sugarbeets 8% harvested, 19% 1987, 21% avg. Sunflowers 44% harvested, 41% 1987, 45% avg. Oats 45% planted, 66% 1987, 59% avg.

**Commercial Vegetables:** Rio Grande Valley moist conditions early week slowed activities; by midweek planting, harvesting resumed. Growing conditions good. Harvest grapefruit began, orange harvest increased. San Antonio-Winter Garden irrigation operations active. Growing conditions good. Land preparations, planting continued. East sweetpotato harvest continued. Cool temperatures night, dry weather slowed growth planted vegetables. High Plains harvest carrots, peppers continued. Pumpkins minor hail damage 2 weeks ago. Trans-Pecos pepper, cucumber harvest continued. Pecan harvest continued south, east, began central, Hill Country. Shucks began splitting northern areas, west. Early yields good east, only fair other areas.

**Range and Pasture:** Ranges, pastures good Plains. Small grains provide grazing for arriving stockers. Portions Blacklands, central very dry, lack of forage. Supplemental feeding active to hold livestock conditions. Marketings increased, forage supplies decreased. Livestock remained good, even drier areas.

**UTAH:** Precipitation light throughout State. Temperatures 2 to 6° above normal.

Days suitable for fieldwork 6.6. Soil moisture 82% short, 18% adequate. Winter wheat 95% seeded, 96% 1987, 90% avg.; 49% emerged. Corn 96% mature, 89% 1987, 90% avg.; grain 35% harvested; silage 99% harvested, 87% 1987, 91% avg. Alfalfa 4th cutting 87% harvested, 67% 1987. Potatoes 97% harvested. Apples 84% harvested, 81% 1987, 69% avg. Livestock movement from summer range 75% cattle, 73% 1987, 66% avg.; 86% sheep, 75% 1987, 69% avg. Pasture, range 21% very poor, 38% poor, 29% fair, 12% good. Irrigation water supplies 12% very short, 64% short, 24% adequate. Stockwater supplies 24% very short, 32% short, 44% adequate. Hay, roughage supplies 12% very short, 24% short, 60% adequate, 4% surplus. Livestock fair to good.

**VIRGINIA:** Cold, record lows, frost statewide except extreme southeast. Temperature 21° to mid 70s. Temperatures moderated end period. Precipitation light, 0.01 in.

Days suitable for fieldwork 6.4. Topsoil moisture 15% very short, 41% short, 44% adequate. Heavy frost damaged some immature soybeans, small amount of flue-cured tobacco. Grain corn 64% harvested, 78% 1987, 68% avg.; silage 92% harvested, 95% 1987, 96% avg. Soybeans 6% harvested, 7% 1987, 9% avg.; 2% poor, 47% fair, 40% good, 11% excellent. Peanuts mostly good; harvest slowed by frost; 56% dug, 67% 1987, 79% avg.; 46% combined, 41% 1987, 66% avg. Tobacco harvest ended with frost. Some hay, alfalfa cut. Apples harvested, normal pace. Wheat 20% seeded, 28% 1987, 26% avg. Barley 60% seeded, 69% 1987, 67% avg. Cattle sales active. Livestock 11% fair, 81% good, 8% excellent. Pastures 18% poor, 46% fair, 32% good, 4% excellent.

**WASHINGTON:** High pressure ridge moved east middle of week which allowed series of Pacific frontal systems to pass across State latter half of week. Most precipitation west as weather systems not strong enough to pass Cascade Mountains.

Days suitable for fieldwork 6.4. Soil moisture 70% short, 30% adequate. Winter wheat 85% seeded, 76% last week, 80% 1987, 89% avg.; 65% emergence, 57% last week, 60% 1987, 66% avg. Emerging fall corps experiencing moisture stress some areas. Third cutting alfalfa completed. Potato 75% harvested. Harvest of jonagold apples underway Skagit County as red delicious harvest continued Yakima County. Grape harvest neared completion Grant, Benton Counties. Harvest pumpkins, broccoli, cauliflower, winter squash continued.

**WEST VIRGINIA:** Temperature 46°, 7 to 11° below normal. Extremes 14° Greenbank; 81° Moorefield. Precipitation 0.07 in.

Days suitable for fieldwork 5.5. Soil moisture 16% very short, 54% short, 30% adequate. Corn fair to poor; 57% harvested. Apples fair to good. Feed supplies 13% very short, 36% short, 51% adequate. Feed from pasture 82%. Farm activities: General farm maintenance, haying, livestock care, planting small grains, filling silos.

**WISCONSIN:** Dry, temperatures 49°, 1° below normal. Extremes 15°; 79°. Precipitation 0.20 to 0.30 in.

Days suitable for fieldwork 6.7. Soil moisture 71% short, 29% adequate. Corn for grain 54% harvested, 54% 1987, 21% avg.; kernel moistures around 20%; silo filling 94%, 95% 1987, 70% avg.; stalks being stacked, baled. Hay being cut after frost. Soybeans 50% harvested, 68% 1987, 26% avg.; yields below average to about normal. Winter wheat, rye excellent; late planted wheat needed moisture to germinate. Fall plowing 31%, 30% 1987, 20% avg. Pastures normal.

**WYOMING:** Temperatures above normal. Rainfall almost nonexistent.

Days suitable for fieldwork 7.0. Topsoil moisture 85% short, 15% adequate. Subsoil moisture 86% short, 14% adequate. Corn 20% harvested, 20% 1987, 30% avg. Dry beans 95% combined, 95% 1987, 95% avg. Potatoes 90% harvested, 90% 1987, 85% avg. Sugarbeets 60% dug, 80% 1987, 70% avg.; sugar content 17%. Winter wheat most planted, 80% emerged; mostly fair to good. Livestock below average to average.

### Crop Progress 1/

FOR WEEK ENDING OCTOBER 16, 1988

SOYBEANS % DROPPING LEAVES				SOYBEANS % HARVESTED				CORN % HARVESTED			
	1988	1987	AVG.		1988	1987	AVG.		1988	1987	AVG.
ALA	62	78	74	ALA	18	30	22	COLO	17	27	30
ARK	51	75	64	ARK	12	44	22	GA	93	96	96
GA	72	84	84	GA	7	13	13	ILL	81	88	57
ILL	100	100	100	ILL	90	95	71	IND	42	77	42
IND	100	100	100	IND	63	88	60	IOWA	85	75	44
IOWA	100	100	100	IOWA	92	95	62	KANS	80	80	60
KANS	97	96	90	KANS	55	60	30	KY	56	86	62
KY	85	97	83	KY	24	41	23	MICH	15	35	15
LA	69	82	76	LA	30	53	35	MINN	81	74	31
MICH	100	100	100	MICH	30	45	25	MO	87	87	65
MINN	100	100	100	MINN	95	95	55	NEBR	65	58	38
MISS	71	87	87	MISS	16	45	29	N C	74	79	82
MO	95	100	92	MO	50	69	38	OHIO	16	66	34
NEBR	100	100	100	NEBR	80	84	52	PA	17	25	19
N C	37	36	38	N C	5	7	5	S DAK	63	64	30
OHIO	100	100	100	OHIO	54	84	58	TEX	98	94	93
S C	34	39	48	S C	2	2	4	WIS	54	54	21
S DAK	100	100	100	S DAK	88	95	55				
TENN	86	93	89	TENN	16	36	18				
19 STATES	90	94	92	19 STATES	61	74	48	17 STATES	63	71	44

THESE 19 STATES PRODUCED 96% OF THE 1987 SOYBEANS CROP.

THESE 19 STATES PRODUCED 96% OF THE 1987 SOYBEANS CROP.

THESE 17 STATES PRODUCED 94% OF THE 1987 CORN CROP.

WINTER WHEAT  
% PLANTED

	1988	1987	AVG.
ARK	16	33	22
CALIF	5	10	9
COLO	97	97	98
GA	10	10	13
IDAHO	87	75	83
ILL	82	80	57
IND	77	72	59
KANS	90	95	80
MICH	80	75	65
MO	59	68	44
MONT	88	95	78
NEBR	100	100	100
N MEX	96	90	NA
N C	20	16	17
OHIO	73	78	60
OKLA	80	90	65
OREG	52	48	50
S DAK	98	100	100
TEX	85	85	68
WASH	85	80	89
20 STATES	82	85	NA
EXCL. STATES WITH NA	82	85	73

THESE 20 STATES PRODUCED 91% OF THE 1987 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

WINTER WHEAT  
% EMERGED

	1988	1987	AVG.
ARK	7	14	NA
CALIF	0	1	1
COLO	84	82	85
GA	5	5	8
IDAHO	51	46	55
ILL	29	29	25
IND	38	41	38
KANS	65	70	55
MICH	55	40	NA
MO	33	41	25
MONT	52	79	51
NEBR	95	98	93
N MEX	89	85	NA
N C	16	6	NA
OHIO	32	33	30
OKLA	50	65	35
OREG	28	15	22
S DAK	86	96	91
TEX	59	68	46
WASH	65	60	66
20 STATES	58	64	NA
EXCL. STATES WITH NA	59	66	52

THESE 20 STATES PRODUCED 91% OF THE 1987 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

GRAIN SORGHUM  
% MATURE

	1988	1987	AVG.
ARK	100	100	NA
ILL	99	100	NA
KANS	90	85	85
LA	100	100	100
MISS	99	100	100
MO	97	100	95
NEBR	100	100	100
OKLA	45	90	90
S DAK	100	100	91
TENN	100	100	100
TEX	92	90	91
11 STATES	92	91	NA
EXCL. STATES WITH NA	91	91	91

THESE 11 STATES PRODUCED 96% OF THE 1987 GRAIN SORGHUM CROP.

NA - NOT AVAILABLE.

GRAIN SORGHUM  
% HARVESTED

	1988	1987	AVG.
ARK	93	98	93
ILL	75	92	57
KANS	40	45	30
LA	96	100	99
MISS	91	97	93
MO	71	86	62
NEBR	75	72	42
OKLA	15	25	25
S DAK	72	74	38
TENN	86	94	76
TEX	72	67	71
11 STATES	60	62	50

THESE 11 STATES PRODUCED 96% OF THE 1987 GRAIN SORGHUM CROP.

COTTON  
% BOLLS OPENING

	1988	1987	AVG.
ALA	99	100	96
ARIZ	100	100	100
ARK	96	100	97
CALIF	100	100	98
GA	87	93	91
LA	100	100	99
MISS	97	100	100
MO	93	100	100
N MEX	90	90	97
N C	96	100	100
OKLA	85	65	70
S C	91	97	96
TENN	100	100	100
TEX	74	57	62
14 STATES	86	79	81

THESE 14 STATES PRODUCED 100% OF THE 1987 COTTON CROP.

COTTON  
% HARVESTED

	1988	1987	AVG.
ALA	58	82	56
ARIZ	25	45	29
ARK	48	86	61
CALIF	10	35	15
GA	34	57	38
LA	67	86	63
MISS	65	87	63
MO	57	87	66
N MEX	14	7	7
N C	12	35	31
OKLA	10	3	5
S C	28	66	52
TENN	46	83	59
TEX	25	18	20
14 STATES	33	43	33

THESE 14 STATES PRODUCED 100% OF THE 1987 COTTON CROP.

RICE  
% HARVESTED

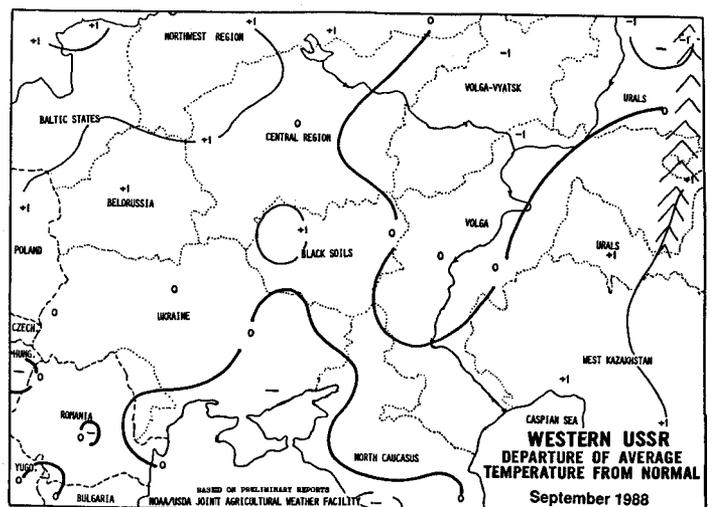
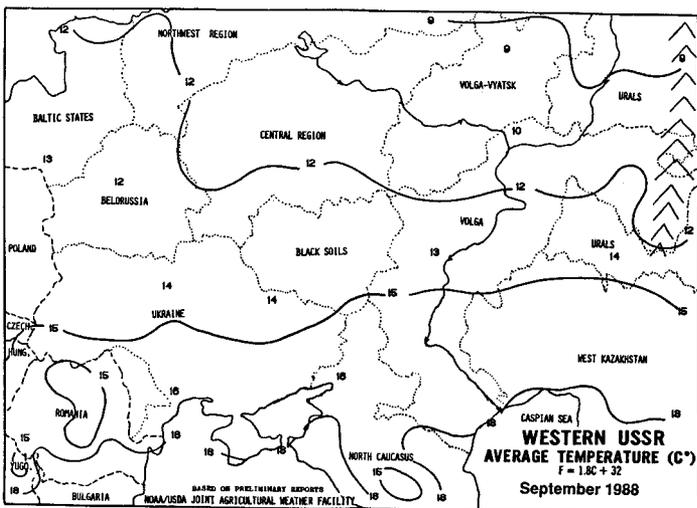
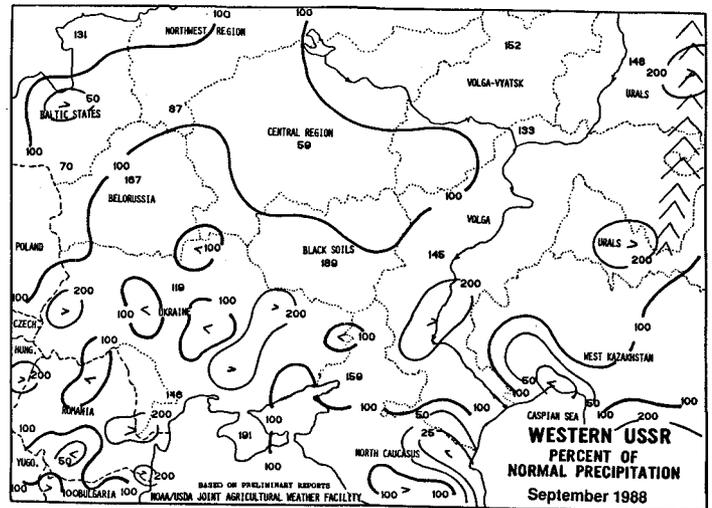
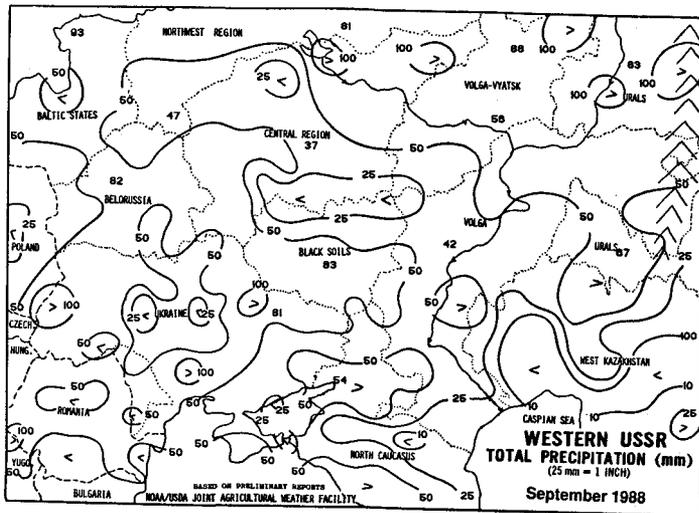
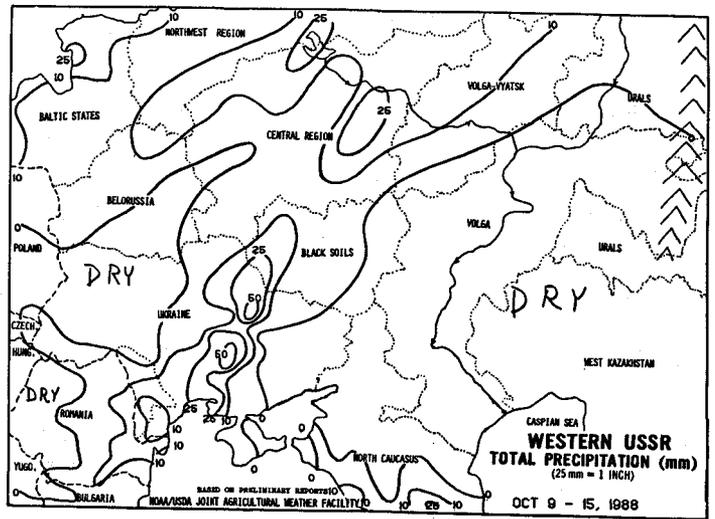
	1988	1987	AVG.
ARK	87	98	90
CALIF	75	80	68
LA	97	100	99
MISS	91	100	94
TEX	100	100	100
5 STATES	89	96	90

THESE 5 STATES PRODUCED 97% OF THE 1987 RICE CROP.

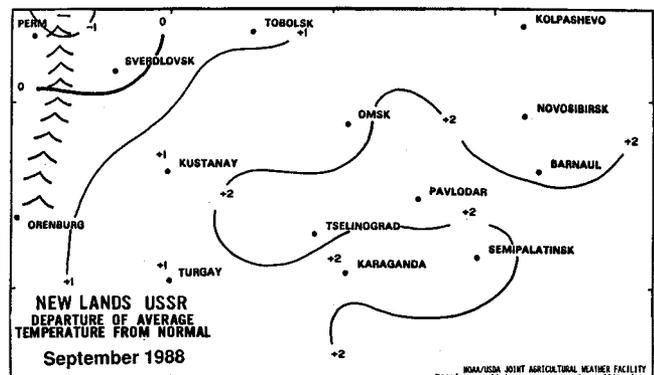
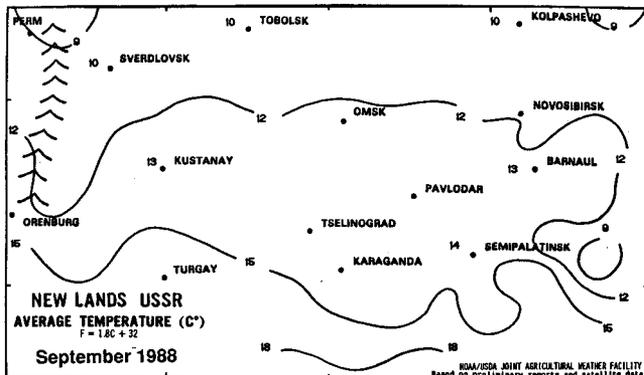
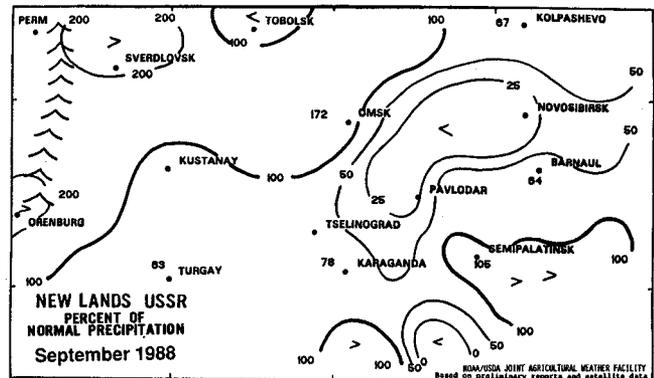
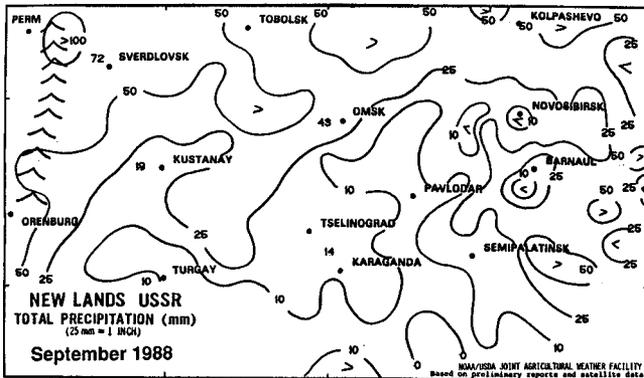
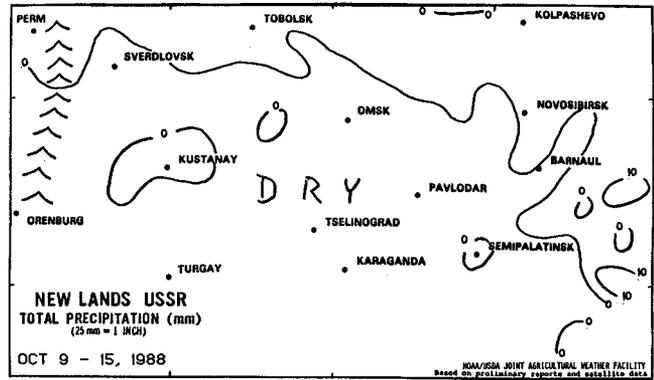
1/ AVERAGES FOR THESE SUMMARIES ARE FOR THE YEARS 1983 - 1987.



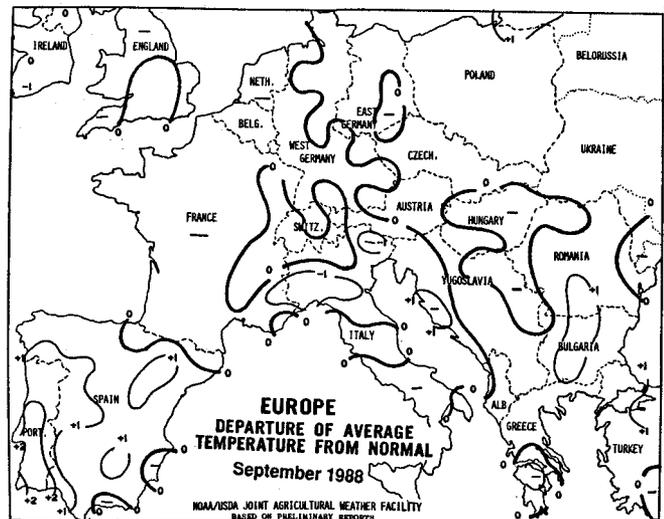
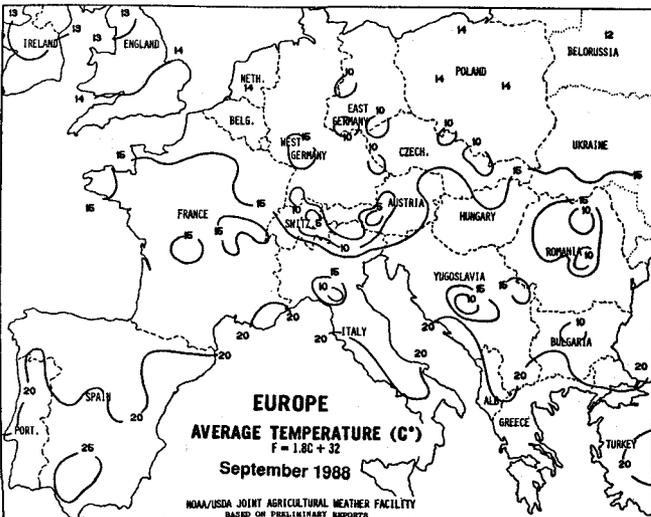
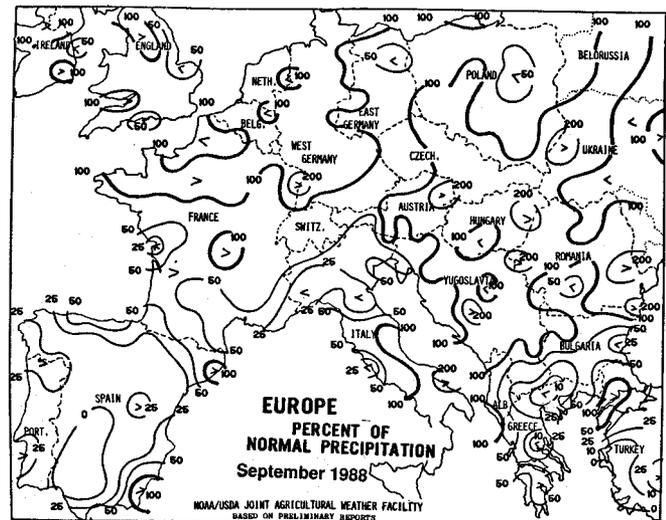
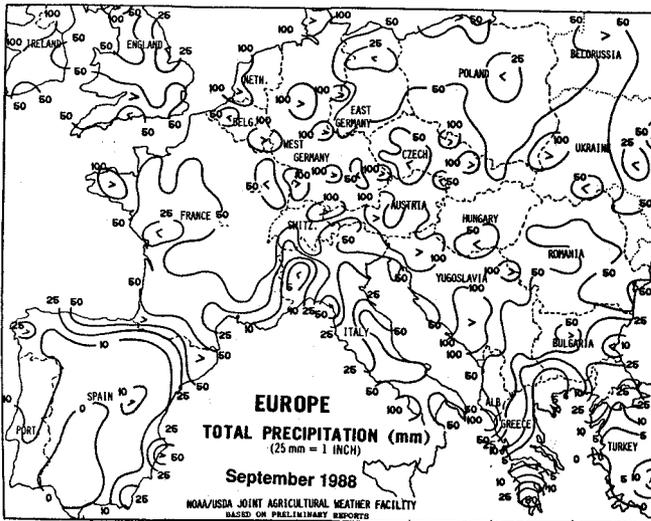
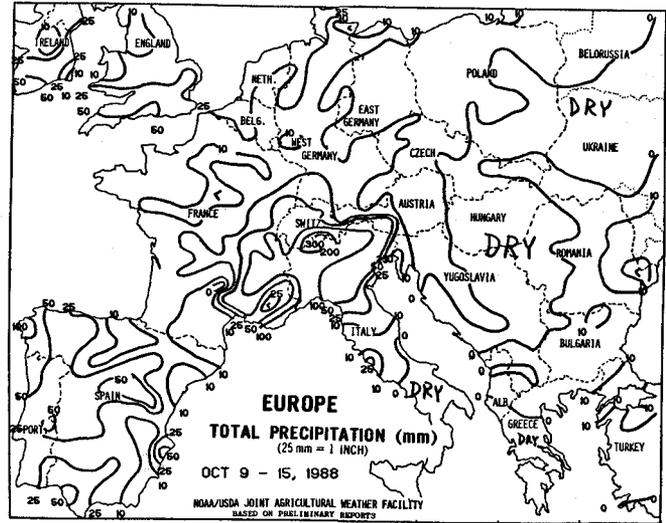
**WESTERN USSR ...** Winter grain planting was virtually complete over the region. The first significant rain since early September covered winter grains in the central Ukraine, favoring crop emergence. Unseasonable warm, dry weather in the western and eastern Ukraine, the North Caucasus, and the Volga helped the sugar beet, corn, and sunflower harvests to advance toward completion. A cooling trend during the week prompted winter grain hardening in the Central Region, the Black Soils Region, the upper Volga, and the Volga Vyatsk, where minimum temperatures dropped to around -4 degrees Celcius (C) by week's end. In September, periodic rain over the northern half of the region provided ample moisture for winter grain emergence and early growth. Minimal rain in the southern portion of the Central Region and the northern Black Soils Region created unfavorable conditions for winter grain establishment. In the Ukraine and North Caucasus, moderate to heavy rain during September 4-10 increased pre-planting moisture for winter grains. Dry weather from September 11 until month's end helped crop harvesting and winter grain planting.



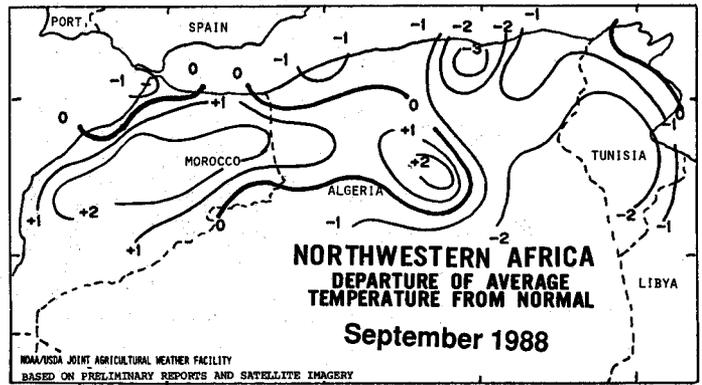
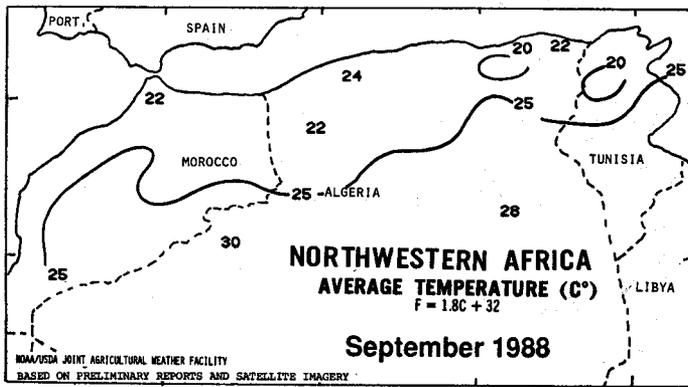
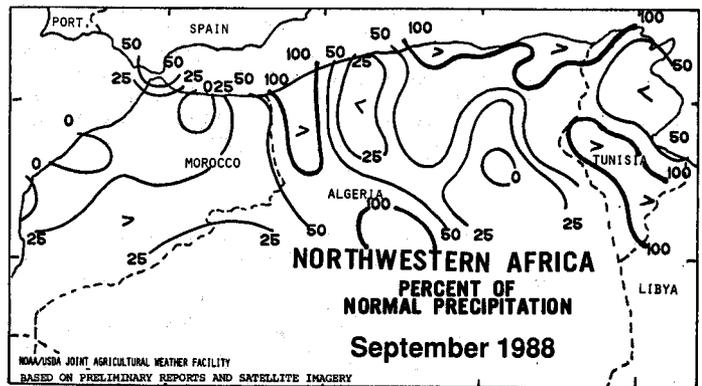
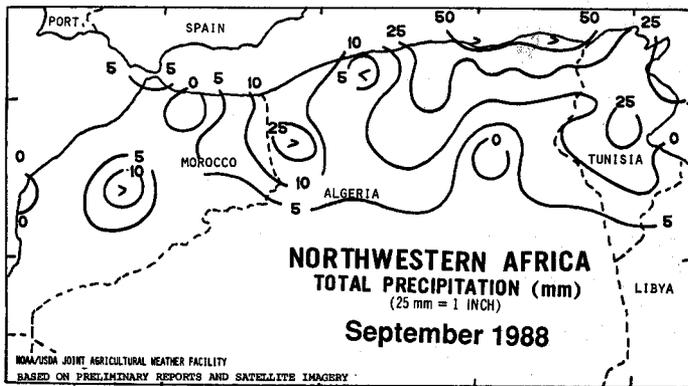
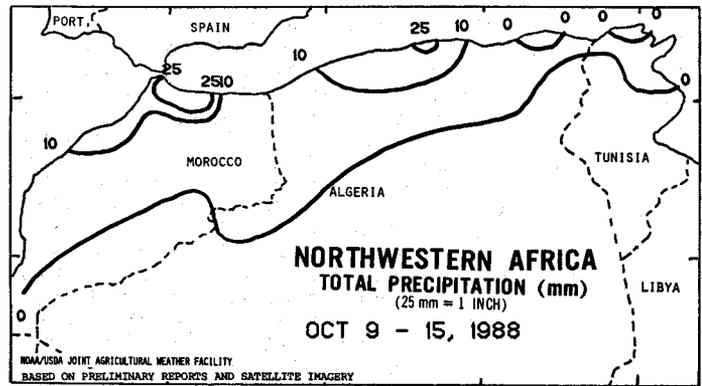
**NEW LANDS** ... In spring grain areas east of the Ural mountains, mostly dry weather helped final harvest efforts. Persistent showers on September 5-22 in the northern Urals produced above-normal precipitation and caused some delays in spring grain harvesting. Dry weather returned to the northern Urals by month's end, helping the harvest. Unseasonable warm, dry September weather in Kazakhstan and West Siberia allowed spring grain harvesting to advance without delay. This year's spring grain harvest has progressed more rapidly than last year when widespread, wet weather caused significant harvest delays. Weekly coverage of the New Lands will be suspended until next spring's planting season.



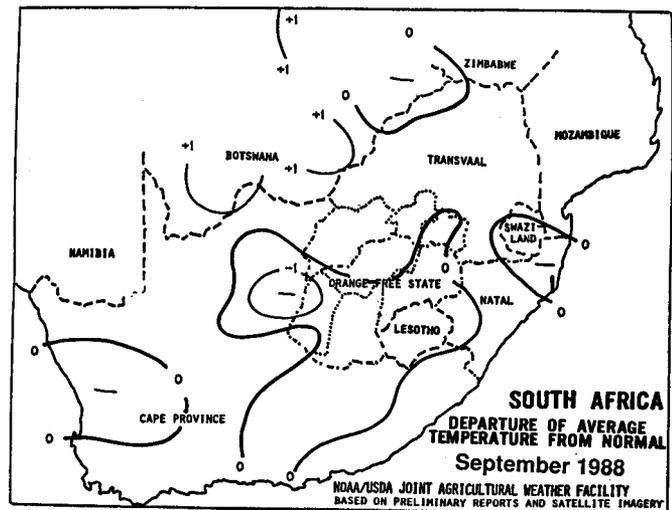
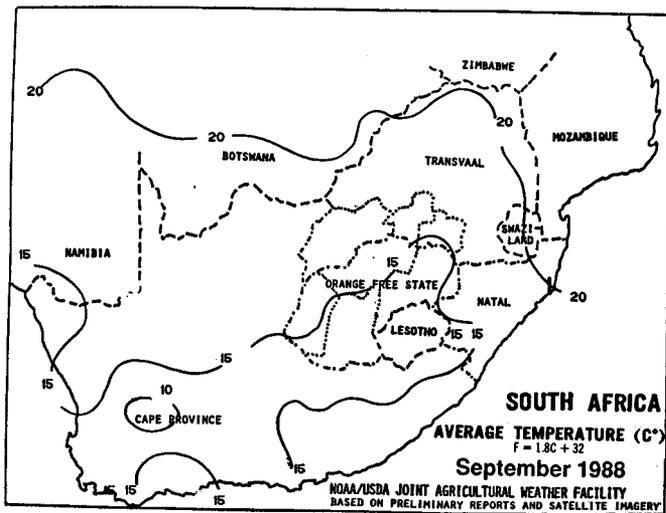
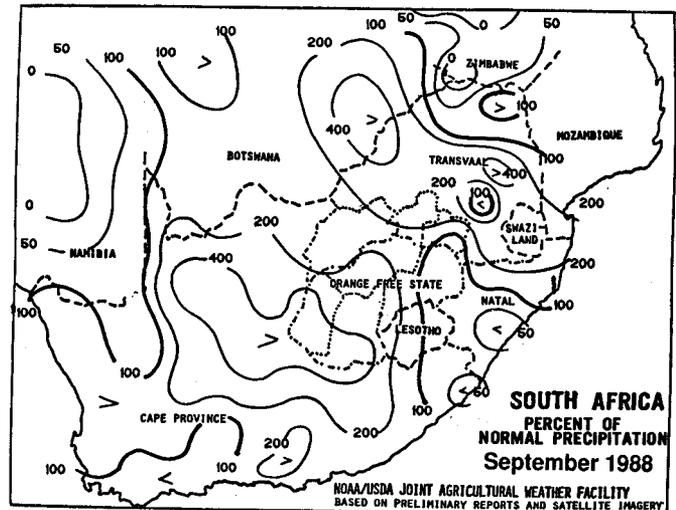
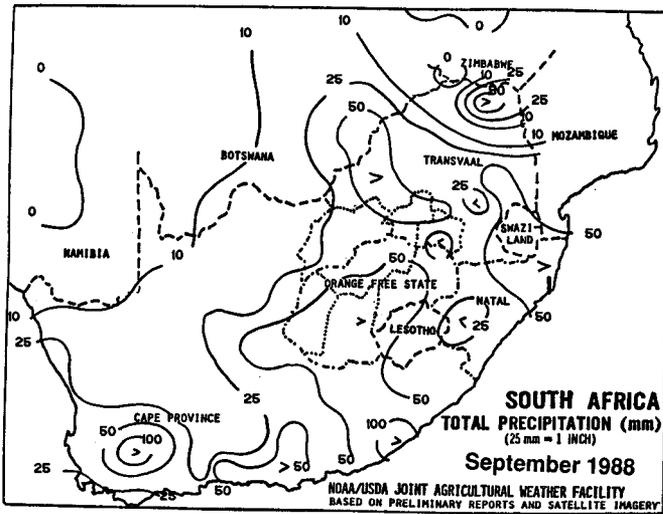
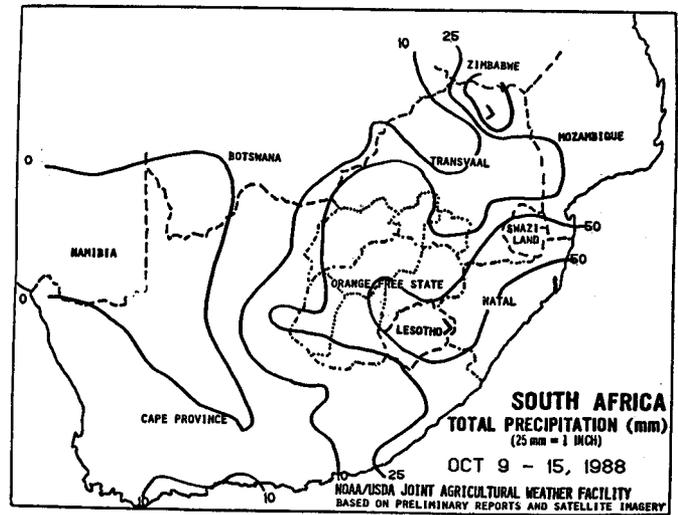
**EUROPE** ... A slow-moving storm brought continued wet, windy weather to northwestern Europe early in the week. Moderate to heavy rain (25-50mm, with isolated rainfall greater than 50mm) from the system across sections of England, northern France, the Low Countries, and West Germany delayed fall planting and summer crop harvest but kept soil moisture levels at favorable to surplus levels for establishing winter grains. Widespread rain (10-50mm, with scattered rainfall greater than 50mm) in southwestern Europe delayed summer crop harvest but helped alleviate soil dryness for newly planted winter grains. Very heavy rain (100-150mm, with isolated amounts greater than 150mm) may have caused localized flooding in sections of Italy's Po Valley. In contrast, eastern Europe remained warm and mostly dry, with the exception of Bulgaria and eastern Romania, where light to moderate showers (5-20mm) favored establishing winter grains. During September, rainfall was above normal in portions of northwestern and southeastern Europe, while below-normal rain fell in the southwest and northeast. Normal- to above-normal rainfall in the Balkans helped increase soil moisture after several months of persistent dryness, although some sections of Bulgaria remain unfavorably dry.



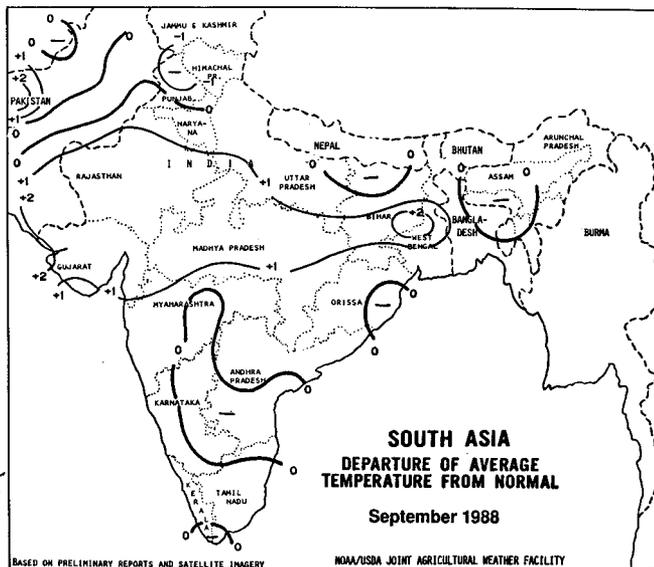
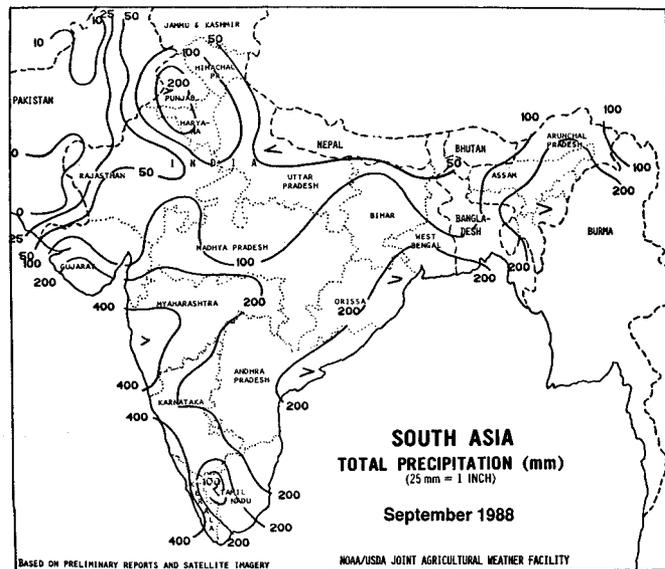
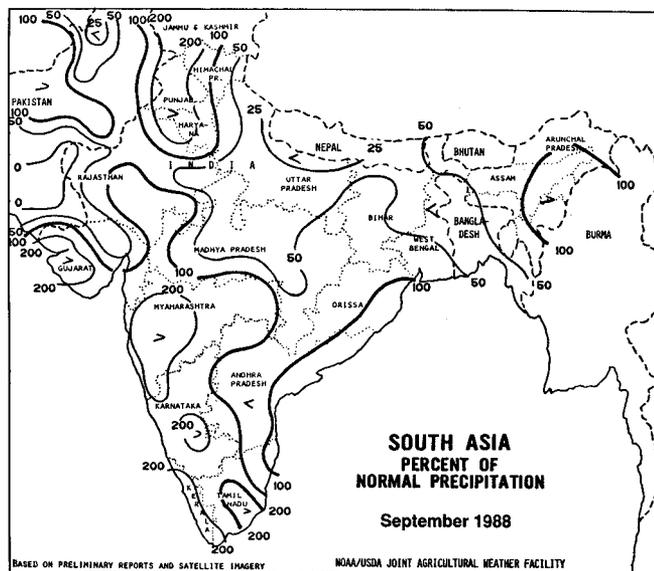
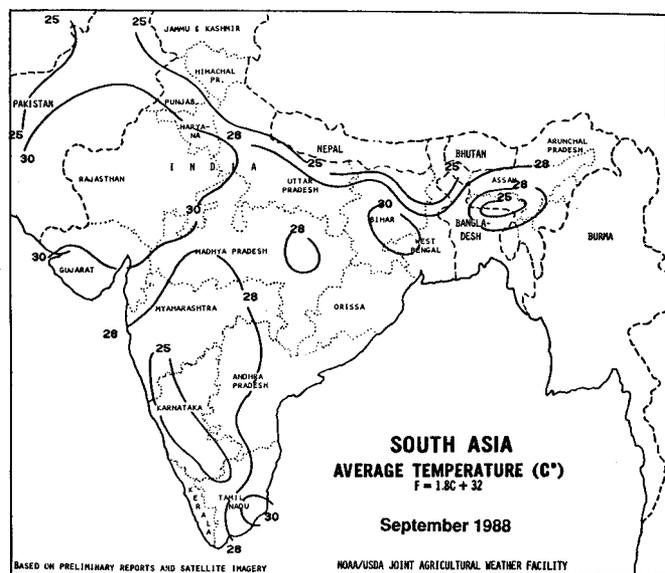
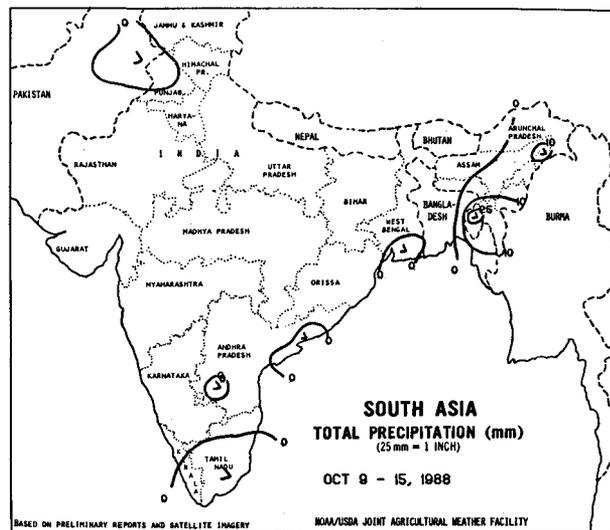
**NORTHWESTERN AFRICA** ... Winter grain planting normally begins in November over much of the region, coinciding with the autumn rainy season. Light showers (around 10mm) over winter grain areas in Morocco and western Algeria helped to increase pre-planting moisture. Mostly dry weather covered winter grain areas in northeastern Algeria and Tunisia. In September, below-normal precipitation over most winter grain areas limited pre-planting moisture.



**SOUTH AFRICA** ... Widespread rain (17-50mm or more) fell over most South African crop regions, providing timely moisture for corn planting which usually begins in mid-October. Rainfall ranged from 17 to 61mm over the Maize Triangle, South Africa's primary corn region which covers southern Transvaal and much of the Orange Free State. In September, rainfall was above normal over most crop regions (ranging from 25 to 100mm or more), bringing some relief to heading winter wheat. Temperatures were near normal.

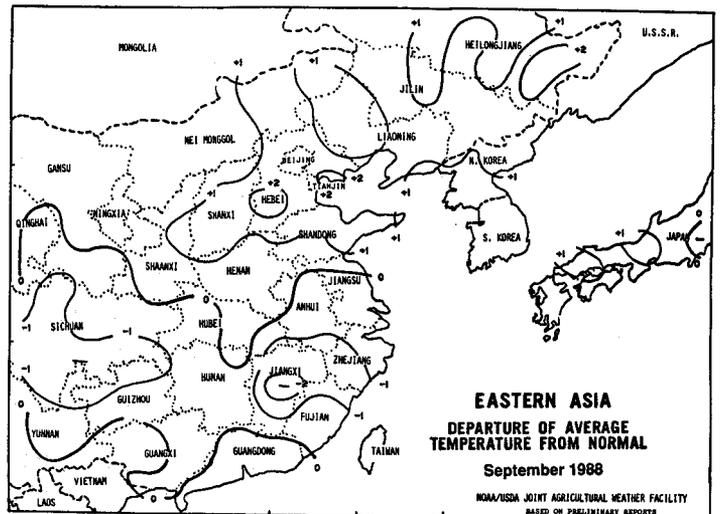
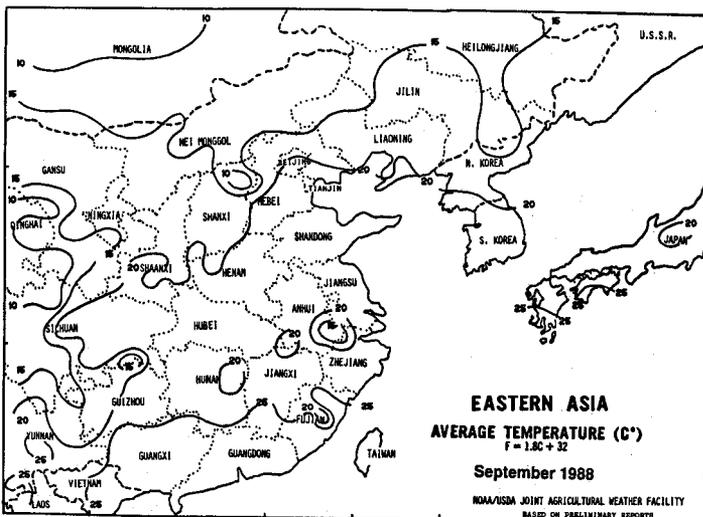
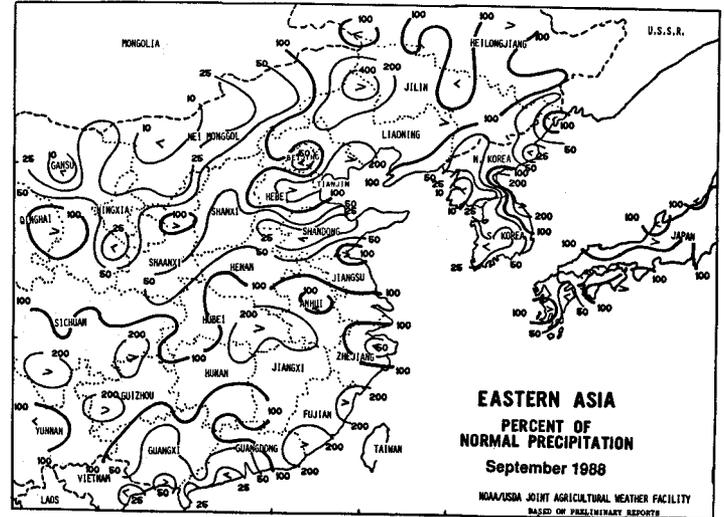
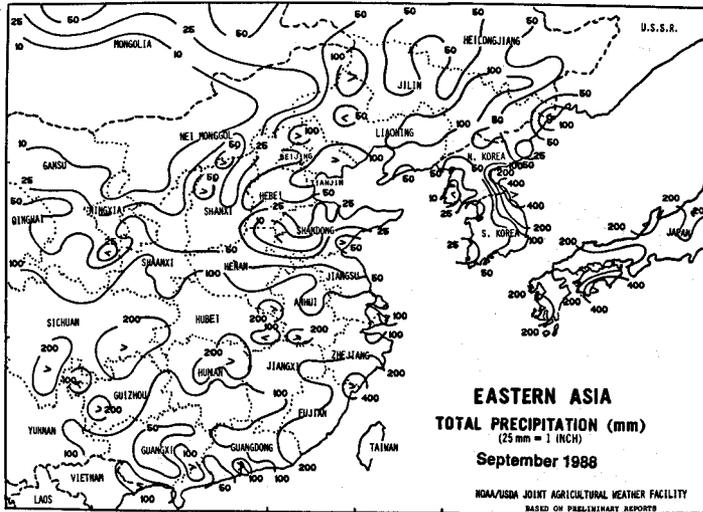
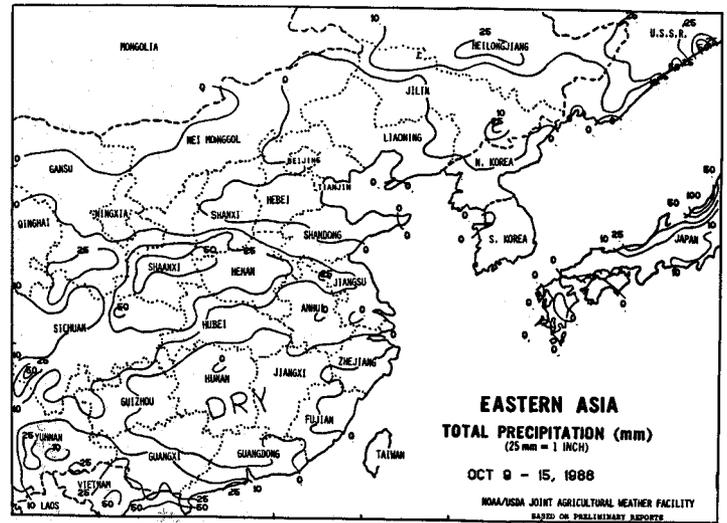


**SOUTH ASIA** ... Dry weather covered most South Asian crop regions with scattered, light rain (less than 10mm) limited to northern Pakistan, coastal areas of India's southern tip, and from southern Bangladesh eastward. The dry weather in India's eastern states allowed floodwaters to subside and in central and southern growing regions, helped maturing grains and oilseeds. Moisture conditions continued generally favorable for flowering to boll forming cotton. In September, rainfall was less than 50 percent of normal over a large part of eastern Madhya Pradesh and the eastern two thirds of Uttar Pradesh, limiting moisture for rainfed crops. Elsewhere near- to above-normal rainfall maintained generally favorable growing conditions for reproductive to filling crops, though periods of excessive rainfall in north-central India and Maharashtra caused local flooding and crop damage. Frequent, heavy rain in India's eastern states exacerbated flooding, but rainfall tapered off by month's end over much of Bangladesh and northern Bihar. Temperatures ranged from 1 to 3 degrees C above normal over a large area from Gujarat to West Bengal but were near normal elsewhere.



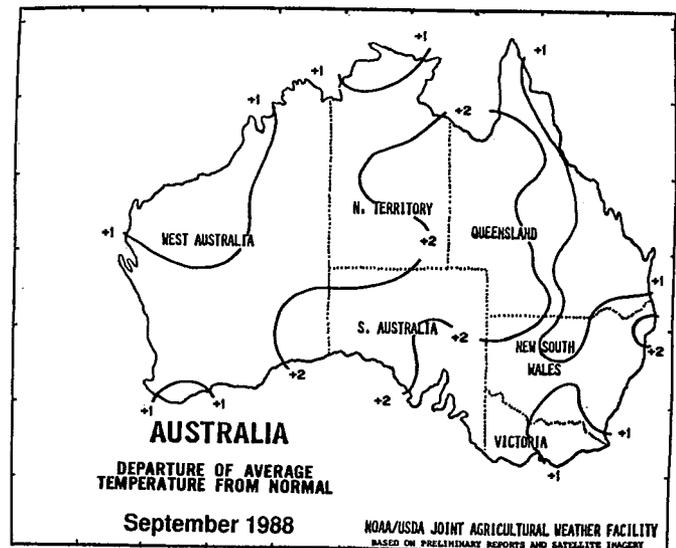
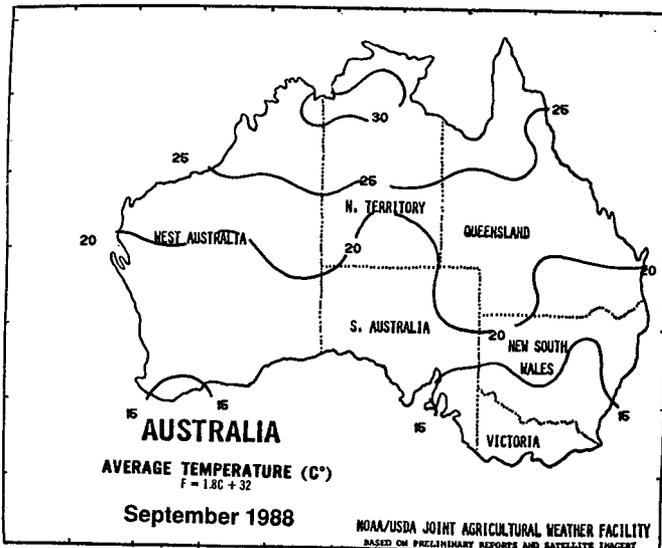
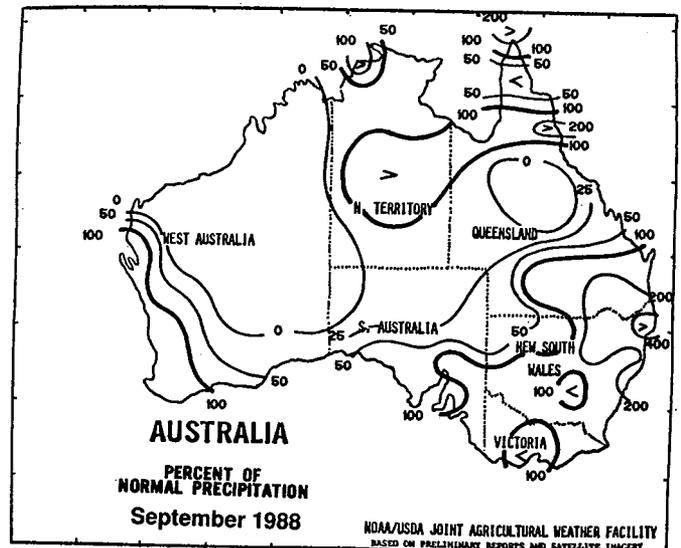
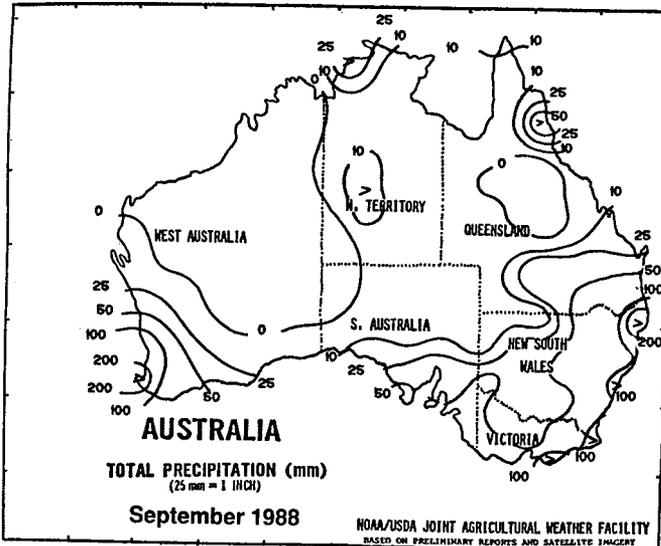
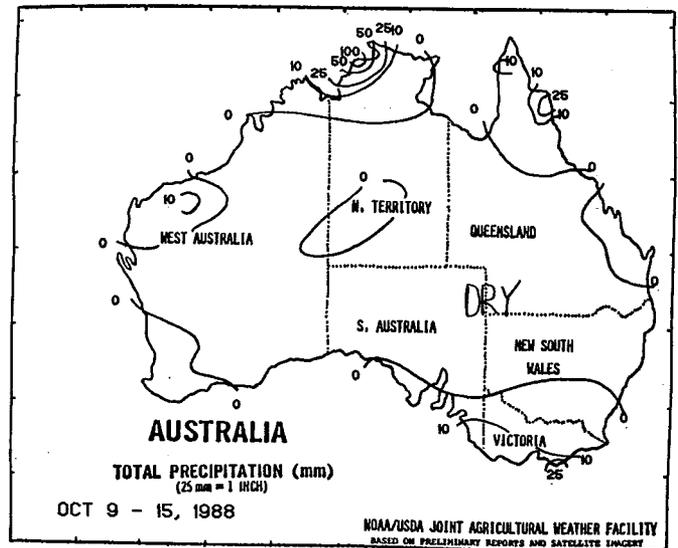
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**EASTERN ASIA** ... Moderate to heavy rain (15-50mm, with isolated rainfall greater than 50mm) benefited newly planted winter grains and oilseeds across Sichuan, southern Shaanxi, Hebei, Henan, and southern Shanxi. Widespread rain and scattered snow also caused delays in fall fieldwork in Heilongjiang. Dryness covered much of the remainder of China and the Korean Peninsula, favoring late summer crop harvest in the north and drydown of maturing late double crop rice in the southeast. However, soils in sections of the North China Plain, especially Shangdong, remain too dry for normal establishment of winter crops. In Japan, dry weather favored a resumption of harvest in southern Honshu while moderate to heavy rain (25-50mm) and fieldwork delays continued in northern Honshu and Hokkaido. Rainfall in Japan was above normal in September, as was the case in the Yangtze Valley and sections of the eastern Korean Peninsula. Mean temperatures for the month ranged from slightly below normal in the Yangtze Valley to slightly above normal in the North China Plain and Manchuria.

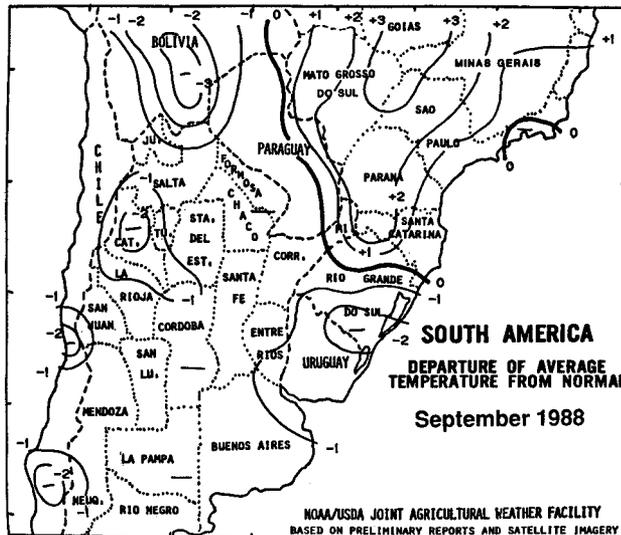
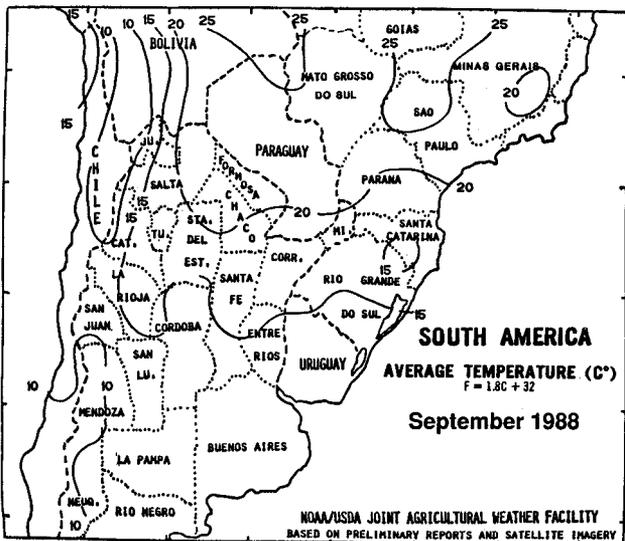
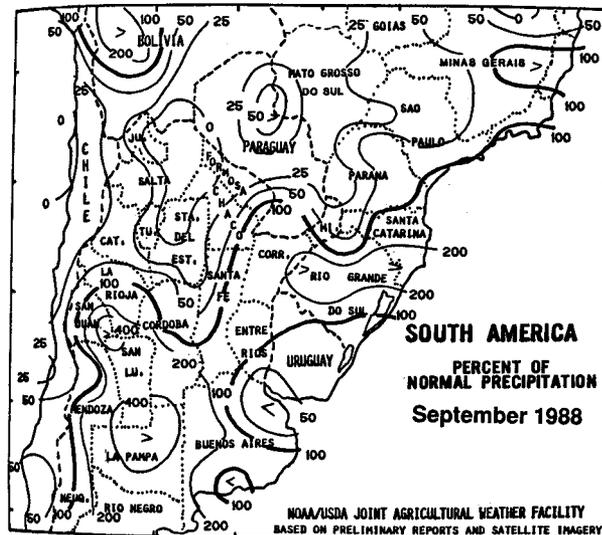
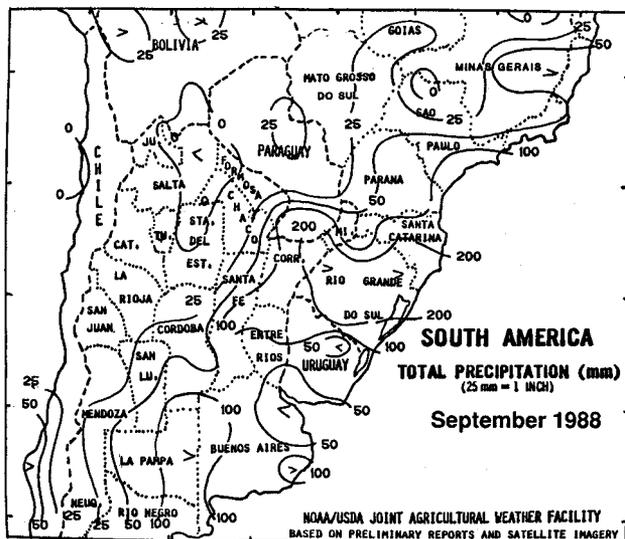
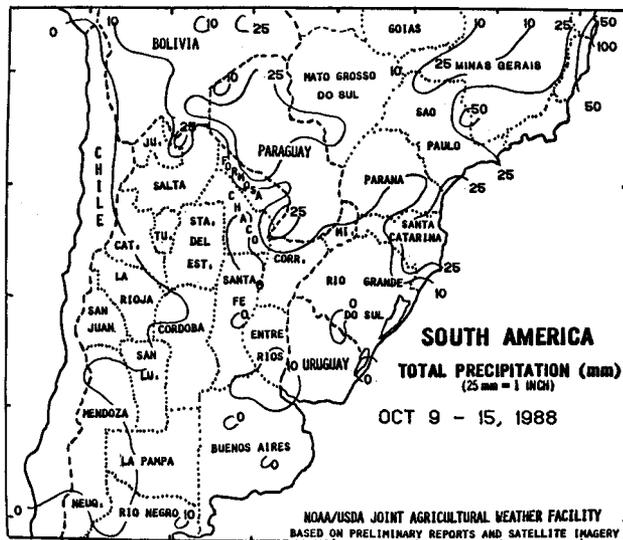




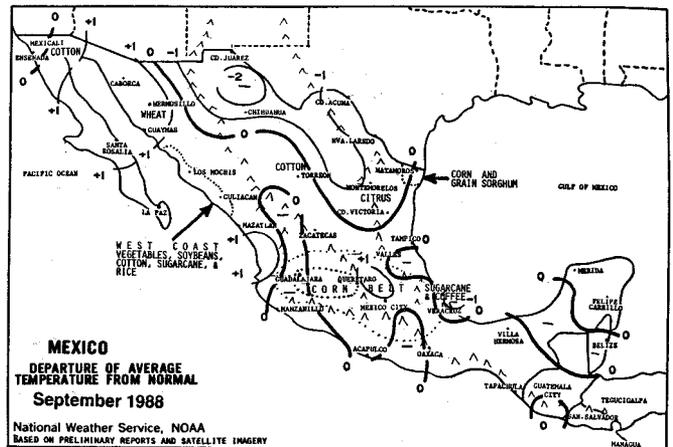
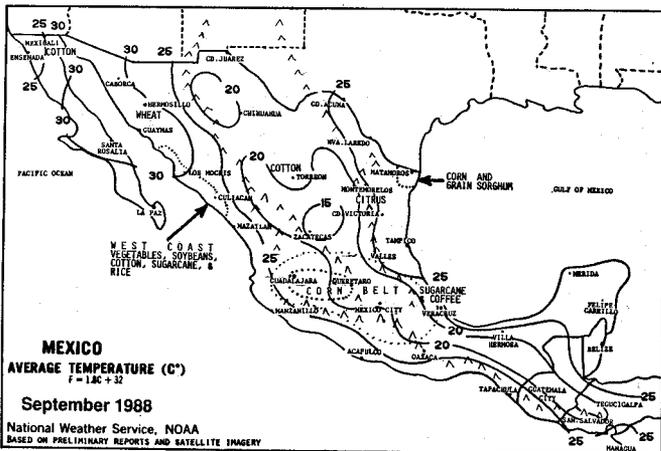
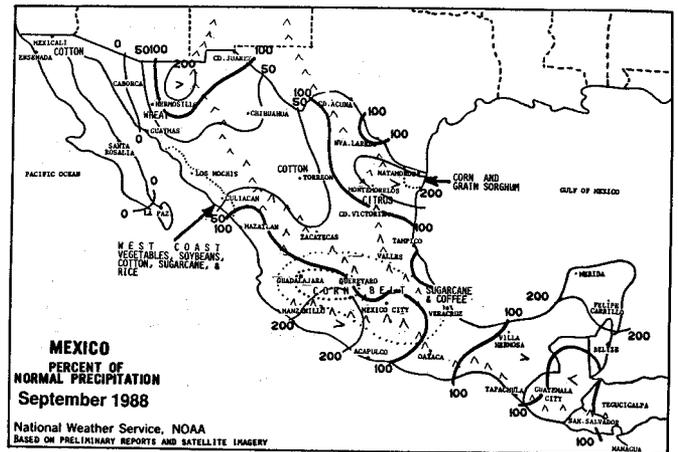
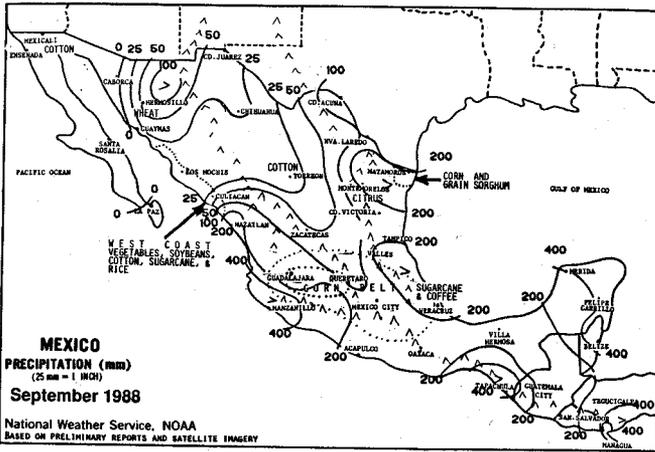
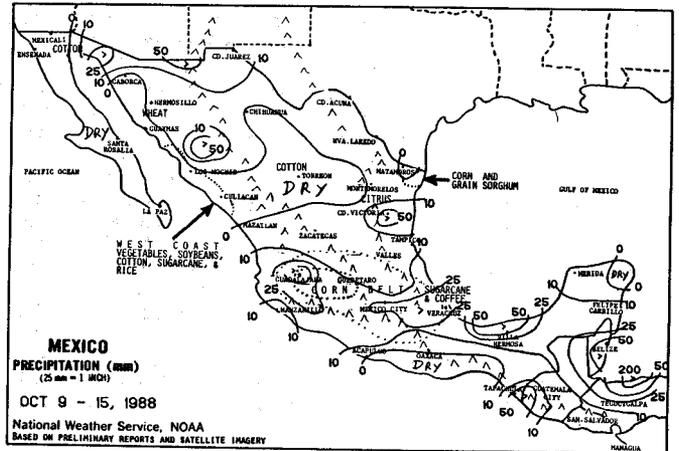
**AUSTRALIA** ... Dry, much warmer-than-normal weather persisted over sections of Queensland, New South Wales, and South Australia, stressing reproductive to filling winter grains. Above-normal September rainfall in southeastern Queensland and New South Wales led to beneficially high soil moisture levels prior to the current dryness. However, below-normal rainfall in South Australia and central Queensland accentuated the effects of moisture stress in these areas. Elsewhere, light to moderate rain (5-20mm) favored reproductive winter grains in Victoria, while crop areas in Western Australia turned mostly dry. Mean temperatures in September were above normal over nearly all crop areas except extreme west Western Australia and eastern New South Wales, where they were near normal to below normal.



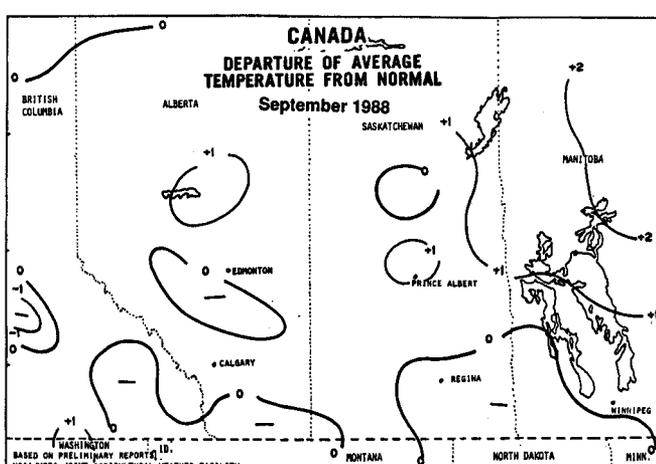
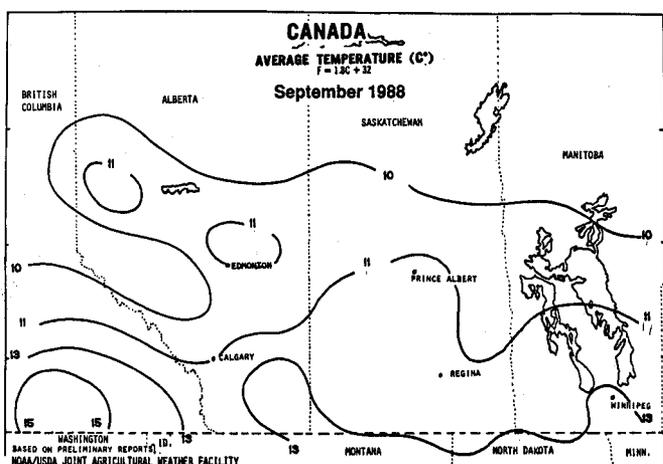
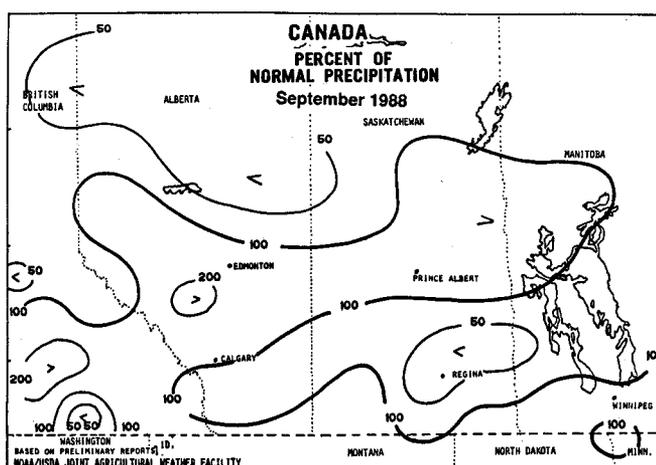
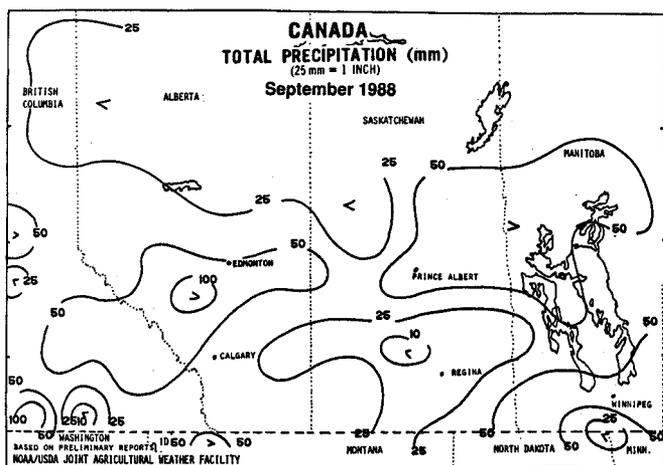
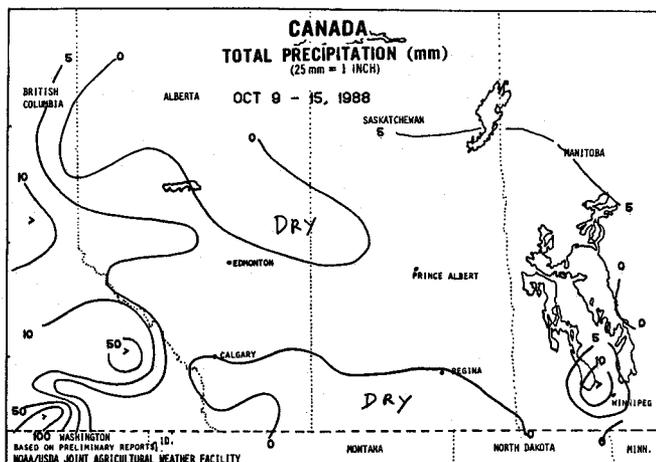
**SOUTH AMERICA** ... Light, scattered showers fell over most of Argentina's crop areas, with the heaviest amounts (10mm) in northeastern Buenos Aires. Summer crop planting is underway, favored by beneficial moisture which improved topsoils in late September and early October. The late-month rain resulted in above-average September rainfall throughout most areas. Below-average monthly rainfall was confined to northeastern Buenos Aires, where early October rain improved conditions, and in northwestern cotton areas. In south-central Brazil, recent dry weather in Rio Grande do Sul improved field conditions, following above-average September rainfall. In contrast, well-below-average monthly precipitation prolonged the long, dry spell from Parana northward. However, recent showers (10-20mm) brought slight improvement for early soybean planting in central and northern areas, including most citrus and coffee areas. Soil moisture is very low in these areas. Maximum temperatures have frequently reached into the thirties (C) in recent weeks over northern and western soybean and corn areas, aggravating unfavorable emergence conditions caused by dryness.



**MEXICO** ... Scattered showers fell over northern Mexico, producing highly variable weekly rainfall. However, wheat planting progressed in the northwest and fieldwork continued in the northeast, with only isolated heavy showers (60-67mm) scattered widely. September rainfall was also highly variable, with the highest amounts associated with Hurricane Gilbert in mid-September over the northeast. Recent, dry weather favored harvesting along the West Coast farming region. Rain fell over most of the Southern Plateau corn belt, slowing harvest somewhat in the west (25-61mm) and east-central areas (25-48mm). September rainfall was mostly near average, except in north-central areas where amounts tended below normal. Tropical showers continued recently over southeastern Mexico, but amounts were light over the Yucatan peninsula which was also hit by Hurricane Gilbert.



**CANADA** ... Late-week, light rain (1-6mm) fell from northern Alberta to Manitoba, but dry weather continued across southern Alberta and southern Saskatchewan where moisture is limited for winter wheat germination. In September, rainfall was near to above normal over most Prairie crop areas, but a large portion of central Saskatchewan received less than 25mm, allowing summer crop harvesting but providing only limited moisture for winter wheat planting. The continuation of wet weather in the northwest was unfavorable for mature crops. Monthly temperatures were near normal, but periodic outbreaks of sub-freezing weather possibly damaged some late-planted oilseeds in northwestern growing regions. This will be the last summary of the season. Coverage will continue next May, corresponding to the planting of spring wheat and oilseeds.



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(Continued from p. 11)

included lettuce, sweet potatoes, and tomatoes. In Arizona, fall vegetables were maturing normally and showed no damage from recent heavy rains. Crops harvested included lettuce, winter squash, and green chilies. Cool, overnight temperatures and dry weather slowed crop growth in east Texas. Carrot and pepper harvests continued in the High Plains.

PASTURES AND LIVESTOCK: Livestock was mostly good. Pasture was mostly fair. Cool, dry weather slowed pasture growth in many areas. Crop residue grazing continued to increase.

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