

WEEKLY WEATHER AND CROP BULLETIN

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

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

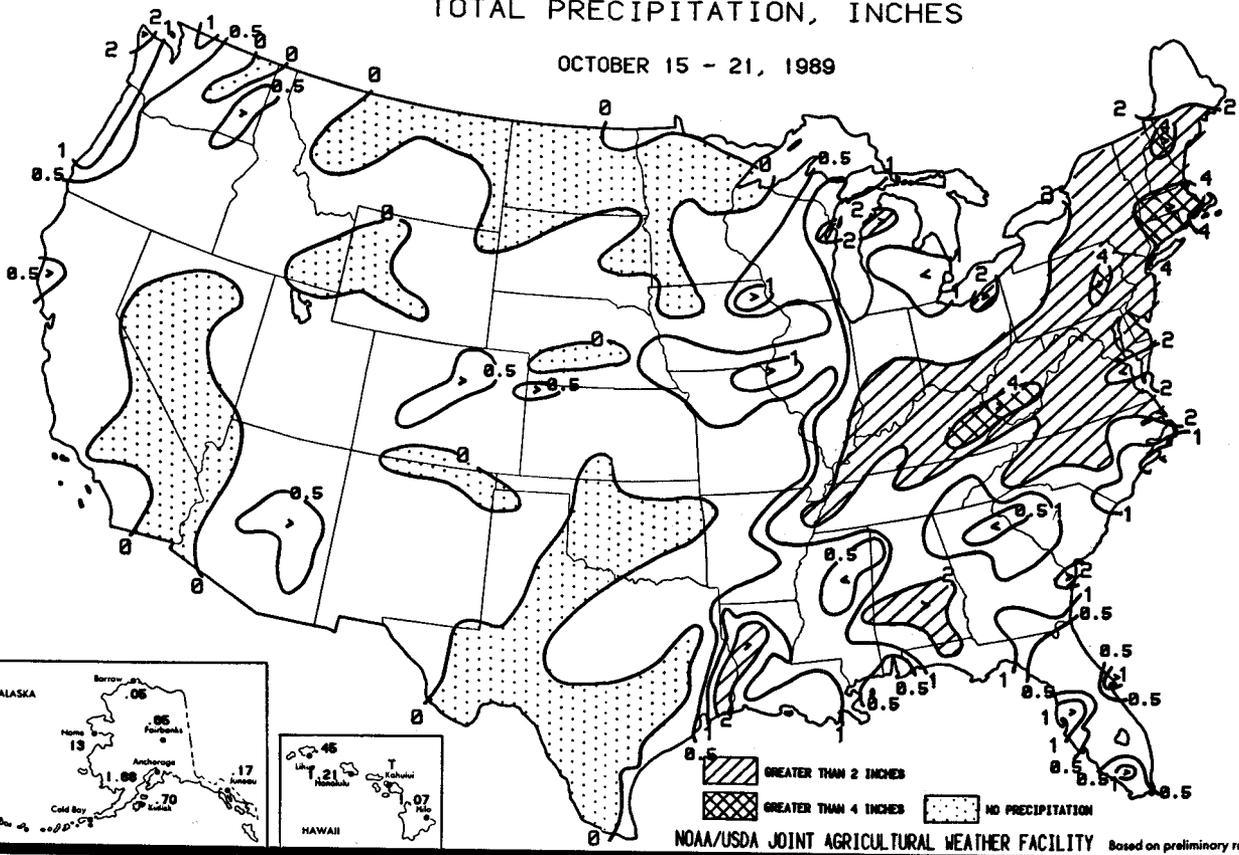
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Oct. 24, 1989

TOTAL PRECIPITATION, INCHES

OCTOBER 15 - 21, 1989



NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY Based on preliminary reports

HIGHLIGHTS

October 15-21, 1989

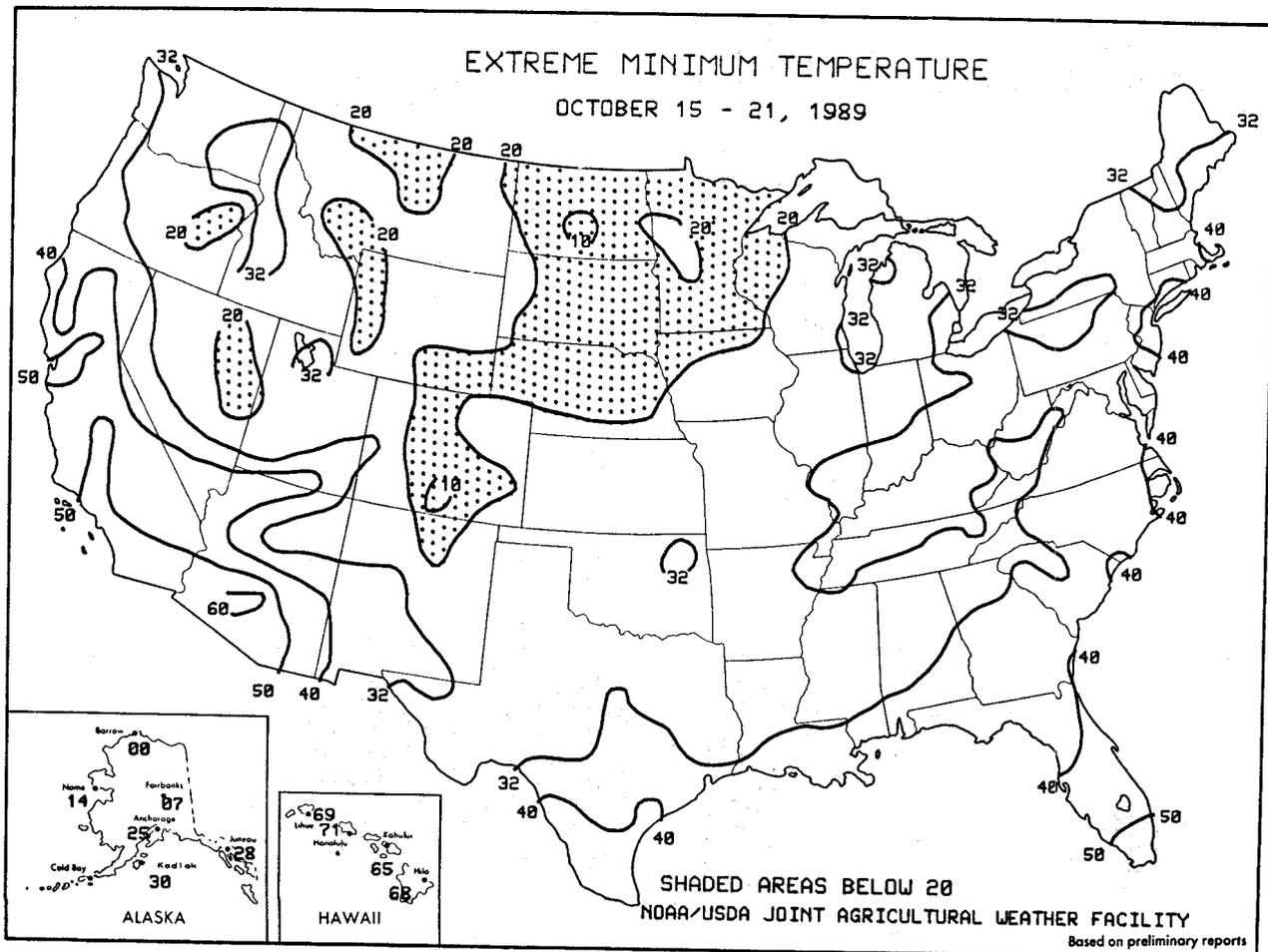
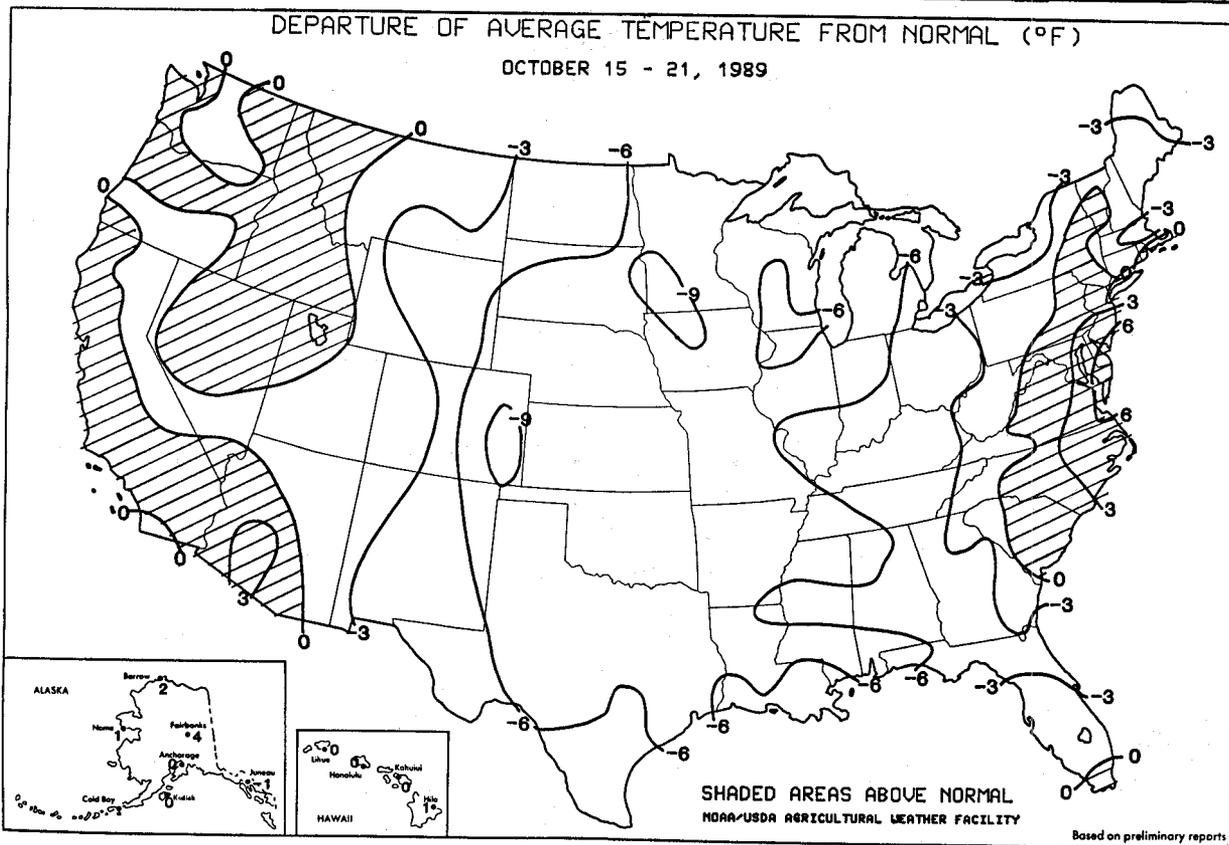
Hurricane Jerry struck **Galveston, TX**, with sustained winds of 75 MPH at the first of the week. Meanwhile, a strong cold front extended across the **Great Lakes** through the **central Rockies**, causing scattered precipitation with snow in the **Rockies** and **central High Plains**. Subsequently, the front raced southeastward and combined with moisture from the remains of Jerry to bring rain from the **central Gulf coast** to the **Northeast**. Flooding resulted from torrential rain over **western Kentucky**. A low-pressure system formed along the front over the **Southeast** and then edged up the **Atlantic seaboard** causing soaking rain, as unusual early season heavy snow fell over the **eastern Corn Belt**. The 3-8 inches of snow October 19-20 set October records across **Indiana**. Cold air plunged southward behind the front into the **Mississippi** and **Ohio Valleys** and the **Southeast**. Numerous

record-low temperatures for the date were broken and temperatures dropped below freezing to the **Gulf coast**. Record-high temperatures in **Florida** on Thursday were replaced by record lows the following day. Showers fell across the **Pacific Coast States** at week's end, as a frontal system moved inland.

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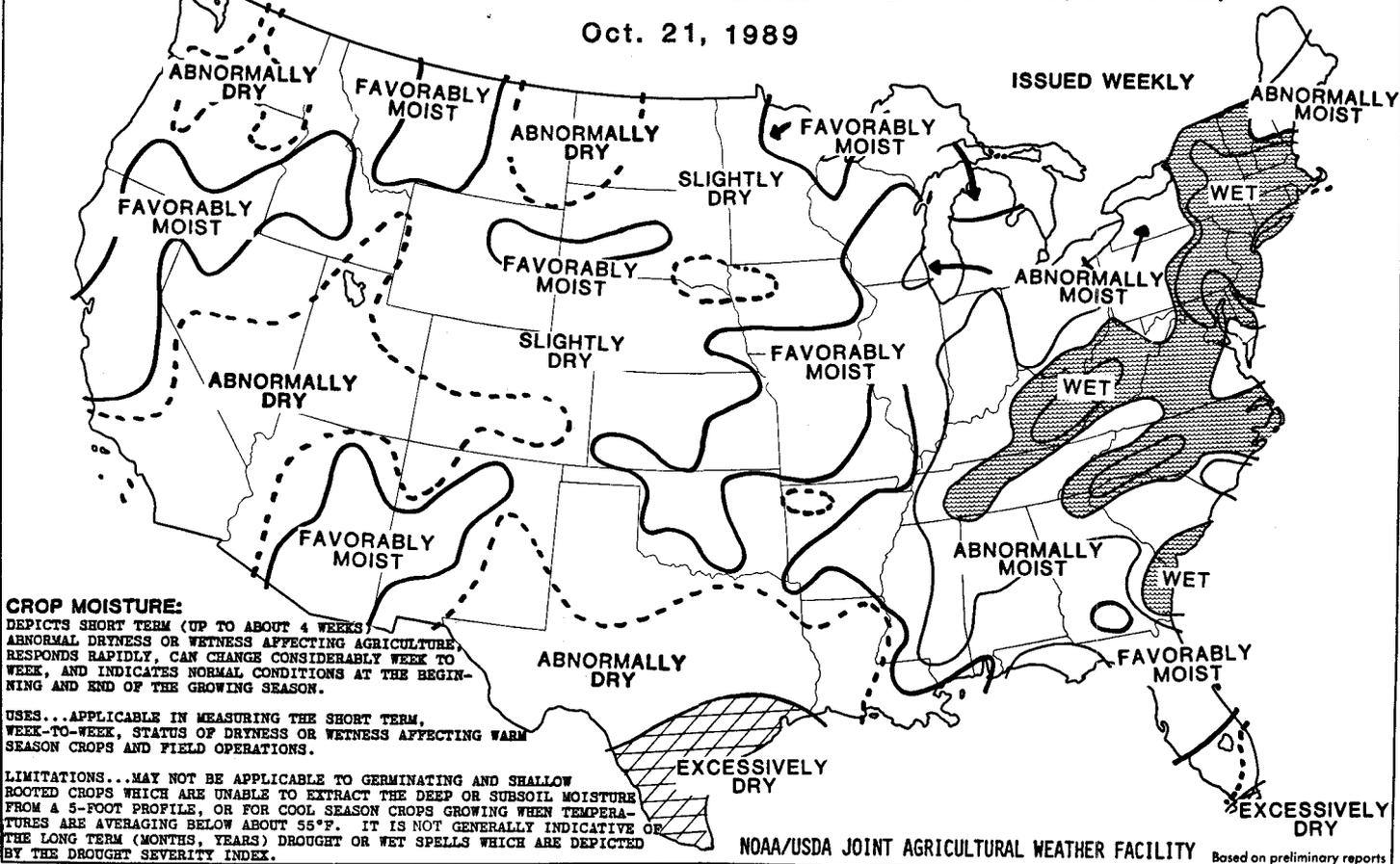
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CROP MOISTURE

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

Oct. 21, 1989



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.

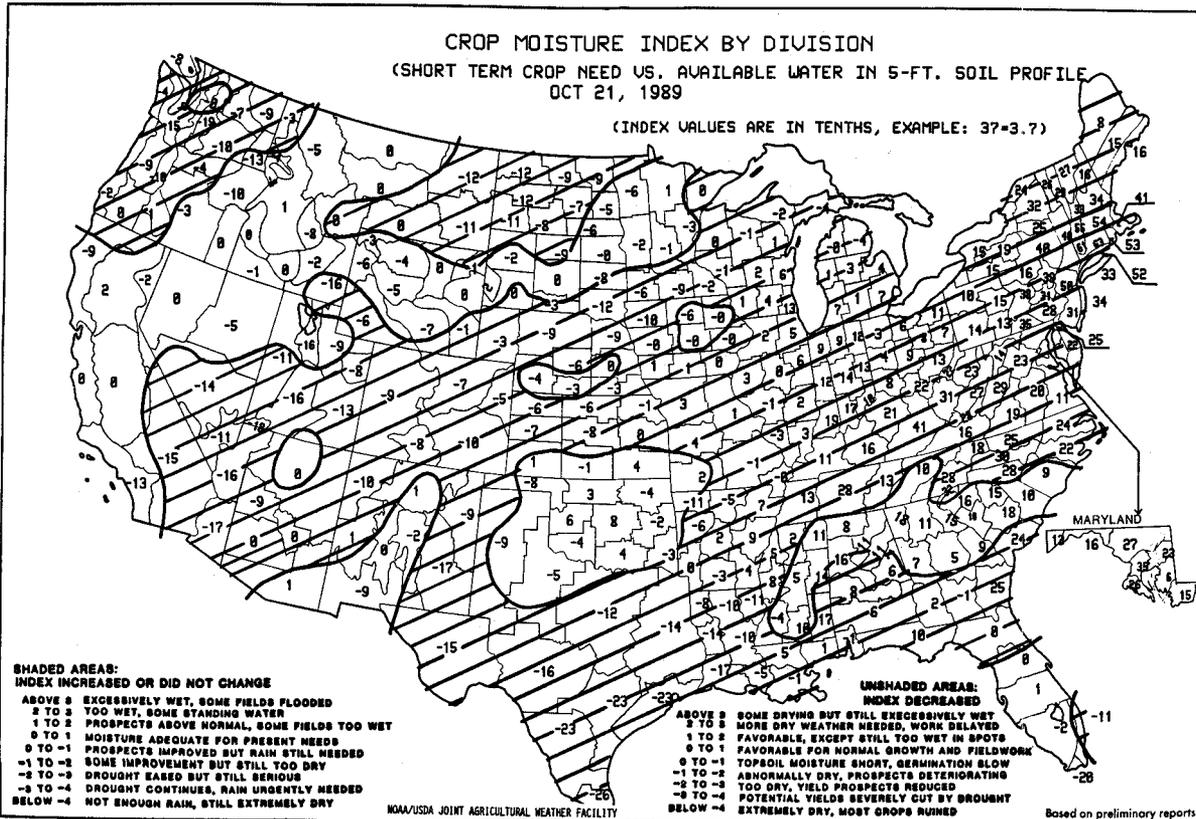
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

CROP MOISTURE INDEX BY DIVISION

(SHORT TERM CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)
OCT 21, 1989

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



SHADED AREAS:
INDEX INCREASED OR DID NOT CHANGE

- ABOVE 8 EXCESSIVELY WET, SOME FIELDS FLOODED
- 7 TO 8 TOO WET, SOME STANDING WATER
- 6 TO 7 PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET
- 5 TO 6 MOISTURE ADEQUATE FOR PRESENT NEEDS
- 4 TO 5 PROSPECTS IMPROVED BUT RAIN STILL NEEDED
- 3 TO 4 SOME IMPROVEMENT BUT STILL TOO DRY
- 2 TO 3 DROUGHT EASED BUT STILL SERIOUS
- 1 TO 2 DROUGHT CONTINUES, RAIN URGENTLY NEEDED
- BELOW 1 NOT ENOUGH RAIN, STILL EXTREMELY DRY

UNSHADED AREAS:
INDEX DECREASED

- ABOVE 8 SOME DRYING BUT STILL EXCESSIVELY WET
- 7 TO 8 MORE DRY WEATHER NEEDED, WORK RELATED FAVORABLE, EXCEPT STILL TOO WET IN SPOTS
- 6 TO 7 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
- 5 TO 6 TOPSOIL MOISTURE SHORT, GERMINATION SLOW
- 4 TO 5 ABNORMALLY DRY, PROSPECTS DETERIORATING
- 3 TO 4 TOO DRY, YIELD PROSPECTS REDUCED
- 2 TO 3 POTENTIAL YIELDS SEVERELY CUT BY DROUGHT
- BELOW 2 EXTREMELY DRY, MOST CROPS RUINED

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Based on preliminary reports

National Weather Data for Selected Cities

Weather Data for the Week Ending October 21, 1989

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERA- TURE OF		PRECIPI- TATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	67	47	83	31	57	-5	1.1	.6	.9	7.4	121	52.7	117	95	60	0	1	3	1
MOBILE	70	52	82	33	61	-7	.4	-.2	.2	5.5	64	45.4	83	96	62	0	0	3	0
MONTGOMERY	71	48	90	30	60	-5	2.7	2.3	1.9	8.5	134	59.1	146	96	58	1	2	3	2
AK ANCHORAGE	37	31	43	25	34	0	1.9	1.5	.7	6.6	180	24.3	198	91	69	0	5	5	1
BARROW	20	10	31	0	15	2	.1	-1.1	0	.9	89	7.0	178	94	75	0	7	4	0
FAIRBANKS	33	23	46	7	28	4	.7	.5	.3	1.7	104	8.5	97	94	74	0	7	5	0
JUNEAU	46	35	50	28	41	-1	-1	-1.5	1.2	12.4	105	33.2	81	98	72	0	3	4	0
KODIAK	45	34	52	30	40	0	.7	-1.9	.7	11.9	108	42.1	89	77	46	0	2	3	1
NOME	35	22	41	14	29	1	.1	-1.1	0	3.1	95	18.4	145	96	70	0	7	4	0
AZ PHOENIX	89	66	94	63	78	5	.4	-.2	-.4	.9	89	4.5	83	47	18	3	0	1	0
PRESCOTT	73	40	76	33	57	2	.4	-.2	-.4	1.3	55	9.4	61	56	22	0	0	1	0
TUCSON	84	58	89	56	71	1	.4	-.2	-.3	1.9	95	6.2	67	60	19	0	0	2	0
YUMA	90	65	97	60	78	2	T	-1.1	T	.1	22	6.9	376	64	22	4	0	0	0
AR FORT SMITH	68	42	92	26	55	-7	T	-.7	T	3.8	71	45.6	141	87	39	1	2	0	0
LITTLE ROCK	65	47	81	32	56	-7	.7	-.1	.6	5.9	96	45.3	115	78	53	0	1	3	1
CA BAKERSFIELD	85	54	94	50	69	2	0	-1.1	0	.5	169	2.8	67	67	27	2	0	0	0
EUREKA	60	50	67	46	55	1	.4	-.3	.3	1.2	51	20.6	82	93	76	0	0	2	0
FRESNO	83	54	91	50	68	4	.2	-.1	.2	1.3	351	6.1	84	83	32	1	0	1	0
LOS ANGELES	75	59	89	55	67	1	T	-1.1	T	.3	142	3.5	40	93	59	0	0	1	0
REDDING	77	51	86	45	64	-1	.3	-.2	.3	5.1	240	25.0	91	91	38	0	0	1	0
SACRAMENTO	78	51	86	47	65	1	.1	-1.1	.1	3.4	479	12.5	110	96	44	0	0	1	0
SAN DIEGO	72	60	80	56	66	0	.1	0	.1	.3	83	2.3	33	93	61	0	0	1	0
SAN FRANCISCO	73	53	83	49	63	2	.1	-2.1	.1	1.3	176	8.7	66	90	49	0	0	1	0
CO DENVER	54	31	74	26	43	-8	.6	-.4	-.4	2.1	111	14.3	106	91	40	0	5	3	0
GRAND JUNCTION	64	39	70	32	52	-2	.1	-1.1	.1	.5	35	5.5	86	73	24	0	2	3	0
PUEBLO	61	32	78	19	46	-7	.1	-1.1	.1	1.1	84	6.9	70	81	31	0	3	1	0
CT BRIDGEPORT	59	48	70	41	53	-2	5.4	4.7	3.4	9.1	167	45.3	139	93	77	0	0	5	3
HARTFORD	56	44	67	39	50	-1	5.6	4.8	3.0	11.8	188	49.7	143	94	76	0	0	5	3
DC WASHINGTON	68	52	83	38	60	1	3.4	2.7	1.1	11.9	229	45.5	143	95	66	0	0	4	4
FL APALACHICOLA	74	57	86	37	65	-4	1.8	1.1	1.7	13.0	117	47.4	99	91	58	0	0	2	1
DAYTONA BEACH	79	60	89	41	70	-3	.4	-.6	.4	14.6	145	37.8	89	95	57	0	0	1	0
JACKSONVILLE	77	58	91	36	68	-2	T	-.8	T	15.3	164	47.1	101	96	56	1	0	1	0
KEY WEST	85	74	89	65	79	0	.7	-.4	.4	5.8	59	22.9	70	85	59	0	0	3	0
MIAMI	85	69	92	53	77	0	.1	-1.5	0	8.3	63	40.9	80	87	50	4	0	2	0
ORLANDO	82	62	93	44	72	-2	0	-.6	0	11.5	132	39.2	87	92	47	3	0	0	0
TALLAHASSEE	75	52	89	30	64	-4	1.3	.6	1.2	7.9	91	54.4	98	98	56	0	1	2	1
TAMPA	82	62	91	44	72	-2	1.4	-.9	1.1	8.0	100	36.8	88	93	52	4	0	2	1
WEST PALM BEACH	84	66	92	48	75	-2	.1	-1.6	.1	6.1	41	31.8	61	92	52	2	0	3	0
GA ATLANTA	68	50	83	34	59	-2	T	-.5	T	13.4	277	54.8	137	90	60	0	0	2	0
AUGUSTA	74	53	87	34	63	1	.6	.2	.5	5.9	118	43.2	117	93	54	0	0	3	0
MACON	71	51	85	31	61	-4	.6	.1	.3	4.7	100	39.6	105	97	58	0	1	3	0
SAVANNAH	74	57	86	37	66	-1	1.9	1.4	1.5	12.7	184	40.2	90	94	55	0	0	2	1
HI HILO	82	70	84	68	76	1	1.1	-1.3	.3	16.6	130	52.8	158	95	62	0	0	4	0
HONOLULU	86	72	88	71	79	0	1.2	.8	1.2	5.8	343	21.0	132	91	60	0	0	2	1
KAHULUI	85	69	87	65	77	0	T	-.2	T	4.2	579	32.9	255	88	61	0	0	0	0
LIHUE	82	73	84	69	78	0	.5	-.6	.4	4.2	82	45.3	145	92	66	0	0	3	0
ID BOISE	66	39	73	32	53	2	.3	-.1	.3	1.7	170	9.0	105	69	23	0	1	1	0
LEWISTON	66	44	72	34	55	4	.3	0	.3	.9	63	12.3	123	64	34	0	0	1	0
POCATELLO	65	30	73	22	48	0	0	-.2	0	.7	57	7.8	92	68	20	0	5	0	0
IL CHICAGO	54	40	83	32	47	-6	1.1	.7	.6	5.3	95	26.7	92	94	56	0	1	5	1
MOLINE	58	40	83	31	49	-4	.2	-.4	.2	6.3	111	30.1	93	86	42	0	2	3	0
PEORIA	56	39	82	31	48	-5	.8	.2	.5	4.1	74	20.4	67	92	53	0	3	4	1
QUINCY	58	40	84	29	49	-6	1.4	.7	1.3	4.6	71	17.0	51	82	45	0	2	2	1
ROCKFORD	56	36	83	29	46	-5	.2	-.5	.1	2.4	43	24.5	78	91	47	0	4	3	0
SPRINGFIELD	58	41	82	32	50	-6	.4	-.2	.2	6.1	120	26.2	90	88	48	0	1	3	0
IN EVANSVILLE	61	42	84	34	52	-5	2.0	1.5	1.4	4.3	101	44.3	131	97	61	0	0	5	1
FORT WAYNE	53	39	81	32	46	-6	1.7	1.2	.8	6.1	144	32.0	112	95	67	0	2	6	1
INDIANAPOLIS	56	40	81	31	48	-6	2.7	2.2	1.7	10.9	248	45.7	143	95	60	0	2	5	2
SOUTH BEND	52	39	82	32	46	-7	1.3	.6	.7	5.2	96	30.7	99	87	58	0	3	5	1
IA DES MOINES	57	35	82	25	46	-7	.3	-.2	.3	6.4	138	27.1	99	83	44	0	3	3	0
SIOUX CITY	57	31	73	19	44	-8	T	-.4	T	4.4	117	18.5	80	74	28	0	4	2	1
WATERLOO	56	34	82	28	45	-5	1.1	.6	.7	4.8	94	17.5	59	87	43	0	4	2	1
KS CONCORDIA	62	36	88	25	49	-7	.2	-.2	.2	4.5	102	23.4	94	80	36	0	3	1	0
DODGE CITY	63	34	86	22	49	-8	T	-.3	T	2.4	86	20.1	107	77	28	0	3	0	0
GOODLAND	58	32	79	22	45	-7	.1	-.1	.1	1.4	66	17.7	119	82	37	0	4	1	0
TOPEKA	61	36	84	20	49	-8	.1	-.5	.1	8.8	161	34.5	117	87	38	0	3	1	0
WICHITA	63	38	86	24	51	-8	T	-.5	T	7.5	143	33.9	133	79	30	0	3	1	0
KY BOWLING GREEN	63	44	83	34	54	-4	1.7	1.1	1.4	5.3	105	53.8	135	89	64	0	0	4	1
LEXINGTON	59	43	82	33	51	-5	2.7	2.2	1.2	8.2	170	48.8	129	93	66	0	0	5	2
LOUISVILLE	60	43	83	34	52	-5	2.0	1.4	.9	4.8	95	46.7	131	99	73	0	0	5	2
LA ALEXANDRIA	72	49	87	26	60	-7	.3	-.4	.2	.7	14	52.8	125	89	49	0	2	3	0
BATON ROUGE	72	52	87	35	62	-5	1.7	1.1	1.6	6.6	106	67.4	147	97	58	0	0	2	1
LAKE CHARLES	73	53	87	32	63	-5	.3	-.5	.2	.8	9	54.0	124	91	50	0	1	2	0
NEW ORLEANS	73	55	86	35	64	-5	.2	-.3	.2	5.1	65	41.4	84	94	59	0	0	3	0

Based on 1951-80 normals

Weather Data for the Week Ending October 21, 1989

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE Sep 1	PCT. NORMAL SINCE JAN 1	AVERAGE		TEMPERATURE °F		PRECIPITATION	
														MAXIMUM	MINIMUM	90 AND ABOVE	72 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	72	47	88	29	60	-6	.7	.1	.5	2.1	41	54.7	155	92	46	0	2	2	1
ME CARIBOU	49	31	62	21	40	-3	.8	.1	.4	5.1	92	26.6	91	87	53	0	5	3	0
PORTLAND	54	41	62	36	47	-1	3.1	2.3	1.6	8.6	149	34.7	106	97	73	0	0	6	2
MD BALTIMORE	68	50	86	36	59	3	3.4	2.7	1.0	8.2	148	47.4	139	99	67	0	0	4	4
SALISBURY	73	53	84	37	63	6	2.0	1.1	.8	11.0	168	47.1	125	99	68	0	0	4	2
MA BOSTON	58	45	66	38	51	-3	3.4	2.7	1.2	8.4	169	36.5	108	100	82	0	0	6	3
CHATHAM	59	51	63	48	55	2	3.0	2.1	1.0	8.4	136	39.3	109	95	88	0	0	6	2
MI ALPENA	45	34	55	30	40	-7	1.6	1.1	.6	4.0	88	18.0	75	93	63	0	1	6	1
DETROIT	54	40	82	33	47	-4	.9	.4	.6	4.6	126	25.2	100	95	64	0	0	4	1
FLINT	52	37	81	33	45	-5	.9	.4	.5	5.9	158	27.3	114	94	63	0	0	6	0
GRAND RAPIDS	50	36	80	31	43	-7	.7	.1	.3	6.4	127	28.1	103	94	57	0	3	5	0
HOUGHTON LAKE	45	33	68	28	39	-7	.7	.2	.4	2.2	50	17.1	74	93	64	0	3	3	0
LANSING	51	36	81	30	44	-6	.7	.3	.4	4.6	108	26.0	107	93	60	0	1	5	0
MARQUETTE	41	31	55	27	36	-8	1.7	1.0	1.1	3.6	58	22.6	73	92	57	0	6	4	1
MUSKOGON	50	36	73	31	43	-7	.7	0	.3	3.9	81	21.0	84	92	56	0	4	4	0
SAULT ST. MARIE	46	31	55	23	38	-7	.4	-.2	.3	2.5	43	18.9	71	88	50	0	4	2	0
MN ALEXANDRIA	52	29	63	23	41	-5	T	-.4	T	3.6	99	18.8	85	88	37	0	6	1	0
DULUTH	47	27	58	16	37	-7	T	-.5	T	4.9	102	24.1	93	92	45	0	6	0	0
INT'L FALLS	49	26	59	20	37	-5	.1	-.3	.1	2.7	60	19.1	89	91	44	0	6	1	0
MINNEAPOLIS	53	32	64	23	42	-7	.1	-.3	.1	1.5	40	21.3	91	79	35	0	4	1	0
ROCHESTER	52	29	72	18	40	-8	.4	-.1	.4	1.6	31	20.7	82	85	45	0	5	2	0
MS GREENWOOD	68	48	86	31	58	-5	.3	-.3	.3	7.6	148	59.3	141	91	57	0	1	2	0
JACKSON	70	46	86	29	58	-6	.2	-.3	.2	5.7	111	41.5	99	93	54	0	2	3	0
MERIDIAN	68	48	84	31	58	-5	2.7	2.1	1.9	9.8	183	57.6	133	97	62	0	2	3	2
MO CAPE GIRARDEAU	62	43	82	32	53	-1	.9	.4	.9	3.8	70	46.3	127	89	55	0	3	3	1
COLUMBIA	60	40	83	28	50	-7	.1	-.7	0	2.7	43	33.2	105	81	43	0	1	2	0
KANSAS CITY	61	38	84	25	50	-9	.5	-.2	.5	9.4	140	34.7	108	83	41	0	2	1	0
SAINT LOUIS	62	45	85	34	53	-4	.1	-.4	.1	2.3	54	27.0	95	78	44	0	0	2	0
SPRINGFIELD	61	40	82	27	50	-7	T	-.7	T	3.0	47	30.0	91	82	44	0	2	1	0
MT BILLINGS	56	36	72	25	46	-2	.1	-.2	.1	2.2	104	12.9	100	67	32	0	3	1	0
GLASGOW	59	30	75	22	45	-1	0	-.1	0	.8	60	9.5	94	74	26	0	4	0	0
GREAT FALLS	59	35	71	20	47	0	0	-.2	0	2.3	145	20.5	155	68	31	0	3	0	0
HAVRE	61	28	75	17	44	-1	0	-.1	0	1.2	81	10.3	98	70	27	0	5	0	0
HELENA	60	28	73	22	44	-1	0	-.1	0	1.5	116	11.3	112	80	28	0	5	0	0
KALISPELL	54	29	63	21	42	0	.1	-.1	.1	2.1	118	16.3	130	92	49	0	5	2	0
MILES CITY	61	31	77	22	46	-2	.1	-.1	.1	.4	21	12.8	101	73	24	0	4	1	0
MISSOULA	60	30	69	22	45	1	T	-.2	T	1.1	69	11.9	110	84	35	0	5	0	0
NE GRAND ISLAND	59	31	77	18	45	-7	0	-.2	0	6.8	205	20.8	98	78	29	0	4	0	0
LINCOLN	59	33	81	20	46	-7	.5	.2	.5	9.1	217	23.2	93	87	38	0	4	2	0
NORFOLK	58	29	73	15	43	-8	T	-.3	T	3.8	124	15.6	71	83	29	0	5	1	0
NORTH PLATTE	59	25	83	11	42	-7	T	-.2	T	1.1	48	13.7	76	85	28	0	5	0	0
OMAHA	56	35	78	25	45	-9	.6	.2	.5	7.3	146	21.7	79	76	42	0	3	2	1
SCOTT'S BLUFF	55	27	77	17	41	-9	.2	0	.1	1.9	115	8.8	66	93	42	0	6	2	0
VALENTINE	57	24	83	13	40	-8	.1	-.1	.1	2.1	103	11.6	72	75	28	0	6	1	0
NV ELY	66	27	73	18	47	1	.1	-.1	.1	.6	51	6.3	85	69	20	0	5	2	0
LAS VEGAS	82	56	85	53	69	2	T	-.1	T	0	2.2	68	30	14	0	0	0	0	0
RENO	73	39	79	35	56	7	T	-.1	T	1.6	370	6.8	128	73	20	0	0	0	0
WINNEMUCCA	71	32	77	22	52	3	T	-.1	T	.9	129	4.1	69	55	16	0	4	0	0
NH CONCORD	55	40	67	32	48	0	3.5	2.8	2.0	8.8	170	33.8	119	99	76	0	1	7	2
NJ ATLANTIC CITY	72	52	84	41	62	6	2.3	1.6	1.5	9.8	201	45.4	136	97	67	0	0	4	2
NM ALBUQUERQUE	64	41	74	33	53	-4	.1	-.1	.1	1.3	91	4.7	70	70	29	0	0	1	0
CLOVIS	63	37	80	27	50	-8	T	-.4	T	1.5	47	14.1	91	77	32	0	2	1	0
ROSWELL	71	43	88	32	57	-2	T	-.2	T	2.1	82	6.2	64	58	23	0	2	1	0
NY ALBANY	55	43	66	37	49	-1	3.6	2.9	2.1	7.6	146	36.3	127	96	76	0	0	6	2
BINGHAMTON	56	41	77	31	49	0	2.5	1.8	1.1	7.3	135	34.7	117	94	73	0	1	5	2
BUFFALO	52	39	76	35	46	-5	2.0	1.3	.6	6.4	120	33.6	114	96	70	0	0	6	1
NEW YORK	64	50	77	42	57	0	3.8	3.1	2.2	10.3	184	50.8	149	91	70	0	0	4	2
ROCHESTER	54	40	80	35	47	-4	1.6	1.0	.7	5.8	133	29.1	115	96	64	0	0	5	2
SYRACUSE	55	41	81	37	48	-3	2.1	1.4	1.0	9.2	171	31.2	100	98	71	0	0	7	2
NC ASHEVILLE	65	43	76	27	54	-2	2.2	1.5	.9	11.1	186	52.8	145	96	59	0	2	4	2
CHARLOTTE	70	51	84	34	60	0	1.8	1.2	1.7	11.4	209	43.0	120	95	55	0	0	3	1
GREENSBORO	69	49	84	33	59	1	2.2	1.5	1.9	11.0	188	44.0	124	93	57	0	0	3	1
HATTERAS	76	61	83	48	69	4	2.3	1.2	1.1	24.8	273	75.5	168	94	63	0	0	3	3
NEW BERN	78	55	84	35	67	4	1.6	.9	1.3	13.1	160	55.6	122	98	53	0	0	3	1
RALEIGH	72	51	86	33	62	3	1.7	1.1	1.1	7.4	144	46.8	135	96	54	0	0	3	2
WILMINGTON	77	56	85	38	67	3	1.0	.3	.7	12.3	157	55.8	122	95	52	0	0	2	1
ND BISMARCK	56	24	74	9	40	-5	0	-.2	0	1.3	69	10.3	74	81	31	0	6	0	0
FARGO	52	26	66	21	39	-6	0	-.3	0	2.3	82	17.6	100	83	36	0	6	0	0
GRAND FORKS	52	25	64	16	39	-6	T	-.2	T	.9	31	11.0	67	81	35	0	7	0	0
WILLISTON	57	23	71	12	40	-5	0	-.2	0	.7	37	9.1	74	79	30	0	6	0	0
OH AKRON-CANTON	54	41	77	33	48	-4	1.1	.6	.5	5.9	132	34.9	117	98	76	0	0	6	1
CINCINNATI	57	42	80	33	49	-5	2.1	1.5	1.3	5.8	128	44.3	134	92	67	0	0	5	1
CLEVELAND	56	44	81	35	50	-3	3.3	2.8	1.5	8.9	195	38.3	133	94	65	0	0	6	2
COLUMBUS	56	42	80	33	49	-4	1.6	1.2	.7	4.3	107	39.0	126	94	65	0	0	6	2

Weather Data for the Week Ending October 21, 1989

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION						RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS				
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Sep 1	PCT. NORMAL SINCE Sep 1	TOTAL, IN., SINCE JAN 1	PCT. NORMAL SINCE JAN 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	TEMPERATURE °F		PRECIPITATION	
																90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	55	41	80	32	48	-6	1.0	.5	.6	6.9	188	43.6	152	98	72	0	1	6	1
TOLEDO	54	40	83	33	47	-4	.8	.4	.4	4.5	119	34.2	132	92	63	0	0	5	0
YOUNGSTOWN	55	42	80	33	49	-2	1.3	.8	.6	8.7	179	39.1	127	96	71	0	0	6	0
OK OKLAHOMA CITY	65	42	83	29	53	-8	T	T	T	6.3	117	39.0	142	78	36	0	0	6	0
TULSA	65	44	85	33	54	-8	T	T	T	4.5	67	27.7	83	78	40	0	0	0	0
OR ASTORIA	63	44	74	35	54	-1	1.1	.7	.7	2.1	31	37.5	82	95	58	0	0	0	0
BURNS	64	30	71	20	47	0	.1	.1	.1	.7	72	8.7	121	68	22	0	0	0	0
MEDFORD	70	41	79	33	56	2	.1	.1	.1	2.1	120	12.9	102	90	39	0	0	4	0
PENDLETON	63	39	68	30	51	-1	.7	.5	.6	.9	75	10.8	127	75	37	0	0	2	0
PORTLAND	64	46	73	36	55	1	.4	.3	.3	1.9	56	21.7	89	96	45	0	0	2	0
SALM	64	42	73	32	53	0	.7	.1	.6	1.8	49	19.0	73	97	53	0	0	1	0
PA ALLENTOWN	62	46	80	34	54	1	3.2	2.5	1.2	9.8	162	41.4	116	97	71	0	0	3	0
ERIE	56	43	79	36	50	-2	2.0	1.2	.7	6.6	104	34.9	110	87	60	0	0	5	3
HARRISBURG	63	46	83	35	55	0	4.3	3.7	1.5	7.7	141	43.2	136	98	67	0	0	4	4
PHILADELPHIA	68	50	84	39	59	3	2.3	1.7	.8	8.4	158	45.6	136	97	72	0	0	4	4
PITTSBURGH	57	43	79	33	50	-2	1.1	.6	.5	6.5	146	38.3	125	92	65	0	0	6	3
SCRANTON	59	44	79	34	52	1	3.9	3.3	1.5	8.3	161	34.0	120	97	67	0	0	4	1
RI PROVIDENCE	59	46	70	37	53	0	4.8	4.0	1.7	11.2	187	48.0	136	99	80	0	0	5	3
SC CHARLESTON	75	57	86	39	66	1	1.4	.8	1.1	17.4	247	48.8	108	94	58	0	0	2	4
COLUMBIA	74	52	89	31	63	1	.6	0	.5	7.4	122	44.7	105	96	53	0	1	2	1
FLORENCE	76	54	87	34	65	2	.8	.3	.7	9.5	165	44.9	118	94	53	0	0	3	1
GREENVILLE	71	50	81	29	60	0	.7	.1	.5	8.5	120	42.0	98	95	56	0	1	3	0
SD ABERDEEN	54	25	73	17	40	-7	.1	.2	.1	2.4	107	17.2	106	85	34	0	6	1	0
HURON	56	24	74	15	40	-8	0	.3	0	1.6	70	13.0	77	80	28	0	6	0	0
RAPID CITY	57	27	75	18	42	-7	T	T	T	3.4	213	11.1	74	82	31	0	5	1	0
SIoux FALLS	56	25	71	15	40	-8	T	T	T	3.4	87	14.5	66	85	26	0	5	1	0
TN CHATTANOOGA	66	47	81	31	57	-2	.6	.1	.3	13.0	206	62.7	148	93	59	0	1	3	0
KNOXVILLE	65	47	83	35	56	-3	.9	.3	.4	10.4	219	48.3	128	95	64	0	0	5	0
MEMPHIS	65	48	83	35	56	-6	2.3	1.8	2.2	8.4	163	53.2	128	91	60	0	0	2	1
NASHVILLE	65	46	84	35	55	-4	3.3	2.7	1.8	9.9	181	51.1	130	90	61	0	0	4	2
TX ABILENE	71	46	88	32	59	-7	.3	.2	.2	4.5	95	26.7	131	69	28	0	1	2	0
AMARILLO	65	38	88	25	52	-7	T	T	T	2.5	94	19.0	109	72	27	0	2	1	0
AUSTIN	77	53	92	41	65	-4	0	0	0	1.1	18	23.1	89	72	29	2	0	0	0
BEAUMONT	75	53	90	32	64	-5	T	T	T	1.3	16	58.7	131	91	46	1	1	1	0
BROWNSVILLE	80	57	92	40	69	-6	.1	.7	.1	2.6	33	15.6	72	87	40	1	0	1	0
CORPUS CHRISTI	81	55	94	39	68	-5	0	0	0	2.1	24	15.5	56	77	32	2	0	0	0
DEL RIO	76	52	90	38	64	-6	T	T	T	1.4	32	7.2	47	54	25	1	0	0	0
EL PASO	72	44	83	32	58	-5	.1	.1	.1	.7	37	7.1	105	65	27	0	1	1	0
FORT WORTH	73	46	90	33	60	-7	.2	.4	.2	2.7	48	37.3	141	81	32	1	0	1	0
GALVESTON	73	59	84	46	66	-6	1.5	.9	1.5	2.8	35	37.8	114	83	57	0	0	1	0
HOUSTON	76	51	92	32	64	-6	T	T	T	2.8	36	53.0	140	87	41	1	1	0	0
LUBBOCK	71	40	90	27	56	-5	T	T	T	3.7	112	14.7	91	68	23	1	1	0	0
MIDLAND	72	43	91	27	57	-7	T	T	T	2.8	89	7.8	64	66	24	1	1	0	0
SAN ANGELO	75	44	91	28	60	-6	T	T	T	2.8	62	16.5	104	70	22	1	1	1	0
SAN ANTONIO	78	50	91	36	64	-6	0	0	0	4.7	81	17.1	70	74	27	2	0	0	0
VICTORIA	78	55	92	40	67	-5	0	0	0	2.8	32	19.2	61	80	33	1	0	0	0
WACO	75	48	94	34	62	-8	.1	.5	.1	.6	11	27.0	105	80	28	1	0	1	0
WICHITA FALLS	70	44	88	29	57	-7	T	T	T	5.3	101	34.1	147	75	29	0	2	0	0
UT CEDAR CITY	66	36	72	28	51	0	.2	0	.2	.4	31	5.9	71	61	19	0	3	2	0
SALT LAKE CITY	67	40	75	32	53	1	T	T	T	.5	31	8.1	66	70	23	0	1	1	0
VT BURLINGTON	54	40	70	33	47	0	2.2	1.5	1.0	8.7	170	32.0	117	95	68	0	0	6	1
VA NORFOLK	76	57	85	40	66	6	1.3	.5	1.0	7.3	110	49.2	130	94	56	0	0	3	1
RICHMOND	70	51	85	38	61	3	1.4	.6	.6	8.0	133	43.3	120	95	60	0	0	4	1
ROANOKE	67	48	86	35	57	1	2.0	1.2	1.1	12.8	233	47.6	147	95	57	0	0	3	2
WA QUILLAYUTE	60	44	66	32	52	2	3.6	1.2	2.1	6.6	51	56.5	78	96	61	0	1	4	3
SEATTLE-TACOMA	62	44	74	37	53	1	.6	.2	.3	1.8	44	22.1	88	97	47	0	0	3	0
SPOKANE	59	36	66	27	48	1	.5	.3	.3	.9	64	10.5	90	92	46	0	3	2	0
YAKIMA	62	33	66	25	48	-2	T	T	T	3	3	3.9	72	87	35	0	3	0	0
WV BECKLEY	61	42	80	30	52	1	4.0	3.4	3.0	8.3	152	38.9	110	99	69	0	4	5	2
CHARLESTON	63	45	83	35	54	-1	2.7	2.1	1.2	11.2	235	53.0	151	98	65	0	0	4	3
HUNTINGTON	62	45	82	36	53	-2	2.6	2.1	1.0	10.1	219	54.7	161	92	61	0	0	4	3
PARKERSBURG	59	44	80	35	52	-3	2.2	1.7	.7	10.9	242	49.9	157	97	67	0	0	5	3
WI GREEN BAY	48	34	63	27	41	-6	2.7	2.2	1.7	4.2	89	17.4	72	87	52	0	3	5	2
LACROSSE	54	34	76	24	44	-6	.8	.4	.8	3.9	78	20.3	76	88	41	0	3	2	1
MADISON	52	34	81	25	43	-6	.8	.3	.7	2.5	53	22.8	86	88	48	0	5	4	1
MILWAUKEE	52	37	81	32	45	-6	1.8	1.3	.7	5.6	127	27.8	107	94	55	0	2	4	2
WAUSAU	50	33	66	25	41	-5	.6	.1	.2	2.2	39	18.4	66	89	40	0	5	3	0
WY CASPER	55	32	72	21	43	-3	.1	.1	.1	3.3	252	12.0	123	73	36	0	5	2	0
CHEYENNE	51	28	70	19	40	-7	.4	.2	.2	2.0	127	11.8	97	92	46	0	6	3	0
LANDER	54	32	64	25	43	-3	.1	.2	.1	2.4	142	13.7	121	82	37	0	3	2	0
SHERIDAN	57	29	73	17	43	-3	.2	.1	.2	1.6	81	10.4	79	85	38	0	4	1	0

National Agricultural Summary

OCTOBER 16-22, 1989

HIGHLIGHTS: Rain slowed harvests in the eastern Corn Belt and portions of the Delta and Southeast. Soil moisture was adequate to surplus in those areas but remained mostly short to adequate in the Great Plains and the West. Frost damaged late planted crops in the central Great Plains and portions of the Delta.

Winter wheat was mostly good to fair with 68 percent (%) of the acres emerged, 7 percentage points ahead of the 5-year average. Planting was 87% complete, 9 points ahead of normal. Corn harvest advanced 17 points and was 63% complete, 8 points ahead of normal. Soybean harvest was 66% complete, 9 points ahead of normal. Ninety-five percent of the acres was dropping leaves, 1 point ahead of normal. Cotton harvest was 32% complete, 6 points behind normal. Eighty-six percent of the acres was opening bolls, 3 points ahead of normal. Sorghum harvest was 56% complete, 2 points behind normal. Eighty-four percent of the acres was mature, 10 points behind normal.

SMALL GRAIN: Winter wheat was mostly good to fair with 68% of the acres emerged, 7 points ahead of normal. Planting was 87% complete, 9 points ahead of normal. Planting was complete in Nebraska and South Dakota and nearly complete in Colorado, Kansas, Michigan, Montana, Oklahoma, and Washington. Planting advanced 20 or more points in Indiana and Ohio. Rain aided germination and emergence in the Corn Belt, where crop condition was mostly good to fair. In Kansas, winter wheat was good to excellent. Crop emergence and early growth have been good. In Oklahoma, winter wheat was good to fair. Rain was needed to promote germination and growth in Nebraska and Oklahoma. Russian wheat aphids were present in wheat fields in Oregon and Washington. Some control measures were underway in Washington.

CORN: Corn harvest advanced 17 points and was 63% complete, 8 points ahead of normal. Harvest progressed rapidly in the western Corn Belt but was slowed by rain in the eastern Corn Belt. Harvest lagged 20 and 24 points behind normal in Indiana and Ohio, respectively. Harvest was more than 20 points ahead of normal in Iowa, Minnesota, and South Dakota. Harvest was 70% complete, slightly ahead of normal in Illinois.

SOYBEANS: Soybean harvest was 66% complete, 9 points ahead of normal. Harvest progressed well in the central Great Plains and western Corn Belt. Rain and snow caused some lodging in Ohio, where harvest lagged 18 points behind normal. Despite inclement weather, harvest advanced 24 points in Ohio and 14 points in Indiana. Harvest was more than 20 points ahead of normal in Iowa, Michigan, Minnesota, Nebraska, and South Dakota. In Illinois, harvest was 88% complete, 10 points ahead of normal. Harvest lagged behind normal in most of the Delta and Southeast. Frost damaged late planted soybeans in Mississippi and Arkansas.

COTTON: Cotton harvest was 32% complete, 6 points behind normal. Eighty-six percent of the acres was opening bolls, 3 points ahead of normal. Bolls opening lagged slightly behind normal in the Delta and Southeast. Harvest lagged behind normal in the

Delta and Southeast, especially in Alabama, Arkansas, and Mississippi, where harvest lagged 30 or more points behind normal. Frost damaged late planted cotton in Mississippi. In Texas, harvest was 24% complete, 3 points ahead of normal. California's harvest advanced 20 points and was 40% complete, 11 points ahead of normal.

SORGHUM: Sorghum harvest was 56% complete, 2 points behind normal. Eighty-four percent of the acres was mature, 10 points behind normal. Frost damaged late planted sorghum in the central Great Plains. In Nebraska, harvest advanced 20 points and was 65% complete, 9 points ahead of normal. Kansas harvest was 35% complete, 10 points behind normal. In Texas, harvest was 70% complete, 3 points behind normal.

OTHER FIELD CROPS: Rice harvest was 94% complete, 1 point ahead of normal. Harvest was complete or nearly complete except in California. California's harvest advanced 25 points but was still 9 points behind the 84% average. Peanut harvest was ahead of normal in the Southeast but lagged behind normal in Oklahoma and Texas. Wet weather damaged unthreshed peanuts in North Carolina. Burley tobacco stripping continued in Kentucky and Tennessee. Stored tobacco was in good to fair condition in Kentucky. Dry bean harvest was nearly complete in Michigan.

FRUIT AND NUTS: Florida citrus groves remained in near excellent condition. Producers were irrigating in many areas. Early fresh market harvests continued. Pecan harvest continued in the Delta and Southeast. Apple harvest was nearly complete in North Carolina. In New York, wind and hail damaged unharvested apples. Harvest was 80% complete. Small fruit size slowed orange harvest in the Rio Grande Valley, Texas. Grapefruit and lemon harvests continued in western and central Arizona. Apple harvest continued in eastern Arizona. In California, almond, walnut, pistachio, and old crop Valencia orange harvests neared completion. Apple harvest was nearly complete in Oregon and Washington. Grape harvest continued in Washington.

VEGETABLES: Record-low temperatures occurred in Florida's major vegetable producing areas but caused only minimal damage. Harvest volumes increased seasonally. The first Palmetto-Ruskin tomatoes of the season were picked. Vegetable harvests were nearly complete in New York. Maine potato harvest was nearly complete. In Texas, frost damaged vegetables in the High Plains and the east. Planting and harvesting operations were active in the Rio Grande Valley. Vegetable harvests continued in Arizona. In California, watermelon harvest was complete in the desert area. Fall potato harvest neared completion in the Tulelake-Butte Valley area. Dry onion and potato harvests were nearly complete in Colorado and Idaho.

PASTURES AND LIVESTOCK: Pasture conditions remained mostly fair to poor in the northern Great Plains and much of the West. Rain was needed. In Texas, producers moved cattle to early planted winter wheat fields in the High Plains area.

Crop Progress

FOR WEEK ENDING OCTOBER 22, 1989

	RICE		
	% HARVESTED		
	1989	1988	AVG.
ARK	96	91	91
CALIF	75	85	84
LA	100	98	99
MISS	95	94	97
TEX	100	100	100

5 STATES	94	93	93
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THESE 5 STATES PRODUCED 97% OF THE 1988 RICE CROP.

	COTTON		
	% BOLLS OPENING		
	1989	1988	AVG.
ALA	96	100	98
ARIZ	100	100	100
ARK	94	97	98
CALIF	100	100	100
GA	89	92	94
LA	100	100	100
MISS	97	97	100
MO	100	98	99
N MEX	97	87	92
N C	99	99	100
OKLA	70	90	75
S C	95	94	98
TENN	100	100	100
TEX	75	81	65

14 STATES	86	90	83
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THESE 14 STATES PRODUCED 99% OF THE 1988 COTTON CROP.

	COTTON		
	% HARVESTED		
	1989	1988	AVG.
ALA	36	62	68
ARIZ	40	25	38
ARK	34	62	64
CALIF	40	25	29
GA	28	47	53
LA	69	78	75
MISS	33	74	72
MO	64	61	67
N MEX	20	20	16
N C	23	25	35
OKLA	5	18	7
S C	31	38	56
TENN	54	60	61
TEX	24	27	21

14 STATES	32	39	38
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THESE 14 STATES PRODUCED 99% OF THE 1988 COTTON CROP.

	CORN		
	% HARVESTED		
	1989	1988	AVG.
COLO	23	43	34
GA	98	95	97
ILL	70	90	69
IND	34	54	54
IOWA	78	94	55
KANS	75	85	75
KY	70	63	68
MICH	30	25	25
MINN	72	93	47
MO	83	91	71
NEBR	60	75	48
N C	84	81	85
OHIO	16	26	40
PA	20	22	27
S DAK	78	79	45
TEX	97	99	95
WIS	40	65	37

17 STATES	63	77	55
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THESE 17 STATES PRODUCED 94% OF THE 1988 CORN CROP.

	SOYBEANS		
	% DROPPING LEAVES		
	1989	1988	AVG.
ALA	79	72	83
ARK	73	62	70
GA	86	86	93
ILL	100	100	100
IND	100	100	100
IOWA	100	100	100
KANS	98	99	95
KY	89	92	94
LA	97	80	83
MICH	100	100	100
MINN	99	99	99
MISS	86	84	91
MO	97	98	96
NEBR	100	100	100
N C	65	60	52
OHIO	100	100	100
S C	55	50	62
S DAK	100	100	100
TENN	100	100	100

19 STATES	95	94	94
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THESE 19 STATES PRODUCED 95% OF THE 1988 SOYBEANS CROP.

	SOYBEANS		
	% HARVESTED		
	1989	1988	AVG.
ALA	28	25	31
ARK	21	21	29
GA	10	14	22
ILL	88	94	78
IND	55	72	69
IOWA	95	97	73
KANS	50	70	45
KY	14	33	30
LA	62	43	43
MICH	75	40	35
MINN	99	98	71
MISS	30	25	33
MO	55	67	45
NEBR	88	93	65
N C	6	7	9
OHIO	48	64	66
S C	3	5	7
S DAK	100	95	68
TENN	30	29	27

19 STATES	66	70	57
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THESE 19 STATES PRODUCED 95% OF THE 1988 SOYBEANS CROP.

GRAIN SORGHUM
% MAIURE

	1989	1988	AVG.
ARK	100	100	NA
ILL	100	100	NA
KANS	70	95	90
LA	100	100	100
MISS	98	100	100
MO	98	100	98
NEBR	100	100	100
OKLA	77	60	95
S DAK	100	100	95
TENN	100	100	100
TEX	89	95	93

11 STATES 85 95 NA

EXCL. STATES WITH NA 84 95 94

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

NA - NOT AVAILABLE.

GRAIN SORGHUM
% HARVESTED

	1989	1988	AVG.
ARK	95	95	94
ILL	67	85	66
KANS	35	55	45
LA	100	98	100
MISS	88	94	96
MO	76	81	68
NEBR	65	87	56
OKLA	27	20	30
S DAK	89	81	55
TENN	100	100	100
TEX	70	78	73

11 STATES 56 70 58

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

WINTER WHEAT
% PLANTED

	1989	1988	AVG.
ARK	36	26	30
CALIF	10	10	14
COLO	98	100	100
GA	6	12	16
IDAHO	93	95	95
ILL	85	90	70
IND	75	84	69
KANS	96	95	85
MICH	95	90	75
MO	67	70	52
MONT	98	100	94
NEBR	100	100	100
N C	22	26	25
OHIO	72	84	72
OKLA	95	90	75
OREG	87	67	64
S DAK	100	100	100
TEX	84	90	78
WASH	95	91	92

19 STATES 87 87 78

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

WINTER WHEAT
% EMERGED

	1989	1988	AVG.
ARK	20	13	NA
CALIF	1	1	2
COLO	90	90	91
GA	4	9	10
IDAHO	69	63	64
ILL	45	51	42
IND	44	58	50
KANS	80	75	65
MICH	75	70	55
MO	41	51	38
MONT	75	74	61
NEBR	100	98	98
N C	12	18	NA
OHIO	38	48	44
OKLA	60	65	50
OREG	45	36	35
S DAK	95	86	94
TEX	58	72	61
WASH	81	71	70

19 STATES 66 67 NA

EXCL. STATES WITH NA 68 69 61

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

NA - NOT AVAILABLE.

Crop Condition

FOR WEEK ENDING OCTOBER 22, 1989

STATE	WINTER WHEAT				
	VP	P	F	G	EX
ARK	0	0	16	72	12
CALIF	NA				
COLO	1	3	24	63	9
GA	0	0	9	91	0
IDAHO	0	1	13	63	23
ILL	0	1	19	73	7
IND	NA				
KANS	0	4	16	48	32
MICH	0	5	20	45	30
MO	1	5	52	42	0
MONT	0	3	19	66	12
NEB	1	0	41	49	9
N C	NA				
OHIO	0	4	37	50	9
OKLA	0	0	25	75	0
OREG	NA				
S DAK	0	8	28	53	11
TEX	NA				
WASH	0	0	50	50	0
19 STATE	0	2	25	59	14
PREV WEEK NA					
PREV YEAR	0	6	25	58	11

NA - NOT AVAILABLE.

VP - VERY POOR P - POOR F - FAIR G - GOOD EX - EXCELLENT

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service.

ALABAMA: Rainfall 1.00 to 3.00 in. central; under 1.00 in. elsewhere. Temperatures 5 to 7° below normal; 10° below normal local areas.

Days suitable for fieldwork 3.9. Soil moisture 2% short, 77% adequate, 21% surplus. Cool, wet conditions limited all field activities. Corn 89% harvested, 93% 1988, 94% avg. Cotton 96% bolls opened, 100% 1988, 98% avg.; 36% harvested, 62% 1988, 68% avg.; 49% fair, 51% good. Soybeans 90% turning color, 91% 1988, 96% avg.; 79% dropping leaves, 72% 1988, 83% avg.; 66% mature, 51% 1988, 65% avg.; 28% harvested, 25% 1988, 31% avg.; 5% poor, 53% fair, 42% good. Peanuts 99% dug, 91% 1988, 90% avg.; 95% combined, 79% 1988, 81% avg. Sorghum 83% harvested, 79% 1988, 82% avg. Winter wheat 42% seeded, 37% 1988, 31% avg. Livestock, pastures good to fair. Primary activities: Preparing land, planting winter annuals; harvesting row crops, sweet potatoes, fall vegetables; repairing harvest equipment; general care of livestock, poultry, catfish.

ARIZONA: Temperatures 2° below to 5° above normal. Extremes 25°; 97°. Cool, dry early in period; heavy showers, thunderstorms 21st central, east; rainfall none extreme west to 0.54 in. north central.

Cotton defoliation, harvest continued; increased activity Pima cotton; insects mostly moderate, whitefly infestations continued later planted fields southwest, central; crop 86% good, 14% excellent. Alfalfa harvest activity moderate; weeds, insects light to moderate; new stand development normal; crop good; hay, roughage adequate. Grapefruit, lemon harvest, packing west, central areas; cantaloupe, honeydew, mixed melon harvests continued. Asparagus harvest continued western areas; lettuce heads forming; planting, thinning, weeding continued. Apples harvested, packed eastern areas; red chilies, green chilies, fall lettuce, pumpkins, winter squash, green bell peppers harvested.

ARKANSAS: Heavy showers northeast first of week. Record cold freezing temperatures all sections except northeast latter part. Extremes 17°; 92°. Rainfall none to 2.90 in.

Days suitable for fieldwork 5.0. Soil moisture 43% short, 46% adequate, 11% surplus. Rice 100% ripe, 100% 1988, 99% avg. Soybeans 94% yellowing, 84% 1988, 87% avg.; mature 48%, 42% 1988, 51% avg.; 8% poor, 78% fair, 14% good. Cotton 85% fair, 15% good. Oats 41% planted, 41% 1988, 35% avg. Corn 99% harvested, 99% 1988, 96% avg. Main activities: Corn, cotton, rice, sorghum, soybean harvest; seeding small grains; disking rice stubble; liming, fertilizing fall pastures; making final hay cuttings; selling, weaning calves. Early freeze slowed cotton boll opening. Soybean harvest interrupted by rains. Freeze will drop yield potentials, late beans. Pecan harvest should start next 7 to 10 days. Pasture growth stopped. Final hay cuttings, plentiful amounts. Livestock good.

CALIFORNIA: High pressure over State allowed temperatures to warm to near or slightly above normal most of week. Early 21st, low pressure trough developed off coast, brought some light rainfall to north coast.

Field activities good progress. Rice harvest full swing. Stubble burning active, smoke

abatement rules permitting. Rain northern portions 21st interrupted rice harvest, other field activities. Cotton harvest full swing. Shredding, discing followed rapidly. Defoliant application later fields. Ground preparations fall seeded small grains continued. Few fields seeded. Corn, dry bean, sugarbeet, sunflower harvests good progress. Alfalfa, Sudan grass harvests seasonal. Some new crop alfalfa seeded. Picking late varieties apples continued. Avocado, soft date harvests ongoing. Raisins reconditioning continued. Late table grapes packed. Wine grape harvest winding down. Packing of kiwis, persimmons, pomegranates continued. Almond, walnut, pistachio harvests winding down. Olive harvest continued. Old crop valencia orange harvest neared completion. Some new crop navel orange crop harvested. Desert grapefruit, lemon harvests ongoing. Tangerine harvest gained momentum. Broccoli harvest moderate with good quality, Salinas, increased with good quality, Santa Maria; harvest continued Fresno County, crop progress good Tulare, Merced counties. Cauliflower movement moderate Salinas, increased Santa Maria, variable quality; growing well, ready to head out Tulare, Merced. Celery supplies fairly heavy Salinas, moderate Santa Maria, good quality. Sweet corn harvest continued Fresno County, Kern-Tulare area. Lettuce movement fairly light, seasonally decreasing, Salinas; remained moderate, variable quality, Santa Maria. Shipments from westside area moderate, seasonally increasing, variable quality. Land preparation spring 1990 crop underway westside area. Cantaloupe, honeydew melon harvest Palo Verde Valley, good quality. Watermelon season concluded desert area, few loads still trucked from Delta. Pepper picking continued Delta, westside areas. Fall potato harvest moved to completion Tulalake-Butte Valley area. Pumpkin harvest full swing in desert, active other growing areas. Fresh market, processing tomatoes harvest continued, Sacramento, San Joaquin Valley areas. Fields being fumigated, prepared for planting next years crops. Livestock good, Statewide. Range pasture, water supplies declined desert, most valley areas, as early grass growth from September rains started to dry. Supplemental feeding increased. Water supplies low. Livestock movement from summer grazing areas to feedlots steady.

COLORADO: Cooler temperatures, snow at the beginning of the week gave way to warmer temperatures later. Precipitation from a trace to 0.57 in. over State. Temperature 4 to 6° below normal in the east, 1 to 2° below normal in the mountains, west.

Days suitable for fieldwork 5.1. Soil moisture 10% very short, 61% short, 29% adequate. Alfalfa 3rd cutting .89% complete, 4th cutting 39% complete. Corn good, 95% mature, 23% harvested. Dry onions 97% harvested. Dry beans 97% threshed. Summer potatoes 96% harvested. Fall potatoes 97% harvested. Sorghum 83% mature, 40% harvested. Sugarbeets 31% harvested. Winter wheat 90% emerged. Livestock good, range, pasture fair to good.

FLORIDA: Cool week; temperatures 5 to 9° below normal, north, 3 to 6° below, Peninsula. Extreme highs mid upper 80s north to low, mid 90s Peninsula. Coldest lows upper 20s, low 30s north

to around 40° central, upper 40s, low 50s south. Rain fell over entire State; amounts mostly under 0.75 in. north, local areas recorded over 1.00 in.; Peninsula mostly under 0.35 in., only isolated locations over 1.00 in.

Soil moisture Panhandle, southern Peninsula mostly adequate; northern, central Peninsula adequate to surplus. Light frost Panhandle, northern Peninsula late week burned leaves some soybeans, cotton. Peanut harvest virtually complete. Cotton harvest full swing. Soybean harvest becoming active. Small grain planting started. Growers prepared to start sugarcane harvest. Sugarcane planting continued. Late week frosts reduced forage growth Panhandle, northern Peninsula. Panhandle pastures poor to good; northern Peninsula fair to good; central, southern Peninsula remain good to excellent. Cattle continued good to excellent. Most citrus trees near excellent. Rain needed; many growers irrigating. Early bloom fruit being picked, fresh use. Caretakers cutting cover crops. Young tree herbiciding continued. Record low temperatures over major vegetable producing areas. Light frost, minimal leaf burn, central, north. Rainfall limited. Planting winter crops steady. Harvest gaining seasonally. Volume leaders: Snap beans, sweet corn, cucumbers, eggplant, peppers, radishes, squash. First Palmetto-Ruskin tomatoes picked.

GEORGIA: First freeze or frost of the season. Lowest temperatures upper 20s to low 30s common, low, mid 20s mountains, mid, upper 30s southeast. Warmest temperatures upper 70s north, upper 80s south. Temperatures 3 to 6° below normal. Rain varied considerably. Heaviest totals southeast with 2.00 to 5.00 in. common Alma to Savannah. Elsewhere 1.00 in. or less, several areas less than 0.50 in.

Days suitable for fieldwork 4.1. Soil moisture 8% short, 71% adequate, 21% surplus. Cotton 1% poor, 18% fair, 77% good, 4% excellent; rain mid week slowed harvest, after good start. Sorghum grain 80% harvested, 64% 1988, 74% avg. Peanuts 98% dug, 93% 1988, 93% avg.; 93% threshed, 80% 1988, 86% avg. Soybeans 8% poor, 37% fair, 52% good, 3% excellent; frost should aid harvest, no damage expected. Rye 25% fair, 69% good, 6% excellent; 53% planted, 54% 1988, 42% avg.; rain helpful for winter grazing. Other small grains 25% planted, 33% 1988, 32% avg. Apples 70% harvested, 100% 1988, 98% avg.; apples fair to good. Pecans 15% poor, 51% fair, 34% good; 13% harvested, 5% 1988, 10% avg. Pastures, hay fair to good. Cattle, hogs good.

IDAHO: Temperatures near normal. North had precipitation 0.25 to 0.50 in.

Days suitable for fieldwork almost 7.0. Soil moisture 2% very short, 21% short, 76% adequate, 1% surplus. One report of slight infestation of Russian wheat aphid in one isolated eastern area. Winter wheat planted 93%, 95% 1988, 95% avg.; 69% emerged, 63% 1988, 64% avg. Potatoes harvested 97%; 98% 1988; 93% avg. Sugarbeets harvested 54%, 53% 1988, 51% avg. Dry beans harvested 99%, 98% avg. Onions harvested 99%, 97% avg. Corn harvested for grain 33%, 37% avg. Apples harvested 77%, 87% avg. Winter wheat 1% poor, 13% fair, 63% good, 23% excellent. Feed supplies adequate, however, ranges, pastures poor. Cattle good.

ILLINOIS: Temperatures 5 to 9° below normal. Rainfall generally 1 in. northeast, central, southeast; lesser amounts other areas.

Days suitable for fieldwork 4.5. Soil moisture 41% short, 53% adequate, 6% surplus. Pasture 2%

poor, 35% fair, 60% good, 2% excellent. Livestock roughage requirements from pasture 62%, 48% 1988, 62% avg.

INDIANA: Temperatures 5 to 10° below normal. Lows upper 20s to low 30s, highs mid 70s to near 80°. Precipitation 0.60 to 2.80 in.

Days suitable for fieldwork 3.6. Topsoil 6% short, 59% adequate, 35% surplus. Subsoil 7% short, 86% adequate, 7% surplus. Corn 23% moisture content, soybeans 13% moisture content. Soybean 96% mature, 100% 1988, 99% avg. Pasture 3% very poor, 1% poor, 34% fair, 53% good, 9% excellent. Snow, rain slowed harvest.

IOWA: Temperatures 6 to 9° below normal. Extremes 14°; 78°. Rainfall none to 0.95 in., average 0.11 in.

Days suitable for fieldwork 6.1. Topsoil 65% short, 35% adequate. Subsoil 94% short, 6% adequate. Corn good. Soybeans good. Row crop acreage fall tilled 25%, 39% 1988, 19% avg. Row crop acreage with fall fertilizer applied 20%, 29% 1988, 15% avg. Livestock good. Pasture 5% very poor, 23% poor, 50% fair, 20% good, 2% excellent.

KANSAS: Temperatures mid to upper 40s, 4 to 10° below normal. Little precipitation during week, highest avg. 0.44 in. northeast, less than 0.25 in. elsewhere.

Days suitable for fieldwork 6.0. Topsoil 84% short, 16% adequate. Subsoil 33% short, 67% adequate. Corn, sorghum, soybean harvest good progress, generally behind last years schedule. Corn harvest nearing completion, central, southern areas. Sorghum generally late, some stands damaged by frost may not reach maturity. Wheat seeding nearing completion well ahead schedule. Good emergence, early growth, short moisture causing spotty stands. Range, pasture good, furnishing adequate forage. Movement of livestock to corn, sorghum stubble relieving pressure on native pastures.

KENTUCKY: Strong cold front brought unseasonably cold air. Temperatures 3 to 4° below normal. Highs upper 30s, lower 40s on 19th, 20th, 25 to 30° below normal. Nearly 3.00 in. of snow fell over north on 19th, rain over south. Rainfall 1.00 in. over west to over 5.00 in. over southeast.

Days suitable for fieldwork 1.8. Soil moisture 1% short, 62% adequate, 37% surplus. Corn, soybean harvest delayed by wet field conditions. Increased moisture brought more tobacco into proper case for stripping. Burley stripping 14% complete, 11% 1988, 13% avg. Housed tobacco 1% very poor, 31% fair, 66% good, 2% excellent. Houseburn continues to be primary curing problem. Wheat seeding 47% complete, 56% 1988, 50% avg. Pastures 91% good or better.

LOUISIANA: Temperatures 5 to 6° below normal. Extremes 26°; 93°. Rainfall 0.25 to 1.23 in.

Days suitable for fieldwork 4.8. Soil moisture 9% very short, 28% short, 54% adequate, 9% surplus. Cotton harvested 69%, 78% 1988, 75% avg. Hay final cutting 99%, 94% 1988, 96% avg. Pecans harvested 2%, 5% 1988, 6% avg. Soybeans shedding leaves 97%, 80% 1988, 83% avg.; harvested 62%, 43% 1988, 43% avg. Sugarcane planted 100%, 95% 1988, 96% avg.; harvested 21%, 17% 1988, 11% avg.; 6% poor, 23% fair, 65% good, 6% excellent. Sweet potatoes harvested 72%, 84% 1988, 85% avg.; 33% fair, 67% good. Wheat planted 15%, 13% 1988, 14% avg.; emerged 5%, 7% 1988, 8% avg. Livestock 2% poor, 20% fair, 76% good, 2% excellent. Pasture 2% very poor, 12% poor, 53% fair, 33% good. Vegetable 10% poor, 58% fair, 32% good.

MARYLAND & DELAWARE: MARYLAND: Precipitation 2.71 in. Temperature 63°, normal 56°. Extremes 31°; 87°.

Days suitable for fieldwork 2.7. Topsoil 20% adequate, 80 surplus. Subsoil 65% adequate, 35% surplus. Field corn good; harvested for grain 62%, 77% 1988, 76% avg. Soybean good; 71% shedding leaves, 95% 1988, 87% avg.; 23% harvested, 34% 1988, 28% avg. Apples 96% harvested, 91% 1988, 90% avg. Pasture good. All hay adequate. Wheat 39% seeded, 61% 1988, 56% avg. Barley 63% seeded, 78% 1988, 79% avg. Rye 55% seeded, 67% 1988, 73% avg. Oats 11% seeded, 40% 1988, 62% avg.

DELAWARE: Precipitation 2.29 in. Temperature 64°, normal 56°. Extremes 37°; 86°.

Days suitable for fieldwork 2.4. Topsoil 57% adequate, 43% surplus. Subsoil 71% adequate, 29% surplus. Field corn good; harvested for grain 84%, 84% 1988, 83% avg. Soybeans good; 74% shedding leaves, 87% 1988, 88% avg.; 17% harvested, 31% 1988, 26% avg. Apples 95% harvested, 84% 1988, 83% avg. Pasture good. All hay adequate. Wheat 26% seeded, 37% 1988, 33% avg. Barley 50% seeded, 83% 1988, 67% avg. Rye 33% seeded, 50% 1988, 46% avg.

MICHIGAN: Temperatures 4 to 8° below normal. Extremes 23°; 83°. Precipitation 0.16 to 2.08 in. across State.

Days suitable for fieldwork 4.5. Soil moisture 20% short, 75% adequate, 5% surplus. Corn 30% harvested, 25% 1988, 25% avg. Soybeans 100% shedding, 100% 1988, 100% avg.; harvested 75%, 40% 1988, 35% avg. Dry beans harvested 98%, 55% 1988, 70% avg. Winter wheat 95% planted, 90% 1988, 75% avg.; 75% emerged, 70% 1988, 55% avg. Major activities: Harvesting corn for grain, soybeans, sugarbeets, potatoes, fruit; seeding winter wheat.

MINNESOTA: Temperatures 5 to 8° below normal. Extremes 9°; 80°. Precipitation none to 0.17 in. Greatest weekly total 0.48 in.

Days suitable for fieldwork 6.4. Topsoil 39% very short, 43% short, 18% adequate. Corn 72% harvested, 93% 1988, 47% avg. Soybeans 99% harvested, 98% 1988, 71% avg. Sugarbeets 99% harvested, 96% 1988, 84% avg. Potatoes 99% harvested, 99% 1988, 96% avg. Sunflowers 92% harvested, 97% 1988, 57% avg. Corn 18% moisture, 18% 1988, 23% avg. Soybeans 11% moisture, 11% 1988, 13% avg. Corn 31% land plowed, 57% 1988, 25% avg. Soybeans 56% land plowed, 66% 1988, 39% avg.

MISSISSIPPI: Cold, damp. Temperatures 5° below normal. Extremes 25°; 89°. Freezing temperatures almost statewide. Rainfall 0.95 in., 0.38 in. above normal.

Days suitable for fieldwork 2.9, 4.2 1988, 3.3 avg. Soil moisture 85% adequate, 10% surplus, 5% excessive. Corn 87% harvested, 86% 1988, 93% avg. Cotton fair; 33% harvested, 74% 1988, 72% avg. Some freeze damage to late crop. Hay 96% harvested, 95% 1988, 96% avg. Pecans fair to poor; 1% harvested, 5% 1988, 10% avg. Rice 95% harvested, 94% 1988, 97% avg. Sorghum 88% harvested, 94% 1988, 96% avg. Soybeans fair; 30% harvested, 25% 1988, 33% avg. Some freeze damage to late crop. Sweet potatoes 72% harvested, 84% 1988, 82% avg. Wheat 40% planted, 41% 1988, 25% avg. Pastures, livestock good.

MISSOURI: Temperatures 7° below normal. Rainfall less than 0.25 in. west central, central, south western areas, up to 1.00 in. northeast, over 2.00 in. parts of southeast.

Days suitable for fieldwork 4.5. Topsoil 44% short, 54% adequate, 2% surplus. Major corn areas all exceed 70% harvested, southeast 100%. Soybean

harvesting under 45% southern third, other areas 48% west central to 73% northeast. Sorghum harvest 95% southeast, other areas 51% southwest to 72% northeast. Cotton harvest slowed by rain. Acreage worked at least once for spring crops 20%, 25% 1988, 24% avg. Pasture 10% poor, 48% fair, 39% good, 3% excellent.

MONTANA: Temperatures near to slightly above normal in west, below normal east. Light rain or snow in northwest, central, south central.

Days suitable for fieldwork 6.6. Topsoil 35% short, 62% adequate, 3% surplus. Subsoil 37% short, 61% adequate, 2% surplus. Eastern third of State remains critically short of moisture. Pasture, range feed 2% very poor, 9% poor, 27% fair, 55% good, 7% excellent. Sugarbeets harvested 81%, 100% 1988, 91% avg. Potatoes harvested 91%, 100% 1988, 91% avg. Cattle, calves moved from summer ranges 66%, 90% 1988, 77% avg. Sheep, lambs moved 72%, 95% 1988, 82% avg.

NEBRASKA: Temperatures 5 to 8° below normal. Extremes 11°; 83°. Precipitation beginning of week produced from a few hundredths up to 0.5 in. of rain, snow. Snow mainly in west.

Days suitable for fieldwork 6.4. Topsoil 65% short, 35% adequate. Subsoil 82% short, 18% adequate. Corn harvest nearly 1 week ahead of average. Drying down well in east. Some eastern sorghum fields with regrowth, second heading needed last weeks heavy frost to stop growth, allow drydown. Soybean harvest about 13 days ahead of normal. Some late season disease problems caused by wet cool weather in August, September may have reduced yields in some central counties. Winter wheat making good growth in east, need more rain to continue favorable development. Russian wheat aphids reported in a few western fields. Sugarbeet harvest continued in a west, dry edible bean harvest complete. Pasture, range feed 15% very short, 54% short, 31% adequate. Hay, roughage 11% very short, 26% short, 63% adequate. Many cattle moved to graze crop residues. Western cattlemen weaning calves, moving some to market.

NEVADA: High pressure system dominated sunny weather most of period. Storm front end of week produced trace precipitation extreme south. Temperatures 5° above normal most areas. Extremes 20°; 96°.

Potato harvest windup stage. Hay harvest virtually over. Livestock good despite drought-like conditions. Early hay feeding common.

NEW ENGLAND: Precipitation 1.00 to 3.00 in. northern New Hampshire, northern Vermont, Maine 3.00 to 5.00 in. remainder. Temperatures near 40° Canadian border to near 50° south coast. Temperatures below normal.

Cranberries 85% harvested. Maine potato harvest nearing completion. Major farm activities: Harvesting remainder of fall vegetables, chopping corn, fall cleanup.

NEW JERSEY: Temperatures near normal north, central; above normal south. Extremes 28°; 87°. Rainfall 4.86 in. north, 3.67 in. central, 2.77 in. south. Heaviest 24-hour total 2.42 in. on 19th, 20th. Estimated soil moisture percent field capacity averaged 98% north, 95% central, 89% south. Four inch soil temperatures averaged 56° north, 59° central, 60° south.

Fieldwork limited due to excess soil moisture. Some erosion, local flooding occurred. Hardy fall vegetables continued to be marketed. Sweet potato, apple, cranberry harvest slowed by poor weather conditions. Corn, soybeans continued to

mature. Harvest delayed by wet fields. Pasture growth very limited. Fall sown grains conditions good except where eroded.

NEW MEXICO: Light precipitation fell over much of State. Temperatures few degrees below normal. Days suitable for fieldwork 6.4. Soil moisture 69% short, 31% adequate. Cotton bolls open 97%, 20% harvested. Wheat planted 99%, 97% emerged. Cattle 6% poor, 64% fair, 30% good. Sheep 64% fair, 36% good. Ranges, pastures 28% poor, 60% fair, 12% good.

NEW YORK: Cool, wet week. Warm, dry as week began. Much cooler air, rain moved in on 17th. Heavy rain in eastern, central areas on 19th, 20th.

Days suitable for fieldwork 3.3. Soil moisture adequate to mostly surplus. Pastures poor to fair, hay mostly fair, corn fair to good. Corn for grain 12% harvested, 17% 1988, 15% avg. Corn for silage 77% harvested, 85% 1988, 73% avg. Progress slowed by rain, wet fields. Vegetable harvest near completion. Only a few late season crops remain for harvest. In the Lake Ontario fruit growing region apple harvest neared completion. Delicious apples 80% harvested. Wind, hail on the 14th caused damage to the remainder of the apple crop. Some grapes in the Finger Lakes area remain for harvest.

NORTH CAROLINA: Temperatures none to 4° above normal across State. Extremes 15°; 88°. Precipitation 0.38 to 4.71 in.

Days suitable for fieldwork 3.9. Soil moisture 2% short, 68% adequate, 30% surplus. Pasture 21% fair, 73% good, 6% excellent. Livestock feed from pasture 82%. Crop condition: Sweet potatoes 2% poor, 40% fair, 56% good, 2% excellent; peanuts 44% fair, 56% good; sorghum 3% poor, 37% fair, 56% good, 4% excellent; cotton 25% fair, 70% good, 5% excellent; soybeans 1% poor, 29% fair, 68% good, 2% excellent; Hay, roughage 3% short, 84% adequate, 13% surplus. Harvesting completed: Corn silage 97%; apples 91%, 92% 1988, 87% avg.; sorghum 60%, 68% 1988, 64% avg.; sweet potatoes 68%, 79% 1988, 71% avg.; peanuts dug 87%, 79% 1988, 81% avg.; peanuts threshed 70%, 56% 1988, 65% avg. Plantings completed: Wheat 22%, 26% 1988, 25% avg.; oats 39%, 46% 1988, 42% avg.; barley 36%, 39% 1988, 41% avg.; rye 36%, 51% 1988, 43% avg. Major activities: Harvest of corn grain. Other activities: Harvesting apples, peanuts, cotton, soybeans, sorghum; small grain planting; cutting wood; pruning, tagging Christmas trees; tending livestock; general farm maintenance. Wet weather continues to damage unharvested sweet potatoes, unthreshed peanuts.

NORTH DAKOTA: Temperatures 4 to 7° below normal. Extremes 6° west central; 78° south central. Little precipitation across State.

Days suitable for fieldwork 7.0. Topsoil 52% very short, 44% short, 4% adequate. Subsoil 53% very short, 45% short, 2% adequate. Harvest is nearly complete. Sunflower 93% harvested, 89% 1988, 51% avg.; corn 79%, 91% 1988, 56% avg.; soybeans 99%, 100% 1988, 87% avg.; sugarbeets 99% lifted, 98% 1988, 90% avg. Pasture 9% very poor, 66% poor, 22% fair, 3% good; furnished 78% roughage requirements.

OHIO: Temperatures 5 to 8° subnormal. Extremes upper 20s to high 70s. Rain, snow midweek; water equivalent 1.00 to 3.00 in. Snow accumulations up to 4.00 in. melted quickly.

Days suitable for fieldwork 3.1. Soil moisture 4% short, 63% adequate, 33% surplus. Rain, snow delayed harvest; some crops lodged, mostly soybeans. Winter wheat fair to mostly good; rain aided germination, emergence.

OKLAHOMA: Temperatures 15° below normal north central to 9° below normal southeast. Precipitation none most areas to 0.08 in. south central.

Days suitable for fieldwork 6.7. Topsoil 70% short, 30% adequate. Subsoil 13% short, 87% adequate. Wheat 25% fair, 75% good; 95% planted, 90% 1988, 75% avg.; 60% emerged, 65% 1988, 50% avg. Rain needed to germinate wheat for fall grazing. Cotton 1% fair, 1% poor, 35% fair, 64% good; 70% open bolls, 90% 1988, 75% avg.; 5% harvested, 18% 1988, 7% avg. Dry weather, cool nights restrict development. Sorghum 8% fair, 90% good, 2% excellent; 77% coloring, 60% 1988, 95% avg.; 27% harvested, 20% 1988, 30% avg. Soybeans 32% harvested, 15% 1988, 30% avg. Peanuts 30% harvested, 25% 1988, 35% avg. Pastures good. Cattle good; marketings, prices stable. Light freeze reduced insect activity.

OREGON: Most temperatures above normal. Greatest departures Medford, Klamath Falls, readings 5° above. Lakeview 4° above. Most western locations 1.50 to 2.00 in. precipitation. Most northeast 1.00 in. or more, while central areas near 0.50 in. or less.

Soil moisture 61% short, 39% adequate. Winter wheat 87% planted, 67% 1988, 64% avg. Winter wheat emerged 45%, 1988 36%, average 35%. Barley 68% planted, 1988 35%, average 49%. Russian wheat aphid reported Columbia Basin Counties. Field corn silage harvest continues Washington County. Field corn harvesting well underway Umatilla County. Sugarbeet harvest continues Malheur County. Some late haying eastern area. Apple harvest Hood River area nearly complete. Orchard cleanup underway. Hazelnut harvest Willamette Valley about finished, slightly ahead of normal. Grape harvest two-thirds finished Willamette Valley. Potato harvest winding down. Onion harvest continues. Sweet corn, cauliflower, cucumber harvest about finished. Late broccoli ready to harvest. Pastures, ranges received rain, need more as conditions very dry. Livestock in fair to good, grazing on crop residue.

PENNSYLVANIA: Temperatures unseasonably warm beginning of the week. Cold front middle to end of the week kept temperatures well below normal. Cool, wet across State, especially the eastern half. Temperature 51°, 1° below normal. Extremes 25°; 86°. Precipitation 2.80 in., 2.14 in. above normal.

Days suitable for fieldwork 2. Soil moisture 6% short, 50% adequate, 44% surplus. Corn 73% mature, 75% 1988, 88% avg.; 20% harvested, 22% 1988, 27% avg. Ensilage corn 81% harvested, 83% 1988, 89% avg. Corn 20% very poor, 45% poor, 21% fair, 11% good, 3% excellent. Soybean harvest 24% complete, 20% 1988, 25% avg.; 22% very poor, 42% poor, 27% fair, 8% good, 1% excellent. Potato harvest 90% complete, 86% 1988, 92% avg. Fall plowing 79% complete, 88% 1988, 92% avg. Winter wheat 84% planted, 83% 1988, 83% avg. Barley 94% planted, 95% 1988, 95% avg. Third cutting alfalfa 92% complete, 97% 1988. Fourth cutting alfalfa 58% complete, 74% 1988. Quality of hay made during week fair to poor. Amount of feed being obtained from pastures average. Apple harvest 78% complete, 77% 1988. Grape harvest 84% complete, 92% 1988. Activities: Harvesting hay, haylage, potatoes, grapes, vegetables, corn, corn silage, fall plowing, planting; maintaining machinery, caring for livestock.

SOUTH CAROLINA: Rainfall more than 3.00 in. in mountains to less than 0.25 in the northeast portion of State. Temperatures near to slightly below normal.

Days suitable for fieldwork 4.7. Soil moisture 7% short, 89% adequate, 4% surplus. Cotton 1% very poor, 5% poor, 81% fair, 13% good, 95% open bolls, 94% 1988, 98% avg.; 31% harvested, 38% 1988, 56% avg. Soybeans 6% poor, 61% fair, 33% good, 84% leaves turning, 88% 1988, 90% avg.; 55% shedding leaves, 50% 1988, 62% avg.; 39% matured, 30% 1988, 38% avg.; 3% harvested, 5% 1988, 7% avg. Tobacco 82% stalks destroyed, 83% 1988, 88% avg. Corn fair, 92% harvested, 92% 1988, 98% avg. Sorghum fair to good, 52% harvested, 57% 1988, 64% avg. Peanuts fair to good, 72% harvested, 66% 1988, 66% avg. Pasture, livestock good. Hay fair to good.

SOUTH DAKOTA: Temperatures 1 to 9° below normal. Extremes 11°; 83°. Precipitation since September 3rd generally above normal, 3.45 in. above normal to 1.91 in. below normal. Weekly precipitation generally below 0.10 in. Max. 0.16 in.

Days suitable for fieldwork 6.2. Topsoil 21% critically short, 53% short, 26% adequate. Subsoil 37% critically short, 48% short, 15% adequate. Corn condition good to fair. Winter wheat good to fair. Winter rye good to fair. Major activities combining, picking corn, harvesting other row crops, working cattle, fencing.

TENNESSEE: Cold, wet week. Temperatures much below normal statewide. Precipitation much above normal, due to remnants of tropical storm Jerry. Heavy snowfall on Cumberland Plateau, eastern area.

Days suitable for fieldwork 3.1. Soil moisture 1% short, 74% adequate, 25% surplus. Corn 88% harvested grain, 89% 1988, 76% avg. Burley tobacco 28% stripped, 30% 1988, 28% avg. Wheat 36% seeded, 46% 1988, 38% avg. Harvest strong despite bad weather. Corn, sorghum harvests nearly complete. Soybeans lacking maturity at harvest.

TEXAS: Hurricane Jerry landfall Upper Coast last week dissipate rapidly after moving inland. Precipitation limited small area southeast. Strong cold front failed to bring significant rain, did bring drastically colder air. Many low temperature records set. Precipitation totals below normal last week. Cold air dropped average temperatures to below normal levels across State.

Crops: Corn harvest continued High Plains without much delay. Yields remained good. Many Plains producers completed harvest. Grain sorghum harvest increasing High Plains despite cooler weather. Late maturing fields hurt by heavy frost. Warmer temperatures end of week helped some fields recover. Yields Plains very good. Sorghum 100% turning color, 100% 1988, 100% avg.

Cotton producers Plains wonder what weather will do next. Latest bout with cold weather ended further production hopes many fields; return to warmer weather weekend may still save some later fields Low Plains. Harvest activity increasing Plains following early freeze. Harvest winding down Blacklands, producers reporting good yields. Harvest increasing Trans-Pecos. Small grain seeding winding down Plains, many fields need moisture. Some soil crusting slowed emergence scattered fields. Irrigated fields good progress. Some early fields providing grazing. Dry conditions Blacklands, central slowed planting activity. Some early fields not emerged. Dry conditions Hill Country left fields short. General rain improve conditions. Peanut harvest increasing Cross Timbers early varieties. Good yields Blacklands. Freeze expected hurt some fields Hill Country, Cross Timbers. Harvest continued south. Yields not improved very much

this area. Dry conditions hampered harvest activities central. Soybean harvest increased Plains, good yields. Harvest continued Upper Coast, dry conditions lowered yields later varieties. Harvest sugarbeets increased High Plains with open conditions. Yields, sugar content good. Other crops: Peanuts harvested 27%, 47% 1988, 36% avg. Pecans 7%, 8% 1988, 10% avg. Soybeans harvested 64%, 60% 1988, 43% avg. Sugarbeets 21%, 26% 1988, 26% avg. Sunflowers harvested 33%, 51% 1988, 48% avg. Oats planted 63%, 60% 1988, 66% avg.

Commercial Vegetables: Rio Grande Valley, vegetables good progress under steady irrigation. Planting, harvesting operations active. Harvest oranges remained slow because small sizes. San Antonio-Winter Garden, cucumber harvest continued. Spinach, carrots, cabbage good progress. Eastern areas, frost could hurt some tomatoes, peppers. High Plains, freezing temperatures may have ended pepper harvest. Carrot, pumpkin harvest continued. Trans-Pecos, chile, bell pepper harvest continued. Yields average; cold weather could cut yields. Pecans cracking open rapidly Cross Timbers. Harvest increased east, south. Sizes smaller. Insects hurt yields east.

Range and Livestock: Exception of few areas, State ranges, pastures continued to decline. Lack of rainfall, cooler temperatures kept forage growth standstill. Moisture badly needed some areas before winter sets in for good. Some early wheat fields providing grazing High Plains. Stocker numbers increase soon. Livestock conditions good under steady feeding.

UTAH: Temperatures 2° above normal. Light precipitation in southern half of State.

Days suitable for fieldwork 7.0. Soil moisture 100% short. Fall fieldwork virtually complete. Winter wheat 98% seeded, 98% 1988, 99% avg. Apple harvest 94% completed, 94% 1988, 86% avg. Potato crop 85% harvested, 100% 1988, 96% avg. Corn for grain harvest 55% complete. Cattle moved from summer range 86%, 86% 1988, 82% avg. Sheep moved from summer range 94%, 94% 1988, 86% avg. Pasture, range mostly poor, very poor.

VIRGINIA: Temperatures above normal first half week; below normal last half. Temperatures low to mid 60s. Extremes 29°; 88°. Precipitation heavy, averaging nearly 2.00 in.

Days suitable for fieldwork 2.3. Topsoil 52% surplus, 48% adequate. Corn for grain 74% harvested, 60% 1988, 65% avg. Corn silage 95% harvested, 90% 1988, 94% avg. Soybean harvest 9% complete, 4% 1988, 6% avg. Peanuts dug 96% complete, 45% 1988, 77% avg. Peanuts combined 84% complete, 39% 1988, 63% avg. Winter wheat seeding 21% complete, 16% 1988, 20% avg. Winter oats seeding 60% complete, 60% 1988, 61% avg. Barley seeding 51% complete, 53% 1988, 58% avg. Apple, sweet potato, vegetable harvest continue.

WASHINGTON: Temperatures normal to 8° below normal, east; 1° above to 6° below normal, west. Precipitation none to 0.19 in., east; 0.16 to 0.56 in., west. Days suitable for fieldwork 6.6. Soil moisture 60% short, 40% adequate. Range, pasture 55% short, 45% adequate. Hay, other roughage 5% short, 85% adequate, 10% surplus. Remaining acreage of winter wheat to be seeded has dry soil conditions which has halted planting activity. Russian wheat aphids were found in many areas of the State with some control taking place. Winter wheat planted 95%, 91% 1988, 92% avg.; emerged 81%, 71% 1988, 70% avg. Progress of other crop harvests: Potatoes 92%, 85% 1988, 83% avg.; dry beans 96%, 99% 1988, 98% avg.; corn silage 95%, 95% 1988, 94% avg.; corn grain 20%,

34% 1988, 45% avg. Apple harvest was nearing completion. The harvests of grapes, carrots, pumpkins, celery continued. Cattle continued to come off mountain ranges with some marketing of calves.

WEST VIRGINIA: Temperature 50°, 5° below to 3° above normal. Extremes 24°; 85°. Precipitation 2.62 in., 1.55 to 2.60 in. above normal.

Days suitable for fieldwork 2.3. Soil moisture 48% adequate, 52% surplus. Corn excellent to good; harvest 48% complete. Wheat seeding 66% complete. Apples fair; harvest slowed by weather. Hay good, 3rd cut 70% complete. Cattle, calves, sheep, lambs good. Farm activities: Corn, hay harvest, seeding small grains, marketing cattle, clipping pastures.

WISCONSIN: Variable weather, mild to cold. Temperature 41°, 6° below normal. Extremes 14°; 69°. Precipitation 0.20 to 2.40 in. Snowfall trace to 6.00 in., most southeast.

Days suitable for fieldwork 5.4. Soil moisture 71% short, 29% adequate. Pasture 63% of normal, 62% 1988, 82% avg. Rapid harvest progress. Yields generally good. Corn grain 40% harvested, 65% 1988, 37% avg. Corn silo filling 96% complete, 97% 1988, 81% avg. Soybeans 70% harvested, 72% 1988, 43% avg. Fall plowing 28% complete, 42% 1988, 27% avg.

WYOMING: Temperatures generally below normal. Precipitation mostly below normal.

Days suitable for fieldwork 6.0. Topsoil 47% short, 53% adequate. 1990 winter wheat fair to mostly good. Corn for grain 30% harvested, 25% 1988, 35% avg. Dry bean harvest continues, most normally harvested. Sugarbeets 70% dug, 80% 1988, 85% avg. Sugar content 17.0%. Potatoes 95% harvested, 100% 1988. Livestock fair to mostly good. Producers continue to move stock to winter pastures, markets. Hay supplies for wintering stock adequate or better 60% of State.

International Weather and Crop Summary

HIGHLIGHTS

October 15-21, 1989

USSR ... A gradual drying trend improves conditions for summer crop harvesting.

EUROPE ... Rain and above-normal temperatures favor winter crops in the north. Thunderstorms cause heavy rain and possible flooding in sections of Spain and Portugal.

SOUTH ASIA ... Beneficial rain continues in the south and east.

EASTERN ASIA ... Heavy rain covers much of the Yangtze Valley. Dryness favors harvest in the North China Plain and southeast.

SOUTHEAST ASIA ... Typhoon Elsie hits the northern Philippines. Widespread showers continue across Thailand.

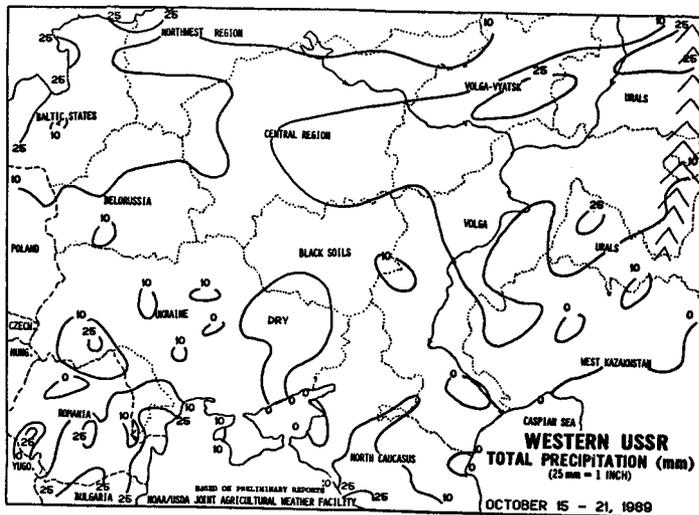
SOUTH AFRICA ... Scattered showers continue across the region, improving soil conditions for corn planting.

SOUTH AMERICA ... Scattered light showers in Argentina's primary crop areas provide little help to dry topsoils. Drier weather in south-central Brazil benefits fieldwork, however.

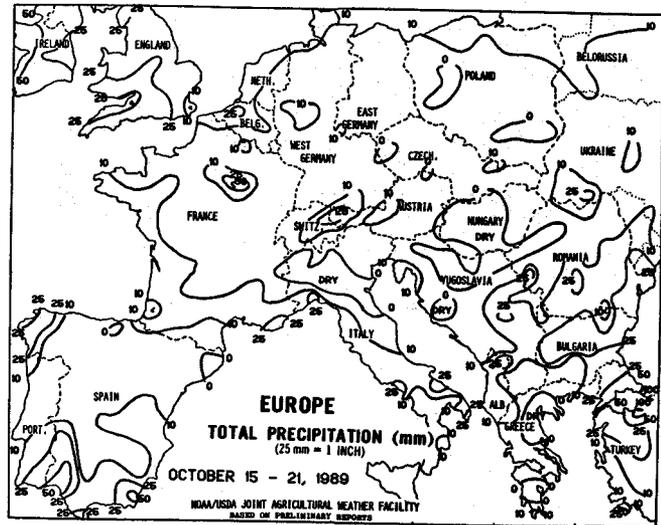
AUSTRALIA ... Moderate to heavy rain benefits winter grains in the southwest. Light rain brings only limited relief from dryness in the east.

MEXICO ... Mostly dry weather in the north contrasts with scattered tropical showers in the south.

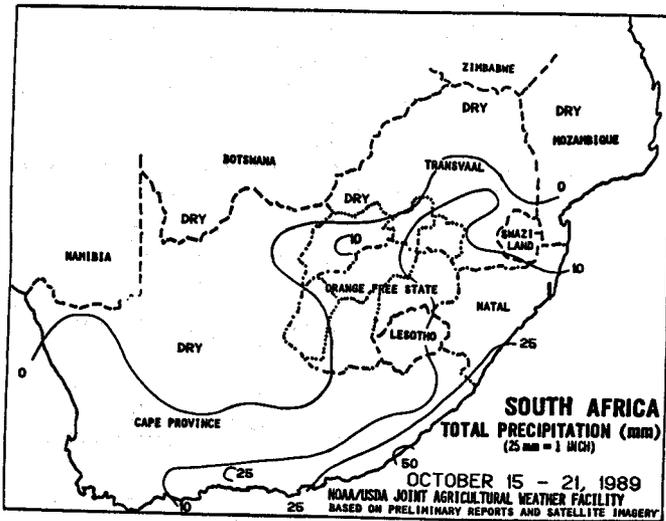
NORTHWESTERN AFRICA ... Fieldwork continues in preparation for winter grain planting.



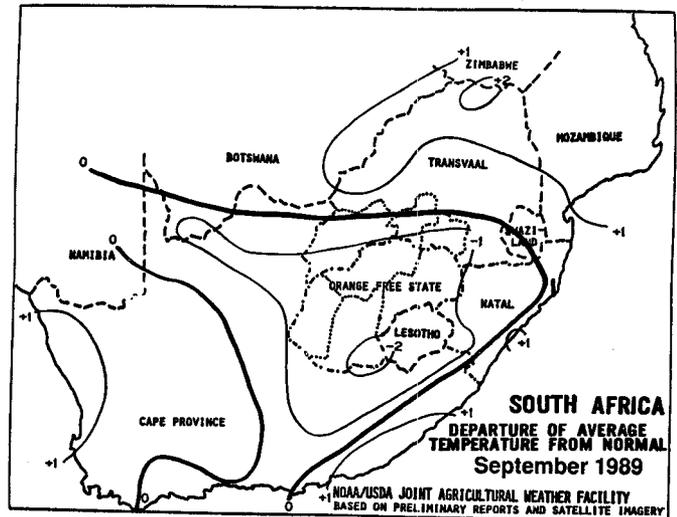
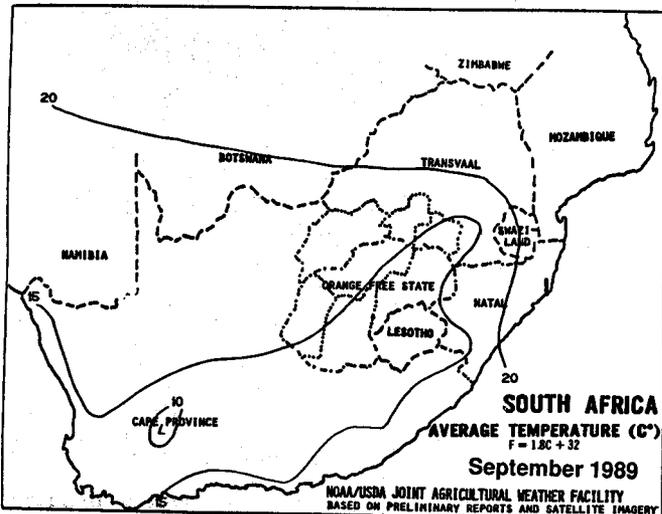
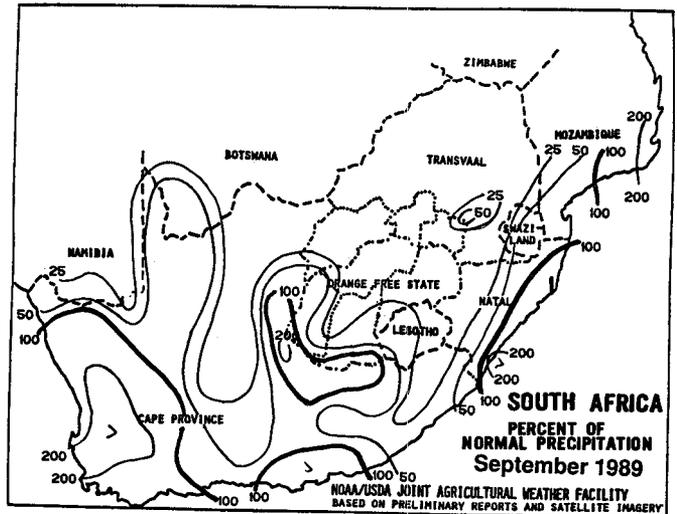
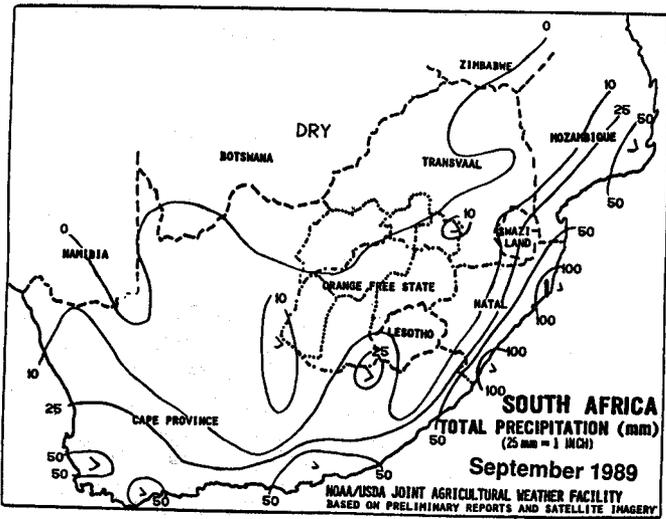
WESTERN USSR ... A drying trend spread gradually eastward across the region. As a result, precipitation amounts were generally below 10mm in southern Belorussia, the Ukraine, the lower Volga, and most of the North Caucasus, improving conditions for corn, sunflower, and sugarbeet harvesting. Greatest amounts of rainfall (10-30mm) covered crop areas over the northern half of the region, increasing soil moisture and benefiting winter grain establishment. Winter grains continued to harden prior to dormancy over most of the region. Weekly average temperatures were 1-3 degrees Celsius (C) above normal in most areas except for the southern Ukraine and the North Caucasus, where temperatures averaged near normal.

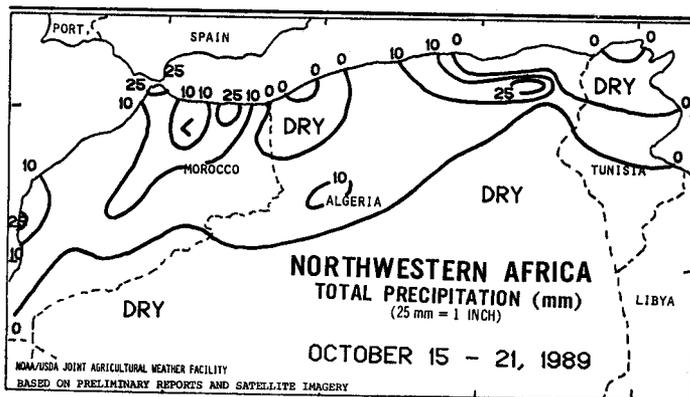


EUROPE ... Strong thunderstorms brought heavy rain (25-60mm, with isolated amounts up to 84mm) and possible flooding to sections of southern Spain and Portugal on the 15th and 16th. Moderate to heavy rain (15-50mm, with isolated amounts in excess of 50mm) in central and eastern sections of the Balkans benefited winter grains establishment but delayed sugarbeet lifting. In the north, a frontal system brought widespread rain (10-35mm) and cooler weather to Great Britain, Benelux, and West Germany. Above-normal temperatures (1-3 degrees C above normal) preceding the front favored rapid growth and establishment of winter grains. In the northeast, scattered showers (5-20mm) and above-normal temperatures created mostly favorable conditions for vegetative winter crops.

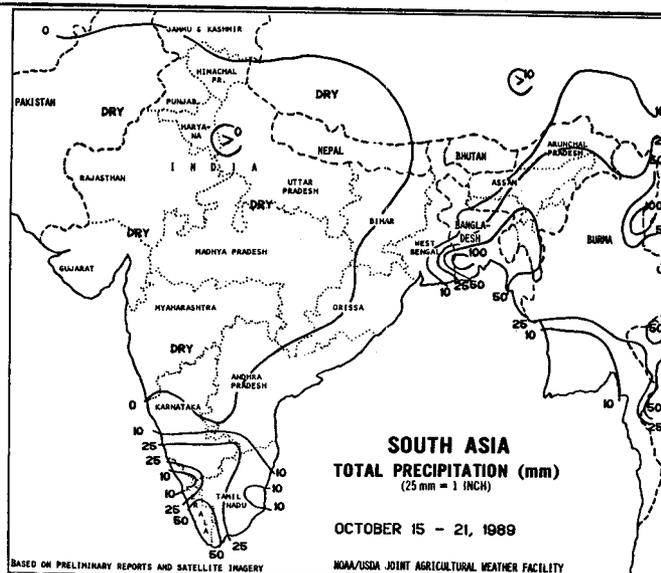


SOUTH AFRICA ... Light to moderate showers swept across the primary corn regions, improving local planting conditions. Heaviest rain (10-25mm or more) fell in the eastern Maize Triangle, Natal, and most coastal crop areas of the Cape Province. Drier weather returned to the central Maize Triangle and persisted in the west, where only light rain has fallen early in the season. Temperatures averaged 1-3 degrees C above normal across the Maize Triangle, warming soils for corn planting.

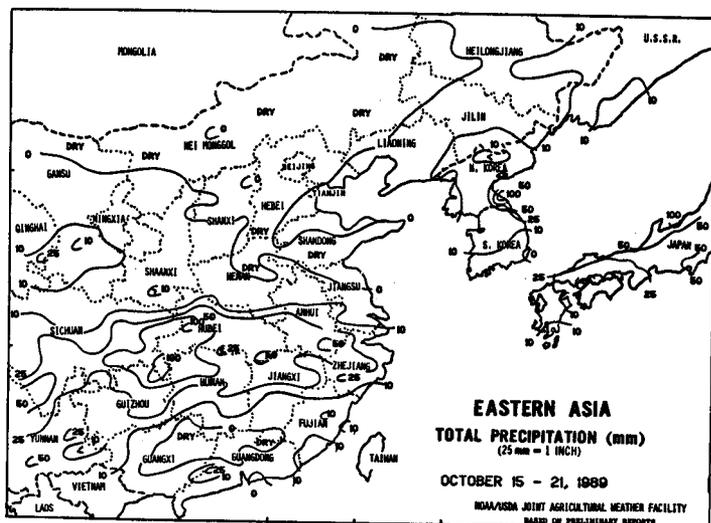




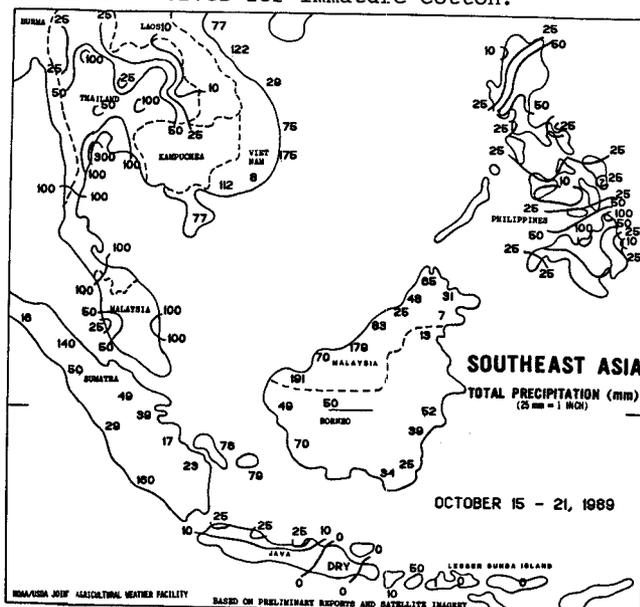
NORTHWESTERN AFRICA ... Preparations for winter grain planting were in the early stages over most of the region. Light showers (8-17mm) over winter grain areas in Morocco moistened topsoils, which may have prompted some early season fieldwork. Farmers in western Algeria await the onset of significant autumn rain before fieldwork can begin. Elsewhere, localized showers (10-31mm), in eastern Algeria, fell mainly over central crop areas. Mostly dry weather covered winter grain areas in Tunisia. Weekly average temperatures were near normal in Tunisia and 2-4 degrees C above normal in Morocco and Algeria.



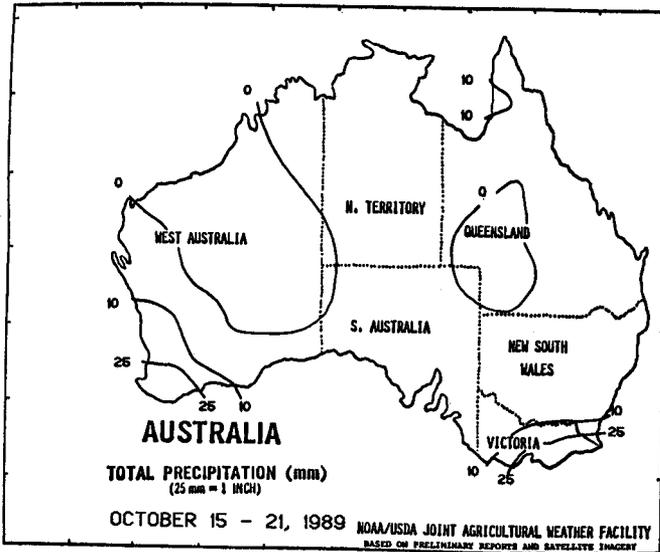
SOUTH ASIA ... Variable rainfall (10-50mm or more) was again limited to eastern and southernmost crop regions, boosting moisture reserves for fall planted crops and immature rice in the east. Dry, warm weather continued elsewhere, benefiting maturing summer crops. Periods of hot weather continued over central India's main season cotton areas, maintaining high evapotranspiration rates and reducing moisture reserves for immature cotton.



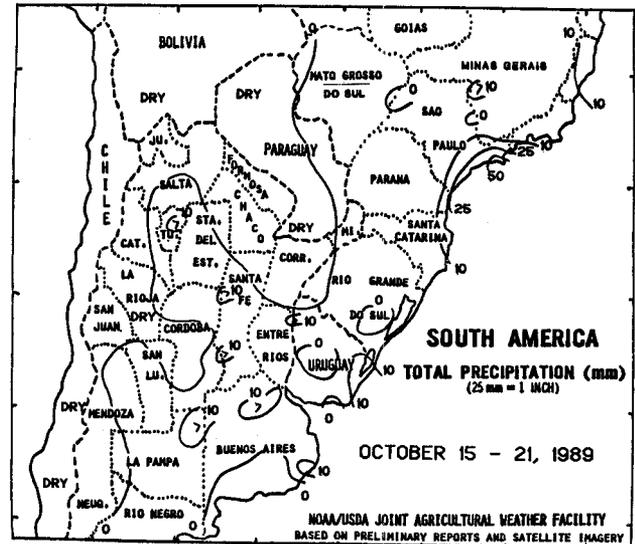
EASTERN ASIA ... Heavy rain (25-70mm, with scattered amounts in excess of 70mm) fell across much of the Yangtze Valley early in the week, causing delays in late season harvest. Very heavy rain (100-127mm) in southeastern Sichuan, northeastern Guizhou, and northern Jiangxi may have caused flooding. Moderate to heavy rain (15-50mm) in Japan and eastern sections of the Korean Peninsula caused delays in rice harvest. In contrast, mostly dry weather favored cotton and late double cropped corn and soybean harvest in northern sections of the North China Plain. Mostly dry weather also allowed rapid progress in late double crop rice in southern coastal China and Taiwan. Below-normal temperatures slowed vegetative growth and development of winter crops across most growing areas.



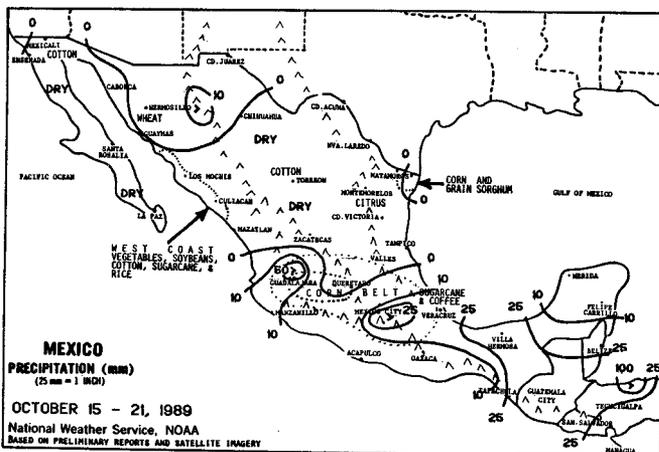
SOUTHEAST ASIA ... Typhoon Elsie, the strongest storm of the season and the third typhoon to strike the Philippines in the past 2 weeks, hit northern Luzon with maximum sustained winds of 140 knots. Elsie's path was between those of Angela and Dan, bringing more flooding and damage to Luzon's grain and northernmost sugarcane regions. Moderate to heavy showers (25-50mm or more) continued across Thailand, with excessive showers (100-300mm or more) likely causing local flooding in the west, south, and local areas of the western Khorat Plateau. Recent weeks of beneficial rain, due partly to the remnants of tropical storms, have improved moisture conditions for immature rainfed crops and fall planted crops. In contrast, only light rain (1-32mm) fell over Java, which received only minimal rain in recent weeks. Main season rice planting in Java is usually underway during November.



AUSTRALIA ... Moderate to heavy rain (15-40mm) fell across crop areas of Western Australia, benefiting reproductive winter grains. In the east, scattered light showers (less than 10mm) offered only limited relief from persistent dryness in crop areas of Queensland, New South Wales, and Victoria. Moisture stress for winter grains was increased by above-normal temperatures (1-3 degrees C above normal) in southern Queensland and northern New South Wales, while below-normal temperatures slowed growth of crops in the south and west. Harvesting of winter wheat and barley continued in eastern growing areas of Queensland. In eastern coastal Queensland, mostly dry weather continued to favor sugarcane harvest.



SOUTH AMERICA ... Scattered showers fell throughout Argentina's primary crop areas early and again late in the week. Weekly rainfall totals were highly variable with most areas receiving insignificant amounts of 5mm or less, while widely scattered areas of Santa Fe and Buenos Aires benefited from amounts of 10-21mm. Dry weather prevailed in Cordoba and northern cotton areas. Corn planting is underway and wheat is advancing through reproductive phases. Dryness is hampering fieldwork in both Cordoba and Santa Fe. Beneficially drier weather covered south-central Brazil, where ample moisture has provided a good start to the summer growing season. Soybean planting is just beginning in Parana, with recent sunny skies promoting fieldwork.



MEXICO ... Scattered light showers (10mm or less) fell in the northwestern mountains. Otherwise, dry weather prevailed over the northern half of the country, extending into north-central portions of the Southern Plateau. In the Plateau corn belt, an isolated shower produced 64mm at one location in the west, near Guadalajara, and more widespread tropical showers in the southeast resulted in 14-35mm of weekly rainfall. Minimal rain (5mm or less) fell elsewhere in the Southern Plateau, favoring summer crop harvesting. Tropical showers covered much of southern Mexico, producing 10-45mm from the Bay of Campeche to the border with Guatemala. Rainfall, however, diminished to less than 10mm over the eastern Yucatan peninsula.

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