

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

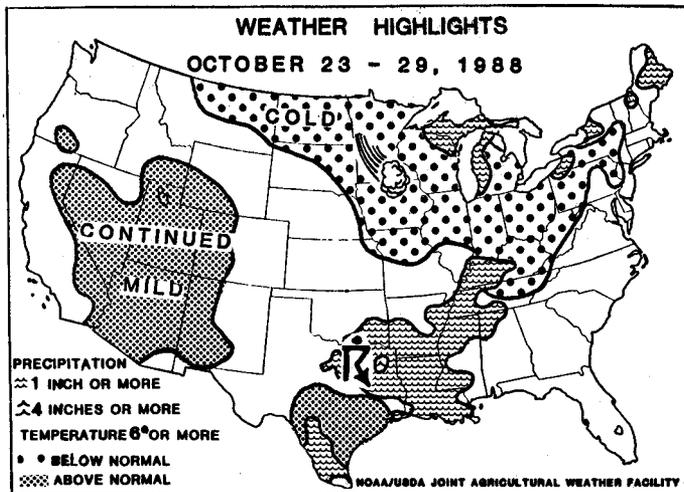
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National Weather Summary

October 23-29, 1988



WEDNESDAY...A sharp cold front pushed across the northern Rockies into the northern Great Plains. Heavy snow fell in western Montana. Severe thunderstorms and heavy rain moved across the lower Delta. Much of the Nation had a clear and cool morning.

THURSDAY...The front swept across the Great Plains into the upper Great Lakes and middle Mississippi Valley. Cold air plunged into the central United States as temperatures were 50 degrees colder in eastern Wyoming than the previous day. Winds gusted to 65 m.p.h. in the Dakotas. Showers and thunderstorms reached ahead of the front from the southern Plains to the lower Great Lakes. Heavy rain fell in the Tennessee Valley.

FRIDAY...The cold front continued to push southeastward bringing scattered rain from New England, down the Appalachians, into the middle Rio Grande Valley. Thunderstorms ahead of the front produced heavier rain from southeast Texas to northern Alabama and over the Carolinas. Strong winds pounded the Great Lakes. The coldest weather of the season so far spread into the mid section of the Nation.

SATURDAY...Cold Canadian air continued to spread over the Plains, Mississippi Valley, and Great Lakes. Temperatures dipped to the teens and single digits from the northern Rockies to the upper Great Lakes. Thunderstorms and showers were widely scattered across the southeast and Pacific Northwest.

HIGHLIGHTS: Cold Canadian air plunged into the north central United States during the latter half of the week as temperatures dropped into the teens and single digits. Thunderstorms produced heavy rain in the eastern southern Plains, lower Mississippi Valley, and Tennessee Valley. Storms caused high winds, rain, and snow over the Great Lakes. Warm weather again persisted in the West and the southern Plains.

SUNDAY...A frontal system advanced across the Mississippi Valley into the Appalachians. Showers and thunderstorms were widespread ahead of the system and brisk northwest winds were behind it in the upper Mississippi Valley and upper Great Lakes. Rain mixed with snow fell over the upper Great Lakes. Chicago received its first snowfall of the season.

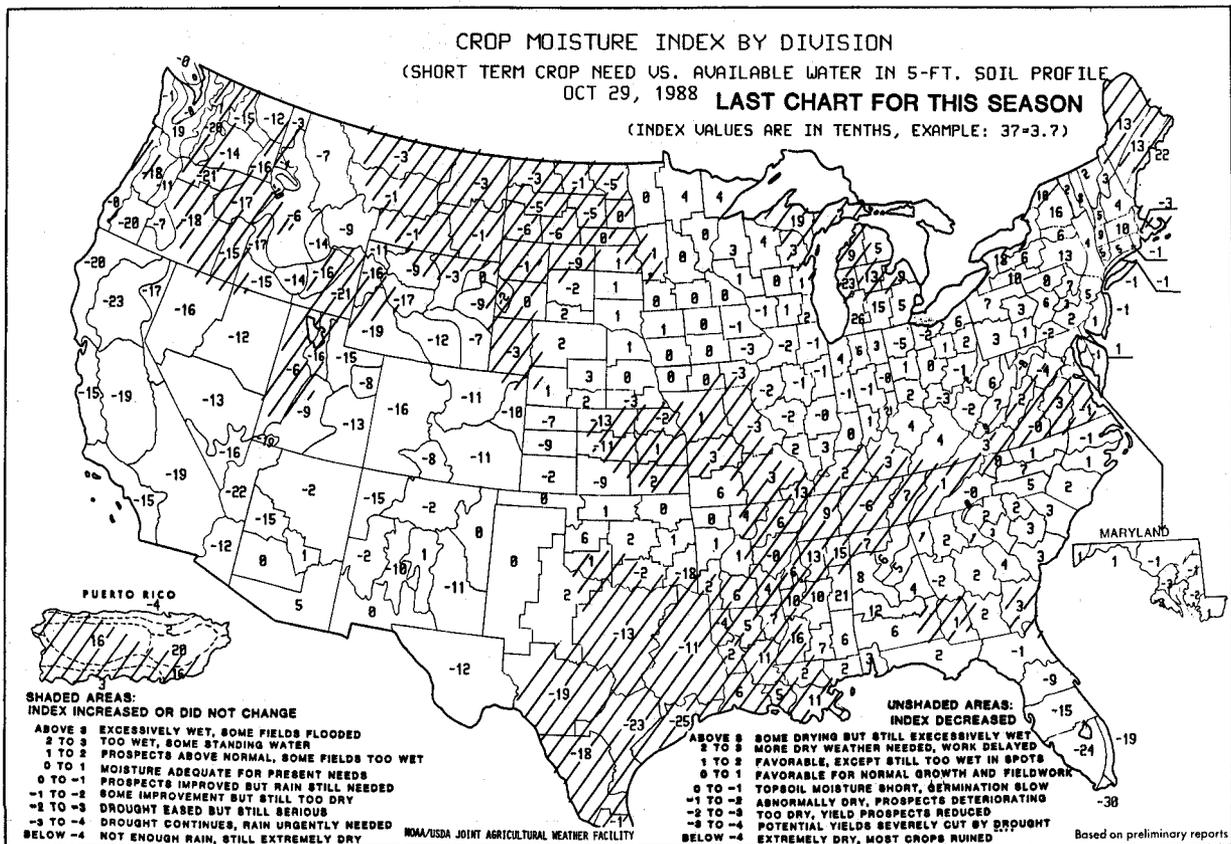
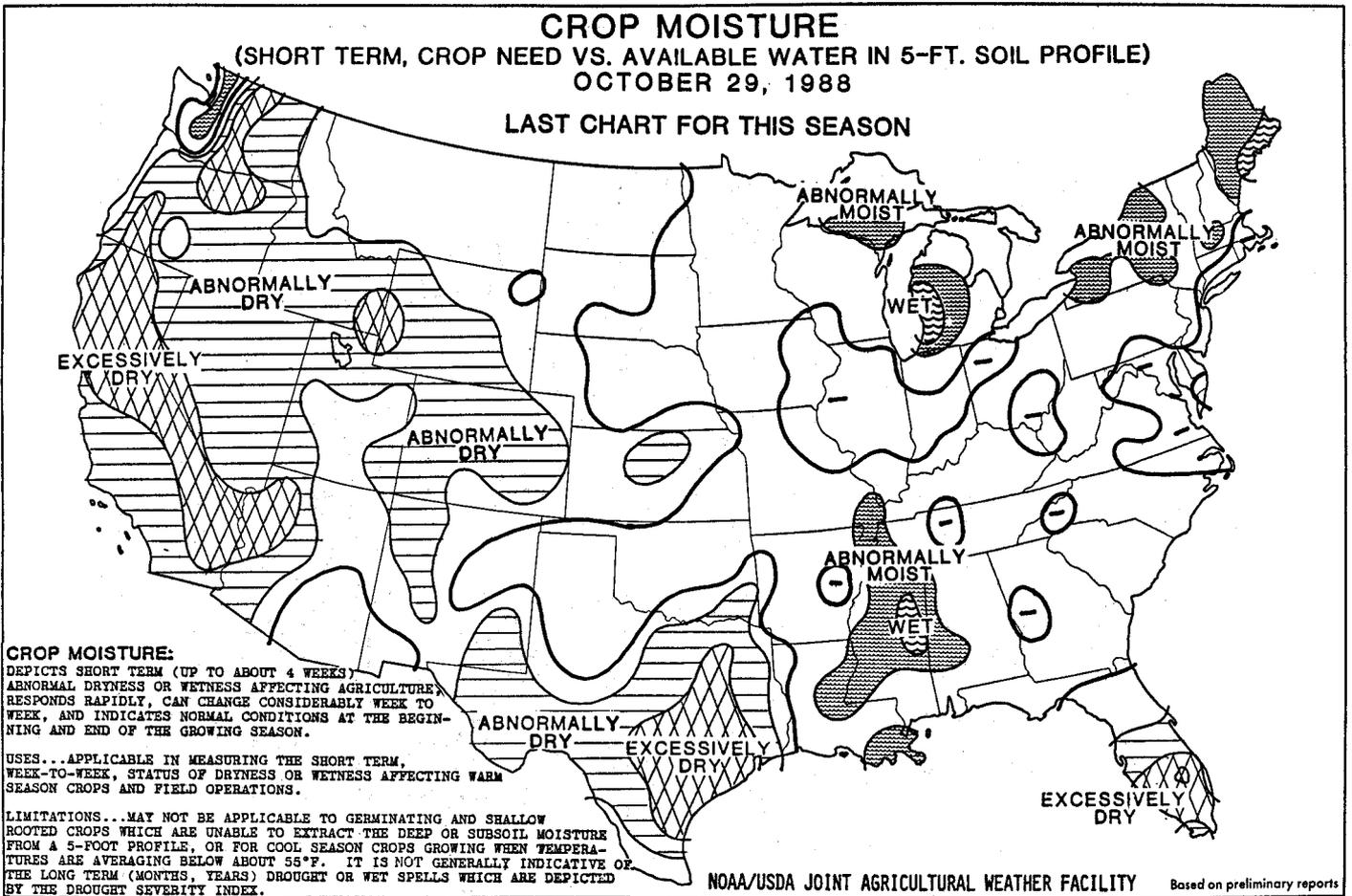
MONDAY...The frontal system crossed the Atlantic seaboard and brought scattered rain. Cold air flowing over the warm waters of the Great Lakes produced rain and snow showers. Skies were mostly sunny over the remainder of the Nation.

TUESDAY...Intense thunderstorms with damaging winds and large hail developed over north central Texas into northwest Louisiana. More lake effect snow fell along the eastern shorelines of the lower Great Lakes. Clear skies again dominated much of the country

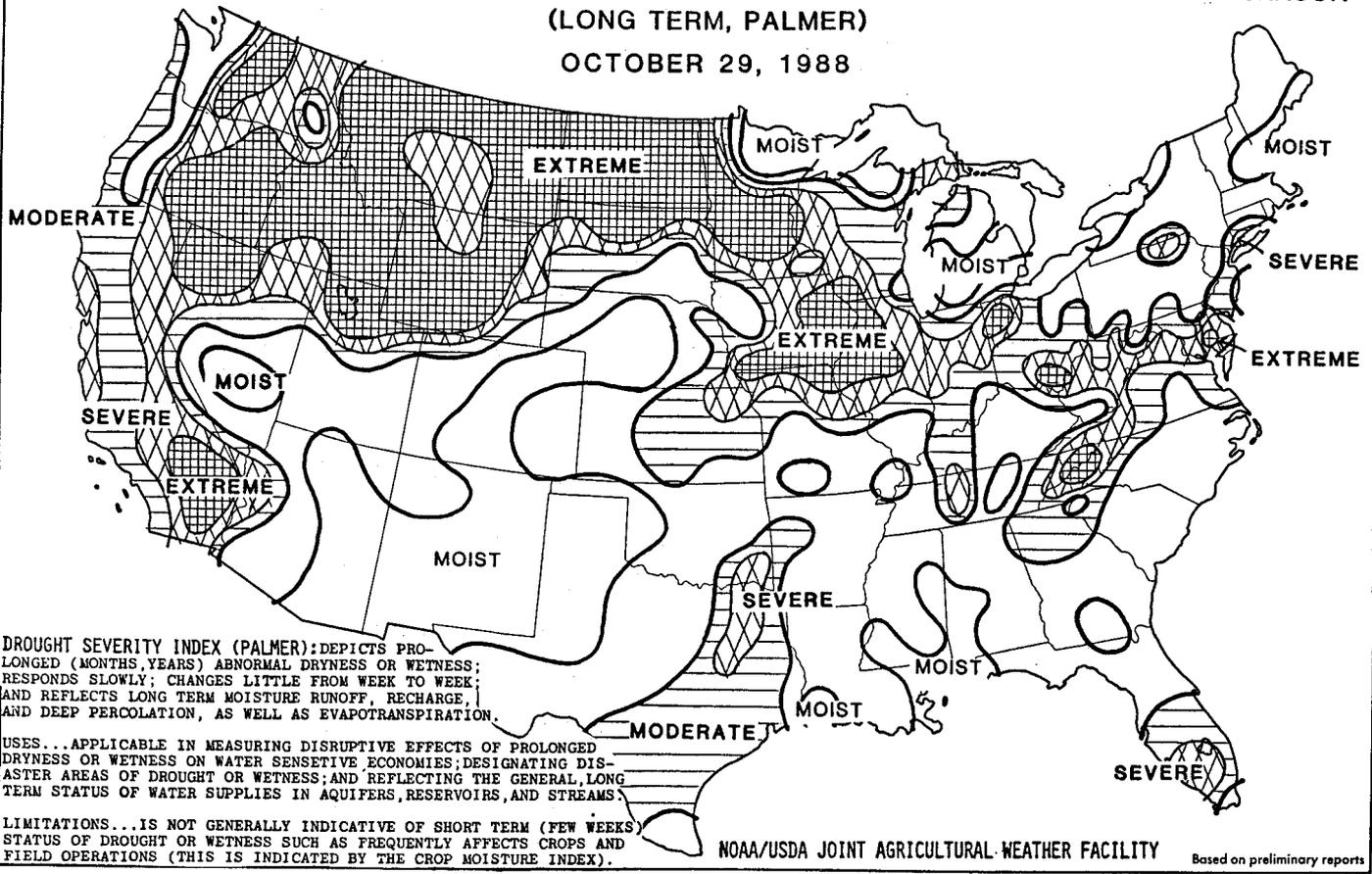
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PRICE INCREASE

Due to increased printing costs, the price of the Weekly Weather and Crop Bulletin will be increased to \$35 for domestic and \$50 for foreign subscriptions on December 1, 1988.

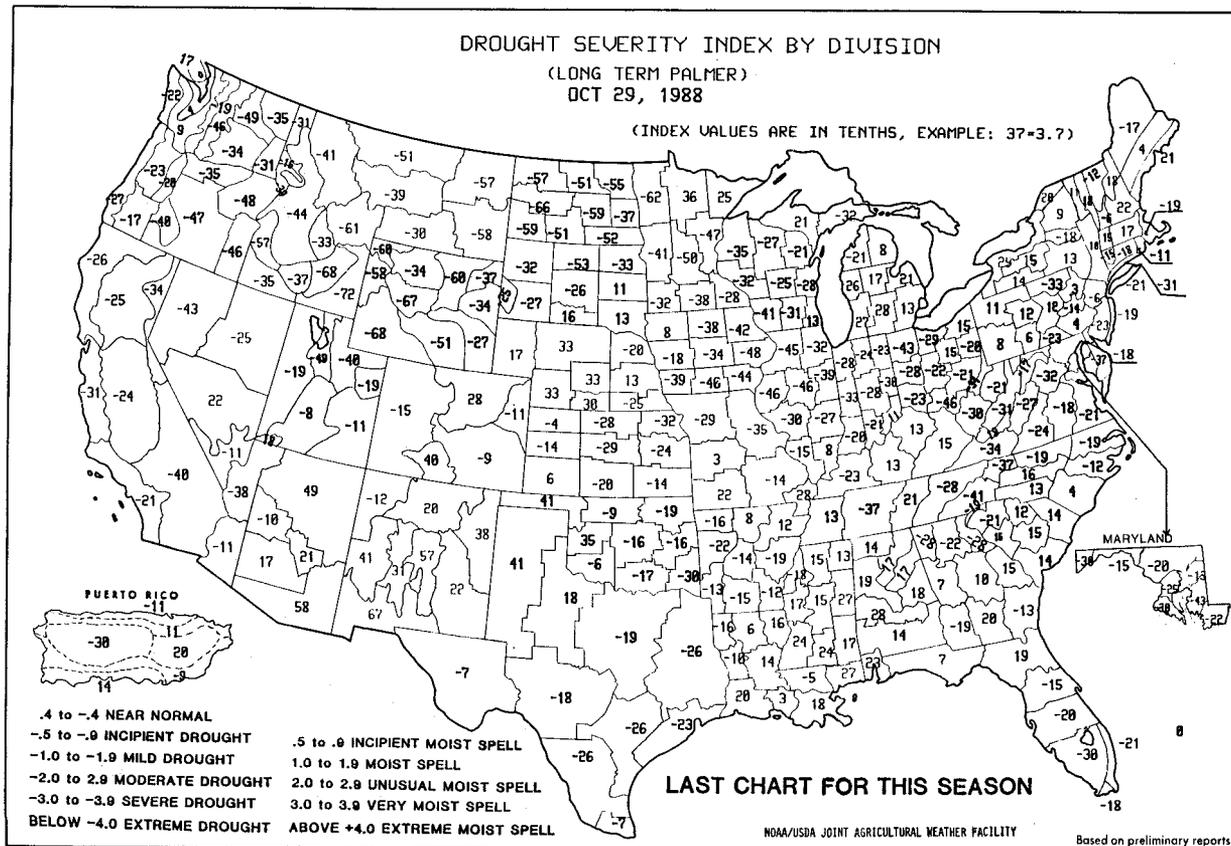


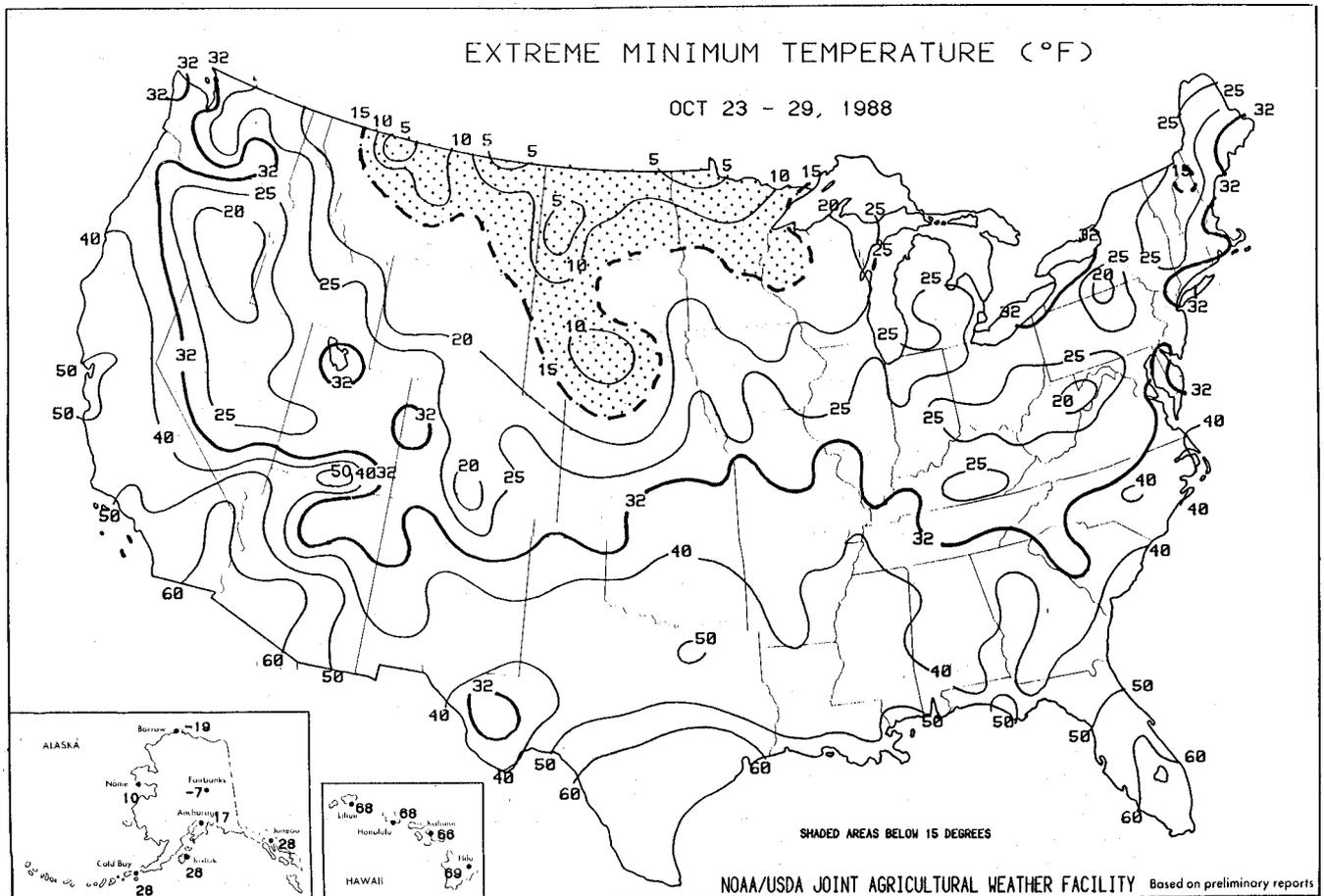
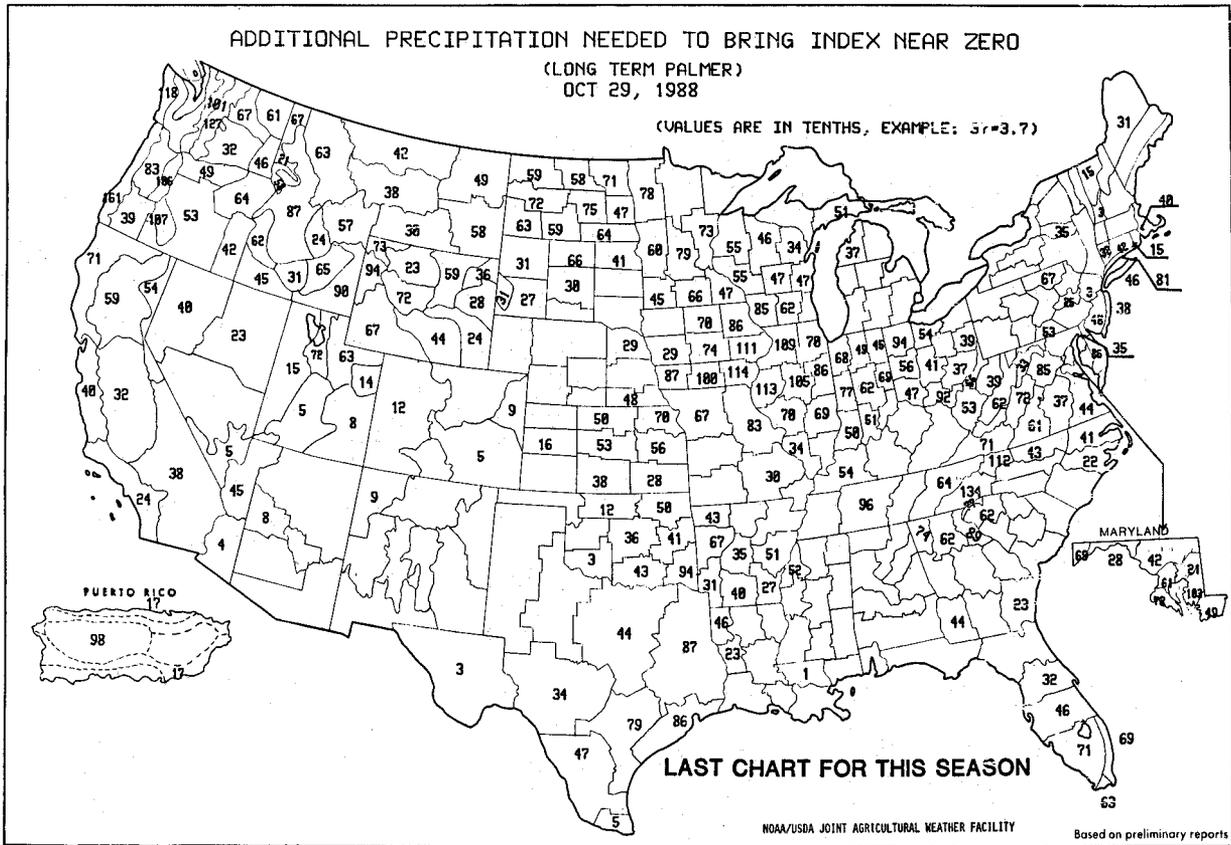
DROUGHT SEVERITY (LONG TERM, PALMER) LAST CHART FOR THIS SEASON
OCTOBER 29, 1988



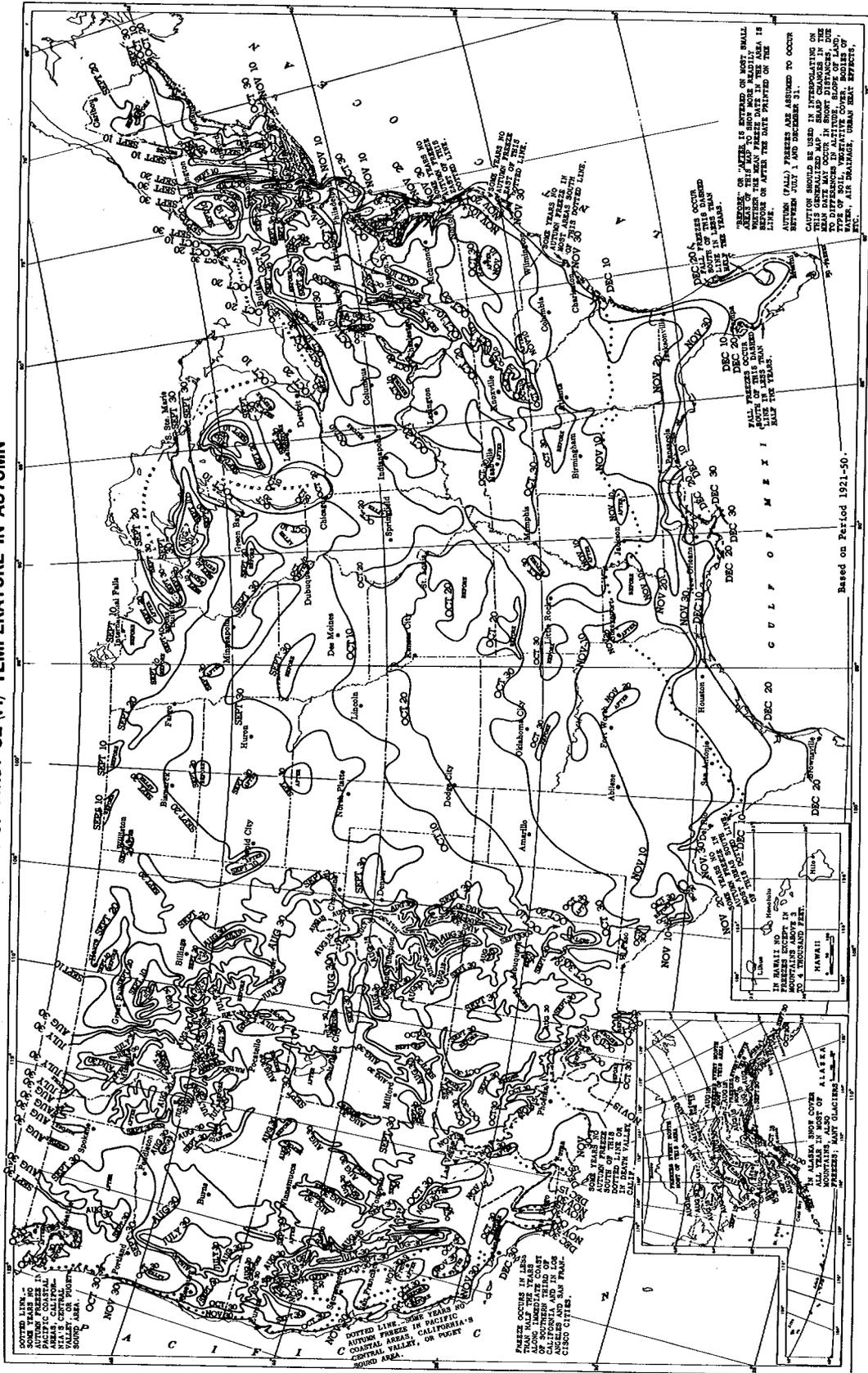
DROUGHT SEVERITY INDEX BY DIVISION (LONG TERM PALMER)
OCT 29, 1988

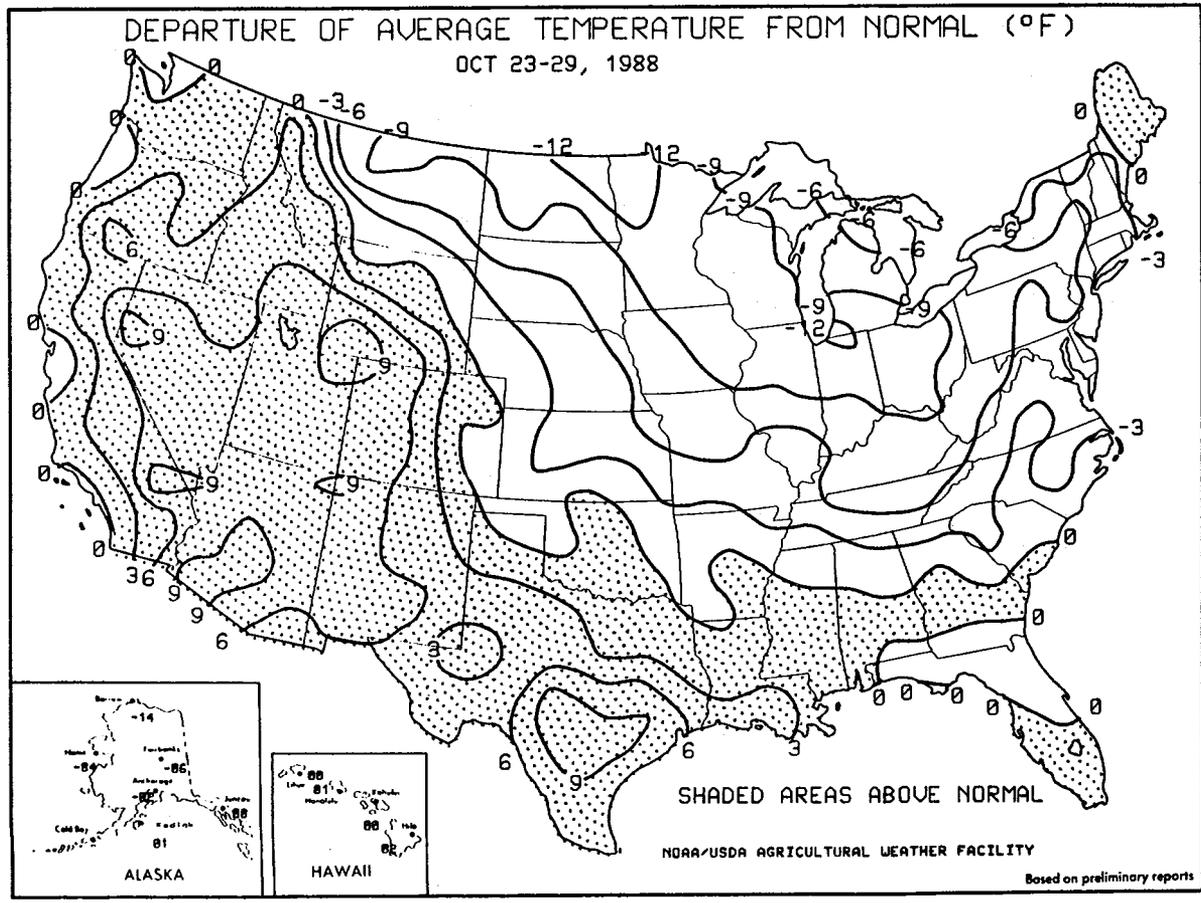
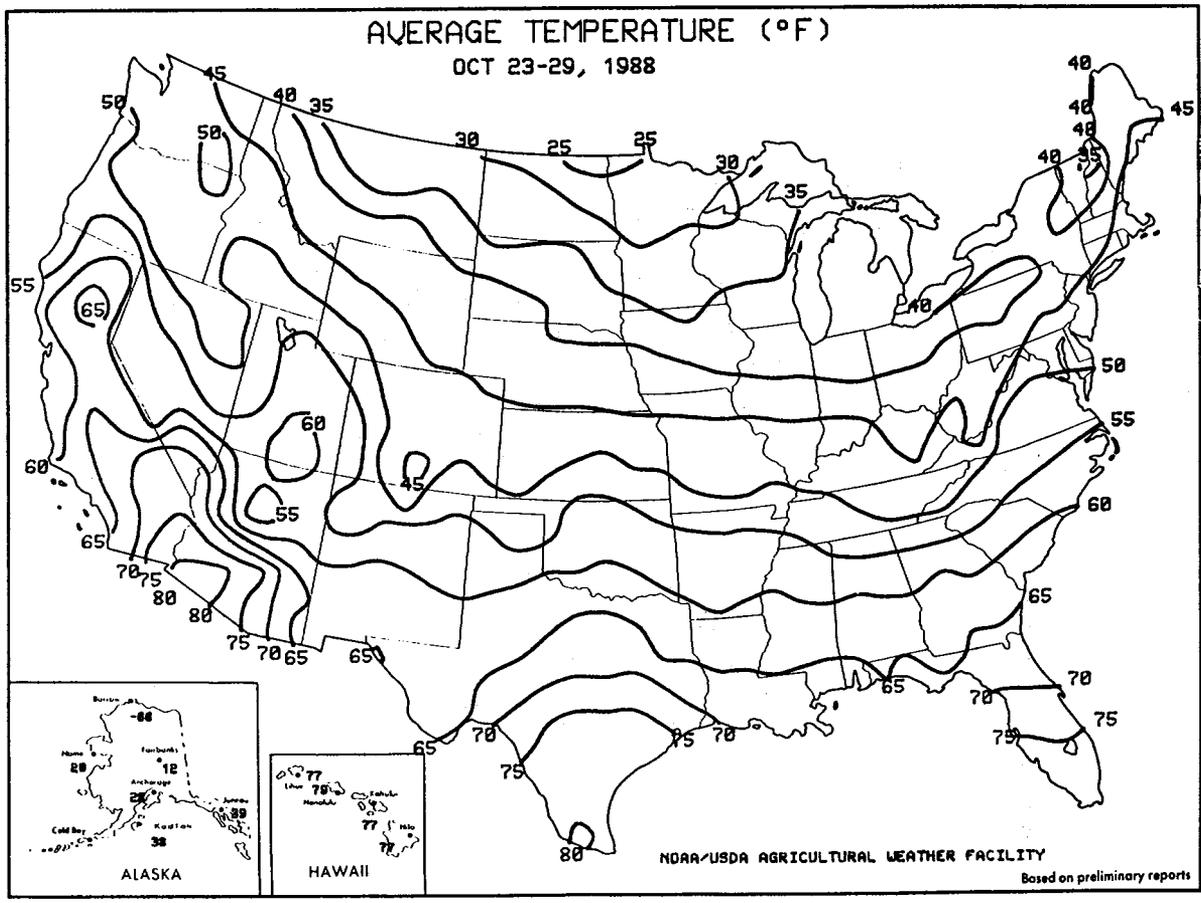
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MEAN DATE OF FIRST 32°F. TEMPERATURE IN AUTUMN





National Weather Data for Selected Cities

Weather Data for the Week Ending October 29, 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	69	47	75	39	58	0	.5	0	.3	10.4	155	32.1	70	96	52	0	0	3	0
MOBILE	78	54	84	47	66	1	.3	-.2	.3	15.9	180	58.2	105	97	47	0	0	1	0
MONTGOMERY	77	47	83	38	62	1	.5	0	.4	11.5	170	51.4	125	98	43	0	0	2	0
AK ANCHORAGE	32	24	42	17	28	-.2	.3	0	.1	4.2	106	11.7	93	90	69	0	0	5	0
BARROW	0	-12	7	-19	-6	-14	T	T	T	.6	60	3.3	81	84	77	0	0	7	0
FAIRBANKS	20	4	29	-7	12	-6	T	T	T	1.7	98	9.2	103	82	59	0	0	3	0
JUNEAU	42	35	47	28	39	0	1.0	-.7	.5	14.1	103	45.4	106	100	75	0	1	4	0
KODIAK	45	32	51	26	39	1	1.9	-.4	1.7	16.5	129	65.2	133	88	53	0	4	4	1
NOME	27	13	33	10	20	-.4	T	T	T	1.6	46	11.3	88	79	47	0	7	1	0
AZ PHOENIX	91	68	93	67	80	11	0	0	0	2.4	198	6.3	113	61	26	6	0	0	0
PRESCOTT	77	42	82	40	60	9	0	0	0	.5	19	13.2	84	64	20	0	0	0	0
TUCSON	87	58	89	56	73	6	0	0	0	2.9	138	10.9	115	79	25	0	0	0	0
YUMA	93	69	98	67	81	9	T	T	T	.5	96	2.7	143	79	30	5	0	0	0
AR FORT SMITH	70	44	82	36	57	-1	.8	.1	.8	7.2	116	27.9	84	84	34	0	0	1	1
LITTLE ROCK	69	50	79	45	59	1	.5	-.2	.4	2.9	43	29.8	74	61	39	0	0	3	0
CA BAKERSFIELD	80	52	91	47	66	2	0	0	0	0	0	3.0	71	82	42	1	0	0	0
EUREKA	56	49	62	46	53	-1	0	0	0	.5	15	16.4	63	92	82	0	0	0	0
FRESNO	79	50	88	48	65	4	0	0	0	0	5.5	73	86	34	0	0	0	0	0
LOS ANGELES	67	60	69	58	64	-1	0	0	0	.1	21	4.7	54	85	63	0	0	0	0
REDDING	80	47	90	43	63	2	0	0	0	-.1	4	17.0	60	80	29	1	0	0	0
SACRAMENTO	75	49	84	46	62	2	0	0	0	-.3	0	2	18	7.1	60	94	39	0	0
SAN DIEGO	68	61	70	59	65	1	T	T	T	0	6.7	95	85	63	0	0	0	0	0
SAN FRANCISCO	63	52	66	51	57	-1	T	T	T	.5	38	7.7	57	93	67	0	0	0	0
CO DENVER	66	31	78	25	48	1	T	T	T	1.0	46	13.5	98	81	24	0	4	1	0
GRAND JUNCTION	72	41	76	38	56	7	0	0	0	.8	51	6.6	100	50	19	0	0	0	0
PUEBLO	67	31	79	24	49	0	0	0	0	1.8	118	10.7	107	69	24	0	5	0	0
CT BRIDGEPORT	56	39	61	34	48	4	.1	-.7	.1	5.5	87	29.6	88	79	45	0	0	1	0
HARTFORD	62	32	60	25	44	-5	.1	-.7	.1	4.2	58	30.6	85	88	38	0	4	1	0
DC WASHINGTON	66	40	73	34	51	-4	.2	-.5	.1	3.6	62	25.2	77	84	26	0	0	2	0
FL APALACHICOLA	79	55	84	49	67	1	0	0	0	12.0	105	58.0	119	95	56	0	0	0	0
DAYTONA BEACH	81	55	83	51	68	-2	0	0	0	7.9	72	33.2	76	98	49	0	0	0	0
JACKSONVILLE	81	51	87	44	66	-1	T	T	T	18.7	188	55.2	117	97	41	0	0	0	0
KEY WEST	84	73	85	70	79	0	.2	-.8	.2	4.2	39	35.6	104	90	61	0	0	1	0
MIAMI	87	70	89	67	78	2	0	0	0	4.6	31	43.7	83	89	46	0	0	0	0
ORLANDO	84	59	89	54	72	0	0	0	0	7.0	77	44.0	97	98	41	0	0	0	0
TALLAHASSEE	81	45	85	37	63	-2	.5	0	.4	6.5	71	43.4	77	98	40	0	0	2	0
TAMPA	84	59	89	53	72	0	0	0	0	13.7	166	44.7	105	95	39	0	0	0	0
WEST PALM BEACH	85	70	88	63	77	2	0	0	0	5.3	32	59.1	110	85	51	0	0	0	0
GA ATLANTA	68	48	72	42	58	0	.1	-.5	.1	10.7	196	39.1	96	85	44	0	0	2	0
AUGUSTA	70	44	79	32	57	-3	.1	-.3	.1	9.2	173	36.7	98	96	44	0	1	2	0
MACON	75	48	81	36	62	0	T	T	T	8.6	167	38.3	100	94	38	0	0	1	0
SAVANNAH	77	53	85	41	65	2	.5	.1	.5	12.4	172	45.7	101	91	45	0	0	1	1
HI HILO	84	70	86	69	77	2	6.0	3.3	3.9	18.7	117	99.9	100	91	59	0	0	0	0
HONOLULU	88	70	89	68	79	1	T	T	T	1.0	44	8.3	50	87	48	0	0	5	3
KAHULUI	85	69	86	66	77	0	T	T	T	.8	74	13.7	103	88	59	0	0	0	0
LIHUE	83	70	83	68	77	0	.3	-.8	.2	2.6	40	27.8	85	92	64	0	0	3	0
ID BOISE	67	36	74	26	52	4	0	0	0	.2	19	7.1	81	61	24	0	1	0	0
LEWISTON	61	37	68	29	49	1	0	0	0	.9	53	7.8	75	74	35	0	2	0	0
POCATELLO	66	36	72	30	51	7	0	0	0	T	3	4.6	53	65	25	0	2	0	0
IL CHICAGO	46	29	58	25	38	-11	.4	0	.3	8.8	150	24.5	83	83	44	0	5	2	0
MOLINE	48	29	56	21	39	-10	.1	-.4	.1	4.4	70	21.1	64	78	36	0	5	1	0
PEORIA	50	30	57	22	40	-9	.3	-.2	.3	3.9	65	15.8	51	78	35	0	5	2	0
QUINCY	54	32	58	25	43	-8	.2	-.5	.2	1.9	26	13.9	41	72	31	0	3	1	0
ROCKFORD	45	29	56	24	37	-10	.5	-.1	.4	4.4	68	18.7	58	87	42	0	6	3	0
SPRINGFIELD	53	32	59	26	43	-8	.3	-.2	.3	4.5	81	17.7	59	77	32	0	3	2	0
IN EVANSVILLE	60	33	70	28	47	-6	1.4	.8	.7	4.1	82	27.7	80	91	32	0	4	2	2
FORT WAYNE	47	27	58	23	37	-11	.5	-.1	.4	4.6	93	27.5	94	88	49	0	7	2	0
INDIANAPOLIS	52	30	64	25	41	-9	.5	-.1	.3	4.2	84	24.4	74	82	38	0	5	2	0
SOUTH BEND	45	29	59	23	37	-12	.9	.2	.6	11.1	180	30.1	94	89	50	0	7	3	1
IA DES MOINES	51	30	59	26	41	-9	T	T	T	3.5	69	17.8	64	73	33	0	6	0	0
STIOUX CITY	52	29	64	23	41	-7	T	T	T	5.3	128	20.6	87	73	32	0	5	0	0
WATERLOO	47	24	55	16	36	-10	T	T	T	2.3	41	15.9	53	81	35	0	6	0	0
KS CONCORDIA	58	37	66	24	48	-4	0	0	0	1.1	24	13.4	53	54	26	0	1	0	0
DODGE CITY	64	36	77	28	50	-2	0	0	0	3.4	112	14.8	77	73	27	0	1	0	0
GOODLAND	63	31	81	22	47	-1	0	0	0	2.2	99	20.0	133	70	27	0	4	0	0
TOPEKA	59	33	65	23	46	-6	0	0	0	2.2	36	17.7	58	75	29	0	3	0	0
WICHITA	66	41	76	34	54	-1	T	T	T	1.5	26	15.8	60	70	27	0	3	0	0
KY BOWLING GREEN	59	33	68	25	46	-8	1.3	.7	.6	9.9	170	33.0	81	96	42	0	3	4	1
LEXINGTON	55	33	62	28	44	-8	.4	-.1	.3	7.3	137	29.9	78	82	39	0	3	3	0
LOUISVILLE	59	36	67	30	47	-6	.5	-.1	.4	3.0	53	28.3	78	77	31	0	2	3	0
LA ALEXANDRIA	74	55	83	46	64	1	2.4	1.7	1.8	7.4	130	36.9	86	97	68	0	0	3	2
BATON ROUGE	78	57	82	49	67	3	1.3	.7	1.0	12.3	180	65.0	139	97	60	0	0	3	1
LAKE CHARLES	80	58	83	49	69	3	1.0	.2	.8	10.1	111	50.3	113	98	63	0	0	3	1
NEW ORLEANS	79	58	83	51	69	3	1.1	.6	.6	8.7	106	68.6	137	100	56	0	0	2	2

Based on 1951-80 normals

Weather Data for the Week Ending October 29, 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	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	74	52	84	43	63	1	3.1	2.5	2.0	5.3	92	25.5	71	97	61	0	0	4	2
ME CARIBOU	49	35	52	29	42	2	1.4	-.7	.6	5.5	87	26.3	88	100	64	0	3	5	1
PORTLAND	54	35	56	28	44	0	.4	-.6	.2	5.0	73	33.6	99	92	48	0	3	4	0
MD BALTIMORE	60	35	68	29	48	-5	.1	-.6	.1	3.6	58	26.6	76	83	26	0	2	1	0
SALISBURY	62	36	72	29	49	-4	T	-.8	T	6.0	81	38.6	100	91	34	0	2	1	0
MA BOSTON	57	41	61	37	49	-2	.1	-.7	0	2.9	45	27.2	78	79	43	0	0	2	0
CHATHAM	54	43	56	37	49	-2	.8	-.1	.4	7.5	105	30.7	83	82	53	0	0	3	0
MI ALPENA	44	33	48	29	38	-5	.9	.5	.3	5.0	100	22.4	91	93	63	0	3	6	0
DETROIT	46	30	53	26	38	-6	.5	0	.3	7.2	173	20.6	80	88	55	0	5	4	0
FLINT	45	31	55	23	38	-8	.6	.1	.3	5.7	134	21.3	87	91	58	0	4	4	0
GRAND RAPIDS	43	30	53	22	37	-10	1.3	.7	.6	12.8	225	29.6	106	91	66	0	5	4	2
HOUGHTON LAKE	40	33	46	29	37	-6	.6	.1	.2	7.1	145	22.9	96	88	66	0	2	4	0
LANSING	43	30	53	23	37	-9	.6	.2	.3	9.1	196	25.7	103	94	64	0	5	4	0
MARQUETTE	36	27	41	21	31	-8	1.4	.7	.5	8.9	128	31.1	98	92	72	0	7	7	1
MUSKEGON	43	34	54	29	38	-8	1.6	1.0	.7	10.6	191	26.6	103	85	60	0	3	5	1
SAULT ST. MARIE	41	32	46	27	36	-5	1.8	1.1	.3	7.4	113	25.4	93	94	72	0	4	7	0
MN ALEXANDRIA	37	22	44	17	30	-12	.1	-.3	.1	4.7	117	20.9	92	93	57	0	7	1	0
DULUTH	34	25	41	14	29	-10	.3	-.1	.2	7.2	138	27.7	105	86	56	0	7	3	0
INT'L FALLS	31	23	38	7	27	-11	.5	.2	.4	4.9	103	22.7	104	93	71	0	7	3	0
MINNEAPOLIS	43	26	50	19	35	-10	.1	-.3	.1	3.6	85	15.5	65	80	41	0	6	2	0
ROCHESTER	43	23	54	16	33	-11	T	-.4	T	4.2	76	17.4	67	85	41	0	7	1	0
MS GREENWOOD	69	51	78	45	60	0	2.0	1.3	1.0	12.6	213	29.8	69	92	53	0	0	3	2
JACKSON	74	52	80	43	63	2	.6	.1	.4	8.0	139	33.1	78	99	60	0	0	2	0
MERIDIAN	75	48	81	40	61	2	.4	-.2	.4	13.2	221	41.5	94	100	57	0	0	2	0
MO CAPE GIRARDEAU	61	38	67	32	50	-1	.9	.4	.5	10.7	179	29.7	80	89	35	0	1	2	1
COLUMBIA	56	36	60	28	46	-7	.4	-.3	.4	3.6	52	22.8	70	74	35	0	3	1	0
KANSAS CITY	57	35	63	25	46	-8	T	-.6	T	8.7	118	21.4	65	71	32	0	2	0	0
SAINT LOUIS	58	39	62	35	49	-4	.4	-.1	.3	3.9	80	24.1	83	70	31	0	0	2	0
SPRINGFIELD	59	39	64	33	49	-4	.7	0	.6	7.0	97	39.9	117	76	37	0	0	3	1
MT BILLINGS	54	30	70	19	42	-3	.2	0	.2	3.1	134	9.2	70	84	38	0	4	2	0
GLASGOW	45	21	59	8	33	-8	T	-.1	T	1.1	77	6.9	68	79	43	0	7	1	0
GREAT FALLS	46	24	62	11	35	-9	.3	.2	.3	3.0	170	10.5	78	89	52	0	5	2	0
HAVRE	43	21	62	9	32	-9	T	-.1	T	1.5	97	5.3	49	90	55	0	7	0	0
HELENA	51	30	66	15	40	0	.1	0	.1	2.8	194	9.0	88	85	45	0	5	2	0
KALISPELL	51	29	62	17	40	2	T	-.2	T	2.6	130	11.6	90	90	47	0	4	1	0
MILES CITY	49	26	59	14	37	-6	.1	-.1	.1	1.9	100	4.3	33	73	36	0	5	1	0
MISSOULA	56	29	65	19	42	3	T	-.2	T	1.0	56	9.7	88	95	42	0	4	0	0
NE GRAND ISLAND	57	28	67	18	43	-5	0	-.2	0	3.3	95	20.1	93	77	30	0	4	0	0
LINCOLN	56	31	65	23	44	-5	0	-.3	0	6.2	139	16.7	66	74	29	0	5	0	0
NORFOLK	54	28	64	20	41	-6	0	-.2	0	5.5	166	22.8	103	75	30	0	5	0	0
NORTH PLATTE	61	26	77	13	44	-1	0	-.2	0	1.6	67	18.4	101	83	28	0	6	0	0
OMAHA	53	31	63	23	42	-8	0	-.4	0	3.7	69	18.7	67	70	39	0	5	0	0
SCOTTSBLUFF	64	24	80	16	44	-1	0	-.1	0	1.1	62	14.5	107	80	24	0	6	0	0
VALENTINE	59	22	79	7	40	-4	0	-.2	0	1.8	81	19.2	118	72	26	0	7	0	0
NV ELY	71	30	75	25	50	9	0	-.1	0	.6	46	6.6	87	57	18	0	5	0	0
LAS VEGAS	86	57	88	54	72	9	0	-.1	0	T	0	2.2	68	35	17	0	0	0	0
RENO	77	36	81	33	57	10	0	-.1	0	11	2.5	46	66	13	0	0	0	0	0
WINNEMUCCA	75	27	78	24	51	6	0	-.1	0	.3	36	4.6	75	54	15	0	7	0	0
NH CONCORD	53	28	56	21	41	-4	.1	-.7	0	2.8	47	27.2	92	96	47	0	5	3	0
NJ ATLANTIC CITY	59	33	67	25	46	-6	T	-.7	T	5.8	103	28.2	82	91	37	0	4	1	0
NM ALBUQUERQUE	75	43	78	40	59	6	0	-.2	0	3.0	186	12.9	184	56	18	0	0	0	0
CLOVIS	72	43	81	40	58	3	0	-.3	0	2.7	77	19.4	122	77	30	0	0	0	0
ROSWELL	77	45	87	41	61	6	0	-.2	0	1.6	58	13.2	134	69	26	0	0	0	0
NY ALBANY	51	30	59	24	40	-6	.2	-.5	.1	2.9	49	24.0	82	94	51	0	5	3	0
BINGHAMTON	45	31	50	27	38	-7	.5	-.2	.3	4.6	76	29.5	96	85	53	0	5	4	0
BUFFALO	48	36	54	34	42	-6	1.9	1.2	1.1	8.2	136	33.1	110	85	55	0	0	5	1
NEW YORK	55	44	62	42	50	-4	.1	-.7	0	5.6	88	31.5	90	68	38	0	0	2	0
ROCHESTER	48	36	53	35	42	-6	.2	-.4	.1	3.8	75	21.6	83	85	56	0	0	4	0
SYRACUSE	50	36	56	30	43	-5	.4	-.3	.3	5.4	87	28.5	89	81	51	0	1	3	0
NC ASHEVILLE	64	34	70	27	49	-3	T	-.7	T	5.5	81	21.3	57	90	33	0	4	0	0
CHARLOTTE	67	44	72	34	56	-1	T	-.6	T	6.9	114	28.9	79	80	35	0	0	1	0
GREENSBORO	65	38	70	30	52	-3	0	-.7	0	6.1	92	29.3	81	85	32	0	2	0	0
HATTERAS	68	51	78	42	60	-2	0	-.1	0	5.7	56	37.6	81	93	48	0	0	0	0
NEW BERN	71	45	81	39	58	-2	T	-.7	T	4.0	46	44.0	95	94	41	0	0	1	0
RALEIGH	66	38	70	32	52	-4	.9	.3	.9	9.4	163	32.1	90	89	38	0	2	1	1
WILMINGTON	71	47	80	38	59	-2	.6	0	.4	4.7	56	54.3	116	92	42	0	0	2	0
ND BISMARCK	46	19	55	14	32	-8	.1	-.1	.1	.8	38	8.9	63	84	40	0	7	2	0
FARGO	39	18	43	13	29	-12	.1	-.2	.1	3.7	123	12.3	68	89	40	0	7	2	0
GRAND FORKS	36	15	40	8	26	-14	T	-.2	T	2.3	74	11.2	67	88	47	0	7	1	0
WILLISTON	44	19	54	9	31	-9	T	-.1	T	1.8	88	9.3	74	84	44	0	7	0	0
OH AKRON-CANTON	48	30	54	26	39	-9	.4	-.1	.2	7.6	151	27.6	91	87	46	0	5	3	0
CINCINNATI	54	29	62	23	42	-9	.3	-.3	.1	4.9	93	32.4	96	82	34	0	6	3	0
CLEVELAND	48	31	54	25	39	-10	.3	-.3	.1	4.3	83	22.6	76	84	46	0	5	4	0
COLUMBUS	51	30	58	24	40	-9	.3	-.2	.2	5.2	117	30.5	97	87	40	0	5	3	0

Weather Data for the Week Ending October 29, 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	50	29	58	26	40	-10	.4	-.1	.2	7.7	183	27.7	94	82	44	0	7	3	0
TOLEDO	47	28	58	22	37	-10	.4	0	.3	6.2	144	22.4	85	90	51	0	5	3	0
YOUNGSTOWN	47	32	52	27	39	-8	.3	-.3	.1	6.1	112	26.7	85	86	47	0	4	3	0
OK OKLAHOMA CITY	67	48	75	41	58	0	T	-.5	T	7.1	119	28.0	100	75	32	0	0	0	0
TULSA	67	46	78	38	57	-1	T	-.7	T	6.8	91	27.1	79	79	30	0	0	0	0
OR ASTORIA	61	40	64	33	50	0	T	-.7	T	3.3	36	34.7	73	97	61	0	0	0	0
BURNS	66	27	73	18	46	3	0	-.2	0	.1	8	5.0	67	64	23	0	6	0	0
MEDFORD	75	39	83	36	57	7	0	-.5	0	-.3	15	7.2	54	86	28	0	0	0	0
PENDLETON	62	38	71	26	50	2	0	-.3	0	.4	26	7.7	87	60	30	0	3	0	0
PORTLAND	62	41	67	35	52	1	T	-.8	T	1.9	43	21.4	84	96	46	0	0	1	0
SALEM	62	36	68	27	49	0	T	-.9	T	1.1	23	19.9	73	97	50	0	2	0	0
PA ALLENTOWN	53	32	58	25	43	-7	.3	-.4	.3	5.4	79	33.4	92	87	41	0	5	1	0
ERIE	47	37	53	33	41	-7	1.0	-.2	.5	11.3	155	33.1	101	82	48	0	0	5	0
HARRISBURG	56	35	60	27	45	-6	.2	-.5	.2	4.8	78	29.9	92	84	34	0	3	1	0
PHILADELPHIA	58	38	63	31	48	-4	.1	-.6	.1	4.8	79	32.2	94	86	38	0	1	1	0
PITTSBURGH	50	31	56	26	40	-8	.1	-.4	.1	3.5	70	21.9	70	91	44	0	4	3	0
SCRANTON	49	33	55	26	41	-7	.3	-.4	.2	3.8	66	27.0	92	85	43	0	3	3	0
RI PROVIDENCE	56	34	60	29	45	-5	.1	-.8	.1	4.2	59	29.8	82	89	43	0	3	2	0
SC CHARLESTON	74	52	80	43	63	1	.1	-.5	.1	10.4	138	40.8	89	94	46	0	0	2	0
COLUMBIA	72	45	77	34	59	-1	.1	-.4	.1	8.9	136	38.8	90	93	37	0	0	0	0
FLORENCE	71	48	77	38	59	-1	.1	-.3	.1	7.8	125	35.1	91	91	36	0	0	2	0
SD GREENVILLE	68	40	74	31	54	-3	T	-.7	T	7.4	95	31.5	72	91	38	0	1	0	0
ABERDEEN	47	24	56	17	35	-7	.1	-.1	.1	5.4	226	16.9	102	77	37	0	7	1	0
HURON	49	24	59	19	36	-7	.1	-.2	.1	3.8	143	17.6	102	80	35	0	7	1	0
RAPID CITY	56	26	74	14	41	-4	T	-.2	T	1.3	76	9.7	64	80	32	0	6	0	0
STIOUX FALLS	48	25	61	21	37	-8	T	-.3	T	4.4	106	16.8	75	73	32	0	7	0	0
TN CHATTANOOGA	66	37	71	35	52	-4	.2	-.4	.2	8.7	124	35.6	82	96	40	0	0	2	0
KNOXVILLE	61	33	67	27	47	-8	.5	-.1	.3	4.2	76	25.9	67	99	43	0	4	3	0
MEMPHIS	67	46	75	41	57	-2	1.7	1.1	.8	8.2	142	33.6	80	85	41	0	0	3	2
NASHVILLE	63	36	72	29	49	-7	1.0	.4	.5	4.0	66	22.0	55	96	41	0	1	3	0
TX ABILENE	79	53	90	42	66	4	.1	-.3	.1	1.8	35	14.5	69	80	32	1	0	1	0
AMARILLO	71	41	79	36	56	1	0	-.3	0	3.8	128	24.2	136	72	25	0	0	0	0
AUSTIN	85	65	93	59	75	9	.1	-.6	.1	1.8	27	17.5	65	95	51	2	0	1	0
BEAUMONT	80	62	86	58	71	5	1.0	-.2	.6	12.0	138	43.2	94	98	65	0	0	3	1
BROWNSVILLE	88	70	90	66	79	6	.9	.3	.5	8.5	99	22.1	98	98	58	1	0	2	1
CORPUS CHRISTI	88	68	90	64	78	7	.9	.5	.7	7.6	85	17.0	60	99	55	2	0	3	1
DEL RIO	81	63	89	60	72	5	.2	-.2	.2	4.7	98	15.1	95	85	51	0	0	1	0
EL PASO	82	48	85	44	65	6	T	-.1	T	2.1	104	10.4	151	75	23	0	0	0	0
FORT WORTH	76	54	87	46	65	2	.6	0	.3	5.5	89	20.2	74	90	48	0	0	3	0
GALVESTON	81	71	85	66	76	7	.2	-.3	.2	10.3	122	36.1	107	94	64	2	0	2	0
HOUSTON	85	66	91	61	76	9	T	-.8	T	2.0	23	20.8	53	95	47	0	0	1	0
LUBBOCK	75	47	86	42	61	5	0	-.3	0	2.3	61	12.3	74	74	29	0	0	0	0
MIDLAND	78	48	90	40	63	3	0	-.2	0	5.1	151	17.7	143	90	33	1	0	0	0
SAN ANGELO	81	51	90	42	66	4	0	-.4	0	3.2	65	13.3	81	87	39	1	0	0	0
SAN ANTONIO	87	68	93	64	78	11	.1	-.5	.4	1.1	17	18.0	72	90	44	1	0	3	0
VICTORIA	87	68	91	65	78	9	.2	-.4	.2	2.9	32	12.9	40	96	52	3	0	1	0
WACO	80	57	90	44	68	4	.2	-.5	.2	5.8	96	20.2	76	93	57	1	0	2	0
WICHITA FALLS	75	51	89	44	63	3	T	-.5	T	7.2	123	21.2	89	84	37	0	0	0	0
UT BLANDING	74	37	77	31	55	8	0	-.3	0	1.1	48	9.3	98	**	**	0	0	0	0
CEDAR CITY	71	42	75	39	56	8	.5	-.3	.5	.8	48	11.0	127	62	22	0	1	1	1
SALT LAKE CITY	48	35	52	30	42	-2	0	-.3	0	.1	4	6.5	52	72	23	0	0	0	0
VT BURLINGTON	64	42	72	40	53	-5	.4	-.3	.2	3.6	63	21.4	76	87	55	0	2	3	0
VA NORFOLK	64	42	72	40	53	-5	.5	-.3	.3	4.5	61	34.0	87	90	46	0	0	2	0
RICHMOND	65	37	75	30	51	-4	T	-.8	T	3.9	56	31.5	85	86	31	0	1	0	0
ROANOKE	63	37	69	30	50	-3	T	-.8	T	4.0	62	26.0	78	80	23	0	2	0	0
WA QUILLYUTE	57	39	61	31	48	0	.5	-.2	.4	11.9	74	69.3	92	98	66	0	1	3	0
SEATTLE-TACOMA	58	42	62	36	50	1	0	-.9	0	3.6	69	20.6	78	94	58	0	0	1	0
SPOKANE	55	30	62	20	43	0	T	-.3	0	1.7	102	10.4	87	83	41	0	3	0	0
YAKIMA	63	29	72	21	46	0	T	-.1	T	.2	23	3.7	66	89	31	0	5	0	0
WV BECKLEY	54	30	60	26	42	-6	.3	-.3	.2	8.0	132	28.9	80	89	29	0	5	4	0
CHARLESTON	58	32	64	24	45	-3	.3	-.3	.2	5.3	99	23.7	66	96	31	0	5	2	0
HUNTINGTON	56	31	62	24	44	-9	.6	-.1	.5	4.6	89	27.4	79	93	31	0	4	2	1
PARKERSBURG	54	32	59	23	43	-9	.4	-.2	.4	5.4	105	25.6	79	85	34	0	3	1	0
WI GREEN BAY	41	28	51	19	35	-9	.9	-.5	.8	6.0	118	18.6	76	87	58	0	5	3	1
LACROSSE	44	29	55	20	37	-9	.1	-.3	.1	5.8	110	22.2	81	76	42	0	5	2	0
MADISON	44	29	55	17	36	-9	.4	0	.4	4.9	97	19.4	71	75	46	0	5	2	1
MILWAUKEE	44	31	58	24	37	-9	.7	-.3	.6	7.9	161	23.9	90	79	49	0	5	2	1
WAUSAU	38	28	47	18	33	-9	.9	-.5	.6	5.2	88	18.8	66	89	59	0	6	3	1
WY CASPER	61	26	70	18	44	-1	T	-.2	T	.9	55	5.5	55	80	25	0	5	0	0
CHEYENNE	62	28	72	21	45	2	0	0	1.7	102	14.8	120	80	24	0	5	0	0	0
LANDER	63	32	72	19	48	6	0	0	.9	45	6.8	58	67	23	0	4	0	0	0
SHERIDAN	55	28	77	16	42	2	.1	-.2	.1	1.2	53	8.7	65	88	39	0	4	2	0
PR SAN JUAN	88	75	89	73	82	1	.9	-.4	.4	9.1	82	50.1	115	91	69	0	0	5	0

Heating Degree Days Summary

LAST DATE OF DATA COLLECTION PERIOD IS 10-29-1988
ACCUMULATIONS ARE FROM JULY 1
** = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

Table with columns: STATE CITY, CALL WEEK, WEEK WEEK, CUM CUM CUM CUM CUM, DEV DEV DEV DEV DEV, FROM FROM FROM FROM FROM, NORM L YR, PRCT PRCT. Lists cities from AL BIRMINGHAM to MT KALISPELL with their respective heating degree day data.

Table with columns: STATE CITY, CALL WEEK, WEEK WEEK, CUM CUM CUM CUM CUM, DEV DEV DEV DEV DEV, FROM FROM FROM FROM FROM, NORM L YR, PRCT PRCT. Lists cities from MT MILES CITY to WY SHERIDAN with their respective heating degree day data.

National Agricultural Summary

October 24-30, 1988

HIGHLIGHTS: Rain slowed harvest progress in the eastern Corn Belt and the Delta. Soil moisture was adequate to short except in the West where it was short to adequate. Days suitable for fieldwork averaged 4 to 5 except in the West where the average was 6 to 7.

Winter wheat was mostly good to fair. Seeding was 92 percent (%) complete, 1 percentage point behind 1987 but 7 points ahead of the 5-year average. Eighty-one percent of the crop was emerged, slightly behind last year's 83% but 11 points ahead of the 70% average. Corn harvest reached 83% completion, 7 points behind 1987 but 16 points ahead of normal. Soybean harvest was 79% finished, 10 points behind last year but 11 points ahead of normal. Sorghum harvest was 82% complete, 5 points and 13 points ahead of 1987 and the average, respectively. Ninety-four percent of the cotton acreage was in the boll opening stage, 9 points and 7 points ahead of last year and the average, respectively. Harvest was 48% finished, 6 points behind 1987 but ahead of the 45% average. Drier weather improved harvest conditions in Arizona. Rice harvest was 97% finished, 2 points behind last year but slightly ahead of the 96% normal. Florida's citrus producers continued to irrigate extensively. Pastures were mostly fair to good. Livestock was mostly good.

SMALL GRAINS: Winter wheat was mostly good to fair. Seeding was 92% complete, slightly behind last year's 93% but 7 points ahead of normal. Eighty-one percent of the crop was emerged, 2 points behind 1987 but 11 points ahead of the average. Seeding was complete in Colorado, Montana, Nebraska and South Dakota. Producers in Idaho and Oregon were fighting Russian wheat aphid infestations. Cooler temperatures reduced aphid activity in Washington. Good early emergence and growth continued in Kansas. Some early seedings were being grazed but the root system in most fields was not developed enough to support grazing. Texas Blacklands producers were spraying to control greenbugs in recently emerged fields.

CORN: Corn harvest advanced 9 points to 83% completion. Harvest was 7 points behind 1987 but 16 points ahead of the average. Harvest was complete in Texas and neared completion in Georgia, Illinois, Iowa, and Minnesota. Rain slowed harvest progress in the eastern Corn Belt and the Delta. Ohio's harvest lagged 16 points behind the 58% normal. Pennsylvania's harvest was 13 points behind the 42% average. Illinois' harvest was 97% finished, 18 points ahead of the average. Iowa's harvest was 31 points ahead of the 68% normal.

SOYBEANS: Ninety-eight percent of the soybean acreage was in the leaf dropping stage, slightly behind 1987's 99% but normal. Acreage not yet in the leaf dropping stage was mostly in the Delta and the Southeast. Harvest was 79% finished, 10 points behind 1987 but 11 points ahead of the 68% average. Harvest neared completion in Illinois, Iowa, Minnesota, and Nebraska and was complete in South Dakota. Rain delayed harvest in the eastern Corn Belt and the Delta. Illinois' harvest reached 98% completion, 13 points ahead of normal. Harvest was 15 points ahead of the 84% average in Iowa.

SORGHUM: Harvest was 82% complete, 5 points and 13 points ahead of last year and normal, respectively. Harvest was complete in Louisiana and Tennessee and neared completion in Arkansas,

and Mississippi. Harvest was 87% complete, 9 points ahead of normal in Texas. Late maturing fields have slowed harvest progress in the High Plains. Kansas' harvest was 20 points ahead of the 55% average. Oklahoma's harvest was 20 points behind the 45% normal.

COTTON: Ninety-four percent of the cotton acreage was in the boll opening stage, 9 points and 7 points ahead of 1987 and the average, respectively. Harvest was 48% finished, 6 points behind last year but 3 points ahead of normal. Drier weather improved harvest conditions in Arizona. Producers suffered considerable ground loss from heavy rains the previous week. Second applications of defoliants were necessary in some fields. Boll weevil populations increased in central areas. Arizona's harvest was 17 points behind the 52% average. California producers harvested one-fourth of their crop last week. Harvest was 4 points ahead of the 46% normal. Texas' harvest was 29% finished, 5 points ahead of normal. Cool temperatures slowed crop maturity in the Plains area. Mississippi's harvest was 82% complete, 6 points ahead of the average.

OTHER FIELD CROPS: Rice harvest was 97% finished, 2 points behind 1987 but 1 point ahead of the average. Harvest was complete in Louisiana and Texas.

Peanut harvest was 78% complete, 4 points ahead of normal in Georgia. Alabama's harvest was 92% complete, slightly ahead of the 91% normal.

Burley tobacco stripping was 48% complete, 13 points ahead of normal in Tennessee. Stripping was 18% finished, 1 point behind normal in Kentucky. Color of the crop was good.

FRUIT AND NUTS: Florida's citrus producers continued to irrigate extensively. The fruit crop continued to size well. Fresh fruit harvest became more active. Lemon harvest continued in central and western Arizona. Grapefruit groves were in good condition. Grapefruit and navel orange harvests became more active. Granny Smith apple harvest continued in eastern Arizona. Pecan harvest activity increased in the Trans-Pecos area of Texas. California's desert lemon harvest was very active. Pecan harvest started in Fresno county. Late variety apple harvest continued. Other harvest activities included avocados, dates, navel and valencia oranges and grapefruit. Red delicious apple harvest was winding down in central Washington.

VEGETABLES: Fall harvests and winter plantings continued active in Florida. Harvest activities included snap beans, sweet corn, and tomatoes. Potato planting was underway in the Homestead area. Fall lettuce harvest continued in Arizona. Asparagus harvest was active in the Parker-Poston and Yuma areas. Carrot, cucumber and cabbage harvests were active in the Rio Grande Valley of Texas. Pepper and cucumber harvests were winding down in the Trans-Pecos. Carrot and pepper harvests continued in the High Plains. Lettuce harvest was complete in the Salinas area of California. Fresh market tomato and sweetpotato harvests continued. Other harvest activities included broccoli, celery, carrots, and cauliflower.

PASTURES AND LIVESTOCK: Pastures were mostly fair to good. Livestock was mostly good. Northern Missouri producers were concerned about winter water supplies. Weather conditions were ideal for calving in Oregon.

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 totals mostly under 0.50 in.; 0.75 to 1.50 in. northwest. Temperatures 1 to 5° above normal; 1 to 4° below normal Tennessee Valley area.

Days suitable for fieldwork 5.3. Soil moisture 22% short, 75% adequate, 3% surplus. Scattered showers benefited small grains; caused some harvest delays. Soybeans 96% turning yellow, 100% 1987, 98% avg.; 85% dropping leaves, 96% 1987, 93% avg.; 67% mature, 91% 1987, 81% avg.; 42% harvested, 67% 1987, 45% avg.; 4% poor, 40% fair, 52% good, 4% excellent. Corn 96% harvested, 99% 1987, 97% avg. Cotton 75% harvested, 95% 1987, 77% avg. Sorghum 83% harvested, 89% 1987, 87% avg. Peanuts 98% dug, 98% 1987, 96% avg.; 92% combined, 96% 1987, 91% avg. Winter wheat 53% seeded, 52% 1987, 39% avg. Pastures, livestock mostly good. Primary activities: Harvesting row crops, sweetpotatoes, pecans, catfish; seeding small grains, annual forage crops; applying lime, fertilizer to cropland, pastures; repairing harvest equipment; routine care of livestock, poultry.

ARIZONA: Sunny, warm days; clear cool nights 23rd to 27th. Afternoon temperatures 70s high country; 80s 5,000 ft.; 90s lower deserts. Partly cloudy skies, slightly lower afternoon temperatures 28th to 29th. Isolated light showers southeast, northwest 28th. Temperatures 5 to 11° above normal.

Drier weather helped cotton harvest. Statewide 35% picked, 65% 1987. Considerable "stringing-out", ground loss from heavy rains west. Second defoliation necessary some fields. Boll weevil populations increased central. Alfalfa hay harvest steadily slowed; new fall plantings, renovation old stands. Rain damage to cut hay west, east. Beginning to sheep-off fields east. Lemon harvest, packing continued west. Grapefruit harvest, packing progressed gradually. Groves good. Asparagus harvest progressed Parker-Poston, Yuma areas. Central lemon harvest, packing progressed. Few grapefruit, navel oranges picked. Mixed vegetables harvested. Granny smith apple harvest, packing progressed eastern areas. Fall lettuce harvest continued. Cattle good to excellent. Ranges providing average to above average feed supplies, except central. Rains should provide good grazing conditions, winter pastures. Northeastern, north central, higher elevations, grazing areas good. Mid-elevation ranges moderate to good. Rains, warm weather turned grasses green south central. Ranges excellent southeast, south central.

ARKANSAS: Cold, good rains statewide, heaviest across south. Temperature extremes 31°; 87°. Rainfall 0.01 to 2.41 in.

Days suitable for fieldwork 5.0. Soil moisture 22% short, 69% adequate, 9% surplus. Major activities: Combining rice, soybean; picking cotton; seeding small grains; planting pastures, fertilization; disking rice stubbles; cutting cotton stalks; marketing, worming cattle. Rains, wet soils delayed harvest. Cotton yields, quality better than expected. Rice harvest nearly complete, some lodging due to rains. Soybeans 68% mature, 84% 1987, 70% avg. Wheat 46% planted, 69% 1987, 47% avg. Oats 86% planted, 67% 1987, 53% avg. Peanut harvest delayed, due to rains. Pecan harvest started. Pastures high nitrate, otherwise excellent growth. Pasture, range 17% poor, 53% fair, 30% good. Hay, roughage remained short.

Stockwater 29% short, 66% adequate, 5% surplus. Some cattle internal parasite problems.

CALIFORNIA: High pressure dominating feature. Only precipitation traces of drizzle coast. Temperatures cooled closer to normal.

Open weather, rapid progress harvest, land preparation. Rice harvest good progress, approached completion many areas. Stubble burning slowed, poor smoke dissipation. Cotton defoliation about complete, harvest full swing. Stalk shredding, disking active. Boll weevil treatment active Riverside. Dry beans, field corn, sunflower harvests tapering off. Sugarbeet harvest normal. Seeding oats, winter forage increased. Ground preparation active. Alfalfa harvest slowing seasonally. Late variety apple picked. Avocado, date harvests ongoing. Table, wine grape harvests neared completion. Kiwifruit, olive, persimmon, pomegranate harvests continued. Fruit, nut growers post harvest pruning, pulling dead trees, pre-plant fumigation. Fertilizers applied orchards, vineyards. Late variety walnuts harvested. Pecan harvest started Fresno County. Riverside County tangerines, desert grapefruit harvested, desert lemon very actively picked, western county lemon harvest slowed. Navel oranges, few valencia oranges picked; Fresno County navel sizes smaller than last year. Lettuce moderate supply decreasing Santa Maria, harvesting expected finished 2 to 3 weeks. Lettuce harvest Salinas complete. Broccoli harvest begun Huron, Firebaugh areas; planting broccoli Riverside. Celery heavy supply, good quality Salinas. Carrots, cauliflower moderate, heavy supply, good quality. Dry bean harvest blackeyes, limas finishing Merced-Atwater area, harvesting fresh market tomatoes, sweetpotatoes continued. Strawberry harvest complete Santa Maria. Fall potato harvest continued Tulelake-Butte Valley. Harvested Kingsburg-Dinuba area cabbage, pumpkins, mixed melons, okra, sweet corn, zucchini, peppers, carrots, green snap beans. Livestock fair to good statewide. Range, non-irrigated pastures poor, dry. Northern counties, cattle getting little feed from pastures, light supplemental feeding. Cattle Sacramento Valley, central foothill areas trucked to winter pastures. Fall rains badly needed initiate grass growth, fill stock ponds.

COLORADO: Continued warm, dry throughout week; only scattered rain showers over State. Some light precipitation over weekend accompanied by overcast conditions. Western Slope, San Luis Valley 4 to 6° above normal while elsewhere 2 to 4° above normal.

Days suitable for fieldwork 6.4. Soil moisture 19% very short, 65% short, 16% adequate. Third, 4th cuttings alfalfa 89%, 55% respectively. Corn 98% mature, 58% harvested. Dry bean harvest complete. Dry onion harvest complete. Sorghum 94% mature, 53% harvested. Sugarbeets 78% harvested. Winter wheat all planted, 94% emerged. Livestock mostly good to excellent. Range, pastures mostly good to fair.

FLORIDA: Dry conditions continued, less than 0.50 in. rainfall anywhere. Temperatures 2° below normal north, central, but south 1° above normal.

Soil moisture generally short to adequate. Cotton, soybean harvests active. Peanut harvest neared completion. Sugarcane harvest became more active as additional mills opened. Dry soils slowed small grain planting. Haymaking, sugarcane planting active. Panhandle, northern Peninsula

grazing mostly fair to good; few drier areas Panhandle, east central Peninsula only poor to fair. West central, lower Peninsula areas mostly good to excellent. Cattle continued fair to mostly good, Panhandle. Few middle east coast herds only fair, but elsewhere in Peninsula, generally good to excellent. Dry all citrus areas, extensive irrigation. Very little fruit drop. Fruit sizing well. Fresh fruit harvest increased. Caretakers clean cultivated, applied few sprays, fresh crops. Dry weather continued vegetable producing areas. Warm days, cool nights prevailed. Planting winter crops active. Harvest many fall crops increased. Fair to good volume snap beans, sweet corn, cucumbers, eggplant, radishes, squash, tomatoes. Potato planting underway Homestead.

GEORGIA: Warm for season. Temperatures 1 to 4° above normal except extreme north, 1 to 5° below normal. Extreme lows mostly low and mid 30s north, south. Extreme highs low 70s north to mid, upper 80s extreme south. Rain 1 to 2 days, totals almost all under 0.25 in.

Days suitable for fieldwork 5.9. Soil moisture 6% very short, 54% short, 39% adequate, 1% surplus. Cotton slow to defoliate. Peanut harvest neared completion. Soybean harvest very active, frost damage light. Rye, other small grain planting near average. Pecans 5% poor, 40% fair, 55% good; 14% harvested, 13% 1987, 16% avg. Pasture, hay fair to good. Cattle, hogs good.

HAWAII: Variable weather. Unsettled conditions early week, sunny mornings, cloudy afternoons with moderate showers. Sunny midweek. Morning showers, sometimes heavy over weekend. Temperatures cooled, high 60s to upper 80s. Rainfall none to 5.50 in.

Days suitable for fieldwork 7.0. Crops improved. Chinese cabbage production steady, moderate volume. Head cabbage output steady, good quality. Cucumber production down slightly. Tomato supplies up, expected to continue increasing. Banana production heavy, cavendish varieties. Papaya production heavy. Green pepper production expected to increase.

IDAHO: Light precipitation north, none elsewhere. Temperatures up to 10° above normal.

Days suitable for fieldwork 7.0. Winter wheat 98% seeded, 94% 1987, 96% avg.; 80% emerged. Early stands fair to good. Much concern about Russian wheat aphid infestation. Sugarbeets 81% harvested, 75% avg. Grain corn over 50% harvested. Apples 95% harvested, 100% 1987, 94% avg. Livestock good.

ILLINOIS: Temperatures 6 to 12° below normal. Precipitation less than 0.20 in. north, central; 0.50 in. south.

Days suitable for fieldwork 5.5. Soil moisture 73% short, 25% adequate, 2% surplus. Pasture 5% very poor, 17% poor, 55% fair, 22% good, 1% excellent; livestock roughage 45%, 46% 1987, 59% avg.

INDIANA: Temperatures 7 to 15° below normal. Lows upper teens to 20s, highs upper 50s to near 70s. Precipitation 0.10 to 0.75 in.

Days suitable for fieldwork 4.5. Topsoil moisture 9% short, 81% adequate, 10% surplus. Subsoil moisture 76% short, 23% adequate, 1% surplus. Pastures 1% very poor, 21% poor, 56% fair, 22% good. Rye 95% seeded, 99% 1987, 91% avg. Spring tilled land 28%, 44% 1987, 24% avg. Hay, roughage 3% very short, 37% short, 57% adequate, 3% surplus. Rains slowed field activities early; corn, soybean harvest gained momentum midweek.

IOWA: Temperatures 7 to 12° below normal. Extremes 10°; 64°. Precipitation trace to maximum 0.06 in.

Days suitable for fieldwork 6.8. Topsoil moisture 78% short, 22% adequate; subsoil moisture 98% short, 2% adequate. Fall tillage 50%, 43% 1987, 25% avg. Fall fertilizer application 40%, 31% 1987, 21% avg. Livestock mostly good. Considerable utilization of corn stalks, bean stubble fields for grazing.

KANSAS: Temperatures 47° north central to 54° south central, 1° above normal northwest, south central; 1 to 2° below normal central, west central; 3 to 4° below normal elsewhere. Little or no rainfall central, western two-thirds of State, scattered light to moderate eastern third. Few localities east 1.40 to 1.50 in.; most 0.26 to 0.41 in.

Days suitable for fieldwork 6.5. Topsoil moisture 70% short, 27% adequate, 3% surplus. Subsoil moisture 63% short, 37% adequate. Harvest corn, sorghum, soybeans excellent progress with another week of near ideal harvest weather. Corn harvest complete or nearing completion all areas except northwest where freeze would help. Sorghum harvest ahead of schedule, progress slow southwest, south central areas where few stands not yet mature. Wheat seeding neared completion; early emergence, growth good. Some early fields being grazed but most stands, root system not developed enough to support grazing. Ranges, pastures fair, some going dormant. Hay, forage supplies generally adequate to short.

KENTUCKY: Temperatures 5 to 10° below normal. Lows 30s, highs 50s. Precipitation mostly around 0.50 in.; 0.10 in. to over 1.00 in.

Days suitable for fieldwork 4.6. Soil moisture 15% very short, 50% short, 35% adequate. Water table low, continued dry weather. Corn, soybean harvest active; moisture content still high. Burley 18% stripped, 20% 1987, 19% avg. Crop good color. Markets open 21st. Wheat 70% seeded, 73% 1987, 60% avg. Early wheat fair to good, seeding to continue for several weeks as row crops harvested. Pastures fair to good, need rain.

LOUISIANA: Temperatures 1° below to 3° above normal. Temperature extremes 41°; 87°. Rainfall 0.78 to 2.41 in.

Days suitable for fieldwork 3.9. Soil moisture 4% very short, 10% short, 54% adequate, 32% surplus. Soybeans 98% turning color. Sweetpotatoes 88% harvested. Sugarcane good; 97% planted, 29% harvested. Pecans 9% harvested. Winter wheat fair to good; 21% planted, 13% emerged. Hay final cutting 98%. Hay, roughage 24% short, 74% adequate, 2% surplus. Livestock good. Pastures, vegetables fair to good. Harvesting cucumbers, snap beans. Transplanting strawberries. Main activities: Harvesting cotton, hay, soybeans, sugarcane, sweetpotatoes; planting sugarcane, wheat, winter pastures. Rain slowed harvest of all crops statewide.

MARYLAND & DELAWARE: **MARYLAND:** Precipitation 0.81 in. Temperature 48°, normal 53°. Temperature extremes 17°; 73°.

Days suitable for fieldwork 5.6. Topsoil moisture 15% short, 85% adequate. Subsoil moisture 40% short, 60% adequate. Hay 20% short, 80% adequate. Corn grain 85% harvested, 85% avg. Soybeans 50% harvested, 50% avg. Apples 95% harvested, 95% avg. Winter wheat 75% seeded, 75% avg. Barley 95% seeded, 90% avg. Rye 80% planted, 85% avg.

DELAWARE: Precipitation 1.09 in. Temperature 50°, normal 53°. Temperature extremes 25°; 72°.

Days suitable for fieldwork 6.4. Topsoil moisture 30% short, 70% adequate. Subsoil moisture 100% adequate. Hay 100% adequate. Corn grain 95%

harvested, 95% avg. Soybeans 50% harvested, 45% avg. Apples 95% harvested, 95% avg. Winter wheat 65% seeded, 45% avg. Barley 95% seeded, 90% avg. Rye 100% seeded, 65% avg.

MICHIGAN: Temperatures 4 to 10° below normal. Temperature extremes 17°; 59°. Precipitation 0.40 to 2.35 in. across State.

Days suitable for fieldwork 2.5. Soil moisture 40% adequate, 60% surplus. Corn 40% harvested, 65% 1987, 40% avg. Soybeans 50% harvested, 80% 1987, 55% avg. Winter wheat 95% planted, 95% 1987, 85% avg.; 80% emerged, 80% 1987, none avg.; 5% poor, 20% fair, 45% good, 30% excellent. Dry beans 60% harvested, 85% 1987, 90% avg. Major activities: Limited harvest of corn for grain, sugarbeets, soybeans, dry beans. Fruit, vegetable harvest nearly complete.

MINNESOTA: Temperatures 10 to 13° below normal. Temperature extremes 2°; 59°. Precipitation 0.09 to 0.36 in. below normal. Precipitation 0.01 to 0.25 in. Greatest weekly total 0.41 in. Snowfall 1 to 5 in. north central, northeast.

Soybeans 99% harvested, 99% 1987, 83% avg. Corn 98% harvested, 95% 1987, 62% avg.

MISSISSIPPI: Cloudy, wet, cool except for coast. Rainfall statewide 0.51 in. above normal. Temperature 1° below normal; extremes 34°; 86°.

Days suitable for fieldwork 3.3, 5.9 1987, 4.1 avg. Soil moisture 50% adequate, 40% surplus, 10% excessive. Rain slowed harvest progress statewide, aided fall planted crops. Corn 90% harvested, 99% 1987, 95% avg. Sorghum 97% harvested, 100% 1987, 97% avg. Cotton 82% harvested, 97% 1987, 76% avg. Soybeans fair; 34% harvested, 71% 1987, 46% avg. Other row crops, hay harvest more than 90%. Pecans good to fair; 10% harvested, 10% 1987, 15% avg. Pastures good. Livestock good. Wheat 47% planted, 35% 1987, 34% avg.; 37% emerged. Hay, roughage 22% short, 75% adequate, 3% surplus. Activities: Harvesting row crops, planting winter wheat, machinery repair.

MISSOURI: Temperatures 7° below normal. Rainfall none northwest to over 1.00 in. Bootheel.

Days suitable for fieldwork 5.8. Topsoil moisture 65% short, 24% adequate, 11% surplus, most northern counties short, surplus mostly confined to Bootheel. Corn harvesting above 90%. Soybean harvest above 90% northern third, 53% southeast, 50% southwest. Winter wheat seeding varies 62% southeast to 91% northwest. Pastures 10% very poor, 24% poor, 43% fair, 19% good, 4% excellent. Livestock water in farm ponds, wells insufficient for winter in northern areas.

MONTANA: Temperatures above normal west, below average east. Central, northeast some precipitation. Other areas mostly dry.

Days suitable for fieldwork 4.9. Topsoil moisture 59% short, 39% adequate, 2% surplus. Subsoil moisture 89% short, 9% adequate, 2% surplus. Wind damage to winter wheat 32% none, 57% light, 11% moderate. Cattle, calves moved from summer ranges 93%, 78% 1987, 82% avg. Sheep, lambs moved 95%, 80% 1987, 85% avg. Cattle receiving supplemental feed 32%. Sheep receiving supplemental feed 42%.

NEBRASKA: Cold, very dry weather continued across State. No rainfall. Temperatures 1 to 8° below normal. Extremes 7°; 80°.

Days suitable for fieldwork 7.0. Topsoil moisture 77% short, 23% adequate. Subsoil moisture 70% short, 30% adequate. Corn 90% harvest, 85% 1987, 63% avg. Sorghum 95% harvested, 90% 1987, 74% avg. Soybean 99% harvest, 97% 1987, 76% avg. Winter wheat 2% poor, 31% fair, 61% good, 6% excellent.

Insect problems west, southeast. Pasture, range, feed 4% very short, 35% short, 61% adequate. Hay seem to be holding steady.

NEVADA: Temperatures continued well above normal early, moderated somewhat last half with light scattered showers mainly east, southeast.

Main ranch, farm operations moving cattle, sorting cattle, movement to market continued slow. Virtually all harvesting operations completed.

NEW ENGLAND: Precipitation 0.50 to 1.00 in. Maine, 0.25 to 0.50 in. Vermont, less than 0.25 in. remainder. Temperatures 40° Canadian border to 50° southern coast. Temperatures near normal north, below normal south.

Major farm activities: Fall clean-up, preparations for winter.

NEW JERSEY: Temperatures much below normal. Extremes 19°; 67°. Rainfall 0.09 in. north, 0.05 in. central, 0.04 in. south. Heaviest 24-hour total 0.16 in. on 24th, 25th. Estimated soil moisture percent field capacity 99% north, 95% central, 94% south. Four inch soil temperatures 42° north, 47° central, 48° south.

Soil moisture adequate for late season crops, fall sown grains. Harvest of hardy vegetables declined. Harvest of sweetpotatoes, apples, cranberries well advanced. Pasture growth very limited. Combining of soybeans, corn for grain very active. Barley, wheat, rye growing well. Hay supplies adequate.

NEW MEXICO: Temperatures 5° above normal; light precipitation limited to more mountainous areas.

Days suitable for fieldwork 6.8. Soil moisture 50% short, 50% adequate. Cotton 100% bolls open, 25% harvested; 9% poor, 18% fair, 73% good. Wheat 32% fair, 68% good; 99% planted, 95% emerged; dry weather began to effect dryland crop. Cattle 8% fair, 92% good. Sheep 13% fair, 87% good. Ranges 33% fair, 67% good.

NEW YORK: Temperatures few degrees below normal. Lows 20s, 30s. Highs 40s, 50s. Several inches of snow Adirondacks. Midweek dry. Rain late week most areas.

Days suitable for fieldwork 4.3. Soil moisture mostly surplus, some excessive amounts. Hay, pastures mostly fair, corn fair to good. Third cutting alfalfa neared complete. Corn for silage harvest almost finished. Corn for grain 32% harvested. Apple harvest neared completion. Packing houses very busy. Vegetable growers seeding cover crops.

NORTH CAROLINA: Temperatures 2 to 3° below normal, statewide. Temperature extremes 21°; 80°. Precipitation none to 0.88 in. across State.

Days suitable for fieldwork 5.6. Soil moisture 18% short, 76% adequate, 6% surplus. Pasture 9% poor, 31% fair, 58% good, 2% excellent. Peanuts 4% poor, 38% fair, 58% good; 92% dug, 85% 1987, 86% avg.; 76% threshed, 74% 1987, 73% avg. Sweetpotatoes 3% poor, 31% fair, 63% good, 3% excellent; 89% harvested, 84% 1987, 80% avg. Apples 98% harvested, 93% 1987, 90% avg. Sorghum for grain 78% harvested, 77% 1987, 70% avg. Small grain plantings: Oats 65%, 56% 1987, 55% avg.; barley 68%, 67% 1987, 57% avg.; rye 56%, 45% 1987, 45% avg.; wheat 38%, 35% 1987, 38% avg. Wheat 22% fair, 74% good, 4% excellent. Major farm activities: Planting small grains, cover crops; fall land preparation; corn for grain harvest, soybean harvest. Other activities: Digging peanuts, sweetpotatoes; threshing peanuts; harvesting apples, cotton; tagging, shearing Christmas trees; making hay; tending livestock, general farm maintenance. Peanut harvest accelerated due to

early frost. Some freeze damage northeast counties.

NORTH DAKOTA: Temperatures 9 to 14° below normal. Extremes -2°; 63°. Precipitation light, snow. Most stations less than 0.10 in.

Days suitable for fieldwork 6.2. Topsoil moisture 63% very short, 35% short, 2% adequate. Subsoil moisture 79% very short, 21% short. Late season row crop harvest essentially complete. Sunflower 97% combined, 95% 1987, 71% avg. Corn for grain 98% harvested, 94% 1987, 74% avg. Pastures 74% very poor, 25% poor, 1% fair; furnished 40% roughage requirements. Main activities: Moving hay, livestock to winter quarters, marketing livestock, limited fall tillage.

OHIO: Lows upper 20s; 2 to 14° subnormal. Highs upper 40s to low 50s; 9 to 12° subnormal. Rainfall 0.15 in. south to 0.25 in. north.

Days suitable for fieldwork 4.4. Soil moisture 22% short, 70% adequate, 8% surplus. Corn harvest pace quickened, soybean pace slowed. Soybean harvest progress neared average, corn lagged average. Lodging became problem in corn. Moisture in harvested grain 23% corn, 15% soybeans. Winter wheat mostly good; adequate moisture major production area. Pasture mostly fair.

OKLAHOMA: Temperatures 4° below normal north central to 1° above normal southwest. Precipitation none northern third to 1.63 in. south central.

Days suitable for fieldwork 6.6. Topsoil moisture 55% short, 45% adequate. Subsoil moisture 35% short, 65% adequate. Wheat 35% fair, 65% good; 95% planted, 95% 1987, 80% avg.; 75% emerged, 80% 1987, 55% avg. Cotton 65% fair, 30% good, 5% excellent; 97% open bolls, 80% 1987, 85% avg.; 30% harvested, 10% 1987, 10% avg. Most dryland producers await killing frost before harvesting. Sorghum 75% mature, 95% 1987, 97% avg.; 25% harvested, 30% 1987, 45% avg. Soybeans 70% mature, 95% 1987, 85% avg.; 30% harvested, 30% 1987, 35% avg. Peanuts 45% harvested, 65% 1987, 40% avg. Pastures good to fair. Cattle good; marketings average, prices stable to slightly higher.

OREGON: Only Portland received measurable precipitation 0.10 in. Temperatures 1 to 2° above normal statewide, except south coast 4 to 6° above normal. Overnight lows in 30s west of Cascades, teens to lower 20s east.

Soil moisture 96% short, 4% adequate. Barley 38% planted. Grain seedings dusted in Columbia Basin, continued spraying for Russian wheat aphid. Some Russian wheat aphids spotted central area. Grass seed plantings winding down Willamette Valley, fertilizing established fields. Many fields still not burned. Some haying activity continued Hermiston area, north Lake County. Sugarbeets 75% harvested Malheur County. Corn for grain 75% harvested Malheur County. Some mint planted central area. Walnut, hazelnut (filbert) harvests winding down west. Later wine grape varieties coming off north Willamette Valley. Cranberry harvest very active south coast, quality good, yields near expectations. Orchard activities include cleanup, fall spraying, seeding cover crops. Potato harvest winding down west, 80% Hermiston-Boardman, almost finished Malheur County, completed Klamath Basin. Seed potato harvest completed Wallowa County. Processing last of cauliflower Willamette Valley, carrots, beets still coming off. Also finishing carrot digging Milton-Freewater. Over-wintering onions in second leaf Willamette Valley, establishing other winter vegetables. Garlic, elephant garlic planted west. Livestock good. Weaning calves east, weights have met expectations. Excellent weather for fall

calving. Cattle on turnip, corn stalks Hermiston; or aftermath hay, stubble northeast mountains. Range, pasture poor to fair. Coastal pastures good. Elsewhere, unseasonably warm, dry weather has limited fall regrowth, slowed pasture plantings west. Feed shortages for winter expected southeast.

PENNSYLVANIA: Strong Canadian high pressure system kept temperatures, precipitation below normal. Temperature 41°, 8° below normal. Temperature extremes 18°; 63°. Precipitation 0.39 in., 0.27 in. below normal.

Days suitable for fieldwork 5.0. Soil moisture 20% short, 66% adequate, 14% surplus. Corn 83% mature, 95% 1987, 96% avg.; 29% harvested, 50% 1987, 42% avg.; ensilage 91% harvested, 96% 1987, 96% avg.; 15% very poor, 26% poor, 33% fair, 21% good, 5% excellent. Soybean 29% harvested, 46% 1987, 38% avg.; 10% very poor, 25% poor, 33% fair, 26% good, 6% excellent. Potatoes 91% harvest, 94% 1987, 98% avg. Fall plowing 92%, 92% 1987, 94% avg. Winter wheat 92% planted, 89% 1987, 92% avg. Barley 97% planted, 96% 1987, 98% avg. Third cutting alfalfa 99%, 94% 1987; 4th cutting 80%, 75% 1987. Hay fair. Amount of feed being obtained from pastures average. Apples 85% harvested, 88% 1987. Grapes 97% harvested, 96% 1987. Activities: Harvesting corn grain, corn silage, soybeans, hay, haylage, fruit, potatoes, other vegetables; planting wheat, barley, rye; fall plowing; spreading manure, fertilizer; caring for livestock; maintaining machinery.

PUERTO RICO: Island rainfall 1.48 in., 0.26 in. below normal. Highest total rainfall 5.12 in. Sabana Grande, 4.30 in. Cerro Maravilla, 4.22 in. Yauco. Highest 24-hour total 3.61 in. Yauco. Total rainfall since January 1st 54.90 in., 5% above normal. San Juan WSFO temperature 82°, 1° above normal. Total rainfall 0.64 in., 0.70 in. below normal. Divisional temperature 79 to 81° on coasts, 75 to 77° interior division, mean station temperature 68° Pico Del Este-Luquillo to 82° Roosevelt Roads. Lowest minimum temperature 53° Arecibo Observatory. Highest maximum temperature 95° Gurabo Aes.

SOUTH CAROLINA: Temperatures low to mid 60s. Rainfall 2.67 in. to less than 1.25 in. Upstate no precipitation.

Days suitable for fieldwork 5.7. Soil moisture 2% very short, 61% short, 37% adequate. Cotton 100% open bolls, 100% 1987, 100% avg.; 53% harvested, 88% 1987, 73% avg.; 1% very poor, 4% poor, 95% fair. Soybeans 97% leaves turning, 97% 1987, 95% avg.; 74% leaves shedding, 80% 1987, 80% avg.; 60% matured, 68% 1987, 55% avg.; 14% harvested, 17% 1987, 13% avg.; 1% poor, 46% fair, 48% good, 5% excellent. Tobacco stalks 89% destroyed, 96% 1987, 90% avg. Corn poor to fair; 96% harvested, 100% 1987, 99% avg. Peanuts fair; 78% harvested, 83% 1987, 82% avg. Sweetpotatoes fair to good; 76% harvested, 76% 1987, 68% avg. Apples fair to good; 93% harvested, 90% 1987, 91% avg. Sorghum fair to good; 63% harvested, 76% 1987, 73% avg. Pastures fair to good. Livestock good.

SOUTH DAKOTA: Temperatures 4 to 8° below normal. Extremes 4°; 76°. Precipitation below normal, some scattered light rain, snow over northern half of State. Precipitation since September 4th above normal over most of east; below normal over most of west.

Days suitable for fieldwork 6.0. Topsoil moisture 30% critically short, 45% short, 25% adequate. Row crop harvest neared completion.

TENNESSEE: Series of cold fronts brought rain, kept temperatures below normal. Cold fronts

crossed State 25th, 28th. Temperatures 10° below normal northeast to 4° below normal west. Coldest temperature 26° Bristol on 27th. Precipitation 0.25 in. east to 1.25 in. west.

Days suitable for fieldwork 4.0. Soil moisture 2% very short, 36% short, 59% adequate, 3% surplus. Pasture feed normal. Burley tobacco 48% stripped, 37% 1987, 35% avg. Wheat 64% seeded, 61% 1987, 50% avg. Primary activities: Cotton, soybean harvest; tobacco stripping; wheat seeding.

TEXAS: Cool front brought widely scattered showers, thunderstorms most State. Southwest, far west little rainfall. Temperatures still generally above normal despite cold fronts. Temperatures Low Plains below normal. Precipitation below normal west, south central, Upper Coast. Elsewhere above normal.

Crops: Corn harvest virtually completed High Plains. Yields good throughout season. Grain sorghum harvest slowed some High Plains, many fields need frost to completely dry down. Yields remained good. Sorghum 98% mature, 97% 1987, 96% avg. Cotton another good week for harvesting Plains with open weather. Additional defoliating occurred. Yields good. Producers hoping for late frost. Cool weather late week once again slowed maturing. Harvest full swing Trans-Pecos. Small grain planting continued, despite some very dry places Blacklands, central. Many stands fair, need rain. Irrigated fields Plains emerging. Greenbugs increased younger fields, spraying continued. Army worm activity slowed Blacklands. Peanut harvest continued Cross-Timbers, south. Yields irrigated fields; dryland yields fair. Yields, grades low most parts central. Rain late week slowed progress central. Soybean harvest continued steady High Plains, good yields. Harvesting continued along Upper Coast; rain slowed activities. Yields average. Yields remained low Blacklands, rain slowed harvest. Sugarbeet harvest good progress High Plains. Sugarcane harvest increased Rio Grande Valley. Yields good. Other Field Crops: Peanuts 59% harvested, 39% 1987, 44% avg. Pecans 16% harvested, 16% 1987, 16% avg. Soybeans 69% harvested, 53% 1987, 44% avg. Sugarbeets 40% harvested, 39% 1987, 35% avg. Sunflowers 57% harvested, 59% 1987, 61% avg. Oats 59% planted, 82% 1987, 74% avg.

Commercial Vegetables: Rio Grande Valley harvest cucumbers, cabbage continued. Carrots good progress. Onion planting continued. Harvest citrus continued, good quality. Sizes increased. Demand good. San Antonio-Winter Garden some fall harvest continued, land preparations, planting. High Plains carrot harvest continued. Peppers harvested. Trans-Pecos pepper, cucumber harvest winding down. Pecan harvest increased. Yields vary area to area, but mostly good. Quality good.

Range and Pasture: Ranges, pastures continued to decline central, south. Rain east brought temporary relief to dry conditions. Other areas need additional moisture. Small grains providing good grazing Plains. Livestock good, marketings steady.

UTAH: Precipitation none. Temperatures 7 to 9° above normal.

Corn grain, apple harvest neared completion, winter range continued dry. Livestock fair to good. Major farm activities: Working livestock, fence repair, hauling hay, winterizing equipment, cutting wood, marketing calves, lambs.

VIRGINIA: Below normal temperatures, variable precipitation. Temperatures 7° below normal. Range 18 to 76°. Precipitation none to 1.96 in.

Days suitable for fieldwork 5.4. Topsoil moisture 4% very short, 33% short, 56% adequate, 7% surplus. Grain corn 79% harvested, 84% 1987, 81%

avg. Soybeans 26% harvested, 30% 1987, 29% avg. Peanuts 95% dug, 97% 1987, 97% avg.; 90% combined, 92% 1987, 89% avg. Some peanuts, soybeans showed frost damage. Graded, cured tobacco. Marketed flue-cured tobacco. Some alfalfa, other hay cut. Rain helped germinate small grains. Wheat 48% seeded, 61% 1987, 54% avg. Barley 85% seeded, 89% 1987, 87% avg. Cattle sales active. Pastures 20% poor, 42% fair, 34% good, 4% excellent.

WASHINGTON: Ridge high pressure over area brought dry weather. Overnight low temperatures well below freezing later part of week.

Days suitable for fieldwork 7.0. Field preparation continued rapid pace. Winter wheat 96% seeded, 1987 92%, 96% avg.; 82% emerged, 1987 73%, 83% avg. Fall cereal growers benefited from cold temperatures, Russian wheat aphid activity reduced. Long, warm fall allowed aphid growth, wing development facilitating rapid infestation new fields. Growers spraying aphids for control. Insufficient soil moisture problem many areas. Some Okanogan, Garfield growers omitted planting due to dryness. Potato, dry bean, corn silage harvests winding down, finished most areas. Grain corn harvest ongoing, 50% harvested. Red delicious apple harvest winding down central. Fumigation, weed control, general orchard clean-up major activities. Cranberry harvest winding down Pacific County. Red raspberry cane renovation continued west. First major killing frost occurred, ended tender season vegetable crops. Sweet corn harvest completed, carrot harvest ongoing Grant County. Livestock on crop aftermath lower valleys.

WEST VIRGINIA: Temperature 46°, 7° below normal. Extremes 13° Greenbank; 67° Creston. Precipitation well below normal, 0.08 in.

Days suitable for fieldwork 4.6. Soil moisture 63% short, 37% adequate. Corn poor to fair; 75% harvested. Livestock mostly good. Feed 53% short, 47% adequate. Farm activities: General farm maintenance, livestock care, picking corn, seeding small grains, apple picking.

WISCONSIN: Very cold, temperatures 34°, 10° below normal. Extremes 5°; 59°. Precipitation 0.10 to 0.90 in., most north. Snow flurries statewide, accumulation north.

Days suitable for fieldwork 5.2. Soil moisture 56% short, 43% adequate, 1% surplus. Subsoil moisture short. Corn for grain 80% harvested, 83% 1987, 45% avg.; silo 99% filled, 99% 1987, 91% avg. Soybeans 85% harvested, 94% 1987, 55% avg. Fall plowing 58%, 57% 1987, 34% avg. Pastures normal. Hay, feed 16% very short, 68% short, 16% adequate.

WYOMING: Temperatures generally above normal. Dry across State.

Corn, sugarbeet harvest continued. Most dry beans harvested. Winter wheat mostly fair to good. Additional moisture needed for good development. Livestock fair to mostly good. Movement to winter pastures, market continued. Hay supplies short many areas.

Crop Progress 1/

FOR WEEK ENDING OCTOBER 30, 1988

SOYBEANS
% HARVESTED

	1988	1987	AVG.
ALA	42	67	45
ARK	41	72	40
GA	28	41	33
ILL	98	100	85
IND	86	99	81
IOWA	99	100	84
KANS	85	85	55
KY	52	74	41
LA	57	82	55
MICH	50	80	55
MINN	99	99	83
MISS	34	71	46
MO	82	90	53
NEBR	99	97	76
N C	12	19	15
OHIO	78	97	81
S C	14	17	13
S DAK	100	100	84
TENN	50	72	40

19 STATES 79 89 68

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

	1988	1987	AVG.
ALA	85	96	93
ARK	83	92	86
GA	93	100	98
ILL	100	100	100
IND	100	100	100
IOWA	100	100	100
KANS	100	100	98
KY	98	100	98
LA	92	99	93
MICH	100	100	100
MINN	100	100	100
MISS	97	100	99
MO	100	100	100
NEBR	100	100	100
N C	82	79	73
OHIO	100	100	100
S C	74	80	80
S DAK	100	100	100
TENN	100	100	100

19 STATES 98 99 98

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

	1988	1987	AVG.
ARK	98	100	95
ILL	92	100	73
KANS	75	70	55
LA	100	100	100
MISS	97	100	97
MO	90	95	74
NEBR	95	90	74
OKLA	25	30	45
S DAK	96	97	72
TENN	100	100	100
TEX	87	73	78

11 STATES 82 77 69

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

	1988	1987	AVG.
ALA	100	100	99
ARIZ	100	100	100
ARK	99	100	99
CALIF	100	100	100
GA	95	98	97
LA	100	100	100
MISS	100	100	100
MO	100	100	100
N MEX	100	100	100
N C	100	100	100
OKLA	97	80	85
S C	100	100	100
TENN	100	100	100
TEX	88	70	74

14 STATES 94 85 87

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

	1988	1987	AVG.
ALA	75	95	77
ARIZ	35	65	52
ARK	77	94	74
CALIF	50	75	46
GA	54	74	59
LA	86	97	77
MISS	82	97	76
MO	78	96	77
N MEX	25	20	21
N C	43	59	53
OKLA	30	10	10
S C	53	88	73
TENN	72	92	73
TEX	29	21	24

14 STATES 48 54 45

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

	1988	1987	AVG.
ARK	97	100	95
CALIF	90	95	92
LA	100	100	100
MISS	95	100	98
TEX	100	100	100

5 STATES 97 99 96

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

	WINTER WHEAT % PLANTED		
	1988	1987	AVG.
ARK	46	69	47
CALIF	15	30	26
COLO	100	100	99
GA	17	13	23
IDAHO	98	94	96
ILL	95	97	79
IND	90	99	85
KANS	98	99	90
MICH	95	95	85
MO	80	87	60
MONT	100	100	94
NEBR	100	100	100
N MEX	99	98	NA
N C	38	35	38
OHIO	92	95	88
OKLA	95	95	80
OREG	76	70	78
S DAK	100	100	100
TEX	94	92	81
WASH	96	92	96

20 STATES 92 93 NA

EXCL. STATES WITH NA 92 93 85

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

NA - NOT AVAILABLE.

	WINTER WHEAT % EMERGED		
	1988	1987	AVG.
ARK	30	48	NA
CALIF	2	5	6
COLO	94	95	91
GA	11	8	13
IDAHO	80	72	75
ILL	77	77	63
IND	74	76	72
KANS	85	90	75
MICH	80	80	NA
MO	64	67	45
MONT	87	92	71
NEBR	100	100	100
N MEX	95	95	NA
N C	24	16	NA
OHIO	64	75	67
OKLA	75	80	55
OREG	50	29	52
S DAK	100	100	100
TEX	85	82	64
WASH	82	73	83

20 STATES 80 81 NA

EXCL. STATES WITH NA 81 83 70

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

NA - NOT AVAILABLE.

	CORN % HARVESTED		
	1988	1987	AVG.
COLO	58	56	60
GA	97	100	98
ILL	97	98	79
IND	72	95	68
IOWA	99	95	68
KANS	95	96	80
KY	73	93	74
MICH	40	65	40
MINN	98	95	62
MO	95	96	77
NEBR	90	85	63
N C	88	91	92
OHIO	42	90	58
PA	29	50	42
S DAK	92	91	58
TEX	100	100	98
WIS	80	83	45

17 STATES 83 90 67

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

We 1

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

Crop Condition

FOR WEEK ENDING OCTOBER 30, 1988

WINTER WHEAT					
STATE	VP	P	F	G	EX
ARK	0	0	12	70	18
CALIF	0	0	0	100	0
COLO	0	4	25	58	13
GA	0	2	24	72	2
IDAHO	5	13	31	44	7
ILL	0	0	17	75	8
IND	0	3	37	56	4
KANS	0	6	26	42	26
MICH	0	5	20	45	30
MO	0	3	52	40	5
MONT	1	13	38	46	2
NEB	0	2	31	61	6
N MEX	0	0	32	68	0
N C	0	0	22	74	4
OHIO	0	4	34	52	10
OKLA	0	0	35	65	0
OREG	0	23	54	23	0
S DAK	10	12	41	32	5
TEX	1	8	43	39	9
WASH	0	5	35	60	0
19 STATE	1	5	33	51	10

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

International Weather and Crop Summary

October 23-29, 1988

HIGHLIGHTS

WESTERN USSR ... Sub-freezing temperatures as far south as the Black Sea coast end the 1988 growing season. Winter grains were becoming dormant in the north and were cold hardening in the south.

EUROPE ... Much colder weather slows growth of winter grains in the east. Mostly dry weather favors a resumption of fieldwork in sections of the southwest.

SOUTH ASIA ... Dry weather benefits maturing grain and oilseeds and brings relief to flooded regions in the east. However, southern cotton areas are too dry for reproductive crops.

EASTERN ASIA ... Tropical Storm Ruby and remnants of Typhoon Pat bring widespread heavy rain to the south.

SOUTHEAST ASIA ... Locally heavy rain persists in central Thailand, causing more flooding. Typhoon Ruby brings high winds and heavy showers to the Philippines, causing flooding and crop damage.

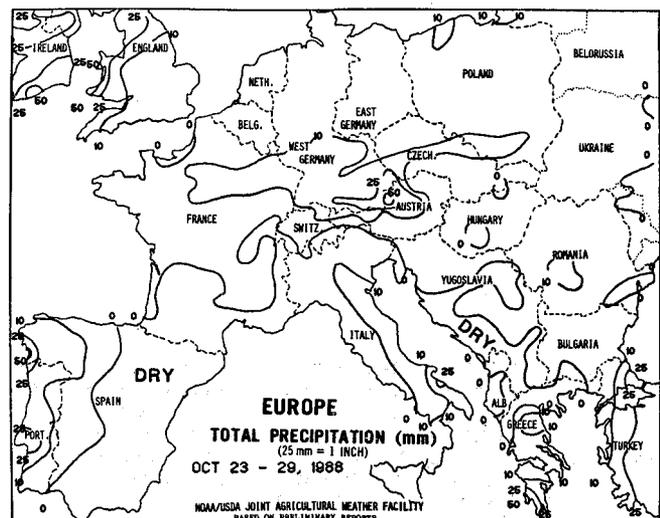
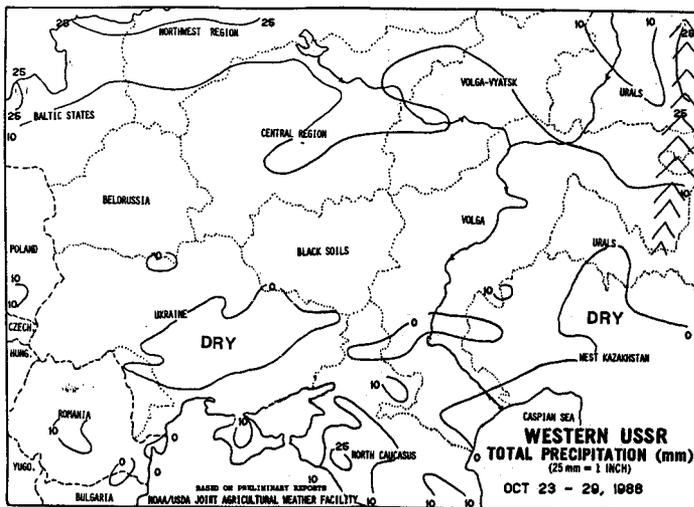
SOUTH AMERICA ... In south-central Brazil, soaking rain provides excellent topsoil moisture for summer crop planting. In Argentina, light showers continue to moisten topsoils for planting but soil moisture reserve remain limited.

AUSTRALIA ... Scattered light showers cause only limited delays in early wheat harvest across southeastern Queensland.

MEXICO ... Dry weather returns to the northwest, allowing wheat planting to progress. Rain in the northeast causes some fieldwork delays.

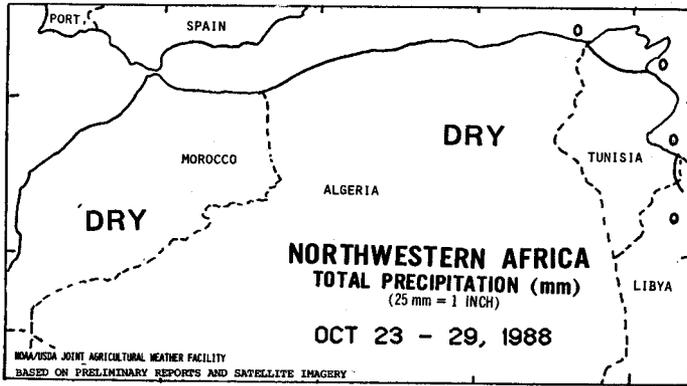
SOUTH AFRICA ... Light to moderate rain continues across the primary corn region, causing more fieldwork delays.

NORTHWESTERN AFRICA ... Dry weather covers the region. Farmers await the onset of significant autumn rains before winter grain planting can begin.

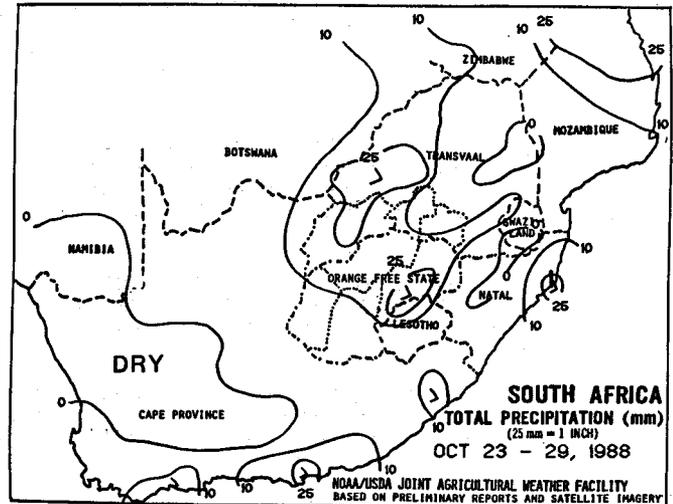


WESTERN USSR ... Sub-freezing temperatures reached as far south as the Black Sea coast, ending the 1988 growing season. Lowest temperatures ranged from -1 to -4 degrees Celsius (C) along the Black Sea coast, and -8 to -11 degrees C throughout the remainder of the region. The weather was cold enough in eastern Belorussia, the Northwest Region, Central Region, Black Soils Region, the Volga Vyatsk, and the upper Volga to induce winter grains into dormancy. Winter grains throughout the Ukraine, North Caucasus, and lower Volga were progressing through the cold hardening phase toward dormancy. Usually, winter grains in these areas enter dormancy by late-November. Mostly dry weather covered the region, allowing final harvest efforts to progress without delay. Weekly average temperatures were 1 to 3 degrees C below normal in the north and 3 to 5 degrees C below normal in the south.

EUROPE ... Light to moderate rain (5-20mm) and above normal temperatures favored establishing winter grains across sections of northern France, the United Kingdom, Benelux, and West Germany. In southwestern Europe, scattered moderate to heavy showers (15-50mm, with isolated rainfall greater than 50mm) fell over Portugal and northwestern Spain, while the remainder of the region remained mostly dry, allowing fieldwork to resume after heavy rainfall the two previous weeks. A strong cold front brought mostly light rain (less than 10mm) and much colder temperatures to eastern Europe. By week's end, widespread frost and freezing temperatures extended as far south as Greece. Mean temperatures as much as 5 degrees C below normal in Poland, eastern Czechoslovakia, Hungary, and Romania slowed vegetative growth of winter grains.

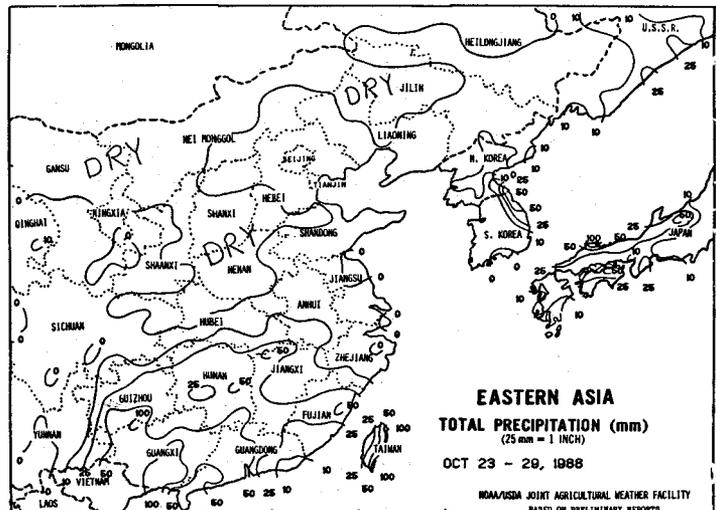


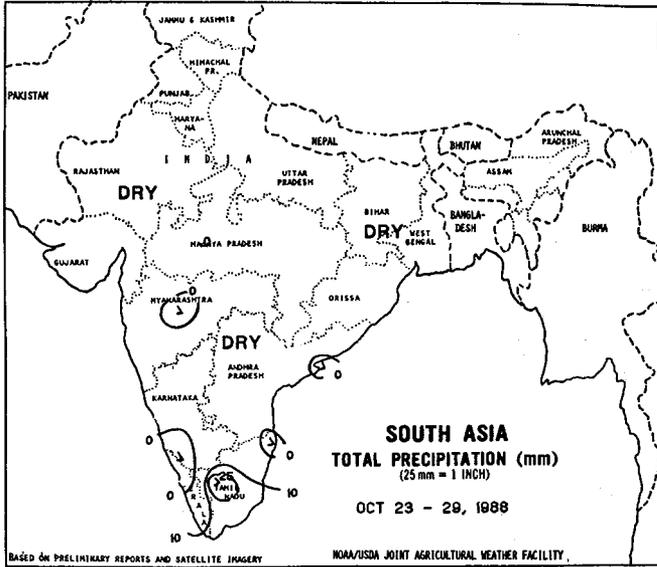
NORTHWESTERN AFRICA ... Dry weather covered winter grain areas in Morocco, Algeria, and Tunisia. Weekly average temperatures 2 to 5 degrees Celsius (C) above normal in Morocco and western Algeria increased evaporation rates, reducing limited topsoil moisture. Weekly average temperatures were near normal in eastern Algeria and northern Tunisia. Farmers throughout the region are awaiting the onset of significant autumn rains before winter grain planting can begin.



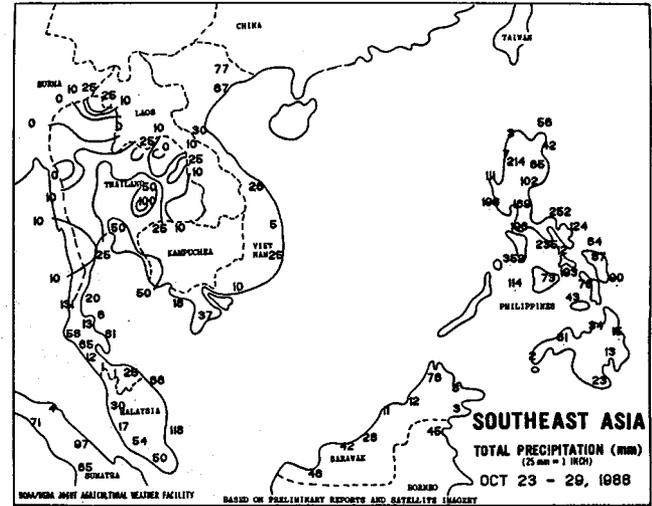
SOUTH AFRICA ... Rainfall was lighter than the previous week over most crop regions, although moderate showers (13-38mm) continued over a large portion of the central Maize Triangle. Light rain (less than 10mm) in the eastern Triangle allowed some drying of saturated fields but temperatures averaged as much as 4 degrees C below normal, lowering evaporation rates. Locally heavy rain (155mm) fell over a small area of the Cape Province but most other South African crop regions received only light to moderate rain, maintaining favorable moisture conditions for corn planting. Drier, warmer weather is now needed over the corn producing regions for planting activities and germination.

EASTERN ASIA ... Remnants of Typhoon Pat caused widespread heavy rain (50-150mm, with isolated rainfall greater than 150mm) in sections of Guangxi, Guizhou, Hunan, and Guangdong early in the period, delaying late-crop rice harvest. On the 28th, Tropical Storm Ruby struck Hainan Island on a path similar to that of Pat, which hit less than one week earlier. The storm brought high winds, torrential rain (100-200mm, with isolated rainfall greater than 200mm) and flooding to much of the island. Heavy rain also fell in eastern Taiwan, eastern portions of the Korean Peninsula, and southern Honshu and Hokkaido in Japan, causing delays in harvest of single-crop rice and summer crops. In the North China Plain, mostly dry and warmer than normal weather returned, favoring fall fieldwork but causing some stress in establishing winter grains in previously dry Shandong.



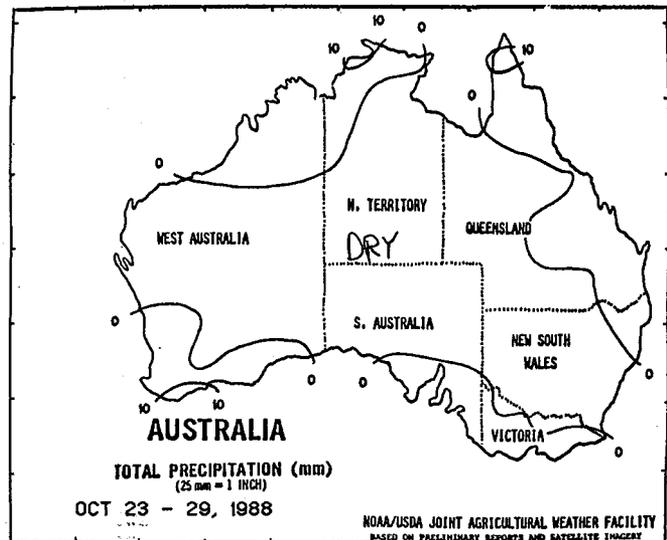


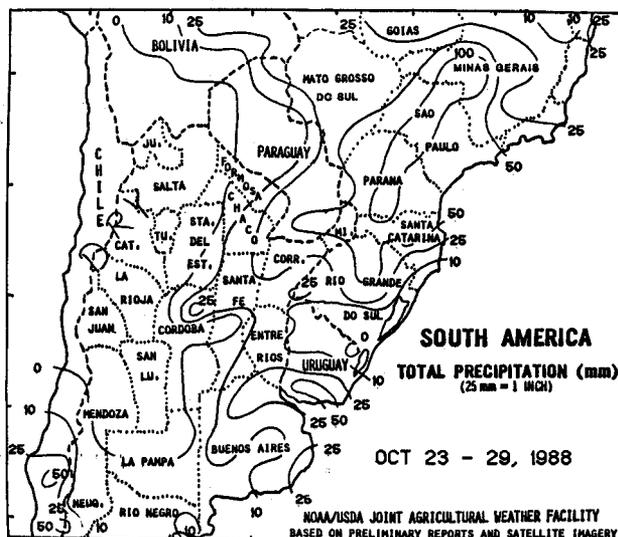
SOUTH ASIA ... Dry weather covered most South Asian crop regions, benefiting maturing grains and oilseeds and favoring winter wheat planting. From Bangladesh eastward, the much-needed dry weather brought some relief to areas hit last week by a tropical cyclone. Light to moderate rain (10-33mm) fell over Tamil Nadu but dry weather persisted elsewhere in southern India, reflecting the recent drying trend which has limited moisture for reproductive cotton.



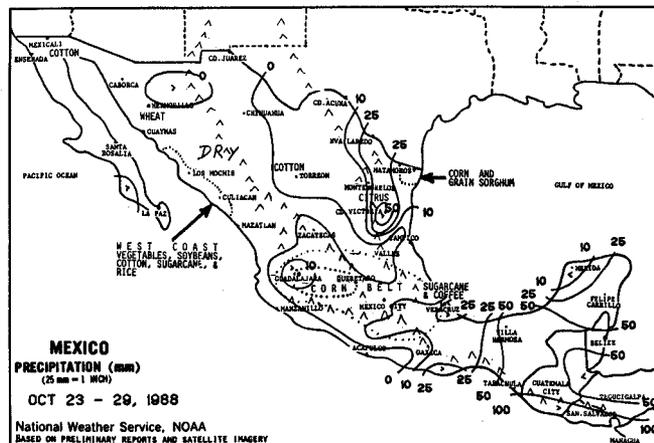
SOUTHEAST ASIA ... Rainfall decreased from the previous week over Indochina, bringing some relief to parts of Thailand and Vietnam flooded from recent heavy rainfall. Heavy rain (50-97mm), however, continued over the areas around Bangkok, worsening flood conditions. Elsewhere in Thailand, rainfall was light (less than 15mm) in the north and east but variable showers (15-100mm or more) continued over central areas, benefiting late crops but causing local flooding. Typhoon Ruby hit the Philippines early in the week, bringing inundating rain (100-200mm or more) from central Luzon to the central islands. The storm's center passed over southern and central Luzon with maximum sustained winds reaching 120 knots, causing crop damage in grain, copra, and minor sugarcane regions. Normally, main season rice in the affected areas is filling to mature and secondary corn planting is in full swing.

AUSTRALIA ... Scattered light showers (less than 10mm) caused only minor delay in early wheat harvest across southeastern Queensland. Mostly dry weather covered crop areas in New South Wales, Victoria, and South Australia, favoring progress in fieldwork and summer crop planting but continuing unfavorably dry conditions for reproductive to filling winter grains across sections of South Australia. Cooler temperatures over eastern and southern Australia offered limited relief from high temperatures and evapotranspiration losses of the last few weeks, although mean temperatures for the week still ranged slightly above normal. In Western Australia, light to moderate rain (5-15mm) continued to favor reproductive to filling winter grains.





SOUTH AMERICA ... Soaking rain covered south-central Brazilian corn and soybean areas in northern Rio Grande do Sul, Santa Catarina, Parana, Sao Paulo and southwestern Minas Gerais, providing excellent topsoil moisture for planting. Rainfall amounts generally ranged from 50 to 100mm, with major corn and soybean areas in Parana, Sao Paulo, and Minas Gerais receiving rainfall ranging from 100 to 150mm. Drier weather is now needed for soil preparation and planting. Coffee trees in south-central Brazil also benefited from this past week's abundant rainfall. In Argentina, light to moderate showers over most summer crop areas continued to maintain favorable topsoil moisture for planting and crop establishment. Rainfall amounts of around 25mm covered northern Buenos Aires and cotton areas in Formosa. Mostly dry weather prevailed over crop areas in southern Cordoba and western Santa Fe. Soil moisture reserves remain limited in Argentine crop areas, and substantial growing season rainfall will be needed to meet crop-moisture requirements.



MEXICO ... Dry weather returned to the northwest, allowing wheat planting following last week's beneficial rain. However, temperatures exceeded 35 degrees C in the northwest, increasing topsoil evaporation rates around newly emerging wheat. Light to moderate rain (10-25mm or more) in the northeast slowed summer crop harvesting. Light rain (1-13mm) caused minor harvest delays across the Southern Plateau corn belt. Light to moderate showers (10-36mm) fell from Veracruz westward and southward with heavier rain (25-75mm) from Villahermosa eastward to the Yucatan.

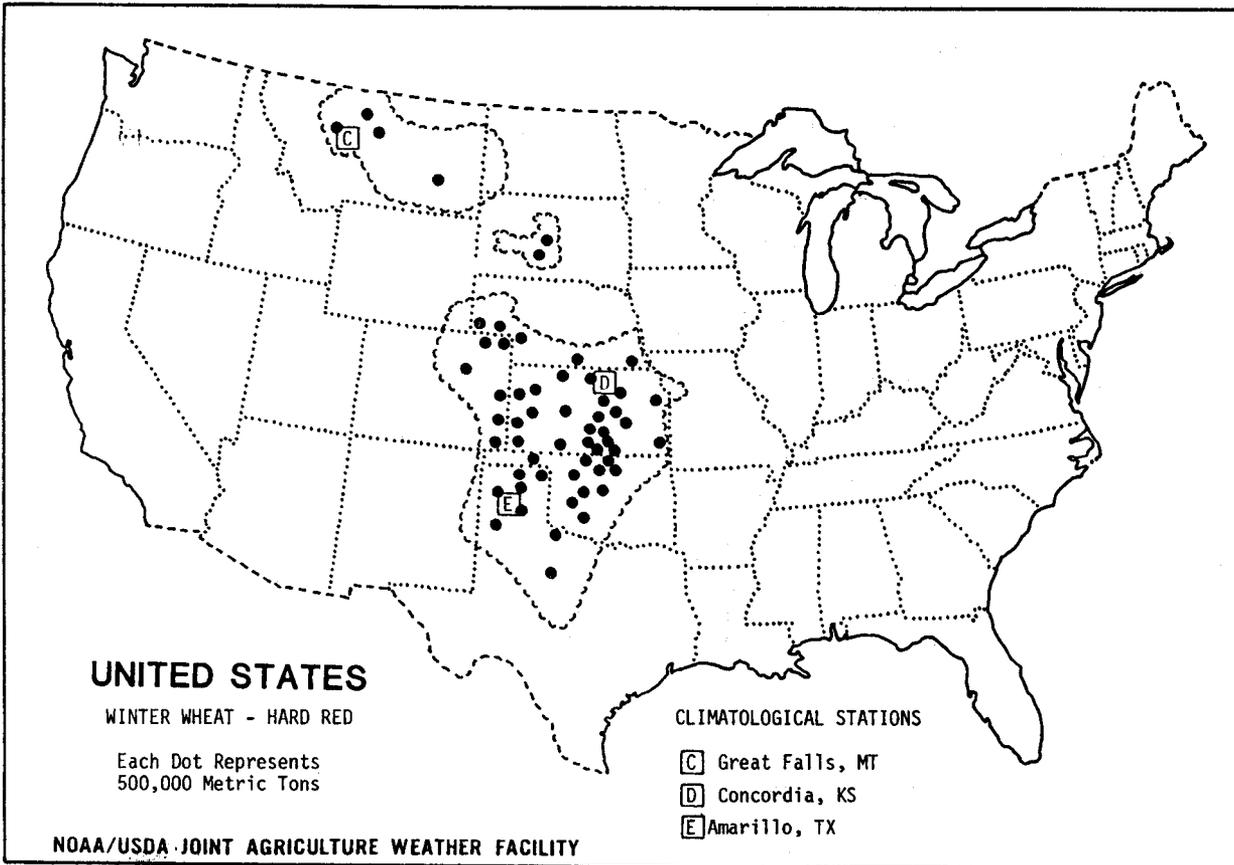
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 Managing Editor (Acting) Douglas Le Comte
 Meteorologists Tom Heddinghaus
 Vilhelm Bjerknes, Jeff Logan, Bob Stefanski,
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Subscriptions (202) 447-7917 . . . Jeanette Hill

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