

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
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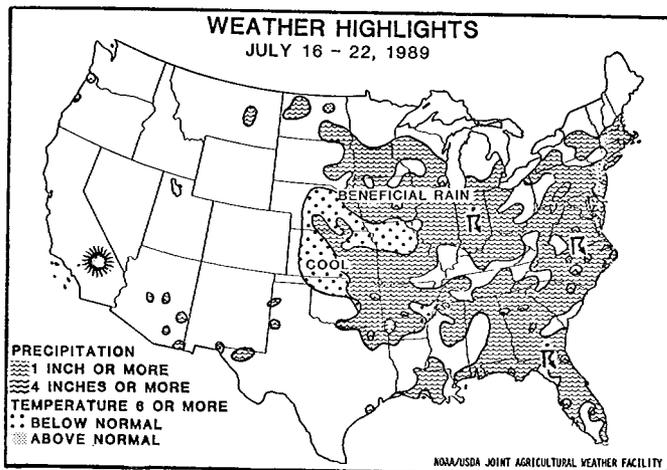
Washington, D.C.

July 25, 1989



National Weather Summary

July 16-22, 1989



WEDNESDAY: Thunderstorms were scattered over the eastern third of the Nation, as a cold front moved through the Central United States. High temperatures persisted in the Southwest.

THURSDAY: Widespread thunderstorms and showers covered most areas from the Ohio Valley to the Mid-Atlantic Coast, with some localized flooding.

FRIDAY: Rain continued over the middle Mississippi Valley to central and southern Atlantic coast, with strong thunderstorms bringing heavy rain to northern Florida. Showers were widely scattered in the Rockies and Intermountain Plateau.

SATURDAY: Rain showers with occasional thunderstorms were scattered over much of the eastern half of the country and in the central and southern Rockies. Fair weather prevailed over the Pacific Coast and North Central States.

HIGHLIGHTS: Scattered thunderstorms and showers were widespread over most of the eastern two-thirds of the Nation. Welcome rain fell across the western Corn Belt and portions of the northern Plains. Persistent heat continued to plague the Southwest, while cool air moved into the Central United States.

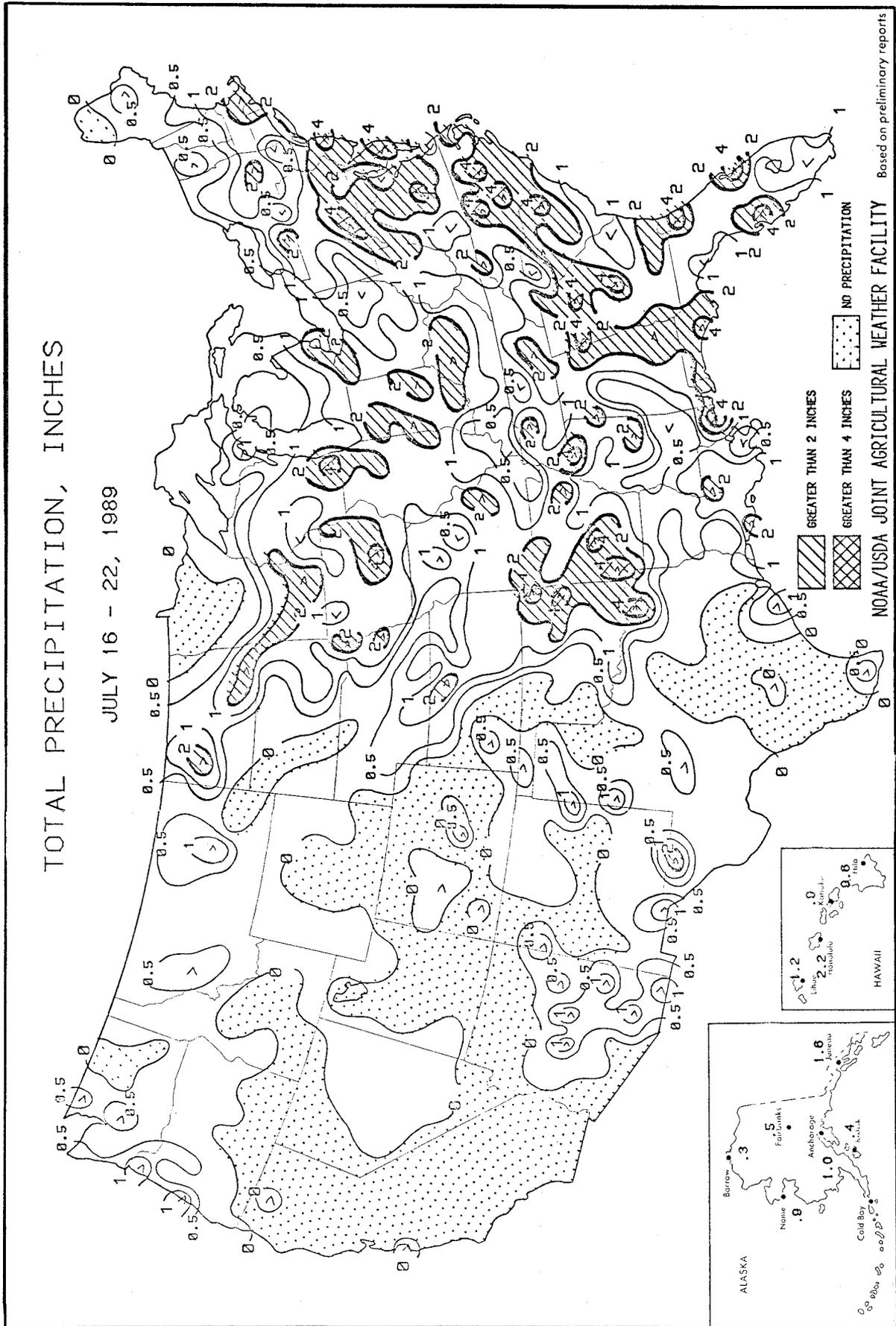
SUNDAY: Scattered heavy rains fell from the Florida Panhandle to the mountains of Pennsylvania, causing some local flash flooding. Thunderstorms brought scattered rains to the northern Plains. Several record-high temperatures were broken in Texas.

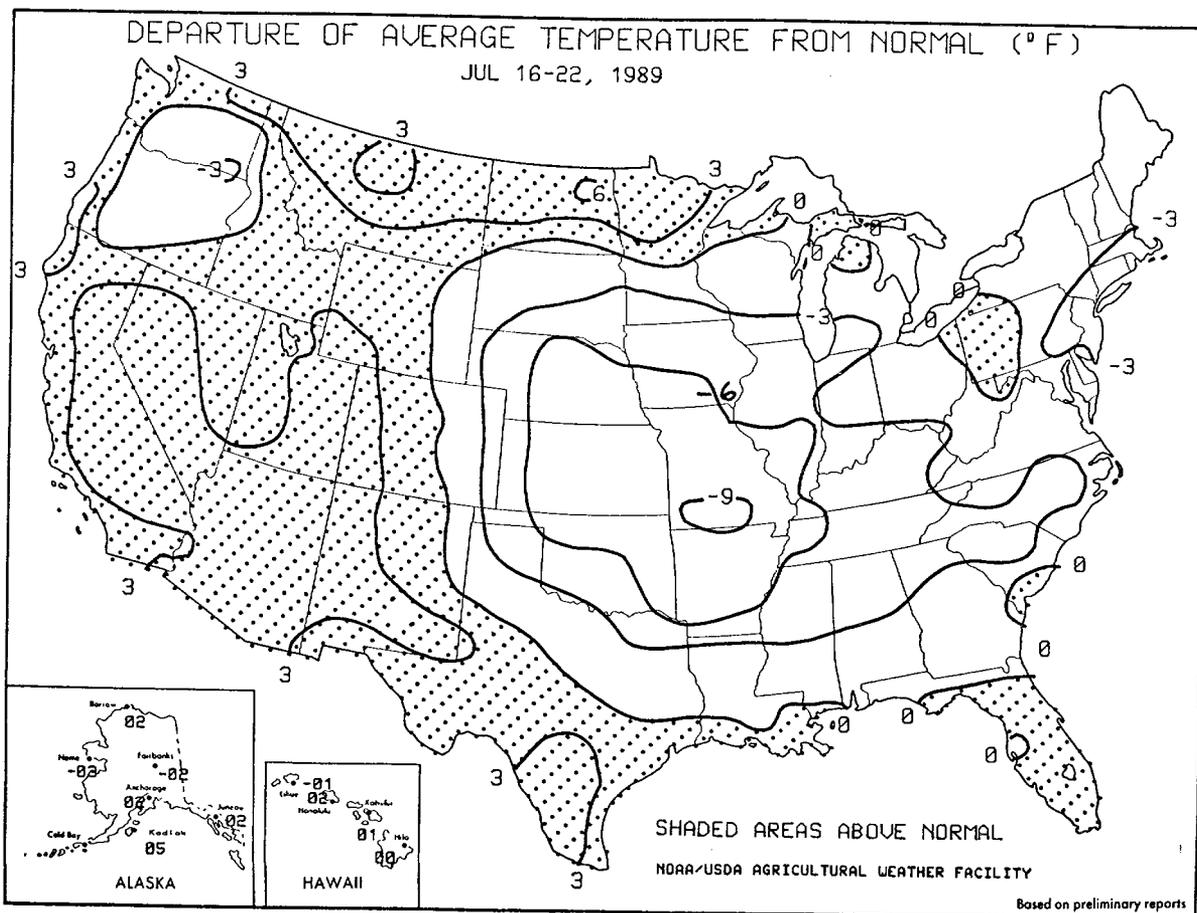
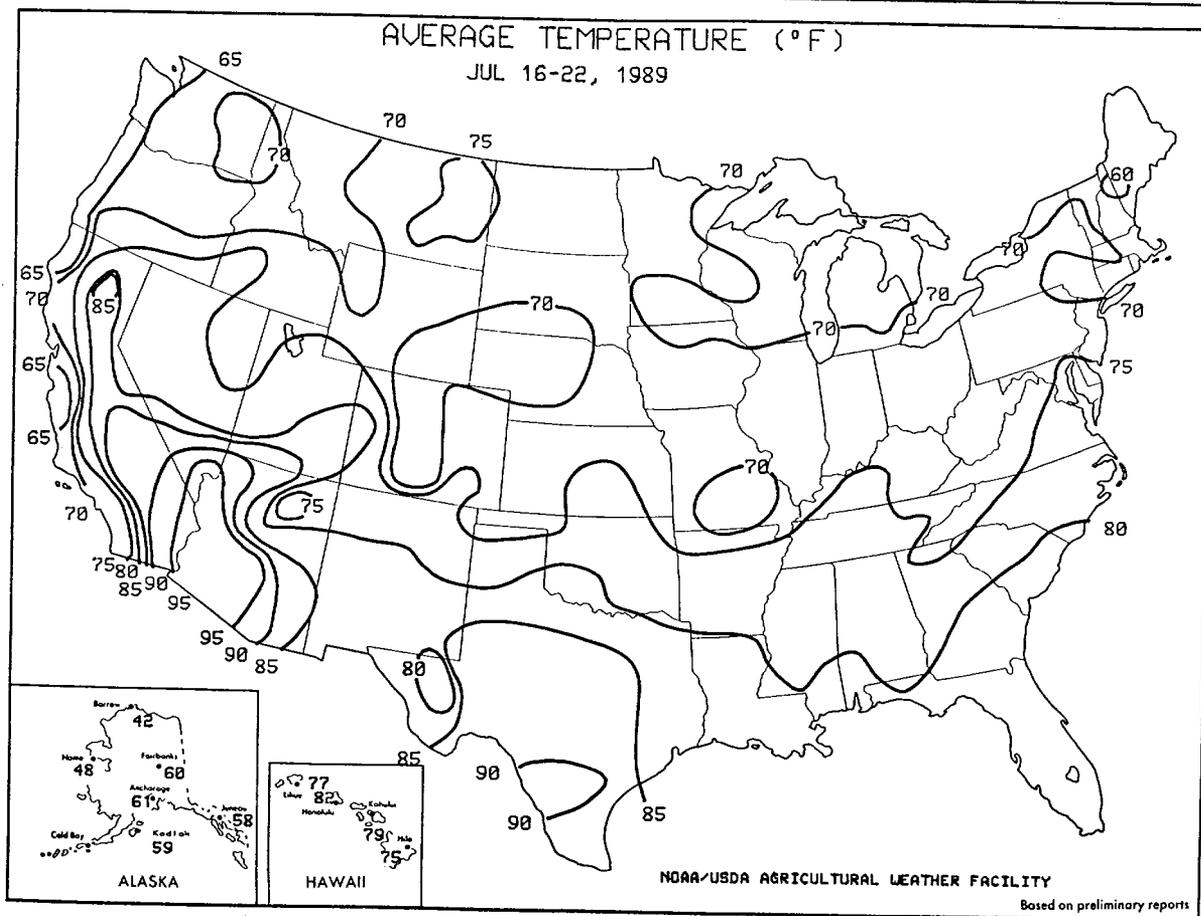
MONDAY: A developing cold front produced severe thunderstorms throughout the northern and central Plains with hail, high winds, and tornadoes being reported. High temperatures continued in the Southwest.

TUESDAY: The cold front moved east, giving much needed rain to portions of the western Corn Belt. A stalled front brought more rain to the Southeast. High temperature records were again broken in parts of Texas and Arizona.

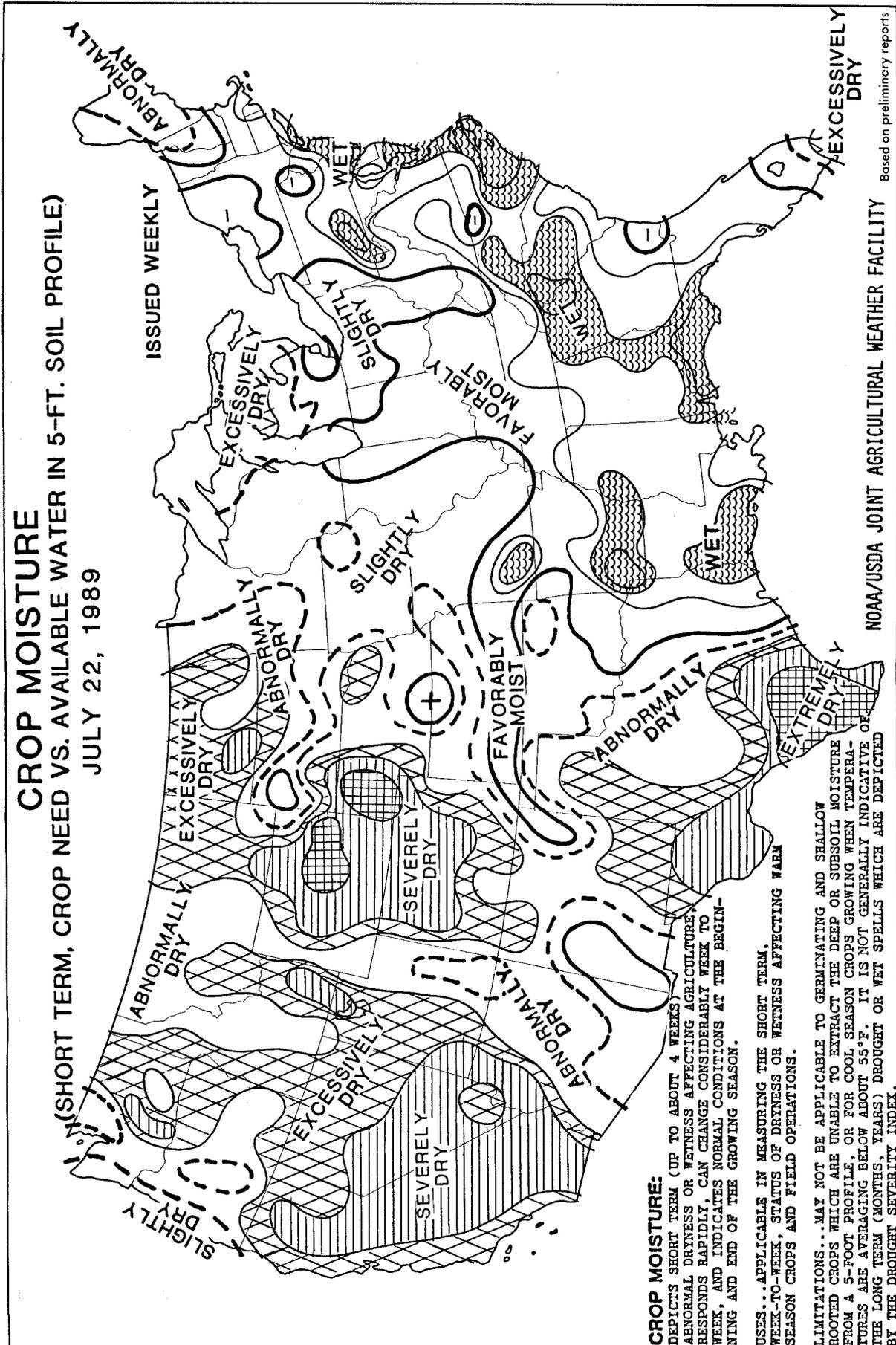
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CROP MOISTURE
 (SHORT TERM, CROP NEED VS. AVAILABLE WATER IN 5-FT. SOIL PROFILE)
 JULY 22, 1989



CROP MOISTURE:

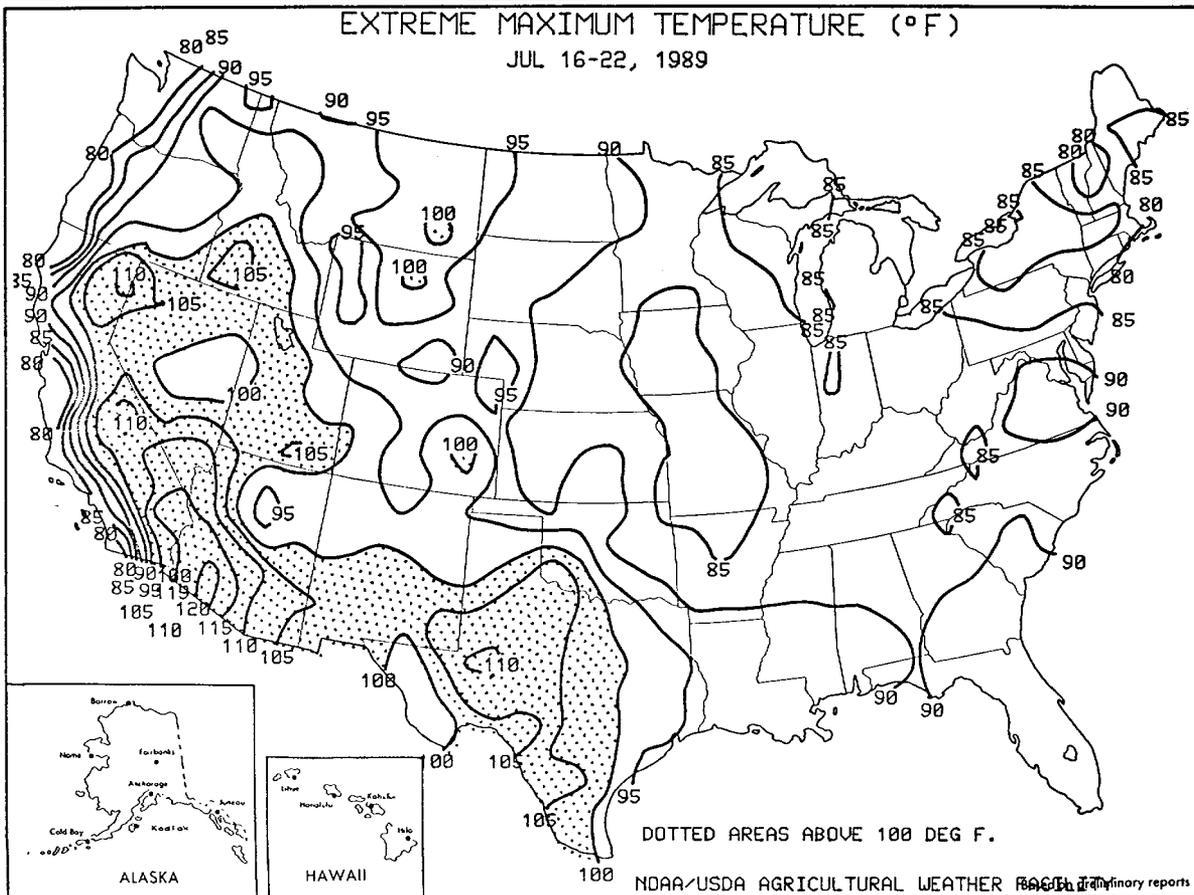
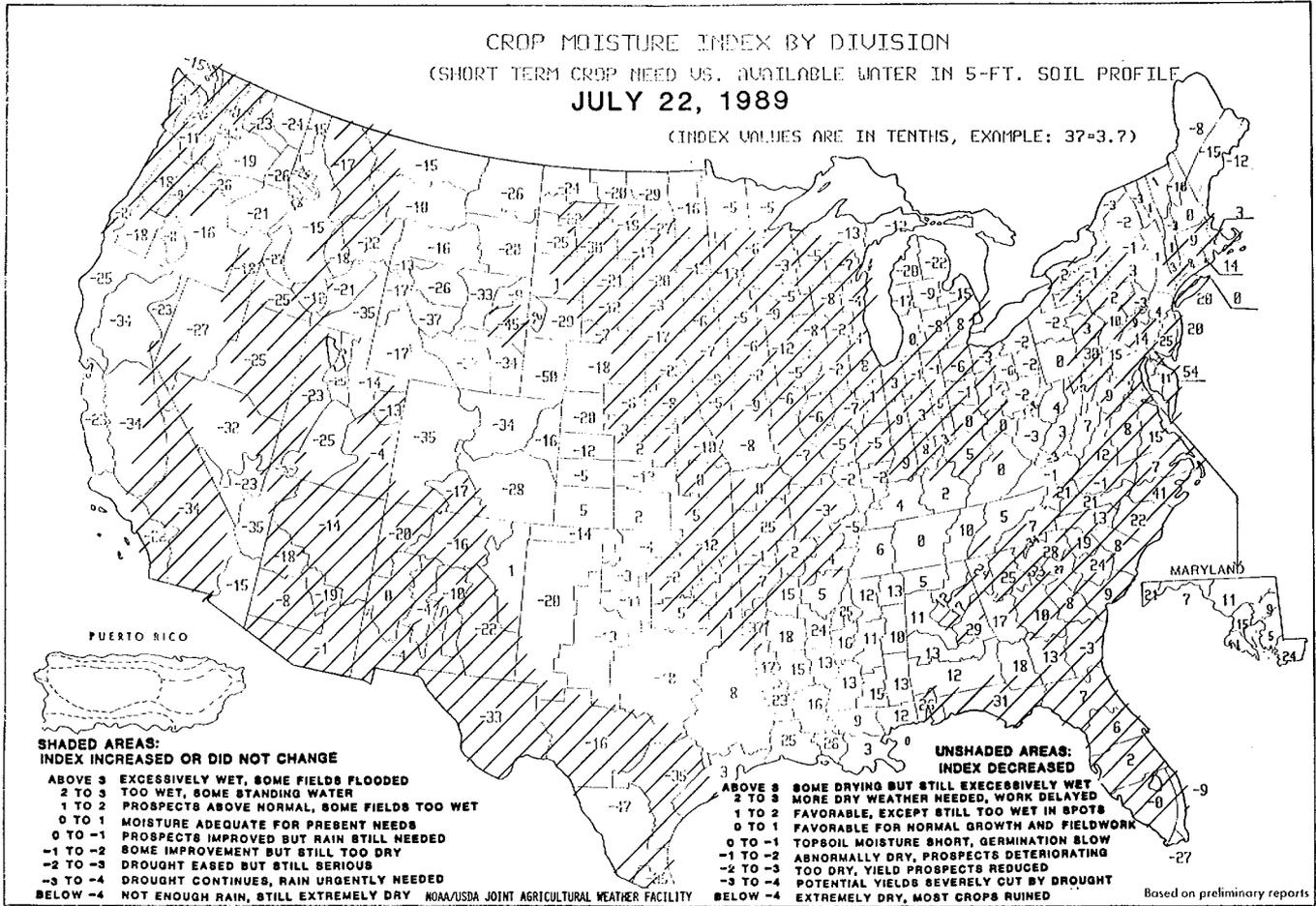
DEPICTS SHORT TERM (UP TO ABOUT 4 WEEKS) ABNORMAL DRYNESS OR WETNESS AFFECTING AGRICULTURE, RESPONDS RAPIDLY, CAN CHANGE CONSIDERABLY WEEK TO WEEK, AND INDICATES NORMAL CONDITIONS AT THE BEGINNING AND END OF THE GROWING SEASON.

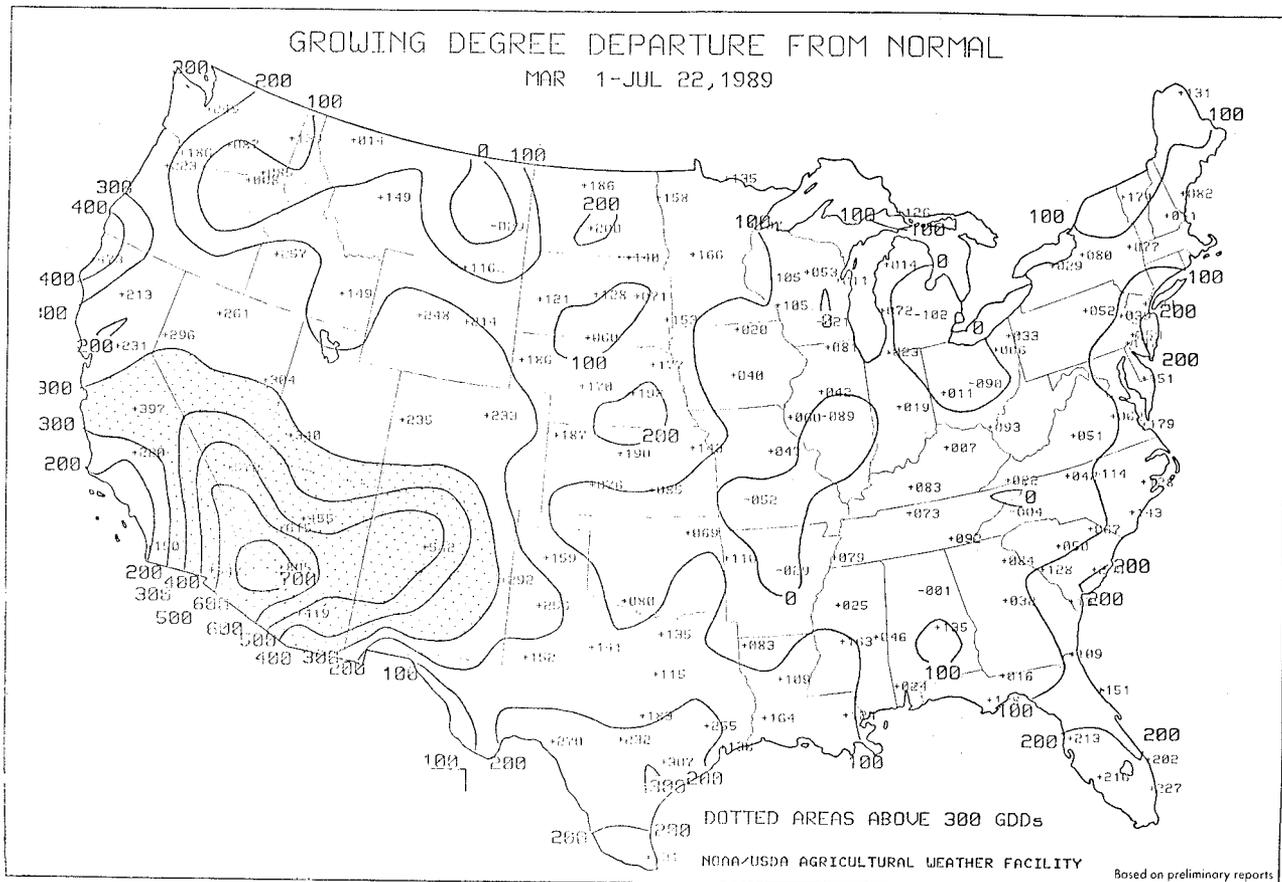
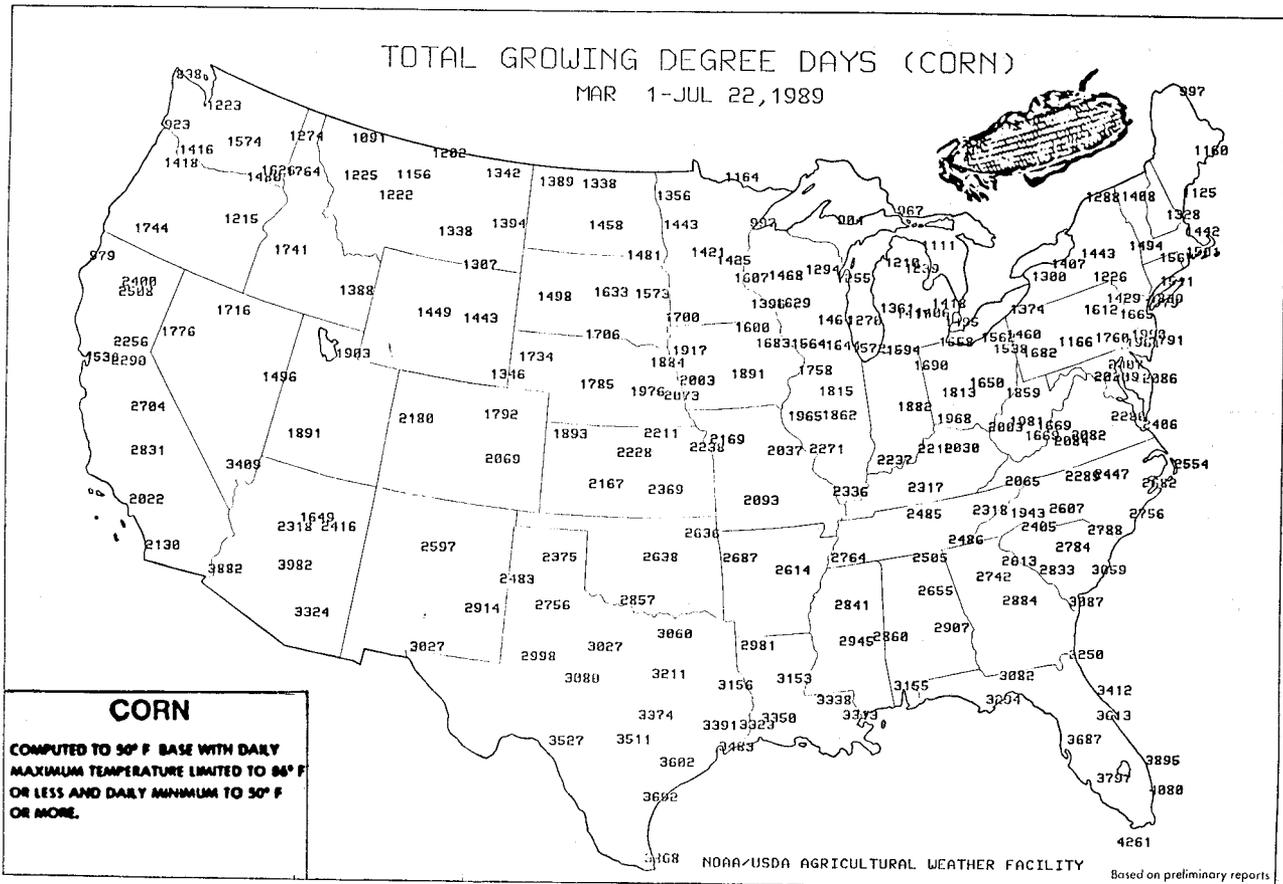
USES...APPLICABLE IN MEASURING THE SHORT TERM, WEEK-TO-WEEK, STATUS OF DRYNESS OR WETNESS AFFECTING WARM SEASON CROPS AND FIELD OPERATIONS.

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





National Weather Data for Selected Cities

Weather Data for the Week Ending July 22, 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 JUN 1	PCT. NORMAL SINCE JUN 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	86	70	89	66	78	-3	.4	-.9	.3	19.0	256	42.0	126	93	54	0	0	4	0	
MOBILE	90	72	97	70	81	-2	2.1	.3	1.0	14.7	141	33.9	91	97	58	4	0	4	2	
AK ANCHORAGE	68	54	79	51	61	2	1.0	.5	.4	2.4	98	6.0	102	90	64	1	0	5	0	
BARROW	49	34	63	30	42	2	.3	.1	.2	2.5	279	3.5	197	96	73	0	2	4	0	
FAIRBANKS	69	52	75	47	60	-1	1.7	.8	1.1	4.1	70	16.4	72	96	67	0	0	5	0	
JUNEAU	63	52	71	51	58	2	1.7	.8	1.1	4.1	70	16.4	72	96	67	0	0	5	0	
KODIAK	66	52	75	49	59	5	1.4	-.5	.3	9.6	146	23.0	76	91	66	0	0	3	0	
NOME	51	45	52	41	48	-3	.9	.4	.7	3.8	144	10.8	194	99	84	0	0	5	1	
AZ PHOENIX	111	87	116	79	99	6	T	T	T	5	2.3	76	44	18	7	0	0	1	0	
PHOENIX	94	66	100	63	80	6	.3	-.5	.2	8	29	3.6	41	59	24	5	0	3	0	
TUCSON	105	76	109	74	91	4	.7	.1	.4	1.2	61	3.1	70	67	19	7	0	0	0	
YUMA	111	86	115	81	98	4	0	0	0	T	0	.8	88	49	17	7	0	0	0	
AR FORT SMITH	84	66	88	64	75	-7	2.5	1.8	2.5	10.1	172	36.9	160	97	55	0	0	1	1	
LITTLE ROCK	82	66	85	65	74	-8	.7	-.1	.4	10.7	171	38.0	130	92	63	0	0	5	0	
CA BAKERSFIELD	101	70	106	62	86	1	0	0	0	0	0	2.3	59	56	22	7	0	0	0	
EUREKA	67	56	71	53	62	5	0	0	0	.2	35	19.1	86	88	72	0	0	0	0	
FRESNO	100	69	105	59	85	3	0	0	0	0	0	4.8	69	60	20	7	0	0	0	
LOS ANGELES	76	65	79	63	70	1	0	0	0	T	0	3.2	39	94	67	0	0	0	0	
REDDING	103	67	108	58	85	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
SACRAMENTO	99	61	103	57	80	4	0	0	0	1.0	98	19.6	79	60	15	7	0	0	0	
SAN DIEGO	75	66	77	63	70	0	0	0	0	.4	331	8.9	84	77	25	7	0	0	0	
SAN FRANCISCO	75	55	85	51	65	3	0	0	0	T	0	2.0	31	89	66	0	0	0	0	
CO DENVER	91	59	97	56	75	1	0	0	0	T	8	7.4	59	88	49	0	0	0	0	
GRAND JUNCTION	98	67	99	60	82	3	.1	-.1	.1	.3	45	3.8	94	30	16	7	0	0	0	
PUEBLO	92	59	103	55	75	-2	0	-.4	0	1.8	74	4.6	77	72	23	2	0	1	0	
CT BRIDGEPORT	75	64	81	59	70	-5	1.0	.2	1.0	9.5	179	30.0	133	89	71	0	0	2	1	
HARTFORD	79	62	86	57	70	-3	1.4	.7	.7	9.3	169	30.4	128	99	64	0	0	4	1	
DC WASHINGTON	84	70	90	66	77	-2	1.3	.4	.7	10.0	166	30.8	146	94	65	1	0	2	2	
FL APALACHICOLA	88	75	91	72	82	0	3.1	1.5	1.9	14.3	147	28.6	105	92	65	1	0	5	2	
DAYTONA BEACH	93	73	96	72	83	2	1.3	.1	.7	4.2	40	18.6	76	94	53	6	0	5	1	
JACKSONVILLE	91	73	93	71	82	-1	3.5	2.0	1.5	10.0	98	19.9	73	96	59	6	0	7	2	
KEY WEST	92	82	92	78	87	2	.2	-.5	.2	4.9	65	11.0	64	80	59	7	0	2	0	
MIAMI	91	77	93	74	84	1	.8	-.5	.4	13.5	100	18.9	65	89	59	6	0	5	0	
ORLANDO	92	74	93	73	83	0	1.1	-.7	.7	10.4	81	20.4	75	98	51	6	0	3	1	
TALLAHASSEE	89	71	94	69	80	-1	1.3	-.7	.5	23.2	183	39.6	106	97	63	2	0	5	0	
TAMPA	91	75	92	71	83	1	4.0	2.3	1.7	14.0	135	18.6	77	91	56	6	0	5	3	
WEST PALM BEACH	91	75	93	74	83	1	1.2	-.1	.8	6.8	55	18.2	62	92	56	6	0	4	1	
GA ATLANTA	85	70	87	68	78	-1	2.3	1.2	1.4	16.8	250	39.2	129	94	59	0	0	4	2	
AUGUSTA	88	71	90	69	80	-1	1.4	.4	.5	14.8	212	32.0	119	98	64	1	0	4	1	
MACON	87	71	89	69	79	-2	1.9	.8	.9	10.0	144	31.3	111	98	63	0	0	5	2	
SAVANNAH	91	74	93	73	83	1	.6	-.1	.3	9.7	89	18.8	65	97	56	6	0	6	0	
HI HILO	80	70	85	69	75	0	9.6	7.6	3.2	27.2	228	125.5	177	97	73	0	0	6	4	
HONOLULU	88	76	90	74	82	2	2.2	2.1	2.1	2.4	287	15.1	112	83	53	1	0	2	1	
KAHULUI	85	73	89	71	79	1	.9	.8	.8	1.4	300	27.6	235	90	63	0	0	4	1	
LIHUE	81	74	84	71	77	-1	1.2	.7	.8	2.9	97	33.3	141	92	74	0	0	2	1	
ID BOISE	93	62	106	55	77	2	T	0	T	.1	10	6.5	91	59	20	5	0	2	0	
LEWISTON	88	62	98	53	75	0	T	-.1	T	1.6	90	8.3	109	60	23	4	0	0	0	
POCATELLO	91	54	99	48	73	0	T	-.1	T	.7	53	6.7	102	82	23	5	0	0	0	
IL CHICAGO	79	62	89	55	71	-3	3.4	2.6	2.0	5.9	89	12.1	63	93	56	0	0	5	2	
MOLINE	81	61	87	56	71	-4	1.4	.3	.7	6.4	81	17.6	82	95	50	0	0	4	1	
PEORIA	79	61	86	56	70	-5	1.9	1.0	.8	3.2	47	13.1	65	98	57	0	0	5	1	
QUINCY	82	63	86	60	72	-5	.9	-.1	.5	2.1	29	8.8	42	93	53	0	0	4	1	
ROCKFORD	78	61	86	58	70	-4	2.1	1.1	1.7	5.6	71	13.3	64	95	58	0	0	4	1	
SPRINGFIELD	81	62	86	58	72	-5	1.5	.7	1.0	2.6	43	16.1	82	98	55	0	0	5	1	
IN EVANSVILLE	84	64	88	62	74	-4	.3	-.6	.3	8.5	134	33.2	131	100	53	0	0	4	1	
FORT WAYNE	84	62	87	56	73	-1	1.2	.4	.5	7.0	116	19.7	98	92	48	0	0	4	1	
INDIANAPOLIS	82	64	85	58	73	-2	1.3	.3	1.0	8.0	113	24.9	108	95	53	0	0	4	1	
SOUTH BEND	79	62	84	55	70	-2	1.6	.7	.5	9.1	140	19.6	94	95	56	0	0	4	0	
IA DES MOINES	80	62	84	58	71	-6	2.4	1.7	2.2	5.6	87	13.9	78	92	50	0	0	3	1	
ST LOUIS	82	59	89	53	71	-5	2.0	1.3	2.0	4.9	76	9.5	61	91	45	0	0	1	1	
KS CONCORDIA	83	63	89	55	70	-3	1.7	.6	1.4	3.3	43	9.5	50	99	48	0	0	4	1	
DOUG CITY	85	60	88	55	73	-8	T	-.7	T	8.5	163	13.6	108	90	39	0	0	1	0	
GOODLAND	83	57	87	55	70	-6	T	-.5	T	9.2	208	13.5	132	92	39	0	0	0	0	
TOPEKA	81	63	86	59	72	-7	.5	-.4	.4	8.2	102	18.1	94	95	56	0	0	3	0	
WICHITA	86	65	92	63	76	-6	1.3	.5	1.3	11.9	179	20.6	125	89	40	1	0	2	1	
KY BOWLING GREEN	86	65	90	61	76	-3	1.1	.1	1.0	15.4	200	45.9	152	93	51	1	0	2	1	
LEXINGTON	84	63	86	56	73	-3	2.5	1.4	2.5	7.5	96	35.6	129	92	45	0	0	2	1	
LOUISVILLE	85	65	88	61	75	-3	3.3	2.4	3.1	10.7	165	38.2	147	92	48	0	0	4	1	
LA ALEXANDRIA	91	73	94	71	82	-1	.5	-.5	.3	15.7	223	47.9	151	93	52	4	0	3	0	
BATON ROUGE	91	72	95	70	82	0	1.7	0	1.0	28.0	348	55.2	169	98	56	5	0	4	1	
LAKE CHARLES	92	76	94	69	84	2	.2	-.1	.2	28.8	371	48.8	172	94	52	7	0	2	0	
NEW ORLEANS	90	74	93	69	82	0	.3	-.1	.2	12.3	132	28.8	85	98	58	5	0	2	0	

Based on 1951-80 normals

Weather Data for the Week Ending July 22, 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 Jun 1	PCT. NORMAL SINCE Jun 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	91	70	95	66	80	-3	.4	-.4	.2	20.5	338	47.7	179	97	51	5	0	3	0
ME CARIBOU	78	51	82	44	64	-1	.4	-.9	T	3.7	62	14.8	81	89	43	0	0	0	0
PORTLAND	76	58	83	55	67	-2	.9	-.3	T	6.3	125	23.6	101	97	64	0	0	2	1
MD BALTIMORE	82	68	90	63	75	-2	2.1	1.2	1.6	10.1	157	32.6	143	100	69	1	0	2	1
SALISBURY	83	67	91	60	75	-2	4.2	3.2	4.2	10.7	165	28.0	117	98	65	1	0	1	1
MA BOSTON	77	62	87	59	70	-4	2.0	1.4	1.1	6.2	130	19.5	82	91	58	0	0	4	2
CHATHAM	69	60	74	56	65	-4	3.9	3.3	2.1	8.8	187	28.6	115	98	87	0	0	3	2
MI ALPENA	81	51	88	46	66	-1	.1	-.6	.1	2.8	52	11.6	75	98	40	0	0	1	2
DETROIT	80	62	86	57	71	-2	3.0	2.4	1.9	7.0	126	17.6	101	97	61	0	0	3	2
FLINT	79	60	86	54	69	-1	.7	.1	.5	6.3	121	15.6	97	95	57	0	0	3	1
GRAND RAPIDS	79	60	85	54	69	-3	.6	0	.4	6.0	103	16.5	90	95	55	0	0	4	0
HOUGHTON LAKE	81	54	86	45	68	0	.2	-.5	.2	3.1	60	11.9	79	88	42	0	0	1	0
LANSING	80	59	86	52	69	0	.7	.1	.3	4.4	76	16.3	100	97	58	0	0	4	0
MARQUETTE	78	50	84	47	64	-1	.7	-.4	.2	5.8	94	15.8	77	81	42	0	0	3	0
MUSKEGON	79	60	85	52	69	-1	.5	0	.4	2.2	53	12.1	74	90	53	0	0	3	0
SAULT ST. MARIE	83	50	87	42	66	2	.2	-.2	.4	3.1	58	13.6	83	98	36	0	0	1	0
MN ALEXANDRIA	86	61	89	58	74	3	.2	-.5	.2	2.7	43	8.5	61	92	33	0	0	1	0
DULUTH	82	54	87	49	68	2	.4	-.9	T	4.2	62	13.4	85	96	42	0	0	1	0
INT'L FALLS	86	56	88	53	71	4	T	-.9	T	7.9	122	12.9	98	97	38	0	0	0	0
MINNEAPOLIS	83	62	86	59	73	-1	1.7	1.0	1.7	5.9	90	15.7	104	88	41	0	0	1	0
ROCHESTER	80	56	84	53	68	-3	.8	0	.5	5.0	77	12.7	81	93	49	0	0	4	0
MS GREENWOOD	87	70	90	66	78	-1	1.1	0	1.0	19.5	295	46.4	141	97	56	2	0	2	1
JACKSON	89	69	92	66	79	-3	.2	-.9	.1	12.2	191	33.6	106	100	58	2	0	4	0
MERIDIAN	89	69	94	65	79	-2	T	-1.2	T	14.3	196	41.5	125	97	54	2	0	1	0
MO CAPE GIRARDEAU	82	66	87	64	74	1	.2	-.6	.2	12.6	204	36.5	139	94	55	0	0	3	0
COLUMBIA	78	63	83	62	71	-8	.5	-.2	.3	4.1	69	16.7	78	95	61	0	0	4	0
KANSAS CITY	81	63	85	59	72	-8	.2	-.2	.2	8.1	106	17.8	87	93	54	0	0	2	0
SAINT LOUIS	81	67	86	63	74	-6	1.8	1.0	1.6	4.5	71	19.3	94	89	55	0	0	5	1
SPRINGFIELD	77	62	82	57	69	-9	1.4	.6	1.2	5.0	68	20.5	90	96	65	0	0	4	1
MT BILLINGS	91	61	99	53	76	3	.1	-.1	0	1.4	53	9.7	100	71	20	3	0	2	0
GLASGOW	89	63	98	59	76	5	.7	.3	.6	1.7	46	7.0	101	74	30	2	0	3	0
GREAT FALLS	84	57	92	49	71	0	.3	.1	.2	4.7	132	13.0	128	85	30	4	0	2	1
HAVRE	86	58	99	52	72	1	.4	.1	.4	2.5	78	7.2	95	68	27	2	0	1	0
HELENA	88	55	95	49	71	3	.3	.1	.2	2.2	78	7.5	102	84	25	3	0	2	0
KALISPELL	84	53	94	44	68	3	.2	0	.1	2.5	87	10.6	115	93	31	2	0	2	0
MILES CITY	88	65	100	59	76	1	T	-.3	T	1.1	27	8.8	94	51	23	3	0	0	0
MISSOULA	88	54	99	47	71	3	.5	.3	.4	2.7	109	8.3	104	88	27	3	0	3	0
NE GRAND ISLAND	81	59	85	55	70	-7	1.0	.4	1.0	6.8	120	10.5	71	95	49	0	0	2	0
LINCOLN	82	61	86	57	72	-6	.4	-.3	.3	6.4	105	9.8	60	94	50	0	0	2	0
NORFOLK	82	58	86	51	70	-6	1.4	.7	1.4	5.5	82	10.8	70	96	46	0	0	3	1
NORTH PLATTE	81	54	87	49	67	-7	.8	.1	.8	4.7	79	9.5	73	96	44	0	0	1	1
OMAHA	80	61	83	59	70	-8	1.8	1.0	1.6	7.1	106	11.7	67	91	58	0	0	4	1
SCOTT'S BLUFF	88	56	94	50	72	-3	T	-.4	T	1.3	28	5.6	54	82	28	4	0	0	0
VALENTINE	83	56	88	52	69	-6	T	-.6	T	3.1	65	6.3	57	81	34	0	0	0	0
NV ELY	91	49	95	43	70	2	.5	.3	.4	1.6	130	4.5	82	57	18	4	0	3	0
LAS VEGAS	109	81	115	73	95	4	T	-.1	T	.1	14	1.3	64	22	9	7	0	0	0
RENO	94	57	100	48	76	6	0	0	0	1.5	306	4.4	96	59	16	6	0	0	0
WINNEMUCCA	97	57	105	51	77	4	0	0	0	.3	30	2.7	57	43	12	6	0	0	0
NH CONCORD	81	56	92	53	69	-1	1.0	.4	.5	7.4	148	20.9	109	99	52	1	0	5	0
NJ ATLANTIC CITY	80	64	85	56	72	-3	2.9	1.9	2.8	9.4	171	29.1	129	100	73	0	0	2	1
NM ALBUQUERQUE	95	65	100	61	80	1	.3	0	.2	.3	21	1.7	49	66	18	7	0	2	0
CLOVIS	89	63	97	61	76	-2	.1	-.5	.1	6.0	129	7.3	81	80	34	2	0	1	0
ROSWELL	97	70	104	63	83	3	.1	-.3	.1	.3	12	1.8	40	52	20	7	0	2	0
NY ALBANY	80	62	85	56	71	-1	.8	.1	.8	11.1	207	24.4	127	96	60	0	0	1	1
BINGHAMTON	75	60	81	55	68	-2	.7	-.1	.6	8.6	143	23.2	116	98	65	0	0	4	1
BUFFALO	81	60	86	52	71	-1	.5	-.2	.4	8.7	186	25.3	134	92	47	0	0	2	0
NEW YORK	79	65	83	61	72	-5	1.9	1.1	1.0	11.3	200	32.2	140	93	65	0	0	3	2
ROCHESTER	83	61	89	52	72	0	.3	-.2	.3	6.6	144	20.7	123	95	50	0	0	2	0
SYRACUSE	81	60	87	51	71	-1	1.7	.9	.7	7.5	120	19.2	91	98	55	0	0	3	3
NC ASHEVILLE	78	64	81	63	71	-2	1.3	.4	.5	15.2	239	33.1	132	97	64	0	0	3	1
CHARLOTTE	84	69	89	66	76	-3	1.1	.2	.5	8.6	136	27.8	109	91	57	0	0	5	0
GREENSBORO	82	68	85	65	75	-3	1.1	.2	1.0	8.9	129	29.6	123	96	67	0	0	4	1
HATTERAS	83	73	85	70	78	-1	2.2	.9	.8	7.3	91	39.6	141	98	76	0	0	6	2
NEW BERN	85	72	88	70	78	-1	2.8	1.3	1.1	14.6	148	36.0	125	98	71	0	0	5	4
RALEIGH	83	68	88	67	75	-3	1.0	0	.6	11.1	165	33.0	138	100	71	0	0	4	1
WILMINGTON	87	72	89	71	79	-1	3.6	1.8	1.3	16.6	152	38.7	133	99	67	0	0	6	4
ND BISMARCK	89	58	93	53	73	2	.4	-.1	.4	1.1	25	6.0	61	88	30	4	0	1	0
FARGO	89	61	92	57	75	4	.4	-.3	.3	2.0	36	9.1	81	89	28	3	0	2	0
GRAND FORKS	90	59	94	57	74	5	0	-.6	0	1.6	32	6.7	65	80	28	5	0	0	0
WILLISTON	89	61	98	56	75	4	.2	-.2	.2	2.3	57	7.3	85	86	34	4	0	1	0
OH AKRON-CANTON	82	62	87	53	72	0	.5	-.4	.1	9.2	152	25.8	124	92	48	0	0	4	0
CINCINNATI	83	63	86	55	73	-2	1.0	.1	1.0	6.5	91	30.6	126	91	48	0	0	1	1
CLEVELAND	82	62	87	54	72	0	.6	-.2	.4	7.4	126	27.5	137	94	52	0	0	4	0
COLUMBUS	81	62	86	53	72	-3	1.2	.3	.8	9.2	135	26.5	120	93	47	0	0	3	1

Weather Data for the Week Ending July 22, 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 Jun 1	PCT. NORMAL SINCE Jun 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	83	65	86	58	74	-1	.7	0	.7	8.0	129	34.5	164	90	46	0	0	3	1
TOLEDO	82	61	88	53	71	-1	3.8	3.1	2.6	10.9	189	23.9	132	92	53	0	0	4	2
YOUNGSTOWN	83	60	86	51	71	1	1.2	.3	.8	12.9	202	28.2	133	95	51	0	0	4	1
OK OKLAHOMA CITY	88	69	91	62	78	-5	T	-7	T	15.7	260	26.1	140	82	42	2	0	1	0
TULSA	85	67	87	64	76	-8	1.9	1.1	1.9	8.1	113	20.7	92	92	52	0	0	2	1
OR ASTORIA	68	53	72	47	61	0	.8	.6	.7	4.1	124	34.4	94	97	62	0	0	4	1
BURNS	86	51	94	43	69	-2	.1	0	.1	1.2	153	6.8	120	74	23	2	0	2	0
MEDFORD	87	58	93	50	73	-1	T	-1	T	.2	19	10.4	100	79	30	3	0	0	0
PENDELTON	84	56	91	49	70	-4	.1	0	.1	.7	75	8.7	129	68	24	2	0	1	0
PORTLAND	76	58	83	54	67	-1	.8	.7	.8	.8	46	18.7	94	90	50	0	0	1	1
SALEM	78	55	86	46	66	0	.3	.2	.3	1.3	87	16.3	75	91	44	0	0	1	0
PA ALLENTOWN	77	63	82	59	70	-4	2.4	1.4	1.2	9.5	151	28.1	118	97	68	0	0	2	2
ERIE	80	63	83	54	71	1	1.2	.4	.9	6.4	101	24.2	119	87	55	0	0	3	1
HARRISBURG	79	64	86	59	72	-4	2.0	1.3	1.0	12.3	205	30.9	140	98	67	0	0	5	2
PHILADELPHIA	82	66	87	62	74	-3	3.3	2.4	1.8	13.7	207	32.8	143	96	64	0	0	3	2
PITTSBURGH	84	64	89	58	74	2	.3	-.6	.3	11.2	181	30.1	138	93	49	0	0	1	0
SCRANTON	77	62	85	58	69	-3	.8	.1	.6	8.1	139	22.1	117	96	63	0	0	3	1
RI PROVIDENCE	77	60	84	55	68	-5	3.7	3.0	3.1	11.1	230	30.3	125	99	70	0	0	3	1
SC CHARLESTON	91	74	92	72	82	2	.7	-1.0	.2	8.8	75	21.9	74	97	57	6	0	5	0
COLUMBIA	87	70	92	68	79	-3	1.5	.3	.5	13.0	159	31.7	109	99	63	1	0	6	1
FLORENCE	89	71	91	69	80	-1	4.4	3.1	1.8	10.9	126	27.5	106	97	63	2	0	5	3
GREENVILLE	84	69	87	67	77	-2	.3	-.7	.1	9.0	119	26.7	88	95	63	0	0	3	0
SD ABERDEEN	86	57	91	54	72	-1	.1	-.5	.1	3.2	63	10.1	87	97	36	2	0	1	1
HURON	84	57	88	55	71	-4	.6	.1	.6	4.2	85	10.0	83	98	40	0	0	1	1
RAPID CITY	87	58	93	57	72	-1	.1	-.4	0	1.7	35	5.9	51	80	29	3	0	3	0
SIoux FALLS	84	57	87	53	70	-4	.8	.3	.8	3.7	66	8.5	60	97	42	0	0	2	1
TN CHATTANOOGA	84	67	88	62	76	-4	2.0	.9	1.2	17.7	270	44.6	142	97	57	0	0	4	1
KNOXVILLE	83	66	88	61	75	-3	.9	-.1	.5	10.1	143	33.9	118	99	58	0	0	4	0
MEMPHIS	85	70	89	67	77	-5	.9	0	.6	11.4	179	40.0	127	94	55	0	0	3	1
NASHVILLE	86	66	88	64	76	-4	.3	-.6	.2	11.0	172	37.5	127	90	51	0	0	2	0
TX ABILENE	98	72	106	63	85	0	T	-.4	T	10.4	261	19.6	155	67	22	7	0	1	0
AMARILLO	89	63	98	59	76	-3	.1	-.5	.1	7.6	142	12.1	109	77	30	2	0	1	0
AUSTIN	100	74	103	69	87	2	0	-.4	0	3.2	72	19.3	111	82	28	7	0	0	0
BEAUMONT	92	74	94	69	83	0	.9	-.5	.8	22.6	252	48.4	164	96	50	7	0	2	1
BROWNSVILLE	95	76	98	70	85	1	T	-.3	T	2.4	64	9.6	90	94	45	6	0	1	0
CORPUS CHRISTI	96	75	98	71	86	1	0	-.5	0	3.3	60	10.1	69	98	44	7	0	0	0
DEL RIO	100	76	104	72	88	2	1	-.3	.1	.5	18	5.6	63	55	23	7	0	1	0
EL PASO	97	70	104	65	83	1	1.0	.6	.5	1.1	67	3.2	102	66	25	7	0	4	0
FORT WORTH	94	72	99	66	83	-3	T	-.5	T	11.0	284	32.5	178	86	37	6	0	0	0
GALVESTON	89	79	91	76	84	0	.4	-.5	.4	13.6	219	25.8	131	90	59	1	0	1	0
HOUSTON	95	73	99	65	84	0	T	-.8	T	18.2	261	42.9	172	97	47	7	0	0	0
LUBBOCK	95	68	105	62	82	2	.2	-.4	.2	5.2	117	7.9	80	63	24	6	0	1	0
MIDLAND	99	71	111	63	85	3	.2	-.2	.1	.8	29	3.6	52	65	21	6	0	2	0
SAN ANGELO	100	70	107	60	85	1	1	-.2	.1	2.9	107	10.6	116	75	22	7	0	1	0
SAN ANTONIO	101	74	106	68	87	3	T	-.4	T	4.1	93	11.4	74	77	25	7	0	0	0
VICTORIA	96	75	99	69	85	1	T	-.5	T	6.3	98	14.2	75	92	40	7	0	0	0
WACO	98	71	103	65	85	-1	T	-.4	T	5.8	151	23.8	132	87	29	7	0	1	0
WICHITA FALLS	96	70	105	65	83	-3	.7	.3	.5	11.1	259	22.0	144	93	34	6	0	2	1
UT CEDAR CITY	95	60	101	52	78	3	.1	-.2	.1	1.2	98	3.9	71	47	14	7	0	1	0
SALT LAKE CITY	96	66	104	59	81	3	T	-.2	T	.6	41	6.7	71	55	18	6	0	0	0
VT BURLINGTON	83	59	85	52	71	1	.5	-.2	.4	6.2	103	15.0	86	92	43	0	0	3	0
VA NORFOLK	84	71	91	68	78	-1	.6	-.6	.3	8.6	124	32.8	135	95	64	2	0	2	0
RICHMOND	84	69	93	65	76	-2	2.1	-.9	2.0	9.6	135	30.1	128	99	67	2	0	2	1
ROANOKE	82	67	90	65	74	-2	.5	-.2	.5	15.7	275	31.0	141	100	67	1	0	2	1
WA QUILLAYUTE	68	51	75	46	60	0	.6	0	.4	6.5	139	47.6	86	99	60	0	0	4	0
SEATTLE-TACOMA	75	57	81	54	66	1	.4	.3	.4	1.7	89	19.3	98	88	50	0	0	1	0
SPOKANE	82	56	94	50	69	-2	.3	-.2	.3	.8	51	8.3	89	77	27	1	0	1	0
YAKIMA	84	55	94	49	69	-2	.1	0	.1	.1	18	3.5	80	77	28	1	0	1	0
WV BECKLEY	80	61	85	55	70	1	1.6	.5	1.4	6.3	86	24.7	99	96	57	0	0	3	1
CHARLESTON	83	63	88	57	73	-2	.7	-.5	.6	9.1	129	34.8	141	100	57	0	0	2	1
HUNTINGTON	82	62	88	57	72	-4	.6	-.5	.6	8.1	119	33.9	140	98	52	0	0	1	1
PARKERSBURG	82	63	88	56	73	-2	.6	-.3	.6	6.6	98	30.0	133	99	63	0	0	2	1
WI GREEN BAY	79	58	84	52	68	-1	.6	-.1	.4	3.6	67	12.0	78	89	48	0	0	3	0
LACROSSE	84	59	90	54	71	-2	.6	-.3	.5	3.1	45	11.0	64	94	43	1	0	2	0
MADISON	78	58	88	50	68	-4	1.6	.8	.8	5.7	87	12.9	75	95	56	0	0	4	2
MILWAUKEE	74	63	81	57	68	-3	3.5	2.8	2.6	6.9	112	15.6	89	92	63	0	0	4	2
WAUSAU	80	56	85	53	68	-2	1.9	1.0	1.8	5.2	77	13.4	79	93	45	0	0	2	1
WY CASPER	90	54	98	47	72	0	T	-.2	T	2.1	105	7.5	100	70	18	4	0	0	0
CHEYENNE	83	54	85	51	68	-1	T	-.4	T	3.8	112	7.6	87	88	27	0	0	0	0
LANDER	88	58	97	52	73	2	0	-.1	0	2.9	147	10.5	116	55	22	3	0	0	0
SHERIDAN	88	56	99	51	72	1	T	-.2	T	2.1	72	8.5	85	77	24	3	0	1	0
PR SAN JUAN	-999	78	-999	75	-999	-	0	-1.1	0	0	0	8.9	36	89	67	0	0	0	0

Cooling Degree Days Summary

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

LAST DATE OF DATA COLLECTION PERIOD IS 7-22-1989
ACCUMULATIONS ARE FROM JANUARY 1
** = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

Table with columns: STATE CITY, CALL, WEEK TOTAL, WEEK FROM, WEEK TO, CUM TOTAL, CUM FROM, CUM TO, CUM FROM, CUM TO. Lists 100+ cities and their cooling degree day data.

National Agricultural Summary

JULY 17-23, 1989

HIGHLIGHTS: The western Corn Belt received some needed rainfall during the week. Subsurface moisture supplies, however, remain short to adequate. Rains continued to fall over the Delta region, delaying crop progress and fieldwork. The east coast received frequent rain showers, causing harvest delays of hay and other crops. The West continued seasonably dry and was in need of moisture to ease stress on ranges and livestock.

Winter wheat was 80 percent (%) harvested, 3 percentage points behind normal. Harvest progressed 20 or more points during the week in Nebraska, Colorado, Indiana, and Ohio. Harvest is nearing completion in Kansas. Spring wheat harvest was 2% complete, 4 points behind the 5-year average and 21 points behind the 1988 harvest progress. Spring wheat condition continued to be mostly fair. Half of the corn crop has reached the silking stage, 15 points behind the average. Silking progressed 23 points during the week. Seven percent of the crop is in the dough stage, 5 points behind normal. Corn condition improved slightly as 70% of the crop is rated good to excellent. Conditions improved in the western Corn Belt. Soybeans were again mostly fair to good. The crop received beneficial rains to improve condition in the Corn Belt. The Delta States showed no improvement because of excessive moisture. Soybeans progressed to 52% in the bloom stage, 7 points behind 1988. Fourteen percent of the crop is setting pods, lagging behind normal by 7 points. Cotton was mostly fair to good. Condition in most of the Delta States regressed. Most other States except Texas showed some improvement. Squaring progressed to 83%, or 5 points behind normal. Forty-three percent of the crop was setting bolls, 7 points behind the average. Pasture and range condition was good to excellent in the East and poor to fair west of the Great Plains.

SMALL GRAIN: Winter wheat harvest was 80% complete, 3 points behind normal. Harvest advanced 40 points in Ohio, 29 points in Colorado, 21 points in Indiana, and 20 points in Nebraska. In Kansas, harvest reached 99% complete. Early harvest activities continued in Oregon, Idaho, and Washington. Montana's winter wheat harvest had not begun.

Spring wheat condition was mostly fair. Dry conditions in North Dakota further stressed spring wheat fields. Harvest had begun in three of the five major producing States, as 2% of the crop has been harvested which is 4 points behind normal.

CORN: Conditions improved as 70% of the crop was good to excellent. The western Corn Belt received needed rains that improved the condition in Iowa, Nebraska, Minnesota, and Missouri. Fifty percent of the crop reached the silking stage or beyond, 15 points behind normal. Illinois, Indiana, and Iowa advanced 26, 27, and 36 points, respectively. Farther East, Ohio and Pennsylvania advanced 8 points and 3 points, respectively. Seven percent of the crop reached the dough stage, 5 percent behind normal. Georgia had 91% in dough, while Texas had 69 and North Carolina 55. Illinois had 15% in dough, but Iowa and Indiana showed nothing in the dough stage. Early harvest in Texas continued.

SOYBEANS: Soybeans were rated mostly fair to good. The Iowa and Missouri crops were relieved of some stress as rains fell, as were the dryland crops in Nebraska and Kansas. Double crop soybeans were good in Indiana where rain had fallen. In Mississippi, Louisiana, and Arkansas, the crop was rated poor to fair, and Alabama's crop was fair to good. These four States had excessive moisture as double crop

soybeans were being planted. Conditions in Georgia and North Carolina were mostly good. Soybeans reached 52% bloomed and 14% setting pods, 7 points behind normal for both development stages. Early harvest was underway in Texas.

COTTON: Condition by week's end was mostly fair to good. The Delta States of Mississippi, Louisiana, and Arkansas did not show improvement as excessive moisture gave rise to weed problems. Conditions in Texas were mostly fair, with dryland fields in need of rain. California fields were rated good. Cotton squaring reached 83%, 5 points behind normal. The percentage setting bolls was 43, 7 points behind the average.

SORGHUM: Twenty-four percent of the crop was headed, 6 points behind normal. Crop advancement was slow in Kansas, Nebraska, and Texas. Conditions, however, improved in most major States except Texas and Oklahoma. The crop was rated mostly fair to good, with 94% fair or better.

OTHER FIELD CROPS: Rice was mostly fair to good with 27% of the acreage heading, 4 points behind normal. Heading progressed only 5 points on average from the previous week. In Arkansas, fungicides were being applied and weed control measures taken. In Texas, rice harvest was getting underway along the Upper Coast. In other areas of the State, fields were being drained to prepare for harvest. Insect and disease problems continued in Kentucky tobacco fields, where condition was mostly fair. North Carolina tobacco fields were fair to good as topping and sucker control were the major activities. Peanut planting was virtually complete in Texas, while Georgia fields were 100% bloomed and pegged. Conditions in Georgia were 95% good or excellent, but weeds were a problem.

FRUIT AND NUTS: Florida valencia orange harvest was virtually complete. Citrus areas in the State received scattered and frequent rains, promoting new growth. Peaches were 90% harvested in Georgia and over half complete in North Carolina and South Carolina. Late-season peach harvest continued in Texas, and freestone peach harvest was active in California. Pecans in Texas continued fair to good growth, as producers sprayed and irrigated where necessary. Melon harvest was essentially complete in Arizona. California almond and walnut orchards were being treated for pests. Oregon raspberry harvest neared completion. Apple thinning was common in Washington. In the New England States, blueberry harvest was beginning in southern regions.

VEGETABLES: California tomato harvest continued and fall potato planting was underway. Onion harvest was also active. Early potato digging had started in the Hermiston-Boardman region of Oregon. Idaho potatoes were mostly good. In the Rio Grande Valley of Texas, land preparation for fall planting of commercial vegetables continued. Initial fall planting was underway in Florida.

PASTURES AND LIVESTOCK: Range and pasture conditions were good to excellent in the East but only fair in the West. Some areas in the central Great Plains and middle Mississippi Valley received beneficial rains. Nebraska cattlemen continued to supplemental feed livestock. In Nevada, conditions deteriorated as stock water supplies were being depleted. Livestock was in mostly good condition nationwide, however, many Western States continued to show more signs of stress resulting from seasonably hot and dry weather.

Crop Progress

FOR WEEK ENDING JULY 23, 1989

SOYBEANS
% BLOOM

	1989	1988	AVG.
ALA	31	32	36
ARK	20	10	21
GA	38	40	44
ILL	77	84	79
IND	52	74	70
IOWA	89	92	75
KANS	35	50	40
KY	30	46	40
LA	40	27	41
MICH	20	45	45
MINN	67	85	70
MISS	22	30	36
MO	48	69	58
NEBR	60	80	71
N C	17	16	16
OHIO	25	64	66
S C	14	11	15
S DAK	38	78	52
TENN	24	39	32
19 STATES	52	65	59

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

SOYBEANS
% SETTING PODS

	1989	1988	AVG.
ALA	12	14	14
ARK	2	0	5
GA	9	14	15
ILL	35	31	37
IND	9	14	17
IOWA	27	48	33
KANS	10	15	15
KY	5	10	11
LA	10	9	17
MICH	0	4	5
MINN	0	52	22
MISS	8	11	10
MO	13	21	25
NEBR	7	23	20
N C	0	0	0
OHIO	2	10	18
S C	1	2	3
S DAK	7	23	9
TENN	4	16	8
19 STATES	14	24	21

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

GRAIN SORGHUM
% HEADED

	1989	1988	AVG.
ARK	55	41	NA
ILL	22	18	NA
KANS	5	10	10
LA	70	65	81
MISS	48	61	62
MO	48	29	42
NEBR	5	21	18
OKLA	10	30	20
S DAK	4	22	7
TENN	46	69	61
TEX	64	64	67

11 STATES	25	30	NA
EXCL. STATES WITH NA	24	30	30

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

NA - NOT AVAILABLE.

RICE
% HEADED

	1989	1988	AVG.
ARK	6	4	11
CALIF	1	1	2
LA	56	60	61
MISS	25	11	30
TEX	84	93	81
5 STATES	27	27	31

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

SPRING WHEAT
% HARVESTED

	1989	1988	AVG.
IDAHO	0	0	0
MINN	3	23	6
MONT	0	14	3
N DAK	1	17	4
S DAK	10	65	17
5 STATES	2	23	6

THESE 5 STATES PRODUCED 87% OF THE 1988 SPRING WHEAT CROP.

CORN
% SILKING

	1989	1988	AVG.
COLO	14	32	42
GA	98	98	99
ILL	81	89	85
IND	45	63	68
IOWA	56	83	71
KANS	60	80	55
KY	72	67	73
MICH	15	30	35
MINN	40	90	67
MO	80	86	78
NEBR	50	83	65
N C	80	92	90
OHIO	13	44	60
PA	6	9	24
S DAK	14	51	22
TEX	85	92	91
WIS	13	54	37
17 STATES	50	73	65

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

CORN
% DOUGH

	1989	1988	AVG.
COLO	0	0	0
GA	91	90	94
ILL	15	17	25
IND	0	0	0
IOWA	0	1	2
KANS	15	15	15
KY	7	4	12
MICH	0	0	1
MINN	0	14	8
MO	22	23	36
NEBR	0	5	5
N C	55	57	61
OHIO	0	2	10
PA	0	0	0
S DAK	0	0	0
TEX	69	69	69
WIS	0	0	0
17 STATES	7	10	12

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

WINTER WHEAT
% HARVESTED

	1989	1988	AVG.
ARK	99	100	100
CALIF	98	98	98
COLO	76	94	87
GA	100	100	100
IDAHO	3	10	6
ILL	99	100	100
IND	96	100	100
KANS	99	100	100
MICH	20	85	65
MO	100	100	100
MONT	0	58	14
NEBR	95	97	91
N MEX	100	100	NA
N C	98	100	100
OHIO	90	99	92
OKLA	100	100	100
OREG	10	7	19
S DAK	50	95	50
TEX	99	100	100
WASH	4	5	12

20 STATES	80	88	NA
EXCL. STATES WITH NA	80	88	83

THESE 20 STATES PRODUCED 90% OF THE 1988 WINTER WHEAT CROP.

NA - NOT AVAILABLE.

COTTON
% SETTING BOLLS

	1989 1988 AVG.		
ALA	55	83	74
ARIZ	98	80	90
ARK	40	74	81
CALIF	80	65	74
GA	58	84	81
LA	64	72	75
MISS	39	79	74
MO	84	80	80
N MEX	60	40	55
N C	59	60	63
OKLA	3	40	10
S C	44	43	70
TENN	46	77	44
TEX	26	23	27
14 STATES	43	49	50

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

COTTON
% SQUARING

	1989 1988 AVG.		
ALA	98	100	99
ARIZ	100	99	100
ARK	98	99	99
CALIF	100	100	99
GA	98	99	98
LA	96	94	97
MISS	87	96	99
MO	100	100	100
N MEX	98	89	95
N C	81	83	86
OKLA	45	95	50
S C	85	86	94
TENN	100	100	100
TEX	71	92	79
14 STATES	83	95	88

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

Crop Condition

PERCENT

FOR WEEK ENDING JULY 23, 1989

COTTON

STATE	VP	P	F	G	EX
ALA	0	20	45	35	0
ARIZ	0	0	0	45	55
ARK	0	13	76	11	0
CALIF	0	0	5	90	5
GA	0	2	7	88	3
LA	0	17	70	13	0
MISS	10	35	50	5	0
MO	0	0	42	50	8
N MEX	0	0	30	60	10
N C	0	0	36	59	5
OKLA	0	0	70	30	0
S C	0	0	5	95	0
TENN	4	2	48	46	0
TEX	0	19	53	23	5
14 STATE	1	15	45	34	5
PREV YEAR	2	4	31	48	15

RICE

STATE	VP	P	F	G	EX
ARK	0	0	38	57	5
CALIF	0	0	10	75	15
LA	0	12	52	32	4
MISS	0	0	50	50	0
TEX	0	0	27	60	13
5 STATE	0	2	36	55	7
PREV YEAR	1	3	24	68	4

SORGHUM

STATE	VP	P	F	G	EX
ARK	0	2	33	62	3
ILL	0	0	13	75	12
KANS	2	2	20	43	33
LA	4	25	39	32	0
MISS	0	10	55	30	5
MO	0	2	38	56	4
NEER	0	1	45	54	0
OKLA	0	0	20	80	0
S DAK	0	10	42	47	1
TENN	0	3	24	65	8
TEX	3	9	25	46	17
11 STATE	2	4	29	48	17
PREV YEAR	2	6	37	46	9

CORN

STATE	VP	P	F	G	EX
COLO	0	3	23	64	10
GA	0	0	2	75	23
ILL	0	2	28	61	9
IND	0	1	13	69	17
IOWA	0	2	29	63	6
KANS	0	5	6	47	42
KY	0	0	8	58	34
MICH	0	5	20	50	25
MINN	0	0	29	58	13
MO	2	6	45	44	3
NEER	1	4	39	49	7
N C	0	1	14	69	16
OHIO	3	12	37	42	6
PA	2	11	27	40	20
S DAK	1	5	22	61	11
TEX	3	11	17	39	30
WIS	0	2	17	63	18
17 STATE	1	3	26	58	12
PREV YEAR	13	32	35	18	2

SPRING WHEAT

STATE	VP	P	F	G	EX
IDAHO	1	4	25	54	16
MINN	0	13	49	38	0
MONT	3	8	23	50	16
N DAK	10	21	56	13	0
S DAK	1	18	47	33	1
5 STATE	5	17	47	28	3
PREV YEAR	36	36	24	4	0

SOYBEANS

STATE	VP	P	F	G	EX
ALA	0	6	28	63	3
ARK	2	21	68	9	0
GA	0	2	7	75	16
ILL	0	0	16	79	5
IND	0	0	20	66	14
IOWA	0	0	25	69	6
KANS	0	1	19	30	50
KY	0	1	27	68	4
LA	5	43	39	11	2
MICH	2	8	20	50	20
MINN	0	0	39	55	6
MISS	15	45	35	5	0
MO	0	2	48	49	1
NEER	0	0	44	52	4
N C	0	0	21	76	3
OHIO	2	13	40	40	5
S C	0	0	18	77	5
S DAK	0	2	20	68	10
TENN	0	4	45	50	1
19 STATE	1	6	31	55	7
PREV YEAR	4	16	54	24	2

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 over 0.50 in., 1.00 to 3.00 in. local areas. Temperatures 2° to 4° below normal.

Days suitable for fieldwork 2.4. Soil moisture 10% adequate, 90% surplus. Dry conditions early in week allowed plantings, other field activities: Corn 93% silked, 97% 1988, 98% avg.; 53% dented, 62% 1988, 65% avg.; 31% mature, 34% 1988, 35% avg.; 8% harvested, 11% 1988, 6% avg.; 13% fair, 68% good, 7% excellent. Sorghum 97% planted, 100% 1988, 100% avg.; 25% fair, 68% good, 7% excellent. Cotton 98% squaring, 100% 1988, 99% avg.; 55% setting bolls, 83% 1988, 74% avg.; 20% poor, 45% fair, 35% good. Soybeans 89% planted, 100% 1988, 100% avg.; 31% blooming, 32% 1988, 36% avg.; 12% setting pods, 14% 1988, 14% avg.; 6% poor, 28% fair, 63% good, 3% excellent. Peanuts 95% pegging, 93% 1988, 85% avg.; 67% good, 33% excellent. Winter wheat 87% harvested, 100% 1988, 100% avg. Livestock, pastures good to excellent. Primary activities: Planting, cultivating soybeans, where fields would support equipment; aerial spraying row crops for insects; applying fungicides to peanuts; harvesting, marketing fruit, vegetable crops; monitoring catfish ponds; routine care of livestock, poultry.

ALASKA: Much needed rain brought relief to stressed crops in the Matanuska Valley. Highs 2° below normal to 4° above normal. Lows 1° below normal to 5° above normal. Seasonal precipitation 0.72 in. below normal at PMC Butte to 1.46 in. above normal at Fairbanks.

Days suitable for fieldwork 3.0. Topsoil 15% short, 80% adequate, 5% surplus. Subsoil 10% short, 80% adequate, 10% surplus. First crop hay harvest 85% complete. Barley 45% dough stage, good to excellent. Commercial potato 25% in bloom. Commercial vegetable harvest continues in full swing.

ARIZONA: Widely scattered showers, thunderstorms 16th, 17th east. Monsoon 20th, 21st; wide spread rain over State except extreme west. Severe thunderstorm Phoenix 21st; locally heavy rain, strong winds. Thunderstorms 22nd over Mogollon Rim, White Mountains. Rainfall 16th to 22nd, 0.25 to 0.75 in. eastern two thirds of State, none extreme west. Temperatures 1° below to 6° above normal.

Cotton 45% good, 55% excellent. Squaring 100%, 99% 1988, 100% avg.; 98% setting bolls, 80% 1988, 90% avg. Insect infestation light to moderate central; light other areas. Small grains harvest complete. Corn silage harvested central. Alfalfa good. Harvest moderate to active. Few watermelons harvested, shipped west. Processing tomato harvest near completion west. Watermelon, cantaloupe, honeydews, mixed melons harvested, shipped central. Cabbage harvest continued east.

ARKANSAS: Temperatures remained below normal. Rainfall moderate, some flooding southern sections. Extremes 55°; 92°. Rainfall 0.22 to 4.46 in.

Days suitable for fieldwork 4.0. Soil moisture 2% short, 45% adequate, 53% surplus. Cotton 40% setting bolls, 74% 1988, 81% avg. Soybeans 94% planted, 97% 1988, 99% avg.; 88% emerged, 93% 1988, 96% avg. Wheat 99% harvested, 100% 1988, 100% avg. Corn 14% fair, 57% good, 29% excellent. Sorghum 100% emerged, 100% 1988. Main

activities: Completing wheat harvest; soybean planting; cultivation of cotton, soybeans; rice, cotton, soybean weed control; rice fertilization; scouting for rice diseases; applying rice fungicides; cotton insect control; pasture weed control; cutting, baling hay; fruit, vegetable harvest. Crops making rapid growth. Aphids becoming heavy in cotton. Fungicides were being applied for sheath blight, blast in rice. Weeds a problem in soybeans. Midge in some fields of sorghum. Pecan orchards sprayed for pecan weevils. Rains continue to hinder hay harvest. Several poultry houses damaged by storms in a southwestern county.

CALIFORNIA: Temperatures at or slightly above normal. Only traces of precipitation.

Field activities rapid, open. Second crop seeding nearly completed. Safflower harvest underway Sacramento Valley. Sugarbeets harvested southern San Joaquin Valley. Cotton treated mites, lygus, pink boll worms as needed. Alfalfa, Sudan grass harvests ongoing. Irrigation, fertilization active. Apricot harvest slowing; packing canning varieties. Dates bagged, Riverside County. Harvesting Flame Seedless, Cardinal, Thompson Seedless table grapes San Joaquin Valley. Over 60% packed Freestone peaches, plums, nectarines. Clingstone peach harvest active, some small sizes. Asian, Bartlett pears harvest continued. Picking grapefruit, non-desert areas. Valencia orange harvest slow. Almond, walnut orchards treated for pests. Broccoli remained light supply, variable quality, Salinas-Watsonville, Santa Maria areas. Celery heavy, generally good quality, Salinas. Supplies Santa Maria continued moderate, varying quality. Processing tomato harvest Huron District at peak. Harvest Sacramento Valley continued full swing, excellent yields. Tomato harvest winding down Cutler-Orosi area, although cherry tomatoes moved local. Insecticides, fungicides applied potato fields, Tulalake-Butte Valley. Spring potato harvest continued Perris-Hemet area. Fall planting underway. Sweet potatoes Merced-Atwater area growing well. Celery light supply Salinas area. Supplies Santa Maria continued moderate. Melon harvest just started Sacramento Valley; both quality, production normal. Watermelons, honeydew continued Cutler-Orosi area. Cantaloupe harvest remained active Kingsburg-Dinuba, good yields. Strawberries moderate supply Salinas-Watsonville area, variable quality. Santa Maria area fairly light, also variable quality. Cucumbers, peppers, onions, squash, eggplant, carrots harvested Statewide. Livestock good. Range, pasture valley poor due dry conditions. Cattle moved higher-elevation Forest Service grazing land, feed inadequate summer grazing areas. Water supplies, valley, well below normal; ponds, springs some northern areas also drying up. Water foothill areas, higher elevations, fair to ample. Supplemental feeding continued.

COLORADO: Warm weather dominated State with very little new moisture being received. Temperatures 1° above normal to 7° below normal.

Days suitable for fieldwork, 6.4. Soil moisture 33% very short, 46% short, 21% adequate. Alfalfa 2nd cutting 29% complete. Barley 71% turning color, 40% ripe, 20% harvested. Onions, sugarbeets good. Potatoes fair to good, with

summer potatoes 9% harvested. Corn 14% silked. Oats 87% headed, 64% turning color, 22% harvested. Dry beans 25% flowered. Sorghum good. Spring wheat 45% turning color; 20% harvested. Winter wheat 93% ripe; 76% harvested. Livestock, range, pasture fair to good.

FLORIDA: Wet, rain varied. Typical amounts Panhandle, Big Bend over 2.00 in.; local 6.00 in. plus. Elsewhere, most areas 1.00 in. plus. Temperatures 1 to 3° below normal north, 1 to 2° above normal Peninsula.

Soil moisture Panhandle adequate to surplus; adequate Peninsula. Few pockets continued short. Tobacco harvest active. Cotton slowly recovering from excessive moisture in June. Soybeans, peanuts making good progress. Corn for grain harvest started. Hay harvest active where weather permitted. Sugarcane made good progress. Grazing Panhandle area good to excellent, average elsewhere. Cattle good to excellent. Citrus areas scattered, frequent rains. Surface moisture adequate, lakes, ponds, reservoirs refilling. Abundant new growth, late bloom showing. Good progress for new crop fruit. Valencia harvest complete except few blocks going to juice. Caretakers active all areas with general summer programs. Summertime weather continued over vegetable producing areas. Land preparation active. Initial plantings fall crops underway. Light supply summer vegetables continued available for mostly local markets.

GEORGIA: Wet pattern continued. Rain most of State 4 to 7 days, over 1.00 in. common, local 5.00 in. Heaviest rain 5.51 in. Warner Robbins. Temperatures 2 to 4° cooler than normal. Extremes 59° Calhoun; 95° Homerville.

Days suitable for fieldwork 2.7. Soil moisture 2% short, 33% adequate, 65% surplus. Corn 70% dent, 72% 1988, 80% avg.; 13% mature, 32% 1988, 42% avg. Sorghum Grain 4% fair, 86% good, 10% excellent. Peanuts 5% fair, 78% good, 17% excellent; 100% blooming, 100% 1988, 99% avg.; 90% pegging, 92% 1988, 92% avg.; Fields weedy. Tobacco 8% poor, 5% fair, 87% good; 50% harvested, 30% 1988, 39% avg. Watermelons 85% harvested, 87% 1988, 88% avg. Apples 26% fair, 74% good; Picking beginning early varieties. Peaches 90% harvested, 87% 1988, 92% avg. Pecans 2% poor, 28% fair, 67% good, 3% excellent. Pasture 1% fair, 72% good, 27% excellent. Hay 2% very poor, 1% poor, 21% fair, 62% good, 14% excellent; Rainy conditions seriously delaying harvest. Cattle, hogs good to excellent.

HAWAII: Tropical storms Dalilia, Erick passed southern area chain causing widespread rain. Moderate to heavy rainfall, light winds beneficial most agriculture. Localized flooding South Point, Ka'u Island of Hawaii, windward side Island of Kauai, no major damage. Temperatures low 70s to high 80s. Winds light 5-10 mph. Rainfall none to 15.20 in.

Days suitable for fieldwork 7.0. Papaya production declined, growers intensifying spraying efforts to control insects, disease. Rainfall, warm temperatures benefited major banana growing areas, production seasonally increasing. Sugarcane harvesting slowed due to wet conditions.

IDAHO: Temperatures 100° south, up to 4° below normal north. Scattered showers extreme north, south central; otherwise well below normal.

Days suitable for fieldwork 7.0. Soil moisture 8% very short, 20% short, 70% adequate, 2% surplus. Winter wheat good; 3% harvested, 10% 1988, 7% avg. Spring wheat good; 98% headed, 96% 1988, 99% avg.; 28% turning. Spring barley 96% headed, 96% 1988, 97% avg.; 38% turning, swathing

underway. Aphid infestation throughout State. Potatoes good; 65% closing middles. Second cutting alfalfa hay 20% harvested, 41% 1988, 23% avg. Early season peach harvest underway. Mint 18% harvested. Growers very busy irrigating crops. Low elevation rangeland dry, high elevation rangeland adequate forage. Livestock good.

ILLINOIS: Temperatures 2 to 4° below normal. Precipitation 1.00 in. to 3.00 in., except less extreme south.

Days suitable for fieldwork 4.25. Soil moisture 57% short, 38% adequate, 5% surplus. Alfalfa 2nd crop cut 88%, 90% 1988, 82% avg., 3rd crop cut 7%, 18% 1988, 12% avg.; 4% poor, 47% fair, 45% good, 4% excellent. Oats ripe 90%, 92% 1988, 95% avg.; harvested 55%, 67% 1988, 66% avg.; 8% fair, 74% good, 18% excellent. Pasture 3% very poor, 22% poor, 42% fair, 28% good, 5% excellent.

INDIANA: Temperatures 3 to 5° below normal for daytime, 1 to 2° above normal at night. Lows low to mid 60s, highs upper 70s to low 80s. Precipitation heavy some areas, 0.30 to 4.60 in.

Days suitable for fieldwork 3.7. Topsoil 8% short, 70% adequate, 22% surplus. Subsoil 13% short, 79% adequate, 8% surplus. Corn, soybean slightly improved. Corn 67 in. high, 58 in. 1988, 67 in. avg. Soybean 18 in. high, 21 in. 1988, 23 in. avg. Alfalfa hay 65% cut twice, 87% 1988, 77% avg. Pasture 3% poor, 23% fair, 63% good, 11% excellent. Double cropped soybeans good where rain has fallen.

IOWA: Temperatures 3 to 5° below normal. Extremes 52°; 88°. Rainfall 0.33 to 3.50 in., average 1.50 in. Rainiest week of the year.

Days suitable for fieldwork 4.2. Topsoil 45% short, 55% adequate. Subsoil 96% short, 4% adequate. Winter wheat 96% harvested, 100% 1988, 86% avg. Hay 2% very poor, 23% poor, 56% fair, 17% good, 2% excellent. Second crop alfalfa 84% harvested, 78% 1988, 72% avg. Corn 90% tasseled, 97% 1988, 74% avg. Rain reduced stress on soybeans. Oats 70% harvested, 91% 1988, 67% avg. Livestock good. Pasture 17% very poor, 36% poor, 38% fair, 7% good, 2% excellent.

KANSAS: Temperatures below normal, 7° below southern third, 4° below northwest, remainder of area 6° below.

Days suitable for fieldwork 5.0. Topsoil 23% short, 74% adequate, 3% surplus. Subsoil 37% short, 63% adequate. Wheat harvest 99% complete. Corn in silking stage 60%. Most corn stands making good growth, 15% dough stage. Recent rains caused few farmers to replant fields due washout. Soybean blooming underway; 35%. Second cutting alfalfa 90%, yields below normal.

KENTUCKY: Low pressure system provided cool temperatures, scattered heavy rainfall. Highs mid to upper 60s, low mid 60s. Temperatures 1 to 2° below normal. Rainfall over 4.00 in. in 24 hours Louisville to 0.10 in. Mayfield for week. Precipitation 1.00 in. above normal east to 1.00 in. below normal west.

Days suitable for fieldwork 4.4. Soil moisture 3% very short, 9% short, 76% adequate, 12% surplus. Water damage to low lying crop acres. Corn prospects good. Double crop soybean planting continues, some won't plant intentions. Tobacco blooming short. Insect, disease problems continue. Condition mostly fair. Hay good. Pastures 1% poor, 12% fair, 59% good, 28% excellent.

LOUISIANA: Temperatures 1 to 2° below normal. Extremes 60°; 96°. Rainfall 0.38 to 1.49 in.

Days suitable for fieldwork 2.8. Soil moisture 31% adequate, 69% surplus. Corn silked 100%, 100% 1988, 100% avg.; dough stage 90%, 93% 1988, 93% avg.; mature 26%, 28% 1988, 36% avg.; harvested 1%, 2% 1988, 3% avg.; 3% poor, 24% fair, 62% good, 11% excellent. Cotton squaring 96%, 94% 1988, 97% avg.; setting bolls 64%, 72% 1988, 75% avg.; 17% poor, 70% fair, 13% good. Insect, weed control continues. Hay first cutting 83%, 95% 1988, 99% avg. Peaches harvested 54%, 80% 1988, 85% avg.; 8% very poor, 25% poor, 34% fair, 33% good. Rice headed 56%, 60% 1988, 61% avg.; ripe 5%, 7% 1988, 9% avg.; harvested 0%, 2% 1988, 3% avg.; 12% poor, 52% fair, 32% good, 4% excellent. Sorghum headed 70%, 65% 1988, 81% avg.; turning color 11%, 14% 1988, 33% avg.; ripe 1%, 1% 1988, 3% avg.; 4% very poor, 25% poor, 39% fair, 32% good. Soybeans planted 97%, 100% 1988, 100% avg.; emerged 96%, 98% 1988, 99% avg.; blooming 40%, 27% 1988, 41% avg.; setting pods 10%, 9% 1988, 17% avg.; 5% very poor, 43% poor, 39% fair, 11% good, 2% excellent. Fields getting very weedy. Cultivating being very limited due to wet fields. Sugarcane 6% very poor, 11% poor, 11% fair, 72% good. Spraying for bores continue. Sweet potatoes planted 92%, 100% 1988, 100% avg.; harvested 1%, 1% 1988, 2% avg.; 15% poor, 35% fair, 50% good. Rotting due to wet ground. Vegetable 9% very poor, 35% poor, 43% fair, 13% good. Pasture 2% very poor, 2% poor, 17% fair, 74% good, 5% excellent. Livestock 2% poor, 18% fair, 75% good, 5% excellent.

MARYLAND & DELAWARE: MARYLAND: Precipitation 2.30 in. Temperature 73°, normal 76°. Extremes 50°; 90°.

Days suitable for fieldwork 4.6. Topsoil 6% short, 72% adequate, 22% surplus. Subsoil 83% adequate, 17% surplus. Field corn good; silked 30%, 56% 1988, 60% avg.; dough stage 7%, 3% 1988, 19% avg. Soybeans fair to good; planted 91%, 94% 1988, 99% avg. Tobacco fair to good. Wheat, barley poor to fair. Oats fair to good. Rye fair to good. Wheat harvested 82%, 97% 1988, 96% avg. Barley harvested 95%, 100% 1988, 100% avg. Pasture good to excellent.

DELAWARE: Precipitation 2.45 in. Temperature 74°, normal 77°. Extremes 57°; 88°.

Days suitable for fieldwork 3.7. Topsoil 60% adequate, 40% surplus. Subsoil 100% adequate. Soybeans good. Single, double crop soybeans planted 97%, 90% 1988, 98% avg.; bloomed 20%, 10% 1988, 23% avg. Wheat fair; harvested 99%, 100% 1988, 100% avg. Field corn good; silked 78%, 55% 1988, 70% avg.; dough stage 20%, 4% 1988, 12% avg.

MICHIGAN: Temperatures 2° below to 3° above normal. Extremes 47°; 88°. Precipitation none to 3.81 in. across State.

Days suitable for fieldwork 5.0. Soil moisture 45% short, 50% adequate, 5% surplus. Corn 15% silked, 30% 1988, 35% avg.; 0% dough stage, 0% 1988, 1% avg.; 5% poor, 20% fair, 50% good, 25% excellent. Soybeans 20% bloomed, 45% 1988, 45% avg.; 2% very poor, 8% poor, 20% fair, 50% good, 20% excellent. Wheat 20% harvested, 85% 1988, 65% avg. Major activities: Limited wheat, oat, hay harvest, spraying, irrigating, cultivation in later planted crops. Tart, sweet cherry harvests continued. Early variety plums, peaches being picked. Vegetables harvested include cucumbers, cherry tomatoes, celery, sweet corn, squash, broccoli, green beans.

MINNESOTA: Temperatures 3° below normal for southern area to 6° above normal for northern area. Extremes 43°; 96°. Precipitation 0.09 to 1.51 in. Greatest weekly total 3.29 in.

Days suitable for fieldwork 5.3. Topsoil 14% very short, 34% short, 50% adequate, 2% surplus.

Spring wheat 60% turning ripe, 95% 1988, 65% avg.; 6% cut, 35% 1988, 12% avg.; 3% combined, 23% 1988, 6% avg. Oats 88% turning ripe, 99% 1988, 85% avg.; 25% cut, 67% 1988, 35% avg.; 11% combined, 61% 1988, 24% avg. Barley 96% turning ripe, 98% 1988, 79% avg.; 13% cut, 44% 1988, 21% avg.; 3% combined, 25% 1988, 9% avg. Corn 68 in. height, 65 in. 1988, 66 in. avg.; 40% tasseling, 90% 1988, 67% avg. Soybeans 24 in. height, 26 in. 1988, 22 in. avg.; 67% blooming, 85% 1988, 78% avg. Winter Wheat 19% harvested, 88% 1988, 35% avg. Rye 23% harvested, 90% 1988, 38% avg. Soybean 39% fair, 55% good, 6% excellent. Corn 29% fair, 58% good, 13% excellent. Spring wheat 13% poor, 49% fair, 38% good.

MISSISSIPPI: Cool, dry. Temperatures 4° below normal. Extremes 60°; 96°. Rainfall 0.81 in., 0.36 in. below normal.

Days suitable for fieldwork 2.4, 4.6 1988, 5.2 avg. Soil moisture 15% adequate, 70% surplus, 15% excessive. Corn good; 91% silked, 91% 1988, 95% avg. Cotton fair to poor; 87% squaring, 96% 1988, 99% avg.; 39% setting bolls, 74% avg. Hay 37% harvested, 58% 1988, 59% avg. Rice fair to good; 25% heading, 11% 1988, 30% avg. Sorghum fair; 48% heading, 61% 1988, 62% avg. Soybeans poor; 90% planted, 100% 1988, 100% avg. Sweet potatoes 100% planted, 100% 1988, 100% avg. Wheat 100% harvested, 100% 1988, 100% avg. Peaches 85% harvested, 65% 1988, 78% avg. Pastures, livestock good. Activities: Applying insecticides, planting soybeans, cultivating.

MISSOURI: Temperatures 7° below normal. Precipitation varied, less than 0.10 in. northwest to over 5.00 in. Lockwood, Lamar southwest. Bootheel 0.50 in., northeast 1.75 in. No flooding.

Days suitable for fieldwork 4.2. Topsoil 48% short, 51% adequate, 1% surplus. Subsoil 72% short, 28% adequate. Crop conditions improved by rain, cooler weather. Corn silking over 70% complete all areas, Bootheel 100%. Soybeans blooming varies 40% southeast to 63% east central. Sorghum heading ranges 15% north central to 81% southeast. Oats harvested 99%, 100% 1988, 95% avg. Second cutting alfalfa 92%, 94% 1988, 91% avg. Other hay harvested 86%, 98% 1988, 91% avg. Pasture 5% very poor, 19% poor, 46% fair, 27% good, 3% excellent. Livestock water 17% critically short, 24% short, 59% adequate.

MONTANA: Temperature normal to above normal. Thunderstorms active across State with precipitation none to 1.67 in., highest in west.

Days suitable for fieldwork 5.7. Topsoil 32% short, 65% adequate, 3% surplus. Subsoil 42% short, 56% adequate, 2% surplus. Winter wheat 1% very poor, 5% poor, 20% fair, 53% good, 21% excellent; ripe 11%, 28% 1988, 23% avg. Barley 1% very poor, 5% poor, 19% fair, 48% good, 27% excellent; ripe 1%, 24% 1988, 9% avg. Oats 3% very poor, 6% poor, 25% fair, 50% good, 16% excellent; ripe 1%, 31% 1988, 11% avg. Pasture, range feed 2% very poor, 5% poor, 24% fair, 51% good, 18% excellent. First cutting alfalfa 91% harvested, 96% 1988, 95% avg. Second cutting alfalfa hay 6% harvested, 18% 1988, 16% avg. Other hay cut 80%, 70% 1988, 69% avg.

NEBRASKA: Temperatures 3° below normal northwest to 8° below normal southwest. Extremes 49°; 98°. Precipitation traces northwest to over 2.00 in. northeast.

Days suitable for fieldwork 4.7. Topsoil 44% short, 56% adequate. Subsoil 90% short, 10% adequate. Oats 70% harvested, 89% 1988, 71% avg. Alfalfa hay 3% very poor, 9% poor, 55% fair, 33% good; 80% second cutting, 89% 1988, 81% avg. 2%

third cutting, 7% 1988, 2% avg. Clover weevils northeast. Pastures, range 21% very short, 46% short, 33% adequate. Hay, roughage 44% very short, 38% short, 18% adequate. Rain improved dryland crops in east. Still concern for irrigation water supply in Panhandle where producers having trouble keeping up with water requirements. Chinch bug damage slowed some in southeast, still spraying. Grasshoppers Panhandle, southwest, east. Corn leaf aphids, green bugs, corn bores in east. Main activities: Harvesting wheat, oats; weed control; cutting hay; irrigating. Cattlemen in east still feeding hay to supplement pastures.

NEVADA: Long, hot summer continues, above normal temperatures, below normal precipitation. Jet stream to north kept hot, dry weather. Precipitation none northwest, scattered light northeast, central, traces elsewhere.

Weather continued favorable haying, small grain harvests. Growth 1989 potato crop favorable to date. Ranges, pastures continued to deteriorate. Stockwater being depleted.

NEW ENGLAND: Precipitation 0.25 to 0.75 in. north except Middlebury, Vermont 2.19 in., less than 1.00 in. coastal Connecticut, 1.50 to 2.50 in. remainder south. Temperatures mid to upper 60s north, mid to upper 60s to low 70s coastal south. Temperatures near normal except interior south 2° below normal.

Days suitable for fieldwork 6.0. Fieldwork progress 4.5 days behind. Soil moisture north 10% very short, 40% short, 50% adequate; south 57% adequate, 43% surplus. Grazing availability north 6% very short, 35% short, 59% adequate; south 83% adequate, 17% surplus. Maine potato good. Connecticut River Valley potato fair. Rhode Island potato good. Maine oats good. Field corn good. Sweet corn fair to good. Shade tobacco fair to good. Outdoor tobacco fair to good. First crop hay 94% cut, 97% 1988, 92% avg.; fair to good. Second crop hay 20% cut, 24% 1988, 25% avg.; good. Apple set average; fruit drop average; scab infection average. Strawberry harvest completed. Blueberry set light to average; harvesting beginning south. Cranberry set good. Major farm activities: Haying, harvesting vegetables, controlling insects.

NEW JERSEY: Temperatures below normal. Extremes 51°, 94°. Rainfall 0.66 in. north, 1.54 in. central, 1.06 in. south. Heaviest 24-hour total 2.60 in. on 20th, 21th. Estimated soil moisture percent field capacity 87% north, 91% central, 84% south. Four inch soil temperatures 69° north, 71° central, 73° south.

Soil moisture remained excessive most areas causing additional crop losses. Summer vegetable marketings showed effects of excessive rain. Blueberry harvest active but past peak. Freestone peach harvest became general. Early planted field corn in tassel. Early soybeans up 12 to 15 in. No planting of late fields. Rain increased wheat losses. Conditions poor for hay making. Oats ripe, rain prevented combining. Pasture growth heavy.

NEW MEXICO: Moderate rainfall central, western areas, basically dry elsewhere. Temperatures above 100°.

Days suitable for fieldwork 6.6. Soil moisture 89% short, 11% adequate. Cotton squaring 98%, 60% setting bolls; 30% fair, 60% good, 10% excellent. Cattle 10% poor, 60% fair, 30% good. Sheep 80% fair, 20% good. Ranges, pastures 70% poor, 10% fair, 20% good.

NEW YORK: Temperatures near normal, mid 60s to low 70s. Extremes 42° Ellenburg Depot, Newcomb;

91° Jamestown. Precipitation fell midweek, 1.00 to 2.75 in. south western areas, 3.95 in. Long Island, less than 0.25 in. across northern tier, elsewhere 0.25 to 0.75 in.

Days suitable for fieldwork 5.7. Soil moisture adequate. Pastures fair to good. Hay good. Wheat fair to good. Early corn tasseling. Alfalfa first cutting 90% complete, 91% avg. Franklin County strawberry harvest active. Early fresh market sweet corn harvest underway in most areas. Orange County lettuce harvest continued. Onions in Orange County good. Soils in some areas of the State getting dry. Irrigation would help many crops. Tart cherry harvest at peak. Sweet cherry harvest finished. Blueberry, raspberry, harvest underway. Peach harvest should begin soon. Apples good, sizing well.

NORTH CAROLINA: Temperatures near normal at coast, 2 to 3° below normal rest of State. Extremes 55°, 92°. Precipitation 0.51 to 6.78 in.

Days suitable for fieldwork 3.4. Soil moisture 1% short 48% adequate, 51% surplus. Pasture 16% fair, 68% good, 16% excellent. Livestock feed from pasture 85%. Crop conditions: tobacco 1% very poor, 6% poor, 46% fair, 47% good; Irish potatoes 4% poor, 46% fair, 50% good; sweet potatoes 38% fair, 58% good, 4% excellent; peaches 3% very poor, 23% poor, 27% fair, 47% good; apples 3% very poor, 10% poor, 55% fair, 28% good, 4% excellent; truck crops 6% poor, 44% fair, 50% good; peanuts 46% fair, 54% good; hay 7% poor, 25% fair, 65% good, 3% excellent. Hay first cutting 97% complete, second cutting 45% complete. Hay, roughage 2% short, 81% adequate, 17% surplus. Plantings completed: Sorghum 99%, 100% 1988. Harvesting completed: Peaches 65%, 54% 1988, 62% avg.; all small grains very near completion; Irish potatoes 85%, 89% 1988, 90% avg. Tobacco 10%, 10% 1988, 10% avg. Major activities: Cultivating crops; topping tobacco, sucker control; cutting hay. Other activities: Spraying crops; planting soybeans, sweet potatoes, vegetables, sorghum; harvesting peaches, tobacco, truck crops, small grains; pruning Christmas trees; tending livestock; general farm maintenance.

NORTH DAKOTA: Temperatures average to 5° above average. Extremes 50° southwest, central, south central; 98° northwest. Precipitation 0.13 in. to 1.34 in. State below average for growing season, -1.10 in. southeast to -3.49 in. east central.

Days suitable for fieldwork 6.5. Topsoil well below average, 38% very short, 53% short, 9% adequate this week; 5-year avg.; 24% very short, 34% short, 38% adequate, 4% surplus; subsoil well below average, 61% very short, 34% short, 5% adequate this week; average 20% very short, 27% short, 51% adequate, 2% surplus. Small grains fair to poor. Barley harvest starting. Spring wheat 10% very poor, 21% poor, 56% fair, 13% good; durum 5%, 26%, 56%, 13%; oats 10%, 32%, 45%, 13%; barley 6%, 28%, 55%, 11%; flax 12%, 22%, 52%, 14%; corn 2%, 9%, 48%, 41%; dry edible beans 3%, 11%, 47%, 39%; soybeans 1%, 1%, 50%, 48%; sunflower 5%, 12%, 35%, 48%; potatoes 28% fair, 72% good. Spring wheat 43% turning to ripe, 4% swathed or combined; durum 27%, 1%; oats 41%, 13%; barley 55%, 20%. Row crops stressed from dry conditions. Bloom or beyond: dry edible beans 65% this week, 80% last year, 62% avg.; flax 59%, 69%, 72%; soybeans 64%, 92%, 73%; sunflower 1%, 25%, 10%. Pasture 13% very poor, 48% poor, 30% fair, 9% good.

OHIO: High temperatures low to mid 80s. Low temperatures mid 60s, 2 to 4° above normal. Rainfall 0.20 to 3.81 in., with most areas receiving at least 0.50 in. Base 50 growing degree-day totals 165 to 175.

Days suitable for fieldwork 5.1. Soil moisture 14% short, 65% adequate, 21% surplus. Flooding in west. Corn, soybeans, pasture, oats fair to good; hay fair. Corn development stages varied widely throughout State. Wheat harvest neared completion; test weights mid to high 50s in north and west, high 40s to low 50s southeast. Oat harvest began. Harvest of pickles, potatoes, carrots, sweet corn began in the north, northwest. Pepper, tomato harvests began in southeast.

OKLAHOMA: Temperatures 8° below normal Panhandle to 4° below normal southwest. Precipitation none west central to 2.16 in. east central.

Days suitable for fieldwork 5.3. Topsoil 12% short, 80% adequate, 8% surplus. Subsoil 10% short, 90% adequate. Wheat 100% harvested, 100% 1988, 100% avg; 80% ground plowed, 90% 1988, 85% avg. Cotton 70% fair, 30% good; 45% squaring, 95% 1988, 50% avg; 3% setting bolls, 40% 1988, 10% avg. Sorghum 20% fair, 80% good; 10% heading, 30% 1988, 20% avg. Soybeans 10% flowering, 10% 1988, 25% avg. Peanuts 50% pegging, 70% 1988, 60% avg. Corn 25% milk-to-soft, 35% 1988, 50% avg. Pastures good. Cattle good; marketings stable, prices down slightly.

OREGON: Temperatures near normal Willamette Valley; slightly above normal coast, southwest, south central areas; slightly below normal northeast, north central regions. Heaviest precipitation (up to 0.75 in.) at coast, in Willamette Valley first few days, remainder dry.

Soil moisture 58% short, 42% adequate. Winter wheat 13% poor, 28% fair, 46% good, 13% excellent. Barley 13% harvested, 22% 1988, 35% avg. Winter wheat being hauled to elevators. Brief rain stopped harvest one day many north central locations. Grain crops starting to head south central. Grass seed harvest continued Willamette Valley. Second cutting alfalfa underway, looking good northeast. Third cutting hay underway Columbia Basin. Average to above average hay condition central area. Second cutting hay done east. Cherry harvest finished, rain damage Hood River. Raspberry harvest nearly completed, blueberry harvest near peak, blackberry harvest well underway Willamette Valley. Earliest peach varieties harvested west. Apples sizing well Hood River, thinning continued. Leaf roller in apple orchards Milton-Freewater; early prune harvest set to begin. Cranberries sizing well south coast. Melon harvest started, excellent quality Hermiston area. Snap bean harvest continued Willamette Valley; broccoli, squash harvests winding down; fields prepared for a second green pea planting; sweet corn tasseling; early potatoes ready for harvest. Early potato digging started Hermiston-Boardman, good quality; also harvested early sweet corn. Walla Walla sweet onion harvest winding down. Livestock good to excellent except poor in north central areas. Range, pasture good Statewide with moisture needed in all areas, starting to dry out east.

PENNSYLVANIA: Warm, humid; plenty of showers, thundershowers. Temperature 71°, 1° above normal. Extremes 50°, 90°. Precipitation 1.62 in., 0.73 in. above normal.

Days suitable for fieldwork 4.0. Soil moisture 49% adequate, 51% surplus. Corn 6% silk, 9% 1988, 24% avg.; corn height 41 in., 31 in. 1988, 50 in. avg.; 2% very poor, 11% poor, 27% fair, 40% good, 20% excellent. Soybeans 97% planted, 99% 1988, 100% avg.; 1% very poor, 6% poor, 26% fair, 47% good, 20% excellent. Barley 2% heading or headed, 1% 1988; 7% turning yellow, 14% 1988; 26% ripe, 13% 1988; 65% harvested, 72% 1988. Wheat 4% heading or headed, none 1988; 12% turning yellow,

10% 1988; 46% ripe, 31% 1988; 38% harvested, 59% 1988; 3% very poor, 14% poor, 38% fair, 30% good, 15% excellent. Oats 29% heading or headed, 20% 1988; 60% turning yellow, 35% 1988; 11% ripe, 30% 1988; none harvested, 15% 1988; 1% very poor, 8% poor, 29% fair, 43% good, 19% excellent. First cutting alfalfa 92% complete, 100% 1988. Second cutting alfalfa 35% complete, 65% 1988. First cutting clover-timothy 86% complete, 100% 1988. Hay quality average. Feed from pastures average. Fruit average. Activities: Planting soybeans; harvesting hay, haylage, barley, wheat, vegetables; weed control; fence work; hauling manure; spreading fertilizer; maintaining machinery; caring for livestock.

PUERTO RICO: Rainfall 0.69 in. was 0.54 in. below normal, highest 4.48 in. Coloso, 3.60 in. San Sabastian, 2.61 in. Toa Baja. San Juan Wsfo mean temperatures 82° plus 0.3 total rainfall 0.67 minus 0.45. Temperature 81° on coast, 74 to 76° in Interior. Extremes 51° Adjuntas Aes; 96° San Sebastian.

SOUTH CAROLINA: Rainfall 3.00 to 5.00 in. over most of State. Temperatures near normal.

Days suitable for fieldwork 3.5. Soil moisture 9% short, 82% adequate, 9% surplus. Cotton 5% fair, 95% good; 85% squaring, 86% 1988, 94% avg.; 44% setting bolls, 43% 1988, 70% avg. Soybeans 18% fair, 77% good, 5% excellent; 14% blooming, 11% 1988, 15% avg.; 1% setting pods, 2% 1988, 3% avg. Tobacco good; 92% topped, 94% 1988, 95% avg.; 17% harvested, 20% 1988, 22% avg. Corn good; 94% silked, 96% 1988, 98% avg.; 61% dough stage, 60% 1988, 73% avg.; 17% matured, 10% 1988, 23% avg. Peanuts good. Sorghum good; 91% planted, 93% 1988, 96% avg.; 2% harvested, 3% 1988, 4% avg. Watermelons good; 64% harvested, 79% 1988, 73% avg. Tomatoes good; 96% harvested, 95% 1988, 98% avg. Peaches fair to good; 52% harvested, 54% 1988, 67% avg. Barley fair to good; 95% harvested, 100% 1988, 100% avg. Pastures good.

SOUTH DAKOTA: Temperatures 5° below normal to 2° above normal. Extremes 47°; 94°. Rainfall above normal east, below normal central, west; maximum 2.84 in. Growing season precipitation 5.15 in. below normal to 3.61 in. above normal.

Days suitable for fieldwork 5.0. Topsoil 26% critically short, 28% short, 45% adequate, 1% surplus. Subsoil 41% critically short, 43% short, 16% adequate. Small grain fair to good. Row crop good to fair. Livestock good. Major activities: Swathing, combining, haying, spraying.

TENNESSEE: Frontal system affected State early week, high pressure controlled late week. Temperatures below normal. Precipitation below normal.

Days suitable for fieldwork 2.9. Soil moisture 56% adequate, 44% surplus. Corn 82% tasseling, 77% 1988, 82% avg.; 20% dough, 33% 1988, 38% avg.; 6% dent, 23% 1988, 11% avg.; 1% very poor, 1% poor, 9% fair, 59% good, 30% excellent. Tobacco 14% topped, 15% 1988, 14% avg. Alfalfa 84% 2nd cutting, 88% 1988, 95% avg. Hay 1% very poor, 4% poor, 28% fair, 54% good, 13% excellent. Occasional sunshine helped dry fields. Weed, insect control major activity. Pastures, cattle excellent.

TEXAS: Weather highlighted by unusual cool front. Started dry, upper level ridge suppressed shower activity. Cool front entered Panhandle 18th. Spotty showers north central, Concho Valley. Front dissipated Gulf of Mexico 21st. Temperatures near to below normal. Rainfall

generally below normal. Eastern counties dry. South central, south western counties wet. South dry, Lower Valley slightly above average.

Crops: Small grain harvest virtually completed most parts State. Corn harvest continued Coastal Bend, Valley, Upper Coast. Aflatoxin increasing these areas. Harvest beginning central. Fields rapidly drying down Blacklands, east. Fields Plains look good under steady irrigation. Silage cut Cross Timbers. Corn 56% dented, 64% 1988, 60% avg.; 37% mature, 37% 1988, 31% avg.; 16% harvests, 11% 1988, 7% avg. Grain sorghum harvest increased Blacklands, central. Fields rapidly turning color Northern Blacklands, Low Plains under hot temperatures. Fields heading High Plains, progress improving. Later dryland fields need rain. Irrigation steady. Spraying occurred. Grain sorghum turning color 57%, 51% 1988, 53% avg.; mature 30%, 35% 1988, 37% avg.; harvested 29%, 27% 1988, 24% avg. Cotton bolls rapidly open Valley, Coastal Bend under hot conditions. Harvest activities increasing these areas. Bolls beginning open central. Fields good progress Blacklands. Spraying occurred. Extreme heat caused shedding scattered fields. Fields Plains slightly behind progress, catching up. Fields beginning set bolls. Irrigation steady, dryland fields need rain. Cotton open bolls 9%, 8% 1988, 5% avg.; harvested 2%, 2% 1988, none avg. Rice harvest getting underway Upper Coast. Many fields being drained, harvest begin soon. Rice 3% harvested, 1% 1988, 2% avg. Peanut planting virtually complete all areas. Most stands good, irrigation necessary many areas. South central wilt because heat. Soybean fields showing good progress Plains. Irrigation steady. Harvest early varieties underway Upper Coast. Later varieties need rain. Other field crops: Oats 96% harvested, 97% 1988, 97% avg. Peanuts 100% planted, 100% 1988, 100% avg. Soybeans 100% planted, 100% 1988, 100% avg. Sunflowers 97% planted, 97% 1988, 99% avg.

Commercial Vegetables: Rio Grande Valley, land preparation continued. Some celery transplanting underway. Citrus continued progress. Rust mites causing some damage. East harvest continued. Sweet potatoes good progress. High Plains, onions, potatoes harvested with good yields. Peppers, cucumbers good progress. Trans-Pecos, onion, cantaloupe harvest continued. Harvest late season peaches continued. Sizes smaller than early season peaches. Pecans continued fair to good progress. Producers busy spraying, irrigating where necessary.

Range and Livestock: Range, pasture grasses beginning show stress from hot, dry conditions many areas. Pastures east good shape. Haying operations active many areas. South critically dry, pear burning for forage increased. Livestock fair. Increased spraying for flies, ticks.

UTAH: Precipitation very light south, none elsewhere. Temperatures 2 to 6° above normal.

Days suitable for fieldwork 6.8. Soil moisture 93% short, 7% adequate. Winter wheat 84% ripe, 89% 1988, 76% avg.; 27% harvested, 40% 1988, 25% avg. Barley 74% ripe, 71% 1988, 67% avg.; 17% harvested, 21% 1988, 21% avg. Spring wheat 34% ripe, 70% 1988, 33% avg.; 6% harvested, 7% 1988, 5% avg. Oats 56% turned color, 62% 1988, 44% avg. Corn 57 in. high, 57 in. 1988, 51 in. avg.; 13% tasseled, 38% 1988, 24% avg. Alfalfa 2nd cutting 67% complete, 54% 1988, 35% avg. Tart cherries, apricot harvests near completion. Range, pasture 16% very poor, 64% poor, 30% fair. Irrigation water short. Stockwater very short to adequate. Hay, roughage very short to adequate. Major farm activities; Irrigation, baling hay, harvesting wheat, barley, cultivating summer fallow.

VIRGINIA: Below normal temperatures, excessive rainfall. Temperatures 54 to 93°. Rainfall 2.00 in., 0.40 to 5.50 in.

Days suitable for fieldwork 3.7. Topsoil 2% short, 63% adequate, 35% surplus. Corn 50% silked, 30% 1988, 48% avg.; dough stage 25%, 10% 1988, 15% avg. Soybeans 99% planted; 26% bloomed, 2% 1988, 6% avg.; setting pods 16%, 1% avg. Wheat 95% harvested. Oats 90% harvested, 92% 1988, 84% avg. Corn 2% poor, 8% fair, 65% good, 25% excellent. Soybeans 50% fair, 41% good, 9% excellent. Pastures 3% fair, 55% good, 42% excellent. Alfalfa 7% fair, 52% good, 41% excellent. Other hay 7% fair, 39% good, 54% excellent. Tobacco 10% poor, 48% fair, 42% good. Peanuts 14% poor, 29% fair, 57% good. Livestock 6% fair, 64% good, 30% excellent.

WASHINGTON: Temperatures 2° above normal to 3° below normal, east; 2° above normal to 3° below normal, west. Precipitation none to 0.14 in., east; 0.33 to 1.03 in., west.

Days suitable for fieldwork, 6.6. Soil moisture 40% short, 60% adequate. Range, pasture 20% short, 80% adequate. Hay, other roughage 95% adequate, 5% surplus. Cereal grain harvest expanded into more areas. Winter wheat harvested 4%, 5% 1988, 12% avg. Spring wheat harvested 0%, 1% 1988, 5% avg. Barley harvested 5%, 10% 1988, 15% avg. Major activities: Cutting hay; thinning apples; working summer fallow; application of cover sprays; harvest of cherries, apricots, raspberries, blueberries, green peas, seed onions, sweet onions, cauliflower, carrots, mint, bluegrass seed, dry peas, lentils.

WEST VIRGINIA: Temperature 73°, 2° below to 3° above normal. Extremes 53° Ripley; 95° Creston. Precipitation 0.73 in., 0.57 in. below to 0.36 in. above normal.

Days suitable for fieldwork 3.8. Soil moisture 79% adequate, 21% surplus. Corn excellent to fair; 39% silked, 1% dough. Wheat, barley fair to good. Wheat 100% ripe, 43% harvested. Barley 100% ripe, 75% harvested. Oats good; 64% ripe, 62% harvested. Tobacco fair; 100% set. Apples fair, peaches poor. Hay good to fair, 1st cut 75% complete, 2nd cut 19% complete. Farm activities: Hay harvest, combining oats, barley, wheat, clipping pasture.

WISCONSIN: Temperature 68°, 3° below normal. Extremes 40°; 91°. Precipitation 0.80 to 2.60.

Days suitable for fieldwork 3.8. Soil moisture 41% short, 55% adequate, 4% surplus. Pasture 66% of normal, 27% 1988, 64% 5 year avg. General condition of crops 3% poor, 21% fair, 64% good, 12% excellent. Soybean 23% fair, 64% good, 13% excellent. Corn 2% poor, 17% fair, 63% good, 18% excellent; height 58 in., 57 in. 1988, 62 in. avg.; 13% silked, 54% 1988, 37% avg. Oats 3% harvested, 25% 1988, 14% avg. Second cut hay 31% completed, 59% 1988, 46% avg. Winter wheat harvest 23% completed, 70% 1988, 48% 3 year avg.

WYOMING: Warm weather far west, elsewhere temperatures generally below normal. Dry except northeast corner.

Days suitable for fieldwork 7.0. Topsoil 75% short, 25% adequate. Winter wheat 5% headed; 45% turning color, 10% 1988, 10% avg.; 40% mature, 45% 1988, 55% avg.; 10% harvested, 45% 1988, 35% avg. Barley 35% headed, 10% 1988, 20% avg.; 45% turning color, 30% 1988, 40% avg.; 20% mature, 50% 1988, 35% avg.; 10% harvested 1988, 5% avg. Spring wheat 40% headed, 15% 1988, 20% avg.; 40% turning color, 25% 1988, 40% avg.; 15% mature, 45% 1988, 35% avg.; 5% harvested, 15% 1988, 5% avg. Oats

International Weather and Crop Summary

July 16-22, 1989

HIGHLIGHTS

USSR ... In Western USSR, a cooling trend and increasing showers benefit filling spring grains but likely cause some delays in the winter grain harvest. In the New Lands, unseasonably warm, dry weather returns, stressing spring grains in the filling stage.

EUROPE ... Unseasonably warm and dry weather in the west favors winter grains harvest but stresses summer crops. Rain and cool weather delay harvest in the east.

SOUTH ASIA ... Widespread showers benefit vegetative to reproductive summer crops in central and southern India but cause local flooding.

EASTERN ASIA ... Tropical Storm Gordon strikes southern China on the 18th, followed by Tropical Storm Hope in the east on the 20th. Heavy rain and flooding cause crop and property damage across northern crop areas.

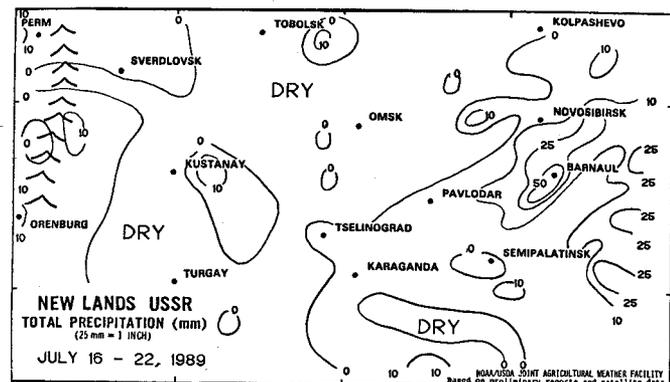
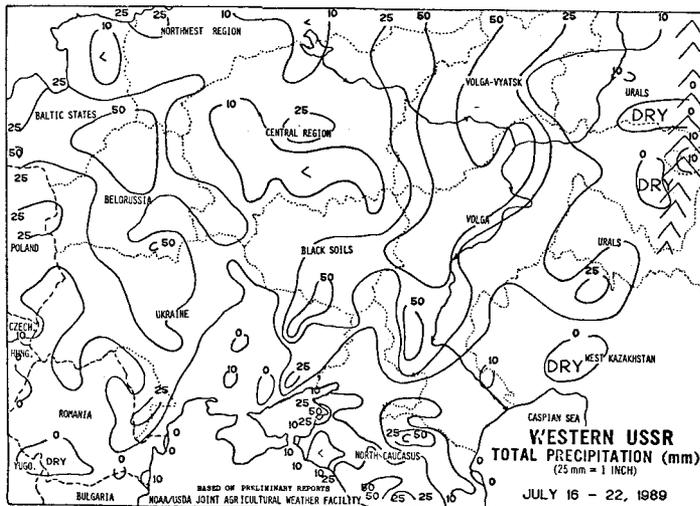
SOUTHEAST ASIA ... Dry, warm weather returns to much of central Thailand, reducing moisture reserves for immature grains.

SOUTH AMERICA ... Showers favor wheat emergence in southwestern wheat areas of Argentina. Dry weather continues in south-central Brazil.

AUSTRALIA ... Persistent rain and cool temperatures continue late planting delays in the southeast.

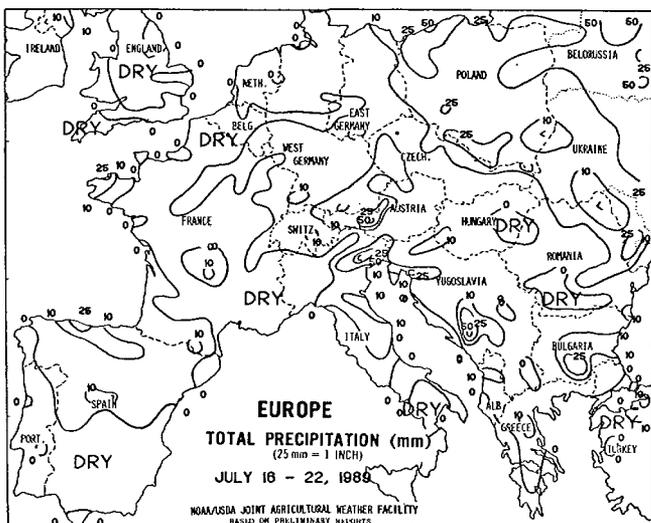
CANADA ... Late-week, hot, dry weather stresses reproductive to filling crops across the southern Prairies.

MEXICO ... Scattered, light showers fall in the Southern Plateau, while beneficial rain eases irrigation demand along the west coast.

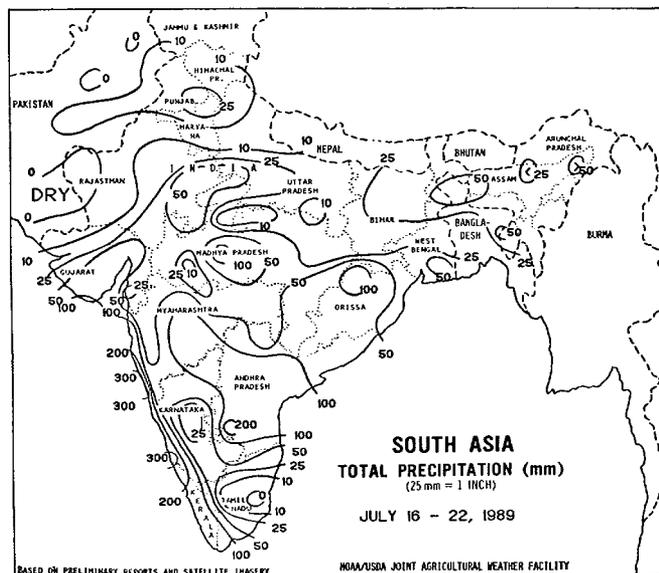


USSR ... In Western USSR, a cooling trend was accompanied by an increase in shower and thunderstorm activity. Although the cool, rainy weather pattern benefited spring grains which were filling in northern areas, it likely delayed winter grain maturation and harvest. Greatest delays in harvesting occurred in the Baltic States, Belorussia, northwestern Ukraine, Black Soils Region, southern North Caucasus, Volga, and Volga Vyatsk, where rainfall amounts ranged from 30 to 97mm. Generally dry weather over the south-central Ukraine helped winter and early spring grain harvests. Weekly average temperatures were 3-5 degrees Celsius (C) below normal in the Baltic States, Belorussia, and Ukraine, and 1-3 degrees C below normal over the remainder of the region.

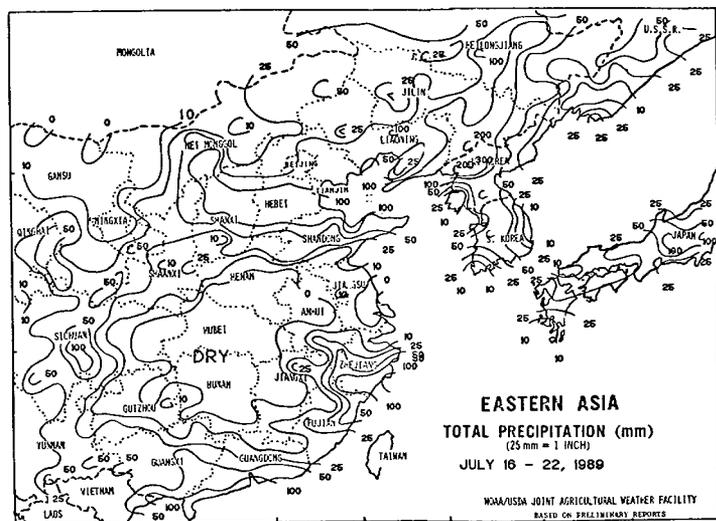
In the New Lands, unseasonably warm, dry weather returned to spring grain areas in the Urals, western and central Kazakhstan, and the western portion of West Siberia, stressing crops in the filling stage. The highest weekly temperatures in these areas ranged from 31 to 37 degrees C. Maximum temperatures were above 30 degrees C on most days during the week, increasing crop stress. Rain and cooler weather are needed to prevent further deterioration in crop condition. Further east, showers and near-normal temperatures benefited spring grains in the reproductive phase around Barnaul and Novosibirsk.



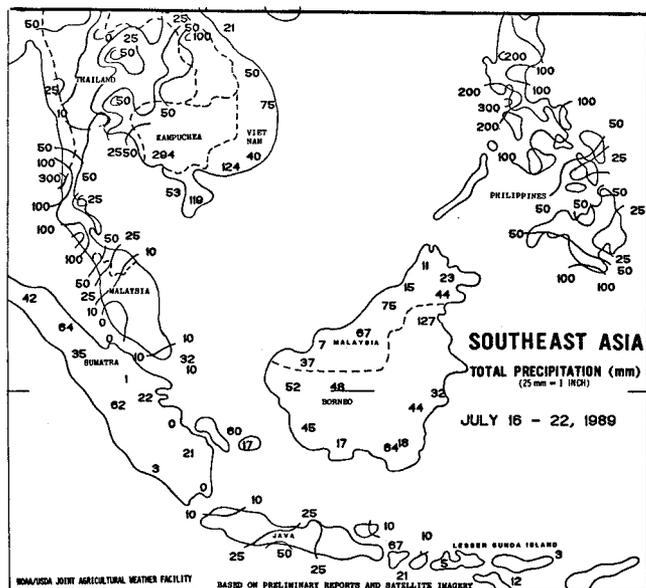
EUROPE ... Dry and unseasonably warm weather covered much of western Europe, allowing rapid harvest and drydown of winter grains but stressing reproductive corn and other summer crops. Maximum temperatures in the 32-38 degree C range spread north and eastward from the Iberian Peninsula early in the week to as far north as southern England, northern France, and central West Germany by week's end. A frontal system brought limited relief in the form of scattered, mostly light showers (less than 10mm) and slightly cooler temperatures to sections of Spain and Portugal on the 22nd. In contrast, light to moderate rain (5-20mm, with isolated amounts in excess of 25mm) and cool temperatures (weekly mean temperatures from 2 to 6 degrees C below normal) covered much of eastern Europe, benefiting reproductive to filling summer crops but causing delays in winter grains harvest.



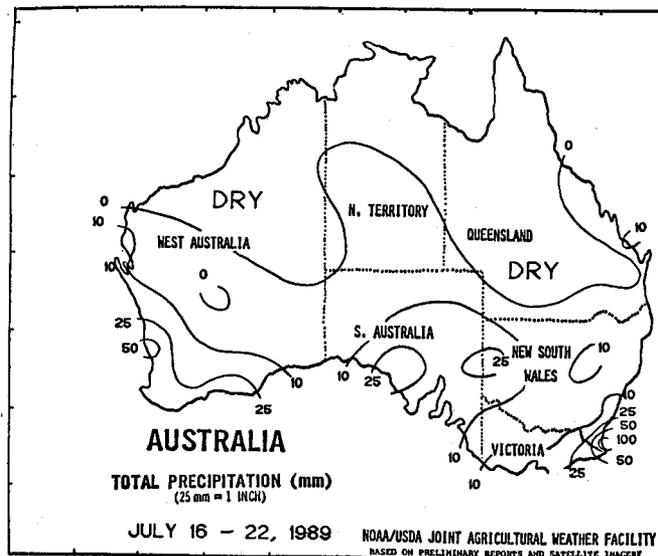
SOUTH ASIA ... Variable, widespread showers (25-100mm or more) covered large areas of central and southern India, improving conditions for vegetative to reproductive crops. Heaviest rain (100-200mm or more) fell along the southwest coast and from central Maharashtra to southern Andhra Pradesh, causing some local flooding. Driest areas included Tamil Nadu and portions of western and eastern Madhya Pradesh, which received 16mm or less. Rainfall tapered off over most eastern rice areas with amounts in most areas ranging from 15 to 35mm. Rainfall also decreased across the north, with scattered, variable showers (1-25mm or more) covering most areas from northern Pakistan to eastern Uttar Pradesh, favoring late planting activities. Much needed rain (25-50mm or more), however, covered crop regions of eastern Rajasthan and southwestern Uttar Pradesh, bringing relief to crop regions experiencing below-normal rainfall for most of the season. Above-normal temperatures, however, maintained high evaporation rates.



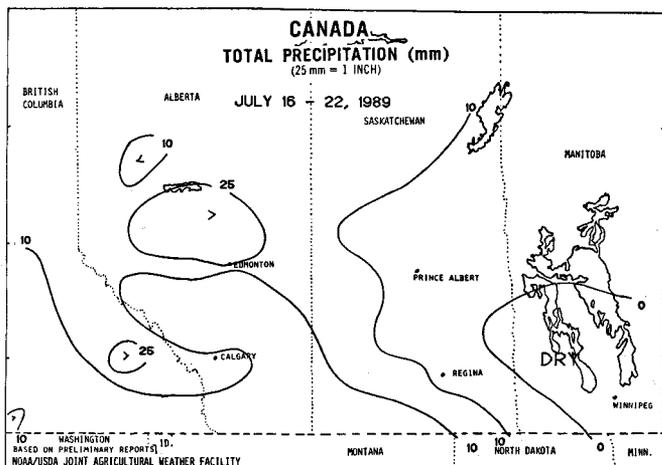
EASTERN ASIA ... Tropical Storm Gordon struck extreme southern China on the 18th, bringing very heavy rain (100-191mm) and flooding to Hainan Island and southern sections of Guangxi and Guangdong. Tropical Storm Hope followed with similar torrential rainfall (100-212mm) and flooding on the 20th and 21st in sections of Taiwan and Zhejiang. Residual tropical moisture from Hope, combined with a slow-moving cool front, produced a band of very heavy rain (50-100mm, with scattered amounts in excess of 150mm) from Nei Mongol and Shanxi eastward to Heilongjiang and North Korea. The rain caused localized flooding and crop and property damage. Heavy rain (25-75mm, with isolated amounts in excess of 75mm) also fell across southern and central sections of Honshu and Hokkaido in Japan. In contrast, mostly dry and hot weather (daytime maximum temperatures in the 35-40 degree C range) covered much of the middle Yangtze Valley and scattered sections of southeast China, allowing soils to dry in western Sichuan, Hubei, and Hunan after several weeks of persistent heavy rain but continuing crop moisture stress in previously dry areas of Fujian, northern Guangdong, and southern Jiangxi.



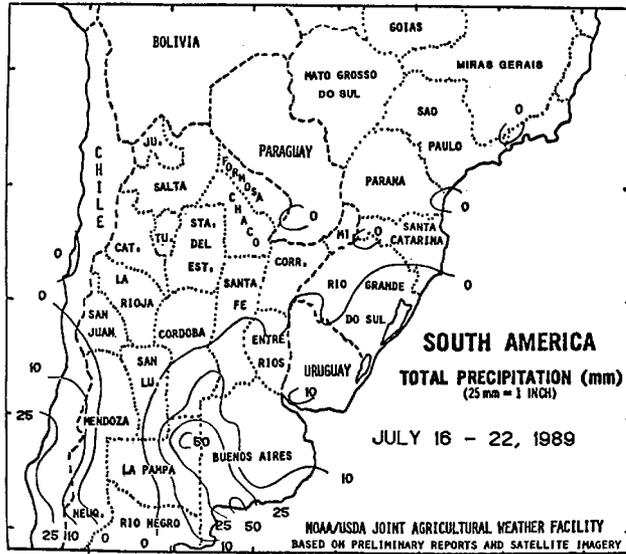
SOUTHEAST ASIA ... Rainfall averaged less than 25mm over a large area from Bangkok northward to northeastern Thailand and parts of the northern hills region, with a large part of the central corn producing region receiving less than 10mm. Recent weeks of persistent drier and warmer-than-normal weather have reduced moisture reserves, especially in western growing regions, for normal development of immature corn. Pockets of beneficial rain (25-50mm or more) in the north, east, and areas southeast of Bangkok maintained favorable conditions for rainfed grains. Temperatures averaged 1-3 degrees C above normal, maintaining high evapotranspiration rates. In the Philippines, heavy rains (50-100mm or more) associated with the passage of Typhoon Gordon soaked grain regions of Luzon but excessive rain (100-300mm or more) in west and south-coastal areas caused flooding and damage. Beneficial showers (25-50mm or more) covered most other growing areas.



AUSTRALIA ... Occasional rain (5-25mm) persisted over crop areas of South Australia, Victoria, and New South Wales, continuing late planting delays of winter grains due to excessive soil moisture. In addition, soil evaporation rates were slowed by below normal temperatures (from 1 to 4 degrees C below normal) which covered much of the continent. Moderate to heavy rain (20-55mm) also fell over winter grain areas of Western Australia. In the east, seasonably dry weather covered crop areas of southern Queensland. Freezing minimum temperatures on the 19th-21st slowed late vegetative winter wheat and barley. Scattered mostly light showers (less than 15mm) caused only minor delays in sugarcane harvest in southern coastal Queensland, while other growing areas remained favorably dry.

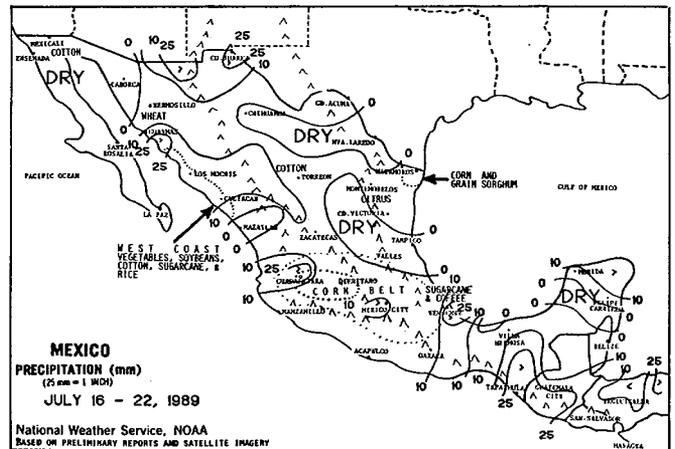


CANADA ... An outbreak of hot, dry weather late in the week over southeastern Alberta and much of Saskatchewan and Manitoba stressed reproductive to filling spring wheat and oilseeds. High temperatures since the 20th ranged from 33 to 37 degrees, and winds were generally 10 knots or less. A slow moving cold front, however, induced locally higher wind speeds, exacerbating evaporation losses. Earlier in the week, scattered, mostly light rain (1-19mm) fell over most of the Prairie Provinces. Dry weather, however, persisted over southeastern Saskatchewan and most of Manitoba, making crops more vulnerable to stressful growing conditions.



SOUTH AMERICA ... In Argentina, late-week showers brought significant rainfall (10-25mm) to western Buenos Aires and eastern La Pampa, with locally heavier amounts (25-59mm) in southwestern Buenos Aires. The moisture favored emerging wheat in southwestern grain areas. Elsewhere, light showers (1-6mm) fell over the remainder of Argentina's primary wheat areas, with weekly mean temperatures averaging 3-6 degrees C above normal, promoting early growth but hastening topsoil moisture loss. Wheat planting is over 70 percent complete, compared with about 40 percent last year at this time. Mostly dry weather and seasonal temperatures prevailed throughout south-central Brazil, where wheat is mostly planted, except in Rio Grande do Sul, and citrus harvesting continued in Sao Paulo.

MEXICO ... Mostly light, scattered showers (1-10mm) fell throughout the Southern Plateau corn belt, except in the extreme northwest, where 10-34mm of weekly rainfall favored corn development. Moisture is generally adequate for corn throughout the Southern Plateau. Beneficial showers (10-36mm) helped ease irrigation requirements along the west coast farming region. Rain in the northwestern mountains also helped water reservoirs, but substantial wet-season rain is needed to replenish irrigation supplies. Hot weather persisted throughout northern Mexico, with early-week high temperatures from the upper 30's to middle 40's C, imposing severe heat stress conditions. Increased cloudiness later in the week helped to ease the oppressive heat somewhat.



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(Continued from p. 19)

40% headed, 25% 1988, 40% avg.; 50% turning color, 45% 1988, 40% avg.; 10% mature, 25% 1988, 20% avg.; 5% harvested 1988. Alfalfa first-cutting 95% complete, 95% 1988, 95% avg.; 5% second cutting complete, 15% 1988, 10% avg. Other hays 50% harvested, 65% 1988, 60% avg. Dry beans 45% in bloom, 80% 1988, 65% avg. Potatoes 40% in bloom, 70% 1988, 75% avg. Corn 15% tasseled, 55% 1988, 45% avg.; none silked, 20% 1988, 15% avg. Livestock good. Stockwater 65% short, 35% adequate. Livestock feed from pastures 90%. Hay, roughage remainder of season 15% very short, 40% short, 40% adequate, 5% surplus.

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