

WEEKLY WEATHER AND CROP BULLETIN

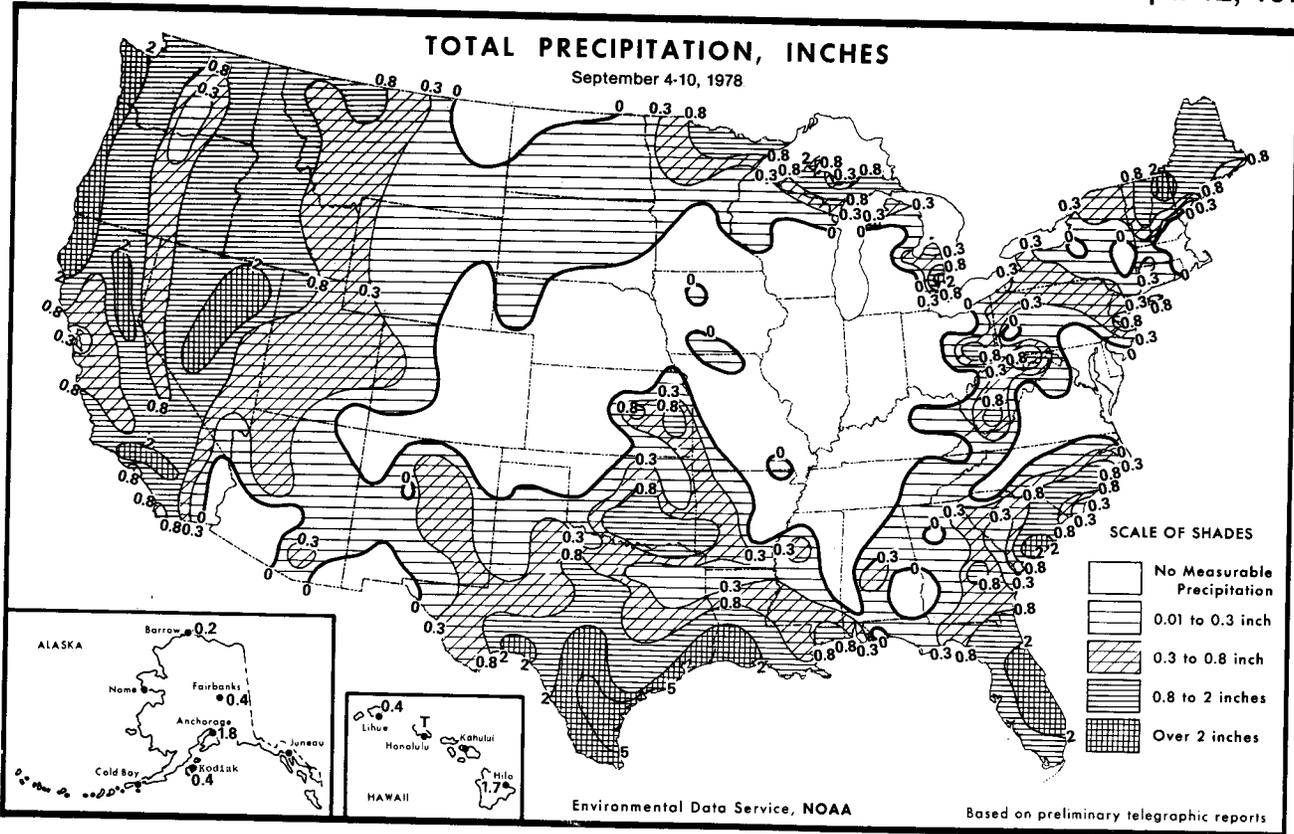
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National Weather Summary

September 4 - 10

HIGHLIGHTS: Moisture set off by Tropical Storm Norman dumped an unseasonable inch of rain on California's San Joaquin Valley and northward.

A nearly stationary high pressure system in the Southeast pumped hot Gulf air into the northern Plains where temperatures averaged as much as 18 degrees above normal. A cool front edged past the northern Pacific Coast causing temperatures to drop and bringing rain from an accompanying marine flow.

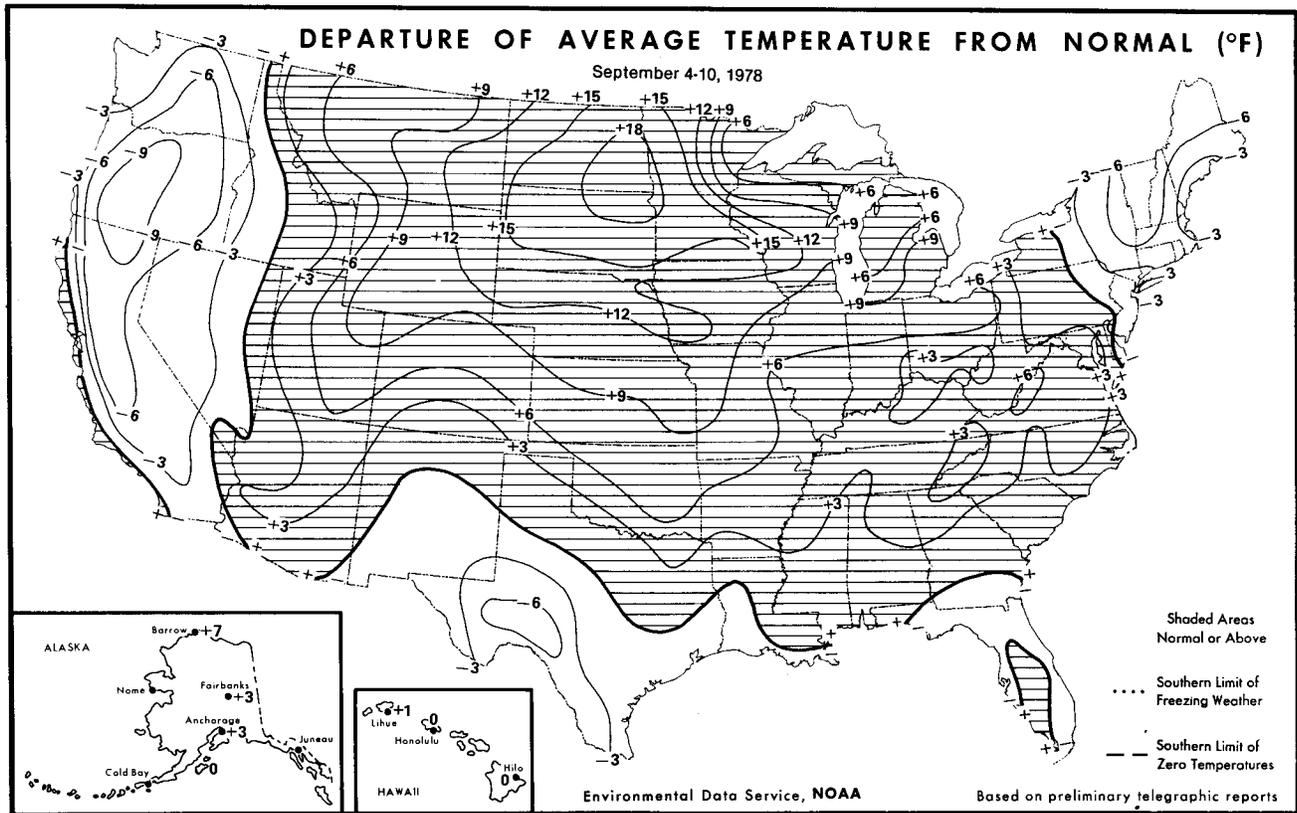
Monday's weather was relatively settled over most of the Nation. In Florida, showers doused Key West and Palm Beach with an inch.

The remnants of Hurricane Norman touched off rain in southern California and Arizona; one-half to three-quarters inch had fallen by day's end. Tornadoes were sighted in southeastern New Mexico and outside Seattle.

Hot temperatures persisted in the Great Plains; records included 98° at Havre, Mont.; in North Dakota, Bismarck's 100° and Minot's 106°; and 102° at Wichita. By contrast, Huntsville, Ala., set a record low of 56°.

Rain ranged up most of the Pacific Coast and eastward into the Intermountain Region on Tuesday. Some portions of California and Nevada received more than an inch of rain. Half-inch to one-inch rains also covered the South Texas coast, Florida, and Georgia through the Carolinas. Heavy hail pelted points in Arkansas and Missouri.

The withering heat continued in the upper Plains. A sampling of new temperature records showed Wyoming's Casper, 95°, and Sheridan, 99°; in North Dakota, it was 102° at Jamestown, 104° at Bismarck, and the 106° at Minot became the highest September reading for the town. Things



were a bit more comfortable in Miami, Fla., where a record-equaling low dipped to 72°.

A high pressure system spanning the Nation from the eastern slope of the Rockies to the Atlantic Coast continued to pump hot air into the midlands on Wednesday. As the mercury rose, records fell. Rapid City, S. Dak., hit 104°, its highest September reading ever. Denver tied a 104-year old mark of 51 days in one year at 90° or above. Bismarck, N. Dak., at 103°, extended its record-breaking streak to 4 consecutive days. Lander, Wyo., notched its highest temperature this late in the season, 93°. The heat reached as far east as Detroit where the record books were opened to 95°.

The day's heaviest rain drenched Corpus Christi, Tex., with 2.53 in. Storms stirred up by Hurricane Norman dissipated but managed to bring about a half-inch of rain to parts of the northern Plateau Region. Hail peppered Jackson, Miss., and southeastern Oklahoma.

Though temperatures soared again in the upper Plains, the extreme northern tier began to cool considerably. However, new records for heat hit Casper, Wyo., 94°; St. Cloud, Minn., 97°; and Lamoni, Iowa, 97°. Denver set its record of 52 days this year at 90° or more while Des Moines, Iowa, reported its highest 1978 reading at 97°.

Again the Gulf Coast of Texas weathered heavy rain; Corpus Christi called in another 1.36 in. Moving inland, southwestern San Antonio measured 4 inches, and 2 inches soaked other towns. A half-inch fell in the Pacific Northwest and northern Plateau Region.

Another hot day baked some northern States on Friday as warm air lingered ahead of an advancing cold front. The Southeast also was warm, but the Northeast began to cool with an influx of Canadian air.

Record high temperatures showed 98° at Toledo and 88° at Asheville, N.C. Record-tying heat meant 94° at Wilmington, N.C., and 97° at Fargo,

N. Dak. The vastly different story in New England told of record lows---45° at Providence, R.I., 40° at Hartford, Conn., and a chilly 32° at Concord, N.H.

Meantime heavy rains saturated south central Texas; San Antonio reported 2.55 in., and Fredericksburg noted 3.52 in. One-half to one-inch showers dotted the upper sections of the Atlantic and Pacific Coasts.

The clouds opened over the Pacific Northwest and northern California on Saturday. Some points in California's Sacramento Valley gathered more than an inch as did towns in Oregon and Washington; nearly 6 inches drenched towering Mt. Olympus, Wash.

In the southern Plains, more than an inch fell on Page, southeastern Oklahoma, and Oklahoma City. Up to 2 inches covered portions of eastern Texas and southern Louisiana.

Hot weather again prevailed over the north central States, but North Carolina had the records. The Tar Heel State called in 90° at Asheville, 92° at Hatteras, and Raleigh's 95°.

A tropical low formed on Friday in the Gulf of Mexico, and centered less than 100 miles from the southern tip of Texas on Sunday; 1.5 inches soaked Brownsville, Beaumont, and Houston. Nearly 3 inches fell on Orlando, Fla., and 1.5 inches at Biloxi, Miss., and Lake Charles, La., near the Gulf Coast.

Light rain continued in the Northwest while heavier rain dampened Minnesota, Michigan, and West Virginia. Nearly 2 inches soaked Houghton on Michigan's peninsula, and 2.2 inches hit Mt. Clemons, eastern Michigan. A tornado touched down near Wheatland, southeastern Wyoming, and heavy hail pelted Cabin Creek, south central West Virginia.

Lansing, south central Michigan, scored a record high temperature of 93°. In New England, record low readings held in Hartford, 37°, and Concord, 29°, which marked the third consecutive record day.



National Agricultural Summary

September 4 - 10

HIGHLIGHTS: Unseasonably high temperatures in the Nation's midsection, particularly the western north central States, stressed livestock and rapidly matured crops. Crops dried so quickly in some areas that soybean pods shriveled. In spite of the heat, soil moisture was not a problem in that part of the Nation. The South and West were dry and row crops were stressed. Stock tanks ran low in the Southwest. Corn rated good; most of the crop ranged well into the dent stage and a significant amount was mature. Corn harvest advanced to the Corn Belt. Stressed cotton bolls opened rapidly in the Southeast. Cotton picking advanced slowly in extreme southern areas and reached into Arkansas. Soybeans rated good in the north central States and only fair in the South; plants shed leaves. Grain sorghum harvest gathered momentum in Kansas; most of the South Dakota crop turned color. Winter wheat seeding became more widespread and gathered momentum in the northern Plains. Small grain harvests were almost complete. Spring wheat combining stood at 88%, falling between 1977's 89% and the 85% average. Pastures scored fair to good except in the very dry parts of the Nation including Texas, some of the Southwest, and the Southeast.

SMALL GRAINS: Winter wheat harvest neared completion; rains in the Northwest prolonged the season again but growers had several good days for harvest. Meanwhile planting of 1979 wheat made good progress in northern production areas keeping pace with most recent years. Among the major States, South Dakota stood at 43%, Nebraska 15%, and Kansas 5%. In the southern Plains dry soils slowed planting activity; Oklahoma reached 2% and Texas only 10%. Last year Texas was twice as far along at 20% and on the average scores 26%. Growers in the Corn Belt plowed land for planting winter wheat, but only a few northern fringe area producers began planting.

Spring wheat combining was nearly finished in the northern Great Plains but producers in Montana and Idaho lagged far behind recent years. In the 5 major producing States, combining reached 88%, compared with 89% in 1977 and the 85% average. Washington and Oregon growers worked around some rain and almost finished combining.

Oats and barley harvests drew to a close in the Dakotas, Minnesota, and Wisconsin. Montana barley combining stood at 65% and Idaho's reached 70%.

CORN: Corn rated good throughout the Corn Belt, but the South's crop rated only fair to good. Some poor corn could be found in the dry Southeast. In the eastern north central States, most of the crop was dented or beyond. Michigan and Ohio corn was 75% dented; other States moved farther along. In Michigan, 10% of the corn was mature and safe from frost; Ohio and Indiana stood at 15% mature; and Illinois and Wisconsin 50%. Illinois and Indiana farmers harvested a few fields.

In the western north central States, dent stage managed 75% or greater and from 15 to 45% mature. Mature corn ranged from 15% in Nebraska to 19% in Minnesota, 24% in Missouri, 40% in Kansas, 42% in Iowa, and 45% in South Dakota. Harvest stood at 5% in both Missouri and Kansas.

In the South, most of the crop was mature and harvest ranged from just starting in the upper South to 75% in Louisiana. Hot, dry conditions matured corn rapidly; harvest advanced almost twice as far as normal.

SOYBEANS: Soybeans in the eastern Corn Belt rated good. The crop matured fast; leaf shed ranged

from 10 to 25% lagging both last year and average. Illinois farmers opened a few early fields.

In the western Corn Belt, soybeans also were in good condition. Leaf shed ranged from 20 to 40% in northern areas and only yellowing in southern parts. Some of the Minnesota and Iowa crops matured but none were harvested.

In the South, dry soils stressed the Georgia crop. In the south central States, soybeans rated fair; only a few early fields shed leaves. Some Texas stands also fell victim to hot, dry conditions and were harvested for hay.

COTTON: Cotton rated fair. Drought speeded boll opening in the Southeast and Texas. Among the 11 Southern States open bolls ranged from 20 to 76% with most States on the low end of the range. Picking centered in the Southwest from California to Texas. Harvest stood at 17% in Texas, ahead of last year and the average. Mississippi reached 2% and Arkansas farmers harvested a few stands. Arizona harvest gained momentum; insect populations also increased. California cotton matured slowly; rains stained some fibers. Growers defoliated Imperial Valley stands.

OTHER CROPS: Texas grain sorghum harvest advanced to 68%, a one point gain for the week. Last year's harvest stood at 64% while the average is 60%. High Plains stands turned color. Oklahoma's crop reached 42% mature, ahead of last year. Ten percent of Kansas grain sorghum was mature; harvest stood at 5%, the same as last year. Coloring advanced to 70% in Nebraska and South Dakota. About 34% of Missouri's crop matured.

Rice harvest was virtually complete in Texas; regrowth for second cutting looked good. Harvests stood at 83% in Louisiana, 25% in Mississippi, and 10% in Arkansas. California growers drained fields in preparation for combining.

Maine potato growers plan to harvest their crop soon; rain alleviated the previous dry conditions. In Idaho, 30% of the potato vines were dying; harvest stayed in the southwestern part of the State. North Dakota digging became widespread. Harvest continued in the Pacific Northwest.

FRUITS AND NUTS: Summer apple harvests declined and growers turned their attention to fall varieties. Peach harvests were wrapped up in all but the northern areas. Pear harvests charged ahead; Oregon growers picked winter varieties. California rains caused major losses to raisins and deciduous fruit crops. Citrus groves rated good in all producing States. Florida grapefruit harvest lagged because of slowly maturing fruit.

VEGETABLES: Summer vegetable harvests wound down including sweet corn, tomatoes, snap beans, and cucumbers. Fall vegetable picking began in northern areas. Florida growers continued planting crops; heavy rains washed some beds and leached fertilizer. Texas rains improved growing conditions in many parts of the State. Producers harvested a wide variety of vegetables, and also seeded fall crops. California rains disrupted fieldwork and brought mold and rot problems to processing tomatoes.

PASTURES AND LIVESTOCK: Movement of cattle from summer ranges advanced slowly. Dry soils in the West kept low elevation pastures in only fair condition. Rains in the Pacific Coast States improved grasslands there. Texas ranges needed more moisture and stock tanks fell low throughout the Southwest. High temperatures stressed cattle in the upper north central States. Eastern pastures rated fair to good.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., Sept. 10, 1978

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
ALA. Birmingham . . .	79	+ 3	.1	-.8	LA. Baton Rouge . . .	80	+ 1	1.2	+.2	Youngstown . . .	72	+ 7	.7	+.1
Mobile . . .	83	+ 4	.7	- 1.0	Lake Charles . . .	77	- 3	3.8	+ 2.8	OKLA. Okla. City . . .	82	+ 6	.4	-.4
Montgomery . . .	80	+ 2	0	- 1.1	New Orleans . . .	80	0	.3	- 1.1	Tulsa . . .	84	+ 8	.1	-.4
ALASKA. Anchorage . . .	54	+ 3	1.8	+ 1.2	Shreveport . . .	80	0	T	-.7	OREG. Astoria . . .	57	- 2	3.0	+ 2.0
Barrow . . .	41	+ 7	.2	+ 1	MAINE. Caribou . . .	49	- 8	1.3	+.5	Burns . . .	53	- 8	1.1	+ 1.0
Fairbanks . . .	52	+ 3	.4	+ 1	Portland . . .	60	- 1	T	-.7	Medford . . .	58	- 9	1.1	+ 1.0
Juneau . . .	52	0	-.4	- 1.0	MD. Baltimore . . .	77	+ 6	0	-.8	Pendleton . . .	59	- 8	.8	+.7
Kodiak . . .	52	0	.4	- 1.0	MASS. Boston . . .	64	- 3	T	-.8	Portland . . .	59	- 5	1.3	+ 1.0
Nome . . .	52	0	-.4	- 1.0	Chatham . . .	62	- 1	.1	- .1	Salem . . .	60	+ 4	1.5	+ 1.3
ARIZ. Flagstaff . . .	62	+ 2	.2	-.2	MICH. Alpena . . .	65	+ 6	.1	-.7	PA. Allentown . . .	67	0	.6	-.3
Phoenix . . .	90	+ 4	0	-.2	Detroit . . .	76	+ 10	T	-.5	Erie . . .	67	+ 3	.1	-.7
Tucson . . .	83	+ 1	.3	-.1	Flint . . .	73	+ 10	T	-.6	Harrisburg . . .	71	+ 1	T	-.6
Winslow . . .	76	+ 4	.2	0	Grand Rapids . . .	71	+ 7	0	-.8	Philadelphia . . .	72	+ 1	T	-.8
Yuma . . .	87	+ 2	T	-.1	Houghton Lake . . .	66	+ 7	T	-.7	Pittsburgh . . .	70	+ 4	T	-.6
ARK. Fort Smith . . .	83	+ 6	.4	-.4	Lansing . . .	73	+ 9	0	-.6	Scranton . . .	63	- 2	.5	-.2
Little Rock . . .	80	+ 4	0	-.8	Marquette . . .	65	+ 5	T	-.8	R.I. Providence . . .	61	- 5	T	-.8
CALIF. Bakersfield . . .	75	- 4	.7	+.7	Muskegon . . .	71	+ 7	0	-.8	S.C. Charleston . . .	78	+ 1	2.4	+ 1.1
Bureka . . .	59	+ 2	2.4	+ 2.3	S. Ste. Marie . . .	61	+ 3	.9	0	Columbia . . .	79	+ 2	.2	-.9
Fresno . . .	70	- 6	1.1	+ 1.1	MINN. Duluth . . .	62	+ 5	T	-.8	Greenville . . .	77	+ 3	T	-.9
Los Angeles . . .	73	0	.4	+ 3	Internatl Falls . . .	68	+ 12	1.3	+.5	S.D. Aberdeen . . .	80	+ 18	.1	-.3
Red Bluff . . .	69	- 7	.6	+ 5	Minneapolis . . .	50	+ 17	T	-.7	Huron . . .	81	+ 17	.1	-.3
San Diego . . .	72	- 1	.5	+ 5	Rochester . . .	76	+ 14	T	-.8	Rapid City . . .	79	+ 15	T	-.3
San Francisco . . .	65	+ 1	.3	+ 3	St. Cloud . . .	76	+ 15	T	-.7	Sioux Falls . . .	80	+ 16	0	-.7
Stockton . . .	67	- 7	.5	+ 2	MISS. Jackson . . .	80	+ 2	.2	0	TENN. Chattanooga . . .	77	+ 3	.1	-.8
COLO. Denver . . .	73	+ 7	T	-.5	Meridian . . .	79	+ 8	T	-.8	Knoxville . . .	77	+ 3	.2	-.5
Grand Junction . . .	76	+ 6	.4	+ 2	MO. Columbia . . .	79	+ 8	T	-.8	Memphis . . .	81	+ 5	T	-.8
Pueblo . . .	72	+ 3	0	-.2	Kansas City . . .	81	+ 10	T	- 1.0	Nashville . . .	78	+ 3	T	-.8
CONN. Bridgeport . . .	67	- 2	T	-.7	St. Louis . . .	78	+ 6	0	-.7	TEX. Abilene . . .	78	+ 1	.7	+ 2
Hartford . . .	60	- 5	T	-.9	Springfield . . .	80	+ 8	T	-.9	Amarillo . . .	73	+ 1	.1	-.4
D.C. Washington . . .	78	+ 5	0	-.8	MONT. Billings . . .	71	+ 9	.1	-.3	Austin . . .	80	- 1	1.6	+ 1.8
FLA. Apalachicola . . .	79	- 1	T	- 2.3	Glasgow . . .	68	+ 8	T	-.2	Beaumont . . .	80	- 1	2.6	+ 3
Daytona Beach . . .	80	- 1	2.7	+ 1.0	Great Falls . . .	68	+ 8	.6	+.3	Brownsville . . .	81	- 2	3.3	+ 2.1
Ft. Myers . . .	82	0	1.3	-.8	Havre . . .	68	+ 8	.6	+.3	Corpus Christi . . .	81	- 2	5.6	+ 4.4
Jacksonville . . .	78	- 2	1.0	- 1.0	Helena . . .	66	+ 8	.5	+ 2	Del Rio . . .	78	- 4	1.2	+ 5
Key West . . .	84	0	1.1	-.6	Kalispell . . .	61	+ 5	.6	+.3	El Paso . . .	75	- 1	0	-.3
Lakeland . . .	81	- 1	1.0	-.9	Miles City . . .	76	+ 13	T	-.3	Fort Worth . . .	82	+ 2	.1	-.6
Miami . . .	82	+ 1	3.6	+ 1.9	Missoula . . .	62	+ 4	1.2	+.9	Galveston . . .	81	0	2.8	+ 1.4
Orlando . . .	79	- 1	.4	- 1.3	NEBR. Grand Island . . .	78	+ 11	0	-.6	Houston . . .	80	- 1	1.8	+ 7
Tallahassee . . .	81	- 1	.8	-.9	Lincoln . . .	78	+ 10	0	-.8	Lubbock . . .	74	0	.3	-.2
Tampa . . .	81	- 1	.8	-.9	Norfolk . . .	78	+ 12	0	-.6	Midland . . .	73	- 5	.3	-.1
W. Palm Beach . . .	81	- 1	2.2	0	N. Platte . . .	75	+ 10	0	-.5	San Angelo . . .	73	- 2	.5	-.1
GA. Atlanta . . .	79	+ 4	0	-.8	Omaha . . .	80	+ 13	0	-.8	San Antonio . . .	79	- 2	3.4	+ 2.6
Augusta . . .	77	+ 1	T	-.8	Valentine . . .	78	+ 13	0	-.4	Victoria . . .	82	0	1.5	+.5
Macon . . .	80	+ 2	T	-.8	NEV. Ely . . .	59	0	.7	+.6	Waco . . .	83	+ 2	.3	-.4
Savannah . . .	79	+ 1	T	- 1.4	Las Vegas . . .	83	0	T	-.1	Wichita Falls . . .	81	+ 1	.2	-.5
HAWAII. Hilo . . .	76	0	1.7	- 1	Reno . . .	58	- 5	.4	+.4	UTAH. Blanding . . .	77	- 1	.2	-.5
Honolulu . . .	81	0	T	-.1	Winnemucca . . .	59	- 3	1.1	+ 1.0	Salt Lake City . . .	74	+ 6	.6	+.5
Kahului . . .	80	+ 1	.4	0	N.H. Concord . . .	56	- 6	0	-.7	VT. Burlington . . .	56	- 6	.1	-.7
Lihue . . .	80	+ 1	.8	0	N.J. Atlantic City . . .	68	- 2	T	-.8	VA. Lynchburg . . .	76	+ 5	0	-.8
IDAHO. Boise . . .	63	- 3	.8	+.7	Trenton . . .	69	- 1	.9	+ 1	Norfolk . . .	77	+ 3	0	- 1.1
Lewiston . . .	63	- 3	1.0	+ .8	N.MEX. Albuquerque . . .	73	0	0	-.2	Richmond . . .	77	+ 4	T	-.9
Pocatello . . .	64	+ 2	.6	+.5	Roswell . . .	72	- 1	.3	+.1	Roanoke . . .	76	+ 6	T	-.8
ILL. Cairo . . .	78	+ 4	0	-.9	N.Y. Albany . . .	59	- 6	T	-.7	WASH. Colville . . .	59	- 2	.9	+.7
Chicago . . .	77	+ 9	0	-.7	Binghamton . . .	60	- 3	.2	-.5	Omak . . .	60	- 5	.8	+.7
Moline . . .	75	+ 8	0	-.9	Buffalo . . .	64	0	.5	-.3	Quillayute . . .	56	- 2	3.3	+ 2.4
Peoria . . .	76	+ 8	0	-.8	New York . . .	68	- 3	.2	-.6	Seattle-Tacoma . . .	59	- 2	1.2	+.8
Rockford . . .	75	+ 9	0	- 1.0	Rochester . . .	66	+ 1	.1	-.5	Spokane . . .	59	- 3	.9	+.7
Springfield . . .	74	+ 4	0	-.7	Syracuse . . .	62	- 3	T	-.6	Walla Walla . . .	62	- 6	.8	+.6
IND. Evansville . . .	75	+ 3	0	-.7	N.C. Asheville . . .	71	+ 2	.1	-.8	Yakima . . .	58	- 6	.3	+ 2
Ft. Wayne . . .	74	+ 7	0	-.6	Charlotte . . .	77	+ 3	T	-.8	W.VA. Beckley . . .	69	+ 4	.8	0
Indianapolis . . .	73	+ 4	0	-.7	Greensboro . . .	74	+ 2	T	-.9	Charleston . . .	73	+ 3	.5	-.2
South Bend . . .	75	+ 9	0	-.7	Hatteras . . .	78	+ 2	T	- 1.4	Huntington . . .	74	+ 4	0	-.7
IOWA. Burlington . . .	76	+ 8	0	-.9	Raleigh . . .	77	+ 4	T	- 1.0	Parkersburg . . .	72	+ 2	0	-.7
Des Moines . . .	79	+ 12	0	-.8	Wilmingon . . .	79	+ 2	T	- 1.4	WISC. Green Bay . . .	72	+ 11	T	-.8
Dubuque . . .	74	+ 10	0	-.7	N.DAK. Bismarck . . .	77	+ 16	.2	-.2	La Crosse . . .	81	+ 16	0	-.8
Sioux City . . .	77	+ 11	0	-.1	Fargo . . .	79	+ 18	.2	-.3	Madison . . .	74	+ 12	0	-.8
IND. Evansville . . .	75	+ 3	0	-.7	Williston . . .	72	+ 12	T	-.3	Milwaukee . . .	73	+ 9	T	-.7
Ft. Wayne . . .	74	+ 7	0	-.6	OHIO. Akron-Canton . . .	73	+ 7	0	-.6	WYO. Casper . . .	72	+ 10	T	-.2
Indianapolis . . .	73	+ 4	0	-.7	Cincinnati . . .	72	+ 2	0	-.6	Cheyenne . . .	69	+ 8	T	-.3
South Bend . . .	75	+ 9	0	-.7	Cleveland . . .	74	+ 8	0	-.7	Lander . . .	71	+ 10	T	-.2
IOWA. Burlington . . .	76	+ 8	0	-.9	Columbus . . .	73	+ 5	0	-.6	Sheridan . . .	71	+ 10	.2	-.1
Des Moines . . .	79	+ 12	0	-.8	Dayton . . .	72	+ 3	0	-.6	P.R. San Juan . . .	84	+ 3	T	- 1.5
Dubuque . . .	74	+ 10	0	-.7	Toledo . . .	75	+ 9	0	-.6					
Sioux City . . .	77	+ 11	0	-.1										
IND. Evansville . . .	75	+ 3	0	-.7										
Ft. Wayne . . .	74	+ 7	0	-.6										
Indianapolis . . .	73	+ 4	0	-.7										
South Bend . . .	75	+ 9	0	-.7										
IOWA. Burlington . . .	76	+ 8	0	-.9										
Des Moines . . .	79	+ 12	0	-.8										
Dubuque . . .	74	+ 10	0	-.7										
Sioux City . . .	77	+ 11	0	-.1										
IND. Evansville . . .	75	+ 3	0	-.7										
Ft. Wayne . . .	74	+ 7	0	-.6										
Indianapolis . . .	73	+ 4	0	-.7										
South Bend . . .	75	+ 9	0	-.7										
IOWA. Burlington . . .	76	+ 8	0	-.9										
Des Moines . . .	79	+ 12	0	-.8										
Dubuque . . .	74	+ 10	0	-.7										
Sioux City . . .	77	+ 11	0	-.1										
IND. Evansville . . .	75	+ 3	0	-.7										
Ft. Wayne . . .	74	+ 7	0	-.6										
Indianapolis . . .	73	+ 4	0	-.7										
South Bend . . .	75	+ 9	0	-.7										
IOWA. Burlington . . .	76	+ 8	0	-.9										
Des Moines . . .	79	+ 12	0	-.8										
Dubuque . . .	74	+ 10	0	-.7										
Sioux City . . .	77	+ 11	0	-.1										
IND. Evansville . . .	75	+ 3	0	-.7										
Ft. Wayne . . .	74	+ 7	0	-.6										
Indianapolis . . .	73	+ 4	0	-.7										
South Bend . . .	75	+ 9	0	-.7										
IOWA. Burlington . . .	76	+ 8	0	-.9										
Des Moines . . .	79	+ 12	0	-.8										
Dubuque . . .	74	+ 10	0	-.7										
Sioux City . . .	77	+ 11	0	-.1										
IND. Evansville . . .	75	+ 3	0	-.7										
Ft. Wayne . . .	74	+ 7	0	-.6										
Indianapolis . . .	73	+ 4	0	-.7										
South Bend . . .	75	+ 9	0	-.7										

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 ESCS State offices in cooperation with the National Weather Service.

ALABAMA: Hot and dry. Few showers on 10th. Temperatures 3° above normal.

Fieldwork: 6.0 days suitable. Soil moisture very short to short. Cotton fair condition; 20% with open bolls, 50% 1977, 18% average. Corn fair condition; 36% harvested, 42% 1977, 23% average. Soybeans fair condition; 19% turning color, 34% 1977, 29% average. Peanuts fair condition, 7% dug, 5% 1977, 19% average. All crops hurt by dry weather, some areas 30 days without rain.

ALASKA: Temperatures 4 to 5° above normal for the week. Rainfall was near normal.

Favorable weather permitted farmers in Tanana Valley to continue harvesting crops while persistent showers and cooler temperatures hampered harvesting operations in the Matanuska Valley. Harvest of barley in Tanana Valley ranges from underway to complete. Matanuska Valley swathing grain. Harvesting progress trails recent years. Wind and rain damage grain crops light. Potato digging increased. Soil moisture mostly adequate. Vegetable harvest active. No widespread killing frost.

ARIZONA: Humid conditions ended, first fall outbreak cold air. Several stations reported over 0.70 in. rainfall. Temperatures seasonal except, northwest 4° above normal.

Cotton picking gaining momentum. Insect activity increasing. Sorghum harvest continued. Corn good condition, limited harvest underway. Alfalfa hay harvest active; renovation old fields, planting new fields. Fall sugarbeets good growth. Seedbed preparation well advanced for spring beets. Seedbed preparation, planting fall vegetables, lettuce nearing completion. Fall cantaloup harvest underway Salt River Valley. Lemon harvest Yuma area limited but increasing. Citrus groves good condition. Range conditions fair, best conditions higher elevation. Lower, mid-elevation ranges drying rapidly, stock tanks running short. Water hauling, limited supplemental feeding required. Cattle, calves mostly good condition. Sheep movement from summer pastures underway.

ARKANSAS: Temperatures near normal to 7° above normal. Dry conditions; no rain reported. Highest temperature 100°, lowest 55°.

Rice, grain sorghum, and corn harvest increased. Soybean and cotton limited harvest. Soil moisture short to adequate. Fieldwork: 6.1 days available. Soybean conditions fair; 81% pod set; 14% mature. Cotton fair condition; open bolls 29%. Rice good condition; harvest 10%, 19% 1977, 12% average. Corn harvest 23% completed, 43% 1977. Sorghum fair to good condition; harvest 32%, 56% last year, 39% average. Wheat and oat seeding active. Apple quality, size good. Grapes good quality and size. Pastures improving but short. Hay harvest slow. Cattle fair condition.

CALIFORNIA: Considerable amounts of rain to many parts of the State. Amounts of over 4.00 in. recorded at mountain locations and only southeast desert remained dry. Along coast temperatures near seasonal normal while below normal readings reported elsewhere.

Alfalfa seed and dry beans damaged most from rain. Rice being drained; harvest soon. Beans maturing slowly. Winter grain preplanting prepara-

tions underway. Cotton maturing slowly, some staining from rain. Defoliation activity in Imperial Valley; insects a problem. Silage corn harvest underway. Safflower harvest underway. Sugarbeet harvest continues. Rains caused major losses to raisins, figs, late peaches, nectarines picked. Almonds, walnuts knocked. Wine table grape harvest resumed. Lemons, valencias, avocados picked. Fieldwork disrupted by rain. Harvest slowed most crops. Potato harvest peak Stockton; Tulalake crop late. Processing tomatoes have mold, rot problems from damp weather. Rains lowered fire hazard. Movement livestock from summer ranges gaining momentum. Sheep pastured early harvested bean fields. Milk, egg production improvement cool weather trend.

COLORADO: Warm, dry early; cooler late week. Heavy thunderstorms northwest caused localized flash flooding 7th. Precipitation amounts averaged less than 0.20 in. Temperatures 3 to 9° above normal.

Corn good condition; in or past dough stage 82%, 75% 1977; dented 63%, mature 4%, cut for silage 9%, 41% 1977, 18% average. Spring wheat harvested 99%. Spring barley harvested 94%, 95% 1977, 82% average. Dry beans good condition; cut 33%, 47% 1977, 32% average; threshed 13%, 32% 1977, 14% average. Sorghum good condition; turned color 49%, 71% 1977; ripe 4%, 8% 1977. Summer potatoes very good condition; harvested 60%, 52% 1977, 51% average. Winter wheat seeded 13%, 36% 1977, 26% average. Alfalfa hay third cutting 53%, 63% 1977. Fieldwork: 6.5 days suitable.

FLORIDA: Scattered showers early in period with mostly dry conditions prevailing late week. Rainfall spotty with some areas of Panhandle and interior north and central remaining quite dry. Most eastern, southern sections had adequate precipitation. Temperatures seasonable.

Soil moisture adequate south and north, short central Peninsula and eastern Panhandle. Corn harvest nearing completion. Peanut harvest increasing. Soybeans, sugarcane good to excellent condition. Tobacco harvest complete. Pecan prospects fair to good. Pastures beginning to show some seasonal decline as summer showers become less frequent. Additional rian beneficial eastern Panhandle, central Peninsula. Cattle, calves good condition, although weight gains slowed in driest areas. Increasing need for rain in citrus areas; many growers irrigating. Tree condition generally good; some cover crops browning due to dryness. Lagging maturity delaying early grapefruit harvest. Vegetable plantings fall crop continued active. Most areas underway. Transplanting, seeding, thinning, staking tomatoes active. Transplanting complete Palmetto-Ruskin area. Blooms, small fruit evident. Condition most growing crops good to very good. Heavy rains first of week washed beds, leached fertilizer where plastic mulch not used. Preventive spray programs active. Soil moisture good, some low areas too wet.

GEORGIA: Temperatures near normal. Few showers, mainly east. Many stations reported no rain. Amounts east mostly less than 0.50 in. Hot weekend west, scattered showers mainly east.

Soil moisture very short to short. Fieldwork: 6 days suitable. Crop conditions declining. Corn

and peanut harvest active. Corn poor to fair: 51% harvested, same last year, 26% average. Peanuts fair to good; 18% dug, 11% threshed, last year 6% dug, 3% threshed, average 18% dug, 11% threshed. Soybeans fair to good; considerable moisture stress. Cotton mostly fair to good; 42% open, 48% last year. Tobacco 98% harvested. Apples fair to good; 64% picked, 55% last year. Pecans, hay, pastures fair to good. Cattle and hogs good.

HAWAII: Beneficial showers Hilo, Puna, Hamakua areas Island Hawaii. Rainfall light elsewhere. Heavy irrigation continues island Maui. Some disease problems in Chinese cabbage Island Hawaii, semi-head lettuce Island Oahu. Frequent spray necessary. Vegetable supplies: Daikon, mustard cabbage heavy. Others light. Banana, sugar supplies steady. Papaya supplies light. Pine-apple harvesting slack. Pastures good.

IDAHO: Temperatures in 60's and low 70's. Extremes: 98 and 30°. Precipitation above normal. Most south central stations over 1.00 in.

Harvests hampered by rain. Winter wheat 85% harvested, virtually complete last year. Spring wheat 70% harvested, last year 90%, normal 80%. Barley 70% harvested, oats 65% harvested. Potato vines dying 30%, early harvest mostly southwest. Fruit and sweet corn harvest favorable progress. Ranges expected to improve with recent rains.

ILLINOIS: Temperatures 4 to 10° above normal, highest north. Precipitation very light to none.

Corn 87% dent, 1977 100%, average 96%; 50% mature, 1977 92%, average 78%; 3% harvested, 1977 3%, average 2%; condition good. Soybeans 52% turned yellow, 1977 73%, average 75%; shedding leaves 25%, 1977 37%, average 42%; combining 3% complete, 1977 2%, average 4%; condition good. Winter wheat acreage 65% plowed, 1977 96%, average 82%. Third crop alfalfa hay 81% cut, 1977 94%, average 84%. Hay condition good. Pasture conditions good to fair. Fieldwork: 7.0 days suitable. Soil moisture short to adequate.

INDIANA: Dry, hot week. No showers except 0.33 in. at one station northeast. Temperatures low and mid-70's and 2 to 10° above normal. Warmest in north. Much smog and morning ground fog. Sunshine 88% of possible.

Fieldwork averaged 7 days. Topsoil moisture adequate to short, subsoil moisture mostly adequate. Corn few fields harvested; 15% mature, 1977 25%, average 20%. Soybeans 40% turning yellow; 10% shedding leaves, 1977 25%. Wheat land plowed 35%, average 35%. Corn and soybeans good.

IOWA: Hot, dry; many of season's highest temperatures reported on 7th. Second virtually rainless week.

Fieldwork: 7.0 days suitable. Topsoil moisture short to adequate. Subsoil moisture adequate. Corn very good condition: 86% dent, 98% 1977 81% average; mature 42%, 67% 1977, 49% normal. Moderate corn borer damage reported. Soybeans good condition; 61% leaves turning, 91% 1977, normal 56%; leaves shedding 21%, 51% 1977, 26% normal; mature 18%, 27% 1977 16% normal. Third cutting alfalfa hay 81% complete, 78% 1977, 71% average. Pasture fair to good condition. Livestock good condition, some heat stress.

KANSAS: Spotty precipitation east central and southeast first of week. As much of 2.03 in. with most amounts under 0.60 in. Temperatures ranged from 77° northwest to 83° south central, 6 to 10° above normal.

Wheat seeding 5% completed, last year 5%, average 5%. Corn dented 70%, last year 85%, average 75%; mature 40%, last year 50%, average 40%; harvested 5%, last year 10%, average 5%. Sorghum grain coloring 50%, last year 60%, average 50%; matured 10%, last year 20%, average 15%; harvested 5%, last year 5%, average 2%. Soybeans harvested 0%, soybeans shedding leaves 20%. Fourth cutting alfalfa 35%, last year 40%, average 20%. Topsoil moisture short.

KENTUCKY: Mostly clear skies with widespread haze and no rainfall. Temperatures 5° above normal.

Soil moisture adequate. Tobacco cutting active. Burley 40% cut, 68% last year. Cutting later than any recent year, but only slightly behind 1974. Burley big and heavy but full of water. Dark tobacco 45% cut, 68% last year. Corn maturing rapidly spurred by warm temperatures; 32% mature, 53% dented but not mature, 15% dough or earlier. Harvest beginning. Soybeans 61% leaves green, 27% leaves turning yellow, 12% shedding leaves. Pastures fair west, good elsewhere.

LOUISIANA: Temperatures normal to 2° above. Extremes: 96 and 62°. Showers statewide late week.

Fieldwork: 5.0 days suitable. Soil moisture generally adequate. Cotton fair; 35% bolls open, 35% last year. Rice 93% ripe; 83% harvested, 71% last year, 71% average. Soybeans fair to good, 37% leaves turning, 17% leaves shedding. Corn 75% harvested, 52% last year, 48% average. Sorghum fair; 63% ripe, 44% harvested. Sugarcane fair to good, 12% planted. Sweetpotatoes 40% dug, 31% last year, 31% average. Pastures fair to good. Cattle good. Hay fair.

MARYLAND & DELAWARE: Temperatures averaged 3° above normal. Highs in 80's, lows in 60's. Most stations no precipitation.

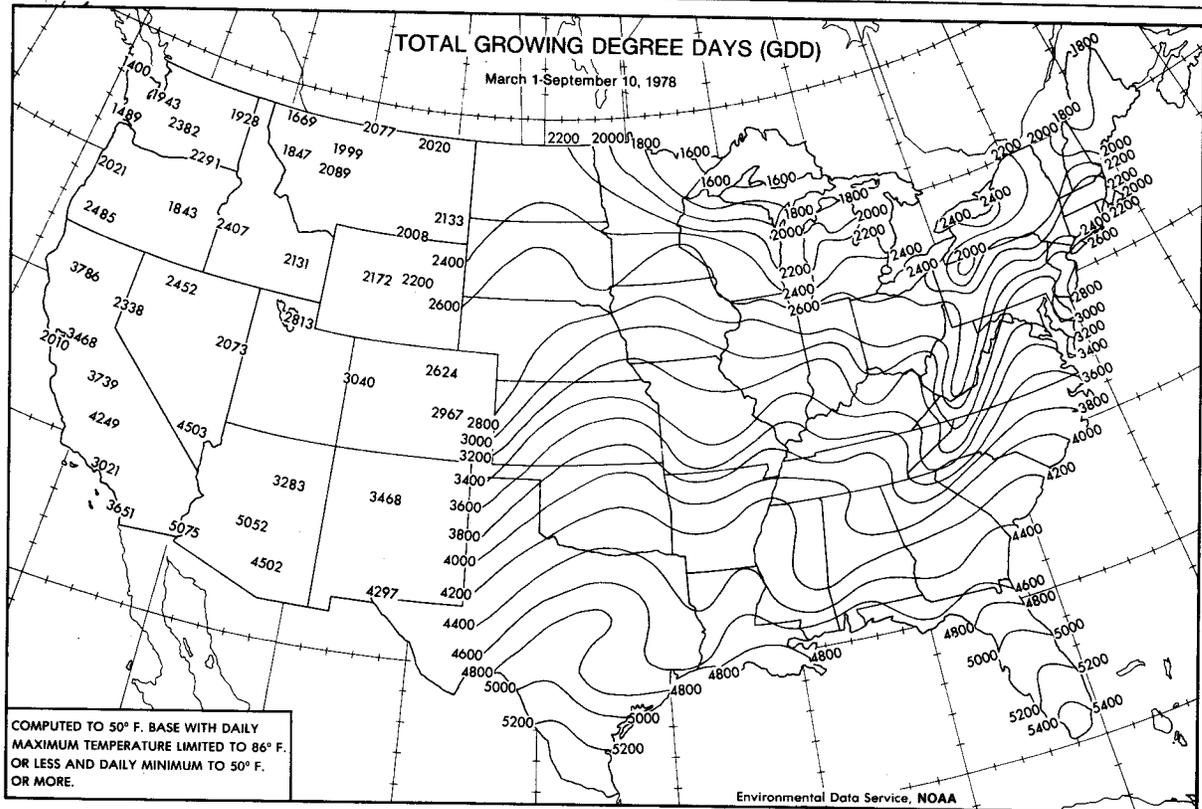
Fieldwork: 7.0 days suitable. Soil moisture adequate. Pastures average. Corn 40% matured, 55% 1977 40% average. Corn for silage 45% harvested, 53% 1977, 42% average. Soybeans 25% yellowed, 24% 1977, 16% average; some plants beginning to shed leaves. Tobacco harvest 60%, 71% 1977, 73% average. Fall apple harvest expected in a week or two.

MICHIGAN: Temperatures much above normal. Most Lower stations no more than a trace of precipitation. Isolated heavy thundershower in southeast Lower. Western Upper above normal precipitation.

Fieldwork: 6 days suitable. Soil moisture approaching short over Lower. Pasture feed supplies short to adequate. Corn 10% mature; 75% dented, 85% last year, 70% normal. Dry beans 40% harvested, 5% last year, 25% normal. Soybeans 15% leaves shedding same as last year and normal. Hay third cutting 45% complete, 45% last year, 35% normal. Summer apples over 90% harvested. Peaches 70% harvested. Pears 70% harvested, 90% last year, 65% normal. Plums-prunes 35% harvested, 90% last year, 65% normal. Onions 45% harvested. Sweet corn 80% harvested. Tomatoes 50% harvested.

MINNESOTA: Temperatures 5° above normal northeast and 12 to 16° above normal elsewhere. Extremes: 103 and 47°. Precipitation totaled 0.00 to 0.05 in. except 0.05 to 1.30 in. north central and about 0.10 in. northwest. Precipitation averaged near normal north central and 0.50 to 0.80 in. below normal elsewhere.

Hot, dry weather pushed maturity corn, soybeans; hastened wrap-up small grain harvest north. Heat, dry winds rushed ripening corn, soybeans some areas



causing some shrinkage ears, pods---especially shallow rooted and on light soils. Topsoil moisture short west central, southwest, southeast and large part central. Corn 87% denting, 1977 99%, normal 84%; mature 19%, 1977 70%, normal 39%. Soybeans 86% yellowing, 1977 96%, normal 89%; shedding leaves 34%, 1977 73%, normal 52%; mature 6%, 1977 21%, normal 14%. Combined: Spring wheat 94%, 1977 95%, normal 88%; oats 98%, 1977 99%, normal 98%; barley 99%, 1977 99%, normal 94%. Flax 37%, 1977 60%, normal 65%. Seeded: Winter wheat 41%, 1977 37%, normal 48%; rye 41%, 1977 35%, normal 46%.

MISSISSIPPI: Temperatures 3 to 4° subnormal. Extremes: 55 and 97°. Widely scattered showers late week.

Soil moisture very short to short. Fieldwork: 6.1 days suitable. Crops maturing rapidly. Some cotton defoliated. Soybeans 98% podding, 95% 1977; 36% turning, 44% 1977; 7% shedding, 14% 1977. Cotton 76% open bolls, 80% 1977, 23% average; 2% harvested, 6% 1977. Corn 91% mature, 96% 1977; 24% harvested, 25% 1977, 12% average. Corn silage 91% harvested, 91% 1977. Rice 71% mature, 84% 1977; 25% harvested, 23% 1977, 3% average. Sorghums 75% ripe, 78% 1977; 28% harvested, 26% 1977, 25% average. Hay crops 84% harvested, 80% 1977, 76% average. Soybeans, cotton fair condition. Rice good condition. Corn fair to good condition. Pasture, pecans mostly fair condition.

MISSOURI: Temperatures 6 to 10° above normal. Few scattered showers.

Fieldwork: 6.2 days suitable. Soybeans 94% setting pods, last year 100%, normal 92%. Soybeans 18% turning color, last year 30%. Corn 56% in dough stage, last year and normal 100%; 62% dented, last year 100%, normal 85%; 24% mature, last year 64%, normal 39%; 5% harvested, last year 14%,

normal 5%. Grain sorghum 34% mature, last year 56%, normal 35%. Cotton 48% open bolls, last year 63%, normal 52%. Alfalfa hay third cutting 94% complete, last year 98%, normal 94%. Condition of crops and pasture mostly fair to good. Soil moisture supplies short.

MONTANA: Temperatures fluctuated with warmest readings early week. Temperatures 3° above normal west to 10° above east. Precipitation central and west scattered, with some heavy rains totaling near 1.50 in. East hot and dry.

Topsoil moisture adequate west, short east, subsoil short to adequate. Fieldwork: 5 days suitable. Harvesting progress: Spring wheat 65% complete, normal 75%; barley 65%, normal 75%; oats 75%, normal 75%; corn silage 15%, normal 20%; dry beans 10%, normal 20%; second cutting alfalfa 70%, normal 75%. Winter wheat planted 20%, normal 15%. Livestock moved from summer ranges 5%, normal 20%. Contracting activity about average, calves slightly heavier.

NEBRASKA: Temperatures up to 20° above normal. Precipitation only few traces.

Corn mature 15%, year ago 60%, normal 30%; dent 75%, year ago 90%, normal 80%. Sorghum turning 70%, year ago 95%, normal 75%. Soybean leaves turning 45%, year ago 50%, normal 55%. Winter wheat seeding 15% complete, year ago 15%, normal 20%. Fieldwork: 6.9 days suitable.

NEVADA: Major west coast storm brought rain and high winds early week. Second storm occurred late in period. First snowfall of new water year fell at higher elevations. Temperatures generally below normal, northwest and south central, above normal northeast. Extremes: 107 and 27°.

Rains temporarily halted alfalfa seed harvest. Alfalfa hay harvest ranged from 3d cutting west to 6th crop extreme southern valleys. Limited movement livestock.

NEW ENGLAND: Temperatures averaged 5 to 10° above normal on 4th then cooled to 6 to 12° below normal in north on 7th and in all sections 8th through 10th. New record lows set on 8th and 10th. Rain 0.50 to 1.25 in. Maine and northern Vermont and New Hampshire on 6th and 0.25 in. on 9th.

Most growers in Aroostook County, Maine plan to start harvesting potatoes next week. Rain helped alleviate extremely dry conditions which had existed. Farmers harvesting corn silage. Early apple varieties being picked. Some pumpkins and winter squash being picked. Sweet corn harvest at peak.

NEW JERSEY: Temperatures 5° below normal. Extremes: 36 and 89°. Rainfall averaged 0.63 in. north, 0.76 in. central and 0 in. south. Sunshine 68% of possible hours.

Fieldwork: 7 days suitable. Soil moisture adequate. Harvest of summer vegetables nearing completion. Fall vegetable harvest increasing. Light sweetpotato harvest begun. Harvest of peaches continues. Fall apples coloring slowly. Cranberries sizing nicely but coloring slowly. Field corn and soybean prospects very good. Harvest of corn for silage continues. Pasture growth good.

NEW MEXICO: Few showers on 4th and again 7th mainly east central and southeast. Rainfall totals light.

Moisture short. Fourth alfalfa hay cutting 85% complete in south, fifth nearly 10% complete. In north 3d cutting in progress. Corn silage harvest continues, grain getting started. Winter wheat planting in full swing. Apple harvest extending into some of the northern orchards. Pecans very good. Cotton in lay-by stage. Sorghum about 75% dough stage.

NEW YORK: Temperatures mostly below normal, some scattered frost. Rainfall well below normal, many areas had none.

Good work week. Corn silage harvest underway. Oats, second cut alfalfa in late stages. Third cutting 30% in, 50% 1977. Cabbage harvest started, sweet corn nearly done. Harvest of peaches, pears, early variety apples and grapes continues.

NORTH CAROLINA: Temperatures 2 to 4° above normal. Scattered showers and thundershowers. Light to heavy amounts from 0.50 to 1.50 in.

Fieldwork: 6.2 days suitable. Soil moisture short to adequate. Condition of soybeans, corn, cotton, peanuts, sorghum, sweetpotatoes and apples fair to mostly good. Pasture fair to good. Harvested: Flue-cured tobacco 82%, 1977 72%, average 86%. Burley tobacco 20%, 1977 41%, average 47%. Sweetpotatoes 19%, 1977 11%, average 11%. Corn for grain 21%, 1977 35%, average 26%. Corn for silage 56%, 1977 70%. Apples 29%, 1977 26%, average 30%. Wheat planting just underway.

NORTH DAKOTA: Hot, record-breaking temperatures early week. Temperatures 13 to 18° above normal. Precipitation mainly confined to light showers central.

Dry conditions provided excellent harvesting conditions and pushed row crops closer to maturity. Hard spring wheat harvest 89% complete, 84% 1977, 81% average. Durum 80% harvested, 69% 1977, 67% average. Barley harvest virtually complete, 94% 1977, 90% average. Oats 95% harvested, 91% 1977,

90% average. Potato digging becoming general and some sunflower fields being sprayed with desiccants and a few fields harvested. Crops and livestock have been under heat stress and cooling trend would be welcomed.

OHIO: Temperatures 3 to 10° above normal. High temperatures in north low to mid-90's. Rainfall practically nonexistent except for northeast and along Ohio River in southeast.

Hot, dry weather pushed crop development. Heavy early morning fog and dew hampering haying and tobacco cutting activities. Activities: Haying, putting up silage, plowing, chopping alfalfa, harvesting fruits and vegetables, spreading lime and preparing equipment for harvests. Corn dented 75%, 90% 1977, 85% average. Corn mature 15%, 40% 1977, 35% average. Corn silage harvested 25%, 35% 1977, 30% average. Alfalfa hay 3d cutting 70%, 75% 1977, 70% average. Tobacco cut 55%, 55% 1977, 50% average. Soybean leaves yellow 35%, 50% 1977, 50% average; leaves shedding 15%, 30% 1977, 25% average. Fieldwork: 6.5 days favorable. Pasture condition good. Soil moisture short to adequate.

OKLAHOMA: Temperatures 3 to 6° above normal. Precipitation less than 0.20 in. west and north and ranging from 0.30 to 0.70 in. elsewhere.

Above normal temperatures, dry weather caused nonirrigated crop and pasture conditions to plummet. Topsoil moisture short. Wheat 71% seedbeds prepared, 80% last year; 2% wheat seeded, 5% last year. Cotton 21% open bolls, 4% 1977. Sorghum 42% mature, 34% last year.

OREGON: Very wet and cool weather continued. Unseasonal precipitation recorded all areas. Precipitation ranged from 0.10 in. along east slope of Cascades to over 2.00 in. along coast and in some areas of northeast. Temperatures averaged from near to below normal. Extremes: Mid-80's, mid-40's, west; mid-80's, low 30's east.

Grain harvest virtually complete in west and nearing completion east. Harvest activities interrupted by rain. Haying continues, baling and curing made difficult by rains. Bentgrass and clover seed harvests continue. Bartlett harvest complete. Winter pears beginning. Prune harvest in progress. Filberts and walnuts look good. Sweet corn, bean, potato and onion harvests continue. Range and pasturelands showing excellent regrowth with rains. Feed and water supplies are ample and the outlook for fall good. Livestock in good to excellent shape.

PENNSYLVANIA: Warming through 7th with aid of clear, sunny skies; much cooler eastern half remainder of period. Temperatures 4 to 6° above normal west to 3° below normal north and northeast. Extremes: 91 and 34°. Rainfall from scattered showers and thunderstorms 0.50 to 0.75 in. northern mountains and east central to less than 0.10 in. most western and southern areas.

Fieldwork: 6 days suitable. Soil moisture mostly adequate to short. Activities: Haymaking; filling silos; combining wheat, oats; baling straw; spreading fertilizer; plowing; digging potatoes; cutting tobacco; planting barley, wheat, alfalfa; harvesting vegetables and fruit. Oats all combined. Potatoes 35% dug, last year 51%. Corn 48% dough, 41% dented, last year 58% dented. Ensilage corn 9% cut, same as in 1977. Fall plowing 43%, same as last year. Tobacco 44% cut, 72% in 1977. Barley 17% sown, last year 5%. Wheat 7% sown, last year under 5%. Alfalfa second cut complete, third cut 59%, fourth cut 14%. Clo-tim second cut 83%. Hay quality 67% good, 33% fair.

Feed from pastures average. Harvesting cabbage, sweet corn, tomatoes, apples, peaches, grapes.

PUERTO RICO: Island average rainfall 1.03 in. or 0.79 in. below normal. Temperatures about 81° on coasts and 76° interior. Extremes: 93 and 58°.

SOUTH CAROLINA: Temperatures warmer than usual, several locations recorded 96° 9th. Scattered showers generally at beginning and weekend except throughout week along south coast.

Soil moisture generally short. Fieldwork: 5.5 days suitable. Corn condition fair; 54% harvested including silage, 61% last year, 39% average. Cotton fair to good condition; drought stress hastened boll opening to 50%, 61% last year, 38% average. Soybean condition fair to good, improved where showers aided bloom and pod set; 92% setting pods, same last year, 86% average. Tobacco 98% harvested, quality good. Apples 61% harvested, 71% last year, 58% average. Grape harvest 94% harvested, 97% last year, 89% average. Peach harvest at a trickle, probably terminate this week.

SOUTH DAKOTA: Unseasonably hot. Temperatures 12 to 15° above normal. Only isolated showers.

Weather hastened row crop maturity. Late corn still needs more frost-free weather. Fall seedings East River delayed somewhat until more moisture, less insects. Topsoil moisture mostly short. Fieldwork: 6.2 days suitable. Winter wheat 43% seeded, 1977 33%, normal 37%. Rye 47% seeded, 1977 40%, normal 34%. Grain sorghum 70% showing color, 1977 79%, normal 69%. Corn 78% dented and beyond, 1977 95%, normal 80%; 45% mature, 1977 44%, normal 45%. Soybeans 40% shedding leaves, 1977 55%, normal 44%. Flax 88% harvested, 1977 94%, normal 100%.

TENNESSEE: Rainfall less than 0.25 in. Temperatures 2 to 6° above normal.

Fieldwork: 5.8 days suitable. Soil moisture short. Corn dent stage 98%, 1977 100%; mature 53%, 1977 70%, average 45%; harvested 9%, 1977 16%, average 5%. Cotton open bolls 22%, 1977 50%, average 16%. Soybeans setting pods 98%, 1977 100%, average 90%. Burley tobacco topped 96%, 1977 100%; harvested 62%, 1977 77%, average 70%. Dark-fired tobacco harvested 65%, 1977 81%, average 64%. Fall plowing completed 46%, 1977 48%, average 48%.

TEXAS: Tropical disturbance moved ashore 3d brought heavy rain south. Scattered thundershowers occurred. Rainfall above normal in southern tip. Normals less than 0.50 in. in Trans-Pecos and western third Panhandle, greater than 1.00 in. southern tip; between 0.50 and 1.00 in. elsewhere. Actual values from 2.50 to almost 3.00 in. Edwards Plateau, coast, south; between 0.25 and 1.00 in. elsewhere. Temperatures 2 to 3° above normal Cross-Timbers, Blacklands, upper East Texas, northern High Plains, southern Low Plains; elsewhere 2 to 5° below normal. Normals in low 80's in south; middle to upper 70's elsewhere.

Cotton harvest active Blacklands; complete in Valley. First cotton reported ginned on southern High Plains. Statewide crop 17% harvested, 15% last year, 12% average. On southern High Plains dryland cotton stressed with bolls opening; irrigated cotton good condition. Grain sorghum harvest active southern High Plains, full swing southern Low Plains; generally complete in Blacklands; 68% harvested, 64% last year, 60% average. Early sorghum fields on northern High Plains turning color; later fields range from blooming stage to grain filling stage. Corn harvest starting on High Plains; nearly complete from Blacklands southward; 40% harvested, 33% last year,

32% average. Rice first crop harvest 99% harvested, same as last year, 98% average. Second crop prospects good, some damage reported from blackbirds. Peanut harvest 16% complete; same as last year, 23% average. Few early fields harvested in Cross-Timbers. Soybeans benefited from recent rains along upper Gulf Coast, Edwards Plateau. Some moisture stressed soybean fields East Texas baled for hay. The crops making good progress northern High Plains. Sunflower harvest beginning High Plains; 2% harvested, last year 23%, average 21%. Wheat planting becoming active High Plains; 10% planted, 20% 1977, 26% average. Oats planting good progress; many growers planted in dry seedbeds; 11% planted, 9% last year and average.

Citrus producers welcomed rains. Vegetable planting full swing. Seedbed preparation, planting underway; rains helped replenish moisture supplies. Bell pepper, cantaloup, cabbage, carrot, squash, tomato, watermelon harvest active. Peach harvest completed central, few late varieties remain east. Pecans south central, along upper Gulf Coast received some relief from dry conditions due recent rains.

Recent rain promoted good grass growth for range, pasture land over most areas of state; some areas remain dry. Livestock fair to good condition. Stock water tanks, ponds low many areas.

UTAH: Widely scattered showers and thunderstorms but becoming more general over weekend. Amounts moisture light to moderate but locally heavy few isolated stations. Cooling trend dropping below normal latter part of week.

Soil moisture fall planting very short to short. Dryland wheat 15% seeded, irrigated 24% seeded. Peaches 75% harvested. Pear harvest 90% complete. Limited fall marketings of livestock so far; most still on summer range.

VIRGINIA: Temperatures little above normal. Extremes: 96 and 46°. Little or no rainfall.

Topsoil moisture short to adequate. Fieldwork: 6 days available. Harvest progress: Corn 11%, 30% 1977, 14% average; tobacco--flue 61%, 58% 1977, 66% average; fire 44%, 51% 1977, 58% average; burley 32%, 55% 1977, 50% average; sun 52%, 70% 1977, 58% average. Seeding progress: Wheat 1%, 1% 1977, 1% average; barley 1%, 4% 1977, 3% average; winter oats 2%, 5% 1977, 3% average. Other activities: Hay making, soybean insect scouting, sweetpotato digging, irrigating fall snap beans and cucumbers on Eastern Shore. Condition of crops and pasture good to excellent.

WASHINGTON: West: Temperatures averaged 1° below normal. Precipitation averaged above normal, ranging 0.03 to 1.00 in.

Harvest of beans, cauliflower and other vegetables continues. Blueberries near completion. Sweet corn and carrots starting. Rain gave pastures and green chop good growth.

East: Temperatures averaged 1 to 2° below normal. Precipitation averaged 0.40 to 0.60 in. below normal.

Harvest of delicious apples started. Peach and pear harvest finished. Hops and potatoes continue. Quality of pears above average. Two dry days enabled some wheat to be cut. Unharvested wheat, peas, and lentils deteriorating. Some hay is down. Ranges look good.

WEST VIRGINIA: Temperature above normal. Precipitation well below normal.

Soil moisture adequate to surplus. Major activities: Haying, pasture clipping and filling silo. Hay, 2nd cutting 81% complete, 82% 1977,

79% average. Oats 97% harvested, 100% 1977, 99% average. Potatoes 60% dug, 59% 1977, 58% average. Crops and livestock good. Apple harvest starting.

WISCONSIN: Unseasonably warm and dry. Temperatures 8° above normal. Highs 80's and 90's except cooler extreme north. Lows 50's and 60's except upper 40's 4th. Extremes: 97 and 47°. Rainfall very light and spotty, no measureable totals.

Fieldwork: 7 days suitable. Corn maturing rapidly in hot weather. Corn 50% safe from frost, 1977 90%, normal 45%. Stalks drying, ears hanging down and husks dry on early corn. Silo filling underway, mostly from light soils and lowlands flooded earlier in season. Silo filling 5% done, 1977 15%, normal 10%. Soybeans 35% leaves turning yellow, 1977 45%, normal 35%. Harvesting of oats finishing up. Making second and third crop hay in dry weather, storage space becoming full. Pasture condition declining but above normal. Tobacco going into curing sheds. Potato and sweet

corn harvests active. Apples being picked. Vegetable harvest continues. A little fall plowing being done, mostly pea and sweet corn ground. A few seeding winter wheat. Topsoil moisture short to adequate.

WYOMING: Precipitation well above normal with no precipitation reported most points. Several record-breaking high temperatures reported. Rather cool nights in low 30's.

Topsoil and subsoil moisture short. Spring wheat and barley 75% harvested. Oats 70% harvested. Potato harvest started. Corn for grain 33% dented with small amount mature. Some corn for silage cut. Dry beans 51% windrowed, 13% combined. Second cutting alfalfa 80% complete third cutting being made in a few areas. Other hay 96% harvested. Winter wheat 50% planted; 19% emerged. Fall and winter grazing prospects good. Cattle and calves 36% contracted, 12% marketed. Sheep and lambs 49% contracted, 14% marketed.

World Weather and Crop Update

September 4 - 10

USSR. Cloudy skies covered European USSR, particularly in the northwest regions where light rain fell during five days of the week, totaling 20 to 40 mm. Belorussia and the central regions received under 15 mm. The far western Ukraine received heavy rains late in the period with amounts up to 65 mm. Early in the week, generally light showers moistened the northern New Lands, (5 to 20 mm). Temperatures began below normal in the New Lands and increased to slightly above normal by the end of the week.

ASIA. In Manchuria and northern regions, light rain accumulated to less than 10 mm, with some isolated heavier accumulations in the most northern areas. Temperatures dropped slightly below normal, with scattered frost in the mountains. Showers dampened the North China Plain, north of the Hwang-Ho River totaling 10 to 30 mm. Showers were generally heavier than normal for the northwest areas (around Shansi and Shensi), reaching 20 to 40 mm. Between the Hwang-Ho and Yangtze River 15 to 50 mm fell, and in the rice regions south of the Yangtze River rain totaled 15 to 50 mm. Heavier rains fell around Hunan (25 to 80 mm), and provided a break for the generally dry conditions which have prevailed during most of this summer. Normally heavy rains fell along the south coast (50 to 200 mm). In India, heavy flooding was experienced in the northern areas due primarily to heavy rains. Heaviest damage occurred at the head waters of the Ganges River near New Delhi. Although extensive crop damage has been reported, it will be some time before the full impact can be evaluated. Rain diminished somewhat from last week, but continued in excess of 100 mm and covered an extensive area along the East Ganges Plains. Temperatures throughout the country were normal.

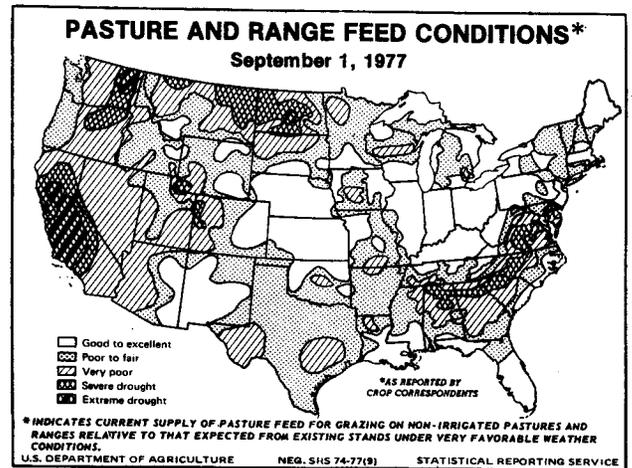
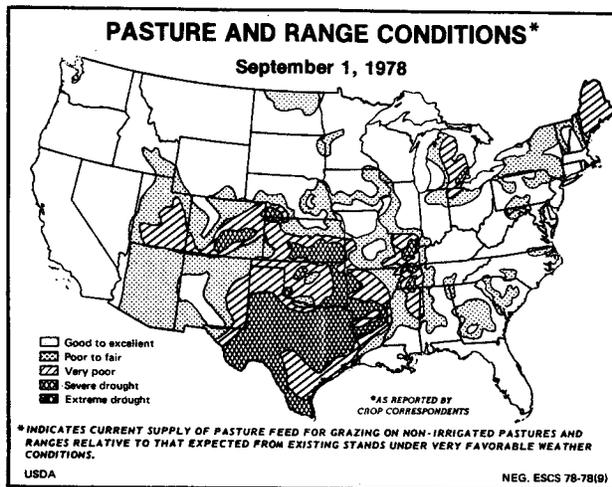
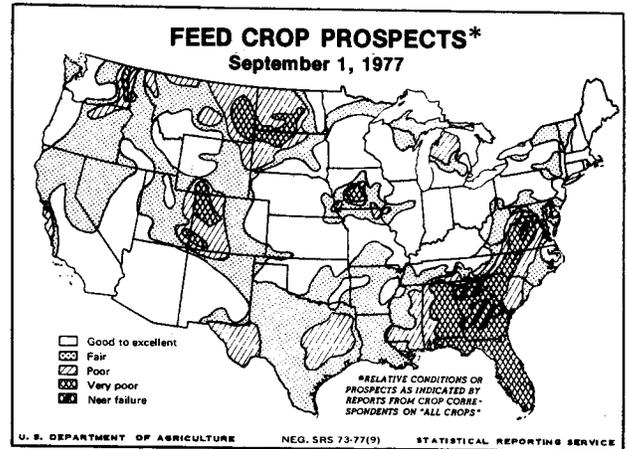
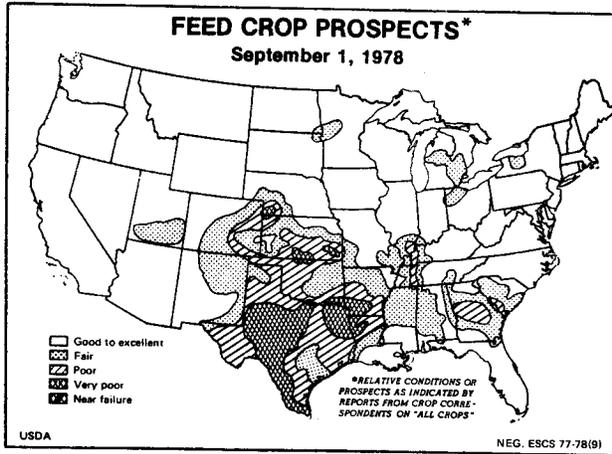
AUSTRALIA. In the northeast wheat and grain regions, around Queensland, showers dumped locally heavy accumulations (25 to 50 mm). Rains also fell in New South Wales totaling 15 to 45 mm, and temperatures held near to or slightly below normal. In agricultural areas of southern Australia, light rains accounted for 10 mm with locally heavier amounts. The same was true for the South Australian Territory. West Australia gathered less than 10 mm of rain, although some heavier amounts were reported locally (35mm).

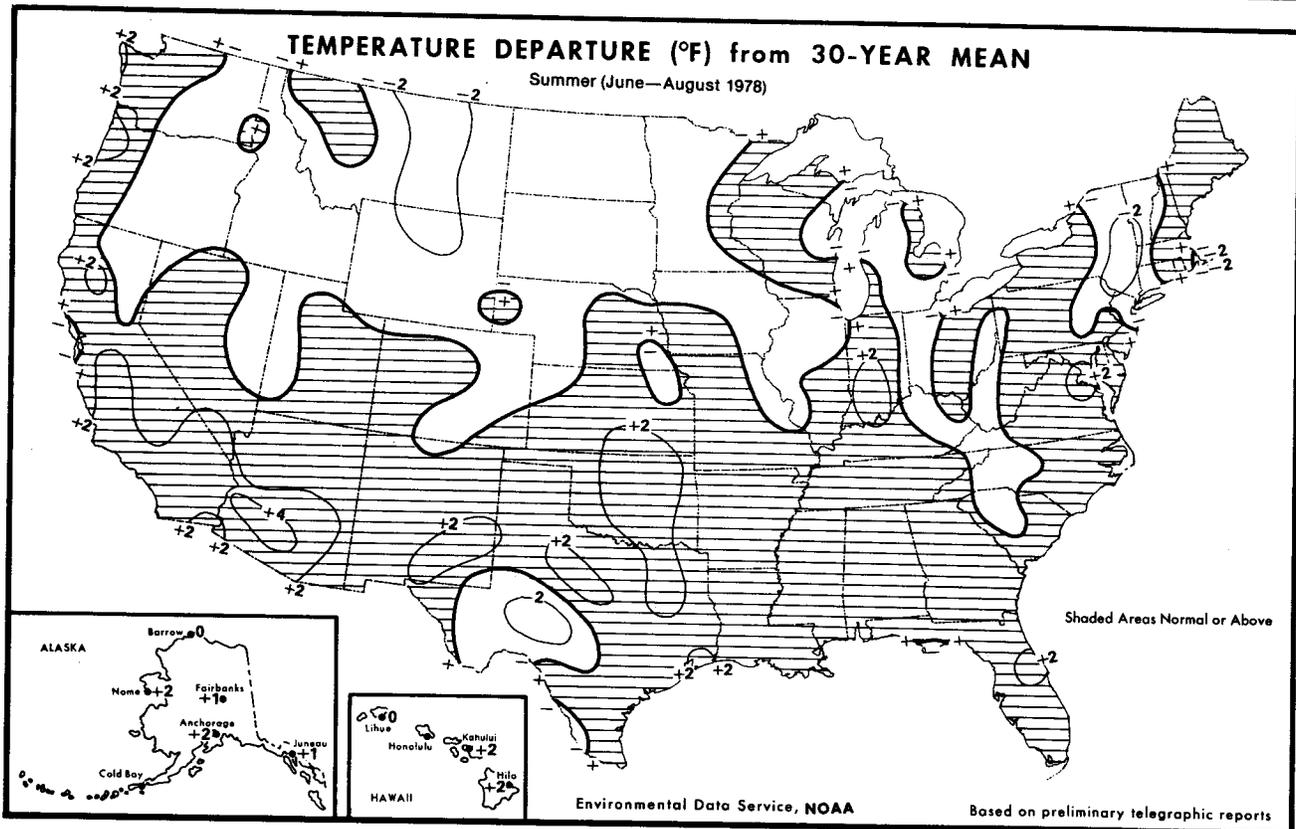
AFRICA. In North Africa, up to 25 mm fell in portions of Tunisia, but generally the region was,

sunny. The rainfall band across central Africa was near normal with lower than normal amounts in northern and southern portions. It remained dry along the Guinea coast and also in the southern Gabon and Congo areas.

EUROPE. Northern portions of the United Kingdom received 10 to 30 mm or rain, and less than 5 mm fell in the south; temperatures ranged slightly above normal. Several frontal passages produced general rain conditions in France leaving between 5 and 20 mm of moisture. Spain, too, collected some rain. During five of the seven days, West Germany received showers totaling 20 to 40 mm in the northern one-third of the country and 10 to 25 mm in the southern two-thirds. Temperatures approached normal. Scattered afternoon thunder-showers in Italy brought nearly 100 mm to some isolated regions; skies cleared toward the end of the period. Temperatures throughout were cooler than normal. It rained for the first four days of the week in East Germany leaving 10 to 30 mm in the north and under 15 mm in the south. Temperatures began cool, but ended up warmer than normal. Clouds prevailed over most of Poland with showers occurring during six of the seven days. There were widely scattered accumulations (15 to 70 mm) with the heaviest amounts in the north. Many areas in Turkey received rain for the first time in weeks when showers developed. Rains totaled from 15 to 30 mm and fell primarily in the northern regions with only scattered showers in the south.

AMERICAS. Coffee-growing regions in Brazil received a much-needed rain totaling from 50 to 80 mm. Rains at this time are particularly important since the moisture will allow coffee plants to break dormancy and set the first flush of flowers. In the cocoa producing regions of northern Brazil, only scattered light rain (under 5 mm fell); the area could use more moisture. Normal warm temperatures prevailed there. In extreme northern Argentina, scattered showers managed under 40 mm. Central Argentina had general showers on 2 days. Northern Mexico received some good rains with 30 to 50 mm accumulation. There was extensive cloud cover over Manitoba, Canada, but rainfall was slight (5 mm). In Saskatchewan accumulations rose between 10 and 15 mm, and in Alberta, 10 to 40 mm. Temperatures in most of Canada were below normal with the greatest departure in the northeast regions.





Summer Weather Review

(June, July, August)

HIGHLIGHTS: The summer weather was generally good for agriculture with some few exceptions, though most planting east of the Rockies was late. Most areas started the summer with ample soil moisture. Subsequent rain fell sparsely in the Southeast and in the four-State area of northern Louisiana, Arkansas, northeastern Texas, and eastern Oklahoma. At the end of the season, a tropical storm moved from southwestern Louisiana to Memphis and the Ohio Valley giving some relief to the eastern part of the dry area. The southeastern U.S. remained dry. Seasonal rain was spotty in southern New Mexico and southern and northwestern Arizona, but accumulated to above-normal amounts in much of the area.

Two tropical storms hit the Gulf Coast during August. Amelia dropped large amounts of rain over central Texas, and Debra was responsible for lesser amounts from southern Louisiana to the Ohio Valley.

Average temperatures for the three-month season came out, generally, 1 or 2 degrees above or below normal. Cool outbreaks from central Canada into the northern Plains were rather frequent, but warmer air from the south kept averages slightly below normal. Fortune smiled on the corn and soybean belt when only moderately warm temperatures prevailed during the critical pollination period.

The month of June marked a turning point in seeding progress in much of the Nation. After being delayed by a cool, wet spring and previously saturated soils, the weather changed so that rapid planting and subsequent emergence of small grains began around the first of June. Thunderstorms

brought heavy rain to the Texas Panhandle and parts of New Mexico early in the month and to New Mexico and parts of Arizona later in June. Above-normal rain accumulated in parts of the upper Mississippi Valley, New England, the mid-Atlantic States, the Gulf of Mexico, and the Mississippi Delta area.

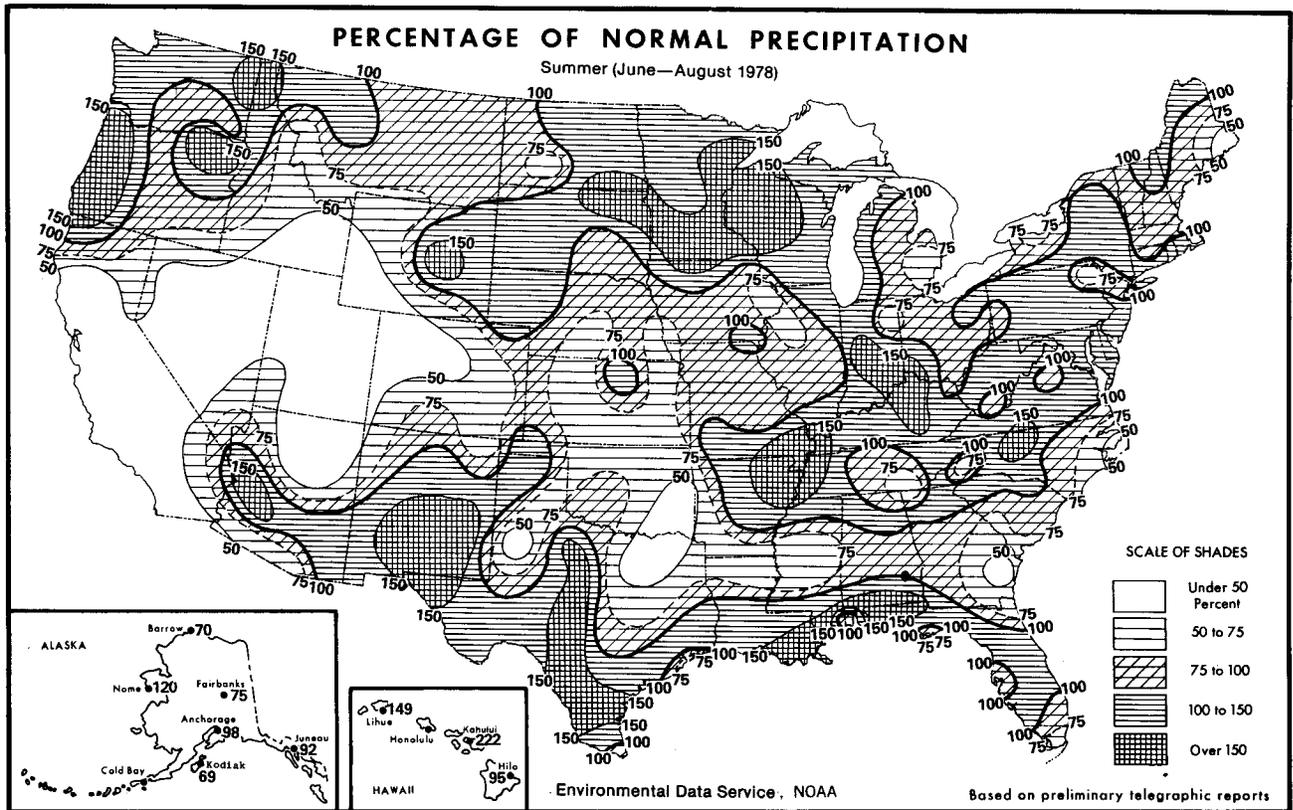
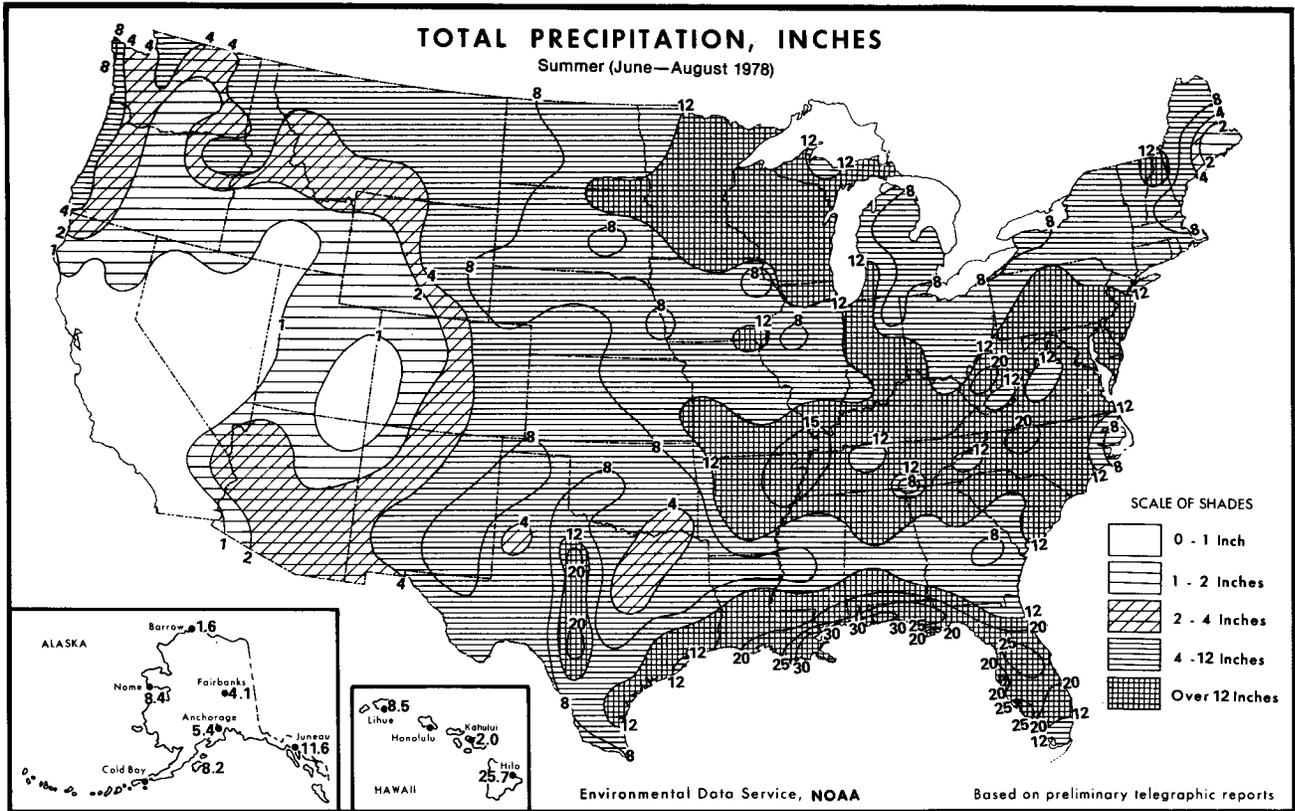
Temperatures generally approached normal in most of the Nation, but parts of New England, New York, and Pennsylvania stayed cool while the Southwest was much warmer than normal.

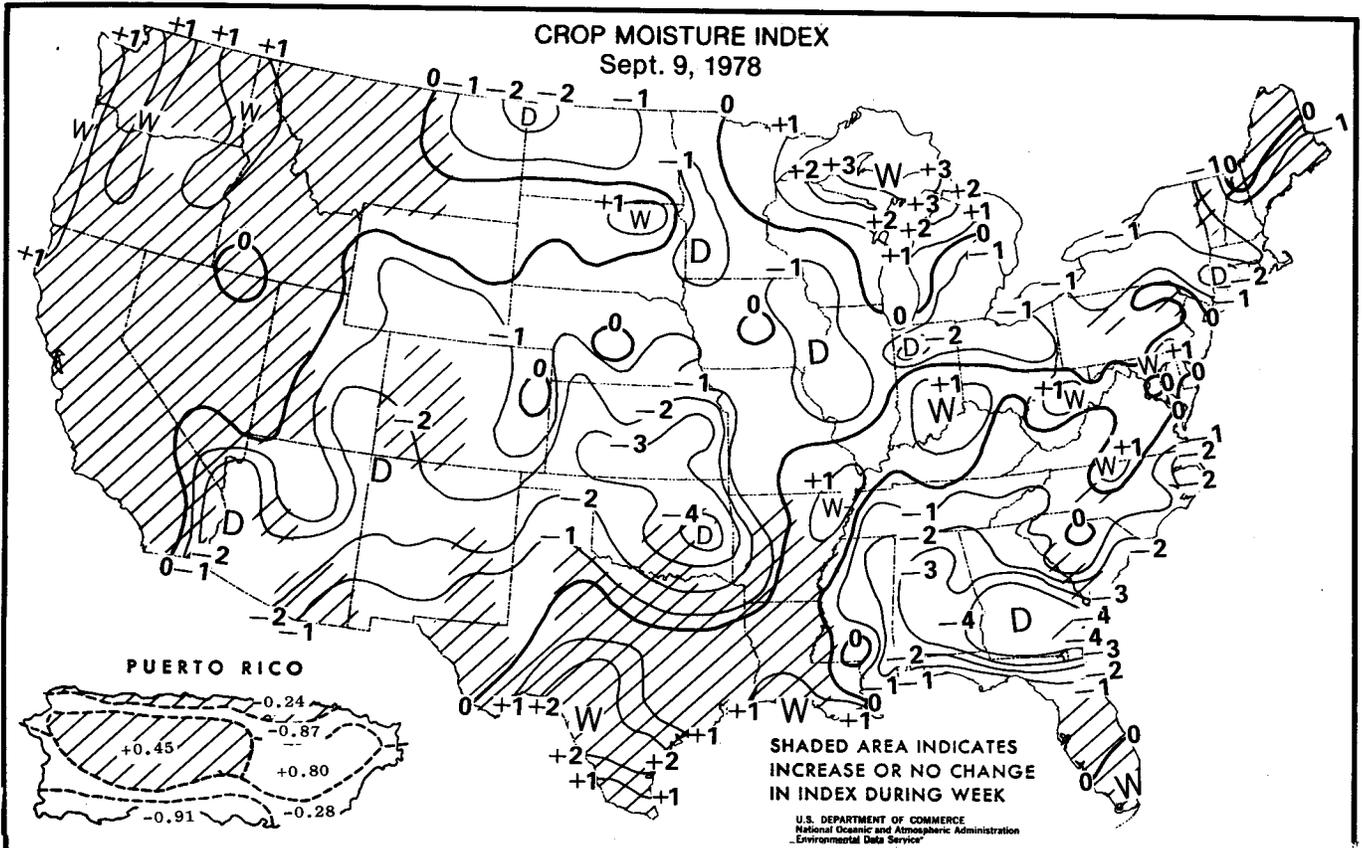
July was a typical summer month. The Bermuda high pressure system extended westward until its ridge reached from the mid-Atlantic States well into Texas. This caused warm, moist air to flow northward from the Gulf of Mexico. Scattered thunderstorms, some severe, occurred throughout the South. Also typical of the summer season, but with some greater frequency this year, was a periodic outbreak of cool air from Canada into the northern Plains. As this cool air moved southward and eastward it encountered warm air from the south and caused severe weather with some heavy rain. The most persistent rain fell in the northern Plains and upper Mississippi Valley.

As might be expected from such a situation, the average temperature for July was cooler than normal through the northern tier of States and warmer in the South and Southwest.

The first two weeks of August were unusually warm west of the Rockies, but at mid-month a series of cool outbreaks from Alaska brought the monthly averages down to near normal in the Far West and cooler than normal from the Plateau to the central Plains. Warmer-than-normal weather persisted eastward. August averaged as much as 4 degrees warmer in the mid-Atlantic States.

(continued on page 15)





The Crop Moisture Index measures the degree to which moisture requirements of growing crops were met during the previous week. The index is computed from average weekly values of temperature and precipitation. These values are used to calculate the potential moisture demand. Taking into account the previous soil moisture condition and current rainfall, the actual moisture loss is determined.

If the potential moisture demand, or potential evapotranspiration, exceeds available moisture supplies, actual evapotranspiration is reduced and the CMI gives a

negative value. However, if moisture meets or exceeds demand the index is positive.

Shaded areas indicate the index was unchanged or increased from the previous week's value; soils dried in the unshaded areas. Centers of positive and negative areas are identified by W for wet and D for dry.

Local moisture conditions may vary because of differences in rainfall distribution or soil types. The type of agriculture and stage of crop development must be considered when assessing the impact of moisture conditions based on the Crop Moisture Index. Some general guidelines follow.

UNSHADED AREAS: INDEX DECREASED	
ABOVE 3.0	SOME DRYING BUT STILL EXCESSIVELY WET
2.0 to 3.0	MORE DRY WEATHER NEEDED, WORK DELAYED
1.0 to 2.0	FAVORABLE, EXCEPT STILL TOO WET IN SPOTS
0 to 1.0	FAVORABLE FOR NORMAL GROWTH AND FIELDWORK
0 to -1.0	TOPSOIL MOISTURE SHORT, GERMINATION SLOW
-1.0 to -2.0	ABNORMALLY DRY, PROSPECTS DETERIORATING
-2.0 to -3.0	TOO DRY, YIELD PROSPECTS REDUCED
-3.0 to -4.0	POTENTIAL YIELDS SEVERELY CUT BY DROUGHT
BELOW -4.0	EXTREMELY DRY, MOST CROPS RUINED

SHADED AREAS: INDEX INCREASED OR DID NOT CHANGE	
ABOVE 3.0	EXCESSIVELY WET, SOME FIELDS FLOODED
2.0 to 3.0	TOO WET, SOME STANDING WATER
1.0 to 2.0	PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET
0 to 1.0	MOISTURE ADEQUATE FOR PRESENT NEEDS
0 to -1.0	PROSPECTS IMPROVED BUT RAIN STILL NEEDED
-1.0 to -2.0	SOME IMPROVEMENT BUT STILL TOO DRY
-2.0 to -3.0	DROUGHT EASED BUT STILL SERIOUS
-3.0 to -4.0	DROUGHT CONTINUES, RAIN URGENTLY NEEDED
BELOW -4.0	NOT ENOUGH RAIN, STILL EXTREMELY DRY

(continued from page 12)

A tropical storm named Amelia moved onto land in the early days of August. Amelia hit the South Texas coast and spread heavy rain from Laredo, Tex., to southwestern Oklahoma. Downpours of 10 inches or more caused local flooding in some central Texas areas.

Warm air continued to flow northward and generate thunderstorms and other severe weather throughout the area east of the Rockies. Cool air checked

into the Northwest in the latter part of the month causing rain in that area. The month ended as it started with a tropical storm moving on shore between Port Arthur, Tex., and Lake Charles, La. The rain associated with Tropical Storm Debra was not as heavy as the earlier storm but was welcome in the dry areas of northern Louisiana, Arkansas, and into the Ohio Valley.

IMMEDIATE - U. S. Weather Report

This Report Will be Treated in All Respects as Letter Mail

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FIRST CLASS MAIL

HARVESTING PROGRESS

SPRING WHEAT
PERCENT OF ACREAGE HARVESTED
AS OF SEPTEMBER 10

	1978	1977	AVG.
IDA	70	90	80
MINN	94	95	88
MONT	65	85	75
N DAK	89	84	81
S DAK	100	100	100
5 STATES	88	89	85

THESE 5 STATES PRODUCED
97% OF THE 1977 U.S. SPRING
WHEAT CROP - EXCLUDING DURUM.

DATELINE MONTH OF AUGUST

- *Baking in Boise---
Idaho's capital notched 22 straight days at 90° or more with no rain.
- *Awash in West Virginia---
Charleston had its second wettest August, 8.21 in., and second wettest summer, 21 inches.
- *Pacific Coast Peaks---
Red Bluff, Calif., hit all-time high reading at 119° on consecutive days; Medford, Oreg., also reached all-timer, 109°.
- *Doused in Duluth---
The Minnesota city was soaked by a record 24-hour rainfall, 5.79 in.
- *Mercury Rises---
Ontario, Oreg., chalked up 11 straight days at 100° or more.
- *Capital Climes---
D.C.'s August, averaging 81.3°, was warmest 8th month ever, and second warmest month on record.
- *Tales of Texas---
Tropical Storm Amelia triggered rains up to 35 inches in central Texas.
- *Drenched---
Memphis measured most monthly rain since 1915, 9.65 in., and saw third wettest month in the books.
- *Heat at Hatteras---
Six straight days at Cape Hatteras, N.C., broke or tied record high temperatures.