

WEEKLY WEATHER AND CROP BULLETIN

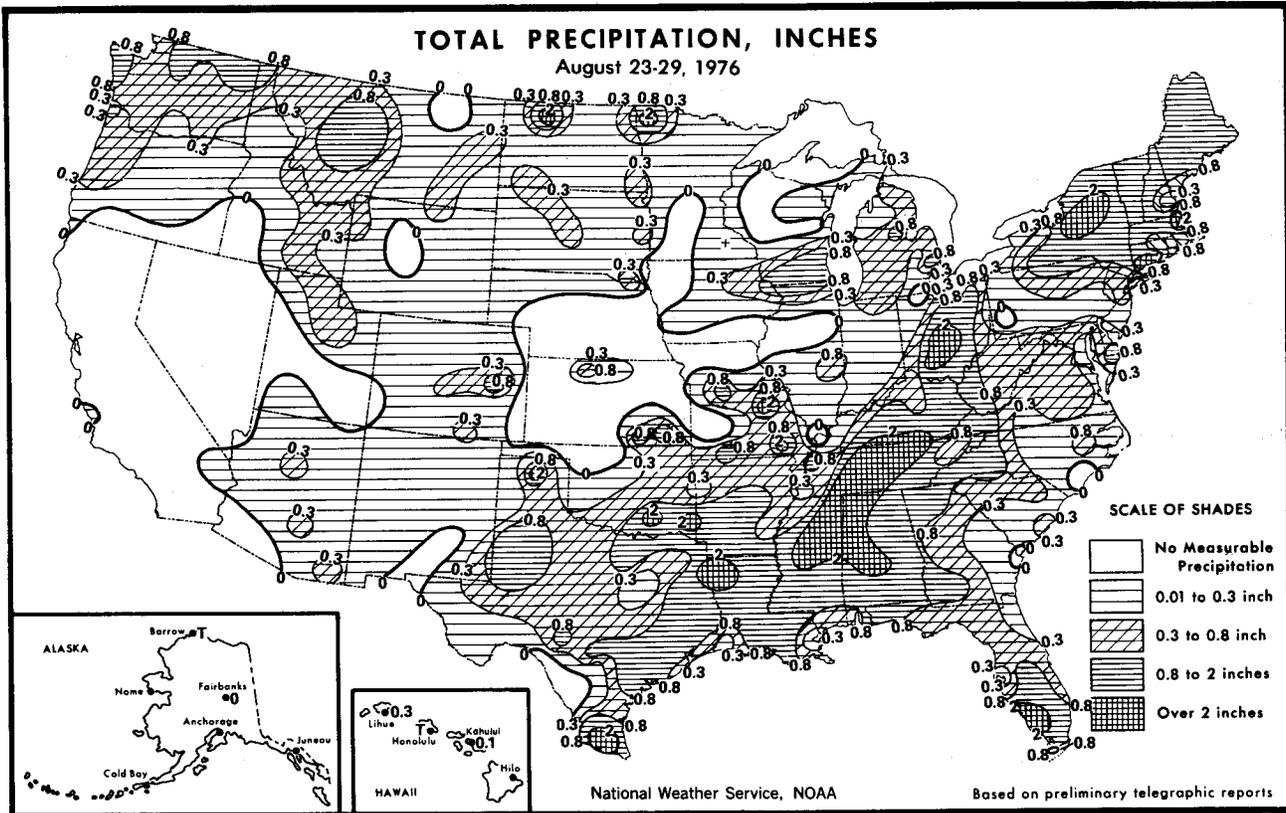
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National Weather Summary

For the Week of August 23 - 29

HIGHLIGHTS: High temperatures and thunderstorm activity dominated the Nation's weather pattern early in the week. Forecasters kept a close eye on tropical storm Emmy as she gathered force east of Bermuda. A cold front lowered temperatures for the midsection of the Nation on Friday. As the cold front continued to dominate the Nation, milder readings and thunderstorm activity prevailed for the weekend.

Showers and thundershowers lingered over the northern and central Plateau region into the Rockies, western Kansas, south central Oklahoma, and southern Florida on Monday. Haze and fog shrouded the lower and middle Mississippi Valley and enveloped an area eastward to the middle and northern Atlantic Coast region.

Unseasonably hot weather again dominated the Dakotas as temperatures rose to new highs.

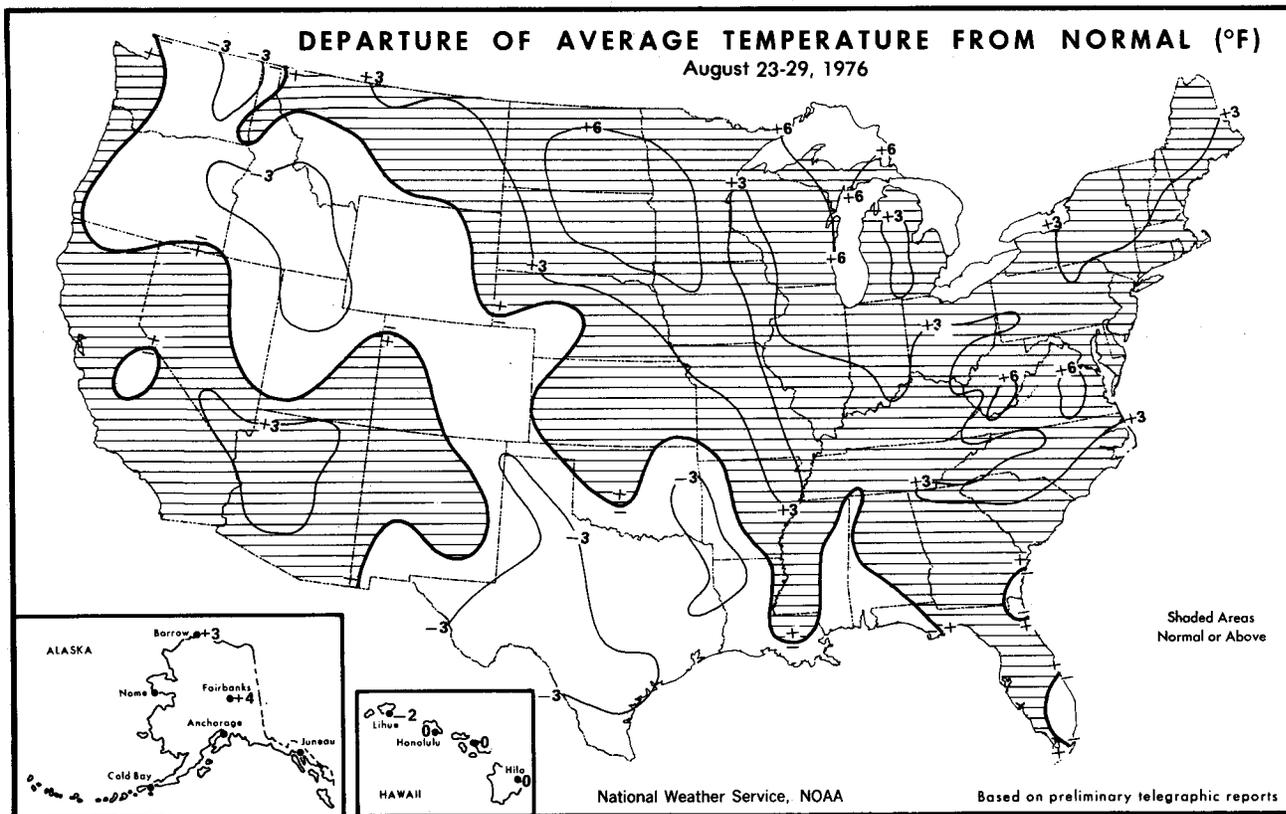
Williston, N. Dak. and Philip, S. Dak. recorded a high of 102°, while the mercury climbed to 101° at Pierre, S. Dak. and rounded out at 100° at Dickinson, N. Dak.

Hurricane Candice, located 200 miles south of Cape Race, Newfoundland moved toward the northeast, while tropical storm Emmy pushed toward the northwest at about 16 mph from her location near Antigua.

Thunderstorms built over the western Dakotas, eastern Colorado, and western portions of the southern Plains Tuesday morning and continued throughout the day and evening.

Thunderstorms in Arizona brought gusty winds which raised dust and caused traffic to be stopped in some instances.

Tropical storm Emmy continued to move toward the northwest from an area 625 miles south of Bermuda. Emmy's high winds gusted to more than



60 mph, and conditions remained favorable for her to reach hurricane strength.

Many of the Atlantic Coast States from southern New England, North Carolina, and through the Appalachians, received air stagnation advisories on Wednesday.

A high pressure system restricted air mixing to a minimum from the upper Mississippi Valley to the middle Atlantic Coast and resulted in a buildup of haze and smoke. By late afternoon, most of Minnesota, eastern Ohio, southwest and eastern Pennsylvania, southern New Jersey, Delaware, West Virginia, and southeast Texas also encountered air stagnation advisories.

Thunderstorms dropped more than 3 inches of rain on Muscle Shoals, Ala. An isolated shower brought about 2 1/2 inches of rain a few miles north of Rochester, Minn. As the day waned, patches of fair skies peeked through at New England, the southern Appalachian Mountains, and the lower Great Lakes region.

A ridge of high pressure extended from the northern Atlantic States into the Ohio Valley on Thursday and resulted in light winds and poor dispersion of atmospheric pollutants. Air stagnation advisories were issued for the eastern half of North Carolina, eastern Pennsylvania, southern New Jersey, Delaware, Maryland, Virginia, and southeastern Texas.

Later in the day, severe thunderstorms hit the northern Plains, and winds gusted to more than 60 mph. Thunderstorms also extended from southern New England, across the Great Lakes region, over

the Appalachians, to the Gulf of Mexico Coast, and the southern Atlantic Coast.

Almost 1 inch of rain fell near Tucson, Ariz. at Sabino Canyon within a 15-minute period. This brought the rainfall grand total in the Tucson area to 3 1/4 inches.

A cold front, with a cooler air mass behind it, pushed its way through the Nation's midsection on Friday. Temperatures dropped to the lower 30's in Montana, Idaho, and Wyoming. By contrast, mercuries soared to the 90 and 100 degree range through the Great Lakes area and the eastern portions of the central Plains. Thunderstorms pounded the southeastern States, through the Atlantic Coast States, and the eastern Great Lakes region, while thundershowers occupied an area from the Texas Panhandle into central Kansas. The Southwest remained warm and sunny.

A cold front, which reached from the Great Lakes region through the middle Mississippi Valley into Texas, divided the Nation into 2 major weather patterns on Saturday. Clear skies and cooler, drier air dominated to the west of the front; while warm, humid conditions, cloudy to partly cloudy skies, and showers and thundershowers covered the area east of the front.

Low temperatures persisted on Sunday. Sunny or partly sunny skies existed over much of the Nation. Overcast skies were restricted to parts of Texas, the lower Mississippi Valley, New England, the upper Great Lakes area, and the northern Pacific Coast.

National Agricultural Summary

For Week of August 23-29

HIGHLIGHTS: Hot, dry conditions in much of the Nation's midsection placed unrelenting stress on corn and soybeans particularly in the western North Central States. The drought stricken area centered in parts of South Dakota, Minnesota, Iowa and Nebraska. Soil moisture shortages exist in virtually every State, but some adequate readings were taken mostly in the Gulf and Atlantic Coast States. Crop and pasture conditions generally deteriorated except in the northeastern area of the United States.

SMALL GRAINS: Small grain harvest advanced at a pace surpassing previous years, but growers in Washington and Oregon faced sprout damage brought on by damp weather in that section of the Country.

Winter wheat remained to be harvested in Montana, Idaho, Oregon and Washington; elsewhere winter wheat harvest neared completion.

Spring wheat harvest advanced to 45% in Idaho, 65% in Montana, 90% in North Dakota and 94% in Minnesota. This pace surpassed recent years by a wide margin.

The oat harvest reached completion in the major producing States.

Seedbed preparation for winter grains slowed over much of the United States, as farmers waited for rains to provide needed soil moisture. Seeding began in several States, including Pennsylvania with 13% sown. Texas growers planted 1% compared with 2% last year and 6% average. In Colorado farmers planted 9% the same as last year and average. South Dakota farmers began seeding but need rainfall to continue.

CORN: The United States corn crop deterioration in many of the major producing States left the crop in fair to good condition. Temperature departures as high as 8° above normal and no general rainfall to offset transpiration losses caused unabating stress on the corn crop throughout many of the North Central States. In the eastern North Central States, 15% of the crop in Ohio and Illinois reached the mature stage and 5% in Indiana. The Michigan and Wisconsin crops were not as far advanced. Development of the 1976 crop lagged recent years. The corn crop in the western North Central States felt the worst of the dry, hot conditions. Generally 15 to 20% of the corn reached the mature stage, ahead of 1975.

Harvesting advanced into Kentucky, where a few farmers began harvesting high moisture corn. Harvesting reached 19% complete in Alabama, 26% in Louisiana, and in Texas 26% where last year 22% was harvested and normally 28%.

COTTON: The Nation's cotton crop rated fair to good, although heat stress caused plants to shed bolls across most of the Cotton Belt. Some of the Missouri and Oklahoma crops scored only poor ratings because of the adverse conditions. In the Delta States, boll opening ranged from 1% in Arkansas to 4% in Mississippi. In the Southeast, States 5 to 6% of the bolls opened.

In Texas, harvest extended into central areas. Statewide, picking reached 5% completion behind 1975's 9% and 8% normal. Plants on the Low Plains and North Texas, stressed by heat, dropped some bolls. Dryland cotton in Oklahoma also sloughed blooms and small bolls.

SOYBEANS: Heat stress and dry soils also lowered condition ratings for the Nation's soybean crop. Plants yellowed and shed leaves prematurely in

the driest areas. Pod set ranged from 76 to 90% complete in the North Central States and 70 to 87% in the South Central States.

In Iowa, 25% of the leaves turned yellow compared with 16% in 1975 and 14% average. The crop needs moisture to fill the pods. Soybeans, under severe stress in Minnesota, filled only one or two beans per pod. In Wisconsin, soybean plants yellowed and shed leaves early. In Arkansas, some of the crop rated poor. Many fields fired badly. Farmers cut some fields for hay.

OTHER CROPS: Development of the U. S. sorghum crop slowed and conditions took a turn downward. Stage of development attained was near normal levels in most major States. In Texas, harvest neared completion in the south and reached 52% complete statewide compared with 56% in 1975 and 50% average. The Oklahoma crop fell behind normal with 58% in the dough stage or beyond. Farmers cut a few fields for grain. In Kansas, 25% of the crop turned color, equalling last year's rate and the average. About 50% of Nebraska's crop turned color, the same as 1975 but ahead of the 40% average.

Harvesting Irish potatoes got underway in Idaho and Maine. Hurricane Belle damaged 10,000 acres of Aroostook County, Maine potatoes. In Washington, damp weather blighted crops, but farmers applied chemicals for control.

Harvest of the Nation's rice crop advanced into Arkansas where 2% of the crop was combined compared with 4% last year. In Louisiana, 57% was harvested, down a point from last year, but ahead of the average by 2 points. Texas producers combined 92% of their crop surpassing 1975's 89% and 73% average.

Peanut condition declined in most producing States. Harvest continued in Georgia and Texas.

North Carolina flue-cured tobacco reached 80% harvested 4 points ahead of 1975. Kentucky farmers enjoyed favorable cutting and curing weather reaching 35% harvested for burley and 33% for dark types. In Virginia, farmers marketed flue-cured tobacco as harvest reached 46%, less than last year's 55%. Burley cutting stood at 30% under 1975's 19%.

FRUIT AND NUTS: Peach harvest neared completion in all but the most northern producing States. Apple harvest became active, as growers began picking fall varieties. Growers picked grapes in South Carolina and California. In California, both champagne and table grape harvests remained active. Grapes colored well in Pennsylvania.

VEGETABLES: Harvests of cabbage, sweet corn, tomatoes, snap beans, and cucumbers were active in northern areas. Washington green pea harvest hit 95% complete. California vegetable harvest, slowed by recent rains, recovered quickly. Crop damage varied, but processing tomatoes received the brunt of the damage. Rain helped heat sensitive crops. In Florida, growers seeded fall vegetable crops. Early seeded acreage emerged to good stands.

PASTURES AND LIVESTOCK: Subnormal pasture conditions prevailed except in Florida, Georgia, the Northeast, some Mountain States, Washington, and Oregon. Cattlemen fed hay depleting the coming winter's supplies. Heavy marketings occurred from the driest areas. Cattle generally remained in good condition.

Temperature and Precipitation Data for the Week Ending Midnight, L.s.t., August 29, 1976

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	+1	1.5	+6	La. Baton Rouge . . .	82	+1	1.3	+4	Youngstown . . .	71	+3	.2	-.5
Mobile . . .	80	-1	.5	-1.0	Lake Charles . . .	81	-1	.3	-.7	OKLA., Okla. City . . .	80	+1	.3	-.4
Montgomery . . .	80	0	1.0	+2	New Orleans . . .	82	0	.1	-1.1	Tulsa . . .	79	-1	.4	-.3
ALASKA. Anchorage . . .	--	--	--	--	Shreveport . . .	79	-3	2.1	+1.5	OREG. Astoria . . .	63	+3	.1	-.3
Barrow . . .	39	+3	T	-.2	MAINE. Caribou . . .	62	+2	1.3	+5	Burns . . .	62	-2	.1	0
Fairbanks . . .	57	+4	0	-.5	Portland . . .	68	+3	.8	+2	Medford . . .	67	-2	T	-.1
Juneau . . .	--	--	--	--	MD. Baltimore . . .	78	+5	.2	-.7	Pendleton . . .	68	-2	.3	+2
Kodiak . . .	--	--	--	--	MASS. Boston . . .	74	+4	2.3	+1.5	Portland . . .	67	+1	.6	+4
Nome . . .	--	--	--	--	Chatham . . .	68	--	.4	--	Salem . . .	65	0	.5	+3
ARIZ. Flagstaff . . .	66	+4	.4	-.2	MICH. Alpena . . .	66	+4	.7	0	PA. Allentown . . .	75	+5	T	-.9
Phoenix . . .	93	+5	.1	-.2	Detroit . . .	74	+5	T	-.7	Erie . . .	72	+6	T	-.8
Tucson . . .	85	+2	.1	-.4	Flint . . .	72	+5	.1	-.6	Harrisburg . . .	76	+4	T	-.7
Winslow . . .	94	+2	0	-.1	Grand Rapids . . .	72	+4	.3	-.3	Philadelphia . . .	78	+5	.1	-.7
Yuma . . .	77	+3	.2	-.5	Houghton Lake . . .	66	+3	.1	-.5	Pittsburgh . . .	71	+2	.5	-.2
ARK. Fort Smith . . .	81	+2	1.3	+6	Lansing . . .	70	+2	.3	-.3	Scranton . . .	72	+3	.7	-.2
Little Rock . . .	82	+2	0	0	Marquette . . .	70	+6	T	-.7	R.I. Providence . . .	79	0	.3	-1.0
CALIF. Bakersfield . . .	58	+1	T	-.1	Muskegon . . .	71	+4	.5	-.2	S.C. Charleston . . .	82	+3	.2	-1.0
Fresno . . .	76	-1	0	0	S. Ste. Marie . . .	66	+5	.3	-.5	Columbia . . .	79	+3	.3	-.6
Los Angeles . . .	74	0	0	0	MINN. Duluth . . .	65	+3	.1	-.7	Greenville . . .	76	+8	.1	-.3
Red Bluff . . .	81	+2	0	-.1	Internatl Falls . . .	64	+3	T	-.8	S.D. Aberdeen . . .	75	+6	.1	-.4
San Diego . . .	73	+2	0	-.1	Minneapolis . . .	73	+5	T	-.7	Huron . . .	71	+2	.1	-.2
San Francisco . . .	65	+2	T	0	Rochester . . .	68	+2	T	-.8	Rapid City . . .	76	+7	T	-.7
Stockton . . .	78	+3	0	0	St. Cloud . . .	72	+6	T	-.9	Sioux Falls . . .	80	+3	1.1	+4
COLO. Denver . . .	70	0	.2	-.1	MISS. Jackson . . .	82	+2	2.0	+1.2	TENN. Chattanooga . . .	78	+2	.5	-.1
Grand Junction . . .	75	+2	T	-.3	Meridian . . .	78	-2	1.5	+7	Knoxville . . .	82	+3	.2	-.5
Pueblo . . .	71	-2	T	-.4	MO. Columbia . . .	78	+4	T	-.8	Memphis . . .	77	0	4.5	+3.8
CONN. Bridgeport . . .	76	+5	2.1	+1.3	Kansas City . . .	78	+3	T	-.9	Nashville . . .	79	-3	.4	-.1
Hartford . . .	74	+5	.6	-.3	St. Louis . . .	77	+1	.3	-.3	TEX. Abilene . . .	73	-3	.2	-.4
D.C. Washington . . .	81	+5	.1	-.9	Springfield . . .	75	0	T	-.7	Amarillo . . .	82	-2	.7	+1
FLA. Apalachicola . . .	81	0	.7	-1.3	MONT. Billings . . .	68	+1	T	-.3	Austin . . .	81	-1	.8	-.5
Daytona Beach . . .	81	0	.2	-1.4	Glasgow . . .	67	+1	0	-.4	Beaumont . . .	82	-2	1.4	+6
Ft. Myers . . .	82	0	2.6	+8	Great Falls . . .	55	0	1.2	+9	Brownsville . . .	81	-3	.6	-.3
Jacksonville . . .	80	-1	T	-1.9	Havre . . .	70	+5	.1	-.2	Corpus Christi . . .	--	--	--	--
Key West . . .	85	+1	.5	-.7	Helena . . .	63	0	.9	+6	Dallas . . .	81	-4	T	-.4
Lakeland . . .	83	+1	1.2	-.4	Kalispell . . .	61	+1	.4	+1	Del Rio . . .	78	-1	T	-.2
Miami . . .	82	-1	1.3	-.4	Miles City . . .	71	+2	.3	0	El Paso . . .	78	-1	T	-.2
Orlando . . .	82	+1	.6	-.9	Missoula . . .	61	-2	.2	0	Fort Worth . . .	83	-1	.2	-.4
Tallahassee . . .	83	+2	.5	-1.0	NEBR. Grand Island . . .	75	+2	T	-.6	Galveston . . .	82	-1	T	-1.1
Tampa . . .	83	+1	.1	-1.7	Lincoln . . .	75	+2	T	-.8	Houston . . .	81	-2	1.1	+1
W. Palm Beach . . .	82	-1	.7	-1.1	Norfolk . . .	74	+3	T	-.6	Lubbock . . .	75	-2	1.1	+7
GA. Atlanta . . .	78	+1	.4	-.3	N. Platte . . .	68	-3	T	-.5	Midland . . .	77	-4	.8	+5
Augusta . . .	80	+1	.1	-.8	Omaha . . .	75	+3	.1	-.8	San Angelo . . .	79	-4	.4	0
Macon . . .	82	+2	.3	-.5	Valentine . . .	74	+4	.1	-.4	San Antonio . . .	80	-4	.2	-.5
Savannah . . .	80	0	T	-1.4	NEV. Ely . . .	62	-1	T	-.1	Victoria . . .	81	-3	1.5	+7
HAWAII. Hilo . . .	76	0	1.9	-.4	Las Vegas . . .	65	0	0	0	Waco . . .	84	0	.1	-.4
Honolulu . . .	81	0	T	-.1	Reno . . .	67	+2	0	-.1	Wichita Falls . . .	82	-2	.4	-.1
Kahului . . .	78	-2	.3	-.2	Winnemucca . . .	68	+3	T	-.7	UTAH. Blanding . . .	71	+2	T	-.4
Lihue . . .	78	-2	.3	-.2	N.H. Concord . . .	75	+3	T	-1.0	Salt Lake City . . .	68	-4	.5	+3
IDAHO. Boise . . .	67	-3	0	-.1	N.J. Atlantic City . . .	75	+3	T	-.6	VT. Burlington . . .	67	+2	1.2	+4
Lewiston . . .	70	+1	.1	-.1	Trenton . . .	77	+5	.3	-.6	VA. Lynchburg . . .	78	+5	.2	-.7
Pocatello . . .	64	-3	.3	+2	N.MEX. Albuquerque . . .	75	0	.2	-.1	Norfolk . . .	81	+5	.2	-1.1
ILL. Cairo . . .	80	+2	0	-.8	Roswell . . .	78	+2	T	-.3	Richmond . . .	81	+6	.4	-.6
Chicago . . .	77	+5	.2	-.5	N.Y. Albany . . .	70	+2	1.3	+6	Roanoke . . .	77	+4	.5	-.4
Moline . . .	75	+3	T	-.7	Binghamton . . .	69	+3	.7	+9	WASH. Colville . . .	62	-3	1.3	+1.1
Peoria . . .	75	+3	.9	0	Buffalo . . .	72	+5	.1	-.9	Omak . . .	65	-2	.5	+4
Rockford . . .	75	+2	T	-.6	New York . . .	78	+5	.1	-.9	Quillayute . . .	59	+1	1.0	+3
Springfield . . .	77	+2	.1	-.5	Rochester . . .	62	+4	.6	0	Seattle-Tacoma . . .	64	+1	.4	+1
IND. Evansville . . .	73	+3	.2	-.4	Syracuse . . .	69	+1	2.1	+1.3	Spokane . . .	62	-4	.8	+7
Ft. Wayne . . .	75	+3	.1	-.5	N.C. Asheville . . .	73	+1	1.0	0	Walla Walla . . .	70	-2	.2	+1
Indianapolis . . .	73	+4	.7	0	Charlotte . . .	80	+3	.4	-.4	Yakima . . .	66	-1	.3	+2
South Bend . . .	74	+2	T	-.8	Greensboro . . .	77	+2	.2	-.8	W. Va. Beckley . . .	75	+7	.5	-.3
IOWA. Burlington . . .	75	+4	T	-.8	Hatteras . . .	77	0	T	-1.5	Charleston . . .	75	+3	.4	-.3
Des Moines . . .	70	+2	1.8	+8	Raleigh . . .	80	+5	T	-1.1	Huntington . . .	77	+4	1.9	+1.2
Dubuque . . .	74	+3	0	-.7	Wilmington . . .	80	+1	T	-1.4	Parkersburg . . .	76	+4	T	-.7
Sioux City . . .	76	+1	.4	-.4	N. DAK. Bismarck . . .	73	+7	.1	-.3	WIS. Green Bay . . .	72	+3	0	-.7
KANS. Concordia . . .	77	+1	0	-.5	Fargo . . .	74	+7	T	-.6	La Crosse . . .	70	+3	1.2	+5
Dodge City . . .	72	0	0	-.4	Williston . . .	69	+3	.1	-.3	Madison . . .	72	+5	1.4	+8
Goodland . . .	77	+2	T	-.9	OHIO. Akron-Canton . . .	72	+3	.1	-.5	Milwaukee . . .	65	-2	T	-.1
Topeka . . .	79	+1	.1	-.6	Cincinnati . . .	76	+3	.5	-.1	WYO. Casper . . .	64	-1	T	-.3
Wichita . . .	75	+1	.5	-.2	Cleveland . . .	73	+4	1.2	+6	Cheyenne . . .	65	-1	T	-.1
KY. Lexington . . .	78	+3	.7	0	Columbus . . .	73	+2	2.2	+1.6	Lander . . .	65	-1	.3	0
Louisville . . .	--	--	--	--	Dayton . . .	73	+1	.4	-.2	Sheridan . . .	65	-1	.3	0
					Toledo . . .	72	+3	T	-.7	P.R. San Juan . . .	83	+1	2.5	+1.0

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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 SRS State offices in cooperation with the National Weather Service, NOAA.

ALABAMA: Seasonal temperatures and scattered showers. Temperatures ranged from 96 to 65°. Rainfall most areas, ranging from 0.50 to 4.00 in. Soil moisture short. Cotton fair to good condition. Corn good condition; 19% harvested, 10% 1975. Soybeans fair to good condition; 70% setting pods, 87%, 1975. Peanuts fair condition.

ALASKA: Tanana Valley warm, very dry with no rainfall. High clouds covered sky first few days, later portion sunny days. Nighttime temperatures dipping into 30's 27th. Matanuska Valley very warm, dry with abundant sunshine. No rainfall. Kenai Peninsula began sunny and warm. Clouds after midweek and heavy rain across southern Kenai Peninsula 26th and 27th. Very dry north with no measurable rain. Kodiak Island very warm and dry early ending cool and very wet.

Warm dry weather hastened ripening of grains. Up to two weeks earlier than last year. Second crop hay harvest underway with low yields due to extremely dry summer. Grain harvest continued in scattered areas in Matanuska and Tanana Valleys. Ground moisture supply generally very short.

ARIZONA: Warm, moist air. Rain from scattered thunderstorms except northwest, southwest. Temperatures 1 to 6° above normal except southeast, normal. Cotton good progress. Early fields maturing rapidly. Late cotton flowering, setting bolls. Some hail damage. Late planted sorghum good growth, some irrigation. Earlier fields maturing rapidly. Mature fields weedy, delaying harvest. Hay baling continues, some renovation. Picking lemons limited scale. Other citrus sizing well, yield prospects favorable. Stock water generally adequate higher elevations, short to adequate in desert. Scattered light rain. Desert ranges poor to fair condition. Higher elevation ranges good to excellent. Cattle, calves generally excellent condition, fair to poor desert.

ARKANSAS: Scattered showers and thunderstorms. Most places received rain, few areas remain dry. Temperatures near normal. Extremes: 99 and 55°. Soybean condition mostly fair to poor. Many fields firing badly. Some fields cut for hay. Cotton growth slowed due to dry weather. Bolls maturing rapidly. Insects not critical. Only 1% open bolls, mostly caused from dry weather. Rice maturing rapidly, 2% combined, 4% last year. Sorghum grain harvest 9% complete, 25% a year ago. Hay crop fair to poor. Pastures short. Some herds heavily culled or dispersed. Slow gains or none at all.

CALIFORNIA: Widely scattered rain showers over north early. North coast, northern Sacramento Valley and northern mountains got most of the showers. Amounts greatest northern mountains, about 0.75 in. Desert quite warm with daily highs over 100°. Warming trend Central Valley late, average temperatures 2° below normal.

Cool wet weather slowed crop development. Sugarbeet harvest increasing, dry bean harvest beginning. Brown rot continues cling peaches, split skins figs, brown rot vineyards due to recent rains. Raisins drying Fresno. Picking champagne varieties grapes Napa. Avocado harvest nearly complete. Table grape harvest under-

way. Pear harvest nearly complete, rapid maturity due to rain, warm temperatures. Vegetable crop harvesting slowed by recent rains recovered quickly. Damage to crops variable. Processing tomatoes hardest hit. Rain provided excellent weather for heat sensitive crops. Range dry, supplemental feeding continues.

COLORADO: Scattered showers 23d, 24th, 27th east. Mostly dry weekend. Temperatures slightly above normal through 26th. Cooler 15 to 20° 27th, normal weekend.

Spring barley, oat combining 75%, 68% average. Sorghum 85% headed, equal 1975; condition fair to good. Corn 55% dough, 10% dent, condition very good. Winter wheat seeding 9%, equal 1975 and average. Summer potatoes 50% dug, 42% 1975. Windrowing, combining dry beans east. Sugarbeets good condition. Alfalfa very good northeast, fair to good elsewhere. Second, third cutting active. Soil moisture very short to short. Ranges, pastures poor to fair. Livestock condition good. Light insect damage corn, spider mites, armyworms. Peach, pear picking. Onion digging, sacking.

FLORIDA: Decreasing thundershower activities and increasing temperatures. Temperatures averaged near to slightly above normal. Rainfall light to moderate ranging from 0.10 to 2.50 in.

Soil moisture short west and central, adequate north, adequate to surplus south. Corn harvest active, excellent yields. Peanut harvest underway, yields lower than earlier expected. Tobacco marketing continues. Soybeans fair condition, need moisture in Panhandle. Sugarcane, cotton good condition. Pastures maintaining generally good to excellent growth as seasonal rainfall holds moisture adequate. Condition of cattle, calves fair some Panhandle areas, elsewhere good. Citrus trees and fruit excellent condition, moisture adequate, new growth abundant, some cover crops out of control. Tomato planting continue active southern areas. Early acreage good condition. Eggplant transplantings continue. Crop in very good condition. Pepper stands good on early seeded acreage, thinning underway. Celery, sweet corn plantings continue.

GEORGIA: Rainfall quite variable, heaviest over extreme northeast. Temperatures averaged 1 to 2° below normal except about 2° above normal extreme northwest.

Soil moisture extremely variable, mostly short. Many areas had showers, more needed. Fieldwork: 6.0 days suitable. Cotton fair to mostly good, 5% open. Peanuts weaker, mostly fair to good, need moisture, harvest increasing, 6% dug, 4% threshed, last year 3% and 3%, average 8% and 4%. Corn fair to mostly good, slightly weaker, grain harvest active southern half, harvesting at high moisture and drying, 24% harvested, last year 12%. Soybeans weaker, fair to good, some pod shedding, need moisture. Tobacco marketing continued at slightly slower pace. Hay crops weaker, fair to good. Pastures considerably weaker, mostly fair to good, some forced cattle marketing. Armyworms troublesome most areas. Apples fair to mostly good, harvest very active, 70% picked. Pecans mostly fair to good, commercial growers fighting insects.

HAWAII: Weather generally favorable. Hot weather, gusty winds, Waianae area Oahu affected crop growth.

Irrigation heavy to maintain fair to good crop growth. Vegetable supplies adequate. Banana supplies steady. Papaya supplies light to moderate. Pineapple harvesting down. Sugar harvesting steady. Pastures leeward dry, windward fair to good.

IDAHO: Temperatures 1 to 6° below normal. Scattered light frost over south central. Extremes: 102 and 28°. Precipitation 0.05 to 1.24 in.

Harvest active hay, grain, dry beans, onions, mint, peaches. Harvest begins hops, potatoes. Harvested 1976 and 1975, respectively: Winter wheat 50%, 50%; spring wheat 45%, 30%; barley 35%, 40%. Livestock good condition. Feeders start moving to market.

ILLINOIS: Temperatures 1 to 5° above normal, warmest north. Precipitation very light, few scattered thunderstorms.

Corn good to fair; 73% reached dent, 84% 1975, 62% average; 15% mature, 46% 1975, 20% average. Soybeans good to fair; 27% turning yellow, 43% 1975, 20% average. Winter wheat acreage 66% plowed, 65% 1975, 67% average. Third crop alfalfa hay good to fair; 61% cut, 53% 1975 and average. Pastures fair to poor. Soil moisture short. Fieldwork: 6.5 days suitable.

INDIANA: Second week of near rainless weather. Some scattered local showers in north central, south central and southeast of 0.50 to 1.00 in. Temperatures 2 to 4° above normal.

Fieldwork: 6 days suitable. Topsoil and subsoil moisture mostly short to adequate. Corn 90% in dough stage or beyond, 40% dented, 5% mature. Last year 10% mature, average 5%. Soybeans 90% podded, 1975 90%. Soybeans 10% yellow. Wheat land 45% plowed, 1975 45%, average 50%. Tobacco 25% harvested, 1975 5%. Apples 30% picked, 1975 30%, average 20%. Peaches 80% picked. Tomatoes 60% picked once. Pastures poor to fair.

IOWA: Hot, dry with temperatures averaging 3 to 5° above normal and a few widely scattered showers falling mostly at midweek. Fieldwork: 7 days suitable. Corn and soybeans suffering from extremely dry conditions in west central and northwest. Firing more widespread with poorly filled ears. Corn in southeast and south central good to excellent. Corn condition 9% excellent, 35% good, 33% fair, 23% poor. Corn in or past dough stage 89%, 85% 1975, 79% average. Corn dented 62%, 60% 1975, 60% average. Soybean condition 5% excellent, 36% good, 42% fair, 17% poor. Soybeans need moisture for pods to fill. Leaves turning 25%, 16% 1975, 14% average. Third cutting alfalfa 64% harvested, 44% 1975, 46% average. Second cutting clover hay 78% harvested, 79% 1975, 77% average. Topsoil moisture short. Subsoil moisture short. Pastures short in west central and northern third. Livestock good, more widespread supplemental feeding.

KANSAS: Locally beneficial rains southeast, extreme east, portions north central, otherwise moisture meager to none. Temperatures averaged from 76° northwest to 80° south central, near normal southeast, 2 to 5° above normal elsewhere.

Dry row crops went through another hot week with only scattered showers. Corn condition dropped 1 point. Corn 50% dented, 60% last year, 55% average; 20% mature, 20% last year, 25%

average. Sorghum condition down 5 points; 80% headed, same as average, 85% last year, 25% colored, same as last year and average. Soybean condition dropped 3 points; 90% in podding stage, same as last year, 85% average. Third cutting alfalfa 90% complete, 75% last year, 80% average.

KENTUCKY: Soil moisture short to adequate, depending on location of showers. Fieldwork: Nearly 5.0 days favorable. Farmers concentrating on tobacco, hay and silage harvest. Corn maturing rapidly, 54% mature or dented, compared 64% last year. Stalks drying and ears dropping on earlier planted acreage. Little high moisture corn already combined. Soybeans 84% entirely green, 14% turning yellow. Tobacco cutting active under generally favorable conditions for both cutting and curing. About 35% burley and 33% dark types already cut, a week ahead of last year, but about normal. About 36% of lespedeza hay saved. Land plowed for fall seeding 20% complete.

LOUISIANA: Temperatures near normal. Extremes: 100 and 62°. Showers 28th.

Soil moisture short. Cotton mostly fair; needs rain; open bolls 3%. Rice good; 76% ripe, 57% harvested, 58% year ago, average 56%. Soybeans fair to good; 87% setting pods; some pod drop due to dry weather. Corn good; 93% mature; 26% harvested, 35% last year. Sorghum 72% turning color, 25% ripe. Sugarcane growth slowed by dry weather; 11% planted; little borer activity. Sweetpotatoes 15% harvested; dry soils slowed harvest. Pastures fair condition.

MARYLAND & DELAWARE: Temperatures normal to above normal except on Eastern Shore. Extremes: Mid 90's to upper 40's. Precipitation from scattered thundershowers, heaviest in north central Maryland, ranged from trace to 2.03 in. Weekend warm and sunny.

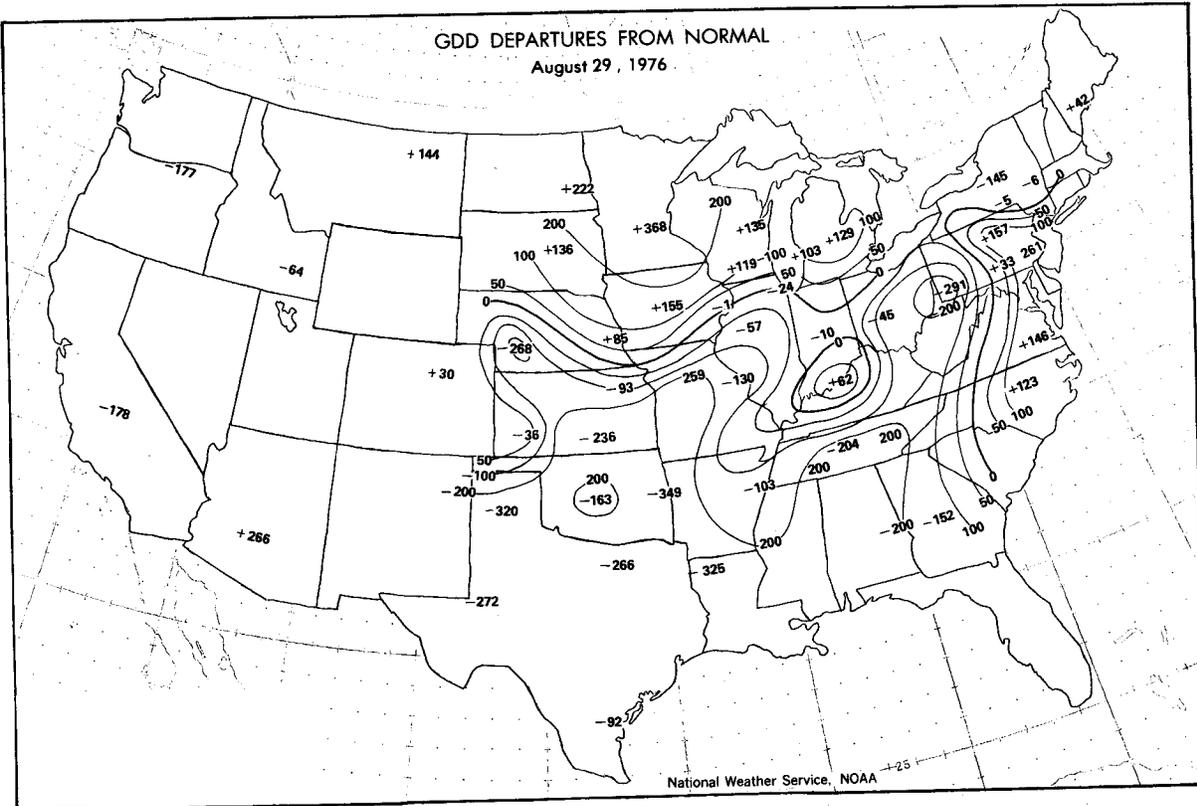
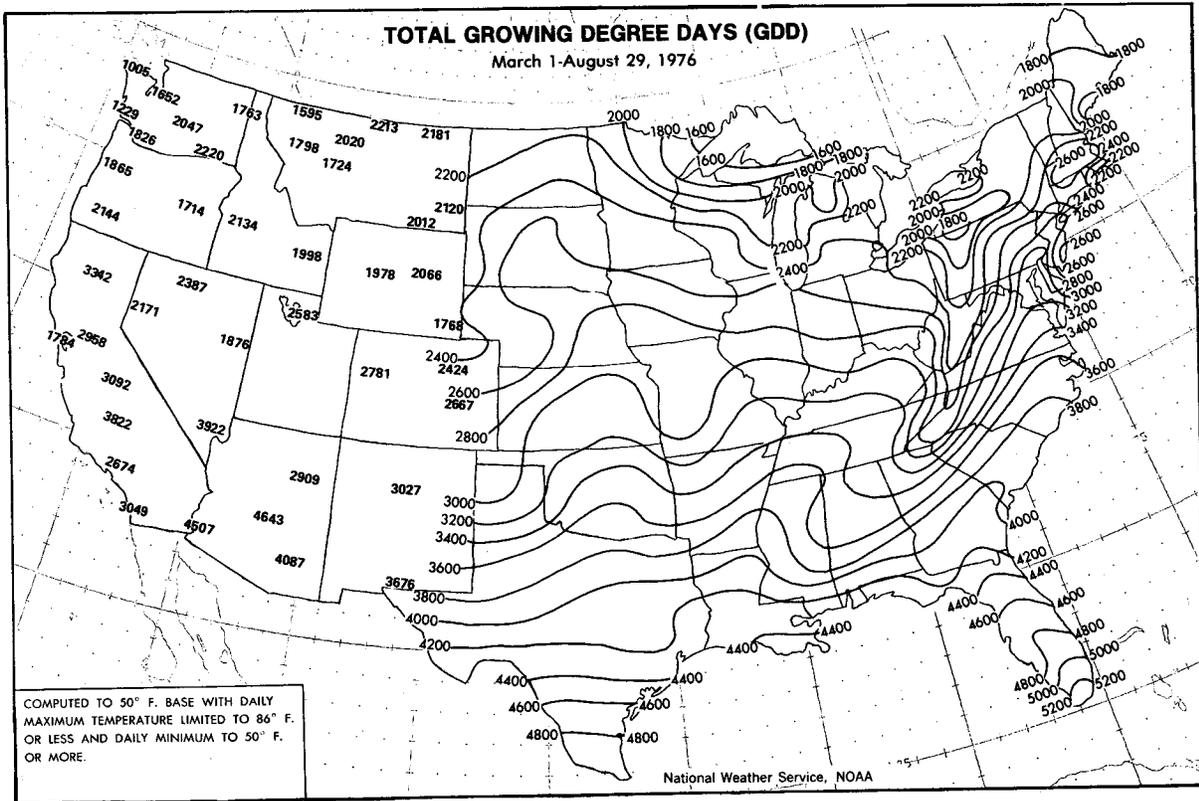
Corn 50% dent stage, 15% mature; equal to 1975, slightly ahead of average. Preparing for harvest. Soybeans 85% podded; 70% 1975, 63% average. Leaves starting to yellow. Tobacco 60% harvested; 50% 1975, 41% average. Excellent curing weather so far. Fourth cutting alfalfa 60% completed. Vegetable harvest still in full swing. Fall apple harvest expected to start first week of September. Apple harvest earlier than normal.

MICHIGAN: Temperatures ranged from 98° west to 29° extreme north. Precipitation most areas, averaging 0.01 in. east central to 0.50 in. west central. Rains some help.

Soil moisture very short to short. Corn 55% dough, 50% normal; 30% dent. Oat harvest 95% complete, 95% 1975, 80% normal. Dry beans 50% leaves turning, 20% leaves shedding, behind last year's progress, harvest underway. Soybeans 20% leaves turning, 1% leaves shedding. Summer potato digging 20%, 20% normal, 25% 1975. Second cut hay 95%, 75% normal, 85% 1975. Third cutting started. Pasture feed supplies mostly short to adequate. Summer apples 85% picked, 50% normal, 75% 1975. Peaches 65%, pear and plum harvest started. Sweet corn 70%, tomatoes 40%, onions 15% harvested.

MINNESOTA: Hot, cool over weekend. Temperatures averaged 7° above normal west half, 3° above normal east half. Extremes: 101 and 31°. Precipitation much below normal except extreme northwest. Average 0.10 in. or less and 0.55 in. northwest. Growing season precipitation departure: 6.00 in. below normal extreme east to 9.00 in. below west.

Hot, dry weather continued stress conditions row crops. Yield prospects further reduced on



lighter soils. Silage cutting active on drought stunted corn. Soybeans under severe stress filling one to two beans per pod. Small grain harvest nearing completion except extreme northern areas. Winter grain seeding slowed by lack moisture. Sweet corn pack 60% completed, one week ahead average. Corn 70% denting, 1975 53%, normal 31%; mature 15%, 1975 5%, normal 4%. Corn silage 14% cut, 1975 4%, normal 2%. Soybeans 42% yellowing, 1975 35%, normal 27%; shedding leaves 10%, 1975 5%, normal 5%. Combined: Spring wheat 94%, 1975 73%, normal 68%; oats 98%, 1975 92%, normal 86%; barley 97%, 1975 90%, normal 84%; flax 53%, 1975 40%, normal 40%. Seeded: Winter wheat 11%, 1975 22%, normal 14; rye 10%, 1975 14%, normal 13%.

MISSISSIPPI: Temperatures 1 to 4° subnormal. Extremes: 57 and 101°.

Soil moisture very short to short. Fieldwork: 6.1 days suitable. Cotton 97% setting bolls, 96% 1975, 98% average; 4% open bolls, 3% 1975, 5% average. Soybeans 97% blooming, 89% 1975; 70% podding, 69% 1975. Rice 80% headed, 62% 1975; 10% ripe, 22% 1975. Corn 96% dented, 60% 1975; 59% mature, 31% 1975. Sorghums 50% ripe, 32% 1975; 20% harvested, 17% 1975, 12% average. Watermelon 96% harvested, 92% 1975. Hay crops 76% harvested, 64% 1975, 69% average. Peanuts 20% harvested, 33% 1975. Sweetpotatoes 12% harvested, 39% 1975, 25% average. Corn silage 67% and sorghum silage 54% harvested. Crops in mostly fair condition.

MISSOURI: Temperatures 1 to 4° above normal. Precipitation 0.25 in.

Soybean and corn condition deteriorated; worse than a year ago. Condition of soybeans poor to fair. Condition of corn poor to good with 50% in poor condition. Condition of cotton poor to fair with 61% in fair condition; improved from week ago. Condition of pasture mostly poor, with 72% in poor condition, a significant drop from previous week. Fieldwork: 6.2 days suitable. Soybeans 79% blooming, normal 95%; 76% soybeans setting pods, 1975 49%, normal 78%. Corn 74% dough stage, 1975 96%; 63% corn dented, 1975 80%; 14% corn matured, 1975 22%. Grain sorghum 88% headed, 1975 92%, normal 88%; 14% grain sorghum matured, 1975 26%, normal 21%. Cotton 89% setting bolls, 5% bolls open.

MONTANA: Cool nights brought first frost to higher southwest valleys midweek. Major fluctuations in daytime maximums occurred with temperatures averaging 5° above normal north central, near normal elsewhere. Precipitation extreme variable with some heavy showers first part of week, little or none latter part.

Winter wheat harvest 85% done, last year 55%, normal 80%. Spring wheat 65% combined, last year 10%, normal 45%. Barley 70% and oats 80% combined, both ahead of last year and normal. Date for start of winter wheat seeding September 6, about same as year ago. Topsoil moisture mostly adequate. Second cutting alfalfa 60% done, wild hay 80%. Corn silage chopping starting, 10% done. Range feed supplies adequate. Little movement livestock from summer ranges. Prospective supplies hay and feed grains for winter adequate. Grasshopper damage light to moderate.

NEBRASKA: Temperatures much above normal except 26th, with 2 to 10° below normal. Few widely scattered light showers or brief thundershowers.

Topsoil moisture supplies short. Subsoil moisture short. Irrigated corn good condition. Dry-

land corn continued decline, rated poor. Corn 85% dough stage, normal 90% and 1975 95%. Over 45% in dent stage, 50% normal and 55% 1975. Silage harvest has begun. Sorghum and soybeans fair condition. Sorghum 50% turned, 40% normal and 50% 1975. Soybean 25% leaves turned compared 15% normal and 1975. Dry bean harvest begun. Alfalfa and wild hay generally fair condition. Third cutting alfalfa 70% complete. Pasture and range feed supplies short. Supplemental feeding continuing.

NEVADA: Cool early but strong warming over week-end brought average temperature near normal. Extremes: 109 and 27°. Locally heavy thundershowers north and central early, little or no precipitation remainder. Hail damage heavy Lovelock area.

Cutting second crop alfalfa hay about finished. Fifth and sixth cuttings well along extreme south. Livestock mostly fair condition.

NEW ENGLAND: Cool, dry until midweek. Thunderstorms south latter part. Extremes: 45 and 88°. Haying active. Apple picking starting. Potato digging for processing underway Aroostook, Me. Rain and flooding from Hurricane Belle damaged 10,000 acres potatoes north Aroostook County.

NEW JERSEY: Dry with temperatures 2 to 4° above normal. Extremes: 94 and 46°. Rainfall averaged 0.36 in. north, 0.36 in. central and 0.08 in. south. Soil temperature averaged 73° north and 76° south.

Soil moisture short. Summer vegetable harvest continues in moderate decline. Tomatoes abundant. Peach harvest near end. Apple harvest slow, awaiting color. Preparation of ground for fall planted cover crops has begun.

NEW MEXICO: Some shower activity but totals generally quite light. Eastern plains sections had almost no useful rain. Temperatures within a couple of degrees of normal with little day to day variation till cooling during weekend.

Topsoil, subsoil moisture short. Cotton good, 95% setting bolls. Alfalfa good. Third cuttings complete, 4th cut well advanced south. Irrigated sorghum good, 90% heading. Corn good progress, 100% tasseled, 90% dough stage. Apples good, harvest begun. Onion harvest over, other vegetables good.

NEW YORK: Temperatures above normal. Cool, dry weather early, turned warm and humid by end. Scattered rain of variable amounts occurred 26th through 29th. Eastern section received heaviest rainfall.

Good week for fieldwork and crop development. Excellent drying condition for hay harvest. Second cutting alfalfa near 80%, third 28%. Oat harvest advanced to 70%. Warm weather improved corn condition. Early planted dry beans ripening. Plowing for wheat beginning. Potato harvest continues; growers spraying for insects and late blight. Sweet corn for processing harvest full swing. Cabbage for kraut harvest starting. Warmer temperatures improved conditions for drying harvest onions and growing vegetables. Early apples available all areas. Pears and peaches being harvested.

NORTH CAROLINA: Rainfall generally light and widely scattered. Temperatures above normal. Fieldwork: 5.7 days suitable. Soil moisture very short to short. Drought caused a general

deterioration in crops. Flue-cured tobacco fair to good; 80% harvested, 76% 1975 and average. Corn fair to good. Soybeans fair to good. Peanuts fair to good. Cotton fair to good. Hay poor to fair; 78% harvested, 74% 1975, 71% average. Pasture poor to fair. Apples fair to good; harvest progress slow.

NORTH DAKOTA: Temperatures well above normal, ranging from 5° above normal southwest to 11° central. Extremes: 103 and 38°. Precipitation below normal, ranging from 0.17 in. southeast to 0.58 in. east central. Weekend cooler but drier.

Hard spring wheat 90% combined, durum wheat 70% combined, barley and oats harvest virtually complete. Winter wheat and rye harvest complete. Row crops continue to suffer from drought stress. Potato spraying beginning. Livestock suffering from heat and drought. Some cattle being marketed in southeast. Some on winter roughage.

OHIO: Scattered showers and thunderstorms 25 to 28th. Precipitation ranged from trace northwest to 2.22 in. central. Temperatures above normal. Extremes: 92 and 42°.

Corn 60% dented, 65% 1975 and 55% normal. Corn 15% mature, 10% 1975 and normal. Soybeans 80% pods set, 85% 1975 and 75% normal. Soybeans 15% leaves turning yellow, 20% 1975 and 10% normal. Tobacco 60% topped, 75% 1975 and 65% normal. Fall plowing for winter wheat 45%, 40% 1975 and normal. Harvest completion: Corn silage 15%, 10% 1975 and normal; potatoes 25%; timothy seed 60%; red clover seed 40%; processing tomatoes 15%. Soil moisture supply short to adequate. Fieldwork: 5.0 days suitable.

OKLAHOMA: Temperatures from normal to 1° below normal. Precipitation from 0.10 in. northeast to 0.36 in. east central. Weekend very warm with scattered rains.

Only scattered light showers left topsoil moisture short. Crop conditions down, as hot, dry weather persists. Row crops not under irrigation showing stress and wheat seedbed preparation slowed. Cotton fair to poor, as dryland crop sloughs blooms and small bolls. Sorghums behind normal; 58% now at dough stage or past. Only occasional fields cut for grain. Some forage acreage cut early. Peanuts fair to good, with 84% crop spiking. Soybeans mostly good to fair in near normal growth pattern. Fourth cutting alfalfa past 33% mark: new growth slow. Ranges burning and new growth very light. Cattle good condition but down from week earlier. Some culling of herds occurring.

OREGON: Temperatures near normal west, below normal, east. Extremes: 80's, 40's west; 90's, 30's east. Precipitation ranged from 0.04 to 0.49 in. along coast; 0.31 to 0.80 in. western valleys; 0.10 to 0.56 in. east.

Wet weather slowed grain harvest. Unharvested grains showing varying degrees of sprout damage. Third cutting alfalfa underway, grass seed, mint, hop harvests continuing. Pear harvest full swing. Prune harvest continuing, peach harvest continuing, prunes, pears sizing. Picking evergreen blackberries; some rot. Filberts, walnuts look fair. Snap beans, sweet corn, cucumbers, cole crops being harvested. Potatoes being harvested. Livestock, pastures, range forage in good condition.

PENNSYLVANIA: Warm and muggy through 28th, much cooler and dryer 29th and 30th. Temperatures mostly 60 to 90° with extremes 92 and 35°. Widely scattered showers and thunderstorms produced 0.50 to 1.00 in. rainfall parts of south central mountains, central and upper Susquehanna Valley and Poconos. Elsewhere mostly less than 0.20 in. extending dry spell through second consecutive week.

Soil moisture mostly adequate to short. Activities: Fall plowing; small grain seeding; combining oats; baling straw; making hay and silage; harvesting tobacco, potatoes, ensilage corn, apples, peaches and vegetables. Oats virtually combined, last year 91%. Tobacco 39% cut, 10 days ahead of 12% in 1975. Potatoes 25% dug, last year 21%, set and tuber size good. Corn 59% dough, 18% dented, 1% mature, last year 28% dented. Fall plowing 33%, last year 24%. Wheat sown 13%, barley 18%. Alfalfa hay second cut 92%, third cut 51%, fourth cut 38%. Clo-tim second cut 77%. Hay quality mostly good. Feed from pastures average but need rain. Harvest active in apples, tomatoes, sweet corn, cabbage, snap beans. Grape coloring well.

PUERTO RICO: Island average rainfall 1.30 or 0.46 in. below normal. Temperatures averaged about 81° on coasts and 76° interior. Extremes: 95 and 54°.

Slow recuperation from drought noted sugarcane fields due recent rains. More rains needed mostly south coastal areas. Farmers active harvesting coffee some areas and preparing for harvest other areas. Dry weather caused some beans to fall. Tobacco areas preparing for planting operations. Seedbeds developing well. Pastures improved slightly some areas due recent rains. New food crops plantings need more rains for good development.

SOUTH CAROLINA: Temperatures 1 to 5° above normal, highest temperatures in northern, western areas. Temperatures in 90's most areas midweek, somewhat lower early week. Extremes: 96 and 63°. Scattered showers, thundershowers, but rainfall below normal.

Soil moisture short to very short except southeastern coastal area where moisture adequate. Dry weather hurting late soybeans, leaves turning color prematurely some areas. Insect damage high in some soybean fields. Armyworms causing damage to coastal bermuda. Cotton generally fair to good, shedding small bolls in some areas due to dry conditions. Corn harvest continues. Some tobacco still being harvested. Tobacco harvested 99% 1976, 96% average. Corn harvested 30% 1976. Cotton open bolls 6% 1976, 17% 1975, 10% average. Soybeans setting pods 60% 1976, 64% 1975, 62% average.

SOUTH DAKOTA: Hot and dry. Showers scattered, 1.50 in. northeast heaviest. Precipitation deficit ranges from 4.00 to 12.00 in. Temperature extremes: 112 and 36°. Temperatures 3 to 7° above normal.

Crops suffered from hot weather. Prospects deteriorating. Corn: 89% in dough stage or past, 1975 85%, normal 83%; 51% denting or past, 1975 41%, normal 55%; 13% safe from frost (mature), 1975 6%, normal 6%. Sorghum development slowed by drought and heat, 78% headed, 1975 95%, normal 97%. Grain sorghum: 36% showing color, 39%, normal 32%. Flax harvest one of fastest on record, 94% combined, 1975 71%, normal 73%. Fall plowing 39% complete, 1975 36%, normal 33%. Seeding winter wheat and rye beginning, but

most farmers waiting for additional moisture. Heavy cattle sales spreading into west river area. Livestock in good condition despite poor pastures in east. Few cases of pneumonia reported in cattle.

TENNESSEE: Scattered showers and thundershowers. Rainfall amounts averaged less than 1.00 in. west and east and over 1.00 in. across the mid-section. Locally heavy rainfall west and mid-section with over 3.00 in. Temperatures 2 to 3° above normal.

Dry weather damaged crop prospects and dried up pastures. Scattered showers helped but more rain needed. Fieldwork: 5.2 days suitable. Main activities: Haying, tobacco harvest, silage cutting, insect control. Pastures extremely short. Soil moisture short. Corn 95% dough stage; 65% dented, 80% last year and average. Corn 15% mature, 22% last year, 27% average. Cotton 93% setting bolls, 100% last year, 95% average. Soybeans 95% bloomed; 33% setting pods, 70% last year and average. Burley tobacco 65% harvested, 30% last year, 40% average. Dark air-cured tobacco 60% harvested, 40% average. Fall plowing 30% completed, 27% last year, 40% average.

TEXAS: Cold front brought cool temperatures, rain. Temperatures averaged 2 to 4° below normal. Average temperatures ranged from upper 70's northwest to mid 80's south. Rainfall averaged near normal; normal rainfall 0.25 to 0.50 in. Heaviest rain southeast. Lower Rio Grande Valley, where amounts averaged near 1.50 in.

Moisture still short most areas, although showers brought some relief. Crops areas suffered from dry; fall planting delayed. Cotton harvesting south, central continued active harvest 5% 1976, 9% 1975, 8% average. Fields on Low Plains, north stressed by heat, dropping bolls some areas. Irrigated fields on northern High Plains look good. Corn fields east good; prospective yields above average. Harvest 26% 1976, 22% 1975, 28% average. Fields on Plains growing well, prospects excellent. Sorghum harvest virtually complete south. Statewide harvest 52% 1976, 56% 1975, 50% average. Heading complete on northern High Plains; harvest to begin there within next 2 weeks. Rice harvest now 92% complete, 89% 1975, 73% average. Peanuts stressed by hot, dry. Most fields making satisfactory progress. Harvest 8% 1976, 13% 1975, 15% average. Haying activity decreased most areas, short moisture slowed development.

Lower Rio Grande Valley wet conditions limited land preparation seeding. Citrus continues to benefit from rains. Coastal Bend land preparation for fall cucumbers complete. San Antonio-Winter Garden planting broccoli, carrots, cabbage, tomatoes, cucumbers continues. Some early fields up. Central Texas fall vegetable planting continues. Pecans plagued by scab, aphids, dry weather. East Texas watermelon harvest near completion. Sweetpotato harvest continues. North Texas harvest cantaloup, watermelon, blackeyes, tomatoes continues. Potato harvest virtually complete. High Plains harvest onions, potatoes, bell peppers, tomatoes, and cucumbers. Ranges poor to average. Fears of extensive range fires widespread Blacklands, Edwards Plateau. Rain aided dry pastures Coastal Bend. Cattle remain good condition. Screwworms, ticks continue central, south.

UTAH: Scattered shower and thunderstorm activity forepart of period. Few isolated light showers

midportion. Accumulated moisture for period quite variable, generally ranging from little or none to locally moderate accumulation. Temperatures ranged from near normal to 5° above. Few areas local frost colder mountain valleys latter part of week.

Generally favorable harvest weather. Small grain harvest nearly complete. Winter wheat 95% harvested, spring wheat 90%, barley 90%, oats 85%. Peach harvest underway with good yields reported. Pear harvest started. Sweet corn and snap beans well into harvest. Tomatoes just beginning. Range feed poor to fair condition, fall and winter prospects poor to good. Cattle making average gains.

VIRGINIA: Temperatures averaged 3° above normal. Extremes: 96 and 52°. Rainfall mostly scattered showers and thundershowers averaging about 0.50 in.

Fieldwork: 5.8 days suitable. Topsoil moisture short. All crops need rain. Corn 73% of normal; silage harvest progressing, grain harvest in early stages. Soybean condition declined to 72% of normal. Peanut condition declined. Fungicides and insecticides applied. Tobacco harvest progress: Flue-cured 46%, 1975 55%; fire-cured 40%, 1975 36%; burley 30%, 1975 19%; sun-cured 31%, 1975 34%. Flue-cured marketing active. Hay and pasture conditions declined to very poor most areas. Peach harvest near completion. Preparations for fall harvest and small grain seeding.

WASHINGTON: West: Temperatures 1 to 2° below normal except south where 7° below normal. Precipitation 0.20 to 0.40 in. above normal.

Good pastures. Some sprout damage to wheat. Green pea harvest 95% complete. Damp weather caused blight in potatoes, chemical burndown underway for control.

East: Temperatures normal to 4° below normal. Precipitation about 0.20 to 0.40 in. above normal.

Rain held hay and grain harvest to a few days. Farmers worried about sprout damage and harvest weather. Moisture good for fall seeding and potatoes. Third cutting alfalfa and straw baled. Winds aided drying. Pear harvest accelerated; peaches near completion. Apple harvest to begin September 1. Harvest of mint, hops and potatoes active. Good potato tuber set, excellent quality. Field corn beginning to dent.

WEST VIRGINIA: Temperatures above normal, precipitation below normal except southwest. Highs upper 80's to low 90's, lows mid-40's to low 60's. Fieldwork: 5.3 days suitable. Soil moisture short. Oats harvested 97%, 1975 92%, average 91%. Second cutting hay 69% cut, 1975 63%, average 62%. Third hay 16% cut; condition fair. Tobacco mostly fair, topping half completed, harvesting over 10% completed. Potato digging 37% complete, 1975 43%, average 38%. Corn condition fair to good; 14% reached dented stage. Soil moisture shortage severe in east where 55% of hay and 67% of pasture poor.

WISCONSIN: Temperatures 4° above normal. Warm, hazy, humid weather until passage of cold front 27th. Highs in middle 90's prior to front.

Weekend sunny with lower humidities and cooler temperatures. Most rainfall south central 25th and southeast 27th where totals near 2.00 in.

Corn 60% dough, 1975 70%, normal 50%. Stage of maturity and development of ears quite variable. Some ears well filled, others poor kernel formation. Early corn dented, late corn needs few

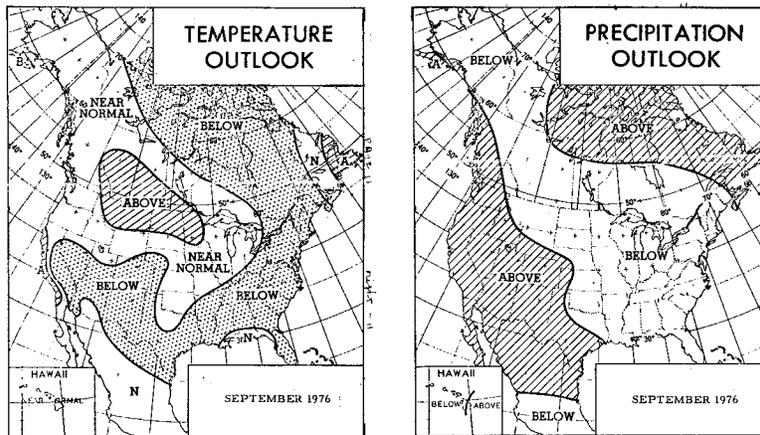
weeks without frost to mature grain. Overall corn growth and ear size below normal. More acreage than originally intended may go into silos. Some green chopping daily to feed cows. Lack of moisture and warm weather causing premature drying of corn. Light soils have brown stalks already and ears hanging down. Pod filling of soybeans limited by dry weather. Soybean leaves yellowing and shedding prematurely. Oats harvest near end, yields and straw supplies below normal. Some good 3d crop hay being made where 2d crop cut early and moisture followed. New seedings look good despite dry weather, but need rain to improve stands prior to winter. Pastures continue in poor condition, supplemental feeding heavy. Early tobacco being harvested, crop uneven, some hail damage. Harvest continues for potatoes, apples, sweet corn, and other vegetables. Quality good but quantity down except

where irrigated. Soil moisture short. Water levels low and fire danger high.

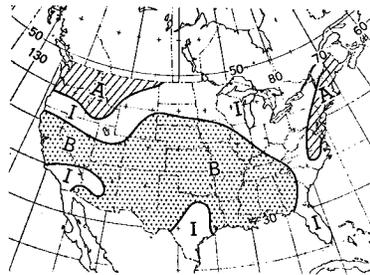
WYOMING: Temperatures 1 to 5° above normal, with northeastern sections hottest. Highs: Mid to upper 80's west; mid to upper 90's north central and extreme northeast, and upper 80's to low 90's elsewhere. Lows: Low 30's west to upper 30's and low 40's remainder. Precipitation slightly below seasonal normals.

Soil moisture short. Major activities: Summer fallowing and preparing winter wheat seedbeds. All grain crops fully matured. Spring wheat, oats and barley 83%, 84%, and 83% harvested, respectively. Dry beans 3% windrowed. Alfalfa 6% in third cut. Expected wintering livestock less than last year. Stored feeds about average. Prospects good for all crops.

Average Monthly Weather Outlook

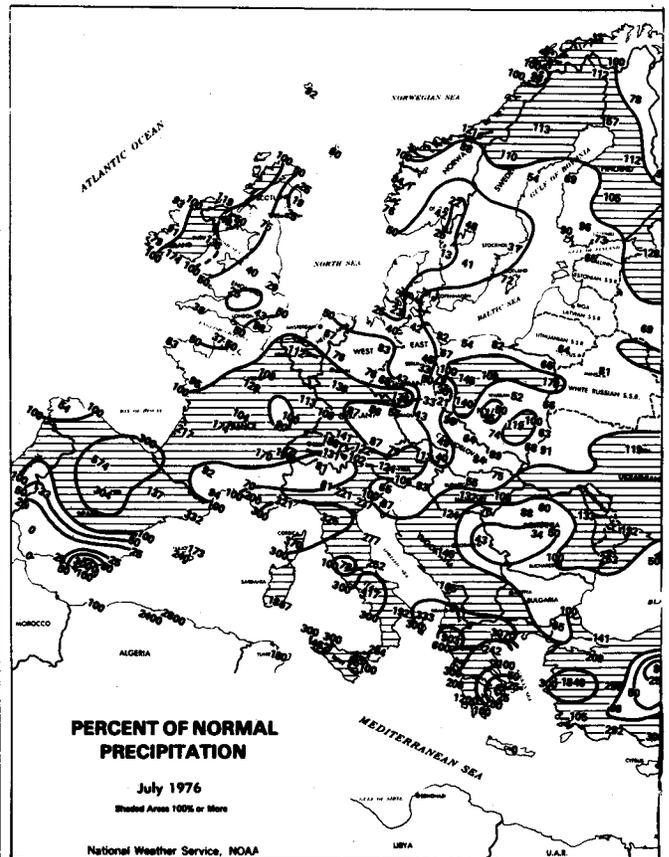
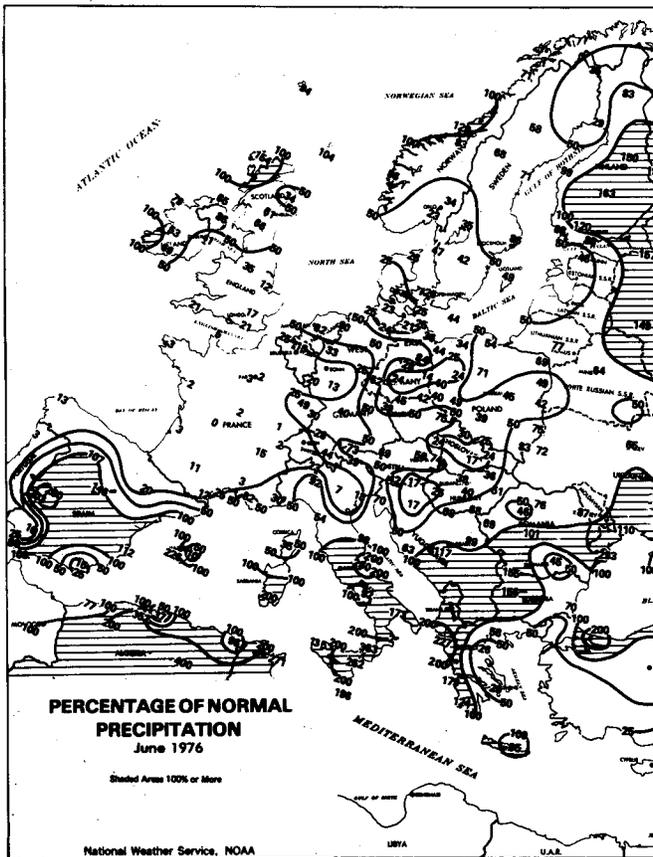
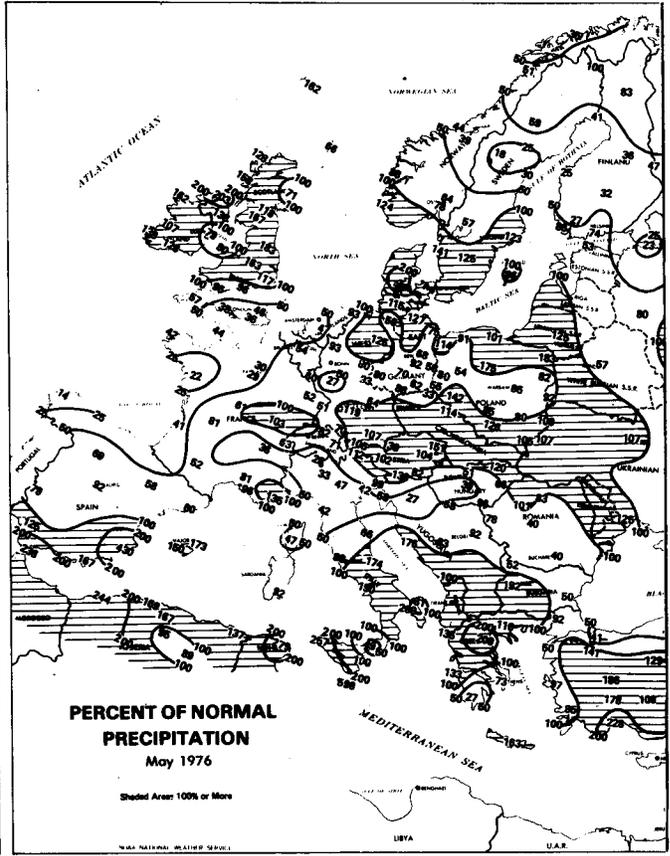
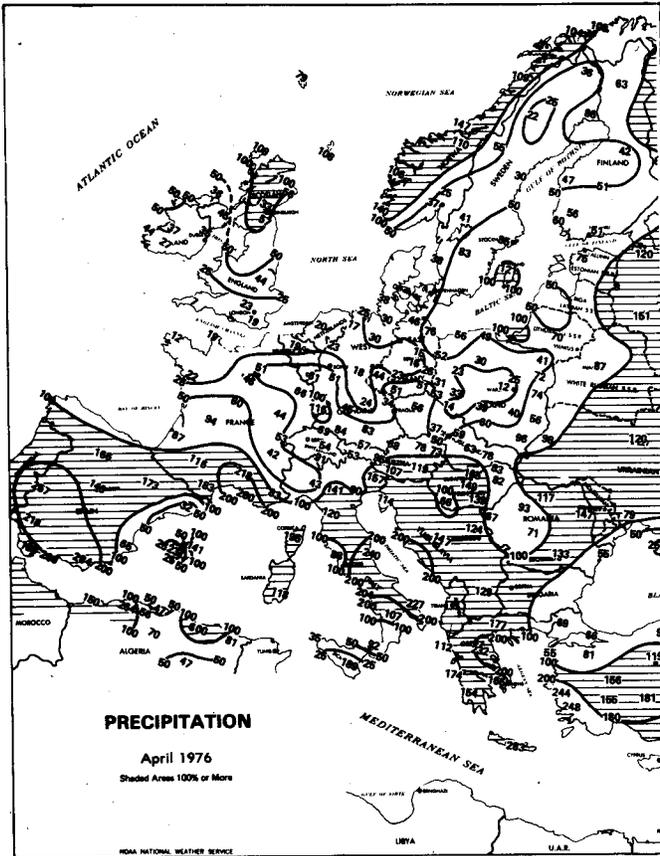


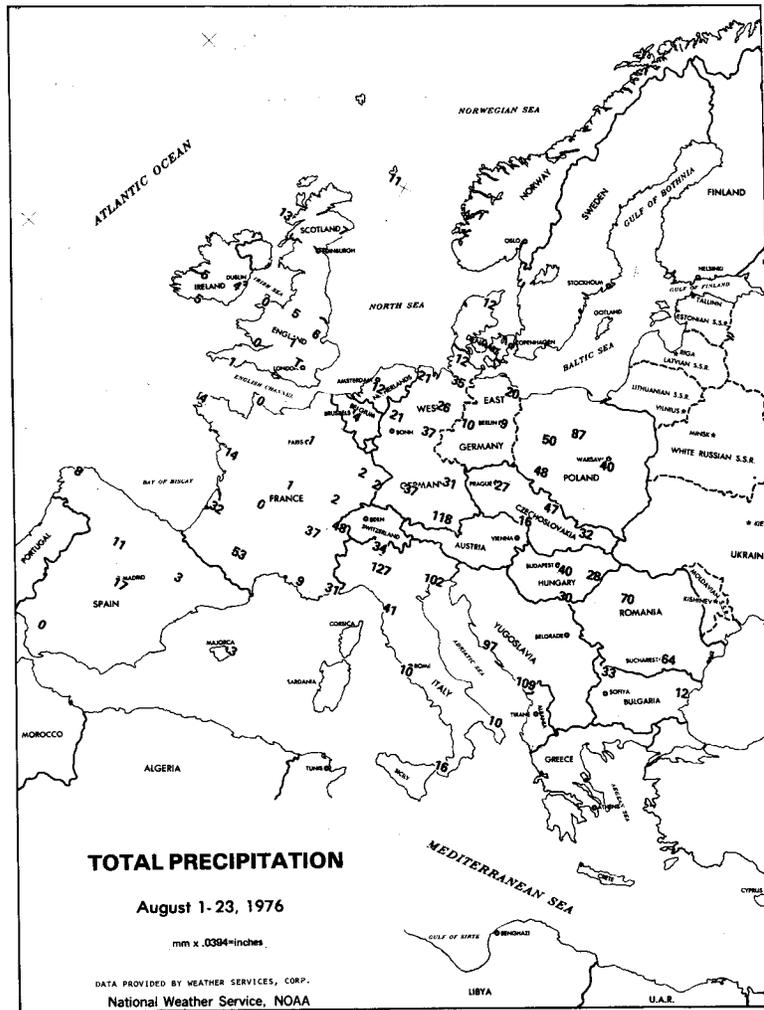
OUTLOOK FOR FALL AVERAGE TEMPERATURES
September through November 1976



- Above Normal, 60% chance of occurrence
- Below Normal, 60% chance of occurrence
- Indeterminate, 50% chance of Above Normal, 50% chance of Below Normal

The two categories Above and Below are to be compared to the long-term average or "normal" temperature of the years 1941-70. Each category has a natural climatic frequency or probability of 50%. Each carries a 60% probability of occurring where forecast (shaded area), based on the verification scores of seventeen years of experimental seasonal predictions.





European Drought Continues

The face of Europe appears as a stranger this summer. Almost non-existent rain in western Europe and southern England has caused extensive drought and the parched condition of the land. The percent of normal precipitation maps for Europe from past Bulletins (on the opposite page) point out the lack of precipitation.

The drought has been caused by a major shift in the circulation patterns over the area. A high pressure system is usually centered over the Azores Islands in the Atlantic, circulating hot, dry air over southern Spain, the Mediterranean, and North Africa. Moisture laden systems then move across northern Europe and drop an average of 19 inches of moisture per year.

However, last fall this high pressure system shifted northward about 2000 miles and continues to persist. The development forced moisture producing storm systems northward. Moisture in the Mediterranean and North Africa has also been much higher than usual.

Most of western Europe and southern England has been the driest summer in over 200 years. In the London area, it is the driest since records were started in 1727. Water tables have dropped 30-40 feet.

The least prepared areas for drought received

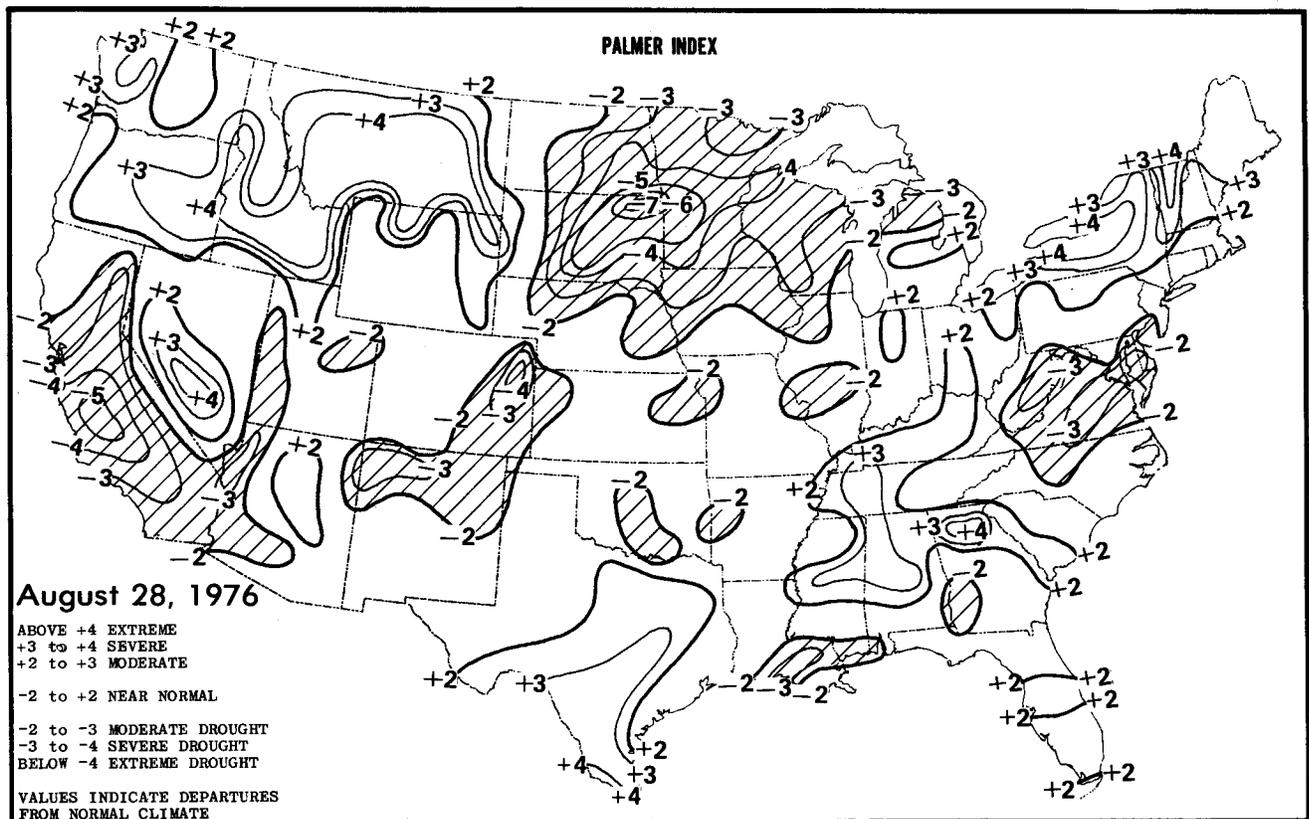
the brunt of the severe condition. Reservoirs are generally limited and there is a strong dependence on shallow wells.

High agricultural losses are expected, but the ramifications extend further. Some domestic taps in South Wales are being shut off for up to 17 hours per day. Those who hose down a car or water a lawn in Belgium can receive a fine of up to \$1000 and a jail sentence of at least a month.

Higher unemployment rates because of the drought remains a primary concern with the British government. High unemployment could place an even greater pressure on the battle against inflation.

France's agricultural exports may fall \$1 billion below the expected \$4 billion level. This would be a crippling blow to a sagging trade deficit. A 10 percent devaluation of the franc over the past four months occurred partially because of the drought situation.

The extensive losses to agriculture and the growing threat to industrial operations from the shortage of water and hydroelectric power again demonstrated the vulnerability of man's interwoven world of trade, finance and politics to weather extremes.



THE PALMER AND CROP MOISTURE INDICES

The Palmer Index was designed to evaluate the scope, severity, and frequency of prolonged periods of abnormally wet or dry weather. For this purpose it works reasonably well. However, it does not provide a measure of the current status of agricultural drought; i.e. the effects of short periods of very dry weather. For this reason the Crop Moisture Index was developed to respond rapidly to changes in the soil moisture situation and take into account only those moisture aspects which affect vegetation and field operations.

If one is interested in the overall soil moisture situation, which will integrate the effects of the past weather over weeks and even months, the Palmer Index provides the best evaluation. However, if one is interested in the availability of moisture to meet current demands, the Crop Moisture Index is the most useful. For example, a recent rain might have replenished the soil sufficiently to meet the current demands. However if the Palmer Index is highly negative, one can interpret this to mean that the overall soil moisture situation is very poor.

A negative CMI value means that the demand for moisture, or the potential evapotranspiration, has been greater than available supplies so that actual transpiration has been reduced. On the other hand, positive CMI values mean that either actual evapotranspiration exceeded the expected amount, or

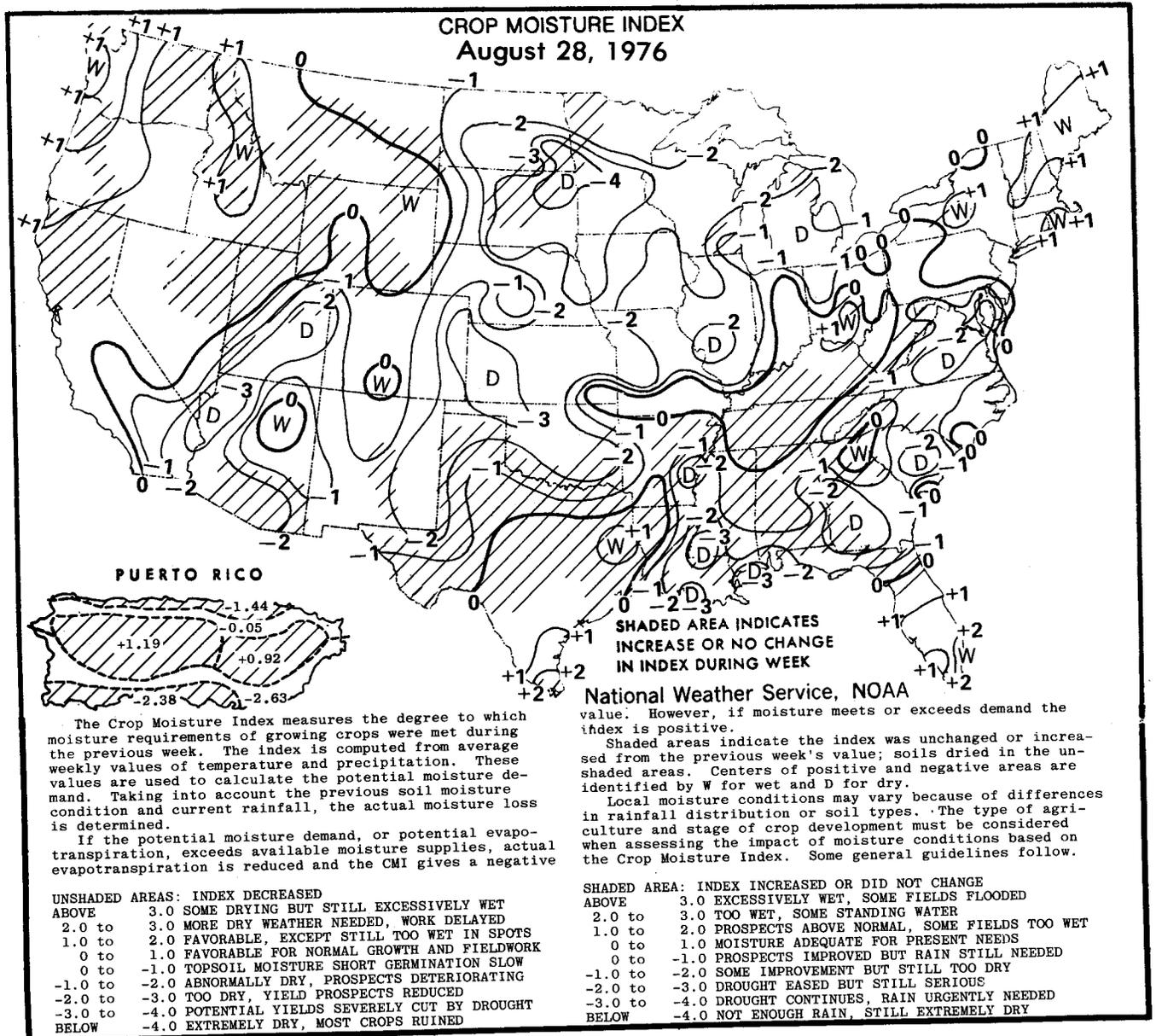
recent rainfall exceeded the moisture requirements of the crops and the additional moisture was added to the soil or was regarded as runoff.

Negative Palmer Index values imply negative abnormalities of either evapotranspiration, the amount of moisture stored in or added to the soil, or of runoff, or a combination of all these types of moisture shortages. In other words, negative PI values simply indicate that the weather has been abnormally dry, and do not specify the exact nature of the effects of the dry weather.

However, positive PI values indicate that the moisture supply either from current or antecedent rainfall exceeded the amount required to sustain soil moisture levels that would be considered as normal and appropriate for the climate of the area.

In brief summary, Palmer Index values are based on all aspects of the moisture situation, but the Crop Moisture values refer only to the crop moisture situation. In addition, the PI values are highly dependent on antecedent moisture conditions, whereas CMI values are much more responsive to weekly or current rainfall, or the lack of it.

The CMI map will appear each week in the Bulletin during the season from now through October. The Palmer Index will be published only in the first issue of each month during the same period.





FIRST CLASS MAIL

World Weather and Crop Update

Weather patterns shifted last week. A high pressure system with much fair weather spread over the European USSR. The fair weather in much of the USSR enhanced harvest and planting previously retarded by cool, wet weather. Excellent harvest weather also prevailed east of the Urals. In contrast, shower activity increased in western Europe.

Rain fell in parched areas of western Europe, including France, Belgium, The Netherlands, and United Kingdom. Amounts ranged from about 1/4 to 1/2 in., although locally heavier quantities fell. However, much of the continent received nothing more than a more hopeful weather pattern. The region needs prolonged gentle rains.

In the Americas, timely and widespread rain fell in Argentina and encouraged tillering of winter wheat. In the latter half of August, rains relieved stress on coffee and other crops in Colombia. Reports from Brazil indicated a little frost damage to wheat, pastures, and vegetables in

Parana but no damage of consequence to coffee.

Relatively dry weather benefitted the small grain harvest in North America but whittled away at the U. S. corn and soybean prospects. Major producing areas escaped harmful low temperatures.

Rain relieved some dry areas in the Peoples Republic of China (PRC). Sparse rain fell in the stressed sections of Manchuria, but Typhoon Ellen provided excessive amounts in the southeastern coastal area and in Hong Kong. Rains in the Philippines increased seasonal accumulation and approached the rainy season normal.

India's monsoon performed actively much of the time and drenched portions of the southwest, particularly. Showers occurred in Sri Lanka and Java, two problem areas, but they appeared to be light and not widely distributed.

Australia suffered through another dry week in winter grain regions. Only isolated stations recorded beneficial amounts of rain. South Africa remained mostly fair, typical of the season.