# WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
**Environmental Data and Information Service, NOAA**

U.S. DEPARTMENT OF AGRICULTURE
**Economics, Statistics, and Cooperatives Service**

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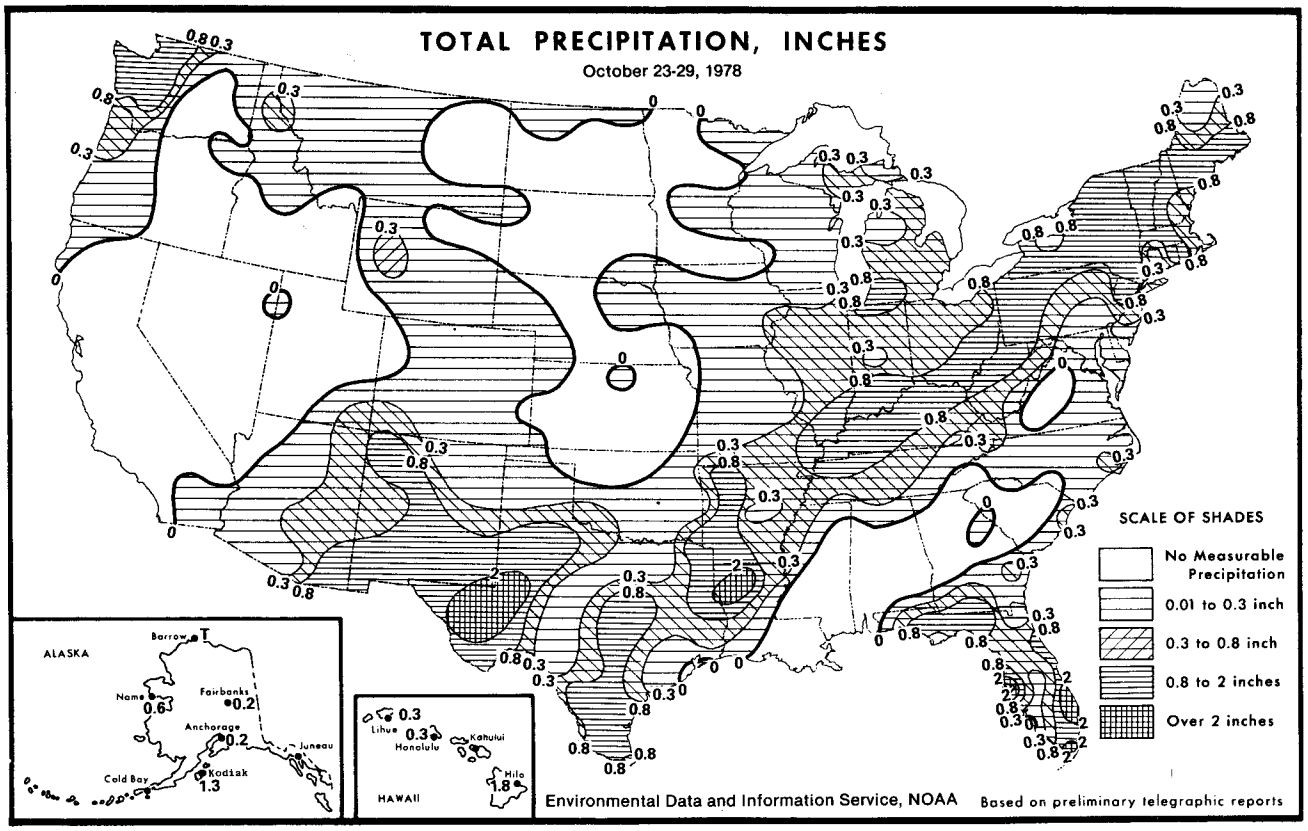


## National Weather Summary

October 23 - 29

HIGHLIGHTS: Unseasonably warm, dry conditions---favorable for farming activities---dominated most of the Southwest, northern Plains, and Southeast. Temperatures averaged 6 to 8 degrees above normal with no rain over most of Georgia and the southern San Joaquin Valley of California.

Cool, wet weather prevailed over southwestern Texas and southeastern New Mexico. Some Texas points totaled over 3 inches of rain and averaged up to 9 degrees below normal for the week. The cool pattern also extended into the Great Lakes while a rain-belt stretched from southern Texas to New England. A warm wet pattern developed over Florida with temperatures 3 to 6 degrees above normal and some points collecting more than 2 inches of rain.

The freeze/frost line dipped to the southern third of the country during the week. The line reached from the New England coast, across the Texas Panhandle to southwestern New Mexico, and close to the Pacific Northwest coast.

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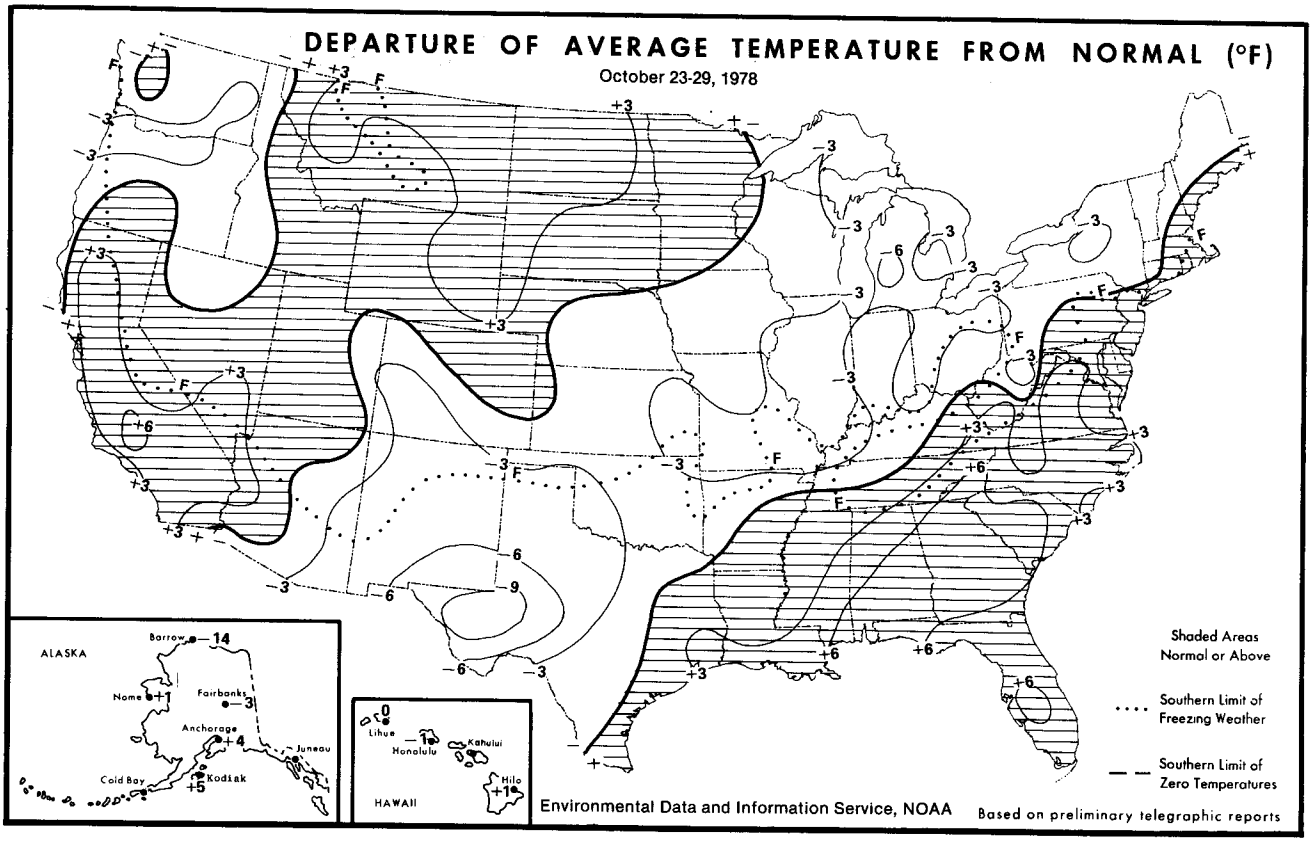
Monday rains spread over the Southwest dumping nearly an inch on points in Arizona and New Mexico and between 2 and 3 inches on Marfa, West Texas. A few showers touched the Pacific Northwest, Delta Region, Ohio Valley, and New York State.

Northerly winds and cool temperatures raced into the Plains and Great Lakes Region; however, readings reached record highs along the Atlantic Coast. Raleigh, N.C., hit a record-tying 84° while Asheville, western North Carolina, at 80°, and Atlantic City, N.J., at 78°, opened the record books.




A cold front streaked over the northern Rockies early Tuesday, but record warmth covered an area just to the east.

Aberdeen, northern South Dakota, checked in with a new high of 78°; Fargo, N. Dak., at 76°, topped a record that had stood since the 19th century. To the south, Columbus, western Georgia, matched its 84° mark.

Meantime moisture was fairly light except over southern Florida; Homestead chalked up nearly 2 inches.

A mantle of snow blanketed many stations in Wyoming and Colorado on Wednesday. Storms extended from East Texas across the Mississippi Valley to the Great Lakes, but most amounts remained below a half-inch. Downpours in the Delta Region and Ohio Valley drenched Shreveport, La., with 1.7 inches and El Dorado, southern Arkansas, and Paducah, western Kentucky, with almost an inch. Homestead, Fla., collected an additional three-quarters inch.

Cool, Canadian air slipped into the East Coast; Atlantic City's record high reading on Monday gave way to a new low of 29°.

On Thursday, the heaviest rain soaked several portions of Texas. Marfa noted another inch and one-third; in South Texas, Alice notched 1.19 in. and Corpus Christi got nearly an inch. Other areas of rain included the Ohio Valley and northern Atlantic Coast States, but totals failed to reach an inch.

Temperatures dipped sharply in the upper half of the Intermountain Region. Hanford, southern Washington, saw the mercury drop to a record low 21°. Winnemucca, northern Nevada, shivered at a record 11°.

By contrast, the East Coast States heated up to record highs. Wilmington, southern North Carolina, managed a record-equaling 83°. New high marks showed Baltimore's 81°, 82° at Roanoke, Va., and 86° at Columbus, Ga.

A relatively calm and seasonable Friday spanned much of the Nation. A few showers dotted New England, the Southeast, and Pacific Northwest; less than one-half inch was all they could muster. Late in the day, extremely light showers moistened the Great Lakes Region.

Temperatures were about consistent with the average; however, Wilmington, N.C., did manage a record-tying 83°.

On Saturday, downpours soaked portions of the Southeast and southern Texas. Extreme southwestern Georgia picked up nearly three-quarters inch while in Florida, Vero Beach called in about 2 inches and Tampa saw more than an inch and one-half. Scattered showers edged into the Pacific Northwest where a quarter-inch fell.

A stationary front over the Southeast kept rain along coastal sections of the Carolinas and Georgia and Florida. Nearly an inch covered Daytona Beach and Panama City. Light rain continued in the Pacific Northwest with some moisture slipping into the northern Rockies. A cold frontal system also carried into the same areas changing the rain to snow at the high elevations. Washington's Cascade Mountains measured 5 inches of the white stuff in some spots; in Montana, Bozeman and Livingston noted 2 inches.

Shifting to the east, a depression over the Bahamas gathered steam and became Hurricane Kendra. At week's end, the storm drifted northward about 400 miles off the southern Atlantic Seaboard posing only the threat of rough seas.

## National Agricultural Summary

October 23 - 29

HIGHLIGHTS: Farmers enjoyed another week of good harvest weather. Most areas of the Nation had 5 to 6 days suitable for fieldwork. Corn harvest advanced 16 points during the week and reached 73%, well ahead of last year's 68% and the 63% average. Soybean harvest advanced 14 points and stood at 72%, compared with 63% in 1977 and the 66% average. Cotton picking in the 11 Southern States reached 46%, lagging last year's 58% but surpassing the 38% average. Sorghum harvest in the 7 major producing States advanced to 80%, one point ahead of last year and eight points ahead of the average. Dry soils hindered wheat germination and growth, but most of the crop was already in the ground at 97% planted, compared with 92% last year and the 96% average. Adequate soil moisture held throughout the eastern north central States, and ranged to very short throughout the South, and short to adequate in other areas of the Nation. Fall plowing ranged from 15 to 40% complete in the Corn Belt--generally ahead of last year but lagging the average in some States.

SMALL GRAINS: Winter wheat seeding was virtually complete at 97%, ahead of 1977's 92% and the 96% average. Most acreage remaining to be seeded centered in the north central States. Although rains delayed planting in some areas, Texas planting reached 91% which is ahead of schedule. Texas wheat growth scored excellent, but many areas need more rain to provide fall grazing. In Oklahoma, 72% of the crop emerged but wheat pasture was unavailable; root systems were underdeveloped. Kansas wheat also provided very little pasture because dry soils slowed growth. South Dakota wheat rated good but needed moisture; spotty stands resulted where soils were dry at planting time. In the Corn Belt, emergence ranged from 55 to 67%; the crop rated fair to good. In the Pacific Northwest, early stands rated good, but late seedings emerged slowly because of dry soils.

CORN: The Nation's corn crop was 73% harvested, compared with 68% last year and the 63% average. Storage facilities in the Corn Belt were taxed forcing some grain to be stored temporarily on the ground.

In the eastern north central States, harvest stood at 61%, surpassing 1977's 57% and the 54% average.

In the western north central States, corn harvest advanced 18 points during the week to reach 78%, ahead of last year's 72% and the 64% average. Harvest neared completion in northern areas. Iowa continued to report light to moderate harvest losses.

In the South, harvest was almost finished, ranging from 78 to 91%.

SOYBEANS: The Nation's soybean harvest progressed to 72%, ahead of last year's 63% and the 66% average. Virtually all the crop matured.

In the eastern north central States, combining reached 84%, falling between last year's 78% and the 88% average. Ohio reported above-normal shattering losses.

In the western north central States, harvest advanced to 85%, surpassing both last year's 74% and the 84% average. Minnesota, Iowa, and Nebraska were nearly finished. Iowa reported light harvest losses.

In the south central States, harvest reached 58%, ahead of last year's 49% and the 41% average. Bean maturity ranged from 94 to 98%.

COTTON: Picking in the 11 major southern States reached 46%, lagging last year's 58% but ahead of the 38% average. Harvests surpassed last year in all States except Oklahoma and Texas. Cotton on the southern Plains needed a frost to defoliate plants. Texas harvest reached 30%, well behind the 54% last year. The long frost-free season and recent rains slowed harvest. Oklahoma stood at 9%, unchanged from a week earlier and well behind last year's 16%.

Arizona rains slowed harvest activity. New Mexico harvest reached 5%, well behind the normal 25%. California picking advanced to 23%.

OTHER CROPS: Grain sorghum harvest in the 7 major producing States advanced to 80%, compared to 79% last year and the 72% average. Rains delayed some Texas harvesting operations.

Potato digging rapidly approached completion throughout the northern production areas.

Rice harvest in the Delta was virtually complete. California rice harvest advanced to 79%.

FRUITS AND NUTS: Deciduous fruit harvests edged toward completion throughout the Nation. Apple harvest ranged from 95% in North Carolina to 85% in Ohio and Michigan. Fruit growers cultivated, pruned, and cleaned up orchards. Pecans rated poor to fair across the South with harvest ranging from 14% complete in Louisiana to 18% in Georgia.

Florida citrus groves rated excellent, growers irrigated to supplement inadequate rainfall. Trees showed very little new growth, but cool temperatures helped fruit color. Texas citrus harvest increased; fruit size was good. Arizona harvested lemons, Navels, and grapefruit. California Valencia harvest neared completion while Navels colored.

VEGETABLES: Northern growers harvested a few hardy vegetable crops; most activity centered in the South. Florida vegetable shipments increased 51% from the previous week on the strength of a wide range of crops. Florida plantings continued active with weather generally ideal for plant growth, fruit set, and sizing. Texas harvested cabbage, carrots, peppers, lettuce, and cucumbers, although rains interrupted activity in some areas. California vegetable harvests slowed from the central coast, but volume increased from the valley and desert areas.

PASTURE AND LIVESTOCK: Pastures rated fair to good in the north central States; poor to fair across the South; and poor in the West except good in the Pacific Northwest. Producers turned herds onto crop stubble fields as harvests advanced. Dry soils stressed grasslands in the South Atlantic States; some stock ponds and small streams dried in hard hit areas. Rains in Arizona restored stock tanks and improved ranges. In California, rangeland deteriorated; young grass was dying and presented a fire hazard in some areas. Texas ranges rated poor to good depending on recent rainfall. Livestock producers supplemented poor grazing and sharply culled herds.

## Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., Oct. 29, 1978

| States and Stations | Temperature °F Average | Temperature °F Departure | Precipitation Inches Total | Precipitation Inches Departure |
|---|---|---|---|---|
| ALA.Birmingham | 63 | + 4 | T | - .6 |
| Moblie | 73 | + 8 | 0 | - .4 |
| Montgomery | 69 | + 7 | 0 | - .4 |
| ALASKA.Anchorage | 34 | + 4 | .2 | - .1 |
| Barrow | - 4 | -14 | T | - .1 |
| Fairbanks | 15 | - 3 | .2 | + .1 |
| Juneau | -- | -- | -- | -- |
| Kodiak | 43 | + 5 | 1.3 | - .1 |
| Nome | 25 | + 1 | .6 | + .3 |
| ARIZ.Flagstaff | 42 | - 1 | T | - .3 |
| Phoenix | 69 | + 1 | .1 | 0 |
| Tucson | 63 | - 3 | .1 | 0 |
| Winslow | 51 | - 2 | .3 | + .2 |
| Yuma | 71 | - 1 | .2 | + .1 |
| ARK.Fort Smith | 58 | - 1 | .1 | - .7 |
| Little Rock | 59 | + 1 | .3 | - .4 |
| CALIF.Bakersfield | 70 | + 7 | 0 | - .1 |
| Eureka | 52 | - 2 | T | - 1.0 |
| Fresno | 65 | + 4 | 0 | - .1 |
| Los Angeles | 68 | + 1 | 0 | - .2 |
| Red Bluff | 66 | + 5 | 0 | - .4 |
| San Diego | 69 | + 5 | T | - .1 |
| San Francisco | 59 | 0 | 0 | - .3 |
| Stockton | 63 | + 3 | 0 | - .2 |
| COLO.Denver | 50 | + 2 | .2 | 0 |
| Grand Junction | 47 | - 3 | T | - .2 |
| Pueblo | 49 | - 1 | .1 | - .1 |
| CONN.Bridgeport | 55 | + 1 | .8 | + .1 |
| Hartford | 47 | - 2 | .2 | - .5 |
| D.C.Washington | 59 | + 3 | .2 | - .4 |
| FLA.Apalachicola | 71 | + 3 | .3 | + .1 |
| Daytona Beach | 75 | + 4 | 1.6 | + .6 |
| Ft. Myers | 79 | + 5 | T | - .6 |
| Jacksonville | 70 | + 3 | T | - .7 |
| Key West | 79 | + 1 | 1.7 | + .7 |
| Lakeland | 78 | + 6 | -- | -- |
| Miami | 79 | + 3 | 1.0 | - .5 |
| Orlando | 76 | + 4 | .3 | - .3 |
| Tallahassee | 71 | + 5 | 1.1 | + .6 |
| Tampa | 77 | + 5 | 2.2 | + 1.8 |
| W.Palm Beach | 78 | + 3 | 2.1 | + .5 |
| GA.Atlanta | 67 | + 8 | 0 | - .6 |
| Augusta | 67 | + 6 | 0 | - .4 |
| Macon | 70 | + 8 | 0 | - .5 |
| Savannah | 70 | + 6 | .1 | - .4 |
| HAWAII.Hilo | 76 | + 1 | 1.8 | - 1.0 |
| Honolulu | 77 | - 1 | .3 | - .2 |
| Kahului | -- | -- | -- | -- |
| Lihue | 77 | 0 | .3 | - .8 |
| IDAHO.Boise | 47 | - 1 | T | - .2 |
| Lewiston | 46 | - 2 | T | - .3 |
| Pocatello | 44 | 0 | 0 | - .2 |
| ILL.Cairo | 55 | - 3 | 1.3 | + .6 |
| Chicago | 47 | - 4 | .3 | - .3 |
| Moline | 47 | - 3 | .4 | - .1 |
| Peoria | 48 | - 3 | .6 | + .1 |
| Rockford | 46 | - 2 | .2 | - .4 |
| Springfield | 49 | - 3 | .4 | - .2 |
| IND.Evansville | 50 | - 4 | 1.0 | + .4 |
| Ft. Wayne | 47 | - 2 | .3 | - .4 |
| Indianapolis | 49 | - 2 | .3 | - .3 |
| South Bend | 47 | - 2 | 1.3 | + .6 |
| IOWA.Burlington | 48 | - 3 | .1 | - .5 |
| Des Moines | 48 | - 2 | .1 | - .3 |
| Dubuque | 45 | - 2 | .1 | - .5 |
| Sioux City | 46 | - 2 | .1 | - .2 |
| KANS.Concordia | 52 | 0 | T | - .3 |
| Dodge City | 52 | - 1 | 0 | - .3 |
| Goodland | 48 | 0 | .1 | - .1 |
| Topeka | 49 | - 4 | T | - .5 |
| Wichita | 53 | - 2 | T | - .4 |
| KY.Lexington | 51 | - 3 | 1.4 | + .9 |
| Louisville | 52 | - 2 | 1.1 | + .5 |
| LA.Baton Rouge | 69 | + 4 | 0 | - .6 |
| Lake Charles | 70 | + 3 | .1 | - .7 |
| New Orleans | 71 | + 5 | 0 | - .4 |
| Shreveport | 65 | + 1 | 1.9 | + 1.2 |
| MAINE.Caribou | 38 | - 2 | .3 | - .5 |
| Portland | 46 | 0 | .6 | - .2 |
| MD.Baltimore | 56 | + 2 | .2 | - .4 |
| MASS.Boston | 52 | 0 | .5 | - .3 |
| Chatham | 51 | -- | .4 | -- |
| MICH.Alpena | 41 | - 3 | .6 | + .2 |
| Detroit | 46 | - 3 | .6 | 0 |
| Flint | 45 | - 2 | .6 | + .1 |
| Grand Rapids | 41 | - 7 | .6 | 0 |
| Houghton Lake | 40 | - 4 | .1 | - .5 |
| Lansing | 43 | - 5 | .6 | + .1 |
| Marquette | 42 | - 3 | .3 | - .3 |
| Muskegon | 43 | - 5 | .4 | - .2 |
| S. Ste. Marie | 38 | - 4 | .1 | - .5 |
| MINN.Duluth | 41 | 0 | T | - .5 |
| Internatl Falls | 39 | 0 | T | - .3 |
| Minneapolis | 46 | + 1 | T | - .4 |
| Rochester | 42 | - 3 | 0 | - .3 |
| St. Cloud | 43 | 0 | .1 | - .3 |
| MISS.Jackson | 64 | + 2 | 0 | - .5 |
| Meridian | 65 | + 4 | 0 | - .5 |
| MO.Columbia | 52 | - 2 | .2 | - .4 |
| Kansas City | 52 | - 2 | T | - .6 |
| St. Louis | 51 | - 4 | .3 | - .3 |
| Springfield | 52 | - 3 | .2 | - .5 |
| MONT.Billings | 47 | + 2 | .1 | 0 |
| Glasgow | 44 | + 3 | T | - .1 |
| Great Falls | 46 | + 2 | T | - .1 |
| Havre | 45 | + 3 | T | - .1 |
| Helena | 44 | + 3 | T | - .1 |
| Kalispell | 41 | + 2 | T | - .3 |
| Miles City | 47 | + 3 | T | - .1 |
| Missoula | 43 | + 3 | T | - .2 |
| NEBR.Grand Island | 48 | - 1 | 0 | - .1 |
| Lincoln | 48 | - 2 | T | - .3 |
| Norfolk | 47 | - 1 | .1 | - .1 |
| N.Platte | 45 | - 1 | T | - .1 |
| Omaha | 49 | - 1 | T | - .3 |
| Valentine | 45 | 0 | T | - .2 |
| NEV.Ely | 44 | + 2 | 0 | - .1 |
| Las Vegas | 67 | + 5 | T | - .1 |
| Reno | 49 | + 2 | 0 | - .1 |
| Winnemucca | 44 | - 1 | 0 | - .2 |
| N.H.Concord | 46 | 0 | .8 | + .1 |
| N.J.Atlantic City | 53 | 0 | .2 | - .7 |
| Trenton | 54 | 0 | .2 | - .4 |
| N.MEX.Albuquerque | 50 | - 4 | .6 | + .5 |
| Roswell | 49 | - 6 | 1.3 | + 1.1 |
| N.Y.Albany | 47 | - 1 | .9 | + .3 |
| Binghamton | 45 | - 2 | .9 | + .2 |
| Buffalo | 47 | - 1 | 1.3 | + .6 |
| New York | 55 | 0 | .7 | 0 |
| Rochester | 48 | - 1 | .7 | + .1 |
| Syracuse | 46 | - 3 | .9 | + .2 |
| N.C.Asheville | 60 | + 7 | 0 | - .7 |
| Charlotte | 62 | + 4 | .1 | - .5 |
| Greensboro | 58 | + 2 | .1 | - .5 |
| Hatteras | 66 | + 4 | .2 | - .9 |
| Raleigh | 61 | + 4 | .1 | - .5 |
| Wilmington | 64 | + 2 | .1 | - .5 |
| N.DAK.Bismarck | 46 | + 4 | T | - .1 |
| Fargo | 44 | + 2 | T | - .2 |
| Williston | 45 | + 4 | T | - .1 |
| OHIO.Akron-Canton | 47 | - 2 | .6 | 0 |
| Cincinnati | 48 | - 5 | .7 | + .2 |
| Cleveland | 47 | - 3 | .6 | 0 |
| Columbus | 48 | - 2 | .3 | - .2 |
| Dayton | 47 | - 4 | .3 | - .2 |
| Toledo | 45 | - 4 | .5 | 0 |
| Youngstown | 46 | - 3 | .8 | + .1 |
| OKLA.Okla. City | 58 | 0 | T | - .5 |
| Tulsa | 57 | - 2 | T | - .6 |
| OREG.Astoria | 49 | - 2 | .6 | - 1.3 |
| Burns | 45 | + 2 | 0 | - .3 |
| Medford | 52 | + 2 | T | - .6 |
| Pendleton | 46 | - 3 | T | - .3 |
| Portland | 48 | - 3 | .3 | - .7 |
| Salem | 46 | - 4 | .4 | - .7 |
| PA.Allentown | 51 | + 1 | .3 | - .3 |
| Erie | 47 | - 1 | 1.5 | + .7 |
| Harrisburg | 53 | + 1 | .3 | - .3 |
| Philadelphia | 54 | 0 | .2 | - .4 |
| Pittsburgh | 47 | - 2 | 1.1 | + .5 |
| Scranton | 48 | - 1 | .7 | + .1 |
| R.I. Providence | 52 | + 2 | .8 | 0 |
| S.C. Charleston | 68 | + 5 | .2 | - .3 |
| Columbia | 68 | + 7 | 0 | - .5 |
| Greenville | 63 | + 5 | T | - .7 |
| S.D. Aberdeen | 45 | + 2 | 0 | - .2 |
| Huron | 45 | 0 | 0 | - .3 |
| Rapid City | 50 | + 4 | 0 | - .2 |
| Sioux Falls | 45 | 0 | T | - .3 |
| TENN.Chattanooga | 60 | + 3 | T | - .7 |
| Knoxville | 60 | + 3 | .2 | - .4 |
| Memphis | 61 | + 2 | .4 | - .2 |
| Nashville | 55 | - 2 | .6 | + .1 |
| TEX.Abilene | 59 | - 3 | .2 | - .3 |
| Amarillo | 51 | - 4 | .1 | - .2 |
| Austin | 66 | - 1 | 1.0 | + .4 |
| Beaumont | 73 | + 7 | T | - .8 |
| Brownsville | 75 | + 2 | .5 | 0 |
| Corpus Christi | 71 | 0 | 1.7 | + 1.2 |
| Del Rio | 66 | - 2 | .1 | - .2 |
| El Paso | 53 | - 7 | 1.2 | + 1.1 |
| Fort Worth | 62 | - 2 | T | - .6 |
| Galveston | 72 | + 2 | 0 | - .5 |
| Houston | 70 | + 2 | .1 | - .8 |
| Lubbock | 52 | - 5 | 1.1 | + .7 |
| Midland | 53 | - 9 | 2.4 | + 2.1 |
| San Angelo | 58 | - 6 | .3 | 0 |
| San Antonio | 66 | - 1 | .3 | - .2 |
| Victoria | 70 | + 1 | .3 | - .4 |
| Waco | 63 | - 2 | 1.6 | + 1.1 |
| Wichita Falls | 57 | - 5 | .7 | + .2 |
| UTAH.Blanding | 47 | 0 | .3 | 0 |
| Salt Lake City | 50 | + 2 | 0 | - .3 |
| VT.Burlington | 44 | - 1 | .9 | + .3 |
| VA.Lynchburg | 57 | + 3 | 0 | - .6 |
| Norfolk | 61 | + 2 | .3 | - .3 |
| Richmond | 57 | + 1 | T | - .7 |
| Roanoke | 55 | + 1 | T | - .7 |
| WASH.Colville | -- | -- | -- | -- |
| Omak | 41 | - 1 | T | - .3 |
| Quillayute | 47 | - 1 | 1.3 | - 1.7 |
| Seattle-Tacoma | 50 | + 1 | .9 | - .2 |
| Spokane | 39 | - 4 | .1 | - .3 |
| Walla Walla | 48 | - 2 | T | - .4 |
| Yakima | 44 | - 2 | 0 | - .2 |
| W.VA.Beckley | 52 | + 3 | .2 | - .4 |
| Charleston | 53 | 0 | .7 | + .1 |
| Huntington | 53 | 0 | 1.0 | + .5 |
| Parkersburg | 51 | - 2 | 1.3 | + .8 |
| WISC.Green Bay | 44 | - 1 | .1 | - .3 |
| La Crosse | 47 | 0 | T | - .4 |
| Madison | 44 | - 2 | .1 | - .3 |
| Milwaukee | 46 | - 1 | .1 | - .3 |
| WYO.Casper | 47 | + 4 | .1 | - .1 |
| Cheyenne | 44 | 0 | T | - .2 |
| Lander | 44 | + 2 | .3 | 0 |
| Sheridan | 46 | + 2 | T | - .2 |
| P.R.San Juan | 80 | 0 | 3.2 | + 2.0 |

Based on 1941-70 normals

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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 ESCS State offices in cooperation with the National Weather Service.

ALABAMA: Temperatures 6° above normal. Widely scattered showers, none most areas.

Fieldwork: 6 days suitable. Soil moisture very short. Harvest of crops major activity. Cotton 65% harvested, 61% 1977, 39% average. Corn 91% harvested, 87% 1977, 74% average. Soybeans 55% harvested, 37% 1977, 39% average. Peanut harvest virtually complete. Small grains 55% seeded, 65% 1977, 65% average. Pecans poor to fair. Pastures short, supplemental feeding necessary some areas.

ARIZONA: Rain statewide early week. Sunny skies, dry air 24th thru weekend. Rainfall mostly 0.25 to 0.67 in. Temperatures ranged 8° below normal to 3° above.

Cotton harvest delayed by rain; limited damage some areas. Sorghum harvest winding down. Corn harvest delayed southeast by rain. Sugarbeet harvest next week southeast. Spring beets central, western areas good stands. Alfalfa haying tapered off. Small grain preparations continued, some planting. Lettuce harvest tapering off southeast, increasing central areas. Western areas lettuce good progress. Mixed vegetables good progress. Melon harvest active. Lemon harvest increasing Yuma, Salt River Valley. Navel, grapefruit harvest underway but limited. Ranges received widespread, sometimes heavy rainfall. Soil moisture, stock water restored many areas. Cattle, calves mostly fair to good condition.

ARKANSAS: Temperatures near normal; precipitation light. Temperature extremes ranged between 27 and 87°; means near normal. Precipitation generally less than 0.50 in.

Weather good for harvest, although light rains occurred midweek. Soil moisture short to adequate. Fieldwork: 5.3 days available. Soybeans 46% combined, 41% 1977, 32% average. Cotton picking 72% completed, same as last year, 53% average. Rice harvest virtually completed, last year and average 95%. Corn harvest 82% completed, 100% 1977, 95% average. Sorghum harvest 96% combined, 98% 1977, 96% average. Oat planting 58% completed, 61% 1977, 71% average. Wheat seeding 56% completed, 51% 1977, 58% average. Pasture conditions below average. Cattle fair to good condition.

CALIFORNIA: Rain in Imperial Valley, otherwise dry. Temperatures above normal except southeast interior mercury ranged from 1° below normal to slightly above normal.

Cotton 28% harvested. Blackeye bean fair volume. Rice 79% harvested. Milo harvest slow. Deciduous fruit orchards, vineyards irrigated, cultivated, pruned. Emperor grapes packed reduced volume; color problems. Olives, persimmons, ponegranates, kiwi, dates, packed. Navel oranges advanced in color. Valencia harvest virtually complete. Walnut harvest continued. Artichokes, brussels sprouts, carrots, slow central coast, volume from valley and desert. Broccoli, cauliflower, celery, good supply. Fresh market tomatoes, bell peppers, moderate. Onions, fall potatoes, active Tulelake. Pumpkins seasonal high. Supplemental feeding continues as range deteriorated from lack moisture. Rangeland grasses germinated by earlier rains dead or dying. Fires destroyed some pastures. Calving, lambing continued active. Sheep grazing bean, alfalfa stubble.

COLORADO: Cold, wet weather 25th was repeat of previous weekend. Heavy snow mountains; rain, light snow elsewhere. Temperatures 1 to 6° below normal.

Winter wheat emerged 87%, 94% 1977, 90% average. Sugarbeets harvested 61%, 75% 1977, 69% average. Corn harvested for grain 70%, 83% 1977, 52% average. Sorghum harvested for grain 49%, 70% 1977, 45% average; for forage 97%, 97% 1977, 94% average. Ranges and pastures poor condition. Fieldwork: 5 days suitable.

FLORIDA: Early period showers over south. Midweek mostly cloudy skies. Temperatures slightly above normal.

Soil moisture short west, north, central; however, weekend showers beneficial. Moisture mostly adequate south. Soybean harvest nearing completion west, just beginning south. Peanut and hay harvest about complete. Cotton harvest beginning. Land preparation, planting small grains delayed due to dry weather. Sugarcane good condition. Pecan harvest active. Panhandle pasture continues to deteriorate under serious moisture stress. Cattle condition also declined but remains good elsewhere. Northern and central pastures mostly poor to fair, mostly good in south. Citrus grove condition excellent; rain needed, irrigation continues. Very little new growth. Cool temperatures helped fruit color. Fresh fruit harvest very active. Vegetable crops fair to excellent conditon. Harvest increasing. Overall shipments up 51% from previous week. Snap bean, cucumbers, eggplant, escarole, lettuce, okra, peppers, squash, tomato shipments increased substantially. Carrot, chinese cabbage, radish supplies also increasing. Corn supplies steady. Cabbage, celery harvest getting underway. Plantings continue active various crops. Weather generally ideal for plant growth, progress, fruit set, sizing. Moderate to heavy volume expected most crops last half November. Strawberry transplanting active. Growth good early acreages. Light water damage some low areas Dade County.

GEORGIA: Unseasonably mild temperatures, mostly 3 to 7° above normal, ranging from around 60° extreme north to around 70° south. Drought continued except for light rainfall in lower southeast. Mild weather through weekend. Additional rainfall over weekend.

Soil moisture very short, except coast short. Fire hazard very high. Fieldwork: 6 days suitable. Dry soils limited planting. Corn 91% harvested, last year 92%, average 73%. Peanut digging almost complete, threshing 99%, last year 98% dug and 95% threshed, average 99% and 97%. Soybeans poor to mostly fair; 40% combined, last year 18%, and average 18%. Cotton mostly fair to good; 68% picked, last year 41%, average 41%. Apples mostly fair to good; 95% picked, last year 94%. Pecans fair; 18% gathered, last year 23%, quality mixed on early harvest. Small grain seeding restricted by drought, some planting in dust. Wheat 28% seeded, last year 47%; rye 26% planted, last year 61%; other small grains 25% planted, last year 57%, average 50%. Pastures under severe stress, mostly poor to fair. Cattle also declining, mostly fair to good. Hogs fair to mostly good.

HAWAII: Favorable weather continued. Rains beneficial on island of Hawaii. Most areas other

islands rainfall light, windward sections; leeward areas dry.

Heavy irrigation some sections. Crop progress fair to good. Few chinese cabbage plantings island of Hawaii abandoned to disease problem. Vegetable supplies: Most cabbage crops, sweetpotatoes, ample; others light to moderate. Banana supplies increasing seasonally. Papaya supplies heavy. Pineapple harvesting slow. Sugar harvesting steady. Showers beneficial to pastures; condition generally good.

IDAHO: Temperatures near normal. Limited amount of precipitation; maximum 0.12 in.

Fall harvest nearing completion except for sugarbeets which is still active. Farmers busy fall plowing where possible. Livestock grazing in harvested fields.

ILLINOIS: Temperatures 3 to 5° below normal. Precipitation light to 0.75 in., extreme southwest over 1.00 in.

Corn 79% harvested, 1977 66%, average 69%. Soybeans 94% combined, 1977 84%, average 94%. Winter wheat acreage 95% seeded, 1977 78%, average 88%. Grain sorghum harvest 70% complete. Plowing 1979 corn and soybean acreage 40% complete, 1977 19%, average 29%. Pasture conditions fair to good. Fieldwork: 5.5 days suitable. Soil moisture adequate.

INDIANA: Sunny cool week. Midweek showers 0.30 to 0.60 in. Temperatures ranged from 24 to 74° which were 2 to 4° below normal. October lows of less than 30°, heavy frost covered state except near Lake Michigan and Evansville/Dubois area.

Fieldwork averaged 5 days. Corn 55% harvested, 1977 60%, average 45%. Soybeans 75% combined, 1977 70%, average 80%. Wheat 85% seeded, 1977 70%, average 85%; 55% emerged, stands fair to mostly good. Spring crop land 25% plowed, 1977 20%. Tobacco 10% stripped. Topsoil and subsoil moisture adequate. Pastures fair.

IOWA: Dry with near normal temperatures.

Fieldwork: 5.9 days favorable. Topsoil and subsoil moisture adequate. Corn harvested 80%, 70% 1977, 59% normal; harvest loss currently light to moderate. Corn storage mostly short, some outside storage. Soybeans harvested 93%, 83% 1977, 92% normal; light harvest loss. Popcorn harvest 93%. Sorghum harvest 77%, 63% 1977, 70% normal. Fall plowing completed 20%, 19% 1977, 23% normal. Livestock good condition. Market movement stable.

KANSAS: Moisture limited to first of week; 0.25 to 0.50 in. east and north. Locally over 0.75 in. northwest, 0.10 in. or less southwest. Temperatures averaged 48° northwest, 53 to 55° elsewhere, or normal southeast and east central to 1 to 2° above normal elsewhere.

Extremely dry; wheat growth slow, very little wheat pasture. Wheat seeding nearing completion; 98%, last year 95%, average 95%. Winter barley seedings virtually completed. Corn harvest 90% complete, last year 85%, average 55%. Sorghum grain harvest 80% complete, last year 65%, average 50%. Soybean harvest 75%, last year 55%, average 60%. Sugarbeet harvest underway. Fieldwork: 6 days suitable.

KENTUCKY: Temperatures near or slightly below normal. Rainfall averaged 0.50 to 0.75 in. south and east, 1.00 to 1.25 in. west and north. Most of rain fell 25th and 26th.

Soil moisture adequate to short. Showers limited days suitable fieldwork to 4.4. Corn harvest 72% complete, 71% last year and average 69%. Harvest near completion west. Soybeans 62% harvested, last year 55% and average 58%. Burley tobacco 11% stripped, last year 24%, average 17%. Housing was ten days to two weeks later than last year and damp weather would now hasten stripping. Thin leaf, big and of top quality being stripped but some concern over weight. Winter wheat 75% seeded. Recent showers beneficial for germination and growth of new crop. Winter hay supply ample in central, some short areas in west and southeast.

LOUISIANA: Temperatures 3 to 5° above normal. Extremes: 86 and 39°. Scattered light showers north.

Fieldwork: 5.7 days suitable. Soil moisture short. Cotton 82% harvested, 67% last year, 46% average. Soybeans 73% harvested, 59% last year, 56% average. Sugarcane 15% harvested, 17% last year, 16% average; planting nearly complete. Sweetpotatoes 89% harvested, 81% last year, 85% average. Oats and wheat 75% seeded, 53% last year, 70% average. Pecans fair; 14% harvested. Hay and pasture fair. Cattle fair to good.

MARYLAND & DELAWARE: Temperatures 4° above normal. Highs in mid-70's, lows in 40's. Precipitation light to moderate, averaging from 0.10 to 0.25 in.

Fieldwork: 6.6 days suitable. Soil moisture short. Pastures below average. Corn for grain 85% harvested, 91% 1977, 79% average. Soybeans 50% harvested, 45% 1977, 43% average. Seeding of small grains progressing slowly, many farmers waiting for rain. Stands need moisture for germination. Tobacco growers stripping this year's crop and fumigating tobacco beds. Apple harvest continued under favorable weather.

MICHIGAN: Temperatures ranged from near normal to 7° below normal. Daytime highs in 50's, early morning lows in 20's. Precipitation light over Upper, moderate over Lower. Traces of snow Upper Peninsula.

Fieldwork: 5 days suitable. Soil moisture adequate. Pasture adequate. Fall acreage plowed 15% complete. Grain corn 45% harvested, 30% last year, 45% normal. Corn silage 95% chopped, 85% last year, 95% normal. Winter wheat 95% sown, 70% last fall, 90% normal. Dry beans over 95% harvested, 70% last year, 95% normal. Soybeans 60% combined, 50% last fall, 75% normal. Sugarbeets 80% dug, 40% last year, 65% normal. Potato harvest 95% complete, 90% last year, 95% normal. Apples: Jonathans and Red Delicious 90% picked, other apples 80%. Grape harvest about finished.

MINNESOTA: Temperatures near normal. Extremes: 76 and 11°. Precipitation averaged 0.32 in. below normal. Amounts ranged from 0.01 to 0.06 in. northeast and southwest and 0 elsewhere.

Except for corn, harvest nearly completed. Most corn picking should be wrapped up this week if weather permits. Many country elevators temporarily storing corn on ground until bin space becomes available. Topsoil moisture short in west. Harvested: Corn 85%, 1977 82%, normal 79%; soybeans 96%, 1977 92%, normal 96%; sunflowers 98%, 1977 93%, normal 89%.

MISSISSIPPI: Temperatures 1 to 10° above normal. Extremes: 34 and 89°. Widely scattered light rain over northern third midweek; elsewhere dry.

Soil moisture very short. Fieldwork: 6.0 days suitable. Dry weather continued; great for harvest, bad for winter grazing. Soybeans 94% mature, 89% 1977, 79% average; 62% harvested, 53% 1977, 40% average. Cotton 86% harvested, 79% 1977, 54% average. Corn 87% harvested, 84% 1977, 70% aver-

age. Sorghum 97% harvested, 89% 1977, 83% average. Hay crops 97% harvested, 96% 1977, 95% average. Winter wheat 63% planted, 73% 1977, 67% average. Pecans poor to fair condition. Wheat and pastures poor condition. Livestock fair to good condition.

MISSOURI: Temperatures near normal, large daily departures. Lows in 20's and 30's, frost general. Precipitation 0.25 in.

Fieldwork: 5.2 days suitable. Soybeans 68% harvested, last year 54%, normal 69%. Corn 61% harvested, last year 66%, normal 62%. Grain sorghum 67% harvested, last year 75%, normal 65%. Cotton 80% harvested, last year 74%, normal 52%. Winter wheat seeding 74% complete, last year 52%. Fall plowing for spring planted crops 32% complete, last year 28%. Condition of pasture mostly fair to good. Soil moisture short to adequate.

MONTANA: Snow locally, heavy at times in higher elevations, with significant amounts lower elevations 29th. Week began mild with temperatures turning much colder and minimums falling to near 0° southwest weekend. Temperatures near 3° above normal.

Soil moisture adequate. Fieldwork: 6.4 days suitable. Harvest progress: Potatoes 95%, normal 95%; sugarbeets 95%, normal 90%. Winter wheat condition good. Livestock good to excellent condition. Cattle moved from summer ranges 75%, normal 80%; sheep moved from summer ranges 75%, normal 85%. Range livestock receiving supplemental feed 5%, normal 10%. Livestock feed supplies for winter adequate.

NEBRASKA: Temperatures near normal. Precipitation early week ranging from 0.25 in. to 1.00 in.

Corn harvested 70%, last year 70%, normal 60%. Grain sorghum harvested 85%, last year 80%, normal 80%. Soybeans harvested 90%, last year 80%, normal 85%. Winter wheat condition fair to good. Pasture and range feed supplies adequate. Fieldwork: 5.5 days suitable.

NEVADA: Warm, pleasant, fall weather continued. No precipitation reported. Temperatures 3 to 7° above normal. Extremes: 84 and 3°.

Potato harvest nearing completion. Livestock coming off summer ranges in good condition.

NEW ENGLAND: Cold front 23d brought light rain, generally 0.10 to 0.30 in. Stronger front 26th accompanied by 0.50 to 0.75 in. Weak front 28th left only a few light showers in north. Temperatures fluctuated from well above normal on each of days before frontal passage to below normal on day following front.

NEW JERSEY: Temperatures 2° below normal. Extremes: 19 and 80°. Rainfall averaged 0.59 in. north, 0.23 in. central and 0.35 in. south.

Showers beneficial for fall seeded grains and cover crops. Harvest of hardy vegetables continues moderate but declining. Apple and cranberry harvests active. Many growers have completed harvest. Combining of soybeans and corn for grain very active. Seeding of grains and cover crops continued. Early plantings growing nicely.

NEW MEXICO: Extensive rains with snows mountains first half of week. Substantial moisture totals all sections except northwest plateau and extreme northeast.

General rains, very little fieldwork. Very little cotton picked; about 5% harvested compared with normal 25%. Very little alfalfa baled. Quite a bit of down hay damaged. Very little corn or sorghum cut. Lettuce and chile picking held up. Livestock good, shipments heavy.

NEW YORK: Temperatures near normal; near or below freezing on 3 days. Rain moderate to heavy; heaviest on 26th, 0.50 to 1.00 in. reported.

NORTH CAROLINA: Temperatures 5° above normal. Precipitation heaviest east, 0.55 in.; elsewhere 0.10 in.

Fieldwork: 6.1 days suitable. Soil moisture short. Condition of soybeans, peanuts and cotton fair to good. Pasture poor to fair. Harvested: Peanuts dug 100%, 1977 90%, average 93%; peanuts threshed 94%, 1977 94%, average 88%; sweetpotatoes 90%, 1977 89%, average 82%; soybeans 25%, 1977 12%, average 10%; corn for grain 94%, 1977 100%, average 86%; apples 95%, 1977 91%, average 92%; sorghum 86%, 1977 77%, average 71%; cotton 45%, 1977 44%, average 38%. Planted: Wheat 45%, 1977 46%.

NORTH DAKOTA: Dry weather continued. Measurable rain fell only in far west. Temperatures 2 to 6° above normal. Extremes: 15 and 81°.

Soil moisture declined again, mostly short. Harvest winding to close with sunflower and corn for grain only crops with significant amount of acres to be harvested. Sunflower 90% combined. Corn for grain 88% picked. Most cattle still on ranges and stubble fields and mostly in good condition.

OHIO: Rainfall lightest in the northwest but over 1.00 in. south. Temperatures moderate with highs in 60's; averages mostly below normal by 1 to 2°. Frost occurred over virtually all of state, hard freeze in north.

Corn borer and root rot damage becoming more evident in corn as well as root rot in soybean fields. More than normal shattering of beans. Producers stripping a good quality tobacco. About 67% wheat acreage emerged and looks good. Corn harvested 55%, 55% 1977, 50% average. Soybeans harvested 75%, 80% 1977, 85% average. Sugarbeets harvested 50%, 55% 1977, 55% average. Popcorn harvested 65%, 60% 1977, 55% average. Apples picked 85%. Potatoes dug 95%. Wheat planted 95%, 85% 1977, 95% average. Fieldwork: 4.5 days favorable. Pasture condition good. Soil moisture adequate.

OKLAHOMA: Temperatures ranged from near normal east central to 4° below normal Panhandle. Precipitation light except southeast.

Topsoil and subsoil moisture supplies short. Wheat pasture unavailable due to dry weather. About 72% of wheat up to stand and in fair condition. Root system under-developed at present. Last year 80% was up compared to 69% normal. Corn harvest 90% complete 1978 and 1977, 77% normal. Sorghum harvest 32% complete, 49% 1977 and normal. Cotton harvest awaiting killing frost; about 9% harvested, 16% 1977 and 7% normal. Pastures in very dry condition. Almost 75% furnishing inadequate supplies of forage. Livestock fair condition.

OREGON: Rainfall light, few showers in northwest; amounts less than 0.20 in. Temperatures near to 5° above normal. Extremes: Mid-70's, high 20's west; upper 70's, low teens east.

Surface moisture short to adequate. Fall seedind continued. Grain emerging slow because of moisture shortage. Spring grain harvest done. Silage corn harvest winding down. Clover seed harvest virtually complete. Tree fruit harvests just about done except for some late apples in

Willamette Valley. Post-harvest activity in progress. Filbert and walnut picking continued. Filberts nearly done but walnuts need rain to drop. Cool weather vegetable harvests continued. Onions done and potatoes nearing completion. Feed supply in good shape. Rain needed for pasture and ranges. Cattle coming off summer range in good shape. Livestock good to excellent.

PENNSYLVANIA: Ideal clear fall weather 25th and 27th through weekend with daily highs mostly 50's and 60's and lows 20's and 30's. Extremes: 80 and 17°. Showers north 23d and general rain 26th totaled 1.00 to 1.50 in. north decreasing to 0.25 in. south.

Ideal fall weather allowed continuation of corn and apple harvesting and seeding small grains.

PUERTO RICO: Island average rainfall 6.89 in. or 5.13 in. above normal. Temperatures averaged about 79° on coasts and 74° interior. Extremes: 95 and 57°.

SOUTH CAROLINA: Temperatures above normal; warmest last half of week. Scattered showers mostly in east 27th and 28th.

Soil moisture very short. Fieldwork: 6 days available. Corn essentially harvested. Cotton harvest 81%, 62% last year, 52% average; yields not seriously affected by dry weather. Soybeans maturing rapidly under drought stress; harvesting 20%, 10% last year, 9% average; yields cut by dry weather. Small grain planting slowed without germination moisture; wheat 29% planted, 38% last year, 25% average; 19% emerged. Winter grazing 71% planted, 84% last year, 73% average. Fall hay 92% harvested, 94% last year. Pasture condition poor to fair, dry stresses. Livestock condition fair to good, very little grazing. Peanuts 92% harvested, 88% last year. Tobacco markets closed after business 26th. Some vegetables still being harvested, primarily southern coast.

SOUTH DAKOTA: Dry fall weather continued. Precipitation widely scattered and light. Temperatures ranged from 4° below normal southeast to 7° above normal north central.

Fall sown grains generally good but need moisture. Stands spotty where moisture short at planting. Stock water supplies generally adequate. Livestock moving off pastures and ranges. Topsoil moisture short; subsoil moisture adequate. Fieldwork: 6.3 days suitable. Corn for grain 75% harvested, 1977 58%, normal 70%. Grain sorghum 80% harvested, 1977 77%, normal 72%. Soybeans 95% harvested, 1977 87%, normal 95%. Sunflowers 80% harvested, 1977 69%.

TENNESSEE: Weather cloudy and warm. Temperatures normal west, 3 to 5° above normal east. Rainfall light; amounts 0.50 in.

Fieldwork: 5.3 days suitable. Soil moisture short. Corn harvested 78%, 1977 70%, average 59%. Cotton harvested 84%, 1977 76%, average 44%. Soybeans mature 98%, 1977 96%, average 78%; harvested 65%, 1977 55%, average 33%. Burley tobacco stripped 33%, 1977 53%, average 43%. Fall plowing completed 77%, 1977 81%, average 81%. Wheat seeded 71%, 1977 73%, average 69%. Oats seeded 89%, 1977 92%, average 89%. Barley seeded 90%, 1977 92%, average 90%. Pasture poor. Cattle on supplemental feed in fair condition.

TEXAS: Cooler temperatures, scattered showers, thundershowers. Rainfall above normal Trans-Pecos, South Texas, lower Valley; below normal along upper Coast; near normal elsewhere. Temperatures ranged from upper 50's Panhandle to low 70's along coast. Temperatures below normal High Plains and Trans-Pecos and above normal East Texas; near normal elsewhere.

Cotton, sorghum, peanut harvests continued lag behind schedule; rains caused delays High, Low Plains. Soybean, sugarbeet harvests on schedule, corn harvest nearing completion. Seeding wheat, oats, flax ahead schedule. Rains helped revive dryland stands, boosted growth rates. Cotton harvest slight progress; rains High, Low Plains stopped activity. Some fields defoliated, ready harvest, most farmers will wait for first frost. Land preparation continued southern areas moisture conditions permit. Sorghum continues lag behind schedule. Some progress early in week; rains High, Low Plains kept activity low level. Corn harvest on schedule; some lodging northern High Plains where farmers in final stages harvest. Peanut harvest moved forward at good pace; rains Cross-Timbers loosened soils, made crop easier dig. Soybean harvest rapid progress High Plains, Blacklands, East Texas. Upper Gulf Coast farmers far short of halfway mark. Wheat seeding continued well ahead schedule though some delays noted because of rain. Good moisture received on High, Low Plains, parts Blacklands, East Texas. Growth excellent High, Low Plains but more rain needed across rest of state. Oat seeding well ahead last year's schedule. Rains revived stands Blacklands, East, South, South central Texas. Few localities still short moisture. Corn harvested 98%, 100% 1977, 97% average. Cotton harvested 30%, 54% 1977, 34% average. Peanuts harvested 70%, 74% 1977, 64% average. Pecans harvested 8%, 11% 1977, 7% average. Sorghum harvested 87%, 95% 1977, 94% average. Soybeans harvested 47%, 54% 1977, 51% average. Sugarbeets harvested 39%, 42% 1977, 42% average. Sunflowers harvested 67%, 86% 1977, 76% average. Oats planted 89%, 73% 1977, 80% average. Wheat planted 91%, 79% 1977, 88% average.

Citrus harvest picked up; size of early fruit good. Harvests of carrots, cabbage, bell peppers, lettuce, cucumbers and potatoes active. Vegetable harvest interrupted by rain some areas. Pecan harvest in progress.

Most range and pasture land responded to recent rains. Blacklands and north central continued dry weather afforded little forage development; livestock into winter in poor condition. Supplemental feeding and heavy culling active. Panhandle cattle continue to move into stalks and wheat pastures. Edwards Plateau ranges and livestock in good condition.

UTAH: Quite general shower and thunderstorm activity south and east forepart period. Few isolated very light showers northwest. Amounts extremely variable ranging from little or none northwest to well over 1.00 in. few stations south. Cooling trend northwest weekend. Temperatures ranged 3° below normal to 6° above.

Soil moisture deficit becoming critical most dryland grain and ranges. Winter wheat planting virtually completed. Sugarbeet harvest nearing completion. Late season apple harvest completed. Fieldwork: 7 days suitable. Livestock mostly on lower ranges. Some movement to fall market.

VIRGINIA: Warm most of period. Cooler temperatures 24th and 25th. Extremes: 86 and 23°. Widely scattered light showers 24th and 27th.

Topsoil moisture short. Fieldwork: 5.9 days available. Pastures poor to fair. Harvest progress well advanced due to long period favorable weather. Corn harvest 73%, 80% 1977, 67% average; soybeans 38%, 15% 1977, 20% average; peanuts dug 98%, 85% 1977, 90% average; peanuts picked 93%, 60% 1977, 74% average; grain sorghum 29%, 22% 1977; cotton 75%, 0% 1977, 11% average. Seeding

progress: Wheat 43%, 50% 1977, 55% average; barley 68%, 83% 1977, 77% average; winter oats 80%, 91% 1977, 80% average. Several farm ponds and some small streams dried up especially in north and west. Some small grain plantings prevented because of dry, hard soils. Winding up apple harvest. Marketing tobacco.

WASHINGTON: West: Temperatures near normal to 2° below normal. Precipitation averaged 0.30 to 2.10 in. below normal.

First frosts sent perennials into dormancy. Carrot and potato digging continued. Silage and sweet corn, celery, and cabbage near complete. Pastures and livestock good.

East: Temperatures 1 to 2° below normal. Precipitation averaged 0.20 to 0.40 in. below normal.

Apple harvest complete. Cleanup and rodent control main orchard activities. Digging potatoes and sugarbeets continued. Grape and vegetable harvests near complete. Early seeded grain looks good. Greenbug, aphids are problem. Late seeded grain struggling to emerge. Some hay being hauled from fields.

WEST VIRGINIA: Temperatures above normal except southern sections. Extremes: 80 and 20°. Precipitation above normal except south and northeast.

Fieldwork: 5 days suitable. Soil moisture mostly adequate to short. Major activities: Harvesting corn, caring for livestock and seeding small grains. 3d cutting of hay 91%. Corn harvested 72%. Wheat planted 77%. Barley sown 84%. Hay growing condition good. Pasture condition fair to good. Hay supply adequate to surplus. Meadows furnishing most of pastures. No major feeding of hay.

WISCONSIN: Temperatures near normal. Highs in 50's and 60's except cooler 23d. Lows in 20's and 30's. Extremes: 65 and 23°. Rainfall very light, averaging 0.10 in. or less.

Fieldwork: 6 days suitable. Corn for grain 45% harvested, 1977 60%, normal 50%. Storage space tight. Soybeans 45% combined, 1977 and normal 55%. Fall plowing increasing as crops harvested. Fall plowing 25% done, 1977 25%, normal 40%. Most haying completed with storage full. Fall pastures very good, many beef and dairy herds out on grass and harvested corn fields. Most potato growers done harvesting. Some cranberry growers have completed harvesting. Apple picking continuing. Tobacco curing well in sheds. Soil moisture supplies adequate; surplus east.

WYOMING: Temperatures generally several degrees above normal with only below normal temperatures coming in from Green, Bear, and Upper Platte drainages. Precipitation well below normal except Upper and Lower Platte drainage areas both above normal.

Topsoil, subsoil moisture short. Acreage harvested: Potatoes 95%; sugarbeets 92%, average sugar content around 17.1% compared to 17.3 last year; corn for grain 34%. Winter wheat mostly good to fair although additional moisture needed. Livestock condition average to above average.

## World Weather and Crop Update

October 23 - 29

USSR. Harvest conditions improved since the previous week in the Ukraine with below-normal moisture (less than 10 mm) over the southern half of the Republic. Above-normal rain fell across northern portions and also along the lower and middle Volga River area. Some progress should have been made on the sunflower harvest, but sugarbeet and potato harvests continued to lag, especially in the northern areas.

PEOPLE'S REPUBLIC OF CHINA. At least temporary relief from dryness came to the Yangtze Valley and most of the North China Plain when above-normal amounts of 20 to 40 mm fell. Totals of 70 to 80 mm were common in the upper reaches of the valley. The winter wheat will benefit greatly from the moisture, although some icing may have occurred. Temperatures closed in on freezing over the weekend during periods of precipitation. Totals along the southwest coast held quite low (0 to 10 mm), but the rice harvest was well underway in this area.

S.E. ASIA. Heavier-than-normal rainfall dotted Thailand and covered most of the northern half of Vietnam. Elsewhere, accumulations were generally light. Malaysia and Indonesia continued to enjoy near-normal rainfall. The Philippines weathered Typhoon Rita; the hardest hit area centered just north of Manila---a region considered to be the rice bowl of the Philippines. Winds peaked at 130 mph.

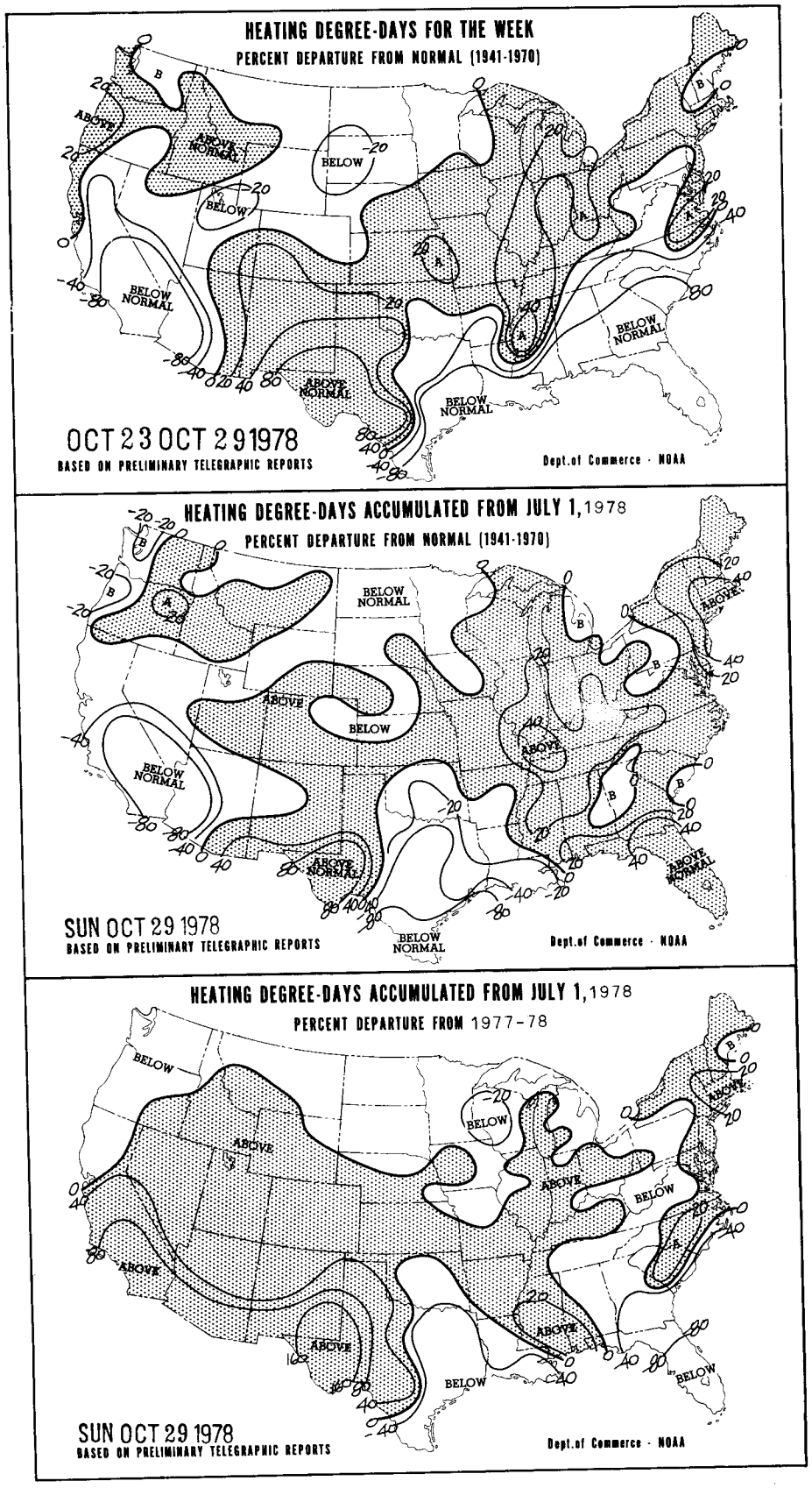
AUSTRALIA. Near-normal rains brought the most moisture in three weeks to the important winter wheat producing portions of Australia. However, the wheat crop is rapidly approaching maturity and should not require much additional moisture.

INDIA. Rainfall in the southern States continued in a normal fashion with 30 to 50 mm prevalent. Northern Sri Lanka reported more than 150 mm of rain---well above normal for this time of year. Some rain also dampened the northeastern portions of the winter wheat area, but the bulk of the region remained dry for the third consecutive week. However, irrigation supplies appeared excellent over most of the country.

AFRICA. Dryness prevailed in Morocco, Algeria, and Tunisia delaying wheat planting in many areas. However, much-above-normal rains of 40 to 90 mm fell along the coast of Libya. The normal rainfall pattern held in Central Africa; variable but generally normal amounts, ranging from 5 to 30 mm, dampened the Maize Triangle of South Africa.

EUROPE. Dry conditions continued to prevail over much of Europe with little or no precipitation reported in Spain, Italy, and France. While this weather has provided excellent conditions for the harvesting of summer crops and the sowing of winter grains, soil moisture levels are becoming seriously low particularly in southern France and Spain. Agriculture in Spain depends on the "winter" rains which are already several weeks late. In eastern Europe, rainfall neared normal in northern areas with 10 to 25 mm common, but less than 10 mm fell over southern countries.

AMERICAS. Well-above-normal rains fell over the key grain growing regions of Argentina and reached into southern Parana of Brazil. However, the bulk of the coffee and soybean producing areas seemed to have missed significant moisture. In Argentina, amounts ranged from 30 to 75 mm over most of Buenos Aires and La Pampa provinces insuring adequate moisture for the winter wheat which is approaching maturity. The rain also provides full soil moisture profiles for corn and other row crops. Although the more general rains of the previous week helped crops in Parana, additional moisture will be needed soon. In Canada, conditions were favorable for winding down the harvest.


HEATING DEGREE-DAYS FOR THE WEEK
PERCENT DEPARTURE FROM NORMAL (1941-1970)
OCT 23 OCT 29 1978
BASED ON PRELIMINARY TELEGRAPHIC REPORTS
Dept.of Commerce · NOAA
HEATING DEGREE-DAYS ACCUMULATED FROM JULY 1, 1978
PERCENT DEPARTURE FROM NORMAL (1941-1970)
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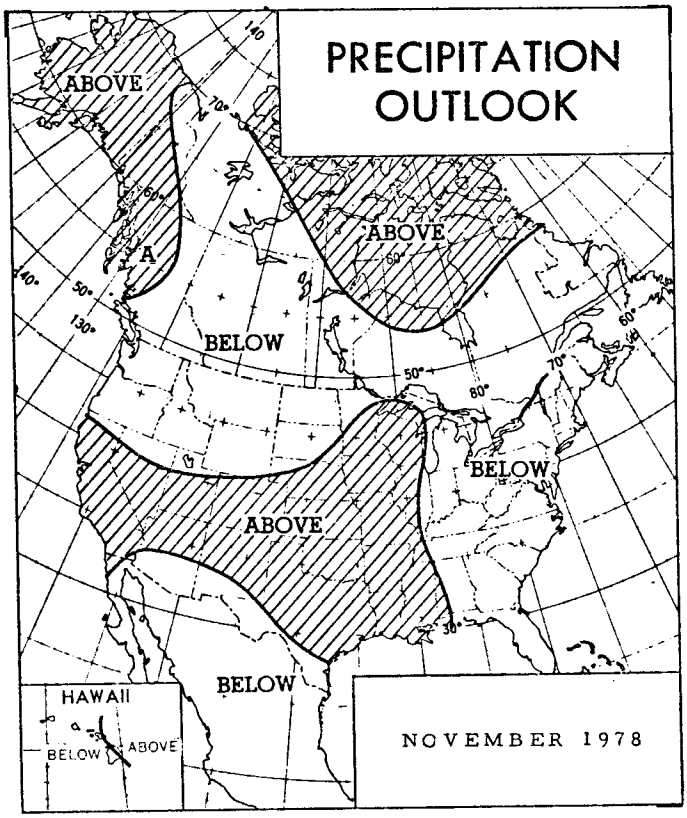
PERCENT DEPARTURE FROM 1977-78
SUN OCT 29 1978
BASED ON PRELIMINARY TELEGRAPHIC REPORTS
Dept.of Commerce · NOAA

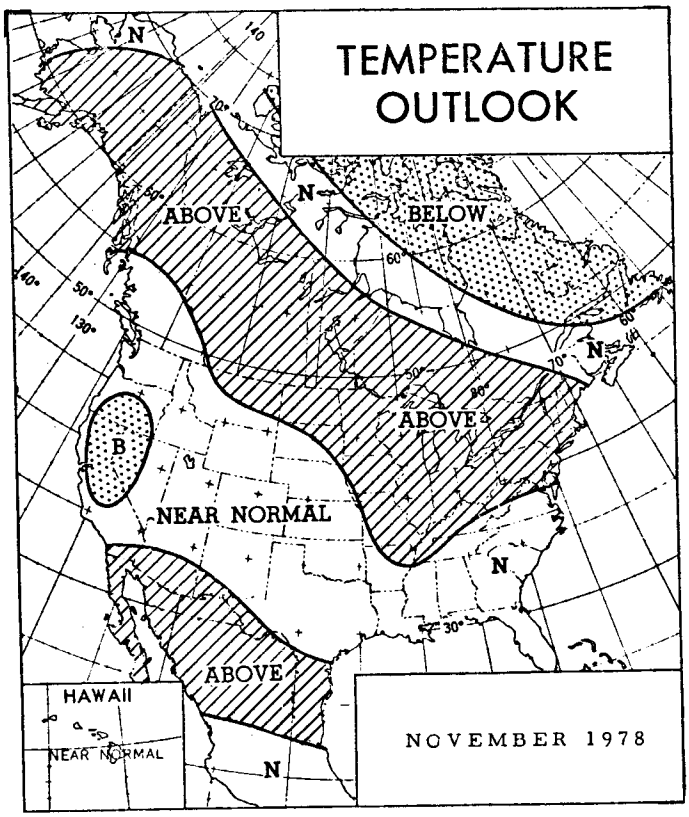
## HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING OCT. 29, 1978.

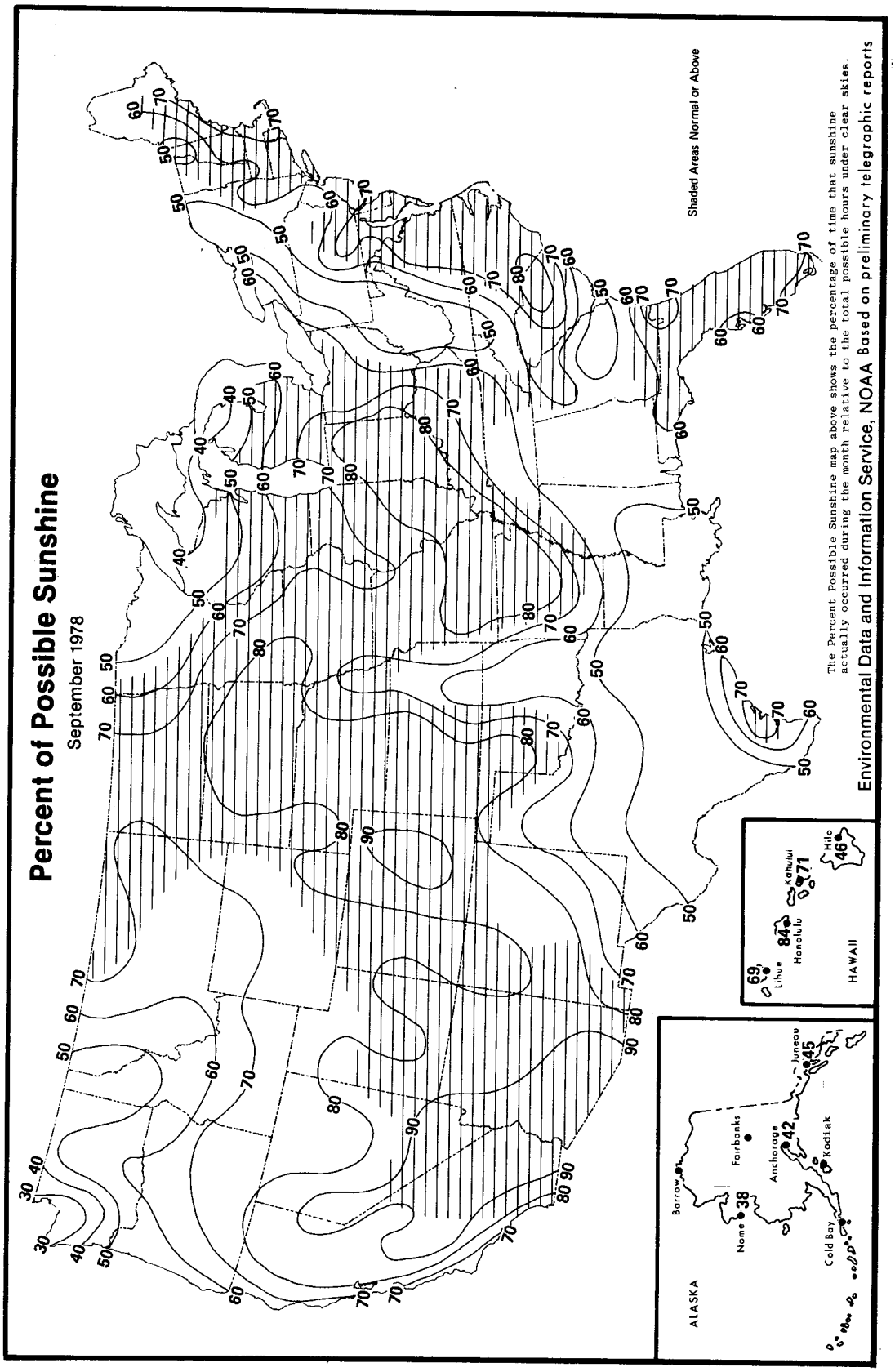
| STATES AND STATIONS | WEEKLY TOTAL | WEEKLY DEPARTURE* | SEASONAL ACCUMULATION + TOTAL | SEASONAL ACCUMULATION + DEPARTURE* | SEASONAL ACCUMULATION + DEPARTURE FROM 1977-78 |
|---|---|---|---|---|---|
| ALA. BIRMINGHAM | 22 | -25 | 161 | 34 | -13 |
| MOBILE | 0 | -18 | 20 | -12 | -53 |
| MONTGOMERY | 0 | -34 | 71 | -10 | -16 |
| ARIZ. FLAGSTAFF | 153 | 0 | 741 | -146 | 166 |
| PHOENIX | 1 | -9 | 1 | -12 | 1 |
| TUCSON | 15 | -1 | 15 | -8 | 14 |
| WINSLOW | 95 | 9 | 199 | -43 | 7 |
| YUMA | 0 | 0 | 0 | 0 | 0 |
| ARK. FORT SMITH | 46 | -3 | 122 | -4 | -20 |
| LITTLE ROCK | 35 | -16 | 116 | -14 | 11 |
| CALIF. BAKERSFIELD | 0 | -24 | 0 | -46 | -5 |
| EUREKA | 89 | 9 | 1003 | -72 | -50 |
| FRESNO | 4 | -31 | 13 | -65 | -18 |
| LOS ANGELES | 0 | -21 | 1 | -123 | -13 |
| RED BLUFF | 6 | -27 | 7 | -63 | -38 |
| SAN DIEGO | 0 | -14 | 33 | -27 | 33 |
| SAN FRANCISCO | 44 | 4 | 332 | -35 | 1 |
| STOCKTON | 12 | -23 | 74 | -1 | 41 |
| COLO. DENVER | 105 | -16 | 435 | -55 | 59 |
| GRAND JUNCTION | 125 | 22 | 382 | 33 | 191 |
| PUEBLO | 113 | 6 | 369 | 14 | 19 |
| CONN. BRIDGEPORT | 74 | -5 | 367 | 90 | 88 |
| HARTFORD | 123 | 12 | 676 | 209 | 196 |
| DEL. WILMINGTON | 83 | 2 | 339 | 79 | -14 |
| D.C. WASHINGTON | 52 | -11 | 184 | 1 | 6 |
| FLA. APALACHICOLA | 0 | -12 | 21 | 3 | -35 |
| DAYTONA BEACH | 0 | 0 | 0 | 0 | -23 |
| FORT MYERS | 0 | 0 | 0 | 0 | -5 |
| JACKSONVILLE | 0 | -11 | 45 | -30 | -24 |
| KEY WEST | 0 | 0 | 0 | 0 | 0 |
| LAKELAND | 0 | 0 | 1 | 1 | -9 |
| MIAMI | 0 | 0 | 0 | 0 | 0 |
| ORLANDO | 0 | 0 | 0 | 0 | -6 |
| TALLAHASSEE | 0 | -16 | 42 | -17 | -50 |
| TAMPA | 0 | 0 | 0 | 0 | -18 |
| WEST PALM BEACH | 0 | 0 | 0 | 0 | 0 |
| GA. ATLANTA | 2 | -46 | 111 | -18 | -58 |
| AUGUSTA | 3 | -35 | 98 | -8 | -48 |
| MACON | 0 | -31 | 71 | 0 | -47 |
| SAVANNAH | 0 | -24 | 43 | -8 | -49 |
| IDAHO. BOISE | 127 | 8 | 519 | 12 | 14 |
| LEWISTON | 124 | 3 | 484 | -28 | -102 |
| POCATELLO | 147 | 2 | 712 | 31 | 89 |
| ILL. CAIRO | 73 | 17 | 220 | 72 | 20 |
| CHICAGO | 126 | 26 | 437 | 89 | 3 |
| MOLINE | 125 | 18 | 451 | 52 | -1 |
| PEORIA | 119 | 16 | 419 | 48 | -24 |
| ROCKFORD | 125 | 8 | 486 | -6 | -84 |
| SPRINGFIELD | 111 | 20 | 368 | 61 | 22 |
| IND. EVANSVILLE | 102 | 24 | 318 | 74 | 41 |
| FORT WAYNE | 130 | 21 | 473 | 43 | -10 |
| INDIANAPOLIS | 113 | 17 | 400 | 61 | 60 |
| SOUTH BEND | 123 | 12 | 447 | -15 | -50 |
| IOWA. BURLINGTON | 120 | 19 | 415 | 51 | -4 |
| DES MOINES | 117 | 7 | 410 | -10 | -1 |
| DUBUQUE | 137 | 11 | 568 | 15 | -67 |
| SIOUX CITY | 131 | 14 | 487 | 25 | 12 |
| KANS. CONCORDIA | 91 | 2 | 310 | -7 | 7 |
| DODGE CITY | 90 | 7 | 256 | -3 | 47 |
| GOODLAND | 113 | -4 | 415 | -42 | 14 |
| TOPEKA | 110 | 26 | 335 | 50 | 69 |
| WICHITA | 84 | 12 | 223 | 5 | 48 |
| KY. LEXINGTON | 100 | 20 | 355 | 96 | 82 |
| LOUISVILLE | 93 | 14 | 287 | 37 | -1 |
| LA. BATON ROUGE | 0 | -21 | 30 | -16 | -26 |
| LAKE CHARLES | 0 | -16 | 26 | -4 | -10 |
| NEW ORLEANS | 8 | -9 | 24 | -10 | -19 |
| SHREVEPORT | 13 | -14 | 57 | -3 | -15 |
| MAINE. CARIBOU | 193 | 20 | 1236 | 99 | 76 |
| PORTLAND | 129 | -4 | 778 | 44 | -8 |
| MASS. BOSTON | 90 | 1 | 522 | 165 | 162 |
| MICH. ALPENA | 160 | 11 | 798 | -155 | -161 |
| DETROIT | 139 | 27 | 519 | 55 | 77 |
| FLINT | 140 | 16 | 550 | -41 | -55 |
| GRAND RAPIDS | 165 | 44 | 674 | 154 | 51 |
| HOUGHTON LAKE | 174 | 25 | 950 | 56 | 12 |
| LANSING | 166 | 43 | 633 | 79 | -26 |
| MARQUETTE | 157 | 15 | 878 | 44 | -16 |
| MUSKEGON | 149 | 28 | 658 | 86 | -1 |
| S. STE. MARIE | 186 | 27 | 1097 | 51 | -182 |
| MINN. DULUTH | 168 | -1 | 1003 | -43 | -188 |
| INTERNATL FALLS | 179 | -5 | 1120 | -30 | -159 |
| MINNEAPOLIS | 129 | -11 | 527 | -104 | -174 |
| ROCHESTER | 162 | 20 | 710 | 30 | 9 |
| ST. CLOUD | 150 | -5 | 723 | -49 | -119 |
| MISS. JACKSON | 12 | -22 | 96 | -17 | -40 |
| MERIDIAN | 7 | -32 | 110 | 13 | 2 |
| MO. COLUMBIA | 92 | 11 | 287 | 25 | -8 |
| KANSAS CITY | 92 | 13 | 290 | 40 | -20 |
| ST. LOUIS | 93 | 18 | 302 | 69 | 12 |
| SPRINGFIELD | 88 | 13 | 271 | 25 | 36 |
| MONT. BILLINGS | 123 | -15 | 709 | 20 | 21 |
| GLASGOW | 149 | -16 | 873 | 41 | -134 |
| GREAT FALLS | 133 | -12 | 782 | -15 | -136 |
| HAVRE | 133 | -28 | 746 | -94 | -99 |
| HELENA | 142 | -24 | 817 | -135 | -140 |
| KALISPELL | 153 | -32 | 1122 | -77 | -91 |
| MILES CITY | 119 | -28 | 619 | -84 | -86 |
| MISSOULA | 152 | -22 | 1019 | 14 | -12 |
| NEBR. GRAND ISLAND | 116 | 5 | 428 | -5 | 16 |
| LINCOLN | 110 | 6 | 384 | -7 | -57 |
| NORFOLK | 125 | 4 | 457 | -34 | 2 |
| NORTH PLATTE | 135 | 5 | 574 | 21 | 14 |
| OMAHA | 96 | -1 | 371 | 26 | -9 |
| VALENTINE | 128 | -10 | 572 | -25 | -47 |
| NEV. ELY | 139 | -22 | 890 | 1 | 125 |
| LAS VEGAS | 0 | -33 | 1 | -61 | 1 |
| RENO | 109 | -17 | 595 | -56 | 66 |
| WINNEMUCCA | 144 | 1 | 706 | -15 | 75 |
| N.H. CONCORD | 133 | -1 | 878 | 189 | 64 |
| N.J. ATLANTIC CITY | 88 | 6 | 461 | 190 | 152 |
| TRENTON | 74 | -5 | 327 | 62 | -4 |
| N.MEX. ALBUQUERQUE | 100 | 21 | 166 | -32 | -4 |
| ROSWELL | 109 | 42 | 199 | 10 | 132 |
| N.Y. ALBANY | 120 | 0 | 787 | 230 | 142 |
| BINGHAMTON | 140 | 13 | 750 | 101 | -7 |
| BUFFALO | 128 | 9 | 620 | 59 | 27 |
| NEW YORK | 74 | 2 | 341 | 111 | 3 |
| ROCHESTER | 120 | 6 | 541 | 17 | -62 |
| SYRACUSE | 128 | 16 | 634 | 132 | 31 |
| N.C. ASHEVILLE | 36 | -46 | 274 | -18 | -48 |
| CHARLOTTE | 24 | -27 | 151 | 7 | -47 |
| GREENSBORO | 52 | -16 | 236 | -25 | -48 |
| HATTERAS | 5 | -23 | 95 | 20 | -2 |
| RALEIGH | 37 | -23 | 179 | -1 | -81 |
| WILMINGTON | 10 | -20 | 78 | 8 | -56 |
| N.DAK. BISMARCK | 130 | -31 | 801 | -16 | -109 |
| FARGO | 145 | -16 | 746 | -40 | -91 |
| WILLISTON | 139 | -30 | 793 | -81 | -147 |
| OHIO. AKRON-CANTON | 127 | 18 | 495 | -38 | -27 |
| CINCINNATI | 111 | 25 | 382 | 96 | -56 |
| CLEVELAND | 121 | 16 | 393 | -54 | -52 |
| COLUMBUS | 113 | 9 | 420 | 27 | -6 |
| DAYTON | 122 | 26 | 441 | 96 | -8 |
| TOLEDO | 142 | 29 | 540 | 80 | -16 |
| YOUNGSTOWN | 130 | 17 | 558 | 58 | -56 |
| OKLA. OKLAHOMA CITY | 50 | -3 | 89 | -52 | -26 |
| TULSA | 56 | 4 | 116 | -19 | -3 |
| OREG. ASTORIA | 108 | 7 | 708 | -154 | -167 |
| BURNS | 144 | -7 | 897 | 71 | 36 |
| MEDFORD | 85 | -21 | 388 | -59 | -63 |
| PENDLETON | 131 | 16 | 567 | -104 | -109 |
| PORTLAND | 114 | 15 | 444 | -94 | -56 |
| SALEM | 126 | 22 | 432 | -118 | -192 |
| PA. ALLENTOWN | 100 | -3 | 441 | 38 | 53 |
| ERIE | 121 | 3 | 553 | -33 | -61 |
| HARRISBURG | 77 | -14 | 314 | 0 | -65 |
| PHILADELPHIA | 73 | -5 | 312 | 51 | -9 |
| PITTSBURGH | 129 | 20 | 549 | 83 | 7 |
| SCRANTON | 124 | 12 | 601 | 99 | -32 |
| R.I. PROVIDENCE | 94 | -7 | 574 | 153 | 134 |
| S.C. CHARLESTON | 1 | -27 | 57 | -7 | -41 |
| COLUMBIA | 6 | -33 | 83 | -15 | -98 |
| GREENVILLE | 19 | -31 | 150 | 13 | -23 |
| S.DAK. ABERDEEN | 136 | -18 | 619 | -96 | -128 |
| HURON | 142 | -1 | 669 | 43 | 36 |
| RAPID CITY | 105 | -32 | 553 | -98 | -113 |
| SIOUX FALLS | 138 | -1 | 615 | 2 | -38 |
| TENN. CHATTANOOGA | 32 | -30 | 179 | -9 | -49 |
| KNOXVILLE | 34 | -25 | 201 | -36 | -36 |
| MEMPHIS | 35 | -14 | 116 | -16 | -7 |
| NASHVILLE | 62 | 0 | 225 | -56 | -24 |
| TEXAS. ABILENE | 45 | 11 | 61 | -16 | 5 |
| AMARILLO | 99 | 28 | 215 | 13 | 72 |
| AUSTIN | 1 | -17 | 3 | -30 | -13 |
| BEAUMONT | 0 | -16 | 6 | -23 | -10 |
| BROWNSVILLE | 0 | 0 | 0 | 0 | 0 |
| CORPUS CHRISTI | 0 | -5 | 1 | -4 | -3 |
| DEL RIO | 1 | -14 | 9 | -19 | 3 |
| EL PASO | 84 | 46 | 111 | 34 | 55 |
| FORT WORTH | 19 | -6 | 25 | -25 | -30 |
| GALVESTON | 0 | -7 | 0 | -10 | -6 |
| HOUSTON | 0 | -12 | 17 | -3 | -17 |
| LUBBOCK | 87 | 30 | 152 | 2 | 73 |
| MIDLAND | 81 | 47 | 165 | 97 | 118 |
| SAN ANGELO | 47 | 18 | 72 | 10 | 28 |
| SAN ANTONIO | 3 | -12 | 10 | -16 | -9 |
| VICTORIA | 0 | -7 | 3 | -8 | -5 |
| WACO | 17 | -5 | 21 | -22 | -1 |
| WICHITA FALLS | 56 | 20 | 75 | -3 | 11 |
| UTAH SALT LAKE CITY | 94 | -26 | 382 | -92 | 58 |
| VT. BURLINGTON | 146 | 8 | 921 | 201 | 120 |
| VA. LYNCHBURG | 54 | -21 | 288 | -45 | -21 |
| NORFOLK | 38 | -10 | 158 | 24 | 11 |
| RICHMOND | 57 | -7 | 219 | -16 | -20 |
| ROANOKE | 71 | -5 | 342 | 100 | 8 |
| WASH. QUILLAYUTE | 121 | 5 | 918 | -124 | -195 |
| SEATTLE-TACOMA | 102 | -7 | 531 | -164 | -80 |
| SPOKANE | 177 | 26 | 859 | -109 | -57 |
| WALLA WALLA | 99 | -4 | 329 | -56 | -153 |
| YAKIMA | 156 | 23 | 646 | -22 | -74 |
| W.VA. BECKLEY | 91 | -19 | 459 | -33 | -75 |
| CHARLESTON | 86 | 3 | 343 | -57 | -13 |
| HUNTINGTON | 87 | 4 | 335 | -51 | -15 |
| PARKERSBURG | 76 | -8 | 278 | -9 | -67 |
| WIS. GREEN BAY | 147 | 7 | 717 | -5 | -22 |
| LACROSSE | 117 | -10 | 449 | -82 | -178 |
| MADISON | 149 | 11 | 670 | -14 | -97 |
| MILWAUKEE | 130 | 1 | 540 | -50 | -80 |
| WYO. CASPER | 124 | -28 | 750 | 3 | 91 |
| CHEYENNE | 144 | -4 | 759 | -3 | 51 |
| LANDER | 142 | -19 | 756 | -5 | -54 |
| SHERIDAN | 126 | -24 | 767 | -22 | -37 |

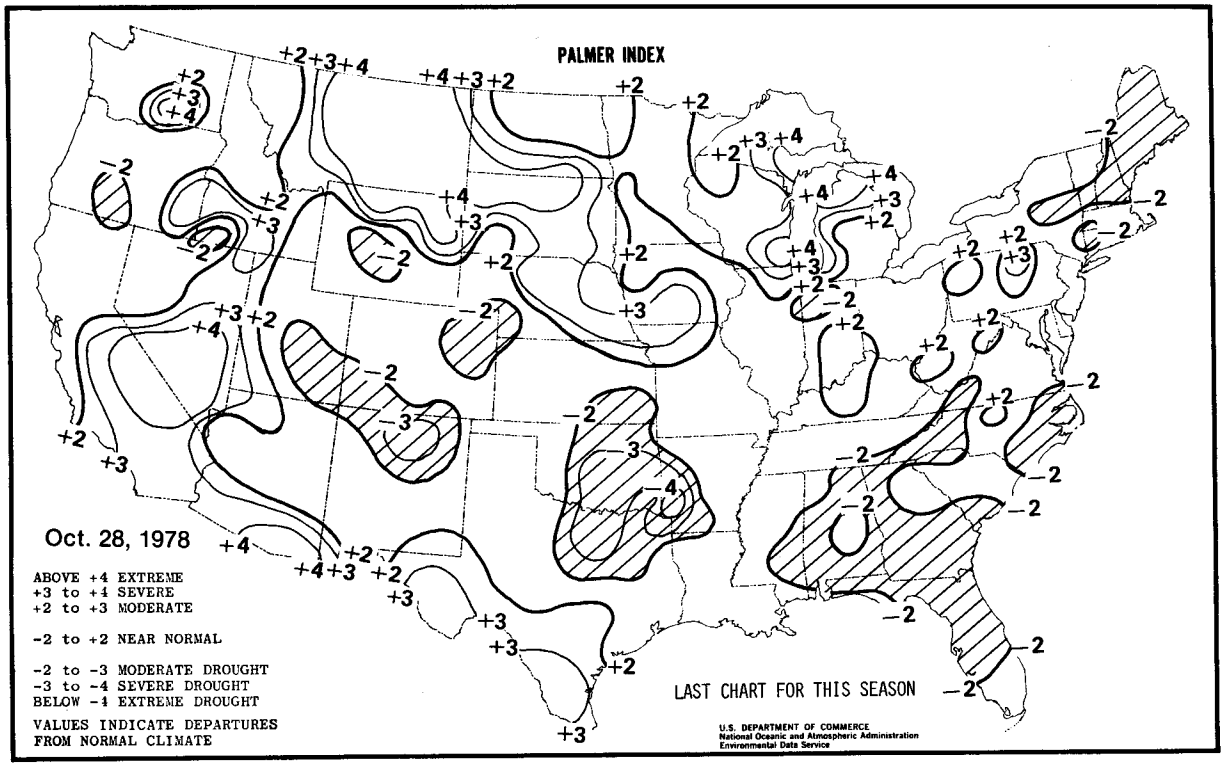
BASED ON 1941-70 NORMALS. + ACCUMULATION FROM JULY 1, 1978.




Average Monthly Weather Outlook




Percent of Possible Sunshine
September 1978
Shaded Areas Normal or Above
The Percent Possible Sunshine map above shows the percentage of time that sunshine actually occurred during the month relative to the total possible hours under clear skies.
Environmental Data and Information Service, NOAA Based on preliminary telegraphic reports
ALASKA
Barrow
Nome 38
Fairbanks
Anchorage 42
Juneau 45
Kodiak
Cold Bay
HAWAII
Lihue 69
Honolulu 84
Kahului 71
Hilo 46

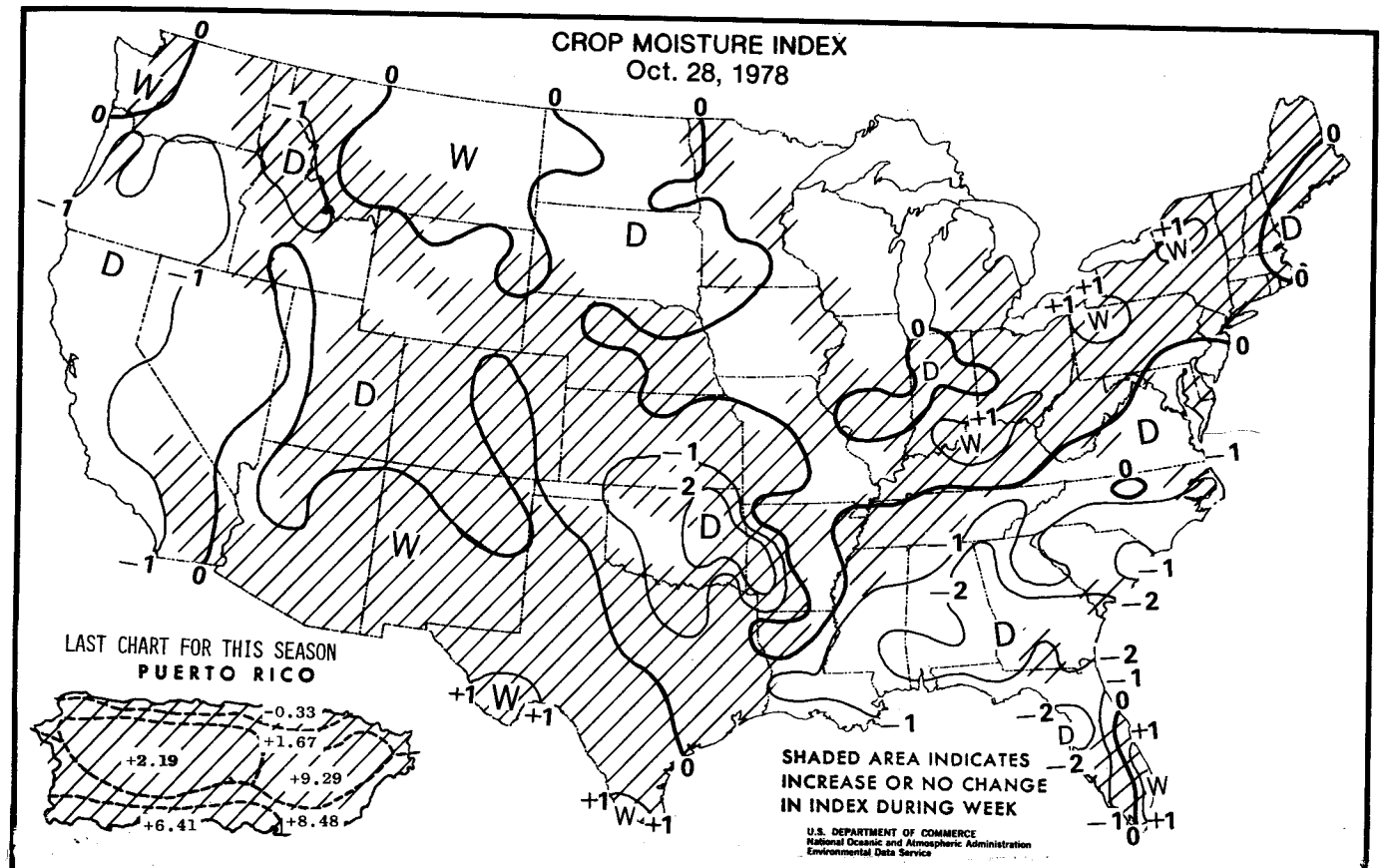



The Palmer Index

The Palmer Index is an index of meteorological drought, which may be defined as a prolonged and abnormal moisture deficiency. The general concept is one of supply and demand. Supply is represented by precipitation and stored soil moisture. Demand is the combination of potential evapotranspiration, the amount needed to recharge the soil moisture, and the runoff needed to keep the rivers, lakes, and reservoirs at a normal level. The results of this water balance accounting produce a positive or negative anomaly which is then weighted by a climate factor. The final product is an index that expresses the abnormality for that particular place for the period of time being computed. This manipulation allows the index to have a reasonably comparable local significance in space and time, that is, a certain index value obtained for a division in New York would have the same local significance as a like value in the more arid areas of western Kansas. This monthly increment is added to a portion of the previous month's index to include the duration of the anomaly in the final index.

The Palmer Index was designed as a climatological indicator of the scope and severity of past droughts. Using the Palmer Index on a real-time basis presents difficulties. A day or so of normal or better rainfall is certainly welcome in an area that has experienced a long drought, but one cannot know whether it indicates the end of the drought or just a brief respite. In order to make the program have some real-time value, a system of computing a "probability" that a weather spell has ended was devised. This is not entirely satisfactory, but does allow one to assign a definite index value at times when there may be some doubt as to whether it should be positive (wet) or negative (dry).

Another aspect of using the Palmer Index is that one must remember that the demand part of the computations includes three parameters---potential evapotranspiration, recharge of soil moisture, and runoff, any one of which may produce a negative index. For instance if only enough rain fell to satisfy most of the expected evapotranspiration, but not enough to supply the expected recharge and runoff, then a negative index would result. If such a situation continued then one might find that agriculture was progressing at a near normal pace but the Palmer Index would be indicating a worsening drought. In this situation the drought would cause shallow wells and springs to go dry and the levels of rivers, lakes and reservoirs to fall below normal and, if this odd situation continued long enough, would cause serious economic stress to the livestock industry and eventually to other industries and cities. Then if rainfall fell below the minimum needed for agriculture, crops would suffer drastic and rapid decline because there would be no reserve water in the soil. Such a situation, to some extent, occurred during the Northeast drought in the 1960's when New York City almost ran out of water.




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 |

Agricultural Weather Facility
USDA South Bldg., Room 1248
Washington, DC 20250

IMMEDIATE – U. S. Weather Report

This Report Will be Treated in All Respects as Letter Mail

# FIRST CLASS MAIL

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
COM 210

## HARVESTING PROGRESS

PERCENT OF ACREAGE HARVESTED
AS OF OCTOBER 29

### soybeans

| | 1978 | 1977 | AVG. |
|---|---|---|---|
| ALA | 55 | 37 | 39 |
| ARK | 46 | 41 | 32 |
| GA | 40 | 18 | 18 |
| ILL | 94 | 84 | 94 |
| IND | 75 | 70 | 80 |
| IOWA | 93 | 83 | 92 |
| KANS | 75 | 55 | 60 |
| KY | 62 | 55 | 58 |
| LA | 73 | 59 | 56 |
| MICH | 60 | 50 | 75 |
| MINN | 96 | 92 | 96 |
| MISS | 62 | 53 | 40 |
| MO | 68 | 54 | 69 |
| NEBR | 90 | 80 | 85 |
| NC | 25 | 12 | 10 |
| OHIO | 75 | 80 | 85 |
| SC | 20 | 10 | 9 |
| TENN | 65 | 55 | 33 |
| TEX | 47 | 54 | 51 |
| U.S. | 72 | 63 | 66 |

THESE 19 STATES PRODUCED 96%
OF THE 1977 U.S. SOYBEAN CROP.

### corn

| | 1978 | 1977 | AVG. |
|---|---|---|---|
| GA | 91 | 92 | 73 |
| ILL | 79 | 66 | 69 |
| IND | 55 | 60 | 45 |
| IOWA | 80 | 70 | 59 |
| KANS | 90 | 85 | 55 |
| KY | 72 | 71 | 69 |
| MICH | 45 | 30 | 45 |
| MINN | 85 | 82 | 79 |
| MO | 61 | 66 | 62 |
| NEBR | 70 | 70 | 60 |
| NC | 94 | 100 | 86 |
| OHIO | 55 | 55 | 50 |
| PA | NA | NA | NA |
| S DAK | 75 | 58 | 70 |
| TEX | 98 | 100 | 97 |
| WISC | 45 | 60 | 50 |
| U.S. | 73 | 68 | 63 |

THESE 16 STATES PRODUCED 94%
OF THE U.S. CORN CROP.

### cotton

| | 1978 | 1977 | AVG. |
|---|---|---|---|
| ALA | 65 | 61 | 39 |
| ARK | 72 | 72 | 53 |
| GA | 68 | 41 | 41 |
| LA | 82 | 67 | 46 |
| MISS | 86 | 79 | 54 |
| MO | 80 | 74 | 52 |
| NC | 45 | 44 | 38 |
| OKLA | 9 | 16 | 7 |
| SC | 81 | 62 | 52 |
| TENN | 84 | 76 | 44 |
| TEX | 30 | 54 | 34 |
| 11 STATES | 46 | 58 | 38 |

THESE 11 STATES PRODUCED 72%
OF THE U.S. COTTON CROP.

### sorghum

| | 1978 | 1977 | AVG. |
|---|---|---|---|
| COLO | 49 | 70 | 45 |
| KANS | 80 | 65 | 50 |
| MO | 67 | 75 | 65 |
| NEBR | 85 | 80 | 80 |
| OKLA | 32 | 49 | 49 |
| S DAK | 80 | 77 | 72 |
| TEX | 87 | 95 | 94 |
| 7 STATES | 80 | 79 | 72 |

THESE 7 STATES PRODUCED 93%
OF THE 1977 U.S. SORGHUM CROP.

## SEEDING PROGRESS

PERCENT OF ACREAGE SEEDED
AS OF OCTOBER 29

### winter wheat

| | 1978 | 1977 | AVG. |
|---|---|---|---|
| COLO | 100 | 100 | 100 |
| ILL | 95 | 78 | 88 |
| IND | 85 | 70 | 85 |
| KANS | 98 | 95 | 95 |
| MO | 74 | 52 | NA |
| MONT | 100 | 100 | 100 |
| NEBR | 100 | 100 | 100 |
| OHIO | 95 | 85 | 95 |
| OKLA | 100 | 100 | 100 |
| S DAK | 100 | 100 | 100 |
| TEX | 91 | 79 | 88 |
| 11 STATES | 97 | 92 | 96 |

THESE 11 STATES PRODUCED 75%
OF THE 1977 U.S. WINTER
WHEAT CROP

NA NOT AVAILABLE