

# WEEKLY WEATHER AND CROP BULLETIN

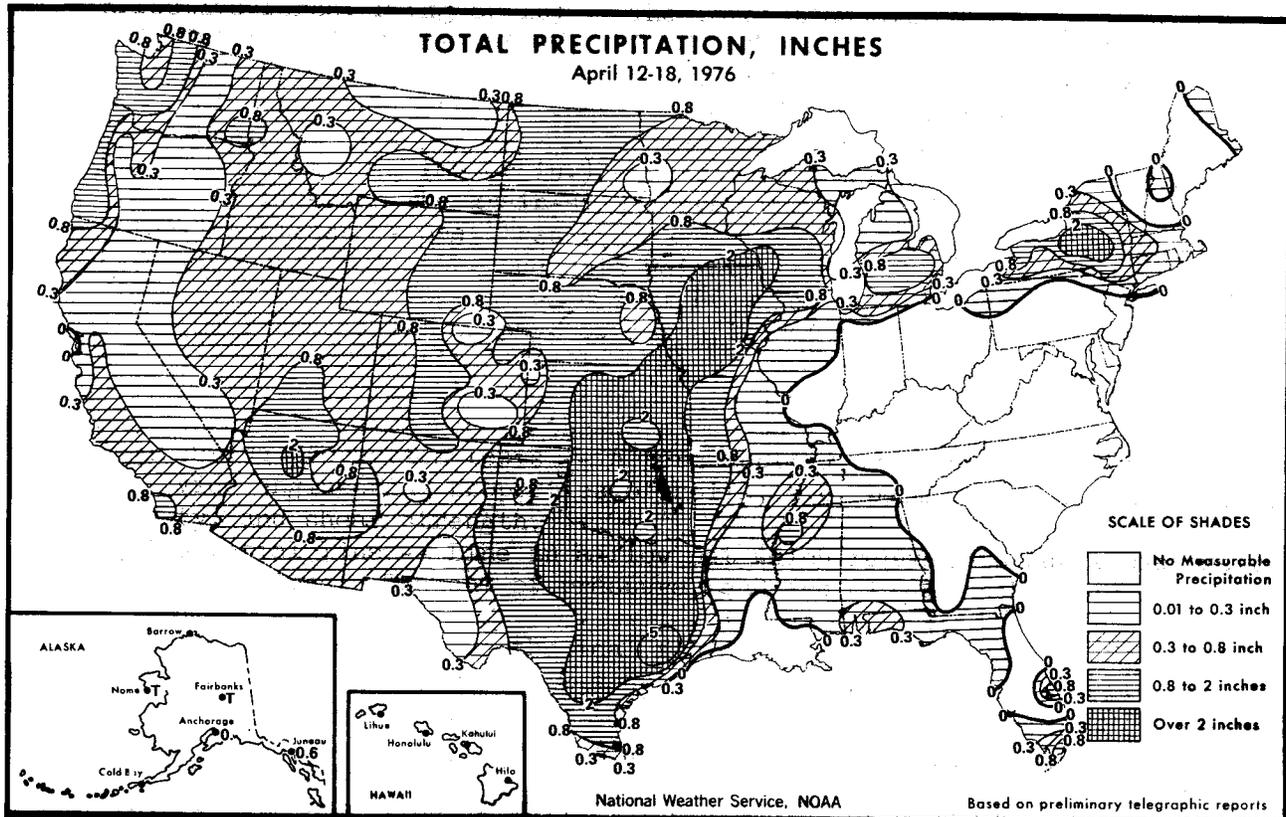
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## National Weather Summary

For the week of April 12-18

**HIGHLIGHTS:** Based on weekly temperatures--averaging up to 15° above normal around the Great Lakes region--record breaking heat in eastern U.S. more than offset the chilly blast of air that cooled the area earlier in the week. In fact, most of the Nation east of the Rockies averaged unseasonably warm readings. Limited precipitation contributed to the summery spell in some eastern areas. Heaviest storm activity focused on central U.S., and in Texas produced damaging tornadoes and hail.

Frigid air continued to invade the Northeast on Monday. Readings in the 20's and 30's set new record lows in Michigan and Ohio and in the Northeast from New England through New Jersey and in portions of Pennsylvania.

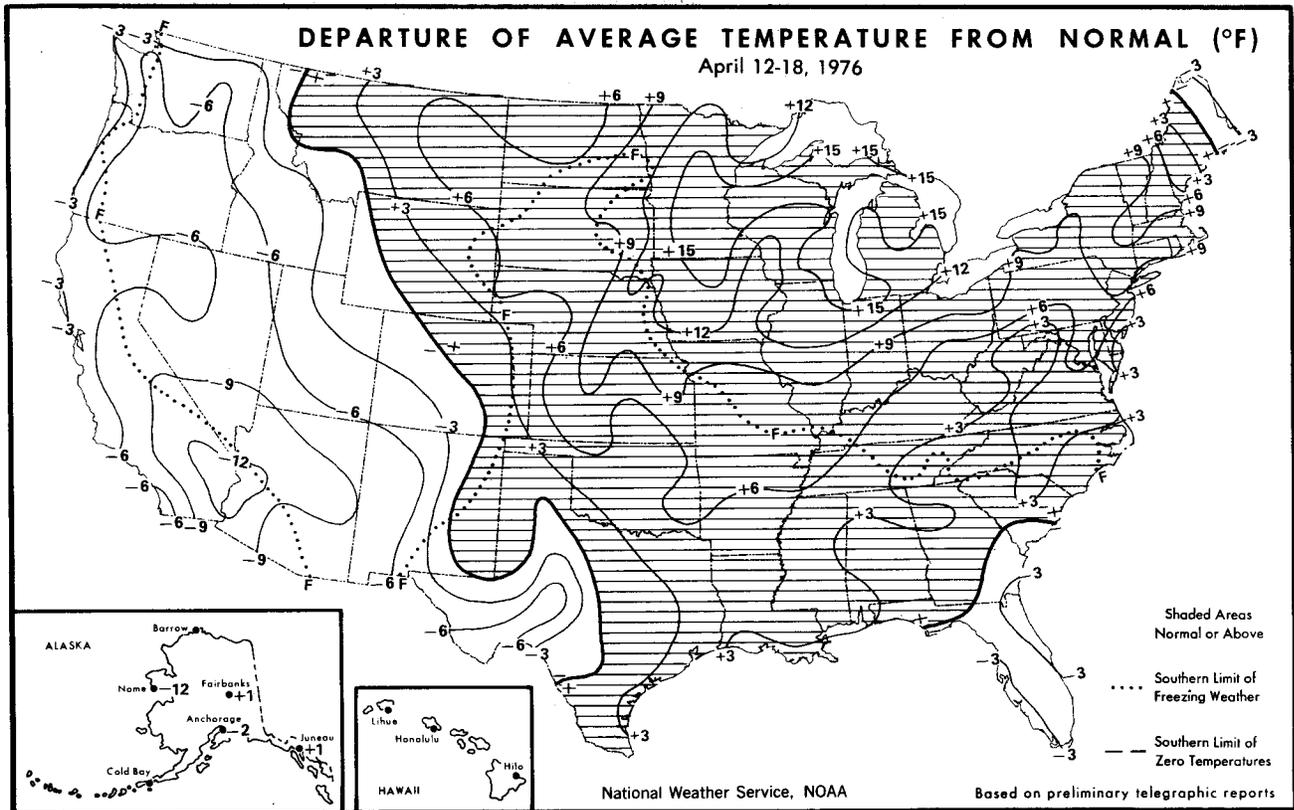
During the day showers grew into thunderstorms in parts of Oklahoma, New Mexico, and north and central Texas. Though most evening activity di-

minished, scattered disturbances continued along the eastern slopes of the central Rockies through the southern Plains.

Except for sections of the Gulf Coast States, sunshine brightened afternoon skies east of the Mississippi River. Unseasonably warm weather favored eastern Colorado and the western Dakotas, where Denver, Colo. 79° and Rapid City, S.D. 80° boasted daily record highs.

Cold air that bulldozed its way across western U.S. on Tuesday produced snow in Nevada, Utah, and Arizona. Western temperatures ranged from the 30's and 40's in interior sections to 50's along the Pacific Coast and in the 60's in desert areas of the Southwest.

In eastern U.S. mostly fair skies nudged warm temperatures to near normal, following record low morning readings. Daytime highs ranged from 50's in the North to 70's and a few 80's in the South. Most of the Nation's thunderstorms rumbled



through western and central Nebraska and South Dakota. Midday showers extended from Florida westward along the Gulf and northward to the central Mississippi Valley. Under the center of a high pressure, fair skies opened from the lower Great Lakes region to the central Atlantic Coast.

Wednesday's western precipitation pattern showed rainshowers with snow in the mountains across the southern Plateau region that spread into portions of the central Rockies. Later in the day a band of heavy thunderstorms--accompanied by hail in places--reached from the central Plains and southward along the central Kansas/Nebraska border.

Though cooler air from the West pushed into the northern Plains, mild temperatures kept a foothold in other parts of central and eastern U.S. Readings in the 70's prevailed as far north as Minnesota, Wisconsin, and Michigan.

Credit for Thursday's diverse weather picture went to frontal systems in the Plains and northwest U.S. By early afternoon, thunderstorms blossomed over parts of New Mexico, Colorado, and western areas of Texas, Oklahoma, and Kansas.

From the Pacific Coast through the Rockies, forecasters traced scattered rain and snow. Thunderstorms appeared from the Great Plains and middle Mississippi Valley region into the upper Great Lakes. Other weather features: lots of hail and around two dozen tornadoes, mostly in western Texas and southern Wisconsin. End-of-the-day thundershowers cut an almost continuous path from southern Texas through western Oklahoma and into northern Minnesota eastward through the Great Lakes

Ahead of the chilly air in the West, unseason-

ably warm weather prevailed across the central Great Plains, upper Mississippi and Ohio Valleys, and into the Great Lakes region.

Though the wild, stormy weather east of the Rockies subsided for the time forecasters looked for a return outbreak in Texas

As predicted, Friday brought severe thunderstorms and tornadoes--about three dozen each--to western U.S. Hardest hit Texas tallied 25 severe weather reports. Damage to buildings, trees, and power lines was widespread.

Intense low pressure centers over Utah and South Dakota stirred up blustery winds from the middle and upper Mississippi into the Rockies and southern California. In South Dakota, Watertown clocked gusts of more than 90 mph.

Moving slowly across central U.S. a series of complex frontal systems produced weekend snow from Wyoming into New Mexico. Unusually cool temperatures in the area included a record low minimum, 24°, and maximum, 44°, for Albuquerque, N. Mex.

At the same time unseasonably warm air shattered record highs in eastern U.S.: Providence, R.I. 93°, Alpena, Mich. 86°, and Richmond, Va. 96° (also the Nation's high). Between the contrasting air masses, showers and thundershowers ranged from the western Great Lakes region into northern Texas.

Considerable rainfall from a major storm system in the Plains hammered the already over-flowing Souris River in North Dakota.

Except for some heavy rains in south central and southeast Texas, Sunday's weather activity was subdued around the Nation. Boston, Mass, 93° joined the list of record breakers in the Northeast. New York City, 96°, set the pace for the Nation.

## National Agricultural Summary

For the week of April 12-18

**HIGHLIGHTS:** Farmers took advantage of warm, clear weather to push soil preparation as much as 2 weeks ahead of normal. Abnormally high temperatures greened pastures and rangeland in northern areas and higher elevations but some areas began to show the need for rain. Winter wheat improved but some dryland wheat was stunted. Spring crop planting was far advanced compared to previous years but some farmers stopped operations, waiting for rainfall to provide more favorable germination conditions. Freezing temperatures damaged fruit crops in most northern areas but the extent of the loss is unknown.

**SMALL GRAINS:** Seeding of spring wheat and oats was ahead of normal throughout all major production areas. The Minnesota wheat crop was 41% planted, almost three times ahead of average. The oats crop was 54% sown compared with 15% average. In South Dakota spring small grains seeding was nearly complete. Normally only a third of the crop is planted by this time. In North Dakota 15% of the hard red wheat was planted and 6% of the durum crop was in the ground.

The winter wheat crop was improved by rainfall in the central Plains and particularly in the dry Oklahoma Panhandle and adjacent areas of surrounding States. In Oklahoma 34% of the crop was rated good, 41% fair, and 25% poor. Stands were thin and heading unevenly. About 84% of the crop was jointed and 16% headed. Rains also improved the Kansas crop. In Texas irrigated wheat responded well to rainfall; dryland fields also improved, but rains were too late to assure a normal crop.

The California winter wheat crop headed out on stunted straw. Elsewhere in the Nation the crop was generally in good condition.

**CORN:** Planting extended as far north as Wisconsin where planting began in extreme southern areas. In the major Corn Belt States planting was 4% complete in Iowa to 11% in Illinois. In Ohio 10% of the corn was planted, twice as much as a year ago and average. Farther south, in Missouri a third of the crop was planted. Along the East Coast, planting was complete in Florida, 73% in Georgia, 79% in South Carolina, 50% in North Carolina, and 17% in Virginia.

**COTTON:** Planting was active throughout the South into parts of Tennessee and South Carolina. Rains delayed planting in California and Texas. In Arizona hail damage required replanting of some fields. Planting operations were far ahead of normal and in some places more than two times ahead of normal. In South Carolina 29% was planted compared with 4% in 1975 and 12% average. The Georgia crop stood at 35% planted, compared to 2% in 1975 and 7% average. The Texas cotton crop was 18% planted, 13% in 1975 and 12% average. In Arkansas 9% was planted compared with 4% in 1975 and a 2% average. The Mississippi crop was 13% planted versus none last year and a 7% average.

**OTHER CROPS:** In Texas, sorghum planting made satisfactory progress. Stands in the southern half made excellent growth. Good rains provided

enough moisture for planting and germinating the rest of this year's crop.

Rice planting was far advanced in Arkansas, Mississippi, and Texas but lagged in Louisiana and California. In Arkansas the crop was 42% seeded, 21% in 1975 and 23% average. The Mississippi crop was 55% planted compared with 2% in 1975.

Sugarcane harvest ended in Florida and young canes were in good condition. In Louisiana farmers fertilized and cultivated cane fields. Sugarbeet seeding advanced in Nebraska, Utah, Wyoming, and Idaho. In Colorado, where contract negotiations delayed planting, the crop was 10% sown, compared with 20% in 1975 and 33% average. In Ohio sugarbeets were 70% planted, 65% in 1975 and 45% average. The Minnesota crop was 10% planted, far ahead of 1% average.

Tobacco activity extended into Wisconsin, where growers steamed and seeded beds. Most plant beds were seeded and some early ones sprouted in Kentucky, Ohio, West Virginia, and Pennsylvania. Plant beds in Virginia and Maryland were in good condition but need irrigation. In Georgia transplanting was 92% complete compared with 84% last year and 79% average.

Peanut planting was underway in Florida and ahead of normal in Alabama, Georgia, and Texas.

**FRUITS AND NUTS:** Low temperatures damaged some fruit orchards but no assessment of the loss was made. Development of most fruit crops was about 2 weeks ahead of normal. Apples were in the green tip or silver tip stage of development in the Northeast and the Northwest. Peach, pear, and cherry trees were in full bloom in Washington, Oregon, and Pennsylvania. Michigan orchards began budding.

Florida citrus groves needed irrigation but were in good condition. Rain helped the California citrus trees. Valencia harvest increased in Florida and California. In Texas and Arizona grapefruit harvest slowed.

**VEGETABLES:** In California cool weather slowed growth in southern areas and planting preparations continued in northern areas. Growers planted canning tomatoes in the Sacramento Valley. Rain stopped the Arizona lettuce harvest. In Florida spring vegetable harvest was in full swing. Volume of shipments increased 13% from a week earlier. The Louisiana strawberry harvest was active. Growers planted summer crops including sweet corn, snap beans, and cucumbers in Virginia, New Jersey, and New York. In Texas onion, carrot, and cabbage harvests were active. Tomatoes and watermelons made excellent progress.

**PASTURE AND LIVESTOCK:** Pastures were in fair to good condition and improving throughout the Nation. Cattlemen gradually moved herds to rangeland. More rain was needed in the north central Plains. In the California valley dry weather hurt ranges but timely rains helped grazing in the foothills and mountains. Lambing and calving were almost 60 to 75% complete. The unusually mild weather kept birth losses below normal. Cattle gained weight on the new range growth.

April 18, 1976

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

| 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 . . .    | 65             | + 2       | .1                   | -1.0      | La. Baton Rouge . . .    | 72             | + 4       | T                    | -1.2      | Youngstown . . .        | 59             | +11       | .8                   | T         |
| Mobile . . .             | 72             | + 4       | .7                   | -.6       | Lake Charles . . .       | 72             | + 3       | .2                   | -.8       | OKLA. Okla. City . . .  | 66             | + 5       | .8                   | 1.0       |
| Montgomery . . .         | 67             | + 2       | T                    | -1.0      | New Orleans . . .        | 72             | + 3       | T                    | -1.0      | Tulsa . . .             | 66             | + 5       | 1.0                  | 2.4       |
| ALASKA. Anchorage . . .  | 33             | - 2       | .2                   | + .1      | Shreveport . . .         | 74             | + 5       | T                    | -1.2      | OREG. Astoria . . .     | 46             | - 2       | 1.1                  | 1.3       |
| Barrow . . .             | -              | -         | -                    | -         | MAINE. Caribou . . .     | 33             | - 3       | .1                   | -.5       | Burns . . .             | 37             | - 7       | .1                   | .2        |
| Fairbanks . . .          | 30             | + 1       | T                    | -.1       | Portland . . .           | 47             | + 4       | T                    | -.8       | Medford . . .           | 43             | - 7       | .2                   | .9        |
| Juneau . . .             | 40             | + 1       | .6                   | -.1       | MD. Baltimore . . .      | 61             | + 7       | 0                    | -.7       | Pendleton . . .         | 45             | - 7       | .2                   | .2        |
| Kodiak . . .             | -              | -         | -                    | -         | MASS. Boston . . .       | 61             | +12       | .1                   | -.7       | Portland . . .          | 47             | - 3       | .5                   | .4        |
| Nome . . .               | 6              | -12       | T                    | -.2       | Chatham . . .            | 49             | -         | T                    | -         | Salem . . .             | 44             | - 6       | .5                   | .3        |
| ARIZ. Flagstaff . . .    | 32             | -10       | 2.9                  | +2.6      | MICH. Alpena . . .       | 58             | +19       | .5                   | -.1       | PA. Allentown . . .     | 58             | + 8       | .9                   | 0         |
| Phoenix . . .            | 59             | - 9       | .7                   | + .6      | Detroit . . .            | 60             | +12       | .3                   | -.5       | Erie . . .              | 56             | +11       | .8                   | T         |
| Tucson . . .             | 56             | - 9       | .6                   | + .5      | Flint . . .              | 59             | +13       | 1.3                  | + .6      | Harrisburg . . .        | 59             | + 6       | .7                   | 0         |
| Winslow . . .            | 45             | - 9       | .2                   | + .1      | Grand Rapids . . .       | 60             | +13       | 1.8                  | +1.0      | Philadelphia . . .      | 61             | + 8       | .8                   | T         |
| Yuma . . .               | 59             | -12       | .4                   | + .4      | Houghton Lake . . .      | 58             | +16       | .1                   | -.5       | Pittsburgh . . .        | 57             | + 7       | .8                   | 0         |
| ARK. Fort Smith . . .    | 68             | + 6       | 1.6                  | + .5      | Lansing . . .            | 61             | +14       | .8                   | + .1      | Scranton . . .          | 57             | + 9       | .7                   | T         |
| Little Rock . . .        | 67             | + 5       | .3                   | -.9       | Marquette . . .          | 56             | +16       | .2                   | -.4       | R.I. Providence . . .   | 58             | +11       | .9                   | .1        |
| CALIF. Bakersfield . . . | 57             | - 6       | .5                   | + .2      | Muskegon . . .           | 58             | +13       | .5                   | -.3       | S.C. Charleston . . .   | 64             | 0         | .6                   | 0         |
| Eureka . . .             | 46             | - 4       | .4                   | -.3       | S. Ste. Marie . . .      | 52             | +14       | .4                   | -.1       | Columbia . . .          | 67             | + 3       | .8                   | 0         |
| Fresno . . .             | 53             | - 7       | .1                   | -.2       | MINN. Duluth . . .       | 51             | +12       | .6                   | 0         | Greenville . . .        | 62             | + 1       | 1.0                  | 0         |
| Los Angeles . . .        | 54             | - 8       | .4                   | + .1      | Internatl Falls . . .    | 51             | +13       | .7                   | + .3      | S.D. Aberdeen . . .     | 55             | +11       | .5                   | .5        |
| Red Bluff . . .          | 54             | - 5       | T                    | -.4       | Minneapolis . . .        | 62             | +17       | .3                   | -.2       | Huron . . .             | 51             | + 6       | .5                   | .8        |
| San Diego . . .          | 58             | - 3       | 1.0                  | + .8      | Rochester . . .          | 60             | +15       | 1.4                  | + .8      | Rapid City . . .        | 58             | +12       | .5                   | 1.0       |
| San Francisco . . .      | 52             | - 3       | T                    | -.4       | St. Cloud . . .          | 58             | +15       | .6                   | + .1      | Sioux Falls . . .       | 51             | + 3       | .7                   | 0         |
| Stockton . . .           | 52             | - 6       | T                    | -.3       | MISS. Jackson . . .      | 71             | + 5       | .1                   | -1.0      | TENN. Chattanooga . . . | 62             | + 2       | 1.0                  | 0         |
| COLO. Denver . . .       | 50             | + 2       | .4                   | 0         | Meridian . . .           | 68             | + 3       | T                    | -1.2      | Knoxville . . .         | 62             | + 2       | 1.3                  | .5        |
| Grand Junction . . .     | 49             | - 3       | .4                   | + .2      | MO. Columbia . . .       | 63             | + 8       | .2                   | -.7       | Memphis . . .           | 69             | + 6       | 1.3                  | 0         |
| Pueblo . . .             | 51             | - 1       | .1                   | -.2       | Kansas City . . .        | 63             | + 8       | 1.5                  | + .7      | Nashville . . .         | 64             | + 4       | 1.0                  | 0         |
| CONN. Bridgeport . . .   | 55             | + 7       | T                    | -.8       | St. Louis . . .          | 64             | + 7       | T                    | -.9       | TEX. Abilene . . .      | 62             | - 3       | .6                   | 2.4       |
| Hartford . . .           | 59             | +11       | .2                   | -.7       | Springfield . . .        | 64             | + 7       | .8                   | -.2       | Amarillo . . .          | 57             | 0         | .3                   | .7        |
| D.C. Washington . . .    | 63             | + 7       | 0                    | -.6       | MONT. Billings . . .     | 49             | + 4       | 1.1                  | + .7      | Austin . . .            | 70             | + 1       | .9                   | 4.1       |
| FLA. Apalachicola . . .  | 67             | - 1       | T                    | -.9       | Glasgow . . .            | 50             | + 7       | T                    | -.1       | Beaumont . . .          | 73             | + 4       | 1.0                  | T         |
| Daytona Beach . . .      | 66             | - 4       | 0                    | -.6       | Great Falls . . .        | 47             | + 3       | .5                   | + .2      | Brownsville . . .       | 77             | + 2       | .3                   | .1        |
| Ft. Myers . . .          | 69             | - 4       | .1                   | -.3       | Havre . . .              | 52             | + 8       | .1                   | -.1       | Corpus Christi . . .    | 77             | + 4       | .5                   | .7        |
| Jacksonville . . .       | 64             | - 4       | T                    | -.7       | Helena . . .             | 43             | 0         | .2                   | 0         | Dallas . . .            | -              | -         | 1.1                  | -         |
| Key West . . .           | 74             | - 4       | .5                   | 0         | Kalispell . . .          | 42             | 0         | .6                   | + .4      | Del Rio . . .           | 70             | - 2       | .4                   | 1.0       |
| Lakeland . . .           | 70             | - 2       | 0                    | -.6       | Miles City . . .         | 52             | + 7       | .7                   | + .4      | El Paso . . .           | 59             | - 5       | T                    | .3        |
| Miami . . .              | 73             | - 2       | .9                   | + .1      | Missoula . . .           | 45             | + 1       | .2                   | 0         | Fort Worth . . .        | 68             | + 3       | 1.0                  | 2.8       |
| Orlando . . .            | 69             | - 2       | T                    | -.6       | NEBR. Grand Island . . . | 61             | +11       | 1.1                  | + .5      | Galveston . . .         | 73             | + 4       | .6                   | 0         |
| Tallahassee . . .        | 69             | + 1       | T                    | -.9       | Lincoln . . .            | 61             | +10       | .7                   | + .1      | Houston . . .           | 72             | + 3       | .8                   | 8.3       |
| Tampa . . .              | 69             | - 3       | T                    | -.5       | Norfolk . . .            | 61             | +12       | .8                   | + .3      | Lubbock . . .           | 61             | + 1       | .2                   | 1.2       |
| W. Palm Beach . . .      | 72             | - 2       | 0                    | -.8       | N. Platte . . .          | 52             | + 4       | 1.0                  | + .6      | Midland . . .           | 64             | 0         | .2                   | 1.0       |
| GA. Atlanta . . .        | 65             | + 4       | 0                    | -1.1      | Omaha . . .              | 63             | +13       | 1.5                  | + .8      | San Angelo . . .        | 60             | - 7       | .4                   | .9        |
| Augusta . . .            | 64             | 0         | T                    | -.8       | Valentine . . .          | 53             | + 7       | .6                   | + .2      | San Antonio . . .       | 69             | - 1       | .6                   | 2.6       |
| Macon . . .              | 67             | + 1       | 0                    | -.8       | NEV. Ely . . .           | 33             | - 8       | .6                   | + .3      | Victoria . . .          | 73             | + 2       | .6                   | 1.9       |
| Savannah . . .           | 64             | - 2       | 0                    | -.6       | Las Vegas . . .          | 54             | -10       | .1                   | 0         | Waco . . .              | 68             | + 1       | 1.0                  | 2.5       |
| HAWAII. Hilo . . .       | -              | -         | -                    | -         | Reno . . .               | 40             | - 7       | .2                   | + .1      | Wichita Falls . . .     | 67             | + 2       | .7                   | 2.0       |
| Honolulu . . .           | -              | -         | -                    | -         | Winnemucca . . .         | 41             | - 4       | .4                   | + .2      | UTAH. Blanding . . .    | 42             | - 5       | .2                   | .7        |
| Kahului . . .            | -              | -         | -                    | -         | N.H. Concord . . .       | 55             | + 3       | 0                    | -.8       | Salt Lake City . . .    | 46             | - 3       | .5                   | .6        |
| Lihue . . .              | -              | -         | -                    | -         | N.J. Atlantic City . . . | 60             | + 3       | 0                    | -.7       | VT. Burlington . . .    | 55             | +12       | .6                   | 0         |
| IDAHO. Boise . . .       | 43             | - 6       | .5                   | + .2      | Trenton . . .            | 48             | - 8       | .3                   | + .2      | VA. Lynchburg . . .     | 61             | + 4       | .6                   | 0         |
| Lewiston . . .           | 46             | - 4       | .9                   | + .6      | N.MEX. Albuquerque . . . | 61             | + 1       | .1                   | 0         | Norfolk . . .           | 62             | + 4       | .6                   | 0         |
| Pocatello . . .          | 42             | - 3       | .3                   | 0         | Roswell . . .            | 55             | + 8       | .3                   | -.3       | Richmond . . .          | 62             | + 4       | .6                   | 0         |
| ILL. Cairo . . .         | 67             | + 7       | T                    | -1.0      | N.Y. Albany . . .        | 54             | + 9       | .2                   | -.5       | Roanoke . . .           | 61             | + 5       | .6                   | 0         |
| Chicago . . .            | 66             | +16       | T                    | -.9       | Binghamton . . .         | 54             | + 9       | .8                   | + .1      | WASH. Colville . . .    | 42             | - 4       | .2                   | .4        |
| Moline . . .             | 64             | +13       | .3                   | -.6       | Buffalo . . .            | 61             | + 9       | T                    | -.8       | Omak . . .              | 45             | - 3       | .2                   | T         |
| Peoria . . .             | 64             | +12       | T                    | -1.1      | New York . . .           | 57             | +11       | .8                   | + .2      | Quillayute . . .        | 43             | - 3       | 2.0                  | 1.9       |
| Rockford . . .           | 61             | +13       | .9                   | 0         | Rochester . . .          | 55             | + 8       | 2.9                  | +2.1      | Seattle-Tacoma . . .    | 43             | - 6       | .6                   | .4        |
| Springfield . . .        | 63             | +10       | T                    | -1.0      | Syracuse . . .           | 58             | + 2       | 0                    | -.8       | Spokane . . .           | 41             | - 5       | .2                   | .6        |
| IND. Evansville . . .    | 64             | + 7       | 0                    | -.9       | N.C. Asheville . . .     | 62             | + 1       | 0                    | -.8       | Walla Walla . . .       | 48             | - 5       | .4                   | .4        |
| Ft. Wayne . . .          | 60             | +11       | 0                    | -.8       | Charlotte . . .          | 64             | + 5       | 0                    | -.7       | Yakima . . .            | 45             | - 4       | .1                   | T         |
| Indianapolis . . .       | 60             | + 8       | 0                    | -.9       | Greensboro . . .         | 59             | 0         | 0                    | -.7       | W.Va. Beckley . . .     | 58             | + 6       | .8                   | 0         |
| South Bend . . .         | 64             | +16       | .4                   | -.6       | Hatteras . . .           | 63             | + 3       | 0                    | -.7       | Charleston . . .        | 60             | + 4       | .8                   | 0         |
| IOWA. Burlington . . .   | 63             | +12       | .2                   | -.7       | Raleigh . . .            | 65             | + 2       | 0                    | -.6       | Huntington . . .        | 60             | + 4       | .7                   | 0         |
| Des Moines . . .         | 64             | +14       | 3.5                  | +2.8      | Wilmington . . .         | 49             | + 6       | 1.4                  | +1.0      | Parkersburg . . .       | 59             | + 4       | .8                   | 0         |
| Dubuque . . .            | 59             | +11       | 1.3                  | + .3      | N.DAK. Bismarck . . .    | 53             | +11       | .1                   | -.4       | WIS. Green Bay . . .    | 58             | +14       | .6                   | .4        |
| Sioux City . . .         | 61             | +11       | .9                   | + .4      | Fargo . . .              | 47             | + 4       | .7                   | + .4      | La Crosse . . .         | 60             | +12       | .6                   | 2.2       |
| KANS. Concordia . . .    | 61             | + 8       | 1.6                  | +1.1      | Williston . . .          | 57             | + 9       | 0                    | -.8       | Madison . . .           | 60             | +15       | .6                   | 1.1       |
| Dodge City . . .         | 61             | + 7       | 2.0                  | +1.6      | OHIO. Akron-Canton . . . | 63             | + 9       | 0                    | -.8       | Milwaukee . . .         | 46             | + 3       | .4                   | .9        |
| Goodland . . .           | 55             | + 6       | .3                   | 0         | Cincinnati . . .         | 58             | +10       | .1                   | -.7       | WYO. Casper . . .       | 45             | + 2       | .4                   | .2        |
| Topeka . . .             | 65             | +10       | 2.4                  | +1.5      | Cleveland . . .          | 58             | + 9       | 0                    | -.8       | Cheyenne . . .          | 44             | + 1       | .6                   | .6        |
| Wichita . . .            | 62             | + 5       | 1.0                  | + .3      | Columbus . . .           | 57             | + 6       | 0                    | -.8       | Lander . . .            | 44             | + 1       | .4                   | .2        |
| KY. Lexington . . .      | 60             | + 5       | 0                    | -.9       | Dayton . . .             | 59             | + 8       | 0                    | -.8       | Sheridan . . .          | 48             | + 4       | .5                   | .8        |
| Louisville . . .         | 62             | + 6       | 0                    | -.9       | Toledo . . .             | 60             | +12       | 0                    | -.7       | P.R. San Juan . . .     | 77             | - 1       | 3.7                  | +2.9      |

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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:** Warm and dry. Temperatures 4° above normal. Extremes: 87 and 40°. Light rainfall 14th and 15th.

Five days suitable fieldwork. Corn 38% planted, last year 13%, average 17%. Cotton 21% planted, 6% year ago, 14% average. Peanuts 13% planted, 3% last year, average 12%. Soil moisture short to adequate. Wheat condition mostly good. Pastures considerably improved.

**ARIZONA:** Storms produced cold weather beneficial precipitation. Temperatures 10 to 15° below normal freezing level as low as 2500 feet.

Wet cold conditions stopped fieldwork. Some cotton replanting necessary. Hail strong winds damaged considerable acres Pinal County. Lettuce harvest stopped by rainfall. Yuma lettuce complete. Cantaloups excellent progress. Grapes cluster thinning, sizing sprays. Grapefruit harvest limited. Citrus groves good condition. Water supplies, soil moisture much improved. Range conditions expected progress well. Cattle shipments moderate, fat lamb shipments active.

**ARKANSAS:** Warm dry. Extremes: 41 and 87°. Weekly rainfall trace southeast, 0.30 in. central, 0.45 in. NW.

Soil moisture short except east central where adequate. Early planted fields need rain for germination and good stands. Most soybean producers waiting for good rain before planting. Cotton planting 9% complete; 4% last year; 1973-75 average 2%. Rice seeding 42% complete; 21% 1975; average 23%. Planted fields need moisture. Corn acreage 61% planted; sorghum planting 33% complete. Wheat and oats good condition. Leaf disease more prevalent. Fruit good condition. Livestock making gains as pastures improve.

**CALIFORNIA:** Cool and windy with precipitation at times. Amounts from less than 0.50 in. most of south to over 1.00 in. Sierra Nevada and Northern Mountain areas. Lows near 32° some north coastal valleys early week, otherwise above freezing low valleys. Weekly averages 10° below normal southeast deserts to 6° below other areas, except 2° below some coastal sections. Rains will help fill small grain, too late for much of dryland acreage. Many fields heading out are stunted. Large acreage alfalfa hit by rain, some damage. Cotton planting delayed by rain. Planting corn, rice increasing slowly. Hail, wind, storm damage. San Joaquin Valley hardest hit. Plums, peaches, nectarines, thinning begun. Some frost damage appearing almonds north areas, other areas, good set. Rain benefited citrus. Navel harvest slowing, valencias beginning, grapefruit movement fair. California vegetables progressing well. Cool weather slowed growth in southern areas. Northern areas preparing to plant. Planting canning tomatoes and melon Sacramento Valley. Foothills, mountains benefit recent rains, Calley too little, too late. Ranchers cull as feed short. Supplemental feeding high. Cattle market active, cattle sold lighter weights. Stock ponds slow filling. Lambing, calving northeast areas.

**COLORADO:** Warm and windy beginning. Showers and thunderstorms over south and central areas 12th. Snow in mountains daily: up to 12 in. late week. Precipitation average 0.20 in. to 0.50

in. west, 0.20 in. eastern plains. Temperatures near to above normal west, 9° above east. High 87° in La Junta. Weekend storm brought varying amounts of moisture to eastern plains.

Winter wheat in very poor condition southeast, fair to poor elsewhere. Sugarbeet contract dispute settled, 10% seeded, 20% 1975, 33% average. Spring barley 73% seeded, 32% 1975, 53% average, 30% emerged. Oats 65% seeded, 37% 1975, 50% average, 34% emerged. Summer potatoes 37% seeded. Soil moisture generally short. Livestock condition good. Ranges and pastures fair to poor.

**FLORIDA:** Temperatures near normal northwest and several degrees below normal peninsula. Moderate to locally heavy rainfall northwest and along south-east. Elsewhere in peninsula dry conditions prevailed with amounts generally less than 0.10 in. Soil moisture variable, mostly adequate west and a few areas central and east, elsewhere short.

Corn planting practically complete, also tobacco. Peanut seeding underway. Soybean land being prepared. Wheat condition variable. Sugarcane harvest complete. Young cane good condition. Pastures vary from fair to good. West good, central and south pastures lagging due to moisture shortages. Pastures in north providing fair grazing. Cool nights limiting growth. Condition of cattle, calves varies widely from poor to excellent. Citrus groves very good to excellent condition, rain needed, irrigation resumed. New crop fruit doing well, valencia harvest accelerating. Spring vegetable harvest in full swing. Cucumbers, peppers and squash at or near peak production. Poor market conditions some crops. Total volume increased 13% over previous week. Crops increasing were sweet corn, cucumbers, green peppers, squash, and potatoes. Crops holding steady were snap beans, cabbage, carrots, celery, eggplant, lettuce, radishes, and tomatoes. Declining in volume were chinese cabbage, escarole, and strawberries. Light watermelon harvest underway. Good volume after May 1.

**GEORGIA:** Temperatures 2° above normal except 5° below normal coast. Seasonably cool early warming thereafter. No rain except isolated light showers. Warm and dry 17th and 18th.

Soil moisture short to very short. Land preparation and planting continues but slower due to dry soils. Fieldwork: 6 days suitable. Tobacco fair to mostly good, transplanting 92% complete, last year 84%, average 79%. Corn fair, 73% planted, last year 31%, average 30%. Cotton mostly fair to good, 35% planted, last year 2%, average 7%. Peanuts fair to mostly good, 16% planted, last year 2%, average 5%. Few soybeans planted. Small grains fair to mostly good, with considerable acreage headed. Apples good. Peaches mostly good to excellent. Watermelons fair to good, 82% planted, last year 58%. Pastures and cattle fair to mostly good. Hogs good.

**HAWAII:** Weather improved. Some areas continued wet.

Vegetable supplies becoming plentiful. Cuttings head cabbage and lettuce heavy. Bananas light. Papayas, wet weather and fruit gaps lowering yields in Puna. Pineapple light. Sugar mills in operation. Pasture good condition, soil moisture ample.

IDAHO: Temperatures 2 to 5° below normal north and southwest with precipitation well above normal these areas. Temperatures and precipitation near normal southeast. Nearly 1.00 in. rain reported.

Rain and snow showers late week temporarily halted farm activities. Soil moisture supplies adequate. Fieldwork and planting operations wide spread southwest and south central. Winter wheat good condition. Seeding spring wheat 20% complete, 5% 1975. Spring barley 15% seeded, 10% 1975. Mixed grain and sugarbeets both 35% planted, 15 and 10% respectively 1975. Potatoes 10% planted, 1% 1975. Livestock excellent condition. Winter feeding continuing. Shortage of hay. Calving active.

ILLINOIS: Temperatures 7 to 16° above normal; warm period continued into 10th week. High temperature records set. Precipitation: 1.00 in. north: Trace to none elsewhere. Heavy thunderstorms northwest.

Corn and soybean acreage 97% plowed, 80% 1975, average 63%. Corn 11% planted, ahead of average. Winter wheat 25% excellent, 71% good, 3% fair, 1% poor. Alfalfa and red clover hay mostly good. Pastures mostly fair to good, supplying 58% livestock roughage requirements. Soil moisture: 80% short, 20% adequate. Fieldwork: 6.75 days suitable.

INDIANA: Dry sunny and warm. Temperatures reached 80's, 12° above normal. Evaporation at midsummer rates. Relative humidity much below normal. Rainfall slight, 2.00 to 2.50 in. below normal past 3 weeks.

Fieldwork: 7 days suitable. Corn and soybean land 85% plowed, 70% 1975, 45% average. Corn 5% planted. Oats 90% seeded, 65% 1975, 35% average. Winter wheat 9 in. high, 5 in. 1975, 6 in. average. Winter wheat 25% jointed, condition fair to mostly good. Pastures fair to good, providing 35% cattle feed. Peach buds: 30% alive. Apple buds: 45% alive.

IOWA: Temperatures 13° above normal. Slight cooling 17th. Fourth successive week above normal. Rainfall excessive 2.00 to 5.00 in. in band south central to northeast decreasing to less than 1 in. extreme southeast, northwest. Normal amounts 0.75 in. First tornado, severe thunderstorm damage night of 14th.

Rain, winds interrupted fieldwork late week. Heavy rain central caused minor flooding, little soil erosion. Some wind erosion 14th. Seedbed preparation nearly complete. Fertilization 77% completed, 92% plowing completed, 60% 1975, and 5-year average. Corn planting underway, 4% complete. Oat seeding 97% complete, 6% last year, 5-year average 50%. Oat seeding virtually complete south. Winter wheat condition mostly fair to good. Pasture improved, mostly fair to good. Fieldwork: Days suitable 6.

KANSAS: Most general and beneficial rain since November, cases since spring 1975. Rains generally 1.00 in. to 3.00 in. except for Q25 in. or less extreme southeast and extreme west portion of northwest and west central. Temperatures well above normal ranging from 60° northwest to 66° southeast or 6° to 11° above normal.

Timely rains benefited wheat. Wheat 35% jointed, 10% last year, 35% average. Some soil-borne mosaic and streak mosaic central. Oats 95% planted, 55% last year, 85% average. Barley 95% planted, 60% last year, 80% average. Corn 15% planted, under 5% planted; 60% last year, 80% average. Corn 15% planted, under 5% last year,

5% average.

KENTUCKY: Warm and dry with temperatures 5 to 7° above normal. No precipitation except scattered light showers extreme west on 14th.

Weather ideal for spring farmwork. Soils becoming dry. Plowing 85% complete, 3% last year, 6% average. Plants up in 74% of tobacco beds, 53% last week, 45% average. Plant beds were irrigated. Barley 16% heading, wheat 2%--both ahead of normal. Pastures good condition, but growth slowed.

LOUISIANA: Temperatures 6° above normal. Extremes: 89 and 55°. Heaviest 1 day rainfall 0.20 in. 12th.

Land preparation and spring planting good progress. Days suitable for fieldwork: 5.7 days. Soil moisture adequate. Cotton 6% planted. Rice 45% planted, 63% last year, 60% average. Corn 72% planted, 30% ahead of last year. Sugarcane fertilization and cultivation continued active; stands and growth good. Strawberry harvest heavy volume; quality excellent. Small grains good. Pasture feed average. Cattle fair to good.

MARYLAND & DELAWARE: Temperatures normal to slightly below normal. Extremes: Low 90's upper teens. Record highs set 16th, 17th, 18th. Very little precipitation.

Plowing for corn 75% complete. Some early corn planted. Small grains in good condition. Tobacco beds in good shape but getting dry, some irrigation started. Freezing temperatures 11th and 12th damaged fruit buds, amount not yet determined. Soil moisture supplies short to adequate, pastures normal. Rain needed.

MICHIGAN: Temperatures 19° above normal over northern lower to 2° above normal along Lake Michigan Shore of upper. Readings early week quite cold, warmed rapidly setting record highs end of week. Heat wave with exception of Lake Michigan Shoreline of Upper. Precipitation spotty falling as rain showers and thunderstorms.

Spring plowing underway. Some early planting underway in drier areas. Winter wheat damage about normal, crop greening up rapidly. Fruit trees budding in southwest.

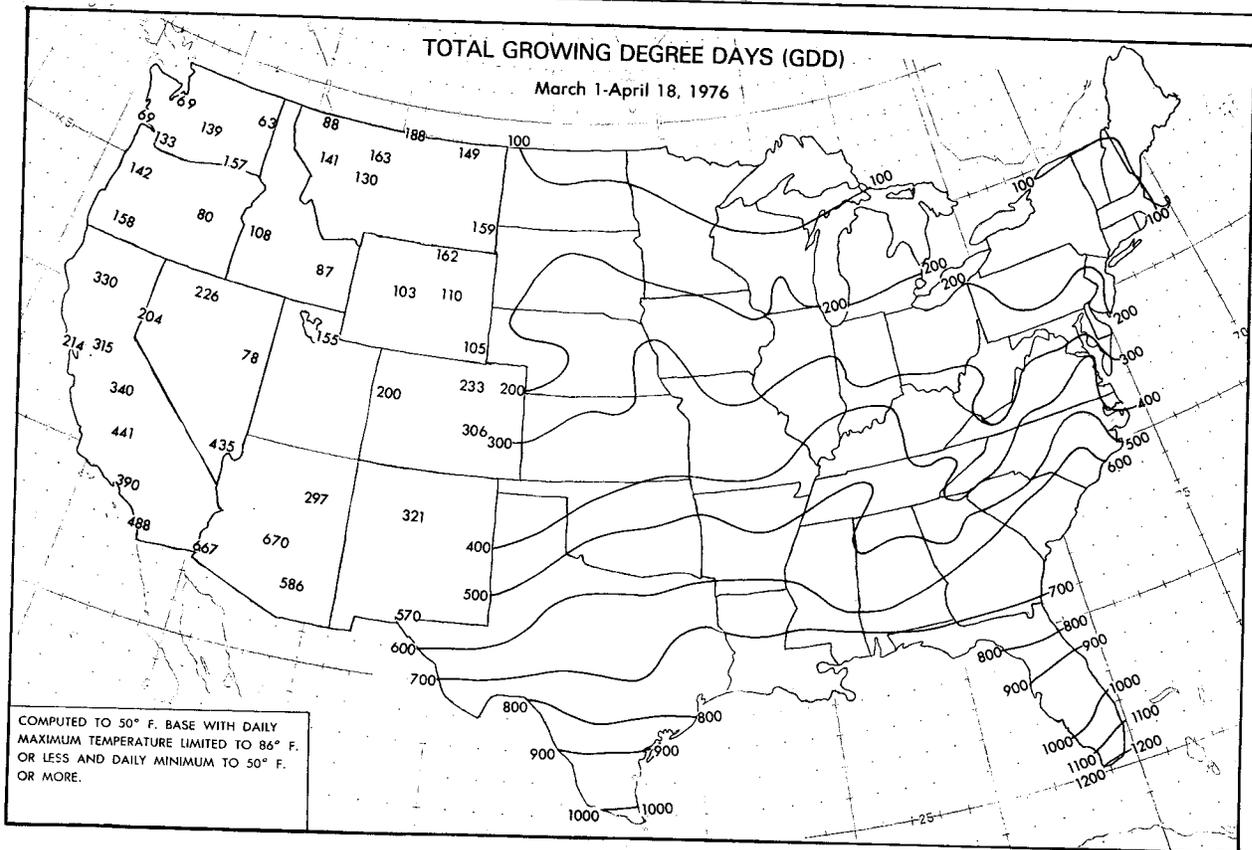
MINNESOTA: Fourth consecutive warm week. Temperatures 12 to 15° above normal. Extremes: 87 and 19°. Significant precipitation near 30% above the 0.40 in. to 0.50 in. normal. Rains of 1.50 in. southeast 17th and 18th.

Progress 2 weeks ahead normal. Small grain seeding begun northwest, nearing completion south. Spring wheat seeded 41%, normal 15%, oats 54% normal 15%, barley 23%, normal 18%, flax 12%, normal 4%, none seeded 1975. Early seedings emerging. Corn land 27% prepared, normal 5%. Planting begun scattered fields. Sugarbeets 10% planted, normal 1%.

MISSISSIPPI: Temperatures near normal. Extremes: 89 and 29°. Greatest 24-hour rainfall 0.64 in. Arkabulata on 14th.

Soil moisture short to adequate south, mostly adequate elsewhere. Fieldwork: 5.8 days suitable. Cotton 13% planted, 0% 1975, about 7% average. Rice 55% planted, 2% 1975. Corn 48% planted, 21%, 1975, 23% average. Winter wheat 88% jointed, 84% 1975; 49% headed. Oats 92% jointed, 83% 1975; 44% headed. Plowing 76% completed. Crops and livestock in fair to good condition.

MISSOURI: Temperatures 1° above average East-



Ozarks to 90° above average northwest and northeast prairie. Precipitation light, less than 0.25 in. Fieldwork: 6.0 days suitable. Plowing 90% complete, two weeks ahead of normal. Corn 33% planted, up 19 points from previous week, two weeks ahead of normal. Cotton 6% planted Bootheel, up 2 points from previous week, one week ahead of normal. Wheat condition good except northwest and north central fair condition. Pastures fair. Soil moisture 90% short, 10% adequate.

**MONTANA:** Precipitation was moderate to heavy except north central and parts of central and northeast. Temperatures 8° above normal north central and east and near normal elsewhere. Topsoil and subsoil moisture adequate. Spring seeding ahead of normal. Spring wheat and oats 30% complete. Winter wheat condition remains fair to good. Field tillage well underway. Ranges greening. Calving and lambing losses light. Calving 75% and lambing 65%

**NEBRASKA:** Temperatures above normal--16 to 23° one day. Showers and thunderstorms 0.50 to 0.75 in. west, 1.00 to 1.50 in. east. Topsoil moisture short 27%, adequate 61% and surplus 12%. Subsoil moisture supplies 82% short and 18% adequate. Winter wheat condition 16% poor, 66% fair and 18% good. Alfalfa and wild hay fair condition. Spring alfalfa seeding continues. Sugarbeet planting ahead of last year. Oats 80% planted and barley 90% planted. Year ago oats 20% and barley 20%. Pasture and range feed supplies short 77%. Pastures beginning to grow. Calving moving along well.

**NEVADA:** Temperatures 5 to 10° below normal. Extremes: 30° Logandale, 13° Lovelock. Measurable precipitation all areas, greatest amounts south

central.

Storms halted seedbed preparation. Alfalfa haying confined to southern valleys. Limited movement livestock to ranges.

**NEW ENGLAND:** Late season cold record 17° on 12th. Record-breaking heat end of week. Rainfall sparse central and western New England dry. Fruit trees entering silver tip stage. No assessment of cold damage start of week. Fieldwork: 2 weeks ahead of normal.

**NEW JERSEY:** Dry with record cold and hot temperatures. Extremes: 22° 14° and 95°. Traces of rainfall. Soil moisture in percent of field capacity: 80% north, 70% central and 66% south. Four in. soil temperature: 56° north, near 60° central and south. Soil quite dry. Freezing temperatures earlier did limited damage to peach and apple orchards. Some damage early blooming strawberries and lettuce plantings. Blueberries coming into bloom. Sweet corn and snap beans planting underway. Small grains need rain.

**NEW MEXICO:** Wettest week this year. Recurring light rains and snows northern mountains. Slow moving storm brought general showers 12th and 13th amounts near 0.50 in. Some severe thunderstorm and hail activity eastern border 13th. Very cold 16th and 17th with sub-freezing temperatures except southeast. Soil moisture short, ranges and livestock fair. Dryland winter wheat poor. Irrigated winter wheat and barley fair eastern areas, but good elsewhere, durum wheat good. Some cotton planted. Apples in north blooming and good condition, some frost damage. Lettuce good in central valley.

**NEW YORK:** Windy and cold lows in teens and 20's,

1 to 3 in. new snow Adirondacks. Temperatures moderated midweek ended hot. Highs 85 to 95° with 96° at New York City. Precipitation well below normal except Mohawk Valley and Finger Lakes where midweek thunderstorms dumped 1.00 to 3.00 in.

Plowing well underway ahead of 1975. Oats planting started. Pastures starting to green. Long Island potato planting 70% complete. Orange County onions 55% in; Madison County onion sets 100%. Early sweet corn planting, celery transplanting started. Some freeze damage to peaches, sweet cherries. Apples in green tip growth stages, little winter damage. Pears and tart cherries wintered well. Grape buds swelling, trellis repair and tying underway.

**NORTH CAROLINA:** Temperatures about normal. Rainfall very light and spotty.

Widespread frost damage 10th to tobacco in fields, Irish potatoes, vegetables, some fruits and berries. Blueberries 75% loss. Days suitable fieldwork: 5.7. Soil moisture mostly short. Condition small grains mostly good. Tobacco plant beds fair to good. Plant supply generally adequate. Flue-cured tobacco in fields mostly fair, some to be replanted; crop 11% transplanted, 1975 7%, 5-year average 7%. Irish potatoes, truck crops, pastures fair to mostly good. Peaches poor to good, mostly fair. Corn 50% planted, 1975 33%, average 20%.

**NORTH DAKOTA:** Temperatures above normal. Extremes: 65 and 19°. Precipitation above normal except east central and southeast. Precipitation ranged from 1.00 in. above normal to 0.21 in. below normal.

Seeding small grains progressing satisfactorily with 15% hard red spring wheat planted, 6% durum, 10 to 15% oats and 5 to 10% barley. Livestock condition good with calving and lambing progressing satisfactorily.

**OHIO:** Recordbreaking low temperatures 12th. Temperatures 17° northwest to 94° southeast. Two stations reported precipitation; greatest amount 0.10 in., southern two-thirds very dry.

Soil moisture: 58% short, 42% adequate. Planting completed: corn 10%, 5% 1975 and 5% normal; oats 85%, 65% 1975 and 45% normal; sugarbeets 70%, 65% 1975 and 45% normal; potatoes 40%, 30% 1975 and 15% normal. Tobacco beds 90% sown. Pasture condition fair to good. Fieldwork: 7 days favorable.

**OKLAHOMA:** Temperatures 4 to 7° above normal. Precipitation 0.57 in. east central to 2.72 in. southwest. Weekend mild with rain.

General thundershowers statewide relieved drought-stricken areas. Topsoil moisture short panhandle and north central, adequate other areas. Subsoil moisture adequate. Improved wheat conditions 35% of crop in good condition, 41% fair, 25% rated poor. About 84% jointed, 16% headed, 2% year ago. Thin stands and uneven heading reported many areas. Oats and Barley 75% jointed, ahead of last year. Some fields starting to head. Corn 20% planted, 80% ready for planting. Early sorghum plantings begun, half of seedbeds prepared. Conditions mostly fair to good. Seedbed preparation continues cotton and peanuts; recent rains slowed progress. Few alfalfa fields extreme south cut. Conditions mostly fair to good. Weevil infestation continues. Ranges making slow growth. Conditions mostly good to fair. Livestock good to fair condition. Marketing active.

**OREGON:** Temperatures slightly below normal. Pre-

cipitation along coast averaged 1.25 in. Willamette Valley. 0.70 to 0.50 in. east.

Fall seeded crops in good condition. Spring land preparation continued, slowed by wet weather. Peaches just past full bloom. Cherries in full bloom to petal fall stage, east. Cherries, prunes, apples, peaches blooming in Willamette Valley. Early potatoes nearly planted. Russet planting continues. Onions coming up. Lambing nearly complete. Calving continuing. Ranges would benefit from warm weather. Feed supplies limited. Cattle going on grass.

**PENNSYLVANIA:** Warm, sunny and dry. Temperatures 10 to 20° above normal. Cool beginning with frost and freezing 13th, 14th. Increasingly warm, humid conditions remainder of week. Weekend record high readings in 80's and 90's. Extremes: 12 and 99°. Very dry with practically no rain.

Soil moisture mostly adequate to short. Dry spring permitting early fieldwork. Six days suitable. Activities: Plowing, top dressing, orchard work, grape tying, planting oats, clover and potatoes. Plowing 60%, 25% in 1975. Oats 44% planted, one week ahead of last year. Potatoes 17% planted, one week ahead of 1975 and 10 days ahead of usual. Tobacco beds 80% set, some sprouting. Hay condition fair to good. Freeze damage to sweet cherries and low blocks peaches plus early blooming apples. Fruit development 2 weeks ahead of usual. Peaches 60% pink, 10% full. Cherries 51% pink, 36% full. Apples 67% pink, under 5% full.

**PUERTO RICO:** Island rainfall 1.81 in. or 0.75 in. above normal. Highest weekly total 4.56 in. at Adjuntas. Temperatures 77° coasts and 69° interior. Extremes: 92 and 51°.

**SOUTH CAROLINA:** Temperatures near or slightly below normal. Early week cool, temperatures above normal end. No rain.

Cold damage 10th severe some areas; some tobacco plants killed after transplanting to fields; some peaches badly hurt Piedmont area.

Soil moisture short to very short. Rain needed to avoid severe damage from burn, poor germination. Some producers waiting for rain before continuing planting. Corn planted 79%, 1976; 48%, 1975; 43% 5 year average. Cotton planted 29%, 1976; 4%, 1975; 12% 5 year average. Tobacco planted 81%, 1976; 44%, 1975; 46% 5 year average. Watermelons planted 85%, 1976; 71%, 1975; 68% 5 year average.

**SOUTH DAKOTA:** Temperatures above normal sixth consecutive week. Highs in 80's, lows in 20's and 30's. Extremes: 88 and 22°. Showers of more than 1.00 in. except northeast where up to 0.50 in. received. High winds 16th caused some crop damage, much blowing soil.

Fieldwork three weeks ahead of normal. Spring plowing 54% complete, 1975 4%, normal 19%. Small grain seeding nearly complete. Spring wheat 91% seeded, 1975 3% normal 33%. Oats 90% seeded, 1975 1%, normal 35%. Barley 83% seeded, 1975 1%, normal 28%. Flax 12% seeded, one of the earliest flax seedings on record. Corn planting just beginning. Pastures greening up with rain, but growth slow. More rain needed. Few cattle moving to pasture as farmers giving pastures time to recover from overgrazing. Livestock condition good. Young animal losses below normal due to excellent weather. Feed supplies adequate. Stock water supplies improved with rain.

**TENNESSEE:** Southerly winds and warm temperatures.

Light rain west early amounts 0.50 in. or less. Temperatures upper 60's west and low 60's and upper 50's east, 3° above normals east to 6° above normal west.

Rapid progress plowing, disking, fertilizing and planting. Days suitable fieldwork over 5 days. Crop development considerably ahead of normal. Corn and cotton planting well underway. Pastures and crops good growth but needing moisture soon. Some damage alfalfa weevil damage.

TEXAS: Heavy rains, warm temperatures. Rain normal far west 3.00 in. above normal north central south central. Temperatures 3 to 5° above normal. Wheat: Good growth where stands irrigated but dryland fields fair to poor. Good response to rains but most dryland stands rains were too late to make normal grain crop. Oats: Excellent growth and furnish adequate grazing southern half. Cotton: Planting excellent progress Blacklands southward before rains. Stands Coastal Bend, Lower Rio Grande Valley making excellent progress, few insect problems. Planting 18%, 13% last year 3-year average 12%. Sorghum: Planting satisfactory progress. Stands southern half making excellent growth. Good rains assured excellent planting moisture for rest of crop. Rice: Seeding making satisfactory progress along Upper Gulf Coast, South Central. Cool, wet weather delayed growth on early stands. Corn: Planting making excellent progress and active from High Plains southward. Early stands continue good growth recent rains provided excellent moisture.

Lower Rio Grande Valley: Onion harvest resumed after rains. Carrot and cabbage harvest active. Tomatoes making excellent progress. Coastal Bend: Cucumber harvest to begin when fields dry. Few late cabbage fields remain for harvest. Watermelons showing good growth as result of rains. San Antonio-Winter Garden: Carrot harvest underway. Onions showing good growth. Potato digging started. Few watermelons damaged by hail and high winds. Central Texas: Tomatoes, watermelons and cantaloups showing good growth. East Texas: Watermelon and tomato planting active. North Texas: Tomatoes being field set. Knox-Haskell: Fungicide treatment applied to potato crop. Trans-Pecos: Onions, lettuce and cabbage showing good growth. High Plains: Potatoes and onions making good progress. Peaches: Make normal development. Pecans: Trees budding and leafing in north. Blooming in south. Citrus: Harvest rapidly nearing completion. Few sheds open for fresh market shipments. Fruit diverted into processing plants. Pastures showing excellent response rains. Grazing normal or above many areas. Livestock responded to improved pasture conditions and putting on weight. Lamb, calf losses to predators continues and screwworm cases show significant increase.

UTAH: Recurring precipitation. Accumulated amounts generally moderate to heavy. Subfreezing minimum temperatures few agricultural areas. Average temperatures generally near normal ranging from 3° above to 5° below normal.

Planting behind normal. Small grain crops 40-45% planted, sugar beets 15-20% planted, corn planting not started. Soil moisture generally adequate. Fruit prospects favorable except apricots. Most alfalfa wintered well but cool weather slowing growth. Calving 65% completed, shearing 30% completed, and range lambing 20% completed. Range feed condition fair to good.

VIRGINIA: Cool and frost at beginning. Unseasonably warm at end of period. Extremes: 93 and 17°. Precipitation light, less than 0.10 in.

Fieldwork: 5.7 days suitable. Topsoil moisture: 86% short, 14% adequate. Corn planting progress 17%; 1975, 6%; average 3%. Effects of dry weather showing. Tobacco plant beds good condition but irrigation necessary. Small grain sprouting out. Potato sprouting and growth progressing well. Snap bean and cucumber planting proceeded. Freeze damage to peaches and apples.

WASHINGTON: West: Temperatures near normal north of Seattle subnormal elsewhere. Precipitation subnormal along coast and above normal elsewhere.

Cabbage fields beginning to bolt. Early lettuce transplanted from cold frames. Fall turnip fields blooming. Strawberry growers working fields. Raspberry plants putting out new shoots. Pasture growth slow. Some green chopping.

East: Temperatures subnormal. Precipitation near normal to much above normal in Palouse-Blue Mountain area.

Sharply falling temperatures caused activation of orchard frost protection systems; damage slight. Apricots in shuck stage. Peaches, pears, cherries full bloom or near full bloom. Some apples in green tip stage. Limited cutting asparagus. Planting: Potatoes, sugarbeets, spring wheat, alfalfa. Other activities: Stringing hops, irrigating. Winter wheat responded well to midweek precipitation. Soil temperatures cold but crop improvement noticeable. Reseeding and seeding of wheat and barley underway. Reseeding expected to be minimal. Calving virtually completed.

WEST VIRGINIA: Temperatures normal. Precipitation below normal, with no rainfall.

Fieldwork: Suitable 5.4 days. Soil moisture short to adequate. Main farm activities: Plowing, fencing, gardening and planting potatoes. Condition of growing crops mostly good. Planted: Oats 62%, potatoes 64%, tobacco 86% with 20% emerged. Spring plantings ahead of last year. Cattle good condition with majority on pasture.

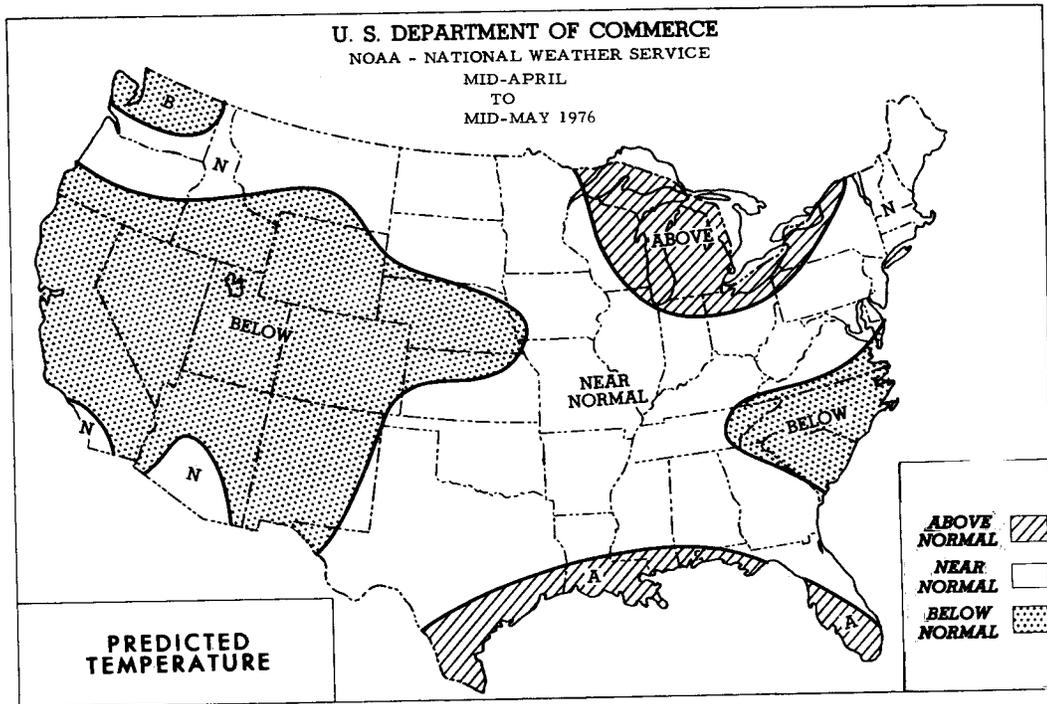
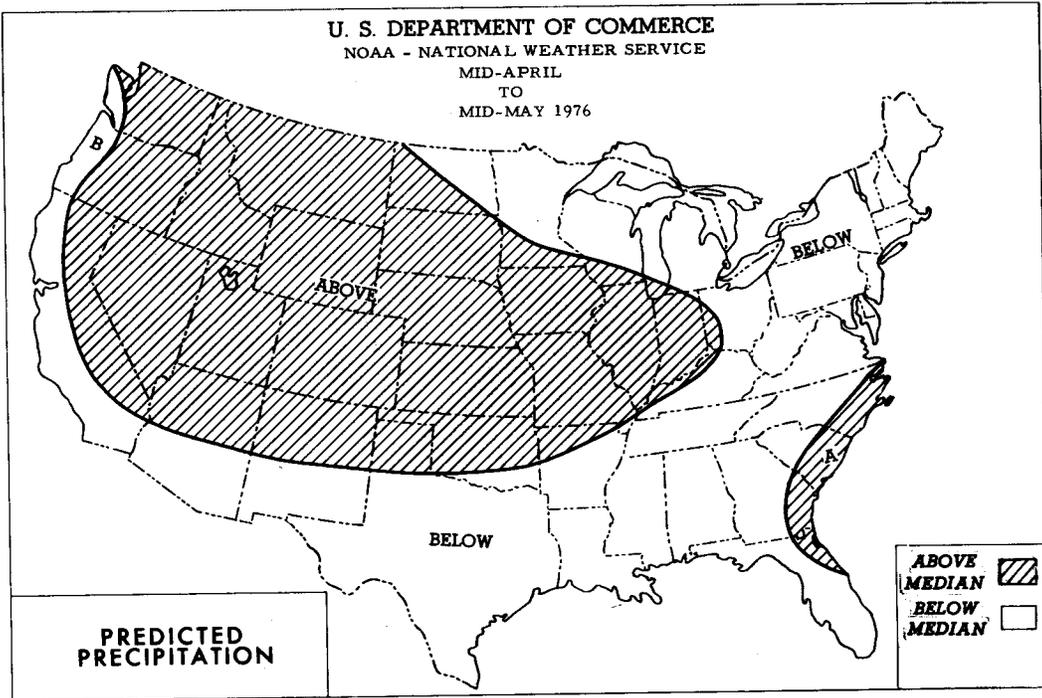
WISCONSIN: Temperatures 13° above normal. Highs in 50's 12th but 70's and 80's remainder. Overnight lows 40's and 50's. Scattered showers and thunderstorms 14th to 18th. Some severe storms with hail and a couple tornadoes reported, but only minor damage. Rainfall 0.50 to 1.20 in. except 0.30 southeast.

Spring work ahead normal. Oats 33% seeded, 1975 none, normal 10%. Many done south, some not started on heavy soils north and east. Early oats is up. Spring plowing 25% done, 1975 none, normal 10%. Corn ground being worked south, a little corn planted. Potatoes and peas being planted. Tobacco beds being steamed and seeded. Orchards advancing fast. Good maple sap run ending. Pastures and hay fields growing with moisture and warm temperatures. Hay seedings had good winter survival. Soil moisture 10% short, 80% adequate, 10% surplus.

WYOMING: Above normal temperatures. Precipitation spotty mostly below normal.

Major activities: Calving, lambing, shearing, seedbed preparations and seeding. Topsoil moisture: 33% poor, 54% adequate, 13% surplus. Range and cropland aided by moisture. Spring wheat planting 2 weeks ahead 5-year average. Sugarbeets 1 week behind. Spring wheat 50% seeded, oats 36%, barley 47%, sugar beets 11%. Calving 60% completed. Ewes lambed: Farm flocks, 71%, range 26%. Sheep shorn: Farm flocks 67%, range 33%.

### Average Monthly Weather Outlook



## World Agricultural Weather Summary

(March 1 - April 18)

**HIGHLIGHTS:** Sowing of spring crops and preparations for summer crops progressed well in most Northern Hemisphere countries. Cold and slowly receding snow cover caused some early crop delays in Eastern Europe. Problem dry areas were the USSR's Northeast Caucasus, Volga, and Urals regions; parts of the U.S. southwestern Great Plains; and the People's Republic of China's (PRC) Manchurian Plain. Soil moisture was mostly adequate for sowing winter crops in the Southern Hemisphere.

**WEATHER:** The relatively cold March in Europe and the USSR moderated considerably by mid-April. Except for much of European USSR, the Continent also tended to be very dry from the Atlantic to central Siberia. In general, accumulated precipitation in Europe since fall has been well below normal.

Precipitation became more generous in April, especially in parts of the Mediterranean region and the Balkan countries. Good rain fell in much of European USSR during the second week of April. Precipitation was mostly light from the Volga eastward, although parts of the Lower Volga region measured one-third to over 1 inch of rain in mid-April.

The Volga, Northeast Caucasus, and Urals regions have not snapped out of the 1975 drought and soils were subject to blowing. Precipitation in Siberia and Kazakhstan was light and spotty except for locally heavy amounts in southern Kazakhstan.

Turkey was drier than normal in March; April rainfall increased but was erratic. Rainy weather began early in the Gulf of Guinea countries of West Africa and extended inland to Upper Volta. Rainfall was also above normal in South Africa and Rhodesia. In North Africa's Maghreb countries rainfall was about normal in March, reasonably good through mid-April in Morocco, but mostly light in Algeria and Tunisia.

The Canadian Prairies had more than usual March precipitation but little or none the first half of April. Significant rains fell during the third week. Mexico was drier than normal as was most of Central America. Dry conditions on the U.S. Great Plains intensified in March but much of the region received heavy precipitation in mid-April.

Temperatures were cooler than usual in South America, southern Brazil, Uruguay, and most of Argentina but above normal in central Brazil. Rainfall was moderate and variable but tended to be below normal in central Brazil and in much of Buenos Aires and La Pampa Provinces of Argentina. Above normal amounts fell in southern Brazil, Uruguay, and northern Argentina.

In Asia, the PRC was mostly drier and cooler than usual in March with a seasonal increase of rain-

fall in southern areas in April. Precipitation was light yet above normal in much of the Manchurian Plain. Japan was quite rainy.

Except for isolated spots, India and Sri Lanka continued mostly hot and dry. Precipitation was rather heavy, however, in Assam and eastern Bangladesh. Frequent rains continued to erase the drought in Malaysia. The Philippines were dry in the west, especially Luzon, and wet in the east, including most of Mindanao.

Australia was wet in the north and along the eastern and southeast coasts and quite dry elsewhere.

**CROPS:** Crop growth lagged in much of Europe because of cold March weather, but picked up as April temperatures moderated. No unusually wet soils slowed soil preparations and planting activities.

After cold weather delays in March, spring planting in the USSR is expected to progress well now that snow cover has receded from most major agricultural areas. Mid-April rains especially benefited winter grains in important tillering and jointing stages, particularly in southern Europe, extending from the Ukraine to Spain.

Much of the USSR winter wheat was poorly tillered in the fall and this reduced yield potential. Spring rains can add some tillers, or bushiness, but cannot completely offset fall losses. The U.S. hard red winter wheat area faces a similar problem.

Early spring weather was mostly favorable for winter grains in North Africa and the Middle East.

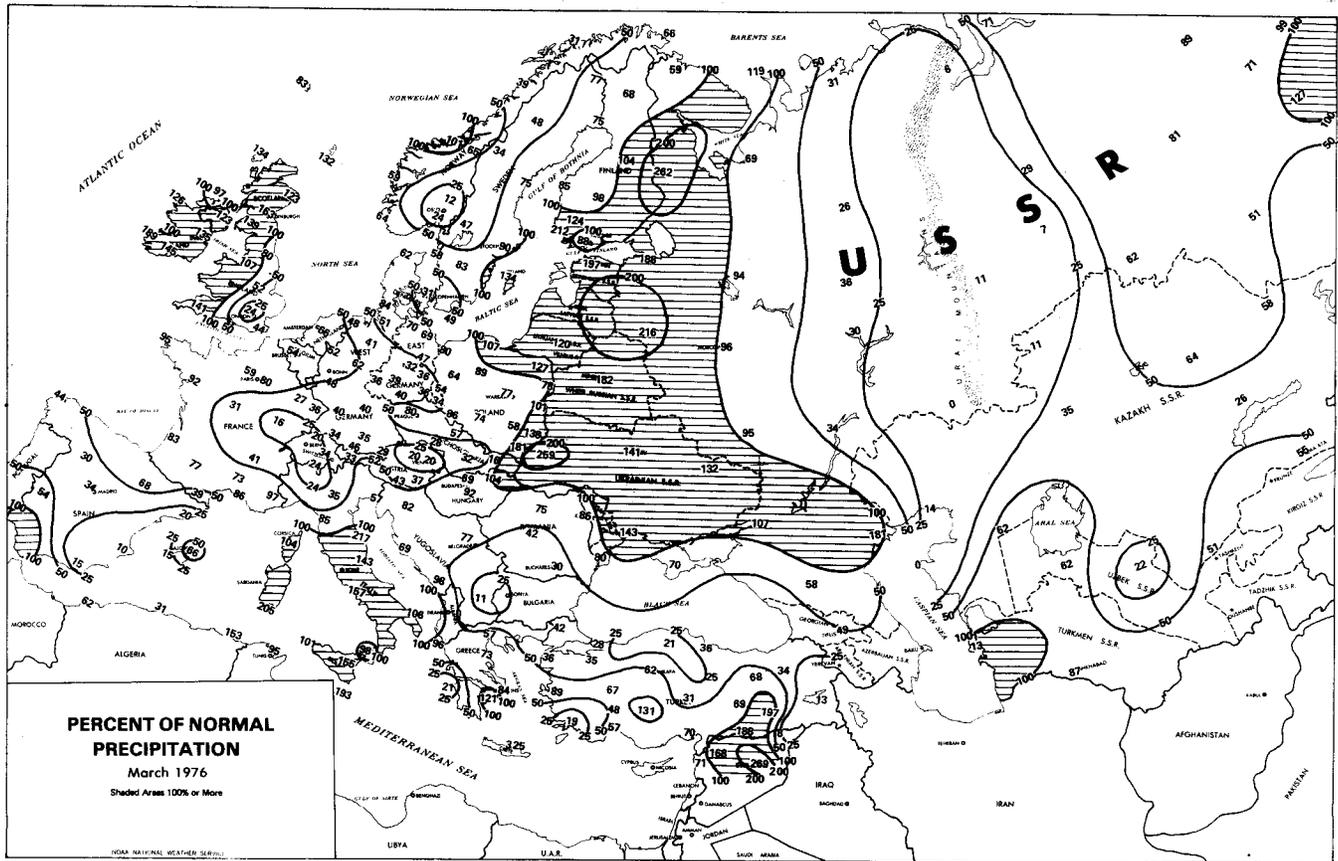
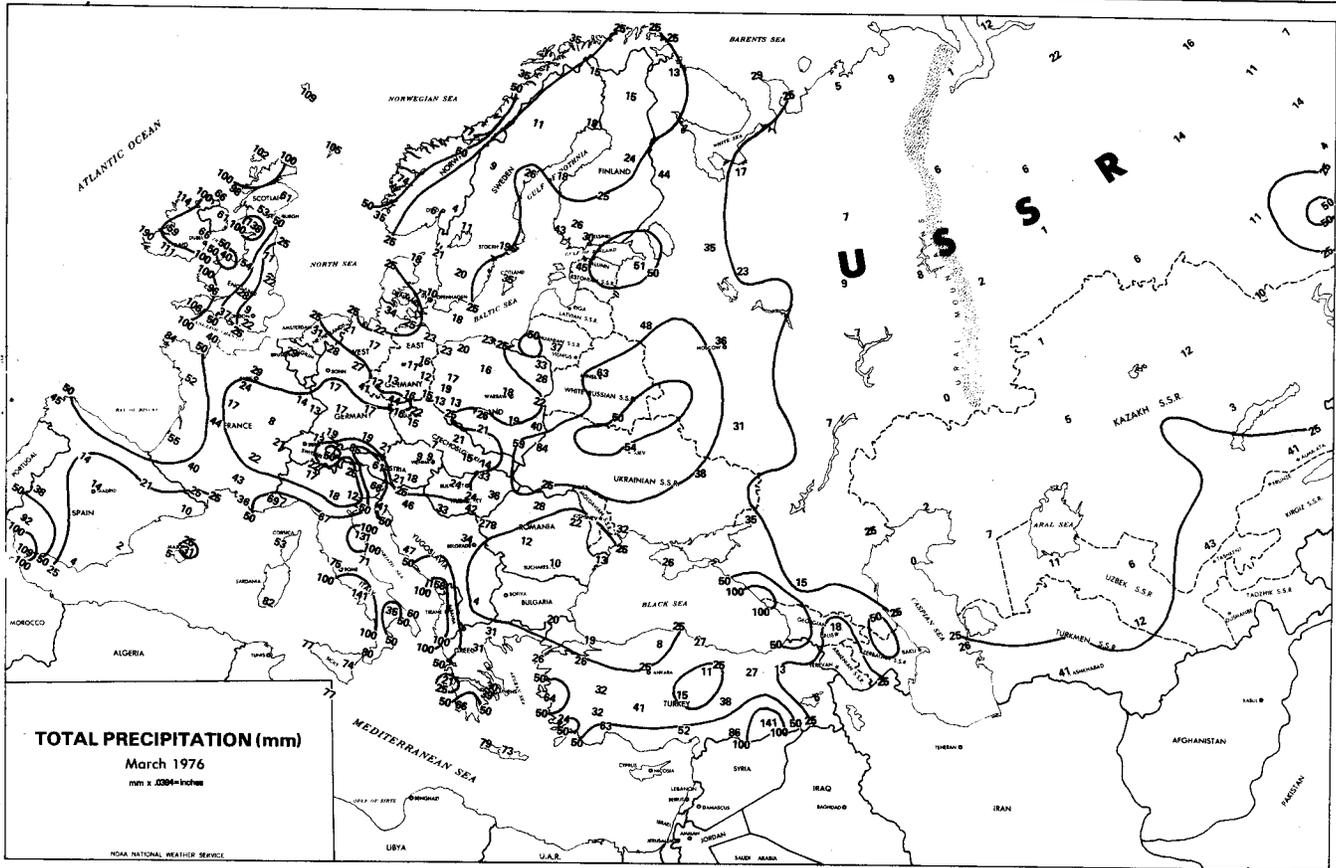
In North America, mild and relatively dry weather encouraged planting of spring grains and hastened forage growth in the Great Plains. April cold snaps, however, reduced deciduous fruit prospects in parts of the U.S.

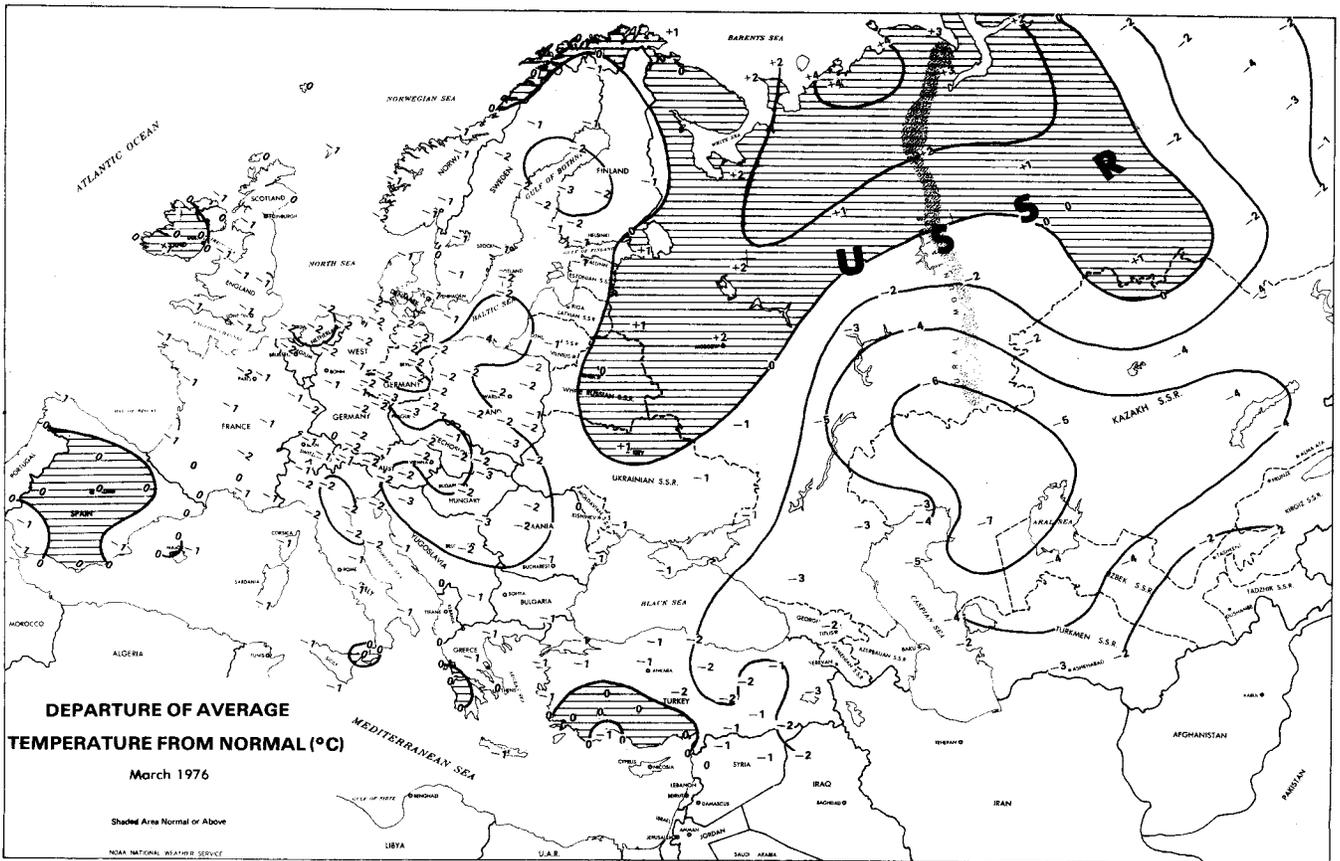
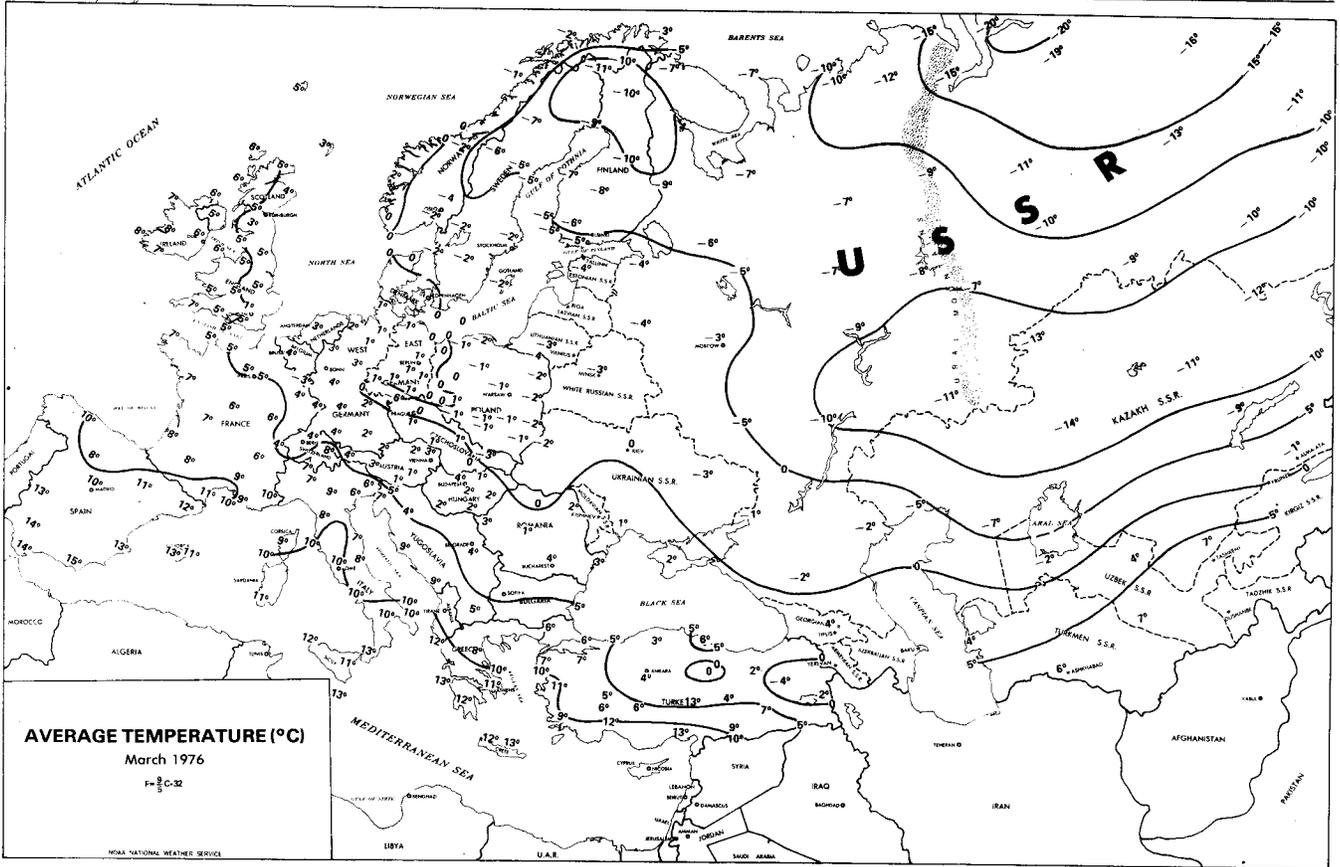
Rains were sparse in the major winter wheat area of the PRC. Soil moisture remained mostly adequate but more generous late spring rainfall would improve yields. Precipitation favored spring wheat in northeast PRC but the crop needs timely rains to overcome low soil moisture reserves. The seasonal increase in rainfall in southern PRC aided early rice and corn crops.

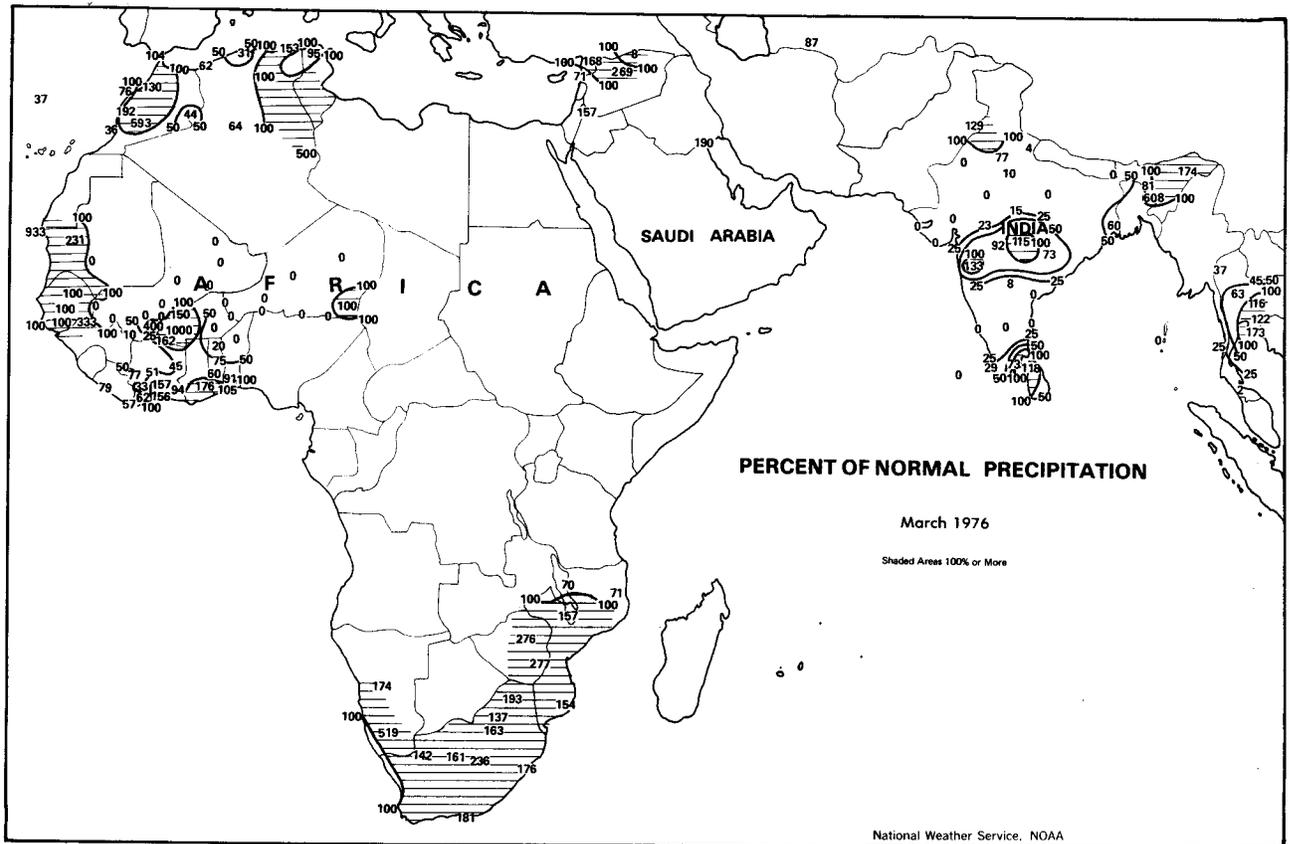
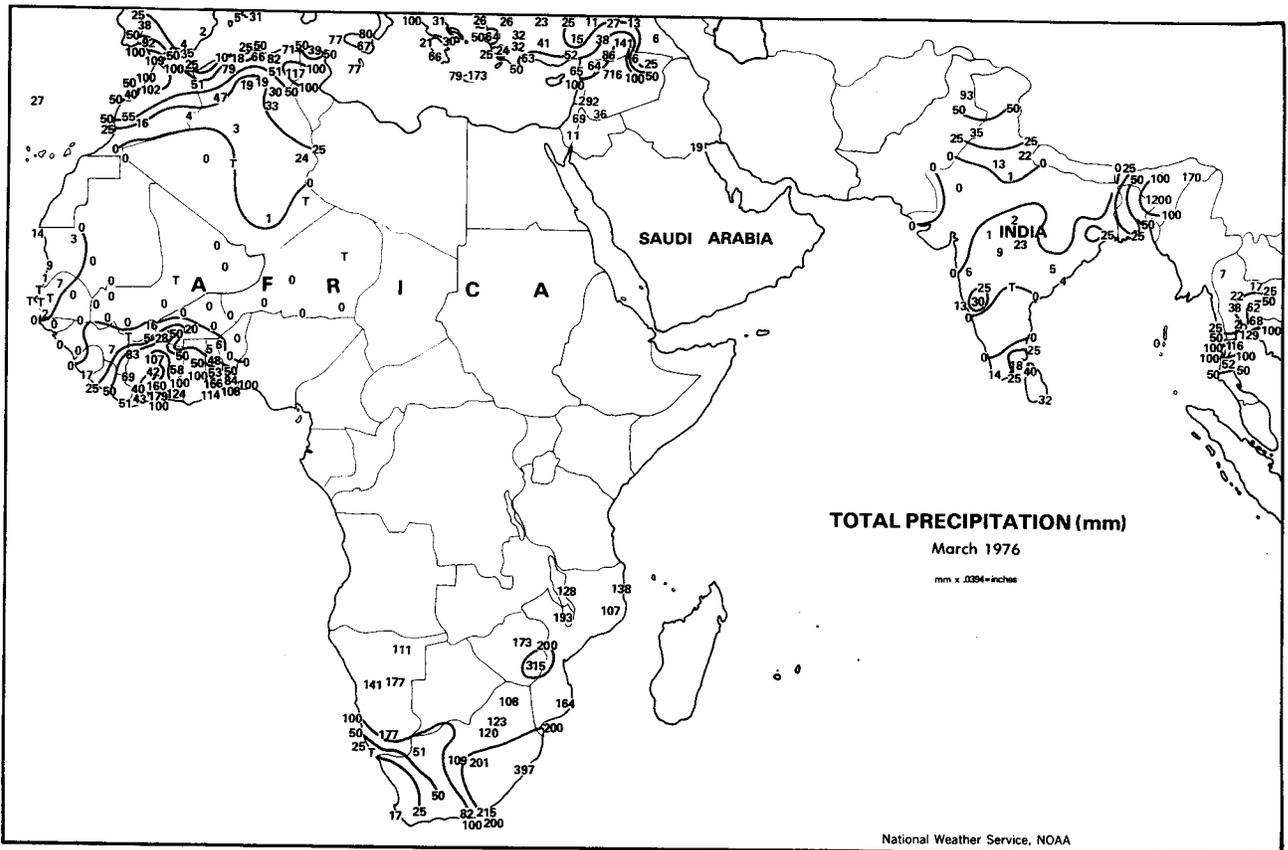
Dry weather enhanced harvest of winter crops in India and Pakistan and of summer-grown crops in Australia's major interior valleys.

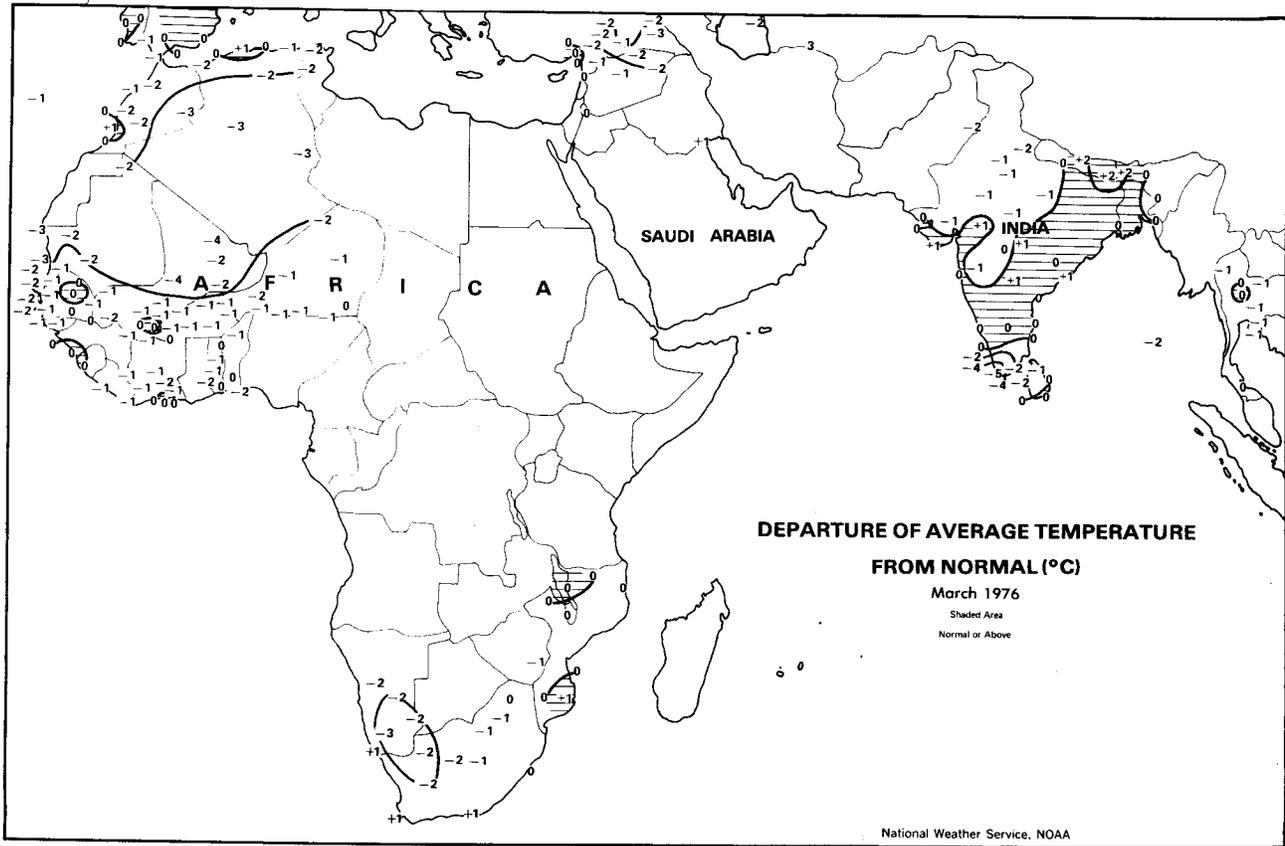
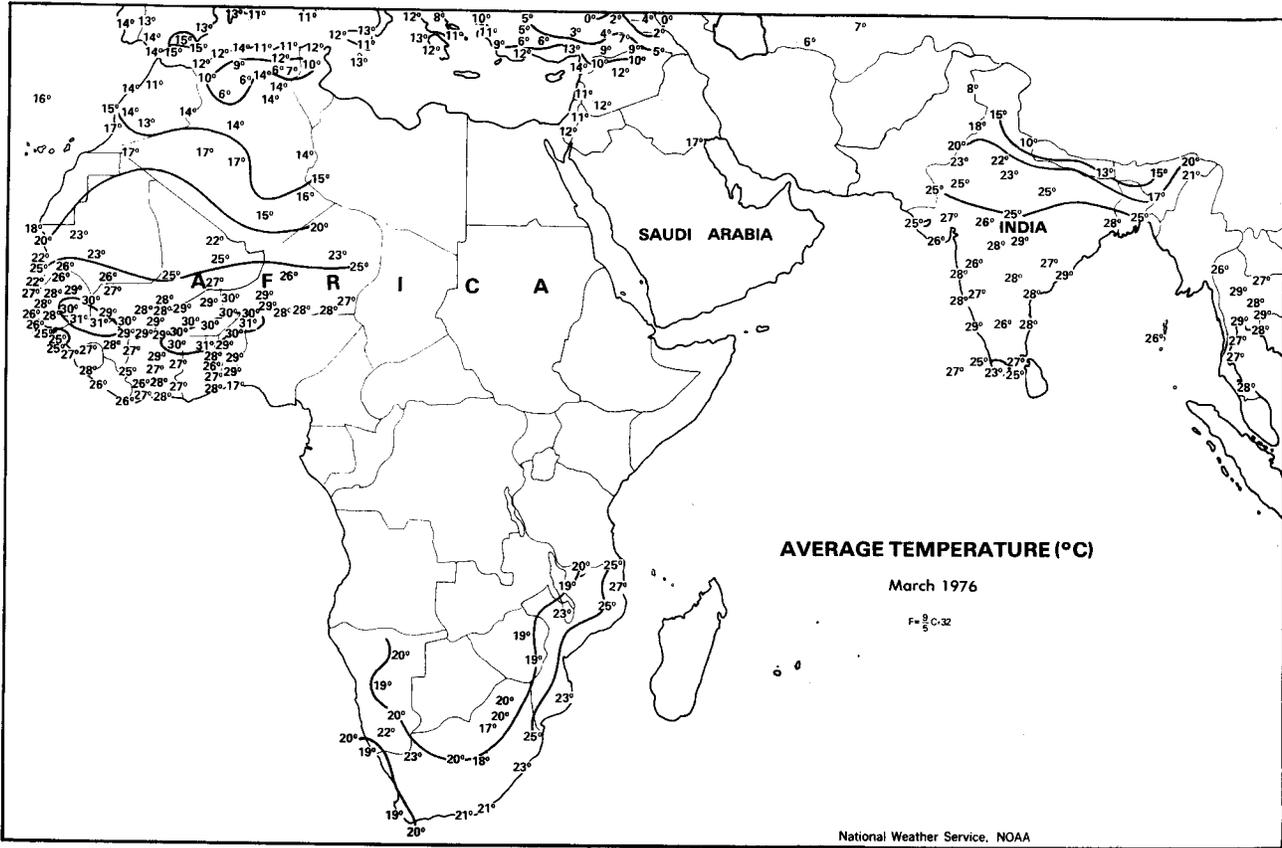
Soil moisture is mostly favorable for establishing winter grains in the major Southern Hemisphere countries.

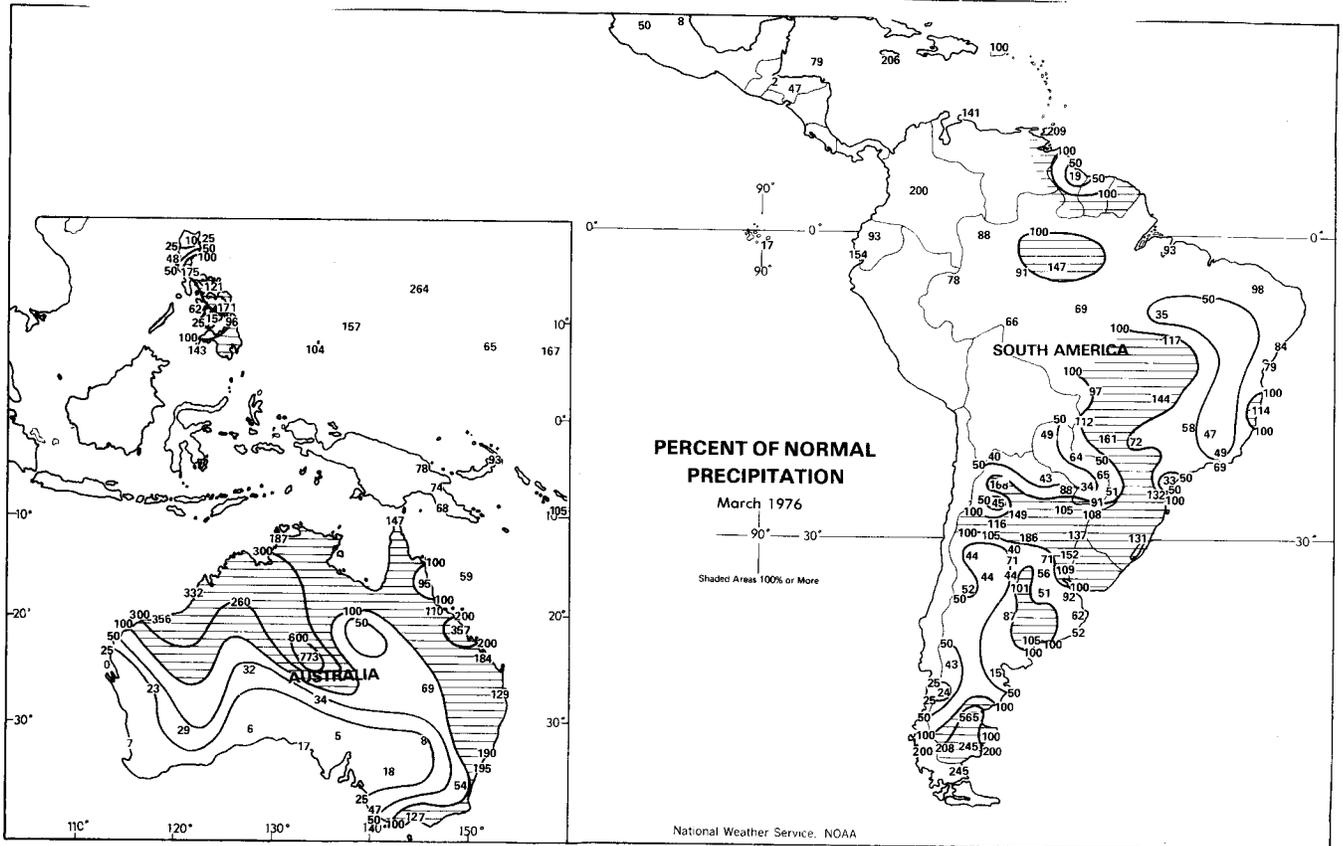
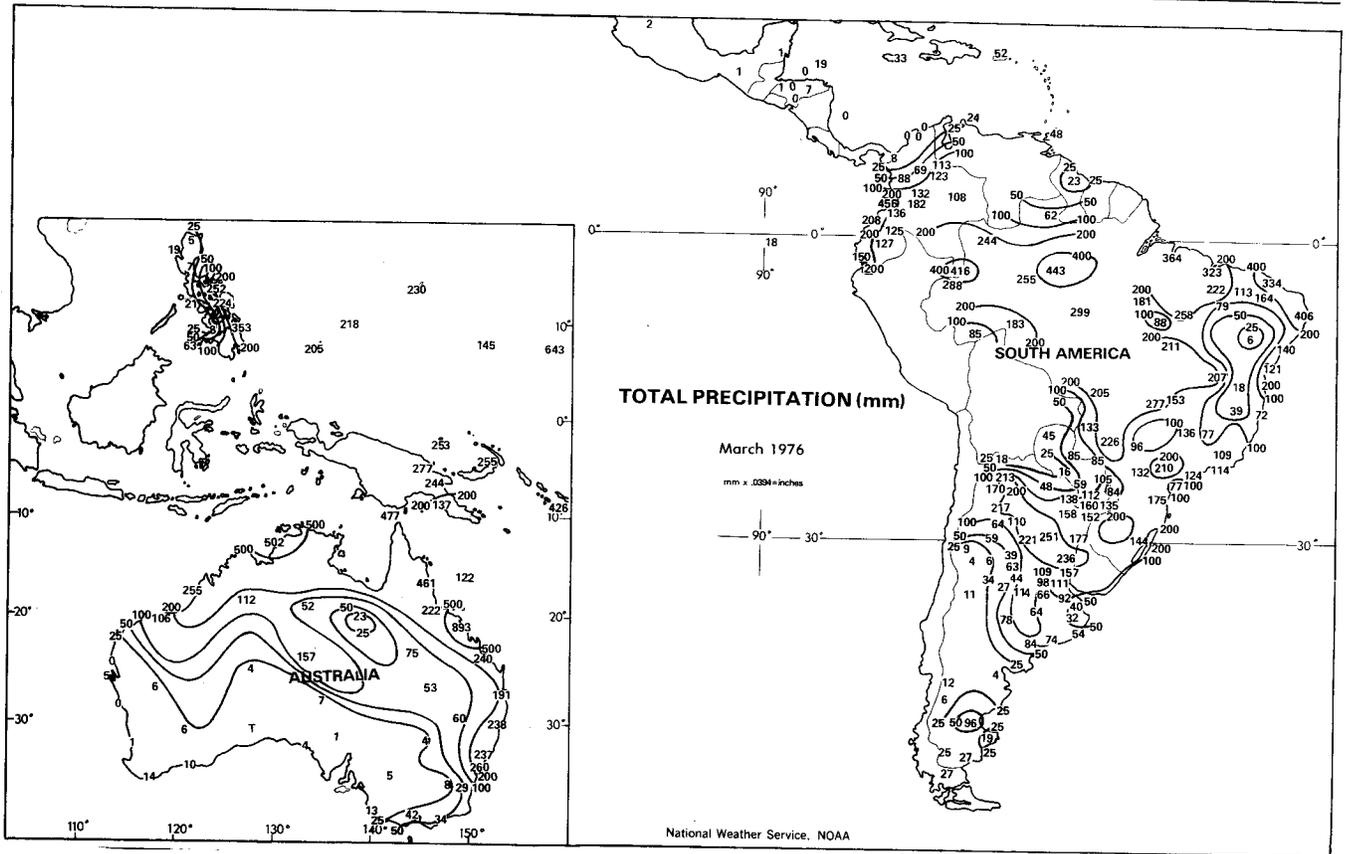
--by William Cremins  
Foreign Agricultural Service, USDA

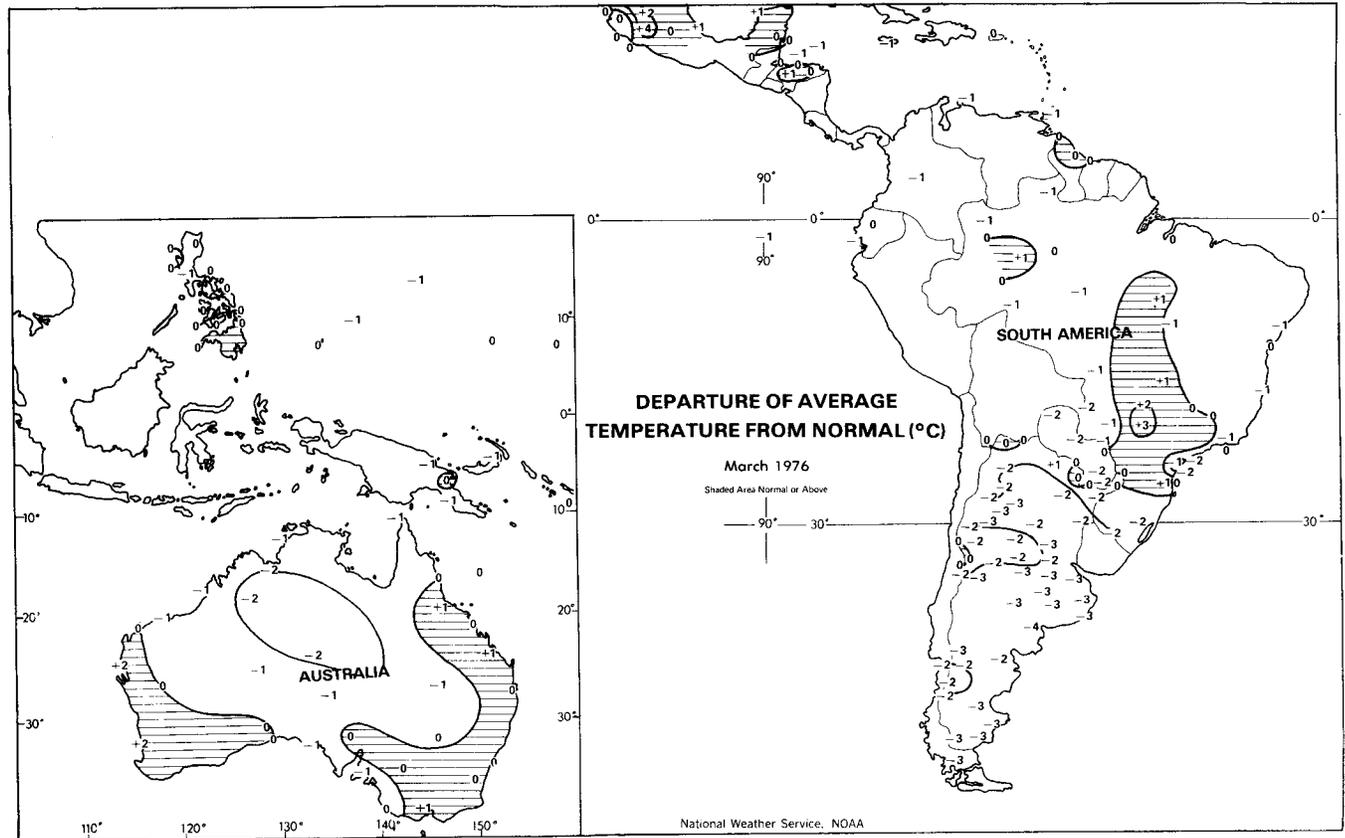
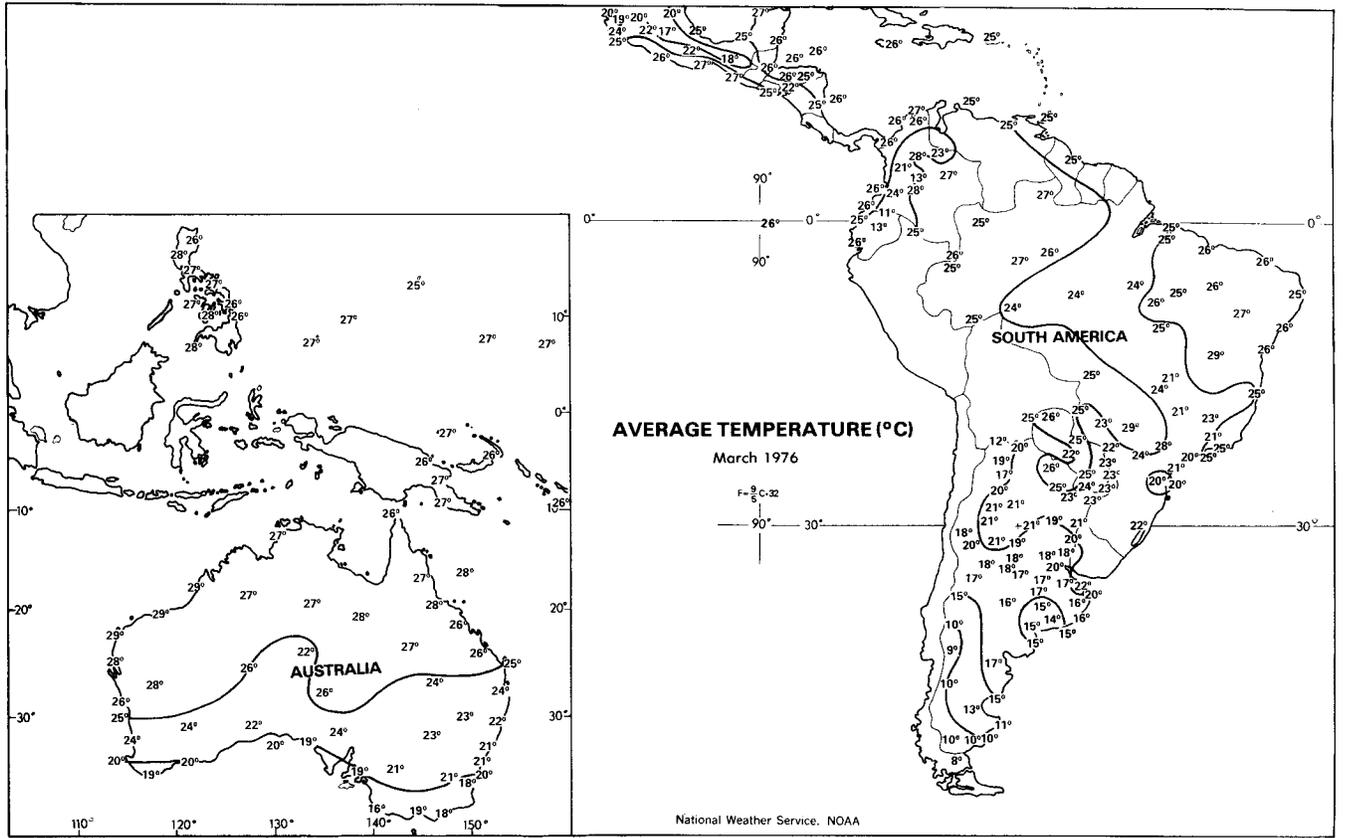












## Using the Growing Degree Day

Plants grow, develop, and produce best within a certain range of air temperature. At temperatures above or below this range, heat or cold can hinder plant productivity. Within these limits there is a direct relationship between temperature and how fast a plant develops.

The range of temperature for growth varies with the type of plant. For corn and soybeans, the apparent limits are about 50 and 86°, and for small grains, 40 and 90°. Each degree of temperature above the minimum for growth contributes toward development of the crop and is called a growing degree day (GDD) unit.

To calculate the GDD accumulation for a certain day:

$$\text{GDD} = \frac{\text{daily maximum (86}^\circ) + \text{daily minimum (50}^\circ)}{2.0} - 50^\circ$$

Use 86° for maximum temperatures above 86° because above that point heat does not contribute to crop development. For minimums below 50° use 50°; temperatures below this level do not reverse development.

The Weekly Weather and Crop Bulletin introduced this method for calculating GDDs in 1969 and starting with this issue, will publish GDD data for the 1976/77 season. In 1970 the hybrid seed corn in-

dustry adopted the GDD unit as a common basis for evaluating crop maturity.

GDD information has many uses. A grower who knows the expected growing degree day accumulation can select varieties that utilize the entire growing season, and minimize the risk of frost damage. If adverse weather delays planting, a grower can select other varieties. In the same way GDD information is useful if reseeding is required and also helps in the selection of seed.

After selecting and planting the seed, the grower can follow crop development or progress of the growing season. First, the grower should note the number of GDDs accumulated at the time of planting from the map on page 7. This value is the base figure.

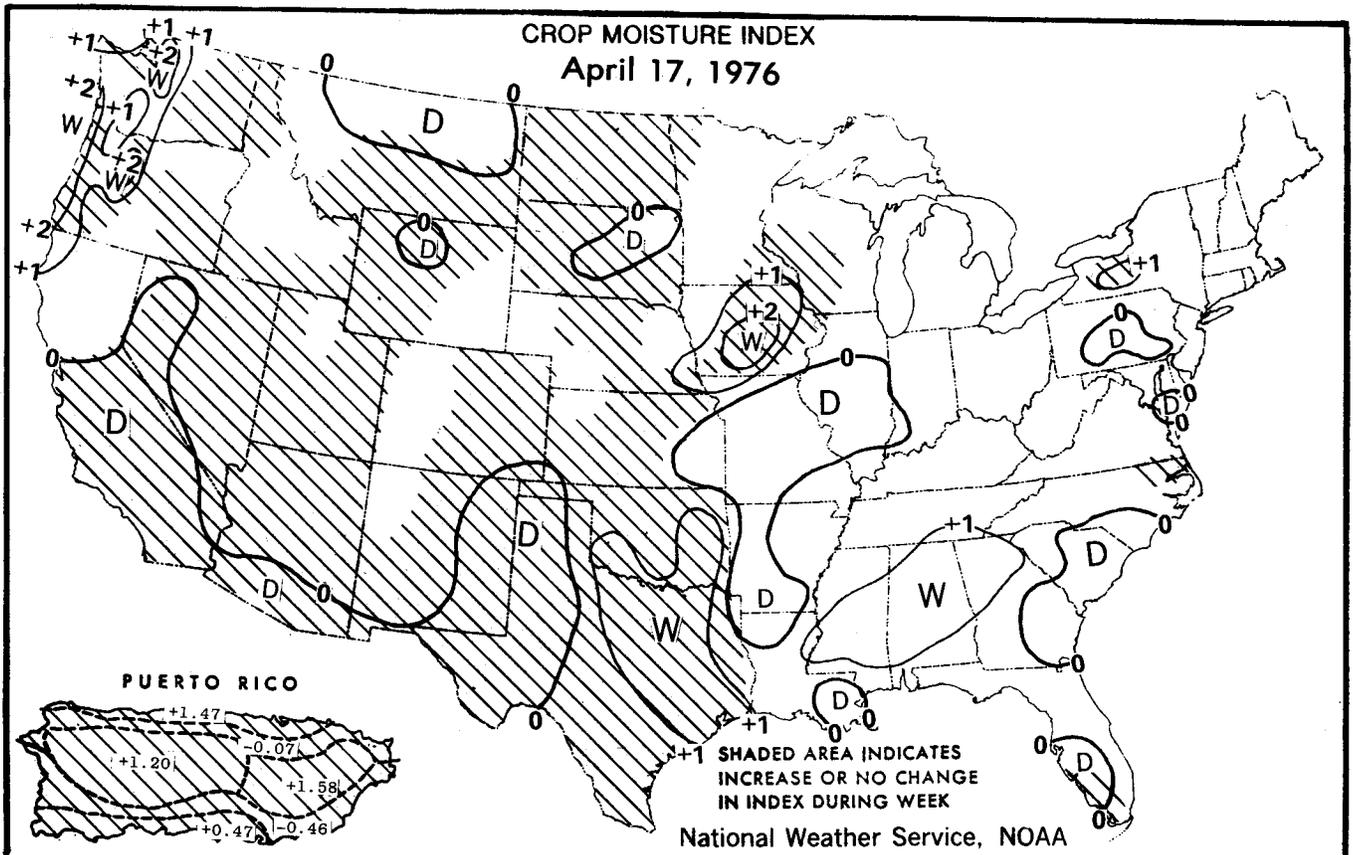
For example, assume 350 GDDs had accumulated at planting time. If as of a certain date 1,200 GDDs had accumulated, only 850 contributed to development of the crop. If the variety requires 2,400 to mature, 1,550 still are needed before the crop is safe from frost. Use a table of normals in the same way to determine if the season is progressing normally.

To assist in following the entire growing season the Bulletin will be publishing two maps. One will show the accumulation as of March 1, and the other will indicate the departure from normal based on expected accumulations as of March 1.



MEAN GROWING DEGREE DAYS (ADJUSTED 50° BASE):  
ACCUMULATED WEEKLY MARCH 1 TO INDICATED DATES

| Station               | May 10 | May 17 | May 24 | May 31 | June 7 | June 14 | June 21 | June 28 | July 5 |
|-----------------------|--------|--------|--------|--------|--------|---------|---------|---------|--------|
| <b>North Central:</b> |        |        |        |        |        |         |         |         |        |
| Des Moines, Iowa      | 340    | 428    | 525    | 629    | 753    | 897     | 1046    | 1201    | 1369   |
| Minneapolis, Minn.    | 224    | 295    | 374    | 458    | 565    | 691     | 822     | 954     | 1103   |
| North Platte, Nebr.   | 366    | 440    | 523    | 617    | 722    | 846     | 977     | 1115    | 1271   |
| Omaha, Nebr.          | 405    | 502    | 607    | 722    | 854    | 1007    | 1165    | 1327    | 1504   |
| Fargo, N. Dak.        | 186    | 250    | 325    | 404    | 503    | 612     | 724     | 839     | 968    |
| Huron, S. Dak.        | 272    | 345    | 425    | 514    | 621    | 743     | 870     | 1001    | 1150   |
| Green Bay, Wis.       | 176    | 234    | 302    | 374    | 466    | 573     | 683     | 797     | 923    |
| Madison, Wis.         | 255    | 325    | 406    | 491    | 597    | 719     | 845     | 977     | 1119   |
| <b>South Central:</b> |        |        |        |        |        |         |         |         |        |
| Fort Smith, Ark.      | 794    | 929    | 1081   | 1240   | 1406   | 1589    | 1774    | 1964    | 2159   |
| Dodge City, Kans.     | 537    | 634    | 741    | 865    | 997    | 1154    | 1318    | 1487    | 1667   |
| Topeka, Kans.         | 519    | 623    | 741    | 867    | 1006   | 1168    | 1333    | 1503    | 1685   |
| Wichita, Kans.        | 582    | 691    | 816    | 952    | 1100   | 1271    | 1447    | 1628    | 1819   |
| Shreveport, La.       | 1020   | 1178   | 1348   | 1525   | 1706   | 1902    | 2100    | 2300    | 2504   |
| Columbia, Mo.         | 519    | 622    | 741    | 864    | 1003   | 1168    | 1330    | 1501    | 1681   |
| St. Louis, Mo.        | 541    | 647    | 770    | 899    | 1047   | 1220    | 1389    | 1566    | 1752   |
| Oklahoma City, Okla.  | 728    | 849    | 988    | 1137   | 1294   | 1475    | 1658    | 1844    | 2039   |
| Amarillo, Tex.        | 667    | 770    | 889    | 1019   | 1156   | 1311    | 1478    | 1649    | 1830   |
| Corpus Christi, Tex.  | 1411   | 1600   | 1794   | 1998   | 2200   | 2412    | 2626    | 2840    | 3055   |
| Fort Worth, Tex.      | 988    | 1140   | 1308   | 1486   | 1670   | 1871    | 2072    | 2278    | 2488   |
| Midland, Tex.         | 964    | 1110   | 1263   | 1431   | 1603   | 1788    | 1978    | 2171    | 2364   |
| <b>Midwest:</b>       |        |        |        |        |        |         |         |         |        |
| Chicago, Ill.         | 313    | 391    | 481    | 579    | 701    | 843     | 984     | 1142    | 1310   |
| Moline, Ill.          | 344    | 429    | 526    | 629    | 755    | 898     | 1045    | 1200    | 1365   |
| Peoria, Ill.          | 367    | 454    | 554    | 660    | 788    | 938     | 1085    | 1245    | 1415   |
| Indianapolis, Ind.    | 411    | 499    | 602    | 708    | 834    | 986     | 1132    | 1293    | 1462   |
| Louisville, Ky.       | 569    | 677    | 801    | 932    | 1073   | 1239    | 1399    | 1572    | 1752   |
| Flint, Mich.          | 239    | 302    | 375    | 455    | 555    | 676     | 795     | 924     | 1064   |
| Grand Rapids, Mich.   | 252    | 321    | 398    | 482    | 588    | 717     | 841     | 976     | 1121   |
| Columbus, Ohio        | 404    | 490    | 593    | 697    | 818    | 964     | 1104    | 1260    | 1424   |



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 |
| and                             | -4.0 EXTREMELY DRY, MOST CROPS RUINED         |

| SHADED AREA: 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       |

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