

WEEKLY WEATHER AND CROP BULLETIN

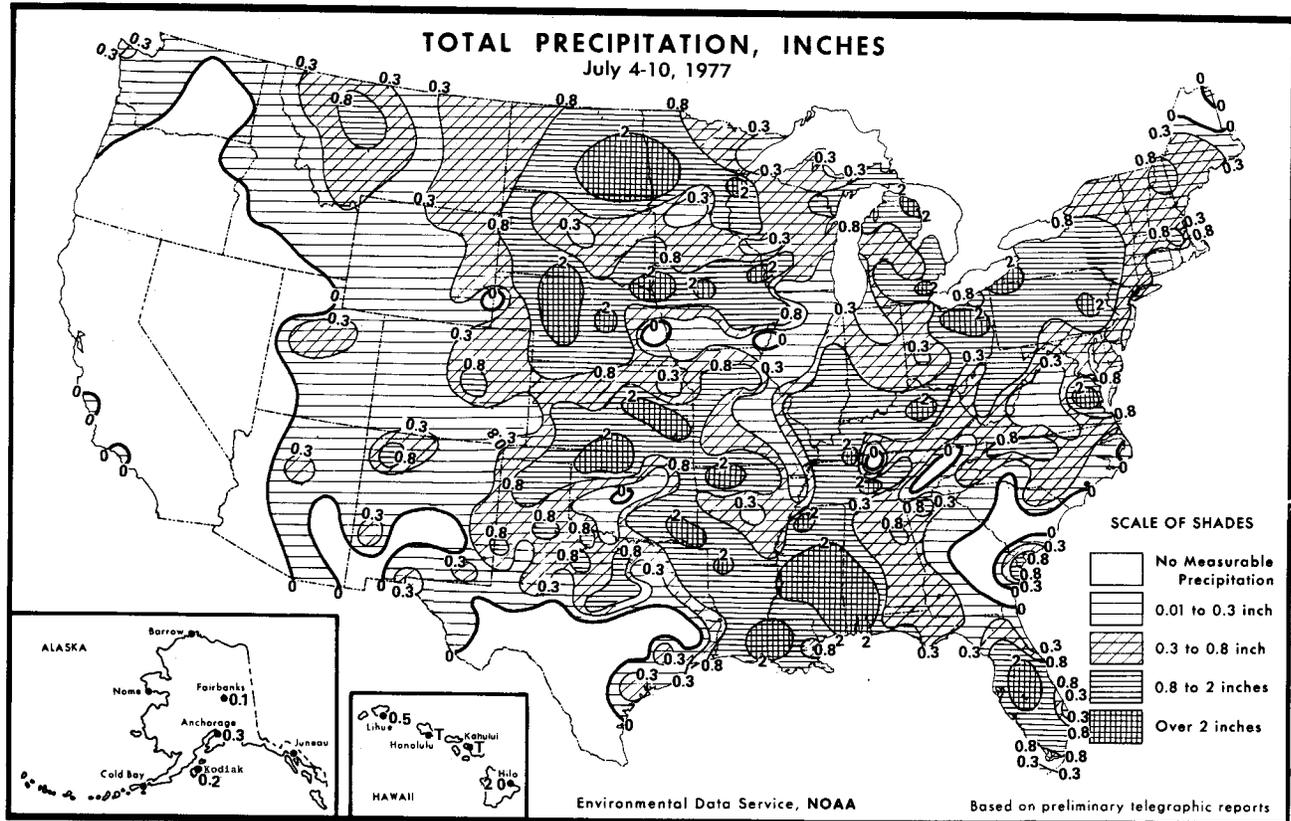
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National Weather Summary

July 4-10

HIGHLIGHTS: Typical for this time of year, thunderstorms, tornadoes, showers, and hot weather dominated the weather picture east of the Rockies during the week. Welcome showers covered most of the very dry area in North Dakota and parts of Minnesota. Much of Nebraska and eastward across the northern half of Iowa enjoyed one to two inches of rain. Significant amounts of rain in the form of showers fell in the lower Mississippi Valley and in most of the Florida peninsula but from central Alabama through Georgia and northern Florida and northward into the very dry western Virginia, the showers were light and spotty.

Many record high temperatures were set in eastern U.S. The warmest areas were from 6 to 8° above normal.

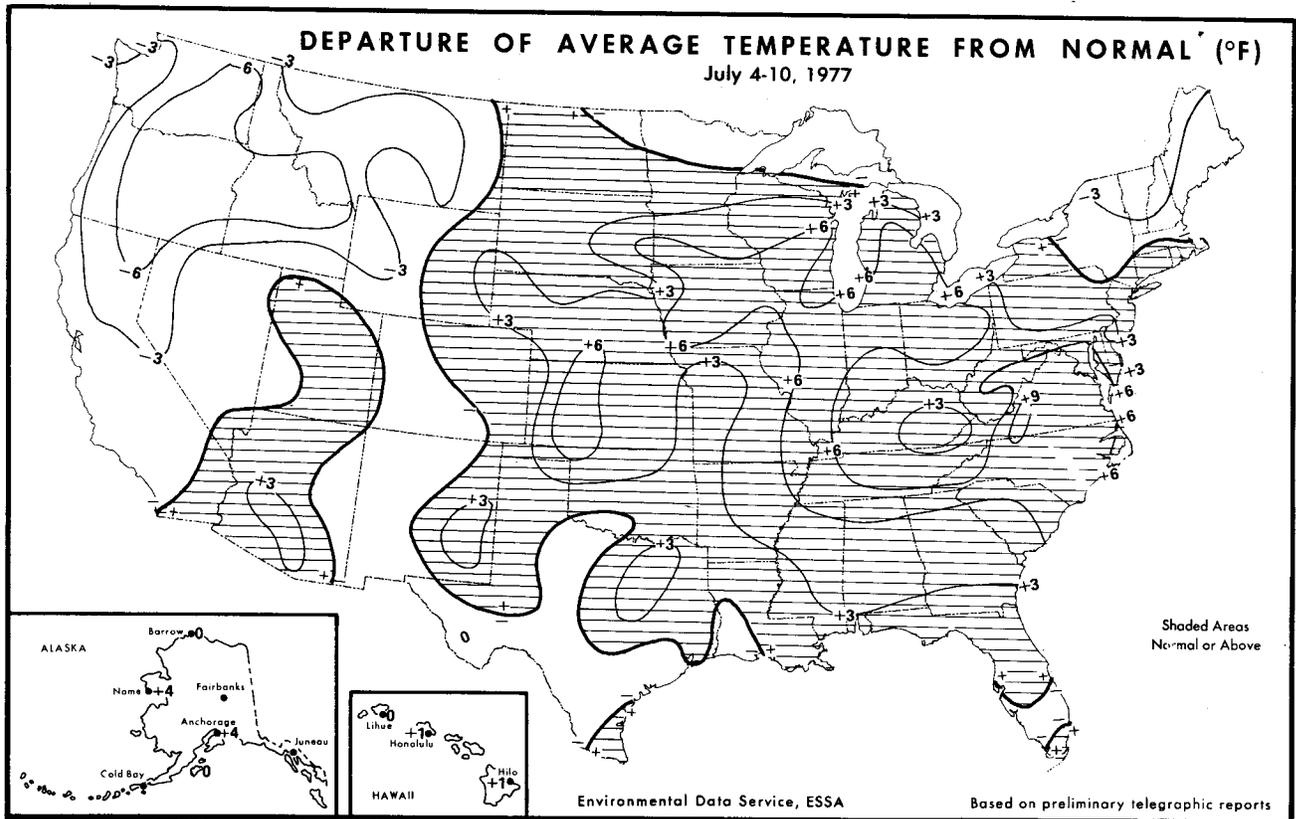
There was little rain west of the Rockies and in contrast with the east, temperatures averaged well below normal; 7 to 8° below in the Pacific Northwest.

Monday morning showers dotted the Great Lakes,

northern Appalachians, and western New England; heavy thunderstorms hit southern Michigan dumping 1.67 inches on Grand Rapids. Thunderstorms also moved across the Dakotas, Minnesota, and western Nebraska. More than three inches of rain covered parts of North Dakota. Fourteen tornadoes blasted the Nation on the Fourth of July; three each touched down in Wisconsin, Ohio, and North Dakota. As expected, it was hotter than a firecracker in Blythe, Needles, and Thermal, Calif., however, Huron, S. Dak., joined in with the same reading of 104°.

Tuesday was rather quiet and sultry for much of the Nation. A few showers were scattered over widely separated areas while some heavy rainfall was recorded in isolated points of South Dakota, Louisiana, and Florida. A twister did no damage to Bassett, Nebr. Record high temperatures were notched in Baltimore, 97°, Detroit, 96°, and Meridian, Miss., 101°.

A large mass of high pressure held firm over the



Southeast on Wednesday keeping a large portion of the country hot and hazy. Showers and thunderstorms moistened the Gulf Coast and formed a band from Nebraska to Wisconsin and from eastern Michigan to southern New England. Locally heavy rains dumped more than one inch along the Pennsylvania/Ohio border. Intense thunderstorms assembled over the upper Mississippi Valley and across the Great Lakes into the middle Atlantic States. Large hail pummeled parts of Pennsylvania, Ohio, Michigan, Wisconsin, and South Dakota. Seventeen tornadoes ripped four States; 9 twisters buffeted Wisconsin, 6 in Iowa, and one each in North Dakota and Michigan.

However, most of the news was provided by the heat. Fifteen cities equaled or broke records for July 6. Readings soared from Detroit southward to Macon and eastward to Washington, D.C. (all these points showed 100°). Richmond, Va., suffered most when 105° topped its 1902 peak by seven degrees. Someone had best tell Montana that it's summer-- snow fell in the mountains on July 6.

Thunderstorms mushroomed when a cool high pressure system advanced from the north and collided with warm moist flow over the Southeast. Thursday's storms began in northern Texas and southwestern Kansas. Later, storms brought rain from the central Plains across the Ohio Valley to the middle Atlantic States. Hail peppered points in Nebraska and Minnesota while two tornadoes clipped Colorado and one each hit ground in Iowa, Pennsylvania, Ohio, and Florida.

Heat was the order of the day and record high readings were the result again in the Southeast. Birmingham, Ala., chalked up 105°, Columbus, Ga.,

104°, and Richmond, Va., cooled down to 103°. Truckee, Calif., buttoned its coat to 31° in the morning.

Scorching temperatures continued on Friday for the East and Southeast. Once again, several stations reported triple-figure readings. Columbia and Florence, S.C., heated up to 105°.

Nighttime thunderstorms drenched the Rocky Mountains, western High Plains, and the southern Great Lakes region southward to the central Gulf States. Severe storms with hail and high winds hit portions of Alabama and Texas.

Early Saturday thunderstorms soaked much of the Nation's midsection. The afternoon brought muggy heat to the same sections once again.

Thunderstorms roamed from Oklahoma and Arkansas over the Gulf Coast States and northward to the Ohio Valley. Rain also dampened the Rockies and Great Plains. Tornadoes were sighted in Wyoming and Nebraska where hail also fell. By evening, storms were scattered over the South Atlantic Coast.

Sunday thunderstorms developed over the Mississippi Valley and from Florida to the Big Bend region of Texas. Heavy rain fell in the southern parts of Illinois and Indiana and northern Kentucky. Rain also reached into the middle Atlantic Coast States. Scattered thunderstorms rumbled over Florida, Georgia, and the Carolinas while a frontal system brought showers into the northern Rockies and Great Plains. Twelve tornadoes clipped South Dakota, Nebraska, and Kansas; there was livestock lost and property damage.

It was still hot and humid in the Southeast quadrant of the country although most temperatures did dip a few degrees.

National Agricultural Summary

July 4-10

HIGHLIGHTS: Widespread rains from the Rocky Mountains eastward brought welcome relief, but parts of the Corn Belt, Texas, Oklahoma and the South Atlantic Coast States got very little precipitation. Rains delayed small grain harvest in several States. High temperatures stressed row crops particularly in dry areas, but generally crops in the Corn Belt rated fair to good. Crop development maintained its rapid pace. Corn silked and soybeans bloomed earlier than normal. Cotton set bolls throughout the South. Soybean planting was almost complete. Winter wheat harvest advanced into the northern States and reached 78% complete compared with 71% last year and 70% average. Fruit growers harvested both sweet and tart cherries, peaches and apples. Soil moisture was short in the western States and across the South; elsewhere short to adequate. Most pastures rated poor to fair; only some grasslands on the Great Plains scored good. In spite of the low ratings recent rains improved some pastures in the north central States.

SMALL GRAINS: Rains delayed combining in a few States, notably Kansas and Michigan. Farmers on the southern Great Plains almost finished harvesting winter wheat. Combining was finished elsewhere in the southern States. Harvest was well advanced in the Corn Belt. Most of the 1977 winter wheat to be harvested was in the Pacific Northwest, the Mountain States, the Dakotas and Minnesota. The U. S. harvest reached 78% complete staying ahead of the 71% last year and the 70% average.

Oats development in the major producing States was up to two weeks ahead of normal. The crop was 68 to 74% ripe in the Dakotas and Minnesota and 60% harvested in Iowa. Rains lodged tall growing oats in Wisconsin.

Spring wheat development equalled 1976 but was far ahead of normal in North Dakota. The crop ranged from 30% ripe in South Dakota to 53% in Minnesota; in both States 20 to 30 points ahead of normal. Spring wheat reached 65% headed in Montana lagging 1976 but ahead of normal.

CORN: Corn silked and rated fair to good in the north and poor to fair in most southern areas. In the Corn Belt soil moisture was short to adequate and high temperatures stressed corn in the driest areas. While topsoil moisture generally was adequate to keep the crop in fair to good condition the corn needs timely rains to maintain development through the season. Silking ranged from a high of 73% in Illinois down to about 10% in Ohio and South Dakota. Last year silking had not begun in some States to only 20% in Illinois. In the South very dry soils and high temperatures stressed corn. Georgia farmers plowed some acreage and harvested some corn for forage instead of grain as originally intended. Florida growers started harvesting corn for grain. In Mississippi and Louisiana 36 to 63% of the corn was in the dough stage.

COTTON: Cotton rated fair to good holding up in the hot dry weather better than other crops. Squaring was almost complete in the 11 Southern States; boll set ranged from 80% in Georgia to 31% in Alabama. In Texas cotton grew rapidly responding to high temperatures. Cotton bloomed and fruited well with few insect problems on the High Plains. Farmers sprayed south central fields.

Boll worm and fleahopper populations increased. In California cotton bloomed in the San Joaquin Valley and farmers sprayed desert cotton to control pink boll worms.

SOYBEANS: The Nation's soybeans rated fair to good and developed rapidly. Soybeans were also fair to good in the dry areas from Mississippi to the Atlantic Coast with the exception of some poor areas in Florida. In the Corn Belt bloom ranged from less than 5% in Ohio, 17% in Indiana, 50% in Illinois, 56% in Iowa, 62% in South Dakota; pod development began in Kansas and Minnesota.

In the South Central States planting was almost complete ranging from 95 to 99% complete. Bloom ranged from 5 to 30%.

OTHER CROPS: U. S. sorghum was in good condition in the 7 major producing States. Missouri's crop was 18% headed. Some chinch bugs attacked the Kansas crop. Oklahoma's sorghum was 10% headed. Texas sorghum was booting on the northern High Plains and heading on the southern High Plains. Greenbug infestations increased. Farmers harvested in southern areas of Texas.

Maine potato vines reached 12 to 18 inches and looked good. Washington potatoes were sizing. Harvest approached for the Oregon crop. Most of the Idaho potatoes were at least 6 inches tall and 34% lapped the middle of the rows. Growth was far ahead of 1976.

Georgia peanuts were fair to good; 83% pegged compared with 68% in 1976. The North Carolina and Virginia crops were good but Virginia's peanuts need moisture to improve pegging conditions. Alabama peanuts need water but rated fair to good.

Rice rated good and growing well. Harvest should begin soon in Texas and Louisiana.

FRUITS AND NUTS: Peach picking extended throughout the U. S. including New England. Georgia peach harvest reached 81%, South Carolina 50%, North Carolina 45%; picking lagged last year. Fruit growers also picked sweet and tart cherries, grapes, apples and in California apricots, nectarines and plums.

Florida citrus groves improved from recent rains but need more. Young trees showed new growth. Texas groves were sprayed for rust and mite control.

VEGETABLES: Harvests of sweet corn, cabbage, lettuce and other summer vegetables extended into northern production areas. Florida growers shipped watermelons and light supplies of sweet corn, eggplant, peppers and okra. Texas growers prepared land for fall vegetables and harvested a wide variety of melons and vegetables. California growers picked light volumes of broccoli and cauliflower and increasing supplies of cantaloupe, celery, green peppers, tomatoes and watermelon.

PASTURES AND LIVESTOCK: Rains improved north central States pastures but many remained in only poor to fair condition providing inadequate amounts of forage. Grasslands from South Dakota to Texas rated fair to good. Pastures in the western and other southern States rated mostly poor to fair. Ranges at higher elevations were the only good grazing areas in the West. In some western areas stock water was low.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., July 10, 1977

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 . . .	85	+ 5	.6	-.6	La. Baton Rouge . . .	83	+ 1	3.2	+1.8	Youngstown . . .	76	+ 6	1.8	+ .9
Mobile . . .	83	+ 2	3.2	+1.2	Lake Charles . . .	81	+ 1	.8	-.7	OKLA. Okla. City . . .	81	0	0	-.7
Montgomery . . .	85	+ 4	.5	-.7	New Orleans . . .	84	+ 2	.5	-1.0	Tulsa . . .	84	+ 3	T	-.9
ALASKA Anchorage . . .	62	+ 4	.3	-.1	Shreveport . . .	83	+ 0	1.1	+ .4	OREG. Astoria . . .	58	- 1	T	-.2
Barrow . . .	---	---	---	---	MAINE. Caribou . . .	62	- 3	.2	-.7	Burns . . .	60	- 7	T	-.1
Fairbanks . . .	61	0	.1	-.3	Portland . . .	66	- 1	.4	-.2	Medford . . .	66	- 5	0	-.1
Juneau . . .	---	---	---	---	MD. Baltimore . . .	82	+ 6	.4	-.5	Pendleton . . .	65	- 7	T	-.1
Kodiak . . .	53	0	.2	-.6	MASS. Boston . . .	72	- 1	.1	-.5	Portland . . .	62	- 4	T	-.1
Nome . . .	---	---	---	---	Chatham . . .	65	---	.1	---	Salem . . .	61	- 5	0	-.2
ARIZ. Flagstaff . . .	85	+ 4	T	-.4	MICH. Alpena . . .	66	+ 1	2.1	+1.5	PA. Allentown . . .	76	+ 2	1.0	0
Phoenix . . .	84	+ 4	T	-.1	Detroit . . .	80	+ 4	1.3	+ .6	Erie . . .	71	+ 3	2.3	+1.5
Tucson . . .	89	+ 3	T	-.4	Flint . . .	77	+ 8	.4	-.3	Harrisburg . . .	78	+ 2	.8	0
Winslow . . .	78	0	T	-.2	Grand Rapids . . .	77	+ 6	2.0	+1.2	Philadelphia . . .	82	+ 5	1.4	+ .5
Yuma . . .	93	+ 1	0	0	Houghton Lake . . .	74	+ 8	.5	-.3	Pittsburgh . . .	75	+ 3	1.0	+ .1
ARK. Fort Smith . . .	83	+ 1	.7	-.1	Lansing . . .	78	+ 7	.6	-.1	Scranton . . .	72	0	1.0	+ .1
Little Rock . . .	85	+ 4	.1	-.7	Marquette . . .	63	- 2	.2	-.5	R. I. Providence . . .	73	+ 2	T	-.6
CALIF. Bakersfield . . .	82	- 1	0	0	Muskegon . . .	74	+ 5	.2	-.4	S. C. Charleston . . .	86	+ 6	.1	-1.8
Eureka . . .	54	- 2	T	-.1	S. Ste. Marie . . .	62	- 1	1.7	+1.1	Columbia . . .	86	+ 5	0	-1.2
Fresno . . .	78	- 2	0	0	MINN. Duluth . . .	65	0	.2	-.7	Greenville . . .	84	+ 6	.2	-.8
Los Angeles . . .	71	- 1	0	0	Internatl Falls . . .	65	0	.6	-.3	S. D. Aberdeen . . .	73	+ 2	1.2	+ .5
Red Bluff . . .	79	- 3	0	0	Minneapolis . . .	76	+ 5	1.4	+ .5	Huron . . .	77	+ 4	.3	-.3
San Diego . . .	69	0	T	0	Rochester . . .	75	+ 5	.3	-.6	Rapid City . . .	73	+ 2	1.9	+1.3
San Francisco . . .	60	- 2	T	0	St. Cloud . . .	71	+ 2	.1	-.7	Sioux Falls . . .	78	+ 6	2.3	+1.5
Stockton . . .	75	- 1	0	0	MISS. Jackson . . .	83	+ 2	2.2	+1.2	TENN. Chattanooga . . .	85	+ 6	T	-1.2
COLO. Denver . . .	74	+ 2	.6	+ .2	Meridian . . .	85	+ 4	3.3	+1.1	Knoxville . . .	82	+ 4	T	-1.1
Grand Junction . . .	78	0	.2	+ .1	MO. Columbia . . .	80	+ 3	.1	-.9	Memphis . . .	87	+ 6	.3	-.5
Pueblo . . .	76	0	.2	-.2	Kansas City . . .	81	+ 3	.4	-.7	Nashville . . .	83	+ 4	T	-.9
CONN. Bridgeport . . .	73	0	.3	-.4	St. Louis . . .	84	+ 6	1.4	+ .5	TEX. Abilene . . .	83	0	.2	-.4
Hartford . . .	74	+ 2	.1	-.7	Springfield . . .	80	+ 3	.7	-.2	Amarillo . . .	80	+ 2	1.1	+ .4
D. C. Washington . . .	85	+ 7	.7	-.2	MONT. Billings . . .	69	- 1	.1	-.2	Austin . . .	84	0	0	-.5
FLA. Apalachicola . . .	83	+ 2	.2	-1.6	Glasgow . . .	66	- 3	.6	+ .2	Beaumont . . .	84	+ 1	.2	-1.1
Daytona Beach . . .	82	+ 1	T	-1.6	Great Falls . . .	63	- 5	1.3	+ .9	Brownsville . . .	84	0	0	-.3
Ft. Myers . . .	81	- 1	1.7	-.4	Havre . . .	66	- 3	.1	-.3	Corpus Christi . . .	84	0	.2	-.2
Jacksonville . . .	83	+ 2	.1	-1.5	Helena . . .	60	- 6	.8	+ .5	Dallas . . .	---	---	---	---
Key West . . .	84	0	.2	-.8	Kalispell . . .	61	- 2	.4	+ .1	Del Rio . . .	85	- 1	0	-.3
Lakeland . . .	84	+ 3	4.6	+2.8	Miles City . . .	70	- 3	.6	+ .1	El Paso . . .	80	- 2	.4	+ .1
Miami . . .	84	+ 2	1.7	0	Missoula . . .	61	- 4	.3	0	Fort Worth . . .	87	+ 3	.1	-.4
Orlando . . .	82	+ 1	2.6	+ .6	NEBR. Grand Island . . .	80	+ 5	1.3	+ .5	Galveston . . .	82	- 1	.1	-1.0
Tallahassee . . .	82	+ 1	.7	-1.4	Lincoln . . .	82	+ 5	T	-.9	Houston . . .	82	- 1	.1	-.9
Tampa . . .	82	0	1.9	0	Norfolk . . .	79	+ 4	.6	-.2	Lubbock . . .	79	0	.2	-.4
W. Palm Beach . . .	81	- 1	.3	-1.3	N. Platte . . .	76	+ 3	4.2	+3.4	Midland . . .	83	+ 1	.3	-.1
GA. Atlanta . . .	82	+ 4	.1	-1.0	Omaha . . .	80	+ 6	0	-.9	San Angelo . . .	84	0	0	-.3
Augusta . . .	85	+ 5	T	-1.1	Valentine . . .	74	+ 1	2.7	+2.1	San Antonio . . .	84	0	0	-.4
Macon . . .	86	+ 5	0	-1.1	NEV. Ely . . .	65	- 1	0	-.1	Victoria . . .	83	- 1	.3	-.3
Savannah . . .	85	+ 4	1.2	-.6	Las Vegas . . .	89	0	0	-.1	Waco . . .	88	+ 3	T	-.4
HAWAII. Hilo . . .	76	+ 1	2.0	+ .1	Reno . . .	64	- 4	0	-.1	Wichita Falls . . .	83	- 2	.1	-.5
Honolulu . . .	81	+ 1	T	-.1	Winnemucca . . .	68	- 2	T	-.1	UTAH. Blanding . . .	71	+ 1	T	-.1
Kahului . . .	78	0	T	-.1	N. H. Concord . . .	66	- 3	.4	-.4	Salt Lake City . . .	76	+ 1	T	-.2
Lihue . . .	78	0	.5	+ .1	N. J. Atlantic City . . .	77	+ 2	.2	-.7	VT. Burlington . . .	66	- 4	.4	-.4
IDAHO. Boise . . .	66	- 7	T	-.1	Trenton . . .	77	+ 1	.3	-.7	VA. Lynchburg . . .	82	+ 6	T	-.9
Lewiston . . .	67	- 5	T	-.2	N. MEX. Albuquerque . . .	77	- 1	.1	-.2	Norfolk . . .	85	+ 7	.8	-.4
Pocatello . . .	67	- 3	.1	0	Roswell . . .	82	+ 3	T	-.4	Richmond . . .	85	+ 7	2.7	+1.5
ILL. Cairo . . .	86	+ 6	.9	+ .1	N. Y. Albany . . .	71	- 1	.4	-.3	Roanoke . . .	84	+ 9	T	-.8
Chicago . . .	81	+ 7	.4	-.6	Binghamton . . .	69	0	1.3	+ .5	WASH. Colville . . .	60	- 7	T	-.2
Moline . . .	80	+ 6	1.9	+ .8	Buffalo . . .	71	+ 1	1.7	+1.1	Omak . . .	66	- 4	T	-.1
Peoria . . .	81	+ 6	.1	-.8	New York . . .	76	0	.1	-.7	Quillayute . . .	54	- 4	.4	-.2
Rockford . . .	78	+ 5	T	-1.0	Rochester . . .	72	+ 1	1.5	+ .9	Seattle-Tacoma . . .	63	- 1	T	-.1
Springfield . . .	82	+ 6	.1	-.8	Syracuse . . .	69	- 2	1.0	+ .3	Spokane . . .	61	- 7	.1	-.1
IND. Evansville . . .	83	+ 5	1.4	+ .5	N. C. Asheville . . .	77	+ 4	.6	-.5	Walla Walla . . .	66	- 8	T	-.1
Ft. Wayne . . .	81	+ 8	.3	-.6	Charlotte . . .	85	+ 7	0	-1.1	Yakima . . .	62	- 8	0	-.1
Indianapolis . . .	80	+ 5	.4	-.5	Greensboro . . .	85	+ 8	1.4	+ .4	W. Va. Beckley . . .	75	+ 5	.2	-.8
South Bend . . .	80	+ 8	T	-.9	Hatteras . . .	82	+ 4	0	-1.3	Charleston . . .	81	+ 6	1.1	0
IOWA. Burlington . . .	80	+ 5	0	-.9	Raleigh . . .	84	+ 7	.6	-.5	Huntington . . .	80	+ 5	.5	-.4
Des Moines . . .	82	+ 7	.2	-.6	Wilmington . . .	87	+ 7	0	-1.8	Parkersburg . . .	79	+ 4	.5	-.5
Dubuque . . .	77	+ 6	.1	-1.0	N. DAK. Bismarck . . .	70	0	1.3	+ .7	WIS. Green Bay . . .	75	+ 6	.5	-.3
Sioux City . . .	77	+ 2	1.7	+ .9	Fargo . . .	71	+ 1	3.6	+2.9	La Crosse . . .	78	+ 6	.2	-.7
KANS. Concordia . . .	81	+ 4	.5	-.4	Williston . . .	69	0	.6	0	Madison . . .	77	+ 7	.4	-.5
Dodge City . . .	85	+ 7	1.1	+ .4	OHIO. Akron-Canton . . .	77	+ 6	2.8	+1.9	Milwaukee . . .	74	+ 5	T	-.8
Goodland . . .	77	+ 2	.4	-.2	Cincinnati . . .	79	+ 4	.7	-.3	WYO. Casper . . .	70	+ 1	.1	-.2
Goodland . . .	77	+ 2	.4	-.2	Cleveland . . .	76	+ 5	.6	-.2	Cheyenne . . .	68	0	.2	-.3
Topeka . . .	80	+ 3	.2	-.9	Columbus . . .	80	+ 7	.8	-.2	Lander . . .	66	- 3	.1	-.1
Wichita . . .	84	+ 4	1.2	+ .1	Dayton . . .	81	+ 7	.1	-.7	Sheridan . . .	65	- 4	.7	+ .3
KY. Lexington . . .	79	+ 3	2.2	+1.1	Toledo . . .	79	+ 7	.4	-.4	P. R. San Juan . . .	82	+ 1	.2	-1.2
Louisville . . .	82	+ 5	.9	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 SRS State offices in cooperation with the National Weather Service.

ALABAMA: Record-breaking heat followed by showers and cooler temperatures over weekend. Some late week drought relief, but still severe.

Fieldwork: 6 days suitable. Soil moisture very short to short. Cotton good: 82% squaring, 37% 1976; 31% setting, 19% 1976; 74% average. Corn poor to fair; 74% tasseled, 69% 1976. Soybeans fair; 94% planted. Peanuts fair; 39% pegging. Wheat harvest virtually complete. Irish potatoes being harvested. Pastures and hay poor.

ALASKA: Fair skies and near normal temperatures; precipitation light.

Nearly ideal growing conditions and making hay throughout railbelt. Over 80% of first hay crop harvested. Oat and barley fields 67% headed Tanana and Matanuska Valleys. Soil moisture adequate Tanana Valley; shortages common Matanuska Valley. Commercial vegetables excellent growth. Livestock mostly good to excellent condition.

ARIZONA: Moist air, widespread thundershowers limited areas. Midweek hot, dry; temperatures above normal south, normal and below elsewhere.

Cotton good growth; squaring, flowering, boll setting well advanced. Some open bolls. Sorghum planting virtually complete, seedhead development underway. Limited safflower harvest. Sugarbeet harvest central area winding down; beets for fall harvest good growth. Harvest alfalfa hay into fourth cutting. Regrowth rapid. Cantaloup harvest active. Watermelon harvest full volume. Dry onion harvest complete, few chipping potatoes remain. Grape harvest expected complete this week. Harvest Valencia oranges virtually complete; grapefruit harvest nearing completion. No significant rainfall lower or midelevation ranges, drought condition. Spotty, sometimes heavy rains east, southeast mountains. Supplemental feeding, water hauling active some areas. Cattle, calves mostly fair lower elevations; fair to good higher summer ranges.

ARKANSAS: Highest mean 87°, lowest 80°. Extremes: 103 and 62°. Precipitation 2.68 to 0 in.

Soil moisture short. Fieldwork: 6.2 days suitable. Soybeans 98% planted, 94% 1976; fair to good condition. Cotton, plant bug populations high; crop in good condition. Some fields too much vegetative growth. An acceptable stand 92% of acreage, 83% setting bolls. Rice crop good condition. Evaporation high due to hot weather. Corn fair to good condition. Sorghum good condition. Early variety apple harvest nearing completion. Peach harvest continued. Pastures providing below average amounts forage.

CALIFORNIA: Scattered showers produced only light rainfall. Cool air lowered temperatures markedly until about midweek. Temperatures most areas stabilized near the seasonal normal, but Sacramento Valley, central coast, and Sierra Nevada remained a few degrees below.

Small grain harvest active Sacramento Valley, slowing desert and southern San Joaquin Valley. Cotton blooming San Joaquin Valley. Pink boll worm control started desert. Rice growing well. Planting second crop milo, corn, silage. Sugarbeet harvest slowing Imperial Valley. Early safflower fields drying. Apricot, avocado, nectarine, valencia orange, peach, plum harvests continue. Cherry harvest complete. Thompson grapes maturing

slow. Tokay thinning nearly complete. Sacramento Valley pear harvest to begin this week. Spraying active peach orchards for oriental fruit moth. Almond, walnut, orchards sprayed Navel orange worm. Broccoli, cauliflower, lettuce lighter; cantaloup, celery, green peppers, fresh market tomato, watermelon increasing. Range conditions poor. Movement cattle to high ranges complete. Cattle low ranges on supplement. Hauling water continues. Calves weaned early, culling herds continues.

COLORADO: Scattered showers; heaviest activity on 5th. Rainfall near seasonal levels, averaging 0.30 to 0.50 in. Temperatures 2 to 4° above normal. Warm to hot early, cooling in east end of week.

Wheat harvest 46% complete, 29% 1976, 27% average. Condition good to fair. Barley condition good, harvest winter varieties progressing. Corn very good; 45 in. tall, 34 in. 1976. First cutting alfalfa nearly complete; second cutting started. Other spring crops good. Range and pasture fair to good; dry in west. Cherry harvest in progress; other fruits in good condition. Livestock in good condition. Soil moisture short.

FLORIDA: Partly cloudy, warm, humid with scattered thundershowers becoming less numerous weekend. Temperatures near to slightly above normal. Rainfall from 0.25 to 0.50 in. to over 3.00 in.

Soil moisture very short west, north, most central areas but mostly adequate south. Corn poor condition, harvest beginning. Soybean planting continues; crop poor to fair condition. Peanuts fair condition. Tobacco harvest active; yields lower than normal. Hay harvest underway, yields low. Sugarcane good condition. Pastures suffering in Panhandle but moisture improving. Northern Peninsula, central pastures poor to good; improved moisture condition. Southern area mostly adequate rainfall, improved pastures. Panhandle cattle condition poor; good to poor in northern Peninsula and central areas; generally good and improved condition southern areas. Citrus tree condition improved, rains all areas, but more rain needed. Some late bloom. Young trees new growth most groves. Spring vegetable season practically over. Watermelons providing most of volume but declining rapidly. Light supplies sweet corn, eggplant, peppers, okra, other miscellaneous vegetables available.

GEORGIA: Temperatures 1 to 3° above normal. Scattered thundershowers each day; amounts variable averaging 0.50 to 0.75 in.

Soil moisture slightly improved; spotty averaging very short to short. Extreme heat causing crop stress. Fieldwork: 6 days suitable. Heavy insect infestation on row crops. Corn condition mostly poor to fair; more flow-up and unplanned alternate harvest. Tobacco condition fair to good, 22% harvested, 53% last year, average 38%. Cotton mostly fair to good, 92% squaring; 80% setting bolls, 41% setting bolls last year. Peanuts mostly fair to good, 94% blooming, 93% last year; 83% pegging, 68% last year. Soybeans fair, 96% planted. Grain sorghum 77% planted, less than normal for this time. Oat harvest complete. Wheat harvest complete. Hay condition mostly poor to fair. Peaches mostly fair to good; harvest 81% complete, 87% last year, 73% average. Apples fair to good. Watermelons poor to mostly fair; 68% harvested, 56% last year. Pastures suffering under extreme

heat, mostly poor to fair. Cattle mostly fair. Hogs fair to mostly good.

HAWAII: Weather favorable. Showers beneficial especially to drier sections Island of Hawaii.

Heavy irrigation most other Islands. Crop progress fair to good. Supplies mustard cabbage, semi-head lettuce light; cucumbers gradually increasing. Others adequate. Banana supplies moderate to heavy. Papaya supplies heavy. Pineapple harvesting peak. Sugar harvesting steady. Pastures fair to good. Showers on big Island beneficial.

IDAHO: Temperatures normal southeast and 6° below normal southwest and north. Extremes: 31 and 98°. Most areas received some precipitation.

Rains and cooler weather eased drought stress. Irrigated crops make excellent progress. Insects greater problem than usual. Stage this year %, last year %, head, turning: Winter wheat 100, 95; 60, 35. Spring wheat 85, 65; 25, 5. Spring barley 90, 65; 30, 15. Oats 85, 70; 20, 10. Potatoes 6 in. 85, 85; 12 in. 70, 40; close middles 34, 15. Alfalfa first cutting 85% complete.

ILLINOIS: Temperatures 5 to 7° above normal. Precipitation less than 0.10 in. north, more than 2.00 in. south.

Corn good; 73% silked, 19% 1976, 21% average; average height 71 in., 57 in. 1976, 51 in. average; most advanced fields height 85 in., 74 in. 1976, 70 in. average. Soybeans good; 50% blooming, 29% 1976, 26% average. Winter wheat 97% combined, 85% 1976, 89% average. Oats 96% turned yellow, 80% 1976, 78% average; 70% ripe, 47% 1976, 37% average; 35% combined, 17% 1976, 10% average; mostly good to fair. Second crop alfalfa hay 75% cut, 50% 1976, 35% average; mostly good. Pastures mostly fair. Soil moisture short. Fieldwork: 6.5 days suitable.

INDIANA: Hot, but good showers late in period. Daily highs averaged in low and high 90's; 7° above normal. Rainfall 0.10 in. north central; 0.50 to 1.00 in. northwest, northeast, east central, southeast; 1.50 to 2.00 in. elsewhere.

Fieldwork: 6 days suitable. Topsoil and subsoil moisture short to adequate. Pastures mostly fair. Corn fair to mostly good. Corn 60 in., 1976 50 in., average 60 in. Soybeans fair to good. Soybeans 17 in. tall, 1976 15 in. Wheat 80% combined, 1976 65%, average 60%. Wheat fair to mostly good. Oats 15% combined, 1976 15%, average 10%.

IOWA: Temperatures 4 to 7° above normal with spotty rainfall. Northwest above normal rainfalls, other north and west areas averaged near normal tapering off to negligible rainfalls in the southeast, south central, and east central.

Topsoil and subsoil moisture short. Corn acreage 71% tasseled. 56% soybean acreage reached bloom stage, ahead of last year's 28% and 15% average. Oats for hay 92% harvested; oats for grain over 60% harvested. Wheat harvest about 80% complete, ahead of 1976's 35% and average 26%. 2d cutting alfalfa hay 66% harvested, ahead of 1976's 45% and average of 27%. Fieldwork: 6.1 days suitable. Corn good; soybeans, oats and wheat mostly good to fair. Clover hay fair and alfalfa hay mostly fair to good. Pastures very poor to fair.

KANSAS: Precipitation 0.30 in. west central and north central to 1.35 in. east central; local heavy rains 2.00 to over 3.00 in. east. Temperatures 80 to 85°; 2 to 5° above normal central and east, 2 to 7° above normal west.

Wheat harvest near completion with 85% cut; last year and average 80%. Harvest slowest east central, southeast, heavy rains continue delay. Weedy fields prevalent. Corn good condition, developing ahead last year, average; 30% tasseling, 5% last year, 20% average. Dough stage 5%, last year and average 0%. Sorghum good condition, chinch bugs problem across east. Soybeans 10% blooming, last year less than 5%. Setting pods 5%, equal average, ahead last year's 0%. Second cutting alfalfa hay 70%, last year, average 65%. Third cutting 10%, also ahead. Moisture supplies dry to semi-dry most part, generally wet lower eastern part. Pastures and ranges good shape. Flies and mosquitoes affecting cattle, spray measures taken. Farm activities: Wheat harvesting, haying, cultivating row crops, irrigating.

KENTUCKY: Temperatures 5° above normal and precipitation averaged 0.70 in. east to 1.25 in. west.

Fieldwork: 6 days suitable. Activities: wheat harvest, planting double cropped soybeans, harvesting hay, hoeing tobacco, cultivating soybeans, clipping pastures and various insect and disease control measures. Corn excellent; 51% tasseled, 32% last year and 26% average. Soybeans 17 in. high, ahead of last year's 13 in. and average 11 in. Tobacco growth ahead of normal with 44% of crop over 2 ft. compared with 38% last year and 22% average. Lead fungus and root diseases slightly less than normal on tobacco. Most prevalent diseases black shank, root rot and manganese toxicity. Most prevalent insects are bud worms, horn worms and flea beetles.

LOUISIANA: Temperatures 1 to 2° above normal. Extremes: 67 and 101°. Scattered showers.

Soil moisture short. Fieldwork: 5.7 days suitable. Main activities: Cultivation of row crops, preparation for rice harvest, and haying. Rice condition fair to good; 50% headed; harvest beginning. Cotton condition fair to good; 93% squaring. Corn condition fair; 63% dough stage. Sorghum condition fair; 95% up to stand, 43% headed. Soybean condition fair; 94% up to stand, 30% blooming. Sugarcane condition good. Sweetpotato condition fair. Hay and pasture condition poor to fair. Cattle condition fair.

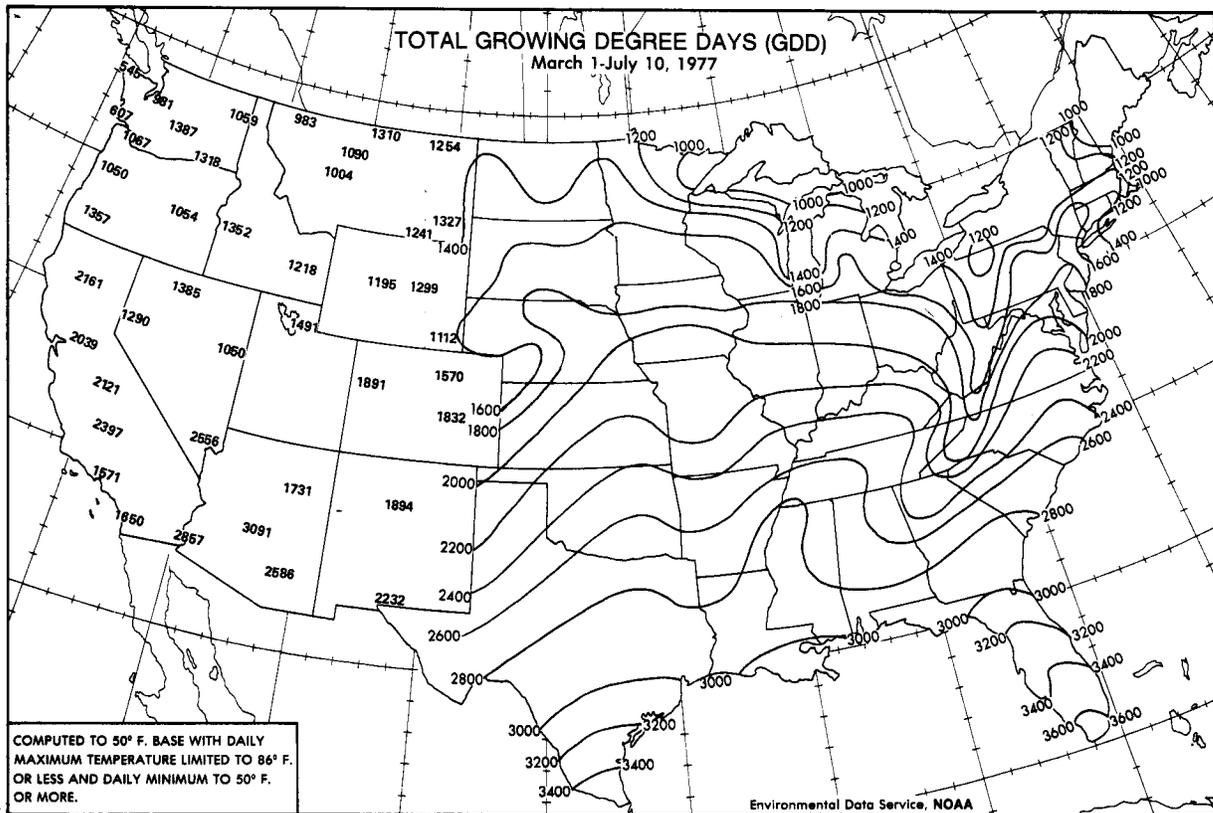
MARYLAND & DELAWARE: Temperatures 3° above normal. High 90's, low 60's. Scattered precipitation between 0.25 and 0.75 in.

Corn over 30% silked. Small grain harvest continues. Second cutting alfalfa over 90% completed. Potato digging underway. Tobacco growth slow.

MICHIGAN: Temperatures 7 to 10° above normal Lower; 1° below to 1° above normal Upper. Precipitation 0.85 in. Lower to 1.17 in. Upper.

Rains improved soil moisture, but slowed wheat harvest. Pasture feed supplies short. Fieldwork: 5 days suitable. Corn height 45 in., 30 in. last year and normal. Hay first cut virtually complete, 90% last year, 80% normal; second cutting started. Wheat 90% yellow, 50% ripe; 75% yellow, 25% ripe last year. Oats 70% headed, 20% yellow; 75% headed, 10% yellow last year. Dry beans and soybeans show good growth. Strawberry picking virtually complete. Tart cherry harvest at peak. Sweet cherry harvest 55% complete, 45% last year and normal. Light harvest early vegetables started.

MINNESOTA: Temperatures near normal north to 5° above normal south. Extremes: 100 and 40°. Precipitation less than 0.50 in. southeast and west central through northeast; elsewhere 0.50 to 1.50



in. except 1.50 to 3.50 in. some sections north central and northwest.

Crop development continues weeks ahead normal progress. Small grain harvest gaining momentum. Surface soil moisture mostly adequate except parts west central; however, regular rains still needed for continued favorable development later season crops. High temperatures past week placed corn crop under stress in areas where moisture supplies short. Corn 72% tasseled, 1976 18%, normal 7%. Soybeans 69% blooming and beyond, 1976 31%, normal 24%; setting pods 8%, 1976 0%, normal 0%. Turning ripe: Spring wheat 53%, 1976 34%, normal 17%; oats 74%, 1976 57%, normal 25%; barley 68%, 1976 35%, normal 21%. Swathed: Spring wheat 4%; oats 13%; barley 10%; winter wheat 20%; rye 18%. Combined: Spring wheat 2%, oats 3%, barley 2%, winter wheat 6%, rye 9%. Flax setting bolls 48%, 1976 31%, normal 19%.

MISSISSIPPI: Temperatures slightly above normal. Extremes: 60 and 105°.

Soil moisture very short to short. Fieldwork: 6.0 days suitable. Soybeans 95% planted, 99% 1976, 93% average; 89% up to stand, 96% 1976. Cotton 95% squaring, 70% 1976, 71% average; 26% blooming, 5% 1976; 55% setting bolls, 4% average. Corn 77% silked, 58% 1976; 36% in dough stage, 19% 1976. Hay crops 48% harvested, 46% 1976, 43% average. Peaches 58% harvested, 59% 1976, 55% average. Cucumbers 79% harvested, 64% 1976. Irish potatoes 94% harvested, 93% 1976, 88% average. Sorghums 92% planted, 94% 1976, 91% average; 21% headed, 21% 1976. Pastures in very poor to poor condition. Cotton in good to fair condition. Rice in good condition. Soybeans in good to fair condition. Corn in fair to poor condition.

MISSOURI: Temperatures averaged 4 to 8° above

normal except west central plains and west Ozark where temperature averaged normal to 3° above normal. High temperatures well into 90's thru 6th. Scattered thunderstorms daily but produced only spotty rainfall. Largest rainfall generally in northwest prairie area. Amounts ranged from none to 0.25 in.

Fieldwork: 5.2 days suitable. Planting double crop soybeans 56% complete. Wheat 88% harvested, 87% last year, 86% normal. Oats 72% harvested, 50% normal. Corn 52% silking, 12% last year, 22% normal; condition good. Soybean condition good. Sorghum 18% headed. Cotton squaring completed, 25% last year, 63% normal. Cotton 75% blooming, 28% setting bolls. Pasture condition fair to good. Soil moisture short to adequate.

MONTANA: Heavy precipitation central and southwest. Moisture generally above normal except west, north and south central. Cool midweek with freezing temperatures west and southwest, followed by brief warm spell. Temperatures averaged 4 to 8° below normal. Sharp cooling weekend, with some hail.

Soil moisture short except southwest. Winter wheat 70% turning color, 55% 1976, 25% average. Warm weather speeded development spring grains. Spring wheat 65% headed, 70% 1976, 40% average. Barley 60% headed, 60% 1976, 40% average. Oats 65% headed, 75% 1976, 40% average. First crop alfalfa hay 75% cut, average 50%. Stock water generally short except southwest and south central. Some springs and creeks drying up.

NEBRASKA: Temperatures 5° above normal. Precipitation ranged from trace to 4.00 in.

Topsoil moisture short; subsoil moisture short to adequate. Wheat harvest 75% completed, 50% year ago and normal 45%. Virtually all ripe.

July 12, 1977

About one week ahead of last year. Two weeks ahead of normal. Corn 20% silking, about one and a half weeks ahead of last year and one week ahead of normal. Most acreage in good condition. Sorghums and soybeans mostly good condition. Second cutting alfalfa hay 65% completed, a week ahead of last year.

NEVADA: Cool showery weather early north and central; dry, warm remainder. Temperatures near or slightly below normal. Extremes: 108 and 29°. Rainfall above normal.

Alfalfa first cuttings finished except central highlands. Third cuttings about completed southern valleys. Small grain harvesting extending northward.

NEW ENGLAND: Temperatures fluctuated widely but averaged near normal in south and a bit below normal in north. Rainfall averaged between 0.50 to 1.00 in. across south with lesser amounts to north.

Maine potatoes good with vines 12 to 18 in. high. Vegetables growth good. Fruit crops doing well and some peaches and blueberries harvested. Field corn generally good. Recent rains helped pastures and second hay crop looks good. West central Vermont very dry with hay and pasture crop very short.

NEW JERSEY: Temperatures 2° above normal. Extremes: 56 and 93°. Rainfall 0.56 in. north, 0.45 in. central and 0.45 in. south.

Soil moisture in percent of field capacity: 60% north, 44% central and 31% south. Soil temperature averaged 72° north and central and 77° south. Scattered showers beneficial but many areas need soaking rain. Harvest summer vegetables increasing. Potato digging light. Summer apple harvest increasing. Early variety peaches available. Blueberry harvest peaking. Grain and hay harvest progressing. Soybean planting continues as grains harvested. Pasture growth limited due to dry soils.

NEW MEXICO: Showers midweek. Rainfall ranged from near 0.20 to over 1.50 in.

Corn, grain sorghum, cotton, good. Corn tasseling south. Cotton squaring with few blooms. Alfalfa second cutting underway north and nearing completion south. Winter wheat 90% harvested. Durum wheat and barley harvest near completion. Onion harvest virtually completed. Ranges, poor to fair. Livestock, fair to good.

NEW YORK: Temperatures 1 to 2° cooler than normal northeast; 1 to 2° warmer elsewhere. Extremes: 91 and 31°. Rain above normal west and south, below normal elsewhere.

Crop growth improved with rain. Oats headed out, condition variable. Wheat harvest about to begin. First cutting alfalfa 90% complete, clover-timothy 80%, grass silage 90%. Early second cutting alfalfa beginning. Hay and pasture regrowth better. Early onions growing well. Early sweet corn, cabbage, lettuce being harvested. Cauliflower transplanting continues. Potato condition good, irrigation and spraying underway. Sweet cherry harvest near completion; tart cherry harvest just beginning.

NORTH CAROLINA: Record-breaking high temperatures. Rainfall ranged from 0 to over 3.00 in.

Fieldwork: 5.8 days suitable. Soil moisture very short to short. Condition: Irish potatoes, peanuts and apples mostly good; tobacco, soybeans, cotton and sweetpotatoes mostly fair; corn, pasture and hay mostly poor and fair. Harvest: Wheat 97%, 1976 92%, average 90%; oats 97%, 1976 94%, average 93%; barley 98%, 1976 96%, average 95%; rye 97%,

1976 91%, average 90%; peaches 45%, 1976 55%, average 43%; Irish potatoes 90%, 1976 87%; hay 68%, 1976 58%.

NORTH DAKOTA: Precipitation heavy central, east central, south central and southeast; some flooding heaviest areas. Below normal precipitation northwest and west central; normal elsewhere. Temperatures near normal. Extremes: 95 and 46°.

Small grain condition remains mostly fair to good. Development 2 weeks ahead of normal but equal to last year. Swathing just beginning and expected to become general in 1 to 2 weeks. Row crops good condition with development also ahead of normal. Recent rains improving pastures but mostly still poor to fair condition. Timely rains needed throughout remainder of growing season to insure proper development due to general lack of subsoil moisture.

OHIO: Precipitation 3.40 in. northeast to 0.09 in. west. Temperatures above normal. Extremes: 97 and 58°. Fieldwork: Over 5 days favorable. Main activities: Combining small grains, spraying and dusting crops, harvest commercial vegetables, detasseling seed corn, picking early peaches and apples, digging early potatoes, cultivating row crops, baling hay and straw, hoeing tomato and tobacco ground, and planting double crop beans. Harvest completion: Wheat 60%, 50% 1976, 40% normal. Oats just underway on schedule. Second cutting alfalfa 40%, 25% 1976, 20% average; second cutting clover-Timothy 25%, less than 10% 1976, less than 5% average. Average height: Corn 50 in., 52 in. 1976, 41 in. average; soybeans 16 in., less than 17 in. 1976, less than 14 in. normal. Corn silked less than 10%, same as last year and normal. Soybeans less than 5% setting pods, equal to last year and normal. Corn and soybeans fair to good. Soil moisture adequate.

OKLAHOMA: Temperatures from 1 to 3° above normal except normal in southwest. Precipitation ranged from 0.02 in. in central to 1.86 in. in north central.

Wheat harvest virtually complete; farmers concentrated on cultivating row crops and doing final planting of sorghums and soybeans. Over 67% stubble ground worked one or more times, with deep tillage used to combat weeds. Corn good to fair, with 25% acreage shooting ears same as year earlier but behind 40% average. Sorghums, 90% up to stand with about 10% headed, near average but earlier than year ago. Cotton acres in good condition with most crop up to stand but squaring at 10%, later than 16% average. Early peanuts starting to bloom on 5% acreage compared 18% average. Rains needed south central and southeast peanut areas. Good planting progress of late soybeans, with over 90% crop up to stand and 5% flowering. Second cutting alfalfa near complete. Scattered rains left topsoils dry. Ranges need moisture for continued growth but providing ample grazing. Cattle good condition. Grasshopper build up in east attacking some crops.

OREGON: Temperatures below normal; east 6 to 9° below, west 2 to 5° below. Freezing temperatures recorded at scattered central and northeast locations. Rainfall light; less than 0.10 in.

Grains in good condition west. Haying continues. Vegetables coming along. Cherry harvest continues. Filberts sizing well. Crop outlook improving. In east: Barley harvest underway. Early wheat harvest continues. Haying activities continue. Cherry harvest nearing completion. Early potato harvest approaching. Onions and potatoes looking good. Livestock in good condition west and poor to

fair east. Feed situation adequate west and dwindling east. Fall pasture outlook dim because of drought.

PENNSYLVANIA: Hot, humid, and thundershowers. Drier by end of period. Precipitation varied from 0.50 to 2.50 in. Temperatures from 52 to 98°.

Fieldwork: 4 days suitable. Mostly adequate moisture except south somewhat dry. Activities: Haymaking, combining barley and wheat, spraying and cultivating, early vegetable picking, early apple and peach picking, orchard mowing and straw baling. Corn 36 in., last year 36 in. Barley 29% ripe, 55% harvested; last year 47% harvested. Wheat 42% turning, 39% ripe; last year 37% ripe. Oats 67% headed, 25% turning; last year 32% turning. Alfalfa first cut virtually complete, second cut 30%. Feed from pastures mostly average to below.

PUERTO RICO: Island rainfall 0.73 in. or 0.39 in. below normal. Temperatures about 81° on coasts and 76° interior. Extremes: 92 and 58°.

Light to moderate rain west and east interior eased agricultural drought conditions. Severe to extreme drought along slopes and coastal areas with crop moisture at unsatisfactory level for agricultural operations. Rains needed for development all crops except west interior where recuperation noted due recent rain. Farmers waiting for rains to plant. Pastures dry and cattle losing weight mostly south coastal areas.

SOUTH CAROLINA: Temperatures 4 to 5° above normal. Rainfall below normal. Few isolated thundershowers.

Tobacco condition fair to good; topping, harvesting underway. Corn condition poor to fair. Fields need rain as drought deteriorated crops. Soybean condition fair to good; additional rainfall needed for normal plant growth. Cotton making fair growth but also needs additional moisture. Peach harvesting about 50% complete. Crop condition fair to good. Watermelon condition fair but additional rainfall needed. Harvesting over 50% complete. Pastures, hay crops poor to fair. Soybeans planted 98% 1977, 93% 1976.

SOUTH DAKOTA: Hot early week, 100° common, cooler by weekend. Extremes: 42 and 104°. Widespread thundershowers left 1.00 in. precipitation most areas. Greatest amount 2.49 in. southeast.

Topsoil moisture adequate to short. Winter wheat ripe 71%, 1976 67%, normal 44%. Spring wheat ripe 30%, 1976 40%, normal 11%. Rye ripe 80%, 1976 86%, normal 47%. Oats ripe 68%, 1976 57%, normal 17%. Barley ripe 63%, 1976 60%, normal 49%. Flax ripe 2%, 1976 0%, normal 0%. Winter wheat harvested 12%, 1976 28%, normal 10%. Other small grain harvest underway. Corn silked 11%, 1976 0%, normal 0%. Flax in or past bloom 89%, 1976 84%, normal 78%. Soybeans in or past bloom 62%, 1976 31%, normal 31%. Second cutting alfalfa 37% harvested, 1976 17%, normal 11%. Pastures fair to good. Flies a severe livestock problem; some pinkeye reported.

TENNESSEE: Precipitation 0 to 3.06 in. Temperatures 4 to 8° above normal.

Soil moisture short. Hot weather deteriorated pastures, crops and cattle. Tomato harvest underway east. Soybeans planted 99% 1977, 93% 1976, 100% normal. Soybeans blooming 17% 1977, 14% 1976, 15% normal. Cotton squaring 86% 1977, 53% 1976, 69% normal. Cotton setting bolls 26% 1977, 0% 1976, 12% normal. Corn silking 61% 1977, 34% 1976, 40% normal. Wheat harvested 97% 1977, 91% 1976, 91% normal. Oats harvested 96% 1977, 85% 1976, 89% normal. Barley harvested 96% 1977, 92% 1976, 94% normal. 2d cutting alfalfa 91% 1977, 78% 1976, 80% normal.

TEXAS: Clear to partly cloudy with scattered thundershowers. Near normal rainfall north ranged 0.25 to 0.50 in. Little precipitation fell from Lower Rio Grande Valley northwest into Edwards Plateau region. Southeast rainfall also below normal as the area received less than 50% of its normal 1.00 in. rain. Temperatures near or above normal. Temperatures exceeded 100° at many stations. Temperatures ranged 2 to 3° above normal north and east, elsewhere near normal temperature.

Cotton continues rapid growth in response to hot temperatures. High Plains crop blooming and fruiting well with few insect problems. Fleahoppers abundant Low Plains, Cross-Timbers, Blacklands, Edwards Plateau. Bollworm increasing Low Plains, Blacklands. Farmers spraying south central. Corn High Plains tasseling and silking; some fields reaching blister stage. Crop good to excellent condition, but prospects east poor to good due lack of moisture. Sorghum booting northern High Plains; beginning to head southern High Plains. Crop condition plains good; greenbug infestations increasing. Prospects generally good central, east. Harvest active Valley and beginning south central, upper coast areas. Few scattered wheat fields northern Low Plains remain for harvest. Rice harvest expected this week early fields. Peanut planting good progress. Stands fair to good, but need moisture Cross-Timbers, Blacklands, east, Edwards Plateau. Peanuts planted 98% 1977, 97% 1976, 98% average. Soybeans planted 100% 1977, 98% 1976, 100% average. Wheat harvested 99% 1977, 98% 1976, 100% average. Barley harvested 100% 1977, 100% 1976, 100% average. Sorghum harvested 6% 1977, 11% 1976, 17% average.

Citrus groves sprayed for rust, mite control. Land preparation underway fall crops. Harvest melons, cabbage, peppers, onions, cucumbers, tomatoes, sweet corn. Dry weather causing vegetable production to suffer some areas. Peach harvest active from central throughout north. Dry weather east limited size later varieties. Pasture conditions adequate to excellent, however, ranges browning some areas. Livestock fair to excellent condition. Some hay feeding necessary east.

UTAH: Scattered showers and thunderstorms early in period. Accumulated amounts moisture ranged from little to locally heavy. Temperatures ranged from 9° above to 6° below normal.

Soil moisture critical. Nonirrigated soil moisture continues very short. Range feed very poor. Irrigation water in ditches about half-stream. Winter wheat harvest began in some areas, others to start soon--about 20% ripe. Sweet cherry picking about 75% completed with production good to slightly below. Production prospects for potatoes and corn for silage and grain were fair to good while sugarbeets rated good.

VIRGINIA: Temperatures 5° above normal, many record highs. Extremes: 105 and 49°. Rainfall averaged 0.25 in.

Topsoil moisture short. Corn 44% silked, condition declining. Soybean condition mostly good, some no-till fields not germinating, a few reseeded. Tobacco cultivation active, condition good, growers preparing for flue harvest. Barley 94% harvested, 94% 1976, average 84%. Wheat 88% combined, 83% 1976, 66% average. Oats 78% harvested, 84% 1976, 70% average. Peanuts good, rains needed to condition soils for pegging; pesticides being applied. Hay poor, 2d cuts continued. Fieldwork: 5.6 days suitable.

WASHINGTON: West: Temperatures 3 to 6° below normal. Precipitation near normal to 0.20 in. below normal.

Green pea harvest in progress, ahead of normal. Cauliflower, cucumbers, late peas need rain.

East: Temperatures 4 to 7° below normal. Precipitation trace.

Weather beneficial to fruit tree growth. Cherry harvest continues. Most fruit doing well, apple thinning continues. Some apricots harvested in early areas. Mint harvest underway. Potatoes beginning to size. Irrigated crops with adequate water doing generally well. Isolated showers did little to moderate drought stress on dryland small grains. Some barley, wheat, and dry pea harvesting in progress, but still early most areas. Haying continues in many areas. Range feed condition mostly poor to fair. Water supplies for livestock and farm use continue to diminish, some operators hauling water for livestock. Most livestock in fairly good condition.

WEST VIRGINIA: Temperatures above normal; highest readings midweek. Precipitation well below normal in south and northeast, below normal elsewhere.

Fieldwork: 4.9 days suitable. Soil moisture short to adequate. 1st haying 81% complete, 78% 1976, 77% average; 2d haying 15%, 9% 1976, 12% average. Small grains mostly fair to good. Harvest progress: Wheat 20%, 18% 1976, 26% average; barley 51%, 57% 1976, 52% average; oats 12%, 8% 1976. Corn good to fair. Tobacco mostly good to fair. Potato digging underway; less than 5% dug. Pastures and hay fair. Fruit poor.

WISCONSIN: Temperatures 3° above normal. Hot and humid until weekend when temperatures more seasonable. Severe storms north 4th with considerable damage to trees, power lines, buildings, and crops.

Severe storms again south 6th. Scattered showers and thunderstorms west and central 7th, southeast 8th. Rainfall for week heaviest north and west at 0.50 to 1.00 in., less than 0.50 in. south and east.

Corn continues rapid development. Average height 58 in., 1976 37 in. Early fields in silk. Early oats ripening, much lodging from storms where growth tall. Winter wheat harvest started southeast. Barley and rye ready for harvest. Second crop haying 20% completed, 1976 3%, normal 1%. Some very good second crop growth, others shorter where lacked moisture. Still trying to finish first crop far north where slowed by rains. Pastures improved in west and north where more moisture received. Soybeans growing rapidly. Early potatoes ready to harvest. Pea harvest continuing, hot weather pushed maturity. Sweet corn doing fine, harvest to begin soon. Early apples being picked. Cherry processing underway. Soil moisture adequate. Insect development greatly accelerated during hot weather.

WYOMING: Temperatures mostly above normal. Wind River drainage precipitation below normal. Elsewhere above normal.

Topsoil moisture supplies short. Winter wheat 80% turned color, 18% mature; combining began southeast. Spring wheat 80% headed, oats 74%, barley 80%. Condition of winter wheat fair to good, spring crops fair to good, row crops mostly good condition. Isolated hail damage to all crops. Alfalfa hay 69% harvested, other hay 25%. Condition of range and pasture fair. Shortages of grass and stock water some areas.

World Weather and Crop Update

USSR. Crop conditions continued to be favorable over most of European USSR. Moderate to heavy rains fell over much of the area with excess precipitation noted in the Baltic Plain, Bielorussia and the southwest Ukraine. Harvesting of winter grains is in full swing in the southern areas with less than ideal harvesting conditions. Excellent yields are being reported, but the heavy precipitation of recent weeks has resulted in lodged grain in some areas with high moisture content of grain. A period of dry, sunny weather is needed if yield potential of this year's winter grain crop is to be achieved. Spring-sown crops in general are developing well, but the cool, wet regime that has prevailed over the past month has resulted in heavy weed growth in some areas. Lodging of spring-sown grains could have a negative impact on yields in some areas. Rainfall was generally light over the spring wheat areas of western Siberia and northern Kazakhstan during the reporting period; more rain is needed in some areas especially in Tselinograd, Kustanay, west Kazakhstan, and in the southern Urals. Estimated soil moisture in these regions at the end of June was well below normal.

ASIA. In the People's Republic of China, moderate to locally heavy--excessive in some places--rain fell throughout the northeastern provinces, an important spring wheat, soybean and coarse grain region. The north China Plain also was drenched by heavy monsoon rains which may have interfered with the harvest of winter grains in some areas. Moderate to locally very heavy rains occurred over most of the rice growing areas south of the Yangtze River. The monsoon continues active over India bringing needed moisture to widespread areas although excessive precipitation has fallen in some areas. In Australia, the principal wheat areas

were without significant precipitation. Rainfall is needed in parts of southwestern and south Australia in order to complete the sowing of winter grains.

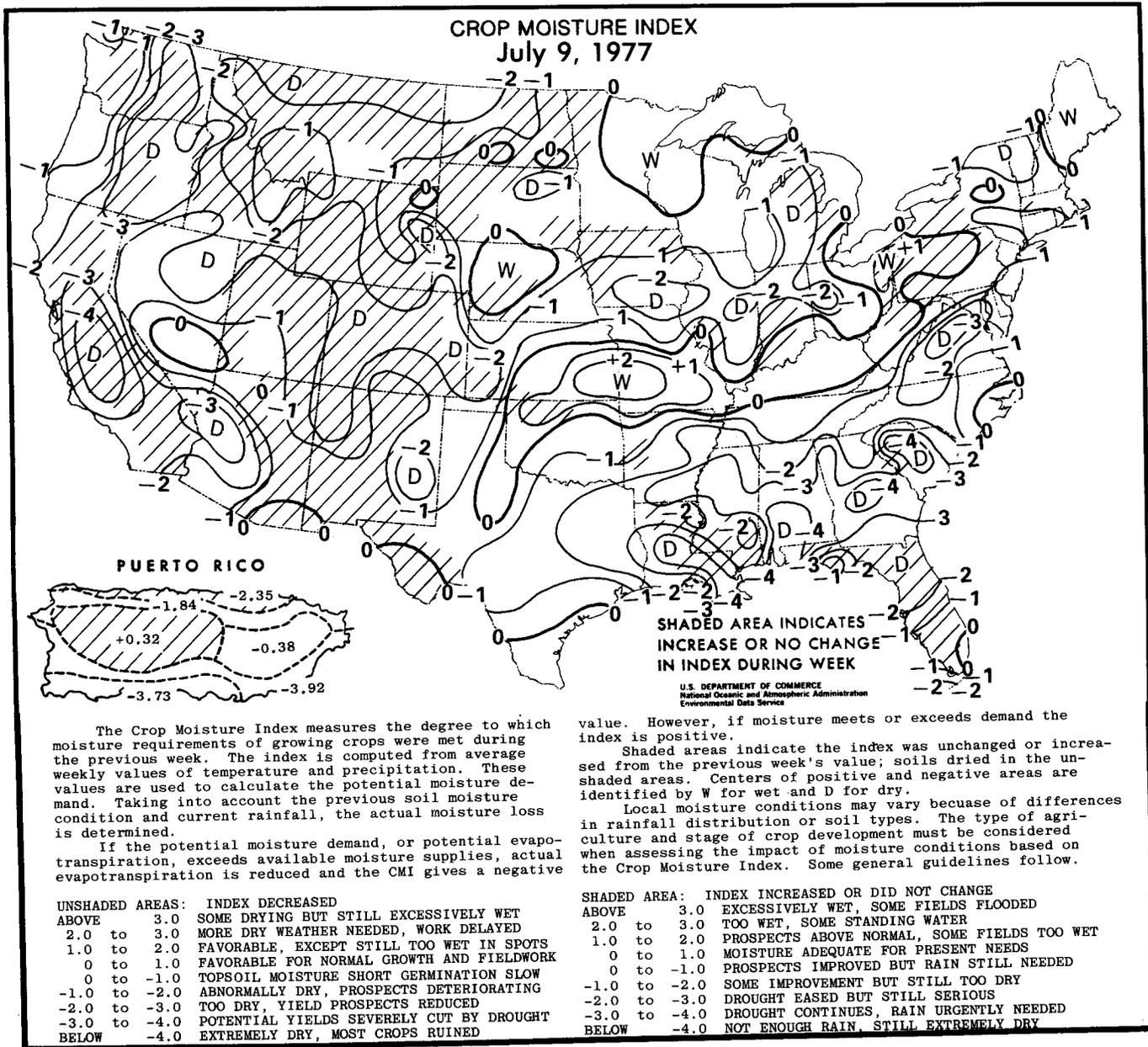
AFRICA. North Africa--Morocco, Algeria and Tunisia--were warm and dry, and South Africa was seasonally cool without significant precipitation in the main agricultural areas.

SOUTH AMERICA. Minimum temperatures in Brazil's coffee-growing regions were well above freezing during the past week. Heavy rains fell in Rio Grande do Sul, Brazil's southernmost state, but precipitation was generally light elsewhere in the main agricultural states in the south. Very light precipitation fell in the principal winter grain areas of Argentina. Wheat planting has been held up in the west and southwestern parts of the grain belt because of a serious moisture shortage.

EUROPE. Precipitation was generally light throughout western Europe with the exception of France where heavy downpours caused localized flooding in parts of the southwest. Mediterranean France was without precipitation. Unirrigated crops and pastures in central and southern Spain are in need of moisture. Heavy showers drenched parts of northern Italy, but southern Italy was without significant rainfall. In eastern Europe, light to moderate showers dampened most of this region. Estimated soil moisture at the end of June, however, was well below normal in Hungary, Yugoslavia and Bulgaria. Greece was without significant rainfall, and only light rains fell on the main agricultural areas in Turkey.

NORTH AMERICA. Timely rains have improved the

(continued on page 12)



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.

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HARVESTING PROGRESS

Percentage of acres harvested as of July 10

	WINTER WHEAT		
	1977	1976	Avg.
Colo.	46	29	27
Ind.	80	65	60
Iowa	80	35	26
Kans.	85	80	80
Mo.	88	87	86
Mont.	0	0	0
Nebr.	75	50	45
Ohio	60	50	40
Okla.	100	100	100
Tex.	99	98	100
U. S.	78	71	70

These 10 States produced 77% of the
1976 U. S. winter wheat crop.

(continued from page 10)

moisture situation in the Corn Belt in the United States, but drought conditions continue to prevail in southern Iowa, central Illinois, and small pockets in Indiana and Ohio. The drought has worsened in western Virginia, stunting crop growth and pastures. And there has been no improvement in the drought in the southern States where the severe moisture deficit has impacted adversely on crops and pastures. Livestock feed is becoming critical

in some areas. Timely rains continue to favor development of spring wheat in the northern Great Plains although soil moisture is generally low throughout this region. The moisture situation continues to deteriorate in parts of the Canadian spring wheat belt, especially in southwestern Saskatchewan and central and southern Alberta. Yields in southern Alberta, especially, are expected to be well below average.