

Weekly Weather & Crop Bulletin

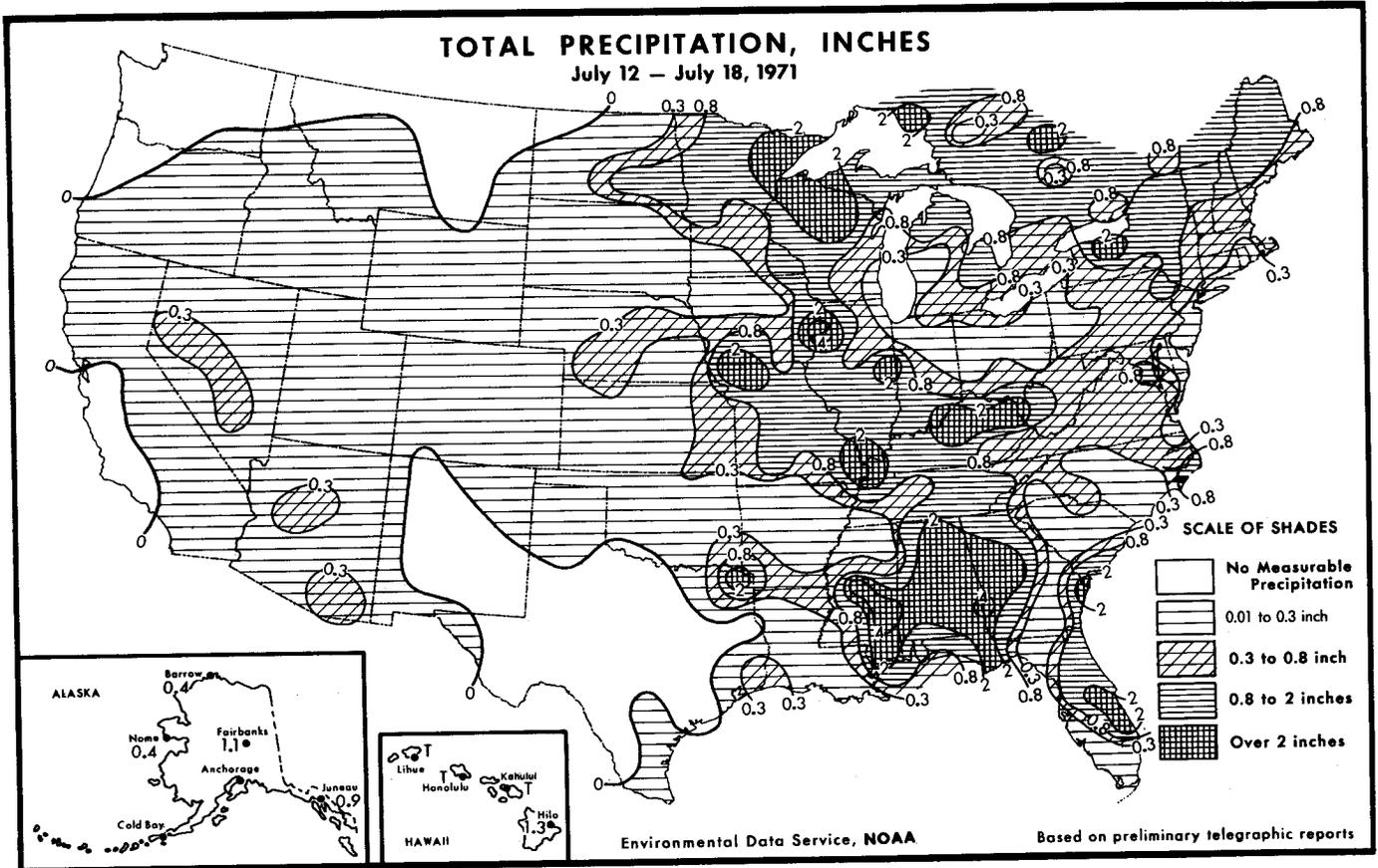
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Edited by Lucius W. Dye

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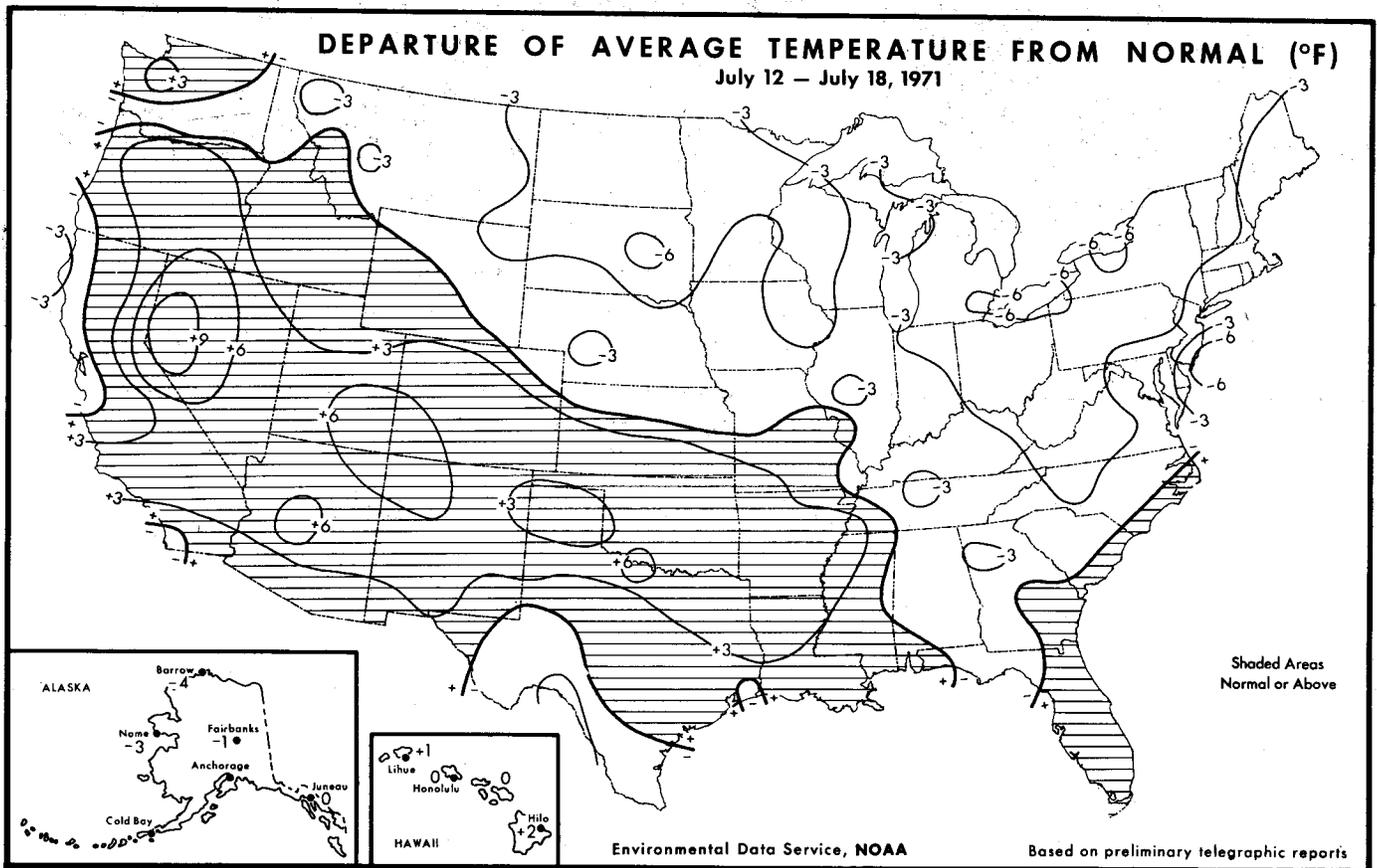


NATIONAL WEATHER SUMMARY

HIGHLIGHTS: Summer heat continued in the Southwest and the southern Great Plains. A cooling trend in the Northeast brought the coolest weather since mid-June. Heavy thundershowers dotted the central Great Plains and the Deep South.

PRECIPITATION: An outbreak of severe thunderstorms occurred in the Upper Mississippi River Valley in the forenoon and early afternoon Monday, July 12. Winds the Rochester, Minn., vicinity gusting to 87 m.p.h., blew a school bus off the road and downed trees and power lines. Hail as large as eggs fell in nearby areas. Gusts exceeding 80 m.p.h. destroyed a barn and crushed an airplane at Rice Lake, Wis.

Tornadoes occurred at scattered locations in Iowa Monday afternoon and evening. Showers fell in the Southeast from Mississippi to the Carolinas. Showers occurred Tuesday evening in northern Missouri and the Lower Ohio River Valley. Light to heavy showers fell over the Southeast in the latter part of the week. Meridian, Miss., received 4.88 inches of rain late Friday and early Saturday. Saturday brought generous showers to the Missouri River Valley from Yankton, S. Dak., to Columbia, Mo., to parts of the Ohio River Valley and the Northeast. Most of New Mexico and Texas received no rain. Duststorms occurred in some of the dry areas.



TEMPERATURE: Cool comfortable air spilled into the Northern States early in the week. Maximums Monday afternoon ranged in the 70's to low 80's over the northern border States. The Southwestern Deserts continued hot with afternoon temperatures 111° to 116° at many locations. Citizens from eastern Colorado to central Texas roasted in 100° heat. La Junta, Colo., registered 108° and Garden City, Kans., 107°. Winslow, Ariz., registered 109° Tuesday afternoon. This is the warmest temperature of record at Winslow. The Southeast was hot and humid. Maximums were in the high 80's and 90's. Early morning temperatures were generally in the 40's and 50's over the northern border States and the 70's across the South except in the Southwestern Deserts where the mercury remained in the 80's.

Phoenix, Ariz., registered 87° on several mornings early in the week.

Hot weather spread northward as the week progressed. Western Kansas and southwestern Nebraska suffered 100° heat Saturday afternoon. Hill City, Kans., registered 104° and Wichita Falls, Tex., 107° on that date. Dickinson, N. Dak., recorded 96° Saturday afternoon.

Temperatures averaged above normal southwest of a line from northern Idaho to Georgia and below normal northeast of that line. Reno, Nev., averaged 9° warmer than normal. Some areas in the North-Central and Northeast averaged several degrees cooler than normal.

L. W. Dye

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Wheat combining wide-spread in Colorado and Nebraska. * Corn Belt row crops making great progress. * Tart cherry picking increasing Northern growing areas. * Cotton picking slow South Texas.

SMALL GRAINS: Favorable weather pushed wheat harvesting in Nebraska, Colorado and South Dakota. Combining was widespread in Colorado and Nebraska (2/3 of crop in) until weekend showers interrupted progress. Beautiful combining weather allowed South Dakota farmers to get a head start on harvesting. Swathing of rye and barley became general in southern counties of North Dakota with combining to start soon. Hot temperatures hastened grain ripening in the Pacific Northwest. Combining is underway in early areas of the region. Kansas wheat growers have their crop in the bin, however a few scattered fields remain to be cut.

Warm weather speeded winter wheat ripening in Montana. About 70 percent of the acreage is turning color. Wheat, barley, rye and oats are ripening rapidly in Minnesota and Wisconsin. Some fields of rye and oats are already threshed. About 3/4 of the winter wheat crop is cut in Indiana and Ohio, with Michigan harvest rapid. Combining was increasing in the dry Northeast, but excess moisture prolonged wrap-up operations in Tennessee.

CORN: Corn continued to make exceptional progress. Good rains fell in the central Corn Belt, but moisture was rather scarce in outer Belt areas. However, prospects remain mostly excellent over the Corn Belt, with 60 percent of the acreage in Iowa and Illinois rated excellent. Many fields are tasseled out. The average height of stalks in Illinois is 6 feet, with many approaching the 7 foot mark. Rains checked the deterioration of the Michigan crop, while irrigation was widespread in Nebraska.

Outside the Corn Belt, the corn outlook also appears highly favorable. More rain is needed in Arkansas and from Virginia northward into New England. But moisture is adequate in most other southeastern States. One-third of the Alabama crop is in the dough stage, with about 4 percent of the South Carolina crop already mature.

Continued wet weather in the Corn Belt was favorable for the spread of Southern corn leaf blight. Infections are still mostly light, but severity is increasing in local areas. Blight infection is also increasing on susceptible varieties in some areas of the South.

SOYBEANS: It was another good week for the soybean crop. Rains fell over most of the important producing areas. Blooming increased rapidly over the North Central States, with about 1/5 of the fields starting to form pods. Growth of this year's plants continues well ahead of past years. In Illinois and Iowa, the Nation's two leading producing States, 94 percent of the acreage is in good to excellent condition. Hot temperatures halted the forming of pods in Arkansas. Planting of soybeans following wheat and barley harvest has ended.

COTTON: Warm temperatures and rain pushed cotton development in the South. Over 80 percent of the acreage is squaring, with roughly half the fields setting bolls. Extreme heat is causing some shedding in Arkansas. Insect populations continued to increase, as rains prevented spraying.

Growers on the High Plains of Texas are irrigating heavily, while rains delayed picking in the Lower Rio Grande Valley. Warm weather continued to push the California crop, but progress is about 2 weeks late in the San Joaquin Valley.

OTHER CROPS: Greenbug infestations continue to increase in sorghum fields in the Great Plains. Spraying is widespread. Most of the Great Plains acreage is in good to excellent shape and starting to head. Arkansas acreage is maturing rapidly, but dry weather is hurting growth. Texas sorghum is 10 percent harvested with combining moving into the Blacklands. Cutting also started in California. Haying made exceptional headway in the West, but scattered showers slowed baling over eastern areas of the Nation. Black shank and root rot are causing more problems than usual for Kentucky tobacco growers. Growers in South Carolina are more fortunate as color and thickness of cured leaves are good. Flue-cured cutting started in Virginia, and the Georgia crop is 40 percent gathered. Potato digging started in Oregon and Washington, while the movement from Virginia's Eastern Shore is ahead of last year. California movement is slow. The Long Island, New York crop is behind schedule.

Fruits and Nuts: Tart cherry picking is underway in all growing areas from the Northwest to the Northeast sections of the Nation. With peach harvest active in the Southeast portion of the U. S. and creeping into the Northeast. Gathering of the New Jersey blueberry crop is active. Massachusetts cranberry growers are irrigating heavily to avoid losses. Severe storms damaged fruit in Michigan and Wisconsin. Moving West, citrus picking is in the wrap-up stage in Arizona, but the new crop is in good shape. Yakima Valley Washington peach harvest also got underway. Warm temperatures accelerated California fruit growth.

Vegetables: Supplies of vegetables continue to increase from Northern producing areas, with sweet corn picking started in New England, and tomatoes nearly ready. Beneficial rains fell in Orange County, New York, but excess moisture hurt some onion fields in the Elba area. Excess moisture also damaged some Georgia crops, but harvesting increased in the central and northern sections. Carrot digging was active in the Yuma Arizona area, but harvesting of other crops was finishing. Harvesting lettuce and onions was underway in Colorado. Warmer temperatures enhanced vegetable crop prospects in Washington. Lettuce supplies are steady from the Salinas Valley of California. South Texas growers are seeding fall vegetable crops.

PASTURES AND LIVESTOCK: Pastures are providing excellent grazing over much of the East. However, pastures are poor in New Jersey, parts of New England, Lower Michigan and eastern Wisconsin. On the Northern Great Plains pastures need rain, but are good for mid-July. More culling of herds is expected in drought ridden Texas and southwest Oklahoma, as pastures continue to "burn-up." Feed supplies are good on Utah's summer ranges, but some ranchers are being forced to haul water for drinking. Pastures declined slightly in Colorado. California cattlemen continue to move herds to higher elevation pastures as lower elevation ranges dry out.

Steve Pscodna
Agricultural Statistician

Temperature and Precipitation Data for the Week Ending Midnight, July 18, 1971

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 . . .	80	- 2	3.0	+1.8	New Orleans . . .	83	+ 1	.2	-1.3	OKLA. Okla. City . . .	87	+ 4	T	-.5
Mobile . . .	85	+ 2	1.9	-.3	Shreveport . . .	89	+ 5	0	-1.0	Tulsa . . .	87	+ 5	T	-.7
Montgomery . . .	81	- 1	.8	-.5	MAINE. Caribou . . .	62	- 3	.9	0	OREG. Astoria . . .	60	- 1	0	-.3
ALASKA. Anchorage . . .	35	- 4	.4	+ .2	Portland . . .	68	- 1	.5	-.1	Burns . . .	74	+ 4	T	-.1
Barrow . . .	59	- 1	1.1	+ .7	MD. Baltimore . . .	76	- 1	T	-.9	Medford . . .	74	+ 1	T	0
Fairbanks . . .	56	0	.9	-.1	MASS. Boston . . .	73	- 1	.5	-.1	Pendleton . . .	77	+ 3	T	0
Juneau . . .	47	- 3	.4	-.1	Nantucket . . .	67	---	.3	---	Portland . . .	71	+ 3	0	-.1
Nome . . .	72	+ 6	.4	-.2	MICH. Alpena . . .	62	- 4	1.0	+ .3	Salem . . .	69	+ 3	0	-.1
ARIZ. Flagstaff . . .	96	+ 6	.1	-.1	Detroit . . .	68	- 7	.2	-.4	PA. Allentown . . .	71	- 4	.6	-.5
Phoenix . . .	87	0	.7	+ .2	Flint . . .	66	- 4	1.8	+1.1	Erie . . .	64	- 7	.1	-.8
Tucson . . .	86	+ 5	T	-.3	Grand Rapids . . .	68	- 4	.2	-.4	Harrisburg . . .	77	+ 2	.6	-.2
Winslow . . .	85	+ 2	T	-.1	Houghton Lake . . .	59	-13	.3	-.3	Philadelphia . . .	76	0	T	-.9
Yuma . . .	86	+ 4	T	-.8	Lansing . . .	64	- 3	1.6	+ .9	Pittsburgh . . .	68	- 5	.2	-.7
ARK. Fort Smith . . .	90	+ 5	0	0	Marquette . . .	68	- 4	.2	-.3	Scranton . . .	68	- 5	1.0	-.1
Little Rock . . .	54	- 3	T	0	Muskegon . . .	60	- 5	1.4	+ .8	R. I. Providence . . .	72	- 1	.2	-.5
CALIF. Bakersfield . . .	84	+ 2	T	0	S. Ste. Marie . . .	61	- 5	3.1	+2.3	S. C. Charleston . . .	82	+ 1	1.7	0
Eureka . . .	77	+ 3	0	0	MINN. Duluth . . .	63	- 3	1.9	+1.1	Columbia . . .	80	- 2	.1	-1.6
Fresno . . .	85	+ 1	T	0	Internat'l Falls . . .	71	- 2	.4	-.3	Greenville . . .	78	- 2	T	-1.2
Los Angeles . . .	85	+ 1	T	0	Minneapolis . . .	69	- 4	1.3	+ .5	S. DAK. Aberdeen . . .	69	- 5	T	-.6
Red Bluff . . .	69	- 1	T	0	Rochester . . .	68	- 3	.7	0	Huron . . .	70	- 6	.1	-.3
San Diego . . .	62	- 1	0	0	St. Cloud . . .	84	+ 2	1.7	+ .6	Rapid City . . .	71	- 3	T	-.4
San Francisco . . .	82	+ 3	0	0	MISS. Jackson . . .	82	0	4.9	+3.4	Sioux Falls . . .	79	- 5	.1	-.5
Stockton . . .	77	+ 4	T	-.3	Meridian . . .	79	0	1.9	+1.2	TENN. Chattanooga . . .	77	- 2	1.6	+ .5
COLO. Denver . . .	85	+ 6	T	-.1	MO. Columbia . . .	80	- 2	.3	-.3	Knoxville . . .	86	+ 4	.2	-.6
Grand Junction . . .	81	+ 4	.2	-.2	Kansas City . . .	79	+ 1	1.5	+ .8	Memphis . . .	78	- 3	.7	-.2
Pueblo . . .	72	- 2	.3	-.6	St. Louis . . .	82	+ 3	.8	-.1	Nashville . . .	87	+ 4	0	-.5
CONN. Bridgeport . . .	72	- 1	.5	-.3	Springfield . . .	73	- 2	0	-.2	TEX. Abilene . . .	83	+ 2	T	-.5
Hartford . . .	78	0	1.1	+ .1	MONT. Billings . . .	70	- 1	0	-.3	Amarillo . . .	86	+ 1	0	-.5
D. C. Washington . . .	81	- 1	2.1	+ .2	Glasgow . . .	69	- 1	T	-.3	Austin . . .	81	- 1	.3	-1.1
FLA. Apalachicola . . .	84	+ 2	.3	-1.9	Great Falls . . .	69	- 2	0	-.2	Beaumont . . .	83	- 2	T	-.4
Ft. Myers . . .	83	0	1.5	-.3	Havre . . .	66	- 3	T	-.2	Brownsville . . .	84	- 1	T	-.5
Jacksonville . . .	85	+ 2	0	-.9	Helena . . .	63	- 3	0	-.2	Corpus Christi . . .	92	+ 7	0	-.4
Key West . . .	82	0	2.4	+ .6	Kalispell . . .	74	- 2	0	-.3	Dallas . . .	82	- 4	0	-.3
Lakeland . . .	83	+ 1	T	-1.5	Miles City . . .	69	+ 1	T	-.2	Del Rio . . .	85	+ 3	T	-.3
Miami . . .	84	+ 1	2.3	+ .5	Missoula . . .	77	- 1	.1	-.5	El Paso . . .	89	+ 3	0	-.4
Orlando . . .	80	- 2	.7	-1.2	NEBR. Grand Island . . .	79	- 2	T	-.7	Fort Worth . . .	84	+ 1	.1	-1.1
Tallahassee . . .	83	+ 1	.3	-1.7	Lincoln . . .	75	- 3	.6	0	Galveston . . .	83	+ 1	0	-1.0
Tampa . . .	76	- 3	2.3	+1.2	Norfolk . . .	73	- 3	.3	-.3	Houston . . .	83	+ 3	0	-.5
GA. Atlanta . . .	79	- 2	T	-1.0	North Platte . . .	75	- 2	.1	-.7	Lubbock . . .	81	- 2	0	-.4
Augusta . . .	82	0	2.2	+ .9	Omaha . . .	74	- 2	.1	-.4	Midland . . .	85	0	0	-.3
Macon . . .	82	+ 1	2.6	+1.0	Valentine . . .	72	+ 4	.1	-.1	San Angelo . . .	86	+ 2	T	-.5
Savannah . . .	77	+ 2	1.3	-.9	NEV. Ely . . .	95	+ 5	T	-.1	San Antonio . . .	85	+ 1	0	-.9
HAWAII. Hilo . . .	79	0	T	-.1	Las Vegas . . .	77	+ 9	.3	+ .2	Victoria . . .	90	+ 4	0	-.5
Honolulu . . .	78	0	T	-.1	Reno . . .	79	+ 8	T	-.1	Waco . . .	92	+ 6	0	-.4
Kahului . . .	79	+ 1	T	-.4	Winneucca . . .	66	- 4	.6	-.2	Wichita Falls . . .	81	+ 8	T	-.2
Lihue . . .	77	+ 1	T	0	N. H. Concord . . .	70	- 6	T	-.8	UTAH. Blanding . . .	79	+ 2	T	-.1
IDAHO. Boise . . .	73	- 1	T	-.1	N. J. Atlantic City . . .	74	- 3	T	-.9	Salt Lake City . . .	66	- 3	1.3	+ .4
Lewiston . . .	68	- 5	T	-.1	Trenton . . .	85	+ 6	0	-.3	VT. Burlington . . .	74	- 3	.4	-.5
Pocatello . . .	80	- 1	2.8	+1.1	N. MEX. Albuquerque . . .	82	+ 3	0	-.4	Norfolk . . .	77	- 2	.1	-1.3
ILL. Cairo . . .	75	- 1	.1	-.6	Roswell . . .	66	- 7	.6	-.2	Richmond . . .	76	- 3	.6	-.7
Chicago . . .	73	- 3	4.4	+3.7	N. Y. Albany . . .	64	- 5	.6	-.3	Roanoke . . .	74	- 3	.3	-.7
Moline . . .	74	- 2	.4	-.4	Binghamton . . .	67	- 3	.7	+ .1	WASH. Colville . . .	69	0	0	-.1
Peoria . . .	71	- 3	.6	-.3	Buffalo . . .	75	- 2	.2	-.6	Omak . . .	61	+ 1	T	-.5
Rockford . . .	75	- 4	.8	0	New York . . .	65	- 7	2.5	+1.8	Quillayute . . .	68	+ 3	0	-.2
Springfield . . .	78	- 2	1.4	+ .7	Rochester . . .	67	- 5	1.6	+ .9	Seattle-Tacoma . . .	70	- 1	0	-.1
IND. Evansville . . .	70	- 4	T	-.8	Syracuse . . .	74	- 1	.1	-.9	Spokane . . .	78	+ 1	T	0
Fort Wayne . . .	73	- 2	.5	-.2	N. C. Asheville . . .	76	- 3	.7	-.4	Walla Walla . . .	73	+ 2	0	0
Indianapolis . . .	69	- 5	.5	-.3	Charlotte . . .	75	- 3	T	-1.1	Yakima . . .	68	- 3	.5	-.6
South Bend . . .	75	- 2	1.5	+ .7	Greensboro . . .	79	+ 1	1.0	-.5	W. VA. Beckley . . .	71	- 4	1.2	-.1
IOWA. Burlington . . .	75	- 2	.3	-.3	Hatteras . . .	77	- 1	T	-1.3	Charleston . . .	71	- 4	1.2	-.1
Des Moines . . .	69	- 4	1.7	+ .9	Raleigh . . .	81	+ 1	.3	-1.6	Huntington . . .	72	- 4	.6	-.3
Dubuque . . .	76	- 2	.1	-.6	Wilmington . . .	68	- 4	.8	+ .3	Parkersburg . . .	69	- 2	.5	-.1
Sioux City . . .	79	- 1	.3	-.3	N. DAK. Bismarck . . .	66	- 6	.8	+ .2	WIS. Green Bay . . .	69	- 5	1.4	+ .6
KANS. Concordia . . .	85	+ 5	.3	-.2	Fargo . . .	68	- 4	0	-.4	La Crosse . . .	69	- 2	.5	-.3
Dodge City . . .	77	0	T	-.6	Williston . . .	70	- 3	.2	-.7	Madison . . .	69	0	.1	-.6
Goodland . . .	78	- 2	.1	-.7	OHIO. Akron-Canton . . .	75	- 3	.6	-.2	Milwaukee . . .	71	- 1	T	-.2
Topeka . . .	85	+ 4	T	-.8	Cincinnati . . .	68	- 4	.3	-.5	WYO. Casper . . .	71	0	.1	-.3
Wichita . . .	76	- 1	2.0	+1.1	Cleveland . . .	70	- 5	.5	-.4	Cheyenne . . .	73	+ 2	.1	-.1
KY. Lexington . . .	76	- 2	3.8	+3.1	Columbus . . .	72	- 4	.1	-.7	Lander . . .	69	- 3	0	-.2
Louisville . . .	85	+ 2	.1	-.8	Dayton . . .	68	- 5	.3	-.3	Sheridan . . .	82	+ 1	.8	-.6
LA. Baton Rouge . . .	84	+ 2	.4	-1.5	Toledo . . .	66	- 5	.1	-.9	P. R. San Juan . . .	82	+ 1	.8	-.6
Lake Charles . . .					Youngstown . . .									

* Departures are from 30-year means (1931-60). Based on preliminary reports

CONDENSED STATE SUMMARIES

These summaries provide brief descriptions of condition and activities important on a national scale. Detailed reports of crop and weather conditions during the growing season are contained in State issues of Weekly Weather and Crop Bulletins published by field offices of the Statistical Reporting Service, U.S.D.A. in cooperation with NOAA Climatologists

ALABAMA: Partly cloudy to cloudy, hot and humid, with numerous showers and thundershowers through Friday. Mostly sunny and warm over weekend with very few showers. Temperatures for week averaged above normal. Rainfall mainly heavy with more than 5.00 inches and flash flooding in north-central sections Friday. Farming activities consisted of laying by cotton and soybeans, pesticide application, weed control, and haying. Cotton made good growth. About 92% squaring and 54% setting bolls--only slightly behind last year. Corn growth good with 80% silk stage and 34% dough stage. DEW Line reports no significant increase Southern corn leaf blight during week. Disease of insignificant economic importance to date. Approximately 97% soybeans emerged and small % blooming. About 84% peanut crop pegging, still behind last year. Leaf spot increasing. Vegetable harvest full swing. Pasture feed mostly adequate. Livestock remain good.

ALASKA: Adequate amounts of both rain and sunshine provided nearly ideal conditions for crop growth for the first time during current crop season. A cooling trend began about midweek but temperatures still remained near normal by end of week. Rainfall was above normal all areas. Cumulative amounts still below normal except for Kenai Peninsula. Growing degree days below normal all areas except Tanana Valley. Grain crops heading with height about 20 inches. Hay harvest 3/4 complete Tanana and Matanuska Valleys, due to begin Kenai Peninsula about July 20. Potatoes beginning to bloom, hilling underway. Harvesting vegetables continues.

ARIZONA: Showers widespread over State this week for first time this summer, with heaviest rainfall totals in mountains in east and southeast. Maximum weekly totals were mostly less than 0.75 inch. Strong winds and blowing dust reported in irrigated valleys in southern part of State. Temperatures averaged slightly above normal most areas. Cotton making good progress. About 90% Yuma crop setting bolls, 80% central area. Some spraying for pink bollworms. Small grain harvest virtually complete. Sorghum making good progress, some Yuma fields approaching hard dough stage. Greenbugs continue threat southeast. Safflower harvest underway. Cantaloupe harvest virtually complete Yuma. Carrot harvest active, tomatoes and other vegetables nearing completion. Cantaloupe and watermelon harvest continues Salt River Valley. Chili peppers good progress Cochise County. Commercial citrus harvest wrap-up stage. New crop fruit sizing well, groves good condition. Grape harvest nearing completion. Summer rains have started, but ranges have not had sufficient time to show noticeable greening. Livestock sustained by supplemental feeding and water hauling.

ARKANSAS: Weekly mean temperatures 3° to 5° above normal ranging from low 80's north to mid-80's elsewhere. Daily extremes: 61° to 106°. Heavy thunderstorms extreme northeast, southwest, and extreme south. Rainfall amounts 1.00 to 3.00 inches southwest and extreme south. Less than 0.25 inch elsewhere. Heaviest 3.34 inches at El Dorado. Fourteen stations report no precipitation. Most of State dry. Soil moisture short

to very short. Some severe hail damage. Cotton fair to good. Fruiting well, although extreme heat causing some shedding. Cultivation active. Insects increasing, but under control. Rice growing good. Soybeans planted and growing good, but need rain. Early fields blooming, but too hot to set pods. Corn blight detected in 2 counties. Corn and sorghum maturing, but hurting from drought. Haying conditions good, but cuttings short. Early apple harvest complete. Peach harvest active. Tomato harvest nearly complete south, underway elsewhere. Watermelons ripening. Cucumber, okra, and potato harvest in progress. Pastures generally poor. Grazing short most areas.

CALIFORNIA: Warmer interior after midweek. Average temperatures several degrees above normal southeastern interior and Los Angeles Basin and near normal elsewhere. Light showers southern mountains and desert, Thursday and Friday, and northward on coast and in Sierras over weekend. Warm weather favorable growth, maturity field crops. Milo harvest started Imperial Valley, late plantings continue. Cotton about 2 weeks late San Joaquin Valley. Sugar beet digging increasing San Joaquin Valley. Warm temperatures accelerated growth deciduous fruit and nut crops. Harvest apricots active. Harvest nectarines, free-stone peaches and plums active. Pear crop looks good, harvest to commence early August. Prunes developing normally; good crop expected. Harvest clingstone peaches underway Visalia-Kingsburg area. Grapevines show good growth, but 10 days to 2 weeks late. Wine grapes progressing well coastal areas, good crop anticipated. Almonds and walnuts making good growth, good fruit sizes. Harvest summer grapefruit continues. Range conditions good northern districts, very dry lower elevations. Stockwater adequate. Some supplemental feeding. Movement to higher range continues. Broccoli, cauliflower light Salinas, Santa Maria. Cantaloupe harvest continues Kern, Hanford, underway Huron. Carrots active Salinas-King City, Santa Maria. Celery increased Salinas, steady Oceano-Guadalupe. Cucumbers active South Coast, upper San Joaquin. Lettuce steady Salinas, Santa Maria. Potatoes slow. Strawberries limited freezers south, active central. Market tomatoes active San Diego, San Joaquin. Canning tomato harvest continues Blythe. Watermelon harvest active Blythe, Kern, underway Fresno.

COLORADO: Hot and dry. Somewhat cooler with increasing shower activity over weekend. Moderate to heavy thundershowers southeast plains and scattered northeast localities. Some local hail. General conditions all crops very good. Above-normal temperatures continue dry topsoil. Topsoil moisture mostly short statewide. Wheat 89% ripe, harvest over 2/3 completed. Winter barley 79% ripe, 59% harvested. Corn 82% laid-by. Limited acreage tasseling southeast. First cutting alfalfa near wind-up west, complete other areas. Second cutting near 25% in. Lettuce, onion harvest underway. Spinach harvest making good progress. Sweet cherry harvest complete. Conditions other fruit crop good. Hail damage to vegetable and field crops eastern area and Arkansas Valley. Pasture and range conditions declining slightly.

FLORIDA: Temperatures averaged near normal with high daytime temperatures in mid-90's, except lower along coast. Rainfall for week averaged 1.00 to 2.00 inches most sections except below 0.50 inch lower East Coast and Keys. Precipitation mostly as scattered afternoon and evening showers and thunderstorms with decreasing thunderstorm activity latter part of week. Current field crop prospects excellent especially for snap beans, peanuts, flue-cured tobacco and corn. Southern corn leaf blight observed 17 counties, but of no economic consequence except few T-cytoplasm fields. Pasture and grass condition good to excellent. Cattle and calves with above-average weight gains. However, due to spring drought, calves sold during spring marketing time may be lighter. Citrus tree conditions excellent, with good fruit and foliage growth. Moisture adequate. Vegetable supplies limited to eggplant, okra, southern peas and other summer vegetables for local market.

GEORGIA: The pattern of showers and thunderstorms continued with rainfall amounts ranging from less than 0.50 inch in extreme southeast to over 2.00 inches in most central and southwest sections. A few observers measured more than 4.00 inches and most places had measurable rain on 2 to 4 days. Shower activity decreased some during the weekend with only a few areas receiving rain on Saturday or Sunday. Temperatures continued seasonally mild most of week. Highs reached 90° on only 2 or 3 days in the north and were in low to mid-90's in south. Lows were mostly in 60's north and low 70's south. Minimums dropped below 60° in the mountains Sunday morning. Averages ranged from just above normal southeast to normal or slightly below remainder of State. Soil moisture surplus northern and western sections, adequate elsewhere. Frequent showers interrupted insect and disease controls and limited other activities. Crop conditions still rate high. Peaches 2/3 picked. Tobacco harvest peaking with 40% gathered. Cotton 3/4 setting bolls, but none open and insects increasing. Peanuts good to excellent. Corn prospects continued very bright. Corn blight found additional counties, but none on N-cytoplasm. Pastures and cattle good. Truck crop harvest increasing central and north. Excess moisture causing some damage.

HAWAII: Growing conditions generally favorable. Tropical Storm Denise brought rain to drought-stricken area on Hawaii. Maui, Oahu, and Kauai remained relatively dry, but progress crops fair to good. Production sugarcane mid-July below same period last year. Picking pineapples at peak. Supplies vegetables and melons adequate. Supplies bananas light. Papaya harvesting steady and ample supply. Pastures benefited from recent showers, but more rain needed. Cattle fair to good.

IDAHO: Temperatures averaged 5° to 10° above normal on last day of week; however, averaged for the week 1° to 5° below normal. Precipitation first of the week moderate to heavy north. Elsewhere precipitation mostly none. A few scattered light thundershowers south-central and east. Warm days spurring crop growth and greatly aiding hay harvest. Grasshoppers becoming troublesome local areas. Aphid population building up southwest on alfalfa. Apricot harvest starting. Other fruits good. Higher ranges providing excellent forage. Pollination alfalfa seed progressing very good--good seed set occur-

ring. Final cultivation row crops complete, except potatoes in eastern part--50% complete there.

ILLINOIS: Decatur weekly total, 5.92 inches. Temperatures normal or slightly below normal. Maximum temperatures mid-80's. Corn 60% excellent, 37% good, 3% fair. Average corn height 72 inches; most advanced 84 inches. Corn 60% silked. Conditions favor Southern corn leaf blight development. Physoderma brown spot developing southern part. Soybeans 52% excellent, 42% good, 6% fair. Crop 70% blooming, 25% podding; insect damage slight. Oats 20% excellent, 62% good, 16% fair, 2% poor. Oats 95% ripe, 55% combined. Cereal leaf beetle threatening crop. Alfalfa hay 18% excellent, 47% good, 33% fair, 2% poor. Pastures mostly fair to good. Four days suitable fieldwork. Activities were combining, haying, baling straw and cultivating.

INDIANA: Cool north, warm south. Humidities below normal north, near normal south. Rainfall 1.50 inches central and south. In north 0.70 inch except 1.30 inches in central. In last 4 weeks driest in northeast, 2.40 inches recorded. Five days suitable fieldwork. Topsoil and subsoil rated mostly adequate. Southern corn leaf blight increasing, but infections mild to moderate and somewhat heavier south. Sources of disease mostly local. Corn 35% silked, 25% last year. Wheat 80% combined, 60% average. Oats 30% harvested, 20% average. Barley 75% combined. Rye 60% harvested. Soybeans 30% blooming, 10% setting pods, on par with 1970. Alfalfa hay 45% cut 2d time. Pastures fair to good.

IOWA: Cool dry week except moderate to heavy showers most eastern counties. Growing crops generally good to excellent condition. Some localized storm damage to crops. Corn borers western 1/3 and scattered across north. Corn 60% excellent, 38% good and 2% fair. Nearly 50% fields 75% or more silked. Little behind 1970, but considerably ahead average. Some increase intensity infections Southern corn leaf blight. Infections still light. Weather conditions were favorable for further development of disease. Soybeans 49% excellent, 45% good, and 6% fair. Over 55% fields blooming, 20% setting pods. Oat harvest 40% completed, considerable variation amount harvested from southwest and northeast. Winter wheat harvest over 65% complete. Second crop alfalfa harvest about 50% complete. Topsoil moisture 5% short, 89% adequate and 6% surplus. Over 5 days suitable fieldwork.

KANSAS: Light to moderate rain much of eastern 1/3 and northeastern Kansas, locally over 1.25 inches. Generally light precipitation elsewhere. Weekly mean temperatures averaged much above normal southwest and south-central, near to below seasonal elsewhere. High humidity, light winds, and high temperatures made weather uncomfortable central and east. Wheat harvest virtually finished except few cleanup operations. Some oats, rye, and brome grass seed harvested. Corn 51% tasseled, same as last year, average 42%. Corn 9% dough stage, 10% year earlier, average 11 percent. Most areas corn growing well, but some southern counties showing moisture stress. Southern corn leaf blight in 30 counties, damage mostly light, some ears being infected. Sorghums 9% headed, 5% last year. Few farmers still planting sorghums for forage. Greenbug infestation increased, some farmers spraying. Soybeans 15% podded, 14% last year. Cattle on pastures gained well, but flies and heat caused

problems. Pasture feed mostly good, but needs moisture some southern and western counties. Hot, humid weather hard on feedlot cattle and hogs.

KENTUCKY: Rainfall spotty, weekly totals from less than 0.25 inch in southeast and portions of Bluegrass to about 4.00 inches or more. Flash flooding at Louisville in north-central Kentucky and in portions of the northeast on 18th. New records for excessive rainfall set at Louisville. Three funnel clouds on 13th and gusts to 84 m.p.h. at Louisville on 13th. Wind damage in west on 15th. Possible tornado in Henry County on 18th; no injuries but some local damage. At least 3 funnel clouds on 18th. Temperatures for week averaged near seasonal. Soil moisture mostly adequate. Corn mostly good to excellent, about 2/3 acreage tasseling, ahead of last year and usual. Many fields silking and setting ears. Weather favorable for spread leaf blight and infection can probably be found every county; but mostly on T-cytoplasm corn. Soybeans 15 inches tall, last year 16. Tobacco very spotty. Black shank, root rot and water scald causing more problems than usual. Most tobacco still 10 days to 2 weeks later than normal. Pastures excellent. Hay volume heavy, but harvest difficult. Peach harvest active.

LOUISIANA: Hot humid weather continued but showers diminished from last week to only isolated occurrences. Average temperatures ranged 1° to 2° above normal most areas but up to 5° above normal northwest. Daily extremes: 104° Shreveport Friday, 66° Ashland and Leesville Monday. Precipitation for the week light or none most places with only a few moderate totals northwest and southeast weekend. Greatest 1-day totals 1.22 inches at Calhoun Saturday morning and 1.18 inches downtown New Orleans Sunday morning. Soil moisture generally short northern 2/3, mostly adequate southern 1/3. Chemical control weeds and insects active row crops. Cotton, corn, soybeans, sweetpotatoes fair to good condition; rice, sugarcane and sorghum good to excellent. About 90% cotton squaring, early plantings blooming. Weevils and worms building up. Early rice being drained for harvest. Some early corn maturing, late corn yield prospects lowered by moisture shortage. Harvest watermelons, peaches and okra active. Haying active. Pasture feed average. Cattle mostly good.

MARYLAND AND DELAWARE: Weekly temperatures averaged 2° to 3° below normal. Extremes ranged mostly from highs in 80's and low 90's to lows in upper 40's to low 60's. Showers and thunderstorms occurring on as many as 6 days gave variable totals ranging from near 0.10 inch to 1.75 inches. Heaviest amounts in west, extreme north-central, and lower southern areas of Maryland and also in northern Delaware. A few severe thunderstorms occurred on 14th in Garrett and Allegany Counties in Maryland. Soil moisture shortages threatening crop production, especially central, Eastern Shore, and Delaware. Corn needs moisture for critical pollination period; at present 1/4 silked, normal 1/3. Soybean growth slowed. Wheat 63% combined, about normal. Vegetable and fruit harvests continue active.

MICHIGAN: Cool, mostly 4° to 6° below normal except western portion of Upper Peninsula where temperatures averaged 6° to 8° below normal. Most stations reported minimum temperatures in 40's during week. Several stations equaled or

established new record low temperatures on Sunday, July 18. Frequent showers. Some areas received substantial amounts, with portions of southwest Michigan, part of Thumb area, some parts of north-east Lower Michigan, and much of Upper Peninsula receiving from 1.00 to 2.00 inches. Most of Berrien County, in southwest Michigan, where moisture supply has been quite short, received less than 1.00 inch while bordering counties received some heavy rains. Southeast Michigan and much of west-central areas received from 0.25 to 0.50 inch, and these areas are becoming very dry. Crop growth helped by rain parts Lower Peninsula, but some west-central, central, and southeastern areas critically dry. State averaged 5.5 days suitable fieldwork. Rains checked deterioration corn crop southwest and stimulated growth south-central. Corn averaged 4 feed high and many fields tasseled. Wheat harvest moved rapidly, 45% in. Oats 2/3 turned yellow, harvest started. Soybean development fair to good. Summer potato yields light. Irrigated fall potatoes fair to good. Pasture feed supplies below average Lower Peninsula, above average Upper Peninsula. Good progress 2d cutting hay. Tart cherry harvest well along southwest, started northwest. Strong winds and hail damaged apples, pears, and cherries. Vegetable development fair to good.

MINNESOTA: Cool week with temperatures averaging 3° to 5° below normal. Extremes 94°, 39°. Precipitation variable, showers of 1.00 to 1.50 inches of rainfall in 30-mile-wide band moving across State. Areas not in heavier showers received about 0.50 inch. Parts west-central received little precipitation. Two small tornadoes causing minor damage touched down south of St. Paul and north of Princeton. Good crop progress. Corn 33% tasseling, normal 15%. Southern corn leaf blight identified 6 additional counties. Soybeans blooming 70%, normal 44%; flax setting bolls 51%, normal 35%. Small grains turning ripe: Spring wheat 48%, normal 18%; oats 68%, normal 36%; barley 68%, normal 32%. Nearly all winter wheat and rye ripening. Rye 15% cut, normal 17%.

MISSISSIPPI: No rain this week at scattered locations with a few stations reporting no rain for second week. Elsewhere generally 1 day with rain and weekly totals mostly under 0.50 inch. A 1-day amount of 1.97 inches was measured at Bay Springs Wednesday morning. Weekly temperature averages were mostly near to 3° above normal. Over weekend: Some severe thunderstorms with heavy rain mostly in central portion of State; Meridian measured 4.88 inches rain Saturday morning. Soil moisture short to adequate southeast, other areas mostly short. Average 5 1/2 days suitable fieldwork. Peaches 60%, Irish potatoes 96%, hay 58% harvested. Cotton 83% squaring, 58% setting bolls. Corn 69% tasseled. Condition peaches, pecans, and pastures mostly fair to good. Corn, cotton, sorghum, hay, soybeans, rice, sweetpotatoes, and livestock fair to mostly good.

MISSOURI: Temperatures averaged 2° below normal north to 3° above normal south. Hottest during middle of week with many Ozark stations breaking 100°. Frequent periods of showers brought generous amounts of rain to all but northeast Missouri and Western Ozarks. Heaviest amounts exceeded 3.00 inches between Vandalia and Sikeston when considerable low-level flooding occurred July 15 and 16. Soil moisture surplus about 3/4 of State. Rains prevent critical drought injury to crops, but humid conditions increased severity and occurrence Southern corn leaf blight. How-

ever, severe infections largely found fields of volunteer corn. Alfalfa 2d cutting 72% complete, 81% last year; clover-timothy 83% cut, 85% last year. Corn 63% silked, 53% last year. Soybeans blooming 38% compared 22% last year. Cotton 64% squared, 62% last year.

MONTANA: Sunny with progressive warming during week, minor cooling weekend. Temperatures averaged near normal. Virtually no precipitation. Topsoil moisture short. Warm, dry weather reduced yield prospects, speeded crop development. Winter wheat 30% headed and still green, 70% turning color. Winter wheat 10% excellent, 65% good, 25% fair condition. Spring wheat 5% excellent, 45% good, 40% fair and 10% poor. Spring wheat 25% turned color. Barley, oats, sugar beets, and potatoes all generally good. First cutting alfalfa hay 85% stacked and wild hay 45% harvested.

NEBRASKA: Seasonal weather. Locally heavy showers in east over weekend. Row crops good condition. Subsoil moisture adequate. Topsoil moisture mostly adequate. Corn irrigation widespread, crop 24% silked. No change Southern corn leaf blight infestation. Sorghum good to excellent, heading. Some green bug infestations present. Soybeans started to pod, condition good to excellent. Wheat harvest 67% completed, 74% normal. Harvest oats underway. Second cutting alfalfa 52% complete. Livestock good.

NEVADA: Temperatures at all stations averaged 3° to 5° above normal. Spotty rainfall in north. Locally heavy cloudbursts caused inundation of mud and water in some Reno area homes. Flash flood cut freeway at Lovelock. Light rainfall in south with Las Vegas reporting 0.03 inch. First cutting alfalfa hay virtually complete western Nevada, but still in progress northeast. Fourth cutting alfalfa southern areas. Small grains good condition with harvesting in south, and soon underway northwest. Livestock remain good, and stockwater adequate. Range feed condition varies from fair in south to good north.

NEW ENGLAND: Week averaged near normal along coast but mostly 2° to 4° below normal inland where several nights were cool. Some new record lows for date were set July 13, with a few readings in north in 30's. Widespread thundershowers on July 13, 14, and 17, with more frequent showers in north. Widely variable totals for week from only about 0.10 inch to over 3.00 inches. Heaviest amounts nearly all in north. More rain badly needed. Pastures, mowings and non-irrigated crops being damaged. Massachusetts cranberry prospects threatened, but damage limited by irrigation. Moisture adequate Aroostook, Maine. Potatoes growing well, now blooming. With irrigation, Connecticut Valley tobacco doing well. Sweet corn harvest started. Tomatoes nearly ready. Snap beans in volume.

NEW JERSEY: Cool week with temperatures generally averaging from 2° to 6° below normal. Extremes: upper 40's to low 90's. Rainfall for week averaged 0.50 inch over northern 1/3 of State and about 0.25 inch elsewhere. Weekly totals varied from less than 0.10 inch at several stations to nearly 1.00 inch at Newton. Some showers received but general rain needed. Where irrigation not available production some crops lowered. Supplies early summer crops good. Very light potato harvest started. Blueberry harvest peak. Peaches and apple sizes could be hurt if dry con-

ditions continue. Barley and wheat combining made good progress. Corn blight detected in 5 southern counties, infection very light. Field corn and soybeans need rain. Pastures browning.

NEW MEXICO: Continued dry except for scattered showers late in week in northern mountains and extreme northeastern plains. Much above normal temperature over most State but with slight cooling after Tuesday. Albuquerque tied its all-time high temperature of 104° on Tuesday. Moisture extremely short supply most areas. Northeast corner has had some moisture. Barley and wheat harvest completed. Dryland sorghum good condition. Cotton and alfalfa good. Onion harvest currently active. Ranges extremely dry and poor. Livestock fair due heavy supplemental feeding.

NEW YORK: Coolest week since week ending June 18. Daytime temperatures especially below normal as maximums mostly in 70's to low 80's entire period. Nights cool early week with minimums low to mid-40's interior sections 12th and 13th. Continued dry southern tier and southeast with precipitation totals 0.10 to 0.40 inch. Showers on 13th, 14th totaled 0.80 to 1.50 inches in northern half with additional 0.60 inch on 17th. Soil moisture short southern half. Rainfall late week much needed as soil moisture short many counties. Corn growth uneven, but generally good. First cutting hay nearly completed. Alfalfa 2d cutting 15% harvested, but regrowth slowed by dry soil. Lodging reported wheat crop that is near harvest. Some barley harvested. Many farmers green chopping oats. Upstate potatoes good, Long Island behind schedule. Rain beneficial onions Orange County, but excess moisture hurt some onion stands Elba. Celery harvest increasing in volume Orange County. Lettuce harvest going strong. Snap bean harvest underway. Hudson Valley sweet corn harvest to begin this week. Fruit conditions remain good. Some Hudson Valley orchards being irrigated. Localized hail damage occurred Hudson Valley and Niagara County. Western New York sweet cherry harvest peaked and tart cherry harvest underway.

NORTH CAROLINA: Temperatures averaged above normal with little change. Highs mostly near 90° and lows near 70° except mountains. Precipitation in daily scattered showers and thundershowers. Totals ranged zero to 3.00 inches, averaging 1.00 inch. Soil moisture declined but continued mostly adequate. Wet some eastern and mountain areas. Dry central and northern Piedmont. Flue-cured tobacco good. Harvest active types 12 and 13. Type 11 underway. Burley tobacco mostly fair to good. Corn still mostly good. Blight increasing. Severe Susceptible T-cytoplasm, some in blends, none N-cytoplasm seed. Acreage 56% N, 3% T, 14% Blends. Southern corn leaf blight identified in 46 counties. Cotton improved, condition generally good, crop blooming. Insect infestation increasing where showers frequent. Other growing crops especially peanuts and soybeans generally good. Apples and peaches steady, harvest accelerating.

NORTH DAKOTA: Little or no rain until scattered showers in over weekend. Amounts in shower areas mostly 0.10 to 0.40 inch but up to 1.20 inches at Grand Forks. Temperatures averaged 2° to 4° below normal. Swathing rye and barley to become general southeast counties. Few southwest counties started swathing tye. Combining will start

as weather permits. Topsoil moisture rated adequate or better almost all areas. Haying varies throughout State with 1st cutting complete few counties and proceeding slowly between showers others. Row crops making excellent growth much ahead 1970. Pastures and ranges doing well. No Southern corn leaf blight reported.

OHIO: Sunny and pleasant week with temperature generally 4° to 6° below normal. Rainfall widespread 15th and 16th with amounts in 0.20 to 0.40 inch range. Local heavy rains in southern 1/3d of State on 18th resulted in local flooding Six days favorable fieldwork. Soil moisture supplies 43% short, 55% adequate, 2% surplus. Height corn 65 inches, compared 55 inches last year. Corn 35% silk. Soybean height 22 inches, 18 inches last year and 17 inches normal. Second cutting alfalfa 60% harvested above last year's 45%. Second cutting clover-timothy 30% harvested. Wheat 75% harvested. Barley harvest 80% complete, same as last year. Oats harvest 25% finished, equal to last year. Southern corn leaf blight positively identified in over 60 Ohio counties.

OKLAHOMA: Rainfall averaged from zero south-central to 0.80 inch southeast. Temperatures averaged 3° to 7° above normal. Extremes: 110° and 58°. Extreme drought in southwest and west-central areas intensified during week with little or no measurable rainfall and temperatures 100° or above each day. Most southwest areas have now received 15 or more consecutive days of 100° plus temperatures. Moisture supplies being depleted by hot dry weather. Surface soil moisture 87% short, 13% adequate. Row crop condition fair to good, dryland acreage deteriorating, especially southwest. Southern corn leaf blight reported 2 Panhandle counties and 1 east-central county. Corn southern areas advanced to stage where infection should not seriously affect yield. Cotton, peanuts, and soybean progress behind last year. Cotton only 14% squaring, corn 21% dough, grain sorghum 23% headed, peanuts 34% and soybeans 14% flowering. Third cutting alfalfa 30% complete. More culling cattle southwest to occur as pastures are burning up.

OREGON: Cool weather persisted until midweek, then sunny skies and strong warming extended through remainder of week. Showers covered most of State during 1st part of week. Coastal amounts varied from 0.05 inch at Brookings to 1.06 at Cloverdale. Throughout rest of State amounts varied from none at Vale to 0.55 inch at Enterprise. Weekly temperatures ranged from slightly above normal on southern Oregon coast to 1° to 5° below normal. However, by end of period, temperatures were well above normal except along coast. On July 12 Enterprise recorded the coldest temperature of the week, 33°, and Pendleton had the highest minima of 68° on the 16th. Maxima ranged from 63° to 70° on the coast while elsewhere from 87° at Portland and Wickiup Dam to 102° at Vale. Grain maturing rapidly with recent warm weather. Grass seed swathing continues active with some combining started. Second cutting alfalfa hay continues. Vegetable crops made good progress. Strawberry harvest over except for "you-picks" and commercial picking higher elevation fields. Black and red raspberry harvest continues. Logan and boysenberry harvest beginning. Sweet cherry harvest well along, with tart cherries just starting. Potato harvest started late week Umatilla County.

PENNSYLVANIA: Relatively cool and dry after nearly 3 weeks of hot and humid conditions. Temperatures emerged 4° to 6° below normal for coolest week since mid-June. Extremes: 92° Philadelphia Saturday afternoon to 33° Bradford Sunday morning for coolest in Nation. Record low temperatures for date several places 18th. Showers and thunderstorms accompanying frontal systems produced weekly rainfall of 0.50 to 1.00 inch over most of State. Only four corners of State less than 0.25 inch. Topsoil moisture short 3/4 State. Fieldwork good progress during favorable weather. Barley harvest nearing completion. Wheat harvest 25% completed. Oat harvest just started. Corn starting to tassel. Second growth alfalfa short. Hay and pastures declining. Tart cherry harvest full swing. Some early peaches expected 1 to 2 weeks. Southern corn leaf blight confirmed 18 counties, but no field to field spread.

PUERTO RICO: Rainfall averaged 0.80 inch or 0.70 inch below normal. Heavier rains and thunder-showers totaling 2.00 to 4.00 inches centered in northwestern Cordillera. Some pea-size hailstones reported in western mountains. Rest of Island totaled generally less than 0.50 inch. Crop moisture near normal except too dry some areas north and south coasts and too wet some western interior zones. Temperatures averaged 80° on coast and 75° interior with average departure of about 0.4° below normal. Highest maximum 95°, lowest minimum 58°. Young sugarcane and ratoons developing well all zones. Coffee plantations report good weather for cultivating and other field operations, except some delay northwest due locally heavy rains. Pastures generally good to excellent. Minor crops active seeding and cultivating.

SOUTH CAROLINA: Temperatures were about normal for week, ranging from the mid-60's to mid 90's. Heavy showers, widely scattered, but some rain fell in all areas. Divisional averages ranged from 0.50 inch in northeast and north-central to 1.25 inches in the west-central and south. Soil moisture adequate practically all areas, excessive portions Coastal Plains. Tobacco 29% harvested. Condition good to excellent. Good color and thickness cured leaves. Cotton mostly good, 92% squaring, 49% setting bolls. Condition corn good to excellent, 90% silk stage, 50% dough stage, 4% matured. Soybean plants good to excellent. Peanuts good to excellent. Peaches mostly good about 41% harvested. Apples, grapes good. Small grain harvest virtually complete, except small acreage wheat Piedmont. Hay crops, pastures good to excellent. Vegetable crops good. Watermelons fair to good. Harvest about 45% complete. Southern corn leaf blight intensifying its damage to susceptible varieties, primarily Pee Dee area. Possibility serious losses due late planting these varieties.

SOUTH DAKOTA: Weekly temperatures averaged up to 6° below normal. Extremes ranged from 42° at Ralph on 13th to 100° at Philip and Kennebec on 16th. Precipitation fell as light showers mostly end of week with amounts generally from a trace to about 0.30 inch. Harvesting small grains advanced under generally favorable weather and well ahead normal. Approximately 38% winter wheat and 27% winter rye already cut. Harvesting spring-seeded small grains well underway. Hail damage reported particularly northwest area. Topsoil moisture shortages throughout western, central, south-central and extreme southeast

corner State. Soybean blooming well advanced. Corn growth and development rapid. Many fields tasseling and silking. No new Southern corn leaf blight development. First brood corn borers are in stock and definite problem southeast. Pastures need moisture, but generally good for this time of year. Livestock good, but flies and mosquitoes prevalent.

TENNESSEE: Partly cloudy hot days, mostly fair warm nights. Temperatures averaged 2° to 3° above normal west and generally 1° to 2° below normal elsewhere. Rainfall highly variable on 3 to 5 days most places. Heaviest amounts in parts of northwest and mountains with some totals over 3.00 inches. Scattered hail. Scattered showers interrupted farm work. Soybean cultivation dominated farm activity. Small grain harvest almost complete. Excess moisture restricted harvest some areas. Soybeans growing rapidly. About 25% blooming and 5% setting pods. Corn excellent. About 75% silked and 18% dough stage. Southern corn leaf blight identified across State and weather ideal for spread of fungus. Impossible to estimate potential damage. Cotton 70% squaring and 35% setting bolls, same as last year. Second cutting alfalfa 90% harvested. Pasture conditions fair. Days favorable for fieldwork averaged 4.2. Soil moisture 60% adequate, 29% short, and 11% surplus.

TEXAS: Except for a few isolated showers, hot dry weather continued throughout the State. Stockmen cull herds and increase feeding as drought dominates weather. Farmers irrigating full scale High Plains. Harvest cotton and sorghum delayed Lower Rio Grande Valley rains. Sorghum harvest moving northward to Blacklands. Yields low. Peanuts making good progress, but insect damage increasing. Rice harvest underway. Harvest major crops; corn 1%, 4% last year; sorghum 10%, 5% last year; rice 1%, 0% last year. High Plains onion harvest full swing with supplies peak volume. Trans-Pecos onion harvest also active. High Plains potato digging active with shipments increasing. Cabbage, cucumber harvest underway High Plains. Pecos cantaloupe harvest increasing with North Texas also harvesting. Watermelon harvest past peak south-central counties, but active East Texas. Shipments below last year because drought. South Texas preparing land for fall winter vegetables with seeding fall crops beginning. Peach harvest continues all areas with supplies substantially below last year. Pecan prospects poor to fair.

UTAH: Few isolated thunderstorms principally southern mountains. Accumulated moisture light to moderate. Temperatures continued warm ranging from near normal to 7° above normal. Soil moisture deficit serious many ranges. Cattle and sheep have enough feed high summer ranges, but water being hauled to them by some central and southern ranchers. Mid-summer finds Utah farmers busy with apricot and sweet cherry picking, putting up hay, starting winter wheat harvest, and irrigating. Last week's high temperatures hastened crop maturity. Irrigation water supply to end of season from reservoir storage and wells adequate. From streamflow, supply will exhaust before crops mature many central and southern areas.

VIRGINIA: Temperatures mainly normal to below normal. Scattered showers and thundershowers mostly during second half. Soil moisture mostly short to adequate. Corn prospects declined. Southern corn leaf blight spreading, soil mois-

ture shortage some areas. Fungicide spraying active. Corn acreage 40% silked. Wheat harvest 3/4 complete, yields good. Early harvest flue-cured tobacco began few areas. Potato movement ahead last year on eastern shore.

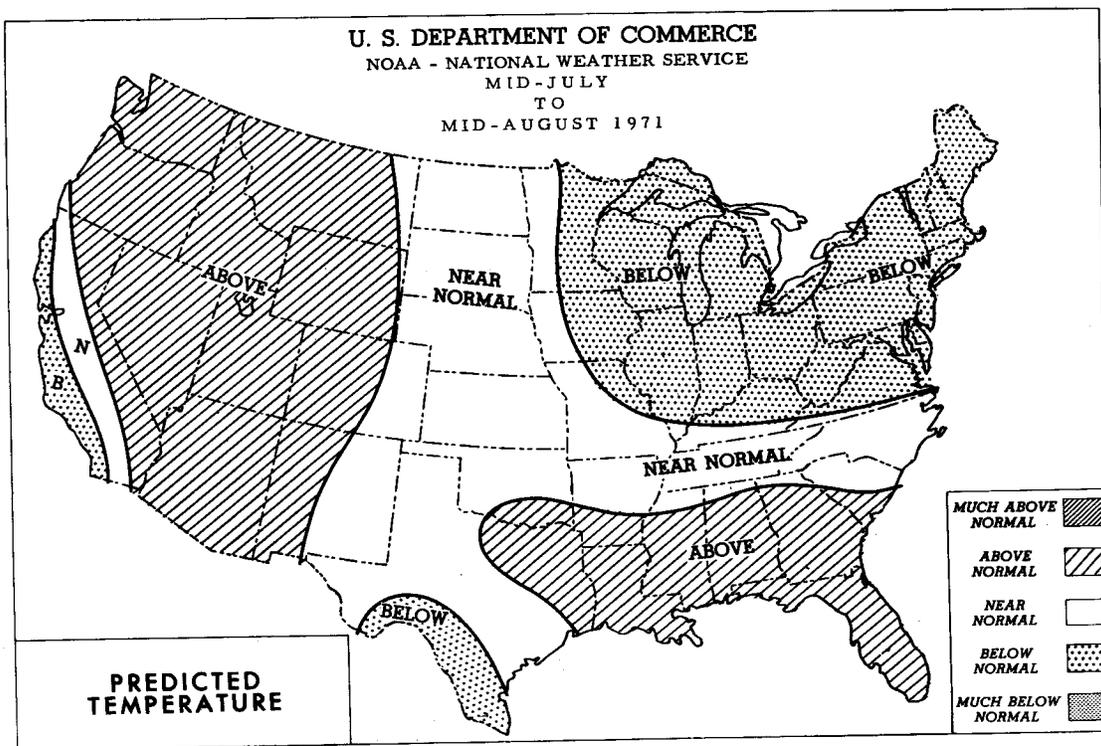
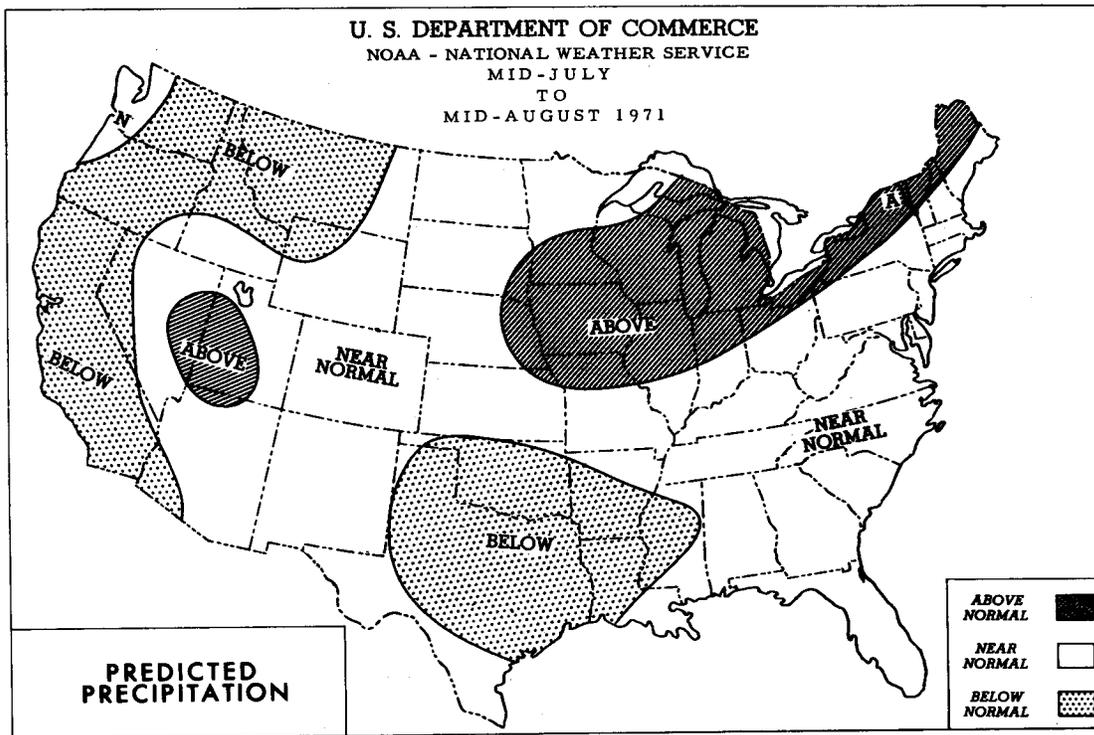
WASHINGTON: Western Washington: Cloudy with rain first 2 days then clearing and sunny with gradual warming to near normal temperatures by end of week. Precipitation amounts quite heavy in coastal and mountain foothills. Improving conditions accelerated harvesting peas and broccoli. Corn and cucumbers doing well in warmer weather. Strawberries about completed and raspberry and cherry harvests full swing. Blueberries and early blackberries beginning. Hay harvest full swing with yields good, but some hay overripe. Eastern Washington: Cloudy with rain first day. Mostly sunny with gradual warming to normal temperatures by end of week. Most precipitation in extreme east. Warmer weather enhanced ripening grains and favorable for row crops. Wheat harvest getting early start some areas. Digging early potatoes started. Green pea harvest 70% completed. Haying full swing with good crop. Apricot picking continuing and some early peach picking started Yakima Valley.

WEST VIRGINIA: Temperatures averaged several degrees below normal, especially in mountainous North-Central and Northeast, mostly with nights 50° with fair skies during the mid-period. The 90's occurred mostly in Southwest. Substantial rains over most of State mostly at beginning and end of period with some heavy rains in Southwest Sunday, lesser amounts occurred in the North-central Mountains. Crop growth stimulated hot weather. Soil moisture 45% short, 50% adequate and 5% surplus. Weekend rains relieved dry pockets some sections. Fieldwork possible 5 days. Barley harvest 75% complete. Wheat 50% in. First cutting hay hampered wet weather, 90% harvested, 2d cutting hay started some areas.

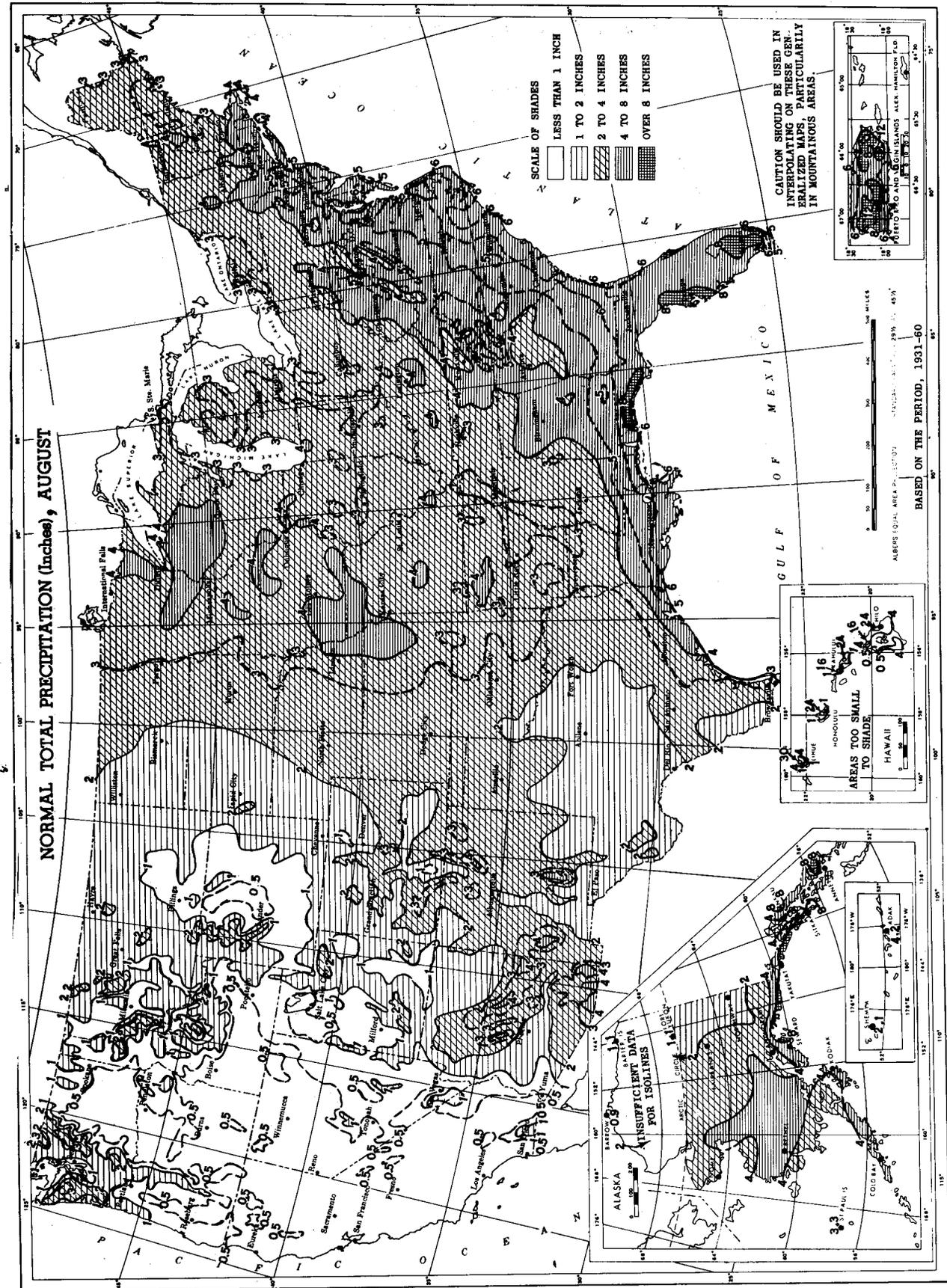
WISCONSIN: Cool weather during most of week with frequent showers. Heavy rains locally with thunderstorms Sunday. Also some wind and tornado damage in several areas with several injuries and at least 1 fatality. Crops mostly doing very well. Corn showing excellent development. Average height 4 1/2 feet. Many fields tasseled out and in silk. Some insect problems. Spraying for corn borer. No significant change distribution and intensity Southern corn leaf blight. Disease confirmed 37 counties. Oats combining getting underway. Short straw south-east half. Lodging generally problem. Second crop haying about 10% done. Growth 2d crop short east. Pasture conditions mostly fair to poor east half, good west. Soybeans doing real good. Cherry picking getting started Door County. Some damage fruit trees that area from severe thunderstorms early week. Soil moisture 65% adequate, 30% short and 5% surplus.

WYOMING: Generally fair, warm weather with a few widely-scattered light showers. Temperatures averaged near normal. Maxima were mostly 85° to 95° west of Divide, 90° to 100° east. Minima were mostly 35° to 45° west of Divide, 40's to low 50's east. Temperature extremes: 101° at Basin and 25° at Foxpark and Bondurant. Main agricultural activities irrigating and haying. Spring wheat 90%, barley 80% and oats 75% headed. Winter wheat development: milk 10%, soft dough 40% and hard dough 50%. First cutting alfalfa 80% in. Other tame hays 55% and wild hay 10%. Condition row crops fair to good.

AVERAGE MONTHLY WEATHER OUTLOOK



The above prognostic charts show the expected categories of average temperature and total precipitation for the period indicated. They were extracted from the Extended Forecast Division's publication "Average Monthly Weather Outlook" which contains additional information necessary for complete interpretation.

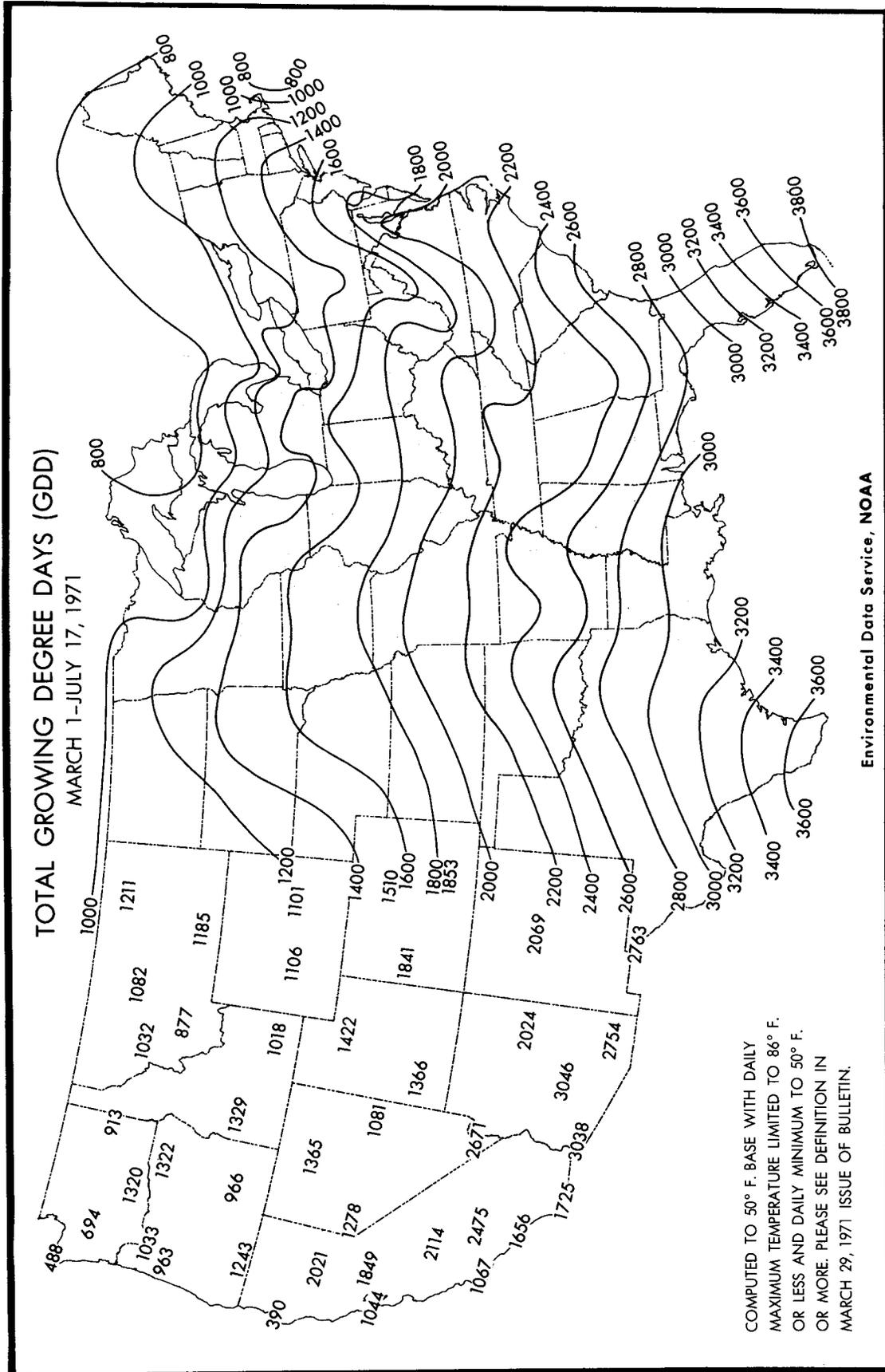


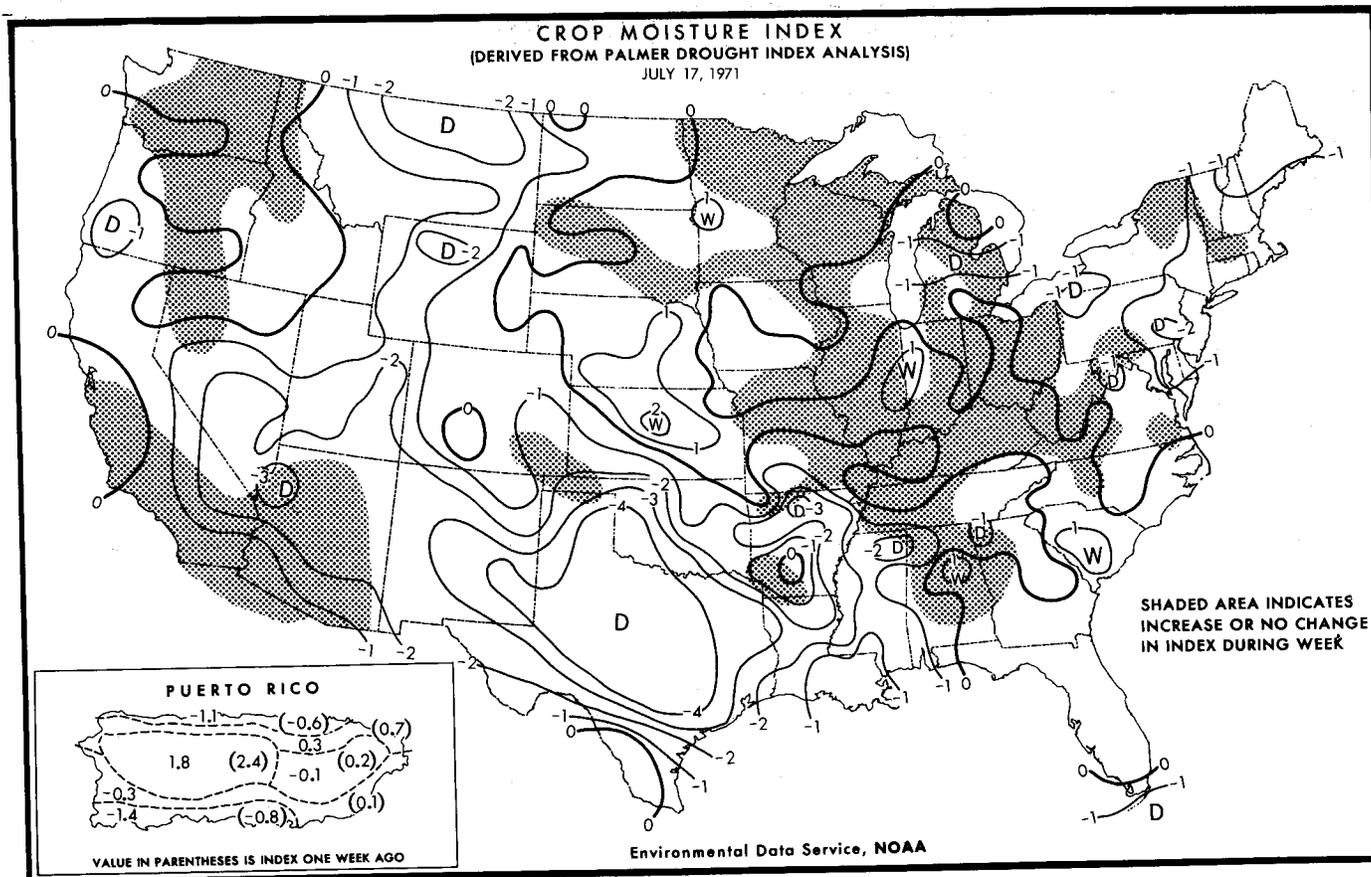
CORN BLIGHT WEATHER STILL VARIABLE

Preliminary output from a Southern corn leaf blight simulator program indicates that by June 15 the northern part of the Corn Belt had not experienced sufficiently wetter weather to support rapid spreading of the fungus. As reported here last week, central Indiana appears to remain favorable for some greater prevalence of the disease.

Repeating last week's cautionary note, we are applying an experimental weather evaluation scheme. The current week's results still show some evidence of computer program "bugs" and the reader should refer to official reports of actual blight occurrences for guidance in all decisions concerning the present corn crop. If results of this research effort warrant, further reports will be published in succeeding issues of the Bulletin.

Gerald L. Barger





INDEX DECREASED DURING WEEK
(Unshaded Areas)

INDEX INCREASED OR DID NOT CHANGE DURING WEEK
(Shaded areas)

INDEX

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

INDEX

- 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 NORMAL 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 EXCEPTIONALLY DRY.

The map above is based on weekly areal mean values of temperature and precipitation for 350 climatological divisions. Weather during previous weeks has been taken into account through successive weekly computations of both topsoil and subsoil moisture. The map shows recent crop moisture conditions; i.e., areas in which crops have been hindered by abnormal dryness or wetness, and areas where moisture conditions have been favorable.

This is a generalized picture; local variations caused by the occurrence or absence of heavy rain or by soil differences are not shown. Shallow rooted crops and crops in areas with poor soils are likely, on occasion, to suffer more than indicated. Conditions may be better than shown in areas having exceptionally good soils.

The legend applies primarily to growing rather than matured vegetation. Interpretation of the

effects on crops and native vegetation must, therefore, take account of the stage of growth as well as the status and trend of moisture conditions. The trend is indicated by the shading which denotes areas where the index did not decrease below its value of a week previous; i.e., conditions did not become noticeably drier during the week. A trend toward drier occurred in the unshaded regions. The lines show the crop moisture situation according to the computed index values which may be interpreted using the legends above. One legend applies to the unshaded areas, the other to the shaded. Centers of relative maximum and minimum index values are marked for easier recognition - W for wet and D for dry. In irrigated regions the index values merely reflect departures from ordinary irrigation requirements.



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Questions, comments, and suggestions concerning the content are desired; please send to the Editor at the above address.

ADIEU

Came to town two years ago,
Liked the job, missed the snow.

Studied screwworms, dew, and blight,
Took an hour and a half to get home at night.

Made many friends and learned a lot,
In the summer here it's too durned hot.

To Pennsylvania now I go,
Au revoir to friend and foe.

J. J. Rahn