

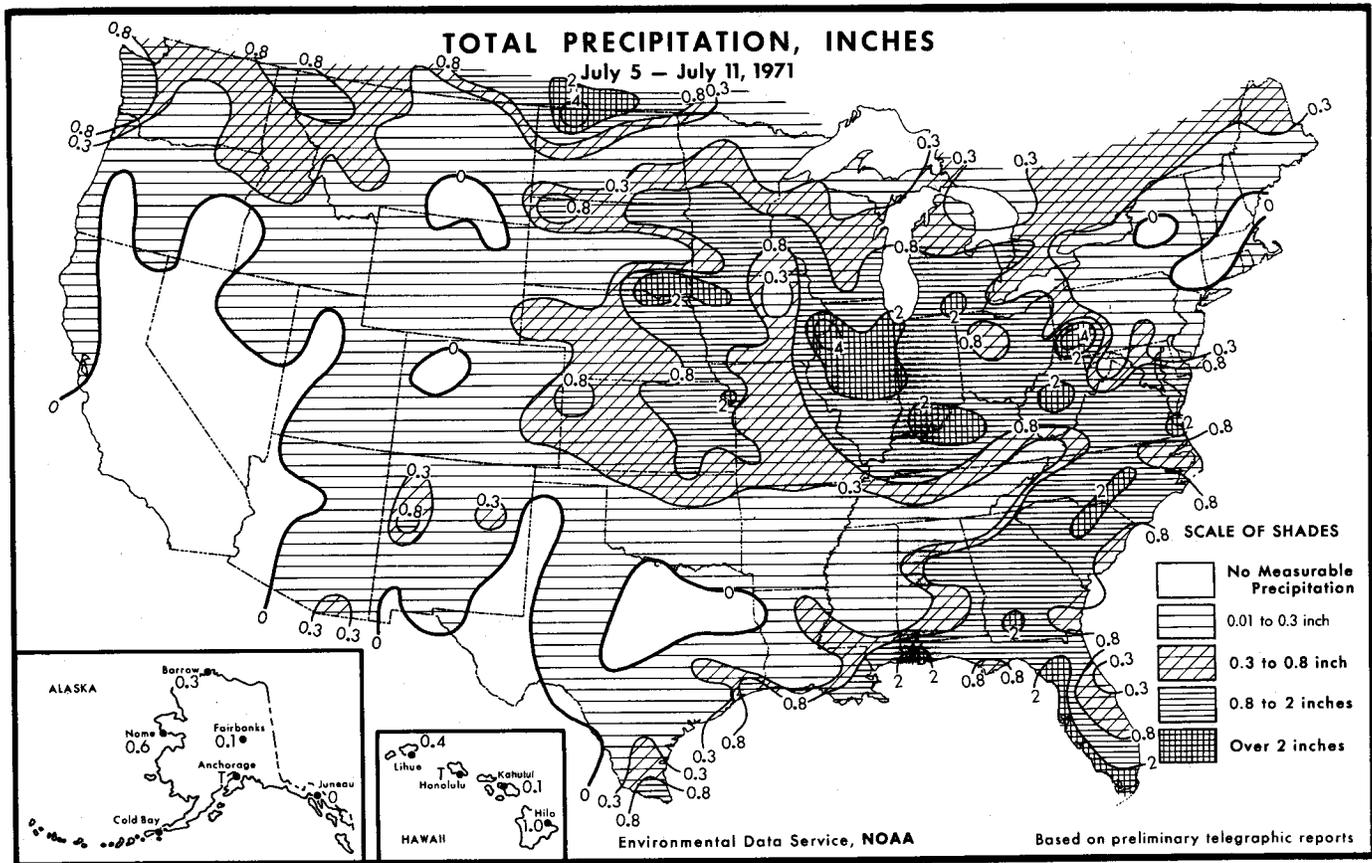
Weekly Weather & Crop Bulletin

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Edited by Lucius W. Dye

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NATIONAL WEATHER SUMMARY

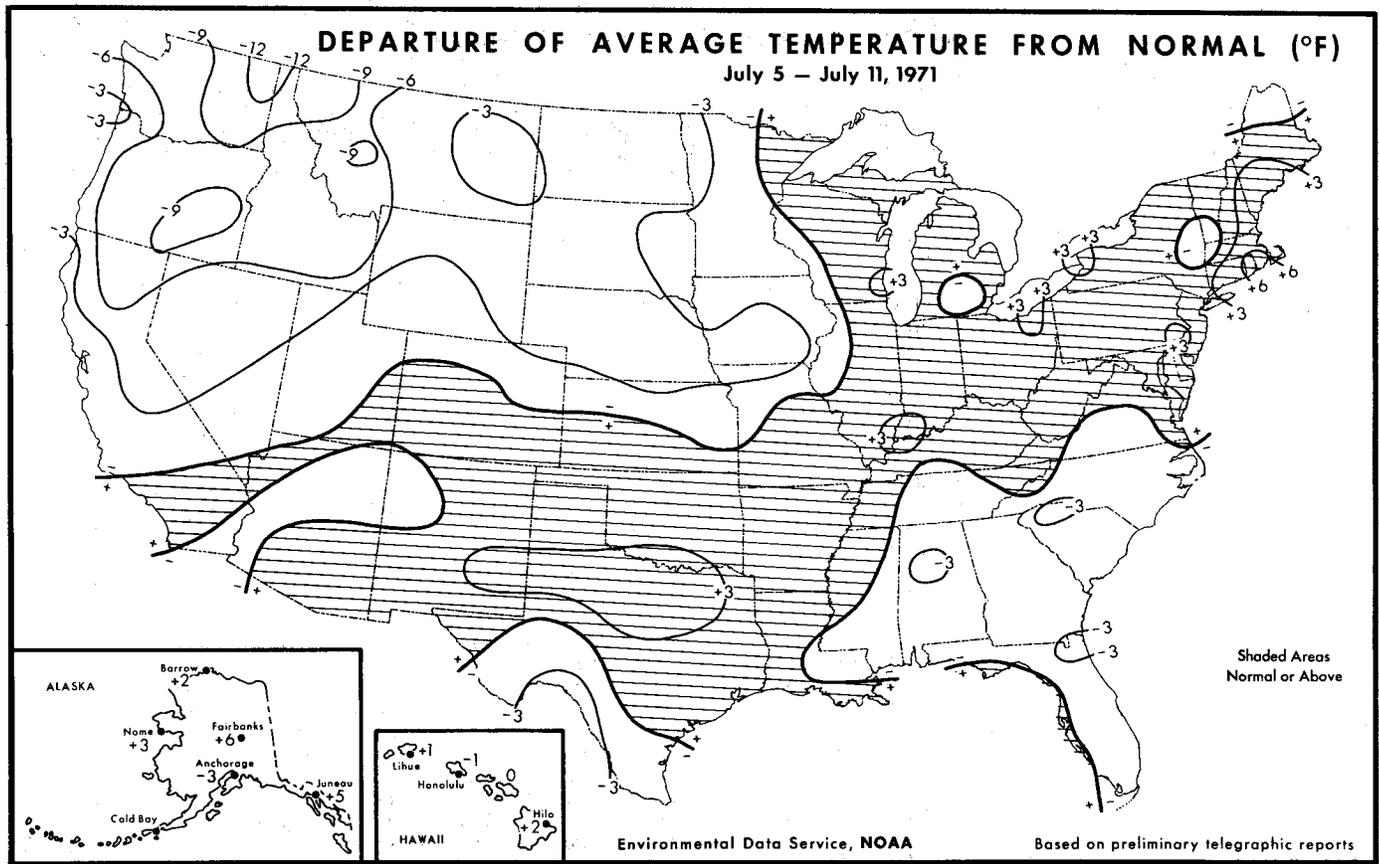
HIGHLIGHTS: Summer heat and summer-type precipitation persisted over most of the Nation.

PRECIPITATION: Typical nocturnal thunderstorms occurred from the central Great Plains to the Great Lakes early Monday morning July 5. One vigorous storm whipped Salina, Kans., with winds gusting to 60 m.p.h. and hail up to 1 inch in diameter. Two to 4.00 inches of rain caused minor flooding in eastern Kansas. One to 4.00 inches of rain fell in some vicinities in eastern Illinois. Seven inches of snow fell at Stampede Pass, Wash., from Monday night to Tuesday forenoon. This is the most snow ever to have fallen in July at Stampede Pass. Paradise Inn at 5550 feet elevation on the south side of Mt. Ranier, Wash., received 3 inches of snow early Tuesday. The depth at 9 a.m., m.d.t., was 132 inches. Never before has an 11-foot depth measurement occurred at Paradise

Inn so early in the season. Snow that falls July 1 or later is not counted in the 1970-71 season. The 1971-1972 season begins July 1.

A light sprinkle occurred at Phoenix, Ariz., Tuesday afternoon. Measurable rain has not occurred at Phoenix in the last 88 days. In 1960, Phoenix received no measurable precipitation for 143 days from March 2 to July 22. Twice have 88-day periods passed without a sprinkle at Phoenix; October 17, 1917 to January 12, 1918, and April 10 to July 6, 1945.

A tornado injured several persons on a farm near Minot, N. Dak., Tuesday. The storm produced 3.89 inches of rain. Other tornadoes and severe thunderstorms occurred at scattered locations in North Dakota Tuesday. Light to moderate showers fell Tuesday and Wednesday from the central Rocky Mountains to Wisconsin; also from southeastern Texas northeastward to West Virginia and



Maryland. A station east of Nashville, Tenn., measured 4.30 inches Wednesday morning, this amount had fallen in the previous 24 hours. Totals exceeded 1.00 inch at scattered stations from Georgia to Virginia. Two of the largest weekly totals are 5.20 inches at Moline, Ill., and 4.56 inches at Pittsburgh, Pa.

TEMPERATURE: Typical summer weather prevailed over most of the Nation last week. Warm humid Gulf air covered the eastern half of the Country and desert heat lay over the Far Southwest. Boston, Mass., registered 90° Tuesday and Wednesday afternoons. Temperatures exceeded 100° at numerous Texas stations on several consecutive afternoons. Wichita Falls, Texas, recorded 108° Tuesday. By Wednesday the 100° heat covered western Kansas reaching 105° at Hill City. Blythe, Calif., with afternoon temperatures

averaging 111° was one of the hottest places in the Nation. Some cooling occurred over the northern Great Plains at midweek and temperatures remained mostly in the 70's Wednesday afternoon.

Early morning temperatures ranged from the 40's and 50's over the northern Great Plains to the upper 70's in much of central and eastern Texas. The mercury dropped to 31° at Kalispell and Missoula Wednesday morning. A high centered over the Prairie Provinces of Canada brought cooler weather to the Northeast Sunday. Harrisburg registered 89° Saturday but no higher than 60° Sunday afternoon.

Temperatures averaged below normal over the Northwest, North-central, and Southeast and warmer than normal over the Southwest, South-central, and Northeast.

L. W. Dye

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Heavy Corn Belt rains enhanced corn and soybean prospects. * Wheat harvest finishing in Kansas. * Rains aided Michigan vegetables. * Pastures drying in the West.

SMALL GRAINS: Wheat combining neared the home-ward drive in Kansas, as 93 percent of the crop is combined. The only sizeable acreage remaining to be cut is in northwest Kansas. Combining did not fare so well in Nebraska and Colorado as repeated showers and high humidity halted activity. For the second week strong winds and hail damaged crops in Nebraska. Heavy rains combined with hail to cause lodging in many South Dakota grain fields. Harvesting did get underway in the Dakota's and should expand rapidly by next week.

Grain crops are ripening in the Pacific Northwest. Wheat harvest is 2 weeks late in Washington, but did get started in a few early areas. Barley combining also began in Oregon. Montana's winter wheat crop is ripening, with streak mosaic generally light. Cutting of the Utah and Nevada grain crops are off to a slow start, with New Mexico entering the final stages of harvest.

Wheat combining made only fair progress between rains in the southern Corn Belt. Harvesting started in Michigan, while the crop is ripening fast in Wisconsin and Minnesota. Wisconsin straw is short. Grain combining is complete in the South.

CORN: Good rains benefitted the 1971 Corn Belt crop. Rains were extremely heavy in local areas of Illinois, Iowa and Missouri. Up to 7 inches fell in scattered areas. For the eastern Corn Belt, where moisture was becoming scarce, the moisture was well received. Silking has started. The Wisconsin crop is shaping up as one of the best in years, with 98 percent of the Iowa crop also in good to excellent condition. The corn borer infestation is still heavy in South Dakota and Nebraska with spraying underway for control.

Corn continued to make rapid growth in the South. Tasseling is widespread and ears starting to fill in southern Louisiana. Dry weather slowed silage corn growth in New England.

Severity of Southern corn leaf blight remains low. However, infection increasing on T-cytoplasm corn in the South. Weather conditions favored spread of the disease in the Corn Belt, but overall severity remains light.

SOYBEANS: Good rains covered most of the major soybean growing States during the week. Prospects continue to look bright for this year's crop. Most of the Nation's acreage is in good to excellent shape. Blooming has started, with some Iowa acreage starting to form pods. Height of this year's plants is well above normal. Planting of soybeans following small grain harvest is nearly finished in the warmer areas of the country.

COTTON: Picking started on a limited scale in Texas, but will increase if high temperatures prevail. Large boll weevil and bollworm infestations have necessitated spraying from the Blacklands southward. Crop progress of Oklahoma cotton is sharply behind 1970. Moving to the South; cotton had another good week of growing weather and responded nicely. About 3/4 of the crop is squaring, with 64% of the acreage setting

bolts in Georgia. Insect populations are increasing in Arkansas and Georgia. Warm weather aided growth in California and Arizona.

OTHER CROPS: Harvest of the 1971 sorghum crop has started in Texas. However, there is a heavy infestation of greenbugs in the Low Plains. Heading started in Kansas. Irrigated acreage in the Oklahoma Panhandle is in excellent shape. Good rains continue to aid the crop on the Central Plains. Heavy showers slowed haying in the South, with Georgia farmers losing a large acreage of cut hay. Heavy downpours also halted haymaking in the North Central States. Haying was widespread in the West, but Texas yields are poor. Peanut prospects continue bright throughout the South, but development lags behind last year. The Maine potato crop is developing nicely. Digging is active on Virginia's Eastern Shore, with movement strong. Digging also increased on the Texas High Plains. Due to the drought sweetpotato conditions are poor in northeast Texas. Rice harvest got underway in Texas, while the Louisiana crop is heading. After a slow start tobacco growth is improving in the major growing States. Harvest started in the Connecticut Valley.

Fruits and Nuts: Early week rains slowed peach harvesting in the South, but good headway was made once the skies cleared. Slightly over half the Georgia crop is picked. The cherry crop is ripening in Door County, Wisconsin; with picking of tart cherries off to a fast start in Michigan, New York, and Pennsylvania. The blueberry crop in New England is ready for picking. The western New York grape crop is developing normally. Texas pecan crop prospects are only poor to fair, while the Oklahoma crop has a good set. Good weather aided fruit and nut growth in California. Picking of freestone peaches increased, and clingstone harvest got underway at Bakersfield.

Vegetables: Soaking rains brightened the vegetable outlook in previously dry Michigan areas. However, little rain fell in New England and irrigation remained heavy. Dry weather is slowing New York onion growth. Supplies of sweet corn, tomatoes and onions are also increasing from New Jersey. Harvest continued in the South, but early week volume was low due to frequent rains. Vegetables on the Texas High Plains are making good progress, with onion pulling gaining momentum. Onion harvest also continued in New Mexico. California tomato picking expanded into new areas, with picking of canning tomatoes underway at Blythe. Frost damaged vegetable crops in Washington's Columbia Basin and peas in northern Idaho.

PASTURES AND LIVESTOCK: Pastures are supplying excellent grazing in the South and northern Great Plains. But, dry conditions are hurting livestock producers in the Northeast as pastures are turning brown. Western cattlemen are also feeling the effects of dry weather on ranges, plus many ranchers continue culling their herds in Texas and the Southwest. Coyotes are inflicting high kills on some Nevada sheep herds. Many herds are still bothered by flies across the Nation, with pinkeye evident in many South Dakota and Kansas herds.

Steve Pscodna
Agricultural Statistician

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., July 11, 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 . . .	79	-3	1.6	+4	New Orleans . . .	81	0	1.2	-3	OKLA. Okla. City . . .	84	+2	T	-6
Mobile	82	-1	2.0	0	Shreveport	85	+1	0	-9	Tulsa	84	+2	.4	-3
Montgomery	80	-1	.3	-1.0	MAINE. Caribou . . .	62	-2	.5	-4	OREG. Astoria	57	-3	1.5	+1.2
ALASKA. Anchorage .	60	+3	T	-4	Portland	71	+4	0	-7	Burns	58	-11	.1	0
Barrow	41	+2	.3	+2	MD. Baltimore	78	+1	.1	-8	Medford	64	-7	0	-1
Fairbanks	66	+6	.1	-3	MASS. Boston	78	+5	.1	-6	Pendleton	65	-8	.3	+2
Juneau	60	+5	0	-1.0	Nantucket	70	-	T	-	Portland	62	-5	.2	+1
None	52	+3	.6	+2	MICH. Alpena	67	-	T	-7	Salem	60	-6	T	-1
ARIZ. Flagstaff . . .	64	-2	0	-4	Detroit	75	0	.4	-3	PA. Allentown	74	0	.1	-9
Phoenix	94	+4	T	-2	Flint	72	+2	1.0	+4	Erie	71	0	.1	-7
Tucson	89	+2	T	-4	Grand Rapids	73	+1	1.4	+7	Harrisburg	77	+1	.6	-7
Winslow	78	-2	.2	0	Houghton Lake	69	+2	.3	-4	Philadelphia	79	+3	.1	-8
Yuma	91	-2	0	0	Lansing	71	-1	2.0	+1.4	Pittsburgh	73	+3	4.6	+3.7
ARK. Fort Smith . . .	83	0	T	-6	Marquette	68	+2	T	-8	Scranton	72	0	T	-1.1
Little Rock	82	0	T	-8	Muskegon	72	+1	1.1	+5	R.I. Providence	78	+6	T	-7
CALIF. Bakersfield . .	82	-2	0	0	S. Ste. Marie	63	-1	.3	-3	S.C. Charleston	80	-1	.6	-9
Eureka	55	-1	.2	+2	MINN. Duluth	65	+1	.1	-7	Columbia	80	-2	2.1	+8
Fresno	78	-3	0	0	Internat'l Falls	65	0	.2	-6	Greenville	77	-3	1.5	+5
Los Angeles	73	+1	0	0	Minneapolis	---	---	---	---	S. DAK. Aberdeen	70	-3	1.8	+1.2
Red Bluff	78	-6	0	0	Rochester	68	-2	.8	-1	Huron	72	-3	T	-4
San Diego	70	0	0	0	St. Cloud	69	-2	1.2	+4	Rapid City	70	-3	T	-5
San Francisco	60	-2	T	0	MISS. Jackson	82	0	0	-1.1	Sioux Falls	72	-2	2.5	+1.8
Stockton	75	-3	0	0	Meridian	81	-1	T	-1.4	TENN. Chattanooga	79	-2	T	-1.2
COLO. Denver	73	0	T	-4	MO. Columbia	79	+1	.4	-4	Knoxville	78	0	.3	-7
Grand Junction	79	+1	T	-1	Kansas City	79	-2	1.5	+6	Memphis	84	+2	.1	-7
Pueblo	79	+2	.1	-3	St. Louis	80	+2	1.0	+1	Nashville	80	-1	.4	-4
CONN. Bridgeport . . .	76	+3	T	-8	Springfield	80	+1	.8	-2	TEX. Abilene	87	+4	0	-6
Hartford	76	+4	0	-8	MONT. Billings	69	-5	0	-3	Amarillo	83	+2	0	-6
D.C. Washington	79	+1	1.3	+4	Glasgow	70	-1	T	-3	Austin	86	+1	T	-6
FLA. Apalachicola . . .	82	+1	.6	-1.1	Great Falls	65	-4	.1	-2	Beaumont	82	0	1.2	-1
Ft. Myers	82	0	2.7	+6	Havre	64	-5	.3	0	Brownsville	82	-2	1.0	+6
Jacksonville	80	-3	1.0	-8	Helena	59	-9	.5	+3	Corpus Christi	83	-1	T	-6
Key West	83	0	2.3	+1.4	Kalispell	56	-10	.9	+6	Dallas	90	+5	0	-5
Lakeland	81	0	.4	-1.7	Miles City	74	-1	T	-3	Del Rio	82	-4	T	-3
Miami	81	-1	2.6	+1.0	Missoula	60	-7	.4	+2	El Paso	84	+2	T	-2
Orlando	82	-1	.7	-1.2	NEBR. Grand Island . . .	74	-3	.8	+2	Fort Worth	88	+2	0	-4
Tallahassee	80	-2	1.3	-5	Lincoln	78	-2	1.4	+ .6	Galveston	83	0	.5	-6
Tampa	82	0	2.4	+5	Norfolk	72	-5	1.9	+1.2	Houston	84	+2	.1	-9
GA. Atlanta	77	-2	1.9	+8	North Platte	71	-5	.5	-1	Lubbock	84	+4	.1	-4
Augusta	80	-1	1.5	+5	Omaha	74	-3	.9	+1	Midland	83	0	T	-4
Macon	82	0	.8	-5	Valentine	72	-3	.2	-4	San Angelo	85	0	T	-3
Savannah	80	-1	1.1	-4	NEV. Ely	64	-3	0	-2	San Antonio	85	+1	T	-5
HAWAII. Hilo	77	+2	1.0	-1.0	Las Vegas	90	0	0	-1	Victoria	84	+1	.3	-5
Honolulu	78	-1	-.1	-.1	Reno	64	-3	0	0	Waco	89	+4	0	-5
Kahului	78	0	.1	0	Winnemucca	67	-3	0	-1	Wichita Falls	90	+4	0	-5
Lihue	79	+1	.4	0	N.H. Concord	70	+1	0	-8	UTAH. Blanding	72	0	T	-2
IDAHO. Boise	67	-8	0	-1	N.J. Atlantic City	73	-2	.8	0	Salt Lake City	75	-1	T	-1
Lewiston	66	-8	.6	+5	Trenton	77	+1	.2	-7	VT. Burlington	70	+1	.2	-7
Pocatello	64	-8	.1	-1	N.MEX. Albuquerque	79	0	.1	-2	VA. Lynchburg	76	-1	1.7	+8
ILL. Cairo	83	+1	1.7	+1.0	Roswell	83	+4	0	-4	Norfolk	80	+1	2.0	+7
Chicago	76	+1	2.6	+1.9	N.Y. Albany	71	-1	T	-8	Richmond	78	0	1.3	+1
Moline	74	-2	5.2	+4.4	Binghamton	70	+2	T	-9	Roanoke	76	-1	---	---
Peoria	76	0	3.0	+2.2	Buffalo	73	+3	.1	-5	WASH. Colville	56	-12	.8	+7
Rockford	75	+1	1.1	+2	New York	78	+1	T	-8	Omak	60	-9	.4	+3
Springfield	78	0	3.9	+3.0	Rochester	73	+2	.2	-5	Quillayute	64	+4	.8	+2
IND. Evansville	83	+4	1.2	+4	Syracuse	73	+1	0	-7	Seattle-Tacoma	58	-7	.7	+5
Fort Wayne	75	+1	1.3	+5	N.C. Asheville	74	0	1.4	+5	Spokane	58	-12	.5	+4
Indianapolis	77	+2	1.3	+5	Charlotte	76	-3	1.7	+7	Walla Walla	64	-11	.7	+6
South Bend	74	+1	.7	-1	Greensboro	76	-2	1.7	+7	Yakima	59	-12	T	-1
IOWA. Burlington	74	-3	1.4	+6	Hatteras	76	-2	.5	-7	W.VA. Beckley	72	+1	1.2	+2
Des Moines	73	-3	1.3	+5	Raleigh	77	-1	2.5	+1.3	Charleston	76	+1	2.1	+9
Dubuque	71	-1	1.2	+4	Wilmington	80	0	1.0	-8	Huntington	75	0	.9	-2
Sioux City	75	-2	1.2	+5	N.DAK. Bismarck	68	-3	.2	-4	Parkersburg	76	0	1.3	+3
KANS. Concordia	77	-3	1.2	+6	Fargo	67	-4	.7	0	WIS. Green Bay	71	+1	.8	+2
Dodge City	83	+3	.5	-1	Williston	67	-4	1.5	+1.0	La Crosse	70	-4	1.3	+5
Goodland	75	-1	1.2	+6	OHIO. Akron-Canton	76	+3	1.6	+8	Madison	71	0	.7	-2
Topeka	78	-2	1.0	+1	Cincinnati	79	+2	1.3	+4	Milwaukee	71	+3	1.8	+1.1
Wichita	82	+1	1.6	+7	Cleveland	75	+3	1.4	+6	WYO. Casper	68	-3	T	-2
KY. Lexington	77	0	3.5	+2.6	Columbus	75	0	.8	-1	Cheyenne	66	-3	.2	-3
Louisville	78	+1	2.4	+1.6	Dayton	77	+1	1.3	+4	Lander	68	-2	T	-2
LA. Baton Rouge	82	-1	.3	-5	Toledo	74	+1	1.4	+7	Sheridan	66	-5	T	-3
Lake Charles	84	+2	.2	-1.6	Youngstown	72	+2	.7	-3	P.R. San Juan	83	+3	T	-1.0

* 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: Considerable cloudiness with scattered showers through Wednesday. Mostly sunny and hot days and fair and warm nights Thursday through weekend with only a few widely scattered showers. Precipitation for week moderate to locally heavy except light or none northwest. Average temperatures warmer than usual for week. Scattered light locally heavy showers maintained generally adequate soil moisture. Local areas need rain, especially northern counties. Activities primarily clipping pastures, applying herbicides and insecticides, row crop cultivation, and haying. Cotton made good progress; about 4/5 squaring and 1/3 setting bolls. Corn made good development; almost 2/3 silk stage or later about as advanced as last year. Dew Line reports southern corn leaf blight "old strain" closed and northern corn leaf blight occurring damaging proportions on N cytoplasm hybrids several south Alabama Counties. Soybeans 95% emerged and growing good. Grass and weeds problems many fields. Peanuts developing nicely but crop continues to lag behind last year. Early summer Irish potatoes moving volume. Peach and vegetable harvest active. Haying slowed by showers.

ALASKA: Except for southern portion of Kenai Peninsula, daytime temperatures have been above normal and nighttime readings near normal. Most stations observed a warming trend during week. Only precipitation was scattered showers in central and upper Tanana Valley and southern portion of Kenai Peninsula. All amounts light. Cumulative precipitation totals for season above average only southern portion Kenai Peninsula. Soil moisture remains short Tanana Valley, mostly adequate Matanuska Valley and Kenai Peninsula. Haying operations underway with quality and yield rated fair due lack of moisture. All crops from 1 to 3 weeks behind normal. Livestock generally good, with some supplemental feeding due short pastures.

ARIZONA: Temperatures were near normal most of State. Scattered showers fell at higher elevations in eastern and southeastern sections early in week but most weekly rainfall totals were less than 0.50 inch. Cotton making good growth. Three-fourths fields Yuma area setting bolls. Fruiting, squaring continues favorably central area. Insect counts low but increasing. Sorghum making satisfactory development. Safflower just underway Yuma. Sugar beet harvest nearing completion. Cantaloupe harvest nearing completion Yuma area. Watermelon harvest slowing. Harvest cantaloupes, watermelons past peak central. Weather conditions continue favorable for grapes with harvesting near completion. Ranges continue to supply less than adequate amounts feed. Extensive supplemental feeding, water hauling continue.

ARKANSAS: Warm and humid weather with isolated afternoon showers continued. Weekly temperatures from upper 70's to mid-80's ranging near normal. Daily extremes: 63° to 103°. Shower totals mostly well below 1.00 inch with many sections no measurable amount central and south. Northwest locations over an inch with 3.56 inches at Fayetteville. Crop growth good where moisture adequate. Soil moisture adequate central and eastern delta and south-central uplands. Mostly short rest of State. Cotton good growth. Most

fields squaring, blooming general. Insects increasing. Rice good to excellent growth. Soybean planting following small grains nearing completion. Early beans developing well. Corn and sorghums mostly good growth. Corn tasseling to roasting ear size. Sorghums heading earlier acreage. No Southern corn leaf blight identified. Combining wheat and oats completed, except northwest. Fruit and vegetable harvest active. Peaches mid-season varieties. Tomatoes at peak. Watermelon volume increasing, also squash and cucumbers. Cattle good, but gains slowing where pastures short.

CALIFORNIA: Average temperatures 2° to 4° below normal most areas, 6° below normal northeastern interior basin. Warmer days central, south coast, low deserts over weekend. Light precipitation Eureka area, northward 9th. Warm weather aided growth, maturity field crops. Cotton forming squares late areas, blooms and bolls southern areas. Digging sugar beets started San Joaquin Valley. Favorable weather aided growth fruit and nut crops. Harvest apricots nearing completion Winters area. Harvest freestone peaches increasing. Picking clingstones underway Bakersfield. Nectarine harvest continues; good fruit quality and size. Harvest plums continues; grade-out heavy from orchards hit by hail. Prunes and pears developing normally. Grape crop looks good, good yields anticipated. Almonds making good progress. Good walnut crop expected. Picking summer grapefruit increasing. Lemon and Valencia orange harvest continues. Lower range dry. Higher range very good. Sheep moving to barley and wheat stubble. Turkeys moving to market. Broccoli-cauliflower light Salinas and Santa Maria. Cantaloupe harvest at peak Kern. Carrots active Salinas-King City and Santa Maria. Celery increased Salinas, steady Oceano-Santa Maria. Sweet corn increasing Kern, Brentwood, and South Coast. Cucumber harvest active south and upper San Joaquin Valley. Green pepper harvest started Merced. Lettuce steady Salinas and Santa Maria. Direct seeded onion harvest active Stockton. Potatoes slow Kern District. Market tomatoes active San Diego, Visalia and Merced. Canning tomato harvest started Blythe. Watermelons started Kern District.

COLORADO: Temperatures variable mostly near normal, warmer over weekend. General scattered thundershowers. Some severe storms extreme east with local heavy rain, hail, and wind. Precipitation mostly light other areas. Condition all crops improved. Topsoil moisture still short most areas. Wheat harvest slowed by scattered showers and high humidity. Main harvest east central portion. Wheat 72% ripe, 30% harvested. Corn 70% laid by. Tasseling just beginning southeast. First cutting alfalfa complete except west; 2d cutting east slope. Harvest spinach continuing all areas. Lettuce cutting should begin coming week San Luis Valley. Harvest onions started. Fruit crops good.

FLORIDA: Temperatures again averaged 2° to 3° below normal as widespread thunderstorm activity continues over Florida. Rainfall averaged 1.50 inches to 2.50 inches most sections except 1.00 inch north-central section. Highest weekly amounts,

5.11 inches Smith Creek and 4.53 inches Glen St. Mary. Heavier thunderstorms occasionally accompanied by hail and several isolated tornadoes. Thunderstorm activity more frequent early in week. Condition field crops generally good. Harvest shade tobacco about complete and flue-cured well along. Adequate moisture and warm temperatures have caused rapid growth grasses. Pastures and livestock good. Citrus trees continue excellent. Fruit growing well. Late bloom light but some shedding in crop adjustment period. Watermelon harvest nearly complete north and west. Summer vegetables including butterbeans, eggplant, okra, southern peas, squash available local markets. Land preparation for seeding fall crops active.

GEORGIA: Daily showers and thundershowers continued during week with measurable rain on 3 to 5 days at most places. Showers, quite heavy first half of week, with totals over 4.00 inches several places in south and from 1.00 to 3.00 inches most other areas. Some decrease in frequency and intensity of showers latter part of week. Daytime temperatures seasonally mild due to cloudiness and showers. Highs mostly in 80's and low 90's. Lows in 60's and low 70's which is about normal for mid-July. Averages ranged from normal to 2° below normal. Soil moisture mostly adequate to excessive statewide. Rains limited activity. Condition crops rates mostly good to excellent. Peaches 53% picked. Tobacco harvest late with 29% pulled. Considerable cut hay lost to rains. Insects increasing on cotton with 64% setting bolls, but none open. Peanut prospects bright with leaf spot control active. Corn conditions still best in years. Blight spreading, but limited to only T-cytoplasm corn. Pastures and cattle good to excellent. Watermelons and cantaloupes moved in volume.

HAWAII: Weather warm and dry. Favorable for growth and maturity. Heavy irrigation taking place to maintain normal growth. Sugarcane harvesting at normal pace. Pineapple peak harvest. All canneries full operation. Supplies vegetables and melons adequate despite West Coast shipping strike. Banana harvesting light, but papayas ample. Dry weather affecting some pastures Hawaii. Cattle fair to good.

IDAHO: Temperatures for the week continued to average as much as 10° below normal. Frost in some of the higher valleys. Stantley, central mountains, at 6230 feet, recorded below freezing 5 of 7 mornings with 22° recorded July 7. Precipitation less than normal except above normal locally Panhandle. Otherwise, scattered precipitation zero to 0.25 inch. Farm crops 1 to 2 weeks late due to cool wet conditions. Second cutting alfalfa just starting southern parts. Frost north Idaho nipped gardens and did some damage to peas. Green peas now 1/3 harvested. Dry field pea condition below normal. Grain crops all headed and turning. Potatoes generally closing rows south, still being cultivated east. Grasshoppers showing up on field fringes near desert areas. Irrigation heavy, water supply abundant.

ILLINOIS: Heavy thundershowers. Warm and humid but cooler in north and central over weekend. Rainfall exceeded 5.00 inches at Monticello and Moline. The east district averaged 3.00 inches. The northwest and southwest had only 3.00 inches. Temperatures exceeded 90° early in week but later daily highs were in the 80's. Corn reported excellent by 44% respondents, good 47%, fair 8%, poor 1%. Corn 25% silked, last year 15%. Average

height 60 inches, most advanced averages 80 inches. Blight development slow, but weather conditions favor spread. Some spraying blight corn. Soybeans 35% excellent, 55% good, 9% fair, 1% poor. Oats 24% excellent, 51% good, 23% fair, 2% poor. Oats ripe 50%; combined 20%. Alfalfa hay 2d crop 45% cut. All 1st crop red clover hay cut. Pastures mostly fair to good. Soil moisture 59% short, 37% adequate, 4% surplus. Work days suitable 5 1/2.

INDIANA: Heavy thundershowers in northwest. Rainfall averaged from a few tenths inch in the east and southeast to 3.00 inches in northwest. Near normal temperatures but cooler on weekend, after warm humid weather earlier. Flash flooding from the heaviest rains and some scattered wind damage prior to cool air arrival. Days suitable fieldwork 6. Showers beneficial to sections northern part State. Topsoil moisture short to adequate, subsoil moisture short to mostly adequate. Wheat 50% combined, 35% average, but 65% last year. Barley 55% cut, rye 40%. Oats 10% harvested, equals last year. Corn 53 inches high, compared to usual 38 inches. Soybeans 15 inches high, starting to bloom, some setting pods. Alfalfa 30% harvested 2d time, about average.

IOWA: A cool wet week. Precipitation totaled mostly 1.00 to 2.00 inches, locally upward to over 7.00 inches. On the 10th, within a few hours, Cedar Rapids reported 7.00 inches (unofficial), Belle Plaine 4.70 inches of rain. Damaging winds and hail 8th from central to northeast Iowa. Small grain harvest slowed by rain with 4 days suitable. Corn borers still active. Corn condition 57% excellent, 41% good and 2% fair. Corn tasseling with over 10% of fields 75% or more silked. No significant change in Southern corn leaf blight since last week. Soybean condition 46% excellent, 51% good, 3% fair. About 35% soybean fields blooming, 10% setting pods. Over 3% winter wheat harvested. Oats 10% combined. Oats mostly good to excellent. Clover 1st cutting nearing completion. Hay and pastures mostly good to excellent. Topsoil moisture 6% short, 88% adequate and 6% surplus.

KANSAS: Continued wet eastern 1/3 with moderate to heavy rainfall. Light to moderate precipitation elsewhere. Local damaging hail northwest on 6th. Weekly mean temperatures averaged below normal north, above seasonal south. Wheat harvest near completion, except northwest corner and scattered fields elsewhere. Wheat crop 93% harvested, 97% last year. Oat harvest continued when rain permitted. Row crops benefited from rain. Sorghum acreage 2% headed. Corn 32% tasseled, 34% last year. Some hybrid corn detasseled. Southern corn leaf blight reported 28 eastern counties; mostly light infection with humid weather conducive to spread. Alfalfa 78% 2d cutting harvested, 80% year ago, average 72%. Sugar beets growing well, some abandonment northwest. Some soybeans and sorghums planted after wheat. Soybeans 7% setting pods, same year ago. Grasshopper infestation building up, damage light. Livestock doing well, still bothered by flies and pinkeye. Pastures improved by rain. Heat caused few deaths swine.

KENTUCKY: Sunny, hot, and humid with scattered thundershowers most days. Temperature averaged about seasonable for week most sections but 2° to 5° above normal in north from about Henderson to Covington. Rainfall spotty, from light to locally heavy, weekly total from 0.14 inch to about 4.00

inches. Flash flooding at Campton, Wolfe County, in east on 6th; no injuries, but water in some 35 to 50 houses. Local wind damage in Bluegrass on 10th. Possible tornadoes in Boyd County in north-east on 11th, no injuries, some minor damage. Soil moisture supplies generally adequate, with topsoil shortages western areas. Slightly over 5 days favorable fieldwork between scattered showers. Crop vegetative growth rapid. Over 40% corn tasseling, compared 30% year ago. Soybeans average 13 inches tall, some still being planted after small grain harvest. Stands early beans good. Tobacco continues uneven, but growth improving. Nearly 40% acreage still 12 inches or less, 10 days later than last year. Also root rot and black shank reported. Alfalfa 2d cutting 70% complete. Early peach harvest underway -- good crop. Pastures excellent.

LOUISIANA: Warm and humid with daily scattered showers and thundershowers. Temperatures averaged 1° to 2° above normal west and normal to 1° below normal east. Temperature extremes: 100° Shreveport Monday and Tuesday and Cotton valley Tuesday, 67° Leesville Tuesday and Ruston Wednesday. Weekly rain totals highly variable. None to more than 2.00 inches north, locally less than 0.20 to more than 2.50 inches central and south. Greatest 1-day totals reported, 1.50 inches New Iberia and 1.32 Winnfield, both measured Friday morning. Soil moisture short to adequate north, adequate to excessive south. Cultivation and chemical weed control active row crops. Cotton, corn, soybeans, sorghum grain fair to good condition. Rice and sugarcane good to excellent. About 80% cotton squaring, early plantings beginning to bloom. Corn silking and tasseling north, ears filling south. Some corn leaf blight noted local gardens southwest. Early rice heading. Frequent showers causing borer buildup sugarcane. Early soybeans blooming stands late planting spotty. Haying slowed by showers. Pasture about average. Cattle mostly good. Marketing fall calves active.

MARYLAND AND DELAWARE: Cool first 3 days, and very warm last 3 days, temperatures averaged near normal. Extremes mostly 90's, 50's. Record-breaking temperature of 96° Baltimore on 8th, previous high 95° that date 1962. Rainfall from showers and thunderstorms on several days especially heavy southern areas. Maryland totaled little or none to over 3.00 inches. Soil moisture short many areas. Little crop damage to date. Corn starting to silk, slightly behind normal pace. Soybean seeding continues and rain needed to start growth. Good progress haying. Barley harvest slow north, wheat harvest underway south. Vegetable and fruit harvest active.

MICHIGAN: Heavy rains fell July 5 over much of parched regions of southwest Michigan. Amounts varied considerably, but 1.00 to 4.00 inches reported from portions of this drought area. A few areas in the southwest, however, received only from 0.50 to 0.65 inch, hardly enough to bring relief. Rains of 1.00 inch or more extended northward as far as Grand Rapids-Holland area, and eastward to Flint area. The 4-inch rains were reported from Van Buren County and 3.00 inches in Jackson County. Temperatures averaged from near normal to 4° above normal. Only minor day-to-day changes, except for somewhat cooler over weekend. Rains brought temporary relief to parched areas southwest and south-central Lower Peninsula. Soil moisture still short much of Lower Peninsula. State averaged 5.2 days suitable fieldwork. Rains great benefit corn

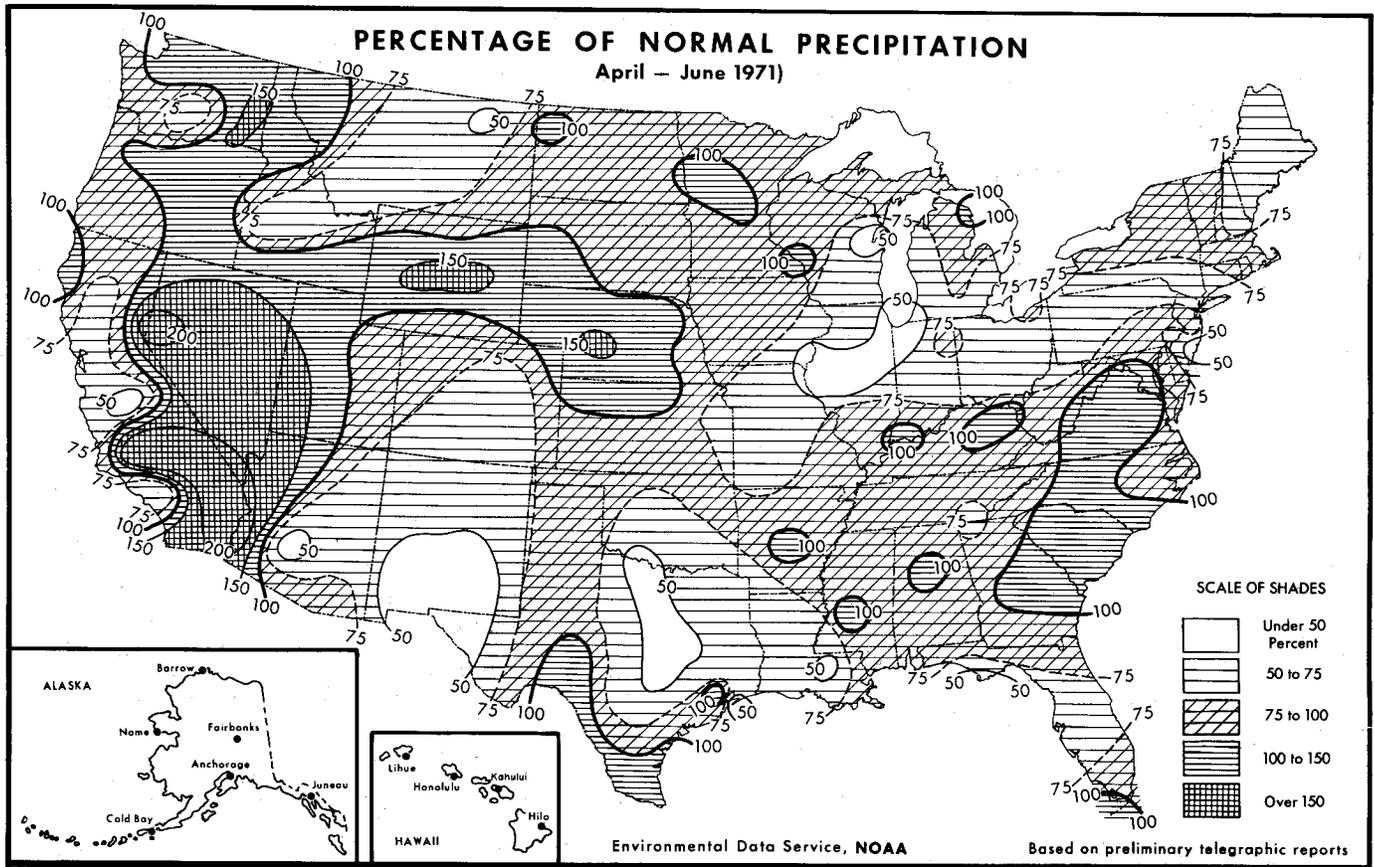
south-central and southwest. Average height corn over 3 feet. Wheat harvest started southwest. About 1/3 oats turned yellow. Soybeans and potatoes doing well. Hay 1st cutting nearly finished Lower Peninsula. Pasture feed supplies below average Lower Peninsula. Sweet cherry harvest well along southwest, started northwest. Tart cherry harvest started southwest. Rains boosted blueberry, raspberry, and vegetables southwest.

MINNESOTA: Temperatures averaged about 2° below normal across the State. Extremes: 95°, 43°. Precipitation, wet week with heavy rainfall of 2.00 to 3.00 inches occurring in the northern part of the west-central district, southern part of the east-central district, and very southwest district. Rest of State generally received from 0.50 to 1.50 inches during week. Severe weather, hail, heavy rains, and strong winds caused \$500,000 damages in the Twin Cities on the 7th, mostly from flooding and wind damage to 25 small aircraft. Continued good crop progress with adequate to surplus moisture. Corn height 45 inches, normal 31; soybeans 17 inches, normal 11. Corn tasseling beginning. Southern corn leaf blight identified 5 additional counties, total 9 counties. Soybeans blooming 29%, normal 17%. Small grains turning ripe: Rye 84%, normal 57%; winter wheat 70%, normal 33%, spring wheat 15%, normal 5%; oats 27%, normal 12%; barley 30%, normal 9%.

MISSISSIPPI: Rain on 1 to 2 days with weekly totals generally under 1.00 inch. On 3d, during severe thunderstorm, a tornado was reported and lightning killed one person near Biloxi, and 2.12 inches rain fell at Columbia for greatest 1-day amount. Weekly temperature averages ranged from 2° below normal to normal with slightly above-normal in Lower Delta. Weekly extremes: 59° on 3d and 99° on 5th, both at Holly Springs. Over weekend: Slightly warmer with 100° on 9th at Rolling Fork, and some isolated thundershowers. Soil moisture mostly short northern and delta counties, and short to adequate other areas. Average 5 1/2 days suitable fieldwork. Peaches 44%, Irish potatoes 91%, hay crops 53% harvested. Cotton 64% squaring, 23% setting bolls. Corn 53% tasseled. Condition peaches and pecans mostly fair to good. Corn, cotton, sorghum, hay, soybeans, rice, sweetpotatoes fair to mostly good. Pastures and livestock good.

MISSOURI: Heavy rains all but inundated north-west Missouri July 9 through 12. Rainfall totals from 4.00 to 7.00 inches were reported between Kansas City and St. Joseph. Rainfall totals exceeded 1.00 inch over most of remainder of State north of the Missouri River, while only scattered light showers fell over south. Temperatures averaged cool early in week, hot Thursday and Friday, July 8 and 9, and below normal over weekend. Missouri farmers worked average 5 days during week. Wheat harvest nearly 90% complete. Second cutting alfalfa hay nearly 65% complete. Clover-timothy hay harvest 77% complete. Indications show corn 35% silked. Corn, soybean conditions mostly good. Pastures mostly fair. Soil moisture mostly short south of Missouri River.

MONTANA: Temperatures continued cold west and central varying to near normal eastern border. Freezing conditions common western divisions 7th as 4 stations tied or set record July minimum temperatures. Precipitation spotty, occurring mainly northern areas. Topsoil moisture generally short, adequate northwest. Winter wheat good



PRECIPITATION - APRIL TO JUNE 1971

Most of the Nation received less than normal rainfall in the 3-month period, April to June. The main exceptions include the Great Basin, central Wyoming, western and central Nebraska, and the Piedmont from Virginia to Georgia. South central New Mexico and an area in Central Texas extending from Wichita Falls to Austin received less than half the 3-month normal.

April precipitation totals were generally less than 1.00 inch from California to western Oklahoma and extreme western Texas. Southern Florida received from about 0.05 inch to 0.75 inch. Totals exceeded 4.00 inches along the Washington and Oregon coast and from central Mississippi to northern Georgia. Elsewhere, April totals ranged from 1.00 to 4.00 inches being greatest east of the Mississippi River and south of the Ohio River.

Early cold rain and drizzle fell in the Northeast and thunderstorms occurred in the Great

Basin, Rocky Mountains and from the central and southern Great Plains to the middle Atlantic coast early in May.

The central and southern Great Plains received beneficial showers in the second week. Several inches of snow fell in the northern and central Rocky Mountains and northern Great Plains in the 3rd week. The eastern half of the Nation received light to heavy showers near the end of the month.

Summer-type precipitation in June included scattered thunderstorms, some with large hail, strong winds, and torrential rains and a few tornadoes. Spots in Texas, Louisiana and Florida received monthly totals exceeding 8.00 inches. Portions of the Southwestern deserts received no rain or only light sprinkles in June.

L. W. DYE

condition, 75% green and headed, 25% turning color. Spring wheat and barley 5% excellent, 60% good and 35% fair. Spring wheat and barley 55% headed and green, turning color 5%. First cutting alfalfa 60% stacked, wild hay 25%. Wheat infection streak mosaic generally light. Alfalfa weevil damage light to moderate. Sugar beets virtually thinned.

NEBRASKA: Repeated showers, light in Panhandle,

moderate to locally heavy elsewhere. Variable crop damage in areas of hail and wind. Farmers haying, completing cultivation as weather permits. Corn good to excellent condition. Corn borer problem with widespread spraying being accomplished. Wheat, sorghum, and soybeans remain good to excellent. Wheat harvest 40% completed, compared 50% normal. Alfalfa 1st crop complete, 25% 2d crop harvested. Livestock good. Few fly problems reported.

NEVADA: Third consecutive week of below normal temperatures in northern Nevada. Temperatures averaged 9° below normal in northwest to near-normal in extreme south. Strong westerly surface wind prevailed throughout the week. Spotty light precipitation in the north; none elsewhere. First cutting alfalfa hay nearing completion most western areas and harvesting underway northeastern areas. Small grains good condition with harvesting in progress south. Cattle and sheep remain good. Cattle deaths about normal, but coyotes have inflicted high kills on some sheep flocks. Range feed good, northern areas and fair south.

NEW ENGLAND: Week mostly sunny with little or no precipitation. Hot most of east-central section and southern division with heat wave in 90's most of southeast from 6th through 9th, and weekly mean temperatures 3° to 6° above normal. Elsewhere, temperatures averaged near or slightly below normal. Return to near normal temperature levels on 11th. Four-week rainfall totals less than 50% of normal most of south and less than 95% of normal most of north. Hot, dry, sunny weather slowed growth many crops. Second crop haying started with low expectations. Pastures turning brown, providing little roughage for cattle. Silage corn making slow growth. Cranberry crop looking good with aid of irrigation. Water reserves getting low. Blueberry harvest should start this week. Apples, peaches, pears progressing nicely. Potato crop Maine developing favorable. Tobacco harvest starting Connecticut Valley. Commercial vegetables receiving irrigation developing favorably.

NEW JERSEY: Daytime temperatures were in 90's much of week but a few cool nights caused average temperatures to be near normal for week over most of State. Rainfall averaged 0.20 inch over North Jersey, 0.40 inch over central and southern interior, and 0.60 inch along the coast. Weekly station totals ranged from a trace to 1.20 inches with greatest amount at Cape May Court House. Weekend rains beneficial, but all areas could use good soaking rain. Cabbage good supply. Escarole, snapbeans, and cucumber volumes are moderate. Sweet corn, tomato, pepper, eggplant, and onion harvests increasing. Light supply lettuce available. Blueberry picking heavy. Early cooking apples available. Early peach harvest ready to get underway. Grain combining active until rain. Field corn and soybeans look good, but need rain.

NEW MEXICO: Scattered light showers throughout week except in southeast. Nearly 1.00 inch total at Grants. Warmer temperatures with averages much above normal in southeast. A little cooler in midweek. Soil moisture extremely short, however northeast corner State has adequate soil moisture. Harvesting barley and wheat in wrap up. Sorghum for grain fair to good. Cotton good condition and beginning to bloom. Cutting alfalfa active. Onion harvest continues. Ranges poor condition. Livestock still being fed, many breeding heads cut due drought.

NEW YORK: Abundant sunshine and very dry. Cool weekend followed early week warming trend and very warm temperatures midperiod. Extremes from low 90's on 8th and 9th down to near 50° on 11th. Precipitation very light all sections with heaviest 0.10 to 0.30 inch Great Lakes to St. Lawrence Valley. Precipitation totals only 1.00 to 1.50 inches in lower Hudson Valley and eastern

Long Island in 4 weeks ending July 9. Corn growing well. Second cutting alfalfa underway. All hay good condition, dry weather slowing growth 2d crop. Pastures poor to fair. Wheat maturing. Oats heading out. Lettuce harvest active; quality excellent. Sweet corn harvest underway. Onions good, but dry weather slowing growth. Celery harvest to start this week Orange County. Snap bean harvest beginning. Tomatoes sizing well, harvest this week. Potatoes good, bloom general. Fruit good development. Western sweet cherry harvest near peak, some cracking. Tart cherry harvest beginning. Western New York grapes developing normally.

NORTH CAROLINA: Temperatures below normal rising to near normal. Range from 40's to 90's. Precipitation in daily scattered showers and thunder-showers most numerous 6th and 7th. Daily amounts zero to 2.00 inches and totals 0.10 to 3.00 inches. Soil moisture improved; mostly adequate, too wet few eastern and mountain areas. Flue-cured tobacco generally good, much improved east. Harvesting types 12 and 13. Corn little change, mostly good. Blight severe fields seeded susceptible T-cytoplasm, none N-cytoplasm; 56% acreage N, 3% T; 14% blends. Most other crops improved. Cotton mostly fair Piedmont, good east. Fruiting well, blooming Coastal Plain. Soybeans and sweet potatoes 75% good, peanuts 90% good. Pastures holding, average good. Apples steady, fair to mostly good. Peaches much better. Small grain harvest about complete except few fields Piedmont and mountains.

NORTH DAKOTA: Temperatures averaged normal southwest, 1° to 3° below normal elsewhere. Rain heavy during week. Most amounts 0.80 to 1.50 inches except locally 2.00 to 4.50 inches northwest and 0.10 to 0.40 much of west-central. Crops making excellent progress as warm weather hastens development. Barley swathing started in few early fields. Row crops look good, except locally in areas of surplus moisture. Haying general as weather permits. Pasture and range conditions best in recent years. No Southern corn leaf blight reported as of July 9.

OHIO: Near normal temperatures accompanied rather humid conditions much of past week. The cold front which moved into northwest on 8th became stationary over central Ohio and did not push through the entire State until 11th. Showers common along this frontal zone 9th to 11th. Seven days favorable fieldwork. Soil moisture supplies 80% short, 20% adequate. Height soybeans 16 inches, above last year's 14 inches and usual 12 inches. Soybean 10% setting pods. Corn starting to silk. Corn height 55 inches, compared 40 inches last year, normal 35 inches. Second cutting alfalfa 35% finished. Clover-timothy 1st cutting virtually all harvested. Wheat 35% harvested, last year 45%, average 25%. Barley 50% combined, below 65% last year. Oats 30% ripe, normal 15%. Oat harvest 5% finished. Rye harvest about 1/2 completed.

OKLAHOMA: Rainfall averaged from none west-central and southwest to 0.30 inch in east-central and 0.70 inch northeast. Temperatures averaged 1° to 2° above normal east to 4° to 8° above normal west. Extremes: 109° and 58°. Hot dry winds burning crops southwest and causing stress other areas. Surface soil moisture 72% short, 28% adequate. Nearly 3/4 harvested wheat acreage tilled. Cotton and peanut progress sharply behind last year, others same

as year ago. Corn 16% dough; sorghum 9% headed; cotton 6% squaring; peanuts 18% and soybeans 11% flowering. Most row crops fair to good condition with irrigated corn and sorghums Panhandle excellent shape. Alfalfa 2d cutting nearly 90% complete. Third cutting hurting for moisture. Good pecan set suffering from case bearer and webworms. Grasshoppers doing heavy to moderate damage many areas, spraying programs underway. Livestock and range conditions holding steady.

OREGON: Cool week with slow warming. Temperatures averaged 2° to 5° below normal west of Cascades and south border, 6° to 9° below normal elsewhere. Minima 33° to 32° except 28° northeast valley. Maxima 63° to 73° coast, 76° to 92° elsewhere. Most of State dry with scattered amounts up to 0.05 inch except locally 0.20 to 0.30 inch north-central and 0.50 to 1.20 inches northern half of coast. Barley harvest activity increasing Columbia Basin and started Willamette Valley. Blue grass, tall fescue, rye grass and orchard grass being swathed. Second cutting alfalfa starting west. Sweet cherry harvest continues. Red raspberry harvest increasing. Strawberry harvest nearing completion. Green pea harvest continues with good yields. Range and livestock good condition.

PENNSYLVANIA: Hot and humid weather returned to Pennsylvania beginning of week and remained through Saturday. Temperatures climbed into 80's daily north and 90's south reaching 97° at Newport and Reading Thursday afternoon. Overnight lows settled mostly into 50's and 60's dipping to 43° at Philipsburg Monday morning. Some relief from heat Sunday as cloudiness and much-needed rain from low-pressure wave kept maxima mostly in 60's. Widely scattered showers and thunderstorms early in week and last 3 days produced rainfall totals of 0.10 inch or less northern and eastern border counties to 4.50 inches Pittsburgh area for one of greatest weekly amounts of record at that station. Central and southern areas recorded 1.00 to 2.00 inch amounts. Haymaking continues throughout State, farmers north making 1st cutting, central and south 2d cutting. Second growth hay slow due lack of rain. Topsoil moisture short 3/4 State. Major farm activities haymaking and barley combining, corn and potato cultivating. Sweet and tart cherry harvest continued south. Strawberry harvest virtually completed.

PUERTO RICO: Rainfall averaged 1.80 inches or about 0.30 inch above normal. Heavy rain-showers totaling 6.00 to 7.00 inches for week fell from west coast into western Cordillera. A drier zone of less than 1.00 inch ran from north to south coast through central part of Island. Crop moisture conditions this zone too dry for developing crops, other zones near normal. Temperatures averaged 79° to 80° on coast and 74° to 75° interior divisions with average departure of 0.5° below normal. Highest maximum 93°, lowest minimum 57°. Favorable weather sugarcane harvesting and transporting operations, also for growth young plants and ratoons. Heavy showers western interior delayed fieldwork coffee areas. Pastures good to excellent all zones, except too dry few areas northern and southern coast and slopes.

SOUTH CAROLINA: Showers frequent in all parts of State. Divisional averages ranged from 1.50 inches in the mountains and north-central to 3.00 inches in the central division. Highest total was

6.63 at Eutawville. Above-average cloudiness reduced average temperatures to 4° below normal in northwest and 2° below normal south. Soil moisture ample all areas, excessive large portion Sandhills, Upper Coastal Plains. Tobacco 15% harvested. Excessive moisture hurting plants lower areas. Cotton condition improved, 87% squaring, 25% setting bolls. Boll weevil infestations increased. Corn good to excellent, 77% milk stage, 34% dough stage. Soybeans planting virtually complete. Stands, condition plants good to excellent. Sorghum planting 95% complete. Sweetpotatoes transplanting ending. Peanut stands, plants good to excellent. Peaches fair to good, 25% harvested. Condition hay crops, pastures good to excellent. Vegetable crops, watermelons good. Watermelon harvest 24% complete. Southern corn leaf blight indentified 15 counties. Damage increasing on varieties containing T-cytoplasm. No confirmation on N-cytoplasm except sweet corn. Situation not critical.

SOUTH DAKOTA: Weekly temperatures averaged from near normal to 3° below normal. Extremes: 40° at Ralph and Lemmon on 8th, 98° at Philip on 9th. Precipitation fell as showers and thunder-showers scattered through week with large variations in amounts. Totals ranged from a trace to over 5.00 inches. Locally heavy rains on 10th caused some flash flooding. Some rainfall amounts on the 10th were Canton 5.50 inches, Yankton 3.70 inches, and Irene 3.50 inches. Spotty areas of hail during week. Harvesting small grain underway many areas and expected to expand remaining areas in a week. Some local areas lodging due heavy rain and hail. Surplus topsoil moisture few eastern counties, but shortages remain south-central, central, and northwest. Soybeans are well into bloom stage. Corn growth and development rapid. Southern corn leaf blight still slight with no new counties infected. Corn borer infestation heavy southeastern areas. Corn root worm becoming problem. Pastures and livestock good, but flies problem and pinkeye spreading.

TENNESSEE: Temperatures below normal beginning of week, normal at midweek, and above normal by weekend. Almost daily widely scattered shower activity gave spotty and mostly unimportant rain. Amounts generally less than 0.50 inch to 1.50 inches; heaviest in mountains. Hot temperatures prevailed, with surplus moisture east and shortage west. Efforts to control weeds and insects dominated farm activity. Almost all wheat and barley harvested. Some harvesting still occurring east. Oat harvest about 85% complete. Soybeans growing rapidly. Corn continues rapid growth and about 50% has silked. Cotton plants made rapid growth under favorable weather. Surveys indicate 70% cotton squaring and 10% setting bolls. About same as last year. Tobacco continues rapid growth with black shank causing considerable damage. Pasture production decreasing some areas due dry conditions. Days favorable fieldwork averaged 4.7. Soil moisture favorable over State.

TEXAS: Except for light showers in Panhandle Friday, rainfall during week was concentrated in Texas coastal zone. Most amounts were light to moderate; however, heavy rains of 3.00 to more than 4.00 inches fell over much of Cameron County in Lower Valley Saturday. Lesser amounts fell in adjoining Hidalgo County. Twenty-four hour totals included Laguna Heights 4.43 inches, Bayview 3.75 inches, and 2.96 inches

near La Feria. Temperatures were slightly hotter in northern half of State than during previous week. Dry weather prevails over State and retarded plant growth. Harvest cotton, corn, rice, and sorghum underway limited scale, should increase if high temperatures prevail. Harvest hay crop full swing. Yields low except where irrigated. Greenbug infestation sorghum Low Plains. Cotton boll weevil and boll-worm infestations from Blacklands south necessitating spraying. Cattlemen culling or selling entire herds over much of State as limited grazing continues. Percent harvested: wheat completed; sorghum 6, 2 year ago; corn 1, none year ago. High Plains onion, potato harvest gaining momentum with harvest full swing current week. Other vegetables High Plains good progress. Trans-Pecos onion harvest active. Watermelon harvest active south-central with harvest increasing East Texas. Cantaloupe harvest getting underway Pecos, North Texas. Dryland sweetpotato condition poor northeast Texas due drought. Citrus sizing fruit, showers beneficial. Peach harvest continues all areas, but supplies substantially below last year. Pecan prospects poor to fair, most areas.

UTAH: One or 2 isolated very light showers or thunderstorms. Accumulated amounts of moisture very small. Temperatures averaged near normal ranging between 3° above normal and 3° below normal. Soil temperatures at 4-inch depth ranged from near 70° in Cache Valley to 80° Salt Lake City and Richfield and 92° in St. George. Accumulated growing degree days since March 1 ranged from 170 degree days behind last year extreme northwest to 50 to 125 degree days ahead of last year east. Little rain past 3 weeks, serious drought situation building daily central and southern Utah. Rangelands critically dry. Alfalfa 1st crop hay harvest about completed. Cutting clover-timothy and wild hay starts this week. Sweet cherry harvest at peak. Apricot picking started. Winter wheat maturity continues to lag. Harvesting barely started, except Washington County, very little ripe major areas. About 90% spring wheat and barley headed out, 80% oats. Green pea harvest nearing complete. Yields good all areas.

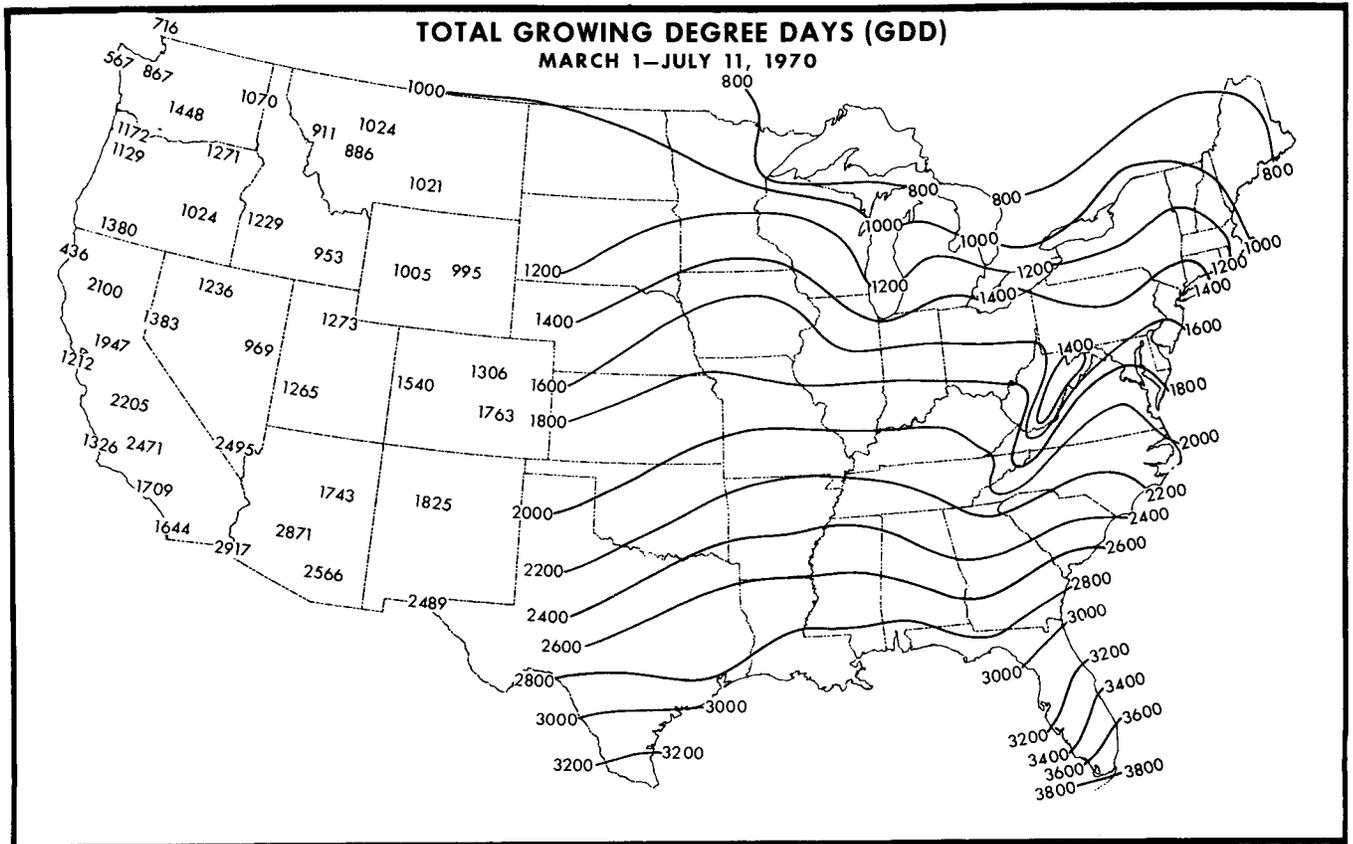
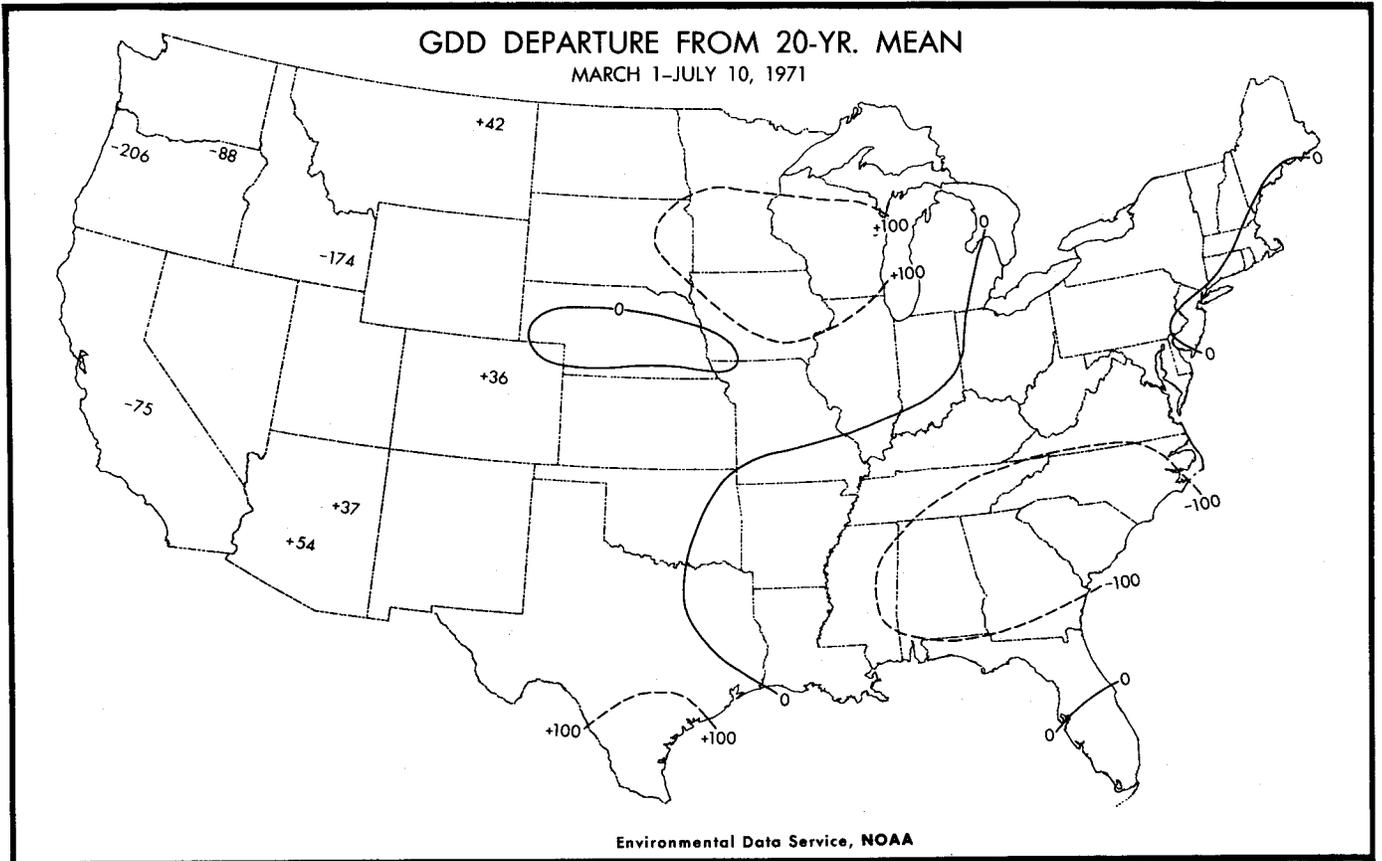
VIRGINIA: Temperatures mostly above normal after a cool beginning. Showers and thundershowers at midweek and over weekend. Topsoil moisture supply declined, 35% respondents reported short. Corn prospects good, but Southern corn leaf blight infections spreading; identified 41 counties, worse in southeast. Corn acreage 1/4 silked, lowest percent for date since 1967. Small grain combining best progress of season. Wheat 60% harvested, barley 80%, oats 67%. Yields good. Tobacco, soybeans, and peanuts making good progress. Pastures excellent, but declined all areas except southwest. Hay harvest active. Potato movement Eastern Shore strong. Cucumber harvest active.

WASHINGTON: Western Washington: Cloudy, cool, showery, two fair days early in period. Temperatures below normal. Precipitation near normal with amounts above normal near mountains. Hay harvest almost at standstill. Strawberries peak with decreased yields, raspberry harvest beginning. Corn growth slowed by cool temperatures. Pea harvest delayed. Broccoli and cauliflower harvest continues with crop good. Eastern Washington: Partly cloudy and cool with some showers and a few isolated thundershowers in southeast portion. Temperatures below normal with light frost in many areas. Precipitation light except in thundershower areas. Some frost damage northern Columbia Basin vegetable crops. Wheat harvest delayed about 2 weeks with some early areas beginning. Green pea harvest 60% completed. Corn needs warm weather while sugar beets and bean growth looks good. Second cutting hay started some areas.

WEST VIRGINIA: Widely scattered thunderstorms July 6 and heavier statewide cold front thunderstorms July 9. Warm and humid after midweek but cooler over weekend. Soil moisture mostly short northern part and adequate central and south. Fieldwork possible average 5 days. Small grains ripening fast. Harvest 1st cutting hay about 80% complete. Second cutting begun scattered areas. Flies continue to pester livestock.

WISCONSIN: Temperatures near normal. Some good soaking rains in previously very dry areas early on 8th. Many totals between 2.00 and 3.00 inches in the extreme southeast. Also strong winds accompanying showers flattened many corn and oat fields across south. Corn otherwise looks best in years at this stage. Early fields tasseling. Spraying corn borers. Southern cornleaf blight found in 33 Counties. Overall blight infection still regarded light. First crop haying still active north. Second cutting getting underway south. Rye, wheat and early oats ripening. Short straw most southeast half. Soybeans look very good. Tobacco growing well. Potatoes also very good. Early pea harvest finishing up. Early cherries turning red Door County. Cranberries full bloom. Pastures good west, but only fair east. Soil moisture 1/3 short and 2/3 adequate.

WYOMING: Scattered light showers state wide, Guernsey Dam most moisture with 0.85 inch. Temperatures averaged near to a little below normal. Maxima were mostly high 70's and low 80's west of Divide and Upper Platte Drainage, 85° to 95° elsewhere. Minima were mostly 30's to mid-40's west of Divide, 40's east. Temperature extremes: 95° at several stations and 22° at Bondurant. Main agricultural activities irrigating and haying. About 2/3 1st cutting alfalfa cut, while about 40% other tame hays harvested. Nearly 80% spring wheat, 75% barley and 40% oat acreages headed. About 1/3 winter wheat in milk stage while approximately 45% in soft dough and 20% hard dough stage. Surface soil moisture supplies are short to adequate. Ranges for use during late summer and fall good to excellent.



WESTERN INDIANA WEATHER FAVORING SOUTHERN CORN LEAF BLIGHT

Computer results are available only from the western half of Indiana to date but a new simulator program has translated the wetter weather of July 5-10 into the kind of environment which Southern corn leaf blight (SCLB) likes. Developed by Dr. Paul E. Waggoner, Vice Director of the Connecticut Agricultural Experiment Station, New Haven, the program is being run on a Purdue University computer. Weather input is being supplied by National Weather Service and University meteorologists and agricultural scientists. Within the next week or two (from a National Weather Service computer in Kansas City) we hope to have results from additional stations throughout the corn producing area.

The fungus which causes the blight requires wet corn leaves for a period of at least 6-9 hours with temperatures above 55-60° Fahrenheit. Summer cornfield temperatures are generally favorable and dew is just as acceptable to the organism as rainfall. For infection to occur on a corn leaf spores must be present. With light infection reported (on susceptible hybrids only for the most part) throughout the corn growing areas of the U.S., it is assumed that spores are available.

Growth of the fungus on corn leaves produces spots or lesions. Waggoner's program assumes a given number of lesions at some beginning date and adds to this number according to how many wet periods of 6, 9, or 12 hours per day are observed. By July 10 in western Indiana this computed relative number of lesions had increased to about 600 at two stations in west central Indiana and over 400 in northwestern Indiana. In the southern half of the State two stations show little or no increase and two more have July 10 totals above 400. This variability is characteristic of, and probably related to, summer rainfall. Corn blight can be expected to develop at very different rates in different localities.

The meaning of 400 or 600 lesions? We assumed 100 lesions present on the beginning day of our computations, June 26. In 14 days this hypothetical number had increased by 300-500 lesions. These numbers have no absolute interpretation; they merely say if there were 100 lesions present at this location in the beginning that 14 days later, according to the weather, one could expect 400-600 infected leaf spots.

The simulator program was tested on 1970 data for Jackson, Tennessee (where blight developed early) and Experiment, Georgia (where spread of the fungus was delayed some four weeks when more favorable weather occurred). The cumulative number of lesions computed for Jackson on May 14 using a May 1 start date was over 400 and at Experiment it was only slightly above the initially assumed 100 level. These numbers compare closely with those noted in Indiana last week. If conditions following July 10 are favorable to the organism, increased blight can be expected where the higher numbers of lesions have been estimated. Where no appreciable increase has been computed, little blight development is expected unless more moisture is experienced.

The method is still experimental but this first output for 1971 indicates that there are portions of Indiana where blight spreading is likely and others where it is not yet expected to develop. In the next few issues of the Bulletin we hope to report weather conditions related to Southern corn leaf blight in several more States. These statements represent estimates of blight infection; actual observations of the disease are being reported by your State and Federal agricultural agencies.

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