

Weekly Weather & Crop Bulletin

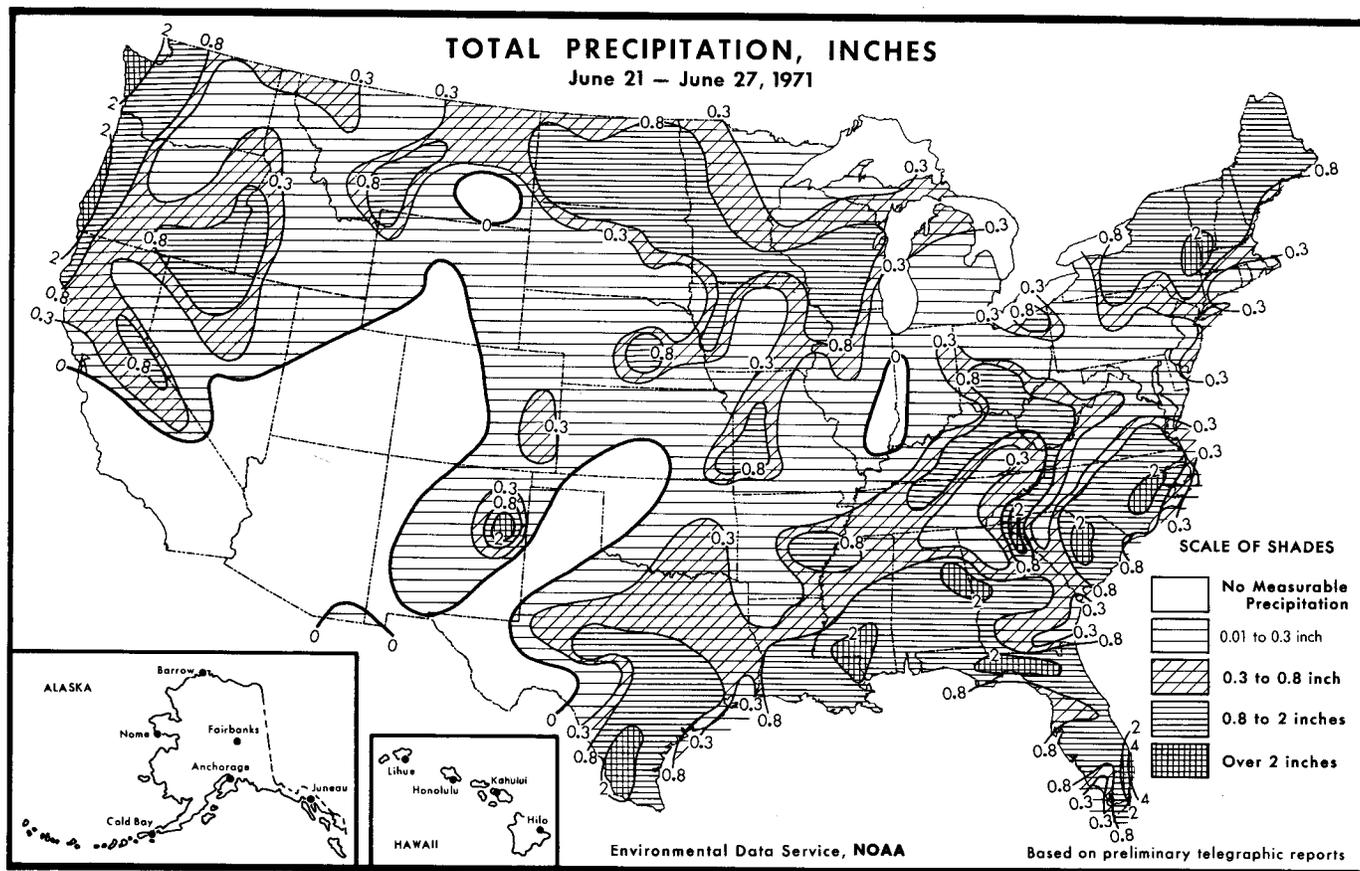
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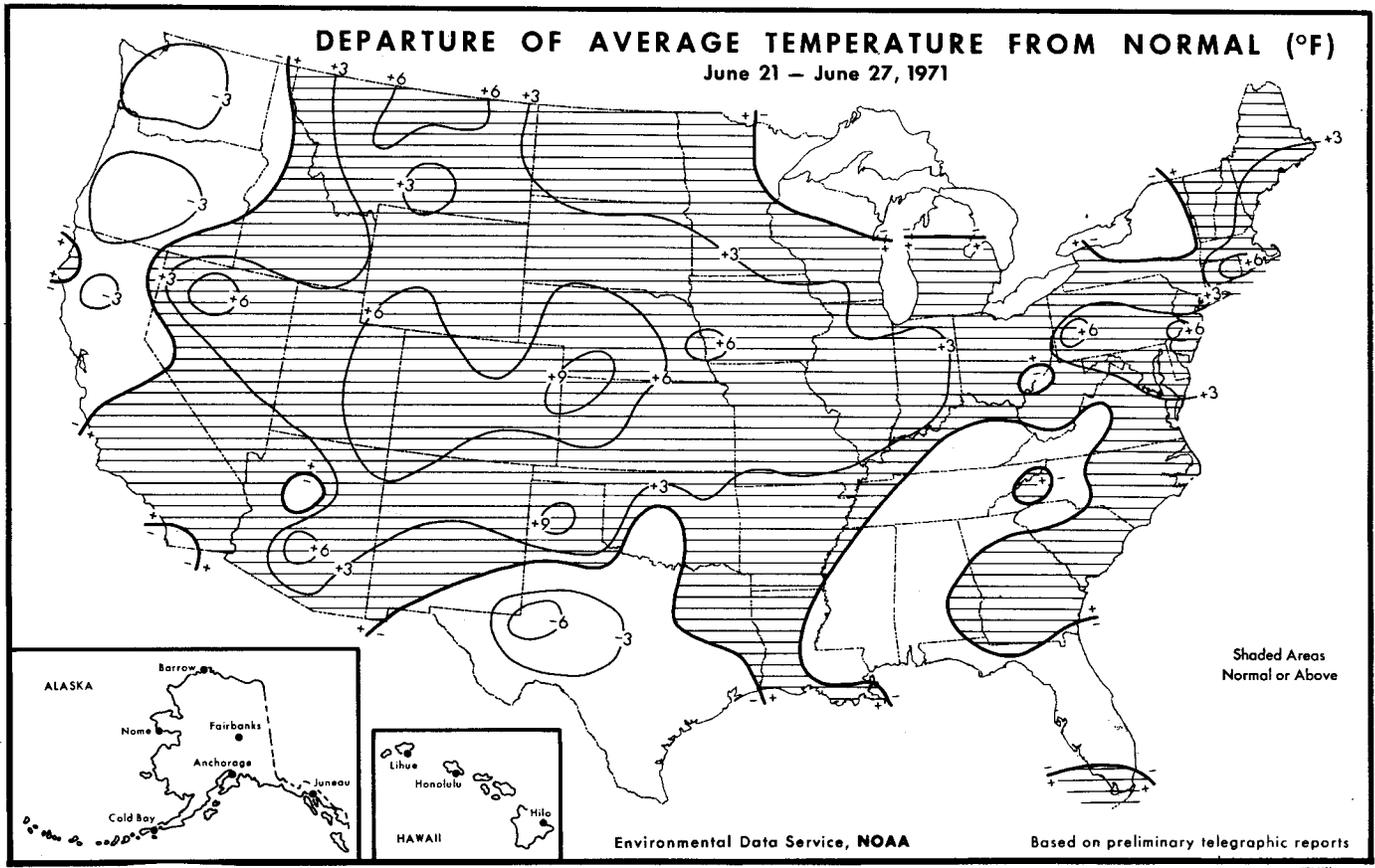
NATIONAL WEATHER SUMMARY

HIGHLIGHTS: Afternoon and evening thundershowers produced most of the precipitation. It was the hottest week of the season in parts of the Nation.

PRECIPITATION: Thunderstorms occurred over the Great Plains and the Deep South early in the week. Hail, high winds, and heavy showers accompanied some of the thunderstorms. A thunderstorm with winds approaching 60 m.p.h. and hail as large as golf balls moved across Kansas City, Mo., late Tuesday afternoon. Other thunderstorms with hail caused considerable crop damage in the Kansas City vicinity Tuesday. Most of the thunderstorms occurred in the afternoons and evenings

and became less intense and more scattered in the early mornings. Some generous thundershowers occurred in the northern Great Plains late in the week.

Weekly totals ranged widely from less than 0.10 inch to several inches. A number of locations in Texas received 24-hour totals ranging from 4.00 to 5.00 inches or more. Numerous locations in the Southeast received more than 3.00 inches during the week while less than 1.00 inch fell at nearby stations. A large area from southern Wyoming to southern California and Arizona received no rain or only widely scattered light sprinkles.



TEMPERATURE: Most of the Nation averaged warmer than normal last week. A large area from Nevada to Indiana and from Montana to Arkansas averaged 3° to 6° or more warmer than normal. Three areas averaged slightly cooler than normal: The Far Northwest, Texas, and from Mississippi to southwestern Virginia.

Summer heat continued over most of the Nation early in the week. Early morning temperatures ranges from the 50's over the northern border States to the 70's across the South. Afternoon readings were in the 70's and 80's in the North and the 90's in the South except in some southwestern desert areas where temperatures exceeded 100°. Needles and Blythe, Calif., registered 114° Tuesday afternoon. A warming

trend over the West brought 90° heat to north-eastern Washington Tuesday afternoon and to north-central Montana Wednesday. Maximums in several States reached 100° or higher on Tuesday and Wednesday. Miles City, Mont., registered 98° Wednesday afternoon.

The heat over the central Great Plains became especially intense Thursday and Saturday. Maximums at Hill City, Kans., averaged 105° from Wednesday to Saturday. Minneapolis, Minn., warmed to 96° Sunday afternoon and cooled only to 77° Monday morning, June 28.

In some areas, last week was the warmest since August 1970.

L. W. Dye

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Wheat harvest rapid in Kansas and nearly complete in Oklahoma. * Warm temperatures sparked row crop growth. * Seeding of soybeans active in the South following small grain harvest.

SMALL GRAINS: Hot, dry weather pushed small grain maturity and harvest on the Great Plains. Wheat harvest was 1/3 complete in Kansas, with combining moving into the northern counties. Combining was also underway along Nebraska's southern border, where 10% of the crop is ripe and ready for harvest. On the Southern Plains most of the acreage is threshed, with many growers in the wrap up stage of harvest. Texas wheat harvest at 73 percent complete remains behind 1970.

Heading of spring seeded grains made rapid headway in the Northern Plains. Heading should be completed in South Dakota this week. Severe storms with hail and high winds damaged grain fields in local areas of the Dakota's, Nebraska, and Montana. Lodging also occurred in Wisconsin. In Washington aphids are starting to cause some concern to wheat and barley growers. Heading is mostly complete for these crops in Washington, with the Idaho wheat crop heading in the South.

Winter wheat harvesting started in Indiana, while 1/3 of the Illinois and Missouri crops are cut. Warm temperatures pushed wheat maturity in Michigan, with combining in Ohio expected to start in early July. Showers slowed harvesting in the South, but most States have about 75 percent or more of their crop in the bin. Barley harvest should start in the Northeast this week.

CORN: The 1971 corn crop continued to make rapid growth in the Corn Belt. Most of the acreage is off to a fast start with corn height well above the knee high stage, long before the 4th of July. Some fields were showing stress from the hot temperatures and drying winds. Moisture is becoming short in several areas and a general rain would be beneficial. Ninety-five percent of the acreage in both Iowa and Illinois is rated good to excellent. Extensive corn borer infestations are developing in southeastern South Dakota, eastern Nebraska and western Iowa.

Corn also made good growth in the South. Moisture is adequate and cooler temperatures limited evaporation. Silking started in many States, with some Louisiana fields beginning to form ears.

Southern corn leaf blight has been identified in all areas of Illinois and much of Iowa. However, the infection level is very low. Hot, dry weather in the Corn Belt slowed development of the disease.

SOYBEANS: Corn Belt soybeans made good progress during the week and most of the acreage is rated good to excellent. Some Illinois fields were replanted. Hail damaged some fields in north-central Iowa. Only a small acreage remains to be planted in this region. Most farmers are busy with weed control measures. Soybeans are 85 percent to 90 percent planted in the South. Seeding of soybeans following small grain harvest was increasing. Recent plantings in Alabama need rain to improve germination.

COTTON: Warm weather and showers aided cotton development in the South. The crop continued to improve in most States. Much of the acreage is squaring freely with bolls starting to set in early planted fields. South Carolina growers

plowed up some additional acreage following last week's hailstorm.

Planting has nearly finished in Texas, but heavy weevil and fleahopper damage was noted in extreme southern and eastern areas. Warm temperatures accelerated cotton growth in California and Arizona.

OTHER CROPS: Sorghum planting is nearly completed in Texas and Kansas, the 2 leading sorghum producing States. Most of the stands are acceptable in Oklahoma. Nebraska growers are busy with weed control measures. Flue-cured tobacco harvesting started along the North Carolina border belt, with 15% of the Georgia crop already in. Harvest was in full swing in Florida. Kentucky growth was rapid, but irregular. Transplanting was still active in Pennsylvania and Wisconsin. The peanut crop made good to excellent growth during the week in the South. Disease and insect control measures were active. Blooming and pegging were widespread in Alabama. The Minnesota flaxseed crop is off to a fast start with 20 percent of the crop blooming, compared to only 12 percent last year. Rice made good progress in Louisiana with some fields heading. Growth is good in California.

Fruits and Nuts: Peach harvesting is widespread in the South, with picking active as far north as Maryland. Georgia peach growers have 25 percent of their crop picked. Sweet cherry picking started in New York, Pennsylvania, Michigan and Oregon. Cherry picking continues in Washington. Some orchards in northern Washington have a high percentage of hail marked apples. The June apple drop in New England is normal, with the set also good in New York.

Rain showers enhanced citrus prospects in Texas, however only fair prospects exist for the pecan crop. Fruit and nut crops developed favorably in California under warm weather.

Vegetables: Dry soils continue to plague vegetable growth in Michigan and Thomas County, Georgia. New England and New Jersey growers are irrigating where water is available. Good supplies of lettuce are available from Orange County, New York, with lighter quantities coming from California's Salinas Valley. Snap bean and cabbage supplies are available in increasing quantities from the South Central States. Tomato picking started as far north as Tennessee. Strawberry supplies are abundant; with picking moving into Michigan's northern Lower Peninsula. Sweet corn and watermelon supplies are heavy from Florida, with other commodities scarce. Alabama and Georgia watermelons are also becoming available.

PASTURES AND LIVESTOCK: Range feed conditions are good in the West, with most herds thriving on high elevation summer ranges. Ranges continue to supply less than adequate feed in the Southwest. However, rain in the southern half of Texas improved grass prospects. Pastures are mostly good in the eastern half of the Nation, but rain is needed. Flies and high temperatures were bothersome to livestock in the East. Livestock marketing declined in Kansas as farmers were busy combining wheat.

Steve Pscodna
Agricultural Statistician

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., June 27, 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	- 2	1.0	0	New Orleans	81	0	1.9	+ .8	OKLA.Okla. City	80	- 1	.2	- .8
Mobile	82	- 1	1.5	+ .1	Shreveport	83	+ 1	T	- .7	Tulsa	83	+ 3	.1	-1.0
Montgomery	81	0	.4	- .8	MAINE.Caribou	63	+ 2	1.1	+ .1	OREG.Astoria	56	- 3	1.4	+ .9
ALASKA.Anchorage	55	- 2	T	- .2	Portland	68	+ 4	.6	- .2	Burns	60	- 3	.6	+ .4
Barrow	39	+ 2	0	- .1	MD,Baltimore	79	+ 4	.3	- .4	Medford	63	- 4	.6	+ .4
Fairbanks	73	+13	T	- .4	MASS.Boston	73	+ 3	.6	- .3	Pendleton	67	- 1	.2	- .1
Juneau	55	- 1	T	- .8	Chatham	--	--	--	--	Portland	62	- 2	1.1	+ .7
Nome	59	+11	T	- .3	MICH.Alpena	61	- 2	.5	- .1	Salem	60	- 3	1.5	+1.2
ARIZ.Flagstaff	54	- 9	0	- .2	Detroit	73	0	.1	- .5	PA.Allentown	75	+ 3	T	-1.0
Phoenix	93	+ 7	0	0	Flint	70	+ 2	T	- .7	Erie	68	- 1	.2	- .6
Tucson	88	+ 3	0	- .1	Grand Rapids	72	+ 2	T	- .8	Harrisburg	78	+ 4	.2	- .6
Winslow	82	+ 4	0	- .1	Houghton Lake	65	0	.1	- .6	Philadelphia	80	+ 7	T	-1.0
Yuma	91	+ 2	0	0	Lansing	72	+ 2	.6	- .1	Pittsburgh	73	+ 2	T	- .9
ARK.Fort Smith	81	0	T	- .9	Marquette	59	- 4	.3	- .6	Scranton	71	+ 1	.5	- .4
Little Rock	82	0	1.6	+ .8	Muskegon	70	+ 1	T	- .6	R.I.Providence	74	+ 6	T	- .7
CALIF.Bakersfield	82	+ 2	0	0	S.Ste.Marie	59	- 2	.9	+ .1	S.C.Charleston	82	+ 1	1.0	- .2
Eureka	57	+ 1	1.3	+1.2	MINN.Duluth	59	- 2	.3	- .8	Columbia	81	0	3.5	+2.5
Fresno	79	+ 2	0	0	Internatl Falls	62	0	.3	- .7	Greenville	78	- 2	T	- .7
Los Angeles	71	+ 1	0	0	Minneapolis	71	+ 2	.4	- .6	S.DAK.Aberdeen	74	+ 5	1.0	+ .1
Red Bluff	74	- 5	.3	+ .2	Rochester	72	+ 3	.9	- .2	Huron	76	+ 5	.8	+ .2
San Diego	66	- 1	0	0	St. Cloud	69	+ 2	.6	- .5	Rapid City	71	+ 2	1.0	+ .3
San Francisco	61	- 1	T	- .1	MISS.Jackson	80	- 1	1.7	+ .8	Sioux Falls	75	+ 4	T	-1.0
Stockton	74	- 1	.3	+ .3	Meridian	80	- 1	1.2	+ .1	TENN.Chattanooga	79	- 1	.2	- .7
COLO.Denver	76	+ 6	T	- .3	MO.Columbia	80	+ 3	T	- .9	Knoxville	77	- 1	.7	- .1
Grand Junction	82	+ 8	0	- .1	Kansas City	83	+ 5	.5	- .7	Memphis	83	+ 2	.7	- .1
Pueblo	80	+ 6	T	- .2	St. Louis	81	+ 4	.2	- .8	Nashville	79	- 1	1.3	+ .6
CONN.Bridgeport	74	+ 4	T	- .8	Springfield	80	+ 3	T	-1.1	TEX.Abilene	80	- 3	.7	+ .1
Hartford	76	+ 6	.1	- .8	MONT.Billings	70	+ 1	T	- .6	Amarillo	78	+ 9	0	- .6
D.C.Washington	81	+ 4	T	- .7	Glasgow	71	+ 6	.3	+ .1	Austin	83	- 1	1.5	+ .8
FLA.Apalachicola	82	+ 1	.7	- .7	Great Falls	69	+ 6	T	- .6	Beaumont	82	+ 1	T	-1.1
Ft. Myers	80	- 2	.9	-1.2	Havre	71	+ 7	T	- .7	Brownsville	74	+ 1	T	- .7
Jacksonville	81	- 1	1.9	+ .3	Helena	63	0	.2	- .3	Corpus Christi	82	- 2	1.0	+ .5
Key West	84	+ 1	T	-1.0	Kalspell	58	- 3	.4	0	Dallas	86	+ 2	.6	- .1
Lakeland	81	0	.6	-1.4	Miles City	74	+ 5	0	- .7	Del Rio	77	+ 9	1.8	+1.4
Miami	81	0	4.8	+3.0	Missoula	63	+ 2	T	- .4	El Paso	80	- 2	0	- .2
Orlando	81	- 1	.7	-1.1	NEBR.Grand Island	81	+ 7	T	- .9	Fort Worth	83	- 1	.6	0
Tallahassee	81	0	2.9	+1.3	Lincoln	83	+ 6	T	-1.1	Galveston	82	- 1	T	- .6
Tampa	81	- 1	1.1	- .6	Norfolk	79	+ 5	T	-1.1	Houston	80	- 2	1.1	+ .2
GA.Atlanta	79	+ 1	T	- .9	North Platte	76	+ 4	T	- .8	Lubbock	78	- 2	T	- .5
Augusta	80	0	.7	- .1	Omaha	80	+ 6	T	-1.1	Midland	76	- 7	.4	+ .1
Macon	82	0	1.6	+ .7	Valentine	77	+ 6	T	- .7	San Angelo	79	- 5	.3	- .1
Savannah	82	+ 1	.2	-1.1	NEV.Ely	66	+ 4	T	- .1	San Antonio	81	- 2	1.8	+1.2
HAWAII.Hilo	--	--	--	--	Las Vegas	--	--	--	--	Victoria	82	- 1	1.0	+ .3
Honolulu	--	--	--	--	Reno	61	- 2	T	- .1	Waco	84	- 1	.9	+ .4
Kahului	--	--	--	--	Winnemucca	66	+ 1	1.0	+ .9	Wichita Falls	84	- 1	.1	- .6
Lihue	--	--	--	--	N.H.Concord	69	+ 3	.8	- .1	UTAH.Blanding	76	+ 8	0	- .1
IDAHO.Boise	70	+ 1	1.2	+1.0	N.J.Atlantic City	75	+ 3	T	- .7	Salt Lake City	76	+ 5	T	- .2
Lewiston	66	- 2	.5	+ .1	Trenton	78	+ 5	.2	- .7	VT.Burlington	66	0	1.4	+ .5
Pocatello	67	+ 1	.1	- .1	N.MEX.Albuquerque	80	+ 3	T	- .1	VA.Lynchburg	75	- 1	T	-1.1
ILL.Cairo	83	+ 3	T	- .9	Roswell	79	0	T	- .3	Norfolk	79	+ 1	.6	- .4
Chicago	75	+ 2	.2	- .7	N.Y.Albany	69	- 1	2.2	+1.4	Richmond	78	+ 1	1.0	0
Moline	77	+ 3	1.0	- .1	Binghamton	68	+ 2	.3	- .6	Roanoke	73	- 2	.2	- .7
Peoria	78	+ 4	.6	- .4	Buffalo	69	+ 1	.3	- .3	WASH.Colville	61	- 2	.7	+ .5
Rockford	75	+ 3	.3	- .7	New York	76	+ 2	.7	- .1	Omak	64	- 3	.2	- .1
Springfield	80	+ 3	T	-1.0	Rochester	69	- 1	1.4	+ .8	Quillayute	55	- 2	2.3	+1.6
IND.Evansville	81	+ 3	0	- .9	Syracuse	69	- 1	1.3	+ .6	Seattle-Tacoma	57	- 5	1.1	+ .7
Fort Wayne	76	+ 3	.4	- .6	N.C.Asheville	75	+ 2	1.6	+ .8	Spokane	63	- 1	.3	- .1
Indianapolis	77	+ 3	.2	- .9	Charlotte	78	- 1	1.8	+ .8	Walla Walla	--	--	--	--
South Bend	75	+ 3	T	- .9	Greensboro	77	+ 1	1.4	+ .6	Yakima	63	- 4	T	- .2
IOWA.Burlington	78	+ 3	T	-1.0	Hatteras	78	+ 1	.3	- .7	W.VA.Beckley	70	+ 1	.9	- .1
Des Moines	79	+ 5	.1	-1.0	Raleigh	78	+ 1	.7	- .3	Charleston	75	+ 1	1.0	+ .1
Dubuque	74	+ 4	1.0	+ .1	Wilmington	80	+ 1	1.5	+ .4	Huntington	74	0	1.9	+ .9
Sioux City	79	+ 5	T	-1.0	N.DAK.Bismarck	68	0	1.0	+ .2	Parkersburg	74	- 1	.4	- .6
KANS.Concordia	82	+ 5	T	- .9	Fargo	69	+ 1	.9	+ .2	WIS.Green Bay	68	0	.9	+ .1
Dodge City	83	+ 6	T	- .7	Williston	68	+ 1	.9	0	La Crosse	73	+ 2	.8	- .2
Goodland	82	+10	.1	- .5	OHIO.Akron-Canton	73	+ 1	T	-1.0	Madison	72	+ 3	1.2	+ .3
Topeka	81	+ 4	.2	- .8	Cincinnati	78	+ 2	.1	- .9	Milwaukee	67	+ 1	.2	- .7
Wchita	85	+ 5	0	-1.0	Cleveland	71	+ 1	1.8	+ .9	WYO.Casper	70	+ 3	T	- .2
KY.Lexington	75	- 1	3.3	+2.2	Columbus	74	+ 1	1.8	+ .8	Cheyenne	70	+ 4	.1	- .4
Louisville	79	+ 3	.7	- .3	Dayton	76	+ 2	1.8	+ .8	Lander	71	+ 6	0	- .3
LA.Baton Rouge	81	- 1	1.0	+ .4	Toledo	73	+ 2	.1	- .8	Sheridan	69	+ 4	T	- .6
Lake Charles	83	+ 1	1.1	0	Youngstown	71	+ 2	.4	- .4	P.R. San Juan	83	+ 3	.3	-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: Scattered showers and thundershowers off and on all week with partly cloudy skies and temperatures about normal. Rainfall generally light extreme north and moderate to locally heavy elsewhere. Warm weather and scattered showers beneficial to crops. Many areas need moisture. Cotton made good progress; squaring freely all areas. Corn good condition with much acreage laid by. DEW Line confirmed Southern corn leaf blight in 17 of Alabama's 69 counties, but none on plants from N-cytoplasm seed. Soybeans 86% planted. Crop doing well, recent plantings need moisture to aid germination. Peanut development good, with blooming and pegging general. First diggings early summer Irish potato crop expected this week, but little volume before July 5. Vegetables moved to market good volume. Harvest watermelons began south. Hay harvest active. Pastures furnishing adequate grazing. Livestock in fair to good condition.

ALASKA: Temperatures much above normal during past week in Tanana Valley, near to slightly above normal elsewhere. Even so, light frost occurred at low elevations southern Kenai Peninsula. Precipitation all areas but amounts variable. Above normal Matanuska Valley, below normal elsewhere. Many lightning-caused fires Tanana Valley because of lack of moisture. Fire situation critical. Warm sunny days and light showers beneficial crop growth. First cutting hay harvest started Tanana and Matanuska Valleys. Some hay grasses utilized for green chop due short stands. Average height grain 7 inches; potatoes 5 inches. Kenai Peninsula too wet and cold for farming activities. Some spring calving losses reported.

ARIZONA: Skies mostly clear over State and temperatures above normal. Some light showers at higher elevations in southeast but most rainfall amounts quite small. Higher temperatures accelerated cotton development. Early Yuma fields setting bolls. Half central area fields squaring. Small grain harvest continues active. Sorghum making satisfactory growth. Planting following small grain continues. Safflower showing good development. Sugar beet harvest continues active. Spring-planted beets making satisfactory progress. Cantaloupe harvest active Yuma area. Most fields holding up well, quality good. Salt River Valley cantaloupes making good progress. Limited grapefruit harvest continued Salt River Valley. New crop fruit sets good all areas. Early grape harvest full swing. Ranges supplying less than adequate amounts feed. Extensive supplemental feeding and hauling stockwater.

ARKANSAS: Warm and humid with weekly temperatures averaging in low 80's. Daily extremes: 60° to 103°. Showers early and late in week. Totals 1.00 to 2.00 inches central and northeast, elsewhere less than 1.00 inch. Stuttgart high with 2.24 inches. Crop growth mostly good. Rain needed, except east-central Delta where excessive moisture slowing growth and delaying weed control and late planting. Cotton mostly fair to good; growth improved, but crops still late. Early acreage squaring, some blossoms showing. Rice mostly good to excellent. Soybeans over 90%

planted as seeding following small grain harvest underway. Corn and sorghum making good growth. Early corn silking and tasseling stage. No Southern corn leaf blight to date. Sorghum starting to head earliest acreage, still planting some areas. Small grains 85% combined, many areas already completed. Summer fruit and vegetable harvest active. Peaches and tomatoes good supply. Cucumbers and apples beginning. Livestock good. Pastures need rain most areas to continue adequate feeding supplies. Haying making good progress.

CALIFORNIA: Warm weather continues most areas 1° or 2° above normal, but almost 7° above normal southeastern interior. Substantial rainfall on north coast and central and northern Sierras Friday and Saturday. Precipitation amounts about 2.00 inches in extreme north, on coast, and in Sierras. Barley harvest active Central Valley; wheat underway. Double crop milo planting continues. Alfalfa cutting active. Sugar beet digging Desert. Start soon Kern District. Cotton growth improving San Joaquin Valley; bolls forming Desert. Corn progress good. Rice growth good Sacramento Valley. Dry beans growth good; some planting continues. Fruit and nut crops developing favorably. Vineyards making good progress. Apricot, freestone peaches, plums, nectarines being packed; sizes, quality generally good. Harvest cherries virtually complete. Almonds normal progress. Prunes and pears developing well; good fruit sizes. Good yield and large sizes expected clingstone peaches. Harvest valencia oranges continues slow. Summer grapefruit harvest continues. Summer ranges very good. Stockwater adequate. Broccoli-cauliflower light Salinas and Santa Maria. Cantaloupes nearly complete Imperial; near peak Blythe. Carrots increased Salinas, King City; about steady Santa Maria. Celery light Orange and Oxnard; increase Salinas and steady Guadalupe-Oceano. Sweet corn at peak Desert; underway Kern District. Lettuce lighter Salinas; steady Santa Maria. Expect decline Stockton onions; seeded crop begins next week. Late spring potato harvest slow; fall crop planted. Market tomato volume heavy San Diego; increasing Visalia and starting Merced. Watermelons at peak Imperial.

COLORADO: Hot dry week. Maximum over 100° 4 or 5 days southeast and lower western valleys. Highest 108° Kit Carson. Few widely scattered mostly light local showers. Cooling trend indicated late Sunday. Hot temperatures drying all crops. Irrigation necessary all parts State. Topsoil moisture rapidly depleting. Maturity fall grains progressing substantially with 77% winter wheat and 81% winter barley turned color. Harvest winter wheat southeast underway. About 10% ripe. Conditions small grains good to fair. First cutting alfalfa 78% complete. Dry beans 99% seeded, 90% emerged. Potato condition improved. Sugar beets 92% thinned. Corn acreage 56% laid by. Range and pasture conditions fair.

FLORIDA: Showers and thundershowers dominated the weather pattern for Florida. Temperatures averaged near normal with most highs reaching into the mid-90's except along coast. Rainfall averaged 1.00 to 2.00 inches except 0.50 inch

southwest coast and 0.25 in Keys. Heaviest rain along southeast coast Palm Beach reporting over 5 inches and Miami 3.05 inches on Friday alone. Heavier thundershowers occasionally accompanied by hail and several funnel clouds and tornadoes Friday. Citrus good condition. New growth evident in most groves. Petals have dropped from scattered June bloom. Rains helping field crops recuperate. Some areas still dry. Crops generally good condition. Soybean, peanut planting complete. Tobacco harvest full swing. No change from last week on Southern corn leaf blight. Pastures and livestock improving response to recent rains and warm weather. Volume supplies watermelons, sweet corn, egg-plant available. Celery to finish this week. Other commodities light supply.

GEORGIA: Light to locally heavy scattered showers and thundershowers. Measurable rain 1 to 4 days most areas with amounts ranging from less than 0.10 inch to more than 3.00 inches. A few areas continued to need rain badly. Temperatures near seasonal with highs mostly in 90's except in mountains and lows in 60's and low 70's. Averages ranged from normal to slightly above. Soil moisture mostly adequate, but some areas very dry. Cultivation, hay making, grain and tobacco harvest very active. Wheat harvest 81%, oats 88%, peaches 25% and tobacco 15% complete. Seeding soybeans 86% and sorghum 80% complete. Crops continue to improve. Tobacco, corn, cotton, and peanuts now mostly good. Peanut farmers busy with gypsum moth application and disease control measures. Corn blight found in 10 additional counties and now in 13 counties. All on volunteer or T-cytoplasm plants. Does not seem to be threat to Georgia crop since most seeded with N-cytoplasm. Hay crops, pastures, and cattle conditions good. Thomas County truck crop area still dry. Watermelons and cantaloupe movement increasing. Yields below average.

HAWAII: Warm sunny weather favorable for crop growth and maturity. Use of irrigation water heavy all areas. Insect and disease damages kept at minimum by frequent sprayings. Harvest-sugarcane down from same period last year. Picking pineapples active. Canning plants full swing. Vegetable supplies adequate, but bananas light. Papaya supplies increasing. Pastures and cattle continue fair to good.

IDAHO: Temperatures averaged near normal in north to 2° to 8° above normal elsewhere. Greatest departures in the Magic Valley. Precipitation was general over the north with amounts ranging from 0.34 inch at Lewiston to 1.13 inches at Grangeville. Over remainder of State, amounts ranged from none at most stations to 0.09 at Parma and 0.20 at Hamer. Rains disrupted hay and cherry harvest. Hay 90% complete southern Idaho--about 15% elsewhere. Sweet cherries splitting due rains--harvest well underway. Forages and most field crops responded well to rains. Winter wheat late boot to heading stages north and east; headed to blooming south. Potatoes being cultivated and irrigated.

ILLINOIS: Very warm humid week. Coolest on 21st. Mid-period hot, very humid thundershowers north. Over weekend less cloudiness, hotter, some temperatures exceeded 100°. Daily minimum frequently 70's. Corn 52% excellent, 43% good, 4% fair, 1% poor. Average corn height 35 inches, most advanced 50 inches. Soybeans 30% excellent, 64% good, 6% fair. Some fields replanted. Wheat 2/3 ripe, 1/3 combined, slightly ahead last year. Oats 20%

excellent, 57% good, 19% fair, 4% poor. All first crop alfalfa cut. Red clover 70% cut. Pastures excellent 14%, good 36%, fair 34%, poor 16%. Soil moisture 52% poor, 48% adequate. Six days suitable fieldwork; main activities include cultivating, making hay, pesticide application, combining wheat. Southern corn leaf blight found all areas of State. Plant Pathologists recommend spraying for blight. Corn in early tassel stage with 10 or more lesions appearing on upper leaves will benefit most from fungicide sprays. Fungicide will only protect corn plants against new infections and will not kill fungus growth already in plants.

INDIANA: Cool, then warm and humid with some showers in north before a weekend of less cloudiness and heat. Highest reported maximum air temperature 99°. Week's evaporation 0.5 inch above normal. No reported relative humidities below 42%. Four-week rainfall least in northeast with average of 2.70 inches, 0.60 inch below normal. Five days suitable fieldwork. Topsoil and subsoil moisture adequate. Soybean planting nearly complete, height 8 inches, 7 usual. Corn 27 inches high, 20 usual, growth rapid. Sorghum 8 inches high. Wheat harvest starting, crop 20% ripe. Barley 10% combined. Rye 5% combined. Both behind average. Alfalfa hay 85% cut first time. Clover 60% cut. Pastures fair to mostly good.

IOWA: A hot dry week except moderate to locally heavy showers over some north-central, northeast, and east-central counties. The past week was the 4th consecutive with above-normal temperatures and, in southern divisions, the 5th consecutive with subnormal precipitation. Crops continued to make good progress. Some fields showing signs stress due hot dry winds and lack of rain. Corn 46% excellent, 49% good, 4% fair and 1% poor. Weed control mostly good. Infestation corn borers local areas western 1/3 Iowa. Southern corn leaf blight identified 40 counties. Infestation very low. Number of spores trapped remain very low. Soybeans mostly good to excellent, weed control good. Hail damage reported north-central, northeast districts. Virtually all oat fields headed. Over 90% 1st cutting alfalfa hay completed. Clover hay over 60%. Hay mostly good to excellent. Pastures generally good, but ranges from poor to excellent. Over 6 days suitable fieldwork. Topsoil moisture 37% short, 59% adequate and 4% surplus.

KANSAS: Hot and dry northern portion and western 2/3. Precipitation generally under 0.25 inch those areas. Moderate to heavy rains much south-east and parts east-central. Few localities had over 2.00 inches. Weekly mean temperatures averaged 4° to 10° above seasonal. Very hot June 24 to 26. Most maxima 95° to 111°. Hottest temperatures, 112° locally west-central 24th. Wheat harvest full swing central Kansas and moving to northern counties. Wheat 33% harvested, compared 49% last year. Wheat 64% ripe, 79% last year, 69% average. Moisture row crop fields rapidly depleted by hot windy weather, some corn rolling. Some corn tasseling and 61% laid by. Light Southern corn leaf blight infection dozen eastern counties, but dry hot weather limiting spread. Sorghum 91% planted, 88% last year and average. Stands and growth generally good, despite greenbug and weed problems. Soybeans 89% planted, 81% year earlier, average 88%. Grasshopper infestation building. Flies and heat bothered cattle and limited gains in feedlots. Pastures generally good, need rain. Livestock marketing slow during wheat harvest. Second cut-

ting alfalfa 32% cut, 28% last year, 31% average.

KENTUCKY: Sunny with spotty shower activity most days. Some weekly rainfall totals locally heavy, but little or none at a number of locations; totals ranging from more than 3.00 inches at Lexington, to less than 0.10 inch at a number of points. At Paducah, no rainfall during the week; as of the 27th it had been 26 days since a rain of at least 0.25 inch. Temperatures near or below seasonal becoming hot and humid latter part of the week with afternoon readings in the 90's. Fieldwork limited 4 days. Soil moisture 11% short, 69% adequate, and 20% surplus. Corn averaged 37 inches tall, with 9% fields tasseled. Weather conditions favorable for development and spread Southern corn leaf blight, but no real outbreak of fungus. Disease confirmed in 20 counties. Infection found primarily in volunteer corn. Soybeans averaged 9 inches high, double crop beans being planted following small grain harvest. Tobacco growth rapid but irregular; 10% acreage reset. Wheat 1/4 harvested, yields variable. Grass seed harvest active between showers. Pastures excellent. Tree fruit prospects good.

LOUISIANA: Summer pattern of scattered daily thundershowers prevailed. Weekly precipitation highly variable, near 1.00 inch to more than 3.00 inches south and trace to locally more than 1.00 inch in north. Temperatures near seasonal ranging from 2° below normal to 1° above normal. Temperature extremes: 100° De Ridder Thursday and 64° Ashland Wednesday. Greatest 1-day rainfall total 1.93 inches measured at 5 p.m. Thursday at Hammond. Soil moisture considerably improved by showers southern half State, most northern areas still deficient. Cultivation and layby corn and cotton active. Growth improving rapidly shower areas. Early corn silking and forming ears. Some cotton beginning to square and bloom. Cultivation and planting soybeans, sorghum, and sweetpotatoes continued. Soybeans 95% planted, sorghum 90%, sweetpotatoes 90%. Early plantings soybeans beginning to bloom and some sorghum headed out. Sweetpotatoes beginning to run, some lapping the middles. Rice making good progress, some fields beginning to head. Sugarcane growth improving, some buildups borers. Pastures and hay improved by showers, but still below average. Livestock mostly good.

MARYLAND AND DELAWARE: Warm and dry. Temperatures averaged 2° to 4° above normal. Extremes mostly 90°, low 50's to low 60's. Most stations little or no rainfall, only a few scattered totals over 0.50 inch. Farmers caught up on fieldwork during week. High temperatures speed moisture loss. Corn growing rapidly. Barley harvest 35% done, about normal, but behind last year. Wheat ripening, but none harvested. Soybean seeding 84% done, about normal. Hay harvest accelerated. Early peaches being picked south. Early summer apples expected week July 5.

MICHIGAN: In Lower Michigan, temperatures averaged 2° to 3° above normal in south, in north averages ranged from near normal to 2° below normal. In Upper Peninsula, temperatures averaged from 2° to 4° below normal. Only minor day-to-day changes until becoming hot and humid over weekend. Jackson reported 101° Sunday, 27th, and 100° was reported at Saginaw and Traverse City. A few isolated areas received from 0.50 to 0.75 inch of rain during week but generally amounts of 0.10 inch or less were more common. Many stations no precipitation. Southwest and west-central continue very dry. Warm weather speeded wheat

towards maturity and stimulated crop growth where soil moisture was adequate. Dry soils limited crop growth Lower Peninsula. State averaged 5.6 days fieldwork. Soybean and fall potato planting about finished. Dry bean planting nearing completion. Oats 50% headed, winter wheat 40% turning yellow. Corn and oat development limited by dry soils Lower Peninsula. About 60% 1st cutting hay made, dry weather and alfalfa weevils reduced hay yields. Pastures supplying less than average amounts feed southern 2/3 Lower Peninsula. Sweet cherry harvest started southwest. Peach thinning continues. Strawberry harvest nearing completion southwest and starting northern Lower Peninsula. Dry soils limiting vegetable development.

MINNESOTA: Warm week with temperatures averaging 2° above normal. Precipitation variable across State, from 0.50 to 2.50 inches. Severe weather late afternoon and evening on 24th on line from Redwood Falls through Rochester caused severe crop, hail damage in Le Sueur County and strong winds caused property damage in Rochester of over \$1 million and also caused several injuries. Crop progress continues good. Corn height 20 inches, normal 14; soybeans 8, normal 6. Corn cultivated twice 42%, normal 34%. Flax blooming 20%, normal 12%. Southern corn leaf blight identified 4 southern counties. Alfalfa cut 73%, normal 66%; quality fair to good. Small grains headed: Spring wheat 52%, normal 23%; oats 60%, normal 36%; barley 54%, normal 24%; winter wheat 95%, normal 79%. Rye turning ripe 19%, normal 6%. Topsoil moisture adequate.

MISSISSIPPI: Temperature averages were near normal with extremes 60° on 23d at Corinth and Tupelo to 99° on 23d and 24th at Moorhead. Precipitation in scattered daily thunderstorms mostly under 1.00 inch with heaviest, 3.13 inches, at Biloxi on 23d. Numerous reports of hail, some golf ball size. Wind damage in several areas with over \$50,000 damages at Yazoo City. Scattered thunderstorms, hail up to golf ball size, and scattered wind damage with little change in temperatures over weekend. Soil moisture short to adequate eastern half and mostly adequate western half State. Winter wheat 77%, oats 78%, hay 42%, peaches 22% and Irish potatoes 68% harvested. Soybeans 87%, corn 98%, sorghum 88% and sweet potatoes 85% planted. Cotton mostly fair condition with 25% squaring and 7% setting bolls. Corn, hay crops, rice, sweet potatoes, peaches and truck crops fair to good condition; while soybeans, pastures and livestock mostly good. Fieldwork 5 days.

MISSOURI: Hot dry week. This was 4th straight week with temperatures above normal. By late in week maximum temperatures were near 100°. Precipitation spotty with only a few stations reporting more than 0.50 inch of rain for week. Missouri farmers worked average about 6 days during week. First cutting alfalfa 96% completed and 14% 2d cutting finished. Clover-timothy hay harvest 56% completed. Wheat 33% harvested. Soybeans and corn mostly good condition. Pastures fair to good. Soil moisture short to adequate across State.

MONTANA: Warm all week until sharply cooler last 2 days. Precipitation ranged from heavy southwest and parts of central to little or none southeast and north-central. Missouri River headwaters streams above Three Forks had shallow flooding from weekend rains. Soil moisture short but relieved southwest and central over weekend. Spring grains good. Five % excellent condition,

70% good, 25% fair. Condition winter wheat 30% in boot. Winter wheat 10% excellent, 75% good, and 15% fair. Hail damage occurred several counties central and north-central divisions. First cutting alfalfa 25% harvested.

NEBRASKA: Hot and dry. Local showers. About 50% topsoils short of moisture, due hot windy conditions. Over 90% subsoils have adequate moisture. Crop damage from hail spotted portions central and south-central. Wheat crop maturing rapidly with 10% ripe. Harvesting begun southern counties. Corn development good, but corn borer infestations increasing eastern areas. Corn leaf blight found 7 additional counties, but hot dry weather slowed development of disease. Sorghum and soybeans making good growth. Farmers busy with weed control measures. More than 90% 1st crop alfalfa harvested and 2d cuttings have started few areas. High temperatures causing discomfort to livestock.

NEVADA: Cool, windy and rain over northern Nevada Friday and Saturday dropping temperatures 3° below weekly normal northwest. Otherwise temperatures average 3° to 5° above normal. Precipitation light to moderate in north averaging 0.20 to 0.40 inch. Owyhee: 1.07 inches Winnemucca 1.00 inch. No precipitation in south. Alfalfa hay harvest in progress, except north-eastern areas. Earlier weather conditions caused hay quality to deteriorate some northern areas. Alfalfa 2d and 3d cuttings underway southern valleys. Cattle and sheep remain good condition. Range feed conditions good central and north.

NEW ENGLAND: Warm week but no unseasonally extremes. Averaged mostly 2° to 6° above normal except somewhat below normal in Vermont and in Massachusetts Berkshires. Showers and local heavy thunderstorms many areas June 21 and 25. Total rainfall varied from none to nearly 3.00 inches, but was mostly 0.50 to 1.50 inches. The least fell in the extreme south where this is the 6th dry week in row. Pastures responding to recent moisture, but still need rain. Haying active northern areas. Many farmers southern areas have 1st cut in barn. Quality excellent. Strawberry harvest at peak with good yields and excellent quality. Cranberry bogs need rain. June apple drop appears normal. Aroostook County potato growers busy cultivating and spraying for weeds. Vegetable crops responding well with aid of irrigation.

NEW JERSEY: A warm week with temperatures averaging from 2° to 6° above normal. Rainfall was spotty with station totals varying from zero to 0.90 inch. North Jersey averaged 0.30 inch and the central and southern interior 0.20 inch with only 0.10 inch reported along the coast. Few widely scattered showers received, but most areas very dry. Irrigation active where available. Lettuce harvest declining. Cabbage good supply. Escarole, squash, snapbeans, beets, eggplant, and sweet corn available light to moderate volume. Blueberry harvest increasing. Early summer variety apple harvest will begin next week. Limited barley combining underway. Sweet corn leaf blight detected 2 locations Salem County. Weather conditions favoring spread. Pasture and hay fields need rain.

NEW MEXICO: Scattered very light showers mostly in mountains. Gradual warming with mild nights. Average temperatures much above normal in west

and slightly below normal in southeast. Soil moisture very short. Showers limited value. Harvest wheat, barley continues. Wheat past 3/4 cut. Planting dryland sorghum, broomcorn about finished. Irrigated sorghum, alfalfa, cotton, peanuts, other crops progressed good. Ranges poor, livestock mostly fair. Supplemental feeding, hauling water extensive. Need rain.

NEW YORK: Hot and dry southeast but seasonal temperatures elsewhere. Maximums mid-70's interior Upstate early week and again on 26th but ranged up to 85° to 90° in southeast daily latter half of week. Precipitation 1.50 to 2.50 inches northern half relieved dry conditions of previous 3 weeks. Elsewhere precipitation totals ranged from very light southeast quarter up to 1.50 to 2.00 inches near Lake Ontario with 0.30 to 0.70 inch southwest quarter. First cutting alfalfa approximately 75% complete. Excellent quality. Pastures deteriorating; moisture adequate to short. Growth 2d crop hay slow. Corn making rapid growth. Dry beans good. Additional moisture needed. Fruit good condition. Apple set good. Sweet cherry harvest Hudson Valley underway. Prospects good all areas. Average crop tart cherries expected; some light set. Peach and pear condition fair to good. Grape bloom general -- favorable weather enabling crop to catch up. Strawberry harvest active, good quality. Sweet corn tasseling. Iceberg lettuce Orange County in volume June 28; Oswego, Orleans, Genesee Counties volume about July 10. Onions remain behind schedule, but good condition. Celery harvest begins mid-July.

NORTH CAROLINA: Temperatures averaged near normal with little day-to-day change. Precipitation variable trace to 5.00 inches, mostly 0.50 inch to 2.00 inches. Widely scattered thunderstorms, a few with hail. Soil moisture mostly adequate except surplus northern mountains and other local areas. Tobacco and corn slightly improved. Mostly good. Cotton improving. Apples and peaches good. Other crops mostly good. Small grain harvest gaining momentum, but behind last year. Hay cutting 45% complete. Peach picking, cabbage cutting, cucumber and vegetable harvest active. Flue-cured tobacco harvest just beginning border belt.

NORTH DAKOTA: Temperatures averaged 1° to 3° above normal. Little daily variation. Scattered thunderstorms throughout week. Most stations reported amounts between 0.50 to 1.00 inch with few stations reporting up to 2.00 inches. Adequate moisture supplies favor good crop development. About 2/3 hard spring wheat and over 1/2 durum has reached boot stage or beyond. About 1/2 rye and winter wheat in milk to dough. Severe storms with hail and winds caused light to severe damage to some fields local areas. Weeds causing problems row crops.

OHIO: Hot and very humid 24th to 27th. Severe thunderstorm activities over western 2/3 of State night of 25th. These storms uprooted hundreds of trees and gave rainfall amounts of up to 5.00 inches. Flash flooding occurred along the Little Miami and Scioto Rivers or their tributaries south of Interstate 70 on 26th and 27th. Rainfall amounts of 2.00 to 4.00 inches were common in those areas hit by the Friday night storm. Temperatures over the western 1/3 of Ohio soared into the upper 90's on 27th. These were the highest temperatures recorded over such a large area in several years. Seven days favorable fieldwork. Soil moisture

supplies 75% short, and 25% adequate. No surplus supplies. Corn height 24 inches compared 23 inches last year, and normal 16 inches. Height soybeans 9 inches, last year 8 inches. Almost all tobacco transplanted. Alfalfa 1st crop harvest 95% finished, same last year. First crop clover-timothy harvest 75% completed. Wheat 80% turning and starting to ripen, 1970 30% ripe. Wheat harvest expected to start early July. Oats virtually all headed with 15% turning, usual 10% turning. Barley 15% harvested, same as 5-year average.

OKLAHOMA: Rainfall averaged generally less than 0.10 inch western 2/3 state and 0.20 to 0.60 inch eastern 1/3. Temperatures were near normal southern 1/2 state and 2° to 3° above normal northern 1/2. Extremes: 107° and 56°. Small grain harvest wrapup stage; wheat 91% complete, oats and barley 95%. Yields above expectation some northern localities. Planting row crops essentially completed, except few localities where dry soils prevented planting. Growth good. Condition corn mostly good to excellent, other row crops fair to good. Slightly over 1/5 corn crop tasseling, 3% dough. Sorghums, cotton, peanuts 80% to 90% up to acceptable stand, about same year ago. Sorghums 1% headed, 3% year earlier. Soybeans 3/5 up to stand, 4/5 year ago. Second cutting alfalfa almost 1/2 completed. Surface soil moisture declined; 47% short, 53% adequate. Subsoil about same. Pastures responding to recent moisture. Heavy grasshopper infestation south central areas. Livestock good.

OREGON: Mild temperatures furnished hot midweek with moderate showers first and last of week, heavy along south coast. Temperatures averaged mostly 2° to 6° above normal except near normal to 3° below normal along coast. Minima 35° to 55°. Maxima 67° to 80° along coast, elsewhere 85° to 92° except up to 98° east central border. Precipitation 1 to 3 days east side, 5 to 7 days west of Cascades. Totals mostly 0.10 to 0.30 inch east side and southwestern valleys with 0.60 to 0.70 inch northeast. Remainder western Oregon 1.40 to 1.80 inches except 2.00 to 3.10 inches southern 2/3 of coast. Recent rains hindered haymaking and hurt quality. Harvest of good strawberry crop well underway. Sweet cherry picking underway at The Dalles, nearly complete Milton-Freewater. Green pea harvest continues with good yields. Onions and potatoes making good growth. Summer ranges providing good feed for livestock.

PENNSYLVANIA: Seasonally warm first half, hot and humid thereafter. Temperatures averaged 2° to 4° above normal and 6° to 8° above previous week for warmest period since mid-August 1970. Extremes = 46° northeast Wednesday morning to 93° south-central Friday and Sunday afternoons. Except for a few local mountain areas from Somerset northeast through Tioga County, where 1.00 to 2.00 inch rain and eastward through Susquehanna County where 0.25 to .59 inch, this was the driest week since April. Most places in western and southern sections reported less than 0.10 inch. Haymaking full swing. Barley harvest expected to begin this week. Wheat headed and turning color. Oats heading fast. All grains have some lodging. Tobacco transplanting still active. Early-planted potatoes blooming. Sweet cherry harvest beginning. Green pea harvest started. Southern corn leaf blight identified Chester, Berks, Lancaster, Franklin and York counties; on bottom 2 or 3 leaves.

PUERTO RICO: Islandwide rainfall averaged 0.94 inch, almost 0.50 inch below normal. Rain well distributed around Island as all divisions received good amounts at some areas. Oddly enough, eastern interior division had lowest weekly average. Individual totals ranged from 3.71 inches to none at very few locations. Crop moisture conditions still too dry for satisfactory growth, especially eastern interior. Temperatures averaged 80° in coastal sections and 75° interior divisions with average departure 0.3° below normal. Extremes: 94° and 57°. Good weather generally for all field activities sugarcane zones. New plantations and ratoons developing normally. Also weather most favorable for pruning, fertilizing, and cleaning coffee trees many areas. Pastures looking good and developing well. Good weather for sowing, cultivating, and development minor crops. Farmers busy preparing new plots and fertilizing those recently planted.

SOUTH CAROLINA: Numerous thundershowers and slightly cooler first of week with decreasing shower activity and rising temperatures at end of period. Temperatures 1° to 2° below normal in Piedmont to slightly above in southern. Rainfall averaged about 0.50 inch in northwestern South Carolina to locally heavy in central and south. Soil moisture adequate all areas. Field activities limited by rain and wet fields. Tobacco condition good to excellent; 3% harvested. Cotton fair to good, additional acreage plowed up, 52% squaring. Corn good to excellent; 26% silked, 5% dough stage. Soybean plants good to excellent. Sorghum 83% planted. Stands and plants good to excellent. Peanut condition good to excellent. Plants mostly good. Peaches 8% harvested. Wheat 68% and oats 91% harvested. Grain hays cutting virtually complete. Other hay crops and pastures fair to good.

SOUTH DAKOTA: Weekly temperatures averaged up to 7° above normal. Extremes: 53° at several stations on 22d and 23d to 101° at Yankton on 26th. Showers and thundershowers scattered through week with totals ranging from 0.01 inch to over 2.00 inches. Rapid crop growth and development maintained throughout week in major row crop areas. Alfalfa 1st cutting nearing completion. Harvest wild hay beginning. Topsoil moisture mostly adequate, but shortages developing some areas. Good general rain would be welcomed. Heading spring grains should be complete this week, well ahead normal. Some local hail damage, particularly north-central areas. Winter wheat and rye fields turning color. Corn over 18 inches high for State, making excellent growth. Second cultivation well advanced many areas. Extensive corn borer infestation 7 southeastern counties. Southern corn leaf blight identified to light degree Union, Clay, Yankton and Brookings counties. Pastures and ranges maintaining good to excellent growth. Livestock good. Flies and mosquitoes becoming problem.

TENNESSEE: Warm and humid week. Temperatures in 90's common over weekend. Scattered thunderstorms early in week, becoming more numerous late in period. Total rainfall 0.25 inch to 2.00 inches, with a few localities in west getting up to 3.00 inches. Scattered hail. Grain harvest and row crop cultivation dominated farm activities. Conditions were good for rapid row crop growth. Nearly all wheat ripe and harvest 55% complete. Over 95% oats ripe and 40% cut. Barley harvesting 68%

complete. Soybean planting complete, except for some areas west; 85% soybeans planted emerged. Hay harvesting still in progress. Rains slowed harvesting and damaged hay some areas. Pasture conditions mostly fair. Harvesting underway for tomatoes, snap beans, and cabbage and squash. Days favorable fieldwork averaged 4.3. Soil moisture 68% adequate, 22% short and 10% surplus.

TEXAS: Scattered showers in eastern half of State Tuesday with a few rains of 2.00 to 3.00 inches in the Commerce, Corsicana area. General showers of 1.00 to 2.00 inches fell on southern and south-central Texas over weekend. Significantly heavy downpours of 4.00 to 5.00 inches in Eagle Pass Winter-Garden areas. Twenty-four hour rainfall amounts included Eagle Pass, 4.59 inches, Blewett 4.85 inches, Brackettville 3.70 inches, Hallettsville 3.25 inches, Gonzales 10SSW 3.85 inches, Dilly and Yoakum 2.80 inches, and 5.00 inches on Turkey Creek above Crystal City. Rains southern half State brought relief and improved range and pasture prospects. Second hay cuttings in progress, prospects poor. Cultivation, insect control measures main activities most farmers. Ranchers continue culling herds. Heavy weevil and fleahopper damage to cotton crop Coastal Bend, Lower Rio Grande Valley, Upper Gulf Coast. Percent harvested major crops, wheat 73, 77 last year; oats 99, 97 last year. Percent planted: Cotton 98, 100 last year; sorghum 96, 98 last year; peanuts 79, 83 last year; soybeans 92, 94 last year. Watermelon harvest continues active Winter Garden, underway south central with early melons ripening central, East Texas. Cantaloupe harvest continues Winter Garden, Presidio, starts Pecos, North Texas mid-July. Onion harvest complete Presidio, Winter Garden, getting underway Fort Stockton, High Plains. Potato digging nearly complete Munday getting started High Plains. Central East Texas harvesting light supplies cucumbers, tomatoes. Citrus prospects enhanced by showers. Peaches being harvested cross timbers northeast Texas with early varieties ripening Gaines County. Pecan prospects fair most areas.

UTAH: Few scattered light thunderstorms over weekend northwest. Otherwise no precipitation. Temperatures averaged 3° to 10° above normal. Soil temperatures 4-inch depth ranged from low 70's Cache Valley to upper 70's Salt Lake City Airport, near 80° at Richfield and 90° at St. George. Above-normal temperatures spurred growth crops and range grasses. Rank growth of grass in Foothills cured rapidly and several grass fires have occurred. Percent spring grain acreage headed out: 55 to 60 for wheat and barley, 50 oats. About 70% 1st crop alfalfa cut. Some 1st crop hay rain damaged. Sweet cherry harvest started June 25. Range feed good. Cattle and sheep thriving high country.

VIRGINIA: Temperatures above normal except below normal at midweek. Scattered showers and thunderstorms at midweek. Totals from none to over 1.00 inch in southwest and southeast. Crops grew well. Weed problems. Little corn silked. Little corn and tobacco drowned. Planted and cultivated soybeans. Rain, high humidity and late maturity restricted small grain harvest. Barley 34% harvested, oats 18% and wheat 5%. Lodging common. Scab damaged some wheat. Digging Irish potatoes; harvested snap beans and cabbage. Pastures excellent.

WASHINGTON: West of Cascades: Mostly cloudy with rain throughout week. Average temperatures near normal. Rainfall amounts ranged from 0.26 to 1.50 inches. Mt. Rainier-Paradise R.S. reported 2 inches snowfall Friday. Cool rainy weather slowed corn growth, but ideal for green peas. Cauliflower harvest started. Strawberry harvest underway, but proceeding slowly as berries slow ripening. Raspberry plants look good. Start harvest around July 1. East of Cascades: Average temperatures slightly above normal. Warm Monday through Wednesday with maximums in 80's and 90's. Rain first and last of week with varying amounts from zero to 0.35 inch. Haying slowed by wet weather. Early areas harvesting 2d cutting. Cherry picking continuing, although rain causing concern. Apple thinning continues. Some orchards northern counties have high percentage hail-marked apples. Wheat and barley heading mostly completed. Aphid infestation wheat and barley starting to cause concern. Good crop top quality strawberries in view. Most hay cut received considerable damage. Yields less than normal.

WEST VIRGINIA: Heavy thunderstorm rainfall June 25 and 26 southern half of State. Only other rain fell June 21 from scattered thunderstorms. Warm, hazy, and humid most of week. Crop development and pasture growth has not overcome cooler than normal weather earlier in season and are generally 2 weeks behind last year. Soil moisture short to adequate. Fieldwork possible average 5 days. Most corn emerged and making good progress. Tobacco 90% set. First cutting hay slowed by rains, 50% cut.

WYOMING: A warm dry week with only the Black Hills of Wyoming receiving significant moisture. There were occurrences of 1-to 2-inch hail in northeast Wyoming. Sundance reported the most moisture with 1.67 inches. Temperatures averaged from 3° to 11° above normal. Maxima were mostly 85° to 95° west of Divide and Upper Platte drainage, 90's elsewhere. Minima were mostly 35° to 45° west of Divide, 45° to 55° east. Temperature extremes: 100° at Basin and Worland and 35° at Evanston. Main agricultural activities were irrigating, haying, tending young stock, and finishing up spring operations. Sugar beet thinning nearly completed. Crop seeding generally finished. Haying progressed well with 20% 1st crop alfalfa cut. Cutting clover hay begun most areas. Livestock and summer ranges good.

WISCONSIN: Generally above normal temperatures and near normal precipitation. Very warm and humid Sunday with temperatures well into 90's. Rainfall averaged 0.40 inch over northern 1/3 of State and near 0.60 inch over remainder of State. Hay half in. Behind last year when 2/3 done. Poor haying weather. Quality not as good as earlier. Second crop growing well. Corn growing well with moisture and warm weather. Some early corn above knee high. Oats 40% headed, last year 50%. Small grains look good. Some lodged by severe storms. Pasture conditions improving with rainfall. Soybeans excellent. Tobacco still being transplanted. Strawberries good. Pea harvest going good some areas, poor where moisture was short. Potatoes doing fine. Other vegetables good. Good growing conditions exist for all crops.

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WEEKLY WEATHER AND CROP BULLETIN

The Weekly Weather and Crop Bulletin is issued on Tuesday of each week or on Wednesday if a holiday falls on Monday or Tuesday. It is prepared jointly by the Agricultural Climatology Service Office, Environmental Data Service, National Oceanic and Atmospheric Administration, U.S. Department of Commerce and Statistical Reporting Service, U.S. Department of Agriculture. It is printed and mailed by the U.S. Department of Agriculture.

The Bulletin contains an account of weather and crop conditions throughout the United States for the week ending at midnight Sunday. It covers the effects of weather on crop development and farm operations. Special features are "Weather of the Week" and "National Agricultural Summary." These articles, included each week, relate to the effects of weather on crop progress and farm operations, with special mention of the development of the more important crops. Tables and charts show temperature and precipitation data throughout the Country. "Condensed State Summaries" are prepared jointly by the Climatologists of each State in cooperation with the State and Federal agricultural agencies concerned with the crop and farm progress in each State.

Other features of the Bulletin include maps showing accumulated growing degree days, for the U.S. and Southern Ontario, Canada, the crop moisture index, and, bimonthly, the "Average Monthly Weather Outlook."

Information contained in the Bulletin is released to representatives of several news services and others at noon, e.s.t., on the day of publication.

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Lucius W. Dye, Editor

FROST-SEASON PRECIPITATION

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As a byproduct of some ongoing research to delineate soil areas having high leaching potential, it was possible to construct a map portraying the precipitation pattern during the frost season. Frost season is the period between the mean date of first fall occurrence of 32°F and

mean date of last spring occurrence of 32°F. These dates and the associated precipitation amounts were extracted from "Climates of the States" (1). The isohyets depicted on the map of Figure 1 were positioned by linear interpolation between points for about 700 stations.

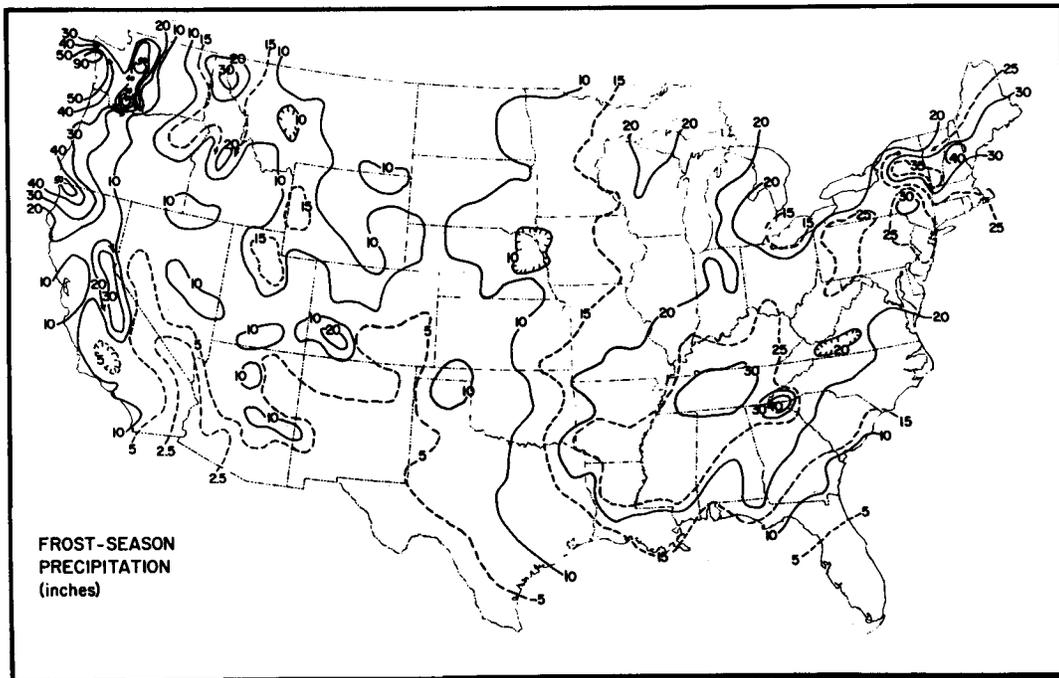


Figure 1. Frost-season precipitation (inches). Data from approximately 700 stations were used to define the position of the isohyets.

Where the frost-season is very short, as in southern Florida, the ratio of frost-season precipitation to annual precipitation is less than 10 percent. In western Wyoming, where temperatures drop to the freezing level nearly every day of the year, this ratio is near 100 percent. About three-fourths of the conterminous United States receives considerably more than half of its annual precipitation during the frost season.

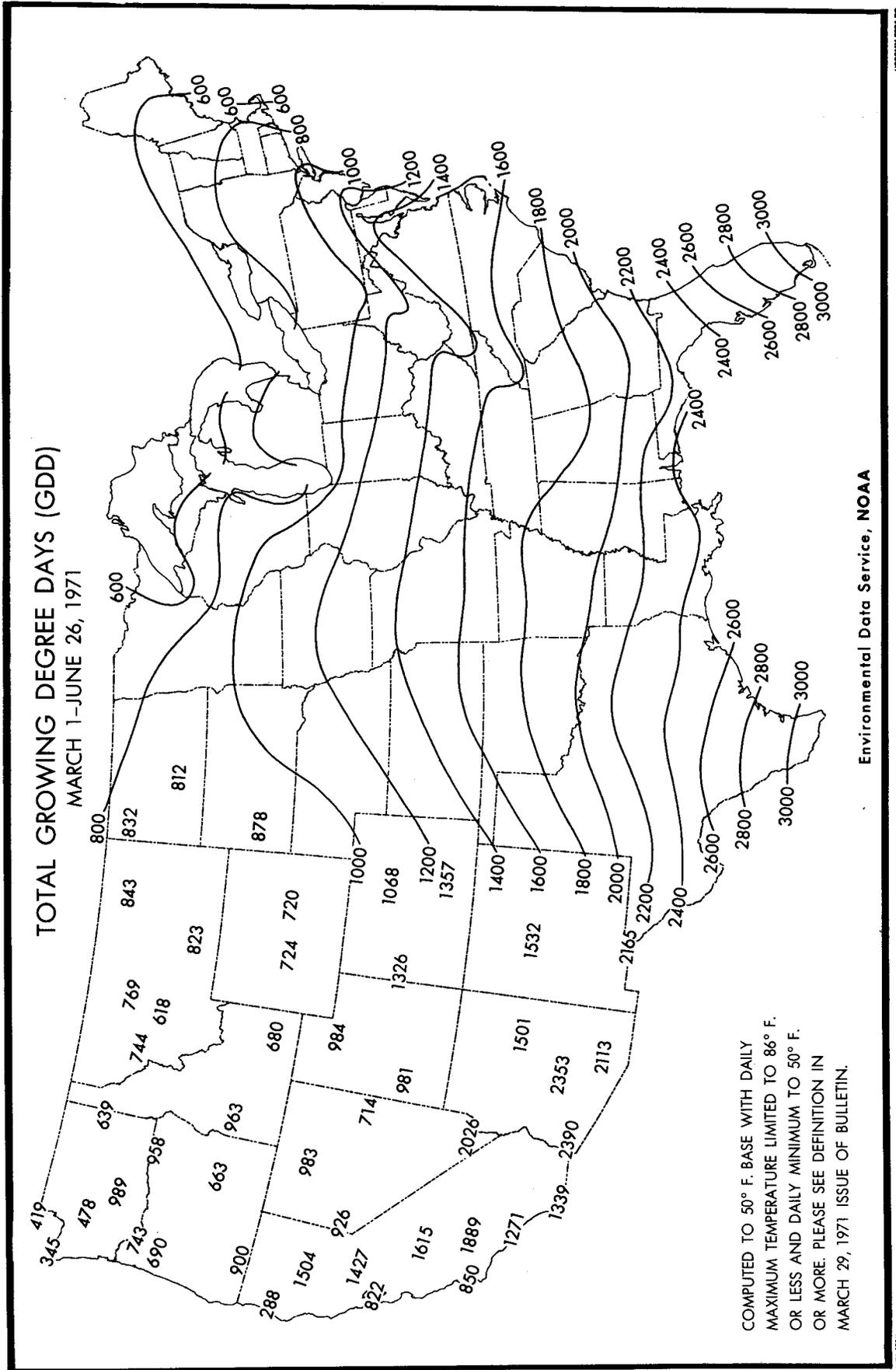
Much attention is currently being focused on the problem of water pollution by nitrogen compounds. Waste effluents from industry and municipalities are known sources. However, the sharp rise in the use of nitrogenous fertilizers over the past few years has emphasized the need for clarifying the effect of these compounds on water quality. Of particular interest is the fate of nitrogen fertilizers applied in excess of crop needs. Allison (2) reviewed the sparse available data on nitrogen loss by leaching and concluded that the problem is at a minimum during the crop growing season because water loss by evapotranspiration and plant intake of the nitrogen leave little for downward movement. Soils, usually dry at the end of the summer, are recharged by fall and winter rains. Early spring rains and snowmelt on wet soils frequently cause runoff and percolation rates to be higher during this season than

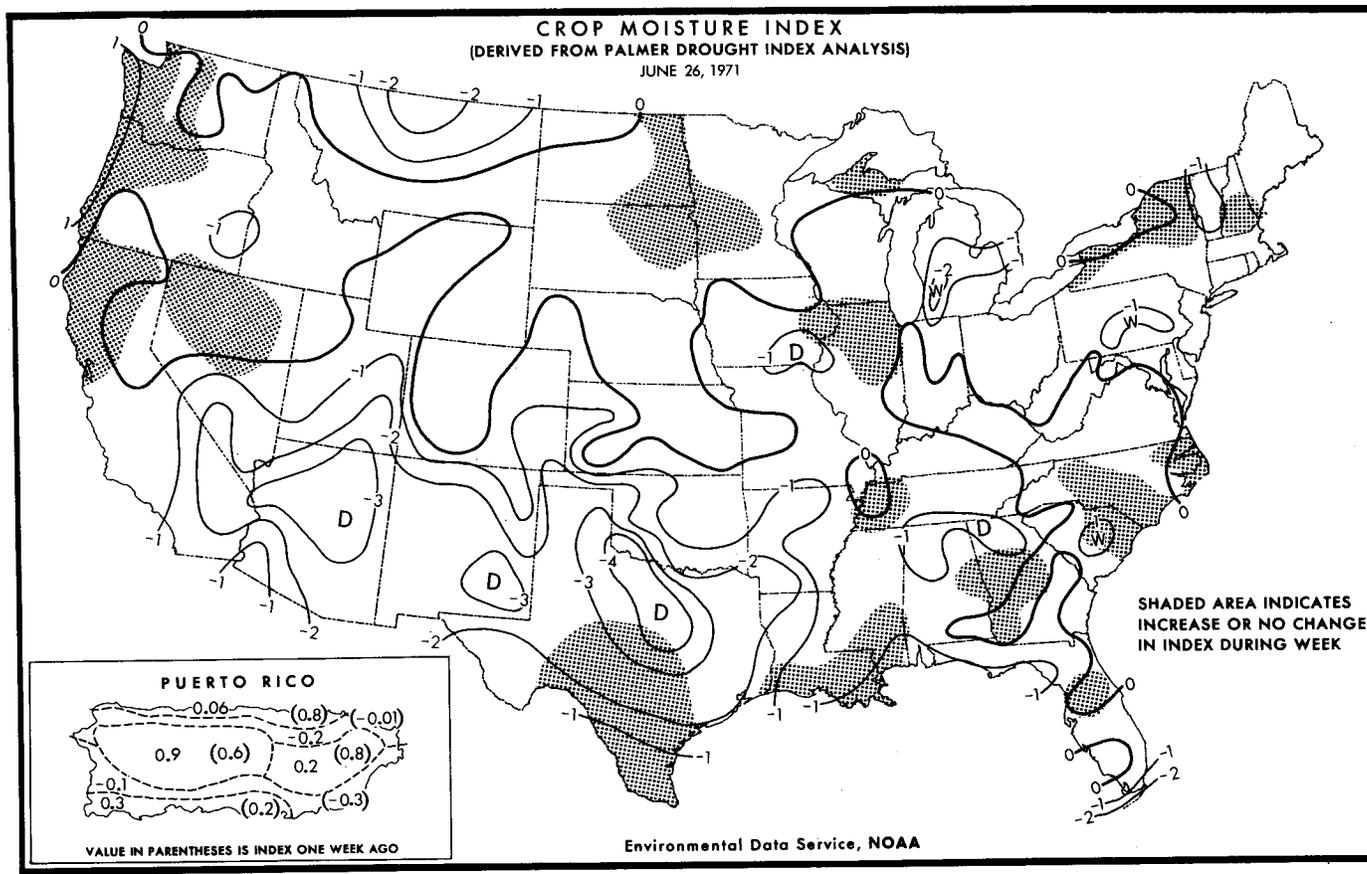
at any other time of the year.

In a recent state-of-the-art report (3), it was pointed out that "the critical period when nitrate is most susceptible to downward leaching is the non-growing season. In areas where soils remain unfrozen and winter rainfall occurs, the need for nitrogen fertilizers at the beginning of the growing season varies directly with the amount of rainfall during the preceding winter." Although the above map does not distinguish between rain and snow, it might be considered an aid in identifying potential problem areas where precipitation is high during the non-growing season.

LITERATURE CITED

- (1) U.S. Weather Bureau, 1959, 1960. *Climates of the States, Climatology of the United States*, Nos. 60-1 to 60-48.
- (2) Allison, F. E. 1966. The fate of nitrogen applied to soils. *Advan. Agron.* 18:219-258.
- (3) Stanford, G., C. B. England, and M. H. Frere 1970. *Fertilizer Use and Water Quality*. U.S. Dept. Agr. ARS 41-168.





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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