

Weekly Weather & Crop Bulletin

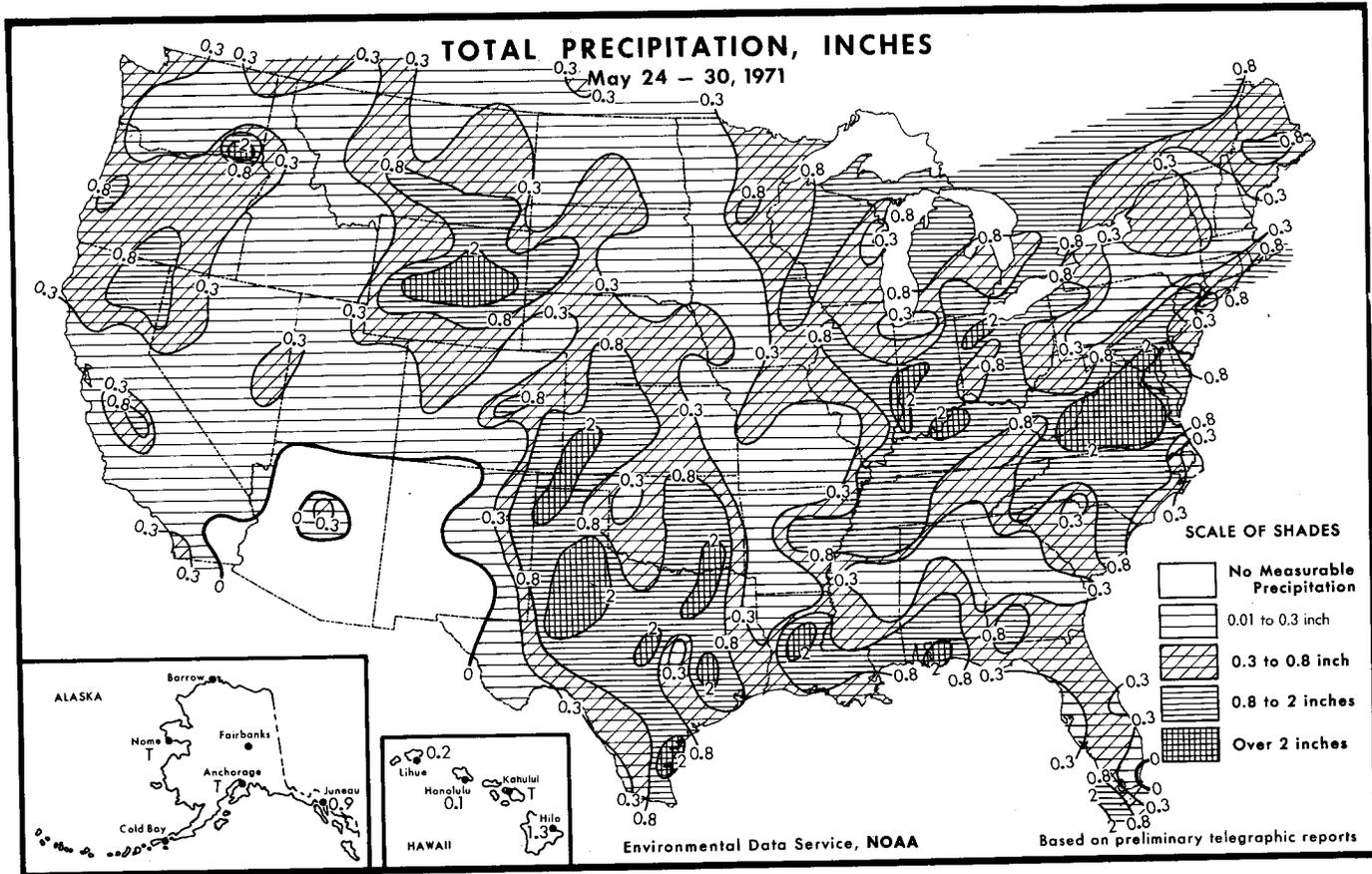
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NATIONAL WEATHER SUMMARY

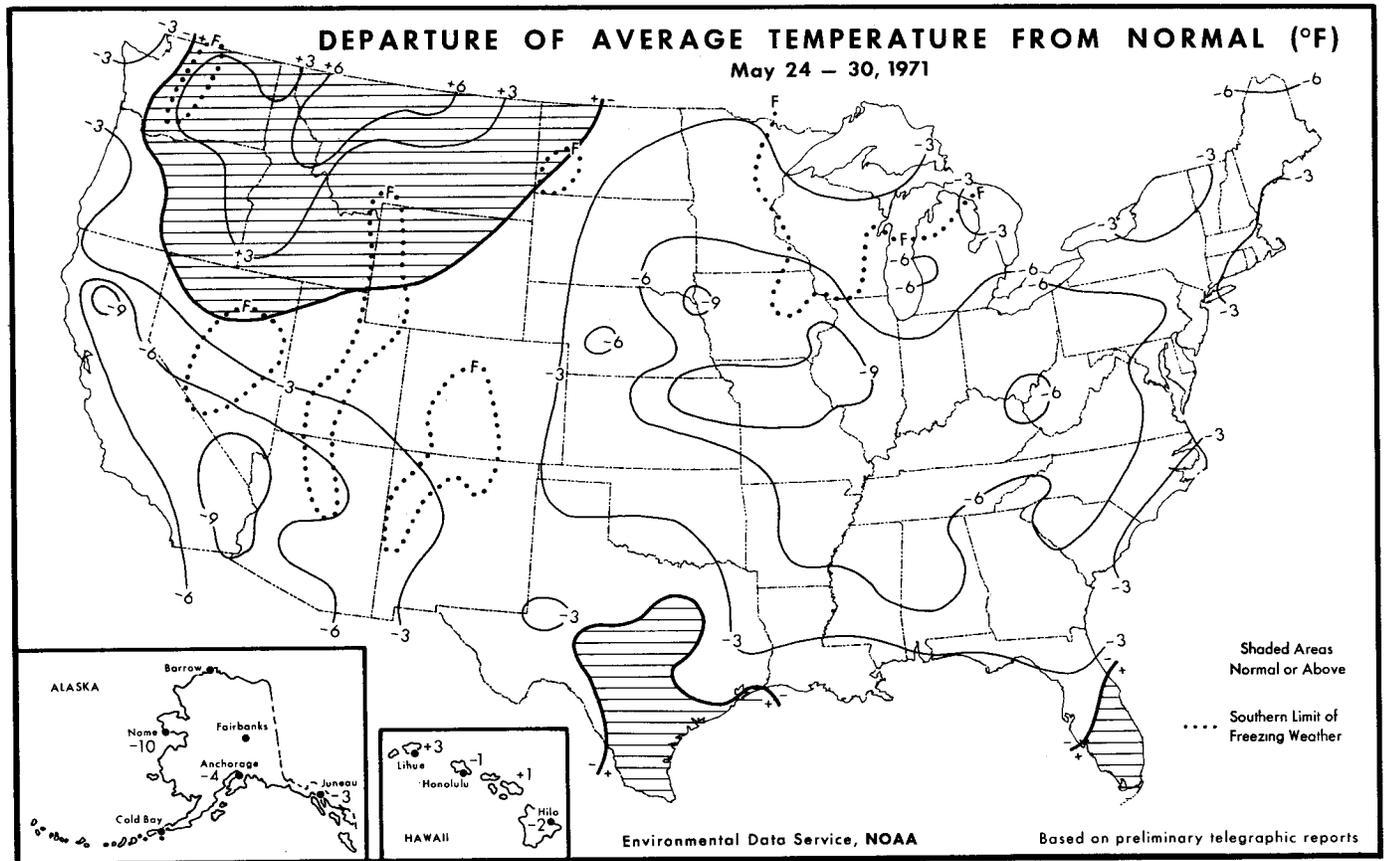
HIGHLIGHTS: Cool temperatures prevailed over most of the Nation. Substantial rains fell in some of the Texas drought areas. Heavy thunderstorms and a few tornadoes struck mid-America. Weekend rains flooded some streams in Maryland and the Virginias.

PRECIPITATION: A storm system, centered over the central Great Plains Monday, May 24, moved toward the Great Lakes. Warm humid air from the western portion of the Gulf of Mexico covered the area east of the storm. Showers, thunderstorms, and numerous tornadoes occurred in the moist air. The storm activity was most severe in eastern Arkansas and Illinois early in the week but the storm center moved eastward by midweek when severe weather occurred from Ohio to Alabama. On Monday, a tornado at Whitney, Texas, about 50 miles south of Ft. Worth, killed 1 person, injured 50 or more persons. Other tornadoes overturned mobile homes,

damaged trees, and unroofed buildings. Hail up to 1 inch in diameter fell at Jacksonville, Ill. Corpus Christi received 3.55 inches of rain in the 24-hour period ending at 7 a.m. Tuesday.

At midweek, thunderclouds towered to 10 miles high over Oklahoma producing thunder, hail, high winds and heavy rain.

Some previously dry areas received rain late in the week and over the weekend. Among these were the farming areas of California and eastward to the western edge of the Great Plains. Weekend showers dampened the Rocky Mountains and the Great Plains. Some areas in the central and southern Great Plains received heavy thundershowers accompanied by large hail and strong winds. A tornado toppled tombstones near Russell, Kans. A storm moving northward along the Atlantic Coast over the weekend brought light to heavy rains to the coastal States. Some streams in West Virginia, Virginia,



and western Maryland overflowed their banks. The dismal weather soaked the coastal areas and dampened the spirits of vacationists.

TEMPERATURE: Early in the week, a storm lay over mid-America. Warm humid air streamed northward over the eastern half of the Nation. South Bend, Ind., warmed to 81° Monday afternoon. Afternoon temperatures in the Great Plains ranged from the 50's and 60's in the Dakotas to the 80's in Texas. Temperatures were much cooler in the West, especially in the high Rockies. Leadville, Colo., registered 16° Monday morning.

As the week progressed, the Low moved across the Great Lakes to Canada and by late Wednesday, a High was centered over southern Minnesota. Chilly Canadian air cooled the East and southerly breezes warmed the West. Worland, Wyo., recorded

87° Wednesday afternoon. A front extended across Kansas from west to east. Topeka's maximum Wednesday was 62°. In sharp contrast, Wichita, south of the front warmed to 82°. Cool air covered the Far Southwest on Thursday and Friday. On the latter day, the maximum temperature at Yuma, Ariz., was 68°; the normal is 98°.

Weekly mean temperatures were below normal over most of the Nation. The main exceptions included a large area from central Washington to extreme western North Dakota and southward to northern Nevada, southern Texas, and the southern part of the Florida Peninsula. The lower Missouri River Valley averaged about 10° below normal. Portions of the Southwestern Deserts averaged 8° to 10° cooler than normal.

L. W. Dye

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: * Soybean planting made rapid progress. * Cool temperatures delayed growth of crops in the eastern half of the Nation. * Corn planting winding up in Corn Belt. * Pasture feed conditions continue short in southwest.

SMALL GRAINS: Small grain harvest picked up in the South as weather permitted. Wheat harvest gained momentum. Combining began in southwestern and central Oklahoma and continued in Texas. Wheat in Kansas is 92% headed compared with 96% last year. Some 8% had turned color. Considerable hail damage occurred locally in central and west-central counties of Kansas and southern and western Nebraska. Rain during the week benefitted the crop.

Planting of spring wheat is virtually completed in Montana and North Dakota. Seeding of spring oats and barley was completed in Montana and nearly complete in North Dakota.

Oats, wheat and barley were being combined in Florida, Alabama, and Mississippi. Harvest was active as weather permitted.

CORN: Corn Belt farmers virtually completed planting during the week except in Nebraska. Other areas are nearing completion. Cool weather over most of the Nation retarded growth of plants that were up. Southern Corn Leaf Blight was found in 2 counties of Alabama and was identified on some volunteer corn in Tennessee. Blight is present in 5 counties in Florida on volunteer and T-cytoplasm corn only. Soil moisture is generally adequate to surplus over most of the Corn Belt.

SOYBEANS: Soybean planting moved ahead rapidly as corn planting was completed. Planting was generally ahead of last year and normal. Illinois had 85% of the crop in the ground compared with 50% last year and Indiana had 50% seeded compared to the average of 35%. Warm weather is needed for crop development.

Planting in the South is lagging behind last year but is making progress. Stands are generally good.

COTTON: Texas cotton planting continues behind last year with 66% in the ground against 82% a year ago. Planting and replanting continues in the South. Arizona's crop is somewhat behind

normal. Squaring is increasing with blooms expected soon. California cotton in the San Joaquin Valley is making poor progress. Desert area is late, but in good shape.

OTHER CROPS: Sorghum grain planting was 73% complete in Texas, but continued behind last year. Kansas had 36% seeded compared to 42% last year. Stands were injured by cutworms locally. Harvest of Florida shade tobacco started. Setting of plants in Kentucky is 7 percent complete, but 7-10 days late. Maryland transplanting is about 15% complete. Burley transplanting in North Carolina reached 13%. Sugar beets are up to 75% stand in Wyoming and about 15% thinned. Thinning is 15% complete in Montana. Potato planting in Aroostock County, Maine is about 3/4 completed.

Fruits and Nuts: Harvest of peaches is increasing in the southern and western regions of the Nation. Thinning of most fruits is complete in California. Sweet cherry harvest has started in California.

The citrus tree condition in Florida is good and improving. Valencia harvest continues normal in California, but is declining in Florida. California almonds and walnuts have a good set.

Vegetables: Planting of vegetables in the northeast for late summer and fall market continues active. Cool temperatures over most of the Nation retarded growth and delayed harvest. Tomato harvest past peak in Texas. Onion harvest is active in Texas and New Mexico. Cantaloupe harvest is active in Texas and California. Lettuce volume from Salinas Valley of California is increasing and continuing in good volume from Santa Maria. Strawberry harvest is active in California.

PASTURES AND LIVESTOCK: Range pasture feed condition improved with rain in over most of Nation. Warmer weather is needed for growth. Range condition in the southwest continues poor. Heavy supplemental feeding continues in this area. Some loss of cattle was reported in Arizona due to lack of feed. Hauling of water for stock continues to be necessary in the drier areas. Sheep shearing was delayed by rain in Northwest.

V. M. Gum
Agricultural Statistician

Temperature and Precipitation Data for the Week Ending Midnight, L.s.t., June 6, 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 . . .	67	- 8	. 7	- .1	New Orleans . . .	75	- 2	. 5	- .5	OKLA, Okla. City . .	69	- 3	. 8	- .4
Mobile . . .	76	- 3	1.2	+ .1	Shreveport . . .	72	- 4	T	-1.0	Tulsa . . .	67	- 4	1.5	+ .3
Montgomery . . .	76	0	. 8	+ 0	MAINE, Caribou . . .	52	- 2	. 4	- .4	OREG, Astoria . . .	53	- 2	. 5	+ .2
ALASKA, Anchorage . .	45	- 4	T	- .1	Portland . . .	54	- 3	. 4	- .3	Burns . . .	57	+ 2	. 5	+ .3
Barrow . . .	---	---	---	---	MD, Baltimore . . .	62	- 6	2.0	+1.0	Medford . . .	57	+ 2	. 4	+ .1
Fairbanks . . .	---	---	---	---	MASS, Boston . . .	60	- 3	. 2	- .5	Pendleton . . .	64	+ 3	. 4	+ .1
Juneau . . .	46	- 3	. 9	+ .2	Nantucket . . .	56	---	1.0	---	Portland . . .	59	0	. 2	- .2
Nome . . .	30	-10	T	- .1	MICH, Alpena . . .	52	- 2	1.2	+ .5	Salem . . .	55	- 3	. 8	+ .4
ARIZ, Flagstaff . . .	47	- 6	. 4	+ .3	Detroit . . .	56	- 7	. 6	- .2	PA, Allentown . . .	58	- 6	1.0	+ .1
Phoenix . . .	74	- 4	T	+ 0	Flint . . .	---	---	---	---	Erie . . .	54	- 6	. 8	+ .1
Tucson . . .	71	- 6	0	- .1	Grand Rapids . . .	55	- 6	. 5	- .3	Harrisburg . . .	60	- 7	1.0	+ .1
Winslow . . .	62	- 6	T	- .1	Houghton Lake . . .	53	- 4	. 8	+ .1	Philadelphia . . .	63	- 3	. 4	- .5
Yuma . . .	72	- 9	0	0	Lansing . . .	56	- 5	1.3	+ .3	Pittsburgh . . .	57	- 6	. 3	- .6
ARK, Fort Smith . . .	68	- 5	. 2	-1.0	Marquette . . .	52	- 2	1.1	- .4	Scranton . . .	58	- 5	T	- .9
Little Rock . . .	65	- 8	1.4	+ .3	Muskegon . . .	54	- 6	1.2	+ .5	R.I, Providence . . .	61	- 1	. 6	- .1
CALIF, Bakersfield . .	---	---	---	---	S. Ste. Marie . . .	49	- 4	. 9	+ .2	S.C, Charleston . . .	73	- 3	. 8	- .1
Eureka . . .	51	- 3	. 4	0	MINN, Duluth . . .	50	- 3	. 5	- .3	Columbia . . .	70	- 6	. 5	- .3
Fresno . . .	64	- 7	. 9	+ .9	Internat Falls . . .	52	- 3	. 5	- .2	Greenville . . .	66	- 7	. 8	+ .1
Los Angeles . . .	63	- 3	. 1	+ .1	Minneapolis . . .	57	- 4	. 4	- .4	S. DAK, Aberdeen . .	57	- 4	. 3	- .2
Red Bluff . . .	62	- 9	. 8	+ .6	Rochester . . .	54	- 6	. 5	- .5	Huron . . .	55	- 6	. 1	- .5
San Diego . . .	61	- 4	. 4	+ .3	St. Cloud . . .	55	- 5	1.1	+ .2	Rapid City . . .	56	- 3	1.2	+ .5
San Francisco . . .	56	- 4	. 1	+ .1	St. Louis . . .	70	- 5	. 6	- .3	Sioux Falls . . .	55	- 7	T	- .8
Stockton . . .	63	- 6	. 1	0	MISS, Jackson . . .	69	- 6	. 1	- .7	TENN, Chattanooga . .	68	- 5	. 2	- .6
COLO, Denver . . .	59	- 1	. 1	- .5	Meridian . . .	70	- 6	. 1	- .7	Knoxville . . .	65	- 6	. 5	- .3
Grand Junction . . .	64	- 1	. 3	+ .2	MO, Columbia . . .	58	-10	. 2	- .9	Memphis . . .	67	- 6	1.1	+ .2
Pueblo . . .	63	- 1	T	- .4	Kansas City . . .	60	-10	. 3	- .7	Nashville . . .	64	- 7	. 8	- .1
Hartford . . .	60	- 3	. 3	- .5	St. Louis . . .	60	- 7	. 1	- .8	TEX, Abilene . . .	73	- 2	1.9	+ .9
D.C, Washington . . .	64	- 5	1.8	+ .8	Springfield . . .	62	- 6	. 1	-1.1	Amarillo . . .	67	- 3	. 8	- .1
FLA, Apalachicola . .	76	- 1	. 2	- .6	MONTE, Billings . . .	59	0	1.0	+ .5	Austin . . .	78	0	. 7	- .1
Ft. Myers . . .	79	0	. 6	- .8	Glasgow . . .	60	+ 3	. 6	+ .2	Beaumont . . .	77	0	. 6	- .4
Jacksonville . . .	74	- 4	. 7	- .1	Great Falls . . .	63	+ 5	. 6	0	Brownsville . . .	81	+ 1	. 9	+ .1
Key West . . .	82	+ 2	2.1	+1.4	Havre . . .	63	+ 7	. 1	- .3	Corpus Christi . . .	80	+ 1	3.6	+2.8
Lakeland . . .	74	- 5	1.3	+ .3	Helena . . .	56	+ 1	. 7	+ .3	Dallas . . .	76	0	3.6	+2.6
Miami . . .	81	+ 2	T	-1.6	Kalispell . . .	61	+ 7	T	- .5	Del Rio . . .	80	- 1	. 4	- .3
Orlando . . .	79	0	. 6	- .5	Miles City . . .	61	+ 1	. 6	+ .1	El Paso . . .	74	- 1	. 0	- .1
Tallahassee . . .	73	- 5	. 8	- .4	Missoula . . .	61	+ 7	. 1	- .4	Fort Worth . . .	72	- 4	1.5	+ .5
Tampa . . .	77	- 1	T	-1.0	NEBR, Grand Island .	59	- 5	. 7	- .2	Galveston . . .	78	0	. 8	+ .1
GA, Atlanta . . .	69	- 3	. 2	- .5	Lincoln . . .	56	- 8	. 3	- .7	Houston . . .	78	0	1.1	- .9
Augusta . . .	69	- 6	. 5	- .2	Norfolk . . .	56	- 8	. 3	- .7	Lubbock . . .	70	- 2	2.4	+1.5
Macon . . .	73	- 4	. 1	- .6	North Platte . . .	56	- 6	. 8	- .1	Midland . . .	73	- 4	2.5	+1.9
Savannah . . .	73	- 3	. 2	- .9	Omaha . . .	57	- 7	. 6	- .2	San Angelo . . .	78	+ 1	1.4	+ .9
HAWAII, Hilo . . .	72	- 2	1.3	- .4	Valentine . . .	51	- 2	. 5	+ .3	San Antonio . . .	80	+ 2	. 8	0
Honolulu . . .	76	- 1	. 1	- .1	NEV, Ely . . .	67	-10	. 1	+ .1	Victoria . . .	80	+ 2	1.0	+ .2
Kahului . . .	77	+ 1	T	- .3	Las Vegas . . .	51	- 4	. 7	+ .6	Waco . . .	78	+ 1	. 1	-1.0
Lihue . . .	78	+ 3	. 2	- .3	Reno . . .	57	+ 1	. 3	+ .1	Wichita Falls . . .	73	- 2	. 7	- .4
IDAHO, Boise . . .	65	+ 5	T	- .3	Winnemucca . . .	57	+ 1	. 3	+ .1	UTAH, Blanding . . .	58	- 3	T	- .1
Lewiston . . .	65	+ 5	. 7	+ .3	N.H, Concord . . .	55	- 4	T	- .8	Salt Lake City . . .	61	- 1	. 3	0
Pocatello . . .	58	+ 1	. 2	- .1	N.J, Atlantic City . .	59	- 6	. 4	- .4	VT, Burlington . . .	56	- 2	. 3	- .4
ILL, Cairo . . .	64	- 8	1.7	+ .6	Trenton . . .	61	- 5	. 6	- .3	VA, Lynchburg . . .	60	- 8	3.8	+3.1
Chicago . . .	59	- 5	. 2	- .7	N. MEX, Albuquerque .	65	- 3	T	- .2	Norfolk . . .	67	- 4	1.3	+ .5
Moline . . .	56	- 9	1.1	+ .2	Roswell . . .	71	- 1	T	- .3	Richmond . . .	63	- 7	3.0	+2.1
Peoria . . .	56	- 9	. 8	- .2	N.Y, Albany . . .	57	- 5	. 4	- .4	Roanoke . . .	61	- 8	3.5	+2.5
Rockford . . .	56	- 7	. 7	- .3	Binghamton . . .	56	- 3	. 7	0	WASH, Colville . . .	59	+ 1	. 7	+ .2
Springfield . . .	57	-11	. 8	- .2	Buffalo . . .	56	- 4	. 2	- .6	Omak . . .	66	+ 5	. 1	- .1
IND, Evansville . . .	63	- 7	2.0	+1.0	New York . . .	62	- 3	. 2	- .4	Quillayute . . .	51	- 3	. 5	- .4
Fort Wayne . . .	58	- 7	1.5	+ .6	Rochester . . .	56	- 4	. 2	- .4	Seattle-Tacoma . . .	56	- 1	. 3	- .1
Indianapolis . . .	58	- 7	1.2	+ .3	Syracuse . . .	58	- 3	. 6	- .1	Spokane . . .	61	+ 3	. 2	- .1
South Bend . . .	57	- 5	. 2	- .6	N.C, Asheville . . .	62	- 5	1.0	+ .3	Walla Walla . . .	61	- 1	2.3	+2.0
IOWA, Burlington . . .	57	- 9	. 4	- .6	Charlotte . . .	65	- 7	. 2	- .5	Yakima . . .	65	+ 5	T	- .1
Des Moines . . .	57	- 7	. 1	-1.0	Greensboro . . .	62	- 8	1.6	+ .8	W.VA, Beckley . . .	56	- 8	2.5	+1.6
Dubuque . . .	54	- 8	. 4	- .7	Hatteras . . .	69	- 2	. 2	- .7	Charleston . . .	62	- 6	. 9	0
Sioux City . . .	57	- 9	. 4	- .4	Raleigh . . .	64	- 6	1.6	+ .8	Huntington . . .	63	- 5	1.4	+ .5
KANS, Concordia . . .	58	- 9	. 5	- .5	Wilmington . . .	71	- 2	. 4	- .5	Parkersburg . . .	61	- 6	. 6	- .3
Dodge City . . .	64	- 4	1.0	+ .2	N.DAK, Bismarck . . .	56	- 3	. 5	0	WIS, Green Bay . . .	55	- 4	. 2	- .5
Goodland . . .	59	- 4	. 6	0	Fargo . . .	56	- 3	T	- .2	La Crosse . . .	54	- 9	1.3	+ .3
Topeka . . .	58	-10	. 1	- .9	Williston . . .	59	+ 2	. 2	- .2	Madison . . .	55	- 5	. 4	- .4
Wichita . . .	64	- 5	. 4	- .5	OHIO, Akron-Canton . .	57	- 6	. 4	- .5	Milwaukee . . .	53	- 4	. 5	- .2
KY, Lexington . . .	60	- 8	1.7	+ .8	Cincinnati . . .	61	- 7	. 8	- .1	WYO, Casper . . .	54	- 2	2.4	+2.0
Louisville . . .	62	- 6	2.1	+1.3	Cleveland . . .	56	- 6	1.6	+ .8	Cheyenne . . .	54	- 2	. 3	- .3
LA, Baton Rouge . . .	76	- 1	1.6	+1.0	Columbus . . .	58	- 7	1.0	+ .1	Lander . . .	56	0	3.1	+2.5
Lake Charles . . .	77	- 1	. 7	- .4	Dayton . . .	58	- 7	. 7	- .2	Sheridan . . .	57	+ 1	1.5	+ .9
					Toledo . . .	55	- 7	1.0	+ .3	P.R. San Juan . . .	82	+ 2	. 5	- .9
					Youngstown . . .	55	- 6	. 8	- .1					

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

CONDENSED STATE SUMMARIES

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

ALABAMA: Partly cloudy to cloudy and cool with scattered showers early in period. Showers all sections Thursday then clearing and unseasonably cool until end of period. Temperatures for week averaged several degrees below normal all sections. Rainfall generally light northeast and moderate to locally heavy elsewhere. Good progress made with fieldwork as rainfall light and interruptions minor. Farmers busy cultivating and fertilizing row crops, cutting hay and planting soybeans. Soil moisture generally adequate. Cotton needs warm weather. Early-planted cotton being cultivated and side dressed. Many fields of early corn being laid by. Dew line confirms southern corn leaf blight in two of 995 fields inspected in 64 counties during week, one each in Baldwin and Geneva. Peanuts made good progress, but many fields grassy. Soybean planting began on many additional farms. Combing of small grains began in additional southern counties. Yields to date are good. Harvest of late spring Irish potatoes active. Yields light, but quality good. First Chilton County peaches moved to market. Harvest of fresh market vegetables active in southern counties. Livestock and pastures in good condition.

ALASKA: Temperatures continue to be below average with freezing still occurring in most areas. The range was from 25° to 68°. For both the past week and cumulative since May 1, precipitation was above normal Kenai Peninsula, below normal elsewhere. High winds in most areas resulted in some losses of vegetable and potato fields. Growth of grasses for hay and pasture generally poor to fair all areas. Livestock generally good condition, some losses of newborn calves due to snowy weather on Kenai Peninsula. Lateness of soil preparation causing some concern for a 1971 crop especially on Kenai peninsula.

ARIZONA: Temperatures were near normal at beginning of week falling much below normal after 27th. Light showers fell at higher elevations in northern part of State on 28th and 29th but maximum reported weekly water totals were less than 0.50 inch. Strong winds, blowing dust, occurred in agricultural areas in southern part of State but rainfall amounts were very light. Development of Arizona's cotton crop somewhat behind normal. Growth rate beginning to pick up. Insects not serious problem to date. Plants recovering from early thrip damage in central area. At Yuma, squaring increasing, first blooms expected soon. Strong wind accelerated soil drying. In the southeast, cold nights slowed growth. In Cochise County some wind damage last week, army worms showing up in some fields. Small grain harvest increasing around Yuma. Central and southeast area, crop is maturing rapidly, few early fields being harvested. Sorghum in central areas making good growth. Preparation underway for planting, following barley. Yuma crops at all stages growing well. Southeast planting continues, early seeded acreage looks good. Some fields being treated for aphids. Alfalfa harvest active, second cutting of most desert valley fields is complete. In the southeast, the first cutting

of alfalfa is complete and second cutting underway in Cochise County. Harvest of cantaloupes started at Yuma. Maturity slowed by cool weather, crop now making satisfactory progress, harvest activity will increase seasonally. Salt River Valley cantaloupes, watermelons making good growth. Lettuce harvest at Willcox is active. Tomatoes in the Yuma area have good fruit set and sizing well. In the Salt River Valley, harvest of dry onions, potatoes, and carrots continues. Limited harvest of Valencia oranges in Maricopa County. Demand for first grade fruit is fair. Picking of white grapefruit increasing. New crop fruit sizing well. At Yuma, trees making good growth and recovery from freeze damage. Few thrips and mites showing up in most groves. Ranges poor to fair condition. Extensive supplemental feeding, hauling stock water continues. Some loss of cattle due to starvation on Papago Reservation.

ARKANSAS: Cool week with weekly temperatures 4° to 6° below normal ranging in the 60's. Daily extremes 41° to 92°. Showers early and midweek produced 1.00 to 2.00 inches central sections eastward with well below 1.00 inch elsewhere. Brinkley high with 2.51 inches. Cool weather, especially nights, continued to slow crop progress, especially cotton. Soil moisture adequate to excessive. Planting near completion, except soybeans and sorghums. However, satisfactory stands not yet obtained on all cotton acreage and further replanting necessary. Cotton generally poor to fair condition, rice good. Soybeans about 50% planted, emerged plantings good condition. Feed grains making normal progress. No positive identification of Southern corn leaf blight reported to date. Oats and wheat maturing rapidly with fair to good yields expected. Hay harvest underway. Fruit and vegetables a little late, but mostly good prospects. Pastures providing ample grazing nearly all areas.

CALIFORNIA: Warm daytime temperatures first part of week but much cooler with strong winds and precipitation Thursday and Friday. Average temperatures were 2° to 5° below normal in most areas and near 10° below normal in low desert. Precipitation amounts generally less than 0.50 inch except heavier in the southern San Joaquin Valley. Wheat and barley harvest active desert areas. Barley harvest underway San Joaquin Valley. Cutting grain hay all areas. Alfalfa hay cutting continues central valley and desert. Some rain damage central valley. Sugar beets being dug desert areas. Thinning, weeding elsewhere. Cotton crop San Joaquin making poor progress; good shape desert but late. Corn making good progress. Planting sorghums and dry beans continues. Rice mostly planted. Cool weather slowing development fruit and nut crops. Wind causing minor damage trees and scarring of fruit. Vineyard growth normal. Thinning most fruits nearing end. Picking Bing cherries started Stockton district. Harvest apricots starting. Good pear crop in prospect. peaches, nectarines, plums continue good progress. Good sets of almonds and walnuts. Olives in bloom all areas. Picking lemons active, quality good. Harvest Valencia oranges continues normal. Grapefruit moderate volume. Growth new citrus crops slow. Harvest summer variety avocados

started. Cool weather slowing pasture growth. Low elevation range grass mostly dry; stock moving higher ranges, irrigated pasture and feed lots. Honey production reduced by cool weather. Vegetable harvest slowed due to cool and rainy weather. Delta district asparagus going mostly to processors. Salinas and Santa Maria broccoli-cauliflower supplies continue moderate volume. Oxnard district cabbage, moderate volume. Imperial Valley cantaloupes increasing, Palo Verde to start about June 10. Imperial carrots nearing completion, Salinas increasing slowly. Oxnard and Orange district celery continues moderate level. Oceano-Guadalupe supplies increasing. Imperial sweet corn increasing. Salinas lettuce increased slightly, Santa Maria continuing at good volume. Imperial onions good volume. Potato digging Bakersfield slowed by rain. Central coast and southern California strawberry harvest active, some damage due to rain. Tomatoes and watermelons in Imperial Valley increasing.

COLORADO: Varying temperature averages mostly below normal. General showers light to locally heavy precipitation totals except little or none central, west and southwest. Snow in some mountain areas. Scattered hail eastern plains. Field activities increased past week as soils dried. Cool temperatures continued to slow seed germination. Light to moderate hail damage to crops localized areas. Surface soil moisture generally adequate except extreme south central and southeast areas. Conditions spring crops good to excellent. Small grain crop condition mostly good. Eastern plains winter wheat 100% jointed, nearly 50% headed. Most winter barley acreage jointed approximately 50% headed. All but few scattered fields spring barley and oats up to stand. Corn planting nearing completion 48% emerged. Sorghum over 33% planted, 20% up to stand. Dry beans slightly over 10% seeded, 2% emerged. Sugar beets 84% up to stand 10% blocked. Over 75% potato acreage emerged. First cutting alfalfa for hay underway on limited acreage. Ranges and pastures condition mostly good. Grass growth slow. Livestock condition good.

FLORIDA: Clear skies and cool temperatures dominated the weather pattern for Florida. Temperatures averaged 3° to 6° below normal northern and central sections and near normal southern sections. Record low temperatures for so late in spring were set Sunday at Pensicola, 56°. Precipitation was in the form of scattered showers with the northern and central sections averaging from 0.50 inch to 1.00 inch, and below 0.30 inch southern sections although Key West reported over 2.00 inches. Wheat being harvested. Shade grown tobacco harvest active. Corn and soybeans good condition. Recent rains benefitting sugarcane. Corn blight present in 5 Florida counties, only on volunteer corn or T-cytoplasm corn. To date no consequences to Florida field corn. Grass is improved but dry soils limiting growth. Most cattle fair. Citrus tree condition good and improving. Weekly rains beginning. Few still irrigating. Much new growth. New crop fruit condition excellent. Harvest is declining seasonally. Irrigation continues most areas. Potatoes, sweet corn, tomatoes, and watermelons led in carlots shipped. Most June supplies will be from central and north Florida areas. A fair supply of sweet corn and celery will be available from the Everglades. June shipments will be mainly sweet corn and watermelons with lesser supplies of pepper and eggplants available.

GEORGIA: Rainfall very light to none except in southwest and coastal area of southeast where some moderate to locally heavy amounts were reported. Downtown Savannah had 3.20 inches in 1 1/2 hours Tuesday afternoon. Most north and central sections have had only light rain since mid-May and were becoming dry by end of period. Temperatures continued mild for 5th straight week. Especially cool during weekend with lows in low 40's extreme north and low 50's remainder of State Sunday. Numerous places recorded new record-lows for the date. Averages ranged from 3° to 6° below normal. Conditions and growth of crops improved with warmer temperatures. Fieldwork active entire week. Planting and replanting cotton, corn and melons active in central and north and soybeans and sorghum statewide. Cultivating, sidedressing, insect and disease control active in tobacco, fruits and nuts, peanuts, and cotton. Small grains and hay harvest increased. Tobacco harvest started. Peach harvest continued in south and started in central areas. Snap beans, squash, and cabbage moving in volume. Melons growing and setting fruit.

IDAHO: Temperature averages recovered from below normal to average 10° to 15° above the preceding week and to near normal except to 5° above normal north. Precipitation was generally light excepting locally heavy Snake River Valley, Twin Falls and upstream. Twin Falls recorded 0.62 inch for the greatest total. Precipitation for the week brought may totals to near normal north, 31% normal southwest, 110% of normal south-central and 50% of normal east. Crop growth behind schedule. First cutting hay underway, curing is slow. Potatoes mostly all planted. Cultivation underway. Sugar beets mostly cultivated. Bean planting well started. Winter wheat in boot to early heading stage.

ILLINOIS: Precipitation 0.50 to 1.00 inch north and central and 1.00 to 2.00 inches south. Temperatures 8° to 10° below normal. Corn planting nearly complete. last year 85%. Condition good to excellent most areas. Cool weather slowing growth. Soybean planting nearly 85% complete, last year 50%. Warmer weather needed. Legumes good, 20% first crop alfalfa cut, red clover 10%. Pastures excellent. Wheat excellent, 90% headed, 40% filled. Oats good, over 10% headed. Soil moisture short 25%, adequate 58%, surplus 17%.

INDIANA: Varied weather occurred during week. Warm early in week, unusually cool middle, and warm late in week. Week averaged 8° below normal. Lowest temperature 29° and 30°, reported in northwest and north-central Indiana on 27th and 28th. Light freeze damage noted. All other areas mid-30's or higher. Highest temperatures low 80's. Rain early in week averaged 1.00 inch to over 2.00 inches except below 0.50 inch northwest and north-central. Evaporation and radiation exceeded normal. Humidity low late in week; otherwise average to above. Three days suitable for fieldwork. Showers slowed activities and raised topsoil moisture to mostly adequate to surplus. Subsoil moisture adequate. Corn 90% planted, 70% average. Corn 70% emerged, stands fair to mostly good. Corn 3 inches high, same as average. Soybeans 50% planted, 35% average. Wheat 50% headed, ripening started in southwest. Pastures fair to good. Cool temperatures slowed growth last week.

IOWA: A cool dry week. Precipitation totaled about 1/3 of normal and temperatures were about 8° subnormal. Scattered frost or freeze at midweek.

Fieldwork made good progress past week. About 90% corn emerged with less than 3% replanted or to be replanted. Condition improved with warmer weather over weekend, but most fair to good as of Friday. Soybean planting 80% complete, about 1/3 emerged. Last year 80% planted. Five-year average 70% planted by this date. Condition mostly good. Weed control both corn and soybeans fair to good. Alfalfa harvest just starting. Condition hay, oats and pasture mostly good. Nearly 4 days were suitable for fieldwork for the week. Top soil moisture mostly adequate.

KANSAS: Moderate to heavy rains last week over much of western Kansas. Totals at most locations in that area were in the range of 0.50 to 1.50 inches. Locally heavy downpours of over 2.00 inches occurred in parts of Finney, Gray, Haskell, Seward, Lane, and Sheridan Counties. Over 4.00 inches fell at Eminence and Kalvesta in northeast Finney County. Precipitation was generally light to moderate over the eastern portion of the State, A few spots received over 0.75 inch but most localities in the east had less than 0.50 inch during the 7-day period. Weekly mean temperatures averaged below seasonal over entire State ranging from 8° to 10° below normal in north-central, northeast, and east-central Kansas to about 4° below seasonal elsewhere. Hottest weather was in southwestern Kansas May 25 as maxima locally in the low 90's. Minima on most nights were in 40's and 50's. Damaging wind and hail occurred in scattered locations several days. Hail especially damaging in parts of Cowley County on May 26. Damage was also locally heavy in north-central Kansas on 30th. Wheat was aided by additional moisture over most of State last week and heads were filling well. Moisture conditions were improved in the dry southern counties. The percent of wheat headed by May 29 was 92% compared with 96% a year earlier and a 10-year average of 93%. Some 8% of the wheat had turned color, compared with 12% this time last year and average of 16%. Considerable hail damage occurred locally in central and west-central counties during week. Winter barley looked good for this time of year. Wet fields slowed planting of row crops in many areas last week. Some 90% of the corn had been planted by May 29, compared with 94% a year earlier and average of 83%. Sorghum had been planted on 36% of intended acreage, compared with 42% a year earlier and average of 34%. Insect damage was generally light, but cutworms injured corn and sorghum stands locally. Soybeans were 35% planted, compared with 30% at this time last year and average of 44%. The first cutting of alfalfa was 49% completed, well behind 62% cut at this time a year earlier. Most cattle not in feedlots were on native grass or brome pastures and gained well. Pasture growth was generally excellent and ponds were mostly full. Some cattle moved from wheat and rye fields to feedlots. Few sheep were left to be sheared and the bulk of the fall lambs had been marketed. Other activities on farms during the week included the working of fallow land, replanting and fertilizing corn and sorghum, spraying for weeds, and fencing. Work in some sugar beet fields was delayed by rains. Many farmers prepared combines for the upcoming wheat harvest.

KENTUCKY: Unseasonably cool week until warming on 30th, temperatures averaging 4° to 9° below normal. Precipitation generally heavy but light some southern sections, total 0.24 to 2.09 inches. Probable tornadoes south-central on 24th. No injuries but considerable damage. Soil moisture

mostly adequate. About 4 days suitable fieldwork. Burley tobacco 7% set, week to 10 days later than last year and normal. Plants in beds small and irregular in size. Corn 90% planted, last year 84%. Cold temperatures and insects hard on early corn. Soybeans 36% planted, last year 36%. Small grain prospects good. Peach set good. Over 1/2 first crop alfalfa cut.

LOUISIANA: Third week with below-normal temperatures statewide. Departures mostly 2° to 3° south and 3° to 6° north. Temperature extremes: 92° Monroe Wednesday; 47° Cotton Valley and Homer Tuesday. Precipitation light to moderate. Thundershowers most areas middle of week. Totals mostly less than 0.20 inch northwest and extreme southeast, 0.20 to 1.50 inches other sections. Locally heavy showers around Clinton with 3.29 inches measured 8 a.m. Friday for greatest 1-day total this week. Weather generally favorable for fieldwork but unusually cool temperature continued to retard crop growth and development. Soybean planting generally made good progress and reached 60% of completion compared with 75% year ago. Mostly good stands were being obtained. Cotton planting advanced to 95% completion but usually finished by this date. Excessive moisture and cool weather have thinned stands and considerable acreage may still be replanted. Some replanting of thin stands of rice reported but crop prospects average or better. Cultivation of sugarcane active. Stands continue to improve but growth behind normal. Corn made good growth but grass a problem in some areas. Some areas needing moisture. Cultivation generally active, some acreage still being replanted. Sorghum grain about 75% planted. Sweet potatoes about 50% planted compared with 65% year ago. Harvest of wheat and oats active in south, just starting in northeast. Harvest of early peaches nearing completion. Pecan prospects good. Haying active. Pasture feed mostly average. Livestock condition good.

MARYLAND AND DELAWARE: Cool with heavy rainfall over east and south Memorial Day weekend. Temperatures averaged 3° to 7° below normal. Weekly rainfall 2.00 to 4.50 inches in east and south and 0.50 inch or 2.00 inches in west. May 1971 temperatures averaged 2° to 4° below normal and rainfall above normal to much above normal, 4 to 9 inches. Good progress fieldwork before rains. Corn nearly 90% planted, last year 86%. Soybeans 40% seeded, last year 25%. Tobacco transplanting 15% done, last year 8%. Barley fully headed, turning color in southern areas. Wheat heads showing in south. First cutting hay being harvested. Strawberry harvest past peak in southern shore.

MICHIGAN: Temperatures were quite cool for week, averaging 3° to 6° below normal. Minimum temperatures dipped into the low to mid-30's on the 28th and 29th. Temperatures moderated somewhat over weekend. From 0.75 to 1.25 inches of precipitation fell over most sections except for a small area in west-central Michigan. Moderate rain temporarily relieved dry soil conditions in Lower Peninsula and stimulated crop growth. Soil moisture still short southern counties. State averaged 4.1 days suitable for fieldwork. Plowing for spring crops nearing completion. Corn 93%, fall potatoes 78%, and soybeans 60% planted. Rains delayed dry bean planting. Sugar beet thinning underway. Pasture feed supplies less than average. Tart cherries full bloom, apples partial bloom northwest and lower Peninsula. Asparagus 1/3 harvested. Strawberries developing well.

MINNESOTA: Cool week with rain at beginning and end of period. Temperatures averaged from 7° below normal in south to below normal in north. Frosts were common across State generally on 26th and 27th. Precipitation, rains in early part of period in eastern part of State, and during later part of period were generally from southwest into central districts. Greatest amount for the week-end was 3.05 inches at Granite Falls. Several small tornadoes and funnel clouds were reported in southwestern Minnesota during afternoon of 31st. Crop progress was slowed by rain and cool temperatures. Planting of corn and soybeans continues ahead of normal. Corn emergence normal. Soybean emergence 3 days behind normal. Flax acreage seeded 94%, normal 73%. Planted: Corn 98%; soybeans 84%; normal 69%. Spring planted crops emerged: Corn 63%, normal 62%; soybeans 29%, normal 42%; spring wheat 98% and normal 64%; oats 96%; normal 76%; barley 88%; normal 64%. Planting of sugar beets completed, peas for processing nearing completion. Potatoes and sweet corn 75% planted. Topsoil and subsoil moisture adequate in all areas. Rye, hay fields, and pastures continue fair to good; winter wheat fair condition.

MISSISSIPPI: Fourth week with average temperatures below normal, most stations were 3° to 6° below normal. One or 2 days with rain and weekly totals mostly under 1.00 inch a few over 1.50 inches. Tornado 8 miles southeast of Corinth Monday evening, 5 injured. Weekend fair. Sunday temperatures dropped to 42° at Holly Springs and Tupelo; while Jackson and Meridian reported record low temperatures for date. Soil moisture short to adequate in southeast, other areas mostly adequate. Average of 5 days suitable for fieldwork. Winter wheat 2%, oats 6%, hay 21% harvested. Soybeans 31%, corn 87%, sorghum 56%, sweetpotatoes 52% planted. Cotton 3% squaring. Cotton in poor to fair condition. Corn, soybeans, truck crops, peaches, and sweetpotatoes mostly fair to good. Pastures and livestock mostly good.

MISSOURI: The week was cloudy and cold with frequent rain. Scattered frost in northern portion of State when temperatures dipped into 30's on Thursday. Rainfall totals ranged from 3.00 inches in area between Springfield and St. Louis to less than 0.50 inch in extreme west. Total of 3 days suitable for fieldwork. Soybeans 66% planted. Grain sorghum 74% planted. Wheat in fair condition, with 83% headed. First cutting of alfalfa hay is 45% completed. The alfalfa weevil has damaged approximately 30% of the crop, with most of the damage occurring in the southern half of State. The soil moisture supply is adequate.

MONTANA: Quite warm northwest to mostly about seasonal temperatures southeast. Rainfall general, mostly moderate, but locally heavy Yellowstone and light north-central and northwest. Havre 92° 27th warmest of season to date. Broadus rainfall 1.90 inches. New snow on mountains south-central and southwest Sunday. Topsoil moisture improved weekend. Winter wheat 20% in boot. Ten percent winter wheat excellent condition, 65% good condition and 25% fair condition. Five percent of spring grains in excellent condition, 75% good condition, and 20% fair condition. Spring wheat, barley, and oats virtually seeded. Corn 85% seeded, potatoes 75% planted, dry beans 95% seeded, flax 80 percent drilled. Sugar beets 15% thinned. Eighty-five percent of range cattle and sheep moved to summer ranges.

NEBRASKA: Cool and cloudy. Scattered severe thunderstorms on Sunday. Fieldwork was accomplished as weather permitted. About 90% of the corn, 45% of the sorghum and 40% of the soybeans are planted. This compares to normal plantings of 98% corn, 84% sorghum and 80% soybeans. Warmer temperatures are needed for good germination and plant development. Wheat is making very good progress. A few small areas of the Panhandle and southwest received damaging hail. First crop alfalfa is being mowed for hay and dehydration. Livestock condition good.

NEVADA: Second consecutive cool wet week. Temperatures averaged 1° to 4° below normal in north and 6° to 10° below normal in south. Light to moderate and locally heavy precipitation in north. Sheldon 1.58 inches, Yerington 1.35 inches, Virginia City 1.39 inches. Light in south. Planting of spring crops complete except in high elevation valleys. Cold spring weather over most of northern part of State has delayed growth of crops. Frost damage reported in northern and central areas. Green chopping of alfalfa continues in southern valleys. Range and feed conditions in northern Nevada good but southern ranges need moisture. Livestock in good condition. Lambing and calving nearing completion.

NEW ENGLAND: Temperatures mostly near seasonal levels but ranged down to 3° below normal in parts of central and south. Similarly above normal locally in southeastern Maine. Showers frequent but mostly light. Memorial day weekend dry in north but just another in a long string of wet weekends in much of south. Rainfall totals variable from less than 0.10 to nearly 1.00 inch. Recent rains caused minor delay field work. Potatoes planting Aroostook County, Maine, active with 75% crop in ground. Planting peas for processing ahead last year. Planting field corn active with 2/3 planted. Hay stands look good. Pastures made excellent growth during past 7 days. Apples in bloom northern areas and past bloom south. Planting late summer and fall vegetables progressing seasonably. Local markets receiving good volume radishes, spinach, scallions, rhubarb, and asparagus.

NEW JERSEY: This was the 10th consecutive week with below-normal temperatures. With the exception of 2 stations, readings averaged from 4° to 6° below normal and ranged from mid-30's to low 80's. Rain at beginning and end of week averaged 1.00 inch over the northern counties, 0.70 inch over the central and southern areas. Soil moisture is adequate throughout the State. Warmer temperatures are needed to bring crop development up to normal for this date. Asparagus yields continue below normal. Lettuce harvest is increasing. Tomato planting is about complete. Sweet-potato transplanting is general. Some winter damage to peaches reported to be showing up. Light strawberry harvest begun. Blueberry prospects are good. Early-planted field corn is up. Soybean planting is active. Small grains are developing nicely. Some alfalfa being cut for silage. Hay making will resume with drier weather.

NEW MEXICO: Continued dry southwestern half of State. Mostly light showers elsewhere but weekend showers in some extreme northeastern localities totaled more than 2.00 inches. Light warming of temperatures averaged below normal with near 5° below normal in west. Warming to Wednesday and then cooling. Extreme shortage of soil

moisture all areas of State. Dryland wheat in poor condition. Irrigated wheat in fair to good condition. Harvest expected in late June. Barley in good condition. Cotton in fair condition, some problems from army worms. First cut alfalfa complete in southern areas, just beginning in northern areas. Cutting of lettuce still active. Onion harvest expected to begin this week. Ranges are in poor condition. Livestock in fair condition due to heavy supplemental feeding.

NEW YORK: Cool for late May. Temperatures averaged several degrees cooler than previous week except near coast. Maximums 55° to low 60's on 26th and 27th otherwise upper 60's to mid-70's. Nights mostly cool with lowest minimums in mid-30's to low 40's on 24th except 29° to 32° some interior sections. Dry week on Long Island until 0.10 to 0.30 inch rainfall on 30th. Light to moderate showers Upstate 25th through 27th, totaled 0.30 to 0.70 inch but averaged 1 inch in southwest. Intermittent rain during the week hampered many field activities. Soil moisture is adequate in all areas with a few counties reporting a surplus. Corn planting about 60% complete in southern and central areas and 45% in northern areas. Oat planting nearing completion with over 80% in. Pastures and hays are in good to excellent condition. No appreciable damage from alfalfa weevil has been reported. Potatoes 75% planted Upstate while Long Island 80% are up. Onion growth on muckland slow due to cool weather. Lettuce and celery planting continues, growth slow. Planting of processing snap beans, sweet corn and tomatoes continues. Fruit in good condition. Hudson Valley and western New York fruit are in petal fall or later stage. Bloom was heavy and pollinating conditions generally satisfactory. McIntosh apples in Lake Champlain area came into full bloom about May 26. Western New York grapes growing well with above normal number of shoots. Long Island strawberries starting to ripen while in Upstate areas they are in full bloom.

NORTH CAROLINA: A warming trend through May 27th when highs reached 90° in warmest areas. Turning cooler over weekend. Average temperatures slightly below normal. Widely scattered showers mostly light through 27th increasing and becoming general 29th, followed by slow clearing. Scattered thunderstorms and a few reports of light hail 28th. Total precipitation variable 0.25 to 5.00 inches. Mostly 1.00 to 2.00 inches. Reports through 28th indicate soil moisture declined slightly but conditions mostly adequate. Crop conditions generally good. Planting of corn, cotton and flue cured tobacco nearly complete. Peanuts about 95% planted and soybeans about 50%. Burley tobacco about 1/3 set. Plant shortages in local areas. Harvest of cabbage, onions, and other vegetables underway.

NORTH DAKOTA: Temperatures averaged 1° below normal northwest to 7° below normal southeast. Rainfall averaged about 0.10 inch north, 0.20 to 0.60 inch elsewhere. Rains over weekend halted fieldwork southern half State. Seeding made satisfactory progress during week and was nearing completion some areas. Topsoil moisture adequate except some areas of northeast. Spraying for wild oats widespread. Warmer weather needed to promote good hay, pasture, and grain development.

OHIO: A cool week with temperatures above normal only on 24th. Cloudy through 27th and clear over weekend. Severe thunderstorms with strong winds, heavy rain, and some hail, widespread 24th and 25th. A few areas reported light frost on 27th or 28th.

Gradual warming from 27th through 31st. North-east and southern areas near Ohio River reported light showers on 27th. Four days favorable for fieldwork. Soil moisture supplies, 10% short, 65% adequate, 25% surplus. Corn planting over 95% completed, last year 85%, usual 75%. Soybeans 75% planted, last year 50%, and usual progress 45%. Potato planting 95% finished. Wheat 40% headed, 1970 65%, average 50%. Barley 60% headed, last year 80%, usual 70%. Oats 5% headed. Alfalfa hay harvest 15% finished, last year and usual 20%. Clover-timothy 10% harvested.

OKLAHOMA: Rainfall ranged from 0.16 inch north-east to 1.7 south-central. Southwest area received 1.10 inches. Temperatures ranged from 2° to 8° below normal. Extremes: 99° and 31°. Wheat harvest well underway southwest and central Oklahoma. Crop maturing rapidly most areas with 94% at or past dough stage compared with 63% a week earlier and 80% a year ago. Small grain harvesting gaining momentum with 1% oats and 4% barley harvested with the balance of oat and barley mostly in dough stage. Harvest of small grain expected to be underway most of area during week. Planting of corn, sorghum, cotton, and peanuts made good progress during week. Soybean planting delayed due to wet soil in eastern Oklahoma. Corn 55% up to stand, 80% a year ago. Grain sorghum 47%, cotton 21%, peanuts 32% and soybeans 36% planted at close of week. Very sharply behind a year ago. Planting progress expected to move ahead rapidly following recent rains. First cutting of alfalfa hay nearly 4/5 complete. Yields have been light. Several areas of surface and subsoil moisture closed last week both 57% short and 43% adequate. However, weekend rains have improved the short supply of western pastures. Mostly fair to good except for western 1/3 of State.

OREGON: Mild warming trend first half of week ended by 3 or 4 days of rain. Temperatures averaged near normal to 2° below normal along coast and southwest valleys, elsewhere 3° to 6° above normal. Minima 26° to 30° higher elevations eastern Oregon, elsewhere 33° to 54°. Maxima 58° to 72° coast, up to 86° elsewhere. Precipitation totaled generally 0.35 to 0.80 inch except near 1.10 inches northeast mountains. Flash flooding at Heppner cost \$0.5 million in damage on 25th, also possible tornado at McMinnville without injuries. Locally 3-inch rain washed out bridges along border area east of Milton-Freewater. Widespread rain past week relieved drought in north-central counties. Quality of downed hay diminished by some rain. Crop development generally delayed by cool season to date. Condition of pasture and range very good. Sheep shearing delayed by wet weather. Livestock contracting and marketing slow.

PENNSYLVANIA: Sixth straight week with subnormal temperatures. Generally cool throughout the period. A light weekend warmup. Temperatures averaged about 6° below normal. High 82° at Huntingdon and Lewistown on the 25th and low 28° at Philipsburg and Bradford on the 28th. Light rains early in week. Some areas receiving only a trace. Coastal low gave over 1.00 inch or rain to south-east corner of State Sunday. Totals for week were generally less than 0.50 inch except in southeast where on the average of 1.50 inches were recorded. Cool weather delayed crop growth. Corn planting continuing. Tomato transplanting heavy, potatoes being planted statewide, some alfalfa cutting. Soil moisture over 75% adequate.

PUERTO RICO: Recent dry spell broken by heavy rains islandwide early in week. Average rainfall 3.50 inches or 2.00 inches above normal. Highest daily total 5.00 inches in north coast with up to 9.00 inches weekly total in eastern mountains. Crop moisture conditions improved in southern divisions with some fields too wet in interior and also some interruptions to fieldwork. Temperatures averaged 79° on coast and 73° interior with average departure of about 1° below normal. Highest maximum 94°; lowest minimum 57°. Young sugarcane crop developing well. Harvesting and transporting operations delayed by rains in some zones. Coffee plantations report normal fieldwork in all zones. Tobacco harvesting and drying operations delayed by rains in some zones. Minor crop zone in central interior reported some delay in fieldwork due heavy rains.

SOUTH CAROLINA: Temperatures averaged about 2° below normal for the 3rd consecutive week. Lowest temperature was 47° at Horseshow Lake on the 27th. Rainfall was very light and scattered. A few stations had from a trace to 0.20 inch. Light rain falling as week ended. Soil moisture generally adequate all areas. Condition of tobacco good to excellent. Second lay-by cultivation. Insect control of budworms most prevalent. Recent cool weather causing some early bloom. Some cotton replanting. Condition stands and plants mostly fair. Condition corn mostly good. Cultivation, herbicide application active. Soybeans 48% planted. Condition stands, plants good to excellent. Sorghum planting 47% complete. Condition stands and plants fair to good. Peanuts 85%, sweet potatoes 52% planted. Condition peaches fair to good. Harvest light in Ridge area. Small grains 80% turned color, 11% ripened, 3% to 5% harvested. Grain hay 55% harvested. Tomatoes, cucumbers, harvest getting underway, cabbage cutting near completion. Condition vegetables generally good.

SOUTH DAKOTA: Weekly temperatures averaged to 8° below normal. Extremes ranged from 29° at Castlewood on 26th to 85° at Belle Fourche on 28th. Precipitation fell as showers beginning and end of week with amounts generally ranging from less than 0.10 inch to about 2.50 inches. Topsoil moisture remains adequate except for small area in extreme southeast corner of State. Subsoil moisture mostly adequate throughout the State. Cool nights slowed crop growth. Light frosts in the northeast part of State caused light damage to alfalfa, flaxseed, and early-emerged corn. Growth of crops during week mostly moderate. Planting of flax seed virtually complete. Corn planting nearing completion with major production areas complete. Winter wheat over 65% at or past boot stage. Winter rye over 90% at or past boot stage. Many fields headed and look good. Soybean planting nearly 90% completed. Sorghum planting at 42% planted, somewhat behind normal. Stock water supplies adequate. Livestock doing good. Some localized scour problems reported in calves in West River area due to damp weather. Pastures look good, but need sunshine.

TENNESSEE: Week averaged up to 8° below normal; extremes ranged from 45° to 80°. Coolest temperatures at midweek and warmest end of week. Rainfall on 24th, 25th totaled mostly 0.50 to 1.00 inch. Light rain 28th, 29th in extreme southeast averaged near 0.25 inch. May temperatures averaged below normal; 3d coolest of record at Nashville. Cool temperatures slowed most crops. Tobacco setting, hay harvest, main activities. Strawberry harvest active statewide. First southern corn leaf blight

identified on volunteer plants in Coffee County. Small grain development slowed by cool weather. Percent turning yellow; wheat 47, oats 25, barley 63. Cotton planting about completed. Corn 90% planted. Soybeans 47% planted. Tobacco 60% transplanted. Alfalfa first cutting 90% completed. Soil moisture adequate most areas.

TEXAS: Good rains of 1.00 to 2.00 inches in north-central Texas Wednesday and Thursday were followed by very heavy rains in the Low Rolling Plains and in the western half of north-central Texas Friday. Amounts of 2.00 to 3.00 inches were common. Eastland received 6.25 inches; Gilliland, 4.90; and Munday, 4.31 inches in less than 24 hours. These substantial amounts fell in areas suffering the most from the current drought. Light to heavy rain covered much of the plains, bringing some relief to drought. Planting of dryland crops should increase in the areas which received the heaviest rainfall. Dryland crop conditions for the southern area of the State are poor. Irrigated crops for above area are responding to warmer temperatures. Harvest of oats and wheat is making good progress with low yields. Isolated light to heavy rains are bringing some relief to dry ranges, but a general soaking rain is still needed. Sorghum 73% planted compared to 83% a year ago. Cotton 66% seeded compared to 82% last year. Lower Valley vegetable harvest continues active, but supplies most spring vegetables past peak. Harvest onions, potatoes, sweet corn nearly complete Lower Valley. Harvest cantaloupes, honeydews, watermelons, cucumbers, green peppers, tomatoes past peak, but shipments continue for several weeks. Watermelon harvest in full swing South Texas. Onion harvest active Winter Garden and Presidio. High plains onions, potatoes good prospects with harvest to start late June. Citrus harvest nearly complete Lower Valley. Peach prospects poor to fair. Light harvest underway. Pecans being sprayed for case-bearers.

UTAH: Light to moderate precipitation many sections of State past weekend. Temperatures averaged near to a little below normal most areas. Accumulated growing degree days now about the same as a year ago. The scattered rains further improved moisture in Utah crop and range lands. Reservoir stored irrigation water best ever. Field corn for grain and silage and sweet corn both 90% planted as of June 1. Late crop fall potatoes 85% planted northern Utah, 60% in leading Iron County, 10% to 30% other southern Utah counties. Planting 95% completed for tomatoes, 90% for snap beans, 5% for dry beans. Sugar beet thinning about 30% completed. Fruit crops fair to good all areas. Winter wheat condition good in major areas except only fair in San Juan County. About 60% of acreage jointed. Virtually none headed out. Movement of cattle and sheep to high country summer range will be heavy first 10 days of June.

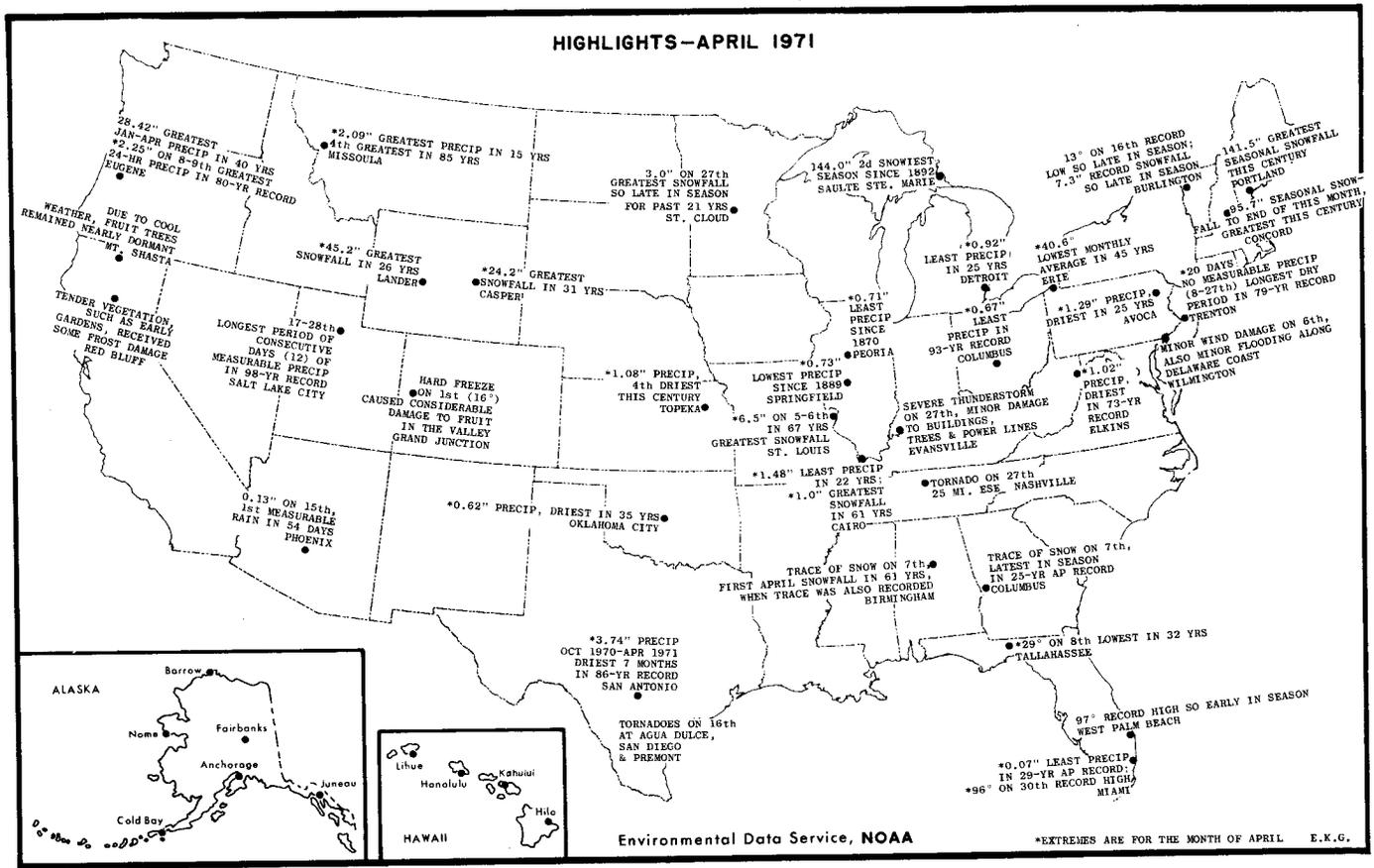
VIRGINIA: Temperatures above normal at beginning, much below normal second half. Heavy precipitation and scattered showers first half and steady rains second half. Rain hampered fieldwork; washed fields and caused flooding. Hay and pastures made good growth. Corn and tobacco growth limited by low temperatures. Corn 90% planted, soybeans 40% planted; most peanuts planted. Cultivated early tobacco, setting behind flue cured, 2/3 planted. Rain damaged some hay. A few eastern shore strawberries harvested. Transplanted peppers and sweetpotatoes. Oats and barley harvest begun in southeast.

WASHINGTON: West of Cascades: Temperatures near normal. Showers. Rainfall less than 0.25 inch. Grass silage harvest started. Corn and beans mostly planted. Early peas near bloom stage. Broccoli and cauliflower look good. Strawberries in full bloom. Raspberries in bloom. East of Cascades: Average temperatures 2° to 4° above normal. Showers midweek with heaviest amounts in eastern and southern counties. Soil moisture conditions improved in some of dryland wheat area. Cutting asparagus, alfalfa and thinning beets in progress. Wheat and barley making good growth. Range conditions improving.

WEST VIRGINIA: Another cool relatively dry week. Light frost scattered areas May 23 and 29. Cold frontal rain May 25 below 0.50 inch generally. Rain from coastal storm May 29 gave about 0.25 inch west of mountains with heavier falls in the east. Farmwork about 2 weeks behind schedule due to continued cool weather. Soil moisture short to adequate most areas. Fieldwork was possible an average of 5 days. Corn is 73% planted. Tobacco beds are 75% emerged but uneven growth reported in some localities due to adverse weather.

WISCONSIN: Cloudy and cold early in week. Moderating temperatures at end. Light frost many areas Thursday and Friday mornings. Rainfall light during week. Thunderstorms southeast and north Monday. Corn planting continues active and about 80% done. Early corn up. Color often poor due to cool weather. Some cultivation and spraying for weed control going on. Oats excellent. Pastures and hayfields improving after recent rains. Green chopping complete for immediate feeding. Haying to start this week. Pasture conditions behind normal due to cool and dry spring weather. Pastures supply only 1/2 of roughage requirements. Soil moisture 20% short, 70% adequate, and 10% surplus.

WYOMING: Light to moderate showers most areas, heavy amounts in eastern drainages. Most moisture at Redbird with 3.21 inches. Some crop damage resulted in eastern portion of State from scattered hail and flooding. Temperatures near to slightly below normal statewide. Maxima varied widely from mid-70's to high 80's statewide; minima from high 20's to mid-30's. Temperature extremes were 90° at Basin and Lovell and 22° at Foxpark. Fieldwork progressed favorably. Almost all sugar beets planted, 75% emerged and 15% have been thinned. About 85% of range ewes have lambled and 90% were shorn. Ranges and pastures good to excellent condition.



OCCURRENCES OF EXTREME DROUGHT IN OKLAHOMA AND TEXAS DURING THE PAST 40 YEARS

The accompanying table lists all occurrences of extreme drought in each climatological division of Oklahoma and Texas since January 1931. The location of each division is shown in figure 1. The Drought Severity Map below shows the drought situation in late May of this year.

Factors Considered in Computing Drought Severity.

The map and the data in the table show drought severity as measured by the Palmer Drought Index. The index values, derived by a computer operation, are based on areal values of temperature and precipitation. The temperature observations are used to estimate the rate at which moisture was evaporated, and the rainfall measurements indicate the replenishment of the moisture supply. This accounting procedure, done either weekly or monthly, provides successive estimates of the amount of water "stored" in each climatological division.

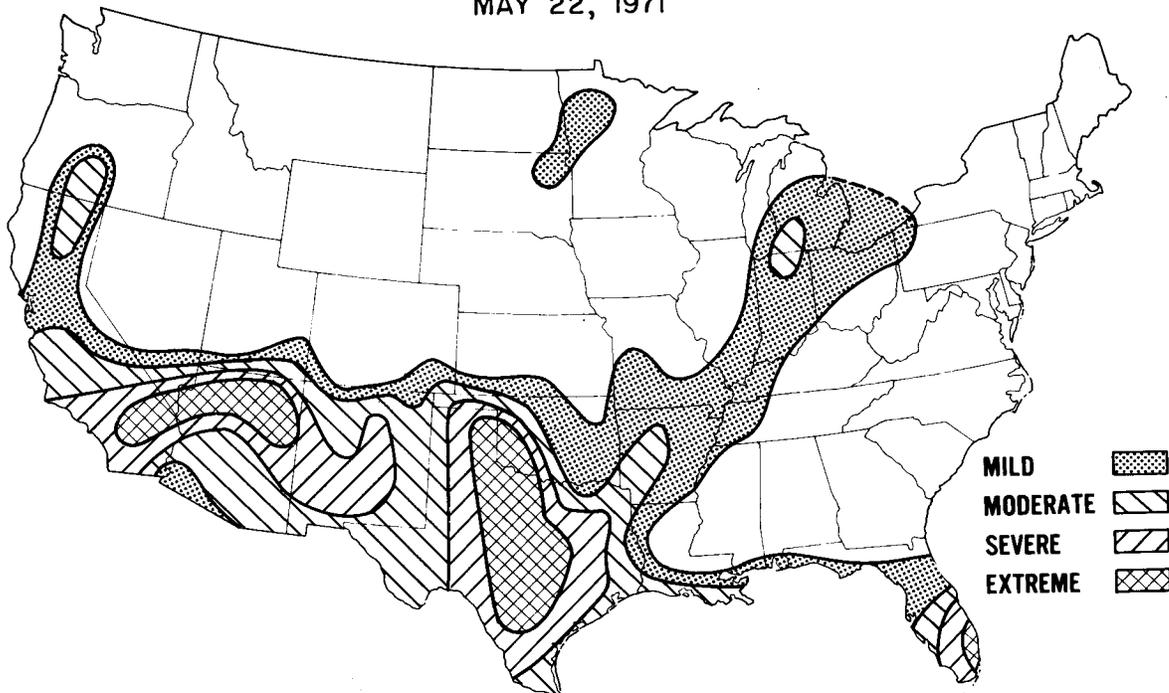
Next, we computed the amount of rainfall that should have occurred over each division each week (or month) to sustain the evaporation, runoff and moisture storage which could be considered as "normal" and appropriate, in view of antecedent moisture conditions in the area. This computed rainfall, when compared with the actual rainfall, provides a measure of the degree of abnormal dryness or wetness of that week. Drought index numbers were computed from this series of successive weekly or monthly rainfall departures. The final index values depend on the size of these successive rainfall departures, the duration of the period of anomalous weather, and on the climatic averages of rainfall and temperature for the area and season in question.

(Continued on page 14)



Fig. 1. Division Location in Texas and Oklahoma.

**DROUGHT SEVERITY
(PALMER INDEX)
MAY 22, 1971**



MILD [dotted pattern]
 MODERATE [diagonal lines pattern]
 SEVERE [cross-hatch pattern]
 EXTREME [grid pattern]

(Continued from page 12)

Extreme Drought Starts at -4.0.

The final index remains near zero in any climate as long as temperature and rainfall are persistently near normal. Likewise, in any climate, abnormally dry weather produces negative index numbers which reach values around -4 to -6 (extreme drought) during extended periods of outstandingly abnormal dryness.

Current Drought Not of Record Severity.

The current drought in the southern Plains is near record severity only in southwestern Oklahoma. The current index there is comparable to the values of -4.8 in August 1936 and Sept. 1956, and -5.0 in August 1967. Index values in the other areas of extreme drought are now around -4.2, whereas previous droughts produced record values around -5.5 to -6.0 in those areas.

Frequency of Extreme Drought.

The table also enables one to count the total number of months of extreme drought that have occurred in each division during the 40-yr period. For example, the totals range from 41 months in the Edwards Plateau area of Texas to 2 months in the Lower Valley Division. There are two primary reasons for the differences from division to division. In large part, the differences are accidental in that 40 years is a rather short record for the summarization of an event

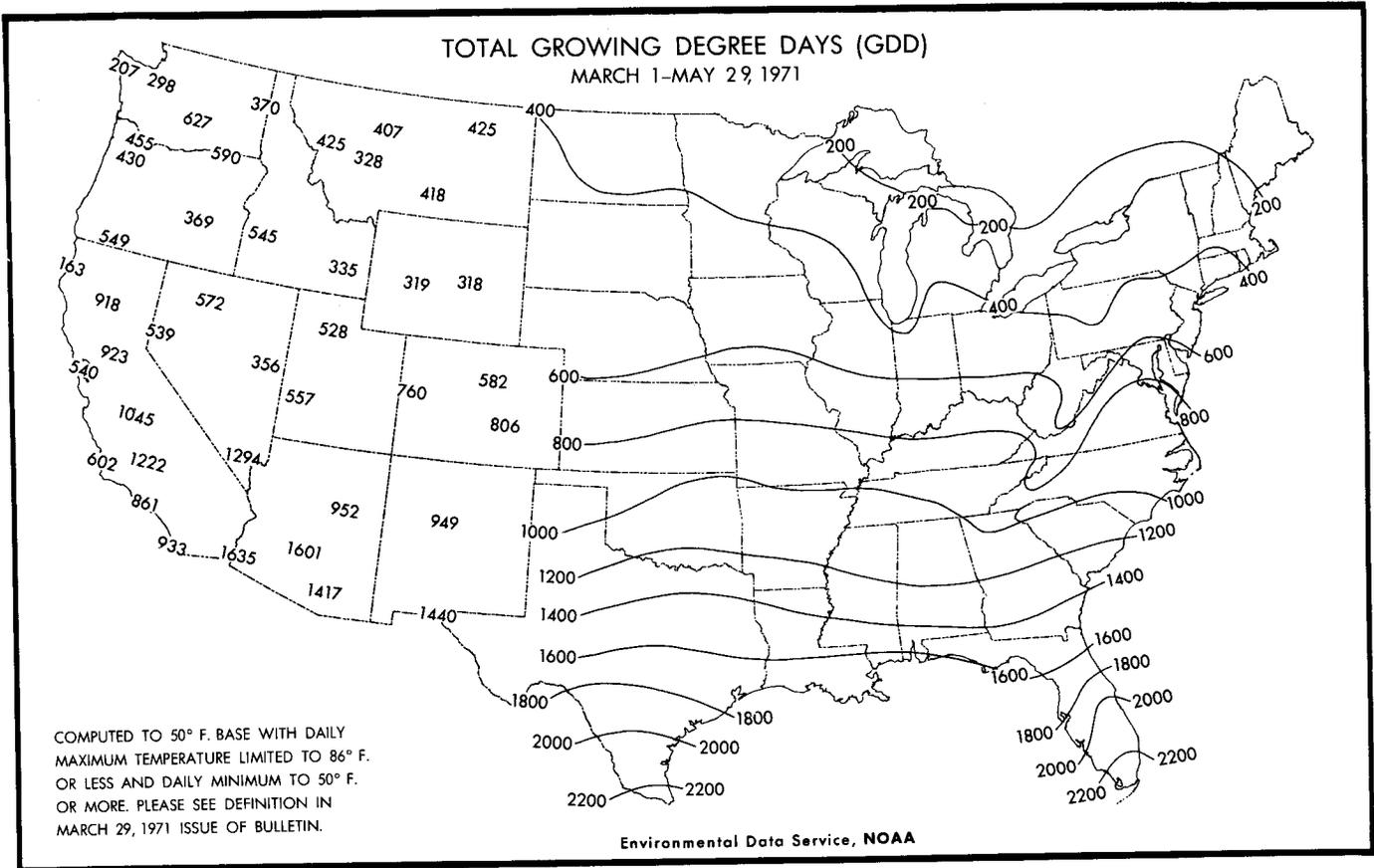
that occurs as infrequently as extreme drought. However, it is important to recognize that extreme drought occurrences are associated with climatic fluctuations toward aridity. Therefore, the greater the year-to-year variability of the moisture aspect of the climate, the more frequently extreme drought occurs. Therefore, the differences from division to division tend to reflect the variability of the climate.

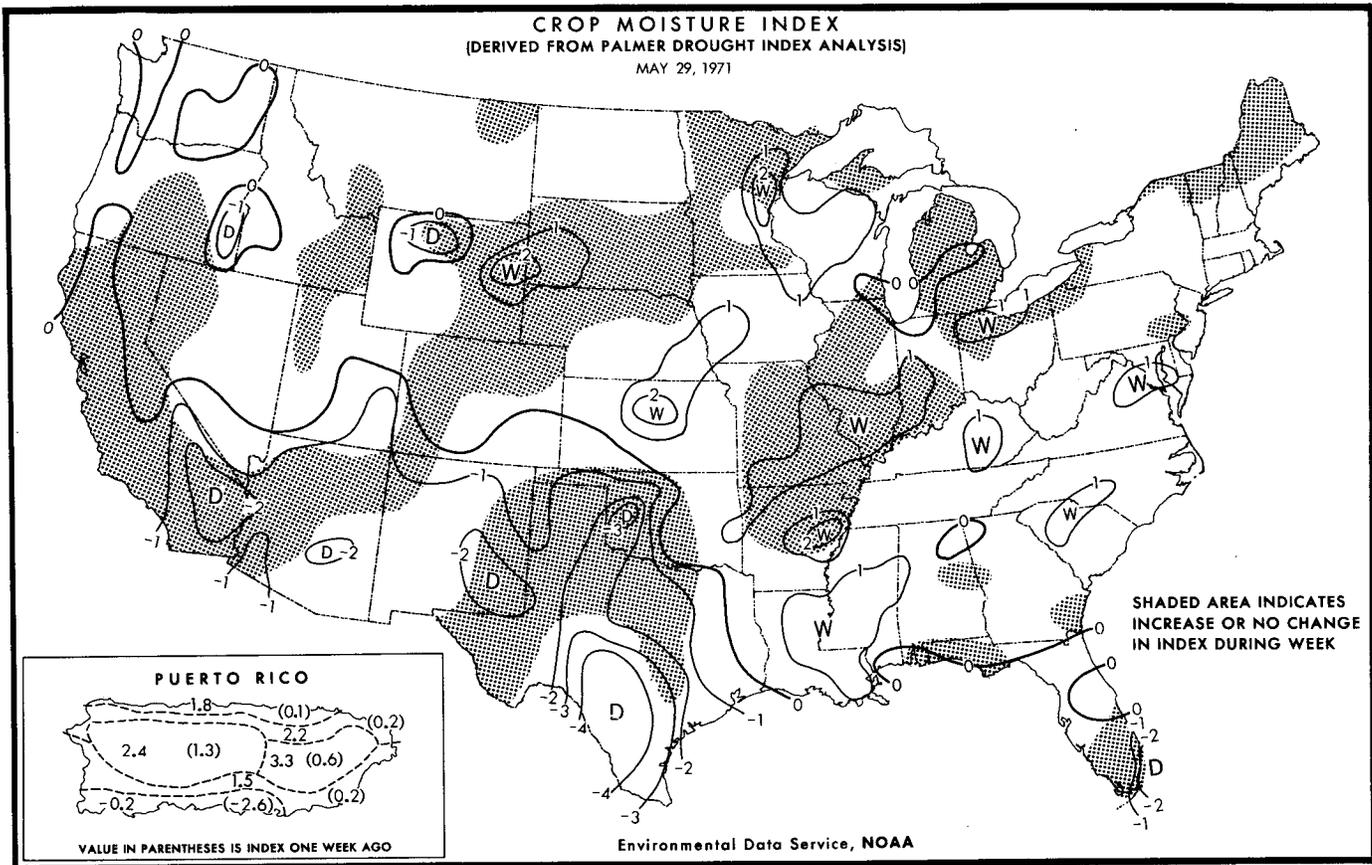
Drought Index Versus Crop Moisture Index.

The drought severity data in this table as well as the drought severity map differ in a number of ways from the Crop Moisture Index (CMI) map on page 15. Negative drought index values simply indicate that the weather has been abnormally dry. The abnormal dryness may have produced negative abnormalities in either runoff or the moisture use by crops, or the amount of moisture stored in or added to the soil, or a combination of all these types of moisture shortages. However, negative CMI values come about only when crop moisture has been abnormally deficient, regardless of the other aspects of the moisture situation.

In addition, the drought index values are highly dependent on the previous value, whereas CMI values are much less dependent on the past, and therefore respond quickly to rainfall or the lack of it.

Wayne C. Palmer





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.

**RAINS EASE DROUGHT IN NORTHERN TEXAS
AND WESTERN OKLAHOMA**

Moderate to locally heavy showers fell in the northern section of the Texas drought area and in parts of southwest Oklahoma. As shown on the above map, the precipitation has eased the extremely dry conditions in those areas, but the drought is far from broken. Additional showers have fallen over the same region since the data for this map were collected. Increased planting of dryland crops is expected in those areas which received the beneficial rainfall. The southern part of the drought area, centered in the Edwards Plateau and Southern Divisions of Texas, received

only scattered light showers during the past week as the dry weather continued unabated. Scattered showers brought further relief to southern Florida, although soils continue dry in most areas, particularly along the southeast coast. Heavy showers fell over Puerto Rico during the week, easing the drought along the southern coast, but causing some interruption to field work in parts of the interior.

J. J. Rahn

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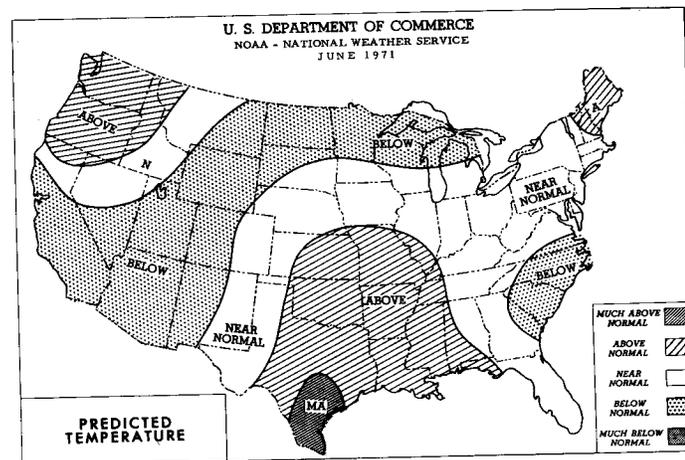
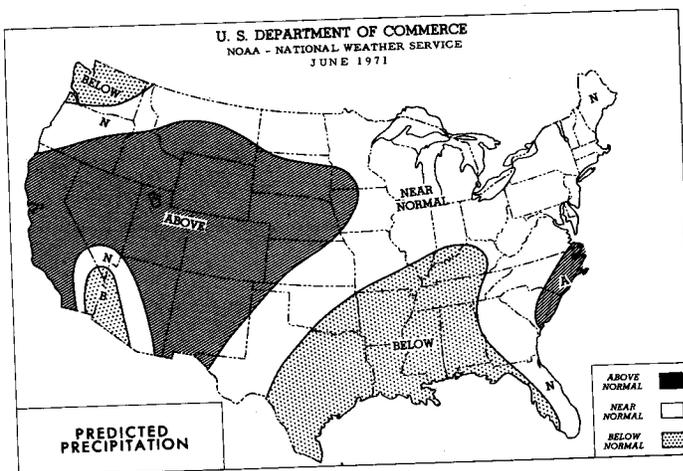
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AVERAGE MONTHLY WEATHER OUTLOOK



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