

# Weekly Weather & Crop Bulletin

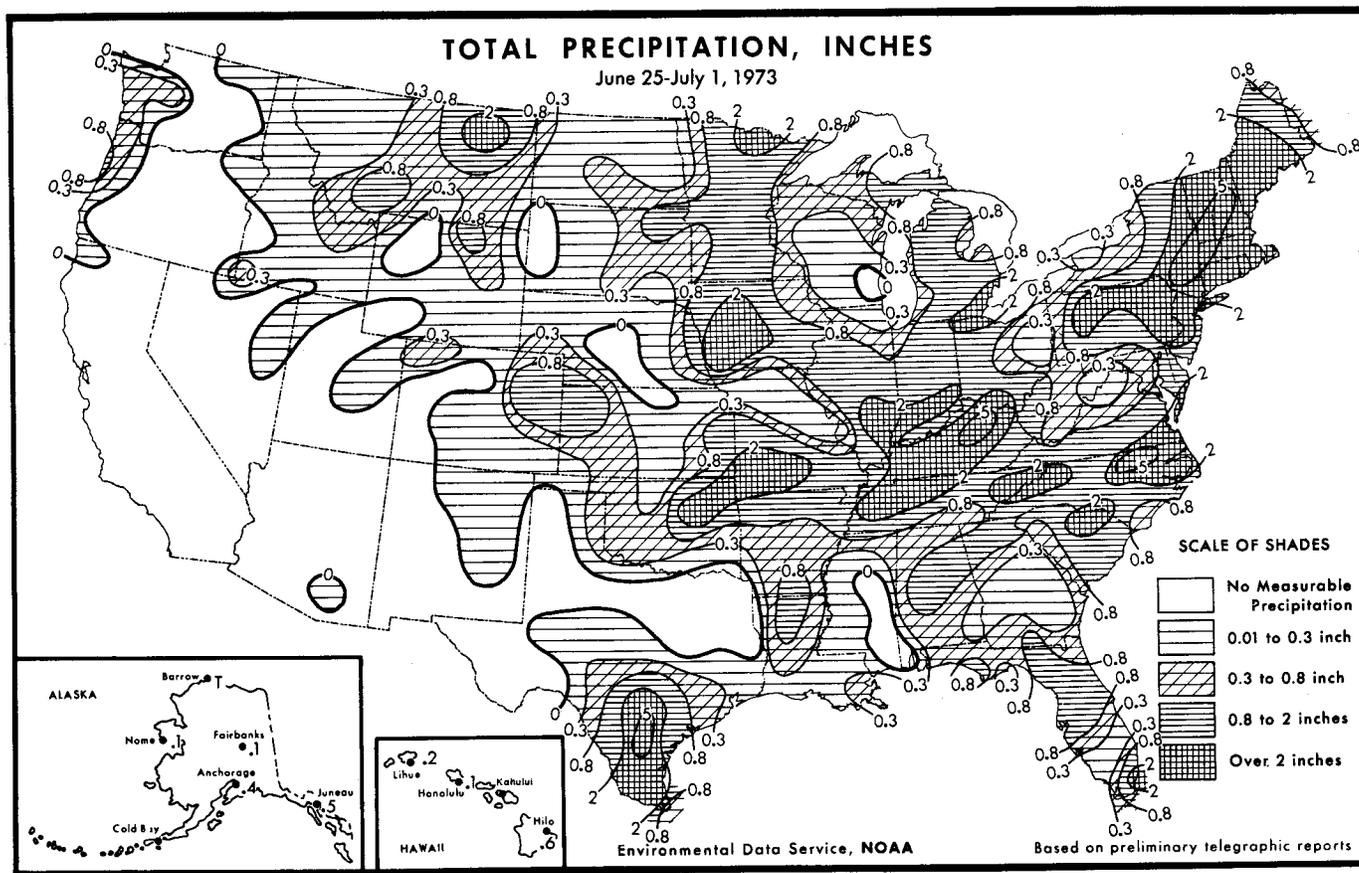
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## NATIONAL WEATHER SUMMARY

**HIGHLIGHTS:** For the first time since early March, the entire length of the Mississippi River was back within its banks; meanwhile from 2.00 in to 5.00 in of rain caused severe flash flooding in New England. The Nation's Western half was hot, with large areas 6° or more above normal, and several records broken. The Nation's eastern half remained cooler than normal, except for New York, New England, New Jersey, and an area of Mississippi and bordering States.

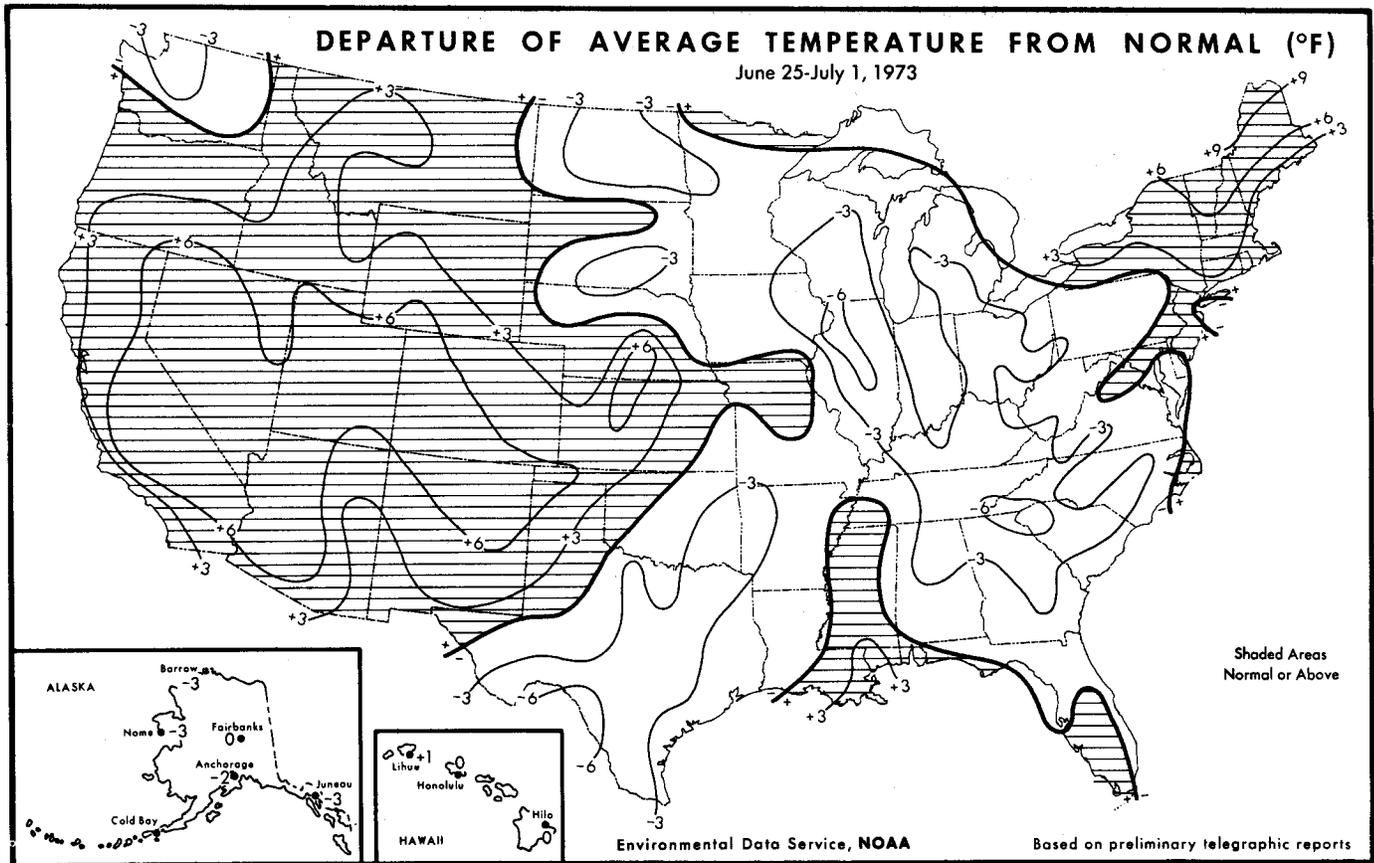
**PRECIPITATION:** A Low drifted slowly across Canada all week. Last Monday it was centered over Saskatchewan; by mid-Thursday it had proceeded to upper Michigan; then it drifted north and was centered over Hudson Bay late Sunday. The cold front extending from the Low brought hail and tornadoes to the Corn Belt most of the week, and

over the weekend dumped heavy rains on New England. Wilmington, Vt., got nearly 5.00 in rain in 6 hours on Saturday. While Vermont had major flooding, minor floods flashed as far south as Philadelphia.

Monday the front triggered tornadoes and hail throughout Minnesota. Funnels harassed lake-side vacation areas near Brainerd. At International Falls, 1-1/2 in hail fell, while golf-ball-size hail struck Danbury.

Early Tuesday, the severe weather invaded the eastern Corn Belt: bands of thunderstorms erupted; 16 tornadoes struck five States bordering the Great Lakes in the afternoon. During one severe storm, the airport wind instruments were destroyed at Detroit, Mich., after recording 95 mph winds.

Wednesday thunderstorms continued in the



eastern Corn Belt area and to the east. Cities receiving 1.50 in or more of rain on Tuesday and Wednesday included Cincinnati, Ohio, Evansville, Ind., and Louisville and Lexington, Ky. Hopkinsville, Ky., got 2.01 in in 6 hours on Wednesday.

Thursday and Friday the front brought bad weather to the East. Tornadoes struck Wilmington, Del., and Canton, Conn. Thursday, Wake Forest, N.C., got 6.05 in rain, Rocky Mount got 4.71 while the Raleigh-Durham area measured 4.25 in. Friday and Saturday the North got a soaking: Poughkeepsie, N.Y., 5.55 in rain Friday, while several locations in Vermont and New Hampshire recorded rainfalls of 4.00 in or more. New England rains continued into Saturday, and the floods came. Rivers jumped banks at Rutland, Vt., and Plymouth, N.H., and 80 automobiles were almost covered with water at the Albany, N.Y., airport.

Elsewhere, scattered storms struck the Nation: 4 in hailstones struck the Odessa, Tex., area, Friday; in Butler County, Neb., 4 in of quite small hail fell, drifting up to 5 feet in ditches and completely destroying crops in an area 3 miles wide and 8 miles long.

Most of California and the Southwest received little or no rain. Lubbock, Tex., recorded its driest June since 1934 (0.33 in rain) and its driest May-June since 1911 (0.75 in rain).

**TEMPERATURE:** In the West, most of Utah and Nevada, and parts of the States bordering them baked in temperatures 6° above the norm. Intense

heat returned to some areas day after day, establishing records. A Thursday high of 114° at Phoenix, Ariz., broke records back to 1932. Sunday temperatures at Denver (90°) and Pueblo (103°), Colo., and at Scottsbluff, Nebr., (101°) broke all records. El Paso, Tex., recorded 108°, the hottest since 1886 for the date.

Furnace Creek, Death Valley, Cal., lived up to its name Thursday: The mercury registered 123° in the afternoon, while soil temperature at 2-1/2 in deep was 192°.

Lingering cold front kept most of the Nation's eastern half from 1° to 6° below normal for the week. Ironically, New England, where the front caused floods, stayed from 3° to 9° above normal. The cold front didn't arrive till the weekend--previously a High in the Atlantic pumped warm air into the area and even northern Maine had early and midweek highs in the high 70's and low 80's.

On Monday the Saskatchewan Low's cold front pushed toward the Mississippi. Ahead of the front, Iowa-Nebraska temperatures hit 80's and low 90's, while Kansas sweated in high 90's and low 100's. By early Tuesday cool air engulfed Iowa and Nebraska.

The front moved very slowly through the eastern Corn Belt, which averaged from 3° to 6° subnormal for the week. Over the weekend, while this front met some warmer than normal air in New England, another large Low pressure system built up north of Montana, and its cold front extended through the Dakotas and Nebraska, into Colorado and Utah.

## NATIONAL AGRICULTURAL SUMMARY

**AGRICULTURAL HIGHLIGHTS:** Windy, hot weather pushed wheat maturity on southern Great Plains as good harvest progress continues. \* Corn growing favorably. \* Soybean planting nearing completion in Corn Belt. \* Cotton growing rapidly. \* Heavy rains and flooding halt haying in New England.

**SMALL GRAINS:** Wheat harvesting continues to make good progress on the southern Great Plains. Texas wheat is 72 percent harvested compared to 95 percent last year. Oklahoma wheat harvest briskly advanced 34 points to slightly over 90 percent complete. Harvesting moved northward into all areas of Kansas except the northwest district and is now 38 percent complete versus the normal 62 percent. High winds and hot temperatures have forced the Kansas wheat crop into maturity causing shriveled kernels in some areas. A shortage of railroad cars was reported. Nebraska wheat is one-third ripe with early harvesting beginning. Winter wheat and rye in South Dakota are beginning to ripen ahead of normal. Rain brought spotty relief to North Dakota small grain crops which have suffered from short moisture. About 5 percent of Montana's winter wheat is turning color. Combining will start soon in Washington and Oregon and is in full swing throughout the South and across the southern Corn Belt into the mid-Atlantic States.

**CORN:** The Nation's corn crop continued to grow favorably under cooler than normal temperatures and widespread showery weather. The Corn Belt crop is in good condition with mostly adequate soil moisture. The height of the crop is averaging several inches shorter than last year. Illinois corn fields average 25 inches high compared to 37 inches last year. Minnesota corn is 5 inches taller than last year's 20 inches. Some corn fields in Michigan were being replanted because of excessive grass or poor stands--planting there is 97 percent complete. Topsoil moisture in Nebraska is generally short dropping corn condition slightly. The Southern corn crop is generally in good to excellent shape with some improvement the past week. In North Carolina and Alabama about one-fourth of the corn is in the silking stage.

**COTTON:** Cotton made rapid growth in the South with mostly open weather which permitted growers to catch up on grass and weed control. The crop is in fair to good condition with wetness hurting condition in South Carolina. Growth and development is behind normal in most areas with squaring in early stages. About 35 percent of the cotton in Mississippi is squaring compared to 66 percent last year and about 3 percent of the crop is blooming. In Louisiana, 15 percent of the crop is squaring while Georgia cotton is 50 percent squaring and 15 percent setting bolls. Texas cotton growers finished planting. Heavy rains over south Texas caused heavy shedding of fruit. In California, cotton blooming increased with normal insect problems. Cotton in Arizona and New Mexico is making good progress.

**SOYBEANS:** Planting of soybeans in the Corn Belt is nearing completion at 93 percent complete on July 1, about 2 weeks behind normal. Planting

was completed by this time last year. The North Central States not finished planting soybeans are Ohio, Indiana, and Illinois (all 90 percent complete), Michigan (95 percent), Missouri (86 percent), and Kansas (87 percent). Emerged soybeans are growing in fair to good condition with some starting to bloom in Minnesota and South Dakota. Unfavorable weather caused problems in some areas, though. Heavy rains in Michigan caused flooding of low places in fields while hail did some minor damage in local areas of Iowa.

Soybean planting in the South progressed satisfactorily to 88 percent complete compared to about 92 percent last year. Planting is 92 percent complete in Arkansas and 86 percent complete in Mississippi. Rapid progress was made planting soybeans following harvested small grains in Virginia and Maryland, and after vegetables in South Carolina. Most emerged acreage is in good condition, although grass and weeds are a problem.

**OTHER CROPS:** Wet conditions hampered haying on many farms in the eastern Corn Belt and North Atlantic Region. Rains and flooding stopped hay cutting in New Hampshire and Vermont. Sorghum planting is 99 percent complete in Texas and is nearing completion in Kansas and Missouri. Insect damage to sorghum is light but widespread in eastern Kansas. Flue-cured tobacco harvest is just starting in North Carolina. In Kentucky, 56 percent of the tobacco is over 6 inches tall with considerable damage from water, insects, and diseases. South Carolina tobacco is fair to good. Peanuts in North Carolina are in good shape. Potatoes in Idaho are recovering from recent cold weather.

**Fruits and Nuts:** Cranberries in New England are in full bloom, but need sun. Warm weather over New York promoted sizing of tree fruit. Sweet cherry harvesting started in Michigan. Peach picking continues in the South, the Georgia crop is 50 percent harvested. Pecan trees in Texas were sprayed for casebearers. Valencia orange harvesting continues in Florida, Arizona, and in California where picking of freestone peaches, nectarines, apricots and plums is accelerating.

**Vegetables:** Harvest of early vegetables increased in New York, and in New Jersey where snapbeans, spinach and squash are available. Many growers in South Carolina are salvaging vegetable crops damaged by excessive rainfall. The season is about completed for most commodities from Florida and preparation for fall vegetables is underway. Heavy rains in south Texas damaged or destroyed most remaining vegetable crops. Tomato harvesting is underway in central and east Texas and is increasing from most southern California areas.

**PASTURES AND LIVESTOCK:** Pastures and livestock in the eastern half of the Nation are generally in good condition. Pastures in the Great Plains States need additional rain, especially in North Dakota. Lower elevation ranges in California and other western States are dry and in the fire hazard stage.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., July 1, 1973

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 . . .	76	- 5	1.2	+ .2	La. Baton Rouge . . .	82	0	.5	- .1	Youngstown . . .	69	- 1	.3	- .5
Mobile . . .	84	+ 1	T	-1.6	Lake Charles . . .	82	- 1	.3	- .8	OKLA. Okla. City . . .	80	- 1	.5	- .5
Montgomery . . .	80	- 1	.5	- .7	New Orleans . . .	84	+ 3	.8	- .3	Tulsa . . .	80	- 1	2.5	+1.4
ALASKA. Anchorage . . .	55	- 2	.4	+ .2	Shreveport . . .	82	- 1	0	- .7	OREG. Astoria . . .	60	+ 1	.5	0
Barrow . . .	35	- 3	T	- .1	MAINE. Caribou . . .	71	+ 9	.6	- .4	Burns . . .	68	+ 4	T	- .2
Fairbanks . . .	61	0	.1	- .3	Portland . . .	66	+ 1	2.2	+1.4	Medford . . .	72	+ 4	0	- .2
Juneau . . .	51	- 3	.5	- .3	MD. Baltimore . . .	73	- 3	.7	0	Pendleton . . .	71	+ 1	T	- .3
Kodiak . . .	---	---	---	---	MASS. Boston . . .	70	0	2.9	+2.0	Portland . . .	66	+ 1	.3	- .1
Nome . . .	45	- 3	.1	- .2	Chatham . . .	61	---	3.6	---	Salem . . .	64	+ 1	.2	- .1
ARIZ. Flagstaff . . .	70	+ 6	0	- .2	MICH. Alpena . . .	64	0	1.0	+ .4	PA. Allentown . . .	74	+ 1	3.6	+2.6
Phoenix . . .	96	+ 8	0	0	Detroit . . .	69	- 2	2.4	+1.8	Erie . . .	67	0	.4	- .4
Tucson . . .	89	+ 4	0	- .1	Flint . . .	66	- 3	1.0	+ .3	Harrisburg . . .	74	- 1	1.2	+ .4
Winslow . . .	81	+ 3	0	- .1	Grand Rapids . . .	69	- 2	.6	- .2	Philadelphia . . .	69	+ 2	4.6	+3.6
Yuma . . .	94	+ 5	0	0	Houghton Lake . . .	64	- 2	1.8	+1.1	Pittsburgh . . .	69	- 3	.3	- .6
ARK. Fort Smith . . .	77	- 5	.8	- .1	Lansing . . .	65	- 5	1.4	+ .7	Scranton . . .	70	+ 1	3.6	+2.7
Little Rock . . .	81	- 1	.5	- .3	Marquette . . .	62	- 2	1.3	+ .4	R.I. Providence . . .	71	+ 2	2.6	+1.9
CALIF. Bakersfield . . .	89	+ 8	0	0	Muskegon . . .	67	- 3	1.0	+ .4	S.C. Charleston . . .	79	- 2	1.3	+ .1
Eureka . . .	57	+ 1	0	- .1	S. Ste. Marie . . .	62	0	1.1	+ .3	Columbia . . .	78	- 4	.2	- .8
Fresno . . .	85	+ 7	T	0	MINN. Duluth . . .	61	- 1	.7	- .4	Greenville . . .	73	- 7	.8	+ .1
Los Angeles . . .	73	+ 2	0	0	Internatl Falls . . .	65	+ 2	2.4	+1.4	S.D. Aberdeen . . .	70	0	1.4	+ .5
Red Bluff . . .	84	+ 3	0	- .1	Minneapolis . . .	69	- 1	1.2	+ .2	Huron . . .	70	- 3	.5	- .1
San Diego . . .	69	+ 1	0	0	Rochester . . .	66	- 3	.5	- .6	Rapid City . . .	70	0	T	- .7
San Francisco . . .	65	+ 3	0	- .1	St. Cloud . . .	67	- 2	.9	- .2	Sioux Falls . . .	71	- 1	.7	- .3
Stockton . . .	81	+ 5	T	0	MISS. Jackson . . .	84	+ 2	- .1	- .8	TENN. Chattanooga . . .	76	- 4	.3	- .6
COLO. Denver . . .	75	+ 4	T	- .3	Meridian . . .	80	- 1	T	-1.1	Knoxville . . .	73	- 5	2.2	+1.4
Grand Junction . . .	81	+ 6	T	- .1	MO. Columbia . . .	76	+ 1	.2	- .7	Memphis . . .	83	+ 2	.9	+ .1
Pueblo . . .	81	+ 6	.1	- .1	Kansas City . . .	78	- 1	1.0	- .2	Nashville . . .	77	- 3	2.9	+2.2
CONN. Bridgeport . . .	73	+ 2	2.6	+1.8	St. Louis . . .	76	- 1	.2	- .8	TEX. Abilene . . .	81	- 2	T	- .6
Hartford . . .	74	+ 3	3.4	+2.5	Springfield . . .	75	- 2	4.5	+3.4	Amarillo . . .	84	+ 3	T	- .6
D.C. Washington . . .	78	+ 1	.4	- .3	MONT. Billings . . .	72	+ 2	.1	- .5	Austin . . .	80	- 4	.9	+ .2
FLA. Apalachicola . . .	82	+ 1	T	-1.4	Glasgow . . .	69	+ 2	2.2	+2.0	Beaumont . . .	81	0	.1	-1.0
Daytona Beach . . .	80	0	1.4	- .8	Great Falls . . .	70	+ 5	.2	- .4	Brownsville . . .	81	- 3	.5	- .2
Ft. Myers . . .	82	0	.3	-1.8	Havre . . .	68	+ 2	.3	- .4	Corpus Christi . . .	82	- 2	1.0	+ .5
Jacksonville . . .	80	- 2	.5	-1.1	Helena . . .	66	+ 2	.2	- .3	Dallas . . .	---	---	---	---
Key West . . .	84	+ 1	.2	- .8	Kalispell . . .	64	+ 1	T	- .4	Del Rio . . .	80	- 6	.1	- .3
Lakeland . . .	81	0	1.2	- .8	Miles City . . .	72	+ 1	.6	- .1	El Paso . . .	85	+ 3	0	- .2
Miami . . .	81	0	3.3	+1.5	Missoula . . .	66	+ 3	T	- .4	Fort Worth . . .	83	- 2	T	- .6
Orlando . . .	84	+ 2	1.2	- .6	NEBR. Grand Island . . .	81	+ 6	.1	- .8	Galveston . . .	82	- 1	.1	- .5
Tallahassee . . .	80	- 1	.4	-1.2	Lincoln . . .	77	0	.4	- .7	Houston . . .	82	0	.4	- .5
Tampa . . .	82	0	.8	- .9	Norfolk . . .	75	0	.1	-1.0	Lubbock . . .	83	+ 3	T	- .5
W. Palm Beach . . .	82	0	1.5	---	N. Platte . . .	75	+ 1	T	- .8	Midland . . .	81	- 2	.2	- .1
GA. Atlanta . . .	76	- 3	.5	- .4	Omaha . . .	74	- 2	1.1	0	San Angelo . . .	82	- 2	T	- .4
Augusta . . .	77	- 3	.5	- .3	Valentine . . .	69	- 3	.3	- .4	San Antonio . . .	80	- 3	3.3	+2.7
Macon . . .	79	- 3	T	- .9	NEV. Ely . . .	69	+ 6	.1	0	Victoria . . .	82	- 1	1.6	+ .9
Savannah . . .	79	- 2	.5	- .8	Las Vegas . . .	95	+ 7	0	0	Waco . . .	80	- 5	T	- .5
HAWAII. Hilo . . .	75	0	.6	-1.0	Reno . . .	70	+ 6	T	- .1	Wichita Falls . . .	82	- 3	T	- .7
Honolulu . . .	79	0	.1	0	Winemucca . . .	75	+ 8	T	- .1	UTAH. Blanding . . .	76	+ 6	0	- .1
Kahului . . .	---	---	---	---	N.H. Concord . . .	72	+ 5	3.9	+3.0	Salt Lake City . . .	79	+ 7	T	- .2
Lihue . . .	79	+ 1	.2	- .1	N.J. Atlantic City . . .	74	+ 1	.5	- .2	VT. Burlington . . .	73	+ 6	2.5	+1.6
IDAHO. Boise . . .	74	+ 3	T	- .2	Trenton . . .	75	+ 1	2.4	+1.5	VA. Lynchburg . . .	77	- 1	2.5	+1.5
Lewiston . . .	72	+ 2	T	- .4	N.MEX. Albuquerque . . .	83	+ 5	T	- .1	Norfolk . . .	76	- 2	1.0	0
Pocatello . . .	71	+ 3	.1	- .1	Roswell . . .	84	+ 5	0	- .3	Richmond . . .	74	- 2	1.5	+ .6
ILL. Cairo . . .	80	- 1	.9	0	N.Y. Albany . . .	73	+ 3	5.5	+4.7	Roanoke . . .	64	0	T	- .2
Chicago . . .	71	- 3	.2	- .7	Binghamton . . .	67	0	1.1	+ .2	WASH. Colville . . .	66	- 2	T	- .3
Moline . . .	69	- 6	1.1	0	Buffalo . . .	71	+ 3	.2	- .4	Omak . . .	57	- 1	T	- .5
Peoria . . .	70	- 5	1.4	+ .4	New York . . .	73	- 2	1.2	+ .4	Quillayute . . .	59	- 4	.4	0
Rockford . . .	69	- 4	.2	- .8	Rochester . . .	74	+ 4	.3	- .3	Seattle-Tacoma . . .	66	0	.1	- .3
Springfield . . .	72	- 5	1.5	+ .5	Syracuse . . .	73	+ 2	.3	- .4	Spokane . . .	72	0	T	- .2
IND. Evansville . . .	75	- 4	1.7	+ .8	N.C. Asheville . . .	70	- 4	1.1	+ .3	Walla Walla . . .	68	0	0	- .3
Ft. Wayne . . .	71	- 3	1.6	+ .6	Charlotte . . .	76	- 3	T	-1.0	Yakima . . .	67	- 3	.5	- .5
Indianapolis . . .	72	- 2	1.0	- .1	Greensboro . . .	77	0	.9	+ .1	W. Va. Beckley . . .	72	- 2	.9	0
South Bend . . .	71	- 1	1.8	+ .9	Hatteras . . .	75	- 3	3.4	+2.4	Charleston . . .	72	- 2	1.0	0
IOWA. Burlington . . .	76	0	1.8	+ .8	Raleigh . . .	72	- 4	.7	- .7	Huntington . . .	72	- 3	1.8	+ .8
Des Moines . . .	73	- 2	3.0	+1.9	Wilmington . . .	65	- 4	.5	- .3	Parkersburg . . .	67	- 2	.5	- .3
Dubuque . . .	67	- 4	.3	- .6	N.DAK. Bismarck . . .	65	- 4	.3	- .4	WIS. Green Bay . . .	68	- 4	.3	- .7
Sioux City . . .	74	- 1	.9	- .1	Fargo . . .	67	- 1	.3	- .6	La Crosse . . .	65	- 5	T	- .9
KANS. Concordia . . .	81	+ 3	T	- .9	Williston . . .	67	- 1	.2	- .8	Madison . . .	69	+ 2	T	- .9
Dodge City . . .	83	+ 5	.7	0	OHIO. Akron-Canton . . .	71	- 1	.2	- .8	Milwaukee . . .	70	+ 2	.2	0
Goodland . . .	76	+ 3	1.3	+ .7	Cincinnati . . .	71	- 4	1.7	+ .7	WYO. Casper . . .	72	+ 5	.2	- .3
Topeka . . .	79	+ 1	T	-1.0	Cleveland . . .	68	- 3	.8	- .1	Cheyenne . . .	72	+ 5	T	- .3
Wichita . . .	83	+ 2	.1	- .9	Columbus . . .	71	- 3	.6	- .4	Lander . . .	69	+2.2	.9	+ .3
KY. Lexington . . .	72	- 4	5.0	+3.9	Dayton . . .	72	- 3	1.3	+ .3	Sheridan . . .	69	+2.2	.9	+ .3
Louisville . . .	74	- 2	1.9	+ .9	Toledo . . .	68	- 4	2.4	+1.5	P.R. San Juan . . .	84	+ 4	1.7	+ .5

CORRECT WWCB June 25, 1973, Pg 4, Precipitation Departures for the following Springfield, Ill. +2.0, St. Louis, Mo., +1.2, Wilmington, N.C. +1.0, and Cincinnati, Ohio +2.0.

## CONDENSED STATE SUMMARIES

The Bulletin capsulizes nationally important weather and crop conditions. Every Monday SRS publishes more detailed data in State Weekly Weather and Crop Bulletins in cooperation with the National Weather Service, NOAA. Voluntary weather observers, crop reporters, and county extension agents contribute weekly observations for these reports.

**ALABAMA:** Hottest weather this year, especially south with 97° at Mobile and Anniston. Showers generally light and spotty south, thundershowers mainly afternoon and evening central and north. Good progress cultivating cotton, corn and soybeans, planting remaining soybean acreage, harvesting small grains and cutting hay. Thundershowers slowed fieldwork several localities north and central. Cotton squaring freely many fields, no major buildup insects reported. Corn generally made satisfactory development. Older corn several southern counties needs moisture, about 25% of crop silking statewide. Peanuts several localities need rain to maintain favorable growth. Planting soybeans about 90% complete. Prospects continued favorable for early planted soybeans. Wheat about 67% combined, yields so far only fair. Fair amount good quality hay saved, cutting limited several localities by rain.

**ARIZONA:** Hot, dry air statewide. Temperatures 3° above normal southwest, 10° above normal northwest, 4° to 6° elsewhere. Slight increase moisture weekend few light showers near mountains southeast and White Mountains. Cotton continues good progress statewide but somewhat later than normal. Few cotton bollworm eggs and larvae appearing Yuma, Maricopa and Pinal Counties. Harvest small grains active, yields generally satisfactory. Sorghum all stages making satisfactory progress. Safflower maturing rapidly, yield prospects favorable. Sugar beets good growth Cochise County, harvest completed Yuma County. Alfalfa hay harvest continues fourth cutting, southeast area nearing third cutting. Cantaloupe harvest west passed peak, just underway central. Watermelon harvest underway Salt River Valley. Mixed vegetable harvest continued seasonally. Potato harvest full swing Salt River Valley. Grape harvest continued central and western. Harvest grapefruit, Valencias continued Salt River Valley. Ranges beginning to dry up but still good. Higher ranges green, grass good; lower ranges beginning to dry due to recent hot weather. Feed supplies adequate to carry ranges until summer rains. Stockwater sufficient. Cattle, calves good, screwworm infestations. Sheep, lambs fair to good.

**ARKANSAS:** Temperatures mid-70's northeast to low 80's much of southeastern half with 4° subnormal to 2° above, mostly subnormal northwest quarter of State. Extremes: 54° Calico Rock and Gilbert; 97° Jonesboro and Marianna. Some cooling midweek, gradual warming through weekend. Rainfall generally in excess 0.50 in south and west. Some areas from 1.91 to 2.40 in. Most rain late week. Open weather. Field progress excellent. Scattered showers beneficial late week. Need rain for plant germination. Cotton grew rapidly, older plants squaring. Rice growth excellent, water weevil several fields. Soybean planting slowed but 92% planted, older fields treated with herbicides, presence of cyst nematodes and pythium fungus noted. Sorghum planting continued. Corn tasseling. Combining small grains nearly over, hay harvest active, peach harvest continues. Picking tomatoes near peak. Cucumber harvest began. Pasture feed ample.

**CALIFORNIA:** Few light showers midweek high Sierra, otherwise no rain. Statewide temperatures several degrees above normal, but near normal portions south coast. Midweek temperature peak had readings 100° plus range, dropping to near normal highs end week. Small grain harvest continues, late areas increasing. Digging overwintered sugar beets active. Planting corn, milo, dry beans as second crop continues. All irrigated crops doing well. Cotton bloom increasing, insect problem normal. Grapes continue to develop well, slight sunburn damage some vineyards, harvest early table grapes continue, Thompson Seedless harvest just beginning. Picking early freestone peaches, nectarines, apricots and plums accelerating. Pear, prune and clingstone peach crops look good. Some heat damage Red Delicious apples. Newtowns unaffected. Some sunburn walnuts. Avocado exposed fruit heat damage considerable Santa Barbara County canyons. Picking oranges, lemons and avocados continues moderate. Desert grapefruit harvest about complete; beginning other areas. Some Calimyrna figs picked. Broccoli, cauliflower down Salinas. Cantaloupe declining Palo Verde Valley, ending El Centro next week. Kern County started last week. Carrots decreased Salinas, quality fair, some heat damage. Southern California celery decreased, quality variable. Sweet corn harvest beginning San Joaquin Valley, increasing Los Angeles with good yields, quality. San Diego picking underway, Coachella drawing to close. Lettuce cutting heavy Salinas, lack of available transportation indicated. Onion harvest continuing Stockton. Potato digging dwindling Kern County, production good. Plant frost damage reported north. Tomato picking light San Diego, sizing difficulties indicated. Shipments increased other south areas. Picking continues Visalia. Watermelon harvest increasing Riverside, decreasing El Centro. Range grasses provide good feed, fires burned scattered foothill acreages. Fire danger critical, especially foothills. Virtually all range cattle moved to high ranges or permanent irrigated pastures. Water supplies mostly adequate, few northern area supplies short. Livestock producers note higher than normal losses from predators, domestic dogs, and rustlers.

**COLORADO:** Unseasonably hot generally dry weather prevailed. Only day with significant precipitation was 28th with number thundershowers central mountains and east. Rainfall amounts extremely variable ranging from less than 0.10 in to over 1.25 in. Weekly temperatures 3° to 5° above normal. Highs of 100° or more several days. Highest was 106° at Lamar and Lajunta. Condition most field crops good to excellent. Hot temperatures pushed maturity small grains. Topsoil moisture short to very short eastern plains. Light insect infestation alfalfa and onions. Winter wheat 98% headed, 71% turning color, 7% ripe. Winter barley 87% headed, 63% turning color, 4% ripe. Corn 20% complete final cultivation. Sorghum seeding virtually complete, 89% emerged. Sugar beets 80% thinned or blocked. Dry bean seeding virtually complete, 79% emerged. Potatoes very good to excellent. Alfalfa excellent, first cutting 65% complete. Ranges and pastures very good.

**FLORIDA:** Scattered afternoon and evening thunderstorms, rainfall variable ranging from none to more than 5.00 in. Seasonable temperatures with averages from 1° above normal to 3° subnormal. A record low temperature for June 26 of 68° established at Apalachicola. Most field crops generally good condition. Soil moisture ranges from surplus to short. Field corn good, recent rains beneficial. Tobacco harvest slow. Peanuts growing good. Late soybean planting delayed by rain. Pastures responding favorably to adequate soil moisture and warm temperatures. Cattle good to excellent. Citrus excellent, new crop growing well. Valencia harvest continues high, grapefruit practically complete. Watermelon harvest active western counties but overall volume declining rapidly. Zucchini sweet corn continues in good but declining volume. Eggplant continues in good supply. Season about completed for most commodities. Summer preparation for fall vegetables underway.

**GEORGIA:** Temperatures about 3° subnormal statewide due to cool nights. Rainfall amounts averaging near 1.00 in north and east, and about 0.25 in southwest and central in widely scattered mainly afternoon and evening thundershowers. Little weekend change except slightly warmer. Soil moisture mostly adequate except surplus southeast. Considerable yield reduction and acreage loss southeast due to drowning. Peanuts fair to mostly good, disease and insect controls active. Corn extremely varied even within localities, moisture damage continues. Cotton fair to good, 50% squaring, 15% setting bolls, far behind normal. Tobacco fair to good, much variation from field to field, harvest 20% complete, considerable water damage evident. Soybeans 88% planted, condition varied. Sorghum 80% seeded. Small grains 90% combined. Hay harvest very active. Peaches 50% harvested, volume off but will resume. Vegetables fair to good. Watermelon movement very light, expected to increase sharply current week. Cattle and pastures good.

**HAWAII:** Weather warm and dry--favored crop progress. Pineapple harvest at peak. Supplies of watermelons, bananas, head cabbage, heavy. Other crop supplies adequate. Pasture dry and in need of rain. Cattle fair to good.

**IDAHO:** Generally cooler at first then warming midweek and cooler end. Temperatures above normal, highs ranging from 84° at Teton to 100° at Mountain Home and 102° at Coeur D'Alene. Precipitation subnormal. Weather conducive to crop development and haying, as hot dry days prevailed. Livestock good. Most ranges dry, grasses headed short, rain needed dryland areas. Potatoes, corn, dry beans recovering from recent cold. Some replanting dry beans southcentral where moderate losses occurred. Activities included irrigating, cultivating, haying all areas, cherry picking, and apple thinning southwest. Winter wheat good growth, 75% headed, 25% fields turning. Spring wheat mostly heading, some turning. Warmer weather speeded winter barley, some fields southwest nearly mature. Except replanted fields, all bean fields emerged and making good growth. Sugar beet blocking and thinning 95% complete. Cutting alfalfa active, over 70% harvested. Fruit crop developing well southwest, apple thinning active, cherry harvest peaked early week. Harvesting green peas for processing active north, 50% complete.

**ILLINOIS:** Precipitation light except heavy thunderstorms central, south midweek. Warm, humid,

cooling Thursday, Friday. Corn 10% excellent, 70% good, 20% fair. All fields average 25 in tall, 1970-72 average 37 in; advanced fields 45 in tall, 1970-72 average 55 in. Soybeans 90% planted, 2 weeks behind normal, stand 80%, same last year. Soybeans 9% excellent, 52% good, 37% fair, 2% poor. Wheat nearly all ripe, 99% last year, average 96%. Combining about 40% complete, 65% last year, average 66%. Oats mostly good, about 90% filled, 85% last year; about 45% turned yellow, 31% last year; about 12% ripe, 10% last year. Barley 40% combined, same last year. Sorghum 70% planted. Alfalfa, red clover hay mostly good to excellent. About 90% first crop alfalfa cut, 80% red clover hay cut, below average. Pastures good to excellent. Soil moisture 53% surplus, 45% adequate, 2% short. Averaged 4.5 days suitable fieldwork. Main activities cultivating, haying, combining wheat, soybean planting.

**INDIANA:** Showers early, sunny and warm later. High, 91°. Rainfall ranged from 0.60 in northwest to 2.00 in southern third and eastcentral. Humidity above normal. About 4 days suitable for fieldwork. Topsoil and subsoil moisture adequate to surplus. Soybeans 90% planted, 2 weeks behind 1972. Soybeans 6 in high, 7 in 1972. Corn 15 in high. Wheat 40% ripe, 5% combined, progress limited to south. Oats 75% headed. Barley 15%, rye 5% combined. Alfalfa hay 80% cut first time. Clover 60% cut. Pastures improved to good.

**IOWA:** Temperatures 1° to 3° subnormal, precipitation ranged from above normal west and central to subnormal east. First cutting alfalfa hay nearly complete with over 6 days suitable for fieldwork. Weed control corn and soybeans mostly good. Localized minor hail damage to corn and soybeans, some soybean replanting expected. Corn condition 18% excellent, 68% good, and 14% fair. Corn stand 92% of normal. Soybeans condition 10% excellent, 69% good, and 21% fair. Over 90% soybeans emerged with stand of soybeans 90% of normal. Oats over 90% headed; condition 18% excellent, 59% good, 19% fair, 4% poor. Second cutting alfalfa hay started, first cutting clover hay 65% complete. Hay crops and pastures mostly good to excellent. Topsoil moisture 8% surplus, 72% adequate, 20% short. Subsoil moisture 21% surplus, 78% adequate, less than 1% short.

**KANSAS:** Temperatures 5° above normal northwest to 1° subnormal southeast. Midweek near normal with much above normal earlier week and again at end. Beneficial rain west and southcentral, extreme northeast. Wheat harvest moved northward into all except northwest district, rainfall slowed harvest some areas. Wheat 38% harvested, 56% last year, average 62%. High winds, hot temperatures have forced crop, causing shriveled kernels some areas. Shortage of railroad cars reported. Surface moisture short many areas. Sorghum planting nearing completion, some replanting due to dry weather. Over half corn crop laid by. Damage from insects sorghum and corn light but widespread east half. Soybeans 87% planted, 89% last year and average. Second cutting alfalfa 39% completed, 38% last year, average 42%. Livestock good. Ranges and pastures need rain. Movement of cattle still slow due to other farm activities.

**KENTUCKY:** Variable cloudiness with temperatures at or slightly subnormal. Precipitation light

west to heavy central and east. Fieldwork possible 3.8 days. Soil moisture 56% adequate, 41% surplus, few local shortages. Planting 1973 crops neared completion, but some soybean planting and replanting continues on river bottoms and double-cropped acreage. Herbicide damage common on beans, necessitating additional replanting. Average height emerged beans 6 in. Corn growing rapidly but well behind normal development, few fields tasseling. Tobacco over 6 in tall 56% of fields; considerable water, insect, and disease damage. Wheat harvest over 50% completed, nearly finished southwest. Harvest fescue seed active, some field losses from wind and driving rains. Pastures good.

**LOUISIANA:** Early summer warmth continued. Temperatures ranged from 2° subnormal northwest to 3° above normal over rest of State. Extremes: 98° Shreveport and Monroe and 64° Ashland. Scattered thundershowers, amounts generally light. Many areas reported no precipitation; most received less than 0.50 in. Greatest 1-day total reported, 1.55 in Saturday downtown New Orleans. Haying, cultivation main activities. Soil moisture short to adequate. Fieldwork possible 6.5 days. Soybean planting continued as floodwaters receded, over 90% planted, 98% last year. Soybeans fair to mostly good, need rain most areas, some fields still weedy. Cotton fair to good, 15% squaring, considerably less than last year. Open week helped farmers catch up on grass control. Rice good, many fields heading southwest, herbicide application continues. Sugarcane good, needs rain to speed growth, some borer control, infestation light, but population appears to be building. Corn and sorghum fair to good, sorghum planting continues. Insects problem some corn fields. Sweet potatoes growing well, need rain to continue development. Harvest of peaches, tomatoes, green peppers and okra active. Some watermelons marketed, most areas 2 weeks later than normal. Hay crops mostly good, haying in full swing many areas. Pasture feed improved slightly, supplied average amount of grazing. Livestock mostly good.

**MARYLAND AND DELAWARE:** Temperatures normal to 2° above normal with cool days and warm nights. Extremes low to mid-80's, mid-60's except low 50's in Garrett County. Precipitation heavy in north ranging from 1.00 in to over 2.00 in. Most of the total reported on the 29th with Wilmington, Del., reporting 2.21 in. Other sections precipitation generally 0.25 to 0.75 in. Weekend fair and warm except few lingering showers Eastern Shore early Saturday. Showers slow fieldwork. Corn growing rapidly, earliest fields tasseling. Barley harvest nearly finished and wheat 50% harvested south. Soybean seeding about normal 90% done, last year 71%. Seeding of dual crop soybean acreage following small grains being pushed. Vegetable harvest active. Lodi apples being picked. Early peaches ripening.

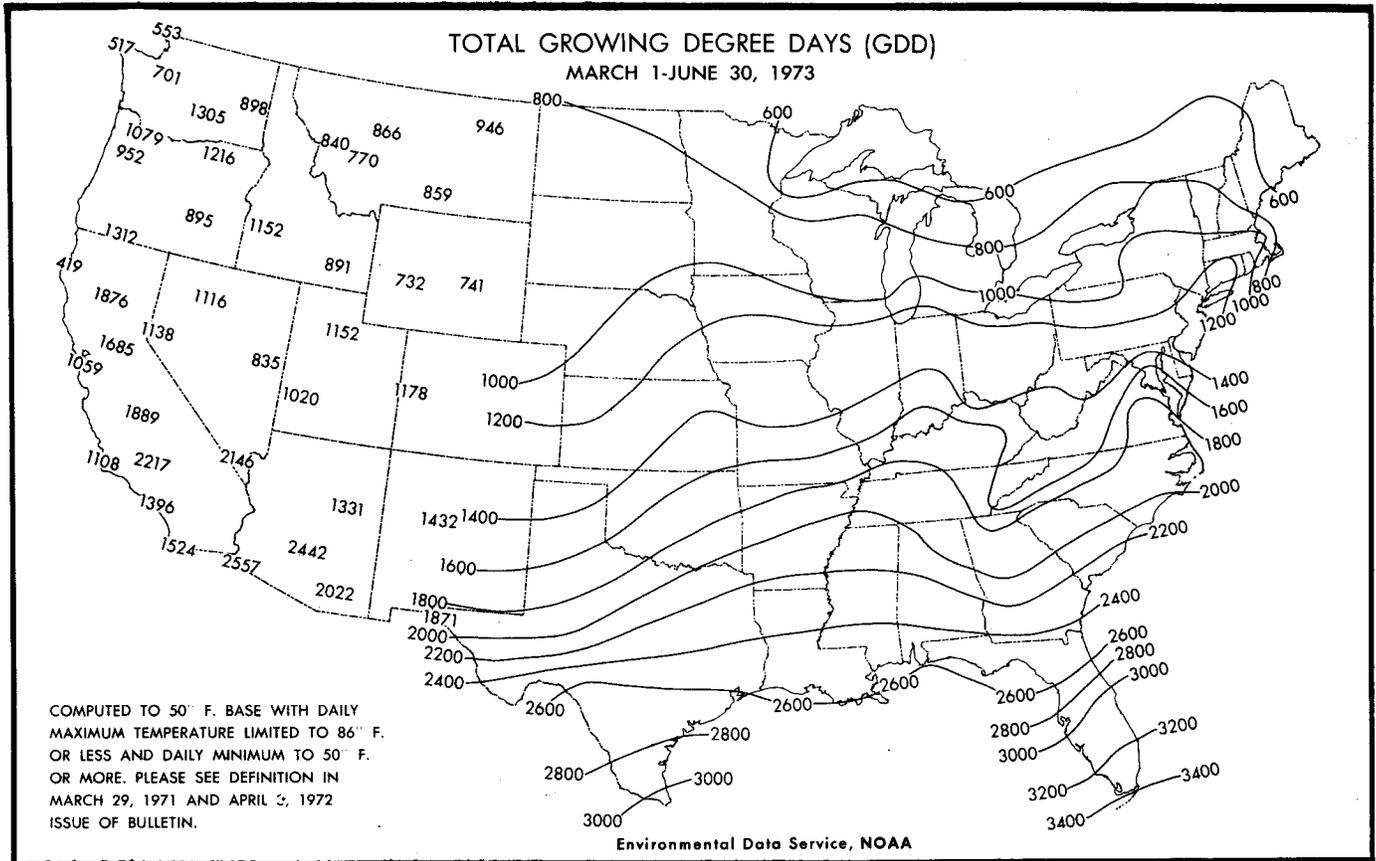
**MICHIGAN:** Temperatures averaged 1° to 3° subnormal most areas. Severe weather late Tuesday and again Wednesday with tornadoes or severe thunderstorms, funnel clouds, damaging winds and hail especially southeast. Winds near 100 mph at Detroit airport Tuesday. Heavy rain, thunderstorms scattered through week most areas east upper and lower. Rainfall totaled 1.50 to 2.01 in most lower except some 4.00 in amounts northwest lower. Heavy rains delayed hay making generally and flooded low lying fields some areas. Soil moisture mostly surplus. Averaged only 3.1 days suitable fieldwork. Corn 97% planted, some fields being replanted because

of much grass in rows or poor stands. Average corn height 15 in. Soybeans 95% planted, normal 100%, low spots in fields drowned out by standing water. Dry beans 83% planted, normal 93%. Some beans will not be planted because of flooded fields. Hail and heavy rains caused some loss of planted navy beans. Nearly 50% wheat turned yellow, heavy rains and wind caused some lodging. Oats 32% headed. Much cut hay damaged by rain, about 42% first cutting made. Pasture feed supplies above average. Sweet cherry harvest underway, tart harvest start July 1 southwest. Cherries beginning to color northwest. Lettuce harvest started in southcentral. Small berry harvest started. Asparagus harvest finished.

**MINNESOTA:** Temperatures 1° to 4° subnormal except northcentral and northeast where normal to 2° above. Week began cool, ended hot. Precipitation northeast above normal first half of week, rest of State dry until Sunday evening when 0.50 to 2.50 in fell. Cool weather benefited small grain heading. Weekend rains relieved dry areas west while rest of State mostly adequate moisture supplies. Scattered showers hampered haying and drizzle in north halted fieldwork. Painted lady butterfly active on sunflowers and soybeans. In northwest, wild oats troublesome some fields from incomplete herbicide effectiveness. Row crops, corn, soybeans, sugar beets, flax, potatoes and small grains good. Corn 25 in tall, 5-year average 20 in; first time cultivation 96%, normal 91%; second time 63%, normal 49%. Soybeans blooming 5%, normal 3%; height 9 in, normal 8 in. Flax blooming 41%, normal 21%; setting bolls 6%, normal 5%. Rye heading 97%, normal 97%; ripening 46%, normal 25%. Spring wheat 83% headed, normal 45%; ripening 1%, normal 1%. Oats 80% headed, normal 55%; ripening 5%, normal 1%. Barley heading 81%, ripening 5%, normal 1%. Winter wheat heading 95%, ripening 16%, normal 13%.

**MISSISSIPPI:** Temperatures near seasonal normals. Extremes: 99° Greenwood; 55° Tupelo. Widely scattered light to moderate showers and thunderstorms late week. Precipitation averaged 0.60 in north central and northeast to less than 0.10 in lower Delta, southwest and southcentral. Poplarville averaged 2.02 in. Thunderstorms with damaging winds on 27th at Bay Springs. Widely scattered showers and thunderstorms over weekend. Soil moisture short to adequate. Fieldwork averaged 5.5 days suitable. Cotton fair to good; 35% of acreage squaring, 66% last year; 3% blooming, 9% last year. Soybeans mostly good, 86% of acreage planted, virtually complete last year; 78% up to a stand. Corn acreage 25% tasseled, 20% silked. Sorghums 90% planted, 80% up to a stand. Wheat 95% and oats 97% combined. Sweet potatoes 86% planted, condition good. Condition of corn, sorghum, rice, peaches fair to good. Pecans mostly fair. Pastures and livestock good.

**MISSOURI:** Temperatures near or 1° to 2° subnormal, except near or slightly above normal in Bootheel. Some of the highest temperatures this season, in 90's, northwest and southeast. Rainfall from showers and thunderstorms rather general southwest and northeast with little or none other sections. Six days suitable for fieldwork. Soybeans 86% planted, finished 1972. Grain sorghum 88% planted, complete 1972. Second cutting alfalfa 29% harvested, 44% 1972. Clo-tim hay 56% harvested, 74% last year. Wheat 77% ripe, 46% harvested, 73% harvested 1972. Corn fair to good. Pastures good. Soil moisture 15% short, 77% adequate, 8% surplus.



Motor fuel supply available for current farm work remains adequate.

**MONTANA:** Temperatures near normal east to 5° above central. High temperatures midweek, cooler over weekend. Low temperatures dropped to freezing or slightly below mountain valleys west. Thundershowers accounted for majority rainfall with more significant precipitation southwestern mountains and eastern division. Winter wheat poor to good northwest, northcentral and central; good eastern third; fair to good elsewhere. Spring grains condition good eastern third, poor to good southwest and southcentral, fair to good elsewhere. Topsoil moisture mostly short except far east. Winter wheat 5% turning, 70% headed, 20% boot. From 25% to 33% spring grains headed. Sugar beets and potatoes fair to good. Sugar beets 85% thinned. First cutting alfalfa 35% complete, wild hay harvest 10% complete. Range feed mostly short except eastern third and portions southcentral. Some movement of livestock from summer ranges because of grass shortage northwest, northcentral, central, and southcentral.

**NEBRASKA:** Temperatures above normal, precipitation limited to panhandle and southwest with amounts of 0.10 to 0.50 in. Wheat nearly all turned, about 33% ripe with early harvest south-east, moisture content 13% to 17%, harvest expected to be full swing this week. Corn condition dipped slightly, 12% excellent, 74% good, 14% fair. Sorghum condition down slightly, green-bugs increasing but only few farmers have needed chemical control. Soybeans remain mostly good, 12% excellent, 76% good, 12% fair. Sugar beet thinning completed and weeding 85% complete.

First cutting alfalfa finished, 20% second cutting complete. Topsoil moisture 94% short, subsoil moisture 24% short. Main farm activities cultivation of row crops and fallow, irrigating, and haying.

**NEVADA:** 5° above normal except 2° above northeast. High 114° Logandale, coldest 25° Mountain City. Northeast only area with precipitation, heaviest 0.14 in at Ely. First cutting alfalfa 50% complete, just underway northeast. Third cutting alfalfa 50% complete southern valleys. Small grains good. Spring grain acreage 50% headed. Fall grains milk to dough stage. Potatoes in north set back by frost. Early planting starting to blossom. Cotton starting to square, cultivation in progress. Vegetable harvest complete southern valleys. Livestock good, movement to summer ranges complete. Upper ranges excellent, lower ranges dry and subject to fire.

**NEW ENGLAND:** Heavy showers end of week, flooding New Hampshire, Vermont, West Massachusetts, and Connecticut. Temperatures below or near normal east coastal, above normal inland. Haying slowed, stopped some areas; well past peak quality many areas, much going for silage, haylage. Corn, hay fields under water in flooded areas. Roads damaged Vermont. Strawberry picking about done south, active north. Cranberries full bloom need sun. Early planted potatoes Aroostook, Me., spotty, later look good. Insects and weeds abundant all areas.

**NEW JERSEY:** Temperatures near normal, ranged from near 60° Monday morning to the upper 80's Sunday afternoon. Precipitation from thundershower activity with some very heavy showers Thursday

night through Friday night. Heaviest 24-hour total around 6.00 in at Wayne in Passaic Co. Some local flooding. Erosion bad on fields with light cover. Spring lettuce harvest near completion. Light tomato and cucumber harvest begun. Cabbage harvest heavy. Snapbeans, spinach and squash available. White potatoes and sweet potatoes making good growth, but some white potato stands uneven. Apples and peaches sizing well. Considerable splitting of blueberries. Harvest of Collins and Blue Crop varieties beginning. Wheat harvest begun. Weather conditions poor for grain combining and hay making.

**NEW MEXICO:** Hot and dry. Temperatures reached levels of 1° to 6° above normal on Tuesday and continued high through weekend. Highest 109° at Alamogordo on Saturday. Very widely scattered, very light showers through last half of week, most amounts negligible. Some locally heavy rains reported in Sacramento Mountains and southern desert late Sunday. Soil moisture becoming short for dryland crops and ranges. Crops growing satisfactorily. Cotton growing rapidly but two weeks behind normal. Wheat harvest active east, behind last year. Alfalfa second cut past peak south, starting north. Sorghum grain planting completed, all emerged. Onion harvest Mesilla Valley active. Apples continue good. Ranges deteriorating, need moisture. Livestock good, branding calves active.

**NEW YORK:** Large amounts rainfall over southeast, totals of 3.00 to 6.00 in Catskills and Hudson Valley, considerable flooding. Rainfall well above normal over most of east but much of west showed deficiency of 0.25 to 0.75 in for week. Temperatures 3° to 7° above normal. Rochester, Massena and Albany all reached 90°. Generally good week for fieldwork and plant growth. Side dressing of corn underway with crop in good condition. Some late corn planted. Wheat and early planted oats headed out. Improved haying weather permitted harvest at increased pace. First cutting alfalfa 50% complete, weevil damage variable but generally not severe. First cutting clover-timothy hay 40% complete and silage 65% harvested. Late planting dry beans continues, 85% planted. Warm weather and showers generally helped vegetable growth as harvest of early vegetables increased. Strawberry harvest peaked Upstate. Early sweet corn tasseling few areas. Upland potatoes good. Storage cabbage planting underway. Supplies iceberg lettuce Oswego muck area increased. Growth late seeded onions slow Orange County. Warmer weather promoted sizing of tree fruit. Sweet cherry harvest continues Hudson Valley and underway west. Some cracking of sweet cherries. Tart cherries beginning to color.

**NORTH CAROLINA:** Temperatures near normal but precipitation varied greatly in scattered thunderstorms. Precipitation amounts varied from over 6.00 in to near 0.25 in. Rain reaching flooding proportions and accompanied by wind and hail in some areas, once again interrupted field activities. Soil moisture surplus coastal plains, adequate elsewhere. Only 3.2 days suitable fieldwork. Flue-cured tobacco harvest just starting, should gain momentum after July 4. Corn improved; 24% excellent, 65% good, 11% poor to fair; 28% silking. Soybeans 88% seeded, growing crop good shape. Small grain harvest active, wheat and rye about 60% complete, oats and barley 70%. Peanuts, cotton, apples good shape. Peach harvest 33% complete. Irish potato digging 50% complete.

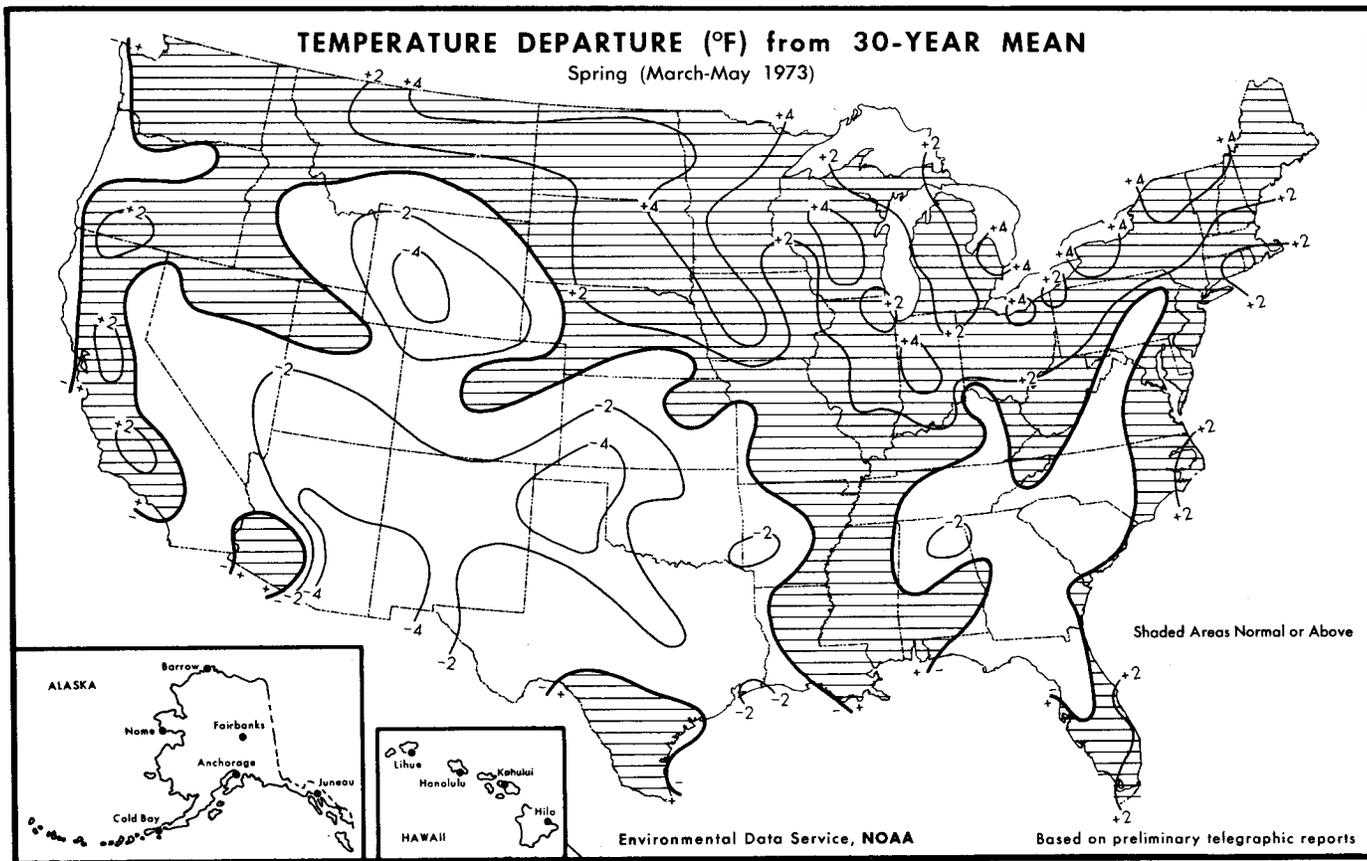
**NORTH DAKOTA:** Very dry week until showers Sunday brought locally heavy rains statewide. Most stations reported 0.50 in or less but a few reported 1.00 to 2.00 in, few in excess of 2.00 in. Temperatures near normal east to about 4° above normal northwest. Extremes 90° and 38°, the lows on 28th and 29th were near record for the day. New record low of 41° set at Bismarck on 29th. Rain July 1 brought spotty relief to widespread moisture short areas. Where beneficial amounts fell, late crops will be helped and filling small grains improved. Crops have suffered from insufficient moisture over much of State. Much small grain headed on short straw and stands thinner these fields. Some grain still looks good but moisture running but many areas. Condition variable but generally good western third, Red River Valley, and some northern counties. Hard spring wheat over 50% headed. Haying active on generally short crop. Pastures mostly fair to poor.

**OHIO:** Severe thunderstorms, scattered showers Most rainfall midweek, greatest amounts over west with Cincinnati and Dayton over 1.00 in, Toledo over 2.00 in. Numerous funnel clouds reported, tornado touchdowns reported Toledo area, near Defiance, New London, west of Tiffin. Generally mid and upper 80's on 26th, and high 70's 27th through 30th, into 80's most locations on 1st. Rain limited fieldwork, about 4 days favorable. Southeast averaged nearly 6 days in fields. Soil moisture 63% surplus, 37% adequate. Corn average height 17 in, last year 19 in, normal 24 in. Crop mostly fair. Soybeans under 90% planted, average height 6 in, normal 8 in. Tobacco over 90% transplanted, normally complete by now. Hay cutting continues 10 days behind normal. Winter wheat harvest due to start on 5th in south weather permitting. Average starting date statewide July 10. Wheat 20% ripe, 15% last year. Oats 70% headed, normal 95%. Barley 10% harvested.

**OKLAHOMA:** Temperatures from 4° subnormal east-central to 3° above normal panhandle. Precipitation ranged from few hundredths to about 0.50 in. Weekend generally hot with light to moderate showers except about 2.50 in rain parts northeast. Last week's statewide burst of activity brought wheat harvest to slightly over 90% complete, 97% year earlier. All but panhandle and northeast districts in cleanup operations. Yields above expectations most areas, 33% of stubble worked. Row crops mostly good condition with some late planting of soybeans; peanuts and sorghums still to be done. Corn 15% tasseling compared with over 25% year earlier. About 75% sorghums up to stand, some aphids and thrips. Much cotton acreage replanted with only occasional field squaring. Nearly 50% soybeans up to stand, 75% year earlier. Second cutting alfalfa 75% baled with most put up without rain. Cutting of native grasses started east. Western range grass showing need of moisture but providing ample grazing. Cattle making good gains.

**OREGON:** Warm, averages running 3° to 8° above normal. Generous rains over northwest previous weekend. Rain east of Cascades limited northern portion with totals less than 0.10 in. Fall barley harvest underway Columbia Basin. Wheat will start July 10th. Second cutting alfalfa underway west, about ready east. Grass seed swathing continues. Rains delayed combining west. Peppermint making good growth. Strawberry harvest nearing completion. Raspberry harvest active.

(Continued on page 12)



**SPRING WEATHER**  
(March 1973 to May 1973)

**PRECIPITATION:** Most of the Nation experienced a wetter than normal Spring, with record flooding throughout the Mississippi River Valley and adjoining areas. The notable exception was the northwest where severe drought has developed over the past several months. In addition, portions of Texas, the eastern Dakotas and southern Florida were considerably below normal.

Almost the entire Nation received above normal precipitation in March. From two to four times the normal March precipitation fell on much of the Corn Belt, the central and southern Plains and the Southwest. Dodge City, Kans., received 8.80 in of rain, which is over seven times the normal for March.

Precipitation in April was highly variable, but generally on the heavy side, particularly along the Mississippi River Valley, the Deep South and the New England areas. Much of the moisture came as late snowfall, particularly over the mountains and in Iowa. Nearly 20 in of snow fell in parts of Iowa on April 8 - 10 in one of the worst snowstorms on record for any time of the year. Over 8.00 in of rain fell over much of the Lower Mississippi River Valley resulting in record flooding. On April 28th, at St. Louis, Mo., the Mississippi crested at 43.4 feet, breaking the old record of 42.0 feet established in 1785. The heaviest rains occurred during the week of April 16 - 22 when a sprawling low pressure system which extended from the Texas Gulf Coast to the Great Lakes drew moisture-laden tropical air up the Nation's midsection.

The heavy rains continued into May, with a much needed respite occurring at mid-month. As a whole, precipitation was above normal from the Mississippi eastward, while the western half of the Nation was below normal except for a narrow

band extending from Iowa to Arizona.

Considerable violent weather was experienced, particularly at the end of May. Tornadoes, high winds, and torrential rains occurred in many areas. Between the 26th and 29th of May, at least 195 tornadoes occurred.

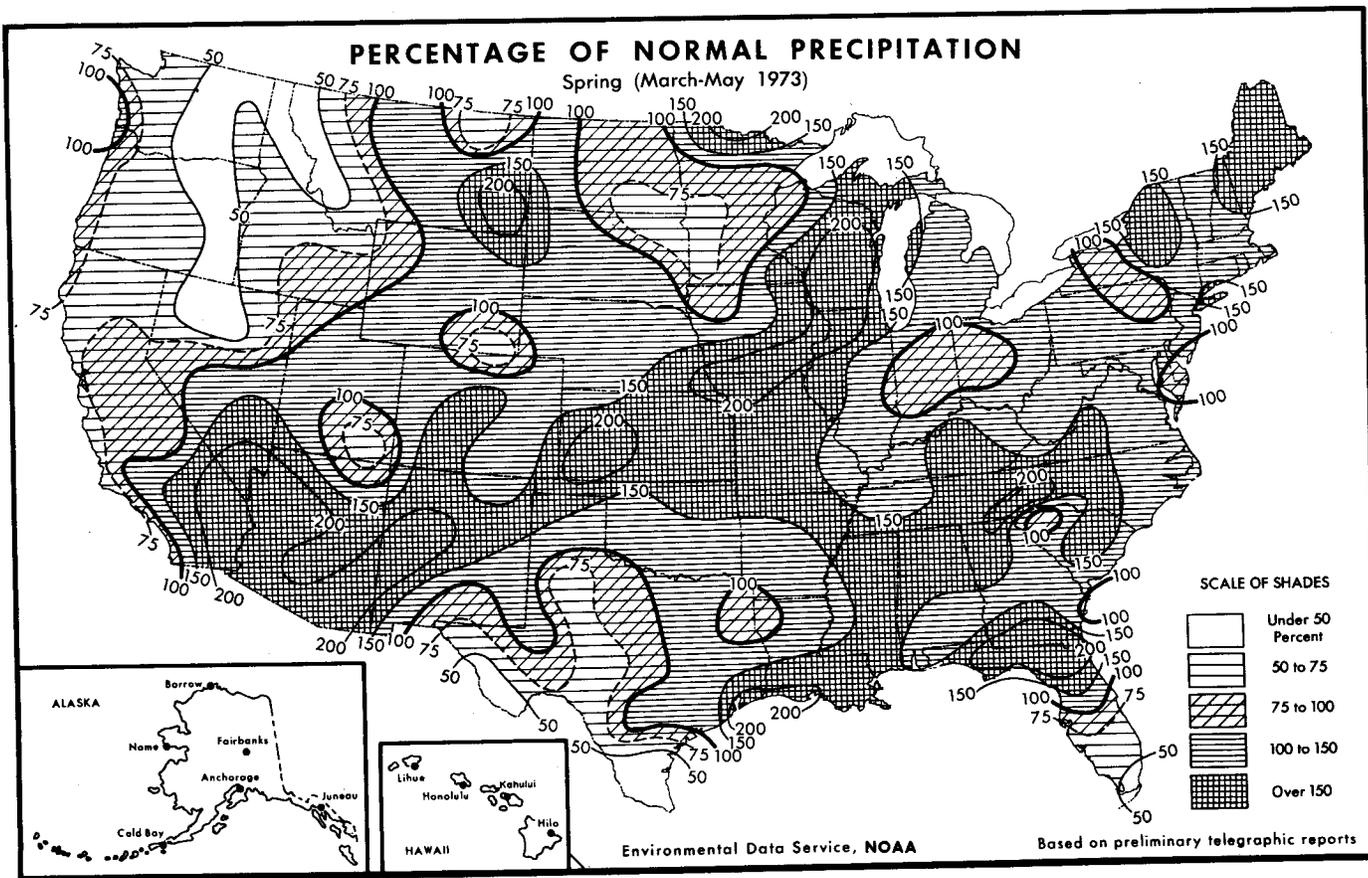
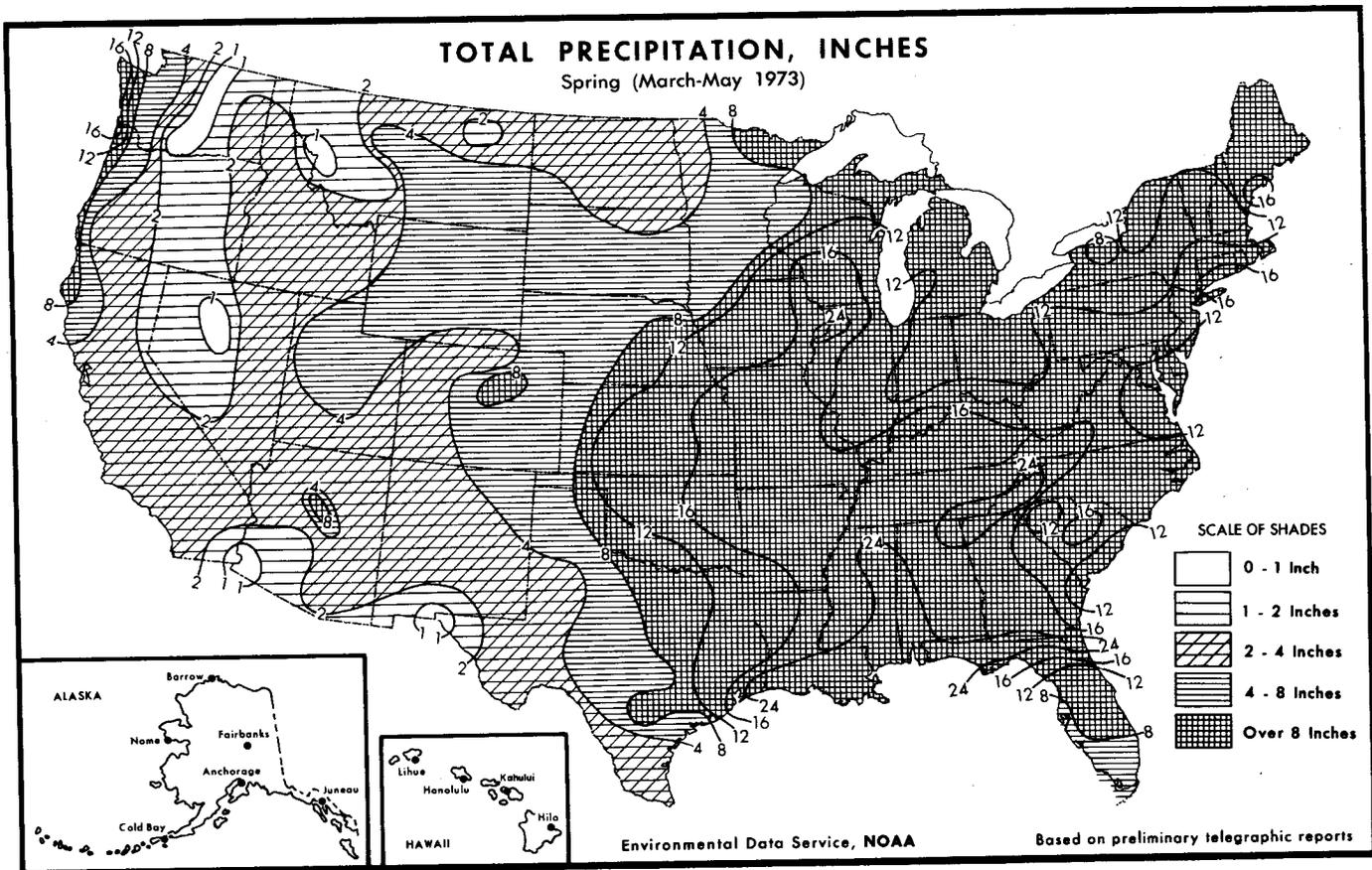
Conditions remained very dry over much of the Pacific Northwest during the entire period, prolonging the period of below normal precipitation which began last year.

**TEMPERATURE:** As a whole, temperatures were generally below normal in much of the western half of the Nation and parts of the South and the Appalachians, while the remainder of the Country experienced above normal precipitation. However, the distribution of temperatures at various times during the period was quite different. March temperatures were exceptionally warm while temperatures during April and May were considerably below normal.

Temperatures in March were warmer than normal over the entire Nation except for the Southwest. The Great Plains averaged 9° to 12° above normal while the South and the Atlantic and Gulf coasts were generally 3° to 6° above normal.

With the exception of the third week of April, temperatures during the month were generally below normal over most of the Nation. Much of New Mexico and the Texas Panhandle was 6° to 8° below normal. A mean temperature of 59.7° at Tucson, Ariz., was the coolest April since 1920.

From the Rockies westward temperatures were generally above normal, but the rest of the Nation remained below normal for the month. Temperatures in most areas were 3° to 6° below normal, with the Rocky Mountain area 6° to 9° above normal.



(Continued from page 9)

Cherry harvest continues. Rain caused some cracking Willamette Valley. Processing broccoli harvest started. Green pea harvest continues. Early bush beans about ready. Onions look good, good growth. Frosted potatoes central, Klamath County are recovering. Ranges continue dry. Livestock good.

**PENNSYLVANIA:** Unsettled weather late week, increasingly heavy thunderstorm activity. Rainfall from 0.25 in west to 1.00 in central and 3.00 to 6.70 in east with greatest in Pocono Mountains. Flood stages reached on Delaware, Schuylkill and Lehigh Rivers as well as numerous small streams east. Near normal temperatures daily. Extremes: 44° northern mountains, 89° Susquehanna Valley. Wet weather continues to delay final plantings. Limited winter barley combined. Winter wheat in milk to soft dough stages. Spring oats emerging to heading stages. Hay quality 33% good, remainder fair to poor. Sweet cherry harvest continues, some splitting. Tart cherries expected next week. Strawberries continue, green peas just beginning.

**PUERTO RICO:** A fairly dry week some sections but scattered showers others. Average rainfall 1.04 in or 0.67 in subnormal. Greatest weekly total 5.38 in over western interior. Greatest 24-hour total 3.77 in western interior. Temperatures averaged 80° on coast and 76° interior divisions. Highest 96°, lowest 52°. Weather favored cultivation and development of sugarcane but some sections need more rain. Coffee beans continued developing well. Very little activity on tobacco fields. Pastures generally good. Cultivation and fertilizing operations some sections while others need more rain. Weather favored cultivation and development of minor crops islandwide. Plantains, bananas and other minor crops developing well.

**SOUTH CAROLINA:** Cooler temperatures during week. Rainfall near normal in mountains, mostly subnormal elsewhere except areas of heavier thundershowers. Scattered thundershowers throughout week east and south, west end of week. Better weather conditions prompted field activities, scattered showers persisted. Tobacco fair to good, 41% topped, 7% harvested, 11% last year. Cotton fair, too wet. Corn good to excellent. Soybeans 83% planted, 88% last year; stands good, but grassy. Sorghum 76% planted, 86% last year. Small grains fair. Wheat 63% harvested, 83% last year. Oats 75% harvested, 89% last year. Rye 74%, barley 76% harvested. Pastures good to excellent. Sweet potatoes 89% transplanted, 98% last year. Peaches good, 23% harvested, 14% last year. Grapes good. Salvaging vegetable crops. Planting soybeans behind vegetables. Watermelons poor.

**SOUTH DAKOTA:** Topsoil moisture short over most of State. Temperatures above normal central and west, but near or slightly subnormal east. Highs in 90's and 80's midweek, lows in 40's and 50's. Precipitation from 2.00 to 4.00 in below normal most of State. Fall grain development ahead of normal. Winter wheat and rye beginning to ripen, over 70% turning color. About 90% of spring grains headed, ahead of normal and last year. Early planted spring grains beginning to turn. First cultivation of corn virtually complete, normal 95%, last year 86%. Second cultivation 59% complete, normal 50%. Soybeans starting to bloom. Flax 70% in bloom or past

bloom stage, 35% normal. Alfalfa and wild hay harvest ahead of normal. Pasture feed adequate. Livestock good.

**TENNESSEE:** Numerous showers and a few thunderstorms accompanied a front across State Wednesday and Thursday. Rainfall amounts of over 4.00 in mid portion and over Cumberland Plateau. Temperatures a little above normal west and from 3° to 5° subnormal mid and east. Temperature extremes ranged from 53° to 97°. Fieldwork progressed rapidly and crops showed good growth. Spring planted crops still considerably behind normal development. Small grain harvest on schedule with 75% barley, 67% wheat, and 60% oats harvested. Soybeans 85% planted, normally nearly all planted. Cotton crop making good growth but quite late, 33% squared, 60% last year. Early planted corn looks good, some intended acreage never planted and considerable concern about reduced yields of large, late plantings. Only 3% corn silked, normal 20%.

**TEXAS:** Drying and warming trend reached heat wave proportions west. Flooding continued along several south Texas streams as above normal rainfall persisted early week. South began warming and drying about midweek. Spotty showers west and north about midweek but remained mostly dry with warm to hot temperatures. Afternoon readings soared above 100° several points west. Cotton and rice planting complete. Sorghum planting almost finished. Soybean and peanut planting satisfactory progress. Short moisture cut sorghum planting short low plains. Heavy rains southern half State caused heavy shedding of cotton and some grain sorghum to sprout in head. Wheat and oat harvest good progress. Hay baling active, yields generally good. Major crops percent planted: Cotton 100, last year 100; sorghum 99, last year 99; peanuts 88, last year 83; rice 100, last year 100; soybeans 92, last year 100. Major crops percent harvested: Wheat 72, last year 95; oats 91, last year 100. Lower Rio Grande Valley: Most remaining vegetables damaged or destroyed by heavy rains--tomatoes, cantaloupes, and honeydew melons suffered heaviest damage. Laredo: Heavy rains did extensive damage to cantaloupe crop. Coastal Bend: Heavy rains damaged remaining vegetables. Declining supplies watermelons available two more weeks. Winter Garden-San Antonio: Watermelon harvest continues active. Moderate supplies onions available. Cantaloupe and cucumber picking slowed by wet fields. Central and East Texas: Tomato harvest underway, yield prospects largely reduced some counties due heavy rains. Knox-Haskell: Potato harvest rapidly nearing completion. North Texas: Watermelons, cantaloupes continue good growth. Trans-Pecos: Early cantaloupes nearing full size with a heavy set. High Plains: Potatoes and onions good progress. Citrus trees benefited from recent rains. Peach harvest continues active. Pecan trees continue to be sprayed for casebearers.

**UTAH:** A few isolated showers late week, amounts very light. Temperatures 2° to 9° above normal. Soil temperature at 4-inch depth ranged from upper 60's Cache Valley to mid-70's Salt Lake City and Richfield and low 90's St. George. Accumulated growing degree days ranged from about 100-degree days above normal Salt Lake City to 150-degree days below southeast. Soil moisture non-irrigated crop and range lands currently rated short most areas. Excellent haying weather prevailed with hot dry days. First crop alfalfa hay 80% harvested. Winter wheat started to ripen few

early areas. Combining will start July 10 Salt Lake County, July 15 to 20 Box Elder and other major counties. Sweet cherry picking completed Washington County, started last week Weber and Utah Counties. Sour cherry picking will start July 10 Box Elder and Weber, July 15 Utah County. Green pea harvest 80% completed Weber County. Range feed on lands now in use fair to good. Cattle and sheep thriving.

**VIRGINIA:** Warm and humid. Showers and thunderstorms statewide midweek with scattered showers through Sunday. Rainfall averaged 1.50 in. Temperatures slightly subnormal, high 90°, low 48°. Made hay, combined small grains, cultivated and applied chemicals to control weeds, diseases and insects with 3.7 days suitable for fieldwork. Topsoil moisture 66% adequate, 17% short, 17% surplus. Piedmont driest, southeast wettest. Planting of soybeans after small grain harvest. Soybeans double-cropped less than last year but slightly more than usual. Corn cultivated, localized heavy European corn borers. Tidewater corn 20% silked, a few silked Piedmont. Small grain harvest active, barley 67% harvested, oats 50%, wheat 30%. Tobacco cultivated and sprayed for budworms. Cultivated peanuts and applied land plaster, herbicides, insecticides, and leafspot controls. Haying active. Tomatoes look good. Irish potatoes, green beans, and cucumbers harvested on Eastern Shore. Sweet potatoes planted.

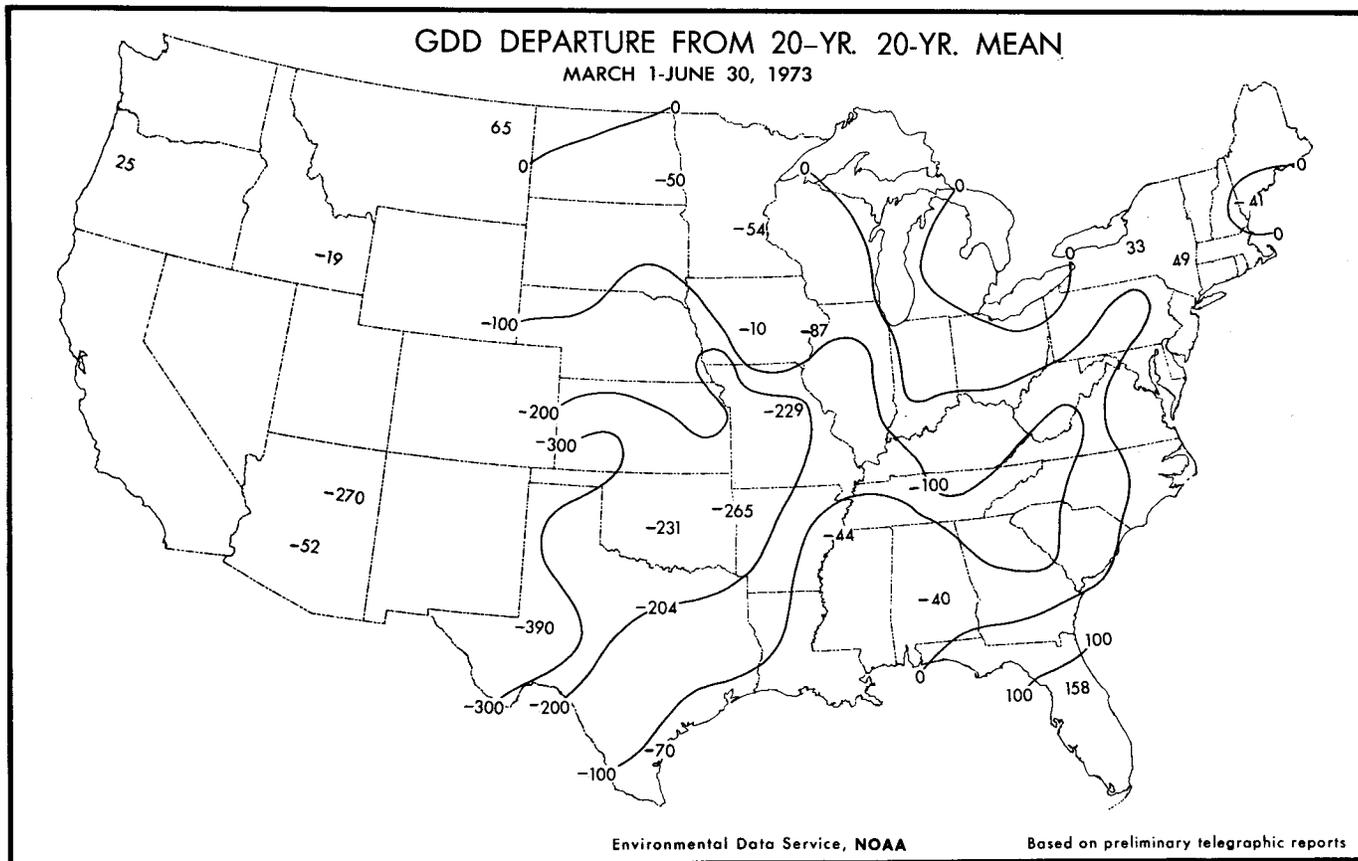
**WASHINGTON:** West: Temperatures subnormal north, near normal south. Precipitation light, subnormal northwestern region. Harvest vegetable crops continued, some farmers experiencing insect problems. Damp conditions leading to weed infestations. Strawberry harvest nears completion. Raspberry harvest underway. Rain holding up haying. Shearing Christmas trees continued. East: Temperatures near normal. Precipitation subnormal. Cherry harvest nearing completion many orchards. Hand thinning apples continued, hail damage to crop evident in Okanogan Valley. Asparagus harvest near complete. Harvest processing peas continued. Haying continued, low yields. Farmers selling cattle to compensate for anticipated feed shortage. Grass seed swathing underway. Grasshoppers continue

harass farmers, migrating into bordering wheat fields. Some barley harvested. Wheat turning color, harvest soon.

**WEST VIRGINIA:** Temperatures slightly subnormal. Highs mostly in 80's, few low 90's. Lows generally 50's and 60's. Lowest 43° in Canaan Valley. Showers and thundershowers last 3 days. Favorable for hay harvest early in week. About 4.4 days favorable for fieldwork. Next to haymaking, gardening and cultivating crops most active. Nearly 67% first cutting hay complete. Soil moisture adequate 82%, short 16%, surplus 2%. Small grains improved with warm weather. Barley 40% ripe, wheat 14%. Combining barley underway. Burley tobacco fair to good. Pastures good to excellent, many need clipping. Cattle plagued by face flies, some pinkeye reported.

**WISCONSIN:** Temperatures near normal. Cool late week, followed by warmer temperatures weekend. Precipitation light and spotty southeast, more general rains west and north. Showers mostly early in week, and again late Sunday. Cool, damp weather slowed haying with much put up as haylage. Yields better than expected, quality affected by frequent showers. Corn development continues good, some late corn still being planted. Corn height average 14 in, last year 15 in, normal 13 in. Condition early oats good, late oats spotty, 30% headed, last year 40%, normal 45%. Soybeans growth good. Tobacco planting continues. Pea harvest underway, yields low. Early potatoes blossoming. Strawberry harvest continues. Soil moisture 74% adequate, 20% surplus, 6% short--mainly northwest.

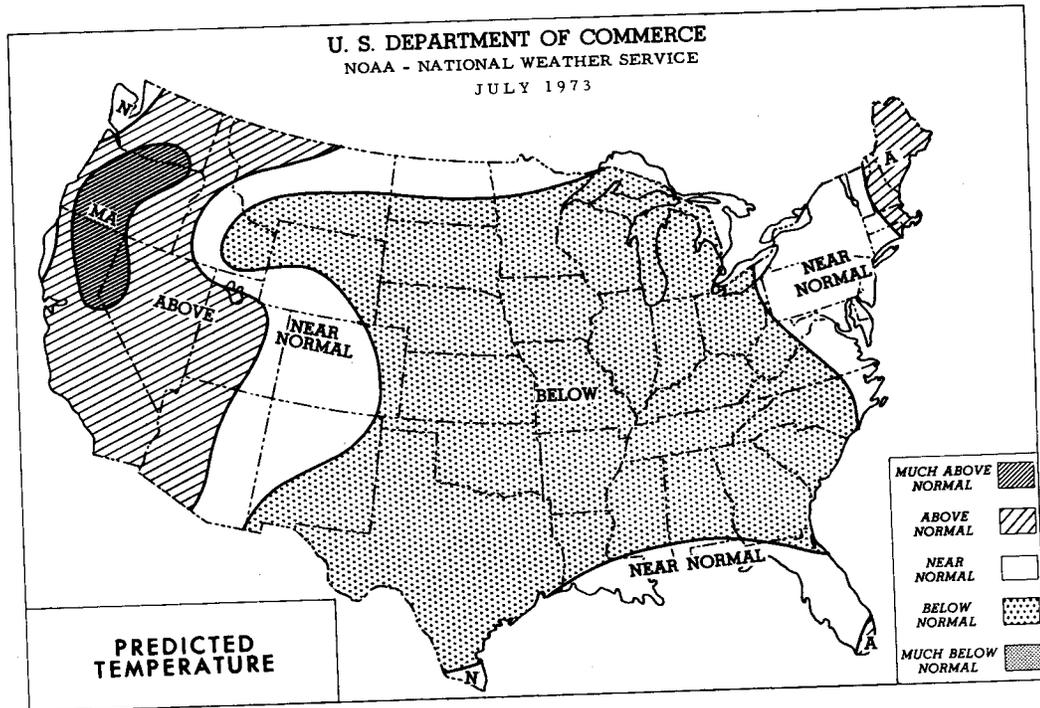
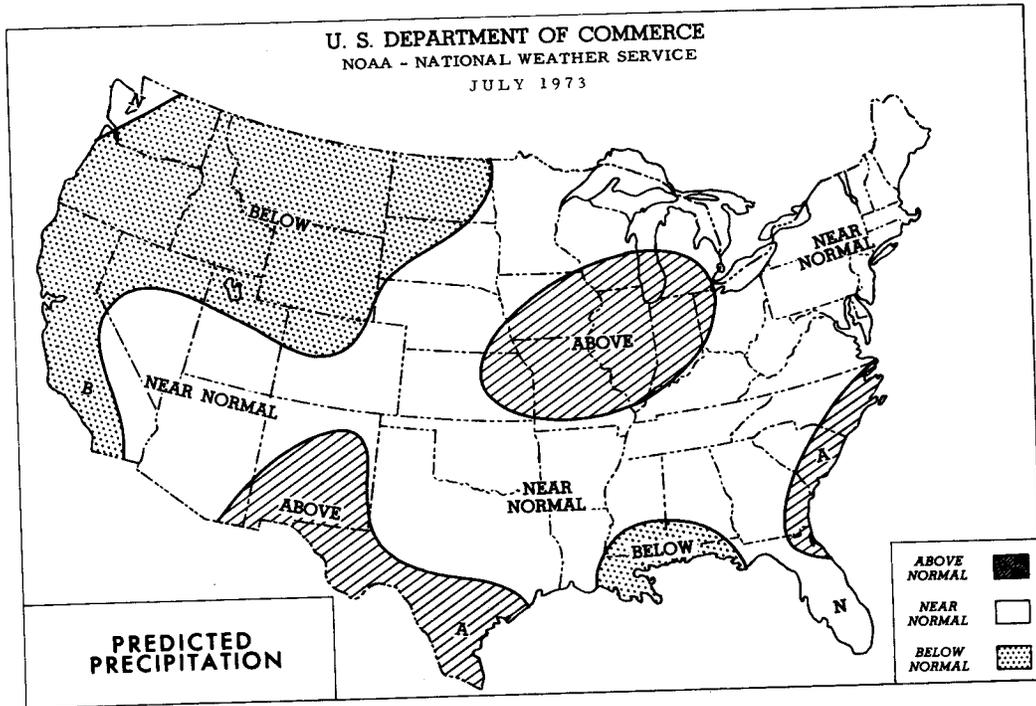
**WYOMING:** Temperatures from 2° to 11° above normal. Extremes: 33° at Bondurant to 95° at several stations. Precipitation generally well below normal, except isolated areas northcentral, most fell late week. Greatest amount 0.91 in at Sheridan. About 15% alfalfa acreage and less than 1% other hay harvested. Heading small grains behind 1972 because of late planting. Spring wheat slightly behind last year, 70% of barley, and 20% of oats headed. Winter wheat development accelerated by warm weather, 70% in milk stage and 20% in soft dough stage.



#### THE 1973 GROWING SEASON

The above map shows the departure from normal of the growing degree day accumulations for the period March 1 to June 30. While the eastern Corn Belt is about normal, much of the area to the west and south is 100 to 300 GDD's behind normal. The significance of this is magnified by the fact that in most of this area planting was delayed because of wet weather. The 30-day outlook on the opposite page is calling for below normal temperatures during the month of July with above normal precipitation during the month of July. While cooler than normal conditions in July would normally indicate ideal conditions, the combination of moist weather and cool temperatures will tend to prolong the vegetative period and delay overall maturity. Because of this and the lateness of the season, there may be some concern over the crop maturing before cold weather sets in this fall.

### 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 Weather Service's publication "Average Monthly Weather Outlook" which contains additional information necessary for complete information.

## WORLD WEATHER AND AGRICULTURE

### PRE-MONSOON RAINS IN INDIA

The pre-monsoon season in India runs from March 1 to May 31. Although rainfall during this season normally accounts for only about 10% of the annual precipitation, it is highly important to the growth of the rabi (spring harvested) crops, particularly in north India, and also to the sowing of jute and summer paddy in eastern India.

During the 1973 pre-monsoon season, rainfall, as a whole was 'scanty' to deficient in most parts of the country excepting Assam and the adjacent areas. Well distributed light to moderate rains in eastern India during April-May encouraged plantings of the 1973-74 jute crop on an extensive scale.

Monsoon rains arrived in south India approximately on schedule during the first week of June.

There are four rainfall seasons in India. These are: (1) the southwest monsoon or rainy season extending from June 1 through September 30, (2) post-monsoon season extending from October 1 through December 31, (3) winter or northeast monsoon season extending from January 1 through February 28, and (4) summer or pre-monsoon season from March 1 through May 31.

Approximately 74 percent of the annual precipitation is received during the monsoon (southwest) season, 13 percent during the post-monsoon season, 3 percent during the winter monsoon season and 10 percent during the pre-monsoon season.

The monsoon season is the pivot upon which the whole of Indian life swings. Monsoon rains are of crucial importance to the country's kharif (fall and winter harvested) crops which include rice, coarse grains, cotton, jute, peanuts, etc., and account for about two-thirds of the total annual agricultural production.

### AGRICULTURAL CONDITIONS IN THE UNITED KINGDOM

May began cool and dry in the United Kingdom, but welcome rain later in the month benefitted winter and spring sown crops. Pastures also benefitted from the wet weather. All cereal crops made good progress during May and, except for mildew, there were few disease or pest problems. Early potatoes were doing well and harvesting had started in a few areas. Sugarbeet growth was slow. Livestock are generally in good condition. There was a very good lamb crop with most lambs strong and healthy.

### TUNISIAN CROPS AFFECTED BY SPRING FLOODING

Serious flooding occurred in parts of Tunisia in late March and April, causing yield reductions in grain crops but providing a boost to the olive crop. Grain yields are expected to be reduced about 15 percent by the flooding, but 1973 is expected to be another above average year. The heavy spring rainfall complicated weed control and fertilizer application in some areas with resultant yield reductions.

The heavy spring rains were very beneficial to the olive trees. The normal upswing expected in the cyclical production pattern in 1973 plus the favorable moisture conditions could well push 1973-74 olive and olive oil production to record levels.

WEATHER CUTS INTO 1972/73  
AUSTRALIAN OILSEED PRODUCTION

Australian oilseed production during 1972/73 has been reduced, despite record or near record plantings, because of adverse weather conditions of one kind or another throughout the growing season. The planting of winter oilseeds was severely restricted by dry conditions during the winter and spring in the eastern States. Summer oilseeds fared somewhat better, although sunflower plantings in northern New South Wales were affected by extremely hot, dry conditions. Cotton and rape were affected by heavy insect infestations.

Only about half of the 500,000 acres of sunflower in New South Wales was harvested. Early crops were severely affected by hot, dry conditions during December and January, forming only small heads or even failing to reach the flowering stage. In Queensland, where soils are better and rainfall is more reliable, yields were good.

Farmers growing rapeseed in western Australia experienced a major disaster. An apparent unusual combination of temperature and moisture caused an extremely severe and widespread outbreak of blackleg disease, with much of the 120,000 acres in the area completely devastated.

GUATAMALAN PROSPECTS GOOD

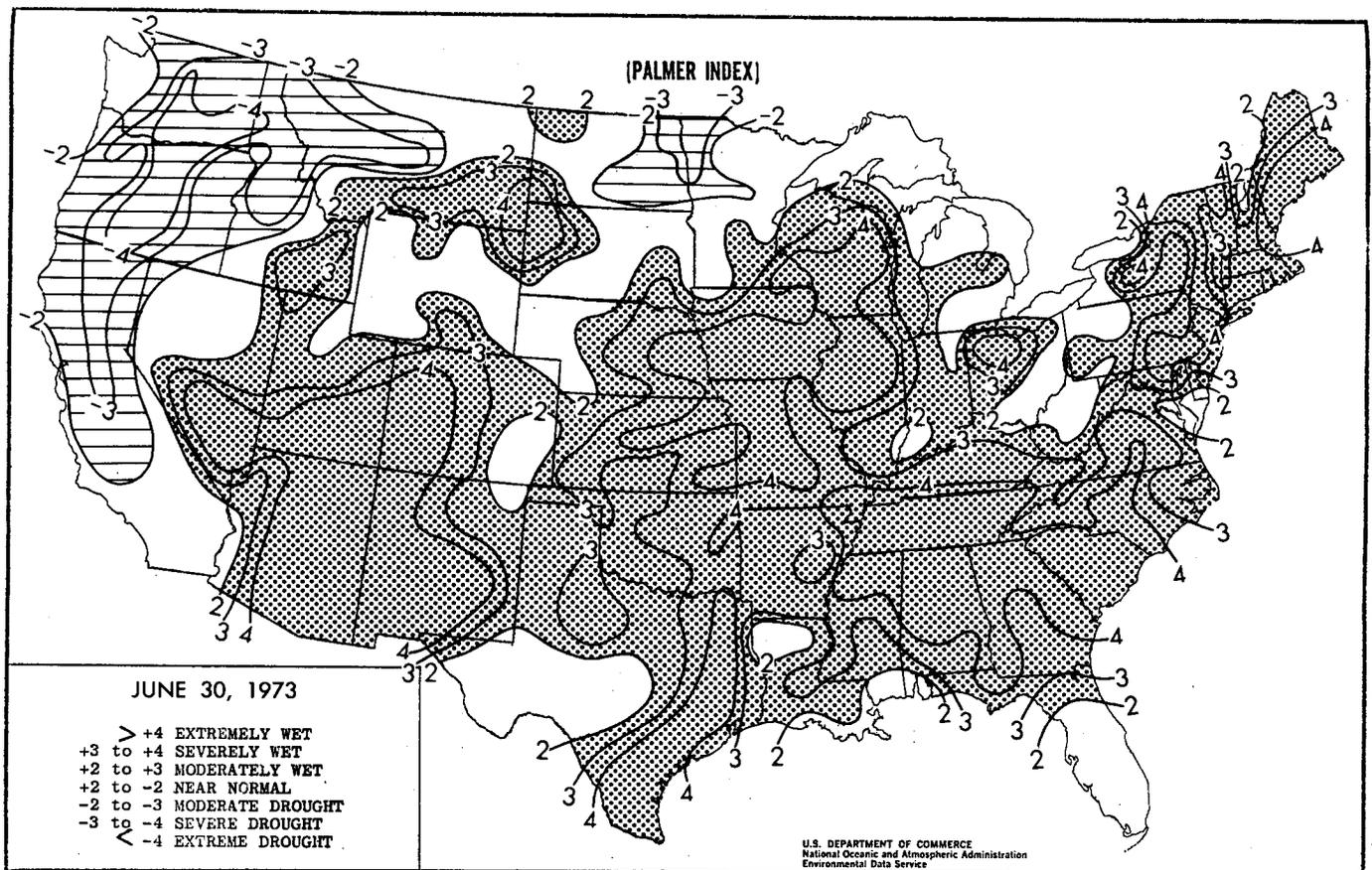
Guatemala, like most other Central American countries, suffered extensive drought last year. However, the May rains have heralded a new crop year and farmers are happy and optimistic about the outlook. The question of whether or not the drought is broken must still be answered, but the rainy season has gotten off to a good start. In general good rains have fallen everywhere. There was one exception in the eastern highlands where beans and rice are the main crops. Rains have not been heavy enough or steady enough to replenish the soil moisture which had been depleted in 1972.

POLISH CROP OUTLOOK GOOD

The outlook for crops in Poland this year is good, with bumper production in some areas if weather conditions continue favorable. In general, April precipitation was below normal in April in a number of important production areas, but timely May precipitation has for the most part been received throughout the country. The large percentage of sandy soils in Poland also make it essential that periodic rains be received during the remainder of the growing season.

On the whole, crops are not as good in the southern half of the country as in the north. Grains and rapeseed, for example, are reported to have suffered somewhat from inadequate moisture in the southeast. Below average spring temperatures have also held back grain development, particularly the spring planted varieties. Growth of grains in the southwest are the latest.

It is early to evaluate potatoes, Poland's important feed crop, but planting and early development conditions have not been ideal, and the mild winter is thought to have prevented the usual potato beetle kill.



#### THE PALMER INDEX MAP

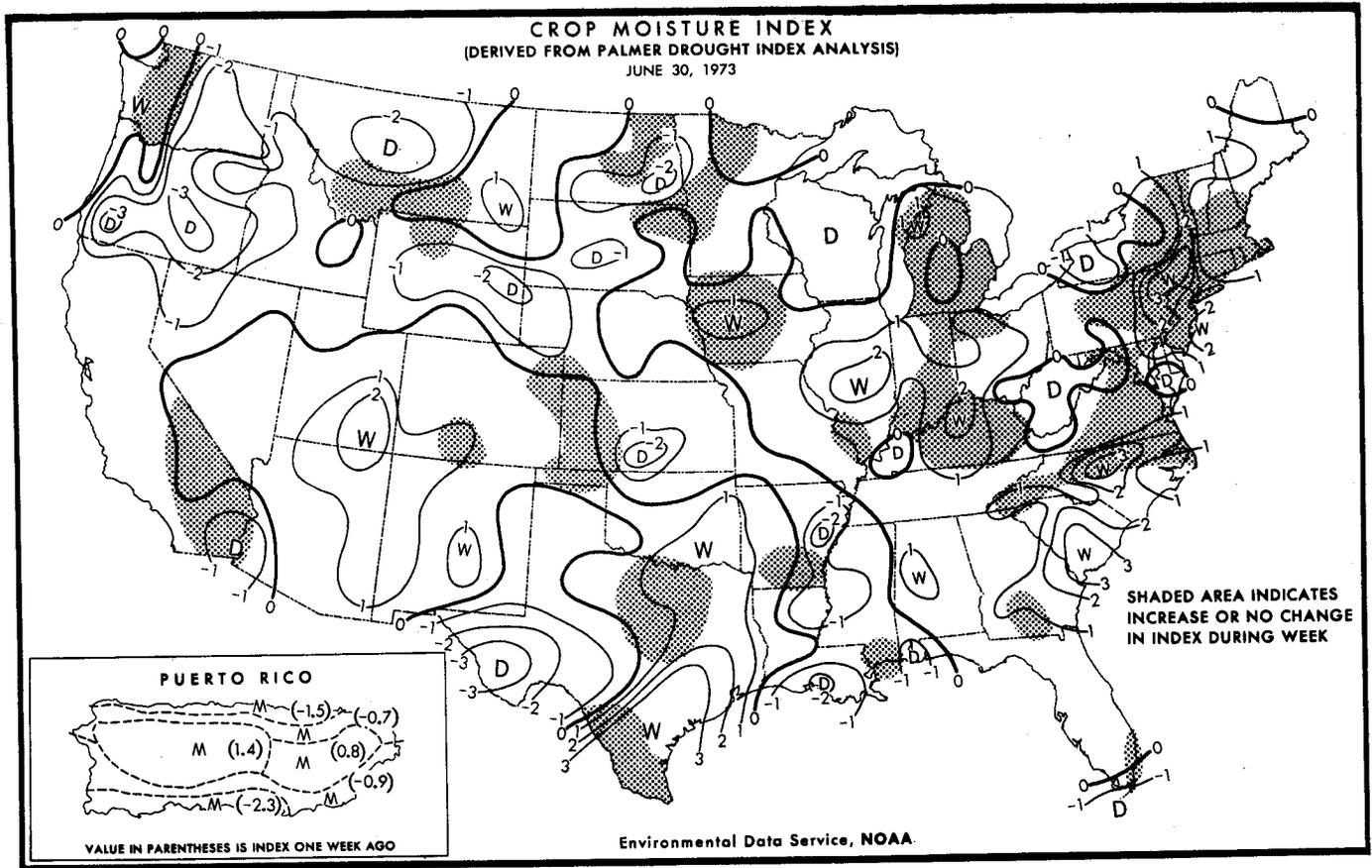
The Palmer Index evaluates the scope, intensity and frequency of periods of abnormally wet or dry weather. This index differs from the Crop Moisture Index which appears on page 19.

The Palmer Index shows values above or below zero to indicate abnormalities of either evapotranspiration, moisture stored in or added to the soil, runoff, or a combination of these.

The Crop Moisture Index shows the effects of the current moisture condition on agriculture. It is primarily based on abnormalities of evapotranspiration in growing vegetation. The map is used to show the current aspects of the moisture situation which affects crops and field operations.

The Palmer Index values are highly dependent on antecedent moisture, in some cases months and even years, before; however, the Crop Moisture Index is much less dependent on the past and responds rapidly to changing conditions. For example, a drought which has continued for months or even years will continue to show a decreasing Palmer Index despite occasional precipitation which may temporarily support plant growth.

In this current Palmer Index map most of the abnormalities shown -- wet and dry -- had their onset in the early fall of 1972. Now that extreme wet and dry spells have been established, it will take long periods of normal weather to end them. However, a more abrupt change to opposite conditions will end them faster.



**SHADED AREAS:** Index increased or did not change last week

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 good, 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 extremely dry

**UNSHADED AREAS:** Index decreased last week

Index

- Above 3.0 Some drying, but still excessively wet
- 2.0 to 3.0 More drying weather needed, work delayed
- 1.0 to 2.0 Favorable, except still too wet in spots
- 0 to 1.0 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 Extremely dry, most crops near ruin

The map gives a general picture of how wet or dry the Nation was last week. It shows areas where abnormal wetness or dryness have hindered crops and areas where moisture conditions have favored them.

The lines show the crop-moisture situation according to an index computed from values of temperature and precipitation by areas...350 climatological divisions, which correspond roughly to SRS's crop reporting districts. Previous weekly computations of soil moisture account for the effects of prior weather.

Shaded areas are those where precipitation increased the index last week or where soils did not dry. Unshaded areas dried last week.

The centers of wet or dry areas are marked: W=wet; D=dry. The map lines mark off crop situations. Use the legend to interpret.

Local variations caused by isolated rain or by soil differences are not shown. While shallow rooted crops in poor soils may suffer more than the map shows, conditions may be better where soils are good. Also, legends apply to growing rather than mature plants. Any map interpretation must consider both the growth stage and moisture status and trend. In irrigated regions, the index values reflect only departures from ordinary irrigation requirements.



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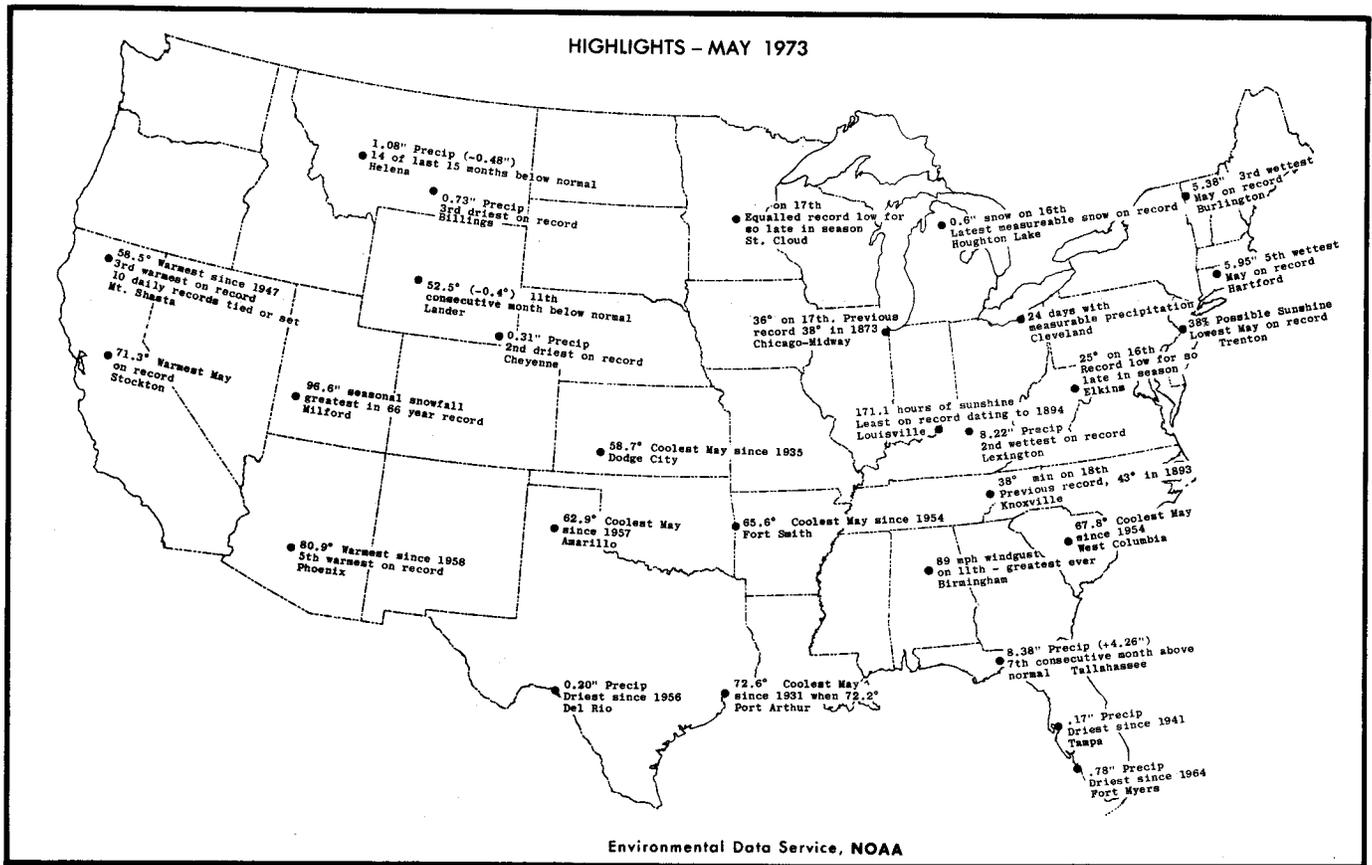
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**HIGHLIGHTS - MAY 1973**



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