

# Weekly Weather & Crop Bulletin

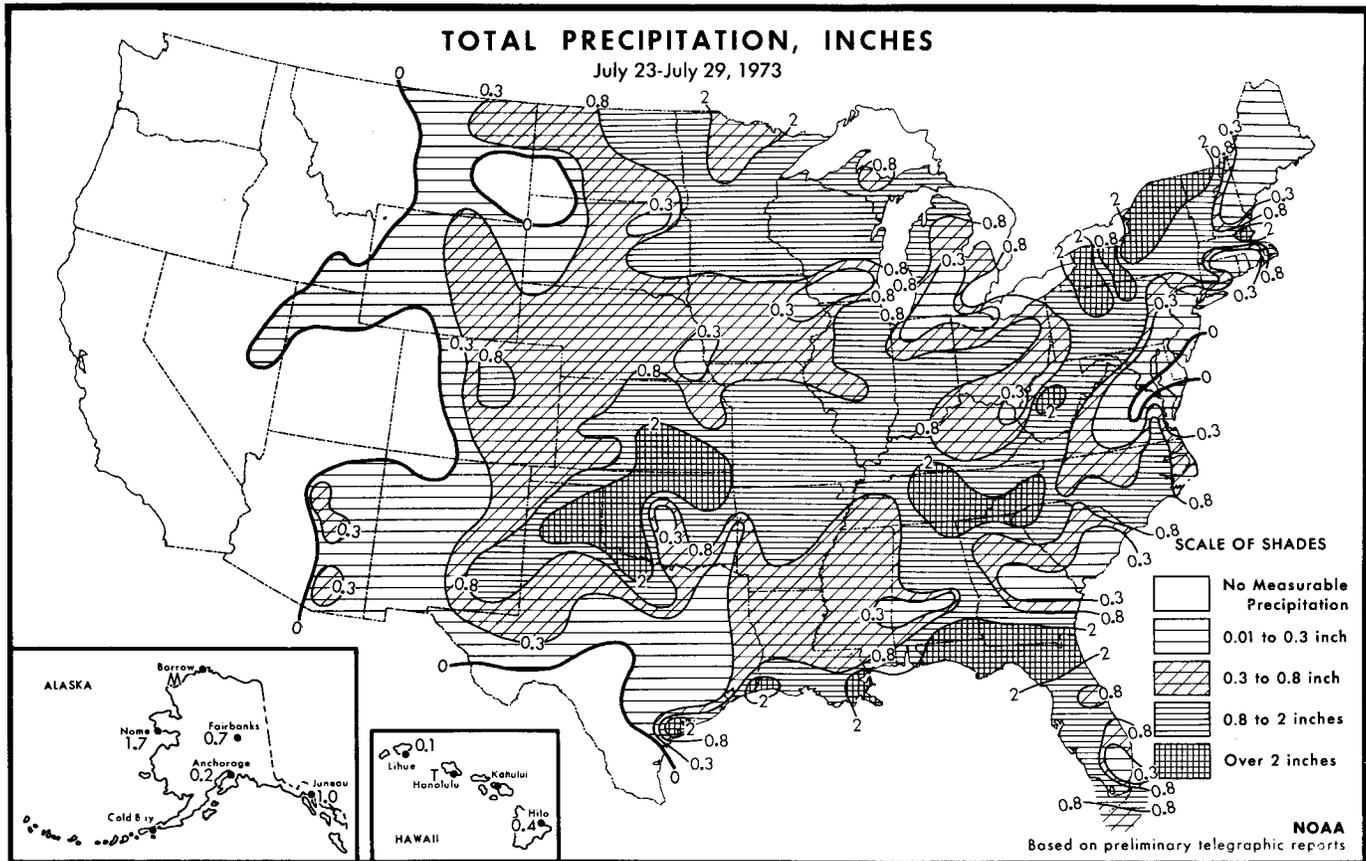
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## NATIONAL WEATHER SUMMARY

**HIGHLIGHTS:** Cool Canadian air dominated much of the Nation's weather, with most temperatures averaging 1° to 6° subnormal. While a few areas received 2.00 in or more rain, the 0.30 to 0.80 in that fell throughout most areas east of the Rockies was welcome--especially in the Corn Belt, Lake States, and in New York--because it moistened drying soils.

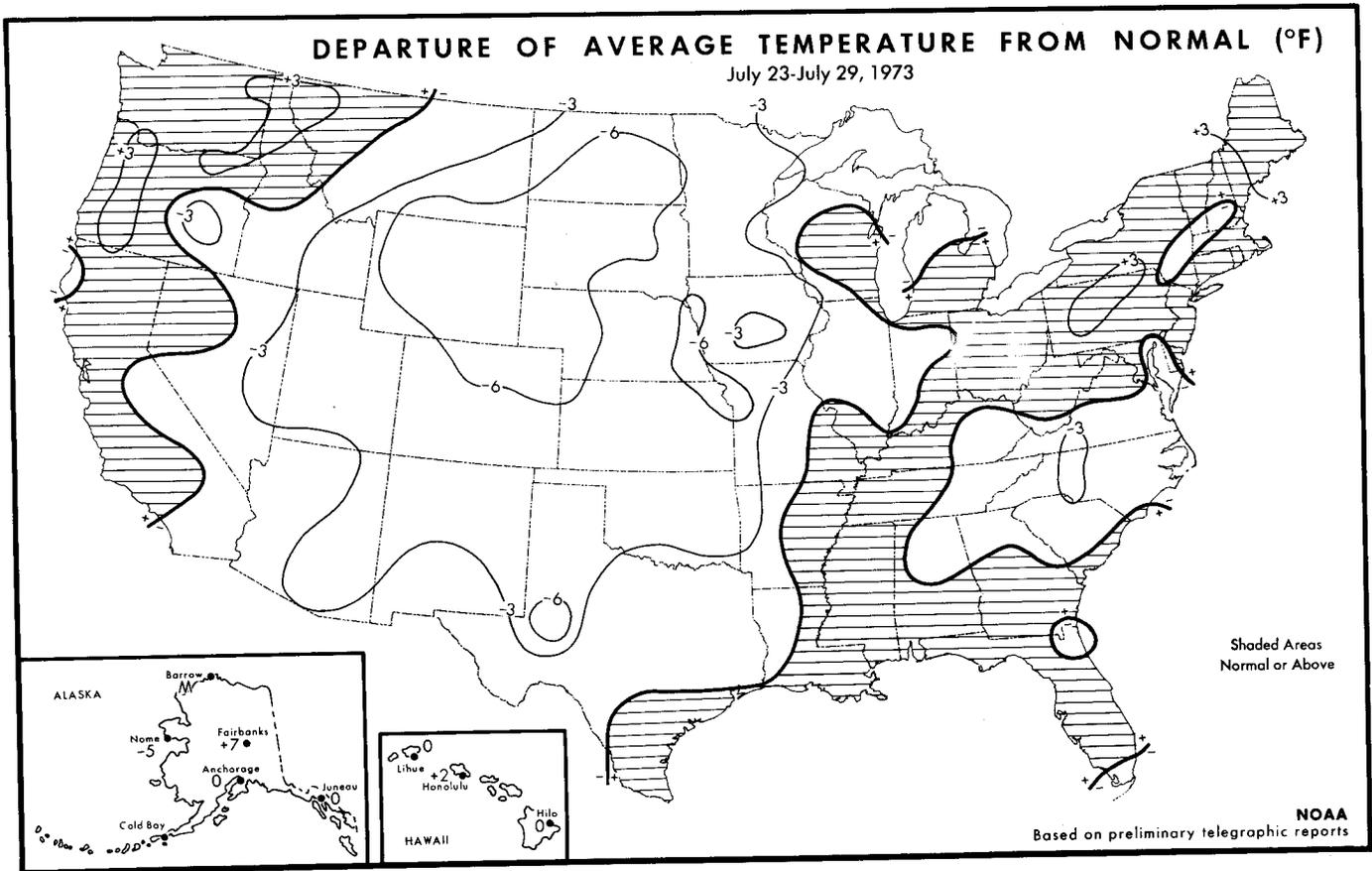
**PRECIPITATION:** While the West remained dry, thunderstorm activity was common over the Nation's midsection and East. Only a few scattered places, mostly near the Great Lakes or the Gulf, plus parts of Texas, Oklahoma, and Kansas received 2.00 in or more rain.

Monday, a cold front stretched from a Low out over the Atlantic, through North Carolina, along the Ohio River into the Plains. Columbia, Mo.,

reported 1.80 in rain, with 1.10 in in 30 minutes. Dodge City, Kans., received 0.60 in the same hour. Later in the day, heavy rains produced flash floods in Missouri and southern Illinois. Rockford, Ill., 1.71 in fell in 1 hour accompanied by 54 mph winds. Thunderstorm activity spread into the Ohio Valley Monday evening. Uniontown, Ky., had 4.60 in rain.

Scattered but intense thunderstorms struck Texas and Louisiana Tuesday afternoon. Severe weather also plagued Kansas and eastern Colorado later in the day. Hail, 1 in in diameter, was reported at Denver and Eads, Colo.

Wednesday, a cold front trailed from a Low located over northern Ontario through Wisconsin to Texas. Thunderstorms along the front produced locally heavy rains: Dighton, Kans., got nearly 5.00 in. While streams overflowed throughout Oklahoma and Nebraska, rainfall was spotty and



dwindled by morning. To the west a large High brought clear, cool weather from Montana to west Texas.

As this front moved eastward on Thursday, thunderstorms continued over the Nation's eastern third. Heavy rains struck Appalachia and the Deep South. Millington, Tenn., had 2.01 in rain in a hour, Chattanooga, Tenn., had 1.99 in rain, while Macomb, Miss., got 1.44 in. Heavy flash floods struck western North Carolina.

Friday was mostly fair, except in Florida, where 1.19 in rain fell at Jacksonville and 1.19 in at Daytona Beach in the afternoon. Victoria, Texas, got a 1.56 in evening rain.

Thunderstorm activity remained low Saturday morning; some banded around the lower Great Lakes, a few hit the Plains and middle Mississippi Valley, and Milton, Fla., got 1.07 in from a pre-dawn thunderstorm. But by noon, most of the Nation enjoyed fair skies and Sunday was a nice day in most places.

**TEMPERATURE:** Most of the Nation averaged within 3° of normal last week, with temperatures generally on the cool side. The area between the Mississippi and the Rockies averaged 3° below normal, and a few record lows were set. Also, a large five-State area in the Northern Plains averaged 6° subnormal. Only the State of Maine and a few scattered areas averaged 3° above normal.

California attained many of the week's extremes. Point Arena, Cal., reached only between

55° and 57° for afternoon highs, while southern desert areas usually heated up to from 100° to 110°. Thermal, Cal., was the hottest on Thursday, 112°.

Monday, a High over Idaho brought cold air from the north into the Rockies. Evanston, Wyo., recorded 45° at 2 a.m., and temperatures dropped almost to freezing in the central Rockies. A High over Quebec kept the northeast cool also.

Tuesday morning temperatures ranged from the mid- and upper 70's over the Nation's southern half, to the 40's over the Northwest. At Albany, N. Y., the mercury dipped to 50°, breaking a record low established in 1898. During the afternoon, hot and humid conditions spread from the Gulf up the Ohio Valley. Buffalo, N.Y., hit its first 90° reading in over 4 years.

Wednesday the chill spread from the Rockies; the afternoon temperatures from the Northwest to Nebraska stayed in the 60's. By Thursday the cold front extended from Michigan to Arkansas. The morning temperature dropped to 52° at North Platte, Nebr., equaling the 1911 record low.

Friday, Texas established or tied several record lows: Abilene's 63° tied, Midland's 60° set a new one. The Rockies had 40's, while cool 50's were reported from the Great Lakes to the Pacific. Damp and drizzle held temperatures in the mid-50's around Lake Superior. Saturday, the damp air mass spread over the North Central States keeping temperatures in the 50's and spreading fog. However, the rest of the Nation mostly enjoyed a warm weekend, with even New England hitting 90° marks.

## NATIONAL AGRICULTURAL SUMMARY

**AGRICULTURAL HIGHLIGHTS:** Widespread rains interrupted combining of small grains and hay making in North Central States, but boosted row crops and improved soil moisture supplies.

**SMALL GRAINS:** Showers interrupted combining of small grain crops last week from the central and northern Great Plains to New York. Harvesting was active and gained momentum in the North-western States under hot, dry weather. The rains came a little too late to benefit small grains in the Dakotas and Minnesota because of the advanced stage of maturity. Ripening and harvesting in these States is ahead of normal. The winter wheat harvest is 90 percent complete in Nebraska, 74 percent complete in Colorado, 89 percent complete in South Dakota, and 25 percent complete in Minnesota. Spring wheat is 45 percent combined in South Dakota and 5 percent combined in Minnesota. Oat harvesting is running well ahead of normal at 65 percent complete in South Dakota compared to an average of 39 percent. Winter wheat harvesting is off to a normal start in Montana at 5 percent complete but may speed up as hot, dry weather continues to force maturity. Yields of wheat and barley are subnormal in eastern areas of Washington and Oregon.

**CORN:** Timely, widespread rains throughout the Corn Belt last week greatly benefited the rapidly growing corn crop especially in the northern portions where topsoils were getting dry. Temperatures averaged below normal over most of the area. The North Central corn crop continues in mostly good to excellent condition with silking past the halfway point in most States. Development is ahead of normal in Minnesota, South Dakota, and Nebraska, but is slightly behind normal in other Corn Belt States. About 75 percent of the Iowa crop is silked, 5 points behind 1972 progress while Illinois acreage is 70 percent silked, 9 points behind normal. Development is highly variable in many eastern Corn Belt States. Topsoil moisture supplies are now rated mostly adequate to surplus from Nebraska to Ohio which is considerably more moisture than reported both a week and a year earlier in most of these States. The Southern corn crop continues growing in good condition with adequate soil moisture although 1 to 2 weeks later than normal in many areas. Most of the acreage in the extreme South is in the dough stage.

**COTTON:** Cotton made good growth and development both in the South and West last week. Despite late planting in the Delta States the crop is looking good and fruiting well. Insect counts are high in some areas, light in others as farmers maintain control measures. In Mississippi, 86 percent of the acreage has set bolls compared to only 33 percent in Tennessee where 50 percent is normal. Moisture is generally adequate although more is needed to maintain favorable prospects in scattered areas of Arkansas, Mississippi, Alabama and Georgia. Harvesting of cotton in Texas is in very early stages. In California, boll setting is satisfactory and insect counts are moderate. Boll setting in Arizona is behind normal and insects are increasing.

**SOYBEANS:** General rains gave the North Central Region soybean crop a boost as topsoil in many areas was becoming short. Soybeans made another week of rapid growth as blooming and setting of pods increased. Most acreage is in good condition. In Illinois, the crop is 60 percent blooming compared to 70 percent in 1972 and 77 percent normally blooming. Pods are being set on 25 percent of the Illinois acreage versus 40 percent last year. Soybean development is running ahead of last year in Minnesota, Iowa, and South Dakota, and behind normal in other Corn Belt States.

In the South Atlantic States, soybeans are in mostly good condition and developing normally. In the Delta States, the crop is late, but growing well and looking good.

**OTHER CROPS:** Showers and high humidity slowed hay making in the Corn Belt. In Wisconsin and Minnesota second crop hay is generally light but rains will help additional cuttings. A shortage of irrigation water will hurt hay crops in Oregon and Washington. Sorghum grain harvesting made excellent progress in south Texas; statewide, the crop is 19 percent harvested versus 25 percent in 1972. Kansas sorghum is 10 percent headed, 10 points behind normal while the Nebraska crop is 40 percent headed, 10 points ahead of normal. In North Carolina, flue-cured tobacco harvesting is 31 percent complete and opening day market prices set a record high. Idaho potatoes are in good condition while dryness is hurting potatoes in Aroostook Co., Me. Harvesting of new crop sugar beets is nearly complete in Imperial Valley, Calif. Rice in Texas is 2 percent harvested compared to 35 percent last year.

**Fruits and Nuts:** Some early variety, good quality peaches are available in local New York markets as peach and summer apple supplies increase in Pennsylvania. In California, peach, plum, nectarine, Bartlett pear and Gravenstein apple harvests are active. Peach, apple and apricot picking is underway in Washington. California walnuts continue good development while pecans in southcentral Texas are being damaged from walnut caterpillars.

**Vegetables:** Vegetables supplies are increasing in the Northeastern States, but additional rain would be beneficial. In Michigan, harvesting of cucumbers, peppers, sweet corn, and tomatoes was active. Showers interrupted onion harvesting in Texas. Watermelon and cantaloupe harvests were active in several areas of Texas. Mixed vegetable harvesting continued in California.

**PASTURES AND LIVESTOCK:** Recent rains have greatly improved pastures and ranges from Nebraska to Texas and livestock are in good to excellent condition. Light showers helped pastures in the northern Great Plains but more moisture is needed. Some Wisconsin hay pastures were being green-chopped and pastured to replace regular pastures which have declined sharply. Northwest dryland ranges continued to deteriorate as livestock producers continued to cull herds closely.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., July 29, 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 . . .	81	- 1	1.0	-. 2	La. Baton Rouge . . .	84	+ 1	.4	-. 7	Youngstown . . .	73	+ 2	.6	-. 4
Mobile . . .	84	+ 1	1.5	-. 9	Lake Charles . . .	83	0	1.1	-. 5	OKLA. Okla. City . . .	79	- 5	.1	-. 4
Montgomery . . .	83	+ 1	.3	-. 9	New Orleans . . .	84	+ 2	3.4	+1.9	Tulsa . . .	80	- 3	4.6	+4.0
ALASKA. Anchorage . . .	57	- 0	.2	-. 2	Shreveport . . .	82	- 2	.6	-. 3	OREG. Astoria . . .	63	+ 2	T	-. 3
Barrow . . .	---	---	---	---	MAINE. Caribou . . .	71	+ 5	.2	-. 7	Burns . . .	68	- 3	.7	+ .6
Fairbanks . . .	66	+ 7	.7	+ .2	Portland . . .	73	+ 3	.1	-. 5	Me. Fort . . .	77	+ 3	0	0
Juneau . . .	56	0	1.0	-. 1	MD. Baltimore . . .	76	- 1	T	-1.0	P. ndle . . .	78	+ 3	0	0
Kodiak . . .	50	- 5	.6	---	MASS. Boston . . .	76	+ 1	2.6	+2.0	Portla . . .	74	+ 6	0	-. 1
Nome . . .	45	- 5	1.7	+1.1	Chatham . . .	68	---	1.5	---	Salem . . .	71	+ 4	0	0
ARIZ. Flagstaff . . .	64	- 2	.5	-. 2	MICH. Alpena . . .	66	- 1	1.5	+1.1	PA. Allentown . . .	76	+ 1	.1	-1.1
Phoenix . . .	92	+ 2	T	-. 2	Detroit . . .	74	+ 1	1.5	+ .9	Erie . . .	73	+ 1	1.1	+ .3
Tucson . . .	83	- 4	.5	0	Flint . . .	72	+ 1	.6	-. 1	Harrisburg . . .	71	0	1.1	+ .3
Winslow . . .	75	- 5	T	-. 3	Grand Rapids . . .	72	0	.3	-. 3	Philadelphia . . .	79	+ 3	T	-1.0
Yuma . . .	92	- 2	T	-. 1	Houghton Lake . . .	68	0	.7	+ .1	Pittsburgh . . .	75	+ 3	.8	0
ARK. Fort Smith . . .	80	- 4	T	-. 6	Lansing . . .	72	0	.2	-. 4	Scranton . . .	73	0	.6	-. 5
Little Rock . . .	83	+ 1	1.0	+ .2	Marquette . . .	67	- 1	.8	+ .1	R.I. Providence . . .	74	+ 1	.1	-. 5
CALIF. Bakersfield . . .	86	+ 1	0	0	Muskegon . . .	71	- 1	1.4	+ .8	S.C. Charleston . . .	82	+ 1	.1	-1.8
Eureka . . .	56	+ 1	0	0	S. St. Marie . . .	64	- 1	1.8	+1.3	Columbia . . .	80	- 2	.3	-1.2
Fresno . . .	82	0	0	0	MINN. Duluth . . .	63	- 5	1.4	+ .6	Greenville . . .	78	- 2	2.1	+ .8
Los Angeles . . .	74	0	0	0	Internat'l Falls . . .	64	- 3	3.3	+2.5	S.D. Aberdeen . . .	71	- 4	.2	-. 3
Red Bluff . . .	85	0	0	0	Minneapolis . . .	72	- 1	1.5	+ .8	Huron . . .	70	- 6	.9	+ .5
San Diego . . .	70	- 1	0	0	Rochester . . .	70	- 3	1.5	+ .7	Rapid City . . .	69	- 6	T	-. 4
San Francisco . . .	65	+ 1	0	0	St. Cloud . . .	68	- 5	1.2	+ .5	Sioux Falls . . .	72	- 3	.8	+ .2
Stockton . . .	79	0	0	0	MISS. Jackson . . .	83	+ 1	.8	-. 3	TENN. Chattanooga . . .	80	- 1	3.5	+1.3
COLO. Denver . . .	68	- 6	1.1	+ .8	Meridian . . .	88	+ 6	.2	-1.2	Knoxville . . .	77	- 2	1.7	+ .5
Grand Junction . . .	76	- 3	T	-. 2	MO. Columbia . . .	77	- 1	1.1	+ .4	Memphis . . .	84	+ 3	.4	-. 4
Pueblo . . .	74	- 3	.5	+ .1	Kansas City . . .	76	- 7	1.9	+1.3	Nashville . . .	81	+ 1	3.3	+2.3
CONN. Bridgeport . . .	76	+ 1	1.3	+ .4	St. Louis . . .	79	+ 1	2.5	+1.9	TEX. Abilene . . .	82	- 2	.3	-. 3
Hartford . . .	75	+ 1	.2	-. 7	Springfield . . .	78	- 1	1.2	+ .4	Amarillo . . .	75	- 5	2.4	+1.9
D.C. Washington . . .	80	+ 1	.1	-. 9	MONT. Billings . . .	70	- 6	.1	-. 1	Austin . . .	84	- 1	T	-. 4
FLA. Apalachicola . . .	82	0	2.9	+1.0	Glasgow . . .	70	- 2	.4	+ .1	Beaumont . . .	82	0	2.7	+1.3
Daytona Beach . . .	83	+ 2	1.4	---	Great Falls . . .	71	0	T	-. 3	Brownsville . . .	85	0	T	-. 4
Ft. Myers . . .	83	0	1.0	-1.0	Helena . . .	71	0	.1	-. 1	Corpus Christi . . .	85	0	0	-. 5
Jacksonville . . .	82	- 1	2.8	+1.1	Kalispell . . .	69	+ 3	0	-. 2	Dallas . . .	---	---	---	---
Key West . . .	83	- 1	.5	-. 4	Miles City . . .	72	- 5	T	-. 3	Del Rio . . .	85	- 2	0	-. 3
Lakeland . . .	82	0	4.0	+2.4	Missoula . . .	70	+ 2	T	-. 2	El Paso . . .	80	- 2	.2	-. 1
Miami . . .	82	0	.2	-1.3	NEBR. Grand Island . . .	74	- 4	.7	+ .2	Fort Worth . . .	85	- 1	1.2	+ .8
Orlando . . .	84	+ 1	.4	-1.4	Lincoln . . .	74	- 7	.2	-. 5	Galveston . . .	84	0	.9	-. 3
Tallahassee . . .	83	+ 2	2.2	+ .4	Norfolk . . .	74	- 3	.4	-. 2	Houston . . .	83	0	.1	-. 9
Tampa . . .	84	+ 2	1.0	-. 9	N. Platte . . .	71	- 6	.4	-. 1	Lubbock . . .	75	- 3	.3	-. 2
W. Palm Beach . . .	83	0	.8	---	Omaha . . .	74	- 3	.2	-. 6	Midland . . .	77	- 6	.6	+ .2
GA. Atlanta . . .	79	0	.6	-. 5	Valentine . . .	72	- 5	.7	+ .2	San Angelo . . .	84	- 1	.2	-. 1
Augusta . . .	81	- 1	.6	-. 4	NEV. Ely . . .	65	- 4	.1	-. 1	San Antonio . . .	85	0	T	-. 4
Macon . . .	84	+ 2	.2	-1.1	Las Vegas . . .	90	0	T	-. 1	Victoria . . .	86	+ 2	2.6	+1.7
Savannah . . .	83	+ 1	T	-1.5	Reno . . .	71	+ 2	T	0	Waco . . .	86	0	T	-. 4
HAWAII. Hilo . . .	76	0	.4	-2.0	Winnemucca . . .	74	+ 2	T	-. 1	Wichita Falls . . .	84	- 2	2.0	+1.6
Honolulu . . .	81	+ 2	T	-. 1	N.H. Concord . . .	71	0	.1	-. 6	UTAH. Blanding . . .	70	- 3	0	-. 2
Kahului . . .	---	---	---	---	N.J. Atlantic City . . .	76	0	0	-. 9	Salt Lake City . . .	74	- 5	T	-. 1
Lihue . . .	78	0	.1	-. 3	Trenton . . .	78	+ 1	.2	-. 7	VT. Burlington . . .	72	+ 2	2.1	+1.2
IDAHO. Boise . . .	76	- 1	0	0	N.MEX. Albuquerque . . .	76	- 3	.1	-. 2	VA. Lynchburg . . .	74	- 2	.1	-. 9
Lewiston . . .	79	+ 4	0	-. 1	Roswell . . .	76	- 3	1.2	+ .8	Norfolk . . .	78	- 1	.2	-1.2
Pocatello . . .	69	- 5	T	-. 1	N.Y. Albany . . .	72	- 1	1.0	+ .2	Richmond . . .	76	- 2	T	-1.4
ILL. Cairo . . .	82	+ 1	.9	+ .2	Binghamton . . .	72	+ 3	1.0	+ .2	Roanoke . . .	74	- 3	.6	-. 4
Chicago . . .	77	0	1.0	+ .2	Buffalo . . .	73	+ 2	2.8	+2.3	WASH. Colville . . .	73	+ 3	0	-. 1
Moline . . .	75	- 1	.4	-. 3	New York . . .	78	0	.3	-. 6	Omak . . .	74	+ 2	0	0
Peoria . . .	75	- 2	.9	+ .1	Rochester . . .	73	+ 1	.6	0	Quillayute . . .	61	0	T	-. 5
Rockford . . .	74	- 1	1.9	+1.0	Syracuse . . .	75	+ 2	2.2	+1.5	Seattle-Tacoma . . .	68	+ 2	0	-. 1
Springfield . . .	76	- 2	.7	0	N.C. Asheville . . .	75	0	4.2	+3.2	Spokane . . .	73	+ 1	0	-. 1
IND. Evansville . . .	79	0	1.5	+ .8	Charlotte . . .	76	- 4	.8	-. 4	Walla Walla . . .	79	+ 1	0	0
Ft. Wayne . . .	74	- 1	.5	-. 2	Hatteras . . .	76	- 2	.4	-. 7	Yakima . . .	74	+ 2	0	0
Indianapolis . . .	76	0	1.7	+ .1	Greensboro . . .	78	- 1	.6	-1.0	W. Va. Beckley . . .	71	0	1.3	+ .2
South Bend . . .	75	+ 1	.3	-. 5	Raleigh . . .	77	- 1	.5	+ .9	Charleston . . .	76	+ 1	2.5	+1.1
IOWA. Burlington . . .	74	- 3	.6	-. 2	Wilmingon . . .	80	0	1.3	-. 6	Huntington . . .	78	+ 2	.2	-1.0
Des Moines . . .	76	- 1	.7	+ .1	N.DAK. Bismarck . . .	65	- 8	.7	+ .3	Parkersburg . . .	76	0	.4	-. 5
Dubuque . . .	70	- 4	.2	-. 6	Fargo . . .	67	- 6	1.2	+ .6	WIS. Green Bay . . .	72	+ 1	1.1	+ .5
Sioux City . . .	73	- 6	.1	-. 7	Williston . . .	69	- 3	.5	+ .2	La Crosse . . .	75	0	1.4	+ .6
KANS. Concordia . . .	76	- 5	1.3	+ .7	OHIO. Akron-Canton . . .	75	+ 2	1.3	+ .4	Madison . . .	72	0	.3	-. 4
Dodge City . . .	77	- 5	.8	+ .3	Cincinnati . . .	75	0	.6	-. 2	Milwaukee . . .	72	+ 2	.3	-. 3
Goodland . . .	72	- 6	.7	+ .1	Cleveland . . .	75	+ 2	.4	-. 3	WYO. Casper . . .	67	- 6	.4	+ .2
Topeka . . .	77	- 5	.4	-. 4	Columbus . . .	76	+ 1	.9	0	Cheyenne . . .	63	- 8	.7	+ .3
Wichita . . .	76	- 5	.1	-. 7	Dayton . . .	76	+ 1	1.4	+ .6	Lander . . .	65	- 7	.1	-. 1
KY. Lexington . . .	76	- 2	.7	-. 2	Toledo . . .	74	+ 1	.2	-. 3	Sheridan . . .	66	- 7	.4	+ .2
Louisville . . .	80	+ 2	.7	0						P.R. San Juan . . .	83	+ 4	.1	-1.4

## 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:** Warmest week of year with temperatures averaging about 2° above normal. Highest 97° at Anniston Tuesday. Rain consisted of mostly afternoon and evening thundershowers. Nearly 3.00 in fell at Centreville with 1.50 to 2.50 in southeast and coastal counties. Only 0.03 in at Muscle Shoals and 0.06 at Anniston. Crops generally made good development but more moisture needed several scattered counties, primarily south, to maintain favorable prospects. Almost 50% cotton setting bolls. Insect counts high many areas, control measures taken where scouting reports indicate need. About 50% corn in dough stage, 20% dented. Prospects good except for early planted acreage hit by dry weather south. Soybeans made good growth, many fields beginning to bloom. Peanuts satisfactory development, but need moisture few localities. Sizable amount of hay saved. Livestock mostly good.

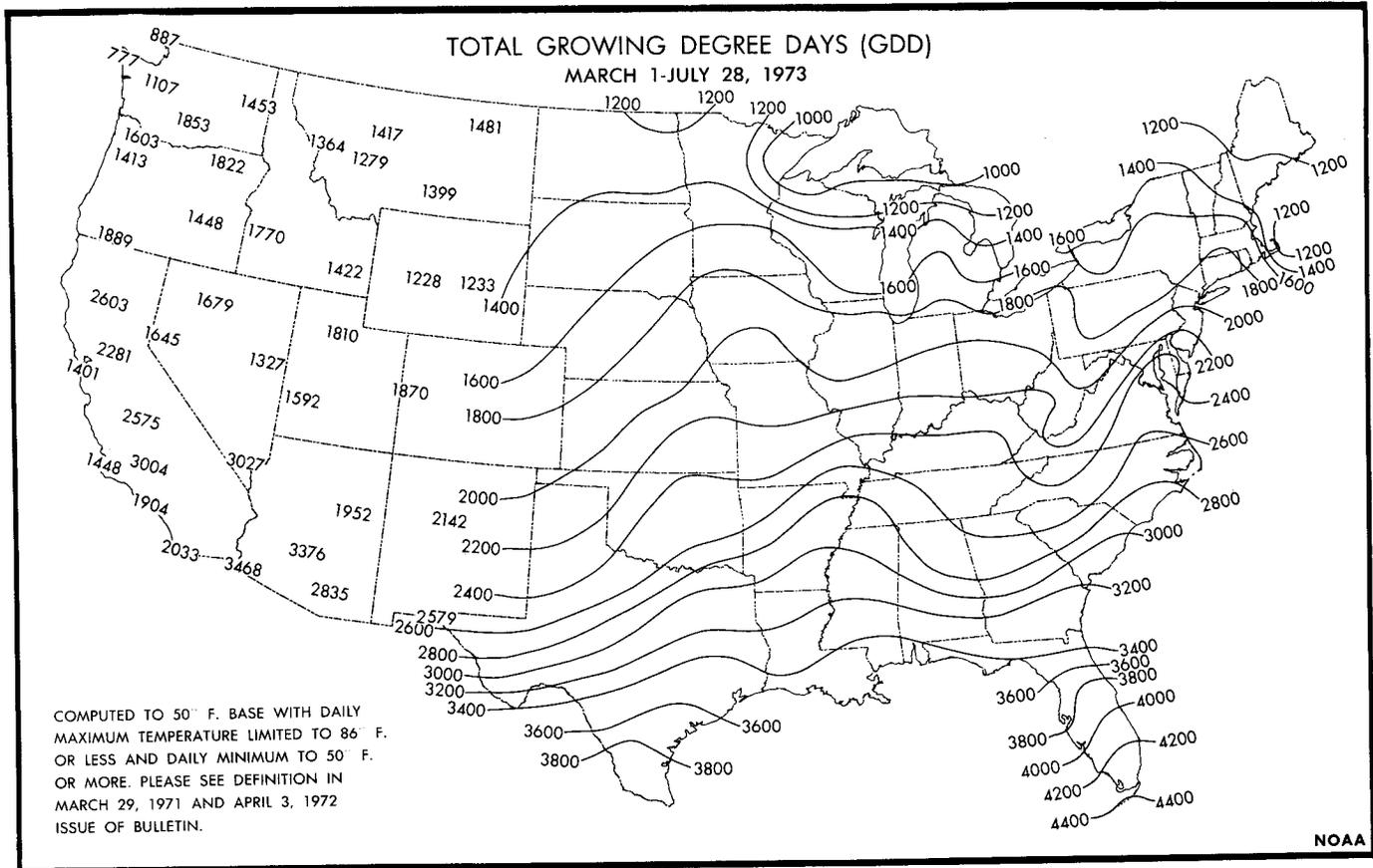
**ALASKA:** Temperatures averaged 5° to 8° above normal in Tanana Valley and near normal elsewhere. Tanana Valley lacked usual shower activity, little if any precipitation reported. Dry weather continues from Matanuska Valley south through Homer with less than 0.10 in measured. However, near end of period some rain spreading northward into Kenai Peninsula with prospects for more wet conditions in store for agricultural interests south of Alaskan Range. Kodiak received over 2.00 in rain during period and 5.00 in above normal so far this season. Small grains headed out, except for oats on Kenai Peninsula. Barley and peas mix are up to 5 ft tall in Matanuska Valley. Second crop brome harvest expected to begin in Fairbanks area first week in August. Nearly all potatoes have bloomed. Soil moisture adequate in Tanana Valley, but in very short supply rest of Railbelt. Irrigation in where sprinkler systems available.

**ARIZONA:** Temperatures slightly subnormal. Week began very dry, invasion tropical moisture Friday produced widely scattered heavy thundershowers by weekend, all sections except southwest. Cotton progress satisfactory, boll setting somewhat behind normal, insect numbers increase Yuma area, controls applied as needed. Vegetative growth slowed, boll set appears good Yuma area. Sorghum growth progressing normally. Safflower harvest progressing well. Alfalfa cutting progressing well. Rains slowing drying some areas. High temperatures shortened harvest period cantaloupes Salt River Valley. Over-supplied markets shortening watermelon picking, prices dropped sharply. Cantaloupe harvest complete Yuma. Early land preparation underway fall lettuce, planting active Cochise County. Grape-harvest virtually complete. Potato harvest completed Salt River Valley. Valencia orange picking, shipping finished Salt River Valley. Limited grapefruit picking. Market limited domestic sales, generally good export. Citrus groves generally good. Fruit sets appear lightest in several years; cool, early spring, extremely hot late spring blamed. Ranges generally good except southwest deserts extremely dry. High ranges green, providing good grazing. Stock-water adequate. Cattle, calves good. Sheep, lambs on summer ranges fair to good.

**ARKANSAS:** Temperatures in upper 70's northwest and northcentral to mid-80's southern border. Departures 3° below to 2° above, mostly subnormal northwest quarter; mostly above normal southcentral. Highest 100° at Brinkley eastcentral on 24th, lowest 58° Calico Rock northcentral on 27th. Rainfall 1.00 in to a little over 3.00 in in scattered amounts northwest, northcentral, northeast and central. Elsewhere amounts none to less than 0.50 in except in a few localities getting 1.00 to a little under 2.00 in. Largest total at Morrilton 3.05 in. Rain fell mainly early week and on weekend. Soil moisture adequate, short eastcentral and northern one-third. Cotton good, later than normal, early fields setting bolls, most squaring and blooming heavily, insect infestation light. Rice grew rapidly, early fields ready to head. Soybeans growing well, early fields blooming, rain needed in driest areas. Early sorghums heading, mostly good condition. Corn roasting ear stage. Hay harvest active. Apple picking in progress. Peach harvest past peak. Tomatoes, cucumbers, okra, cantaloupes and watermelons being marketed. Pastures good to excellent. Cattle good shape.

**CALIFORNIA:** No rain except scattered thundershowers northern mountains and Sierra Nevada. Temperatures began subnormal but above normal over interior by midweek. Afternoon readings in central valley over 100° by midweek, about 110° in desert southeast, and near 90° along central and south coast. Chopping corn silage started San Joaquin Valley. Milo harvest increased Imperial Valley. Cotton boll set mostly satisfactory, insect problems moderate. Early rice heading out. Harvest new crop sugar beets near complete Imperial Valley. Harvest fresh grapes active, volume increasing Kern County. Perlette and Cardinal grape harvests expected Visalia area. Insect and disease controls continue. Mites becoming problem in many crops. Peach, plum nectarine, Barlett pear and Gravenstein apple harvests active. Prune and almond orchards prepared for harvest--expected by mid-August. Walnuts good development, limb breakage from heavy crop some areas. Navel oranges sizing rapidly. Valencia orange, and grapefruit harvest active. Labor shortages slowing date bagging for rain protection. Broccoli, cauliflower moderate Santa Maria. Cantaloupes steady San Joaquin. Carrots moderate San Joaquin, central coast. Celery active Santa Maria-Oceano. Honeydew melons increasing central valley. Lettuce good Santa Maria, limited Salinas. Onions light Stockton. Potatoes steady south, increased Stockton. Fresh market tomatoes increased south, past peak Merced. Processing tomatoes increasing San Joaquin and Sacramento. Watermelons steady central valley. Summer ranges providing adequate quantity feed, low nutritional value. Some areas light supplemental feeding. Fire danger high; scattered fires throughout State. Sheep moved on grain stubble as available. Water supplies normal. Egg, milk production declined seasonally, hot weather.

**COLORADO:** Unseasonably cool weather prevailed for second straight week. Temperatures averaged



5° to 10° subnormal. Daily highs most days in 80's and 90's lower elevations and in 60's to 70's mountains. Extremes: 95° La Junta; 29° Fraser. Precipitation widespread but significant amounts rather spotty. Heaviest rainfall in eastern third where several localities received over 1.00 in. Most field crops good to excellent. Surface soil moisture mostly short to adequate. Excellent growth irrigated crops. Winter wheat and barley harvest progressed but some delay by showers. Light insect infestation alfalfa. Winter wheat 99% ripe, 74% harvested. Winter barley 97% ripe, 75% harvested. Spring planted crops very good to excellent. Final cultivation corn 92% complete, 28% tasseled. First cutting alfalfa mostly complete, second cutting 38% complete. Potatoes very good to excellent, harvest underway Arkansas Valley. Lettuce harvest continuing. Ranges and pastures good southeast, very good to excellent elsewhere. Livestock very good.

**FLORIDA:** Scattered showers daily. Totals generally moderate, heaviest west. Few totals less than 1.00 in. Temperatures normal. Overall crop conditions improved. Adequate soil moisture most of State. Flue-cured tobacco about harvested. Auctions opened July 24, active during week. Sugarcane crop continues excellent progress. Pastures good to excellent. Haying active. Cattle, calves good to excellent. Citrus trees excellent, new growth abundant, moisture adequate, very little late bloom, harvesting moving slowly. Planting sweet corn, eggplant, green pepper starting. Light supplies summer vegetables including greens, squash, okra, eggplant, peas, available local markets.

**GEORGIA:** Temperatures near to a little above normal. Warmest first of week, slightly cooler north portions near end of week due to showers. Rainfall moderate to heavy north, mostly moderate central and west and generally light southeast. Several reports of amounts in excess of 3.00 in north portions Wednesday. Soil moisture mostly adequate northern half, mostly short to adequate southern. Main activities haying and insect controls. Corn fair to mostly good. Cotton late, fair to good, 80% setting bolls. Tobacco harvest 80% complete, markets opened with record prices. Peanuts and soybeans mostly good. Peach picking 93% complete. Pastures and cattle good. Vegetables fair to good. Melon volume remained high.

**HAWAII:** Except for some light showers most crop areas dry. Heavy irrigation necessary to maintain crop growth. Insects continue problem despite heavy spraying. Forage growth poor because moisture lack. Pasture feed low in leeward islands. Harvesting activity in pineapple and sugarcane active.

**IDAHO:** Temperatures subnormal statewide with lows from 38° to 55°. Warming from midweek on. Mostly dry, rain southeast. Hot, dry weather north put added stress on dryland crops and ranges. Due to shortage of forage, livestock marketings much above usual. Herds being culled closely as feed supplies become critical. Ranges greatly benefited from previous week's rains. Irrigated crops grew well. Water demands high, irrigation supplies adequate so far. Small grain harvest active with 10% winter wheat harvested. Barley 15% harvested north, 30% southwest.

Potato crop good, some fields turning southwest and southcentral. Second cutting alfalfa active, 20% complete. Dry pea, lentil harvest well underway main area north with 30% dry peas and 10% lentils harvested.

ILLINOIS: Temperatures near to slightly subnormal. Precipitation most of State; some areas little rainfall, other areas heavy. Corn in silk stage about 70%, 1972 81%, 1970-72 average 79%. Corn 24% excellent, 57% good, 19% fair; 1972 81% good or excellent. Soybeans about 60% bloom stage, 1972 70%, average 77%; 25% setting pods, 40% 1972, average 43%. Soybeans 15% excellent, 59% good, 25% fair, 1% poor; 1972 77% good or excellent. Oats 90% ripened, 83% 1972, average 94%; 55% combined, 50% 1972, average 75%. Second crop alfalfa hay 65% cut, 60% 1972, average 72%; 90% good or excellent. Pastures 32% excellent, 59% good, 7% fair, 2% poor. Soil moisture 12% short, 66% adequate, 22% surplus. Averaged 3.5 days suitable fieldwork. Main activities combining oats, baling hay, soybean cultivation, weed cutting.

INDIANA: Wet, cool week. Temperatures seldom above 90°. Rainfall of 2.00 to 3.00 in left only northwest with deficit rainfall past 4 weeks. Fieldwork averaged 2 days. Topsoil moisture adequate to surplus. Subsoil moisture mostly adequate to surplus. Oats 45% combined, 60% average, 40% 1972. Barley, rye 95% combined. Corn 50% silked, 60% average, 50% 1972. Soybeans 40% in bloom, 20% setting pods. Intended wheat acreage 5% plowed. Alfalfa hay 50% cut second time. Pastures improved, fair to good.

IOWA: For 3rd straight week temperatures remained a few degrees subnormal. Three separate periods of thundershower conditions gave widely variable amounts of rainfall. A few local amounts over 3.00 in. Northeast sections showed a deficit for July. Crops mostly good to excellent, some reports of fair. Most fair reports from corn, soybeans from southcentral, southeast. Fieldwork: 3 days suitable. Corn 70% of fields 75% or more silked, ranging from 90% northwest to 50% eastcentral. About 10% corn entering dough stage, same as 1972. Corn good to excellent, a few reports of fair. Soybeans 72% fields blooming, same as 1972. Bloom ranges from 90% northwest to nearly 45% southeast. Pod setting 30%, 25% 1972, 30% 5-year average. Soybeans good to excellent, some reports of fair. Weed control in soybeans mostly good. Over 50% oats harvested, same as 1972, 5-year average 69%. Winter wheat harvest near completion. Second cutting alfalfa hay 62% complete, second cutting clover hay 33% complete. Pastures, hay crops good to excellent. Topsoil moisture 17% surplus, 78% adequate, 5% short. Subsoil moisture 16% surplus, 83% adequate.

KANSAS: Temperatures averaged 4° to 5° subnormal with beneficial rains most areas. Night of 23rd and early 24th, rains from 0.25 to 0.75 in fell eastcentral and in next 24 hours general rains: 2.00 in or more common northwest and southeast. Limited severe weather. Row crops good condition, development behind normal. Sorghum 10% headed, 15% 1972, average 20%. Corn 55% tasseled, 70% 1972, 75% average. Corn 10% dough stage, 20% 1972, 25% average. Row crop insect damage minor. Pods set on 15% of soybeans, 25% 1972, average 30%. Second cutting alfalfa 95% complete, same as 1972 and average. Third cutting 25% complete, 20% 1972, average 30%. Pastures, ranges greatly improved by recent rains. Livestock good to excellent.

KENTUCKY: Very warm, humid with scattered thunder-showers concentrated during midweek. Daytime temperatures upper 80's and low 90's, 60's and low 70's at night. Precipitation statewide averaged near 1.00 in. About 3 days suitable fieldwork. Soil moisture 3% short, 46% adequate, 51% surplus. Showers very beneficial in western corn and soybean areas, but tobacco in eastern two-thirds has had too much rain which slowed tobacco growth, caused drowned out spots, leached out nitrogen and encouraged root rot. Burley 13% blooming, 2% topped; later development than last year and usual. Corn growing and developing rapidly; 54% silked or beyond maturity, still later than normal. Soybeans 28% blooming, 38% 1972; in all stages maturity with many late fields dependent on favorable late summer and fall. Soybean stands irregular, reports of spotty and poor stands common. Pastures excellent, late hay crop prospects improved by recent rain.

LOUISIANA: Temperatures 3° subnormal northeast to 3° above southeast. Extremes 98° at Bunkie, 69° Clinton and Ashland. Measurable rainfall most stations 2 to 5 days. Totals highly variable, ranging less than 0.50 in to more than 3.00 in New Orleans. Farm work fair to good progress, interrupted by showers. Soil moisture mostly adequate. Fieldwork 4 days. Cotton good growth and development; early cotton setting bolls, laying by late cotton, insect control active. Soybeans good growth; some setting pods, some late fields grassy. Scattered rice harvest underway, yields and quality good. Sugarcane good growth, showers beneficial, borers well controlled. Corn maturing rapidly. Digging early sweet potatoes underway, yield and grade good. Watermelon harvest active. Haying delayed by showers. Pasture average, but improving.

MARYLAND AND DELAWARE: Temperatures near normal with cool days and warm nights except slightly subnormal lower Eastern Shore. Extremes low 90's to low 50's except highs in low 80's Garrett County. Precipitation light (trace to 0.33 in) northern one-third, about normal (0.25 to 1.25 in) central and heavy up to 3.00 in in Garrett County, and showers lower Eastern Shore. Typical summer work week, limited shower interruption. Soils dried except where heavy showers. Corn 68% silking, 1972 54%, average 58%. Soybeans 33% in bloom stage. Wheat harvest near end, spring oats underway. Cutting early tobacco started. Vegetable harvest active, watermelons just started. Summer apples and peaches available all orchards. Roadside market sales active.

MICHIGAN: Temperatures near normal all areas. Warmest Wednesday; near 90° recorded many areas. A cold front followed near end of week, coldest Sunday morning when 40° reported at Stambaugh in western upper State and 40's reported most of lower State. Rainfall totaled 1.00 to 2.00 in in most areas with generally 0.25 to 0.50 in central and some northwest lower State areas. Scattered showers and humid weather slowed hay and wheat harvest. Rapid development of field crops. Soil moisture highly variable within counties; mostly adequate to short. State averaged 4.6 days suitable for fieldwork. Winter wheat 67% harvested. Oats 64% turning yellow or more advanced, 4% harvested. Corn development highly variable because of great variation in planting dates and retarded development in wet spots. Average corn height 52 in. Earlier planted soybeans made rapid growth, many fields blooming. Sugar beets develop-

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## WORLD WEATHER AND AGRICULTURE

### GENERAL CROP-WEATHER CONDITIONS IN SWITZERLAND

Spring and early summer rainfall in Switzerland has been excellent and growing conditions are above average. Early hay and grass cuttings have been heavy. Some damage has occurred in low areas of central Switzerland from flooding which resulted from several days of heavy rainfall in June. Also, some hail storms have been reported, but several days of hot sunny weather is helping corn and other row-crops.

### WHEAT AND CORN CROPS GOOD IN YUGOSLAVIA

The wheat harvest in Yugoslavia began during the last week in June. Early field reports are very optimistic. Local storms and hail in early June caused some lodging, but in general, weather conditions in June were favorable for wheat. The corn crop is also in very good condition at this time.

### USSR CROP PROSPECTS GOOD: GRAIN HARVEST UNDERWAY

The grain harvest is moving into full swing in the southern regions of the Soviet Union. Early reports from widely scattered areas indicate that yields are running very high. However, rains in some areas have caused some harvesting difficulties, and there is considerable lodging. According to a Moscow radio broadcast on July 9, "Rains in the Ukraine are interfering with harvesting and in many windrowed fields grain must be turned and dried before threshing."

In general, crop development is 10 to 15 days ahead of normal in the majority of areas of the European USSR. Consequently, by the end of June, winter wheat and spring barley had reached the wax stage in the southern Ukraine, southern Rostov Oblast, and North Caucasus.

### INDIAN SUMMER MONSOON RESUMES

After two weeks of rather dry weather, summer monsoon activity revived during early July. The south-west monsoon, which arrived on schedule in southern India and progressed normally during the first two weeks of the monsoon season, suddenly weakened around mid-June. There were practically no rains in most of central, south-eastern and western parts of the country during the latter half of June. The monsoon activity revived on July 2 with fairly widespread and continuing rains occurring since then in many part of the country. Had the monsoon activity not resumed, particularly in the States of Maharashtra and Gujarat, kharif (fall harvested) crop prospects would have suffered a serious setback. Latest reports indicate that the monsoon now covers practically the whole of India excluding the northern states of Punjab, Haryana and Uttar Pradesh.

The accumulative rainfall for this monsoon season which started on June 1 was normal in 14 weather zones, above normal in 9 and deficient or scanty in 12, as of July 4. The 23 weather zones which received normal or above normal rainfall account for approximately 55 percent of the total kharif cereal grain production in India.

#### CROP-WEATHER IN AUSTRIA HAS BEEN FAVORABLE

The general weather situation so far this summer has been most favorable for most agricultural crops in Austria. A spell of warm, dry weather at pollination time encouraged insect activity, resulting in good prospects for the apple and pear crops. There was some lack of precipitation in May, but this was remedied by ample rainfall in June. This rainfall also provided a boost to grain crops, and a bumper crop of sugar beets is also expected.

#### DROUGHT AND INSECTS THREATEN CROPS IN FINLAND

Crop production in southern Finland is expected to be reduced as a result of drought and insect attacks. Livestock slaughter has increased somewhat as pastures wilted and wells ran dry. A contributing factor is a low ground water level because of limited snowfalls in the winter and below average precipitation in the spring.

In the tracks of the drought, fields have been invaded by leaf louse and other insects with resulting damage to the grain crops through a virus transmitted by the louse. The leaf louse attack has now culminated and the presence of ladybirds is ample in southern Finland.

#### LEBANON WHEAT PRODUCTION IS DOWN

Wheat and barley yields have been reduced in Lebanon because of a lack of moisture during much of the growing season. On the average, yields are 50 percent below last year. However, this figure obscures the real effect of the drought because yields on irrigated lands were as good or better than last year. In many dryland areas, fields were grazed before maturity and in others, yields hardly met seed requirements for next year's crop.

Below average moisture and a long stretch of dry weather last fall had retarded germination. However, ample moisture in January had encouraged farmers to complete planting and allowed replanting of early seeded fields which had been severely stunted by the dry weather. However, conditions continued dry, resulting in the severe yield reductions.

#### WORLD ALMOND PROSPECTS

Adverse weather has severely dampened the prospects for the 1973 world almond crop. Early estimates call for a 157,500 short ton crop, well below last year's record 164,300 ton harvest.

Foreign production is expected to approach 77,500 tons, approximately 15 percent below last year. Severe cold and unusually late snowfall were recorded in Italy and Spain, curtailing the crop's potential. Italian production is projected to be the smallest since World War II. This would be Italy's third consecutive below-average harvest. In Spain, the hope for another record crop was eliminated by unfavorable weather conditions.

Conversely, Iran, Morocco, and Portugal all report that weather conditions have been most favorable and that crop prospects are good. Each of these countries expects a larger crop than last year if conditions remain favorable.

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ing well. Dry beans improving but need rain. Second cutting hay active. Pasture feed supplies near average. Tart cherry harvest active northwest, completed elsewhere. Harvest of pickles, peppers, sweet corn and tomatoes active.

**MINNESOTA:** Temperatures averaged 3° to 5° subnormal with afternoon highs in 70's and 80's and lows mostly in 50's and 60's. Precipitation fell statewide and was above normal except for parts of Red River Valley. Weekly totals averaged 1.00 to 2.00 in with greatest 24-hour total 3.14 in at Faribault on 29th. Considerable hail damage southeastern central district on 29th. General rains improved soil moisture supplies. Topsoil moisture now adequate except some northwest counties. Subsoil mostly adequate. Rains boosted row crop prospects but small grains too far advanced to receive much benefit. Row crops mostly good, small grain prospects fair to good. Swathing, combining small grains delayed by wet weather but most fields ripe and rapid advancement expected with drier weather. Second cutting alfalfa will be light but rains will help additional cuttings. Armyworms several areas but serious damage limited to few local areas. Corn 85% tasseled, 5-year average 69%, 4% milk stage, average 1%. Soybean crop over 90% in bloom stage, average 80%; 33% setting pods, average 20%. Nearly 50% turning ripe, average 20%. Rye about 40% combined, average 20%. Winter wheat nearly 90% swathed, 25% combined. Spring wheat 20% swathed, 33% average; around 5% combined, average 1%. Oats 40% swathed, average 33%; 14% combined, 9% average. Barley 50% swathed, 25% average; 16% combined, average 10%.

**MISSISSIPPI:** Precipitation and temperatures near normal. Temperature extremes: 99° to 66°. Showers more numerous and substantial in southernmost counties. Soil moisture spotty but mostly adequate. Average of 4.8 days suitable for fieldwork. Condition of field crops fair to good. Pastures, livestock good. about 94% of cotton acreage squaring, 86% setting bolls. Completion of harvest: peaches 84%, hay 62%, watermelons 61%, cucumbers 80%. Corn 77% tasseled, 69% silked.

**MISSOURI:** Showers general early and late week with totals ranging from less than 1.00 in in Bootheel to as much as 3.00 to 5.00 in in a few local areas. Generally rainfall sufficient to relieve drought that had prevailed over parts of State for more than a month. Temperatures averaged 5° subnormal across north and central but near normal across south. Afternoon highs remained generally in 80's north most of week but rose into 90's most days in southern half. Fieldwork: 3 days suitable. Oats 74% cut, 93% 1972. Second cutting alfalfa 83% harvested, 89% 1972. Corn good, 52% silked, 77% 1972. Soybeans 30% blooming, 57% 1972. Grain sorghum 17% headed, 40% 1972. Cotton 85% squaring, 37% setting bolls, fair to good. Soil moisture supply 15% short, 73% adequate, 12% surplus. Motor fuel supply for current farm work remains adequate.

**MONTANA:** Continued warm, dry. Isolated showers beginning late week. Precipitation subnormal. Temperatures 3° above normal west, 5° below southeast and southcentral. High temperatures midweek. Soil moisture short most areas. Hot, dry weather forcing maturity of grains. Winter wheat 45% ripe, 45% headed and turning, and 10% headed but still green. Spring wheat 10% ripe,

60% headed and turning, 35% headed but still green. Barley 10% ripe, 55% headed and turning, 35% headed but still green. Winter wheat harvest 5% complete. First cutting alfalfa 95% complete, wild hay 75% complete. Range feed supply short northwest, northcentral and central, varies short to adequate other districts. Livestock generally fair to good, some early marketing continues. Ranchers concerned about fall, winter grazing and hay supplies.

**NEBRASKA:** Rainfall general statewide. Temperatures subnormal; lows 50's and 60's. Wheat crop 90% harvested. Corn 54% good, 43% excellent, 3% poor; 75% silking, normal 68%. Sorghum 59% good, 41% excellent; nearly 40% heading, 10% above normal. Soybeans 64% good, 32% excellent, 4% fair; 30% podding, 31% normal. Second cutting alfalfa 85% complete, third cutting 10% harvested; condition 75% good, 19% excellent, 6% fair. Wild hay 72% good, 17% excellent, 11% fair. Topsoil moisture supplies 92% adequate, 5% surplus, 3% short. Subsoil moisture supplies 97% adequate, 3% short. Farm activities mainly weeding soybeans, haying, combining oats and wheat, working summer fallow, irrigating, hauling grain to market, and spraying for weeds and insects. Range and pasture 6% below average, 68% average, 26% above average.

**NEVADA:** Temperatures 1° to 3° above normal except 2° below in extreme south. Highest extremes 111°, Logandale; 34°, Mountain City. Precipitation negligible. Small grain harvest complete southern valleys, underway elsewhere. Second cutting alfalfa hay started north with fourth cutting almost complete south. Treatment for spider mites and cutworms on seed alfalfa Humboldt County. Livestock good. Range feed continues excellent but ranges dry and extremely fire prone.

**NEW ENGLAND:** Warm, humid, highs around 90°. Rain Wednesday night into Sunday, amounts few hundredths north Maine, 1.50 in northwest Vermont, 2.50 in Boston area. Much hay made, some corn sidedressed. Vegetables good supply all areas. Cranberries sizing well. Connecticut Valley tobacco crop generally good. Dry conditions Aroostook County, Maine, now hurting potatoes, condition generally fair to poor, no rain over weekend.

**NEW JERSEY:** Warm, dry summer week. Temperatures near to slightly above normal ranging from mid-50's Monday morning to low 90's weekend. Precipitation light north, little or none south. Most fell in scattered showers Thursday and Friday. Soil moisture short some areas, some growers irrigated. Hot weather increased crop development. Harvest summer crop increased. Potato digging continued light. Blueberry harvest heavy. Peach movement moderate and increasing. Grain combining neared completion. Second cutting hay about 75% complete. Weather conditions were good for drying. Most field corn and soybean prospects excellent. Pastures need a good soaking rain.

**NEW MEXICO:** Cool week, heavy showers. Extremes: 102°, Rodeo; 34°, Chama. Showers statewide, over 2.00 in Clovis, Des Moines, and Grand Quivira. Northwestern Plateau driest with only about 0.10 in. Scattered rainfall interrupted some field activity. Soil moisture mostly adequate. Wheat, barley harvest complete. Grain sorghum remains good, many fields heading. Cotton mostly good, squaring well advanced many fields, boll setting occurring. Alfalfa well advanced third cutting.

Ranges, livestock good. Grasshoppers remain problem some areas, spraying underway.

**NEW YORK:** Temperatures slightly above normal most sections: Western Mohawk Valley, 7° above normal. Highs in mid to upper 80's early week west but by Wednesday down to upper 70's and lower 80's. East subnormal early week, a few degrees above normal midweek, near normal by weekend. Welcome rains fell over much of State easing the drought conditions to some extent. Rains began Wednesday afternoon throughout west and spread to entire State Thursday. Some of week generally favorable for fieldwork. Wheat nearly 70% harvested. Second cutting alfalfa about 35% complete. Corn good, in various stages development, but moisture needed for more rapid growth. Harvest of early planted oats getting underway a few areas. Dry beans good although root rot a problem. Short moisture conditions many areas holding back vegetable crop development, although overall condition remains good. Early snap bean plantings yielding light due to dry weather. Onions generally good. Wayne County celery growing well. Oswego County lettuce excellent quality and good supply. Harvest light tart cherry crop continues, expected completion next week. Some early variety peaches available local markets, quality good. Early summer apples available include Lodi, Wellington and Quinte. Grapes sizing well.

**NORTH CAROLINA:** Rainfall varied widely due to thundershowers: Over 3.00 Asheville and Greensboro; none New Bern. Temperatures on warm side, high 96°, Rocky Mount. Fieldwork averaged 4.1 days. Border belt flue-cured tobacco markets opened. Opening day prices averaged record high 83 cents per pound. Flue-cured harvest 31% complete. Corn 25% excellent, 65% good, 10% fair. Soybeans 12% excellent, 78% good, 10% fair. Small grain harvest complete. Bollworm damage difficult to control on cotton plants. Pastures declined due to hot dry weather.

**NORTH DAKOTA:** Temperatures 5° subnormal with little variation. Scattered showers and thunderstorms. Precipitation averaged few tenths in above normal with over 2.00 in for weekly total at Mott. Small grain maturity ahead of normal but combining interrupted temporarily by scattered showers. Precipitation generally light but helpful to late crops, pastures and haylands. Cool temperatures also favorable. More rain needed.

**OHIO:** Warm, humid. Overnight lows in 60's and low 70's through 27th, then gradually dropped into upper 50's and lower 60's by 29th. Daytime highs mostly middle and upper 80's until 29th when high readings in upper 70's to 80°. A measurable amount of precipitation reported somewhere in State almost daily. Rainfall associated with showers and thundershowers varied considerably. Locally heavy showers produced flash flooding central portions on 24th. Kenton reported 3.50 in in 24 hours ending 7:00 A.M. on 25th. Least rain fell at Toledo, less than 0.25 in. Cultivating, small grain harvest slowed by badly needed rain over State. Showers, high humidity made haying difficult but conducive to excellent crop growth. Only 2 days favorable fieldwork. Soil moisture supplies replenished many areas; 2% short, 49% adequate, 49% surplus. Corn averaged 60 in high, (1968-72) average 65 in. Corn nearly 40% silked, 1972 45%, normal 60%. Soybeans 19 in tall, normal average 24 in. Soybean maturity continues behind normal due to lateness of planting season; about

25% has pods forming, normal progress 45%. Second cutting alfalfa 35% and second cutting clover tim 20% harvested. Wheat 95% harvested, normal 85%. Oats 25% harvested, behind 1972 and average of 55%.

**OKLAHOMA:** Temperatures 1° subnormal southeast to 5° subnormal panhandle. Precipitation light to moderate. Amounts ranged from 0.25 in eastcentral to 2.90 in northcentral. Weekend warm with scattered light to moderate rains. Row crops made good growth as good rains fell in most producing areas. Conditions of all crops mostly good to excellent with sorghums and cotton showing gains over last week. Over 33% sorghums heading, 50% 1972. Some areas have light aphid and earworm infestations. Cotton is small with less than 67% squaring, but prospects good as bolls start to set. Soybeans began to flower, over 50% peanuts bloomed, both 1 to 2 weeks later than 1972. Good progress haying, but shortage baling wire a problem. Rain improved ranges. Cattle very good.

**OREGON:** Cool weather, warming end of period. Mostly 2° subnormal to 2° above normal. Highest temperatures 90's to low 100's. Minimum dropped briefly into upper 30's parts east. Thunder-showers early week brought varying light amounts rain east of Cascades. Hermiston measured 0.86 in and Madras 0.24 in. Most stations reported traces or few hundredths. Few light showers fell on north coast, northern interior. Harvest of field crops continues. Grass seed yields other than orchardgrass, tall fescue about normal. Field burning underway, conditions permitting. Grain harvest continues, subnormal yields east of Cascades, normal or better west. Mint harvest started Willamette Valley. Potato harvest underway Umatilla Basin, starting Ontario. Sweet corn harvest started Ontario, southwest. Tomatoes coming on Milton-Freewater, Southwest. Bush, pole bean harvest continues. Also harvesting broccoli, cucumbers. Shortage irrigation water will hurt vegetable, hay crops. Sour cherry harvest almost over; apricot, Red Haven peach continue. Early prunes started Milton-Freewater. Apples, pears, filberts, walnuts look good. Cattle carrying good flesh. Pastures, ranges, water supplies rapidly being depleted.

**PENNSYLVANIA:** Seasonably warm, humid week with considerable shower activity. Warmest week since early July; temperatures averaged near and slightly above normal. Considerably cooler and less humid Sunday. Showers and thunderstorms Thursday through Saturday produced rainfall in excess of 0.50 in west, central and north, only isolated activity southeast. Amounts from less than 0.10 in south-east to 0.50 in and more elsewhere, 1.00 to 2.00 in common northern half, 2.5 in northcentral from storms Thursday. Strong winds and hail up to 1 in diameter from Saturday thunderstorms. Topsoil moisture supplies 67% adequate, remainder short. Combining barley winding up, winter wheat 67%, oats 15% harvested. Silked ear shoots appearing in corn. Potatoes making good growth. Fruit and vegetable growers maintaining spraying schedules. Tart cherry harvest progressing slowly, nears end. Increasing supplies of peaches and summer apples, good quality and size. Snap beans plentiful supply. Sweet corn, cabbage volume increasing, tomatoes late. Mechanical harvest of snap beans continues. Second cutting alfalfa 67% completed, regrowth good. Grass hay regrowth slow.

**PUERTO RICO:** Rainfall averaged 0.94 in or 1.50 in subnormal. Greatest weekly total 4.53 in west Cordilleras. Heavy showers east and west Cordilleras

with 24-hour totals up to 2.60 in. Little or no rain central-interior and south coast: Moderate to severe agricultural drought continued southcentral coast. Temperatures averaged 82° on coasts and 75° interior. Highest 95°, lowest 60°. Sugarcane plantations made good progress with fieldwork except south where lack of rain retarded operations. Good progress preparing tobacco seedbeds. Good progress fertilizing, cultivating pastures except central, south zones where dry weather retarded fieldwork. Rainshowers favored planting, development of plantains, sweet potatoes and yams except in south where too dry. Good harvest of yams northeast.

**SOUTH CAROLINA:** Temperatures near normal. Rain-fall total above normal west to well subnormal south and central. Scattered showers throughout week more numerous after midweek. Favorable weather. Tobacco fair to good, 62% harvested, 63% 1972. Cotton good, 94% squaring, 70% setting bolls, 1% bolls opening; 85%, 65%, 3% respectively in 1972. Corn good to excellent, 98% silked, 76% reached dough stage, 19% mature; 94%, 72%, 28% respectively in 1972. Soybeans good. Peanuts good to excellent. Small grain harvest complete. Lespedeza, pastures good. Peaches good, 66% harvested, same 1972, grapes fair to good. Watermelons fair, 80% harvested, 72% 1972.

**SOUTH DAKOTA:** Cool; temperatures 1° to 6° subnormal; highs in low 90's some areas with high of 92° lows in 50's and low 60's. Widespread rainfall with 0.50 to 0.75 in common, with local areas 1.50 in. Rains provided relief to row crops, pastures, hay and delayed harvest. Combining still well ahead of normal. Winter wheat 89% harvested, normal 71%. 86% harvested, normal 56%. Spring grain harvest well underway. Barley 74% complete, normal 40%, 1972 18%. Oats 65% harvested, normal 39%, 1972 11%. Spring wheat 45% combined, normal 16%, 1972 2%. Row crop maturity ahead of normal. Corn 60% silked, normal 59%. Soybeans 83% in bloom or past, normal 76%. Sorghum 15% headed. Flaxseed 20% ripe, harvest to begin 7 to 10 days. Wild hay harvest 71% complete, ahead of normal. More rain needed for pastures, row crops. Livestock generally good, pinkeye remains a problem.

**TENNESSEE:** Numerous showers and thundershowers midweek, heaviest amounts across plateau area east. Livingston received over 5.50 in. Temperatures near normal east to 3° above normal west. General rains eastern two-thirds boosted late corn, soybeans but once again hindered hay harvesting and curing. Tobacco crop looking better than earlier but still poor. Considering lateness of crop, soybeans looking good most areas; some poor stands late beans west due to dry spells following planting. Soybeans 33% bloomed, normal 45% to 50%; less than 10% set pods. Corn crop looks promising, good development; 67% silked, 20% in dough, only few fields beginning to dent. Normally over 80% silked, 40% in dough, and over 10% dented. Cotton 33% set bolls, 50% normal. Most fields cotton good despite lateness of crop. Some fields in low areas not recovered from early floods and have poor stands. Pasture condition highest for 10 years of record for late July.

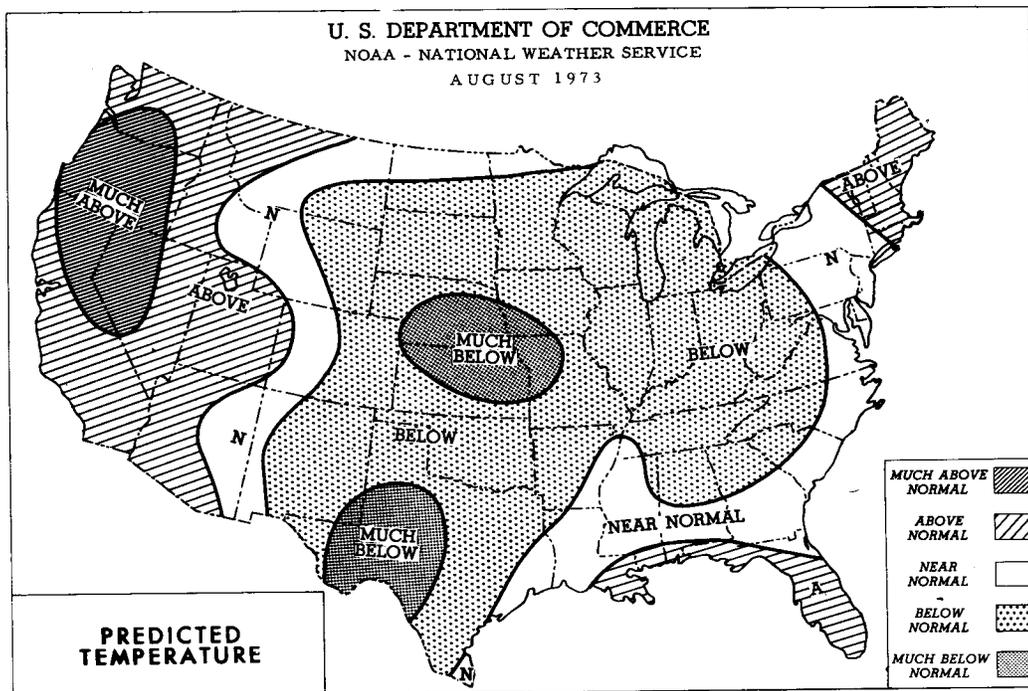
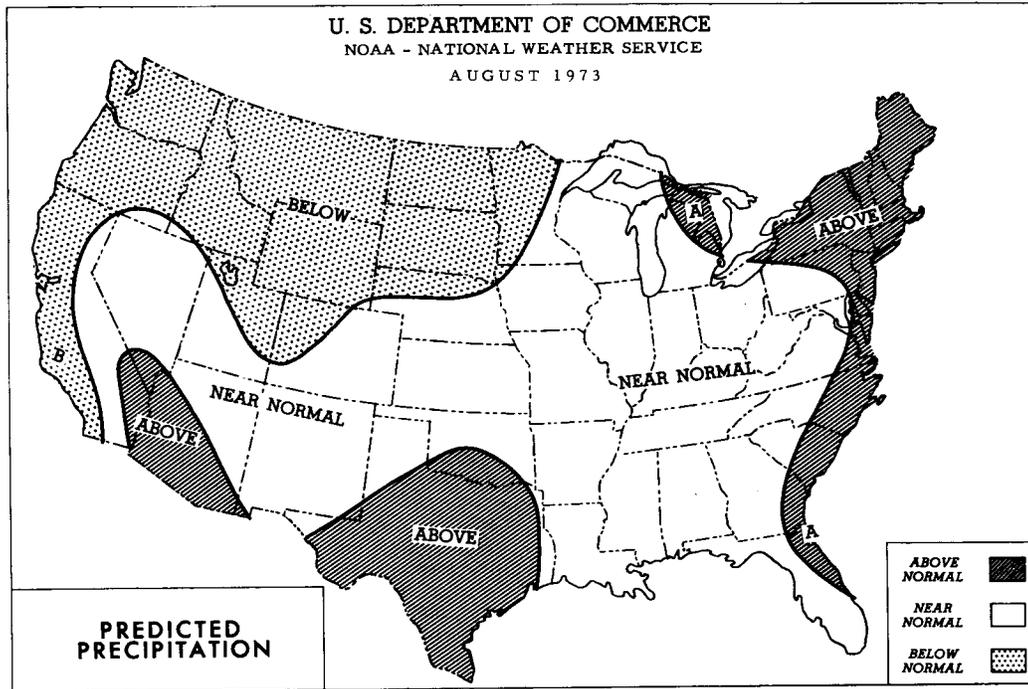
**TEXAS:** Above normal rain fell over high plains and other sections, except south, southwest where rain subnormal. Weekend scattered thunderstorms northward over northcentral and west producing high winds and locally heavy rains. In northcentral Texas 60-mph winds raked Possum Kingdom dam area. At Lake Kickapoo, as much as 8.00 in rain Sunday flooded several farm-to-market roads and low lying

areas. Temperatures averaged 7° subnormal along the high plains. Otherwise, normally warm weather prevailed. Sorghum harvest excellent progress south, coastal bend. Early yields light result recent rain, hail damage. Peanut, rice, cotton harvest early stages. Corn harvest starting south. Farmers high and low plains plowed wheat, stubble preparing land for fall seeding. Major crops percent harvested: cotton 0, 1972, 2; corn 1, 1972, 4; sorghum 19, 1972, 25; peanuts 1, 1972, 8; rice 2, 1972, 35. Confirmed screwworm cases reappeared across State, cases confirmed northern low plains. Hay baling continues rapid pace, excellent weather. Some areas completed third cuttings. Alfalfa prospects good late summer, early fall crops. Livestock good to excellent. Ranges excellent for time of year, grazing getting short some areas. Fall goat shearing started Edwards Plateau, Trans-Pecos areas. High Plains: Showers interrupted onion, potato harvest. Cucumber picking continued after fields dried. Trans-Pecos: Pecos cantaloupe harvest continues. Showers slowed onion harvest Culberson County. North Texas: Tomato, cucumber, sweet corn, pepper picking continues. Increasing supplies of watermelons and cantaloupes available. Knox-Haskell: Watermelon and cantaloupe harvests remain active. East and Central: Watermelons continued to market. Tomatoes declined. San Antonio-Winter Garden: Only light supplies of melons remained available. Onion harvest rapidly ending. Lower Rio Grande Valley: Tomato, pepper planting continued. Winter lettuce seeding in progress. Peach harvest continued in north and east but supplies continued seasonal decline. Pecans southcentral damaged by walnut caterpillars. Citrus trees remained excellent as the 1973-74 crop continued to size well.

**UTAH:** Scattered shower and thunderstorm activity early week and few isolated thundershowers later. Totals locally quite heavy early week. Some local wind damage with heavier thunderstorms. Temperatures generally 2° to 10° subnormal. Accumulated growing degree days (base 50) now average near to a little above normal. Soil moisture short to adequate, better than usual for end of July because of frequent thunderstorms. Winter wheat only 15% harvested, nearly 80% 1972; good yields. Spring wheat, barley 25% ripened, less than 10% harvested. Farmers very busy haying. Second crop alfalfa 30% cut, 55% 1972. Clo-tim and wild hay about 55% cut; good yields. About 20% sour cherries, 45% apricots picked. Range feed good to excellent statewide. Cattle, sheep thriving. Insects troublesome.

**VIRGINIA:** Temperatures 1° subnormal, ranged 3° above to 4° below. Highs in 80's southwest, 90's elsewhere; lows mostly around 60°. Precipitation averaged 1.00 in, heaviest near 2.00 in south-east. Tornadoes Brunswick County and Norfolk area Saturday. Flash flood 10 miles north Woodstock Friday. Topsoil moisture 64% adequate, 28% short, 8% surplus. Wettest southwest, shortest south to east of mountains. Harvested small grain fields, plowed and prepared seed beds for fall sown crops. Soybeans sprayed for Mexican bean beetles and other insects. Rains improved corn slightly. Burley tobacco growth slow in wet fields. Some flue-cured irrigated, topped, sprayed and some harvested. Haying active many areas. Pastures improved except south, clipping active. Cabbage set, cut, some disease. Har-

**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.

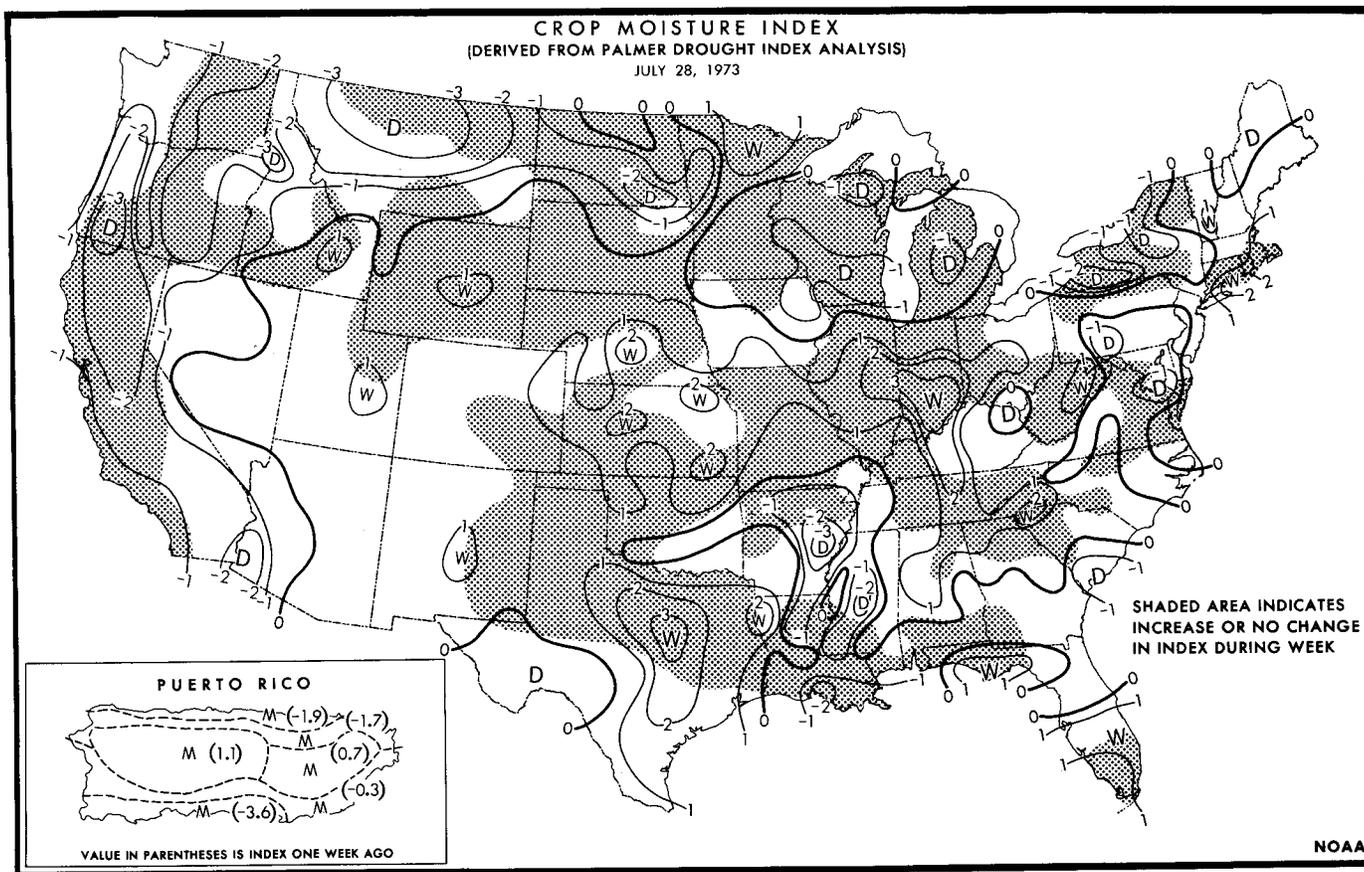
vested both fresh and processing tomatoes. Some Eastern Shore Irish potato growers waiting for increased size, others digging. Cucumbers, snap beans harvested. Picked peaches, early apples.

WASHINGTON: West: Temperatures normal, precipitation subnormal. Green pea harvest full operation. Corn, bean crops good. Celery planting underway. Cucumbers bloomed. Raspberry harvest tapered off, fair crop. Blueberry harvest underway. Haying continued. Pastures deteriorated due to dry weather. East: Temperatures 2° to 3° subnormal, precipitation light some areas. Supply irrigation water further depleted, rationing continued. Peach, apple, apricot picking underway. Bartlett pear harvest expected soon. Sweet corn, potatoes early produce harvested. Peas, lentils showed good quality, yields down. Grain harvest underway, yields low except southern areas where winter damage not too severe. Barley yields down, some shriveling. Hay being stocked for winter, some producers piling cereal straw for winter feed. Livestock good, culling continued. Pastures, ranges poor.

WEST VIRGINIA: Temperatures near normal, minimums 50's and 60's, maximums 80's and low 90's. Showers and thundershowers every day in some parts of State. Soil moisture 60% adequate, 36% surplus. About 3.1 days favorable fieldwork, mostly hay making and general chores. About 75% wheat, 90% barley harvested. Over 90% first cutting hay complete, second cutting 24%. Crops continue fair to good with slight improvement for all crops except tobacco. Corn continues excellent progress with 81% good to excellent compared to 68% last week.

WISCONSIN: Temperatures near normal. Rainfall averaged from 1.50 in north to 0.50 in southeast. Rain very timely for development of crops as moisture was short. More rain needed most areas. Corn continued to show good progress; 20% silked, 1972 30%, normal 15%. Leaf diseases on corn very minor but relatively high population of corn borers in more advanced corn. Harvesting continued on early oats, wheat, barley, rye. Wheat and rye producing good. Oats crop varied but generally poor; 5% harvested, 1972 4%, normal 10%. Late oats short, thin, lacks usual golden color. Second crop hay 15% harvested, 1972 and normal 15%. Growth of second crop short, some green-chopped and pastured to replace regular pastures which have declined sharply. Soybeans grew well, early beans in bloom. Tobacco also grew well but need more moisture in south. Harvesting underway on early potatoes and snap beans. Harvest continues on cherries, cucumbers, late peas. Sweet corn appearing at roadside markets. Wild berry crop good. Soil moisture 70% short, 30% adequate.

WYOMING: Most of State recorded showers, totals 0.33 to 1.50 in, maximum amount 1.91 in at Redbird. Temperatures quite cool averaging 4° to 11° subnormal. Highs mostly upper 70's and 80's. Lows mostly 35° to 45° southwest half, 45° to 55° northeast half. Extremes: 90°, Deaver; 35°, Jackson. Wheat harvest slow, 10% cut. Spring wheat 55% soft dough, 40% hard dough, 5% mature. Barley 35% soft dough, 55% hard dough, 10% mature. Barley harvest started. Oats 65% soft dough, 35% hard dough stage; about 2 weeks behind 1972. Row crops generally good. Corn 5% tasseled. Dry beans 50% in bloom. Only about 5% of second crop alfalfa cut.



**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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