

# Weekly Weather & Crop Bulletin

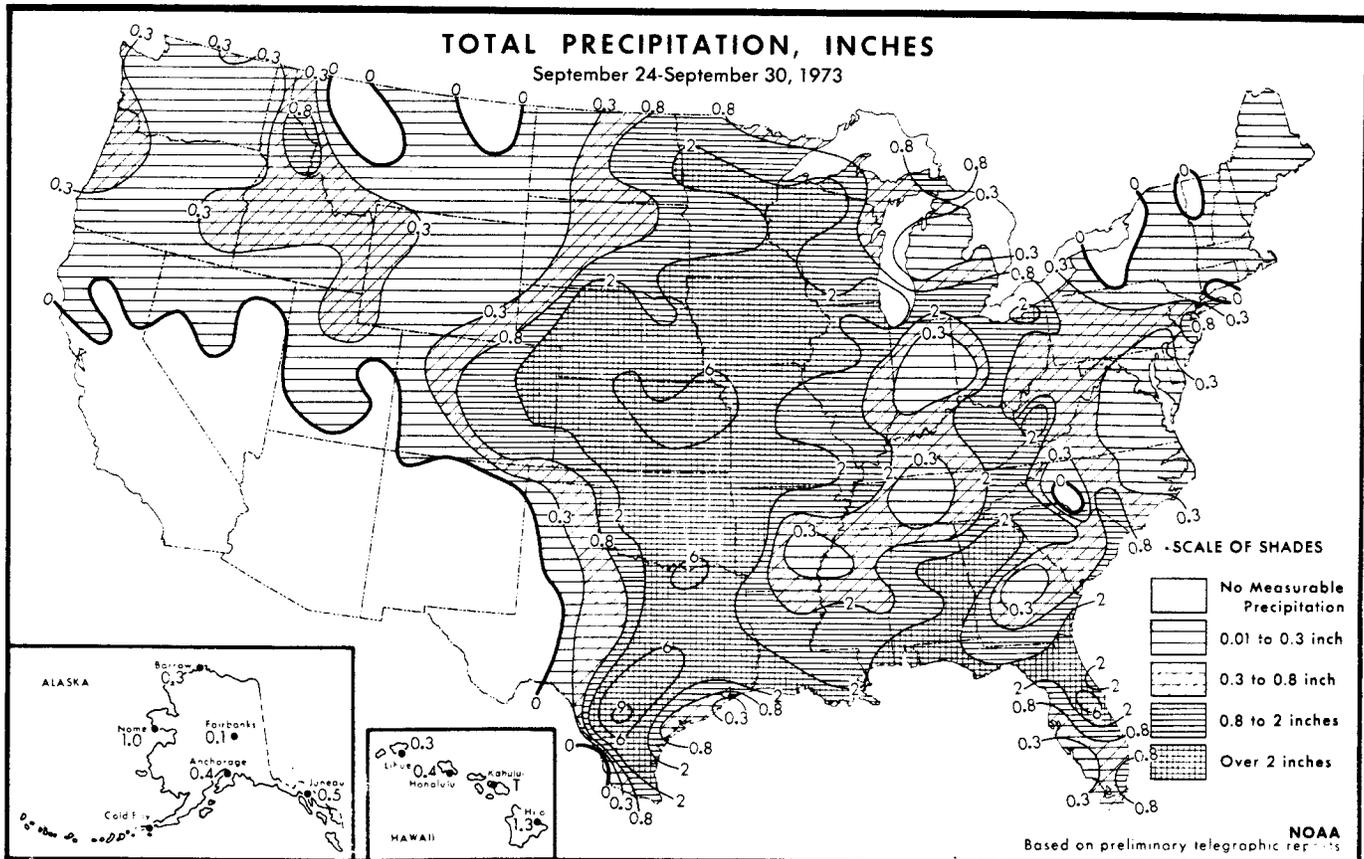
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## NATIONAL WEATHER SUMMARY

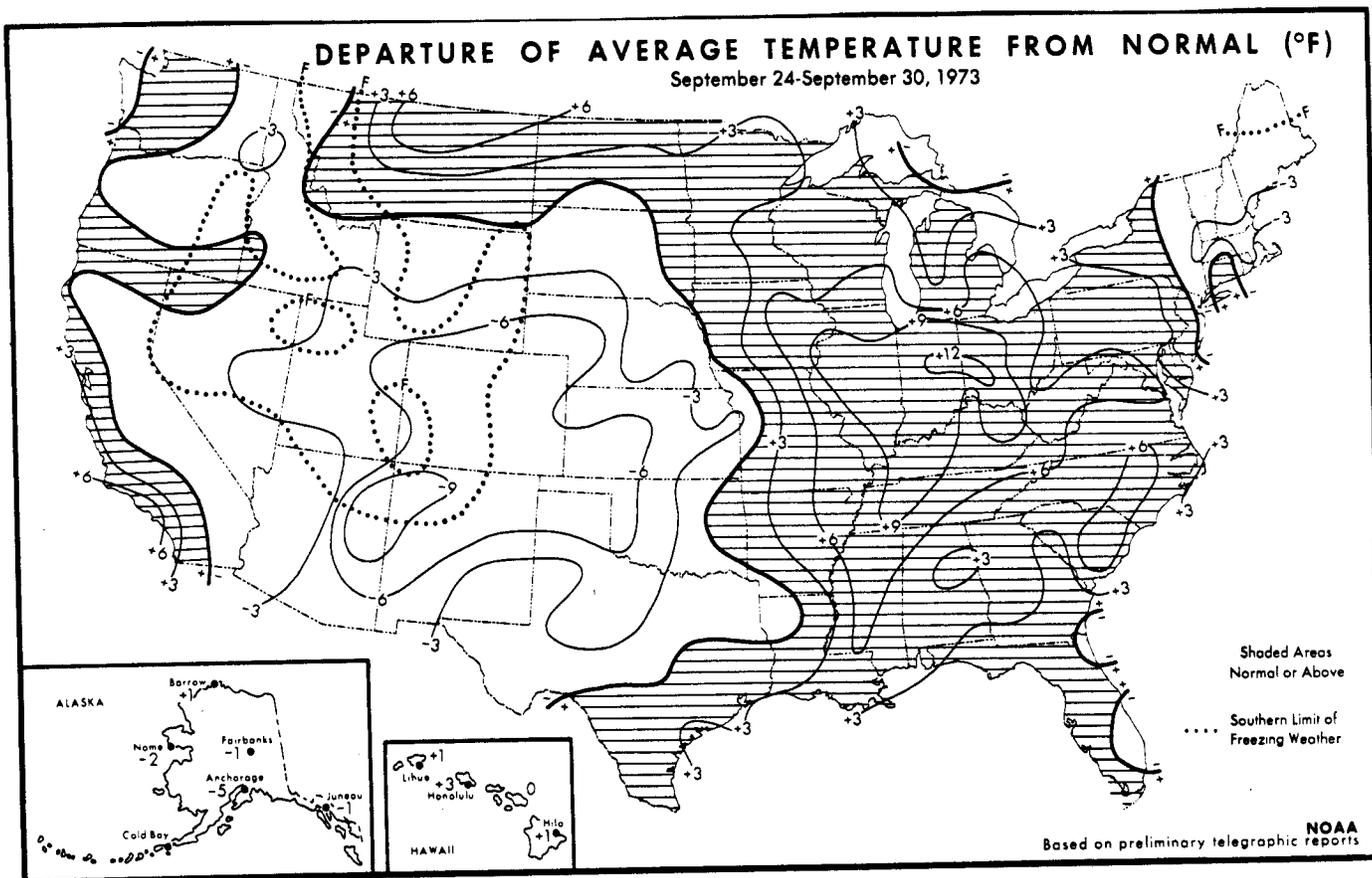
**HIGHLIGHTS:** A slow moving cold front dumped monsoon-like rains on the Nation's midsection last week as it inched its way across the Central Plains. Behind the storm front the weather was not only wet but wild -- 20 tornadoes touched down in Kansas in a single afternoon. Temperatures in the area affected by the storm system were as much as 9° cooler than normal. Ahead of this weather front, however, the weather was mild with temperatures reaching the 80's as far north as Minnesota and Michigan at times during the week.

**PRECIPITATION:** Monday a cold front creeping across the Central Plains stirred up a rash of thunderstorms and tornadoes as it clashed violently with a flow of tropical air moving up from Texas. Kansas got a taste of things to come as thunderstorms dumped upwards of an inch of rain in a single hour on already

saturated ground. Emporia and Topeka, Kans., each received 1.50 in. of rain during the afternoon. Meanwhile, tornadoes touched down at Altoona, Atlanta, Fredonia, and Kiowa, Kans., and near Lindsay, Tonkawa, and Vinita in north central and northeast Oklahoma.

The rest of the week saw more of the same as the cold front inched its way across the Midwest. During the afternoon and early evening Tuesday 20 tornadoes touched down in Kansas, two in Nebraska, and one in Oklahoma. The 6.00 in. of rain which fell on Topeka, Kans., since Sunday morning pushed that city's precipitation total since the start of the year to 46.00 in. -- the wettest year on record to date.

A separate storm front in the Atlantic started causing trouble in the East on Wednesday, too. The storm whipped up 25-35 m.p.h. winds as it moved its way north and dumped more than 3 in. of rain on Orlando, Fla.,



within a 6-hour period. Cocoa Beach, Fla., got close to 2 in.

By Thursday morning the major storm system in the Nation's interior had shown little movement -- and continued to dump 1.00 to 2.00 in. of rain on parts of southeastern Kansas that had already received as much as 9.00 in. of rain in the preceding 2 days. Texas and Oklahoma came in for a share of the bad weather, too. Over 6.00 in. of rain drenched San Antonio, Tex., in a 24-hour period while Austin received nearly 3.00 in. in the same time.

On Friday the slow moving front continued to dump rain over large areas of the United States. Lafayette, La., received nearly 1.00 in. of rain during the afternoon while Tobia, Neb., reported 2.00 in. of rain in a single hour.

The sun peeked out briefly over the Midwest on Saturday -- only to disappear again as Sunday saw more rain dumped from another storm front drifting east into Kansas. Late Sunday afternoon more than 3.00 in. of rain fell in about 2 hours at Shawnee in extreme northeastern Kansas. Meanwhile, at the town of Eden in central Texas pea-sized hail fell with such intensity that it stripped leaves from trees. The hail accumulated to a depth of 1 in. on the ground and was accompanied by more than 1.25 in. of rain in 15 minutes. Homewood, Ala., just south of Birmingham, received over 3.00 in. of rain since early morning.

**TEMPERATURES:** Temperatures were generally

warmer than average over the Nation's eastern third last week, but cooler than normal over much of the Plains and Mountain States.

On Monday morning the only freezing temperatures reported during the night occurred in the Great Basin. Lows in the 40's and 50's were common in the West and North while 60's and 70's occurred southeast of a line through the Southwestern Plains, the middle Mississippi Valley, the Ohio Valley, and the Middle Atlantic Coast.

On Tuesday cold air covered the North Atlantic Coastal States. The lowest temperature during the night was 27° at Houlton, Me. Freezing temperatures also occurred in the northern and central Rockies. However, it continued quite warm through the southern and central sections of the country. Temperatures reached the 90's from Florida through the Gulf States into the Desert Southwest. Maximums in the 80's were recorded as far north as Minnesota and Michigan.

Wednesday through Saturday saw the weather continuing unseasonably warm outside the cold front causing so much precipitation in the Nation's midsection. Temperature readings of 88 at Toledo, Ohio, and 86 at Ft. Wayne, Ind., equalled record maximums for Wednesday's date. In the West, dry off-shore winds known as the Santa Ana winds, sent temperatures soaring into the 90's along California's southern coast.

Sunday saw the return of more autumnlike weather as temperatures dropped 10° to 15° from the preceding night over the Great Lakes, north Appalachians, and northern Ohio Valley.

## NATIONAL AGRICULTURAL SUMMARY

**AGRICULTURAL HIGHLIGHTS:** Moderate to heavy rains slowed wheat seeding in the Great Plains for the third straight week and hampered early harvesting of corn and soybeans in the Western Corn Belt. The wet weather also stopped the Texas cotton harvest. Soybean combining advanced to 16% complete in the Eastern Corn Belt.

**SMALL GRAINS:** Moderate to heavy rains interrupted winter wheat seeding in the Great Plains but boosted soil moisture in the Dakotas. It was the third consecutive week of slowed seeding progress from rain and wet fields in Kansas and Nebraska.

The Kansas wheat crop is 35% seeded which is one week behind normal; 1972 progress was 66%. The northeast quarter of Kansas got about 6.00 in. rain and flooding there washed out some newly seeded fields; considerable reseeding will have to be done. Nebraska wheat seeding is 70% complete versus 85% in 1972 and an average of 90%. Subnormal temperatures there slowed wheat germination and growth.

Heavy rains over the Colorado eastern plains halted seeding at 80% complete. The deluge delayed seeding in Oklahoma at 41% done versus 67% in 1972. Texas wheat is 55% planted versus 64% in 1972. Recent rains improved topsoil moisture in Montana, Idaho, Washington and Oregon, seeding is active.

**CORN:** Mild temperatures and wet weather prevailed over the Corn Belt as the corn crop matured rapidly ahead of last year and about equal to normal progress. The Corn Belt crop is 82% mature and safe from frost versus 79% in 1972 and 84% average.

Corn is maturing slower than normal in 6 North Central States. The Iowa and Illinois crops are 90% mature, equal to 1972 and only 2 or 3 points behind normal. The Missouri crop is the least advanced at 58% mature versus 67% in 1972. Michigan corn is 60% mature, ahead of last year's 39%.

The Corn Belt corn crop is 5% harvested versus 5% in 1972 and average progress of about 9%. Picking is underway in every Corn Belt State although very limited in Wisconsin and Nebraska. The Southern corn crop is 35% picked versus 32% in 1972. Corn harvesting is running ahead of 1972 in the South Atlantic States and behind 1972 progress in the South Central States.

**COTTON:** Cotton is opening rapidly in the South with about 40% of the bolls open in Mississippi, Arkansas, and Louisiana. The crop in these States is later than last year when about 65% of the bolls were open.

Moderate to heavy rains stopped cotton harvesting in Texas at midweek with 13% of the crop picked versus 27% a year earlier. The rain held up harvesting in Arkansas but defoliation was active. Mississippi cotton is 3% picked versus 14% in 1972. Only a few scattered fields have been harvested in other South Central States.

Defoliation was very active in South Atlantic States and the harvest is about 6% complete. In California and Arizona, cotton harvesting gained some momentum but defoliation was the main activity.

**SOYBEANS:** Soybean harvesting gained momentum in the Corn Belt with 10% of the acreage combined compared to 4% the previous week and 6% this date a year earlier.

Combines in the Eastern Corn Belt were in high gear last week as farmers advanced that area's harvest to 16% complete versus 6% a week earlier and 7% in 1972. Ohio led with 20% harvested, Illinois 17%, and Indiana 15% harvested.

Rain hampered soybean harvesting in the Western Corn Belt with only 5% of the acreage combined versus 6% in 1972. Combining was 11% done in Minnesota, 4% in Iowa and 3% in Missouri.

In the South, combining is in early stages at about 2% complete. Kentucky soybeans are 11% combined while the Mississippi crop is 3% combined.

**OTHER CROPS:** Sorghum harvesting at 51% complete in Texas was delayed by rain. Sorghum in Kansas and Nebraska is equal to 1972 maturity but behind the average. Kansas sorghum is 40% mature, Nebraska 60%.

Burley tobacco in North Carolina is 85% cut. Virginia's burley crop is 90% harvested.

Rain slowed peanut harvesting in Georgia at 73% complete and in Texas at 40% complete.

Potato digging in Idaho resumed at midweek after delays from rain. The Aroostook County, Maine potato harvest is 50% complete.

Rice harvesting continued behind schedule in Texas at 77% complete versus 100% in 1972. Showers slowed rice harvesting in Louisiana at 80% done. Arkansas rice is 24% complete.

**FRUITS AND NUTS:** Harvesting weather was favorable in Northeast fruit orchards last week. In New York, peach and pear harvesting is completed, the apple harvest made good progress and Concord grape harvesting is underway in the Finger Lakes area.

Apple picking continued in full swing in the Pacific States. The California grape harvest remained active.

Picking of Valencia oranges, grapefruit and lemons continued in California.

**VEGETABLES:** Fall lettuce harvesting increased in New Jersey, in the Texas High Plains and in Arizona where the Cochise County harvest is underway. Frequent rains and wet fields continued to delay vegetable seeding and land preparation in the Texas Lower Rio Grande Valley. Vegetable harvesting continued normally in the Pacific States.

**PASTURES AND LIVESTOCK:** Pastures in the Dakotas and Northwest are greening from recent rains. Additional rains fell on the Dakotas, Minnesota, Wisconsin and dry parts of southern Michigan benefiting late pasture growth. Heavy rains from Nebraska to Texas will also spur fall grazing. Pastures declined due to dryness in Ohio and Indiana and in much of the South Atlantic Region.

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

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 . . .	77	+ 3	2.2	+1.5	La. Baton Rouge . . .	81	+ 5	1.9	+ .9	Youngstown . . .	64	+ 5	1.8	+1.1
Mobile . . .	80	+ 4	3.7	+2.2	Lake Charles . . .	79	+ 2	3.2	+2.3	OKLA. Okla. City . . .	67	+ 3	3.3	+2.6
Montgomery . . .	79	+ 4	1.9	+1.0	New Orleans . . .	80	+ 4	1.7	+ .6	Tulsa . . .	70	0	2.5	+1.6
ALASKA. Anchorage . . .	39	- 5	.4	- .2	Shreveport . . .	72	- 4	1.5	+ .9	OREG. Astoria . . .	57	0	.6	- .5
Barrow . . .	28	+ 1	.3	+ .1	MAINE. Caribou . . .	50	- 1	.2	- .7	Burns . . .	54	- 1	.3	+ .1
Fairbanks . . .	39	- 1	.1	- .2	Portland . . .	53	- 3	.2	- .7	Medford . . .	64	+ 3	.1	- .2
Juneau . . .	46	- 1	.5	-1.2	MD. Baltimore . . .	68	+ 3	.2	- .5	Pendleton . . .	60	- 1	.1	- .1
Kodiak . . .	43	- 4	.6	---	MASS. Boston . . .	60	- 3	.7	- .7	Portland . . .	61	+ 1	.4	- .2
Nome . . .	36	- 2	1.0	+ .5	Chatham . . .	59	- 3	.1	---	Salem . . .	58	- 2	.4	- .1
ARIZ. Flagstaff . . .	53	- 2	0	- .4	MICH. Alpena . . .	56	+ 3	T	- .9	PA. Allentown . . .	63	+ 2	.3	- .5
Phoenix . . .	79	- 1	0	- .1	Detroit . . .	66	+ 6	1.5	+ .9	Erie . . .	62	+ 4	.4	- .6
Tucson . . .	74	- 5	0	- .2	Flint . . .	64	+ 7	.8	+ .2	Harrisburg . . .	67	+ 4	.4	- .2
Winslow . . .	58	- 9	0	- .2	Grand Rapids . . .	62	+ 3	.5	- .2	Philadelphia . . .	67	+ 3	.2	- .5
Yuma . . .	81	- 2	0	- .1	Houghton Lake . . .	57	+ 3	1.1	- .6	Pittsburgh . . .	66	+ 5	.6	0
ARK. Fort Smith . . .	73	+ 1	2.8	+1.9	Lansing . . .	64	+ 5	1.2	+ .6	Scranton . . .	62	+ 3	.1	- .6
Little Rock . . .	75	+ 4	.3	- .4	Marquette . . .	58	+ 3	.6	- .3	R.I. Providence . . .	58	- 3	1.1	- .7
CALIF. Bakersfield . . .	76	+ 2	0	0	Muskegon . . .	64	+ 4	.2	- .5	S.C. Charleston . . .	79	+ 6	1.2	- .2
Eureka . . .	57	0	.2	0	S. Ste. Marie . . .	52	- 1	1.5	+ .5	Columbia . . .	78	+ 6	.9	0
Fresno . . .	71	- 1	0	0	MINN. Duluth . . .	54	+ 2	1.4	+ .8	Greenville . . .	74	+ 4	1.2	+ .4
Los Angeles . . .	75	+ 7	0	- .1	Internatl Falls . . .	54	+ 4	.5	- .1	S.D. Aberdeen . . .	57	0	.6	+ .3
Red Bluff . . .	72	- 2	T	- .1	Minneapolis . . .	60	+ 4	1.3	+ .8	Huron . . .	57	0	.8	+ .5
San Diego . . .	72	+ 3	0	- .1	Rochester . . .	61	+ 4	3.1	+2.5	Rapid City . . .	56	- 1	.2	0
San Francisco . . .	67	+ 3	T	0	St. Cloud . . .	59	+ 3	1.8	+1.3	Sioux Falls . . .	59	+ 1	3.5	+3.0
Stockton . . .	70	- 1	T	- .1	MISS. Jackson . . .	79	+ 6	1.2	+ .6	TENN. Chattanooga . . .	76	+ 5	.8	+ .1
COLO. Denver . . .	52	- 8	1.7	+1.4	Meridian . . .	78	+ 5	.7	0	Knoxville . . .	74	+ 5	.9	+ .3
Grand Junction . . .	57	- 7	.1	- .1	MO. Columbia . . .	70	+ 5	1.6	+ .7	Memphis . . .	77	+ 7	.7	+ .1
Pueblo . . .	57	- 7	1.1	+ .9	Kansas City . . .	65	- 3	6.2	+5.5	Nashville . . .	78	+ 9	T	- .7
CONN. Bridgeport . . .	65	+ 2	T	- .9	St. Louis . . .	73	+ 7	.9	+ .3	TEX. Abilene . . .	69	- 4	.4	- .2
Hartford . . .	61	+ 1	.1	- .8	Springfield . . .	70	+ 3	2.6	+1.7	Amarillo . . .	62	- 6	.3	- .1
D.C. Washington . . .	73	+ 7	T	- .8	MONT. Billings . . .	57	+ 1	.2	- .1	Austin . . .	77	0	6.8	+5.9
FLA. Apalachicola . . .	80	+ 2	2.7	+1.0	Glasgow . . .	59	+ 6	0	- .2	Beaumont . . .	80	+ 3	2.0	+1.1
Daytona Beach . . .	80	+ 2	1.3	---	Great Falls . . .	59	+ 5	T	- .3	Brownsville . . .	81	+ 1	1.2	- .5
Ft. Myers . . .	82	+ 2	.1	-1.8	Havre . . .	59	+ 7	.1	- .2	Corpus Christi . . .	81	+ 2	1.2	+ .1
Jacksonville . . .	77	- 1	4.7	+2.9	Helena . . .	54	+ 2	T	- .2	Dallas . . .	---	---	---	
Key West . . .	84	+ 2	.4	-1.2	Kalispell . . .	50	- 1	0	- .3	Del Rio . . .	78	+ 1	.3	- .4
Lakeland . . .	80	+ 1	.9	- .5	Miles City . . .	58	+ 2	.1	- .1	El Paso . . .	69	- 3	0	- .3
Miami . . .	81	0	1.8	- .6	Missoula . . .	53	+ 1	.4	+ .1	Fort Worth . . .	73	- 2	3.1	+2.4
Orlando . . .	80	+ 1	6.7	+5.0	NEBR. Grand Island . . .	60	- 1	3.9	+3.4	Galveston . . .	81	+ 2	T	-1.4
Tallahassee . . .	79	+ 2	1.8	+ .7	Lincoln . . .	62	- 3	4.1	+3.5	Houston . . .	78	+ 2	1.2	+ .2
Tampa . . .	81	+ 2	.4	-1.0	Norfolk . . .	59	- 2	2.0	+1.4	Lubbock . . .	66	- 2	T	- .7
W. Palm Beach . . .	81	- 1	.5	---	N. Platte . . .	53	- 6	2.7	+2.3	Midland . . .	69	- 3	0	- .2
GA. Atlanta . . .	74	+ 4	2.1	+1.4	Omaha . . .	62	0	5.0	+4.5	San Angelo . . .	72	- 3	4	- .2
Augusta . . .	76	+ 3	.5	- .2	Valentine . . .	53	- 5	3.0	+2.7	San Antonio . . .	77	+ 1	7.4	+6.5
Macon . . .	79	+ 5	.2	- .3	NEV. Ely . . .	49	- 4	T	- .1	Victoria . . .	80	+ 3	.6	- .4
Savannah . . .	77	+ 3	1.2	+ .1	Las Vegas . . .	74	- 2	0	- .1	Waco . . .	76	0	3.2	+2.5
HAWAII. Hilo . . .	77	+ 1	1.3	- .6	Reno . . .	55	- 1	T	- .1	Wichita Falls . . .	71	- 3	1.5	+ .9
Kahului . . .	82	+ 3	.4	+ .1	Winnemucca . . .	55	0	.2	+ .1	UTAH. Blanding . . .	55	- 4	0	- .3
Lihue . . .	78	+ 0	T	- .1	N.H. Concord . . .	54	- 2	.1	- .8	Salt Lake City . . .	57	- 3	.6	+ .5
IDAHO. Boise . . .	79	+ 1	.3	- .2	N.J. Atlantic City . . .	63	- 1	.5	- .2	VT. Burlington . . .	54	- 1	T	- .8
Lewiston . . .	59	0	.5	+ .4	Trenton . . .	66	+ 2	.8	0	VA. Lynchburg . . .	70	+ 5	.2	- .6
Pocatello . . .	57	- 3	.2	0	N.MEX. Albuquerque . . .	59	- 7	T	- .2	Norfolk . . .	75	+ 5	.2	- .7
ILL. Cairo . . .	54	- 3	1.2	+ .5	Roswell . . .	65	- 1	0	- .4	Richmond . . .	72	+ 5	T	- .8
Chicago . . .	76	+ 7	3.0	+2.4	N.Y. Albany . . .	56	- 3	.2	- .6	Roanoke . . .	70	+ 4	.4	- .4
Moline . . .	70	+ 9	2.3	+1.6	Binghamton . . .	59	+ 3	T	- .7	WASH. Colville . . .	55	- 1	0	- .2
Peoria . . .	72	+ 9	2.8	+2.1	Buffalo . . .	61	+ 3	T	- .7	Omak . . .	56	+ 1	.3	+ .1
Rockford . . .	68	+ 8	1.8	+1.1	New York . . .	65	- 1	.3	- .6	Quillayute . . .	55	- 1	.2	-1.3
Springfield . . .	74	+10	1.1	+ .3	Rochester . . .	61	+ 2	T	- .6	Seattle-Tacoma . . .	59	+ 1	.2	- .3
IND. Evansville . . .	76	+10	.6	- .1	Syracuse . . .	60	+ 1	T	- .7	Spokane . . .	56	- 2	.1	- .1
Ft. Wayne . . .	71	+10	.3	- .4	N.C. Asheville . . .	70	+ 5	.8	+ .2	Walla Walla . . .	61	- 2	.2	0
Indianapolis . . .	74	+11	.1	- .6	Charlotte . . .	74	+ 4	T	- .8	Yakima . . .	59	+ 1	.1	0
South Bend . . .	71	+11	.5	- .2	Greensboro . . .	71	+ 4	.6	- .2	W. Va. Beckley . . .	67	+ 6	.3	- .4
IOWA. Burlington . . .	71	+ 9	3.0	+2.2	Hatteras . . .	75	+ 3	T	-1.2	Charleston . . .	72	+ 7	2.4	+1.7
Des Moines . . .	67	+ 5	4.2	+3.7	Raleigh . . .	74	+ 6	T	- .9	Huntington . . .	74	+ 9	.4	- .2
Dubuque . . .	65	+ 6	2.3	+1.5	Wilmington . . .	77	+ 4	.6	- .7	Parkersburg . . .	69	+ 5	3.3	+2.7
Sioux City . . .	63	0	2.5	+1.9	N.DAK. Bismarck . . .	54	0	.6	+ .3	WIS. Green Bay . . .	61	+ 4	.5	- .1
KANS. Concordia . . .	61	- 5	5.5	+4.9	Williston . . .	56	+ 1	2.1	+1.8	La Crosse . . .	66	+ 7	1.1	+ .4
Dodge City . . .	60	- 7	2.8	+2.5	Fargo . . .	58	+ 5	.2	- .1	Madison . . .	64	+ 6	1.5	+ .5
Goodland . . .	57	- 5	2.7	+2.4	Williston . . .	67	+ 7	.6	0	Milwaukee . . .	64	+ 7	2.3	+1.7
Topeka . . .	64	- 3	5.8	+5.1	OHIO. Akron-Canton . . .	73	+ 7	.9	+ .3	WYO. Casper . . .	52	- 3	.1	- .1
Wichita . . .	64	- 3	6.6	+6.0	Cincinnati . . .	68	+ 7	2.0	+1.3	Cheyenne . . .	47	- 8	.6	+ .3
KY. Lexington . . .	75	+ 9	1.1	+ .5	Cleveland . . .	72	+ 9	1.8	+1.2	Lander . . .	53	- 2	.1	- .2
Louisville . . .	76	+10	.5	- .1	Columbus . . .	75	+12	.1	- .5	Sheridan . . .	53	- 2	T	- .3
					Dayton . . .	67	+ 7	.9	+ .4	P.R. San Juan . . .	83	+ 2	1.3	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:** Fair through Tuesday. Partial cloudiness and widely scattered showers until weekend. Rains 2.00 to 3.00 in. covered central and northcentral counties over weekend. Temperatures well above normal entire week.

Rains slowed harvest of corn, peanuts but provided needed moisture for late soybeans. Cotton opening rapidly over State. Only limited amount harvested, mainly south and central. Corn almost 25% harvested, slightly behind 1972. Soybeans rapidly reaching maturity, harvest underway earliest fields. Growers made good progress digging peanuts. Federal-State Inspection reported 83,361 tons inspected through September 29, compared with 177,545 tons a year earlier. Pecan prospects favorable in well-managed orchards. Limited amount hay saved, cutting about complete. Pastures adequate grazing all except few scattered counties.

**ALASKA:** Temperatures and precipitation subnormal in Tanana and Matanuska Valleys. First snowfalls of season fell south of Fairbanks on 23rd, 27th and 28th. Only small amount fell, melted rapidly.

Grain harvest nearly completed Tanana Valley. Some grain remaining in Matanuska Valley. Silage chopping, haying operations still underway Matanuska Valley. Potato harvest about 90% completed. Soil moisture adequate.

**ARIZONA:** Sunny, dry. Low humidities prevailed statewide except isolated sprinkles northeast, eastcentral Tuesday. Temperatures near normal over southcentral; 2° to 5° subnormal over southwest, southeast; and 4° to 8° above normal elsewhere.

Cotton harvest gain momentum, application chemical defoliants started many areas, crop fair to good, favorable yields expected. Sorghum continued satisfactory progress, limited harvesting Yuma, Cochise County. Spring harvested sugar beets established good stand Yuma area. Central Valley in field preparation stages, some planting. Alfalfa seed harvested Yuma area moderate scale, fair yields. Hay harvest continued valley areas but limited elsewhere. Field renovation, planting most valley locations.

Lettuce harvest underway, Cochise County. Lettuce central, western areas made good progress, good stands. Planting active, Yuma areas. Chili pepper harvest full swing Cochise County. Cantaloupes for fall harvest, satisfactory progress central, western areas. Lemon harvest continued Yuma area. Picking underway Salt River Valley areas. Citrus groves good -- new crop fruit sizing well -- insect controls applied as needed. Ranges fair to poor, deteriorated from dryness.

Southeast ranges fair, grazing limited. Desert ranges poor. Central mountain, north-eastern ranges dry. Prospects for winter feed poor statewide. Stockwater adequate, but drying rapidly. Cattle, calves good statewide.

Sheep, lambs fair to good. Sheep continued move to winter pastures.

**ARKANSAS:** Widespread precipitation. Heavy amounts 2.00 to over 5.00 in. western third, Fayetteville got 5.10 in. Temperatures 1° to 7° above normal, in upper 60's northwest to the upper 70's southeast. Warmest midweek.

Rains late week. Adequate to surplus soil moisture. Cotton 40% open, harvest slowed by weather, defoliation active, small percent harvested, yields good. Rice 24% harvested, condition and yields good. Soybeans good, limited combining, yields average, weeds troublesome. Corn and sorghum good to excellent yields. Sprouting of sorghum heads still occurring. Small grain planting continued, armyworms damaging. Apple and okra harvest continued. Pea harvest delayed. Peanut digging began. Growth and planting of spinach, greens going well. Pastures infested with armyworms. Fertilizer shortage causing concern. Livestock condition good, gains adequate, marketing steady.

**CALIFORNIA:** Fall storms brought rain north through Monday. Amounts ranged from over 2.00 in. some northwestern mountain areas to very light amounts along central coast eastward into central Sierras. Temperatures generally subnormal early week. Afternoon highs in mid-90's by late week in central valley and near 100° along central and south coast. Weekly averages above normal along central and south coast and subnormal other areas.

Small grain planting continued active. Rice harvest progressed rapidly, delayed briefly by rains 22nd. Cotton defoliation widespread, scattered fields picked. Sugar beet digging gained momentum. Corn and milo harvest continued. Windrowing dry beans and cutting alfalfa seed increased. Baling alfalfa active, some cut last time of season.

Grape harvest active. Raisin harvest complete. Crush picked up momentum. Sugar levels subnormal, excellent yields. Almond, fig harvest active. Walnut, olive harvest increased. Apple picking active. Some late plums, freestone peaches, pears picked. Picking avocados, valencia oranges, grapefruit, lemons continued. New citrus normal.

Artichoke harvest increased. Broccoli, cauliflower moving good volume Salinas, Santa Maria. Cantaloupe harvest tapering off Westside. Carrot volume good Salinas. Celery shipments heavy Salinas. Sweet corn decreased south. Honeydew volume lighter San Joaquin, Sacramento Valleys. Lettuce shipments Salinas slowed by rail car shortage, but partially offset by increased truck movement. Cutting underway Brentwood, Westside districts. Bell pepper harvest moderate San Joaquin, Salinas. Potato digging north increased. Sweet potato harvest continued Livingston. Market tomato volume expected increase south. Processing tomato harvest continued San Joaquin, Sacramento.

Sheep, cattle moved from high ranges on to foothills and valleys. Rains north, coastal

fog reduced fire danger these areas. Range feed dry. Water supplies adequate. Producers turned livestock on stubble fields statewide. Supplemental feeding on upswing. Fall calving underway. Milk, egg production normal. Mature turkeys to processors. Movement bees to rangeland and nectar pollen areas decreased.

**COLORADO:** Major storm brought cloudy weather, moderate to heavy precipitation to east and most mountain areas. Elsewhere, precipitation light, skies generally fair to partly cloudy. Moisture totals in mountains and over east mostly between 0.50 and 2.50 in. Lower elevations west got 0.10 to 0.50 in. Considerable snow fell in some mountain areas east of Continental Divide. Temperatures 4° to 6° subnormal. Unseasonably cold September 25-27 from major storm. Parts of east got first frost on 27th. Extremes: 11° at Leadville early on 27th, 79° at Grand Junction on 30th. Considerable warming all areas late week.

Heavy rains eastern plains halted planting winter wheat, harvest fall crops. Harvest oats, spring barley wrap-up stages San Luis Valley and northwest. Planting winter wheat 80% complete, 50% emerged but some reseeded will be necessary. Winter barley 57% planted, 31% up to stand. Corn maturing, 86% dented, 66% safe from frost, 95% and 86% 1972. Corn silage 76% harvested. Grain sorghum 89% turning color, 30% ripe. Fall potato harvest good progress, 10% dug. Dry beans 82% cut, 30% threshed. Sugar beets good to excellent, harvest to begin next week. Third cutting alfalfa active, some fourth cutting ready. Pastures and ranges good to excellent. Livestock good to excellent.

**FLORIDA:** Temperatures slightly above normal. Daily scattered showers except on weekend resulted in mainly moderate to locally heavy rainfall totals.

Soil moisture adequate. Crops mostly good. Harvest all field crops increased. Corn harvest neared completion. Peanut digging at peak. Combining of soybeans increased. Cotton harvest underway. Yields most crops fair to good. Small grains being planted. Pastures starting to decline but mostly good. Cattle and calves good to excellent.

Citrus tree and new crop condition excellent, very heavy rains on central citrus areas. Good fruit color beginning to show, some splitting. Light harvest sweet corn, radishes in Everglades. Squash available from Dade, supplies increased. Eggplant harvesting central, northern districts. Most other crops to be in seasonal supply late October.

**GEORGIA:** Temperatures 2° to 5° above normal. Showers mainly Wednesday through Friday. Heavy amounts 2.00 in. or more near coast and light to moderate elsewhere, except little or none southcentral. Continued warm over weekend with showers northwest half, dry south-east half.

Soil moisture adequate most of State. Peanut harvest slowed by showers, otherwise very active, 85% dug, 73% picked. Corn fair to mostly good, silage harvest near completion, grain harvest 24% complete. Cotton fair to good, 6% picked. Soybeans fair to good, 6% combined. Pecans fair to good, some nuts falling. Hay, pasture mostly good. Hay harvest hampered by showers. Cattle good. Land

preparation, seeding winter pastures active. Small grain planting 17% complete.

**HAWAII:** Showers windward and higher elevations replenished water supply. Much more needed to fill irrigation demands. Crops under irrigation fair to good. Recent rains caused some greening of previously dry pastures. Supplemental feeding continuous. Pineapple harvest declining. Sugar harvest normal. Vegetable supply adequate. Bananas plentiful. Papayas light, gradual increase expected.

**IDAHO:** Temperatures subnormal statewide. Precipitation general first of week with clearing and warmer temperatures at end. Some freezing temperatures east and at higher elevation stations.

Harvest temporarily halted by wet fields but rains brought needed moisture to dryland northern areas. Potato digging resumed mid-week with southwest nearing 33% harvested, southcentral 15% and east underway. Dry beans about 50% combined. Apple harvest near peak, cool weather bringing color. Good moisture supplies now available north, seeding of winter grains expected to be active.

**ILLINOIS:** Heavy rains north Monday, extreme northwest Wednesday. Moderate amounts northeast Friday, central districts Sunday; elsewhere light. Temperatures 6° to 10° above normal.

Corn about 90% mature, safe from frost, same 1972, 1970-72 average 93%. Cloudy, wet weather slowed development, limited corn harvest; about 5% harvested, nearly same 1972, average 12%. Soybeans developed rapidly despite rainy weather; about 85% shedding leaves, 76% 1972, average 83%. Rains slowed harvest some areas, about 17% combined, 10% 1972, average 24%. Third crop alfalfa hay nearly 90% cut; cloudy, damp weather delayed harvest most areas. Progress ahead of 1972, about same as average. Winter wheat seeding about 25% complete, 15% 1972, average 23%.

Pasture condition 17% excellent, 66% good, 15% fair, 2% poor. Soil moisture 11% short, 66% adequate, 23% surplus. Averaged 4 days suitable fieldwork. Main activities: Fall plowing, winter wheat seeding, corn and soybean harvesting.

**INDIANA:** Warm week. Temperatures 11° above normal, ranging from 60's to 80's with little day-to-day change. Rainfall 0.20 to 0.40 in. Below normal 1.00 to 2.00 in. last 4 weeks.

Fieldwork averaged 6 days. Topsoil and subsoil moisture short to adequate. Corn 5% harvested and 75% mature, both same as average. Soybeans 15% combined, same as average, 5% in 1972. Wheat land 80% plowed, well ahead of 1972 and average. Wheat 30% seeded, near average. Rye 40% seeded. Barley 30% seeded. Sorghum grain 15% combined. Apples 50% picked. Tobacco 70% cut. Pastures poor to mostly fair.

**IOWA:** Cloudy, wet week. Temperatures and precipitation above normal. Two days suitable for fieldwork. Corn 90% mature, 5-year average 92%. Corn 6% harvested, 5-year average 8%. Corn least advanced eastcentral and southeast. Soybean leaves shedding 90%, 76% mature, 5-year average 77% mature. Soybeans 4% harvested, 5-year average 12%. Bean

crop least advanced eastcentral, southeast, and southcentral. Winter wheat 38% planted, 5-year average 58%. Grain sorghum 6% harvested, average 9%. Topsoil moisture 24% adequate, 76% surplus. Subsoil moisture 2% short, 57% adequate, 41% surplus. Motor fuel supply for current farm work 12% short, 88% adequate.

**KANSAS:** Abnormally cool, wet week. Very heavy rains most of State. Major flooding northcentral and on smaller streams northeast, southcentral. Temperatures ranged near normal southeast to 7° subnormal west. Major outbreak tornadoes central Kansas evening of 25th. Lesser tornado outbreak on 24th southeast.

Extremely heavy rains statewide stopped farming operations, washed out fall seeded grain, damaged some row crops. Winter wheat seeding 35% completed, 1 week behind normal. Considerable reseeding expected. Winter barley seeding 20% completed, 40% average. Virtually no corn, grain sorghum or soybeans harvested past week -- harvest progress 2 weeks behind normal. Corn acreage 70% mature, 75% last year, 80% average. Sorghum 40% mature, same 1972, 50% average.

Fourth cutting of alfalfa hay complete, 55% 1972 and average. New alfalfa acreage 85% sown, some will be reseeded. Ranges and pastures excellent. Some cattle moved to high ground because of flooding.

**KENTUCKY:** Mostly fair, warm. Temperatures 5° to 10° above normal. Rain end of week averaged about 0.50 in.

Another dry week. Soil moisture 90% short. Corn for grain harvest 10% complete. Most corn mature. Soybeans 11% harvested, 33% shedding leaves, 33% turning yellow, 23% leaves still green. Late beans hurt by lack of moisture. Tobacco cutting continued, house-burn minimal. Fall wheat 21% seeded, rain needed for seed germination and to aid planting. Winter hay supply expected adequate. Pastures fair, declining.

**LOUISIANA:** Warm most of week, cooler weekend. Temperatures 2° to 5° above normal except 2° subnormal northwest. Extremes: 93° New Orleans Monday, and Winnsboro Wednesday; 54° Shreveport Saturday morning. Precipitation moderate to heavy, totals 0.50 to 3.00 in. Greatest 1-day total 2.71 in. New Orleans Friday.

Fieldwork possible 5.1 days. Soil moisture adequate. Main activities: Haying, land preparation, seeding small grain and winter pastures, and readying harvest equipment. Cotton maturing rapidly, 40% open, scattered harvest, some boll rot. Insect control and defoliation active. Rice harvest slowed by showers, 80% harvested. Soybean harvest 5% complete. Some pods rotting lower branches, stinkbugs some late fields.

Sugarcane rapid growth, planting active. Limited grinding next week. Corn and sorghum over 50% harvested, yields good. Sweet potato harvest continued, considerable loss low fields, quality and quantity good higher ground. Pecans beginning to fall, good yield expected. Oats and wheat over 30% seeded, need showers for germination some areas. Hay harvest 85% complete. Pastures average. Livestock mostly good.

**MARYLAND AND DELAWARE:** Warm week, averaged 4° above normal. Extremes: Upper 80's to

upper 40's. Precipitation light.

Soil moisture adequate most areas, short central Maryland, lower Delaware, and lower Eastern Shore. Corn 33% harvested, 22% 1972. Soybeans 23% shedding, normal 28%. Tobacco harvest practically complete. Harvesting Red and Golden Delicious apples, few Stayman and Rome Beauty.

**MICHIGAN:** Temperatures generally 1° to 6° subnormal. Highs in 80's over lower Peninsula Wednesday. Over northern lower and upper, lows in 30's or lower 40's with scattered frost Friday morning and again Sunday morning. Precipitation averaged less than 0.30 in. over northern lower and less than 0.80 over western upper. Over eastern upper and southern lower amounts excess of 1.00 in. and over southwest lower some stations reported over 3.00 in.

Rains relieved dry soil conditions south. Averaged 4.7 days suitable for fieldwork. Corn maturing rapidly, 60% now mature 4% harvested. Corn silage 68% harvested. Soybean acreage 75% shedding leaves or more advanced, 30% mature, 6% harvested. Dry beans 91%, fall potatoes 50%, sugar beets 9% harvested. Wheat planting rapid, 78% planted. Good germination early planted wheat. Pasture feed supplies below average. Apple harvest at peak southwest, in early stages northwest. Grape harvest full swing. Fall vegetable harvest active.

**MINNESOTA:** Temperatures 1° to 4° above normal except for southeast corner of southeast district where temperatures 3° below. Precipitation much above normal all areas, rain fell 4 out of 7 days. Some districts had 1.00 to 2.50 in. above normal. Weekend rains of 1.00 to 2.00 in. fell along Iowa border and southeast.

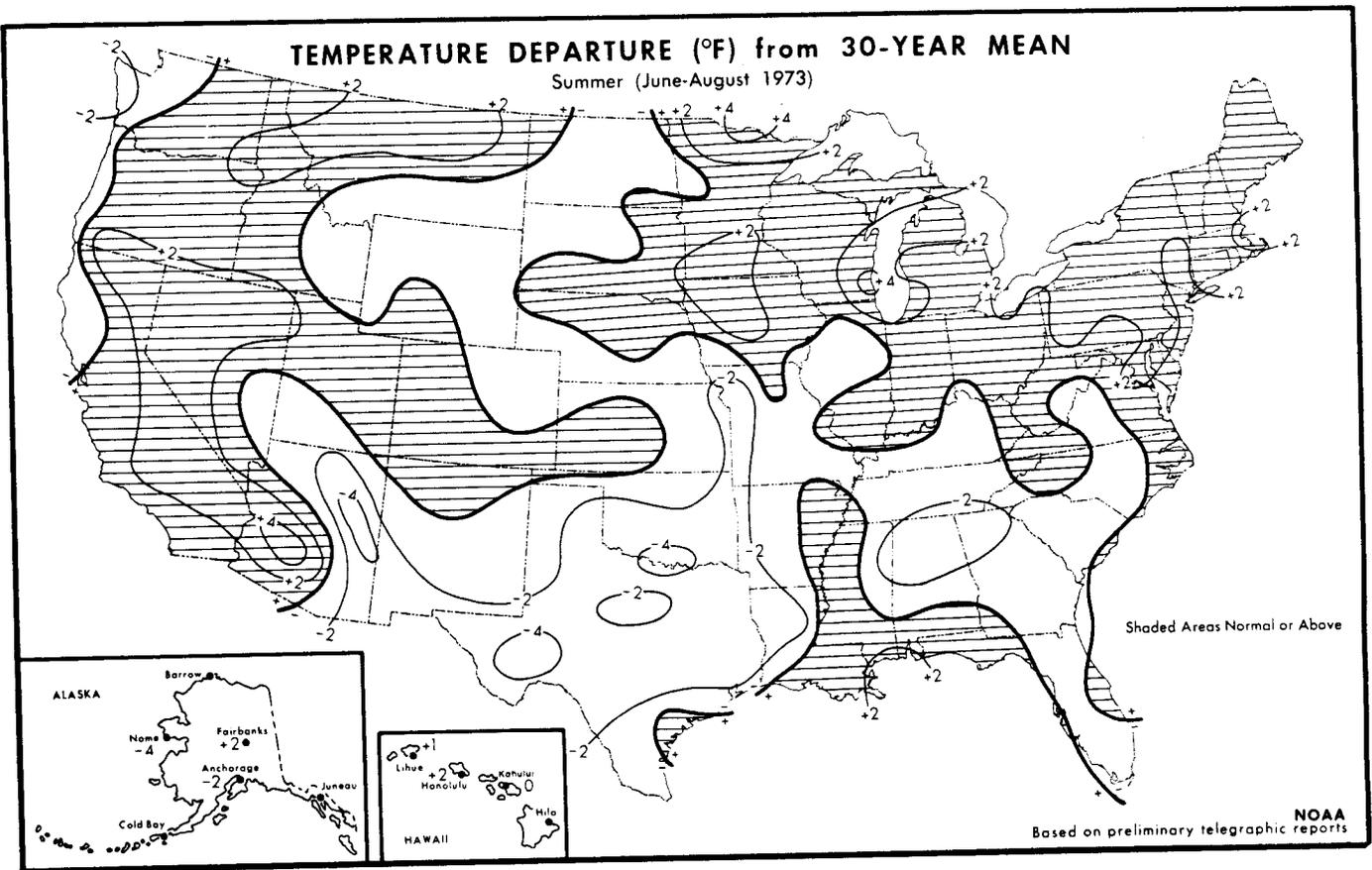
Wet weather slowed harvest of mature corn and soybeans. Considerable field drying needed before harvest fully underway again. Corn for grain 93% mature, 5% picked. Corn silage 80% cut. Soybeans nearly 80% mature, 11% combined. Potato digging over 50% completed. Sugar beet harvest slowed by wetness, 13% dug. Dry edible beans harvest 80% completed. Sunflower combining 15% completed. Warm, dry weather end of week improved conditions for resuming field operations.

**MISSISSIPPI:** Warm, dry week. Temperatures 3° to 7° above normal. Extremes: from 97° to 56°. Precipitation subnormal over most of State with normal amounts in upper Delta and in southwest and coastal sections. Over weekend widespread showers and thundershower activity most of State, rainfall over 1.00 in. Temperatures slightly cooler.

Soil moisture very short to adequate, mostly short. Fieldwork: 5.5 days, 3.6 days in 1972. Cotton 40% open, 64% 1972. Acreage picked 3%, 14% 1972. Soybeans 3% harvested, 8% 1972, other acreage 17% mature, 30% shedding, and 35% turning. Rice 30% cut, 55% 1972. Corn 25% picked, 32% 1972. Sorghum 42% harvested, 58% 1972. Peanuts 32% harvested, 53% 1972. Sweet potatoes 38% harvested, 60% 1972. Hay 92% cut, 85% 1972. All crops and pasture conditions mostly fair to good. Pecans very poor to excellent condition. Livestock mostly good.

**MISSOURI:** Abnormally warm week. Temperatures about 8° above normal. Rainfall very heavy north-

(Continued on page 10)



**SUMMER WEATHER**  
(June 1973 through August 1973)

**PRECIPITATION:** Rainfall during the summer season was generally normal to above east of the Mississippi, but generally below normal to the west. The most notable exceptions in the west occurred over eastern Nevada and northwestern Utah and most of Texas. San Antonio, Texas, received 18.60 in. which was 250 percent of normal. The greatest rainfall over the 3-month period was 37.50 in. at Charleston, S. C.,

The generally wet spring continued through much of the Nation during the beginning of summer and did not begin to fall off until August. For example, most of eastern Texas had twice its normal rain during June and July but fell below expectations only in August, leaving them, on the average, much wetter than normal. The summer ended with many drying areas in the country. Southern New York, Pennsylvania, eastern Ohio, Maryland and northern Virginia and eastward to the coast all averaged below normal rain -- some of these areas, as little as half the expected amount.

The areas that were already experiencing drought conditions at the beginning of summer saw a persistence of that condition as rainfall averaged far below normal and the drought got worse. Northern California, Oregon, Washington, northern Idaho, western Montana, central North and South Dakota all had less than half the normal amount of rain and many gauges recorded nothing for the period.

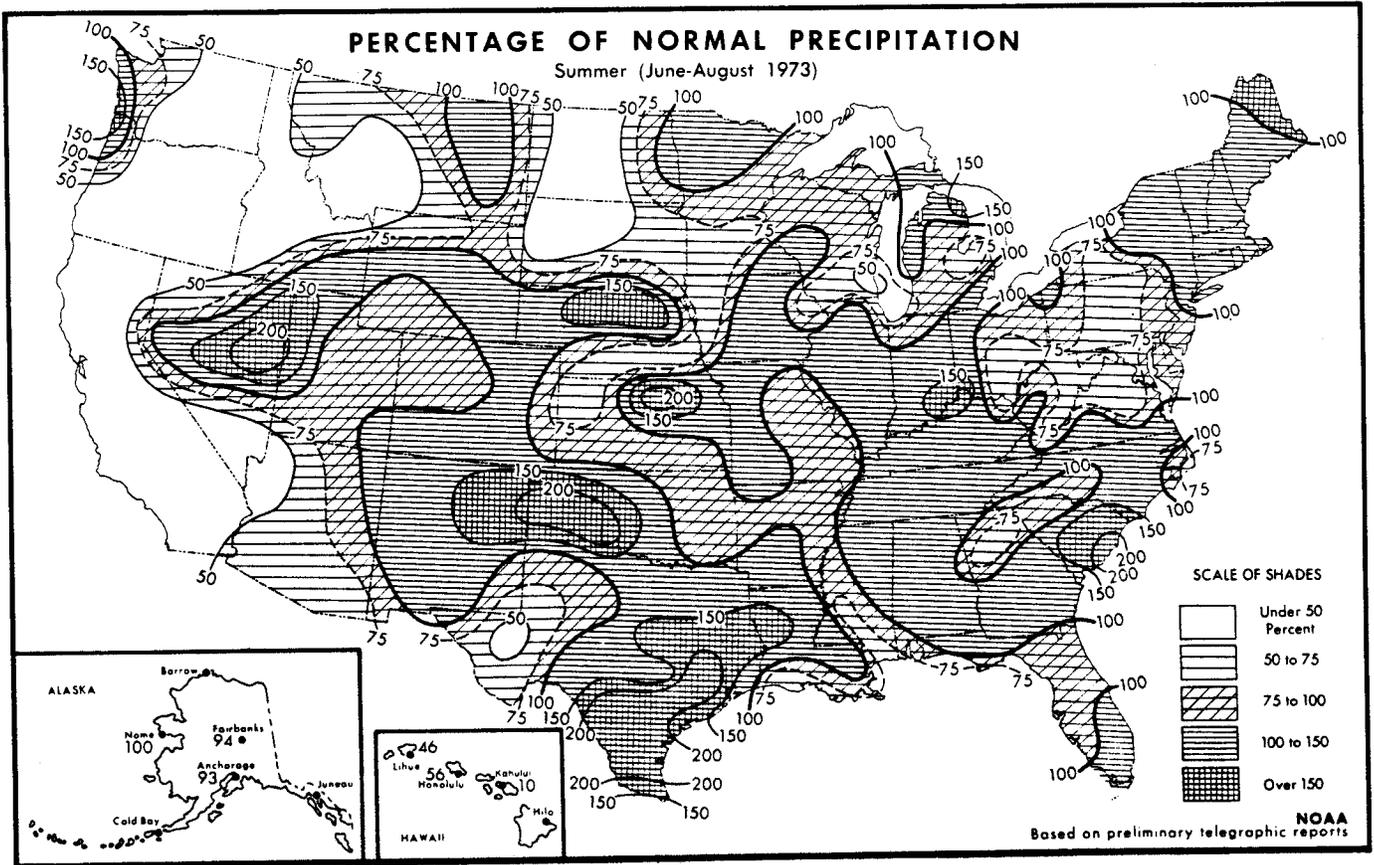
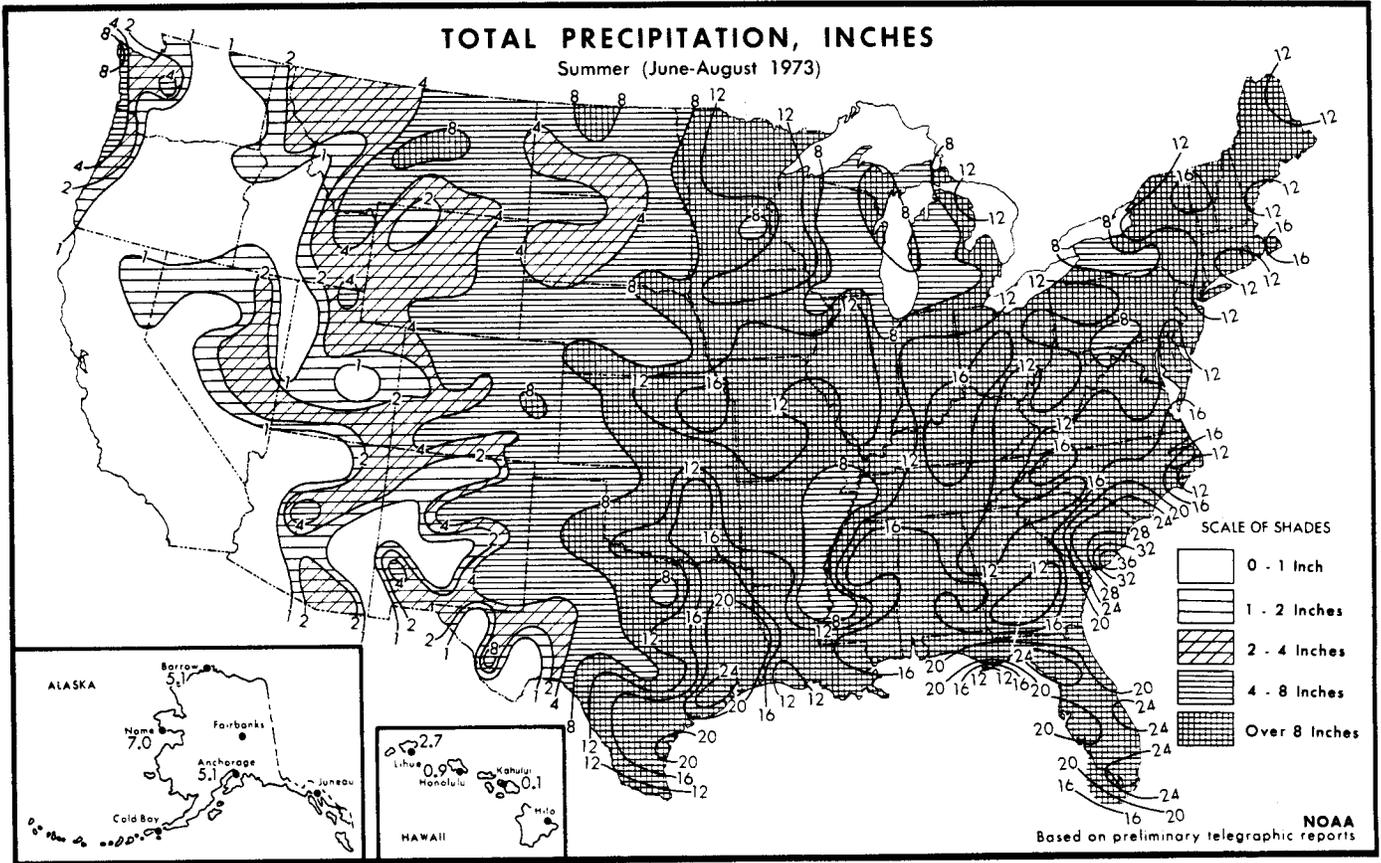
Most of the Corn Belt States, western Ohio, Indiana, all but southern Illinois and eastern Iowa, had above normal rain for the period.

Some corn-producing areas did have a dry spell during the initial silking stage but the excess subsoil moisture seems to have enabled the deep-rooted corn to fare well.

The western and northwestern drought area has experienced a continual danger from forest fires. As many as 14 major fires were burning at once but were finally brought under control.

**TEMPERATURE:** The average temperature for the summer season was widely diversified but warmer than normal areas were somewhat more predominant. The Northeast and North Central States were above normal with highest departures being 3° to 4° in New England and around Lake Michigan. Other areas that averaged warmer than normal for the season were the Gulf Coast, with maximum departures plus 2° from Mobile to New Orleans, and the mountain areas where the drought dominated and departures were 2° to 4° above normal. Great Falls, Mont., hit 105° on July 10 parching the already dry area. These same areas were above normal in each of the three summer months.

Summer mean temperatures were below normal in Texas and westward to eastern Arizona and northward through Oklahoma, Missouri, western Arkansas and eastern Kansas. Wyoming and southern Montana were cool. The southeastern States were below normal with the greatest departure being centered in northern Alabama and Georgia. Again these areas were cool in each month.



(Continued from page 7)

east and moderately heavy southwest, ranging from 3.00 to 7.50 in. Missouri River rose above flood stage from St. Joseph to mouth of the river at St. Charles. Many tributaries flooded briefly. Elsewhere, rainfall generally more than sufficient for good crop growth. Additional rains over weekend most of State averaged 0.50 in. to over 1.00 in. Monthly rainfall totals near normal of 3.00 to 4.00 in. across south, 2 to 3 times normal across north.

Two days suitable for fieldwork. Rain and muddy conditions held back harvest progress. Corn 58% mature, 7% harvested; 1972 67% mature, 13% harvested. Soybeans 32% mature, 3% harvested; 48% and 9% 1972. Sorghum 56% mature, 7% harvested; 1972 61% mature and 15% harvested. Cotton and soybeans fair to good. Pastures 1% poor, 17% fair, 68% good, 14% excellent. Soil moisture supplies 8% short, 45% adequate, 47% surplus.

MONTANA: Temperatures normal to 7° above with warming late week. Highs upper 70's to low 80's. Lows 30° to 40°, few mountain stations in 20's. Precipitation early week averaged subnormal except west.

Livestock feed available for sale--normal north-east and southeast, mostly short elsewhere. Mild weather slowed livestock movement from summer ranges. Wheat seeding 75% complete, germination fair to good. Rains needed to maintain stands northcentral. Topsoil moisture mostly short northcentral, northwest, and some areas central; adequate elsewhere. Subsoil moisture short northwest, northcentral, central, and parts southwest. Potato harvest 20% complete. Corn silage 75% done. Dry beans over 60% combined. Sugar beet harvest started.

NEBRASKA: Heaviest rains of year, possibly many years. Generally 2.00 to 4.00 in., greatest 8.80 at Tecumseh. Temperatures subnormal. Soil moisture supplies mostly surplus: Topsoil 85% surplus, 15% adequate; subsoil 57% surplus, 41% adequate, 2% short. Farmers chored, prepared machinery and storage for fall harvest; when weather permitted, hayed, put up silage, seeded wheat. Fieldwork: 1.5 days.

Cool weather slowed maturing of fall crops, wheat germination and growth. Rains delayed wheat seeding. Corn 80% mature, same 1972, 85% average. Stalk and root rot damage reported. Silage cutting behind normal. Sorghum 60% mature, same 1972, average 75%. Soybean leaves 85% shedding, 80% 1972, 90% average; 50% mature, same 1972, 70% average. Winter wheat, seeding 70% completed, 85% 1972, 90% average. Alfalfa 29% excellent, 63% good, 8% fair. Wild hay 17% excellent, 76% good, 7% fair. Sugar beet harvesting expected this week. Dry beans suffered from rain and hail, 25% harvested. Range and pasture 38% above average, 60% average, 2% below average. Feedlots muddy.

NEVADA: Temperatures range from normal 60° southcentral to 6° subnormal south. Extremes: 97° at Logandale and Las Vegas, 22° at Mountain City. Precipitation varied from 0.58 in. at McDermitt to none south. Rains delayed harvest and fall seedbed preparation from 1 to 4 days. Alfalfa seed harvest over 80% complete, will finish by mid-October. Third cutting alfalfa hay nearly 70% complete. Onion harvest to be complete within a week. Potato digging underway. Sixth cutting alfalfa hay started extreme south. Bolls starting to open on Pahrump Valley cotton. Livestock generally good. Cattle coming down from summer ranges.

NEW ENGLAND: Cool beginning of week, warming, then cooling again end. Light rainfall during week. Silage harvest continued active. McIntosh apple harvest half complete south, neared half north. Color good, crop generally lower than expected. Aroostook Co., Maine, potato harvest 50% plus complete, many farmers will finish this week if good weather continues, yields spotty. Cranberry harvest over half complete.

NEW JERSEY: Mild week. Temperatures 1° to 6° above normal. Extremes: 84° at Millville last Monday to 34° at Newton this Monday morning. Rainfall mainly from scattered thundershowers Saturday and Sunday. Heaviest amount 1.31 in. at Newark early Saturday morning. Fall lettuce harvest increasing. Cabbage movement moderate. Eggplant and squash harvest steady. Pepper supplies decreasing. Most tomato can-houses closed for season. Potato harvest about 90% complete. Sweet potato digging increased. Apple and cranberry harvest active. Field corn and soybean combining increased. Grain seeding continued, recent showers beneficial for germination and growth.

NEW MEXICO: First major change autumn as showers and a few snows over higher elevations of northern mountains accompanied cold air following a cold front. By midweek freezing temperatures common higher mountain valleys north and at higher elevations elsewhere. Snow 2 in. at Red River Wednesday. Significant precipitation fell over northern mountains eastward into northeastern plains. Largest amounts fell at Des Moines, 2.78 in. and Raton, 1.48 in. Temperatures over 5° subnormal north and near normal extreme south. Ranges fair to good. Livestock good. Grain sorghum, corn good, harvest continued. Cotton fair to good, bolls opening most fields, some harvest underway. Alfalfa good, harvest continued. Other crops good.

NEW YORK: Mild week. Temperatures near normal to 2° subnormal in upper Hudson and Champlain Valleys, near Watertown and across coastal southeast. Elsewhere 2° to 5° above normal. Highest readings over southwest. Extremes: Dansville 85° Thursday, Saranac Lake - 27° Sunday. Dry, sunshine plentiful last week. Boonville 0.35 in. and New York City 0.34 in. had highest weekly rainfall. Several stations reported less than 0.10 in. All stations well below normal this week. Favorable week for field activity. Silage corn harvest in full swing, about 50% harvested. Harvest of grain corn underway many areas. Third cutting alfalfa continued, over 70% complete. Pasture condition varies and soil moisture levels generally adequate. Harvest of sweet corn, snap beans, tomatoes virtually complete. Orange County onion harvest complete, Central and West neared completion. Long Island potatoes 60% harvested. Western New York potato harvest at midpoint. Cabbage supplies increased with good quality. Late cauliflower harvest now underway. Good harvest weather for fruit crops. Bartlett pear and peach harvest completed. Concord grape harvest continued in Chautauqua-Erie area and now underway in Finger Lakes area. Quality good with high sugar content. Apple harvest made good progress all areas. McIntosh nearly finished Hudson Valley, about 50% harvested West.

NORTH CAROLINA: Morning temperatures in 50's and 60's, rising to 80's by afternoon. Late week highs in upper 80's to low 90's. Only a few scattered showers, most of State received no rain. Field-

work averaged 4.8 days. Harvesting conditions ideal. Soil moisture 78% short, to very short. Corn harvest 65% complete. Tobacco, Middle, Border belts complete. Selling very active. Burley 85% cut. Defoliants continued on cotton, 7% cotton harvested. Peanuts 50% dug, 38% threshed. Sweet potato harvest in peak. Pastures showing signs of stress, rain desperately needed. Grape harvest in high gear. Small grains 14% planted.

**NORTH DAKOTA:** Temperatures generally 1° to 2° above normal except southeast slightly subnormal. Precipitation patterns about 0.50 in. subnormal except eastern areas above normal. Indian summer continued over weekend, no significant rainfall. Fair weather beginning September 25 permitted row crop harvest resumption late in week after previous weekend rains stopped field activity. Flax harvest made good progress most areas. Pastures made good fall growth.

**OHIO:** Generally fair and unseasonably warm most of State from 24th through 27th. Mostly cloudy, showery weather on 28th and 29th, followed by partial clearing on 30th. Dry weather permitted rapid progress soybean harvest and fall seeding. Rain needed for early seeded wheat. Soil moisture 84% short. Corn 65% mature, 5% harvested; 1972 50% mature, harvest just starting; normal average 80% mature, 10% harvested. More attention given soybean combining, now 20% harvested, normal 15%. Soybean crop 55% mature, normal 60%. Corn silage 60% chopped. Fall potato digging 65% complete. Tobacco 95% cut, normal 85%. Sugar beet harvest just starting. Winter wheat 40% seeded, 10% 1972, 35% normal. Barley seeding 65% complete, same as normal.

**OKLAHOMA:** Temperatures 2° subnormal panhandle to 4° above normal eastcentral. Precipitation ranged from 1.72 in. panhandle to 4.94 in. north-east. Weekend cool with a few widely scattered light rain showers. Some wheat planted prior to rains which delayed planting. Heavy rains will necessitate reworking ground and replanting wheat some areas. Wheat 41% planted compared to 67% year ago. Early seeded wheat good. Surplus topsoil moisture 47% counties. Rains delayed harvesting corn, sorghums for grain. About 30% corn, 6% sorghum acreage harvested for grain. Oats 18%, barley 7% planted. About 80% cotton acreage rated good condition or better. Cotton 32% open bolls, 67% 1972. Peanuts 53% mature, 6% combined. Soybeans 18% mature. Rains beneficial to range grasses, 81% pasture and ranges rated good to excellent, 36% 1972. Cattle mostly good. Adequate forage supplies contributing to good gains.

**OREGON:** Rains continued first part of week, coast got 1.38 to 2.75 in., Willamette Valley 1.16 to 1.57 in., east of Cascades 0.10 to 1.41 in. Skies cleared end of week. High temperatures in 70's coast, upper 70's to 80's interior valleys, east of Cascades 70° to 80°. Spotty local frost higher valleys east of Cascades. Main activities: Plowing, fertilizing, weeding, seeding. Some seeded fall grain fields emerging, stands uneven. Potato harvest continued, quality, yield good. Sugar beet harvest started Malheur-Umatilla Counties. Apple, pear harvests continued. Rain slowed filbert drop, delayed harvest. Walnut drop started. Cranberry harvest to start midweek. Broccoli, cabbage, cauliflower in good supply. Development late snap beans slowing. Pastures, ranges greening. Pasture seeding continued. Cattle fair to average.

**PENNSYLVANIA:** Mild and sunny through Friday. Rain Saturday. Fair, sunny and cool Sunday. Temperatures 2° to 4° above normal with daily highs mostly in 60's north, 70's south and overnight lows in 50's and 60's. Cool, clear and crisp Sunday with highs in 60's. Extremes: 83° and 31°. Weekly rainfall less than 0.25 in. north and east border counties to nearly 2.00 in. central mountains, elsewhere 0.50 to 1.50 in. Topsoil moisture 8% short, 67% adequate, 25% surplus. Corn 10% dough, 60% dent, 30% mature; some harvested. Ensilage corn chopping more than 50% completed. Pasture: 60% average, 20% below average, 20% above average. More than 50% of farmers report fourth cuttings alfalfa. Hay quality fair to good. Fall plowing 80% done. Wheat planting 50% done. Concord grape harvest started. Winter apple harvest started. Potato harvest more than 50% done. Tomato harvest nearly over. Cabbage harvest in progress.

**PUERTO RICO:** Rainfall averaged 1.30 in. or about 0.70 in. subnormal. Heaviest rains centered east interior, 5.92 in., of which 3.30 in. fell on 27th. Eastern Cordilleras got 4.17 in. A dry belt of less than 1.00 in. ran from north to southcentral coasts through central interior. Crop moisture conditions this area too dry for optimum crop development. Temperatures averaged 81° coasts, 76° interior divisions. Highest 93°, lowest 61°. Continued good development sugarcane ratoons, favorable weather for cultivating, fertilizing young cane. Good development young coffee crop and good progress coffee harvesting except parts west interior where rains delayed operations. Tobacco zones ended preparation seedbeds, now awaiting favorable soil moisture for planting since most zones too dry. Pastures good to excellent except localities northwest coast where chinch bugs continued damage. Minor crop zones report good progress seeding, fertilizing and cultivating. An abundance of bananas planted central-interior. Some insecticide control applied to pigeon peas, squash crops southcentral zones.

**SOUTH CAROLINA:** Temperatures much warmer than usual except briefly at midweek when near normal readings occurred north and west. Rainfall subnormal most areas except for small portion south where locally heavy rains fell near midweek. Soil moisture generally adequate statewide. Cotton defoliation continued at active pace, 60% open bolls, 6% harvested; in 1972 62% and 7%, respectively. Corn 68% harvested, 50% 1972. Soybeans fair to good, essentially all pods set, 49% leaves turning, 17% leaves shedding, 3% matured; in 1972 91%, 48%, 26%, and 9%, respectively. Peanuts 67% harvested, 70% 1972. Apples 83% harvested, same as 1972. Pecans, pastures fair to good. Winter grazing 38% planted. Fall hays 68% harvested, 69% 1972. Fall vegetables fair to good, harvest of cucumbers and squash underway.

**SOUTH DAKOTA:** Cool weather for third consecutive week. Temperatures 2° above to 6° below normal. Highs generally in 70's, lows in upper 20's to lower 40's. Widespread rains brought some relief from drought. Southeast received heaviest amounts. Many areas reported rain 6 of 7 days, totals 2.50 to 5.00 in. Average of 1.00 in. fell in northeast where drought most severe. This section remains 4.50 in. to over 6.00 in. below seasonal normal. Row crop harvest began but was delayed most areas by wet weather. Corn for grain 5% harvested, same as 1972. Soybeans 3% harvested, 5% 1972. Sorghum 7% harvested, 3% 1972. Corn



generally expected to yield about average or better as most drought-damaged corn cut for silage. No frost damage to crops, little ear droppage in corn and very little lodging in sorghum. Fall seeded grain looking good due to recent moisture. Livestock good. Pastures greened. Feed supply outlook improved. Livestock marketing variable.

**TENNESSEE:** Isolated showers during week and general showers over weekend. Amounts ranged from a trace to around 2.00 in. Temperatures 7° to 9° above normal. Large areas of State short soil moisture supply. Only western third and southeastern counties had generally adequate soil moisture. Corn 10% harvested, 67% mature. Normally 20% harvested, 80% mature. Yields from early corn good to excellent, but late corn suffering from corn worms and lack of moisture. Cotton bolls later than usual opening, harvest will be late. Only a few fields picked, normal 15% picked. Soybean crop making good progress but 1 to 2 weeks later than usual and is vulnerable to early or normal frost. Only a few fields mature, about 15% started shedding leaves. Burley and dark air cured tobacco harvest neared completion on schedule with 1972 and previous years. About 15% dark fired tobacco not harvested.

**TEXAS:** Cool temperatures, heavy rainfall about midweek. Showers and thunderstorms, some locally heavy, caused some flooding. Average rainfall ranged up to 2.00 and 3.00 in. Above normal much of southcentral and northcentral Texas. Temperatures about 14° below subnormal panhandle to near 3° above near coast. San Antonio-Seguin area hit hard by up to 13.00 in. rain. Flooding along several rivers, most extensive from Lower Nueces to Guadalupe River. Mostly fair and milder over the weekend except for some thundershowers central. Moderate heavy rains covered State midweek, stopped planting, harvest activity. Rice harvest behind schedule. Peanut, sorghum harvest about on schedule, prospects good. Early stands wheat, oats good growth. Major crops percent planted: Wheat 55, 1972 64; oats 41, 1972 43. Major crops percent harvested: Cotton 13, 1972 27; corn 58, 1972 71; sorghum 51, 1972 48; peanuts 40, 1972 34; rice 77, 1972 100. High Plains: Lettuce harvest underway. Cucumber, pepper, tomato harvest remained active. Carrot digging continued. Some cabbage supplies available. Trans-Pecos: Tomato harvest active Dell City area. East Texas: Sweet potato harvest continued. San Antonio-Winter Garden: Cucumber picking continued. Carrots made good growth. Cabbage cupping in many fields. Disease problems appearing in pepper fields. Lower Rio Grande Valley: Frequent rains and wet fields continued to delay vegetable seeding and land preparation. Citrus continued to size well, light supplies early season oranges available. Pecans began to hull many areas of State. Moderate to heavy rains maintained grazing high levels. Good grazing available most areas into early winter. Stockwater abundant all areas. Confirmed screwworm cases south Texas, coastal bend. Hay baling still active.

**UTAH:** Scattered areas got rain, snow higher mountains, north and west portions early week. Locally moderate accumulations few stations along Wasatch Front. Fair with rising temperatures remainder of period. Temperatures 2° to 6° subnormal growing degree days since March 1st 100 to 200 G.D.D. subnormal. Harvest late crops rapid aided by warm, dry weather. Harvest completion: 70% silage corn; none grain corn; 90% potatoes Davis County, 20% Millard, Beaver, Iron, Washington Counties; 20% dry onions; 30% dry beans San Juan County; 85%

tomatoes; 15% apples leading Utah County and about 35% other apple counties; and 65% third crop alfalfa hay. Sugar beet harvest started, only 500 acres or 3% harvested. Soil moisture dry on cropland. Ranges short to adequate statewide except southwest very short. Winter wheat 80% planted. Feed on fall, winter range lands 97% of normal, probably best ever. About 15% cattle, sheep moved down from high summer range lands.

**VIRGINIA:** Precipitation early week and over weekend, mainly showers and thunderstorms. Greatest rainfall 1.77 in. at Williamsburg. Otherwise, fair weather prevailed with above normal temperatures until late week. Extremes: 93° and 38°. Excellent harvesting weather. Topsoil moisture 67% short, 33% adequate. Averaged 5.7 days suitable for fieldwork, fifth consecutive week of 5 plus days. Corn for grain harvest 32% complete, 22% 1972. Excellent progress peanut harvest, 23% dug, 17% combined; only 3% dug last 2 years. Early fields soybeans harvested, limited insect spraying. Flue-cured and burley tobacco harvest 90% complete, fire-cured 74%, sun-cured, 81%. Dry soils limited small grain seeding progress. Wheat 9% seeded, oats 28%, barley 27%. Pasture condition decreased. Apple harvest active. Sweet potatoes 33% dug. Good yields snap-beans, cucumbers, and cabbage.

**WASHINGTON:** West: Scattered rain first half week, clearing last half. High temperatures 60° to 70°, lows 40° to 50°. Harvest continued sweet, silage corn, cauliflower, D'Anjou pears. Blueberry, blackberry harvest neared end. Potato, carrot harvest mid-point. Field preparation, planting grains continued. Bulb planting, landscaping, hoeing strawberries active. Pastures short to adequate. Rains relieved dryness, more needed. East: Rain early week, sunny latter week. High temperatures first week 60° warming to 70° to 80° latter week. Lows 40° cooling to mid-30's last of week. Harvested sugar beets, potatoes, grapes, sweet, silage corn. Apple picking full swing, mostly Red Delicious. Lima bean, hop harvest neared end. Processing carrots begin next week. Fourth cutting alfalfa hay, alfalfa seed, dry bean harvest underway. Preparing soil, planting fall grain crops active. Topsoil moisture improved, subsoil still short.

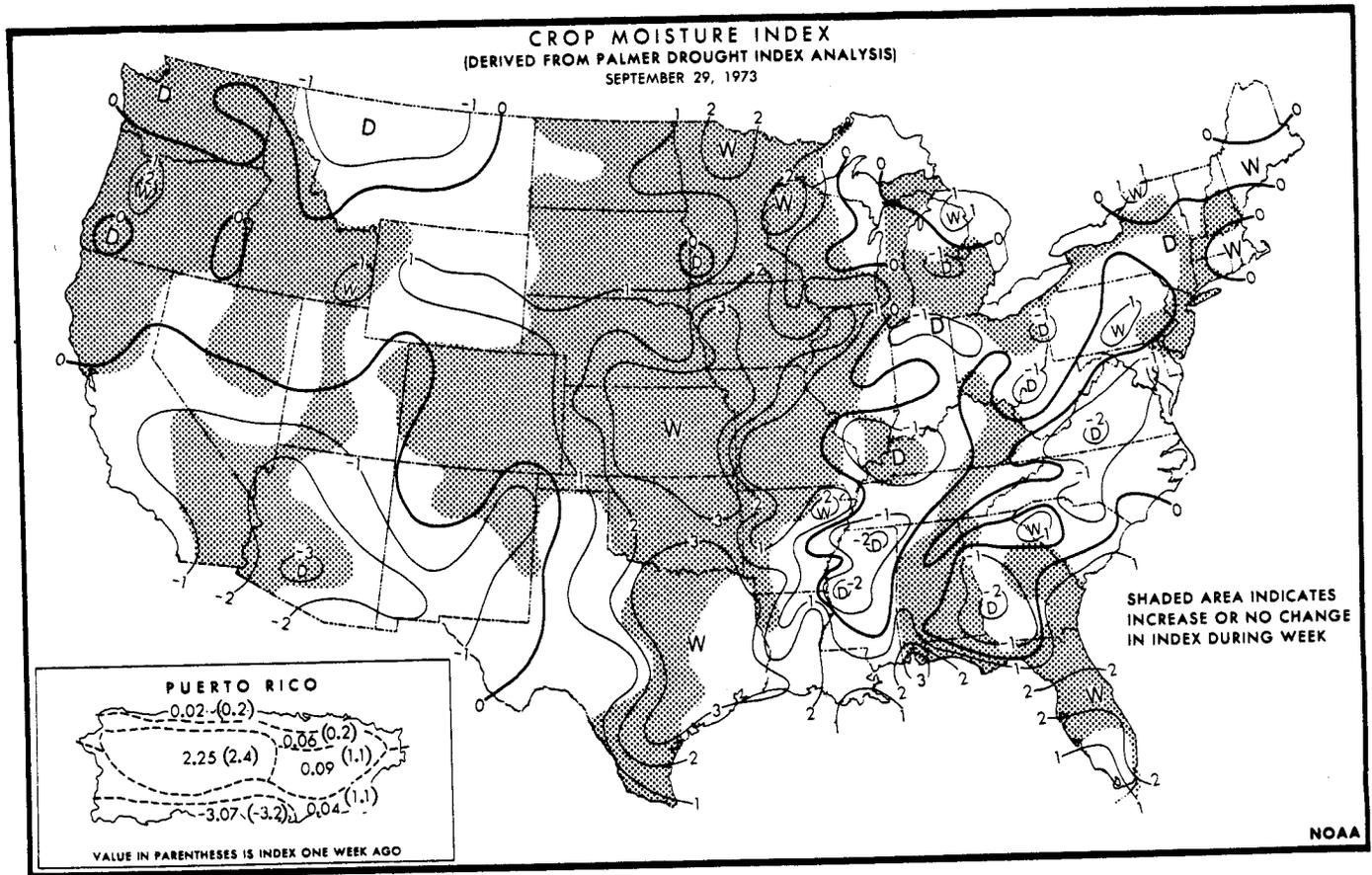
**WEST VIRGINIA:** Temperatures above normal. High 92° at Wayne, low 42° Canaan Valley and Clarksburg. Showers early week. Averaged 5.4 days suitable fieldwork. Major field activities: Harvesting corn silage, hay and potatoes; seeding small grains. Soil moisture 48% short, 50% adequate, 2% surplus. Hay mostly good, 92% second cutting and 64% of third cutting complete. Tobacco 87% harvested. Potatoes 86% dug. Corn mostly good, 39% dent, 61% mature. Wheat 31% and barley 41% sown.

**WISCONSIN:** Mild, wet week. Temperatures 3° above normal reaching upper 70's and low 80's early week. Extensive cloud cover kept evening temperatures mild. Rainfall abundant, covering most of State early week, confined to south half rest of week, weekend. Rainfall lightest northeast, east central, averaged 0.60 in.; heaviest southeast 2.80 in. Park Falls had 2.15 in. Wednesday. Fall fieldwork slowed by frequent showers. Silo filling 50% completed, 1972 25%, normal 50%. Silage quality good, quantity lower due to shorter stalk growth. A little picking of corn for grain and high moisture ear corn for silos. Moisture percent content mid to upper 20's early varieties. September rain too late southeast for corn and soybeans. Soybeans

maturing well, 45% shedding leaves, 1972 15%, normal 25%. A little second and third crop hay cut. Recent rains benefited new seedings, pastures. Winter wheat, rye planting active. Plenty moisture for fall plowing, 10% done, 1972 5%, normal 10%. Soil moisture 70% adequate, 30% surplus. Tobacco harvest latter stages, good crop in curing sheds. Potato harvest active. Harvest cranberries, apples continued. Sweet corn mostly done. Harvest of snap beans, cabbage, beets slowed by wet weather.

WYOMING: Light to moderate rain, snow higher elevations fell over much of State. Most moisture 1.03 in. at Carpenter. Temperatures just below to 7° below normal. Highs mostly mid-60's to upper 70's. Lows mostly 20's to mid-30's. Extremes: 79° at Basin and Torrington, 16° at Big Piney. Harvest behind last year; Corn for silage 70% complete, corn for grain 50% done, dry bean harvest 40% finished, potatoes 30% completed, sugar beet harvest started. Hay supplies short to adequate, little for sale. Calves being weaned.

Standard copy for the Weekly Weather and Crop Bulletin is prepared by: Dr. Richard E. Felch, Agricultural Climatologist; Arlon M. Scott, Agricultural Statistician; Geraldine Schumacher, Editor.



**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
- 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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