



Weekly Weather & Crop Bulletin

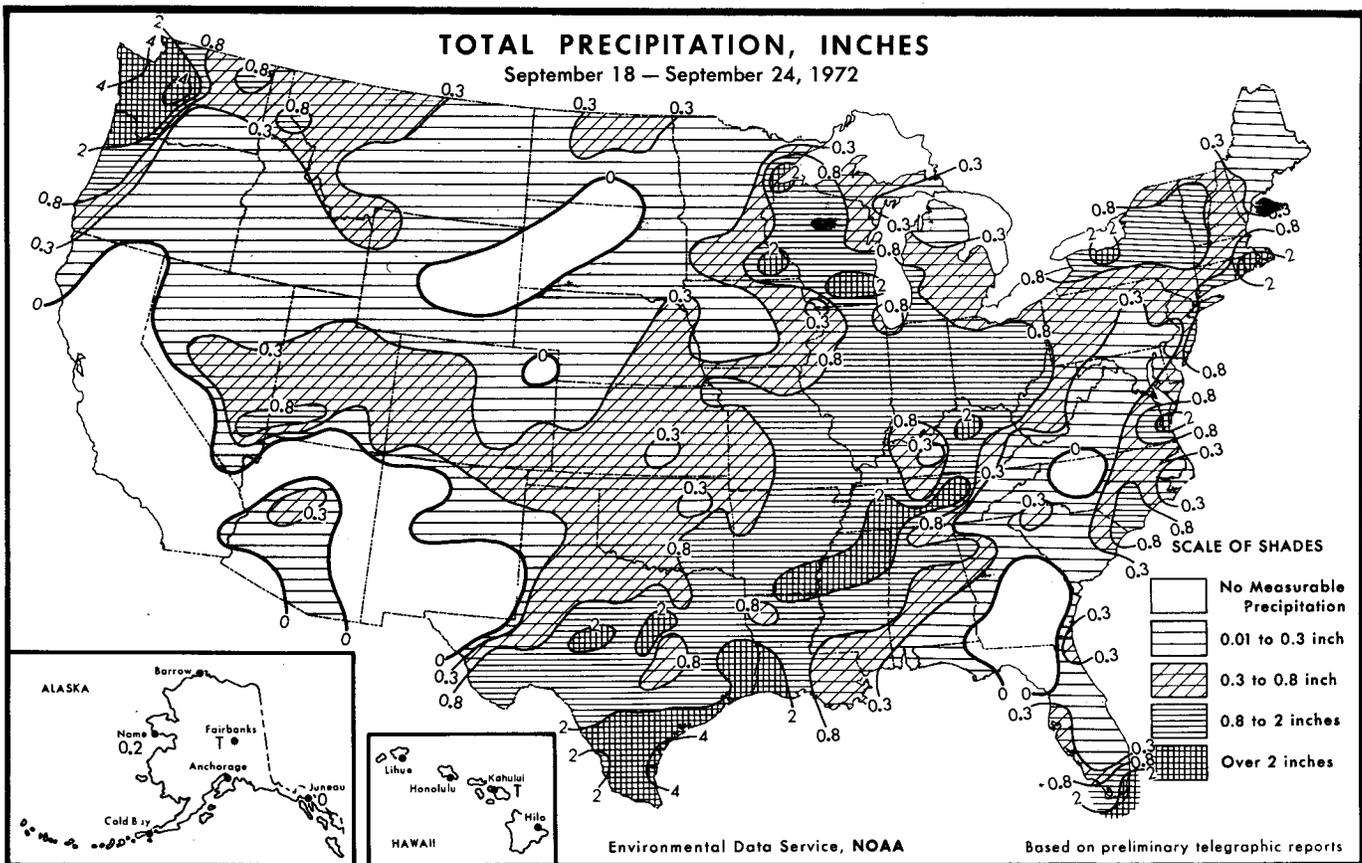
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NATIONAL WEATHER SUMMARY

HIGHLIGHTS: Summer continued in the South but autumn weather made a good start in the North. The rainy season has begun in the Far Northwest.

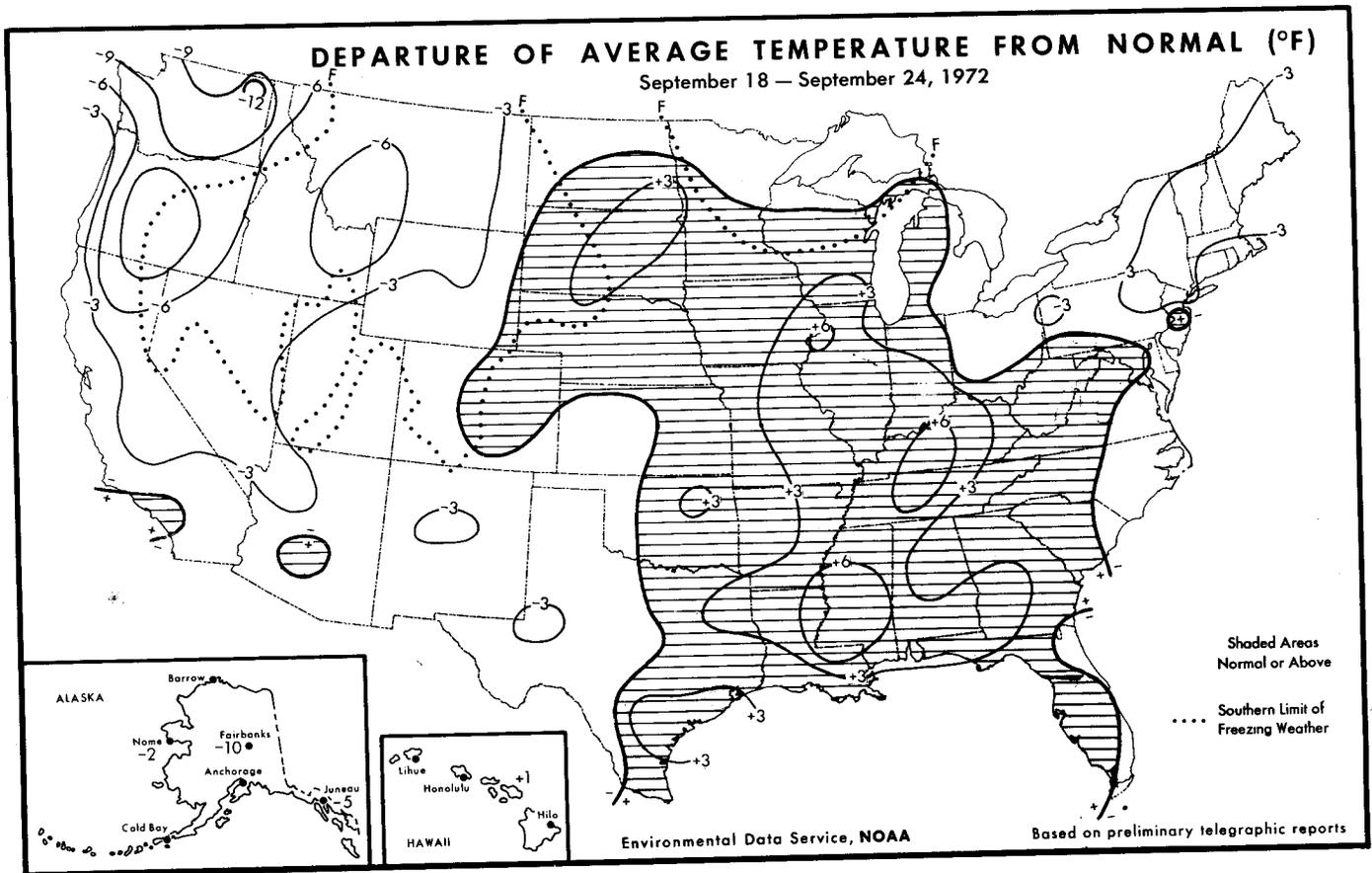
PRECIPITATION: Widely scattered thunderstorms occurred in the humid tropical air that streamed northward in the warm sector of the storm which was centered in southern Manitoba. Thunderstorms also occurred along the fronts associated with the storm. Torrential rains fell in northern Ohio Sunday night and early morning, September 18. A storm in the Pacific Northwest brought rain to the coastal areas and nearby hills and snow in the higher Cascades. Stampede Pass, Wash., measured 5 inches of snow on the ground Wednesday morning. A long band of thunderstorms marked the advance of a strong cold front Wednesday forenoon. The front at the time reached from Lake Superior to the Texas Panhandle and was moving southeastward.

Heavy rains, about 5.00 inches, drenched Duluth, Minn., causing local flooding. Hail and high winds occurred in Wisconsin and Minnesota.

A large High pushed into the northern Great Plains shortly after midweek ending the rainy weather in that area. However, as the leading edge of the cold air migrated southeastward, it set off other thunderstorms. Heavy rains caused light overflow of the Rock River in northern Illinois Thursday. In the Texas Big Bend area, heavy rains caused the Rio Grande to rise above flood level. While the band of thunderstorms moved across the Great Plains, other airmass thunderstorms dotted the Deep South in the hot sultry air that covered that region.

Light to moderate showers fell from the Great Lakes to eastern Texas over the weekend.

Weekly totals exceeded 5.00 inches in the extreme Northwest where the rainy season has defin-



itely begun. Generous totals also occurred in northern Mississippi, nearby portions of neighboring States and extreme southern Florida. The driest spots included California, southern New Mexico, southern Georgia, central and northeastern Wyoming and western and central South Dakota.

TEMPERATURE: A low was centered over southern Manitoba early in the week. A front trailed southward up the Red River of the North. A cold front extended from near Grand Forks, N. Dak., toward Colorado and a warm front stretched from the Grand Forks vicinity to South Carolina. Hot humid air covered the warm sector of the Low. Afternoon temperatures reached the 90's over much of the warm sector. Grand Island, Nebr., registered 100° Monday afternoon and Aberdeen, S. Dak., 98° Tuesday. High relative humidity made the air feel more uncomfortable. A quick change in weather occurred Wednesday as the cold air advanced over the northern and central Great Plains. Afternoon temperatures at Jamestown, N. Dak., were: Tuesday 94°; Wednesday 70°; Thursday 60°.

Temperature changes over the South were less drastic. The daily maximums at Memphis, Tenn., Tuesday to Thursday, were 96°, 91°, and 88°. The Desert Southwest continued hot. Thermal and Blythe, both in California, registered 104° Thursday.

Subfreezing weather occurred in spots in the northern and central Rocky Mountains and in parts of the Great Basin on some mornings. Big Piney, Wyo., recorded 13° Thursday morning.

The weekend was cool over most of the Nation. Subfreezing temperatures occurred over the northern Rocky Mountains and the western edge of the northern Great Plains. Afternoon temperatures remained in the 40's and 50's over most of Montana and North Dakota Sunday. Although autumn made a good beginning over the North, summer weather continued in the South. Parts of Mississippi averaged more than 5° above normal. Maximum temperatures in Mississippi were mostly in the high 90's early in the week, the low 90's over the weekend.

L. W. Dye

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Planting of 1973 winter wheat crop faster than normal. * Corn crop continues to mature slowly in Corn-Belt. * Cotton harvest increasing all producing areas.

SMALL GRAINS: Planting of the 1973 winter wheat crop advanced rapidly during the week and is ahead of the normal pace in the southern Great Plains States. North Dakota farmers continued to wind up the 1972 small grains harvest but were slowed by poor drying conditions. About one-half of the 1973 winter wheat acreage from Texas to Nebraska is now seeded. Good moisture conditions prevail and wheat is generally emerging well. Stands are showing good growth. Kansas seeding made excellent progress this past week with 38 percent in the ground compared to a normal 34 percent. Nearly 50 percent of Oklahoma's wheat crop is seeded, with about 10 percent up to an acceptable stand. Texas farmers had planted 54 percent of their wheat acreage compared to 49 percent last year. Nebraska wheat planting is 70 percent complete with some reseeded, but most stands are even and growing well. Colorado winter wheat acreage is 91 percent seeded and 65 percent emerged. In Montana, winter wheat is 45 percent seeded with fair to good germination.

CORN: Several days of sultry end-of-summer hot weather during the past week helped the Nation's corn crop make fair progress towards maturity. Good to excellent prospects continue. Autumn announced it's arrival with scattered light frost late in the week in northern portions of the Corn-Belt. Some frost damage to corn occurred in Michigan where only 26 percent of the crop has matured compared to a normal of 49 percent. Corn development is still running behind in the eastern Corn Belt and dry weather is needed to mature the crop. Most of the corn in the western Corn Belt is maturing on schedule. In the leading corn growing States of Iowa and Illinois, about 80 to 85 percent of the corn is mature and safe from frost. Early harvesting of mature fields has increased in the Corn-Belt. Five percent of the crop is picked in Iowa and 8 percent in Missouri is harvested. Silo filling with corn silage is in full swing in the northern half of the Nation.

Corn harvesting in the southern States is slightly behind normal but picking is gaining momentum. Harvesting completion ranges from 61 percent in Texas to 33 percent in North Carolina.

COTTON: Recent cool weather in Texas slowed cotton maturity, but the first bales were ginned on the Southern High Plains. Texas cotton harvesting advanced to 26 percent, well ahead of last year's 16 percent harvested. Rain showers came too late in the season to help cotton in other southern States. About one-half of the bolls were open from East Texas to the Carolinas and picking was increasing. About 5 percent of the crop has been harvested in Arkansas, Louisiana, and Tennessee. In Mississippi 10 percent of the crop is picked.

Harvest activity increased in California and in Arizona where cotton is in good condition and is maturing ahead of normal. Controls for pink bollworm are being applied Statewide. Late summer rains and high humidity in southeastern Arizona have brought on late growth and boll rot. Cotton in New Mexico and Oklahoma is opening rapidly.

SOYBEANS: Combining of the 1972 soybean crop is just beginning in some areas of the Corn-Belt. Maturity of the crop in most northern States continues to lag behind normal and progress is slow. Good to excellent prospects continue, but fair weather would be welcomed in the North Central States. In the leading soybean producing States of Illinois and Iowa, about two-thirds of the plants are shedding leaves and are mature. Normal harvest progress has been attained in Illinois and Iowa with about 7 percent of the crop harvested. In Minnesota, only 20 percent of the soybeans are mature compared to 34 percent normal progress. Ohio's soybean crop is slow in maturing with only 20 percent mature compared to 45 percent mature last year.

Showers this past week benefited late planted soybeans from Arkansas to Alabama. Soybean prospects dropped in South Carolina and Georgia due to continued dry weather. Some light harvesting began in several southern States.

OTHER CROPS: Texas sorghum grain harvesting is 45 percent complete; the first acreage on the High Plains was combined this week. About 1/2 of the sorghum grain in Oklahoma and Missouri is ripe with about 1/10 harvested, while the Kansas and Nebraska crop is 1/3 mature with harvesting beginning. The burley tobacco harvest was active in western North Carolina. Weather was ideal for housing and curing tobacco in Kentucky where 88 percent of the burley and dark types are cut. The Georgia peanut harvest is nearing completion with 95 percent dug and 89 percent threshed. The Texas peanut harvest is ahead of last year's at 31 percent harvested. Potato digging is rapidly increasing in Idaho and vine killing by chemicals is still active in absence of killing frosts. Digging is active in Aroostook County, Maine where a freeze killed vines on Russett Burbank potatoes. About 1/3 of the crop is harvested in North Dakota and Minnesota. Sugar beet digging increased in the Merced-Modesto area of California, while harvest is starting in Washington. The Colorado crop is in excellent condition.

Fruits and Nuts: Apple picking was active and widespread on Northern fruit farms with many seasonal varieties available. Cranberry harvesting was active in New Jersey and Massachusetts. The Thompson seedless grape harvest is nearing completion in California but picking grapes for wineries continues active. Grape harvest is increasing in the Finger Lakes area of New York. Alabama pecan trees are defoliating early due to dry weather, insects and diseases and nuts are not sizing properly.

Vegetables: The Michigan and Wisconsin vegetable harvest struggles on with wet fields continuing to plague farmers. An extended season is needed to complete harvesting in New York of sweet corn, snapbeans, cabbage and tomatoes. Planting of fall vegetables is active in Florida. Harvest of late summer vegetables in California is seasonally active.

PASTURES AND LIVESTOCK: Widespread scattered showers from Texas to New England benefited pastures. Grazing in the Southeast and extreme West continued short. Livestock movement increased from summer ranges in the Mountain States.

Arlon M. Scott
Agricultural Statistician

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., September 24, 1972

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 . . .	75	0	.6	-.1	New Orleans . . .	80	+3	.4	-.7	OKLA, Okla. City . .	74	+2	.6	-.1
Mobile . . .	82	+5	.1	-1.4	Shreveport . . .	81	+3	.4	-.2	Tulsa . . .	75	+3	.3	-.6
Montgomery . . .	79	+3	---	---	MAINE, Caribou . . .	49	-3	.1	-.8	OREG, Astoria . . .	55	-3	3.7	+2.9
ALASKA, Anchorage . .	---	---	---	---	Portland . . .	54	-4	.1	-.8	Burns . . .	47	-10	T	-.2
Barrow . . .	---	---	---	---	MD, Baltimore . . .	67	0	.2	-.5	Medford . . .	54	-9	.2	0
Fairbanks . . .	32	-10	T	-.3	MASS, Boston . . .	62	-3	1.4	+ .7	Pendleton . . .	56	-7	1.1	-.1
Juneau . . .	43	-5	0	-1.7	Chatham . . .	60	-1	3.1	---	Portland . . .	56	-6	2.0	+1.5
Nome . . .	38	-2	.2	-.3	MICH, Alpena . . .	54	-1	.1	-.8	Salem . . .	53	-9	1.7	+1.3
ARIZ, Flagstaff . . .	54	-3	.5	+ .1	Detroit . . .	62	0	.5	-.1	PA, Allentown . . .	60	-3	.5	-.3
Phoenix . . .	83	+1	.1	0	Flint . . .	59	0	.5	-.2	Erie . . .	58	-2	.8	-.2
Tucson . . .	77	-3	.1	-.1	Grand Rapids . . .	61	0	.8	+ .1	Harrisburg . . .	65	-1	.2	-.4
Winslow . . .	67	-2	T	-.2	Houghton Lake . . .	57	+1	.1	-.6	Philadelphia . . .	65	-1	.1	-.7
Yuma . . .	83	-2	0	-.1	Lansing . . .	58	-2	.6	0	Pittsburgh . . .	63	0	.7	+ .1
ARK, Fort Smith . . .	75	+1	.7	-.2	Marquette . . .	55	-1	.8	-.1	Scranton . . .	57	-4	.6	-.1
Little Rock . . .	76	+3	1.2	+ .5	Muskegon . . .	62	0	1.1	+ .4	R.I, Providence . . .	61	-1	3.1	+2.3
CALIF, Bakersfield . .	73	-3	0	0	S. Ste. Marie . . .	54	0	.3	-.7	S.C, Charleston . . .	75	0	.2	-1.2
Eureka . . .	56	-1	.1	-.1	MINN, Duluth . . .	51	-2	3.8	+3.2	Columbia . . .	75	+1	.1	-.8
Fresno . . .	69	-4	0	0	Internat'l Falls . .	52	0	.2	-.4	Greenville . . .	73	+1	.5	-.3
Los Angeles . . .	74	+2	0	-.1	Minneapolis . . .	60	+2	.4	-.1	S. DAK, Aberdeen . .	64	+5	T	-.3
Red Bluff . . .	69	-6	0	-.1	Rochester . . .	60	+1	2.1	+1.5	Huron . . .	63	+3	.2	-.1
San Diego . . .	68	-2	T	-.1	St. Cloud . . .	57	0	.2	-.3	Rapid City . . .	60	+1	0	-.2
San Francisco . . .	62	-2	0	0	MISS, Jackson . . .	82	+7	1.5	+ .9	Sioux Falls . . .	61	+1	.3	-.2
Stockton . . .	69	-3	0	-.1	Meridian . . .	81	+6	.9	+ .2	TENN, Chattanooga . .	73	0	T	-.7
COLO, Denver . . .	63	+2	T	-.3	MO, Columbia . . .	71	+5	1.0	+ .1	Knoxville . . .	73	+2	T	-.6
Grand Junction . . .	65	-1	.6	+ .4	Kansas City . . .	72	+2	.6	-.1	Memphis . . .	77	+5	1.1	+ .5
Pueblo . . .	66	+1	T	-.2	St. Louis . . .	73	+3	1.7	+1.1	Nashville . . .	78	+7	.7	0
CONN, Bridgeport . . .	63	-2	.9	0	Springfield . . .	71	+2	.7	-.2	TEX, Abilene . . .	73	-2	1.6	+1.0
Hartford . . .	60	-1	.5	-.4	MONT, Billings . . .	53	-5	.1	-.2	Amarillo . . .	68	-2	.1	-.3
D.C, Washington . . .	68	0	.2	-.6	Glasgow . . .	51	-4	.2	0	Austin . . .	80	+2	.6	-.3
FLA, Apalachicola . .	82	+3	.2	-1.5	Great Falls . . .	50	-6	.4	+ .1	Beaumont . . .	79	+1	2.7	+1.8
Ft. Myers . . .	82	+1	.3	-1.6	Havre . . .	49	-5	.7	+ .4	Brownsville . . .	82	+1	2.7	+1.0
Jacksonville . . .	78	-1	.8	-1.0	Helena . . .	46	-8	T	-.2	Corpus Christi . . .	83	+3	6.8	+5.7
Key West . . .	82	0	4.0	+2.4	Kalispell . . .	49	-4	.4	+ .1	Dallas . . .	79	+3	.5	-.2
Lakeland . . .	80	0	.1	-1.3	Miles City . . .	56	-3	T	-.2	Del Rio . . .	77	-2	.5	-.2
Miami . . .	80	-1	2.4	0	Missoula . . .	49	-5	.4	+ .1	El Paso . . .	71	-2	T	-.3
Orlando . . .	81	+1	.3	-1.4	NEBR, Grand Island .	65	+2	1.1	+ .6	Fort Worth . . .	78	+1	1.6	+ .9
Tallahassee . . .	80	+3	0	-1.1	Lincoln . . .	65	-2	1.3	-.7	Galveston . . .	84	+5	2.2	+ .8
Tampa . . .	81	+1	.5	-.9	Norfolk . . .	64	+1	.4	-.2	Houston . . .	80	+3	1.7	+ .7
GA, Atlanta . . .	74	+2	.4	-.3	North Platte . . .	62	+1	.1	-.3	Lubbock . . .	68	-2	.4	-.3
Augusta . . .	74	0	T	-.7	Omaha . . .	66	+2	.1	-.4	Midland . . .	69	-5	.7	+ .2
Macon . . .	79	+4	T	-.5	Valentine . . .	63	+3	.1	-.2	San Angelo . . .	75	-1	3.5	+2.9
Savannah . . .	77	+1	T	-1.1	NEV, Ely . . .	53	-3	.4	+ .3	San Antonio . . .	81	+3	1.0	+ .1
HAWAII, Hilo . . .	---	---	---	---	Las Vegas . . .	75	-3	.3	+ .2	Victoria . . .	83	+4	2.5	+1.5
Honolulu . . .	---	---	---	---	Reno . . .	54	-4	T	-.1	Waco . . .	78	0	.5	-.2
Kahului . . .	79	+1	T	-.1	Winnemucca . . .	53	-4	.1	0	Wichita Falls . . .	76	0	.5	-.1
Lihue . . .	---	---	---	---	N.H, Concord . . .	53	-5	.8	-.1	UTAH, Blanding . . .	59	-2	.3	0
IDAHO, Boise . . .	57	-4	T	-.1	N.J, Atlantic City . .	65	-1	1.7	+1.0	Salt Lake City . . .	61	-1	.6	+ .5
Lewiston . . .	56	-6	.2	0	Trenton . . .	68	+2	.9	+ .1	VT, Burlington . . .	53	-4	.9	+ .1
Pocatello . . .	53	-6	.2	-.1	N.MEX, Albuquerque .	66	-3	.1	-.1	VA, Lynchburg . . .	68	+1	.3	-.5
ILL, Cairo . . .	75	+4	1.9	+1.2	Roswell . . .	---	---	---	---	Norfolk . . .	70	-1	3.4	+2.5
Chicago . . .	66	+1	.4	-.2	N.Y, Albany . . .	57	-3	.8	0	Richmond . . .	68	-1	.8	0
Moline . . .	69	+6	.3	-.4	Binghamton . . .	55	-3	.4	-.3	Roanoke . . .	67	-1	T	-.8
Peoria . . .	68	+3	.8	+ .1	Buffalo . . .	59	-1	1.4	+ .7	WASH, Colville . . .	46	-12	1.8	+1.6
Rockford . . .	65	+3	1.2	+ .5	New York . . .	63	-5	.7	-.2	Omak . . .	50	-8	.4	+ .2
Springfield . . .	70	+4	1.4	+ .6	Rochester . . .	60	-1	2.3	+1.7	Quillayute . . .	48	-9	5.5	+4.0
IND, Evansville . . .	73	+5	.9	-.3	Syracuse . . .	60	-1	1.6	+ .9	Seattle-Tacoma . . .	50	-9	3.6	+3.1
Fort Wayne . . .	63	0	.9	+ .2	N.C, Asheville . . .	69	+2	T	-.6	Spokane . . .	50	-10	.7	+ .5
Indianapolis . . .	69	+4	1.3	+ .6	Charlotte . . .	72	+1	.1	-.7	Walla Walla . . .	57	-8	.6	+ .4
South Bend . . .	62	0	1.2	+ .5	Greensboro . . .	70	+1	0	-.8	Yakima . . .	49	-11	.1	0
IOWA, Burlington . . .	69	+5	.7	-.1	Hatteras . . .	73	-1	.1	-1.1	W.VA, Beckley . . .	63	+1	.6	-.1
Des Moines . . .	66	+2	.2	-.3	Raleigh . . .	68	-2	.7	-.2	Charleston . . .	68	+1	.5	-.2
Dubuque . . .	64	+4	.2	-.6	Wilmington . . .	73	-1	1.2	-.1	Huntington . . .	69	+2	1.7	+1.1
Sioux City . . .	65	+1	.5	-.1	N.DAK, Bismarck . . .	58	+2	T	-.3	Parkersburg . . .	68	+1	1.1	+ .5
KANS, Concordia . . .	68	0	.5	-.1	Fargo . . .	60	+3	T	-.3	WIS, Green Bay . . .	59	0	.7	+ .1
Dodge City . . .	68	-1	.4	+ .1	Williston . . .	53	-2	.3	0	La Crosse . . .	63	+2	1.4	+ .7
Goodland . . .	64	0	.1	-.2	OHIO, Akron-Canton .	63	0	1.0	+ .4	Madison . . .	61	+2	2.1	+1.1
Topeka . . .	70	+2	.5	-.1	Cincinnati . . .	69	+3	1.6	+1.0	Milwaukee . . .	62	+3	3.0	+2.4
Wichita . . .	72	+3	.3	-.4	Cleveland . . .	63	0	.6	-.1	WYO, Casper . . .	55	-3	T	-.2
KY, Lexington . . .	72	+4	2.0	+1.4	Columbus . . .	63	-1	1.3	+ .7	Cheyenne . . .	57	0	T	-.3
Louisville . . .	74	+6	1.1	+ .5	Dayton . . .	64	-1	1.4	+ .8	Lander . . .	55	-2	T	-.3
LA, Baton Rouge . . .	83	+6	.5	-.5	Toledo . . .	60	-2	.7	+ .2	Sheridan . . .	55	-2	.1	-.2
Lake Charles . . .	79	0	3.6	+2.7	Youngstown . . .	58	-3	.7	0	P.R. San Juan . . .	83	+2	.4	-1.0

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

CONDENSED STATE SUMMARIES

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

ALABAMA: Rainfall spotty ranging from none to locally 2.00 inches. Warm and rather dry with considerable sunshine. Showers were widely scattered and limited mainly to first of week and again Thursday and Friday. Cool Monday but remainder of week averaged 5° above normal. Hottest at midweek when Selma reached 99°. Low for week 61° Friday at Anniston. Scattered showers aided cotton and soybeans in north Alabama--dry weather persisted remainder of State. Cotton harvest gained momentum south and central--limited in northern counties. Moisture too high most corn harvest to become active. Early soybeans maturing rapidly with few beans combined. Showers helped late beans in several localities. Peanut harvest nears completion. Federal-State inspection reported 155,000 tons inspected through September 22, compared with 139,000 tons last year. Pecans defoliating early due to dry weather, insects, and diseases. Nuts not filling and sizing properly. Limited amount of hay saved. Pastures supplied short grazing many counties lower half of State. Few cattlemen having to feed.

ALASKA: Unprecedented cool weather coupled with clear skies forced high and low temperatures far below normal for week. Hard freezes all areas. Lowest temperature was 1° above zero in Upper Tanana Valley. Only minor isolated precipitation. Topsoil moisture supply adequate all areas Rail-belt. High winds and a few rain occurrences hampered most harvest activities. Freezing temperatures Tanana Valley virtually stopped potato harvest. Silage chopping and hay baling activities strong in most areas. Potato harvest for storage about 50% completed Matanuska Valley, completed Tanana Valley.

ARIZONA: Temperatures ranged from near to slightly above normal central areas to 5° below normal north. Precipitation limited to showers first 2 days of week. Cotton crop generally good all areas. Maturity ahead of normal; at Yuma 90% open, harvest progressing normally. In Mohave County, about 1/3 open. In southeast August and September rain coupled with high humidity brought on late growth and caused boll rot. Practically all fields have had last irrigation. Controls for pink bollworm being applied statewide. Grain sorghums in all stages of development, harvest underway on limited scale. Harvest of alfalfa hay at steady rate, renovation of some fields at Yuma in progress. Alfalfa seed harvest nearly complete, yields generally poor to fair. Fall seeding of sugar beets in full swing in central Arizona. Early lettuce in Yuma area making good progress, planting, thinning, spraying active. In Cochise County cutting of early lettuce fields began September 25. Lettuce up good stands Salt River Valley. Planting fall vegetable crops underway. Lemon harvest active Yuma. Salt River Valley early lemon picking underway, quality good. Range conditions vary widely. Yuma and Mohave Counties mostly poor to fair. Central desert valley fair to poor. Southeastern and eastern higher elevations fair to good. Cattle and calves, sheep and lambs fair to good. Fall cattle and sheep sales have begun on Navajo reservation bringing premium prices. Screwworms remaining a problem.

ARKANSAS: General rains fell over State during week averaging 1.00 to 2.00 inches most sections except northeast and along extreme eastern border where amounts generally in 0.50 to 1.00 inch range. Larger weekly totals include Shirley in north-central section, 6.25 inches, Hot Springs 4.03 inches, and Marianna in east-central section, 3.90 inches. Scattered showers with heavier falls mainly in latter part of week and on weekend. Mean temperatures ranged from near normal in west-central portion to 4° to 5° above normal in central and north-central portions and along eastern border. Warm weather early in week followed by pronounced cooling late in week continuing through weekend. High temperature of 98° at number of locations across State early in week. Lowest of 54° occurred at Mena in extreme west-central portion on 23d. Harvest underway but slowed by showers. Rains improved outlook for late-maturing crops, fall seedings and pastures. Cotton mostly fair to good; about 50% open and 5% picked. Picking general next week if weather permits. About 2/3 rice crop combined, yields very good. Peak harvest underway as soon as dry enough. Light harvest begun on soybeans. Late beans helped by recent showers, early soybeans near maturity. Rains may help fill pods on some of this acreage. Corn and sorghum harvest made further progress. Hay harvest continued to bolster short supply most farms. Conditions improved for getting stands up on early-seeded small grains. Apple harvest well advanced. Grape Harvest about over. Okra volume declined. Pastures improved but still short most areas. Supplemental feeding still required few areas, but livestock remain mostly fair to good condition.

CALIFORNIA: Average temperatures 2° to 7° below normal central valleys; generally below normal throughout State. Freezing temperatures northern mountain basins. Light precipitation extreme northwest corner State, Eureka reporting 0.06 inch 21st and 22d. Harvest active alfalfa, field corn, milo, sugarbeets, near complete safflower, seed crops. Harvest underway cotton. Thompson grape harvest nearing completion. Most raisins rolled, many boxed, some delivered processors. Tray counts low. Picking grapes for wineries active. Sugar and quality good. Apple harvest on schedule, fruit sizes better than earlier expected, color good. Almond harvest 2/3 complete Sacramento Valley, knocking active other areas. Walnut harvest picking up momentum. Prune harvest virtually complete. Harvest late peach, nectarine and pear varieties continues. Picking light olive crop getting underway. Fig and date harvest continued. Pomegranates and quince being picked. Valencia orange harvest continues. Some splitting noted new navel crop. Light picking lemons and avocados continued, harvest summer grapefruit virtually complete. Artichokes, light volume. Broccoli and cauliflower, Santa Maria, seasonally active. Westside cantaloupe near completion, desert cantaloupes start early October. Carrot digging continues. Celery active Santa Maria. Sweet corn harvest remains active. Honeydew, Sacramento Valley, declining rapidly. Salinas, Santa Maria lettuce moderate. Onion harvest continues San Joaquin, increasing northern California. Bell pepper harvest continues. Merced-Modesto sweet-potato digging increasing. Tulelake potato harvest

started. Fresh market tomato harvest active King City and San Joaquin. Cannery tomato volume declining, Sacramento and San Joaquin Valley, central coast active. Ranges continue dry, providing little forage. Increased movement stock off summer ranges reported. Feedlot activity remains high. Hay supplementation increasing. Permanent pasture growth slowed due seasonal cooler temperatures. Livestock good condition despite drought conditions. Early calving, lambing southern and coastal areas. Milk and egg output per unit at seasonal levels.

COLORADO: Substantial rainfall west of Continental Divide; generally 0.50 to 1.00 inch totals. Eastern Plains mostly sunny and warm with some light scattered showers all areas. Cool nights slowing maturity of crops. Harvest active most areas. Surface soil moisture adequate northeast, short to very short other areas. Fall grain seeding final stages. Winter wheat 91% seeded, 65% emerged. Condition very good. Winter barley 88% seeded, 54% emerged. Corn 90% dented, 78% mature. Corn silage 67% cut. Sorghum 80% turned color, 68% ripe. Sorghum forage harvest 44% complete. Dry beans 73% cut, 40% threshed. Late summer potato harvest 77% complete. Fall potatoes 20% dug. Sugar beet condition excellent. Cutting 3d crop alfalfa 79% complete. Range and pastures improving most areas. Livestock condition fair to good.

FLORIDA: Continued hot and dry except for cool spell Thursday and Friday. Temperatures near normal. A high of 96° at Tampa on 19th was highest temperature recorded so late in season. Rainfall averaged less than 0.30 inch north and central Florida and over 1.00 inch lower East Coast and Keys in weekend showers. Rainfall sparse with north and central Florida receiving less than 10% of normal rainfall so far this month. Highest amounts in Keys which show half of normal. Harvest of corn and peanuts progressing rapidly. Early varieties of soybeans maturing. Moisture needed for late-planted soybeans. Dry weather hampering grass growth most areas. Hay harvest accelerated during dry weather. Citrus tree condition very good, rain needed all areas, irrigation underway. Color break showing up on Hamlins, grapefruit and tangelos. Planting of fall vegetables remains active. Included are snap beans, cabbage, celery, sweet corn, cucumbers, leaf crops, peppers, potatoes, radishes, squash, and tomatoes. Land preparation underway for strawberries. Small quantities of pole beans, cucumbers, eggplant, radishes, and summer squash harvested, with first Everglades sweet corn expected this week.

GEORGIA: Light to moderate rain northwest and extreme north early in week, little or none remainder of State. Much of central and south extremely dry. Some areas have had less than 0.50 inch in last 6 weeks. Unseasonably high temperatures last 2 weeks have contributed to moisture stress. Highs in mid- to upper 90's south and upper 80's to low 90's north on most days. Lows mostly in 60's except some 50's in mountains. Averages ranged from 1° to 5° above seasonal normals. Soil moisture mostly adequate northwest corner, remainder of State mostly very short. Late-season crop prospects declined rapidly. Cotton mostly fair condition--harvest 13% complete. Corn fair to good with harvest 1/5 complete. Peanuts 95% dug and 89% threshed--remainder in fair to good condition. Soybean condition dropped sharply--in poor to fair condition. Hay crops and pastures mostly fair. Small grain and winter grazing seeding well behind normal at 9% planted. Cattle mostly good.

HAWAII: Warm and dry. Light showers mainly mountain areas. Progress of crops fair to good with heavy irrigation. Supplies of vegetables adequate. Seasonal increases for bananas and papayas. Sugarcane harvesting normal but pineapple harvest declining. Seasonal uptrend in coffee and macadamia nut harvest. Pastures and cattle in fair to good condition. Some lowland pastures need more moisture.

IDAHO: Temperatures averaged normal to slightly below normal. Freezing temperatures most all higher valleys with many lows in mid- and upper 20's last part of week. Precipitation variable with reports ranging to more than 1.00 inch Panhandle and 0.25 to 0.50 inch east. Elsewhere totals ranged less than 0.10 inch. Potato digging rapidly increasing. Vine killing by chemicals still underway in the absence of killing frosts. Harvest about 20% complete in the southwest, 10% in the Magic Valley, and 5% in the east. Unsettled weather hampered bean and hay harvest. Beans about 80% harvested and 3d cutting alfalfa nearly 50% complete. Silage chopping about 70% done with very little frost damage. Fall seeding held up in north because of lack of rain. About 25% fall seeding done in north and about 50% in south Idaho. Apple picking nearly 25% complete. Livestock movement increasing due to snow in higher elevation ranges.

ILLINOIS: Temperatures averaged 1° to 6° above normal in spite of late week cooling. Readings ranged from mid-90's over southern portion of State at midweek to lows in mid-30's in northwest corner by weekend. Scattered light frost in northwest. Weekly precipitation totals over 1.00 inch fairly common especially in northeast corner of State where several points recorded over 4.00 inches. Corn 85% mature, 3% harvested: 1971 10% harvested. Dry weather is needed. Soybeans progress slow, 85% all yellow, 2/3 shedding leaves; 8% combined, about normal but well behind 1971. Third crop alfalfa hay 80% cut, slowed due to rains, year ago 90% cut. Winter wheat 15% seeded, about same as 1971. Pastures doing well, 78% good to excellent. Soil moisture short 15%, adequate 58% and surplus 27%.

INDIANA: Sunny and warm early in week. Cloudy with showers over weekend. About 1.00 inch central, 0.75 inch north, 0.25 inch southeast. Humidity high and evaporation below normal. Temperatures ranged from 49° on 22d to 92° on 19th. Five days suitable for fieldwork. Excess moisture in north offsetting dryness in south. Topsoil and subsoil moisture adequate. Wheat land 75% plowed, 65% average. Wheat 10% seeded, 15% average. Rye 25% and barley 15% seeded, both behind average. Corn 45% mature 50% average, corn 93% in dent or later. Soybeans 60% turning yellow, 35% shedding leaves, also behind. Tobacco 60% harvested. Pastures fair to good.

IOWA: Hot early week with maximum temperatures to 95° turning cooler about 20th. Statewide light scattered frost morning of 22d. Lowest 31° at Carroll and Fayette. Dry statewide except evening of 24th when moderate to heavy showers began falling over northern district. Corn crop is 80% mature and safe from frost with 5% harvested, about the same as average. Soybeans 70% shedding leaves with slightly less than 70% mature. Less than 5% of soybean harvest complete, same as average, but behind 11% of last year. Soybeans condition 59% good, 38% excellent, 2% fair. Winter wheat 35% planted compared with 51% last year. Third cutting alfalfa hay about 80% complete. Pasture condition 51% excellent, 47% good,

2% fair. Over 80% of popcorn crop is mature and safe from frost, less than 5% harvested. About 5 1/2 days suitable for fieldwork. Topsoil moisture 72% adequate, 26% surplus, 2% short.

KANSAS: Light to moderate precipitation most of State. Generally 0.25 to 1.25 inches. Locally heavy rains west-central and eastern 1/3 with few spots over 1.50 inches. Unseasonably warm weather ended 20th. Weekly mean temperatures averaged 2° to 3° above seasonal south-central, east-central, and northeast, near normal elsewhere. Maxima in 90's early in week dropping to 60's and 70's September 21 and 22. Warming trend after 22d pushed maxima to 70's and 80's on 24th. Wheat seeding excellent progress in west, State averaged 38% in ground compared 24% last year and 10-year average 34%. Wheat emerging well aided by precipitation. Fall crops helped by warm weather but behind usual maturity. Sorghum grain 28% mature, average 34% and 5% harvested, average 7%. Corn grain 62% mature, average 69% and 8% harvested, average 13%. Silo filling in full swing. Soybean harvest slow starting with 10% combined, 11% last year and average 4%. Dry bean and apple harvest progressing. Fourth cutting alfalfa, 38% harvested, average 46%. Fall alfalfa seeding 7/8 finished with mostly good stand. Some cattle contracted for fall delivery and some moved off pasture along with considerable in and out movement at feed yards.

KENTUCKY: Moderate to heavy rain over much of Kentucky, light in southeast and southwest. Totals ranged from 0.04 inch to almost 3.00 inches. Many locations had over 3 to 4 weeks without a day's rain of at least 0.25 inch. Temperatures 4° to 6° above normal generally. Showers and thunder-showers over much of State on night of 21st and on 23d and 24th. Temperature above normal most days except below normal 22d. Early morning temperatures middle 40's to low 50's Bluegrass and east on 21st. Soil moisture short all districts, week-end rains gave some relief. Harvest of major crops on schedule. Fall wheat 20% seeded. Germination condition poor prior to weekend rain. Corn silage cutting winding up, good tonage reported. Corn harvest 5% complete compared to 10% year earlier. Burley 88% cut, 82% last year. Dark types 88% cut, 86% year earlier. Weather ideal for housing and curing. Soybeans maturing on schedule, 4% harvested, 31% shedding leaves, another 35% leaves turning yellow. Pastures fair to poor, too dry in most areas.

LOUISIANA: Hot and humid for 3d consecutive week. High temperatures upper 80's to mid-90's. Lows upper 60's to mid-70's. Weekly averages 3° to 8° above normal. Extremes: 99° Winnsboro Tuesday; 62° Ashland Wednesday. Weekly rainfall totals highly variable. Many points less than 0.50 inch but weekly totals more than 2.00 inches scattered areas. Greatest 1-day rain, 3.04 inches, measured at Lake Charles this morning. Fieldwork made good progress despite some interruptions. Crops matured rapidly with continued hot weather. Harvest of cotton, corn, rice, soybeans, sorghum grain, and sweet potatoes progressed favorably. Cotton about 55% open, but less than 5% picked. Insect control continued. Corn 75% harvested, rice 95%, soybeans about 5%, sorghum grain about 75% and sweet potatoes 45% harvested. Sugarcane prospects good, planting 80% complete. Pecan prospects generally light. Winter oats 20% seeded, wheat 15% seeded. Pasture feed below average. Livestock in good condition.

MARYLAND AND DELAWARE: Temperatures averaged near normal. Extremes mostly upper 80's and low 90's, mid-40's to mid-50s, 5° to 10° lower in Garrett County area. Rainfall mostly 0.50 inch or less. Weekly maximum only 0.90 inch. Many stations in northern and central Maryland and northern Delaware have had less than 1.00 inch for September through 25th. Small relief for dry soils. Corn harvest 1/4 done southern counties, but just starting in north, about 1 week late. Soybean maturity slow as plants respond to late moisture. Tobacco harvest 95% done, good weather for curing. Sweet potatoes 10% dug. Fall snap bean harvest 25% done in Southern Shore. Peppers 85% picked. Red and golden Delicious apples at peak of harvest.

MICHIGAN: Near seasonal temperatures until turning cooler after midweek with spotty heavy frost interior northern sections. Warmer, showers as period ended. Temperature averages 1° above normal south to 1° below normal north Upper Peninsula. Near normal most sections except 3° above normal west-central to 3° below normal south-central interior section. Precipitation averages: 0.25 to 0.75 inch Upper Peninsula; Lower Peninsula, trace northeast to 0.10 to 0.30 inch south increasing to 0.75 inch to locally over 1.50 inches northwest. Wet fields slowed or halted harvest of field crops and vegetables. Some frost damage to corn interior areas of northern Lower Peninsula. State averaged 4.2 days suitable for fieldwork. Soil moisture adequate to surplus. Corn 26% mature compared with 52% last year and recent year average of 49%. About 20% corn for silage harvested, but much still too immature for harvest as silage. Only 3% soybeans mature compared with 28% last year. Dry beans 20% harvested; mold and rot causing some loss to dry beans. Sugar beet harvest started. Wet fields retarding potato harvest; about 35% harvested. About 18% winter wheat planted compared with 48% a year ago and recent year average of 39%. Picking of Jonathan, McIntosh and Delicious apples active. Wet fields still slowing vegetable harvest.

MINNESOTA: Temperatures near normal. Temperatures 32° and less common in north-central and all eastern districts sometime during period. Extremes: 98°, 24°. Little to no rain northwest, north-central, and west-central districts, about 0.50 inch in southwest, central, and south-central districts. Eastern district varied from 1.00 inch to more than 5.00 inches. Flash flood in Duluth and North Shore areas on September 20 caused an estimated \$14 million damage and 2 people were drowned. Corn and soybeans made good progress. Few areas experienced frost damage to soybeans. Some corn in eastern areas developed stalk rot and leaf diseases. Topsoil moisture adequate to surplus eastern districts, short in west-central district and mostly adequate elsewhere. Corn 69% safe from Frost, normal 65%. Corn silage cut 45%, normal 59%. Soybeans mature 20%, normal 34%, combining just beginning. Flax combined 65%, normal 73%. Hay and green stubble plowed 60%, normal 47%. Potatoes harvested 30%, normal 31%. Sugar beets harvested 10%, normal 10%. Small grains seeded: winter wheat 90%, normal 79%; rye 83%, normal 77%.

MISSISSIPPI: Temperatures averaged 4° to 6° warmer than normal north and 8° to 10° above normal south. Extremes: 99° Waynesboro Wednesday, 54° Laurel Saturday. Rainfall from 0.50 inch south to over 3.00 inches north. Soil moisture improved. Short to adequate north; very short to

adequate central; short south. Five days suitable for fieldwork. Cotton mostly fair to good, 46% open, 10% harvested. Corn mostly fair, 70% mature and 28% harvested. Soybeans fair to good, 30% shedding, 20% mature and 4% harvested. Rice is fair to good, 80% mature and 50% harvested. Pecans are mostly fair.

MISSOURI: Record warmth early in week. Cooler air across State late in week bringing seasonal temperatures. Temperatures averaged about 5° above normal. Rain with arrival of cool air was quite varied. Heaviest amounts west-central where some stations received over 2.00 inches. Some areas of northwest and Bootheel received less than 0.10 inch. Four days suitable for fieldwork. Corn mostly good condition, 53% mature, 8% harvested, 22% a year ago. Soybeans remain in good condition, 4% harvested, 14% last year. Grain sorghum 49% mature, 10% harvested compared to 22% last year. Cotton remains good, 5% harvested. Soil moisture 29% short, 61% adequate, 10% surplus.

MONTANA: Very warm first of week, cooler midweek and strong cooling over weekend. Temperatures averaged from 3° to 7° below normal. Precipitation generally above normal with amounts mostly from 0.25 inch to 0.75 inch, with rain and snow mixed over weekend. Winter wheat 45% seeded. Germination good northwest and central, fair to good elsewhere. Topsoil and subsoil moisture short to adequate. Potatoes 10% harvested, corn silage 70% harvested, flaxseed 60%, dry beans 65%, 2d cutting alfalfa 90% complete. Average date to begin sugar beet harvest September 27. Cattle 35% moved from summer ranges, sheep 40% moved. Stockwater supply adequate. Feed grain supplies available for sale normal and above northwest, northeast, southcentral and southeast, below normal to normal elsewhere. Hay and roughage supplies variable normal to below normal northwest, central and southwest.

NEBRASKA: Week was one of extremes in both temperature and precipitation. The 16th through 19th was dry and abnormally hot, with Hastings registering 103° on 18th. A surge of Canadian air brought the first general 32° freeze of fall to portions of northwest 21st, with Agate recording 19° minimum. Rainfall was light or absent over much of northwest half, in addition extreme southeast. Weekly totals of 1.00 inch or more were confined mainly to south-central and east-central divisions. A fresh surge of cool air moved across most of Nebraska weekend of 23d triggering scattered light rain in northwest. Silage harvest and sowing wheat were main activities. Wheat planting 70% completed compared with 61% normal and 67% last year. Some reseeded, emerged stands even and good growth. Corn development slow, with corn 52% mature, compared with 63% normal. Some early corn picking and high moisture corn harvest. Silage harvest full swing. Sorghum 92% turning color, and 30% ripe, slightly less than normal. Soybeans 55% shedding leaves, and 20% ripe with some harvest started very limited basis. Dry bean harvest made good advances with some wind damage to windrowed beans. Planting of rye and legumes 90% completed.

NEVADA: Cool week. A storm moved through State on Monday and Tuesday. Light precipitation north and moderate to heavy amounts northeast and south. Temperatures 2° to 4° below normal north; 1° to 4° below normal south. Extremes: 98° at Logandale and 22° at Winnemucca. Alfalfa seed harvest continues in full swing and nearing comple-

tion some areas. Cutting of alfalfa hay still active with 3d cutting underway in central and west. Sixth cutting in progress in southern valleys. Cattle and sheep continue in good condition with stockwater generally adequate in most areas.

NEW ENGLAND: Week averaged from normal to about 3° below normal. Hot on Monday with highs mostly in 70's and 80's. Cold mornings with freezing at some colder locations on September 20, 21, 23 and 24. No general freeze this fall in southern and coastal sections. Frequent but very light rain daily except 23d gave weekly totals less than 0.10 inch in Maine. Heavier rain on 19th in many locations gave totals varying up to 1.00 inch in New Hampshire, Vermont, and western portions of Connecticut and Massachusetts, and up to about 4.00 inches in extreme southeast, including Cape Cod. General fall harvest progressing without interruption. Silage corn being cut with some holding back to allow for maturity. Good quality hay still going into barns. Potato digging active in Aroostook County, Maine. Freeze killed vines of Russett Burbanks which could use more growth. Apples coloring well with picking active. Cranberry harvest active with good yields, quality and color. Late summer vegetables tapering off.

NEW JERSEY: Temperatures averaged near or a little below normal, sharp contrast to the warm weather of previous week. Readings reached mid-80's early in week but dipped to mid-30's toward weekend. Precipitation variable ranging from 0.20 inch to 4.10 inches. The northwestern counties had greatest totals. Showers during period but additional rainfall would be beneficial. Harvest of fall vegetables is increasing. Peppers, eggplant, and squash supplies are moderate. Very limited amounts of corn and tomatoes available. Good supplies of apples moving from all areas. Cranberry harvest increasing. Soil preparation and seeding grain crops active. Showers have been beneficial for germination and growth. Some soybean fields well colored.

NEW MEXICO: Scattered light showers early in week mostly in north. Cooler with weekly temperatures averaging near normal. Coolest Friday and Saturday with a few local freezing temperatures north and mountains. Warmest Monday. Warming in southeast on weekend. Soil moisture adequate except short far northwest. Sunny open weather beneficial, fields drying out. Harvest gaining momentum. Southern cotton opening rapidly, northern just starting opening. Haying resuming, hampered heavy morning dews. Planting wheat nearly finished. Grain sorghum ripening, occasional fields combined. Harvesting Irish potatoes, sweet potatoes, lettuce, corn ensilage, and mixed vegetables. Peanuts maturing. Ranges, livestock good.

NEW YORK: Considerable day-to-day temperature variations with weekly averages below normal eastern half. Maximums 85° southeast and near 80° elsewhere on 18th ranging down to 60° to 65° 1 or 2 days late week. Minimums 35° to low 40's Upstate on 20th, 21st, and 23d with 30° to 32° in a few normally cooler localities. Precipitation general on 18th to 19th and in southeast on 21st. Totals mostly 0.30 to 0.60 inch. Some scattered areas heavier. Showers on 24th of 1.30 to 1.90 inches Great Lakes county but decreasing to 0.20 inch or less eastern valleys and Long Island. Corn silage harvest 20% complete. Corn maturing slow. Poor drying conditions

slowed harvest on early dry beans. Most 2d cutting alfalfa harvested. Development on 3d cutting slowed. Fields being prepared for winter wheat. Potatoes moving to storage on Long Island. Up-state harvest active. Steuben area 1/3 complete with most supplies moving direct to processors. Onion harvest complete Orange County, western and central sections active. Most sections will be completed in 1 to 2 weeks. Shipments active. Processing snapbeans deliveries now heavy. Extended season needed to complete harvest of sweet corn, snapbeans, cabbage and tomatoes. Grape harvest increasing, Finger Lakes. Processing apple harvest underway western New York, quality good. Peach and pear harvest near completion.

NORTH CAROLINA: Temperatures above normal at first, dropping to near normal. Showers 18th and in east portion 21st. Total amounts variable trace to 3.00 inches mostly 0.50 to 1.00 inch. Soil moisture adequate central, southern coastal plains; mostly short to adequate remaining areas. Corn for grain 1/3 harvested--cutting silage western counties. Soybeans mostly good--insects, weeds and grass problems some fields. Peanuts fair to good commercial areas--digging gaining momentum. Cotton mostly fair--leaf defoliation underway, limited picking. Commercial apples--harvest approaching halfway mark in lower mountain elevations. Commercial sweet potatoes mostly good--tubers sizing well, harvest active. Recent rains revived pasture growth. Burley tobacco harvest active western counties.

NORTH DAKOTA: Windy most of week with frequent changes in temperature. Highs ranged from 40's to 90's and lows from 20's to 50's. Considerable cloudiness. A few light sprinkles during week and scattered showers on weekend. Rainfall totals varied from a trace to 0.50 inch, heaviest in north and west-central areas. Cool temperatures and generally poor drying conditions continued to delay windup small grain harvest. Over 3/4 durum combining completed. Hard wheat, oats and barley harvest nearing completion. Potato acreage about 1/3 dug. Lifting sugar beets underway.

OHIO: Temperatures much cooler than normal. Lows and highs ranged from upper 30's to upper 60's and upper 50's to mid-80's, respectively. On 20th, Oberlin had low of 39°. On 22d Youngstown reported 38°. On 22d Youngstown high only reached 58°, while Toledo had a high of only 57° on 23d. Ohio was generally free of rain from 19th to 22d. Rainfall amounts on 18th, 23d, and 24th were locally heavy. Crop moisture index indicated that conditions in the northwest, north-central, and central hills climatic divisions were too wet while conditions in the south-central climatic division were too dry. Wet muddy fields are a problem in the northern 1/3. Soil moisture 29% short, 52% adequate, surplus 19%. Corn for grain 35% mature, last year 70% mature; harvest getting underway in some areas. Corn for silage 45% complete, 25 percentage points behind last year. Soybean crop is 1/5 mature, last year 45%. Harvest started in a few localities. Third cutting alfalfa 80% harvested. Potato harvest about 1/2 complete. Tobacco crops 90% harvested, surpassing last year at 70%. Fall acreage seeded; winter wheat 15%, winter barley 30%, rye 25%.

OKLAHOMA: Precipitation occurred all sections and ranged from 0.20 inch southwest to 1.80 inches

east-central. Temperatures averaged slightly above normal and ranged from normal in Panhandle and south-central to 3° above normal central and northeast. Few 100° readings mostly in southwest quarter of State early in week. Much below normal all sections Friday. Row crop condition remains fair to good. Cotton development sharply ahead year earlier, development other row crops about same. Soil moisture supplies increased, surface moisture 2/5 adequate, subsoil moisture 1/3 adequate, balance short. Harvesting corn for grain outside Panhandle active. Some light picking cotton continues southwest and east-central Oklahoma. Scattered harvesting of peanuts and soybeans. Seeding 1973 wheat crop nearly completed Panhandle, rapid progress elsewhere, nearly 1/2 completed for State compared 1/4 year earlier. About 1/10 crop up to acceptable stand. Nearly 3/5 corn for grain crop in Panhandle mature, with harvest few fields beginning. Over 1/2 sorghum grain mature, nearly 1/10 harvested. Birds causing scattered local heavy damage. Cotton bolls opening rapidly, nearly 3/5 bolls open compared 1/5 year earlier. Slightly over 2/5 peanut crop and 1/5 soybean crop mature. Alfalfa now making favorable growth, 4th cutting 3/5 completed. Range and pasture condition improving but grazing still short many areas and supplemental feeding continues. Most livestock good to fair.

OREGON: Cooling trend averaged weekly temperatures near normal with rain most of period, heavy northwest 1/3 of State. Varied minima 26° to 41° eastside, 34° to 50° western 1/3. Maxima 66° to 94°. Rains mostly trace southeast quadrant, 0.10 to 0.50 inch northeast and southwest, 1.30 to 2.00 inches Willamette Valley, 2.50 to 5.00 inches Cascades and northern coast. Land preparation and fall seeding halted in western Oregon by rains late in week, but continues eastern Oregon. Early-seeded grain is up in Columbia Basin Counties. Red clover seed harvest nearly complete, alfalfa seed harvest continues. Sweet corn and bush beans still being harvested. Pear harvest continues. Apple harvest activity will increase next week. Russett potato digging continues at Ontario and Hermiston, with Norgolds being shipped from Klamath Falls. Cattle moving in from summer ranges.

PENNSYLVANIA: Rather cloudy with showers or light rain beginning and end of week. Clouds, drizzle, and light rain persisted in east during midweek. Weekly rainfall 0.10 to 0.25 inch southeast, 0.50 to 0.75 inch northeast and extreme northwest, 0.25 to 0.50 inch elsewhere. Temperatures near normal south and west, 2° to 4° below normal central and northeast. Scattered frost northern sections Saturday morning. Corn over 10% matured, ensilage past 1/3 mark. Potatoes past 1/4 mark. Tobacco nearing final stages of an irregular crop. Fall plowing nears 2/3 mark. Winter barley 1/2 planted, winter wheat 1/4. Early-seeded grains and alfalfa show good stands, slow growth. Hays and pastures greened, growth short.

PUERTO RICO: Frequent moderate to heavy shower and thunderstorm activity islandwide except light to moderate South Coast. Rainfall averaged 1.75 inches or about 0.25 inch below normal. Highest weekly total 11.18 inches in northwest coast with 5.66 inches in 1 day. Minor flooding but no significant crop damage. South-central coast received less than 0.50 inch for week in a drier zone which extended northward to northeast coast. Crop moisture conditions near normal most zones

except too wet some western fields and too dry in south-central coast. Temperatures averaged 80° to 81° on coast and 76° interior divisions with mean departure of 1.3° below normal. Highest maximum 94°, lowest minimum 59°. Young sugarcane continued good development especially non-irrigated zones. Coffee harvesting continued on schedule except some delays in west due heavy rains. Tobacco seedbed preparation continued under favorable weather conditions. Pastures much improved all zones except more rain needed south-central coast where mild to moderate agricultural drought continued some zones. Minor crop zones active planting, cultivating, and fertilizing with good abundance of plantains, bananas, and vegetables on market. Avocados nearing end of season.

SOUTH CAROLINA: Variable amounts rain on first day; rest of week warm and dry. Temperatures averaged 3° above normal all sections. Extremes: 97° and 51°. 1.00 to 2.00 inches rain Oconee County and from Berkeley County to Horry County along northeast coast. 1.00 inch near Anderson and Columbia, other areas averaged about 0.50 inch except south was rather dry. Cotton 45% open bolls 3% harvested. Corn 43% harvested, 30% last year. Soybeans fair to good condition; yield expectations declining. 97% set pods, 29% leaves turning color, 13% leaves shedding, 4% mature. Peanuts 68% harvested, apples 72% harvested. Pecans poor condition. Pastures fair. Winter grazing 23% planted. Fall hays 59% harvested. Fall vegetables poor.

SOUTH DAKOTA: Weekly temperatures averaged up to 6° above normal. Freezing temperatures in northwest with spotty areas of frost other locations of northern half of State on 21st. Extremes ranged from 27° at Oral and Herrington on 21st to 99° at Clear Lake on 18th. Precipitation fell as showers and thundershowers middle and end of week locally heavy amounts in southeast. Vermillion received 1.31 inches on 20th. In other areas, amounts ranged from zero to about 0.25 inch with little or no precipitation in most of west and central areas. Warm, dry winds over most of the State aided row crop maturity. Corn at 84% mature and safe from frost is equal to normal, but behind last year. Silage harvest well underway many areas and nearing completion in others. Average date in October harvest expected to start: Corn, 11th; sorghum, 8th; and soybeans, 13th. A few early farmers have begun picking corn. Sorghum 85% showing head color is behind last season and normal, but generally looks good with good yields expected if frost holds off. Soybean maturity well behind normal and last year with 75% shedding leaves. Early beans look good, but late beans may not mature. Fall seedings need moisture many areas to insure uniform stands. Fields spotted many areas with a few areas lacking enough moisture to germinate seed. Greenbugs a problem in winter wheat, spraying underway in many areas with some acreage being reseeded. Pastures becoming dry, fire hazard in West River. Livestock condition good.

TENNESSEE: Temperatures averaged above normal for 2d consecutive week. Scattered light showers weekend with a few locally heavy showers northern Cumberland Plateau and parts west-central. Corn and cotton harvest continues. Approximately 5% cotton and over 10% corn harvested. Both slightly behind normal. Twenty percent of soybeans have matured, harvest should begin within the next 2 weeks. Tobacco harvesting nearing

completion; 85% dark-fired, over 95% burley and virtually all dark-aircured is harvested. Nearly 35% wheat and almost 50% oats and barley are seeded.

TEXAS: A slow-moving cool front triggered heavy showers in southwest Texas Wednesday, including 6.79 inches at Case Range, northwest of San Angelo and widespread shower activity over the eastern half of State throughout the latter half of week. Two- to 4.00-inch totals were numerous in the Coastal Bend area Saturday. Temperatures were cooler except in extreme South Texas. Harvest of cotton, corn, sorghum and peanuts making fair to good progress. First sorghum harvested on High Plains. First bales ginned on Southern High Plains. Recent cold weather on High and Low Plains delayed maturity of cotton. Wheat and oat seeding making fair to good progress. Wet weather delayed planting on High and Low Plains, short moisture forcing farmers to dry plant some central and southern localities. Major crops percent harvested: cotton 26, last year 16; corn 61, last year 69; sorghum 45, last year 44; peanuts 31, last year 21. Major crops percent planted: wheat 54, last year 49; oats 31, last year 31. On High Plains, harvest of cabbage, bell peppers, lettuce, carrots continues. Other vegetables remain in good condition. In Trans-Pecos, pepper harvest continues. Lettuce progressing satisfactorily. North Texas, light supplies watermelons and cantaloupes still available. Central and East Texas, digging of dryland sweetpotatoes in full swing. Irrigated crop prospects remain good. Winter Garden-San Antonio, cucumber picking begun on early fields. Tomatoes and peppers making fair growth. Laredo, tomatoes, peppers, cucumbers and eggplant continue good growth. Lower Rio Grande Valley, planting cabbage, carrots and lettuce continues. Peppers and tomatoes making good growth. Pecan harvest earlier than normal. Potential present for making excellent crop. The 1972-73 citrus crop sizing well and making good growth. Some harvest of early oranges and grapefruit.

UTAH: A storm of moderate to heavy intensity swept across much of State first few days of period. Accumulated amounts of moisture ranged from a few 100ths of an inch to well over 1.50 inches at several stations southwestern Utah. Temperatures dropped following storm to near or below freezing at about 1/3 of stations. Little crop damage. Harvest weather to date generally very favorable. Planting winter wheat for 1973 now 80% completed. Harvest of 3d crop alfalfa hay 75% completed. Cutting of field corn for silage 50% completed. Potato harvest southern Utah about 17% completed. Onions 20% lifted and drying in fields. Apple picking barely started Utah County. Tomato picking 85% completed. Fall and winter range feed only 55% of normal.

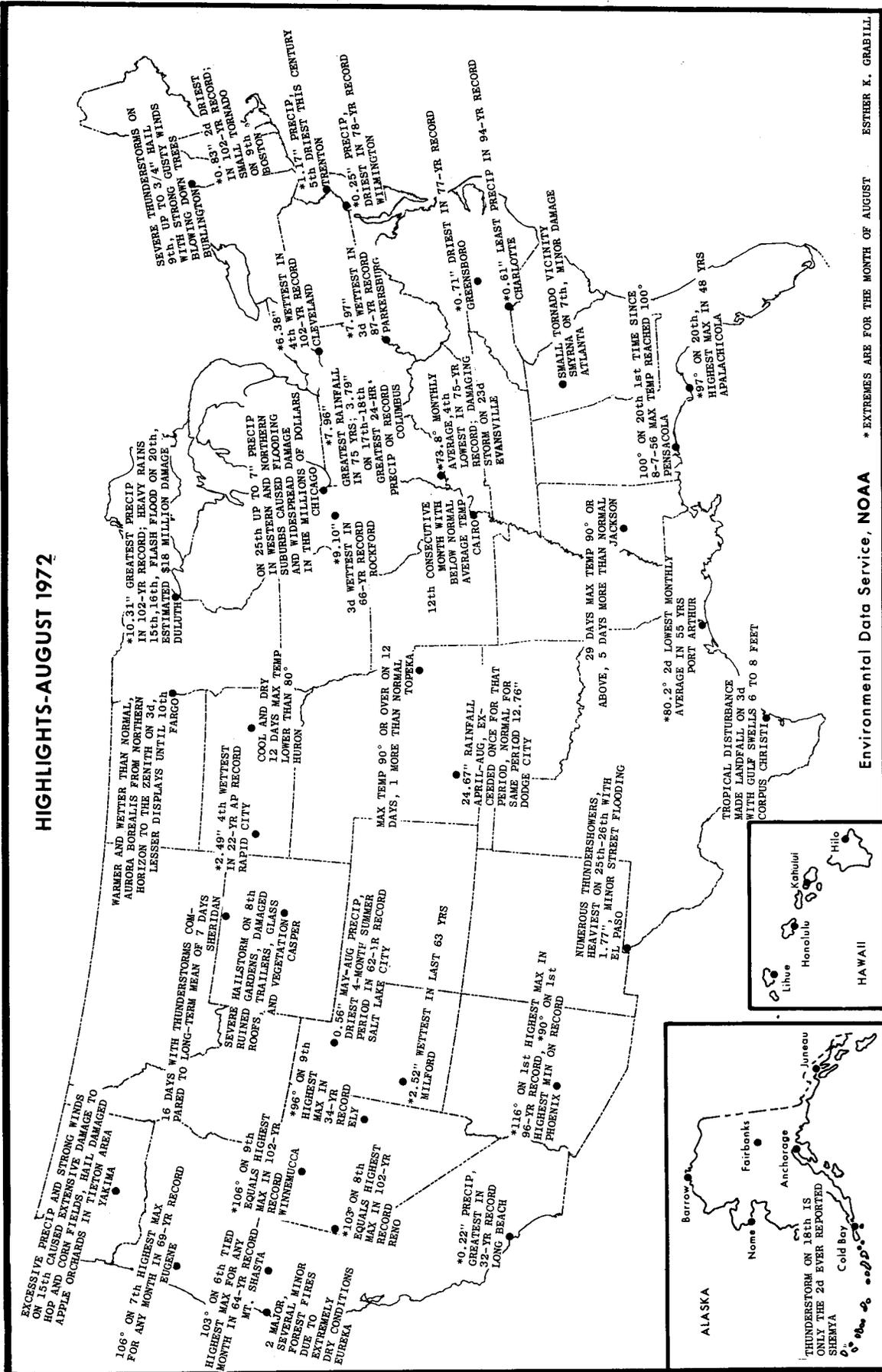
VIRGINIA: Temperatures below normal except above normal at beginning. Scattered showers and thundershowers. Totals up to 8.00 inches in southeast. Topsoil moisture short in 2/3 of State. Corn 13% picked. A few peanuts dug, most not mature. Barley and oats 15% sown, wheat 5%. Cotton picking began. Pastures deteriorated rapidly. Sweet potatoes 10% harvested. Red delicious and golden delicious apples nearly picked east of Blue Ridge, north to Madison County. In Winchester area harvest of these varieties well underway, but week later than normal. Prospects below earlier expectations.

WASHINGTON: **Western Washington:** Light rains along coast followed by general rains and ending with showers. Temperatures 2° to 4° below normal. Bremerton, Seattle-Tacoma, and Olympia received over 3.00 inches of rain. Strong winds and rain slowed fieldwork and caused considerable lodging of corn. Pruning of Christmas trees and harvesting of truck crops continued. Picking of blackberries ended. Livestock in good shape. **Eastern Washington:** Temperatures began warm Saturday in 80's. A storm accompanied by gusty winds and rains gradually moved eastward. Rain-fall amounts for week mostly 0.25 to 0.50 inch. Temperatures 1° to 6° below normal. Clear skies on 20th allowed temperatures to drop into the upper 20's northern sections. Picking of apples well underway while grape harvest picked up. A few dryland farmers had winter wheat seedings blown out by wind. Some fall seeding delayed. Hop and sweet corn harvest nearly complete. Diggers started to move into sugarbeet fields. Harvest of alfalfa seed, silage corn, and potatoes continued. Fall pastures and livestock generally in good shape with movement of calves to market picking up.

WEST VIRGINIA: Warm week with little rain. Light showers September 21 and heavier rain September 24. Highest temperatures September 18, -- lowest September 21 and 23. Fieldwork favorable average 5 1/2 days. Main activities haying and silage cutting. Soil moisture mostly short. Pastures and hay crops fair to mostly good. Tobacco cutting 81% finished, 61% last year. Corn late, needs long growing season to mature. Corn mostly dough and dent stages. Wheat 13% planted and barley 21%. Potatoes 72% dug.

WISCONSIN: Continued wet weather caused difficult harvest conditions. About 10 weeks of continued heavy rains some areas have taken their toll in losses of hay and oats and abandonment of a large acreage of vegetable crops. Silo filling going on at a slow pace, about 15% completed against 60% last year. Most corn intended for grain safe from frost. Some northern and central fields hit Friday morning when temperatures dropped to 26° at Weyerhauser in the northwest. A few farmers still trying to harvest oats. Vegetable harvest struggling on. About 10% of sweet corn acreage abandoned due to soft ground. Cranberry harvest getting underway, good crop. Large apple crop ripening. Tobacco about all in the shed, better curing weather needed. Leaves turning on soybeans, crop generally good though some southeastern fields have standing water. A little 2d and 3d crop haying done, most green chopped into silos. Also baling straw. New feeding mostly good except poor where oats and straw remained late. Pastures excellent though soft. Mosquitoes continue bothersome to man and beast. Fall plowing getting started. Soil moisture 25% adequate and 75% surplus.

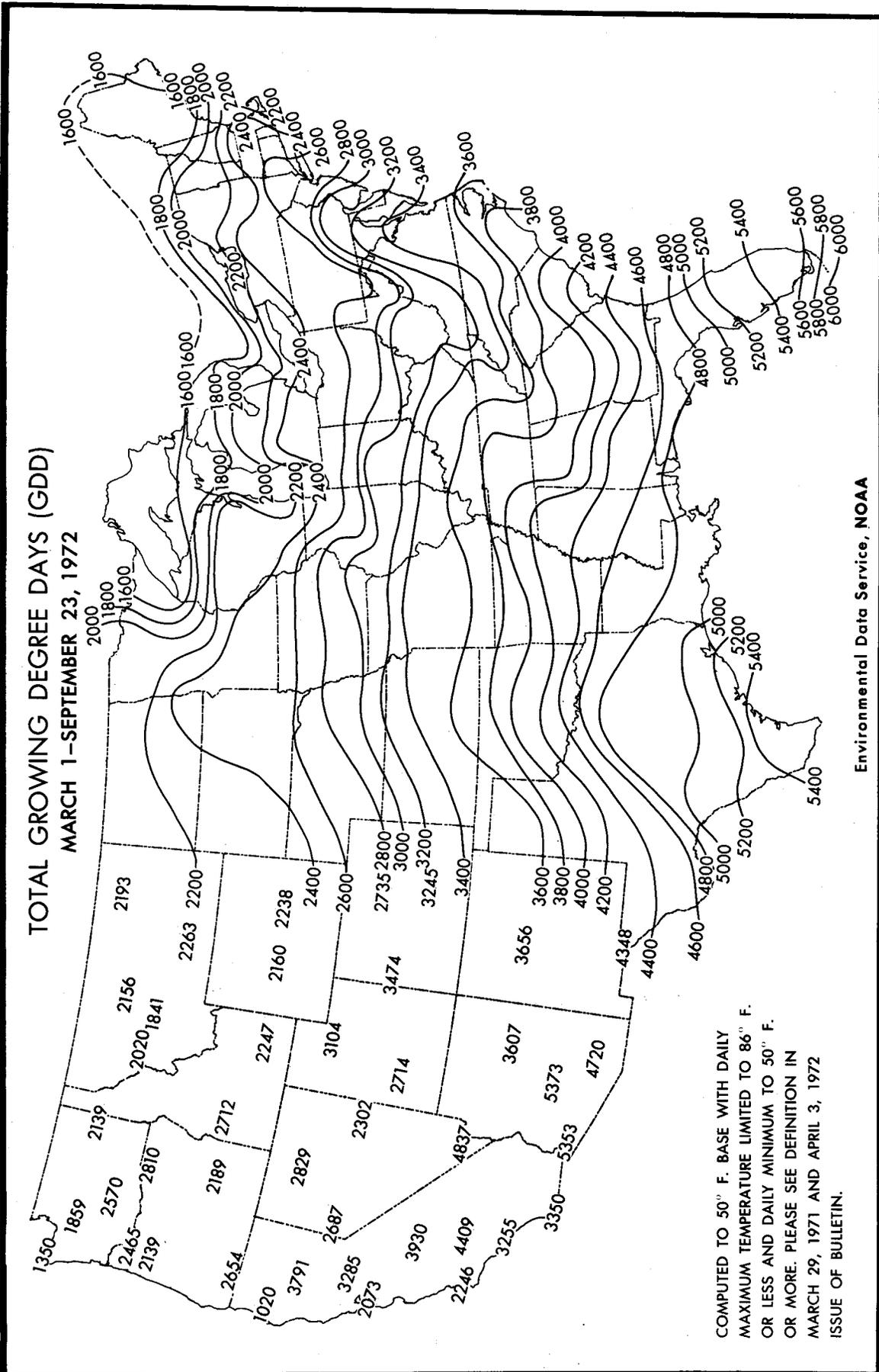
WYOMING: Moderate showers occurred along the western border, otherwise very light and scattered. Temperatures averaged near to a little above normal. Maxima mostly 70's west of Divide and Upper Platte Drainage, 80's elsewhere. Minima mostly teens and 20's west of Divide, 20's to 30's east. Most areas recorded frost and freezes. Temperature extremes: 90° at Lagrange, Gillette, and Sheridan Field Station and 7° at Bondurant. Agriculture included harvesting corn for silage, bean, and potatoes; drilling winter wheat and movement of livestock to fall ranges. Corn for silage 70% cut with corn for grain at 80% denting and 20% mature. Windrowing of dried beans was 80% completed with 30% combined. Winter wheat is 70% planted with much wheat emerged. Some livestock moving to market.

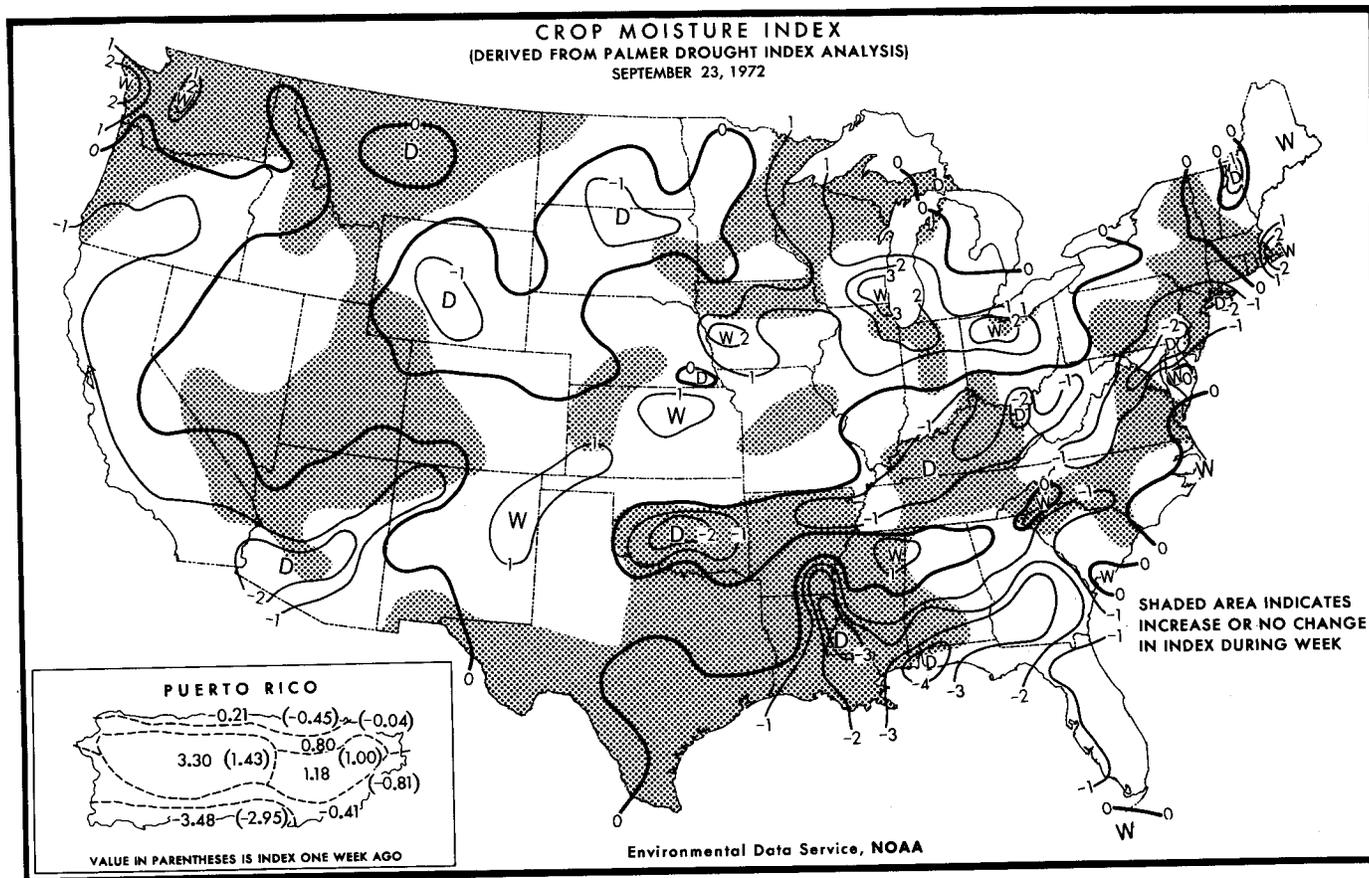


ESTHER K. GRABILL

*EXTREMES ARE FOR THE MONTH OF AUGUST

Environmental Data Service, NOAA





INDEX DECREASED DURING WEEK
(Unshaded Areas)

INDEX INCREASED OR DID NOT CHANGE DURING WEEK
(Shaded areas)

INDEX

ABOVE 3.0 SOME DRYING, BUT STILL EXCESSIVELY WET.
2.0 to 3.0 MORE DRY WEATHER NEEDED, WORK DELAYED.
1.0 to 2.0 FAVORABLE, EXCEPT STILL TOO WET IN SPOTS.
0 to 1.0 FAVORABLE FOR NORMAL GROWTH AND FIELDWORK.
0 to -1.0 TOPSOIL MOISTURE SHORT; GERMINATION SLOW.
-1.0 to -2.0 ABNORMALLY DRY, PROSPECTS DETERIORATING.
-2.0 to -3.0 TOO DRY, YIELD PROSPECTS REDUCED.
-3.0 to -4.0 POTENTIAL YIELDS SEVERELY CUT BY DROUGHT.
BELOW -4.0 EXCEPTIONALLY DRY, MOST CROPS ABOUT RUINED

INDEX

ABOVE 3.0 EXCESSIVELY WET, SOME FIELDS FLOODED.
2.0 to 3.0 TOO WET, SOME STANDING WATER.
1.0 to 2.0 PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET.
0 to 1.0 MOISTURE ADEQUATE FOR PRESENT NORMAL NEEDS.
0 to -1.0 PROSPECTS IMPROVED, BUT RAIN STILL NEEDED.
-1.0 to -2.0 SOME IMPROVEMENT, BUT STILL TOO DRY.
-2.0 to -3.0 DROUGHT EASED, BUT STILL SERIOUS.
-3.0 to -4.0 DROUGHT CONTINUES, RAIN URGENTLY NEEDED.
BELOW -4.0 NOT ENOUGH RAIN, STILL EXCEPTIONALLY DRY.

The map above is based on weekly areal mean values of temperature and precipitation for 350 climatological divisions. Weather during previous weeks has been taken into account through successive weekly computations of both topsoil and subsoil moisture. The map shows recent crop moisture conditions; i.e., areas in which crops have been hindered by abnormal dryness or wetness, and areas where moisture conditions have been favorable.

This is a generalized picture; local variations caused by the occurrence or absence of heavy rain or by soil differences are not shown. Shallow rooted crops and crops in areas with poor soils are likely, on occasion, to suffer more than indicated. Conditions may be better than shown in areas having exceptionally good soils.

The legend applies primarily to growing rather than matured vegetation. Interpretation of the

effects on crops and native vegetation must, therefore, take account of the stage of growth as well as the status and trend of moisture conditions. The trend is indicated by the shading which denotes areas where the index did not decrease below its value of a week previous; i.e., conditions did not become noticeably drier during the week. A trend toward drier occurred in the unshaded regions. The lines show the crop moisture situation according to the computed index values which may be interpreted using the legends above. One legend applies to the unshaded areas, the other to the shaded. Centers of relative maximum and minimum index values are marked for easier recognition - W for wet and D for dry. In irrigated regions the index values merely reflect departures from ordinary irrigation requirements.



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A Night in the Day of a Forecaster

James T. Bradley
NOAA Climatologist for Florida

It was a good night for the aviation forecaster. With unlimited ceilings and excellent visibilities, there would be no problem forecasting for any of the 22 terminals. Even the compilation of the area forecast and the winds aloft would be no trouble tonight. The public service forecaster was equally happy. State and zone forecasts are time consuming to make, but there is a lot less worry when the weather is uniform. Only the agricultural forecaster was concerned.

By 5:00 p.m. that afternoon, a high pressure area had spread into North and Central Florida and the winds had begun to subside. Now at 10:00 p.m., the temperature had dropped another 3° in the last hour at Gainesville to 33°F. Below freezing temperatures had already been forecast for the agricultural districts, but the problem now was to decide how low and how many hours below freezing. The citrus growers had been on the alert since the 10:00 a.m. forecast, but with an erroneous forecast at this hour, they could fire too early and run out of fuel before morning. If they fired too late, the citrus crop could be ruined. And now, in the last few years, the problem of air pollution put an even greater burden on the forecaster's shoulders. Then there was the problem of forecasting for the Everglades. It didn't seem like much -- a little area south of Lake Okeechobee -- but that land was the size of Rhode Island and is known as the nation's winter vegetable basket.

True, in the last few years, several forecasting tools had been developed to help him - the APT photographs showed cloud bands, buoys in the Gulf gave added weather data and there was a whole

series of new computer produced forecast charts.

But forecasting minimum temperatures in Florida is a problem in physical meteorology not a dynamical one. When that sun goes down, unique things happen in Florida. First, the freeze is measured in terms of hours and not days and the temperatures are usually just in the low and middle 20's. Even as far north as Jacksonville, there have been only 5 days in the last 70 years on which the maximum temperatures have failed to go above freezing. Then, the soil never freezes. During the big freeze of January 1971, the air temperature at Gainesville dropped to 19°F. but at just 1 inch below the ground the temperature never reached below 42°F. This means heat is brought to the surface from below: a little heat when the soil is dry, more when it is wet. But who measures soil moisture content - and at 10:00 p.m.!

The agricultural forecaster shook these thoughts from his mind as he bent over his maps again. Now if it would only stay calm and clear, he could use that new radiation flux method developed by the MIC. But the 7:00 p.m. surface chart showed a few clouds in the Gulf that could possibly move in. Worse, the 9:00 p.m. sequence showed the wind trying to back into the SW at Tallahassee. "How will I ever decide whether it is going to be 25° or 28°F.? With the critical temperature for citrus being 27°F., a decision must be made."

The aviation forecaster looked up and said, "What, you're not finished yet?"

Editor's Note: This is one of several interesting articles submitted as part of our Centennial effort. We will be publishing additional pieces in forthcoming issues.