

WEEKLY WEATHER AND CROP BULLETIN

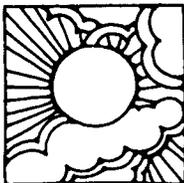
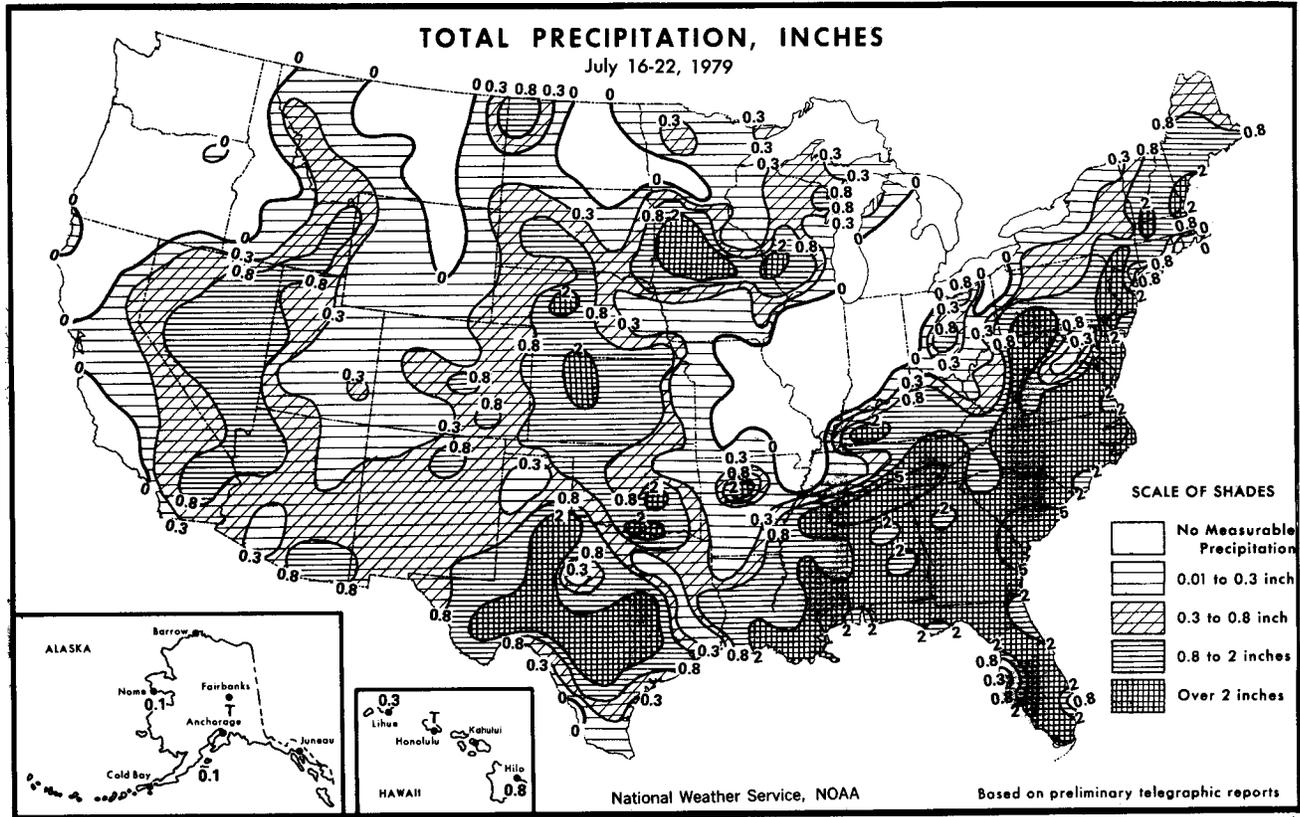
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July 24, 1979



National Weather Summary

July 16 - 22

HIGHLIGHTS: A lingering frontal system produced moderate to heavy rain from West Texas to Alabama and through the Appalachian chain to the East Coast. Moisture moved from the Gulf of Mexico westward to California, where light to moderate showers gathered. Early in the week, numerous thunderstorms dotted the central Plains but diminished by week's end.

Hot, dry air edged northward along the West Coast pushing the mercury past 100° as far north as Washington State and southern Canada before cooling at the end of the week. Most of the Nation east of the Rockies was near or cooler than normal.

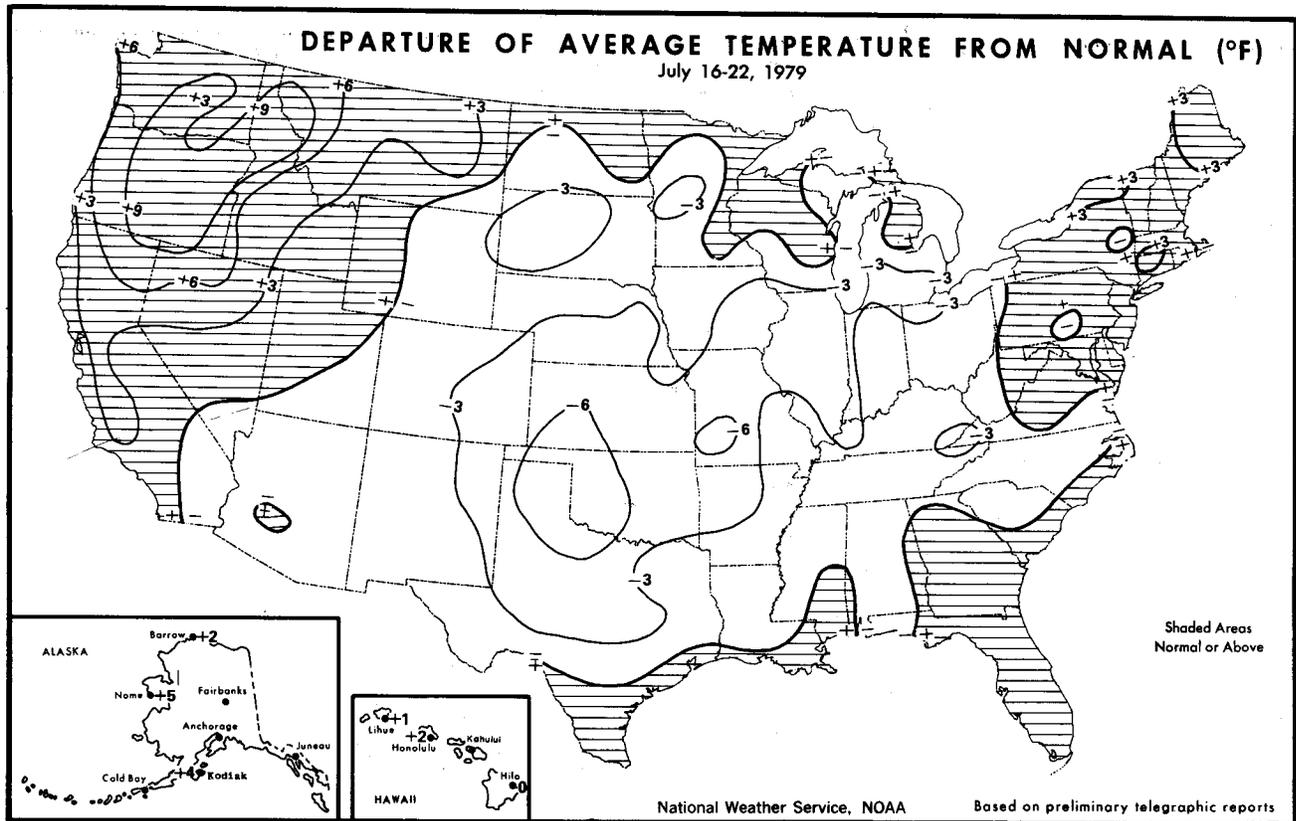
An area from western Oklahoma to the southern Great Lakes ranged 3 to 6 degrees cooler than normal.

On Monday, heavy rains hit several eastern States triggering local flooding. The eastern sections of West Virginia reported intense downpours. Nearly 5 inches drenched a portion of southeastern New York.

By afternoon, thunderstorms cropped up over most of the Great Plains, the East Coast, and Florida. Philip, west central South Dakota, notched more than an inch of rain; an inch of rain in 10 minutes quickly dampened Wilber, southeastern Nebraska; and an inch fell over McAlester, southeastern Oklahoma. Tornadoes tore through Cheyenne, Wyo., and sections of Colorado and Missouri.

To the east, about an inch and one quarter of rain washed over Allentown, eastern Pennsylvania, and Worcester, central Massachusetts. Vero Beach, eastern Florida, measured more than 2 inches.

Temperatures soared west of the Rockies; Las Vegas, Nev., scored a record high 114°. In the Pacific Northwest, Portland, Oreg., tallied a re-



cord of 103°, and Washington's Seattle/Tacoma Airport noted 98°, the all-time high for July there.

A stationary front spread showers and thunderstorms across the Atlantic and Gulf Coastal States to the southern Plains on Tuesday.

A sampling of rain totals showed 2.5 inches at Portland, eastern Maine, 1.5 inches at Savannah, eastern Georgia, 1.8 inches at Daytona Beach, Fla., and an inch at Colorado City, western Texas. A tornado touched down southeast of Mobile, southwestern Alabama.

Record heat persisted in the Pacific Northwest; Portland, at 102°, chalked up another record, and Seattle/Tacoma Airport did the same at 96°. Meantime, Asheville, western North Carolina, managed a record-equaling 90°.

While Tropical Storm Claudette weakened over Puerto Rico, heavy rains again drenched the Nation from the Atlantic through the Deep South to Texas on Wednesday.

More than 2 inches soaked Wilmington, Del., and Rocky Mount, northern North Carolina; between one and 2 inches fell in Columbia, S.C., Macon, central Georgia, and Pensacola, northern Florida.

To the west, San Antonio weathered 3 inches of rain and local flooding, and Nogales, Ariz., on the Nation's southern border, posted 1.2 inches.

While Seattle, at 91°, reported another record high, readings dipped to record lows in the Midwest. New marks included 45° at St. Cloud, south central Minnesota, 47° at Madison, Wisc., Chicago's 53°, and 47° at Muskegon, western Michigan.

On Thursday, heavy thunderstorms rolled over the southern tier of States from Texas to the Atlantic.

In Texas, 2 to 4 inches fell on parts of Val Verde County in the western section of the State, and Austin accumulated a bit more than 4 inches. Moving eastward, rain totals showed 2 inches at Sherman, northeastern Mississippi, 2.3 inches at Savannah, and 1.3 inches at Charleston, eastern

South Carolina. Other thunderstorms dumped 1.5 inches on Wilmont, southwestern Minnesota, and 3.2 inches on Hays, west central Kansas.

Readings continued hot west of the Rockies, but remained unseasonably cool from the Midwest to western Pennsylvania. A sampling of record low temperatures included 54° at Burlington, south-eastern Iowa, 47° at Grand Rapids, western Michigan, Cleveland's 50°, and 52° at Erie, northwestern Pennsylvania. Alamosa, south central Colorado, chipped in with a record low 40°.

Heavy storms rumbled over portions of the Southeast, Midwest, Texas, and the Southwest on Friday.

Two to 3 inches drenched Greensboro, northern North Carolina, and Valparaiso, in the Florida Panhandle. To the north, Chattanooga was deluged by more than 4 inches. An intense storm dropped 2 inches of rain on Redwood Falls, southwestern Minnesota.

An inch covered Waco, central Texas, and Tucson, southern Arizona.

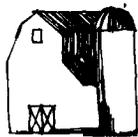
The heat wave continued to bake the Pacific Northwest, but readings declined in the Plateau Region. Las Vegas, Nev., at 81°, recorded its coolest afternoon temperature ever for July.

On Saturday, a frontal system produced heavy rains along the southern half of the Atlantic Coastal States and the Deep South.

Flooding surrounded the Richmond, Va., area, and Petersburg, Va., where nearly 5 inches fell. About 5 inches of rain saturated New River, eastern North Carolina. Other areas of heavy rains included 2 to 3 inches at Columbia, S.C., Augusta, eastern Georgia, and Bowling Green, southern Kentucky. Sections of Huntsville, northern Alabama, collected 7 inches of rain.

Large hail pounded parts of southwestern Minnesota; Redwood Falls scored a 2-day rainfall of 4 inches.

(continued on page 19)



National Agricultural Summary

July 16 - 22

HIGHLIGHTS: Crops across the northwestern part of the Nation showed stress from dry soils. Several other areas reported short soil moisture, including parts of the Corn Belt and the Northeast, but crops were not seriously stressed. Rains improved southern crops and greened pastures. Most areas of the Nation had almost a full week with conditions favorable for fieldwork, except in the south central and south Atlantic States, where only 3 to 5 days were available. Pastures rated mostly good in the eastern half of the Nation but only fair to good in the West, where dry conditions took their toll. Grasshoppers continued to be a problem in the northern and southern Plains, the Pacific Northwest, and parts of the south central States. Winter wheat harvest advanced to 73%, trailing last year's 81% and the 86% average. Cotton rated fair to good; squaring was almost complete and boll set was well advanced in the Southeast. Corn rated fair to mostly good; the crop advanced into the critical tasseling and silking stages. Late soybean planting neared completion, while bloom and pod set became widespread in major production areas. Sorghum heading advanced into Nebraska. Rice rated good with heading just starting in the upper Delta areas. Deciduous fruit harvests continued throughout almost all areas of the Nation. Southern producers finished harvests, while northern producers just started. Summer vegetable harvests continued in northern production areas, while growers in extreme southern areas prepared land for late summer and fall plantings. LP gas availability held steady from the previous week at 10% tight and 87% adequate. Diesel fuel supplies also remained unchanged at 36% tight and 61% adequate. Gasoline scored 30% tight and 68% adequate---also no change.

SMALL GRAINS: Winter wheat harvest stood at 73%, short of last year's 81% and the 86% average. Combining began in the Pacific Northwest. The Plains harvest reached into South Dakota and was complete as far north as Kansas. Harvest was almost complete in the Corn Belt. Oats harvest neared a third completion in Iowa and Illinois and 8 to 10% finished in South Dakota and Ohio. Other major oats producing States reported none harvested; Wisconsin oats needed additional moisture for good development. The barley harvest began in the southern parts of the major producing area and stood at 9% in South Dakota and 10% in Colorado. Most spring wheat headed and began turning color.

CORN: Corn rated good throughout the north central States and fair to good in the South. Tasseling moved well ahead in the South, and harvest extended from Texas to Florida and as far north as South Carolina. In the eastern north central States, silking ranged from 25% in Indiana to 49% in Illinois and just beginning in Wisconsin. About 55% of the Ohio crop tasseled. Dry soils stressed some of the Michigan crop. In the western north central States, tasseling ranged from 15% in northern areas to 46% in Iowa and 65% in Missouri. Corn development lagged the average in most States but held near 1978's progress.

SOYBEANS: Soybeans rated fair to mostly good in all major production areas. In the eastern Corn Belt, bloom ranged from 15% in Michigan to 59%

in Illinois; pod set ranged from 15% in Ohio to 20% in Illinois. In the western Corn Belt, bloom ranged from 15% in Kansas to 52% in Iowa; pod set just began. Bloom ranged from 6% to 23% in the Southeast. In the south central States, bloom ranged from 9% for the late-planted Arkansas crop to 33% in Alabama. Progress generally lagged last year and the average. Grasshoppers damaged some late-planted Kentucky stands.

COTTON: Cotton rated fair to good. Warm temperatures improved the Texas crop on the High Plains. Growers in the lower Rio Grande Valley applied defoliant, and harvest should begin in a week. Squaring was virtually complete throughout all areas except Texas and Oklahoma. Boll set was most advanced in the Southeast ranging from 86 to 99%; in the Delta, boll set ranged from 36 to 44%; Texas boll set stood at about 21%; and in the West, New Mexico boll set was just beginning but had reached 26% in California.

OTHER CROPS: Grain sorghum heading advanced northward into Nebraska, where heading just started. Crop development generally lagged last year and average. Texas heading reached 63%; harvest stood at 26% trailing last year's 42% and the 28% average. Rains delayed the Texas harvest.

Rice heading was almost complete in Texas and past the halfway point in Louisiana. Only a small acreage of the rice crop in the other Delta States showed heads. Harvest stood at 3% in Louisiana and 2% in Texas. Heavy rains slowed progress along the Gulf Coast.

Tobacco harvest among the four major producing States ranged from 6% in Virginia to 21% in North Carolina. Georgia harvest stood at 50%; tobacco markets in that State opened.

FRUITS & NUTS: Deciduous fruit harvest spread throughout the Nation. New England growers harvested early apples, peaches, and berry crops. Sweet cherry harvest wound down in most areas but continued in Michigan and the Northwest. In the Southeast, peach harvest ranged from 86% in Georgia to 56% in North Carolina and 65% in South Carolina. Texas pecans continued to develop well. California almonds and walnuts neared maturity. Oregon walnuts and filberts sized.

Florida citrus groves rated excellent showing an abundance of new growth on young trees; afternoon rains provided adequate moisture. The Florida Valencia harvest was about done. Texas citrus continued to size well, although rust and mites infested some groves. California growers harvested light volumes of grapefruit, lemons, new crop Navels, and old crop Valencias.

VEGETABLES: Northern growers harvested an increasing volume of summer vegetables, including sweet corn, snap beans, peas, tomatoes, cabbage, cucumbers, and beets. Southern growers finished harvesting and began land preparation for late summer and fall plantings. California growers harvested an increasing volume of market and processing tomatoes, celery, melons, broccoli, and cauliflower. The lettuce harvest was seasonally lighter.

PASTURES & LIVESTOCK: Pastures in the eastern half of the Nation rated mostly good, although some dry areas developed which deteriorated some grassland. Rains across the South improved pastures. Western rangelands rated mostly fair, but fire conditions threatened. Rains in some parts of the West reduced fire hazards and improved grass growth. Cattle generally rated good with most herds on summer ranges.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., July 22, 1979

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 . . .	79	- 1	1.6	+ .4	LA. Baton Rouge . . .	81	- 1	2.0	+ .5	Youngstown . . .	70	- 1	0	- .9
Mobile . . .	82	0	1.4	- .7	Lake Charles . . .	82	0	.8	- .7	OKLA. Okla. City . . .	74	- 8	.3	- .3
Montgomery . . .	80	- 1	1.5	+ .3	New Orleans . . .	84	+ 2	2.1	+ .5	Tulsa . . .	80	- 2	T	- .8
ALASKA Anchorage . . .	-	-	-	-	Shreveport . . .	81	- 2	T	- .6	OREG. Astoria . . .	64	+ 4	T	- .2
Barrow . . .	41	+ 2	T	- .2	MAINE. Caribou . . .	69	+ 4	.5	- .4	Burns . . .	79	+ 9	T	- .1
Fairbanks . . .	-	-	-	-	Portland . . .	70	+ 2	3.1	+ 2.5	Medford . . .	79	+ 6	0	- .0
Juneau . . .	-	-	-	-	MD. Baltimore . . .	78	+ 1	.2	- .7	Pendleton . . .	82	+ 8	0	- .1
Kodiak . . .	59	+ 4	.1	- .7	MASS. Boston . . .	74	0	1.0	+ .4	Portland . . .	76	+ 8	0	- .1
Nome . . .	55	+ 5	.1	- .5	Chatham . . .	68	-	-	-	Salem . . .	74	+ 7	0	- .1
ARIZ. Flagstaff . . .	64	- 2	.6	0	MICH. Alpena . . .	67	+ 1	0	- .6	PA. Allentown . . .	75	0	2.2	+ 1.2
Phoenix . . .	93	+ 1	T	- .2	Detroit . . .	70	- 3	0	- .7	Erie . . .	68	- 1	0	- .8
Tucson . . .	85	- 2	1.2	+ .6	Flint . . .	69	- 1	0	- .6	Harrisburg . . .	76	- 1	.8	0
Winslow . . .	77	- 2	.3	0	Grand Rapids . . .	69	- 3	0	- .7	Philadelphia . . .	78	+ 1	2.1	+ .2
Yuma . . .	92	- 3	.3	+ .2	Houghton Lake . . .	66	0	0	- .7	Pittsburgh . . .	73	+ 1	1.2	+ .3
ARK. Fort Smith . . .	78	- 4	.3	- .7	Lansing . . .	69	- 2	0	- .6	Scranton . . .	73	0	1.5	+ .6
Little Rock . . .	79	- 3	.1	- .7	Marquette . . .	74	- 1	.1	- .9	R.I. Providence . . .	75	+ 2	T	- .7
CALIF. Bakersfield . . .	89	+ 4	0	0	Muskegon . . .	67	- 3	0	- .6	S.C. Charleston . . .	82	+ 2	5.5	+ 3.6
Eureka . . .	87	+ 1	T	0	S. Ste. Marie . . .	65	+ 1	T	- .6	Columbia . . .	80	- 1	4.5	+ 3.2
Fresno . . .	56	+ 5	.1	+ .1	MINN. Duluth . . .	67	+ 1	.2	- .6	Greenville . . .	76	- 2	1.4	+ .5
Los Angeles . . .	74	0	0	0	Internat'l Falls . . .	67	+ 1	T	- .9	S.D. Aberdeen . . .	69	- 3	0	- .6
Red Bluff . . .	86	+ 3	0	0	Minneapolis . . .	72	0	.5	- .3	Huron . . .	72	- 2	.1	- .3
San Diego . . .	74	+ 4	.1	+ .1	Rochester . . .	72	+ 2	T	- .8	Rapid City . . .	70	- 3	.8	+ .4
San Francisco . . .	63	0	.1	+ .1	St. Cloud . . .	68	- 3	T	- .7	Sioux Falls . . .	73	- 1	1.4	+ .8
Stockton . . .	79	+ 2	.2	+ .2	MISS. Jackson . . .	80	- 2	2.0	+ 1.0	TENN. Chattanooga . . .	77	- 2	7.3	+ 6.1
COLO. Denver . . .	73	- 1	T	- .4	Meridian . . .	82	+ 1	1.3	+ .1	Knoxville . . .	76	- 2	3.3	+ 2.2
Grand Junction . . .	79	- 1	T	- .1	MO. Columbia . . .	74	- 4	T	- .9	Memphis . . .	82	0	0	- .8
Pueblo . . .	74	- 3	.1	- .3	Kansas City . . .	74	- 4	.2	- .7	Nashville . . .	78	- 2	.3	- .6
CONN. Bridgeport . . .	76	+ 2	.1	- .7	St. Louis . . .	77	- 2	0	- .8	TEX. Abilene . . .	81	- 3	.3	- .2
Hartford . . .	76	+ 3	.8	0	Springfield . . .	72	- 6	T	- .8	Amarillo . . .	73	- 6	.2	- .4
D.C. Washington . . .	81	+ 2	.1	- .9	MONT. Billings . . .	74	+ 1	T	- .1	Austin . . .	83	- 2	4.9	+ 4.5
FLA. Apalachicola . . .	82	+ 1	1.3	- .6	Glasgow . . .	75	+ 3	T	- .3	Beaumont . . .	83	0	.1	- 1.3
Daytona Beach . . .	82	+ 1	2.0	+ .5	Great Falls . . .	74	+ 4	T	- .2	Brownsville . . .	85	+ 1	.2	0
Ft. Myers . . .	85	+ 2	2.1	+ .1	Havre . . .	75	+ 4	T	- .3	Corpus Christi . . .	85	0	.2	- .2
Jacksonville . . .	81	0	.8	- .9	Helena . . .	73	+ 4	.2	0	Del Rio . . .	87	0	T	- .2
Key West . . .	85	0	.4	- .5	Kalispell . . .	74	+ 9	.1	- .1	El Paso . . .	80	- 2	.6	+ .2
Lakeland . . .	-	-	-	-	Miles City . . .	79	+ 4	T	- .3	Fort Worth . . .	83	- 2	T	- .4
Miami . . .	83	+ 1	2.5	+ 1.0	Missoula . . .	76	+ 9	.3	+ .1	Galveston . . .	83	0	.4	- .6
Orlando . . .	83	+ 2	2.3	+ .4	NEBR. Grand Island . . .	72	- 5	.4	+ .2	Houston . . .	83	0	.7	- .2
Tallahassee . . .	81	0	3.0	+ .9	Lincoln . . .	74	- 4	.1	- .6	Lubbock . . .	76	- 4	1.1	+ .6
Tampa . . .	83	+ 1	.2	- 1.8	Norfolk . . .	74	- 2	.1	- .6	Midland . . .	78	- 4	1.2	+ .8
W. Palm Beach . . .	83	+ 1	.4	- 1.0	N. Platte . . .	72	- 3	1.4	+ .8	San Angelo . . .	80	- 5	1.2	+ .9
GA. Atlanta . . .	80	+ 2	2.0	+ .9	Omaha . . .	73	- 2	.1	- .7	San Antonio . . .	84	- 1	2.8	+ 2.4
Augusta . . .	81	+ 1	4.9	+ 3.7	Valentine . . .	73	- 2	.3	- .2	Victoria . . .	83	- 1	.6	0
Macon . . .	82	+ 1	3.4	+ 2.3	NEV. Ely . . .	69	+ 1	1.3	+ 1.2	Waco . . .	81	- 5	3.8	+ 3.5
Savannah . . .	82	+ 1	6.7	+ 4.9	Las Vegas . . .	89	- 1	.8	+ .7	Wichita Falls . . .	79	- 7	.8	+ .3
HAWAII. Hilo . . .	75	0	.8	- 1.5	Reno . . .	74	+ 4	.6	+ .5	UTAH. Blanding . . .	72	- 2	.1	- .1
Honolulu . . .	82	+ 2	T	- .1	Winnemucca . . .	77	+ 5	.7	+ .7	Salt Lake City . . .	80	+ 2	.4	+ .3
Kahului . . .	-	-	-	-	N.H. Concord . . .	72	+ 2	1.1	+ .4	VT. Burlington . . .	73	+ 3	.3	- .5
Lihue . . .	79	+ 1	.3	- .1	N.J. Atlantic City . . .	76	0	1.0	0	VA. Lynchburg . . .	76	0	2.9	+ 2.0
IDAHO. Boise . . .	81	+ 5	T	0	Trenton . . .	76	0	3.8	+ 2.7	Norfolk . . .	78	- 1	1.3	0
Lewiston . . .	84	+ 10	0	- .1	N.MEX. Albuquerque . . .	78	- 1	.6	+ .2	Richmond . . .	78	0	3.0	+ 1.7
Pocatello . . .	73	0	.6	+ .5	Roswell . . .	77	- 2	.6	+ .2	Roanoke . . .	76	+ 1	1.9	+ 1.1
ILL. Cairo . . .	80	- 1	0	- .7	N.Y. Albany . . .	72	- 1	.4	- .3	WASH. Colville . . .	78	+ 9	0	- .1
Chicago . . .	70	- 5	T	- .9	Binghamton . . .	72	+ 2	.4	- .5	Omak . . .	77	+ 6	0	- .1
Moline . . .	71	- 4	T	- 1.0	Buffalo . . .	72	+ 2	.3	- .4	Quillayute . . .	64	+ 5	T	- .5
Peoria . . .	70	- 5	T	- .8	New York . . .	79	+ 2	.6	- .3	Seattle-Tacoma . . .	73	+ 8	T	- .1
Rockford . . .	69	- 4	.1	- .9	Rochester . . .	73	+ 1	.1	- .5	Spokane . . .	79	+ 8	0	- .1
Springfield . . .	72	- 4	0	- .8	Syracuse . . .	72	0	T	- .7	Walla Walla . . .	85	+ 8	0	- .1
IND. Evansville . . .	75	- 3	T	- .9	N.C. Asheville . . .	73	- 1	1.4	+ .3	Yakima . . .	80	+ 9	0	0
Ft. Wayne . . .	71	- 2	T	- .9	Charlotte . . .	78	- 1	2.7	+ 1.6	W.VA. Beckley . . .	69	- 1	.3	- .7
Indianapolis . . .	73	- 2	0	- .8	Greensboro . . .	77	0	3.1	+ 2.1	Charleston . . .	74	- 1	.3	- .9
South Bend . . .	70	- 2	0	- .8	Hatteras . . .	78	0	2.2	+ .9	Huntington . . .	75	- 1	T	- 1.0
IOWA. Burlington . . .	73	- 3	.3	- .6	Raleigh . . .	77	- 1	2.9	+ 1.7	Parkersburg . . .	75	0	T	- 1.0
Des Moines . . .	73	- 2	.1	- .6	Wilmington . . .	82	+ 2	1.2	- .8	WISC. Green Bay . . .	69	0	.2	- .5
Dubuque . . .	69	- 3	1.8	+ .9	N.DAK. Bismarck . . .	70	- 2	0	- .4	La Crosse . . .	71	- 2	.1	- .7
Sioux City . . .	73	- 3	1.1	+ .4	Fargo . . .	73	+ 2	0	- .7	Madison . . .	68	- 2	1.5	+ .7
KANS. Concordia . . .	75	- 3	1.0	+ .3	Williston . . .	73	+ 2	1.0	+ .6	Milwaukee . . .	70	0	T	- .8
Dodge City . . .	74	- 6	1.0	+ .3	OHIO. Akron-Canton . . .	70	- 2	T	- .9	WYO. Casper . . .	71	- 1	0	- .2
Goodland . . .	73	- 3	1.1	+ .5	Cincinnati . . .	75	- 1	.1	- .8	Cheyenne . . .	69	- 1	.3	- .1
Topeka . . .	76	- 3	.1	- .8	Cleveland . . .	71	- 1	1.6	+ .8	Lander . . .	72	0	T	- .1
Wichita . . .	77	- 4	.9	- .1	Columbus . . .	72	- 2	1.2	+ .2	Sheridan . . .	70	- 1	T	- .2
KY. Lexington . . .	75	- 1	1.3	+ .2	Dayton . . .	73	- 2	T	- .8	P.R. San Juan . . .	82	+ 1	2.6	+ 1.1
Louisville . . .	76	- 1	.1	- .7	Toledo . . .	68	- 5	0	- .7					

Based on 1941-70 normals

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State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by ESCS State offices in cooperation with the National Weather Service.

ALABAMA: Temperatures 1° below normal. Numerous showers late, total rainfall above normal. Heaviest Auburn, Huntsville 3.00 in. or more.

Fieldwork: 3.3 days suitable. Soil moisture adequate to surplus. Corn 85% silked, 90% 1978, 89% average; 50% dented, 46% 1978, 33% average; 35% mature, 16% 1978. Soybeans 33% blooming, 26% 1978, 31% average; 16% pods set, 7% 1978. Cotton 93% squaring, 86% 1978, 90% average; 44% setting bolls, 31% 1978, 47% average. Peanuts 90% pegging, 66% 1978, 88% average; good to excellent condition. Other crops, pastures fair to good condition.

ALASKA: Temperatures averaged near to slightly above normal. Rainfall averaged near normal.

General scattered showers throughout Matanuska Valley and Kenai Peninsula kept haymaking at standstill. Farmers had 5 haymaking days in Tanana Valley. Harvest 1st crop hay ranged from 25% to complete. Small grains mostly headed, some barley in soft dough stage. Prospects small grains average or above. Average height potatoes above last year. Some growers finished hilling potatoes and many fields in bloom stage. Harvest commercial vegetables well underway. Soil moisture generally adequate or better.

ARIZONA: Scattered showers, thundershowers; drying 21st and 22d. Amounts 1.00 in. central mountains, over 2.00 in. some southeast areas. Temperatures mostly 2 to 5° below normal.

Cotton excellent progress. Bolls maturing, west; squaring, setting bolls in central areas. Southeast 90% squaring. Insect counts low. Sorghum grain maturing rapidly. Late crop in all stages. Green chop corn harvest well advanced. Corn for grain good progress southeast. Safflower harvest well underway. Alfalfa haying good progress. Sugarbeet harvest winding down. Cantaloup harvest virtually complete western area, winding down central. Watermelon harvest past peak, expected to continue into August. Grape, deciduous fruit, citrus harvests all complete. Diesel, gasoline, LP gas supplies mostly adequate except in southeast where supplies mostly tight. Cattle, calves good condition. Fire danger extreme. Higher ranges good condition. Stock water, soil moisture adequate. Summer feed sufficient. Scattered thunderstorms brought moisture and lightning caused fires.

ARKANSAS: Temperatures normal to 6° subnormal. Rainfall spotty.

Soil moisture adequate. Fieldwork: 5.6 days suitable. Diesel 56% adequate, 39% tight; gasoline 56% adequate, 42% tight; LP gas 89% adequate. Soybeans generally good; 9% bloomed; 7% 1978. Weed and insect control effective. Cotton good to fair condition; squaring 94%, 97% 1978; setting bolls 36%, 73% 1978. Rice good condition. Corn and sorghum in good condition. Peach harvest continued. Apple prospects excellent. Tomato harvest near completion southeast, beginning northwest. Watermelon harvest expected to start last week of month. Hay and pastures average condition. Third cutting of alfalfa. Bermuda hay making excellent regrowth. Livestock good condition.

CALIFORNIA: Clouds, rain and thunderstorms late week.

Cotton growth picked up with warmer temperatures, 78% bloomed and 26% setting bolls. Rice growing

well except in Sacramento area with its cooler nights. Harvest of small grains nearing completion. Stubble being burned off. Barley 87% harvested, wheat 92% harvested. Alfalfa cutting and baling actively continued. Some rain and flood damage to cut alfalfa in south. Corn 63% tassel, 46% silk. Sugarbeets making good progress. Pusarium wilt a problem in some dry beans. Safflower harvest nearing. Milo progressing well. Apples progressing normally. Apricot harvest near completion. Avocado set next season fair. Grapes making excellent progress most areas. Nectarine, pear, and peach harvest looking good. Recent rain could cause damage to peach crop in next 7 to 10 days. Grapefruit movement slow, quality variable. Lemon movement remained light. New crop Navel oranges light. Domestic movement Valencia oranges slow. Almond orchards prepared for harvest. Walnut crop maturing normally, good crop prospects. Weather favorable till storm hit end of week. Little damage expected except increased mold, splitting on ripe tomatoes. Broccoli, cauliflower fairly heavy central coast. Cantaloups, watermelons full swing San Joaquin Valley. Celery harvest becoming heavy central coast. Lettuce harvest seasonally lighter. Market tomatoes active south coast, San Joaquin Valley. Processing tomato harvest starting Sacramento Valley, increasing San Joaquin Valley. Rains late in week lessened fire danger. Bulk of cattle moved to summer range, irrigated pasture, feedlots. Some sheep shearing still underway north. Diesel fuel situation deteriorated slightly. Supplies tight in San Joaquin Valley. Gasoline and propane supplies remained generally adequate.

COLORADO: Scattered thunderstorms and showers prevailed through 18th. Numerous reports of funnel clouds, hail and heavy rain. Isolated heavy showers continued through 22d in northeast. Temperatures near normal mountains and west to 4° below normal east of mountains.

Winter wheat turned color 100%, 100% 1978, 100% average; ripe 83%, 98% 1978, 96% average; harvested 58%, 89% 1978, 81% average. Barley turned color 55%, 100% 1978; ripe 22%, 94% 1978; harvested 10%, 64% 1978. Corn average height 49 in., 52 in. 1978; tasseled 10%, 23% 1978, 44% average. Alfalfa hay first cutting 100%, 100% 1978; second cutting 37%, 51% 1978. Fieldwork: 5 days suitable. Ranges and pastures good condition. LP gas, gasoline supplies mostly adequate. Diesel fuel supply tight to adequate.

FLORIDA: Low pressure center and weak frontal system caused scattered thundershowers over Panhandle and extreme north afternoon of 16th through 20th. Tropical wave crossed southern third 20th and moved westward into Gulf where it became a tropical depression. Above-normal southeast winds resulted from this depression activity from 20th through 22d. Summertime afternoon, evening thundershowers occurred through period with most amounts averaging 1.00 to 2.00 in. Temperatures generally 2° above normal.

Soil moisture mostly adequate, but some scattered wet spots north, west. Corn harvest increasing, tobacco harvest active; markets opened with early volume heavy. Peanuts, sugarcane, soybeans good to excellent condition. Soybean planting about complete. Haymaking slowed in many areas due to frequent showers. Fuel supplies mostly adequate,

a little tight in areas where crop harvesting active. Pastures mostly good to excellent. Cattle good condition. Citrus grove condition excellent; afternoon rains providing adequate moisture. Abundance of new growth on young trees. Valencia harvest almost complete. Caretakers working normal summer activities. Spring vegetable season complete. Limited supply watermelons, summer vegetables continued to move through local markets. Land preparation summer, fall planting underway. Some beds seeded.

GEORGIA: Temperatures ranged 3° above normal west central to 2° below normal southeast. Temperatures averaged near 80° south to low 70's mountains. Moist tropical air persisted; rainfall variable from the scattered thunderstorms. Most areas received over 1.00 in. of rainfall.

Soil moisture surplus southern third, adequate elsewhere. Fieldwork: 3 days suitable. Corn fair to mostly good; 2% harvested, same as year ago. Soybeans good. Peanuts good; rains interrupting insecticide and fungicide schedules; 99% blooming, 96% pegging; last year 99% and 93%. Tobacco fair to mostly good; markets opened; 50% harvested, last year 39%, average 56%. Cotton fair to mostly good; 99% setting bolls, last year and average 85%. Watermelons fair to mostly good; 78% harvested, last year 79%. Peaches fair to mostly good; 86% picked, last year 79%, average 88%. Apples good, 8% picked, last year 4%. Pecans fair to good. Hay fair to mostly good. Pastures, cattle, and hogs good. LP gas 90% adequate; diesel fuel 67% adequate, 30% tight; gasoline 76% adequate, 22% tight.

HAWAII: Hot, humid weather continued. Showers light.

Most crop areas dry. Irrigation heavy, spraying frequent. Tipburning of semi-head lettuce and soft rot disease of head lettuce affecting yields. Vegetable supplies: Head cabbage heavy, chinese cabbage declining, others light to moderate. Banana, papaya supplies light. Pineapple harvesting active and heavy. Peak season in progress. Sugar harvesting active. Harvesting schedule not met some plantations because early year inclement weather hampered field activities. Pastures generally fair to good. Fuel supplies adequate.

IDAHO: Hot, dry weather. Temperatures ranged from 28° to 107°. Precipitation very sparse with only a trace reported.

Crops maturing rapidly and drawing heavily on water supplies. Winter wheat 70% turned, 65% last year. Spring wheat 95% headed, 40% turned; last year 90% headed, 40% turned. Barley 95% headed, 40% turned. Potatoes 60% closing middles, same as last year. Second cutting alfalfa 10% harvested. Grass seed 35% harvested, 10% last year. Ranges dry and deteriorating. Soil moisture short to very short. Farm fuel supplies generally adequate to tight. Mint harvest begun.

ILLINOIS: Temperatures: 1 to 5° below normal. Precipitation light with no rainfall in most areas, northwest 1.50 in.

Soil moisture short to adequate. Corn 49% silked, 52% 1978, 67% average; condition good. Soybeans 59% bloomed, 50% 1978, 57% average; 20% set pods, 6% 1978, 24% average; condition good. Oats 94% turning yellow, 88% 1978, 97% average; 49% ripe, 47% 1978, 80% average; 30% combined, 30% 1978, 52% average; condition good. Barley 85% combined. Alfalfa hay second crop 75% cut, 63% 1978, 68% average; condition good. Pastures fair to good. Fieldwork: 6.0 days suitable.

INDIANA: Rainless except for a few tenths of inch in local showers in east and southeast. Temperatures averaged 2° below normal. Daily highs averaged in 80's and daily lows in 50's. Temperatures ranged from 43 to 91°. Soil temperatures 8° above normal in extreme north where very dry.

Fieldwork: 5 days suitable. Topsoil and subsoil moisture adequate. Wheat 90% combined, 1978 90%, average 97%. Oats 20% combined, 1978 25%, average 50%. Corn good condition; 64 in. tall, 1978 73 in.; 25% silked, 1978 25%, average 50%. Soybeans mostly good condition; 21 in. tall, 1978 18 in. Pastures mostly good condition.

IOWA: Temperatures 2 to 3° subnormal. Moderate to locally heavy showers fell on weekend over west central, central, and north.

Fieldwork: 6.2 days favorable. Corn tasseled 46%, 1978 72%; silked 22%, 1978 44%, average 56%; condition good to excellent. Soybean condition good; bloom 52%, 1978 60%, normal 63%. Winter wheat harvest 75% complete, 59% 1978, 80% normal. Oats 33% harvested, 1978 39%, normal 61%. Oat condition improved, wheat declined. Second crop alfalfa hay harvested 66% complete, 1978 60%, normal 67%. Topsoil moisture short to adequate; subsoil moisture adequate.

KANSAS: Precipitation averaged from almost 2.00 in. over central and north central to 0.40 in. southeast. Temperatures 2 to 5° below normal and averaged from 78° south central to 74° northwest.

Wheat harvest 95% complete, 100% year ago, 100% average. Corn 30% tasseled, 40% last year, 55% average. Sorghum 5% headed. Soybeans 15% in blooming stage, 5% setting pods, compared with 25% and 5% last year, respectively. Second cutting alfalfa 80% complete, third cutting 10%, compared with 85% and 25% last year, respectively. Average 90% second cutting and 20% third cutting. Fieldwork: 4.0 days suitable.

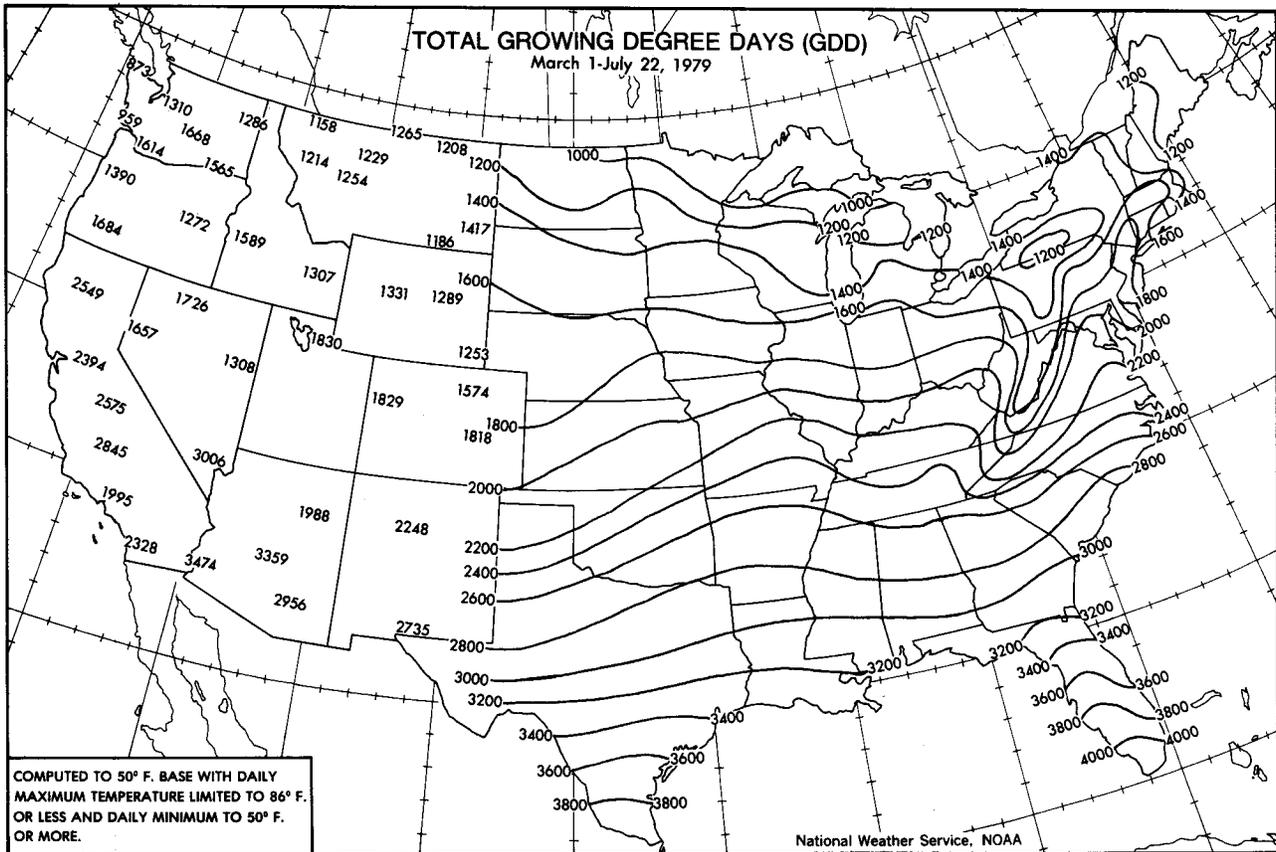
KENTUCKY: Temperatures averaged 5° below normal. Precipitation generally less than 1.00 in. However, isolated areas received as much as 3.00 in.

Crops made good progress. Soil moisture adequate. Fieldwork: 4.6 days suitable. Main activities: Cultivating soybeans and tobacco, making hay and clipping pastures. Corn 49% tasseled, last year 58%, average 72%. Soybean blooming 16% compared with 23% last year and 28% average. Grasshopper population building and causing some damage to late planted soybeans. Pastures and hay crops very good condition following recent rains.

LOUISIANA: Temperatures 1° below to 1° above normal. Extremes 98 and 68°. Rain statewide.

Fieldwork: 3.8 days suitable. Soil moisture adequate. Cotton fair to good; 95% squaring, 99% last year; 49% setting bolls, 77% last year, 66% average. Soybeans fair to good; 28% blooming, 51% last year; 13% setting pods. Rice good; 58% headed, 74% last year; 14% ripe, 15% last year; 3% harvested, 6% last year. Corn fair to good; 98% tasseled; 83% dough, 89% last year; 42% mature, 57% last year. Sorghum fair to good; 63% headed, 79% last year. Sugarcane fair to good. Sweet-potatoes good. Peach, watermelon, vegetable harvest active. Hay fair to good. Pastures, cattle good.

MARYLAND & DELAWARE: Temperatures averaged 2° above normal. Highs in upper 80's and lows in 70's. Precipitation widespread and irregular.



Fieldwork: 6.5 days suitable. Soil moisture short to adequate. Fuel supplies adequate. Corn 50% silked, 48% last year, 51% normal. Soybeans mostly good condition. Small grain harvested: Barley 95%; wheat 90%; rye 80%; oats 60%. Second cutting alfalfa 75% complete. Early varieties apples and peaches harvested. Tobacco growers cultivating.

MICHIGAN: Temperatures near normal northern Lower and northern Upper to 2 to 4° below normal elsewhere. Cool early week with warming trend from midweek through weekend. Isolated precipitation of 0.20 to 0.40 in. north.

Fieldwork: over 6 days suitable. Soil moisture generally short. Pasture supplies average. Corn height almost 50 in., 54 in. last year. Corn stress from dry conditions. Wheat harvest 25% complete, 18% last year, 45% normal. Oats 10% ripe, 22% last year, 13% normal. Dry beans under 15% bloomed, soybeans over 15% bloomed. Second cut hay 30% complete. Sweet cherry 35% complete northwest, completed southwest. Tart cherry 80% complete southwest, starting northwest. Blueberry picking 10% complete. Pickle and snap beans harvest 10% complete.

MINNESOTA: Temperatures averaged 1 to 3° below normal southwest and much of south central, east central, and central; 1 to 5° above elsewhere. Extremes: 94 and 41°. Precipitation averaged up to 1.00 in. above normal southwest and south central, greater than 0.50 in. below normal elsewhere except for some northern portions. Precipitation totals generally less than 1.00 in. except for southwest and south central. Many stations reported zero accumulation in central and west central.

Crops continue to develop rapidly. Moisture short west central, central; mostly adequate

elsewhere. Some row crops on light soils in south central, southeast suffered dry stress until weekend rains alleviated shortage. Corn tasseling beginning; soybean blooming well underway. Few winter wheat, rye fields swathed. Corn 14% tasseling, 1978 65%, normal 65%. Blooming: Soybeans 42%, 1978 73%, normal 76%; flax 64%, 1978 79%, normal 90%. Turning ripe: Spring wheat 9%, 1978 54%, normal 55%; oats 19%, 1978 65%, normal 68%; barley 12%, 1978 67%, normal 63%.

MISSISSIPPI: Temperatures 1 to 3° below normal. Extremes: 64 and 97°. Rainfall ranged from 0.40 in. northwest to over 2.00 in. coastal areas.

Soil moisture mostly surplus. Fieldwork: 2.6 days suitable. Rains hampered weed control in row crops and hay harvest. Soybeans 32% blooming, 37% 1978, 31% average; 7% podding, 6% 1978; condition good. Cotton 96% squaring, 99% 1978, 92% average; 62% blooming, 93% 1978; 40% setting bolls, 45% 1978, 47% average; condition fair to good. Rice 8% headed, 12% 1978, 14% average; condition good. Corn 89% silked, 94% 1978, 83% average; 61% in or past dough stage, 72% 1978; 30% dented, 32% 1978; condition good. Sorghum 31% headed, 40% 1978. Hay crops 54% harvested, 57% 1978, 49% average. Watermelon 56% harvested, 45% 1978, 45% average. Peaches 57% harvested, 59% 1978, 75% average. Pasture condition good. Diesel and gasoline supplies adequate to tight. LP gas supplies mostly adequate.

MISSOURI: Temperatures slightly above normal Bootheel, 5° below normal elsewhere. Heavy rainfall in few areas north, otherwise precipitation scattered and light.

Fieldwork: 5.7 days suitable. Doublecrop soybeans 90% planted. Corn 65% tasseled, last year 39%; 44% silked, last year 21%, normal 60%. Soy-

beans 20% blooming, last year 20%, normal 33%. Sorghum 8% headed, last year 20%, normal 22%. Cotton 100% squared, last year 100%, normal 74%; 62% blooming, last year 81%. Oats 74% harvested, last year 71%, normal 83%. Wheat 94% harvested, last year 94%, normal 100%. Alfalfa hay 77% harvested, 2d cutting, last year 63%, normal 82%. Other hay 86% harvested, last year 83%. Condition of corn, soybeans, cotton and pasture mostly fair to good. Soil moisture short to adequate. LP gas supplies mostly adequate. Diesel fuel and gasoline supplies mostly tight to adequate.

MONTANA: Hot and generally dry. Week began with temperatures near or a little below normal, but rapid warming spread from west early week to extreme east portion by weekend. Readings above 90°, including a few topping 100° were common during latter half. Temperatures averaged 6 to 8° above normal west of Divide, 2 to 4° above central, 1° above normal extreme east. Precipitation well below normal, few widely scattered thunderstorms near end of week.

Soil moisture short, crops suffering. Fieldwork: 7 days suitable. Small grains fair condition, irrigated crops mostly good. Winter wheat ripe 5%, 5% 1978, 20% average. Spring wheat turning 15%, 10% 1978, 25% average. Barley turning 20%, 15% 1978, 30% average. Oats ripe 0%, 5% 1978, 5% average. First cutting alfalfa hay 90% complete, normal 85%. Other hay cut 55%, normal 50%. Late summer grazing prospects fair. Livestock in good condition.

NEBRASKA: Temperatures 3° below normal. Precipitation 0.25 in. west to 0.50 in. east and southeast.

Wheat ripe 90%, year ago 100%, normal 90%; harvest 50% complete, year ago 80%, normal 80%. Corn silking 15%, year ago 30%, normal 45%. Sorghum heading less than 5%, year ago 5%, normal 10%. Soybeans podding less than 5%, year ago 10%, normal 10%. Second cutting alfalfa 60% complete, year ago 70%. Diesel 50% adequate, 50% tight; gasoline 60% adequate, 40% tight; LP gas adequate. Fieldwork: 5.3 days suitable.

NEVADA: Heat wave continued through midweek. Several record highs for date set before surge of moisture remainder of week. Rain began south and central and spread over most of state by weekend. Many stations more than double normal July rainfall. Temperature extremes: 15 and 38°.

Showers end of week delayed small grain harvest and haying operations. Ranges benefitted from widespread precipitation. Fire hazard reduced greatly.

NEW ENGLAND: Typical summer prevailed, rainfall varied considerably. Amounts ranged from trace to 3.00 in. Temperatures 3 to 10° above normal.

Needed rains relieved dry conditions but the lack of moisture still a problem. Ponds and reservoirs dropped to critical levels due to increased irrigation. Cabbage, zucchini, beans, beets and carrots, lettuce, tomatoes, sweet corn, and peas being harvested. Fruit growers picking raspberries, blueberries, and early apple and peach varieties. Fuel supplies remain tight to adequate. Soil moisture and available grazing reported very short to adequate.

NEW JERSEY: Temperatures 1 to 2° below normal. Extremes: 54 and 92°. Rainfall averaged 1.92 in. north, 1.47 in. central and 0.93 in. south. Soil temperature 73° north, 75° central and south.

Fieldwork: 4.4 days suitable. Good soil moisture and warm weather improved growth of corn and summer vegetables. Volume of summer vegetables

and peaches increasing rapidly. Blueberry supplies continue heavy. Wheat combining completed in some areas. Potato supplies limited to local roadside markets. Hay making active. Late soybean planting continued.

NEW MEXICO: Considerable cloudiness and recurring showers almost all sections. Many rain totals in excess of 1.00 in. Temperatures averaged near to about 3° cooler than normal.

Cotton fair to good, but late; 25% squared, limited boll set. Alfalfa harvest slowed by general showers. In south, 2d cutting complete and 3d cutting 25% complete. In north, 2d cutting in progress. Wheat harvest virtually complete. Grain sorghum and corn good with about 50% of corn silked in south. Limited heading grain sorghum main area. Chile fair, hurting from extremely hot weather. Tomatoes poor to fair, hurting from curly-top virus. Onion harvest in progress. Pastures and livestock good. Most areas have had adequate rainfall.

NEW YORK: Temperatures averaged above normal. Rainfall below normal. Scattered showers hit some areas, left many dry.

Crops not yet suffering extensively from dry conditions. Wheat harvest off to good start. First cutting alfalfa done, second cutting underway. Grass silage and clover timothy harvests nearly done. Dry bean condition good. Sweet corn, snap beans good condition; both harvests starting. Cabbage planting nearly complete. Onion condition good. Early variety apple harvest to start soon. Tart cherry harvest underway. Sweet cherry harvest complete.

NORTH CAROLINA: Low temperatures above normal; high temperatures subnormal. Precipitation as thunderstorms; 4.00 in. southeast, elsewhere 2.00 in.

Fieldwork: 4.5 days suitable. Soil moisture short to adequate. Condition of corn, cotton, peanuts, soybeans, hay crops, Irish potatoes, sweet potatoes, apples and pasture fair to mostly good. Vegetables fair to good. Tobacco mostly fair to good. Harvested: Peaches 56%, 1978 48%, average 64%; hays 73%, 1978 79%, average 70%; Irish potatoes 95%, 1978 complete, average 93%; flue-cured tobacco 21%, 1978 12%, average 19%; spring snap beans 75%. Phenological stages: Corn silking 82%; corn soft dough 52%; corn dent 30%; cotton squared 73%; cotton bloomed 48%; soybeans flowered 6%.

NORTH DAKOTA: Above normal temperatures with below normal precipitation. Highs by weekend into low to mid-90's. Extremes: 99 and 43°. Showers scarce. Many stations reporting no measurable precipitation.

Hot, dry weather continued stress on small grains and pushed development. Most severe northwest and north central. General rains needed overall. Early seeded grains ripening while winter wheat and rye harvest just beginning. Small grain development still behind normal. Percents turning to ripe or beyond and normal: Hard red spring wheat 2% and 20%; durum 1% and 10%; oats 3% and 28%; barley 7% and 36%. Row crop progress generally good but showing stress some areas. Average height sunflowers 33 in., normal 38 in. Potatoes 51% bloom, normal 69%. Both rated mostly fair to good. Scattered grasshopper problems. Most severe parts of central and south central. First alfalfa cutting nearing completion. Pastures also suffering from drought.

OHIO: Mean temperatures in upper 60's to low 70's; generally from 0 to 3° below normal. Precipitation

light with totals usually less than 0.25 in. Soil temperatures rose under mostly clear skies.

Wheat harvest almost caught up. Much hay made and straw baled. Early apple and peach harvest began. Wheat harvested 85%, 80% 1978, 90% average. Corn tasseled 55%, 50% 1978, 55% average. Corn in dough stage 5%, 5% 1978, 5% average. Soybeans setting pods 15%, 15% 1978, 35% average. Alfalfa 2d cut 65%, 70% 1978, 60% average. Soybeans blooming 45%, 40% 1978. Oats harvested 10%, 15% 1978, 35% average. Fieldwork: 6.5 days favorable. Pasture condition good. Soil moisture adequate.

OKLAHOMA: Temperatures 4 to 6° below normal except in extreme southwest where temperatures averaged 7° below normal. All areas received precipitation averaging from 0.69 in. south central to 1.57 in. Panhandle.

Wheat harvest virtually complete; 100% 1978, 100% average. Sorghum 10% heading, 15% 1978, 30% average. Sorghum 5% milk to soft, 5% 1978 and average. Cotton 45% squaring, 50% 1978 and average. Fieldwork: 4.5 days suitable.

OREGON: Maximum temperatures ranged from low 70's to 105°, most in high 90's to 103°. Minimum temperatures ranged from mid-30's to upper 50's, most in low 50's. Average temperatures generally in 70's, 6° above normal. No rainfall except a little drizzle in coastal areas.

Soil moisture mostly short. Winter wheat 5% harvested. Spring wheat turning rapidly, especially lower elevations. Barley harvest continuing. Grass seed harvest as weather permits. Hot weather stimulating mint growth in west, but nematodes and other insects causing concern. Other mint fields spotty, some producing flower buds. Grasshoppers doing some damage around borders of wheat, hay and other crops. Sprays being applied. Cherry harvest continuing. Early apple and peach harvest in progress; hot weather causing some sunburn on apples. Apricots ripening rapidly. Picking canberries continued. Walnuts and filberts sizing well; filbert prospects better than earlier anticipated. Vegetables look good. Snap bean harvest underway. Sweet corn progressing well. Irrigation in full swing. Potatoes growing well; digging started in Hermiston area. Onions progressing well. Livestock condition fair to mostly good. Range and pasture conditions fair to good west, poor to mostly fair east. Hot weather decreasing efficiency of pasture irrigation. Ranges getting very dry and grasses are deteriorating rapidly due to lack of moisture and grasshopper infestation.

PENNSYLVANIA: Weather data not available.

Fieldwork: 6 days suitable. Soil moisture mostly adequate to short. Activities: Making hay; combining small grains; baling straw; filling silos; spraying; cultivating; fruit and vegetable harvest. Barley 67% combined, last year 63%. Wheat 24% combined, last year 30%. Oats 47% turning; 11% ripe, last year 5%. Corn 43 in., last year 46 in. Alfalfa second cut 39%. Clo-tim first cut 94%. Hay quality good to fair. Feed from pastures average. Harvesting early apples, peaches, pears, snap beans, green peas, cabbage, sweet corn, tomatoes and early potatoes.

PUERTO RICO: Island average rainfall 4.29 in. or 2.94 in. above normal. Temperatures averaged about 81° on coasts and 76° interior. Extremes: 96 and 60°.

SOUTH CAROLINA: Higher than usual temperatures at first, near normal thereafter. Cloudy, showery throughout week, some areas with rainfall every day.

Soil moisture adequate before weekend rains. Fieldwork: 4.3 days suitable. Corn condition good, rains helped dry areas; 1% harvested; 25% mature, 28% last year, 29% average; dough stage 71%, last year 74%. Cotton condition fair to good; sprays controlling bollworm increases, hot spots; squaring 97%, 93% last year, 94% average; setting bolls 86%, 72% last year, 74% average. Soybeans condition good, some dry stress before rains; 23% blooming, 12% last year; 7% setting pods. Tobacco condition good, some dry stress; 44% harvested, 28% last year, 45% average. Peaches excellent size, quality due to good rains, sunshine; 65% harvested, 60% last year, 72% average. Early apple varieties harvested, excellent due to favorable weather, 1% harvested.

SOUTH DAKOTA: Temperatures 6° subnormal to 1° above normal. Extremes: 99 and 44°. Rainfall all sections except parts of north central and northeast. Greatest amounts southeast. Central and west averaged 0.50 in.

Topsoil moisture supplies northeast, northwest, southeast, short; adequate elsewhere. Hail damaged some crops in central area. Grasshoppers remain problem and moving east. Small grain harvest began but behind average by one to two weeks. Crop growth and development moderate to rapid. Winter wheat 3% harvested, 1978 32%, average 54%. Rye 3% harvested, 1978 20%, average 40%. Oats 8% harvested, 1978 6%, average 28%. Spring wheat 1% harvested, 1978 1%, average 15%. Barley 9% harvested, 1978 8%, average 31%. Alfalfa 2d cut 30% harvested, 1978 36%, average 43%. Wild hay 41% harvested, 1978 47%, average 54%. Flax 84% in bloom or past, 1978 74%, average 93%. Soybeans 40% in bloom or past, 1978 63%, average 66%. Corn 2d cultivation 93%, 1978 90%, average 96%; tasseled 15%, 1978 23%, average 38%; silked 5%, 1978 9%, average 23%.

TENNESSEE: Rainy and overcast. Heavy rain at weekend; amount averaged 0.50 in. west, 3.00 in. east. Flash floods some areas. Temperatures normal west, 2 to 3° below normal east.

Soil moisture surplus. Fieldwork: 3.8 days suitable. Soybeans blooming 25%, 1978 39%, average 39%; setting pods 5%, 1978 7%, average 9%. Corn silked 57%, 1978 71%, average 77%; dough stage 10%, 1978 20%, average 29%. Cotton squaring 75%, 1978 91%, average 91%; setting bolls 10%, 1978 39%, average 39%. Second cutting alfalfa 92% complete, 1978 90%, average 91%. Row crops fair condition. Pastures and livestock good condition. Blue mold in tobacco. Weeds bad in all crops. Small grain harvest virtually completed. Snap beans, tomato, peach harvest active. Fuel supplies mostly adequate.

TEXAS: Cold front early week causing showers and thunderstorms with heaviest rains over southeast and southwest. Rainfall much above normal. Southwest near 1.75 in. above normal; East Texas, North Texas, and western Panhandle, rainfall above average by 0.75 to 1.50 in.; elsewhere rainfall near normal.

Good rains alleviated moisture stress in many areas. Wheat harvest completed on High Plains prior to rains, but harvest of sorghum and corn curtailed in South Texas, Valley. Beneficial insects kept many harmful insects in check but grasshoppers becoming problem on cotton and sorghum fields bordering rangeland, particularly on Low Plains. Cotton responding well to hot weather. Over 67% of High Plains fields squaring while defoliant applied on fields in Lower Rio Grande Valley. Producers applying insecticides for bollworm and fleahopper north central. General harvesting oper-

ations should commence this week in Valley. Spraying for midge and webworm on sorghum active South Texas, Blacklands. Corn harvest delayed Valley and South Texas due to rain. Beneficial rains came in Panhandle just as fields entering critical tasseling stage. Sunflowers full bloom throughout Panhandle. Recent rains curtailed rice harvest as it began along Gulf Coast. Cotton squaring 65%; setting bolls 21%; open bolls-6%. Rice headed 97%; turning color 50%; harvested 2%, 10% 1978, 12% average. Sorghum headed 63%; turning color 50%; mature 34%; harvested 26%, 42% 1978, 28% average. Wheat harvested 100%, 100% 1978, 100% average. Corn harvested 2%, 4% 1978, 3% average.

Harvests of bell peppers, melons, sweet corn, peas, cucumbers, okra, tomatoes for processing active. Fall vegetable land preparation and planting continued. Citrus continued size well and rust mite infestations increased some groves. Peach supplies available throughout north, central and East Texas. Pecan nutlets continued develop well. Second generation casebearer spraying active in Central, North Texas.

Recent showers over many areas greened pastures, rangeland. Threat of range fires in Central, North Texas reduced due additional moisture. Hay cutting, baling active as weather permitted. Grasshopper populations heavy some areas North Texas although many spray programs completed. Livestock conditions ranged fair to excellent, some weight loss attributed to hot weather.

UTAH: Scattered areas shower and thunderstorm activity increasing in intensity over weekend. Accumulated amounts variable ranging from little or none to over 1.00 in. Average temperatures well above normal but cooling trend weekend. Averages ranged from near normal to 6° above.

Soil moisture short to very short on nonirrigated lands. Range feed supplies poor to fair and rapidly drying. Stock water supplies mostly adequate except local areas where ponds going dry. Fieldwork: 7 days suitable. Second cutting alfalfa progressing. Some insect damage. Tart cherry harvest beginning, sweet cherry harvest ending. Apricot harvest continues. Labor short. Irrigated small grains looked good. Dryland small grain stressed. Livestock generally good condition but competing with grasshopper for available feed. Flies, gnats, mosquitoes continuing problem. Fuel supplies generally adequate.

VIRGINIA: Cloudiness kept temperatures near to a little above normal. Precipitation mainly around 1.00 in. or less except over central and south where over 6.00 in. prompted flash flood warnings on 21st.

Topsoil moisture short to adequate; mostly surplus west of mountains. Fieldwork: 5.1 days available. Corn, soybeans, tobacco, peanuts, pastures, hay in good condition but many localities Piedmont, southside, east and southeast need rain. Much flue-cured tobacco irrigated and harvest 6% done, 2% 1978, 4% usual. Wheat 95% combined, 91% 1978, 93% average. Corn 55% silked, 52% 1978, 62% usual. Oats cut for hay in west and southwest; potato harvest on Eastern Shore; cabbage cut southwest; eastern tomatoes, cantaloups, sweet corn, squash picked. Scattered rains during period and over following weekend alleviated much of crop stress due to dryness.

WASHINGTON: West: Much above normal temperatures. Precipitation much below normal.

Red raspberry harvest winding down. Blueberry picking gaining momentum. Vegetable seed harvest started. Harvest of lettuce, cabbage, broccoli, cauliflower, and other vegetables continue. Baling pea vines and grass hay.

East: Temperatures averaged much above normal. No precipitation recorded.

Picking apricots and peaches both fruit areas, sweet cherries Wenatchee. Hand thinning apples. Second cutting alfalfa. Digging Walla Walla onions almost over. Hot weather accelerated maturing of crops. Combining winter wheat more widespread, dry peas underway. Range and pastures dry. High fire danger. Wheat turned 85%; harvested 9%, 1978 9%.

WEST VIRGINIA: Temperatures 4° above normal northeast, near normal elsewhere. Extremes: 91 and 42°. Precipitation scattered but heavy, some high water in northeast.

Fieldwork: 3.6 days suitable. Soil moisture adequate to surplus. Main farm activities: Harvesting hay and small grains and clipping pastures. Barley harvested 59%, 69% 1978. Wheat harvested 34%, 48% 1978. Oats harvested 5%, 23% 1978. Corn mostly good to fair condition. Hay 1st cutting 86%, 90% 1978; 2d cutting 28%, 21% 1978. Fuel supply adequate to tight.

WISCONSIN: Temperatures 2° below normal. Cooler beginning week with highs 70's and lows 40's to 50's. Warmed to highs 80's to 90's and lows 50's to 60's after midweek. Extremes: 90 and 45°. Rainfall light except for some locally heavier totals of 0.50 to 1.50 in. north 19th and south 21st. Averages 0.50 in. or less.

Fieldwork: 7 days suitable. Second crop hay harvest 25% done, 1978 20%, normal 15%. Very good quality hay, quantity shorter where lacked sufficient moisture after first cutting. Corn continued good growth; average height 53 in., 1978 56 in., normal 54 in. Early corn silking, needs rain. Seed corn being detasseled. Soybeans in bloom, need rain on lighter soils. Winter wheat harvest underway. Rye and barley ripening, early oats turning color rapidly. Late oats need moisture for kernel development. Pastures declined during warm, dry July weather but condition above normal. Early potatoes being dug. Harvesting of very good pea crop continued. Early sweet corn on sale at roadside markets. Unirrigated vegetable crops need rain. First snap beans and beets being harvested. Tobacco showing good growth. Cherry harvest starting northern area. Topsoil moisture short to adequate.

WYOMING: Temperatures little below normal. Extremes: 98 and 28°. Precipitation below normal.

Topsoil moisture short. Winter wheat mature 52%; harvested 9%. Spring wheat turning color 50%; mature 6%. Oats headed 82%; turning color 30%; mature 5%. Barley headed 92%; turning color 42%; mature 8%. Hay harvested first cutting alfalfa 77% complete, second cutting started; other 35%. Spring planted small grains maturing later than normal. Corn tasseled 9%. Dry beans 32% bloomed. Potatoes 29% bloomed. Row crops fair to good condition. Fieldwork: 7 days suitable. Stock water adequate most areas.

World Weather and Crop Update

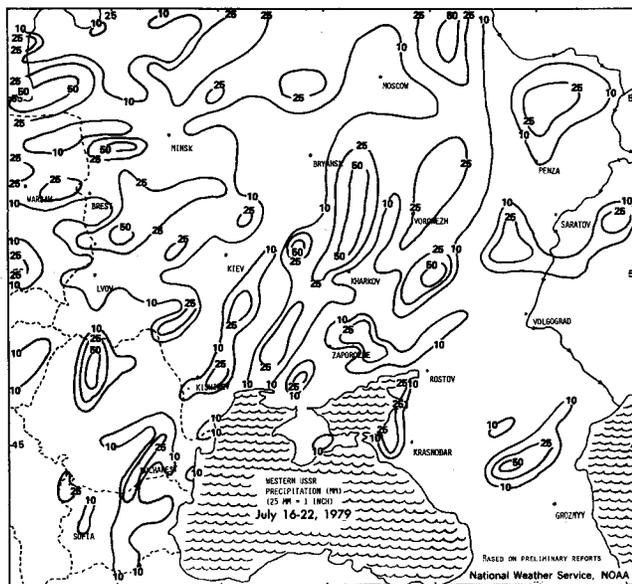
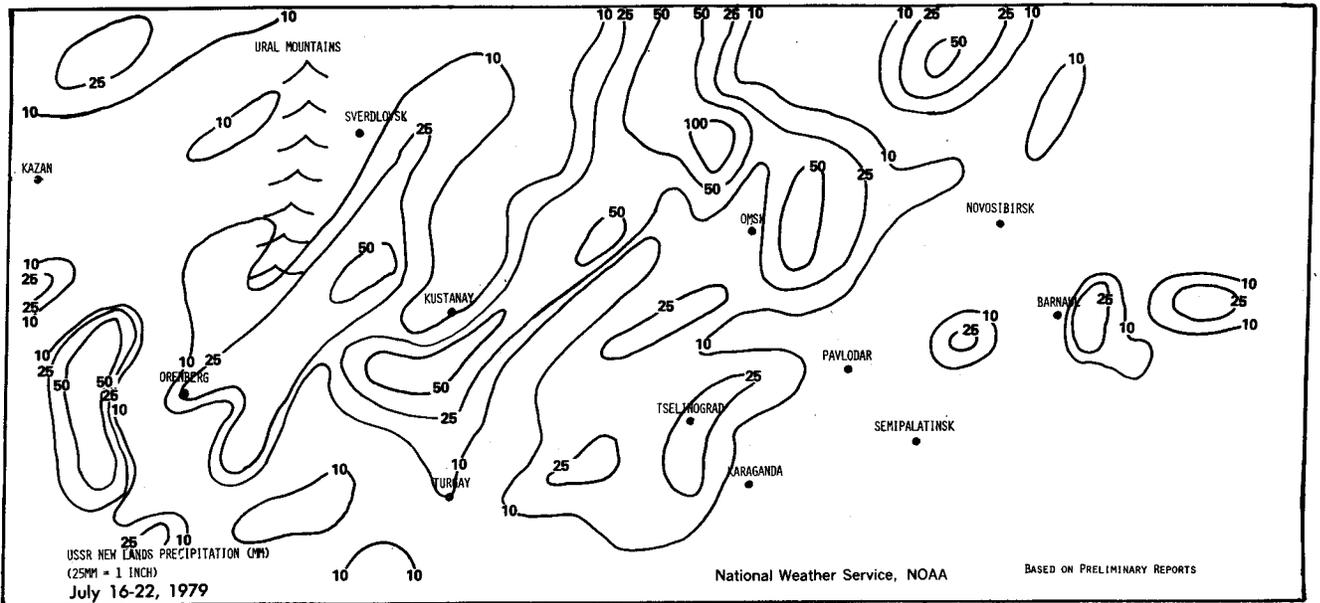
July 16 - 22

*Based on normal crop calendar information.

USSR. WINTER GRAIN HARVESTING -- SOME INTERFERENCE BY RAINS. SPRING GRAINS HEADING -- GOOD SOIL MOISTURE.

Production prospects for some spring-planted crops continued to improve in European USSR; good rains fell for the third consecutive week. On the other hand, rainfall has also been persistent enough to begin causing problems with winter grain harvest. The western Ukraine and Belorussia received 15 to 50 mm, while the areas north and south of Kiev were essentially dry (see accompanying map). Most of the North Caucasus and lower Volga were dry,

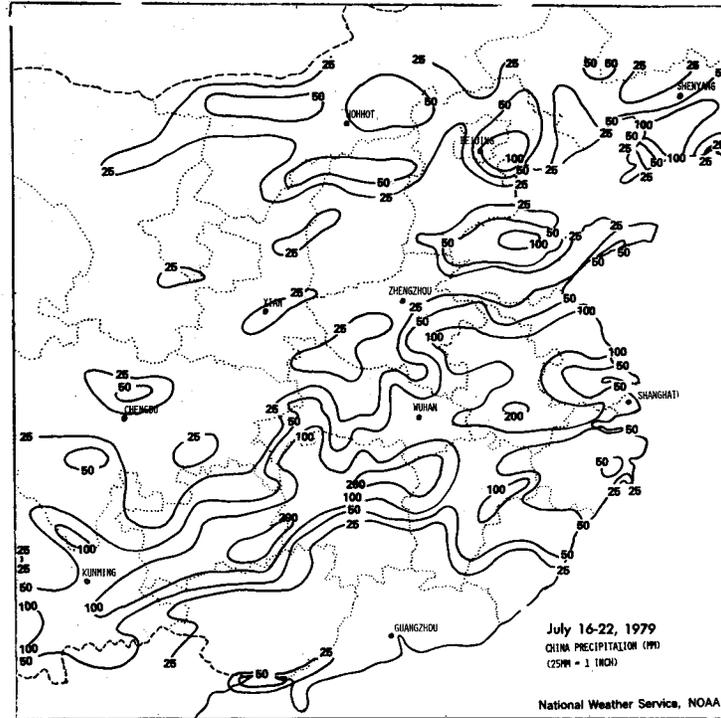
although some showers occurred in the middle Volga region. Farmers are planting a second crop for use as forage, where good rains have occurred. In the New Lands, good rains continue to fall over much of the area. For the past three weeks (July 2-22), rainfall has been near or slightly below normal over the western portion of the New Lands but well above normal in central and eastern areas. Spring wheat development across the region is behind normal. Current soil moisture levels are likely sufficient to carry the crop through the filling period. Warmth is needed to push crop development.



CHINA. SECOND RICE CROP PLANTED -- ADEQUATE MOISTURE AVAILABLE.

Heavy rainfall continued across the North China Plain, while the southern half of the country is unseasonably dry. Water levels in the southern double-crop region---which has been dry for four

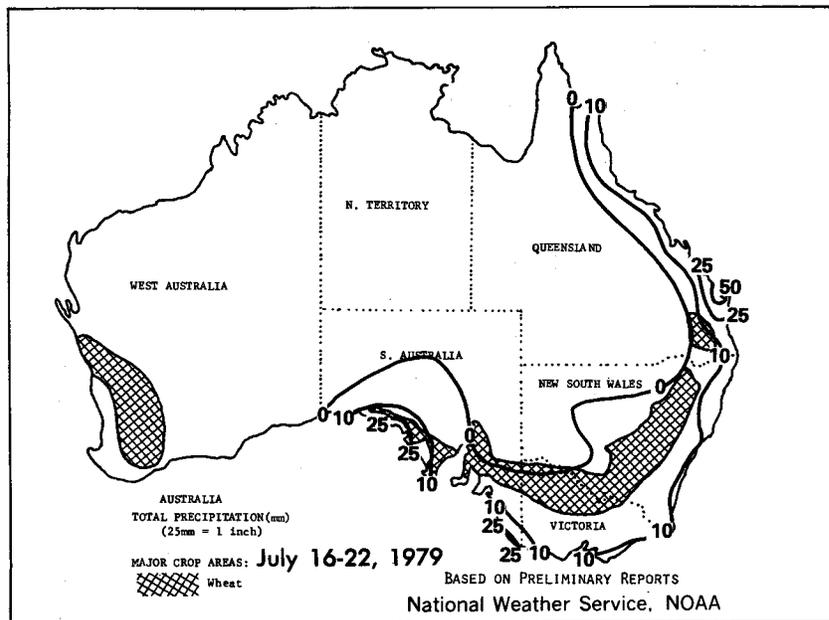
weeks---are still excellent, as a result of well-above-normal moisture in June. As pointed out last week, the area of heavy rainfall in the North China Plain includes most of China's cotton production. The very wet conditions are likely causing some problems with crop development and disease and insect problems.



AUSTRALIA. WINTER GRAINS JOINTING IN QUEENSLAND* -- SOIL MOISTURE GOOD.

Very light showers (mostly less than 10 mm) covered the primary winter grains area. Crop condition

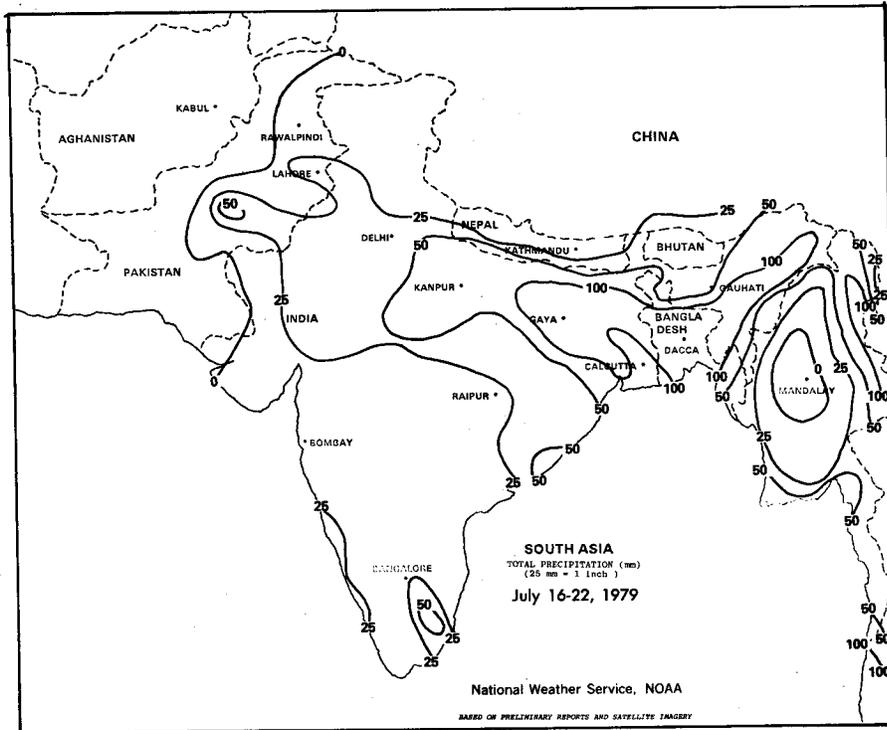
is considered excellent. Crop calendar information indicates that winter grains should be jointing in the Queensland area.



INDIA. RICE JOINTING* -- GOOD GROWING CONDITIONS IN MAJOR AREAS.

Monsoon activity continued over northern India; near- or above-normal rainfall stayed in the north-eastern provinces and all of Bangladesh, where

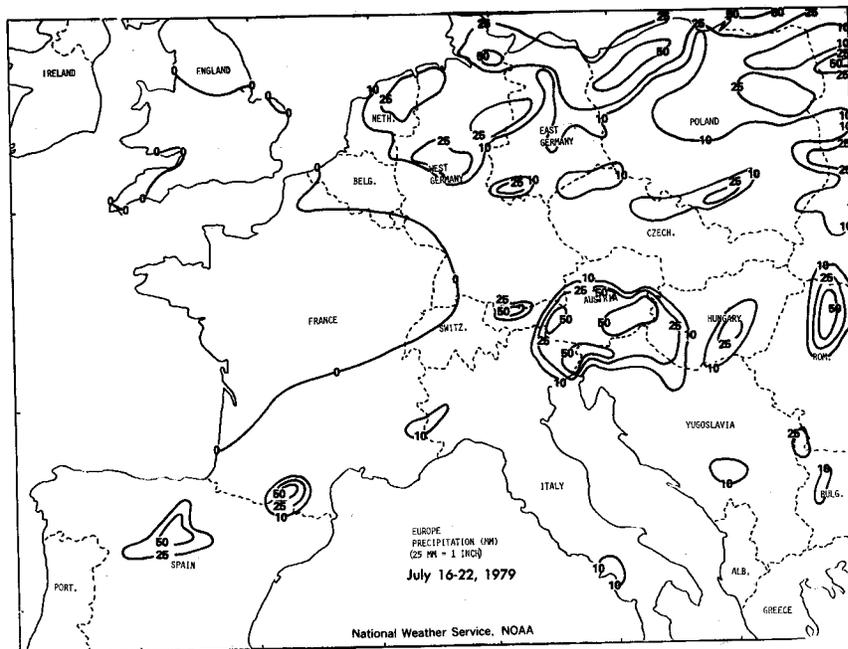
over 100 mm fell. This would be extremely beneficial to rice in the region, which is now at the jointing stage. Dry conditions persisted over the southern half of India. The area from Gujarat East to Andhra Pradesh has been dry all through July; moisture is needed across most of the region.

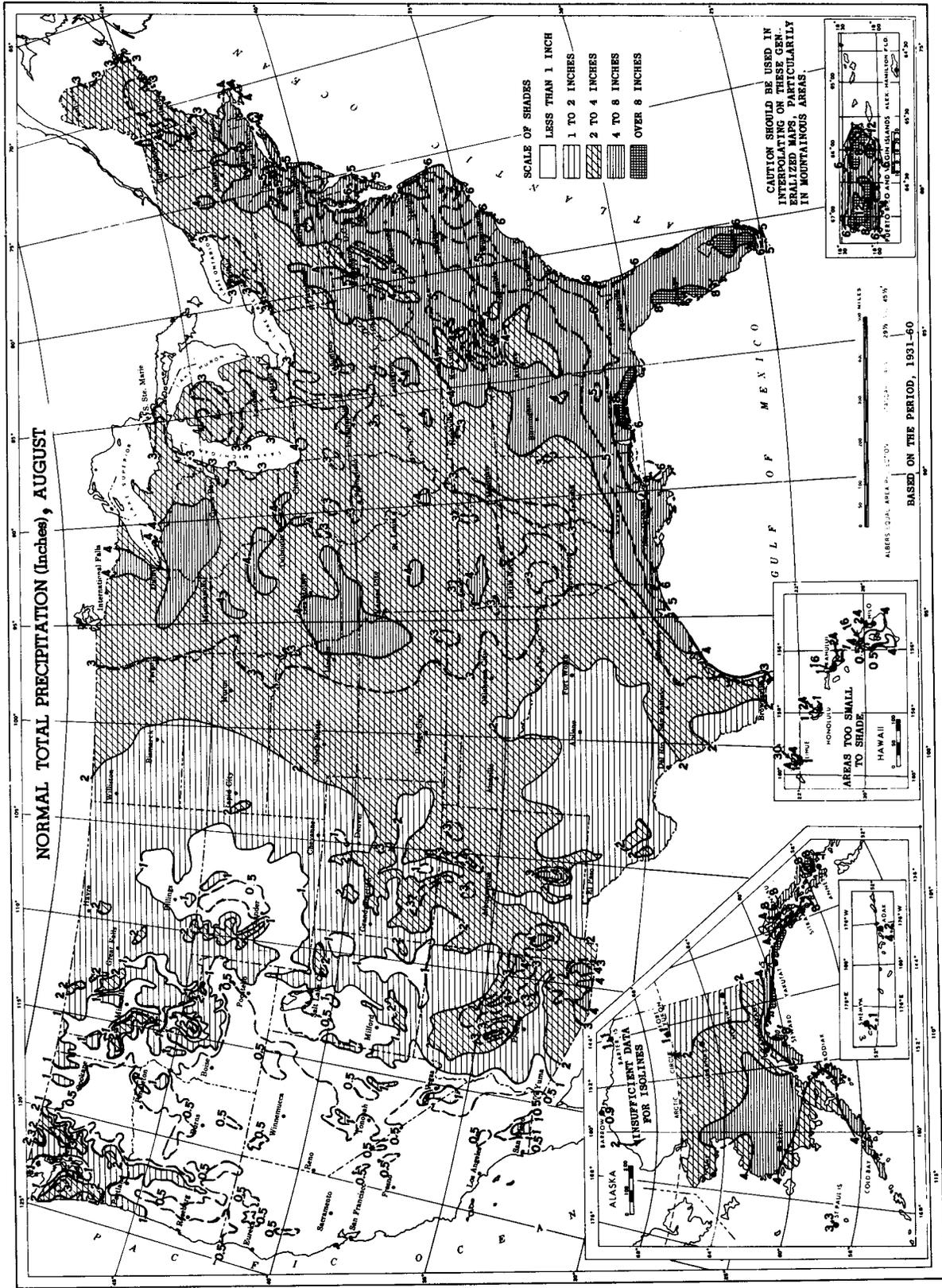


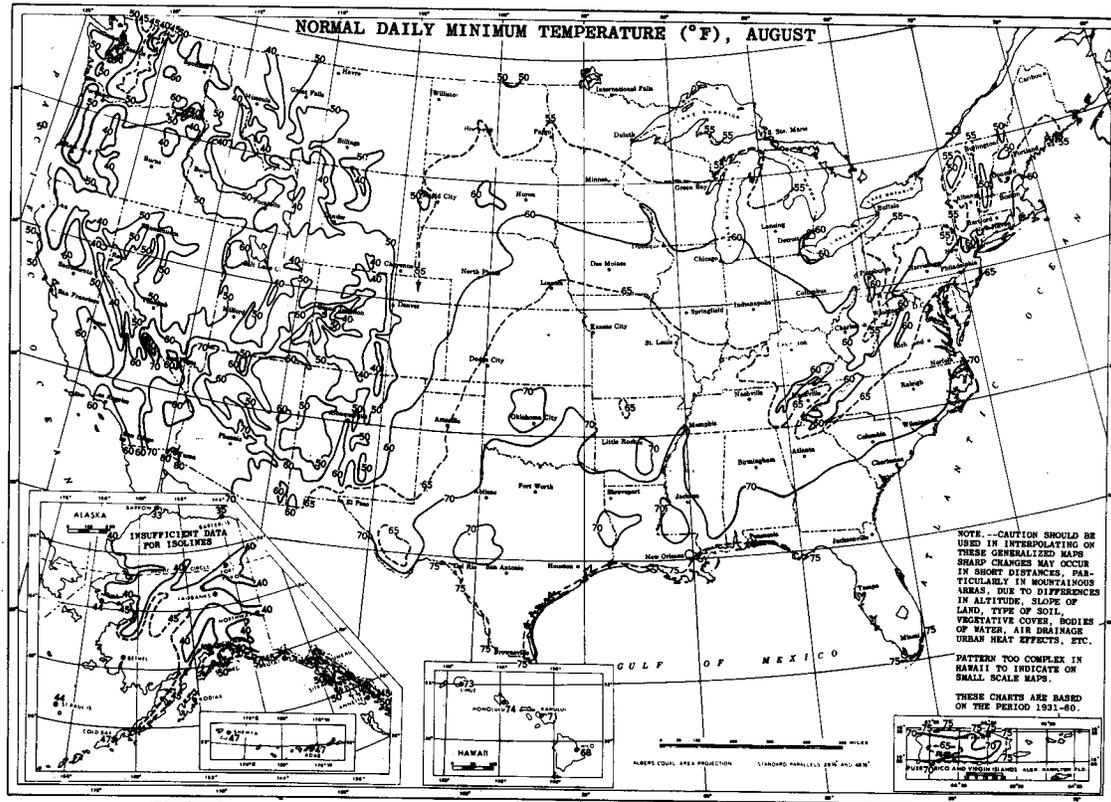
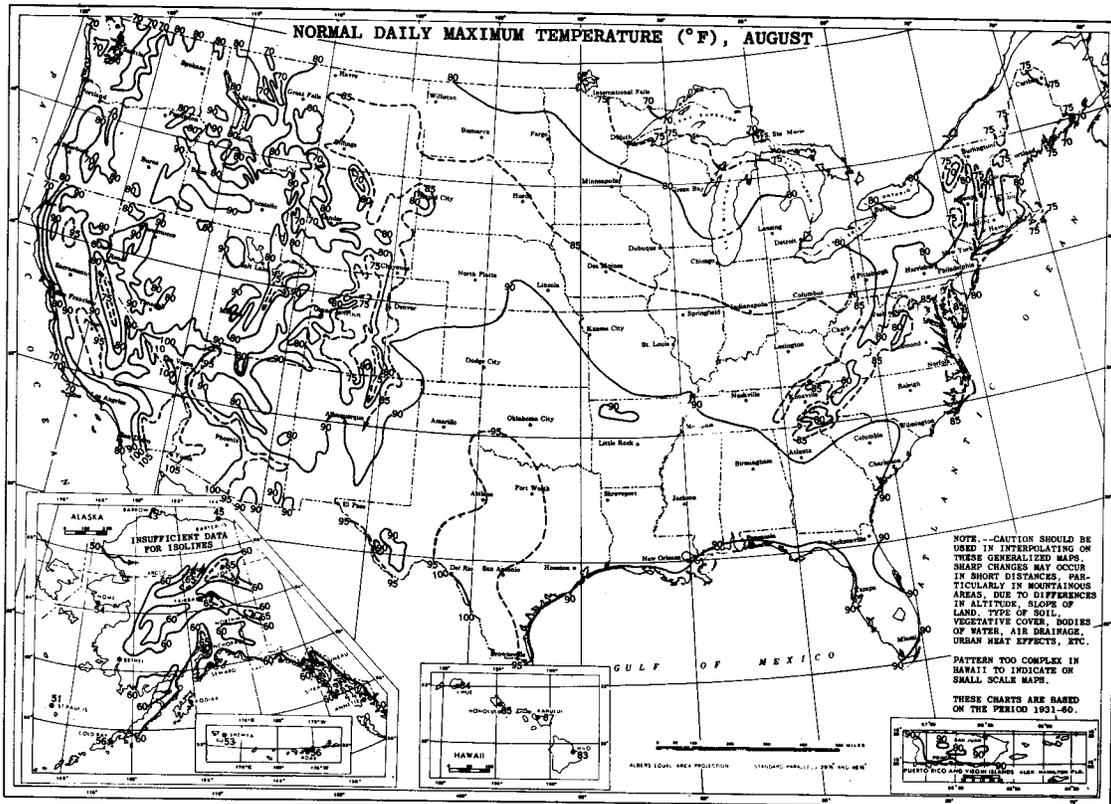
EUROPE. WINTER GRAIN HARVESTING* -- INTERFERENCE BY RAINS IN CENTRAL AREAS.

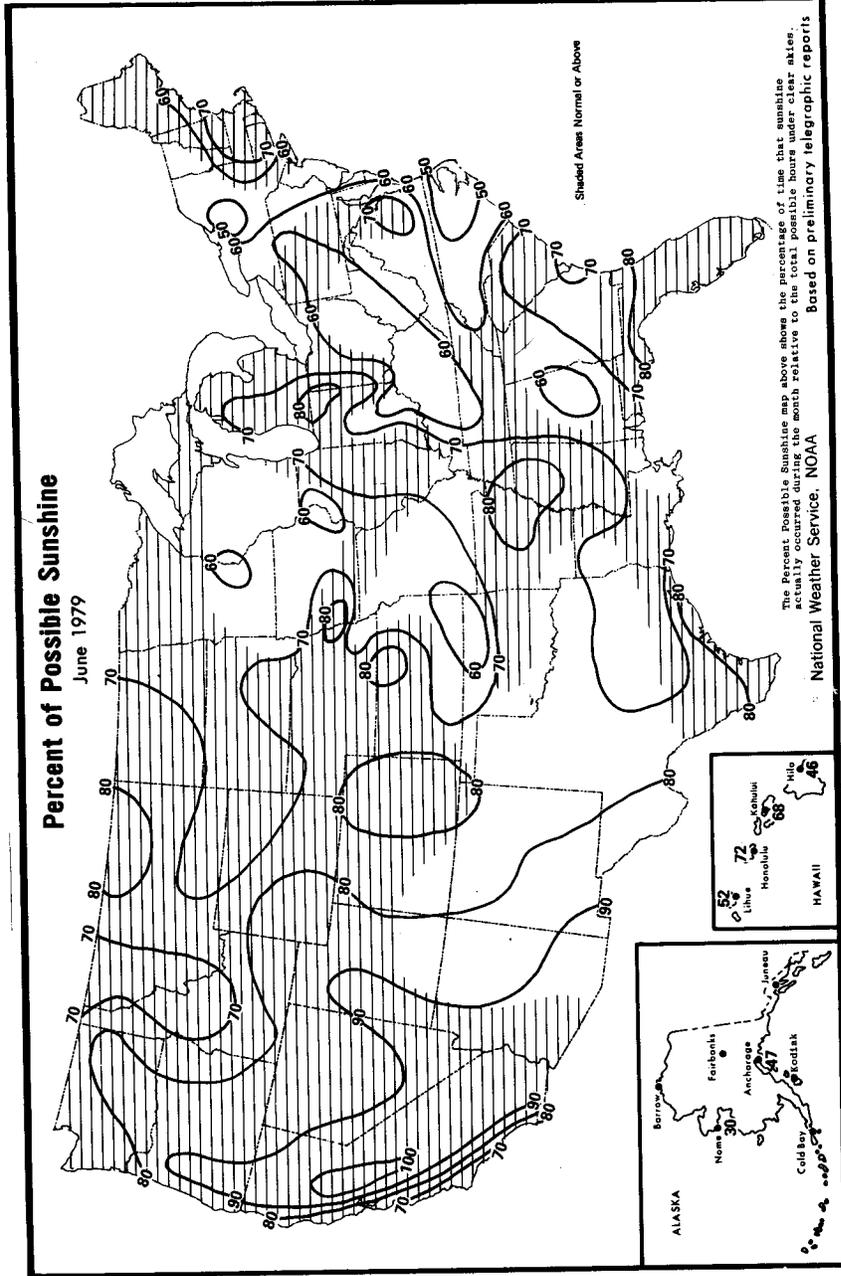
Winter grain harvest in western Europe continued this week with clear skies in most areas. The only significant rain fell over the northern por-

tions of both East and West Germany, Poland, and Austria. Austria and adjoining areas have experienced heavy rainfall almost every week since mid-June after very dry weather during May and early June. Winter grains harvest has been carried out under very difficult conditions.









CROP DEVELOPMENT
FOR WEEK ENDING JULY 22

CORN TASSELING			
	1979	1978	AVG.
COLO	10	23	44
GA	NA	NA	NA
ILL*	49	52	67
IND*	25	25	50
IOWA	46	72	NA
KANS	30	40	55
KY	49	58	72
MICH	NA	NA	NA
MINN	14	65	65
MO	65	39	NA
NEBR*	15	30	45
NC*	82	NA	NA
OHIO	55	50	55
PA	NA	NA	NA
S DAK	15	23	38
VA*	55	52	62
WISC	1/	NA	NA

* SILKING PROGRESS

SOYBEANS BLOOMING			
	1979	1978	AVG.
ALA	33	26	31
ARK	9	7	NA
GA	NA	NA	NA
ILL	59	50	57
IND	NA	NA	NA
IOWA	52	60	63
KANS	15	25	NA
KY	16	23	28
LA	28	51	NA
MICH	15	NA	NA
MINN	42	73	76
MISS	32	37	31
MO	20	20	33
NEBR	NA	NA	NA
NC	6	NA	NA
OHIO	45	40	NA
SC	23	12	NA
TENN	25	39	39

SOYBEAN POD SET			
	1979	1978	AVG.
ALA	16	7	NA
ARK	0	0	0
GA	NA	NA	NA
ILL	20	6	24
IND	NA	NA	NA
IOWA	NA	NA	NA
KANS	5	5	NA
KY	NA	NA	NA
LA	13	NA	NA
MICH	NA	NA	NA
MINN	NA	NA	NA
MISS	7	6	NA
MO	NA	NA	NA
NEBR	1/	10	10
NC	NA	NA	NA
OHIO	15	15	35
SC	7	NA	NA
TENN	5	7	9

COTTON SQUARING			
	1979	1978	AVG.
ALA	93	86	90
ARIZ	NA	NA	NA
ARK	94	97	NA
CALIF	NA	NA	NA
GA	100	100	100
LA	95	99	NA
MISS	96	99	92
MO	100	100	74
N MEX	25	NA	NA
NC	73	NA	NA
OKLA	45	50	50
SC	97	93	94
TENN	75	91	91
TEX	65	NA	NA

COTTON SETTING BOLLS			
	1979	1978	AVG.
ALA	44	31	47
ARIZ	NA	NA	NA
ARK	36	73	NA
CALIF	26	NA	NA
GA	99	85	85
LA	49	77	66
MISS	40	45	47
MO	NA	NA	NA
N MEX	1/	NA	NA
NC	NA	NA	NA
OKLA	NA	NA	NA
SC	86	72	74
TENN	10	39	39
TEX	21	NA	NA

GRAIN SORGHUM HEADED			
	1979	1978	AVG.
COLO	NA	NA	NA
KANS	5	NA	NA
MO	8	20	22
NEBR	1/	5	10
OKLA	10	15	30
SD	0	0	0
TEX	63	NA	NA

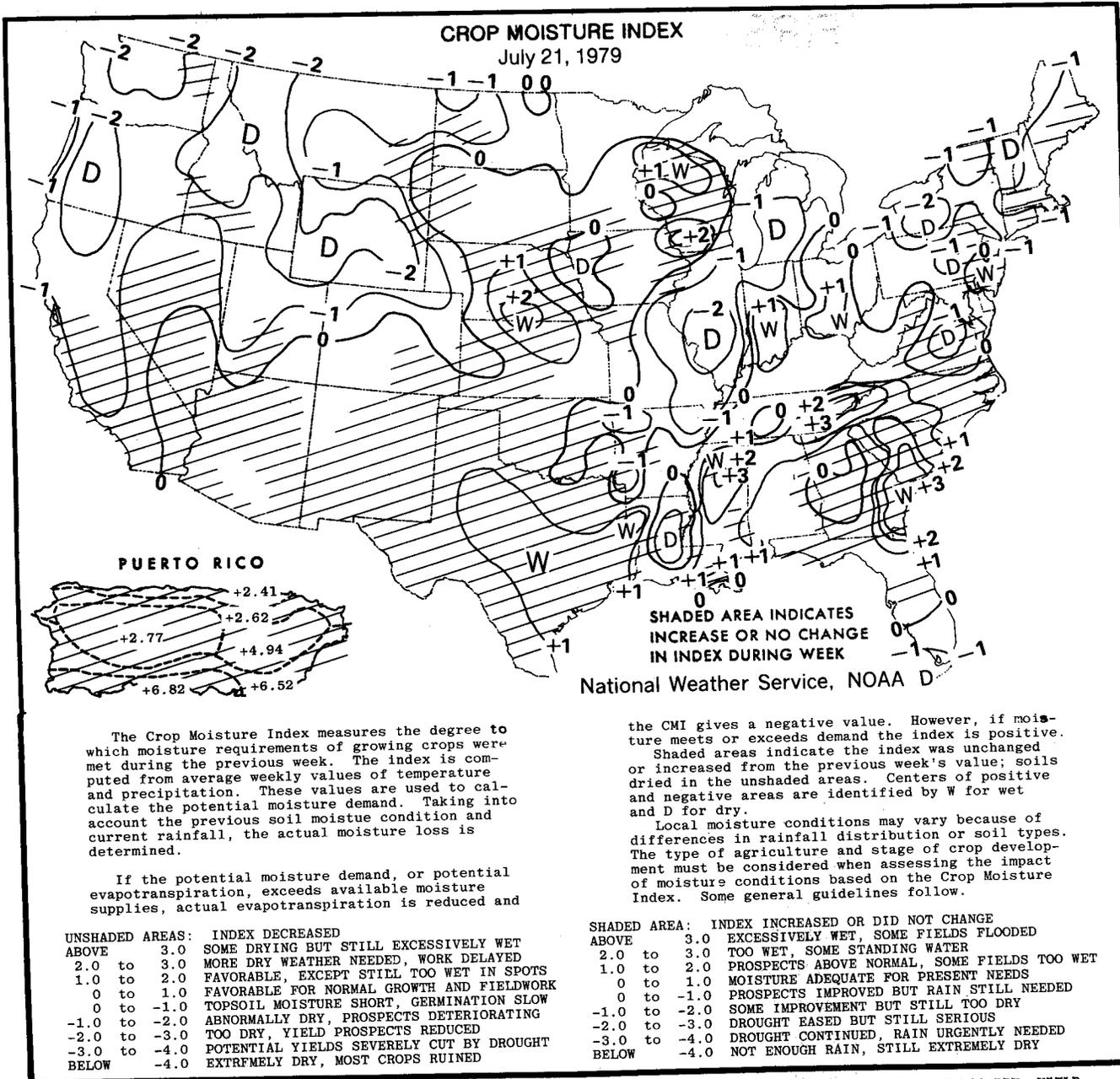
RICE HEADED			
	1979	1978	AVG.
ARK	NA	NA	NA
CALIF	NA	NA	NA
LA	58	74	NA
MISS	8	12	14
TEX	97	NA	NA

HARVEST PROGRESS
FOR WEEK ENDING JULY 22

WINTER WHEAT			
	1979	1978	AVG.
CALIF	92	NA	NA
COLO	58	89	81
IDAMH	0	0	0
ILL	100	95	100
IND	90	90	97
KANS	95	100	100
MO	94	94	100
MONT	0	0	0
NEBR	50	80	80
OHIO	85	80	90
OKLA	100	100	100
OREG	5	NA	NA
S DAK	3	32	54
TEX	100	100	100
WASH	9	9	NA
15 STATES	73	81	86

THESE 15 STATES PRODUCED 91%
OF THE 1978 WINTER WHEAT CROP.

1/ LESS THAN 5%
NA NOT AVAILABLE



The Crop Moisture Index measures the degree to which moisture requirements of growing crops were met during the previous week. The index is computed from average weekly values of temperature and precipitation. These values are used to calculate the potential moisture demand. Taking into account the previous soil moisture condition and current rainfall, the actual moisture loss is determined.

If the potential moisture demand, or potential evapotranspiration, exceeds available moisture supplies, actual evapotranspiration is reduced and

the CMI gives a negative value. However, if moisture meets or exceeds demand the index is positive. Shaded areas indicate the index was unchanged or increased from the previous week's value; soils dried in the unshaded areas. Centers of positive and negative areas are identified by W for wet and D for dry.

Local moisture conditions may vary because of differences in rainfall distribution or soil types. The type of agriculture and stage of crop development must be considered when assessing the impact of moisture conditions based on the Crop Moisture Index. Some general guidelines follow.

THE VERY DRY AREA CENTERED IN CENTRAL ILLINOIS HAS BECOME DRIER. THE MINUS TWO INDEX IS DESCRIBED AS "TOO DRY, YIELD PROSPECTS REDUCED". THE RELATIVELY DRY AREA EXTENDS NORTHEASTWARD INTO MICHIGAN AND INTO EASTERN MISSOURI BUT THE DRIEST SPOT IS IN SOUTH CENTRAL ILLINOIS. ELSEWHERE, VERY WET CONDITIONS CONTINUE IN NORTHERN MISSISSIPPI AND RECENT RAIN HAS PRODUCED AN EXCESSIVELY WET CONDITION IN SOUTH CAROLINA AND EASTERN GEORGIA. NORTHWESTERN NORTH DAKOTA AND NORTHERN MONTANA ALONG THE CANADIAN BORDER ARE GETTING DRIER. RECENT RAIN IN NEW ENGLAND HAS HELPED BUT, MORE RAIN IS NEEDED IN THE WESTER PORTION

(continued from page 2)

On Sunday, a warm front triggered heavy rain over the eastern third of the Nation.

Intense downpours dumped 2 inches of rain on parts of West Virginia, and the Pittsburgh metropolitan area collected 3 inches.

A series of storms formed over northern Iowa, where Spencer and Dubuque notched 1.5 to 2 inches. In the Plateau Region, 1.3 inches fell near Idaho Falls, eastern Idaho, and one inch dampened an area north of Elko, northern Nevada. Temperatures heated up in New England; Caribou, northeastern Maine, hit a record 89°.

Agricultural Weather Facility
USDA South Bldg., Room 1248
Washington, D.C. 20250

IMMEDIATE - U. S. Weather Report

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