

# WEEKLY WEATHER AND CROP BULLETIN

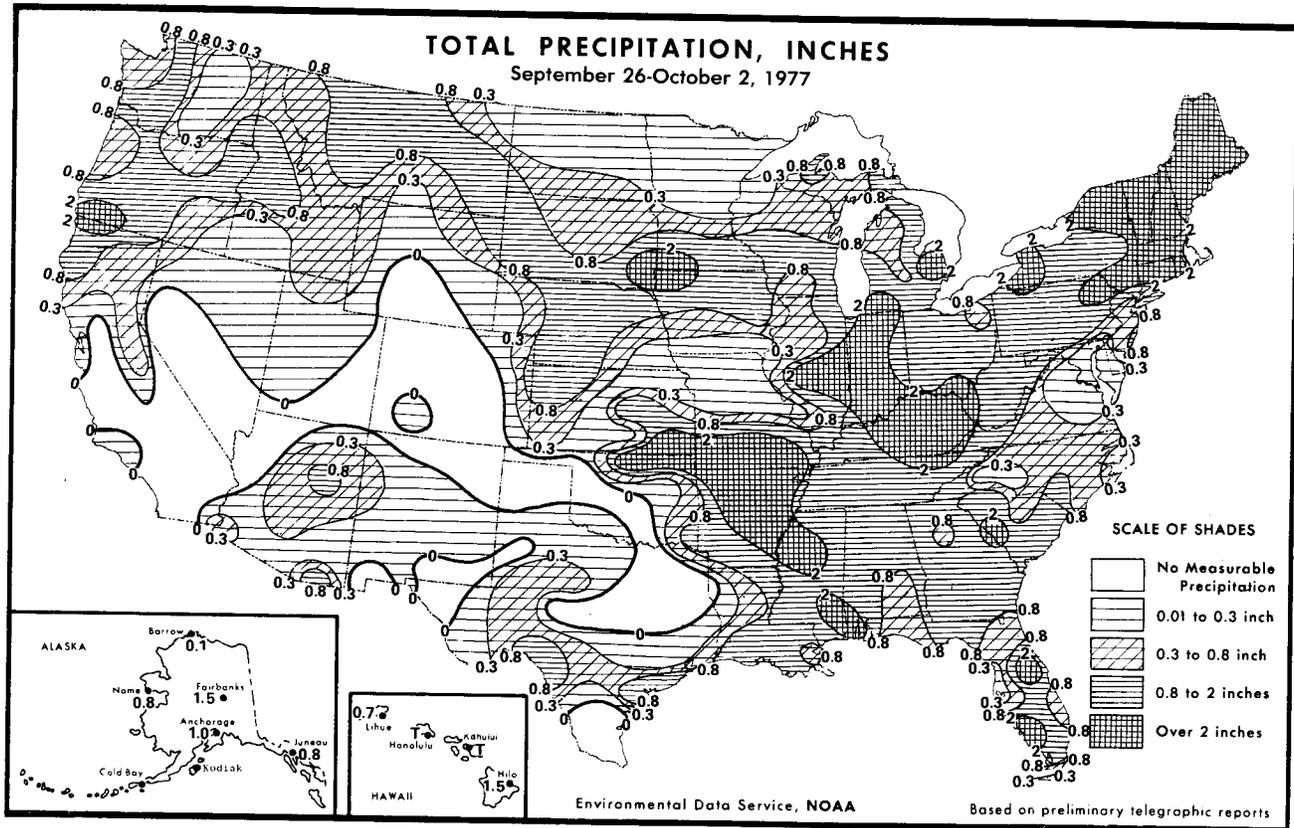
U.S. DEPARTMENT OF COMMERCE  
Environmental Data Service, NOAA

U.S. DEPARTMENT OF AGRICULTURE  
Statistical Reporting Service

Volume 64, No. 40

Washington, D.C.

Oct. 4, 1977



## National Weather Summary

September 26 - October 2

**HIGHLIGHTS:** Field work in parts of the Midwest, Mississippi Valley, New England, and Montana was hampered by moderate to heavy rains.

Temperatures in the northern portions of the U.S. were generally cool while central Texas was as much as 13° above normal including many 100°-plus days.

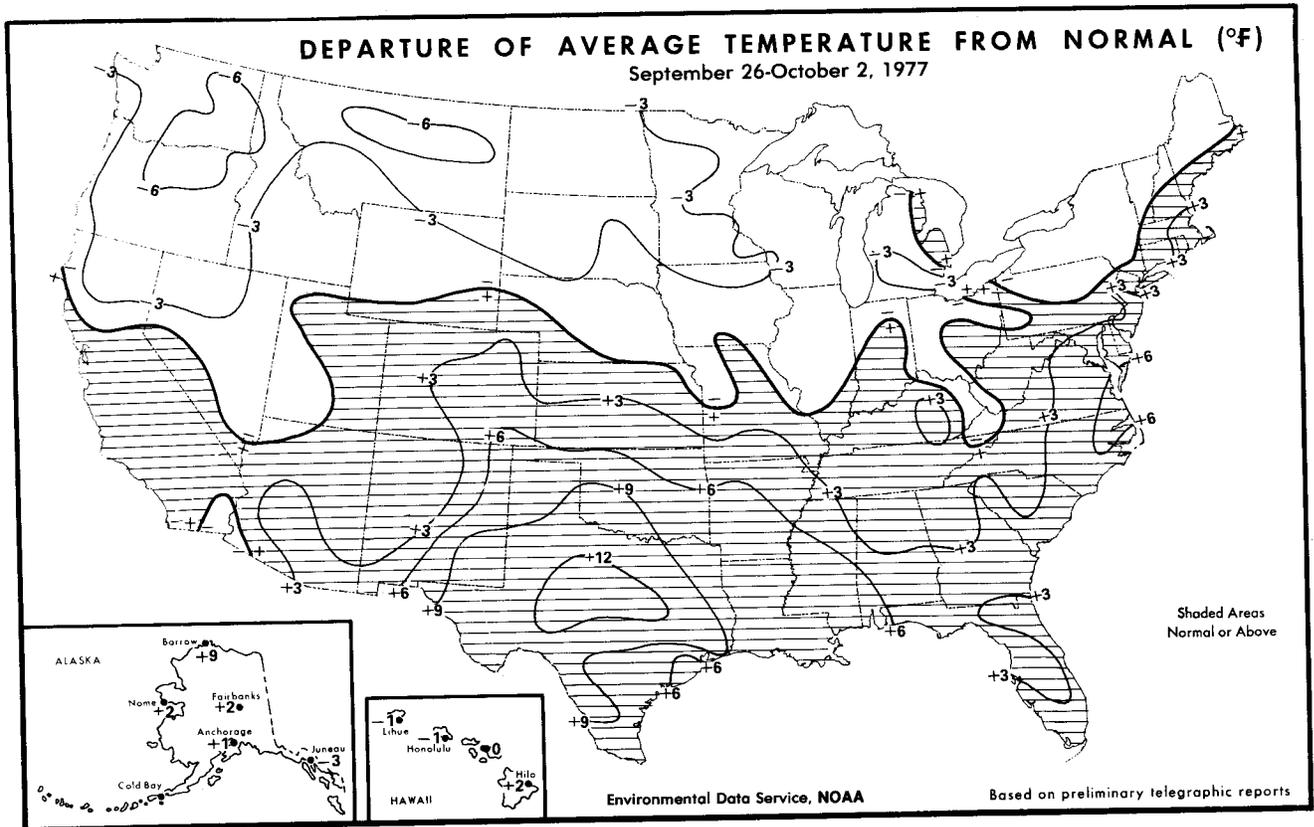
Monday morning showers and thunderstorms reached from the Virginias to New England and dotted Ohio, Michigan, and Kentucky; over 1 inch fell on north-eastern Pennsylvania and eastern and western New York. The rain continued into the afternoon in those two States, setting off flooding. Scattered storms formed over the Deep South and Florida where 3.50 in. drenched Orlando. Light showers were scattered over the northern Great Lakes, southern Rockies, and central Kansas where hail pelted Burlington.

Lines of heavy thunderstorms rumbled over the south central Mississippi Valley and raced on to western Tennessee, Kentucky, and Alabama; 1 to 2 inches soaked some sections. Heavy rain later bore down on Louisiana and Florida dumping similar amounts. Unusually heavy rains spawned by Tropical Storm Glenda hit Arizona--nearly an inch and one-half threatened flooding in the State.

Later storms raked points in the Southeast bringing close to three-quarters inch to the Carolinas. Meanwhile rain was widespread on the West Coast from northern California through Oregon, into the northern Intermountain Region.

Temperatures stayed hot in Texas where four records were set including 106° at Waco. New Orleans, 94°, and Wilmington, N.C., 91°, also set new marks.

Daybreak Wednesday brought thunderstorms to eastern Oklahoma, both ends of Kansas, and the



lower Mississippi Valley. Hope, Ark., had 2.50 in. and parts of Kansas more than that. A few heavy showers and hail hit portions of South Dakota. Thunderstorms moved into the Deep South where Mobile notched 1.60 in. and Atlanta nearly 1 inch. Light rain persisted in the northwestern States; Medford, Oreg., got nearly three-quarters inch.

Texas sweated out another hot day; record high readings were noted in Lubbock, Amarillo, and San Angelo.

Thursday dawned with heavy rains over Arkansas; several stations reported at least 1 or 2 inches from the low pressure area centered over Oklahoma while isolated points were soaked by more than 4 inches. The system edged eastward later carrying the precipitation to western Tennessee and northern Mississippi. Three inches drenched south central and southeastern Kansas. Rain continued in northern California and the Pacific Northwest. Southwestern Oregon was especially wet. Medford finally measured nearly 3 inches, the city's single-day record for September. By nightfall, storms formed over the upper half of the Plains and produced large hail in southwestern Nebraska.

The southern Plains had another hot day; some readings crept past the century mark once again.

Morning storms dampened a wide area from the northern Rockies across the middle Mississippi and Ohio Valleys into New England on Friday. Heavy thunderstorms rumbled over the southern half of Indiana, northeastern Missouri, and northern Kentucky; Indianapolis measured nearly 2 inches. Other thunderstorms formed and peppered hail on portions of Wyoming, Kansas, Illinois, and Missouri.

Torrential downpours hit the upper Midwest in the afternoon. Sioux Falls, S. Dak., was awash with 5 inches of rain while Worthington in southwestern Minnesota got 6.50 in. Elsewhere snow blanketed the upper Rockies. A frontal system also brought heavy rains to the South; more than 1 inch fell over Birmingham.

Temperature records, some over 100°, were common at reporting points in Oklahoma, Texas, and Louisiana.

Precipitation extremes for September revealed Birmingham, Ala., having had its wettest ninth month since 1906 recording 10.43 in. Meanwhile Corpus Christi had its driest September, 1.46 in., since 1963.

Heavy rains east of the Mississippi River meant a gray day for a large section of the country. Parts of Ohio, West Virginia, and Kentucky were hard hit by the storms. There were 13 tornadoes for the day including six in Kentucky and three in Indiana.

The heat in Texas finally began to break as Wichita Falls reported a high reading in the 80's after boiling under 108° on Friday.

Early Sunday scattered thunderstorms extended from Texas through the northern Gulf Coast States, Ohio Valley, and Appalachians into New England. Heavy rains ahead of a cold front triggered flash flooding along the Virginia/Tennessee border.

Autumnlike temperatures were overtaking much of the Nation although Richmond, Va., 90°, and Tucson's 97° put new highs in the record book.

## National Agricultural Summary

September 26 - October 2

**HIGHLIGHTS:** Rains and soggy fields prevented crops from drying and delayed harvest operations. Heavy rains stretched across most of the Corn Belt, parts of the south central States, and the Northwest. Most corn was mature; harvest reached 24%, not far ahead of 1976's 20% but almost double the 14% average. Soybean harvest advanced to 14%, less than half the pace of last year and also behind the 17% average. Low temperatures, wet fields, and farmers' efforts to harvest the earlier than normal corn crop kept the soybean harvest lagging. Cotton picking stood at 23%, far ahead of both 1976's 7% and the 12% average. Sorghum harvest at 39% exceeded 1976's rate and surpassed the 30% average. Winter wheat seeding reached 60% compared with 49% last year and the 58% average. Soil moisture was adequate to surplus except in some of the middle Atlantic States, the western south central States, and most of the West.

**SMALL GRAINS:** Some spring grains remained unharvested in the Pacific Northwest and North Dakota. Rains in the north central States kept producers from finishing combining; sprouting became more of a problem in the damp grain.

Winter wheat seeding for the 1978 crop reached 60% ahead of 1976's 49% and the 58% average. Rains delayed planting in some areas of the Great Plains, but in the Pacific Northwest the additional moisture brought improved seeding conditions. Southern Great Plains farmers needed more soil moisture to produce good stands on dryland fields. Kansas growers reached 65%; western growers made most progress while eastern rains slowed planting there. Oklahoma growers reached 61%; winds dried topsoils, but 25% of the plantings already sprouted to good stands compared with 7% in 1976 and 17% average. Texas seedings reached 57% complete; most of the wheat from the Low Plains southward was seeded in dry soils and needs rain to establish stands. Colorado growers advanced to 92%. Seeding lagged in Illinois and Indiana, but was on schedule in Ohio. Washington soil moisture improved, however, more moisture is needed.

**CORN:** Corn harvest reached 24% complete compared with 20% in 1976 and the 14% average. The crop developed very early this year, and farmers tried to harvest quickly because of problems with weak stalks and eardrop; rains slowed harvest progress last week.

In the eastern north central States harvest reached 14% compared with 10% for both 1976 and the average. Most of the crop was mature and safe from frost--Michigan reported only 60% mature but elsewhere over 85% was mature. Wet fields checked harvest progress.

In the western north central States harvest stood at 23%, only one point ahead of 1976 but far ahead of the 12% average. Producers in Minnesota and Iowa concentrated on harvesting corn to prevent excessive loss from ear drop, stalks were weakened by insect damage.

Across the South harvest reached 75%, far ahead of 1976 and the average. Florida and South Carolina farmers almost finished.

**SOYBEANS:** Soybean harvest stood at 14%, half of the 30% last year and less than the 17% average. Farmers ignored soybeans in favor of corn, but adverse harvest conditions delayed combining too.

In the eastern Corn Belt combining reached 19% compared with 41% in 1976 and the 28% average. Leaf shed ranged from 70% in Wisconsin to 95% in Illinois. Only 30% of Michigan's crop was mature.

In the western Corn Belt harvest reached 18%, equalling the average but little more than a third of 1976's progress. Soybeans had a high moisture content and dried very slowly in Minnesota where only 20% was harvested compared with 74% last year.

In the southern States 6% was harvested, the same as last year but less than the 8% average. Arkansas rains flooded some fields and slowed harvest.

**COTTON:** Cotton harvest in the eleven southern States advanced to 23%, more than three times 1976's rate and almost double the average. Cotton matured faster and bolls opened earlier all across the South. Storms blew down some cotton plants and also caused excessive leaf regrowth in Arkansas. Texas picking moved into the High and Low Plains where the crop was 2 weeks to a month early. Harvest was almost complete from the Blacklands southward; some gins operated on ricked cotton. California growers defoliated and picked a limited amount of cotton.

**OTHER CROPS:** Sorghum harvest advanced to 39% ahead of 1976's 37% and the 32% average. Harvest lagged in South Dakota with only 9% combined but elsewhere ran near or ahead of last year's pace. South Dakota's crop had a high moisture content and needed some drying time. Texas producers had near ideal harvest conditions.

Irish potato harvest reached 50 to 60% in Maine where wet fields delayed digging. The North Dakota harvest stood at 75%. Idaho's potato harvest reached 15% lagging 1976's 25%; rain was the culprit again.

Rice harvest was almost complete except in Arkansas at 61% and Mississippi at 69%. Progress was ahead of last year and average, but in Arkansas heavy rains flooded some fields and most of the unharvested rice lay on the ground.

**VEGETABLES:** The summer vegetable season was nearly ended in northern areas; low temperatures and wet fields slowed late maturing crops. Florida vegetable conditions rated good; lower temperatures helped fruit set and sizing. Producers shipped sweet corn, pole beans, cucumbers, eggplants, and a few tomatoes. Texas growers seeded winter crops and harvested a wide variety of summer vegetables. California producers supplied heavy volumes of brussels sprouts, broccoli, cauliflower, celery, and bell peppers.

**FRUIT AND NUTS:** A rain-slowed apple harvest slogged to the halfway mark in the Appalachian region and the Northeast. Washington apple growers experienced labor shortages.

Florida's citrus groves rated excellent with some irrigation on fruit for fresh use. Color break showed on early fruit but very little packed yet. Texas growers picked early season oranges. California summer grapefruit and valencia orange harvests were nearly complete; the desert lemon harvest was active.

**PASTURES AND LIVESTOCK:** Grasslands rated good to excellent in the north central States and the Northeast; fair to good in the South Atlantic States except poor in Virginia; fair to good in the south central States, and poor to good in the West depending on soil moisture and elevation. Rains improved pastures in the Northwest, however, some seriously dry areas need more time to recuperate. Cattlemen continued moving herds off summer ranges. Texas rangelands dried and in some areas presented a fire hazard. Northern California rains sprouted winter grasses and runoff improved stock water supplies.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., Oct. 9, 1977

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 . . .	72	+ 2	1.9	+ 1.2	La.Baton Rouge . . .	82	+ 8	1.3	+ .5	Youngstown . . .	60	+ 1	1.1	+ .5
Mobile . . .	81	+ 9	2.4	+ 1.2	Lake Charles . . .	82	+ 7	1.6	+ .7	OKLA.Okla. City . . .	78	+ 9	0	- .8
Montgomery . . .	77	+ 8	1.0	+ .1	New Orleans . . .	83	+ 8	.4	- .6	Tulsa . . .	74	+ 5	1	- .8
ALASKA.Anchorage . . .	44	+ 1	1.0	+ .5	Shreveport . . .	81	+ 9	T	- .7	OREG.Astoria . . .	54	- 2	.9	- .1
Barrow . . .	33	+ 9	.1	0	MAINE.Caribou . . .	49	- 1	2.3	+ 1.5	Burns . . .	50	- 4	.5	+ .4
Fairbanks . . .	39	+ 2	1.5	+ 1.3	Portland . . .	57	+ 2	2.8	+ 2.1	Medford . . .	57	- 3	3.6	+ 3.3
Juneau . . .	43	- 3	.8	- 1.0	MD.Baltimore . . .	68	+ 4	1	- 1.5	Pendleton . . .	51	- 8	.6	+ .4
Kodiak . . .	43	- 3	---	---	MASS.Boston . . .	65	+ 4	1.9	+ 1.2	Portland . . .	56	- 3	.6	+ .1
Nome . . .	39	+ 2	.8	+ .4	Chatham . . .	60	---	1.4	---	Salem . . .	54	- 5	.3	- .2
ARIZ.Flagstaff . . .	56	+ 3	.7	+ .3	MICH.Alpena . . .	54	+ 1	1.1	+ .5	PA.Allentown . . .	63	+ 3	.8	+ .1
Phoenix . . .	83	+ 4	.5	+ .4	Detroit . . .	55	- 4	1.4	+ .9	Erie . . .	56	- 2	1.3	+ .5
Tucson . . .	80	+ 3	T	- .2	Flint . . .	57	0	2.2	+ 1.7	Harrisburg . . .	63	0	1.4	+ .8
Winslow . . .	66	+ 1	1.1	+ 1.0	Grand Rapids . . .	55	- 3	1.3	+ .6	Philadelphia . . .	66	+ 2	.3	- .3
Yuma . . .	82	- 1	.4	+ .3	Houghton Lake . . .	52	- 1	.7	0	Pittsburgh . . .	59	- 1	1.0	+ .4
ARK.Fort Smith . . .	76	+ 6	.7	- .1	Lansing . . .	54	- 4	.7	+ .1	Scranton . . .	58	- 1	2.2	+ 1.6
Little Rock . . .	75	+ 6	3.7	+ 2.9	Marquette . . .	53	- 1	3	- .4	R.I. Providence . . .	62	+ 3	2.0	+ 1.3
CALIF.Bakersfield . . .	74	+ 1	0	- .1	Muskegon . . .	56	- 1	1.6	+ .9	S.C. Charleston . . .	77	+ 5	1.3	+ .3
Eureka . . .	56	0	1.1	+ .8	S. Ste. Marie . . .	51	- 1	1.4	+ .6	Columbia . . .	72	+ 2	.8	0
Fresno . . .	71	+ 1	0	- .1	MINN.Duluth . . .	48	- 3	2	- .4	Greenville . . .	71	+ 3	1.3	+ .5
Los Angeles . . .	72	+ 1	0	0	Internatl Falls . . .	47	- 2	3	- .3	S.D. Aberdeen . . .	52	- 3	.5	+ .1
Red Bluff . . .	68	- 4	.4	+ .3	Minneapolis . . .	53	- 3	.6	+ .1	Huron . . .	53	- 3	.4	0
San Diego . . .	71	+ 2	T	- .1	Rochester . . .	54	- 2	1.4	+ .8	Rapid City . . .	51	- 3	1.2	+ .9
San Francisco . . .	65	+ 1	T	- .1	St. Cloud . . .	52	- 2	1.2	- .3	Sioux Falls . . .	54	- 3	3.1	+ 2.5
Stockton . . .	70	+ 1	0	- .1	MISS.Jackson . . .	79	+ 7	1.9	+ 1.3	TENN.Chattanooga . . .	69	+ 1	1.5	+ .7
COLO.Denver . . .	61	+ 3	T	- .3	Meridian . . .	79	+ 8	.9	+ .3	Knoxville . . .	69	+ 2	1.7	+ 1.1
Grand Junction . . .	65	+ 2	T	- .2	MO.Columbia . . .	64	0	1	- .9	Memphis . . .	74	+ 5	1.9	+ 1.3
Pueblo . . .	66	+ 4	0	- .2	Kansas City . . .	64	- 1	.2	- .8	Nashville . . .	69	+ 1	.9	+ .3
CONN.Bridgeport . . .	65	+ 2	1.2	+ .6	St. Louis . . .	64	- 2	T	- .6	TEX.Abilene . . .	84	+ 12	.4	- .2
Hartford . . .	61	+ 3	2.6	+ 1.9	Springfield . . .	68	+ 3	2.5	+ 1.5	Amarillo . . .	84	+ 9	1	- .8
D.C.Washington . . .	70	+ 4	.1	- .5	MONT.Billings . . .	52	- 3	.2	- .1	Austin . . .	74	+ 5	1.9	+ 1.4
FLA.Apalachicola . . .	79	+ 2	1.3	+ .3	Glasgow . . .	47	- 6	.6	+ .5	Beaumont . . .	85	+ 9	.6	- .5
Daytona Beach . . .	82	+ 2	2.3	+ .6	Great Falls . . .	48	- 6	1.4	+ 1.2	Brownsville . . .	86	+ 6	0	- 1.1
Ft. Myers . . .	82	+ 2	2.3	+ .6	Hayne . . .	49	- 4	1.5	+ 1.3	Corpus Christi . . .	87	+ 9	0	- 1.0
Jacksonville . . .	78	+ 3	.4	- 1.2	Helena . . .	49	- 2	.9	+ .7	Dallas . . .	---	---	---	---
Key West . . .	83	+ 1	T	- 1.7	Kalispell . . .	45	- 4	.7	+ .5	Del Rio . . .	86	+ 9	1.6	+ .9
Lakeland . . .	82	+ 4	.7	- .4	Miles City . . .	51	- 4	1.4	+ 1.1	El Paso . . .	78	+ 8	T	- .2
Miami . . .	82	+ 2	1.3	- .9	Missoula . . .	47	- 3	.6	+ .4	Fort Worth . . .	84	+ 10	0	- .7
Orlando . . .	82	+ 4	3.7	+ 2.2	NEBR.Grand Island . . .	59	- 1	.7	+ .2	Galveston . . .	82	+ 5	1.2	+ .1
Tallahassee . . .	78	+ 3	1.5	+ .3	Lincoln . . .	60	- 1	3	- .2	Houston . . .	82	+ 6	T	- 1.0
Tampa . . .	81	+ 3	.2	- .9	Norfolk . . .	58	- 1	.8	+ .3	Lubbock . . .	77	+ 10	0	- .6
W.Palm Beach . . .	81	+ 1	.4	- 2.0	N.Platte . . .	58	0	1.1	+ .7	Midland . . .	82	+ 10	.6	+ .2
GA.Atlanta . . .	68	0	.6	- .1	Omaha . . .	60	- 1	.3	- .3	San Angelo . . .	86	+ 13	0	- .6
Augusta . . .	74	+ 4	2.0	+ 1.4	Valentine . . .	54	- 3	1.7	+ 1.4	San Antonio . . .	84	+ 8	.3	- .5
Macon . . .	75	+ 3	1.4	+ .8	NEV.Ely . . .	51	- 1	.1	0	Victoria . . .	85	+ 8	1.9	+ .8
Savannah . . .	78	+ 5	1.6	+ .5	Las Vegas . . .	75	0	0	0	Waco . . .	88	+ 13	0	- .7
HAWAII.Hilo . . .	77	+ 2	1.5	- .4	Reno . . .	56	0	T	- .1	Wichita Falls . . .	82	+ 10	T	- .7
Honolulu . . .	79	- 1	T	- .2	Winnemucca . . .	52	- 3	1	0	UTAH.Blanding . . .	59	0	0	- .3
Kahului . . .	78	0	T	- .1	N.H.Concord . . .	57	+ 2	2.8	+ 2.2	Salt Lake City . . .	62	+ 2	.2	0
Lihue . . .	77	- 1	.7	+ .1	N.J.Atlantic City . . .	66	+ 3	1.1	+ .5	VT.Burlington . . .	54	- 1	3.5	+ 2.9
IDAHO.Boise . . .	55	- 3	.1	0	Trenton . . .	66	+ 3	.5	- .1	VA.Lynchburg . . .	67	+ 3	.5	- .2
Lewiston . . .	52	- 7	.9	+ .7	N.MEX.Albuquerque . . .	67	+ 1	.2	0	Norfolk . . .	74	+ 6	.7	- .1
Pocatello . . .	54	- 1	.4	+ .3	Roswell . . .	76	+ 10	1	- .3	Richmond . . .	70	+ 4	T	- .7
ILL.Cairo . . .	69	+ 1	1.4	+ .7	N.Y.Albany . . .	57	0	1.3	+ .6	Roanoke . . .	65	+ 1	.6	- .2
Chicago . . .	60	- 2	1.1	+ .4	Binghamton . . .	55	- 1	1.4	+ .7	WASH.Colville . . .	48	- 6	.3	+ .1
Moline . . .	59	- 2	.7	- .1	Buffalo . . .	56	- 1	3.3	+ 2.6	Omak . . .	---	---	---	---
Peoria . . .	59	- 2	.4	- .4	New York . . .	64	0	.6	0	Quillayute . . .	51	- 4	.3	- 1.5
Rockford . . .	57	- 2	.9	+ .1	Rochester . . .	57	- 1	1.8	+ 1.2	Seattle-Tacoma . . .	54	- 3	.5	- .1
Springfield . . .	62	- 1	2.5	+ 1.7	Syracuse . . .	58	- 1	1.2	+ .6	Spokane . . .	48	- 7	.6	+ .4
IND.Evansville . . .	66	+ 1	1.7	+ 1.1	N.C.Asheville . . .	65	+ 2	1	- .7	Walla Walla . . .	54	- 6	.5	+ .2
Ft. Wayne . . .	60	0	.6	0	Charlotte . . .	70	+ 2	2	- .5	Yakima . . .	51	- 6	.2	+ .1
Indianapolis . . .	63	+ 1	3.1	+ 2.5	Greensboro . . .	68	+ 3	.5	- .3	W.Va.Beckley . . .	59	0	1.6	+ .9
South Bend . . .	59	- 1	2.1	+ 1.4	Hatteras . . .	74	+ 4	- 1	- 1.1	Charleston . . .	64	+ 1	1.8	+ 1.2
IOWA.Burlington . . .	60	- 1	.2	- .6	Raleigh . . .	70	+ 4	.8	0	Huntington . . .	62	- 1	2.2	+ 1.6
Des Moines . . .	60	0	.3	- .3	Wilmington . . .	76	+ 5	.4	- .7	Parkersburg . . .	64	+ 1	1.0	+ .4
Dubuque . . .	56	- 2	.5	- .4	N.DAK.Bismarck . . .	49	- 4	.3	+ .1	WIS.Green Bay . . .	54	- 1	.7	0
Sioux City . . .	58	- 1	1.4	+ .8	Fargo . . .	51	- 3	T	- .3	La Crosse . . .	55	- 3	1.3	+ .6
KANS.Concordia . . .	63	0	.1	- .5	Williston . . .	48	- 4	.1	- .1	Madison . . .	55	- 1	.7	0
Dodge City . . .	68	+ 4	.1	- .3	OHIO.Akron-Canton . . .	59	- 1	.8	+ .2	Milwaukee . . .	57	0	1.3	+ .7
Goodland . . .	61	+ 1	.8	+ .5	Cincinnati . . .	63	0	1.3	+ .8	WYO.Casper . . .	53	- 1	T	- .2
Topeka . . .	66	+ 2	.2	- .5	Cleveland . . .	62	+ 2	.4	- .2	Cheyenne . . .	55	+ 1	T	- .2
Wichita . . .	70	+ 4	.2	- .6	Columbus . . .	62	+ 1	1.2	+ .7	Lander . . .	53	- 1	0	- .3
KY.Lexington . . .	67	+ 3	2.2	+ 1.7	Dayton . . .	61	- 1	1.8	+ 1.3	Sheridan . . .	51	- 3	.5	+ .2
Louisville . . .	65	0	4.0	+ 3.4	Toledo . . .	58	- 2	1.1	+ .6	P.R.San Juan . . .	82	+ 1	.3	- 1.0

Based on 1941-70 normals

Publication of the Weekly Weather and Crop Bulletin began in 1872 as the Weekly Weather Chronicle. It is issued under general authority of the Act of January 12, 1895 (44USC 213), 53d Congress, 3d Session. Contents of the Bulletin may be reprinted freely, with proper credit. Standard copy for the Bulletin is prepared by Lyle Denny and O.W. Byrd, Environmental Data Service, National Oceanic & Atmospheric Admini-

stration; Harry DeLong and Jim Carlin, Statistical Reporting Service, U.S. Department of Agriculture.

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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 SRS State offices in cooperation with the National Weather Service.

**ALABAMA:** Ample rain with warm temperatures. Readings 3° above normal.

Fieldwork: 3.3 days suitable. Soil moisture adequate. Major activities included harvesting corn, peanuts, soybeans and cotton and seeding small grains. Cotton harvested 23% complete, just started last year. Corn harvest 65% complete, 48% 1976; 35% average. Soybeans 30% mature, 30% 1976 and 40% average. Peanuts 26% combined, 58% 1976, 73% average. Pastures adequate.

**ALASKA:** Autumn storms dominated weather. Mild days and cool nights with scattered light frost. First snow of season fell on the 29th.

Rain and snow continue to hamper harvesting operations and slowed farm activity throughout railbelt. Haying progress slow. Making mixed grain silage. Potato digging virtually complete. Harvest most vegetables finished except cabbage and carrots. Soil moisture adequate to mostly surplus. Livestock good condition.

**ARIZONA:** Moist air with rainfall early week remainder warm, dry. Over 1.00 in. rain, central basins, mountains. Temperatures 1 to 4° above normal.

Rain halted field activities. Cotton picking increasing, spraying active some fields. Sorghum harvest active. Corn harvest continued. Alfalfa hay seasonally slow, some cutting established fields. Planting, renovation other fields. Sugar-beet harvest in about two weeks, planting for spring harvest nearing completion. Lettuce, mixed vegetable planting active. Lettuce harvest underway southeast. Green chili harvest active. Cantaloup harvest good progress Salt River Valley, later plantings nearing maturity. Lemon picking increasing Yuma areas, just underway Salt River Valley. Few grapefruit being picked. Higher elevation ranges generally good, some improvement lower ranges. Stock water, soil moisture still short. Livestock mostly good condition higher ranges, poor to fair elsewhere.

**ARKANSAS:** Mean temperature range 81 to 70°. Extremes: 95 and 54°. Most precipitation 4.95 in.; least 0.21 in.

Soil moisture adequate to surplus. Fieldwork: 2.1 days suitable. Soybeans 4% harvested, 5% last year, average 12%. Heavy rains flooded some low fields, slowed harvest. Rain, wind caused cotton to drop to ground, excessive re-growth of leaves, gins catching up; 24% harvested, 4% 1976, average 9%. Open bolls 83%, 39% year ago. Most unharvested rice laying on ground, several fields flooded by rain; 61% harvested, 43% 1976, average 52%. Corn harvest 79% complete, 72% last year. Sorghum harvest 74% complete, 71% year ago, average 61%. Wheat seeding 15% complete, 14% 1976; growth and stands good. Oat planting 14% complete, 16% last year. Hay harvest continued between rains. Pastures providing average or above average amounts feed.

**CALIFORNIA:** Precipitation to the northern third midweek. Amounts ranged from over 1.00 in. on the northwest coast to a trace in the Bay area and Stockton. Temperatures mixed, ranging from several degrees above normal to several degrees below normal. Greatest variation in mountain areas where mercury averaged from 4 to 7° below normal.

Small grain land preparation continued. Corn harvested; grain and silage. Rice harvest increased. Dry beans cut, thrashed. Early milo harvested. Cotton defoliation underway, limited picking. Late season fruit crops continue harvest. Summer grapefruit and Valencia oranges nearly complete. Desert lemon harvest active. Apples remained major fruit harvested; avocado harvest ready to start in Central Valley. Soft dates began harvest. Grapes harvested for table and wine use. Raisins 80% boxed, Fresno County. Almond and walnut harvests continue. Pomegranate harvest began. Almonds nearing peak harvest season and walnuts gaining momentum. Brussels sprouts, broccoli, cauliflower, celery, bell pepper, sweetpotato heavy. Cantaloup near end. Lettuce tapering Salinas. Rain damage showing processing tomatoes. Rains north sprouted grasses. Enough rain some areas cause runoff improve stock water. Supplement feed, haul water many areas still necessary. Calving active central coast.

**COLORADO:** Dry and warm. Isolated precipitation in western mountains and San Luis Valley averaged less than 0.10 in. Isolated severe thunderstorm in northeast produced 0.33 in. rain and golf ball size hail. Temperatures well above normal.

Winter wheat seeding 92% 1977, 88% 1976, 87% average. Corn harvest grain 27% 1977, 3% 1976, 4% average. Corn silage cut 95%. Dry beans 81% threshed. Alfalfa 37% 4th cutting. Sorghum 74% ripe, 8% harvested. Range and pasture in fair condition except western slope poor. Livestock in good to very good condition.

**FLORIDA:** Scattered thundershowers early week diminished to isolated showers most areas. Showers later in the week were most numerous northwest. Temperatures near to slightly above normal.

Soil moisture mostly adequate; with few wet areas in south, west; few dry areas in north. Corn harvest about complete. Tobacco markets closed. Peanut harvest continues but showings interfering. Soybean harvest underway, crop good condition. Pecan prospects good, harvest beginning. Planting small grains underway. Sugarcane good condition. Grazing fair to good. Considerable variability exists. Rainfall spotty. Armyworm problems decreasing. Cattle condition mostly good. Citrus grove condition excellent. Very little rain last week, some irrigation underway for fresh fruit. Color break showing on early fruit. Very little fruit being packed. Vegetable crops generally good condition. Plantings active most crops. Cooler night temperatures beneficial to setting, sizing fruit on older crops eggplant, squash, peppers, tomatoes. Sweet corn harvest well underway. Light volume pole beans, cucumbers, eggplant, squash. Very light tomato harvest.

**GEORGIA:** Temperatures 1 to 2° above normal north, 2 to 5° above south. Scattered showers with variable amounts ranging 0.75 to 1.25 in. north and 0.50 to 0.75 in. south.

Soil moisture adequate. Fieldwork: 4 days suitable. Insect infestation subsiding. Corn rated poor; 73% harvested, 60% last year, 36% average. Cotton poor to fair; 68% open, 17% harvested; last year 51% open, 3% harvested; average 9% harvested. Soybeans mostly fair to good; 1% harvested, none last year, 1% average. Peanuts rated fair; 50% dug, 39% threshed; last year 76%

dug, 65% threshed; average 82% dug, 71% threshed. Pastures mostly fair to good, some improved. Hay crops mostly fair to good. Cattle mostly fair to good. Hogs fair to mostly good. Apples fair to good; 77% harvested, 86% last year. Pecans mostly fair to good; 1% harvested, same as last year. Wheat 11% planted, rye 14%, other small grains 15%. Last year wheat 10%, rye 15%, other small grains 15%.

HAWAII: Weather warm and humid. Rainfall light and scattered most Islands.

Vegetable supplies short. Banana supplies moderate to heavy. Papayas moderate. Pineapple harvest light. Sugar harvest steady. Pastures fair to good.

IDAHO: Temperatures near normal south; temperatures 4 to 8° below normal north. Extremes: 84 and 25°. Precipitation above normal; ranged from trace to 1.69 in.

Fieldwork interrupted by rain. Harvest otherwise generally active. Planting fall grains also continues. Harvest of potatoes 15% complete compared to 25% in 1976. Dry bean combining 85%, 50% 1976. Planting winter wheat 60% complete, 50% 1976. Emergence of winter wheat 30% 1977 and 1976.

ILLINOIS: Temperatures 2° below normal northern two-thirds, 1° above normal extreme south. Precipitation 0.33 to 3.00 in., localized flooding. Severe thunderstorms, wind damage late week.

Corn 16% harvested, 11% 1976 and average. Soybeans 95% shedding leaves, 98% 1976, 80% average; 25% combined, 58% 1976, 38% average. Grain sorghum 20% harvested. 1978 winter wheat 8% seeded, 20% last year, 24% average. Pastures mostly good. Soil moisture mostly adequate to surplus. Fieldwork: 4.8 days suitable.

INDIANA: Heavy thunderstorms and rain on 30th. Central areas had 3.00 to 4.00 in. Extreme north recorded 6.00 in., southern areas 1.00 to 2.00 in. Wind damage slight. Flash flooding and rivers full.

Fieldwork: 5 days suitable. Topsoil moisture mostly adequate to surplus. Subsoil moisture mostly adequate. Corn 15% harvested, 1976 10%, average 10%; 93% mature, 1976 90%, average 75%; condition fair to mostly good. Soybeans 10% harvested, 1976 20%, average 15%; 90% shedding leaves, 1976 90%; condition fair to mostly good. Wheat land 55% plowed, 1976 70%, average 80%. Wheat 10% seeded, 1976 15%, average 30%. Silos 85% filled, 1976 80%. Tobacco 90% harvested, 1976 90%.

IOWA: Cool and rainy.

Continuing rains slow fieldwork. Topsoil adequate. Subsoil short to adequate. Fieldwork: 5 days suitable. Corn borers continue to affect corn. Stalk and ear droppage widespread with mold present in many fields. Corn reported mostly good; 98% corn mature and 20% corn for grain harvested. Corn silage harvest 79% complete. Soybean condition mostly good with 12% leaves shedding, 87% mature, and harvest 25% complete. Hay and pasture continue to benefit from additional moisture. Livestock in good to excellent condition.

KANSAS: Southeast wet, extreme southeast receiving over 2.00 in.; amounts elsewhere mostly less than 0.50 in., many stations west and north less than 0.25 in. Temperatures ranged from 63° northwest to 71° southeast, slightly above normal north central and 2 to 5° above normal elsewhere.

Harvesting slowed east. Moisture conditions mixed, semi-dry west, adequate central, adequate

to surplus east. Wheat seeded 65%, last year 45%, average 60%. Corn harvested 40%, last year 25%, average 20%. Corn fully mature 90%, equal last year, average 80%. Sorghum harvested 15%, last year 20%, average 10%. Sorghums fully mature 60%, last year 70%, average 55%. Soybeans harvested 5%, equal last year, average 10%. Alfalfa seedings nearly complete. Pastures excellent most parts, supplementary feeds adequate to surplus. Farm activities: Wheat seeding, harvesting corn, milo, haying, silage cutting.

KENTUCKY: Temperatures near normal turning much cooler last day of week. Precipitation 2.00 in. west to over 3.00 in. east.

Fieldwork: 3.9 days suitable. Activities: Shelling corn and soybeans, cutting tobacco, haying, plowing and seeding small grains. Soil moisture adequate. Corn 32% harvested, 17% last year. Soybeans maturing rapidly, 47% mature with 8% harvested and only 12% still with green leaves. Harvesting progress behind last year's 11% and average of 9%. Tobacco harvest almost complete and 19% ready for stripping. Curing problems still prevalent; 52% showing houseburn varying from light to heavy severity. Fall plowing progressing with about 17% of wheat seeded compared to 21% last year and average. Pastures remain in excellent condition.

LOUISIANA: Temperatures 9 to 11° above normal. Extremes: 67 and 97°. Showers south late week.

Soil moisture short north, mostly adequate elsewhere. Activities: Harvesting crops, cotton defoliation, planting sugarcane and winter pastures. Cotton fair, maturing rapidly; 75% open, 63% last year, 53% average; 14% harvested, 5% last year and average. Soybeans fair to good; 59% turning color or past; 15% combined, 17% last year, 12% average. Rice 92% harvested, 94% last year, 89% average. Sugarcane good; 26% planted, 90% last year, 63% 1975. Corn 84% harvested, 86% last year. Sorghum fair; 95% ripe, 71% harvested, 69% last year. Sweetpotatoes 57% dug, 61% last year. Haying active. Pastures and livestock fair to good.

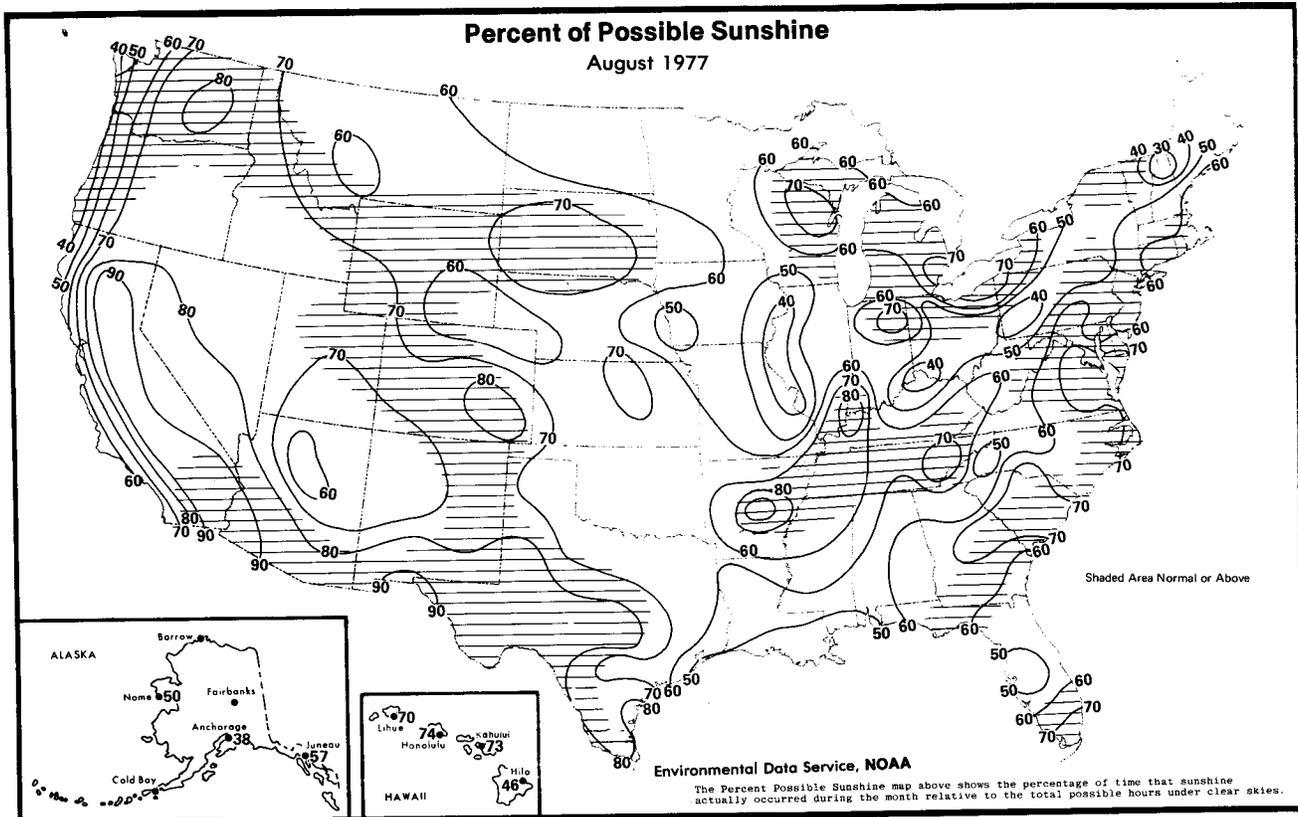
MARYLAND & DELAWARE: Temperatures 2° above normal. Highs, upper 70's; lows upper 50's. Precipitation 0.30 in. Western Maryland over 1.00 in., Lower Eastern Shore reported no rainfall.

Soil moisture supplies short. Pastures supplying below average amounts of feed. Corn for silage 90% harvested, 84% 1976, 81% average. Corn for grain 60% harvested, 35% 1976, 33% average. Soybeans 65% yellowed equal to 1976. Nearly 30% shed leaves equal to 1976 and average. Tobacco harvest near complete. Red and Golden Delicious 85% harvested. Stayman 60%, Rome Beauties 30%.

MICHIGAN: Temperatures normal to 3° above northern Lower and Upper; normal southern Lower. Extremes: 75 and 28°. Precipitation 1.50 to 2.80 in. east central Lower; 0.50 in. northwest Lower, west Upper and south central Lower; 0.70 to 1.50 in. elsewhere. Scattered frost in upper and north Lower.

Fieldwork: 3 days suitable. Activity: Limited harvest of silage, apples, dry beans, windrowed hay, drop apples. Dry beans spoiling on ground. Corn 60% mature, 56% 1976, 50% normal. Dry beans 20% picked, 86% 1976, 70% normal. Soybeans 30% mature, 42% 1976, 29% normal. Hay 3d cut 55% done. Apples picked: McIntosh 90%; Jonathan, Red Delicious, other 50%. Grapes, tomatoes 90% picked.

MINNESOTA: Temperatures near normal. Extremes: 75 and 28°. Precipitation less than 1.00 in. except 1.00 to 3.00 in. southwest, south central



and southeast and locally over 5.00 in. extreme southwest.

Wet fields in north, heavy rains in south slowed harvest. Drying weather needed to resume full scale harvesting. Wet conditions deteriorating some late season crops in north. Soybeans drying slowly. Farmers harvesting corn before soybeans to minimize ear droppage, permit soybean drying. Corn 26% picked, 1976 29%, normal 10%; silage corn 87% cut, 1976 98%, normal 85%. Soybeans 20% combined, 1976 74%, normal 38%. Harvested: Flax 80%, 1976 94%, normal 87%; sugarbeets 8%, 1976 7%, normal 14%; sunflowers 30%, 1976 61%, normal 25%; potatoes 60%, 1976 78%, normal 62%.

MISSISSIPPI: Temperatures 6° above normal. Extremes: 94 and 58°.

Soil moisture adequate south, surplus elsewhere. Fieldwork: 2.8 days suitable. Soybeans 76% shedding, 64% 1976; 39% mature, 34% 1976, 23% average; 13% harvested, 7% 1976, 9% average. Cotton 96% open bolls, 82% 1976, 54% average; 29% harvested, 4% 1976, 8% average. Rice 69% harvested, 40% 1976, 42% average. Corn 53% harvested, 44% 1976, 30% average. Sorghums 62% harvested, 71% 1976, 55% average. Winter wheat 33% planted, 32% 1976. Oats 23% planted, 28% 1976. Hay crops 85% harvested, 91% 1976, 85% average. Peanuts 70% harvested, 66% 1976, 57% average. Sweet-potatoes 47% harvested, 48% 1976, 47% average. Soybeans and cotton in fair to good condition. Pastures in good to fair condition. Pecans in fair condition.

MISSOURI: Temperatures 2° above normal north and 4° above normal central and southeast. Precipitation light in north averaging 0.17 in. northwest prairie and 0.70 in. west central plains. Southern sections averaged 2.00 to 3.00 in. west and east

Ozarks and 3.56 in. Bootheel. Isolated reports of 5.00 to 6.00 in. south, with flooding, high winds and large hail.

Fieldwork: 3.0 days suitable. Soybeans 48% mature, last year 76%, normal 44%. Soybeans harvested 9% this year, last year 23%, normal 10%. Corn 90% mature, last year 91%, normal 76%; harvested 37%, last year 44%, normal 22%. Grain sorghum 83% mature, last year 82%, normal 69%; 41% harvested, 32% last year, 21% normal. Cotton 15% harvested, last year 4%, normal 8%. Winter wheat seeding 12% completed, last year 14%. Fall plowing 8% completed, last year 9%. Pasture condition mostly good. Soil moisture adequate to surplus.

MONTANA: Cool, wet. Above normal precipitation except south central. Temperatures 2 to 5° below normal. Heaviest precipitation across north central, central, southeast, and southwest.

Rains helped soil moisture. Topsoil moisture mostly adequate except south central short to adequate. Subsoil varies short to adequate by locality. Potato harvest 20% complete, normal 25%. Cutting corn silage 75%, normal 80%. Dry bean harvest 55%, normal 60%. Planting winter wheat 85% completed compared with normal of 80%. Winter wheat germination and condition generally good. Livestock moved from summer ranges 60%, normal 40%.

NEBRASKA: Temperatures near normal. Precipitation ranged up to 1.50 in. eastern two-thirds.

Corn harvest 20% completed, about 15% year ago, less than 5% normal. Sorghum harvest 25% completed, less than 20% year ago, less than 10% normal. Soybean harvest 15% completed, 30% year ago. 10% normal. Winter wheat seeding now 85% complete, same as last year and normal. Soil moisture generally adequate.

NEVADA: Mostly sunny skies and seasonal temperatures. Light rain north and somewhat cooler temperatures. Temperatures ranged from 4° above normal to 3° below. Extremes: 97 and 21°.

Livestock moving off summer ranges. Good progress potato digging.

NEW ENGLAND: Temperatures about normal with fluctuations 10° above and below. Rainy weather most of week with accumulations of from under 2.00 in. to over 4.00 in.

Maine potato harvest hampered by wet weather very little harvested during week. Crop now 50 to 60% harvested. Summer vegetables near end. Apple and cranberry harvest slowed by rainy weather but both crops look good. Good silage corn crop but difficult harvesting it. Too wet to harvest much hay.

NEW JERSEY: Temperatures 2° above normal. Extremes: 39 and 82°. Rainfall 1.49 in. north, 0.63 in. central and 0.42 in. south.

Rainfall accumulating in low areas of some fields; some areas of south continue extremely dry. As fields dry harvest of field corn and soybeans expected to increase rapidly. Corn silage harvest well advanced. Irish potato harvest over 75% complete. Snap bean and tomato harvests declining rapidly. Cabbage and lettuce available in good volume. Apple and cranberry harvest continues active. Early plantings of fall grains and cover crops making good growth. Some late cutting hay being delayed because of cool wet weather. Pastures making good growth.

NEW MEXICO: Light showers 27th, otherwise dry.

Crops in good condition. Limited harvest of cotton and grain sorghum. Fourth cutting of alfalfa in north, fifth in south. Winter wheat planting 80% complete. Corn silage harvest active. Ranges and livestock good.

NEW YORK: Rainfall ranged from 1.00 to 4.00 in. Temperatures from mid-40's to mid-50's and mid-60's. Extremes: 75 and 26°.

Fieldwork moving slowly. Corn silage harvest 25% complete, same as 1976 slow pace. Winter wheat planting behind schedule. Third cutting alfalfa stalled at 60% complete. Vegetable crop harvests being slowed by wetness, particularly potatoes. McIntosh apple harvest nearing completion, Cortland and Delicious harvests beginning. Rain slowing grape harvest, most varieties except Concord and Catawba near completion.

NORTH CAROLINA: Temperatures 3 to 5° above normal. Dry week except for mountain region that received some rainfall.

Fieldwork: 5.5 days suitable. Soil moisture short to adequate. Conditions: Corn poor to fair; soybeans, cotton, pastures and sorghum grain fair; peanuts, apples and sweetpotatoes fair to good. Harvested: Burley 91%, 1976 91%, average 85%; corn for grain 75%, 1976 66%, average 57%; corn for silage 91%, 1976 90%; peanuts dug 36%, 1976 14%; peanuts threshed 22%, 1976 8%; apples 61%, 1976 57%, average 59%; sweetpotatoes 41%, 1976 29%; cotton 10%, 1976 and average less than 5%. Planted: Wheat 7%, 1976 8%, average 14%.

NORTH DAKOTA: Drier conditions with most areas receiving near normal precipitation. Southeast wettest with 1.81 in. Temperatures normal with some areas north portion receiving frost.

Topsoil moisture adequate; subsoil moisture adequate except short north central third. Restricted harvesting small grain, especially north-

west; significant amount still unharvested; serious sprout damage. Farmers resumed row crop harvest. Potato digging about 75% completed. Condition seeded rye, winter wheat and pasture good.

OHIO: Temperatures near normal. Extremes: 82 and 42°. Rainfall light to heavy.

Soil moisture adequate. Fieldwork: 5 days suitable. Main activities: Chopping silage, shelling seed corn, fall plowing, rye and barley planting, harvesting corn and soybeans, potato digging and picking apples. Corn 10% harvested, same as last year and normal; 85% of corn mature and safe from frost, equal to 1976, and 5% above average. Soybeans 75% mature; 15% harvested, 20% in 1976 and 15% normal. Corn silage harvest 75% complete, 70% 1976, 65% normal. Potato digging slow. Apple picking 40% complete. Sugarbeet lifting not yet underway. Tobacco and tomato harvesting almost complete. Fall acreage planted: Wheat 30%, same as last year and normal. Barley and rye on schedule. Pastures in good condition.

OKLAHOMA: Temperatures 2 to 6° above normal north and 8 to 10° above normal south. Isolated heavy rains east 27th and 28th; otherwise rainfall light

Hot, dry winds depleted topsoil moisture supplies, now rated short to adequate. Subsoil moisture supplies rated adequate. Wheat good condition; 61% seeded, 39% 1976 and 47% normal. The crop is 25% up to stand; 7% 1976 and 17% normal. Corn good condition; 49% harvested, 42% 1976 and 35% normal. Sorghum good condition; 74% mature, 75% 1976 and 72% normal. Cotton good condition; 59% has open bolls, 38% 1976 and 40% normal. Peanuts rated good to fair; 63% mature, 53% 1976 and 55% normal. Soybeans good condition; 60% mature, 29% 1976 and 34% normal. Few fields of peanuts and soybeans harvested. Alfalfa hay good condition. Pasture and range rated good condition. Livestock rated good to excellent.

OREGON: Rainy; precipitation recorded on most days. Amounts averaged over 1.00 in. west and over 3.00 in. southwest. East averaged nearly 0.80 in. Temperatures 1 to 3° below normal western valleys and 3 to 9° below normal central and east.

General farm activity continued light due to rain delays. Fall land preparation and seeding continues as weather permits. Spring grain harvest nearing completion in east. Fruit harvest continues with pears and apples picked. Prune harvest continues with some fruit splitting due to rains. Filbert harvest should begin shortly. Potato harvest continues. Rainfall aided regrowth on ranges and pastures. Cattle beginning to move from summer range. General stock condition good.

PENNSYLVANIA: Partly cloudy to cloudy. Temperatures from 3° above normal south central to 3° below normal west and north. Extremes: 81 and 29°. Rainfall almost daily west and on 4 days east totaled less than 0.50 in. southeast, 0.50 to 1.00 in. central and 1.00 to 1.50 in. southwest and north.

Fieldwork: 4 days suitable. Moisture adequate to surplus. Activities: Plowing, seeding barley, rye and wheat; cutting corn silage; limited corn shelling, potato digging, tobacco harvest. Tobacco 98% cut, 96% in 1976. Potatoes 66% harvested, 69% 1976. Grain corn 49% mature, 33% in 1976. Corn silage 55% cut, 52% 1976. Wheat sown 43%, 50% 1976. Barley 62% sown, 75% 1976. Hay quality poor. Pastures supplying to average to above average feed.

**PUERTO RICO:** Average rainfall 0.79 in. or 1.04 in. below normal. Temperatures averaged about 81° on coasts and 76° interior. Extremes: 95 and 56°.

**SOUTH CAROLINA:** Temperatures warmer than usual with little change except slightly cooler near end of week. Extremes: 91 and 47°. Scattered showers and thundershowers most areas.

Soil moisture short to adequate. Tobacco marketing continues. Corn harvest nearing completion; 90% 1977, 79% 1976, 64% average. Soybeans in fair condition; insects generally controlled. Pastures fair, improving with rainfall. Winter grain planting active. Pecan crop generally favorable. Apples fair with harvest nearing completion. Fall vegetables in fair condition; cucumber shipments will begin shortly. Cotton harvested 17% 1977, 4% 1976, 6% average.

**SOUTH DAKOTA:** Temperatures below normal. Extremes: 28 and 87°.

Topsoil moisture adequate. Rain heaviest south and southeast. Some frost occurred during week-end. High moisture content in grain and wet fields delaying harvest. Livestock in good condition. Hay and feed supplies adequate. Corn harvested 10%, 1976 31%, normal 13%. Grain sorghum harvested 9%, 1976 50%, normal 23%. Soybeans harvested 15%, 1976 67%, normal 25%. Sunflowers harvested 7%.

**TENNESSEE:** Temperatures above normal. Precipitation excessive; 1.00 to 2.00 in. with extreme above 6.00 in.

Soil moisture surplus. Fieldwork: 1.8 days suitable. Cattle and pastures improving. Some lowland flooding and crop damage. Most harvesting halted. Some aerial application of defoliants and small grains seeding. Stock ponds replenished. Soybeans mature 17% 1977, 13% 1976, 13% normal. Soybeans harvested 4% 1977, 2% 1976, 3% normal. Cotton bolls open 85% 1977, 20% 1976, 46% normal. Cotton harvested 29% 1977, 1% 1976, 12% normal. Corn mature 90% 1977, 84% 1976, 84% normal. Corn harvested 30% 1977, 23% 1976, 22% normal. Burley tobacco stripped 23% 1977, 20% 1976, 10% normal. Fall plowing completed 66% 1977, 63% 1976, 67% normal. Wheat seeded 36% 1977, 33% 1976, 35% normal. Oats seeded 60% 1977, 54% 1976, 56% normal. Barley seeded 55% 1977, 54% 1976, 57% normal.

**TEXAS:** Fair skies, hot temperatures prevailed. Temperatures from 6 to 13° above normal reached century mark breaking records central, north. Rainfall almost nil until thunderstorms developed along front across east, south and moved southeast. Below normal rainfall; north, northwest receiving little or no rain.

Harvest cotton, corn, sorghum ahead schedule. Hot, dry weather near ideal harvest operations. Peanut harvest on schedule with last year; soybean harvest getting started. Seeding wheat and oats ahead schedule but many fields dry seeded need rain to establish stand. Cotton harvest accelerating High and Low Plains. Cotton crop these areas two weeks to month ahead schedule. Cotton harvest complete or nearing completion Blacklands, Lower Rio Grande Valley. Some gins Coastal Bend, Lower Rio Grande Valley operating only on ricked cotton. Sorghum harvest, aided by near ideal weather, well ahead schedule. Corn harvest continues rapid progress. Wheat seeding Low Plains dry seeded; needs rain to establish stands. Heavy armyworm infestations damaged early stands north central areas. Sorghum harvested 73% 1977, 64% 1976, 62% average. Corn harvested 76% 1977, 45% 1976, 54% average. Cotton harvested 24% 1977, 10%

1976, 16% average. Peanuts harvested 33% 1977, 36% 1976, 32% average. Wheat planted 57% 1977, 41% 1976, 52% average. Oats planted 39% 1977, 33% 1976, 45% average.

Harvest early season oranges; quality good, size small because hot, dry weather. Seeding spinach, cabbage, onions, carrots. Broccoli, cauliflower, cucumbers, green peppers, cabbage continuing to develop. Green peppers, okra, squash, cucumbers, lettuce, carrots, tomatoes, onions, cabbage being harvested. Pecan trees splitting shucks central southward, nuts being harvested some areas.

Livestock held up well while ranges, pastures declining from hot, dry weather. Heavy armyworm infestations many areas problem in early wheat, oat stands. Central, south and west grass fires hazard most pastures. Ranchers culling herds sharply because fall, winter grazing prospects poor.

**UTAH:** Light rain in valleys and snow in mountains northwest. Accumulated moisture generally light to moderate but locally heavy. Temperatures quite variable ranging from 5° below normal to 8° above.

Winter wheat planting 71% completed. Soil moisture for planting wheat short except northern areas. Harvest of third crop alfalfa hay about 72% completed, silage corn 72% harvested, potatoes 29%, dry onions 32%, and apples 30% harvested. Movement of cattle and sheep picked up some.

**VIRGINIA:** Temperatures above normal. Extremes: 91 and 37°. Rainfall less than 0.25 in.

Topsoil moisture short to adequate. Dry soils delaying small grain seeding, wearing out peanut digging equipment. Corn combining 57% done, 1976 40%, average 30%. Soybean hay harvest active, bean harvest to start next week. Peanuts digging 17%, 12% 1976, 13% average; combining 7%, 2% 1976, 6% average. Flue pulling ending, some leaves green, needing additional time to mature. Burley, fire and sun cutting nearing end. Seeding: Wheat 11%, 12% 1976, 11% average; barley 27%, 29% 1976, 25% average; winter oats 35%, 31% 1976, 28% average. Armyworms still problem but declining with cooler weather. Apples picked 52%, 53% 1976. Pastures fair to poor. Fieldwork: 5.7 days suitable.

**WASHINGTON:** West: Precipitation above normal. Temperatures 1° below normal except near normal San Juans.

Showers intermittent interrupted harvests of cauliflower, sweet corn, lettuce, cabbage, cucumbers, carrots, and beet seed. Fertilizing and planting cover crops underway.

East: Precipitation 0.60 in. above normal except near normal Okanogan area. Temperatures 4 to 6° below normal.

Apple harvest in full swing. Some picker shortages. Grapes, potatoes, fall onions, carrots, alfalfa seed, clover seed, and other seed crop being harvested. Corn silage harvest underway. Some hay damage from rain. Moisture conditions on dryland improved, winter wheat is 35 to 90% planted, and winter barley is 30 to 50% planted. Some areas still have marginal moisture for good germination. Range and pasture conditions improved, but recovery will take a considerable amount of time in severely drought-stricken areas.

**WEST VIRGINIA:** Temperatures above normal. Rainfall much above normal.

Fieldwork: 4.1 days suitable. Soil moisture mostly adequate, some shortages northeast. Haying, corn harvesting, small grain planting primary activities. Hay harvest: 2d cutting 91% complete,

93% 1976, average 91%; 3d cutting 65%, 76% 1976, average 65%, condition mostly fair. Corn development 9% dough, 57% mature, 35% harvested, 14% 1976, average 18%. Potatoes 82% dug, 91% 1976, average 85%. Tobacco 89% barned, 90% 1976, average 89%. Wheat sown 29%, barley 39%, wheat ahead 1976, barley 5% behind 1976, both ahead average. Pastures improving.

WISCONSIN: Temperatures 2° subnormal. Highs 50's and 60's except low 70's under sunshine 28th. Rainy weather developed after midweek and continued through 30th. Rainfall about 1.00 in. except north where less than 0.50 in. Clear skies and cool temperatures weekend, with general frost northern and central areas.

Wet fields slowed corn harvest. Silo filling 70% completed, 1976 95%, normal 70%. Corn for grain 8% harvested, 1976 10%, normal 1%. Frost and clear weather over weekend should help dry corn. Moisture content generally 25 to 30%. Soybean 70% shedded leaves, 1976 90%, normal 67%; 1% harvested, 1976 10%, normal none. Some 3d and 4th crop hay to make, much 3d crop spoiled during

September. Pastures in best fall condition since 1972. Fall plowing 13% done, 1976 8%, normal 15%. Adequate moisture for easy plowing; winter wheat emergence good. Potato harvest hampered by wet soils, some rotting in fields and some breakdown in storage. Shed rot reported for late harvested tobacco due to poor curing weather. Cranberry harvest continues, apple harvest nearing end. Soil moisture supplies adequate to surplus. Streamflows much improved from year ago.

WYOMING: Temperatures few degrees above normal with north central a little below. Precipitation generally below normal, especially south.

Sugarbeet harvest slow, only 3% dug. Average sugar content 16%. Potatoes 75% harvested. Dry beans 88% combined. Silage corn 90% cut. Grain corn 59% mature, 17% harvested. Winter wheat prospects fair to good, 89% emerged to stand. Soil moisture short. Winter grazing prospects generally fair. Expected number cattle and sheep to be wintered 90% of last year. Stockmen gathering and marketing livestock.

## World Weather and Crop Update

September 26 - October 2

USSR. By September 26, small grains had been swathed on 118 million hectares (93 percent of plan) of which 115 million hectares had been threshed. Relatively good weather prevailed in western Siberia and northern Kazakhstan where there is still a substantial amount of unharvested grain. Harvest activity, which is near completion, centered on the non-grain crops in European USSR and the cotton harvest in central Asia. A warming trend aided field operations in European USSR although temperatures have been dipping below freezing over much of the area with some light snow in the more northerly regions. Cotton harvest has been moving rapidly ahead under favorable conditions; about half the crop was already gathered. By September 26, winter grains had been seeded on 30 million hectares or 77 percent of the plan; condition of winter plantings are generally good although the cool, wet weather has retarded some development somewhat in certain areas, especially the North Caucasus.

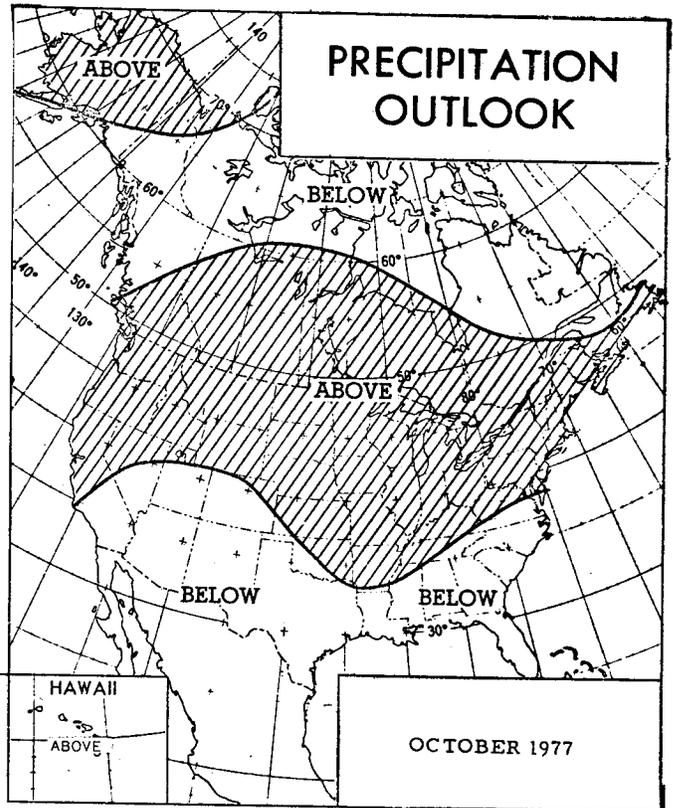
ASIA. Precipitation continued to be very light over northern China including the northeast provinces. Coarse grains and industrial crops harvesting was nearly complete in these areas. Winter crops seeding was well underway in the North China Plain. Moderate rains fell over most of the rice growing areas south of the Yangtze River, but heavy downpours were recorded along the southeast and southern coastal provinces. Monsoon activity in India diminished further, but the 1977 monsoon has been one of the best, comparing favor-

ably with the 1975 season which contributed to the record fall harvest of food grains in that year. Showers soaked wheat areas in southwestern and southern Australia, but there was no significant rain in Victoria, New South Wales, and Queensland where the crop needed moisture.

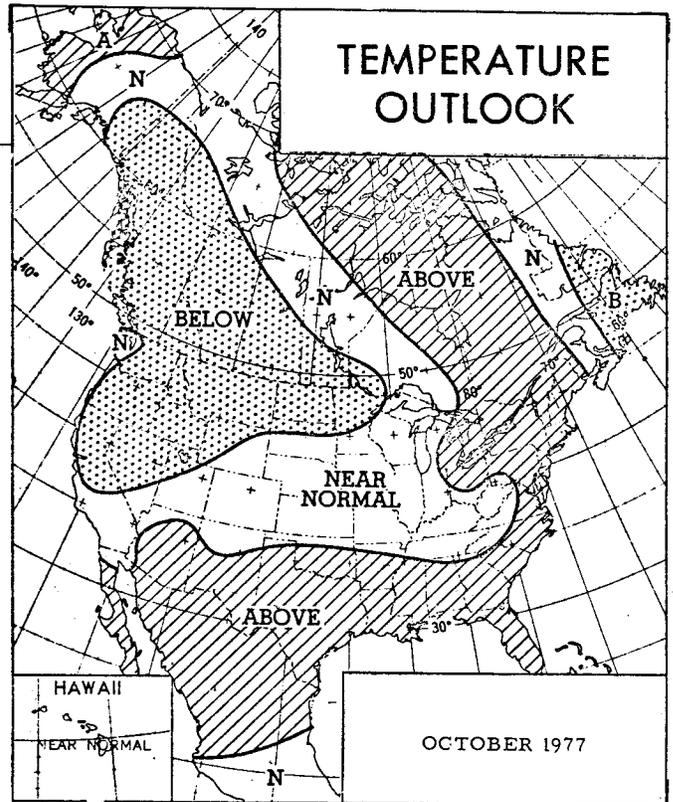
AFRICA. The main agricultural regions of South Africa received significant precipitation as earlier-than-usual spring rains swept across the Orange Free State and the Transvaal for the second successive week. But North Africa is still waiting for fall rains to commence seeding of winter grains.

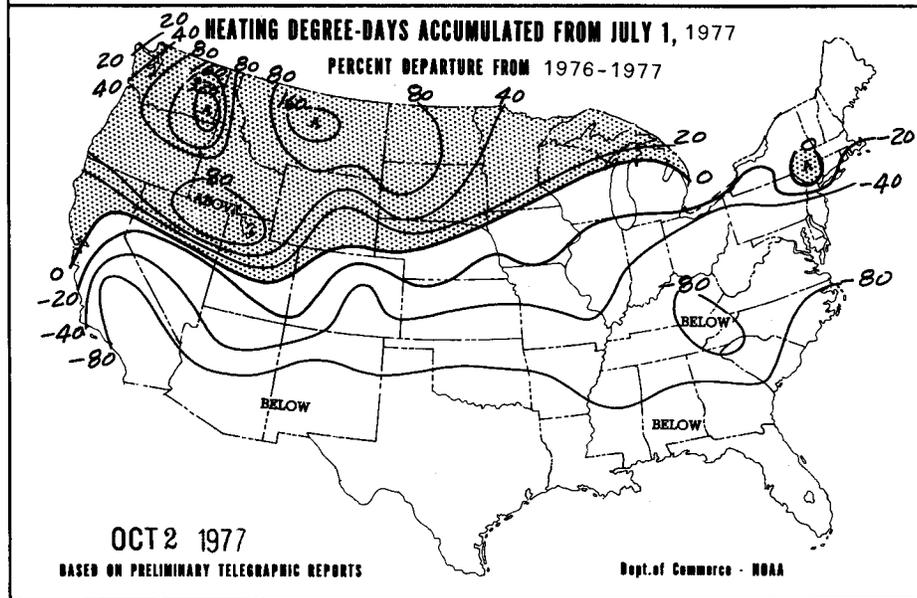
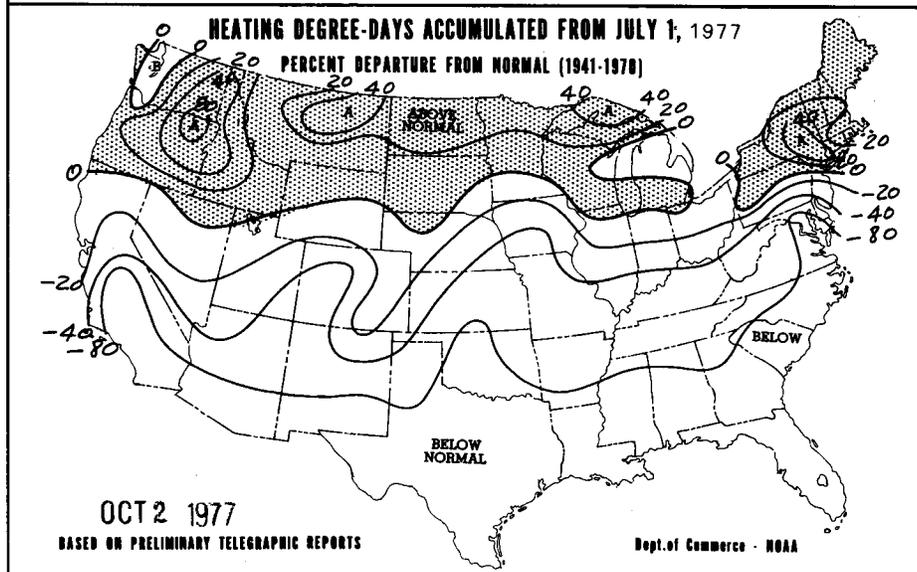
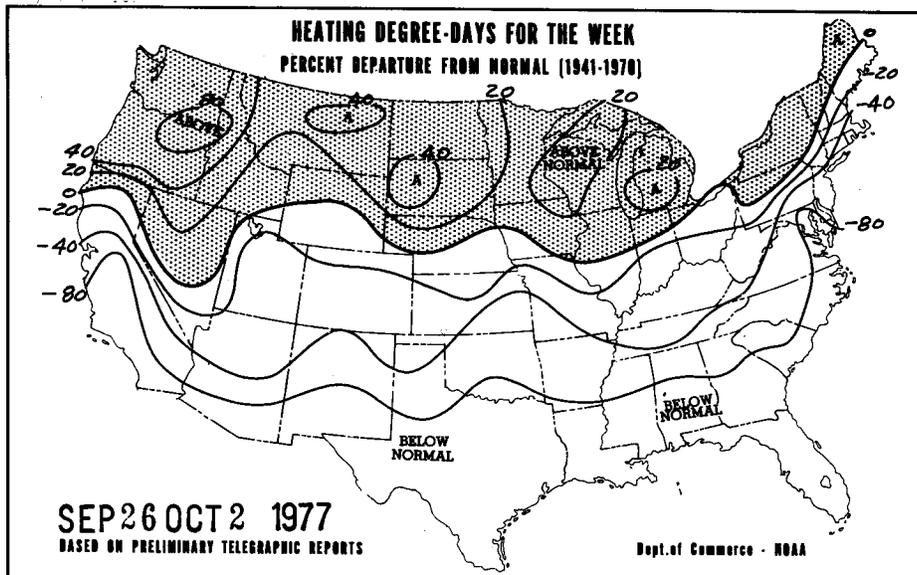
AMERICAS. Moderate to heavy rains fell on much of Argentina's wheat belt, bringing badly needed moisture to parts of the southern and western regions where crops have been adversely affected by a six-month drought. Moderate to heavy showers fell on the main agricultural regions in Brazil's south and southeastern states. Harvesting conditions improved somewhat in Canada's Prairie Provinces although heavy precipitation (snow in places) fell recently in parts of Alberta.

EUROPE. Field work moved briskly ahead over most of western and eastern Europe with little or no precipitation to impede operations. Light precipitation fell over northern Greece. Heavy rains soaked the Black Sea Coast of Turkey, but the main agricultural areas received little significant moisture.



**Average Monthly Weather Outlook**



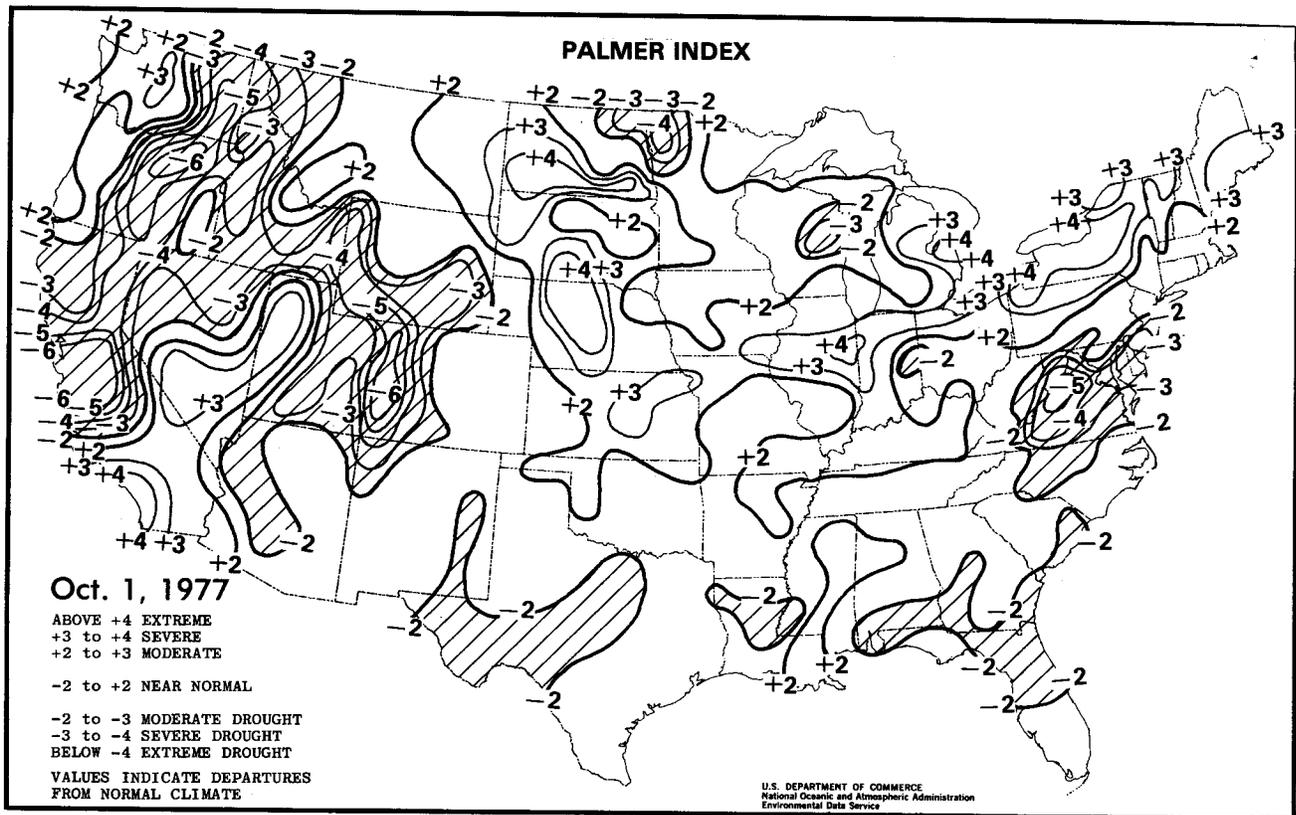


HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING OCT. 2, 1977.

STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +		STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +		STATES AND STATIONS	WEEKLY		SEASONAL ACCUMULATION +	
	TOTAL	DEPARTURE*	TOTAL	DEPARTURE*		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*		TOTAL	DEPARTURE*	TOTAL	DEPARTURE*
ALA. BIRMINGHAM...	0	0	0	0	MAINE CARIBOU...	11	15	358	23	YOUNGSTOWN...	40	128	38	147
MOBILE...	0	0	0	0	PORTLAND...	59	19	353	29	OKLA. OKLAHOMA CITY...	1	13	13	17
MONTGOMERY...	0	0	0	0	MD BALTIMORE...	9	11	11	34	TULSA...	1	13	13	17
ARIZ. FLAGSTAFF...	5	2	28	201	MASS BOSTON...	9	2	95	1	OREG ASTORIA...	7	1	1	17
PHOENIX...	1	1	1	1	MICH ALPENA...	7	1	410	66	BURNS...	1	1	1	14
TUCSON...	0	0	0	0	DETROIT...	1	1	117	13	NEEDFORD...	1	1	1	14
AVULDA...	0	0	0	0	FLINT...	1	1	117	13	PENDLETON...	1	1	1	14
YUMA...	0	0	0	0	GRAND RAPIDS...	1	1	117	13	PORTLAND...	1	1	1	14
ARK. FORT SMITH...	0	0	0	0	HOUGHTON LAKE...	1	1	117	13	SALEM...	1	1	1	14
LITTLE ROCK...	0	0	0	0	IRVING...	1	1	117	13	PA ALLENTOWN...	1	1	1	14
CALIF. BAKERSFIELD...	0	0	76	2	JACKSON...	1	1	117	13	ERIE...	1	1	1	14
EUREKA...	0	0	0	0	MINN. DULUTH...	1	1	117	13	HARRISBURG...	1	1	1	14
FRESNO...	0	0	0	0	INTERNATIONAL FALLS...	1	1	117	13	PHILADELPHIA...	1	1	1	14
LOS ANGELES...	0	0	0	0	ROCHESTER...	1	1	117	13	PITTSBURGH...	1	1	1	14
RED BLUFF...	0	0	0	0	ST. CLOUD...	1	1	117	13	SCRANTON...	1	1	1	14
SAN DIEGO...	0	0	0	0	MISS. JACKSON...	0	0	0	0	I. PROVIDENCE...	23	19	119	46
SAN FRANCISCO...	0	0	22	22	MO. KANSAS CITY...	1	1	1	1	S. CHARLESTON...	1	1	1	1
STOCKTON...	0	0	0	0	ST. LOUIS...	1	1	1	1	COLUMBIA...	1	1	1	1
COLO. DENVER...	14	87	14	87	SPRINGFIELD...	1	1	1	1	GREENVILLE...	1	1	1	13
GRAND JUNCTION...	11	39	11	39	MONT. BILLINGS...	9	9	9	9	DAK. ABERDEEN...	9	2	1	8
PUEBLO...	11	39	11	39	GLASSBORO...	9	9	9	9	HURON...	9	2	1	8
CONN. BRIDGEPORT...	15	67	15	67	GREAT FALLS...	9	9	9	9	RAPID CITY...	9	2	1	8
HARTFORD...	15	67	15	67	HAVER...	9	9	9	9	SIoux FALLS...	9	2	1	8
DEL. WILMINGTON...	13	34	13	34	HELENA...	9	9	9	9	TENN. CHATTANOOGA...	1	1	1	4
D.C. WASHINGTON...	13	34	13	34	HOVE...	9	9	9	9	KNOXVILLE...	1	1	1	4
FLA. PALM BEACH...	0	0	0	0	KALISPELL...	9	9	9	9	MEMPHIS...	1	1	1	4
DAYTONA BEACH...	0	0	0	0	MILES CITY...	9	9	9	9	NASHVILLE...	1	1	1	4
FORT MYERS...	0	0	0	0	MISSOURI...	9	9	9	9	TEXAS. ABILENE...	0	0	0	0
JACKSONVILLE...	0	0	0	0	NEBR. GRAND ISLAND...	1	1	1	1	AMARILLO...	0	0	0	0
KEY WEST...	0	0	0	0	LINCOLN...	1	1	1	1	AUSTIN...	1	1	1	1
LAKELAND...	0	0	0	0	NORTH PLATTE...	1	1	1	1	BEAUMONT...	0	0	0	0
MIAMI...	0	0	0	0	OSAMA...	1	1	1	1	BROWNSVILLE...	0	0	0	0
ORLANDO...	0	0	0	0	VALENTINE...	1	1	1	1	CORPUS CHRISTI...	0	0	0	0
TALLAHASSEE...	0	0	0	0	NEV. ELY...	9	9	9	9	DEL RIO...	0	0	0	0
NORTH PALM BEACH...	0	0	0	0	LAS VEGAS...	9	9	9	9	FORT PASO...	0	0	0	0
GA. ATLANTA...	0	0	0	0	RENO...	9	9	9	9	FORT WORTH...	0	0	0	0
AUGUSTA...	0	0	0	0	WINNEVOCCA...	9	9	9	9	GALVESTON...	0	0	0	0
Macon...	0	0	0	0	N.H. CONCORD...	57	12	359	94	HOUSTON...	0	0	0	0
SAVANNAH...	0	0	0	0	N.J. ATLANTIC CITY...	10	14	33	21	LUBBOCK...	0	0	0	0
IDAHO. BOISE...	15	17	15	17	TRENTON...	10	14	33	21	MIDLAND...	0	0	0	0
LENISSON...	15	17	15	17	N.MEX. ALBUQUERQUE...	13	7	21	6	SAN ANGELO...	0	0	0	0
POCATELLO...	15	17	15	17	ROSMELL...	13	7	21	6	SAN ANTONIO...	0	0	0	0
ILL. CAIRO...	11	11	11	11	N.Y. ALBANY...	5	5	22	7	VICTORIA...	0	0	0	0
CHICAGO...	11	11	11	11	BINGHAMTON...	5	5	22	7	HACO...	0	0	0	0
MOLINE...	11	11	11	11	BUFFALO...	5	5	22	7	NICHITA FALLS...	0	0	0	0
PEORIA...	11	11	11	11	NEW YORK...	5	5	22	7	UTAH. SALT LAKE CITY...	37	10	112	13
ROCKFORD...	11	11	11	11	ROCHESTER...	5	5	22	7	VT. BURLINGTON...	7	1	32	41
SPRINGFIELD...	11	11	11	11	SYRACUSE...	5	5	22	7	VA. LYNCHBURG...	12	12	17	20
IND. EVANSVILLE...	11	11	11	11	N.C. ASHEVILLE...	14	14	19	19	NORFOLK...	12	12	17	20
FORT WAYNE...	11	11	11	11	CHARLOTTE...	14	14	19	19	RICHMOND...	12	12	17	20
INDIANAPOLIS...	11	11	11	11	GREENSBORO...	14	14	19	19	ROANOKE...	12	12	17	20
SOUTH BEND...	11	11	11	11	HATTERAS...	14	14	19	19	WASH. QUILLAYUTE...	7	7	7	6
IOWA. BURLINGTON...	11	11	11	11	WILMINGTON...	14	14	19	19	SEATTLE-TACOMA...	7	7	7	6
DES MOINES...	11	11	11	11	WIS. GREEN BAY...	77	14	227	10	SPOKANE...	7	7	7	6
DUBUQUE...	11	11	11	11	LACROSSE...	77	14	227	10	HALLA HALLA...	7	7	7	6
STOUX CITY...	11	11	11	11	MADISON...	77	14	227	10	YAKIMA...	7	7	7	6
KANS. CONCORDIA...	11	11	11	11	MILWAUKEE...	77	14	227	10	W. VA. BECKLEY...	4	4	5	1
DOGUE CITY...	11	11	11	11	OHIO. AKRON-CANTON...	140	140	140	140	CHARLESTON...	4	4	5	1
GOODLAND...	11	11	11	11	CINCINNATI...	140	140	140	140	HUNTINGTON...	4	4	5	1
TOPEKA...	11	11	11	11	CLEVELAND...	140	140	140	140	PARKERSBURG...	4	4	5	1
NICHITA...	11	11	11	11	COLUMBUS...	140	140	140	140	WIS. GREEN BAY...	77	14	227	10
KY. LEXINGTON...	12	10	12	10	CAYTON...	140	140	140	140	LACROSSE...	77	14	227	10
LOUISVILLE...	12	10	12	10	TOLEDO...	140	140	140	140	MADISON...	77	14	227	10
LA. BATON ROUGE...	0	0	0	0						MILWAUKEE...	77	14	227	10
LAKE CHARLES...	0	0	0	0						OHIO. CASPER...	78	13	112	13
NEW ORLEANS...	0	0	0	0						CHEYENNE...	78	13	112	13
SHREVEPORT...	0	0	0	0						LANDER...	78	13	112	13
										SHERIDAN...	78	13	112	13

\* BASED ON 1941-70 NORMALS.

+ ACCUMULATION FROM JULY 1, 1977.



The Palmer Index was designed to evaluate the scope, severity, and frequency of prolonged periods of abnormally wet or dry weather. For this purpose it works reasonably well. However, it does not provide a measure of the current status of agricultural drought; i.e. the effects of short periods of very dry weather. For this reason the Crop Moisture Index was developed to respond rapidly to changes in the soil moisture situation and take into account only those moisture aspects which affect vegetation and field operations.

If one is interested in the overall soil moisture situation, which will integrate the effects of the past weather over weeks and even months, the Palmer Index provides the best evaluation. However, if one is interested in the availability of moisture to meet current demands, the Crop Moisture Index is the most useful. For example, a recent rain might have replenished the soil sufficiently to meet the current demands. However, if the Palmer Index is highly negative, one can interpret this to mean that the overall soil moisture situation is very poor.

A negative CMI value means that the demand for moisture, or the potential evapotranspiration, has been greater than available supplies so that actual transpiration has been reduced. On the other hand, positive CMI values mean that either actual evapotranspiration exceeded the expected amount, or

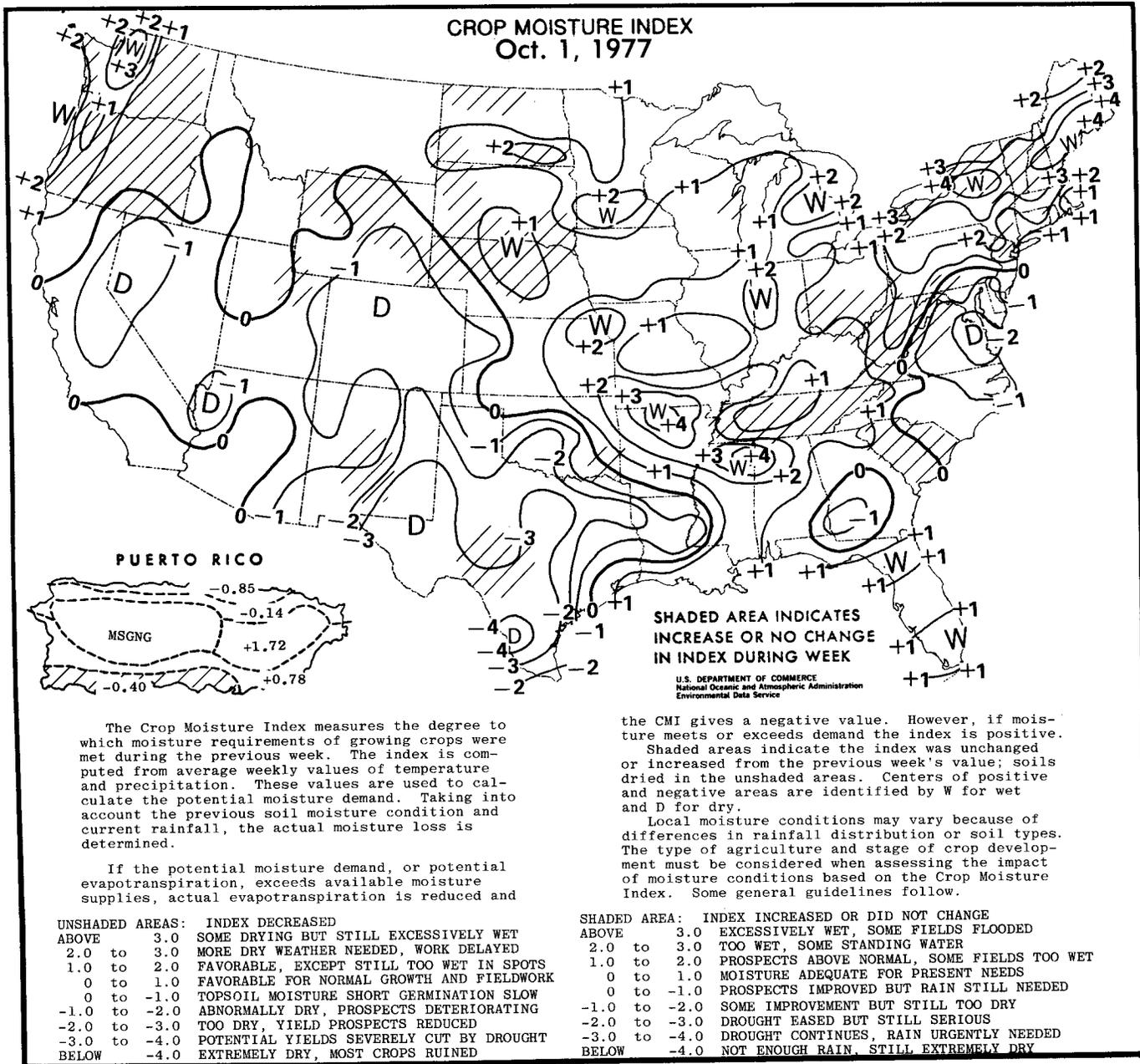
recent rainfall exceeded the moisture requirements of the crops and the additional moisture was added to the soil or was regarded as runoff.

Negative Palmer Index values imply negative abnormalities of either evapotranspiration, the amount of moisture stored in or added to the soil, or of runoff, or a combination of all these types of moisture shortages. In other words, negative PI values simply indicate that the weather has been abnormally dry, and do not specify the exact nature of the effects of the dry weather.

However, positive PI values indicate that the moisture supply either from current or antecedent rainfall exceeded the amount required to sustain soil moisture levels that would be considered as normal and appropriate for the climate of the area.

In brief summary, Palmer Index values are based on all aspects of the moisture situation, but the Crop Moisture values refer only to the crop moisture situation. In addition, the PI values are highly dependent upon antecedent moisture conditions, whereas CMI values are much more responsive to weekly or current rainfall, or the lack of it.

The CMI map will appear each week in the Bulletin during the season from now through October. The Palmer Index will be published only in the first issue of each month during the same period.



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**HARVESTING PROGRESS**

Percent of acres harvested as of October 1

CORN				SORGHUM			
	1977	1976	Avg.		1977	1976	Avg.
Ga	73	60	36	Colo	8	NA	NA
Ill	16	11	11	Kans	15	20	10
Ind	15	10	10	Mo	41	32	21
Iowa	20	15	7	Nebr	15	20	10
Kans	40	25	20	Okla	1/	24	18
Ky	32	17	NA	S Dak	9	50	23
Mich	NA	NA	NA	Tex	73	64	62
Minn	26	29	10				
Mo	37	44	22	7 States	39	37	30
Nebr	20	15	15				
N C	75	66	57				
Ohio	10	10	10				
Pa	NA	NA	NA				
S Dak	10	31	13				
Tex	76	45	54				
Wisc	8	10	1				
U. S.	24	20	14				

These 7 States produced 90% of the 1976 U. S. sorghum crop.

These 16 States produced 92% of the 1976 U. S. corn crop.

**COTTON**

	1977	1976	Avg.
Ala	23	1/	1/
Ark	24	4	9
Ga	17	3	9
La	14	5	5
Miss	29	4	8
Mo	15	4	8
N C	10	1/	1/
Okla	0	0	0
S C	17	4	6
Tenn	29	1	12
Tex	24	10	16
11 Southern States	23	7	12

These 11 States produced 67% of the 1976 U. S. cotton crop.

**SOYBEANS**

	1977	1976	Avg.
Ala	1/	NA	NA
Ark	4	5	12
Ga	1	0	1
Ill	25	58	38
Ind	10	20	15
Iowa	25	58	14
Kans	5	5	10
Ky	8	11	9
La	15	17	12
Mich	NA	NA	NA
Minn	20	74	38
Miss	13	7	9
Mo	9	23	10
Nebr	15	30	10
N C	0	0	0
Ohio	15	20	15
S C	0	0	0
Tenn	4	2	3
U. S.	14	30	17

These 18 States produced 96% of the 1976 U. S. soybean crop.

**SEEDING**

Percent of acres planted as of October 1

**WINTER WHEAT**

	1977	1976	Avg.
Colo	92	88	87
Ill	8	20	24
Ind	10	15	30
Kans	65	45	60
Mo	12	14	NA
Mont	85	90	80
Nebr	85	85	85
Ohio	30	30	30
Okla	61	39	47
Tex	57	41	52
U. S.	60	49	58

These 10 States produced 74% of the 1977 U. S. winter wheat crop.

1/ Less than 5%  
 NA Not Available