

# WEEKLY WEATHER AND CROP BULLETIN

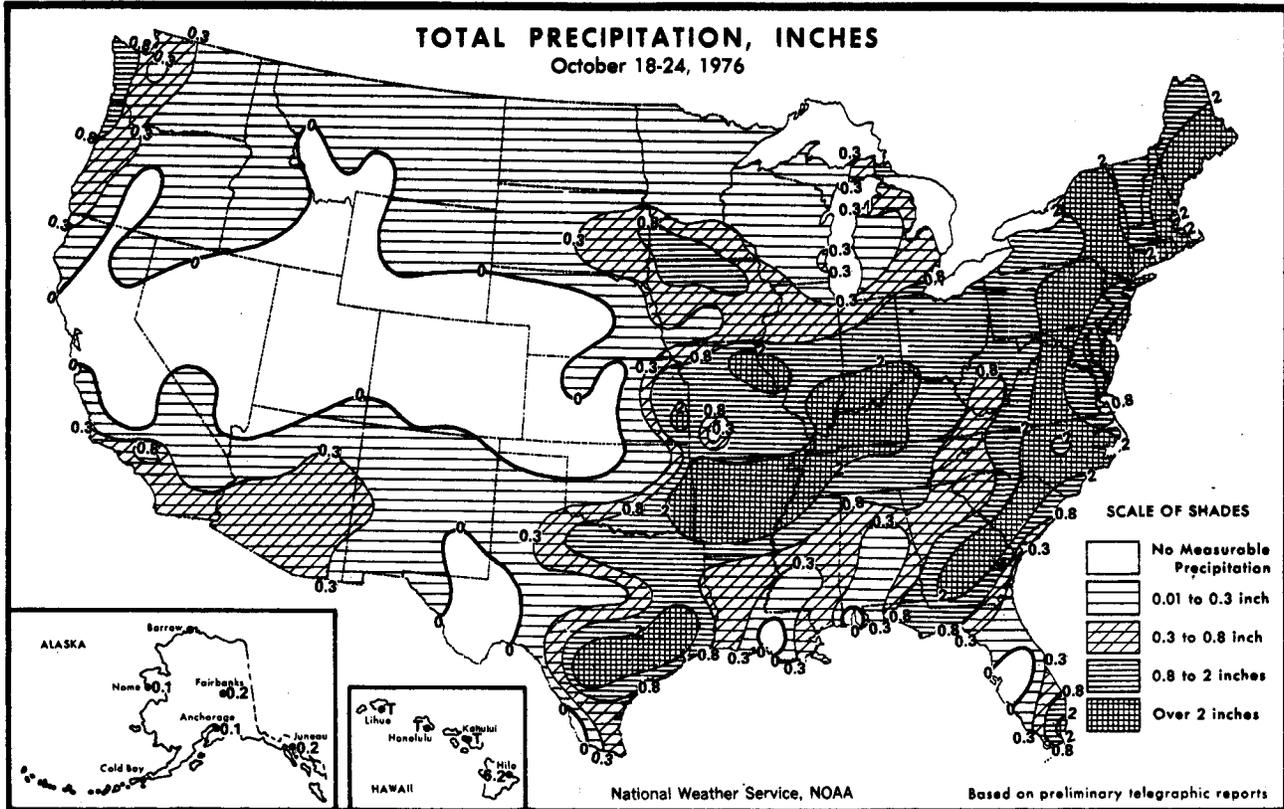
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## National Weather Summary

For the Week of October 18-24

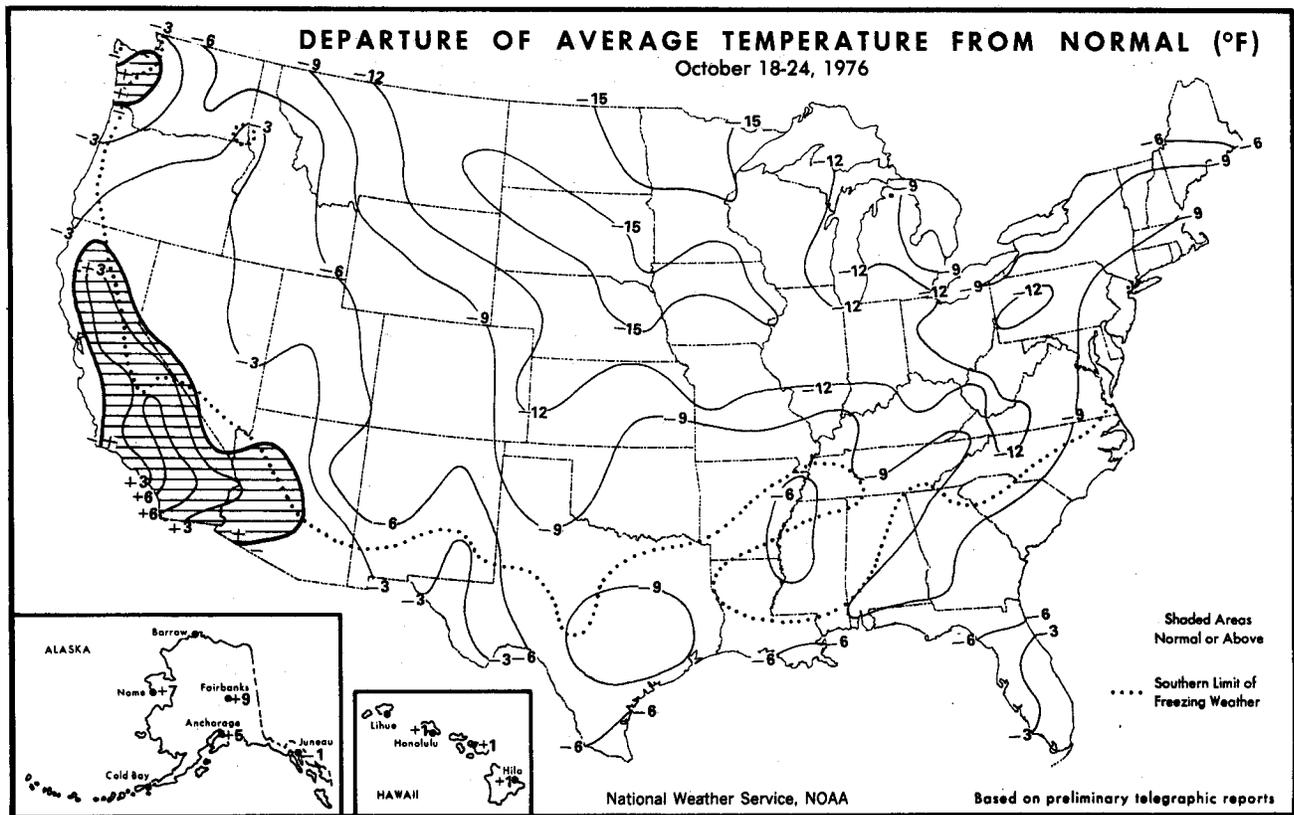
**HIGHLIGHTS:** Temperatures over most of the Nation averaged much colder than normal. The exception was the Far West where southern and central California, western Washington and southwest Arizona were above normal. In the northern Plains many areas averaged more than 15° colder than normal; the southeastern U.S. averaged as much as 10° below the normal expectations. The greatest precipitation fell from east Texas to the eastern Great Lakes and from Georgia to New England. Snow was recorded from Montana to western New York. Strong winds, showers and snow in the mountains began in the Pacific Northwest by the end of the week.

On Monday morning snow was reported from Colorado through Nebraska and the Dakotas. The snow was mixed with rain in the southern portion and was increasing in area coverage. An early winter had moved into the Ohio Valley. The morn-

ing low temperature of 24° at Dayton was the coldest temperature ever recorded so early in the season there. Other record lows included 27° at St. Louis, Mo. and 17° at Toledo, Oh. Combinations of rain, sleet and snow fell during the day on the northern and central Plains, the upper Mississippi Valley and by late in the day was beginning in the eastern Great Lakes area. By Monday evening 3 in. of snow had accumulated at Huron, S.D.; 2 in. at Trinidad, Co. and 1 in. at Redwood Falls, Mr. Rain fell south of the snow area from Oklahoma to the middle Mississippi Valley.

Mostly clear skies prevailed in the eastern third of the country except for southern Florida where thunderstorms were reported.

Tuesday morning saw unseasonably cold air covering much of the Nation. In the East early morning readings dipped into the 20's from the central Appalachians to the mid Atlantic Coast



breaking a number of low temperature records. Lows of  $25^{\circ}$  at both Atlantic City, N.J. and Roanoke, Va. and  $23^{\circ}$  at Grand Junction, Co. were the lowest ever recorded so early in the fall. By late in the day rain had been reported in a band from the Texas Coast into the western half of the Great Lakes region and was occasionally mixed with snow in parts of Michigan. Scattered showers were also present along the Gulf Coast and the south Atlantic Coast.

From the Pacific Coast through the Rockies and into the Plains the weather was beautiful on Wednesday. Temperatures remained on the cool side with mid-day reading in the 40's and 50's. In much of the East the weather was decidedly unfavorable. Flash flood watches were posted along the rain drenched slopes and foothills from North Carolina to Pennsylvania. Gale warnings were flying along the Coast from southern New England to Virginia. Heavy thunderstorm activity occurred over the south Atlantic Coast States. The cause of it all was an intensifying low pressure center moving through the Atlantic States. Winter continued its grip on central U.S. with another morning of record low temperatures as the cold air moved rapidly south behind the eastern storm.

The storm continued northward through New England on Thursday; rain and flooding were widespread. By mid-day the storm moved out of New England and most of the rain abated. However, snow squalls began forming in western New York as the strong wind moved over the Lakes and was lifted by the Adirondacks. Cold air moved all the way to the Gulf of Mexico and many record low temperatures were set: Mobile, Ala.,  $37^{\circ}$ ; Meridian, Miss.,  $29^{\circ}$ ; and Baton Rouge, La.,  $36^{\circ}$ .

Late in the day scattered showers and a few thunderstorms developed over Arizona and southern California.

Gale force winds continued over the Great Lakes on Friday. Flooding and beach erosion resulted from the 12 foot high waves along the eastern shorelines. Warmer air from the Gulf of Mexico began to invade the southern Plains. The warm moist air gave rise to shower activity in northwest Texas, Oklahoma and southern Arkansas. Scattered showers and thundershowers occurred from southern California into New Mexico.

Cold weather continued over northern U.S. Friday and spread deeper into Southeast. Record low temperatures included Atlanta, Ga.,  $33^{\circ}$ ; Mobile, Ala.,  $40^{\circ}$  (coldest for the date since 1898). In the cold area, Spencer, Ia. recorded  $11^{\circ}$  breaking the old record for the date of  $17^{\circ}$ .

Scattered showers with isolated thundershowers fell on Saturday from the southern Plains into the middle Mississippi Valley and Ohio Valley. Showers were again reported in Arizona to New Mexico. Snow fell in the northern portion of lower Michigan and in eastern South Dakota. Temperatures reversed themselves in the southern Plains and soared to near the  $80^{\circ}$  mark in portions of Oklahoma and Kansas. Cold weather continued in the North and East.

The precipitation area increased rapidly on Sunday. Precipitation in one form or another fell from southwest Texas to New York, south through the middle Atlantic States, north to Nebraska and from Minnesota through the Great Lakes where snow was accumulating. An intense fall storm was approaching the Pacific Northwest bringing with it strong winds, numerous rainshowers and snow at higher elevations.

## National Agricultural Summary

For the Week of October 18-24

**HIGHLIGHTS:** Frosty weather throughout most of the major row crop areas terminated plant growth and aided harvest operations. Cold weather defoliated the cotton plants and helped other plants dry. Rainy weather slowed farm activity in most of the eastern part of the United States but winter wheat seeding reached 88% complete. Soybean harvest hit 68%, corn 63%, cotton 27% and sorghum 77%.

**SMALL GRAINS:** Winter wheat seeding moved into the final stage throughout the Nation except in the South Atlantic States where planting reached only 32% complete. Soil moisture remained short in parts of the western North Central States but in Texas rains saturated fields slowing seeding of the 1977 crop.

Nationwide winter wheat growers seeded 88% of the crop, ahead of last year's 85% but short of the 93% average. Texas lagged the seeding rate of last year and the average more than any other major producing State. In the western North Central States seeding reached 90%, equalling last year but 7 points off the average. Growers completed seeding in South Dakota and Nebraska. Kansas producers planted 90% of the crop, the same as last year and 5 points less than the average. In the South Central States planting reached 83% complete, ahead of 1975's 73%, but short of the 90% average. Oklahoma growers seeded 93% of their crop far surpassing last year's 65% and edging ahead of the 90% average. Rain slowed Texas seeding, holding progress to 80% complete behind 1975's 85% and the average 91%.

Winter wheat producers in the Mountain States planted almost all the crop. In Montana and Colorado, growers finished planting their winter wheat crops.

**CORN:** Rainy weather slowed harvest activity in most of the Corn Belt. High moisture levels in harvested corn caused temporary storage problems. Corn producers harvested 63% of the United States crop, falling behind 1975's progress of 65% but surpassing the average 47%. In the eastern North Central States where rainy weather and high moisture corn slowed picking, farmers picked only 44% of the crop, 10 points less than last year but ahead of the 39% average. Illinois growers were almost half finished at 49% compared with 67% in 1976 and 45% average.

In the western North Central States where drier conditions prevailed picking reached 76% complete, advancing ahead of 1975's 71% and the 46% average. In Iowa, farmers advanced to 80% complete compared with 69% in 1975 and the 38% average. In the South Central and South Atlantic States harvesting progress was near normal.

**COTTON:** Cotton producers in the 11 major States picked 27% of the 1976 crop, 1 point ahead of last year but 2 points less than average. In spite of some rainy weather cotton picking progressed throughout the South. In Texas picking advanced to 16% complete lagging 1975's 26% and the average of 23%. Frost defoliated the cotton plants on the Plains. In other areas of Texas rain slowed picking. Only a small acreage was picked in Oklahoma but freezing weather killed the crop and harvest should begin soon. In Arkansas frost helped defoliate the cotton crop. Arkansas growers picked 41% of the crop compared with 47% last year and 39% average.

**SOYBEANS:** Combining of the Nation's soybean crop advanced to 68% complete ahead of 62% in 1975 and 54% average. In the eastern North Central States harvest reached 91%, surpassing 89% in 1975 and 78% average. Harvest exceeded the average and last year's pace in all States except in Wisconsin where this year's pace lagged a year earlier. In the western North Central States combining advanced to 90% complete exceeding 1975's 74% and the average of 57%. Harvesting was nearly complete except in Kansas, Missouri and Nebraska.

In the South Atlantic States farmers combined only 10% of the crop compared with 16% in 1975 and 19% average. Growers in the South Central States harvested 39% of the soybean crop exceeding 1975's 36% and the 34% average.

**OTHER CROPS:** The Nation's sorghum growers harvested 77% of their crop lagging the 83% combined last year at this time but surpassing the average pace of 59%. Texas growers harvested sorghum on the Plains and reached 84% complete, well ahead of the 74% average but less than last year's 92%. In Oklahoma early freezing temperatures damaged some late sorghum but 93% of the crop was already mature. Growers harvested nearly 55% of the crop, exceeding the 30% average by a wide margin. Kansas growers reached 65% complete exceeding both 1975's 60% and 35% average.

Rice harvest in Arkansas reached 91% complete compared with 97% in 1975 and 93% average. Growers disked levees and stubble in earlier harvested fields. Mississippi growers harvested 92% of their crop far surpassing 72% in 1975 and the 84% average.

Peanut digging in Georgia reached 98% complete and threshing 94% slightly less than recent years. Adverse weather held Texas peanut growers harvest to only 62% complete compared with 86% last year and 75% average. In Oklahoma, digging reached the halfway mark compared with 57% last year but only 20% average.

Kentucky tobacco growers stripped 12% of the burley against 8% in 1975. Tennessee planters stripped 40% of their burley crop compared with 35% last year and average.

**FRUITS AND NUTS:** Picking in the Nation's apple orchards was almost finished for the 1976 season. The New York grape harvest reached 70% complete. The California grape harvest was nearly complete. Florida citrus groves were in excellent condition. Harvest was active as new growth matured rapidly. Texas growers harvested citrus in the Lower Rio Grande Valley.

**VEGETABLES:** A few late season cabbage, onions and cauliflower moved to market from northern areas of the Nation. In Florida growers harvested a light volume of a wide variety of vegetables from southern areas. Texas vegetable growers harvested many kinds of vegetables. Rain damaged some onion fields in the Lower Rio Grande Valley. California growers harvested lettuce, broccoli, cauliflower and celery.

**PASTURES AND LIVESTOCK:** Grasslands rated mostly poor to fair in the western North Central States, elsewhere pastures were in fair to good condition for this time of year. Cattlemen moved herds to lower elevations. Generally cattle were in good condition.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., October 24, 1976

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	54	-7	.2	-.4	La.Baton Rouge	59	-8	T	-.6	Youngstown	40	-11	1.0	+ .3
Mobile	58	-9	T	-.4	Lake Charles	60	-8	.5	-.3	OKLA.Okla. City	53	-8	1.1	-.4
Montgomery	55	-9	T	-.4	New Orleans	62	-6	.5	+1.1	Tulsa	53	-8	1.1	-.6
ALASKA.Anchorage	37	+5	.1	-.2	Shreveport	58	-8	.7	+1.1	OREG.Astoria	52	0	.9	-.8
Barrow	---	---	---	---	MAINE.Caribou	38	-4	1.6	+ .8	Burns	44	-1	1.1	-.1
Fairbanks	31	+9	.2	+1.1	Portland	39	-9	2.9	+2.1	Medford	49	-2	T	-.5
Juneau	39	-1	.2	-1.6	MD.Baltimore	47	-8	1.9	+1.3	Pendleton	47	-4	1.1	-.2
Kodiak	---	---	---	---	MASS.Boston	47	-7	1.5	+ .8	Portland	51	-1	.3	-.6
Nome	33	+7	.1	-.2	Chatham	47	-7	2.8	---	Salem	48	-4	.6	-.4
ARIZ.Flagstaff	45	0	.3	0	MICH.Alpena	38	-8	.5	+1.1	PA.Allentown	44	-8	1.9	+1.3
Phoenix	72	+2	.6	+ .5	Detroit	41	-10	.6	-.0	Erie	43	-7	1.4	+ .7
Tucson	67	-1	.3	+2.2	Flint	45	-4	.4	-.1	Harrisburg	45	-9	2.1	+1.5
Winslow	49	-6	.4	+ .3	Grand Rapids	37	-13	.2	-.4	Philadelphia	47	-9	1.6	+1.0
Yuma	74	0	.4	+ .3	Houghton Lake	36	-10	.1	-.5	Pittsburgh	39	-12	2.4	+ .3
ARK.Fort Smith	53	-8	2.5	+1.7	Lansing	38	-12	.3	-.2	Scranton	42	-9	2.4	+1.8
Little Rock	53	-8	3.7	+3.0	Marquette	35	-12	.1	-.4	R.I.Providence	44	-9	2.2	+1.4
CALIF.Bakersfield	70	+5	T	-.1	Muskegon	35	-10	.9	+ .3	S.C.Charleston	57	-7	.3	-.3
Eureka	51	-3	T	-.8	S. Ste. Marie	35	-10	.9	+ .3	Columbia	53	-9	2.3	+1.8
Fresno	64	+2	T	-.1	MINN.Duluth	29	-15	.1	-.4	Greenville	49	-11	.3	-.4
Los Angeles	68	0	.2	+1.1	Internatl Falls	27	-15	.2	-.1	S.D.Aberdeen	33	-13	.3	0
Red Bluff	66	+3	T	-.3	Minneapolis	36	-12	.3	-.1	Huron	32	-16	.6	+ .3
San Diego	71	+6	.4	+ .3	Rochester	33	-15	.3	-.1	Rapid City	34	-14	T	-.2
San Francisco	58	-2	T	-.3	St. Cloud	32	-14	.1	-.3	Sioux Falls	34	-14	.5	+ .2
Stockton	66	+4	0	-.2	MISS.Jackson	58	-6	1.1	-.4	TENN.Chattanooga	52	-7	.9	+ .3
COLO.Denver	43	-7	0	-.2	Meridian	55	-8	.4	-.1	Knoxville	50	-7	2.5	-.1
Grand Junction	45	-8	T	-.2	MO.Columbia	44	-12	2.0	+1.3	Memphis	56	-5	.6	+2.0
Pueblo	44	-8	0	-.2	Kansas City	42	-15	.8	+1.1	Nashville	50	-9	1.3	+ .8
CONN.Bridgeport	49	-6	2.1	+1.4	St. Louis	45	-12	1.7	+1.1	TEX.Abilene	56	-8	.2	-.4
Hartford	43	-8	1.7	+1.0	Springfield	49	-8	.3	-.4	Amarillo	47	-11	T	-.4
D.C.Washington	49	-9	1.8	+1.2	MONT.Billings	36	-12	.1	-.1	Austin	58	-10	1.6	+1.0
FLA.Apalachicola	61	-8	.6	+ .2	Glasgow	32	-12	.1	0	Beaumont	80	-8	.8	0
Daytona Beach	70	-2	T	-1.1	Great Falls	36	-11	T	-.1	Brownsville	71	-4	.7	+1.1
Ft. Myers	71	-4	.2	-.6	Havre	32	-13	.1	0	Corpus Christi	67	-6	.7	+ .2
Jacksonville	61	-8	.1	-.8	Helena	36	-8	T	-.1	Dallas	67	-6	-.2	-.2
Key West	79	0	.1	-1.0	Kalispell	37	-7	.1	-.2	Del Rio	64	-6	.2	-.2
Lakeland	69	-4	0	-.5	Miles City	32	-15	.2	+1.1	El Paso	58	-4	.1	0
Miami	76	-1	2.4	+ .7	Missoula	37	-5	T	-.2	Fort Worth	58	-8	1.0	+ .4
Orlando	60	-8	1.1	+ .6	NEBR.Grand Island	38	-14	T	-.2	Galveston	64	-8	.6	+1.1
Tallahassee	60	-8	1.1	+ .6	Lincoln	38	-15	.1	-.2	Houston	58	-11	2.4	+1.5
Tampa	69	-4	0	-.4	Norfolk	36	-15	.2	-.1	Lubbock	52	-7	.1	-.3
W.Palm Beach	78	0	1.1	-.7	N.Platte	37	-12	T	-.2	Midland	58	-6	T	-.3
GA.Atlanta	51	-10	.4	-.2	Omaha	39	-14	.5	+1.1	San Angelo	58	-8	.2	-.2
Augusta	54	-8	1.4	+ .9	Valentine	35	-13	T	-.2	San Antonio	58	-11	2.3	+1.7
Macon	55	-9	1.4	+ .9	NEV.Ely	40	-4	T	-.1	Victoria	62	-9	1.3	+ .5
Savannah	57	-8	.2	-.3	Las Vegas	64	-1	0	-.1	Waco	57	-10	.2	+ .4
HAWAII.Hilo	76	+1	6.2	+5.5	Reno	48	-1	T	-.1	Wichita Falls	56	-8	1.2	+ .6
Honolulu	80	+1	T	-.4	Winneucca	45	-1	T	-.1	UTAH.Blanding	45	-5	.1	-.2
Kahului	78	+1	T	-.3	N.H.Concord	38	-10	2.3	+1.7	Salt Lake City	48	-4	0	-.3
Lihue	77	0	T	-1.0	N.J.Atlantic City	46	-9	2.5	+1.7	VT.Burlington	38	-9	1.3	+1.7
IDAHO.Boise	45	-5	.1	-.1	Trenton	48	-7	2.0	+1.4	VA.Lynchburg	46	-10	2.4	+ .8
Lewiston	48	-2	.1	-.2	N.MEX.Albuquerque	50	-6	T	-.1	Norfolk	52	-8	.5	-.2
Pocatello	41	-6	0	-.2	Roswell	55	-3	T	-.3	Richmond	48	-9	1.9	+1.3
ILL.Cairo	53	-7	1.6	+1.0	N.Y.Albany	40	-10	1.6	-1.0	Roanoke	43	-13	1.2	+ .5
Chicago	44	-9	.2	-.4	Binghamton	38	-11	2.0	+1.3	WASH.Colville	37	-7	.2	-.2
Moline	36	-15	.3	-.3	Buffalo	41	-9	1.0	+ .3	Omak	39	-6	0	-.2
Peoria	40	-13	.4	-.1	New York	50	-6	1.7	+1.0	Quillayute	48	-2	1.3	-1.5
Rockford	37	-14	.2	-.4	Rochester	43	-8	1.7	+1.1	Seattle-Tacoma	52	+1	.3	-.7
Springfield	43	-12	1.0	+ .3	Syracuse	42	-9	2.0	+1.3	Spokane	41	-5	.2	-.2
IND.Evansville	47	-9	3.6	+3.0	N.C.Asheville	45	-10	.3	-.4	Walla Walla	48	-4	.3	-.1
Ft. Wayne	40	-12	.8	+ .2	Charlotte	49	-11	1.1	+ .5	Yakima	48	-5	T	-.1
Indianapolis	41	-13	1.5	+ .9	Greensboro	46	-11	2.4	+1.8	W.Va.Beckley	41	-10	.6	+1.1
South Bend	39	-13	.5	-.2	Hatteras	58	-6	2.0	+ .9	Charleston	43	-12	.5	-.1
IOWA.Burlington	39	-14	.4	-.2	Raleigh	49	-9	1.7	+1.1	Huntington	43	-12	.9	+ .4
Des Moines	39	-13	.2	-.2	Wilmington	57	-7	1.3	+ .6	Parkersburg	44	-11	.9	+ .4
Dubuque	37	-13	.6	0	N.DAK.Bismarck	32	-13	.2	0	WIS.Green Bay	35	-12	.1	-.3
Sioux City	34	-17	.3	0	Fargo	29	-16	T	-.2	La Crosse	36	-14	T	-.4
KANS.Concordia	44	-11	T	-.4	Williston	31	-13	T	-.1	Madison	36	-12	.2	-.2
Dodge City	46	-10	T	-.4	OHIO.Akron-Canton	40	-11	1.2	+ .7	Milwaukee	38	-11	.4	0
Goodland	38	-13	0	-.2	Cincinnati	42	-13	2.1	+1.6	WYO.Casper	35	-11	.1	-.1
Topeka	45	-11	.9	+ .3	Cleveland	41	-11	1.0	+ .4	Cheyenne	37	-8	T	-.2
Wichita	49	-9	.1	-.4	Columbus	41	-11	1.4	+1.0	Lander	37	-8	T	-.3
KY.Lexington	44	-12	1.1	+ .6	Dayton	41	-13	1.5	+1.1	Sheridan	32	-14	.1	-.1
Louisville	47	-9	2.1	+1.6	Toledo	38	-13	.8	+ .3	P.R.San Juan	83	+3	.4	-.9

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 SRS State offices in cooperation with the National Weather Service, NOAA.

**ALABAMA:** Week started cool, turned cooler and ended warm. Temperatures from 16° below normal on 21th to 4° above normal on 24th. Rain varied from 0.03 to 3.78 in.

Fieldwork: 5.2 days suitable. Soil moisture short to adequate. Harvesting corn, cotton and soybeans major activities. Cotton harvest 18% complete, 14% 1975, 36% average. Corn harvest 71% complete, 56% 1975, 58% average. Soybean harvest 28% complete, 23% 1975, 30% average. Pecans poor condition. Seeding small grains 52% complete, 50% 1975, 58% average. Pastures fair condition.

**ARIZONA:** Moderate to heavy thundershowers. Amounts over 0.75 in. central basins, White Mountains. Temperatures 2° above normal to 6° below.

Cotton harvest well underway. Rainy weather caused delay. Cultivation, insecticide applications limited to late fields. Harvest grain sorghum continues, yields average. Preparations next year's wheat, barley fields. Sugarbeets good growth. Planting, renovation alfalfa fields. Lemon harvest picking up. Algerian tangerine harvest to start soon. Grapefruit harvest continues limited scale. Citrus groves satisfactory condition. Showers helped range, pasture conditions. Dry ranges lower elevations requiring supplemental feeding. Stock water supplies generally adequate. Livestock good condition. Fall calving, lambing. Movement to winter pastures.

**ARKANSAS:** Cool, wet. Temperatures 5 to 13° below normal. Extremes: 78 and 18°. Rainfall general with range 0.22 in. to 3.02 in.

Midweek frost many areas. Soybean harvest 30% complete, 36% last year, same as average. Frost will speed up leaf drop. Cotton harvest 41% complete, 47% year ago, average 39%. Frost aided defoliation. Open bolls 83% of acreage, 84% last year. Rice harvest 91% complete, 97% year ago, average 93%. Levees and stubble disked. Corn harvest virtually complete at 98%, 99% last year. Sorghum harvest 95% complete, 93% year ago, average 89%. Wheat seeding 42% complete, 51% last year. Oat planting 53% complete. Pastures short but weekend precipitation helped.

**CALIFORNIA:** Temperatures 2 to 6° above normal except along the central coast and in the Sierra-Cascade areas where the averages were near normal. A low aloft centered west of the southern California coast late in the week brought rainfall along south coast and southeast interior areas. Amounts less than 0.25 in., elsewhere dry.

Small grain preparation and planting continuing. Rice harvest nearly complete. Harvest of beans, sugarbeets, corn, and milo active. Cotton harvest underway. Gins running 24 hour days. Grape harvest nearly complete. Raisins to distilleries. Fruit and nut tree pruning underway Central Valley. Lettuce harvest ending Salinas Valley, supplies now coming from Westside. Melon harvest moving to desert valleys. Broccoli, cauliflower, celery, continue active Salinas Valley. Fall potato harvest well along. Supplemental feeding continues. Cattle winter pasture.

**COLORADO:** Cold early week. Temperatures 10° below normal 19th, normal by weekend. Sparse precipitation, only significant amount in mountains. Winter wheat seeding complete; emergence 93%, 76% 1975, 89% average. Grain sorghum harvested

23%, 62% 1975, 30% average, ripe 83%, 92% 1975. Sorghum forage harvested 87%, 86% 1975, 96% average. Corn for grain harvested 28%, 55% 1975, 32% average. Sugarbeets harvested 40%, 63% 1975, 54% average. Dry bean threshing complete. Summer potato harvest complete. Fall potato harvest 95%, 100% 1975, 95% average. Alfalfa fourth cutting 88%. Topsoil, subsoil moisture short. Ranges, pastures fair. Livestock good.

**FLORIDA:** Cool and windy. Warming trend beginning 22d. Temperatures below normal. Rainfall generally light to moderate.

Soil moisture adequate west, north, south but short central. Corn, peanut and hay harvest almost complete. Soybean, cotton harvest in progress. Harvest of sugarcane for sugar beginning. Pecan harvest underway. Planting small grains continues, conditions favorable. Grazing conditions fair to good. Pastures continue seasonal decline. Ranchers having insect problems, spraying when necessary. Small grain seeding for forage full swing. Cattle, calves mostly good condition. Citrus grove condition excellent, small amount of irrigation underway. Cooler temperatures, good fruit color, new growth maturing rapidly, harvest active. Vegetable movement increasing. Light harvest snap beans, cucumbers, eggplant, green peppers, squash. Southern areas reaching production. Escarole-endive, lettuce harvest underway, central and Everglades. Sweet corn harvest active Everglades. Tomato harvest increasing. Quality good. Size very good. Yields fair to good. Plant condition good most vegetables. Plantings continue.

**GEORGIA:** Temperatures 5 to 10° below normal. Rainfall 0.50 to 1.00 in. in north and 2.50 to 3.00 in. in central and south. Rainfall ranged from 5.78 in. to less than 0.10 in.

Soil moisture adequate to surplus. Fieldwork: 4.0 days suitable. Cotton condition fair to good, 81% open; 24% harvested, last year 28%, average 45%. Peanuts fair to good, 98% dug, 94% threshed; last year 99% and 97% respectively; average 100% and 99%. Corn good, 79% harvested, 64% last year, 79% average. Soybeans fair to good, 10% harvested, 15% last year, 16% average. Hay crops fair to good. Pecans poor to mostly fair; 8% harvested, 14% last year. Apples fair to good, 98% harvested. Pastures and cattle, fair to mostly good. Hogs good. Wheat 29% planted, 30% last year. Rye 50% planted, 53% last year. Other small grains 45% planted, 50% last year.

**HAWAII:** Weather favorable. Heavy rains on Hawaii 21st caused some flooding. No serious crop damage. Irrigation and spraying continue frequent. Vegetable supplies leafy crops short. Papaya and banana supplies moderate to heavy, Pineapple harvesting light. Sugar harvesting steady. Rain beneficial to pastures southern and eastern Hawaii. Other islands need more moisture. Ample dry feed.

**IDAHO:** Cool, dry. Temperatures 3 to 9° below normal. Extremes: 72 and 6°. Only precipitation: Trace at Ashton.

Harvest operations good headway with harvest most crops near completion. Potato harvest 95% complete, 90% 1975. Sugarbeet harvest 45% complete, 40% 1975. Planting winter wheat 90% completed, 95% 1975. Emergence winter wheat 60%,

75% 1975. Cattle and sheep being moved to winter ranges. Livestock good to excellent condition. Weaning of calves started.

ILLINOIS: Temperatures 5 to 15° below normal; cool period 5th straight week; freezing temperatures early week most areas. Precipitation ranged from 0.33 in. north portions to 3.00 in. southeast.

Corn 49% harvested, 67% 1975, 45% average; moisture content remains high; some elevator storage problems. Soybeans 97% combined, 97% 1975, 87% average. Grain sorghum 65% harvested. 1977 winter wheat 90% seeded, 91% 1975, 87% average. 1977 corn and soybean acreage 30% plowed, 31% 1975, 23% average. Pastures 24% good, 58% fair, 18% poor. Soil moisture short. Fieldwork: 5.8 days suitable.

INDIANA: Temperatures 10° below normal and ranged from 20 to 64°. Hard freeze in low to mid-20's on 22d. Substantial rainfall 19th and 23d. Amounts 2.00 to 3.00 in. south, 1.00 to 1.50 in. central and 0.30 to 1.00 in. north.

Cloudiness and poor drying typical most days. Fieldwork: 5 days suitable. Topsoil and subsoil moisture short to adequate. Corn 35% harvested, 1975 40%, average 30%. Soybeans 85% combined, 1975 80%, average 60%. Winter wheat 85% seeded, 1975 85%, average 75%. Wheat 45% emerged. Wheat stands mostly good. Rye 85% seeded, 1975 90%. Apples 90% picked, 1975 80%, average 80%. Pastures declined slightly, rated poor to fair.

IOWA: Very cold, temperatures 12 to 16° subnormal. Season's first snowfalls, rain on 18th to 19th and occurring again on weekend.

Snow and rain early provided some moisture relief. Ground remains hard and dry, fall plowing slow with 21% complete. Harvest moving well, soybeans completed, corn progressing rapidly. Fieldwork: 6 days favorable. Corn yields vary, some loss in northeast due to high winds causing droppage and lodging. Corn harvest 80%, 69% 1975, 38% average. Winter wheat seeded 95%. Grain sorghum harvested 70%, 75% 1975, 59% average. Topsoil moisture and subsoil moisture short. Livestock good condition, supplemental feeding necessary, pasture and hay regrowth slow to none.

KANSAS: Hard freezes ended growing season. Temperatures 8 to 12° below normal. Precipitation 0.25 to 0.50 in. over east but nonexistent elsewhere.

Wheat seeding nearing final stages, 90% complete by weekend, same as last year, average 95%. Fall row crop harvest moving along well. Corn 60% harvested, 75% last year, 45% average. Sorghum 65% harvested, 60% last year, 35% average. Soybean harvest 60% completed, 50% last year and average. Sugarbeet harvest approaching final stages.

KENTUCKY: Temperatures few degrees below seasonal normal. Rainfall near midweek and again weekend. Rainfall from near 1.00 in. in east to around 1.50 in. central and west.

Fieldwork: limited to 4 days. Main activities: Corn, soybean, and tobacco harvesting and seeding winter cover crops. Corn harvest 52% complete, 57% last year and 53% average. Soybean harvest 43% complete, 49% last year and 44% average. Burley stripping 12% complete, 8% last year. About 44% of tobacco plant beds for 1977 crop will be treated for weed control this fall and remaining 56% next spring. About 80% of beds will be treated with methyl bromide, 13% burned, and the remaining 7% other methods or no treatment.

Fall seeding of winter wheat about 50% complete. Soil moisture adequate.

LOUISIANA: Temperatures 3 to 6° below normal. Extremes: 83 and 28°.

Soil moisture generally short. Fieldwork: 5.6 days suitable. Cotton condition fair to good; harvested 54%, 18% last year, 28% average. Soybeans harvested 70%, 52% year ago, 44% average. Sugarcane good condition; 8% harvested, 13% last year, 11% average. Sucrose and purity good. Sweetpotatoes 86% dug, 80% last year. Grain sorghum 96% harvested, 69% year ago. Oats 72% planted, 69% year earlier. Wheat 63% planted, 64% year ago. Last cutting hay 93% complete. Pastures fair, need good rain. Livestock fair to good.

MARYLAND & DELAWARE: Temperatures 8° below normal. Extremes: low 60's and upper 30's. Precipitation above average, mostly from 1.00 to 2.00 in., 3.00 in. or more in southern areas.

Soil moisture adequate to surplus. Pastures average to above average. Killing frost on 19th. Corn for grain 65%, 80% 1975. Farmers experiencing long waiting lines at elevators. Soybeans 20%, 35% 1975, 26% average. Frost on 19th killed most plants. Small grain seeding; oats 95%, barley 85%, rye 75%, wheat 70%. Fall apple harvest active; demand good, prices favorable.

MICHIGAN: Temperatures ranged from 53 to 8°. Precipitation sparse; ranged from 0.28 in. over central Lower to 0.49 in. oversoutheast Lower.

Fieldwork: 5 days suitable. Grain corn over 45% picked. Winter wheat over 95% planted. Soybeans almost 70% combined. Sugarbeets 65% dug. Potatoes 91% dug. Pasture feed short. Jonathan and Red Delicious picking nearly complete. Other fall apples progressing. Carrots 95% completed. Cabbage and cauliflower harvesting normal.

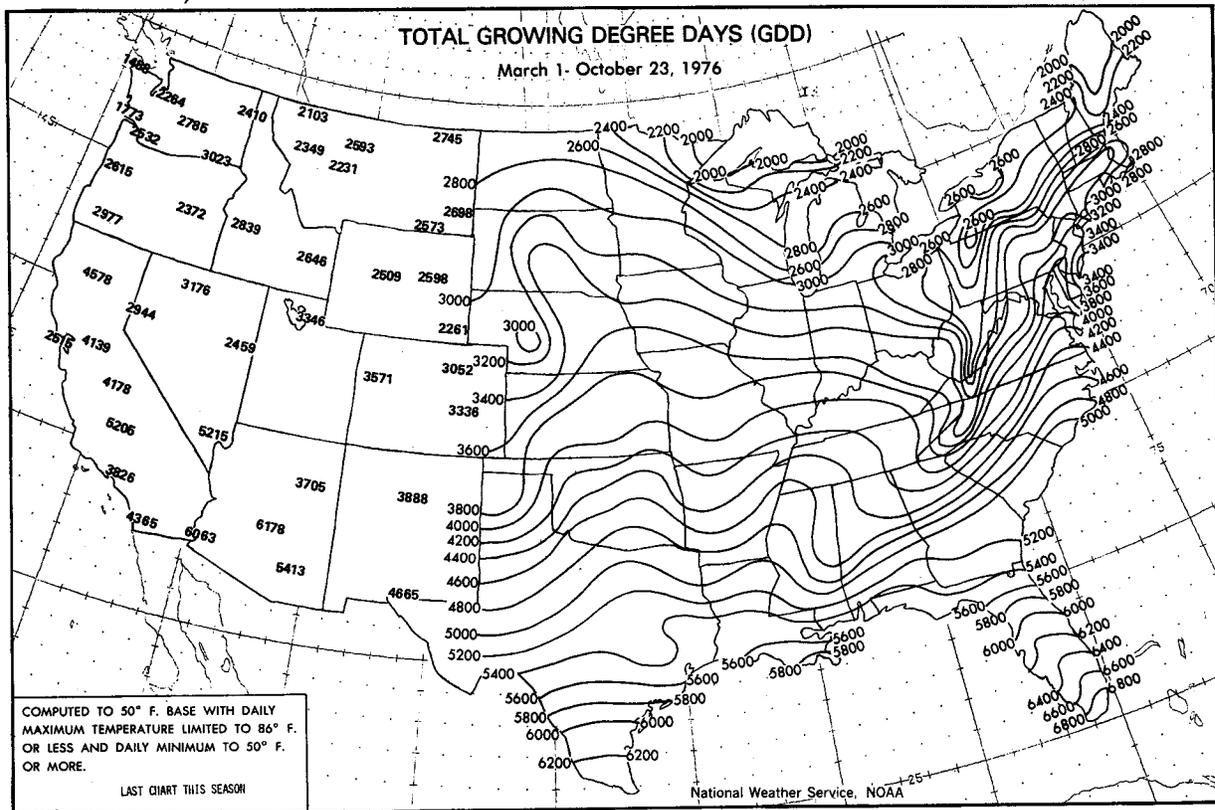
MINNESOTA: Cold with snow early and late week. Temperatures 14° below normal. Extremes: 53 and 7°. Precipitation more than 0.50 in. most of southwest and south central, to less than 0.15 in. most of north.

Fall harvests proceeded rapidly despite light snow in south; nearly completed most areas. Only corn to be picked is in south central, southeast. Topsoil, subsoil moisture very short. Harvested: Corn for grain 89%, 1975 72%, normal 53%; sugarbeets 95%, 1975 92%, normal 91%; sunflowers 98%, 1975 68%, normal 76%.

MISSISSIPPI: Temperatures 10 to 12° subnormal. Extremes: 26 and 85°.

Soil moisture very short to adequate. Fieldwork: 5.3 days suitable. Cotton 96% open bolls, 91% 1975, 77% average; 47% harvested, 14% 1975, 37% average. Soybeans 97% shedding, 86% 1975; 80% mature, 61% 1975; 42% harvested, 29% 1975, 28% average. Rice 92% harvested, 72% 1975, 84% average. Corn 75% harvested, 65% 1975, 59% average. Sorghums 90% harvested, 76% 1975, 77% average. Hay crops 95% harvested, 92% 1975, 94% average. Peanuts 91% harvested, 90% 1975, 87% average. Sweetpotatoes 81% harvested, 79% 1975, 74% average. Pecans 12% harvested, 14% 1975. Winter wheat 68% planted, 73% 1975. Oats 76% planted, 78% 1975. Soybeans in mostly fair condition. Cotton in poor to fair condition.

MISSOURI: Temperatures 11 to 15° below normal. Precipitation 1.00 in. Bootheel, 0.50 in. elsewhere.



Fieldwork: 5.1 days suitable. Soybeans 73% harvested, 75% 1975, 52% normal. Corn 75% harvested, 80% 1975, 53% normal. Grain sorghum 76% harvested, 83% 1975, 58% normal. Cotton 39% harvested, 75% 1975, 52% normal. Condition of cotton 67% poor, 33% fair. Winter wheat seeding 65% complete, 76% 1975. Fall plowing 34% complete, 34% 1975. Condition of pastures 76% poor, 23% fair, 1% good. Soil moisture short.

**MONTANA:** Cold with temperatures well below normal. Snow 18th south central and east, dry elsewhere through midweek. Snow 22d ending 24th with warmer temperatures. Windy along east slopes. Soil moisture short. Winter wheat condition mostly fair. Potato harvest 90% complete. Sugarbeet harvest making good progress--80% dug. Livestock condition good to excellent. Almost 75% cattle and sheep moved from summer ranges. Some supplement feeding started.

**NEBRASKA:** Temperatures 10 to 15° below normal. Light rainfall or snow first of week. Fieldwork: 6.0 days suitable. Topsoil moisture short 68%, 32% adequate. Subsoil moisture 91% short, 9% adequate. Corn for grain 55% harvested, 45% normal and 70% 1975. Sorghum 85% harvested, normal 65%, 1975 95%. Soybeans 90% harvested, 75% normal and 95% 1975. Wheat condition fair to good. Sugarbeets 75% harvested. Cattle gleaning stalk fields. Livestock on short, dry pastures received supplemental feed.

**NEVADA:** Temperatures averaged few degrees below normal. Extremes: 82 to 10°. Light precipitation late week. Potato crop about completed main production areas. Planting grains continued. Livestock

movement on schedule.

**NEW ENGLAND:** Temperatures 5° below normal rising to normal by mid-week falling to 10° below normal by weekend. Storm with gale force winds 20th and 21st dropped 1.00 to 3.00 in. rain. Snow flurries with accumulations in northern mountain areas.

**NEW JERSEY:** Cold averaging: 7 to 12° below normal. Extremes: 18 and 66°. Rainfall averaged 2.10 in. north, 2.09 in. central and 2.08 in. south. Soil moisture, in percent of field capacity averaged 100%. Soil temperature averaged 48° north and 55° south.

Light to moderate volumes of hardy vegetables available. Apple and cranberry harvest nearing completion. Corn for grain and soybean harvest will resume as fields dry off. Small grains and cover crops making good growth. Planting continues as fall crops are harvested.

**NEW MEXICO:** Cool first half with very cold nights. Considerable cloudiness and scattered showers 21st through 23d with temporary clearing 24th.

Soil moisture short, ranges fair, livestock good. Cotton poor to fair east, fair southwest, freeze damage in east. Harvest 35% complete. Alfalfa good, finishing fifth cut south, third and fourth cuts north. Grain sorghum fair, freeze lowered quality, many late planted fields not harvested, 50% harvested. Corn good, 70% harvested, freeze caused lodging. Dryland winter wheat fair, needs moisture, 90% planted, 60% acceptable stand. Irrigated wheat plantings near completion, 95% acceptable stand. Apples good, harvest well advanced. Lettuce harvest, chili picking continued. Peanuts freeze-damaged on

tops, harvest underway. Sugarbeets good, harvest continued. Pecans good, hulls opening.

NEW YORK: Cool and dry. Slight warming trend midweek. Precipitation above normal all areas. Temperatures 5 to 9° below normal, greatest departures in central lakes area. Extremes: 64 and 12°. Precipitation range 1.00 to 3.50 in., 15 in. snow.

Weather slowed harvest activity. Corn silage 80% complete. Grain corn 15% done, 30% 1975. Limited alfalfa chopping and dry bean harvesting continues. Late season vegetables still being harvested. Cabbage, onions, potatoes moving into storage. Grape harvest 70% in. Apple harvest complete.

NORTH CAROLINA: Rainfall amounts high particularly over Piedmont and coast. Excessive moisture along with freezing temperatures caused heavy frost in Piedmont 22d.

Fieldwork: 3.2 days suitable. Soil moisture adequate. Corn for grain 82% combined, 1975 78%, average 73%. Soybeans 8% harvested, 1975 8%. Cotton 33% picked, 1975 26%, average 36%. Peanuts 79% dug, 1975 92%; threshing 66% complete, 1975 80%, average 72%. Sorghum grain 70% harvested, 1975 49%. Apple harvest nearing completion. Sweetpotatoes 67% harvested, 1975 71%. Small grain 29% seeded, 1975 40%, average 42%. Pastures average 50% fair, 50% good.

NORTH DAKOTA: Temperatures 10° below normal. Extremes: 51 to 7°. Precipitation ranged 0.27 in. to 0.06 in. below normal. Weekend below normal temperatures and snow showers. Largest snowfall west.

Sugarbeet, sunflower and corn for grain harvest virtually complete. Pastures and ranges continue poor.

OHIO: Below normal temperatures. Extremes: 60 to 17°. Precipitation somewhere every day ranging 0.48 in. to 1.72 in.

Fieldwork: 5 days favorable. Main activities: Corn, soybean and sugarbeet harvest. Considerable late fall plowing. Normal high moisture in corn and soybeans, quality mostly good. Harvest completed: Corn for grain 35%, 40% last year and average; soybeans 85%, 80% 1975, 75% normal; sugarbeets 25%, 30% last year, 40% average. Apples and grapes 85%, on schedule. Popcorn 60%, 40% 1975, 50% average. Winter wheat 90% seeded, 85% last year and average; 55% emerged, condition good. Pasture condition good. Livestock in good condition. Limited use of crop residue. Soil moisture supplies mostly adequate.

OKLAHOMA: Temperatures 9 to 12° below normal. Precipitation averaged from trace in west central to 0.74 in. southeast. Weekend mild to cool, with light to moderate rains.

Freezing temperatures as much as two weeks ahead of average first 32° temperatures. Late cotton, sorghums, and soybeans hurt. Most peanuts mature. Wheat seeding 93% complete, ahead of 65% a year ago when soils were very dry and near 90% average. Corn harvest 89% complete, ahead 78% year earlier and 58% average. Sorghums 93% mature, with near 55% acreage harvested, much ahead near 30% average. Very small portion cotton acreage picked but with freeze harvest will begin soon. Open bolls 85% acres, compared 70% average. Peanut digging past 50% mark, compared 20% average, 57% year ago. Soybean harvest 18% complete, 15% average. Ranges only fair to poor but cattle hold mostly good condition.

OREGON: Temperatures 2 to 4° below normal north; 3 to 4° above normal extreme south. Extremes: mid 70's, 30's west; 70's, teens east. No precipitation.

Fall seeding and land preparation continuing. Greenbug infestation increasing in eastern grain fields. Haying almost finished, silage harvest continues. Apple, filbert harvests continuing. Walnuts falling. Sweet corn, onion harvests finishing. Potato harvest continuing. Range forage, pastures in good condition but drying. Livestock in excellent condition. Winter feed supplies appear adequate.

PENNSYLVANIA: Cold, wet. Moderate to heavy precipitation mid-week and weekend. Snow showers and squalls north and west, up to 6 in. northwest snowbelt. Total precipitation 1.00 in. west central to about 3.00 in. northeast. Temperatures persistently below normal. Daytime highs 40's and 50's, overnight lows 20's and 30's. Extremes: 60 and 18°. Weekly temperatures 6 to 12° below normal.

Wet soils hindered fieldwork. Limited harvest of corn, potatoes and apples.

PUERTO RICO: Island rainfall 1.12 in. or 0.64 in. below normal. Temperatures about 80° on coasts and 75° interior. Extremes: 93 and 59°.

Weather conditions favored development sugarcane plantings. Excessive rains some western interior areas affected coffee harvest and drying of bean. Recuperation of pastured noted due recent rains. Weather favorable food crop plantings. Insect attacks reported some areas due excessive moisture. Abundance bananas.

SOUTH CAROLINA: Temperatures well below normal, freezing temperatures 22d, 23d. Extremes: 28 and 76°. Rainfall average to above average, mostly early week.

Soil moisture adequate to surplus. Fains delayed fieldwork. Corn harvest nearly complete, soybean, cotton, vegetable harvest continues. Small grains, livestock, pastures fair to good condition. Soybeans fair condition. Corn harvested 94% 1976, 88% 1975, 81% average. Cotton harvested 28% 1976, 40% 1975, 44% average. Peanuts harvested 72% 1976. Oats planted 31% 1976. Barley planted 28% 1976. Wheat planted 16% 1976, 21% 1975, 16% average. Soybeans mature 21% 1976. Soybeans harvested less than 5% 1976.

SOUTH DAKOTA: Scattered showers and snow left up to 0.82 in. precipitation. Most amounts under 0.50 in. Temperatures low as 18° below normal. Extremes: 5° and 60°.

Topsoil and subsoil moisture short. Row crop harvest nearly complete. Record early harvests for corn and grain sorghum. Percent harvested: Corn for grain 90%, 1975 75%, normal 65%, grain sorghum 97%, 1975 94%, normal 72%; soybeans 99%, 1975 99%, normal 86%. Sunflower and alfalfa seed harvests complete. Moisture helped fall sown grains. Winter wheat condition good southwest, fair to poor elsewhere. Livestock sales and movements strong in West River areas. Hay still moving into state. Farmers preparing for winter.

TENNESSEE: Rains 0.50 to 1.00 in. west to 0.25 to 0.50 in. midweek. Weekend rainfall 2.00 to 3.00 in. west and generally 0.25 to 0.75 middle and east. Temperatures generally 8 to 10° below normal.

Rains stopped harvesting of soybeans, corn and cotton and delayed seeding of fall sown grain.

Frosts ended growing season and caused damage to late planted cotton and soybeans. Fieldwork: 4.1 days suitable. Pastures fair and improving. Soil moisture adequate. Corn harvest slowed by rains and high moisture content. Corn 50% harvested, 50% last year, 55% average. Corn 98% mature, 92% last year, 98% average. Cotton 2 weeks behind normal and frosts damaged late planted fields. Cotton 70% open boll stage, 80% last year and average. Cotton 25% harvested, 35% last year, 40% average. Soybeans 70% mature, 75% last year, 72% average. Soybeans 30% harvested, 30% last year, 25% average. Frost damage in late planted soybean fields. Burley tobacco 40% stripped, 35% last year and average. Fall plowing 75% completed, 78% last year, 80% average. Wheat 60% seeded, same as last year and average. Oats 83% seeded, 80% last year, 88% average. Barley 80% seeded, 78% last year, 88% average.

TEXAS: Temperatures 3 to 6° below normal except southern tip where normal. Subfreezing in northwest. Near freezing east. Precipitation widespread. Rainfall central 1.00 to 3.00 in.

Harvesting corn, sorghum on High Plains progresses rapidly. Harvest delayed by rain other areas. Frost hit most fields in northern half. Cool slows crop development other areas. Cotton on plains nearly all hit by frost. Following the frost, defoliation widespread. Harvest 16% complete, 26% last year, 23% average. Corn harvest progressed rapidly on High Plains. Lodging widespread, but losses minimal. Harvest 82% complete, 96% last year, 88% average. Sorghums harvest on plains continued active. Harvest 84% complete, 92% 1976, and well ahead of 74% average. Peanut harvest 62%, 86% 1976, 75% average. Wheat seeding on low plains, north delayed by rain, wet fields. Seeding 80% complete, 85% 1976, 91% average.

Citrus harvest continues. Planting spring onions active. Harvest of various vegetable crops underway. Pecan harvest continues most areas.

Ranges average condition. Pastures in northern Panhandle poor, as soil moisture remains short. Cattle good. Reduced screwworm, tick, armyworm activity.

UTAH: No precipitation. Temperatures ranged from near normal to 8° below.

Growers pushed harvest of late fall crops to get ready for deer hunt. Sugarbeet harvest well over half way. Silage corn and potato harvests virtually complete. A good apple crop also nearly harvested. Movement of livestock to fall and winter range in progress.

VIRGINIA: Cloudy, cool and rainy conditions prevailed. Temperatures several degrees below normal. Scattered light frost.

Fieldwork: 2.2 days suitable. Topsoil moisture 1% short, 41% adequate, 58% surplus. Wet fields hampering harvesting and seeding. Corn for grain 55% harvested. Corn silage harvest nearing completion. Soybean harvest 14% complete.

Peanut digging 66% complete, 39% combined. Pastures in very good condition. Small grain seeding progress: Wheat 41%, barley 63%, oats 64%. Apple harvest nearly complete.

WASHINGTON: West: Temperatures 3° below normal except west Olympic Coastal area where near normal. Precipitation averaged from 2.10 in. below normal west Olympic Coastal area to 0.60 in. below normal Olympic San Juans.

Corn silage nearly complete. Potato harvest continued. Cool weather slowed pasture growth.

East: Temperatures averaged 4° below normal except northeastern area where 5° below normal. Precipitation 0.20 in. below normal central basin to 0.40 in. below normal Palouse Blue Mountain area.

Apple harvest nearing completion north central area. Cooler weather hastened grape harvest. Sugarbeet harvest continues. Winter wheat and barley still being seeded. Emerged wheat looks good. Farmers spraying for greenbugs. Fall roundup of cattle in full swing. Lambs nearly finished coming to market. Pastures and ranges short.

WEST VIRGINIA: Temperatures 10° below normal, precipitation near or above normal. Freezing statewide.

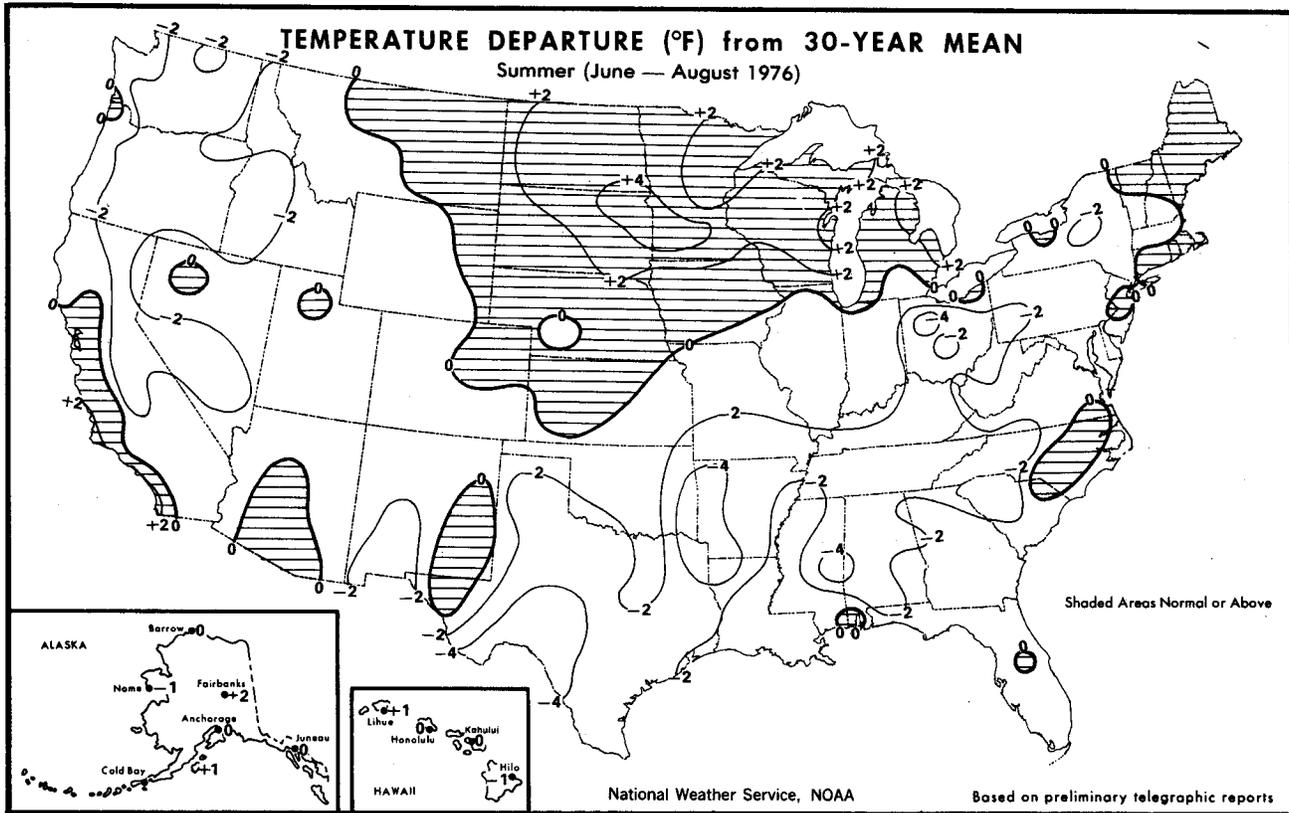
Fieldwork: 3.0 days suitable. Preparation for winter, general chores, corn harvesting main activities. Soil moisture adequate. Corn silage harvested 90%, grain 47%. Wheat 58% planted, barley 78% planted. Third hay cutting 95% complete, uncut hay condition fair. Pasture condition fair to good.

WISCONSIN: Temperatures 15° below normal. Highs in 30's and 40's except 50 south 23d. Precipitation light, snow north, rain and snow south. Heaviest rainfall of 0.50 in. southeast and heaviest snowfall of a few inches near northern lakes.

Corn for grain harvest 55% done, 1975 50%, normal 30%. Harvest moving fast with low moisture content and dry field conditions. Many moisture samples below 20%. Corn shelling more than usual because of dryness. Most corn harvested in northern two-thirds where less acreage for grain. Corn stalks being chopped for feed and bedding. Soybean harvest 67% completed, 1975 75%, normal 35%. Fall plowing 20% done, 1975 35%, normal 37%. Ground too dry and hard for plowing. Most tillage being done by chisel plows and digging implements. Soil moisture short. Winter wheat and new seedings need rain. Harvest of potatoes, vegetables, apples, and cranberries near end.

WYOMING: Temperatures below normal. Precipitation slightly below normal.

Soil moisture short. Major activities: Livestock gathering, preparing for winter. Winter wheat seedings 92% emerged, conditions fair to good. Sugarbeet digging 81% complete, sugar content averaging around 17%. Potatoes 86% dug. Grain corn 30% in the crib.



## Summer Weather Review

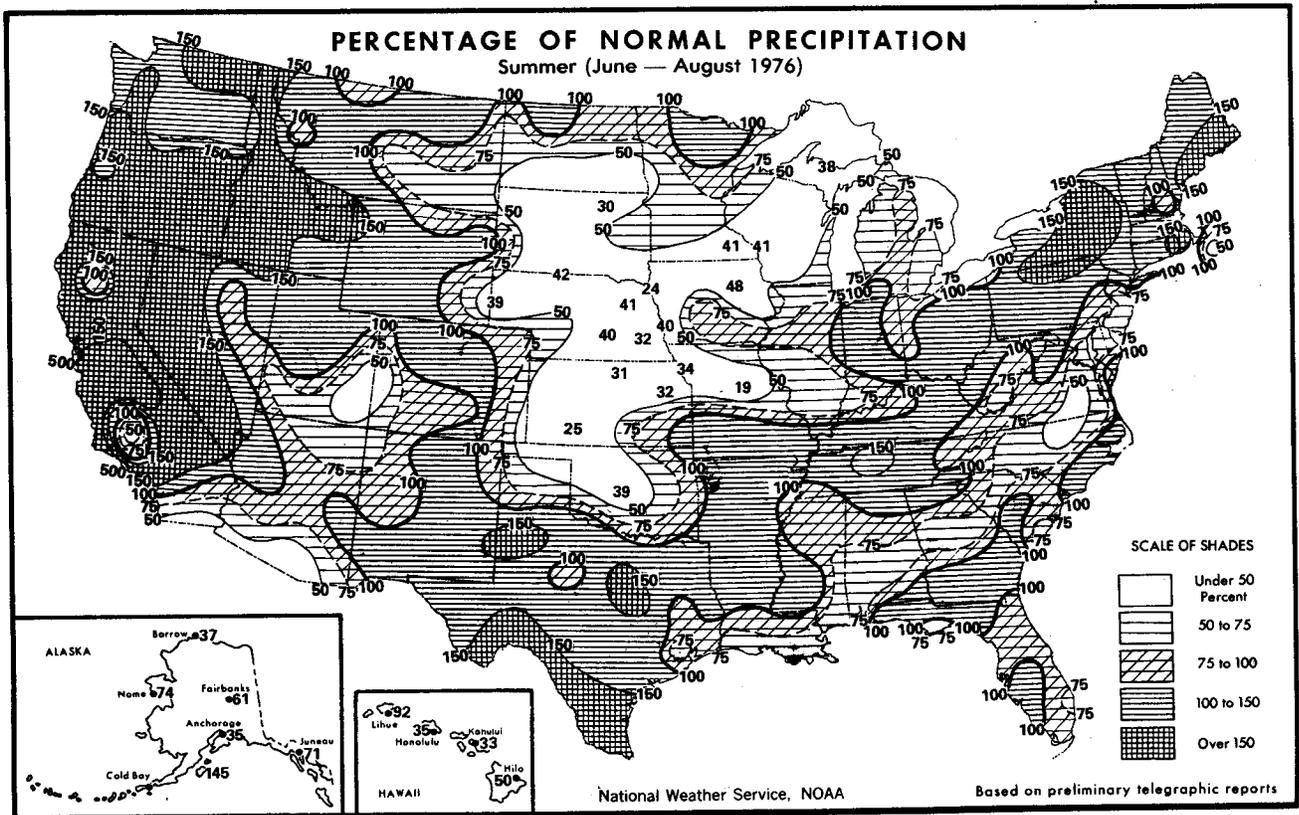
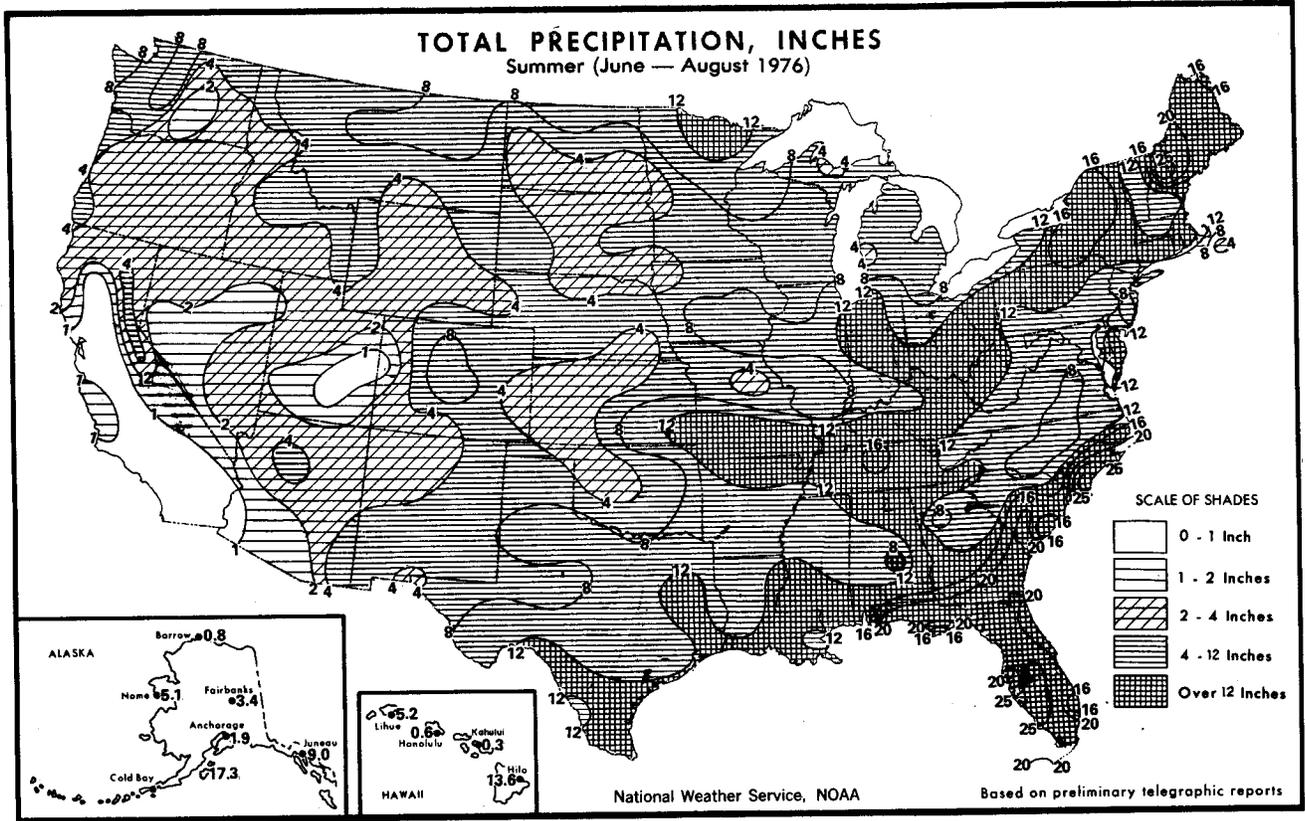
June, July, August

**HIGHLIGHTS:** The summer season averaged cooler than usual across most of the Nation, except the central and the southwest coast. The driest part of the northern Plains (northeast South Dakota and west central Minnesota) was exceptionally warm, averaging 4 to 5° above normal for the summer. This same area had only half the normal rainfall during this period. The seasons rainfall favored the area just to the west of the Appalachians and southwestward to include Arkansas and Texas. Almost winterlike circulation patterns dropped considerable moisture over northern and central California during August. This unseasonable rain damaged fruit and vegetable crops, but relieved pasture and fire hazard conditions which were in dire need of water. Across the continent, in the Piedmont east of the Appalachians and extending into New Jersey, rain was also scarce. Central Virginia received less than half their normal rain and crop growth was severely affected.

June ushered in the summer season with dry weather continuing in the northern Plains. Northern Minnesota had some relief with above normal rainfall but the extra moisture was rapidly used up in the subsequent dry days. The Piedmont east of the Appalachians was drier than normal. The drought in California continued in the extreme category with no relief expected until late fall. The mean temperature for June was below normal in most of the Nation except for the northern Plains where it averaged 3 to 5° above normal. This increased the moisture demand from the already dry area. The warmer than normal temperatures extended eastward through New England.

Hot dry weather described conditions in the northern Plains during July. The extreme dryness lowered yields of small grains and threatened, corn and soybeans in the western Corn Belt. Eastern South Dakota, southern Minnesota, southern Wisconsin and most Iowa temperatures averaged 3 to 5° above normal. In contrast, cooler than normal weather extended from Texas to Tennessee and northeastward through New England. In Texas the average temperature for the month was 8 to 10° below normal. Precipitation was well above normal in Texas and most of the West. However, drought persisted in California.

Warmer than usual weather continued in August from Kansas northward into Montana to the west and Wisconsin to the east. North and South Dakota and Minnesota temperatures averaged 4 to 6° above normal. Most of the Nation was cooler than normal. From Alabama into Ohio it was 4 to 5° cooler than normally expected. August precipitation varied considerably across the Nation with only isolated heavy rains being recorded. Dry weather intensified drought problems in the northern Plains and began them in Arkansas where rain in the eastern portion was less than half of normal. Unusual wet weather in the the Pacific Northwest created a number of problems for the agricultural community. Northern California and Oregon got five times their normal rainfall. Although very unseasonal rain in portions of central and northern California relieved fire danger and aided pastures, it resulted in considerable losses to fruit and vegetable crops. Across the continent hurricanes Belle and Dottie dropped heavy rains on portions of the East Coast.



## World Weather Review

**HIGHLIGHTS:** This summer's weather has been extremely variable in many areas of the world. Virtually every continent has had some weather problems. The Soviet Union experienced an unusually wet summer; heavy duty combines were needed to harvest the wheat crop. The harvest of row crops was delayed. However, the net effect of all the moisture has been excellent grain yields. Parts of western Europe experienced their worst drought in over 200 years; southern England, Benolux, France and West Germany were the hardest hit. India's southwest or summer monsoon was above normal across most of the country, but its behavior was erratic and rainfall was poorly distributed. Pakistan produced a record winter wheat crop, but corn and other crops were reduced by too much moisture. China harvested record or near record crops. The winter wheat belt of Argentina finally received much needed moisture in August and September, but Australia's winter grain belt continued extremely dry until the last week in September.

Mid-September rains finally relieved the European drought and improved prospects for late maturing crops, catch crops, fall forage and fall planting and harvesting. By the end of September record amounts of rain for the month were recorded in several locations and farmers were looking for some dry weather to complete fall field work. In contrast, skies finally cleared of rain clouds over the grain areas of the Soviet Union, permitting rapid advance of harvest and fall planting operations.

### THE SOVIET UNION

In stark comparison with 1975, the Soviet farmer began looking for the sun to drive the rain clouds away in order to complete the harvests. Wet weather persisted through most of August in the Soviet Union. From the Urals eastward the rain improved spring wheat prospects and other crops. In the European sector, it caused considerable lodging of grain, favored weed growth, stimulated potato diseases, stunted root crops and created numerous harvesting problems. Coupled with below normal temperatures, crops lagged in development and maturity.

More typical summer weather, warm and dry, in late August and September permitted more orderly harvesting, timely seeding of winter grains, plowing for spring planting and enhanced development and ripening of other crops. Because of the unusually good soil moisture conditions, officials have pushed farmers to seed more fall grains because of their yield advantage over spring grains.

The grain harvest was completed by the end of September. Harvesting of sunflowers, lifting of sugarbeets and potatoes, and picking of corn and cotton moved steadily.

### EUROPE

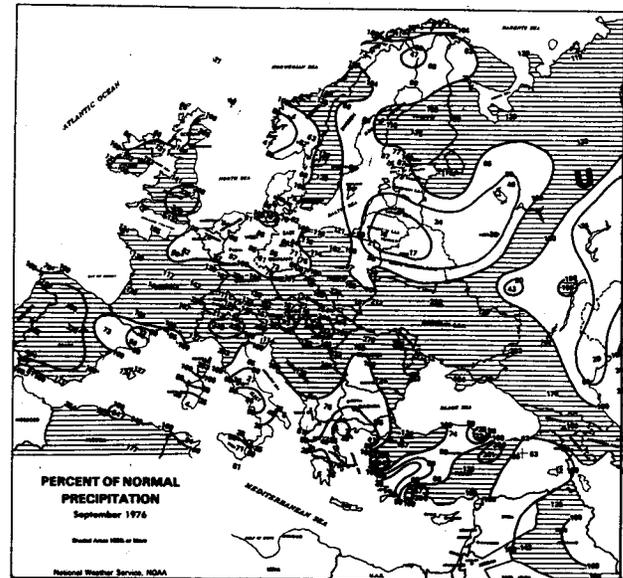
Western Europe experienced one of the driest summers in modern history. The hardest areas were southern England, Wales, Belgium, Luxembourg, the Netherlands and northern France. Some of these areas received no significant precipitation from March until late August or early September. Some moderate rains fell in late August, but good soaking rains did not begin until almost mid-September.

July rainfall was near normal in southern portions of the drought area. However, the drought intensified in August. In the worst areas live-

stock consumed feed earmarked for winter as the pastures dried up. There was little or no hay cut. September turned out to be one of the wettest record at many locations. As far as surface moisture was concerned the drought had generally broken by the end of September. However, overall moisture deficits will continue until moisture is sufficient to build up ground water levels and refill reservoirs to a safe level.

In general, the moisture was too late to benefit most grain, potatoes and winter vegetables. The major benefit has been to pastures, many of which were well on their way to recovery by the end of September. In many areas top soil moisture was actually a problem and farmers were looking for some drier weather to allow them to proceed with the fall fieldwork.

Other parts of Europe suffered from cool, moist weather. Rainy, cold weather in August and September in Yugoslavia, Austria and the Balkan region delayed the development and maturity of most crops. This caused a delay in harvesting and reduced the quality of many crops.



### CENTRAL ASIA

The so-called summer or southwest monsoon over India was generally satisfactory. All but three provinces, Arunachal Pradesh, the hills of West Uttar Pradesh and Kerala, received normal or above normal precipitation. This includes 97 percent of the Kharif (summer harvest) production. Rainfall amounts are comparable to 1975, but the timing and distribution was more favorable in 1975. In general, production will be about normal.

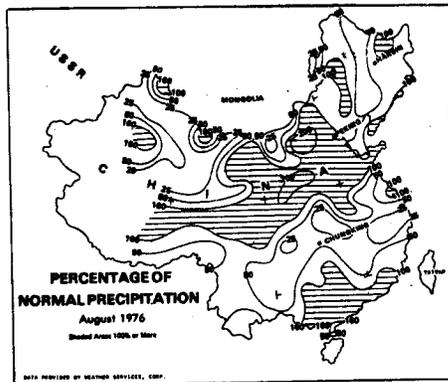
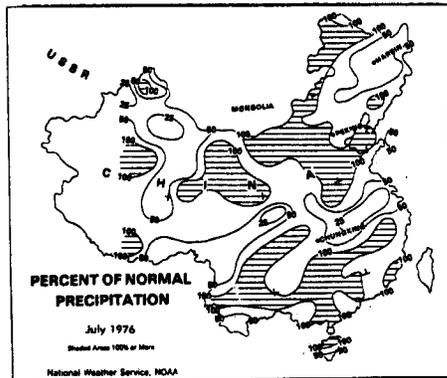
India's on again-off again monsoon all but disappeared on September 7. It did not pick up again. Poor rainfall early in the summer had made some crops, particularly rice, more dependent than usual on good September rainfall. Early end of the monsoon also causes concern for the winter wheat crop, which derives much of its moisture from that accumulated during the summer months.

Pakistan harvested a record wheat crop thanks to abundant moisture. However, other crops have suffered from too much moisture, increasing weed and pest problems and causing difficulty with storage.

Seasonal showers increased in Tamil Nadu and Sri Lanka in late September, bringing some relief to the serious drought there. Java also received some showers. Burma generally experienced good weather this summer and anticipates a good rice crop. Some drought problems were experienced in Thailand.

**CHINA - EASTERN ASIA**

In the Peoples Republic of China, official sources have indicated a record summer grain harvest, despite some soil moisture shortages during the growing season. Unseasonably dry weather in late summer favored the harvest of early crops. Barring bad weather during the fall, 1976 rice production was expected to be as good or better than last year's record crop. The important North China Plain received abundant rain in early September to enhance sowing and emergence of winter wheat.



**SOUTH AMERICA**

Drought has been a problem in many of Central and South America during the past three months. Good rains finally came to the grain belt of Argentina in July and continued through August. The timely and widespread rains encouraged the tillering of winter wheat. With the exception of the northern provinces of Chaco and Formosa, important cotton and sunflower areas, planting conditions were excellent in most of the country as of the end of September.

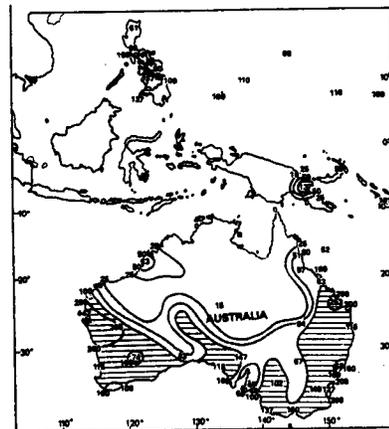
Brazil received adequate rains for grain and forage in the southern provinces, but the drought continued in portions of the northeast. Chile experienced a poor planting season because of dryness. The area from Santiago to Concepcion received less than half the normal rainfall. Good rains finally came the last few days of September, but seed supplies are poor for planting.

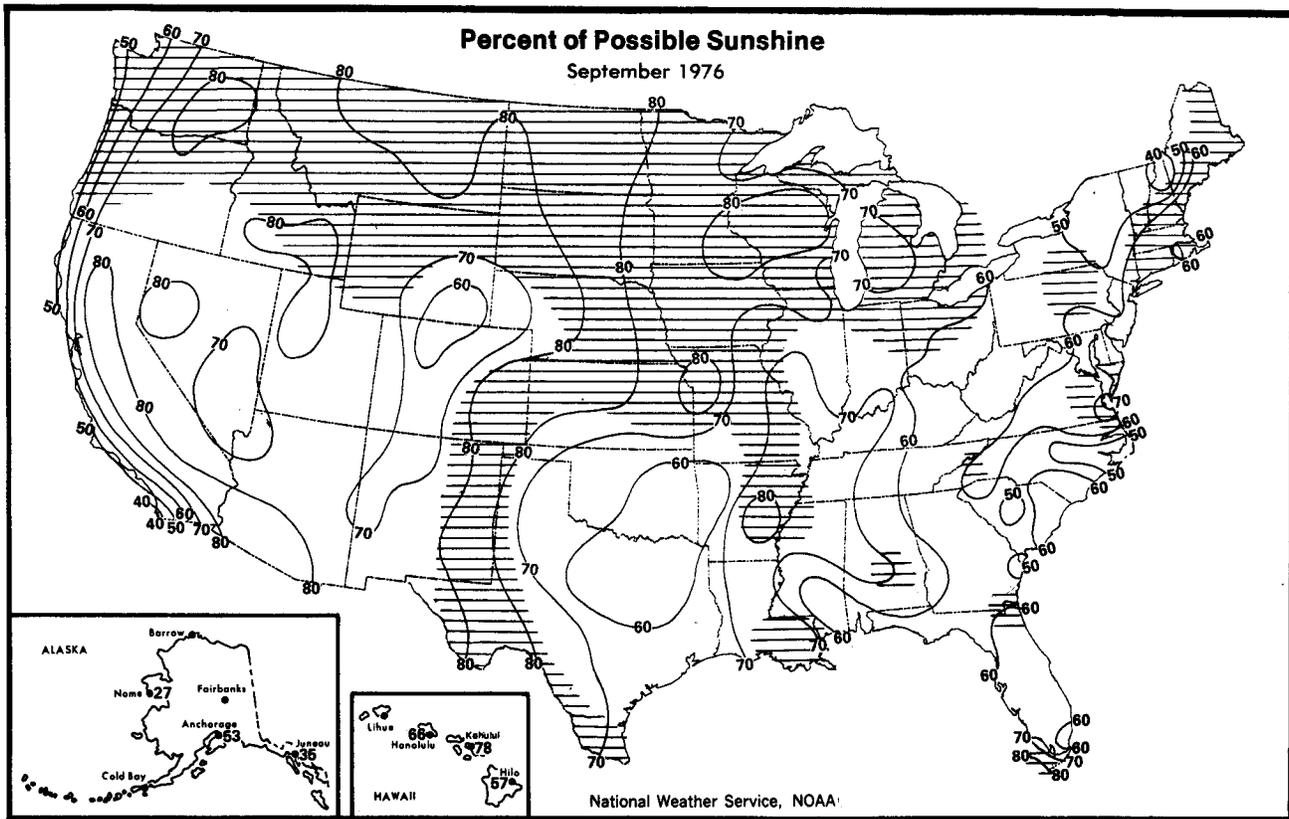
Tropical storm activity helped to relieve dryness across Central America. Hurricane Liza caused heavy loss of life and considerable property damage in northern Mexico, including the States of Baja, Sinaloa, Sonora and Chihuahua. Tropical storm Madeline contributed substantial moisture to drought stressed areas of Columbia.

**AUSTRALIA**

The winter wheat area of Australia received only token rainfall during July and August and early September. Good rains finally fell in the important areas of southern Australia on September 19-22. Amounts ranged from 0.50 to 2.50 in., and in many places, provided the best rainfall since January. The lateness of the rain limits the benefit of the moisture to winter grains, which were in the late tillering stage or early jointing. However, the moisture buoys hopes for spring-sown crops and forages.

**PERCENT OF NORMAL PRECIPITATION**  
September 1976  
Shaded Area 100% or More





### World Weather and Crop Update

**EUROPE.** Rain enhanced forage crops and emergence and development of winter grain in much of the Mediterranean region, including North Africa. Frequent and generous rain fell in Turkey where wet weather has plagued cotton and dry fruit. A predominance of rainless days over much of Europe favored harvesting and fall tillage.

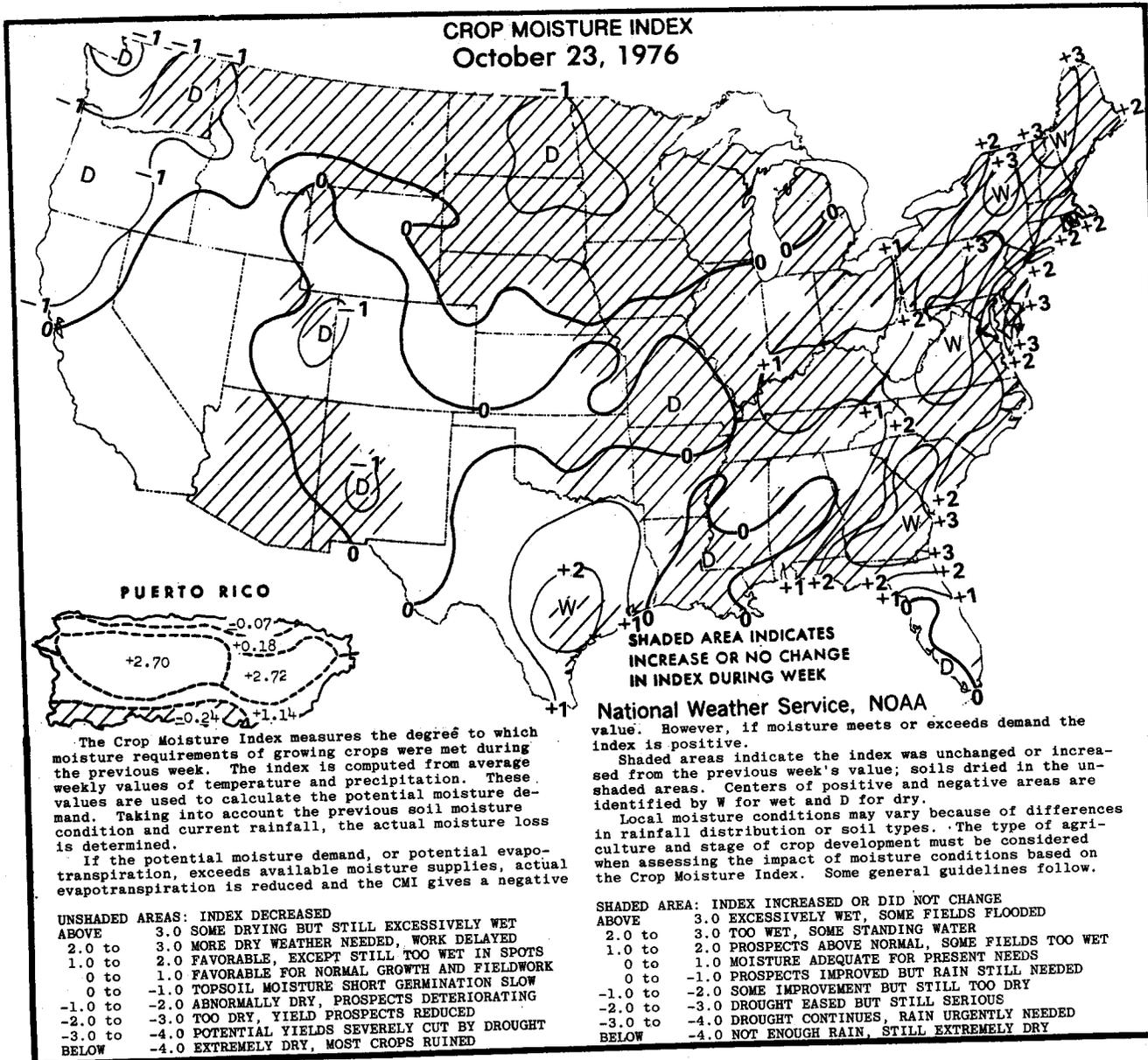
**USSR.** Party Leader Brezhnev indicated the incomplete grain harvest reached 216 million metric tons and, when complete, production will approach or exceed the record 1973 harvest of 222.5 million. Cold continued its grip on the USSR, and it slowed vegetative growth in the south and west and induced early dormancy elsewhere. The weather favored harvesting in most of the European territory although it could have damaged undug potatoes. Rain and snow, however, slowed activities in the vicinity of the Black Sea and

an unusually early snow cover prevailed over much of the country east of the Volga.

**AMERICAS.** The major wheat areas of Argentina and Brazil received little rain the past week. Some rain fell in Brazil's northeast sector. Rains fell in Colombia almost daily, continuing to relieve dry conditions.

**ASIA.** Rain spread over much of the Peoples Republic of China during the week including previously dry areas of the south. Some showers occurred along the Bay of Bengal coast of India but little or no rain fell in the interior.

**AUSTRALIA.** The country continued to emerge from drought but many months of rainfall deficits are not quickly corrected. Rain fell in coastal Queensland perhaps introducing the wet season typical of this time of year.





**FIRST CLASS MAIL**

**HARVESTING PROGRESS**

Percent of Acreage Harvested  
 (As of October 24)

SOYBEANS			
	1976	1975	Avg.
Ala.	28	23	30
Ark.	30	36	36
Ga.	10	15	16
Ill.	97	97	87
Ind.	85	80	60
Iowa	100	1/	1/
Kans.	60	50	50
Kv.	43	49	44
La.	70	52	44
Mich.	70	1/	1/
Minn.	100	1/	1/
Miss.	42	29	28
Mo.	73	73	52
Nebr.	90	95	75
N. C.	8	8	1/
Ohio	85	80	75
S. C.	5	1/	1/
Tenn.	30	30	25
U. S.	68	62	54

These 18 States produced 96% of the Nation's soybeans in 1975.

SORGHUM			
	1976	1975	Avg.
Kans.	65	60	35
Mo.	76	83	58
Nebr.	85	95	65
Okla.	55	1/	30
S. Dak.	97	94	72
Tex.	84	92	74
6-States	77	83	59

These 6 States produced 90% of the Nation's sorghum grain in 1975.

CORN			
	1976	1975	Avg.
Ga.	79	64	79
Ill.	49	67	45
Ind.	35	40	30
Iowa	80	69	38
Kans.	60	75	45
Ky.	52	57	53
Mich.	45	1/	1/
Minn.	89	72	53
Mo.	75	80	53
Nebr.	55	70	45
N. C.	82	78	73
Ohio	35	40	40
S. Dak.	90	75	65
Wis.	55	50	30
U. S.	63	65	47

These 14 States produced 89% of the Nation's corn in 1975.

COTTON			
	1976	1975	Avg.
Ala.	18	14	36
Ark.	41	47	39
Ga.	24	28	1/
La.	54	18	28
Miss.	47	14	37
Mo.	39	75	52
N. C.	33	26	36
Okla.	2/	2/	2/
S. C.	28	40	44
Tenn.	25	35	40
Tex.	16	26	23
11-States	27	26	29

These 11 States produced 68% of the Nation's cotton in 1975.

**PLANTING PROGRESS**

Percent of Acreage Planted  
 (As of October 24)

WINTER WHEAT			
	1976	1975	Avg.
Colo.	100	100	100
Ill.	90	91	87
Kans.	90	90	95
Mont.	100	100	100
Nebr.	100	100	100
Ohio	90	85	85
Okla.	93	65	90
S. Dak.	100	100	100
Tex.	80	85	91
U. S.	88	85	93

1/Data not available.  
 2/Less than 5%.