

# WEEKLY WEATHER AND CROP BULLETIN

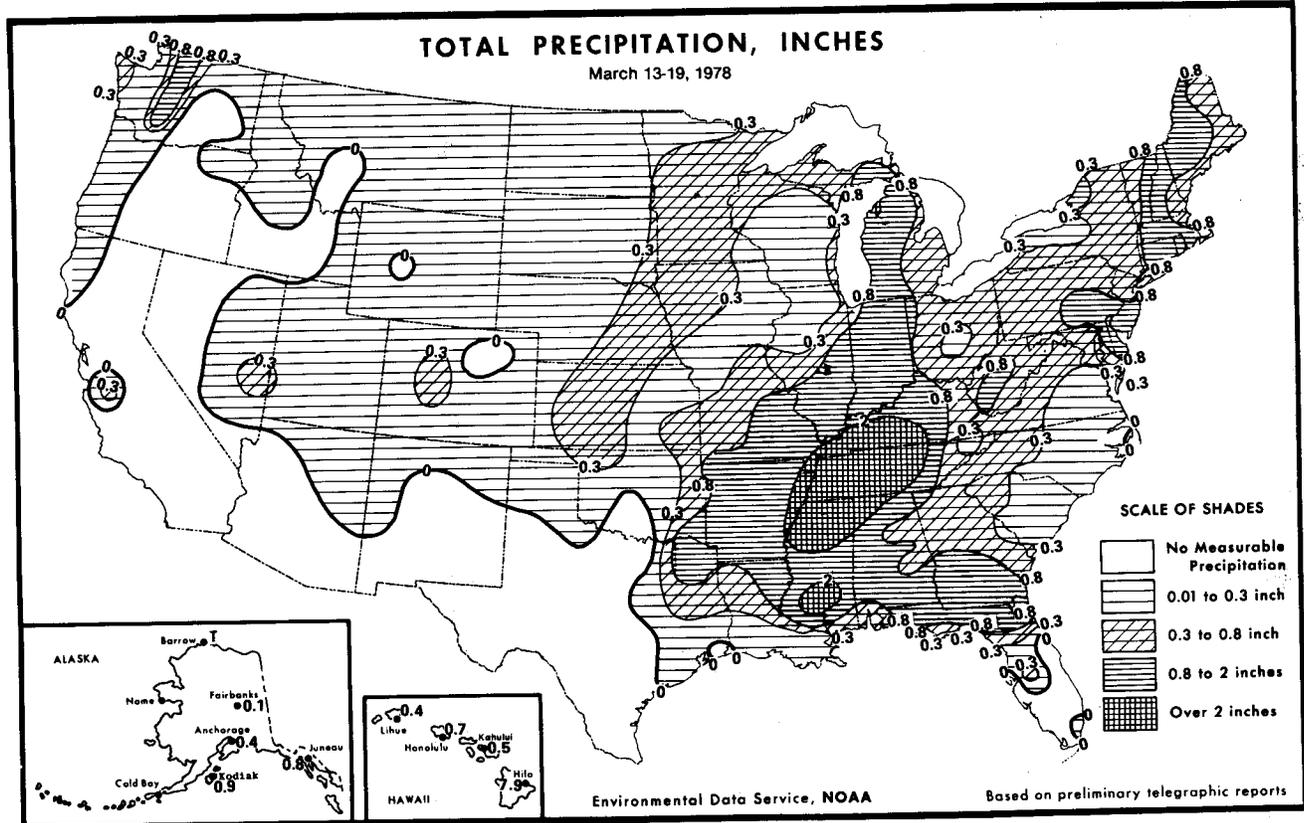
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## National Weather Summary

March 13 - 19

**HIGHLIGHTS:** No severe storms occurred. Most storm activity began in the Nation's midsection pulling warm, moist air from the Gulf and spreading light to moderate rain and snow as far north as western Michigan. Some rain and snow covered New England as well. Spring flooding hit part of the midlands.

Isolated pools of cold air chilled the Southeast, but most frigid temperatures stayed in the Midwest and New England. Readings continued generally above normal west of the Plains.

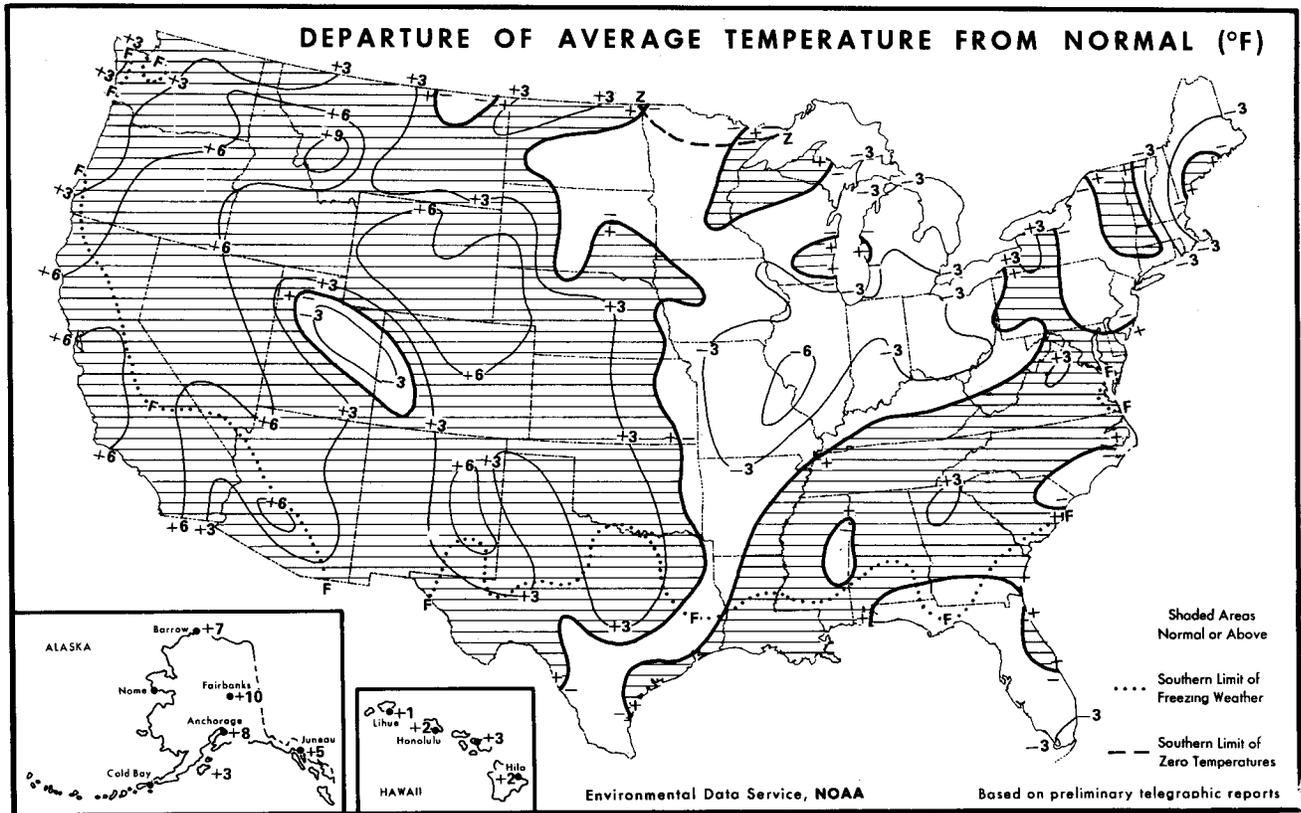
A storm brewed over Oklahoma on Monday, carrying rain and snow from the Plains across the Mississippi Valley to the Ohio Valley. Sections of Minnesota and Wisconsin got 2 to 6 inches of snow while more

than an inch of rain soaked Memphis, Indianapolis, and Jackson, Miss. Two tornadoes were spotted in Tennessee, and one whirled past Paducah, Ky. A Pacific frontal system entered the upper West Coast dumping a third-inch of rain on some Washington stations, and light snow in eastern Washington and Idaho.

Rain drenched the Ohio Valley and moved eastward on Tuesday; more than an inch covered Chattanooga, Huntsville, Ala., and Meridian, Miss. Midwest rivers topped their banks at several locations. Meantime snow fell in the upper Midwest, the Northeast, and parts of the Plains; 3 inches whitened Muskegon, Mich. By late afternoon, a half-inch of rain dampened many of the Atlantic Coast States. Mount Washington, N.H., picked up 5 inches of snow.

Mobile, Ala., at 83°, and Lake Charles, La., at 82°, tied warm temperature records set in 1967.

The biggest problem on Wednesday was overflowing waterways caused by snow melt or ice jams. Rivers in the Plains and Ohio Valley provided most of the trouble.



On the precipitation front, a low center moving out of Texas produced snow in northern Arkansas, rain mixed with snow in the Ohio and Tennessee Valleys, and hail near Corinth, Miss. Light snow dusted the northern sections of the Plains and Michigan.

Dressing for Arkansas weather posed quite a quandary---in the southern portion of the State, El Dorado reached 80°, while Harrison, to the north, shivered through 34° and 6 inches of snow.

Low pressure off the South Carolina coast moved northward carrying heavy snow to the Northeast on Thursday. Snow and rain fell from West Virginia northeastward with the heaviest amounts in New England. A half-inch of rain dampened Philadelphia before nearly 4 inches of snow whitened the city. Other snow depths included 9 inches at Providence, R.I., 7 inches at Hartford, Conn., and Boston's 4 inches. Light snow covered the northern half of the Plains and the upper Great Lakes.

Orlando, Fla., set a high temperature record of 89°, breaking the old mark by one. Readings hit the 90's in Los Angeles and San Diego.

The northeastern snowstorm trudged out to sea on Friday, but not before leaving additional snow in its wake. The total climbed to 10 inches at Chatham, Mass., and Providence; Boston counted 6 inches. Light snow continued in the Midwest. Flooding plagued large areas of bottomland in Nebraska and Iowa. Nebraska's Big Blue River was reported at its highest stage in 10 years. Overflow also created difficulties from Illinois to West Virginia.

Temperatures were unseasonably warm west of the Rockies---readings were the warmest ever for this time of year in San Diego, 93°, and Lewiston, Idaho, 74°. Meantime winter refused to let go east of the Mississippi River. A new low mark of 28° chilled Meridian, Miss.

While the middle of the country thawed under warm temperatures on Saturday, the eastern portion remained chilly. The 60's to 80's were common in the Plains, even as sections of northern Florida plummeted into the 30's. Record low readings froze Florence, S.C., 31°, and Meridian, Miss., 29°. Columbia, S.C., tied its record low of 26°.

Parts of the Midwest and upper Ohio Valley continued to suffer some flooding as did portions of the Plains. Ashland, Nebr., contended with its worst flooding since 1940.

Precipitation was light showing only a little snow in the Great Lakes Region and New York State, and some showers over California and southern Nevada.

Early Sunday morning temperatures again dipped to the 30's in northern Florida; Apalachicola registered a record 36°, 3 degrees under the 1923 mark. For the second day, warmth covered the Nation's midsection, but this time the spring-like weather spread to the East Coast where the mercury climbed to the 70's. Moisture was generally light throughout the country.

Record snow covers finally melted away. Des Moines spent 91 days with measurable snow while St. Louis ended its string at 66.

Overflow of waterways continued in the northern half of the Plains, and extended into northwestern Missouri.



## National Agricultural Summary

March 13 - 20

**HIGHLIGHTS:** Temperatures struggled above normal except in a narrow band from Texas widening out to encompass most of the north central States, most of New England, and Florida, where readings dipped only slightly below normal. The gradually moderating temperatures held snow melt in check over many areas, but some of the Great Plains States had flooding problems anyway. Saturated soils could not absorb the runoff as streams took the added burden. Precipitation poured into the heart of the south central States, and extended into parts of the Great Lakes States and New England. Wet fields and remaining snow cover delayed spring plowing and seedbed preparation. Plowing reached only half the 1977 pace in Mississippi and Tennessee. Winter wheat greening advanced northward; most major production areas rated the crop good. Planting activity increased across the South, particularly in Texas, but cold wet soils delayed germination and emergence. Pastures greened and provided some grazing for cattle.

**SMALL GRAINS:** Winter's snowy blanket rapidly receded exposing winter wheat to sunny weather and above normal temperatures in the central and southern Great Plains and near-normal readings in the northern Plains. Wheat greened as far north as Kansas and southern Ohio. Kansas fields showed improvement and rated good to excellent. Farmers applied nitrogen to a few fields. Topsoil moisture rated short to adequate to surplus moving from west to east across the State. Wet soils delayed spring barley and oats seeding. Last year oats was 65% seeded and normally 40%; barley planting stood at 65% in 1977 and normally 25%. Oklahoma's mild weather boosted small grains which scored fair to good; cattle started grazing some stands. Texas wheat also improved. Stands on the High and Low Plains began growing. Topsoil moisture was adequate, but subsoil moisture under dryland fields was short. Stands from the Blacklands southward grew rapidly. New Mexico winter wheat rated fair to good. Arizona's crop developed heads. Colorado wheat rated good with very little wind damage; 5% of the acreage was pastured, slightly ahead of recent years. Montana's snow cover receded rapidly exposing a crop in good condition. Wyoming's wheat rated good and Nevada's was greening.

Winter wheat condition rated poor to fair in the southern States; Louisiana and Alabama crops rated fair. Mississippi and Tennessee measured poor to fair. Arkansas farmers fertilized wheat. Mississippi wheat reached 14% jointed compared with 1977's 9%. In the Southeast, farmers fertilized a fair to good winter wheat crop. Washington's crop wintered well, and Oregon farmers spread fertilizer.

**OTHER CROPS:** Florida tobacco plants improved, but remained small-sized with none transplanted. Georgia transplanting was just barely underway using fair to mostly good plants. South Carolina plant beds rated good, but weekend low temperatures slowed growth. Virginia flue tobacco plant beds were mostly good; producers seeded some beds in south central and southeast. Tennessee tobacco plant beds were 8% seeded compared with 60% in 1977 and 65% average.

Farmers planted Irish potatoes from Virginia's Eastern Shore southward. North Carolina potato planting reached 10%, short of 1977's 35%. Mississippi seeding stood at 29%, also lagging last year's 45%.

Florida's sugarcane harvest was almost complete. Louisiana growers shaved cane stubble.

Corn planting gathered some momentum, but remained confined within the Deep South, as soils dried and the mercury climbed.

Florida's first planted fields emerged. A few South Carolina fields were planted. Mississippi corn planting reached 12%, ahead of 1977's 9% and the 10% average. Texas corn planting advanced in the southern Blacklands. Plants emerged in fields from south central Texas southward. Seeding reached 10% short of last year's 12% and the 23% average.

Texas cotton planting extended throughout the lower Rio Grande Valley and Coastal Bend, but cool nights slowed germination. Producers seeded 5% of the intended acreage, more than last year's 2% and the 4% average. Arizona and California growers planted cotton; some early-sown fields were up to stand.

Rice growers planted a few fields in Texas and Louisiana.

Texas sorghum growers planted from the Blacklands southward. Many early planted fields were up to good stands, however, cool, wet soils slowed emergence in some areas. The crop was 23% planted, the same as last year but short of the 28% average.

**FRUITS AND NUTS:** Deciduous orchard operators pruned trees in northern areas including New Jersey, Michigan, and the Pacific Northwest. Virginia peaches rated good; buds were tight. In Texas most pecan trees were dormant. Texas peach trees reached full bloom in the south and pink bud stage in central areas. California deciduous trees were in bloom; grapes leafed out and grew.

Florida citrus groves rated excellent; few bloom buds opened during the week. Early and midseason harvests were almost complete. Valencia harvest was slow. Texas citrus trees bloomed. Growers picked Valencias and grapefruit. California Navel quality declined.

**VEGETABLES:** Florida vegetables rated fair to mostly good and improving. Shipments increased 9% from the previous week; only cucumber, cabbage, eggplant, and tomato shipments declined. Higher temperatures improved the watermelon crop. Texas harvests of spinach, broccoli, cabbage, carrots, lettuce, and onions continued. Growers planted watermelons, bell peppers, tomatoes, beans, cucumbers, and cantaloups. California's mild weather increased planting and harvest activity. Broccoli supplies were heavy, cauliflower light. Asparagus and strawberry production was light but improving. Producers planted fresh market and processing tomatoes.

**PASTURES AND LIVESTOCK:** Southern pastures provided limited grazing; higher temperatures improved many grasslands but rated only poor to fair. Western ranges were the best in several years. Texas ranges greened but have only limited grazing. In California previous rains and now warm temperatures produced excellent growing conditions. The milder temperatures also created better calving and lambing conditions. Some young stock was lost to flooding. Livestock condition rated fair to good.

Temperature and Precipitation Data for the Week Ending Midnight, L.s.t., March 13-19, 1978

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	+ 1	.7	- .7	LA. Baton Rouge . . .	61	+ 2	.3	- .8	Youngstown . . .	34	- 1	.5	- .2
Mobile . . .	60	+ 1	.6	- 1.1	Lake Charles . . .	61	+ 1	.6	- .8	OKLA. Okla. City . . .	53	+ 5	T	- .5
Montgomery . . .	57	+ 1	.5	- .9	New Orleans . . .	63	+ 2	.1	- 1.2	Tulsa . . .	49	+ 1	.2	- .3
ALASKA. Anchorage . . .	31	+ 8	.4	+ .3	Shreveport . . .	57	0	.4	- .5	OREG. Astoria . . .	46	+ 2	2	- 1.3
Barrow . . .	- 9	+ 7	T	0	MAINE. Caribou . . .	20	- 4	.4	- .1	Burns . . .	43	+ 7	T	- .2
Fairbanks . . .	19	+10	.1	0	Portland . . .	33	+ 1	.8	0	Medford . . .	50	+ 5	.1	- .3
Juneau . . .	37	+ 5	.8	0	MD. Baltimore . . .	43	0	.7	- .1	Pendleton . . .	48	+ 4	T	- .2
Kodiak . . .	35	+ 3	.9	+ .1	MASS. Boston . . .	37	- 1	.6	- .3	Portland . . .	49	+ 3	.1	- .7
Nome . . .	- 1	- 1	-	-	Chatham . . .	36	- 1	1.2	-	Salem . . .	46	+ 1	.1	- .9
ARIZ. Flagstaff . . .	38	+ 4	T	- .4	MICH. Alpena . . .	25	- 1	.8	+ .4	PA. Allentown . . .	37	- 1	.8	0
Phoenix . . .	65	+ 6	T	- .2	Detroit . . .	32	- 3	.5	- .1	Erie . . .	32	- 1	.4	- .2
Tucson . . .	61	+ 4	T	- .1	Flint . . .	30	- 2	.4	- .1	Harrisburg . . .	40	- 1	1.1	+ .3
Winslow . . .	48	+ 3	T	- .1	Grand Rapids . . .	30	- 3	.9	+ .3	Philadelphia . . .	41	- 1	1.0	+ .2
Yuma . . .	66	+ 2	T	- .1	Houghton Lake . . .	25	- 1	1.1	+ .7	Pittsburgh . . .	39	+ 1	.4	+ .4
ARK. Fort Smith . . .	48	- 2	.7	- .1	Lansing . . .	29	- 4	.3	- .2	Scranton . . .	35	- 1	.7	+ .1
Little Rock . . .	50	0	1.0	- .1	Marquette . . .	27	0	.4	0	R.I. Providence . . .	34	- 3	1.2	+ .3
CALIF. Bakersfield . . .	52	+ 6	0	- .2	Muskegon . . .	32	0	.8	+ .3	S.C. Charleston . . .	58	+ 2	2	- .9
Eureka . . .	63	+ 5	.1	- 1.0	S. Ste. Marie . . .	20	- 4	.6	+ .2	Columbia . . .	54	0	.2	- .9
Fresno . . .	60	+ 6	0	- .4	MINN. Duluth . . .	25	+ 2	.4	0	Greenville . . .	52	+ 1	.4	- .8
Los Angeles . . .	67	+ 8	0	- .5	Internatl Falls . . .	18	- 2	.1	- .2	S.D. Aberdeen . . .	25	- 2	.2	0
Red Bluff . . .	59	+ 6	T	- .6	Minneapolis . . .	29	+ 1	.5	+ .1	Huron . . .	30	+ 1	.1	- .2
San Diego . . .	67	+ 9	0	- .4	Rochester . . .	26	- 1	2	- .2	Rapid City . . .	37	+ 6	T	- .2
San Francisco . . .	59	+ 6	T	- .6	St. Cloud . . .	25	- 1	.7	+ .4	Sioux Falls . . .	31	+ 1	.4	+ .1
Stockton . . .	58	+ 5	0	- .4	MISS. Jackson . . .	57	+ 1	1.6	+ .3	TENN. Chattanooga . . .	50	0	1.1	- .2
COLO. Denver . . .	44	+ 7	T	- .3	Meridian . . .	54	- 2	1.2	- .2	Knoxville . . .	50	0	.6	- .5
Grand Junction . . .	37	- 4	.1	- .1	MO. Columbia . . .	38	- 3	.5	- .1	Memphis . . .	52	+ 1	2.1	+ 1.0
Pueblo . . .	44	+ 4	T	- .1	Kansas City . . .	37	- 4	.8	+ .1	Nashville . . .	48	0	2.6	+ 1.5
CONN. Bridgeport . . .	37	- 1	.8	0	St. Louis . . .	40	- 4	.4	- .2	TEX. Abilene . . .	47	+ 2	.1	- .1
Hartford . . .	37	+ 2	1.0	+ .2	Springfield . . .	34	+ 2	T	- .2	Amarillo . . .	62	+ 3	T	- .4
D.C. Washington . . .	47	+ 2	.3	- .5	MONT. Billings . . .	23	- 2	T	- .1	Austin . . .	62	+ 2	0	- .6
FLA. Apalachicola . . .	57	- 4	.1	- 1.0	Glasgow . . .	35	+ 5	T	- .2	Beaumont . . .	67	0	0	- .1
Daytona Beach . . .	64	0	T	- .8	Great Falls . . .	30	+ 4	.1	0	Brownsville . . .	65	0	0	- .2
Ft. Myers . . .	67	- 1	T	- .7	Havre . . .	39	+ 9	0	- .1	Corpus Christi . . .	-	-	-	-
Jacksonville . . .	61	0	1.0	+ .2	Helena . . .	33	+ 3	.1	- .1	Dallas . . .	63	+ 1	0	- .1
Key West . . .	72	- 3	0	- .3	KallsPELL . . .	31	+ 1	T	- .1	Del Rio . . .	55	+ 1	0	- .1
Lakeland . . .	65	- 1	.4	- .6	Miles City . . .	40	+ 7	.1	0	El Paso . . .	59	+ 4	0	- .5
Miami . . .	68	- 3	T	- .4	Missoula . . .	38	+ 3	.3	0	Fort Worth . . .	62	+ 1	T	- .6
Orlando . . .	68	+ 2	T	- .8	NEBR. Grand Island . . .	36	0	.7	+ .4	Galveston . . .	59	- 2	T	- .6
Tallahassee . . .	58	- 2	1.0	- .4	Lincoln . . .	34	+ 2	.4	+ .1	Houston . . .	52	+ 3	0	- .2
Tampa . . .	65	- 1	T	- .8	Norfolk . . .	38	+ 4	.1	- .1	Lubbock . . .	58	+ 4	0	- .1
W. Palm Beach . . .	69	+ 3	.4	- .9	N. Platte . . .	33	- 1	.6	+ .2	Midland . . .	57	0	T	- .2
GA. Atlanta . . .	55	+ 1	.1	- 1.0	Omaha . . .	30	- 1	.1	0	San Angelo . . .	60	- 1	T	- .3
Augusta . . .	57	+ 1	.7	- .5	Valentine . . .	39	+ 6	T	- .2	San Antonio . . .	63	+ 1	T	- .4
Macon . . .	58	0	.4	- .7	NEV. Ely . . .	59	+ 4	T	- .1	Victoria . . .	61	+ 4	.1	- .4
Savannah . . .	73	+ 2	7.9	+ 4.9	Las Vegas . . .	47	+ 7	T	- .1	Wichita Falls . . .	57	+ 5	0	- .4
HAWAII. Hilo . . .	75	+ 2	.7	- .1	Reno . . .	44	+ 7	T	- .1	UTAH. Blanding . . .	41	+ 3	.1	- .1
Honolulu . . .	75	+ 3	.5	- .2	Winnemucca . . .	29	- 3	.6	0	Salt Lake City . . .	36	- 3	.2	- .2
Kahului . . .	73	+ 1	.4	- .7	N.H. Concord . . .	41	0	1.6	+ .6	VT. Burlington . . .	30	+ 1	.6	+ .2
Lihue . . .	46	+ 5	T	- .2	N.J. Atlantic City . . .	40	- 1	.8	- .1	VA. Lynchburg . . .	47	+ 2	.3	- .5
IDAHO. Boise . . .	49	+ 6	T	- .2	Trenton . . .	47	+ 2	0	- .1	Norfolk . . .	48	+ 1	.2	- .6
Lewiston . . .	40	+ 5	T	- .2	N.MEX. Albuquerque . . .	55	+ 6	0	- .1	Richmond . . .	47	+ 2	.4	- .4
Pocatello . . .	47	- 1	1.5	+ .4	Roswell . . .	34	+ 1	.3	- .3	Roanoke . . .	38	+ 1	T	- .3
ILL. Cairo . . .	32	- 5	.3	- .3	N.Y. Albany . . .	31	0	.4	- .2	WASH. Colville . . .	42	+ 3	.1	- .1
Chicago . . .	34	- 1	.1	- .5	Binghamton . . .	36	+ 4	.3	- .3	Omak . . .	46	+ 4	.5	- 1.9
Moline . . .	33	- 4	T	- .6	Buffalo . . .	40	0	.5	- .4	Quillayute . . .	46	+ 2	.1	- .7
Peoria . . .	30	- 4	.2	- .4	New York . . .	33	0	.2	- .4	Seattle-Tacoma . . .	43	+ 6	.1	- .2
Rockford . . .	33	- 6	.5	- .1	Rochester . . .	32	- 1	.1	- .5	Spokane . . .	51	+ 6	T	- .2
Springfield . . .	42	- 2	1.3	+ .2	Syracuse . . .	48	+ 2	.3	- .8	Walla Walla . . .	46	+ 4	0	- .1
IND. Evansville . . .	38	- 4	1.0	+ .3	N.C. Asheville . . .	52	+ 2	.2	- .9	Yakima . . .	40	0	.7	- .3
Ft. Wayne . . .	32	- 1	1.7	+ .8	Charlotte . . .	49	+ 1	.3	- .5	W.Va. Beckley . . .	44	0	.8	- .1
Indianapolis . . .	32	- 3	.8	+ .2	Greensboro . . .	51	+ 1	T	- .9	Charleston . . .	43	- 1	.5	- .5
South Bend . . .	33	- 4	.1	- .5	Hatteras . . .	51	+ 2	.1	- .7	Huntington . . .	40	- 3	.4	- .5
IOWA. Burlington . . .	33	- 0	.1	- .4	Raleigh . . .	52	- 2	.1	- .8	Parkersburg . . .	27	- 1	T	- .4
Des Moines . . .	28	- 4	.2	- .5	Wilmington . . .	24	- 1	.1	0	WIS. Green Bay . . .	29	- 2	.1	- .4
Dubuque . . .	34	+ 1	.4	+ .1	N.DAK. Bismarck . . .	23	- 1	.3	+ .1	La Crosse . . .	31	+ 1	.1	- .3
Sioux City . . .	40	+ 1	.4	0	Fargo . . .	27	+ 3	.1	0	Madison . . .	31	0	.3	- .2
KANS. Concordia . . .	46	+ 5	.4	+ .1	Williston . . .	34	- 2	.6	- .1	Milwaukee . . .	36	+ 6	.1	- .1
Dodge City . . .	40	+ 4	.2	0	OHIO. Akron-Canton . . .	37	- 5	.7	- .3	WYO. Casper . . .	38	+ 7	T	- .2
Goodland . . .	39	- 2	T	- .5	Cincinnati . . .	35	- 1	.6	- .1	Cheyenne . . .	39	+ 8	T	- .2
Topeka . . .	45	+ 2	.2	- .2	Cleveland . . .	36	- 3	.3	- .5	Lander . . .	36	+ 6	.1	- .2
Wichita . . .	42	- 1	1.1	- .1	Columbus . . .	35	- 4	.7	0	Sheridan . . .	80	+ 4	.2	- .3
KY. Lexington . . .	44	0	1.1	- .1	Dayton . . .	32	- 4	.7	+ .1	P.R. San Juan . . .				
Louisville . . .					Toledo . . .									

Based on 1941-70 normals

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## State Summaries of Weather and Agriculture

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

**ALABAMA:** Temperatures normal. Rainfall near or below average.

Fieldwork limited. Small grains fair condition. Supplemental feeding of livestock still necessary, hay supplies becoming short. Pastures provided limited grazing. Some summer potatoes planted.

**ARIZONA:** Dry except widely scattered light showers 13th, 18th and 19th. Cool first half, warm last half with temperatures reaching upper 80's in lower deserts and upper 60's at 7,000 ft. level. Temperatures 1 to 5° above normal.

Cotton planting increasing, earlier planting up to stand, field preparation later plantings well advanced. Seedbed preparations underway grain sorghum, corn. Small grains excellent progress, head development increasing. Sugarbeets growing well. Second cutting alfalfa hay underway warmer areas. Above normal water supplies statewide. Harvest lettuce, cauliflower, cabbage, broccoli, mixed vegetables continued. Planting cantaloup underway. Lettuce harvest continues. Hand weeding, thinning some fields. Harvest lemons, grapefruit, Valencias, tangerines continued. Groves good condition. Spring bloom developing. Ranges improving. Soil moisture conditions best several years for spring. Livestock good to excellent condition.

**ARKANSAS:** Cool and wet turning warm and dry. Rainfall general; amounts ranged 0.24 to 1.83 in. Snow early week north. South temperatures near or just above normal; elsewhere below normal. Extremes: 80 and 22°.

Pastures greening up, limited grazing south on small grains. Little to no grazing elsewhere. Hay supplies short central and north; hay feeding slowing in south. Fieldwork active, nitrogen top-dressed on large acreage, some small grains still to receive nitrogen application. Stalk cutting and disking in delta.

**CALIFORNIA:** Light precipitation; only south coast and San Joaquin Valley precipitation exceeded 0.50 in. Temperatures near or above normal with departures of 6° or more above normal along central and south coast.

Warm, sunny weather benefited crops, helped dry fields. Many fields too wet to work. Alfalfa sprayed weevils, aphids central valley. Soil pre-planting work continued cotton. Cotton planted Coachella Valley; emerged in Aplo Verde. Oats green chopped. Sugarbeet planting continued. Deciduous spring bloom progressing. Grapes leafing out with increased growth. Navel orange quality declining. Almonds past bloom. Mild weather increased vegetable planting, harvest activity. Broccoli supplies heavy, cauliflower light. Production asparagus, strawberries light but improving. Lettuce harvest past peak desert. Spring potato, fresh market and processing tomato planting continues. Range conditions most favorable in years. Rainfall, warm temperatures, excellent growing conditions.

**COLORADO:** Scattered rains diminished over lower elevations west and north. Snow and blowing snow over mountains thru 16th. Cloudiness decreased 17th as weather turned warmer over eastern plains. Temperatures near normal.

Winter wheat good condition 5% pastured, 4% 1977, 3% average. Very little wind damage. Winter

barley very good condition. Intended spring crop acreage 34% plowed. Range and pasture mostly fair. Livestock good condition. Cows calved 41% 1978, 56% 1977, 50% average. Ewes lambled 34% 1978, 51% 1977, 43% average. Death losses slightly below average. Scabies infestation widespread in east requiring additional handling of livestock for eradication.

**FLORIDA:** Scattered showers Panhandle, north through midweek, with only light amounts central, south. Weekend temperatures returned below normal but skies became generally fair. Rainfall ranged from near 1.00 in. north to little or none southern half.

Soil moisture adequate south, central and most of Panhandle; surplus over most of north. Corn planting increasing, early planted corn coming up. Tobacco plants improving but small, no transplanting to date. Wheat, oats good growth; high humidity creating disease problems in wheat. Sugarcane harvest about complete. Moderating temperatures beneficial to pasture recovery. Central, southern pastures turning green. Northern pastures responding more slowly. Soil moisture adequate to excessive. Fertilizer applied where fields not too wet. Cattle condition poor to good. Some stress from severe winter evident. Citrus tree condition excellent; bloom buds progressing, very little open bloom last week. Moisture adequate all areas. Early-mid orange harvest all but over. Valencia movement very slow. Weather warm, sunny in vegetable growing areas, however, cold front moved through areas last of week dropping temperatures into 40's 18th. Highs in 80's. Winds light to moderate, rainfall limited to few light, scattered showers. Vegetables fair to mostly good condition, improving. Growth, quality, fruit set, size generally good. Overall shipments increased 9% from previous week. Volume steady to increased including snap beans, chinese cabbage, sweet corn, escarole, strawberries, lettuce, okra, peppers, potatoes, radishes. Celery, carrots, squash held steady. Shipments cucumbers, cabbage, eggplant, tomatoes decreased. Watermelon crop improving with warmer weather. Growth, progress good. Planting continues active central, north areas.

**GEORGIA:** Temperatures 4 to 7° above normal north and 2 to 4° above normal south; averages 48° extreme northeast to 61° extreme south. Rain mainly first and middle of week with most amounts around 0.50 in. Some light snow extreme northeast on 17th. Dry over weekend.

Soil moisture excessive. Fieldwork limited by wet soils until near end of period. Land preparation unchanged at about 25% complete. Very limited planting continued in southern areas; mostly corn. Small grains fair to mostly good, fertilizing well advanced. Pastures fair northern half, good south. Tobacco transplanting barely underway; plant quality fair to mostly good. Cattle mostly fair to good.

**HAWAII:** Weather wet, cool. Beneficial showers continue all islands.

Winds gusty, banana orchards slightly damaged Oahu, bruising crops exposed areas. Vegetable supplies: Cucumbers, green peppers continue to be light, others adequate. Bananas light. Papayas moderate. Pineapple harvesting light. Sugar production increasing. Pastures improving.

**IDAHO:** Temperatures near or slightly below normal. Cool temperatures early week, low 70's by weekend in southwest. Precipitation below normal except Magic Valley.

Seedbed preparation slow, limited seeding in southwest. Most farm activity centered on getting ready for spring work and tending livestock. Livestock good condition. Feed supplies adequate.

**ILLINOIS:** Temperatures below normal. Warming trend reduced snow cover. Precipitation less than 0.50 in. north and central, heavier south, 2.00 in. extreme southeast.

Winter wheat good. Livestock good condition. Marketing hindered by poor road conditions. Soil moisture adequate to surplus.

**INDIANA:** Cool and wet. Temperatures 2° below normal and ranged from 16 to 65°. Rainfall 0.50 in. north to 1.10 south plus melting snow, and frozen soils resulting in wet fields and high streams. Snow cover of 2 in. near Lake Michigan. Sunshine 55% of possible.

Virtually no field activity undertaken due to snow cover, standing water and saturated soils. Farm activities limited to care for livestock and general maintenance work.

**IOWA:** Temperatures 2 to 4° subnormal south and east to near normal central and northwest. Precipitation varied from near 0.50 to less than 0.10 in. Snow cover diminished rapidly late week. Snow cover confined to northeast and westward to Hampton-Mason City area.

**KANSAS:** Temperatures averaged 40 to 42° north and east central, 43 to 46° elsewhere, 1° below normal northeast, 5° above normal west. Moisture fell most areas first half with 0.25 to 0.75 in. southwest through north central and generally 0.10 in. or less elsewhere.

Wheat out of dormancy, greening up. Condition of wheat shows improvement; rated good to excellent, nitrogen applied few fields. Topsoil moisture short to adequate west, adequate central, adequate to surplus east. Subsoil moisture mostly short western third, adequate elsewhere. Barley and oats seeding delayed. Oats normally 40% seeded, 65% last year. Barley normal 25%, 65% last year. Feedlots muddy.

**KENTUCKY:** Temperatures near or slightly below normal with average readings in low to mid-40's. Precipitation 1.00 to 1.50 in. Some snow of up to 1 to 2 in. 16th.

Heavy rain melted snow and flooded low lying areas. Soil condition mostly too wet for spring fertilizing, plowing, and seedbed preparation.

**LOUISIANA:** Temperatures normal north, 1 to 2° above central, south. Extremes: 27 and 84°. Light showers.

Activities: Equipment preparation, fertilizing pasture, caring for livestock. Fieldwork: 3.9 days suitable. Soil moisture adequate to surplus. Rice, corn planting begun; Irish potato planting active. Shaving sugarcane stubble. Strawberries blooming, good condition. Small grains fair condition. Pastures poor to fair. Cattle fair.

**MARYLAND & DELAWARE:** Temperatures about normal; highs in upper 40's, lows in 30's. Precipitation 0.50 to 1.50 in. Weekend mild with sunny skies.

Fieldwork at standstill due to extremely wet conditions. Small grains in good condition. Not much winterkill; protective snow cover most of winter. Very few tobacco beds seeded, progress behind normal. Feed supplies running short in some areas.

**MICHIGAN:** Temperatures 2 to 4° below normal. Higher temperatures beginning and end of week ranged from mid 30's to near 40° with a maximum of 45°. Lower temperatures ranged from teens to subzero. Precipitation varied from 0.10 in. southwestern Upper to near 1.00 in. at Houghton Lake. Most of precipitation occurred midweek. Snow depth ranged from 24 in. eastern Upper to 4 in. southern Lower. Most snow melted in southeastern Lower.

Farm activities: Making maple sirup, fruit tree pruning, farm chores and feeding livestock.

**MINNESOTA:** Temperatures near normal. Extremes: 45 and -9°. Precipitation near normal; 0.20 in. above normal central to 0.20 in. below normal southeast. Totals ranged from less than 0.10 in. part of northwest to 0.65 in. central. Snowfall ranged from 1 in. part of north and southwest to 6 in. central. Snow depth ranged from none extreme to 19 in. north central.

**MISSISSIPPI:** Temperatures 5° subnormal. Extremes: 26 and 85°.

Soil moisture surplus to adequate. Fieldwork: 2.0 days suitable. Acreage plowed 24%, 45% 1977, 31% average. Irish potatoes 29% planted, 45% 1977. Corn 12% planted, 9% 1977, 10% average. Winter wheat 14% jointing, 9% 1977. Oats 10% jointing, 7% 1977. Winter wheat and oats in fair to poor condition.

**MISSOURI:** Temperatures 4 to 7° below normal, ranging from highs of 40's and 50's early week, 30's and low 40's midweek, and 60's and 70's later. Precipitation light in north and southwest with 0.20 to 0.40 in.; heavy in east Ozarks and Bootheel, averaging about 1.50 in.

**MONTANA:** Cool with scattered rain or snow first part of week. Moderating temperatures and turning dry by week's end. Gusty winds along east slopes Rockies. Temperatures averaged near normal north-east to 10° above normal southwest. Precipitation below normal.

Winter wheat condition good with snow cover receding rapidly. Livestock generally fair condition with lambing and calving active statewide.

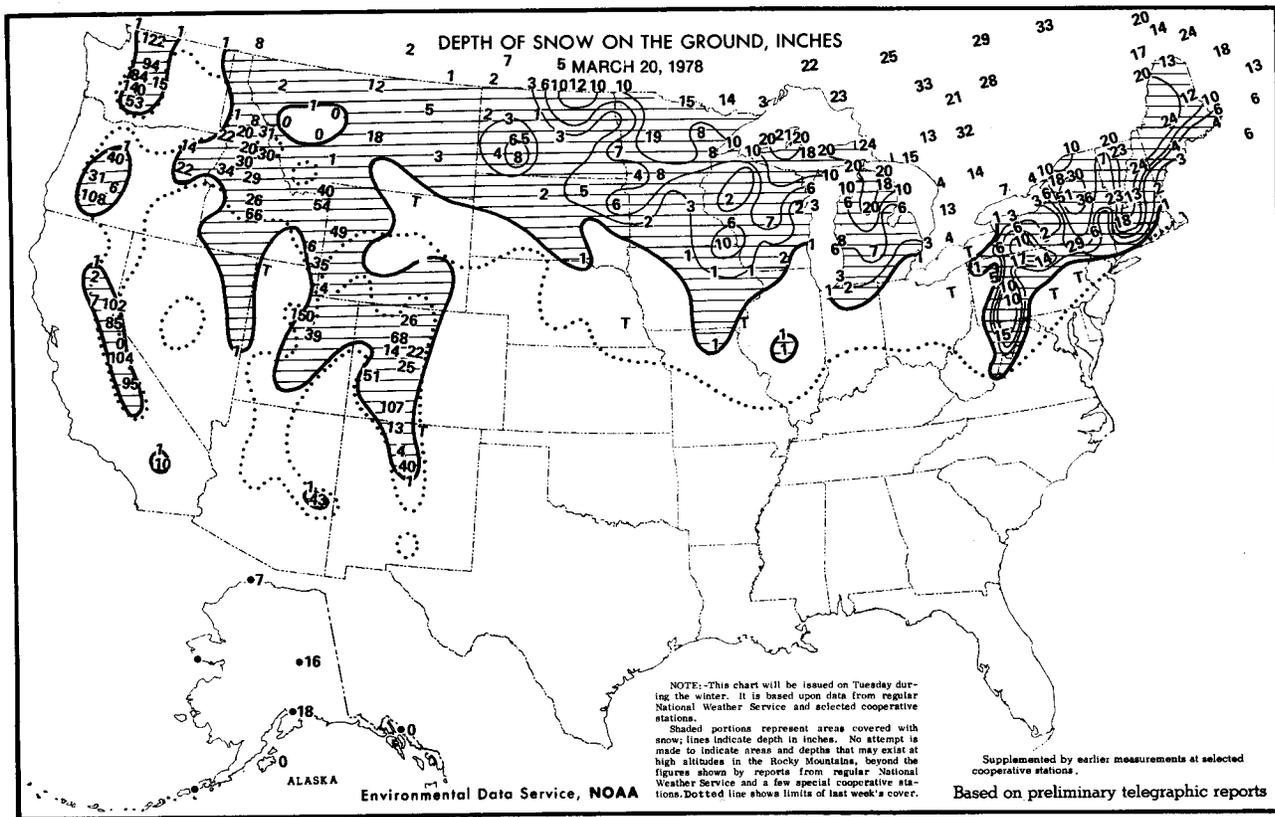
**NEBRASKA:** Above normal temperatures except north-east and east central. Precipitation as snow early week. Amounts up to 4 in. central areas. Warm weekend temperatures caused flooding along many east central streams. Extensive flooding Platte River from Columbus downstream to Missouri River confluence. Elkhorn River flooding lowlying areas Dodge County. Missouri River threatening lowlands metropolitan Omaha southward to border.

**NEVADA:** Rain early, sunny and dry remainder. Temperatures near normal to 5° above. Extremes: 12 and 80°. Precipitation varied considerably.

Fall seeded grains greening. Mild weather favorable to calving and lambing.

**NEW ENGLAND:** Precipitation mainly confined to 14th and 16th. On 14th warm rain amounting to near 1.00 in. fell briefly threatening heavy snow melt. On 16th late winter snowstorm produced up to 18 in. snow. Unseasonably mild temperatures 14th and 15th followed by colder than normal temperatures 16th to 18th. Bright sun, gusty winds and temperatures in 40's to near 50° considerably reduced snow cover over south and central.

**NEW JERSEY:** Temperatures 2° below normal. Extremes: 10 and 64°. Rainfall 1.04 in. north, 1.17 in. central and 1.36 in. south. Soil moisture in per-



cent of field capacity 100% north, 99% central and 99% south. Soil temperature averaged 30° north, 35° central and south. Thunderstorms 14th and 16th; 4 to 6 in. snow 16th.

Fieldwork extremely limited as fields are very wet with water standing in low areas. Early field vegetable planting at least two weeks behind schedule. Warm drying winds badly needed. Fruit tree pruning resumed. Routine chores on livestock farms continue.

**NEW MEXICO:** Some light precipitation mountains and extreme northeast early week but otherwise dry. Very warm temperatures last of week but still freezing or below at night. Temperatures averaged near normal generally to about 5° above normal southeast.

Mild open weather conducive to preplant operations. Soil moisture generally short to adequate. Winter wheat and barley generally fair to good condition. Alfalfa breaking dormancy south. Calving, lambing in full swing.

**NEW YORK:** Temperatures and precipitation near normal.

**NORTH CAROLINA:** Temperatures 3° above normal western half; normal on coast. Precipitation light.

Fieldwork: 3.8 days suitable. Soil moisture adequate to surplus. Condition small grains mostly fair to good; pastures poor to mostly fair. Supplies hay, roughage and feed grains short to adequate. Planted: Irish potatoes 10%, 1977 35%.

**NORTH DAKOTA:** Thawing temperatures west and spread to east by weekend. Snowbanks settled but little runoff. Temperatures near normal and extremes ranged from -7° north central to 43° southwest and

northwest. Precipitation ranged from trace north central to 0.25 in. northeast. Thawing temperatures caused muddy conditions most areas. Fields beginning to clear. Snow melting slowly which will relieve some flood potential. Feed supplies mostly short. Mild temperatures also allowing good conditions for calving and lambing.

**OHIO:** Slowly moderating temperatures. Late winter storm 14th along with snow melt caused flooding along rivers and streams 14th, 15th, and 16th. Precipitation ranged from 0.32 to 0.73 in.

Field conditions improved and by 20th most fields free from standing water and snow. Slow thaw iced some northern fields overnight and up to several days. Damage to wheat not yet determined, but slow runoff is more than offsetting. Winter grains and grasses just beginning to green in south. Most maple trees tapped and sap running in northeast and central.

**OKLAHOMA:** Temperatures near normal north, southwest 7° below normal while southeast and east central 2 to 3° above normal. Precipitation ranging from less than 0.05 in. south central and central to 0.39 in. north central.

Topsoil and subsoil moisture adequate. Mild weather boosted small grains. Wheat rated good to fair, beginning to provide adequate forage for livestock. Planting spring seeded oats and barley 20% complete. Cattle fair to good condition, many being removed from wheat pasture. Spring cultivation proceeding slowly due to wet fields.

**OREGON:** Rainfall less than normal; along coast received up to 0.75 in., from 0.25 to 0.50 in. interior western valleys. Northeast mountain areas received 0.20 to 0.30 in. Temperatures near normal. Warming trend at end of week and tempera-

tures rose into 60's and 70's. Extremes: high 60's, mid-20's west; low 70's, high teens east.

Soil moisture supply adequate. Spring plowing underway. Grass and grain fields fertilized. Pruning and spraying continue in fruit orchards and berry fields. Onions being planted. Pastures growing nicely. Feed supplies adequate. Livestock good condition.

**PENNSYLVANIA:** Mild but cloudy with rain showers first half, clearing and colder with scattered snow flurries weekend. Mildest week since mid-December but still 1 to 3° below normal. Extremes: 4 and 61°. Precipitation 0.50 to 1.00 in. with snowfall from traces to 4 in. Considerable snow melt. Usual winter chores. Break in harsh weather permitted fence repair, manure hauling, and preparation for spring fieldwork.

**PUERTO RICO:** Island rainfall 0.20 in. or 0.31 in. below normal. Temperatures about 78° on coasts and 71° interior. Extremes: 92 and 51°.

**SOUTH CAROLINA:** Temperatures above normal with 70's prevailing except weekend temperatures returned to below normal. Rainfall below normal, as scattered showers 14th and 17th.

Tobacco plant beds in good condition; colder temperatures near weekend slowed growth. Activities included corn planting; pre-plant soil pesticide and herbicide application, disking.

**SOUTH DAKOTA:** Temperatures normal to 7° above normal south and west; normal to 6° below normal northeast. Extremes: -2 and 67°. Precipitation generally 0.10 in. or less. East central had greatest amounts of about 0.50 in. Much snow melting.

**TENNESSEE:** Early and midweek rains 1.00 to 2.00 in. Temperatures near normal; highs upper 50's to low 60's, lows mid-30's to near 40.

Soil moisture surplus. Fieldwork less than one day suitable. Pasture condition poor. Wheat and oats mostly poor to fair. Spring plowing completed 20%, 1977 40%, normal 45%. Tobacco beds planted 8%, 1977 60%, average 65%. Cattle still on supplemental feeds; supplies low.

**TEXAS:** Temperatures ranged from low 50's over Panhandle to mid-60's along coastal plains. Rainfall sparse. Soil temperatures southern third ranged from upper 60's to lower 70's; central third near 60; northern third ranged from upper 40's to near 60°.

Good weather for planting, fieldwork. Planting very active south while growers to north busy fertilizing and applying herbicides. Cotton planting full swing lower Valley, Coastal Bend. Cool nights slowing germination. Sorghum planting very active from southern Blacklands southward. Many early planted fields up to good stands but cool, wet soils slowing emergence some areas. Corn planting active as far north as southern Blacklands. Plants emerging in early-planted fields from south central southward. Wheat fields improving; stands High, Low Plains beginning to grow in response to warmer temperatures, recent moisture; subsoil moisture dryland fields remains short. Stands from Blacklands southward making good growth. Oat fields responding to warmer temperatures with good growth, but stands Cross-Timbers, Edwards Plateau need additional moisture. Peanut producers south beginning limited planting. Rice growers finishing final pre-plant preparations; few fields planted. Flax fields beginning to bloom south central. Fields south blooming but need rain. Corn planted 10%, 12% 1977, 23%

average. Cotton planted 5%, 2% 1977, 4% average. Sorghum planted 23%, 23% 1977, 28% average.

Harvests of broccoli, spinach, cabbage, carrots, lettuce, onions continued. Seed stem activity a serious problem in many early onion fields. Watermelon, bell pepper, tomatoes, beans, cucumbers, cantaloup planting active. Citrus trees in bloom. Harvest Valencias and grapefruit continued. Pecan trees most areas dormant. Peach trees in south in full bloom; beginning pink bud stage in central. Buds beginning to swell on High Plains.

Ranges, pastures turning green but most areas still have limited grazing; ranchers continuing to feed livestock. Livestock condition generally fair to good and improving.

**UTAH:** Scattered areas rain in valleys and snow in mountains forepart period and again south weekend. Accumulated amounts generally light to moderate but locally heavy few isolated areas. Temperatures continued variable with warming trend. Averages ranged from 3° below normal to 4° above.

Livestock on ranges in good condition. Spring calving and early lambing taking place. Clear and warming days allowed spring fieldwork to get underway in few sections.

**VIRGINIA:** Slightly above normal temperatures. Extremes: 70's to upper teens. Precipitation light occurring on 14th, 16th, and 17th; averaged about 0.33 in.

Topsoil moisture adequate to surplus. Peach condition good; buds mostly tight, some swelling. Pruning active. Plowing, disking increasing as fields thaw; too wet in many areas. Potato seeding Eastern Shore in dry areas. Flue tobacco plant beds mostly good, some seeded south central. Southeast fumigating active, progress behind normal. Liming, fertilizing for spring seedings began most areas. Pastures, wheat, barley fair to good, overseeding active north, greening in south-east. Barley winterkill heavy. Alfalfa good. Fieldwork: 0.9 days suitable. Livestock mostly fair to good. Calf, lamb loss high north. Feed and hay short.

**WASHINGTON:** West: Temperatures 2° above normal except 1° above in San Juans and east Cascade foothills. Precipitation below normal; 1.50 in. coastal area, 0.90 in. east Cascade foothills, 0.10 in. Puget Sound area and 0.10 in. above normal San Juans.

Raspberry planting continues and strawberry plant digging nearing completion.

East: Temperatures near normal northeast, 1° below elsewhere. Precipitation 0.10 in. below central basin, near normal Okanogan area, 0.20 in. below normal elsewhere.

Carrots, onions, peas, and barley planted. Wheat and barley wintered well. Pear psylla and boron nutrient sprays applied to orchards. Some new Concord grapes planted. Lambing and calving continues.

**WEST VIRGINIA:** Temperatures below normal except northeast which was slightly above. Extremes: 68 and 17°. Precipitation below normal.

Limited fieldwork, ground too wet with most snow gone. Hay supply short but holding, grain and other supplies adequate.

**WISCONSIN:** High temperatures mostly in 30's until weekend when reached mid-40's 19th. Cloudy skies prevailed to midweek, with some dense fog. Low temperatures fell to near -10° in north morning 17th as skies cleared. Precipitation generally

light except for locally heavier snowfall. Mild weekend weather reduced snow cover.

WYOMING: Temperatures above normal with only Big Horn drainage below normal. Coolest tempera-

tures in northwest. Precipitation varied from 0 to 0.62 in. Precipitation below normal.

Topsoil moisture adequate to surplus. Winter wheat prospects good. Seedbed preparation and spring planting just starting. Calving, lambing in progress. Feed supplies mostly adequate.

**World Weather and Crop Update**

February Review - March 20

USSR. Temperatures and precipitation rose above normal in most regions during February. Above-normal temperatures, which continued into mid-March, resulted in an earlier-than-usual thaw in the winter grain areas. By March 10, the snow cover line was much further north than normal, approaching the average for March 25 to 31, and in the far west April 10. The soil has thawed completely in the North Caucasus, Moldavia, and in the southern Ukraine. Fieldwork is underway in these regions with sowing of early crops taking place in the more southerly areas. Winter grains in these regions have resumed vegetation 10 to 15 days earlier than normal, and fruit trees came out of dormancy. Although the early spring could be a blessing, it also brings with it the increased dangers of killing spring freezes.

ASIA. Winter grain prospects in the People's Republic of China continued to be favorable. February precipitation in North China's main winter wheat belt scored well above normal, and additional moisture has fallen in March. Although rainfall south of the Yangtze River, especially in the south and south central provinces, was well below normal in February, heavy March rains have eliminated the threat of drought. The rains have helped to replenish reservoirs and ponds with water that will be needed for transplanting rice, but too much rain fell in some areas, creating localized waterlogging problems. India's February weather featured unseasonably good precipitation in northern wheat growing regions, further enhancing prospects for a good harvest. Rainfall through mid-March was seasonally light over peninsular India except in isolated pockets.

AUSTRALIA. Western Australia received well-above-normal rainfall in February, but conditions worsened in New South Wales, Victoria, and South Australia where precipitation was well below normal. March rainfall also has been deficient in these areas, and additional moisture was needed to prevent further declines of non-irrigated crops and pastures. Coastal regions in New South Wales were drenched by heavy mid-March rains, but only light to moderate amounts of moisture were recorded in the interior regions.

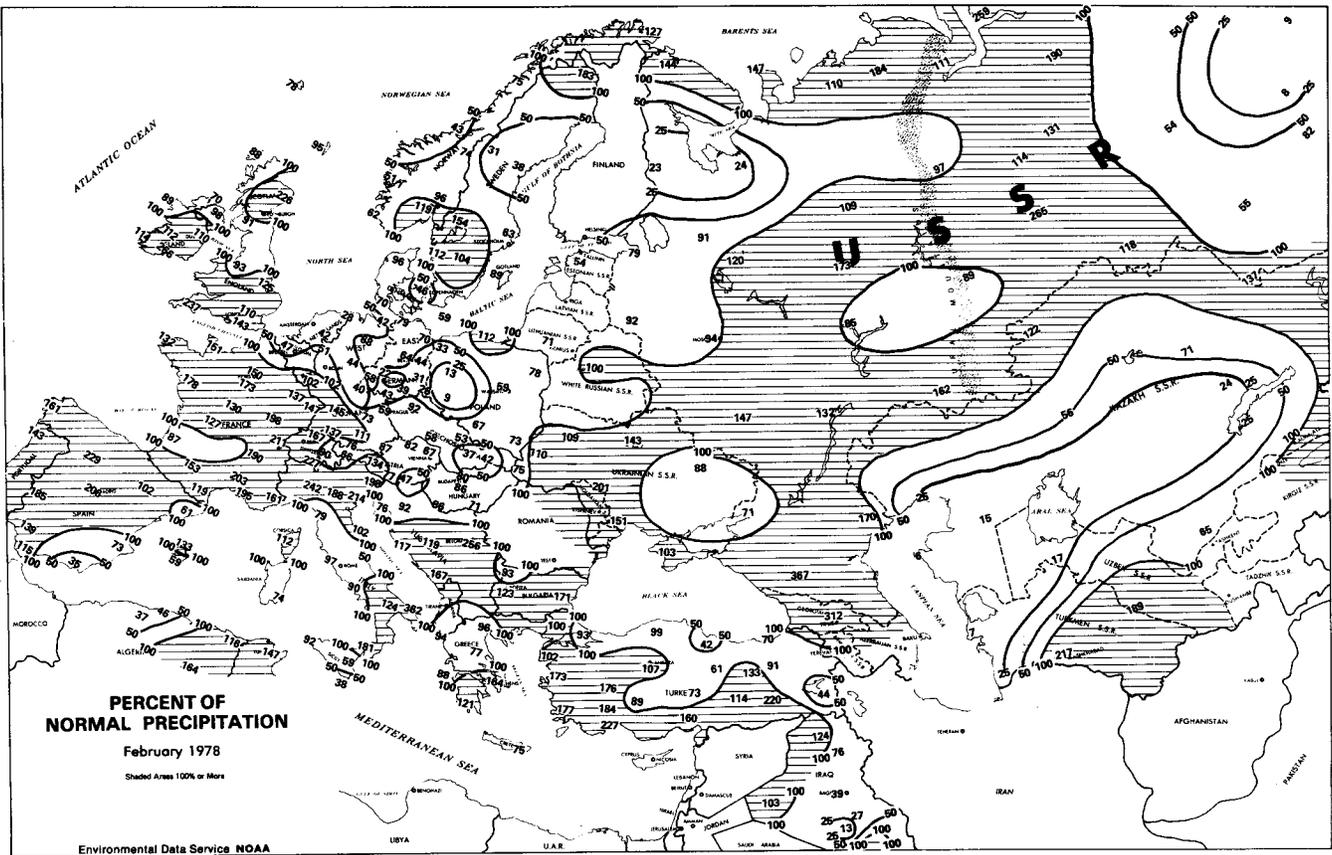
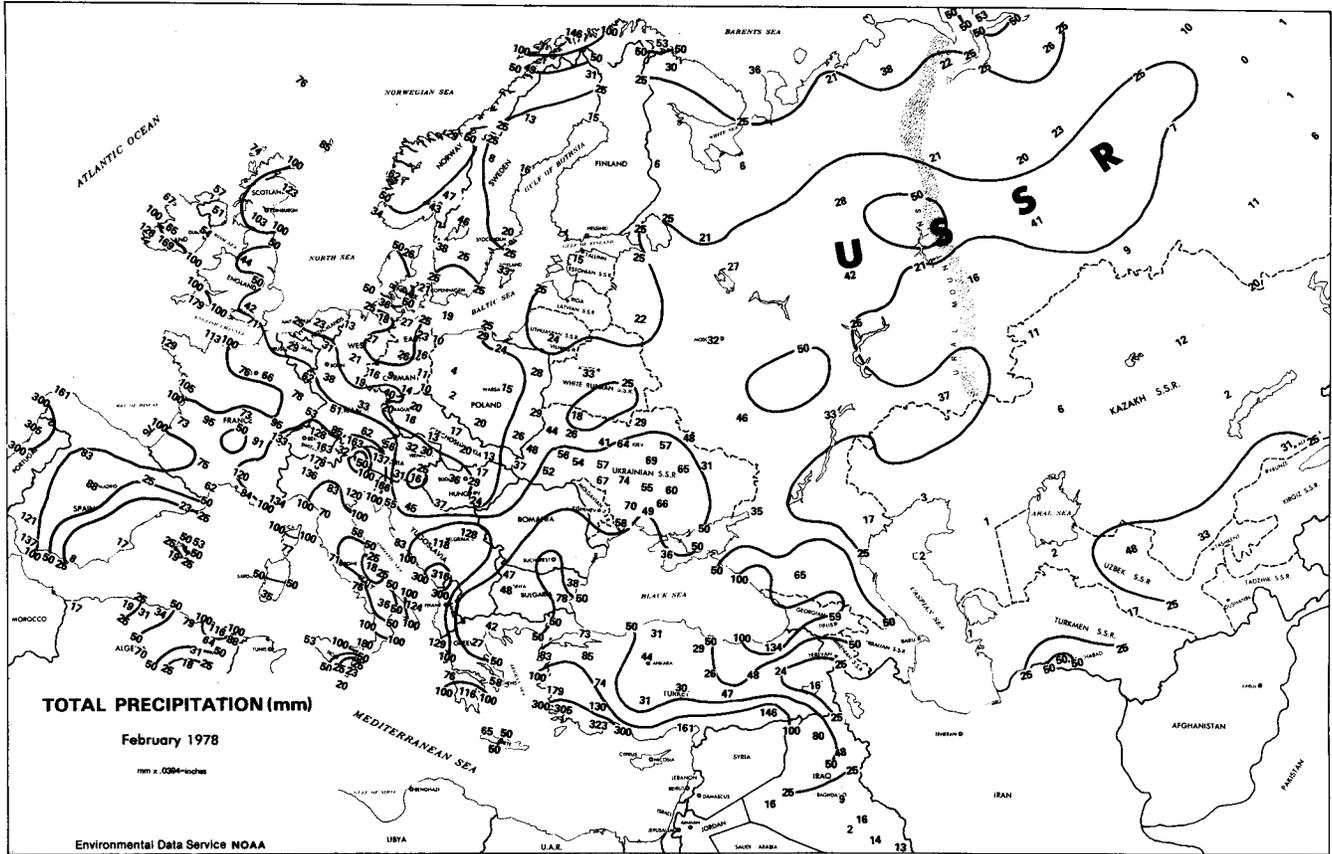
AFRICA. Generally crop prospects continued to improve in North Africa in February with above-normal precipitation in Morocco, and with at least normal rainfall in eastern Algeria and northern Tunisia. Some areas, however, are badly in need of rain, especially central Tunisia which has been suffering from severe moisture deficiency. Crop prospects continued favorable over the maize triangle in South Africa; most of this important agricultural area received normal-or-above rainfall in February and March rains have been generally adequate through mid-month. The Sahelian countries persisted seasonally dry, but most of the west and central African countries have received normal rainfall thus far in 1978.

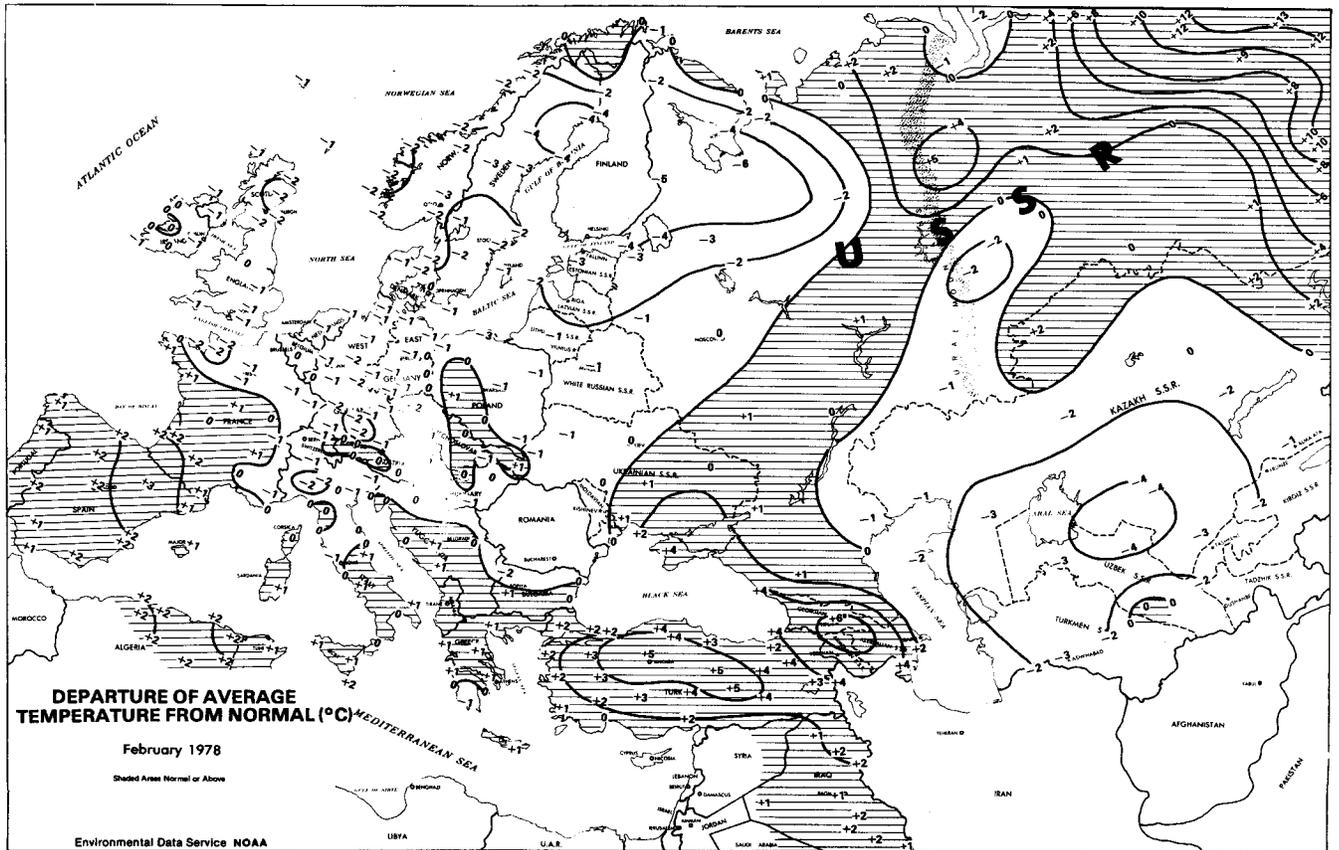
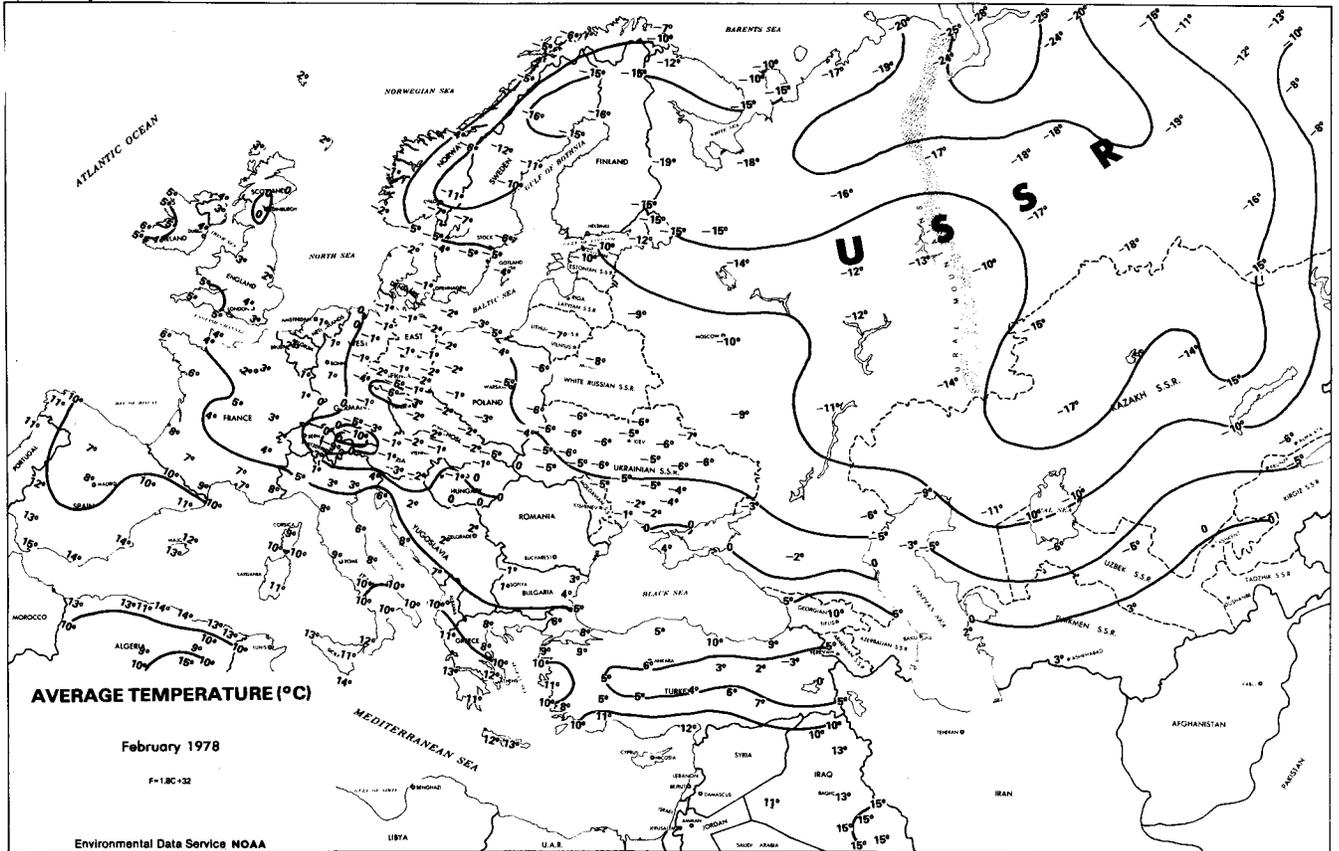
EUROPE. Substantial precipitation fell over most of western Europe excluding northern France, Benelux, Denmark, and northern sections of West Germany. Temperatures in these regions fell below

freezing on occasion, and several snowfalls were registered during the month. A mid-month freeze in Spain caused light damage to standing citrus and almonds where trees were in full bloom. Some corn and winter vegetables also fell victim to the cold snap. Below-normal temperatures and light precipitation hit the northern half of eastern Europe. Well-above-normal precipitation in Romania and Bulgaria improved soil moisture. In Turkey, rains during the first half of February continued to replenish water resources in all sections. Although temperatures dropped below freezing even in coastal areas, no frost damage was reported.

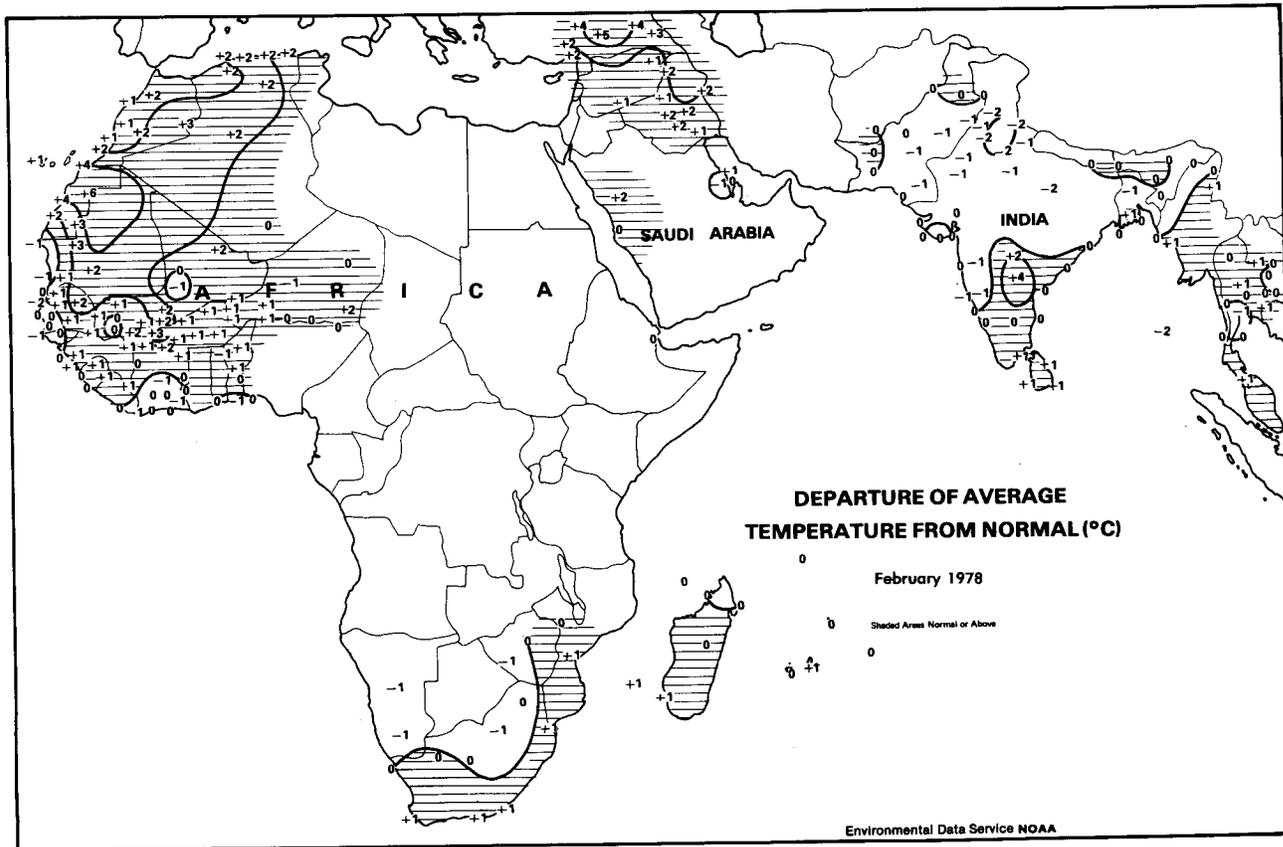
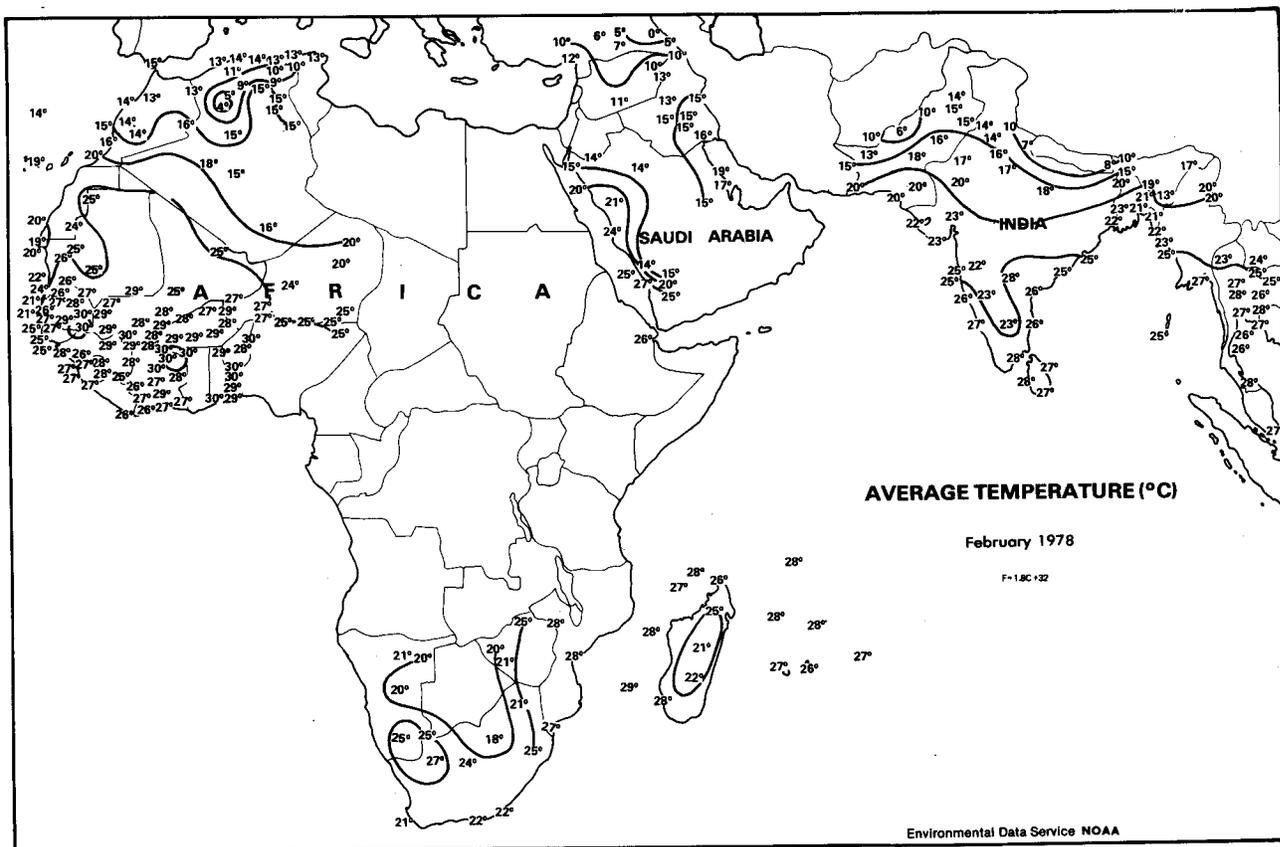
SOUTH AMERICA. February's excellent rains helped crops and pastures in Argentina and Uruguay. However, extremely heavy rains in mid-March produced local flooding in some Argentine areas, impeding harvesting operations now underway in the more northerly sections of the main grain area. But rainfall has been patchy throughout the important corn and soybean areas in southern Brazil which has been plagued by spotty drought. Although March rains eased the drought situation somewhat, the rains arrived too late to aid early soybeans and upland rice, but could improve the conditions of late variety beans. However, as of mid-March, more rain was required to prevent crop prospects from deteriorating further. March rains eased the serious drought in the principal growing areas of northern Peru; however, the rice crop was damaged by the earlier moisture deficiencies which reduced area sown to this crop in some regions. Good weather in Chile's central zone permitted normal fruit and vegetable harvesting, but the grain harvest in southern Chile was delayed somewhat by drought.

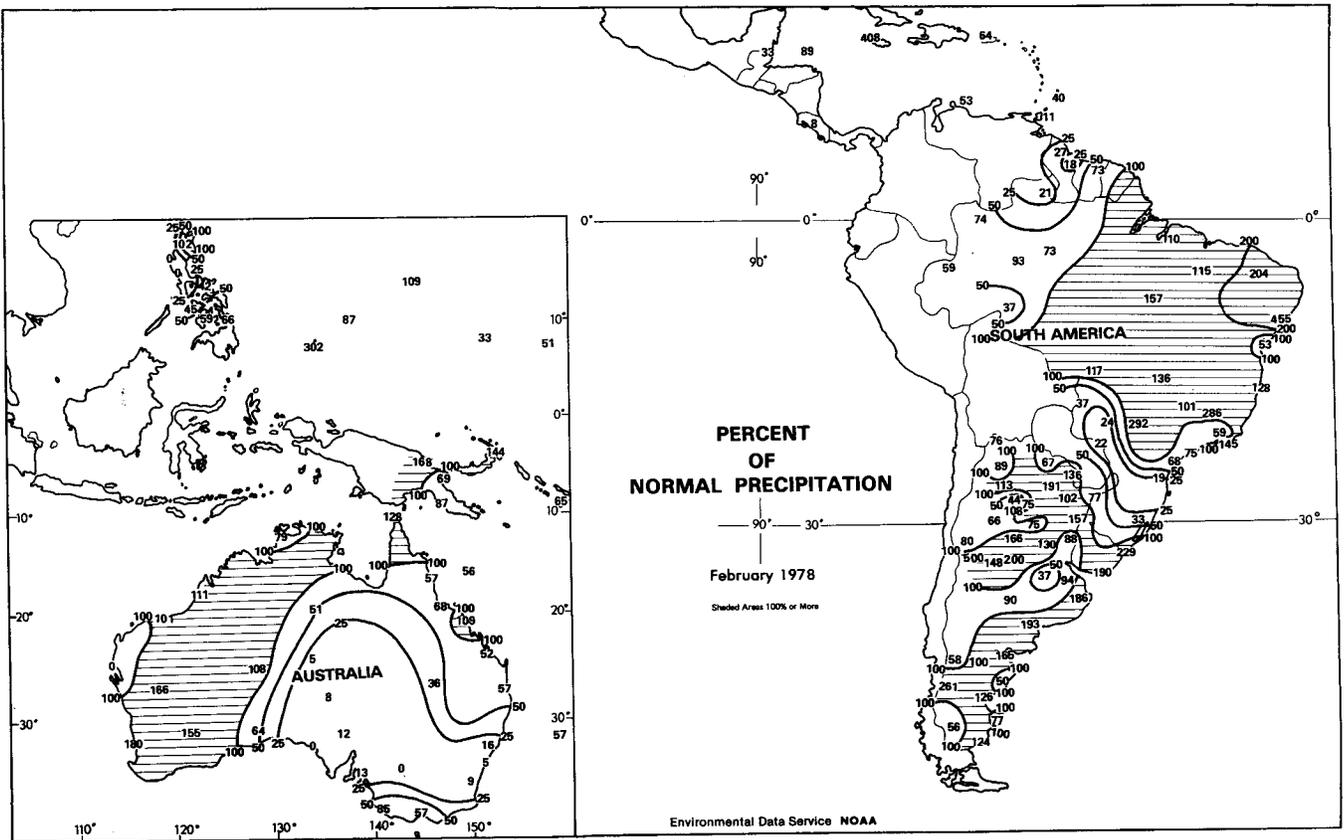
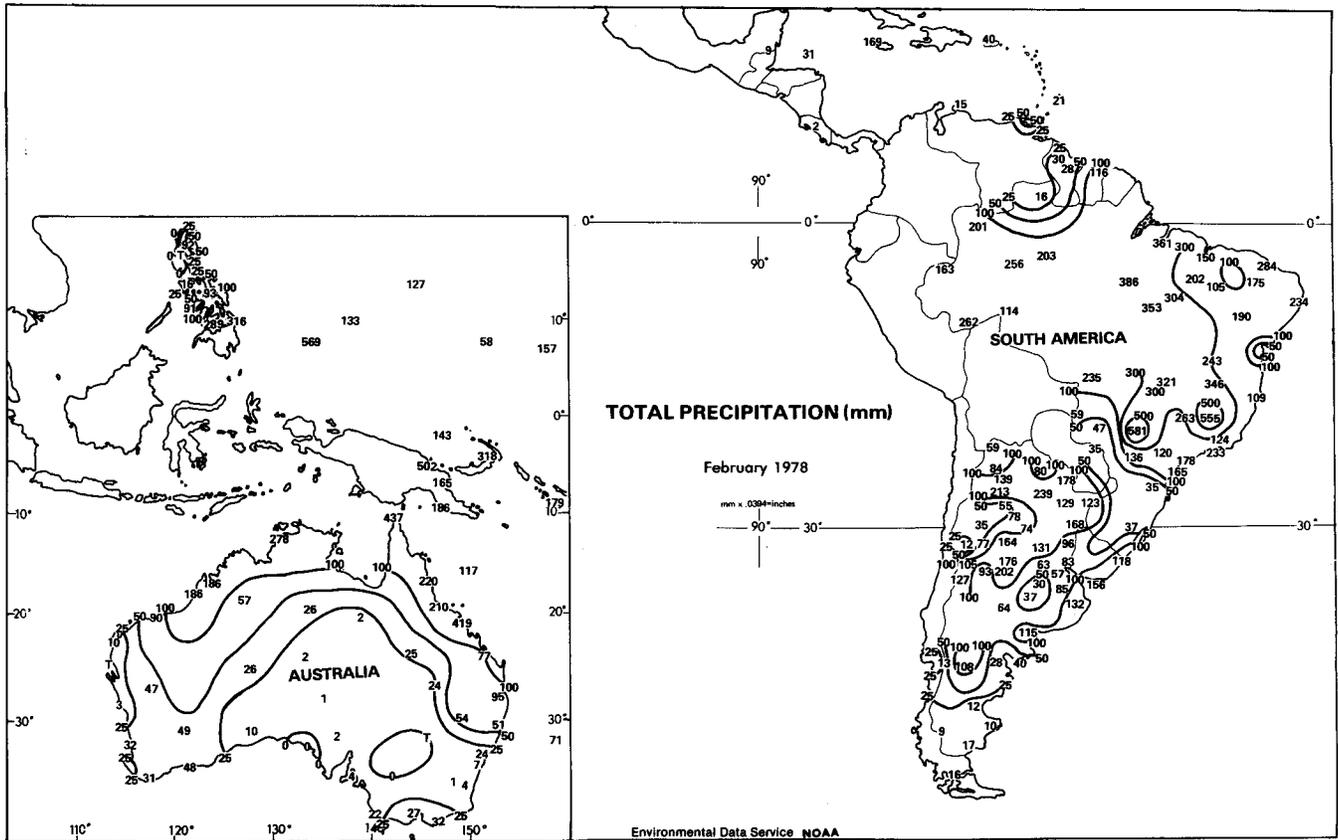
WEEKLY HEATING DEGREE DAY DATA NOT AVAILABLE

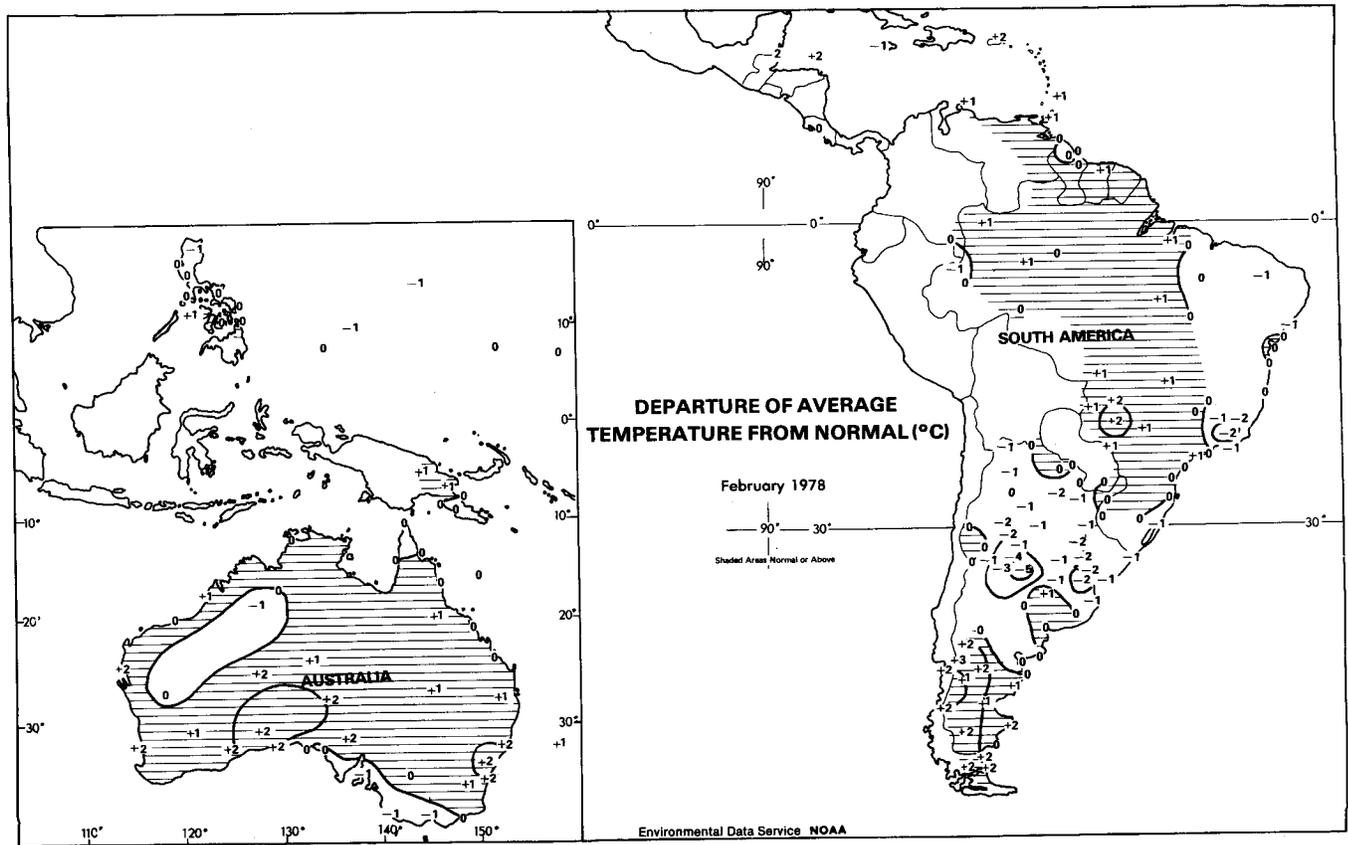
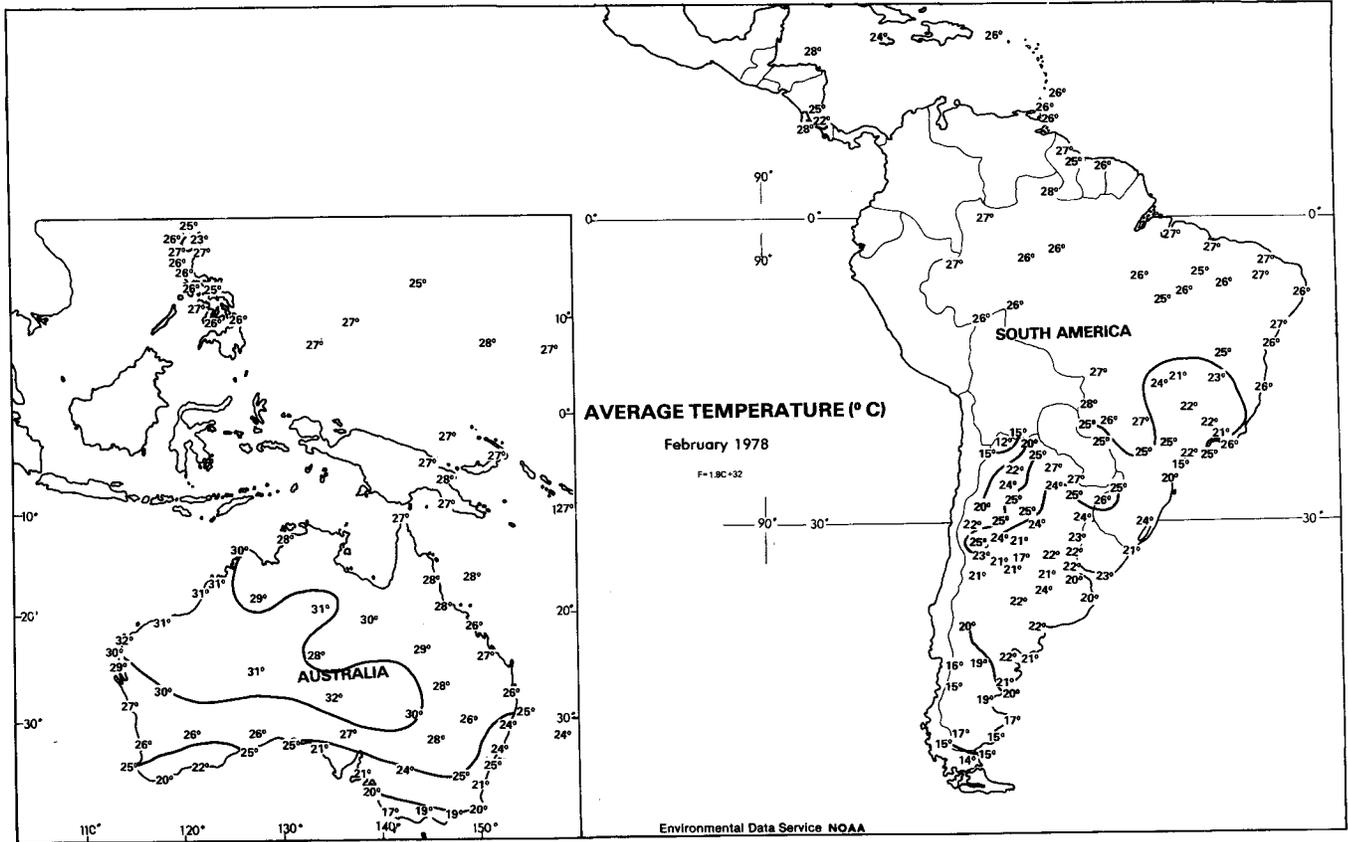












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