

# WEEKLY WEATHER AND CROP BULLETIN

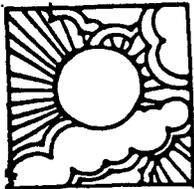
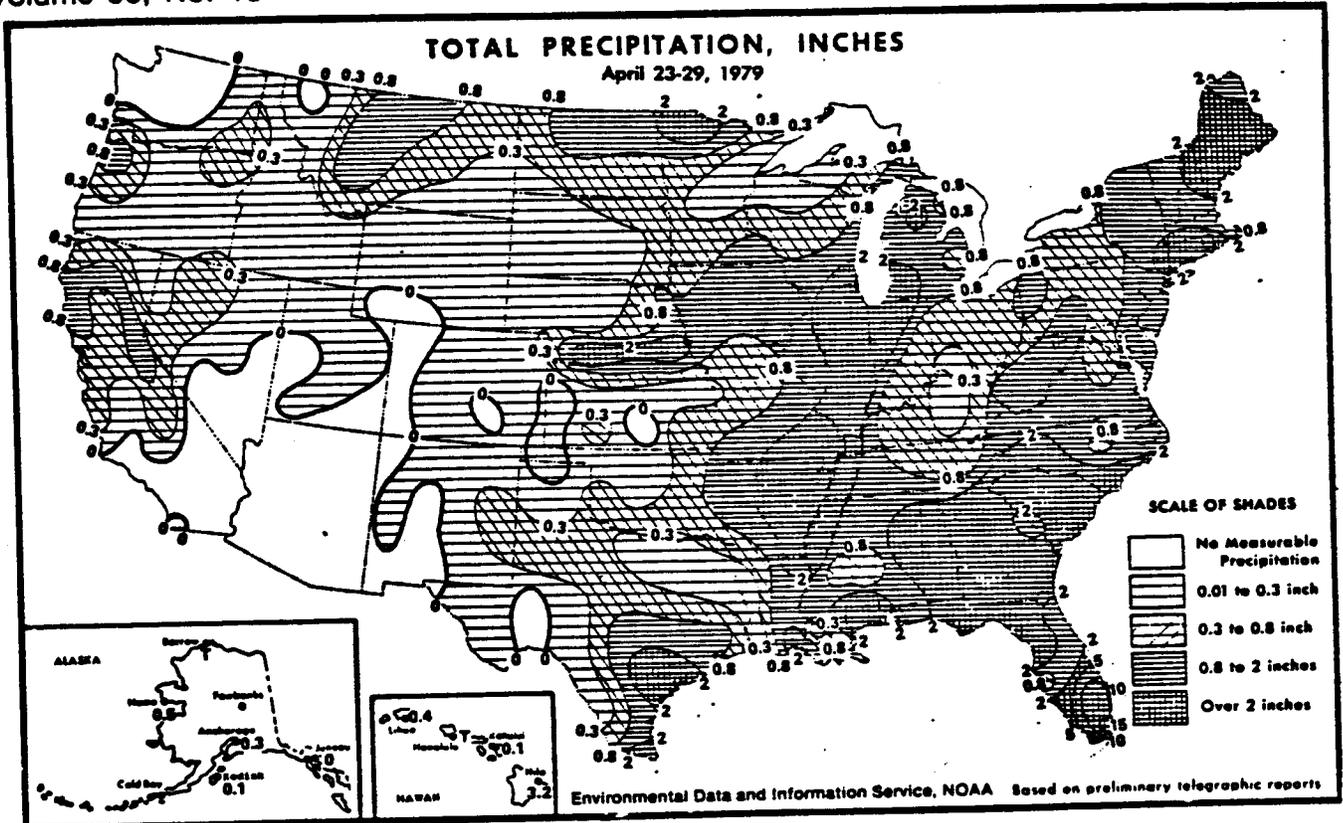
U.S. DEPARTMENT OF COMMERCE  
Environmental Data and Information Service, NOAA

U.S. DEPARTMENT OF AGRICULTURE  
Economics, Statistics, and Cooperatives Service

Volume 66, No. 18

Washington, D.C.

May 1, 1979



## National Weather Summary

April 23 - 29

**HIGHLIGHTS:** A weather system moved through the southern Gulf of Mexico, turned northward, and deluged southeastern Florida with record rainfall. The storm continued northward dropping moderate amounts of rain on the remainder of the East Coast. Elsewhere, thunderstorms with moderate rain soaked an area from the mouth of the Mississippi River to the Great Lakes. Amounts up to 2 inches added to the flooding problems of North Dakota and Minnesota. Heavy hail hit southern Nebraska. Cold weather raced into the northern Plains and spread southeastward. The northern space of the cold air ranged 10 degrees colder than normal. The

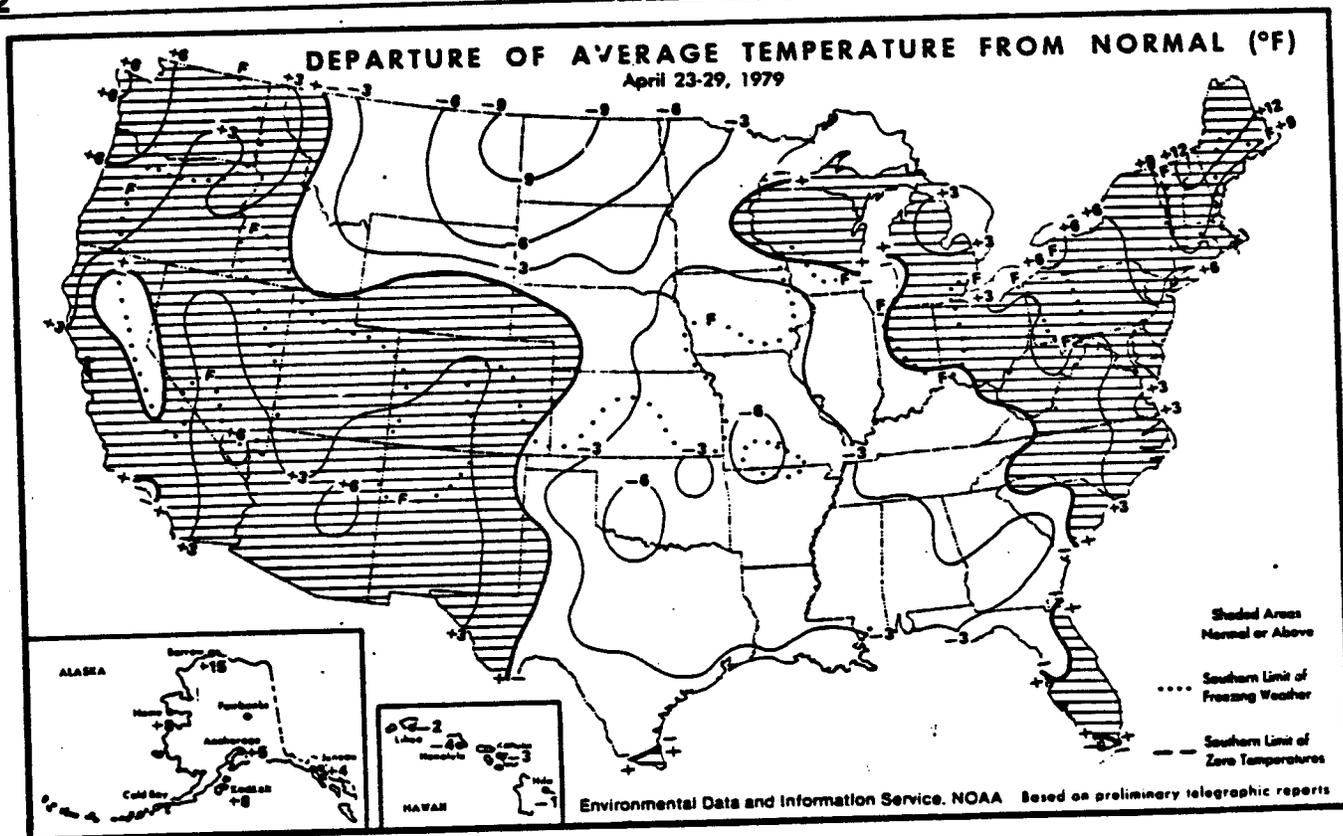
South averaged 3 to 6 degrees below normal. The four corners of the country showed warmer-than-normal readings; New England readings rose 12 degrees above normal.

On Monday, rain covered an area from the Delta Region to the Ohio Valley; Little Rock gathered more than 2 inches, and nearly 2 inches soaked Memphis. Flooding remained a problem in the Red River Basin of North Dakota and Minnesota.

Heavy snows hit the Montana mountains, where up to 2 feet clogged some areas.

Arizona scored both the Nation's highest and lowest temperatures. Flagstaff checked in with 28°, and Buckeye noted 94°.

Unsettled weather tested the country's midlands and Gulf Coast on Tuesday. Rain fell from the Gulf to the Canadian border aggravating flooding problems in Louisiana and the Red River region of the North. Melting snow combined with 2 inches of rain in North Dakota and Minnesota to increase the overflow. In the South, nearly 3 inches fell near



Biloxi, Miss., and more than an inch and one-half drenched Miami.

Temperatures warmed in the Great Lakes area, where Alpena, northeastern Michigan, reached a record 77°, topping the 1960 high mark by seven.

On Wednesday, severe thunderstorms surged over previously-dry Florida dumping record rains. Miami's 24-hour total hit a record 16 inches. Just to the north, Fort Lauderdale reported 14 inches. The rain reached through Georgia to South Carolina; Atlanta's rain pushed the monthly total to 9.87 in. ---an April record. Some South Carolina stations received an inch and one-third.

Heavy rains and hail battered the Midwest as well. More than 2 inches soaked Rockford, northern Illinois, and an inch and a half covered Omaha. Baseball-sized hail pounded Holdrege, south central Nebraska, while smaller hail and nearly an inch and one-half of rain struck the Springfield, southern Missouri, area.

Rain from the Southeast edged up the Atlantic Coast reaching eastern Pennsylvania by Thursday's end. Atlanta picked up another 1.4 inches, while most points north received about an inch or less.

Thunderstorms barreled over Louisiana and Mississippi. Lafayette, southwestern Louisiana, measured 2.27 in. of rain; hail accompanied the storms. A tornado touched down in southern Mississippi.

Other areas of rain showed about three-quarters inch in sections of the Great Lakes and Ohio Valley, and a half-inch from northern California to Nevada.

Temperatures soared in New England. Caribou, northeastern Maine, at a record 74°, toppled the 1970 record by 12 degrees.

On Friday, a cold front spread rain from the Middle Atlantic States to New England. A sampling of rainfall amounts showed a half-inch at Washington, D.C.; Baltimore's inch and one-half; more than two and one-half inches at Hartford, Conn.; and 1.72 in. at Portland, southern Maine.

Light rain dampened the Pacific Northwest and Plateau Region. Rivers crested in portions of the northern Plains, Midwest, Ohio Valley, and New England.

Saturday's weather lacked the severity of the week's earlier storms. Rainfall amounted to less than an inch in New York State, New England, the upper half of the Plains, and the Texas Panhandle. Springtime snow flurries spread from northern Minnesota to Michigan; however, Muskegon, western Michigan, tallied an inch of snow.

Severe thunderstorms rolled over south central and southern Texas on Sunday. Rains of an inch to 3 inches drenched San Antonio, Houston, and Victoria and Brownsville near the South Texas Gulf Coast. Some hail and high winds hit those portions of Texas.

Temperatures dipped sharply in the Midwest; Sioux City, northwestern Iowa, at a record 28°, undercut the 1907 low mark by one.

Rain also fell in Florida and New England; nearly an inch moistened West Palm Beach, Fla., and three-quarters inch fell on Providence, R.I.

Cold temperatures chilled the Nation from the Rockies to the Ohio Valley. Record-equaling readings plummeted to 28° at Grand Rapids, west central Michigan, and 35° at Louisville, Ky. Muskegon, Mich., posted a record 26°, and South Bend, northern Indiana, opened the record books to 27°.



## National Agricultural Summary

April 23 - 29

**HIGHLIGHTS:** Rains continued to pour on the Red River Valley stalling fieldwork and damaging considerable quantities of stored grains. Rains also kept soils saturated in the South delaying planting progress, particularly in the Delta. Low temperatures slowed soil warming, which delayed planting and germination of seeds in the northern half of the Nation. Soil moisture rated adequate to surplus except in some of the Mountain States and parts of West Virginia and Florida. Fields dried slowly holding plowing to equal or less than average but generally ahead of last year. Plowing ranged up to 75% complete in the Corn Belt. Most of the Nation had 1 to 3 days suitable for fieldwork, but the West and the South Atlantic States enjoyed up to five days. Winter wheat rated fair to good. Heading advanced into Oklahoma; some combining began in Arizona. Spring wheat seeding stood at 5%, half last year's rate and far behind the 31% average. Oats and barley seeding also fell far behind. Pastures rated good and improving; the adequate soil moisture in most areas of the Nation produced abundant spring growth. Cotton planting in the 14 major States stood at 27%; excluding California, planting reached 19%, short of the 31% last year and the 23% average. Rice seeding in the five major States advanced to 37%; excluding California, planting reached 44%, lagging the 78% last year and the 72% average. Corn planting stood at 7%, only 2 points less than 1978 and 8 points below the average. Grain sorghum planting centered in Texas, however, Missouri growers seeded a few acres. Heavy rains damaged vegetable plants in parts of Florida and Texas.

**SMALL GRAINS:** Winter wheat condition rated fair to good. All major production areas enjoyed adequate soil moisture. Heading advanced northward into parts of Oklahoma. Heading stood at 15% in Oklahoma, equaling last year but short of the 35% average. Heading ranged from 64 to 80% elsewhere across the South. Dryland stands on the southern Great Plains suffered from moisture shortages. Harvesting began in western Arizona. Growers reseeded spotty northeastern Colorado winter wheat stands to spring grains. Corn Belt wheat grew to 7 inches---2 inches taller than last year.

Wet soils and flooding held spring wheat seeding to 5%, compared with 10% last year and the 31% average. Idaho continued on schedule, but the other major States lagged far behind average. Fieldwork in much of the Red River Valley is probably three weeks away barring additional rains.

**CORN:** Corn planting stood at 7% in the 16 major producing States, near the 9% for last year but less than half the 15% average. Wet, cold soils kept planting to a minimum in the north central States. The eastern Corn Belt stood at 2%; only Ohio showed significant progress with 10% planted. That region reached 5% planted last year and on the average 13%. The western Corn Belt stood at 1% compared with 2% last year and the 9% average. Southeastern growers advanced to 79% of the corn planted, exceeding 1978's 76% and the 68% average.

**COTTON:** Cotton planting in the 14 major producing States stood at 27%; excluding California, planting reached 19% compared with 31% last year and the 23% average. Planting in the Southeast and the

Southwest was well advanced and ranged from 49 to 87%. The wet Delta States lagged far behind both last year and average. Texas cotton started squaring in the south just as planting began on the High Plains.

**OTHER CROPS:** Soybean planting continued slowly in the South. Progress ranged from 1% or less in Mississippi and Arkansas, to 2% in South Carolina, 3% in Virginia, and 5% in Georgia.

Grain sorghum planting advanced to 56% in Texas, slightly behind 1978's 66% and the 61% average. Missouri stood at 1% compared with 3% last year and the 6% average. Other major producing States on the Great Plains reported no sorghum planted.

Wet soils held rice planting in the Delta to 44%, well behind 1978's 78% and the 72% average. California rice seeding stood at 6%, which dropped progress in the five States to 37%.

Peanut planting stood close to the schedule set in recent years. Progress in Virginia reached 3%, North Carolina 6%, Texas 9%, Alabama 30%, and Georgia 50%.

Irish potato planting for the fall harvest got off to a slow start and lagged last year and the average in most States.

**FRUITS AND NUTS:** Peaches advanced to the bloom to petal fall stage in New Jersey, pink to full bloom in Pennsylvania, full bloom in Maryland, and dormant to green tip in Michigan. Peaches sized in Texas. California harvested early peaches. Apples bloomed in the middle Atlantic States and reached the green tip stage in New York and Michigan. Apples showed a good set in southern production areas. Young apple trees in Washington had some winter damage. Cherries bloomed in northern production areas. Rains damaged some Oregon cherry blooms. Pecans bloomed in New Mexico and formed nutlets in early Texas groves. Arkansas pecans rated good. The California almond drop continued.

Florida rains relieved drought conditions in citrus growing areas. New growth and new crop fruit development continued. Rains slowed the late Florida orange harvest. Arizona growers harvested Valencias and grapefruit. California citrus began blooming. The Navel harvest wound down; Valencia picking increased.

**VEGETABLES:** Growers in northern production areas planted sweet corn and green peas. Snap beans and cucumber plantings advanced into the Carolinas and Tennessee. Ohio growers direct-seeded tomatoes. California growers planted tomatoes for processing. Cool temperatures slowed asparagus harvest in Washington but was active in California, where large quantities were diverted to processors. The Michigan asparagus harvest should have started around May 1. Watermelon planting reached 92% in Georgia and 60% in North Carolina. Vegetable crop condition declined in southeastern Florida when heavy rains flooded many fields. Other areas sustained less damage with rains generally beneficial. Shipments increased 6% from the previous week; only snap beans, cauliflower, eggplant, lettuce, squash, strawberry, and tomato supplies declined. Texas growers harvested cabbage, carrots, and onions. Vegetables in southern areas received severe damage from rains and floods with replanting necessary. The Arizona lettuce harvest made excellent progress. California cauliflower, lettuce, and strawberry harvests increased. Early market tomatoes set fruit.

(continued on page 15)

Temperature and Precipitation Data for the Week Ending Midnight, Lst., April 29, 1979

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
ALA. Birmingham	62	-4	2.5	+1.5	LA. Baton Rouge	69	-2	0	-1.0	Youngstown	53	+2	1.0	+ .1
Mobile	67	-4	2.2	+1.0	Lake Charles	69	-2	0	- .8	OKLA. Okla. City	58	-2	2.2	+ .8
Montgomery	65	-3	4.3	+3.4	New Orleans	70	-1	0	0	Tulsa	62	-2	3.3	+ .8
ALASKA Anchorage	44	+5	3	+ .2	Shreveport	66	-3	0	-1.0	OREG. Astoria	55	+3	1.1	+ .1
Barrow	21	+15	T	0	MAINE Caribou	53	+12	1.3	+ .7	Burns	49	+2	1.1	+ .1
Fairbanks	48	+4	0	- .7	Portland	52	+8	3.8	+3.0	Medford	56	+3	T	+ .3
Juneau	47	+8	1	- .8	MD. Baltimore	62	+5	1.7	+1.0	Pendleton	56	+3	4	+ .1
Kodiak	32	+8	5	+ .4	MASS. Boston	59	+7	1.2	+ .4	Portland	59	+6	7	+ .2
Nome	48	+3	0	- .3	Chatham	51	+4	7	+ .1	Salem	58	+4	8	+ .4
ARIZ. Flagstaff	78	+3	0	- .1	NICH. Alpena	48	+4	7	+ .1	PA. Allentown	60	+6	1.3	+ .4
Phoenix	72	+4	0	- .1	Detroit	52	+2	1.2	+ .2	Erie	52	+4	8	+ .0
Tucson	63	+6	0	- .1	Flint	52	+2	2.5	+ .2	Harrisburg	60	+3	5	+ .2
Winslow	77	+3	0	- .1	Grand Rapids	51	+0	2.2	+1.4	Philadelphia	62	+5	1.5	+ .8
Yuma	61	-9	1.1	+ .1	Houghton Lake	49	+3	1.3	+ .7	Pittsburgh	58	+4	6	+ .2
ARK. Fort Smith	67	-3	2.6	+1.3	Lansing	52	+1	9	+ .5	Scranton	58	+6	1.8	+1.0
Little Rock	62	+2	7	- .2	Marquette	42	+1	2	- .2	R.I. Providence	58	+7	2.9	+2.1
CALIF. Bakersfield	55	+5	4	- .2	Muskegon	48	+1	1.8	+1.1	S.C. Charleston	68	+1	2.5	+1.9
Eureka	66	+3	1	- .1	S. Ste. Marie	44	+1	1.6	+1.0	Columbia	64	-3	3.9	+3.1
Fresno	62	-1	0	- .2	MINN. Duluth	41	-2	1	- .5	Greenville	64	0	3.3	+2.4
Los Angeles	60	-2	8	+ .4	Internat'l Falls	40	-3	1.8	+1.3	S.D. Aberdeen	46	-3	4	- .1
Red Bluff	64	+2	T	- .1	Minneapolis	51	+1	4	- .2	Huron	46	-5	2	- .3
San Diego	58	+2	6	+ .3	Rochester	48	-1	9	+ .3	Rapid City	44	-5	T	- .6
San Francisco	63	+2	4	+ .1	St. Cloud	47	-1	2	- .4	Sioux Falls	48	-3	3	- .3
Stockton	54	+3	2	- .3	MISS. Jackson	64	-5	7	- .4	TENN. Chattanooga	62	-2	1.4	+ .5
COLO. Denver	58	+2	0	- .1	Meridian	63	-5	3	- .5	Knoxville	62	-2	2.4	+1.2
Grand Junction	56	+1	T	0	MO. Columbia	56	-3	7	- .5	Memphis	64	-3	4	- .5
Pueblo	57	+5	2.7	+1.9	Kansas City	53	-5	3	- .5	Nashville	60	-3	4	- .4
CONN. Bridgeport	61	+9	3.3	+2.5	St. Louis	57	-3	1.4	+ .5	TEX. Abilene	65	-3	3	- .4
Hartford	64	+4	5	- .2	Springfield	54	-6	1.8	+ .7	Amarillo	56	-4	1.3	+ .4
D.C. Washington	69	-2	1.7	+1.0	MONT. Billings	44	-5	3	- .1	Austin	68	-3	5	- .6
FLA. Apalachicola	74	+2	2.0	+1.5	Glasgow	41	-7	7	+ .5	Beaumont	70	-1	2.1	+1.7
Daytona Beach	78	+1	2.1	+1.6	Great Falls	43	-5	9	+ .6	Brownsville	77	-1	9	+ .3
Ft. Myers	78	0	1.4	+ .7	Havre	45	-4	8	+ .5	Corpus Christi	74	-1	T	- .5
Jacksonville	70	-1	2.8	+2.3	Helena	44	-3	1.0	+ .8	Del Rio	73	+6	T	- .1
Key West	78	0	1.4	+ .7	KallsPELL	48	+2	T	- .3	El Paso	73	+6	T	- .1
Lakeland	79	+3	16.3	+15.3	Miles City	42	+3	T	- .3	Fort Worth	65	-3	4	- .2
Miami	73	0	1.0	+ .4	MISSOULA	50	+3	6	- .1	Galveston	70	-2	1.0	- .0
Orlando	68	-2	3.4	+2.6	NEBR. Grand Island	51	-3	2.0	+1.4	Houston	69	-3	1.4	- .1
Tallahassee	74	0	4	0	Lincoln	52	-4	5	- .1	Lubbock	64	+1	3	- .1
Tampa	75	0	8.4	+7.5	Norfolk	51	-2	2	- .4	Midland	67	0	T	- .3
W. Palm Beach	63	-1	2.4	+1.4	N. Platte	52	-0	2	- .4	San Angelo	67	-3	1	- .4
GA. Atlanta	64	-3	1.8	+1.1	Omaha	50	-5	1.1	+ .3	San Antonio	71	-1	1.6	+ .9
Augusta	65	-4	3.6	+2.8	Valentine	48	-2	1	- .4	Victoria	66	-2	2.4	+1.7
Macon	68	-1	2.3	+1.6	NEV. Ely	47	-2	T	- .2	Waco	66	-4	4	- .6
Savannah	72	-1	3.2	+ .3	Las Vegas	73	+6	0	- .1	Wichita Falls	62	-6	1	- .8
HAWAII. Hilo	72	-4	T	- .2	Reno	49	-1	3	+ .2	UTAH. Blanding	54	+3	T	- .2
Honolulu	71	-3	1	- .1	Winnesucca	51	+3	6	+ .4	Salt Lake City	54	+1	1	- .4
Kahului	72	-2	4	- .3	N.H. Concord	58	+10	1.1	+ .4	VT. Burlington	56	+9	1.3	+ .7
Lihue	72	-2	4	- .3	N.J. Atlantic City	60	+5	1.3	+ .5	Norfolk	61	+1	9	+ .3
ID. Boise	53	+1	1	- .2	Trenton	62	+6	8	+ .1	VA. Lynchburg	63	+2	1.9	+1.3
Lewiston	48	-1	1	- .2	N.MEX. Albuquerque	64	+5	T	- .1	Richmond	65	+4	9	+ .2
Pocatello	61	-3	3.0	+1.9	Roswell	66	+3	3	+ .2	Roscoe	59	0	1.7	+1.0
ILL. Cairo	51	-3	2.2	+1.3	N.Y. Albany	57	+6	1.4	+ .7	WASH. Colville	54	+4	T	- .3
Chicago	52	-3	1.3	+ .4	Binghamton	54	+5	8	0	Omak	53	+4	0	-1.6
Moline	53	-2	2.0	+1.0	Buffalo	56	+7	5	- .3	Quillayute	58	+7	T	- .5
Peoria	50	-2	3.6	+2.7	New York	59	+4	1.2	+ .4	Seattle-Tacoma	53	+4	3	0
Rockford	55	-2	1.5	+ .5	Rochester	53	+3	7	0	Spokane	57	+1	7	+ .3
Springfield	58	-2	7	- .3	Syracuse	56	+5	1.0	+ .3	Walla Walla	57	+4	T	- .1
IND. Evansville	54	+1	7	- .2	N.C. Asheville	59	0	2.0	+1.2	Yakima	56	+2	1.5	+ .7
Ft. Wayne	56	0	6	- .3	Charlotte	64	0	2.9	+2.2	W. VA. Beckley	60	+1	1.2	+ .4
Indianapolis	52	0	2.8	+1.9	Greensboro	63	+1	1.4	+ .7	Charleston	60	+1	8	0
South Bend	53	-3	1.2	+ .3	Hatteras	66	+4	1.8	+1.1	Huntington	59	+1	7	- .1
IOWA. Burlington	51	-3	8	0	Raleigh	65	+2	6	- .1	Parkersburg	48	0	8	+ .1
Des Moines	49	-3	1.0	0	Wilmington	70	+4	2.8	+2.1	WISC. Green Bay	52	0	8	+ .1
Dubuque	49	-5	6	0	N. DAK. Bismarck	40	-8	4	0	La Crosse	48	-2	1.4	+ .7
Sioux City	54	-3	4	- .3	Fargo	43	-5	7	+ .2	Madison	48	0	3.2	+2.6
KANS. Concordia	56	-2	3	- .2	Williston	38	-10	5	+ .2	Milwaukee	47	0	T	- .4
Dodge City	54	+1	T	- .4	OHIO. Akron-Canton	54	+2	7	- .5	WYO. Casper	48	+1	2	- .2
Goodland	55	-4	2	- .7	Cincinnati	58	+2	3	- .4	Cheyenne	48	+1	1	- .5
Topeka	55	-5	T	- .8	Cleveland	56	+4	4	- .4	Lander	48	+1	1	- .4
Wichita	57	-2	2	- .7	Columbus	57	+2	4	- .5	Sheridan	41	-7	1	- .4
KY. Lexington	58	-1	3	- .6	Dayton	57	+2	3	- .5	P. R. San Juan	60	+2	2.0	+ .9
Louisville	58	-1	3	- .6	Toledo	54	+2	8	+ .1					

Based on 1941-70 normals

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

National Oceanic and Atmospheric Administration; Harry DeLong and Jim Carlin, Economics, Statistics, and Cooperatives Service, U.S. Department of Agriculture.

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## State Summaries of Weather and Agriculture

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

**ALABAMA:** Temperatures 3° below normal. Rain first half; totals 2.00 to 4.00 in. common. Cool, dry weekend.

Fieldwork: 1.4 days suitable. Soil moisture mostly surplus. Planting corn, cotton, peanuts, sorghum major activity; rains curtailed progress. Corn planted 58%, 69% 1978, 51% average. Cotton planted 20%, 53% 1978, 45% average. Peanuts planted 30%, 29% 1978. Sorghum planted 14%. Wheat headed 64%, 55% 1978; mostly good condition. Pastures, livestock mostly good condition.

**ARIZONA:** Warm, dry with only isolated light showers, northeast. Temperatures 2 to 6° above normal.

Cotton planting 80% complete, 70% last year. Harvest small grains underway west, lodging problem some varieties. Milo, corn, safflower planting approaching half-way point, early plantings good stand. Sugarbeets good growth, excellent condition, harvest begins next week. Alfalfa hay excellent regrowth, second cutting virtually complete west, beginning central. Lettuce harvest excellent progress central areas, tapering off west. Cantaloups, watermelons good progress. Flowering fruit setting satisfactory. Valencia harvest full swing, grapefruit harvest active, seasonally slow. Soil moisture, stock water adequate. Cattle, calves good condition. Range feed average or better. Bulls being moved onto ranges.

**ARKANSAS:** Warm first portion, cool remainder to average below normal. Good rainfall first of week; dry thereafter. Lowest normal 60°; highest 67°. Lowest mean 52°; highest 65°. Extremes: 30 and 87°. Least precipitation 0.64 in.; most 4.93 in.

Rain early week delayed land preparation and plantings. Wet soils and cool temperatures resulted in slow germination. Soil moisture surplus. Fieldwork: 2.7 days available. Soybean land preparation limited; planting 1%, 3% 1978, 5% average. Cotton plantings poor to fair condition; seeding 4%, 23% 1978; 21% average. Rice planted fields up to stand; seeding 21%, 60% 1978, 55% average. Corn planting 35%, 55% 1978, 68% average. Sorghum 13%, 51% 1978, 41% average. Oats and wheat fair to good condition. Fruit and vegetable crops good to excellent condition. Peach and apple fruit set good. Grapes excellent condition. Strawberries sizing excellent. Tomatoes fair to good condition. Pecans good condition. Hay and pasture plant growth good to excellent; average forage. Cattle good condition; gaining weight.

**CALIFORNIA:** First part of period rain northern third, midweek subtropical air mass brought rain to north and central. Largest amounts in Sierra with 2.60 in. No measurable rainfall in south. Up to 18 in. new snow added in high country of northern Sierra. Temperatures near to little above normal at lower elevations but below normal at higher elevations. High temperatures in low to mid-80's in Lower San Joaquin Valley latter part of period.

Cotton planting continued; some fields replanted San Joaquin, Imperial Valleys wind damage. Cotton 87% planted, 65% emerged. Dry land stress Riverside County, irrigated grains good growth. Small grains 64% headed. Limited pesticide applications San Joaquin Valley. Replanting operations, planting rice continue; rain slowed planting activities Sacramento Valley. Rice 6% planted. Alfalfa cut

hay, green chopped San Joaquin Valley. Planting corn continued. San Joaquin, Sacramento Valleys good stands. Corn 25% planted. Planting sugarbeets continued south coast. Harvesting active central coast. Growth safflower good San Joaquin Valley. Planting lima beans south coast. Spraying, irrigating, cultivating, thinning deciduous fruit, nut crops. Grapes suffered light frost damage Lodi area. First peaches harvested Coachella Valley. Citrus bloom began. Navel harvest wound down, Valencia harvest increased. Almond drop continued. Harvest artichokes continued heavy. Asparagus cutting active, heavy diversion to processing. Broccoli movement steady central coast, cutting started San Joaquin Valley. Cauliflower harvest increasing central coast. Lettuce harvest increasing Salinas, Santa Maria, staying heavy San Joaquin Valley, Ventura County. Grading onions started Imperial Valley. Digging spring potatoes slow Kern district waiting for skin set. Sweetpotato planting started. Strawberry harvest heavy south coast, increasing central coast, San Joaquin Valley. Early market tomatoes setting fruit. Planting late fields processing tomatoes Sacramento Valley. Spring ranges maturing. Feed abundant, excellent. Rains prolonging season. Some movement summer grass. Stock water good.

**COLORADO:** Mostly fair and dry first half week, widely scattered showers over central and eastern portions midweek with amounts generally less than 0.10 in. Temperatures 3 to 4° above normal.

Spring barley seeded 60%, 75% 1978, 78% average; emerged 34%, 41% 1978, 43% average. Oats seeded 33%, 77% 1978, 70% average; emerged 11%, 48% 1978, 42% average. Sugarbeets seeded 55%, 92% 1978, 68% average; emerged 9%, 44% 1978. Onions seeded 37%; emerged 12%. Winter wheat generally good condition. Stands very spotty; significant acreage in northeast being reseeded to spring grains. Alfalfa, range and pasture good condition. Soil moisture adequate. Livestock good condition. Calving 76% complete, lambing 51% complete. Death losses slightly below average. Fieldwork: 5.5 days suitable.

**FLORIDA:** Southeast winds prevailed on 23d and 24th. Showers with amounts less than 0.25 in. over extreme west Panhandle on 23d. Rainfall on 24th and much greater amounts on 25th, with lower southeastern coastal areas recording about 16.00 in. Slightly cooler temperatures 27th and 28th but no widespread rainfall. Thundershowers developed over south during the afternoon of 29th. Temperatures general near normal.

Soil moisture adequate west, north, south; most short central. Corn and tobacco mostly good condition. Peanut planting active. Soybean planting underway, but progress slow. Sugarcane good to excellent progress. Small grains good to excellent condition. Wheat headed. Peach prospects good. Pasture condition improved; good condition Panhandle north; fair to good central, south. Cattle, good condition. Rain helped relieve drought conditions in citrus growing areas. New growth and new crop fruit development continue. Late orange harvest slowed by rain but otherwise active. Overall vegetable crop condition southeast area sharply lowered as heavy rains flooded many fields. Acreage loss some crops was heavy. West central, southwest Everglades growing areas not damaged as rainfall generally beneficial. Fruit quality,

yields generally fair to very good. Fruit set good to very good, sizing well. Harvest continued active. Shipments up 6% from previous week. Watermelon harvest gaining. Harvest celery, sweet corn, cucumbers, escarole, okra, parsley, peppers, increased while cabbage, carrots, chinese cabbage, potatoes, radishes held steady. Snap bean, cauliflower, eggplant, lettuce, squash, strawberry, tomato supplies decreased. Commercial strawberry harvest season past seasonal peak. Watermelon harvest underway southwest but progress slow.

**GEORGIA:** Temperatures low 60's mountains to low 70's south. Extremes: 41 and 84°. Rainfall general; amounts 1.00 to over 3.50 in.

Soil moisture adequate to mostly surplus. Fieldwork: 3 days available. Land preparation delayed north. Corn fair to mostly good; 94% planted, last year 87%, average 79%. Tobacco fair to mostly good; 100% transplanted, last year 96%, average 98%. Watermelons fair to mostly good; 92% planted, 90% last year. Cotton good; 74% planted, last year 60%, average 54%; 43% up to stand, last year 26%. Soybeans 5% planted, 6% last year, average 6%. Peanuts 50% planted, last year 48%, average 46%. Sorghum 17% planted, last year 20%. Small grains good. Peaches and apples good, spraying active. Vegetables fair to good. Pastures, cattle, and hogs good.

**HAWAII:** Weather favorable. Some heavy showers Waimea district Island of Hawaii affected crop progress.

Disease in leafy crops expected. Day temperature, humidity high, evenings rather cool. Insects increasing; frequent spraying keeping damage minimal. Vegetable supplies increasing. Banana and papaya supplies light. Orchards improving. Pineapple harvesting steady. Pastures generally fair to good.

**IDAHO:** Temperatures near normal. Precipitation generally below normal.

Fieldwork active in most southern areas, limited in northern areas. Seeding behind last two years and below normal. Spring wheat 50% seeded, last year 55%, normal 50%; spring barley 40%, last year 50%, normal 50%. Sugarbeets 65% planted. Potatoes 10% planted, 25% last year. Soil moisture mostly adequate except some shortages south central. Calving and lambing nearing completion.

**ILLINOIS:** Temperatures 2 to 4° below normal. Precipitation 1.00 to 4.00 in., trace of snow north. Soil moisture surplus. Winter wheat good. Corn 1% planted, 6% last year, 19% average. Oats seeding 70% complete, 71% last year, 93% average. Alfalfa good. Plowing 1979 corn, soybeans 75% complete, 65% last year, 87% average. Apples good. Peaches fair to good. Pastures good. Fieldwork: 1.3 days suitable.

**INDIANA:** Numerous showery days; cool, and cloudy. Temperatures 3° below normal and ranged from 26 to 76°. Rainfall 2.20 in. north, 1.00 in. southwest, and 0.50 central and southeast. Soil temperatures in 50's. Solar radiation 20 to 50% of possible.

Fieldwork averaged 3 days. Topsoil and subsoil moisture adequate to surplus. Spring cropland 75% plowed, 1978 55%, average 75%. Few corn fields planted, 1978 same, average 10%. Oats 65% seeded, 1978 45%, average 80%. Clover 85% seeded, 1978 60%, average 85%. Wheat 7 in. high, 1978 5 in., average 9 in. Wheat condition fair to mostly good. Wheat 25% joint stage, 1978 10%. Cantaloup 15% planted. Watermelons 30% planted.

**IOWA:** Cold with considerable cloudiness and frequent showers.

Topsoil and subsoil moisture adequate to surplus. Plowing: 66% completed, last year 56%, normal 79%. Oat acreage seeded 58%, last year 65%, normal 79%. Fertilizer applied 58%, last year 47%. Corn acreage planted: na, last year 2%, normal 11%. Fieldwork: 2.0 days suitable.

**KANSAS:** Precipitation ranged from mostly none west to less than 0.25 in. central and east. Temperatures ranged from 54 to 59°; 2 to 3° below normal to 2° above normal.

Fieldwork: 5 days suitable. Corn planted 10%, last year 15%, average 15%. Oat seeding 80% complete, last year 85%, average 90%. Barley seeding 95%, last year 95%, average 90%. Wheat development behind average; 40% acreage jointing, last year 50%, average 70%. Soil moisture mostly adequate. Some shortages in west, some surpluses in east.

**KENTUCKY:** Light rain first and midweek; amounts mostly from 0.25 to 0.75 in. Temperatures above normal beginning and below normal at end, and averaged 1° below normal.

Fieldwork: 3.1 days favorable. Nine days behind normal progress but full two weeks behind in west. Soil moisture adequate to surplus. Corn 9% planted, 16% last year, 32% average. Tobacco plants up 75% size of dime or less, 20% size of quarter, 5% size of half-dollar. Barley 33% headed. Wheat just beginning to head, mostly in boot. Alfalfa 12 in. tall. Pastures excellent.

**LOUISIANA:** Temperatures 1 to 3° below normal. Extremes: 88 and 47°. Rainfall statewide.

Fieldwork: 1.3 days suitable. Soil moisture surplus. Rice 70% planted, 87% last year, 82% average; 65% emerged. Corn 77% planted, 88% last year, 79% average; 75% emerged. Cotton 8% planted, 42% last year, 33% average. Strawberry harvest slowed. Small grains and cattle fair to good. Pastures average. Oats and wheat 80% headed.

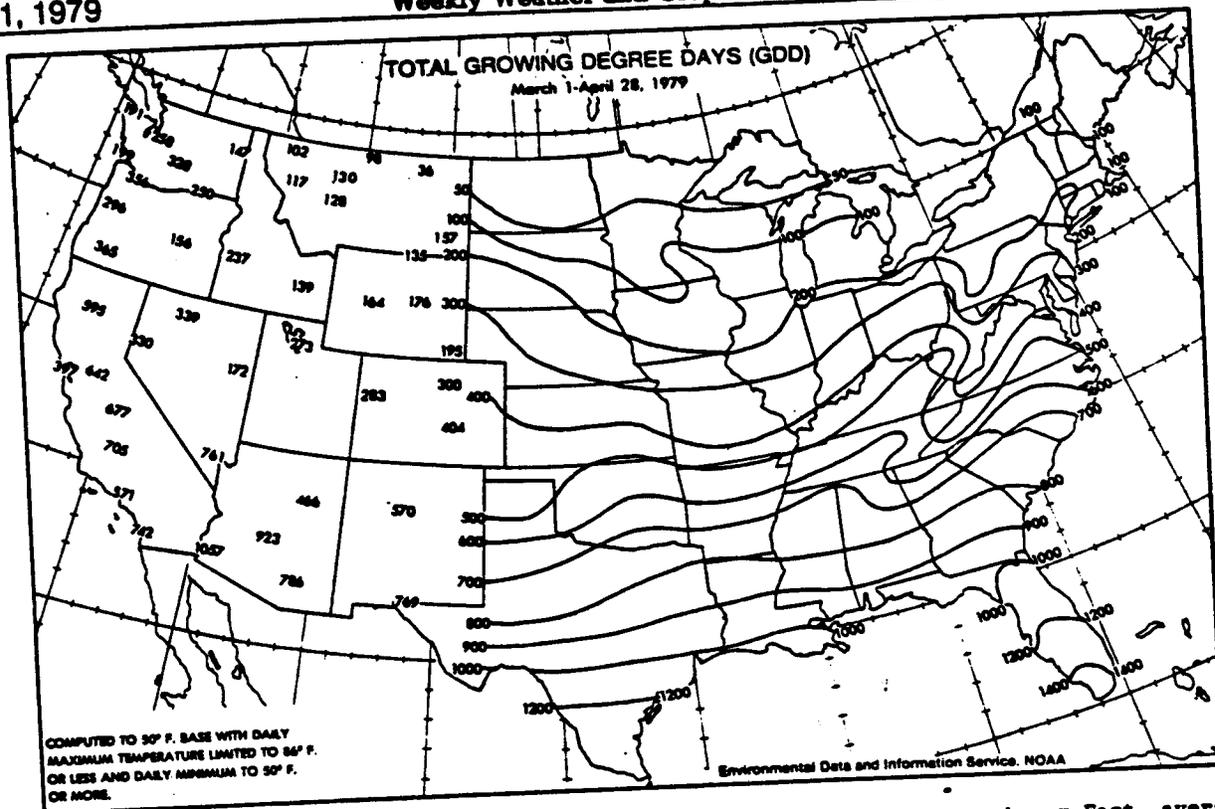
**MARYLAND & DELAWARE:** Temperatures 5° above normal. Highs in low 70's and lows in mid-50's. Precipitation light; about 1.00 in.

Fieldwork: 5.4 days suitable. Soil moisture adequate. Pastures supplying average amounts of feed. Plowing for corn over 75% completed. Some early corn planted. Vegetable planting continued with sweet corn, tomatoes and watermelons. Tobacco beds doing fine. Apples and strawberries in full bloom.

**MICHIGAN:** Temperatures 5° below to 4° above normal. Maximum readings in 70's, minimums in 20's. Precipitation ranged from 0.12 in. Keweenaw Peninsula, to near 2.75 in. southwest.

Fieldwork: 2 days suitable. Plowing 45% complete, 30% last year, 45% normal. Corn 1% planted, 2% last year, 5% normal; 3% last year's corn crop still to be harvested. Fertilizer and motor fuel supplies mainly adequate. Soil moisture adequate to mostly surplus. Winter wheat damage below average to average. Oats planted 25%, 15% last spring, 50% normal. Some barley also seeded. Sugarbeets 15% planted, 45% last season, 60% normal. Potatoes 5% planted, 7% last year, 15% normal. Apples and peaches green tip to dormant stage. Sweet and tart cherries green tip. Some sweet cherries in southwest blossomed. Vegetables already started include: onions, cabbage, peas, cauliflower, broccoli, strawberries, sweet corn, beets and celery. Asparagus harvest to start May 1, southeast; spears out of ground.

**MINNESOTA:** Temperatures near normal except 4 to 7° subnormal north central and northwest. Extremes:



78 and 20°. Precipitation near normal south, 0.50 to 0.65 in. subnormal central through northeast and 0.50 to 1.75 in. above normal northwest and extreme north central. Precipitation totals less than 0.50 in. central through northeast and 0.50 to 1.00 in. elsewhere except 1.00 to 2.28 in. northwest and extreme north central. Weekly snowfall, trace in south to 0.50 in. some northern sections. Snow depth trace in north.

Wet fields continued to prevent full-scale fieldwork. Few small grain fields seeded southern half, no other planting last week. Topsoil moisture adequate to surplus across central, south central, southeast; surplus elsewhere. Planted: Spring wheat 1%, 1978 5%, normal 37%; oats 7%, 1978 11%, normal 43%; barley 0%, 1978 3%, normal 28%; corn 0%, 1978 1%, normal 7%; green peas for processing 5%, 1978 9%, normal 31%; sugarbeets 0%, 1978 8%, normal 25%; potatoes 0%, 1978 1%, normal 7%.

**MISSISSIPPI:** Temperatures slightly below normal. Rain most areas on 3 days, up to 5 days many areas. Cool and mostly dry late week.

Soil moisture surplus to excessive. Fieldwork: 0.9 days suitable. Rain and cool, cloudy weather further delayed planting, land preparation. Cotton 7% planted, 45% 1978, 33% average; 3% up to stand, 5% 1978, 6% average. Soybeans less than 1% planted, 3% 1978, 2% average. Rice 21% planted, 86% 1978, 66% average; 9% up to stand, 36% 1978, 23% average. Corn fair to good condition; 52% planted, 73% 1978, 60% average; 38% up to stand, 50% 1978. Winter wheat good to fair condition; 74% headed, 67% 1978; 2% ripe, 5% 1978. Peanuts 1% planted, 27% 1978. Sorghum 3% planted, 4% 1978, 5% average. Sweetpotatoes 5% planted, 8% 1978, 7% average. Watermelon 76% planted. Pastures and peaches good condition.

**MISSOURI:** Precipitation heavy East, averaging 1.50 to over 3.00 in.. 0.50 to 1.00 in. West. Temperatures near normal Bootheel. 4° below normal elsewhere.

Fieldwork: 1.3 days suitable. Plowing 64% complete, last year 31%, normal 70%. Oats 44% sown, last year 33%, normal 79%. Corn 5% planted, last year 9%, normal 34%. Cotton 3% planted, last year 15%, normal 19%. Grain sorghum 1% planted, last year 3%, normal 6%. Condition of winter wheat and pasture mostly fair to good. Soil moisture mostly surplus.

**MONTANA:** Wet, west and southeast escaped with least precipitation, while portions of north central and northeast had heavy rainfall. Temperatures mild with large changes in maximum temperature during rainy days as compared to dry days---as much as 30°. Overall, temperatures 1° above normal west of Divide to as much as 6° below in northeast and southeast. Elsewhere temperatures 2 to 4° below normal.

Soil moisture adequate. Fieldwork: 1.5 days suitable. Winter wheat condition fair, winterkill moderate. Planting progress: Spring wheat less than 5%, 25% 1978, 35% average. Barley less than 5%, 25% 1978, 40% average. Oats less than 5%, 20% 1978, 35% average. Sugarbeets 30%, 60% 1978, 55% average. Livestock good condition, 70% on supplemental feed. Calving 85% complete, lambing 80%. Shearing 65% complete.

**NEBRASKA:** Temperatures 3 to 5° below normal except Panhandle temperatures near normal. Precipitation 0.12 in. west to near 1.00 in. east central and southeast.

Winter wheat condition fair to good. Oats planting 90% complete, 65% year ago, 80% normal. Barley seeding 75% complete, 65% year ago, normal

85%. Corn planting less than 5%, same as year ago and normal. Sugarbeet planting near completion. Soil moisture adequate. Pasture growth slow due to cool weather. Fieldwork: 4.6 days suitable.

NEVADA: Precipitation early in period and near end. Temperatures 1° above normal northwest, 2 to 3° above elsewhere. Extremes: 92 and 17°. Seedbed preparation and seeding slowed by showers. Low night temperatures not favorable to vegetative growth. Calving and lambing showing good progress.

NEW ENGLAND: Precipitation scattered 23d through 25th and 29th. General rains 26th through 28th gave 2.00 to 3.25 in. to eastern areas and 1.00 to 2.00 in. elsewhere. Temperatures 4 to 8° above normal 23d through 25th and 8 to 18° above 26th through 28th and 3 to 10° above on 29th.

NEW JERSEY: Temperatures 2 to 4° above normal. Extremes: 32 and 78°. Rainfall 1.50 in. north, 1.16 in. central and 1.40 in. south. Soil temperature 54° north, 57° central and south.

Fieldwork: 5 days suitable. Soil moisture generally adequate. Soil preparation and planting active. Asparagus harvest increasing, "greens" moving to market. Peaches in petal fall stage in south and central areas, blooming in north. Apples in heavy bloom. Strawberry bloom beginning. Wheat, rye and barley look good. Hay crops growing nicely. Pasture growth increased.

NEW MEXICO: Scattered, light showers mostly eastern plains sections early week and again weekend. Rainfall generally less than 0.50 in.

Mostly open weather permitted outdoor activity to proceed unhampered. Alfalfa, wheat, barley, lettuce and onions good. Limited alfalfa on 1st cutting in extreme south. Corn and cotton planting active. Cotton nearing 50% planted. Early corn and Irish potatoes up. Pecans full bloom. Pastures fair, livestock good.

NEW YORK: Temperatures 4 to 10° above normal. Extremes: 82 and 24°. Rainfall below normal in west, above normal central and east.

More plowing activity. Oat planting 10% complete, 20% 1978. Corn planting just starting. Pastures and hay greening. Planting of vegetable crops moving ahead in all areas. Western apples half inch green tip to pink stage. Champlain Valley apple buds green tip or earlier.

NORTH CAROLINA: Temperatures 2 to 5° above normal. Precipitation east 1.00 to 2.00 in. Elsewhere 2.00 to 4.00 in.

Fieldwork: 4.4 days suitable. Soil moisture adequate. Condition of small grains, pasture, tobacco beds, Irish potatoes and truck crops fair to mostly good. Tobacco in fields mostly fair to good. Vegetables fair to good. Planted: Flue-cured tobacco 35%, 1978 16%, average 32%; corn 82%, 1978 80%, average 70%; sorghum 14%, 1978 14%; peanuts 6%, 1978 6%, average 10%; cotton 49%, 1978 35%, average 34%; soybeans just getting underway; watermelons 60%; spring cucumbers 95%.

NORTH DAKOTA: Cold and damp. Temperatures 4 to 8° below normal. Extremes: 70 and 23°. Rain or wet snow statewide. Precipitation extremes 1.30 in. northwest and east central to 1.10 in. southwest.

Start on fieldwork further delayed. Only limited amounts south. With good weather fieldwork could be more general south later in week. Farther north will be delayed 2 to 3 more weeks. Flood damage to stored grain considerable particu-

larly east central and northeast. Hard red spring wheat seeded none, 1978 3%, average 19%.

OHIO: Highs in 70's, minimum 30's, on weekend some frost north. Rainfall totaled under 1.00 in. Poor drying conditions.

Heavy soils remained too wet to plant but were fitted and fertilized. Oat condition good. Wheat condition fair to good. Some poor fields not responding to drying soils. Warm weather needed. Topdressing active northern areas. Leafy vegetables being seeded or transplanted in Celeryville area. Direct seeding tomatoes underway. Corn planted 10%, 15% 1978, 20% average. Sugarbeets planted 15%, 20% 1978, 80% average. Oats planted 60%, 60% 1978, 80% average. Oats emerged 10%. Height of wheat 7 in., 5 in. 1978. Wheat jointed less than 5%. Fieldwork: 4 days favorable. Pasture condition good. Soil moisture adequate to surplus.

OKLAHOMA: Temperatures near normal Panhandle, below normal elsewhere. Range was 2° below normal northeast to 6° below normal southwest and south central. Below normal averages caused by much below normal temperatures 27th and 28th. Light precipitation; mostly near 0.25 in.

Open spring weather enabled wheat and other small grains to make excellent progress. Wheat growing exceptionally well except Panhandle where numerous dryland fields showing blue cast due to low moisture. Wheat 95% jointing, 90% 1978, 100% average; 15% headed, 15% 1978, 35% average. Pastures and ranges growing rapidly and providing lush grazing. Fieldwork: 5.6 days suitable.

OREGON: Temperatures near seasonal norm, warming trend at weekend. Maximums upper 60's and 70's; minimums 30's and upper 20's. Precipitation 0.25 in. along coast, well below seasonal normal, elsewhere 0.30 to 0.80 in., well above normal for east.

Fieldwork continued as rain permitted. Grain seeding about complete. Summer fallowing as weather permits. Beginning planting field and cannery corn, also some beans west. Fertilizing continuing, spraying of orchards continued. Strawberries and apples blooming. Rains damaged some cherry blooms. Livestock condition good. Pastures beginning to show more life as ground warms.

PENNSYLVANIA: Sunny, warm until midweek, showers end of week. High temperatures mid-70's to 80's; overnight lows 40's to 50's beginning of period; mid-60's to mid-30's end of period. Extremes: 83 and 25°. Rainfall 0.50 to 2.00 in. with greatest amounts in east and southeast.

Fieldwork: 5 days suitable. Soil moisture adequate. Activities: Discing; plowing; spreading lime, manure, fertilizer; spraying; fence repair; planting oats, corn, potatoes, alfalfa, pulling asparagus. Plowing 56%, last year 55%. Oats 54% planted, same last year. Potatoes 30% planted, last year 27%. Tobacco beds sown. Corn 5% planted, same last year, 8% normal. Barley 5% boot, last year 0. Wheat under 5% boot, last year 0. Hay condition good. Fruit 2 weeks ahead of last year. Peaches 33% pink, 33% full or past. Cherries 20% pink, 45% full or past. Apples 33% pink, 10% full or past.

PUERTO RICO: Island average rainfall 2.28 in. or 1.03 in. above normal. Temperatures averaged about 78° on coasts and 72° interior. Extremes: 93 and 57°.

SOUTH CAROLINA: Weather near seasonal normals except becoming little cooler 29th. General rains

midweek. All rivers, streams rose, some minor flooding.

Soil moisture adequate to surplus. Fieldwork: 3.5 days suitable. Corn condition good; 92% planted, 93% last year, 86% average. Cotton stands fair to good; 79% planted, 53% last year, 58% average. Soybeans 2% planted, 3% last year. Tobacco condition good; 92% planted, 82% last year, 87% average. Planting completion snap beans 94%, all cucumbers and tomatoes 97%; vegetables good condition. Cabbage 1% harvested; condition good. Peaches, apples good condition, fruit set heavy, some frost injury now evident. Pasture condition good. Grain hay 19% harvested, 15% last year, 22% average.

**SOUTH DAKOTA:** Temperatures warm early week but turned cool, averaging normal to 7° below normal. Extremes: 18 to 85°. Precipitation in the form of rain and snow statewide, ranging from less than 0.15 to 0.63 in.

Fieldwork: 3 days suitable; behind. Winter wheat rated fair. Oats seeded 30%, 1978 17%, average 58%. Barley seeded 20%, 1978 7%, average 51%. Spring wheat 18%, 1978 10%, average 57%.

**TENNESSEE:** Rain early week. Amounts 2.00 in. west, 0.75 in. east. Temperatures 2 to 4° below normal.

Fieldwork: 2.0 days suitable. Soil moisture surplus. Spring plowing 58% complete, 1978 79%, average 74%. Corn planted 20%, 1978 44%, average 38%. Cotton planted 5%, 1978 19%, average 23%. Wheat headed 10%, 1978 16%, average 37%. Oats headed 13%, 1978 18%, average 26%. Barley headed 19%, 1978 43%, average 47%. Pastures and cattle good. Small grains fair. Tobacco plant beds growing slow. Snap bean planting slowed by wet fields. Tent caterpillar in fruit trees.

**TEXAS:** Cloudiness over northeast corner early week gave way to fair weather 24th. Cold front 25th and 26th with cooler temperatures and little rain. Weekend heavy rains over south. Scattered showers and few thunderstorms occurred late week over Panhandle and parts of west and north. Rainfall averaged near 0.10 in. over far west to above 1.00 in. over central coast, north, and northeast. Temperatures near normal to slightly above normal; however, east 12° above normal and far south 5° above normal.

Land preparation and planting moved at brisk pace in central and west while most of east either drying or experiencing additional moisture. Rains needed parts of High and Low Plains where isolated wheat fields showing signs of moisture stress. Cotton planting began on High Plains while planting active in Blacklands and south central. Low Plains awaiting warmer soil while east and some coastal areas awaiting drier conditions. Early planted cotton squaring in many fields in south and lower Rio Grande Valley. Good stands and growth noted on earlier planted fields in central and south. Many fields south sprayed for aphids and flea-hoppers. Corn planting gained momentum on Plains. Excellent stands noted as warmer weather enhanced growth. Corn began to tassel throughout lower Rio Grande Valley. Some early planted sorghum beginning to emerge in Lubbock area as plantings began on southern High Plains. Rain and wet fields continued delay planting east. Excellent stands noted on early plantings. Limited greenbug build-up noted while armyworms present a problem south. Wheat approaching maturity in south. Oat fields nearing maturity in Blacklands and south. Many oat fields being cut for hay. Peanut planting progressed as far north as southern Low Plains. As soils warm, activity will increase. Rice

plantings behind schedule as rice belt dries out. Sugarbeet planting began to wind down on High Plains. Irrigation noted on earlier seeded fields. Alfalfa harvest continued in Trans-Pecos; other hay being baled in Cross-Timbers while farmers fertilizing meadows in east when weather permitted. Corn planted 63%, 71% 1978, 72% average. Cotton planted 17%, 26% 1978, 20% average. Peanuts planted 9%, 14% 1978, 16% average. Rice planted 73%, 97% 1978, 94% average. Sorghum planted 56%, 66% 1978, 61% average. Sugarbeets planted 93%, 98% 1978, 92% average. Sunflowers planted 1%, 0% 1978, 5% average.

Cabbage, carrot, potato, onion harvests active except where rain and wet conditions interrupted field activities. Melons blooming and bee colonies moved into fields for pollination. Tomatoes making good progress. Vegetables in south received severe damage from rains and floods, replanting necessary. High Plains onion, potato planting completed; irrigation active and growth on earlier plantings favorable. Peach crop in Hill Country and south continued to size well. Trees beginning to set fruit in north and east. Damage from early April freeze on High Plains has become evident and crop will be reduced. Pecan nutlet clusters beginning to form on trees south central. Other areas, trees in various stages of catkin and leaf development, pre-pollination and zinc spraying active.

**UTAH:** No precipitation. Temperatures near normal to 6° above normal and 3° below normal.

High winds dried most of State. Irrigation starting. Livestock moving to spring range. Calving, lambing past peak. No serious freeze damage to fruit. Fieldwork: 6.5 days suitable. Spring wheat and barley 65% planted. Other crops gearing up to be planted.

**VIRGINIA:** Statewide rain, mostly second half of period, average 1.00 in. Above normal temperatures with average 63°.

Topsoil moisture mostly adequate to surplus. Fieldwork slowed by rain. Seeding progress: Corn 37%, 45% 1978, 40% usual; soybeans 3%, 3% 1978, 3% average; peanuts 5%, 5% 1978, 7% usual; cotton 50%, 75% 1978. Wheat, pasture, corn, tobacco, fruit good. Wet, cool weather promoted small grain and pasture growth. Fieldwork: 3.7 days suitable.

**WASHINGTON:** West: Temperatures 3 to 7° above normal. Precipitation 0.20 to 1.30 in. below normal.

Harvest of field rhubarb at peak. Green pea, carrot, broccoli seeding active. Corn planting just getting started. Berries making good growth. Raspberries showing some winter injury. Pastures making good growth. Livestock moved to full grazing. Green chopping hay continued.

East: Temperatures near normal to 2° above normal. Precipitation 0.10 in. below to 0.40 in. above normal.

Apples near full bloom in north central area. Thinning peach blooms underway. Winter injury to young apple trees evident in Yakima Valley. Green pea, bean, corn planting active. Asparagus harvest slowed early week by cool weather. Alfalfa fields showing winter injury. Weed spray, topdressing applied to grain stands. Small grain seeding continued in later areas. Calving, lambing complete. Rangeland greening.

**WEST VIRGINIA:** Temperatures well above average. Precipitation northeast below normal, above normal elsewhere. Extremes: 86 and 27°. Snow higher elevations 28th.

Fieldwork: 4.0 days suitable. Soil moisture adequate to short. Main activities: Plowing, fencing. Wheat and barley fair to good condition. Oats poor to good condition; 45% planted. Tobacco beds 82% planted, 39% emerged. Pasture and hay fair to good condition. Tent caterpillars abundant.

WISCONSIN: Week began sunny and mild but turned cool and wet after midweek. High temperatures in 60's and 70's 23d to 25th, dropped to 40's and 50's remainder of week. Extremes: 80 and 22°. Precipitation heavy in south. Showers and thunderstorms developed 25th in advance of cold front. Lowland flooding extreme southeast where more than 2.00 in. rain fell. Periods of rain mixed with snow 27th, more rain 29th. Weekly precipitation totals 1.00 to 3.00 in. except north where 0.50 or less.

Fieldwork slowed by wet weather and soft field conditions. Fieldwork: 3 days suitable. Oats 25% planted, 1978 25%, normal 40%. Little oats seeded north, some farmers finished south. Winter wheat good. Spring plowing 20% done, 1978 20%,

normal 33%. Plowing goes good except where too wet. Few large corn growers have some acreage planted, most farmers waiting for warmer and drier soils. Early potatoes and peas being planted prior to heavy rains. Strawberry beds being uncovered. Tobacco beds being steamed and seeded. Little sweet corn planted. Maple syrup season about finished, weather conditions not favorable for good sap run. Soil moisture adequate to surplus.

WYOMING: Temperatures mostly normal. Precipitation below normal.

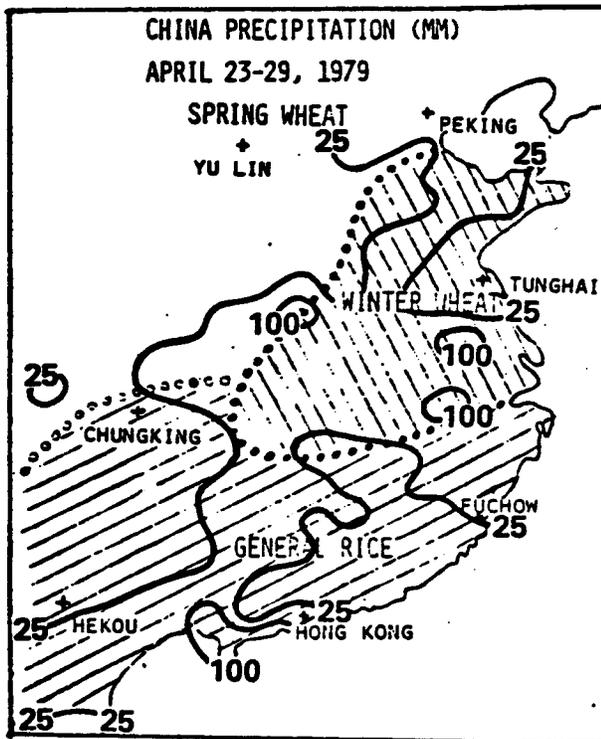
Topsoil moisture short to adequate. Acreage planted: Spring wheat 45%; oats 45%; barley 57%; sugarbeets 68%. Farmers made excellent progress planting spring crops. Fieldwork: 5 days suitable. Acreage emerged: Barley 20%; spring wheat 13%; oats 12%; sugarbeets 9%. Supplies of fertilizer adequate. Calves born 80%; range ewes lambed 45%; farm flock ewes lambed 85%; range sheep shorn 59%; farm flock shorn 85%. Cattle and sheep losses average to slightly above normal.

World Weather and Crop Update

April 23 - 29

USSR. Most of the grain-producing areas of the Ukraine and the Volga River region enjoyed a clear week which should have permitted the first full week of fieldwork this spring. However, the western quarter of the Ukraine and the Balkan States all received at least 25 mm of rain, which interfered with the planting of potatoes and late spring grains. Showers dampened the New Lands, where planting of spring grains will be starting in 2 to 3 weeks. Soil moisture should be better than average for seeding.

CHINA. Heavy rains fell through the central portions of China again, but much of the winter wheat area received only light moisture. A tongue of heavy moisture covered the eastern part of the wheat and cotton areas and reached up into the spring wheat regions, where seeding will begin shortly. The southwestern rice-growing region, which has reported dry conditions, failed to receive any significant moisture.



**INDIA-SOUTHEAST ASIA.** Precipitation over India was limited to the southern states, while clear, hot conditions prevailed over the north, where the harvest of winter wheat is now underway. Dry conditions should prevail through the harvest period under normal conditions. In Southeast Asia, generous rains fell over the eastern portions with 25 mm and more common.

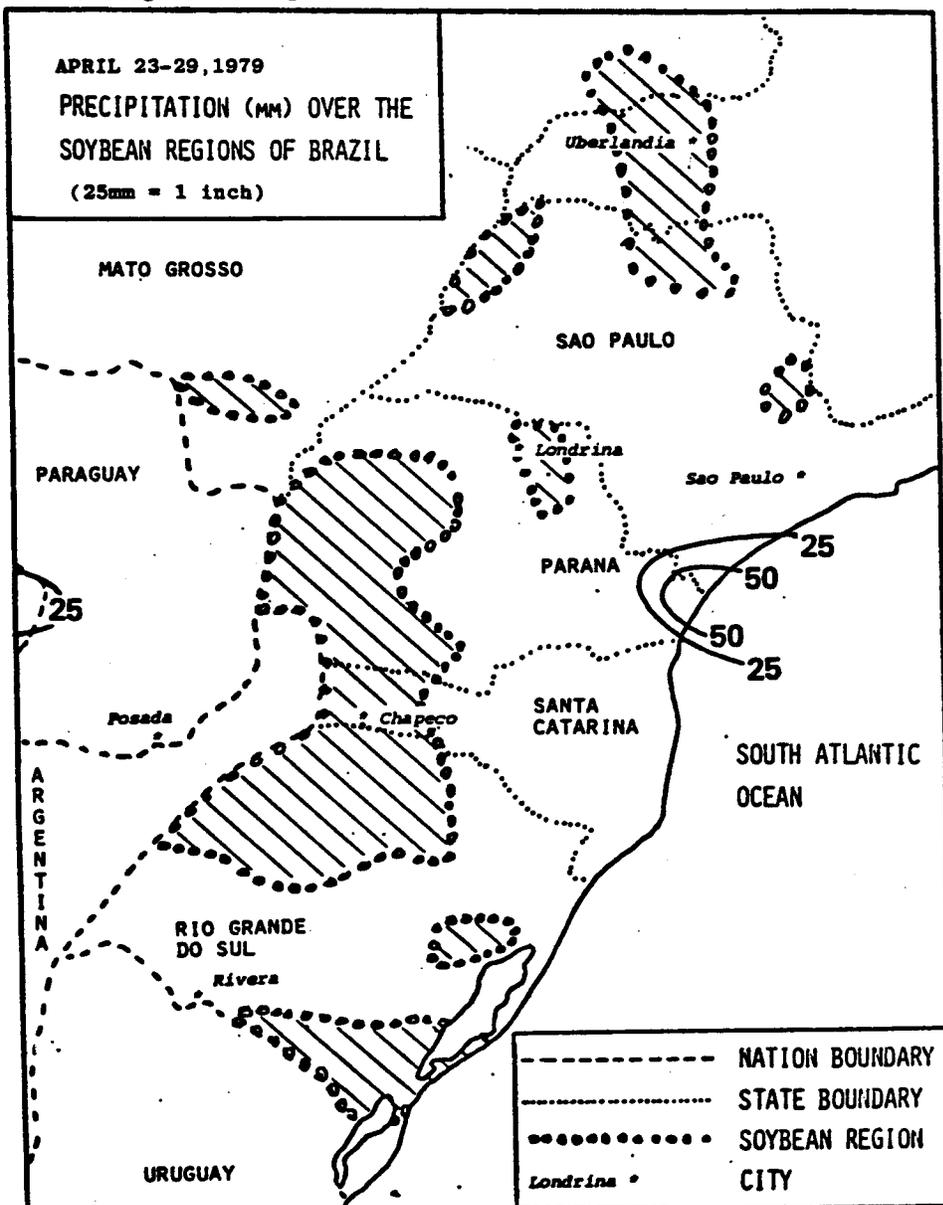
**AFRICA.** Northern Africa was dry except for scattered showers over the winter wheat region of Tunisia. The winter wheat harvest got underway in Morocco where dry conditions prevailed. Rains continued to pick up along the southern coastal regions of the Sahel with amounts commonly in excess of 25 mm. Only scattered precipitation fell in the Maize Triangle of South Africa.

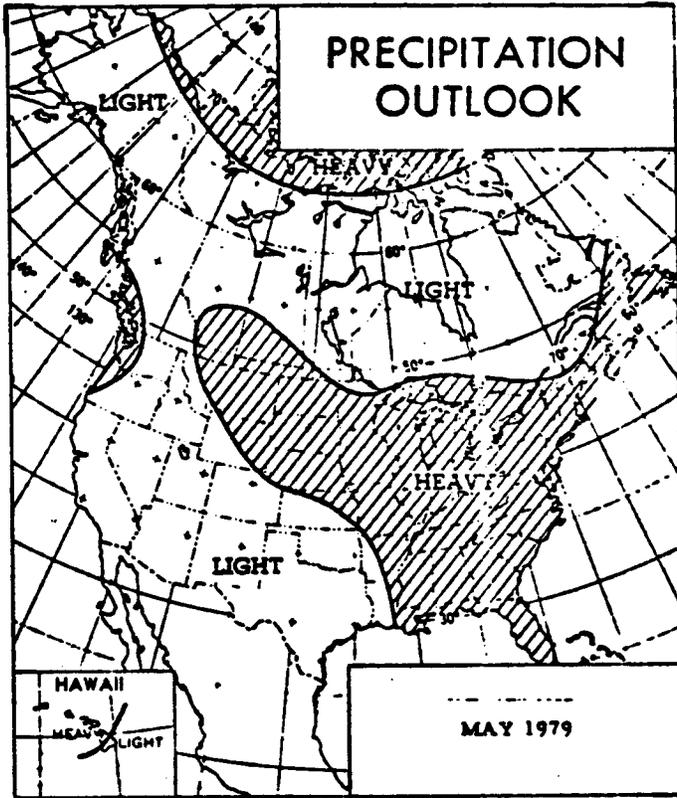
**EUROPE.** Precipitation over nearly all of Europe was either well below or well above normal levels. Poland, East Germany, and most of West Germany received only light amounts (less than 10 mm), which permitted fieldwork to continue. No moisture fell in Spain or Portugal. A range of 30 to

70 mm fell over much of France, southern England, and much of southeastern Europe. This moisture not only hindered fieldwork last week, but will force a slow start this week because of wet fields.

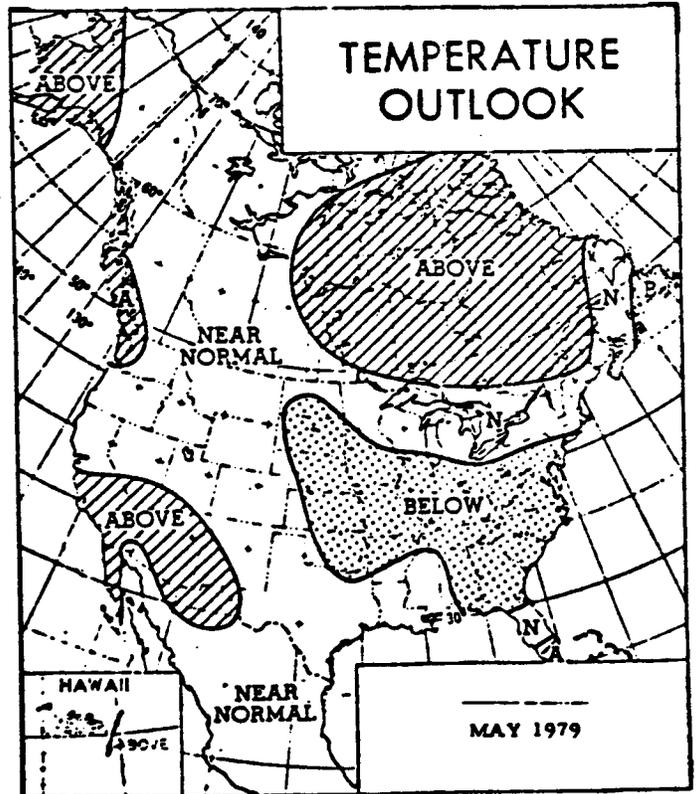
**SOUTH AMERICA.** The last significant moisture over the soybean-producing areas of Brazil occurred on April 20. The ten-day period since then should have permitted rapid harvest progress under ideal conditions. In Argentina, most of the precipitation occurred in the southern portion of the grains areas, where winter wheat seeding should begin shortly.

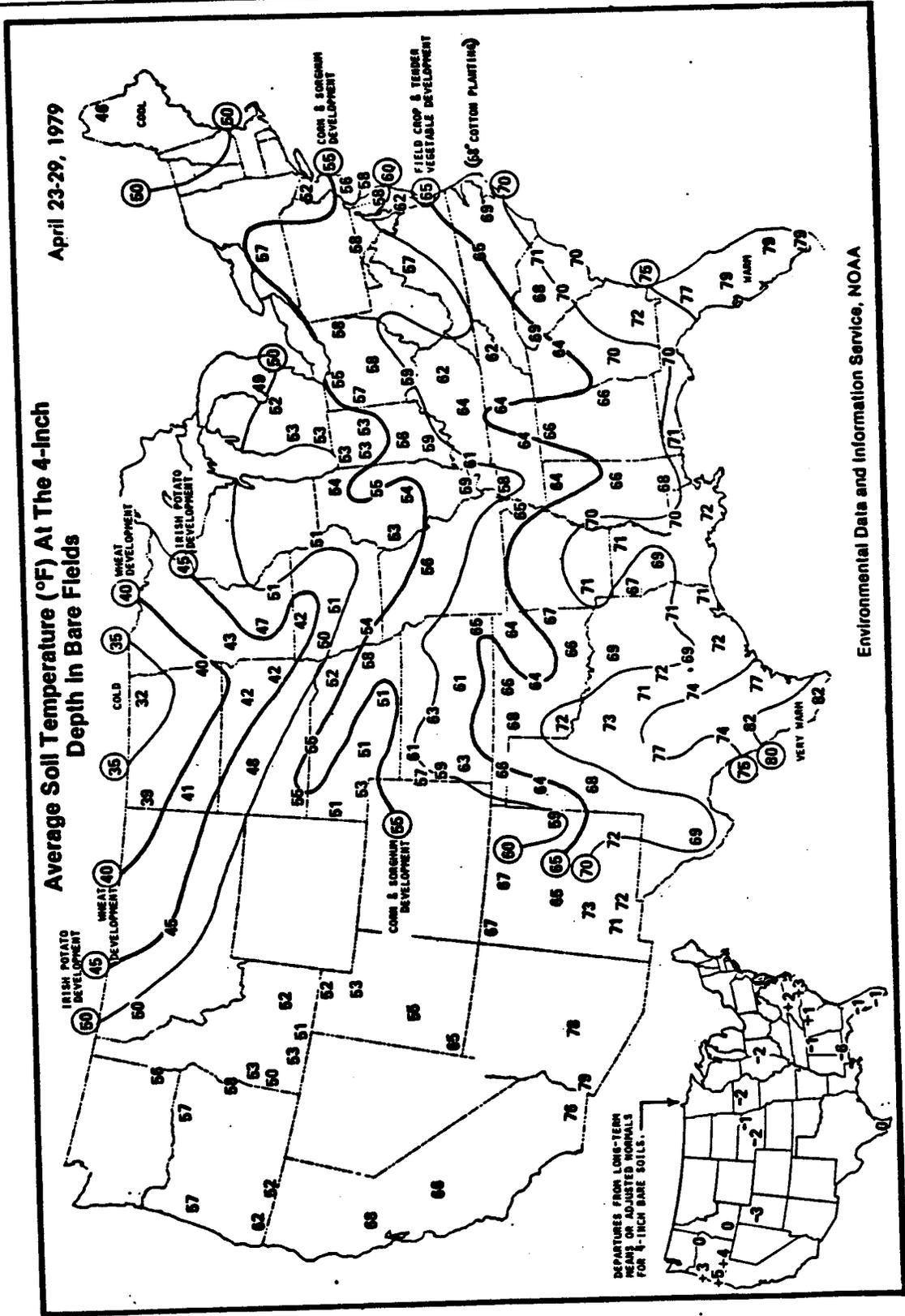
**MEXICO.** Heavy rains (90 to 180 mm) fell over portions of the Vera Cruz-Jalapa citrus areas, while Montemorelos and Rio Verde had only a few light showers. Strawberries had mostly warm, dry weather in the Zamora-Irapuato area. Temperature maxima reached 25 to 28°C and minima, 12 to 15°C; a few sprinkles of rain fell in the higher elevations. Culican tomato and other west coast vegetable areas were generally sunny and warm; maxima showed 30 to 35°C and minima, 15 to 18°C.

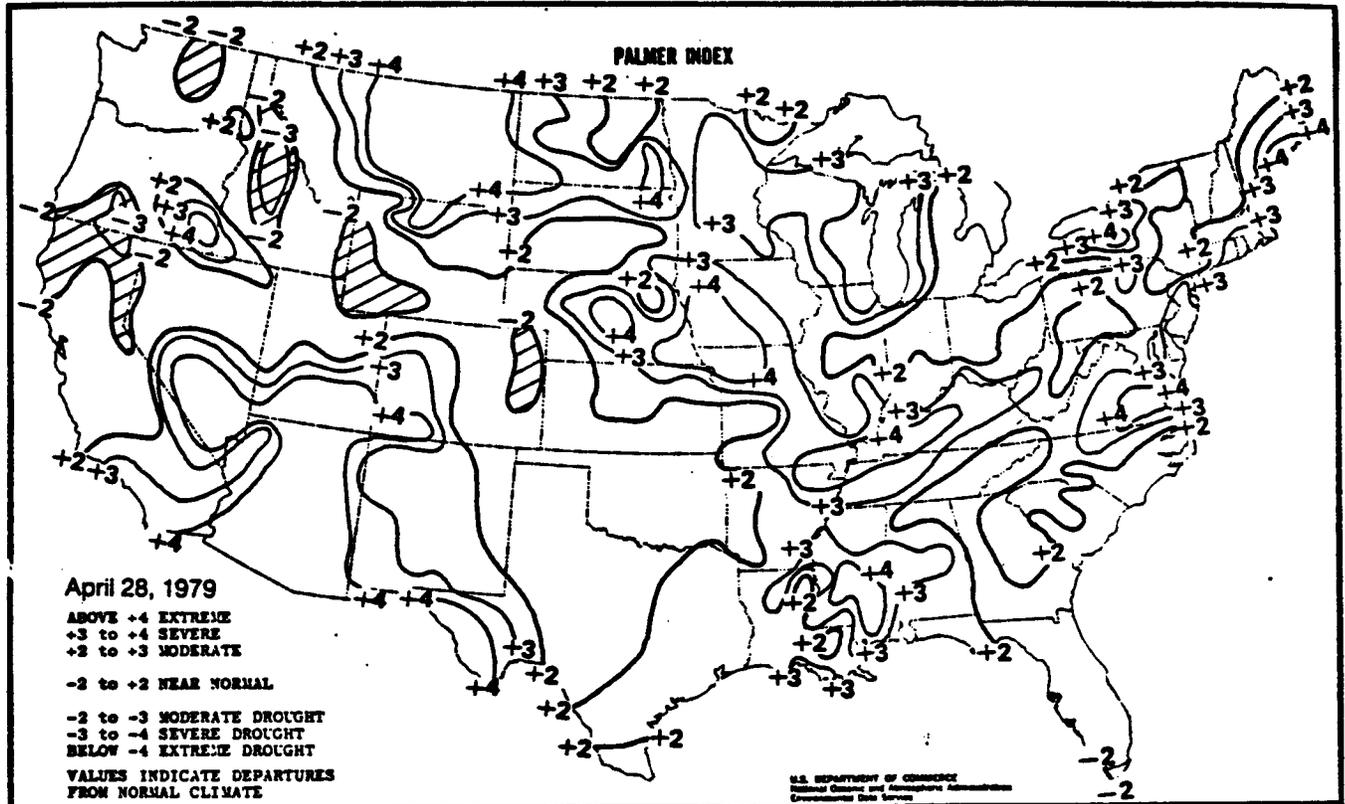




Average Monthly Weather Outlook







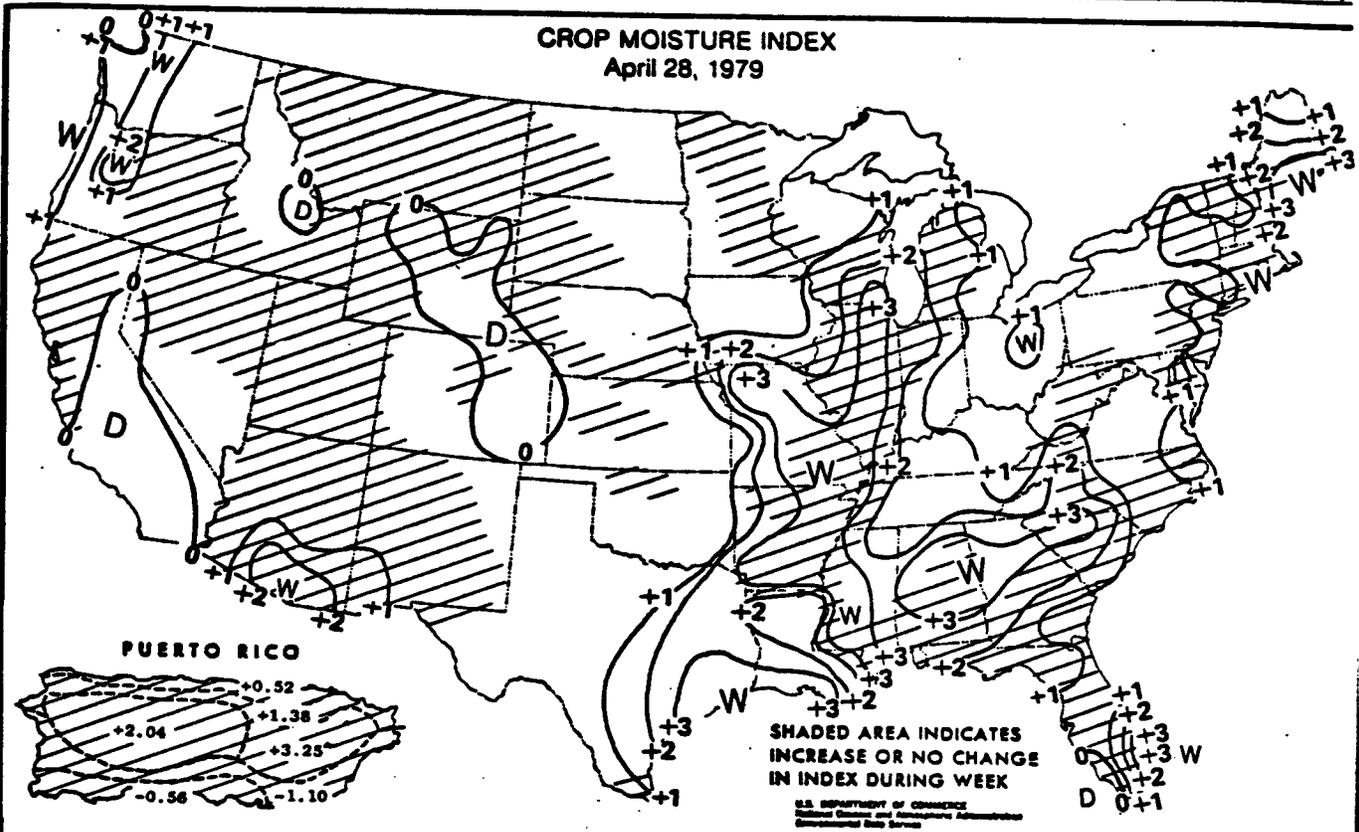
The Palmer Index

The Palmer Index is an index of meteorological drought, which may be defined as a prolonged and abnormal moisture deficiency. The general concept is one of supply and demand. Supply is represented by precipitation and stored soil moisture. Demand is the combination of potential evapotranspiration, the amount needed to recharge the soil moisture, and the runoff needed to keep the rivers, lakes, and reservoirs at a normal level. The results of this water balance accounting produce a positive or negative anomaly which is then weighted by a climate factor. The final product is an index that expresses the abnormality for that particular place for the period of time being computed. This manipulation allows the index to have a reasonably comparable local significance in space and time, that is, a certain index value obtained for a division in New York would have the same local significance as a like value in the more arid areas of western Kansas. This monthly increment is added to a portion of the previous month's index to include the duration of the anomaly in the final index.

The Palmer Index was designed as a climatological indicator of the scope and severity of past droughts. Using the Palmer Index on a real-time basis presents difficulties. A day or so of normal or better rainfall is certainly welcome in an area that has experienced a long drought, but one cannot know whether it indicates the end of the drought or just a brief respite. In order to

make the program have some real-time value, a system of computing a "probability" that a weather spell has ended was devised. This is not entirely satisfactory, but does allow one to assign a definite index value at times when there may be some doubt as to whether it should be positive (wet) or negative (dry).

Another aspect of using the Palmer Index is that one must remember that the demand part of the computations includes three parameters---potential evapotranspiration, recharge of soil moisture, and runoff, any one of which may produce a negative index. For instance if only enough rain fell to satisfy most of the expected evapotranspiration, but not enough to supply the expected recharge and runoff, then a negative index would result. If such a situation continued then one might find that agriculture was progressing at a near normal pace but the Palmer Index would be indicating a worsening drought. In this situation the drought would cause shallow wells and springs to go dry and the levels of rivers, lakes and reservoirs to fall below normal and, if this odd situation continued long enough, would cause serious economic stress to the livestock industry and eventually to other industries and cities. Then if rainfall fell below the minimum needed for agriculture, crops would suffer drastic and rapid decline because there would be no reserve water in the soil. Such a situation, to some extent, occurred during the Northeast drought in the 1960's when New York City almost ran out of water.



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

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

the CMI gives a negative value. However, if moisture meets or exceeds demand the index is positive.

Shaded areas indicate the index was unchanged or increased from the previous week's value; soils dried in the unshaded areas. Centers of positive and negative areas are identified by W for wet and D for dry.

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

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

SHADED AREA: INDEX INCREASED OR DID NOT CHANGE	
ABOVE 3.0	EXCESSIVELY WET, SOME FIELDS FLOODED
2.0 to 3.0	TOO WET, SOME STANDING WATER
1.0 to 2.0	PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET
0 to 1.0	MOISTURE ADEQUATE FOR PRESENT NEEDS
0 to -1.0	PROSPECTS IMPROVED BUT RAIN STILL NEEDED
-1.0 to -2.0	SOME IMPROVEMENT BUT STILL TOO DRY
-2.0 to -3.0	DROUGHT EASED BUT STILL SERIOUS
-3.0 to -4.0	DROUGHT CONTINUED, RAIN URGENTLY NEEDED
BELOW -4.0	NOT ENOUGH RAIN, STILL EXTREMELY DRY

CROP MOISTURE IS AT LEAST ADEQUATE IN ALL OF THE NATION AS OF MAP TIME. SOUTHERN CALIFORNIA IS BEGINNING TO DRY BUT CROP MOISTURE IS STILL ADEQUATE. THE SAME CONDITION IS DEVELOPING IN MUCH OF WYOMING. IN FLORIDA THE SOUTHEAST COAST WENT FROM DRY TO EXCESSIVELY WET DUE TO THE TORRENTIAL RAINS THERE EARLY IN THE WEEK. SOUTHWESTERN FLORIDA SHOWED SOME DRYNESS AT MAP TIME BUT SUBSEQUENT RAIN HAS PROBABLY ELIMINATED THAT CONDITION. AN EXCESSIVELY WET AREA EXISTS FROM THE MISSISSIPPI DELTA TO LAKE MICHIGAN AND FROM SOUTHEAST TEXAS TO THE SOUTHERN APPALACHIANS.

(continued from page 3)

**PASTURES AND LIVESTOCK:** Grasslands rated good and improving throughout the Nation. Forage crops grew fast especially across the South. Rains prolonged the spring season in California producing abundant growth. Cattle made weight gains on the lush grass growth. Only Montana reported most

cattle on supplemental feed. Calving moved well past peak and ranged from 76 to 100% complete. Lambing ranged from 51 to 85% complete. Losses of newborn lambs and calves were not unusual. Cattle continued to move to summer ranges.

IMMEDIATE - U. S. Weather Report  
This Report Will be Treated in All Respects as Letter Mail

POSTAGE AND FEES PAID  
U.S. DEPARTMENT OF COMMERCE



CON 210

FIRST CLASS MAIL

SEEDING PROGRESS  
FOR WEEK ENDING APRIL 29

	CORN		
	1979	1978	AVG.
COLO	0	0	0
GA	94	87	79
ILL	1	6	19
IND	1/	1/	10
IOWA	NA	2	11
KANS	10	15	15
KY	9	16	32
MICH	1	2	5
MINN	0	1	7
MO	5	9	34
NEBR	1/	1/	1/
NC	82	80	70
OHIO	10	15	20
PA	5	5	8
S DAK	0	0	0
VA	37	45	40

16 STATES 7 9 15

THESE 16 STATES PRODUCED 93%  
OF THE 1978 CORN CROP.

	SPRING WHEAT		
	1979	1978	AVG.
IDAHO	50	55	50
MINN	1	5	37
MONT	1/	25	35
N DAK	0	3	19
S DAK	18	10	57

5 STATES 5 10 31

THESE 5 STATES PRODUCED 95%  
OF THE 1978 SPRING WHEAT  
CROP EXCLUDING DURUM.

	COTTON		
	1979	1978	AVG.
ALA	20	53	45
ARIZ	80	70	NA
ARK	4	23	21
CALIF	87	NA	NA
GA	74	60	54
LA	8	42	33
MISS	7	45	33
MO	3	15	19
N MEX	50	NA	NA
NC	49	75	34
OKLA	0	0	0
SC	79	53	58
TENN	5	19	23
TEX	17	26	20

14 STATES 27 31 23  
EXCL CALIF

THESE 14 STATES PRODUCED 99%  
OF THE 1978 COTTON CROP.

	RICE		
	1979	1978	AVG.
ARK	21	60	55
CALIF	6	NA	NA
LA	70	87	82
MISS	21	86	66
TEX	73	97	94

5 STATES 37 78 72  
EXCL CALIF

THESE 5 STATES PRODUCED 99%  
OF THE 1978 RICE CROP.

1/ LESS THAN 5%

NA NOT AVAILABLE