

WEEKLY WEATHER AND CROP BULLETIN

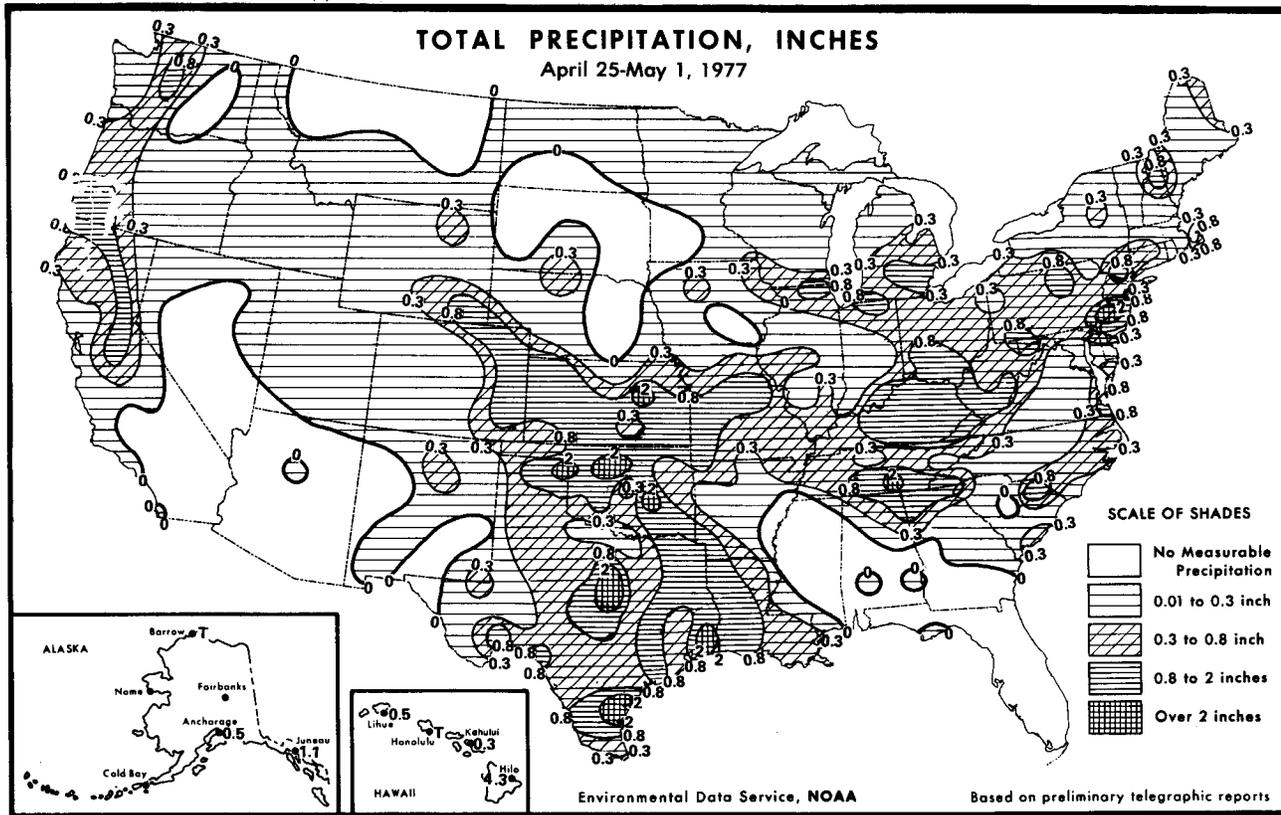
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National Weather Summary

For the Week of April 25 - May 1

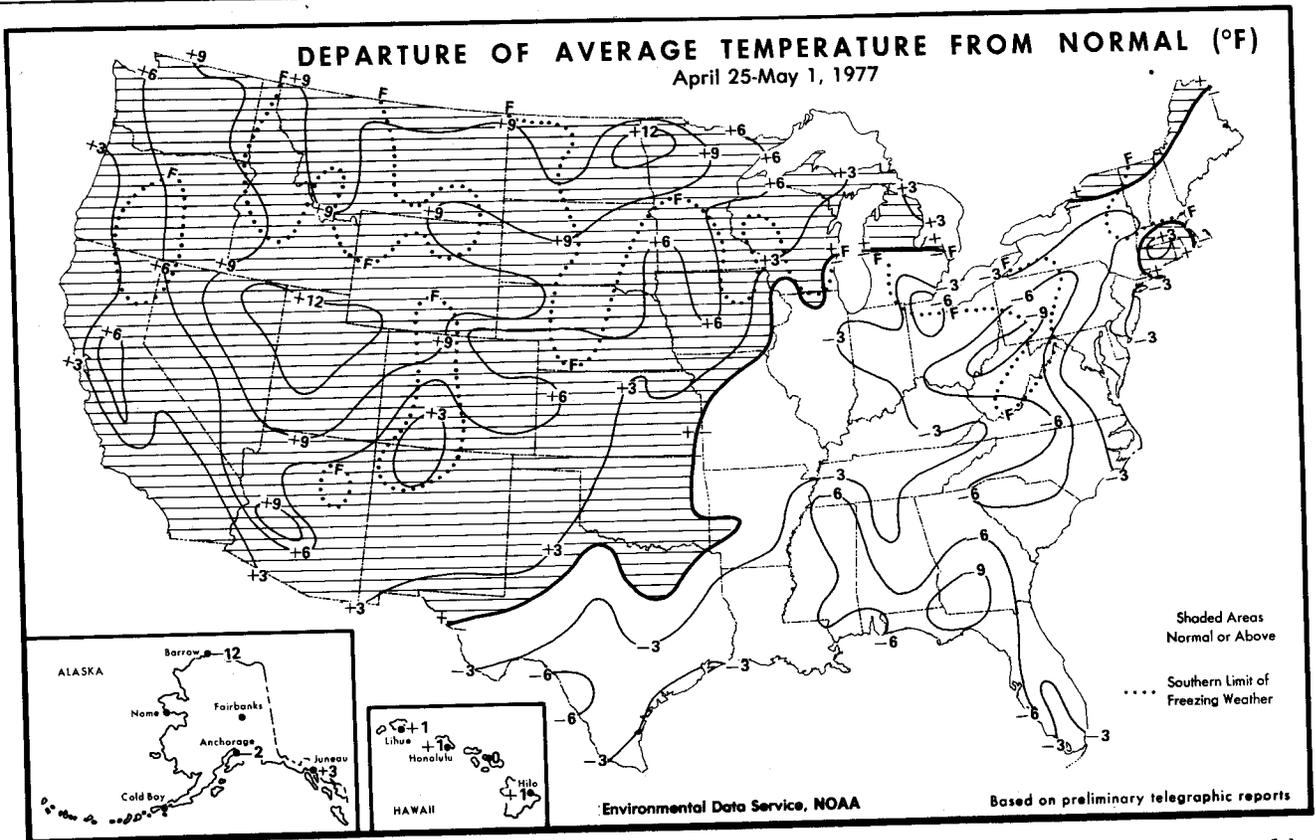
HIGHLIGHTS: The western half of the Nation experienced temperatures well above normal. The central Plateau and a portion of the upper tier of the northern Plains averaged 13° higher than expected. East of the Mississippi River, the mercury dropped lower than normal. The central Appalachians, southern Piedmont, and Florida Panhandle were 6 to 9° below average. Apalachicola, Fla., shivered through six consecutive days of record-shattering low temperatures.

Late season rainfall was welcome in the mountains of northern California and southwestern Oregon. Significant precipitation helped winter wheat farmers in the Texas and Oklahoma Panhandles, eastern Colorado, and western Kansas. Rain was generally light in most of the Corn Belt, although some locally heavier showers were noted. The extreme northern Great Plains continued with little or no rain.

Two low pressure centers, one over Ohio and the other off the New Jersey coast, dominated Monday's weather from southern Michigan to New England. Streams overflowed in Michigan, portions of New York, and lower New England; rain diminished in these areas toward evening. A cold front over the eastern U.S. brought cooler temperatures, but little precipitation.

Scattered showers developed over the Pacific Northwest and northern California, but warm temperatures and fair skies, produced by a massive high pressure system, were common over the western two-thirds of the Nation.

Tuesday brought light showers to the northern Pacific Coast and an area from Virginia to western New York. The large high pressure system, centered over eastern Texas, continued to give much of the country pleasant weather. An upper air disturbance triggered rainshowers and a few thunderstorms from



Ohio eastward to New Jersey. Hail and a small tornado clipped southeast Delaware.

Cold temperatures delivered a spring chill from the Gulf Coast States northward to the Ohio River Valley and the middle Atlantic Coast States.

High pressure moved cold air into the East and South early Wednesday morning, and produced record low temperatures for many cities from Florida westward to Louisiana and northward to Virginia.

A northern Plains frontal system set off some light showers in the western Dakotas and central Rockies. Late in the afternoon, a line of thunderstorms formed along a cold front from southeastern Minnesota into western Kansas. Another band extended from lower Michigan to northern Iowa; by evening, the rain moved to the middle Mississippi Valley. Isolated storms drifted over the southern and central Rockies, southwest Texas, and eastern Arizona, and hail pelted northeastern Nebraska.

Wednesday's cold front brought Thursday's morning and afternoon showers to the middle Mississippi Valley, and extended eastward to the Ohio River Valley. The most precipitation fell in eastern Iowa and northern Illinois where the high for the day dipped 40° from the day before. As night approached, baseball-sized hail hammered east central Missouri. Rainshowers touched the middle Atlantic Coast States northward to New England; scattered showers dotted the northern and central Pacific Coast and the Rockies.

Florida awoke Thursday to its third straight day of record breaking low temperatures; Tallahassee reported a frosty 38°.

The dominant cold front trailed from the Atlantic Coast to Oklahoma with showers and

thundershowers ahead of it. The following cold air mass chilled Friday morning from Wisconsin to the front, and chilly weather remained in northern Florida eastward to the middle Atlantic Coast States.

Afternoon showers and thundershowers fell from northwestern Texas northeastward to Kansas and Nebraska. Intensity increased by nightfall as heavy rains, hail, and tornadoes left their mark. Very light rain dampened the upper half of the Rockies and from the Southeast through central New England.

The storms became less severe by Saturday morning, however, showers continued in southern Texas and extended to the middle Mississippi Valley.

By afternoon, moist, unstable air triggered thunderstorms in the Great Plains eastward to Georgia. Showers were scattered from Oregon through much of California and over the Rockies; at midnight, Stockton, Calif., notched nearly one-half inch of rain for a total of nearly an inch for the week.

Mostly fair skies covered the Atlantic Coast States after another chilly morning.

May began with showers for the central U.S., northern California, and southern Oregon eastward to Wyoming. Scattered showers reached as far east as the western Carolinas.

Midday rains, some locally heavy, picked up in southeastern Kansas, eastern Texas, and Louisiana. By late afternoon, tornadoes had touched down in Colorado, Arkansas, and Louisiana.

Delightful weather provided a May Day gift for most of the Atlantic Coast States after another brisk night. Cold air crept into the northern Plains as the day closed.

National Agricultural Summary

For the Week of April 25 - May 1

HIGHLIGHTS: More precipitation in the southern Great Plains improved the winter wheat crop. Corn planting advanced to within a point of the last year's fast pace and almost double the 18% average. Cotton planting reached 25% complete, lagging behind both last year and average because of low soil temperatures. Soybean planting advanced in the southern States where planting ranged up to 6% complete, but virtually no acreage was seeded in the North Central States. Sorghum planting was also restricted to the southern areas of the Nation; low soil temperatures slowed activity too. Spring wheat seeding surpassed 1976's swift pace. Fruit trees were in various stages of bloom and post-bloom; frost damaged some of the crop in the northeastern States. Soil moisture was adequate in the southern States and from Indiana eastward through the northern Atlantic States; it was short to adequate in most of the North Central States and short in the western States.

SMALL GRAINS: Winter wheat was in good condition throughout the major production areas. Precipitation improved the crop in the southern half of the Great Plains; it ranged from heading out in Texas and Oklahoma to 17% jointed in Colorado. Wheat was ready for harvest in Florida, and 2% of the Mississippi crop was ripe.

In Kansas, rains should further improve an already rapidly improving wheat crop. No wind damage was observed, however, insect infestations increased. Scattered rains and low temperatures improved Oklahoma's small grain outlook. Wheat was 65% headed, nearly equal to 1976's 68%, but far ahead of the 45% average. A few early fields reached the dough stage making an early harvest possible. The crop was in fair to good condition. The Texas wheat crop began heading out on the northern High Plains and was fully headed from the Low Plains southward. Rains favored the wheat crop. Colorado winter wheat was fair to good with 17% jointed, short of 24% in 1976 and the 28% average. Wheat grew to 9 to 11 inches in the eastern North Central States and jointing ranged from 21 to 45%.

Spring wheat seeding advanced to 67% complete. Last year, 60% of the crop was planted far ahead of the 36% average. North Dakota farmers seeded 40% of the 1977 crop, and Minnesota farmers planted 37% in one week.

CORN: Farmers planted 32% of the Nation's corn crop, nearly equal the 33% in 1976, and far ahead of the 18% average. Excellent planting weather prevailed through most of the Corn Belt. In the eastern North Central States farmers planted 29% of the corn crop lagging 1976's 33%, but double the 14% average. Producers in the western North Central States planted 27%, ahead of 1976's 24% and the 12% average. Iowa and Illinois farmers planted 30% of their crop in one week. Missouri and Texas farmers planted 25 and 27% of the crop in one week. Corn planting began in the northern States and ranged from 3% complete in South Dakota to 21% in Minnesota.

COTTON: Producers in the 11 southern States planted 25% of the cotton crop falling short of the 36% last year and the 28% average. Cotton

producing States along the Atlantic Coast surpassed last year and the average, but elsewhere planting lagged 1976. Cold soils delayed planting in some areas, particularly Texas. Field preparations were almost complete on the High and Low Plains. Farmers replanted some Blacklands fields. Squares began forming in southern Texas. Oklahoma farmers planted a few fields. Arkansas growers replanted a few early fields. New Mexico producers planted 40% of the cotton crop; the earliest fields germinated. Arizona growers almost finished planting.

OTHER CROPS: Sorghum planting advanced very slowly; cold soils were responsible for the delay. In Texas, planting advanced only 1 point to 56%, equalling the average rate but short of 1976's 61%. In Oklahoma, less than 10% of the acreage was planted, but a few early fields were up. South Dakota farmers expect to begin planting soon.

Soybean growers planted the crop throughout the South, and in a few Ohio fields. Progress in southern States ranged from 3 to 6% complete, slightly ahead of last year and the average. Minnesota growers expect to begin planting next week.

Rice ranged from 68% planted in Arkansas to 92% in Texas. Progress lagged most in Arkansas where planting was 18 points less than last year; elsewhere, planting was within 2 points of the 1976 pace. Low temperatures slowed crop development.

Producers planted 60% of the peanut crop in Georgia and 10% in Virginia. Texas planting advanced only 1 point to 20% ahead of 1976's 13% and the 16% average.

FRUITS AND NUTS: Low temperatures frosted some of the fruit crop in the eastern North Central States and the Northeast, but the extent of significant damage, if any, was unknown. Most of the Nation's deciduous fruit trees were in various stages of bloom or beyond. Texas peach growers began picking in southern areas. Citrus growers harvested in Florida, Texas, Arizona, and California. Florida citrus growers irrigated the dry groves, however, new growth was slow.

VEGETABLES: Frost also damaged some vegetable crops across northern areas of the Country with asparagus growth affected most. Florida vegetables were in good to excellent condition; most crops moved in good volume. Supplies of carrots, celery, sweet corn, cucumbers, eggplant, peppers, tomatoes, and potatoes increased; snap beans, cabbage, chinese cabbage, escarole, lettuce, and radishes held steady as squash declined. Growers irrigated and sprayed. Texas farmers harvested cabbage, carrots, onions, potatoes, cucumbers, spinach, and collards. Vegetable crops developed well. California producers picked asparagus, broccoli, carrots, celery, lettuce, strawberries, potatoes, onions, and cabbage.

PASTURES AND LIVESTOCK: Pastures were in fair to good condition except in the dry western States. Western ranchers coped with drying grasslands and low stock water supplies. Some producers provided additional feed and hauled water; calving and lambing almost were completed.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., May 1, 1977

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
ALA. Birmingham . . .	64	-3	.1	-.8	La. Baton Rouge . . .	66	-5	.3	-.6	Youngstown . . .	47	-5	.2	-.6
Mobile . . .	67	-4	0	-1.1	Lake Charles . . .	68	-4	.8	-.3	OKLA. Okla. City . . .	66	+2	.2	-1.0
Montgomery . . .	65	-3	0	-.9	New Orleans . . .	67	-5	.6	-.4	Tulsa . . .	66	+1	.7	-.5
ALASKA. Anchorage . . .	38	-2	.5	+ .4	Shreveport . . .	66	-4	1.9	+ .8	OREG. Astoria . . .	54	+4	.1	-.5
Barrow . . .	-5	-12	T	0	MAINE. Caribou . . .	42	0	.4	-.3	Burns . . .	55	+7	.2	-.1
Fairbanks . . .	---	---	---	---	Portland . . .	45	-2	.2	-.5	Medford . . .	56	+3	1.0	+ .6
Juneau . . .	45	+3	1.1	+ .4	MD. Baltimore . . .	56	-2	.4	-.4	Pendleton . . .	62	+8	.1	-.2
Kodiak . . .	---	---	---	---	MASS. Boston . . .	53	0	1.1	-.7	Portland . . .	58	+5	.4	-.1
Nome . . .	---	---	---	---	Chatham . . .	48	---	1.0	---	Salem . . .	55	+3	.5	0
ARIZ. Flagstaff . . .	51	+5	T	-.3	MICH. Alpena . . .	49	+4	.2	-.4	PA. Allentown . . .	52	-2	.6	-.2
Phoenix . . .	81	+10	0	-.1	Detroit . . .	50	-2	1.0	+ .2	Erie . . .	46	-3	.6	-.2
Tucson . . .	74	+5	T	-.1	Flint . . .	48	-2	.7	0	Harrisburg . . .	53	-4	.6	-.2
Winslow . . .	63	+5	T	-.1	Grand Rapids . . .	50	-1	.8	+ .1	Philadelphia . . .	56	-1	2.9	+2.1
Yuma . . .	76	+2	0	0	Houghton Lake . . .	49	+2	1.2	-.5	Pittsburgh . . .	46	-8	.7	-.1
ARK. Fort Smith . . .	65	-1	.2	-1.0	Lansing . . .	48	-3	1.1	+ .3	Scranton . . .	48	-5	.2	-.6
Little Rock . . .	65	0	.2	-1.1	Marquette . . .	49	+4	.2	-.5	R.I. Providence . . .	51	0	.1	-.7
CALIF. Bakersfield . . .	69	+3	T	-.2	Muskegon . . .	49	-1	1.1	-.5	S.C. Charleston . . .	64	+4	.5	-.5
Eureka . . .	53	+2	.8	+ .2	S. St. Marie . . .	45	+2	.1	-.6	Columbia . . .	62	-6	T	-.8
Fresno . . .	66	+3	.1	-.1	MINN. Duluth . . .	52	+8	1.1	-.8	Greenville . . .	58	-7	.1	-.6
Los Angeles . . .	64	+1	T	-.2	Internatl Falls . . .	50	+6	.1	-.6	S.D. Aberdeen . . .	58	+8	T	-.7
Red Bluff . . .	64	+1	.4	0	Minneapolis . . .	57	+6	T	-.8	Huron . . .	59	+8	T	-.7
San Diego . . .	63	+1	T	-.1	Rochester . . .	55	+5	.1	-.8	Rapid City . . .	58	+8	T	-.7
San Francisco . . .	59	+3	T	-.3	St. Cloud . . .	55	+6	T	-.9	Sioux Falls . . .	57	+5	0	-.9
Stockton . . .	68	+7	1.0	+ .8	MISS. Jackson . . .	55	+4	0	-.9	TENN. Chattanooga . . .	60	+4	1.7	+1.0
COLO. Denver . . .	59	+7	T	-.5	Meridian . . .	63	-6	0	-.8	Knoxville . . .	61	-3	.2	-.5
Grand Junction . . .	64	+8	.2	0	MO. Columbia . . .	58	-1	1.0	-.1	Memphis . . .	60	-6	T	-.9
Pueblo . . .	63	+7	T	-.4	Kansas City . . .	60	0	.3	-.8	Nashville . . .	62	-2	.2	-.7
CONN. Bridgeport . . .	54	+1	T	-.8	St. Louis . . .	60	-1	.3	-.6	TEX. Abilene . . .	66	+3	.2	-.7
Hartford . . .	55	+3	.6	-.2	Springfield . . .	60	-1	.8	-.3	Amarillo . . .	66	+5	.3	-.4
D.C. Washington . . .	59	-2	.2	-.5	MONT. Billings . . .	60	+11	T	-.5	Austin . . .	69	+3	.1	-.8
FLA. Apalachicola . . .	63	-8	.2	-.5	Glasgow . . .	58	+9	0	-.4	Beaumont . . .	69	+3	2.6	+1.5
Daytona Beach . . .	67	-5	0	-.5	Great Falls . . .	57	+9	0	-.6	Brownsville . . .	75	-2	.1	-.5
Ft. Myers . . .	69	-6	0	-.5	Havre . . .	58	+8	0	-.4	Corpus Christi . . .	72	+3	4.2	+3.5
Jacksonville . . .	66	-5	T	-.6	Helena . . .	55	+8	T	-.5	Dallas . . .	---	---	---	---
Key West . . .	76	-3	0	-.5	Kalispell . . .	55	+9	T	-.5	Del Rio . . .	69	-6	.8	+ .2
Lakeland . . .	71	-3	0	-.5	Miles City . . .	62	+11	T	-.6	El Paso . . .	69	+2	T	-.1
Miami . . .	73	-3	0	-1.0	Missoula . . .	57	+9	T	-.4	Fort Worth . . .	71	+2	.3	-.7
Orlando . . .	68	-5	0	-.5	NEBR. Grand Island . . .	61	+6	T	-.9	Galveston . . .	71	-1	.8	0
Tallahassee . . .	62	-9	T	-.8	Lincoln . . .	60	+4	.1	-.8	Houston . . .	68	+4	.4	-.8
Tampa . . .	68	-6	T	-.4	Norfolk . . .	62	+8	T	-1.0	Lubbock . . .	68	+4	.4	-.4
W. Palm Beach . . .	71	-4	0	-.9	N. Platte . . .	58	+5	.2	-.6	Midland . . .	68	0	.1	-.4
GA. Atlanta . . .	60	-5	.1	-.9	Omaha . . .	59	+4	.2	-.8	San Angelo . . .	69	-2	.6	0
Augusta . . .	62	-5	T	-.7	Valentine . . .	58	+7	.6	-.1	San Antonio . . .	69	+4	.4	-.3
Macon . . .	62	-7	.2	-.6	NEV. Ely . . .	55	+10	T	-.2	Victoria . . .	70	-3	.4	-.5
Savannah . . .	66	-3	.1	-.6	Las Vegas . . .	75	+7	0	0	Waco . . .	70	-1	.6	-.4
HAWAII. Hilo . . .	74	+1	4.3	+1.5	Reno . . .	54	+4	T	-.1	Wichita Falls . . .	68	0	.1	-1.0
Honolulu . . .	77	+1	T	-.2	Winnemucca . . .	58	+9	T	-.2	UTAH. Blanding . . .	59	+8	.1	0
Kahului . . .	75	0	.3	+ .1	N.H. Concord . . .	48	-1	.2	-.5	Salt Lake City . . .	65	+12	T	-.3
Lihue . . .	75	+1	.5	-.1	N.J. Atlantic City . . .	52	-4	1.6	-.2	VT. Burlington . . .	49	+1	.1	-.6
IDAHO. Boise . . .	61	+8	.2	-.1	Trenton . . .	54	-2	1.2	+ .4	VA. Lynchburg . . .	55	-6	.1	-.7
Lewiston . . .	65	+11	.3	0	N.MEX. Albuquerque . . .	64	+4	T	-.1	Norfolk . . .	60	-2	1.0	+ .2
Pocatello . . .	59	+10	T	-.3	Roswell . . .	69	+5	T	-.3	Richmond . . .	59	-3	.2	-.6
ILL. Cairo . . .	63	-2	1.4	+ .3	N.Y. Albany . . .	48	-4	.1	-.7	Roanoke . . .	56	+4	.2	-.6
Chicago . . .	52	-2	.4	+.3	Binghamton . . .	46	-3	T	-.9	WASH. Colville . . .	58	+8	T	-.4
Indianapolis . . .	55	-1	.1	-.4	Buffalo . . .	47	-2	T	-.6	Omak . . .	61	+9	T	-.3
Peoria . . .	54	-2	.1	-.8	New York . . .	53	-3	.1	-.6	Quillayute . . .	53	+5	.1	-.8
Rockford . . .	54	+1	.9	0	Rochester . . .	49	-2	.1	-.5	Seattle-Tacoma . . .	59	+8	.2	-.2
Springfield . . .	57	-1	.6	-.2	Syracuse . . .	48	-3	T	-.7	Spokane . . .	60	+10	.2	-.2
IND. Evansville . . .	60	-1	.3	-.7	N.C. Asheville . . .	55	-4	.3	-.5	Walla Walla . . .	64	+8	.1	-.3
Ft. Wayne . . .	51	-3	.5	-.4	Charlotte . . .	58	-1	.1	-.6	Yakima . . .	60	+7	T	-.1
Indianapolis . . .	53	-4	.1	-.8	Greensboro . . .	57	-5	.1	-.6	W.Va. Beckley . . .	49	-6	1.2	+ .3
South Bend . . .	51	-2	.8	+ .1	Hatteras . . .	62	0	.1	-.7	Charleston . . .	52	-8	.5	-.3
IOWA. Burlington . . .	56	0	T	-.9	Raleigh . . .	57	-6	.1	-.7	Huntington . . .	54	-6	1.3	+ .4
Des Moines . . .	61	+6	T	-1.1	Wilmington . . .	63	-4	.1	-.9	Parkersburg . . .	50	-9	.4	-.4
Dubuque . . .	52	-1	.5	-.6	N.DAK. Bismarck . . .	56	+7	T	-.6	WIS. Green Bay . . .	51	+2	T	-.7
Sioux City . . .	59	+4	.2	-.7	Fargo . . .	58	+10	T	-.6	La Crosse . . .	57	+4	.1	-.8
KANS. Concordia . . .	60	+3	T	-1.1	Williston . . .	58	+10	.1	-.4	Madison . . .	51	+1	.1	-.7
Dodge City . . .	64	+5	1.0	+ .2	OHIO. Akron-Canton . . .	49	-4	.4	-.5	Milwaukee . . .	47	-2	.2	-.5
Goodland . . .	59	+6	1.6	+1.0	Cincinnati . . .	52	-6	.6	-.2	WYO. Casper . . .	57	+10	.2	-.2
Topeka . . .	62	+3	.6	-.4	Cleveland . . .	49	-4	.8	0	Cheyenne . . .	52	+5	1.6	+1.0
Wichita . . .	63	+2	.3	-.6	Columbus . . .	50	-5	.7	-.3	Lander . . .	58	+10	.2	-.4
N.Y. Lexington . . .	55	-5	.9	-.1	Dayton . . .	51	-5	.8	-.1	Sheridan . . .	56	+8	.3	-.3
Louisville . . .	58	-2	1.1	+ .1	Toledo . . .	46	-7	.7	-.1	P.R. San Juan . . .	80	+2	.1	-1.4

Based on 1941-70 normals

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State Summaries of Weather and Agriculture

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

ALABAMA: Dry and seasonal. Rainfall light and scattered. Temperatures 2° below normal.

Fieldwork: 5 days suitable. Soil moisture mostly adequate. Cotton 61% planted, 74% 1976, 61% average. Corn 67% planted, 72% 1976, 59% average. Wheat good condition; 84% headed. Pastures, livestock fair condition.

ARIZONA: Scattered showers central mountains. Remainder dry, occasionally windy. Temperatures 2 to 5° above normal. Weather conditions near perfect.

Cotton growing well, planting near completion. Small grains good progress, coloring. Spring sugarbeets ready to harvest. Lettuce harvest continued but slowed. Some fields abandoned, low prices. Watermelons, cantaloups good progress. Potato, dry onion harvest expected shortly. Valencia harvest steady. Grapefruit harvest active but limited. Drought conditions lower deserts. Soil moisture short, stock water critically short. Higher mountain ranges fair to good. More moisture needed. Supplemental feeding, water hauling some areas.

ARKANSAS: Near normal temperatures and light precipitation. Extremes: 87 and 32°. Precipitation averaged near 0.25 in.

Cool temperatures delayed planting and slowed growth. Soil moisture adequate. Fieldwork: under 5 days available. Soybean crop 6% planted, 8% 1976, average 7%. Cotton planting 36% complete, 52% last year, average 34%. Few early planted fields replanted. Rice seeding 68% complete, 86% year ago, average 72%. Corn planting 82% complete, 86% last year, average 78%. Sorghum planting 62% complete, 69% 1976, average 44%. Wheat and oat fields heading. Tomato pruning, spraying, staking and tying continued. Pastures providing adequate feed; cattle making good weight gains.

CALIFORNIA: Temperatures near or slightly above normal in the north and well above normal in the south. Very small amounts of precipitation north.

Dryland small grain heading out. Most stands have short heads. Cotton planting well along. Rice planting still slow. Harvest sugarbeets active. Digging new crop beets increasing Imperial Valley. Navel orange harvest continues with increased cullage. Nectarines, peaches, plums being thinned. Artichoke, asparagus, broccoli, carrots, celery, lettuce are in good volume. Strawberry, potatoes, and dry onion harvest gaining momentum. Cabbage cutting continues light. Rangelands continued drying; pastures going to seed, browning. Early movement cattle, sheep to mountain areas and irrigated pastures. Herds thinned, supplemental feeding active. Cattle poor to fair. Stock water low. Wells going dry, water hauled.

COLORADO: Precipitation light early and midweek. Thunderstorm activity increased late in week. Temperatures above normal; 6 to 8° western valleys, 3° San Luis Valley; 3 to 6° eastern plains; 1 to 3° mountains.

Winter wheat mostly fair to good condition, 17% jointed 1977, 24% 1976, 28% average. Soil moisture short. Spring seedings: Oats, 75% 1977, 73% 1976, 68% average; spring barley, 87% 1977, 83% 1976, 78% average; summer potatoes, 42% 1977, 54% 1976, 46% average; sugarbeets, 71% 1977, 59%

1976, 60% average; corn, 21% 1977, 23% 1976, 19% average. Alfalfa in fair condition. Livestock in good condition.

FLORIDA: Few scattered showers 23d and 24th amounting to 2.00 in. but generally less than 0.25 in. Cooler and drier remainder of week with several new record low temperatures set. Weekend temperatures warmer.

Soil moisture mostly short. Corn, tobacco fair condition. Peanut planting continues, early plantings fair. Cotton planting continues. Oats and wheat about ready for harvest. Soybean land being prepared. Peach and nectarine harvest beginning. Sugarcane good condition. Pasture conditions mostly fair Panhandle, north; poor to fair south; very poor central. Cattle, calf condition mostly good Panhandle; fair to good north, south; poor, central. Citrus areas very dry; rain needed. Irrigating where equipment available. New growth slowed. Valencia harvest continues active. Vegetable crop conditions good to excellent. Most crops moving in good volume. Supplies carrots, celery, sweet corn, cucumbers, eggplant, peppers, tomatoes, and potatoes increased. Squash decreased while snap beans, cabbage, chinese cabbage, escarole, lettuce and radishes held steady. Irrigation heavy. Spray programs active. Watermelon crop mostly good. Growth not up to expectations for this time of year. Harvest underway. Strawberry season virtually over.

GEORGIA: Temperatures 2 to 4° below normal north and 3 to 5° below south. Averages ranged from mid-50's mountains to mid-60's central and south. Rainfall 1.00 to 2.00 in. far north; 1.00 in. coastal plains; near 0.50 in. elsewhere. Weekend warmer with scattered thundershowers northwest and north.

Soil moisture adequate north, short elsewhere. Fieldwork: 5 days suitable. Dry fields continued to delay planting south. Cool nights slowed germination. Tobacco fair to good, 98% transplanted, last year 98%, average 97%. Corn fair to mostly good, 93% planted, last year 88%, average 68%. Dry weather hurt stands south. Watermelons fair to good, 95% planted. Cotton fair to good, 74% seeded, last year 69%, average 48%; 52% up to stand. Peanuts fair to mostly good, 60% planted, last year 57%, average 39%; need rain. Soybeans fair to mostly good, 6% planted, last year 5%, average 3%. Sorghum 20% planted, last year 15%. Small grains fair to mostly good. Peaches still fair to mostly good; additional hail damage. Apples improved; good. Hogs good. Cattle and pastures fair to mostly good.

HAWAII: Variable weather continues. Hawaii generally wet, rainfall light other Islands. Temperature getting warmer.

Progress of crops fair to good. Regular spray program keeping insect and disease damage to minimum. Watermelon harvest beginning. Vegetable supplies adequate. Banana and papaya supplies light. Pineapple harvesting gradually increasing. Sugar harvesting active. Pastures fair to good.

IDAHO: Temperature above normal. Extremes: 97 and 25°. Precipitation well below normal.

Soil moisture very poor. Planting well ahead normal. Crop planting 1977, 1976; crop

emerged 1977, 1976: Spring wheat 85, 35; 45, 15. Barley 80, 33; 50, 15. Oats 77, 41; 45, 25. Sugarbeets 85, 55; 30, 23. Potato planting 20, 15. Range condition very poor. Stock water short.

ILLINOIS: Temperatures 1° above normal northwest, 1 to 2° below normal elsewhere. Precipitation trace to more than 1.00 in., heavy rains extreme south.

Corn 45% planted, 44% 1975, 21% average. Winter wheat, oats, pastures good. Soil moisture short to adequate. Livestock water supplies adequate. Fieldwork: 5.3 days suitable.

INDIANA: Cool with two period of light to moderate rain. Totals averaged 0.50 to 0.90 in. Temperatures averaged a few degrees below normal. Freezing temperatures on 29th in north and central. Lowest, 26° in north central.

Fieldwork: 3 days suitable. Topsoil moisture mostly adequate to surplus; subsoil moisture short to mostly adequate. Land for spring planted crops 90% plowed, 1976 95%, average 65%. Corn 20% planted, 1976 35%, average 10%. Oats 100% seeded, 1976 100%, average 75%. Oats 4 in. high, 1976 4 in. Wheat 11 in. tall, 1976 14 in., average 9 in. Wheat 45% jointed, 1976 60%. Wheat rated fair to good. Barley 45% headed, 1976 70%. Rye 35% headed, 1976 35%. Pastures rated fair to good.

IOWA: Warm, dry. Early week frost across north and locally into southwest. East reported general frost 29th.

Soil moisture declined. Topsoil adequate; subsoil short. Fieldwork: 6.5 days suitable. Plowing 96% complete. Corn planting 35% complete, last year 25%, average 12%. Oats 90% emerged. Stands in mostly good condition. Alfalfa hay mostly good condition. Pastures fair to good. Wheat mostly fair to good.

KANSAS: Beneficial moisture 0.25 to 0.75 in. common, locally 2.00 in. west and extreme southeast. Temperatures averaged 53° northwest, 60° east and south, or 8° above normal northwest and 2 to 4° above normal elsewhere.

Rains should further improve an already rapidly improving wheat crop. No wind damage reported although insect infestations increasing. Corn plantings stand at 20%, identical to last year and average. Livestock moved off wheat pasture to native pastures and volunteer fields. Farm activities centered around corn plantings, seedbed preparation, pre-irrigation of fields, and general farm chores.

KENTUCKY: Temperatures averaged from near 60° west to mid-50's east. Precipitation averaged 0.33 in. west; 2.00 in. south central and near 1.00 in. north and east.

Fieldwork: 3 days suitable. Soil moisture adequate. Corn planting 35% complete, 59% last year, and 26% average. Tobacco plant beds good to excellent. Small grains in good condition, 59% in boot, 38% headed or reading; 4% blooming. Pastures in good condition.

LOUISIANA: Temperatures 4 to 7° below normal. Extremes: 42 and 90°. Rain 1st; heaviest central.

Fieldwork: 4.1 days suitable. Main activities: Land preparation, planting, fertilizing, and weed control. Rice 79% planted, 80% last year, 70% average. Corn 86% planted, 87% last year, 66% average. Cotton 33% planted, 49% last year, 28% average. Soybean planting 6% complete. Sugar-cane improving but behind year ago. Heading of small grain near complete. Irish potatoes in good

condition. Tomatoes ripening in south. Replanting vegetables active in areas flooded previous week. Pastures average. Cattle fair to good.

MARYLAND & DELAWARE: Temperatures 2 to 4° above normal. Highs in 70's, lows in 40's. Precipitation averaged from 0.75 to 1.00 in. Weekend sunny.

Soil moisture supplies adequate. Pastures supplied average amounts of feed. Plowing for corn nearly completed. Planting 30% complete; 10% 1976; 21% average. Fertilizer and herbicides being applied. Small grains in fair condition, slightly improved. Barley heading, plants short. Hay short, needs moisture. Tobacco growers preparing fields for transplanting; marketing 1976 crop. Vegetable planting active. Asparagus harvest started. Fruit crop in good condition, true set known in couple weeks.

MICHIGAN: Temperatures ranged to 2° below normal southern Lower and 5 to 9° above normal northern Lower and Upper. Temperatures dipped midweek with night time frost. Precipitation varied 0.80 in. southern Lower; 0.20 in. elsewhere.

Fieldwork hampered by cold, wet weather. Frost damaged some fruit and asparagus. Fieldwork: 4 days suitable. Intended acreage plowed 65%. Corn 10% planted, normal 2%. Oats 80% planted, equal to last year, 40% normal. Sugarbeets 90% in, normal 35%; 50% emergence. Potatoes 25% planted, normal 13%. Asparagus harvest 15% complete, normal 5%. Fruit tree development well advanced. Some early carrots, sweet corn, lettuce, and field-seeded tomatoes planted.

MINNESOTA: Temperatures 2 to 12° above normal. Extremes: 90 and 21°. Precipitation less than 0.10 in. except 0.10 to 0.20 in. northwest.

Good progress planting small grains north, corn south. Emerged crops looking good. Soybean planting expected to begin this week in south. Topsoil moisture short to adequate south half, short north half except very short extreme northwest. Present planted: Corn 21%, 1976 33%, normal 11%; spring wheat 88%, 1976 82%, normal 40%; oats 89%, 1976 84%, normal 47%; barley 74%, 1976 66%, normal 31%; flax 29%, 1976 36%, normal 22%; sugarbeets 85%, 1976 68%, normal 18%; potatoes 17%, 1976 12%, normal 6%; green peas 65%, 1976 69%, normal 31%.

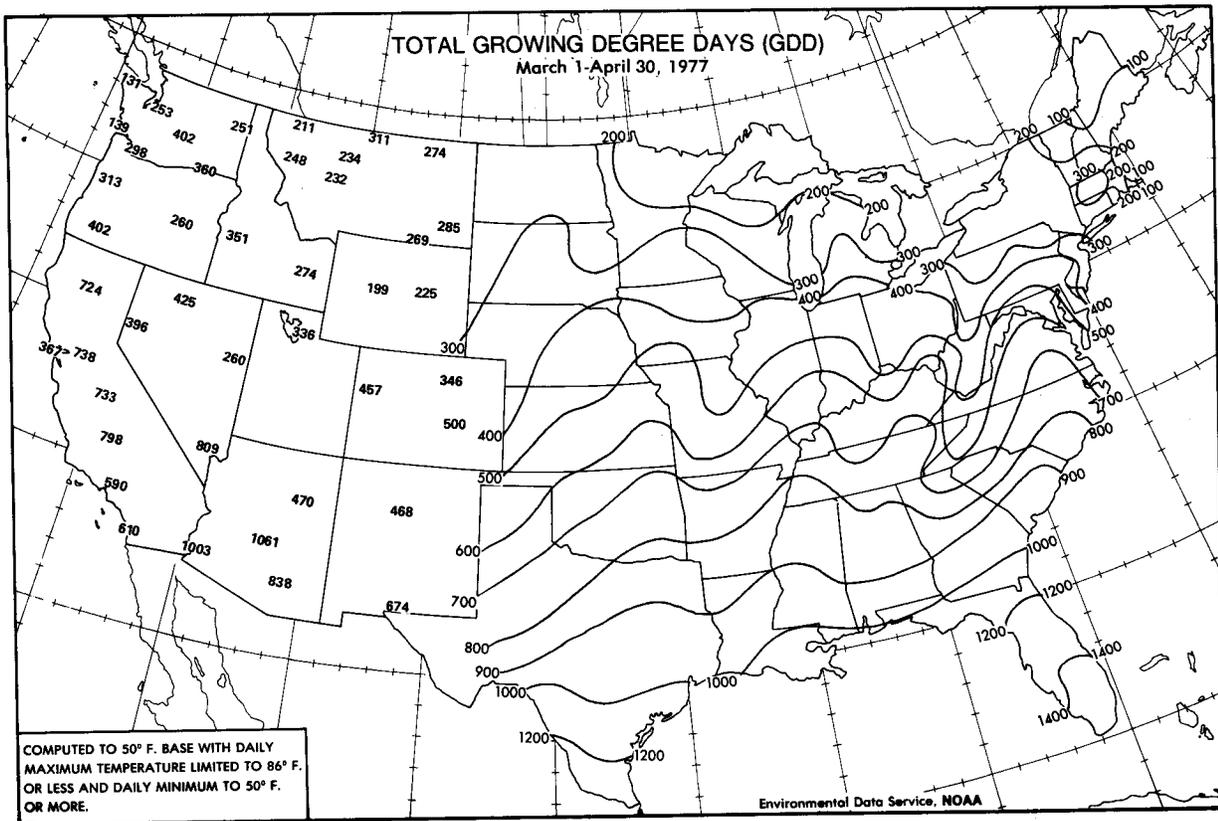
MISSISSIPPI: Temperatures 2 to 8° subnormal. Highest temperature 85°.

Soil moisture adequate. Fieldwork: 4.7 days suitable. Soybeans 3% planted. Cotton 35% planted, 55% 1976, 35% average; 12% up to stand, 7% average. Rice 75% planted, 74% 1976, 53% average; 37% up to stand, 11% 1976. Corn 72% planted, 74% 1976, 46% average; 46% up to stand, 42% 1976. Winter wheat 88% headed, 92% 1976, 2% ripe. Oats 88% headed, 89% 1976; 6% ripe. Sorghums 9% planted, 8% 1976. Sweetpotatoes 10% planted, 5% 1976, 11% average. Peanuts 30% planted. Crops in good to fair condition.

MISSOURI: Cooler temperatures ranging 2 to 3° below normal everywhere except northwest prairie where near normal. Precipitation light, averaging less than 0.50 in. except few heavy showers.

Fieldwork: 5.0 days suitable. Corn 60% planted, 53% last year. Soybean planting 5% complete; 3% last year. Cotton 22% planted, 50% last year. Winter wheat 18% headed; in fair to good condition. Soil moisture short.

MONTANA: Very dry. Temperatures averaging well above normal, began in 80's, ending in 60's and 70's. Some light freeze early week. Few scattered



showers. Some significant moisture west and south-west.

Topsoil moisture short. Winter wheat fair to good condition. Spring seeding progress good. About 60% spring wheat and barley sown--last year 60%, normal 40%. Some seeding delayed due dry soils. Oat seeding 55% done, corn and potatoes 20% done, dry beans 10%, and sugarbeets 90% complete. Irrigation becoming general. Irrigation water short west of Divide. Range feed mostly short except southern half. Hay supplies generally adequate for rest of season. Stockwater short to adequate. Calving 90%, lambing 80%, shearing 75% done. About 15% cattle and sheep moved to summer ranges.

NEBRASKA: Temperatures 5° above normal. Precipitation from less than 0.10 to 0.50 in.

Topsoil moisture adequate. Subsoil moisture short. Winter wheat mostly fair condition. Oats and barley seeding 95% complete. Corn planting near 15% completed compared to 10% last year and 5% normal. Pasture and range feed supplies short to adequate. Calving nearing completion.

NEVADA: Dry with temperatures generally 5 to 10° above normal. Extremes: 95 and 20°. Light precipitation.

Seedbed preparation and seeding behind normal. Vegetative growth limited by low night temperatures. Calving and lambing progressing under favorable condition.

NEW ENGLAND: Temperatures averaged about normal; beginning week at below normal levels under mostly cloudy skies but with bright spring sunshine pushing to above normal readings by end. Precipitation light.

NEW JERSEY: Temperatures 3 to 8° below normal. Extremes: 29 and 78°. Rainfall averaged 0.78 in. north, 0.67 in. central and 0.60 in. south. Soil moisture in percent of field capacity: 93 north, 83 central and 71 south. Soil temperature 53° north, 55° central and 58° south.

Cool temperatures slowing crop development. Soil moisture adequate. Asparagus harvest increasing. "Greens" moving to market. Vegetable planting active. Early planted Irish potatoes up. Peaches in the shuck-split stage. Apples in petal fall stage. Strawberries in full bloom. Field corn planting begun. Barley and rye heading. Preparations underway for soybeans.

NEW MEXICO: Widely scattered local showers and thunderstorms. Precipitation mostly less than 0.10 in.

Dryland wheat fair. Irrigated wheat, durum wheat, alfalfa, barley, lettuce, onions, fair to good. Wheat, 85% jointed. Barley, 75% jointed. Cotton less than 40% planted with earliest fields up to stand. Ranges, livestock, fair to good.

NEW YORK: Temperatures mainly in 40's, ranged near normal to 5° below normal. Extremes: 14 and 81°. Rain 0.75 in. Mohawk Valley. Less elsewhere.

Weather slowed fieldwork. Oat planting 40% complete. Corn planting just starting. Wheat condition variable. Pasture and hay condition good. Onion seeding 75% complete. Cabbage, sweet corn, potato, and lettuce planting continues. Long Island potatoes 90% planted. Frost on 29th damaged sweet cherries, may have reduced apple and grape prospects.

NORTH CAROLINA: Temperatures 3 to 5° below normal. Precipitation between 0.25 and 0.50 west and 0.75 to 1.50 in. east.

Soil moisture adequate. Fieldwork: 5.0 days suitable. Farm activities: Planting corn, cotton, peanuts, sorghum, soybeans and setting tobacco. Condition: Tobacco plant beds, Irish potatoes, pasture, peaches, rye and truck crops mostly good. Wheat fair to good. Barley and oats mostly fair. Planting: Corn 81% completed, 1976 79%, average 63%; cotton 60%, 1976 52%, average 43%. Transplanting: tobacco 29% completed, 1976 46%, average 35%.

NORTH DAKOTA: Temperatures 9 to 13° above normal. Extremes: 19 and 88°. Precipitation averaged 0.10 in. except for isolated thunderstorms of 2.00 to 4.00 in.

Seeding making normal progress. Hard red spring wheat 60% planted, durum, oats and barley 40% complete. Livestock in fair to good condition.

OHIO: Rain last of week 1.00 in. south to 0.50 in. northeast. Temperatures averaged below normal. Scattered frost 27th and 30th. Freeze with record lows 29th.

Severe frost damage some localities, depending on crop. Some damage to all fruits, vegetables and strawberries where not protected. Condition of winter wheat, oats, and alfalfa fair to mostly good. Cool weather with rains greatly improved pastures. Planting completed: Corn, 25%, 35% last year, 20% normal; sugarbeets 90%, virtually completelast year, 75% normal; potatoes 55%, 66% 1976, 40% average. Soybeans just underway, less than 5% last year and normal. 60% of oats emerged. Wheat height 9 in.; 21% jointed, virtually same as last year. Soil moisture adequate to surplus. Fieldwork: 2 days suitable.

OKLAHOMA: Temperatures 5° above normal Panhandle, 2° above normal central and near normal east. Rain general. West central had 2.14 in. rain. Southeast received only 0.24 in.

Scattered rains ranging from light to heavy and cool weather improved small grain outlook. Wheat 65% headed compared 68% year ago, 45% average. Condition crop good to fair. Few early fields near dough stage, with early harvest possible. Oats and barley good to fair condition, with 55% of the acreage headed, a bit later than year ago. Corn planting now 25% complete, with near 15% crop up-to-stand. Few early sorghum fields up, with under 10% acres planted. Condition corn and sorghums fair to good. Seedbeds prepared 70% or more for peanuts, cotton and soybeans, with very little planting done. First cutting alfalfa hay 12% complete. Prairie hay growth good east. Pecan outlook good but too early to be certain. Topsoil adequate. Ranges and pastures good to fair, with even drier areas now greening up. Cattle in mostly good condition, as ranges improve.

OREGON: Rainfall averaged near 0.20 in. over west but in east extreme drought conditions continued. Temperatures very warm. West averaged 4 to 9° above normal; east 7 to 13° above.

Soil moisture short to adequate west; short east. Fall seeded crops fair to good condition west, poor to fair east. Spraying and fertilizing fall grains. Spring grain seeding near completion. Seeding alfalfa and clover. Cherries and apples blooming. Peach bloom about over. Most fruits and nuts developing normally. Sprays being applied to apples, cherries and strawberries. Onions, snap beans, corn and beets being planted west; fair east. Livestock remain in good condition west, fair east. Range and feed situation deteriorating. Feed supply generally low and pastures need moisture. Hauling stock water in east.

Soil moisture short to adequate west; short east. Fall seeded crops fair to good condition west, poor to fair east. Spraying and fertilizing fall grains. Spring grain seeding near completion. Seeding alfalfa and clover. Cherries and apples blooming. Peach bloom about over. Most fruits and nuts developing normally. Sprays being applied to apples, cherries and strawberries. Onion, snap beans, corn and beets being planted west; onions and potatoes east. Livestock remain in good condition west, fair east. Range and feed situation deteriorating. Feed supply generally low and pastures need moisture. Hauling stock water in east.

PENNSYLVANIA: Cool with scattered showers and thunderstorms through midweek. Fair, milder weekend. Frost or freezing many areas 28th and 29th. Rainfall totaled 0.25 to 0.75 in. central and south except over 2.00 in. southeast corner, less than 0.25 in. north. Temperatures 2 to 6° below normal. Extremes: 81 and 19°.

Fieldwork: 3 days suitable. Moisture mostly adequate to surplus. Activities: Plowing; spreading fertilizer; grape trimming and tying; orchard spraying; soil preparation; planting oats, potatoes, corn. Plowing 68%, last year 81%. Oats 73%, last year 85%. Potatoes 39%, last year 44%. Corn 7%, last year 18%. Hay condition mostly good. Feed from pastures mostly average to below. Peaches 26% pink, 69% full or past; last year 82% full. Cherries 21% pink, 75% full or past; last year, 90% full or past. Apples 21% pink, 66% full or past; last year 76% full or past.

PUERTO RICO: Island rainfall 0.84 in. or 0.41 in. below normal. Temperatures averaged about 76° on coasts and 71° interior. Extremes: 92 and 51°.

North and east sugarcane growing with some efficiency due rains. South and west rains needed urgently. Irrigation used. Outlook poor coffee harvest as optimum moment for bean formation passing without any rain. Pastures recuperating except south and some central and west areas where situation critical due dryness. Soil preparation active food crop but farmers waiting for additional rains for planting.

SOUTH CAROLINA: Temperatures cooler than normal. Some scattered frost in west 26th and 28th. Rainfall light, scattered.

Moisture and plant condition in tobacco plant beds fair. About 87% of tobacco transplanting complete. Corn, watermelon planting almost finished. Dry weather enabled farmers to make good progress planting cotton. Soybean planting got underway. About half of peanut acreage planted. Sweetpotato, sorghum planting underway. Other activities: Thinning, spraying peaches; staking, tying tomatoes; harvesting greens, cabbage, beets, squash; cultivating tomatoes, cucumbers, sweet corn. Corn planted: 94% 1977, 90% 1976; 79% average. Soybeans planted 5% 1977. Cotton planted: 80% 1977; 65% 1976; 54% average.

SOUTH DAKOTA: Precipitation light, up to 0.87 in. southwest. Temperature 6 to 14° above normal. Extremes: 24 and 90°.

Topsoil moisture short northwest and part of northeast, adequate elsewhere. Subsoil moisture varies, critically short to adequate. Fieldwork making excellent progress. Small grain seedings completed: Spring wheat 63%, 1976 74%, normal 47%; oats 88%, 1976 97%, normal 73%; barley 82%, 1976 96%, normal 66%. Flax planting 27% complete, 1976 37%, normal 16%. Corn 3% planted, 1976 4%, normal 2%. Sorghum and soybean planting to begin soon.

Calving nearly complete. Stock water mostly adequate.

TENNESSEE: Temperature and precipitation seasonable with amounts from less than 1.00 in. to more than 3.00 in.

Soil moisture adequate. Soybean planting underway. Farmers spraying for alfalfa weevils. Plowing 85% complete. Tobacco seedbeds good condition and ready to set. Livestock and pastures in good condition. Small grains condition good. Wheat 45% headed, oats 25% and barley 35%. Corn 60% planted, cotton 45% planted.

TEXAS: Showers, thunderstorms prevalent with heaviest amounts late week. Temperatures 8° above normal in plains; near normal elsewhere. Soil temperatures mid-60's High Plains to upper 80's Lower Valley.

Planting rapid progress High Plains, but cotton and sorghum planting delayed, low soil temperatures. Field preparations active. Wheat responding favorably to recent rains. Cotton planting little progress. Plains area, light showers cool soil temperatures hindered planting. Field preparations nearly complete High and Low Plains. Square formation beginning south. Sorghum planting slow progress. Corn planting advanced rapidly. Early planted corn High Plains up to good stands. Wheat continues grow well. Wheat northern High Plains beginning to head out; fully headed from Low Plains southward. Rice planting on schedule; some fields approaching two leaf stage, development slowed by cool nights. Cotton planted: 13% 1977, 22% 1976, 24% average. Corn planted: 63% 1977, 83% 1976, 83% average. Sorghum planted: 56% 1977, 61% 1976, 56% average. Peanuts planted: 20% 1977, 13% 1976, 16% average. Rice planted: 92% 1977, 94% 1976, 92% average. Sugarbeets planted: 93% 1977, 100% 1976, 100% average.

Cabbage, cucumbers, spinach, collards, carrot, onion, potato harvest continues. Citrus harvest nearing completion. Wet weather slowed activities some areas. Planting beans, peas active. Peach harvest underway south.

Livestock good condition; pastures show good growth. Cool nights hindered growth some areas. Some oats cut for hay.

UTAH: Few showers and thunderstorms principally southeast half. Accumulated amounts generally very light. Temperature 2 to 14° above normal.

Good weather allowed full week for working. Early peaches blooming. Late peaches, early apples, sour cherries beginning to bloom. Excellent conditions for pollination. No additional frost damage. Pasture and range feed mostly planted. Spring calving 85% complete; sheep shearing over half complete; range lambing over 33% complete.

VIRGINIA: Temperatures near normal. Scattered frost 27th, 29th. Extremes: 86 and 27°. Local showers and thunderstorms averaged 0.75 in.

Topsoil moisture short to adequate. Fieldwork: 5.1 days suitable. Corn 53% planted,

50% 1976, 30% average. Soybeans 3% seeded, 6% 1976, 2% average. Peanuts 10% planted, 13% 1976, 6% average. Fieldwork ahead of normal. Pasture and wheat in good condition but slightly short. Planting cotton crop virtually complete. Some flue-cured tobacco transplanted.

WASHINGTON: West: Temperatures 3 to 5° above normal. Precipitation averaged from 1.10 in. below normal to 0.25 in. above normal.

Green peas 30 to 50% seeded; field corn planting just underway. Green chopping for feed; livestock in good condition on good pasture.

East: Temperatures 7° above normal. Precipitation averaged 0.10 to 0.30 in. below normal.

Fruits beyond bloom, good pollinization. weather. Post-bloom thinning sprays applied. Some frost damage from freeze 2 weeks ago, but little affect on overall crop. Planting potatoes, corn, beans. Asparagus cutting continues. Wheat on summer-fallow looks good; with summer rains should produce good crop. Spring wheat on recrop showing stress. Seeding continues for spring wheat, barley, potatoes, dried peas, alfalfa, pastures. Livestock in good condition.

WEST VIRGINIA: Temperatures below normal; highs upper 70's, lows, upper teens. Rainfall near normal except above in northwest.

Fieldwork: 3.9 days suitable. Soil moisture adequate. Planting progress: Potatoes 76%, 1976 83%; oats 73% complete, 1976 94%. Tobacco beds all seeded. Crop conditions fair to good. Frost damage to fruit late in week.

WISCONSIN: Temperatures near normal south, above elsewhere. Highs in 80's 27th before strong cold front brought much cooler weather 28th. Hard frost with temperatures in lower 20's morning 29th except west. Rainfall light averaging near 0.25 in. south, 0.10 in. north.

Fieldwork progressing rapidly. Oats 85% seeded, 1976 55%, normal 45%. Good germination and early growth for small grains. Winter wheat good some areas, poorer other areas. Spring plowing 70% done, 1976 45%, normal 35%. Corn 15% planted, 1976 5%, normal 1%. South and west well underway planting corn, other areas plowing corn ground. Pastures ahead of normal, cattle on grass earlier than usual. Potatoes and peas being planted. Seeding tobacco beds, some plants up. Fruit trees bloomed early, frost damage to apple and cherry blossoms in eastern areas. Soil moisture short to adequate. Need weekly rains to maintain crop development.

WYOMING: Temperatures 5 to 10° above normal. Coldest areas southwest and north central. Precipitation below normal.

Topsoil moisture short to adequate. Most plantings close to normal. Percent planted: Spring wheat 50%; oats 54%; barley 75%; sugarbeets 74%; corn 4%; potatoes 4%. Acreage emerged: Spring wheat 16%; oats 17%; barley 42%; sugarbeets 10%. Calving and lambing progressing normally. Range sheep 67% shorn, farm flocks 86% shorn. Death losses generally lighter than average.

HEATING DEGREE DAYS (BASE 65°) FOR WEEK ENDING MAY. 1, 1977.

THIS WILL BE THE LAST CHART FOR THIS SEASON

STATES AND STATIONS	WEEKLY			SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY			SEASONAL ACCUMULATION +			STATES AND STATIONS	WEEKLY			SEASONAL ACCUMULATION +		
	TOTAL	DEPARTURE*	DEPARTURE FROM 1975-76	TOTAL	DEPARTURE*	DEPARTURE FROM 1975-76		TOTAL	DEPARTURE*	DEPARTURE FROM 1975-76	TOTAL	DEPARTURE*	DEPARTURE FROM 1975-76		TOTAL	DEPARTURE*	DEPARTURE FROM 1975-76	TOTAL	DEPARTURE*	DEPARTURE FROM 1975-76
ALA. BIRMINGHAM...	28	17	3516	691	93	724	MAINE CARIBOU...	261	12	9432	423	278	YOUNGSTOWN...	222	30	7203	1062	1580		
MOBILE...	17	10	2426	418	102	917	PORTLAND...	141	1	7710	682	829	OKLA. OKLAHOMA CITY...	17	18	3880	219	839		
MONTGOMERY...	10	8	3083	791	152	931	MD. BALTIMORE...	69	16	5025	359	1107	TULSA...	17	18	3924	219	839		
ARIZ. FLAGSTAFF...	10	35	6263	150	46	105	MASS. BOSTON...	90	4	5632	245	930	OREG. ASTORIA...	77	77	4997	316	182		
PHOENIX...	10	35	6263	150	46	105	MICH. ALPENA...	94	47	8019	87	619	BURNS...	11	11	6830	300	306		
TUCSON...	10	35	6263	150	46	105	DETROIT...	101	101	6898	737	1148	MEDFORD...	11	11	6830	300	306		
MINSLON...	10	35	6263	150	46	105	GRAND RAPIDS...	101	101	6898	737	1148	PENDLETON...	11	11	6830	300	306		
YUMA...	10	35	6263	150	46	105	HOUGHTON LAKE...	101	101	6898	737	1148	PORTLAND...	11	11	6830	300	306		
ARK. FORT SMITH...	10	14	4133	812	1007	779	LANSING...	101	101	6898	737	1148	SALEM...	11	11	6830	300	306		
LITTLE ROCK...	10	14	4133	812	1007	779	FLINT...	101	101	6898	737	1148	PA. ALLENTOWN...	11	11	6830	300	306		
CALIF. BAKERSFIELD...	10	1	1801	364	209	209	GRAND RAPIDS...	101	101	6898	737	1148	ERIE...	11	11	6830	300	306		
FRESNO...	10	1	1801	364	209	209	MARQUETTE...	101	101	6898	737	1148	HARRISBURG...	11	11	6830	300	306		
SAN FRANCISCO...	10	1	1801	364	209	209	MUSKOGON...	101	101	6898	737	1148	PHILADELPHIA...	11	11	6830	300	306		
INDIANAPOLIS...	10	1	1801	364	209	209	S. STE. MARIE...	101	101	6898	737	1148	PITTSBURGH...	11	11	6830	300	306		
INDIANAPOLIS...	10	1	1801	364	209	209	MINN. DULUTH...	101	101	6898	737	1148	SCRANTON...	11	11	6830	300	306		
INDIANAPOLIS...	10	1	1801	364	209	209	INTERNATL FALLS...	101	101	6898	737	1148	R.I. PROVIDENCE...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	MINNEAPOLIS...	101	101	6898	737	1148	S.C. CHARLESTON...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	ROCHESTER...	101	101	6898	737	1148	COLUMBIA...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	ST. CLOUD...	101	101	6898	737	1148	GREENVILLE...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	MISS. JACKSON...	101	101	6898	737	1148	S. DAK. ABERDEEN...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	MONT. BILLINGS...	101	101	6898	737	1148	HURON...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	KANSAS CITY...	101	101	6898	737	1148	ST. LOUIS...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	ST. LOUIS...	101	101	6898	737	1148	STOUR FALLS...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	SPRINGFIELD...	101	101	6898	737	1148	TENN. CHATTANOOGA...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	GLASSBORO...	101	101	6898	737	1148	KNOXVILLE...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	GREAT FALLS...	101	101	6898	737	1148	MEMPHIS...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	HAVRE...	101	101	6898	737	1148	NASHVILLE...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	HELENA...	101	101	6898	737	1148	TEXAS ABILENE...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	KALISPELL...	101	101	6898	737	1148	AMARILLO...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	MILES CITY...	101	101	6898	737	1148	AUSTIN...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	MISSOULA...	101	101	6898	737	1148	BERNARDINE...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	NEBR. GRAND ISLAND...	101	101	6898	737	1148	CORPUS CHRISTI...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	LINCOLN...	101	101	6898	737	1148	DEL RIO...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	NORTH PLATTE...	101	101	6898	737	1148	FEL PASO...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	OMAHA...	101	101	6898	737	1148	FORT WORTH...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	VALENTINE...	101	101	6898	737	1148	GALVESTON...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	NEV. ELY...	101	101	6898	737	1148	HOUSTON...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	LAS VEGAS...	101	101	6898	737	1148	LEWISPORT...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	MINNEAPOLIS...	101	101	6898	737	1148	LIBERTY...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	N.H. CONCORD...	101	101	6898	737	1148	NEW BRUNSWICK...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	N.J. ATLANTIC CITY...	101	101	6898	737	1148	SAN ANGELO...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	TRENTON...	101	101	6898	737	1148	SAN ANTONIO...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	N.MEX. ALBUQUERQUE...	101	101	6898	737	1148	VICTORIA...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	ROSMEL...	101	101	6898	737	1148	NICHITA FALLS...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	N.Y. ALBANY...	101	101	6898	737	1148	UTAH SALT LAKE CITY...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	BINGHAMTON...	101	101	6898	737	1148	VT. BURLINGTON...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	BUFFALO...	101	101	6898	737	1148	VA. LYNCHBURG...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	NEW YORK...	101	101	6898	737	1148	NORFOLK...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	ROCHESTER...	101	101	6898	737	1148	RICHMOND...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	SYRACUSE...	101	101	6898	737	1148	ROANOK...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	N.C. ASHEVILLE...	101	101	6898	737	1148	WASH. GUILLAVUTE...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	CHARLOTTE...	101	101	6898	737	1148	SEATTLE-TACOMA...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	GREENSBORO...	101	101	6898	737	1148	SPOKANE...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	HATTERAS...	101	101	6898	737	1148	HALLA HALLA...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	RALEIGH...	101	101	6898	737	1148	YARIMA...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	WILMINGTON...	101	101	6898	737	1148	VA. BECKLEY...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	N.DAK. BISMARCK...	101	101	6898	737	1148	CHARLESTON...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	FARGO...	101	101	6898	737	1148	HUNTINGTON...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	HILLSTON...	101	101	6898	737	1148	PARKERSBURG...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	OHIO AKRON-CANTON...	101	101	6898	737	1148	WIS. GREEN BAY...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	CINCINNATI...	101	101	6898	737	1148	LACROSSE...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	CLEVELAND...	101	101	6898	737	1148	MADISON...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	COLUMBUS...	101	101	6898	737	1148	WILAUREE...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	DAYTON...	101	101	6898	737	1148	WYO. CASPER...	101	5	6196	506	910		
INDIANAPOLIS...	10	1	1801	364	209	209	TOLEDO...	101	101	6898	737	1148	CHEYENNE...	101	5	6196	506	9		

World Weather and Crop Update

USSR. Much of European USSR continued to receive ample precipitation during the reporting period with heaviest amounts recorded in the Baltics, the central Region, Central Black Soil region, the southern Ukraine, especially along the Black Sea Coast, and the lower Volga Valley. Some areas of the middle Volga also received good rainfall; Saratov recorded almost an inch of moisture. It was dry throughout the Urals where more rain was needed. The heavy April precipitation in European USSR, especially in the western regions, hampered spring fieldwork in some areas. Spring sowing, after a fast start because of the early spring, lagged behind the slow pace of 1976. Precipitation was light throughout the principal spring wheat regions in eastern and western Siberia and North Kazakhstan. Fieldwork was general throughout these areas, and selected fields in some areas already were sown.

ASIA. In the People's Republic of China, light to moderate rains--6 mm to 13mm--eased the moisture situation over much of the important winter wheat provinces of Shantung and northern Honan, but only traces of precipitation were recorded in Hopeh province. Light to moderate rainfall covered much of the major spring wheat area in northeast China. Heavy precipitation fell throughout the Yangtze River Valley, including southern Honan, and most of southern China. However, rainfall was light in Kwangtung, the PRC's leading rice producing province, where a shortage of irrigation water affected the early rice crop in some areas. In India, it was seasonably hot with temperatures in the 90's and low 100's. Rainfall was limited mainly to scattered thunderstorms, locally heavy, in the north, northeast, and extreme south. Unirrigated crops suffered over much of central India. In Australia, precipitation was confined mainly to the immediate coastal areas in the principal winter grain areas where fall planting soon will be underway. Western and southern Australia, in particular, are in need of precipitation.

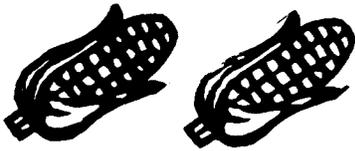
SOUTH AMERICA. Corn harvesting and fall planting in Argentina proceeded under favorable conditions

during most of the reporting period. Heavy rains, however, struck Buenos Aires province on May 1. Dry weather also prevailed in the important agricultural states in southern Brazil; heavy seasonal showers fell in the North.

AFRICA. There was little improvement in the countries lacking moisture in North Africa where precipitation, during the past week, was confined to isolated light showers. Incomplete data for South Africa indicate that at least light to locally moderate showers fell over the principal agricultural areas.

NORTH AMERICA. Winter wheat prospects continued to improve in the United States as ample rains fell throughout the hard winter wheat States during the past week. There was no significant improvement in the severe moisture deficit in the principal spring wheat areas in the United States and in the adjacent prairie provinces of Canada. California received light to moderate showers, but there was little improvement in the severe drought. Light to moderate showers also eased the dry situation in the Northwest's winter wheat areas. Persistent, heavy rains swamped important agricultural areas in the Mississippi Delta region.

EUROPE. Persistent, almost daily, rains continued to plague spring field operations over much of western Europe. A spell of dry weather is badly needed to get spring sowing back on schedule. Central and southern Spain, however, are in need of rain as precipitation in those areas was less than 30 percent of normal during the past two months. After a brief lull, heavy rains again interfered with normal spring operations in northern Italy; it has been dry elsewhere in that country. In eastern Europe, the northern half of that region--East Germany, Poland, and Czechoslovakia--was cool and damp; the southern countries experienced warm weather with scattered showers, locally heavy. Winter grains are generally in good condition throughout the area. Moderate to heavy showers fell over most of the wheat regions of Turkey where crop prospects continued favorable.



Corn Belt Planting Shoots Ahead

Farmers across the Corn Belt took advantage of a relatively clear, dry week to roll the corn planters in earnest. By the weekend, 20 percent of the corn was planted in Indiana, 45 percent in Illinois and 35 percent in Iowa. The entire area is well ahead of normal. The table on the back page provides additional details. In general, the planting season is off to an excellent start. The next question then becomes whether the weather will continue favorable, and will there be sufficient moisture for crop growth and development.

Last summer, fall and winter had been very dry and the soil moisture situation across the Corn Belt was critical, particularly in the western and northern portions. Generous moisture finally began to fall in February and March. The entire Corn Belt was above normal in March with parts of Iowa, Minnesota and South Dakota receiving approximately three to five times normal.

The favorable pattern did not continue into April, and as the figure below shows the Corn Belt was generally below normal. Only the central and southern Great Plains received above normal moisture, providing a large boost to the outlook for winter wheat. However, the Corn Belt did not buildup soil moisture reserves to the level desired.

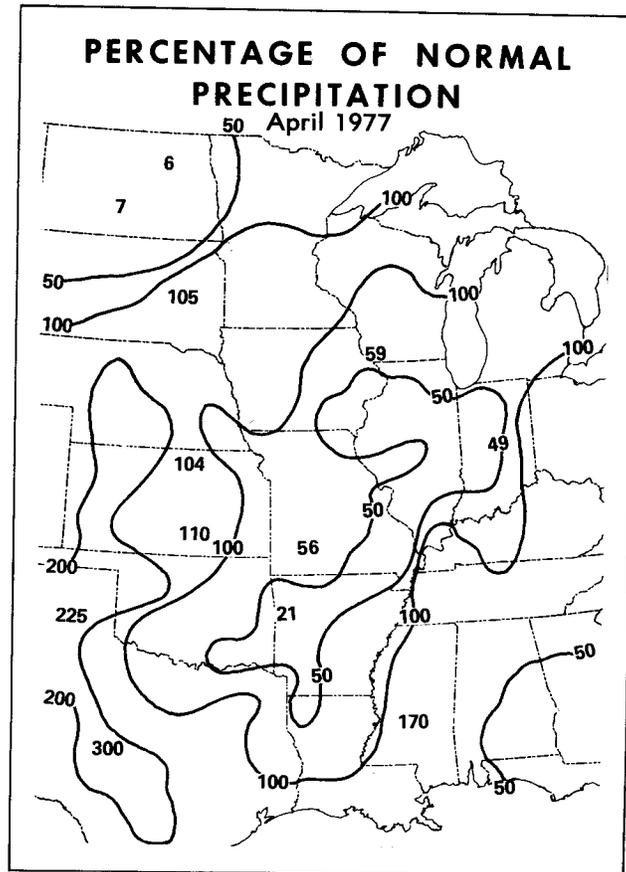
The situation in the Corn Belt cannot be considered serious at this time but there are some potential problems further into the growing

season. Moisture conditions across the area are generally favorable. The Crop Moisture Index Map on page 15 shows an area in parts of Minnesota, Iowa, Illinois, Missouri and Nebraska which is dry on the surface. However, the moisture at lower levels is adequate to carry the crop.

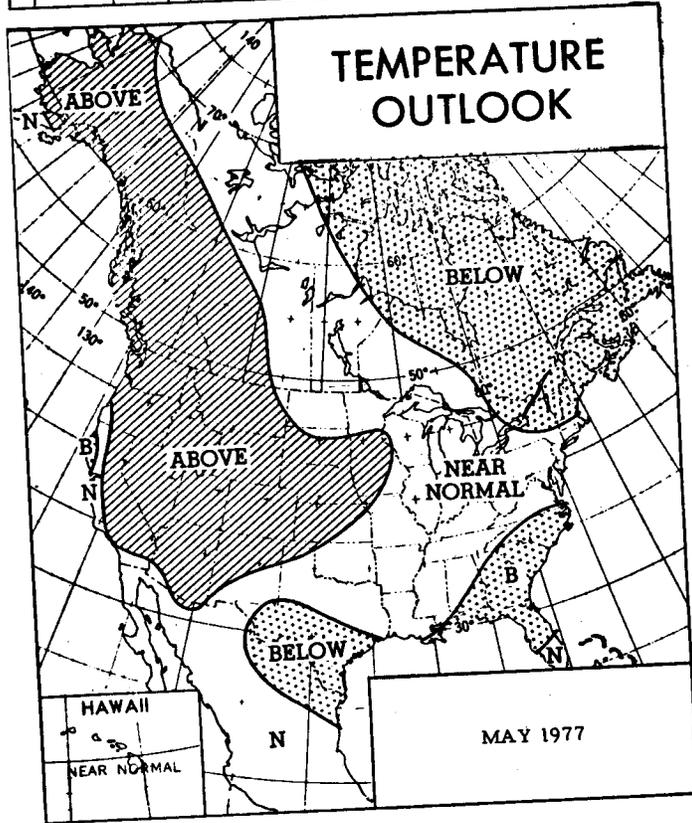
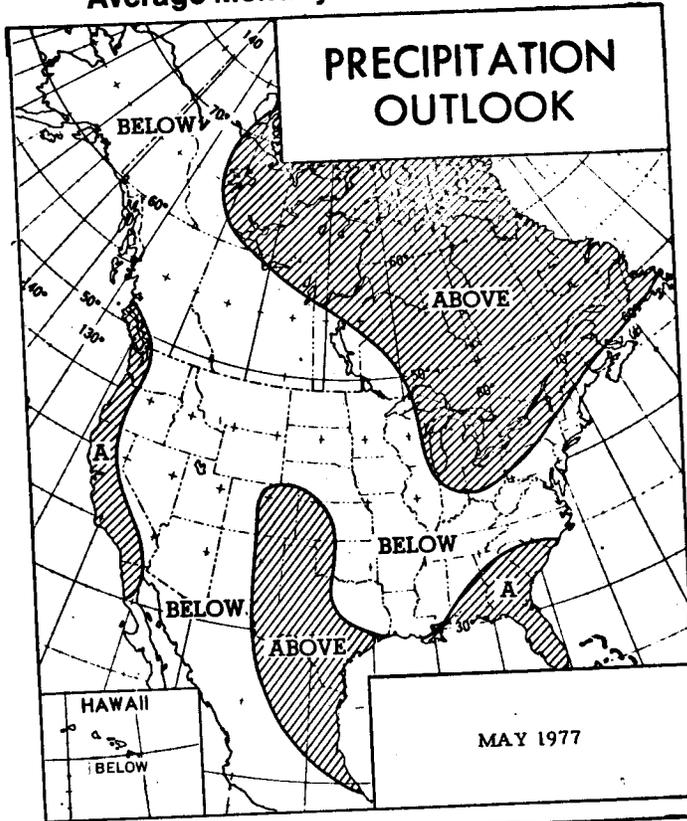
The Palmer Index Map does show that the area is still suffering from meteorological drought. This means that the area is still recovering from the impact of the long dry spell. This is reflected in the fact that the subsoil moisture situation is still very short, particularly at depths greater than four feet in the soil. By midsummer the roots of a corn plant will have penetrated far below this level, if moisture were available.

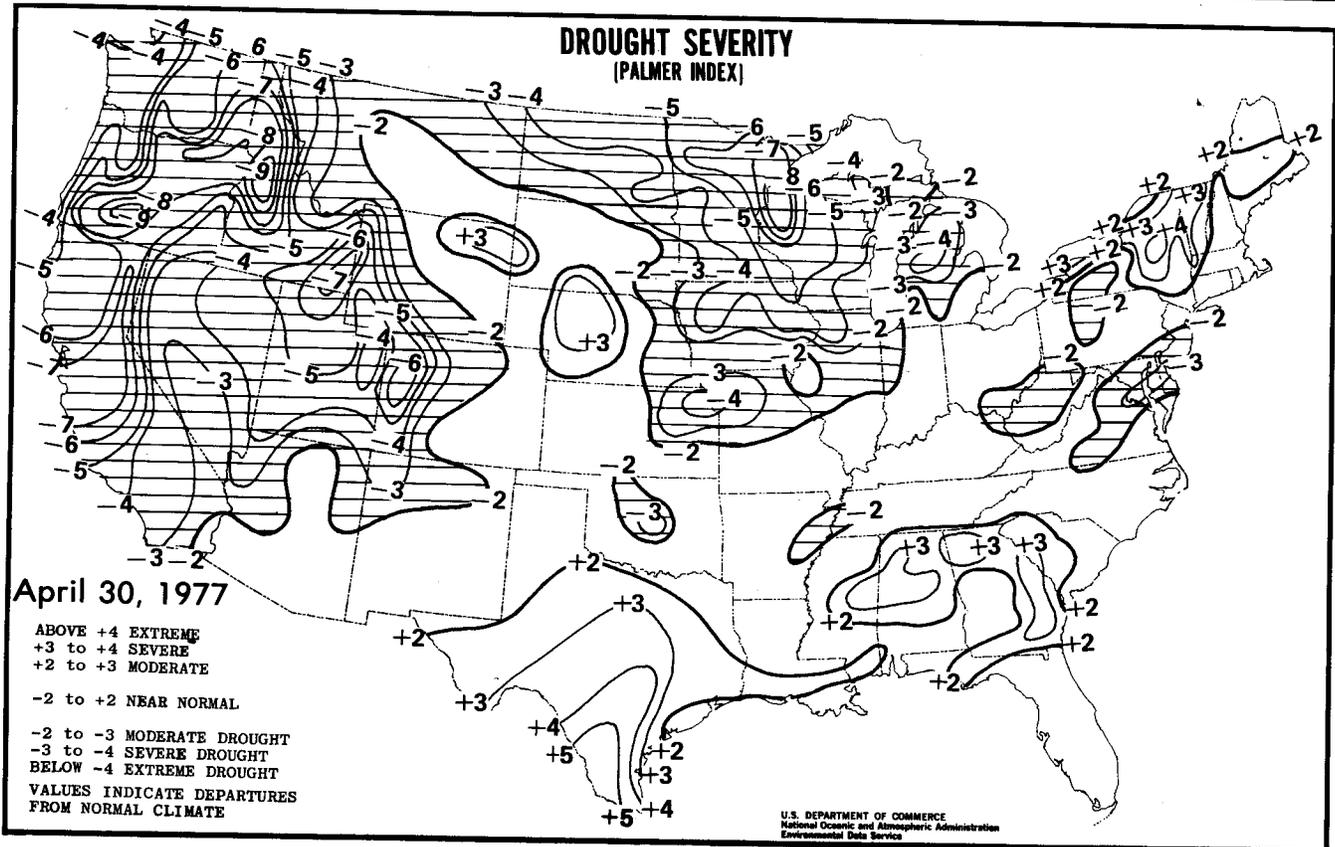
The thirty day outlook on the opposite page indicates that moisture may be below normal during May. The primary exceptions are the Great Lakes region, northern New England, Texas and eastern New Mexico, the Florida peninsula, and the Pacific Coast. Above normal temperatures are expected in the western Corn Belt. This would result in increased evaporation and transpiration, cutting further into soil moisture supplies.

In summary, the situation is satisfactory at this time to carry the crops through early development. Particularly in the western areas very timely rainfall, preferably in above normal amounts, will be required to carry the crop through the reproductive and grain-filling stages.



Average Monthly Weather Outlook





THE PALMER AND CROP MOISTURE INDICES

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

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

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

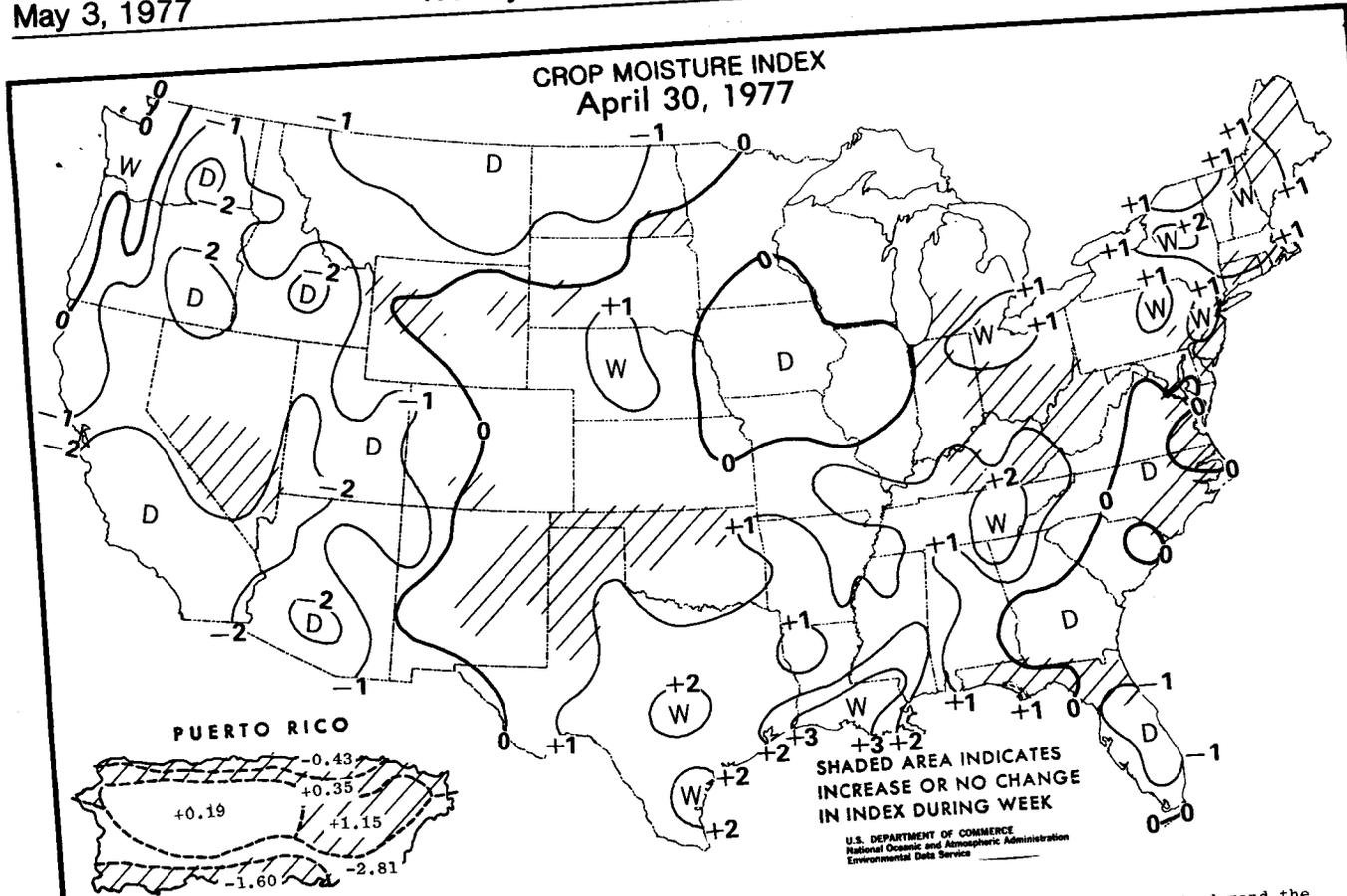
recent rainfall exceeded the moisture requirements of the crops and the additional moisture was added to the soil or was regarded as runoff.

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

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

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

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



SHADED AREA INDICATES INCREASE OR NO CHANGE IN INDEX DURING WEEK

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Data Service

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
2.0 to 3.0	SOME DRYING BUT STILL EXCESSIVELY WET
1.0 to 2.0	MORE DRY WEATHER NEEDED, WORK DELAYED
0 to 1.0	FAVORABLE, EXCEPT STILL TOO WET IN SPOTS
0 to 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	EXTREMELY DRY, MOST CROPS RUINED

SHADED AREA:	INDEX INCREASED OR DID NOT CHANGE
ABOVE	3.0
2.0 to 3.0	EXCESSIVELY WET, SOME FIELDS FLOODED
1.0 to 2.0	TOO WET, SOME STANDING WATER
0 to 1.0	PROSPECTS ABOVE NORMAL, SOME FIELDS TOO WET
0 to 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 CONTINUES, RAIN URGENTLY NEEDED
BELOW	NOT ENOUGH RAIN, STILL EXTREMELY DRY



FIRST CLASS MAIL

PLANTING PROGRESS
 Percent of Acreage Planted as of May 1

CORN			COTTON			SPRING WHEAT					
1977	1976	Avg.	1977	1976	Avg.	1977	1976	Avg.			
Ga.	93	88	68	Ala.	61	74	61	Idaho	85	35	NA
Ill.	45	44	21	Ark.	36	52	34	Minn.	88	82	40
Ind.	20	35	10	Ga.	74	69	48	Mont.	60	60	40
Iowa	35	25	12	La.	33	49	28	N. D.	60	47	29
Kans.	20	20	20	Miss.	35	55	35	S. D.	63	74	47
Ky.	35	59	26	Mo.	22	50	17	5-States	67	60	36
Mich.	10	10	2	N. C.	60	52	43				
Minn.	21	33	11	Okla.	0	0	0				
Mo.	60	53	31	S. C.	80	65	54				
Nebr.	15	10	5	Tenn.	45	60	30				
N. C.	81	79	63	Texas	13	22	24				
Ohio	25	35	20	11-States	25	36	28				
Penn.	7	18	NA								
S. D.	3	4	2								
Texas	63	83	83								
Wisc.	15	5	1								
U. S.	32	33	18								

These 5 States produced 96% of the 1976 U. S. spring wheat crop other than durum.

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

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

NA Not Available

