

WEEKLY WEATHER AND CROP BULLETIN

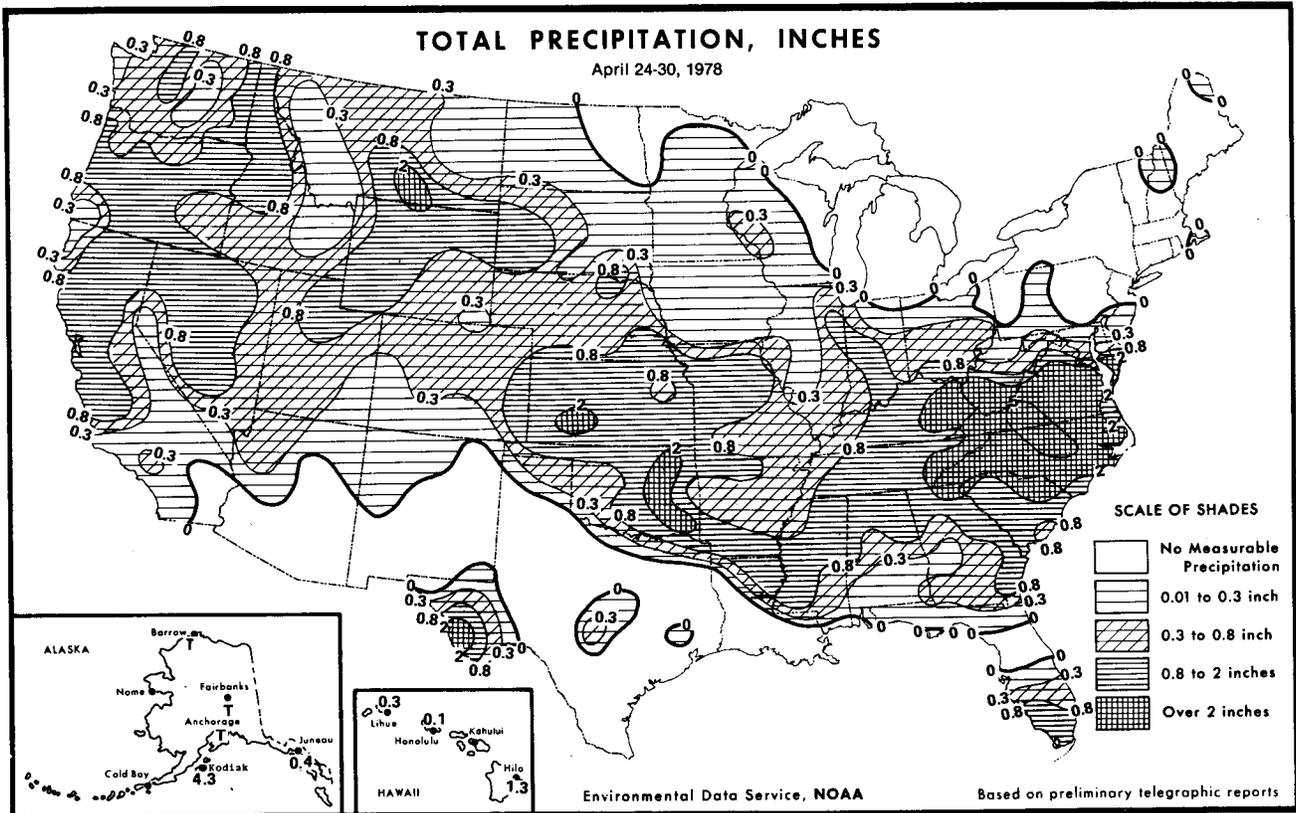
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National Weather Summary

April 24 - 30

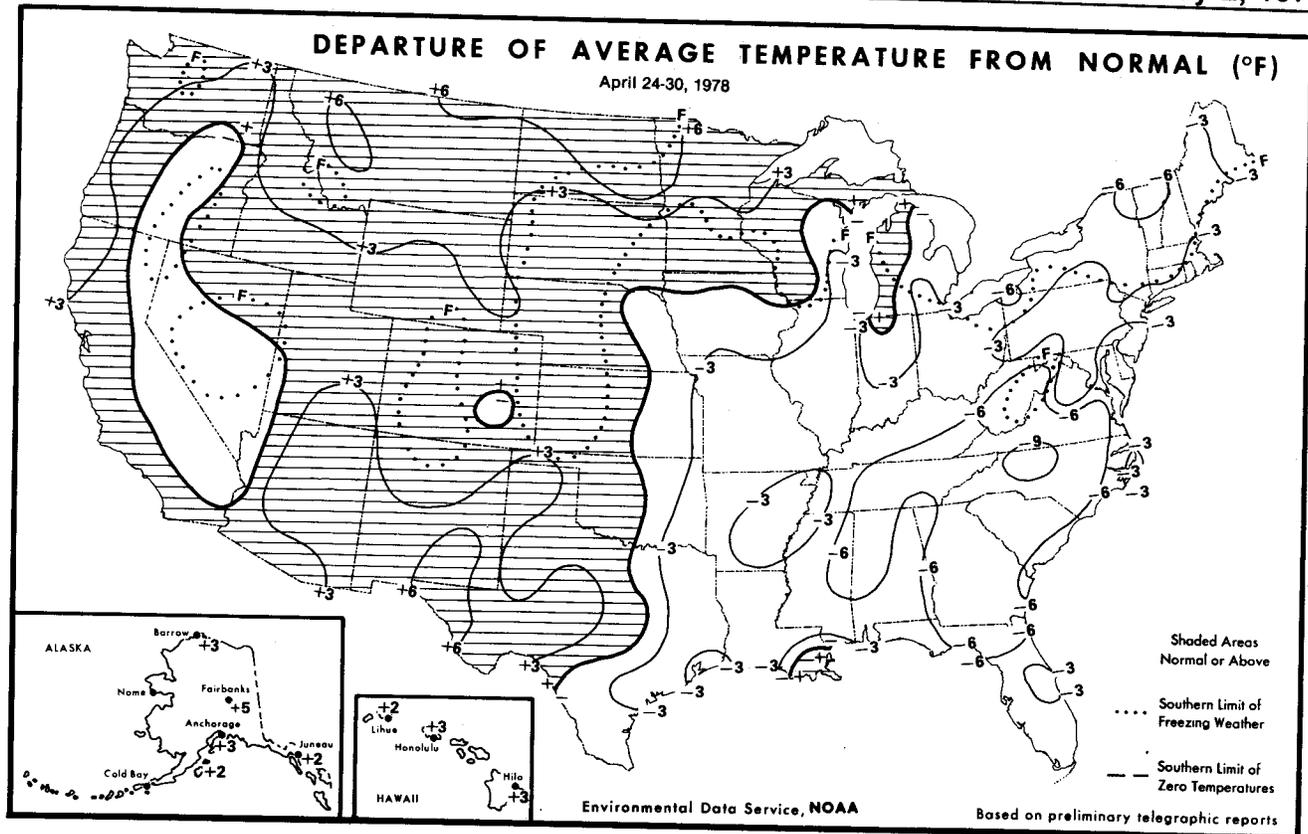
HIGHLIGHTS: Much of the Corn Belt, from Illinois through Ohio, remained nearly rainless after Wednesday allowing some drying of soils in that critical area. In general only light rain fell from Iowa northward. However eastern Nebraska, Kansas and Missouri remained quite wet. Elsewhere from the Virginias southward and westward through the central Plains and Rockies to the West Coast showers and thunderstorms were reported. A pool of cool air kept the Southeast cooler than normal early in the week and a late season polar outbreak late in the week resulted in cooler than normal average temperatures for most of eastern U.S.

The thunderstorm activity that was occurring in southern Florida at the end of last week continued

to produce moderate amounts of rain on Monday morning. As the day progressed, rain and thunderstorms developed from east Texas to western Virginia and the upper Ohio Valley. The thunderstorms extended to the southern Lakes area and light rain fell throughout the upper Mississippi Valley. Tornadoes and hail added their destructive forces in many parts of the thunderstorm areas. Late in the day rain returned to the northern Pacific Coast.

Temperatures around the Nation at daybreak on Monday ranged from the 20's in parts of the Rockies and northern Appalachians to near 70° in Florida and south Texas. Late afternoon readings were in the 50's and 60's across the northern States to the 70's and 80's in the South. The highest readings in the Nation were in southern Texas where Cotulla registered 102°.

Rainfall on Tuesday was confined to western U.S. from the central Plateau to southern California and to Washington State and to southeastern U.S. from the Ohio Valley and Virginia



southward through Alabama and Florida. Late in the day thunderstorms broke out in southwest Texas where the moisture was much needed. The precipitation came in the form of light rain and showers in the West and as thunderstorms and heavy rain in the Southeast. Tornadoes were reported in Alabama, Georgia, and South Carolina and many reports of hail were recorded. Tuesday temperatures were a bit on the cool side on the West Coast and across the North with 50's and 60's prevailing. Readings in the 70's and 80's extended from the Southwest to the Atlantic Coast.

Heavy rain in the mountains of Virginia and West Virginia caused some flash flooding in parts of those areas on Wednesday. The same storm system caused high winds and tides that eroded beaches on the Coasts of Virginia, Maryland, and Delaware. The rain extended southward to Georgia. Elsewhere showers spread from central California northward and northeastward to the northern Rockies. The Midwest and Plains were rainless. Temperatures were near seasonal normals except for some unusually low temperatures recorded in West Virginia Wednesday morning.

Temperatures were unseasonably cool Thursday morning. Several record lows were set in the South. Rain with winds and high tides continued to batter the East Coast as the storm system moved northeastward. Showers and thunderstorms occurred over the central portion of the Plains and upper Missouri Valley, turning to snow in the northern Rockies. Some heavy rain fell in the Pacific Northwest causing some small stream flooding in Idaho. Although some showers began in the western portion, most of the Midwest was rainless.

Although the storm had moved out of the East by Friday, some flooding continued in the southern Appalachians. Elsewhere another storm system was moving into the Plains. Heavy rains and some

heavy snow fell in the northern Rockies. Thunderstorms, some severe, were reported in Oklahoma, Arkansas, Kansas, Nebraska, and Missouri. Showers covered the rest of the northern Plains and crept into Illinois. Light rain continued in the central Plateau and the Northwest. By Friday afternoon temperatures were seasonably pleasant over most of the country, however Friday morning temperatures were well below normal in the Southeast.

The storm system in the Plains began to move southeastward on Saturday. Showers and thunderstorms occurred from the Ohio and Tennessee Valleys across the Mississippi Valley and into the central and northern Plains. Showers were also scattered over the central Rockies as well as the eastern end of the Great Lakes. Light rain continued over the Plateau and the Northwest as far south as northern California. Temperatures remained cool in the northern States with high readings generally in the 50's. The warmest area on Saturday was southwest Texas where the mercury climbed to the 90's. Junction, Tex., marked 99°.

A much cooler air mass moved through the northeastern quarter of the Nation on Sunday. A variety of stormy weather occurred along and ahead of the moving cool air and in association with a series of low pressure centers from the south central Plains into the Rockies. Showers and thunderstorms were reported over much of the central portion of the country. These extended from the Virginias and Carolinas across the lower two-thirds of the Mississippi Valley, through the central half of the Plains, over the central Rockies to the Pacific Coast from northern California through Oregon. Severe weather was reported in the central Plains late in the day and by mid-evening the activity extended into the central Gulf States.



National Agricultural Summary

April 24-30

HIGHLIGHTS: Plowing plodded along far behind last year in the north central States lagging normal by 30 percentage points but in some States as much as 50 points. Soil moisture rated adequate to surplus with the only exceptions in parts of Florida, Oklahoma and Texas. Many areas need higher temperatures and drier conditions to get through the spring planting season. Low temperatures dominated the eastern half of the Nation slowing germination, plant growth and in some instances damaging fruit trees. Corn planting reached 10%, far short of 1977's 32% and the 21% average. All the Corn Belt States lagged a year earlier. Cotton planting reached 29%, exceeding last year's 24% and the 23% average; Texas growers set the pace to push progress ahead of previous years. Spring seedings of small grains fell far short of 1977's unusual rate. Spring wheat planting reached 10% in sharp contrast to 1977's 70% and the 43% average. Oats seeding was in a similar situation. Soybean planting spread across the South and into parts of Ohio.

SMALL GRAINS: Winter wheat rated fair to mostly good. Southern Great Plains dryland stands were poor. The crop began heading in Missouri but growth farther north was only half of last year. Limited combining began in Arizona.

In Kansas wheat development lagged; 50% was jointed compared with 70% last year and average. Crop condition deteriorated in western Kansas because of dry soils in spite of recent rains. Oklahoma wheat rated fair to good. Most of the crop was jointed; heading reached 14%, half the 1977 figure but ahead of the 12% normal. Texas dryland wheat on the Plains rated poor because of low soil moisture; many fields were grazed out. Irrigated stands scored good and growing rapidly into the joint and head stages. Colorado winter wheat condition was poor to fair. Wind lightly damaged some stands. Rain improved soil moisture and should limit foot rot damage. Nebraska wheat was good. Wheat growth in Ohio and Indiana ranged from 4.5 to 5.0 in., half the growth at this time in 1977.

Spring wheat seeding in the 5 major producing States reached a cold, wet 10%. Last year an early spring helped producers reach 70%. Only Idaho growers at 50%, exceeded the average but they also lagged 1977's pace. The two largest spring wheat States, North Dakota and Minnesota, did not attain one-tenth of the progress in 1977 because of a late winter, lingering low temperatures, and wet soils. Oats producers fared no better and progress ranged from 2% in North Dakota, 10% in Minnesota, 20% in South Dakota, 25% in Wisconsin to 63% in Iowa. These major States generally lagged 1977 by 30 to 60 percentage points.

CORN: Planting advanced to 10%, less than a third of 1977's 32% and only half the average 21%. Very little acreage was planted in the Corn Belt; most States fell in the range of 5% or less except Ohio at 15%. Planting in southern areas was well advanced.

In the eastern north central States planting reached 5%, mostly on the strength of Ohio's showing. Last year these States stood at 29% and the average was 19%. Illinois, at 5%, was only a tenth of 1977's 49%.

In the western north central States seeding stood at 2% compared with 27% in 1977 and the 14% average. Iowa reported virtually no corn planted; last year 40% of the acreage was already seeded.

Low temperatures and wet soils held corn planting, germination, and early growth in check throughout most of the Nation. One exception was the Lower Rio Grande Valley where corn began tasseling.

COTTON: Planting in the 11 southern States advanced to 29% surpassing both 1977's 24% and the 23% average. Most of the States actually lagged last year and the average. Only Mississippi, Louisiana, and Texas exceeded the historic figures but Texas has over half the cotton acreage among this group of States.

In the Southeast cotton rated poor to fair because of low temperatures and wet soils in some localities. Texas cotton rated good with 26% planted, double 1977's 13% and also a significant lead over the 17% average. Growers planted a few irrigated fields in the Plains.

Cotton planting advanced in western production areas. New Mexico growers reached the halfway mark.

OTHER CROPS: Sorghum planting advanced northward; Oklahoma growers seeded a few early fields but most activity remained centered in Texas among the major producing States. Texas planting advanced into the northern Plains; statewide, seeding reached 66% exceeding 1977's 56% and the 61% average. Emerged stands rated good. Oklahoma land preparation for sorghum, at 64%, far surpassed the 43% for last year and average.

Soybean seedings just got started in southern areas where progress ranged from 3 to 6%, slightly behind last year because of the slow start in Arkansas. Growers planted a few early fields in Missouri and Ohio too.

Rice seeding was almost complete in Texas; growers started permanently flooding early planted fields. Mississippi and Louisiana planting, at 86 and 87% respectively, exceeded last year by about 10 points. Arkansas sowing at 60% lagged 1977 by 8 points.

Peanut planting in Alabama reached 28%, almost half the average rate; but Georgia stood at 46%, 11 points ahead of average. In Texas planting lagged at 14%; producers waited for higher temperatures.

FRUITS AND NUTS: Low temperatures threatened damage to many orchards but frosts appeared to be limited. Hail hit some South Carolina orchards. Northern trees ranged from dormant to green tip. Peach bloom passed peak in New Jersey. Peaches sized in Texas. Pecans bloomed in New Mexico and leafed in Texas. Cherries set in Oregon and Washington.

Florida citrus groves rated good; growers irrigated to supplement deficient rains. The Valencia harvest was active in all production areas.

VEGETABLES: Florida crops rated good to excellent; shipments increased 9% from the previous week. Only supplies of chinese cabbage, strawberries, and okra declined. Texas growers harvested carrots, onions, spinach, cabbage, and strawberries. Wet fields delayed California plantings and harvests but shipments included sweet corn, bell peppers, tomatoes, lettuce, and strawberries. Low temperatures delayed asparagus harvests in New Jersey and Michigan.

PASTURES AND LIVESTOCK: Pastures generally rated fair to good but low temperatures limited growth. Extreme northern grasslands greened but supplied very little grazing. Western ranges rated good to excellent with ample stock water available. Parts of Florida, Colorado and Texas had poor grazing land because of low soil moisture. Some Texas cattlemen fed supplemental rations.

Temperature and Precipitation Data for the Week Ending Midnight, L.s.t., April 30, 1978

States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches		States and Stations	Temperature °F		Precipitation Inches	
	Average	Departure	Total	Departure		Average	Departure	Total	Departure		Average	Departure	Total	Departure
ALA. Birmingham . . .	60	-6	.7	-.2	LA. Baton Rouge . . .	67	-4	0	-1.2	Youngstown . . .	48	-4	T	-.9
Mobile . . .	67	-4	0	-1.1	Lake Charles . . .	68	-4	0	-1.1	OKLA. Okla. City . . .	64	0	.4	-.6
Montgomery . . .	64	-4	.1	-.8	New Orleans . . .	72	+1	0	-.9	Tulsa . . .	63	-2	2.7	+1.6
ALASKA, Anchorage . . .	43	+3	T	-.1	Shreveport . . .	66	-3	T	-.3	OREG. Astoria . . .	53	+4	.3	-.6
Barrow . . .	10	+3	T	0	MAINE, Caribou . . .	41	-1	.1	-.5	Burns . . .	48	0	.3	+.5
Fairbanks . . .	42	+5	T	-.1	Portland . . .	54	-3	T	-.8	Medford . . .	56	+3	.7	0
Juneau . . .	44	+2	.4	-.3	MD. Baltimore . . .	55	-3	T	-.7	Pendleton . . .	52	-2	.7	+.4
Kodiak . . .	41	+2	4.3	+3.4	MASS. Boston . . .	51	-10	0	-.8	Portland . . .	54	+1	.8	+.3
Nome . . .	---	---	---	---	Chatham . . .	51	-10	0	-.7	Salem . . .	54	+2	.4	0
ARIZ. Flagstaff . . .	48	+3	0	-.3	MICH. Alpena . . .	43	-2	T	-.6	PA. Allentown . . .	53	-1	T	-.9
Phoenix . . .	75	+4	0	-.1	Detroit . . .	50	-2	T	-.8	Erie . . .	43	-6	0	-.8
Tucson . . .	71	+2	0	-.1	Flint . . .	48	-2	T	-.7	Harrisburg . . .	55	-2	0	-.7
Yuma . . .	80	+3	0	-.1	Grand Rapids . . .	51	0	T	-.8	Philadelphia . . .	54	-3	T	-.7
ARK. Fort Smith . . .	63	-3	.4	-.8	Houghton Lake . . .	47	0	0	-.6	Pittsburgh . . .	54	0	T	-.8
Little Rock . . .	63	-2	.6	-.7	Lansing . . .	48	-3	0	-.6	Scranton . . .	50	-3	T	-.8
CALIF. Bakersfield . . .	65	0	.2	0	Marquette . . .	44	0	0	-.6	R.I. Providence . . .	50	-1	T	-.8
Bureka . . .	54	+3	.2	-.4	Muskegon . . .	51	+2	0	-.7	S.C. Charleston . . .	64	-4	.6	0
Fresno . . .	62	-1	1.0	+.8	S. Ste. Marie . . .	44	+1	0	-.6	Columbia . . .	59	-8	1.2	+.4
Los Angeles . . .	63	0	.3	+.1	MINN. Duluth . . .	46	+3	T	-.5	Greenville . . .	58	-6	1.7	+.9
Red Bluff . . .	62	0	1.6	+1.2	Internat'l Falls . . .	48	+4	T	-.6	S.D. Aberdeen . . .	52	+2	1	-.4
San Diego . . .	65	+3	T	-.1	Minneapolis . . .	52	+2	.3	-.3	Huron . . .	52	+1	1	-.4
San Francisco . . .	57	+1	1.5	+1.2	Rochester . . .	51	+1	1	-.5	Rapid City . . .	51	+1	1.2	+.6
Stockton . . .	62	+1	.7	+.5	St. Cloud . . .	49	+1	1	-.5	Sioux Falls . . .	51	0	.2	-.4
COLO. Denver . . .	54	+2	.7	+.2	MISS. Jackson . . .	64	-5	.9	-.2	TENN. Chattanooga . . .	59	-5	1.7	+.8
Grand Junction . . .	57	+1	.3	+.2	Meridian . . .	61	-7	.3	-.8	Knoxville . . .	57	-1	2.3	+1.5
Pueblo . . .	55	-1	.2	-.2	MO. Columbia . . .	56	-3	1.4	+.4	Memphis . . .	65	-7	.3	-.9
CONN. Bridgeport . . .	51	-1	T	-.8	Kansas City . . .	57	-3	1.1	+3	Nashville . . .	58	-1	.9	0
Hartford . . .	49	-3	T	-.8	St. Louis . . .	56	-5	.2	-.7	TEX. Abilene . . .	73	+6	0	-.7
D.C. Washington . . .	58	-3	.3	-.4	Springfield . . .	57	-3	.4	-.7	Amarillo . . .	64	+4	T	-.4
FLA. Apalachicola . . .	66	-5	0	-.7	MONT. Billings . . .	52	+3	3.7	+3.4	Austin . . .	71	-1	0	-.9
Daytona Beach . . .	69	-3	0	-.5	Glasgow . . .	53	+5	.2	0	Beaumont . . .	71	-1	0	-.1
Ft. Myers . . .	70	-5	1.0	+.5	Great Falls . . .	51	+3	.5	+.1	Brownsville . . .	76	-1	0	-.6
Jacksonville . . .	65	-6	T	-.7	Havre . . .	54	+5	.5	+.2	Corpus Christi . . .	73	-2	0	-.6
Key West . . .	78	-3	1.3	+.8	Helena . . .	55	+8	.3	+.1	Dallas . . .	---	---	---	---
Lakeland . . .	70	-4	.1	-.2	Kalispell . . .	51	+5	-.1	-.2	Del Rio . . .	77	+2	T	-.5
Miami . . .	71	-5	1.2	+.4	Miles City . . .	54	+3	1	-.3	El Paso . . .	73	+6	T	-.1
Orlando . . .	71	-2	T	-.6	Missoula . . .	51	+3	1	-.2	Fort Worth . . .	67	-1	0	-.1
Tallahassee . . .	64	-7	T	-.7	NEBR. Grand Island . . .	55	0	.5	-.2	Galveston . . .	71	-1	0	-.6
Tampa . . .	69	-5	T	-.4	Lincoln . . .	54	-2	1.1	+.5	Houston . . .	69	-3	T	-.6
W. Palm Beach . . .	70	-5	.7	-.2	Norfolk . . .	53	-1	.5	-.1	Lubbock . . .	66	+2	0	-.3
GA. Atlanta . . .	57	-8	.7	-.3	N. Platte . . .	52	0	.6	0	Midland . . .	70	+2	0	-.4
Augusta . . .	60	-7	1.6	+.9	Omaha . . .	54	-1	T	-.8	San Angelo . . .	74	+4	T	-.5
Macon . . .	62	-7	.3	-.5	Valentine . . .	51	0	.2	-.3	San Antonio . . .	69	-3	0	-.7
Savannah . . .	65	-4	1.0	+.3	NEV. Ely . . .	44	-1	.6	+.4	Victoria . . .	70	-3	T	-.8
HAWAII, Hilo . . .	76	+3	1.3	+.6	Las Vegas . . .	67	-1	1.1	+.1	Waco . . .	71	+1	.2	-.9
Honolulu . . .	79	+3	.1	-.1	Reno . . .	49	-1	.2	+.1	Wichita Falls . . .	68	0	.1	-.8
Kahului . . .	---	---	---	---	Winnemucca . . .	49	0	1.0	+.8	UTAH, Blanding . . .	55	+4	T	-.2
Lihue . . .	76	+2	.3	-.4	N.H. Concord . . .	45	-3	0	-.7	Salt Lake City . . .	54	+1	.8	+.3
IDAHO, Boise . . .	52	0	.6	+.3	N.J. Atlantic City . . .	51	-5	.1	-.7	VT. Burlington . . .	42	-6	T	-.6
Lewiston . . .	56	+3	.8	+.5	Trenton . . .	53	-3	T	-.7	VA. Lynchburg . . .	54	-6	4.7	+4.1
Pocatello . . .	51	+2	.3	0	N.MEX. Albuquerque . . .	62	+2	0	-.1	Norfolk . . .	56	-5	1.9	+1.3
ILL. Cairo . . .	61	-3	.4	-.7	Roswell . . .	70	+7	T	-.1	Richmond . . .	54	-7	3.4	+2.7
Chicago . . .	50	-4	.4	-.5	N.Y. Albany . . .	47	-4	0	-.7	Roanoke . . .	53	-6	6.7	+6.0
Moline . . .	53	-2	.2	-.7	Binghamton . . .	46	-2	T	-.8	WASH. Colville . . .	52	+2	.5	+.2
Peoria . . .	53	-3	.2	-.8	Buffalo . . .	54	-3	0	-.8	Omak . . .	57	+5	1	-.2
Rockford . . .	52	-1	.2	-.7	New York . . .	47	-2	0	-.8	Quillayute . . .	51	+3	1	-1.5
Springfield . . .	55	-3	T	-1.0	Rochester . . .	47	-3	0	-.7	Seattle-Tacoma . . .	54	+3	.7	+.2
IND. Evansville . . .	56	-5	.4	-.6	Syracuse . . .	47	-4	0	-.7	Spokane . . .	51	+1	.9	+.6
Ft. Wayne . . .	52	-2	T	-.9	N.C. Asheville . . .	52	-7	2.1	+1.3	Walla Walla . . .	55	-1	1.1	+.7
Indianapolis . . .	55	-1	1.1	+.2	Charlotte . . .	58	-6	2.2	+1.5	Yakima . . .	54	+1	2	+.1
South Bend . . .	53	+1	T	-.9	Greensboro . . .	53	-9	3.6	+2.9	W.Va. Beckley . . .	49	-6	2.6	+1.8
IOWA, Burlington . . .	54	-2	.2	-.7	Hatteras . . .	62	0	2.2	+1.5	Charleston . . .	54	-6	2.2	+1.4
Des Moines . . .	53	-2	.1	-.7	Raleigh . . .	55	-8	5.1	+4.4	Huntington . . .	54	-5	2.8	+2.0
Dubuque . . .	52	0	T	-1.0	Wilmington . . .	62	-5	1.5	+.8	Parkersburg . . .	54	-4	.2	-.6
Sioux City . . .	53	-2	.1	-.5	N.DAK. Bismarck . . .	52	+4	.1	-.3	WIS. Green Bay . . .	46	-3	0	-.7
KANS. Concordia . . .	57	0	1.4	+.7	Fargo . . .	54	+6	T	-.5	La Crosse . . .	53	0	.3	-.4
Dodge City . . .	59	+1	4.6	+4.1	Williston . . .	50	+3	T	-.1	Madison . . .	50	0	1	-.6
Goodland . . .	53	0	.8	+.4	OHIO, Akron-Canton . . .	54	+6	.2	-.8	Milwaukee . . .	46	-3	0	-.6
Topeka . . .	57	-2	.3	-.6	Cincinnati . . .	53	-5	.4	-.4	WYO. Casper . . .	48	+1	.7	+.3
Wichita . . .	60	-1	1.7	+.9	Cleveland . . .	49	-3	1	-.7	Cheyenne . . .	48	+1	1	-.3
KY. Lexington . . .	54	-5	1.7	+.8	Columbus . . .	51	-4	.4	-.5	Lander . . .	48	+1	1.1	+.5
Louisville . . .	57	-3	1.0	+.1	Dayton . . .	53	-3	.7	-.1	Sheridan . . .	52	+4	1.9	+1.4
					Toledo . . .	50	-3	T	-.7	P.R. San Juan . . .	82	+4	.8	-.3

Based on 1941-70 normals

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State Summaries of Weather and Agriculture

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

ALABAMA: Temperatures 4° below normal. Ranging from 4° above normal on 30th to 13° below normal on 26th. Light rains on 25th and 26th.

Fieldwork made good progress, 4.5 days suitable. Cotton 51% planted, 61% 1977, 57% average. Corn 68% planted, 67% 1977, 60% average. Some cotton and corn damaged by low temperatures. Peanuts 28% planted, 58% average. Wheat fair to good condition; 52% headed, 84% 1977, 85% average. Livestock and pastures fair to good.

ARIZONA: Mostly dry, mild; some rain northwest. Temperatures normal to 4° above. Northwest temperatures 2 to 4° below normal.

Cotton planting full swing. Grain sorghum planting active, but limited. Wheat, barley excellent progress, many fields maturing. Wind caused limited lodging. Limited combining underway, west. Safflower good progress, earlier fields setting seed. Sugarbeet top, taproot growth good. Third cutting alfalfa central, west. Harvest spring lettuce winding down. Lettuce harvest nearly complete Yuma. Harvest carrots, cabbage, other mixed vegetables continued. Melon vines good growth, development. Digging potatoes started. Valencia orange harvest gaining momentum. Lemon harvest nearly complete. Grapefruit, tangerine harvest active. Range conditions improving, mountain regions. Desert ranges excellent condition. Soil moisture starting to dry; mostly adequate. Cattle making good weight gain, abundant forage. Sheep, lambs good condition.

ARKANSAS: Temperatures cooler than normal. Means to 7° subnormal. Extremes: 85 and 32°. Highest mean 65°, lowest 58°. Rain first and last of week; most precipitation 3.10 in., least 0.01 in.

Cool temperatures and rain hampered soil preparation and plantings. Fieldwork: 5 days suitable. Soil moisture adequate. Soybeans 3% planted, 6% last year and average. Cotton 23% planted, 52% last year, 34% average. Rice 60% planted, 68% last year and average. Emerged seedlings fair. Corn 55% planted, 82% last year, 84% average. Sorghum 51% planted, 62% last year, 55% average. Wheat and oats fair to good, heading. Strawberries good to excellent; harvest expected May 7 to 13. Peaches and apple fruit set good. Tomatoes and watermelons good. Pastures average condition; growth slowed. Hay good condition. Cattle good.

CALIFORNIA: Precipitation statewide; greatest amounts 3.00 in. in mountain areas. Temperatures slightly above normal to slightly below normal.

Midweek rains slowed most field operations. Ground preparation, planting continues cotton and corn. Grain hay green chopped. Field preparation rice continued. Safflower, small grains various stages development. Fruit crops suffering from wet weather. Avocado bloom heavy south, harvest active. Cherry crop coloring. Sulfur applied to grapes to combat mildew and fungus. Olive bloom slow. Peach set appears good, spraying for insects and disease. Citrus bloom prolonged by cool weather. Valencia pack increased. Almond trees show damage due to wet. Blight showing in some walnut groves, growers spraying. Wet fields delayed vegetable planting and harvests. First harvest sweet corn, bell peppers, tomatoes desert areas. Lettuce harvest increasing very slowly central coast. Strawberry harvest heavy. Range, pasture excellent. Grass maturing. Stock ponds full, overflowing. Cattle, sheep good.

COLORADO: Fair and dry thru 28th. Showery conditions on 29th. Heaviest rain eastern foothills and southeast; wet snow higher elevations. Temperatures near normal. Cool early week with scattered frosts eastern plains and west valleys. Warmer midweek, cool and rainy end of week.

Winter wheat poor to fair, light to moderate wind damage early in week. General rain falling at end of week eastern plains. Moisture will limit foot rot damage. Oats seeded 77%, 75% 1977, 80% average. Spring barley seeded 75%, 87% 1977, 91% average. Summer potatoes seeded 51%, 57% 1977, 57% average. Sugarbeets seeded 92%, 70% 1977, 70% average. Corn seeding 32%, 21% 1977, 14% average. Fieldwork: 4.5 days suitable. Fruits seriously damaged by freeze. Ranges and pastures vary from good to very poor. Livestock good.

FLORIDA: Seasonal temperatures early week; 7 to 12° below normal 26th through 29th. Sunny and mild 30th. Precipitation 0.50 in. south third of Peninsula 24th, and 0.25 to 0.50 in. Panhandle and north 25th.

Soil moisture adequate north and west, short central and upper south. Corn planting about complete. Early corn fair to good condition. Peanut planting continues. Soybean land mostly prepared. Small grains headed out, disease no problem. Tobacco making fair progress. Sugarcane good. Pastures mostly good to excellent north and Panhandle; poor to fair central, southern Peninsula, some pastures turning brown. Cattle generally good. Citrus groves generally good but rain needed. Most growers irrigating. Valencia harvest very active. Grapefruit movement active for processing. Vegetable crops generally good to excellent, some declining seasonally. Growth, quality, fruit set generally good. Overall shipments up 9% from previous week. Shipments sweet corn, radishes, tomatoes, cucumbers, eggplant, peppers increased. Volume steady snap beans, cabbage, carrots, escarole, lettuce, potatoes, squash. Supplies celery, chinese cabbage, strawberries, okra down. Watermelon crop mostly good. Fruit set, sizing good to excellent. Light cutting underway. Fair to moderate volume mid to late May.

GEORGIA: Temperatures 6 to 9° below normal. Averages upper 50's north except near 30° mountains to low 60's in south. Rainfall midweek; amounts near 1.00 in. northeast to less than 0.25 in. southwest. Scattered showers north 30th.

Soil moisture adequate. Fieldwork: 4 days suitable. Wet fields again hampered land preparation and planting. Cool temperatures restricted plant development. Corn 86% planted, 93% last year, 70% average; fair to good. Peanuts 44% seeded, 60% last year, 37% average; fair to good condition. Tobacco 95% transplanted, 98% last year, 87% average; plants fair to good. Cotton 56% planted, 74% last year, 44% average; condition variable, average fair. Cotton 18% up to stand, behind average of 21%. Soybeans 6% planted, 6% last year, 3% average. Grain sorghum 20% seeded, same as last year. Watermelons 90% planted, 93% last year. Small grains fair to mostly good. Peaches and apples fair to mostly good. Pasture and cattle fair to mostly good.

HAWAII: Weather favorable. Periodic showers beneficial all Islands.

Quality of semi-head lettuce down; caused by bolting and diseases. Other crops fair to good condition. Spraying frequent to control disease

and insect infestation. Vegetable supplies: Cucumbers increasing, head cabbage heavy, others light to moderate. Banana supplies light. Papaya supplies: Slight increase anticipated. Sugar active. Pineapple harvest gradually increasing. Pastures improving.

IDHAO: Temperatures slightly above normal north, below normal south. Precipitation general but heaviest central.

Spring storms limited fieldwork to 3 days. Barley and oats 50% seeded. Spring wheat seeding 50%, 85% last year, normal 40%. Sugarbeets 80% planted, potatoes 25%. Some irrigation in south central area. Ranges good but more warm weather needed. Cattle and sheep in good condition.

ILLINOIS: Temperatures normal northwest, 2 to 4° below normal elsewhere. Precipitation trace to 0.30 in., most beginning of week.

Winter wheat good to fair. Oats seeding 80% complete, 1977 100%, average 99%. Plowing 1978 corn and soybean land 68% complete, 1977 100%, average 96%. Corn planting 5% complete, 1977 49%, average 33%. Pastures good to fair. Fieldwork: 2.8 days suitable. Soil moisture adequate to surplus.

INDIANA: Cool week. North half rainless after 1st day, sunny with low humidities. South, week-end rains of 0.10 to 0.50 in. Temperatures declined from low 70's 29th to high 20's 1st.

Soil temperatures about 2° below normal. Fieldwork: 1 day suitable. Spring planted cropland 55% plowed, 1977 85%, average 65%. Corn 2% planted, 1977 15%, average 10%. Oats 35% seeded, 1977 95%, average 70%. Oats 1 in., average 2 in. Wheat condition fair; 5 in., 1977 11 in., average 11 in. Wheat 10% jointed. Clover 60% seeded, average 100%. Topsoil and subsoil moisture mostly surplus. Pastures mostly fair to good.

IOWA: Cool with considerable cloudiness but low precipitation.

Soil temperatures in 40's. Topsoil and subsoil moisture adequate to surplus. Plowing 55% complete, complete last year, normal 83%. Condition of oats, wheat, hays, and pasture fair to good. Oats acreage planted 63%, complete last year, normal 79%. Oats acreage emerged 22%, last year 90%, normal 56%. Corn acreage planted 0%, last year 40%, normal 17%. Fertilizer 45% applied. Fieldwork: 2.8 days suitable. Livestock condition improving.

KANSAS: Substantial to heavy weekend rains west and south; from 2.00 to 4.00 in. southwest, 0.50 in. or less northeast. Temperatures averaged 56° northwest to 61° southeast and south central or 1 to 2° above normal west and north central and normal to 2° below normal east and south central.

Wheat growth behind normal; 50% jointed, 70% last year and average. Condition down slightly due to dry conditions. Topsoil moisture supplies short western two-thirds; subsoil moisture supplies short western one-third. Corn planted 15%, 20% last year and average.

KENTUCKY: Temperatures 3° below normal. Rainfall near average with amounts of 1.00 in. Rain occurred every day but 27th and 28th.

Fieldwork averaged 2.5 days. Soil moisture adequate to surplus. Corn planting advanced slowly at 16% complete; last year 35%, average 31%. Cold temperatures slowing germination; 11% planted corn emerged. Tobacco plants small, 90% dime or less. Condition of plants in beds fair; stands thin. Barley beginning to head but most wheat in boot. Pasture condition good but growth slow.

LOUISIANA: Temperatures 3 to 5° below normal except southeast. Extremes: 39 and 89°. Showers north.

Activities: Fertilizing pastures, land preparation, cotton, corn and rice planting. Fieldwork: 5.3 days suitable. Soil moisture short central, west; short to adequate elsewhere. Corn 87% planted, 85% last year, 66% average. Rice 87% planted, 77% last year, average 68%. Cotton 40% planted, 31% last year, 22% average. Sugarcane slow growth, fertilization active. Soybeans 6% planted, 5% last year. Strawberry harvest active. Wheat and oats fair to good; 67% headed. Cattle fair to good. Pastures fair.

MARYLAND & DELAWARE: Temperatures 6° below normal. Highs in mid-60's, lows in low 40's. Precipitation less than 0.05 in. except Eastern Shore 1.00 to 2.00 in.

Plowing for corn and spreading fertilizer. Corn planting 15% complete, 30% 1977, 28% average. Progress expected to pick up rapidly. Small grains fair to good; progress later than normal due to cool weather. Vegetable planting in full swing. Tobacco growers marketing 1977 crop and tending tobacco beds. Fruit crops in good condition, no spring freeze damage.

MICHIGAN: Temperatures ranged 4° below normal to 2° above. Warmest midweek. Precipitation southwest Lower with negligible precipitation elsewhere.

Fieldwork: 5 days. Plowing 30%, normal 34%, last year 64%. Corn 2% planted, 8% last year, 7% normal. Oats 15% sown, normal 59%. Sugarbeets planted 55%, normal 60%. Potatoes 10% planted, 13% normal. Asparagus crowns planted; none harvested. Expected harvest May 8. Fruit dormant to green tip; spraying started. Planting onion, cabbage, cauliflower transplants, beets and peas.

MINNESOTA: Temperatures near normal southeast half and 4 to 7° above normal northwest half. Extremes: 75 and 19°. Precipitation less than 0.25 in. except 0.25 to 0.75 in. west central through east central. Precipitation averaged 0.25 to 0.60 in. below normal except near normal to 0.25 in. below normal west central through east central.

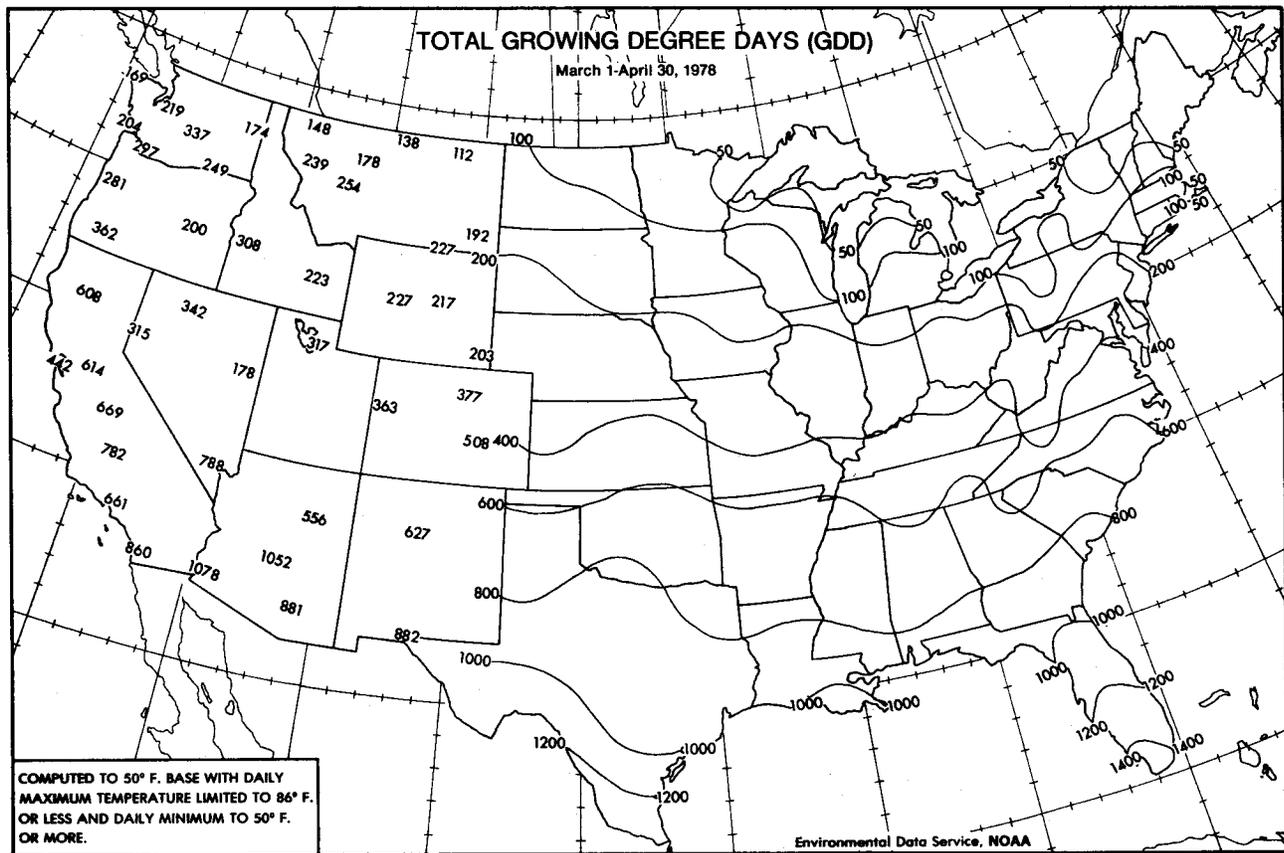
Fieldwork begun but limited to better drained soils; momentum expected to accelerate this week. Fields in northeast, west central, southwest still too wet to work. Seeded: Spring wheat 6%, 1977 90%, normal 55%; oats 10%, 1977 88%, normal 58%; barley 2%, 1977 75%, normal 43%. Ground prepared for planting: Corn 5%, 1977 56%, normal 41%; soybeans 0% 1977 26%, normal 21%. Few corn fields, no soybeans planted.

MISSISSIPPI: Temperatures 3 to 9° below normal. Extremes: 34 and 87°.

Soil moisture adequate. Fieldwork: 5.0 days suitable. Cotton 45% planted, 35% 1977, 34% average; 5% up to stand, 12% 1977, 8% average. Rice 86% planted, 75% 1977, 56% average; 36% up to stand, 37% 1977. Corn 73% planted, 72% 1977, 47% average; 50% up to stand, 46% 1977. Soybeans 3% planted, 3% 1977. Sorghums 4% planted, 9% 1977, 8% average. Peanuts 27% planted, 30% 1977. Sweet-potatoes 8% planted, 10% 1977, 11% average. Winter wheat 67% headed, 88% 1977; 5% ripe, 2% 1977. Oats 68% headed, 88% 1977; 8% ripe, 6% 1977. Crops and pastures in good to fair condition.

MISSOURI: Weekend showers produced 0.25 to 0.50 in. Temperatures averaged 5° below normal northeast; 1 to 2° below normal south of Missouri River.

Fieldwork: 2.2 days suitable. Corn 9% planted, last year 58%, normal 37%. Soybeans 1% planted, last year 5%, normal 3%. Grain sorghum 3% planted,



last year 13%. Cotton 16% planted, last year and normal 20%. Oats acreage intended at present 33% planted, last year over 95%. Winter wheat 1% headed, last year 16%. Winter wheat and pasture mostly fair to good. Soil moisture supply adequate to surplus.

MONTANA: Heavy rains midweek southcentral totaled over 3.00 in. Showers and thunderstorms general other areas. Hail and strong gusty winds some areas. Temperatures mild; averaged near normal south central; 11° above normal elsewhere.

Winter wheat good to excellent except northeast. Soil moisture adequate. Fieldwork: 4 days suitable. About 25% spring wheat and barley seeded, 1977 60%, normal 40%. Oats seeding 20% done, 1977 55%, average 40%. Corn, potatoes and dry beans 10% planted, about normal. Sugarbeets 60% seeded, 1977 90%, normal 55%. Range growth slow, about 15% cattle on summer ranges. Nearly 65% cattle and 70% sheep still on hay. Hay supplies short to adequate. Stock water adequate to surplus. Calving 85% and lambing 75% done.

NEBRASKA: Precipitation general, averaged 0.25 in. Temperatures normal; skies cloudy.

Corn planting less than 5%, year ago 10%, normal 5%. Oats planting 65%, year ago 95%, normal 80%. Barley planting 60%, year ago 95%, normal 85%. Winter wheat mostly good condition. Topsoil moisture surplus to mostly adequate. Subsoil moisture adequate. Fieldwork: 3.8 days suitable.

NEVADA: Considerable cloudiness and periodic precipitation. Temperatures near normal. Extremes: 85 and 24°.

Scattered showers delayed seeding operations. Vegetative growth slowed by low night temperatures. Calving and lambing good progress.

NEW ENGLAND: Dry; few brief showers or snow flurries northern Maine 24th and 30th. Light rain extreme southern New England 27th and 28th. Temperatures near normal.

NEW JERSEY: Cold, dry with frequent frost. Temperatures 3 to 7° below normal. Extremes: 22 and 73°. Rainfall 0.12 in. central and 0.18 in. south.

Soil moisture in percent of field capacity 88% north, 83% central, and 79% south. Soil temperature 48° north, 49° central, and 55° south.

Fieldwork: 6.1 days suitable. Below normal temperatures continue to delay crop progress. Asparagus harvest very limited. Greens moving to market from south. Peaches past full bloom. Apples in pink stage. Strawberries and blueberries showing scattered bloom. Limited field corn planting begun. Rye heading, pasture growth limited.

NEW MEXICO: Mostly dry. Temperatures near normal north, 3 to 6° warmer than normal south. Considerable afternoon windiness.

Cotton 50% planted. Alfalfa first cutting just beginning in far south. Wheat and barley in fair to good condition. Wheat at least 90% jointed. Onion crop in good condition. Spring lettuce harvest started. Pecan trees blooming heavily. Heavy set on apple crop. Ranges in fair condition. Livestock fair to good. Supplemental feeding still required.

NEW YORK: Cool, dry. Temperatures 5° below normal. Rainfall mainly over Long Island, little or none Upstate.

Plowing widespread, fields drying. Corn planting underway. Oats 18% planted, 40% 1977. Slow growth on pastures and hay fields. Early vegetable crop planting started. Long Island potatoes mostly planted. Most western fruit in green tip stage

or earlier. Pruning, tying, maintenance underway in vineyards; bud break will be later than normal.

NORTH CAROLINA: Temperatures normal early week; below normal midweek; above normal weekend. Precipitation above normal midweek; 14.00 in. mountains, elsewhere 4.00 to 6.00 in.

Fieldwork: 2.5 days suitable. Soil moisture adequate to mostly surplus. Condition wheat, oats, pasture, tobacco beds, Irish potatoes, tobacco in fields and truck crops, fair to good. Barley and rye mostly good. Corn 80% planted, 1977 77%, average 62%; cotton 35%, 1977 41% average 42%; flue-cured tobacco 16%, 1977 32%, average 33%; peanuts 6%, 1977 18%, average 17%; sorghum 14%, 1977 12%. Soybeans just underway.

NORTH DAKOTA: Cloudy, damp weather prevailed; rain widespread at beginning week and also end. Rainfall ranged from 0.17 in. south central to 0.71 in. southeast. Temperatures 3 to 7° above normal north and 1 to 3° above normal south.

Weather conditions limited fieldwork. Hard red spring wheat planting 5% complete, 57% 1977, 31% average. Durum wheat 2% planted, 45% 1977, 19% average. Oats 2% planted, 47% 1977, 24% average. Barley 3% planted, 53% 1977, 24% average. Sugarbeet planting well-advanced. Calves and lambs mostly good shape. Fieldwork: 5 days suitable.

OHIO: Precipitation 0.25 in.; 0.50 to 0.75 in. below normal. Mean temperatures, high 40's, 3 to 5° below normal.

Fields in good working condition. Crops fair to good. Wheat growth slow; jointing two weeks behind normal. Oats slow in emerging, warm weather needed. Sugarbeet seeding behind schedule, less than 50% planted. Corn planted 15%, 25% 1977, 20% average. Soybeans planted 1%, 1% 1977, 1% average. Oats planted 55%, 90% 1977, 80% average. Height of wheat 4.5 in., 9 in. 1977. Wheat jointed 1%, 20% 1977. Oats emerged less than 10%, 60% 1977. Fieldwork: 2.5 days favorable. Pasture condition fair. Soil moisture adequate to surplus.

OKLAHOMA: Temperatures 1 to 3° below normal central and north central, 1 to 3° above normal elsewhere. Precipitation less than 0.50 in. west half and 2.00 in. eastern third.

Topsoil moisture supplies short. Subsoil moisture short in west, adequate elsewhere. Wheat good to fair condition; jointing 90% 1978, 1977 and normal. Heading 14% 1978, 28% 1977, 12% normal. Oats good to fair; 18% heading, 17% 1977, 11% normal. Barley good to fair; 15% heading, 23% 1977, 11% normal. Corn 15% seeded, 17% 1977 and normal. Seedbed preparations remain ahead of normal; sorghum 64% 1978, 43% 1977 and normal; peanuts 71% 1978, 60% 1977, 38% normal; soybeans 55% 1978, 64% 1977, 34% normal; cotton 69% 1978, 53% 1977, 30% normal. Few fields of sorghum planted. Native pastures good to fair. Livestock good.

OREGON: Temperatures near normal. Rainfall heavy; northeast averaged nearly 2.00 in., south central 0.80 to 0.90 in. West, coastal region averaged 1.80 in. Willamette Valley 1.50 in., southwest interior valley driest with less than 0.25 in.

Soil moisture supply adequate. Fall grain and field crops in good condition. Spring seeding nearly complete west, various stages east. Fieldwork stopped by rains. Vegetable planting interrupted. Fruit bloom continues, cherry set good. Pears spotty south. Berry growth slowed by rains. Onions and early potatoes growing well. Ranges

and pastures look good, softened by rains. Forage outlook excellent. Livestock in good to excellent shape.

PENNSYLVANIA: Cool, breezy and dry with abundant sunshine. Temperatures near to 7° below normal. Extremes: 75 and 16°. Rainfall mostly traces.

Fieldwork: 5 days suitable. Soil moisture adequate. Activities: Picking corn; plowing; spreading lime, fertilizer and manure; planting oats, alfalfa, potatoes and corn; orchard pruning and spraying; seeding tobacco beds. Plowing 55%, last year 67%. Potatoes 27% planted, last year 37%. Tobacco beds virtually all sown. Oats 54% sown, last year 70%. Corn 5% planted, 5% last year; soils too cool to plant. No barley in boot, last year 6%. No wheat in boot, last year under 5%.

PUERTO RICO: Island average rainfall 1.06 in. or 0.19 in. below normal. Temperatures averaged 80° on coasts and 74° interior. Extremes: 96 and 57°.

SOUTH CAROLINA: Temperatures considerably below normal with some scattered frost in higher elevations on 23d. Midweek rainfall heavier than usual. Scattered hail in Piedmont, ridge areas.

Fieldwork: 3 days suitable. Corn good stand; 93% planted, 94% last year, 79% average. Needs warmer weather. Cotton poor condition, ragged stands due to damp, cool; 52% planted, 80% last year, 54% average. Tobacco stands good; cool, dampness increased pythium rot. Transplanted 80%, 87% last year, 82% average. Soybean planting at 3%, 5% last year. Peach condition good. Severe hail damage ridge areas, some damage also in Piedmont. Small grains good condition. Vegetables good, except some watermelon replanting. All crops need a period of drier, warmer weather.

SOUTH DAKOTA: Temperatures warmer, averaging 50 to 55°. Extremes: 26 and 75°. Precipitation variable, heaviest totals southwest and south central.

Cool weather and rain held up fieldwork until 27th and 28th. Topsoil moisture adequate west, adequate to surplus east. Spring plowing 13% complete, 1977 64%, normal 46%. Oats 20% seeded, 1977 85%, normal 70%. Spring wheat 12% seeded, 1977 87%, normal 67%. Barley 9% seeded, 1977 80%, normal 63%. Flax 0% planted, 1977 26%, normal 18%. Fieldwork: 1.5 days suitable.

TENNESSEE: Showers early week, dry midweek, showers late week. Temperatures normal west, 4 to 8° below normal east. Rainfall 0.02 to 3.00 in.

Fieldwork: 3 days suitable. Soil moisture mostly adequate. Tobacco beds poor. Spring plowing 84% complete, 1977 85%, average 75%. Corn planted 42%, 1977 59%, average 37%. Cotton planted 15%, 1977 42%, average 24%. Pasture, wheat, oats fair. Frost damaged fruit trees.

TEXAS: Temperatures near normal south, south central, coastal plains; 2 to 3° above normal Trans-Pecos; 3 to 6° above normal elsewhere. Rainfall near normal west Trans-Pecos; below normal elsewhere. Soil temperatures averaged from mid-60's in Panhandle to lower 80's in southwest.

Dry conditions with western half extremely short of moisture. Many small grain fields grazed out. Cotton and sorghum planting underway in irrigated fields in Plains. Sorghum planting underway in northern Plains. Early planted fields generally good. Greenbugs and aphids present in some fields. Sorghum 66% planted, 56% 1977, 61% average. Cotton generally good; 26% planted, 13%

1977, 17% average. Few irrigated fields planted in Plains. Corn planting very active High Plains. Producers in lower Valley expect some fields to begin tasseling this week; 71% planted, 63% 1977, 76% average. Dryland wheat in Plains in poor condition due to lack of moisture. Many fields grazed out. Irrigated wheat in Plains good and growing rapidly. Most wheat fields in joint and heading stages. Oat fields heading; many fields grazed out. Peanuts 14% planted, 20% 1977, 18% average. South central producers delayed planting due to cool evenings. Rice stands good; producers permanently flooding early planted fields; 97% planted, 92% 1977, 94% average. Hay producers sprigging coastal east. Flax harvest to begin soon; crop fair to poor. Citrus harvest nearing completion. Melons blooming and progressing well. Cucumbers good development. Carrot, cabbage, onion, spinach harvests continue. Strawberries in good volume. Cucumbers, tomatoes, onions, cabbage, and bell peppers progressing well. Pecan trees various stages of leaf development; trees from central southward setting nuts. Peaches from 0.50 to 0.75 in. diameter from southern High Plains through central.

Livestock fair to good except in south and lower Valley, livestock in mostly poor to fair condition. Small grain fields being grazed, many fields being grazed out. Supplemental feeding continues. Stock tanks continue low, critical in some areas. Sheep shearing continues.

UTAH: Light rain in valleys and snow in mountains. Temperatures 2° above normal to 5° below.

Fieldwork: 5 days suitable. Alfalfa good; stands average 6 to 8 in. Spring small grains average 60 to 65% planted; barley 64%; spring wheat 61%; oats 52%. Sugarbeets 36% planted. Potato planting 18%. Field corn planting just starting. Range and pasture feed supplies good. Some livestock moving to spring ranges. Calving virtually completed. Range lambing 46% along; sheep shearing 60% complete.

VIRGINIA: Temperatures low 50's; several degrees below normal. Extremes: 82 and 27°. Scattered light frost. Precipitation 3.00 in.; some serious flooding. Snow higher elevations 27th.

Topsoil moisture mostly adequate to surplus. Fieldwork virtually halted by midweek by moderate to heavy precipitation. Seeding progress: Corn 45%, 53% 1977, 35% usual; soybeans 3%, 3% 1977, 2% average; peanuts 5%, 10% 1977, 7% usual; cotton 75%, 100% 1977, 44% average. Wheat, pastures,

corn, tobacco, fruit good. Alfalfa downed by snow southwest. No frost damage to apples, peaches reported. Wet, cool weather helped small grain, pasture growth. Fieldwork: 2.3 days suitable.

WASHINGTON: West: Temperatures 2 to 3° above normal. Precipitation 0.30 in. below to 0.40 in. above normal.

Raspberries setting buds, strawberries flowering.

East: Temperatures 1° above normal to 1° below normal. Precipitation to 0.40 in. above normal.

Cherry set light to moderate. Marginal fire blight infection prompted spraying. Some foot rot in wheat.

WEST VIRGINIA: Temperatures below normal. Precipitation below normal northwest, north central and northeast; above normal elsewhere.

Fieldwork: 3.0 days suitable. Soil moisture surplus to mostly adequate. Activities: Plowing, caring for livestock, planting oats and corn. Planting progress: Potatoes 51%; corn 9%; tobacco beds 98%; oats 52%. Crop conditions: Small grains mostly fair; potatoes fair; pasture and hay fair.

WISCONSIN: Temperatures near normal. Extremes: 78 and 18°. Showers and thunderstorms west and south 24th; amounts 0.10 to 0.50 in.

Some progress plowing and planting as fields dried. Fieldwork: 3 days suitable. Oats 25% seeded, 1977 85%, normal 45%. Spring plowing 20% done, 1977 70%, normal 35%. Corn 1% planted, 1977 15%, normal 1%. Finishing harvest 1977 corn. Hay stands good but growth behind rapid start last year. Pastures green but little growth. Early peas, potatoes, sweet corn, and other vegetables planted. Working on tobacco beds. Soil moisture mostly adequate to surplus.

WYOMING: Temperatures normal. Precipitation widespread.

Topsoil moisture short to mostly adequate. Acreage planted: Spring wheat 51%; oats 51%; barley 63%; sugarbeets 71%; corn 7%; potatoes 1%. Spring planted crops emerging slower than normal. Acreage emerged: Spring wheat 22%; oats 11%; barley 24%; sugarbeets 2%. Fertilizer supplies adequate. Fieldwork: 5 days suitable. Spring calves born 84%. Range ewes lambed 47%; farm ewes lambed 88%; range sheep shorn 59%; farm flock sheep shorn 79%. Death losses due to unfavorable weather and disease about average.

World Weather and Crop Update

April 24 - 30

USSR. Temperatures were near normal or slightly below throughout most of European USSR. Freezing temperatures were reported for all of the main agricultural areas except the Ukraine, Moldavia, North Caucasus and the lower Volga Valley. Light to moderate precipitation (1-12mm) occurred over most of European USSR with heavier amounts (up to 25mm) falling in parts of the eastern Ukraine and the North Caucasus. Above normal temperatures prevailed with light to moderate rainfall in the spring wheat regions of western Siberia and North Kazakhstan. Fieldwork is in progress in all agricultural areas with sowing progressing northward daily. As of April 24, spring sowing was completed on almost 35 million hectares or about 22 percent of the planned area. The overall pace of spring sowing is somewhat below the average of recent years. However, the seeding lag probably

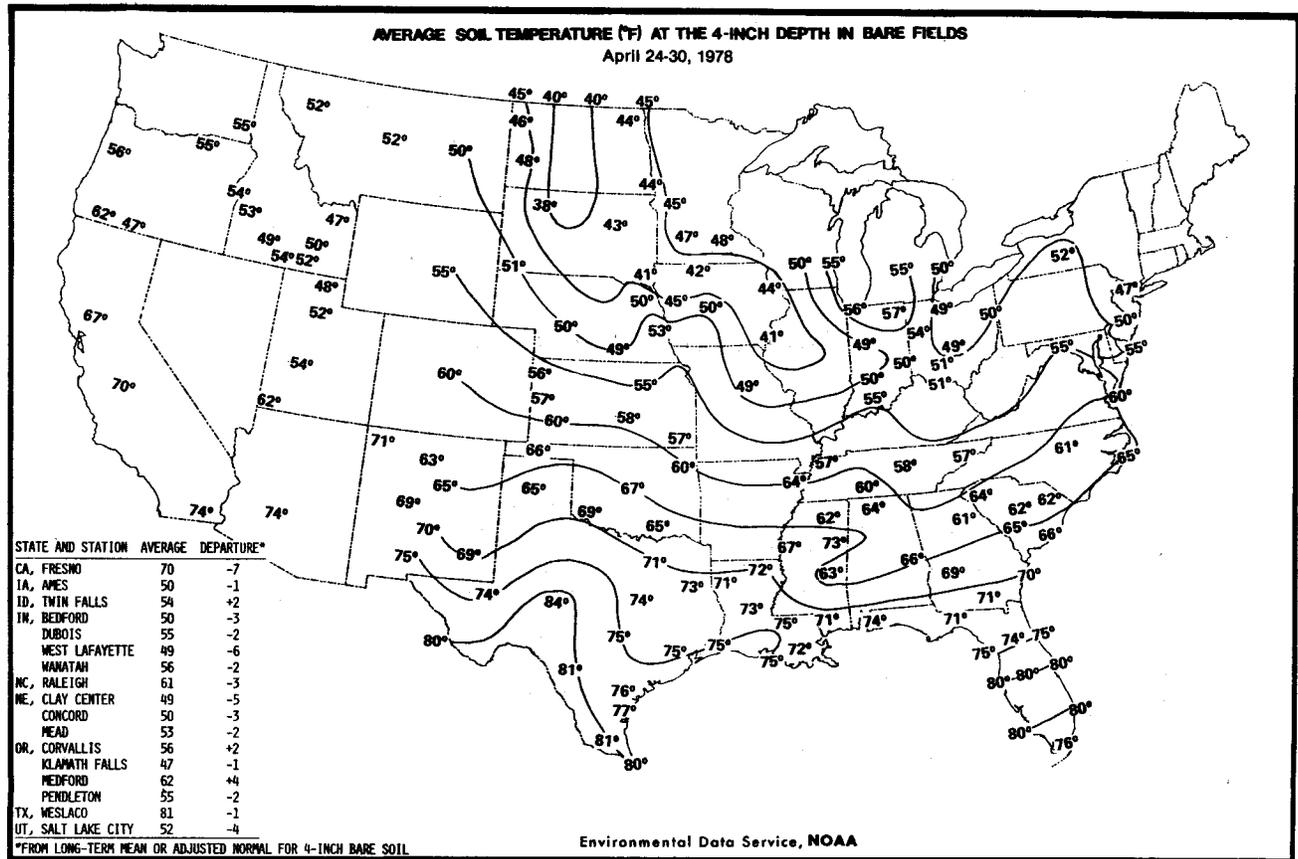
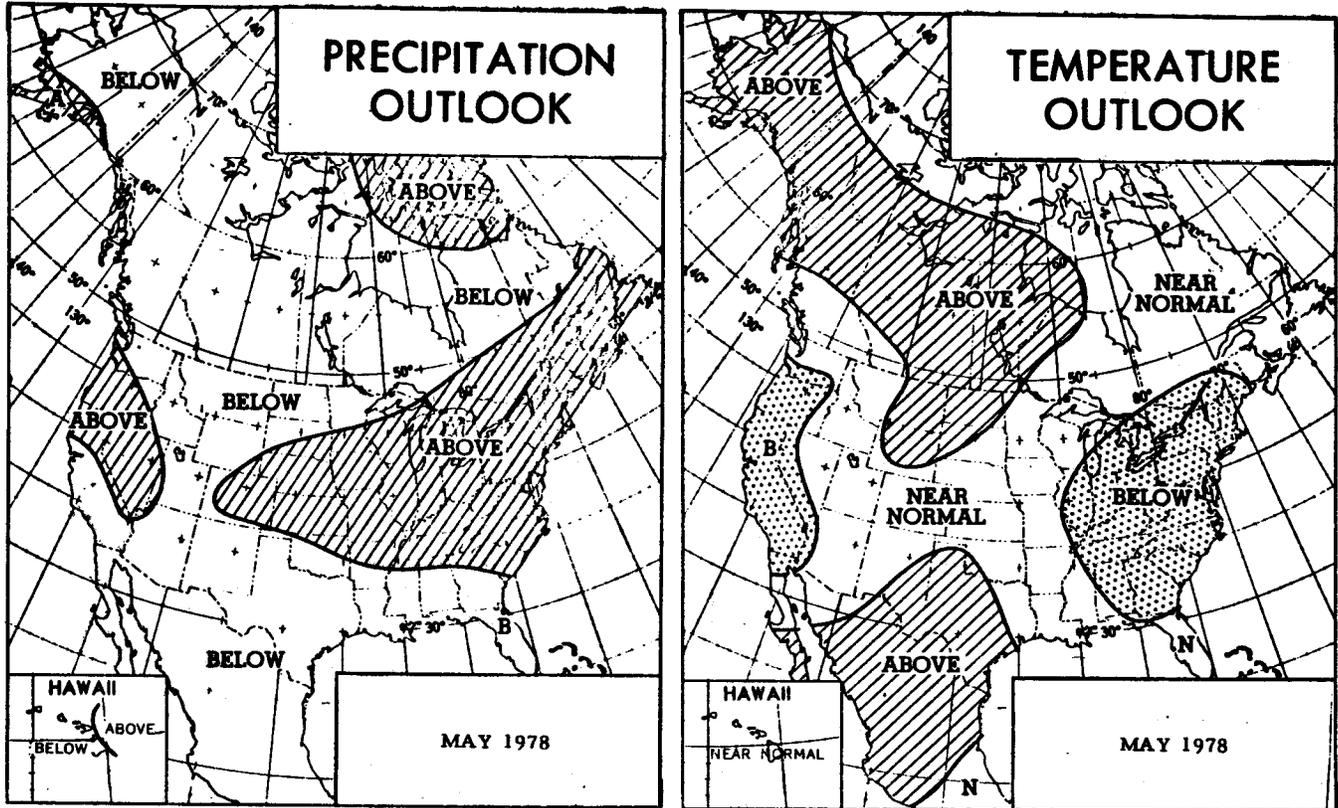
could be made up rather quickly with an extended period of warm, sunny weather.

ASIA. Temperatures were well above normal in the main winter wheat belt in North China. The high temperatures combined with only light rainfall have increased stress on non-irrigated crops throughout much of this region. Precipitation was generally heavy in the rice growing provinces south of the Yangtze River. Transplanting of the early rice crop is in full swing throughout South China. Moderate to heavy rains were deposited in the northeast, a prime spring wheat, soybean and coarse grain area where sowing is now well underway.

AUSTRALIA. Moderate showers dampened the grain areas in parts of western Australia, but precipi-

(continued on page 16)

Average Monthly Weather Outlook



SOIL TEMPERATURES: WINTER AND EARLY SPRING 1978

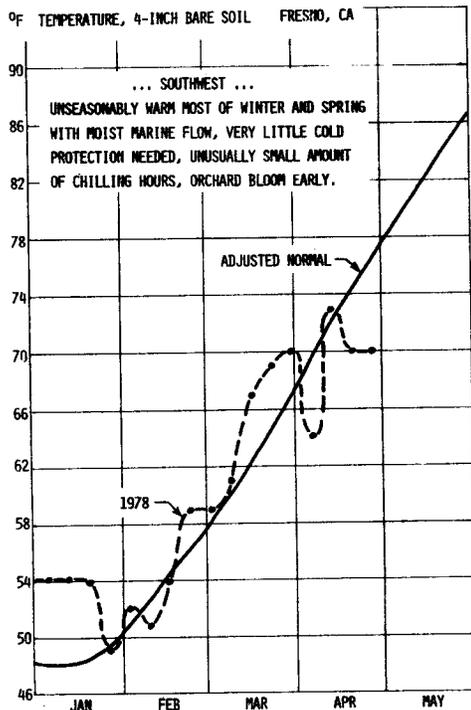
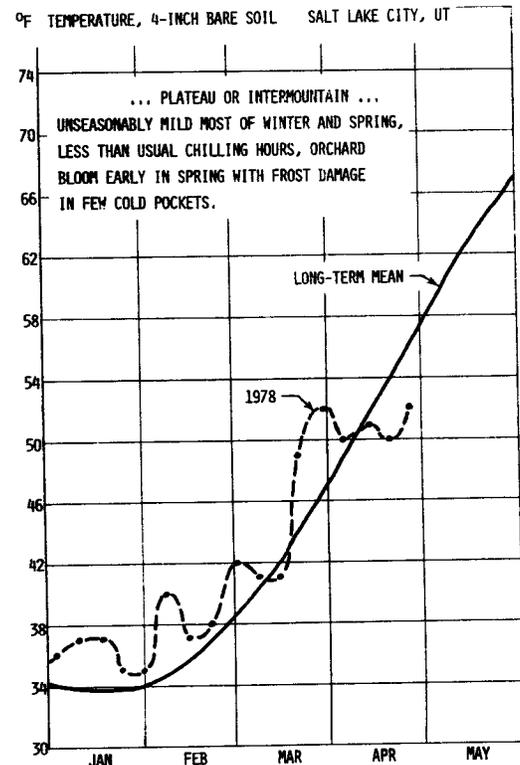
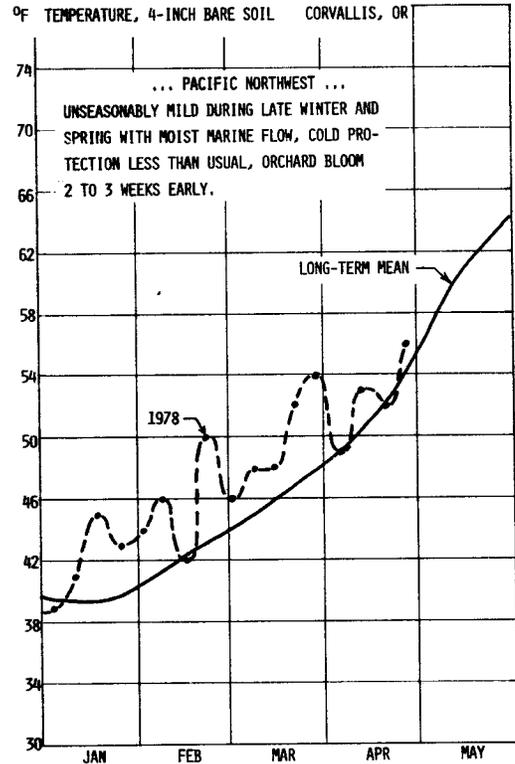
Soil temperature with its controlling effect upon seed germination is a useful and popular weather item during the spring. It is also important, but to a lesser extent, during the fall for seeding, applying nitrogen fertilizer (below 50°), and injecting soil fumigants. The soil temperature is also a weather and climatic indicator and varies with the combined effect of air temperature, solar radiation, soil moisture, evaporation, and heat storage.

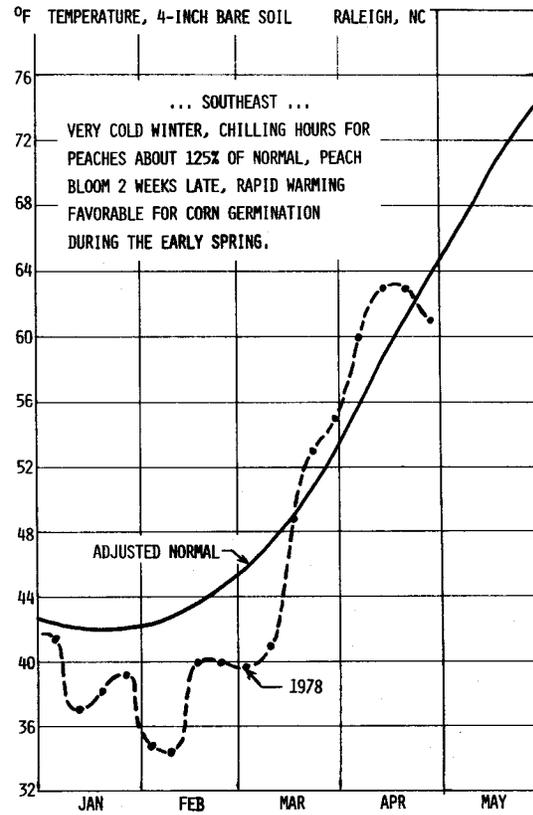
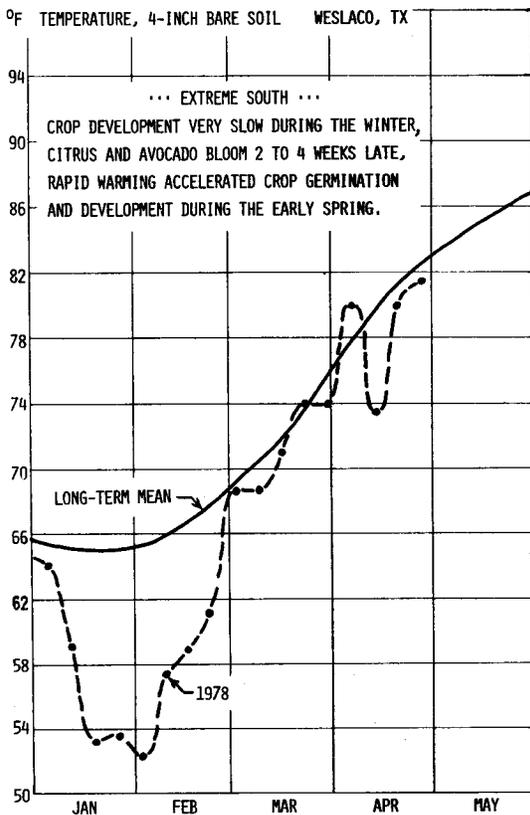
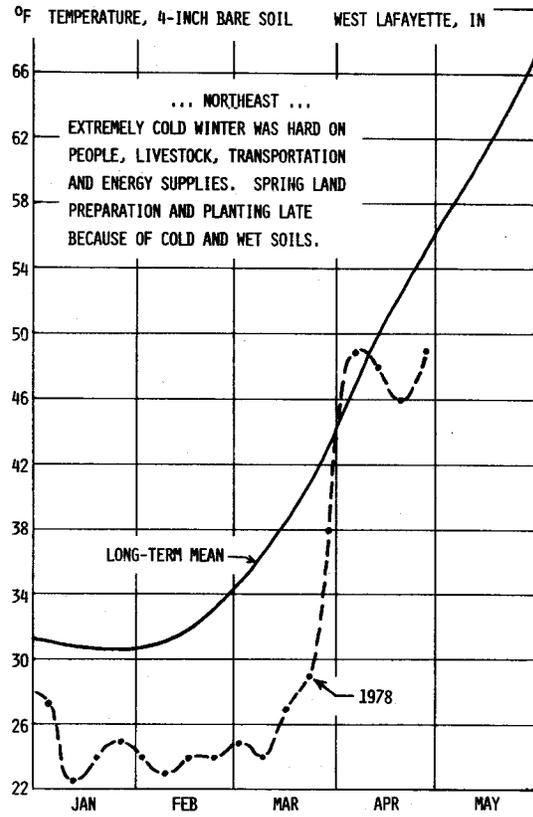
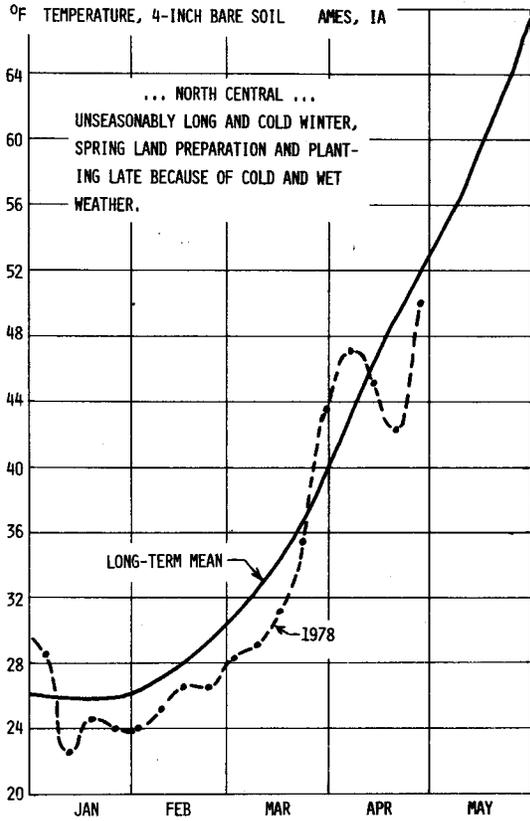
To show how soil temperatures behaved across the Nation so far this year, data for a few representative sites are presented in graphs along with descriptions of some weather effects. The graphs depict the 1978 weekly values and trends together with the normal or long-term means so that the departures can be illustrated. The soil temperature and its departure is not only an indicator of how fast or slow seeds germinate and young crops develop, but also an index of seasonal weather, chilling hours, and bloom timeliness of orchards in reference to usual.

Soil temperatures of 1978 indicate that the winter was unseasonably cold with some adverse effects east of the Rockies while being warm to mild in the west. However, the pattern reversed in certain areas during the early spring...seems that mother nature has a way of evening the score. The southeast which was very cold this winter with a large amount of chilling hours warmed rapidly during the early spring and favored corn planting. The temperature-earliness effect for crop planting and development in the southwest was reduced by rains and wet fields.

Corn Belt station data indicate prolonged and extreme winter cold in the northeast and to a lesser extent in the north central region. The cool, wet pattern continuing into early spring delayed land preparation and planting.

The Pacific northwest and intermountain regions were mild with an early bloom of orchards, but this can be risky for late freeze damage in the cold pockets.



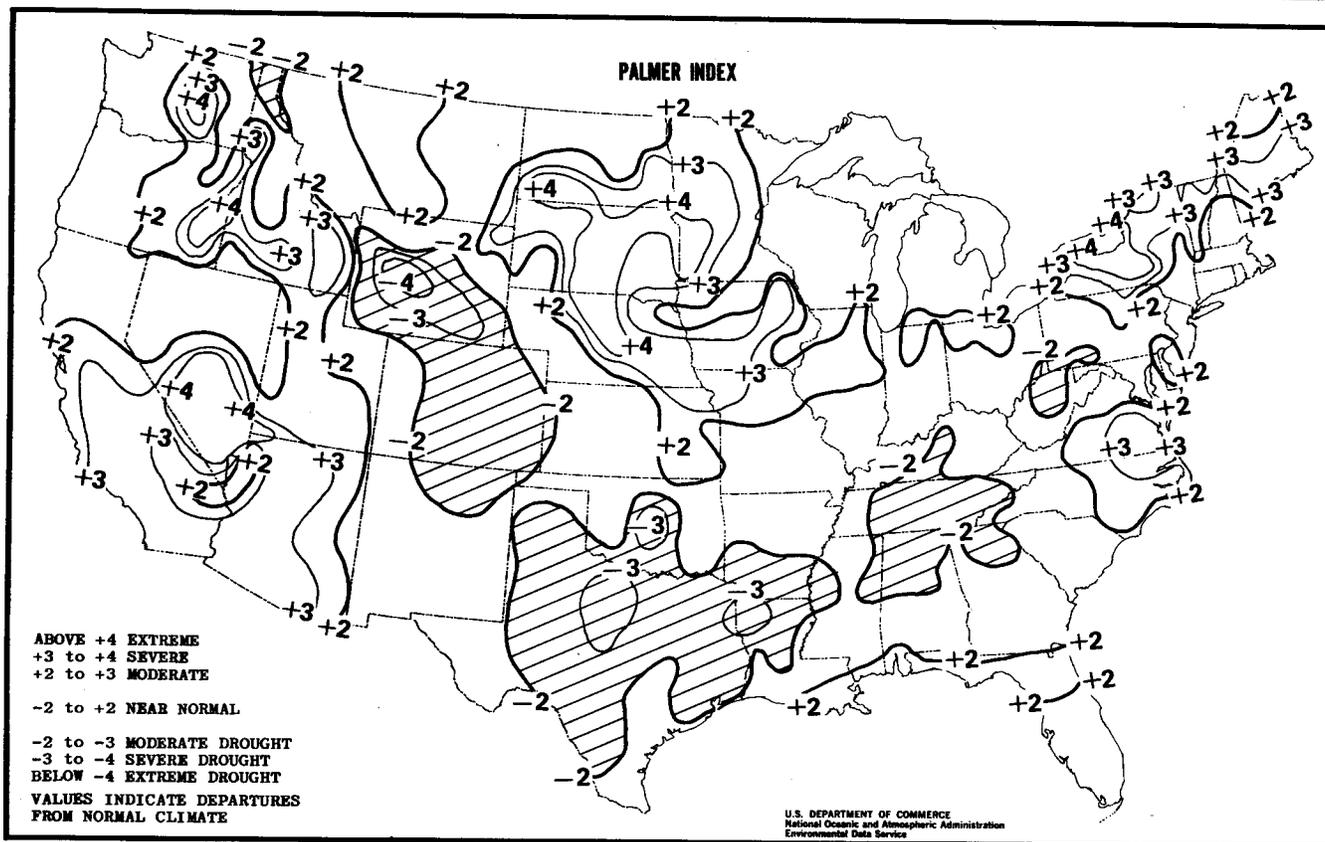


Heating Degree Days (Base 65° F.)

April 1978

ALA. Birmingham	120	MAINE, Caribou	894	OKLA. Okla. City	90
Mobile	16	Portland	724	Tulsa	110
Montgomery	50	MD. Baltimore	318	OREG. Astoria	482
ALASKA, Anchorage	771	MASS. Boston	480	Burns U.	655
Barrow	1904	Chatham	639	Medford	451
Fairbanks	898	MICH. Alpena	861	Pendleton	504
Juneau	684	Detroit	580	Portland	430
Nome	1195	Flint	632	Salem	476
ARIZ. Flagstaff	677	Grand Rapids	584	PA. Allentown	430
Phoenix	25	Houghton Lake	769	Erie	688
Tucson	64	Lansing	627	Harrisburg	414
Winslow	732	Marquette U	826	Philadelphia	423
Yuma	16	S. Ste. Marie	889	Pittsburgh	412
ARK. Fort Smith	113	MINN. Duluth	794	Scranton	562
Little Rock	99	Internatl Falls	832	R. I. Providence	542
CALIF. Bakersfield	124	Minneapolis	584	S. C. Charleston	52
Eureka U.	415	Rochester	601	Columbia	109
Fresno	182	St. Cloud	683	Greenville	143
Los Angeles U	122	MISS. Jackson	73	S. DAK. Aberdeen	659
Red Bluff	216	Meridian	111	Huron	624
Stockton	212	Vicksburg U	--	Rapid City	588
San Diego	43	MO. Columbia	260	Sioux Falls	613
San Francisco	295	Kansas City	291	TENN. Chattanooga	114
COLO. Denver	435	St. Louis	275	Knoxville	148
Grand Junction	372	Springfield	258	Memphis	74
Pueblo	347	MONT. Billings	545	Nashville	164
CONN. Bridgeport	536	Glasgow	621	TEX. Abilene	37
Hartford	500	Great Falls	622	Amarillo	136
D. C. Washington	219	Havre	545	Austin	15
FLA. Apalachicola	34	Helena	514	Beaumont	14
Ft. Myers	0	Kalispell	624	Brownsville	6
Jacksonville	22	Miles City	540	Corpus Christi	17
Key West	0	Missoula	564	Dallas	--
Lakeland U.	2	NEBR. Grand Island	409	Del Rio	3
Miami	0	Lincoln	410	El Paso	57
Orlando	0	Norfolk	471	Fort Worth	54
Daytona Beach	5	North Platte	491	Galveston U.	16
Tallahassee	42	Omaha	432	Houston	33
Tampa	4	Valentine	618	Lubbock	75
GA. Atlanta	137	NEV. Ely	716	Midland	49
Augusta	93	Las Vegas	91	San Angelo	31
Macon	62	Reno	582	San Antonio	27
Savannah	35	Winnemucca	523	Victoria	23
IDAHO, Boise	488	N. H. Concord	725	Waco	19
Lewiston	442	N. J. Atlantic City	455	Wichita Falls	73
Pocatello	567	Trenton U	418	UTAH, Milford	533
ILL. Cairo U.	119	N. MEX. Albuquerque	215	Salt Lake City	433
Chicago	508	Roswell	45	VT. Burlington	781
Moline	423	N. Y. Albany	642	VA. Lynchburg	237
Peoria	405	Binghamton	699	Norfolk	235
Rockford	519	Buffalo	670	Richmond	235
Springfield	334	New York	436	Roanoke	261
IND. Evansville	233	Rochester	634	WASH. Colville	--
Fort Wayne	485	Syracuse	677	Omak	--
Indianapolis	292	N. C. Asheville	235	Quillayute	516
South Bend	480	Charlotte	140	Seattle-Tacoma	447
IOWA, Burlington	392	Greensboro	245	Spokane	576
Des Moines	427	Hatteras R.	152	Walla Walla U.	388
Dubuque	521	Raleigh	196	Yakima	464
Sioux City	487	Wilmington	89	W. VA. Beckley	366
KANS. Concordia	326	N. DAK. Bismarck	663	Charleston	258
Dodge City	252	Fargo	667	Huntington	253
Goodland	456	Williston U	655	Parkersburg U.	340
Topeka	280	OHIO, Akron-Canton	533	WIS. Green Bay	733
Wichita	194	Cincinnati U.	346	Madison	608
KY. Lexington	315	Cleveland	534	Milwaukee	667
Louisville	221	Columbus	424	WYO. Casper	605
LA. Baton Rouge	29	Dayton	395	Cheyenne	627
Lake Charles	22	Toledo	573	Lander	586
New Orleans	2	Youngstown	582	Sheridan	543
Shreveport	61				

Preliminary reports from airport locations, except those marked U for urban and R for rural.
*Estimated.



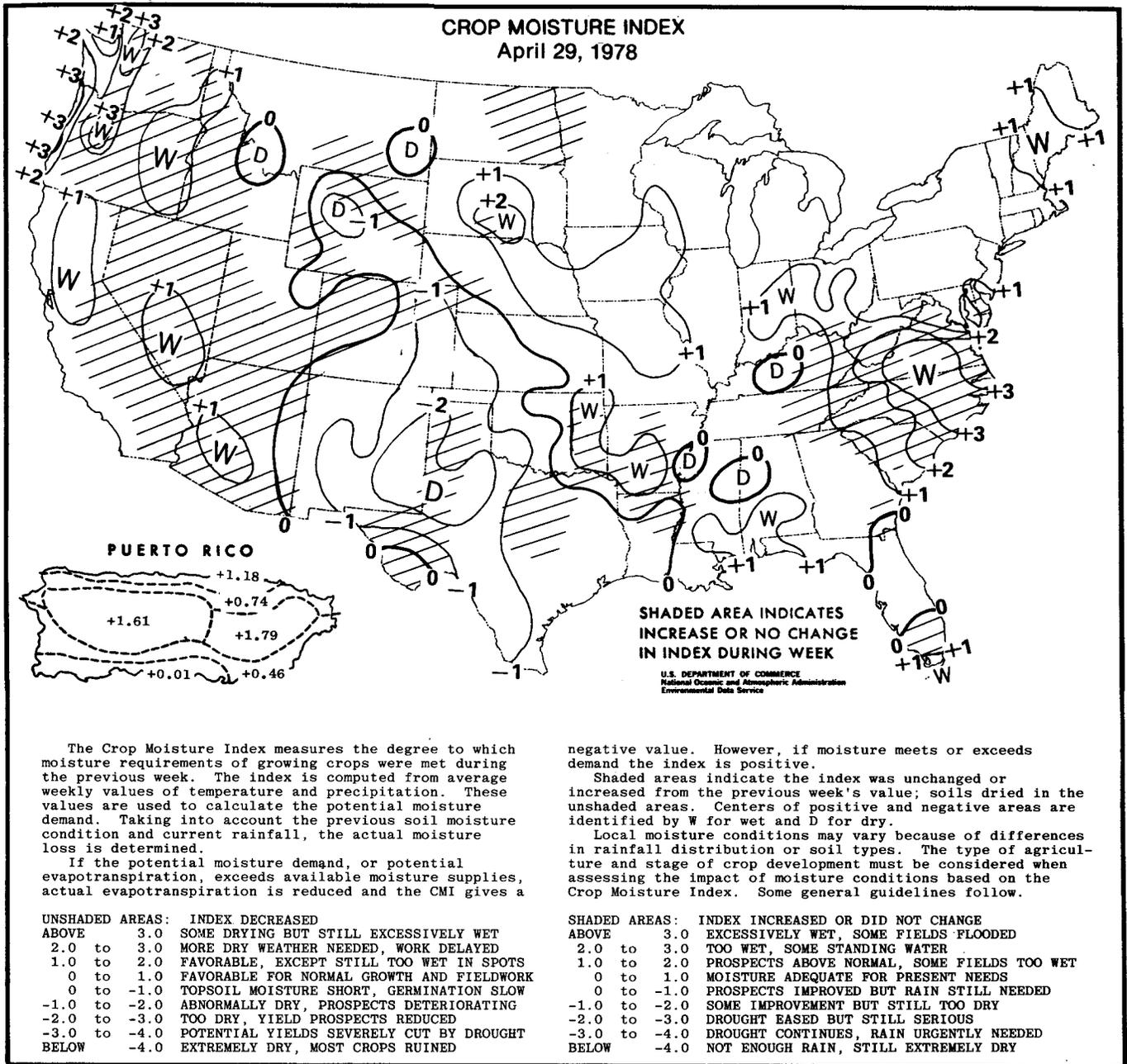
The Palmer Index

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.



FIRST CLASS MAIL

SEEDING PROGRESS

Percent of Acreage Planted as of April 30

SPRING WHEAT				COTTON				CORN			
	1978	1977	Avg.		1978	1977	Avg.		1978	1977	Avg.
Idaho	50	85	40	Ala	51	61	57	Ga	86	93	70
Minn	6	90	55	Ark	23	52	34	Ill	5	49	33
Mont	25	60	40	Ga	56	74	44	Ind	2	15	10
N Dak	5	57	31	La	40	31	22	Iowa	0	40	17
S Dak	12	87	67	Miss	45	35	34	Kans	15	20	20
5 States	10	70	43	Mo	16	20	20	Ky	16	35	31
These 5 States produced				N C	35	42	42	Mich	2	8	7
97% of the 1977 U. S.				Okla	0	0	0	Minn	1/	21	11
spring wheat crop				S C	52	80	54	Mo	9	58	37
excluding durum.				Tenn	15	42	24	Nebr	1/	10	5
				Tex	26	13	17	N C	80	77	62
				11 States	29	24	23	Ohio	15	25	20
				These 11 States produced				Pa	5	5	NA
				72% of the 1977 U. S.				S Dak	0	0	0
				cotton crop.				Tex	71	63	76
								Wisc	1	15	1
								U. S.	10	32	21
								These 16 States produced			
								94% of the 1977 U. S.			
								corn crop.			

(continued from page 9)

tation was generally insignificant in the other principal grain areas. There was no relief for the severe moisture deficiency in South Australia.

AFRICA. In North Africa, moderate to heavy rains (15 to 30mm) enhanced crop prospects in Morocco; but precipitation was very light in Algeria and Tunisia. Weather conditions favored harvesting in South Africa with little significant moisture recorded in the maize triangle during the week. Heavy showers fell along the east coast.

EUROPE. Cool temperatures predominated in western Europe punctuated by periods of rain. Moisture accumulation for the week was heaviest in the Benelux countries. Substantial rains have improved moisture conditions in central and southern Spain.

Heavy rains drenched northern Italy. Fieldwork and crop growth have been lagging behind normal over much of western Europe. Fieldwork moved rapidly ahead in eastern Europe as dry weather prevailed most of the week throughout this region. Scattered, light showers dotted the region over the weekend. Precipitation also was light in the main grain areas of Turkey.

SOUTH AMERICA. There was little significant rainfall to interfere with harvesting and other field operations in the main agricultural areas of Argentina. It was warm and dry also in the important agricultural states of southern Brazil. However, heavy, locally excessive rains fell along the northeast coast and Bahia.