

WEEKLY WEATHER AND CROP BULLETIN

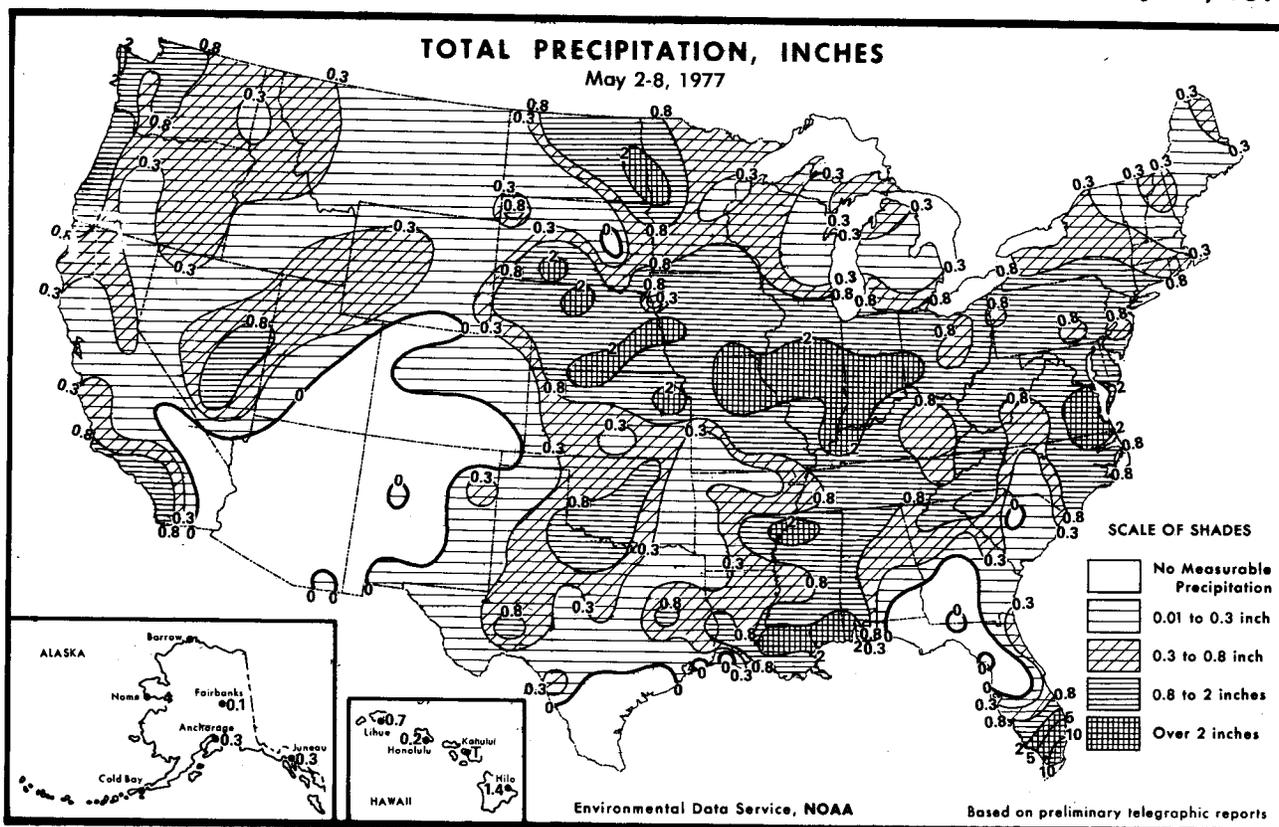
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National Weather Summary

For the Week of May 2-8

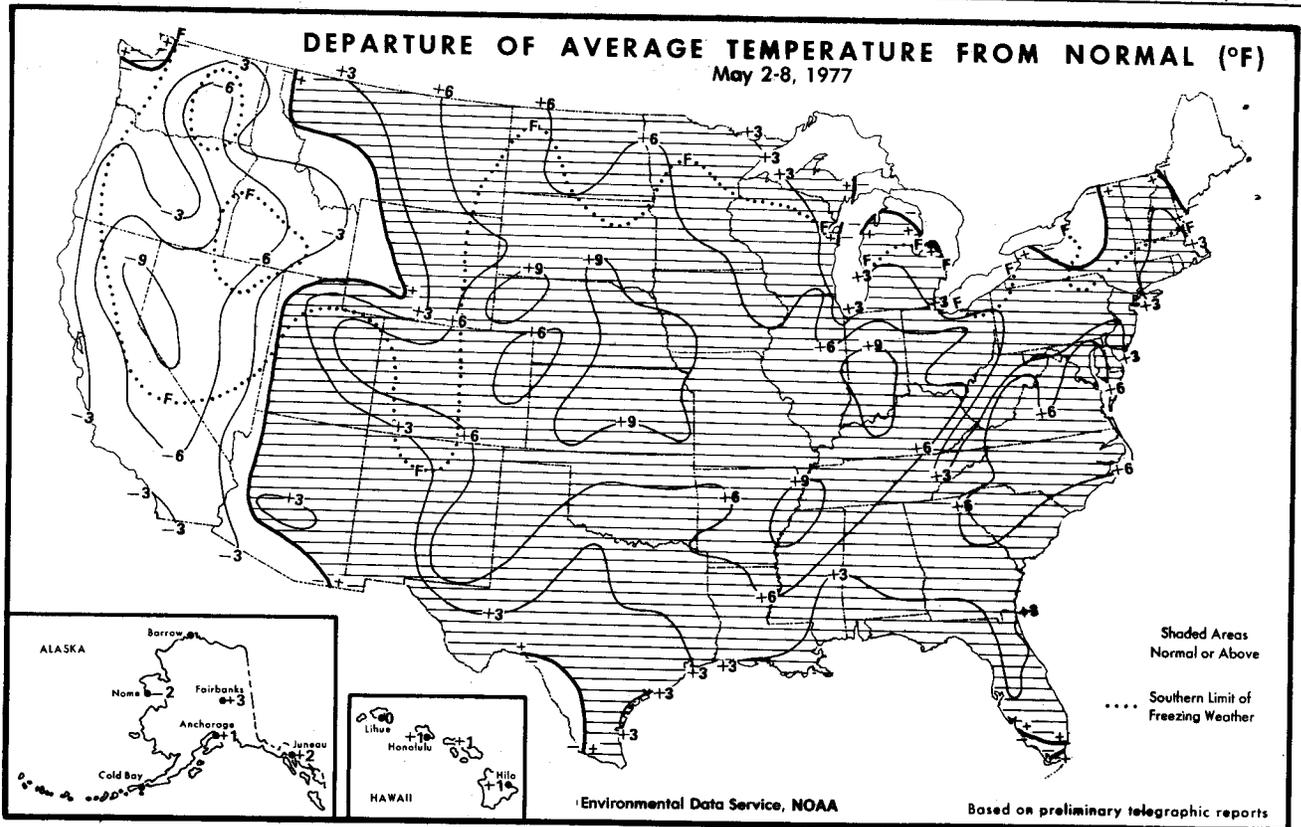
HIGHLIGHTS: Cold air plowed into the West accompanied by welcome precipitation. Areas west of the Cascades in Washington and Oregon and along the southern California coast enjoyed an inch or more of rain. Los Angeles and San Diego scored nearly two inches, rare for this time of year. This moisture entered the northern Rockies and most of the Plateau region.

Moist air from the Gulf of Mexico encountered cool temperatures further north; rainfall resulted in most locales east of the Rocky Mountains. Southern Florida experienced large amounts of rain, but the panhandle and northern two-thirds of the peninsula remained virtually dry. Temperatures averaged nearly 10° above normal in the central Plains and 5-7° higher than expected in the middle Atlantic Coast States. By week's end, the mercury dropped sharply in a large portion east of the Mississippi River. Severe weather was common from the Plains eastward throughout much of the week.

Unstable weather began the week for the central and southern Great Plains and the lower Mississippi Valley. Thunderstorms extended from the Kansas-Nebraska border to Indiana, and rumbled through parts of the southern Appalachians and the South Carolina coast. Showers were scattered from eastern Ohio to the Atlantic Coast; from western Washington to Montana; and in portions of the northern Plains.

Monday's violent storm activity produced hail in Texas and Oklahoma and heavy rains in Louisiana. Tornadoes whirled through areas in Nebraska, Texas, Louisiana, Mississippi, and Alabama.

Showers and thunderstorms brought a gray Tuesday to many States east of the Mississippi River. New England, the Great Lakes region, the northern Ohio Valley, and Florida escaped moisture. An approaching cold front triggered showers from the Pacific Northwest eastward to the northern Rockies. Tornadoes, hail, and high winds hit



Kansas, Texas, and Oklahoma. Locally heavy rain drenched portions of Indiana, Mississippi, Virginia, and North Carolina.

Wednesday produced the worst outbreak of severe weather this year. Thirty-nine tornadoes were reported in the Nation's midsection. Missouri was hit hardest as 14 tornadoes, hail, and torrential rains killed five, injured dozens, and left thousands homeless. Twisters also ripped through Illinois, Iowa, South Dakota, Nebraska, Kansas, and Florida.

At daybreak, thunderstorms and showers were scattered over the eastern half of the country except the northern Atlantic Coast. Storms increased unusually early in the day over the east central Plains; the harsh results followed there and in the middle Mississippi Valley.

Extreme southern Florida was inundated; Miami set a 12-hour record rainfall of 11.50 inches. This exceeded the 24-hour high count by four inches, and passed the May precipitation average by five inches. Northern Florida, however, saw little or no rain.

Scattered showers and thundershowers dotted the northern Plains, northern Rockies, and upper Pacific Northwest.

Five inches of much-needed rain fell in northeastern North Dakota and northwestern Minnesota on Thursday. Showers and thunderstorms dampened an area from the Great Lakes southward through the Tennessee Valley; southern Florida, the Rockies, northern California, and western Oregon received scattered showers.

Thunderstorms formed along a slow-moving cold front from Texas through eastern Kansas and central Illinois into northern Indiana. Toward Thursday evening, tornadoes, hail, and high winds lashed areas from Texas northward to Iowa.

Friday produced light showers over the Pacific Coast States that turned to snow as they moved

over the Rockies. Showers and thunderstorms increased in size and strength from the lower two-thirds of the Mississippi Valley to the Ohio Valley and central Appalachians. Heavy rain and hail were common in this unstable weather. Scattered thundershowers moistened parts of Florida and the upper half of the Great Plains. Precipitation became heavy by late afternoon from southeastern Ohio eastward to the middle Atlantic Coast.

Unsettled weather was Saturday's contribution to much of the country as thunderstorms prevailed over the central Mississippi Valley and the Ohio and Tennessee Valleys. Locally heavy rain splashed Nebraska; Georgia, the Carolinas, Tennessee, and Virginia waited out cloudbursts, some hail, and high winds.

Rain, with snow in higher elevations, fell over the upper half of the Rockies. The West Coast also received some precipitation. By evening, thundershowers and some hail hit portions of the lower Plains. Temperatures cooled considerably from the Dakotas eastward to the northern half of the Atlantic Coast.

A low pressure system off the California coast pumped cool, moist air over much of the Far West. By Sunday afternoon, San Diego reported one-half inch of rain. Thunderstorms, locally heavy, dumped rain from the middle and lower Plains eastward through the Mississippi Valley. Tornadoes, hail, and high winds were reported in this area and beyond as far east as Florida.

A vigorous cold front blustered into the middle Atlantic Coast; wind gusts of nearly 60 mph whipped the Nation's Capital. Snow flurries and scattered rainshowers accompanied sharply plummeting temperatures from the upper Great Lakes to the East Coast and southward in the Appalachians.

National Agricultural Summary

For the week of May 2-8

HIGHLIGHTS: Rains slowed fieldwork and replenished soil moisture supplies in most of the central States. Planting progress was not seriously delayed, and farmers were about equal to last year, and for most crops, ahead of normal. United States farmers have 58% of the corn planted, edging ahead of 1976's fast pace and 21 points above the average. Cotton planting in the 11 southern States reached 45% complete, falling between last year's pace and the average. Sorghum planting reached 28% and spring wheat seeding advanced to 86%. Soybean planting got underway in the North Central States. Soil moisture was generally adequate except in the western States. Some local dry areas persisted from the Dakotas eastward to Michigan and in some of the South Atlantic States. Some surplus soil moisture was in the East Central States. Most orchards were past peak bloom in the northern production areas. Frost damaged some of the crops in Michigan and the Appalachian area. Pastures improved east of the Rocky Mountains, but deteriorated in the Mountain and Pacific Coast States.

SMALL GRAINS: Small grains generally rated good on the Great Plains. Farmers harvested early fields in southern areas; less than 5% of the Montana crop reached the boot stage. Winter wheat began turning color in Arkansas and Alabama. Most of the crop in the western States was in poor to fair condition, showing drought stress in some areas with some fields abandoned in California.

The Kansas wheat crop made excellent growth with 90% of the crop in or past the jointing stage and 35% heading; this was slightly ahead of last year. Weeds and insects plagued some fields. Oklahoma winter wheat was 80% headed with 5% in early dough stages--nearly the same as last year, but a week earlier than average. The crop rated mostly good. Wheat headed in the Texas plains area. Dryland wheat in some parts of the northern High Plains needs more rain; however, in other areas the crop was filling out in response to favorable weather. Some of the first fields were harvested in southern Texas. Colorado winter wheat rated good; 32% of the crop was jointed.

Spring wheat seeding in the five major producing States advanced to 86% complete and surpassed 1976's 80% and the 52% average. North Dakota farmers reached 81%, 10 points ahead of last year and almost double the average. These farmers seeded 21% of the acreage in one week.

CORN: The Nation's farmers passed the halfway point and have planted 58% of the corn crop; this was one point ahead of the 1976 pace and 21 points more than the average. Rainy weather slowed progress in the eastern North Central States; producers advanced to 48% complete which lagged behind last year's 55%, but was 15 points ahead of the average. Illinois farmers made the best progress, reaching 74% complete. Rains and saturated fields held Ohio farmers to 25% complete. Growers in the western North Central States have planted 62% of the corn crop, beating 1976's 53% and double the 31% average. Although rains covered much of the western North Central States, farmers in some States made significant progress planting corn. During the week, Nebraska and Kansas farmers planted 25% of the crop, Missouri farmers 21%, Minnesota farmers 43% and Iowa farmers 46%. Planting in most of the southern States was almost complete.

COTTON: Producers in the 11 southern States advanced to 45% complete, 2 points less than last year's rate, but more than the 41% average. Planting was well along in the Carolinas and Georgia, slightly ahead of last year and far ahead of average. Texas cotton planting progressed rapidly in the southern Low Plains, however, rains delayed planting in the northern Low Plains. Soil temperatures were high enough to plant cotton in all areas of Texas. Early fields squared in the Lower Rio Grande Valley. Insect activity was light to medium. Arkansas growers obtained good stands. Oklahoma rains produced good conditions to seed the cotton crop, but also required reseeding of some earlier planted fields.

OTHER CROPS: Soybean planting increased throughout the Nation. About 11 to 15% of the soybeans were planted in southern areas. Further north planting ranged from 3 to 10%. Rains held progress in Kentucky, Indiana, and Ohio to less than 5%. Planting was more advanced than a year ago in southern areas, but lagged in northern production areas. Iowa was a notable exception with 9% of the crop planted, the earliest planting progress since 1971.

Sorghum planting in the major producing States reached 28%, outpacing the 1976 rate by 2 points, but short of the average progress by a like amount. Planting only began in South Dakota, but Texas farmers already have planted 61% of the crop. Progress in Missouri, Nebraska, Kansas and Oklahoma far surpassed both last year and the average. Planting began on the Texas High Plains. Some fields must be replanted because of recent heavy rains.

FRUITS AND NUTS: Northern deciduous orchards passed peak bloom. Frost nipped some orchards from Michigan and through the Northeast, but damage varied widely. Fruit growers sprayed orchards in Pennsylvania and Oregon. Growers harvested peaches in Texas and Georgia. Arizona's deciduous crops approached maturity. California's growers picked cherries. Florida citrus trees were in good condition, but need water. Growers irrigated wherever possible; dryness slowed new crop development. Producers harvested citrus in Florida, Arizona, and California.

VEGETABLES: Growers planted string beans, sweet corn, tomatoes, and celery in northern areas. Low temperatures delayed asparagus harvest, and frost damaged some vegetable crops. In Florida, high temperatures and rains were very helpful to vegetable crops; shipments increased 14%. Supplies of potatoes, radishes, tomatoes, and watermelons increased; snap beans, eggplant, lettuce, peppers, and squash decreased; cabbage, carrots, celery, sweet corn, chinese cabbage, cucumbers, and escarole held steady. Growers irrigated and sprayed. Texas vegetable growers harvested onions, carrots, squash, cabbage, cucumbers, snap beans, strawberries, greens, and potatoes. Arizona growers harvested lettuce. California producers picked asparagus, broccoli, cauliflower, lettuce, peas, strawberries, sweet corn and potatoes.

PASTURES AND LIVESTOCK: Ranchers moved cattle to summer ranges, although in western areas most grasslands needed more water. Stock water supplies were low in some areas. Rains improved California ranges temporarily, but need more precipitation. Pastures were in good condition in the eastern half of the Nation.

Temperature and Precipitation Data for May 8, 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 . . .	73	+ 5	.6	- .3	La. Baton Rouge . . .	76	+ 3	3.1	+2.0	Youngstown . . .	58	+ 4	.6	- .3
Mobile . . .	74	+ 2	3.1	+ 2.1	Lake Charles . . .	76	+ 3	T	-1.1	OKLA. Okla. City . . .	70	+ 4	1.1	0
Montgomery . . .	75	+ 5	.2	- .6	New Orleans . . .	76	+ 3	1.2	+ .3	Tulsa . . .	73	+ 7	.1	-1.0
ALASKA. Anchorage . . .	44	+ 1	.3	+ .2	Shreveport . . .	75	+ 4	.3	- .9	OREG. Astoria . . .	50	- 1	1.0	+ .3
Barrow . . .	---	---	---	---	MAINE. Caribou . . .	43	- 2	.4	- .2	Burns . . .	51	+ 1	.6	+ .4
Fairbanks . . .	45	+ 3	.1	0	Portland . . .	48	- 1	.1	- .7	Medford . . .	50	- 5	.4	+ .1
Juneau . . .	46	+ 2	.3	- .5	MD. Baltimore . . .	66	+ 6	.9	+ .1	Pendleton . . .	50	- 6	.6	+ .3
Kodiak . . .	---	---	---	---	MASS. Boston . . .	58	+ 3	.1	- .7	Portland . . .	53	- 2	1.3	+ .8
Nome . . .	28	- 2	.4	+ .2	Chatham . . .	51	- 2	.2	---	Salem . . .	51	- 3	.7	+ .2
ARIZ. Flagstaff . . .	48	+ 1	T	- .2	MICH. Alpena . . .	46	- 1	.1	- .5	PA. Allentown . . .	59	+ 2	1.1	+ .2
Phoenix . . .	76	+ 3	0	- .1	Detroit . . .	56	+ 2	.7	- .1	Erie . . .	51	0	1.3	+ .5
Tucson . . .	70	- 1	T	- .1	Flint . . .	54	+ 2	.1	- .6	Harrisburg . . .	61	+ 1	.6	- .2
Winslow . . .	61	+ 2	0	- .1	Grand Rapids . . .	58	+ 4	.4	- .4	Philadelphia . . .	65	+ 5	.6	- 1
Yuma . . .	71	+ 2	T	0	Houghton Lake . . .	51	+ 2	.2	- .4	Pittsburgh . . .	59	+ 3	1.8	+1.0
ARK. Fort Smith . . .	72	+ 3	T	- 1.3	Lansing . . .	57	+ 4	.1	- .6	Scranton . . .	56	+ 1	1.1	+ .3
Little Rock . . .	73	+ 6	1.5	+ .2	Marquette . . .	49	+ 2	.2	- .4	R.I. Providence . . .	57	+ 4	.3	- .5
CALIF. Bakersfield . . .	62	- 5	.2	+ .1	Muskegon . . .	55	+ 3	.4	- .3	S.C. Charleston . . .	74	+ 4	1	- .6
Eureka . . .	50	- 1	.6	0	S. Ste. Marie . . .	42	- 3	.3	- .3	Columbia . . .	76	+ 7	T	- .7
Fresno . . .	59	- 6	.3	+ .2	MINN. Duluth . . .	50	+ 4	.3	- .4	Greenville . . .	73	+ 7	1.9	+1.2
Los Angeles . . .	60	- 4	2.0	+ 1.9	Internat'l Falls . . .	50	+ 4	.5	0	S.D. Aberdeen . . .	60	+ 8	.2	- .3
Red Bluff . . .	58	- 7	.3	0	Minneapolis . . .	58	+ 5	.4	- .3	Huron . . .	61	+ 8	T	- .5
San Diego . . .	61	- 2	1.6	+ 1.5	Rochester . . .	58	+ 6	.9	+ .2	Rapid City . . .	58	+ 6	.1	- .5
San Francisco . . .	55	- 2	.2	0	St. Cloud . . .	55	+ 4	.1	- .6	Sioux Falls . . .	62	+ 8	1.1	+ .4
Stockton . . .	59	- 4	.1	- .1	MISS. Jackson . . .	76	+ 6	.4	- .7	TENN. Chattanooga . . .	70	+ 4	.8	0
COLO. Denver . . .	61	+ 7	.1	- .5	Meridian . . .	71	+ 1	1.9	+ .9	Knoxville . . .	69	+ 3	.8	0
Grand Junction . . .	66	+ 7	0	- .1	MO. Columbia . . .	67	+ 6	2.5	+1.4	Memphis . . .	77	+ 9	.5	- .6
Pueblo . . .	64	+ 6	T	- .4	Kansas City . . .	69	+ 7	.8	- .1	Nashville . . .	73	+ 7	1.1	+ .1
CONN. Bridgeport . . .	58	+ 3	1.3	+ .5	St. Louis . . .	69	+ 6	1.2	+ .3	TEX. Abilene . . .	73	+ 3	.2	- .6
Hartford . . .	60	+ 5	.7	- .1	Springfield . . .	70	+ 8	.1	-1.0	Amarillo . . .	69	+ 7	.1	- .4
D.C. Washington . . .	69	+ 6	1.3	+ .5	MONT. Billings . . .	56	+ 4	.1	- .3	Austin . . .	75	+ 2	T	- .9
FLA. Apalachicola . . .	72	- 1	0	- .6	Glasgow . . .	57	+ 6	.2	0	Beaumont . . .	77	+ 4	T	-1.1
Daytona Beach . . .	76	+ 3	.3	- .1	Great Falls . . .	51	0	T	- .4	Brownsville . . .	80	+ 2	T	- .5
Ft. Myers . . .	76	0	1.9	+ 1.3	Havre . . .	57	+ 5	.2	- .1	Corpus Christi . . .	79	+ 3	0	- .7
Jacksonville . . .	75	+ 3	.4	- .2	Helena . . .	50	0	.2	- .1	Dallas . . .	---	---	---	---
Key West . . .	78	- 2	6.0	+ 5.5	Kalispell . . .	49	+ 1	.6	+ .3	Del Rio . . .	75	- 1	.1	- .4
Lakeland . . .	78	+ 3	0	- .6	Miles City . . .	60	+ 7	.1	- .3	El Paso . . .	70	+ 1	T	- .1
Miami . . .	77	0	11.8	+10.7	Missoula . . .	49	+ 1	.4	+ .1	Fort Worth . . .	75	+ 5	.2	- .9
Orlando . . .	77	+ 2	0	- .5	NEBR. Grand Island . . .	66	+ 9	1.5	+ .7	Galveston . . .	76	+ 2	.1	- .5
Tallahassee . . .	73	+ 1	T	- .8	Lincoln . . .	68	+10	1.4	- .3	Houston . . .	75	+ 1	T	-1.1
Tampa . . .	77	+ 2	.1	- .3	Norfolk . . .	66	+10	1.4	+ .7	Lubbock . . .	71	+ 6	.5	- .1
W. Palm Beach . . .	77	+ 1	5.4	+ 4.5	N. Platte . . .	61	+ 6	1.3	+ .7	Midland . . .	74	+ 5	.5	+ .1
GA. Atlanta . . .	71	+ 5	.7	- .2	Omaha . . .	68	+11	3.2	+2.4	San Angelo . . .	75	+ 3	.3	- .3
Augusta . . .	75	+ 6	.5	- .3	Valentia . . .	60	+ 7	1.3	+ .7	San Antonio . . .	76	+ 2	T	- .7
Macon . . .	76	+ 5	0	- .8	NEV. Ely . . .	43	- 4	T	+ .7	Victoria . . .	77	+ 2	T	- .9
Savannah . . .	76	+ 5	.1	- .7	Las Vegas . . .	67	- 3	T	- .1	Waco . . .	75	+ 3	T	-1.1
HAWAII. Hilo . . .	74	+ 1	1.4	- 1.2	Reno . . .	43	- 9	.2	+ .1	Wichita Falls . . .	72	+ 3	1.8	+ .8
Honolulu . . .	77	+ 1	.2	0	Winnemucca . . .	45	- 6	.2	0	UTAH. Blanding . . .	56	+ 2	0	- .2
Kahului . . .	76	+ 1	.0	- .2	N.H. Concord . . .	54	+ 3	.1	- .6	Salt Lake City . . .	60	+ 5	.6	+ .2
Lihue . . .	75	0	.7	+ .1	N.J. Atlantic City . . .	59	+ 1	.8	0	VT. Burlington . . .	53	+ 2	.1	- .5
IDAHO. Boise . . .	49	- 6	.2	- .1	Trenton . . .	61	+ 2	.8	0	VA. Lynchburg . . .	68	+ 6	.6	- .1
Lewiston . . .	54	- 2	.2	- .1	N.MEX. Albuquerque . . .	64	+ 2	0	- .1	Norfolk . . .	70	+ 6	2.5	+1.8
Pocatello . . .	49	- 3	.4	+ .1	Roswell . . .	73	+ 8	.1	- .1	Richmond . . .	71	+ 7	2.1	+1.3
ILL. Cairo . . .	74	+ 8	1.5	+ .4	N.Y. Albany . . .	54	0	.8	+ .1	Roanoke . . .	70	+ 8	.7	0
Chicago . . .	58	+ 2	1.2	+ .4	Binghamton . . .	52	0	1.1	+ .3	WASH. Colville . . .	48	- 4	.4	+ .1
Moline . . .	63	+ 5	.8	- .1	Buffalo . . .	52	+ 1	.6	- .1	Omak . . .	51	- 3	.7	+ .5
Peoria . . .	64	+ 6	3.3	+ 2.4	New York . . .	59	+ 1	1.3	+ .5	Quillayute . . .	49	0	2.0	+ .7
Rockford . . .	64	+ 9	1.4	+ .5	Rochester . . .	53	0	.4	- .2	Seattle-Tacoma . . .	53	0	.8	+ .4
Springfield . . .	67	+ 7	3.9	+ 3.1	Syracuse . . .	53	0	.3	- .4	Spokane . . .	48	- 4	.3	0
IND. Evansville . . .	71	+ 8	2.2	+ 1.2	N.C. Asheville . . .	65	+ 4	1.6	+ .9	Walla Walla . . .	52	- 6	.6	+ .2
Ft. Wayne . . .	68	+ 9	1.0	+ .2	Charlotte . . .	72	+ 6	.1	- .6	Yakima . . .	49	- 6	.3	+ .2
Indianapolis . . .	61	+ 9	2.4	+ 1.5	Greensboro . . .	71	+ 7	.1	- .6	W. Va. Beckley . . .	63	+ 7	.7	- .1
South Bend . . .	65	+ 6	1.8	+ 1.0	Hatteras . . .	70	+ 6	.4	- .3	Charleston . . .	65	+ 3	.8	0
IOWA. Burlington . . .	65	+ 7	1.8	+ 1.0	Raleigh . . .	71	+ 7	.9	+ .2	Huntington . . .	68	+ 7	1.1	+ .3
Des Moines . . .	65	+ 8	1.6	+ .8	Wilmington . . .	74	+ 5	1.6	+ .8	Parkersburg . . .	66	+ 5	1.3	+ .5
Dubuque . . .	58	+ 3	1.2	+ .2	N.DAK. Bismarck . . .	55	+ 4	.1	- .3	WIS. Green Bay . . .	54	+ 3	.1	- .6
Sioux City . . .	64	+ 7	.3	- .4	Fargo . . .	59	+ 8	4.1	+3.6	La Crosse . . .	59	+ 4	.7	0
KANS. Concordia . . .	69	+10	1.1	+ .3	Williston . . .	58	+ 7	.2	- .1	Madison . . .	57	+ 5	.2	- .5
Dodge City . . .	70	+ 9	.4	- .2	OHIO. Akron-Canton . . .	61	+ 6	.9	+ .1	Milwaukee . . .	51	0	.2	- .4
Goodland . . .	61	+ 6	.3	- .2	Cincinnati . . .	66	+ 6	1.1	+ .3	WYO. Casper . . .	54	+ 4	T	- .4
Topeka . . .	71	+10	2.6	+ 1.8	Cleveland . . .	56	+ 1	.8	0	Cheyenne . . .	55	+ 6	T	- .5
Wichita . . .	71	+ 8	.3	- .5	Columbus . . .	64	+ 6	.6	- .3	Lander . . .	50	0	.5	- .1
KY. Lexington . . .	69	+ 8	.6	- .3	Dayton . . .	65	+ 7	2.0	+1.2	Sheridan . . .	55	+ 5	T	- .5
Louisville . . .	71	+ 9	1.0	+ .1	Toledo . . .	58	+ 3	1.4	+ .7	P.R. San Juan . . .	80	+ 1	.2	-1.2

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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: Warm; temperatures 5° above normal. Rainfall normal west, below normal east.

Fieldwork: 5 days suitable. Soil moisture short to adequate. Cotton fair to good; 88% planted, 89% 1976, 76% average. Corn fair to good; 85% planted, 86% 1976, 68% average. Soybean planting just underway, 14% completed, 16% 1976, 13% average. Peanuts 62% planted, 76% 1976, 73% average. Planting delayed by moisture shortage. Wheat fair to good, 35% turning color, 30% 1976. Pastures fair condition. Spring Irish potato harvest underway.

ALASKA: Tanana Valley warm and dry. Temperature above normal and precipitation below normal. Matanuska Valley near normal temperatures but night lows little above normal. Moist with almost all precipitation falling week's end. Kenai Peninsula cloudy and wet. Temperatures near normal. Precipitation above normal. Kodiak Island warm and wet. Temperatures 2 to 5° above normal; precipitation 0.20 to 0.50 in. above normal.

Cool, damp weather limited fieldwork throughout rail-belt. Main farming activities: Fertilizer application and machinery repair. Ground preparation and small grain seeding started. Most farmers waiting for soil to firm up. Fieldwork on schedule. Soil moisture adequate or better. Carryover feed supply small. Livestock mostly good condition.

ARIZONA: Dry windy, high humidity. Temperatures near normal.

Cotton good progress. Planting complete west, virtually complete central, approaching 90% complete southeast. Small grains good progress. Sorghum activity increasing. Spring sugarbeet harvest underway. Alfalfa haying full swing. Lettuce harvest active but slow. Watermelons, cantaloupe growing well. Potato, dry onion harvest underway. Valencia oranges and grapefruit picked. Early varieties deciduous fruit nearing maturity. Grapes excellent progress. Drought conditions prevail lower and mid-elevation ranges. Conditions vary higher locations. Water hauling, supplemental feeding required some areas. Cattle, calves fair to good condition. Movement spring to summer ranges active.

ARKANSAS: Temperatures ranged from 2 to 8° above normal. Extremes: 91 and 52°. Precipitation light ranging from 0.02 to 1.68 in.

Soil moisture mostly adequate to surplus. Fieldwork: 4 days available. Soybean planting 15% complete, 12% last year, average 10%. Cotton planting 79% complete, 72% 1976, average 55%. Good stands. Rice seeding 84% complete, 91% year ago, average 82%. Some flushing. Corn planting 92% complete, 90% last year. Cultivation and side dressing accomplished. Sorghum planting 74% complete, 70% 1976, average 56%. Green bug infestations severe. Wheat and oats good condition with some fields beginning to change color. Strawberry quality continued very good. Alfalfa harvest continued. Pastures providing adequate feed. Cattle gaining weight.

CALIFORNIA: Cloudy skies and precipitation with exception of southeast interior. Over 0.50 to 1.00 in. precipitation North and over 1.00 in.

fell Sacramento Valley and mountains. Few coastal stations above normal temperatures while elsewhere below normal readings. Irrigated small grains maturing. Some dryland fields abandoned. Rice showing growth. Cotton growth slowed by cool weather. Desert sugarbeet harvest progressing. Corn, sorghum, safflower crops making good progress. Cherry harvest underway, good crop expected. Desert grapefruit diverted to juice. Navel orange harvest slowed; drying and granulations heavy. Valencia harvest increasing. Thinning and spraying peaches, plums, nectarines. Artichokes, asparagus, broccoli, cauliflower, lettuce, green peas, and strawberries near or at peak harvest. Sweet corn, and spring potatoes began harvests. Rapid development in other crops also noted. Rains nominal improving effects rangelands. Cattle continue being moved market, lack feed and expected high cost supplemental feeding next fall. Many stock water ponds empty.

COLORADO: Isolated heavy thunderstorms brought 2.00 in. extreme eastern plains early week. Light snow higher mountains midweek. All temperatures above normal.

Winter wheat good condition, 32% jointed 1977, 39% 1976, 46% average. Soil moisture short. Spring seedings: Oats 91% 1977, 84% 1976, 76% average. Spring barley 93% 1977, 90% 1976, 83% average. Sugarbeets, 86% 1977, 90% 1976, 74% average. Summer potatoes, 60% 1977, 67% 1976, 58% average. Corn 45% 1977, 51% 1976, 35% average. Range and pasture in fair condition, livestock in good condition.

FLORIDA: Increased moisture, higher temperatures triggered thundershowers. Up to 12.00 in. rain in Dade County. Northern Peninsula mostly dry until 8th with widely scattered thundershowers developing. Rainfall averaged from none north, central to very heavy south. Temperatures near normal.

Topsoil moisture very short. Conditions improved extreme southern areas. Corn fair, needs rain. Peanut planting slow; soybean planting delayed due to dry soils. Irrigated tobacco good condition, non-irrigated poor. Wheat and oats about ready for harvest. Sugar-cane good condition. Peach harvest increasing. Pastures fair to good, western Panhandle; poor to good, eastern Panhandle, north; very poor central, some relief in extreme south from midweek rains. Cattle, calf condition variably poor to good. Supplemental feeding increasing. Citrus tree condition remains good, rain needed all areas. Irrigation active wherever available. Harvest active. New crop fruit progressing slowly due to dryness. Warm temperatures, scattered showers very beneficial to vegetable crops. Overall shipments increased 14%. Supplies potatoes, radishes, tomatoes and watermelons increased. Snap beans, eggplant, lettuce, peppers, and squash decreased while cabbage, carrots, celery, sweet corn, chinese cabbage, cucumbers, and escarole held steady. Irrigation heavy; spray programs active. Watermelon crop very good. Fruit sizing well; quality good.

GEORGIA: Temperatures 2 to 3° above normal except 4 to 7° above west and central. Averages ranged from mid-60's northeast to mid-70's west central. Rainfall 1.00 to 2.00 in. north

tapering off south. Scattered thundershowers weekend mainly northwest and central.

Soil moisture short, adequate north. Fieldwork: 5 days suitable. Dry soils delayed planting. Progress still above normal. Crop conditions weakened. Tobacco transplanting almost complete; condition mostly fair to good. Corn 96% planted, last year 94%, average 80%, condition fair to mostly good. Cotton fair to good, 88% planted, last year 86%, average 61%; 69% acceptable stand, last year 56%, average 23%. Peanuts fair to good, 80% planted, 82% last year, average 63%; germination now requires irrigation, many stopped planting. Soybeans mostly fair to good, 15% planted, last year 11%, average 9%. Watermelons fair to good, 95% planted, last year 92%, need rain. Small grains fair to good, harvest for silage underway. Peaches fair to mostly good, harvest began south. Apples fair to mostly good. Dry weather affecting quality and volume of vegetables reaching market. Pastures declined, fair to good. Cattle fair to mostly good, hogs good.

HAWAII: Weather mostly favorable. Most areas received showers. Central Valley area Maui Koko Head and Waimanalo areas Oahu dry.

Seasonal melon production Kahuko area Oahu active. Frequent spraying keeping plantings fair to good condition. Vegetable supplies adequate. Banana and papaya supplies light. Pineapple harvesting more active. Sugar production steady. Pastures fair to good.

IDAHO: Temperature averaged slightly above normal in north but 1 to 5° below south. Extremes: 86 and 20°. Above normal precipitation.

Fieldwork delayed by much needed rain. Soil moisture still short. Rain beneficial to dry land grain and range grass. Crops planted percent this year, last year; emerged percent this year, last year: Spring wheat 90%, 40%, 65%, 25%. Barley 90%, 45%, 65%, 20%. Oats 90%, 55%, 65%, 35%. Sugarbeets 95%, 72%, 55%, 40%. Potatoes 40%, 30%, 5%, 0%.

ILLINOIS: Temperatures 2 to 7° above normal. Precipitation ranged about 1.00 in. to 4.00 in., severe flooding central.

Corn 74% planted, 66% 1976, 50% average. Soybeans 10% planted, 13% 1976, 7% average. Winter wheat 45% headed, 64% 1976, 38% average. Pastures mostly good. Soil moisture adequate. Livestock water supplies adequate. Fieldwork: 3.8 days suitable.

INDIANA: Rainy, warm. Rain parts of extreme southwest 3.00 in.; 2.00 in. common north. 0.50 in. extreme east, 2.00 in. extreme west. Central areas had 1.00 to 2.00 in. Temperatures few degrees above normal.

Fieldwork: 2 days suitable. Topsoil moisture adequate to mostly surplus. Subsoil moisture mostly adequate to surplus. Pastures good. Wheat fair to mostly good. Land for spring planted crops 90% plowed, 1976 95%, average 75%. Corn 30% planted, 1976 65%, average 25%. Wheat 15 in. high, 1976 17 in. Wheat 70% jointed, 1976 75%. Wheat 10% headed, 1976 25%. Oats 5 in. high, 1976 5 in.

IOWA: Warm with moderate to locally heavy showers. Temperatures 3° above normal northeast to 9° above normal southwest. Scattered frost in northeast 9th.

Fieldwork: 4.5 days suitable. Corn acreage 81% planted, last year 63% and average 33%. Corn 14% emerged. Stands in good condition. Soybean

acreage 9% planted, most advanced since 1971. Alfalfa good to excellent, 2 weeks ahead of normal southwest. Oats and clover hay good. Wheat and pastures mostly good to fair. Livestock in good condition.

KANSAS: Intermittent showers and thunderstorms delivered 0.50 to over 1.00 in. moisture. Temperatures ranged from 65° northwest, 72° southeast, from 9 to 11° above normal.

Wheat crop continues to make excellent growth with 90% in or past jointing stage and 35% heading out; slightly ahead of last year. Mustard weeds plague many fields as well as insects such as army cutworms, green bugs and grown wheat mites. Row crop planting made good progress with corn 45% sorghum 10% and soybeans 5% planted. Last year and long time average: Corn 35%, sorghum 5% and soybeans 0. Livestock in good shape on native pastures with only a minimal amount of wheat being pastured off. Farm activities centered around row crop planting and spraying weeds.

KENTUCKY: Temperatures 6 to 10° above normal. Rainfall near 1.25 in.

Fieldwork: 2.2 days favorable. Soil moisture adequate to surplus. Corn planting slowed; 47% complete, 75% last year and 46% average. Soybean seeding just starting at 3% completed. About 20% tobacco plants 2 to 4 in.; some about ready for setting. Beds in excellent condition. Wheat progressing well, 76% heading or in block, several days later than last year. Almost full crop apples, peaches a near failure. Good strawberry crop expected; picking underway.

LOUISIANA: Temperatures 2° above normal. Extremes: 52 and 91°. General rain 2d, scattered rain 8th.

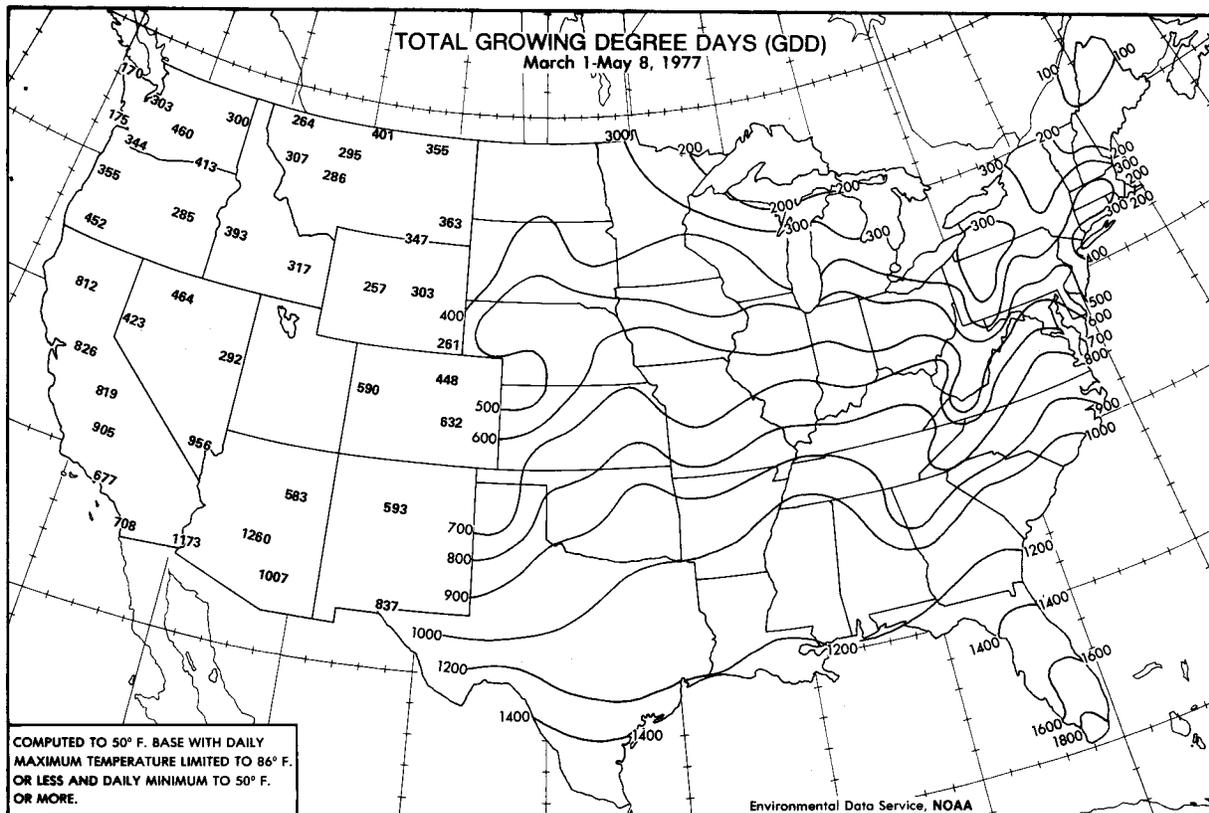
Fieldwork: 3.5 days suitable. Main activities: Planting, cultivation and application of fertilizer and pesticides. Rice 90% planted, 91% last year, 79% average. Corn 93% planted, 92% last year, 71% average. Cotton 73% planted, 66% last year, 42% average. Soybean planting 13% complete; Sorghum 35% complete. Sweetpotatoes 25% transplanted, same as year ago. First Irish potatoes dug. Tomatoes harvested south. Pastures average; cattle condition fair to good.

MARYLAND AND DELAWARE: Temperatures 3 to 5° above normal. Highs in upper 70's; lows in mid-50's. Precipitation widespread, amounts 0.50 to 1.50 in.

Corn planting 65%, 60% 1976, 52% average. Early planted fields up, growing well. Fertilizer and herbicides being applied. Small grains fair condition. Many heading; plants short and small. Few alfalfa fields cut. Hay still short, rain should help growth. Spraying for alfalfa weevil. Tobacco transplanting started. Growers marketing last year's crop. Fruit growers mowing, caring for orchards.

MICHIGAN: Temperatures 3° below normal to 3° above normal Upper and normal northern Lower to 7° above normal southern Lower. Precipitation ranged 0.40 in. Upper to over 1.00 in. southwest Lower.

Corn and potato planting very active. Frost damage to fruit and vegetable varies from minor to severe. Fieldwork: 5 days suitable. Soil moisture short. Pasture feed supplies mostly adequate, except north. Intended acreage plowed 80%. Corn 30% planted, 16% last year, normal 9%. Oats 90% planted, 85% last year, 60% normal. Sugarbeets 95% planted, 90% last year, 60% average



Potatoes 50% planted, 30% last year, 22% normal. Poor weather and wet fields delay asparagus harvest and vegetable planting.

MINNESOTA: Temperatures 8° above normal west; 4° above normal east. Extremes: 84 and 25°. Precipitation variable and showers about midweek, ranging from none extreme west central to isolated 4.10 in. northwest; average 0.70 in. above normal northwest, near normal across south, 0.20 to 0.60 in. below normal elsewhere.

Planting made good progress despite rains. Small grain seeding nearing completion, corn planting making good headway. Spring crop growth good to excellent where moisture adequate; fair to good where short. Soil moisture short north, adequate south. Rains improved prospects in southern Red River Valley. Planted: Corn 64%, 1976 71%, normal 32%; Soybeans 9%, 1976 16%, normal 5%; spring wheat 95%, 1976 96%, normal 51%. Oats 94%, 1976 94%, normal 62%; Barley 87%, 1976 87%, normal 42%; Flax 50%, 1976 51%, normal 32%; sugarbeets 98%, 1976 94%, normal 30%; potatoes 34%, 1976 38%, normal 20%; Sunflowers 23%, 1976 18%.

MISSISSIPPI: Temperatures near or slightly above normal. Extremes: 44 and 88°.

Soil moisture adequate. Fieldwork: 3.8 days suitable. Soybeans 11% planted, 5% 1976. Cotton 75% planted, 75% 1976, 54% average; 36% up to stand, 19% 1976, 25% average. Rice 84% planted, 84% 1976, 58% average; 55% up to stand, 28% 1976. Corn 85% planted, 85% 1976, 58% average; 66% up to stand, 55% 1976. Winter wheat 96% headed, 97% 1976, 3% ripe, 7% 1976. Oats 91% headed, 94% 1976, 7% ripe, 11% 1976. Sorghums 18% planted, 20% 1976. Sweetpotatoes 20% planted,

18% 1976, 19% average. Peanuts 35% planted. Crops in good to fair condition.

MISSOURI: Temperatures 6 to 7° above normal. Precipitation 1.00 to 2.50 in. everywhere but southeast where average about 0.50 in.

Fieldwork: 3.2 days suitable. Corn 81% planted, 70% last year, 43% normal. Soybeans 13% planted, 8% last year, 8% normal. Grain sorghum 25% planted; 18% last year, 14% normal. Cotton 42% planted; 82% last year, 48% normal. Wheat 56% headed, 63% last year, 31% normal. Wheat condition good. Pasture condition fair. Soil moisture short to adequate.

MONTANA: Temperatures above normal north central and east, to near normal elsewhere. Precipitation above normal west and southwest but continued very dry elsewhere. Scattered thunderstorms developed weekend.

Soils dry. Winter wheat fair to good; drought stress becoming evident many areas north central and northeast. Less than 5% winter wheat in boot. Spring wheat seeding 80% complete, last year 70%, average 45%. Barley seeding 80% done, last year 70%, average 50%. Oats 75% seeded, last year 65%, average 45%. Sugarbeet 20% planted, last year 20%, average 15%. Corn seeding 45% done and dry beans about 10% seeded. Range feed short except portions south. About 45% cattle and 35% sheep on supplemental feed. Calving over 90%, lambing 85%, and shearing 80% done. About 30% cattle and 35% sheep moved to summer pastures.

NEBRASKA: Temperatures 5 to 10° above normal. Good rainfall with 0.50 to 2.00 in. common.

Showers delayed fieldwork activities for a couple days. Good soil conditions for spring

planting. Topsoil moisture supplies adequate. Winter wheat mostly fair condition. Corn planting 40% completed. Grain sorghum and soybean planting started with 15% and 10% completed, respectively. Pasture and range feed supplies short. Cattle moving to spring pasture.

NEVADA: Cool unstable air spread up to 1.00 in. precipitation. About 12 in. snow fell Sierras. Temperatures averaged 5 to 10° below normal. Extremes 86 and 18°.

Seeding spring crops delayed by snow and rain showers. Vegetative growth slowed by cool weather. Reservoirs at near record low levels. Calving nearing completion. Sheep shearing and lambing normal. Livestock in good condition despite poor range condition.

NEW ENGLAND: Temperatures fluctuated sharply. Precipitation light but up to 0.50 in. reported.

Season one to two weeks early. South fruit trees in bloom, north not as advanced. Planting early season vegetables. Soil preparation for corn, potatoes underway. Pastures greening. Except for blueberries in western Massachusetts, fruit appears to have escaped serious winterkill.

NEW JERSEY: Temperatures averaged 2 to 3° above normal in central and south. Rainfall averaged 1.46 in. north, 0.81 in. central and 0.82 in. south. Soil moisture, in percent of field capacity, averaged 98 north, 87 central and 80 south. Soil temperature 57° north and central and 62° south.

Planting string beans, field corn, tomatoes, and sweet corn. Potato seeding virtually completed. Small grains improving. Strawberry harvest to begin in 2 weeks. Preparation continues for soybean planting.

NEW MEXICO: Dry with few very light showers south midweek and isolated heavy thundershowers eastern plains weekend.

Wheat 50% headed. Dryland wheat, fair. Irrigated wheat, durum wheat, barley, lettuce, onions, fair to good. Cotton and corn about 60% planted. Seeding active with good stands reported. Grain sorghum planting begun. Ranges fair to good. Livestock fair to good with spring calving and lambing virtually complete. Lettuce harvest begun.

NEW YORK: Temperatures near normal, mainly in 50's. Precipitation 0.75 to 1.50 in. in southern tier, Catskills, and Hudson Valley; under 0.50 in. elsewhere.

Favorable for plowing and planting. Oat planting 65% complete. Corn planting underway. Early oats and corn emerging. Onion seeding 95% complete. Sweet corn planting 40% complete. Limited snap bean, celery planting. Long Island potato planting about done, Upstate 40% complete. Western sweet and tart cherry prospects fair. Vineyard freeze damage variable but present in all areas. Some damage apparent in many apple orchards.

NORTH CAROLINA: Temperatures 4 to 6° above normal. Precipitation ranged from 1.00 to 2.00 in. coast to less than 0.50 in. Piedmont.

Fieldwork: 5.3 days suitable. Soil moisture: short to adequate. Principle farm activities: Planting corn, cotton, peanuts, sorghum, and soybeans and transplanting tobacco and sweet-potatoes. Conditions: Corn, cotton, Irish potatoes, pastures, peaches, tobacco plant beds and tobacco in the fields mostly good. Wheat fair to good. Barley and oats mostly fair. Planting: Corn 90%

completed, 1976 86%, average 75%; cotton 77%, 1976 74%, average 67%; soybeans 15%, 1976 14%, average 11%; peanuts 51%, 1976 38%, average 35%. Trans-planting: Tobacco 65% set, 1976 64%, average 54%; sweetpotatoes 15% set, 1976 10%.

NORTH DAKOTA: Temperatures 5 to 8° above normal. Extremes: 24 to 87°. Rains in northeast ranged from 0.50 to 1.50 in. Isolated thunderstorms up to 4.00 in. Southwest still dry.

Hard red spring wheat 81% planted, last year 71%, average 44%. Durum, oats, barley, 75% planted. Flax 30% planted. Row crop planting satisfactory. Calving and lambing nearing completion. Livestock fair to good condition.

OHIO: Temperatures normal. Extremes: 84 and 31°. Rainfall through 6th and across southern sections 7th. Amounts ranged 2.12 to 0.58 in.

Very limited field activities, less than 1.5 days favorable. Some fruit and hay crop spraying. Corn planting 25% done, 65% 1976, 35% normal. Soybeans less than 5% planted, 15% 1976, 10% average. Potatoes 55% planted, 70% 1976, 50% normal. Oats 75% emerged, same as last year. Wheat average height 12 in., 27% jointed, 60% 1976. Condition of winter wheat mostly good to excellent, oats fair to mostly good, pasture mostly good to excellent. All hay fair to excellent, mostly good. Soil moisture supplies surplus.

OKLAHOMA: Temperatures 6° above normal east, 4° above normal central and 2° below normal Panhandle. Southwest reported 1.51 in. while the west central had only 0.19 in.

Rains slowed seedbed preparation and will cause some replant of early seeded cotton. Soil moisture adequate. Wheat now 80% headed with 5% in early dough stages, not greatly different than year ago but week ahead of average. Wheat rated mostly good. Oats and barley rated good, near 80% crop headed. Few early fields near soft dough stage. Corn planting near 67% complete ahead of 45% average and year ago 60%. Condition only fair. Sorghums near 10% planted, slightly behind last year but ahead of average. Moisture conditions in cotton area good but many early planted fields will be reseeded. Average planting this date 3%. Peanut and soybean prospects good, with seedbed preparation well along. First cutting alfalfa 20% complete, some loss to rain. Ranges making good growth and cattle condition continues to improve, now mostly good.

OREGON: Rainfall 1.50 in. along coast, 1.25 western valleys, east 0.30 to 0.50 in. Temperatures near normal but 2 to 5° below normal along east slopes Cascades and across south. Extremes: low 70's, mid-30's west; low 80's, high teens, east.

Soil moisture adequate west, short east. Grain crops fair to good west, poor to fair east. Seeding, fertilizing and pest control continue. Some mildew, yellowing and septoria reported west; moisture stress showing east. Fruit bloom mostly completed, many orchards being irrigated. Sprays applied to berry fields and fruit trees. Potato and onion plantings about complete. Sugarbeets being planted. Livestock in good condition west, fair east. Feed situation most critical east. No pasture growth. Ranchers hauled stock water in many areas.

PENNSYLVANIA: Precipitation totaling from 0.50 in. Susquehanna Valley to 1.00 in. east and 1.75 in. southwest. Temperatures 2° below normal north to 4° above normal south. Extremes: 87 and 26°. Moisture adequate. Activities: Plowing, spreading lime and fertilizer, orchard spraying,

grape tying, planting oats, corn, potatoes, alfalfa, a few soybean fields, cutting alfalfa and rye for silo. Plowing 81%, last year 88%. Planting: Oats 83%, last year 91%; potatoes 44%, last year 61%; corn 13%, last year 26%. Barley 14% boot, 5% headed, last year 26% boot. Wheat 13% boot, last year 25%. Hay stands good condition. Feed from pastures average. Peaches and cherries in or past full bloom. Apples 92% in or past full bloom. Frost damage to asparagus, tomatoes, strawberries, apples, cherries, peaches, grapes especially northwest.

PUERTO RICO: Island average rainfall 0.45 in. or 0.91 in. below normal. Temperatures about 77° on coasts and 72° interior. Extremes: 91 and 54°.

Sugarcane harvest near completion. Growth of ratoons affected by dryness of soil. Formation of coffee bean affected by dry weather. Tobacco harvest and curing main activities. Pastures in bad condition and getting worse due lack of rain. Soil preparation for planting food crops active. Crops and other vegetables deteriorating due dryness. Banana plantations affected by winds some western interior zones.

SOUTH CAROLINA: Temperatures warmer than usual. Rainfall practically non-existent except few scattered showers.

Moisture, plant condition in tobacco plant beds fair. About 98% of tobacco transplanting complete. Irrigating tobacco transplants some areas. Corn, cotton, watermelon planting virtually complete. Soybean planting making considerable progress. Peanut plantings 68% complete. Small grains in fair condition. Other activities: harvesting cabbage, beets, squash; cultivating cucumbers, tomatoes; staking, tying, pruning tomatoes. Corn planted: 97% 1977, 95% 1976, 89% average. Soybeans planted: 11% 1977, 8% 1976, 7% average. Cotton planted: 93% 1977, 81% 1976, 74% average.

SOUTH DAKOTA: Precipitation scattered up to 1.20 in. south central. Temperature 6 to 11° above normal. Extremes: 28 and 85°.

Topsoil moisture short to adequate. Condition deteriorating generally. Subsoil mostly short. Fieldwork good progress. Seedings: Spring wheat 99%, 1976 99%, normal 84%; oats 98%, 1976 99%, normal 86%; barley 97%, 1976 99%, normal 82%; flax 52%, 1976 57%, normal 36%; corn 16%, 1976 18%, normal 18%; soybeans 2%, 1976 2%, normal 0; sorghum 1%, 1976 2%, normal 0. Livestock moving to pasture as feed exhausted; pasture in poor to fair condition due to drought. Stock water adequate.

TENNESSEE: Temperatures 4 to 9° above normal. Precipitation 0.50 to 2.00 in.

Soil moisture adequate. Plowing nearly 90% complete. Tobacco transplanting begun. Livestock, pastures and small grains in good condition. Wheat 85% headed, oats 60%, and barley 75%. Corn 70% planted, 80% last year, 55% average. Cotton 50% planted, 75% last year, 50% average.

TEXAS: Warm moist southerly winds prevailed. Temperatures at or above normal. Above normal rainfall over west, northwest, Lower Gulf Coast; elsewhere near normal. Soil temperatures averaged 70's to low 80's except high plains; warm enough planting all crops.

Cotton planting made good progress southern Low Plains. Rains delayed planting northern Low Plains. Early cotton fields squaring south. Sorghum planting began High Plains, northern Low Plains, continues active southern Low Plains.

Some will be replanted due to recent heavy rains. Sorghum making good growth most areas. Corn planting, made excellent progress. Early corn northern High Plains up. Wheat heading out Plains area; continues to develop well other areas. Dryland wheat parts northern High Plains would benefit from rain, other areas weather favorable crop filling well. Some good, as well as poor fields, being grazed out. First fields being harvested south. Rice growth slow due to cool weather.

Peanut planting, ahead average. Field preparations, planting active. Some fields blooming south, growth slow. Cotton planted: 24% 1977, 28% 1976, 32% average. Corn planted: 89% 1977, 92% 1976, 89% average. Sorghum planted: 61% 1977, 62% 1976, 60% average. Peanuts planted: 23% 1977, 15% 1976, 20% average. Rice planted: 97% 1977, 98% 1976, 95% average. Sugarbeets planted: 100% 1977, 100% 1976, 100% average. Onion, strawberries, cabbage, cucumber, beans, potatoes, carrot, squash harvest continues. Peas, sweetpotatoes, peppers, okra being planted. Peach harvest in full swing in south; early varieties harvest starting central. Peaches being thinned north with early varieties showing some color. Livestock fair to good condition, putting on weight. Pastures, ranges average to above average. Weeds more abundant than normal. Ticks, hornflies problem some areas. Shearing nearing completion.

UTAH: Recurring rain valleys and snow mountains northwest. Few scattered showers south and east. Temperatures ranged from near normal to 5° above.

Soil moisture very short on irrigated and non-irrigated land. Fruit crop conditions rated good. Little frost damage. Winter wheat mostly poor. Corn about 60% planted, potatoes about 33% planted, sugarbeet plantings virtually completed. Pasture and range feed supplies very poor to severe drought most areas. Calving 90% complete, range lambing 67% complete and sheep shearing 50% done. Cattle and sheep being moved to spring ranges.

VIRGINIA: Temperatures above normal. Scattered frost. Extremes: 92 and 29°. Heavy rain late in period averaged 0.50 in. Some hail.

Topsoil moisture adequate. Fieldwork: 4.3 days suitable. Corn 70% planted, 73% in 1976, 48% average. Soybeans 6% seeded, 13% in 1976, 6% average. Peanuts 27% planted, 38% in 1976, 20% average. Small grains good condition, ensilage harvest, spraying active. Flue-cured tobacco 15% transplanted, 12% in 1976, 5% average. Eastern Shore potatoes and vegetables very good condition. Pasture, hay, good condition.

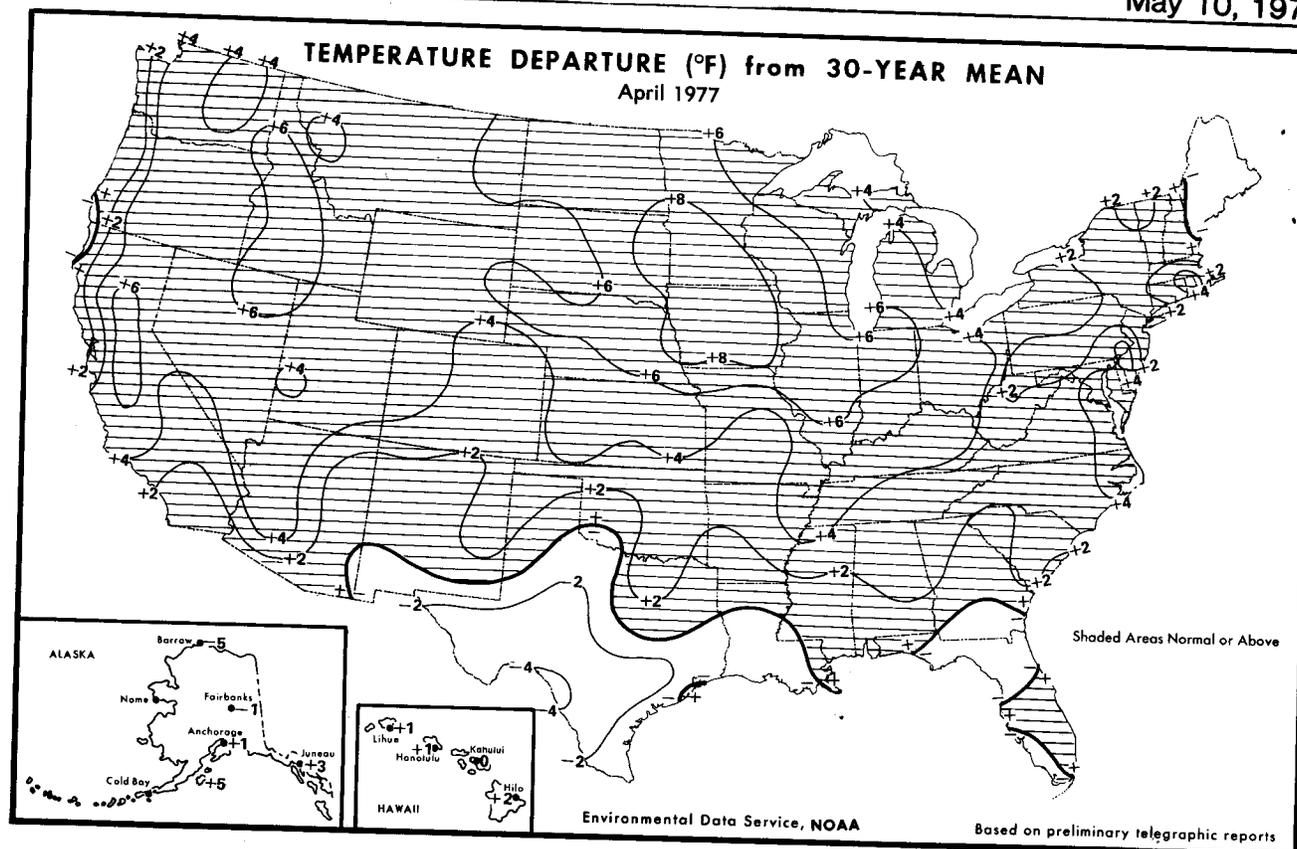
WASHINGTON: West: Temperatures 1° below normal. Precipitation 0.10 in. above normal.

Early planted crops making good growth. Planting spring grains, silage, sweet corn and peas. Grass crop earlier than normal and looking excellent. Pastures and livestock in good condition.

East: Temperatures 3 to 4° below normal. Precipitation 0.30 in. above normal to near normal.

Planting potatoes, spring grains, sugarbeets, alfalfa, field and sweet corn, dry beans, and pastures. First cutting alfalfa hay started. Asparagus harvest continues with above normal yields. Post-bloom thinning fruit trees continues. Spring plantings of barley, wheat, oats, lentils are up. Pastures in poor condition. Winds caused surface drying of fields.

(continued on page 15)



April Weather Summary

HIGHLIGHTS: Precipitation was well above normal in April from New Mexico northeastward through southern Minnesota and parts of northern Wisconsin. The previously dry winter wheat area of northern Texas, western Oklahoma and Kansas, and eastern Colorado measured 2 to 4 in. of rain during the latter part of the month. Heavy rain caused flooding early in the month in the Tennessee, Kentucky, and West Virginia portions of Appalachia. Later, floods occurred in central Texas and southeastern Louisiana.

Average temperatures for April were above normal in much of the Nation; this promoted early pasture growth and brought soil temperatures up for some early planting. The exception to the warm temperatures occurred in central and southern Texas and along the Gulf Coast where cool, wet weather kept temperatures lower than normal.

In early April, locally heavy rain and thunderstorms carried additional moisture to the thirsty soils of the middle Mississippi Valley. The showers moved further north by April 10. Elsewhere, during this period, thunderstorms produced heavy rain and some tornadoes from central Louisiana to central Virginia. Southwestern Virginia and southern West Virginia experienced serious flooding. Very little rainfall was measured from the middle U.S. westward to the Cascades. Some rain fell in northern California and along the northwest coast. Isolated showers and snow showers hit parts of the northern Rockies where temperatures were cooler than normal.

In the week of mid-April, stagnating weather patterns produced moderate to heavy precipitation

from Texas northward to South Dakota and to the Great Lakes. This marked the beginning of the spring rains in the important winter wheat areas of the Texas and Oklahoma Panhandles, western Kansas, and eastern Colorado. The rain was heavy in central Texas where flooding occurred, and was moderate northward into South Dakota.

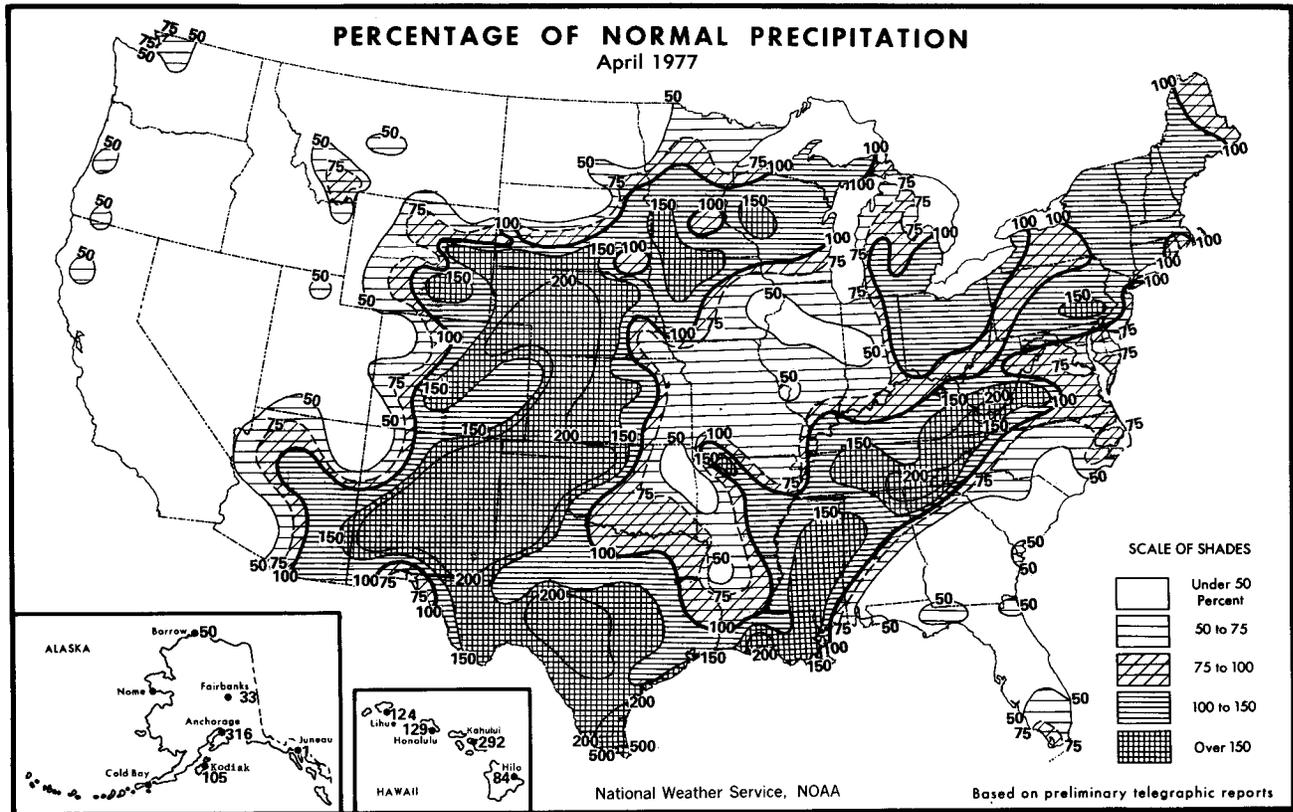
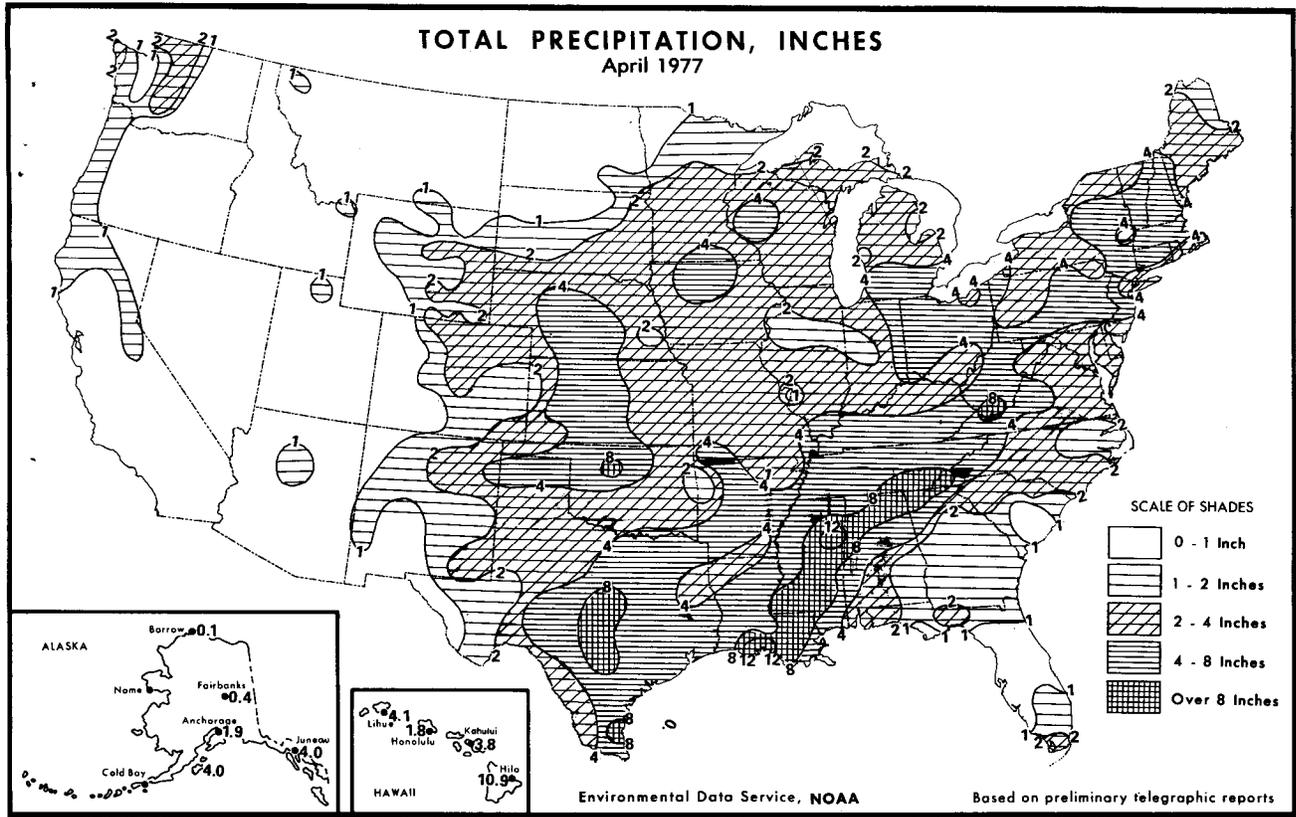
Temperatures over the Nation averaged well above normal in most areas, about 18 to 20° higher in Iowa and parts of the Midwest.

As the month passed its mid-point the area of rain, thunderstorms, and other severe weather moved eastward. Numerous tornadoes plagued the lower Mississippi Valley and very heavy rain flooded an area in southeast Louisiana where some points measured as much as 14 in. in three days.

Cooler weather dominated an area from Texas to western Nebraska, but the rest of the Nation continued with a warm spell. An area around the Great Lakes averaged 10 to 13° warmer than normal for the week ending April 24th.

Late April brought cooler temperatures to most of the eastern U.S. as a late winter air mass moved southward through the Great Lakes area. Frost whitened areas from Ohio through New England.

Rain was absent or very light in the Southeast, the Southwest and from the northern Rockies through the northern Great Lakes area. Some late season rain moved on to the West Coast. Portions of northern California and parts of the west slopes of the Cascades had nearly an inch of rain. Elsewhere, showers and thunderstorms were reported from Texas to southeastern Wyoming and from Kansas eastward to the mid-Atlantic States. A few tornadoes and hailstorms marred the month's end.



Temperature and Precipitation Data for April 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 . . .	65	+ 2	6.7	+2.1	La. Baton Rouge . . .	67	- 1			Youngstown . . .	51	+ 3	4.1	+ .4
Mobile . . .	68	0	2.7	-2.9	Lake Charles . . .	68	- 1	7.1	+2.0	OKLA. Okla. City . . .	61	+ 1	2.9	- .6
Montgomery . . .	67	+ 2	1.5	-3.0	New Orleans . . .	69	0	6.2	+1.9	Tulsa . . .	64	+ 3	2.1	-2.1
ALASKA. Anchorage . . .	36	+ 1	1.9	+1.3	Shreveport . . .	66	0	2.0	+2.2	OREG. Astoria . . .	49	+ 1	1.7	-2.9
Barrow . . .	6	- 5	.1	- .1	MAINE. Caribou . . .	36	0	1.8	- .6	Burns . . .	48	+ 4	.2	- .5
Fairbanks . . .	28	- 1	.4	+ 1	Portland . . .	42	- 1	3.5	+ .2	Medford . . .	53	+ 3	.8	- .2
Juneau . . .	42	+ 3	4.0	+1.0	MD. Baltimore . . .	58	+ 4	3.1	0	Pendleton . . .	55	+ 4	.2	- .8
Kodiak . . .	42	+ 5	4.0	+ .2	MASS. Boston . . .	51	+ 2	4.1	+ .6	Portland . . .	53	+ 2	1.0	-1.2
Nome . . .	--	--	--	--	Chatham . . .	47	0	3.8	+ .2	Salem . . .	51	+ 1	.6	-1.7
ARIZ. Flagstaff . . .	45	+ 3	1.5	+ .2	MICH. Alpena . . .	43	+ 3	2.2	- .2	PA. Allentown . . .	52	+ 2	4.2	+ .4
Phoenix . . .	74	+ 6	.1	- .2	Detroit . . .	52	+ 4	4.2	+1.0	Erie . . .	48	+ 3	5.2	+1.6
Tucson . . .	67	+ 1	.4	0	Flint . . .	50	+ 4	3.3	+ .4	Harrisburg . . .	54	+ 1	4.5	+1.5
Winslow . . .	54	0	.5	+ 1	Grand Rapids . . .	52	+ 5	4.0	+ .6	Philadelphia . . .	57	+ 4	5.6	+2.3
Yuma . . .	72	+ 1	T	- .1	Houghton Lake . . .	47	+ 5	2.3	- .1	Pittsburgh . . .	51	+ 1	3.3	- .1
ARK. Fort Smith . . .	64	+ 2	1.0	-3.7	Lansing . . .	51	+ 4	2.5	- .4	Scranton . . .	49	0	4.0	+ .6
Little Rock . . .	65	+ 3	5.3	0	Marquette . . .	44	+ 4	3.2	+ .6	R.I. Providence . . .	51	+ 4	3.4	- .3
CALIF. Bakersfield . . .	68	+ 5	T	- .9	Muskegon . . .	50	+ 5	1.7	-1.5	S.C. Charleston . . .	66	+ 1	.5	-2.5
Eureka . . .	49	- 1	1.2	-1.8	S. Ste. Marie . . .	40	+ 2	1.7	- .5	Columbia . . .	66	+ 2	.9	-2.6
Fresno . . .	66	+ 6	T	-1.2	MINN. Duluth . . .	44	+ 5	1.3	-1.3	Greenville . . .	62	+ 1	3.2	-1.1
Los Angeles . . .	64	+ 2	0	-1.3	Internatl Falls . . .	43	+ 5	1.0	- .7	S.D. Aberdeen . . .	52	+ 8	.9	-1.1
Red Bluff . . .	65	+ 5	1.0	- .8	Minneapolis . . .	53	+ 8	1.8	- .2	Huron . . .	53	+ 7	2.1	+ 1
San Diego . . .	61	0	T	- .8	Rochester . . .	53	+ 8	2.9	+ .5	Rapid City . . .	50	+ 5	1.6	- .5
San Francisco . . .	56	+ 1	T	-1.6	St. Cloud . . .	51	+ 8	3.2	+ .9	Sioux Falls . . .	54	+ 8	2.2	- .1
Stockton . . .	65	+ 6	.5	- .9	MISS. Jackson . . .	66	0	8.0	+3.3	TENN. Chattanooga . . .	63	+ 2	9.1	+4.7
COLO. Denver . . .	57	+ 3	2.1	+ .2	Meridian . . .	65	0	7.6	+2.5	Knoxville . . .	63	+ 3	7.0	+2.4
Grand Junction . . .	51	+ 5	.5	- .3	MO. Columbia . . .	58	+ 3	2.7	-1.1	Memphis . . .	67	+ 4	5.4	0
Pueblo . . .	54	+ 2	1.8	+ .5	Kansas City . . .	60	+ 5	2.4	-1.3	Nashville . . .	63	+ 3	7.9	+3.8
CONN. Bridgeport . . .	49	+ 1	3.6	+ .2	St. Louis . . .	61	+ 4	1.0	-2.9	TEX. Abilene . . .	62	- 3	3.1	+ .6
Hartford . . .	51	+ 3	4.9	+1.1	Springfield . . .	60	+ 3	2.4	-1.9	Amarillo . . .	58	+ 1	2.7	+1.5
D.C. Washington . . .	60	+ 4	2.7	- .2	MONT. Billings . . .	50	+ 5	.6	-1.0	Austin . . .	67	- 2	6.1	+2.6
FLA. Apalachicola . . .	67	- 1	.6	-3.0	Glasgow . . .	48	+ 5	.2	- .5	Beaumont . . .	68	- 1	4.8	+ .6
Daytona Beach . . .	70	0	.4	-2.0	Great Falls . . .	47	+ 4	.3	- .9	Brownsville . . .	74	- 1	6.6	+5.3
Ft. Myers . . .	71	- 2	.8	-1.2	Havre . . .	47	+ 4	.1	- .9	Corpus Christi . . .	72	- 1	6.0	+3.8
Jacksonville . . .	67	- 1	1.8	-1.3	Helena . . .	47	+ 4	.1	- .8	Dallas . . .	--	--	--	--
Key West . . .	77	- 1	3.0	+ .8	Kalispell . . .	46	+ 4	.4	- .6	Del Rio . . .	68	- 4	2.7	+1.1
Lakeland . . .	72	0	.2	-2.4	Miles City . . .	51	+ 6	.2	-1.1	El Paso . . .	62	- 2	.1	- .1
Miami . . .	75	0	2.0	-1.6	Missoula . . .	47	+ 3	.1	- .9	Fort Worth . . .	67	+ 2	4.3	0
Orlando . . .	71	0	.1	-2.6	NEBR. Grand Island . . .	56	+ 6	4.9	+2.4	Galveston . . .	70	+ 1	6.7	+4.1
Tallahassee . . .	67	- 1	2.7	-1.4	Lincoln . . .	57	+ 6	1.8	- .7	Houston . . .	67	- 2	4.3	+ .8
Tampa . . .	72	0	.9	-1.2	Norfolk . . .	56	+ 7	3.5	+1.3	Lubbock . . .	60	0	2.9	+1.8
W. Palm Beach . . .	75	+ 1	1.7	-1.8	N. Platte . . .	52	+ 4	4.9	+3.0	Midland . . .	62	- 2	1.2	+ .3
GA. Atlanta . . .	63	+ 2	1.8	-2.8	Omaha . . .	59	+ 9	3.3	+ .5	San Angelo . . .	65	- 2	5.1	+3.4
Augusta . . .	65	+ 1	1.2	-2.2	Valentine . . .	51	+ 5	3.5	+1.7	San Antonio . . .	67	- 3	8.8	+6.3
Macon . . .	67	+ 1	1.3	-2.3	NEV. Ely . . .	45	+ 4	1.2	- .8	Victoria . . .	69	- 2	3.9	+1.2
Savannah . . .	68	+ 2	1.9	-1.0	Las Vegas . . .	69	+ 5	T	- .3	Waco . . .	67	0	7.3	+3.3
HAWAII. Hilo . . .	74	+ 2	10.9	-2.0	Reno . . .	51	+ 4	T	- .5	Wichita Falls . . .	63	- 1	2.5	- .7
Honolulu . . .	76	+ 1	1.8	+ .4	Winnemucca . . .	50	+ 5	.3	- .4	UTAH. Blanding . . .	51	+ 4	.2	- .7
Kahului . . .	74	0	3.8	+2.5	N.H. Concord . . .	45	+ 1	4.0	+1.1	Salt Lake City . . .	54	+ 5	.6	-1.5
Linole . . .	74	+ 1	4.1	+ .8	N.J. Atlantic City . . .	53	+ 1	2.1	-1.3	VT. Burlington . . .	45	+ 2	3.1	+ .5
IDAHO. Boise . . .	54	+ 5	.2	- .9	Trenton . . .	54	+ 2	4.2	+1.0	VA. Lynchburg . . .	59	+ 2	4.8	+2.1
Lewiston . . .	56	+ 6	.1	-1.0	N.MEX. Albuquerque . . .	57	+ 1	1.1	+ .6	Norfolk . . .	62	+ 4	2.2	- .5
Pocatello . . .	50	+ 5	.1	-1.0	Roswell . . .	62	+ 2	1.3	+ .8	Richmond . . .	61	+ 3	2.3	- .5
ILL. Cairo . . .	65	+ 5	6.3	+1.6	N.Y. Albany . . .	47	0	3.4	+ .7	Roanoke . . .	59	+ 3	3.5	+ .7
Chicago . . .	55	+ 5	2.5	-1.3	Binghamton . . .	47	+ 2	2.7	- .5	WASH. Colville . . .	50	+ 3	T	-1.0
Moline . . .	57	+ 6	1.6	-2.2	Buffalo . . .	47	+ 2	3.6	+ .4	Omak . . .	52	+ 3	T	-1.0
Peoria . . .	57	+ 6	1.2	-3.2	New York . . .	53	+ 1	2.9	- .7	Quillayute . . .	47	+ 1	3.9	-4.3
Rockford . . .	55	+ 7	2.4	-1.5	Rochester . . .	48	+ 2	2.5	- .2	Seattle-Tacoma . . .	54	+ 5	.6	-1.9
Springfield . . .	60	+ 7	2.8	-1.3	Syracuse . . .	48	+ 1	3.0	- .1	Spokane . . .	51	+ 5	.1	-1.0
IND. Evansville . . .	62	+ 5	3.3	- .8	N.C. Asheville . . .	58	+ 2	4.1	+ .6	Walla Walla . . .	57	+ 4	.2	-1.2
Ft. Wayne . . .	55	+ 6	4.0	+ .4	Charlotte . . .	63	+ 3	2.1	-1.3	Yakima . . .	54	+ 4	T	- .5
Indianapolis . . .	57	+ 5	1.9	-2.0	Greensboro . . .	61	+ 2	2.3	- .9	W. Va. Beckley . . .	55	+ 3	6.3	+3.0
South Bend . . .	55	+ 7	2.8	-1.2	Hatteras . . .	63	+ 4	1.9	-1.2	Charleston . . .	58	+ 2	4.1	+ .8
IOWA. Burlington . . .	59	+ 8	2.0	-1.8	Raleigh . . .	63	+ 3	1.9	-1.2	Huntington . . .	60	+ 4	3.6	+ .3
Des Moines . . .	59	+ 9	2.5	- .4	Wilmington . . .	66	+ 3	1.4	-1.5	Harkersburg . . .	57	+ 2	2.4	-1.4
Dubuque . . .	54	+ 6	2.9	-1.3	N.DAK. Bismarck . . .	49	+ 6	.1	-1.3	WIS. Green Bay . . .	48	+ 4	3.3	+ .6
Sioux City . . .	56	+ 7	3.1	+ .9	Fargo . . .	49	+ 7	.8	-1.3	La Crosse . . .	55	+ 7	3.7	+1.1
KANS. Concordia . . .	57	+ 4	2.4	+ .1	Williston . . .	49	+ 7	.5	- .8	Madison . . .	52	+ 7	2.6	- .1
Dodge City . . .	59	+ 5	3.3	+1.6	OHIO. Akron-Canton . . .	54	+ 5	4.1	+ .8	Milwaukee . . .	49	+ 4	2.1	- .7
Goodland . . .	52	+ 3	1.9	+ .5	Cincinnati . . .	56	+ 2	4.2	+ .6	WYO. Casper . . .	47	+ 4	1.1	- .4
Topeka . . .	60	+ 5	2.5	-1.1	Cleveland . . .	51	+ 3	3.6	+ .1	Cheyenne . . .	45	+ 2	1.9	+ .3
Wichita . . .	60	+ 3	3.3	+ .3	Columbus . . .	55	+ 4	4.0	+ .3	Lander . . .	47	+ 4	1.5	- .9
KY. Lexington . . .	60	+ 5	3.4	- .5	Dayton . . .	56	+ 5	5.1	+1.8	Sheridan . . .	47	+ 3	1.2	- .9
Louisville . . .	60	+ 4	3.4	- .7	Toledo . . .	53	+ 5	6.1	+3.1	P.R. San Juan . . .	80	+ 3	1.0	-2.4

Based on 1941-70 normals

Heating Degree Days (Base 65° F.)

April 1977

ALA. Birmingham . . .	73	MAINE, Caribou . . .	850	OKLA. Okla. City . . .	107
Mobile	28	Portland	674	Tulsa	99
Montgomery	53	MD. Baltimore	245	OREG. Astoria	477
ALASKA, Anchorage . .	873	MASS. Boston	414	Burns U.	493
Barrow	2138	Chatham	552	Medford	358
Fairbanks	1107	MICH. Alpena	643	Pendleton	299
Juneau	673	Detroit	395	Portland	358
Nome	---	Flint	468	Salem	424
ARIZ. Flagstaff	604	Grand Rapids	401	PA. Allentown	384
Phoenix	33	Houghton Lake	544	Erie	519
Tucson	65	Lansing	439	Harrisburg	340
Winslow	319	Marquette U	630	Philadelphia	258
Yuma	23	S. Ste. Marie	744	Pittsburgh	436
ARK. Fort Smith	88	MINN. Duluth	612	Scranton	487
Little Rock	70	Internatl Falls	658	R. I. Providence	434
CALIF. Bakersfield . . .	32	Minneapolis	365	S. C. Charleston	58
Eureka U.	468	Rochester	371	Columbia	69
Fresno	42	St. Cloud	419	Greenville	117
Los Angeles U	57	MISS. Jackson	43	S. DAK. Aberdeen	395
Red Bluff	40	Meridian	53	Huron	374
Stockton	41	Vicksburg U	---	Rapid City	459
San Diego	103	MO. Columbia	209	Sioux Falls	341
San Francisco	278	Kansas City	192	TENN. Chattanooga	111
COLO. Denver	414	St. Louis	190	Knoxville	110
Grand Junction	250	Springfield	173	Memphis	61
Pueblo	318	MONT. Billings	437	Nashville	129
CONN. Bridgeport	470	Glasgow	497	TEX. Abilene	89
Hartford	419	Great Falls	529	Amarillo	215
D. C. Washington	188	Havre	521	Austin	20
FLA. Apalachicola	35	Helena	535	Beaumont	16
Ft. Myers	0	Kalispell	553	Brownsville	3
Jacksonville	46	Miles City	414	Corpus Christi	6
Key West	0	Missoula	536	Dallas	---
Lakeland U.	5	NEBR. Grand Island	280	Del Rio	13
Miami	0	Lincoln	256	El Paso	138
Orlando	8	Norfolk	287	Fort Worth	100
Daytona Beach	20	North Platte	395	Galveston U.	258
Tallahassee	46	Omaha	219	Houston	123
Tampa	6	Valentine	431	Lubbock	264
GA. Atlanta	102	NEV. Fly	596	Midland	133
Augusta	65	Las Vegas	45	San Angelo	300
Macon	52	Reno	405	San Antonio	352
Savannah	42	Winnemucca	430	Victoria	144
IDAHO, Boise	342	N. H. Concord	594	Waco	182
Lewiston	300	N. J. Atlantic City	380	Wichita Falls	78
Pocatello	445	Trenton U	337	UTAH, Milford	44
ILL. Cairo U.	109	N. MEX. Albuquerque	250	Salt Lake City	333
Chicago	344	Roswell	109	VT. Burlington	590
Moline	286	N. Y. Albany	545	VA. Lynchburg	217
Peoria	273	Binghamton	537	Norfolk	150
Rockford	318	Buffalo	544	Richmond	176
Springfield	222	New York	377	Roanoke	203
IND. Evansville	162	Rochester	523	WASH. Colville	460
Fort Wayne	322	Syracuse	512	Omak	---
Indianapolis	276	N. C. Asheville	198	Quillayute	530
South Bend	327	Charlotte	120	Seattle-Tacoma	355
IOWA, Burlington	264	Greensboro	159	Spokane	436
Des Moines	234	Hatteras R.	104	Walla Walla U.	250
Dubuque	343	Raleigh	132	Yakima	323
Sioux City	296	Wilmington	78	W. VA. Beckley	310
KANS. Concordia	240	N. DAK. Bismarck	473	Charleston	242
Dodge City	198	Fargo	466	Huntington	200
Goodland	387	Williston U	469	Parkersburg U.	275
Topeka	180	OHIO. Akron-Canton	354	WIS. Green Bay	500
Wichita	170	Cincinnati U.	276	Madison	409
KY. Lexington	208	Cleveland	423	Milwaukee	490
Louisville	183	Columbus	323	WYO. Casper	549
LA. Baton Rouge	18	Dayton	309	Cheyenne	602
Lake Charles	11	Toledo	381	Lander	543
New Orleans	18	Youngstown	449	Sheridan	527
Shreveport	46				

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

World Weather and Crop Update

USSR. Spring sowing regained momentum as warm, dry weather prevailed throughout European USSR. Excessive rainfall in the last half of April adversely affected spring fieldwork in a number of areas, and spring sowing, as of May 2 for the USSR, was about 7 million hectares behind even the slow 1976 pace. Timely and fairly widespread rains fell in the principal spring wheat regions in western and eastern Siberia and North Kazakhstan; this improved sowing conditions in these areas. The southern Urals received little precipitation during the previous week, and soil moisture in this important spring wheat region was only about 75 percent of normal at the end of April.

ASIA. In the Peoples Republic of China, heavy rains fell throughout the central rice growing regions. The principal winter wheat belt in North China, however, received little or no precipitation, and rainfall also was scanty in Kwangtung, the PRC's leading rice growing province in the extreme south. Unirrigated crops in these areas suffered from the shortage of moisture. Light rains dampened much of the northeast with heavier amounts recorded in parts of Heilungkiang, the PRC's most important spring wheat province where sowing was in progress. In India, showers, locally heavy, covered the north, northeast and in the rice growing areas in the south. The unseasonally heavy rains and hailstorms in the north, however, damaged some of the wheat crop. In Australia, timely rains fell over much of the wheat growing areas in New South Wales and Victoria as sowing of winter wheat got underway. South Australia was dry, and rainfall in southwest Australia was limited to the coastal areas.

AFRICA. Winter grain crops under considerable stress in North Africa--Morocco, Algeria and Tunisia --received no relief during the past week; only a few scattered, light showers fell over this region. South Africa received light-to-moderate showers over the main agricultural areas as the corn harvest got underway.

SOUTH AMERICA. Heavy rains with more than 50 mm of precipitation in some places interrupted the har-

vest of corn and soybeans in Rio Grande do Sul, Brazil's southernmost province. Only widely scattered showers were reported elsewhere in Brazil except in the north where rainfall was seasonally heavy. Harvesting conditions were generally favorable in Argentina although general showers, locally heavy, fell in Buenos Aires province.

EUROPE. Persistent rains continued to hamper field operations over much of western Europe. The excessive precipitation of recent weeks and the lack of sunshine retarded development of winter grains and delayed spring sowing in some areas. Timely, heavy rains fell in Mediterranean France and adjacent coastal areas of northern Spain. However, there was little or no precipitation in major agricultural areas in central Spain and in the south. Heavy rains again pelted parts of northern Italy, especially in the agriculturally important Po River Valley, but crops in southern Italy needed moisture. In eastern Europe, frequent showers, locally heavy, fell over the northern half--East Germany, Poland and Czechoslovakia--of this region. However, it was essentially dry in Romania, Bulgaria, and Yugoslavia except in the Belgrade area. Estimated soil moisture, by April 30, was about normal for all of the eastern European countries except Bulgaria which was about 20 percent below normal. There was no improvement in the moisture deficit in Greece as little or no rain fell on that country. Prospects for winter grains continued favorable in Turkey; moderate-to-heavy showers dominated large areas of that country.

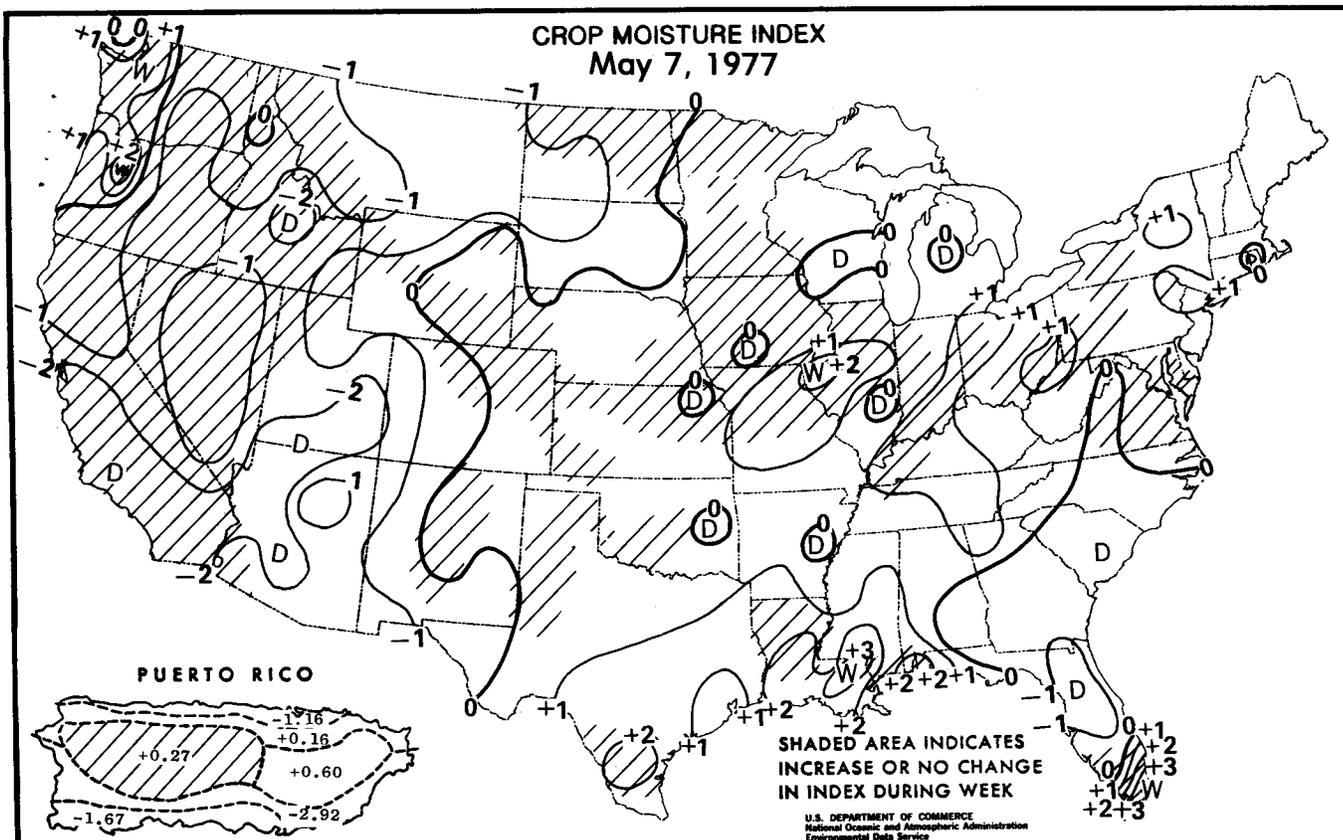
NORTH AMERICA. Moderate-to-heavy rains over much of the major hard spring wheat belt in the northern Great Plains of the United States and the adjacent Prairie Provinces of Canada improved the critical moisture deficit where spring seeding was well underway. Prospects for the U. S. hard winter wheat crop improved as significant moisture fell in Kansas, Oklahoma, eastern Colorado and Nebraska during the week. Heavy precipitation dented the severe drought in southern California, but rainfall was much lighter over the drought-stricken northern part of the State. Moderate rains improved winter wheat prospects in the Pacific Northwest.

WATER SUPPLY OUTLOOK FOR THE WESTERN UNITED STATES Issued as of May 1, 1977

The table below shows the runoff forecast in percent of the 15-year (1958-72) average. The forecasts are for the remainder of the water year (October thru September), except for the full water year for the Sacramento and San Joaquin Basins; April 1 to September 30, 1975, for the Missouri, Yellowstone, and North Platte Basin. The publication "Water Supply Outlook for the Western United States," issued as of May 1, 1977, contains the complete water supply forecasts for about 375 stations in the Western United States.

River	Station	Forecast 1,000 Acre-feet	Percent 15-year average
Columbia	Grand Coulee, WA	38,100	55
Columbia	The Dalles, OR	50,400	48
Snake	Lower Granite, WA	7,930	36
Sacramento	Red Bluff, CA	2,900	32
San Joaquin	Big Creek, CA	210	16
Weber	Gateway, UT	28	12
Jordan	Utah Lake, UT	72	37
Truckee	L. Tahoe-Farad	15	7
Colorado	L. Powell infl.	2,330	34
Green	Green River, UT	750	28
San Juan	Bluff, UT	200	24
Rio Granda	San Marcial, NM	53	20
Arkansas	Pueblo, CO	80	24
Missouri	Ft. Peck, MT	1,900	40
Yellowstone	Sidney, MT	3,810	55
North Platte	Glendo, WY	354	43

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

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

(continued from page 7)

WEST VIRGINIA: Temperatures above normal; highs upper 80's, lows low 30's. Rainfall above normal except northeast.

Fieldwork: 3.3 days suitable. Soil moisture adequate. Planting progress: Spring oats 85%, potatoes 86%, corn 34%. Emerged: Spring oats 64%, potatoes 44%, tobacco 88%, corn 10%. Condition of growing crops mostly fair to good. Some frost damage to fruit. Main farm activities fencing, gardening and planting corn.

WISCONSIN: Temperatures averaged 3° above normal. Highs in 70's and 80's 5th to 6th. Rainfall generally light, averaging 0.10 in. east to 0.50 in. west and central.

Field preparation and planting rapid. Spring plowing 85% done, 1976 60%, normal 55%. Corn 35% planted, 1976 20%, normal 10%. Unusually early planting corn for many farmers, some finished.

Oats 98% seeded, 1976 and normal 70%. Small grains need more moisture. Some oats showing herbicide carryover effects. Alfalfa hay growth ahead of normal but slowed by frost and no rain. Pastures need warmer weather and moisture; many cattle out on grass. Vegetable crops and potatoes being planted. Early peas and sweet corn emerged. Tobacco beds being planted. Apple and cherry trees hurt by frost east. Soil moisture short.

WYOMING: Temperatures 3 to 5° above normal. Substantial amounts of precipitation.

Soil moisture short. Spring plantings on or ahead of normal. Barley planting 83% complete. Sugarbeets 94% planted, 14% emerged. Winter wheat and alfalfa prospects fair to good. Some alfalfa winterkill reported. Spring grazing prospects fair to good. Some livestock moving to summer range. Sheep shearing 90% completed.



PLANTING PROGRESS
 Percent of Acreage Planted
 as of May 8

SORGHUM			
	1977	1976	Avg.
Colo.	NA	NA	NA
Kans.	10	5	5
Mo.	25	18	14
Nebr.	15	0	1/2
Okla.	10	5	2
S. D.	1	2	0
Texas	61	62	60
7-States	28	26	30

These 7 States produced 90% of the 1976 U. S. sorghum crop.

SPRING WHEAT			
	1977	1976	Avg.
Idaho	80	75	45
Minn.	95	96	51
Mont.	80	75	45
N. D.	81	71	44
S. D.	99	99	84
5-States	86	80	52

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

CORN

	1977	1976	Avg.
Ga.	96	94	80
Ill.	74	66	50
Ind.	30	65	25
Iowa	81	63	33
Kans.	45	35	35
Ky.	47	75	46
Mich.	30	16	9
Minn.	64	71	32
Mo.	81	70	43
Nebr.	40	30	25
N. C.	90	86	75
Ohio	25	65	35
Penn.	13	26	NA
S. D.	16	18	18
Texas	89	92	89
Wisc.	35	20	10
U. S.	58	57	37

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

COTTON

	1977	1976	Avg.
Ala.	88	89	76
Ark.	79	72	55
Ga.	88	86	61
La.	73	66	42
Miss.	75	75	55
Mo.	42	82	48
N. C.	77	74	67
Okla.	7	1	3
S. C.	93	81	74
Tenn.	50	75	50
Texas	24	28	32
11-States	45	47	41

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

1/ Less than 5%.
 NA Not Available.

SOYBEANS

	1977	1976	Avg.
Ala.	14	16	13
Ark.	15	12	10
Ga.	15	11	9
Ill.	10	13	7
Ind.	1/9	1/	1/
Iowa	9	NA	NA
Kans.	5	0	0
Ky.	3	NA	NA
La.	13	NA	NA
Mich.	NA	NA	NA
Minn.	9	16	5
Miss.	11	5	NA
Mo.	13	8	8
Nebr.	10	0	1/
N. C.	15	14	11
Ohio	1/	15	10
S. C.	11	8	7
Tenn.	NA	NA	NA

These 18 States produced 96% of the 1976 U. S. soybean crop.