

topped 80 mph at Livingston, Mont. Light to moderate snow fell around the Low and along the fast moving cold front.

The Low moved rapidly eastward through the Great Lakes and into Canada on Thursday and the cold air ended its southward journey in Arkansas. A blizzard swept across northern Michigan. Heavy snow fell on the back side of the cold front in western Montana. Another frontal system moved to Northwest and heavy rain fell along the coasts of Washington and Oregon. By Friday, fair and mild weather prevailed over most of the Nation again. However, snow fell around Lake Erie--Syracuse, N. Y., got 7 in.--and rain continued along the Pacific Northwest coast.

A wave moving along the cold front on Saturday in the Ohio Valley caused snow to the north and east. Heavy snow warnings were issued for southern New York and southern New England. On Sunday, the departing storm caused freezing drizzle and snow over the Mid-Atlantic States but the New England snowstorm eased. Snow was falling over the Great Lakes, southeast into the upper Ohio Valley and over the northern Appalachians into southwest New England. Sleet and freezing drizzle plagued the lower Hudson Valley south to the northern Chesapeake Bay and inland to the central Appalachians. Thunderstorms were aligned from the northcentral Gulf to the South Carolina coast and were scattered over northern Florida.

TEMPERATURE: The temperature of the Nation was marked by drastic change at midweek. At the begin-

ning of the week, the only below normal areas were the plateau area of Colorado and Utah, where a mass of cold air was trapped, and the extreme northern border of the U. S. All the rest of the Nation had above normal temperatures. The air warmed to as much as 20° above normal along most of the East Coast and new temperature highs were set as far north as Portland, Me. 86° was reported at Mayport, Fla.

The abnormally high temperature continued until Wednesday, when a mass of cold polar air, which had been pushing in and out of our northern States, was poised north of Montana. A ridge of high pressure building along the West Coast caused the long delayed cold air to plunge southward with a rapidity indicating that it was anxious to get where it was supposed to be in mid-winter.

The cold air had moved all the way south to Arkansas and east to the Great Lakes by Thursday morning. Blizzard conditions with sub-zero temperatures existed in the North Central States.

By Friday the colder air enveloped all of the area from the Central Plains to the Midsouth and all of the Northeast. The contrast of the air masses is dramatically depicted in the thermometer readings. It was well below zero in northern Minnesota and above 80° in southern Texas.

Another outbreak of cold air moved into the Northcentral U. S. on Sunday but without the violence that marked the earlier one. Record warm temperatures were again occurring in the Southcentral and Southeastern States. A record high for the date was set at San Antonio, Tex., where 85° was reported.

NATIONAL AGRICULTURAL SUMMARY

AGRICULTURAL HIGHLIGHTS: Mild weather for the third consecutive week greened winter wheat in southern areas of the Great Plains and Corn Belt. The Texas High Plains wheat crop is in poor condition from dryness. The mild, dry weather favored livestock and pastures over most of the Nation except in the Southeast where wetness prevailed.

SMALL GRAINS: Above normal temperatures for the third straight week caused winter wheat in southern areas of the Great Plains and Corn Belt to turn green.

Kansas winter wheat greened as did about half the wheat acreage in Oklahoma. Soil moisture supplies in Kansas are surplus in the eastern half and generally adequate elsewhere. Eastern Oklahoma small grain fields are too wet to graze while soils in the western part are too dry to promote enough growth for grazing.

Light snow brought temporary relief to moisture-stressed wheat on the Texas High Plains where the crop is rated in poor condition and declining. Even irrigated wheat in the Texas Panhandle is furnishing little grazing and some dryland acreage is believed to be beyond recovery. Strong winds early last week in Montana caused moderate damage to winter wheat in some areas, but damage was light in the major producing counties and condition statewide remained fair to good.

In Idaho, fall planted small grains are in satisfactory condition but lack adequate snow cover in most areas. Some soil erosion has occurred mostly on summerfallow fields in northern Idaho and in eastern Washington where warm temperatures have stimulated some wheat growth. Fall seeded grain looks good in Oregon. Farmers there and in Washington seeded some small acreages of wheat in eastern areas as soils dried.

OTHER CROPS: The Texas cotton harvest is virtually complete except for a few fields remaining to be stripped. A year ago Texas cotton was only 89% harvested. Ginning will remain active for several weeks as farmers move ricked cotton to gins. Cotton cleanup operations neared completion in Arizona. Field preparations for the 1974 crop are actively underway there and in South Texas.

Tobacco plant bed preparation continued active in the South Atlantic States. Tobacco plants in Florida will be ready to transplant in 2 to 3 weeks.

Irish potato planting remained active in Frio

County, Texas but was limited in Alabama.

Sugar beets made satisfactory progress near Yuma, Arizona, but planting fell behind schedule in California.

FRUITS AND NUTS: Florida citrus trees continued in excellent condition although growers irrigated to offset moisture shortages. Some groves are approaching full bloom.

The Navel orange harvest increased in the San Joaquin Valley and southern California while the lemon harvest slowed and tangerine harvesting tapered off.

Citrus harvesting continued without interruption from weather in Arizona and Texas.

Pruning of fruit trees became more active in the Pacific Coast States last week. Fruit growers in California were also busy spraying, cultivating and fertilizing orchards.

Early almond trees in California began to bloom; apricot and peach buds swelled. Early peach varieties began blooming in many South Texas counties while peach trees in Florida reached full bloom.

VEGETABLES: Transportation difficulties distorted normal vegetable shipment patterns from Florida. Volume was off sharply for cabbage, celery, escarole, lettuce, peppers, and radishes. Sweet corn was down a little and tomatoes held about steady.

Harvesting continued active in South Texas for lettuce, cabbage, and carrots; onions made good growth.

In California, lettuce harvesting was light and carrots were steady in the Imperial Valley; cabbage remained unchanged and celery harvesting was active from the south coast area.

Lettuce supplies and quality continued at good levels near Yuma, Arizona and lettuce planting started in Cochise County.

PASTURES AND LIVESTOCK: Pastures in the southern half of the Nation responded to the mild temperatures of recent weeks and generally improved. Wet, muddy conditions limited grazing in the Southeast while cattle in the central and southern Great Plains increased grazing of stubble fields. Dryness has limited pasture growth and grazing in the Oklahoma and Texas Panhandles.

Livestock are generally wintering in good condition with adequate supplemental feed supplies. Calving and lambing are underway in many areas of the Plains and West, with no unusual death losses.

Temperature and Precipitation Data for the Week Ending Midnight, l.st., Feb. 3, 1974

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 . . .	57	+12	1.1	-.1	La. Baton Rouge . . .	64	+12	3.1	+2.0	Youngstown . . .	33	+ 8	.1	-.6
Mobile . . .	68	+16	.5	-.4	Lake Charles . . .	62	+ 9	.6	-.4	OKLA. Okla. City . . .	46	+ 8	0	-.3
Montgomery . . .	60	+11	.8	-.1	New Orleans . . .	65	+11	4.6	+3.7	Tulsa . . .	45	+ 7	.1	-.3
ALASKA. Anchorage . . .	7	- 7	T	-.2	Shreveport . . .	56	+ 8	T	-1.0	OREG. Astoria . . .	45	+ 3	3.7	+1.0
Barrow . . .	---	---	---	---	MAINE. Caribou . . .	16	+ 5	.3	-.2	Burns . . .	35	+ 7	.3	-.1
Fairbanks . . .	-28	-20	T	-.2	Portland . . .	30	+ 9	.3	-.7	Medford . . .	39	0	.3	-.4
Juneau . . .	---	---	---	---	MD. Baltimore . . .	42	+ 9	.2	-.6	Pendleton . . .	46	+11	.3	0
Kodiak . . .	---	---	---	---	MASS. Boston . . .	35	+ 6	1.2	+ .3	Portland . . .	47	+ 7	1.4	+ .2
Nome . . .	-9	-15	T	-.2	Chatham . . .	38	---	.5	---	Salem . . .	45	+ 4	1.8	+ .4
ARIZ. Flagstaff . . .	28	- 1	0	-.4	MICH. Alpena . . .	22	+ 5	.1	-.3	PA. Allentown . . .	37	+10	.4	-.4
Phoenix . . .	54	+ 1	0	-.2	Detroit . . .	28	+ 3	.6	+ .1	Erie . . .	30	+ 6	.8	+ .2
Tucson . . .	50	- 2	0	-.2	Flint . . .	27	+ 5	.1	-.3	Harrisburg . . .	40	+ 9	.2	-.5
Winslow . . .	34	- 1	0	-.1	Grand Rapids . . .	27	+ 4	.4	0	Philadelphia . . .	40	+ 8	.2	-.6
Yuma . . .	56	- 1	0	-.1	Houghton Lake . . .	22	+ 5	T	-.3	Pittsburgh . . .	37	+ 9	.4	-.3
ARK. Fort Smith . . .	47	+ 6	T	-.7	Lansing . . .	27	+ 5	.6	+ .2	Scranton . . .	32	+ 6	.6	+ .1
Little Rock . . .	51	+10	T	-1.2	Marquette . . .	18	0	.2	-.3	R.I. Providence . . .	36	+ 8	.9	0
CALIF. Bakersfield . . .	51	+ 1	0	-.2	Muskegon . . .	26	+ 3	.2	-.3	S.C. Charleston . . .	65	+16	1.2	+ .6
Eureka . . .	46	- 2	.8	-.7	S. Ste. Marie . . .	15	+ 1	.6	+ .2	Columbia . . .	63	+17	2.0	+1.3
Fresno . . .	49	+ 2	T	-.5	MINN. Duluth . . .	8	- 1	.5	+ .2	Greenville . . .	55	+12	1.4	+ .5
Los Angeles . . .	56	- 1	0	-.6	Internat Falls . . .	-3	- 6	.5	+ .3	S.D. Aberdeen . . .	7	- 4	.2	0
Red Bluff . . .	48	+ 1	.2	-.8	Minneapolis . . .	13	0	.3	+ .2	Huron . . .	16	+ 2	.4	+ .3
San Diego . . .	56	0	T	-.5	Rochester . . .	14	0	.3	+ .1	Rapid City . . .	28	+ 5	.1	0
San Francisco . . .	49	0	.3	-.7	St. Cloud . . .	8	- 1	.3	+ .2	Sioux Falls . . .	17	+ 2	.1	0
Stockton . . .	47	0	.2	-.4	MISS. Jackson . . .	59	+11	.9	-.3	TENN. Chattanooga . . .	52	+11	1.4	+ .2
COLO. Denver . . .	38	+ 7	0	-.2	Meridian . . .	60	+12	.7	-.4	Knoxville . . .	53	+12	2.4	+1.3
Grand Junction . . .	13	-16	T	-.2	MO. Columbia . . .	37	+ 6	.1	-.3	Memphis . . .	51	+ 9	.7	-.7
Pueblo . . .	45	+13	.2	+ .1	Kansas City . . .	36	+ 6	T	-.3	Nashville . . .	51	+12	1.5	+ .2
CONN. Bridgeport . . .	36	+ 6	.6	-.3	St. Louis . . .	38	+ 6	.5	+ .1	TEX. Abilene . . .	51	+ 6	0	-.2
Hartford . . .	33	+ 8	.2	-.6	Springfield . . .	41	+ 7	.3	-.1	Amarillo . . .	42	+ 5	0	-.2
D.C. Washington . . .	47	+11	.2	-.5	MONT. Billings . . .	28	+ 4	.5	+ .4	Austin . . .	58	+ 7	T	-.5
FLA. Apalachicola . . .	71	+17	.2	-.5	Glasgow . . .	10	- 1	.1	-.1	Beaumont . . .	61	+ 8	.6	+ .2
Daytona Beach . . .	72	+13	.2	---	Great Falls . . .	22	- 1	.7	+ .6	Brownsville . . .	67	+ 6	T	-.3
Ft. Myers . . .	73	+ 9	.2	-.2	Havre . . .	8	- 6	.3	+ .2	Corpus Christi . . .	66	+ 9	T	-.4
Jacksonville . . .	72	+17	.3	-.3	Helena . . .	32	+11	.3	+ .2	Dallas . . .	---	---	---	---
Key West . . .	77	+ 6	T	-.3	Kalispell . . .	34	+13	.3	0	Del Rio . . .	59	+ 6	0	-.2
Lakeland . . .	73	+12	.2	-.3	Miles City . . .	22	+ 5	.1	+ .2	El Paso . . .	41	- 4	0	-.1
Miami . . .	75	+ 8	0	-.4	Missoula . . .	30	+ 7	.4	+ .2	Fort Worth . . .	54	+ 8	0	-.5
Orlando . . .	73	+12	T	-.4	NEBR. Grand Island . . .	29	+ 5	0	-.1	Galveston . . .	64	+10	T	-.8
Tallahassee . . .	71	+18	1.7	+ .9	Lincoln . . .	28	+ 4	T	-.2	Houston . . .	62	+ 9	.1	-.7
Tampa . . .	73	+12	0	-.5	Norfolk . . .	27	+ 7	T	-.2	Lubbock . . .	46	+ 6	0	-.1
W. Palm Beach . . .	72	+ 7	.1	---	N. Platte . . .	35	+10	0	-.1	Midland . . .	49	+ 4	0	-.2
GA. Atlanta . . .	58	+15	1.2	+ .1	Omaha . . .	27	+ 5	T	-.2	San Angelo . . .	52	+ 4	0	-.2
Augusta . . .	61	+14	1.0	+ .3	Valentine . . .	28	+ 6	T	-.1	San Antonio . . .	58	+ 6	T	-.4
Macon . . .	64	+15	1.4	+ .6	NEV. Ely . . .	29	+ 4	T	-.2	Victoria . . .	64	+10	.1	-.3
Savannah . . .	67	+16	.4	-.2	Las Vegas . . .	46	0	0	-.2	Waco . . .	54	+ 6	0	-.5
HAWAII. Hilo . . .	73	+ 1	.2	-2.1	Reno . . .	38	+ 4	T	-.2	Wichita Falls . . .	50	+ 7	0	-.3
Honolulu . . .	73	+ 1	.9	-.1	Winnemucca . . .	38	+ 7	T	-.2	UTAH. Blanding . . .	24	- 5	0	-.3
Kahului . . .	71	0	4.8	+3.8	N.H. Concord . . .	27	+ 6	.3	-.4	Salt Lake City . . .	37	+ 7	T	-.3
Lihue . . .	74	+ 3	1.4	0	N.J. Atlantic City . . .	42	+10	.6	-.2	VT. Burlington . . .	23	+ 7	.4	0
IDAHO. Boise . . .	41	+ 9	.4	0	Trenton . . .	41	+ 9	.2	-.6	VA. Lynchburg . . .	48	+11	.4	-.3
Lewiston . . .	43	+ 9	.3	0	N.MEX. Albuquerque . . .	37	0	T	-.1	Norfolk . . .	52	+12	.8	0
Pocatello . . .	35	+ 9	.3	0	Roswell . . .	43	+ 3	T	-.1	Richmond . . .	51	+13	.8	0
ILL. Cairo . . .	45	+ 8	.4	-.7	N.Y. Albany . . .	28	+ 7	.6	0	Roanoke . . .	50	+13	.3	-.4
Chicago . . .	31	+ 6	T	-.4	Binghamton . . .	30	+ 8	.4	-.1	WASH. Colville . . .	36	+10	.4	0
Moline . . .	30	+ 7	T	-.4	Buffalo . . .	28	+ 5	.8	+ .2	Omak . . .	37	+14	.1	-.2
Peoria . . .	32	+ 7	.1	-.3	New York . . .	40	+ 8	.3	-.5	Quillayute . . .	42	+ 2	7.9	+4.5
Rockford . . .	27	+ 6	T	-.4	Rochester . . .	29	+ 6	1.3	+ .7	Seattle-Tacoma . . .	45	+ 5	2.2	+ .9
Springfield . . .	35	+ 7	.3	-.1	Syracuse . . .	28	+ 5	1.1	+ .4	Spokane . . .	36	+ 8	.7	+ .2
IND. Evansville . . .	44	+11	.3	-.7	N.C. Asheville . . .	49	+11	1.1	+ .4	Walla Walla . . .	48	+12	.5	+ .1
Ft. Wayne . . .	32	+ 6	.5	-.1	Charlotte . . .	54	+11	2.2	+1.4	Yakima . . .	45	+14	.2	-.1
Indianapolis . . .	37	+ 9	.5	-.2	Greensboro . . .	50	+11	1.0	+ .2	W.Va. Beckley . . .	45	+13	.6	-.3
South Bend . . .	32	+ 8	.3	-.2	Hatteras . . .	59	+14	1.2	+ .4	Charleston . . .	45	+10	.5	-.5
IOWA. Burlington . . .	32	+ 8	T	-.4	Raleigh . . .	53	+12	2.2	+1.6	Huntington . . .	44	+ 9	1.0	+ .1
Des Moines . . .	28	+ 7	T	-.3	Wilmington . . .	62	+15	2.9	+2.3	Parkersburg . . .	42	+ 9	.8	0
Dubuque . . .	22	+ 3	.1	-.3	N.DAK. Bismarck . . .	5	- 4	.2	+ .1	WIS. Green Bay . . .	19	+ 4	.4	+ .1
Sioux City . . .	26	+ 6	T	-.2	Fargo . . .	-3	-10	.3	+ .2	La Crosse . . .	21	+ 5	.5	+ .2
KANS. Concordia . . .	34	+ 6	0	-.2	Williston . . .	4	- 6	.1	0	Madison . . .	23	+ 5	.2	-.1
Dodge City . . .	41	+ 8	0	-.2	OHIO. Akron-Canton . . .	33	+ 7	.1	-.5	Milwaukee . . .	26	+ 6	.6	+ .2
Goodland . . .	38	+ 9	T	-.1	Cincinnati . . .	39	+ 7	.4	-.5	WYO. Casper . . .	30	+ 6	0	-.2
Topeka . . .	36	+ 6	T	-.2	Cleveland . . .	35	+ 9	.5	-.1	Cheyenne . . .	35	+ 7	0	-.1
Wichita . . .	37	+ 4	T	-.2	Columbus . . .	37	+ 8	.2	-.6	Lander . . .	34	+12	0	-.1
KY. Lexington . . .	44	+11	1.0	-.1	Dayton . . .	36	+ 7	.1	-.7	Sheridan . . .	32	+ 9	.1	0
Louisville . . .	45	+11	.4	-.6	Toledo . . .	29	+ 4	.5	0	P.R. San Juan . . .	78	+ 3	.3	-.7

Based on 1941-70 normals. CORRECT ALBUQUERQUE, N. M., VOL. 61, No. 4, JAN. 22, 1974. 42 DEGREES AVERAGE TEMP AND DEPARTURE +7, INSTEAD OF 29 DEGREES AND DEPARTURE -6.

CONDENSED STATE SUMMARIES

The Bulletin capsulizes nationally important weather and crop conditions. Every Monday SRS publishes more detailed data in State Weekly Weather and Crop Bulletins in cooperation with the National Weather Service, NOAA. Voluntary weather observers, crop reporters, and county extension agents contribute weekly observations for these reports.

ALABAMA: Sharp change to colder Sunday ended three full weeks of exceptionally warm weather. No freezing temperatures at Mobile since December 22. Scattered thundershowers limited mainly to beginning of week and weekend. Temperatures consistently in 60's north and 70's south all week.

Farmers made limited progress with spring plowing in few well-drained, upland fields late week. Soil moisture surplus all except few scattered counties where moisture is adequate. Warm temperatures favored development of small grains. Producers anxious to apply nitrogen to acreage for grain, wet weather has delayed this activity many localities. Grazing of small grains limited to driest fields after midweek. Planting spring Irish potatoes continued on limited scale. Livestock mostly fair, result of regular supplemental feeding.

ARIZONA: Weak system moved across north Wednesday bringing locally windy conditions. No precipitation recorded, except Monday across northeast plateau and White Mountains. South rim of Grand Canyon measured 0.01 in., Alpine recorded 0.10 in. Weekly temperatures at seasonal normals except northcentral, southeast where weekly mean 2° to 4° subnormal.

Small grain planting in final stages. Plant development in warmer areas advanced past tillering stage, cold slowed growth higher elevation fields. Safflower planting in late stages, progressing well. Cotton clean-up operations neared completion, some rooding, stalk cutting remaining in southeast. Field preparations 1974 crop underway. Yuma sugar beet crop progressing satisfactorily.

Harvest lettuce continued Yuma. Lettuce supplies and quality good, market weak. Mixed vegetable harvest continued Yuma, Salt River Valley under excellent weather. Later plantings lettuce, other mixed vegetables good progress central, western areas. Planting lettuce just underway Cochise County, smallest acreage in many years. Harvest grapefruit, lemons continued Yuma, Salt River Valley. Sweets, tangerines being picked, Salt River Valley. Groves remain generally excellent, early bloom in scattered groves. Ranges fair, winter mild so far. Grazing north good except snow covered areas. Southeast ranges fair to poor, feed limited. Desert ranges providing grazing but additional moisture needed. Cattle, calves good. Calving active. Sheep, lambs on desert pastures fair. Work on new-crop lambs neared completion. Movement old-crop lambs to slaughter underway.

ARKANSAS: Abnormally warm, dry week. Temperatures mostly 7° to 10° above normal, greatest departure 10° above at Fayetteville and least departure 4° above at Mountain Home. Extremes: 78° at Camden on 31st and 23° at Gilbert on January 30 and February 4, and at Fayetteville on January 28 and February 4th. Precipitation light, most stations did not get enough to measure. Greatest was 0.43 in. at Arkansas City.

Farm activity in Delta region limited to routine chores. No land preparation has begun. Small rains greened up during past week. Some pastures and small grains were topdressed. Many home gardens being prepared.

CALIFORNIA: Temperatures averaged near normal, but overnight lows dropped to freezing or colder all reporting areas. Precipitation confined to north half, amounts generally less than 1.00 in.

Soil preparation increased as fields dry north half State. Small grains doing very well, planting continued. Sugar beet planting behind schedule. Some alfalfa cutting Imperial Valley. Fruit and nut growers active spraying, cultivating, fertilizing and pruning as weather permitted ground to dry. Bloom beginning on early almonds. Apricot and peach buds swelling. Navel orange harvest still increasing in San Joaquin Valley and South. Lemon harvest slow due to poor demand, tangerine harvest tapering off. Avocado harvest slow. Dry, warm weather aided set of new crop Santa Barbara County. Artichoke low seasonal level. Asparagus low seasonal level, Imperial Valley. Broccoli light, variable quality, Salinas Valley. Cabbage unchanged. Carrots steady, Imperial Valley. Cauliflower low levels, variable quality. Celery active, south coast. Lettuce light, Imperial Valley. Ranges, pastures improved almost all areas. Warmer weather, earlier rains have aided growth. Supplemental feeding necessary many areas. Water supplies adequate, should carry stock through dry months ahead. San Joaquin Valley feedlots not as muddy as year ago. Dairymen having problems with muddy pens. Milk production at winter levels. Some sheep, cattle moved to ranges. Livestock good. Bee colonies continued move into almond orchards northern San Joaquin, Southern Sacramento Valleys.

COLORADO: Cold high pressure system dominated west while eastern plains generally above normal. Extremes: 23° below zero at Gunnison, 65° at La Junta. Precipitation fell mostly in mountains and west as scattered snow showers with a few periods of moderate snow early week. Ouray recorded most snow with 9 in. for a water equivalent of 0.44 in. and Aspen had 6 to 7 in. for a water equivalent of 0.33 in.

Generally dry, open weather eastern plains allowed further melting snow--most fields open. West slope remains under heavy snow cover and cold temperatures. Supplemental feeding livestock remains necessary most areas although small acreage winter wheat being grazed. Winter wheat and barley good condition and responding to warm temperatures eastern plains. Livestock generally good. Few early calves and lambs falling, with no unusual problems.

FLORIDA: Temperatures much above normal. Rainfall heavy in panhandle with local amounts near 2.00 in., only scattered light amounts elsewhere.

Citrus tree condition continued excellent - growers irrigating to hold tree condition - some groves approaching full open bloom - others showing various stages of swelling buds. Land preparation underway most areas. Soil moisture short most of State, adequate to excessive northwest and panhandle. Tobacco plants excellent condition and will be ready to transplant in 2 to 3 weeks. Small grains rapid growth. Sugarcane harvest active,

young cane good to excellent. Peach trees full bloom.

Vegetable shipment patterns distorted by transportation problems. Last week volume off sharply for cabbage, celery, escarole, lettuces, peppers, radishes. Sweet corn down a little. Tomatoes, potatoes held about steady. Strawberries past first peak. Chinese cabbage, squash, eggplant light. Normal supplies available most commodities if transportation, economic conditions warrant. Pastures fair to excellent. Cattle and calves fair to good.

GEORGIA: Temperatures averaged 10° to 16° above normal. Unseasonably warm through midweek, cooler late week. Rainfall averaged 1.00 to 3.00 in. north and west, except 4.00 to 6.00 in. vicinity of Clayton and along Florida border to Columbus area. Southeast generally got 0.50 in. Rainfall mostly fell as showers through midweek, heaviest amounts associated with lines of thunderstorms.

Soil moisture adequate to mostly excessive. Small grains mostly good, some grain heading out due to warm weather. Short supply of fuel, lime and nitrogen continued in some areas. Pastures and cattle mostly good.

HAWAII: Farm operations limited because of heavy rains on Oahu, Maui, and Kauai. Weather favorable on Hawaii--crops made satisfactory progress. Production of some crops low, importations up. Banana and papaya supplies adequate. Pastures in good condition with adequate forage feed. Cattle good. Sugar operations slack. Pineapple harvest for fresh fruit active.

IDAHO: Unsettled weather for week. Lower valleys received rain and snow early week, then general clearing midweek followed by rain, snow, and wind end of week. More snow fell higher elevations and north. Temperatures averaged 5° to 15° above normal and precipitation ranged from 0.25 to 0.50 in. above normal most areas.

Mild, wet weather kept fields muddy and limited farm activity to caring for livestock marketing of potatoes, onions, apples, and grain crops, and pruning of fruit trees. Feed supplies generally adequate and livestock good condition despite muddy feed lots. Lambing and calving active lower elevation areas. Fall planted crops satisfactory condition but lacking adequate snow cover most areas. Some washing and erosion of fields in north. Marketing of certified seed potatoes underway.

ILLINOIS: Mild, rather dry conditions. Temperatures averaged 7° above normal. Week began with near normal temperatures, highs in 50's, 60's midweek, below normal end of week. Snow north, rain south Monday, 0.25 in. precipitation. Dry conditions until Saturday and Sunday when trace of snow fell north sections. Main activities: Livestock care and routine farm chores.

INDIANA: Warm, dry week. Temperatures averaged 6° above normal and ranged from 12° northwest on 4th to 66° at Evansville on 1st. Below normal precipitation of 0.10 to 0.50 in. Soils frozen 2 to 4 in. deep. Snow cover of 1 in. extreme north.

Muddy conditions limited hauling manure and other field activities. Pastures and overwintering grains continued to green up during mild week. Normal chores and caring for livestock were main activities.

IOWA: Temperatures averaged 4° above normal changing from much above early week to below at week's end. Record daily highs south half of State on 29th with 60° at Council Bluffs. Coldest morning: Feb-

ruary 4 with 13° below zero at Mason City.

Precipitation light except in extreme northeast corner where above normal amounts reported. Mild temperatures early week caused ice break-up and ice jams in rivers and streams and local flooding in southeast.

KANSAS: Temperatures averaged 5° to 7° above normal central and east to 10° above normal northwest. Precipitation primarily limited to rain or snow mostly southeast with amounts ranging to over 0.50 in. extreme southeast.

Winter wheat greened with mild temperatures. Moisture surplus much of east half, generally adequate most other areas. Nitrogen topdressing applied to wheat where field conditions permitted. Field preparation for spring planting progressed and some irrigation water applied western areas. Open weather permitted cattle to graze stalk, stubble and some wheat fields. Supplemental feeding continued moderate with adequate feed supplies. Early calving losses near normal.

KENTUCKY: Temperatures 10° to 20° above normal Monday through Thursday, cooled to near normal by Sunday. Rain Monday and Saturday totaled near 0.50 in. north and west and over 1.50 in. parts south-central and east.

Mild winter weather and ample to excessive moisture caused greening of some winter grains and pastures. Cattle continued to glean pastures and harvested fields for portion of roughage requirements. Some early season problems from grass tetany caused by new growth shoots.

LOUISIANA: Warm, wet weather continued most of week; cooler Saturday evening. Temperatures averaged 7° to 10° above average across State. Extremes: 81° on Saturday at Alexandria and Shreveport, 31° Monday at Shreveport. Rain continued most of week, greatest 1-day amount reported, 2.90 in. at Moisant airport Sunday morning. Agricultural activities limited to livestock chores.

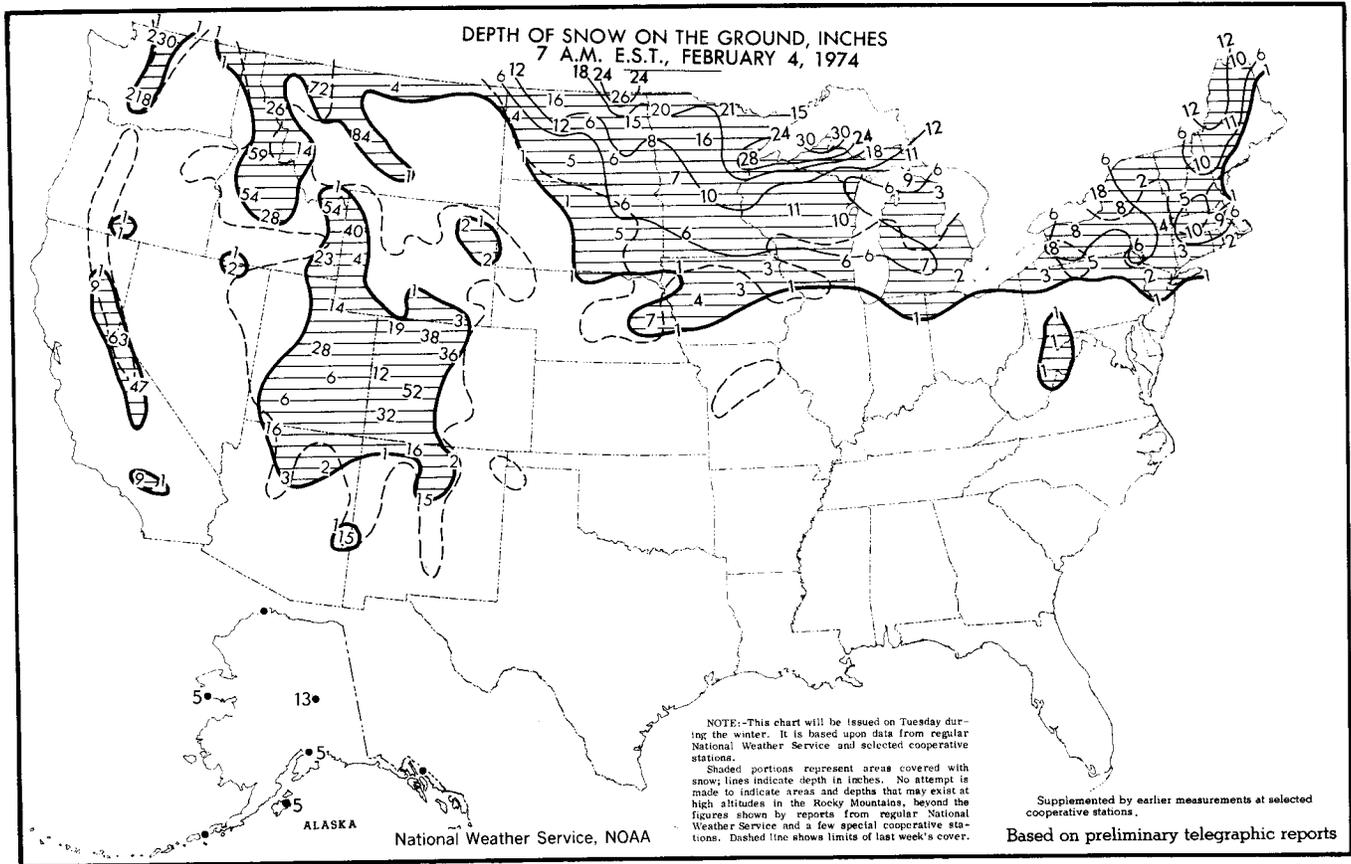
MARYLAND AND DELAWARE: Warm week, temperatures well above normal. Highs in mid-60's to mid-70's and lows from low 20's to low 40's, except areas in Garrett County with highs in upper 50's. Precipitation light over two States, totals from under 0.25 to 1.00. Heaviest amounts on Eastern Shore. Cooler on weekend.

Sunny days favored outdoor activity but wet fields limited work to repair and maintenance. Tobacco stripping continued rapid pace. Pruning, tree planting and orchard care progressed favorably.

MICHIGAN: Up to 5 in. snow extreme southeast lower peninsula Monday. Snow or snow flurries over upper and northern lower most days, but only on Monday and last half of week over southern lower. Precipitation for week generally totaled 0.30 to 0.70 in. over southeast lower and extreme east upper and around 1.00 in. over Keeweenaw Peninsula. Most of remainder got 0.20 in. or less.

Temperatures averaged 4° to 8° above normal over lower peninsula and near normal over upper. Highs in 40's or low 30's lower Wednesday and in 40's southern lower Thursday. Temperatures below normal from early Thursday through rest of week. Lows late week generally in teens southern lower; 4° to 10° northern lower, and mostly below zero upper peninsula.

MINNESOTA: January's temperatures ended as they began, well below normal. Subzero readings returned to State on 31st and continued over weekend. Weekly temperatures averaged 3° below north, 3°



above Central and South, 5° to 8° above along Iowa border. Most overnight lows on 1st to 3d 10° to 25° below zero with coldest reported 33° below zero at Roseau on 1st, and 30° below zero at Redwood Falls on 3d.

Precipitation fell 5 out of the 7 days with water content ranging from 0.25 to 0.50 in. Past week precipitation equaled that which fell during entire month of January for most of State. Total snow depths now 4 to 12 in. except less than 4 in. southwest and generally 12 to 16 in. northcentral and northeast. Farm chores remain routine. Livestock wintering well. Energy crisis slowing transportation of processed meats and other agricultural products.

MISSISSIPPI: Week started with violent weather as thunderstorms and a few tornadoes ripped through State early Monday morning. Most of week wet and warm. Temperatures averaged between 8° and 10° above normal all sections. Weekend continued warm with heavy showers until cool, dry air moved in Saturday night and Sunday.

Some sunshine during week but soil moisture supplies still surplus. Major farm activities: Feeding livestock, maintenance of farm machinery, and repairing fences. Fieldwork averaged 0.5 day. Feed grain, hay and other roughage supplies short to adequate. Wheat, oats mostly fair. Livestock, pastures generally fair to good.

MISSOURI: Temperatures averaged 7° to 13° above normal, greatest departure northwest corner. Precipitation mostly less than 0.25 in. but up to 1.00 in. central.

MONTANA: Above normal temperatures west and south but a midweek Arctic outbreak northeast caused subnormal temperatures with lows 10° below to 20° below zero. Above normal precipitation except northeast and southwest divisions. Significant amounts fell west, central. Unusually strong southwesterly winds early week along east slopes of Rockies.

Strong winds early week and absence of snow-cover caused moderate damage to winter wheat in parts of central, southwest and southcentral districts. However, most counties in major winter wheat area received only light wind damage. By week's end, snow protection was variable with poorest cover in south and east. Winter wheat condition fair to good statewide.

NEBRASKA: Temperatures 5° to 15° above normal under partly cloudy skies all week except for a cold spell on Thursday. Most of State received no measurable precipitation.

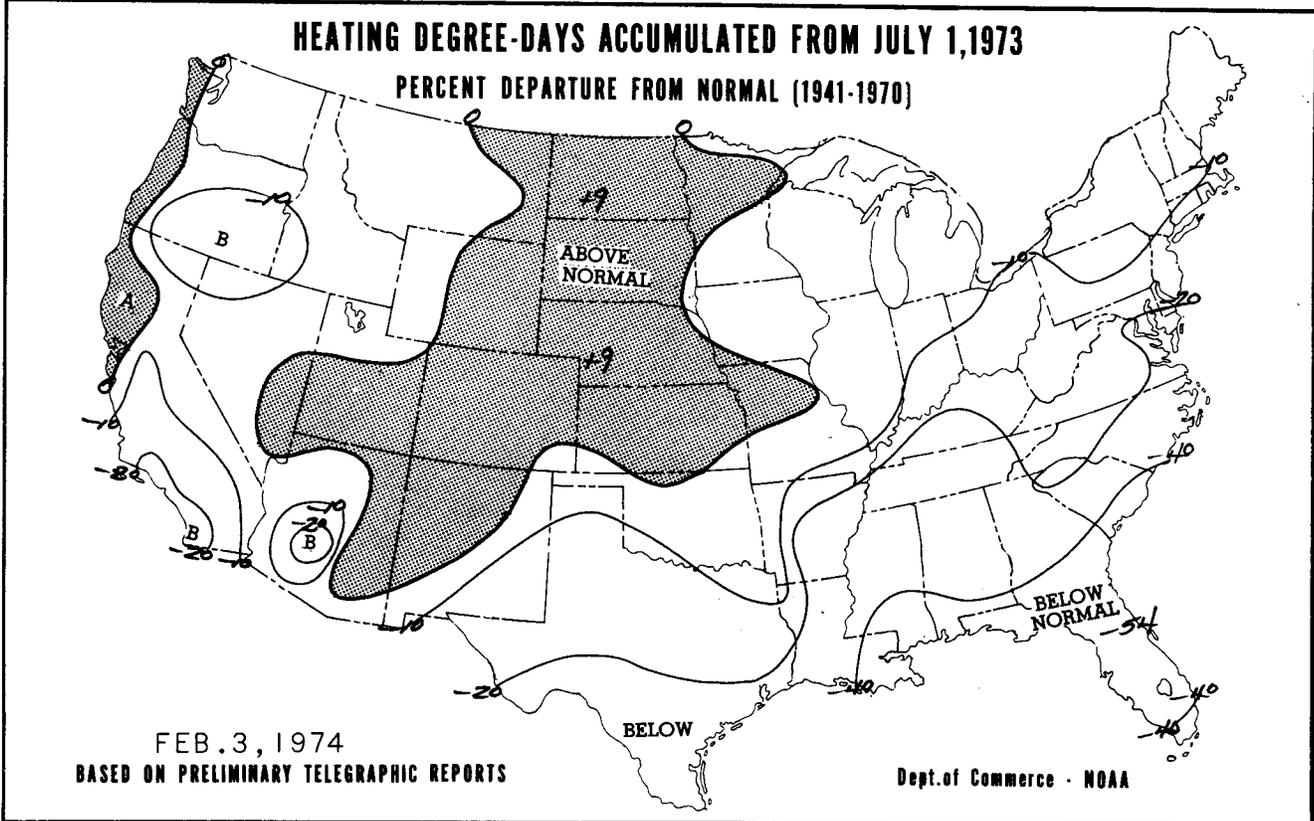
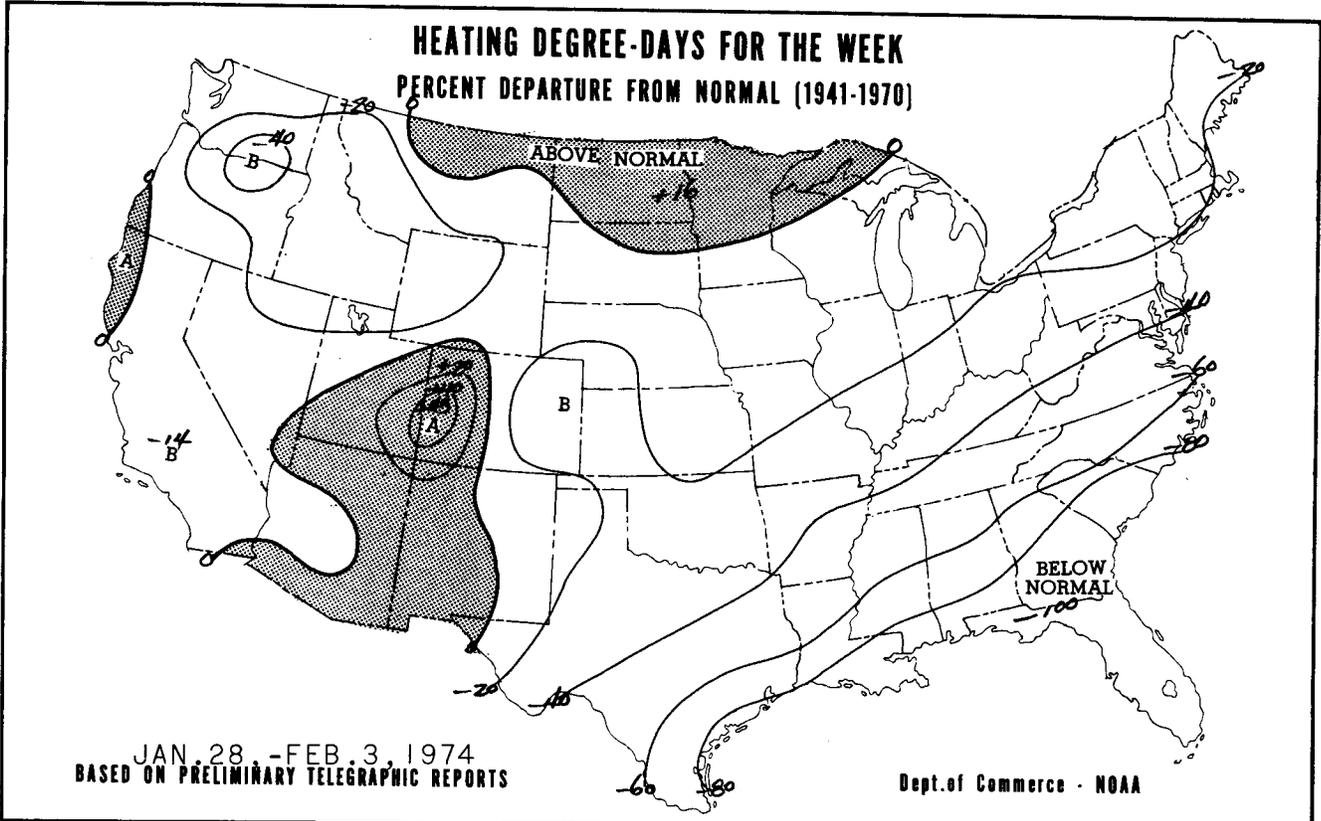
Livestock were able to graze stubble fields and pasture due to some melted snow cover. Calving, farrowing, and lambing underway. Winter wheat continued to lose snow cover, leaving many wheat fields exposed to wind.

NEVADA: Week's high and low temperature averaged 5° above normal. Extremes: 65° Las Vegas, 6° Ely. Precipitation heaviest at Owyhee, 0.41 in. Owyhee with 2 inches only measurable snow on ground. Livestock good to excellent condition due mild winter. Early calving underway under ideal weather. Stockwater adequate.

(Continued on Page 10)

FAX CHART 136

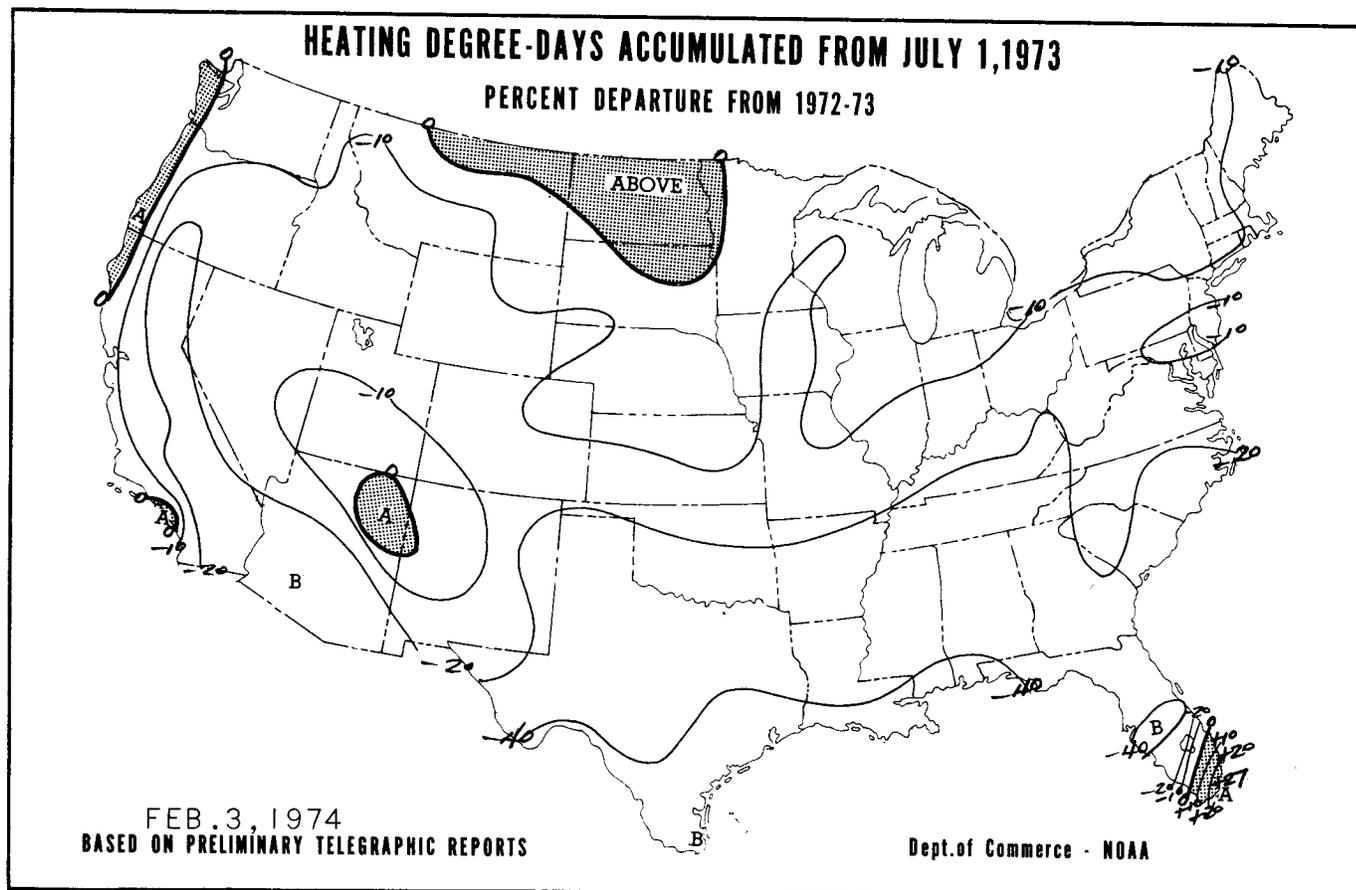
OCT 73



Heating Degree Days (Base 65°) For Week Ending Feb. 3, 1974

States and Stations	Weekly		Seasonal † Accumulation			States and Stations	Weekly		Seasonal † Accumulation			States and Stations	Weekly		Seasonal † Accumulation		
	TOTAL	Departure*	TOTAL	Departure*	Departure From 1972-73		TOTAL	Departure*	TOTAL	Departure*	Departure From 1972-73		TOTAL	Departure*	TOTAL	Departure*	Departure From 1972-73
ALA. Birmingham	58	-84	1373	-489	-597	Portland	241	-67	3933	-333	-511	Tulsa	142	-45	2301	-60	-512
Mobile	4	-94	598	-530	-495	MD. Baltimore	162	-60	2543	-298	-242	OREG. Astoria	140	-21	3112	152	162
Montgomery	38	-83	992	-526	-470	MASS. Boston	204	-48	2884	-305	-366	Burns	210	-52	4068	-176	-508
ARIZ. Flagstaff	255	2	3824	-317	-910	MICH. Alpena	300	-36	4481	-318	-291	Medford	177	-8	2514	-416	-595
Phoenix	74	-14	808	-243	-278	Detroit	254	-26	3531	-220	-286	Pendleton	127	-85	2990	-238	-553
Tucson	106	13	1123	16	-389	Flint	262	-39	3726	-342	-211	Portland	127	-48	2572	-249	-177
Winslow	213	6	2992	9	1	Grand Rapids	264	-30	3754	-181	-316	Salem	137	-34	2819	12	-299
Yuma	65	3	666	-52	-220	Houghton Lake	303	-33	4462	-330	-351	PA. Allentown	197	-66	3027	-416	-387
ARK. Fort Smith	123	-48	2053	-127	-612	Lansing	266	-35	3837	-172	-375	Erie	243	-44	3369	-474	-381
Little Rock	93	-77	1730	-447	-507	Marquette	329	0	4542	-131	-443	Harrisburg	175	-64	2720	-448	-299
CALIF. Bakersfield	93	-15	1199	-250	-421	Muskegon	275	-19	3784	-129	-130	Philadelphia	172	-59	2529	-359	-289
Eureka	131	12	2657	51	71	S. Ste. Marie	348	-11	5091	-90	-138	Pittsburgh	196	-63	2999	-537	-376
Fresno	112	-11	1565	-127	-378	MINN. Duluth	397	5	5792	106	-462	Scranton	227	-46	3528	-175	-302
Los Angeles	69	-1	747	-183	13	Internat Falls	475	39	6127	-172	-121	R.I. Providence	199	-60	3061	-328	-291
Red Bluff	120	-3	1704	41	-423	Minneapolis	364	-3	4768	-212	-405	S.C. Charleston	9	-103	759	-642	-573
San Diego	59	-8	605	-198	-97	Rochester	353	-7	4802	-93	-509	Columbia	23	-110	946	-761	-387
San Francisco	108	-1	1765	57	-77	St. Cloud	397	8	5234	-67	-472	Greenville	69	-85	1678	-351	-302
Stockton	124	-6	1558	-180	-353	MISS. Jackson	46	-78	1069	-448	-541	S. DAK. Aberdeen	405	23	5468	278	297
COLO. Denver	184	-55	3641	151	-377	Meridian	38	-86	957	-642	-606	Huron	344	-15	4889	38	-27
Grand Junction	364	113	3758	222	-553	MO. Columbia	197	-44	3125	-4	-322	Rapid City	257	-35	4320	83	-350
Pueblo	179	-53	3323	35	-561	Kansas City	204	-44	3234	43	-306	Sioux Falls	336	-11	4718	-14	-262
CONN. Bridgeport	200	45	2647	-377	-596	St. Louis	187	-41	3002	60	-228	TENN. Chattanooga	88	-80	1766	-487	-696
Hartford	226	-54	3311	-409	-323	Springfield	164	-51	2623	-218	-507	Knoxville	83	-85	1770	-446	-519
DEL. Wilmington	166	-65	2485	-441	-156	MONT. Billings	249	-38	4183	-70	-651	Memphis	96	-68	1624	-468	-770
D.C. Washington	125	-78	1965	-603	-421	Glasgow	384	4	5443	102	-9	Nashville	100	-82	1808	-549	-471
FLA. Apalachicola	0	-77	458	-441	-286	Great Falls	296	1	4566	112	-202	TEX. Abilene	96	-42	1501	-219	-830
Daytona Beach	0	-56	264	-310	-172	Havre	401	42	5227	-64	106	Amarillo	161	-33	2316	-274	-887
Ft. Myers	0	-35	159	-140	-45	Helena	232	-76	4866	-15	-716	Austin	49	-53	948	-220	-607
Jacksonville	0	-77	496	-382	-254	Kalispell	222	-84	4739	-378	-529	Brownsville	11	-37	286	-146	-277
Key West	0	-7	24	-12	0	Miles City	301	-34	4587	-153	-424	Corpus Christi	11	-52	494	-144	-432
Lakeland	0	-47	225	-212	-163	Missoula	201	-91	4483	-299	-526	Del Rio	46	-43	778	-320	-518
Miami	0	-14	94	-34	20	NEBR. Grand Island	252	-35	4184	287	-79	El Paso	161	-24	1581	-272	-296
Orlando	0	-49	212	-237	-113	Lincoln	261	-26	4148	339	-37	Fort Worth	78	-54	1316	-243	-607
Tallahassee	0	-91	588	-470	-358	Norfolk	262	-50	4267	49	-247	Galveston	13	-66	484	-293	-501
Tampa	0	-49	230	-234	-139	North Platte	214	-65	4420	369	-312	Houston	25	-62	780	-184	-576
W. Palm Beach	0	-21	106	-86	7	Omaha	265	-38	4108	107	-188	Lubbock	128	-46	1828	-405	-887
GA. Atlanta	51	-102	1398	-588	-501	Valentine	255	-49	4315	-10	-494	Midland	99	-40	1500	-251	-760
Augusta	30	-101	1219	-462	-276	NEV. Ely	253	-25	4503	30	-441	Beaumont	31	-58	712	-306	-642
Macon	19	-99	924	-573	-378	Las Vegas	132	0	1752	6	-341	San Angelo	82	-39	1211	-306	-698
Savannah	6	-99	742	-557	-266	Reno	186	-28	3263	-283	-779	San Antonio	40	-54	871	-203	-536
IDAHO. Boise	169	-64	3184	-351	-606	Winemucca	191	-49	3518	-393	-791	Victoria	17	-64	568	-260	-586
Lewiston	151	-66	3211	-149	-295	N.H. Concord	261	-48	4250	-44	-558	Waco	72	-45	1163	-207	-739
Pocatello	208	-68	4107	-93	-571	N.J. Atlantic City	111	-117	2479	-412	-210	Wichita Falls	97	-56	1647	-253	-791
ILL. Cairo	138	-57	2220	-225	-423	Trenton	170	-61	2564	-340	-256	UTAH. Salt Lake C	197	-47	3445	-170	-620
Chicago	239	-41	3496	-137	-310	N. MEX. Albuquerque	191	-3	2898	159	-154	VT. Burlington	294	48	4357	-199	-403
Moline	245	-53	3809	-64	-138	Roswell	153	-22	2094	-366	-450	VA. Lynchburg	119	-77	2198	-415	-362
Peoria	230	-52	3624	-78	-317	N.Y. Albany	260	-47	3962	-86	-119	Norfolk	89	-86	1568	-523	-306
Rockford	263	-46	3871	-234	-240	Binghamton	242	-59	3766	-417	-504	Richmond	98	-91	1974	-470	-324
Springfield	207	-55	3242	-157	-344	Buffalo	260	-34	3654	-257	-231	Roanoke	106	-90	2152	-491	-416
IND. Evansville	148	-73	2496	-395	-595	New York	176	-55	2478	-337	-417	WASH. Quillayute	156	-20	3578	227	69
Fort Wayne	233	-40	3461	-224	-216	Rochester	249	-44	3488	-341	-184	Seattle-Tacoma	153	-23	2819	-187	-262
Indianapolis	196	-61	2958	-427	-399	Syracuse	257	-37	3689	-121	-117	Spokane	199	-60	4064	-71	-104
South Bend	226	-61	3261	-534	-449	N.C. Asheville	108	-81	2018	-598	-395	Walla Walla	118	-87	2870	-162	-406
IOWA. Burlington	233	-54	3629	-111	-331	Hatteras	40	-100	981	-579	-268	Yakima	141	-99	3598	-174	-322
Des Moines	259	-52	3860	-199	-583	Charlotte	73	-81	1696	-360	-383	W. VA. Beckley	137	-94	2717	-650	-497
Dubuque	296	-28	4227	-146	-373	Greensboro	99	-83	2092	-322	-385	Charleston	139	-71	2324	-506	-424
Sioux City	273	-45	4128	-113	-251	Raleigh	81	-87	1654	-564	-505	Huntington	143	-67	2318	-519	-569
KANS. Concordia	215	-43	3588	150	-201	Wilmington	23	-104	949	-602	-416	Parkersburg	161	-63	2522	-410	-336
Dodge City	169	-58	3178	88	-439	N. Dak. Bismarck	423	34	5885	476	313	WIS. Green Bay	320	-28	4476	-261	-207
Goodland	185	-65	3781	144	-442	Fargo	475	66	5879	331	62	LaCrosse	305	-35	4283	-176	-425
Topeka	203	-43	3361	104	-196	Williston	426	39	5799	303	48	Madison	292	-42	4316	-265	-292
Wichita	191	-33	3106	172	-364	OHIO. Akron-Canton	222	-51	3074	-568	-331	Milwaukee	269	-46	3932	-368	-377
KY. Lexington	143	-81	2376	-528	-359	Cleveland	209	-61	3000	-555	-458	WYO. Casper	248	-36	4512	165	-503
Louisville	139	-78	2299	-564	-424	Columbus	191	-61	2903	-528	-411	Cheyenne	211	-51	4233	129	-565
LA. Baton Rouge	20	-78	676	-460	-439	Cincinnati	178	-54	2778	-293	-374	Lander	215	-87	4633	-21	-967
Lake Charles	28	-62	726	-278	-551	Dayton	198	-55	3002	-380	-368	Sheridan	231	-65	4582	83	-399
New Orleans	14	-74	576	-409	-529	Toledo	251	-29	3597	-174	-235						
Shreveport	64	-54	1314	-126	-457	Youngstown	229	-51	3355	-382	-514						
MAINE. Caribou	341	-38	5469	-90	-641	OKLA. Okla City	129	-57	2263	-98	-603						

* Based on 1941-70 Normals. † Accumulated from July 1, 1973.



(Continued from Page 7)

NEW ENGLAND: A marked change from warm weather to subnormal cold late Thursday. Strong, gusty winds of virgorous cold front reached hurricane force some areas causing some tree damage and power outages. Scattered thunderstorms with cold front in north. Temperatures generally in 50's on Thursday and only in teens and 20's on Friday.

Major snowstorm for Massachusetts Saturday averaged 8 to 12 in. Rhode Island and Connecticut had little accumulation and no snow at all fell in northern mountain areas.

NEW JERSEY: Mild week averaging as much as 7° above normal in southern counties. High of 62° at Pomona on 30th. Winter weather over weekend, temperatures dropped 10° below normal. Newton coldest with 11°. Precipitation from 0.30 to 0.60 in. melted. Weekend snowfall from trace south to 1 to 2 in. some areas.

NEW MEXICO: Only negligible precipitation. Gradual warming trend into last half of week then slight cooling over weekend. Temperatures averaged within a few degrees of normal most sections but about 10° colder than normal in San Juan Basin.

Moderate weather past week. Moisture short, ranges fair. Livestock fair to good. Wheat, barley fair to good, poor some areas due to aphids. Some field preparation and pruning of orchards.

NEW YORK: Temperatures averaged around 7° above normal. Middle 60's on Sunday and the 50's quite generally on four days. Turned much colder Friday and Saturday with minimum temperatures falling below zero North. High's Saturday varied from around zero north to 25° south.

Precipitation generally light, most sections got under 0.50 in. A few inches of snow fell mainly over central and southern sections. Some heavier squalls developed Friday with Syracuse getting 7 inches snow.

NORTH CAROLINA: Temperatures above normal making January one of the warmest since 1950. Pasture condition 55% good. Feed supplies adequate. Soil moisture 59% surplus, 41% adequate. Small grains 80% good to excellent. Field work 1.8 days. Peach, strawberry growers concerned about unseasonably warm temperatures. Major farm activities: Farm business, tax preparation, maintenance of machinery, disking, topdressing pastures, tobacco plant bed preparation and seeding.

NORTH DAKOTA: Week started mild, high temperatures generally in 30's. Warmest 39° at Dickinson on 28th while Fargo reached only 18°. Lows Friday morning below zero statewide, ranging from 3° below at Dickinson to 19° below at Grand Forks. Precipitation fell most days but amounts generally traces. Heaviest snowfall extreme north where Bottineau received 7 in. new snow, Bisbee 4 in., Rugby and Fortuna 3 in. Weekend remained cool, some light snow. Coldest at Fargo Sunday morning, 33° below zero.

Additional snow northern and eastern areas increased difficulty of farm chores. No severe storms and roads generally open for travel. Truck stoppages hindered marketing of grains and livestock some areas. Livestock receiving heavy winter rations. Feed and roughage supplies accessible.

OHIO: Week began with temperatures in 40's and 60's and rainfall from trace to 0.50 in. Frontal system with strong winds divided State on 31st, temperatures in 30's northwest and low 60's southeast. Winterlike conditions Friday north, but in low 60's south. Isolated thundershower activity Friday evening southwest. Freezing drizzle east Saturday and light snow in north. Light snow flurries over north two-thirds end of week.

Farming activities limited to building, equipment repair and planning for spring work. Wheat looking good. Livestock feed supplies adequate.

OKLAHOMA: Temperatures averaged 4° to 11° above normal. Precipitation ranged from a trace in southwest to 0.75 southeast. Weekend mild and dry.

Above normal temperatures brought over half of winter wheat out of dormancy. Soils too dry in west to promote enough growth for grazing. Eastern small grain fields too wet to graze. Planting of spring oats and barley made slow progress, but field preparation increased. Cotton harvest nearly completed under favorable weather. Farm activities included fencing, shop work, topdressing of pastures and tax reports. Range feeds short most areas, supplemental feeding widespread. Hay supplies ample.

OREGON: Temperatures averaged 3° to 10° above normal through week. Highs in mid-40's to mid-50's occurring latter part of week. Lows ranged 30's, lower 40's west, 20's east of Cascades. Coldest nights early week. Precipitation fell on all areas most of week. Amounts along coast ranged from 1.16 in. Brookings, to 5.81 in. Cloverdale, 1.67 in. Portland, 2.06 in. Salem. Remainder of State ranged from 0.25 to 0.50 in.

Fall seeded grain looks good. Planting continued in east on dryer soils. Farmers applied fertilizer as available and pruned orchards. Potatoes moving to processors. Onion movement nearly complete. Calving, lambing now started most areas. Feeding continues heavy. No feed shortage yet. Mild conditions helping winter pastures and ranges.

PENNSYLVANIA: Continued unseasonably mild with several sunny, dry days. Temperatures 10° to 12° above normal with highs mostly in 40's and 50's and lows in 20's and 30's until weekend when considerably colder. Extremes: 67° south central Thursday afternoon, 2° north central Monday morning. Precipitation beginning and end of week from less than 0.25 in. southeast and west-central to 0.75 in. southwest and northeast. Up to 5 in. new snow fell over weekend in north, icing conditions elsewhere.

PUERTO RICO: Relatively rainy weather prevailed most of week with numerous nighttime showers mainly over north coast and a few heavy afternoon showers interior. Average weekly rainfall 1.13 in. or 0.39 in. above normal. Heaviest weekly total 4.70 in. at Cidra. Highest daily total 1.99 in. at Lajas. High winds continued during week. Temperatures averaged 75°. Extremes: 90° San German, 52° Adjuntas.

Prevailing rainy weather caused a drop in sugar content of cane and also delayed field operations in coffee farms, but helped development of new plantings. Excessive rain and humidity retarded tobacco harvest and drying in the shed. In Naranjito some tobacco is rotting. Excessive rains retarded development of pastures and delayed

field operations. Drought in southwest and parts of interior getting worse, pastures short. Rains stopped field operations on food crops except in rainless southwest and parts interior.

SOUTH CAROLINA: The unseasonably warm period that has lasted over a month continued last week. Temperatures ranged 9° above normal northwest to 18° above normal northeast. Rainfall heaviest in lower Piedmont and midlands, amounts 0.50 to nearly 2.50 in. Elsewhere, amounts averaged 0.25 to 1.00 in. Precipitation fell mainly during early and midweek.

Rain through most of week almost stopped farm activities. Limited amounts of salad greens being harvested along coast, daffodil harvest got underway. Cabbage transplanting along coast virtually complete. Farmers throughout peach areas continued to prune and fertilize trees. Activity in Pee Dee area centered around maintenance of tobacco beds.

SOUTH DAKOTA: Pleasant, warm weather last several weeks ended on 31st. Temperatures then tumbled below normal. Early week readings in 40's and 50's, with 61° at Vermillion the 28th. Sub-zero readings end of week, Milbank had State's low of 23° below on Sunday. Light snows. Up to 2 in. fell statewide over weekend. Heaviest east-central--some locations received over 0.25 in. moisture.

Winter wheat fields need additional protective snow cover. Main farm activities: Feeding, caring for livestock and machinery repairs.

TENNESSEE: Three frontal systems moved across State. Less than 0.10 in. rainfall west, 1.00 to 2.50 in. middle and east. Temperatures averaged 10° above normal, continuing long warm spell.

Fields, barnyards, farm and access roads have turned into seas of mud, increasing care and feeding of livestock. No fieldwork done.

TEXAS: Cold front Monday triggered showers, thunderstorms in east that became severe some areas Monday night. High pressure behind front brought fair skies and below average rainfall to most of State throughout remainder week. Clouds, rain formed in northeast and coastal plain during morning hours daily through Friday. Clear skies brought cool nights, warm days to rest of Texas pushing average temperature well above normal all areas except west of Pecos. Cold air invaded State Saturday. Fair skies continued on weekend over all but south coast and lower Rio Grande Valley.

Cotton harvest virtually completed across State except for a few fields remaining to be stripped. A year ago, cotton only 89% harvested. Ginning will remain active several weeks as farmers move ricked cotton to gins. Land preparation making good progress southern half of State. Seeding of 1974 cotton crop will start in Lower Rio Grande Valley as soil warms up. Light snow on high plains brought temporary relief to moisture stressed winter wheat. Wheat condition generally poor and continued to deteriorate. Irrigated wheat furnishing little grazing and dryland fields some areas probably beyond recovery.

Lower Rio Grande Valley: Harvest of lettuce, cabbage and carrots remained active. Cantaloupe and honeydew melon planting continued. Onions made good growth. Laredo: Late cabbage and carrots made good growth. Onions made satisfactory progress. San Antonio--Winter Garden: Spinach, carrot, and cabbage harvests continued. Onions showed good growth. Potato seeding remained active in Frio County.

Early peach varieties blooming in many southern counties. Citrus harvest continued active, tree condition varies greatly. Grazing improved central and south half. Livestock fair to good and improving. Winter pastures beginning to recover but more moisture needed most areas. Death losses not unusual. Goat shearing started on Edwards Plateau.

UTAH: Few scattered forepart of period and again northwest over weekend. Moisture generally light to moderate but heavier in mountains. Temperatures averaged 2° to 7° above normal northern mountains and along Wasatch Front, but 2° to 17° below normal elsewhere.

Farm flock lambing should start this week. Care and feeding of livestock, poultry continued major activities. Turkey poulters for 1974 flocks being placed as hatcheries increase poult output. Sugarbeet processing continued. Some marketing of potatoes, apples, and dry onions from storage continued. Potatoes going mostly for chipping.

VIRGINIA: Unseasonably warm. Temperatures averaged 12° above normal. Extremes: 75°, 21°. Rain beginning and near end of week, averaged around 0.20 in. north to 1.00 in. southeast.

Over half of topsoil has surplus moisture. Slightly under 2 days suitable for fieldwork. Winter grains and grazing crops excellent. Forage secured from grazing about 10% for dairy cattle, 25% for beef, and 33% for sheep. Grain and hay supply near normal. Winter feeding and care of livestock prime activities. Dark-fired tobacco and grain marketed. Repaired fences, machinery and buildings. Limited acreage of light soil plowed. Spread lime, fertilizer and manure. Prepared tobacco plantbeds. Some aphids on small grain.

WASHINGTON: West: Average temperatures 4° above normal. Precipitation daily varying from 0.50 to 11.00 in. Heavy snowfall mountains. Low lying fields water covered. Pruning caneberreries continued. Digging, replanting raspberry plants to begin soon, weather permitting. Forced rhubarb harvest active. Feed supplies becoming tighter. Wet, soft roads prevented logging operations and hay movement. East: Warm with average temperatures 6° to 12° above normal. Rain, snow showers

many areas. Pruned fruit trees. Trunk, bark plitting some fruit trees due to cold January. Some soil erosion, mostly summerfallow fields. Warm temperatures caused early wheat growth some fields, no frost damage to date. Winds dried soils enough to begin ground preparation and seeding small acreages wheat. Livestock good. Calving, lambing active. Feed supplies vary from short to adequate.

WEST VIRGINIA: Unseasonably warm temperatures 10° to 15° above normal continued over State with highs in 50's and 60's. Cold front divided State Friday, holding highs to 30's and 40's in north. Lows generally 30's and 40's until Friday changing to teens and 20's north. Weekend brought return to normal temperatures after Saturday thundershowers.

Farmers report January as one of the warmest, wettest, and muddiest of record. Cattle good, early calves arriving. Mud held work to routine chores.

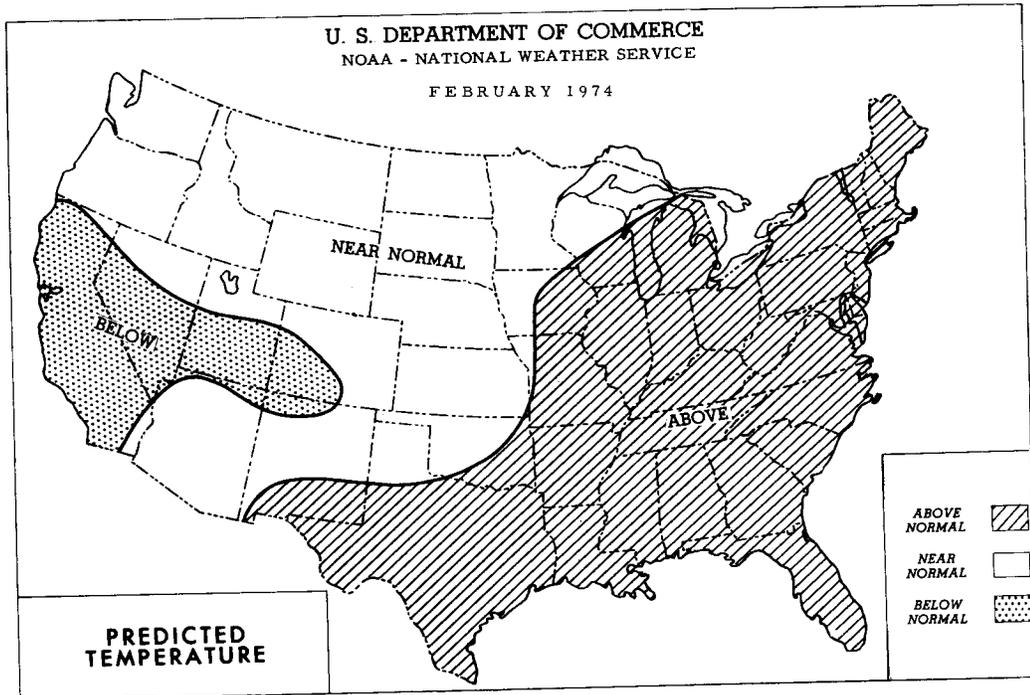
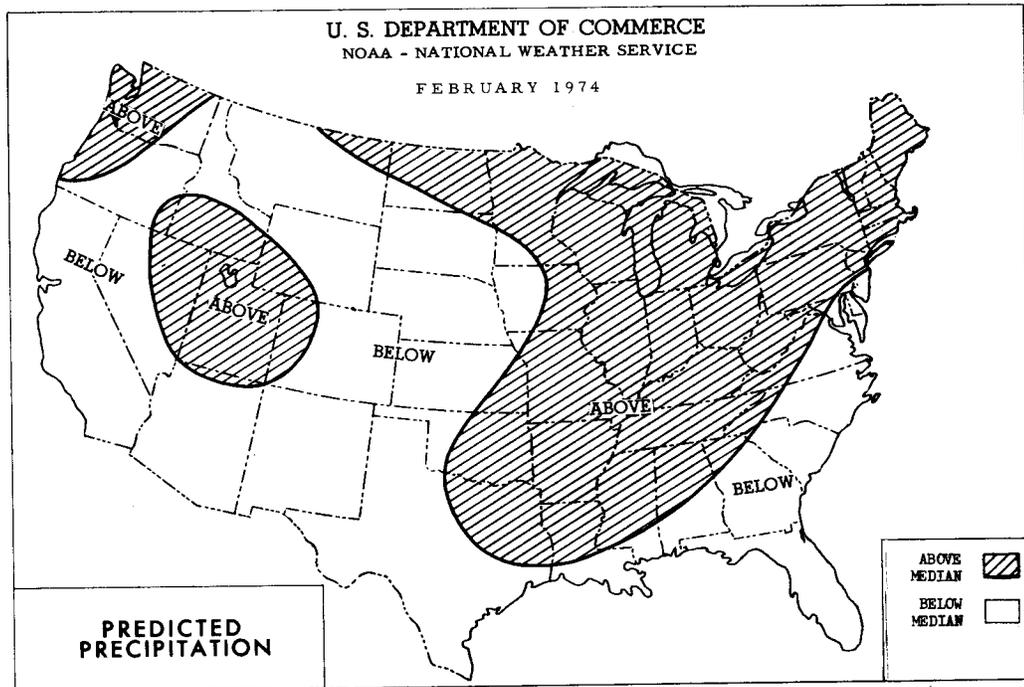
WISCONSIN: Temperatures averaged slightly above normal. Week began with warming trend with highs in upper 30's and 40's which lasted until cold returned Wednesday night. Below zero temperatures north Thursday morning for first time in several days. Coldest was 15° below zero at Superior Thursday morning.

Precipitation light Monday through Thursday except for brief periods of heavy snow near Lake Superior. On Friday 3 to 6 in. snow fell over southeast, additional snow fell Saturday night and Sunday, mostly north and east. Weekly precipitation averaged 0.40 to 0.60 in. water equivalent north and east to 0.25 in. or less southwest. Snow depths averaged 6 in., deepest in north. Frost depths averaged 12 in. statewide, lightest penetration northeast.

WYOMING: Precipitation mostly in Green and Bear and Snake drainage areas with light amounts elsewhere. Moran reported most, 0.85 in. Temperatures averaged well above normal. Extremes: 55° at Wheatland, 14° below zero at Big Piney. High winds over State hindered outdoor work. Livestock care and feeding major activities. Many farmers and ranchers preparing for spring shearing, lambing, and calving.

Standard copy for the Weekly Weather and Crop Bulletin is prepared by: Richard E. Felch, Lyle M. Denny, Orus W. Byrd, National Weather Service, NOAA; Arlon M. Scott, Statistical Reporting Service, USDA.

AVERAGE MONTHLY WEATHER OUTLOOK



These prognostic charts show the expected categories of average temperature and total precipitation for the period indicated. They are taken from the Weather Service's publication Average Monthly Weather Outlook which contains additional information necessary for complete interpretation.

WORLD WEATHER AND AGRICULTURE

1973 CROP WEATHER IN YUGOSLAVIA
- A BRIEF REVIEW -

The weather in Yugoslavia during January-March was unusually mild with little precipitation either in the form of rain or snow. Frequent winds also removed a considerable amount of moisture from the soil, but not to the extent of significantly damaging winter crops or affecting prospects for the spring crops.

April and May experienced adequate moisture and sunshine, benefitting wheat, fruit, corn, sunflowers and sugar beets. The exception was a couple of days at the end of May when high temperatures reaching close to 30° C. damaged plums in an early stage of development.

Favorable weather continued during June and most of July, with July ending hot and dry. The hot and dry conditions continued into August. However, cooling temperatures and good rainfall during September brought a good recovery of crops and bright prospects for the fall harvest.

October and most of November were normal, with rather mild temperatures and usual rainfall for the period, allowing timely completion of the fall harvest.

The end of November brought heavy snow and the drop of temperatures ranging from 0° C. to -20° C. Snow cover was welcome to protect the wheat crop, but thawing of snow cover occurred in the middle of December leaving the winter wheat crop unprotected.

DROUGHT REDUCES 1973/74 PRODUCTION IN NIGERIA

Nigeria's agricultural production during the 1973-74 crop season is mixed. Tree crop production is down because of an extended dry period from the fall of 1972 to the spring of 1973. Food crops in the area essentially north of the 12° latitude line are way off because of drought conditions. This affected mainly the peanut, sorghum, millet, and tobacco crops. There were substantial cattle losses due to the drought. In the large area south of 12°, however, food crops are better than in 1972-73.

The rains quit early throughout Nigeria in the fall of 1972. Then, spring rains in 1973 were late in arriving. This extended dry period hurt tree-crop production and caused considerable anxiety regarding food crop prospects. With the late onset of the rains, the only prospect for a fair to normal crop was that the rains last longer than normal. This occurred in most of the area south of the 12° latitude line. Consequently, crops in this large area were generally as good as or better than the crops in this area the previous season.

The situation north of the 12° north latitude line was quite different, however. Normally, this area receives a few showers in May and good rains beginning in June and ending in September or early October. This year, the first good rains did not begin until early July. The rains through July and mid-August were good, raising hopes of decent crops--then the rains fizzled out with most of the area receiving only a few occasional showers after mid-August. Consequently, crops throughout the most northern areas of Nigeria were substantially off this year. The major crops affected were peanuts, sorghum, millet, tobacco, and pulses.

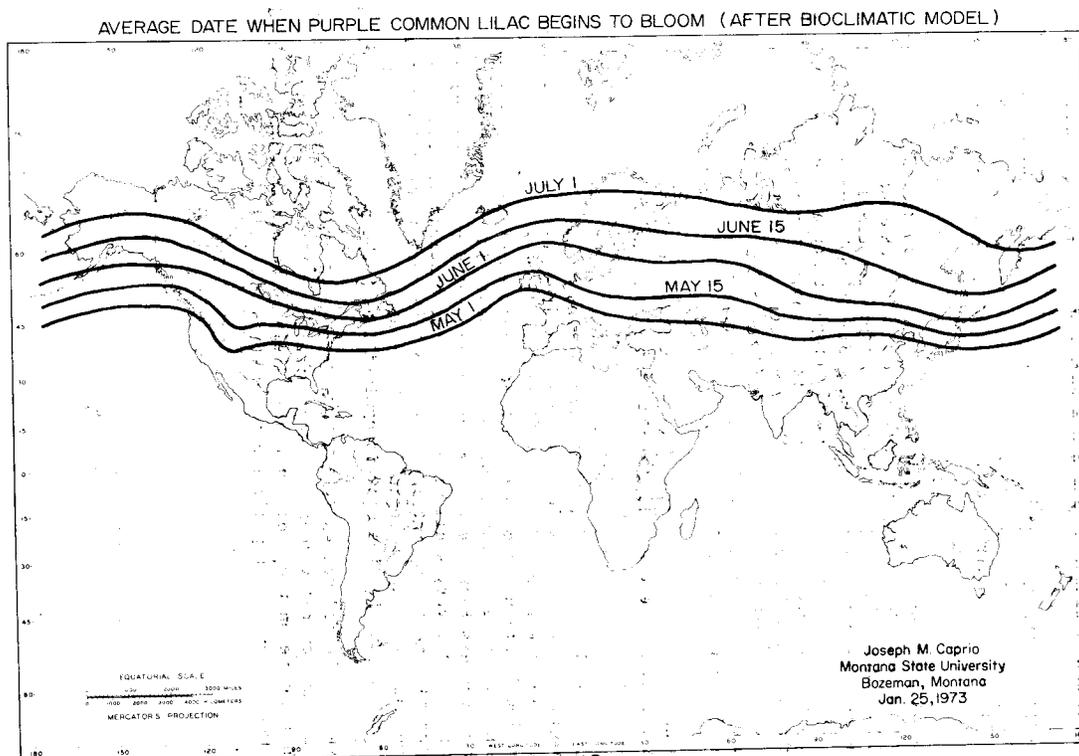


Figure 2

A World Map of Dates When Common Purple
Lilacs Begin to Bloom

Joseph M. Caprio
Montana Agricultural Experiment Station
Bozeman, Montana
Sept. 25, 1973

Analysis of the information to date has revealed how spring (as indicated by plant development) advances from south to the north and from lower to higher elevations throughout the West. Correlative studies of environment and plant data have also led to the development of an equation which appears to account for much of the variation in the observed dates of phenological events of many plants. This equation links rate of plant development to both ambient atmospheric temperatures and solar radiation.

According to the equation plant development is initiated in the spring about the time when mean daily temperatures exceed 31°F. Mean daily temperatures are computed by adding the daily maximum and minimum temperatures and dividing by two. Thus, the mean temperature of a day with a high of 60°F and a low of 40°F is 50°F. A Solar Thermal Unit (STU) is then simply computed for a given day by multiplying mean daily temperature minus 31 by the total amount of solar radiation received during that day on a horizontal surface expressed as calories per square centimeter. Thus, a day with a mean temperature of 61°F and solar radiation of 500 calories per square centimeter is assigned a Solar Thermal Unit value of 61 minus 31 (or 30) times 500 which equals 15,000 STU.

The number of Solar Thermal Units of each day in the spring are accumulated and when the number reaches 380,000 STU lilacs are likely to start blooming in that particular area.

This accumulation of 380,000 STU can be used to estimate the average date when lilacs begin to bloom at any location where daily records of both temperature and solar radiation are recorded. Solar Thermal Units were calculated by computer for more than 100 locations in middle and high latitudes of the Northern Hemisphere where mean monthly temperatures during the coldest time of the year average near or below 31 degrees Fahrenheit. Isophanes were not drawn in the Southern Hemisphere since only a very small proportion of the stations between Antarctica and the equator have mean temperatures less than 31°F during the coldest time of year. In drawing the world map of begin lilac bloom shown in Figure 2, no attempt has been made to account for the many irregularities in the pattern in mountainous areas.

In western United States it has been determined that the average begin bloom date for lilacs generally does not occur after June 15. Thus, areas north of the June 15th isophane on the global map are likely to be places where lilacs do not grow or where they do not produce bloom every year.

This work is supported in part by NASA Contract No. NAS 5-21781 (ERTS-1 Phenology Satellite Experiment) and by Hatch Regional Research Projects NE-69 (Atmospheric Influences on Ecosystems and Satellite Sensing) and W-48 (Climate and Phenological Patterns for Agriculture in Western United States). Montana Agricultural Experiment Station Journal Series No. 455.

IMMEDIATE - U. S. Weather Report

This Report Will be Treated in All Respects as Letter Mail

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Heating Degree Days (Base 65° F.)

January 1974

ALA. Birmingham . . .	374	MAINE, Caribou . . .	1810	OKLA. Okla. City . . .	922
Mobile . . .	108	Portland . . .	1290	Tulsa . . .	951
Montgomery . . .	218	MD. Baltimore . . .	830	OREG. Astoria . . .	803
ALASKA, Anchorage . . .	1797	MASS. Boston . . .	1022	Burns U. . .	1185
Barrow . . .	2352	Chatham . . .	943	Medford . . .	810
Fairbanks . . .	2535	MICH. Alpena . . .	1364	Pendleton . . .	1064
Juneau . . .	1550	Detroit . . .	1189	Portland . . .	832
Nome . . .	1861	Flint . . .	1240	Salem . . .	845
ARIZ. Flagstaff . . .	1147	Grand Rapids . . .	1212	PA. Allentown . . .	1036
Phoenix . . .	333	Houghton Lake . . .	1380	Erie . . .	1077
Tucson . . .	451	Lansing . . .	1233	Harrisburg . . .	931
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Yuma . . .	293	S. Ste. Marie . . .	1566	Pittsburgh . . .	957
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Eureka U. . .	559	Rochester . . .	1611	Columbia . . .	199
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Los Angeles U. . .	305	MISS. Jackson . . .	327	S. DAK. Aberdeen . . .	1819
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D. C. Washington . . .	677	Havre . . .	1585	Austin . . .	496
FLA. Apalachicola . . .	40	Helena . . .	1452	Beaumont . . .	288
Ft. Myers . . .	0	Kalispell . . .	1385	Brownsville . . .	190
Jacksonville . . .	31	Miles City . . .	1427	Corpus Christi . . .	264
Key West . . .	0	Missoula . . .	1356	Dallas . . .	---
Lakeland U. . .	0	NEBR. Grand Island . . .	1479	Del Rio . . .	363
Miami . . .	0	Lincoln . . .	1543	El Paso . . .	632
Orlando . . .	0	Norfolk . . .	1493	Fort Worth . . .	656
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ILL. Cairo U. . .	830	N. MEX. Albuquerque . . .	963	Salt Lake City . . .	1181
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IND. Evansville . . .	849	Rochester . . .	1167	WASH. Colville . . .	1271
Fort Wayne . . .	1206	Syracuse . . .	1199	Omak . . .	---
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South Bend . . .	1145	Charlotte . . .	463	Seattle-Tacoma . . .	809
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Dubuque . . .	1460	Raleigh . . .	477	Yakima . . .	1157
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KY. Lexington . . .	744	Cleveland . . .	1015	Milwaukee . . .	1340
Louisville . . .	772	Columbus . . .	977	WYO. Casper . . .	1432
LA. Baton Rouge . . .	179	Dayton . . .	1004	Cheyenne . . .	1264
Lake Charles . . .	245	Toledo . . .	1197	Lander . . .	1452
New Orleans . . .	117	Youngstown . . .	1077	Sheridan . . .	1400
Shreveport . . .	533				

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 *Estimated.