

# Weekly Weather & Crop Bulletin

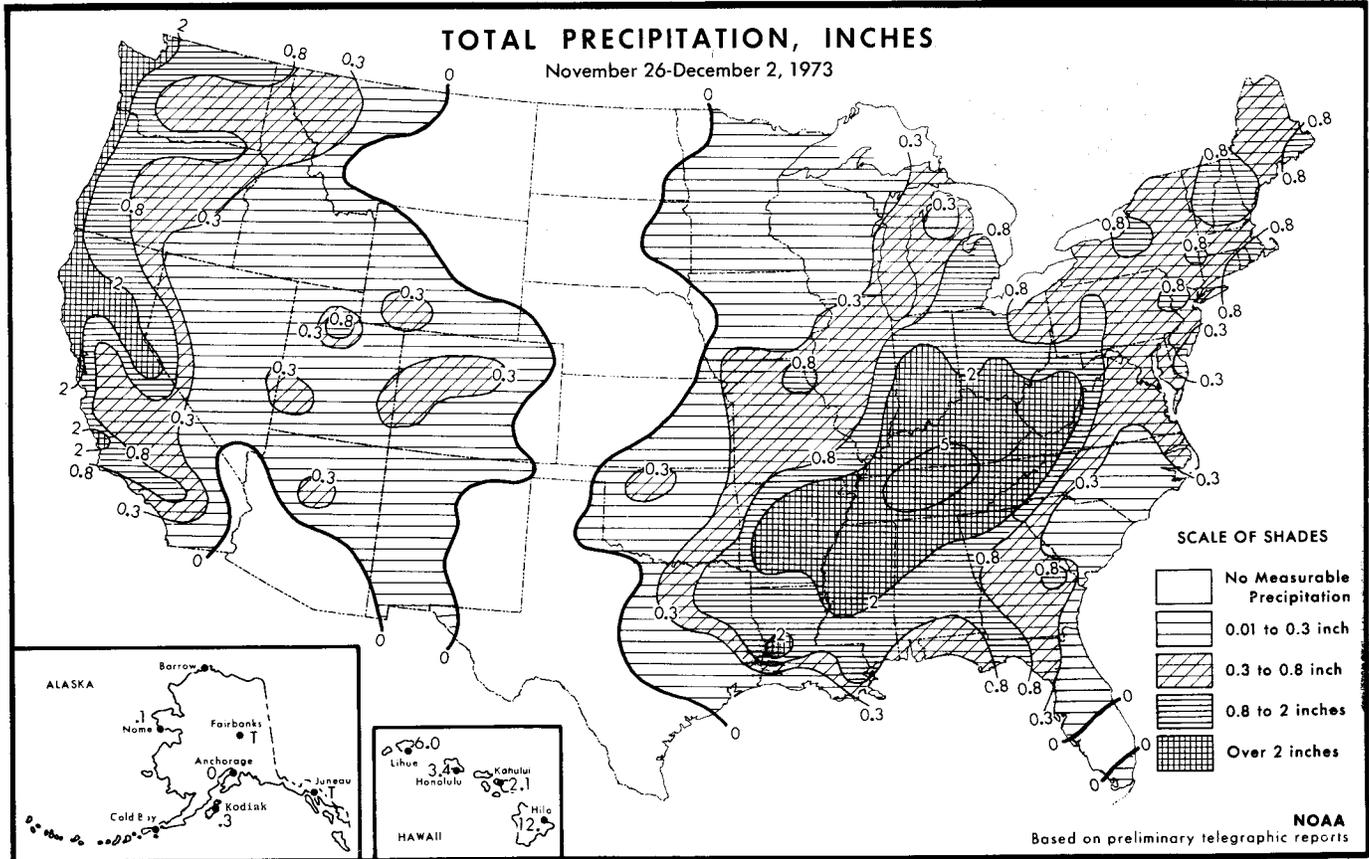
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## NATIONAL WEATHER SUMMARY

**HIGHLIGHTS:** Heavy rains fell from east Texas to western Pennsylvania early in the week. North-central Tennessee area had over 5.00 in. rain. Warm, southerly air influenced the Northeast much of the week, resulting in unseasonably warm temperatures and record high readings in many eastern locales.

**PRECIPITATION:** Most of the Nation's rain fell early in the week. Over 2.00 in. rain fell over a 9-State area centered around Tennessee and Kentucky as a cold front passed through the area. An area along the Tennessee-Kentucky border received over 5.00 in. of rain.

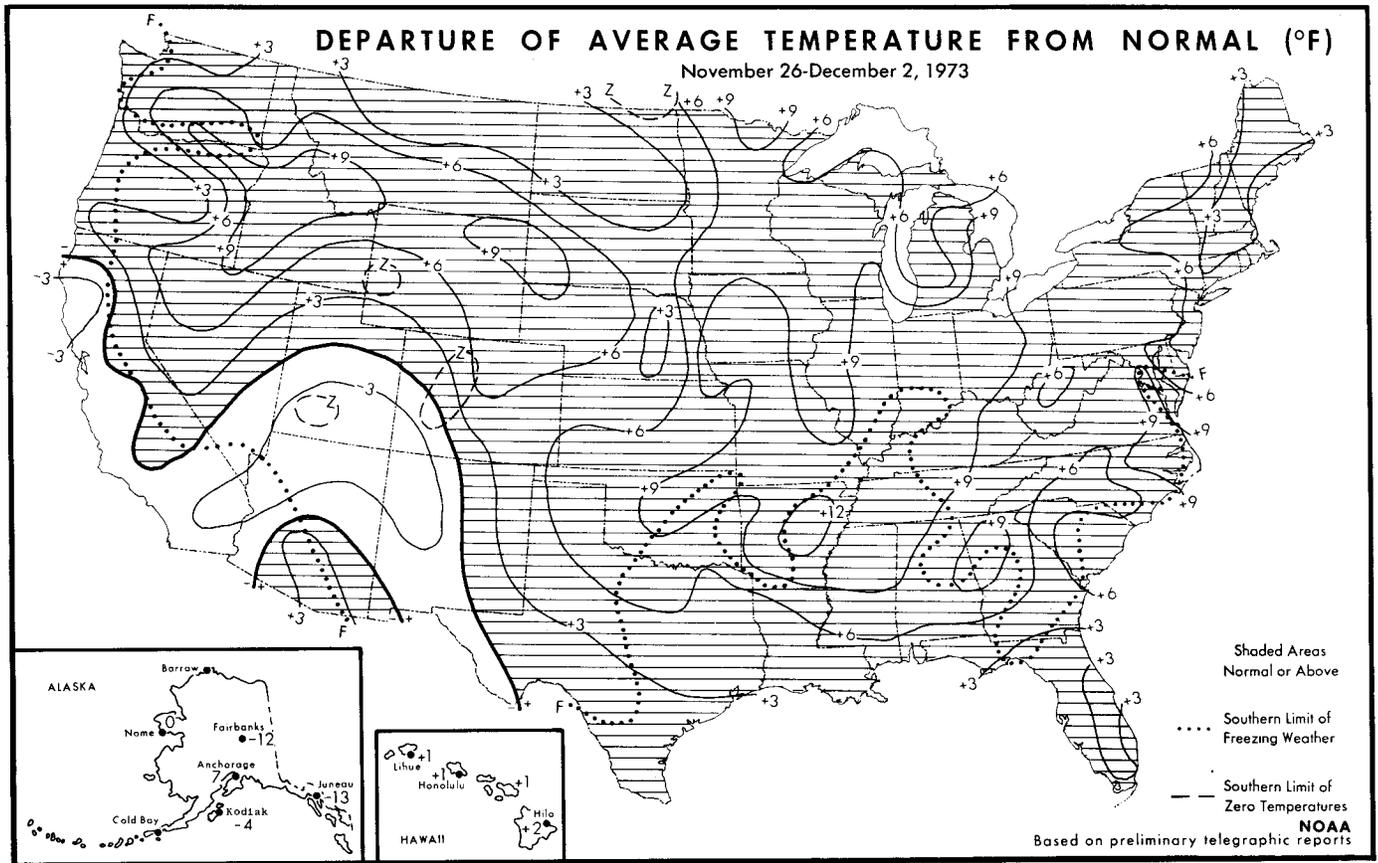
Seasonal winter rainfall continued along the West Coast the whole week. The Coast, and parts of interior California, got 2.00 in. or more, and parts of California, Washington, Oregon, Idaho, Nevada, and Montana had from 0.30 in. to 2.00 in. of rain, with snow in higher elevations.

Monday, thunderstorms produced heavy rains in

the lower Mississippi and Ohio Valleys. Memphis, Tenn., received 1.50 in. in less than half an hour of morning rain. Evansville, Ind., got 2.00 in. in 2 hours. In the West, 4 in. snow fell at Salt Lake City, Utah, and Grand Canyon, Ariz.

Tornadoes and hail plagued the South. Central Mississippi and north Alabama received the heaviest damage. By midmorning, Nashville, Tenn., had measured more than 3.00 in. rain in 24 hours; by noon, Pine Bluff, Ark., had received more than 3.00 in. Tuesday morning alone. A violent afternoon erupted in Dixie: 22 tornadoes appeared, 7 near Memphis, Tenn.; at Chattanooga, Tenn., a tornado sent 15 persons to hospitals. Knoxville and Crossville, Tenn.; Birmingham, Montgomery, and Huntsville, Ala., and Huntington, W. Va., all received over 1.50 in. rain late Tuesday and early Wednesday.

Wednesday, the cold front pushed through the deep South, ending both record warm temperatures and violent weather. Most Wednesday rain in the East was confined to East Coast and New England



sprinkles. On Thursday, clear skies were the rule over almost the whole Nation. Friday also fared fair over most of the Nation--most rain was winter seasonal, confined to the Northwest. Brookinos, Ore., received 0.69 in. morning rain, and Ukiah, Calif., 0.42 in. Rain and snow dominated Northwestern weather, while most of the Nation enjoyed fair skies through Sunday night.

In the Northwest, a weekend storm intensified. By early Saturday it had hit northwest California with over 3 in. snow. By late afternoon, an area west of Lake Tahoe, Calif., had received 19 in. of new snow. Sunday, the storm reached into Utah, where it left 4 in. snow at Salt Lake City in the morning. By late Sunday, light rain and drizzle was scattered from north Iowa to southeast Nebraska.

**TEMPERATURE:** The populous Northeastern megapolis area averaged from 3° to 6° above normal, while just to the east and south many record highs marked the early week. Also, large areas in the South and Midwest and Northwest averaged 9° or more above seasonal norms as below normal conditions were confined to the Desert Southwest. Rapid City, S. Dak., had 11° above normal, while Denver, Colo., was 7° above.

Monday a large Atlantic High moved warm air into the South and by Tuesday the unseasonable warmth moved into the mid-Atlantic States. Gulf areas had 80's on Monday. Corpus Christi, Tex., hit 87°; Macon, Ga., 85°, a record.

Monday night it stayed in the 70's into northern Alabama, and Tuesday saw record breaking heat from Texas to Virginia, where most readings reached 80's. Corpus Christi hit 81; Norfolk, Va., 82°, a record. Wednesday records reached farther north: Washington, D. C., 72°; Harrisburg, Pa., 70°, Rochester, N. Y., 67°. Late Wednesday the passage of a cold front ended the Eastern heat. Rochester fell to 39° Thursday morning, and Athens, Ga., at 33° began the day 31° colder than it began Wednesday.

During the East's heat, the West had highs mainly from the low 30's to the low 40's, but Wednesday a large High began to form in the southern Rockies; by Thursday the system began to influence the whole southern area of the Nation east of the Rockies. Thursday it brought cold air into Mississippi, Alabama, and Georgia, where temperatures dipped into the 30's. But as the High spread eastward temperatures again warmed over the southern plains.

Wednesday-Thursday temperatures throughout much of Colorado hit into the 60's, then into even the mid-70's in some places. Trinidad, Colo., hit 78° Thursday. Friday the Chinook winds began to blow over parts of Wyoming and the Dakotas at 35 to 40 mph. Cheyenne, Wyo., started December 1 at 34°, and hit 63° by 11 a.m.; Rapid City, S. Dak., started at 31°, hit 64° by 11 a.m., then hit 71° later in the day.

Sunday, the High in the Gulf caused 70's and 80's to the southeast, but the rest of the Nation had seasonal weather for December.

## NATIONAL AGRICULTURAL SUMMARY

**AGRICULTURAL HIGHLIGHTS:** Winter wheat crop remained mostly good to excellent, but has very little snow cover in the Northwest. Texas cotton harvest continued well. The corn harvest neared completion and soybean combining advanced to nearly 95% complete.

**SMALL GRAINS:** Great Plains winter wheat prospects stayed bright. Wheat and oat seeding are nearing completion in Texas. Wheat stands in Oklahoma are providing better grazing than normal. Recent moisture helped winter wheat in Kansas, and stands are good, although top growth is short. The Nebraska crop is in mostly good condition.

Montana snowcover is mostly light on wheat. Small grains generally are in good condition in other northwestern States. In Oregon, continuing rains have kept farmers from completing grain seeding. Earlier seeded fields are showing good stands and color. California's small grain seeding is active in the San Joaquin Valley and has just started in the south.

**CORN:** Rain and soft fields slowed the Corn Belt harvest; however, harvest was almost over throughout the Belt. Rains stopped almost all fieldwork in Ohio and only one day favored fieldwork in Indiana where more than 95% of the corn crop is out of the fields. Farmers made limited progress in Missouri, where combining is 86% complete compared with 62% last year and the 5-year average of 77%. In Nebraska, harvest is 90% complete vs. 65% last year and 95% average. In Kansas, about 10% of the acreage is still unharvested.

In the South Central States, most farmers are finished with corn harvest and are concentrating on wrapping up their cotton and soybean harvests.

**COTTON:** Picking progressed rapidly in Texas and is 59% complete, a 13 point gain over last week and compares with 44% harvested last year and the 5-year average of 52 percent.

Heavy rains early in week stopped all harvesting activities in Mississippi where picking is 89% complete vs. 84% last year. Harvesting resumed last half of week in Arkansas and is 90% complete compared with 82% in 1972. Harvest is 90% complete in Tennessee, 85% in Alabama and 80% in Louisiana. Farmers picked some cotton in the Oklahoma Panhandle but rain halted progress elsewhere in Oklahoma. Over 90% of the Carolina and Georgia acreage has been picked. Wet weather slowed progress in the Western States.

**SOYBEANS:** The Nation's soybean harvest was about 94% complete on December 2, well ahead of 73 percent last year when prolonged rain and soft fields halted harvesting operations.

Rains hampered combining in the South Central

States; however, some Southcentral farmers made fair progress. Harvest is 84% complete in the South Central Region compared with 67% a year ago. Missouri and Kansas progress was limited, but only about 5% of the acres in each State remain for harvest. In other Corn Belt States, farmers have harvested all but a few scattered fields. The South Atlantic Region made good harvest progress except for South Carolina where showers interrupted combining. Harvest is nearing completion in Virginia and is 89% complete in North Carolina vs. 60% a year earlier.

**OTHER CROPS:** Sorghum grain combining is almost over in Texas, Nebraska, Kansas, and New Mexico and 90% complete in Missouri. Wet weather has slowed Oklahoma harvest.

Sugar beet processing is active in Utah and digging continues in California's San Joaquin Valley.

Burley tobacco stripping is well along with much of the crop ready for market in Kentucky and Tennessee. Tobacco seedbed preparation continues in South Carolina's Pee Dee area.

**FRUITS AND NUTS:** Citrus harvest is active in Florida where fruit is in good condition. Rain is greatly needed for fruit trees because high winds have accelerated evaporation. Irrigation is becoming more widespread. Navel oranges, lemons and grapefruit are being picked in Arizona and California desert areas.

Pecan harvest advanced to 65% complete in Georgia and 70% in Mississippi. Harvest is still active in many areas of Texas and in Louisiana.

**VEGETABLES:** Supplies of vegetables increased in Florida; peppers, cucumbers, cabbage and lettuce are moving to market in good volume. Other vegetables available in Florida are: Sweet corn, snap beans, celery, eggplant, squash and radishes. In Texas's Lower Rio Grande Valley cabbage, pepper and tomato harvests continue. Some onions still being planted. Lettuce harvesting continues active in Arizona and California. Rain slowed broccoli harvest in California.

**PASTURES AND LIVESTOCK:** Native and improved ranges continue to deteriorate on the Texas High Plains where moisture is critically short. High Plains irrigated wheat is furnishing fair grazing. Wheat grazing is open in much of the Northwest. Mild temperatures and good rains improved pastures in South Central and Atlantic States. Livestock have been foraging through harvested corn and sorghum fields in many of the North Central States. Supplemental feeding has been limited this fall, partly due to high feed prices. Livestock are generally in good condition.

Temperature and Precipitation Data for the Week Ending Midnight, l.s.t., Dec. 2, 1973

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 . . .	56	+ 6	1.3	+ .4	La. Baton Rouge . . .	60	+ 6	.4	- .7	Youngstown . . .	42	+ 8	.3	- .4
Mobile . . .	61	+ 5	.5	- .4	Lake Charles . . .	61	+ 4	.1	-1.0	OKLA. Okla. City . . .	53	+ 9	.2	- .1
Montgomery . . .	59	+ 8	1.3	+ .5	New Orleans . . .	60	+ 3	1.1	+ .3	Tulsa . . .	54	+11	.2	- .3
ALASKA. Anchorage . . .	7	-11	0	- .2	Shreveport . . .	57	+ 5	1.3	+ .3	OREG. Astoria . . .	47	+ 2	2.8	- .1
Barrow . . .	---	---	---	---	MAINE. Caribou . . .	26	+ 2	.6	0	Burns . . .	33	+ 1	.4	+ .1
Fairbanks . . .	-12	- 9	T	- .1	Portland . . .	37	+ 4	1.0	0	Medford . . .	44	+ 5	1.0	+ .4
Juneau . . .	19	-13	T	-1.1	MD. Baltimore . . .	46	+ 5	.6	- .1	Pendleton . . .	47	+ 9	1.0	+ .6
Kodiak . . .	28	- 4	.3	---	MASS. Boston . . .	43	+ 2	.7	- .2	Portland . . .	47	+ 4	1.0	- .5
Nome . . .	11	0	.1	- .2	Chatham . . .	43	---	1.4	---	Salem . . .	45	+ 2	1.0	- .4
ARIZ. Flagstaff . . .	30	- 3	.4	+ .1	MICH. Alpena . . .	35	+ 6	.4	- .1	PA. Allentown . . .	44	+ 7	1.0	+ .1
Phoenix . . .	58	+ 4	T	- .1	Detroit . . .	43	+10	1.2	+ .6	Erie . . .	41	+ 7	.5	- .2
Tucson . . .	58	+ 3	T	- .2	Flint . . .	40	+ 9	1.3	+ .8	Harrisburg . . .	46	+ 8	.4	- .3
Winslow . . .	34	- 2	.1	0	Grand Rapids . . .	39	+ 6	.6	0	Philadelphia . . .	52	+13	.3	- .5
Yuma . . .	56	- 2	T	0	Houghton Lake . . .	35	+ 7	.2	- .3	Pittsburgh . . .	43	+ 8	.6	+ .1
ARK. Fort Smith . . .	52	+ 7	.4	- .3	Lansing . . .	39	+ 6	1.2	+ .7	Scranton . . .	41	+ 7	.4	- .3
Little Rock . . .	57	+12	3.3	+2.3	Marquette . . .	36	+ 7	.1	- .7	R.I. Providence . . .	43	+ 4	1.2	+ .1
CALIF. Bakersfield . . .	53	+ 1	.4	+ .2	Muskegon . . .	40	+ 5	.4	- .3	S.C. Charleston . . .	61	+ 9	.1	- .4
Eureka . . .	50	0	3.1	+2.1	S. Ste. Marie . . .	33	+ 5	.4	- .4	Columbia . . .	58	+ 8	.1	- .5
Fresno . . .	49	- 1	.5	+ .2	MINN. Duluth . . .	27	+ 6	.1	- .3	Greenville . . .	52	+ 4	.4	- .2
Los Angeles . . .	59	- 2	.4	0	Internatl Falls . . .	25	+ 9	.1	- .2	S.D. Aberdeen . . .	25	0	T	- .1
Red Bluff . . .	48	- 3	2.3	+1.7	Minneapolis . . .	32	+ 8	.1	- .2	Huron . . .	29	+ 5	T	- .1
San Diego . . .	58	- 2	.3	+ .1	Rochester . . .	33	+ 7	.1	- .3	Rapid City . . .	41	+11	0	0
San Francisco . . .	51	- 2	2.6	+2.2	St. Cloud . . .	30	+ 7	.1	- .2	Sioux Falls . . .	33	+ 7	T	- .2
Stockton . . .	50	+ 1	.5	+ .1	MISS. Jackson . . .	60	+ 8	2.0	+1.0	TENN. Chattanooga . . .	53	+ 8	3.6	+2.7
COLO. Denver . . .	41	+ 7	.4	+ .3	Meridian . . .	60	+ 9	1.0	+ .1	Knoxville . . .	53	+ 8	3.0	+2.1
Grand Junction . . .	32	- 1	.3	+ .1	MO. Columbia . . .	47	+ 9	.7	+ .2	Memphis . . .	57	+11	3.5	+2.4
Pueblo . . .	41	+ 4	.1	0	Kansas City . . .	47	+ 7	.3	- .1	Nashville . . .	51	+ 7	5.0	+4.2
CONN. Bridgeport . . .	45	+ 5	.7	- .3	St. Louis . . .	45	+ 7	.4	- .2	TEX. Abilene . . .	55	+ 6	T	- .2
Hartford . . .	40	+ 3	.8	- .1	Springfield . . .	50	+10	.6	0	Amarillo . . .	49	+ 7	T	- .1
D.C. Washington . . .	52	+ 9	.3	- .4	MONT. Billings . . .	38	+ 7	0	- .1	Austin . . .	59	+ 4	.1	- .4
FLA. Apalachicola . . .	62	+ 3	.7	+ .1	Glasgow . . .	24	+ 2	0	- .1	Beaumont . . .	60	+ 3	.2	0
Daytona Beach . . .	66	+ 3	T	---	Great Falls . . .	32	+ 2	T	- .2	Brownsville . . .	67	+ 2	0	- .3
Ft. Myers . . .	69	+ 2	0	- .3	Havre . . .	25	+ 1	.1	0	Corpus Christi . . .	66	+ 5	0	- .4
Jacksonville . . .	61	+ 2	.2	- .2	Helena . . .	35	+ 8	T	- .1	Dallas . . .	---	---	---	---
Key West . . .	75	+ 2	.1	- .5	Kalispell . . .	33	+ 5	.4	+ .1	Del Rio . . .	58	+ 3	0	- .1
Lakeland . . .	66	+ 2	.1	- .2	Miles City . . .	33	+ 6	T	- .1	El Paso . . .	46	- 1	.1	0
Miami . . .	73	+ 3	.1	- .5	Missoula . . .	34	+ 8	.5	+ .3	Fort Worth . . .	57	+ 7	.3	- .3
Orlando . . .	67	+ 4	T	- .3	NEBR. Grand Island . . .	35	+ 3	T	- .1	Galveston . . .	66	+ 6	T	- .9
Tallahassee . . .	60	+ 4	1.1	+ .4	Lincoln . . .	40	+ 5	T	- .2	Houston . . .	67	+ 3	.1	- .8
Tampa . . .	66	+ 2	.1	- .2	Norfolk . . .	36	+ 6	T	- .2	Lubbock . . .	49	+ 3	T	- .1
W. Palm Beach . . .	72	+ 1	T	---	N. Platte . . .	35	+ 5	T	- .1	Midland . . .	52	+ 4	T	- .1
GA. Atlanta . . .	57	+10	.5	- .3	Omaha . . .	40	+ 9	T	- .3	San Angelo . . .	54	+ 3	0	- .1
Augusta . . .	56	+ 6	.2	- .4	Valentine . . .	37	+ 8	T	0	San Antonio . . .	57	+ 1	T	- .3
Macon . . .	60	+ 8	.5	- .2	NEV. Ely . . .	28	- 2	.3	+ .1	Victoria . . .	65	+ 6	T	- .5
Savannah . . .	60	+ 6	.1	- .4	Las Vegas . . .	46	- 1	T	- .1	Waco . . .	56	+ 3	.1	- .4
HAWAII. Hilo . . .	75	+ 2	12.0	+8.6	Reno . . .	40	+ 5	.9	+ .8	Wichita Falls . . .	55	+ 7	T	- .3
Honolulu . . .	76	+ 1	3.4	+2.8	Winnemucca . . .	40	+ 8	.1	- .1	UTAH. Blanding . . .	31	- 3	.3	+ .1
Kahului . . .	75	+ 1	2.1	+ .2	N.H. Concord . . .	34	+ 2	.9	+ .1	Salt Lake City . . .	37	+ 3	1.2	+ .9
Lihue . . .	75	+ 1	6.0	+4.9	N.J. Atlantic City . . .	47	+ 5	.3	- .6	VT. Burlington . . .	37	+ 8	.5	- .1
IDAHO. Boise . . .	43	+ 9	T	- .3	Trenton . . .	46	+ 5	.6	- .1	VA. Lynchburg . . .	49	+ 4	.4	- .2
Lewiston . . .	42	+ 5	.7	+ .4	N.MEX. Albuquerque . . .	36	- 3	.1	0	Norfolk . . .	56	+ 9	.5	- .2
Pocatello . . .	36	+ 5	.1	- .1	Roswell . . .	45	+ 3	0	- .1	Richmond . . .	51	+ 7	.4	- .4
ILL. Cairo . . .	53	+10	1.6	+ .7	N.Y. Albany . . .	38	+ 5	.2	- .4	Roanoke . . .	49	+ 7	1.1	+ .5
Chicago . . .	43	+ 9	.4	- .1	Binghamton . . .	40	+ 7	.5	- .1	WASH. Colville . . .	35	+ 5	1.0	+ .5
Moline . . .	41	+ 8	.5	+ .1	Buffalo . . .	40	+ 7	.5	- .5	Omak . . .	32	+ 2	1.1	+ .8
Peoria . . .	42	+ 8	.5	0	New York . . .	46	+ 4	.7	- .1	Quillayute . . .	44	+ 1	5.9	+2.2
Rockford . . .	40	+ 9	.3	- .2	Rochester . . .	42	+ 7	.6	0	Seattle-Tacoma . . .	46	+ 4	1.3	0
Springfield . . .	45	+ 9	.4	- .1	Syracuse . . .	40	+ 5	1.7	+1.0	Spokane . . .	36	+ 3	.6	0
IND. Evansville . . .	50	+11	2.6	+1.9	N.C. Asheville . . .	50	+ 7	2.2	+1.7	Walla Walla . . .	46	+ 7	1.3	+ .9
Ft. Wayne . . .	43	+10	1.5	+ .9	Charlotte . . .	52	+ 5	.3	- .3	Yakima . . .	42	+ 8	.3	0
Indianapolis . . .	46	+10	3.6	+2.8	Greensboro . . .	49	+ 5	.4	- .3	W.Va. Beckley . . .	44	+ 7	2.4	+1.7
South Bend . . .	44	+10	.8	+ .2	Hatteras . . .	61	+ 9	.4	- .6	Charleston . . .	47	+ 6	3.1	+2.5
IOWA. Burlington . . .	41	+ 8	.3	- .1	Raleigh . . .	55	+ 9	.1	- .6	Huntington . . .	49	+ 8	3.1	+2.4
Des Moines . . .	41	+10	.1	- .3	Wilmington . . .	58	+ 6	.1	- .5	Parkersburg . . .	47	+ 7	1.5	+ .9
Dubuque . . .	37	+ 8	.1	- .5	N.DAK. Bismarck . . .	23	+ 1	T	- .1	WIS. Green Bay . . .	35	+ 7	.3	- .1
Sioux City . . .	37	+ 7	T	- .2	Fargo . . .	25	+ 5	.1	- .1	La Crosse . . .	35	+ 7	.1	- .3
KANS. Concordia . . .	42	+ 5	T	- .2	Williston . . .	22	+ 1	0	- .1	Madison . . .	36	+ 8	.2	- .3
Dodge City . . .	44	+ 6	0	- .1	OHIO. Akron-Canton . . .	45	+10	.6	+ .1	Milwaukee . . .	44	+14	.3	- .2
Goodland . . .	39	+ 5	T	- .1	Cincinnati . . .	47	+10	2.0	+1.1	WYO. Casper . . .	37	+ 6	.1	0
Topeka . . .	46	+ 9	T	- .2	Cleveland . . .	44	+ 8	.6	0	Cheyenne . . .	36	+ 5	.1	0
Wichita . . .	46	+ 7	.1	- .2	Columbus . . .	50	+14	2.0	+1.4	Lander . . .	31	+ 5	T	- .2
KY. Lexington . . .	49	+ 9	3.3	+2.5	Dayton . . .	45	+ 9	1.1	+ .4	Sheridan . . .	37	+ 8	T	- .2
Louisville . . .	50	+10	2.5	+1.7	Toledo . . .	41	+ 8	1.5	+1.0	P.R. San Juan . . .	80	+ 1	T	-1.4

## 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:** Moist and unseasonably warm early week, but drier and cooler midweek, as a cold front passed Tuesday night. Rain statewide with heaviest amounts in north. Mostly minor wind damage occurred over north with extensive damage in Huntsville/Decatur area resulting from tornado Tuesday evening. Fair weather for remainder of week. Temperatures returned to above normal week-end.

Rains delayed harvest of remaining crops, but improved prospects for small grains and other winter grazing crops. Cotton harvest 85% complete, 84% year ago. Farmers need two weeks open weather to complete harvest. Harvest of corn 91% complete, about same as last year. Combining soybeans slowed with 86% expected production. Harvest complete with 80% year earlier. Harvest complete many fields and acreage being planted to small grains. Growing conditions for small grains nearly all these crops have been seeded favorable with about .9 up to stand. Stockmen are seeding hay where grazing short. Supplies of stored seed adequate most farms.

**ARIZONA:** Light to moderate rain with snow above 4,000 feet spread west to east across State beginning week. Near 0° minimum temperatures on 27th, 28th above 7,000 feet. Clearing skies Tuesday initiated warming trend statewide through Saturday. Light showers, north, accompanied cold front Saturday followed by moist, colder air Sunday. Temperatures early week generally 5° to 10° below normal warming to near normal north, as much as 10° above normal, south. Exceptions valleys of east, northeast where trapped cold air held temperatures 3 to 8° below normal. Average temperatures 5° to 10° above normal Saturday dropping near or slightly below Sunday.

Cotton harvest resumed following rain Salt River Valley, southeast. Harvest 1st picking Yuma well advanced. Harvest 2nd picking progressing steadily. Sorghum harvest continues, good yields indicated. Yuma County sugarbeets good progress. Land preparation, planting small grains continues steady. Winter wheat, barley planting in Cochise County practically complete. Harvest lettuce, mixed vegetables continued Yuma, Salt River Valley. Lettuce for later harvest being planted, thinned Yuma. Overall lettuce quality good. Harvest honeydews active. Navels, lemons, grapefruit being picked. Market conditions reasonably good all varieties. Range outlook improved slightly. Rains too late to promote much new growth. Supplemental feeding picking up. Stock water supplies getting low. Cattle, calves mostly good condition. Sheep, lambs fair to good, lambing and shearing active.

**ARKANSAS:** General rains early week: Less than 1.00 in. except 1.00 to 2.00 in. south and east. Scattered areas southeast had 3.00 to 4.00 in. Heaviest: 4.00 in. at Pine Bluff, 3.27 in. at Arkansas City. Weather fair middle and last portion of week. Temperatures above normal ranging from 5° above at El Dorado to 12° above at Harrison. Extremes: 76° Rohwer; 23° Gilbert.

Harvesting resumed late week when fields dried from heavy rains. Soggy fields slowed harvest operations. Limited acreage of crops, notably

soybeans, still under flood waters. Cotton about 90% picked. Soybean harvest about 80% finished. Rice harvest complete. Good growth on wheat and oats. Farmers will plant more wheat by mid-December if weather permits. Harvest good, pecan crop underway. Mild weather prolonged grazing season. Condition livestock generally good to excellent with minimum feeding to date.

**CALIFORNIA:** Precipitation tapered off during middle of week. Weather high barometric pressure during midweek delayed onset of additional rain, and snow on mountains, until end of week. Average temperatures continued colder than normal most areas. Seasonal precipitation well above normal except southeast interior.

Wet weather delayed field work northern areas. Planting small grain active San Joaquin Valley, only started south. Digging sugarbeets continues San Joaquin Valley, some planting south. Harvest rice, milo, corn continued slow, little acreage left. Picking cotton well along, progress now slow. Table grape shipments from cold storage. Vineyards pruned, tied, sprayed, fruit and nut orchards pruned, sprayed. Kiwis, guavas, persimmons, lemons harvested. Color improved navel. Grapefruit harvest slow. Artichokes seasonal levels. Rain slowed broccoli harvest. Cabbage harvest down. Brussels sprouts, cauliflower, celery harvest down, decay reported. Carrot production increased. Potatoes and tomatoes harvest light. Smog damage reported, leafy vegetables.

Range feed conditions improve, future prospects excellent. Many low elevation pastures water covered, mud low elevations, snow high elevations hampered supplemental feeding, which continues most areas.

Livestock excellent. Calving, lambing well along. Some predator control necessary. Movement livestock to market slow. Central valleys cattle moved to foothills for winter range. Stock water, soil moisture conditions adequate. Sales of dairy cattle, horses result of high feed costs. Grazing fees private pastures and stubble up considerably. Turkey pens and ranges being renovated, anticipation 1974 season. Bees wintering well, some movement into almond orchards. Sales of honey at record prices. Milk, egg productions at seasonal levels.

**COLORADO:** Early week snow mountains; scattered snows lower elevations of north. Another storm late week brought widespread precipitation. Between the two storms generally fair and mild weather ruled. Weekly precipitation totals most places 0.10 to 0.50 in. Locally heavier in some mountains. Ten in. or more of snow reported at Hillside and at Squaw Mountain. Temperatures averaged below normal over west and south, generally above normal northeast. Daily highs quite variable. 20's and 30's over west early week to 70's locally in east November 29 and December 1. Extremes: 78°, several places in south-east; -9°, Fraser.

Drying weather provided favorable conditions to resume activity late week. Corn 85% picked, 72% last week. Grain sorghum 82% combined, 68% last week. Harvest normally complete. Winter wheat continues good, but grows slowly, 14% being grazed. Livestock good to excellent.

**FLORIDA:** Temperatures mostly mostly much above normal, but scattered frost over panhandle and northern peninsula Friday morning. Rainfall mostly light to zero. Soil moisture short west.

Soybean and cotton harvest continued, but delayed by showers west. Sugarcane harvest in full swing. Planting of cane continued. Small grains and winter forage improved where rain fell, but rain still needed most areas.

Pasture conditions severe drought to poor-fair. Cattle and calves fair to good. Tomatoes shipments up sharply, heaviest movement this week, next. Peppers increasing to good volume by mid-month. Cucumbers about steady, heavy volume. Cabbage movement gaining momentum. Sweet corn supplies moderate, still in transition from lake to east coast areas. Lettuce, other leafy vegetables increasing to good volume. Snap beans, celery, eggplant up after holiday lull. Squash, radishes about steady. Carrots light, increasing. Citrus tree and fruit condition good-rain badly needed. Irrigation continues with more widespread use. High winds accelerated evapotranspiration. Harvest active.

**GEORGIA:** Very warm till cooler northwest Wednesday night and rest of State Thursday. Several record high temperatures Tuesday and Wednesday. Temperatures averaged 9-13° above normal. Rainfall Tuesday night and Wednesday averaged 1.00-3.00 in. northwest, 0.50-1.50 central and northeast, 0.50-1.00 in. southwest and 0.50 in. or less remainder in shower and thundershower activity.

Soil moisture adequate with early week rains except central and southeast counties short. Harvesting active. Small grains 82% seeded. Cotton fair to mostly good -- 93% picked. Corn harvest 94% complete. Soybean harvest 86% complete. Pecans 65% harvested -- condition fair to good. Rain helped pasture -- condition still fair. Cattle good. Fertilization and liming active.

**HAWAII:** Heavy rains drenched State. Moisture excessive some areas. Farm operations slow and difficult. Some damage to crops expected. Progress of crops generally slow. Pastures expected to improve. Bananas and papayas continue plentiful. Supply of most vegetables adequate but quality down. Continued wet weather reduced pineapple and sugar activities.

**IDAHO:** Storms moved across Idaho, bringing snow in mountains while low areas got rain. Precipitation above normal north and southwest and much above normal for November most sections. Snow depths ranged from 10 to 30 in. in central mountains. Warming trend at late week brought average temperatures near normal. Farmers cared for livestock, winterized equipment and buildings, attended meetings and livestock sales. Fields snow-covered higher elevations north and east. Moisture welcomed. It replenished dry soil and improved prospects for 1974 irrigation water supplies.

**ILLINOIS:** Unseasonably mild, most sections 10° above normal. Week started near normal, warmed Tuesday. Near record highs Sunday. Precipitation centered on first 3 days. Heavy rains Tuesday westcentral, total almost 1.00 in. From Thursday on dry and warm weather prevailed. Winter wheat stands good to excellent. Soil moisture mostly adequate. Livestock good to excellent. Pastures fair to good. Most fieldwork done.

**INDIANA:** Warm, wet. Temperatures averaged 7° to 12° above normal. Precipitation 1.00 in. in northwest to 4.00 in. in southwest and southcentral.

Soil temperatures and relative humidity above normal.

Fieldwork averaged 1 day. Topsoil moisture mostly adequate to surplus. Corn harvest slowed; more than 95% done, 80% average, 50% in 1972. Sorghum grain 95% combined. Plowing for 1974 seeded crops 50% complete. Considerable fertilizer spread, some stockpiling, contributing to reports of shortages. Wheat stands mostly good to excellent. Pastures mostly fair but on decline.

**IOWA:** Temperature averaged 9° above normal with record breaking highs Sunday. Rainfall mostly on Tuesday, scattered eastern two-thirds from 0.10 in. to 0.50 in. State average 0.20 in. below normal.

**KANSAS:** Temperatures considerably above normal, ranging from 5° above northwest to 10° to 11° above southeast. New record high of 74° for December 2 at Dodge City. Over 2.00 in. rain extreme southeast, sparse other areas.

Fall harvest in final stages--sorghum and soybeans 95%, corn 90% complete. Recent moisture helped winter wheat. Top growth short, stands good. Some greenbug infestations. Cattle grazing crop residue and some wheat fields. Less than 10% fall seeded wheat being pastured, 15% year ago and average.

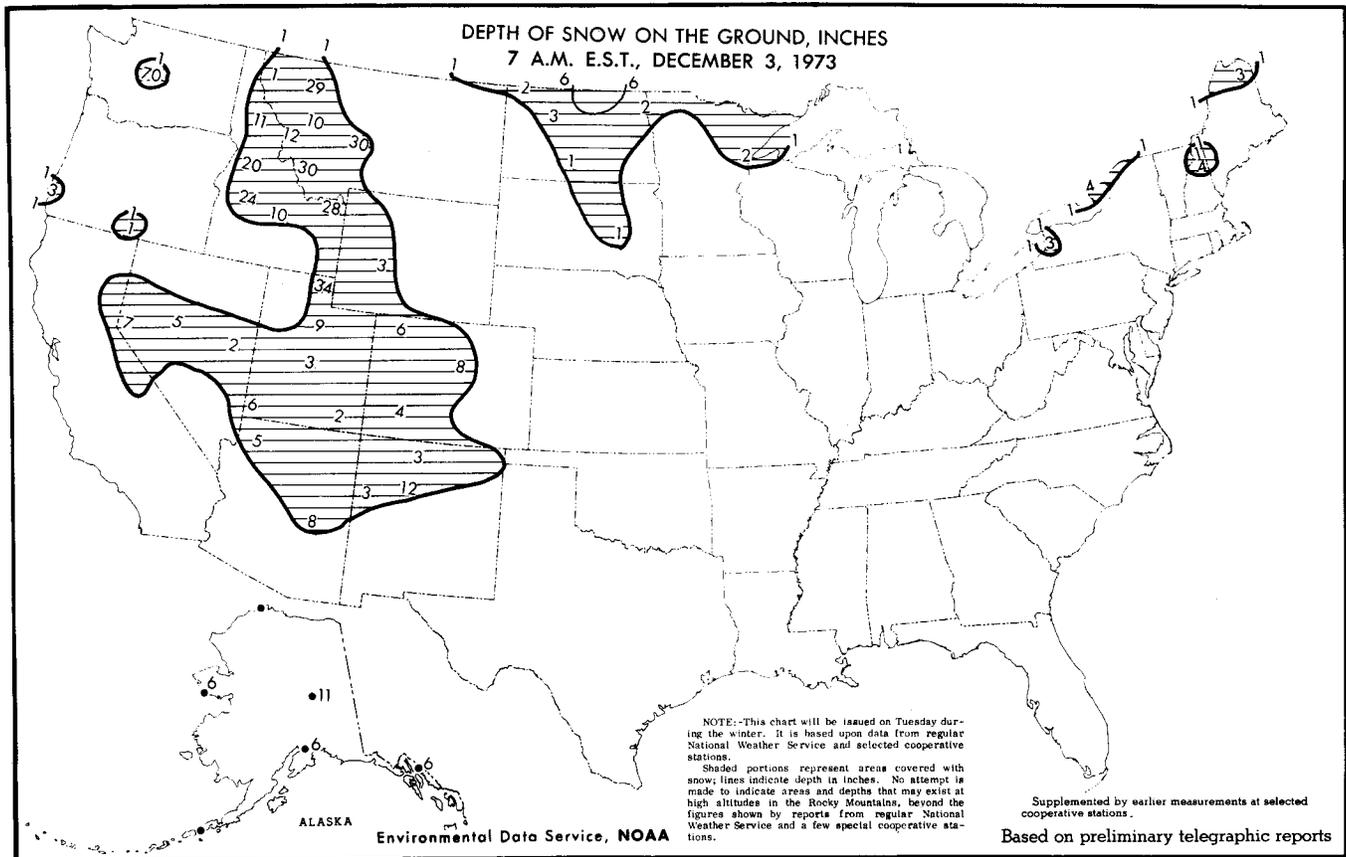
**KENTUCKY:** Temperatures 10° to 15° above normal early week fell to near normal on 29th, and rose well above normal weekend. Heavy rain early week. Weekly totals less than 1.50 in. extreme west, over 5.00 in. parts of east and southeast. Burley tobacco markets open; price strong, averaging about \$91 per cwt end week. Poundage running light, many growers below quota. Wheat and barley seedings good, some fields little growth, but green and growing. Pasture good for season.

**LOUISIANA:** Warm Monday, clear and cool remainder. Weekly temperatures averaged 4° to 11° above normal. Extremes: 88° Baton Rouge and Winnfield; 29°, Ashland. Several points reported first freeze and heavy frost of season Thursday. Showers and thunderstorms preceded and accompanied cold front. Also some very light rain late Friday. Weekly totals ranged from less than 0.25 in. to more than 3.00 in.

Wet fields continued to limit harvest. Practically no land preparation. Soil moisture surplus except adequate southeast. Days favorable 2.5. Scattered cotton harvest late week on drier soils, 80% picked, 80% last year, 98% 1971. Quality declining, losses increasing. Little progress soybeans, 80% combined, 88% last year, 98% 1971. Rain hampered sugarcane harvest. 60% delivered, same last year, 75% 1971. Trash above normal. Oats and wheat good. Rust showing northeast. Pastures above average northern third, average elsewhere. Fertilizing active. Livestock declined, mostly good. Pecan harvest continued, mostly good yields, quality variable.

**MARYLAND AND DELAWARE:** Warm; 8-14° above normal. Highs: mid to upper 70's. Lows: mid 20's to low 30's. Precipitation less than 1.00 in., except 2.70 in. west Maryland. Crop harvest almost over. Later seedings of small grains slow in germination and growth due to dry soils. Low humidity slowed tobacco stripping. Livestock good to excellent. Roughage supplies plentiful.

**MICHIGAN:** Precipitation totaled 0.30 to 1.00 in. over north lower and west upper. Excess of 1.00 in. over most of south lower and east upper peninsula. Flint reported 1.77, Sault Ste. Marie 1.30 in.; 1 to 5 in. snow fell over upper. Precipita-



tion fell mainly Wednesday and Saturday. Temperatures averaged 6° to 8° above normal over upper and north lower and 7° to 12° above over south lower.

**MINNESOTA:** Three straight mild weeks with temperatures mostly averaging 5 to 9° above normal. Extremes: 60° southwest corner midweek and 4° above Northwest corner. Precipitation: drizzle and light snow north, drizzle or light rain south accounted for subnormal averages of 0.10 to 0.30 in. across the State. Traces to 1.00 in. of new snow north. Produced total snow cover of traces to 2.00 in. north early week. Traces to 1.00 in. cover observed by end week.

**MISSISSIPPI:** Rains general most midweek. Rain in some north and central counties very heavy accompanied by tornadoes, hail, and strong winds on the 26th-29th. Rainfall of 4.00 in. to 6.00 in. north and central, while 2.00 in. was general over coastal, southeast and southcentral. Highest weekly total, 8.99 in., Charleston; a 1 day total, 6.62, Ripley. Extremes: 83°, south; 28°, Waynesboro. Weekend skies clear, cool nights and mild days.

Soil moisture mostly surplus to excessive, south third was adequate to surplus. Fieldwork: 1.1 days, 2.0 days in 1972. Heavy rains earlier in week stopped all harvesting activities until Friday. Cotton harvest 89% complete, 84% in 1972, 92% normal. Soybeans 83% combined, 55% in 1972, 86% normal. Corn harvest 93%, 90% in 1972, and pecans 70%, 72% last year. Winter wheat 93% and oats 98% seeded. Hay and roughage supplies mostly adequate. Feed grain supplies mostly short to adequate. Winter wheat, oats, winter pastures, and livestock fair to good.

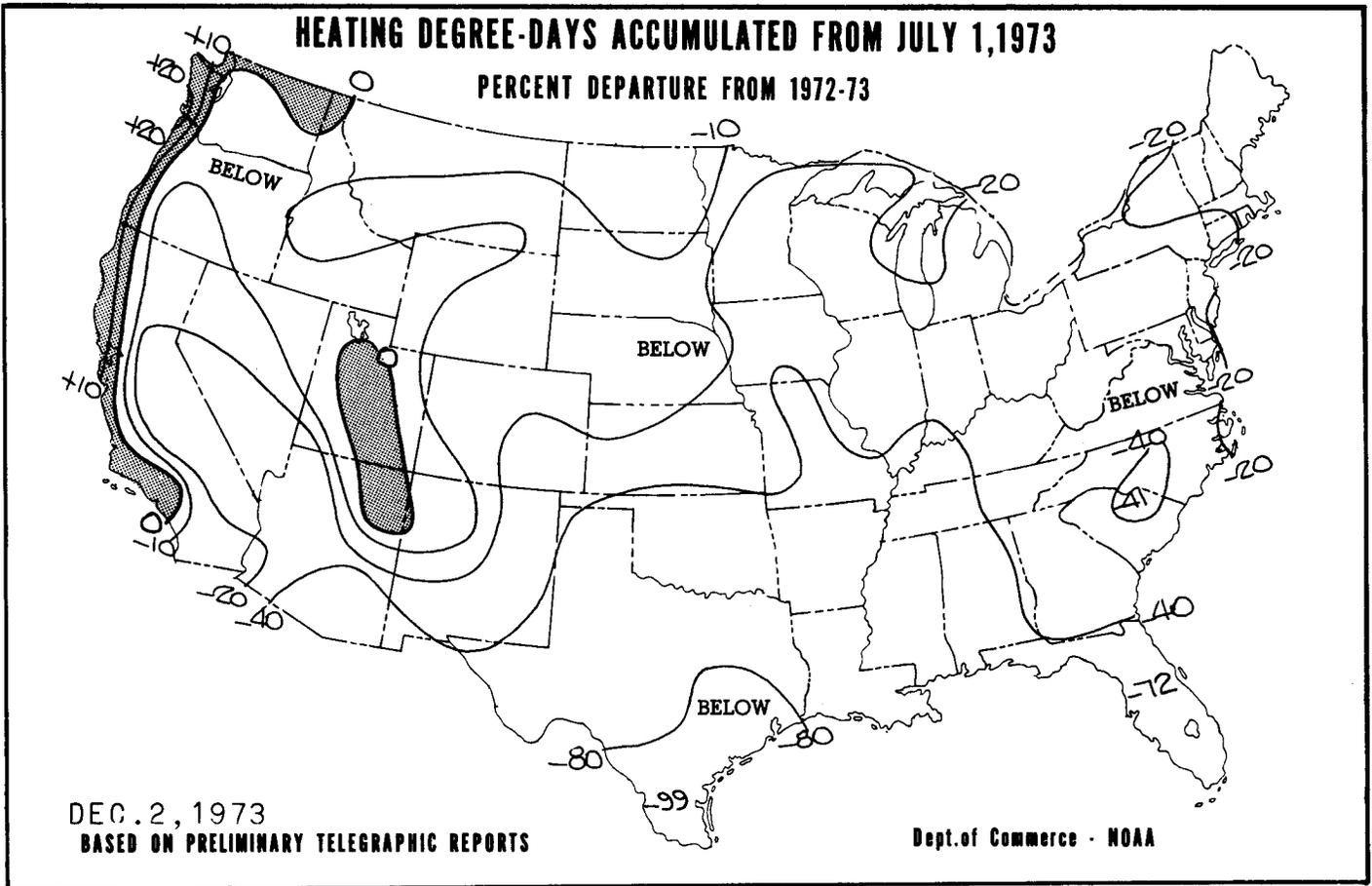
**MISSOURI:** Heavy rains south half caused local flooding in many areas. Some totals in excess of 5.00 in. to 7.00 in. Extreme north and northwest corner was generally rather dry; total rain mostly under 0.25 in. Temperatures: 5° to 10° above normal; south and Bootheel near or a little more than 10° above.

Fieldwork: 2 days suitable. Corn harvest 86% complete, 62% 1972; 77% 1968-72 average. Soybean harvest 94% complete, 59% 1972; 84% average. Grain sorghum harvest 90% complete, 67% 1972, 83% average. Cotton harvest 93% complete, 55% 1972; 83% average. Intended fall seeding and plowing 87% and 57% complete respectively. Wheat crop condition 1% poor, 30% fair, 65% good, 4% excellent. Soil moisture supply 41% adequate, 59% surplus. Motor fuel supply for current farm work reported 32% short, 68% adequate.

**MONTANA:** Warming trend; temperatures near normal central to 12° above normal southwest. Highs mostly 50's. Lows teens, except 0 to 10° north-central and northeast. Precipitation below normal except west, where north parts above normal.

Winter wheat fair to good northwest, north-central and southwest; mostly good central and southcentral; good to excellent northeast and southeast. Wind damage to winter wheat none to light. Snowcover on winter wheat poor to fair northwest, northcentral, northeast and central districts: fair southwest: poor southcentral and southeast. Grazing mostly open all areas. Stockwater short northcentral and parts of northeast and central: mostly adequate elsewhere. Nearly 70% of cattle receiving supplemental feed statewide; lightest feeding in southcentral and southeast.

(Continued on Page 12)



HEATING DEGREE DAYS - AN OUTLOOK

In addition to the series of maps describing the current heating degree-day situation this week, the 30- and 90-day temperature outlooks are included in this issue of the Bulletin. The 30-day outlook (p.11) for temperature and precipitation has been a regular feature of the Bulletin for several years. However, the 90-day outlook is published on p. 12 for the first time.

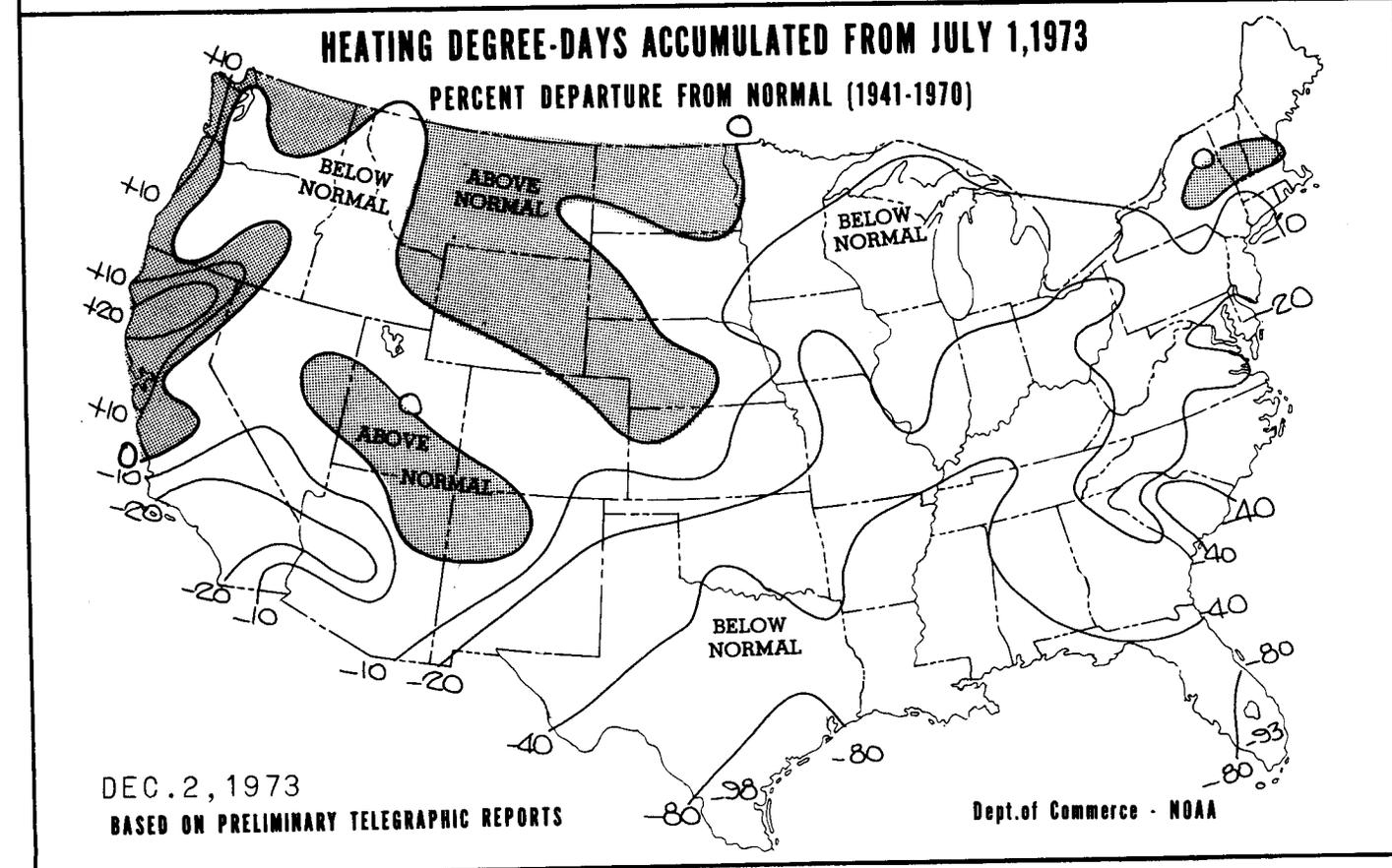
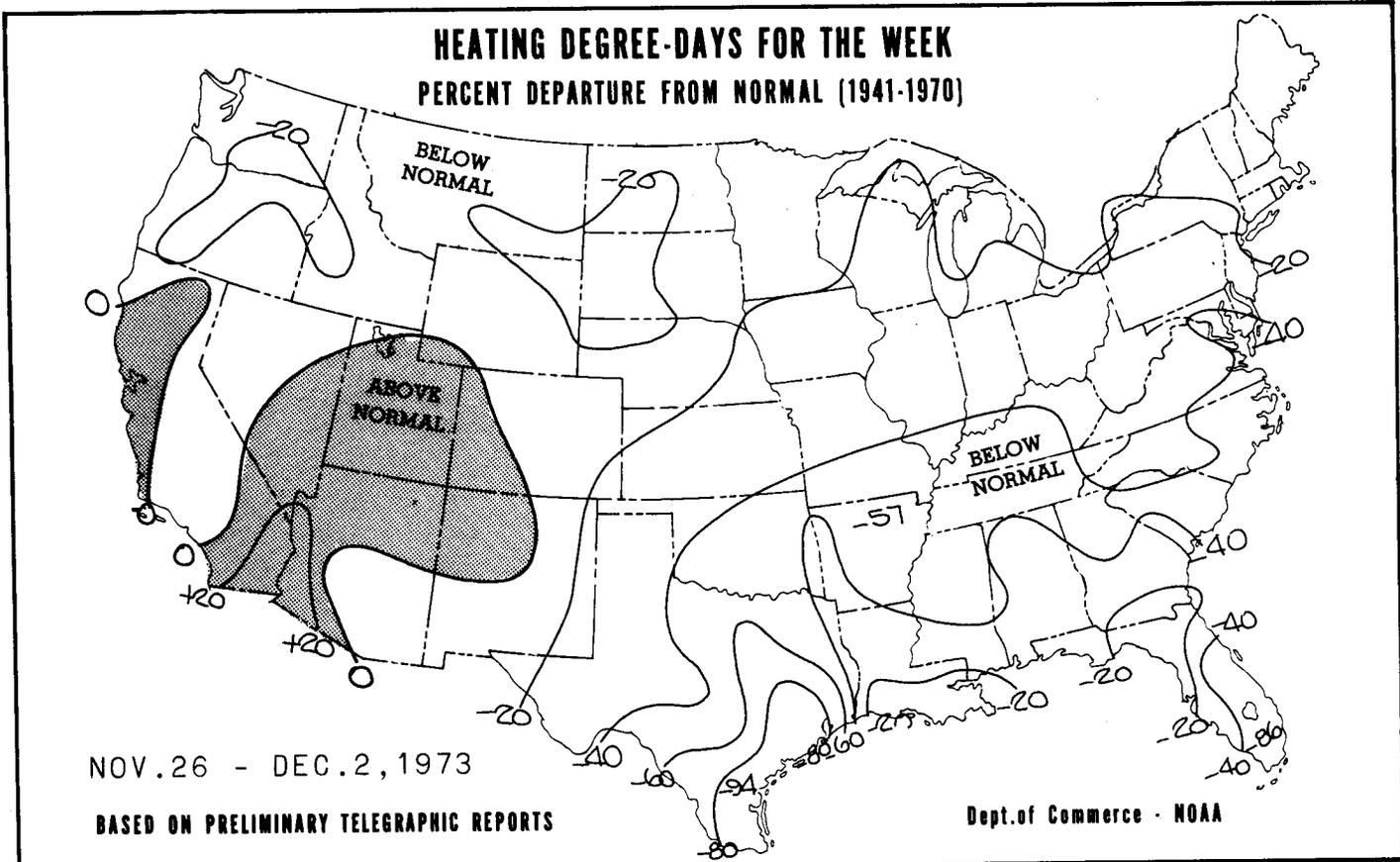
So far this season, the heating degree-day accumulations since July 1 have been below normal except in parts of the West. In other words, temperature conditions have been averaging warmer than normal. The New York-Washington megalopolis has accumulated from 10 to 20 percent less heating degree-days than normal and are running 20 to 40 percent behind last year.

The 30-day outlook calls for this pattern to persist as above normal temperatures are expected during December east of a line running from Del Rio, Texas, to Sault Ste. Marie, Mich. The south-east is expected to be much above normal. The

southern Great Plains and the western Corn Belt is expected to be about normal and the below normal temperatures are restricted to the Rockies, the Desert Southwest and California and Nevada.

The 90-day outlook cannot be as definitive because of the extended time interval involved. However, it attempts to depict areas where above or below normal conditions may be expected. The approach to making the forecast is basically statistical based on past climatology and current conditions up to the time of the forecast. As the map indicates, in some areas it is not possible to make an estimate of what might happen, so these areas are considered indeterminate.

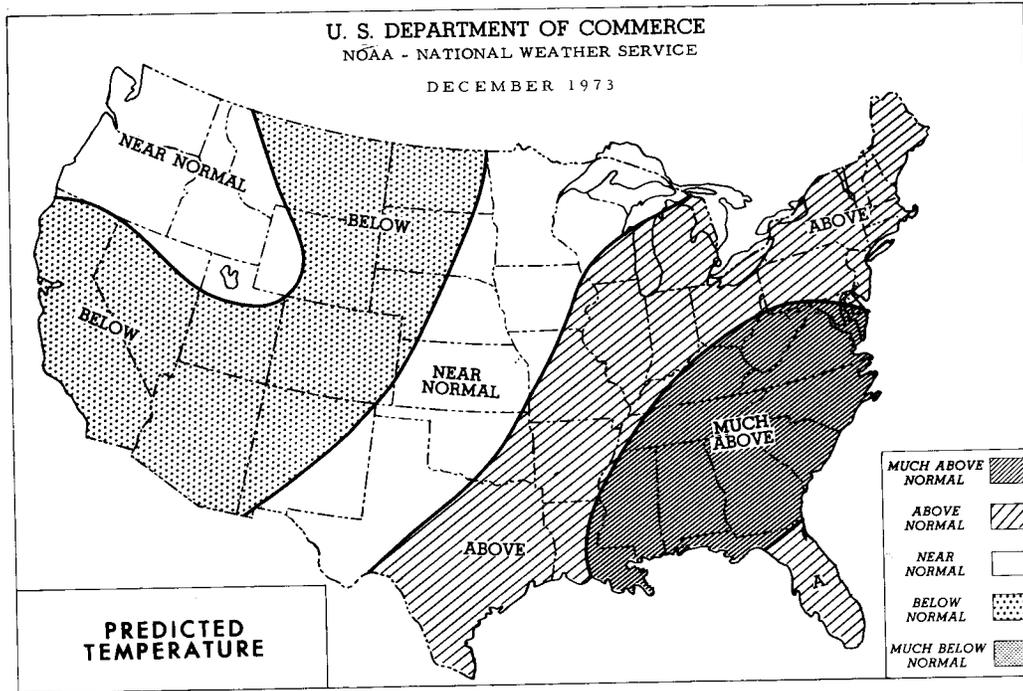
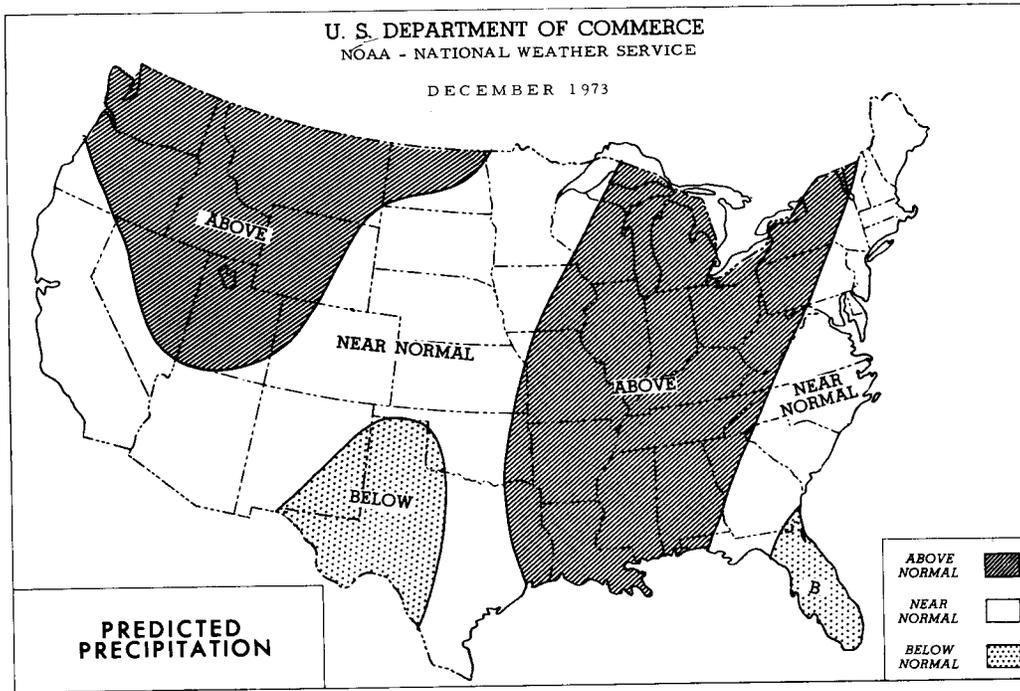
It should be remembered that these maps are forecasts and may or may not verify. However, for planning purposes they offer a best estimate of expected conditions. If these forecasts verify, the weather may provide a big boost to the problem of overcoming the expected fuel shortages this winter.



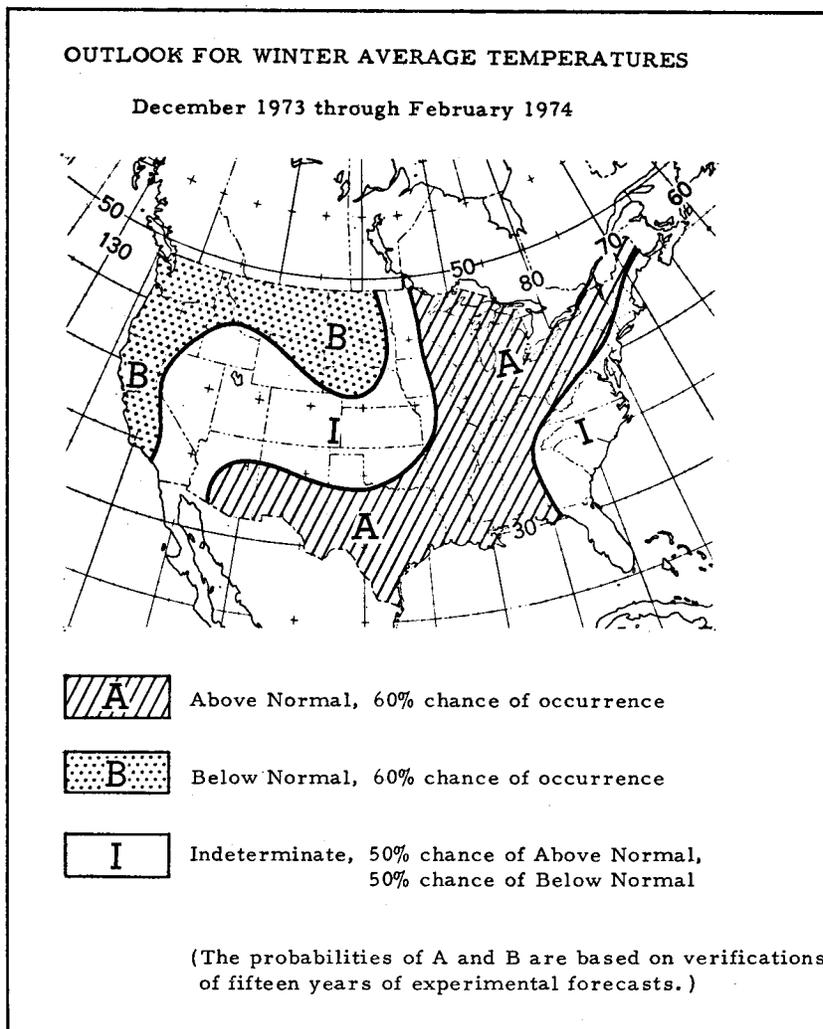
Heating Degree Days (Base 65°) For Week Ending Dec. 2, 1973

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 . . .	79	-39	387	-182	-289	Portland . . . . .	198	-30	1600	-35	-239	Tulsa . . . . .	76	-69	474	-190	-395
Mobile . . . . .	44	-24	120	-150	-232	MD.Baltimore . . . .	127	-45	824	-71	-245	OREG.Astoria . . . .	128	-15	1675	185	327
Montgomery . . . . .	62	-34	272	-155	-221	MASS.Boston . . . .	150	-30	1015	-18	-179	Burns . . . . .	219	-15	1856	39	-75
ARIZ.Flagstaff . . . .	242	15	1642	-216	-406	MICH.Alpena . . . . .	211	-40	1722	-254	-445	Medford . . . . .	124	-49	1002	-174	-228
Phoenix . . . . .	50	-16	168	-51	-94	Detroit . . . . .	173	-43	1148	-163	-452	Pendleton . . . . .	131	-56	1192	-70	-112
Tucson . . . . .	69	-2	254	-3	-222	Flint . . . . .	173	-55	1267	-231	-430	Portland . . . . .	124	-31	1091	-115	26
Winslow . . . . .	212	23	1015	34	30	Grand Rapids . . . .	180	-45	1262	-151	-452	Salem . . . . .	137	-17	1254	34	-110
Yuma . . . . .	60	16	139	17	-30	Houghton Lake . . . .	208	-48	1689	-244	-458	PA.Allentown . . . . .	145	-55	1018	-157	-379
ARK.Fort Smith . . . .	86	-49	442	-171	-435	Lansing . . . . .	179	-48	1336	-122	-522	Erie . . . . .	177	-36	1205	-228	-470
Little Rock . . . . .	58	-77	337	-292	-372	Marquette . . . . .	202	-53	1648	-227	-583	Harrisburg . . . . .	133	-56	861	-175	-297
CALIF.Bakersfield . . .	85	-8	315	-44	-153	Muskegon . . . . .	176	-42	1291	-157	-309	Philadelphia . . . . .	127	-43	779	-123	-302
Eureka . . . . .	100	-3	1653	125	214	S. Ste. Marie . . . . .	223	-47	1980	-160	-380	Pittsburgh . . . . .	152	-53	1015	-257	-411
Fresno . . . . .	94	-16	474	6	-125	MINN.Duluth . . . . .	266	-41	2187	-101	-624	Scranton . . . . .	168	-44	1286	-41	-412
Los Angeles . . . . .	45	-4	184	-20	24	Internatl Falls . . . .	282	-57	2203	-309	-443	R.I.Providence . . . .	154	-39	1154	-8	-172
Red Bluff . . . . .	118	11	575	122	-86	Minneapolis . . . . .	228	-54	1517	-290	-510	S.C.Charleston . . . .	48	-40	209	-162	-126
San Diego . . . . .	49	4	155	-64	-32	Rochester . . . . .	225	-52	1527	-253	-572	Columbia . . . . .	59	-49	285	-200	-201
San Francisco . . . . .	96	9	792	95	93	St. Cloud . . . . .	244	-52	1754	-205	-537	Greenville . . . . .	87	-42	548	-65	-164
Stockton . . . . .	106	-7	472	-13	-132	MISS.Jackson . . . . .	54	-40	250	-170	-259	S.DAK.Aberdeen . . . .	279	-13	1885	-4	-115
COLO.Denver . . . . .	168	-39	1285	-71	-273	Meridian . . . . .	58	-43	241	-231	-280	Huron . . . . .	249	-27	1675	-57	-262
Grand Junction . . . .	228	11	1088	-116	-173	MO.Columbia . . . . .	124	-65	697	-281	-477	Rapid City . . . . .	168	-74	1743	90	295
Pueblo . . . . .	165	-35	1078	-96	-361	Kansas City . . . . .	140	-51	793	-182	-385	Sioux Falls . . . . .	221	-50	1518	-177	-449
CONN.Bridgeport . . . .	137	-37	765	-160	-449	St. Louis . . . . .	136	-43	787	-125	-347	TENN.Chattanooga . . .	82	-61	551	-165	-326
Hartford . . . . .	175	-36	1126	-150	-306	Springfield . . . . .	102	-71	651	-256	-425	Knoxville . . . . .	86	-56	546	-155	-282
DEL.Wilmington . . . .	132	-43	722	-195	-282	MONT.Billings . . . . .	188	-51	1784	102	-291	Memphis . . . . .	59	-71	338	-272	-466
D.C.Washington . . . . .	90	-68	547	-214	-322	Glasgow . . . . .	288	-7	2137	86	-64	Nashville . . . . .	83	-85	434	-298	-314
FLA.Apalachicola . . . .	40	-14	100	-96	-115	Great Falls . . . . .	229	-13	2002	176	-95	TEX.Abilene . . . . .	54	-52	275	-182	-471
Daytona Beach . . . . .	23	-14	34	-75	-46	Havre . . . . .	279	-13	2197	67	-48	Amarillo . . . . .	107	-55	634	-201	-575
Ft. Myers . . . . .	12	-6	12	-38	-18	Helena . . . . .	213	-50	2236	156	-269	Austin . . . . .	26	-42	79	-185	-365
Jacksonville . . . . .	47	-9	126	-71	-85	Kalispell . . . . .	225	-40	2215	-146	-173	Brownsville . . . . .	2	-15	2	-46	-151
Key West . . . . .	0	0	0	0	0	Miles City . . . . .	230	-37	1782	-24	-249	Corpus Christi . . . . .	2	-30	2	-96	-205
Lakeland . . . . .	17	-10	26	-54	-66	Missoula . . . . .	213	-43	2027	-87	-177	Del Rio . . . . .	32	-35	72	-166	-252
Miami . . . . .	1	-6	1	-14	-2	NEBR.Grand Island . . .	211	-18	1342	1	-227	El Paso . . . . .	115	-8	414	-116	-196
Olando . . . . .	11	-16	19	-57	-49	Lincoln . . . . .	173	-52	1262	4	-248	Fort Worth . . . . .	38	-56	196	-179	-369
Tallahassee . . . . .	55	-12	169	-86	-112	Norfolk . . . . .	205	-40	1376	-88	-295	Galveston . . . . .	5	-34	15	-114	-247
Tampa . . . . .	23	-5	32	-47	-52	North Platte . . . . .	210	-28	1591	62	-286	Houston . . . . .	3	-50	30	-165	-366
W. Palm Beach . . . . .	2	-10	2	-24	-3	Omaha . . . . .	172	-63	1252	-83	-301	Lubbock . . . . .	93	-50	457	-241	-492
GA.Atlanta . . . . .	71	-55	404	-187	-245	Valentine . . . . .	191	-61	1568	-60	-387	Midland . . . . .	78	-33	338	-132	-416
Augusta . . . . .	72	-36	387	-93	-88	NEV.Ely . . . . .	252	4	2024	83	-74	Beaumont . . . . .	31	-29	90	-147	-336
Macon . . . . .	56	-39	264	-150	-152	Las Vegas . . . . .	129	14	417	-48	-177	San Angelo . . . . .	58	-37	189	-210	-369
Savannah . . . . .	51	-32	214	-124	-84	Reno . . . . .	170	-31	1396	-100	-247	San Antonio . . . . .	36	-26	84	-145	-301
IDAHO.Boise . . . . .	159	-47	1240	-121	-172	Winemucca . . . . .	192	-28	1535	-125	-164	Victoria . . . . .	9	-36	20	-132	-275
Lewiston . . . . .	162	-31	1297	-44	-65	N.H.Concord . . . . .	213	-20	1720	111	-388	Waco . . . . .	28	-53	123	-193	-420
Pocatello . . . . .	202	-35	1667	-8	-84	N.J.Atlantic City . . . .	127	-45	893	-25	-216	Wichita Falls . . . . .	55	-62	264	-232	-532
ILL.Cairo . . . . .	81	-71	504	-210	-361	Trenton . . . . .	135	-35	811	-92	-288	UTAH.Salt Lake C . . . .	217	2	1258	-94	-4
Chicago . . . . .	155	-61	1030	-153	-429	N.MEX.Albuquerque . . . .	202	24	951	59	-99	VT.Burlington . . . . .	192	-51	1659	-15	-310
Moline . . . . .	168	-58	1111	-164	-318	Roswell . . . . .	139	-19	599	-202	-323	VA.Lynchburg . . . . .	109	-52	691	-164	-280
Peoria . . . . .	160	-60	1018	-205	-462	N.Y.Albany . . . . .	188	-36	1462	-39	-297	Norfolk . . . . .	73	-54	475	-115	-167
Rockford . . . . .	173	-64	1171	-240	-397	Binghamton . . . . .	175	-58	1422	-140	-514	Richmond . . . . .	101	-47	631	-117	-224
Springfield . . . . .	136	-67	827	-264	-459	Buffalo . . . . .	171	-48	1296	-124	-373	Roanoke . . . . .	111	-53	710	-155	-347
IND.Evansville . . . . .	104	-73	662	-263	-469	New York . . . . .	135	-28	738	-96	-393	WASH.Quillayute . . . .	148	-13	2025	274	187
Fort Wayne . . . . .	155	-61	1021	-252	-451	Rochester . . . . .	158	-56	1198	-160	-355	Seattle-Tacoma . . . . .	133	-26	1353	-34	-65
Indianapolis . . . . .	126	-78	825	-304	-426	Syracuse . . . . .	176	-36	1313	-7	-282	Spokane . . . . .	200	-32	1789	40	45
South Bend . . . . .	149	-71	951	-374	-547	N.C.Asheville . . . . .	104	-56	779	-148	-162	Walla Walla . . . . .	130	-48	1127	-13	-78
IOWA.Burlington . . . .	165	-56	1003	-216	-426	Hatteras . . . . .	46	-47	297	-84	-51	Yakima . . . . .	162	-51	1531	5	-11
Des Moines . . . . .	164	-74	1037	-306	-598	Charlotte . . . . .	89	-42	520	-101	-210	W.VA.Beckley . . . . .	145	-52	1028	-252	-358
Debuque . . . . .	191	-59	1290	-251	-511	Greensboro . . . . .	109	-40	677	-101	-254	Charleston . . . . .	129	-43	815	-137	-280
Sioux City . . . . .	193	-55	1210	-225	-330	Raleigh . . . . .	74	-65	475	-215	-317	Huntington . . . . .	114	-58	720	-227	-441
KANS.Concordia . . . . .	158	-49	1010	-107	-333	Wilmington . . . . .	57	-39	285	-112	-129	Parkersburg . . . . .	126	-51	826	-140	-280
Dodge City . . . . .	145	-48	920	-90	-369	N.Dak.Bismarck . . . . .	212	-90	2152	112	-135	WIS.Green Bay . . . . .	209	-55	1523	-239	-345
Goodland . . . . .	178	-42	1444	90	-210	Fargo . . . . .	281	-29	2056	35	-177	LaCrosse . . . . .	206	-51	1303	-233	-490
Topeka . . . . .	131	-65	880	-155	-325	Williston . . . . .	299	-6	2273	148	-207	Madison . . . . .	203	-54	1458	-227	-404
Wichita . . . . .	134	-48	791	-112	-367	OHIO.Akron-Canton . . . .	139	-73	973	-311	-434	Milwaukee . . . . .	182	-63	1286	-272	-405
KY.Lexington . . . . .	108	-69	719	-231	-330	Cleveland . . . . .	96	-109	928	-316	-523	WYO.Casper . . . . .	220	-29	1845	45	-250
Louisville . . . . .	100	-76	641	-287	-341	Columbus . . . . .	139	-65	896	-289	-469	Cheyenne . . . . .	194	-40	1812	51	-309
LA.Baton Rouge . . . . .	52	-15	121	-161	-178	Cincinnati . . . . .	126	-60	746	-260	-467	Lander . . . . .	235	-34	1931	36	-223
Lake Charles . . . . .	48	-11	104	-127	-302	Dayton . . . . .	138	-65	903	-230	-442	Sheridan . . . . .	194	-58	1956	98	-100
New Orleans . . . . .	53	-5	118	-119	-239	Toledo . . . . .	169	-51	1167	-156	-452						
Shreveport . . . . .	58	-31	222	-152													

### 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.



(Continued from Page 7)

**NEBRASKA:** Temperatures below normal first 2 days, above normal rest. Very little precipitation statewide except for 0.25 to 0.75 in. east. Corn 90% harvested, 65% 1972, 95% average. Moisture 18%, same as last week, 22% 1972. Wet fields slowed harvest. Wheat mostly good; 13% excellent, 67% good, 20% fair. Soil moisture supplies generally adequate. Livestock good. Cattle grazing on harvested fields. Range and pasture, hay and forage supplies average to above average.

**NEVADA:** Precipitation varied 1.01 in. Carson City to trace Las Vegas. Extremes: 64° Hawthorne; 8° Ely. Snow depths: 7 in. Virginia City, 5 Austin, 3 Ely, 2 Carson City and 1 Reno. Greatest snow depth in Sierras 76 in. Echo Summit. Cotton harvest continues Pahrump Valley. Vegetable harvest Moapa Valley. Feed and stock water adequate to plentiful. Livestock good.

**NEW ENGLAND:** Early week Greenville and Houlton, Maine, got 4 in. snow; Livestone and Caribou, 5.00 in. rain. Bennington, Vt., reported 1.23 in. and Chatham, Mass., 1.38 in. rain. Wednesday was warmest: Providence and Quonset Point, R. I., both hit 66°. Late week, progressively colder air moving across New England with snow flurries over the north and mountain sections.

**NEW JERSEY:** Mild, temperatures averaged as much as 18° above normal on 28th, when highs reached lower 70's. Colder weekend brought temperatures below seasonal normals. East Millstone reported low of 17° December 2. Coastal precipitation averaged 0.38 in., 0.56 in. central and south interior and 0.77 in. north. Greatest: 1.31 in. New Brunswick.

**NEW MEXICO:** Snow Monday, ended Tuesday; again on Sunday except no precipitation eastcentral and southeast plains. Precipitation: Near 0.50 in. mountains from Silver City to Red River and near 0.10 in. elsewhere. Very warm days through mid and end week. Carlsbad recorded 80° Sunday. Nights quite cold. Many readings below 0° mountains. Windy eastern plains late week and generally windy Sunday.

Weather still favored harvest. Moisture needed for ranges and small grains; grain sorghum harvest almost over, cotton approaching 75%; pecan harvest picking up. Livestock - good, ranges - poor to fair.

**NEW YORK:** Temperatures averaged several degrees above normal. Tuesday and Wednesday were unseasonably mild. Some places had highs of 60° or above. Extremes: Rochester, 67°; Boonville, 12°. The weather cooled during rest of week and some morning readings fell into teens. Precipitation near

to above normal most locations. Heaviest Tuesday and Wednesday. Totals ranged from 0.21 in. Albany to 1.74 at Syracuse and 2.05 at Boonville. Late week snow flurries produced measurable amounts to the lee of Great Lakes and in some mountains.

**NORTH CAROLINA:** High temperatures broke records mainly east of mountains. Rather light precipitation except for some heavy amounts in mountains.

Soil moisture in mountains adequate, Piedmont and coastal plain short to very short. Some drought exists. Harvest of all crops well ahead previous year. Corn harvest almost over. Soybeans 89% harvested, well ahead in major producing area. Cotton 93% picked. Pasture condition sorry: 21% good, 79% fair to poor. Small grains 88% intended acreage seeded. More rain needed for proper seed germination. Sorghum grain harvest 97% complete. Lespedeza seed, 94% complete. Average work days 3.5.

**NORTH DAKOTA:** Temperatures ranged from 54° at Ft. Yates to -7° at Lamoure. Very little precipitation: most recorded at Cooperstown, which had 0.18 in. Most fell as snow. Livestock good. Some pastures and ranges still furnishing grazing, particularly in west. Roughage and grain fed. Hay supplies short and high priced some areas. Grain hauled when boxcars available. Marketing of calves and lambs progressing normally.

**OHIO:** Frequent rains 26th through 28th accumulated to over 1.00 in. many areas; heaviest over central and south. Minor flooding south half. Streams and rivers rose to bank full or higher. Generally fair weather from 30th to 2nd. Mild most of week except for brief cool spell on 29th and 30th. Weekly temperatures continued to average well above normal.

Rain stopped all fieldwork and harvesting throughout most of State. Soft fields and lots of mud. Winter wheat has good growth and root system. Livestock good; still grazing in many areas. Farmers stripped and marketed tobacco, maintained machinery and cared for livestock.

**OKLAHOMA:** Temperatures ranged from near normal panhandle to much above east, ranging from 9° above northeast to 1° above panhandle. Dry panhandle; extremely wet east. Warm and dry weekend. Small grains good; more growth than normal provided good grazing. Pecan harvest continued, some flood loss. Some progress sorghum and cotton harvests west, but wet conditions stopped crop harvest elsewhere. Pasture and range conditions remain good; livestock good to excellent. Flooding caused some livestock loss southeast counties.

**OREGON:** Rain all week. Amounts ranged 3.00 to 5.00 in. along immediate coast. Willamette Valley ranged 1.78 in. Portland to 3.95 Eugene, Medford 0.99 in. Eastern Oregon amounts generally ranged 0.30 in. to 0.90 in. Temperatures near normal. Southwestern interior valleys, portions northcentral area average temperatures 5+ degrees above normal. Maximum temperatures upper 40's to the upper 60's. Hermiston warmest, 67°. Minimum temperatures upper 30's and lower 40's west, east lows mostly teens and 20's. Baker 16°.

Continuing rains delayed carrot harvest, grain seeding. Fall sown grains showed good even stands, color. Sale of apples and pears good. Onion market strong, growers still holding. Christmas tree, holly harvest and distribution underway. Feed supplies mostly adequate.

**PENNSYLVANIA:** Cloudy, mild and wet first half, fair and cool last half. Third straight week of above normal temperatures: This week by 5° to 8° but 5° lower than last week. Daily temperatures 40's to 60's first half and teens to 40's weekend. Extremes record 70° Harrisburg Wednesday to 12° northcentral Sunday. Precipitation 0.50-1.00 in. generally with up to 1.50 in. southwest. Brisk winds and unstable air brought few snow flurries mountains Thursday and Friday. No snow or ice on ground 7:00 a.m. December 3.

**PUERTO RICO:** Very dry islandwide. Rainfall averaged only 0.19 in. or about 1.10 in. below normal. Most 0.80 in. southeast. Crop moisture conditions are rapidly becoming too dry for satisfactory crop development in parts of northwest central/interior and southwest coastal sections. Temperatures averaged 76° to 77° on coast and 71° to 72° interior divisions. Highest 91°; lowest 51°. Dry weather prevailed in all sugarcane zones and helped increase sucrose content prior to harvest. Coffee harvesting continued well with favorable weather. Tobacco plantations continued planting new crop but more rain badly needed to help planting. Pastures generally good except fair in some drier zones, where lack of rain retarded fertilizing and cultivating. Insects attacked some drier areas. Seeding and fertilizing progressed well in minor crop zones. Some areas had abundance of plantains and bananas.

**SOUTH CAROLINA:** Temperatures near 15° above normal over central, northeast, south. Mountains, northcentral, and northwest averaged 8 to 10° above normal. It cooled late week. Rainfall above normal mountains, normal westcentral, below normal elsewhere. Rain fell 25th through 28th. A weak front triggered showers until a cool front moved across 28th giving clear weather.

Soil moisture mostly short; however, adequate in northwest. Cotton 92% harvested, 87% last year. Soybeans 80% harvested, 63% last year. Pastures fair. Oats and wheat fair to good. Oats 81% planted, 77% last year; 68% emerged. Wheat 72% planted, 73% last year; 60% emerged. Sorghums 83% harvested, 75% last year. Tobacco seedbed preparation in Pee Dee. Pruning peach trees, grape vines in Piedmont.

**SOUTH DAKOTA:** Generally mild. West, including Black Hills, generally in 60's. Rapid City hit December 1 record high: 71°. Temperatures east not as high. Highs in eastern third mid-40's to mid-50's. Low 4° above 0° 27th. Only few places east, central and southeast had precipitation--amounts less than 0.05 in. Still few areas eastcentral with at least 1 in. snow cover. Livestock generally good. Some holding of livestock while good weather continues.

**TENNESSEE:** Severe weather and flooding Tuesday and early Wednesday. Rainfall widespread with amounts commonly ranging from 4.00 in. to 7.00 in. Fair, dry and cooler latter part of week. Temperatures: From 13° above normal west to about 6° above east. Cotton and soybean harvest over 90% completed; corn nearing 100%. Wet ground will delay picking last fields. Tobacco crop nearly all stripped and ready for sale. Auction sales active. Crop quality good. Wet, warm weather favored germination and growth of fall-sown grains, which are excellent. Pastures still growing and giving good feed.

**TEXAS:** Strong, northerly winds early week; snow flurries in north panhandle Tuesday. By midweek,

cold dry air covered most of State. Night temperatures near or below freezing over all but coastal sections. However, sunny skies combined with warm southwesterly winds late week to produce warming. A record temperature was set on Sunday at El Paso with a reading of 80°. Weekly temperatures generally averaged 4° to 12° above normal.

Crops: Corn harvest complete, sorghum, peanut harvest near completion. Cotton harvest rapid progress, rain delayed soybean harvest. Seeding wheat, oats near completion. Fields in Blacklands and east Texas too wet to plant. Critical moisture shortage on High Plains killed some dryland wheat. Grazing wheat, oats adequate to abundant from low plains southward, limited to irrigated stands on high plains. Major crops: Percent harvested on or about Nov. 30: Cotton 1973 59, 1972 44, 5-year average 52; corn 1973 100, 1972 100; sorghum 1973 99, 1972 89, 5-year average 97; soybeans 1973 72, 1972 80; peanuts 1973 97, 1972 97; rice-second cutting 1973 80, 1972 95. Major crops: Percent harvested on or about Nov. 30: Wheat 1973 99, 1972 96; oats 1973 99, 1972 97.

Vegetables: Lower Rio Grande Valley, cabbage, pepper and tomato harvest continued. Carrots and onions grew well. Some onions still being planted. In Coastal Bend, cucumber and squash harvest almost over. Spinach grew well. In San Antonio-Winter Garden area, spinach harvest continued. Carrot digging active. Supplies of peppers and tomatoes remain available even though frost burned in some places. Pecan harvest active.

Range and Livestock: Native and improved ranges continue deteriorate High Plains where moisture critically short. Dryland wheat dying some localities from short moisture and greenbugs. Irrigated wheat on High Plains furnishing fair grazing but stocking rates down considerably. From low plains south wheat, oats good growth, grazing good to excellent. Many small grainfields too wet to graze in Blacklands, East Texas but livestock condition excellent. Heavy screwworm infestations Lower Rio Grande Valley. South Texas not affected by recent cold weather.

UTAH: Scattered rain and snow early week and week-end. Moisture accumulations locally moderate to heavy. Many sections have measurable snow cover. Average temperatures 2° to 10° subnormal.

Weekend snowstorm ended field activities until next spring. Agricultural activities include: Sugar beet processing; hauling hay to livestock; sorting, grading, and marketing of potatoes, dry onions, and apples from storage; care and feeding of cattle and sheep; and processing Utah's record turkey crop.

Utah farmers are concerned about how to cope with impending shortages of fuel, fertilizer, baling wire, and other items.

VIRGINIA: Record warmth first half, turning colder second half. High temperature record broken at Richmond on 27th and 28th. Temperature extremes 83° and 19° for this date. Locally heavy rain and some extreme flooding southwest Tuesday with Wise

reporting 4.05 in. for the week. Topsoil moisture 62% adequate; 25% short, mostly southeast and southside; 13% surplus, mostly north and mountains. Days suitable for fieldwork 4.0. Corn, sorghum grain, and soybean harvest almost over. Cotton harvest over 80% complete. Liming and fertilizing active. Small grain seeding neared completion. Pastures provided good grazing. Fruit orchard pruning started.

WASHINGTON: West: Temperatures about normal. Highs 40's and 50's, lows mostly 30's and 40's. Precipitation 1.00 to 5.00 in. Minor flooding. Carrot, celery harvest near end. Fall grains, cabbage seed fields good condition. Limited pasturing. Most livestock on winter feed. Dairymen concerned about feed shortage. East: Average temperatures above normal: Central Basin highs 40's to 50's, lows 30's. Other areas highs 30's, lows 20's and 30's. Precipitation 0.20 to 1.00 in. Snowfall far east area Monday. Wet conditions interrupted sugar beet, grain corn harvest. Vineyard, orchard pruning active. Most fall grains planted. Some planting will wait for spring. Soil moisture penetration good. Fall grain stands fair to good. Livestock on winter feed with supplies short. Farmers repairing equipment, routine winter chores.

WEST VIRGINIA: Temperatures 10 to 15° above normal. Highs generally 60's, but only reached into 30's on Thursday after a cold front. Lows in 40's and 50's, dipping into 20's and 30's Friday morning. Rain over State until Thursday. Heavy rains and thundershowers early week caused flash flooding south and west. Cattle good. Mild weather allowed some livestock to remain on pasture. Fall fieldwork complete. Farmers cared for livestock and did other routine chores.

WISCONSIN: Mild weather continued. Temperatures: 6° above normal northwest to 12° above southeast. Lowest temperature, 14° Superior Friday morning. Otherwise lows in teens or 20's. Very mild week-end. Sunshine pushed temperatures into 50's central and south. Sporadic, light precipitation Monday through Tuesday night but amounts generally less than 0.33 in. Some snow fell northwest. Snow depth 4 in. Tuesday morning near Superior. A few snow flurries in extreme north Friday but generally dry from Wednesday into weekend. Corn 97% harvested, 1972 80%, normal 93%. Soybeans all harvested except for isolated fields, 1972 70%, normal 98%. A little fall plowing as mild weather keeps out frost. Soil moisture adequate to surplus.

WYOMING: Snows over much of State, heaviest northwest. Temperatures near 8° subnormal west of Divide and upper Platte drainage, near 6° above elsewhere. Highs mostly upper 30's and 40's west of Divide, upper 40's to low 60's east. Extremes: 65°, Torrington; -14° Big Piney. Relatively open weather. Livestock and ranges good. High feed costs continue as major problem for ranchers.

Standard copy for the Weekly Weather and Crop Bulletin is prepared by: Dr. Richard E. Felch, Agricultural Climatologist; Arlon M. Scott, Agricultural Statistician; John Carlin Ryan, Editor.

## WORLD WEATHER AND AGRICULTURE

RAINS REDUCE ESTIMATE OF  
AUSTRALIA'S WHEAT CROP

Further reports from Australia continue to confirm that serious damage has resulted from continued rains in New South Wales and South Australia, increasing the incidence of disease (stem rust) in the wheat crops in those two States. Victoria's crop is affected less because planting was earlier and the crop is further advanced.

Indications are that the Australian wheat crop will range between 400 million and 450 million bushels, compared with a previous USDA estimate of 485 million bushels.

Foreign Agriculture  
November 26, 1973

## CORN AND RICE PRODUCTION UP IN PHILLIPINES

The corn and rice crops for 1973-74 in the Phillipines are expected to be up markedly from the levels of 1972-73 when extensive drought greatly reduced yields. The 1973-74 corn crop is expected to be 2,200,000 metric tons, up 18% from last year due to generally improved weather condition.

Growing conditions this year are much improved in the major rice areas, despite two typhoons that hit in Central Luzon. It is thought that the upland rice crop benefitted from the rains and efforts are being made to replant some lowland rice.

OLIVE OIL PRODUCTION IN GREECE  
REDUCED BY HOT WEATHER

Olive oil production in Greece in 1973-74 is lower than last year due to extremely hot weather in late summer and the lower cycle year for some producing areas. The areas of Attica and Mytilene were particularly affected. High pecking cost may result in high abandonment.

DECIDUOUS FRUIT PRODUCTION IN SPAIN  
REDUCED BY FROST AND DROUGHT

As a result of April frosts and drought, deciduous fruit production in Spain declined 8% in 1973. Apricots, apples and figs were affected the greatest: 22.7%, 15.4%, and 14.6%, respectively. Most fruit crops were 20 to 30 days late. The April frosts, affected Aragon, Murcia, and sections of Extremadura and Andalusia.

Fruit quality is generally good to excellent due to reduced insect and disease problems as well as good sunshine. Most fruits sized fairly well despite the drought, probably because of the lighter fruit set.

## DROUGHT REDUCES SPAIN'S OLIVE CROP

Substantially below normal rainfall during most of the year has reduced the new table olive crop by 6% from last year in Spain. The districts of Andalusia and Extremadura were particularly hard hit. The only appreciable rainfall during the growing season occurred in late May and early June. The lack of moisture substantially reduced the size of this year's olives. This was particularly

true with Manzanillas and Carrasquenas, which are very small for the most part. Insect and disease damages to the new crop have been minimal.

## OUTLOOK FOR 1973/74 CROPS IN MEXICO IMPROVES

Mexico's production of all major foodgrains and feedgrains (corn, wheat, sorghum and rice) was disappointingly low during the 1972-73 crop cycle due to unfavorable weather conditions during the growing season and at harvesting time. Production setbacks and sharply increasing domestic consumption combined to necessitate record imports of corn and wheat. The greatest production deficit was in corn, followed by wheat and sorghum.

The 1973-74 outlook is for significant improvement in grain production, particularly for corn, sorghum and wheat, however, with practically no carry-in stocks and with consumption steadily increasing as a result of an annual population increase of 3.4% and rising income.

The 1973-74 corn production outlook was brightened considerably by the unusually heavy rains which covered most of Mexico's corn area during the July-August period. Most of the corn (80%) is dryland production and crop prospects had been dimmed earlier by a shortage of moisture in May and June. However, aided by the heaviest overall rainy season in Mexico's history, the corn crop now is estimated at 9.5 million M.T. Sorghum production in the dryland areas was also aided by the summer rains after hurricane Bernice has destroyed about one-fourth of the one-million ton early maturing crop in the Matamoros area.

## SWISS FALL CROP WEATHER

In September temperatures all over Switzerland were above normal, while the quantity of precipitation varied from region to region being partly above, partly below normal. In October temperatures were about 1 centigrade too low. Precipitation was 20 to 50% above average. Only in southern Switzerland temperatures were about 60 percent above normal. In the last days of October some frost occurred in the lower regions without causing notable damage to agriculture.

Sugar beet production increased 26% as the result of favorable weather conditions which permitted the beets to grow very large. The sugar content averaged only 15.9 percent, below the average of 16.4 percent.

RAINY SEASON RUNS LATE  
IN HONDURAS AND GUATEMALA

The rainy season in Honduras and Guatemala has continued to linger past its normal end and there is considerable concern about harvesting crops. In Honduras there are two bean harvests. The early harvest--July to September--was smaller than expected, but it normally accounts for only 20% of the total harvest. The heavy rainfall so late in the season could damage the prospects for the more important second crop.

In Guatemala, relatively heavy rainfall the past six months has drowned out some plantings on flat lands while benefitting those on mountain slopes.

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