

WEEKLY WEATHER AND CROP BULLETIN

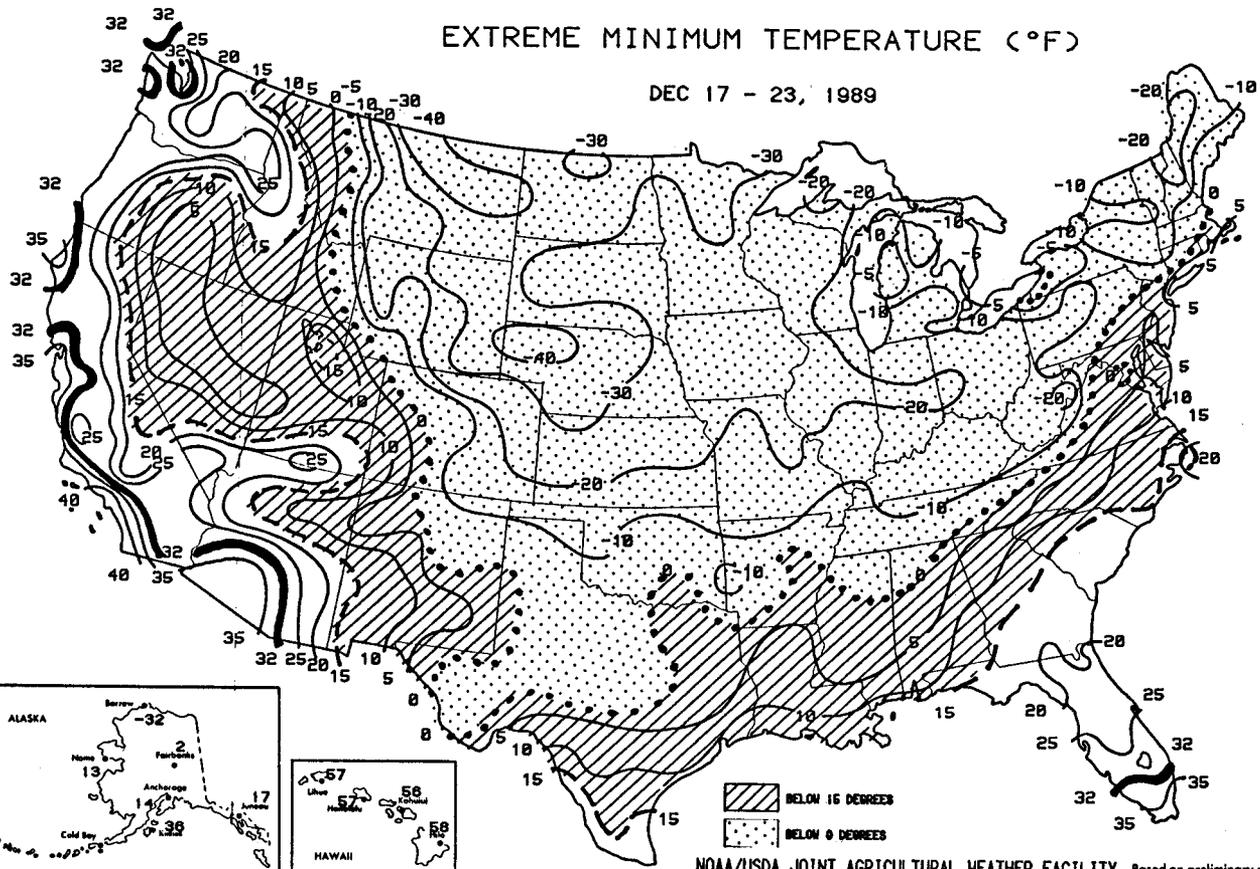
U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration, National Weather Service

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HIGHLIGHTS

December 17-23, 1989

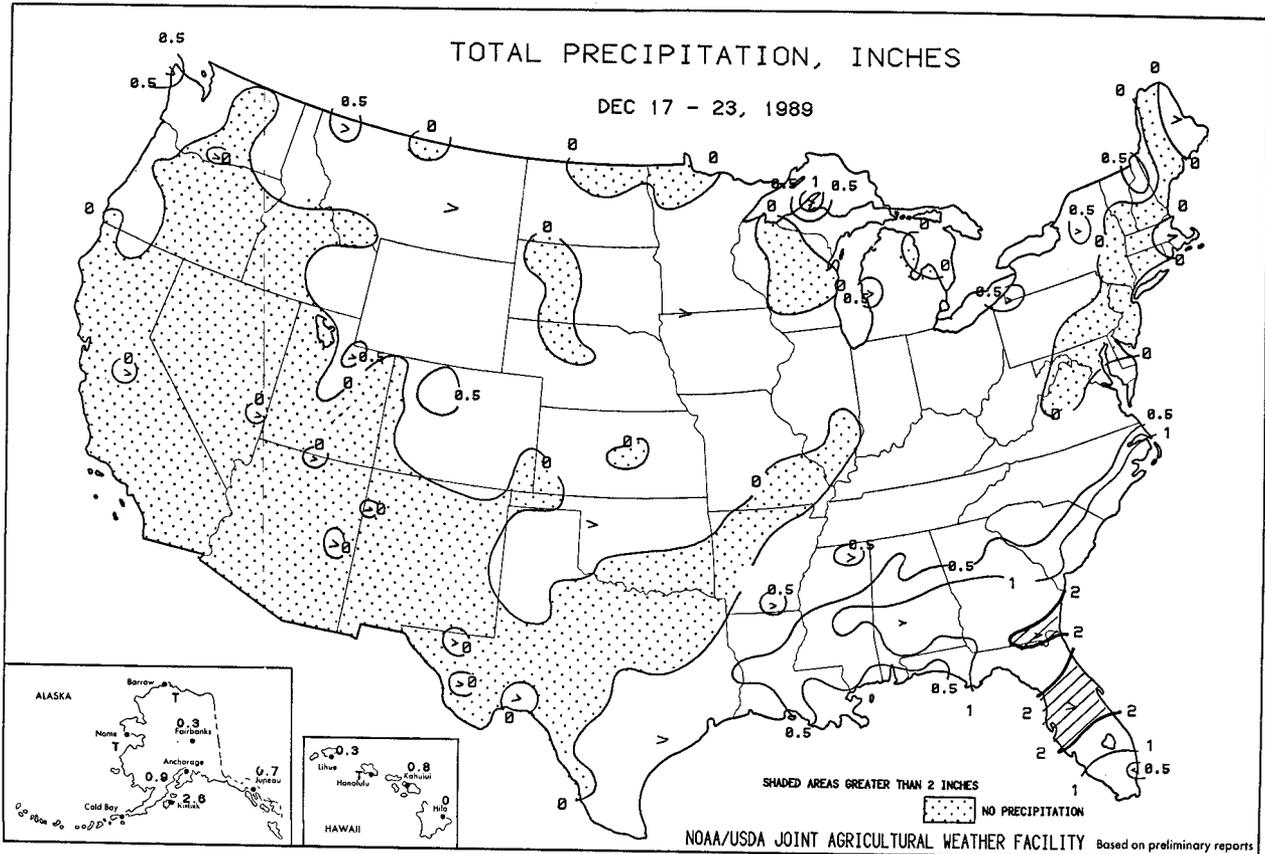
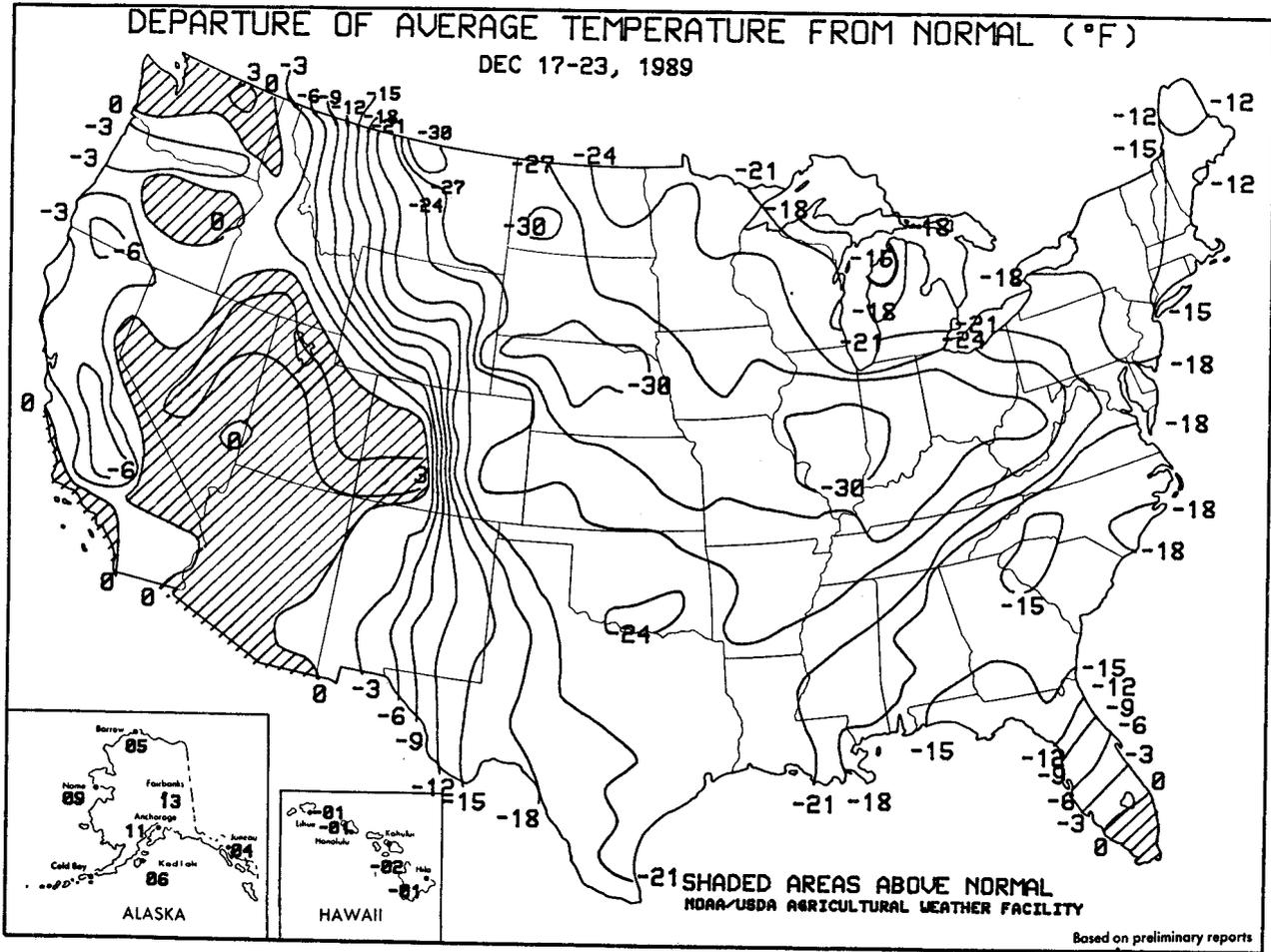
A brutal blast of polar air struck the eastern two-thirds of the country and brought in the coldest air of the season, and in some cases, the coldest on record. Friday morning temperatures of -23 degrees Fahrenheit at Kansas City, Mo, -26 at Concordia, KS, and -27 at Goodland, KS, were the lowest ever reported for these cities. Saturday morning temperatures of 11 at New Orleans, LA, -2 at San Angelo, TX, -26 at Topeka, KS, were also all-time records. At week's end, the unprecedented cold weather covered vegetables and citrus fruit in the Rio Grande Valley and was penetrating into central and southern Florida (see p.3). A total of 253 daily record-low temperatures were established east of the Rockies on Friday and Saturday, with 40 cities

(Continued to p. 12)

Contents

| | Page |
|--|------|
| Highlights & Extreme Minimum Temperature Map | 1 |
| Temperature Departure & Total Precipitation Maps | 2 |
| Record Cold Grips the South | 3 |
| Snow Cover and Average Temperature Maps | 4 |
| National Weather Data for Selected Cities | 5 |
| National Agricultural Summary | 8 |
| State Summaries of Weather and Agriculture | 9 |
| Corrected Highlights for December 10-16 | 12 |
| International Weather and Crop Summary | 13 |
| Subscription and Mailing Permit Information & Special Mexico Weather Summary | 16 |





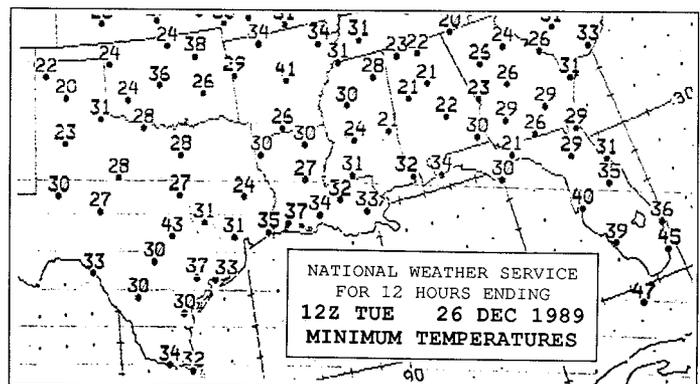
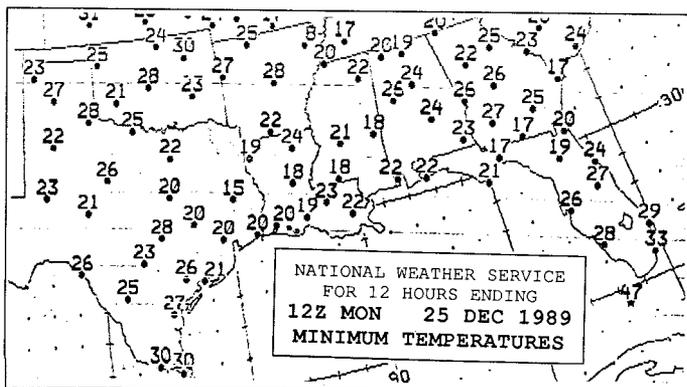
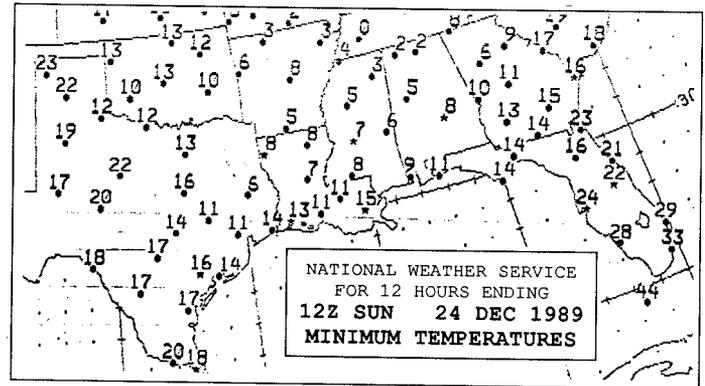
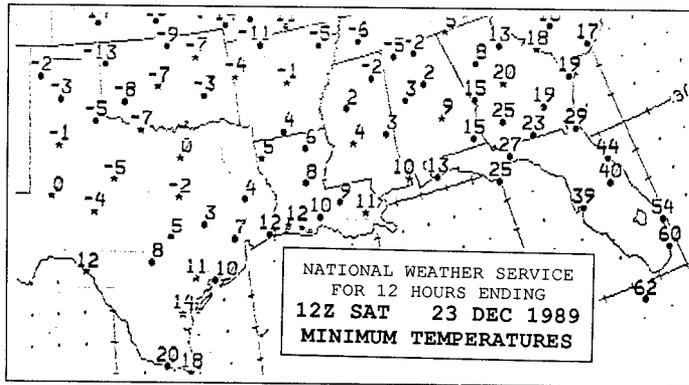
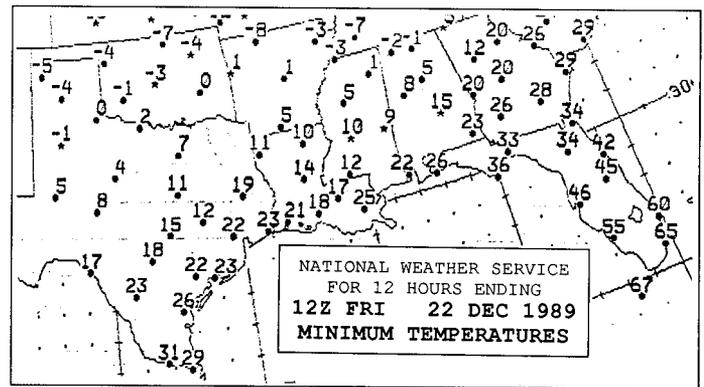
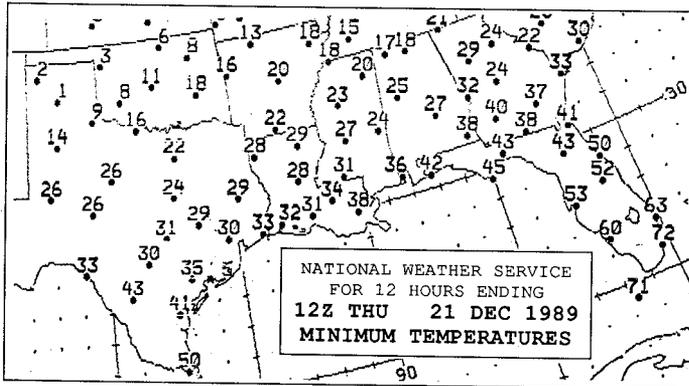
Record Cold Grips the South

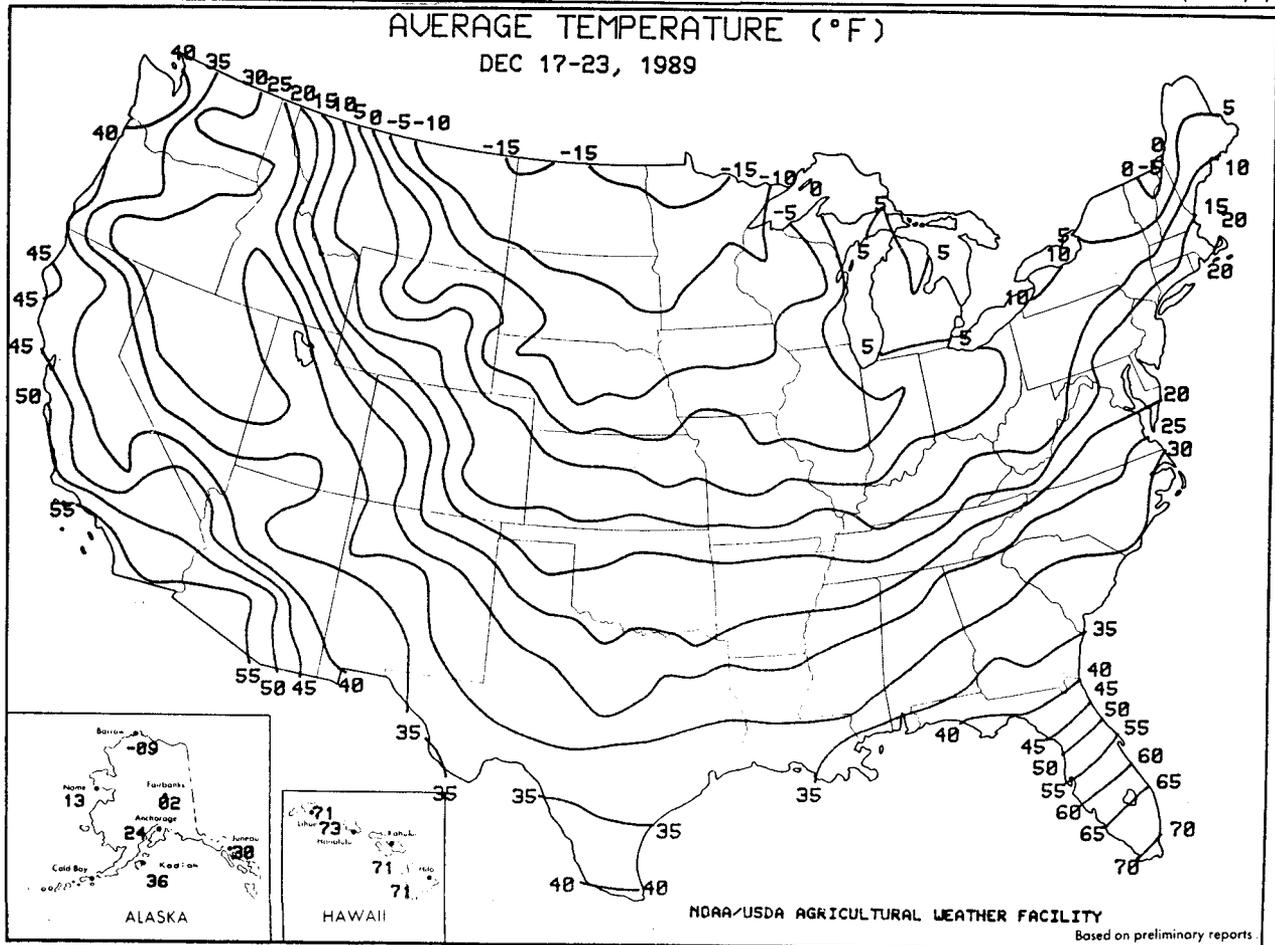
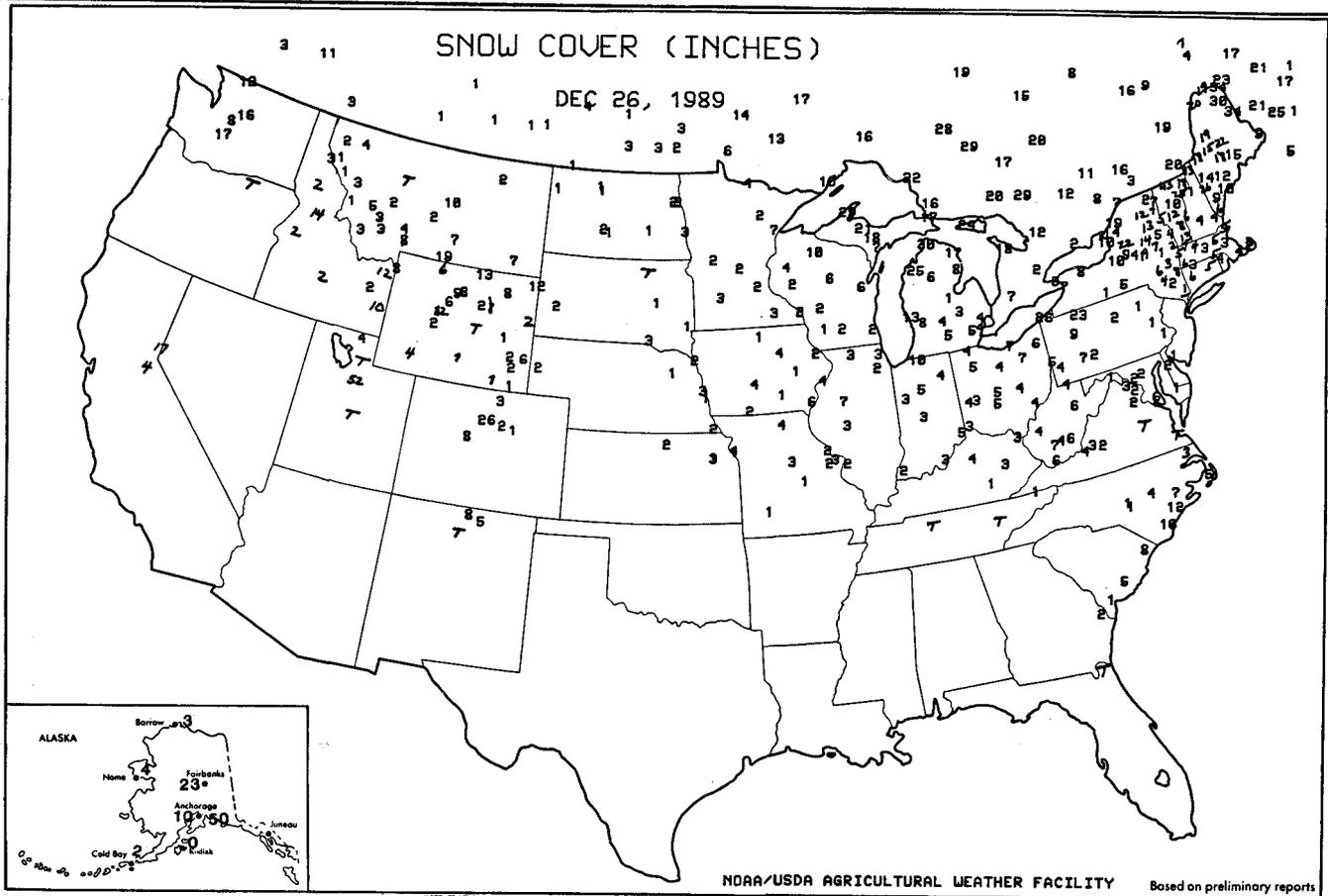
Bitter arctic air blasted the South (See figures below), causing severe damage to citrus groves and winter crops in the Rio Grande Valley and Florida. Subzero temperatures also struck the hard red winter wheat in the southern Plains unprotected by snow (See p. 9 for reports on crop damages). Many growers were just recovering from the December 1983 and January 1985 freezes (See Weekly Weather and Crop Bulletins, December 28, 1983, Vol. 70, No. 52 and January 23, 1985, Vol. 72, No. 3).

Cold weather plunged into the lower Rio Grande Valley beginning early Friday morning on December 22. By Saturday, temperatures reached 18 degrees Fahrenheit at Brownsville, TX, and did not reach above freezing again until Sunday afternoon. Except for one 3-hour period, freezing conditions remained for over 50 consecutive hours from Friday

to Sunday morning. Temperatures were at or below 26 degrees (critical temperature for fruit damage) for an 18-hour period from Friday night to Saturday and again for 12 hours from Saturday night to Sunday. Temperatures also ranged from 18 to 22 degrees (damage to mature twigs) for a 9-hour period from Saturday night to Sunday morning.

The first freeze hit central Florida on Saturday evening. Orlando reported freezing temperatures or below for a 15-hour period from Saturday night to Sunday, and again for 9 hours from Sunday night to Monday morning. Temperatures were at or below 26 degrees for 12 hours from Saturday night to Sunday morning and reached 22 degrees on Sunday morning for a short while. In southern Florida (latitude of Miami), temperatures were around 32 degrees for brief periods on both Sunday and Monday mornings.





National Weather Data for Selected Cities

Weather Data for the Week Ending December 23, 1989

| STATES AND STATIONS | TEMPERATURE °F | | | | | | PRECIPITATION | | | | | | RELATIVE HUMIDITY, PERCENT | | NUMBER OF DAYS | | | | |
|---------------------------|--------------------|--------------------|-----------------|----------------|---------|-----------------------------|----------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|----------------------------|----------------------------|--------------------|--------------------|----------------|--------------|---------------------|---------------------|
| | AVERAGE MAXIMUM | AVERAGE MINIMUM | EXTREME HIGH | EXTREME LOW | AVERAGE | DEPARTURE FROM NORMAL | WEEKLY TOTAL, IN. | DEPARTURE FROM NORMAL | GREATEST IN 24-HOUR, IN. | TOTAL, IN., SINCE Dec 1 | PCT. NORMAL, SINCE Dec 1 | TOTAL, IN., SINCE JAN 1 | PCT. NORMAL SINCE JAN 1 | AVERAGE MAXIMUM | AVERAGE MINIMUM | TEMPERATURE °F | | PRECIPITATION | |
| | | | | | | | | | | | | | | | | 90 AND ABOVE | 32 AND BELOW | .01 INCH OR MORE | .50 INCH OR MORE |
| AL BIRMINGHAM | 34 | 18 | 46 | 1 | 26 | -19 | .4 | -.7 | .3 | 2.4 | 66 | 60.1 | 114 | 80 | 42 | 0 | 6 | 2 | 0 |
| MOBILE | 40 | 27 | 53 | 9 | 34 | -19 | .3 | -.9 | .3 | 4.4 | 108 | 61.1 | 97 | 84 | 57 | 0 | 4 | 3 | 0 |
| MONTGOMERY | 37 | 23 | 52 | 9 | 30 | -18 | 2.0 | .9 | 1.0 | 7.1 | 203 | 72.6 | 152 | 85 | 55 | 0 | 5 | 3 | 2 |
| AK ANCHORAGE | 28 | 21 | 34 | 14 | 24 | 11 | .9 | .7 | 1.3 | 1.3 | 158 | 27.5 | 189 | 90 | 69 | 0 | 7 | 5 | 2 |
| BARROW | 0 | -17 | 12 | -32 | -9 | 5 | T | 0 | T | .1 | 120 | 7.2 | 160 | 89 | 72 | 0 | 7 | 1 | 0 |
| FAIRBANKS | 9 | -5 | 20 | -21 | 2 | 13 | .3 | .1 | .2 | 4.5 | 94 | 10.3 | 101 | 82 | 59 | 0 | 7 | 2 | 0 |
| JUNEAU | 34 | 26 | 45 | 17 | 30 | 4 | .9 | -.2 | .5 | 4.2 | 119 | 49.9 | 96 | 87 | 73 | 0 | 6 | 3 | 0 |
| KODIAK | 39 | 33 | 43 | 30 | 36 | 6 | 2.6 | 1.4 | 1.3 | 10.1 | 248 | 59.4 | 100 | 98 | 80 | 0 | 4 | 5 | 2 |
| NOME | 21 | 4 | 28 | -5 | 13 | 9 | T | .1 | T | .6 | 120 | 20.5 | 143 | 75 | 49 | 0 | 7 | 0 | 2 |
| AZ PHOENIX | 68 | 43 | 74 | 37 | 56 | 3 | 0 | -.2 | 0 | 0 | 0 | 4.6 | 69 | 55 | 23 | 0 | 0 | 0 | 0 |
| DRESCOTT | 56 | 21 | 63 | 19 | 38 | 2 | 0 | -.4 | 0 | 0 | 0 | 9.4 | 51 | 68 | 20 | 0 | 7 | 0 | 0 |
| TUCSON | 67 | 38 | 73 | 33 | 52 | 1 | 0 | -.2 | 0 | 0 | 0 | 6.3 | 59 | 67 | 23 | 0 | 0 | 0 | 0 |
| YUMA | 70 | 45 | 74 | 39 | 58 | 2 | 0 | -.1 | 0 | 0 | 0 | 7.2 | 308 | 61 | 27 | 0 | 0 | 0 | 0 |
| AR PORT SMITH | 29 | 8 | 39 | -5 | 19 | -22 | T | -.6 | T | .2 | 8 | 46.9 | 120 | 85 | 37 | 0 | 7 | 0 | 0 |
| LITTLE ROCK | 26 | 11 | 34 | -2 | 19 | -24 | .2 | -.8 | .1 | .3 | 10 | 47.6 | 99 | 72 | 47 | 0 | 7 | 3 | 0 |
| CA BAKERSFIELD | 50 | 31 | 68 | 28 | 40 | -7 | 0 | -.1 | 0 | 0 | 0 | 2.9 | 54 | 90 | 55 | 0 | 6 | 0 | 0 |
| EUREKA | 54 | 41 | 57 | 38 | 47 | -1 | 0 | -1.4 | 0 | .6 | 13 | 25.3 | 69 | 97 | 77 | 0 | 0 | 0 | 0 |
| FRESNO | 48 | 32 | 61 | 28 | 40 | -4 | 0 | -.4 | 0 | 0 | 0 | 6.9 | 69 | 99 | 74 | 0 | 4 | 0 | 0 |
| LOS ANGELES | 69 | 48 | 85 | 46 | 59 | 2 | 0 | -.4 | 0 | 0 | 0 | 4.2 | 37 | 83 | 42 | 0 | 0 | 0 | 0 |
| REDDING | 57 | 27 | 63 | 24 | 42 | -5 | 0 | -1.6 | 0 | 0 | 0 | 29.6 | 76 | 95 | 46 | 0 | 6 | 0 | 0 |
| SACRAMENTO | 46 | 35 | 53 | 28 | 40 | -5 | 0 | -.7 | 0 | 0 | 0 | 15.1 | 94 | 100 | 81 | 0 | 2 | 0 | 0 |
| SAN DIEGO | 67 | 47 | 78 | 44 | 57 | 0 | 0 | -.5 | 0 | T | 0 | 2.7 | 29 | 84 | 41 | 0 | 0 | 0 | 0 |
| SAN FRANCISCO | 53 | 41 | 55 | 37 | 47 | -2 | 0 | -.8 | 0 | 0 | 0 | 11.4 | 62 | 97 | 72 | 0 | 0 | 0 | 0 |
| CO DENVER | 27 | -5 | 53 | -18 | 11 | -21 | .2 | -.1 | .1 | .8 | 183 | 15.4 | 103 | 89 | 46 | 0 | 7 | 3 | 0 |
| GRAND JUNCTION | 40 | 14 | 46 | 8 | 27 | 0 | 0 | -1.0 | 0 | .1 | 19 | 5.6 | 72 | 80 | 40 | 0 | 7 | 0 | 0 |
| PUEBLO | 22 | -6 | 42 | -15 | 8 | -24 | T | 0 | T | .5 | 213 | 7.4 | 68 | 88 | 56 | 0 | 7 | 1 | 0 |
| CT BRIDGEPORT | 25 | 12 | 33 | 5 | 19 | -14 | T | -.8 | T | .3 | 9 | 49.9 | 124 | 72 | 42 | 0 | 7 | 2 | 0 |
| HARTFORD | 22 | 7 | 27 | -5 | 14 | -14 | T | -.9 | T | .7 | 23 | 53.9 | 125 | 74 | 41 | 0 | 7 | 0 | 0 |
| DC WASHINGTON | 25 | 12 | 31 | 5 | 19 | -19 | T | -.7 | T | .8 | 35 | 49.0 | 129 | 72 | 44 | 0 | 7 | 0 | 0 |
| FL APALACHICOLA | 48 | 36 | 60 | 17 | 42 | -12 | 1.0 | -.2 | .7 | 5.6 | 218 | 56.9 | 105 | 94 | 66 | 0 | 2 | 4 | 1 |
| DAYTONA BEACH | 60 | 44 | 73 | 23 | 52 | -7 | 2.4 | 1.9 | .9 | 3.9 | 239 | 44.6 | 93 | 95 | 77 | 0 | 1 | 6 | 2 |
| JACKSONVILLE | 46 | 35 | 55 | 24 | 41 | -14 | 1.8 | 1.2 | 1.0 | 3.3 | 189 | 51.3 | 101 | 91 | 75 | 0 | 3 | 5 | 1 |
| KEY WEST | 78 | 66 | 82 | 52 | 72 | 1 | .7 | -.3 | .4 | 1.8 | 134 | 31.3 | 81 | 98 | 76 | 0 | 0 | 2 | 0 |
| MIAMI | 79 | 61 | 87 | 36 | 70 | 2 | .3 | -.1 | .2 | .6 | 46 | 42.6 | 75 | 98 | 68 | 0 | 0 | 3 | 0 |
| ORLANDO | 61 | 47 | 78 | 24 | 54 | -7 | 2.4 | 2.0 | .9 | 4.5 | 323 | 45.6 | 93 | 96 | 78 | 0 | 1 | 6 | 3 |
| TALLAHASSEE | 45 | 33 | 57 | 18 | 39 | -14 | 1.5 | .4 | .9 | 3.6 | 108 | 62.6 | 99 | 93 | 61 | 0 | 3 | 6 | 1 |
| TAMPA | 60 | 48 | 71 | 28 | 54 | -7 | 2.3 | 1.8 | 1.0 | 4.7 | 301 | 43.6 | 95 | 97 | 76 | 0 | 1 | 6 | 2 |
| WEST PALM BEACH | 77 | 57 | 88 | 31 | 67 | 0 | 1.8 | 1.3 | 1.1 | 1.9 | 118 | 38.6 | 65 | 98 | 66 | 0 | 1 | 4 | 2 |
| GA ATLANTA | 34 | 21 | 44 | 8 | 28 | -16 | .3 | -.7 | .2 | 3.7 | 121 | 62.5 | 132 | 80 | 51 | 0 | 7 | 2 | 0 |
| AUGUSTA | 38 | 25 | 52 | 17 | 32 | -14 | .5 | -.2 | .3 | 4.0 | 177 | 48.5 | 116 | 86 | 45 | 0 | 6 | 3 | 0 |
| MACON | 37 | 25 | 46 | 15 | 31 | -17 | 1.2 | -.2 | .6 | 7.2 | 248 | 49.8 | 114 | 81 | 57 | 0 | 6 | 3 | 1 |
| SAVANNAH | 39 | 29 | 53 | 18 | 34 | -16 | 1.8 | 1.2 | .9 | 5.0 | 252 | 46.5 | 96 | 86 | 56 | 0 | 4 | 5 | 1 |
| HI HILO | 80 | 61 | 83 | 58 | 71 | -1 | 0 | -2.8 | 0 | 1.4 | 14 | 161.9 | 130 | 91 | 53 | 0 | 0 | 0 | 0 |
| HONOLULU | 81 | 64 | 83 | 57 | 73 | -1 | T | -.8 | T | 1.3 | 54 | 22.9 | 103 | 92 | 58 | 0 | 0 | 1 | 0 |
| KAHULUI | 79 | 62 | 84 | 56 | 71 | -2 | .8 | -.1 | .7 | 4.2 | 221 | 39.9 | 230 | 96 | 64 | 0 | 0 | 2 | 1 |
| LIHUE | 79 | 63 | 83 | 57 | 71 | -1 | .3 | -1.0 | .3 | 1.8 | 46 | 54.7 | 129 | 92 | 58 | 0 | 0 | 1 | 0 |
| ID BOISE | 41 | 18 | 49 | 15 | 30 | -2 | 0 | -.3 | 0 | .1 | 11 | 10.5 | 94 | 90 | 49 | 0 | 7 | 0 | 0 |
| LEWISTON | 41 | 30 | 45 | 30 | 36 | 1 | .1 | -.3 | .1 | .2 | 16 | 13.5 | 108 | 82 | 65 | 0 | 7 | 1 | 0 |
| POCATELLO | 36 | 13 | 43 | 3 | 25 | -1 | T | -.2 | T | .1 | 10 | 9.5 | 92 | 87 | 51 | 0 | 7 | 1 | 0 |
| IL CHICAGO | 9 | -5 | 16 | -14 | 2 | -24 | .1 | -.4 | .1 | .2 | 11 | 29.2 | 87 | 78 | 52 | 0 | 7 | 3 | 0 |
| MOLINE | 6 | -12 | 17 | -24 | -3 | -28 | .3 | -.2 | .1 | .5 | 35 | 31.7 | 87 | 88 | 57 | 0 | 7 | 3 | 0 |
| PEORIA | 7 | -13 | 15 | -23 | -3 | -30 | .3 | -.2 | .1 | .7 | 45 | 22.4 | 65 | 83 | 60 | 0 | 7 | 3 | 0 |
| QUINCY | 9 | -12 | 18 | -22 | -1 | -30 | .2 | -.2 | .1 | .4 | 28 | 18.0 | 48 | 80 | 57 | 0 | 7 | 3 | 0 |
| ROCKFORD | 4 | -10 | 17 | -20 | -3 | -26 | .1 | -.3 | .1 | .2 | 15 | 25.9 | 72 | 84 | 59 | 0 | 7 | 3 | 0 |
| SPRINGFIELD | 9 | -12 | 17 | -21 | -1 | -30 | .2 | -.3 | .1 | .3 | 16 | 27.7 | 83 | 84 | 59 | 0 | 7 | 3 | 0 |
| IN EVANSVILLE | 15 | -6 | 27 | -15 | 4 | -30 | T | -.8 | T | .3 | 11 | 46.3 | 114 | 85 | 54 | 0 | 7 | 1 | 0 |
| FORT WAYNE | 10 | -10 | 20 | -18 | 0 | -28 | .1 | -.4 | .1 | .4 | 19 | 34.5 | 102 | 83 | 65 | 0 | 7 | 3 | 0 |
| INDIANAPOLIS | 13 | -12 | 21 | -23 | 1 | -30 | .2 | -.5 | .2 | .7 | 30 | 49.3 | 129 | 85 | 57 | 0 | 7 | 2 | 0 |
| SOUTH BEND | 12 | -6 | 21 | -13 | 3 | -25 | .4 | -.2 | .2 | 1.2 | 57 | 35.5 | 96 | 90 | 74 | 0 | 7 | 4 | 0 |
| IA DES MOINES | 5 | -10 | 15 | -22 | -2 | -27 | .4 | -.1 | .2 | .5 | 63 | 29.1 | 96 | 78 | 56 | 0 | 7 | 5 | 0 |
| STOUC CITY | 2 | -17 | 16 | -24 | -7 | -29 | T | -.1 | T | .3 | 57 | 19.2 | 76 | 71 | 56 | 0 | 7 | 2 | 0 |
| WATERLOO | 2 | -15 | 13 | -25 | -6 | -27 | .1 | -.2 | 0 | .1 | 11 | 19.5 | 60 | 83 | 61 | 0 | 7 | 3 | 0 |
| KS CONCORDIA | 11 | -9 | 21 | -26 | 1 | -29 | .3 | -.1 | .2 | .4 | 74 | 24.7 | 92 | 83 | 61 | 0 | 7 | 2 | 0 |
| DODGE CITY | 20 | -3 | 35 | -21 | 8 | -24 | .1 | 0 | .1 | .4 | 105 | 20.6 | 102 | 86 | 59 | 0 | 7 | 2 | 0 |
| GOODLAND | 21 | -11 | 43 | -27 | 5 | -25 | .1 | 0 | .1 | .3 | 90 | 18.1 | 113 | 90 | 66 | 0 | 7 | 2 | 0 |
| TOPEKA | 13 | -11 | 26 | -26 | 1 | -30 | .2 | -.1 | .2 | .6 | 62 | 38.4 | 116 | 87 | 58 | 0 | 7 | 1 | 0 |
| WICHITA | 17 | -1 | 30 | -16 | 8 | -25 | .1 | -.1 | .1 | .4 | 58 | 34.7 | 122 | 83 | 57 | 0 | 7 | 2 | 0 |
| KY BOWLING GREEN | 18 | 0 | 29 | -14 | 9 | -28 | .2 | -.8 | .2 | 1.2 | 36 | 58.4 | 122 | 92 | 61 | 0 | 7 | 1 | 0 |
| LEXINGTON | -15 | -4 | 25 | -19 | 6 | -30 | T | -.8 | T | .4 | 13 | 51.7 | 116 | 84 | 50 | 0 | 7 | 1 | 0 |
| LOUISVILLE | 18 | -1 | 28 | -15 | 9 | -28 | .1 | -.7 | 0 | .4 | 14 | 49.9 | 117 | 80 | 47 | 0 | 7 | 2 | 0 |
| LA ALEXANDRIA | 34 | 24 | 44 | 9 | 29 | -21 | .7 | -.4 | .6 | 1.3 | 37 | 56.5 | 111 | 73 | 50 | 0 | 7 | 3 | 1 |
| BATON ROUGE | 38 | 26 | 47 | 8 | 32 | -20 | .4 | -.7 | .2 | 3.6 | 96 | 84.6 | 155 | 86 | 60 | 0 | 4 | 3 | 0 |
| LAKE CHARLES | 37 | 27 | 46 | 11 | 32 | -21 | .2 | -1.0 | .1 | 1.1 | 28 | 59.4 | 113 | 87 | 56 | 0 | 5 | 4 | 0 |
| NEW ORLEANS | 41 | 30 | 51 | 11 | 36 | -19 | .3 | -.9 | .2 | 5.5 | 142 | 66.7 | 115 | 87 | 62 | 0 | 3 | 4 | 0 |

Based on 1951-80 normals

Weather Data for the Week Ending December 23, 1989

| STATES AND STATIONS | TEMPERATURE °F | | | | | | PRECIPITATION | | | | | | | RELATIVE HUMIDITY, PERCENT | | NUMBER OF DAYS | | | |
|---------------------------|--------------------|--------------------|-----------------|----------------|---------|--------------------------|----------------------|--------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------|----------------|--------------|---------------------|---------------------|
| | AVERAGE MAXIMUM | AVERAGE MINIMUM | EXTREME HIGH | EXTREME LOW | AVERAGE | DEPARTURE FROM NORMAL | WEEKLY TOTAL, IN. | DEPARTURE FROM NORMAL | GREATEST IN 24-HOUR, IN. | TOTAL, IN., SINCE Dec 1 | PCT. NORMAL SINCE Dec 1 | TOTAL, IN., SINCE JAN 1 | PCT. NORMAL SINCE JAN 1 | AVERAGE MAXIMUM | AVERAGE MINIMUM | TEMPERATURE °F | | PRECIPITATION | |
| | | | | | | | | | | | | | | | | 90 AND ABOVE | 32 AND BELOW | .01 INCH OR MORE | .50 INCH OR MORE |
| SHREVEPORT | 31 | 20 | 38 | 5 | 26 | -22 | .2 | -.6 | .2 | .4 | 13 | 58.0 | 136 | 80 | 49 | 0 | 7 | 2 | 0 |
| ME CARIBOU | 12 | -2 | 24 | -14 | 5 | -9 | .1 | -.6 | .1 | 2.2 | 92 | 32.7 | 92 | 81 | 62 | 0 | 7 | 2 | 0 |
| PORTLAND | 23 | 1 | 30 | -6 | 12 | -12 | T | -1.0 | T | 1.3 | 39 | 40.7 | 96 | 77 | 40 | 0 | 7 | 0 | 0 |
| MD BALTIMORE | 24 | 8 | 29 | 4 | 16 | -19 | T | -.8 | T | 1.3 | 49 | 50.8 | 125 | 88 | 61 | 0 | 7 | 0 | 0 |
| SALISBURY | 25 | 10 | 32 | 6 | 18 | -20 | .1 | -.8 | .1 | 2.4 | 86 | 53.2 | 120 | 79 | 48 | 0 | 7 | 1 | 0 |
| MA BOSTON | 25 | 12 | 30 | 4 | 19 | -14 | T | -1.0 | T | .3 | 10 | 41.8 | 98 | 62 | 38 | 0 | 7 | 1 | 0 |
| CHATHAM | 26 | 16 | 30 | 6 | 21 | -13 | .1 | -1.0 | .1 | .7 | 18 | 45.8 | 101 | 68 | 50 | 0 | 7 | 2 | 0 |
| MI ALPENA | 14 | -7 | 21 | -17 | 4 | -19 | T | -.4 | T | 1.0 | 70 | 21.4 | 75 | 86 | 57 | 0 | 7 | 0 | 0 |
| DETROIT | 15 | -3 | 22 | -9 | 6 | -22 | .2 | -.4 | .1 | .4 | 23 | 28.4 | 94 | 90 | 62 | 0 | 7 | 3 | 0 |
| FLINT | 14 | -3 | 20 | -12 | 5 | -20 | .1 | -.4 | .1 | .3 | 18 | 30.5 | 107 | 86 | 60 | 0 | 7 | 1 | 0 |
| GRAND RAPIDS | 15 | -1 | 23 | -11 | 7 | -19 | .2 | -.4 | .1 | .6 | 31 | 33.5 | 102 | 86 | 63 | 0 | 7 | 5 | 0 |
| HOUGHTON LAKE | 12 | -5 | 20 | -11 | 4 | -18 | .1 | -.3 | .1 | .3 | 22 | 19.6 | 71 | 86 | 64 | 0 | 7 | 4 | 0 |
| LANSING | 14 | -4 | 19 | -14 | 5 | -20 | .1 | -.5 | .1 | .3 | 15 | 30.1 | 103 | 87 | 64 | 0 | 7 | 2 | 0 |
| MARQUETTE | 8 | -10 | 16 | -21 | -1 | -18 | .2 | -.4 | .1 | 1.8 | 96 | 28.9 | 79 | 97 | 75 | 0 | 7 | 4 | 0 |
| MUSKOGON | 16 | 5 | 21 | -5 | 11 | -17 | .5 | -.1 | .1 | 1.2 | 63 | 25.3 | 82 | 90 | 70 | 0 | 7 | 2 | 0 |
| SAULT ST. MARIE | 11 | -6 | 20 | -22 | 3 | -16 | .1 | -.5 | .1 | 1.1 | 57 | 25.3 | 78 | 88 | 58 | 0 | 7 | 7 | 0 |
| MN ALEXANDRIA | -4 | -21 | 11 | -29 | -12 | -25 | .1 | -1.1 | .1 | 1.1 | 18 | 20.9 | 86 | 82 | 58 | 0 | 7 | 2 | 0 |
| DULUTH | -2 | -19 | 13 | -29 | -11 | -23 | T | -.3 | T | .2 | 24 | 25.9 | 89 | 78 | 51 | 0 | 7 | 1 | 0 |
| INT'L FALLS | -9 | -24 | 10 | -34 | -17 | -23 | T | -.2 | T | .2 | 30 | 20.7 | 87 | 77 | 57 | 0 | 7 | 0 | 0 |
| MINNEAPOLIS | 0 | -15 | 14 | -22 | -8 | -25 | .1 | -1.1 | .1 | .2 | 33 | 23.2 | 89 | 77 | 52 | 0 | 7 | 2 | 0 |
| ROCHESTER | -2 | -16 | 13 | -23 | -9 | -25 | .1 | -1.1 | .1 | .2 | 32 | 23.3 | 83 | 77 | 60 | 0 | 7 | 0 | 0 |
| MS GREENWOOD | 30 | 17 | 42 | 2 | 24 | -22 | .2 | -1.0 | .2 | .8 | 21 | 61.3 | 119 | 79 | 47 | 0 | 7 | 1 | 0 |
| JACKSON | 34 | 21 | 46 | 4 | 27 | -20 | .8 | -.5 | .6 | 2.9 | 73 | 51.3 | 102 | 82 | 53 | 0 | 6 | 3 | 1 |
| MERIDIAN | 36 | 21 | 48 | 2 | 28 | -19 | 1.0 | -.3 | .7 | 5.4 | 129 | 69.0 | 133 | 82 | 48 | 0 | 6 | 3 | 1 |
| MO CAPE GIRARDEAU | 20 | 1 | 32 | -11 | 10 | - | T | -.8 | T | .1 | 2 | 48.3 | 111 | 79 | 44 | 0 | 7 | 0 | 0 |
| COLUMBIA | 13 | -8 | 25 | -20 | 2 | -30 | .1 | -.4 | .1 | .3 | 21 | 34.2 | 94 | 84 | 57 | 0 | 7 | 2 | 0 |
| KANSAS CITY | 11 | -7 | 24 | -23 | 2 | -30 | .3 | -.1 | .2 | .6 | 50 | 37.6 | 105 | 85 | 60 | 0 | 7 | 3 | 0 |
| SAINT LOUIS | 14 | -4 | 22 | -16 | 5 | -28 | .1 | -.4 | .1 | .4 | 24 | 28.4 | 85 | 80 | 50 | 0 | 7 | 3 | 0 |
| SPRINGFIELD | 20 | -1 | 33 | -16 | 9 | -26 | .1 | -.5 | 0 | .6 | 29 | 31.3 | 80 | 83 | 55 | 0 | 7 | 2 | 0 |
| MT BILLINGS | 13 | -8 | 44 | -26 | 3 | -24 | .5 | -.3 | .3 | 1.2 | 216 | 15.2 | 104 | 79 | 62 | 0 | 7 | 5 | 0 |
| GLASGOW | -1 | -25 | 38 | -38 | -13 | -28 | T | -.1 | T | .2 | 82 | 10.2 | 95 | 80 | 64 | 0 | 7 | 3 | 0 |
| GREAT FALLS | 17 | -5 | 45 | -23 | 6 | -19 | .2 | 0 | .1 | .7 | 127 | 22.1 | 149 | 87 | 67 | 0 | 6 | 4 | 0 |
| HAVRE | 2 | -25 | 39 | -45 | -11 | -30 | T | -.1 | T | .7 | 189 | 11.9 | 103 | 82 | 58 | 0 | 7 | 0 | 0 |
| HELENA | 18 | -2 | 47 | -9 | 8 | -15 | .4 | -.2 | .2 | .5 | 107 | 12.4 | 109 | 83 | 62 | 0 | 7 | 4 | 0 |
| KALISPELL | 23 | 13 | 31 | 6 | 18 | -6 | .7 | -.3 | .3 | 2.1 | 184 | 22.1 | 144 | 92 | 64 | 0 | 7 | 6 | 0 |
| MILES CITY | 0 | -18 | 41 | -40 | -9 | -29 | T | -.1 | T | .7 | 156 | 14.4 | 103 | 76 | 47 | 0 | 7 | 1 | 0 |
| MISSOULA | 24 | 13 | 33 | 8 | 18 | -6 | .3 | 0 | .2 | .6 | 67 | 13.5 | 106 | 92 | 67 | 0 | 7 | 4 | 0 |
| NE GRAND ISLAND | 10 | -16 | 22 | -26 | -3 | -29 | .1 | 0 | .1 | .4 | 80 | 21.9 | 96 | 79 | 61 | 0 | 7 | 2 | 0 |
| LINCOLN | 8 | -15 | 19 | -23 | -3 | -28 | .1 | 0 | .1 | .5 | 110 | 23.8 | 89 | 81 | 59 | 0 | 7 | 2 | 0 |
| NORFOLK | 3 | -20 | 18 | -30 | -9 | -31 | .1 | 0 | .1 | .7 | 149 | 16.5 | 70 | 83 | 63 | 0 | 7 | 3 | 0 |
| NORTH PLATTE | 11 | -20 | 36 | -34 | -5 | -30 | .1 | 0 | .1 | .3 | 90 | 14.1 | 73 | 89 | 61 | 0 | 7 | 2 | 0 |
| OMAHA | 6 | -13 | 18 | -25 | -4 | -30 | .1 | -.1 | .1 | .4 | 71 | 22.2 | 74 | 71 | 50 | 0 | 7 | 2 | 0 |
| SCOTT'SBLUFF | 12 | -19 | 42 | -42 | -3 | -30 | .1 | 0 | .1 | .6 | 175 | 10.0 | 69 | 85 | 63 | 0 | 7 | 2 | 0 |
| VALENTINE | 7 | -23 | 40 | -39 | -8 | -31 | T | -.1 | T | .2 | 63 | 12.3 | 72 | 63 | 38 | 0 | 7 | 1 | 0 |
| NV ELY | 48 | 8 | 56 | 5 | 28 | 2 | 0 | 0 | 0 | 4 | 6.7 | 77 | 81 | 25 | 0 | 7 | 0 | 0 | |
| LAS VEGAS | 60 | 32 | 66 | 30 | 46 | 1 | 0 | 0 | 0 | 0 | 2.2 | 56 | 50 | 22 | 0 | 4 | 0 | 0 | |
| RENO | 53 | 17 | 57 | 13 | 35 | 3 | 0 | 0 | 0 | 0 | 7.3 | 107 | 87 | 26 | 0 | 7 | 0 | 0 | |
| WINNEMUCCA | 48 | 9 | 50 | 5 | 28 | -2 | 0 | 0 | 0 | .1 | 22 | 5.6 | 75 | 89 | 33 | 0 | 7 | 0 | 0 |
| NH CONCORD | 20 | -1 | 25 | -10 | 9 | -14 | T | -.8 | T | .5 | 20 | 37.9 | 106 | 76 | 44 | 0 | 7 | 0 | 0 |
| NJ ATLANTIC CITY | 25 | 8 | 30 | 1 | 17 | -19 | T | -.8 | T | 1.0 | 35 | 49.8 | 122 | 75 | 46 | 0 | 7 | 0 | 0 |
| NM ALBUQUERQUE | 46 | 19 | 52 | 9 | 33 | -2 | 0 | 0 | 0 | .3 | 69 | 5.0 | 64 | 71 | 26 | 0 | 7 | 0 | 0 |
| CLOVIS | 41 | 9 | 58 | 1 | 25 | -14 | T | -.1 | T | .5 | 119 | 14.6 | 87 | 68 | 32 | 0 | 7 | 1 | 0 |
| ROSWELL | 43 | 12 | 67 | 5 | 28 | -12 | T | -.1 | T | 0 | 6.2 | 59 | 57 | 25 | 0 | 7 | 0 | 0 | |
| NY ALBANY | 18 | 0 | 25 | -11 | 9 | -16 | T | -.7 | T | .4 | 19 | 39.4 | 113 | 82 | 48 | 0 | 7 | 0 | 0 |
| BINGHAMTON | 13 | 0 | 20 | -6 | 7 | -18 | T | -.6 | T | .9 | 41 | 38.0 | 106 | 86 | 55 | 0 | 7 | 1 | 0 |
| BUFFALO | 15 | 4 | 22 | -2 | 9 | -19 | .3 | -.4 | .2 | 1.5 | 57 | 40.3 | 111 | 89 | 64 | 0 | 7 | 3 | 0 |
| NEW YORK | 24 | 15 | 30 | 7 | 19 | -16 | T | -.8 | T | .2 | 7 | 54.0 | 130 | 67 | 40 | 0 | 7 | 0 | 0 |
| ROCHESTER | 15 | 5 | 22 | -1 | 10 | -18 | .1 | -.5 | 0 | 1.1 | 54 | 32.3 | 105 | 86 | 60 | 0 | 7 | 4 | 0 |
| SYRACUSE | 16 | 1 | 22 | -13 | 9 | -18 | .3 | -.4 | .1 | 2.5 | 37 | 35.7 | 94 | 92 | 58 | 0 | 7 | 5 | 0 |
| NC ASHEVILLE | 29 | 14 | 39 | 1 | 22 | -17 | T | -.7 | T | .9 | 107 | 59.7 | 139 | 80 | 41 | 0 | 7 | 1 | 0 |
| CHARLOTTE | 35 | 21 | 47 | 8 | 28 | -14 | .1 | -.7 | .1 | 2.5 | 100 | 48.7 | 116 | 68 | 33 | 0 | 7 | 1 | 0 |
| GREENSBORO | 30 | 16 | 44 | 5 | 23 | -16 | .1 | -.7 | .1 | 2.5 | 104 | 49.6 | 120 | 74 | 35 | 0 | 7 | 1 | 0 |
| HATTERAS | 39 | 29 | 46 | 22 | 34 | -14 | 1.4 | .4 | .8 | 5.5 | 170 | 89.7 | 165 | 89 | 59 | 0 | 5 | 4 | 2 |
| NEW BERN | 34 | 22 | 46 | 15 | 28 | -18 | 1.5 | .6 | .9 | 5.4 | 200 | 63.2 | 121 | 86 | 42 | 0 | 7 | 2 | 2 |
| RALEIGH | 31 | 19 | 46 | 10 | 25 | -16 | T | -.7 | T | 2.5 | 112 | 53.3 | 131 | 73 | 36 | 0 | 7 | 1 | 0 |
| WILMINGTON | 36 | 23 | 50 | 15 | 29 | -18 | 1.2 | .5 | .8 | 6.6 | 261 | 66.2 | 126 | 91 | 56 | 0 | 7 | 4 | 1 |
| ND BISMARCK | -3 | -26 | 38 | -35 | -14 | -28 | .1 | 0 | .1 | .2 | 64 | 11.3 | 75 | 79 | 58 | 0 | 7 | 1 | 0 |
| FARGO | -7 | -21 | 15 | -27 | -14 | -25 | T | -.1 | T | .1 | 16 | 19.0 | 99 | 77 | 61 | 0 | 7 | 1 | 0 |
| GRAND FORKS | -6 | -22 | 15 | -28 | -14 | -23 | T | -.1 | T | .1 | 18 | 11.5 | 64 | 74 | 52 | 0 | 7 | 1 | 0 |
| WILLISTON | -2 | -27 | 38 | -37 | -14 | -28 | .1 | 0 | .1 | .3 | 83 | 11.4 | 86 | 78 | 58 | 0 | 7 | 3 | 0 |
| OH AKRON-CANTON | 13 | -4 | 22 | -15 | 4 | -25 | .1 | -.5 | .1 | .8 | 39 | 38.0 | 109 | 84 | 57 | 0 | 7 | 3 | 0 |
| CINCINNATI | 15 | -7 | 25 | -20 | 4 | -29 | T | -.6 | T | .6 | 25 | 48.3 | 123 | 83 | 46 | 0 | 7 | 3 | 0 |
| CLEVELAND | 14 | -5 | 22 | -15 | 5 | -26 | .1 | -.5 | .1 | 1.0 | 47 | 43.2 | 125 | 84 | 58 | 0 | 7 | 3 | 0 |
| COLUMBUS | 14 | -7 | 23 | -17 | 4 | -27 | T | -.6 | T | .6 | 31 | 42.6 | 118 | 84 | 53 | 0 | 7 | 1 | 0 |

Weather Data for the Week Ending December 23, 1989

| STATES AND STATIONS | TEMPERATURE °F | | | | | PRECIPITATION | | | | | | RELATIVE HUMIDITY, PERCENT | | NUMBER OF DAYS | | | | |
|---------------------------|--------------------|--------------------|-----------------|----------------|-------------------------------------|----------------------|--------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------|--------------------|-----------------|-----------------|------------------------|------------------------|
| | AVERAGE MAXIMUM | AVERAGE MINIMUM | EXTREME HIGH | EXTREME LOW | AVERAGE DEPARTURE FROM NORMAL | WEEKLY TOTAL, IN. | DEPARTURE FROM NORMAL | GREATEST IN 24-HOUR, IN. | TOTAL, IN., SINCE Dec 1 | PCT. NORMAL SINCE Dec 1 | TOTAL, IN., SINCE JAN 1 | PCT. NORMAL SINCE JAN 1 | AVERAGE MAXIMUM | AVERAGE MINIMUM | 90 AND ABOVE | 52 AND BELOW | .01 INCH OR MORE | .50 INCH OR MORE |
| DAYTON | 13 | -7 | 21 | -20 | 3 | | | | | | | 89 | 60 | 0 | 7 | 1 | 0 | |
| TOLEDO | 12 | -6 | 22 | -19 | 2 | | | | | | | 86 | 61 | 0 | 7 | 1 | 0 | |
| YOUNGSTOWN | 14 | -4 | 23 | -12 | 5 | | | | | | | 119 | 88 | 0 | 7 | 2 | 0 | |
| OK OKLAHOMA CITY | 24 | 7 | 38 | -8 | 15 | | | | | | | 117 | 86 | 0 | 7 | 1 | 0 | |
| TULSA | 24 | 6 | 38 | -8 | 15 | | | | | | | 134 | 84 | 0 | 7 | 1 | 0 | |
| OR ASTORIA | 46 | 35 | 53 | 27 | 41 | | | | | | | 82 | 98 | 0 | 7 | 1 | 0 | |
| BURNS | 46 | 11 | 51 | 4 | 28 | | | | | | | 96 | 95 | 0 | 3 | 3 | 0 | |
| MEDFORD | 36 | 24 | 42 | 22 | 30 | | | | | | | 100 | 84 | 0 | 7 | 1 | 0 | |
| PENDLETON | 39 | 26 | 49 | 23 | 32 | | | | | | | 111 | 12.4 | 0 | 7 | 0 | 0 | |
| PORTLAND | 42 | 32 | 50 | 29 | 37 | | | | | | | 107 | 92 | 0 | 7 | 0 | 0 | |
| SALEM | 41 | 33 | 58 | 31 | 37 | | | | | | | 70 | 28.9 | 0 | 5 | 2 | 0 | |
| PA ALLENTOWN | 22 | 7 | 27 | 1 | 15 | | | | | | | 11 | 44.0 | 0 | 3 | 0 | 0 | |
| ERIE | 17 | 8 | 23 | 5 | 13 | | | | | | | 11 | 102 | 76 | 0 | 7 | 0 | |
| HARRISBURG | 21 | 6 | 27 | 2 | 14 | | | | | | | 90 | 41.5 | 0 | 7 | 5 | 0 | |
| PHILADELPHIA | 25 | 11 | 30 | 6 | 18 | | | | | | | 16 | 45.7 | 0 | 7 | 0 | 0 | |
| PITTSBURGH | 14 | -4 | 19 | -12 | 5 | | | | | | | 22 | 48.1 | 0 | 7 | 0 | 0 | |
| SCRANTON | 18 | 3 | 23 | -1 | 11 | | | | | | | 60 | 41.2 | 0 | 7 | 0 | 0 | |
| RI PROVIDENCE | 24 | 10 | 29 | 2 | 17 | | | | | | | 12 | 38.2 | 0 | 7 | 1 | 0 | |
| SC CHARLESTON | 38 | 27 | 52 | 17 | 32 | | | | | | | 25 | 55.1 | 0 | 7 | 2 | 0 | |
| COLUMBIA | 37 | 24 | 51 | 16 | 31 | | | | | | | 209 | 55.3 | 0 | 7 | 5 | 2 | |
| FLORENCE | 36 | 23 | 49 | 16 | 29 | | | | | | | 195 | 51.4 | 0 | 7 | 2 | 0 | |
| GREENVILLE | 35 | 21 | 49 | 10 | 28 | | | | | | | 196 | 51.0 | 0 | 7 | 3 | 1 | |
| SD ABERDEEN | -1 | -21 | 22 | -27 | -11 | | | | | | | 119 | 49.3 | 0 | 7 | 1 | 0 | |
| HURON | 2 | -21 | 27 | -28 | -9 | | | | | | | 39 | 18.5 | 0 | 7 | 1 | 0 | |
| RAPID CITY | 8 | -15 | 49 | -29 | -3 | | | | | | | 50 | 14.5 | 0 | 7 | 1 | 0 | |
| SIoux FALLS | 1 | -19 | 18 | -26 | -9 | | | | | | | 221 | 13.5 | 0 | 7 | 2 | 0 | |
| TN CHATTANOOGA | 32 | 17 | 39 | 4 | 24 | | | | | | | 40 | 15.7 | 0 | 7 | 1 | 0 | |
| KNOXVILLE | 29 | 14 | 40 | 0 | 21 | | | | | | | 48 | 69.9 | 0 | 7 | 2 | 0 | |
| MEMPHIS | 24 | 9 | 33 | -4 | 17 | | | | | | | 39 | 54.7 | 0 | 7 | 2 | 0 | |
| NASHVILLE | 22 | 4 | 34 | -10 | 13 | | | | | | | 9 | 57.2 | 0 | 7 | 1 | 0 | |
| TX ABILENE | 36 | 12 | 53 | -7 | 24 | | | | | | | 23 | 27.6 | 0 | 7 | 3 | 0 | |
| AMARILLO | 31 | 4 | 51 | -8 | 17 | | | | | | | 136 | 27.6 | 0 | 7 | 0 | 0 | |
| AUSTIN | 38 | 22 | 51 | 4 | 30 | | | | | | | 5 | 25.8 | 0 | 7 | 2 | 0 | |
| BEAUMONT | 38 | 28 | 48 | 12 | 33 | | | | | | | 81 | 66.0 | 0 | 5 | 3 | 0 | |
| BROWNSVILLE | 48 | 34 | 62 | 16 | 41 | | | | | | | 81 | 66.0 | 0 | 5 | 3 | 0 | |
| CORPUS CHRISTI | 42 | 30 | 50 | 13 | 36 | | | | | | | 216 | 21.2 | 0 | 2 | 1 | 0 | |
| DEL RIO | 42 | 26 | 51 | 10 | 34 | | | | | | | 170 | 18.9 | 0 | 3 | 2 | 0 | |
| EL PASO | 53 | 27 | 61 | 9 | 40 | | | | | | | 60 | 9.1 | 0 | 4 | 0 | 0 | |
| FORT WORTH | 31 | 15 | 42 | -1 | 23 | | | | | | | 0 | 7.1 | 0 | 4 | 0 | 0 | |
| GALVESTON | 39 | 29 | 46 | 13 | 34 | | | | | | | 2 | 39.5 | 0 | 7 | 0 | 0 | |
| HOUSTON | 39 | 26 | 46 | 7 | 32 | | | | | | | 6 | 41.5 | 0 | 3 | 0 | 0 | |
| LUBBOCK | 39 | 9 | 62 | -2 | 24 | | | | | | | 14 | 56.9 | 0 | 5 | 4 | 0 | |
| MIDLAND | 44 | 14 | 65 | -1 | 29 | | | | | | | 59 | 14.8 | 0 | 7 | 1 | 0 | |
| SAN ANGELO | 40 | 14 | 61 | -4 | 27 | | | | | | | 12 | 8.0 | 0 | 7 | 0 | 0 | |
| SAN ANTONIO | 39 | 23 | 53 | 6 | 31 | | | | | | | 21 | 17.5 | 0 | 7 | 0 | 0 | |
| VICTORIA | 39 | 27 | 50 | 9 | 33 | | | | | | | 35 | 22.1 | 0 | 5 | 1 | 0 | |
| WACO | 34 | 16 | 48 | -4 | 25 | | | | | | | 58 | 25.6 | 0 | 4 | 2 | 0 | |
| WICHITA FALLS | 30 | 7 | 45 | -7 | 19 | | | | | | | 6 | 28.0 | 0 | 7 | 0 | 0 | |
| UT CEDAR CITY | 49 | 15 | 54 | 10 | 32 | | | | | | | 1 | 36.4 | 0 | 7 | 0 | 0 | |
| SALT LAKE CITY | 43 | 24 | 47 | 19 | 33 | | | | | | | 0 | 6.4 | 0 | 7 | 0 | 0 | |
| VT BURLINGTON | 14 | -4 | 20 | -15 | 5 | | | | | | | 11 | 10.7 | 0 | 7 | 0 | 0 | |
| VA NORFOLK | 31 | 21 | 42 | 12 | 26 | | | | | | | 46 | 35.5 | 0 | 7 | 3 | 0 | |
| RICHMOND | 29 | 14 | 40 | 8 | 21 | | | | | | | 86 | 49.3 | 0 | 7 | 1 | 0 | |
| ROANOKE | 27 | 9 | 34 | -2 | 18 | | | | | | | 75 | 41 | 0 | 7 | 1 | 0 | |
| WA QUILLAYUTE | 46 | 39 | 52 | 31 | 43 | | | | | | | 75 | 53.3 | 0 | 7 | 1 | 0 | |
| SEATTLE-TACOMA | 46 | 38 | 53 | 33 | 42 | | | | | | | 56 | 83.7 | 0 | 2 | 5 | 0 | |
| SPOKANE | 33 | 26 | 36 | 22 | 29 | | | | | | | 4.1 | 88 | 34.2 | 0 | 2 | 0 | |
| YAKIMA | 33 | 25 | 40 | 20 | 29 | | | | | | | 0 | 9 | 0 | 7 | 3 | 0 | |
| WV BECKLEY | 17 | -2 | 29 | -16 | 8 | | | | | | | 2 | 5.4 | 0 | 7 | 0 | 0 | |
| CHARLESTON | 19 | -1 | 31 | -12 | 9 | | | | | | | 1.2 | 50 | 42.4 | 0 | 7 | 2 | 0 |
| HUNTINGTON | 19 | 1 | 29 | -13 | 10 | | | | | | | 6 | 23 | 56.7 | 0 | 7 | 0 | 0 |
| PARKERSBURG | 16 | -5 | 26 | -16 | 6 | | | | | | | 7 | 30 | 58.4 | 0 | 7 | 3 | 0 |
| WI GREEN BAY | 4 | -13 | 15 | -20 | -5 | | | | | | | 5 | 25 | 51.9 | 0 | 7 | 0 | 0 |
| LACROSSE | 1 | -13 | 17 | -22 | -6 | | | | | | | 3 | 31 | 20.2 | 0 | 7 | 0 | 0 |
| MADISON | 6 | -8 | 19 | -18 | -1 | | | | | | | 3 | 34 | 22.8 | 0 | 7 | 1 | 0 |
| MILWAUKEE | 10 | -4 | 20 | -15 | 3 | | | | | | | 1 | 5 | 24.2 | 0 | 7 | 1 | 0 |
| WAUSAU | 1 | -15 | 17 | -25 | -7 | | | | | | | 9 | 30.2 | 0 | 7 | 2 | 0 | |
| WY CASPER | 22 | -4 | 44 | -28 | 9 | | | | | | | 16 | 22.3 | 0 | 7 | 0 | 0 | |
| CHEYENNE | 22 | -8 | 47 | -28 | 7 | | | | | | | 42 | 13.6 | 0 | 7 | 1 | 0 | |
| LANDER | 18 | -6 | 34 | -13 | 6 | | | | | | | 6 | 222 | 12.6 | 0 | 7 | 4 | 0 |
| SHERIDAN | 12 | -15 | 47 | -35 | -2 | | | | | | | 3 | 69 | 15.3 | 0 | 7 | 1 | 0 |
| | | | | | | | | | | | | 90 | 62 | 0 | 7 | 2 | 0 | |

National Agricultural Summary

December 18-24, 1989

HIGHLIGHTS: Snowcover protected winter wheat from below-normal temperatures in the central and northern Great Plains and the Corn Belt. Below-normal temperatures damaged fruit and vegetable crops in Florida and Texas. Cold temperatures stressed livestock in the Great Plains and the East.

SMALL GRAINS: Snowcover protected winter wheat from cold temperatures in the central and northern Great Plains and the Corn Belt. Cold temperatures and lack of moisture stressed winter wheat in Oklahoma and Texas. The extent of the freeze damage was still unknown. Plant growth was virtually stopped by bitter cold temperatures in the Blacklands and central area of Texas. Cold temperatures stressed small grains in portions of the Delta and Southeast, but the extent of the damage was still unknown. In California, small grain planting continued. Lack of moisture slowed growth and emergence in dryland fields.

COTTON: Cotton harvest was complete in Arizona and California. Stalk shredding and disking continued. In Texas, cotton harvest was 99 percent (%) complete, 17 percentage points ahead of the 5-year average. Light snow halted harvest in the Plains area.

OTHER FIELD CROPS: Peanut harvest was slowed by cold temperatures in south Texas. Harvest was 97% complete, equal to the average. In the Rio Grande Valley, freeze damage to sugarcane was expected to be light to moderate. In Florida, sugarcane suffered some freeze damage but the extent was unknown. In Louisiana, sugarcane harvest was slowed by cold temperatures.

FRUIT AND NUTS: In Florida, a hard freeze occurred in all the citrus producing areas. Ice was observed in fruit in all areas. The extent of the damage was still unknown. Fruit droppage in coming weeks, weather conditions, and processor use rates will affect the final amount of the crop used. In Texas, severe cold temperatures at the end of the week ended fresh market production for grapefruit and oranges in the Rio Grande Valley. Picking crews worked rapidly to salvage fruit for processing.

Temperatures fell as low as 14 degrees and remained below 26 degrees for over 12 hours, which will cause wood damage on trees. The extent of the damaged wood on trees or total tree loss was still unknown. Pecan harvest was 90% complete, 2 points ahead of normal. Weather conditions slowed harvest late in the week. Pecan harvest was complete in Mississippi. In Arizona, harvest and packing of lemons, oranges, grapefruit, and tangerines continued. The grove condition was good. Grapefruit, lemon, and tangerine harvests continued in the desert area of California. Packing of Satsuma mandarins gained momentum.

VEGETABLES: In Florida, freezing temperatures over the major vegetable producing areas caused extensive damage. Harvest prior to the freeze was very active. In Georgia, freezing temperatures may have damaged onions and winter vegetables, but the extent of the damage was unknown. Severe cold temperatures caused light to severe damage to cabbage and celery in the Rio Grande Valley of Texas. Damage to lettuce and carrots was light to moderate. In the San Antonio-Winter Garden area, harvest of cabbage and spinach continued through the midweek. Freeze damage was light. Damage to onions in both the Rio Grande Valley and the San Antonio-Winter Garden area was still unknown. Mixed vegetable harvests continued in Arizona. In California, cauliflower supplies declined seasonally in the Central Coast area. Desert lettuce harvest continued at a slow pace. Onion and garlic planting continued in the Westside area.

PASTURES AND LIVESTOCK: Subzero temperatures stressed livestock in the central and northern Great Plains and the Corn Belt. Below-normal temperatures stressed livestock and slowed pasture growth in the southern Great Plains, Delta, and Southeast.

State Summaries of Weather and Agriculture

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

ALABAMA: Rainfall under 0.50 in. north; under 0.75 in. central, south; over 1.00 in. local areas. Temperatures 18 to 25° below normal.

Primary activities: General care including supplemental feeds to livestock, poultry; turning harvested cropland; repairing, cleaning, storing harvest equipment.

ARIZONA: Mostly sunny, mild days; clear, cool nights. Temperatures 3° below to 3° above normal; no precipitation.

Small grains good; 80% seeded, 78% 1988, 58% avg.; 54% established, 48% 1988, 26% avg. Cotton harvest completed; stalk shredding, disking, plowing continued; fields prepared for subsequent crops. New, renovated alfalfa growing well; sheepling off continued. Harvest, packing lemons, oranges, grapefruit, tangerines continued, groves good; lettuce harvest continued west, central; market poor. Mixed vegetable harvests continued central, west. Apple shipping continued east; harvest, packing pecans continued statewide.

ARKANSAS: Record cold temperatures, mixture of frozen precipitation first part of week. Extremes -12°; 42°. Rainfall none to 0.41.

Wheat fair to good, to early to determine any damage. Livestock fair to good. Holes made in frozen ponds to provide water. Hay good. Gas supplies limited in rural areas, premium prices.

CALIFORNIA: High pressure continued dry weather pattern. Weak offshore flow brought mild conditions southern area. Persistent fog central valley kept high temperatures 40s.

Normal fall cultural practices slowed by fog. Pruning, spraying, irrigating, fertilizing active. Avocado harvest continued. Packing navel oranges progressed. Desert grapefruit, lemons, tangerine harvests continued. Packing Satsuma mandarins gained momentum. Heavy fog, cold weather most northern portions slowed field activities. Small grain seeding continued. Cool temperatures slowed emergence, growth. Moisture shortage slowed dryland emergence. Heavy dews, fog kept emerged fields fair to good, rain needed. Some new alfalfa fields seeded. Sheep grazed many alfalfa fields. Remaining cotton shredded, disced to meet pink bollworm quarantine dates. Land preparations next seasons crops active. Artichokes moderate supply good quality. Broccoli light supply, central coast. Cauliflower light supply, central coast. Seasonally declining supply, generally good quality. Desert lettuce harvest continued slow pace. Planting garlic, onions continued, westside. Livestock good. Range, pasture fair to good, north, central; fair to very poor, south. Water supplies low. Steady movement cattle to feeding areas, markets. Livestock on supplemental feed.

COLORADO: Extreme cold air settled over the State, bringing temperatures below zero over mountains, eastern plains. Precipitation trace to 0.26 in. over State. Temperatures 22° below normal over the east, near normal over the west.

Livestock care was the primary farm activity during the cold weather.

FLORIDA: Summer experienced over south early week with record cold, winter precipitation by end of period. Extremes 9°; 88°. Temperatures 20°

below normal, west to 5° below, south. Precipitation up to 1.00 in. west, 1.00 to 2.00 in. north, across Peninsula except 0.50 in. along lower east coast. Precipitation in form of snow, sleet, freezing rain 22nd, 23rd.

Panhandle soil moisture mostly adequate. Peninsula short to adequate. Winter wheat planting virtually complete. Freeze damage to sugarcane; extent undetermined. Frost, snow ended summers pastures, slowed growth of winter grazing crops northern half of State. Winter pastures very poor to fair. Many pastures southern half of State affected by cold, frost, varied from poor to good. Cattle, fair to good, experiencing some weight loss due to winter season. Hard freeze all citrus areas mornings of 24th, 25th. Ice observed in fruit all areas, heavy frost Christmas morning, southern areas. Freezing temperatures over major vegetable producing areas caused extensive damage. Few crops escaped unscathed. Harvest prior to freeze very active. Volume leaders: Tomatoes, peppers, squash, celery, cucumbers, snap beans, cabbage, sweet corn. Also available lettuce, carrots, radishes, eggplant, escarole.

GEORGIA: Cold week. Series cold fronts most significant 21st. White Christmas extreme southeast. Snow accumulations 3.00 to 5.00 in. Savannah, Brunswick 1.00 to 3.00 in. inland. No significant accumulations elsewhere. Highs low 40s mountains near 50 central low to mid 50s south. Lows lower single digits common northern half minus 6° Blairsville. Lows in teens to Florida border coastal locations. Temperatures 12 to 18° below normal. Rain 0.50 in. north, central under 0.80 in. over 1.00 in. isolated areas. 1.00 to 2.00 in. common extreme south.

Cold, wind stressed livestock, poultry. Fieldwork standstill. Farmers concerned of onions, winter vegetables, tobacco beds damage not yet determined. Soil moisture adequate to surplus.

HAWAII: Warm, dry days, cool nights. Winds continued to be variable 5 to 20 mph. Temperatures high 50s to low 80s. Rainfall none to 2.07 in.

Days suitable for farm work 7.0. Papaya production decreasing. Pineapple harvesting continuous. Some sugar mills closing for annual cleaning, repairs.

IDAHO: Precipitation well below normal with only scattered showers north, east. Temperatures on the cool side, especially east.

Some fieldwork in southwest. Potato, grain marketings were main activities. Other activities: Working in shop, financial planning, attending meetings, caring for livestock. Calving, lambing some areas. Other livestock activities: pregnancy testing, culling cows, milking, feeding hay. Adequate supplies of hay in all areas except north.

ILLINOIS: Temperatures 20 to 28° below normal across State. Precipitation 0.10 to 0.30 in. north, central, 0.10 in. or less south.

Winter wheat mostly good. Livestock good.

INDIANA: Temperatures more than 20° below normal. Lows 5 to 12° below zero, highs mid teens

to low 20s. Precipitation up to 0.10 in. Snow cover 3.00 to 5.00 in.

Scattered fields of corn, soybeans remain for harvest. Other activities: Hauling grain, spreading fertilizer, moving hay, hauling manure, processing tobacco, machinery repair, record keeping, cutting wood, care of livestock. Snow, frigid temperatures limited field activities.

IOWA: Coldest week since December 1983. Temperatures 23 to 29° below normal. Extremes -29°; 35°. Light snow scattered throughout week. Precipitation 0.03 to 0.39 in.; average 0.17 in. Record cold temperatures very stressful to livestock. Weight gains, milk production down as livestock using calories to maintain body heat.

KANSAS: Temperatures well below normal all areas. Precipitation 0.03 to 0.20 in. across State.

Snow provided blanket for wheat. Snow will provide much needed moisture for wheat crop. Livestock stressed by extreme low temperatures. Feeding increased.

KENTUCKY: Bitter cold latter half. Highs a few degrees above zero, lows 10° to 20° below zero. Morning lows below zero through weekend. Temperatures below normal, average 25° to 30° below seasonal normals. Dry, 0.10 to 0.20 in. of melted snow early. Flurries several days.

Bitter cold temperatures stressed livestock. Producers busy providing more, better feed, breaking pond ice to provide water. Light snow cover provided some winter wheat protection from sub zero temperatures. Burley sales are scheduled to resume January 8, 1990.

LOUISIANA: Temperatures 22 to 24° below normal north, 20 to 22° south. Extremes 0°; 55°. Rainfall 0.28 to 0.63 in.

Main activities: Limited sugarcane harvest due to frozen cane; caring for livestock; crawfishing; routine chores.

MARYLAND & DELAWARE: MARYLAND: Precipitation 0.04 in. Temperatures 18°, normal 36°. Extremes -17°; 47°.

DELAWARE: Precipitation trace. Temperatures 20°, normal 36°. Extremes 5°; 45°.

MICHIGAN: Temperatures 14 to 22° below normal. Extremes -21°; 23°. Precipitation none to 0.50 in. across State. Most areas received some snow. Adequate snow cover, statewide, to protect wheat, alfalfa seedings.

Major activities: Farm activities slowed by cold weather, holidays. Major activities centered on caring for livestock. Livestock remain good. Feed, roughage supplies abundant.

MINNESOTA: Low temperatures -30s, highs in single digits below zero. Wind chills as low as -80° below zero. Very little precipitation.

MISSISSIPPI: Temperatures and precipitation data unavailable.

Soil moisture adequate. Pecan harvest complete, wheat fair. Planting finished. Hay, roughage supplies adequate. Pastures, livestock fair. Record low temperatures causing ranchers to put out extra hay, supplements. Activities: Cattle feeding.

MISSOURI: Temperatures 25 to 30° below normal, 3 days record breaking cold. Light snow fell northern third, equivalent to 0.15 in. precipitation.

Extreme cold stressed livestock. Work limited to care of farm animals. Some concern about winter wheat during extreme cold, most areas had snow cover.

MONTANA: Temperatures 5 to 30° below normal, some new low records set. Most of State received some snow. Heavier amounts in northwest, south central. Precipitation none to 0.69 in.

Winter wheat 1% very poor, 2% poor, 17% fair, 60% good, 20% excellent. Snow cover protection 1% poor, 5% fair, 30% good, 64% excellent. About 90% livestock on supplemental feed. Grazing 85% difficult or closed, 15% open.

NEBRASKA: Temperatures 25° below normal. Extremes -42°; 44°. Precipitation first half of week, 0.01 in. north up to 0.04 in. southwest.

NEVADA: Strong high pressure ridge remained stationary over State throughout week. Dry, no precipitation. Temperatures near normal. Extremes 4°; 69°.

Livestock feeding operations continued favorable due to near normal temperatures, lack of snow. Good progress trucking potatoes to market.

NEW ENGLAND: Although several isolated precipitation amounts of 0.10 in. or less, precipitation was primarily limited to trace events in light snow or flurries. Temperatures near zero along the Canadian border to the teens along the south coast, well below normal for this time of year.

Major farm activities: Tending livestock, moving the last turkeys to market, shipping some stored commodities.

NEW JERSEY: Temperatures much below normal; 12° north, 15° south, 18° coastal. Extremes -9°; 32°. Precipitation below normal; none north, south, coastal. Heaviest 24 hour total 0.01 in. 20th, 21st. Heaviest 24 hour snowfall 0.01 in. on 20th, 21st. Depth of snow on ground 26th, 1.00 to 2.00 in. south to 1.00 to 3.00 in. north.

Well below normal temperatures halted outdoor activities. Farmers cared for livestock, marketed holiday items.

NEW MEXICO: Meager amounts of snow fell over the eastern plains. Extremely cold air mass resulted in well below normal temperatures Statewide.

NEW YORK: Temperatures 15 to 20° below normal. Extremes -31°; 31°. Precipitation below normal except downwind of Great Lakes. Lake effect snow dropped as much as 4.00 of snow east of Lake Ontario.

Grading, packing fruit, vegetables. Cold weather made farm chores difficult. Cut your own Christmas tree operations active during the week.

NORTH CAROLINA: Temperatures and precipitation data unavailable.

Days suitable for fieldwork 1.1. Soil moisture, 49% adequate, 51% surplus. Pasture 3% very poor, 12% poor, 50% fair, 32% good, 3% excellent. Livestock feed from pasture 38%. Crop condition: Wheat 5% poor, 29% fair, 66% good; oats 6% poor, 23% fair, 71% good; barley 33% fair, 67% good; rye 3% poor, 25% fair, 72% good; hay, roughage supplies 5% short, 82% adequate, 13% surplus. Feed grain supplies 97% adequate, 3% surplus. Activities: Cutting wood; tending livestock, general farm maintenance.

NORTH DAKOTA: Record breaking cold temperatures 31° below normal southwest to 25° below normal northeast, east central. Extremes -44° west

central; 22nd; 40° southwest, 23rd. Precipitation none east central to 0.12 in. northwest.

Soil moisture below normal. Lack of adequate snow cover combined with extreme cold temperatures caused concern for winter wheat, rye producers. Ranchers provided extra care to protect livestock. Hay, roughage supplies adequate.

OHIO: Temperatures 25° subnormal. Highs teens, lows mostly below zero. Record setting cold drove low temperatures -15 to -25°. Highs mostly 20s to some 30s south. Precipitation light with liquid equivalent totals of 0.25 in or less.

Snow covered much of State protecting winter wheat, grassland from the bitter cold winds, providing some insulation to the ground, however soil temperatures were below freezing in most places.

OKLAHOMA: Temperatures 25° below normal southeast to 20° below normal Panhandle. Precipitation none most areas to 0.02 in. central.

Farmers assessing potential freeze damage to small grains, orchards. Cold weather stressed cattle, caused supplemental feeding. Moisture needed Statewide for winter crops.

OREGON: Temperatures quite cool west; 3° below normal Willamette Valley, 7 to 9° below normal southwest. Temperatures within 2° of normal east, except Enterprise 3° above normal. Spotty precipitation across State; most occurred at coast. Greatest precipitation was 0.32 in. Astoria.

Soil moisture mostly short. Very little snow cover southeast. Winter wheat fair to good. Cereal grains look good Willamette Valley. Orchard pruning underway. Potato, onion packing continued. Livestock fair to good. Many cattle on winter pasture, feeding grounds, some hay being fed. Weaning pretty well finished. Range, pasture fair to good. Some fall green up due to mild winter southeast. Some late seeding of range, CRP ground.

PENNSYLVANIA: Temperatures very cold for the entire State, light precipitation most of State. Temperatures 9°, 21° below normal. Extremes -20°; 30°. Precipitation 0.09 in., 0.61 in. below normal.

Activities: Spreading manure, fertilizer; caring for livestock; maintaining machinery, grading potatoes.

PUERTO RICO: Rainfall 0.20 in. was 0.78 in. below normal. Rainfall 1.74 in. Quebradillas, 0.92 in. San Juan City, 0.67 in. Guayama. San Juan WSFO mean temperature 71°. Temperature 76 to 77° coasts, 69 to 73° interior. Mean station 80° Roosevelt roads to 64° Pico Del Este Luquillo. Extremes 54°; 91°.

SOUTH CAROLINA: Temperatures 13 to 19° below normal across State. Precipitation less than 0.10 in. the mountains, upper Piedmont to around 2.00 in. at some coastal locations.

SOUTH DAKOTA: Temperatures 22 to 33° below normal. Extremes 54°; -46°. Precipitation above normal west; below normal elsewhere. Maximum melted precipitation 0.41 in. Precipitation for the year above normal northwest, northeast, below elsewhere. Range 3.75 in. above normal, 8.21 in. below. Snow cover trace in northeast, 20.0 in. Black Hills.

TENNESSEE: Temperatures 20° below normal. Highs 10 to 20°. Below zero record lows set. Sleet, snow, freezing rain early week brought 0.10 to

0.25 in. precipitation. Precipitation 0.90 in. below normal.

Routine livestock chores, increased feeding, chopping ice, main activities.

TEXAS: Coldest in six years. Week started chilly, huge, powerful arctic air mass overspread State 21st, 22nd, bringing light snow to coastal locations. Lower Rio Grande Valley record breaking temperatures, hard, deep freeze. Slow moderation weekend. Temperatures extremely cold, more than 20° below normal most places. All areas except deep south averaged at or below freezing, deep south barely above freezing. Precipitation below normal.

Crops: Cold, colder, coldest weather story across State. No area spared record breaking low temperatures. Damage to citrus crop very extensive. Fresh market production finished, some remaining fruit going to juice. Damage to trees still being assessed. Cotton harvest rapidly winding down Plains, despite cold temperatures. Gins running steadily. Light snow did prevent all remaining cotton from being harvested, some scattered fields left. Cotton 99% harvested, 97% 1988, 82% avg. Small grains hit hard by cold weather, additional stand losses. Dryland fields stressed for moisture. Dry snowfall little value. Plant growth virtually stopped by bitter cold Blacklands, central. Oats heavy damage Hill Country. Wheat emerged 99%, 100% 1988, 98% avg. Peanut producers about finished south when cold temperatures halted final operations. Harvest virtually completed Cross Timbers last week. Soybean harvest winding down rapidly Upper Coast. Most harvest now complete High Plains. Other crops: Peanuts harvested 97%, 100% 1988, 97% avg. Pecans 90%, 93% 1988, 88% avg. Soybeans harvested 97%, 100% 1988, 97% avg. Sunflowers harvested 98%, 100% 1988, 98% avg. Oats planted 98%, 99% 1988, 97% avg.

Commercial Vegetables: Rio Grande Valley, very cold temperatures light to moderate damage many vegetables, celery, cabbage extensive damage. Carrot tops burned, should come back. Onions experience some bolting; amount unknown this time. Other greens also burned back. San Antonio Winter Garden, harvest cabbage, spinach continued through midweek. Cold temperatures burned some leaves; damage expected to be light. Remaining pepper fields destroyed. Pecan harvest continued good pace until late week. Quality average, prices good.

Range and Livestock: Producers increased feeding activities. Water sources freezing up, producers busy thawing, breaking ice. Pastures already weak most areas, cold caused further declines. Small grain pastures remained short Plains. Livestock conditions held steady.

UTAH: Temperatures about normal. Precipitation light in northern half, almost zero in other parts of State.

Snow cover over winter crops negligible. Most crops fair. Irrigation systems being installed, fertilizer applied. Cattle being vaccinated, weaned. Feed supplies short. Some cattle moved to winter ranges. Range conditions mostly poor to fair.

VIRGINIA: Temperatures 15 to 20° below normal, average low 20s. Extremes -11°; 51°. Precipitation sparse, less than 0.25 in. Many areas varied amounts of snow cover.

No days suitable for fieldwork. Topsoil 50% surplus, 50% adequate. Winter grains, grazing crops 2% excellent, 31% good, 46% fair, 17% poor, 4% very poor. Forage from pastures, beef cattle 3%, sheep 3%. Preparing burley tobacco, calving, lambing, limited pruning.

WASHINGTON: Temperatures 3° above normal to 5° below normal, east; 1° above normal to 3° below normal, west. Precipitation 0.01 to 0.04 in., east; 0.01 to 0.29 in., west.

Days suitable for fieldwork 3.0. Soil moisture 40% short, 55% adequate, 5% surplus. Range, pasture 85% short, 15% adequate. Hay, other roughage 25% short, 75% adequate. Overall, weather was dry, cool. Christmas tree harvest was completed. Orchard pruning activities increased with the mild weather. Pruning, tying raspberries, feeding livestock were other activities. Winter wheat 2% poor, 40% fair, 58% good.

WEST VIRGINIA: Temperatures 9°. Extremes -24°, 32°. Precipitation well below normal, in form of snow, none to 0.30 in.

Days suitable for fieldwork 1.0. Soil moisture 5% short, 80% adequate, 15% surplus. Wheat, barley good. Livestock good to fair. Feed supplies adequate. Farm activities: Feeding, watering livestock. Extreme cold stopping other activities.

WISCONSIN: Temperatures -5°, 15 to 25° below normal. Extremes -35°, 30°. Precipitation trace to 0.10 in. Snow flurries to about 1.00 in.

WYOMING: Temperatures well above normal. Bitter cold most areas. Precipitation above normal.

Winter wheat fair to good. Heavy snowfall most areas improved moisture. Livestock producers continue to market livestock. Supplemental feeding increasing with cold temperatures, heavy snow cover.

(Continued from front cover)

setting new records for the month of December. During the first half of the week, bitter arctic air remained settled over the **central and northeastern States**, while **southern Florida** experienced record warm weather. Moderate to heavy rain spread from the **Delta into the Southeast**. During the latter half of the week, the bitter cold pushed southward and triggered rare snow across **northern Florida** and up the **south Atlantic coast** and heavy rain over **central Florida**. Heavy lake-effect snow fell over the **Great Lakes**, while light snow fell from the **northern and southern Rockies** to the **Northeast** throughout the week. Snow blanketed most winter wheat except in the **southern Plains**, where subzero temperatures occurred on Friday and Saturday.

CORRECTION

Several lines from last week's highlights paragraph were inadvertently omitted when the text was continued to page 7. The following is the corrected text for issue no. 50, December 19, 1989.

HIGHLIGHTS

December 10-16, 1989

Bitter polar air invaded the **eastern two-thirds of the Nation**, where freezing temperatures reached into the lower **Rio Grande Valley**, southern California, and **northern Florida**. Temperatures averaged as much as 24 degrees Fahrenheit below normal in the **Missouri Valley**, as much of the **central United States** remained in a deep freeze. At the first of the week, a frontal system spread beneficial snow over the winter wheat in the **central Plains** and **middle Mississippi Valley**. The system then brought heavy rain across the **Southeast** and additional snow over the **Appalachians** and **middle Atlantic States**. Arctic air plunged into the eastern half of the country behind the system. On Wednesday morning, **Brownsville, TX**, had a record-low temperature of 30 degrees Fahrenheit. During the latter half of the week, another frontal system spread snow from the **northern and central Rockies** to the **middle and northern Atlantic coast**, and rain, freezing rain, and snow across the **Southeast**. At week's end, more snow fell across the **central Plains** and **northern portions of the southern Plains**, while bitter polar air settled over much of the country. Fifty-nine stations reported record-low temperatures in the **eastern half of the Nation**. Cool, dry conditions prevailed over the **far West**.

International Weather and Crop Summary

HIGHLIGHTS

December 17-23, 1989

USSR ... Unseasonably mild weather and rain reduce the protective snow cover over dormant grains.

NORTHWESTERN AFRICA ... Adequate moisture favors winter grain emergence and establishment in Morocco. Insufficient moisture continues to delay grain planting in Algeria and southernmost crop areas in Tunisia.

EUROPE ... Heavy rain falls across much of the west and north. Warm temperatures dramatically reduce snow cover in the east.

SOUTH ASIA ... Showers over Pakistan and northern India boost irrigation reserves for vegetative wheat.

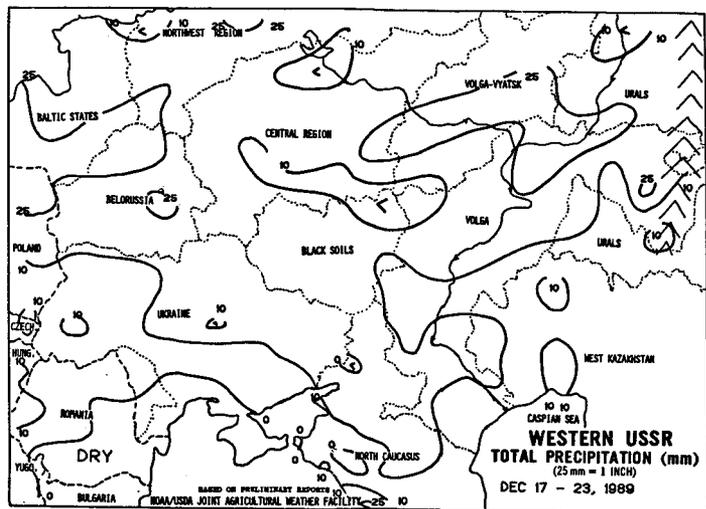
EASTERN ASIA ... Rain falls in sections of the Yangtze Valley and Japan. Snow covers sections of the North China Plain.

SOUTHEAST ASIA ... Scattered showers cover Malaysia and Indonesia, but northern areas continue a drier-than-normal trend.

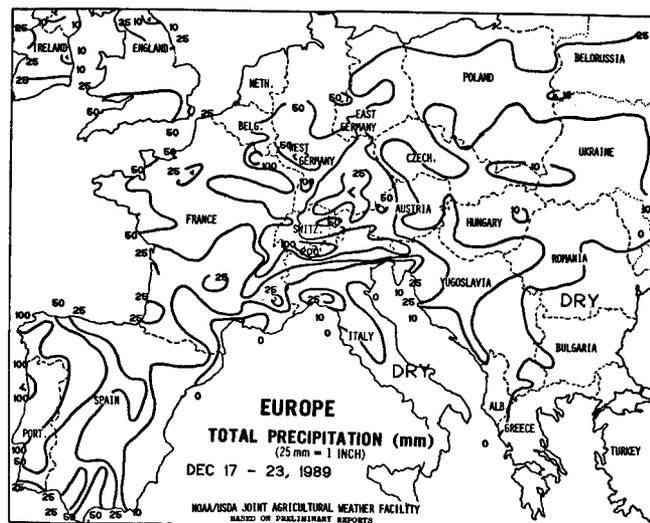
SOUTH AFRICA ... Drier and warmer weather reduces moisture for vegetative corn.

SOUTH AMERICA ... Showers in northern Argentina and southern Brazil benefit immature crops but cause fieldwork delays and local flooding.

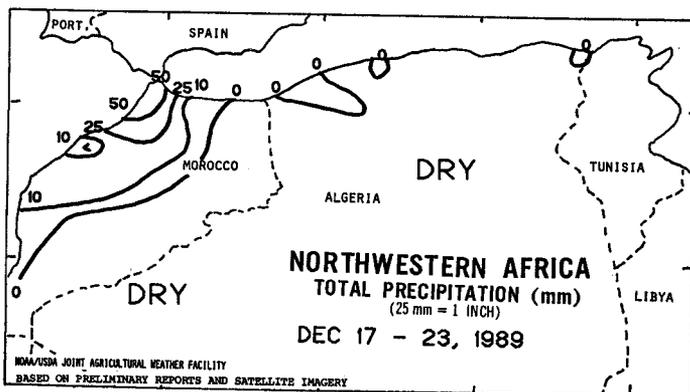
AUSTRALIA ... Warm temperatures accelerate growth of summer crops in the east. Dryness continues to favor winter grain harvest across much of the south.



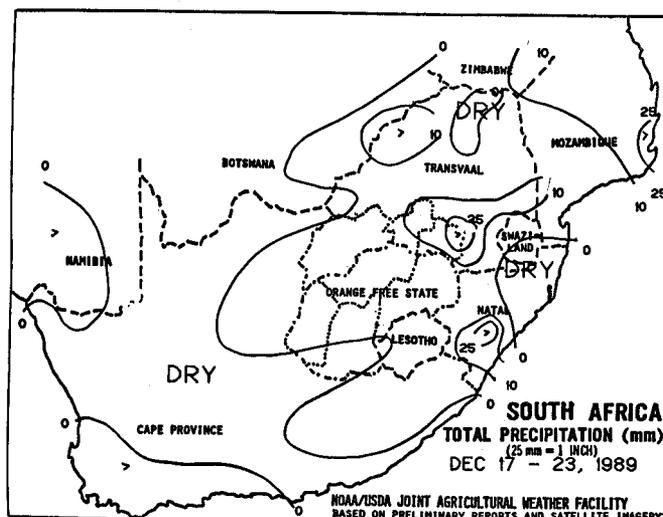
WESTERN USSR ... Light to moderate rain (1-25mm) accompanied unseasonably warm weather across the Ukraine and North Caucasus. Temperatures averaged 6-11 degrees Celsius (C) above normal across the region, continuing the recent warming trend that has eliminated the protective snow cover. Milder weather and scattered showers (10-25mm or more) also covered the northwest, and by week's end spread eastward toward the Volga and Volga Vyatsk region. Temperatures averaged 4-9 degrees C above normal across the northern wheat areas. Despite the mild weather, a protective snow cover still covered most dormant grains in the northern region.



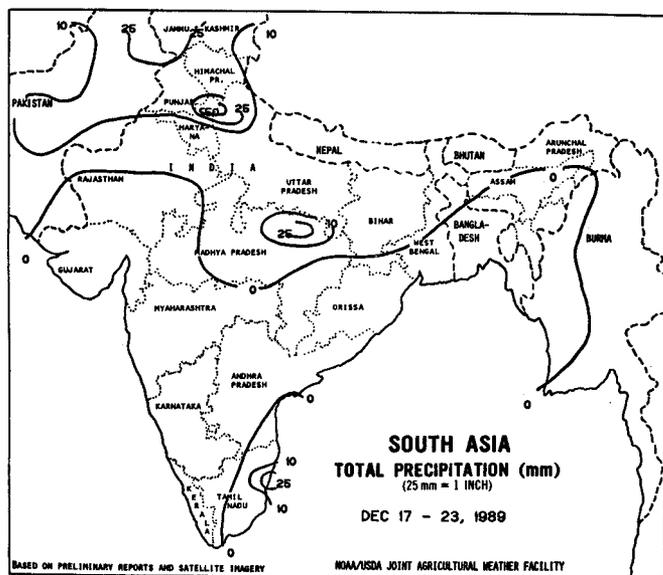
EUROPE ... An intense, slow moving storm brought heavy rain (25-50mm or more) to much of northern and western Europe, bringing soils to saturation in many areas. Moderate to heavy rain in south-central and southwestern sections of the Iberian Peninsula continued flooding problems for the 6th consecutive week. High winds associated with the storm caused scattered property damage in sections of Ireland and the United Kingdom early in the week. Much-above-normal temperatures (maximum temperatures as high as 25 degrees C in some eastern crop areas) covered most of the continent, eliminating protective snow cover over all but sections of Scandinavia and higher elevations. Elsewhere, scattered light to moderate showers (1-25mm or more) fell in sections of northern Italy and the northern Balkans, while the southern Balkans remained mostly dry.



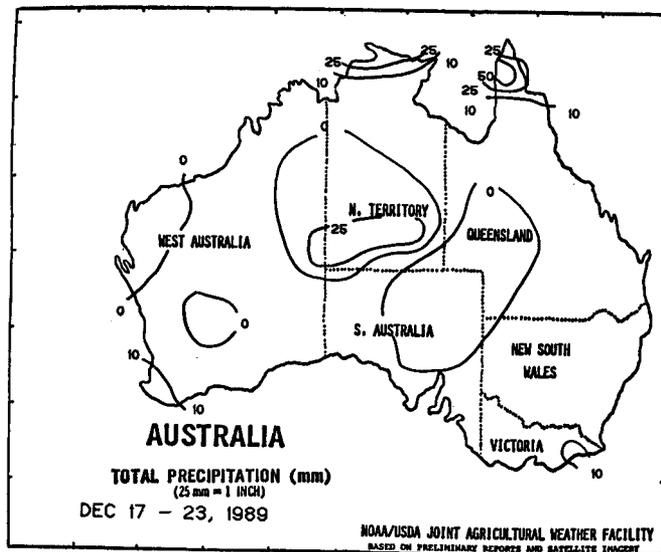
NORTHWESTERN AFRICA ... Light to moderate rain (10-25mm or more) covered most Moroccan winter grain areas, maintaining adequate topsoil moisture for crop emergence and early plant establishment. Insufficient moisture in Algeria and southernmost crop areas in Tunisia since the beginning of the growing season has likely caused planting delays. As a result, planting will likely extend into January.



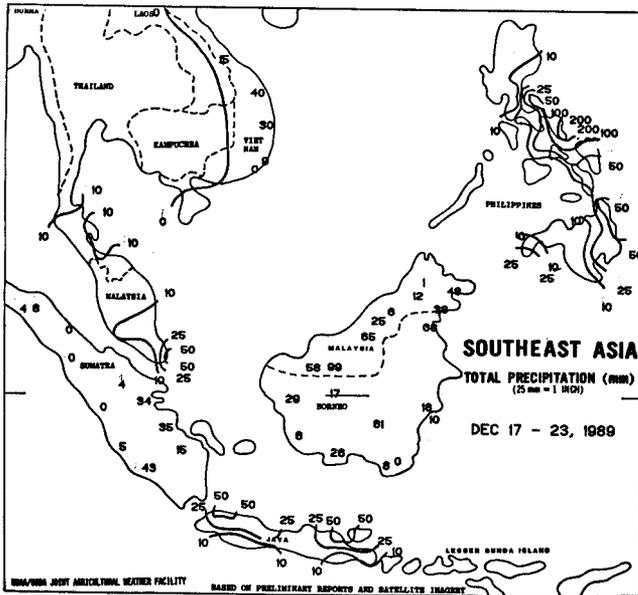
SOUTH AFRICA ... Only scattered, light rain (3-29mm) fell in the primary corn regions as maximum temperatures reached the low to middle thirties C, increasing crop moisture demands. Moisture across western portions of the Maize Triangle is limited for normal crop development, necessitating more rain before reproduction occurs during January. Drier weather also covered crop regions of the Cape Province and Natal, including coastal sugarcane regions.



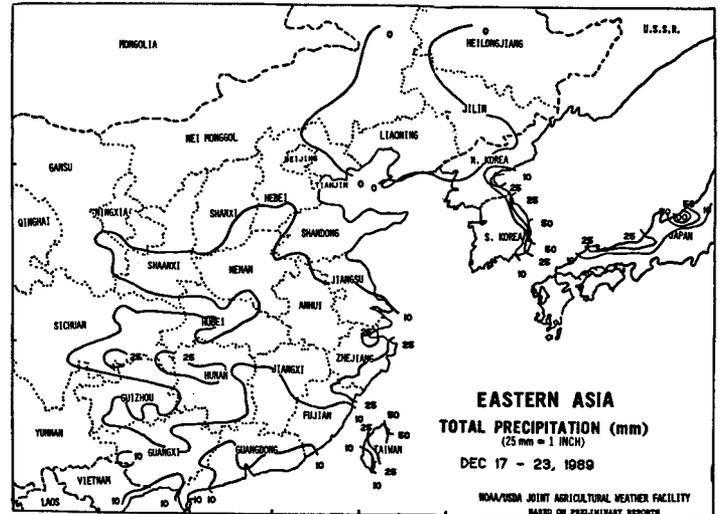
SOUTH ASIA ... Scattered showers (10-25mm or more) swept across northern Pakistan and northern India late in the week, improving irrigation reserves for vegetative winter wheat. Dry, warm weather dominated most other crop regions, favoring late summer crop harvests and fall plantings. Rain (as much as 38mm) in the south was limited to northeast Tamil Nadu and southern Andhra Pradesh, increasing only local irrigation reserves.



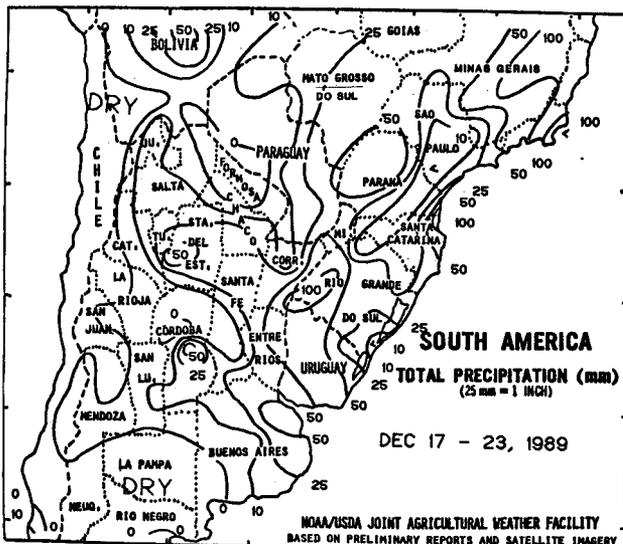
AUSTRALIA ... Mostly dry weather covered summer crop areas of southern Queensland and northern New South Wales. Normal- to above-normal temperatures accelerated growth and development of vegetative cotton, sorghum, and corn. Mostly dry weather also continued in the south, favoring winter grain harvest, although scattered, mostly light rain (less than 10mm) may have caused minor delays in sections of central Victoria. In the north, an active tropical convergence zone caused scattered rain (9-32mm) in normally dry sections of central Northern Territory and in northern Queensland.



SOUTHEAST ASIA ... Variable, scattered showers (10-50mm or more) covered Indonesia and Malaysia, although amounts continued to be minimal (25mm or less) in west Malaysia and much of Sumatra. The dryness extended northward into peninsular Thailand, continuing the trend of drier-than-normal weather that has continued for much of December. In the Philippines, moderate to heavy showers (25-50mm or more) continued in the east from southern Luzon to northeastern Mindanao, maintaining favorable moisture reserves for seasonal crops. Local excessive amounts (100-300mm or more), however, caused local flooding in southeastern Luzon.



EASTERN ASIA ... Widespread rain (10-25mm or more) fell over much of the upper Yangtze River Valley, keeping soil moisture levels generally favorable for semidormant winter crops. Light to moderate snow and rain (1-21mm or more water equivalent) and seasonable temperatures covered much of the North China Plain, leaving a protective snow cover for dormant winter grains in northern areas. By week's end, moderate to heavy rain (25-50mm or more) fell over lower sections of the Yangtze Valley and Taiwan, ending several consecutive weeks of dryness. Moderate to heavy precipitation also fell in sections of the Korean Peninsula and Japan, with rain (11-50mm or more) in northern sections of Honshu and snow (10-25mm or more water equivalent) in Hokkaido and eastern North and South Korea. Manchuria remained seasonably cold and mostly dry.



SOUTH AMERICA ... In Argentina, variable showers (10-50mm or more) continued early in the week from northern and eastern Buenos Aires and Cordoba northeastward. Warmer and drier weather later in the week helped to dry fields for a resumption of winter wheat harvesting (50 percent complete) and soybean and grain planting (63 and 90 percent sown, respectively). In Brazil, moderate to heavy showers (25-50mm or more) swept from southern Brazil to the northeast, boosting moisture reserves but causing local flooding. Heavy rain (100mm or more) in western Rio Grande do Sul improved moisture conditions, but most rain fell in a 1-2 day period, causing local flooding. Soybean planting was reportedly over 75 percent complete. Heavy rain (50-100mm or more) maintained excessively wet conditions over coffee areas of Minas Gerais.

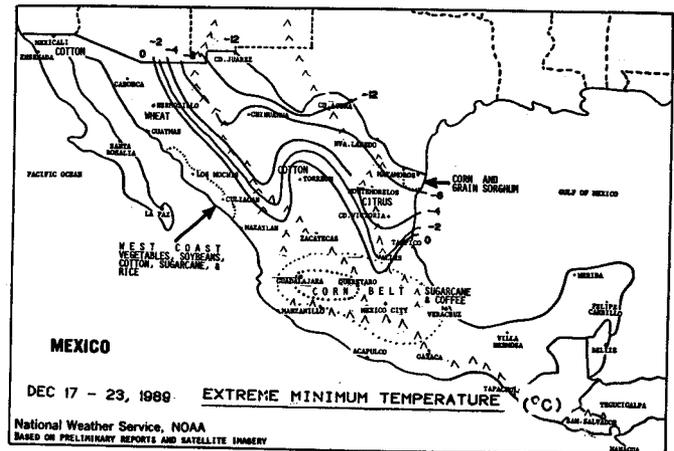
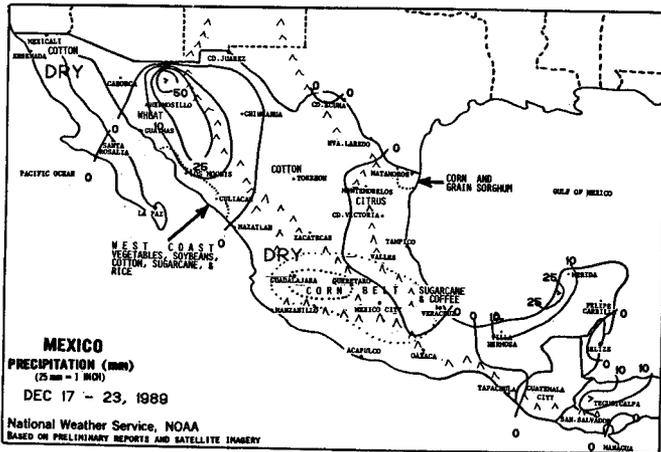
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Temperatures plummeted well below freezing across northern Mexico, causing concern for severe damage to citrus fruit and vegetables in the Northeast. An active subtropical jet stream early in the week brought unseasonably heavy rain to the Northwest.

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