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# Cattle and Calves Death Loss in the United States, 2000



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All participants are to be commended, particularly the producers whose voluntary efforts made this report possible.

A handwritten signature in black ink, reading "José R. Díez". The signature is written in a cursive style with a large initial 'J' and a long, sweeping underline.

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## Introduction

Each January, the U.S. Department of Agriculture's (USDA) National Agricultural Statistics Service (NASS) collects cattle data on inventory, calf crop, and total death losses for State and national estimating programs. Inventory and calf crop estimates (number of head) are published in January, while cattle and calves death losses (number of head) are published annually in April via the Meat Animals: Production, Disposition and Income report. For the January 1992, 1996, and 2001 surveys, USDA's Animal and Plant Health Inspection Service (APHIS) provided funding for a detailed breakdown of total losses for producer-attributed cause of loss occurring the previous year. Death losses by cause for predator losses were estimated and subsequently published by NASS (*Cattle Predator Loss*, May 4, 2001).

This report provides a breakdown of cattle and calves losses in 2000 from all causes. Death losses by size group and region are also provided with special emphasis on nonpredator causes of loss. When possible the 1991 and 1995 death losses are provided for comparison.

### Terms Used In This Report

**Beef operation:** On individual questionnaires, if beef cows were greater than milk cows and milk cows were fewer than five head, the operation was classified as a beef cattle operation.

**Cattle:** All cows, bulls, steers, and heifers 500 lb or greater.

**Calves:** All bulls, steers, and heifers less than 500 lb.

**Dairy operation:** On individual questionnaires, if milk cows were greater than beef cows and beef cows were fewer than five head, the operation was classified as a dairy cattle operation.

**Mixed operation:** On individual questionnaires, if beef cows were greater than five head and milk cows were greater than five head or beef cows equaled milk cows, the operation was classified as a mixed operation.

**Other operation:** Operation that did not meet the criteria to be classified as beef, dairy, or mixed operation.

**N/A:** Not available

**Regions:** The United States was divided into six regions (listed below) for the purposes of providing data on smaller geographical areas within the country. Because cause of loss estimates are not generated for Alaska, the State is not included in the regional demographics. In the 2000 Cattle Predator Loss Report, States reporting fewer than 100 head are combined in an unpublished category. For Nebraska, cattle predator losses were included in this unpublished category, and calf predator losses were published separately. The remaining States in the unpublished category were all in the Northeast region; losses from these States are included in the Northeast regional totals for both cattle and calves.

**Regions:**

**North Central:** Iowa, Minnesota, Nebraska, North Dakota, South Dakota

**Northeast:** Connecticut, Delaware, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, Wisconsin

**Northwest:** Idaho, Montana, Oregon, Washington, Wyoming

**South Central:** Arkansas, Kansas, Missouri, Oklahoma, Texas

**Southeast:** Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee

**Southwest:** Arizona, California, Colorado, Hawaii, Nevada, New Mexico, Utah

**Operation size:** Total number of cows for beef, dairy and mixed operations.

- For beef operations: size groups are 1-49, 50-99, 100-499, and 500 or more.
- For dairy operations: size groups are 1-29, 30-49, 50-99, 100-199, 200-499, and 500 or more.
- For mixed operations: size groups are 1-99, 100-499, and 500 or more.
- For other operations: total number of cattle and calves. Size groups are 1-99 head, 100-499 head, 500-999 and more than 1,000 head



## Section I: Population Estimates—Number of Head

### A. U.S. Demographics

#### 1. Inventory—January 1, 1991-2001

a. Number of cattle and calves, by year:

| January 1 Number (1,000 Head) |        |        |        |         |         |         |         |        |        |        |        |
|-------------------------------|--------|--------|--------|---------|---------|---------|---------|--------|--------|--------|--------|
| Class                         | Year   |        |        |         |         |         |         |        |        |        |        |
|                               | 1991   | 1992   | 1993   | 1994    | 1995    | 1996*   | 1997    | 1998   | 1999*  | 2000   | 2001*  |
| All cattle and calves         | 96,393 | 97,556 | 99,176 | 100,974 | 102,785 | 103,548 | 101,656 | 99,744 | 99,115 | 98,199 | 97,298 |
| Cattle 500 lb or more         | 78,286 | 79,220 | 81,059 | 83,101  | 84,444  | 85,164  | 83,830  | 82,343 | 81,825 | 81,383 | 81,082 |
| Beef cows                     | 32,520 | 33,007 | 33,365 | 34,603  | 35,190  | 35,319  | 34,458  | 33,885 | 33,750 | 33,575 | 33,398 |
| Dairy cows                    | 9,965  | 9,728  | 9,658  | 9,507   | 9,482   | 9,420   | 9,318   | 9,199  | 9,128  | 9,183  | 9,172  |
| Heifers, steers, and bulls    | 35,801 | 36,485 | 38,036 | 38,991  | 39,772  | 40,426  | 40,054  | 39,259 | 38,946 | 38,625 | 38,511 |
| Calves                        | 18,107 | 18,336 | 18,117 | 17,873  | 18,341  | 18,384  | 17,826  | 17,401 | 17,290 | 16,816 | 16,216 |

\*Numbers may not add up due to rounding

#### 2. Operations—1991-2001

a. Number of operations with cattle and calves, beef cows, and milk cows, by year:

| Number Operations |           |           |           |           |           |           |           |           |           |           |           |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                   | Year      |           |           |           |           |           |           |           |           |           |           |
|                   | 1991      | 1992      | 1993      | 1994      | 1995      | 1996      | 1997      | 1998      | 1999      | 2000      | 2001      |
| Cattle and calves | 1,242,270 | 1,226,860 | 1,213,780 | 1,197,290 | 1,190,630 | 1,176,700 | 1,148,050 | 1,114,650 | 1,095,560 | 1,076,370 | 1,049,170 |
| Beef cows         | 910,950   | 901,870   | 894,980   | 897,260   | 897,660   | 885,980   | 872,840   | 855,460   | 844,170   | 831,270   | 814,520   |
| Milk cows         | 180,640   | 170,520   | 157,150   | 148,140   | 139,670   | 130,980   | 123,700   | 117,145   | 110,855   | 105,055   | 97,460    |

<sup>1</sup> Cattle, NASS, annual January report

b. Percentage of operations with beef cows by size of operation and by year:

|  |  | <b>Percent Operations</b> |             |             |             |             |             |             |             |             |
|--|--|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|  |  | <b>Year</b>               |             |             |             |             |             |             |             |             |
| <b>Size of Operation<br/>(Number of Beef Cows)</b> |  | <b>1993</b>               | <b>1994</b> | <b>1995</b> | <b>1996</b> | <b>1997</b> | <b>1998</b> | <b>1999</b> | <b>2000</b> | <b>2001</b> |
| 1 to 49  |  | 80.7                      | 80.3        | 79.8        | 79.4        | 79.3        | 79.3        | 79.0        | 78.8        | 78.5        |
| 50 to 99   |  | 11.3                      | 11.5        | 11.8        | 12.0        | 12.0        | 11.9        | 12.0        | 12.0        | 12.1        |
| 100 to 499   |  | 7.4                       | 7.6         | 7.8         | 8.0         | 8.1         | 8.2         | 8.4         | 8.5         | 8.7         |
| 500 or more  |  | 0.6                       | 0.6         | 0.6         | 0.6         | 0.6         | 0.6         | 0.6         | 0.7         | 0.7         |
| Total  |  | 100.0                     | 100.0       | 100.0       | 100.0       | 100.0       | 100.0       | 100.0       | 100.0       | 100.0       |

c. Percentage of operations with dairy cows by size of operation and by year:

|   |  | <b>Percent Operations</b> |             |             |             |             |             |             |             |             |
|---|--|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|   |  | <b>Year</b>               |             |             |             |             |             |             |             |             |
| <b>Size of Operation<br/>(Number of Dairy Cows)</b> |  | <b>1993</b>               | <b>1994</b> | <b>1995</b> | <b>1996</b> | <b>1997</b> | <b>1998</b> | <b>1999</b> | <b>2000</b> | <b>2001</b> |
| 1 to 29   |  | 37.3                      | 36.1        | 34.5        | 32.9        | 31.6        | 30.8        | 29.7        | 29.3        | 29.0        |
| 30 to 49  |  | 22.2                      | 22.0        | 22.2        | 22.3        | 22.1        | 21.8        | 21.7        | 21.1        | 20.4        |
| 50 to 99  |  | 26.8                      | 27.4        | 28.1        | 28.7        | 29.0        | 29.1        | 29.6        | 29.7        | 29.8        |
| 100 to 199  |  | 9.3                       | 9.8         | 10.2        | 10.7        | 11.3        | 11.8        | 11.9        | 12.2        | 12.6        |
| 200 or more   |  | 4.4                       | 4.7         | 5.0         | 5.4         | 6.0         | 6.5         | 7.1         | 7.7         | 8.2         |
| 200 to 499  |  | N/A                       | N/A         | N/A         | N/A         | 4.1         | 4.4         | 4.8         | 5.1         | 5.3         |
| 500 or more   |  | N/A                       | N/A         | N/A         | N/A         | 1.9         | 2.1         | 2.3         | 2.6         | 2.9         |
| Total   |  | 100.0                     | 100.0       | 100.0       | 100.0       | 100.0       | 100.0       | 100.0       | 100.0       | 100.0       |

d. Percentage of beef cow inventory by size of operation and by year:

| Size of Operation<br>(Number of Beef Cows) | Percent Inventory |       |       |       |       |       |       |       |       |
|--|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|  | 1993              | 1994  | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  |
| 1 to 49                                    | 31.7              | 31.5  | 31.2  | 30.8  | 30.4  | 30.5  | 29.9  | 29.5  | 29.0  |
| 50 to 99                                   | 19.8              | 19.4  | 19.2  | 19.6  | 19.4  | 18.8  | 19.1  | 19.1  | 19.1  |
| 100 to 499                                 | 33.9              | 34.6  | 35.3  | 35.4  | 35.9  | 36.1  | 36.6  | 36.7  | 37.0  |
| 500 or more                                | 14.6              | 14.5  | 14.3  | 14.2  | 14.3  | 14.6  | 14.4  | 14.7  | 14.9  |
| Total                                      | 100.0             | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

e. Percentage of dairy cow inventory by size of operation and by year:

| Size of Operation<br>(Number of Dairy Cows) | Percent Inventory |       |       |       |       |       |       |       |       |
|---|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|   | 1993              | 1994  | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  |
| 1 to 29                                     | 5.0               | 4.6   | 4.0   | 4.0   | 3.5   | 3.6   | 3.2   | 2.9   | 2.7   |
| 30 to 49                                    | 14.8              | 14.0  | 13.0  | 12.0  | 11.5  | 10.5  | 10.2  | 9.1   | 8.0   |
| 50 to 99                                    | 29.2              | 28.7  | 28.0  | 27.0  | 26.0  | 24.3  | 23.3  | 22.0  | 20.8  |
| 100 to 199                                  | 19.2              | 19.3  | 20.0  | 20.0  | 20.0  | 19.3  | 18.4  | 18.1  | 17.2  |
| 200 or more                                 | 31.8              | 33.4  | 35.0  | 37.0  | 39.0  | 42.3  | 44.9  | 47.9  | 51.3  |
| 200 to 499                                  | N/A               | N/A   | N/A   | N/A   | 14.6  | 15.5  | 16.3  | 16.6  | 16.3  |
| 500 or more                                 | N/A               | N/A   | N/A   | N/A   | 24.4  | 26.8  | 28.6  | 31.3  | 35.0  |
| Total                                       | 100.0             | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

**3. Calf crop—1991–2001**

a. Calf crop and calf crop per 100 cows on hand, by year:

|  | Year   |        |        |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|  | 1991   | 1992   | 1993   | 1994   | 1995   | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   |
| <b>Calf crop (1,000 Head)</b>                                | 38,583 | 38,933 | 39,369 | 40,105 | 40,264 | 39,823 | 38,961 | 38,812 | 38,796 | 38,631 | 38,300 |
| Calf crop per 100 cows on hand beginning of year (January 1) | 90.8   | 91.1   | 91.5   | 90.9   | 90.1   | 89.0   | 89.0   | 90.1   | 90.5   | 90.3   | 90.0   |

**B. Regional Demographics**

**1. Cattle and calves inventory—January 1, 1992, 1996, and 2001**

a. Number of cattle and calves and number of cattle over 500 lb, by region and by year:

| Region        | January 1 – Number (1,000 Head) |         |        |                    |        |        |
|---------------|---------------------------------|---------|--------|--------------------|--------|--------|
|               | Cattle and Calves               |         |        | Cattle Over 500 lb |        |        |
|               | 1992                            | 1996    | 2001   | 1992               | 1996   | 2001   |
| North Central | 18,000                          | 19,110  | 18,830 | 15,248             | 16,555 | 16,884 |
| Northeast     | 18,638                          | 18,184  | 16,111 | 14,598             | 14,259 | 12,903 |
| Northwest     | 8,300                           | 8,920   | 8,600  | 7,320              | 8,018  | 7,796  |
| South Central | 30,480                          | 33,610  | 31,500 | 24,565             | 27,390 | 25,650 |
| Southeast     | 10,760                          | 11,710  | 9,925  | 8,152              | 8,845  | 7,506  |
| Southwest     | 11,270                          | 12,004  | 12,320 | 9,331              | 10,089 | 10,334 |
| Total*        | 97,548                          | 103,538 | 97,286 | 79,214             | 85,156 | 81,073 |

\*Excludes Alaska, so total of regions does not match published United States total.

**2. Beef and dairy cow inventory—January 1, 1992, 1996, and 2001**

a. Number of beef and dairy cows that had calved, by region and by year:

| January 1 – Number (1,000 Head) |           |          |          |            |         |         |
|---------------------------------|-----------|----------|----------|------------|---------|---------|
| Region                          | Beef Cows |          |          | Dairy Cows |         |         |
|                                 | 1992      | 1996     | 2001     | 1992       | 1996    | 2001    |
| North Central                   | 5,618.0   | 6,072.0  | 6,151.0  | 12,320.0   | 1,078.0 | 949.0   |
| Northeast                       | 3,832.3   | 3,936.6  | 3,510.5  | 4,787.4    | 4,417.1 | 4,017.6 |
| Northwest                       | 3,641.0   | 3,874.0  | 3,721.0  | 549.0.0    | 626.0   | 714.0   |
| South Central                   | 11,484.0  | 12,520.0 | 11,895.0 | 856.0      | 820.0   | 715.0   |
| Southeast                       | 5,262.0   | 5,760.0  | 5,077.0  | 763.0.0    | 640.0   | 543.0   |
| Southwest                       | 3,167.0   | 3,153.0  | 3,040.0  | 1,540.0    | 838.0   | 2,178.0 |
| Total*                          | 33,004.3  | 35,315.6 | 33,394.5 | 9,727.4    | 9,419.1 | 9,170.6 |

\*Excludes Alaska, so total of regions does not match published United States total.

**3. Calf crop—1991, 1995, and 2000**

a. Calendar year calf crop by region:

| Calf Crop (1,000 Head) |        |        |        |
|------------------------|--------|--------|--------|
| Region                 | Year   |        |        |
|                        | 1991   | 1995   | 2000   |
| North Central          | 6,570  | 6,770  | 6,730  |
| Northeast              | 7,823  | 7,5767 | 6,813  |
| Northwest              | 3,945  | 4,280  | 4,410  |
| South Central          | 11,070 | 11,910 | 11,330 |
| Southeast              | 5,205  | 5,475  | 4,880  |
| Southwest              | 3,968  | 4,249  | 4,464  |
| Total*                 | 38,581 | 40,261 | 38,627 |

\*Excludes Alaska, so total of regions does not match published United States total.

**C. U.S. Annual Death Loss**

**1. Loss from all causes—1991-2000**

a. Number of cattle and calf death losses due to all causes, by year:

| Number (1,000 Head) |       |       |       |       |       |       |       |       |       |       |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Year                |       |       |       |       |       |       |       |       |       |       |
|                     | 1991  | 1992  | 1993  | 1994  | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  |
| Cattle              | 1,540 | 1,677 | 1,702 | 1,589 | 1,645 | 1,761 | 1,847 | 1,668 | 1,658 | 1,711 |
| Calves              | 2,707 | 2,689 | 2,921 | 2,681 | 2,739 | 2,811 | 2,829 | 2,541 | 2,455 | 2,387 |
| Total               | 4,247 | 4,366 | 4,623 | 4,270 | 4,384 | 4,572 | 4,676 | 4,209 | 4,113 | 4,098 |

b. Cattle death loss as a percentage of January 1 inventory of cattle over 500 lb on January 1 of the following year, by year:

| Percent Inventory |      |      |      |      |      |      |      |      |      |
|-------------------|------|------|------|------|------|------|------|------|------|
| Year              |      |      |      |      |      |      |      |      |      |
| 1991              | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| 1.9               | 2.1  | 2.0  | 1.9  | 1.9  | 2.1  | 2.2  | 2.0  | 2.0  | 2.1  |

c. Calf death loss as a percentage of calf crop, by year:

| Percent Calf Crop |      |      |      |      |      |      |      |      |      |
|-------------------|------|------|------|------|------|------|------|------|------|
| Year              |      |      |      |      |      |      |      |      |      |
| 1991              | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| 7.0               | 6.9  | 7.4  | 6.7  | 6.8  | 7.1  | 7.3  | 6.5  | 6.3  | 6.2  |

**2. U.S. (excluding Alaska) nonpredator and predator death loss—1991<sup>2</sup>, 1995<sup>2</sup>, and 2000<sup>2</sup>**

a. Number of cattle and calf losses by cause and by year:

| Cause       | Year                      |         |                           |         |                           |         |
|-------------|---------------------------|---------|---------------------------|---------|---------------------------|---------|
|             | 1991                      |         | 1995                      |         | 2000                      |         |
|             | Number<br>(1,000<br>Head) | Percent | Number<br>(1,000<br>Head) | Percent | Number<br>(1,000<br>Head) | Percent |
| Nonpredator | 4,143.4                   | 97.6    | 4,263.6                   | 97.3    | 3,952.0                   | 96.4    |
| Predator    | 102.0                     | 2.4     | 118.8                     | 2.7     | 144.6                     | 3.6     |
| Total       | 4,245.4                   | 100.0   | 4,382.4                   | 100.0   | 4,096.6                   | 100.0   |

b. Number of cattle losses by cause and by year:

| Cause       | Year                      |         |                           |         |                           |         |
|-------------|---------------------------|---------|---------------------------|---------|---------------------------|---------|
|             | 1991                      |         | 1995                      |         | 2000                      |         |
|             | Number<br>(1,000<br>Head) | Percent | Number<br>(1,000<br>Head) | Percent | Number<br>(1,000<br>Head) | Percent |
| Nonpredator | 1,523.7                   | 99.0    | 1,622.7                   | 98.7    | 1,689.6                   | 98.8    |
| Predator    | 15.4                      | 1.0     | 21.4                      | 1.3     | 20.5                      | 1.2     |
| Total       | 1,539.1                   | 100.0   | 1,644.1                   | 100.0   | 1,710.1                   | 100.0   |

c. Number of calf losses by cause and by year:

| Cause       | Year                      |         |                           |         |                           |         |
|-------------|---------------------------|---------|---------------------------|---------|---------------------------|---------|
|             | 1991                      |         | 1995                      |         | 2000                      |         |
|             | Number<br>(1,000<br>Head) | Percent | Number<br>(1,000<br>Head) | Percent | Number<br>(1,000<br>Head) | Percent |
| Nonpredator | 2,619.7                   | 96.8    | 2,640.9                   | 96.5    | 2,262.4                   | 94.8    |
| Predator    | 86.6                      | 3.2     | 97.4                      | 3.5     | 124.1                     | 5.2     |
| Total       | 2,706.3                   | 100.0   | 2,738.3                   | 100.0   | 2,386.5                   | 100.0   |

<sup>2</sup>NASS estimates of total death loss were revised in subsequent publications. However, estimates of predator and nonpredator death loss were not revised. The ratio of predator to nonpredator losses in the initial publication was maintained and applied to the revised total loss estimate to generate the losses due to predators and nonpredators in tables a., b., and c. above. For the 1991 estimates, cattle losses were revised from 1,583,800 to 1,539,100, and calf losses were revised from 2,786,300 to 2,706,300. For the 1995 estimates, cattle losses were revised from 1,635,100 to 1,644,100, and calf losses were revised from 2,745,300 to 2,738,300. For the 2000 estimates, cattle losses were revised from 1,721,100 to 1,710,100, and calf losses were revised from 2,409,500 to 2,386,500.

**3. Regional predator and nonpredator death loss—1991, 1995, and 2000**

a. Number of cattle death losses from all causes by region and by year:

| <b>Number Losses (1,000 Head)</b> |             |             |             |
|-----------------------------------|-------------|-------------|-------------|
| <b>Year</b>                       |             |             |             |
| <b>Region</b>                     | <b>1991</b> | <b>1995</b> | <b>2000</b> |
| North Central                     | 264.0       | 277.0       | 281.0       |
| Northeast                         | 312.1       | 311.1       | 291.1       |
| Northwest                         | 103.0       | 115.0       | 124.0       |
| South Central                     | 498.0       | 522.0       | 625.0       |
| Southeast                         | 183.0       | 201.0       | 174.0       |
| Southwest                         | 179.0       | 218.0       | 215.0       |
| Total*                            | 1,539.1     | 1,644.1     | 1,710.1     |

\*Excludes Alaska, so total of regions does not match published United States total.

b. Cattle death loss as a percentage of January 1 inventory of cattle over 500 lb on January 1 of the following year, by year:

| <b>Percent</b> |             |             |             |
|----------------|-------------|-------------|-------------|
| <b>Year</b>    |             |             |             |
| <b>Region</b>  | <b>1991</b> | <b>1995</b> | <b>2000</b> |
| North Central  | 1.7         | 1.7         | 1.7         |
| Northeast      | 2.1         | 2.2         | 2.3         |
| Northwest      | 1.4         | 1.4         | 1.6         |
| South Central  | 2.0         | 1.9         | 2.4         |
| Southeast      | 2.2         | 2.3         | 2.3         |
| Southwest      | 1.9         | 2.2         | 2.1         |
| Total          | 1.9         | 1.9         | 2.1         |



c. Number of calf death losses from all causes by region and by year:

| <b>Number Losses (1,000 Head)</b> |             |             |             |
|-----------------------------------|-------------|-------------|-------------|
| <b>Year</b>                       |             |             |             |
| <b>Region</b>                     | <b>1991</b> | <b>1995</b> | <b>2000</b> |
| North Central                     | 493.0       | 553.0       | 425.0       |
| Northeast                         | 717.3       | 673.3       | 538.5       |
| Northwest                         | 204.0       | 216.0       | 225.0       |
| South Central                     | 689.0       | 675.0       | 620.0       |
| Southeast                         | 297.0       | 313.0       | 266.0       |
| Southwest                         | 306.0       | 308.0       | 312.0       |
| Total*                            | 2,706.3     | 2,738.3     | 2,386.5     |

\*Excludes Alaska so total of regions does not match published United States total.

d. Calf death loss as a percentage of calf crop by region and by year:

| <b>Percent</b> |             |             |             |
|----------------|-------------|-------------|-------------|
| <b>Year</b>    |             |             |             |
| <b>Region</b>  | <b>1991</b> | <b>1995</b> | <b>2000</b> |
| North Central  | 7.5         | 8.2         | 6.3         |
| Northeast      | 9.2         | 8.9         | 7.9         |
| Northwest      | 5.2         | 5.0         | 5.1         |
| South Central  | 6.2         | 5.7         | 5.5         |
| Southeast      | 5.7         | 5.7         | 5.5         |
| Southwest      | 7.7         | 7.2         | 7.0         |
| Total          | 7.0         | 6.8         | 6.2         |

**4. Regional predator and nonpredator death loss—1995 and 2000**

a. Number of cattle death losses by cause and percentage of losses by cause—by region and by year:

| <b>Number (1,000 Head) and Percent Loss</b> |              |               |                |               |                |
|---|--------------|---------------|----------------|---------------|----------------|
| <b>Year</b>                                 |              |               |                |               |                |
| <b>1995</b>                                 |              |               |                |               |                |
| <b>2000</b>                                 |              |               |                |               |                |
| <b>Region</b>                               | <b>Cause</b> | <b>Number</b> | <b>Percent</b> | <b>Number</b> | <b>Percent</b> |
| North Central                               | Nonpredator  | 274.8         | 99.2           | 280.2         | 99.7           |
|   | Predator     | 2.2           | 0.8            | 0.8           | 0.3            |
|   | Total        | 277.0         | 100.0          | 281.0         | 100.0          |
| Northeast                                   | Nonpredator  | 308.3         | 99.1           | 288.2         | 99.0           |
|   | Predator     | 2.8           | 0.9            | 2.9           | 1.0            |
|   | Total        | 311.1         | 100.0          | 291.1         | 100.0          |
| Northwest                                   | Nonpredator  | 113.5         | 98.7           | 121.9         | 98.3           |
|   | Predator     | 1.5           | 1.3            | 2.1           | 1.7            |
|   | Total        | 115.0         | 100.0          | 124.0         | 100.0          |
| South Central                               | Nonpredator  | 514.2         | 98.5           | 619.7         | 99.2           |
|   | Predator     | 7.8           | 1.5            | 5.3           | 0.8            |
|   | Total        | 522.0         | 100.0          | 625.0         | 100.0          |
| Southeast                                   | Nonpredator  | 198.0         | 98.5           | 170.5         | 98.0           |
|   | Predator     | 3.0           | 1.5            | 3.5           | 2.0            |
|   | Total        | 201.0         | 100.0          | 174.0         | 100.0          |
| Southwest                                   | Nonpredator  | 214.1         | 98.2           | 208.8         | 97.1           |
|   | Predator     | 3.9           | 1.8            | 6.2           | 2.9            |
|   | Total        | 218.0         | 100.0          | 215.0         | 100.0          |

b. Number of calf death losses by cause and percentage of loss by cause—by region and by year:

| <b>Number (1,000 Head) and Percent Loss</b> |              |               |                |               |                |
|---|--------------|---------------|----------------|---------------|----------------|
| <b>Year</b>                                 |              |               |                |               |                |
| <b>1995</b>                                 |              |               |                |               |                |
| <b>2000</b>                                 |              |               |                |               |                |
| <b>Region</b>                               | <b>Cause</b> | <b>Number</b> | <b>Percent</b> | <b>Number</b> | <b>Percent</b> |
| North Central                               | Nonpredator  | 545.3         | 98.6           | 416.9         | 98.1           |
|   | Predator     | 7.7           | 1.4            | 8.1           | 1.9            |
|   | Total        | 553.0         | 100.0          | 425.0         | 100.0          |
| Northeast                                   | Nonpredator  | 662.5         | 98.4           | 526.1         | 97.7           |
|   | Predator     | 10.8          | 1.6            | 12.4          | 2.3            |
|   | Total        | 673.3         | 100.0          | 538.5         | 100.0          |
| Northwest                                   | Nonpredator  | 206.1         | 95.4           | 210.1         | 93.3           |
|   | Predator     | 9.9           | 4.6            | 14.9          | 6.7            |
|   | Total        | 216.0         | 100.0          | 225.0         | 100.0          |
| South Central                               | Nonpredator  | 636.5         | 94.3           | 581.6         | 93.8           |
|   | Predator     | 38.5          | 5.7            | 38.4          | 6.2            |
|   | Total        | 675.0         | 100.0          | 620.0         | 100.0          |
| Southeast                                   | Nonpredator  | 299.5         | 95.7           | 242.4         | 91.1           |
|   | Predator     | 13.5          | 4.3            | 23.6          | 8.9            |
|   | Total        | 313.0         | 100.0          | 266.0         | 100.0          |
| Southwest                                   | Nonpredator  | 292.3         | 94.9           | 284.5         | 91.2           |
|   | Predator     | 15.7          | 5.1            | 27.5          | 8.8            |
|   | Total        | 308.0         | 100.0          | 312.0         | 100.0          |

## Section II: Population Estimates—Nonpredator Losses

### A. Operation Classification

#### 1. Operation classification process

This section reports death loss and cause of loss on three operation types with cows: beef, dairy, and mixed operations. NASS collects inventory numbers of beef, milk cows, and heifers on each operation. However, animal breed is not specified in death loss numbers. To estimate death loss, operations were classified based on inventory numbers of beef and dairy cows reported on individual questionnaires as follows:

**Beef operation:** Beef cows are greater than milk cows, and milk cows are fewer than five head.

**Dairy operation:** Milk cows are greater than beef cows and beef cows are fewer than five head.

**Mixed operation:** Operation has at least one cow of any breed, and beef cows are greater than five head and milk cows are greater than five head, or the number of beef cows is equal to the number of milk cows.

**Other:** Operation that did not meet the criteria to be classified as beef, dairy, or mixed operation.

#### 2. Operation Characteristics

Nearly 85 percent of the January 1, 2001, inventory of all cattle and calves were on operations classified as beef, dairy, or mixed. Almost 99 percent of beef cows were on operations classified as beef, while 91.9 percent of milk cows were on operations classified as dairy.

a. Percentage of January 1, 2001, inventory for all cattle and calves, beef cows, and dairy cows, by operation type:

| Operation Type | Percent Inventory     |            |           |            |            |            |
|----------------|-----------------------|------------|-----------|------------|------------|------------|
|                | All Cattle and Calves |            | Beef Cows |            | Dairy Cows |            |
|                | Percent               | Std. Error | Percent   | Std. Error | Percent    | Std. Error |
| Beef           | 67.1                  | (0.5)      | 98.7      | (0.1)      | 0.1        | (0.0)      |
| Dairy          | 14.9                  | (0.3)      | 0.0       | (0.0)      | 91.9       | (0.4)      |
| Mixed          | 2.2                   | (0.1)      | 1.3       | (0.1)      | 8.0        | (0.4)      |
| Other          | 15.8                  | (0.5)      | 0.0       | (--)       | 0.0        | (--)       |
| Total          | 100.0                 |            | 100.0     |            | 100.0      |            |

b. Percentage of nonpredator cattle death loss and nonpredator calf death loss, by operation type:

| Operation Type | Percent Loss |            |         |            |
|----------------|--------------|------------|---------|------------|
|                | Cattle       |            | Calf    |            |
|                | Percent      | Std. Error | Percent | Std. Error |
| Beef           | 49.3         | (0.9)      | 58.4    | (1.9)      |
| Dairy          | 25.7         | (0.6)      | 24.4    | (1.1)      |
| Mixed          | 2.8          | (0.2)      | 3.4     | (0.3)      |
| Other          | 22.2         | (1.0)      | 13.8    | (2.6)      |
| Total          | 100.0        |            | 100.0   |            |

**B. Nonpredator Cattle Death Loss**

**1. Losses—2000**

a. Percentage of cattle inventory lost\*, by region:

| Region         | Percent Inventory |                |
|----------------|-------------------|----------------|
|                | Percent           | Standard Error |
| North Central  | 1.0               | (0.1)          |
| Northeast      | 2.0               | (0.1)          |
| Northwest      | 1.3               | (0.0)          |
| South Central  | 1.7               | (0.1)          |
| Southeast      | 1.9               | (0.1)          |
| Southwest      | 1.9               | (0.1)          |
| All operations | 1.6               | (0.0)          |

\*2000 death loss divided by end-of-year (January 1, 2001) inventory of cattle 500 lb or greater.

b. For **beef** operations, percentage of cattle inventory lost, by region and by size of operation:

| <b>Percent Inventory*</b>                 |             |                   |              |                   |                |                   |                    |                   |                       |                   |
|---|-------------|-------------------|--------------|-------------------|----------------|-------------------|--------------------|-------------------|-----------------------|-------------------|
| <b>Size of Operation (Number of Cows)</b> |             |                   |              |                   |                |                   |                    |                   |                       |                   |
| <b>Region</b>                             | <b>1-49</b> |                   | <b>50-99</b> |                   | <b>100-499</b> |                   | <b>500 or More</b> |                   | <b>All Operations</b> |                   |
|   | <b>Pct.</b> | <b>Std. Error</b> | <b>Pct.</b>  | <b>Std. Error</b> | <b>Pct.</b>    | <b>Std. Error</b> | <b>Pct.</b>        | <b>Std. Error</b> | <b>Pct.</b>           | <b>Std. Error</b> |
| North Central                             | 0.9         | (0.1)             | 0.7          | (0.1)             | 0.6            | (0.0)             | 0.9                | (0.1)             | 0.7                   | (0.0)             |
| Northeast                                 | 1.5         | (0.1)             | 1.3          | (0.1)             | 1.0            | (0.1)             | 0.7                | (0.1)             | 1.3                   | (0.1)             |
| Northwest                                 | 1.2         | (0.2)             | 1.1          | (0.1)             | 0.8            | (0.0)             | 0.8                | (0.0)             | 0.9                   | (0.0)             |
| South Central                             | 2.0         | (0.1)             | 1.3          | (0.1)             | 1.1            | (0.1)             | 0.8                | (0.1)             | 1.4                   | (0.1)             |
| Southeast                                 | 1.9         | (0.1)             | 1.6          | (0.1)             | 1.3            | (0.1)             | 1.1                | (0.1)             | 1.6                   | (0.1)             |
| Southwest                                 | 3.3         | (1.3)             | 1.5          | (0.2)             | 1.3            | (0.2)             | 0.9                | (0.1)             | 1.4                   | (0.2)             |
| All operations                            | 1.8         | (0.1)             | 1.2          | (0.0)             | 0.9            | (0.0)             | 0.8                | (0.0)             | 1.2                   | (0.0)             |

\*2000 death loss divided by end-of-year (January 1, 2001) inventory of cattle 500 lb or greater.

c. For *dairy* operations, percentage of cattle inventory lost, by region and by size of operation\*:

| Region         | Percent Inventory                  |            |           |            |           |            |           |            |           |            |             |            |                |            |
|----------------|------------------------------------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-------------|------------|----------------|------------|
|                | Size of Operation (Number of Cows) |            |           |            |           |            |           |            |           |            |             |            |                |            |
|                | 1-29                               |            | 30-49     |            | 50-99     |            | 100-199   |            | 200-499   |            | 500 or More |            | All Operations |            |
|                | Std. Pct.                          | Std. Error | Std. Pct. | Std. Error | Std. Pct. | Std. Error | Std. Pct. | Std. Error | Std. Pct. | Std. Error | Std. Pct.   | Std. Error | Std. Pct.      | Std. Error |
| North Central  | 4.7                                | (1.4)      | 2.9       | (0.4)      | 2.3       | (0.2)      | 2.9       | (0.3)      | 2.2       | (0.3)      | 3.0         | (0.1)      | 2.7            | (0.1)      |
| Northeast      | 2.3                                | (0.3)      | 3.2       | (0.5)      | 2.6       | (0.1)      | 2.8       | (0.1)      | 2.4       | (0.1)      | 2.3         | (0.1)      | 2.6            | (0.1)      |
| Northwest      | 1.9                                | (0.7)      | 1.4       | (1.0)      | 5.1       | (0.9)      | 3.7       | (0.4)      | 3.3       | (0.2)      | 2.3         | (0.5)      | 2.7            | (0.4)      |
| South Central  | 2.2                                | (0.5)      | 2.1       | (0.6)      | 3.0       | (0.3)      | 4.0       | (0.4)      | 3.8       | (0.4)      | 4.4         | (0.4)      | 3.8            | (0.2)      |
| Southeast      | 6.3                                | (3.5)      | 8.2       | (3.4)      | 4.5       | (0.5)      | 3.9       | (0.4)      | 3.4       | (0.2)      | 5.5         | (1.1)      | 4.4            | (0.4)      |
| Southwest      | 2.7                                | (1.3)      | **        |            | 1.6       | (0.5)      | 2.9       | (0.5)      | 3.3       | (0.2)      | 2.6         | (0.1)      | 2.7            | (0.1)      |
| All operations | 2.6                                | (0.3)      | 3.1       | (0.4)      | 2.7       | (0.1)      | 3.0       | (0.1)      | 2.8       | (0.1)      | 2.8         | (0.1)      | 2.8            | (0.1)      |

\*2000 death loss divided by end-of-year (January 1, 2001) inventory of cattle 500 lb or greater.

\*\*Too few operations to report.

d. For *mixed* operations, percentage of cattle inventory lost, by region and by size of operation\*:

| Region         | Percent Inventory                  |       |            |       |             |       |                |       |
|----------------|------------------------------------|-------|------------|-------|-------------|-------|----------------|-------|
|                | Size of Operation (Number of Cows) |       |            |       |             |       |                |       |
|                | 1-99                               |       | 100-499    |       | 500 or More |       | All Operations |       |
| Pct.           | Std. Error                         | Pct.  | Std. Error | Pct.  | Std. Error  | Pct.  | Std. Error     |       |
| North Central  | 2.0                                | (0.4) | 1.5        | (0.2) | 0.9         | (0.2) | 1.6            | (0.2) |
| Northeast      | 2.1                                | (0.4) | 1.9        | (0.2) | 0.8         | (0.2) | 1.9            | (0.2) |
| Northwest      | 1.5                                | (0.6) | 2.0        | (0.5) | 0.7         | (0.1) | 1.3            | (0.2) |
| South Central  | 1.9                                | (0.4) | 2.7        | (0.3) | 2.4         | (0.2) | 2.5            | (0.2) |
| Southeast      | 2.0                                | (0.4) | 2.4        | (0.2) | 3.1         | (0.2) | 2.5            | (0.2) |
| Southwest      | 6.4                                | (4.0) | 2.1        | (0.5) | 2.0         | (0.3) | 2.0            | (0.2) |
| All operations | 2.0                                | (0.3) | 2.0        | (0.1) | 1.8         | (0.1) | 2.0            | (0.1) |

\*2000 death loss divided by end-of-year (January 1, 2001) inventory of cattle 500 lb or greater.



e. For **other** operations, percentage of cattle inventory lost, by region and by size of operation\*:

| Region         | Percent Inventory                               |            |                      |            |         |            |               |            |                |            |
|----------------|---|------------|----------------------|------------|---------|------------|---------------|------------|----------------|------------|
|                | Size of Operation (Number of Cattle and Calves) |            |                      |            |         |            |               |            |                |            |
|                | 1-99  |            | 100-499 <sup>†</sup> |            | 500-999 |            | 1,000 or More |            | All Operations |            |
|                | Pct.  | Std. Error | Pct.                 | Std. Error | Pct.    | Std. Error | Pct.          | Std. Error | Pct.           | Std. Error |
| North Central  | 6.6   | (3.3)      | 1.6                  | (0.3)      | 1.2     | (0.1)      | 0.8           | (0.1)      | 1.4            | (0.3)      |
| Northeast      | 2.8   | (0.5)      | 1.8                  | (0.3)      | 1.6     | (0.2)      | 1.4           | (0.1)      | 2.1            | (0.2)      |
| Northwest      | 5.0   | (1.2)      | 2.8                  | (0.7)      | 0.5     | (0.1)      | 2.3           | (0.1)      | 2.4            | (0.1)      |
| South Central  | 7.7   | (1.9)      | 2.9                  | (0.5)      | 1.5     | (0.4)      | 2.4           | (0.2)      | 2.6            | (0.2)      |
| Southeast      | 4.7   | (1.1)      | 3.0                  | (1.2)      | **      |            | 1.6           | (0.3)      | 5.6            | (2.6)      |
| Southwest      | 5.0   | (1.5)      | 1.4                  | (0.3)      | 0.7     | (0.4)      | 2.1           | (0.3)      | 2.1            | (0.2)      |
| All operations | 4.9   | (1.0)      | 2.1                  | (0.2)      | 1.7     | (0.4)      | 1.9           | (0.1)      | 2.2            | (0.1)      |

\*2000 death loss divided by end-of-year (January 1, 2001) inventory of cattle 500 lb or greater.

\*\*Too few to report

**2. Cause of loss—1991, 1995, and 2000**

a. Percentage of cattle death loss by cause and by year:

| <b>Percent Nonpredator Loss</b>  |              |              |              |                   |
|--|--------------|--------------|--------------|-------------------|
| <b>Nonpredator Cause</b>   | <b>1991*</b> | <b>1995*</b> | <b>2000</b>  | <b>Std. Error</b> |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis, etc.) | 12.8         | 12.2         | 10.5         | (0.3)             |
| Respiratory problems<br>(pneumonia, shipping fever, etc.)                          | 26.1         | 26.0         | 27.1         | (0.8)             |
| Metabolic problems<br>(milk fever, grass tetany, etc.)                             | N/A          | N/A          | 4.0          | (0.2)             |
| Weather-related causes<br>(chilling, drowning, lightning, etc.)                    | 7.4          | 8.3          | 8.0          | (0.4)             |
| Theft (stolen)   | 1.0          | 0.5          | 1.2          | (0.6)             |
| Poisoning (nitrate poisoning,<br>noxious feeds, noxious weeds, etc.)               | 3.2          | 2.0          | 1.6          | (0.2)             |
| Calving problems   | 16.2         | 15.3         | 12.4         | (0.5)             |
| Other diseases (mastitis, etc.)  | N/A          | N/A          | 6.1          | (0.3)             |
| Other**  | 33.3         | 35.7         | 13.2         | (0.5)             |
| Unknown <sup>+</sup>   | N/A          | N/A          | 15.9         | (0.6)             |
| <b>Total</b>   | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |                   |

\*Standard errors not available for 1991 and 1995.

\*\*Old age, lameness, etc.

<sup>+</sup>Other causes and unknown causes combined in 1991 and 1995.

b. For **beef** operations, percentage of cattle death loss by cause and by year:

| <b>Percent Nonpredator Loss</b>  |              |              |              |                   |
|--|--------------|--------------|--------------|-------------------|
| <b>Nonpredator Cause</b>   | <b>1991*</b> | <b>1995*</b> | <b>2000</b>  | <b>Std. Error</b> |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis, etc.) | 9.3          | 10.3         | 7.5          | (0.4)             |
| Respiratory problems<br>(pneumonia, shipping fever, etc.)                          | 12.8         | 14.2         | 16.9         | (0.8)             |
| Metabolic problems<br>(milk fever, grass tetany, etc.)                             | N/A          | N/A          | 1.7          | (0.2)             |
| Weather-related causes<br>(chilling, drowning, lightning, etc.)                    | 10.0         | 10.0         | 11.9         | (0.7)             |
| Theft (stolen)   | 2.3          | 0.6          | 2.2          | (1.2)             |
| Poisoning (nitrate poisoning,<br>noxious feeds, noxious weeds, etc.)               | 6.1          | 3.2          | 2.6          | (0.3)             |
| Calving problems   | 18.9         | 19.0         | 15.5         | (0.7)             |
| Other diseases (mastitis, etc.)  | N/A          | N/A          | 3.4          | (0.4)             |
| Other**  | 40.6         | 42.7         | 16.8         | (0.7)             |
| Unknown***   | N/A          | N/A          | 21.5         | (0.9)             |
| <b>Total</b>   | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |                   |

\*Standard error not available for 1991 and 1995.

\*\*Old age, lameness, etc.

\*\*\*Other causes and unknown causes combined in 1991 and 1995.

c. For *dairy* operations, percentage of cattle death loss by cause and by year:

| <b>Percent Nonpredator Loss</b>  |              |              |              |                   |
|--|--------------|--------------|--------------|-------------------|
| <b>Nonpredator Cause</b>   | <b>1991*</b> | <b>1995*</b> | <b>2000</b>  | <b>Std. Error</b> |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis, etc.) | 14.3         | 15.2         | 12.2         | (0.5)             |
| Respiratory problems<br>(pneumonia, shipping fever, etc.)                          | 11.4         | 18.6         | 14.6         | (0.6)             |
| Metabolic problems<br>(milk fever, grass tetany, etc.)                             | N/A          | N/A          | 10.6         | (0.5)             |
| Weather-related causes<br>(chilling, drowning, lightning, etc.)                    | 4.4          | 8.2          | 4.3          | (0.8)             |
| Theft (stolen)   | 0.3          | 0.0          | 0.2          | (0.1)             |
| Poisoning (nitrate poisoning,<br>noxious feeds, noxious weeds, etc.)               | 1.9          | 0.9          | 0.6          | (0.2)             |
| Calving problems   | 26.3         | 19.3         | 13.8         | (0.5)             |
| Other diseases (mastitis, etc.)  | N/A          | N/A          | 15.4         | (0.7)             |
| Other**  | 41.4         | 37.8         | 15.3         | (1.0)             |
| Unknown***   | N/A          | N/A          | 13.0         | (0.5)             |
| <b>Total</b>   | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |                   |

\*Standard error not available for 1991 and 1995.

\*\*Old age, lameness, etc.

\*\*\*Other causes and unknown causes combined in 1991 and 1995.

d. For *mixed* operations, percentage of cattle death loss by cause and by year:

| Nonpredator Cause  | Percent Nonpredator Loss |              |              | Std. Error |
|--|--------------------------|--------------|--------------|------------|
|  | 1991*                    | 1995*        | 2000         |            |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis, etc.) | 12.8                     | 19.9         | 11.3         | (1.3)      |
| Respiratory problems<br>(pneumonia, shipping fever, etc.)                          | 9.4                      | 22.5         | 16.8         | (1.7)      |
| Metabolic problems<br>(milk fever, grass tetany, etc.)                             | N/A                      | N/A          | 10.1         | (1.4)      |
| Weather-related causes<br>(chilling, drowning, lightning, etc.)                    | 8.7                      | 8.8          | 10.0         | (1.5)      |
| Theft (stolen)   | 0.4                      | <0.01        | 1.7          | (1.2)      |
| Poisoning (nitrate poisoning,<br>noxious feeds, noxious weeds, etc.)               | 3.1                      | <0.01        | 0.4          | (0.2)      |
| Calving problems   | 28.3                     | 15.0         | 16.0         | (1.4)      |
| Other diseases (mastitis, etc.)  | N/A                      | N/A          | 7.3          | (0.9)      |
| Other**  | 37.3                     | 33.8         | 10.5         | (1.5)      |
| Unknown***   | N/A                      | N/A          | 15.9         | (1.5)      |
| <b>Total</b>   | <b>100.0</b>             | <b>100.0</b> | <b>100.0</b> |            |

\*Standard error not available for 1991 and 1995.

\*\*Old age, lameness, etc.

\*\*\*Other causes and unknown causes were combined in 1991 and 1995.

e. For **other** operations, percentage of cattle death loss by cause and by year:

| <b>Percent Nonpredator Loss</b>  |              |              |              |                   |
|--|--------------|--------------|--------------|-------------------|
| <b>Nonpredator Cause</b>   | <b>1991*</b> | <b>1995*</b> | <b>2000</b>  | <b>Std. Error</b> |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis, etc.) | 15.6         | 12.1         | 14.9         | (.09)             |
| Respiratory problems<br>(pneumonia, shipping fever, etc.)                          | 58.4         | 67.2         | 64.1         | (2.5)             |
| Metabolic problems<br>(milk fever, grass tetany, etc.)                             | N/A          | N/A          | 1.2          | (0.1)             |
| Weather-related causes<br>(chilling, drowning, lightning, etc.)                    | 6.9          | 3.3          | 3.5          | (0.3)             |
| Theft (stolen)   | 0.3          | <0.01        | 0.1          | (0.0)             |
| Poisoning (nitrate poisoning,<br>noxious feeds, noxious weeds, etc.)               | 0.7          | <0.01        | 0.6          | (0.3)             |
| Calving problems   | 1.7          | 1.5          | 3.6          | (2.0)             |
| Other diseases (mastitis, etc.)  | N/A          | N/A          | 1.6          | (0.4)             |
| Other**  | 16.4         | 15.9         | 3.5          | (0.8)             |
| Unknown***   | N/A          | N/A          | 6.9          | (0.9)             |
| <b>Total</b>   | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |                   |

\*Standard error not available for 1991 and 1995.

\*\*Old age, lameness, etc.

\*\*\*Other causes and Unknown causes combined in 1991 and 1995.

**3. Cause of loss by operation size—2000**

a. For **beef** operations, percentage of cattle death loss by cause and by size of operation:

| Nonpredator Cause  | Percent Nonpredator Loss           |                 |                 |                 |                 |                 |                 |  |
|--|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|
|  | Size of Operation (Number of Cows) |                 |                 |                 |                 |                 |                 |  |
|  | 1-49                               |                 | 50-99           |                 | 100-499         |                 | 500 or More     |  |
|  | Std. Pct. Error                    | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error |  |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 6.3 (0.6)                          | 8.1 (0.8)       | 7.6 (0.6)       | 10.6 (1.3)      |                 |                 |                 |  |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 9.7 (0.9)                          | 14.7 (1.1)      | 23.3 (1.9)      | 29.9 (2.6)      |                 |                 |                 |  |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 2.1 (0.4)                          | 1.6 (0.3)       | 1.4 (0.3)       | 1.2 (0.2)       |                 |                 |                 |  |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 10.3 (1.5)                         | 13.0 (1.6)      | 13.9 (0.9)      | 10.1 (0.9)      |                 |                 |                 |  |
| Theft (stolen)   | 4.2 (2.9)                          | 1.0 (0.4)       | 0.7 (0.2)       | 1.4 (0.6)       |                 |                 |                 |  |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 2.6 (0.5)                          | 2.6 (0.9)       | 2.7 (0.4)       | 2.1 (0.4)       |                 |                 |                 |  |
| Calving problems   | 19.1 (1.4)                         | 15.7 (1.2)      | 12.8 (0.9)      | 9.3 (1.2)       |                 |                 |                 |  |
| Other diseases (mastitis, etc.)  | 3.3 (0.7)                          | 4.1 (0.8)       | 2.7 (0.6)       | 4.2 (1.5)       |                 |                 |                 |  |
| Other*   | 18.5 (1.4)                         | 18.1 (0.8)      | 16.0 (0.8)      | 10.4 (1.1)      |                 |                 |                 |  |
| Unknown  | 23.9 (2.0)                         | 21.1 (1.4)      | 18.9 (1.2)      | 20.8 (1.9)      |                 |                 |                 |  |
| Total  | 100.0                              | 100.0           | 100.0           | 100.0           |                 |                 |                 |  |

\*Old age, lameness, etc.

b. For *dairy* operations, percentage of cattle death loss by cause and by size of operation:

| <b>Percent Nonpredator Loss</b>  |                        |                        |                        |                        |                        |                        |
|--|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| <b>Size of Operation (Number of Cows)</b>                                    |                        |                        |                        |                        |                        |                        |
|  | <b>1-29</b>            | <b>30-49</b>           | <b>50-99</b>           | <b>100-199</b>         | <b>200-499</b>         | <b>500 or More</b>     |
| <b>Nonpredator Cause</b>   | <b>Std. Pct. Error</b> | <b>Std. Pct. Error</b> | <b>Std. Pct. Error</b> | <b>Std. Pct. Error</b> | <b>Std. Pct. Error</b> | <b>Std. Pct. Error</b> |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 11.5 (2.6)             | 8.4 (1.7)              | 13.0 (1.6)             | 12.2 (1.1)             | 14.3 (1.2)             | 11.8 (0.6)             |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 22.7 (6.4)             | 10.5 (1.9)             | 10.6 (1.0)             | 12.3 (1.0)             | 16.8 (1.5)             | 17.8 (1.1)             |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 10.5 (3.1)             | 11.9 (2.5)             | 11.8 (1.0)             | 10.8 (0.9)             | 12.5 (1.6)             | 8.4 (0.6)              |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 3.4 (1.5)              | 3.7 (1.1)              | 3.4 (0.6)              | 6.4 (1.0)              | 3.8 (0.8)              | 4.2 (2.2)              |
| Theft (stolen)   | 0.5 (0.5)              | 0.2 (0.2)              | 0.0 (0.0)              | 0.2 (0.1)              | 0.5 (0.2)              | 0.1 (0.0)              |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 1.6 (0.9)              | 0.8 (0.4)              | 1.2 (0.6)              | 0.7 (0.2)              | 0.2 (0.1)              | 0.3 (0.1)              |
| Calving problems   | 12.1 (2.8)             | 15.5 (2.7)             | 17.3 (1.2)             | 15.4 (1.2)             | 14.1 (1.0)             | 10.1 (0.5)             |
| Other diseases (mastitis, etc.)  | 9.5 (2.7)              | 9.5 (1.7)              | 13.8 (1.6)             | 14.9 (1.3)             | 16.3 (1.4)             | 18.5 (1.5)             |
| Other*   | 13.4 (3.2)             | 27.2 (7.6)             | 16.9 (1.4)             | 15.9 (1.6)             | 10.4 (1.1)             | 13.2 (1.1)             |
| Unknown  | 14.8 (3.3)             | 12.3 (2.4)             | 12.0 (1.1)             | 11.2 (1.2)             | 11.1 (1.1)             | 15.6 (1.0)             |
| <b>Total</b>   | <b>100.0</b>           | <b>100.0</b>           | <b>100.0</b>           | <b>100.0</b>           | <b>100.0</b>           | <b>100.0</b>           |

\*Old age, lameness, etc.



c. For *mixed* operations, percentage of cattle death loss by cause and by size of operation:

| Nonpredator Cause  | Percent Nonpredator Loss           |            |         |            |             |            |
|--|------------------------------------|------------|---------|------------|-------------|------------|
|  | Size of Operation (Number of Cows) |            |         |            |             |            |
|  | 1-99                               |            | 100-499 |            | 500 or More |            |
|  | Pct.                               | Std. Error | Pct.    | Std. Error | Pct.        | Std. Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 11.2                               | (3.1)      | 12.7    | (1.9)      | 8.2         | (1.5)      |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 19.6                               | (4.3)      | 14.8    | (2.3)      | 19.0        | (2.2)      |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 8.0                                | (2.2)      | 12.3    | (2.2)      | 6.9         | (1.2)      |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 9.8                                | (4.1)      | 10.8    | (2.0)      | 8.4         | (1.5)      |
| Theft (stolen)   | 0.0                                | (0.0)      | 3.0     | (2.2)      | 0.0         | (0.0)      |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.7                                | (0.5)      | 0.4     | (0.2)      | 0.0         | (0.0)      |
| Calving problems   | 17.7                               | (3.2)      | 14.9    | (2.0)      | 17.1        | (2.0)      |
| Other diseases (mastitis, etc.)  | 7.5                                | (2.0)      | 6.3     | (1.2)      | 9.4         | (1.8)      |
| Other*   | 11.5                               | (2.9)      | 11.7    | (2.3)      | 6.0         | (0.9)      |
| Unknown  | 14.0                               | (3.5)      | 13.1    | (2.0)      | 25.0        | (2.3)      |
| Total  | 100.0                              |            | 100.0   |            | 100.0       |            |

\*Old age, lameness, etc.

d. For **other** operations, percentage of cattle death loss by cause and by size of operation:

| Nonpredator Cause  | Percent Nonpredator Loss                        |                 |                 |                 |                 |                 |                 |       |
|--|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------|
|  | Size of Operation (Number of Cattle and Calves) |                 |                 |                 |                 |                 |                 |       |
|  | 1-99  |                 | 100-499         |                 | 500-999         |                 | 1,000 or More   |       |
|  | Std. Pct. Error                                 | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error |       |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 12.1  | (3.6)           | 7.4             | (1.3)           | 8.7             | (2.8)           | 18.3            | (1.0) |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 39.7  | (7.8)           | 75.5            | (3.0)           | 81.6            | (5.5)           | 66.7            | (1.7) |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 0.9   | (0.5)           | 0.6             | (0.2)           | 0.3             | (0.2)           | 1.5             | (0.2) |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 3.3   | (0.9)           | 3.4             | (1.0)           | 2.3             | (0.8)           | 3.8             | (0.3) |
| Theft (stolen)   | 0.1   | (0.1)           | 0.0             | (0.0)           | 0.4             | (0.3)           | 0.0             | (0.0) |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.5   | (0.2)           | 1.0             | (0.5)           | 0.1             | (0.1)           | 0.6             | (0.5) |
| Calving problems   | 18.4  | (8.3)           | 0.5             | (0.3)           | 0.1             | (0.0)           | 0.2             | (0.0) |
| Other diseases (mastitis, etc.)  | 2.3   | (0.9)           | 2.2             | (1.1)           | 3.7             | (3.0)           | 1.0             | (0.1) |
| Other*   | 12.4  | (4.3)           | 5.0             | (1.5)           | 0.9             | (0.3)           | 0.8             | (0.2) |
| Unknown  | 10.3  | (2.4)           | 4.4             | (1.1)           | 1.9             | (0.7)           | 7.1             | (1.3) |
| Total  | 100.0   |                 | 100.0           |                 | 100.0           |                 | 100.0           |       |

\*Old age, lameness, etc.

**4. Cause of loss by region—2000**a. For **beef** operations, percentage of cattle death loss by cause and by region:

| Nonpredator Cause  | Percent Nonpredator Loss |                    |                    |                    |                                      |                    |
|--|--------------------------|--------------------|--------------------|--------------------|--------------------------------------|--------------------|
|  | Region                   |                    |                    |                    |                                      |                    |
|  | North<br>Central         |                    | Northeast          | Northwest          | South<br>Central Southeast Southwest |                    |
|  | Std.<br>Pct. Error       | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error                   | Std.<br>Pct. Error |
| Digestive problems<br>(bloat, scours,<br>parasites, entero-<br>toxemia, acidosis,<br>etc.) | 13.8 (1.0)               | 7.9 (1.0)          | 11.1 (1.1)         | 6.3 (0.6)          | 4.1 (0.5)                            | 6.0 (1.0)          |
| Respiratory<br>problems<br>(pneumonia,<br>shipping fever, etc.)                            | 30.5 (1.7)               | 14.7 (1.7)         | 17.9 (1.4)         | 16.1 (1.4)         | 6.8 (0.8)                            | 20.6 (4.7)         |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                                  | 0.8 (0.2)                | 3.9 (0.8)          | 1.9 (0.4)          | 1.3 (0.3)          | 1.9 (0.6)                            | 1.1 (0.3)          |
| Weather-related<br>causes (chilling,<br>drowning, lightning,<br>etc.)                      | 14.3 (1.1)               | 8.0 (1.4)          | 8.2 (0.9)          | 12.7 (1.6)         | 12.9 (1.3)                           | 10.9 (2.3)         |
| Theft (stolen)   | 0.3 (0.1)                | 0.9 (0.5)          | 0.9 (0.3)          | 1.3 (0.4)          | 0.2 (0.1)                            | 13.6 (9.9)         |
| Poisoning (nitrate<br>poisoning, noxious<br>feeds, noxious<br>weeds, etc.)                 | 0.9 (0.5)                | 1.6 (0.4)          | 3.9 (0.7)          | 2.2 (0.5)          | 4.1 (0.9)                            | 3.8 (0.8)          |
| Calving problems   | 7.8 (0.8)                | 17.3 (1.7)         | 10.8 (1.6)         | 17.2 (1.3)         | 20.9 (1.3)                           | 11.9 (2.3)         |
| Other diseases<br>(mastitis, etc.)   | 2.8 (1.1)                | 3.2 (0.9)          | 2.9 (0.5)          | 3.7 (0.7)          | 3.9 (0.8)                            | 2.5 (0.7)          |
| Other*   | 14.4 (1.2)               | 20.3 (2.1)         | 19.6 (1.4)         | 16.1 (1.2)         | 19.4 (1.3)                           | 12.8 (2.1)         |
| Unknown  | 14.4 (1.2)               | 22.2 (3.2)         | 22.8 (1.7)         | 23.1 (1.9)         | 25.8 (1.5)                           | 16.8 (2.6)         |
| <b>Total</b>   | <b>100.0</b>             | <b>100.0</b>       | <b>100.0</b>       | <b>100.0</b>       | <b>100.0</b>                         | <b>100.0</b>       |

\*Old age, lameness, etc.

b. For *dairy* operations, percentage of cattle death loss by cause and by region:

| Nonpredator Cause  | Percent Nonpredator Loss |                 |                 |                 |                 |                 |
|--|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|  | Region                   |                 |                 |                 |                 |                 |
|  | North Central            | Northeast       | Northwest       | South Central   | Southeast       | Southwest       |
|  | Std. Pct. Error          | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 12.2 (1.3)               | 11.7 (0.9)      | 13.1 (1.4)      | 10.4 (1.4)      | 12.3 (1.8)      | 13.7 (0.8)      |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 18.8 (2.2)               | 11.8 (0.8)      | 13.1 (1.0)      | 18.5 (2.9)      | 8.6 (0.9)       | 19.7 (1.4)      |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 13.8 (1.4)               | 12.7 (0.9)      | 9.4 (1.2)       | 5.7 (0.8)       | 6.5 (1.0)       | 8.6 (1.0)       |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 2.1 (0.4)                | 2.6 (0.5)       | 1.6 (0.3)       | 19.2 (6.8)      | 7.2 (1.3)       | 2.5 (0.6)       |
| Theft (stolen)   | 0.1 (0.1)                | 0.2 (0.1)       | 0.0 (0.0)       | 0.6 (0.2)       | 0.0 (0.0)       | 0.1 (0.1)       |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.1 (0.1)                | 0.8 (0.3)       | 1.6 (1.2)       | 0.3 (0.1)       | 0.6 (0.2)       | 0.4 (0.2)       |
| Calving problems   | 15.0 (1.7)               | 16.3 (0.9)      | 9.5 (0.7)       | 15.1 (1.7)      | 13.2 (1.5)      | 9.1 (0.7)       |
| Other diseases (mastitis, etc.)  | 13.1 (1.4)               | 14.6 (1.0)      | 14.9 (1.8)      | 10.1 (1.4)      | 21.8 (5.1)      | 18.4 (1.2)      |
| Other*   | 14.5 (1.4)               | 17.7 (2.0)      | 9.0 (0.9)       | 8.0 (1.2)       | 14.1 (2.1)      | 16.7 (1.6)      |
| Unknown  | 10.3 (1.4)               | 11.6 (0.8)      | 27.8 (2.1)      | 12.1 (2.0)      | 15.7 (2.0)      | 10.8 (1.2)      |
| Total  | 100.0                    | 100.0           | 100.0           | 100.0           | 100.0           | 100.0           |

\*Old age, lameness, etc.

c. For *mixed* operations, percentage of cattle death loss by cause and by region:

| Nonpredator Cause  | Percent Nonpredator Loss |                 |                 |                 |                 |                 |
|--|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|  | Region                   |                 |                 |                 |                 |                 |
|  | North Central            | Northeast       | Northwest       | South Central   | Southeast       | Southwest       |
|  | Std. Pct. Error          | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 19.5 (4.8)               | 12.6 (2.6)      | 6.3 (2.5)       | 10.6 (2.1)      | 3.0 (0.9)       | 11.3 (3.7)      |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 23.0 (5.8)               | 16.7 (3.5)      | 10.9 (3.3)      | 11.7 (2.6)      | 11.1 (2.5)      | 24.8 (3.9)      |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 11.0 (4.5)               | 11.8 (3.0)      | 9.7 (2.9)       | 12.1 (2.8)      | 5.7 (1.8)       | 7.6 (2.3)       |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 10.6 (3.1)               | 6.4 (3.0)       | 3.6 (1.7)       | 20.4 (4.5)      | 7.6 (2.0)       | 8.7 (1.8)       |
| Theft (stolen)   | 0.0 (0.0)                | 0.0 (0.0)       | 10.1 (8.4)      | 0.0 (0.0)       | 0.0 (0.0)       | 7.9 (7.3)       |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.7 (0.4)                | 0.5 (0.4)       | 0.0 (0.0)       | 0.5 (0.3)       | 0.2 (0.2)       | 0.0 (0.0)       |
| Calving problems   | 10.9 (3.6)               | 13.7 (2.5)      | 3.0 (1.2)       | 20.3 (3.0)      | 25.0 (4.1)      | 16.8 (3.4)      |
| Other diseases (mastitis, etc.)  | 4.1 (1.5)                | 8.3 (1.8)       | 6.0 (2.4)       | 6.2 (1.7)       | 7.8 (2.6)       | 10.0 (2.7)      |
| Other*   | 9.1 (2.6)                | 16.4 (4.1)      | 9.6 (3.0)       | 8.7 (1.8)       | 7.0 (2.0)       | 5.4 (1.6)       |
| Unknown  | 11.1 (3.5)               | 13.6 (2.8)      | 40.8 (7.7)      | 9.5 (3.5)       | 32.6 (4.1)      | 7.5 (2.8)       |
| Total  | 100.0                    | 100.0           | 100.0           | 100.0           | 100.0           | 100.0           |

\*Old age, lameness, etc.

d. For *other* operations, percentage of cattle death loss by cause and by region:

| Nonpredator Cause  | Percent Nonpredator Loss |                    |                    |                    |                    |                    |
|--|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|  | Region                   |                    |                    |                    |                    |                    |
|  | North<br>Central         | Northeast          | Northwest          | South<br>Central   | Southeast          | Southwest          |
|  | Std.<br>Pct. Error       | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error |
| Digestive problems<br>(bloat, scours,<br>parasites, entero-<br>toxemia, acidosis,<br>etc.) | 14.8 (3.0)               | 12.1 (2.4)         | 14.1 (1.2)         | 17.1 (1.2)         | 4.3 (2.8)          | 11.2 (2.2)         |
| Respiratory<br>problems<br>(pneumonia,<br>shipping fever, etc.)                            | 62.2 (9.8)               | 56.2 (5.8)         | 44.8 (2.2)         | 66.0 (2.2)         | 74.0 (7.4)         | 76.4 (4.1)         |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                                  | 0.7 (0.4)                | 1.6 (0.5)          | 0.0 (0.0)          | 1.7 (0.2)          | 0.1 (0.1)          | 0.8 (0.5)          |
| Weather-related<br>causes (chilling,<br>drowning, lightning,<br>etc.)                      | 4.4 (1.0)                | 2.6 (0.7)          | 0.8 (0.4)          | 4.0 (0.4)          | 1.6 (1.2)          | 2.3 (0.8)          |
| Theft (stolen)   | 0.2 (0.1)                | 0.0 (0.0)          | 0.0 (0.0)          | 0.1 (0.1)          | 0.0 (0.0)          | 0.0 (0.0)          |
| Poisoning (nitrate<br>poisoning, noxious<br>feeds, noxious<br>weeds, etc.)                 | 0.0 (0.0)                | 1.0 (0.5)          | 0.7 (0.5)          | 0.8 (0.5)          | 0.3 (0.4)          | 0.3 (0.3)          |
| Calving problems   | 10.5 (8.6)               | 2.0 (0.7)          | 0.4 (0.1)          | 2.0 (1.0)          | 4.6 (3.1)          | 1.2 (0.6)          |
| Other diseases<br>(mastitis, etc.)   | 1.6 (0.7)                | 2.2 (1.1)          | 5.7 (1.3)          | 1.2 (0.5)          | 0.3 (0.3)          | 1.2 (0.6)          |
| Other*   | 1.4 (0.4)                | 15.1 (6.2)         | 7.1 (2.1)          | 1.3 (0.8)          | 5.1 (3.4)          | 4.5 (1.7)          |
| Unknown  | 4.2 (1.0)                | 7.2 (1.5)          | 26.4 (2.9)         | 5.8 (1.5)          | 9.7 (5.8)          | 2.1 (0.6)          |
| Total  | 100.0                    | 100.0              | 100.0              | 100.0              | 100.0              | 100.0              |

\*Old age, lameness, etc.

**C. Nonpredator  
Calf Death Loss**

**1. Losses—2000**

a. Percentage of calf crop (born during 2000) lost\*, by region:

| Region         | Percent Calf Crop* |                |
|----------------|--------------------|----------------|
|                | Percent            | Standard Error |
| North Central  | 4.5                | (0.6)          |
| Northeast      | 6.3                | (0.4)          |
| Northwest      | 3.7                | (0.1)          |
| South Central  | 3.7                | (0.2)          |
| Southeast      | 3.7                | (0.2)          |
| Southwest      | 4.9                | (0.4)          |
| All operations | 4.4                | (0.1)          |

\*Calf deaths in 2000 / 2000 calf crop x 100.

b. For **beef** operations, percentage of calf crop (born during 2000) lost\*, by region and by size of operation:

| Region         | Percent Calf Crop                  |       |            |       |            |       |                        |       |            |       |
|----------------|------------------------------------|-------|------------|-------|------------|-------|------------------------|-------|------------|-------|
|                | Size of Operation (Number of Cows) |       |            |       |            |       |                        |       |            |       |
|                | 1-49                               |       | 50-99      |       | 100-499    |       | 500 or More Operations |       | All        |       |
| Pct.           | Std. Error                         | Pct.  | Std. Error | Pct.  | Std. Error | Pct.  | Std. Error             | Pct.  | Std. Error |       |
| North Central  | 3.6                                | (0.3) | 3.4        | (0.2) | 2.9        | (0.1) | 2.4                    | (0.1) | 3.0        | (0.1) |
| Northeast      | 5.0                                | (0.3) | 3.5        | (0.3) | 4.1        | (0.4) | 1.8                    | (0.3) | 4.5        | (0.2) |
| Northwest      | 3.7                                | (0.5) | 3.7        | (0.3) | 3.0        | (0.1) | 3.0                    | (0.2) | 3.1        | (0.1) |
| South Central  | 4.0                                | (0.2) | 3.1        | (0.2) | 2.6        | (0.1) | 1.9                    | (0.4) | 3.1        | (0.1) |
| Southeast      | 4.0                                | (0.2) | 3.0        | (0.2) | 2.4        | (0.2) | 1.8                    | (0.1) | 3.2        | (0.1) |
| Southwest      | 6.3                                | (0.8) | 3.8        | (0.4) | 3.5        | (0.4) | 2.0                    | (0.2) | 3.4        | (0.2) |
| All Operations | 4.3                                | (0.1) | 3.3        | (0.1) | 2.9        | (0.1) | 2.3                    | (0.1) | 3.3        | (0.1) |

\*Calf deaths in 2000 / 2000 calf crop x 100.

c. For *dairy* operations, percentage of calf crop (born during 2000) lost\*, by region and by size of operation:

| Percent Calf Crop                  |      |           |       |           |       |           |         |           |         |           |             |           |                |           |
|------------------------------------|------|-----------|-------|-----------|-------|-----------|---------|-----------|---------|-----------|-------------|-----------|----------------|-----------|
| Size of Operation (Number of Cows) |      |           |       |           |       |           |         |           |         |           |             |           |                |           |
| Region                             | 1-29 |           | 30-49 |           | 50-99 |           | 100-199 |           | 200-499 |           | 500 or More |           | All Operations |           |
|                                    | Pct. | Std. Err. | Pct.  | Std. Err. | Pct.  | Std. Err. | Pct.    | Std. Err. | Pct.    | Std. Err. | Pct.        | Std. Err. | Pct.           | Std. Err. |
| North Central                      | 9.1  | (1.4)     | 7.1   | (0.6)     | 7.2   | (0.4)     | 7.9     | (0.6)     | 4.4     | (0.7)     | 4.0         | (0.3)     | 6.7            | (0.3)     |
| Northeast                          | 6.7  | (0.7)     | 7.2   | (0.5)     | 7.1   | (0.3)     | 6.8     | (0.3)     | 6.5     | (0.7)     | 3.3         | (0.1)     | 6.6            | (0.2)     |
| Northwest                          | 5.3  | (3.7)     | 4.8   | (1.6)     | 8.9   | (0.9)     | 7.9     | (0.6)     | 5.7     | (0.5)     | 4.6         | (0.2)     | 5.2            | (0.3)     |
| South Central                      | 16.9 | (5.9)     | 6.9   | (1.0)     | 8.9   | (0.8)     | 9.4     | (0.9)     | 8.4     | (0.9)     | 12.5        | (5.6)     | 10.7           | (2.6)     |
| Southeast                          | 4.6  | (1.3)     | 5.3   | (3.7)     | 7.7   | (0.9)     | 9.9     | (0.9)     | 7.3     | (0.6)     | 4.5         | (0.3)     | 6.9            | (0.3)     |
| Southwest                          | 18.6 | (3.7)     | **    |           | 8.2   | (1.8)     | 9.2     | (1.6)     | 7.7     | (0.7)     | 4.3         | (0.2)     | 5.1            | (0.2)     |
| All Operations                     | 7.9  | (0.7)     | 7.1   | (0.4)     | 7.3   | (0.2)     | 7.5     | (0.3)     | 6.6     | (0.4)     | 4.9         | (0.5)     | 6.4            | (0.2)     |

\*Calf deaths in 2000 / 2000 calf crop x 100.

\*\*Too few operations to report.



d. For *mixed* operations, percentage of calf crop (born during 2000) lost\*, by region and by size of operation:

| Region         | Percent Calf Crop                  |            |         |            |             |            | All Operations |            |
|----------------|------------------------------------|------------|---------|------------|-------------|------------|----------------|------------|
|                | Size of Operation (Number of Cows) |            |         |            |             |            |                |            |
|                | 1-99                               |            | 100-499 |            | 500 or More |            | Pct.           | Std. Error |
|                | Pct.                               | Std. Error | Pct.    | Std. Error | Pct.        | Std. Error | Pct.           | Std. Error |
| North Central  | 7.7                                | (0.8)      | 5.8     | (0.5)      | 4.1         | (0.4)      | 6.2            | (0.4)      |
| Northeast      | 7.4                                | (1.1)      | 8.4     | (1.6)      | 2.9         | (0.5)      | 7.8            | (1.0)      |
| Northwest      | 6.9                                | (1.9)      | 6.6     | (1.5)      | 2.3         | (0.3)      | 4.5            | (0.9)      |
| South Central  | 7.8                                | (1.0)      | 6.7     | (0.8)      | 4.0         | (0.7)      | 6.2            | (0.5)      |
| Southeast      | 4.5                                | (2.0)      | 6.9     | (0.7)      | 2.3         | (0.6)      | 5.0            | (0.6)      |
| Southwest      | 17.5                               | (15.5)     | 4.5     | (1.4)      | 7.9         | (1.2)      | 6.9            | (1.0)      |
| All Operations | 7.3                                | (0.7)      | 6.9     | (0.6)      | 4.3         | (0.5)      | 6.4            | (0.4)      |

\*Calf deaths in 2000 / 2000 calf crop x 100.

**Note: Very few calves were born on “other” operations. Therefore, inventory of calves less than 500 lb was used in place of calf crop.**

e. For *other* operations, percentage of *calf inventory* lost\*, by region and by size of operation:

| <b>Percent Inventory</b>                               |             |                   |                |                   |                |                   |                      |                   |                       |                   |
|--|-------------|-------------------|----------------|-------------------|----------------|-------------------|----------------------|-------------------|-----------------------|-------------------|
| <b>Size of Operation (Number of Cattle and Calves)</b> |             |                   |                |                   |                |                   |                      |                   |                       |                   |
| <b>Region</b>  | <b>1-99</b> |                   | <b>100-499</b> |                   | <b>500-999</b> |                   | <b>1,000 or More</b> |                   | <b>All Operations</b> |                   |
|  | <b>Pct.</b> | <b>Std. Error</b> | <b>Pct.</b>    | <b>Std. Error</b> | <b>Pct.</b>    | <b>Std. Error</b> | <b>Pct.</b>          | <b>Std. Error</b> | <b>Pct.</b>           | <b>Std. Error</b> |
| North Central  | 25.6        | (6.9)             | 9.6            | (1.7)             | 21.9           | (9.1)             | 4.0                  | (2.4)             | 13.7                  | (3.0)             |
| Northeast  | 11.6        | (1.7)             | 7.2            | (0.9)             | 22.9           | (9.0)             | 6.2                  | (1.0)             | 12.2                  | (3.3)             |
| Northwest  | 13.3        | (3.1)             | 9.4            | (4.7)             | 3.6            | (2.0)             | 20.8                 | (1.9)             | 14.7                  | (2.0)             |
| South Central  | 15.7        | (3.4)             | 3.9            | (0.9)             | 3.7            | (0.7)             | 3.7                  | (1.0)             | 5.6                   | (0.7)             |
| Southeast  | 14.7        | (3.4)             | 6.1            | (2.3)             | **             |                   | 5.1                  | (1.2)             | 16.5                  | (6.9)             |
| Southwest  | 12.3        | (4.0)             | 2.4            | (0.8)             | 7.7            | (3.5)             | 14.1                 | (4.7)             | 12.2                  | (3.7)             |
| All Operations   | 14.9        | (1.5)             | 6.2            | (0.6)             | 15.0           | (5.1)             | 8.6                  | (2.1)             | 10.4                  | (1.3)             |

\*2000 death loss divided by end-of-year (January 1, 2001) inventory of calves 500 lbs or less. \*\*Too few operations to report.

**2. Cause of loss—1991, 1995, and 2000**

a. Percentage of calf death loss, by cause—1991, 1995, and 2000:

| <b>Percent Nonpredator Loss</b>  |               |               |              |                   |
|--|---------------|---------------|--------------|-------------------|
| <b>Nonpredator Cause</b>   | <b>1991**</b> | <b>1995**</b> | <b>2000</b>  | <b>Std. Error</b> |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 26.0          | 25.2          | 19.8         | (0.7)             |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 35.2          | 29.6          | 30.0         | (1.9)             |
| Metabolic problems (milk fever, grass tetany, etc.)                          | N/A           | N/A           | 0.8          | (0.0)             |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 6.2           | 10.7          | 10.6         | (0.9)             |
| Theft (stolen)   | 0.6           | 0.4           | 0.4          | (0.1)             |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.8           | 0.6           | 0.5          | (0.1)             |
| Calving problems   | 13.2          | 15.1          | 16.7         | (0.7)             |
| Other diseases (mastitis, etc.)  | N/A           | N/A           | 3.2          | (0.8)             |
| Other***   | 18.0          | 18.4          | 3.2          | (0.3)             |
| Unknown <sup>†</sup>   | N/A           | N/A           | 14.8         | (0.7)             |
| <b>Total</b>   | <b>100.0</b>  | <b>100.0</b>  | <b>100.0</b> |                   |

\*Operations that reported a calf crop in 2000 but no beef or milk cows on January 1, 2001, are included in this table.

\*\*Standard error not available in 1991 and 1995.

\*\*\*Lameness, etc.

<sup>†</sup>Other and unknown causes combined in 1991 and 1995.

b. For **beef** operations, percentage of calf death loss by cause and by year:

| <b>Percent Nonpredator Loss</b>  |              |              |              |                   |
|--|--------------|--------------|--------------|-------------------|
| <b>Nonpredator Cause</b>   | <b>1991*</b> | <b>1995*</b> | <b>2000</b>  | <b>Std. Error</b> |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 19.2         | 17.4         | 13.8         | (0.5)             |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 25.6         | 23.5         | 23.2         | (0.7)             |
| Metabolic problems (milk fever, grass tetany, etc.)                          | N/A          | N/A          | 0.7          | (0.1)             |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 10.8         | 14.7         | 13.5         | (0.5)             |
| Theft (stolen)   | 1.0          | 0.4          | 0.6          | (0.1)             |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 1.2          | 0.8          | 0.7          | (0.1)             |
| Calving problems   | 20.4         | 20.4         | 23.5         | (0.6)             |
| Other diseases (mastitis, etc.)  | N/A          | N/A          | 2.1          | (0.3)             |
| Other**  | 21.8         | 22.8         | 3.5          | (0.3)             |
| Unknown***   | N/A          | N/A          | 18.4         | (0.6)             |
| <b>Total</b>   | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |                   |

\*Standard error not available in 1991 and 1995.

\*\* Lameness, etc.

\*\*\*Other and unknown combined in 1991 and 1995.

c. For *dairy* operations, percentage of calf death loss by cause and by year:

| <b>Percent Nonpredator Loss</b>  |              |              |              |                   |
|--|--------------|--------------|--------------|-------------------|
| <b>Nonpredator Cause</b>   | <b>1991*</b> | <b>1995*</b> | <b>2000</b>  | <b>Std. Error</b> |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 36.6         | 40.5         | 35.4         | (1.4)             |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 33.0         | 35.3         | 30.7         | (1.3)             |
| Metabolic problems (milk fever, grass tetany, etc.)                          | N/A          | N/A          | 1.1          | (0.1)             |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 2.5          | 3.9          | 6.8          | (3.2)             |
| Theft (stolen)   | 0.2          | 0.1          | 0.1          | (0.0)             |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.5          | 0.2          | 0.2          | (0.0)             |
| Calving problems   | 10.6         | 8.3          | 9.8          | (0.6)             |
| Other diseases (mastitis, etc.)  | N/A          | N/A          | 2.5          | (0.3)             |
| Other**  | 16.6         | 11.7         | 3.1          | (0.9)             |
| Unknown***   | N/A          | N/A          | 10.3         | (0.6)             |
| <b>Total</b>   | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |                   |

\*Standard error not available in 1991 and 1995.

\*\*Lameness, etc.

\*\*\*Other and unknown causes combined in 1991 and 1995.

d. For *mixed* operations, percentage of calf death loss by cause and by year:

| <b>Percent Nonpredator Loss</b>  |              |              |              |                   |
|--|--------------|--------------|--------------|-------------------|
| <b>Nonpredator Cause</b>   | <b>1991*</b> | <b>1995*</b> | <b>2000</b>  | <b>Std. Error</b> |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 37.5         | 41.3         | 31.0         | (2.1)             |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 34.9         | 41.5         | 34.1         | (2.0)             |
| Metabolic problems (milk fever, grass tetany, etc.)                          | N/A          | N/A          | 1.5          | (0.7)             |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 4.1          | 3.1          | 6.8          | (0.9)             |
| Theft (stolen)   | 0.4          | 0.0          | 0.0          | (0.0)             |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.2          | 0.0          | 0.0          | (0.0)             |
| Calving problems   | 11.3         | 5.3          | 10.7         | (1.4)             |
| Other diseases (mastitis, etc.)  | N/A          | N/A          | 1.3          | (0.5)             |
| Other**  | N/A          | N/A          | 1.8          | (0.6)             |
| Unknown***   | 11.6         | 8.8          | 12.8         | (2.4)             |
| <b>Total</b>   | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |                   |

\*Standard error not available in 1991 and 1995.

\*\*Lameness, etc.

\*\*\*Other and unknown causes combined in 1991 and 1995.

e. For **other** operations, percentage of calf death loss by cause and by year:

| <b>Percent Nonpredator Loss</b>  |              |              |              |                   |
|--|--------------|--------------|--------------|-------------------|
| <b>Cause</b>   | <b>1991*</b> | <b>1995*</b> | <b>2000</b>  | <b>Std. Error</b> |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 16.0         | 27.7         | 15.1         | (3.3)             |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 65.9         | 61.7         | 56.5         | (9.2)             |
| Metabolic problems (milk fever, grass tetany, etc.)                          | N/A          | N/A          | 0.3          | (0.2)             |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 3.1          | 2.5          | 5.6          | (2.3)             |
| Theft (stolen)   | 0.5          | <0.01        | 0.0          | (0.0)             |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.4          | <0.01        | 0.3          | (0.2)             |
| Calving problems   | 0.7          | 1.8          | 1.7          | (0.5)             |
| Other diseases (mastitis, etc.)  | N/A          | N/A          | 9.9          | (5.3)             |
| Other**  | 13.4         | 6.3          | 2.5          | (1.2)             |
| Unknown**  | N/A          | N/A          | 8.1          | (2.9)             |
| <b>Total</b>   | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> |                   |

\*Standard error not available for 1991 and 1995.

\*\*Other causes, lameness, etc.

\*\*\*Other causes and unknown causes combined in 1991 and 1995.

**3. Cause of loss by size of operation—2000**

a. For **beef** operations, percentage of calf death loss by cause and by size of operation:

| Nonpredator Cause   | Percent Nonpredator Loss           |                    |                    |                    |                    |                    |                    |       |
|---|------------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------|
|   | Size of Operation (Number of Cows) |                    |                    |                    |                    |                    |                    |       |
|   | 1-49                               |                    | 50-99              |                    | 100-499            |                    | 500 or More        |       |
|   | Std.<br>Pct. Error                 | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error |       |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis,<br>etc.) | 11.2                               | (1.0)              | 11.2               | (0.9)              | 16.8               | (0.8)              | 18.5               | (1.6) |
| Respiratory problems<br>(pneumonia, shipping<br>fever, etc.)                          | 16.4                               | (1.1)              | 25.0               | (1.5)              | 27.8               | (1.0)              | 29.8               | (3.6) |
| Metabolic problems<br>(milk fever, grass tetany,<br>etc.)                             | 0.5                                | (0.1)              | 0.7                | (0.2)              | 0.9                | (0.2)              | 0.8                | (0.1) |
| Weather-related causes<br>(chilling, drowning,<br>lightning, etc.)                    | 13.8                               | (0.9)              | 12.9               | (1.1)              | 14.5               | (0.9)              | 10.3               | (1.0) |
| Theft (stolen)  | 0.4                                | (0.2)              | 0.7                | (0.3)              | 0.6                | (0.2)              | 1.1                | (0.4) |
| Poisoning (nitrate<br>poisoning, noxious<br>feeds, noxious weeds,<br>etc.)            | 1.0                                | (0.3)              | 0.7                | (0.3)              | 0.6                | (0.2)              | 0.4                | (0.1) |
| Calving problems  | 27.1                               | (1.2)              | 25.4               | (1.3)              | 20.9               | (1.0)              | 14.5               | (1.2) |
| Other diseases<br>(mastitis, etc.)  | 2.4                                | (0.5)              | 2.0                | (0.4)              | 1.4                | (0.4)              | 3.0                | (0.6) |
| Other*  | 4.5                                | (0.5)              | 3.8                | (0.7)              | 2.5                | (0.4)              | 2.6                | (0.3) |
| Unknown   | 22.7                               | (1.2)              | 17.6               | (1.1)              | 14.0               | (0.8)              | 19.0               | (1.8) |
| Total   | 100.0                              |                    | 100.0              |                    | 100.0              |                    | 100.0              |       |

\*Lameness, etc.



b. For *dairy* operations, percentage of calf death loss by cause and by size of operation:

| Cause  | Percent Nonpredator Loss           |                 |                 |                 |                 |                 |
|--|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|  | Size of Operation (Number of Cows) |                 |                 |                 |                 |                 |
|  | 1-29                               | 30-49           | 50-99           | 100-199         | 200-499         | 500 or More     |
|  | Std. Pct. Error                    | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 34.9 (4.9)                         | 35.3 (2.9)      | 41.8 (1.7)      | 41.3 (1.8)      | 34.7 (2.5)      | 25.7 (3.6)      |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 30.4 (5.0)                         | 35.1 (3.2)      | 28.3 (1.4)      | 31.1 (1.7)      | 33.4 (2.7)      | 29.4 (4.1)      |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 0.0 (0.0)                          | 0.2 (0.1)       | 1.1 (0.3)       | 1.2 (0.5)       | 1.1 (0.3)       | 1.4 (0.3)       |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 4.1 (1.4)                          | 2.2 (0.8)       | 3.8 (0.6)       | 4.1 (0.6)       | 4.2 (0.6)       | 15.3(10.9)      |
| Theft (stolen)   | 0.0 (0.0)                          | 0.0 (0.0)       | 0.0 (0.0)       | 0.0 (0.0)       | 0.1 (0.1)       | 0.2 (0.1)       |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.0 (0.0)                          | 0.1 (0.1)       | 0.1 (0.0)       | 0.2 (0.1)       | 0.3 (0.1)       | 0.2 (0.1)       |
| Calving problems   | 12.4 (3.4)                         | 12.5 (1.7)      | 11.1 (1.0)      | 9.3 (1.1)       | 7.4 (1.0)       | 9.3 (1.5)       |
| Other diseases (mastitis, etc.)  | 1.2 (0.6)                          | 2.1 (0.9)       | 3.6 (0.8)       | 2.4 (0.8)       | 2.8 (0.8)       | 1.8 (0.3)       |
| Other*   | 3.0 (1.0)                          | 2.0 (0.5)       | 3.4 (1.1)       | 2.3 (0.8)       | 7.2 (4.8)       | 1.2 (0.2)       |
| Unknown  | 14.0 (3.5)                         | 10.5 (2.0)      | 6.8 (0.8)       | 8.1 (1.1)       | 8.8 (1.2)       | 15.5 (2.4)      |
| Total  | 100.0                              | 100.0           | 100.0           | 100.0           | 100.0           | 100.0           |

\*Lameness, etc.

c. For *mixed* operations, percentage of calf death loss by cause and by size of operation:

| Nonpredator Cause  | Percent Nonpredator Loss           |            |         |            |             |            |
|--|------------------------------------|------------|---------|------------|-------------|------------|
|  | Size of Operation (Number of Cows) |            |         |            |             |            |
|  | 1-99                               |            | 100-499 |            | 500 or More |            |
|  | Pct.                               | Std. Error | Pct.    | Std. Error | Pct.        | Std. Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 36.5                               | (4.1)      | 30.4    | (2.9)      | 24.6        | (3.6)      |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 30.2                               | (3.4)      | 35.5    | (2.9)      | 33.8        | (2.1)      |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 1.2                                | (0.8)      | 1.9     | (1.1)      | 0.5         | (0.1)      |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 5.9                                | (1.8)      | 6.3     | (1.3)      | 10.2        | (1.5)      |
| Theft (stolen)   | 0.0                                | (0.0)      | 0.0     | (0.0)      | 0.0         | (0.0)      |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.0                                | (0.0)      | 0.0     | (0.0)      | 0.1         | (0.0)      |
| Calving problems   | 12.6                               | (3.1)      | 9.0     | (1.7)      | 14.8        | (2.5)      |
| Other diseases (mastitis, etc.)  | 2.4                                | (1.8)      | 1.0     | (0.4)      | 0.8         | (0.3)      |
| Other*   | 1.2                                | (0.8)      | 2.5     | (0.9)      | 0.1         | (0.0)      |
| Unknown  | 10.0                               | (2.4)      | 13.4    | (3.9)      | 15.1        | (1.5)      |
| Total  | 100.0                              |            | 100.0   |            | 100.0       |            |

\*Lameness, etc.

d. For **other** operations, percentage of calf death loss by cause and by size of operation:

| Nonpredator Cause  | Percent Nonpredator Loss                        |                 |                 |                 |                 |                 |                 |  |
|--|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|
|  | Size of Operation (Number of Cattle and Calves) |                 |                 |                 |                 |                 |                 |  |
|  | 1-99  |                 | 100-499         |                 | 500-999         |                 | 1,000 or More   |  |
|  | Std. Pct. Error                                 | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error | Std. Pct. Error |  |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 12.1 (5.4)                                      | 28.9 (6.5)      | 15.1 (5.7)      | 12.7 (3.7)      |                 |                 |                 |  |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 66.9 (14.4)                                     | 55.8 (6.7)      | 44.7 (14.4)     | 48.9 (9.0)      |                 |                 |                 |  |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 0.4 (0.4)                                       | 0.2 (0.1)       | 0.1 (0.1)       | 0.2 (0.0)       |                 |                 |                 |  |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 4.3 (2.3)                                       | 2.7 (1.3)       | 0.6 (0.4)       | 14.4 (5.9)      |                 |                 |                 |  |
| Theft (stolen)   | 0.0 (0.0)                                       | 0.0 (0.0)       | 0.0 (0.0)       | 0.1 (0.0)       |                 |                 |                 |  |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.1 (0.1)                                       | 1.7 (1.3)       | 0.0 (0.0)       | 0.0 (0.0)       |                 |                 |                 |  |
| Calving problems   | 4.0 (1.8)                                       | 0.6 (0.3)       | 0.0 (0.0)       | 0.1 (0.1)       |                 |                 |                 |  |
| Other diseases (mastitis, etc.)  | 1.0 (0.5)                                       | 3.0 (1.7)       | 38.5 (12.4)     | 3.5 (3.0)       |                 |                 |                 |  |
| Other*   | 5.4 (3.4)                                       | 1.2 (1.0)       | 0.0 (0.0)       | 0.1 (0.1)       |                 |                 |                 |  |
| Unknown  | 5.8 (2.6)                                       | 5.9 (2.8)       | 1.0 (0.8)       | 20.0 (6.7)      |                 |                 |                 |  |
| Total  | 100.0   | 100.0           | 100.0           | 100.0           |                 |                 |                 |  |

\*Lameness, etc.

**4. Cause of loss by region—2000**a. For **beef** operations, percentage of calf death loss by cause and by region:

| Nonpredator Cause  | Percent Nonpredator Loss |                    |                    |                    |                    |                    |
|--|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|  | Region                   |                    |                    |                    |                    |                    |
|  | North<br>Central         | Northeast          | Northwest          | South<br>Central   | Southeast          | Southwest          |
|  | Std.<br>Pct. Error       | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 20.2 (1.1)               | 15.6 (1.9)         | 20.5 (1.3)         | 8.6 (0.9)          | 8.5 (0.9)          | 19.1 (2.1)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 24.8 (1.1)               | 21.4 (2.1)         | 21.5 (1.1)         | 25.8 (1.6)         | 14.8 (1.3)         | 27.9 (2.3)         |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 0.2 (0.1)                | 0.2 (0.1)          | 0.8 (0.2)          | 0.9 (0.2)          | 0.9 (0.2)          | 1.4 (0.4)          |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 13.7 (1.0)               | 11.6 (1.5)         | 12.5 (1.0)         | 16.4 (1.1)         | 10.9 (1.0)         | 10.8 (2.0)         |
| Theft (stolen)   | 0.7 (0.2)                | 0.2 (0.1)          | 0.1 (0.0)          | 0.7 (0.3)          | 0.2 (0.1)          | 1.8 (0.9)          |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 1.0 (0.5)                | 0.8 (0.4)          | 0.8 (0.2)          | 0.3 (0.1)          | 1.2 (0.4)          | 1.0 (0.3)          |
| Calving problems   | 26.7 (1.2)               | 20.8 (1.7)         | 22.1 (1.4)         | 23.8 (1.3)         | 26.5 (1.4)         | 16.9 (1.9)         |
| Other diseases (mastitis, etc.)  | 0.8 (0.2)                | 2.7 (1.1)          | 2.2 (0.4)          | 1.7 (0.4)          | 3.8 (0.8)          | 1.9 (0.6)          |
| Other*   | 2.7 (0.6)                | 4.3 (0.6)          | 3.7 (0.5)          | 3.2 (0.5)          | 5.3 (0.8)          | 1.8 (0.4)          |
| Unknown  | 9.2 (0.8)                | 22.4 (2.5)         | 15.8 (1.4)         | 18.6 (1.1)         | 27.9 (1.5)         | 17.4 (1.7)         |
| Total  | 100.0                    | 100.0              | 100.0              | 100.0              | 100.0              | 100.0              |

\*Lameness, etc.

b. For *dairy* operations, percentage of calf death loss by cause and by region:

| Nonpredator Cause  | Percent Nonpredator Loss |                    |                    |                    |                    |                    |
|--|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|  | Region                   |                    |                    |                    |                    |                    |
|  | North<br>Central         | Northeast          | Northwest          | South<br>Central   | Southeast          | Southwest          |
|  | Std.<br>Pct. Error       | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 40.7 (2.1)               | 41.5 (1.5)         | 29.9 (3.2)         | 19.0 (6.2)         | 24.7 (2.5)         | 31.7 (1.6)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 32.7 (1.9)               | 31.0 (1.3)         | 30.1 (4.3)         | 18.3 (5.8)         | 29.1 (3.9)         | 37.5 (1.8)         |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 0.4 (0.2)                | 1.1 (0.3)          | 0.9 (0.3)          | 0.5 (0.2)          | 0.4 (0.2)          | 2.0 (0.4)          |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 3.3 (0.9)                | 2.2 (0.3)          | 1.3 (0.4)          | 39.8 (18.7)        | 9.8 (1.7)          | 2.8 (0.4)          |
| Theft (stolen)   | 0.0 (0.0)                | 0.0 (0.0)          | 0.1 (0.0)          | 0.2 (0.1)          | 0.0 (0.0)          | 0.3 (0.1)          |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.1 (0.1)                | 0.1 (0.0)          | 0.0 (0.0)          | 0.1 (0.1)          | 0.2 (0.1)          | 0.4 (0.2)          |
| Calving problems   | 14.0 (1.6)               | 9.2 (0.7)          | 6.5 (0.9)          | 11.2 (3.7)         | 9.8 (1.2)          | 9.6 (1.2)          |
| Other diseases (mastitis, etc.)  | 1.5 (0.6)                | 2.5 (0.5)          | 1.6 (0.5)          | 4.7 (2.0)          | 2.5 (0.6)          | 2.5 (0.5)          |
| Other *  | 1.1 (0.3)                | 5.0 (1.9)          | 0.2 (0.1)          | 1.8 (0.8)          | 1.4 (0.4)          | 2.1 (0.7)          |
| Unknown  | 6.2 (1.1)                | 7.4 (0.7)          | 29.4 (5.9)         | 4.4 (1.5)          | 22.1 (2.2)         | 11.1 (1.4)         |
| Total  | 100.0                    | 100.0              | 100.0              | 100.0              | 100.0              | 100.0              |

\*Lameness, etc.

c. For *mixed* operations, percentage of calf death loss by cause and by region:

| Nonpredator Cause  | Percent Nonpredator Loss |                    |                    |                    |                    |                    |
|--|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|  | Region                   |                    |                    |                    |                    |                    |
|  | North<br>Central         | Northeast          | Northwest          | South<br>Central   | Southeast          | Southwest          |
|  | Std.<br>Pct. Error       | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 27.4 (4.1)               | 36.8 (3.4)         | 14.9 (5.0)         | 36.4 (6.0)         | 29.9 (4.4)         | 22.8 (3.4)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 36.3 (4.4)               | 36.8 (3.6)         | 17.9 (5.6)         | 33.2 (5.1)         | 26.3 (3.6)         | 40.9 (2.5)         |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 3.4 (3.2)                | 2.1 (0.8)          | 0.1 (0.1)          | 0.3 (0.1)          | 0.3 (0.1)          | 0.2 (0.0)          |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 7.3 (2.2)                | 2.5 (0.8)          | 3.7 (1.0)          | 12.7 (3.3)         | 10.4 (4.0)         | 11.1 (2.2)         |
| Theft (stolen)   | 0.0 (0.0)                | 0.0 (0.0)          | 0.0 (0.0)          | 0.0 (0.0)          | 0.0 (0.0)          | 0.0 (0.0)          |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.0 (0.0)                | 0.0 (0.0)          | 0.0 (0.0)          | 0.0 (0.0)          | 0.0 (0.0)          | 0.0 (0.0)          |
| Calving problems   | 13.2 (3.3)               | 8.3 (2.5)          | 6.4 (2.8)          | 7.7 (2.0)          | 13.1 (3.6)         | 19.6 (3.8)         |
| Other diseases (mastitis, etc.)  | 0.0 (0.0)                | 2.5 (1.3)          | 0.7 (0.6)          | 1.6 (1.1)          | 0.2 (0.1)          | 0.2 (0.0)          |
| Other*   | 1.8 (1.1)                | 1.7 (1.0)          | 0.4 (0.3)          | 3.6 (2.3)          | 2.5 (1.5)          | 0.0 (0.0)          |
| Unknown  | 10.6 (3.8)               | 9.3 (3.3)          | 55.9(12.0)         | 4.5 (1.1)          | 17.3 (3.3)         | 5.2 (2.0)          |
| Total  | 100.0                    | 100.0              | 100.0              | 100.0              | 100.0              | 100.0              |

\*Lameness, etc.

d. For **other** operations, percentage of calf death loss by cause and by region:

| Nonpredator Cause  | Percent Nonpredator Loss |                    |                    |                    |                    |                    |
|--|--------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|  | Region                   |                    |                    |                    |                    |                    |
|  | North<br>Central         | Northeast          | Northwest          | South<br>Central   | Southeast          | Southwest          |
|  | Std.<br>Pct. Error       | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error | Std.<br>Pct. Error |
| Digestive problems<br>(bloat, scours,<br>parasites, entero-<br>toxemia, acidosis,<br>etc.) | 7.7 (4.7)                | 29.2 (2.8)         | 36.3 (3.9)         | 11.2 (5.8)         | 5.0 (3.2)          | 10.8 (4.6)         |
| Respiratory problems<br>(pneumonia, shipping<br>fever, etc.)                               | 78.6 (14.5)              | 33.7 (4.4)         | 33.8 (3.0)         | 59.3 (7.1)         | 73.2 (12.9)        | 42.7 (10.8)        |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                                  | 0.1 (0.0)                | 0.1 (0.1)          | 0.1 (0.0)          | 0.3 (0.2)          | 2.0 (1.9)          | 0.0 (0.0)          |
| Weather-related<br>causes (chilling,<br>drowning, lightning,<br>etc.)                      | 0.6 (0.5)                | 2.7 (1.4)          | 2.5 (1.2)          | 9.1 (3.8)          | 1.1 (0.7)          | 20.0 (6.6)         |
| Theft (stolen)   | 0.1 (0.1)                | 0.0 (0.0)          | 0.0 (0.0)          | 0.1 (0.1)          | 0.0 (0.0)          | 0.0 (0.0)          |
| Poisoning (nitrate<br>poisoning, noxious<br>feeds, noxious<br>weeds, etc.)                 | 0.0 (0.1)                | 0.8 (0.8)          | 0.0 (0.0)          | 0.1 (0.0)          | 0.5 (0.4)          | 0.0 (0.0)          |
| Calving problems   | 0.9 (0.6)                | 1.7 (0.8)          | 1.2 (0.6)          | 3.0 (1.2)          | 5.7 (3.5)          | 0.7 (0.5)          |
| Other diseases<br>(mastitis, etc.)   | 10.9 (10.9)              | 22.1 (11.3)        | 0.7 (0.3)          | 5.6 (4.2)          | 1.0 (0.8)          | 0.1 (0.1)          |
| Other*   | 0.1 (0.0)                | 4.7 (3.8)          | 7.7 (5.6)          | 4.4 (3.8)          | 3.3 (3.2)          | 0.1 (0.1)          |
| Unknown  | 1.0 (0.7)                | 5.0 (2.4)          | 17.7 (3.0)         | 6.9 (2.6)          | 8.2 (4.1)          | 25.6 (7.7)         |
| Total  | 100.0                    | 100.0              | 100.0              | 100.0              | 100.0              | 100.0              |

\*Lameness, etc.

## **Section III: Methodology**

### **A. Reliability of Cattle and Calf Death Loss Estimates**

#### **1. Survey procedures**

A random sample of U.S. cattle producers was surveyed to provide data for these estimates. Survey procedures ensured that all producers (except those in Alaska) had an opportunity to participate in the survey, regardless of operation size. Large operations were sampled more heavily than small operations. Data were collected from about 77,000 operators in 1991, 50,000 producers in 1995, and 50,000 producers in 2000 during the first half of January by mail, telephone, and face-to-face interviews. Regardless of when producers responded, they were asked to report death losses for cattle and calves for the 1991, 1995, and 2000 calendar years and the January 1, 1992, 1996, and 2001 cattle and calf inventories by class.

Based on the original data collected during January, NASS's Cattle and Calves Death Loss report was issued in May 1992 and May 1996. NASS's Cattle Predator Loss report was published in May 2001. These reports contained data for death loss by cause, including predator losses and losses from other causes. These estimates were on State and regional levels. NASS's Cattle report was issued in February 1991, February 1995, and February 2001 and contained January 1, inventory estimates.

Data in the reports mentioned above as well as additional summaries from the original data provided estimates for this report. The original data were resummarized to break the losses out by class and size group based on reported inventory. The classes included beef cattle, dairy cattle, mixed, and other cattle operations. These classes and size groups are further defined on p. 1 of this report (Terms used in this report).

#### **2. Estimating procedures**

These estimates of total death loss and death loss by cause were prepared by the Livestock, Dairy and Poultry Branch, NASS, and the National Animal Health Monitoring System, APHIS. Total cattle and calf death losses from all causes were published in NASS's 1991, 1995, and 2000 Meat Animals Production, Disposition, and Income reports, released in April 1992, April 1996, and April 2001. Breakdowns by cause of loss and value of loss were published in the NASS Cattle and Calves Death Loss reports issued in May 1992 and May 1996. Only the NASS Cattle Predator Loss report was issued in May 2001.

#### **3. Reliability**

Since all cattle producers are not included in the sample, survey estimates are subject to sampling variability. Survey results also are subject to nonsampling errors such as omissions, duplications, and mistakes in reporting, recording, and processing the data. The effects of these nonsampling errors cannot be measured directly. They are minimized through rigid quality controls in the data collection process and through a careful review of all reported data for consistency and reasonableness.



**Appendix I: U.S. Populations and Operations\*****Number of Cattle and Calves on January 1, 2001, and Number of Operations in 2000**

| <b>Region</b>          | <b>State</b>   | <b>Number cattle and calves (1,000 head)</b> | <b>Number Operations</b> |
|------------------------|----------------|--|--------------------------|
| North Central          | Iowa           | 3,650  | 36,000                   |
|                        | Minnesota      | 2,550  | 30,000                   |
|                        | Nebraska       | 6,600  | 26,000                   |
|                        | North Dakota   | 1,980  | 13,700                   |
|                        | South Dakota   | 4,050  | 20,000                   |
|                        | Total          | 18,830                                       | 125,700                  |
| Northeast              | Connecticut    | 63   | 1,200                    |
|                        | Delaware       | 27   | 480                      |
|                        | Illinois       | 1,470  | 25,000                   |
|                        | Indiana        | 880  | 22,000                   |
|                        | Kentucky       | 2,260  | 48,000                   |
|                        | Maine          | 97   | 1,800                    |
|                        | Maryland       | 235  | 4,500                    |
|                        | Massachusetts  | 48   | 1,300                    |
|                        | Michigan       | 980  | 16,000                   |
|                        | New Hampshire  | 42   | 950                      |
|                        | New Jersey     | 48   | 1,700                    |
|                        | New York       | 1,380  | 17,000                   |
|                        | Ohio           | 1,240  | 28,000                   |
|                        | Pennsylvania   | 1,640  | 28,000                   |
|                        | Rhode Island   | 6  | 210                      |
|                        | Vermont        | 295  | 3,100                    |
|                        | Virginia       | 1,650  | 27,000                   |
|                        | West Virginia  | 400  | 13,000                   |
| Wisconsin              | 3,350          | 42,000                                       |                          |
| Total                  | 16,111         | 281,240                                      |                          |
| Northwest              | Idaho          | 1,960  | 12,000                   |
|                        | Montana        | 2,550  | 14,400                   |
|                        | Oregon         | 1,360  | 16,900                   |
|                        | Washington     | 1,180  | 15,000                   |
|                        | Wyoming        | 1,550  | 6,400                    |
|                        | Total          | 8,600  | 64,700                   |
| South Central          | Arkansas       | 1,800  | 31,000                   |
|                        | Kansas         | 6,700  | 36,000                   |
|                        | Missouri       | 4,250  | 68,000                   |
|                        | Oklahoma       | 5,050  | 60,000                   |
|                        | Texas          | 13,700                                       | 152,000                  |
|                        | Total          | 31,500                                       | 347,000                  |
| Southeast              | Alabama        | 1,360  | 27,000                   |
|                        | Florida        | 1,800  | 20,000                   |
|                        | Georgia        | 1,270  | 23,000                   |
|                        | Louisiana      | 860  | 15,500                   |
|                        | Mississippi    | 1,070  | 24,000                   |
|                        | North Carolina | 950  | 26,000                   |
|                        | South Carolina | 445  | 11,000                   |
|                        | Tennessee      | 2,170  | 52,000                   |
|                        | Total          | 9,925  | 198,500                  |
| Southwest              | Arizona        | 860  | 3,100                    |
|                        | California     | 5,150  | 22,000                   |
|                        | Colorado       | 3,150  | 15,100                   |
|                        | Hawaii         | 150  | 800                      |
|                        | Nevada         | 520  | 1,700                    |
|                        | New Mexico     | 1,580  | 8,400                    |
|                        | Utah           | 910  | 8,000                    |
|                        | Total          | 12,320                                       | 59,100                   |
| Total (49 States)      | 97,286         | 1,076,240                                    |                          |
| Total U.S. (50 States) | 97,297.5       | 1,076,370                                    |                          |

\*Source: Cattle, NASS, Cattle Final Estimates 1999-2003; NASS Livestock Operations, Final Estimates 1998-2002