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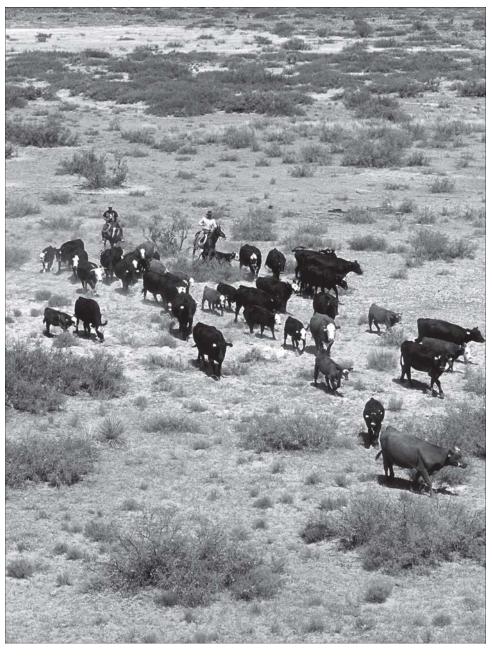
Veterinary Services

National Animal Health Monitoring System

May 2007



# Cattle and Calves Nonpredator Death Loss in the United States, 2005



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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, 2001, and 2006 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 (number of head) by cause for predator and nonpredator losses were estimated and subsequently published by NASS (Cattle Death Loss, May 5, 2006).

This report provides additional analysis of cattle and calves losses in 2005 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, 1995, and 2000 death losses are provided for comparison.

## Terms Used In This Report

**Beef operation:** If an operation had more beef cows than milk cows and milk cows were fewer than five head, the operation was classified as a beef operation.

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

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

**Dairy operation:** If an operation had more milk cows than beef cows and beef cows were fewer than five head, the operation was classified as a dairy operation.

**Mixed operation:** If an operation had more than five beef cows and more than five milk cows, or if the number of beef cows equaled the number of 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 for the purposes of providing data on smaller geographic areas. Alaska is not included because cause-of-loss estimates are not generated for the State.

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 head.

**For dairy operations** size groups are: 1-29, 30-49, 50-99, 100-199, 200-499, and 500 or more head.

**For mixed operations** size groups are: 1-99, 100-499, and 500 or more head.

**For other operations** (total number of cattle and calves) size groups are: 1-99 head, 100-499, 500-999, and 1,000 or more head.

### Section I: Population Estimates—Number of Head

#### A. U.S. Demographics

#### 1. Inventory—January 1, 1996-20061

Number of cattle and calves, by year:

#### January 1 Number (x 1,000)\*

#### Year

| Class                            | 1996    | 1997    | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   | 2006   |
|----------------------------------|---------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| All cattle and calves            | 103.548 | 101.656 | 99,744 | 99,115 | 98,199 | 97,298 | 96,723 | 96,100 | 94.888 | 95.438 | 96,702 |
| Cattle 500 lb or more            | 85,164  | 83.830  | 82.343 | 81.825 | 81,383 | 81.082 | 80.971 | 80.555 | 79.679 | 80.188 | 81,237 |
| Beef                             | 35.319  | 34.458  | 33,885 | 33.750 | 33.575 | 33,398 | 33,134 | 32.983 | 32.861 | 32.915 | 32,994 |
| Dairy                            | 9.420   | 9.318   | 9,199  | 9.128  | 9,183  | 9,172  | 9.106  | 9,142  | 8.990  | 9.005  | 9,063  |
| Heifers,<br>steers,<br>and bulls | 40.426  | 40.054  | 39.259 | 38.946 | 38.625 | 38,511 | 38,731 | 38.430 | 37.828 | 38.268 | 39,180 |
| Calves                           | 18,384  | 17,826  | 17,401 | 17,290 | 16,816 | 16,216 | 15,753 | 15,545 | 15,210 | 15,250 | 15,465 |

<sup>\*</sup>Numbers may not add up due to rounding

#### 2. Operations—1995-2005

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

#### **Number Operations**

|                | 1995      | 1996      | 1997      | 1998      | 1999      | 2000      | 2001      | 2002      | 2003      | 2004    | 2005    |
|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|---------|
| Cattle         | 4 400 620 | 4 470 700 | 1 110 050 | 1 114 050 | 1 005 500 | 4 070 070 | 1 040 470 | 1 020 120 | 1 042 570 | 000 400 | 000 540 |
| calves<br>Beef | 1,190,630 | 1,176,700 | 1,148,050 | 1,114,650 | 1,095,560 | 1,076,370 | 1,049,170 | 1,036,430 | 1,013,570 | 989,460 | 982,510 |
| cows           | 897,660   | 885,980   | 872,840   | 855,460   | 844,170   | 831,270   | 814,520   | 808,110   | 792,050   | 774,930 | 770,170 |
| Milk           |           |           |           |           |           |           |           |           |           |         |         |
| cows           | 139,670   | 130,980   | 123,700   | 117,145   | 110,855   | 105,055   | 97,460    | 91,240    | 86,360    | 81,520  | 78,300  |

<sup>&</sup>lt;sup>1</sup>NASS multiple reports

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

#### **Percent Operations**

#### Year

| Size of<br>Operation<br>(Number of<br>Beef Cows) | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 to 49  | 79.8  | 79.4  | 79.3  | 79.3  | 79.0  | 78.8  | 78.5  | 78.4  | 78.3  | 77.6  | 77.5  |
| 50 to 99   | 11.8  | 12.0  | 12.0  | 11.9  | 12.0  | 12.0  | 12.1  | 12.2  | 12.1  | 12.4  | 12.3  |
| 100 to 499                                       | 7.8   | 8.0   | 8.1   | 8.2   | 8.4   | 8.5   | 8.7   | 8.7   | 8.9   | 9.3   | 9.5   |
| 500 or more                                      | 0.6   | 0.6   | 0.6   | 0.6   | 0.6   | 0.7   | 0.7   | 0.7   | 0.7   | 0.7   | 0.7   |
| Total  | 100.0 | 100.0 | 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:

#### **Percent Operations**

| Size of<br>Operation<br>(Number of<br>Dairy Cows) | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 to 29   | 34.5  | 32.9  | 31.6  | 30.8  | 29.7  | 29.3  | 29.0  | 28.9  | 29.0  | 29.2  | 28.7  |
| 30 to 49  | 22.2  | 22.3  | 22.1  | 21.8  | 21.7  | 21.1  | 20.4  | 19.8  | 19.5  | 19.0  | 19.0  |
| 50 to 99  | 28.1  | 28.7  | 29.0  | 29.1  | 29.6  | 29.7  | 29.8  | 30.0  | 29.9  | 29.5  | 29.6  |
| 100 to 199  | 10.2  | 10.7  | 11.3  | 11.8  | 11.9  | 12.2  | 12.6  | 12.7  | 12.7  | 12.8  | 12.8  |
| 200 or more                                       | 5.0   | 5.4   | 6.0   | 6.5   | 7.1   | 7.7   | 8.2   | 8.6   | 8.9   | 9.5   | 9.9   |
| 200 to 499  | N/A   | N/A   | 4.1   | 4.4   | 4.8   | 5.1   | 5.3   | 5.4   | 5.5   | 5.8   | 6.0   |
| 500 or more                                       | N/A   | N/A   | 1.9   | 2.1   | 2.3   | 2.6   | 2.9   | 3.2   | 3.4   | 3.7   | 3.9   |
| Total   | 100.0 | 100.0 | 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:

#### **Percent Inventory**

#### Year

| Size of<br>Operation<br>(Number of<br>Beef Cows) | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 to 49  | 31.2  | 30.8  | 30.4  | 30.5  | 29.9  | 29.5  | 29.0  | 29.0  | 29.1  | 28.1  | 27.9  |
| 50 to 99   | 19.2  | 19.6  | 19.4  | 18.8  | 19.1  | 19.1  | 19.1  | 19.2  | 19.0  | 19.1  | 19.0  |
| 100 to 499                                       | 35.3  | 35.4  | 35.9  | 36.1  | 36.6  | 36.7  | 37.0  | 37.3  | 37.5  | 38.3  | 38.5  |
| 500 or more                                      | 14.3  | 14.2  | 14.3  | 14.6  | 14.4  | 14.7  | 14.9  | 14.5  | 14.4  | 14.5  | 14.6  |
| Total  | 100.0 | 100.0 | 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:

#### **Percent Inventory**

| Size of<br>Operation<br>(Number of<br>Dairy Cows) | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 to 29   | 4.0   | 4.0   | 3.5   | 3.6   | 3.2   | 2.9   | 2.7   | 2.4   | 2.3   | 2.1   | 2.0   |
| 30 to 49  | 13.0  | 12.0  | 11.5  | 10.5  | 10.2  | 9.1   | 8.0   | 7.4   | 6.9   | 6.6   | 6.4   |
| 50 to 99  | 28.0  | 27.0  | 26.0  | 24.3  | 23.3  | 22.0  | 20.8  | 19.6  | 18.8  | 17.8  | 17.1  |
| 100 to 199  | 20.0  | 20.0  | 20.0  | 19.3  | 18.4  | 18.1  | 17.2  | 16.4  | 15.7  | 15.1  | 14.6  |
| 200 or more                                       | 35.0  | 37.0  | 39.0  | 42.3  | 44.9  | 47.9  | 51.3  | 54.2  | 55.3  | 58.4  | 59.9  |
| 200 to 499  | N/A   | N/A   | 14.6  | 15.5  | 16.3  | 16.6  | 16.3  | 15.9  | 15.4  | 15.5  | 15.4  |
| 500 or more                                       | N/A   | N/A   | 24.4  | 26.8  | 28.6  | 31.3  | 35.0  | 38.3  | 40.9  | 42.9  | 44.5  |
| Total   | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

#### 3. Calf crop—1995-2005

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

| ·  |        |        |        |        |        | Year   |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|  | 1995   | 1996   | 1997   | 1998   | 1999   | 2000   | 2001   | 2002   | 2003   | 2004   | 2005   |
| Calf crop<br>(1,000<br>Head)                           | 40,264 | 39,823 | 38,961 | 38,812 | 38,796 | 38,631 | 38,300 | 38,224 | 37,903 | 37,505 | 37,575 |
| Calf crop<br>per 100<br>cows on<br>hand<br>(January 1) | 90.1   | 89.0   | 89.0   | 90.1   | 90.5   | 90.3   | 90.0   | 90.5   | 90.0   | 89.6   | 89.6   |

## B. Regional Demographics

#### 1. Cattle and calves inventory—January 1, 1992, 1996, 2001, and 2006

NASS does not conduct a cause-of-loss survey in Alaska; therefore Alaska is excluded from regional demographics tables and nonpredator loss estimates. Overall, the national inventory of cattle and calves remained relatively stable from 1992 to 2006, with 96.7 million head present on January 1, 2006.

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

|               |        |          | Janua    | ry 1—Nu | mber (x | 1,000)    |           |        |
|---------------|--------|----------|----------|---------|---------|-----------|-----------|--------|
|               |        | Cattle a | nd Calve | S       |         | Cattle Ov | er 500 lb | •      |
| Region        | 1992   | 1996     | 2001     | 2006    | 1992    | 1996      | 2001      | 2006   |
| North Central | 18,000 | 19,110   | 18,830   | 18,120  | 15,248  | 16,555    | 16,884    | 16,390 |
| Northeast     | 18,638 | 18,184   | 16,111   | 16,185  | 14,598  | 14,259    | 12,903    | 12,852 |
| Northwest     | 8,300  | 8,920    | 8,600    | 8,460   | 7,320   | 8,018     | 7,796     | 7,734  |
| South Central | 30,480 | 33,610   | 31,500   | 32,410  | 24,565  | 27,390    | 25,650    | 26,920 |
| Southeast     | 10,760 | 11,710   | 9,925    | 9,460   | 8,152   | 8,845     | 7,506     | 7,194  |
| Southwest     | 11,270 | 12,004   | 12,320   | 12,051  | 9,331   | 10,089    | 10,334    | 10,134 |
| Total*        | 97,548 | 103,538  | 97,286   | 96,686  | 79,214  | 85,156    | 81,073    | 81,224 |

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

#### 2. Beef and dairy cow inventory—January 1, 1992, 1996, 2001, and 2006

From 1992 to 2006, U.S. inventory of beef cows fluctuated between 33 million and 35 million head, while dairy cow inventory decreased from 9.7 million to 9.0 million head. In 2006, the South Central region had more beef cows than any other region (12.2 million head), while the Northeast region had more dairy cows than any other region (3.8 million).

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

#### **January 1—Number** (x 1,000)

|                  | 5,618.0 6,072.0 6,151.0 6,02<br>3,832.3 3,926.6 3,510.5 3,69 |          |          |          |          | Dairy   | Cows    |         |
|------------------|--|----------|----------|----------|----------|---------|---------|---------|
| Region           | 1992   | 1996     | 2001     | 2006     | 1992     | 1996    | 2001    | 2006    |
| North<br>Central | 5,618.0  | 6,072.0  | 6,151.0  | 6,029.0  | 12,320.0 | 1,078.0 | 949.0   | 806.0   |
| Northeast        | 3,832.3  | 3,926.6  | 3,510.5  | 3,695.0  | 4,787.4  | 4,417.1 | 4,017.6 | 3,831.5 |
| Northwest        | 3,641.0  | 3,874.0  | 3,721.0  | 3,543.0  | 549.0    | 626.0   | 714.0   | 857.0   |
| South<br>Central | 11,484.0   | 12,520.0 | 11,895.0 | 12,185.0 | 856.0    | 820.0   | 715.0   | 645.0   |
| Southeast        | 5,262.0  | 5,760.0  | 5,077.0  | 4,885.0  | 763.0    | 640.0   | 543.0   | 421.0   |
| Southwest        | 3,167.0  | 3,153.0  | 3,040.0  | 2,650.4  | 1,540.0  | 1,838.0 | 2,178.0 | 2,501.6 |
| Total*           |  | ,        | 33,394.5 | ,        | ,        | 9,419.1 | 9,170.6 | 9,062.1 |

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

#### 3. Calf crop—1991, 1995, 2000, and 2005

About 30 percent of the 37.6 million calves born in 2005 were born in the South Central region.

Calendar year calf crop, by region and by year:

**Calf Crop** (x 1,000)

Year

| Region        | 1991   | 1995   | 2000   | 2005   |
|---------------|--------|--------|--------|--------|
| North Central | 6,570  | 6,770  | 6,730  | 6,420  |
| Northeast     | 7,823  | 7,5767 | 6,813  | 6,569  |
| Northwest     | 3,945  | 4,280  | 4,410  | 4,410  |
| South Central | 11,070 | 11,910 | 11,330 | 11,450 |
| Southeast     | 5,205  | 5,475  | 4,880  | 4,560  |
| Southwest     | 3,968  | 4,249  | 4,464  | 4,361  |
| Total*        | 38,581 | 40,261 | 38,627 | 37,570 |

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

## C. U.S. Annual Death Loss

#### 1. Loss from all causes—1991-2005

A total of 1.7 million cattle and 2.3 million calves were lost to all causes during 2005. These totals represent 2.1 and 6.2 percent of cattle inventory and calf crop, respectively. While the percentage of cattle inventory lost remained stable, the percentage of calf crop lost declined from 7.0 percent in 1991 to 6.2 percent in 2005.

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

#### **Number** (x 1,000)

|        | 1991  | 1992  | 1993  | 1994  | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003  | 2004  | 2005  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Cattle | 1,540 | 1,677 | 1,702 | 1,589 | 1,645 | 1,761 | 1,847 | 1,668 | 1,658 | 1,711 | 1,722 | 1,710 | 1,710 | 1,711 | 1,718 |
| Calves | 2,707 | 2,689 | 2,921 | 2,681 | 2,739 | 2,811 | 2,829 | 2,541 | 2,455 | 2,387 | 2,487 | 2,366 | 2,320 | 2,292 | 2,335 |
| Total  | 4,247 | 4,366 | 4,623 | 4,270 | 4,384 | 4,572 | 4,676 | 4,209 | 4,113 | 4,098 | 4,209 | 4,076 | 4,030 | 4,003 | 4,053 |

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

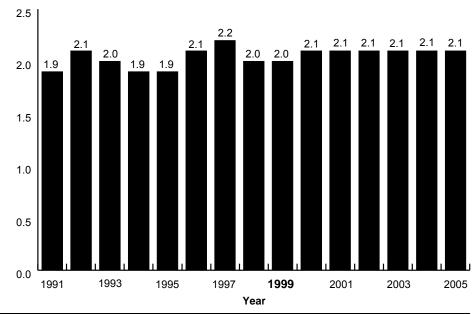
#### **Percent Inventory**

#### Year

| 991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1.9 | 2.1  | 2.0  | 1.9  | 1.9  | 2.1  | 2.2  | 2.0  | 2.0  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  |

Cattle Death Losses as a Percentage of January 1 Inventory of Cattle Over 500 lb on January 1 of the Following Year, by Year



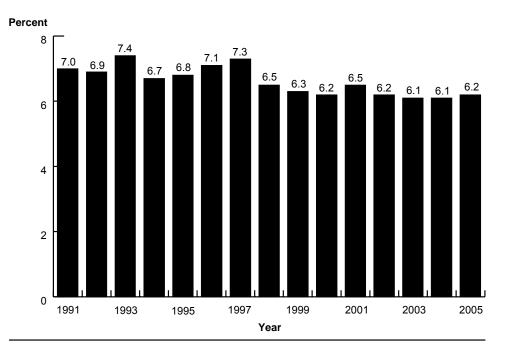


c. Calf death losses as a percentage of calf crop, by year:

#### **Percent Calf Crop**

| 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 7.0  | 6.9  | 7.4  | 6.7  | 6.8  | 7.1  | 7.3  | 6.5  | 6.3  | 6.2  | 6.5  | 6.2  | 6.1  | 6.1  | 6.2  |

#### Calf Death Losses as a Percentage of Calf Crop, by Year



## 2. U.S. nonpredator and predator death loss (excluding Alaska)—1991 $^2$ , $1995^2$ , $2000^2$ , and 2005

Since 1991, nonpredator causes accounted for the majority of cattle and calf losses; 95.3 percent of losses in 2005 were attributed to nonpredator causes. As expected, predators accounted for a larger percentage of calf losses than cattle losses (6.7 and 2.0 percent, respectively).

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

|             | Year                |       |                     |       |                     |       |                     |       |  |  |
|-------------|---------------------|-------|---------------------|-------|---------------------|-------|---------------------|-------|--|--|
|             | 199                 | 91    | 19                  | 95    | 200                 | 00    | 200                 | 5     |  |  |
| Cause       | Number<br>(x 1,000) | Pct.  | Number<br>(x 1,000) | _     | Number<br>(x 1,000) | Pct.  | Number<br>(x 1,000) | Pct.  |  |  |
| Nonpredator | 4,143.4             | 97.6  | 4,263.6             | 97.3  | 3,952.0             | 96.4  | 3,861.0             | 95.3  |  |  |
| Predator    | 102.0               | 2.4   | 118.8               | 2.7   | 144.6               | 3.6   | 190.0               | 4.7   |  |  |
| Total       | 4,245.4             | 100.0 | 4,382.4             | 100.0 | 4,096.6             | 100.0 | 4,051.0             | 100.0 |  |  |

#### b. Number and percentage of cattle death losses, by cause and by year:

|             |                     |       |                     | Y     | ear                 |       |                         |       |
|-------------|---------------------|-------|---------------------|-------|---------------------|-------|-------------------------|-------|
|             | 199                 | 91    | 19                  | 95    | 200                 | 00    | 200                     | 5     |
| Cause       | Number<br>(x 1,000) | Pct.  | Number<br>(x 1,000) | Pct.  | Number<br>(x 1,000) | Pct.  | <b>Number</b> (x 1,000) | Pct.  |
| Nonpredator | 1523.7              | 99.0  | 1,622.7             | 98.7  | 1,689.6             | 98.8  | 1,683.0                 | 98.0  |
| Predator    | 15.4                | 1.0   | 21.4                | 1.3   | 20.5                | 1.2   | 34.0                    | 2.0   |
| Total       | 1,539.1             | 100.0 | 1,644.1             | 100.0 | 1,710.1             | 100.0 | 1,717.0                 | 100.0 |

#### c. Number and percentage of calf death losses, by cause and by year:

|             |                     |       |                  | Ye    | ear              |       |                         |       |
|-------------|---------------------|-------|------------------|-------|------------------|-------|-------------------------|-------|
|             | 199                 | 91    | 19               | 95    | 200              | 00    | 200                     | 5     |
| Cause       | Number<br>(x 1,000) | Pct.  | Number (x 1,000) | Pct.  | Number (x 1,000) | Pct.  | <b>Number</b> (x 1,000) | Pct.  |
| Nonpredator | 2,619.7             | 96.8  | 2,640.9          | 96.5  | 2,262.4          | 94.8  | 2,178.0                 | 93.3  |
| Predator    | 86.6                | 3.2   | 97.4             | 3.5   | 124.1            | 5.2   | 156.0                   | 6.7   |
| Total       | 2,706.3             | 100.0 | 2,738.3          | 100.0 | 2,386.5          | 100.0 | 2,334.0                 | 100.0 |

<sup>&</sup>lt;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. 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, 2000, and 2005

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

#### Number Losses (x 1,000)

#### Year

| Region        | 1991    | 1995    | 2000    | 2005    |
|---------------|---------|---------|---------|---------|
| North Central | 264.0   | 277.0   | 281.0   | 267.0   |
| Northeast     | 312.1   | 311.1   | 291.1   | 300.0   |
| Northwest     | 103.0   | 115.0   | 124.0   | 117.0   |
| South Central | 498.0   | 522.0   | 625.0   | 635.0   |
| Southeast     | 183.0   | 201.0   | 174.0   | 174.0   |
| Southwest     | 179.0   | 218.0   | 215.0   | 224.0   |
| Total*        | 1,539.1 | 1,644.1 | 1,710.1 | 1,717.0 |

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

In 2005, the Northwest and North Central regions lost a smaller percentage of cattle (1.5 and 1.6 percent, respectively) than the other regions.

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

#### **Percent Inventory**

| Region        | 1991 | 1995 | 2000 | 2005 |
|---------------|------|------|------|------|
| North Central | 1.7  | 1.7  | 1.7  | 1.6  |
| Northeast     | 2.1  | 2.2  | 2.3  | 2.3  |
| Northwest     | 1.4  | 1.4  | 1.6  | 1.5  |
| South Central | 2.0  | 1.9  | 2.4  | 2.4  |
| Southeast     | 2.2  | 2.3  | 2.3  | 2.4  |
| Southwest     | 1.9  | 2.2  | 2.1  | 2.4  |
| Total         | 1.9  | 1.9  | 2.1  | 2.1  |

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

#### Number Losses (x 1,000)

#### Year

| Region        | 1991    | 1995    | 2000    | 2005    |
|---------------|---------|---------|---------|---------|
| North Central | 493.0   | 553.0   | 425.0   | 392.0   |
| Northeast     | 717.3   | 673.3   | 538.5   | 543.0   |
| Northwest     | 204.0   | 216.0   | 225.0   | 205.0   |
| South Central | 689.0   | 675.0   | 620.0   | 638.0   |
| Southeast     | 297.0   | 313.0   | 266.0   | 238.0   |
| Southwest     | 306.0   | 308.0   | 312.0   | 318.0   |
| Total*        | 2,706.3 | 2,738.3 | 2,386.5 | 2,334.0 |

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

The Northeast region lost the largest percentage of calf crop (8.2 percent) in 2005, compared all other regions.

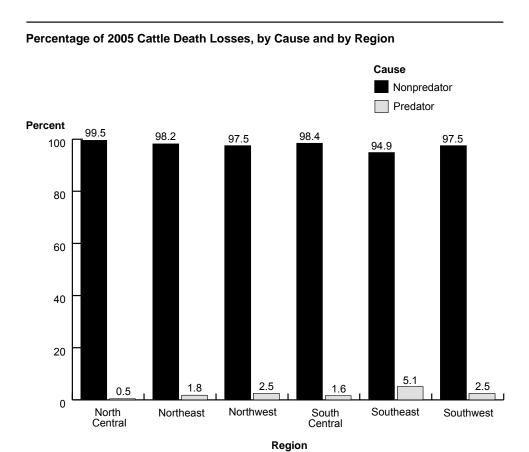
d. Calf death losses as a percentage of calf crop, by region and by year:

#### Percent Calf Crop

| Region        | 1991 | 1995 | 2000 | 2005 |
|---------------|------|------|------|------|
| North Central | 7.5  | 8.2  | 6.3  | 6.1  |
| Northeast     | 9.2  | 8.9  | 7.9  | 8.2  |
| Northwest     | 5.2  | 5.0  | 5.1  | 4.8  |
| South Central | 6.2  | 5.7  | 5.5  | 5.5  |
| Southeast     | 5.7  | 5.7  | 5.5  | 5.2  |
| Southwest     | 7.7  | 7.2  | 7.0  | 7.2  |
| Total         | 7.0  | 6.8  | 6.2  | 6.2  |

- 4. Regional predator and nonpredator death loss—1995, 2000, and 2005 In all regions, nonpredator causes accounted for the majority of cattle losses. With the exception of the North Central and South Central regions, the percentages of losses due to nonpredator causes decreased in all regions from 1995 to 2005. In the Southeast region, the percentage of losses due to nonpredator causes decreased from 98.5 percent in 1995 to 94.9 percent in 2005.
- a. Number and percentage of cattle death losses by cause—by region and by year:

|                  |             |                        |         | Υe                     | ear     |                        |         |
|------------------|-------------|------------------------|---------|------------------------|---------|------------------------|---------|
|                  |             | 19                     | 95      | 200                    | 00      | 20                     | 05      |
| Region           | Cause       | <b>Number</b> (x1,000) | Percent | <b>Number</b> (x1,000) | Percent | <b>Number</b> (x1,000) | Percent |
|                  | Nonpredator | 274.8                  | 99.2    | 280.2                  | 99.7    | 265.6                  | 99.5    |
| North<br>Central | Predator    | 2.2                    | 0.8     | 8.0                    | 0.3     | 1.4                    | 0.5     |
|                  | Total       | 277.0                  | 100.0   | 281.0                  | 100.0   | 267.0                  | 100.0   |
|                  | Nonpredator | 308.3                  | 99.1    | 288.2                  | 99.0    | 294.7                  | 98.2    |
| Northeast        | Predator    | 2.8                    | 0.9     | 2.9                    | 1.0     | 5.3                    | 1.8     |
|                  | Total       | 311.1                  | 100.0   | 291.1                  | 100.0   | 300.0                  | 100.0   |
|                  | Nonpredator | 113.5                  | 98.7    | 121.9                  | 98.3    | 114.1                  | 97.5    |
| Northwest        | Predator    | 1.5                    | 1.3     | 2.1                    | 1.7     | 2.9                    | 2.5     |
|                  | Total       | 115.0                  | 100.0   | 124.0                  | 100.0   | 117.0                  | 100.0   |
|                  | Nonpredator | 514.2                  | 98.5    | 619.7                  | 99.2    | 625.0                  | 98.4    |
| South<br>Central | Predator    | 7.8                    | 1.5     | 5.3                    | 0.8     | 10.0                   | 1.6     |
|                  | Total       | 522.0                  | 100.0   | 625.0                  | 100.0   | 635.0                  | 100.0   |
|                  | Nonpredator | 198.0                  | 98.5    | 170.5                  | 98.0    | 165.1                  | 94.9    |
| Southeast        | Predator    | 3.0                    | 1.5     | 3.5                    | 2.0     | 8.9                    | 5.1     |
|                  | Total       | 201.0                  | 100.0   | 174.0                  | 100.0   | 174.0                  | 100.0   |
|                  | Nonpredator | 214.1                  | 98.2    | 208.8                  | 97.1    | 218.5                  | 97.5    |
| Southwest        | Predator    | 3.9                    | 1.8     | 6.2                    | 2.9     | 5.5                    | 2.5     |
|                  | Total       | 218.0                  | 100.0   | 215.0                  | 100.0   | 224.0                  | 100.0   |



In all regions in 2005, nonpredator causes accounted for the majority of calf losses. However, the percentage of total losses due to nonpredator causes ranged from 86.4 percent in the Southeast region to 97.5 percent in the North Central region.

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

| •                          |             |                        |         | Υe                     | ear     |                        |         |
|----------------------------|-------------|------------------------|---------|------------------------|---------|------------------------|---------|
|                            |             | 19                     | 95      | 20                     | 00      | 20                     | 05      |
| Region                     | Cause       | <b>Number</b> (x1,000) | Percent | <b>Number</b> (x1,000) | Percent | <b>Number</b> (x1,000) | Percent |
|                            | Nonpredator | 545.3                  | 98.6    | 416.9                  | 98.1    | 382.1                  | 97.5    |
| North<br>Central           | Predator    | 7.7                    | 1.4     | 8.1                    | 1.9     | 9.9                    | 2.5     |
|                            | Total       | 553.0                  | 100.0   | 425.0                  | 100.0   | 392.0                  | 100.0   |
|                            | Nonpredator | 662.5                  | 98.4    | 526.1                  | 97.7    | 520.3                  | 95.8    |
| Northeast                  | Predator    | 10.8                   | 1.6     | 12.4                   | 2.3     | 22.7                   | 4.2     |
|                            | Total       | 673.3                  | 100.0   | 538.5                  | 100.0   | 543.0                  | 100.0   |
|                            | Nonpredator | 206.1                  | 95.4    | 210.1                  | 93.3    | 191.4                  | 93.4    |
| Northwest                  | Predator    | 9.9                    | 4.6     | 14.9                   | 6.7     | 13.6                   | 6.6     |
|                            | Total       | 216.0                  | 100.0   | 225.0                  | 100.0   | 205.0                  | 100.0   |
|                            | Nonpredator | 636.5                  | 94.3    | 581.6                  | 93.8    | 581.0                  | 91.1    |
| South<br>Central           | Predator    | 38.5                   | 5.7     | 38.4                   | 6.2     | 57.0                   | 8.9     |
| <b>3 3 3 3 3 3 3 3 3 3</b> | Total       | 675.0                  | 100.0   | 620.0                  | 100.0   | 638.0                  | 100.0   |
|                            | Nonpredator | 299.5                  | 95.7    | 242.4                  | 91.1    | 205.6                  | 86.4    |
| Southeast                  | Predator    | 13.5                   | 4.3     | 23.6                   | 8.9     | 32.4                   | 13.6    |
|                            | Total       | 313.0                  | 100.0   | 266.0                  | 100.0   | 238.0                  | 100.0   |
|                            | Nonpredator | 292.3                  | 94.9    | 284.5                  | 91.2    | 297.6                  | 93.6    |
| Southwest                  | Predator    | 15.7                   | 5.1     | 27.5                   | 8.8     | 20.4                   | 6.4     |
|                            | Total       | 308.0                  | 100.0   | 312.0                  | 100.0   | 317.0                  | 100.0   |

13.6

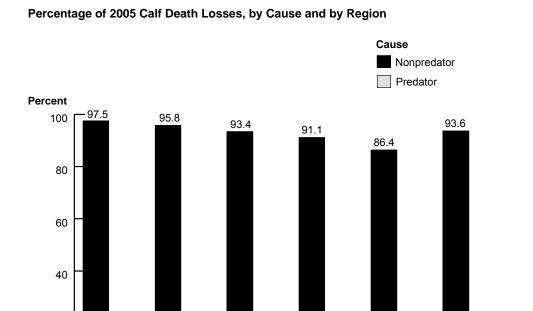
Southeast

6.4

Southwest

8.9

South Central



6.6

Region

Northwest

4.2

Northeast

2.5

North Central

20

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: beef, dairy, and mixed operations (see p. 2 for definition of operation types). NASS collects inventory numbers of beef cows, 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.

#### 2. Operation characteristics

Nearly two-thirds (65.6 percent) of the January 1, 2006, inventory of cattle and calves was on beef operations. Over 98 percent of beef cows were on beef operations, and 1.4 percent were on mixed operations. Ninety percent of the dairy cow inventory was on dairy operations, and 9.9 percent was on mixed operations.

a. Percentage of January 1, 2006, inventory for all cattle and calves, beef cows, and dairy cows, by operation type:

|                   |                   |               | Percent I | nventory      |         |               |
|-------------------|-------------------|---------------|-----------|---------------|---------|---------------|
|                   | All Cattl<br>Calv |               | Beef C    | Cows          | Dairy ( | Cows          |
| Operation<br>Type | Percent           | Std.<br>Error | Percent   | Std.<br>Error | Percent | Std.<br>Error |
| Beef              | 65.6              | (8.0)         | 98.6      | (0.1)         | 0.1     | (0.0)         |
| Dairy             | 15.6              | (0.4)         | 0.0       | (0.0)         | 90.0    | (1.7)         |
| Mixed             | 2.6               | (0.4)         | 1.4       | (0.1)         | 9.9     | (1.7)         |
| Other             | 16.2              | (0.8)         | 0.0       | ()            | 0.0     | ()            |
| Total             | 100.0             |               | 100.0     |               | 100.0   |               |

Across all operation types, nonpredator causes accounted for the majority of cattle losses in 2005.

b. Percentage of 2005 cattle death losses, by cause and by operation type:

# Percent Losses Operation Type

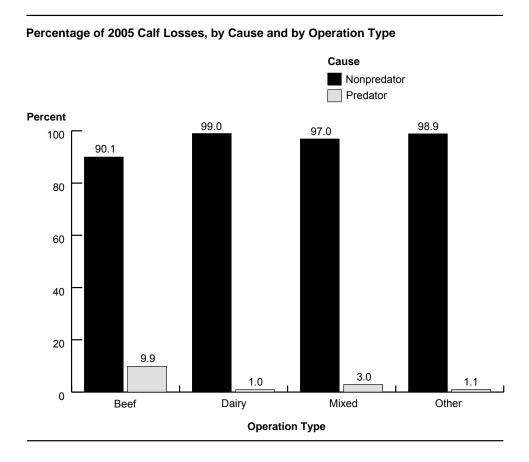
|             | Ве    | ef            | Da    | iry           | Mix   | Mixed         |       | ner           |
|-------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|
| Cause       | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error |
| Nonpredator | 96.6  | (0.3)         | 99.7  | (0.1)         | 99.6  | (0.1)         | 99.3  | (0.2)         |
| Predator    | 3.4   | (0.3)         | 0.3   | (0.1)         | 0.4   | (0.1)         | 0.7   | (0.2)         |
| Total       | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               |

Just over 90 percent of calf losses on beef operations were due to nonpredator causes, compared to at least 97 percent of losses on dairy, mixed, and other operations (99.0, 97.0, and 98.9 percent of losses, respectively).

c. Percentage of 2005 calf death losses, by cause and by operation type:

## Percent Losses Operation Type

|             | Ве    | eef           | Da    | iry           | Mixed |               | Otl   | ner           |
|-------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|
| Cause       | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error |
| Nonpredator | 90.1  | (0.4)         | 99.0  | (0.1)         | 97.0  | (0.9)         | 98.9  | (0.3)         |
| Predator    | 9.9   | (0.4)         | 1.0   | (0.1)         | 3.0   | (0.9)         | 1.1   | (0.3)         |
| Total       | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               |



Half of cattle losses (51.4 percent) and 61.0 percent of calf losses in the United States occurred on beef operations, which is most likely a reflection of the fact that the majority of U.S. cattle and calves are on beef operations.

d. Percentage of nonpredator cattle and calf death losses, by operation type:

|                |         | Percent Nonpredator Loss |         |            |  |  |  |  |  |  |
|----------------|---------|--------------------------|---------|------------|--|--|--|--|--|--|
|                | Ca      | ittle                    | С       | alf        |  |  |  |  |  |  |
| Operation Type | Percent | Std. Error               | Percent | Std. Error |  |  |  |  |  |  |
| Beef           | 51.4    | (1.4)                    | 61.0    | (1.5)      |  |  |  |  |  |  |
| Dairy          | 24.9    | (0.8)                    | 21.0    | (0.7)      |  |  |  |  |  |  |
| Mixed          | 3.2     | (0.6)                    | 3.6     | (0.4)      |  |  |  |  |  |  |
| Other          | 20.5    | (1.7)                    | 14.4    | (1.9)      |  |  |  |  |  |  |
| Total          | 100.0   |                          | 100.0   |            |  |  |  |  |  |  |

## B. Nonpredator Cattle Death Loss

#### 1. Losses as a percentage of inventory—2005

The percentage of cattle inventory lost to nonpredator causes ranged from 1.5 percent in the Northwest region to 2.6 percent in the South Central region.

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

|               | Percent Inventory |                |  |  |  |  |  |
|---------------|-------------------|----------------|--|--|--|--|--|
| Region        | Percent           | Standard Error |  |  |  |  |  |
| North Central | 1.8               | (0.1)          |  |  |  |  |  |
| Northeast     | 2.3               | (0.1)          |  |  |  |  |  |
| Northwest     | 1.5               | (0.1)          |  |  |  |  |  |
| South Central | 2.6               | (0.1)          |  |  |  |  |  |
| Southeast     | 2.2               | (0.1)          |  |  |  |  |  |
| Southwest     | 2.3               | (0.1)          |  |  |  |  |  |

<sup>\*2005</sup> death loss divided by end-of-year (January 1, 2006) inventory of cattle 500 lb or greater X 100.

Overall, 1.7 percent of cattle inventory on beef operations was lost to nonpredator causes. Across all regions, operations with 1 to 49 operations lost a higher percentage of inventory to nonpredator causes than operations with 500 or more cows.

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

#### Percent Inventory\*

#### Size of Operation (Number of Cows)

|                | 1-   | 49            | 50   | -99           | 100  | -499          |      | 0 or<br>ore   | _    | All<br>ations |
|----------------|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|
| Region         | Pct. | Std.<br>Error |
| North Central  | 1.8  | (0.3)         | 1.2  | (0.1)         | 1.1  | (0.1)         | 1.1  | (0.1)         | 1.2  | (0.1)         |
| Northeast      | 1.7  | (0.1)         | 1.4  | (0.1)         | 1.2  | (0.1)         | 1.1  | (0.1)         | 1.5  | (0.1)         |
| Northwest      | 1.6  | (0.2)         | 1.2  | (0.2)         | 0.9  | (0.1)         | 0.8  | (0.1)         | 1.0  | (0.1)         |
| South Central  | 3.1  | (0.2)         | 2.3  | (0.2)         | 2.0  | (0.2)         | 1.3  | (0.1)         | 2.3  | (0.1)         |
| Southeast      | 2.3  | (0.1)         | 2.2  | (0.2)         | 1.9  | (0.2)         | 1.1  | (0.1)         | 2.0  | (0.1)         |
| Southwest      | 2.2  | (0.3)         | 1.7  | (0.2)         | 1.2  | (0.1)         | 1.3  | (0.1)         | 1.4  | (0.1)         |
| All operations | 2.4  | (0.1)         | 1.8  | (0.1)         | 1.5  | (0.1)         | 1.1  | (0.1)         | 1.7  | (0.0)         |

<sup>\*2005</sup> death loss divided by end-of-year (January 1, 2006) inventory of cattle 500 lb or greater x 100.

Overall, 3.6 percent of cattle inventory on dairy operations was lost to nonpredator causes, ranging from 3.1 percent of inventory in the Northeast region to 6.1 percent in the South Central region. Across all regions, the percentage of inventory lost was higher on dairy operations than on beef operations (table b).

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

#### **Percent Inventory**

#### Size of Operation (Number of Cows)

|                | 1-   | -29           | 30   | 0-49          | 50   | )-99          | 100  | -199          | 200  | -499          |      | 00<br>Nore    | -    | All<br>ations |
|----------------|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|
| Region         | Pct. | Std.<br>Error |
| North Central  | 3.8  | (1.1)         | 3.7  | (0.7)         | 3.3  | (0.3)         | 3.6  | (0.4)         | 4.1  | (0.4)         | 9.0  | (0.6)         | 4.5  | (0.2)         |
| Northeast      | 3.1  | (0.5)         | 2.4  | (0.2)         | 2.8  | (0.1)         | 3.0  | (0.2)         | 3.4  | (0.2)         | 4.0  | (0.3)         | 3.1  | (0.1)         |
| Northwest      | 2.0  | (0.6)         | 4.4  | (1.1)         | 3.9  | (0.5)         | 3.3  | (0.3)         | 3.7  | (0.3)         | 4.0  | (0.4)         | 3.9  | (0.3)         |
| South Central  | 2.2  | (1.1)         | 7.2  | (1.8)         | 6.0  | (0.9)         | 4.9  | (0.6)         | 5.6  | (0.8)         | 7.1  | (1.1)         | 6.1  | (0.6)         |
| Southeast      | **   |               | 3.9  | (0.3)         | 4.6  | (0.5)         | 4.4  | (0.3)         | 3.3  | (0.2)         | 4.0  | (0.3)         | 4.0  | (0.2)         |
| Southwest      | **   |               | **   |               | 3.0  | (0.6)         | 3.9  | (0.7)         | 3.8  | (0.3)         | 3.0  | (0.3)         | 3.2  | (0.3)         |
| All operations | 3.9  | (0.9)         | 2.7  | (0.2)         | 3.1  | (0.1)         | 3.4  | (0.1)         | 3.7  | (0.2)         | 3.8  | (0.2)         | 3.6  | (0.1)         |

<sup>\*2005</sup> death loss divided by end-of-year (January 1, 2006) inventory of cattle 500 lb or greater X 100.

<sup>\*\*</sup>Too few operations to report.

On mixed operations, 2.7 percent of inventory was lost to nonpredator causes.

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

#### **Percent Inventory**

#### Size of Operation (Number of Cows)

|                | 1.   | 1-99          |      | 100-499       |      | 500 or More   |      | All Operations |  |
|----------------|------|---------------|------|---------------|------|---------------|------|----------------|--|
| Region         | Pct. | Std.<br>Error | Pct. | Std.<br>Error | Pct. | Std.<br>Error | Pct. | Std.<br>Error  |  |
| North Central  | 3.3  | (0.5)         | 2.2  | (0.4)         | 2.6  | (0.9)         | 2.6  | (0.3)          |  |
| Northeast      | 2.8  | (0.5)         | 2.3  | (0.3)         | 3.2  | (0.6)         | 2.6  | (0.2)          |  |
| Northwest      | **   |               | 2.2  | (0.5)         | 1.9  | (0.3)         | 2.0  | (0.3)          |  |
| South Central  | 4.4  | (1.3)         | 2.5  | (0.4)         | 2.2  | (8.0)         | 2.9  | (0.4)          |  |
| Southeast      | 2.6  | (8.0)         | 2.7  | (0.3)         | 2.6  | (0.5)         | 2.7  | (0.3)          |  |
| Southwest      | **   |               | 0.9  | (0.2)         | 3.6  | (0.3)         | 3.0  | (0.6)          |  |
| All operations | 3.2  | (0.3)         | 2.1  | (0.2)         | 3.1  | (0.3)         | 2.7  | (0.2)          |  |

<sup>\*2005</sup> death loss divided by end-of-year (January 1, 2006) inventory of cattle 500 lb or greater X 100.
\*\* Too few operations to report.

On "other" operations, 2.7 percent of inventory was lost to nonpredator causes.

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

#### **Percent Inventory**

#### Size of Operation (Number of Cattle and Calves)

|                | 1-   | .99           | 100  | -499`         | 500  | -999          |      | 00 or<br>ore  |      | All<br>ations |
|----------------|------|---------------|------|---------------|------|---------------|------|---------------|------|---------------|
| Region         | Pct. | Std.<br>Error |
| North Central  | 4.8  | (0.9)         | 2.6  | (0.3)         | 1.9  | (0.2)         | 3.1  | (0.2)         | 3.0  | (0.1)         |
| Northeast      | 2.7  | (0.4)         | 2.0  | (0.3)         | 1.8  | (0.3)         | 1.4  | (0.2)         | 2.1  | (0.2)         |
| Northwest      | 6.9  | (1.7)         | 1.6  | (0.5)         | 1.0  | (0.2)         | 1.7  | (0.2)         | 2.0  | (0.2)         |
| South Central  | 9.0  | (2.6)         | 2.9  | (0.6)         | 1.8  | (0.4)         | 3.0  | (0.5)         | 3.2  | (0.4)         |
| Southeast      | 5.1  | (1.6)         | 1.5  | (0.6)         | 3.2  | (0.5)         | 2.3  | (0.4)         | 3.5  | (0.6)         |
| Southwest      | 4.5  | (1.5)         | 2.6  | (0.8)         | 2.1  | (0.4)         | 2.6  | (0.2)         | 2.6  | (0.2)         |
| All operations | 5.0  | (0.6)         | 2.4  | (0.2)         | 2.0  | (0.2)         | 2.8  | (0.3)         | 2.9  | (0.2)         |

<sup>\*2005</sup> death loss divided by end-of-year (January 1, 2006) inventory of cattle 500 lb or greater X100.

#### 2. Cause of loss—1991, 1995, 2000, and 2005

Since 1991, respiratory problems accounted for the highest percentage of nonpredator cattle losses (24.8 percent). Other common causes of loss in 2005 included unknown causes (13.3 percent) and calving problems (11.1 percent).

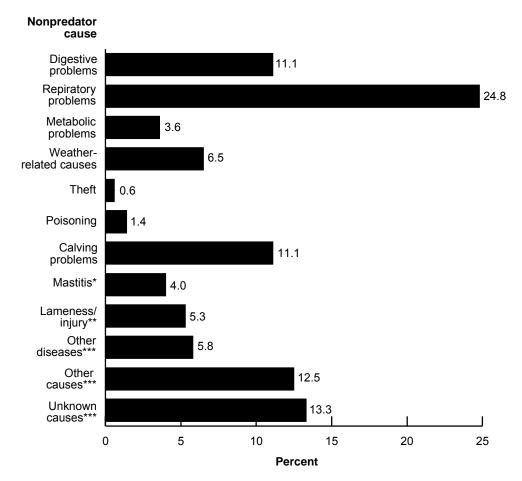
a. Percentage of cattle death losses, by cause and by year:

|   | Percent Nonpredator Loss |       |       |       |  |  |  |  |  |  |
|---|--------------------------|-------|-------|-------|--|--|--|--|--|--|
| Nonpredator Cause   | 1991                     | 1995  | 2000  | 2005  |  |  |  |  |  |  |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis,<br>etc.) | 12.8                     | 12.2  | 10.5  | 11.1  |  |  |  |  |  |  |
| Respiratory problems (pneumonia, shipping fever, etc.)                                | 26.1                     | 26.0  | 27.1  | 24.8  |  |  |  |  |  |  |
| Metabolic problems<br>(milk fever, grass tetany,<br>etc.)                             | N/A                      | N/A   | 4.0   | 3.6   |  |  |  |  |  |  |
| Weather-related causes (chilling, drowning, lightning, etc.)                          | 7.4                      | 8.3   | 8.0   | 6.5   |  |  |  |  |  |  |
| Theft (stolen)  | 1.0                      | 0.5   | 1.2   | 0.6   |  |  |  |  |  |  |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                     | 3.2                      | 2.0   | 1.6   | 1.4   |  |  |  |  |  |  |
| Calving problems  | 16.2                     | 15.3  | 12.4  | 11.1  |  |  |  |  |  |  |
| Mastitis*   | N/A                      | N/A   | N/A   | 4.0   |  |  |  |  |  |  |
| Lameness/injury**   | N/A                      | N/A   | N/A   | 5.3   |  |  |  |  |  |  |
| Other diseases***   | N/A                      | N/A   | 6.1   | 5.8   |  |  |  |  |  |  |
| Other causes***   | 33.3                     | 35.7  | 13.2  | 12.5  |  |  |  |  |  |  |
| Unknown causes***   | N/A                      | N/A   | 15.9  | 13.3  |  |  |  |  |  |  |
| Total   | 100.0                    | 100.0 | 100.0 | 100.0 |  |  |  |  |  |  |

<sup>\*</sup>Mastitis included in "other causes" in 1991 and 1995 and in "other diseases" in 2000.

<sup>\*\*</sup>Lameness/injury included in "other causes" in 1991, 1995, and 2000.
\*\*\* "Other diseases" and "unknown causes" included in "other causes" in 1991 and 1995.

#### Percentage of 2005 Cattle Death Losses, by Cause



<sup>\*</sup>Mastitis included in "other causes" in 1991 and 1995 and in "other diseases" in 2000.

<sup>\*\*</sup>Lameness/injury included in "other causes" in 1991, 1995, and 2000.

<sup>\*\*\*&</sup>quot;Other diseases" and "unknown causes" included in "other causes" in 1991 and 1995.

Respiratory problems accounted for just under one-fifth of cattle losses (18.7 percent) on beef operations. Not surprisingly, the percentage of losses due to mastitis was higher on dairy operations than on beef operations (12.8 and 0.5 percent, respectively.) Mastitis also accounted for 15.8 percent of losses on mixed operations, likely because almost 10 percent of the dairy cow inventory was on mixed operations (see table 2a, p. 18). Respiratory problems accounted for over half of nonpredator losses (54.2 percent) on "other" operations; many operations in the this category are feedlots, which commonly experience problems with bovine respiratory disease.

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

|   |                   | Percer            | nt Nonpr | edator L      | oss   |               |
|---|-------------------|-------------------|----------|---------------|-------|---------------|
| Nonpredator Cause   | 1991 <sup>1</sup> | 1995 <sup>1</sup> | 2000     | Std.<br>Error | 2005  | Std.<br>Error |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia,<br>acidosis, etc.) | 9.3               | 10.3              | 7.5      | (0.4)         | 7.5   | (0.5)         |
| Respiratory problems (pneumonia, shipping ever, etc.)                                 | 12.8              | 14.2              | 16.9     | (0.8)         | 18.7  | (1.8)         |
| Metabolic problems<br>(milk fever, grass tetany,<br>etc.)                             | N/A               | N/A               | 1.7      | (0.2)         | 1.2   | (0.1)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                          | 10.0              | 10.0              | 11.9     | (0.7)         | 9.1   | (0.6)         |
| Theft (stolen)  | 2.3               | 0.6               | 2.2      | (1.2)         | 0.9   | (0.2)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                     | 6.1               | 3.2               | 2.6      | (0.3)         | 2.2   | (0.4)         |
| Calving problems  | 18.9              | 19.0              | 15.5     | (0.7)         | 14.2  | (0.6)         |
| Mastitis*   | N/A               | N/A               | N/A      | ()            | 0.5   | (0.1)         |
| Lameness/injury**   | N/A               | N/A               | N/A      | ()            | 3.4   | (0.2)         |
| Other diseases***   | N/A               | N/A               | 3.4      | (0.4)         | 5.4   | (0.5)         |
| Other causes***   | 40.6              | 42.7              | 16.8     | (0.7)         | 19.8  | (0.9)         |
| Unknown causes***   | N/A               | N/A               | 21.5     | (0.9)         | 17.1  | (8.0)         |
| Total   | 100.0             | 100.0             | 100.0    |               | 100.0 |               |

<sup>&</sup>lt;sup>1</sup>Standard errors not available for 1991 and 1995.

<sup>\*</sup>Mastitis included in "other causes" in 1991 and 1995 and in "other diseases" in 2000.

<sup>\*\*</sup>Lameness/injury included in "other causes" in 1991, 1995, and 2000.

<sup>\*\*\* &</sup>quot;Other diseases" and "unknown causes" included in "other causes" in 1991 and 1995.

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

|  | Percent Nonpredator Loss |                   |       |               |       |               |  |  |  |
|--|--------------------------|-------------------|-------|---------------|-------|---------------|--|--|--|
| Nonpredator<br>Cause   | 1991 <sup>1</sup>        | 1995 <sup>1</sup> | 2000  | Std.<br>Error | 2005  | Std.<br>Error |  |  |  |
| Digestive problems<br>(bloat, scours,<br>parasites,<br>enterotoxemia,<br>acidosis, etc.) | 14.3                     | 15.2              | 12.2  | (0.5)         | 12.3  | (0.6)         |  |  |  |
| Respiratory<br>problems<br>(pneumonia,<br>shipping fever, etc.)                          | 11.4                     | 18.6              | 14.6  | (0.6)         | 14.4  | (0.8)         |  |  |  |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                                | N/A                      | N/A               | 10.6  | (0.5)         | 9.9   | (0.5)         |  |  |  |
| Weather-related causes (chilling, drowning, lightning, etc.)                             | 4.4                      | 8.2               | 4.3   | (0.8)         | 2.0   | (0.2)         |  |  |  |
| Theft (stolen)   | 0.3                      | 0.0               | 0.2   | (0.1)         | 0.1   | (0.1)         |  |  |  |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                        | 1.9                      | 0.9               | 0.6   | (0.2)         | 0.5   | (0.1)         |  |  |  |
| Calving problems   | 26.3                     | 19.3              | 13.8  | (0.5)         | 12.5  | (0.6)         |  |  |  |
| Mastitis*  | N/A                      | N/A               | N/A   | ()            | 12.8  | (0.5)         |  |  |  |
| Lameness/injury**  | N/A                      | N/A               | N/A   | ()            | 10.5  | (0.5)         |  |  |  |
| Other diseases***  | N/A                      | N/A               | 15.4  | (0.7)         | 8.3   | (1.4)         |  |  |  |
| Other causes***  | 41.4                     | 37.8              | 15.3  | (1.0)         | 6.2   | (0.6)         |  |  |  |
| Unknown causes***  | N/A                      | N/A               | 13.0  | (0.5)         | 10.5  | (0.7)         |  |  |  |
| Total  | 100.0                    | 100.0             | 100.0 |               | 100.0 |               |  |  |  |

<sup>\*</sup>Mastitis included in "other causes" in 1991 and 1995 and in "other diseases" in 2000.

\*\*Lameness/injury included in "other causes" in 1991, 1995, and 2000.

\*\*\*\* "Other diseases" and "unknown causes" included in "other causes" in 1991 and 1995.

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

|  | Percent Nonpredator Loss |                   |       |               |       |               |  |  |  |  |
|--|--------------------------|-------------------|-------|---------------|-------|---------------|--|--|--|--|
| Nonpredator<br>Cause   | 1991 <sup>1</sup>        | 1995 <sup>1</sup> | 2000  | Std.<br>Error | 2005  | Std.<br>Error |  |  |  |  |
| Digestive problems<br>(bloat, scours,<br>parasites,<br>enterotoxemia,<br>acidosis, etc.) | 12.8                     | 19.9              | 11.3  | (1.3)         | 7.7   | (1.7)         |  |  |  |  |
| Respiratory problems (pneumonia, shipping fever, etc.)                                   | 9.4                      | 22.5              | 16.8  | (1.7)         | 15.2  | (3.6)         |  |  |  |  |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                                | N/A                      | N/A               | 10.1  | (1.4)         | 11.9  | (3.2)         |  |  |  |  |
| Weather-related causes (chilling, drowning, lightning, etc.)                             | 8.7                      | 8.8               | 10.0  | (1.5)         | 3.5   | (1.0)         |  |  |  |  |
| Theft (stolen)   | 0.4                      | 0.01              | 1.7   | (1.2)         | 0.1   | (0.1)         |  |  |  |  |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                        | 3.1                      | 0.01              | 0.4   | (0.2)         | 0.8   | (0.4)         |  |  |  |  |
| Calving problems   | 28.3                     | 15.0              | 16.0  | (1.4)         | 12.7  | (3.2)         |  |  |  |  |
| Mastitis*  | N/A                      | N/A               | N/A   | ()            | 15.8  | (6.4)         |  |  |  |  |
| Lameness/injury**  | N/A                      | N/A               | N/A   | ()            | 7.4   | (1.8)         |  |  |  |  |
| Other diseases***  | N/A                      | N/A               | 7.3   | (0.9)         | 4.3   | (1.3)         |  |  |  |  |
| Other causes***  | 37.3                     | 33.8              | 10.5  | (1.5)         | 10.1  | (2.6)         |  |  |  |  |
| Unknown***   | N/A                      | N/A               | 15.9  | (1.5)         | 10.5  | (3.5)         |  |  |  |  |
| Total  | 100.0                    | 100.0             | 100.0 |               | 100.0 |               |  |  |  |  |

<sup>&</sup>lt;sup>1</sup>Standard errors not available for 1991 and 1995.

<sup>\*</sup>Mastitis included in "other causes" in 1991 and 1995 and in "other diseases" in 2000.

\*\*Lameness/injury included in "other causes" in 1991, 1995, and 2000.

\*\*\* "Other diseases" and "unknown causes" included in "other causes" in 1991 and 1995.

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

|  |                   | Per               | cent Nonp | redator L     | .oss  |               |
|--|-------------------|-------------------|-----------|---------------|-------|---------------|
| Nonpredator<br>Cause   | 1991 <sup>1</sup> | 1995 <sup>1</sup> | 2000      | Std.<br>Error | 2005  | Std.<br>Error |
| Digestive problems<br>(bloat, scours,<br>parasites,<br>enterotoxemia,<br>acidosis, etc.) | 15.6              | 12.1              | 14.9      | (0.9)         | 18.8  | (2.9)         |
| Respiratory<br>problems<br>(pneumonia,<br>shipping fever, etc.)                          | 58.4              | 67.2              | 64.1      | (2.5)         | 54.2  | (2.7)         |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                                | N/A               | N/A               | 1.2       | (0.1)         | 0.6   | (0.1)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                             | 6.9               | 3.3               | 3.5       | (0.3)         | 6.0   | (1.5)         |
| Theft (stolen)   | 0.3               | 0.01              | 0.1       | (0.0)         | 0.4   | (0.2)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                        | 0.7               | 0.01              | 0.6       | (0.3)         | 0.4   | (0.2)         |
| Calving problems   | 1.7               | 1.5               | 3.6       | (2.0)         | 1.4   | (0.6)         |
| Mastitis*  | N/A               | N/A               | N/A       | ()            | 0.1   | (0.0)         |
| Lameness/injury**  | N/A               | N/A               | N/A       | ()            | 3.7   | (1.0)         |
| Other diseases***  | N/A               | N/A               | 1.6       | (0.4)         | 3.9   | (0.9)         |
| Other causes***  | 16.4              | 15.9              | 3.5       | (0.8)         | 2.4   | (0.5)         |
| Unknown causes***  | N/A               | N/A               | 6.9       | (0.9)         | 8.1   | (1.0)         |
| Total  | 100.0             | 100.0             | 100.0     |               | 100.0 |               |

<sup>\*</sup>Mastitis included in "other causes" in 1991 and 1995 and in "other diseases" in 2000.

\*\*Lameness/injury included in "other causes" in 1991, 1995, and 2000.

\*\*\* "Other diseases" and "unknown causes" included in "other causes" in 1991 and 1995.

#### 3. Cause of loss by size of operation—2005

The percentage of losses due to calving problems decreased as the size of operation increased, ranging from 18.9 percent on operations with 1 to 49 cows to 10.7 percent on operations with 500 or more cows.

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

#### **Percent Nonpredator Loss**

|   | 1-49       | 50-99      | 100-499    | 500 or More |
|---|------------|------------|------------|-------------|
|   | Std.       | Std.       | Std.       | Std.        |
| Nonpredator Cause   | Pct. Error | Pct. Error | Pct. Error | Pct. Error  |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia,<br>acidosis, etc.) | 8.2 (1.0)  | 7.4 (1.0)  | 7.1 (0.7)  | 6.8 (0.8)   |
| Respiratory problems (pneumonia, shipping fever, etc.)                                | 12.9 (1.3) | 14.8 (1.7) | 26.6 (4.5) | 21.0 (1.9)  |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                             | 1.3 (0.3)  | 1.8 (0.4)  | 0.7 (0.1)  | 1.1 (0.2)   |
| Weather-related causes (chilling, drowning, lightning, etc.)                          | 8.0 (0.9)  | 10.4 (1.5) | 10.0 (1.4) | 8.0 (0.8)   |
| Theft (stolen)  | 0.4 (0.1)  | 0.8 (0.3)  | 1.1 (0.4)  | 2.6 (1.1)   |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                     | 2.3 (0.9)  | 2.1 (0.7)  | 1.8 (0.3)  | 3.3 (0.4)   |
| Calving problems  | 18.9 (1.2) | 12.6 (1.0) | 11.0 (1.1) | 10.7 (0.9)  |
| Mastitis  | 0.6 (0.2)  | 0.5 (0.2)  | 0.4 (0.1)  | 0.6 (0.2)   |
| Lameness/injury   | 4.0 (0.5)  | 3.4 (0.5)  | 2.6 (0.4)  | 3.7 (0.5)   |
| Other diseases  | 4.7 (0.7)  | 5.5 (0.9)  | 5.8 (1.0)  | 6.0 (0.9)   |
| Other   | 22.4 (1.6) | 23.7 (1.7) | 16.5 (1.5) | 14.0 (1.6)  |
| Unknown   | 16.3 (1.2) | 17.0 (1.5) | 16.4 (1.6) | 22.2 (2.1)  |
| Total   | 100.0      | 100.0      | 100.0      | 100.0       |

Respiratory problems accounted for a higher percentage of losses on operations with 1-29 cows (31.6 percent) than on all other operation sizes. Mastitis accounted for 15.0 of nonpredator losses on operations with 500 or more cows and 3.9 percent of losses on operations with 1 to 29 cows.

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

| -   |                    | Р                  | ercent Non         | predator Los       | SS                 |                    |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|   |                    | Size o             | of Operation       | (Number of         | Cows)              |                    |
|   | 1-29               | 30-49              | 50-99              | 100-199            | 200-499            | 500 or<br>More     |
| Nonpredator Cause   | Std.<br>Pct. Error |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis,<br>etc.) | 14.1 (5.0)         | 13.7 (3.1)         | 10.0 (1.1)         | 15.1 (2.9)         | 12.2 (1.0)         | 12.2 (0.8)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                                | 31.6 (5.4)         | 8.3 (2.0)          | 8.9 (1.1)          | 13.3 (1.3)         | 11.6 (1.0)         | 17.0 (1.5)         |
| Metabolic problems<br>(milk fever, grass tetany, etc.)                                | 9.2 (3.9)          | 10.3 (1.6)         | 10.7 (1.2)         | 8.9 (1.3)          | 11.2 (1.3)         | 9.5 (0.7)          |
| Weather-related causes (chilling, drowning, lightning, etc.)                          | 1.1 (0.7)          | 1.0 (0.5)          | 2.3 (0.7)          | 2.1 (0.4)          | 2.0 (0.4)          | 2.0 (0.4)          |
| Theft (stolen)  | 0.0 (0.0)          | 0.0 (0.0)          | 0.3 (0.3)          | 0.0 (0.0)          | 0.0 (0.0)          | 0.1 (0.1)          |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                     | 0.3 (0.2)          | 0.5 (0.3)          | 1.5 (0.6)          | 0.4 (0.2)          | 0.4 (0.1           | 0.2 (0.1)          |
| Calving problems  | 9.0 (2.8)          | 19.2 (2.4)         | 17.0 (2.2)         | 14.0 (1.1)         | 13.3 (1.3)         | 9.9 (0.7)          |
| Mastitis  | 3.9 (2.0)          | 9.6 (2.0)          | 10.6 (1.5)         | 9.9 (1.0)          | 13.0 (1.1)         | 15.0 (0.9)         |
| Lameness/injury   | 8.7 (2.3)          | 11.2 (1.8)         | 13.2 (1.3)         | 10.2 (1.0)         | 13.0 (1.3)         | 9.0 (0.6)          |
| Other diseases  | 7.8 (3.9)          | 9.9 (2.6)          | 8.1 (1.5)          | 7.0 (1.0)          | 9.3 (1.8)          | 8.4 (2.7)          |
| Other   | 8.7 (3.0)          | 7.2 (1.4)          | 7.3 (1.2)          | 9.3 (1.4)          | 5.3 (1.2)          | 5.0 (1.0)          |
| Unknown   | 5.6 (2.9)          | 9.1 (1.8)          | 10.1 (1.6)         | 9.8 (1.3)          | 8.7 (1.3)          | 11.7 (1.3)         |
| Total   | 100.0              | 100.0              | 100.0              | 100.0              | 100.0              | 100.0              |

Almost one-fifth of losses on mixed operations with 500 or more cows (19.3 percent) were due to metabolic problems, while only 2.5 percent of losses on operations 1 to 99 cows were due to metabolic problems.

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

#### **Percent Nonpredator Loss**

|  | 1-9   | 99            | 100-  | 499           | 500 or | More          |
|--|-------|---------------|-------|---------------|--------|---------------|
| Nonpredator Cause  | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.   | Std.<br>Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 9.2   | (2.8)         | 7.4   | (1.4)         | 7.1    | (3.2)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 14.4  | (4.5)         | 16.3  | (2.3)         | 14.8   | (7.4)         |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 2.5   | (1.0)         | 8.2   | (1.4)         | 19.3   | (4.0)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 7.2   | (2.5)         | 4.8   | (1.2)         | 0.9    | (0.5)         |
| Theft (stolen)   | 0.0   | (0.0)         | 0.0   | (0.0)         | 0.2    | (0.2)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 1.5   | (1.4)         | 1.3   | (0.5)         | 0.0    | (0.0)         |
| Calving problems   | 21.6  | (8.3)         | 16.1  | (2.1)         | 5.9    | (2.7)         |
| Mastitis   | 3.4   | (1.3)         | 8.6   | (2.2)         | 27.2   | (9.5)         |
| Lameness/injury  | 8.0   | (2.3)         | 10.8  | (2.6)         | 4.5    | (2.3)         |
| Other diseases (mastitis, etc.)  | 5.2   | (1.7)         | 6.9   | (2.6)         | 1.9    | (1.0)         |
| Other  | 6.5   | (2.0)         | 9.6   | (2.0)         | 12.2   | (4.8)         |
| Unknown  | 20.5  | (11.2)        | 10.0  | (2.5)         | 6.0    | (3.1)         |
| Total  | 100.0 |               | 100.0 |               | 100.0  |               |

Respiratory problems accounted for the majority of nonpredator losses on "other" operations. Operations with 1 to 99 head had a smaller percentage of losses due to respiratory problems compared to all other operation sizes.

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

#### **Percent Nonpredator Loss**

Size of Operation (Number of Cattle and Calves)

|   | 1-99  |               | 100-  | -499          | 500-  | -999          | 1,000 or<br>More |               |  |
|---|-------|---------------|-------|---------------|-------|---------------|------------------|---------------|--|
| Nonpredator Cause   | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.             | Std.<br>Error |  |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis,<br>etc.) | 9.3   | (2.2)         | 5.5   | (1.1)         | 10.6  | (2.0)         | 24.0             | (3.8)         |  |
| Respiratory problems (pneumonia, shipping fever, etc.)                                | 33.9  | (5.3)         | 66.1  | (4.3)         | 66.3  | (3.6)         | 55.5             | (3.5)         |  |
| Metabolic problems<br>(milk fever, grass tetany,<br>etc.)                             | 2.1   | (8.0)         | 0.9   | (0.5)         | 1.0   | (0.4)         | 0.2              | (0.1)         |  |
| Weather-related causes (chilling, drowning, lightning, etc.)                          | 12.5  | (7.7)         | 2.5   | (0.9)         | 5.4   | (1.5)         | 5.1              | (1.2)         |  |
| Theft (stolen)  | 0.6   | (0.6)         | 2.4   | (1.7)         | 0.7   | (0.6)         | 0.0              | (0.0)         |  |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                     | 1.9   | (1.1)         | 0.0   | (0.0)         | 0.5   | (0.3)         | 0.2              | (0.1)         |  |
| Calving problems  | 8.8   | (3.6)         | 0.5   | (0.3)         | 0.4   | (0.3)         | 0.0              | (0.0)         |  |
| Mastitis  | 0.3   | (0.1)         | 0.0   | (0.0)         | 0.1   | (0.0)         | 0.0              | (0.0)         |  |
| Lameness/injury   | 9.0   | (5.2)         | 3.2   | (0.9)         | 3.2   | (0.9)         | 2.6              | (0.7)         |  |
| Other diseases  | 3.6   | (1.3)         | 5.2   | (3.2)         | 3.5   | (1.7)         | 3.8              | (1.1)         |  |
| Other   | 9.8   | (2.3)         | 4.8   | (1.9)         | 2.4   | (0.9)         | 0.4              | (0.2)         |  |
| Unknown   | 8.2   | (2.0)         | 8.9   | (2.7)         | 5.9   | (1.8)         | 8.2              | (1.4)         |  |
| Total   | 100.0 |               | 100.0 |               | 100.0 |               | 100.0            |               |  |

#### 4. Cause of loss by region—2005

On beef operations, the percentage of losses due to respiratory problems ranged from 8.5 percent in the Southeast region to 29.1 in the North Central region. The percentage of losses due to weather-related causes ranged from 4.7 percent in the Northwest region to 16.7 percent in the Southeast region.

a. For *beef* operations, percentage of cattle death losses by cause and by region:

#### **Percent Nonpredator Loss**

|   | North<br>Central   | Northeast          | Northwest          | South<br>Central   | Southeast          | Southwest          |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Nonpredator Cause   | Std.<br>Pct. Error |
| Digestive problems<br>(bloat, scours,<br>parasites, entero-<br>toxemia, acidosis, etc.) | 9.4 (1.0)          | 9.9 (1.2)          | 9.2 (1.2)          | 6.0 (0.9)          | 7.0 (1.0)          | 9.6 (1.5)          |
| Respiratory problems (pneumonia, shipping fever, etc.)                                  | 29.1 (2.1)         | 16.3 (2.0)         | 14.5 (1.6)         | 20.0 (3.6)         | 8.5 (1.1)          | 17.0 (2.0)         |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                               | 0.7 (0.3)          | 1.8 (0.4)          | 2.5 (1.0)          | 0.9 (0.2)          | 1.7 (0.4)          | 0.3 (0.1)          |
| Weather-related causes (chilling, drowning, lightning, etc.)                            | 11.2 (1.0)         | 6.9 (1.0)          | 4.7 (0.6)          | 7.5 (0.9)          | 16.7 (2.5)         | 5.8 (0.9)          |
| Theft (stolen)  | 0.5 (0.2)          | 0.3 (0.1)          | 0.9 (0.4)          | 1.1 (0.4)          | 0.1 (0.0)          | 3.3 (1.0)          |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                       | 0.8 (0.3)          | 1.8 (0.6)          | 4.5 (0.6)          | 1.7 (0.7)          | 1.9 (0.5)          | 8.5 (1.8)          |
| Calving problems  | 7.8 (1.7)          | 17.5 (1.5)         | 7.1 (0.8)          | 15.7 (1.2)         | 18.5 (1.3)         | 10.6 (1.7)         |
| Mastitis  | 0.3 (0.1)          | 0.2 (0.1)          | 0.3 (0.2)          | 0.4 (0.1)          | 0.9 (0.3)          | 1.4 (0.6)          |
| Lameness/injury   | 5.0 (0.7)          | 4.8 (0.6)          | 4.8 (0.7)          | 2.2 (0.3)          | 4.2 (0.8)          | 3.1 (0.6)          |
| Other diseases  | 6.5 (1.4)          | 3.5 (0.5)          | 7.7 (2.3)          | 5.7 (0.8)          | 3.7 (0.8)          | 4.4 (0.8)          |
| Other   | 14.4 (1.3)         | 16.8 (1.4)         | 17.8 (1.5)         | 22.4 (1.7)         | 21.8 (1.5)         | 15.7 (1.6)         |
| Unknown   | 14.3 (1.6)         | 20.2 (1.7)         | 26.0 (3.0)         | 16.4 (1.4)         | 15.0 (1.3)         | 20.3 (2.0)         |
| Total   | 100.0              | 100.0              | 100.0              | 100.0              | 100.0              | 100.0              |

On dairy operations, the percentage of losses due to mastitis ranged from 7.7 percent in the South Central region to 16.9 percent in the Southwest region.

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

#### **Percent Nonpredator Loss**

|   |       | North |       |       |       |       |       | uth    |       |       |       |       |
|---|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
|   | Cer   | ıtral | Nort  | heast | North | nwest | Cer   | ntral  | Sout  | heast | South | nwest |
|   |       | Std.  |       | Std.  |       | Std.  |       | Std.   |       | Std.  |       | Std.  |
| Nonpredator Cause   | Pct.  | Error | Pct.  | Error | Pct.  | Error | Pct.  | Error  | Pct.  | Error | Pct.  | Error |
| Digestive problems<br>(bloat, scours,<br>parasites, entero-<br>toxemia, acidosis, |       |       |       |       |       |       |       |        |       |       |       |       |
| etc.)   | 14.7  | (2.0) | 11.2  | (8.0) | 10.6  | (1.7) | 10.7  | (1.8)  | 16.3  | (6.9) | 14.2  | (1.0) |
| Respiratory problems (pneumonia, shipping fever, etc.)                            | 12.0  | (1.4) | 11.9  | (0.8) | 19.0  | (5.2) | 14.6  | (2.4)  | 10.8  | (1.2) | 18.7  | (1.6) |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                         | 8.8   | (1.2) | 11.3  | (0.8) | 10.5  | (1.3) | 5.6   | (1.2)  | 7.2   | (1.2) | 10.0  | (1.1) |
| Weather-related causes (chilling, drowning, lightning, etc.)                      | 1.6   | (0.4) | 1.6   | (0.3) | 0.2   | (0.1) | 2.5   | (0.7)  | 5.5   | (0.9) | 2.7   | (0.8) |
| Theft (stolen)  | 0.0   | (0.0) | 0.1   | (0.1) | 0.2   | (0.1) | 0.5   | (0.4)  | 0.0   | (0.0) | 0.0   | (0.0) |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                 | 0.3   | (0.1) | 0.7   | (0.2) | 0.0   | (0.0) | 1.2   | (0.5)  | 0.1   | (0.1) | 0.1   | (0.0) |
| Calving problems  |       | (1.1) |       | (0.7) |       | (1.5) |       | (3.8)  |       | (1.6) |       | (1.0) |
| Mastitis  | 11.8  | (1.1) | 13.1  | (0.9) | 9.5   | (1.4) | 7.7   | (1.5)  | 12.3  | (1.7) | 16.9  | (1.3) |
| Lameness/injury   | 11.6  | (1.6) | 12.9  | (0.7) | 9.1   | (1.3) | 6.2   | (1.2)  | 10.8  | (1.5) | 8.2   | (8.0) |
| Other diseases  | 6.3   | (1.0) | 8.0   | (0.9) | 5.9   | (1.0) | 20.5  | (10.3) | 4.5   | (1.1) | 6.1   | (1.4) |
| Other   | 11.2  | (1.8) | 5.1   | (0.5) | 3.2   | (0.6) | 10.8  | (2.7)  | 6.0   | (1.1) | 5.2   | (1.9) |
| Unknown   | 9.0   | (2.0) | 11.2  | (1.2) | 22.9  | (3.6) | 3.5   | (0.8)  | 11.9  | (2.2) | 6.7   | (0.9) |
| Total   | 100.0 |       | 100.0 |       | 100.0 |       | 100.0 |        | 100.0 |       | 100.0 |       |

On mixed operations, metabolic problems such as milk fever or grass tetany accounted for 22.5 percent of losses in the Southwest region and 2.9 percent of losses in the North Central region.

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

#### **Percent Nonpredator Loss**

|  |       | rth<br>ntral  | North | neast         | Northwest          | South<br>Central   | Southeast          | Southwest          |
|--|-------|---------------|-------|---------------|--------------------|--------------------|--------------------|--------------------|
| Nonpredator Cause  | Pct.  | Std.<br>Error | Pct.  | Std.<br>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.) | 8.0   | (3.2)         | 9.9   | (2.1)         | 9.3 (1.8)          | 9.9 (2.7)          | 8.6 (1.9)          | 3.9 (2.7)          |
| Respiratory problems (pneumonia, shipping fever, etc.)                                     | 29.8  | (10.0)        | 13.9  | (3.1)         | 16.8 (3.5)         | 21.1 (4.9)         | 17.8 (4.1)         | 4.4 (3.1)          |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                                  | 2.9   | (1.1)         | 8.0   | (1.9)         | 12.4 (4.2)         | 10.4 (3.6)         | 4.6 (1.3)          | 22.5 (3.7)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                               | 9.3   | (3.1)         | 2.7   | (0.9)         | 2.8 (0.9)          | 3.2 (1.7)          | 9.0 (2.8)          | 0.2 (0.2)          |
| Theft (stolen)   | 0.0   | (0.0)         | 0.0   | (0.0)         | 0.0 (0.0)          | 0.0 (0.0)          | 0.0 (0.0)          | 0.2 (0.2)          |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                          | 0.4   | (0.4)         | 0.9   | (0.6)         | 0.4 (0.4)          | 2.4 (1.7)          | 0.7 (0.6)          | 0.1 (0.0)          |
| Calving problems   | 9.2   | (3.1)         | 13.5  | (3.0)         | 11.3 (3.0)         | 24.4 (9.1)         | 22.0 (3.4)         | 4.7 (3.1)          |
| Mastitis   | 4.4   | (1.2)         | 8.5   | (2.0)         | 7.9 (2.9)          | 8.5 (4.1)          | 7.6 (1.5)          | 35.3 (9.1)         |
| Lameness/injury  | 8.2   | (2.3)         | 13.1  | (3.7)         | 11.2 (3.7)         | 4.5 (1.5)          | 7.9 (1.9)          | 3.3 (2.8)          |
| Other diseases   | 9.4   | (5.3)         | 4.0   | (1.2)         | 4.2 (1.8)          | 3.4 (1.4)          | 2.6 (0.8)          | 2.8 (2.1)          |
| Other  | 10.4  | (3.9)         | 6.2   | (1.6)         | 7.0 (2.3)          | 7.6 (2.7)          | 7.6 (2.2)          | 15.7 (4.9)         |
| Unknown  | 8.0   | (3.3)         | 19.3  | (9.9)         | 16.7 (5.9)         | 4.6 (1.4)          | 11.6 (2.0)         | 6.9 (5.5)          |
| Total  | 100.0 |               | 100.0 |               | 100.0              | 100.0              | 100.0              | 100.0              |

Across all regions, respiratory problems accounted for the highest percentage of nonpredator losses on "other" operations, ranging from 34.7 percent in the Southwest region to 62.3 percent in the North Central region.

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

#### **Percent Nonpredator Loss**

|   | No<br>Cen |               | North | neast         | North | west          | So:<br>Cen |               | Sout  | heast         | South | west          |
|---|-----------|---------------|-------|---------------|-------|---------------|------------|---------------|-------|---------------|-------|---------------|
| Nonpredator Cause   | Pct.      | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.       | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error |
| Digestive problems<br>(bloat, scours,<br>parasites, entero-<br>toxemia, acidosis, etc.) | 13.9      | (1.4)         | 13.7  | (2.4)         | 10.3  | (1.7)         | 23.9       | (5.2)         | 1.9   | (0.8)         | 17.3  | (2.3)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                                  | 62.3      | (2.4)         | 58.6  | (4.3)         | 45.5  | (4.6)         | 56.3       | (5.0)         | 53.2  | (12.4)        | 34.7  | (2.1)         |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                               | 0.6       | (0.3)         | 2.0   | (0.8)         | 0.1   | (0.1)         | 0.4        | (0.2)         | 4.2   | (3.3)         | 0.1   | (0.1)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                            | 11.3      | (2.2)         | 2.6   | (0.8)         | 1.5   | (0.4)         | 6.1        | (2.9)         | 3.7   | (2.2)         | 0.5   | (0.2)         |
| Theft (stolen)  | 0.0       | (0.0)         | 0.0   | (0.0)         | 0.1   | (0.1)         | 0.6        | (0.4)         | 3.6   | (3.4)         | 0.0   | (0.0)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                       | 0.4       | (0.3)         | 1.0   | (1.0)         | 0.9   | (0.4)         | 0.2        | (0.2)         | 4.8   | (4.8)         | 0.0   | (0.0)         |
| Calving problems  | 0.4       | (0.2)         | 0.8   | (0.4)         | 0.9   | (0.5)         | 1.9        | (1.1)         | 10.0  | (8.1)         | 0.1   | (0.1)         |
| Mastitis  | 0.1       | (0.0)         | 0.5   | (0.3)         | 0.0   | (0.0)         | 0.0        | (0.0)         | 0.0   | (0.0)         | 0.0   | (0.0)         |
| Lameness/injury   | 3.2       | (0.5)         | 4.0   | (0.7)         | 6.6   | (2.6)         | 2.9        | (1.8)         | 0.7   | (0.3)         | 6.4   | (1.9)         |
| Other diseases  | 1.9       | (0.5)         | 6.1   | (4.5)         | 5.5   | (1.5)         | 1.2        | (0.5)         | 0.1   | (0.1)         | 15.3  | (2.7)         |
| Other   | 1.4       | (0.4)         | 3.7   | (1.4)         | 7.1   | (3.9)         | 2.7        | (8.0)         | 6.7   | (2.5)         | 0.7   | (0.3)         |
| Unknown   | 4.5       | (0.9)         | 7.0   | (1.7)         | 21.5  | (3.7)         | 3.8        | (1.3)         | 11.1  | (7.3)         | 24.9  | (2.9)         |
| Total   | 100.0     |               | 100.0 |               | 100.0 |               | 100.0      |               | 100.0 |               | 100.0 |               |

## C. Nonpredator Calf Death Loss

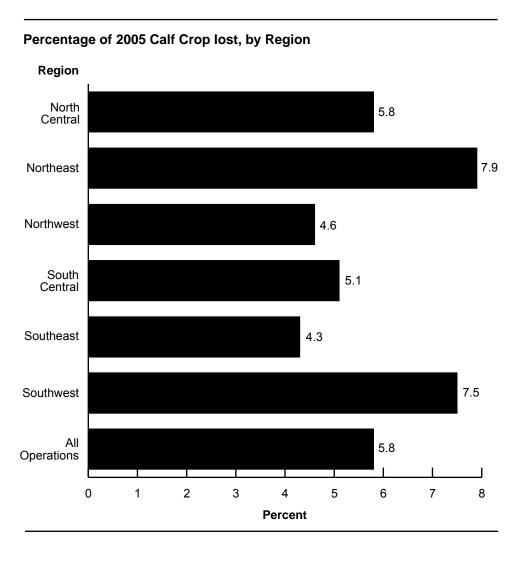
#### 1. Losses as a percentage of calf crop—2005

Overall, 5.8 percent of the calf crop was lost to nonpredator causes. Losses were highest in the Northeast and Southwest regions (7.9 and 7.5 percent of calf crop, respectively).

a. Percentage of calf crop (born during 2005) lost,\* by region:

|                | Percent Calf Crop* |                |  |  |  |  |  |  |
|----------------|--------------------|----------------|--|--|--|--|--|--|
| Region         | Percent            | Standard Error |  |  |  |  |  |  |
| North Central  | 5.8                | (0.1)          |  |  |  |  |  |  |
| Northeast      | 7.9                | (0.4)          |  |  |  |  |  |  |
| Northwest      | 4.6                | (0.1)          |  |  |  |  |  |  |
| South Central  | 5.1                | (0.2)          |  |  |  |  |  |  |
| Southeast      | 4.3                | (0.1)          |  |  |  |  |  |  |
| Southwest      | 7.5                | (1.1)          |  |  |  |  |  |  |
| All operations | 5.8                | (0.1)          |  |  |  |  |  |  |

<sup>\*</sup>Calf deaths in 2005 / 2005 calf crop x 100.



On beef operations, 4.5 percent of the calf crop was lost to nonpredator causes in 2005. The lowest percentage of losses (3.0 percent) occurred on operations with 500 or more cows.

b. For *beef* operations, percentage of calf crop (born during 2005) lost\* by region and by size of operation:

#### **Percent Calf Crop**

|                |      |               |      |               |      |               |       |               | 4      | All           |
|----------------|------|---------------|------|---------------|------|---------------|-------|---------------|--------|---------------|
|                | 1.   | -49           | 50   | )-99          | 100  | )-499         | 500 c | or More       | e Opei | rations       |
| Region         | Pct. | Std.<br>Error | Pct. | Std.<br>Error | Pct. | Std.<br>Error | Pct.  | Std.<br>Error | Pct.   | Std.<br>Error |
| North Central  | 7.3  | (0.6)         | 5.7  | (0.3)         | 4.0  | (0.1)         | 3.2   | (0.2)         | 4.7    | (0.1)         |
| Northeast      | 6.4  | (0.3)         | 5.5  | (0.4)         | 4.6  | (0.3)         | 3.0   | (0.2)         | 5.7    | (0.2)         |
| Northwest      | 6.2  | (8.0)         | 4.5  | (0.4)         | 3.5  | (0.1)         | 3.6   | (0.2)         | 3.9    | (0.1)         |
| South Central  | 5.4  | (0.3)         | 4.5  | (0.2)         | 4.6  | (0.3)         | 2.8   | (0.4)         | 4.6    | (0.1)         |
| Southeast      | 4.4  | (0.2)         | 4.0  | (0.2)         | 3.3  | (0.2)         | 2.1   | (0.1)         | 3.8    | (0.1)         |
| Southwest      | 8.1  | (1.3)         | 5.1  | (0.6)         | 3.9  | (0.3)         | 2.9   | (0.3)         | 4.3    | (0.2)         |
| All Operations | 5.7  | (0.2)         | 4.8  | (0.1)         | 4.1  | (0.1)         | 3.0   | (0.1)         | 4.5    | (0.1)         |

<sup>\*</sup>Calf deaths in 2005 / 2005 calf crop x 100.

Overall, 7.1 percent of the calf crop on dairy operations was lost to nonpredator causes in 2005. The percentage of calf crop lost varied across regions, ranging from 4.5 percent in the Southwest region to 10.5 percent in the North Central region.

c. For *dairy* operations, percentage of calf crop (born during 2005) lost\* by region and by size of operation:

#### **Percent Calf Crop**

|                | 1-   | 29           | 30   | -49          | 50   | -99          | 100  | -199         | 200  | -499         |      | or<br>ore    | A<br>Opera | ll<br>ations |
|----------------|------|--------------|------|--------------|------|--------------|------|--------------|------|--------------|------|--------------|------------|--------------|
| Region         | Pct. | Std.<br>Err. | Pct.       | Std.<br>Err. |
| North Central  | 10.1 | (2.8)        | 11.1 | (1.5)        | 11.8 | (8.0)        | 12.0 | (1.1)        | 8.9  | (8.0)        | 7.7  | (1.4)        | 10.5       | (0.5)        |
| Northeast      | 12.1 | (2.4)        | 7.7  | (0.5)        | 9.2  | (0.4)        | 8.6  | (0.5)        | 6.7  | (0.4)        | 4.7  | (0.3)        | 7.7        | (0.2)        |
| Northwest      | 5.9  | (2.8)        | 11.4 | (1.4)        | 8.8  | (0.9)        | 8.1  | (0.7)        | 6.5  | (0.5)        | 5.5  | (0.3)        | 5.9        | (0.3)        |
| South Central  | 3.0  | (1.5)        | 8.3  | (1.8)        | 10.9 | (2.0)        | 9.8  | (1.0)        | 9.6  | (1.1)        | 7.6  | (0.7)        | 8.4        | (0.6)        |
| Southeast      | **   |              | 12.3 | (2.3)        | 9.5  | (1.1)        | 11.5 | (2.6)        | 8.9  | (0.7)        | 6.8  | (0.5)        | 8.5        | (0.7)        |
| Southwest      | **   |              | **   |              | 11.0 | (1.2)        | 8.6  | (1.2)        | 6.1  | (0.5)        | 4.3  | (0.3)        | 4.5        | (0.3)        |
| All Operations | 9.5  | (1.5)        | 8.3  | (0.5)        | 9.6  | (0.4)        | 9.4  | (0.4)        | 7.1  | (0.3)        | 5.0  | (0.2)        | 7.1        | (0.1)        |

<sup>\*</sup>Calf deaths in 2005 / 2005 calf crop x 100.
\*\*Too few operations to report.

Overall, 8.7 percent of the calf crop on mixed operations was lost to nonpredator causes.

d. For *mixed* operations, percentage of calf crop (born during 2005) lost\* by region and by size of operation:

#### **Percent Calf Crop**

|                | 1-9  | 99            | 100  | -499          | 500 o | r More        |      | All<br>ations |
|----------------|------|---------------|------|---------------|-------|---------------|------|---------------|
| Region         | Pct. | Std.<br>Error | Pct. | Std.<br>Error | Pct.  | Std.<br>Error | Pct. | Std.<br>Error |
| North Central  | 14.7 | (3.1)         | 8.8  | (1.2)         | 8.7   | (1.8)         | 10.6 | (1.3)         |
| Northeast      | 12.4 | (3.3)         | 9.0  | (1.1)         | 7.0   | (1.3)         | 10.0 | (1.4)         |
| Northwest      | **   |               | 7.2  | (1.8)         | 4.9   | (0.5)         | 6.1  | (0.9)         |
| South Central  | 8.7  | (2.8)         | 7.9  | (1.0)         | 6.8   | (1.9)         | 7.6  | (1.0)         |
| Southeast      | 10.1 | (3.5)         | 7.3  | (8.0)         | 5.6   | (0.6)         | 6.9  | (0.6)         |
| Southwest      | **   |               | 8.0  | (1.7)         | 8.0   | (2.7)         | 8.0  | (2.1)         |
| All Operations | 12.2 | (2.0)         | 8.3  | (0.5)         | 7.1   | (1.3)         | 8.7  | (0.6)         |

<sup>\*</sup>Calf deaths in 2005 / 2005 calf crop x 100.

<sup>\*\*</sup>Too few operations to report.

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

Overall, 11.6 percent of calf inventory was lost to nonpredator causes on "other" operations. On operations with fewer than 100 head, 25.1 percent of inventory was lost, compared to 3.9 percent of inventory on operations with 500-999 head. Regionally, losses ranged from 8.1 percent of calf inventory in the South Central region to 17.2 percent of inventory in the North Central region.

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

#### **Percent Inventory**

Size of Operation (Number of Cattle and Calves)

|                | 1-99               | 100- | 499           | 500  | -999          | •    | 0 or<br>ore   | A<br>Opera |               |
|----------------|--------------------|------|---------------|------|---------------|------|---------------|------------|---------------|
| Region         | Std.<br>Pct. Error | Pct. | Std.<br>Error | Pct. | Std.<br>Error | Pct. | Std.<br>Error | Pct.       | Std.<br>Error |
| North Central  | 26.3 (6.2)         | 8.2  | (2.4)         | 10.5 | (3.6)         | 24.2 | (14.9)        | 17.2       | (3.2)         |
| Northeast      | 34.9 (15.7)        | 8.4  | (1.4)         | 3.5  | (0.8)         | 1.9  | (1.5)         | 9.1        | (4.1)         |
| Northwest      | 29.2 (11.0)        | 13.9 | (4.4)         | 5.0  | (3.3)         | 13.5 | (2.1)         | 14.5       | (2.0)         |
| South Central  | 14.8 (4.1)         | 11.7 | (4.5)         | 3.1  | (1.0)         | 7.3  | (1.6)         | 8.1        | (1.3)         |
| Southeast      | 14.8 (5.7)         | 7.8  | (3.8)         | 2.1  | (0.7)         | 8.9  | (3.3)         | 10.6       | (2.4)         |
| Southwest      | 26.3 (13.4)        | 16.7 | (8.0)         | 3.3  | (1.7)         | 16.0 | (4.1)         | 16.1       | (3.8)         |
| All Operations | 25.1 (6.3)         | 9.6  | (1.4)         | 3.9  | (0.7)         | 10.6 | (3.1)         | 11.6       | (2.0)         |

<sup>\*2005</sup> death loss divided by end-of-year (January 1, 2006) inventory of calves 500 lbs or less X100.

#### 2. Cause of loss—1991, 1995, 2000, and 2005

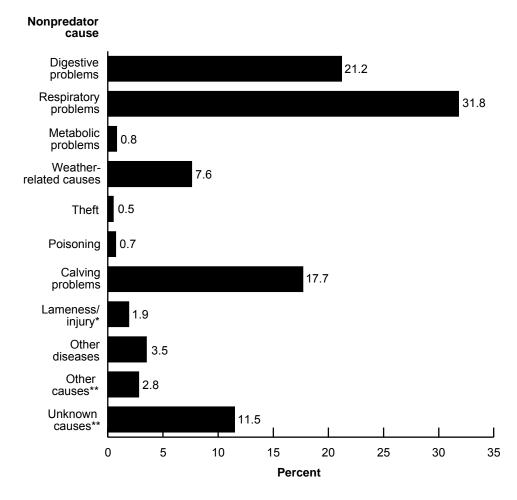
The highest percentages of nonpredator calf losses in 2005 were due to respiratory problems (31.8 percent) and digestive problems (21.2 percent).

a. Percentage of calf death losses, by cause and by year:

|   | Percent Nonpredator Loss |       |       |       |  |  |  |  |  |  |
|---|--------------------------|-------|-------|-------|--|--|--|--|--|--|
| Nonpredator Cause   | 1991                     | 1995  | 2000  | 2005  |  |  |  |  |  |  |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis,<br>etc.) | 26.0                     | 25.2  | 19.8  | 21.2  |  |  |  |  |  |  |
| Respiratory problems (pneumonia, shipping fever, etc.)                                | 35.2                     | 29.6  | 30.0  | 31.8  |  |  |  |  |  |  |
| Metabolic problems<br>(milk fever, grass tetany,<br>etc.)                             | N/A                      | N/A   | 0.8   | 0.8   |  |  |  |  |  |  |
| Weather-related causes (chilling, drowning, lightning, etc.)                          | 6.2                      | 10.7  | 10.6  | 7.6   |  |  |  |  |  |  |
| Theft (stolen)  | 0.6                      | 0.4   | 0.4   | 0.5   |  |  |  |  |  |  |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                     | 0.8                      | 0.6   | 0.5   | 0.7   |  |  |  |  |  |  |
| Calving problems  | 13.2                     | 15.1  | 16.7  | 17.7  |  |  |  |  |  |  |
| Lameness/injury*  | N/A                      | N/A   | N/A   | 1.9   |  |  |  |  |  |  |
| Other diseases  | N/A                      | N/A   | 3.2   | 3.5   |  |  |  |  |  |  |
| Other causes**  | 18.0                     | 18.4  | 3.2   | 2.8   |  |  |  |  |  |  |
| Unknown causes**  | N/A                      | N/A   | 14.8  | 11.5  |  |  |  |  |  |  |
| Total   | 100.0                    | 100.0 | 100.0 | 100.0 |  |  |  |  |  |  |

Lameness/injury included with other causes in 1991, 1995, and 2000. Other causes and unknown causes combined in 1991 and 1995.

#### Percentage of 2005 Calf Death Losses, by Cause



<sup>\*</sup>Lameness/injury included with other causes in 1991, 1995, and 2000. \*\*Other causes and unknown causes combined in 1991 and 1995.

On beef operations in 2005, the two most common causes of calf losses were respiratory problems and calving problems (27.7 and 24.2 percent of losses, respectively).

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

|   |                   | Perc              | ent Nonp | redator       | Loss  |               |
|---|-------------------|-------------------|----------|---------------|-------|---------------|
| Nonpredator Cause   | 1991 <sup>1</sup> | 1995 <sup>1</sup> | 2000     | Std.<br>Error | 2005  | Std.<br>Error |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis,<br>etc.) | 19.2              | 17.4              | 13.8     | (0.5)         | 13.0  | (0.5)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                                | 25.6              | 23.5              | 23.2     | (0.7)         | 27.7  | (0.8)         |
| Metabolic problems<br>(milk fever, grass tetany,<br>etc.)                             | N/A               | N/A               | 0.7      | (0.1)         | 0.6   | (0.1)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                          | 10.8              | 14.7              | 13.5     | (0.5)         | 10.2  | (0.5)         |
| Theft (stolen)  | 1.0               | 0.4               | 0.6      | (0.1)         | 0.7   | (0.2)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                     | 1.2               | 0.8               | 0.7      | (0.1)         | 0.9   | (0.1)         |
| Calving problems  | 20.4              | 20.4              | 23.5     | (0.6)         | 24.2  | (0.7)         |
| Lameness/injury*  | N/A               | N/A               | N/A      | ()            | 1.7   | (0.2)         |
| Other diseases**  | N/A               | N/A               | 2.1      | (0.3)         | 3.5   | (0.3)         |
| Other causes**  | 21.8              | 22.8              | 3.5      | (0.3)         | 3.5   | (0.3)         |
| Unknown causes**  | N/A               | N/A               | 18.4     | (0.6)         | 14.0  | (0.5)         |
| Total   | 100.0             | 100.0             | 100.0    |               | 100.0 |               |

<sup>&</sup>lt;sup>1</sup>Standard errors not available for 1991 and 1995.

<sup>\*</sup>Lameness/injury included in "other causes" in 1991, 1995, and 2000.
\*\* "Other diseases" and "unknown causes" included in "other causes" in 1991 and 1995.

On dairy operations in 2005, digestive and respiratory problems were the most common causes of calf loss (35.8 and 33.2 percent of losses, respectively).

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

|  |                   | Per               | cent Nonp | redator L     | .oss  |               |
|--|-------------------|-------------------|-----------|---------------|-------|---------------|
| Nonpredator<br>Cause   | 1991 <sup>1</sup> | 1995 <sup>1</sup> | 2000      | Std.<br>Error | 2005  | Std.<br>Error |
| Digestive problems<br>(bloat, scours,<br>parasites,<br>enterotoxemia,<br>acidosis, etc.) | 36.6              | 40.5              | 35.4      | (1.4)         | 35.8  | (1.0)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                                   | 33.0              | 35.3              | 30.7      | (1.3)         | 33.2  | (0.9)         |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                                | N/A               | N/A               | 1.1       | (0.1)         | 1.5   | (0.4)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                             | 2.5               | 3.9               | 6.8       | (3.2)         | 2.2   | (0.2)         |
| Theft (stolen)   | 0.2               | 0.1               | 0.1       | (0.0)         | 0.1   | (0.0)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                        | 0.5               | 0.2               | 0.2       | (0.0)         | 0.3   | (0.2)         |
| Calving problems   | 10.6              | 8.3               | 9.8       | (0.6)         | 10.4  | (0.6)         |
| Lameness/injury*   | N/A               | N/A               | N/A       | ()            | 1.5   | (0.2)         |
| Other diseases**   | N/A               | N/A               | 2.5       | (0.3)         | 4.4   | (0.7)         |
| Other causes**   | 16.6              | 11.7              | 3.1       | (0.9)         | 2.0   | (0.7)         |
| Unknown causes**   | N/A               | N/A               | 10.3      | (0.6)         | 8.6   | (0.6)         |
| Total  | 100.0             | 100.0             | 100.0     |               | 100.0 |               |

<sup>&</sup>quot;Standard errors not available for 1991 and 1995.

\*Lameness/injury included in "other causes" in 1991, 1995, and 2000.

\*\* "Other diseases" and "unknown causes" included in "other causes" in 1991 and 1995.

On mixed operations in 2005, digestive and respiratory problems were the most common causes of calf loss (28.9 and 30.0 percent of losses, respectively).

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

|  | Percent Nonpredator Loss |                   |       |               |       |               |  |  |  |  |  |
|--|--------------------------|-------------------|-------|---------------|-------|---------------|--|--|--|--|--|
| Nonpredator<br>Cause   | 1991 <sup>1</sup>        | 1995 <sup>1</sup> | 2000  | Std.<br>Error | 2005  | Std.<br>Error |  |  |  |  |  |
| Digestive problems<br>(bloat, scours,<br>parasites,<br>enterotoxemia,<br>acidosis, etc.) | 37.5                     | 41.3              | 31.0  | (2.1)         | 28.9  | (4.6)         |  |  |  |  |  |
| Respiratory<br>problems<br>(pneumonia,<br>shipping fever, etc.)                          | 34.9                     | 41.5              | 34.1  | (2.0)         | 30.0  | (3.9)         |  |  |  |  |  |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                                | N/A                      | N/A               | 1.5   | (0.7)         | 1.2   | (0.7)         |  |  |  |  |  |
| Weather-related causes (chilling, drowning, lightning, etc.)                             | 4.1                      | 3.1               | 6.8   | (0.9)         | 7.1   | (4.6)         |  |  |  |  |  |
| Theft (stolen)   | 0.4                      | 0.0               | 0.0   | (0.0)         | 0.1   | (0.1)         |  |  |  |  |  |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                        | 0.2                      | 0.0               | 0.0   | (0.0)         | 0.0   | (0.0)         |  |  |  |  |  |
| Calving problems   | 11.3                     | 5.3               | 10.7  | (1.4)         | 11.8  | (1.9)         |  |  |  |  |  |
| Lameness/injury*   | N/A                      | N/A               | N/A   | ()            | 3.1   | (1.8)         |  |  |  |  |  |
| Other diseases**   | N/A                      | N/A               | 1.3   | (0.5)         | 3.4   | (1.1)         |  |  |  |  |  |
| Other causes**   | N/A                      | N/A               | 1.8   | (0.6)         | 2.3   | (0.9)         |  |  |  |  |  |
| Unknown causes**   | 11.6                     | 8.8               | 12.8  | (2.4)         | 12.1  | (3.4)         |  |  |  |  |  |
| Total  | 100.0                    | 100.0             | 100.0 |               | 100.0 |               |  |  |  |  |  |

<sup>\*</sup>Standard errors not available for 1991 and 1995.

\*Lameness/injury included in "other causes" in 1991, 1995, and 2000.

\*\* "Other diseases" and "unknown causes" included in "other causes" in 1991 and 1995.

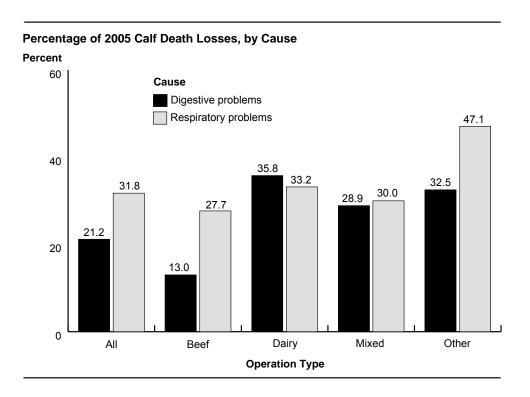
On "other" operations, digestive and respiratory problems accounted for the highest percentage of calf losses (32.5 and 47.1 percent of losses, respectively). The percentage of calf losses due to respiratory causes was higher on other operations than on beef, dairy, or mixed operations.

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

|  | Percent Nonpredator Loss |                   |       |               |       |               |  |  |  |  |  |
|--|--------------------------|-------------------|-------|---------------|-------|---------------|--|--|--|--|--|
| Nonpredator<br>Cause   | 1991 <sup>1</sup>        | 1995 <sup>1</sup> | 2000  | Std.<br>Error | 2005  | Std.<br>Error |  |  |  |  |  |
| Digestive problems<br>(bloat, scours,<br>parasites,<br>enterotoxemia,<br>acidosis, etc.) | 16.0                     | 27.7              | 15.1  | (3.3)         | 32.5  | (5.4)         |  |  |  |  |  |
| Respiratory<br>problems<br>(pneumonia,<br>shipping fever, etc.)                          | 65.9                     | 61.7              | 56.5  | (9.2)         | 47.1  | (3.0)         |  |  |  |  |  |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                                | N/A                      | N/A               | 0.3   | (0.2)         | 0.8   | (0.4)         |  |  |  |  |  |
| Weather-related causes (chilling, drowning, lightning, etc.)                             | 3.1                      | 2.5               | 5.6   | (2.3)         | 4.5   | (1.3)         |  |  |  |  |  |
| Theft (stolen)   | 0.5                      | <0.01             | 0.0   | (0.0)         | 0.2   | (0.1)         |  |  |  |  |  |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                        | 0.4                      | <0.01             | 0.3   | (0.2)         | 0.8   | (0.5)         |  |  |  |  |  |
| Calving problems   | 0.7                      | 1.8               | 1.7   | (0.5)         | 1.8   | (0.4)         |  |  |  |  |  |
| Lameness/injury*   | N/A                      | N/A               | N/A   | ()            | 3.4   | (1.5)         |  |  |  |  |  |
| Other diseases**   | N/A                      | N/A               | 9.9   | (5.3)         | 2.3   | (0.7)         |  |  |  |  |  |
| Other causes**   | 13.4                     | 6.3               | 2.5   | (1.2)         | 1.0   | (0.4)         |  |  |  |  |  |
| Unknown causes**   | N/A                      | N/A               | 8.1   | (2.9)         | 5.6   | (1.3)         |  |  |  |  |  |
| Total  | 100.0                    | 100.0             | 100.0 |               | 100.0 |               |  |  |  |  |  |

<sup>&</sup>lt;sup>1</sup>Standard errors not available for 1991 and 1995.

<sup>\*</sup>Lameness/injury included in "other causes" in 1991, 1995, and 2000.
\*\* "Other diseases" and "unknown causes" included in "other causes" in 1991 and 1995.



#### 3. Cause of loss by size of operation—2005

Calving problems accounted for 31.4 percent of losses on beef operations with 1 to 49 cows and 19.5 percent of losses on operations with 500 or more cows.

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

#### **Percent Nonpredator Loss**

|  | 1-    | 49            | 50-   | -99           | 100   | -499          | 500 o | More          |
|--|-------|---------------|-------|---------------|-------|---------------|-------|---------------|
| Nonpredator Cause  | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 11.2  | (0.9)         | 14.7  | (1.1)         | 13.1  | (0.8)         | 16.0  | (1.8)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 19.7  | (1.2)         | 26.8  | (1.4)         | 35.5  | (1.6)         | 30.6  | (1.8)         |
| Metabolic problems<br>(milk fever, grass tetany,<br>etc.)                    | 0.8   | (0.2)         | 0.5   | (0.2)         | 0.4   | (0.1)         | 0.5   | (0.2)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 8.7   | (0.7)         | 10.8  | (1.2)         | 11.0  | (8.0)         | 10.8  | (1.4)         |
| Theft (stolen)   | 0.8   | (0.3)         | 0.7   | (0.3)         | 0.3   | (0.1)         | 2.2   | (1.0)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.8   | (0.2)         | 0.7   | (0.2)         | 1.0   | (0.2)         | 1.2   | (0.3)         |
| Calving problems   | 31.4  | (1.4)         | 20.6  | (1.2)         | 20.4  | (0.9)         | 19.5  | (2.6)         |
| Lameness/injury  | 2.7   | (0.4)         | 1.0   | (0.3)         | 1.2   | (0.2)         | 1.0   | (0.2)         |
| Other diseases   | 3.5   | (0.5)         | 5.1   | (1.2)         | 2.7   | (0.4)         | 3.6   | (8.0)         |
| Other  | 5.1   | (0.7)         | 3.8   | (0.7)         | 2.1   | (0.3)         | 2.1   | (0.8)         |
| Unknown  | 15.3  | (0.9)         | 15.3  | (1.2)         | 12.3  | (0.9)         | 12.5  | (1.3)         |
| Total  | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               |

The percentage of calf losses due to respiratory problems was higher on operations with 500 or more cows than on operations with 1-29 cows.

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

#### **Percent Nonpredator Loss**

|  | 1-2   | 29            | 30-   | 49            | 50-   | 99            | 100-  | 199           | 200-  | 499           | 500 or | More          |
|--|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|--------|---------------|
| Cause  | Pct.  | Std.<br>Error | Pct.   | Std.<br>Error |
| Digestive<br>problems (bloat,<br>scours, parasites,<br>enterotoxemia,<br>acidosis, etc.) | 34.5  | (8.1)         | 35.7  | (3.5)         | 38.6  | (2.1)         | 40.6  | (3.0)         | 38.9  | (2.0)         | 29.9   | (1.5)         |
| Respiratory<br>problems<br>(pneumonia,<br>shipping fever,<br>etc.)                       | 20.2  | (4.8)         | 31.9  | (3.0)         | 31.7  | (2.1)         | 33.1  | (2.3)         | 35.1  | (1.7)         | 35.3   | (1.4)         |
| Metabolic<br>problems (milk<br>fever, grass<br>tetany, etc.)                             | 0.8   | (0.8)         | 0.0   | (0.0)         | 1.9   | (1.5)         | 0.6   | (0.2)         | 0.9   | (0.3)         | 2.6    | (0.8)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                             | 1.3   | (0.6)         | 4.4   | (1.4)         | 1.5   | (0.5)         | 2.2   | (0.5)         | 1.5   | (0.3)         | 2.6    | (0.4)         |
| Theft (stolen)   | 0.0   | (0.0)         | 0.0   | (0.0)         | 0.1   | (0.1)         | 0.0   | (0.0)         | 0.0   | (0.0)         | 0.1    | (0.1)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                        |       | (0.7)         | 0.1   | (0.1)         | 0.2   | (0.1)         | 1.2   | (1.1)         | 0.3   | (0.3)         | 0.0    | (0.0)         |
| Calving problems   | 10.5  | (3.2)         | 13.3  | (2.2)         | 14.2  | (1.7)         | 9.0   | (1.2)         | 9.0   | (1.2)         | 8.4    | (0.8)         |
| Lameness/injury  | 1.4   | (0.7)         | 2.6   | (8.0)         | 0.9   | (0.2)         | 1.0   | (0.2)         | 1.6   | (0.4)         | 1.8    | (0.3)         |
| Other diseases   | 13.3  | (10.5)        | 2.6   | (1.0)         | 3.0   | (0.7)         | 6.3   | (2.4)         | 4.5   | (1.0)         | 3.6    | (0.4)         |
| Other  | 13.6  | (11.5)        | 1.1   | (0.6)         | 1.4   | (0.6)         | 0.7   | (0.3)         | 0.5   | (0.2)         | 2.6    | (1.3)         |
| Unknown  | 3.7   | (1.9)         | 8.3   | (1.7)         | 6.5   | (0.9)         | 5.3   | (0.9)         | 7.7   | (1.5)         | 13.1   | (1.5)         |
| Total  | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               | 100.0  |               |

Across all sizes of mixed operations, at least one-quarter of calf losses were due to respiratory problems. Operations with 500 or more cows had a disproportionately high percentage of weather-related losses.

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

#### **Percent Nonpredator Loss**

|  | 1.    | .99           | 100   | -499          | 500 o | r More        |
|--|-------|---------------|-------|---------------|-------|---------------|
| Nonpredator Cause  | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 35.0  | (10.4)        | 32.4  | (3.6)         | 17.1  | (6.6)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 30.7  | (6.4)         | 32.3  | (3.0)         | 25.4  | (10.2)        |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 0.2   | (0.2)         | 0.6   | (0.2)         | 3.1   | (2.7)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 1.4   | (1.0)         | 2.2   | (0.9)         | 20.9  | (11.9)        |
| Theft (stolen)   | 0.1   | (0.1)         | 0.0   | (0.0)         | 0.4   | (0.3)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.0   | (0.0)         | 0.1   | (0.1)         | 0.0   | (0.0)         |
| Calving problems   | 10.1  | (3.3)         | 11.3  | (2.1)         | 14.4  | (4.1)         |
| Lameness/injury  | 1.0   | (0.5)         | 0.8   | (0.4)         | 9.0   | (4.5)         |
| Other diseases   | 3.7   | (2.8)         | 4.1   | (1.6)         | 1.8   | (8.0)         |
| Other  | 1.9   | (1.5)         | 3.4   | (1.6)         | 0.7   | (0.7)         |
| Unknown  | 15.9  | (9.1)         | 12.8  | (4.1)         | 7.2   | (2.9)         |
| Total  | 100.0 |               | 100.0 |               | 100.0 |               |

For other operations, the causes of calf loss were similar across operation sizes.

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

#### **Percent Nonpredator Loss**

Size of Operation (Number of Cattle and Calves)

|   | 1-9   | 99            | 100-  | 499           | 500-  | 999           | 1,00<br>Mo |               |
|---|-------|---------------|-------|---------------|-------|---------------|------------|---------------|
| Nonpredator Cause   | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.       | Std.<br>Error |
| Digestive problems<br>(bloat, scours, parasites,<br>enterotoxemia, acidosis,<br>etc.) | 21.0  | (3.9)         | 38.0  | (5.7)         | 20.3  | (4.4)         | 38.6       | (8.8)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                                |       | (3.9)         |       | (5.2)         |       | (6.2)         |            | (4.7)         |
| Metabolic problems<br>(milk fever, grass tetany,<br>etc.)                             | 1.2   | (0.9)         | 2.1   | (2.1)         | 0.8   | (0.5)         | 0.1        | (0.0)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                          | 6.7   | (1.4)         | 1.2   | (0.8)         | 2.0   | (0.9)         | 4.5        | (2.2)         |
| Theft (stolen)  | 0.1   | (0.1)         | 0.0   | (0.0)         | 2.8   | (2.6)         | 0.0        | (0.0)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)                     | 2.7   | (1.3)         | 0.0   | (0.0)         | 0.4   | (0.4)         | 0.0        | (0.0)         |
| Calving problems  | 5.1   | (1.6)         | 0.3   | (0.2)         | 0.4   | (0.3)         | 0.4        | (0.2)         |
| Lameness/injury   | 3.9   | (1.9)         | 0.8   | (0.5)         | 0.5   | (0.3)         | 4.1        | (2.7)         |
| Other diseases  | 2.9   | (8.0)         | 0.4   | (0.3)         | 7.8   | (3.8)         | 2.2        | (1.3)         |
| Other   | 1.8   | (0.9)         | 1.0   | (8.0)         | 0.0   | (0.0)         | 0.6        | (0.5)         |
| Unknown   | 8.0   | (2.6)         | 2.8   | (1.1)         | 6.6   | (2.5)         | 5.0        | (2.1)         |
| Total   | 100.0 |               | 100.0 |               | 100.0 |               | 100.0      |               |

#### 4. Cause of loss by region—2005

Marth

On beef operations, the percentage of calf losses due to unknown causes ranged from 7.8 percent in the North Central region to 20.4 percent in the Southeast region.

a. For *beef* operations, percentage of calf death losses by cause and by region:

#### **Percent Nonpredator Loss**

|  |       | rth<br>ntral  | North | neast         | Norti | hwest         |       | uth<br>ntral  | Sout  | heast         | Soutl | hwest         |
|--|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|
| Nonpredator Cause  | Pct.  | Std.<br>Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 18.1  | (1.2)         | 15.3  | (1.3)         | 18.1  | (1.7)         | 8.9   | (0.8)         | 8.6   | (0.9)         | 15.7  | (2.1)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 29.0  | (1.3)         | 22.5  | (1.8)         | 25.8  | (1.6)         | 33.0  | (1.8)         | 19.6  | (1.5)         | 23.8  | (2.2)         |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 0.4   | (0.2)         | 0.9   | (0.2)         | 0.4   | (0.1)         | 0.4   | (0.1)         | 1.2   | (0.4)         | 0.3   | (0.1)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 12.4  | (1.1)         | 10.8  | (1.3)         | 13.8  | (1.2)         | 7.3   | (0.7)         | 11.2  | (1.4)         | 10.4  | (1.6)         |
| Theft (stolen)   | 0.1   | (0.1)         | 0.8   | (0.6)         | 0.7   | (0.2)         | 0.7   | (0.2)         | 0.6   | (0.3)         | 2.9   | (1.4)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.3   | (0.1)         | 0.7   | (0.3)         | 1.4   | (0.3)         | 1.1   | (0.2)         | 0.7   | (0.3)         | 1.4   | (0.4)         |
| Calving problems   | 24.0  | (1.3)         | 22.8  | (2.0)         | 22.2  | (1.5)         | 24.4  | (1.3)         | 27.6  | (1.5)         | 24.3  | (3.1)         |
| Lameness/injury  | 1.1   | (0.2)         | 2.2   | (0.5)         | 1.6   | (0.4)         | 1.8   | (0.3)         | 2.4   | (0.5)         | 0.6   | (0.2)         |
| Other diseases   | 3.3   | (0.8)         | 3.3   | (0.6)         | 2.8   | (8.0)         | 3.8   | (0.7)         | 3.4   | (0.6)         | 4.4   | (1.3)         |
| Other  | 3.5   | (0.7)         | 2.7   | (0.6)         | 2.7   | (0.4)         | 3.8   | (0.7)         | 4.3   | (0.7)         | 2.7   | (0.7)         |
| Unknown  | 7.8   | (0.7)         | 18.0  | (1.6)         | 10.5  | (1.0)         | 14.8  | (1.1)         | 20.4  | (1.3)         | 13.5  | (1.7)         |
| Total  | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               |

For dairy operations, digestive problems accounted for a higher percentage of calf losses in the North Central region (40.7 percent) than in the South Central and Southwest regions (27.2 and 26.8 percent, respectively).

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

#### **Percent Nonpredator Loss**

|  | No<br>Cen |               | Norti | neast         | North | nwest         |       | uth<br>ntral  | Sout  | heast         | South | hwest         |
|--|-----------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|
| Nonpredator Cause  | Pct.      | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 40.7      | (2.7)         | 39.0  | (1.4)         | 31.9  | (2.4)         | 27.2  | (2.9)         | 37.1  | (8.2)         | 26.8  | (2.1)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 30.0      | (2.1)         | 32.9  | (1.3)         | 32.3  | (2.0)         | 41.4  | (4.3)         | 25.4  | (4.1)         | 36.5  | (1.9)         |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 1.0       | (0.5)         | 0.6   | (0.2)         | 0.9   | (0.3)         | 6.2   | (4.7)         | 1.0   | (0.2)         | 3.6   | (1.5)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 3.5       | (0.8)         | 1.4   | (0.2)         | 0.7   | (0.2)         | 1.7   | (0.6)         | 4.5   | (1.6)         | 3.8   | (0.9)         |
| Theft (stolen)   | 0.0       | (0.0)         | 0.0   | (0.0)         | 0.0   | (0.0)         | 0.6   | (0.3)         | 0.0   | (0.0)         | 0.2   | (0.1)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.0       | (0.0)         | 0.7   | (0.4)         | 0.1   | (0.1)         | 0.3   | (0.2)         | 0.1   | (0.1)         | 0.0   | (0.0)         |
| Calving problems   | 16.9      | (1.9)         | 8.9   | (0.9)         | 9.9   | (1.4)         | 13.7  | (2.2)         | 9.5   | (1.7)         | 8.5   | (1.3)         |
| Lameness/injury  | 1.0       | (0.3)         | 1.8   | (0.3)         | 1.1   | (0.2)         | 0.8   | (0.4)         | 1.5   | (0.4)         | 1.4   | (0.4)         |
| Other diseases   | 1.8       | (0.7)         | 4.9   | (1.0)         | 3.5   | (0.7)         | 2.7   | (8.0)         | 11.3  | (7.3)         | 3.8   | (0.7)         |
| Other  | 1.3       | (0.4)         | 1.8   | (1.0)         | 0.5   | (0.1)         | 3.1   | (1.9)         | 0.6   | (0.4)         | 4.1   | (2.7)         |
| Unknown  | 3.8       | (0.9)         | 8.0   | (8.0)         | 19.1  | (3.5)         | 2.3   | (0.6)         | 9.0   | (1.9)         | 11.3  | (1.6)         |
| Total  | 100.0     |               | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               |

The percentage of losses due to calving problems ranged from 7.5 percent in the Northeast region to 18.5 percent in the Southwest region. The Southwest region had a disproportionately high percentage of weather-related losses.

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

#### **Percent Nonpredator Loss**

|  |       | rth<br>itral  | Norti | neast         | North | nwest         |       | uth<br>ntral  | Sout  | heast         | South | nwest         |
|--|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|-------|---------------|
| Nonpredator Cause  | Pct.  | Std.<br>Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 31.6  | (6.2)         | 37.8  | (8.9)         | 27.7  | (4.5)         | 33.1  | (6.7)         | 22.3  | (3.6)         | 7.2   | (4.6)         |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 43.9  | (6.0)         | 23.2  | (4.6)         | 37.9  | (4.1)         | 38.3  | (5.8)         | 33.1  | (4.9)         | 13.0  | (8.0)         |
| Metabolic problems (milk fever, grass tetany, etc.)                          | 0.0   | (0.0)         | 0.6   | (0.3)         | 2.4   | (1.2)         | 5.0   | (4.1)         | 0.4   | (0.3)         | 0.0   | (0.0)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 1.0   | (0.5)         | 1.0   | (0.4)         | 2.2   | (1.0)         | 3.5   | (2.3)         | 7.3   | (4.0)         | 32.5  | (12.9)        |
| Theft (stolen)   | 0.0   | (0.0)         | 0.1   | (0.1)         | 0.0   | (0.0)         | 0.0   | (0.0)         | 0.1   | (0.0)         | 0.6   | (0.6)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.1   | (0.1)         | 0.0   | (0.0)         | 0.0   | (0.0)         | 0.0   | (0.0)         | 0.0   | (0.0)         | 0.0   | (0.0)         |
| Calving problems   | 13.4  | (4.0)         | 7.5   | (2.5)         | 16.7  | (4.1)         | 8.0   | (2.6)         | 15.1  | (3.5)         | 18.5  | (4.1)         |
| Lameness/injury  | 0.5   | (0.3)         | 1.7   | (0.7)         | 0.0   | (0.0)         | 1.7   | (1.4)         | 0.0   | (0.0)         | 13.1  | (5.1)         |
| Other diseases   | 2.5   | (1.6)         | 6.9   | (3.1)         | 1.0   | (0.4)         | 0.6   | (0.3)         | 2.4   | (0.9)         | 1.2   | (1.0)         |
| Other  | 3.1   | (2.5)         | 1.0   | (0.6)         | 2.5   | (1.1)         | 4.4   | (2.8)         | 0.0   | (0.0)         | 2.5   | (2.7)         |
| Unknown  | 3.9   | (1.5)         | 20.2  | (8.5)         | 9.6   | (4.0)         | 5.4   | (1.9)         | 19.3  | (4.5)         | 11.4  | (9.5)         |
| Total  | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               | 100.0 |               |

On "other" operations in all regions, digestive and respiratory problems combined accounted for at least 60 percent of calf losses.

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

#### **Percent Nonpredator Loss**

|  | No<br>Cen |               | Norti | neast         | North | west          | Soi<br>Cen |               | Sout  | heast         | South | nwest         |
|--|-----------|---------------|-------|---------------|-------|---------------|------------|---------------|-------|---------------|-------|---------------|
| Nonpredator Cause  | Pct.      | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error | Pct.       | Std.<br>Error | Pct.  | Std.<br>Error | Pct.  | Std.<br>Error |
| Digestive problems (bloat, scours, parasites, enterotoxemia, acidosis, etc.) | 32.8      | (8.2)         | 25.8  | (4.8)         | 47.5  | (9.9)         | 15.8       | (5.6)         | 18.3  | (4.6)         | 43.8  | (10.5)        |
| Respiratory problems (pneumonia, shipping fever, etc.)                       | 37.4      | (6.8)         | 49.8  | (3.3)         | 32.7  | (7.1)         | 65.3       | (5.7)         | 45.1  | (7.3)         | 42.2  | (5.2)         |
| Metabolic problems<br>(milk fever, grass<br>tetany, etc.)                    | 0.0       | (0.0)         | 2.4   | (1.6)         | 0.0   | (0.0)         | 0.8        | (0.8)         | 0.2   | (0.0)         | 0.0   | (0.0)         |
| Weather-related causes (chilling, drowning, lightning, etc.)                 | 16.0      | (7.4)         | 3.7   | (1.8)         | 6.1   | (2.9)         | 1.9        | (1.0)         | 9.9   | (5.1)         | 2.3   | (1.7)         |
| Theft (stolen)   | 1.1       | (1.0)         | 0.0   | (0.0)         | 0.6   | (0.5)         | 0.0        | (0.0)         | 0.0   | (0.0)         | 0.0   | (0.0)         |
| Poisoning (nitrate poisoning, noxious feeds, noxious weeds, etc.)            | 0.0       | (0.0)         | 2.7   | (1.5)         | 0.0   | (0.0)         | 0.8        | (0.7)         | 0.0   | (0.0)         | 0.0   | (0.0)         |
| Calving problems   | 3.4       | (1.3)         | 0.9   | (0.4)         | 0.5   | (0.3)         | 4.6        | (1.7)         | 8.1   | (3.1)         | 0.2   | (0.2)         |
| Lameness/injury  | 1.0       | (0.4)         | 4.3   | (2.1)         | 1.1   | (0.6)         | 0.1        | (0.1)         | 1.4   | (8.0)         | 5.4   | (3.6)         |
| Other diseases   | 2.3       | (1.4)         | 2.5   | (0.7)         | 2.7   | (1.0)         | 1.4        | (0.7)         | 4.8   | (2.9)         | 2.3   | (1.7)         |
| Other  | 2.8       | (2.3)         | 0.6   | (0.3)         | 2.9   | (2.4)         | 1.8        | (1.2)         | 2.0   | (2.0)         | 0.1   | (0.1)         |
| Unknown  | 3.2       | (1.3)         | 7.3   | (2.6)         | 5.9   | (2.0)         | 7.5        | (3.1)         | 10.2  | (3.2)         | 3.7   | (2.4)         |
| Total  | 100.0     |               | 100.0 |               | 100.0 |               | 100.0      |               | 100.0 |               | 100.0 |               |

#### 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 during the first half of January by mail, telephone, and face-to-face interviews from about 77,000 producers in 1992, 50,000 in 1996, 50,000 in 2001, and 50,000 in 2006. Regardless of when producers responded, they were asked to report death losses for cattle and calves for the 1991, 1995, 2000, and 2005 calendar years and the January 1, 1992, 1996, 2001, and 2006 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, May 1996, and May 2006. 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 1992, February 1996, January 2001, and January 2006 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. 2 of this report (Terms Used in This Report).

#### 2. Estimating procedures

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, 2000, and 2005 Meat Animal Production, Disposition, and Income reports, released in April 1992, 1996, 2001, and 2006. Breakdowns by cause of loss and value of loss were published in the NASS Cattle and Calves Death Loss reports issued in May 1992, 1996, and 2006. 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 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: U.S. Populations and Operations\*

#### Number of Cattle and Calves on January 1, 2006, and Number of Operations in 2005

|               |                | Number cattle<br>and calves |                   |
|---------------|----------------|-----------------------------|-------------------|
| Region        | State          | (1,000 head)                | Number Operations |
| North Central | Iowa           | 3,800                       | 31,000            |
|               | Minnesota      | 2,350                       | 26,000            |
|               | Nebraska       | 6,500                       | 24,000            |
|               | North Dakota   | 1,720                       | 11,700            |
|               | South Dakota   | 3,750                       | 17,000            |
|               | Total          | 18,120                      | 109,700           |
| Northeast     | Connecticut    | 52                          | 1,100             |
|               | Delaware       | 23                          | 420               |
|               | Illinois       | 1,330                       | 19,800            |
|               | Indiana        | 900                         | 19,000            |
|               | Kentucky       | 2.380                       | 45,000            |
|               | Maine          | 92                          | 1,700             |
|               |                | 230                         | 4,000             |
|               | Maryland       |                             |                   |
|               | Massachusetts  | 47                          | 1,100             |
|               | Michigan       | 1,030                       | 14,400            |
|               | New Hampshire  | 39                          | 850               |
|               | New Jersey     | 42                          | 1,500             |
|               | New York       | 1,400                       | 14,700            |
|               | Ohio           | 1,280                       | 27,000            |
|               | Pennsylvania   | 1,590                       | 28,000            |
|               | Rhode Island   | 5                           | 220               |
|               | Vermont        | 275                         | 2,500             |
|               | Virginia       | 1,660                       | 25,000            |
|               | West Virginia  | 410                         | 12,500            |
|               | Wisconsin      | 3,400                       | 36,000            |
|               | Total          | 16,185                      | 254,790           |
| Northwest     | Idaho          | 2,110                       | 10,400            |
|               | Montana        | 2,400                       | 12,600            |
|               | Oregon         | 1,420                       | 15,300            |
|               | •              |                             |                   |
|               | Washington     | 1,100                       | 13,000            |
|               | Wyoming        | 1,430                       | 5,800             |
|               | Total          | 8,460                       | 57,100            |
| South Central | Arkansas       | 1,710                       | 30,000            |
|               | Kansas         | 6,650                       | 32,000            |
|               | Missouri       | 4,500                       | 64,000            |
|               | Oklahoma       | 5,450                       | 56,000            |
|               | Texas          | 14,100                      | 150,000           |
|               | Total          | 32,410                      | 332,000           |
| Southeast     | Alabama        | 1,280                       | 25,000            |
|               | Florida        | 1,680                       | 18,800            |
|               | Georgia        | 1,180                       | 21,000            |
|               | Louisiana      | 820                         | 14,500            |
|               | Mississippi    | 990                         | 21,000            |
|               | North Carolina | 860                         | 21,000            |
|               | South Carolina | 410                         | 10,000            |
|               | Tennessee      | 2,240                       | 48,000            |
|               | Total          | 9,460                       | 179,300           |
| Southwest     | Arizona        | 9,400                       | 2,600             |
| Coulings      |                |                             |                   |
|               | California     | 5,450                       | 17,000            |
|               | Colorado       | 2,650                       | 12,900            |
|               | Hawaii         | 161                         | 800               |
|               | Nevada         | 500                         | 1,600             |
|               | New Mexico     | 1,550                       | 7,600             |
|               | Utah           | 800                         | 7,000             |
|               | Total          | 12,1051                     | 49,500            |
| Total         |                | 96,686                      | 982,390           |
| (49 States)   |                |                             |                   |
| · '           |                |                             |                   |
| Total U.S.    |                | 96,701.5                    | 982,510           |
|               |                |                             |                   |

\*Source: NASS Cattle 2007; NASS Farms, Land in Farms, and Livestock Operations, 2007