Cattle And Calves Predator Death Loss in the United States, 2005
Acknowledgments

This report was a cooperative effort between two U.S. Department of Agriculture (USDA) Agencies: the National Agricultural Statistics Service (NASS) and the Animal and Plant Health Inspection Service (APHIS).

Thanks to the NASS enumerators who contacted cattle producers and collected the data. Their hard work and dedication were invaluable. Thanks also to the personnel at the USDA–APHIS–Veterinary Services’ Centers for Epidemiology and Animal Health for their efforts in generating and distributing this report, and to USDA–APHIS–Wildlife Services for their involvement.

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

Larry Granger
Director
Centers for Epidemiology and Animal Health
Suggested bibliographic citation for this report:
#N507.0908

Contacts for further information:
Questions or comments on the Cattle and Calves Predator Death Loss in the United States, 2005 report: Dr. David Dargatz (970)-494-7000
Information on reprints or other reports: Ms. Kathy Snover (970) 494-7000
E-mail NAHMS@aphis.usda.gov
Table of Contents

Introduction 1
Terms Used In This Report 2

Section I: Population Estimates—Number of Head 4
A. U.S. Demographics 4
   1. Inventory—January 1, 1996-2006 4

B. Regional Demographics 8

C. U.S. Annual Death Loss 11
   1. Loss from all causes—1991-2005 11

Section II: Population Estimates—Losses Due to Predators 22
A. Operation Classification 22
   1. Operation classification process 22
   2. Operation characteristics 22

B. Cattle Death Loss on Beef Operations Due to Predators 25
   1. Losses as a proportion of inventory—2005 25
   3. Cause of loss by size of operation—2005 28
   4. Cause of loss by region—2005 30

C. Calf Death Loss on Beef Operations Due to Predators 32
   1. Losses as a proportion of calves born—2005 32
   3. Cause of loss by size of operation—2005 34
   4. Cause of loss by region—2005 36
D. Nonlethal Predator Control  38
   1. Frequency of use  38
   2. Operations that used nonlethal predator control methods  41

Section III: Methodology  45
 A. Cattle and Calf Death Loss Estimates  45
   1. Survey procedures  45
   2. Estimation procedures  45
   3. Reliability  46
   4. Revision  46

Appendix I: U.S. Populations and Operations  47
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 predator 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 cattle 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 cattle 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.

- **Beef operation** size groups are: 1-49, 50-99, 100-499, and 500 or more head.
- **Dairy operation** size groups are: 1-29, 30-49, 50-99, 100-199, 200-499, and 500 or more head.
- **Mixed operation** size groups are: 1-99, 100-499, and 500 or more head.
- **Other operation** (total number of cattle and calves) size groups are: 1-99 head, 100-499 head, 500-999 and 1,000 or more head.
### Section I: Population Estimates—Number of Head

#### A. U.S. Demographics

1. **Inventory—January 1, 1996-2006**
   
   Number of cattle and calves by year:

<table>
<thead>
<tr>
<th>Year</th>
<th>January 1 Number (x 1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All cattle and calves</td>
<td>103,548</td>
</tr>
<tr>
<td>Cattle 500 lb or more</td>
<td>85,164</td>
</tr>
<tr>
<td>Beef cows</td>
<td>35,319</td>
</tr>
<tr>
<td>Dairy cows</td>
<td>9,420</td>
</tr>
<tr>
<td>Heifers, steers, and bulls</td>
<td>40,426</td>
</tr>
<tr>
<td>Calves</td>
<td>18,384</td>
</tr>
</tbody>
</table>

*Numbers may not add up due to rounding


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

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle and calves</th>
<th>Beef cows</th>
<th>Milk cows</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>1,190,630</td>
<td>897,660</td>
<td>139,670</td>
</tr>
<tr>
<td>1996</td>
<td>1,176,700</td>
<td>885,980</td>
<td>130,980</td>
</tr>
<tr>
<td>1997</td>
<td>1,148,050</td>
<td>872,840</td>
<td>123,700</td>
</tr>
<tr>
<td>1998</td>
<td>1,114,650</td>
<td>855,460</td>
<td>117,145</td>
</tr>
<tr>
<td>1999</td>
<td>1,095,560</td>
<td>844,170</td>
<td>110,855</td>
</tr>
<tr>
<td>2000</td>
<td>1,076,370</td>
<td>831,270</td>
<td>105,055</td>
</tr>
<tr>
<td>2001</td>
<td>1,049,170</td>
<td>814,520</td>
<td>97,460</td>
</tr>
<tr>
<td>2002</td>
<td>1,036,430</td>
<td>808,110</td>
<td>91,240</td>
</tr>
<tr>
<td>2003</td>
<td>1,013,570</td>
<td>792,050</td>
<td>86,360</td>
</tr>
<tr>
<td>2004</td>
<td>989,460</td>
<td>774,930</td>
<td>81,520</td>
</tr>
<tr>
<td>2005</td>
<td>982,510</td>
<td>770,170</td>
<td>78,300</td>
</tr>
</tbody>
</table>

*a* Cattle, NASS, annual January/February report.

*b* Farms, Land in Farms and Livestock Operations, NASS annual February report.
b. Percentage of operations with beef cows, by size of operation and by year:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 49</td>
<td>80.7</td>
<td>80.3</td>
<td>79.8</td>
<td>79.4</td>
<td>79.3</td>
<td>79.0</td>
<td>78.8</td>
<td>78.5</td>
<td>78.4</td>
<td>78.3</td>
<td>77.7</td>
<td>77.5</td>
<td></td>
</tr>
<tr>
<td>50 to 99</td>
<td>11.3</td>
<td>11.5</td>
<td>11.8</td>
<td>12.0</td>
<td>12.0</td>
<td>11.9</td>
<td>12.0</td>
<td>12.0</td>
<td>12.1</td>
<td>12.2</td>
<td>12.1</td>
<td>12.3</td>
<td>12.3</td>
</tr>
<tr>
<td>100 to 499</td>
<td>7.4</td>
<td>7.6</td>
<td>7.8</td>
<td>8.0</td>
<td>8.1</td>
<td>8.2</td>
<td>8.4</td>
<td>8.5</td>
<td>8.7</td>
<td>8.9</td>
<td>9.3</td>
<td>9.5</td>
<td></td>
</tr>
<tr>
<td>500 or more</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 29</td>
<td>37.3</td>
<td>36.1</td>
<td>34.5</td>
<td>32.9</td>
<td>31.6</td>
<td>30.8</td>
<td>29.7</td>
<td>29.3</td>
<td>29.0</td>
<td>28.9</td>
<td>29.0</td>
<td>29.2</td>
<td>28.7</td>
</tr>
<tr>
<td>30 to 49</td>
<td>22.2</td>
<td>22.0</td>
<td>22.2</td>
<td>22.3</td>
<td>22.1</td>
<td>21.8</td>
<td>21.7</td>
<td>21.1</td>
<td>20.4</td>
<td>19.8</td>
<td>19.5</td>
<td>19.0</td>
<td>19.0</td>
</tr>
<tr>
<td>50 to 99</td>
<td>26.8</td>
<td>27.4</td>
<td>28.1</td>
<td>28.7</td>
<td>29.0</td>
<td>29.1</td>
<td>29.6</td>
<td>29.7</td>
<td>29.8</td>
<td>30.0</td>
<td>29.9</td>
<td>29.5</td>
<td>29.6</td>
</tr>
<tr>
<td>100 to 199</td>
<td>9.3</td>
<td>9.8</td>
<td>10.2</td>
<td>10.7</td>
<td>11.3</td>
<td>11.8</td>
<td>11.9</td>
<td>12.2</td>
<td>12.6</td>
<td>12.7</td>
<td>12.7</td>
<td>12.8</td>
<td>12.8</td>
</tr>
<tr>
<td>200 or more</td>
<td>4.4</td>
<td>4.7</td>
<td>5.0</td>
<td>5.4</td>
<td>6.0</td>
<td>6.5</td>
<td>7.1</td>
<td>7.7</td>
<td>8.2</td>
<td>8.6</td>
<td>8.9</td>
<td>9.5</td>
<td>9.9</td>
</tr>
<tr>
<td>200 to 499</td>
<td>4.1</td>
<td>4.4</td>
<td>4.8</td>
<td>5.1</td>
<td>5.3</td>
<td>5.4</td>
<td>5.5</td>
<td>5.8</td>
<td>6.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500 or more</td>
<td>1.9</td>
<td>2.1</td>
<td>2.3</td>
<td>2.6</td>
<td>2.9</td>
<td>3.2</td>
<td>3.4</td>
<td>3.7</td>
<td>3.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
d. Percentage of beef cow inventory, by size of operation and by year:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 49</td>
<td>31.7</td>
<td>31.5</td>
<td>31.2</td>
<td>30.8</td>
<td>30.4</td>
<td>30.5</td>
<td>29.9</td>
<td>29.5</td>
<td>29.0</td>
<td>29.0</td>
<td>29.1</td>
<td>28.1</td>
<td>28.0</td>
</tr>
<tr>
<td>50 to 99</td>
<td>19.8</td>
<td>19.4</td>
<td>19.2</td>
<td>19.6</td>
<td>19.4</td>
<td>18.8</td>
<td>19.1</td>
<td>19.1</td>
<td>19.2</td>
<td>19.0</td>
<td>19.1</td>
<td>18.9</td>
<td></td>
</tr>
<tr>
<td>100 to 499</td>
<td>33.9</td>
<td>34.6</td>
<td>35.3</td>
<td>35.4</td>
<td>35.9</td>
<td>36.1</td>
<td>36.6</td>
<td>36.7</td>
<td>37.0</td>
<td>37.3</td>
<td>37.5</td>
<td>38.3</td>
<td>38.5</td>
</tr>
<tr>
<td>500 or more</td>
<td>14.6</td>
<td>14.5</td>
<td>14.3</td>
<td>14.2</td>
<td>14.3</td>
<td>14.6</td>
<td>14.7</td>
<td>14.9</td>
<td>14.5</td>
<td>14.4</td>
<td>14.5</td>
<td>14.6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 to 29</td>
<td>5.0</td>
<td>4.6</td>
<td>4.0</td>
<td>4.0</td>
<td>3.5</td>
<td>3.6</td>
<td>3.2</td>
<td>2.9</td>
<td>2.7</td>
<td>2.4</td>
<td>2.3</td>
<td>2.1</td>
<td>2.0</td>
</tr>
<tr>
<td>30 to 49</td>
<td>14.8</td>
<td>14.0</td>
<td>13.0</td>
<td>12.0</td>
<td>11.5</td>
<td>10.5</td>
<td>10.2</td>
<td>9.1</td>
<td>8.0</td>
<td>7.4</td>
<td>6.9</td>
<td>6.6</td>
<td>6.4</td>
</tr>
<tr>
<td>50 to 99</td>
<td>29.2</td>
<td>28.7</td>
<td>28.0</td>
<td>27.0</td>
<td>26.0</td>
<td>24.3</td>
<td>23.3</td>
<td>22.0</td>
<td>20.8</td>
<td>19.6</td>
<td>18.8</td>
<td>17.8</td>
<td>17.1</td>
</tr>
<tr>
<td>100 to 199</td>
<td>19.2</td>
<td>19.3</td>
<td>20.0</td>
<td>20.0</td>
<td>20.0</td>
<td>19.3</td>
<td>18.4</td>
<td>18.1</td>
<td>17.2</td>
<td>16.4</td>
<td>15.7</td>
<td>15.1</td>
<td>14.6</td>
</tr>
<tr>
<td>200 or more</td>
<td>31.8</td>
<td>33.4</td>
<td>35.0</td>
<td>37.0</td>
<td>39.0</td>
<td>42.3</td>
<td>44.9</td>
<td>47.9</td>
<td>51.3</td>
<td>54.2</td>
<td>56.3</td>
<td>58.4</td>
<td>59.9</td>
</tr>
<tr>
<td>200 to 499</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>14.6</td>
<td>15.5</td>
<td>16.3</td>
<td>16.6</td>
<td>16.3</td>
<td>15.9</td>
<td>15.4</td>
<td>15.5</td>
<td>15.4</td>
</tr>
<tr>
<td>500 or more</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>24.4</td>
<td>26.8</td>
<td>28.6</td>
<td>31.3</td>
<td>35.0</td>
<td>38.3</td>
<td>40.9</td>
<td>42.9</td>
<td>44.5</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
### 3. Calf crop—1995–2005

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Calf crop (1,000 Head)</td>
<td>40,264</td>
<td>39,823</td>
<td>38,961</td>
<td>38,812</td>
<td>38,796</td>
<td>38,631</td>
<td>38,300</td>
<td>38,224</td>
<td>37,903</td>
<td>37,505</td>
<td>37,575</td>
</tr>
<tr>
<td>Calf crop per 100 cows on hand (January 1)</td>
<td>90.1</td>
<td>89.0</td>
<td>89.0</td>
<td>90.1</td>
<td>90.5</td>
<td>90.3</td>
<td>90.0</td>
<td>90.5</td>
<td>90.0</td>
<td>89.6</td>
<td>89.6</td>
</tr>
</tbody>
</table>
B. Regional Demographics


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:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>18,000</td>
<td>19,110</td>
<td>18,830</td>
<td>18,120</td>
<td>15,248</td>
<td>16,555</td>
<td>16,884</td>
<td>16,390</td>
</tr>
<tr>
<td>Northeast</td>
<td>18,638</td>
<td>18,184</td>
<td>16,111</td>
<td>16,185</td>
<td>14,598</td>
<td>14,259</td>
<td>12,903</td>
<td>12,852</td>
</tr>
<tr>
<td>Northwest</td>
<td>8,300</td>
<td>8,920</td>
<td>8,600</td>
<td>8,460</td>
<td>7,320</td>
<td>8,018</td>
<td>7,796</td>
<td>7,734</td>
</tr>
<tr>
<td>South Central</td>
<td>30,480</td>
<td>33,610</td>
<td>31,500</td>
<td>32,410</td>
<td>24,565</td>
<td>27,390</td>
<td>25,650</td>
<td>26,920</td>
</tr>
<tr>
<td>Southeast</td>
<td>10,760</td>
<td>11,710</td>
<td>9,925</td>
<td>9,460</td>
<td>8,152</td>
<td>8,845</td>
<td>7,506</td>
<td>7,194</td>
</tr>
<tr>
<td>Southwest</td>
<td>11,270</td>
<td>12,004</td>
<td>12,320</td>
<td>12,051</td>
<td>9,331</td>
<td>10,089</td>
<td>10,334</td>
<td>10,134</td>
</tr>
<tr>
<td>Total*</td>
<td>97,548</td>
<td>03,538</td>
<td>97,286</td>
<td>96,686</td>
<td>79,214</td>
<td>85,156</td>
<td>81,073</td>
<td>81,224</td>
</tr>
</tbody>
</table>

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

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:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>5,618.0</td>
<td>6,072.0</td>
<td>6,151.0</td>
<td>6,029.0</td>
<td>12,320.0</td>
<td>1,078.0</td>
<td>949.0</td>
<td>806.0</td>
</tr>
<tr>
<td>Northeast</td>
<td>3,832.3</td>
<td>3,926.6</td>
<td>3,510.5</td>
<td>3,695.0</td>
<td>4,787.4</td>
<td>4,417.1</td>
<td>4,017.6</td>
<td>3,831.5</td>
</tr>
<tr>
<td>Northwest</td>
<td>3,641.0</td>
<td>3,874.0</td>
<td>3,721.0</td>
<td>3,543.0</td>
<td>549.0</td>
<td>626.0</td>
<td>714.0</td>
<td>857.0</td>
</tr>
<tr>
<td>South Central</td>
<td>11,484.0</td>
<td>12,520.0</td>
<td>11,895.0</td>
<td>12,185.0</td>
<td>856.0</td>
<td>820.0</td>
<td>715.0</td>
<td>645.0</td>
</tr>
<tr>
<td>Southeast</td>
<td>5,262.0</td>
<td>5,760.0</td>
<td>5,077.0</td>
<td>4,885.0</td>
<td>763.0</td>
<td>640.0</td>
<td>543.0</td>
<td>421.0</td>
</tr>
<tr>
<td>Southwest</td>
<td>3,167.0</td>
<td>3,153.0</td>
<td>3,040.0</td>
<td>2,650.4</td>
<td>1,540.0</td>
<td>1,838.0</td>
<td>2,178.0</td>
<td>2,501.6</td>
</tr>
<tr>
<td>Total*</td>
<td>33,004.3</td>
<td>35,315.6</td>
<td>33,394.5</td>
<td>32,987.0</td>
<td>9,727.4</td>
<td>9,419.1</td>
<td>9,170.6</td>
<td>9,062.1</td>
</tr>
</tbody>
</table>

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

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:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>6,570</td>
<td>6,770</td>
<td>6,730</td>
<td>6,420</td>
</tr>
<tr>
<td>Northeast</td>
<td>7,823</td>
<td>7,576</td>
<td>6,813</td>
<td>6,569</td>
</tr>
<tr>
<td>Northwest</td>
<td>3,945</td>
<td>4,280</td>
<td>4,410</td>
<td>4,410</td>
</tr>
<tr>
<td>South Central</td>
<td>11,070</td>
<td>11,910</td>
<td>11,330</td>
<td>11,450</td>
</tr>
<tr>
<td>Southeast</td>
<td>5,205</td>
<td>5,475</td>
<td>4,880</td>
<td>4,560</td>
</tr>
<tr>
<td>Southwest</td>
<td>3,968</td>
<td>4,249</td>
<td>4,464</td>
<td>4,361</td>
</tr>
<tr>
<td>Total*</td>
<td>38,581</td>
<td>40,261</td>
<td>38,627</td>
<td>37,570</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle (x 1,000)</th>
<th>Calves (x 1,000)</th>
<th>Total (x 1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1,540</td>
<td>2,707</td>
<td>4,247</td>
</tr>
<tr>
<td>1992</td>
<td>1,677</td>
<td>2,689</td>
<td>4,366</td>
</tr>
<tr>
<td>1993</td>
<td>1,702</td>
<td>2,921</td>
<td>4,623</td>
</tr>
<tr>
<td>1994</td>
<td>1,589</td>
<td>2,681</td>
<td>4,270</td>
</tr>
<tr>
<td>1995</td>
<td>1,645</td>
<td>2,739</td>
<td>4,384</td>
</tr>
<tr>
<td>1996</td>
<td>1,761</td>
<td>2,811</td>
<td>4,572</td>
</tr>
<tr>
<td>1997</td>
<td>1,847</td>
<td>2,829</td>
<td>4,676</td>
</tr>
<tr>
<td>1998</td>
<td>1,668</td>
<td>2,455</td>
<td>4,113</td>
</tr>
<tr>
<td>1999</td>
<td>1,711</td>
<td>2,387</td>
<td>4,098</td>
</tr>
<tr>
<td>2000</td>
<td>1,722</td>
<td>2,487</td>
<td>4,209</td>
</tr>
<tr>
<td>2001</td>
<td>1,710</td>
<td>2,366</td>
<td>4,076</td>
</tr>
<tr>
<td>2002</td>
<td>1,710</td>
<td>2,320</td>
<td>4,030</td>
</tr>
<tr>
<td>2003</td>
<td>1,711</td>
<td>2,292</td>
<td>4,003</td>
</tr>
<tr>
<td>2004</td>
<td>1,711</td>
<td>2,335</td>
<td>4,053</td>
</tr>
<tr>
<td>2005</td>
<td>1,718</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1.9</td>
</tr>
<tr>
<td>1992</td>
<td>2.1</td>
</tr>
<tr>
<td>1993</td>
<td>2.0</td>
</tr>
<tr>
<td>1994</td>
<td>2.1</td>
</tr>
<tr>
<td>1995</td>
<td>1.9</td>
</tr>
<tr>
<td>1996</td>
<td>2.2</td>
</tr>
<tr>
<td>1997</td>
<td>2.0</td>
</tr>
<tr>
<td>1998</td>
<td>2.0</td>
</tr>
<tr>
<td>1999</td>
<td>2.1</td>
</tr>
<tr>
<td>2000</td>
<td>2.1</td>
</tr>
<tr>
<td>2001</td>
<td>2.1</td>
</tr>
<tr>
<td>2002</td>
<td>2.1</td>
</tr>
<tr>
<td>2003</td>
<td>2.1</td>
</tr>
<tr>
<td>2004</td>
<td>2.1</td>
</tr>
<tr>
<td>2005</td>
<td>2.1</td>
</tr>
</tbody>
</table>
Cattle Death Losses as a Percentage of January 1 Inventory of Cattle Over 500 lb on January 1 of the Following Year, by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1.9</td>
</tr>
<tr>
<td>1993</td>
<td>2.1</td>
</tr>
<tr>
<td>1995</td>
<td>2.0</td>
</tr>
<tr>
<td>1997</td>
<td>1.9</td>
</tr>
<tr>
<td>1998</td>
<td>1.9</td>
</tr>
<tr>
<td>1999</td>
<td>2.0</td>
</tr>
<tr>
<td>2000</td>
<td>2.2</td>
</tr>
<tr>
<td>2001</td>
<td>2.0</td>
</tr>
<tr>
<td>2002</td>
<td>2.1</td>
</tr>
<tr>
<td>2003</td>
<td>2.1</td>
</tr>
<tr>
<td>2004</td>
<td>2.1</td>
</tr>
<tr>
<td>2005</td>
<td>2.1</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent Calf Crop</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>7.0</td>
</tr>
<tr>
<td>1992</td>
<td>6.9</td>
</tr>
<tr>
<td>1993</td>
<td>7.4</td>
</tr>
<tr>
<td>1994</td>
<td>6.7</td>
</tr>
<tr>
<td>1995</td>
<td>6.8</td>
</tr>
<tr>
<td>1996</td>
<td>7.1</td>
</tr>
<tr>
<td>1997</td>
<td>7.3</td>
</tr>
<tr>
<td>1998</td>
<td>6.5</td>
</tr>
<tr>
<td>1999</td>
<td>6.3</td>
</tr>
<tr>
<td>2000</td>
<td>6.2</td>
</tr>
<tr>
<td>2001</td>
<td>6.5</td>
</tr>
<tr>
<td>2002</td>
<td>6.2</td>
</tr>
<tr>
<td>2003</td>
<td>6.1</td>
</tr>
<tr>
<td>2004</td>
<td>6.1</td>
</tr>
<tr>
<td>2005</td>
<td>6.2</td>
</tr>
</tbody>
</table>
Calf Death Losses as a Percentage of Calf Crop, by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>7.0</td>
</tr>
<tr>
<td>1993</td>
<td>6.9</td>
</tr>
<tr>
<td>1995</td>
<td>6.7</td>
</tr>
<tr>
<td>1997</td>
<td>6.8</td>
</tr>
<tr>
<td>1999</td>
<td>7.3</td>
</tr>
<tr>
<td>2001</td>
<td>6.5</td>
</tr>
<tr>
<td>2003</td>
<td>6.2</td>
</tr>
<tr>
<td>2005</td>
<td>6.1</td>
</tr>
</tbody>
</table>

USDA APHIS VS / 13

Since 1991, nonpredator causes accounted for the majority of cattle and calf losses. In 2005, nonpredator causes accounted for 95.3 percent of losses. 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:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (x 1,000)</td>
<td>Pct.</td>
<td>Number (x 1,000)</td>
<td>Pct.</td>
</tr>
<tr>
<td>Nonpredator</td>
<td>4,143.4</td>
<td>97.6</td>
<td>4,263.6</td>
<td>97.3</td>
</tr>
<tr>
<td>Predator</td>
<td>102.0</td>
<td>2.4</td>
<td>118.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Total</td>
<td>4,245.4</td>
<td>100.0</td>
<td>4,382.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (x 1,000)</td>
<td>Pct.</td>
<td>Number (x 1,000)</td>
<td>Pct.</td>
</tr>
<tr>
<td>Nonpredator</td>
<td>1523.7</td>
<td>99.0</td>
<td>1,622.7</td>
<td>98.7</td>
</tr>
<tr>
<td>Predator</td>
<td>15.4</td>
<td>1.0</td>
<td>21.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>1,539.1</td>
<td>100.0</td>
<td>1,644.1</td>
<td>100.0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cause</td>
<td>Number (x 1,000)</td>
<td>Pct.</td>
<td>Number (x 1,000)</td>
<td>Pct.</td>
</tr>
<tr>
<td>Nonpredator</td>
<td>2,619.7</td>
<td>96.8</td>
<td>2,640.9</td>
<td>96.5</td>
</tr>
<tr>
<td>Predator</td>
<td>86.6</td>
<td>3.2</td>
<td>97.4</td>
<td>3.5</td>
</tr>
<tr>
<td>Total</td>
<td>2,706.3</td>
<td>100.0</td>
<td>2,738.3</td>
<td>100.0</td>
</tr>
</tbody>
</table>


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

<table>
<thead>
<tr>
<th>Region</th>
<th>Number Losses (x 1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>264.0</td>
</tr>
<tr>
<td>Northeast</td>
<td>312.1</td>
</tr>
<tr>
<td>Northwest</td>
<td>103.0</td>
</tr>
<tr>
<td>South Central</td>
<td>498.0</td>
</tr>
<tr>
<td>Southeast</td>
<td>183.0</td>
</tr>
<tr>
<td>Southwest</td>
<td>179.0</td>
</tr>
<tr>
<td>Total*</td>
<td>1,539.1</td>
</tr>
</tbody>
</table>

*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 loss as a percentage of January 1 inventory of cattle over 500 lb on January 1 of the following year, by year:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
<td>1.6</td>
</tr>
<tr>
<td>Northeast</td>
<td>2.1</td>
<td>2.2</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Northwest</td>
<td>1.4</td>
<td>1.4</td>
<td>1.6</td>
<td>1.5</td>
</tr>
<tr>
<td>South Central</td>
<td>2.0</td>
<td>1.9</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>Southeast</td>
<td>2.2</td>
<td>2.3</td>
<td>2.3</td>
<td>2.4</td>
</tr>
<tr>
<td>Southwest</td>
<td>1.9</td>
<td>2.2</td>
<td>2.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Total</td>
<td>1.9</td>
<td>1.9</td>
<td>2.1</td>
<td>2.1</td>
</tr>
</tbody>
</table>
c. Number of calf death losses from all causes, by region and by year:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>493.0</td>
<td>553.0</td>
<td>425.0</td>
<td>392.0</td>
</tr>
<tr>
<td>Northeast</td>
<td>717.3</td>
<td>673.3</td>
<td>538.5</td>
<td>543.0</td>
</tr>
<tr>
<td>Northwest</td>
<td>204.0</td>
<td>216.0</td>
<td>225.0</td>
<td>205.0</td>
</tr>
<tr>
<td>South Central</td>
<td>689.0</td>
<td>675.0</td>
<td>620.0</td>
<td>638.0</td>
</tr>
<tr>
<td>Southeast</td>
<td>297.0</td>
<td>313.0</td>
<td>266.0</td>
<td>238.0</td>
</tr>
<tr>
<td>Southwest</td>
<td>306.0</td>
<td>308.0</td>
<td>312.0</td>
<td>318.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,706.3</td>
<td>2,738.3</td>
<td>2,386.5</td>
<td>2,334.0</td>
</tr>
</tbody>
</table>

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

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

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>7.5</td>
<td>8.2</td>
<td>6.3</td>
<td>6.1</td>
</tr>
<tr>
<td>Northeast</td>
<td>9.2</td>
<td>8.9</td>
<td>7.9</td>
<td>8.2</td>
</tr>
<tr>
<td>Northwest</td>
<td>5.2</td>
<td>5.0</td>
<td>5.1</td>
<td>4.8</td>
</tr>
<tr>
<td>South Central</td>
<td>6.2</td>
<td>5.7</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>Southeast</td>
<td>5.7</td>
<td>5.7</td>
<td>5.5</td>
<td>5.2</td>
</tr>
<tr>
<td>Southwest</td>
<td>7.7</td>
<td>7.2</td>
<td>7.0</td>
<td>7.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7.0</td>
<td>6.8</td>
<td>6.2</td>
<td>6.2</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Region</th>
<th>Year</th>
<th>Cause</th>
<th>Number (x1,000)</th>
<th>Pct.</th>
<th>Number (x1,000)</th>
<th>Pct.</th>
<th>Number (x1,000)</th>
<th>Pct.</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>1995</td>
<td>Nonpredator</td>
<td>274.8</td>
<td>99.2</td>
<td>280.2</td>
<td>99.7</td>
<td>265.6</td>
<td>99.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Predator</td>
<td>2.2</td>
<td>0.8</td>
<td>0.8</td>
<td>0.3</td>
<td>1.4</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>277.0</td>
<td>100.0</td>
<td>281.0</td>
<td>100.0</td>
<td>267.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Northeast</td>
<td>1995</td>
<td>Nonpredator</td>
<td>308.3</td>
<td>99.1</td>
<td>288.2</td>
<td>99.0</td>
<td>294.7</td>
<td>98.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Predator</td>
<td>2.8</td>
<td>0.9</td>
<td>2.9</td>
<td>1.0</td>
<td>5.3</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>311.1</td>
<td>100.0</td>
<td>291.1</td>
<td>100.0</td>
<td>300.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Northwest</td>
<td>1995</td>
<td>Nonpredator</td>
<td>113.5</td>
<td>98.7</td>
<td>121.9</td>
<td>98.3</td>
<td>114.1</td>
<td>97.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Predator</td>
<td>1.5</td>
<td>1.3</td>
<td>2.1</td>
<td>1.7</td>
<td>2.9</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>115.0</td>
<td>100.0</td>
<td>124.0</td>
<td>100.0</td>
<td>117.0</td>
<td>100.0</td>
</tr>
<tr>
<td>South Central</td>
<td>1995</td>
<td>Nonpredator</td>
<td>514.2</td>
<td>98.5</td>
<td>619.7</td>
<td>99.2</td>
<td>625.0</td>
<td>98.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Predator</td>
<td>7.8</td>
<td>1.5</td>
<td>5.3</td>
<td>0.8</td>
<td>10.0</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>522.0</td>
<td>100.0</td>
<td>625.0</td>
<td>100.0</td>
<td>635.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Southeast</td>
<td>1995</td>
<td>Nonpredator</td>
<td>198.0</td>
<td>98.5</td>
<td>170.5</td>
<td>98.0</td>
<td>165.1</td>
<td>94.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Predator</td>
<td>3.0</td>
<td>1.5</td>
<td>3.5</td>
<td>2.0</td>
<td>8.9</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>201.0</td>
<td>100.0</td>
<td>174.0</td>
<td>100.0</td>
<td>174.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Southwest</td>
<td>1995</td>
<td>Nonpredator</td>
<td>214.1</td>
<td>98.2</td>
<td>208.8</td>
<td>97.1</td>
<td>218.5</td>
<td>97.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Predator</td>
<td>3.9</td>
<td>1.8</td>
<td>6.2</td>
<td>2.9</td>
<td>5.5</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>218.0</td>
<td>100.0</td>
<td>215.0</td>
<td>100.0</td>
<td>224.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Percentage of 2005 Cattle Death Losses, by Cause and by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Nonpredator</th>
<th>Predator</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>99.5%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Northeast</td>
<td>98.2%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Northwest</td>
<td>97.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>South Central</td>
<td>98.4%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Southeast</td>
<td>94.9%</td>
<td>5.1%</td>
</tr>
<tr>
<td>Southwest</td>
<td>97.5%</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

Cause
- Black: Nonpredator
- White: Predator
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:

<table>
<thead>
<tr>
<th>Region</th>
<th>Year</th>
<th>Cause</th>
<th>1995 Number (x1,000)</th>
<th>1995 Pct.</th>
<th>2000 Number (x1,000)</th>
<th>2000 Pct.</th>
<th>2005 Number (x1,000)</th>
<th>2005 Pct.</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>1995</td>
<td>Nonpredator</td>
<td>545.3</td>
<td>98.6</td>
<td>416.9</td>
<td>98.1</td>
<td>382.1</td>
<td>97.5</td>
</tr>
<tr>
<td></td>
<td>1995</td>
<td>Predator</td>
<td>7.7</td>
<td>1.4</td>
<td>8.1</td>
<td>1.9</td>
<td>9.9</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>Nonpredator</td>
<td>662.5</td>
<td>98.4</td>
<td>526.1</td>
<td>97.7</td>
<td>520.3</td>
<td>95.8</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>Predator</td>
<td>10.8</td>
<td>1.6</td>
<td>12.4</td>
<td>2.3</td>
<td>22.7</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Nonpredator</td>
<td>673.3</td>
<td>100.0</td>
<td>538.5</td>
<td>100.0</td>
<td>543.0</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Predator</td>
<td>10.8</td>
<td>1.6</td>
<td>12.4</td>
<td>2.3</td>
<td>22.7</td>
<td>4.2</td>
</tr>
<tr>
<td>Northeast</td>
<td>1995</td>
<td>Nonpredator</td>
<td>206.1</td>
<td>95.4</td>
<td>210.1</td>
<td>93.3</td>
<td>191.4</td>
<td>93.4</td>
</tr>
<tr>
<td></td>
<td>1995</td>
<td>Predator</td>
<td>9.9</td>
<td>4.6</td>
<td>14.9</td>
<td>6.7</td>
<td>13.6</td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>Nonpredator</td>
<td>636.5</td>
<td>94.3</td>
<td>581.6</td>
<td>93.8</td>
<td>581.0</td>
<td>91.1</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>Predator</td>
<td>38.5</td>
<td>5.7</td>
<td>38.4</td>
<td>6.2</td>
<td>57.0</td>
<td>8.9</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Nonpredator</td>
<td>216.0</td>
<td>100.0</td>
<td>225.0</td>
<td>100.0</td>
<td>205.0</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Predator</td>
<td>9.9</td>
<td>4.6</td>
<td>14.9</td>
<td>6.7</td>
<td>13.6</td>
<td>6.6</td>
</tr>
<tr>
<td>South Central</td>
<td>1995</td>
<td>Nonpredator</td>
<td>299.5</td>
<td>95.7</td>
<td>242.4</td>
<td>91.1</td>
<td>205.6</td>
<td>86.4</td>
</tr>
<tr>
<td></td>
<td>1995</td>
<td>Predator</td>
<td>13.5</td>
<td>4.3</td>
<td>23.6</td>
<td>8.9</td>
<td>32.4</td>
<td>13.6</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>Nonpredator</td>
<td>292.3</td>
<td>94.9</td>
<td>284.5</td>
<td>91.2</td>
<td>297.6</td>
<td>93.6</td>
</tr>
<tr>
<td></td>
<td>2005</td>
<td>Predator</td>
<td>15.7</td>
<td>5.1</td>
<td>27.5</td>
<td>8.8</td>
<td>20.4</td>
<td>6.4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Nonpredator</td>
<td>308.0</td>
<td>100.0</td>
<td>312.0</td>
<td>100.0</td>
<td>317.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Percentage of 2005 Calf Death Losses, by Cause and by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Nonpredator</th>
<th>Predator</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>97.5%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Northeast</td>
<td>95.8%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Northwest</td>
<td>93.4%</td>
<td>6.6%</td>
</tr>
<tr>
<td>South Central</td>
<td>91.1%</td>
<td>8.9%</td>
</tr>
<tr>
<td>Southeast</td>
<td>86.4%</td>
<td>13.6%</td>
</tr>
<tr>
<td>Southwest</td>
<td>93.6%</td>
<td>6.4%</td>
</tr>
</tbody>
</table>
Section II: Population Estimates—Losses Due to Predators

A. Operation Classification

1. Operation classification process

This section reports inventory and death loss on four operation types with cows: beef, dairy, mixed, and other operations (see Terms Used In This Report, 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:

<table>
<thead>
<tr>
<th>Operation Type</th>
<th>All Cattle and Calves</th>
<th>Beef Cows</th>
<th>Dairy Cows</th>
<th>Calves Born</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>65.6</td>
<td>(0.8)</td>
<td>98.6</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Dairy</td>
<td>15.6</td>
<td>(0.4)</td>
<td>0.0</td>
<td>(0.0)</td>
</tr>
<tr>
<td>Mixed</td>
<td>2.6</td>
<td>(0.4)</td>
<td>1.4</td>
<td>(0.1)</td>
</tr>
<tr>
<td>Other</td>
<td>16.2</td>
<td>(0.8)</td>
<td>0.0</td>
<td>(--)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td></td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Across all operation types, nonpredator causes accounted for the majority of cattle losses in 2005. On beef operations, 96.6 percent of losses were due to nonpredator causes, compared to over 99 percent of losses on the other operation types.

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

<table>
<thead>
<tr>
<th>Operation Type</th>
<th>Beef</th>
<th>Dairy</th>
<th>Mixed</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonpredator</td>
<td>96.6 (0.3)</td>
<td>99.7 (0.1)</td>
<td>99.6 (0.1)</td>
<td>99.3 (0.2)</td>
</tr>
<tr>
<td>Predator</td>
<td>3.4 (0.3)</td>
<td>0.3 (0.1)</td>
<td>0.4 (0.1)</td>
<td>0.7 (0.2)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0 (0.0)</td>
<td>100.0 (0.0)</td>
<td>100.0 (0.0)</td>
<td>100.0 (0.0)</td>
</tr>
</tbody>
</table>

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 loss, by cause and operation type:

<table>
<thead>
<tr>
<th>Operation Type</th>
<th>Beef</th>
<th>Dairy</th>
<th>Mixed</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nonpredator</td>
<td>90.1 (0.4)</td>
<td>99.0 (0.1)</td>
<td>97.0 (0.9)</td>
<td>98.9 (0.3)</td>
</tr>
<tr>
<td>Predator</td>
<td>9.9 (0.4)</td>
<td>1.0 (0.1)</td>
<td>3.0 (0.9)</td>
<td>1.1 (0.3)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0 (0.0)</td>
<td>100.0 (0.0)</td>
<td>100.0 (0.0)</td>
<td>100.0 (0.0)</td>
</tr>
</tbody>
</table>
Just fewer than 9 of 10 cattle predator losses (87.9 percent) and over 9 of 10 calf predator losses (93.4 percent) in the United States occurred on beef operations.

d. Percentage of 2005 cattle and calves *predator* death losses, by type of operation:

<table>
<thead>
<tr>
<th>Operation Type</th>
<th>Percent Cattle</th>
<th>Std. Error</th>
<th>Percent Calves</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>87.9</td>
<td>(2.0)</td>
<td>93.4</td>
<td>(0.8)</td>
</tr>
<tr>
<td>Dairy</td>
<td>3.9</td>
<td>(0.7)</td>
<td>2.9</td>
<td>(0.3)</td>
</tr>
<tr>
<td>Mixed</td>
<td>0.7</td>
<td>(0.2)</td>
<td>1.6</td>
<td>(0.4)</td>
</tr>
<tr>
<td>Other</td>
<td>7.5</td>
<td>(1.9)</td>
<td>2.1</td>
<td>(0.6)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td></td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
B. Cattle Death Loss on Beef Operations Due to Predators

Note: Estimates in this section (B) are exclusively for beef operations due to the small number of losses on other operation types.

1. Losses as a proportion of inventory—2005

The proportion of cattle inventory lost to predator causes by region ranged from 0.9 per 10,000 head of cattle 500 lb or more in the North Central region to 12.6 per 10,000 in the Southeast region. Larger operations (100 or more head) generally lost a smaller proportion of inventory to predators than smaller operations (fewer than 100 head), although individual differences were not statistically significant.

Cattle predator death loss on beef operations per 10,000 head of cattle 500 lb or more (January 1 following year inventory), by region and by size of operation:

<table>
<thead>
<tr>
<th>Region</th>
<th>1-49</th>
<th>50-99</th>
<th>100-499</th>
<th>500 or More</th>
<th>All Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>0.8</td>
<td>(0.6)</td>
<td>0.9</td>
<td>(0.4)</td>
<td>0.9</td>
</tr>
<tr>
<td>Northeast</td>
<td>7.8</td>
<td>(1.9)</td>
<td>13.2</td>
<td>(3.8)</td>
<td>4.6</td>
</tr>
<tr>
<td>Northwest</td>
<td>9.0</td>
<td>(5.8)</td>
<td>5.9</td>
<td>(2.9)</td>
<td>4.7</td>
</tr>
<tr>
<td>South Central</td>
<td>6.1</td>
<td>(1.3)</td>
<td>7.5</td>
<td>(2.4)</td>
<td>4.5</td>
</tr>
<tr>
<td>Southeast</td>
<td>19.0</td>
<td>(4.5)</td>
<td>9.4</td>
<td>(2.3)</td>
<td>7.8</td>
</tr>
<tr>
<td>Southwest</td>
<td>18.3</td>
<td>(7.1)</td>
<td>21.5</td>
<td>(8.2)</td>
<td>4.3</td>
</tr>
</tbody>
</table>

*Cattle 500 lb or more.

From 1991 to 2005, coyotes, dogs, and mountain lions accounted for the highest percentages of predator death loss for cattle on all operations, respectively. Coyotes, dogs, and mountain lions also accounted for the highest percentages of predator death losses for cattle on beef operations from 2000 to 2005. In 2005, coyotes were responsible for about one-third of predator losses (32.4 percent on all operations and 31.8 percent on beef operations).

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>37.1</td>
<td>36.1</td>
<td>38.1</td>
<td>32.4</td>
<td>29.7</td>
<td>31.8</td>
</tr>
<tr>
<td>Dogs</td>
<td>17.6</td>
<td>16.3</td>
<td>23.8</td>
<td>12.9</td>
<td>17.1</td>
<td>13.4</td>
</tr>
<tr>
<td>Mountain lions¹</td>
<td>10.1</td>
<td>8.2²</td>
<td>14.3</td>
<td>9.4</td>
<td>10.1</td>
<td>9.1</td>
</tr>
<tr>
<td>All other predators³</td>
<td>35.2</td>
<td>39.4</td>
<td>23.8</td>
<td>45.3</td>
<td>43.1</td>
<td>45.7</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

¹Also known as cougars, pumas, and panthers.
²Differs slightly from NASS published data due to rounding.
³Bears, bobcats or lynx, foxes, wolves, ravens, eagles, vultures, other predators, and unknown predators.
In 2005, losses due to predators for all operations increased from 1.9 per 10,000 head of cattle 500 lb or more in 1991 to 4.2 per 10,000. For beef operations, cattle losses due to predators increased from 3.6 per 10,000 head in 2000 to 5.9 per 10,000 head in 2005.

b. Cattle predator death loss per 10,000 head of cattle over 500 lb (January 1 following year inventory), by cause and by year:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>0.7</td>
<td>0.9</td>
<td>1.0</td>
<td>1.4</td>
<td>1.1</td>
<td>1.9</td>
</tr>
<tr>
<td>Dogs</td>
<td>0.3</td>
<td>0.4</td>
<td>0.6</td>
<td>0.5</td>
<td>0.6</td>
<td>0.8</td>
</tr>
<tr>
<td>Mountain lions</td>
<td>0.2</td>
<td>0.2</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>All other predators</td>
<td>0.7</td>
<td>1.0</td>
<td>0.6</td>
<td>1.9</td>
<td>1.5</td>
<td>2.7</td>
</tr>
<tr>
<td>Total</td>
<td>1.9</td>
<td>2.5</td>
<td>2.6</td>
<td>4.2</td>
<td>3.6</td>
<td>5.9</td>
</tr>
</tbody>
</table>

1Cattle 500 lb or more.
²Estimates adapted to NASS published numbers.
3. Cause of loss by size of operation—2005
Coyotes accounted for the highest percentages of cattle death losses due to predators across operation sizes. The percentage of losses due to mountain lions ranged from 3.7 percent on operations with 1 to 49 cows to 21.5 percent of losses on operations with 500 or more cows.

a. Percentage of cattle predator death loss on beef operations, by cause and by size of operation:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-49</td>
<td></td>
<td></td>
<td>50-99</td>
<td></td>
<td>100-499</td>
<td></td>
<td>500 or More</td>
<td></td>
</tr>
<tr>
<td>Coyotes</td>
<td>37.4 (6.7)</td>
<td>19.5 (4.6)</td>
<td>28.6 (5.6)</td>
<td>43.8 (5.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dogs</td>
<td>12.2 (4.1)</td>
<td>16.8 (6.5)</td>
<td>16.1 (5.3)</td>
<td>5.2 (2.0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mountain lions</td>
<td>3.7 (1.8)</td>
<td>12.9 (5.5)</td>
<td>8.3 (2.6)</td>
<td>21.5 (6.8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other predators*</td>
<td>14.6 (4.2)</td>
<td>14.2 (4.3)</td>
<td>23.8 (4.4)</td>
<td>8.1 (2.5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unknown predators</td>
<td>32.1 (5.6)</td>
<td>36.6 (8.0)</td>
<td>23.2 (4.1)</td>
<td>21.4 (5.7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Bears, bobcats or lynx, foxes, wolves, ravens, eagles, vultures, and other predators.
Operations with 1 to 49 cows had 9.0 losses per 10,000 head of cattle 500 lb or more due to all predator causes compared with 4.3 losses per 10,000 on operations with 500 or more head.

b. Cattle predator death loss on beef operations per 10,000 head of cattle 500 lb or more (January 1 following year inventory), by cause and by size of operation:

<table>
<thead>
<tr>
<th>Predator Cause</th>
<th>1-49</th>
<th>50-99</th>
<th>100-499</th>
<th>500 or More</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>3.4  (0.8)</td>
<td>1.5  (0.4)</td>
<td>1.1  (0.3)</td>
<td>1.9  (0.6)</td>
</tr>
<tr>
<td>Dogs</td>
<td>1.1  (0.4)</td>
<td>1.3  (0.6)</td>
<td>0.6  (0.2)</td>
<td>0.2  (0.1)</td>
</tr>
<tr>
<td>Mountain lions</td>
<td>0.3  (0.2)</td>
<td>1.0  (0.5)</td>
<td>0.3  (0.1)</td>
<td>0.9  (0.5)</td>
</tr>
<tr>
<td>Other predators</td>
<td>1.3  (0.4)</td>
<td>1.1  (0.3)</td>
<td>0.9  (0.2)</td>
<td>0.4  (0.1)</td>
</tr>
<tr>
<td>Unknown predators</td>
<td>2.9  (0.5)</td>
<td>2.9  (0.8)</td>
<td>0.8  (0.2)</td>
<td>0.9  (0.2)</td>
</tr>
<tr>
<td>All predator causes</td>
<td>9.0  (1.2)</td>
<td>7.8  (1.2)</td>
<td>3.7  (0.4)</td>
<td>4.3  (1.0)</td>
</tr>
</tbody>
</table>

*Cattle 500 lb or more.
4. Cause of loss by region—2005

Mountain lions accounted for 35.5 percent of losses in the Southwest region. Coyotes and/or unknown predators accounted for the highest percentages of losses in other regions.

a. Percentage of cattle predator death loss on beef operations by cause and by region:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>31.1 (9.2)</td>
<td>24.7 (5.8)</td>
<td>6.8 (2.5)</td>
<td>30.0 (5.9)</td>
<td>45.1 (8.4)</td>
<td>31.7 (5.9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dogs</td>
<td>3.5 (3.4)</td>
<td>14.2 (4.6)</td>
<td>5.1 (4.1)</td>
<td>17.1 (6.2)</td>
<td>16.6 (5.5)</td>
<td>6.0 (2.5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mountain lions</td>
<td>23.6 (9.8)</td>
<td>0.0 (-- )</td>
<td>18.5 (6.1)</td>
<td>4.6 (2.8)</td>
<td>0.0 (0.0)</td>
<td>35.5 (6.7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other predators</td>
<td>8.0 (4.2)</td>
<td>17.7 (6.1)</td>
<td>32.5 (8.0)</td>
<td>23.3 (5.4)</td>
<td>8.0 (2.8)</td>
<td>7.0 (2.6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unknown predators</td>
<td>33.8 (9.4)</td>
<td>43.4 (8.4)</td>
<td>37.1 (10.0)</td>
<td>25.0 (6.0)</td>
<td>30.3 (6.5)</td>
<td>19.8 (6.3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Losses due to all predator causes ranged from 0.9 per 10,000 head of cattle 500 lb or more in the North Central region to 12.6 per 10,000 in the Southeast region. Interestingly, the Northwest region was the only region in which coyotes were not among the leading causes of predator loss.

b. Cattle predator death loss on beef operations per 10,000 head of cattle 500 lb or more (January 1 following year inventory), by cause and by region:

<table>
<thead>
<tr>
<th>Predator</th>
<th>North Central</th>
<th>Northeast</th>
<th>Northwest</th>
<th>South Central</th>
<th>Southeast</th>
<th>Southwest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>0.3 (0.1)</td>
<td>2.0 (0.6)</td>
<td>0.3 (0.1)</td>
<td>1.6 (0.4)</td>
<td>5.7 (1.7)</td>
<td>3.5 (1.1)</td>
</tr>
<tr>
<td>Dogs</td>
<td>0.0 (0.0)</td>
<td>1.1 (0.4)</td>
<td>0.2 (0.2)</td>
<td>0.9 (0.4)</td>
<td>2.1 (0.7)</td>
<td>0.7 (0.3)</td>
</tr>
<tr>
<td>Mountain lions</td>
<td>0.2 (0.1)</td>
<td>0.0 (0.0)</td>
<td>0.8 (0.3)</td>
<td>0.3 (0.2)</td>
<td>0.0 (0.0)</td>
<td>3.9 (1.3)</td>
</tr>
<tr>
<td>Other predators</td>
<td>0.1 (0.0)</td>
<td>1.4 (0.5)</td>
<td>1.4 (0.4)</td>
<td>1.2 (0.3)</td>
<td>1.0 (0.3)</td>
<td>0.8 (0.3)</td>
</tr>
<tr>
<td>Unknown predators</td>
<td>0.3 (0.1)</td>
<td>3.6 (0.9)</td>
<td>1.6 (0.6)</td>
<td>1.3 (0.4)</td>
<td>3.8 (0.8)</td>
<td>2.2 (0.7)</td>
</tr>
<tr>
<td>All predator causes</td>
<td>0.9 (0.2)</td>
<td>8.1 (1.4)</td>
<td>4.3 (0.8)</td>
<td>5.3 (0.8)</td>
<td>12.6 (2.0)</td>
<td>11.1 (2.3)</td>
</tr>
</tbody>
</table>

*Cattle 500 lb or more.
C. Calf Death Loss on Beef Operations Due to Predators

Note: Estimates in this section (C) are exclusively for beef operations due to the small number of losses on other operation types.

1. Losses as a proportion of calves born—2005

Regional calf predator losses ranged from 16.7 per 10,000 calves born in the North Central region to 85.7 per 10,000 calves born in the Southwest region. The North Central region had the lowest calf predator loss in most size categories.

a. Calf predator death loss on beef operations per 10,000 calves born*, by region and by size of operation:

<table>
<thead>
<tr>
<th>Region</th>
<th>1-49</th>
<th>50-99</th>
<th>100-499</th>
<th>500 or More</th>
<th>All Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>19.9</td>
<td>(5.3)</td>
<td>19.4</td>
<td>(4.9)</td>
<td>17.0</td>
</tr>
<tr>
<td>Northeast</td>
<td>60.2</td>
<td>(7.1)</td>
<td>63.9</td>
<td>(11.0)</td>
<td>62.5</td>
</tr>
<tr>
<td>Northwest</td>
<td>50.1</td>
<td>(12.2)</td>
<td>49.6</td>
<td>(12.8)</td>
<td>38.1</td>
</tr>
<tr>
<td>South Central</td>
<td>78.2</td>
<td>(10.9)</td>
<td>47.6</td>
<td>(7.5)</td>
<td>38.9</td>
</tr>
<tr>
<td>Southeast</td>
<td>89.6</td>
<td>(11.5)</td>
<td>46.9</td>
<td>(7.0)</td>
<td>72.0</td>
</tr>
<tr>
<td>Southwest</td>
<td>108.4</td>
<td>(23.1)</td>
<td>122.1</td>
<td>(46.2)</td>
<td>77.0</td>
</tr>
</tbody>
</table>

*All calves born on beef operation.

Coyotes were the single largest cause of predator losses in calves on all operations from 1991 to 2005. However, the percentage of losses attributable to coyotes decreased from 66.3 percent in 1991 to 55.1 percent in 2005. The percentage of calves lost because of “other” predators increased from 9.9 to 26.3 percent on all operations and from 19.5 to 27.4 percent on beef operations between 2000 and 2005.

a. Percentage of calf predator death loss by cause and by year:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>66.3</td>
<td>64.1</td>
<td>69.1</td>
<td>55.1</td>
<td>60.8</td>
<td>53.7</td>
</tr>
<tr>
<td>Dogs</td>
<td>18.6</td>
<td>19.1</td>
<td>16.7</td>
<td>11.2</td>
<td>14.3</td>
<td>11.2</td>
</tr>
<tr>
<td>Mountain lions</td>
<td>5.2</td>
<td>6.6</td>
<td>6.3</td>
<td>7.4</td>
<td>5.4</td>
<td>7.7</td>
</tr>
<tr>
<td>All other predators</td>
<td>9.9</td>
<td>10.2</td>
<td>7.9</td>
<td>26.3</td>
<td>19.5</td>
<td>27.4</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

1Differs slightly from NASS published numbers due to rounding.
2Bears, bobcats or lynx, foxes, wolves, ravens, eagles, vultures, other predators, and unknown predators.
Predator losses in calves on all operations increased from 23.4 per 10,000 calves born in 1991 to 41.5 per 10,000 in 2005. For beef operations, calf losses increased from 37.8 per 10,000 calves born in 2000 to 49.6 per 10,000 in 2005.

b. Calf predator death loss per 10,000 calves born, by cause:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>15.5</td>
<td>15.3</td>
<td>22.5</td>
<td>22.9</td>
<td>23.1</td>
<td>26.6</td>
</tr>
<tr>
<td>Dogs</td>
<td>4.4</td>
<td>4.6</td>
<td>5.4</td>
<td>4.6</td>
<td>5.3</td>
<td>5.5</td>
</tr>
<tr>
<td>Mountain lions</td>
<td>1.2</td>
<td>1.6</td>
<td>2.1</td>
<td>3.1</td>
<td>2.1</td>
<td>3.8</td>
</tr>
<tr>
<td>All other predators</td>
<td>2.3</td>
<td>1.6</td>
<td>2.1</td>
<td>3.1</td>
<td>2.1</td>
<td>3.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>23.4</td>
<td>23.9</td>
<td>32.6</td>
<td>41.5</td>
<td>37.8</td>
<td>49.6</td>
</tr>
</tbody>
</table>

1All calves born on beef operation.
2Estimates adapted to NASS published numbers.

3. Cause of loss by size of operation—2005
The percentages of calf death losses due to each of the listed causes were relatively consistent across operation sizes.

a. Percentage of calf predator death loss on beef operations, by cause and by size of operation:

<table>
<thead>
<tr>
<th>Predator Cause</th>
<th>1-49</th>
<th>50-99</th>
<th>100-499</th>
<th>500 or More</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>56.0</td>
<td>48.2</td>
<td>53.3</td>
<td>56.5</td>
</tr>
<tr>
<td>Dogs</td>
<td>11.0</td>
<td>13.5</td>
<td>10.9</td>
<td>8.4</td>
</tr>
<tr>
<td>Mountain lions</td>
<td>5.2</td>
<td>5.7</td>
<td>10.6</td>
<td>11.1</td>
</tr>
<tr>
<td>Other predators</td>
<td>11.2</td>
<td>17.3</td>
<td>13.0</td>
<td>16.1</td>
</tr>
<tr>
<td>Unknown predators*</td>
<td>16.6</td>
<td>15.3</td>
<td>12.2</td>
<td>7.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Bears, bobcats or lynx, foxes, wolves, ravens, eagles, vultures, and other predators.
Losses due to all predator causes showed a clear trend across herd sizes. Operations with 1 to 49 cows had the highest losses, with 70.3 losses per 10,000 calves born, and operations with 500 or more cows had the lowest losses, with 34.0 losses per 10,000 calves born.

b. Calf predator death loss on beef operations per 10,000 calves born, by cause and by size of operation:

<table>
<thead>
<tr>
<th>Predator Cause</th>
<th>1-49</th>
<th>50-99</th>
<th>100-499</th>
<th>500 or More</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>39.3 (4.5)</td>
<td>23.4 (2.9)</td>
<td>21.9 (1.9)</td>
<td>19.2 (1.5)</td>
</tr>
<tr>
<td>Dogs</td>
<td>7.7 (1.3)</td>
<td>6.6 (1.6)</td>
<td>4.5 (0.8)</td>
<td>2.9 (0.7)</td>
</tr>
<tr>
<td>Mountain lions</td>
<td>3.7 (1.0)</td>
<td>2.8 (0.7)</td>
<td>4.4 (0.8)</td>
<td>3.7 (0.8)</td>
</tr>
<tr>
<td>Other predators</td>
<td>7.9 (1.5)</td>
<td>8.4 (2.2)</td>
<td>5.3 (0.8)</td>
<td>5.5 (1.0)</td>
</tr>
<tr>
<td>Unknown predators</td>
<td>11.7 (1.6)</td>
<td>7.5 (1.5)</td>
<td>5.0 (0.7)</td>
<td>2.7 (0.7)</td>
</tr>
<tr>
<td>All predator causes</td>
<td>70.3 (5.3)</td>
<td>48.7 (4.8)</td>
<td>41.1 (2.6)</td>
<td>34.0 (2.7)</td>
</tr>
</tbody>
</table>

*All calves born on beef operation.*
4. Cause of loss by region—2005

Coyotes accounted for the highest percentages of calf predator losses across all regions. Mountain lions accounted for more losses in the Northwest and Southwest regions than in the other regions.

a. Percentage of calf predator death loss on beef operations by cause and by region:

<table>
<thead>
<tr>
<th>Predator Cause</th>
<th>North Central</th>
<th>Northeast</th>
<th>Northwest</th>
<th>South Central</th>
<th>Southeast</th>
<th>Southwest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>67.8 (5.3)</td>
<td>55.4 (4.2)</td>
<td>44.9 (3.6)</td>
<td>51.7 (3.8)</td>
<td>58.4 (3.7)</td>
<td>49.2 (4.0)</td>
</tr>
<tr>
<td>Dogs</td>
<td>7.0 (3.7)</td>
<td>11.3 (3.0)</td>
<td>2.3 (0.8)</td>
<td>13.4 (2.2)</td>
<td>15.6 (2.4)</td>
<td>5.6 (1.5)</td>
</tr>
<tr>
<td>Mountain lions</td>
<td>9.3 (2.1)</td>
<td>0.1 (0.1)</td>
<td>18.5 (2.6)</td>
<td>5.3 (1.6)</td>
<td>0.3 (0.2)</td>
<td>25.6 (4.2)</td>
</tr>
<tr>
<td>Other predators</td>
<td>6.7 (2.9)</td>
<td>10.4 (2.2)</td>
<td>18.6 (2.5)</td>
<td>18.6 (2.7)</td>
<td>8.1 (1.4)</td>
<td>9.9 (3.9)</td>
</tr>
<tr>
<td>Unknown predators</td>
<td>9.2 (2.8)</td>
<td>22.8 (3.7)</td>
<td>15.7 (2.5)</td>
<td>11.0 (1.7)</td>
<td>17.6 (3.2)</td>
<td>9.7 (2.7)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Calf losses due to coyotes ranged from 11.3 per 10,000 calves born in the North Central region to 42.2 in the Southwest region. Mountain lions accounted for 21.9 losses per 10,000 calves born in the Southwest region.

b. Calf predator death loss on beef operations per 10,000 calves born, by cause and by region:

<table>
<thead>
<tr>
<th>Predator Cause</th>
<th>North Central</th>
<th>Northeast</th>
<th>Northwest</th>
<th>South Central</th>
<th>Southeast</th>
<th>Southwest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coyotes</td>
<td>11.3 (1.5)</td>
<td>33.4 (3.7)</td>
<td>16.7 (2.1)</td>
<td>26.8 (3.4)</td>
<td>41.3 (4.5)</td>
<td>42.2 (5.9)</td>
</tr>
<tr>
<td>Dogs</td>
<td>1.2 (0.7)</td>
<td>6.8 (2.0)</td>
<td>0.9 (0.3)</td>
<td>6.9 (1.2)</td>
<td>11.0 (1.8)</td>
<td>4.8 (1.3)</td>
</tr>
<tr>
<td>Mountain lions</td>
<td>1.6 (0.4)</td>
<td>0.1 (0.0)</td>
<td>6.9 (1.2)</td>
<td>2.7 (0.8)</td>
<td>0.2 (0.1)</td>
<td>21.9 (3.7)</td>
</tr>
<tr>
<td>Other predators</td>
<td>1.1 (0.5)</td>
<td>6.3 (1.4)</td>
<td>7.0 (1.0)</td>
<td>9.7 (1.6)</td>
<td>5.8 (1.0)</td>
<td>8.5 (3.9)</td>
</tr>
<tr>
<td>Unknown predators</td>
<td>1.5 (0.5)</td>
<td>14.0 (2.6)</td>
<td>5.8 (1.0)</td>
<td>5.7 (0.9)</td>
<td>12.5 (2.4)</td>
<td>8.3 (2.3)</td>
</tr>
<tr>
<td>All predator causes</td>
<td>16.7 (1.9)</td>
<td>60.6 (5.2)</td>
<td>37.3 (3.2)</td>
<td>51.8 (4.3)</td>
<td>70.8 (5.4)</td>
<td>85.7 (9.4)</td>
</tr>
</tbody>
</table>

*All calves born on beef operation.*
D. Nonlethal Predator Control

Note: Estimates in this section (D) are exclusively for beef operations.

1. Frequency of use

The percentage of all operations that used any nonlethal predator control methods increased from 3.1 percent in 2000 to 7.5 percent in 2005. Beef operations were slightly more likely than all operations to use nonlethal methods in 2000, although the difference diminished in 2005. The methods used most frequently were guard animals and fencing.

a. Percentage of operations that used a nonlethal predator control method, by method used:

<table>
<thead>
<tr>
<th>Nonlethal Control Method</th>
<th>Percent Operations for Comparison*</th>
<th>Beef Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guard animals</td>
<td>1.1 (0.1)</td>
<td>2.9 (0.2)</td>
</tr>
<tr>
<td>Fencing</td>
<td>1.1 (0.1)</td>
<td>2.5 (0.2)</td>
</tr>
<tr>
<td>Herding</td>
<td>0.2 (0.0)</td>
<td>0.3 (0.1)</td>
</tr>
<tr>
<td>Night penning</td>
<td>0.3 (0.0)</td>
<td>0.5 (0.1)</td>
</tr>
<tr>
<td>Fright tactics</td>
<td>0.2 (0.2)</td>
<td>0.2 (0.0)</td>
</tr>
<tr>
<td>Carcass removal</td>
<td>0.8 (0.1)</td>
<td>1.3 (0.1)</td>
</tr>
<tr>
<td>Culling</td>
<td>-- (--)</td>
<td>1.6 (0.1)</td>
</tr>
<tr>
<td>Frequent checks</td>
<td>-- (--)</td>
<td>1.8 (0.1)</td>
</tr>
<tr>
<td>Other</td>
<td>0.3 (0.1)</td>
<td>0.5 (0.1)</td>
</tr>
<tr>
<td>Any method</td>
<td>3.1 (0.2)</td>
<td>7.5 (0.3)</td>
</tr>
</tbody>
</table>

*Data on nonlethal predator control methods were not collected in 1991 and 1995.
About 1 of 10 operations (8.6 percent) used some type of nonlethal predator control method. The most common nonlethal method was guard animals, followed by fencing, frequent checks, and culling. Large operations (500 head or more) were more likely to use any nonlethal predator control method than smaller operations.

b. Percentage of beef operations by nonlethal predator control method used, and by size of operation:

<table>
<thead>
<tr>
<th>Control Method</th>
<th>Percent Operations</th>
<th>Size of Operation (Number of Cows)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1-49</td>
<td>50-99</td>
</tr>
<tr>
<td>Guard animals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.4 (0.3)</td>
<td>2.5 (0.4)</td>
<td>3.1 (0.4)</td>
</tr>
<tr>
<td>Fencing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.9 (0.2)</td>
<td>2.2 (0.4)</td>
<td>1.8 (0.3)</td>
</tr>
<tr>
<td>Herding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.3 (0.1)</td>
<td>0.6 (0.2)</td>
<td>0.5 (0.1)</td>
</tr>
<tr>
<td>Night penning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.6 (0.1)</td>
<td>0.2 (0.1)</td>
<td>0.7 (0.2)</td>
</tr>
<tr>
<td>Fright tactics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2 (0.1)</td>
<td>0.3 (0.1)</td>
<td>0.3 (0.1)</td>
</tr>
<tr>
<td>Carcass removal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 (0.1)</td>
<td>2.6 (0.4)</td>
<td>3.0 (0.3)</td>
</tr>
<tr>
<td>Culling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.6 (0.2)</td>
<td>2.5 (0.3)</td>
<td>3.9 (0.4)</td>
</tr>
<tr>
<td>Frequent checks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.8 (0.2)</td>
<td>2.9 (0.5)</td>
<td>3.8 (0.4)</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.5 (0.1)</td>
<td>0.6 (0.2)</td>
<td>0.9 (0.2)</td>
</tr>
<tr>
<td>Any method</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.3 (0.4)</td>
<td>8.6 (0.7)</td>
<td>10.3 (0.7)</td>
</tr>
</tbody>
</table>
c. Percentage of beef operations by nonlethal predator control method used, and by region:

<table>
<thead>
<tr>
<th>Control Method</th>
<th>North Central</th>
<th>Northeast</th>
<th>Northwest</th>
<th>South Central</th>
<th>Southeast</th>
<th>Southwest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guard animals</td>
<td>1.8 (0.4)</td>
<td>2.8 (0.4)</td>
<td>2.6 (0.7)</td>
<td>3.4 (0.4)</td>
<td>4.1 (0.6)</td>
<td>3.7 (0.9)</td>
</tr>
<tr>
<td>Fencing</td>
<td>1.5 (0.3)</td>
<td>3.1 (0.5)</td>
<td>3.6 (0.7)</td>
<td>1.6 (0.3)</td>
<td>4.3 (0.5)</td>
<td>4.7 (1.0)</td>
</tr>
<tr>
<td>Herding</td>
<td>0.2 (0.1)</td>
<td>0.3 (0.1)</td>
<td>0.4 (0.2)</td>
<td>0.2 (0.1)</td>
<td>0.6 (0.2)</td>
<td>0.9 (0.4)</td>
</tr>
<tr>
<td>Night penning</td>
<td>0.6 (0.2)</td>
<td>1.1 (0.4)</td>
<td>0.7 (0.3)</td>
<td>0.4 (0.2)</td>
<td>0.3 (0.1)</td>
<td>0.9 (0.4)</td>
</tr>
<tr>
<td>Fright tactics</td>
<td>0.2 (0.1)</td>
<td>0.2 (0.1)</td>
<td>0.5 (0.2)</td>
<td>0.1 (0.1)</td>
<td>0.2 (0.1)</td>
<td>1.4 (0.6)</td>
</tr>
<tr>
<td>Carcass removal</td>
<td>1.8 (0.3)</td>
<td>1.2 (0.2)</td>
<td>3.2 (0.6)</td>
<td>0.7 (0.2)</td>
<td>2.4 (0.4)</td>
<td>2.5 (0.8)</td>
</tr>
<tr>
<td>Culling</td>
<td>1.9 (0.3)</td>
<td>1.9 (0.3)</td>
<td>4.2 (0.7)</td>
<td>1.1 (0.2)</td>
<td>2.6 (0.4)</td>
<td>3.6 (0.9)</td>
</tr>
<tr>
<td>Frequent checks</td>
<td>2.6 (0.4)</td>
<td>2.2 (0.3)</td>
<td>4.3 (0.6)</td>
<td>1.1 (0.2)</td>
<td>2.5 (0.4)</td>
<td>5.0 (1.2)</td>
</tr>
<tr>
<td>Other</td>
<td>0.5 (0.2)</td>
<td>0.7 (0.2)</td>
<td>0.8 (0.3)</td>
<td>0.6 (0.1)</td>
<td>0.4 (0.1)</td>
<td>0.7 (0.4)</td>
</tr>
</tbody>
</table>


2. Operations that used nonlethal predator control methods

For beef operations that used nonlethal predator control methods, about one-third used guard animals and about one-third used fencing in 2005 (37.6 and 32.0 percent, respectively).

a. For the 7.5 percent of all operations and the 8.6 percent of beef operations that used a nonlethal predator control method in 2005, percentage of operations by control method used:

<table>
<thead>
<tr>
<th>Nonlethal Control Method</th>
<th>All Operations— for Comparison*</th>
<th>Beef Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guard animals</td>
<td>27.7</td>
<td>38.0</td>
</tr>
<tr>
<td>Fencing</td>
<td>29.9</td>
<td>34.0</td>
</tr>
<tr>
<td>Herding</td>
<td>7.4</td>
<td>3.8</td>
</tr>
<tr>
<td>Night penning</td>
<td>10.8</td>
<td>9.7</td>
</tr>
<tr>
<td>Fright tactics</td>
<td>6.8</td>
<td>3.0</td>
</tr>
<tr>
<td>Carcass removal</td>
<td>40.4</td>
<td>16.5</td>
</tr>
<tr>
<td>Culling</td>
<td>NA</td>
<td>19.6</td>
</tr>
<tr>
<td>Frequent checks</td>
<td>NA</td>
<td>21.8</td>
</tr>
<tr>
<td>Other</td>
<td>11.3</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Only 8.6 percent of beef operations used a nonlethal control method during 2005. Of these operations, the percentage that used guard animals decreased as operation size increased. Conversely, the percentage of operations that used culling or frequent checks increased as operations size increased.

b. For the 8.6 percent of beef operations that used a nonlethal predator control method in 2005, percentage of operations by control method used and by size of operation:

<table>
<thead>
<tr>
<th>Control Method</th>
<th>1-49</th>
<th>50-99</th>
<th>100-499</th>
<th>500 or More</th>
<th>All Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guard animals</td>
<td>40.5</td>
<td>(2.5)</td>
<td>28.9</td>
<td>(3.9)</td>
<td>30.2</td>
</tr>
<tr>
<td>Fencing</td>
<td>35.5</td>
<td>(2.4)</td>
<td>25.5</td>
<td>(3.6)</td>
<td>17.7</td>
</tr>
<tr>
<td>Herding</td>
<td>3.4</td>
<td>(0.8)</td>
<td>6.8</td>
<td>(2.3)</td>
<td>4.8</td>
</tr>
<tr>
<td>Night penning</td>
<td>7.5</td>
<td>(1.6)</td>
<td>2.3</td>
<td>(0.9)</td>
<td>6.3</td>
</tr>
<tr>
<td>Fright tactics</td>
<td>2.5</td>
<td>(0.6)</td>
<td>3.8</td>
<td>(1.5)</td>
<td>3.3</td>
</tr>
<tr>
<td>Carcass removal</td>
<td>13.3</td>
<td>(1.5)</td>
<td>30.0</td>
<td>(3.8)</td>
<td>29.4</td>
</tr>
<tr>
<td>Culling</td>
<td>18.8</td>
<td>(1.7)</td>
<td>29.2</td>
<td>(3.6)</td>
<td>38.1</td>
</tr>
<tr>
<td>Frequent checks</td>
<td>21.2</td>
<td>(1.9)</td>
<td>33.4</td>
<td>(4.5)</td>
<td>36.3</td>
</tr>
<tr>
<td>Other</td>
<td>5.9</td>
<td>(1.0)</td>
<td>7.5</td>
<td>(1.8)</td>
<td>9.2</td>
</tr>
</tbody>
</table>
Of the 8.6 percent of beef operations that used a nonlethal predator control method, 50.9 percent in the South Central region used guard animals compared with about one-quarter of operations in the Northwest and Southwest regions (24.7 and 24.9 percent, respectively).

c. For the 8.6 percent of beef operations that used a nonlethal predator control method in 2005, percentage of operations by control method used and by region:

<table>
<thead>
<tr>
<th>Control Method</th>
<th>North Central</th>
<th>Northeast</th>
<th>Northwest</th>
<th>South Central</th>
<th>Southeast</th>
<th>Southwest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guard animals</td>
<td>28.7</td>
<td>(4.7)</td>
<td>33.8</td>
<td>(4.2)</td>
<td>24.7</td>
<td>(5.3)</td>
</tr>
<tr>
<td>Fencing</td>
<td>23.2</td>
<td>(4.3)</td>
<td>37.0</td>
<td>(4.6)</td>
<td>34.6</td>
<td>(5.5)</td>
</tr>
<tr>
<td>Herding</td>
<td>3.5</td>
<td>(1.6)</td>
<td>3.2</td>
<td>(1.3)</td>
<td>3.8</td>
<td>(1.4)</td>
</tr>
<tr>
<td>Night penning</td>
<td>9.2</td>
<td>(2.7)</td>
<td>12.9</td>
<td>(4.4)</td>
<td>6.9</td>
<td>(2.4)</td>
</tr>
<tr>
<td>Fright tactics</td>
<td>2.9</td>
<td>(1.5)</td>
<td>2.5</td>
<td>(1.2)</td>
<td>4.6</td>
<td>(1.8)</td>
</tr>
<tr>
<td>Carcass removal</td>
<td>28.2</td>
<td>(4.2)</td>
<td>14.5</td>
<td>(2.5)</td>
<td>31.0</td>
<td>(4.9)</td>
</tr>
<tr>
<td>Culling</td>
<td>30.4</td>
<td>(4.4)</td>
<td>22.9</td>
<td>(3.2)</td>
<td>40.2</td>
<td>(5.3)</td>
</tr>
<tr>
<td>Frequent checks</td>
<td>40.7</td>
<td>(5.1)</td>
<td>26.5</td>
<td>(3.5)</td>
<td>41.0</td>
<td>(5.2)</td>
</tr>
<tr>
<td>Other</td>
<td>8.2</td>
<td>(2.4)</td>
<td>7.8</td>
<td>(2.1)</td>
<td>7.8</td>
<td>(2.9)</td>
</tr>
</tbody>
</table>
Of beef operations that used a nonlethal predator control method, 80.8 percent used one nonlethal predator control method in 2000. In 2005, 67.9 percent of operations used one nonlethal method.

d. For the 7.5 percent of all operations and the 8.6 percent of beef operations that used a nonlethal predator control method in 2005, percentage of operations by number of methods used:

<table>
<thead>
<tr>
<th>Number of Control Methods Used</th>
<th>All Operations— for Comparison</th>
<th>Beef Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80.6 (2.1)</td>
<td>68.3 (1.7)</td>
</tr>
<tr>
<td>2</td>
<td>13.4 (2.0)</td>
<td>15.9 (1.2)</td>
</tr>
<tr>
<td>3</td>
<td>4.3 (0.8)</td>
<td>11.2 (1.2)</td>
</tr>
<tr>
<td>4</td>
<td>1.2 (0.4)</td>
<td>3.0 (0.5)</td>
</tr>
<tr>
<td>More than 5</td>
<td>0.5 (0.2)</td>
<td>1.6 (0.4)</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Section III: Methodology

A. Cattle and Calf Death Loss Estimates

1. Survey procedures
A random sample of U.S. cattle producers was surveyed to provide data for these estimates. Survey procedures ensured that all producers (except those in Alaska) had an opportunity to participate in the survey, regardless of operation size. Large operations were sampled more heavily than small operations. Data were collected from about 77,000 producers in 1991, 50,000 in 1996, 50,000 in 2001, and 50,000 in 2006, during the first half of January by mail, telephone, and face-to-face interviews. Regardless of when producers responded, they were asked to report death losses for cattle and calves for the 1991, 1995, 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, the NASS “Cattle and Calves Death Loss” report was issued in May 1992, May 1996, and May 2006. The NASS “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. The NASS “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-out the losses by class of operation and by size group based on reported inventory. The operation classes included beef cattle, dairy cattle, mixed, and “other” cattle operations. These classes and size groups are further defined in Terms Used In This Report (p 2).

2. Estimation procedures
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.

4. Revision
Revisions to previous estimates of total death losses are made to improve the current estimates. Previous-year estimates are subject to revision when current estimates are made. Estimates for losses from all causes are subject to revision in the following year’s “Meat Animals, Production, Disposition, and Income” report.
### Appendix I: U.S. Populations and Operations*

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

<table>
<thead>
<tr>
<th>State</th>
<th>Number Cattle and Calves (1,000 Head)</th>
<th>Number Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North Central</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iowa</td>
<td>3,800</td>
<td>31,000</td>
</tr>
<tr>
<td>Minnesota</td>
<td>2,350</td>
<td>26,000</td>
</tr>
<tr>
<td>Nebraska</td>
<td>6,500</td>
<td>24,000</td>
</tr>
<tr>
<td>North Dakota</td>
<td>1,720</td>
<td>17,100</td>
</tr>
<tr>
<td>South Dakota</td>
<td>3,750</td>
<td>17,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>18,120</td>
<td>90,700</td>
</tr>
<tr>
<td><strong>Northeast</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connecticut</td>
<td>52</td>
<td>1,100</td>
</tr>
<tr>
<td>Delaware</td>
<td>23</td>
<td>420</td>
</tr>
<tr>
<td>Illinois</td>
<td>1,330</td>
<td>19,800</td>
</tr>
<tr>
<td>Indiana</td>
<td>900</td>
<td>19,000</td>
</tr>
<tr>
<td>Kentucky</td>
<td>2,380</td>
<td>45,000</td>
</tr>
<tr>
<td>Maine</td>
<td>92</td>
<td>1,700</td>
</tr>
<tr>
<td>Maryland</td>
<td>230</td>
<td>4,000</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>47</td>
<td>1,100</td>
</tr>
<tr>
<td>Michigan</td>
<td>1,030</td>
<td>14,400</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>39</td>
<td>850</td>
</tr>
<tr>
<td>New Jersey</td>
<td>42</td>
<td>1,500</td>
</tr>
<tr>
<td>New York</td>
<td>1,400</td>
<td>14,700</td>
</tr>
<tr>
<td>Ohio</td>
<td>1,280</td>
<td>27,000</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>1,590</td>
<td>28,000</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>5</td>
<td>220</td>
</tr>
<tr>
<td>Vermont</td>
<td>275</td>
<td>2,500</td>
</tr>
<tr>
<td>Virginia</td>
<td>1,660</td>
<td>25,000</td>
</tr>
<tr>
<td>West Virginia</td>
<td>410</td>
<td>12,500</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>3,400</td>
<td>36,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16,185</td>
<td>254,790</td>
</tr>
<tr>
<td><strong>Northwest</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Idaho</td>
<td>2,110</td>
<td>10,400</td>
</tr>
<tr>
<td>Montana</td>
<td>2,400</td>
<td>12,600</td>
</tr>
<tr>
<td>Oregon</td>
<td>1,420</td>
<td>15,300</td>
</tr>
<tr>
<td>Washington</td>
<td>1,100</td>
<td>13,000</td>
</tr>
<tr>
<td>Wyoming</td>
<td>1,430</td>
<td>5,800</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8,460</td>
<td>57,100</td>
</tr>
<tr>
<td><strong>South Central</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arkansas</td>
<td>1,710</td>
<td>30,000</td>
</tr>
<tr>
<td>Kansas</td>
<td>6,650</td>
<td>32,000</td>
</tr>
<tr>
<td>Missouri</td>
<td>4,500</td>
<td>64,000</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>5,450</td>
<td>56,000</td>
</tr>
<tr>
<td>Texas</td>
<td>14,100</td>
<td>150,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>32,410</td>
<td>332,000</td>
</tr>
<tr>
<td><strong>Southeast</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alabama</td>
<td>1,280</td>
<td>25,000</td>
</tr>
<tr>
<td>Florida</td>
<td>1,680</td>
<td>18,800</td>
</tr>
<tr>
<td>Georgia</td>
<td>1,180</td>
<td>21,000</td>
</tr>
<tr>
<td>Louisiana</td>
<td>620</td>
<td>14,500</td>
</tr>
<tr>
<td>Mississippi</td>
<td>990</td>
<td>21,000</td>
</tr>
<tr>
<td>North Carolina</td>
<td>860</td>
<td>21,000</td>
</tr>
<tr>
<td>South Carolina</td>
<td>410</td>
<td>10,000</td>
</tr>
<tr>
<td>Tennessee</td>
<td>2,240</td>
<td>48,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9,460</td>
<td>179,300</td>
</tr>
<tr>
<td><strong>Southwest</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arizona</td>
<td>940</td>
<td>2,600</td>
</tr>
<tr>
<td>California</td>
<td>5,450</td>
<td>17,000</td>
</tr>
<tr>
<td>Colorado</td>
<td>2,650</td>
<td>12,900</td>
</tr>
<tr>
<td>Hawaii</td>
<td>161</td>
<td>800</td>
</tr>
<tr>
<td>Nevada</td>
<td>500</td>
<td>1,600</td>
</tr>
<tr>
<td>New Mexico</td>
<td>1,550</td>
<td>7,600</td>
</tr>
<tr>
<td>Utah</td>
<td>800</td>
<td>7,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>12,1051</td>
<td>49,500</td>
</tr>
<tr>
<td><strong>Total (49 States)</strong></td>
<td>96,686</td>
<td>982,390</td>
</tr>
<tr>
<td><strong>Total U.S. (50 States)</strong></td>
<td>96,701.5</td>
<td>982,510</td>
</tr>
</tbody>
</table>

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