United States Department of Agriculture
National Agricultural Statistics Service

# Montana Sheep and Lamb Loss 2007

Cooperating with the Montana Department of Agriculture
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## Montana Sheep and Lamb Loss 2007

*Total Loss, Cause of Death and Value of Loss*

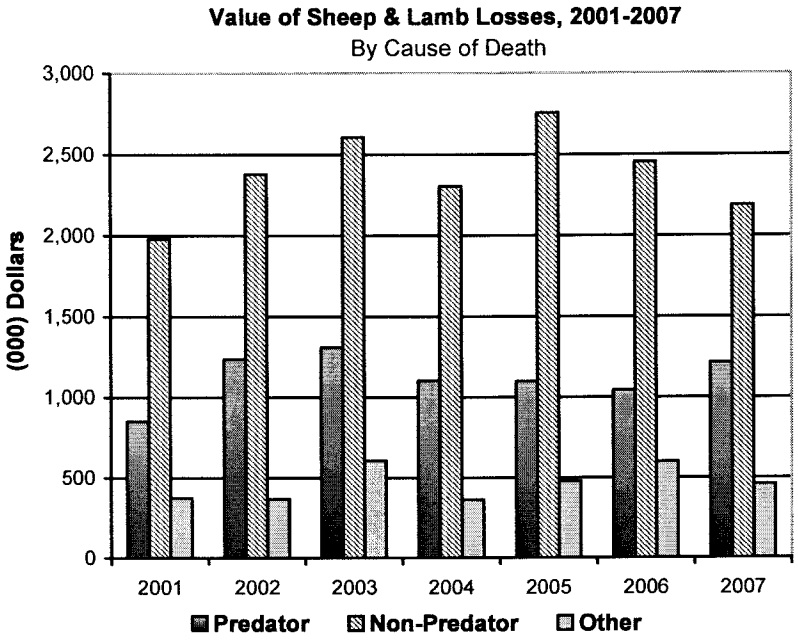
Released: February 15, 2008

Montana sheep and lamb producers lost 50,000 animals to weather, predators, disease and other causes during 2007, representing a total value of $3.9 million, according to a survey conducted by USDA, National Agricultural Statistics Service, Montana Field Office. The total number of sheep and lambs lost decreased 1,000 head from last year, but the total value of inventory lost was 6 percent less than a year ago. The January 1, 2007 inventory was 2 percent less than the previous year. Sheep and lamb deaths amounted to 8.7 percent of the January 1 inventory and lambs born, unchanged from last year.

The number of sheep and lambs lost to all predators totaled 17,000 head, up 2,900 head from last year. Lamb losses by all predators amounted to 13,900 head, up 21 percent from last year. The number of sheep lost to all predators totaled 3,100, up 500 head from a year ago. Predators caused an estimated $1.2 million in losses in 2007, up 16 percent from the previous year. Losses due to predators amounted to 2.9 percent of the January 1 inventory and lambs born and 34 percent of all sheep and lamb deaths. Coyotes remained the largest predator for both sheep and lambs. Coyotes accounted for 69 percent of the predator caused losses and 23 percent of all death losses in the state. The value of losses attributed to coyotes was $0.8 million.

The total value of non-predatory losses was $2.2 million in 2007, compared with $2.5 million in 2006. Non-predatory losses accounted for 55 percent of all losses. The largest non-predatory cause of losses was diseases at 7,800 head. Sheep lost to non-predatory factors totaled 8,800 head, 4 percent lower than 2006. Non-predatory lamb losses came in at 18,700 head, 1,700 head lower than a year ago.

Producers reported less sheep and lambs lost to unknown causes this past year. The number of sheep and lambs lost to unknown causes decreased 25 percent from last year. Lambs lost to unknown causes totaled 3,400 head, compared with 5,100 head last year. Unknown causes claimed 2,100 sheep, compared with 2,200 head last year. The value of sheep and lambs lost to unknown causes decreased to $0.5 million.



**Methodology and Definitions**

The sheep and lamb survey utilized multi-frame sampling procedures. The survey involved drawing a random sample from a list of livestock producers maintained by the USDA, National Agricultural Statistics Service, Montana Field Office. In addition, sheep producers living in a selected sample of area segments were interviewed. This procedure assures complete coverage of sheep producers by accounting for ranchers/farmers who may not be on the list.

Sheep and lamb loss estimates published by the USDA include sheep losses for the entire year, but include only those lamb losses that occur after docking. This special report also includes an estimate of lambs lost before docking.

**Cooperation**

This study was undertaken at the request of the Montana Wool Growers Association who also provided funding. The USDA, National Agricultural Statistics Service, Montana Field Office conducted the survey and expresses appreciation to all cooperating sheep producers.

**Table 1: Sheep & Lambs: Inventory, Death Loss, and Percent of Total Inventory Lost, Montana, 1998-2007.**

| Year | January 1 Inventory | Lamb Crop | All Sheep Losses | Lamb Losses | | | Total Loss | Percent of Total Inventory Lost 1/ |
|---|---|---|---|---|---|---|---|---|
| | | | | Before Docking | After Docking | All Lambs | | |
| | (000) Head | | | | | | | Percent |
| 1998 | 415 | 355 | 20 | 25 | 22 | 47 | 67 | 8.4 |
| 1999 | 380 | 340 | 18 | 23 | 23 | 46 | 64 | 8.6 |
| 2000 | 370 | 365 | 19 | 23 | 24 | 47 | 66 | 8.7 |
| 2001 | 360 | 340 | 19 | 24 | 23 | 47 | 66 | 9.1 |
| 2002 | 335 | 295 | 18 | 25 | 24 | 49 | 67 | 10.2 |
| 2003 | 310 | 280 | 17 | 21 | 20 | 41 | 58 | 9.5 |
| 2004 | 300 | 270 | 13 | 17 | 14 | 31 | 44 | 7.5 |
| 2005 | 305 | 275 | 12 | 19 | 15 | 34 | 46 | 7.6 |
| 2006 | 295 | 270 | 14 | 20 | 17 | 37 | 51 | 8.7 |
| 2007 | 290 | 270 | 14 | 18 | 18 | 36 | 50 | 8.7 |

1/ Total inventory equals January 1 inventory plus lamb crop plus lambs lost before docking

**Table 2: Sheep & Lambs: Death Losses by Cause and Value of Loss, Montana, 1998-2007.**

| Year | Predator Losses | | Non-Predator Loss | Unknown Causes | Value of Losses | | | |
|---|---|---|---|---|---|---|---|---|
| | Total | Percent of Total Inventory Lost 1/ | | | Predator | Non Predator | Unknown | Total 2/ |
| | (000) Head | Percent | (000) Head | | (000) Dollars | | | |
| 1998 | 21.8 | 2.7 | 38.7 | 6.5 | 1,105.5 | 2,189.8 | 360.2 | 3,655.5 |
| 1999 | 20.3 | 2.7 | 36.8 | 6.9 | 1,094.7 | 2,198.8 | 410.2 | 3,703.7 |
| 2000 | 18.9 | 2.5 | 37.3 | 9.8 | 1,079.1 | 2,423.1 | 609.7 | 4,111.9 |
| 2001 | 19.9 | 2.7 | 38.6 | 7.5 | 850.8 | 1,980.6 | 375.0 | 3,206.4 |
| 2002 | 21.4 | 3.3 | 39.9 | 5.7 | 1,236.0 | 2,378.2 | 366.6 | 3,980.8 |
| 2003 | 17.7 | 2.9 | 33.0 | 7.3 | 1,309.2 | 2,608.0 | 605.7 | 4,522.9 |
| 2004 | 13.7 | 2.3 | 26.0 | 4.3 | 1,102.6 | 2,306.2 | 364.3 | 3,773.1 |
| 2005 | 12.4 | 2.1 | 28.4 | 5.2 | 1,096.4 | 2,755.6 | 477.6 | 4,329.6 |
| 2006 | 14.1 | 2.4 | 29.6 | 7.3 | 1,044.4 | 2,453.7 | 600.3 | 4,098.4 |
| 2007 | 17.0 | 2.9 | 27.5 | 5.5 | 1,214.4 | 2,189.3 | 458.0 | 3,861.7 |

1/ Total inventory equals Jan 1 inventory, plus lamb crop plus lambs lost before docking.

2/ Totals may not add because of rounding.

**Table 3: Sheep & Lambs: Death Losses by Cause, Montana 2006-2007.**

| | SHEEP LOSS | | | | LAMB LOSS | | | | TOTAL LOSS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number of Head | | Value in Dollars (000) 1/ | | Number of Head | | Value in Dollars (000) 2/ | | Number of Head | | Value in Dollars (000) | |
| Cause of Loss | 2006 | 2007 | 2006 | 2007 | 2006 | 2007 | 2006 | 2007 | 2006 | 2007 | 2006 | 2007 |
| **Predators** | | | | | | | | | | | | |
| Bear | 300 | 400 | 39.3 | 48.0 | 200 | 300 | 12.2 | 18.2 | 500 | 700 | 51.5 | 66.2 |
| Bobcat | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Coyote | 1,800 | 1,900 | 235.8 | 228.0 | 8,300 | 9,800 | 508.0 | 593.9 | 10,100 | 11,700 | 743.8 | 821.9 |
| Dog | 100 | 300 | 13.1 | 36.0 | 500 | 400 | 30.6 | 24.2 | 600 | 700 | 43.7 | 60.2 |
| Eagle | -- | -- | -- | -- | 1,100 | 800 | 67.3 | 48.5 | 1,100 | 800 | 67.3 | 48.5 |
| Fox | -- | -- | -- | -- | 700 | 1,100 | 42.8 | 66.7 | 700 | 1,100 | 42.8 | 66.7 |
| Mountain Lion | 200 | 100 | 26.2 | 12.0 | 300 | 300 | 18.4 | 18.2 | 500 | 400 | 44.6 | 30.2 |
| Wolf | 100 | 200 | 13.1 | 24.0 | 100 | 400 | 6.1 | 24.2 | 200 | 600 | 19.2 | 48.2 |
| Other Animals | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Unknown Predators | 100 | 200 | 13.1 | 24.0 | 300 | 800 | 18.4 | 48.5 | 400 | 1,000 | 31.5 | 72.5 |
| **Total Predators** | **2,600** | **3,100** | **340.6** | **372.0** | **11,500** | **13,900** | **703.8** | **842.4** | **14,100** | **17,000** | **1,044.4** | **1,214.4** |
| **Non-Predators** | | | | | | | | | | | | |
| Total Diseases | 1,600 | 2,800 | 209.6 | 336.0 | 5,000 | 5,000 | 306.0 | 303.0 | 6,600 | 7,800 | 515.6 | 639.0 |
| Lambing Complications | 800 | 1,100 | 104.8 | 132.0 | 5,600 | 5,600 | 342.7 | 339.4 | 6,400 | 6,700 | 447.5 | 471.4 |
| Old Age | 3,000 | 3,000 | 393.0 | 360.0 | -- | -- | -- | -- | 3,000 | 3,000 | 393.0 | 360.0 |
| On Back | 500 | 600 | 65.5 | 72.0 | 100 | -- | 6.1 | -- | 600 | 600 | 71.6 | 72.0 |
| Poison | 700 | 700 | 91.7 | 84.0 | 900 | 500 | 55.1 | 30.3 | 1,600 | 1,200 | 146.8 | 114.3 |
| Theft | 100 | -- | 13.1 | -- | 400 | 100 | 24.5 | 6.1 | 500 | 100 | 37.6 | 6.1 |
| Weather Conditions | 2,300 | 400 | 301.3 | 48.0 | 6,900 | 6,500 | 422.3 | 393.9 | 9,200 | 6,900 | 723.6 | 441.9 |
| Other | 200 | 200 | 26.2 | 24.0 | 1,500 | 1,000 | 91.8 | 60.6 | 1,700 | 1,200 | 118.0 | 84.6 |
| **Total Non-Predators** | **9,200** | **8,800** | **1,205.2** | **1,056.0** | **20,400** | **18,700** | **1,248.5** | **1,133.3** | **29,600** | **27,500** | **2,453.7** | **2,189.3** |
| **Unknown Causes** | **2,200** | **2,100** | **288.2** | **252.0** | **5,100** | **3,400** | **312.1** | **206.0** | **7,300** | **5,500** | **600.3** | **458.0** |
| **Total Loss** | **14,000** | **14,000** | **1,834.0** | **1,680.0** | **37,000** | **36,000** | **2,264.4** | **2,181.7** | **51,000** | **50,000** | **4,098.4** | **3,861.7** |

1/ Using average reported value for Ewes 1+.
2/ Lamb values equal to market year average price received for lambs multiplied by an average weight of 60 pounds per lamb.
-- Denotes less than 100 head.

**Sheep and Lamb Loss by Predators 2007**

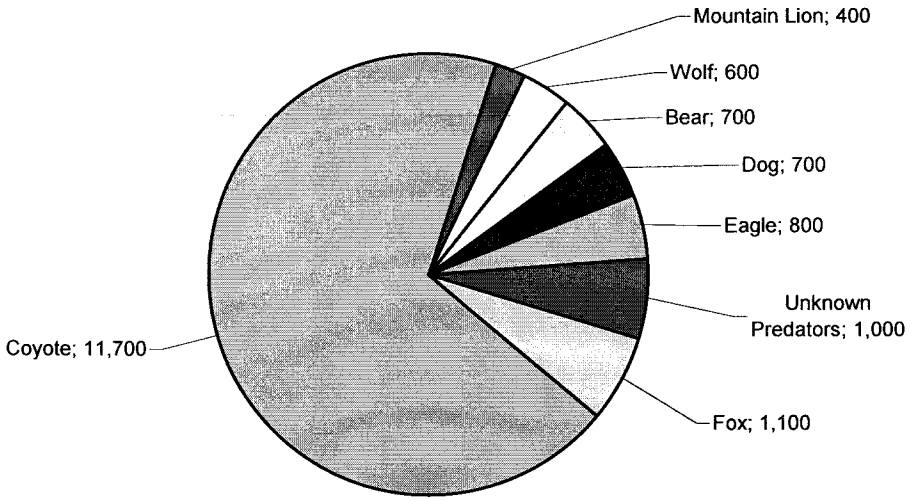


**Table 4: Sheep & Lambs: Percent of Death Losses by Cause, Montana, 1998-2007.**

| Cause of Loss | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Predators** | | | | | | | | | | |
| Bear | -- | -- | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 |
| Bobcat | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Coyote | 22 | 24 | 20 | 22 | 21 | 20 | 21 | 19 | 20 | 23 |
| Dog | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 |
| Eagle | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Fox | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 |
| Mountain Lion | 1 | 1 | 1 | 1 | 1 | 1 | 1 | -- | 1 | 1 |
| Wolf | -- | -- | -- | -- | 1 | 1 | 1 | 1 | 1 | 1 |
| Other Animals | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Unknown Predators | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 |
| **Total Predators** | **32** | **33** | **28** | **30** | **31** | **30** | **31** | **27** | **28** | **34** |
| **Non-Predators** | | | | | | | | | | |
| Digestive | 2/ | 5 | 2/ | 2/ | 2/ | 2/ | 7 | 2/ | 2/ | 2/ |
| Respiratory | 2/ | 8 | 2/ | 2/ | 2/ | 2/ | 10 | 2/ | 2/ | 2/ |
| Metabolic | 2/ | 2 | 2/ | 2/ | 2/ | 2/ | 2 | 2/ | 2/ | 2/ |
| Other Diseases | 2/ | 4 | 2/ | 2/ | 2/ | 2/ | 3 | 2/ | 2/ | 2/ |
| **Total Diseases** | **14** | **19** | **15** | **16** | **12** | **14** | **22** | **17** | **13** | **16** |
| Lambing Complications | 14 | 11 | 12 | 11 | 12 | 15 | 11 | 13 | 13 | 13 |
| Old Age | 7 | 6 | 9 | 8 | 4 | 6 | 8 | 7 | 6 | 6 |
| On Back | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 1 |
| Poison | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 |
| Theft | 1 | 2 | 1 | 1 | 1 | 3 | -- | 1 | 1 | 1 |
| Weather Conditions | 15 | 13 | 11 | 13 | 20 | 11 | 12 | 15 | 18 | 14 |
| Other | 2 | 2 | 5 | 7 | 7 | 5 | 3 | 5 | 3 | 2 |
| **Total Non-Predators** | **57** | **57** | **57** | **58** | **60** | **57** | **59** | **62** | **58** | **55** |
| **Unknown Causes** | **10** | **11** | **15** | **12** | **9** | **13** | **10** | **11** | **14** | **11** |
| **Total Loss 1/** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** | **100** |

1/ Totals may not add due to rounding.
-- Denotes less than 1 percent.

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