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MONTANA SHEEP & LAMB LOSSES--1999



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Montana sheep and lamb producers lost 64,000 animals to weather, predators, disease and other causes during 1999, representing a total value of more than \$3.7 million, according to a survey conducted by the Montana Agricultural Statistics Service. The total number of sheep and lambs lost dropped 4 percent from 1998 but the total value of inventory lost in 1999 increased 1 percent. Decreased losses are partially due to total sheep and lamb inventory dropping 8 percent from the previous year. Higher average market prices this past year resulted in the increased value of sheep and lambs losses. Sheep and lamb deaths amounted to 8.6 percent of the January 1 inventory and lambs born -- slightly more than the previous year.

Predators caused an estimated \$1.1 million in losses in 1999, down slightly from the previous year. Losses due to predators amounted to 2.7 percent of the January 1 inventory and lambs born and 32 percent of all sheep and lamb deaths. Coyotes remained the largest predator for both sheep and lambs. Coyotes accounted for 74 percent of the predator caused losses and 24 percent of all death losses in the state. The number of sheep and

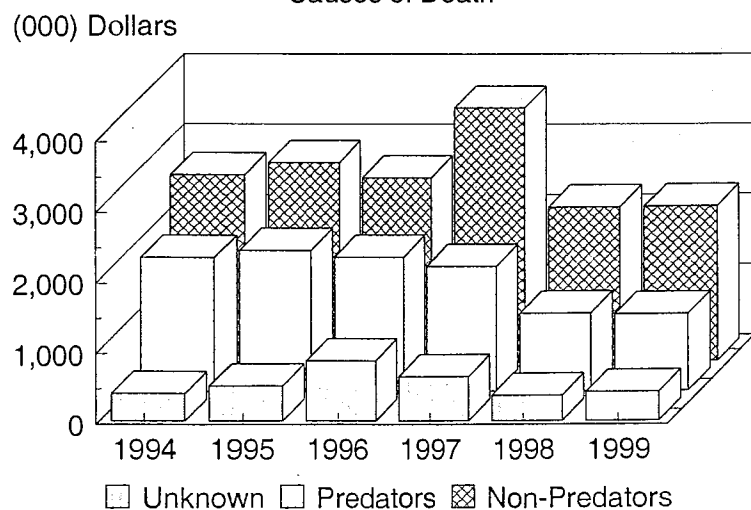
lambs lost to coyotes was 15,100 head, up 200 head from 1998. The value of losses attributed to coyotes was \$0.8 million. The number of sheep and lambs lost to all predators totaled 20,300 head, down 1,500 head from last year. Lamb losses by all predators amounted to 16,500 head, down 7 percent from last year. The number of sheep lost to all predators totaled 3,800, down 300 head from a year ago.

The total value of non-predatory losses was \$2.2 million in 1999, slightly less than the previous year. Non-predatory losses accounted for 58 percent of all losses. The largest non-predatory cause of losses were diseases at

12,400 head. Sheep lost to non-predatory factors totaled 12,000 head, 13 percent lower than 1998. Non-predatory lamb losses came in at 24,800 head, 100 head lower than a year ago.

More producers reported sheep and lambs lost to unknown causes. There was a 6 percent increase in the number of sheep and lambs lost to unknown causes from the previous year. Lambs lost to unknown causes totaled 4,700 head, 300 head higher than 1998. Unknown causes claimed 2,200 sheep, 100 more head than last year. The value of sheep and lambs lost to unknown causes rose to \$0.4 million.

Sheep & Lamb Losses - 1999
Causes of Death



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 Montana Agricultural Statistics Service. 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 and the USDA, Animal Plant Health Inspection Service who also provided funding. The Montana Agricultural Statistics Service conducted the survey and expresses appreciation to all cooperating sheep producers.

Sheep & Lambs: Inventory, Death Losses, and Value of Losses, Montana, 1990-1999

Year	Jan. 1 Sheep & Lamb Inventory (000 head)	Lamb Crop (000 head)	DEATH LOSSES					
			All Sheep Losses (000 head)	Lambs (000 head)			All Sheep & Lamb Losses	
				Before Docking	After Docking	All Lambs	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/
1990	663	535	40	53	40	93	133.0	10.6
1991	683	585	42	54	46	100	142.0	10.7
1992	678	510	35	39	38	77	112.0	9.1
1993	564	480	35	36	37	73	108.0	10.0
1994	534	465	29	35	40	75	104.0	10.1
1995	490	410	25	34	33	67	92.0	9.9
1996	465	390	21	30	32	62	83.0	9.4
1997	432	380	25	32	28	60	85.0	10.1
1998	415	355	20	25	22	47	67.0	8.4
1999	380	340	18	23	23	46	64.0	8.6

Year	Predator Losses		Non- Predator Loss (000 head)	Unknown Causes (000 head)	Value of Losses (000 dollars)			
	Total Loss (000 head)	% Jan. 1 Inventory & Lambs Born 1/			Predator	Non- Predator	Unknown	Total 2/
1990	39.1	3.1	79.9	14.0	1,491.1	3,586.1	659.8	5,737.0
1991	44.9	3.4	83.5	13.6	1,590.0	3,179.6	550.4	5,320.0
1992	41.2	3.4	63.0	7.8	1,593.6	2,696.0	374.6	4,664.1
1993	40.2	3.7	59.4	8.4	1,767.7	2,891.8	418.8	5,078.2
1994	42.9	4.1	53.8	7.3	1,897.0	2,649.9	386.6	4,933.5
1995	37.1	4.0	46.9	8.0	2,001.0	2,821.2	500.1	5,322.3
1996	31.2	3.5	39.2	12.6	1,902.1	2,606.9	853.9	5,362.9
1997	27.0	3.2	49.1	8.9	1,769.8	3,598.9	627.1	5,995.8
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

1/ Lambs born equals lamb crop plus lambs lost before docking. 2/ Totals may not add because of rounding.

SHEEP & LAMBS: Losses by Cause, Montana, 1998-1999

Cause of Loss	SHEEP LOSS				LAMB LOSS				TOTAL LOSS			
	Number of Head		Value in Dollars (000) 1/, 3/		Number of Head		Value in Dollars (000) 2/, 3/		Number of Head		Value in Dollars (000) 3/	
	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999
Predators												
Fox	100	-	7.9	-	1,900	1,200	83.9	55.3	2,000	1,200	91.8	55.3
Dog	500	300	39.5	26.4	700	300	30.9	13.8	1,200	600	70.4	40.2
Coyote	2,900	2,800	229.1	246.4	12,000	12,300	529.9	566.8	14,900	15,100	759.0	813.2
Eagle	100	100	7.9	8.8	1,900	1,600	83.9	73.7	2,000	1,700	91.8	82.5
Bobcat	-	-	-	-	-	-	-	-	-	-	-	-
Bear	100	200	7.9	17.6	200	200	8.8	9.2	300	400	16.7	26.8
Mountain Lion	400	200	31.6	17.6	200	200	8.8	9.2	600	400	40.4	26.8
Other Animals	-	-	-	-	100	-	4.4	-	100	-	4.4	-
Unknown Predators	-	200	-	17.6	700	700	30.9	32.3	700	900	30.9	49.9
Total Predators	4,100	3,800	323.9	334.4	17,700	16,500	781.6	760.3	21,800	20,300	1,105.5	1,094.7
Non-Predators												
Digestive	4/	700	4/	61.6	4/	2,700	4/	124.4	4/	3,400	4/	186.0
Respiratory	4/	800	4/	70.4	4/	4,200	4/	193.5	4/	5,000	4/	263.9
Metabolic	4/	700	4/	61.6	4/	800	4/	36.9	4/	1,500	4/	98.5
Other Diseases	4/	900	4/	79.2	4/	1,600	4/	73.7	4/	2,500	4/	152.9
Total All Diseases	3,000	3,100	237.0	272.8	6,300	9,300	278.2	428.5	9,300	12,400	515.2	701.3
Weather Conditions	2,000	1,000	158.0	88.0	8,000	7,600	353.3	350.2	10,000	8,600	511.3	438.2
Poison	1,000	1,000	79.0	88.0	800	500	35.3	23.0	1,800	1,500	114.3	111.0
Lambing Complications	1,400	1,300	110.6	114.4	8,000	5,600	353.3	258.0	9,400	6,900	463.9	372.4
On Back	1,000	1,000	79.0	88.0	-	-	-	-	1,000	1,000	79.0	88.0
Old Age	4,900	3,900	387.1	343.2	-	-	-	-	4,900	3,900	387.1	343.2
Theft	300	600	23.7	52.8	400	600	17.7	27.6	700	1,200	41.4	80.4
Other	200	100	15.8	8.8	1,400	1,200	61.8	55.3	1,600	1,300	77.6	64.1
Total Non-Predators	13,800	12,000	1,090.2	1,056.0	24,900	24,800	1,099.6	1,142.8	38,700	36,800	2,189.8	2,198.8
Unknown Causes	2,100	2,200	165.9	193.6	4,400	4,700	194.3	216.6	6,500	6,900	360.2	410.2
Total Loss	20,000	18,000	1,580.0	1,584.0	47,000	46,000	2,075.5	2,119.7	67,000	64,000	3,655.5	3,703.7

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. 3/ Totals may not add due to rounding. 4/ Not available. - Denotes less than 100 head.



SHEEP & LAMBS: Percent of Losses By Cause and Size of Flock, Montana, 1998-1999

CAUSE OF LOSS	SIZE OF FLOCK										
	1-99		100-999		1000+		All Sizes				
	1998	1999	1998	1999	1998	1999	1995	1996	1997	1998	1999
Predators											
Fox	2	-	2	2	4	3	4	3	3	3	2
Dog	3	1	2	1	1	1	2	2	1	2	1
Coyote	12	27	20	24	30	27	30	27	23	22	24
Eagle	-	-	1	3	6	3	3	3	3	3	3
Bobcat	-	-	-	-	1	1	-	1	-	-	1
Bear	-	-	-	-	-	-	-	-	-	-	-
Mountain Lion	4	-	-	-	1	1	1	1	1	1	1
Other Animals	1	-	-	-	-	-	-	-	-	-	-
Unknown Predators	1	-	2	1	1	2	1	1	1	1	1
Total Predators 1/	24	29	28	31	43	39	40	38	32	33	32
Non-Predators											
Digestive	2/	9	2/	6	2/	5	2/	2/	2/	2/	5
Respiratory	2/	8	2/	8	2/	5	2/	2/	2/	2/	8
Metabolic	2/	4	2/	1	2/	1	2/	2/	2/	2/	2
Other Diseases	2/	6	2/	5	2/	3	2/	2/	2/	2/	4
Total All Diseases	25	28	12	20	11	15	10	8	9	14	20
Weather Conditions	15	6	21	12	11	14	16	17	31	15	13
Poison	-	-	2	1	5	3	2	2	2	3	2
Lambing Complications	25	21	15	12	10	8	9	8	8	14	11
On Back	-	1	1	1	2	2	1	1	1	1	2
Old Age	6	7	7	6	5	4	6	5	5	7	6
Theft	-	-	1	3	1	2	2	3	2	1	2
Other Causes	1	1	3	3	3	2	4	2	1	2	2
Total Non-Predators	72	63	61	58	48	50	50	47	58	57	57
Unknown Causes	4	8	11	11	9	11	10	15	10	10	11
Total Loss 1/	100	100	100	100	100	100	100	100	100	100	100

1/ Totals may not add due to rounding. 2/ Not available. - Denotes less than 1 percent.

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