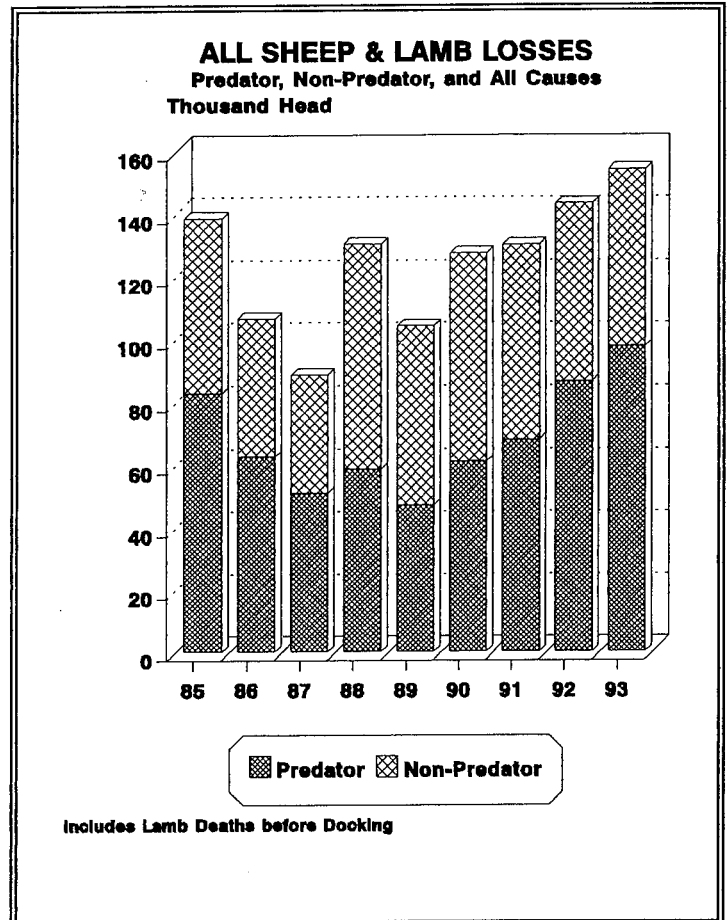


SHEEP LOSSES TO ALL CAUSES - 1993

This annual report is funded by the Wyoming Department of Agriculture. A survey of producers is conducted in early January and is used to estimate total sheep and lamb inventory on hand January 1 and to estimate sheep and lamb losses to all causes during the previous year.

Our thanks go to all the Wyoming ranchers and farmers whose voluntary cooperation made this report possible. I also want to thank the staff of field and telephone interviewers who did an excellent job of collecting the data. This series of reports based on information from a scientifically designed survey is important documentation for the sheep industry.



HIGHLIGHTS

PREDATOR LOSSES UP 13 PERCENT: Wyoming sheep producers lost 97,500 sheep and lambs to predators in 1993, up 13 percent from 1992. Coyotes were the main predator taking 74 percent of the total predator losses and 47 percent of all losses. Losses to coyotes were up 7 percent. Sheep and lamb losses to all causes increased 8 percent from 1992 with non-predator losses virtually unchanged. This is the fourth consecutive year with an increase in total sheep and lamb losses to predators.

ALL LAMB LOSSES UP 9 PERCENT: Sheep producers lost 122,000 lambs before or after docking in 1993, 9 percent more than in 1992. Losses to predators accounted for 71 percent of the total. Predator losses were up 14 percent from last year. Less disease and lambing problems offset more weather related deaths resulting in a 3 percent drop in non-predator losses.

SHEEP LOSSES UP: Sheep losses in Wyoming during 1993 totaled 32,000 head, up 3 percent from 1992. Predator losses increased 2 percent to 10,500 head and were 33 percent of the total. Non-predator losses increased 4 percent. Coyotes killed 8,500 adult sheep which is down from 8,800 in 1992. Poison was the leading non-predator cause of death followed closely by old age and weather.

VALUE OF LOSSES OVER \$7 MILLION: Sheep producers in Wyoming lost over \$7 million from sheep and lamb deaths in 1993. Predation accounted for \$4.2 million which was up from \$3.3 million in 1992. Total dollar value for all losses in 1993 was up 21 percent from the previous year. This large increase was due to both more head lost to predators and a higher value per head.

LOSSES OF SHEEP AND LAMBS BY CAUSE: WYOMING 1988-93 1/

Cause of loss	1988	1989	1990	1991	1992	1993
Number of head						
Coyotes	42,700	34,800	43,900	51,300	67,300	72,000
Bobcats	700	300	100	200	300	700
Dogs	1,900	1,400	1,800	1,600	1,000	900
Bears	900	900	500	1,100	800	1,100
Eagles	4,900	4,600	6,100	4,300	5,400	9,500
Fox	4,600	3,800	7,200	7,000	9,200	11,400
Mountain Lions	2,600	1,200	1,100	2,200	2,000	1,800
Other Predators	300	100	200	200	300	100
Total Predators	58,600	47,100	60,900	67,900	86,300	97,500
Weather	19,900	11,500	15,200	17,200	11,600	17,800
Disease	11,100	8,500	12,200	10,600	12,600	9,800
Lambing	12,800	8,700	14,000	12,300	13,200	9,800
Poison	8,800	7,000	7,700	6,500	6,400	7,500
Old Age	5,500	6,700	5,700	5,600	4,400	3,800
On Back	2,500	2,500	1,800	2,000	1,800	1,900
Theft	4,300	4,800	3,700	4,700	2,600	2,700
Other Known Causes	6,700	7,200	6,100	3,200	4,100	3,200
Total Loss From All Causes	130,200	104,000	127,300	130,000	143,000	154,000

Percent of total by cause

Coyotes	32.8	33.5	34.4	39.5	47.1	46.7
Bobcats	.5	.3	.1	.2	.2	.4
Dogs	1.5	1.3	1.4	1.2	.7	.6
Bears	.7	.9	.4	.8	.6	.7
Eagles	3.8	4.4	4.8	3.3	3.8	6.2
Fox	3.5	3.6	5.7	5.4	6.4	7.4
Mountain Lions	2.0	1.2	.9	1.7	1.4	1.2
Other Predators	.2	.1	.2	.2	.2	.1
Total Predators	45.0	45.3	47.8	52.2	60.3	63.3
Weather	15.3	11.1	11.9	13.2	8.1	11.5
Disease	8.5	8.2	9.6	8.2	8.8	6.4
Lambing	9.8	8.4	11.0	9.5	9.2	6.4
Poison	6.8	6.7	6.0	5.0	4.5	4.9
Old Age	4.2	6.4	4.5	4.3	3.1	2.5
On Back	1.9	2.4	1.4	1.5	1.3	1.2
Theft	3.3	4.6	2.9	3.6	1.8	1.7
Other Known Causes	5.2	6.9	4.8	2.5	2.9	2.1
Total Loss From All Causes	100.0	100.0	100.0	100.0	100.0	100.0

Dollar value of losses by cause

Coyotes	2,188,600	1,730,900	1,533,000	1,720,700	2,597,500	3,128,500
Bobcats	28,500	21,400	3,000	5,900	13,300	28,200
Dogs	137,100	88,500	90,000	57,200	40,500	44,300
Bears	69,200	68,800	24,000	52,100	36,200	60,300
Eagles	199,400	200,700	192,000	130,900	194,500	388,200
Fox	192,600	154,800	220,500	211,100	324,800	464,800
Mountain Lions	138,400	56,900	42,000	88,000	83,700	91,200
Other Predators	17,700	4,000	6,000	5,900	13,300	4,000
Total Predators	2,971,500	2,326,000	2,110,500	2,271,800	3,303,800	4,209,500
Weather	1,152,000	582,500	555,000	575,400	444,500	808,100
Disease	609,200	521,000	523,500	431,100	542,700	461,700
Lambing	754,400	524,200	586,500	455,800	552,700	475,000
Poison	586,200	476,000	375,000	328,700	309,300	414,400
Old Age	522,500	582,900	427,500	347,200	275,000	254,600
On Back	232,100	212,700	135,000	117,500	107,000	119,300
Theft	332,500	346,300	187,500	194,500	135,000	164,900
Other Known Causes	419,300	436,400	223,500	108,000	187,500	153,000
Total Loss From All Causes	7,579,700	6,008,000	5,124,000	4,830,000	5,857,500	7,060,600

1/Includes all lamb losses from birth both before and after docking.

LOSSES OF SHEEP BY CAUSE: WYOMING 1988-93

Cause of loss	1988	1989	1990	1991	1992	1993
Number of head						
Coyotes	8,300	7,500	4,800	6,100	8,800	8,500
Bobcats	200			100		
Dogs	1,100	700	800	300	200	300
Bears	600	700	200	600	300	600
Eagles		400	200	100	200	200
Fox	100	100	100	100	100	200
Mountain Lions	600	200	200	700	500	700
Other Predators	100				100	
Total Predators	10,800	9,800	6,300	7,900	10,300	10,500
Weather	6,300	2,700	2,200	2,000	1,400	3,400
Disease	2,900	3,900	3,500	3,600	3,700	2,500
Lambing	4,300	3,800	3,700	2,800	3,300	3,000
Poison	4,200	4,200	3,200	4,200	3,100	4,200
Old Age	5,500	6,700	5,700	5,600	4,400	3,800
On Back	2,400	2,400	1,800	1,800	1,600	1,600
Theft	2,900	3,300	1,700	1,700	1,600	2,100
Other Known Causes	2,700	3,200	900	400	1,600	900
Total Loss From All Causes	42,000	40,000	29,000	30,000	31,000	32,000

Percent of total by cause						
Coyotes	19.9	18.8	16.5	20.3	28.4	26.6
Bobcats		.5			.3	
Dogs	2.6	1.7	2.8	1.0	.6	.9
Bears	1.4	1.7	.7	2.0	1.0	1.9
Eagles		1.0	.7	.3	.6	0.6
Fox	.2	.3	.3	.3	.3	0.6
Mountain Lions 1/	1.4	.5	.7	2.3	1.6	2.2
Other Predators	.2				.3	
Total Predators	25.7	24.5	21.7	26.3	33.2	32.8
Weather	15.0	6.7	7.6	6.7	4.5	10.6
Disease	6.9	9.7	12.1	12.0	11.9	7.8
Lambing	10.2	9.5	12.8	9.3	10.6	9.4
Poison	10.0	10.5	11.0	14.0	10.0	13.1
Old Age	13.1	16.8	19.7	18.7	14.2	11.9
On Back	5.7	6.0	6.2	6.0	5.2	5.0
Theft	6.9	8.3	5.9	5.7	5.2	6.6
Other Known Causes	6.5	8.0	3.1	1.3	5.2	2.8
Total Loss From All Causes	100.0	100.0	100.0	100.0	100.0	100.0

Dollar value of losses by cause 2/						
Coyotes	788,500	652,500	360,000	378,200	550,000	569,500
Bobcats		17,400			6,300	
Dogs	104,500	60,900	60,000	18,600	12,500	20,100
Bears	57,000	60,900	15,000	37,200	18,700	40,200
Eagles		34,800	15,000	6,200	12,500	13,400
Fox	9,500	8,700	7,500	6,200	6,300	13,400
Mountain Lions 1/	57,000	17,400	15,000	43,400	31,200	46,900
Other Predators	9,500				6,300	
Total Predators	1,026,000	852,600	472,500	489,800	643,800	703,500
Weather	598,500	234,900	165,000	124,000	87,500	227,800
Disease	275,500	339,300	262,500	223,200	231,200	167,500
Lambing	408,500	330,600	277,500	173,600	206,200	201,000
Poison	399,000	365,400	240,000	260,400	193,800	281,400
Old Age	522,500	582,900	427,500	347,200	275,000	254,600
On Back	228,000	208,800	135,000	111,600	100,000	107,200
Theft	275,500	287,100	127,500	105,400	100,000	140,700
Other Known Causes	256,500	278,400	67,500	24,800	100,000	60,300
Total Loss From All Causes	3,990,000	3,480,000	2,175,000	1,860,000	1,937,500	2,144,000

1/Mountain Lions reported as separate item beginning in 1986, previous years included with Other Predators.

2/Sheep value per head based on a two year average value per head of ewes 1+ years.

Sheep value: 1988-\$95.00; 1989-\$87.00; 1990-\$75.00; 1991-\$62.00; 1992-\$62.50; 1993-\$67.00.

LOSSES OF LAMBS BY CAUSE: WYOMING 1988-93 1/

Cause of loss	1988	1989	1990	1991	1992	1993
Number of head						
Coyotes	34,400	27,300	39,100	45,200	58,500	63,500
Bobcats	700	100	100	200	200	700
Dogs	800	700	1,000	1,300	800	600
Bears	300	200	300	500	500	500
Eagles	4,900	4,200	5,900	4,200	5,200	9,300
Fox	4,500	3,700	7,100	6,900	9,100	11,200
Mountain Lions 2/	2,000	1,000	900	1,500	1,500	1,100
Other Predators	200	100	200	200	200	100
Total Predators	47,800	37,300	54,600	60,000	76,000	87,000
Weather	13,600	8,800	13,000	15,200	10,200	14,400
Disease	8,200	4,600	8,700	7,000	8,900	7,300
Lambing	8,500	4,900	10,300	9,500	9,900	6,800
Poison	4,600	2,800	4,500	2,300	3,300	3,300
On Back	100	100	200	200	200	300
Theft	1,400	1,500	2,000	3,000	1,000	600
Other Known Causes	4,000	4,000	5,200	2,800	2,500	2,300
Total Loss From All Causes	88,200	64,000	98,300	100,000	112,000	122,000

Percent of total by cause

Coyotes	39.0	42.6	39.8	45.2	52.2	52.0
Bobcats	.8	.2	.1	.2	.2	.6
Dogs	.9	1.1	1.0	1.3	.7	.5
Bears	.3	.3	.3	.5	.4	.4
Eagles	5.6	6.6	6.0	4.2	4.6	7.6
Fox	5.1	5.8	7.2	6.9	8.1	9.2
Mountain Lions 2/	2.3	1.5	.9	1.5	1.3	.9
Other Predators	.2	.2	.2	.2	.2	.1
Total Predators	54.2	58.3	55.5	60.0	67.9	71.3
Weather	15.4	13.7	13.2	15.2	9.1	11.8
Disease	9.3	7.2	8.9	7.0	7.9	6.0
Lambing	9.7	7.7	10.5	9.5	8.8	5.6
Poison	5.2	4.4	4.6	2.3	2.9	2.7
On Back	.1	.2	.2	.2	.2	.2
Theft	1.6	2.3	2.0	3.0	.9	.5
All Other Causes	4.5	6.2	5.3	2.8	2.2	1.9
Total Loss From All Causes	100.0	100.0	100.0	100.0	100.0	100.0

Dollar value of losses by cause 3/

Coyotes	1,400,100	1,078,400	1,173,000	1,342,500	2,047,500	2,559,000
Bobcats	28,500	4,000	3,000	5,900	7,000	28,200
Dogs	32,600	27,600	30,000	38,600	28,000	24,200
Bears	12,200	7,900	9,000	14,900	17,500	20,100
Eagles	199,400	165,900	177,000	124,700	182,000	374,800
Fox	183,100	146,100	213,000	204,900	318,500	451,400
Mountain Lions 2/	81,400	39,500	27,000	44,600	52,500	44,300
Other Predators	8,200	4,000	6,000	5,900	7,000	4,000
Total Predators	1,945,500	1,473,400	1,638,000	1,782,000	2,660,000	3,506,000
Weather	553,500	347,600	390,000	451,400	357,000	580,300
Disease	333,700	181,700	261,000	207,900	311,500	294,200
Lambing	345,900	193,600	309,000	282,200	346,500	274,000
Poison	187,200	110,600	135,000	68,300	115,500	133,000
On Back	4,100	3,900	5,900	7,000	7,000	12,100
Theft	57,000	59,200	60,000	89,100	35,000	24,200
All Other Causes	162,800	158,000	156,000	83,200	87,500	92,700
Total Loss From All Causes	3,589,700	2,528,000	2,949,000	2,970,000	3,920,000	4,916,600

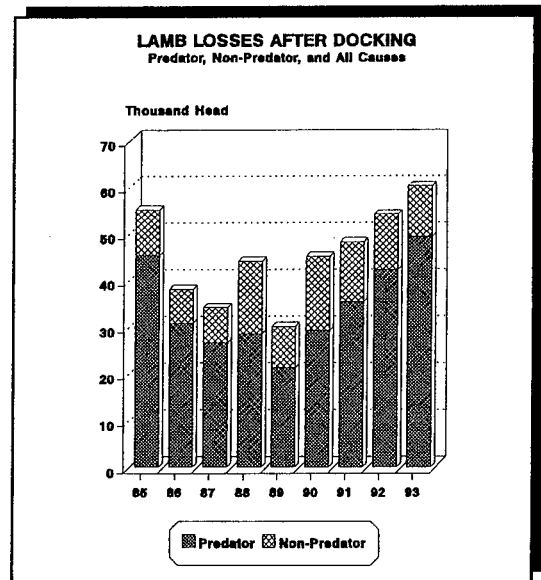
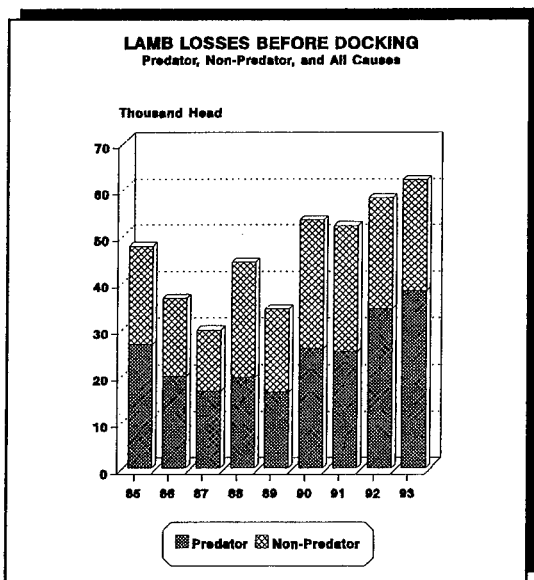
1/Includes all lamb losses both before and after docking.

2/Mountain Lions reported as separate item beginning in 1986, previous years included with Other Predators.

3/Lamb value per head based on the annual hundredweight prices received by farmers and ranchers for a 60 pound lamb.
Lamb value: 1988-\$40.70; 1989-\$39.50; 1990-\$30.00; 1991-\$29.70; 1992-\$35.00; 1993-\$40.30.

LOSSES OF LAMBS BEFORE DOCKING: WYOMING 1988-93

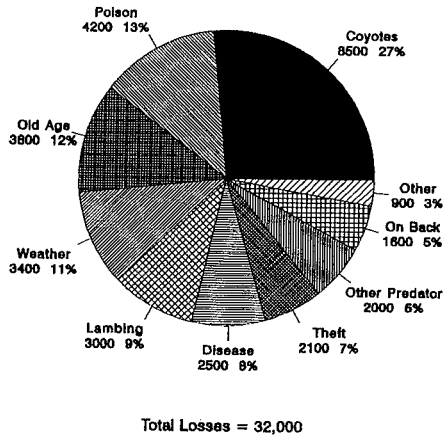
Cause of loss	1988	1989	1990	1991	1992	1993
Number of head						
Coyotes	12,200	10,100	15,100	16,400	23,500	22,500
Bobcats	100		100	100	100	300
Dogs	300	200	200	200	300	200
Bears			100	200	100	
Eagles	3,000	2,900	4,300	2,500	3,300	6,200
Fox	3,400	2,600	5,500	4,600	5,900	8,600
Mountain Lions 2/	400	100	800	700		200
Other Predators			100	100	100	
Total Predators	19,300	16,200	25,500	24,900	34,000	38,000
Weather	10,300	7,100	10,300	12,700	8,900	13,000
Disease	3,400	2,300	3,700	2,900	3,600	3,000
Lambing	8,500	4,900	10,300	9,500	9,900	6,800
Poison	900	800	1,100	300	700	400
On Back	100			100	100	200
Theft	300	200	200	300	200	100
Other Known Causes	1,400	2,500	2,200	1,300	600	500
Total Loss From All Causes	44,200	34,000	53,300	52,000	58,000	62,000



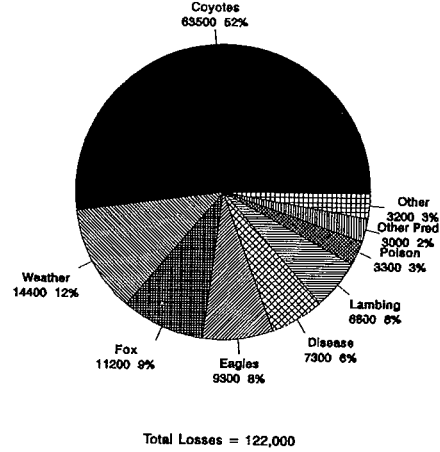
LOSSES OF LAMBS AFTER DOCKING: WYOMING 1988-93

Cause of loss	1988	1989	1990	1991	1992	1993
Number of head						
Coyotes	22,200	17,200	24,000	28,800	35,000	41,000
Bobcats	600	100		100	100	400
Dogs	500	500	800	1,100	500	400
Bears	300	200	200	300	400	500
Eagles	1,900	1,300	1,600	1,700	1,900	3,100
Fox	1,100	1,100	1,600	2,300	3,200	2,600
Mountain Lions 2/	1,700	600	800	700	800	900
Other Predators	200	100	100	100	100	100
Total Predators	28,500	21,100	29,100	35,100	42,000	49,000
Weather	3,300	1,700	2,700	2,500	1,300	1,400
Disease	4,800	2,300	5,000	4,100	5,300	4,300
Poison	3,700	2,000	3,400	2,000	2,600	2,900
On Back		100		100	100	100
Theft	1,100	1,300	1,800	2,700	800	500
Other Known Causes	2,600	1,500	3,000	1,500	1,900	1,800
Total Loss From All Causes	44,000	30,000	45,000	48,000	54,000	60,000

**Sheep Losses by Cause
Wyoming 1993**



**All Lamb Losses by Cause
Wyoming 1993**



LOSSES OF SHEEP AND LAMBS: PERCENT BY CAUSE WITHIN EACH AGRICULTURAL STATISTICS DISTRICT, WYOMING 1993 1/

Cause of Loss	Agricultural Statistics District					
	North	North	South	South	State	
	West	East	West	Central	East	
	Percent					
Coyotes	42.2	40.5	54.8	54.1	48.1	46.8
Bobcats	0.0	0.7	1.2	0.0	0.5	0.5
Dogs	1.2	0.5	0.6	0.4	0.5	0.6
Bears	0.9	0.8	1.8	0.6	0.0	0.7
Eagles	2.8	10.4	2.4	4.7	5.0	6.2
Fox	4.4	8.2	13.9	4.7	7.7	7.4
Mountain Lions	1.9	1.1	1.2	1.5	0.5	1.2
Other Predators	0.2	0.0	0.0	0.1	0.0	0.1
Total predators	53.6	62.0	75.9	66.1	62.4	63.3
Weather	15.3	12.3	7.2	12.0	9.4	11.6
Disease	9.7	5.8	4.8	3.2	9.4	6.4
Lambing	8.8	5.4	4.8	5.8	7.7	6.4
Poison	3.7	5.6	3.0	7.0	3.0	4.9
Old Age	2.3	2.1	3.0	3.2	2.0	2.5
On Back	1.4	1.2	0.6	0.6	2.4	1.2
Theft	0.0	3.5	0.0	0.9	2.0	1.8
All Other Known Causes	5.1	2.1	0.6	1.2	1.7	2.1
Total Loss-All Causes	100.0	100.0	100.0	100.0	100.0	100.0