



# 1997 Oregon Wildlife Damage Survey



October 28, 1998

Phone: 503 326 2131

## Wildlife damage losses total \$158 million

Wildlife caused Oregon farmers and ranchers \$158 million in damage to crops and livestock, structures, veterinary and prevention expenses in 1997 according to a survey conducted by the Oregon Agricultural Statistics Service. Of that total, production losses of \$147.1 million occurred to crops and livestock production, structure damage totaled \$4.5 million, livestock injury costs were \$214,000 and damage prevention expenses of \$6.0 million were incurred.

According to the survey, 47 percent of the state's farms reported some type of wildlife damages.

## Crops suffer most damage

Damage to crops amounted to \$145.6 million and livestock losses totaled \$1.5 million. Deer, elk, geese and rodents caused the most damage to crops while predators, specifically coyotes, cougars and dogs, inflicted the most damage to livestock. Deer and elk were also responsible for about three fourths of the damage to structures, mostly fences. Costs incurred for injured livestock were an additional \$214,000. That total includes \$80,000 to treat injuries caused by dogs.

## Damage prevention cost \$6.0 million

Expenses incurred for wildlife damage prevention were necessary on 19 percent of Oregon farms and totaled more than \$6.0 million. Field crops required the most prevention costs (\$3.6 million) while costs for fruits and vegetables and livestock were evenly divided at \$1.2 and \$1.3 million, respectively. Prevention expenses included fencing, hazing devices, guardian animals, etc.

## Losses total 3.3 percent of total value of production

Total losses amounted to 3.3 percent of production, and were incurred mostly to crops, where 3.6 percent of the value of production was lost. Livestock losses totaled 0.4 percent of total livestock values.

## Publication

The random sample survey of 6,000 Oregon agriculture operators was sponsored by the Oregon Department of Agriculture at the request of the Board of Agriculture through funding by the State Legislature. The report was published by the Oregon Agricultural Statistics Service. A special thanks goes to the many farmers and ranchers participating in this survey.

## Wildlife damage to value of production: Oregon, 1997

Category	Damage value	Average per farm reporting damage
	<i>1,000 dollars</i>	<i>Dollars</i>
Crops	145,616	9,223
Livestock	1,528	740
Structures	4,478	806
Prevention costs	6,045	1,555
Injury costs	214	466
<b>All costs</b>	<b>157,881</b>	<b>3,517</b>

**Wildlife damage to crops, by commodity, Oregon 1997**

Commodity	Damage value		Avg./farm reporting damage
	1,000 dollars	Percent	
Pasture	77,262	53.1	13,928
Nursery	20,486	14.1	20,205
Hay	13,666	9.4	5,267
Grass seed	9,440	6.5	21,352
All fruits	9,321	6.4	5,246
Christmas trees	1,887	1.3	22,690
Wheat	1,796	1.2	2,665
All vegetables	589	.4	1,729
Other	11,169	7.6	17,885
<b>Total crop damage</b>	<b>145,616</b>	<b>100.0</b>	<b>9,223</b>

**Wildlife damage to livestock and poultry, by commodity, Oregon 1997\***

Commodity	Damage value		Avg./farm reporting damage
	1,000 dollars	Percent	
Cattle and calves	870	57.0	824
Sheep and lambs	552	36.2	767
Horses	54	3.6	1,563
Other	51	3.2	368
<b>All livestock and poultry</b>	<b>1,528.0</b>	<b>100.0</b>	<b>740</b>

\* May not add due to rounding.

**Wildlife damage to grass seed crops, by species, Oregon 1997**

Species	Northwest <sup>1/</sup>	All other areas
	1,000 dollars	1,000 dollars
Geese	5,738	27
Other Waterfowl	82	-
Other Birds	-	-
Deer/Eik	153	10
Rodents	2,891	530
Other	8	-
<b>Total damage to grass seed crops</b>	<b>8,872</b>	<b>568</b>

1/ Northwest Oregon counties: Benton, Clackamas, Clatsop, Columbia, Lane, Lincoln, Linn, Marion, Multnomah, Polk, Tillamook, Washington and Yamhill.

### Damage by species: Oregon, 1997

Commodity by species	Damaged value *
	<i>1,000 dollars</i>
<b>Crops</b>	
Deer/elk	101,103
Geese	14,932
Rodents	16,527
Other birds	10,205
Other	2,849
<b>Total crops</b>	<b>145,616</b>
<b>Livestock</b>	
Coyotes	939
Cougars	308
Dogs	133
Others	148
<b>Total livestock</b>	<b>1,528</b>
<b>Total crops &amp; livestock</b>	<b>147,144</b>

\* May not add due to rounding.

### Wildlife damage prevention expenses, Oregon 1997\*

Commodity	Damaged value	
	<i>1,000 dollars</i>	<i>Percent</i>
All crops	4,761	78.6
All livestock	1,284	21.2
<b>Total</b>	<b>6,045</b>	<b>100.0</b>

\* May not add due to rounding.

### Costs of injuries to livestock by district, Oregon 1997\*

District	Costs of all injuries	Costs of injuries due to dogs
	<i>1,000 dollars</i>	<i>1,000 dollars</i>
Northwest <sup>1/</sup>	120	52
North central <sup>2/</sup>	5	3
Northeast <sup>3/</sup>	5	3
Southwest <sup>1/</sup>	29	9
Southeast <sup>4/</sup>	55	13
<b>State Total</b>	<b>214</b>	<b>80</b>

\* Includes veterinary charges.

### Wildlife damage to wheat, by area and species, Oregon 1997

Species	Western <sup>1/</sup>	North Central <sup>2/</sup>	Northeast <sup>3/</sup>	Southeast <sup>4/</sup>
	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>
Geese	476	68	48	17
Other waterfowl	—	—	47	—
Other birds	—	—	1	—
Deer/elk	132	425	270	85
Rodents	—	63	136	2
Other	1	21	—	4
<b>Total damage</b>	<b>609</b>	<b>577</b>	<b>502</b>	<b>108</b>

1/ Western Oregon counties: Benton, Clackamas, Clatsop, Columbia, Lane, Lincoln, Linn, Marion, Multnomah, Polk, Tillamook, Washington, Yamhill, Coos, Curry, Douglas, Jackson and Josephine.

2/ North central Oregon counties: Gilliam, Coos, Curry, Hood River, Morrow, Sherman, and Wasco.

3/ Northeast Oregon counties: Baker, Umatilla, Union, and Wallowa.

4/ Southeast Oregon counties: Crook, Deschutes, Grant, Harney, Jefferson, Klamath, Lake, Malheur, and Wheeler.

## Structural damages by species: Oregon, 1997

Species	Amount
	<i>1,000 dollars</i>
Deer/Elk	3,341
Rodents	325
Others	253
Miscellaneous	559
<b>Total</b>	<b>4,478</b>

### Reliability of Wildlife Damage Survey Estimates, Oregon, 1997

A random sample of Oregon agricultural producers was surveyed to provide data for these estimates. Survey procedures ensured that all producers, regardless of size, had a chance to be included in the survey. Data were collected from a statewide random sample of 6,000 operators during July - September, 1998. An initial mailing of the questionnaire was followed by a second mailing to all non-respondents.

Further, a non-response phone survey was made on the remaining non-respondents. The response from the two mailings was 56.3 percent. Of those 61.1 percent were usable. The non-response survey was on a sample of 675 operators. All were accounted for and 55 percent were usable.

This survey and resulting estimates were subject to sampling and non-sampling type errors that are common to all surveys. Sampling error for percent of farms reporting damage was .0104 percent. The average loss per farm has a standard error of  $\pm 9\%$ . For reference, sampling errors for the National Agricultural Statistics Service major crop survey estimates are between 1 and 6 percent.

There was no significant difference in the proportion of operators reporting by county and major commodity than that found in the population universe. There were only negligible differences of value of production by size groups for the operators reporting as compared to the population universe. The non-response follow-up survey also showed no significant difference in the proportion of operations reporting by county and major commodity. For the non-response follow-up survey, sampling error for percent of farms reporting damage was .0256 percent. Therefore, the survey results would have been similar had the entire 6,000 sampled operators completely reported.

To minimize non-sampling errors, vigorous quality controls were used in the data collection process and all data were carefully reviewed for consistency and reasonableness.

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Bruce Andrews, Director  
Department of Agriculture

Homer K. Rowley Oregon  
State Statistician

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**Oregon Agricultural  
 Statistics Service  
 1735 Federal Bldg., 1220 SW 3rd  
 Portland, Oregon 97204**