

*Wildlife Damage Management, Internet Center for
Great Plains Wildlife Damage Control
Workshop Proceedings*

University of Nebraska - Lincoln

Year 1997

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AGRICULTURAL COMMODITIES IN
1994 WITH EMPHASIS ON THE
GREAT PLAINS

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WILDLIFE-CAUSED LOSSES OF AGRICULTURAL COMMODITIES IN 1994 WITH EMPHASIS ON THE GREAT PLAINS

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Abstract. The USDA, National Agricultural Statistics Service (NASS) surveyed 16,000 agricultural producers in January 1995. Of 10,144 respondents nationwide, 58% reported wildlife-caused losses of their commodities, an increase from 55% in 1989. Based on the median value of all producers' estimates of their losses, wildlife-caused losses cost producers approximately \$591 million in 1994, \$130 million more than in 1989. Losses presented are based on median producer estimates which have been shown to be consistent with field-measured estimates of damage. Because the dollar value of losses are based on median estimates, extremes of reported losses do not affect these results. If all producers estimated their losses accurately, wildlife-caused losses based on the mean of producers' estimates may have been as high as \$1.6 billion in 1994, compared to \$1.3 billion in 1989. While these losses represent 1% of the value of agricultural production, losses are not evenly distributed and 23% of producers sustained losses valued at >\$500. Further, some commodities sustain greater losses than others. All differences discussed are statistically significant.

Awareness of ADC by agricultural producers increased from 21% in 1989 to 27% in 1994. Those aware of ADC were more likely to have had a loss in 1994 than those not aware of ADC. Although 27% of respondents were aware of ADC, only 3.2% ($n = 328$) had ever contacted an ADC specialist. For producers aware of ADC, those who contacted ADC had greater median losses (\$1,200) than those producers who had not contacted ADC (median <\$100). Of those who contacted ADC, 49% said that they received direct control from an ADC specialist, while 55% said that they had modified their operation as a result of advice received from an ADC specialist. Catfish-trout producers were most likely to contact an ADC specialist. The estimated loss was greater for producers who contacted ADC than for those who had not. Producers who had received direct control from an ADC specialist reported greater losses than those who had not received direct control. The reported value of losses did not differ statistically between those who modified their operation based on advice from an ADC specialist and those who had not. Caution must be taken in the interpretation of these results; causal relationships can not be assumed.

Patterns of losses for livestock/poultry producers in 1994 differed little from those in 1989. Twenty-one percent of livestock/poultry producers reported wildlife-caused losses. Carnivores, primarily coyotes, remained the most frequently cited, and caused more losses in western regions. Wildlife-caused losses cost producers \$140 million in 1994, similar to the \$138 million in 1989.

Wildlife-caused losses cost field crop producers \$316 million in 1994, an increase from \$237 million in 1989. The proportion with field crop losses (51%) increased (from 47% in 1989) and the estimated value of wildlife-caused losses increased. Reported deer-caused losses (the species cited most frequently) of field crops were greater in 1994 than in 1989.

Patterns of wildlife-caused losses of stored commodities were similar to 1989. Nearly half (43%) of producers stored feed, seed or grain on their farm, of which 23% reported wildlife-caused losses primarily to rats and mice. Losses of stored commodities were valued at \$23 million, similar to the \$26 million loss in 1989.

While average wildlife-caused losses represent 1% of the value of agricultural production, the loss rates vary widely among producers and commodities. Wildlife managers must recognize the magnitude and distribution of wildlife-caused damage to agriculture and consider both perceptions and damage in their decisions about wildlife management.

Pages 171-172 in C. D. Lee and S.E. Hygnstrom, eds. Thirteenth Great Plains Wildl. Damage Control Workshop Proc., Published by Kansas State University Agricultural Experiment Station and Cooperative Extension Service.

Key Words: agricultural producer, bird, *Canis*, coyote, damage, deer, dollar value, field crop, livestock, loss, *Odocoileous*, wildlife