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# WILDLIFE DAMAGE CONTROL PROGRAM NEEDS OF COUNTY EXTENSION AGENTS IN COLORADO

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**Abstract** — County extension agents in Colorado indicated that extension bulletins were the most important type of assistance needed for their clientele in the area of wildlife damage control. County extension agents indicated that pocket gophers, prairie dogs, skunks, and coyotes were the most important of 32 species requiring extension information for their clientele.

## Introduction

Extension wildlife specialists frequently conduct wildlife damage control education programs by working directly with clientele groups or by training county extension agents and other professionals and providing them with materials that are passed along to their clientele. In order to conduct the most successful programs, extension wildlife specialists should have knowledge of the needs of professionals and their clientele. This study was conducted in Colorado to evaluate programming needs of county extension agents and their clientele in wildlife damage control. The results of this study may be applicable in other states.

## Methods

Questionnaires were mailed during September 1985 to 83 county extension agents. A second questionnaire was mailed to nonrespondents. The county agents were instructed to score each type of programming assistance in wildlife damage control and each species of concern from 0 (type of assistance or species not important) to 10 (type of assistance or species extremely important) according to their clientele's needs. Similarities in programming needs and species were determined with Spearman's coefficient of rank correlation.

## Results and Discussion

Responses to the questionnaire were received from 70 county extension agents; 66 and 69 agents provided responses related to type of programming needs and species, respectively. The 70 agents, according to their extension titles, specialized in agriculture (34), agronomy (6), horticulture (12), livestock (8), various combinations of agriculture, agronomy, livestock and horticulture (6), entomology (1), natural resources (1), community development (1) and director (1). Most of the county agents had broad educational responsibilities with several also responsible for home economics and youth education.

County extension agents rated extension bulletins as the most important type of assistance that extension specialists could provide to assist their clientele's needs in wildlife damage control (Table 1). Agents expressed a strong desire to have the extension wildlife specialist available for telephone consultations. News releases that could be incorporated in the county agents' weekly newspaper columns were rated higher than news releases sent directly to newspapers (Table 1). Communications between county agents' microcomputers and the wildlife specialist's microcomputer to provide the latest information on wildlife

**Table 1. County extension agents' prioritization of needed programming assistance for their clientele in wildlife damage control.**

Type of assistance	Number of agents and average scores <sup>a</sup>				
	All Agents (66)	Agricultural agents (33)	Agronomy agents (5)	Horticulture agents (10)	Livestock agents (8)
Extension bulletins	8.8	8.6	9.8	9.0	7.8
Telephone consultations	7.4	8.3	5.8	6.6	6.4
News releases for agent columns	6.2	6.4	4.4	5.6	6.0
Agent training workshops	6.0	6.0	4.0	7.4	4.8
Public meetings, demonstrations, and workshops	5.5	5.8	2.6	3.6	6.6
Slide and tape sets	5.2	5.1	4.2	4.4	7.4
News releases from wildlife specialist to newspapers	4.7	4.6	5.4	5.5	5.4
Teletips <sup>b</sup>	4.6	4.8	4.2	4.4	3.0
Radio and TV programs	4.2	4.6	2.6	4.7	4.8
Video tapes	3.8	4.2	4.0	2.7	3.5
Microcomputer communications	2.8	2.2	4.6	1.2	3.5

<sup>a</sup>Rated from 0 (type of assistance not needed) to 10 (extremely important need for type of assistance).

<sup>b</sup>Represent three-minute, telephone-accessible tape recordings of methods to control various types of wildlife damage.

<sup>c</sup>Between specialist's and agent's microcomputers thru telephone modems.

**Table 2. County extension Agents' (N=69) prioritization of their clientele's information needs species in wildlife damage control.**

Species	Average score <sup>a</sup>	Species	Average score <sup>a</sup>
Pocket gophers ( <i>Thomomys</i> , <i>Geomys</i> , <i>Pappogeomys</i> )	7.8	Pigeons ( <i>Columba livia</i> )	4.0
Prairie dogs ( <i>Cynomys</i> )	7.5	Dogs ( <i>Canis familiaris</i> )	3.8
Skunks ( <i>Spilogale</i> , <i>Mephitis</i> , <i>onepatus</i> )	7.3	Raccoon ( <i>Procyon lotor</i> )	3.5
Coyotes ( <i>Canis latrans</i> )	6.8	Treesquirrels (Family Sciuridae)	3.5
Woodpeckers (Family Picidae)	5.8	Antelope ( <i>Antilocapra americana</i> )	3.4
Ground squirrels (Family Sciuridae)	5.7	Norway rats ( <i>Rattus norvegicus</i> )	3.3
Starlings ( <i>Sturnus vulgaris</i> )	5.6	Elk ( <i>Cervus canadensis</i> )	3.0
Snakes (Suborder Ophidia)	5.4	Crows ( <i>Corvus brachyrhynchos</i> )	2.6
Bats (Order Chiroptera)	5.3	Porcupines ( <i>Erethizon dorsatum</i> )	2.6
Moles ( <i>Scalopus aquaticus</i> )	4.9	Domestic cats ( <i>Felis catus</i> )	2.4
English sparrows ( <i>Passer domesticus</i> )	4.8	Red foxes ( <i>Vulpes vulpes</i> )	2.2
House mice ( <i>Mus musculus</i> )	4.7	Waterfowl (Family Anatidae)	2.2
Blackbirds,(Family Icteridae)	4.3	Beavers ( <i>Castor canadensis</i> )	1.7
Rabbits ( <i>Sylvilagus</i> , <i>Lepus</i> )	4.3	Bobcats ( <i>Felis rufus</i> )	1.6
Voles ( <i>Microtus</i> , <i>Clethrionomys Phenacomys</i> , <i>Lagurus</i> )	4.3	Black bears ( <i>Ursus americanus</i> )	1.5
Deer ( <i>Odocoileus</i> )	4.0	Mountain lions ( <i>Felis concolor</i> )	1.3

<sup>a</sup>Rated from 0 (species not important) to 10 (species extremely important).

damage control was given the lowest priority, probably because only 23% of the agents had microcomputers with modems. The county agents' prioritization of other types of programming needs are listed in Table I. Programming needs of extension agents were similar ( $r_s = 0.61 - 0.96$ ,  $P < 0.05$  for each paired comparison) among the 4 extension districts (western, front range, south central, high plains) in Colorado. Programming needs were similar between agriculture and horticulture ( $r_s = 0.80$ ,  $P = 0.003$ ) and agriculture and livestock ( $r_s = 0.69$ ,  $P = 0.018$ ) agents, but were not similar between agriculture and agronomy ( $r_s = 0.32$ ,  $P = 0.34$ ), agronomy and horticulture ( $r_s = 0.43$ ,  $P = 0.18$ ), agronomy and livestock ( $r_s = 0.31$ ,  $P > 0.34$ ), and horticulture and livestock ( $r_s = 0.47$ ,  $P = 0.15$ ) agents (Table 1).

County extension agents in Colorado indicated that pocket gophers, prairie dogs, skunks, and coyotes were the most important of 32 species requiring extension information for their clientele (Table 2). Prioritization of the most important to the least important species were similar among the 4 extension districts ( $r_s = 0.37 - 0.74$ ,  $P < 0.05$  for each paired comparison) and among agriculture, agronomy, horticulture, and livestock agents ( $r_s = 0.40 - 0.77$ ,  $P < 0.025$  for each paired comparison) in Colorado.

The survey mailed to county agents did not include scientific names of animals. Some colloquial names for various groups of animals may have caused a few errors in the survey. For instance, moles received average scores of 4.3 to 5.6 among the 4 extension areas but moles are found only in northeastern and extreme southeastern Colorado, suggesting that county agents might also refer to other burrowing animals as moles.