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Interagency Collaboration on Wildlife Management Issues: Opportunities and Constraints

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Interagency Collaboration on Wildlife Management Issues: Opportunities and Constraints

Abstract

The researcher used mail surveys to evaluate the potential for partnership between Ohio's Extension and state organizations on wildlife management issues. Respondents rated wildlife topics according to perceived importance and their own knowledge about topics. Extension and state personnel did not differ in the perceived importance of 72% of topics, suggesting similar programming needs. However, knowledge values were higher for state than Extension personnel for 83% of topics. Thus, state agencies seem better poised to deal with wildlife management issues. Extension organizations should enhance the wildlife training of Extension agents and promote additional collaboration with state agencies.

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Introduction

Introduction

Traditionally, Cooperative Extension has provided science-based, educational resources for rural clientele on a variety of agricultural issues. However, societal and landscape changes have produced a need for the Extension system to include a stronger emphasis on natural resource management (Schneider & Smallidge, 2000).

Most notably, the demographics and needs of clientele have changed. In particular, our client base is increasingly urban and interested in a wide range of natural resource topics rather than a narrow agricultural focus. This interest in the natural resources may result, in part, from greater public awareness and interest in environmental issues. Within our physical landscapes, regional changes in land use have resulted in greater amounts of natural cover types (e.g., woodlands and wetlands) than in previous decades.

Wildlife ecology and management are among the most popular topics in the natural resources. Wildlife species have important ecological, aesthetic, scientific, educational, recreational, economic, and cultural value. Across the country, millions of people participate in wildlife-related activities, ranging from hunting to birdwatching. As the rural-urban interface expands, the public also faces more challenges with nuisance wildlife and associated damage. In addition, because the eastern U.S. has little public land, the management of wildlife on private lands is increasingly recognized as critical to the success of statewide conservation efforts. Thus, many state and federal agencies and environmental organizations are involved with outreach efforts to promote education and awareness about wildlife ecology and management, particularly concerning damage prevention, habitat enhancement, and conservation.

Although specific outreach programs vary in subject matter, delivery system, and approach, all depend on successfully identifying issues that are most important to concerned citizens and using these issues to guide programming. Interagency collaboration has been widely promoted as a strategy to achieve the challenging educational goals of various groups. However, effective and mutually beneficial collaboration depends on sharing compatible priorities. In an effort to evaluate the potential for partnership between Extension organizations and state agencies, I (1) identified

wildlife management issues that were perceived to be important to Ohioans and (2) compared perceived importance and knowledge levels of Extension and state agency personnel.

Methods

In consultation with faculty and staff in The Ohio State University Extension and the School of Natural Resources, I developed a mail survey that listed various wildlife management topics, ranging from habitat enhancement to wildlife damage management. These topics represented a broad range of wildlife management issues that, based on my conversations with agents, faculty, state agency personnel, and private citizens, seemed to be of interest to Ohioans. Respondents were asked to rate each topic according to (a) perceived importance to clientele and (b) their own level of knowledge about the topic. The rating scale ranged from 1 (low importance or knowledge) to 5 (high importance or knowledge).

In October 2000, surveys were mailed to 100 county Extension agents and district specialists dealing with agriculture and natural resources in all of Ohio's 88 counties and to 59 personnel at the Ohio Department of Natural Resources (Divisions of Forestry and Wildlife). I targeted state agency personnel who interacted directly or indirectly with private citizens concerned with forest or wildlife management issues (e.g., service foresters, private lands biologists, wildlife specialists). Ninety-six surveys were returned, and return rates were similar for both groups (60% for Extension and 61% for state agencies). Differences in importance and knowledge scores between state and Extension personnel were analyzed separately for each topic using an analysis of variance (SAS Institute, Inc., 1990).

Results and Discussion

In general, the wildlife management issues that were assigned the highest importance values by Extension and state personnel were related to either wildlife damage, hunting, or managing for game species (e.g., deer and grouse) (Table 1). Nuisance wildlife that were perceived to be of greatest importance to Ohioans were deer, geese, and raccoons.

Perceived public interest was relatively high for habitat management and enhancement, particularly for private forestlands, agricultural areas, and grasslands. In contrast, both groups rated the creation of specific habitat features (e.g., hedgerows, nest boxes) as less important to clientele. Clientele were thought to be especially interested in learning ways to attract game species.

Although the overall results initially suggested that bird-feeding and backyard landscaping were of relatively low importance to clientele, an examination of respondents from counties containing metropolitan areas showed that bird-feeding ranked third and backyard landscaping ranked sixth in perceived importance among habitat management topics. Given that a high proportion of Ohioans resides in metropolitan counties, targeting these "suburban" interests in wildlife habitat can have considerable impact. General information on wildlife in various landscapes (forest, grassland, urban) as well as wildlife-habitat relationships was also important to clientele regardless of the respondent group.

For 72% (21 of 29) of the topics, Extension and state personnel did not significantly differ in their ratings of perceived importance to clientele. Extension personnel placed greater importance on use of pesticides, wildlife-related health issues, and the control of bats, woodpeckers, and rodents than personnel in state agencies. In contrast, state agency personnel assigned higher importance values to the use of nestboxes, hunting, and managing for game species.

Table 1.
Ratings of Perceived Importance for Wildlife Topics

Topic	Extension (<i>n</i> = 60)	State (<i>n</i> = 36)	P
Backyard management for wildlife	2.80	2.69	0.671
Forest management on private lands	3.68	3.81	0.606
Grassland management on private lands	3.00	3.06	0.826
Managing windbreaks and hedgerows	2.68	2.67	0.960
Managing riparian buffers for wildlife	2.98	3.00	0.940

Creating or managing wetlands for wildlife	2.84	3.08	0.351
Wildlife-sensitive agricultural practices	3.21	2.94	0.250
Managing CRP/CREP lands for wildlife ^a	3.02	3.08	0.797
* Effects of pesticides on wildlife	3.17	2.39	0.003
* Nest boxes for wildlife	2.49	3.06	0.005
Bird-feeding	3.03	2.67	0.145
* Attracting game species	3.09	4.00	<0.001
Wildlife identification	3.26	3.39	0.553
Wildlife habitat relationships	3.30	3.53	0.244
Birdwatching	2.76	2.58	0.446
* Hunting	3.56	4.00	0.048
Wildlife in forest/grassland/urban areas	3.51	3.83	0.121
Wildlife rehabilitation	2.90	2.67	0.292
* Human-health issues (e.g., rabies)	3.71	3.12	0.012
Goose problems	4.21	3.97	0.283
Deer problems	4.34	4.61	0.129
Blackbird, crow, and starling problems	3.63	3.25	0.105
Raccoon problems	3.68	4.00	0.128
* Bat problems	3.24	2.63	0.014
Squirrel problems	2.86	2.46	0.078
* Woodpecker problems	2.61	2.17	0.048
* Vole, mouse, or rat problems	3.24	2.03	<0.001
Woodchuck problems	3.78	3.61	0.516
Coyote problems	3.61	3.42	0.416

Means ranged from 1 (low importance) to 5 (high importance).

* Indicates statistically significant difference ($P < 0.05$).

Respondents generally rated their knowledge similar to the importance score, and there were few large gaps between importance and knowledge. However, there were striking differences in the self-assessed knowledge scores between Extension and state personnel (Table 2). Self-assessed knowledge values were significantly higher for state agency than Extension personnel for 83% (24 of 29) of wildlife topics. Although it is possible that gaps between the two groups were related to confidence with subject matter, differences in professional development and training likely explain a large part of the pattern.

In Ohio, most Extension agents in agriculture and natural resources have extensive training in agriculture but less exposure to natural resource management. In contrast, most personnel at the Forestry and Wildlife Divisions of the Ohio Department of Natural Resources have extensive training in natural resource fields, including wildlife management. These differences in training reflect, in part, the traditional agricultural focus of Extension agents. However, as the clientele base shifts from agricultural to urban/suburban areas, the emphasis of outreach and Extension programs in natural resources will likely shift (Brown, 1999; Brown & Nielsen, 2000).

Table 2.
Self-Assessed Knowledge Ratings for Wildlife Topics

Topic	Extension (n = 60)	State (n = 36)	P
* Backyard landscaping for wildlife	2.57	3.19	0.003
* Forest management on private lands	2.83	4.06	<0.001
Grassland management on private lands	2.92	3.06	0.604
* Managing windbreaks and hedgerows	2.32	3.36	<0.001
* Managing riparian buffers for wildlife	2.43	3.81	<0.001
* Creating or managing wetlands for wildlife	2.25	3.36	<0.001
Wildlife-sensitive agricultural practices	2.97	3.38	0.068
* Managing CRP/CREP lands for wildlife	2.58	3.25	0.005
Effects of pesticides on wildlife	3.18	2.78	0.072
* Nest boxes for wildlife	2.22	3.81	<0.001
* Bird-feeding	2.58	3.28	0.002
* Attracting game species	2.36	4.20	<0.001
Wildlife identification	3.26	3.39	0.553
* Wildlife habitat relationships	3.16	4.20	<0.001
* Birdwatching	2.22	3.25	<0.001

* Hunting	2.92	4.17	<0.001
* Wildlife in forest/grassland/urban areas	3.02	4.17	<0.001
* Wildlife rehabilitation	2.43	3.28	<0.001
* Human-health issues (e.g., rabies)	2.72	3.44	0.001
* Goose problems	3.14	3.83	0.003
* Deer problems	3.40	4.36	<0.001
* Blackbird, crow, and starling problems	3.63	3.25	<0.001
* Raccoon problems	3.12	3.91	0.001
Bat problems	2.89	3.39	0.059
* Squirrel problems	2.74	3.64	<0.001
* Woodpecker problems	2.54	3.33	0.001
Vole, mouse, or rat problems	2.89	3.25	0.153
* Woodchuck problems	3.28	4.03	0.004
* Coyote problems	2.86	3.67	0.001

Means range from 1 (low knowledge) to 5 (high knowledge).

* Indicates statistically significant differences ($P < 0.05$).

Overall, the potential for collaboration between Extension and state personnel is great. Similarity in the perceived importance of two-thirds of the wildlife topics suggests that Extension and state personnel have common interests and needs in outreach programs. For example, wildlife damage management is expected to become one of the most important issues facing both Extension and state agencies within this century--especially as the rural-urban interface expands (Regan, 1999).

Ideally, partnerships can build on the respective strengths of the two groups. Extension educators have tremendous experience in developing effective outreach programs and have well-established clientele networks. Natural resource professionals in the state agencies have the subject and technical expertise necessary to address complex wildlife issues.

Implications for Cooperative Extension

The Extension system must not neglect the natural resources. Limited training and expertise in wildlife ecology ultimately could be a future barrier to the success of Extension programs in natural resources. Although both Extension and state personnel recognize the importance of wildlife management to clientele, state agencies seem better poised to successfully deal with those issues. Extension agents have traditionally concentrated their efforts on an agricultural clientele base. However, today's agents are also an important resource for an increasingly urban public that encounters more wildlife, and agents must be knowledgeable about wildlife management (Schaefer et al., 1992).

What can Extension organizations do to prevent problems? First, they can increase the natural resource and wildlife training of Extension agents. Clearly, wildlife topics are perceived as important to clientele. By placing too much emphasis on agriculture, we put agents at a disadvantage in dealing with the full range of topics that are important to clientele. There are several ways to achieve a greater level of training. For example, the Department of Wildlife and Fisheries Sciences at Texas A&M University developed an ambitious and innovative course to train county Extension agents in natural resources management, regulations, resource decision-making,

and conflict resolution (Brown, 1999).

Second, Extension organizations must promote additional collaboration with state agencies, particularly on the most difficult issues. Partnering with wildlife biologists and other natural resource professionals will not only be a learning experience for many agents, it will likely increase the satisfaction of the clientele concerned with wildlife issues. Collaboration is needed in three basic areas (Regan, 1999):

1. Technical assistance to private land and homeowners,
2. Development of science-based outreach materials on habitat management, damage prevention and control, land ethics, and sustainability, and
3. Encouragement of individuals and communities to actively participate in problem solving and planning.

Is collaboration a threat to the Extension system? Probably not. Although the "credit" for programs may become more diffuse, this "co-management" or sharing of responsibility among agencies and organizations is likely to be the next paradigm shift in wildlife management (Decker & Chase, 1997, Decker et al., 1999). Ultimately, the common tie between Extension systems and state agencies is sincere interest in helping others to help themselves. Working together is the best way to reach this goal.

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