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[Return to Current Issue](#)

Opportunities for Planned County-Based Wildlife Programming

Andrea M. Kleist

Graduate Student, Fisheries and Wildlife Sciences Program
amkleist26@gmail.com

Christopher E. Moorman

Associate Professor and Extension Wildlife Specialist
Chris_Moorman@ncsu.edu

Christopher S. DePerno

Assistant Professor and Extension Wildlife Specialist
Chris_DePerno@ncsu.edu

Robert E. Bardon

Associate Professor and Extension Forestry Specialist
Robert_Bardon@ncsu.edu

North Carolina State University
Raleigh, North Carolina

Abstract: Extension personnel trained in agricultural fields may not adequately meet client needs in natural resources-related topics. To help guide strategies to improve planned wildlife programming, we conducted a survey of North Carolina Cooperative Extension Service county agents. Forty-six of 101 county agents responded, with 62% of respondents indicating lack of training limited their abilities to conduct wildlife programming. Development of seminars and educational resources by university-based Extension specialists may help county agents conduct formal programming related to wildlife conservation. Additionally, county agents can partner with local natural resource management professionals to develop and conduct wildlife-related programming.

Introduction

The Cooperative Extension Service originally was created to "aid in diffusing... useful and practical information on subjects relating to agriculture and home economics" (Rasmussen, 1989, p. 153 in Robinson, Dubois, & Bailey, 2005). Because the original purpose of Extension programming was rooted in agriculture, Extension personnel may have difficulty meeting the needs of clients interested in conservation of natural resources, including wildlife (Robinson, Dubois, & Bailey, 2005; Schneider & Smallidge, 2000). Further, county-based Extension programs that venture into topics other than agriculture may occur only when federal funding is allocated for those specific program areas (Robinson, Dubois, & Bailey, 2005). Traditional Extension programs may not adequately address changing client needs, especially the needs of a more urban

client base (Rodewald, 2002); therefore, county Extension agents likely will need assistance from university-based Extension specialists to appropriately implement natural resources programming.

Most states employ only one or two university-based wildlife specialists, and the resources available to build county-based wildlife programming are limited. To maximize the efficiency of program development and delivery, university Extension specialists must understand the challenges facing county Extension agents and the types of resources that would best enable them to overcome those challenges. In turn, more efficient programming will aid county agents in assisting clients with an interest in wildlife conservation. Our objective was to survey North Carolina Cooperative Extension Service (NCCES) county agents and use the information gathered to develop strategies to assist county agents in conducting wildlife programming.

Methods

We conducted an online survey of 101 NCCES agents, one from each of the 100 county centers and the Cherokee Reservation. NCCES county agents were notified by email, explaining why the survey was being conducted and asking them to participate. Survey questions were developed based on author experience and the need for developing materials and programs to assist county agents in wildlife programming. We sent the draft survey to three county agents for pilot testing and incorporated their comments into the final survey. The online survey was available for completion beginning May 2, 2005 and closing on May 9, 2005. On May 5, 2005, a follow-up email was sent to each individual who had not completed the survey. In mail surveys, response rates of at least 50% are adequate for immediate data analysis (Babbie, 1995). Therefore, we did not conduct a non-response survey because our response rate was close to 50%.

The survey identified:

- Agent work responsibility
 - ◆ County(ies) in which agent worked (Open-ended)

 - ◆ Workload and primary responsibilities outlined in plans of work (Open-ended)

 - ◆ Obstacles that limited county agents' abilities to conduct wildlife programming (Checklist)

- County agent education and experience related to wildlife
 - ◆ Educational background of county agents (Open-ended)

 - ◆ Wildlife-related recreational activities in which county agents regularly participated (Checklist)

- Client needs
 - ◆ Frequency for forms of contact used by county agents to become aware of individual client needs (Often, Sometimes, Never)

 - ◆ Frequency that clients request information on specific wildlife-related topics (Very frequently, Frequently, Rarely, Never)

- Programming
 - ◆ Wildlife-related topics for which agents conduct programming (Checklist)
 - ◆ Frequency that county agents used specific outreach methods to convey wildlife information to clients (Very frequently, Frequently, Rarely, Never)
 - ◆ Resources needed to help county agents convey wildlife information to clients (Ranking)

Findings

A total of 46 NCCES county agents representing 48 of 101 Extension centers in North Carolina responded to the survey, resulting in a 48% response rate. Four of the 46 agents were responsible for multiple counties. NCCES county agents reported 30 different areas of responsibility, with over 95% having responsibilities in two or more areas. The majority of respondents listed horticulture (60.9%) and/or forestry (58.7%) as their main area(s) of responsibility. Only 13% of NCCES county agents reported having wildlife-related responsibilities included in their plans of work. However, 67% of respondents indicated they conducted wildlife programming. Wildlife programming primarily was focused on nuisance wildlife (71.9% of respondents), backyard wildlife (62.5%), farm pond management (50%), timber management for wildlife (34.4%), and food plot management (31.3%).

The educational backgrounds of NCCES county agents varied, with only one having a degree in wildlife and fisheries biology. The most common subjects of undergraduate degrees earned were horticulture (21%), animal science (13%), and agronomy (11%). The majority of respondents participated in some outdoor recreational activity, including fishing (57%), hiking (52%), and wildlife watching/photography (48%) and over one third hunted (35%).

When asked to choose what limited their ability to conduct wildlife programming, NCCES county agents answered:

- Lack of training in wildlife-related issues (61.9% of respondents)
- Lack of time (47.6% of respondents)
- Wildlife-related issues not a formal responsibility (33.3% of respondents)

NCCES county agents indicated that phone correspondence (83%), one-on-one meetings (59%), and group meetings (32%) with clients were methods often used to become aware of individual client needs. Email correspondence was more likely to be used only sometimes (85%). Agents reported that they most frequently received requests for information about nuisance wildlife, farm pond management, and backyard wildlife (Table 1).

Table 1.

Frequency of Information Requests to North Carolina Cooperative Extension Agents (1=Very Frequently; 2=Frequently; 3=Rarely; 4=Never)

Information	Mean	n	Standard Error
Nuisance wildlife	1.62	45	0.10
Farm pond management	1.95	43	0.12
Backyard wildlife	2.29	45	0.11
Food plot management	2.55	44	0.11
Timber management for wildlife	2.86	44	0.12
Invasive, exotic species	2.98	43	0.12
Game species management	3.00	43	0.12
Non-game species management	3.21	43	0.10
Prescribed burning	3.23	43	0.11
Hunt leases	3.24	42	0.10
Hunting regulations	3.31	42	0.12
Threatened/endangered species	3.40	43	0.09
Wildlife diseases	3.44	43	0.08

To convey wildlife-related information to clients, NCCES county agents indicated they very frequently used NCSU Extension publications (30%) and technical advice via phone conversation (36%). Conversely, no more than 11% of county agents answered that they used any other resource, including presentations by NCSU Extension specialists or North Carolina Wildlife Resources (NCWRC) biologists, very frequently. When asked to rank the resources that would better facilitate wildlife programming, NCCES county agents reported that NCSU wildlife publications summarized into bulleted one-page documents and made available online would be most useful (Table 2).

Table 2.

NCCES County Agent Ranking of Resources Which Would Better Facilitate Wildlife Programming (1=most important, 9=least important)

Resources	Mean Ranking	n	Standard Error
NCSU wildlife publications summarized into bulleted one-page documents	2.87	38	0.38
Files (e.g., PDF or Word files) of all NCSU wildlife publications available online	3.29	38	0.37
List of wildlife contacts and contact information	3.41	37	0.34
Additional detailed (longer than one page) NCSU wildlife publications	3.92	37	0.35

Training sessions for NCCES agents with wildlife responsibilities	4.00	40	0.44
PowerPoint presentations available online or by request	4.12	33	0.44
Answers to frequently asked questions available online	4.45	42	0.40
Additional NCWRC ¹ publications	4.86	35	0.40
Telephone hotline providing information about nuisance wildlife	5.97	34	0.51
¹ North Carolina Wildlife Resources Commission is the state wildlife management agency.			

Discussion

Generally, NCCES county agents conveyed wildlife-related information to constituents as a reactive response to information requests and rarely conducted planned wildlife programming (i.e., agents rarely anticipated educational needs of their clients and provided them with suitable programming). NCCES county agents responsible for forestry approached forestry programming in a similar fashion (Bardon, 2001). NCCES county agents surveyed in our study favored short publications, Web sites, and contact lists, all of which are used to respond quickly to client requests related to wildlife issues. Programming topics tended to be reactions to information requests (e.g., nuisance wildlife) rather than planned attempts to train clients about habitat management practices (e.g., prescribed burning or timber stand improvement).

Because most NCCES county agents are under pressure to provide technical assistance to their traditional client base, it is difficult for them to initiate new programs for new clients, especially in unfamiliar subject areas such as wildlife management. Even though a majority of NCCES agents participated in outdoor activities, most had too little wildlife-related training and too little time to conduct planned wildlife programming. Similarly, Bardon (2001) reported that NCCES county agents had difficulties conducting forestry programming because of lack of formal training in forestry issues and lack of time because of multiple areas of responsibility. However, we suggest that county agents could use available resources (e.g., specialists, continuing education workshops, government agency professionals, and other partner organizations) to better prepare themselves to conduct planned programming related to conservation of wildlife or other natural resources.

At the request of NCCES agents, NCSU wildlife and forestry specialists travel to counties to conduct programs for relatively small audiences of mostly laypeople (< 30 people). However, because of dwindling budgets and more diverse academic appointments, university Extension specialists are less able to travel away from campus (Bromley, 2006). To use limited resources more efficiently, Extension specialists could facilitate periodic professional development seminars (i.e., video conferences, Web-based training, and correspondence classes) and regional training workshops for county agents.

County agents can partner with state and federal conservation organizations to resolve wildlife-related problems and promote wildlife programming (Rodewald, 2002). In North Carolina, counties with partnerships between NCCES county agents, NCWRC, and/or other government agencies tend to have the strongest wildlife programming (CEM, personal observation). Agents also could partner with local wildlife

clubs or local chapters of non-governmental organizations (e.g., National Wildlife Federation, Ducks Unlimited, National Wild Turkey Federation, Rocky Mountain Elk Foundation, Quality Deer Management Association) to develop and implement outreach materials and workshops. University Extension specialists can facilitate development of county-based partnerships by providing county agents with appropriate agency or partner organization contacts, moderating initial planning meetings, and commenting on programming goals and objectives.

Issues related to wildlife conservation, particularly managing nuisance animals, enhancing habitats for game and nongame species, and developing outdoor recreation opportunities, are of increasing interest across the United States (Rodewald, 2002). To maintain Extension's relevance to issues related to conservation of wildlife and other natural resources, Extension specialists and county Extension agents should work cooperatively to facilitate formal programming at the county level.

Where Extension county agents are not formally trained in natural resource conservation, initiatives to conduct planned wildlife programming most likely will not begin at the county level (Robinson, Dubois, & Bailey, 2005). In these cases, states might consider hiring area agents (i.e., agents that are responsible for multiple counties or an entire region) with formal training in a natural resources field. In North Carolina, a majority of NCCES respondents indicated they already conduct educational programming on wildlife-related topics, so expanding their reactive programming efforts into formal programming related to wildlife conservation should be a natural transition.

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