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Distance Education of Pennsylvania Pond Owners

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Distance Education of Pennsylvania Pond Owners

Abstract

Pennsylvania pond owners represent a large audience with a great need for educational programming and assistance. Penn State Extension attempted to reach this audience via a pond management program delivered by satellite. Evaluations by both program attendees and Extension professionals demonstrated that the program was successful. However, attendee respondents indicated that they wanted more in-depth information over a shorter time frame. A relatively small proportion (10%) of attendees did not favor satellite delivery. This level of dissatisfaction is quite low and may be improved by focusing on shorter, more focused satellite programs and by providing videotapes of satellite programs.

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Introduction

Traditional speaker-based live programs given by Extension specialists may be increasingly delivered by satellite in the future. Significant progress has been made in the use of satellite for delivering Extension programs, and a number of studies have developed recommendations about enhancing the quality of such programs (Shrestha & Sutphin, 1995; Shrestha & Sutphin, 1999; Rost, 2000; Ricketts, Hoelscher-Day, Begeman, & Houtkooper, 2001). The satellite method allows Extension to more efficiently and inexpensively reach a large audience at one time. Swistock, Sharpe, and Dickinson (2001) recently evaluated a Penn State drinking water program delivered by satellite and found that it met and often exceeded the same educational objectives as the traditional format.

Educational programs on pond management in Pennsylvania have traditionally been delivered by the Natural Resource Conservation Service (NRCS), the Pennsylvania Fish and Boat Commission (PFBC), and Penn State Extension (PSE). In recent years, educational programs and support for pond owners have been lacking within Pennsylvania. A pond management program seemed conducive to satellite delivery due to the large existing audience within the state, the great variety of existing problems with ponds, and the need for multi-agency expertise. The satellite method would also allow experts from different agencies to come together for only one evening, versus a more significant commitment that would be required for a series of regional programs.

Purpose/Objectives

The objective of the program described here was to bring the various agencies and experts back together to deliver a comprehensive speaker-based program on pond management and to become reacquainted with current pond owners. Penn State Extension wanted to:

- Learn more about the current characteristics of pond owners in Pennsylvania in order to deliver better programs in the future.
- Measure whether the program met educational objectives.
- Compare the perspectives of the satellite downlink coordinators (Extension professionals) and attendees towards the satellite method.

Methods/Procedures

The pond management program was delivered in one evening to 1,104 participants across 37 counties in Pennsylvania through the American Distance Education Consortium (ADEC). A county Extension professional served as a downlink coordinator at each downlink site. The 2-hour presentation was divided into four topics:

- Pond construction and design
- Water quality
- Aquatic plant/algae control
- Fisheries management.

Experts from PSE, NRCS, and PFBC presented parts of the program with graphics and short video clips. The program was followed by a half-hour question-and-answer session using toll free phone and fax lines.

Evaluations

Extension downlink coordinators from each of the 37 counties provided addresses for 557 attendees of the program. An evaluation was sent to each of these attendees approximately 4 months after the satellite program aired.

The evaluation included questions to measure the number of concepts learned, actions taken, and cost savings resulting from the program. The evaluation design also measured attendees' perspective of the satellite method and the format of the question-and-answer session. Questions were also included to measure the most important uses of ponds and the types of problems common to Pennsylvania ponds. An open-ended response area was provided for attendees to record their general thoughts and comments about the program.

Reminders or second evaluations were not mailed to non-respondents because of funding limitations. A total of 175 (31%) of the evaluations were returned.

A separate evaluation was also sent to each of the 37 Extension professionals who served as downlink coordinators for the program. This evaluation was designed to measure their opinion of the educational effectiveness and design of the satellite method. Out of the 37 counties that participated in the satellite program, 31 Extension professionals (84%) returned the evaluation.

Results

Pond Uses and Problems

Respondents indicated that ponds are used for a wide variety of activities in Pennsylvania, with aesthetic beauty being the most frequently cited reason for pond ownership (Table 1). Although attendees were asked to only choose the most important use of their pond, about one-third of the respondents selected more than one important use for their pond. Thus, the percentages in Table 1 add up to more than 100 percent. In addition to aesthetic beauty, other important pond uses were fishing and wildlife habitat. Surprisingly few ponds were used solely for swimming, irrigation, or drinking water. Some respondents did not yet own a pond but marked uses that they thought would be important for a future pond. These responses were included in Table 1.

Table 1.
Pond Uses Cited by Program Attendees

Most Important Pond Uses	Frequency Cited
Aesthetic Beauty	46%
Fishing	35%
Waterfowl/Wildlife	22%
Fire Protection	18%
Swimming	13%

Animal Drinking Water	10%
Irrigation	5%
Other	3%
Drinking Water	0%
No Response	3%
Do not own a pond	14%

The evaluation also asked respondents to identify any problems they have experienced in the past with their pond. The most common problems were excessive algae or plant growth (52%), nuisance wildlife (34%), pond leaks (26%), water quality problems (9%), and fish kills (8%). The topic areas covered during the satellite program had been targeted toward these common pond problems.

Educational Objectives and Actions

The evaluation included a list of 11 important pond management concepts. Attendees were asked to select the concepts that they were unaware of before the program and subsequently learned by attending the pond management program. The most important management concepts from each of the four program topic areas were listed on the evaluation.

Table 2 lists the percent of respondents that learned at least one important management concept in each of the four program topic areas compared to the percent that identified a problem. Overall, 92% of respondents learned at least one concept, and the mean number of concepts selected was 4.7 out of 11. The water quality concepts had the lowest response level (34%), and the plant and algae control concepts had the highest response rate (55%). The most frequently learned concepts (plant/algae control and pond design) were also the most frequently identified problem areas for ponds. Thus, the program was generally successful in teaching basic pond management educational concepts related to frequently observed problems.

Approximately 42% of the respondents had taken some action to manage their pond after attending the program (Table 2). The most common actions were related to plant/algae control, which is also the category that most respondents identified as a problem and about which they learned new concepts. Of the respondents who had not taken any action, 18% indicated they intended to but had not begun yet, 9% were still unsure of what steps to take, and 15% indicated other reasons.

Table 2.
The Percent of Program Attendees That Identified a Pond Problem, Learned a Management Concept and Took Action in the Four Program Topic Areas

Program Topic	Identified Problem	Learned Concept	Took Action
Pond Design	26%	43%	4%
Water Quality	9%	34%	4%
Plant/Algae Control	52%	55%	25%
Fisheries Management	8%	40%	9%

Opinion of the Program

Both attendee respondents and Extension professionals had favorable opinions of the pond management program. The average rating of the program was 5.6 for respondents and 5.9 from professionals (0=poor, 7=excellent). Eighty-two percent of attendee respondents rated the program good, very good, or excellent. When Extension professionals were asked what they thought of the usefulness of the program for their audience, 84% responded it was just right, 10% said it was too general, and 3% thought it was too specific.

The most frequent comment made by attendees concerned the desire for more detailed information on specific topics. This was often accompanied by a comment that more time was needed for each session or that the presentations were delivered too quickly. A small number of respondents stated that the information was too technical, which was also noted by a few

Extension professionals. Others commented that more time was needed per session and that the program itself was too long.

Opinion of the Satellite Method

A recognized problem with the satellite delivery method is the lack of personal contact and opportunity for questions and answers. The evaluations sent to both Extension professionals and attendees attempted to gage their respective opinions of the 30-minute question-and-answer (Q&A) session (Table 3). While a clear majority of both attendees and Extension professionals believed that the time allowed for questions was just enough, more attendees than professionals believed there was too little time for questions.

A review of the comments made by both Extension professionals and attendee's in the open-ended portion of the evaluation indicated that some attendees wanted more time for questions and more speaking interaction during the program. Separation of the program by topic area would allow more time for Q&A and increase the opportunity for downlink coordinators to encourage audience participation. Another possible modification would be the incorporation of multiple Q&A sessions throughout the program as recommended by Rost (2000).

Table 3.
Opinions of the Question-and-Answer (Q&A) Portion of the Satellite Program by Extension Professionals and Program Attendees

Evaluation Question	Response	Extension Professionals	Attendees
Time allowed for questions	Just enough	71%	62%
	Too little	1%	25%
	Too much	10%	4%
Helpfulness of Q&A session	Not helpful	0%	NA
	Somewhat helpful	45%	NA
	Very helpful	55%	NA
NA = question not asked to program attendees.			

Several questions on both the attendee and Extension professional evaluations were meant to gage their willingness to host or attend another program delivered by satellite. Attendees were asked whether they would prefer to drive exactly 15 miles to attend a satellite program (representing delivery to all Pennsylvania counties) or drive exactly 50 miles to attend a traditional live-speaker program (representing regional delivery). Sixty-four percent of attendees preferred to attend the satellite program, 13% preferred the regional program, and 23% had no preference.

A similar question posed to the Extension professionals produced nearly identical results. Sixty-five percent preferred a program delivered by satellite to all interested counties, 13% preferred a regional program delivered in person by specialists, and 22% had no preference. Eighty-eight percent of the attendee respondents were "just as likely" to "very likely" to attend another satellite Extension program, while 100% of Extension professionals were "just as likely" or "very likely" to host another satellite downlink.

Eight percent of attendee respondents had a negative comment about the satellite method in the open-ended portion of the evaluation. Comments were considered negative if they were critical of the program structure (length, speed, etc.) or they were critical of the program delivery method (e.g., poor sound, poor picture, small room, etc.). The majority of the negative comments were related to the length of the program or to sound or picture quality at the downlink sites. The proportion of negative comments and those preferring a live program were similar to findings by Swistock et al. (2001). Sound and picture quality were also a concern, especially where the room and/or audience was large. These concerns may be best addressed by limiting the length of satellite programs and offering videotapes to attendees with hearing or vision difficulties.

Discussion

Schneider and Smallidge (2000) surveyed Extension educators in New York to determine the public demand and interest for natural resource management related programs. They found that water resource related topics were a high priority for programming, and aquatic weed management emerged as a new topic area. Some of the reasons they cited for a shift in programming needs related to increasing land base in natural cover types, changing needs of the audience, and a dramatic increase in public awareness of environmental issues.

The make-up of the pond management audience may be a reflection of this shift in programming. Attendees of this pond management program indicated that today's pond owner is mostly

interested in the aesthetic and recreational benefits of the pond. Therefore, pond owners are most likely to be interested in aquatic weed control, which is a pervasive problem in ponds. In general, there is an audience available for all pond management topic areas; however, the greatest current demand appears to be for aquatic plant management. This finding parallels the authors' experience with pond assistance requests, which are predominately about aquatic weed control.

Evaluation of the satellite delivery method by both attendees and Extension professionals provided generally favorable results. Nearly all of the attendees indicated that they had learned pond management concepts, and nearly half had taken action to better manage their pond. The majority of both audiences were willing to sacrifice the personal interaction of a live-speaker program for the increased local availability offered by the satellite format (i.e., shorter driving distances). Many of the concerns expressed by attendees about the satellite format could be addressed by limiting the length of satellite programs to 2 hours (or less) or by providing frequent breaks during longer programs.

Satellite technology will continue to be an important method for delivery of Extension programs. A cost-benefit analysis of the satellite method in Pennsylvania by Swistock et al. (2001) provided favorable results for continued or expanded use of this method in the future. Continued improvement in satellite programming may improve overall acceptability in the future. Useful information about satellite programs was obtained from Extension professionals and attendees, and both should be included when evaluating satellite programs. The relatively low response rate for attendees indicates caution in interpreting their responses.

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References

Ricketts, J., Hoelscher-Day, S., Begeman, G., & Houtkooper, L. (2001). Interactive distance learning effectively provides winning sports nutrition workshops. *Journal of Extension* [On-line], 39(5). Available at: <http://joe.org/joe/2001october/a1.html>

Rost, B. (2000). Interaction analyzed in traditional and satellite-delivered Extension educational presentations. *Journal of Extension*, 38(1). Available at: <http://joe.org/joe/2000february/rb3.html>

Schneider, R. L., & Smallidge P. J. (2000). Assessing Extension educator needs in New York to address natural resource issues for the new millennium. *Journal of Extension* [On-line], 38(3). Available at: <http://joe.org/joe/2000june/a4.html>

Shrestha, G. M., & Sutphin, H. D. (1995). Program delivery via satellite in the information age: Extension educators' perspectives on teaching techniques, communication channels, and participation. *J. Educational Technology Systems*, 24(2) 135-144.

Shrestha, G. M., & Sutphin, H. D. (1999). Relationship between interaction and acceptance in satellite video-conferencing. *J. Educational Technology Systems*, 28(1) 43-58.

Swistock, B. R., Sharpe, W. E., & Dickinson, J. (2001). Educating rural private water system owners in Pennsylvania using satellite versus traditional programs. *Journal of Extension* [On-line], 39(3). Available at: <http://joe.org/joe/2001june/a7.html>

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