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Perceptions of Polycom Programming for Delivery of Continuing Education to Florida's Licensed Pesticide Applicators

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Abstract: Polycom technology has potential for efficient use of program delivery by Extension educators. A survey of licensed pesticide applicators attending a 1-day event at one of 20 host polycom sites revealed that polycom distance learning is effective for presenting information and learning. Responses also indicated that most of this audience is comfortable with the format of the polycom environment and would attend a similar type event in the future.

Introduction

There are currently 91 pesticides labeled for use in Florida that are registered as "Restricted Use" (Fishel, 2005). A pesticide applicator must possess or work directly under the purview of a pesticide license holder in order to use "restricted use" products. Consequently, agricultural pesticide license holders must accumulate between eight and 20 continuing education units (CEUs) every 4 years, depending on license type (Fishel, 2005). Traditionally, CEUs have been administered through face-to-face workshops and meetings through county Extension offices and large statewide conferences.

Declining resource challenges faced by the University of Florida/IFAS Extension have been described (Vergot, 2004). Polycom technology allows Extension professionals to utilize strained resources efficiently. It makes real-time interaction among presenters and participants at remote sites possible. Educational programs using distance delivery formats have shown that participants are accepting of these methods without loss of program effectiveness (Schmidt, Swistock, & Sharpe, 2003; Ricketts, Hoelscher-Day, Begeman, & Houtkooper, 2001). University of Georgia Extension workers conservatively estimated that each virtual educational conference held in 17 counties and attended by 349 people saved \$6,000 in mileage reimbursement, 200 hours of employee time, and 3,400 pounds of carbon emissions (Hurt, Mickler, Abreu, & Martinez-Espinoza, 2008). That same work reported that the participants' perceptions of the program were positive.

This article reports a University of Florida/IFAS Extension statewide effort conducted in 2009 to deliver a polycom program to licensed pesticide applicators for obtaining CEUs and the participants' perception of this technology as a delivery method.

Methodology

A faculty and staff planning committee was formed and met during 2008 to discuss the logistics of a statewide polycom educational event. Details discussed included:

- Host sites.
- Meeting length.
- Program topics.
- Potential speakers.
- Program format.

A base of four sites was initially selected, but because of the interest level, the program was opened to all Extension faculties volunteering to host a local site. The 20 sites hosting the program were in 19 counties, either at county Extension offices (shaded in blue), research and education centers (shaded in orange), or the main campus in Gainesville (Figure 1). Whether to charge a fee to attend was left at the discretion of each site host.

Figure 1.
Counties Hosting a Site for Participating in the University of Florida/IFAS Extension Statewide Polycom Program



The meeting length was a total of 4 hours, with morning and afternoon sessions of 2 hours each. The focus of each session was slightly different and planned according to the type of license held by pesticide applicators. Participants could attend either or both sessions if they wished.

The topics selected by presenters pertained mainly to those who apply pesticides to agricultural row and tree crops in Florida. All presenters were University of Florida/IFAS Extension faculty. Presentations were delivered from five of the host sites to all other participating sites. The sessions and topics were formatted for each agenda to meet requirements of the Florida Department of Agriculture and Consumer Services' CEU approval process (Table 1).

Table 1.
Program Agendas from the University of Florida/IFAS Extension Statewide Polycom Event

| Session | Time | Title | Presenter |
|---------|---------------|--|---------------|
| Morning | 10:00 - 10:30 | Pasture Weed Management | Jason Ferrell |
| | 10:30 - 11:00 | Use of Biopesticides for the Management of Vegetable Diseases | Gary Vallad |
| | 11:00 - 11:30 | A Dresser Drawer Method to Rotate Pesticides for Resistance Management | Jim Price |
| | 11:30 - 12:00 | Integrated Pest Management of Sugarcane Insects | Ron Cherry |

| | | | |
|-----------|-------------|--|--------------|
| Afternoon | 1:00 - 2:00 | Behavior, Ecology and Management of Wood-Boring Insects | Russ Mizell |
| | 2:00 - 3:00 | Managing Diaprepes Root Weevil with Entomopathogenic Nematodes | Larry Duncan |

A survey instrument was developed to ascertain participants' perceptions of effectiveness and likelihood of attending educational events involving polycom use in the future. A total of 142 surveys were returned. Our questionnaire asked five participant background questions (data not reported) and two yes/no response questions and contained 4 statements using a 5-point Likert scale (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, and 1 = strongly disagree). Space was provided for participants to optionally provide written comments. Response means are presented along with their standard deviations.

Results and Discussion

The first two questions of the survey attempted to ascertain participants' experience in attending events using distance technology as a delivery method and the likelihood of them attending such programs in the future. Apparently, polycom-based training was a new experience for many (63%) of the applicators who attended this event. A positive perception from an Extension educator's viewpoint is that most plan to attend an event of similar format in the future. In fact, some who responded that this wasn't the first time they've attended a distant event, responded positively again to the second question, even though they weren't required.

The four statements in the survey addressed their perceptions of polycom-based programming as an effective learning tool. The applicators either strongly agreed or agreed that the polycom format was an effective method of presenting information and an effective method of learning (response mean = 4.24; sd = .67).

Concerning the effectiveness of polycom use as a learning tool when compared to traditional "face-to-face" classes, responses were variable. Although they thought the format was effective (response mean = 4.14; sd = .72), they weren't in as much agreement that it seemed just as effective as traditional "face-to-face" classes (response mean = 3.68; sd = 1.09).

Qualitative work has shown positive user perception of newer delivery technology for obtaining pesticide applicator CEUs (Fishel & Ferrell, 2009). Previous studies involving newer delivery technology have quantified data using pre- and post-tests for comparing computer-based learning to traditional classes and found no differences in learning turfgrass management technology (Mayfield, Wingenbach, & Chalmers, 2006). This may be true, at least with their short-term learning. Long-term learning effectiveness would require future study. It was reassuring to see the positive response level regarding applicator comfort in attending programs using this delivery format (4.33; sd = .79). This was our initial assumption, and the results confirm them.

Table 2.

Pesticide Applicator Response to the University of Florida/IFAS Extension Polycom Event

| Survey Question | Yes | No | n |
|--|-----|----|-----|
| Is this the first time you have attended an event that has used distance technology to deliver CEUs? | 90 | 52 | 142 |

| | | | |
|---|----------------------------------|-----------------------|-----|
| If yes, would you attend a similar type event in the future? | 117 | 1 | 118 |
| Survey Statement | Response Mean¹ | sd² | |
| I found the format of this event to be an effective method of presenting information. | 4.24 | .67 | 141 |
| I found this format to be an effective method of learning. | 4.14 | .72 | |
| I found this format to be just as effective for learning as traditional "face-to-face" classes. | 3.68 | 1.09 | |
| I feel comfortable attending an event using this format. | 4.33 | .79 | |
| ¹ Mean was based on a 5-point scale where 5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, and 1 = strongly disagree. ² Standard deviation. | | | |

Implications

A positive perception from an Extension educator's viewpoint is that a real need was identified and that the initial program had success. Such a delivery system saves time, costs, and manpower. Extension's use of these distance technologies will only increase as resources become increasingly scarce.

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