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Volunteer Researchers: Moving Beyond Cooperators

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Volunteer Researchers: Moving Beyond Cooperators

Abstract

Engaging volunteer cooperators to perform field research presents a new approach to conducting applied research. We enlisted Extension Service users to conduct research. This allowed for an increased sample size and expanded study area than was possible using traditional approaches. Cooperators received comprehensive training that briefed them on the subject and research protocols. Data were collected via research workbooks and informal written surveys. We obtained acceptable data for demonstrating the efficacy of rodenticide treatment under operational conditions. Unexpectedly, cooperators favored one control method and indicated they would use it in the future, despite no statistical difference between treatment methods.

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Introduction

From an Extension perspective, the term "cooperative research" typically refers to the use of private property to conduct research with the consent of the landowner. Our cooperators are often farmers or others who let us use their operations for applied research. There is no question these cooperators are essential for many Extension programs, and, without them, we could not do the relevant research and demonstration work that is the hallmark of Cooperative Extension.

<<http://groups.ucanr.org/growerevaluation>>.

We were interested in learning cooperator opinions about the project and whether they found the research experience useful. Because direct mail is the preferred mode of contact for the Extension audience (Cartmell, Orr, & Kelemen, 2006; Kelsey & Mariger, 2004), we included postage paid surveys in the training materials. The survey was also posted on the Web site, although posting material on the Internet does not guarantee that the target audience will be reached (Malone, Herbert, & Pheasant, 2004). The survey questions were designed to gauge interest in future cooperative research, as well as provide a section for questions, comments and suggestions. Because we had a relatively small number of participants to survey and because we worked closely with each of them, we did not conduct a non-respondent bias test. However, we feel the survey results are informative about this approach.

Making Research Convenient

Because cooperators typically have little spare time in their work days (Malone, Herbert, & Pheasant, 2004), we designed clear and concise protocols that would minimize the time devoted to research. To make conducting research more convenient and decrease potential disruptions in the cooperators' daily routines, we:

- Developed an abridged population indexing and bait application method that required less time and effort than in previous studies (Fagerstone, 1983; Salmon, Whisson, & Gorenzel, 2002).
- Provided cooperators with all the materials needed to conduct the research including bait and application equipment.
- Calibrated the equipment prior to distribution.
- Provided individual workbooks for each research plot with step by step instructions and activity forms that were completed each day as the project progressed. All relevant data were included on the forms.
- Visited sites and personally trained cooperators in all research techniques (Miller & Cox, 2006), allowing each cooperator to ask questions and receive immediate answers.
- Maintained regular contact with cooperators directly or through the local Farm Advisors.

Data Recovery

One of the most important aspects of cooperative research is collecting the data from cooperators once it has been compiled. Upon completion of the project all the workbooks were collected by the project manager. Some cooperators were slow in returning their workbooks once the research was completed. This made communication with the Farm Advisors crucial as we relied on them to remind cooperators to submit their workbooks.

Results

Of the 94 research workbooks distributed, 90 were completed and returned (95.7% recovery), resulting in 90 completed research plots. Most of the workbooks were complete and easy to read, and any questions were clarified by telephone calls to the cooperators. The four missing workbooks were from a cooperator who was contacted electronically and by telephone by the local Farm Advisor and the project manager before the data were considered lost.

Eighteen of 24 cooperators completed and returned the surveys. The majority of cooperators felt participation in this project was a positive experience, and they gained a more thorough understanding of ground squirrel control. Several cooperators expressed an interest in participating in future research projects.

Discussion

The Farm Advisors played a vital role in finding willing cooperators, setting up meetings, conducting site visits, and assisting with field work. In addition, some served as cooperators. Because they had no previous experience with this type of research, we did not segregate their data during the analysis. The project manager spent considerable time meeting with Farm Advisors and cooperators, conducting site visits, transporting equipment, and collecting completed workbooks. Maintaining regular contact with the Farm Advisors and cooperators allowed us to answer questions and help with unforeseen problems.

Salmon, Whisson, and Gorenzel (2002) had conducted the most complete ground squirrel anticoagulant efficacy research study prior to this project. They employed two research project managers, three research assistants, 10 seasonal technicians, and one independent consultant, resulting in a cost of over \$275,000. Forty-four research plots were completed by this research team. We completed 90 research plots using cooperators as researchers and one project manager.

We doubled the number of treatment plots over previous work at a cost of about \$78,000, and our results were comparable to the other study (Kowalski, Long, Sullins, Garcia, & Salmon, 2006). In addition, we were able to conduct research in several different areas under operational farming conditions, providing real-world application of research.

Our work suggests that involving cooperators as researchers could become an important tool when funding or the number of available scientists is limited (Strieter & Blalock, 2006; Cuthill, 2000). Furthermore, the economics of involving cooperators as researchers may free up funds for use in other Extension projects.

The surveys allowed us to gain insight into the perceptions about ground squirrel control techniques from people who used them in practical situations. This insight revealed a potential difference between cooperator perception and what the data actually showed. The cooperators who responded preferred one control method over another, even though the data they collected--and previous research--showed no significant difference between the methods. This reinforces the common notion that Extension educators' understanding of current research often differs from the beliefs of the community (Massey, 1994). In addition, this highlights the need for Extension professionals to disseminate the latest university findings in a clear and concise manner (Hinkey, Ellenberg, & Kessler, 2005) and in a variety of formats to accommodate differing methods of learning (Miller & Cox, 2006). We believe cooperative research can be a significant part of this process, making scientific approaches to problem solving more appealing and accessible to our clientele.

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References


- Cartmell, D. D., II, Orr, C. L., & Kelemen, D. B. (2006). Effectively disseminating information to limited-scale landowners in the urban/rural interface. *Journal of Extension* [Online], 44(1) Article 1FEA5. Available at: <http://www.joe.org/joe/2006february/a5.shtml>
- Cuthill, M. (2000). An interpretive approach to developing volunteer-based coastal monitoring programs. *Local Environment*. 5:127-137.
- Fagerstone, K. A. (1983). An evaluation of visual counts for censusing ground squirrels. American Society of Testing and Materials: *Vertebrate Pest Control and Management Materials*, 4:239-246.
- Fore, L. S., Paulsen, K., & O'Laughlin, K. (2001). Assessing the performance of volunteers in monitoring streams. *Freshwater Biology*. 46:109-123.
- Hinkey, L. M., Ellenberg, K. T., & Kessler, B. (2005). Strategies for engaging scientists in collaborative processes. *Journal of Extension* [Online], 43(1) Article 1FEA3. Available at: <http://www.joe.org/joe/2005february/a3.shtml>
- Kelsey, K. D., & Mariger, S. C. (2004). A Comparison of farmers who do and do not use Cooperative Extension Services. *Journal of Extension* [Online], 42(2). Available at: <http://www.joe.org/joe/2004april/a8.shtml>
- Kowalski, V. J., Long, R., Sullins, J., Garcia, S., & Salmon, T.P. (2006). Grower evaluation of California ground squirrel (*Spermophilus beecheyi*) control using anticoagulant baits. (*In Press*). *Proc. Vertebr. Pest Conf.* (R. M. Timm and J. M. O'Brien, Eds.). Published at Univ. of Calif., Davis. 22: 142-147.
- Malone, S., Herbert, D. A., Jr., & Pheasant, S. (2004). Determining adoption of integrated pest management practices by grain farmers in Virginia. *Journal of Extension* [Online], 42(4). Available at: <http://www.joe.org/joe/2004august/rb6.shtml>
- Massey, R. E. (1994). Extension education and unbiased research. *Journal of Extension* [Online], 32(3). Available at: <http://www.joe.org/joe/1994october/comm1.html>
- Miller, R. L., & Cox, L. (2006). Technology transfer preferences of researchers and producers in sustainable agriculture. *Journal of Extension* [Online], 44(3) Article 3RIB2, Available at: <http://www.joe.org/joe/2006june/rb2.shtml>

Orr, C. L. (2003). Informational needs of limited-scale landowners within the urban/rural interface of Lincoln County, Oklahoma. M. S. Thesis. Oklahoma State University.

Penrose, D., & Call, S. E. (1995). Volunteer monitoring of benthic macroinvertebrates: Regulatory biologists' perspectives. *Journal of the North American Benthological Society*. 14(1):203-209.

Salmon, T. P., Whisson, D. A., & Gorenzel W. P. (2002). Field efficacy studies comparing 0.005% and 0.01% diphacinone and chlorophacinone baits for controlling California ground squirrels (*Spermophilus beecheyi*). Unpublished Report. California Department of Food and Agriculture. Contract 00-0471. 131 pp.

Strieter, L., & Blalock, L. D. (2006). Journey to successful collaborations. *Journal of Extension* [Online], 44(1) Article 1TOT4. Available at: <http://www.joe.org/joe/2006february/tt4.shtml>

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