



Using Needs Assessment to Build Foundation for Agronomic Extension Programming in Central Arizona

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Abstract

Arizona is a major producer of field crops (cotton, hay, wheat, corn, barley, etc.). Field crops account for almost 1.5 million acres in Pinal, Pima, and Maricopa counties and bring in approximately \$690 million dollars (USDA, Census of Ag 2007). Not only are field crops critical to the economic income for the area but they also provide jobs and support for people and communities. A needs assessment is one tool to help determine and measure community need. A needs assessment was conducted among producers and agricultural industry professionals in Central Arizona. Participants were asked to identify agronomic topics they were interested in for their operations and if they were interested in new research and/or education opportunities. From the survey the top five issues were identified for both research and education. This included soil fertility issues, crop varieties, water use, and economics. Results from the survey were used for program development.

Introduction

For the agronomic field crop program there is great variability in the methods that can be used to implement it. This is because agronomy is a science that takes an integrated and complete approach to agriculture. Agronomy is made up of many components and it is important to understand soil-plant interactions, the way crops grow and develop, how climate and other environmental factors affect the crop at all stages, and how best to control crop pests. Also it is important to consider cost effectiveness and profitability and resource conservation. This program also has a wide audience that includes colleagues and other professionals, growers and growers associations, Certified Crop Advisors, Pesticide Control Advisors, other agricultural providers, coalitions and cooperatives, community leaders, business owners, county and tribal governments, state and federal agencies, and other diverse individuals. So a needs assessment was created to help decide programming direction that identified the needs and priorities of the community.

Key Findings

- There was a 47% return of completed surveys, 149 were handed out or mailed with 70 returned.
- From the results we found:

The top 5 Research needs were

1. Fertilizer Application Rate, Time, & Technique
2. Crop Varieties (cotton, corn, alfalfa, sorghum, wheat)
3. Nutrient Management
4. Manure Application, Time, & Technique
5. Water Use Management Strategies

The top 5 Education needs were

1. Fertilizer Application Rate, Time, & Technique
2. Nutrient Management
3. Water Use Management Strategies
4. Weather Condition Impacts
5. Financial, Economics, Marketing

Methods of Delivery Findings

From the responses in Table 1, we can see a clear preference for the traditional in-person events and printed materials compared to the use of new technologies.

Methods of Delivery	Users Preferences
Workshops & classes in-person	93%
On-farm events	97%
Online courses	44%
Conferences	55%
Factsheets-printed	97%
Factsheets- online	53%
YouTube (videos)	17%
Extension Website	57%
Handbook	86%

Table 1. Preferred delivery methods of clientele.

The survey form contains several sections:

- County Extension Needs Assessment 2011**
- 1. In your own words, please describe products, services, and programs cooperative extension can provide in relation to your agricultural operation.**
- 2. What type of information has been most difficult for you to obtain for your operation to succeed and why?**
- 3. Please select from the following topics only those items you want to know more about for your operation. Then indicate whether you are interested in new research, education opportunities, or both. You may also indicate the crop(s) for which these needs are most pressing.**
- 4. How do you prefer products, services, and programs to be delivered to you? Select the number that best indicates your response to the topics below. 1= being most preferred to 7= being least preferred.**
- 5. What is the likelihood you would use the following outlets to learn about products, services, and programs and to interact with your extension agent? 1= Being most likely to 7= being least likely.**
- 6. Please identify yourself as one of the following:**
- 7. Additional comments, concerns, or questions.**

Fig. 1. Example Survey handed out to clientele in central AZ.

Materials and Methods

In 2011-2012 a needs assessment survey of the Central Arizona agricultural community was handed out at extension meetings, through mailings, and postings on the extension website. The purpose of the survey was to assist the new area agricultural agent in the development of extension programs. The area agent was hired to focus on field crops and that was reflected in in survey questions. The needs assessment survey was set up to identify research and education needs in field crops for the area. The survey was also used to help determine the best delivery systems.

Discussions and Implications

From the results, efforts have been used as a foundation for extension programming and focused on the top 5 responses for both research and education. Also the preferred delivery method results are used to deliver program outputs to clientele. However, there is often pressure from the university and peers to embrace new technologies, social media and be cutting edge. So there is a constant balancing act in adopting new technologies but also making sure that a large portion of the clientele are not left behind.

Since needs are continually changing (as well as preferences) this is an ongoing process and is constantly being revisited. Some methods we are working on integrating more and more is the use of online surveys (e.g. Constant Contact) and the use of clickers which help us to get immediate responses.

