

The Agricultural Extension Team: Enhancing Stakeholder Input and Coordinated Program Planning and Delivery to Agricultural Clientele Statewide (an SPT proposal)

Situation

There are over 2.4 million acres of field and vegetable crops across the state of Arizona (NASS 2008), with most of the acreage located in seven of the fifteen counties. A little over 2.2 million of these acres are in field or row crops with the remaining 200,000 in vegetable crops. These crops are produced annually by 1,150 growers, and managed by 220 registered Pest Control Advisors and 820 certified private and commercial applicators. For decades, extension has played an important role in providing cutting-edge research-based information to help producers and pest managers improve crop quality, control pests, maximize profits and minimize risks to people and the environment. Meeting the research and education needs of growers and pest managers has become increasingly challenging with the steady reduction in Extension personnel, especially the reduction in County Agents focused on agriculture, over the past several years. We currently have three full time extension agents with primary responsibility in field and vegetable crops, three additional agents with partial agricultural responsibilities and 18 extension specialists from a variety of disciplines that work with agricultural clientele. This small, multidisciplinary team of specialists and agents are called upon to continue to meet clientele needs for agricultural research and up-to-date information in these competitive times.

Through a 2009/2010 Signature Program Initiative, four former Extension **w**orking **g**roups (Cotton IPM/ICM working group, the Cross Commodity working group, the Vegetable working group and the Crop Pest Losses working group) that had separately coordinated program planning to impact agricultural clientele combined their efforts and communication practices through the formation of a single comprehensive Agricultural Extension Team. The formation of this “super-team” has greatly increased our efficiency and coordination across all agricultural extension programs. In our first year, we held five team or sub-team meetings, conducted a comprehensive field crop stakeholder needs assessment, conducted six clientele meetings that emphasized identification of stakeholder needs, and better coordinated extension programs throughout the state. An Arizona Pest Management Center (APMC) webpage was set up to facilitate team communication and posting of meeting notes (http://cals.arizona.edu/apmc/cotton_team/index.html). In addition, information from our sub-team focused on the agronomic (field crops) needs assessment is available at http://cals.arizona.edu/apmc/agronomic_ipm.html. This past year, we delivered over 50 continuing education credits to clientele in 24 separate meetings, workshops, and field days around the state. Travel funds available through last year’s Extension grant provided critical support to team members whose other travel resources have been cut by departments during the recent fiscal crisis. Through this Signature Program Team proposal, we request continued Extension team support to maintain and further enhance our stakeholder engagement, program planning and delivery to agricultural audiences.

This project falls under the signature program area of Food and Fiber Production Systems.

Goals/Objectives

- (1) Through a variety of **stakeholder engagement** mechanisms (described below), we will continue to identify research and information needs of agriculture clientele statewide.
- (2) We will further **improve communication** between specialists and agents within Cooperative Extension to enhance program planning and delivery to meet clientele needs.
- (3) We will provide quality up-to-date research-based **education and outreach** to stakeholders via Extension meetings and workshops, e-mail communications and publications.

Inputs

Project Leaders:

Erin Taylor, Maricopa County; Al Fournier, Maricopa Ag Center; Peter Ellsworth, Maricopa Ag Center; John Palumbo, Yuma Ag Center; Randy Norton, Graham County; Kurt Nolte, Yuma County

Team Members:

Pedro Andrade, Maricopa Ag Center; Paul Brown, Campus; David Byrne, Campus; Robert Call, Cochise County; Jorge Fonseca, Yuma Ag Center; Rick Gibson, Pinal County; Rob Grumbles, Mohave County; Ed Martin, Maricopa Ag Center; Linda Masters, La Paz County; Mike Matheron, Yuma Ag Center; Bill McCloskey, Campus; Michael McClure, Campus; Mary Olsen, Campus; Mike Ottman, Campus; Channah Rock, Maricopa Ag Center; Bob Roth, Maricopa Ag Center; Charles Sanchez, Yuma Ag Center; Mark Siemens, Yuma Ag Center; Trent Teegerstrom, Campus; Barry Tickes, Yuma Ag Center; Russ Tronstad, Campus; James Walworth, Campus; Sam Wang, Maricopa Ag Center

Outputs

Activities:

1. **Stakeholder engagement** is central to agricultural extension program planning and delivery. We continually solicit information on clientele research and education needs through a variety of mechanisms.
 - Through the **Crop Pest Losses program** we conduct up to six workshops annually wherein we collect data on insect, weed and disease pests that impact yields and profitability on key crops (cotton, melons and leafy vegetables). These data help identify areas of focus for research and education efforts, that often vary by geographic region within the state.
 - **Needs Assessment.** We are in the process of analyzing data from last year's statewide integrated pest management (IPM) needs assessment survey of field crops producers. These data will provide focus for future research and education efforts centered around IPM for large acreage crops, especially alfalfa and wheat, as

well as seed alfalfa. A key output of this proposal is to develop at least one extension publication that address priority education needs identified.

- **Every extension meeting provides an opportunity for stakeholder input.** Using tools such as brief informal surveys, workshop evaluations, and audience response technology, we will identify, document, and consolidate information on grower and pest manager research and education needs and priorities to inform future program planning.
- **Transparency.** All information collected will be posted on the APMC website for use by team members for program planning, and is available to support grant proposals. For example, Crop Pest Losses data on the Arizona Crop Information Site (ACIS) can be accessed through the APMC website (<http://cals.arizona.edu/apmc/croplosswg.html>); and we have posted preliminary results from our field crops survey (http://cals.arizona.edu/apmc/agronomic_ipm.html).

2. **Improve Communication.** Successful, coordinated delivery of extension programming requires ongoing communication among faculty (agents and specialists). This will be achieved through a variety of mechanisms:

- **Team meetings** to coordinate program planning will be held 2-3 times each year. During the meetings team members will discuss identified stakeholder needs and arising issues in the agriculture arena, current and future research and other issues that are important to meeting the cliental needs. These meetings culminate in a plan for coordinated delivery of extension workshops, field days and other outputs. County extension meetings address local needs and support county agents in delivering the most appropriate up-to-date research topics to clientele.
- **Team listserv.** In the past year, we communicated mainly by informal email lists that sometimes resulted in incomplete communication to all team members. We will set up an Agricultural Team listserv for use by all members to improve ongoing communication related to program planning, county-based activities and specialist and agent publications and other outputs.
- **Team websites.** Another mechanism for improved communication is the APMC website, which is used to communicate activities and outputs of various sub-teams. With the merging of our former working groups, we have maintained focal areas of activity that are highlighted on separate web pages. These include our Agricultural Team page, the Crop Pest Losses Program, the Agronomic (field crops) Survey Team, and others. All are accessible through the APMC Working Groups page at <http://cals.arizona.edu/apmc/groups.html>.

3. **Education and Outreach** activities will deliver relevant research-based information to clientele in a variety of ways.

- **Clientele meetings.** At least 15 extension meetings will be held across Arizona to deliver information to clientele. These will include workshops, field days, seminars, and grower meetings, to be held during the different growing seasons to present timely, relevant research information. Continuing education credits from the Arizona Department of Agriculture, California Department of Pesticide Regulation, and Certified Crop Advisor program (as appropriate) will be made available to clientele at these meetings.
- **Extension publications, websites and advisories.** In the past year, the Ag Team has developed a system of peer review for all Extension publications that will improve the quality of our outputs. Team members serve as editors in rotation and all new publications are submitted for peer review, which typically includes one or more non-UA reviewers. In the coming year we will develop at least one publication related to field crops IPM that is based on key needs identified in last year's survey. We continually review existing extension publications and team members commit to revising as needed. Publications may be printed or posted on the web (e.g., ACIS) for clientele access (or both). Advisories are timely, focused updates provided to clientele on a routine basis throughout a growing season. These are typically delivered by agents through email and web communications and include information developed collaboratively by specialists and agents. To ensure timely delivery, advisories are not subjected to peer review. One example is the Vegetable IPM Updates, which are posted every two weeks on ACIS and sent out to clientele via email and smart-phone updates (<http://ag.arizona.edu/crops/vegetables/advisories/advisories.html>).
- **Popular press.** In addition to formal Extension publications, an important vehicle for reaching broader agricultural audiences in the popular press. This includes articles and interviews for Western Farm Press, Farm Bureau, Casa Grande Dispatch and other newspapers, as well as television and radio interviews. We will deliver at least five popular press outputs in the coming year.

Participation:

At least eight Arizona counties (Yuma, LaPaz, Mohave, Pinal, Maricopa, Pima, Graham and Cochise) will be directly involved and 8 disciplines (including entomology, weed science, plant pathology, agronomy, irrigation, agricultural engineering, weather, and agricultural economics) will be represented on this team. Over 1000 producers, 200 PCA's, 800 certified commercial and private applicators and 2.4 million acres are expected to be impacted by this agricultural extension team. Stakeholder participation will be one of the key driving forces of this teams program planning.

Outcomes/Impacts/Evaluation

Short-term: Stakeholders will provide input on program planning for Cooperative Extension. These stakeholders will help us prioritize clientele needs and determine effective methods of program planning and information delivery. Through the listserv, websites and meetings, better communication among agents and specialists will be realized.

Mid-term: An increase in more targeted extension outputs that better address the needs of stakeholders. Through improved communication we will increase efficiency, reduce redundancy of efforts and develop more focused research and outreach outputs.

Long-term: An increase in crops yields, resource use efficiency, quality, profitability, and an improved knowledge base of stakeholders should help growers maintain agricultural production levels in Arizona. will be seen and evaluated through surveys at meetings.

Communication of Program Impacts

In our first year, we have achieved new levels of communication and transparency for statewide agricultural extension. Our Ag Team website provides a hub of communication, team meeting notes and a place to post reports and outputs. Sub-team activities and outputs are similarly documented. Peer-reviewed research outcomes and updates are provided to end-users in research reports such as the Cotton Report, Forage and Grain Report and the Vegetable Report, available through ACIS. These reflect impacts of ongoing research and outreach to all specific commodity areas. Ag Team grant reports summarizing the impacts of our activities will be posted annually and submitted to Extension Administration. Furthermore, information related to individual and team efforts will be provided by each member of the team on their APR each year.

Budget:

Travel	
Mileage	\$996.00
Hotel	\$300.00
Per Diem	\$204.00
Total Travel	\$1500.00
Total Requested	\$1500.00

Budget Justification:

Travel to team meetings and stakeholder meetings will be required by team members throughout the state. These monies will be used to pay for mileage, overnight stays, and a per diem allowance for those traveling for these purposes. Rates were calculated using the "Maximum Transportation, Lodging and Meal Reimbursement Rates" posted on the University web site. The funds requested for hotel and per diem will provide the team with up to 5 hotel stays and 6 per diem days. The mileage based on 44.5 cents per mile will pay for 2,200 miles of travel.