

**ICM Workgroup Meeting
Nov 18 2015**

Bill McCloskey, Duarte Diaz, Pedro Andrade, Mike Ottman, Al Fournier, Ayman Mostafa, Randy Norton, Russ Tronstad, Lydia Brown, Joshua Sherman, Barry Pryor, Paul Brown

Review of current activities:

(List of project and activities that team members are involved in was provided. A more comprehensive spreadsheet with details will be posted on APMC website and sent out to group.)

Ayman Mostafa: Research activities include aphid management in alfalfa (WIPMC & USDA NIFA grant), in collaboration with Eric Natwick & Ricard Rimerez at UC. Includes chemical trials and resulted in registration of one new insecticide so far. Biggest problem is with blue alfalfa aphid. There may be resistance issues with some chemistries. Survey so PCAs reveal multiple applications, up to 5, to manage this aphid over 4 to 5 months. We are also investigating local thresholds for BAA and determining practical sampling methods. We have not found any virus transmission from BAA in AZ (it does elsewhere). There is a naturally occurring fungus (not yet identified) that has some potential for biological control, up to 70% infection rate. This is reducing the number of sprays needed. Another study is for Egyptian alfalfa weevil. A project with Ottman to study phosphorous applications and availability and impact on yields. The goal is to enhance fertilization recommendations. Examining products to control mites in corn. Also studies on aflatoxin in corn. Many efficacy trials for new chemistries are ongoing. Another project examines the movement of lygus bugs in cotton, funded by ACG and CI. Trying to link movement to natural refuges for lygus. Peter Ellsworth is testing a specific Bt for control of Lygus bugs.

Randy Norton: Program revolves mainly around cotton, including variety testing for experimental varieties (small plots in 3 locations) as well as strip trials for commercial varieties, replicated large plot studies done in grower fields in 8 locations across the state. Collaborating on a national beltwide project....Working with Kevin Bronson (ARS) on nitrification inhibitors that slow down the process of nitrification. Developing nitrogen response curves. We are growing varieties with higher yield potentials, but so far don't see a need to increase fertilization. He is on seedling disease committee, and doing trials. Also involved on nematode committee. Cotton Inc and Bayer are funding the trials. Randy is on the committee for the new plant pathologist. Working with Monsanto, to support regulatory process in transgenic cottons. Flutriofol, has efficacy data on cotton root rot, it is very effective, depending on application technique. Have state support from CI to conduct trials on this, including precise application technology, examining different application techniques. Ayman is conducting similar studies in alfalfa.

Lydia Brown: Brown stinkbug work. Works on Cotton Pest Losses Survey each year. Needs to speak with Randy and Ayman about adding questions on cotton root rot. She is also working on an MS degree under Peter. Working on damage dynamics of BSB, including full cage feeding experiments, aspergillus work, integrated management of BSB. Lydia's work shifts based on where her funding comes from. (Explain how AiE funding works through the APMC.) Outputs database. This is her last semester for coursework. Anticipates graduation next August.

Joshua Sherman. “Foamafungicola” fungus trials in pistachios. It affects pistachios in Arizona (not CA), causes significant yield loss because product is turned away from processing. Pecan Bacterial Leaf Scorch positively identified in AZ and NM recently. Caused by a Xylella. He is examining funding options for a grant to support research. Did a survey with Mary Olsen, but did not examine Yuma because there are no commercial pecans there. Need more definitive results, but finding positive in both symptomatic and non-symptomatic plants. Have also had positives in other crops. 80% detection. 10% impact in terms of complete foliar loss. Working with Jim Walworth to acquire root stock in pecan to examine root rot. New funded grant looking at nickel nutrition in pecans, to develop grower recommendations.

Duarte Diaz. Started about 2 months ago. Has created a stakeholder task force with several dairy producers, and they held the first meeting. He spends about 3 days per week visiting dairy farmers around the state. Met with Mike Ottman to discuss ideas. He is developing a dairy handbook that will compile a lot of available information into one place. Would like to collaborate with team members on this. Will include soil maps, information on soil testing, will cover alfalfa, corn, alternative crops. Aflatoxin is an important issue to growers. They are also concerned about water use. Most dairy farms in the state are pretty large, around 5,000 acres, but there are also some very small operations. Working on an aflatoxin control publication, including pre harvest control, AF36, as well as post-harvest recommendations. He would like input and collaboration with UA colleagues who work in this area. It was recommended that Duarte talk to Leighton with Arizona Cotton Research & Protection Council. Randy gins a lot of cotton from around the state. Is he interested in data from those samples? Yes, but there is a processing cost of \$35 per sample. Samples can be collected and stored until funding becomes available. Some groups are concerned about the impact of AF36 on the environment. Dr. Cotty works with the compound in many countries worldwide. Developing training programs, a “silage school” likely to be funded by industry. Silage work has mostly been done by a small number of researchers in the country. Not many producers are using inoculants in silage. There is very good data on the benefits of this. A Michigan State decision support tool he is examining if it is applicable to AZ. Has some projects with AZ grain. They are interested in aflatoxin control. Will test fungal populations in silage throughout the state. Ayman pointed out a data resource for aflatoxin data. Duarte can look at samples and speak about quality from the perspective of growers. Dairy producers request information from us, but do not necessarily attend Extension meetings. Having Duarte on board should help close this gap. They have a lot of information resources from industry delivered to their door; they are not used to going to meetings or having to reach out to CE.

Barry Pryor. We currently do not have a UA plant diagnostics lab. Diagnostics are done mainly by Mike Matheron and Mary Olsen. Mary is about to retire. Barry Pryor now has an Extension appointment (35%) and will be filling in as Extension plant diagnostician until a new one is hired. He is working with the AZ mushroom industry, which is small but growing. His Extension role is to respond to requests from PCAs, growers, homeowners, to process samples, statewide but not so much for Yuma, which is covered by Matheron. Recently funded by Lettuce Research Council to control fusarium wilt in lettuce. A soil-borne pathogen that gets spread through farm equipment. It is a big economic problem for growers. Examining different biological control

options. Recent International Fusarium Wilt Symposium sponsored by the Center for Excellence in Yuma. Researchers presented state of the art research. A large grower panel addressed the audience. A lot of breeders, CA, AZ and international attendees. Discussed management strategies. The group formed sort of an international consortium of researchers. He is also interested in pecan scorch and pistachio diseases.

Russ Tronstad. Working on profitability of agricultural industries in the state. Involved in water allocation issues. 80% of payouts in the state go to cotton. Examining alternative crops that might be profitable. Cotton seed to the dairy industry will often pay for ginning costs. Seed contracts have been more profitable, perhaps saving the cotton industry. He and Trent Teegerstrom have expertise in the Farm Program and can respond to questions, though Russ is more available.

Pedro Andrade. Is getting more requests for presentations and advice on precise application technologies, including variable rate applications, mainly for fertility management. Technology is also applicable to seeding rates and pest control. Also working on yield monitors with John Deere, on product development. Pedro is involved in a phenotyping project, developing methods for plant breeding purposes. His focus is on ground-based systems. Q: How will this project be integrated with Extension? Early on in his career here, he did a lot of work oriented toward support for management decisions. These technologies are available to growers. In this past year, this funding opportunity has allowed him to work with more high-end technologies. The project at MAC is based on energy sorghum (biofuels) funded by Dept. of Energy. Will also do tests on wheat. He is also funded to develop a planning proposal on conservation tillage for specialty crops. He is planning a project meeting January 6-7 to plan writing a proposal next year. Wants to work with Josh and Ayman on this.

Bill McCloskey. Next year will be last year of a long-term study of pre-emergent herbicides on the orchard floor. Interest from pecan growers to do some weed management projects. Wants to involve Josh and Randy. Chili pepper project working with Ed Curry. It is a labor intensive crop with a lot of weed management issues. Trying to get additional herbicide registrations with the growers.

Paul Brown. Budget remains steady with no increases this year. College will have to cover an additional 10% of ERE that . Hiring plan submitted in June was approved last month. \$400k was lost from the Extension budget to T&R within the college. Pulled back some funds from counties and added that money into the hiring plan, which will allow additional positions to be filled this year.

Extension Plant Pathologist. Approved for hiring. Search committee formed and working on job description.

Extension Ag Agent (Vice Loper) position is already in process. Have job description and need to advertise it broadly.

Extension Specialist in Cropping Systems. Approved, but search is delayed until at least Feb in part to see what kind of person gets hired into agent position. We are looking for someone with irrigation expertise for both this position and the agent position.

Jim Sprinkle left recently. Will be looking for a new natural forage management position. Will move forward quickly.

Tom Degomez will retire. Jeff Schalaus will pick up the slack in the short term. Jeff will be covering Mohave, Yavapai, Coconino. Tree crops may be going in in Mohave County. A lot of forages already up there. There will be demand for presentations and meetings in Mohave, like in the old days.

“Legislative battle” will become an annual event. Jeff will be asking for economic impacts. The goal is to keep the Extension budget at least flat for next year. Trying to lay the groundwork for another budget increase in a the next couple of years. Do good work, promote the good work we are doing to the legislature, in the meantime.

We need to get back into doing more in-service training in Extension than we have been doing in recent years. These will be mandated and also involve County Directors. Extension will cover the travel costs of participants and will also bring in outside speakers as needed. Mike Ottman has some prototypes for in-service training. One important aspect of the in-service would be for faculty to present and share what they are doing, keep each other current on activities. This is very important to Paul and other administrators to have good information on what the organization does. Timing would be after the next round of hires, second half of 2016.

Duarte has training module for students, preparation for professional careers.

Extension has money to support travel. Just have to ask.

CAP water rights go away in 2030, by current law.

AL: Mention desire to present on 1080 issues at upcoming meetings; plan to work with distributors.

CPL meetings

Chemical Use Maps

Meeting Planning

Dec 3 Cotton Pest Losses, Yuma (Peter)

Dec 9 Cotton Pest Losses, Maricopa (Peter)

Dec 10 Cotton Pest Losses, Parker (Peter)

Ayman:

Field Crops Clinics: **Late Jan, Early Feb.** Need to finalize the dates. (Ayman)

Alfalfa & Forage workshop. **March.** Need to finalize the dates. (Ayman).

New Technology workshop: **Early June (usually 1st week in June).** This year invite Dr.

Glennon or someone with a lot of knowledge on water policy. Paul suggests Chris Udall, head of AZ Agribusiness Water Council (Ayman).

Randy:

Feb 3 SE Ag Day in Wilcox. Wants Duarte to present on aflatoxin in corn (Randy)

Mar 2 Farm, Home & Ranch Day, in Safford (Randy)

Outside Meetings

Dec 1 Ag Water Council and Listening Session

Dec 2 – 4 Western Alfalfa Conference, Reno

Jan 5 – 7 Cotton Beltwides

Jan 12 – 15 CA Weed Science Society

Jan 13 – 15 Yuma Water Conference

Jan 25 – 26 AZ crop improvement association, Sedona

Feb 8 – 11 Weed Science Society of America

Mar 7 – 10 Western Weed Science Society

Mar 7 – 8 Western Pecan Conference

Feb 17 – 19 SW Dairy Nutrition Conference

Feb 18 – 19 National Forage Testing Association

Feb 24 – 25 SW Ag Summit, Yuma

June 16-20, 2016: American Society for Microbiology, Boston, Massachusetts

June 18-22, 2016: American Society for Virology, Blacksburg, Virginia

June 28-30, 2016: Pacific Division, APS, LaConner, Washington

July 17-21, 2016: Society of Nematologists, Montreal, Canada

July 30-Aug 3, 2016: American Phytopathological Society (APS), Tampa, Florida

August 7-11, 2016: Mycological Society of America, Berkeley, California

AZ Pecan Growers meet end of August.

Suggestions for the future

- It is helpful to have the updates from everyone. We should not do this at every meeting. Do it once a year. Maintain the project list online and update it once a year.
- We need to talk about what issues are important in different regions of the state.
- At every meeting have one person provide a more detailed presentation on their research. 15 minute slot. (May be covered through the in-service that Paul talked about.)
- Paul: I hope the group will prepare to put things out in a way that is most valuable to stakeholders. If “we” get our act together and can get the information regardless of the issues with the Ag Communications group at UA.
- Paul likes idea of in-services that are focused on each group, e.g., an ANR meeting.

- There is a need to bring back the plant diagnostics clinic. There is a need for technical support, funding for personnel.
- Paul needs a list of issue we have with Matt Rarh's group. Things that are not getting done by that group. Dominic Rodreiguez, new Operations Coordinator with Extension is responsible for Extension web issues.

Acis Web Update

Typically this group meets 3 times per year:

May

Nov

Doodle poll for next meeting.

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