



**IPM Coordinating Committee
Copper Sky Recreation, Maricopa AZ
November 30, 2018**



COLLEGE OF AGRICULTURE
AND LIFE SCIENCES
COOPERATIVE EXTENSION
Arizona Pest Management Center

Committee Membership:

- | | |
|---|---|
| Matt Baur (Acting Director, Western IPM Center) | Keith Birkemeyer (Entomologist, ProBest) |
| Paul Brown (ex-officio, UA Cooperative Extension) | Peter Ellsworth (Entomology, MAC) |
| Blase Evancho (Pinal, Pima County) | Junior Evans (Dow AgroSciences) |
| Lin Evans (PCA, stakeholder) | Jim Farrar (Director, UC Statewide IPM) |
| George Frisvold (Ag Economics) | Dawn Gouge (Entomology, MAC) |
| Alex Hu (Plant Sciences) | Mike Matheron (Plant Sciences, YAC) |
| Bill McCloskey (Plant Sciences) | Tom Montoya (PCA, stakeholder) |
| Ayman Mostafa (Maricopa/Pinal/Pima Counties) | Randy Norton (Regional Extension Specialist, SAC) |
| John Palumbo (Entomology, YAC) | Jack Peterson (Arizona Department of Agriculture) |
| Ursula Schuch (Plant Sciences) | Kai Umeda (Maricopa County) |

APMC Staff: Al Fournier, IPM Program Manager; Gene Hall, Assistant in Extension (AiE) Insect Diagnostics; Naomi Pier, AiE, Agronomic Crops IPM; Wayne Dixon, AiE, IPM Assessment; Shaku Nair Associate in Extension, Community IPM; Shujuan (Lucy) Li, AiE, Public Health IPM; **Marco Peña AiE Vegetable IPM**, Julianne Trejo, Pesticide Data Analyst.

Guests: Jesse Richardson, Corteva
Those shown in Yellow unable to attend



Meeting Notes

Summary of meeting evaluations at the end of the notes

Introductions

Participants responded to an exercise to state someone or something they value about the APMC, or something they appreciate about their work in Arizona pest management. Some elements people were thankful for:

- Appreciation for the APMC staff
- Mentoring and guidance from AI, Peter and Randy to newer faculty
- Lin Evans!
- Dawn & AI for Editorial work
- Kai for work on Extension impacts
- John & Peter for conceiving of the APMC
- The growers, the reason many of us are here
- The admirable work of the APMC in documenting impacts
- Interactions with a broad range of stakeholders, growers, PCAs, etc.
- Shaku for being positive, proactive, and her work in the school IPM program, connecting faculty to stakeholders and spinning off into new opportunities
- Getting out into the state and talking with people
- AI, Peter and other APMC members, for all they've taught me about IPM
- Peter and AI for realizing the concept of APMC
- Shaku and Lucy for increasing our productivity in community IPM
- Everyone is so passionate about what they do
- Constant surprises & learning that come with this job

Welcome from APMC Director Peter Ellsworth

Goals & Theme of the meeting: Recognition and Values.

https://cals.arizona.edu/apmc/docs/18APMC_IPM-CC-Intro.pdf

(Please note, the linked PPT includes slides not presented in the live meeting.)

Highlights:

- What's new?
 - Naomi Pier, new Assistant in Extension for Agronomic Crops (11/5/18)
 - Public Health IPM Leadership Team to support AiE Lucy Li
 - Shaku Nair promoted to Associate in Extension (9/2018)
 - AI Fournier promoted to Entomology, Associate Specialist (8/2018)
 - Many awards and activities at International IPM Symposium (3/2018)
 - Dawn Gouge, International IPM Award of Excellence (3/2018)
 - Pink Bollworm officially eradicated from the U.S.
- Why EIP is Important to Arizona: EIP Enables capacity to do research & outreach and:
 - To engage stakeholders at all levels and conduct needs assessments
 - To measure outcomes

- To maintain long-standing efforts to measure, support and secure Impacts in Arizona and beyond.

School IPM Spotlight (Shaku Nair)

https://cals.arizona.edu/apmc/docs/School_IPM-Nair_11-30-18.pdf

Highlights:

- First Annual Arizona Statewide School IPM Conference was attended by 66 participants including school staff (K-12, community colleges, higher ed.), pest management professionals, municipal and tribal staff members. Program included indoor and outdoor pest management tracks. Evaluations were overwhelmingly positive.
- New school district added to School IPM Inside and Out Program, now totaling 8 schools in 7 districts we are working with.
- We have had high level of buy-in from schools and tribes
- The fun part of this job is working with real people out in the community. We have noticed, many of them are scared of bugs!

Public Health IPM Spotlight (Lucy Li & Dawn Gouge)

https://cals.arizona.edu/apmc/docs/Public-Health-Team_Lucy-Dawn_11-30-18.pdf

Highlights (Lucy):

- Formed a new Leadership Team for Public Health IPM:
 - Chair**, Dawn Gouge, Entomology
 - Kathleen Walker, Entomology
 - Kacey Ernst, Epidemiology and Biostatistics
 - Paula Rivadeneira, Soil, Water and Environmental Science
 - Trent Teegerstrom, Agricultural and Resource Economics
- The group convened to identify priorities for the Public Health IPM program
- New Extension Publication to address invasive pest, Long-horned Tick
- IPM in Public Housing program implemented at 5 sites (612 units) with large reductions in bed bug and German cockroach populations
- Stop Pests in Housing webinar had 1500 participants!
- Forming new industry partnerships, for example, implemented Southwest Rodent Academy at MAC, very well received.
- Dawn provided an update on a CDC funded vector control project (a collaboration with Kathleen Walker in Entomology and others) focused on *Aedes aegypti* mosquitoes.
 - West Nile Virus and/or St. Louis encephalitis viruses detected in mosquitoes in 50% of surveyed blocks.
 - Control methods tested (adulticide and larviciding) not effective
 - Monitoring methods tested not effective
 - Water management remains critically important
 - Residents are concerned but do not tend to report mosquitoes
 - Many more details available in presentation (link above)

Agronomic Crops IPM / The APMC and Social Media (Naomi Pier)

https://cals.arizona.edu/apmc/docs/Agronomic-Team-Update_Pier.pdf

Highlights:

- Brand-new in Assistant in Extension role (about 2 weeks); will convene Leadership Team in the near future
- My goal is use interaction and engagement to get more people involved in IPM
- We did a survey at the Tucson Festival of Books, Science City in 2017 and 2018, asking people's awareness of UA's role in offering guidance and resources for IPM. There was some improvement between years, from about 28 to about 37% awareness.
- Another goal is to increase APMC use of social media outlets (examples provided)
 - Twitter, Instagram, Facebook
 - Provide links to social media accounts on website
 - Have separate APMC accounts for Community and Agricultural teams
 - Need to limit posts to no more than two a day

Insect Diagnostics Spotlight (Gene Hall *on Zoom*)

- Blister Beetle project. Working with Peter and Al, Gene secured funding for a second Specialty Crop Block Grant focused on blister beetle identification and potential threats to specialty crop safety. The beetles contain a toxin, cantharidin, which could be harmful if ingested. The Extension component of the project includes developing educational resources and presentations to support specialty crop producers, pest managers and others in blister beetle identification, and providing diagnostic support. In addition, in collaboration with Duarte Diaz, Associate Extension Specialist for Dairy, and Leif Abrell (SWES), we will chemically test cantharidin levels of beetles collected from Arizona producer's fields.
- Reminder: Gene is an insect /arthropod diagnostic resource for all of Cooperative Extension. Currently, about 50% of his appointment is in Extension.

Western IPM Center Update & Opportunities (Matt Baur *on Zoom*)

https://cals.arizona.edu/apmc/docs/WIPMC_Update_11-30-18.pdf

Highlights:

- Matt presented graphics showing the extent and interconnectedness of Western states and the IPM Network. There are good connections among IPM programs in the West, and a large concentration of connections in Arizona.
- WIPMC has many federal partners, including USDA (many office and programs), EPA, US Forest Service and IR-4 project
- The West has diverse agriculture and over 500 federally recognized tribes, the largest concentration in the country.
- The IPM Networks, including Al's role in Arizona and other Southwest states, help support pesticide regulatory review, coordinated responses to pest management issues in the West and help document successes
- These activities lead reduce risks associated with pests and pesticides, maintain economic viability, helping to change public perception of pest management,

influencing well informed federal policy decision through coordinated stakeholder input and data, and supporting the needs of underserved audiences.

Ivory Tower Demolisher Awards (Al Fournier)
Stakeholder Recognition

We would like to this opportunity to recognize some of our important stakeholders that have helped to make the Arizona Pest Management Center successful and for “keeping us real” and in touch with the pest management needs across different industries in the state. Today I will present our participants in the IPM Coordinating Committee with the “Ivory Tower Demolisher” award.

Keith Birkemeyer – 0 years (2018)

Junior Evans – 3 years (2016) Accepted by Jesse Richardson

Jack Peterson – 5 years (2014)

Tom Montoya – 8 years (2013)

Jim Farrar – 8 years (2013) (First representing the Western IPM Center and later representing UC IPM.)

Lin Evans - 15 years (2004) (Towering Buddha award)

Many thanks to our non-UA participants for all you contribute to the APMC!





Individual & Group Exercise: Revealing Common Values (Al Fournier & Naomi Pier)



Common themes were integrity, family, health, and security. To a lesser extent, there were shared values of creativity, faith, dedication, friends, and love. Many of these values fall within the mission or goals of the APMC. For example, integrity, family (to include friends), health, security, creativity, dedication all relate to APMC goals of protecting **health**, the economy and the environment (financial and environmental **security**) of all of Arizona citizens (**family, friends**) through a **dedication** of developing creative solutions (**creativity**) to pest management issues with **integrity, relevance** and **transparency**.

Currently, the APMC mission statement does not explicitly state these values. **Using these shared values as a starting point, we, as a team, can create a mission statement that more fully illustrates the purpose of the APMC** beyond it being “a collaboration between UA scientists offering innovative solutions to pest management issues for the citizens of Arizona.” By connecting our values to our mission and expressing it succinctly in communications with stakeholders we convey our purpose and create a sense of shared values with the communities we serve.

Al & Naomi will be following up with IPM Coordinating Committee members to move forward with this project of a values-based mission statement. Stay tuned!

UC IPM Update & Opportunities (Jim Farrar)

https://cals.arizona.edu/apmc/docs/UCIPM_Update_Farrar_11-30-18.pdf

Highlights:

- Jim Farrar is the Director of the UC-IPM Program at the University of California at Davis.
- Jim reviewed the structure of UC-IPM. They have 20 staff members, they have 11 IPM Advisors, 4 Affiliated Advisors and 1 Affiliated Specialist throughout the state, and they host the Western IPM Center.
- Recent updates to UC-IPM Website make it mobile friendly and database driven. Many IPM guidelines and helpful resources available there.
- Their website hosts online trainings that can provide certification credits to pest management professionals.
- UC-IPM is seeking to diversify their funding.

Extension Administrative Update & Opportunities (Paul Brown *on Zoom*)

Highlights:

- Hiring update
 - Livestock Range Agent, Joshua Grace
 - Horticulture Agent, Michael Chamberlain (Maricopa County CE in January)
 - AiE, Plant Pathology, Dr. Pudu (Yuma)
 - Horticulture Agent, Pima County (letter of offer, Anna Howell)
 - Horticulture Small Acreage (Yavapai posted)
 - Pesticide Safety Education (meeting on 12/14 review)
 - Area Agent STEM (and Agricultural) Education (MARCO, but beyond Maricopa County)
 - AiE, Livestock (Graham County)
 - Ag Agent (Yuma County)
- **Challenges in hiring Specialists, Departments need to be in line on these.**
 - Livestock
 - Turf
 - Veterinarian
- **Budget issues**
 - The budget is flat, we are hiring only for retirements and departures.
 - Working with legislature in to increase base budget.
 - Think about new positions to be supported by permanent moneys, in order to support funding and hiring plans to get the \$.
- **Opportunities**
- Extension ANR has funds for outreach related to climate change (contact Paul for more information). Can support speakers and meetings that cover this area.
- **ANR** has funds for bringing speakers in (travel only, no honoraria)
- Funds available for internal working groups
- Extension Strategic initiatives for new programmatic initiatives. \$2 mil available, up to 500k in each program area (e.g., ANR, Consumer and Family Sciences). Seeking 2-page

proposals with defined programmatic outputs. Can support applied research and capital purchases, if directly related. Must be spent by 12/21/19. 6-month progress report required and must present at CALS Annual Conference if funded.

UPDATE: APMC members submitted at least 9 proposals for new Extension Strategic Initiative projects, 4 of which were funded. (Almost 100 proposals were received across all of Extension.) Here is a list of funded projects:

Dixon, W.A., A.J. Fournier, N. Pier, J. Trejo, P.C. Ellsworth, D.H. Gouge, P.C. Ellsworth. 2019. **ACIS Web Content Migration Supports Arizona Agriculture.** University of Arizona Cooperative Extension, Strategic Initiative Program. Jan 2019 – Dec 2019. \$42,322.

Gouge, D.H., S. Li, S. Nair. 2019. **Reducing Pests and Pest Management Related Hazards in Low-income Multiunit Public Housing.** University of Arizona Cooperative Extension, Strategic Initiative Program. Jan 2019 – Dec 2019. \$18,658

Li, S., D.H. Gouge, K.R. Walker, K.C. Ernst, P. Rivadeneira, P.C. Ellsworth. 2019. **Public Health IPM Education in American Indian Communities.** University of Arizona Cooperative Extension, Strategic Initiative Program. Jan 2019 – Dec 2019. \$31,895.

Schuch, U., D.H. Gouge, K. Umeda. 2019. **IPM and Strategic Plant Use for Human Health in Health Care Facilities.** University of Arizona Cooperative Extension, Strategic Initiative Program. Jan 2019 – Dec 2019. \$18,172.

APMC Shared Resources & Capacity (Wayne Dixon, Al Fournier) (No PowerPoint)

- APMC Website, Databases and Programming Resources (Wayne).
 - We are continuing work on the “new ACIS” website, which will include and update agricultural information (from ACIS), community IPM and the Arizona Pest Management Center websites.
 - Wayne manages the APMC Pesticide Use Database, which includes all pesticide use records submitted to the Arizona Department of Agriculture. These data are used in research projects, for IPM evaluation, and to support pesticide registration issues in Arizona and the Desert Southwest. If you are considering a project that could benefit from analysis of agricultural pesticide use data, please contact Wayne, Al or Peter.
- Grant support, Evaluation support & more (Al)
 - One of my roles is to help support grant success among APMC faculty. This year, in addition to working with Gene (mentioned earlier) I had the opportunity to work with Alex Hu on a specialty crop block grant (not selected for funding).
 - Alex Hu could not be here today, but has provided a brief program update which we’ve included as a handout for everyone. (See notes below.)

- Promoting the Value of USDA-NIFA IPM Programs.
https://cals.arizona.edu/apmc/docs/AZPM_Impacts_vf.pdf
 - I had the opportunity to attend Alan Alda Communication workshop in Feb, and had great fun working with Cara Gibson, formerly of the Entomology Department, Dawn, Peter, Naomi, Kai, John Palumbo, Marco, and other members of the IPM Teams to develop a 2-sided piece promoting the important impacts of Federal IPM Funding in Arizona. Dawn Gouge and Naomi Pier presented this to offices of Jeff Flake and John McCain in March when many of us were in Baltimore for the International IPM Symposium.

Lunch: Industry Appreciation to John Palumbo (video) (11 min)

- <https://www.youtube.com/watch?v=yD70XC9Fvvg&t=575s>
- Acknowledgement of the Vegetable IPM Team with Marco's regrets.

An Update from Extension Plant Pathologist, Alex Hu, who could not attend follows.

Extension Plant Pathology Program Highlights

1. **Citrus brown wood rot project.** Brown wood rot (BWR) has been and continues to be a limiting factor for citrus production in Arizona, in particular Yuma and surrounding areas. A lot of Yuma citrus growers increasingly expressed their concerns about the negative impact of this fungal wood rot diseases and there is no effective fungicide control or cultural remedies. To address growers' concern, we have secured a 2-year grant from Arizona Specialty Crop Block program. The goal of this project is to develop a real-time PCR assay coupling with spore traps to determine when and under what environmental and management conditions fungal spores are released in citrus orchards. Low risk infection periods will be identified and this information will be used by growers to improve disease control by alteration in the pruning timing, fungicide application timing, and orchard floor management. The ultimate outcomes are reduced yield loss due to BWR, reduced fungicide costs and increased profit and viability of lemon orchards. At moment, we have completed the survey of fungal pathogen responsible for BWR in Yuma orchards. Over 100 fungal isolates have been recovered and characterized. Primers for quantitative PCR has been designed and are under testing and validation. Two spore traps have been purchased and will be deployed in upcoming December. In the last couple of weeks, to our surprise, Dr. Glenn Wright and I have received several requests from both Yuma growers and South CA growers for purchasing 4 additional spore traps with growers' funds. We have confirmed BWR presence in CA citrus orchards just across AZ borders. Arizona Citrus Research Council also provides funds to support this project. We kick started this project in October and we are hopeful that this project will generate tons of data that will be useful for AZ citrus growers combating BWR.
2. **Survey project of FOV race 4 in Arizona Cotton.** Historically, Fusarium wilt in cotton produced visible symptoms and caused economic damage only in susceptible varieties

in combination of significant populations of the root knot nematode. In these cases, Fusarium wilt was caused by race 1 and 2 of FOV. In recent years, however, several localized occurrences of FOV infections with moderate to severe plant damage have been confirmed in the absence of nematode populations. In these cases, the disease was caused by race 4 of FOV. Race 4 has been confirmed in CA, El Paso of Texas. Cotton industry concerns about the spread of race 4 to other state across cotton belt. Arizona Cotton Research and Protection Council and Cotton Incorporated support my statewide survey project of FOV race 4 in Arizona cotton. More than 200 plant samples from 7 Counties were received and processed for FOV isolation. We recovered over 132 isolates that belong to 7 Fusarium species. 19 isolates were FOV based on molecular assay. The great news is that no race 4 was detected from any samples. We are conducting greenhouse experiments to determine the pathogenicity of 19 FOV isolates. We will continue to survey AZ cotton field for FOV race 4 again in early spring of 2019. However, the focal areas will be restricted to where we discover FOV isolates in 2018 survey.

- 3. Plant disease diagnostic program.** The goal of this program is to provide timely and accurate plant disease diagnostics in support of the disease prevention system and decision making in production agriculture for Arizona. It also serves as a scientific resource and provides professional expertise to a number of clients including Arizona Department of Agriculture, the United States Department of Agriculture, other federal and state agencies, County Agricultural Commissioners, the University of Arizona Cooperative Extension faculty, field agents and Master Gardeners, the agriculture industry, pest control advisors, and the public. For the calendar year of 2018, we received more than 260 plant samples from a wide variety of crops including forages, fruits and nuts, ornamentals, turf grasses, vegetables, and field crops. The samples were submitted by a diverse group of stakeholders including pest control advisors, crop consultants, growers and producers, CES faculty, regulatory agents, landscape management personnel, arborists, master gardeners, and home owners from 8 Counties across the state (e.g. Maricopa, Pinal, Pima, Santa Cruz, Cochise, Graham, Gila, and Yuma). The diagnostic results have been summarized as an official diagnostic report for each submission and communicated back to clientele in a timely manner. We appreciate the diagnostic funds from APMC's federal Extension Implementation Program grant in support of this program.

In closing, I recognize the importance of being a member of this organization. I would like to express my appreciation for Al and Peter's excellent leadership.

Meeting Evaluation Results

1. Please rank your impressions of each of the following:

Poor (1)..... ..Outstanding (6)

a) Facility	5.2 / 6.0
b) Today's program and meeting themes	5.5 / 6.0
c) Team and partner updates	5.8 / 6.0
d) Awards & appreciation	5.8 / 6.0
e) Values exercise	4.8 / 6.0

2. Please indicate your level of agreement with each of the following statements

Strongly Agree (1).....Strongly Disagree (6)

a) I felt like I was able to positively contribute to meeting outcomes	1.7
b) I learned more about APMC capacity to support me in my work	1.8

Comments:

- First class presentations, planning and conducting the meeting. I really appreciate the appreciation of everybody's work. Thank you for taking the time for that. Great meeting!
- Great overview. Glad to be part of this.
- Good meeting!
- Recognizing individuals was a very good gesture!
- I had a great time at today's meeting. I really enjoy everyone's updates.
- Suggested question for future evaluations:
What would you pay \$10 to see a video of Peter eating?
 - a. Redvines
 - b. 1 adult male cricket
 - c. 1 adult female housefly
 - d. South American Palm Weevil

THANKS TO EVERYONE INVOLVED!!!! YOU ARE THE APMC!!!!