**IPM Assessment Leadership Team**
**Maricopa Agricultural Center**
**June 29, 2012 – 12:30 pm to 3:30 pm**

*Membership*:

Al Fournier (*Chair*), Dawn Gouge, George Frisvold, Jack Peterson, John Palumbo, Peter Ellsworth, Wayne Dixon

**NOTES**

## I. Purpose / Introduction

Al Fournier presented background information on the importance of IPM Assessment and a historical overview of the APMC. IPM Assessment is important because it answers the question of why we do what we do in IPM. IT provides solid evidence of the success of our programs and engages stakeholders, recruiting others to our vision and convincing sponsors that we are worthy of their investments. In addition, program assessment is now an expected component of any funded project. The APMC was founded with the idea that assessment is important and Assessment is an explicit focal area (and founding principle) for the APMC. We believe in part because of our investment in IPM assessment, we were able to gain a major increase in Extension IPM funding (75-80%) when the formula program went competitive.

Our vision for Extension IPM in our competitive proposal included the expansion of our programs through a new investment in Assistants in Extension (AiE) for our major program areas. Three AiEs started early in 2011, joining Marco Peña who has worked with the Vegetable IPM Team since early 2010. Wayne Dixon, hired as a UA employee in April 2011, is our AiE for IPM Assessment. Lydia Brown is AiE for Agronomic Crops IPM and Bryan Stevens is AiE for Community IPM. Each of these important new assets interacts with a "Leadership Team" that helps direct their activities and will assess their performance, much as Al Fournier interacts with the larger IPM Coordinating Committee.

This is the first meeting of the IPM Assessment Leadership Team. Our goals today are to share our current vision of Wayne's position, to provide an update on his activities, projects and current funding, and most importantly to open a dialog with the members of this team on important goals for IPM assessment, including an update on current projects with IPM assessment needs.

## II. Structure and Funding for the AiE Position

Our Extension IPM (EIPM) funding comes primarily from our competitive USDA-NIFA grant ($175k annually) and is leveraged with additional funds from CALS ($55k annually, plus ERE) and other grants. Through these diverse resources we fund the AiE positions and much of what we do in our statewide IPM programs. Each of the AiE

positions are funded 50% through EIPM resources (including CALS) funds, and are expected to come up with 50% of their position funding through other grants, with support an input from their Leadership Teams.

Breakdown for Wayne's funding currently (handout provided, showing timeline):

The Arizona Pest Management Center: Enhancing Capacity for IPM Practice in Diverse Environments
USDA-NIFA, Extension IPM (E-IPM). $525,000.
Ellsworth & Fournier
Salary – 50%, Effort – 35%

Crop Pest Losses Impact Assessment Working Group.
Western IPM Center. $12,000
Fournier, Ellsworth, Palumbo, Dixon, Barlow, Matheron, McCloskey & Tickes.
Salary – 7%, Effort – 7%

Risk Management for Farmers and Advisors (PRiME).
Arizona Dept. Ag., Specialty Crop Block Grant program. $54,010
Fournier, Ellsworth & Dixon.
Salary – 25%, Effort – 25%

Pesticide Information Empowers Progressive Vegetable Industry
Arizona Dept. of Agriculture, Specialty Crops Block Grant Program: $142,426
Fournier, Ellsworth, Farmer & Peterson
Salary – 33%, Effort – 30%

### III.   Current Projects, Resource Development and Outputs

Wayne Dixon provided a description of two major resources for agricultural IPM assessment: (1) the Crop Pest Losses and Impact Assessment Workgroup and the APMC Pesticide Use Database. **The Crop Pest Losses and Impact Assessment Working Group** has been funded continuously by the Western IPM Center since 2004. Our goal is to develop "real world" data on crop pest losses, control costs, yields and pesticide use in key crops for Arizona and the low desert region of California. We conduct annual workshops with pest control advisors and guide them through a survey process. The data developed provide a broad view of pest management practices, and needs, in three key crops: cotton, head lettuce and melons. This started as a process focused on insects, but now we also collect data on weeds and diseases. **The APMC Pesticide Use Database** contains 22 years of agricultural pesticide use reports (1991 – 2012) and was developed in partnership with the Arizona Department of Agriculture and an industry stakeholder advisory committee. The database currently stores information from over 527,000 pesticide use reports, including 850,000+ pesticide applications and 2,100 Products. We have integrated data from diverse sources and invested time in data verification and correction. Data from these two sources have been used to respond to federal pesticide information requests and to document extension program outcomes and impacts,

including adoption of reduced risk pesticides. Reduction of economic, environmental and human health risks can be inferred from these data.

**Outputs.** Wayne has responded to at least 17 data requests for pesticide use data (handout provided), including mainly internal requests from UA researchers. These data have been used in Extension presentations and publications developed by faculty. He helped developed 2 posters for the International IPM Symposium (posters were viewed by the group) and was coauthor on an abstract for the USDA-NIFA EIPM session (handout provided). He provided data used in impact statements that helped us earn the EPA Pesticide Environmental Stewardship Program Gold Tier Shining Star Award. These impacts were highlighted in a Western Farm Press article and on Mrs. Greensworld Internet Radio show (an interview with Peter Ellsworth), reaching tens of thousands.

IV. **Projects & Open Commitments**
   a. Crop Pest Losses
   b. Specialty Crop Block Grant
   c. PRiME
   d. PMAP
   e. Related projects of Leadership Team members

**Crop Pest Losses and Impact Assessment Working Group (ends 12/31/12)**
- Developing online version of survey forms to support data entry and analysis.

**Pesticide Information Empowers Progressive Vegetable Industry (ends 9/31/13)**
- Working with stakeholder advisory committee to define procedures for submitting data requests to the APMC for pesticide use data.
- Developing pesticide use data for lettuce and other vegetable crops for inclusion in a report that will highlight progress of the vegetable industry.

**Risk Management for Farmers and Advisors (PRiME, ends 9/30/12)**
- Developing 22 years of lettuce pesticide use records for analysis using Pesticide Risk Mitigation Engine (PRiME) developed by International Plant Protection Center at OSU.

**Pest Management Alternatives Program (with X. Li, ends 8/31/12)**
- No funding provided for Wayne through this grant, which examines resistance issues and aims to revise cross commodity guidelines for insecticide use.
- Have contributed to the project by pulling large datasets for major insecticide chemistries across key crops on multiple occasions.

V. **Discussion**

Team member projects

**Peter**
- Has thousands of forms from Mexican growers that show field visits, including pest sampling data and pesticide use. Every field has a birth certificate – a standard means of identification. Peter needs to get the data entered into a format that is useful for analysis. This would be baseline data for Peter's current Mexicali IPM project. Peter is trying to get records from other cooperatives to get a picture of pesticide use throughout the valley. Peter is seeking funding to support this.

**Dawn**
- Sits on EPA Pesticide Program Dialog Committee. She is on a subcommittee focused on measuring changes in knowledge, practices, and conditions; they are using pre and post measurement at meetings, and plan to conduct long term follow-up studies. The committee is charged with providing feedback on how pesticides are being used in community settings and in agriculture. (Bill Coli is working on the same subcommittee.) They need to aggregate data sources on a large scale. The data are from individual investigators, all different types of data. Their goal is to identify the critical benchmarks across all these studies, then to harmonize these data on a national scale.
- She piloted a national survey of school district management in AZ and has a 37% response rate. (Was hoping for at least 40% as representative data sample.) Survey of school district managers: superintendents and facility managers. George: how are the school districts that did not respond different from the ones that did? That would reveal any survey bias. Be clear in any write up about what your sample is representative of.
- EPA will have grant funds for school IPM available again next year. They will require certain standardized data to be collected to document success.
- A bed bug survey that Dawn created has been approved by Human Subjects and is being translated into Spanish. The purpose of the survey is to identify what people do to control bed bugs, to measure behaviors related to bed bug transmission and risk. It will be delivered as an online survey in English and Spanish, and will be implemented at training events using audience response. Target audience is individuals in public housing. The survey will be promoted in Canada.
- The Community IPM Leadership Team is working on a program called School IPM inside and out. They are measuring changes in knowledge at workshops. Changes in practices and conditions also need to be measured. Do we have baseline data for the baseline conditions at the school sites? 3 forms of assessment used: asthma trigger list (indoor audits); IPM Star Assessment tool (indoor environments), and an assessment form (mostly outdoors) that the Leadership Team developed. Dawn is also working with school nurses to collect data on asthma and accidents due to gopher holes. Are we measuring indoor air quality? Dawn has a monitor that measures $CO_2$. The more interesting data you have to pay for through a service.

**John**
- Veggie and melon pest losses surveys are ongoing.

- Marco is going to start on a Masters degree at UA out of Yuma. He will have a meeting on campus. He may do a project related to the lettuce insect losses data. He will continue to work full time.

**George**
- He is interested in the work Peter has been doing on Lygus movement and source-sink relationships. He would like to run some spatial statistics.
- He would like to examine changes herbicide use over time, specifically, glyphosate use. Or look at herbicide data by mode of action. His goal would be to show that we have a more diverse program of herbicide use and less use of glyphosate resistance than some other states. One problem is that many herbicide products are not well represented in the APMC pesticide use database. There are big differences in application practices geographically around the state.

**Jack**
- They have plans to change their 1080 database. They will add information on groundwater protection. The new version would identify products on the GW protection list plus things that are soil applied in community uses. The agriculture group at ADA wants these data added. There is a plan to change the law to require reporting for GW products in community IPM on a county basis. If this goes through, homeowners will not report, just commercial applicators.
- Jack is on the Certification and Training Assessment Group (CTAG) and mentioned that a project being funded through the National Association of State Departments of Agriculture Research Foundation (NASDRF) is a national assessment to see what impact the Pesticide Application Training program has on other parts of the economy.
- Wayne has reviewed the ADA 1080 database. Jack is open to input to improve the database. They have a new staff person that will be working on a database that interfaces with the 1080 data. Wayne mentioned some examples of characters that don't belong in certain fields. Wayne will follow up, sending Jack an analysis of some of the issues.

**Other Notes**
- Agenda for next meeting: f/u on ADA's work on 1080 database.
- Doodle for next meeting.