

## Cotton IPM / ICM Working Group 2008/2009 Report

**Lead Faculty:** Guangyao (Sam) Wang

**U of A Team Members:** Bill McCloskey and Mary Olsen (Plant Sciences), Russ Tronstad and Trent Teegerstrom (Agricultural and Resource Economics), Paul Brown and Jeff Silvertooth (Soil, Water & Environmental Science), Ed Martin and Pedro Andrade (Maricopa Ag Center / Agricultural and Biosystems Engineering), Kurt Nolte (Yuma Co.), Eric Norton (LaPaz & Mohave Co.), Randy Norton (Safford Ag. Center / Soil Water & Environmental Sciences), Erin Taylor and Kevin Rice (Maricopa, Pinal, and Pima Co.), Peter C. Ellsworth (Maricopa Ag Center / Entomology), Bob Roth and Al Fournier (Maricopa Ag Center), Xianchun Li (Entomology).

**USDA Team Members:** Steve Naranjo, Steve Castle, James Hagler, and John Byers

Outcomes in the past year included:

- ICM/IPM workgroup meetings held on September 15, 2008 and March 20, 2009. These meetings focused on discussion of needs, and Extension program planning for late-season 2008 and pre- and early-season 2009.
- The group planned and implemented cotton-related workshops and trainings around the state, impacting over 100 participants (growers, PCAs, industry reps)
  - October 14, 2008, Safford Cotton Field Day (Norton, McCloskey, Andrade, and Wang)
  - December 4, 2008; Yuma Preseason Cotton Workshop (Nolte)
  - February 25, 2009, Marana Cotton Workshop (Taylor, Brown, Andrade, McCloskey, Ellsworth, Teegerstrom, and Wang)
  - February 26, 2009, Maricopa Cotton Workshop (Taylor, Brown, Andrade, McCloskey, Ellsworth, Teegerstrom, and Wang)
  - September 17, 2009, Fall cotton production field day at MAC (Taylor, Ellsworth, and Wang)
- Participation in the 1st community Farm Day (MAC) on November 1, 2008. Estimated attendance was around 700 people (Roth, Martin, Andrade, Ellsworth, Taylor, Fournier, and Wang).
- Development of cotton production training materials for state Pest Control Advisor manual for publication in 2009 (Norton, Silvertooth, Ellsworth, McCloskey). This includes a chapter on Cotton IPM by Ellsworth, a chapter on Plant Growth Regulators by Norton et al., a chapter on harvest aids defoliants by Taylor & Norton, and a section on Integrated Crop Management by Silvertooth. In addition, authors are writing revised versions of the Pest Control Advisors' licensing exam. This new PCA manual will be published this year in collaboration with the Arizona Crop Protection Association, the Arizona Department of Agriculture and Western Growers Association.
- An USDA PMAP grant for developing an improved cross-commodity whitefly management program to counter resistance B biotype whitefly and potential establishment of Q biotype has been funded (informed by phone and formal notice of award will arrive in 1-2 months). Title: Sustaining Cross-Commodity Whitefly Management with Novel Reduced Risk Chemistries. PIs: Xianchun Li,

Peter C Ellsworth, John C. Palumbo, Steven E. Naranjo, and Alfred J Fournier.  
Total award: \$191,199. Duration: 2009-2011

- Our State-wide survey has detected 6 Q biotype whitefly samples in 2008. All the 6 samples were from poinsettia, none from field crops. Two samples were mixtures of B and Q biotypes. This is the first time we have detected Q biotype samples that contain B biotype whiteflies. Also, the Q biotype samples we've got in 2008 are much more quickly to establish in the lab than samples we got in previous years.
- Pyriproxyfen resistance in whitefly continues to increase in 2008.
- Cotton Report Guidance development: Peter Ellsworth, Ed Martin, Al Fournier and Robert Casler drafted a new set of procedures for peer review and ongoing (rolling) publication of cotton report articles online. This new approach was developed out of Cotton Team discussions and is currently in the final review stages by the group. This new process will increase the quality of articles developed and will benefit agents and specialists seeking to develop peer reviewed articles to support tenure and continuing review processes. Another benefit is that completed articles will be made available to the public immediately following the review process. They will be published on the Extension website. Once enough articles are published online, print copies of the Cotton Report will be printed and made available to the public