

## **Cotton IPM / ICM Working Group 2007/2008**

**State Coordinator(s):** Peter C. Ellsworth (Maricopa Ag Center / Entomology), Al Fournier (Maricopa Ag Center)

**U of A Team Members:** Bill McCloskey (Plant Sciences), Russ Tronstad (Agricultural and Resource Economics), Trent Teegerstrom (Agricultural and Resource Economics), Mary Olsen (Plant Sciences), Paul Brown (Soil, Water & Environmental Science), Ed Martin (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.), Jeff Silvertooth (Soil, Water & Environmental Science), Pedro Andrade-Sanchez (Maricopa Ag Center / Agricultural and Biosystems Engineering), Guangyao Wang (Maricopa Ag Center / Plant Sciences)

**USDA Team Members:** Steve Naranjo, Steve Castle, Jackie Blackmer, James Hagler, Richard Percy

**Situation and Environment:** Successful desert cultivation of cotton demands a large knowledge base across a variety of interrelated disciplines. Because there is a strong link between production practices, weather, key pests, and pesticide use, interdisciplinary Extension education programs are needed to deliver timely, science-based information to cotton production clients to ensure profitable production and optimize inputs to meet environmental goals. In particular, the availability of accurate and timely information for growers and pest control advisors on integrated crop management (ICM) and integrated pest management (IPM) can affect cotton yields and quality and therefore the economic well being of Arizona cotton growers. Furthermore, information on IPM can improve pest management, reduce ineffective and/or unnecessary use of pesticides and thus reduce risks to applicators and the environment. Frequent up-to-date communication among specialists, Extension agents and clientele is required to identify needs and to deliver science-based information to clientele. However, specialist/agent participation in meetings is often impeded by lack of financial support and budget shortfalls of departments and counties.

### **Outputs:**

**Activities:** At least two working group meetings (face-to-face); frequent email communication through working group listserv; supplementary conference calls on an as-needed (issue-driven) basis; information delivery via county Extension meetings, workshops, field days, the Arizona Crop Information Website (ACIS), AZMET cotton advisories, and cotton reports.

**Participation:** Seven or more counties and over 6 disciplines are represented on this working group. Over 100 PCAs, 500 cotton growers, and 190,000 acres of production are expected to be impacted.

### **Outcomes - Impacts:**

**Short-term:** Arizona cotton growers will have timely, accurate, science-based information to enhance desert cotton production. Interdisciplinary interactions of Extension faculty system-wide and partnerships with USDA colleagues will be enhanced. Increased communication will enhance the effectiveness of Extension programs by improving our understanding of growers needs.

**Medium-term:** Increased yields and profits, and improved cotton management as a result of workgroup efforts are expected to increase client satisfaction with Extension. Enhanced interaction among interdisciplinary Extension faculty is expected to benefit other programs and lead to new collaborations.

**Long-term:** Improved cotton production will enhance the economic and environmental well-being of clients, sustain rural communities, and will contribute to the state's economy and efficient use of the state's limited natural resources.

**Inputs:**

- Agents' and Specialists' time for meetings, planning, and work on outputs
- USDA researchers' time
- Funding requested (\$2,000)

**Budget:** \$2,000 is requested to support travel, in-service training and meeting logistics. Other funding sources will be used to support publications and/or printing costs.

**Working Group Outcomes from 2007-2008**

Outcomes in the past year included:

- ICM/IPM workgroup meetings held June 29 and October 23, 2007 and May 12, 2008. These meetings focused on discussion of needs, and Extension program planning for late-season 2007 and pre- and early-season 2008.
- The group planned and implemented numerous cotton-related workshops and trainings around the state, impacting over 100 participants (growers, PCAs, industry reps)
  - Aug 27, 2007, Parker Cotton Workshop
  - Oct 10, 2007, Safford Cotton Field Day
  - Oct 16, 2007, Yuma, Pink Bollworm Eradication meeting
  - Oct, 2007, Held grower field day in Pinal County, highlighting the attributes of reduced-risk chemistry.
  - Feb 27, 2008, Yuma Cotton Workshop
  - Feb 28, 2008, Parker Cotton Workshop
  - Mar 5, 2008, Maricopa Cotton Workshop
  - Mar 19, 2008, Marana Cotton Workshop
- Initiated discussions on the formation of a precision ag working group, to be led by Pedro Andrade next year.
- Several team members contributed to the Arizona Crop Protection Association Peat Control Advisor's manual, which will be published in revised form in 2008.

- The team implemented a Pest Management Strategic Plan (PMSP) for Desert Cotton at the Maricopa Ag Center on May 24, 2007. This included stakeholders from AZ and CA cotton production systems engaged in a process of identify crop production and pest management issues and priorities. The PMSP document is currently in development and will be published in late 2008 on the Western IPM Center website.
- 2007 Cotton Report (12 articles published)  
<http://cals.arizona.edu/pubs/crops/az1437/>