

Arizona Crop Information Site Technical Support IPM Proposal 2007

Project Leader: Al Fournier

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Location: Statewide effort, with impact on campus, county, and experiment station personnel. Benefits can be accessed worldwide.

Situation and Need

The mission of the Arizona Crop Information Site (ACIS) is to provide growers, pest control advisors (PCAs), pest managers, and allied agricultural industries, county Extension personnel, researchers, state and Federal regulators, and the general public with current, independent, research-based desert crop production and protection information. Since its inception, ACIS has greatly enhanced stakeholder access to critical, timely information related to Arizona crop management across all major crops (e.g., cotton, citrus, vegetables, grains, forage) and all types of pests (weeds, insects and diseases). ACIS has facilitated rapid dissemination of scientific information that has helped to inform pest management decision-making and other crop production efforts statewide. Growers, PCAs, and other stakeholders have attested to the importance and usefulness of ACIS to their crop and pest management activities (see attached Position Statement). Monthly activity on the site during the 2006 granting period ranged from 330,000 to 413,000 hits, with over 2.6 million hits over a 7-month period (see table 1 in the attached 2006 final report). The ACIS website has been used by numerous Extension personnel as an important communication channel that provides links to key clientele.

This valuable communication tool, which our clientele have come to rely on, was threatened following the loss of Program Coordinator (J. Jones) in October 2004, and a lack of available staff to maintain the website. Thanks in part to funding from an IPM proposal last year, we were able to employ a part-time student to maintain ACIS and re-invigorate our communication and relationship with agricultural clientele throughout the state. A modest investment in 2006 (\$7500 IPM grant leveraged with other support funds) yielded significant benefits and outcomes, as described in the attached final report. We are requesting a slightly lower level of funding this year through this proposal to maintain this important resource. This reduced request reflects an increase in leveraged dollars through external grants.

The loss of this important web resource would impede our ability as extension educators to communicate critical information to our agricultural clientele in a timely and economic manner and forces us to rely on more diffuse and less efficient methods of communication. In the long-

run, this would impact our relationship and credibility with key stakeholder groups, who may turn to other, less independent and less science-based, information sources (primarily industry).

Relevance to Priorities

This project specifically addresses two Arizona Pest Management Center (APMC) IPM priorities: (1) It provides easy access to resources that address the broad pest management needs of pest managers, growers and other clientele working in a variety of crops statewide; and (2) it links applied IPM research with statewide (potentially worldwide) outreach by providing clientele timely access to important research data (e.g., cotton variety trial data posted prior to 2006 planting season). As shown on the APMC organization chart, ACIS spans virtually all or production/pest management programming and so is a support tool for a broad range of faculty. Furthermore, good and consistent communication with stakeholders facilitated by ACIS builds trust and credibility in the extension system.

Outputs:

Activities:

- Post new events (meetings, workshops, etc.) of interest to agricultural clientele; this is an important vehicle for promoting extension meetings as well as regional conferences, etc.
- Provide email updates to clientele via the ACIS email list, which alerts people to new events and newly posted information and resources.
- Post new “Pest Alerts” as they become available, to inform clientele of potential new threats to Arizona agriculture (e.g., Citrus Greening). This will be done in conjunction with the Arizona Plant Diagnostics Network, to reduce redundancy.
- Continue to organize, format and post a backlog of crop/pest management information; progress has been made on this objective, but there is more work to be done here.
- Continue to educate clientele *and* faculty about ACIS as a communication resource.
- Continue to seek other sources of extramural funding to support and expand ACIS.

Products:

- New and revised information posted to ACIS; some information may also be reproduced in Extension bulletins, fact sheets, newsletters and other “traditional” extension formats as needed or appropriate.
- The less tangible “product” of these efforts is the relationship-building impact frequent and consistent communication with our stakeholders can have.

Participation: Major users of ACIS include growers, pest control advisors, rangeland managers, agricultural industry representatives, county extension personnel, researchers and specialists, state and Federal regulators.

Expected Outcomes and Impacts

Short-term:

- Continued availability of current research and educational information for clientele.
- Continued posting of new events and email updates will keep clientele informed and promote the success of our extension meetings.
- Continuity of communication with stakeholders will not be disrupted.

- ACIS serves as an extension programming tool, in that it highlights where gaps exist and where work and/or publication is needed.

Medium-term:

- Availability of timely information will help to improve crop/pest management practices in multiple crops.
- ACIS will improve the efficiency and effectiveness of communication efforts of extension educators (on campus, in counties, and at research centers), which should improve morale and time management of UA staff.
- Improved communication with stakeholders achieved through ACIS will inform our grant-writing efforts and improve our competitiveness for regional and national funding by increasing stakeholder input.

Long-term:

- ACIS support will improve our relationship and credibility with agricultural clientele.
- A long-term goal is to extend the ACIS model to other program areas, particularly community IPM, including turf, horticulture, school IPM and structural IPM. This goal is dependent upon availability of resources and the interest level of faculty working in these areas.

Plan for Evaluation:

The usefulness and vitality of ACIS will be measured by the number of web hits to various areas of the site. The functionality, relevance and content of ACIS will be evaluated using stakeholder input obtained at meetings, workshops, via email communication, etc.

Inputs/Budget:

We are requesting \$3,000 for salary support for a part-time web specialist to maintain and expand ACIS. We will leverage this by continuing to seek partial ACIS support through APMC extramural grants that have outreach components.

Al Fournier will invest time into this project to supervise the part-time web specialist and to communicate with faculty and stakeholders.

Leveraged Resources / Continued Funding

We have continued to seek external support for ACIS from commodity groups, and by partnering with faculty on extramural projects. Partial funds to support web development and maintenance (including but not limited to ACIS) were written into 2 external USDA grants that were funded in 2006 for future work: a Western IPM Center Information Network proposal (the Arid Southwest IPM Network) and a Risk Avoidance and Mitigation Program (RAMP) proposal focused on area-wide suppression of Lygus bugs. For calendar year 2007, these funds total about \$8,700. (It is important to note that these funds are tied to specific project objectives and outcomes, beyond routine maintenance of ACIS.) We will continue to seek buy-in and financial support for this important resource from key stakeholder groups.

Arizona Crop Information Site Technical Support

2006 IPM Grant Report

Project Leader: Al Fournier

Project Objective: The purpose of this proposal was to provide continued financial support for maintenance and expansion of the Arizona Crop Information Site (ACIS), which provides independent, research-based desert crop production and protection information to a wide range of agricultural clientele in Arizona, the desert Southwest, and beyond.

Summary and Current Status

The funds provided through this grant were used to pay a part-time student worker (Charles Reid) who began work on Jun 13, 2005. This allowed us to provide regular updates to ACIS, including posting of new events, presentations, commodity reports and other research data and publications. In addition, some new areas of the site were created, such as a new “Pest Alerts” page that includes updates and regulatory information related to invasive species. Some highlights of our activities are presented below.

Charles Reid’s employment was terminated in November 2006. We are currently working with Robert MacArthur to identify and hire a new campus-based student to work on ACIS part-time. In the meantime, Becky Papp, currently employed part time at the Maricopa Ag Center, will help us to maintain the site.

Activities (Highlights, June 2006 – Nov 2006)

- Posted over 30 new educational events and opportunities, covering a range of commodities and topics, including cotton, vegetables, melons, citrus, rangelands, turf, landscape/nurseries, pesticide safety, crop insect losses and IPM assessment.
- Maintained ACIS email list (currently 205 recipients) and sent out occasional email updates and alerts.
- Posted Extension presentations and publications including:
 - Whitefly Management in Arizona Cotton 2006 (IPM #18)
 - Technical Advisory Committee of the Q-Biotype Whitefly Taskforce: A Rapid Response to an Emerging Pest (poster)
 - Commodity Reports (2005 Vegetable Report, 2006 Cotton Report, 2005 Forage and Grain Report, 2003 Citrus Report)
- Posted results of Western survey about herbicide tolerant and insecticide resistant crops.
- Made revisions to several sections of ACIS, including grains page; cotton advisory pages; farm fresh produce page; pesticides / regulatory pages.
- Created “Pest Alerts” page to provide information about new and potential invasive insects, weeds, diseases and nematodes in Arizona and the US.
- Created a page to host information / updates related to the Pink Bollworm Eradication program.
- Performed routine maintenance tasks.

- Created links to the Western and National Plant Diagnostics Network websites.
- Engaged with Barry Pryor and the Arizona Plant Diagnostics Network on plans to integrate their website (currently under development) and ACIS in the near future.
- Charles Reid's employment was terminated in November 2006.

Participation

All UA faculty involved in agriculture are invited to contribute to ACIS. Primary participants during this grant period included: Peter Ellsworth, John Palumbo, Charles Ried, Becky Papp, Jon Dinsmore, Mary Olsen, Mike Matheron, Jeff Silvertooth, Russ Tronstad, Pat Clay, Kurt Nolte, Eric Norton, Randy Norton, Kai Umeda, James Walworth, Barry Pryor, Jon Reding (Arizona Crop Protection Association), AnnaMarie Knorr (Arizona Crop Protection Association).

ACIS is used by a wide variety of agricultural stakeholders, including growers, pest control advisors, industry representatives, researchers, and Extension personnel statewide. Usage statistics for ACIS from May 1 to Nov 30, 2006 are listed in table 1.

Table 1: ACIS Summary, 5/1/06 – 11/30/06

Total Sessions	421,355.00
Total Pageviews	1,217,989.00
Total Hits	2,651,961.00
Total Bytes Transferred	101.51 GB
Average	
Average Sessions Per Day	1,968.95
Average Pageviews Per Day	5,691.54
Average Hits Per Day	12,392.34
Average Bytes Transferred Per Day	485.75 MB
Per Session	
Average Pageviews Per Session	2.89
Average Hits Per Session	6.29
Average Bytes Per Session	252.62 KB
Average Length of Session (HH:MM:SS)	00:03:18

Leveraged Resources

- Partial funds to support web development and maintenance (including but not limited to ACIS) were written into 2 external USDA grants that were funded in 2006 for future work: a Western IPM Center Information Network proposal (the Arid Southwest IPM Network) and a Risk Avoidance and Mitigation Program (RAMP) proposal focused on area-wide suppression of Lygus bugs. For calendar year 2007, these funds total about \$8,700. It is important to note that these funds are tied to specific project objectives and outcomes, beyond routine maintenance of ACIS.
- Jon Dinsmore was hired as Yuma County Instructional Specialist in early September 2006, funded 100% through Yuma County. Jon is currently working with Kurt Nolte, Jorge Fonseca and others to update Yuma county information, particularly with respect to vegetable production, on an ongoing basis. All updated information will be posted on ACIS.

- Becky Papp was hired as a part time Research Technician in August 2006, primarily to work on the Arizona Pest Management Center and the Arid Southwest IPM Network websites, but her web expertise makes her a valuable resource to ACIS as well.
- Faculty members and non-UA partners contribute time, energy and information to help us maintain and update various sections of ACIS, and occasionally review past and current information on the site. These reviews are critical to maintaining a high quality standard for the information provided by ACIS.

Outcomes / Current Status / Continuing Need

Statistics on web activity continue to support the reality that a well maintained website gets more visitors and has more potential impact on clientele than a static site. Since June 2005, with the exception of a few months in the summer of 2006, we have been able to maintain and expand ACIS to meet the changing needs of clientele. In a 7-month period from May through November 2006, ACIS had well over 2.5 million hits and over 1.2 million page view, averaging over 12,000 hits/day. Our stakeholders have come to rely on the “one-stop-shopping” convenience of ACIS as a single source for reliable, unbiased research information and current events related to Southwest desert agriculture.

The funds provided through the APMC IPM grant have been critical to the ongoing maintenance and modest expansion of ACIS during this timeframe. For a relatively small investment, we were able to maintain critical communication with agricultural stakeholders, including growers, pest control advisors, extension personnel and other agricultural clientele. While we continue to seek additional resources for ACIS in nearly every extra-mural grant we submit, it is important to demonstrate UA’s ongoing commitment of internal resources to maintain the site. The scope and depth of information on ACIS that make it an invaluable resource also require that the site is vigilantly reviewed and maintained on a continual basis. Since pest management is a primary focus of the ACIS site, we feel the IPM 3(d) monies are an appropriate resource to commit to this ongoing need.