

## Arizona Cooperative Extension Proposal Requests - Working Group Award

**Title:** Vegetable Advisory Committee

**Program Area(s):** Agriculture and Natural Resources

**County affiliate(s):** La Paz - Barry Tickes  
La Paz - Eric Norton  
Maricopa - Erin Taylor  
Yuma - Kurt Nolte

**On-campus or Experiment Station affiliate(s):** ABE - Gene Giacomelli  
Entomology - Al Fournier  
Entomology - David Byrne  
Entomology - John Palumbo  
Entomology - Peter Ellsworth  
Entomology - Timothy Dennehy  
Plant Sciences - Jorge Fonseca  
Plant Sciences - Mary Olsen  
Plant Sciences - Michael Matheron  
SWES - Jeffrey Silvertooth

**Lead Faculty:** Entomology - David Byrne

**This Working Group was previously funded:** Yes

**University fiscal year:** FY2006

### Report of Working Group accomplishments (Outputs and Outcomes) from 2006 – 2007:

March 2, 2007

A meeting was held on the above date at the Yuma County Extension Office. Two things stand out. Due to a series of conflicts, attendance was particularly low this year. Dennis, after all, had to polish his pickup. The male equivalent of, "Not Saturday, I have to wash my hair." On the bright side, Bill Fox did not show up in his usual beer helmet this year, so conversations had a more serious tone. Dan, failing to live up to his brother's standards, wore a rather particularly pedestrian hat (What, Husky Hats were not available this year?)

There was a lengthy discussion concerning Cucurbit yellow stunting disorder virus (CYSDV). A successful meeting was held recently in Yuma where Judy Brown, and others, discussed its potential as a pest. Judy will be sampling bridge hosts to determine if they serve as inoculum sources. I am attaching two web addresses that you may find helpful. <http://portal.isiknowledge.com/portal.cgi/portal.cgi?DestApp=WOS&Func=Frame&Init=Yes&SID=B2BaOLLmkHpIL7A4cJL>

<http://www.blackwell-synergy.com/doi/pdf/10.1111/j.1365-2338.2005.00847.x>

We know this is a crini virus, transmitted in a semipersistent way to cucurbits by the sweet potato whitefly. One of the major problems it creates is that it can reduce sugar levels in melons to near 10%.

There was talk of host-free periods to stem this problem. Perhaps July 15 until August 15. Many other are pointing the finger at one particular grower, but many factors could be involved. One possibility is that vectors are being carried into the area from Mexico. Anecdotes concerning long-range (i.e., 50 miles) movement by the sweet potato whitefly are common and may have some basis in fact. Empirical evidence establishing that flights exceeding 5 miles in a day exists. Tim stated that he has voucher specimen of Bemisia collected over several years that could be tested for presence of the virus.

In a statement not specific to this virus, it was agreed that fall melons in the low desert are a source of many problems.

Articles for the next vegetable report are due July 1. That will make a publication date of August possible.

Al reported on the status of the revision of the Pest Control Advisor's Study Manual. I seem to recall the last revision was made in the mid 1980s. This project is collaboration between UofA faculty and the Arizona Crop Protection Association (AZ PCA), coordinated by Jeff Silvertooth. The manual should be available near the first of the year and constitutes a considerable effort. A designated team will complete each section included in a 3-ring binder format. The materials will build on information from the University of California "IPM in Practice" manual. As a result of these

revisions, some teams will produce new or updated stand-alone extension publications. There will be no on-line version; rather it will be sold as a complete document, marketed by the AZ CPA.

The positions from the CALS Extension decision packet were discussed. A list of positions, along with Al's notes, has been sent under a separate letter.

Tim discussed the status of the sweet potato whitefly, Biotype Q. In 2006 they found 13 of 100 sites that had whiteflies. One site had Biotype Q. This has been placed into culture in several laboratories. Both Tim and John stated that there have been no reported field failures in trying to control sweet potato whiteflies. Tim presented a report on recent resistance research. He specifically pointed out that imidacloprid was holding its own with cotton- and non-cotton collected whiteflies. This was true at rates of 100 mg/ml and above.

John and Steve Castle are checking levels of pesticides in plants to make sure it is available to pest insects.

Dan reported that lettuce-, cowpea-, and green peach aphids have been present at various times in recent months, but seem to have been held in check by imidacloprid.

Our cold winter seems to have had an effect on Arizona's vegetable market in at least two ways; because of cold weather less produce is being consumed in the East; cold weather prevents pesticides from moving through the plants. This is particularly true for translaminar materials.

According to Mike and Mary Botrytis and Sclerotinia minor have been problems. They expressed the opinion that this may be due to fertilizer applications late in the season

The two "mold-heads" also sent the message that fungicides have to be applied prophylactically. Once they have they have a toehold, they are impossible to deal with.

We were asked about predicting future pest populations. Given the dynamics of agroecosystems, this has proven to be almost impossible. It used to be common to hear statements such as, "We put a lot of pinkies to bed, and so we can expect problems next year." John and I agreed that conditions during a growing season have more effect on pest populations than previous year's pest levels. This observation is only anecdotal, however.

Something I failed to do this year was to ask which pest issues were of importance to our audience. If you have any comment (even if you were unable to attend this meeting), please pass them along.

I also failed to give a report on the CALS progress since last year. I will do so next week. I have already inquired about Lygus work in the low desert.

Thank you for attending.

David

**This Working Group is connected to a state- No wide initiative:**

**Which one?**

**Budget amount requested (up to \$2,000.00):** \$950.00

**Budget amount approved (up to \$2,000.00):** \$950.00

**Situation/issue:**

It has been 15 years since the Vegetable IPM Advisory Committee came into existence. It has met every year since then. In the beginning personnel from CALS were looking for an alternative to the conventional extension meeting when we supplied our audience with information, with little expectation of receiving guidance from them. While traditional grower meeting serves a useful purpose, it was clear that a meeting where the intention was to have an exchange of information between university employees and members of the vegetable production industry could be extremely useful. This formula has worked out well for all parties. Barriers to communication have been lifted over the years and ideas about how to improve the vegetable production are freely exchanged. The initial problem was to coax them to give us this information in the presence of their competitors. After some time, we have established such a relationship. They are willing, no eager (sometimes too eager), to tell us, for example, when our thresholds are too low or- ask why we are still conducting variety trials. There have been some extremely heated discussions over the years, as we have been held accountable for our pronouncements. At the same time we are able to describe our limitations so that their expectations are not inordinately high. Most obviously, people in the industry have developed their own solutions to problems, which they are willing to share. This communication is particularly important given the increased contribution of Arizona vegetables to the state economy. In 2005 this industry contributed \$1,185,376,000 to our gross state profit.

Members of the committee include In attendance were: Kevin Adam (Bayer Crop Science), Art Anderson (Valent),

David Byrne (UofA), Tim Dennehy (UofA), Peter Ellsworth (UofA, ex-officio), Jorge Fonseca (UofA), Kevin Ford (Keithly-Williams Seed), Al Fournier (UofA), Bill Fox (Independent PCA), Dan Fox (Dune Co.), Gene A. Giacomelli (UofA), Kurt Nolte (UofA), Dennis Monypeny (Dune), Jeff Nigh (Independent PCA.), Clint Osborn (Dune Co.), Mary W. Olsen (UofA), John Palumbo (UofA), Jack Peterson (ADA), Rick Rademacher (Salter-American), Jesse Richardson (Dow), Jeffery C. Silvertooth (UofA), and Jeff Smith (Valent). The composition of the committee is dynamic and changes yearly. Some members have been a part of the committee since its inception.

**Inputs including budget:**

Travel to attend two meetings and for trips to review vegetable production outside Yuma Co., \$800; Support for meeting \$150; Net Request \$950

**Outputs:**

Continued direct communication between UA Cooperative Extension personnel and affected vegetable grower groups.

**State at least one educational product:**

Publication by Palumbo, J. P. 2007. Insect Management in Leafy Vegetable and Melons Crops.

Byrne, D. N. (ed). 2006. 2006 Vegetable Report. Cooperative Extension, CALS, University of Arizona Bulletin, Series P-146, AZ1479, 153 pp.

Two hundred copies of this report have been distributed in the state. It is also available at [cals.arizona.edu/pubs/crops/az1479](http://cals.arizona.edu/pubs/crops/az1479). The purpose of this report to to formally present the results of vegetable-related research by CALS personnel.

**Short-term outcomes:**

A meeting of the CALS Vegetable IPM Team was held March 2, 2007 at the Yuma County Extension Center. See appendix for minutes. (A meeting will be held on a similar date in 2008). In advance we will have a planning meeting to discuss an agenda. Participants with particular topics of interest will be asked to make short introductory presentations. These will be followed by open discussions. We will also need to discuss our list of invitees.

Results of research were published in cited reference.

**Medium-term outcomes:**

Continued direct communication between UA Cooperative Extension personnel and affected vegetable grower groups