Seed Crop Coordination

- Cross pollination with vegetable seed crops.
- Estimated that 90% of the global broccoli seed production occurs in Yuma.
- Collective action impacts.
- Trusted 3rd party to facilitate a voluntary program.
- A network of 30 individuals including seed companies/growers and extension specialist.
- System was/is entirely self-enforced.
- Peer based instead of issue based.
The Old System

- **Large Paper Map on the Extension Office Wall**
  - Required individuals to go to the extension office to insert pins (up to an hour drive).
  - Unauthorized pin movement (wandering pins).
  - Unofficial pinning times and data.
  - No historical data kept.
  - Labor intensive.
The New System

- **Web Based Program (Thin Client)**
  - Requires no additional programs/plug-ins.
  - Remote access 24/7, will soon be able to pin using cell phone.
  - Pins are time/date stamped and can only be edited or removed by the original party.
  - Can pin up to every 10 acres.
  - Mutipule security levels.
  - Complete historical records.
Other Benefits Provided

- **Instant feedback on potential cross-pollination problems (Buffer Zones).**
- **Takes advantage of the DSL wireless environment in the Yuma Valley.**
- **Real time communication with all pin map participants.**
- **Reduces transaction costs while validating pinning contract.**
- **Easily handles the 120 to 150 pins per season.**
- **Able to query past pins.**
Adoption Hurdles

- Cultural issues between the seed companies, growers and extension.
- Technology not everyone was comfortable with the new technology.
- Creation of an equal playing field (small vs. large).
- Getting the group together.
- Security issues.
- System needed to minimize over pinning.
Yuma Growers’ Pinmap 2003 - 2004
DEMO SITE

Company       PIN #
SeedGen:      4141
Acme Seed:    9999
Great Seed Co: 5353
Seed Corp:    8520

Please Enter your Company Pin Number

Login

Logout
Yuma Seed Growers' Pinmap 2003 - 2004

DEMO SITE

Seed Company: Acme Seed
Grower: Aaryn Olsson
Township: 7
Range: 16
Section: 26
UTM x-coordinate: 230737
UTM y-coordinate: 3631421
Pin ID: 11320
Crop type: Broccoli
Acres: Cauliflower

Submit Details

Logout

Layers
- Insert Pins
- Remove Pins
- Crops
- Seed Companies
- 2002 Training Crops
- Street Labels
- Detailed Streets
- City Labels
- Township and Range
- Sections Labels
- Sections
- Satellite Imagery

Refresh Map
Logout
Gateway Page

Crop Types
- Broccoli
- Cauliflower
- Mustard
- Okra
- Radish
- Sunflower
- Red Onion
- Yellow Onion
- White Onion
- Rappini

Map: 214532.21, 3625787.41 -- Image: 560, 9 -- ScaleFactor: 16.835351614478906
Remains Seed Dealer/Grower Driven

- **Self-imposed $10.00 pinning fee to stop excessive up front pinning.**
- **Pinning money is given to the Yuma Cooperative Extension Office.**
- **Continually being tweaked as new needs and features are uncovered.**
- **Annual pre season pinning meeting now held.**
Extension Office Pinmap Computers
Extension of the Technology and Program

- **Creation of the Peer to Peer (P2P) Early Virus Detection Program**
  - Direct link to University Diagnostic Labs and Specialist.
  - Quick Responses to local situations

- **Planned program to track White Fly Movements and Outbreaks.**
Virus Disease Management Peer to Peer Project

This is a producer-driven collaboration with University of Arizona researchers to provide rapid, accurate identification of plant viral pathogens of vegetable and fiber crops in Arizona.

The University of Arizona
Tucson Arizona
Below is the case summary for case 875

Pest
This thing is pretty nasty!

Plant

Reporter Name: Robert
Email Address: robmac@ag.arizona.edu
UTM Coordinates: 123455, 3555555
UTM Zone: 12
Plant: Alfalfa
Symptoms:
1. Chlorosis
2. Cucumber beetle
3. Squash beetle
Pests:
1. Squash beetle

Planting Date: 01-01-2002
Date Reported: 10-20-2003

Case Dialogue
DATE: REPORTER COMMENTS: REVIEWER COMMENTS:

This thing is pretty nasty!

Cucumber beetle
Squash beetle
THANK YOU!

Pin Map Demo Site:
- http://img.calsnet.arizona.edu/website/yuma03_t/

Virus Disease Mgt Peer to Peer Site:
- http://ag.arizona.edu/p2p/vdm/

Univ. of AZ, Ag and Resource Economics Department
- http://cals.arizona.edu/AREC/arechome.html/

Geospatial Tools for Natural Resource Management
- http://rangeview.arizona.edu/