Research and Regulatory Update

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CA Garlic & Onion Research Advisory Board
WHITE ROT UPDATE

- Level of infection San Joaquin Valley
- Research Efforts
- Registration Status
- Grant-In-Aid Programs
  - CAGORAB
  - CADPR
White Rot Level of Infection SJV

- Total no. acres infected: 14,368
- Total fields: 93
Nomad Computer and Software

EZ-OFFICE MOBILE SOFTWARE AND THE TRIMBLE NOMAD HANDHELD COMPUTER

AN EFFECTIVE TOOL FOR GROWERS, CROP CONSULTANTS, SOIL SAMPLERS AND SCOUTS

SIMPLE USER INTERFACE:
- Familiar and easy to use Client, Farm, Field, and Job data management
- Customizable text display on screen
- Touch screen provides large buttons and map area for finger selection

HARDWARE:
- Rugged handheld to easily withstand field use
- Reliable rechargeable battery designed for all day jobs
- Versatile built-in GPS receiver, digital camera, and wireless technology

SCOUTING:
- The field imagery tool allows scouts to utilize the built-in GPS receiver and digital camera on the Trimble® Nomad® handheld computer to capture and geo-reference pictures of problems such as weeds and insects
- Enter an unlimited number of attributes, such as scouting notes or types of weeds, for mapped areas, lines, and points

MAPPING:
- Map a field boundary in order to calculate area or drainage lines in order to measure distances
- Record soil sample points or other points of interest
- Display background Shapefiles (SHP) and geo-referenced BMP/JPG aerial photos

DATA STORAGE:
- Store data to secure internal memory or removable Secure Digital data card

SAMPLING:
- Create soil sampling grids to any size, pattern, and orientation
- Import pre-existing sampling targets or zones from EZ-Office™ software or other GIS programs
- Easily navigate to soil sample locations and other targets

VIEWING DATA:
- Data from EZ-Office Mobile software transfers easily to EZ-Office desktop software using automated data synchronization
- Data can be exported in Shapetree format to use with 3rd party applications

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WHITE ROT OF ONIONS & GARLIC
Inoculum Density Vs. Disease Loss

% YIELD LOSS

ASSAY LIMIT

SCLEROTIA/LITER SOIL

- GARLIC, SALINAS
- GARLIC, DAVIS
- SP ONIONS, TULELAKE
- GARLIC, KING CITY
- FALL ONIONS, NAMPA
- GARLIC, WALLA WALLA

Data from F. Crowe, 1976-1982
Registration Status White Rot Products

- **Folicur** (tebuconazole) *registered for soil and foliar applications July 2008*
- **Switch** (combo fludioxonil & cyprodinil) *soil application registered CA*
- **Cannonball** (fludioxonil) *registration?? CA??*
- **Endura** (boscalid) *foliar/drip irrigation in season CA*
- **BAS 510 ST** (boscalid) *CA reg.??*
- **DADS** (diallyl disulfide) *No product currently available*
2010 Research Program

- **White Rot**
  - **Mike Davis** (UCD)  *IPM White Rot*
  - **Tom Turini** (UCCE Fresno)  *Drip Irrigation*
  - **Ken Giles** (UCD-Ag Eng.)  *Application techniques and equipment* (Kevin Moules)
  - **Colin Eady** (NZ Crop & Food Research Inst.)  *Biotech Allium germplasm development*
  - **Bo Ming Wu** (OSU prev. USDA ARS CA) w/Davis on  *White Rot management strategies*
  - **$52,000 budgeted**
Folicur Application Equipment Design Program

- **Ken Giles** UC Davis Ag Engineering
- **Kevin Moules** (UCD Ag Engineering Masters Program)
Garlic Rust Management

- First observed CA 1934.
- **Severe outbreak spring 1998.**
- Obtained Section 18 for Folicur 1999 and have continued that 18 for 7 years (except 2003).
- **Azoxystrobin (Quadris) is only registered compound for use on garlic rust. It is preventative.**
- Folicur (tebuconazole) can reach back and control infection once observed.
- **CA DPR Registration approved 7/31/08.**
- Bayer no longer selling but generic products available.
IYSP and Thrips Control

- Researchers:
  - Hanu Pappu (WA State Univ. Virology)
  - Eric Natwick (UCCE Imperial Valley)
  - Donna Henderson (UCCE Imperial Valley)
  - Steve Orloff/Larry Godfrey (Tulelake)
  - Tom Turini (UCCE Fresno County)
  - Mike Davis (Extension Pathologist, UCD)
  - Howard Schwartz (Colorado State Univ.)
Seed Corn Maggot

- Submitted Section 18 for use of Poncho as a seed treatment (Klamath Basin) 2009
- Renewal of 18 not allowed- tolerance for clothianidin established at EPA
- Bayer will decide how to proceed
Seed Corn Maggot Program 2010

- Rob Wilson/Larry Godfrey (UCCE/IREC)
  - Evaluation of seed treatment products

- Mary Ruth McDonald (Univ. of Guelph, Ontario)
  - Seed treatments for control of onion maggot and seed corn maggot (part of IR-4 national program)
QUESTIONS???

THANKS FOR YOUR TIME