Looking Ahead

Overview of CfAHR
- Sustainable horticulture
- What’s next?

Research
- Phoma (Phomopsis)
- Mites
- Powdery Mildew
Sustainable Horticulture

Find practical solutions for the issues that growers face

- New Crop Development/ Plant Introductions
- Crop Production and Monitoring
- New Technologies
- Quality Assessments of manufactured products
Monitoring and Interpretation Services

- Laboratory diagnostics
- Analysis and interpretation
- Onsite trialing
- Technical management
- Regulatory compliance
Evaluate Production Efficiencies

New technology
  Greenhouse and nursery production, pest management and plant health

Environment quality
  Water treatment, potting mixes, containers and more...

Science is a tool to evaluate performance, discover and test new applications, and develop guidelines and standards.
Community Outreach

Service
Promote horticulture through demonstration, applied science, innovation and value

Share our sustainable horticulture industry
CfAHR Mission:

Provide research and service to promote the industry and advance horticulture science
Inexpensive, safe and easy to use pest control

- Phoma (Phomopsis)
- Mites
- Powdery Mildew
Pest Control with Inexpensive, Non-Toxic and Easy to Use Treatments

Lime-Sulfur Solution
- Calcium Polysulfide (Lime Sulfur), OMRI Listed
- Therapeutic use recorded in 1,000 BC, crop pests, weed and disease control

Mono-Potassium phosphate
- Micronutrient mixtures
Phomopsis disease

Crop
- *Jasminum polyanthum* (Jasmine)

Symptoms on plants
- Tip burn
- Die back

Sulfur trial for control of *Phomopsis* sp.
## Materials and Methods

### Treatments
- Lime- Sulfur 29% (100 oz)
- Potassium Monophosphate 53% (100 oz)
- Pyraclostrobin 16 oz, with Chlorothalonil & Thiophanate methyl (8oz)
- Water (100 Gal/ Acre)

### Measures
- Plant Quality
- Disease Symptoms
- Crop Loss

Laboratory and field testing
Materials and Methods
Methods

Plant quality and disease symptoms

% of plant with disease
Results

• Treated plants did better than control
• No differences between treatments
• Variability among blocks of plants
• No phytotoxicity
• Limited efficacy
Mites

Crop

- Roses

Symptoms on plants

- Mottling
- Chlorosis, necrosis
- Mites and webbing

Sulfur compounds for control of *Spider Mite on Rose*
# Materials and Methods

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Materials and Methods
Results

Spider mites alive on leaves at 7 and 28 days after treatment on *Rosa* sp.

Treatment response varied over time
Results

- Lime Sulfur response after 28 days
- Possible control of immature stages
- Irrigation water had basic pH and resulted in deposits on leaves
- Abamectin showed control of adults after 7 days
Powdery mildew

Crops
• Rose

Symptoms
• Powdery covering
• Necrosis
• Die back
# Materials and Methods

## Treatments
- Lime- Sulfur 29% (100 oz)
- Activated peroxygen (25 oz)
- Water (100 Gal/ Acre)

## Measures
- Plant Quality
- Disease
- Crop Loss
Results

Treatments decreased powdery mildew

Number of Rose plants with Powdery Mildew

- **Week 1**:
  - Treatment: 10
  - Industry Std.: 1
  - No Treatment: 20

- **Week 4**:
  - Treatment: 20
  - Industry Std.: 15
  - No Treatment: 50

Treatments decreased powdery mildew
Conclusions about Sulfur

- Phoma control was limited among treatments
- Early treatment may improve treatment efficacy
- Plant health was affected by water pH
- Alternative MOA that can be used in rotation for Mite control
- Decreased Powdery Mildew disease when applied early
Horticulture Vision
5-Year Goals

- Improve environmental stewardship and promote sustainable practices for industry
- Provide leadership in research and technology
- Manage and monitor to increase biocontrol efficacy
- Involvement with government regulations
- Integrative data management strategies
- Disease thresholds and forecasting models
CfAHR Service

- Education
- Technical support
- Monitoring
- Quality assurance guidelines
- Onsite trialing
- Regulatory compliance
Connect and Grow!

Social Media

www.cfaahr.org
Thank you!

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