Foliar and Fruit Disease Management for Strawberries

Mark Bolda
Farm Advisor, Strawberries and Caneberries
Santa Cruz, Monterey and San Benito Counties
Introduction

- Fruit and foliar pathogens of strawberry
  - Powdery mildew
  - *Botrytis* gray mold
  - Leather rot caused by *Phytophthora* spp.
Powdery mildew in strawberry
Conditions amenable to powdery mildew in strawberry

- Dry leaf surface, high relative humidity and cool to warm air temperatures.
- Spores are not long lived, mildew can come in on planting material or from neighboring fields.
Control of Powdery Mildew in Strawberries

- Selection of varieties
- Be on the alert during optimal conditions:
  
  Ideal conditions for infection are dry leaf surfaces, high relative humidity, and cool to warm air temperatures (60 – 80°F)

- Sulfur
- Oils
- Synthetic fungicides
2008 Fungicide Screen

Treatment

% infestation (20 leaves):

UTC
Silmix 3 qt
Orbit 4 fl oz
A15909 14 fl oz
A7402 7 fl oz
A16001 14 fl oz
A16001 20 fl oz
A13703 14 fl oz
Rally 4 oz
Procure 8 fl oz
Procure + Thiram
Pinpoint 0.03 lb ai rot/ GS
Pinpoint 0.02 lb ai rot/ GS
Mildew control of various materials
2009

% infestation, average of 40 leaves

Material and rate
Leaf Problem #1
Leaf Problem #1
Leaf problem #2
Leaf problem #2
Leaf problem #3
Leaf problem #4
Leaf problem #4
Leaf problem #5
Leaf problem #5
Leaf problem #5
Botrytis in strawberry
Optimum conditions for Botrytis

- Humid and cool.
- Infections generally commence on the flower, either rotting it outright or remaining dormant until fruit sugars and conditions are favorable.
Cultural management of Botrytis

• Plant hygiene.
• Nutrient management?
• Management of plant size?
Novel Fungicide Screens for Botrytis 2008-2010

- Numbered compounds from Syngenta
- V10135
- S2200
- Grower standards Elevate, Switch, Pristine
Leather Rot Caused by *Phytophthora* spp.
Control of Leather Rot through Fungicides

- 4 treatments applied end of May through July.
- Fruit sampled after third and fourth applications.
- Treatments foliar applied:
  - Revus 8 fl oz/A
  - Ridomil 1 pt/A
  - Quadris 15.5 fl oz/A
  - Untreated control
Treatment: Untreated
Treatment: Revus
Treatment: Quadris
Treatment: Ridomil