Canopy Management

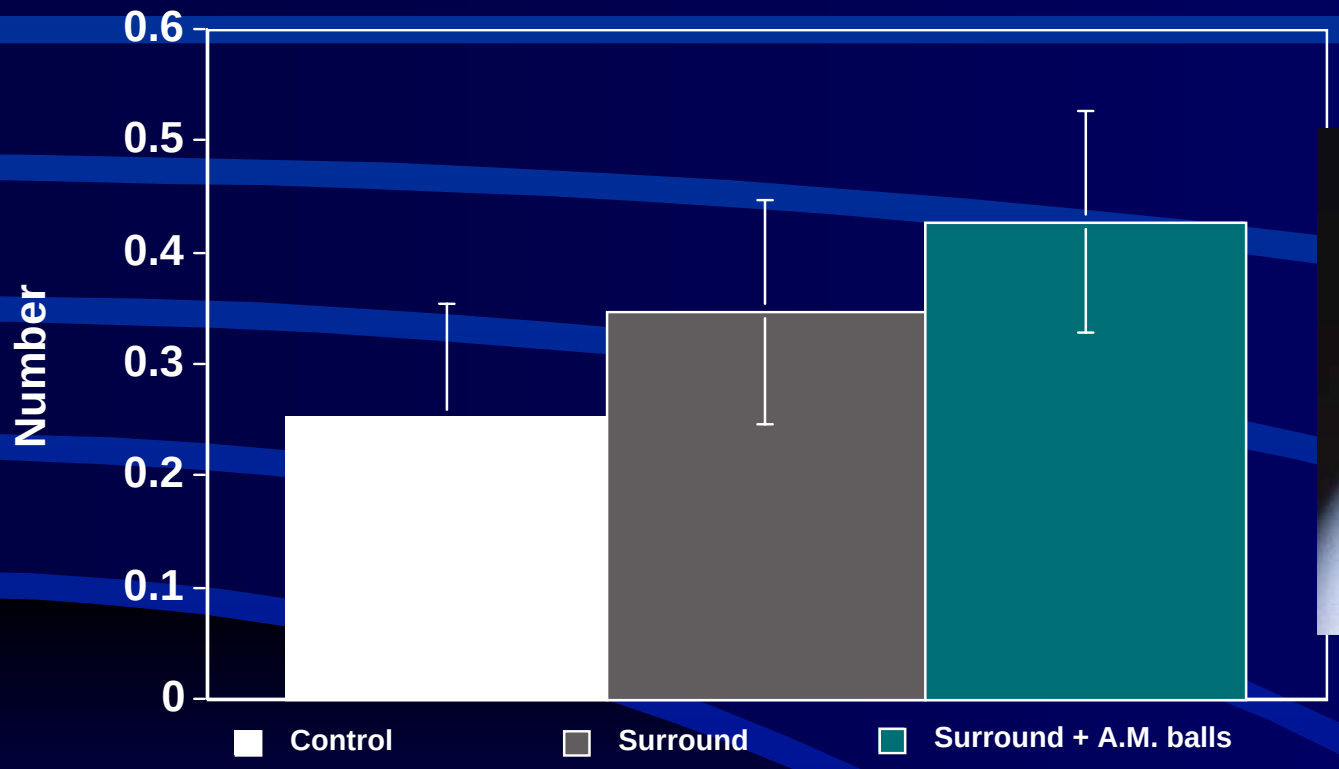
Eli Bergmeier, Golden Hills RC&D

- Like proper site selection, canopy management will serve to minimize the existence of environmental conditions favorable to the development of a number of fungal diseases.
- Practices such as shoot thinning, shoot positioning, and leaf pulling have rapidly become widely accepted practices in modern viticulture. They will be vital to successful disease management in organic vineyards.

Surround™

- Particle film technology - 95% kaolin clay (Englehard Corp., Iselin, N.J.)-Glenn & Puterka (1999-2000)
- Reported to protect apples and grapes from insects (primarily codling moth, plum curculio, leafhopper)
  - Serves as irritant to insect pests
  - Bright white surface visually repels insects
  - Masking of host plant
- Secondary purpose: to protect grape leaves/fruit from disease pathogens
  - Hydrophobic properties prevent water from reaching apple

Beneficial Insects–Apples Sprayed with Surround™



Spider on grape
(Frey Vineyards)

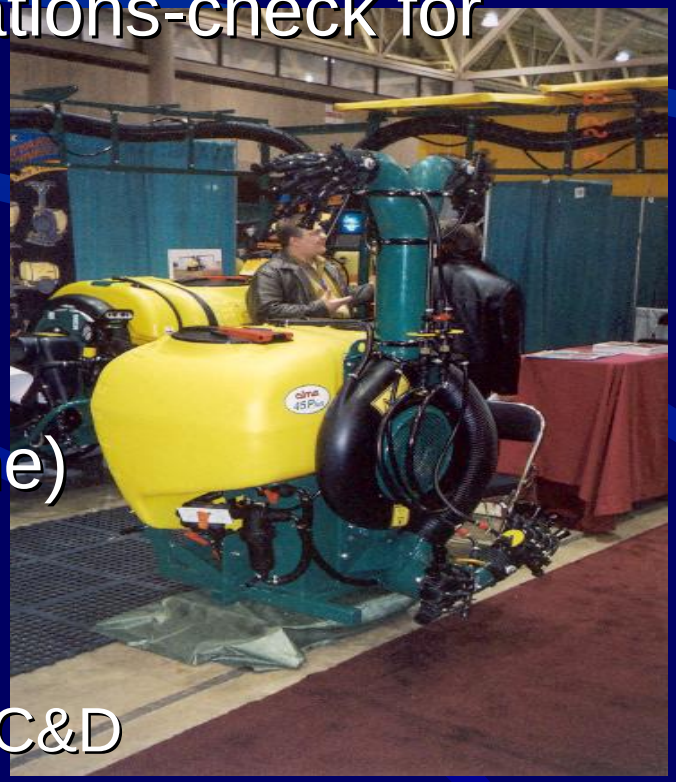
Beneficial insects were not harmed by kaolin clay sprays.

Organically-Approved Fungicides

Approved organic fungicides-30%

Timely spraying is critical–before bud break to 2 wk. after

- –Sulfur, lime sulfur, copper (some formulations-check for cultivar sensitivity)
- –Surround™ kaolin clay (2-3 sprays)
- –Compost tea
- Kaligreen
- Champion WP (mix with hydrated lime)
- Organic JMS Stylet Oil



Slide courtesy of Eli Bergmeier, Golden Hills RC&D

Kirkland's On-Farm Organic Grape Trial

Disease management treatments:

- Compost tea
- Surround™

- No difference re. leaf diseases
- Will test for fruit diseases in 2004
- Will use *Nosema* for grasshopper control (J. DeWitt)

Heartland Organic Wine

Summary

- Producers and consumers interested in less pesticides in the environment and organic fruit production as a niche market in Midwestern U.S.
- Organic integrated pest management program includes multiple tactics: sanitation/pruning, pheromone technology, sprays, early harvest
- Weed management includes mulching, mowing, and cover crops
- 2004 research will include effects of integrated weed, insect and disease management

Organic Fruit Marketing

- Organic grape/apple marketing cooperative or alliance to share equipment, winery, juice factory + tourist destination development
- Cooperative development of markets with a regional marketer/processor and/or consumer-owned retail cooperatives
- Alliances with independent midsize grocers/restaurants
- Cooperation with the University in R & D

Frey's organic grapes turning into organic wine

Organic Agriculture

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http://extension.agron.iastate.edu/organicag