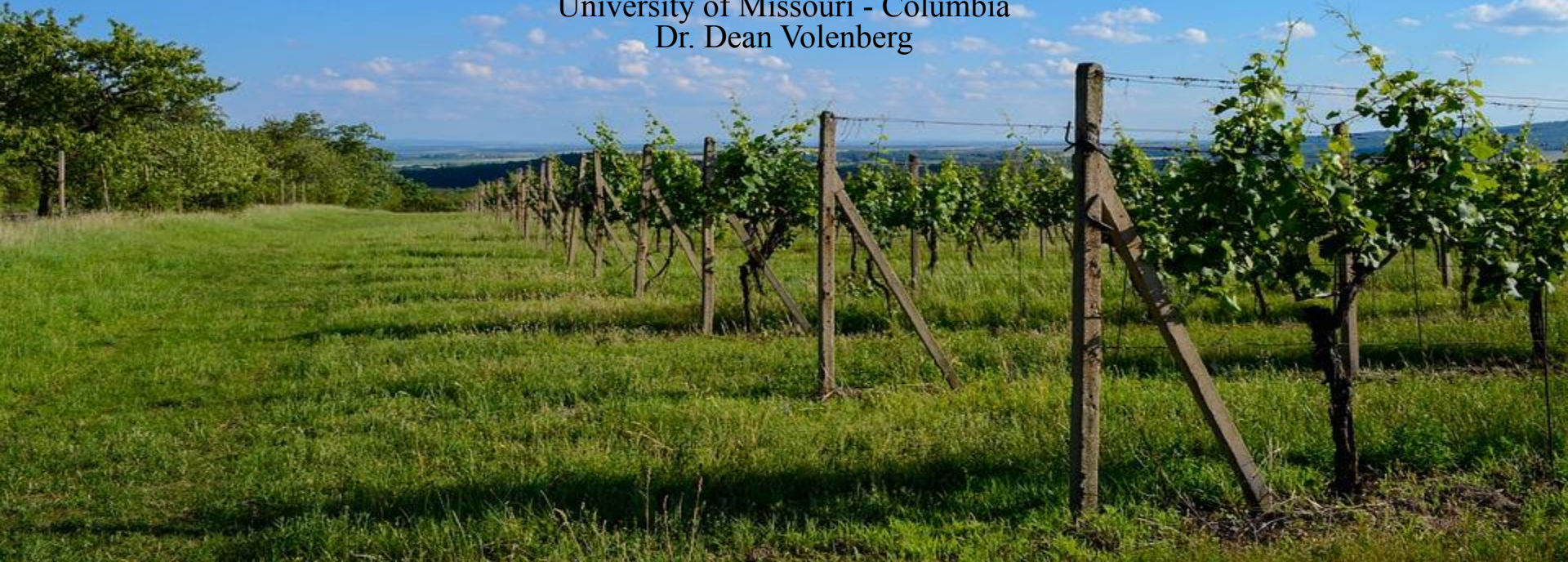


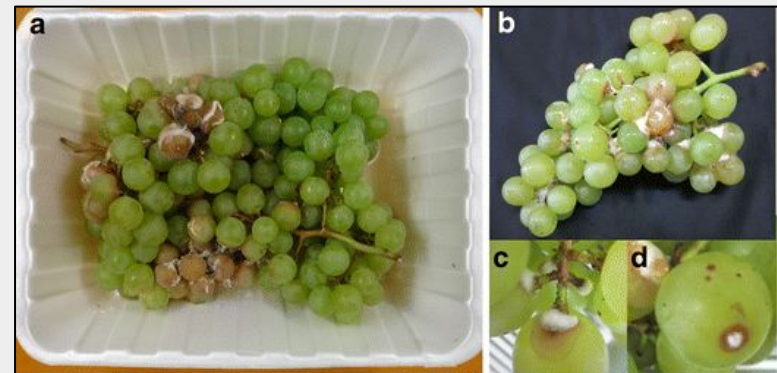
The efficacy of selected fungicides for the control of *Pestalotiopsis spp.* for grape berry rot

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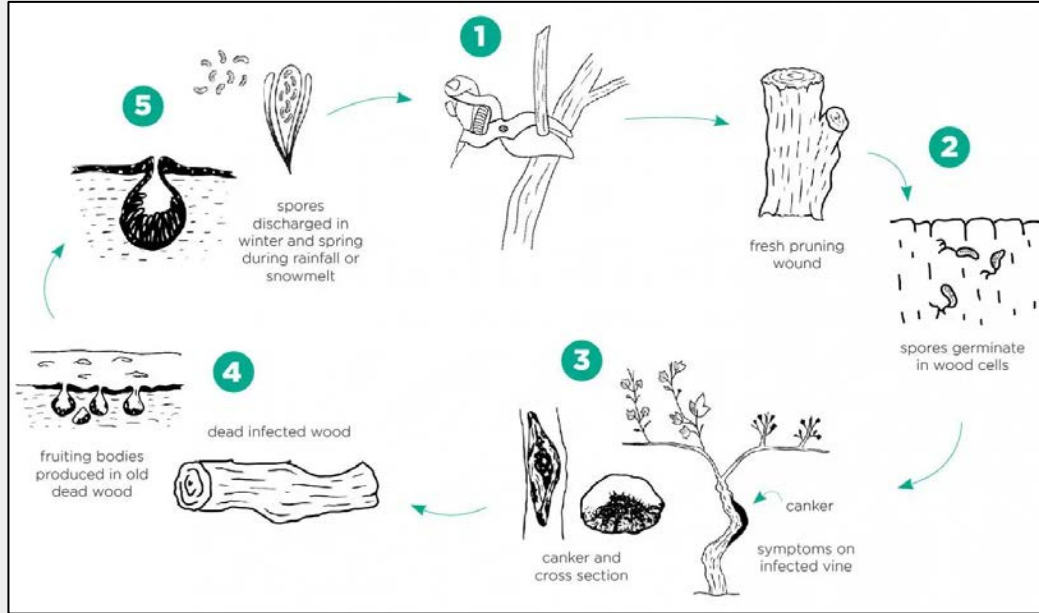


Background: grapevine trunk diseases are an economic concern to Missouri grapes and wine

- ❑ Grapevine trunk diseases (GTD) are a wide category of chronic diseases caused by fungal pathogens.
 - ❑ All GTDs cause dieback in the cordons and trunk.
- ❑ *Pestalotiopsis* spp. cause damage to grape leaves and berries, resulting in berry rot.



Background: how GTD happens



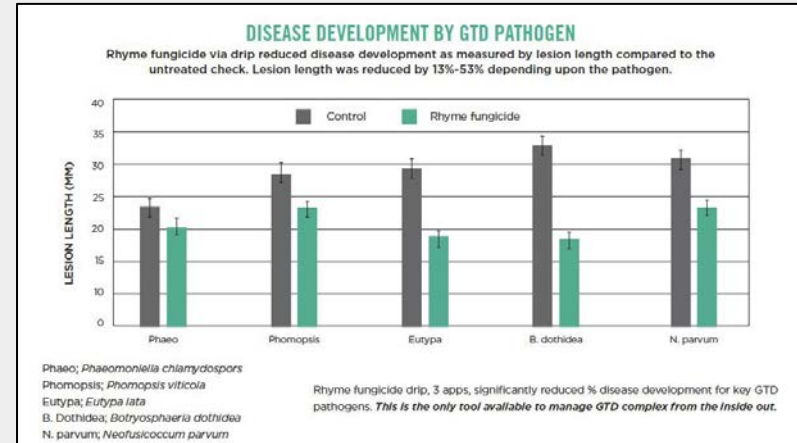
1. There is a pruning or harvest injury.
2. Open wounds allow entry sites for infection.
3. Pathogens enter and grow in the vine.
4. Dead vines produce spores.
5. Spores spread to new vines, infecting fresh wounds.

Objective: does Rhyme prevent *Pestalotiopsis spp.* development?



- ❑ There are few fungicides labeled for GTD.
- ❑ A new systemic fungicide, Rhyme (active ingredient, flutriafol, Frac code 3), is not yet approved for use in Missouri.
- ❑ Rhyme provides management of the trunk disease complex in grapes via drip irrigation.
 - ❑ Rhyme prevents fungal pathogens from destroying the xylem tissue that leads to grapevine decline and death.

- ❑ The objective of this experiment was to assess the effectiveness of Rhyme and six additional fungicides for the control of *Pestalotiopsis spp.* by observing rates of berry fruit rot.



Materials & methods

1. Norton berries were collected, washed, air dried, and pinpricked.
2. Berries were submerged in a 10^6 conidia/L *Pestalotiopsis spp.* solution and dried.
3. Berries were treated with 1 of 7 fungicides at the labeled field rate.
4. Berries were placed in petri dishes at 25 C and infection rates were evaluated after 48-72 hours.

Results

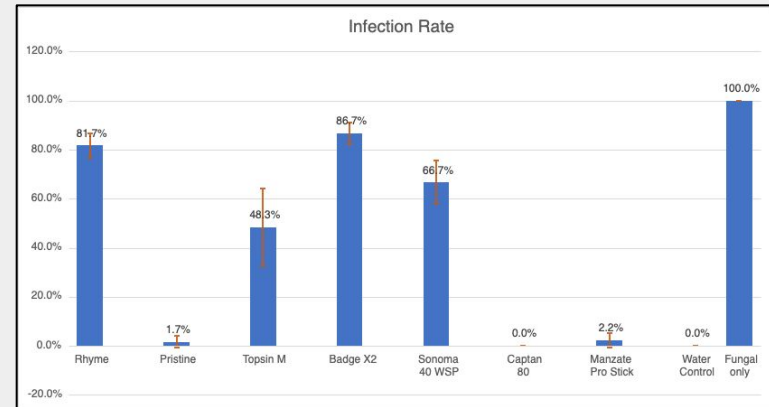
- ❑ Fruit rot infection rates differed significantly among fungicides.
- ❑ Captan, Manzate, and Pristine provided the best protection against *Pestalotiopsis spp.* infection.
- ❑ The infection rate among Rhyme-treated berries was 81.7%.
 - ❑ Rhyme provides ineffective protection against fungal infection.



Pestalotiopsis spp. at 7 days

Control

10^6 conidia/L



Conclusion & future directions

- ❑ As Rhyme provides ineffective protection against *Pestalotiopsis spp.* infection, special local needs registration (FIFRA 24 (c)) for Rhyme fungicide in Missouri is nonessential.
- ❑ Future research will determine the efficacy of Rhyme fungicide and other selected fungicides for the control of *Pestalotiopsis spp.* in grapevine trunks to manage GTD.



Wikipedia

Texas A&M University



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