



Tril-21

Contact Fungicide-Bactericide

IR-4 Workshop 2021

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Tril-21 Contact Fungicide-Bactericide

Experimental Product Profile

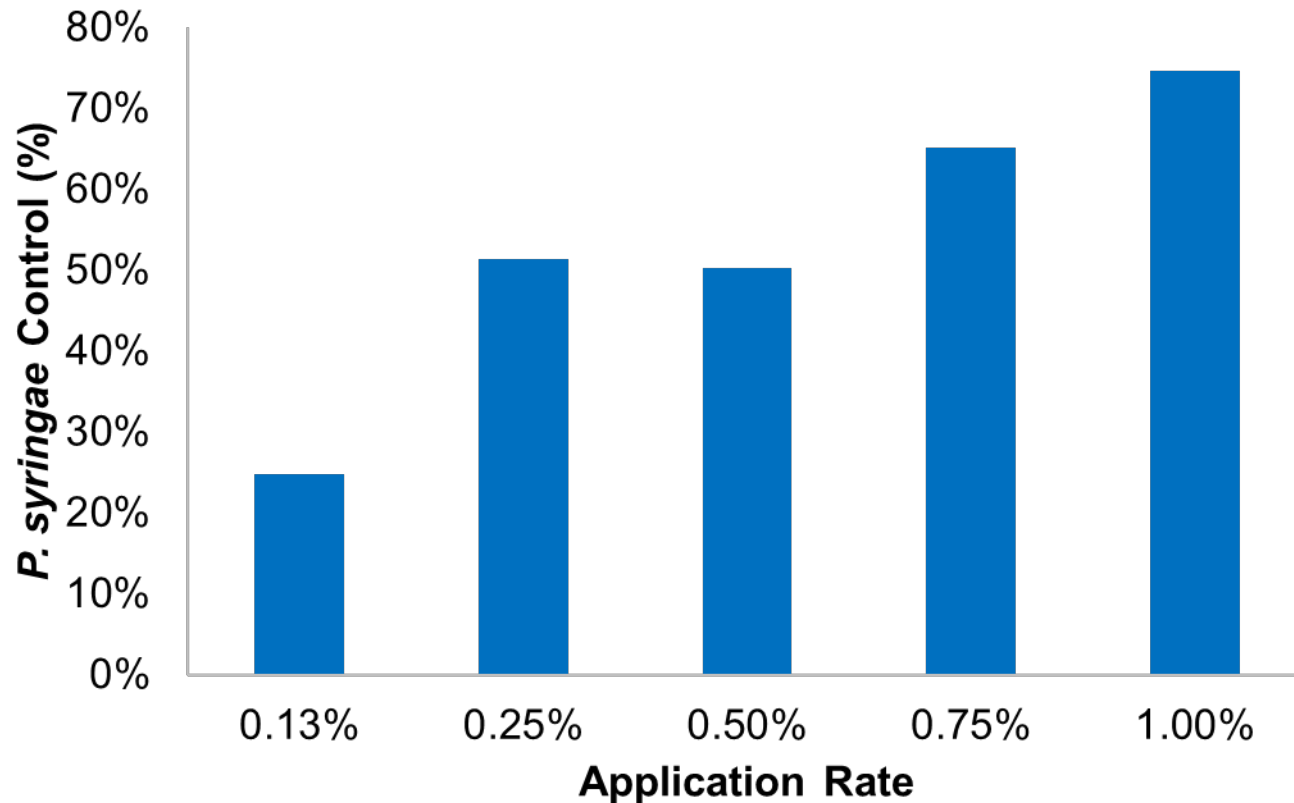
Active Ingredient	Thyme oil
Mode of Action	FRAC F7: Cell membrane disruption
Crops	All crops, indoor and outdoor
Target Pests	Broad spectrum fungal and bacterial foliar plant pathogens
Application Rate	32-128 fl oz/100 gal (0.25%-1%)
Number of Applications	3-5 applications
Spray Interval	3-7 days, pressure dependent
FIFRA 25(b)	0-hour REI, 0-day PHI



Tril-21 Contact Fungicide-Bactericide

Proof of Concept – *Pseudomonas syringae*

Tomato Tissue Assay



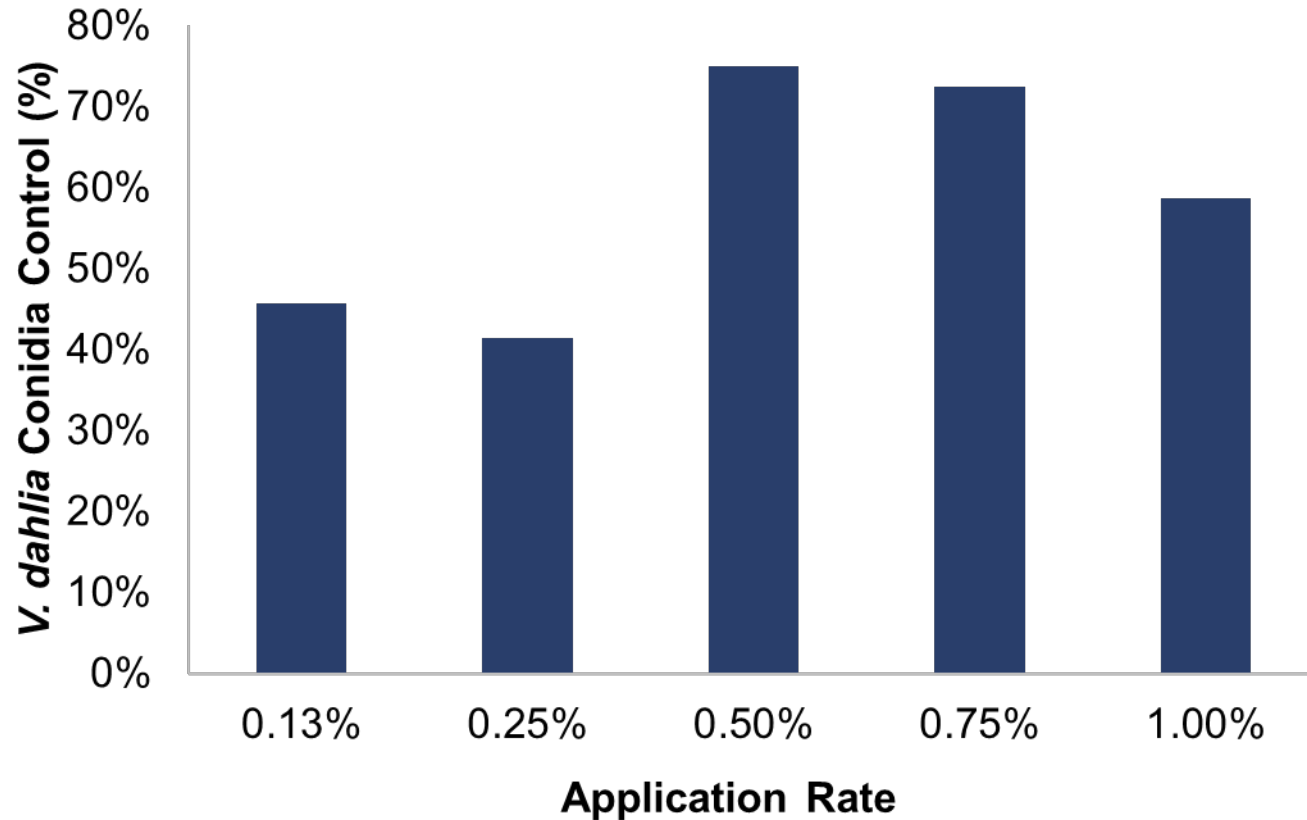
- Sterilized tomato leaf tissue was inoculated and incubated for 30 min
- Tril-21 treatments were applied and incubated for 30 min
- *P. syringae* were rescued and recovered from the tissue and plated
- Recovered cfu compared to inoculated untreated control to determine percent control



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Proof of Concept – *Verticillium dahliae*

Tomato Tissue Assay

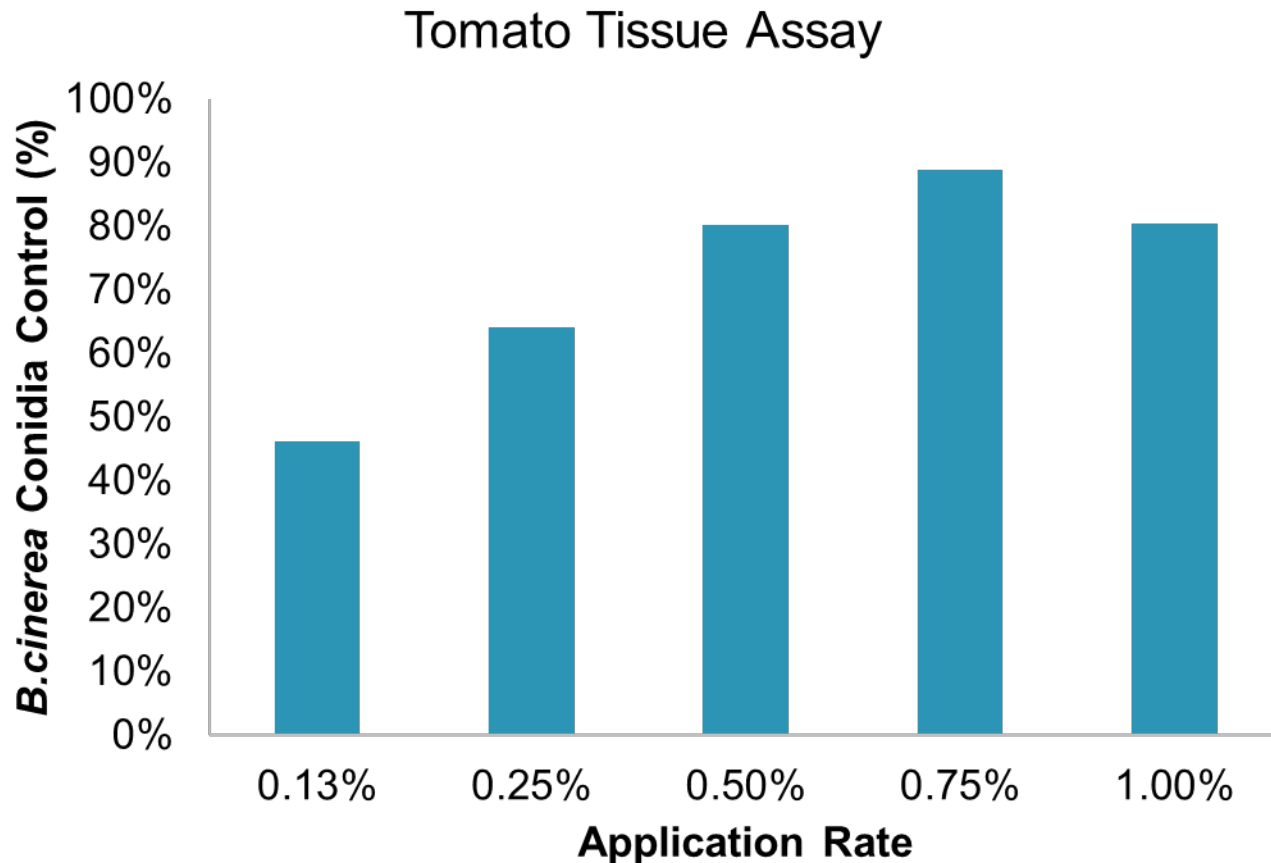


- Sterilized tomato leaf tissue was inoculated with conidia and incubated for 30 min
- Tril-21 treatments were applied and incubated for 30 min
- *V. dahlia* were rescued and recovered from the tissue and plated
- Recovered cfu compared to inoculated untreated control to determine percent control



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Proof of Concept – *Botrytis cinerea*



- Sterilized tomato leaf tissue was inoculated with conidia and incubated for 30 min
- Tril-21 treatments were applied and incubated for 30 min
- *B. cinerea* were rescued and recovered from the tissue and plated
- Recovered cfu compared to inoculated untreated control to determine percent control



Tri-21 Contact Fungicide-Bactericide

IR-4 Request

Application Information:

- Apply before or when environmental conditions for pest development are high
- Complete coverage of the leaf and plant surfaces, apply to run off
- Make 3-5 consecutive applications 3-7 days apart depending on pressure
- Rates:
 - 64 fl oz/100 gal (greenhouse/indoor high pressure)
 - 128 fl oz/100 gal (outdoor high pressure)
- Apply early in the morning or late afternoon when temperature is under 90 °F

Testing Needs:

- Greenhouse and field **efficacy trials** on all foliar plant pathogens
- Plant **safety trials** at 128 fl oz/100 gal, 2x, and 4x

