

A proprietary 3rd party research company conducted the research.

BioWorks Products Included in Trial

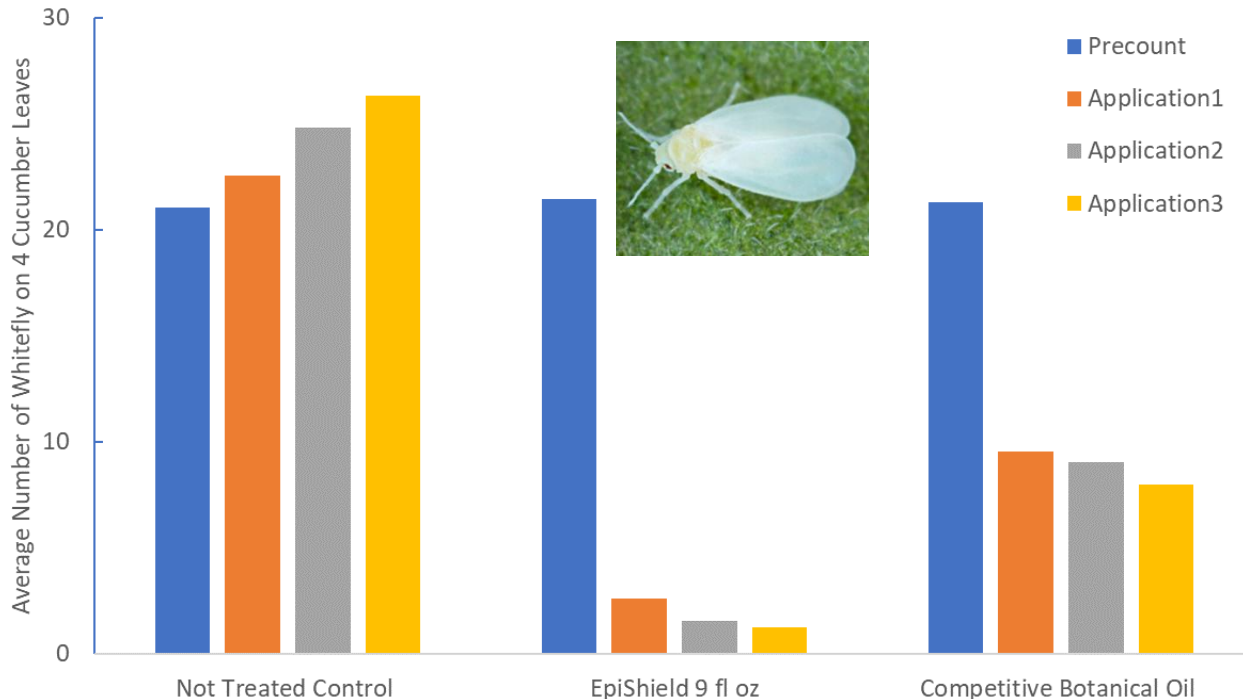
EpiShield™

Summary:

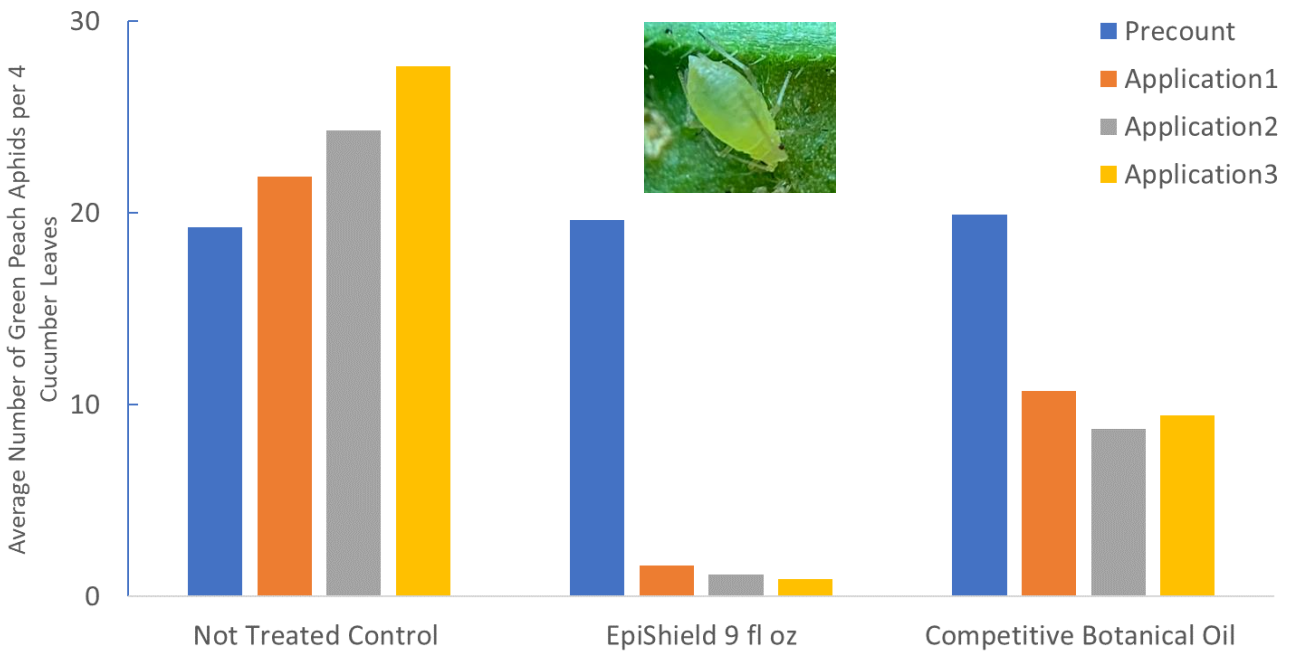
EpiShield controlled whiteflies, aphids, mites, and thrips on greenhouse grown cucumbers.

Treatment	Rate/100 Gallons
Untreated Check	-
Competitive Oil	64 fl oz
EpiShield	9 fl oz

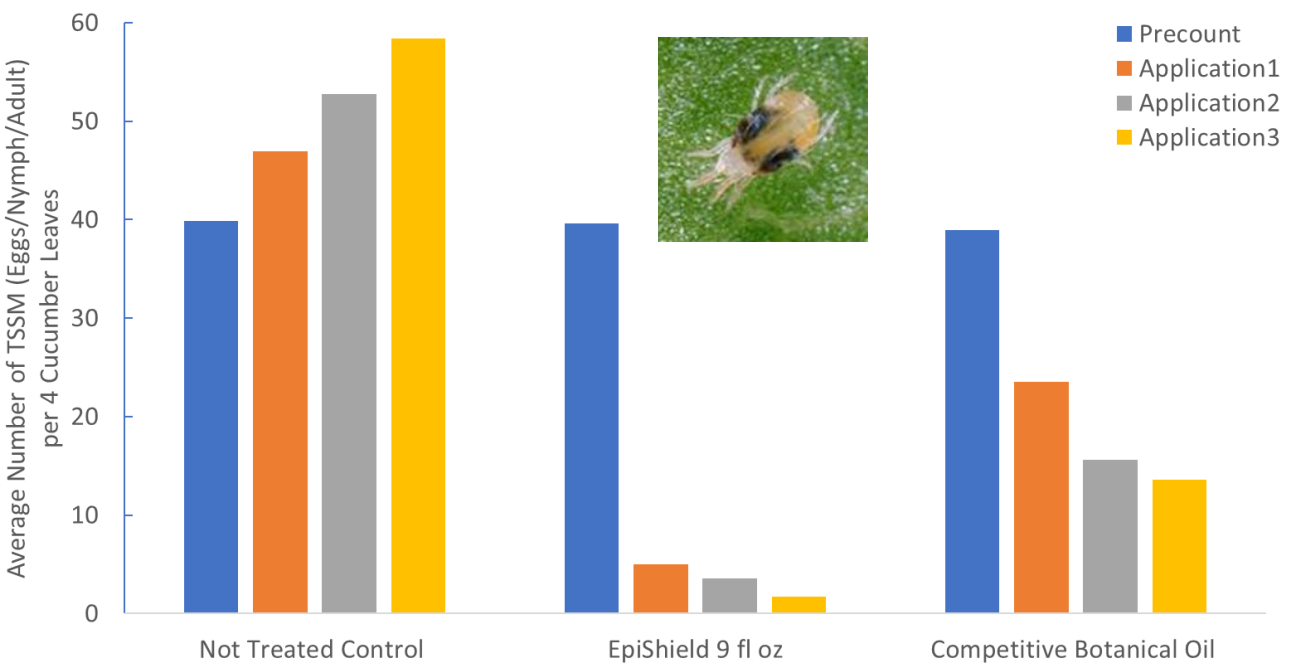
Method Summary	
Crop	Cucumber (Morris RZ)
Location	Greenhouse
Pests	Greenhouse whitefly (<i>Trialeurodes vaporariorum</i>) Green peach aphids (<i>Myzus persicae</i>) Twospotted spider mites (<i>Tetranychus urticae</i>) Western flower thrips (<i>Frankliniella occidentalis</i>)
Trial Design	Randomized complete block
Application Method	Foliar Spray



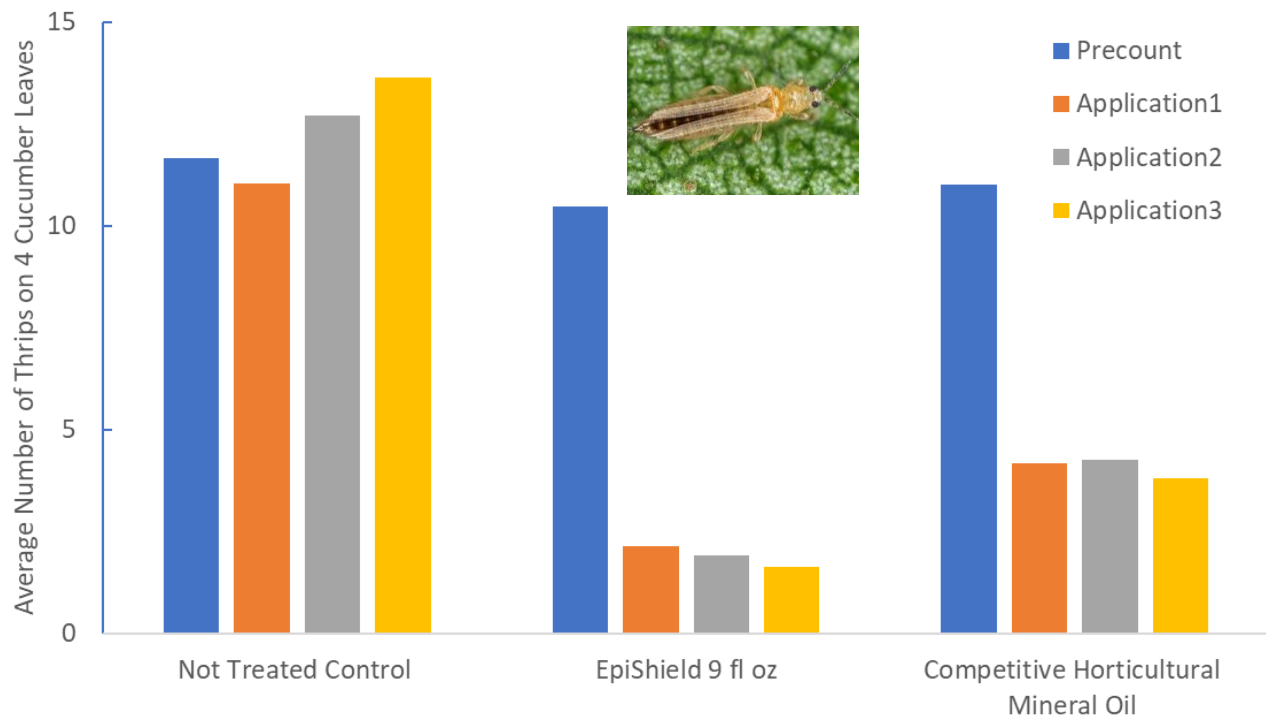
Average number of greenhouse whitefly per 4 leaves. Three applications were made three days apart, data recorded one day after treatment (December 8, 11, & 13 2021). EpiShield at 9 fl oz caused a 94% reduction and a competitive oil product caused a 62% reduction of greenhouse whiteflies after 3 applications.



Average number of green peach aphids per 4 leaves. Three applications were made three days apart, data recorded one day after treatment (October 10, 13, & 16 2021). EpiShield at 9 fl oz caused a 95.3% reduction and a competitive oil product caused a 52.3% reduction of green peach aphids after 3 applications.



Average number of twospotted spider mites. Three applications were made three days apart (October 15, 18, & 21 2021), data recorded one day after treatment. EpiShield at 9 fl oz caused a 94.9% reduction and a competitive oil product caused a 71.5% reduction of twospotted spider mites after 3 treatments.



Average number of western flower thrips per 4 leaves. Three applications were made three days apart, data recorded one day after treatment (December 5, 10, & 15 2021). EpiShield at 9 fl oz caused an 84% reduction and a competitive oil product caused a 65.5% reduction of western flower thrips after 3 applications.

Result Summary

- EpiShield (15% peppermint oil, 10% clove oil & 3% sodium lauryl sulfate) significantly reduced whitefly, aphids, mites and thrips after three applications.
- EpiShield did not cause plant phytotoxicity during the study.

Recommendations from Data

- Apply EpiShield at 0.07% (9 fl oz/100 gallons) for control of arthropods.
- Apply EpiShield as a fine spray to full coverage but not the point of run off.
- EpiShield is ideal for integrated pest programs against damaging arthropod pests.