



## Biocontrol of *Brevipalpus yothersi* in Florida\*

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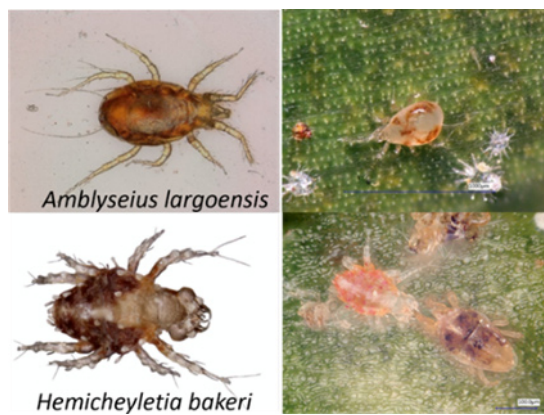
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**FIGURE 1.** *Amblyseius largoensis* and *Hemicheyletia bakeri*, predators of *Brevipalpus yothersi* in Florida.

*Brevipalpus yothersi* is the main vector of Cileviruses (CiLV-C and CiLV-C2) that cause citrus leprosis disease in Brazil, Colombia, Mexico and other places in South and Central America. This mite is also present in Florida, where it was recently found vectoring a strain of Citrus leprosis virus 2 (CiLV-C2H) that infects hibiscus. Management of *B. yothersi* has been focused on chemical control, however, reports of *B. yothersi* resistance to acaricides indicate the need for an integrated pest management approach. We evaluated the biological control potential of four predatory mite species (*Neoseiulus longispinosus*, *N. californicus*, *Amblyseius largoensis*; Acari: Phytoseiidae) and *Hemicheyletia bakeri* (Acari: Cheyletidae) that are naturally associated with *Brevipalpus* spp. in Florida citrus. In preliminary lab experiments phytoseiid mites preyed mostly upon immature

stages of *B. yothersi*, while *H. bakeri* preyed mainly on adults. In greenhouse experiments however, only *A. largoensis* effectively suppressed *B. yothersi* and reduced damage to citrus plants (Argolo *et al.* 2020). In order to incorporate biological control in the management of *B. yothersi* we investigated the selectivity of several conventional and biorational acaricides to *A. largoensis*. *Amblyseius largoensis* was compatible with horticultural oils and showed tolerance to some conventional acaricides. Our results suggest that *A. largoensis*, which is common on landscape hibiscus and citrus (Childers *et al.* 2022), could be an efficient biological control agent of *B. yothersi* and play an important role in IPM programs tailored to manage citrus leprosis and other diseases transmitted by this mite in Florida.

## References

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