



Poster #100115

Efficacy of essential oil of *Piper aduncum* against nymphs and adults of *Diaphorina citri*

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Abstract Text:

Insecticide application is the main way to control *Diaphorina citri*. However, it causes environmental contamination, has a negative impact on beneficial organisms, and leads to psyllid resistance. The essential oil of *Piper aduncum* has low toxicity towards the environment and contains dillapiol, which was proven to be effective against several crop pests. Here, we studied its efficacy against nymphs and adults of *D. citri* under laboratory conditions. Oils with three concentrations of dillapiol (65.2%, 76.6%, and 81.6%) at 0.5%, 0.75%, and 1.0% dilutions plus 0.025% adjuvant were tested. All treatments caused 90–100% mortality in nymphs. Topical treatments with oil containing 76.6% and 81.6% of dillapiol at 0.75% and 1% dilutions were effective (mortality \geq 80%) in adults. However, the essential oil showed no residual activity against adults (mortality \leq 30%). Because of its high efficacy against nymphs and adults, *P. aduncum* is a promising botanical insecticide for use in integrated pest management of *D. citri*.

Topic Selection:

PBT Section Poster Session B

Slot:

302: Wednesday, November 18, 2015: 8:00 AM-4:30 PM

Title:

Efficacy of essential oil of *Piper aduncum* against nymphs and adults of *Diaphorina citri*

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Preferred Presentation Format:

P

Author has seen and agreed to all information contained in the presentation and all information contained in the presentation is available for general dissemination:

Yes

Author has confirmed they are available to present all days of the conference:

Yes

Author's presentation contains a sound file:

No

ESA Section:

Physiology, Biochemistry, and Toxicology

Species 1

ESA Approved Common Name:

Asian citrus psyllid

Common Name:

Asian citrus psyllid

Order:

Hemiptera

Family:

Liviidae

Genus:

Diaphorina

Species:

citri

Order:

Piperales

Family:

Piperaceae

Genus:

Piper

Species:

aduncum

First Presenting Author

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