Biology and Host Range of the Brazilian Thrips *Pseudophilothrips ichini* (Thysanoptera: Phlaeothripidae), a Candidate for Biological Control of *Schinus terebinthifolius* (Anacardiaceae) in Florida, USA

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1. Why Classical Biological Control?
- Non-native invasive species
- No native congeners in United States
- Causes widespread ecological damage
- Economic and aesthetic
- Low market value
- Conventional control practices temporary and costly
- There are effective natural enemies
(Feiner, 1993; Jelinek & Griffin, 1993; Vitousek et al., 1990)

2. Biology of *Pseudophilothrips ichini* (Hood)
- Adults, black & winged
- Larvae red & wingless
- Females lay 60 days & produce ≥300 eggs
- Parthenogenetic reproduction
- Dispersal on wind/water
- Life cycle 38-52 days at 24°C
- Four generations in Brazil
(Garrus, 1997; Cuda et al., 1998)

3. Is *P. ichini* Host Specific?
Objectives: To investigate the host range of *P. ichini.*

4. Screening Procedures
- Laboratory, greenhouse
- Quarantine studies
- Nematode and multiple choice tests
- Larval feeding / development
- Adult reproduction
- Experimental design
- Replicated, 10 replications
- 5000 inoculated larvae
- 20 adults/plants

5. Results
- Survival of *P. ichini* Larvae on Plant Families
- Survival of *P. ichini* Larvae on Nativo & Cultivated Anacardiaceae

6. Conclusions
- Only two *Schinus* spp. accepted as host plants
- Low risk of non-target damage
- No reports of *P. ichini* on California Peppertree (S. molinae) in South America
- *Schinus terebinthifolius* is a non-native ornamental cultivated in invasive species by California Exotic Plant Pest Council
- Climate changes may preclude establishment of *P. ichini* in California
- Permit acquired by Federal Invasive Pest Technical Advisory group (TIG) in October 2002

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8. References

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Brasilian Peppertree
*Schinus terebinthifolius* Radlila

Key West
Temple
Jacksonville
Naples
Manasota
Tampa
St. Petersburg
Miami
Cape Coral
Fort Myers
Indian River
West Palm Beach
Sarasota
Bradenton
_key West
Montecito
_Anaheim_Centennia
Anaco-Playa (PIER)

Portuguese (Brazil)
Common Names
English (USA)
Claro-de-Berberis
Brazilian pepper
Brazilian holy
French
Faiso-potato
Patiцев Caules
Hindi
Potato tree

Bouquettes
potted plants
muslin cages

Life cycle of *P. ichini* (Cuda et al., 2001)

Survival of *P. ichini* Larvae on Plant Families

Survival of *P. ichini* Larvae on Nativo & Cultivated Anacardiaceae

Deposition Preferences of *P. ichini*

- *Mangue* index
- *Salmoe* index
- *Schinese* index
- *Maravilla* index

- Shoot damage
- Larvae infestion & feed on tender shoots
- Damage on all new shoots and young plants
- Only on Brazilian peppertree in South America
(Garrus, 1997; Cuda et al., 2001)