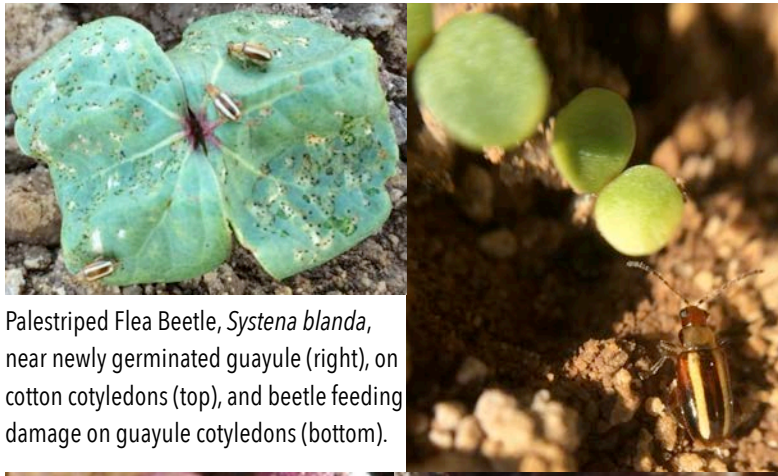


## First Foliar Insecticide Special Local Needs Registrations for Palestriped Flea Beetle Control During Guayule Stand Establishment

Peter C. Ellsworth & Naomi Pier, University of Arizona Department of Entomology & Cooperative Extension

The Palestriped Flea Beetle, *Systema blanda*, is one of the larger flea beetles in North America. Its body size is larger than a cotyledon leaf of guayule. These beetles can be locally and seasonally abundant and favor germinating crops of all types. Their feeding on larger seeded crops often appears as a scarring or pitting of the cotyledons and is often of little economic consequence. However, in guayule, these beetles can eat entire cotyledons and stem of the plant. An individual can consume an entire guayule seedling in a matter of minutes. Protection of the cotyledons is paramount to successful establishment of guayule.



Palestriped Flea Beetle, *Systema blanda*, near newly germinated guayule (right), on cotton cotyledons (top), and beetle feeding damage on guayule cotyledons (bottom).



Feeding Damage on Guayule Cotyledons

**\*INSECTICIDE APPLICATION STEWARDSHIP\***  
**Read and strictly adhere to all insecticide labels.**

### Special Local Needs 24(c) Labels (SLN)

The Arizona Department of Agriculture has approved Acenthrin™ and Acephate® 97Up plus Bifenture® EC for use against palestriped flea beetles in guayule. The two active ingredients, either in the premix Acenthrin or as a mixture of Acephate 97Up and Bifenture EC, provide the most consistent control of this pest. It should be noted that most guayule seed currently in production has been treated with NipsIt® and may not require any additional sprays.

Product	Active Ingredient	Max. Rate	SLN No.
Acenthrin	acephate + bifenthrin	26.7 oz / A	AZ-220301
Acephate 97Up	acephate	16.3 oz / A	AZ-220303
Bifenture EC	bifenthrin	5.12 fl oz / A	AZ-220302

### Guidelines

Timing applications for flea beetles is critical. Guayule stand loss can happen rapidly when beetle pressures are high. Spraying within the first 48 hours of initial seedling emergence will likely provide the greatest protection; however, initial treatments up to 7 days after initial seedling emergence may still be beneficial depending on soil temperatures, speed of seedling growth, and beetle pressure. A second spray might be needed as more plants emerge from the soil and if flea beetle pressures persist.

### Guayule Planted Without an Effective Seed Treatment

Apply Acenthrin or Acephate 97Up plus Bifenture EC to guayule stands once seedlings begin to emerge from the soil and:

- 1) when flea beetles are known to be in the area,
- 2) initial feeding on cotyledons is likely or evident, and
- 3) feeding is likely to cause economic damage to emerging seedlings.

### Guayule Planted With an Effective Seed Treatment

Apply Acenthrin or Acephate 97Up plus Bifenture EC to guayule stands once seedlings begin to emerge from the soil and:

- 1) when living flea beetles are present at densities that are overwhelming the stand despite the toxic effects of the seed treatment – dead beetles and those showing signs of reduced or disoriented movement indicate seed treatment is working,
- 2) cotyledon damage is severe and plant loss is imminent, or
- 3) feeding is likely to cause economic damage to emerging seedlings.

For more information on the Palestriped Flea Beetle see:

Brown, L. & P.C. Ellsworth. 2012. Pale-Striped Flea Beetles in Young Cotton Stands. University of Arizona, Arizona Pest Management Center. <http://hdl.handle.net/10150/664215>.