Chemistries for Alfalfa Insect Pest Management

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Cooperative Extension & Dept of Entomology

The 7th Annual New Technologies Workshop for Field Crops – June 3, 2020
### Seasonal occurrence of Major Insect Pests of Desert-Grown Alfalfa

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<th>Insect</th>
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<td>Spotted Alfalfa Aphid</td>
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<td>Threecornered Alfalfa Hopper</td>
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Alfalfa Aphid Complex

• Damage

  • Sucking plant sap
    +
  • injecting toxins
    +
  • secreting honeydew

  • Leaf curling, shortened internodes and yellowing
  • Sooty mold reduces photosynthesis and quality

  • Reducing growth and yield
  • Plant death
Alfalfa Aphids in the Southwest Desert

- **Pea aphid**, *Acyrthosiphon pisum*
- **Blue alfalfa aphid**, *Acyrthosiphon kondoi*
- **Cowpea aphid**, *Aphis craccivora*
- **Spotted alfalfa aphid**, *Therioaphis maculata*
Active Ingredients for Aphid Control

• Pyrethroids
  - Warrior II with Zeon Technology®
    - Lambda-cyhalothrin
  - Mustang Max® Insecticide
    - Zeta-cypermethrin
  - BAY THRHOID XL
    - ß-cyfluthrin

• Organophosphates
  - Dimethoate

• Sulfoxaflor (Transform)

• Butenolides (Sivanto)

• TBR: Sefina, PQZ, Centric
Damages & Management of Alfalfa Weevil

- Threshold of 1-4 large larvae / sweep
- Based on hay price, costs of application
Active Ingredients for AW Control

- **Pyrethroids**
  - Warrior II
  - Mustang Max
  - Baythroid XL
  - Lambda-cyhalothrin
  - Zeta-cypermethrin
  - ß-cyfluthrin

- **Organophosphates**
  - Lorsban Advanced
  - Chlorpyrifos

- **Indoxacarb**

- **Other in the pipeline?**
Early Season Insecticide Treatment

December 17th, 2018

Late Season Insecticide Treatment

March 20th, 2019

189 / 5 sweeps

37.8 / sweep

3/9/2020
WE NEED TO FIX THINGS.

OK, LET'S TAKE A SURVEY!
Cultural Control

• Cultural Control
  • Resistant Varieties

• Strip Cutting

• Early harvest
• Proper irrigation
Natural Enemies ... Your Friends in IPM
ACKNOWLEDGEMENT

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• Various Agrochemical Corporations

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  G. Ahmed, Marisa Noble

• Students
  Graduate: Kyle Harrington, Rojo Martinez
  Undergraduate: Jordan Young, Gina Harris, Fabio Restrepo, Kaia Mullarkey, Robert Edgar, Julia Lisk, Ray Lenz, Miriam Sanchez
Thanks

Take care
and
stay well!