Management of Sugarcane Aphid in Arizona Forage Sorghum

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Worku Burayu
Identification

- Black tipped antennae
- Black Tarsi
- Yellowish body
- Dark cornicles

Greenbug
Corn leaf aphid
Sampling & Action Threshold

• Determining when to spray varies from state to state and sometimes even within a state.

• Grain vs forage sorghum

• Typically within any given field, any of the thresholds used will be effective and will trigger an insecticide application at about the same time.

• Examples of thresholds:
  • Spray when 25% of the plants are infested with a minimum of 50 aphids per leaf
  • Spray when a field reaches a level of 50 to 125 SCA per leaf
  • Spray when 20 – 30% (depending on growth stage) of plants are infested with localized areas of honeydew and established colonies are present
Quick Aphid Checker

Estimate the number of sugarcane aphids (SCA) per leaf to help time foliar insecticides for SCA control on sorghum. Each photo represents an estimate from the table. For example, photo A shows about 12 aphids.

<table>
<thead>
<tr>
<th>Photo</th>
<th>Range</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1–25</td>
<td>12</td>
</tr>
<tr>
<td>B</td>
<td>26–50</td>
<td>38</td>
</tr>
<tr>
<td>C</td>
<td>51–100</td>
<td>75</td>
</tr>
<tr>
<td>D</td>
<td>101–500</td>
<td>300</td>
</tr>
<tr>
<td>E</td>
<td>501–1000</td>
<td>750</td>
</tr>
<tr>
<td>F</td>
<td>&gt;1000</td>
<td>1500</td>
</tr>
</tbody>
</table>

Field Average = \[ \frac{\text{Total of All Estimates}}{\text{Total # of Leaves Examined}} \]

Learn more about sugarcane aphids at [http://txscan.blogspot.com](http://txscan.blogspot.com)

*Photos courtesy of Travis Ahrens, Mike Brewer, and Pat Porter.*

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Sampling for Sugarcane Aphid using Quick Aphid Checker

https://youtu.be/dVZV
DZgpHms
Early Panting Date Trial

Greenbug and corn leaf aphids on early planted forage sorghum

- **6/12/17**: Green bug: 4, Corn leaf aphids: 1
- **6/18/17**: Green bug: 25, Corn leaf aphids: 2
- **6/27/17**: Green bug: 5, Corn leaf aphids: 0

Legend:
- Blue: Green bug
- Orange: Corn leaf aphids
2017 foliar trial, Sugarcane Aphid in Forage Sorghum

Sugarcane Aphid Population

Sampling Date

Sivanto 200SL
Lorsban 4E
Transform 50WG
Beleaf 50
Majister SC
Dimethoate 4E
UTC
Accumulative Number of SCA per leaf in foliar application efficacy trial in 2018 sorghum season at MAC

UTC

Dimethoate 4D 16oz/A

Sivanto Prime 4oz/A

Sivanto Prime 7oz/A

Transform 1oz/A

Transform 1.5oz/A

Centric 2.5oz/A

Centric 3.4oz/A

UTC

Dimethoate 4D 16oz/A

Sivanto Prime 4oz/A

Sivanto Prime 7oz/A

Transform 1oz/A

Transform 1.5oz/A

Centric 2.5oz/A

Centric 3.4oz/A

In-furrow (injection) Application
Accumulative Number of SCA per leaf in efficacy trial in sorghum at MAC

UTC

Centric 2.5oz

Sivanto 2 oz + Centric 2.5oz

Sivanto 4 oz + Centric 2.5oz

Sivanto 8oz + Centric 2.5oz

Sivanto 2 oz

Sivanto 4 oz

Sivanto 8oz

UTC

Yield in efficacy trial in 2018 sorghum season at MAC

<table>
<thead>
<tr>
<th>Treatment</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sivanto 2oz + Centric 2.5oz</td>
<td>200.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sivanto 8oz + Centric 2.5oz</td>
<td>192.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sivanto 4oz + Centric 2.5oz</td>
<td>192.85</td>
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<td>Sivanto 8oz</td>
<td>191.9</td>
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<tr>
<td>Sivanto 2oz</td>
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</tr>
<tr>
<td>Sivanto 4oz</td>
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<td>168.15</td>
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<tr>
<td>Centric 2.5oz</td>
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<td>164.1</td>
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<tr>
<td>UTC Injection</td>
<td></td>
<td>161.7</td>
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</tr>
</tbody>
</table>

**Ton/A (Injection; Injection + Foliar)**

- **FRESH TONS/A**
  - 0.00
  - 5.00
  - 10.00
  - 15.00
  - 20.00
  - 25.00
  - 30.00
  - 35.00
  - 40.00
  - 45.00
  - 50.00

- **Sivanto 2oz + Centric 2.5oz**
  - Yield: 43.71
- **Sivanto 8oz + Centric 2.5oz**
  - Yield: 41.99
- **Sivanto 4oz + Centric 2.5oz**
  - Yield: 41.98
- **Sivanto 8oz**
  - Yield: 41.77
- **Sivanto 2oz**
  - Yield: 38.79
- **Sivanto 4oz**
  - Yield: 36.60
- **Centric 2.5oz**
  - Yield: 35.72
- **UTC Injection**
  - Yield: 35.20
2020 Sugarcane Aphid Trials in Sorghum - MAC

**Foliar Treatments**

- **Sivanto Prime** (4 & 7 oz/A)
- **Centric** (2.5 & 3.4 oz/A)
- **Transform** (1.5 oz/A)
- **Sefina** (6 oz/A)
- **Lorsban** (32 oz/A)
- **Dimethoate** (16 oz/A)
- **UTC**

**Sivanto HL Injection at Planting + Foliar Treatments**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Sivanto HL at planting</th>
<th>Centric 2.5 oz/A foliar spray</th>
<th>Transform 1.5 oz/A foliar spray</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 oz/A</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 oz/A</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 oz/A</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 oz/A</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>2 oz/A</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>1 oz/A</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>4 oz/A</td>
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<td>2 oz/A</td>
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<tr>
<td>1 oz/A</td>
<td>X</td>
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<tr>
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<td>X</td>
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<td></td>
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<tr>
<td>UTC2</td>
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<td></td>
<td>X</td>
</tr>
<tr>
<td>UTC UTC</td>
<td></td>
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</tbody>
</table>
Best Management Practices for SCA

• Control Johnson grass and other sorghum species around field
• Plant early to avoid infestations early in the season
• Scout early and often
• Do not let SCA populations develop to large numbers
  – Treat when 20% of leaves checked have 50 or more SCAs
  – Use common sense concerning pending weather, number of fields needing to cover, etc.
• Use an efficacious insecticide; preferably one that is soft on beneficials
  – Avoid pyrethroids for other pests if possible
• Good spray coverage is key for SCA control
Funding

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