A New Mode of Action in Mite Control from BASF

December 8, 2015
Speakers

Richard Waycott, Almond Board (Moderator)

Taylor Barnhill, BASF
Taylor Barnhill, BASF
Nealta® miticide: A new mode of action in spider mite control
Agenda

Spider mites and almonds

Nealta® miticide in a nutshell

- Unique mode of action
- Compatible with beneficials
- Controls all life stages of spider mites

Trial data

BASF’s Almond portfolio
Mite infestations can reduce yield¹ and quality; affect next crop

- 16% reduction in yield can be worth ~$960 / acre in losses
- 25% decrease in terminal growth
- 7% reduction in leaf size
- Feeding and webbing can cause reduced photosynthesis, affecting the next crop
- Miticide resistance has been reported
- Treated almond acreage is increasing
- Expenditures for miticides is increasing

¹Source: UC Davis IPM
Nealta® miticide label overview

Formulation: 1.67 lb Al / gal (18.7%) SC

Use rate: 13.7 oz / acre

Package: 137 oz

Rainfast: 1 Hour after drying

PHI: 7 days

REI without PPE: 12 Hours

Signal word: Caution
Nealta® Miticide
Site of Action is Unique

- Only product in IRAC Group 25
- Inhibits mitochondrial respiration at Complex II
**Nealta® miticide controls all life stages**

### Spider mites in almonds

- Twospotted spider mite
- Pacific spider mite
- Brown mite
- European red mite
- Strawberry spider mite

<table>
<thead>
<tr>
<th>Activity of cyflumetofen on life stages of twospotted spider mite</th>
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<tbody>
<tr>
<td><strong>Mite life stage</strong></td>
</tr>
<tr>
<td>Eggs</td>
</tr>
<tr>
<td>Intermediate life stages</td>
</tr>
<tr>
<td>Adult female Direct contact</td>
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<tr>
<td>Adult female Indirect contact</td>
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</tbody>
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* - 13.5 oz Nealta/100 gallons = 211 ppm cyflumetofen
Nealta® miticide is compatible with beneficials

Labeled beneficials

- Common lacewing
- Insidious flower bug
- Predatory mites
  - Amblyseius fallacies, Phytoseiulus persimilis
  - Typhlodromus pyri, Zezellia mali
- Seven-spotted ladybeetle
- Six-spotted thrips
- Spider mite destroyer
- Western predatory mite
Nealta® miticide – efficacy
Pacific spider mite (*Tetranychus pacificus*) on almond
2014 – David Haviland, UCCE Kern; Shafter, CA

Nealta® miticide provided excellent control up to 21 days.
Nealta® miticide – safety to beneficials

Predatory mites on leaf disc (laboratory assay)

2013 – ATAC Laboratory, BASF; Research Triangle Park, NC

**Persimilis**

<table>
<thead>
<tr>
<th>Hours after exposure</th>
<th># of mites</th>
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<tbody>
<tr>
<td>5</td>
<td>5</td>
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<tr>
<td>24</td>
<td>3</td>
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<td>48</td>
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**Western predatory mite**

<table>
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**Neoseiulus**

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No significant differences in mean mite counts (ANOVA, Student’s t, P≤0.05) with an observation period. 3.5 cm lima bean leaf discs were sprayed and then infested.

→ Nealta® miticide had no significant effect on three predatory mite species in laboratory assays.
Nealta® miticide in a nutshell

What you need to know

New mode of action

Expand your toolbox.

Compatible with beneficials

Maximize your investment.

Controls all life stages

Get the most out of your application.

Always follow label instructions. Visit BASF at booth 619 or www.agproducts.basf.us for more information.
Grow Smart™
BASF’s Almond portfolio

Merivon®
Fungicide

Nealta®
Miticide

Altrevin®
Fire ant bait insecticide

Prowl® H₂O
Herbicide

Treevix®
Herbicide
150 years

BASF

We create chemistry