

# ARBICO Quick Pest Reference Guide

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## Aphids

**Damage to Plants:** Honeydew & dark frass, leaf discoloration, puckered leaves.

**Solutions:**

- Green Lacewing - *Chrysoperla rufilabris*
- Ladybugs - *Hippodamia convergens*
- Minute Pirate Bug - *Orius insidiosus*
- Assassin Bugs - *Zelus renardii*
- Aphid Parasites - *Aphelinus abdominalis*, *Aphidius ervi* & *Aphidius colemani*
- Aphid Predator - *Aphidoletes aphidimyza*
- Spinosad
- *Beauveria bassiana*



## Budworms

**Damage to Plants:** Chewed, deformed or dying buds.

**Solutions:**

- Minute Pirate Bug - *Orius insidiosus*
- Assassin Bugs - *Zelus renardii*
- Moth Egg Parasites - *Trichogramma sp.*
- Spinosad
- *Bacillus thuringiensis var. kurstaki (Btk)*



## Cutworms

**Damage to Plants:** Missing or damaged seedlings cut right at soil level.

**Solutions:**

- NemaAttack Beneficial Nematodes - *Steinernema carpocapsae (Sc)*
- Moth Egg Parasites - *Trichogramma sp.*
- Spinosad
- *Bacillus thuringiensis var. kurstaki (Btk)*
- Cutworm collars



## Cyclamen & Broad Mites

**Damage to Plants:** Flowers can wither, distorted leaves, leaves curled inward, dark & streaked foliage, compact leaf masses.

**Solutions:**

- Mite Predator - *Neoseiulus (=Amblyseius) fallacis*, *Amblyseius andersoni*, *Neoseiulus (=Amblyseius) californicus* & *Amblyseius swirskii*
- Thrips Predator - *Neoseiulus (=Amblyseius) cucumeris*



## Flea Beetles

**Damage to Plants:** Jumping insects, chewed leaves, small white buckshot holes.

**Solutions:**

- Assassin Bugs - *Zelus renardii*
- *Beauveria bassiana*
- NemaSeek Beneficial Nematodes - *Heterorhabditis bacteriophora (Hb)*



## Fungus Gnats

**Damage to Plants:** Yellowing leaves, wilting plants, lack of root structure, damage may appear as nutrient deficiency.

**Solutions:**

- Fungus Gnat Predator - *Stratiolaelaps scimitus (=Hypoaspis miles)*
- NemaAttack Beneficial Nematodes - *Steinernema feltiae (Sf)*
- *Beauveria bassiana*
- *Bacillus thuringiensis israelensis (Bti)*



## Grubs

**Damage to Plants:** Yellowing leaves, wilting plants, lack of root structure, damage may appear as nutrient deficiency, non-existent roots.

**Solutions:**

- NemaSeek Beneficial Nematodes - *Heterorhabditis bacteriophora (Hb)*
- NemaAttack Beneficial Nematodes - *Steinernema riobrave (Sr)*



## MEET OUR BENEFICIAL INSECTS



*Chrysoperla rufilabris*

Green Lacewings



*Zelus renardii*

Assassin Bugs



*Orius insidiosus*

Minute Pirate Bugs



*Hippodamia convergens*

Ladybugs

## Mealybugs/Scale

**Damage to Plants:** Leaves may wilt, drop off easily, be discolored or reduced in size. Infested plants may have a distorted stem or growing points.

### Solutions:

- Ladybugs - *Hippodamia convergens*
- Mealybug Destroyer - *Cryptolaemus montrouzieri*



## Root Aphids

**Damage to Plants:** Lack of vigor, withering leaves, yellowing leaves, signs of nutrient deficiency.

### Solutions:

- NemAttack Beneficial Nematodes - *Heterorhabditis bacteriophora* (Hb)
- *Beauveria bassiana*



## Russet Mites

**Damage to Plants:** Leaflets curl, chlorosis, necrosis, lower leaves dry out, leaves look bronze in color.

### Solutions:

- Thrips Predator - *Neoseiulus* (= *Amblyseius*) *cucumeris*
- Mite Predator - *Amblyseius andersoni*, *Neoseiulus* (= *Amblyseius*) *fallacis*, *Neoseiulus* (= *Amblyseius*) *californicus* & *Galendromus occidentalis*
- Sulfur



## Slugs/Snails

**Damage to Plants:** Silver trail left on leaves, holes in leaves.

### Solutions:

- Spinosad
- Iron Phosphate



## Spider Mites

**Damage to Plants:** Webbing, leaf edges curling or burned, slowed growth, speckled, leathery golden leaves.

### Solutions:

- Mite Predators - *Amblyseius andersoni*, *Phytoseiulus persimilis*, *Neoseiulus* (= *Amblyseius*) *fallacis*, *Mesoseiulus longipes*, *Galendromus occidentalis* & *Neoseiulus* (= *Amblyseius*) *californicus*
- Minute Pirate Bug - *Orius insidiosus*
- Spidermite Destroyer - *Feltiella acarisuga* & *Stethorus punctillum*
- Ladybugs - *Hippodamia convergens*
- Assassin Bugs - *Zelus renardii*



## Thrips

**Damage to Plants:** Silver/bronze scarring on leaves & stems, browning & drying leaves, puckered leaves.

### Solutions:

- Green Lacewing - *Chrysoperla rufilabris*
- Assassin Bugs - *Zelus renardii*
- Mite Predator - *Amblyseius swirskii*
- NemAttack Beneficial Nematodes - *Steinernema feltiae* (Sf)
- Minute Pirate Bug - *Orius insidiosus*
- Fungus Gnat Predator - *Stratiolaelaps scimitus* (= *Hypoaspis miles*)
- Spinosad
- *Beauveria bassiana*
- Thrips Predator - *Neoseiulus* (= *Amblyseius*) *cucumeris*



## Whiteflies

**Damage to Plants:** Piercing/sucking marks, dust like substance when touched, silver/white coloring.

### Solutions:

- Green Lacewing - *Chrysoperla rufilabris*
- Minute Pirate Bug - *Orius insidiosus*
- Whitefly Parasite - *Encarsia formosa* & *Eretmocerus eremicus*
- Mite Predator - *Amblyseius swirskii*
- Whitefly Predator - *Delphastus catalinae*
- *Beauveria bassiana*



## ARBICO Organics Difference

Visit [arbico-organics.com](http://arbico-organics.com) for our full line of beneficial, biological and botanical pest control solutions.

### History

We have been in business for over 35 years servicing conventional, transitional and organic growers.

### Quality & Selection

For the home gardener to the commercial grower, we pride ourselves on the quality and selection of available products.

### IPM Specialists

Our on-staff IPM Specialists are ready to listen to your needs and recommend solutions tailored to your situation.