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 - Aphisius abdominalis, Aphiidius ervi & Aphiidius 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:
• NemAttack 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)
• NemAttack Beneficial Nematodes - Steinernema feltiae (St)
• 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)
• NemAttack Beneficial Nematodes - Steinernema riobrave (Sr)
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)
  - Steinernema feltiae (Sf)
- 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

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