



Pesticides for Home, Nursery, and Landscape: Updates 2006

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Recently, several commonly used insecticides for the control of insects on woody landscape plants were removed from sale. EPA is phasing out the use of chlorinated hydrocarbons, organophosphates and carbamates due to safety concerns. Tree and shrub insecticides that have lost their registration include:

- bendiocarb
- chlorpyrifos, (only for nursery production, golf courses, and road medians)
- diazinon
- dimethoate
- lindane

Always be sure that the pesticide label is for the LOCATION you are planning to treat. Use the product according to label directions and dispose of unused pesticides during local toxic waste collection days in your community.

Homeowner products should have the pest or a similar pest name on the container and come in ready to use sprays, dusts, or liquids that are sold at garden centers.

Landscape professional products are available at commercial supply houses for purchase by professionals with a valid pesticide license.

Pesticides for Trees and Shrubs in 2006

Common names of pesticides are followed in parenthesis by trade names for consumers and professionals (bold). This is not a complete list of brand names and inclusion or exclusion from this list does not constitute a claim about product effectiveness.

Aphids

| | | |
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| abamectin (Avid) | dinotefuran (Safari) | oil, summer spray (Whitmire's Ultrafine Spray Oil) |
| acetamiprid (Tristar) | esfenvalerate (Ortho Bug-B-Gone Multipurpose Spray) | permethrin (several products, Astro) |
| acephate (Isotox, Orthene) | fenpropathrin (Tame) | pymetrozine (Endeavor) |
| azadirachtin (Safer's Brand Neem, Azatin XL, Ornazin) | flonicamid (Aria) | pyrethrin (several products) |
| bifenthrin (Ortho Home Defense, Talstar) | fluvalinate (Mavrik Aquaflo) | pyridalyl (Overture) |
| chlorpyrifos (Chlorpyrifos Pro) | imidacloprid (Bayer Advanced Tree & Shrub Insect Control, Merit) | pyriproxifen (Distance) |
| clarified hydrophobic extract of neem (Triact 70) | insecticidal soap (Safer's, Concern) | thiamethoxam (Flagship) |
| clothianidin (Celero) | lambda-cyhalothrin (Scimitar, Battle) | |
| cyfluthrin (Bayer Advanced Garden Multi-Insect Killer, Tempo) | malathion (Ortho Malathion Plus Insect Spray Concentrate, Malathion) | |
| deltamethrin (Delta-Eight Enforcer, Deltagard) | | |



Borers and Bark Beetles (shothole, bronze birch borer, twolined chestnut borer, clearwing borers, flatheaded borers, roundedheaded borers)

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| bifenthrin (Onyx, Talstar) chlorpyrifos (Chlorpyrifos Pro) imidacloprid is not for clearwing borers (Bayer Advanced Tree & Shrub Control, Merit) | permethrin (several products, Astro) | |
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Caterpillars (cankerworms, Eastern tent, fall webworm, gypsy moth, spiny elm, white-market tussock moth)

| | | |
|---|--|--|
| acephate (Isotox, Orthene, Acephate Pro) acetamiprid (Tristar) azadirachtin (Safer's Brand Neem, Azatin XL, Ornazin) <i>Bacillus thuringiensis var. kurstaki</i> (Thuricide, Dipel) bifenthrin (Ortho Home Defense, Onyx, Talstar) carbaryl (Sevin) chlorfenapyr (Pylon) chlorpyrifos (Chlorpyrifos Pro) cyfluthrin (Bayer Advanced Garden Multi-Insect Killer, Tempo) | dinotefuran (Safari) deltamethrin (Delta-Eight, Enforcer, Deltagard) diflubenzuron (Dimilin) esfenvalerate (Ortho Bug-B-Gone Multipurpose Spray) fenpropathrin (Tame) fenoxycarb (Precision) fluvalinate (Mavrik Aquaflo) insecticidal soap (Safer's, Concern) | lambda-cyhalothrin (Scimitar, Battle) malathion (Ortho Malathion Plus Insect Spray Concentrate, Malathion) novaluron (Pedestal) permethrin (several products, Astro) pyridalyl (Overture) pyrethrin (several products) spinosad (Fertilome and Bulls-Eye BioInsecticide, Conserve) tebufenozide (Confirm) thiamethoxam (Flagship) |
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Galls (Cooley Spruce gall adelgid, Eastern spruce gall adelgid, others)

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|---|---|--|
| acephate (Isotox, Orthene) bifenthrin (Ortho Home Defense, Talstar) carbaryl (Sevin) chlorpyrifos (Chlorpyrifos Pro) | deltamethrin (Delta-Eight Enforcer, Deltagard) fluvalinate (Mavrik Aquaflo) imidacloprid (Bayer Advanced Tree & Shrub Insect Control, Merit, Marathon) | insecticidal soap (Safer's, Concern) lambda-cyhalothrin (Scimitar, Battle) oil, summer spray (Whitmire's Ultrafine Spray Oil) oil, dormant (Ortho, Fertilome) |
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Leaf feeding beetles (elm, cottonwood, spirea, viburnum, willow leaf beetles)

| | | |
|---|---|--|
| acephate (Orthene) | chlorpyrifos (Chlorpyrifos Pro) | imidacloprid (Bayer Advanced Tree & Shrub Insect Control, Merit) |
| acetamiprid (Tristar) | clothianidin (Celero) | lambda-cyhalothrin (Scimitar, Battle) |
| azadirachtin (Safer's Brand Neem, Azatin XL, Ornazin) | cyfluthrin (Bayer Advanced Garden Multi-Insect Killer, Tempo) | malathion (Ortho Malathion Plus Insect Spray Concentrate, Malathion) |
| <i>Bacillus thuringiensis</i> var. <i>tenebrionis</i> | deltamethrin (Delta-Eight Enforcer, Deltagard) | permethrin (several products, Astro) |
| (Bonide Colorado Potato Beetle Beater, Novodor) | diflubenzuron (Dimilin) | spinosad (Fertilome and Bulls-Eye BioInsecticide, Conserve) |
| bifenthrin (Ortho Home Defense, Onyx, Talstar) | dinotefuran (Safari) | thiamethoxam (Flagship) |
| carbaryl (Sevin) | esfenvalerate (Ortho Bug-B-Gone Multipurpose Spray) | |
| | fluvalinate (Mavrik Aquaflo) | |

Leaf feeding beetles (Japanese beetle adults)

| | | |
|---|---|--|
| acephate (Isotox, Orthene) | cyfluthrin (Bayer Advanced Garden Multi-Insect Killer, Tempo) | imidacloprid (Bayer Advanced Tree & Shrub Insect Control, Merit) |
| acetamiprid (Tristar) | deltamethrin (Delta-Eight, Enforcer, Deltagard) | lambda-cyhalothrin (Scimitar, Battle) |
| azadirachtin (Safer's Brand Neem, Azatin XL, Ornazin) | diflubenzuron (Dimilin) | malathion (Ortho Malathion Plus Insect Spray Concentrate, Malathion) |
| bifenthrin (Ortho Home Defense, Talstar) | dinotefuran (Safari) | permethrin (several products, Astro) |
| carbaryl (Sevin) | esfenvalerate (Ortho Bug-B-Gone Multipurpose Spray) | thiamethoxam (Flagship) |
| chlorpyrifos (Chlorpyrifos Pro) | fluvalinate (Mavrik Aquaflo) | |
| clothianidin (Celero) | | |

Leafhoppers, plant bugs, lace bugs (potato leafhopper, ash plant bug, honeylocust plant bug, lace bug)

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|---|---|--|
| acephate (Isotox, Orthene) | clarified hydrophobic extract of neem (Triact 70) | imidacloprid (Bayer Advanced Tree & Shrub Insect Control, Merit) |
| acetamiprid (Tristar) | clothianidin (Celero) | insecticidal soap (Safer's, Concern) |
| azadirachtin (Safer's Brand Neem, Azatin XL, Ornazin) | cyfluthrin (Bayer Advanced Garden Multi-Insect Killer, Tempo) | lambda-cyhalothrin (Scimitar, Battle) |
| bifenthrin (Ortho Home Defense, Onyx, Talstar) | deltamethrin (Delta-Eight, Enforcer, Deltagard) | malathion (Ortho Malathion Plus Insect Spray Concentrate, Malathion) |
| buprofezin (Talus) | esfenvalerate (Ortho Bug-B-Gone Multipurpose Spray) | permethrin (several products, Astro) |
| carbaryl (Sevin) | fluvalinate (Mavrik Aquaflo) | pyrethrin (several products) |
| chlorpyrifos (Chlorpyrifos Pro) | | thiamethoxam (Flagship) |


Leafminers (arborvitae, birch, cherry-hawthorn, elm, oak, pine needle, spruce needle)

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|--|---|--|
| abamectin (Avid) | dinotefuran (Safari) | novaluron (Pedestal) |
| acephate (Isotox, Orthene) | fenoxycarb (Precision) | permethrin (several products, Astro) |
| acetamiprid (Tristar) | imidacloprid – must apply early for systemic effect (Bayer Advanced Tree & Shrub Insect Control, Merit, Marathon) | spinosad (Fertilome, and Bulls-Eye BioInsecticide, Conserve) |
| carbaryl (Sevin) | | thiamethoxam (Flagship) |
| chlorpyrifos (Chlorpyrifos Pro) | | |
| cyromazine (Citation) | malathion (Ortho Malathion Plus Insect Spray Concentrate ornamentals, Malathion) | |

Mites (spider mites)

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|--|---------------------------------------|---|
| abamectin (Avid) | etoxazole (TetraSan) | lambda-cyhalothrin (Scimitar, Battle) |
| acequinocyl (Shuttle) | fenbutatin oxide (Vendex) | milbemectin (Ultiflora) |
| bifenazate (Floramite) | fenpropathin (Tame) | pyridaben (Sanmite) |
| bifenthrin (Ortho Home Defense, Onyx, Talstar) | fenpyroximate (Akari) | oil, summer spray (Whitmire's Ultrafine Spray Oil) |
| chlorfenapyr (Pylon) | fluvalinate (Mavrik Aquaflo) | oil, dormant not effective on all mites (Ortho, Fertilome) |
| clofentazine (Ovation) | hexythiazox (Hexagon) | spiromesifen (Judo, Forbid) |
| dicofol (Kelthane) | insecticidal soap (Safer's, Concern) | |

Mites (rust, eriophyid mites)

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|--|---------------------------------------|---|
| abamectin (Avid) | dicofol (Kelthane) | lambda-cyhalothrin (Scimitar, Battle) |
| bifenthrin (Ortho Home Defense, Talstar) | fenbutatin oxide (Vendex) | oil, dormant is not effective on all mites (Ortho, Fertilome) |
| carbaryl (Sevin) | fenpyroximate (Akari) | pyridaben (Sanmite) |
| chlorfenapyr (Pylon) | fluvalinate (Mavrik Aquaflo) | spiromesifen (Forbid, Judo) |
| | insecticidal soap (Safer's, Concern) | |


Sawflies (elm, pine, mountain-ash, pear slug, rose, slug, viburnum)

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|--|---|---|
| acephate (Isotox, Orthene) acetamiprid (Tristar) azadirachtin (Safer's Brand Neem, Azatin XL, Ornazin) bifenthrin (Ortho Home Defense, Onyx, Talstar) carbaryl (Sevin) cyfluthrin (Bayer Advanced Garden Multi-Insect Killer, Tempo) chlorpyrifos (Chlorpyrifos Pro) deltamethrin (Delta-Eight, Enforcer, Deltagard) | diflubenzuron (Dimilin) dinotefuran (Safari) esfenvalerate (Ortho Bug-B-Gone Multipurpose Spray) fluvalinate (Mavrik Aquaflow) imidacloprid (Bayer Advanced Tree & Shrub Control, Merit, Marathon) insecticidal soap (Safer's, Concern) lambda-cyhalothrin (Scimitar, Battle) | malathion (Ortho Malathion Plus Insect Spray Concentrate ornamentals, Malathion) oil, summer spray (Whitmire's Ultrafine Spray Oil) permethrin (several products, Astro) Pyrethrin (several products) spinosad (Fertilome and Bulls-Eye BioInsecticide, Conserve) thiamethoxam (Flagship) tebufenozide (Confirm) |
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Scales (armored scales, soft scales, mealybugs)

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| azadirachtin (Safer's Brand Neem, Azatin XL, Ornazin) acephate (Isotox, Orthene) acetamiprid (Tristar) bifenthrin (Ortho Home Defense, Onyx, Talstar) buprofezin (Talus) carbaryl (Sevin) chlorpyrifos (Chlorpyrifos Pro) clarified hydrophobic extract of neem (Triact 70) | deltamethrin (Delta-Eight, Enforcer, Deltagard) dinotefuran (Safari) esfenvalerate (Ortho Bug-B-Gone Multipurpose Spray) fluvalinate (Mavrik Aquaflow) fenoxycarb (Precision), soft scales insecticidal soap (Safer's, Concern) imidacloprid (Bayer Advanced Tree & Shrub Insect Control, Merit), not for armored scales | lambda-cyhalothrin (Scimitar, Battle) malathion (Ortho Malathion Plus Insect Spray Concentrate ornamentals, Malathion) oil, summer spray (Whitmire's Ultrafine Spray Oil) oil, dormant (Ortho, Fertilome) permethrin (several products, Astro) pyriproxifen (Distance), armored scales thiamethoxam (Flagship) |
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Thrips (privet, daylily, western flower)

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| abamectin (Avid) acephate (Isotox, Orthene) acetamiprid (Tristar) azadirachtin (Safer's Brand Neem, Azatin XL, Ornazin) chlorpyrifos (Chlorpyrifos Pro) | chlorfenapyr (Pylon) dinotefuran (Safari) flonicamid (Aria) fluvalinate (Mavrik Aquaflow) novaluron (Pedestal) | permethrin (several products, Astro) pyridalyl (Overture) spinosad (Fertilome and Bulls-Eye BioInsecticide, Conserve) thiamethoxam (Flagship) |
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