

Safe Yard Product Buying Guide  
Pest Solution Fact Sheet

# Aphids, scale, and whiteflies



Aphids seldom kill a plant, but they can cause leaf distortion, stunted growth, and carry disease from one plant to another. Aphids reproduce very quickly, with females bearing up to 80 live young per week. Eggs are typically laid in fall, allowing the species to overwinter. Aphids have a symbiotic relationship with ants, who ‘farm’ the colonies and protect the aphids from predators. Natural aphid predators include birds, spiders, and ladybeetles.

The following products can help control aphids without risking the health of your family, pets, or environment.

Product/type	How to use
<i>Mechanical</i>	
Water spray nozzle	Spray adults and eggs off of plants daily.
Sticky Traps and Glue	<b>Cards:</b> Expose adhesive and place close to infected plants. <b>Gums and glues:</b> apply to base of plant to block access for ants.
Ladybeetles	Release into garden to feed on aphids. 1,500 adult ladybeetles should be suitable for home garden aphid control. Proper timing and release of beetles that are ready to eat is key.
<i>Chemical</i>	
Plant Oils	Spray directly onto the insects and eggs that are visible on the plant. Use caution on sunny days to avoid burning. Re-apply as needed every 4-7 days.
Neem Oil	Spray directly on aphids and plant foliage. Re-apply as needed every 4-7 days.
Spinosads	Spray directly onto the insects and infested plants. Re-apply weekly interrupt the breeding cycle. Do not spray on plants with flowers, to prevent harm to honeybees.

As with all pesticides, protect people, pets, and the environment by following all instructions and cautions on labels.



## Grow Smart, Grow Safe®

Learn about the hazards associated with specific pesticide products at [GrowSmartGrowSafe.org](http://GrowSmartGrowSafe.org).

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## Try These Products

- Oak Stump Farm Aphid Chaser
- EcoSmart Organic™ Insect Killer
- EcoSmart Organic™ Insect Killer Spray for Lawns & Landscapes
- EcoSmart Organic™ 3 in 1 Rose & Flower Care

## Tips for pesticide application

Many pesticides pose a risk to people, pets, and the environment. Use the following guidelines to minimize these risks.

- Do not overuse. Apply only enough to cover the insects, and foliage.
- Spray directly on the insects and eggs.
- Do not apply if rain is expected within 24 hours.
- Time applications to get adults and eggs early.



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# Aphids, scale, and whiteflies

## Preventing aphids—your best defense!

<b>Build healthy plants</b>	Healthy plants resist attack better than unhealthy plants. Choose plants that are suited to your conditions, build healthy soils using compost and slow-release fertilizers, and water appropriately.
<b>Attract beneficial predators</b>	Predators like green lacewings, birds and ladybeetles are important to aphid control. Attract these predators by planting nectar-producing plants like those in the parsley and sunflower families and installing a bird feeder or birdbath.
<b>Monitor plants regularly</b>	Monitor your plants regularly (especially the underside of leaves) for signs of aphids like sticky honeydew deposits or black sooty mold fungus.
<b>Don't plant aphid-attracting plants</b>	Some plants are known to attract aphids more than others including spruce and birch trees, lupines, and honeysuckles. Seek expert advice on aphid-resistant varieties. One is the "Great Plant Picks" website, <a href="http://www.greatplantpicks.org">www.greatplantpicks.org</a>



## How pesticides work

**Plant oils:** Plant oils like rosemary, cinnamon, garlic, peppermint, and lemongrass create a barrier that prevents air exchange, killing both adults and eggs. Commercial plant oil formulations are often a combination of several oils, and some may be more effective than others. Use caution on sunny days; plant oils can burn foliage when they volatilize with the heat.

**Neem oil:** Hormonal disruption affects feeding and reproduction in aphids, and works as a contact insecticide and insect repellent. Works on adult aphids only; will not kill eggs. Oils break down after 4 - 7 days, and reapplication is often necessary for continued control.

**Spinosads:** The toxin is absorbed directly by the aphids, as well as being ingested from sprayed leaves. The toxin overstimulates the nervous system of insects leading to paralysis. Do not apply to plants with flowers present, as this product can impact honeybees.

## Other Pesticides

Other pesticides that are commonly used to treat aphids include carbaryl and malathion, which can be harmful to salmon and people. These chemicals typically work by disrupting nerve impulses responsible for insect functions such as breathing, eating, or mobility, which eventually leads to the animal's death. Ingredients in many common insecticides can pose a significant threat to people, pets, and the environment. Understand the risks by visiting Grow Smart, Grow Safe®.

## What to consider when using pesticides

Pesticides can also harm beneficial insects that prey on aphids. Because aphids reproduce much faster than their predators, predator populations will not recover as quickly as the aphid populations after a pesticide treatment.

*Sheets customized for Vashon Island by  
Diane Emerson and Michael Laurie  
Phone: 206-567-5492 October, 2015*



# Safe Yard Product Buying Guide

## Pest Solution Fact Sheet

# Dandelions *and other broadleaf weeds*



Dandelions and other broadleaf weeds can quickly overrun your yard. Fast growing, they take soil nutrients, water, sunlight, and space from your lawn and garden. Dandelions reproduce quickly through abundant seeds and vigorous thick roots - even small pieces of the roots can become whole new plants! Established plants can survive year to year, so controlling them early to prevent seeding is the best option.

The following products can help control dandelions and other broadleaf weeds without risking the health of your family, pets, or environment.

Product/type	How to use
<b>Mechanical</b>	
Mulch	Spread 2-4 inches thick over bare soil to prevent seed germination.
Hand tools	Dig up and remove root and top of plant.
Flame Weeder	Best for small weeds on non-flammable surfaces. Move the flame back and forth to sear weeds. Re-apply as needed.
<b>Chemical</b>	
Plant Oils*	Spray directly on weeds you want to control. Reapply as needed.
Citric Acid*	Spray directly on foliage—spray only weeds you want to control. Reapply as needed.
Corn Gluten <i>Pre-emergent</i>	Apply during spring and fall to prevent seeds from germinating. Spread over bare soil and water immediately. Reapply according to the label.
Iron HEDTA <i>Selective</i>	Spray directly on weeds, covering plant and leaves evenly. Results will appear in 2-7 days. Reapply in 3-4 weeks as regrowth appears.

\*Best used during warm weather on weeds less than 6 inches tall.

As with all pesticides, protect people, pets, and the environment by following all instructions and cautions on labels.



### Grow Smart, Grow Safe®

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### Try These Products

- Preen® Organic Vegetable Garden Weed Preventer
- St. Gabriel Organics BurnOut II Fast Acting Weed & Grass Killer
- Bonide® BurnOut®

### Tips for pesticide application

Many pesticides pose a risk to people, pets, and the environment. Use the following guidelines to minimize these risks.

- Do not overuse. Apply only enough to cover weeds or bare soil.
- Spray directly on weeds—avoid spraying other foliage.
- Apply plant oils and citric acid during warm weather.
- Apply pre-emergent herbicides before seeds germinate.
- Do not apply if rain is expected within 24 hours.

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# Dandelions and other broadleaf weeds

## Preventing dandelions—your best defense!

<b>Cover bare soil with mulch</b>	Preventing weeds from becoming established in your yard is the first step. Mulch such as wood chips or compost creates a barrier that limits sunlight and prevents many weed seeds from germinating.
<b>Plant densely and keep plants healthy</b>	Weeds are opportunists - they will find empty spaces in your garden and move in. Keeping your lawn healthy and thick, and planting your garden densely, limits spaces for dandelions to grow.
<b>Water deeply and less frequently</b>	Your lawn and garden plants need water that reaches deep into their roots to stay healthy. Dandelions thrive on extra water. Water plants enough so the surface dries out but the soil 1" below the surface stays moist.

### How pesticides work

**Plant oils:** Plant oils like rosemary, cinnamon, garlic, peppermint, and lemongrass burn foliage, causing plants to dry out. It does not kill the roots, but re-applying the herbicide as the top of the weed grows back will deplete the energy reserves in the roots and kill the weed over time. Commercial plant oil formulations are often a combination of several oils and citric acid, some of which may be more effective than others. Because plant oils volatilize with heat to burn foliage, they are most effective on warm days.

**Citric Acid:** Similar to plant oils, citric acid breaks down the coatings on plant foliage and causes them to dry out. It does not kill the roots, but re-applying the herbicide as the top of the weed grows back will deplete the energy reserves in the roots and kill the weed over time. Citric Acid is often combined with plant oils for increased effectiveness.

**Corn Gluten:** Corn gluten works to inhibit root growth in germinating seeds. This means that it needs to be in your garden before weed seeds sprout. You may need to reapply the corn gluten to get complete control since weed seeds will germinate at varying times. Corn gluten is high in nitrogen, and can have the added benefit of adding it as a nutrient to your garden; however, use caution near streams as inputs of excess nitrogen can harm water quality.

**Iron HEDTA:** Iron HEDTA is sprayed directly on the leaves and stems of plants where it oxidizes and damages the plant cells and tissues. Ultimately it kills the plant. It works on broadleaf weeds, but not on grasses, so can be used on lawns without damaging grass.

### Other Pesticides

Other pesticides that are commonly used to treat dandelions and other broadleaf weeds include trifluralin and 2,4-D (often found in weed and feed products). These chemicals can be harmful to salmon and people. They typically work by preventing root and shoot growth in newly germinated seedlings and plants leading to plant death. Ingredients in many common herbicides can pose a significant threat to people, pets, and the environment. Understand the risks by visiting Grow Smart, Grow Safe®.



### What to consider when using pesticides

Pesticides can also harm desirable plants as well as weeds. Be careful to apply pesticides when they will be most effective at controlling weeds; when they are small or—in the case of pre-emergent pesticides - before the seeds germinate. When using selective herbicides, applying the product only where it's needed (spot application vs. broadcast application) can limit the risk of pesticide exposure.

*Sheets customized for Vashon Island by  
Diane Emerson and Michael Laurie  
Phone: 206-567-5492 October, 2015*





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# MOSS

Moss as we think of it is a community of very small plants that form a dense mat. Mosses thrive in dark, moist conditions and can quickly cover lawns and outcompete turf grasses. Moss can also form on roofs, decks, and other structures around our homes. When moss forms on structures, it can cause damage by clogging roof downspouts and allowing organic materials to collect and cause rot.

The following products can help control moss without risking the health of your family, pets, or the environment.

Product/type	How to use
<b>Mechanical</b>	
Rakes, brooms, water spray nozzle	On structures, scrape or spray off existing moss and the soil it is growing in. On lawns, rake out moss and replant turf grasses*.
Zinc metal strips	Install zinc strips on the top ridge of the roof. Rain water will slowly release and wash the zinc over your roof. Zinc can be harmful to salmon, so use other methods if near waterways.
<b>Chemical</b>	
Plant Oils	Spray directly onto the moss. Take care not to spray on other plants. Reapply after 1-2 weeks if further control is needed.
Ferrous sulfate	Apply in fall when moss begins to actively grow in your lawn. Remove damaged moss from your lawn and overseed with grass seed.

\*See reverse side of fact sheet for how to improve soil conditions before planting turf grasses.

As with all pesticides, protect people, pets, and the environment by following all instructions and cautions on labels.



### Grow Smart, Grow Safe®

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### Try These Products

- Agricultural Lime, after soil test

### Tips for pesticide application

Many pesticides pose a risk to people, pets, and the environment. Use the following guidelines to minimize these risks.

- Do not overuse. Apply only enough to cover the moss.
- Be careful to apply only to the moss – the pesticide will kill other plants.
- Do not apply if rain is expected within 24 hours.

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# Moss

## Preventing moss—your best defense!

<b>Add lime to increase pH for healthier lawns</b>	Healthy turf grass leaves little room for mosses, which like acidic (low pH conditions) and shade. Adding lime to your lawn can increase the pH, which is ideal for most turf grasses. Get a soil test to know how much lime to add. The preferred pH for most grass is around 7, but fescue likes a more acid pH of 5.5-6
<b>Plant more shade tolerant turf grasses</b>	For shadier lawn areas, seed with more shade tolerant grasses. Some good examples are: Hard Fescues, Kentucky Bluegrass, and Perennial Ryegrass. Shade tolerant grasses still need 4-5 hours of sunlight. If you have less, consider planting shade tolerant plants instead, or allowing the moss to grow.
<b>Decrease excess moisture</b>	Mosses thrive on wet conditions, where lawns need good drainage. Aerating and thatching can increase drainage creating ideal conditions for a lush lawn.
<b>Reduce shade</b>	Moss will not thrive in direct sun. Whether on a roof or in your lawn, remove sources of shade where moss is growing.

### How pesticides work

**Plant oils:** Plant oils like rosemary, cinnamon, garlic, peppermint, and lemongrass work on contact to destroy the plant tissue. Commercial plant oil formulations are often a combination of several oils, and some may be more effective than others. Plant oils can burn foliage on hot and sunny days because the oils volatilize with the heat, so these pesticides are particularly potent during hot weather.

**Zinc:** Zinc is an essential element for plant growth though when present in high amounts like roof strips, it can inhibit the growth of moss. Zinc is only recommended for use on roofs away from waterways, as it can leach into the soil and pose toxicity hazards to aquatic wildlife, if used as a spray.

**Ferrous sulfate:** Iron (ferrous) is an essential element for plant growth. However, when present in high amounts it will inhibit growth in mosses without damaging turf grass on your lawn.

### Other Pesticides

Other pesticides that are commonly used to control moss include potassium salts of fatty acids. These chemicals typically work by killing mosses on contact and destroying the plant tissue. They present a high hazard to aquatic life, however.

Ingredients in many common pesticides used to kill moss can pose a significant threat to people, pets, and the environment. Understand the risks by visiting Grow Smart, Grow Safe®.



### What to consider when using pesticides

Pesticides used to control mosses can damage other desirable plants in your garden and lawn. They can also pose a risk to aquatic wildlife as they get transported from your garden into local waterways.

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Diane Emerson and Michael Laurie  
Phone: 206-567-5492 October, 2015*



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# Powdery Mildew *and other fungal diseases*



Powdery mildew is a fungal disease that spreads vegetatively and by spores. Powdery mildew looks like gray powdery spots on the surface of leaves and stems, which are the tiny strands of the mildew feeding off plant tissue. The spores are microscopic particles that allow the disease to spread from one area of the plant to another. Because powdery mildew and other fungal diseases thrive in moist conditions, preventing water from collecting on the foliage, allowing good air circulation around the leaves and plant, and letting the surface of the soil dry out between watering will help minimize disease. Drip irrigation can help with this.

The following products can help control powdery mildew and other fungal diseases without risking the health of your family, pets, or the environment.

Product/type	How to use
<i>Mechanical</i>	
Plant pruners	Prune out affected foliage to prevent fungal spores from spreading. Prune stems and foliage to improve air circulation throughout plant. Clean pruner after each use to avoid spreading mildew spores to your other plants.
<i>Chemical</i>	
Plant Oils	Spray directly on top and bottom of foliage of affected plants. Reapply every 7-14 days.
Neem Oil	Spray directly on top and bottom of foliage, stems, and new growth of affected plant. Reapply every 4-7 days.
Sulfur	Preventative—apply every 7-10 days during wet weather. Do not apply: <ul style="list-style-type: none"><li>• when flowers are present to avoid killing pollinators</li><li>• in temperatures &gt;85 °F</li><li>• within 30 days of spraying plants with plant oils, to avoid damage to the plant or tree</li></ul>
Copper sulfate	Spray top and bottom of affected plant to treat existing and prevent new infection. Allow 12 hours to dry after application; reapply every 7-10 days as needed.

### Try These Products

- EcoSmart Organic™ 3 in 1 Rose & Flower Care
- Bonide® Sulfur Plant Fungicide Ready to Use
- Safer® Garden Fungicide II
- Safer® Brand Garden Fungicide
- Hi-Yield® Snake Eyes Dusting Wettable Sulfur

### Tips for pesticide application

Many pesticides pose a risk to people, pets, and the environment. Use the following guidelines to minimize these risks.

- Do not overuse. Apply only enough to cover foliage of the infected plants.
- Spray directly on the foliage and stems.
- Do not apply if rain is expected within 24 hours.
- Time applications to treat new growth and during early onset of the disease.



### Grow Smart, Grow Safe®

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# Powdery Mildew *and other fungal diseases*

## Preventing powdery mildew—your best defense!

<b>Choose disease-resistant plants</b>	Disease-resistant varieties and cultivars are less prone to fungal diseases. There are many options available for the most susceptible plants such as roses, cucumbers, squashes, and rhododendrons. Go to <a href="http://www.greatplantpicks.org">www.greatplantpicks.org</a> for recommended varieties.
<b>Prevent excess moisture on your plants</b>	Minimize overhead watering to prevent moisture from collecting on the plant surfaces. Allow the surface of the soil to dry out between waterings to prevent spore germination. Drip irrigation systems help keep foliage dry and don't waste water.
<b>Keep air flowing around your plants</b>	Prune back branches and leaves on the plant to allow sunlight and air to circulate and evaporate excess moisture on plant surfaces.



### How pesticides work

**Plant oils:** Plant oils like rosemary, cinnamon, garlic, peppermint, clove, sesame and lemongrass create a barrier that prevents the fungus from digging into the plant to feed. The barrier also coats the spores and prevents germination. Commercial plant oil formulations are often a combination of several oils, and some may be more effective than others. Because the oils volatilize with heat, plant oils can burn foliage on hot and sunny days.

**Neem oil:** Neem oil, similar to plant oils, create a barrier that prevents the fungus from attaching to the plant and coats the spores to prevent germination. Neem oil can break down after 4-7 days, and reapplication is often necessary for continued control.

**Sulfur:** Sulfur prevents fungal spores from germinating, which is why it is best used as a preventative. Sulfur does not persist as a toxin in the environment, and therefore poses very little risk.

**Copper sulfate:** Copper sulfate binds to proteins in fungi, causing the cells to break, and is an effective control for all fungal diseases. It can be applied as a preventative as well as when the fungal disease is present. Copper is a naturally occurring mineral and has low toxicity.

### Other Pesticides

Other pesticides that are commonly used to treat fungal diseases include chlorothalinalol, a known carcinogen. These chemicals typically work by inhibiting enzymes needed for cellular respiration. Ingredients in many common fungicides can pose a significant threat to people, pets, and the environment. Understand the risks by visiting Grow Smart, Grow Safe®.

### What to consider when using pesticides

Pesticides can harm beneficial insects and cause damage to the foliage of other plants. Try not to spray when beneficial insects are present on the plants. When applying pesticides directly to plants, take care to only apply to the target plants.

*Sheets customized for Vashon Island by Diane Emerson and Michael Laurie*

*Phone: 206-567-5492 October, 2015*





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# Quackgrass



Quackgrass is the common term for spreading grasses with thick mat-like roots. They can quickly take over your lawn and garden beds by forming dense patches. Their roots spread quickly, sending out runners that colonize new areas. Even small bits of the roots can become whole new plants, enabling the grass to spread even faster. Quackgrass quickly fills bare soil in direct sun, so covering bare soil and growing healthy plants and lawn minimizes spaces for quackgrass to take hold.

The following products can help control weedy grasses without risking the health of your family, pets, or the environment.

Product/type	How to use
<i>Mechanical</i>	
Mulch	Spread 2-4 inches thick over bare soil to reduce seed germination.
Hoes, digging forks, trowels	Dig up and remove entire thick root mass and the top of the plant.
Flame Weeder	Best for weeds smaller than 3" on non-flammable surfaces. Move the flame back and forth to sear grass. Retreat as needed.
<i>Chemical</i>	
Plant Oils*	Spray directly on foliage—spray only weeds you want to control. Reapply as needed.
Citric Acid*	Spray directly on foliage—spray only weeds you want to control. Reapply as needed.

\*Best used during warm weather on weeds less than 6 inches tall.

As with all pesticides, protect people, pets, and the environment by following all instructions and cautions on labels.



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## Try These Products

- Preen® Organic Vegetable Garden Weed Preventer
- St. Gabriel Organics BurnOut II Fast Acting Weed & Grass Killer
- Bonide® BurnOut®

## Tips for pesticide application

Many pesticides pose a risk to people, pets, and the environment. Use the following guidelines to minimize these risks.

- Do not overuse. Apply only enough to coat the grasses you wish to control.
- Spray directly on the foliage—avoid spraying other grasses.
- Do not apply if rain is expected within 24 hours.
- Time applications to treat grasses when they are young.



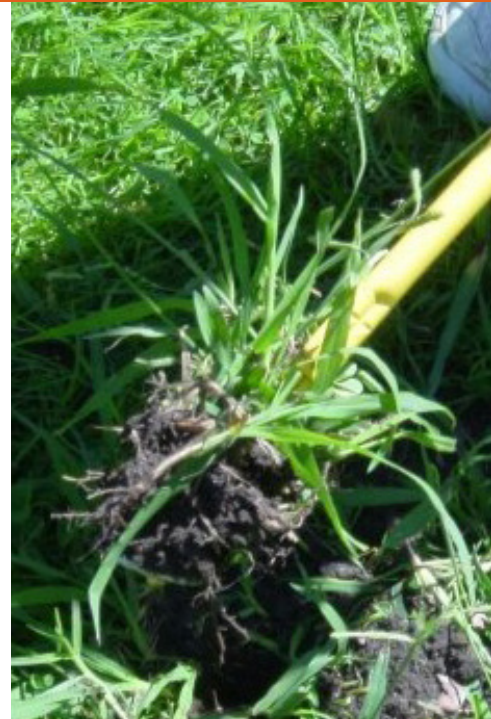
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# Quackgrass

## Preventing quackgrass—your best defense!

<b>Cover bare soil with mulch</b>	Covering bare soil with 2-4 inches of mulch (compost or wood chips) will reduce quackgrass and other seeds from germinating and prevent roots from taking hold and colonizing your garden beds or lawn.
<b>Maintain a healthy lawn</b>	Keeping your desirable turf grasses healthy and lush prevents spaces for quackgrass to move in. Aerate and overseed your lawn in spring and fall to fill in bare spots. Water deeply to insure moisture stays in the soil and reaches the roots - once a week should be enough. Fertilize with a slow release fertilizer in the spring to provide nutrients all season long.
<b>Build healthy plants</b>	Healthy plants have healthy root systems that cover areas where quackgrass roots could take hold. Water your plants deeply, letting the surface dry out between watering. Cover areas between plants with mulch to limit soil exposure. Use slow release organic fertilizers to provide sustained nutrients all season long.



### How pesticides work

**Plant oils:** Plant oils like rosemary, cinnamon, garlic, peppermint, and lemongrass burn foliage, causing plants to dry out. It does not affect the roots, but with several applications to kill foliage as it grows back, the energy reserves in the roots can be depleted, which kills the plant over time. Commercial plant oil formulations are often a combination of several oils and citric acid, some of which may be more effective than others. Because plant oils volatilize with heat to burn foliage, they are most effective on warm days.

**Citric Acid:** Similar to plant oils, citric acid breaks down the coatings on plant foliage and causes them to dry out. It does not affect the roots, but with several applications to kill foliage as it grows back, the energy reserves in the roots can be depleted, which kills the plant over time. Citric Acid is often combined with plant oils for increased effectiveness.

### Other Pesticides

Other pesticides that are commonly used to treat quackgrasses include the pre-emergent herbicide trifluralin, which can be harmful to salmon. These chemicals typically work by preventing root and shoot growth in newly germinated seedlings and plants leading to plant death. Ingredients in many common herbicides can pose a significant threat to people, pets, and the environment. Understand the risks by visiting Grow Smart, Grow Safe®.

### What to consider when using pesticides

Pesticides can harm beneficial insects and cause damage to the foliage of other plants. Do not to spray when beneficial insects are present on the plants. When applying pesticides directly to plants take care to only apply to the target plants.

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# Slugs and snails



Slugs and snails are voracious predators that can cause a lot of damage to your garden. They prefer to eat tender shoots and new plant growth, especially vegetables. Their populations build up in the garden as adults hide and lay eggs as often as every 6 weeks, ensuring a steady stream of successive generations of slugs and snails in your garden. Due to their preference for tender plants, they can be especially damaging to gardens in the spring and fall.

The following products can help control slugs and snails.

Product/type	How to use
<i>Mechanical</i>	
Physical removal	Remove slugs from the area by hand, on cool, cloudy days and in the evenings. Relocate, feed to ducks, or kill.
Copper barrier	First, remove slugs from the area targeted for slug control. Then install a barrier at least 3-inches high vertically around the control area.
Lure traps	Activate the lure and position the trap in the garden: <ul style="list-style-type: none"><li>• For vegetable-based powder lures: mix with water</li><li>• For beer lure: pour a few inches of beer into the trap</li></ul> Monitor daily to check trap levels—replace when full
<i>Chemical</i>	
Iron Phosphate baits	Place baits or pellets around plants you wish to protect. Check plants regularly for slugs and snails. Re-apply as needed. Can be harmful to pets.
Plant Oils	Spray directly onto the slugs and snails. Apply spray to plants that snails and slugs are eating. This creates a coating that can protect the plants from further damage. Monitor slugs and snail presence and reapply as necessary.

As with all pesticides, protect people, pets, and the environment by following all instructions and cautions on labels.



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## Try These Products

- Corry's® Slug & Snail Copper Tape Barrier
- Snail Trap

## Tips for pesticide application

Many pesticides pose a risk to people, pets, and the environment. Use the following guidelines to minimize these risks.

- Do not overuse. Apply only enough to cover the pests and affected plants (spray) or enough bait to surround your plants.
- Spray directly on the existing pests.
- Do not apply if rain is expected within 24 hours.
- Time applications to get adults before they can lay eggs in the soil.



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# Slugs and snails

## Preventing slugs and snails—your best defense!

<b>Remove leaf and garden debris</b>	Slugs and snails love dark moist places to hide. Removing leaf litter and other debris that they can hide under eliminates places for adults to hide and lay their eggs.
<b>Turn your soil before planting your garden</b>	Turning the soil in your garden before planting can crush adults and eggs that are in the soil and eliminate small pockets in the soil where they are hiding. Since slugs can survive through the winter, removing them early in spring and then in autumn can break the cycle and decrease the population in your garden.

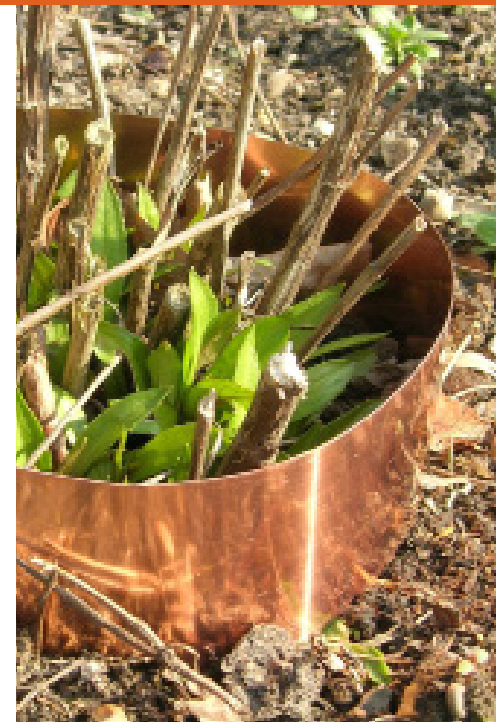
### How pesticides work

**Iron phosphate baits:** Iron phosphate baits attract slugs and snails, who consume them. Once consumed, the iron phosphate is metabolized in their gut into a toxic substance, resulting in death. Some, but not all, of these baits are formulated to smell bitter to mammals, so pets are highly unlikely to consume them. Keep all iron phosphate baits away from pets and children.

**Plant oils:** Plant oils like rosemary, cinnamon, garlic, peppermint, and lemongrass create a barrier that prevents air exchange, killing both adults and eggs. Commercial plant oil formulations are often a combination of several oils, and some may be more effective than others. Plant oils can burn foliage on hot and sunny days because the oils volatilize with the heat; therefore, use caution when applying plant oils on sunny days.

### Other Pesticides

Other pesticides that are commonly used to treat slugs and snails include carbaryl and metaldehyde, which can be harmful to people and animals. These chemicals typically work by poisoning animals with toxic compounds and chemicals that interrupt nerve impulses in pets, animals, and aquatic life. Ingredients in many common herbicides can pose a significant threat to people, pets, and the environment. Understand the risks by visiting Grow Smart, Grow Safe®.



### What to consider when using pesticides

Common pesticides used to control slugs and snails can harm other animals in your yard. Be sure to choose a pest control product for slugs that will not cause harm to pets or other wildlife.

*Sheets customized for Vashon Island by  
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