

Organic Gardening Recipes & Tips

Hot Pepper Spray: *repels aphids, whiteflies and animals*

Put 6 hot peppers (the hotter the better) and two cups of boiling water into a blender.

Mix at high speed for 1-2 minutes.

Pour into a container and set aside for up to one day.

Strain liquid through a cheese cloth or coffee filter.

Add liquid into a one quart container. Fill container to top with water.

Apply liberally to plants. Re-apply every week to two weeks or after a rain.

Compost Tea

Supplies needed:

- 2 - 5 gallon buckets
- 1 gallon mature compost
- 1 aquarium pump (\$5)
- 4 gallons of water
- 2 feet + of aquarium hose (\$1)
- 1 aquarium air stone (\$1)
- 1 oz. unsulfured molasses

Instructions:

- Fill a bucket with 4 gallons of water.
- Attach air stone to hose, and hose to pump. Plug in to turn on. If you are using treated water (municipal water supply) aerate water overnight to allow added chlorine to evaporate.
- Add compost to bucket and make sure the air stone is covered (you can weigh it down with a rock or a submerged jar). Add molasses and stir.
- Allow tea to brew for 24 – 48 hours, until a foamy head forms. Stir occasionally. **Tea should not smell bad at all.**
- After brewing is complete, strain tea through cheese cloth or an old tee shirt into a clean bucket. You can put the compost solids back into the compost pile or in the garden.
- Apply the compost tea to your flower and vegetable plants immediately. The beneficial microbes will begin to die shortly after the air source is removed.

Aphid Soap Spray: *When sprayed on pests, soap damages cell membranes, causing insects to dehydrate and die. Most effective against soft-bodied insects (aphids), careful not to spray on beneficial predators like hoverflies and mites.*

1 teaspoon vegetable oil

1 teaspoon dish soap (Ivory, Dawn)

one quart of water

(1 tbsp. each of the vegetable oil and dish soap to a gallon of water)

Spray leaves affected by aphids, making sure to cover underside of leaves. Apply Spray early or late in day, when leaves will not get direct sunlight.

Weed Spray

Ingredients:

1 quart of vinegar

1/4 cup of salt

2 tablespoons of dishwashing detergent

Directions:

Stir it all together until the salt dissolves.

Add it to a spray bottle and spray directly onto the weeds.

This works best when there's no rain in the forecast for a couple of days!

Ten Steps to Prevent Common Garden Diseases

1. SANITATION!

Start with a clean planting site and clean tools. (Free of last year's crop debris. Debris from the previous season's crop may harbor diseases and insects.)

2. Purchase high quality plants and seeds.

Select plants with healthy-looking leaves and strong stems (avoid spindly plants.)

3. Rotate crops.

Grow your crops in different parts of the garden each year. Be sure not to rotate crops with those in the same plant family (i.e. tomatoes, eggplants and peppers; cabbage, broccoli, and cauliflower.)

4. Don't plant too early.

Plant growth may be slowed due to cold soil temperatures (slow-growing plants are more susceptible to attack by disease-causing organisms and insect pests.)

5. Mulch.

Mulches prevent soil that may contain disease-causing organisms from splashing onto the plants and also helps to retain soil moisture.

6. Avoid overcrowding the plants.

Crowding creates a moist, humid environment that is favorable for disease development.

7. Water early in the day.

Plants that remain wet throughout the night are more likely to develop disease problems.

8. Remove diseased leaves, flowers and fruit as soon as they are noticed.

Diseases are easily spread by wind and rain from diseased plant tissues.

9. Fertilize to promote growth, but avoid over-fertilization, especially with nitrogen.

10. Try to maintain insect damage at a minimum.

Young, succulent growth is susceptible to attack by many fungi and bacteria. Insect wounds provide entry sites for disease-causing organisms.



Top 10 Beneficial Insects

- 1. Braconid Wasps** (Hymenoptera): North America is home to nearly 2,000 species of these non-stinging wasps. Adults are less than half an inch long, with narrow abdomens and long antennae. Adults lay eggs inside or on host insects; the maggot-like larvae that emerge consume the prey. Diet: Caterpillars (including tomato hornworms), flies, beetle larvae, leaf miners, true bugs and aphids. Adults consume nectar and pollen.
- 2. Ground Beetles** (Coleoptera): Most of the 2,500 species are one-eighth to 1 1/2 inches long, dark, shiny and hard-shelled. Diet: Asparagus beetles, caterpillars, Colorado potato beetles, corn earworms, cutworms, slugs, squash vine borers and tobacco budworms. Some are also important consumers of weed seeds.
- 3. Hover or Syrphid Flies** (Diptera): Larvae are small, tapered maggots that crawl over foliage. Black-and-yellow-striped adults resemble yellow jackets but are harmless to humans. The adults hover like hummingbirds as they feed from flowers. Diet: Larvae eat mealybugs, small caterpillars, and are especially helpful in controlling early season aphids. The adults feed on nectar and pollen.
- 4. Lacewings** (Neuroptera): Larvae, sometimes called “aphid lions,” measure to half an inch long and are light brown with hooked jaws. Adults are light green or brown and one-half to 1 inch long with transparent wings. Diet: Larvae prey upon aphids, small caterpillars and caterpillar eggs, other larvae, mealybugs, whiteflies and more. Adults eat honeydew, nectar and pollen, and some eat other insects.
- 5. Lady Beetles** (Coleoptera): All of the nearly 200 beneficial North American species are one-quarter-inch long. Larvae, which can resemble tiny alligators, are usually dark and flecked with red or yellow. Adults are rounded and often have orange or red bodies with black spots. Diet: Larvae and adults both dine on aphids, small caterpillars, small beetles and insect eggs. Specialist species feed on scale insects, mealybugs, mites and even powdery mildew. Adults also eat honeydew, nectar and pollen.
- 6. Predatory Bugs** (Hemiptera): This group includes big-eyed, minute pirate, assassin, damsel and even certain predatory stink bugs. All use their mouth, or “beak,” to pierce and consume prey. Adults range in size from the minute pirate bug (one-sixteenth-inch long) to the wheel bug (an assassin bug that’s 1 1/2 inches long). Diet: Nymphs or larvae and adults feed on aphids, caterpillars, scale insects, spider mites and insect eggs. Many also prey upon beetles.
- 7. Soldier Beetles** (Coleoptera): These elongated, half-inch-long beetles have soft wing covers. Larvae are brownish and hairy. Adults usually have yellow or red and black markings and resemble fireflies. Diet: Larvae feed on the eggs and larvae of beetles, grasshoppers, moths and other insects. Adults feed on aphids and other soft-bodied insects, as well as on nectar and pollen.
- 8. Spiders** (Araneae): All of the more than 3,000 North American species — including the crab spider, jumping spider, wolf spider and orb-web spider — are predatory. Diet: Depends on species, but can include aphids, beetles, cutworms, fire ants, lacebugs, spider mites, squash bugs and tobacco budworms.
- 9. Tachinid Flies** (Diptera): There are more than 1,300 North American species of parasitic flies. Most resemble houseflies but with short, bristly hairs on the abdomen. All develop as internal parasites of other insects, including many garden pests. Usually, the adult female attaches its egg to the host insect, which is then consumed by the larva. Diet: Larvae feed internally on caterpillars, beetles, bugs, earwigs and grasshoppers. Adults feed on nectar, pollen and honeydew.
- 10. Trichogramma Mini-Wasps** (Hymenoptera): These extremely small wasps lay their eggs inside the host’s eggs, where the young trichogramma develop as internal parasites. Parasitized eggs turn black. Because the trichogramma’s life cycle is very short — just seven to 10 days from egg to adult — their populations can grow rapidly. Diet: Pest eggs, especially those of cabbageworms, codling moths, corn earworms, diamondback moths, and other moths and butterflies.

Instectary Plants By Season

attract lacewings, lady beetles, hoverflies, tachinid flies and parasitic wasps, as well as honey bees and butterflies

Plant	Bloom Time
Sweet alyssum (a)	spring through frost
Hairy vetch (a)	spring to summer, depending on seeding time
Angelica (p)	late spring
Common garden sage (p)	late spring to early summer
Orange stonecrop (p)	late spring to early summer
Thyme (p)	late spring to early summer
Catmint (p)	late spring to midsummer
Buckwheat (a)	three weeks after planting; continues up to 10 weeks
Dill (a)	summer
Fennel (p)	summer
Shasta daisy (p)	summer
Mints (p)	midsummer
Coreopsis (p)	summer to fall
Cilantro (a)	summer to fall, if reseeded
Cosmos (a)	summer to fall
Oregano (p)	summer to fall
Yarrows, common and fern-leaf (p)	summer to fall
Goldenrod (p)	late summer to fall
Asters (p)	late summer to fall

Organic Pest Management Resources

Books

Brooklyn Botanic Garden Series, Janet Marinelli (editor)

[Natural Disease Control](#)

[Natural Insect Control](#)

[The Wildlife Gardener's Guide](#)

available at: <http://www.bbg.org/gardening/handbooks/>

[What's Wrong with My Vegetable Garden: 100% Organic Solutions for All your Vegetables from Artichokes to Zucchini](#), David Deardorff & Kathryn Wadsworth

[Good Bug, Bad Bug: Who's Who, What They Do, and How to Manage Them Organically](#), Jessica Walliser

[Rodale's Illustrated Encyclopedia of Organic Gardening: The complete guide to natural & chemical-free gardening](#), Pauline Pears (editor)

Web Resources

Great pest library with photos and management information

<http://www.garden.org/pestlibrary/bugs.php>

Fedco Organic Growers' Supply – for organic supplies and seeds

<http://www.fedcoseeds.com/ogs/search.php>

www.MillCityGrows.org

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