

Insect Treatments - <http://www.ghorganics.com/page14.html#Wormwood%20Spray>

For These Insects	Go To This Treatment
Aphids, root flies & cabbage butterflies	Clover Underplanting
Aphids, carrot root fly, cucumber beetles, midges, peach tree borers & root maggots	Elder Leaf Insecticide
Aphids, cabbage loopers, grasshoppers, June bugs, leafhoppers, mites, squash bugs, slugs & whiteflies	Garlic Spray
All purpose	Great Fleabane Treatment
Aphids, blister beetles, caterpillars, Colorado beetles, whiteflies, soft-bodied insects & maybe even slugs	Horseradish Pesticide
Cucumber beetles, mites & all purpose	Lime Spray
Repels asparagus beetles, tomato hornworms, leaf cutting & chewing insects	Marigold Spray
Aphids, fungus gnats, mealy bugs & as an ant repellent	Orange Peel Spray
All purpose	Pepper and Herb Dusts
All purpose	Pepper Spray
Bad nematodes!	Sugar Drench
Repels asparagus beetles & flea beetles, will kill earworms & maggots, acts as an anti-feedent for other insects	Tomato or Potato Leaf Spray
Aphids, caterpillars, crawling insects & slugs, may repel snakes	Wormwood Spray
Aphids, mealybugs & other soft-bodied insects	Yarrow Tea

Having healthy soil and a good eco-balance in your yard allows nature to take care of itself. Keeping the soil in top condition is the number one way to have healthy, strong plants! Plants have naturally inherent abilities to ward off adverse conditions when living in healthy soil. Proper pruning and sanitation is a big part of the picture. When you have insect problems remember that insects are attracted to unhealthy plant material. They are scavengers. However if you have encountered a pest or disease that has become uncontrollable try these natural methods to eliminate the problem and bring things back in balance.

Always observe some basic rules when you try any of these, even though they are natural, damage can occur. Use homemade remedies with caution and as a last resort.

Spraying basics

1. It is best to use any type of spray in the early morning or the cool of evening. Do not spray when temps are above 80 degrees Fahrenheit! Your plants may "burn" or have a reaction to what you are using in excessive heat. This is known as "phytotoxicity"
2. Always perform a test on a small portion of the plant material first. Wait 24 hours to observe any negative reaction. Proceed if there is no damage.
3. Really and truly...more is not better. If you are not getting good results don't increase the strength of these remedies without testing first.

4. Target just the area you need to treat. Be careful... try not to harm the good guys! You don't want to run off your allies.
5. When working with sprays or dusts always protect your exposed skin and face. Some of these ingredients can be very irritating to your skin, eyes and mucous membranes, especially any hot pepper sprays.

Clover underplanting:

Target insects: Aphids, root flies and cabbage butterflies.

To reduce insect damage in the brassica family underplant with white clover (*T. repens*) or subterranean clover (*Trifolium subterranean*). works via masking the distinct scent of brassicas.

Elder Leaf Insecticide:

Target insects: Aphids, carrot root fly, cucumber beetles, peach tree borers, and root maggots. It is particularly effective against midges. Elder leaves also have fungicidal properties and may be useful against mildew and blackspot diseases.

- To make: simmer 8 ounces of leaves in 16 ounces of water for 30 minutes. Stir this thoroughly, then strain. Take 16 ounces of warm water and mix with 1 tablespoon of castile soap. Add soap mixture to the elder water, spray as needed. Note: Set your sprayer to a coarse or large droplet setting as this mixture will tend to plug a fine setting.

Garlic Spray:

Target insects: Aphids, cabbage loopers, grasshoppers, June bugs, leafhoppers, mites, squash bugs, slugs and whiteflies. May also help to repel rabbits! Never use oils sprays on Blue Spruce as it will remove the blue waxy coating on the needles! Because garlic contains naturally occurring sulfur it also acts as an antibacterial agent and fungus preventative.

- To make: Combine 3 ounces of minced garlic cloves with 1 ounce of mineral oil. Let soak for 24 hours or longer. Strain.
- Next mix 1 teaspoon of fish emulsion with 16 ounces of water. Add 1 tablespoon of castile soap to this.
- Now slowly combine the fish emulsion water with the garlic oil. Kept in a sealed glass container this mixture will stay viable for several months. To use: Mix 2 tablespoons of garlic oil with 1 pint of water and spray.
- When working with oil sprays you want to monitor the climate conditions so your plants won't get phytotoxic burn. Use this simple equation: Take the current outdoor Fahrenheit temperature then add to this the percentage of humidity, if the total is more than 140 don't spray.
- Example: Temperature of 80 degrees plus humidity of 67 percent equals 147, don't spray. You also do not want to spray when temps are above 80F.

Great Fleabane: (*Inula conyza*)

the leaves and roots of this plant make a strong general insecticide. It is also a nice addition to the perennial flower bed.

- To make: Take one cup of leaves and or roots. Bring 4 cups of water to a boil and pour over the fleabane, put a lid on this and let it steep for 10 minutes. Strain the mixture, let cool. Mix in a 1/4 teaspoon of pure soap such as castile and spray.

Horseradish Pesticide

How about some alternative uses for this invasive plant?

Target insects: Aphids, blister beetles, caterpillars, Colorado beetles, whiteflies and soft-bodied insects. Maybe even slugs.

- To make: Bring 3 quarts of water to a boil, add 2 cups of cayenne peppers, a 1 inch piece of chopped horseradish root, and 2 cups of packed scented geranium leaves, any kind. Let mixture steep for 1 hour, cool, strain and spray. Note: this can be made without the scented geranium leaves if you don't have them to spare.

NOTE: Penn State University announced in 1995 that minced horseradish holds promise in decontaminating wastewater and now says it may clean contaminated soils as well!

Penn State's center for Bioremediation and Detoxification reports that minced horseradish combined with hydrogen peroxide can completely remove chlorinated phenols and other contaminants found in industrial wastes. Experiments involve applying the mixture directly to tainted soils or growing horseradish in contaminated soil and rototilling the roots just before applying hydrogen peroxide! The cleansing properties of horseradish have been known for more than a decade, however creating a purified form has been far too expensive. This method has proved to be just as effective, but at a fraction of the cost!

Lime Spray

Target insects: Cucumber beetles, mites and general purpose.

- To make: Mix 1 ounce of hydrated lime, 32 ounces of water and 1 teaspoon of castile soap. Use up to twice a week.

Marigold Spray (use pot marigold: *Calendula officinalis*)

Target insects: Repels asparagus beetles, tomato hornworms, leaf cutting and chewing insects, like leaf cutting bees on your roses and lilacs.

- To make: Mash 1 cup of marigold leaves and flowers. Mix with 1 pint of water. Let soak for 24 hours. Strain through cheesecloth. Dilute further with 1 1/2 quarts of water then add 1/4 teaspoon of castile soap. Spray target areas.

Orange Peel Spray

Oranges and other citrus fruit contain natural occurring pesticide compounds called limonene and linalool. These compounds can be used as a treatment for soft bodied pests such as aphids, fungus gnats, mealy bugs and as an ant repellent.

- To Make: Pour 2 cups of boiling water over peelings of one orange. Let this steep for about 24 hours. Strain the mixture into a glass jar and toss the peels into the compost. Use this liquid as a spray mixing in a few drops of castile soap on target insects or on ants and their nests. Smells nice too!

Pepper and Herb Dusts

Target Insects: General

- Peppers and certain herbs contain the compound "capasaicin" which will irritate and repel many insects. Cayenne, chili, dill, paprika, red and black peppers can be used as dusts. Purchase the cheapest you can find, or grow hot peppers and dill in your garden. Dry them and pulverize them in a food processor. Sprinkle on moist plant foliage and the surrounding soil.

Pepper Spray

Target insects: All-purpose

- Just like the pepper dusts a spray made from hot peppers will release the capasaicin compound to repel insects.
- To make: Mix 1/2 cup of finely chopped or ground hot peppers with 1 pint of water. Let this sit for 24 hours. Use as is for a soil drench application or strain the mixture through cheesecloth

until you have a clear liquid. Add a few drops of castile soap and use as a foliar application. Keep away from your eyes and skin when using.

Tomato or Potato Leaf Spray

Target insects: Repels asparagus beetles and flea beetles. This will kill earworms and maggots and acts as an anti-feedent for other insects.

- Plants belonging to the nightshade family (tomatoes, potatoes etc.) have large amounts of compounds called "alkaloids" in their leaves. These compounds are water soluble and can be extracted by soaking chopped leaves then using as a spray. The toxicity of the alkaloids may account for only part of their effectiveness. The sprays may also attract beneficial insects that follow the chemicals in these plants as a cue in searching for their prey.
- To make: Soak 2 cups of chopped tomato leaves in 1 pint of water overnight. Strain this mixture then add another pint of water and 1/4 teaspoon of castile soap a sticker. Spray foliage and soil as needed.

Sugar Drench

Target insects: Bad nematodes! Sugar also adds trace minerals to the soil.

- Mix 1/2 a cup of sugar with 1 gallon of water. Stir to dissolve sugar. Pour on the soil around plant roots where you have had nematode problems or use as a treatment prior to planting.

Wormwood Spray

Target insects: Aphids, caterpillars, crawling insects and slugs. May repel snakes.

Caution is advised when using wormwood sprays around plants as it can inhibit growth. Best results are obtained when spraying directly onto the target insect when possible.

To Make:

- 8 ounces wormwood leaves
- 4 pints of water
- 1 teaspoon castile soap

Directions

- Simmer wormwood leaves in the water for 30 minutes. Stir, strain, and leave to cool.
- Add the castile soap to wormwood mixture and use to spray.

Yarrow Tea

Target insects: Aphids and soft-bodied insects. Also an excellent plant tonic!

Yarrow has insecticidal properties and is also an excellent natural fertilizer. Try mixing this with strong coffee to make a more powerful brew. Yes, coffee, caffeine makes the insects hyper and confused.

See: Companion planting: Yarrow. Yarrow is also one of the ingredients used in Golden Harvest fertilizer.

- To make: Soak 1 cup of yarrow plant pieces in 16 ounces of water for 24 hours or more. Brew it in the sun like tea. Strain and mix with 1 gallon of water. Mix in strongly brewed coffee and 1/4 teaspoon castile soap. Spray on aphids and other soft bodied pests every 1-2 weeks. Or use as a preventative.