Home-Made Remedies and Treatments

A lot of folks are big believers in trying to be as "organic" as possible when controlling ailments in their plant collections, or just trying to spruce them up. We strongly recommend AGAINST preventive use of insecticides and fungicides, as there is a fairly strong tendency to breed resistant strains. Instead, we suggest that you take the time to carefully inspect your collection, and treat problems as soon as they arise.

We are strong believers in the use of pure Neem Oil as a general purpose spray, as it is not known to lead to the development of resistant strains of insects, and acts as an insect repellent, as well as a fungicide, nematacide, and even molluscicide! Click here to learn more.

Below are a number of concoctions that come highly recommended, but please remember that you’re using them at your own risk, and that of your plants, and the I can take no responsibility for the outcome.

INSECTICIDES:

Your choice of home-made insecticide should be based upon what you’re trying to eliminate.

Soft-bodied bugs, such as aphids & mealie bugs:

- Straight 70% or 90% isopropyl rubbing alcohol - touch insects with a soaked cotton swab, or for larger infestations, spray the entire affected plant, being sure to thoroughly wet all surfaces. Repeat every 3 days for about 2 weeks. (I have never experienced any problems with buds, flowers, or any part of the plant when using an alcohol spray.)
- Garlic/pepper spray - liquefy 2 bulbs of garlic and 2 hot peppers in a blender 1/2 to 2/3 full of water. Strain to remove the solids and add enough water to the garlic/pepper juice to make 1 gallon of concentrate. Use 1/4 cup of concentrate per gallon of spray. To make garlic tea, simply omit the pepper and add another bulb of garlic. Add two tablespoons of blackstrap molasses for more control.
- Mix 1 teaspoon (5 ml) each cooking oil and liquid dishwashing soap or detergent in a quart (liter) of water. Concentrations are not critical - some recommend a tablespoon (15 ml) of oil be used. Shake well, and spray the plant, being sure to thoroughly wet all surfaces. Repeat every 3 days for about 2 weeks. (The soap breaks down the waterproof, waxy coating on the insects' shells, and the oil will smother them.)

Insects that have hard shells, such as scale, and thrips:

- Mix 1 teaspoon (5 ml) each cooking oil and liquid dishwashing soap or detergent in a quart (liter) of water. Concentrations are not critical - some recommend a tablespoon (15 ml) of oil be used. Shake well, and spray the plant, being sure to thoroughly wet all surfaces. Repeat every 3 days for about 2 weeks. (The soap breaks down the waterproof, waxy coating on the insects' shells, and the oil will smother them.)

General-purpose insect spray:

- One cup (250 ml) each Formula 409 or Fantastik household cleaner/degreaser and isopropyl rubbing alcohol and 2 cups water, making a quart or liter of spray. Use the same as the formulas above. (I've not tried this one.)
- Orange Plus, a household cleaner made from byproducts of orange juice production, can be sprayed directly on plants to eliminate insects. (I suspect other concoctions made
using citrus oils may also be effective, but have no knowledge or experience concerning them.

**Ant eliminator:**

- Melt about 1/4 pound of candle wax, then slowly stir in about 1/4 cup sugar and 4 ounces boric acid powder (available at your local drug store). When thoroughly mixed, pour into a pan, creating a 1/4” to 1/2” thick slab. Cut or break into chunks, and distribute around the greenhouse. If you decide to try this indoors, be sure to keep them away from children and animals.

- A surprising - and no doubt smelly - ant repellant is fermented cow manure tea. Put about a gallon volume of fresh manure in a 5-gallon bucket and top it up with water. Cover and let stand for a couple of weeks or more until it's fully "cured." Spray around the greenhouse and under the benches. (CJ Maciejeski claims this keeps fire ants away down in Houston, and if it works for them...)

- Here's another volunteered from the world of cyberspace: raw grits! Sprinkle them in an area where ants are attracted, and they will gobble them up. Later they will swell in their bellies. (Need I say more?)

**Insect Repellant:**

- Place small, open containers of eucalyptus oil in the growing area. The vapors will discourage critters from approaching. (Yeah, it's going to smell like a Hall's Cough Drop factory, but it's good for opening your sinuses, too - *a la* Vick's Vapo-Rub.) Eucalyptus oil has also been shown to be an effective fungicide, but I know that a dispersion in water and alcohol, when sprayed directly on the plant, will damage flower buds, so I can't recommend that use.

**FUNGICIDE:**

Those of you who frequent the rec.gardens.orchids newsgroup know of my "crusade" for the use of cinnamon as a fungicide. I've done a lot of digging, and it turns out that the chemicals in the bark have all sorts of medicinal applications (I've even cured athlete's foot with my alcohol extract!)

Choose the consistency that is best for your situation:

**Powder:**

- Apply normal, household cinnamon powder directly to the affected part of the plant by dusting heavily. This has proven to be a good way to control slime mold and mushrooms in the mulch in my outdoor flower beds, too!

**Poultice:**

- Mix cinnamon powder with sufficient casein-based glue (Elmer's) to make a thick, brown paste. Apply to the wound and let dry. The Elmer's Glue is water soluble, but resists washing-off quite well. This is the preference for mounted plants that get watered or misted frequently. An alternative to the Elmer's Glue, but just as waterproof and long-lasting is made by
mixing cinnamon powder and cooking oil to form a thick paste. (Thanks to John Kawamoto!)

**Spray:**

You can prepare a cinnamon spray using either alcohol or water as your solvent. The alcohol infusion is faster to prepare, and offers some insecticidal properties as well. This is my preferred method, and has been effective at eliminating all sorts of fungus problems, including *damping-off* of deflasked seedlings.

- **Put 2 tablespoons (30 ml) of cinnamon powder in a pint (500 ml) of isopropyl rubbing alcohol.** Shake well and let stand overnight. Filter the solution to remove the sediment (coffee filters work well), and use the brown liquid as a spray. (While it's not a big problem for most orchid growers, I've heard that this is good for powdery mildew, as well.)

  or

- **Put the cinnamon powder in hot water.** Shake well and let stand for several days. Filter and use as above. (Some feel that the alcohol can be too desiccating when used on seedlings.)

**MILDEWCIDE:**

- **Mix approximately 1/3 cup milk into a quart of water, and spray.** I have not tested this one, but even if it doesn't work, you end up with shiny leaves!
- **Mix 3 tablespoons cooking oil and 1 tablespoon baking soda in a gallon of water; spray at three-day intervals for powdery mildew.** (Adapted from the Sunspray label)

**SLUG & SNAIL TREATMENTS:**

**Killer:**

- **Trap:** Put a plate or plant saucer full of fresh beer on the floor; snails and slugs will be attracted to it, fall in and drown. (Stale beer, has apparently been shown in university studies, to be a repellant, not attractant!
- **Spray:** Mix one cup household (non-sudsy) ammonia with water, and spray directly on the critters.

**Barrier:**

If you suffer from slugs climbing up onto the benches and attacking your plants, there are several ways of blocking their path, ranging from mechanical to chemical:

- **Mechanical:** Spread a layer of Diatomaceous Earth on the benches, around your plants. The material - the skeletons of microscopic sea creatures (diatoms) - is almost pure silicon dioxide, and has very sharp points and edges that discourage the passage of the creatures. The material sold as a microfiltration medium for aquariums probably won't do much. If you can find horticultural grade material, it is coarser and has much sharper edges that make a great barrier.
Mechanical / Electrochemical: Tightly wrap the legs of your bench with a 2" (5cm) wide strip of copper foil, being sure to apply it tightly enough to avoid gaps. The copper is supposed to create some sort of uncomfortable electrochemical effect when in contact with the "slime" secreted by the critters. I suppose it's like biting on a piece of foil if you have metal fillings in your teeth!

Chemical: Apply a thick layer of the product Tree Tanglefoot around the legs of the bench. Available at most good garden centers, it is sold as a bird repellent for ornamental trees, it contains a castor-bean extract that repels slugs and snails.

**Bait:**

If you just want to lure the critters away from your plants so you can dispose of them, try putting slices of raw potato near the potted plants on the bench. The slugs and snails can be found on the underside in the morning. (Thanks to Janet Price.)

**HERBICIDE:**

Spray full-strength household vinegar on weeds, repeat daily as needed. This is NOT to be used for weeds growing in the pots of your other plants, but is good in driveways, walkways, the greenhouse floor, patios, etc.

**GENERAL-PURPOSE DISINFECTANT:**

Add one ounce of household chlorine bleach to a gallon of water and spray on utensils, benches, even your plants to control a wide variety of pathogens. It even helps control algae.

**LEAF SHINE:**

If you live in an area where the water has a fair amount of dissolved minerals, or if you mist with a fertilizer solution, the leaves of your plants can become dull in appearance. Folks may warn you that these treatments can clog the pores (stomata) on the leaves, but I've never seen a problem.

Pineapple juice, or any citrus juice (lemon, lime, orange), when rubbed onto the leaves with a soft cloth or paper towel will also remove such deposits so your leaves will be nice and shiny. I suppose the acidity reacts with the mostly alkaline deposits. (Thanks to CJ Maciejeski)

Reka reports that stale beer may also be used for shining up leaves, although we're both at a loss for how to get stale beer, as it never gets that way around our houses!

Mix about a 50% dispersion of whole milk in a quart of water. Using a soft cloth or paper towel, wipe the leaf surfaces with the dispersion.

Similar to the milk above, dilute mayonnaise with water to form a thin paste. Again, apply using a soft cloth or paper towel, being sure that you wipe off as much of the paste as you can.

"**DO EVERYTHING**" SPRAY:

Fermented Compost Tea - take about one- to two cups of some really well-composted organic matter (the stuff at the bottom of the pile), place it in a cloth bag (an old sock will work), and immerse it in a gallon of water at room temperature. Let it stand overnight or longer until you
have a dark liquid. Remove the "tea bag" and let the container sit outdoors for about two weeks.

Remove the scum that forms at the surface, filter the liquid and spray.

Supposedly, this brew will be loaded with bacteria and other microorganisms that attack pretty much all of the fungi and diseases that harm plants. (It has also been suggested that the unfermented brew from above, once diluted to about 20% in water, is as close to the food source an orchid sees in nature as you can get!)

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