



## Pesticides

### Information Sheet

#### Scientific Background

According to a recent survey, 4 billion pesticide applications occur each year in the US. Over 85% of households store between 3-5lbs within their home. There are over 20,000 products on the market. 93% of US households using at least one pesticide product indoor during the past year with 47% of those homes with children under five having at least one pesticide product within reach of children. In 2004, some 71,000 children were involved in common household pesticide poisonings or exposures.



Both the active and inert ingredients in pesticides can be organic compounds; therefore, both can add to airborne organics inside homes. To date, however, there is insufficient understanding at present about what pesticide concentrations are necessary to produce negative health effects. Exposure to high levels, commonly associated with misapplication, has produced various symptoms, including headaches, dizziness, muscle twitching, weakness, and nausea. Suspected long-term damage includes liver, central nervous system and cancer.

Reference: <http://www.epa.gov/pesticides>

#### Discovery

One study suggests 80-90% of most people's exposure to pesticides occurs indoors and that measurable levels of up to a dozen pesticides have been found in the air inside homes. With such a high concentration, it is doubtful the only source is household use, but possibly contaminated soil, stored containers, or water sources. Pesticides bind to synthetic material, especially carpet even after repeated cleaning.



Dust or bulk sampling tests will analyze for any pesticide you request. Most frequent requests are for: Organophosphate, Organochlorine, and Carbamate.

#### Fixing the Problem

Mitigation is extremely difficult, especially for sensitive people. And removal of older chlorinated pesticides is usually impossible.



- Read the label.
- Ventilate the area.
- Use non-chemical methods.
- Select disease-resistant plants.
- Frequently wash indoor plants and pets.
- Keep wood material from direct contact with the soil or stored firewood.
- Appropriately fertilize, water, and aerate lawn to reduce the need for herbicides.
- Moth pesticides can cause cancer in animals – use non-chemical methods.

Reference: <http://www.epa.gov/pesticides/ipm/index.htm>



## Natural Pest Control

Source: [http://www.aerias.org/c\\_Doc\\_133.htm](http://www.aerias.org/c_Doc_133.htm)

- In San Francisco, cockroach-eating **geckos** and gopher-eating snakes are being used to decrease use of pesticides.
- Use **biological** pesticides, such as *Bacillus thuringiensis*, for the control of gypsy moths. Products containing *Bacillus thuringiensis* are also good for getting rid of caterpillars.
- You can also **get rid of caterpillars** by introducing frogs, toads and lizards into your yard.
- Select **disease-resistant plants**
- **Wash indoor [plants](#) and [pets](#) frequently**
- **Reduce or prevent termite damage** by making sure that wooden building materials do not come into direct contact with the soil and by storing firewood away from the home.
- **Appropriately fertilize, water, and aerate lawns**, thus reducing the need for chemical pesticide lawn treatments
- **To get rid of ants**, first keep counters, floors and pet feeding areas clean. Remove and clean up whatever the ants are after. Then follow the ant trail and find out how they are getting in. Wipe up ants and ant trails w/soapy water. Caulk openings where they enter the house. Petroleum jelly in the cracks or duct tape can be a quick, temporary fix. Apply diatomaceous earth or silica gel into cracks. Apply a fine dusting to entry points that cannot be caulked. Then spread red chili powder or boric acid into cracks at point of entry. Since boric acid is a poison, be sure it is inaccessible to [pets](#) and children.
- **To repel [roaches](#)**, first close openings into house with caulking, screening, weather-stripping. Clean dishes nightly and seal all food containers. Do not leave pet food out overnight. Place chopped bay leaves and cucumber skins in the pantry, cupboards and on shelves to repel cockroaches.
- **To repel nematodes** (a type of parasitic worm) in your garden, plant marigolds
- **To repel slugs and snails** in your garden, plant onion and marigold plants.
- **Trap wasps** by suspending a piece of raw meat ½ inch over soapy water in a 5-gallon bucket.
- **To repel fleas and ticks** from your pet, scatter pine needles, fennel, rye or rosemary on pet's bed.
- **To repel fleas on your [pets](#)**, feed them pet brewer's yeast, vitamin B or garlic tablets.
- **To prevent pantry moths**, put herbs that have insect-repellant qualities, (like bay leaves, coriander, dill, cinnamon, lemon peel, black pepper) on pantry shelves or even in stored grain. Vacuum and wash down pantry shelves to kill eggs. Store grains and flours in pest-tight containers (e.g. a glass jar with a rubber seal and a metal spring clamp). Plastic, zip-lock type bags are not adequate. Freezing newly purchased bulk grains for a week will guarantee no new moths.
- **To keep mosquitoes away**, the most important thing to do is remove all standing water near your house (tires, wading pools, bird baths, vases, barrels). If you have an ornamental pond, stock it with mosquitofish and use *Bacillus thuringiensis* in the pond to kill the larvae in the water. Use citronella oil insect repellents and burn citronella candles or oil at outside gatherings. Do not wear any strong smelling products like lotions, deodorants, hairspray, and sun tan oils. They attract mosquitoes. Also, install yellow porch lights since they do not attract flying insects. Also, encourage mosquito predators such as birds, frogs, turtles, ants, spiders, dragonflies, bats, and praying mantids.
- **To keep away flies and other insects**, first eliminate the breeding areas rather than trying to control adult flies after they emerge. Keep kitchen garbage containers tightly closed. Clean

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regularly. Sprinkle dry soap or kitty litter into bottom of container and keep a well-watered pot of basil around. Rinse out your recyclables, screen windows and doors, and check your yard for:

- [Garbage](#) cans with loose lids
- **Fruit rotting** under trees
- **Pet waste** not collected daily
- **Compost piles** that are not turned at least once a week and where decomposing food is not covered with dirt or black plastic
- **To get rid of insects on [plants](#)**, put soapy water on the leaves and then rinse. You can also take infested indoor plants outside for a couple of days (if not too cold) to let your yard's predatory bugs take care of your pest problem.
- **To prevent [fungus on roses](#)**, plant them in full sun, at least 3 ft. apart for good air circulation. Avoid over watering and remove and carefully dispose of dead or diseased leaves and flowers. Do not add them to the compost pile.
- **To control mildew on roses**, spray both sides of rose leaves with: 2 tablespoons of mild liquid soap, 2/3 tsp baking soda in 1 gal water. Spray in the morning, every week.
- **For a disinfectant**, wash items with water and soap, borax or sodium carbonate monohydrate (washing soda). Wash large surfaces with a solution of ¼ cup borax dissolved in ½ gallon of hot water