

## **How to Use this Pest Management Guide for Home Grounds and Animals**

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This 2012 Virginia Pest Management Guide provides the latest recommendations for controlling diseases, insects, and weeds for home grounds and animals. New for 2012 is information about prevention and nonchemical control as alternatives to chemical control or as part of an integrated pest management approach. The chemical controls in this guide are based on the latest pesticide label information at the time of writing. Because pesticide labels change, read the label directions carefully before buying and using any pesticide. Regardless of the information provided here, always follow the latest product label instructions when using any pesticide.

### **Help is as Close as the Local Extension Office**

<http://www.ext.vt.edu/offices> – or in the blue (government) pages of your telephone directory.

Virginia Tech and Virginia State University are Virginia's land-grant universities. The land-grant universities were created to benefit every state through research and educational resources. To provide this opportunity to everyone in the United States, the land-grant university system was extended into each locality through outreach programs, established as the Cooperative Extension Service in 1914.

The unique Cooperative Extension partnership that exists between the USDA, the commonwealth, and your home town means that individuals, families, businesses, institutions, and the community can find answers to many agricultural questions through a local Extension agent.

### **How this Guide is Designed**

This guide includes an overview of best management practices associated with home grounds and animals. Information about general biological controls of insects and diseases includes best practices using pest resistant plants or companion plants that reduce pest attacks, as well as advice about incorporating friendly insects, animals or organisms into a pest management plan that helps fight off damaging pest organisms. There are mechanical ways to control pests that include using weed blocking textiles and mulches to reduce weeds in vegetable or ornamental plantings. Information on labeled chemical controls for specific pests is also included if no alternative solutions provide enough weed and pest control. See page 1-9 Integrated Pest Management for more information. Pay special attention to recommendations related to the type of application equipment and personal protective equipment for the applicator. There are also warnings associated with specific chemicals, especially as they relate to fish, other wildlife, pets and pollinators.

This guide includes nonchemical and chemical control recommendations for insect pests in outdoor recreation areas, wood destroying insects and household insect pests. The animal chapters of this guide cover external parasites of dogs and cats, outline Virginia regulations in dealing with nuisance and wild animals, and discuss management options for these nuisance animals.

Each chapter also provides recommendations on when to hire a professional pest control firm. The end of this chapter has some advice on selecting a pest control company. Many pest control jobs require equipment, permits, or chemicals that are not available to homeowners.

### **Getting to the Right Place in the Guide**

First, identify the problem. Most of the concerns addressed by this guide involve plants. What type of plant has the problem? Each plant's problem should be approached differently—such as, never apply chemical recommendations for ornamentals to edible crops. See the vegetable or fruit sections of this guide for recommendations regarding pest problems on edible crops.

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It is hard to determine the significance of a pest until the pest is clearly identified. It is also difficult to control the pest properly without identifying it. It is easy to recognize a fly or dandelion. With a self-help book or other reference it is also simple to identify many other insects and weeds. However, other pests can be difficult to identify. This is especially true for the organisms and conditions that cause plant diseases. Some plant diseases aren't even caused by living organisms. For example, some plant injuries or damages are caused by nonliving, or abiotic conditions, such as air pollution, chemicals, heat, drought, excess water, cold, or poor site selection.

Extension agents can help identify the cause of home garden problems and prescribe a control. See page 1-5 Diagnosing Plant Problems in this chapter. If the problem is especially hard to identify, the Extension agent has the resources of Virginia Tech and Virginia State University to provide assistance. A specimen can be sent to Blacksburg for identification. After identifying a pest problem, the next step is to control it.

### **How Important Is Your Pest Problem?**

A pest is anything that causes a nuisance, blight or annoyance. Annoyances associated with pests include the discomfort caused by a pet's fleas, the destruction of food supply by pantry pests, the overgrowth of weeds in the lawn and garden, the loss of a favorite shade tree to blight, the health hazard associated with ticks, or the structural damage to a home caused by wood-infesting insects.

Is the pest problem worth controlling? Annoyances vary in their importance. Damage to a home is critical because it can be quite expensive and even dangerous. This kind of pest problem demands a quick, effective control. Other pest-related annoyances are not as important because they might not be as costly or dangerous. Low-priority problems don't always demand a quick and effective control. Some can even be ignored or eliminated by replacing the host plant. First evaluate how important the pest problem is, and is it worth the effort and expense to control?

### **How Do You Choose a Pest Control Option?**

To complete this task, learn about choosing the best pest control option. Around the home, pests can be controlled without applying some of the common principles of pest control. Choosing a pest control option can be a confusing and critical decision in the health of humans, plants and animals. When considering a pest control option, follow these important rules.

- Control a pest only when it is causing, or is expected to cause, more damage than is reasonable to accept.
- Use a control strategy that reduces the pest numbers to an acceptable level.
- Cause as little harm as possible to everything except the pest.

### **Avoiding Harmful Effects**

Pest control involves more than simply identifying a pest and using a control measure. The treatment site, whether it is outdoors or inside a structure, usually contains other living organisms, such as people, animals, and plants, and non-living surroundings, such as air, water, structures, objects and surfaces. All of these could be affected by pest control measures. It is important to consider the possible effects on the entire environment where the pest exists. Otherwise, pest control efforts could cause harm or create new pest problems. Use good judgment and, when pesticides are part of the strategy, rely on the pesticide labeling.

Pest control strategies are disruptive. The actions of every type of organism or component sharing the site usually affect the actions and well being of many others. When the balance is disrupted, certain organisms may be destroyed or reduced in number, and others—sometimes the pests—may dominate.

### **Who Should Apply the Control?**

Decide who is going to control the pest problem. Is the job simple enough to tackle at home, or is it better for a professional to handle? The next section is about hiring contractors for pest control management. Even avid do-it-yourselfers should consider hiring a professional if the job involves controlling wood infesting pests in a home or spraying trees. Many pest control options require special equipment and knowledge. Some pest control projects are too complicated and can be unsuccessful for the home gardener, resulting in a project that is far more expensive than originally estimated. In these situations, hiring a professional is best.

## **How to Choose a Pest Control Company**

Termites chomp away at your house. Roaches infest the kitchen. Mouse droppings dot a dresser drawer. Gypsy moths eat trees in the front yard. The lawn needs a major overhaul. There is a hornets' nest in the walls. These are serious pest management problems that demand a professional applicator. But how can one be sure that the pest control company will do a good job?

Here are some questions to ask:

### ***Does the company have a good track record?***

Research this answer carefully. Ask neighbors and friends if they were satisfied with the service they received from a given company. Call the Better Business Bureau, Sheriff's Office, the Virginia Department of Agriculture and Consumer Services (VDACS) - Office of Consumer Affairs or the VDACS Office of Pesticide Services, listed in the reference tables later in the chapter, to check if they have received any complaints about the company.

### ***Does the company have insurance? What kind of insurance? Can the salesperson show some documentation to prove the company is insured?***

Contractor's general liability insurance, including insurance for sudden and accidental pollution, gives the homeowner some protection should an accident occur while pesticides are applied. Contractor workers' compensation insurance can also help protect the homeowner, should an employee of the contractor be injured while working in your home.

In Virginia, pest control companies are required to carry liability insurance. Never contract with a company that is not insured.

### ***Is the company licensed?***

In Virginia, all pest control companies are required to carry a pesticide business license. All employees are required to be trained and certified as either registered technicians or commercial applicators. In addition, these applicators are required to be recertified every two years. The law requires that a certified commercial applicator be available to supervise the application of pesticides in a home. This direct supervision requirement means that the supervisor must be in direct contact with the applicator, but the supervisor does not have to be on site.

Ask the company manager and the applicator to show you both their pesticide business license and their current pesticide applicator's certificate before signing the contract.

### ***Is the company affiliated with a professional association?***

As a member of a professional association, these companies can keep up-to-date on the latest information on pest control methods, safety, training, research and regulation. Most associations also have a code of ethics that members agree to abide by. The fact that a company chooses to affiliate itself with a professional association is evidence that they are concerned about quality and professionalism in their work.

For pest control operators (PCOs) or exterminators, professional associations include the National Pest Management Association, the Virginia Pest Management Association, and several regional groups. Lawn care companies also belong to many local and regional associations. The national and state associations affiliated with these groups are the Professional Lawn Care Network (PLANET) and the Virginia Turfgrass Council (VTC). The Virginia Nursery and Landscape Association is also affiliated with many landscape firms who apply pesticides for hire in Virginia. The addresses of these groups are listed in the reference tables later in the chapter.

### ***Does the company stand behind its work? What assurances does the company make?***

Think twice about dealing with a company unwilling to stand behind its work. The homeowner also has a role in this. For example, in the case of termite control treatments, a guarantee could be invalidated if the homeowner makes structural changes to the treated building without notifying the pest control company. In addition, many companies require an annual inspection or maintenance contract to keep the guarantee valid. Read the contract's fine print and ask questions.

### ***Is the company willing and able to discuss the treatment plan?***

Selecting a pest control service is just as important as selecting other professional services. Look for the same high degree of competence expected from a doctor or lawyer. The company should inspect the premises and outline a recommended control program, including what pests are to be controlled, the extent of the infestation, what pesticide formulations will be used in your home and why, what methods will be used in the application, what alternatives could be used instead, what special instructions

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the homeowner should follow to reduce exposure to the treatment, such as vacating the house, emptying cupboards, removing pets, when it is safe to reenter the home, and what the homeowner can do to minimize pest problems in the future.

Contracts should be developed jointly with the customer. Any safety concerns should be noted and reflected in the choice of pesticides to be used. These concerns should include the health of occupants, including allergies, age of occupants, such as infants and the elderly; or pets. Get bids from two or three different companies, and judge by value, not price. What appears to be a bargain may merit a second look. Don't always settle on the lowest bid. Look for quality.

After hiring a company, continue to monitor the work closely and evaluate results. If there is any reason to believe that something has gone wrong with the pesticide application, contact the company and discuss it with them. If the solution is unsatisfactory and continued negotiation does not work, contact the VDACS Office of Pesticide Services for help. They are listed in the reference tables later in the chapter. Document all details, ask detailed questions, and remain vigilant. Little misunderstandings and poor communication about the outcome of a job can end up in court or cause great distress. Understand all the details before signing the contract, especially those concerning the risks of using pesticides.

Human risk is related to the toxicity of the pesticide versus the potential for exposure. Just because a pesticide is being sprayed doesn't mean there is a great risk for harm if exposure is minimized. Know what is being done to minimize this risk before committing to the treatment. Ask your contractor to share the product labeling information and Material Safety Data Sheets (MSDSs) on the chemicals being used. If the contractor refuses, look elsewhere for service.