



## Deer: A Garden Pest

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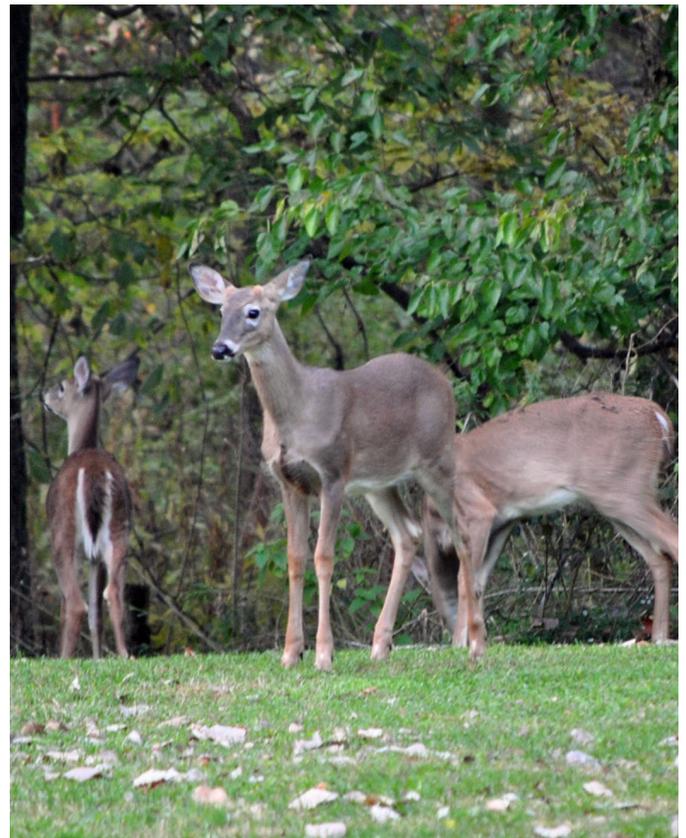
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### Introduction

Virginia gardeners have many challenges, but one of the toughest is dealing with those ever present, pesky deer. Virginia Cooperative Extension and Virginia Tech use an integrated pest management (IPM) approach to manage pests like deer. This publication outlines the IPM steps you can take to enjoy your gardening activity and be successful in spite of the presence of deer. We'll provide you a decision making process that begins with the most effective and best economic solutions that have the least possibility of causing other problems.

### Deer Deterrent Options

- Accept Damage
- Choose Deer Resistant Plants
- Erect Fences
- Pick a Safe Location
- Install Scare Devices
- Apply Repellents



**Figure 1.** The pest: white-tailed deer. Photo by Chris Sibert

## Effects of the Various Options

We use the term “deer deterrents” because few options guarantee complete success against deer; they eat just about anything, leap tall fences and even fight off dogs. Let’s get started in laying out the process steps you’ll take to assess the problems deer cause and evaluate potential deterrent methods (Parkhurst, 2013).

### Accept Damage

In assessing the impact caused by deer, ask yourself what level of damage is acceptable. The least impactful response is to simply accept deer damage. For example, because deer can forage only within about 6 feet from the ground, browsing at the base of a mature tree is not very harmful to the tree. Deer are creatures of habit so another low impact response is to use some of the deterrents mentioned here to disrupt deer feeding patterns at the first signs of damage.

### Choose Deer Resistant Plants

If the level of damage is not acceptable, then another low impact response is to use plants that are less attractive to deer. Although a variety of publications offer lists of plants that are supposedly deer resistant, we suggest Virginia Cooperative Extension’s *Pest Management Guide: Home Grounds and Animals*, available at <http://pubs.ext.vt.edu/456/456-018/456-018.html>.

### Erect Fences

Next, consider fences such as tall mesh, electric, or combinations, as well as the use of dogs behind a fence. Note that the use of electric fencing may be prohibited by local ordinance (especially in incorporated cities and towns), so check local restrictions before starting down that path. Because deer can jump fences up to 8 feet high, use of dual fences, reflective material, and banners may enhance the effectiveness of lower fences (Curtin & Sullivan, 2001; Salmon et al., 2004).



Figure 2. An effective deer fence must be tall enough that deer cannot jump over it. Photo by Ellen MacDonald via Flickr

Deer Resistant Plants <sup>1,2,3</sup>	
American Holly	Oregon Grape Holly
Barberry	Peony
Boxwood	Poppy
Butterfly Bush	Rhubarb
Daffodil	River Birch
Dusty Miller	Rose of Sharon
False Cypress	Spurges
Ferns	Various Herbs
Hellebore	including:
Hyacinth	• Lavender
Iris	• Mint
Lamb’s Ear	• Oregano
Marigold	• Sage
Nasturtium	• Thyme

Adapted from: 1. Rutgers Cooperative Extension, 2013. 2. West Virginia University Extension Service, 2013. 3. Kays et al., 2003



Figure 3. Vegetables generally require a fence. Photo by Dave Brenner via Flickr

### Pick a Safe Location

Regarding the location of where you garden, consider planting in pots, perhaps on a protected deck. Plants next to your house are less likely to be bothered by deer (Kays et al., 2003).

### Install Scare Devices

Scare devices are another type of deterrent. Examples of scare devices include lights, whistles, loud noisemakers and scarecrows. Because of the nature of these devices, consider your neighbors, local ordinances and HOA rules before installation.



**Figure 4.** Deer may initially be frightened by scare devices, but they adjust rapidly to them (Salmon et al., 2004). Photo by Emery Way via Wikimedia Commons

### Apply Repellents

Repellents consist of both taste and odor types that are generally applied to small areas. Keep in mind that deer can become used to repellents within two to three applications, so rotating repellents prolongs their usefulness. Table 1, adapted from the Cornell publication, “White-Tailed Deer” (Curtin & Sullivan, 2001) lists some of the more commonly available chemical repellents. One disadvantage of repellents is that most must be reapplied after a rain; one missed application can wipe out a season’s work. Another disadvantage is that some repellents, especially the blood formulations, have such a strong odor that your garden can become a much less pleasant place to visit for yourself as well as deer.

Deer will ignore deterrents when what you plant is a highly palatable preferred food or when other naturally occurring food sources become scarce. So keep monitoring and, if necessary, change methods as deer change their habits.

**Table 1. Common Chemical Deer Repellents<sup>1</sup>**

Repellent	Formulation	Plants for Which Registered	How to Apply	Length of Effectiveness
Deer Away/Big Game Repellent	Primarily odor-based	Fruit trees before flowering; ornamental & Christmas trees	Spray on all susceptible plant parts	Minimum of 5 weeks with heavy feeding pressure
Deer-Off Repellent Spray	Combination odor & taste based product; available as spray	Flowers, grass, bulbs, ornamental shrubs, edible crops, plants, seedlings, trees	Apply to all leaves, stems & branches at onset of deer damage	About 5 weeks with heavy feeding pressure
Hinder	Odor-based	Home gardens, ornamentals, annual & perennial flowers, fruit trees until one week before harvest	Spray on all susceptible plant parts	About four weeks; varies owing to weather & application technique
Miller’s Hot Sauce Animal Repellent	Taste-based	Ornamentals, fruit & nut trees, bushes, vines and hay bales stored in the field; can also protect veggie crops if sprayed before edible parts develop	Backpack or hand-pump spray on all susceptible plant parts	-
Nott’s Chew-Not	Fungicide that acts as taste-based repellent; liquid formulation	Dormant trees and shrubs	Spray or paint on individual trees	-
Tree Guard	Taste-based; ready-to-use spray	Shrubs, ornamental plants, conifers, and nonbearing deciduous trees; not intended for use on food or feed crops	Spray on all susceptible plant parts	About two weeks with heavy feeding pressure

1. For more information see the full table, available in Cornell Cooperative Extension’s factsheet, “White-Tailed Deer.” Available at [http://wildlifecontrol.info/pubs/Documents/Deer/Deer\\_factsheet.pdf](http://wildlifecontrol.info/pubs/Documents/Deer/Deer_factsheet.pdf)

### For more information contact:

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### References:

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- Parkhurst, J. 2013. "Vertebrates as Pests." In J. Latimer & D. Close (Eds.), *Pest Management Guide: Home Grounds and Animals*. Virginia Cooperative Extension Publication ENTO-17 P (456-018), Section 8-4. <<http://pubs.ext.vt.edu/456/456-018/456-018.html>>
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- West Virginia University Extension Service. 2013. "Resistance of Ornamentals to Deer Damage." <<http://www.wvu.edu/%7Eagexten/hortcult/treeshrub/resistan.htm>>

### Photographs:

- Figure 1** (three white-tailed deer) by Chris Sibert via Stock Exchange (<http://www.sxc.hu/photo/1404953>)
- Figure 2** (deer fence) by Ellen MacDonald via Flickr (<http://www.flickr.com/photos/ellenmac/4853805654>)
- Figure 3** (vegetables) by Dave Brenner via Flickr (<http://www.flickr.com/photos/snre/6309752576/>)
- Figure 4** (white-tailed deer) by Emery Way via Wikimedia Commons ([http://commons.wikimedia.org/wiki/File:White-tailed\\_deer\\_52.jpg](http://commons.wikimedia.org/wiki/File:White-tailed_deer_52.jpg))

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