

# Managing Deer in the Landscape and Garden

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North Carolina has seen a dramatic increase in its white-tailed deer (*Odocoileus virginianus*) population in recent decades. According to current wildlife population estimates North Carolina is home to more than a million deer and they can be found in all 100 counties. White-tailed deer have made an amazing comeback when one considers the fact that in 1900 North Carolina had only about 10,000 deer and the white-tailed population for the entire U.S. was only 500,000.

With deer occurring in such large numbers they can have a tremendous detrimental effect causing crop damage, spreading Lyme disease, eating landscape and garden plants and causing 14,000 – 16,000 deer/vehicle collisions annually in NC alone. Much of the increased deer/human interaction is the result of building and development in areas where wildlife and humans compete for the same space.

## **Strategies to Minimize Deer Damage**

Using an integrated approach for repelling and restricting deer is the most effective way to reduce damage and the greatest amount of protection comes from using a variety of methods and rotating their use.

And remember, it's easier to prevent damage than to stop it after it's already begun.

## **Plant Selection**

Selecting plants that are less likely to be eaten by deer is a common strategy used to protect ornamentals and landscaping plants. Catalogs often advertise “deer proof” plants but no plant is truly deer proof. Some are less likely to be eaten than others because of their taste, texture, or odor but hungry deer will eat almost any plant to survive. Deer will especially eat anything in the spring as tender new growth emerges. Over-watered and over-fertilized plants are also appealing since they tend to be especially lush and tender. When selecting deer-resistant plants for landscaping consider what deer dislike: plants with sticky/hairy leaves and stems; plants with thorny/prickly leaves and stems (roses being an exception); plants that are poisonous or produce a thick sap; and those with strong scents and pungent tastes, especially if they have a lemony or minty odor. This does not mean that homeowners are limited to only using deer-resistant plants in their landscaping. One strategy is to plant at least two resistant plants for each vulnerable plant. Additionally, resistant plants as part of a border around a vegetable garden may serve as a deterrent to help protect garden plants. However, remember if deer are hungry they may eat resistant plants as well. There are far too many plants considered deer-resistant to list here. Check on-line sources, gardening books, catalogs and with local nurseries for recommendations for deer-resistant plants.

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## **Physical Barriers**

To protect young trees, plastic or woven wire cylinders can be used but are only effective as long as the tree fits inside the cylinder. For shrubs, a fine mesh, black plastic netting can be spread over the plants and from a distance is almost invisible. To prevent the netting from becoming entwined in the plants it needs to be lifted and repositioned every few days during the growing season. For larger areas, such as gardens or orchards, fences are the best solution for keeping deer out. However, fencing can sometimes be less than appealing to look at and can also be expensive. To eliminate deer completely from an area a mesh fence needs to be eight feet high while a solid fence that deer can't see through will usually work at a height of six feet. A shorter, five foot high, mesh fence will often work if the top is angled out. A four foot high double fence is effective if the fences are placed five feet apart. Electric fences also generally work well. In areas with low deer populations a single electrified strand of wire 30 inches above the ground may be sufficient. However, in areas where deer are more numerous, an electric fence may need to include up to three strands of wire at different heights. Electric fences can also be expensive and need a nearby power source unless a solar-powered battery unit for electric fencing is used.

## **Commercial Chemical Repellents**

Commercial chemical repellents including Deer Out, Deer Off, Plantskydd, Detour, Hinder, Deer Scram, and Not Tonight Deer, just to name a few, are sometimes effective if used properly. A variety of factors including weather, the availability of other food, and the deer's appetite will often play a role in their effectiveness. Repellents often need to be applied regularly and after significant rains although some claim to be effective for three months or longer regardless of the weather. Repellents that are absorbed by the plant seem to be the most effective. One study that included more than 15 commercial repellents found that those with sulfurous odors were the most effective. All chemicals should be used in accordance with the label's instructions and should also be checked to see if it is safe for use on food plants if the repellent is to be used on fruits or vegetables.

## **Homemade Repellents**

Homemade repellents often use materials found around the home that are disagreeable to the deer's senses of taste and smell. Books, on-line sources, and anecdotal information provide a variety of recipes for home grown repellents. Human hair, available from almost any barber shop or salon, is an odor repellent that has shown some limited success. Place several handfuls of hair in mesh bags (such as onion bags or nylon stockings) and hang the bags on the outer branches of fruit trees no more than three feet apart. Some gardeners also recommend placing handfuls of hair at the end of garden rows. To protect larger areas hang the bags about three feet apart and 28 to 32 inches off the ground on a fence or posts.

The rotting or sulfurous odor of eggs can also be used as a deterrent. Mix four eggs in a gallon of water and spray the mixture on the plants to be protected. Other homemade sprays that may deter deer because of its taste or odor include- peppermint oil; one-half cup of heavily scented dishwashing liquid in a gallon of water; one cup of dried hot peppers soaked in a gallon of water; or several tablespoons of Tabasco sauce mixed in a gallon of water. Any of these mixtures will need to be reapplied after heavy rains.

Bars of heavily scented soap have also shown some success as an odor repellent. Place pieces of soap in a mesh bag and hang much the same as the bags of hair. Another strategy is to drill a hole in the bars of soap and use wire or string to hang them from fruit tree limbs or on a fence or posts. The soap should be placed at about 3 foot intervals surrounding the area to be protected. Similarly, some sources suggest using perfumed fabric softener sheets fastened to stakes around the garden or sprinkling baby powder lightly over plant leaves. One final odor repellent often mentioned is mothballs. However, it is illegal and potentially dangerous to use mothballs in this manner. To quote the North Carolina Master Gardener Training Manual **“it is illegal to use any pesticide in a manner inconsistent with the product label. Deer are not listed on the label for mothballs. Small children and pets can be poisoned by eating mothballs.”**

Other suggested deterrents include- spraying urine around garden borders; placing citrus peels in the garden; hanging CDs or aluminum pie pans around the garden (the reflected light is thought to scare the deer); using lights or a noise source, such as a radio, connected to a motion sensor; or a dog. Dogs will generally keep deer away by barking or with their scent. However, unless the dog is well trained, they often can't be allowed to run free. This, as with other methods, such as lights, noise or shiny objects, the deer may eventually realize there is no danger.

### **Lethal Control**

Since live trapping and removal is not a practical way to control damage by deer, hunting is still the most effective means of managing the deer population. However, hunting may not be a practical means of control in suburban areas because of the obvious potential danger to humans. In North Carolina the white-tailed deer is the most hunted large game animal and more than 150,000 (some estimates are as high as 250,000) are harvested annually in the state. Deer hunting is limited to seasons set by state law although a landowner can apply for a depredation permit which will allow them to take deer at any time to prevent them from damaging or destroying property. Contact the North Carolina Wildlife Resources Commission for additional information on hunting regulations.

### **Resources**

NC Wildlife Resources Commission  
[www.ncwildlife.org](http://www.ncwildlife.org)

Cornell University Cooperative Extension  
[www.wildlifecontrol.info/deer](http://www.wildlifecontrol.info/deer)

West Virginia Division of Natural Resources  
West Virginia Cooperative Extension Service  
[www.wvu.edu/agexten/wildlife](http://www.wvu.edu/agexten/wildlife)

Deer Natural History and NC Wildlife Commission Programs  
[www.ces.ncsu.edu](http://www.ces.ncsu.edu)

Bluegrass Gardens  
[www.bluegrassgardens.com](http://www.bluegrassgardens.com)

Acme How To  
[www.acmehowto.com](http://www.acmehowto.com)

The Gardener's Network  
[www.gardenersnet.com](http://www.gardenersnet.com)

Pender County Cooperative Extension Service  
[www.pender.ces.ncsu.edu](http://www.pender.ces.ncsu.edu)

Exploring North Carolina  
UNC TV

Landscaping With Nature: Using Nature's Designs to Plan Your Yard  
Jeff Cox

The Gardener's Complete Q and A  
Garden Way Publishing

Garden Problem Solver  
Pippa Greenwood

Rodale's Weekend Gardener  
Erin Hayes

Joy of Gardening  
Dick Raymond

The North Carolina Master Gardener Training Manual  
North Carolina Cooperative Extension Service