

Non-Lethal Deer Management

1 References

1. Deer Control Options <https://attra.ncat.org/attra-pub/summaries/summary.php?pub=150>
2. Wildlife Damage Control <http://wildlifedamagecontrol.net>
3. Non-lethal Methods of Controlling Deer Population Growth <http://www.ct.gov/caes/cwp/view.asp?a=2824&q=378098>
4. Deer Friendly <http://www.deerfriendly.com/deer-population-control>

2 Fencing

A well-designed fence has been successfully proven to keep deer out. Retailers keep endorsing and selling deer fencing. If fencing didn't work, it wouldn't be sold.

The most effective method for exclusion is a well-designed fence, and there are several designs available to meet specific needs. Temporary electrified fences are simple, inexpensive, and useful in protecting garden and field crops during snow-free periods. (Ref 1)

Permanent woven-wire fences provide the ultimate deer barrier. (Ref 1)

A new, patented Wireless Deer Fence consists of just a post less than 2 feet high, a deer-attractant reservoir, and a battery-powered high-voltage shocker (Ref 1)

*Fencing is the most effective way of protecting crops, plants and property from the browsing damage caused by deer (*Odocoileus virginianus*). There are a variety of deer fences that can be installed.* (Ref 2)

3 Covers

Floating polyester covers and tree protectors made from polypropylene tubing often prevent deer from doing damage.

Another way to exclude deer from small garden areas is to use floating polyester row covers over the crops to be protected. The floating row covers need to be put on each evening and removed in the morning. This method of exclusion was reported to have worked very well by a gardener in Massachusetts (Bye, 2000). (Ref 1)

The protectors can be made of polypropylene tubing, plastic tree wrap, or even woven-wire cylinders. Polypropylene tubes are commercially available and come in different diameters for trees or seedlings. Four-or 5-foot shelters are generally needed in areas of heavy deer pressure (Pierce and Wiggers, 1997). (Ref 1)

4 Plant Choices

Landscaping with plants that deer don't like tend to ensure less chance of damage.

Deer damage to landscape plants and flowers usually occurs when the deer's natural browse is low, generally in the late fall through early spring. By choosing species that are undesirable to deer, you can reduce the amount of damage to these plants. (Ref 1)

Here is a list of plants we have heard were resistant to deer. Remember that plant resistance is also tied to the relative density of deer in your area. If deer are hungry, and there is little preferred food. They will eat what they don't like. Partial list: Astilbe, Cransebill Geranium, Epimedium, Foxglove, Lamium, Lamb's Ears, Monkshood, Peonies, Pulmonaria, Silvery auresia, Solomon's Seal. (Ref 2)

5 Scare Options

Various methods are available and generally effective and economical if utilized early. It is more difficult to get deer to change once they establish a pattern.

Propane cannons or gas exploders set to detonate at irregular intervals are the most common scare devices, and they are sometimes available for loan from wildlife refuges or wildlife agencies. Strobe lights and sirens can also be effective; even fireworks and gunfire can be used as a temporary method. Playing a radio that goes on and off during the night will work for a short time, as will attaching a sprinkler system or lights to motion detectors. (Ref 1)

Another scare option is the use of dogs that are kept behind an invisible fence by the use of a radio transmitter, an underground copper wire, and a special dog collar with receivers. Stationed inside the invisible fence, the dogs chase the

deer out of the dogs territory. The collar, when activated by the underground wire, first gives an audible signal, and if the dogs don't stop they receive a mild, harmless shock. The dogs must be trained to heed the signals. (Ref 1)

6 Repellents

Several repellents are available to deter deer. They are best utilized on specialized environments.

Repellents are best suited for high-value crops in orchards, nurseries, and gardens. High cost, limitations on use, and variable effectiveness make most repellents impractical on row crops, pasture, or other large areas. There are two kinds of repellents: contact and area. Contact repellents are applied directly to the crop plants and repel by taste. Some of these contact repellents use inedible egg solids to repel deer, while others are derived from cayenne pepper extract and cannot be applied to the edible portion of the crop because they will leave a hot taste. (Ref 1)

Some repellents are listed here with sources (Ref 2):

- *Big Game Repellent has been found to reduce deer browsing damage to Japanese Yews about 50% in comparison to untreated bushes. Roger Conover. "Comparison of Two Repellents for Reducing Deer Damage to Japanese Yews During Winter" Wildlife Society Bulletin. 15:265-2658, 1987.*
- *Hinder has been found to reduce deer browsing damage to Japanese Yews almost as well as Big Game Repellent. Roger Conover. "Comparison of Two Repellents for Reducing Deer Damage to Japanese Yews During Winter" Wildlife Society Bulletin. 15:265-2658, 1987.*
- *Human Hair is used by placing two-four handfuls of hair into a nylon bag and suspending it around the tree you wish to protect. One study found that it reduced damage 35%. Michael Conover. "Effectiveness of Repellents in Reducing Deer Damage in Nurseries." Wildlife Society Bulletin. 12:399-404, 1984.*
- *Miller's Hot Sauce reduced browsing damage by 15%. Michael Conover. "Effectiveness of Repellents in Reducing Deer Damage in Nurseries." Wildlife Society Bulletin. 12:399-404, 1984.*
- *Magic Circle reduced browsing damage by 18%. Michael Conover. "Effectiveness of Repellents in Reducing Deer Damage in Nurseries." Wildlife Society Bulletin. 12:399-404, 1984.*

7 Reproductive Control

Spaying and neutering deer is a certain way to reduce their population. Though the procedure is expensive, volunteer efforts can bring costs down significantly.

Reproductive control: By suppressing reproduction in a population to a level below that of natural mortality, it is possible to achieve a decrease in population size. Most of the research on non-lethal control in deer has focused on females. The two basic methods of controlling female reproduction in deer are by using immunocontraceptives and by using contragestation agents. (Ref 3)

Here are various media excerpts collected by Deer Friendly (Ref 4):

- *Our community implemented a unique program to trap, neuter and release deer in 2006 with the permission of the Illinois Department of Natural Resources, said Highland Park Deputy City Manager Patrick Brennan. That program has provided multiple benefits for years. (Lakeforester)*
- *DeYoung said that surgical sterilization was the preferred method, but that a contraceptive vaccine was also an option during the discussion, DeYoung said more background information a six-person team .. would study deer movement and range size "Removing deer is not enough as that merely makes an opening for new deer to come in. At the same time, new fawns can easily come in This is a first-time study of deer movements both within and out of the city limits" (The Boerne Star)*
- *a pilot project to sterilize deer, spending more than \$159,000 to outfit an ambulance as a moving veterinary clinic and hiring teams to tranquilize, neuter and release 19 deer. (Chicago Tribune)*
- *The \$50,000 spaying pilot has made for some strange bedfellows. Feinberg is an animal welfare advocate who has carried out a tireless campaign against what she sees as a state bureaucracy that is too quick to use hunting as an answer to deer problems. The professional she hired is Tony DeNicola, a biologist with a doctorate and a national reputation as a deer sharpshooter. The money is from the estate of Gerda Deterer, an animal rehabilitation expert who died in 2009. And the DNR Feinberg's frequent adversary approved the effort. (CBS Baltimore)*

8 Relocation

Though relocation can be stressful on deer, research shows that many do survive albeit with despite below-average body conditions.

A common objection to relocation is that many deer perish as a result, since deer are flight animals and easily stressed by any constraint. A 2008 study in Texas where there had been significant experience with Trap, Transport, and Transplant concludes "reasonable survival rates can be achieved." (See research by Aaron M. Foley et al). (Ref 4)