

Deer Control Methods

“You can use proven techniques, including using plants that deer don’t like, specialized fencing, chemical deer repellents, high-pressure water, big dogs, deer distractions, noisemaking devices (and I’m not talking about screaming at the deer), robots, scary lights, and more. But you have to look at the world from the deer’s perspective. You have to think like a deer, to look at your garden from the deer’s point of view. To do this you need to understand how deer behave, eat, breed, and live. You have to wander around your yard as if you were a deer. Never mind if your neighbors think you’re a bit crazy. This is war.”

Bill Adler Jr.

www.outwittingdeer.com

Useful Facts about Deer (know your enemy)

It has been estimated that in the US deer damage a total of \$100 million in agricultural crops, \$750 million of forest regeneration, and cost \$1 billion in deer vehicle accidents. 300,000 vehicles collide with deer every year in the US, resulting in an average of 120 fatalities, making deer the number one wildlife killer of man. On the plus side, economic and recreational benefits from deer were judged to be \$14 billion.

In Washington State past forest practices have contributed to increased mule deer and elk populations. In the early 1900s we had 10,000 elk and about 50,000 deer. Today we have 55,000 elk and 350,000 deer. Clear-cut forests offered excellent habitat for these animals. The plants that grow in recently cleared areas provide forage preferred by deer and elk. On average, a healthy adult buck or doe needs to consume 5 to 10 pounds of food per day.

Deer are selective feeders – whether a plant is eaten depends on season, plant palatability, and availability of alternative foods, weather conditions and nutritional needs. The hungrier they are the less selective they are; no plant species will be avoided by deer under all conditions.

Deer learn quickly and learned behaviors are taught to their young. Deer have learned that suburban homeowners are not a threat and often won’t run unless actually chased, so gardeners have to be more resourceful. Deer will learn the limit of a tied dog and stay beyond that range, then help themselves to plantings.

Once deer establish a pattern of behavior it is very hard to break. Deer are creatures of habit, and will return to a successfully forged area. **Therefore if you have had deer damage in the past it is very important to use a control method BEFORE you see damage, to “unlearn” the past behavior. Preventing deer damage before it starts is easier than interrupting an established pattern.** Once they adapt to your garden, they adopt it.

Damage reduction should include different strategies in different times of the year; stronger measures are needed in late winter and early spring because natural foods may be scarce.

Deer are very good jumpers and can easily clear 4-foot fences. Another deer was observed clearing a 12-foot fence when being chased by dogs.

Deer lack upper incisor teeth; they just have cartilage like sheep so damage consists of tearing and breaking, as well as stomping on what they don't eat.

Methods of Damage Control

In any deer deterrent program plan on using several different tactics, rotating and alternating them throughout the season, before the deer get used to them. Use all five physical senses of the deer to assault their sense of security. Like all wild animals, they are neophobic (afraid of anything new) so don't give them a chance to adapt.

Population Control:

Deer are classified as game animals and can only be killed during legal hunting seasons by persons holding a valid big game license. See Resources page for Dept of Fish and Wildlife web site for 2001 hunting season dates.

Deer have the potential to double their population about every 2.5 years if no mortality takes place. Buck-only harvests do not reduce or stabilize deer numbers. Where legally possible landowners should require hunters to harvest sufficient does, as it is essential to reduce deer numbers and damage.

Some states are experimenting with steroid contraceptive birth control methods with some success; cost and logistics for wide-scale use are problematic.

Chemical Repellants:

The greatest amount of protection for home gardens with repellents is to use several different repellants and to rotate their use so deer don't adjust to them. Although designed to have no worse effect than leave a bad taste in their mouths, chemical repellents are pesticides and usage should follow label directions carefully.

Contact repellants

Commercial or home made sprays can be temporarily effective but need frequent reapplying (3-4 weeks) or after rain. Usually includes capsicum pepper, eggs, or thiram. Hot pepper sauce is a successful contact repellant, a commercial mix is "Hot Sauce Animal Repellant." Another commercial spray I've used successfully is called "*This One Works*." Other commercial mixes are *Hinder* and *Repel* (ammonium soaps of higher fatty acids with Thiram.), *Chaperone*, *Guftafon 42-S8*, *Noff Chew Not*, *Scram 42-S* and *Bonide Deer Repellent*.

Area scent repellants

Success is usually temporary as deer become accustomed to fragrances and realize the threat is not actually present. Repellants can include human hair, human urine, coyote urine, deodorant soap, moth balls, bone tar oil, rancid grease, feathermeal (dried chicken feathers), dried blood or blood meal in a cloth bag. If the deer have

encountered these before they will have little to no effect. Hang in a nylon stocking, plastic bag with holes or mesh bag about 30" off the ground. Commercial area repellent sprays include Deer-Away, Big Game Repellent, or Cunita.

The smell of decaying eggs is repellent to deer but can't be smelled by humans. A mixture of a dozen eggs and five gallons of water can be applied to the ground using a pressure sprayer. Mixture will cover approx one acre. Reapplication is necessary after each rainfall.

Another cheap and easy repellent is fabric softener cloth you use in the dryer. The stronger the fragrance, the better. Hang them at intervals of 3 feet. Replace after a rain as they lose effectiveness.

Processed sewage has also proven effective in areas of low deer pressure -- fertilizer derived from processed sewage is repugnant to deer. Fertilizes the roses and keeps deer away!

Also in this category is certain plants deer dislike; garlic or onions around a small raised bed sometimes works.

Scare Devices – lights, whistles, gas exploders, gunfire, fireworks, dogs:

Deer quickly habituate to noises and resume foraging. They will most likely annoy your neighbors and may be dangerous to other animals.

Dogs that run free can successfully repel deer long-term. However it is illegal for dogs to 'run down' a deer at any time and as pet owner you might be legally liable.

Personal experience: We live on 4 acres next to 2,000+ acres of the Nisqually Wildlife Refuge. For 10 years we had two dogs, a Cocker Spaniel and a Welsh Corgi (not large dogs). I had occasional but never drastic deer damage. We lost both dogs, and went 2 years without a dog. Both summers I had extensive damage and repeated total loss of buds and blooms. Now again we have a small herd of Cocker Spaniels. I'm convinced the scent of a dog in the yard works as a deterrent that takes advantage of predator avoidance behavior.

Scarecrow Motion Detector:

Last year I bought a Scarecrow – a motion detector you attach to a water hose. When the motion detector is activated, the sprayer hose kicks off and shoots water very fast and very loud in the circle or the arc you have set. The distance of the spray is determined by the setting and your water pressure. It runs all summer off one 9 volt battery. This works. I bought another one this spring to point in another direction.

Physical Barriers

Fencing is the most reliable deer control solution, but may not always be practical due to appearance, zoning restrictions, cost, or terrain. However, when pro-rated over their life spans, fences are often more cost effective than repellent spray programs.

Whatever the strategy and material used, it must be firmly attached to the ground. Deer will squeeze under or through tight places and are smart enough to knock down a flimsy fence. They will normally attempt to go under or through a fence rather than jump over it.

Natural defenses

Use of large, thick woody shrubs can successfully keep deer from a garden, particularly if they can't see through it. Thorns or extremely thick growth work best. Deer rarely damage barberry, birches, dogwoods and spruces.

Netting and Partial Barriers

Effective for protecting small plantings, individual plants, or small beds of plants. Can also be used to surround a planting as a temporary fence. Around a large planting, netting may need to be high enough to prevent being jumped over – 6 to 8 feet. At this point it's really a fence.

Personal experience: Fishing line can be used effectively if strung carefully. Use 10 – 15 lb. test fishing line, the first line about waist to chest high off the ground. String around trees or poles and pull very taut. (Not too high; deer aren't very tall.) String a second line about knee height off the ground, pulled as tight as you can get it. The deer will stop when they feel the line on their chest and legs, but can't see it well so don't recognize it as a fence to jump over. I've used this as a barrier between the yard and the woods for a number of years with some success. Requires checking every few months or after a windstorm. Not recommended in a human pathway!

Passive exclusion fences

Low fences can be successful if the deer can't see a safe landing zone – the threat of injury is a powerful deterrent. The combination of 4-foot fence and 5 foot tall shrubs they can't see through will work.

A woven wire fence must be at least 8 feet high with 12-foot posts placed at 40-foot intervals. The bottom should be at ground level so deer cannot crawl under it. A fence that slants away from the area to be protected is another successful design because slanting lines seem to confuse the deer. If properly built, a wire fence should last about 20 years with little upkeep needed.

See also handout example of Benner's Gardens 8 foot fence netting or their web site on Resources page.

Active exclusion fences

Active fences use electricity to keep deer out. The deer are attracted to the fences by their appearance or smell. When they touch the fence with their nose or tongue they receive a shock that conditions them to avoid the fenced area. They are usually less expensive than a tall passive fence.

The key to effective fences is high voltage, low impedance charger, and a good ground rod. High voltage chargers require less vegetative maintenance. A good ground is an absolute requirement.

Many designs are available but generally consist of a top electrified wire about 30" off the ground. A vertical two-wire fence should have wires located at 15 and 30 inches. If three wires are used, place the wires at 10, 20 and 30 inches off the ground.

Another effective electric fence is a two dimensional design. A single wire at 50 inches is placed around the garden. A second set of two wires is located 38 inches outside the first wire at heights of 15 and 43 inches. Using hand driven posts and poly-wire makes it possible to take the fence down and put it back up several times.

See ARS Magazine article handout and Resource page for more details on electric fences.

Two Homemade Contact Repellent Recipes

Spray Mixture [spray 1]

Date: Tue, 30 Jul 1996 07:45:28 -0700

From: "Linda M. Gay" <dglg@cdsnet.net>

To: mgarden@listproc.wsu.edu

Subject: Deer Deterrent

If you try this mixture and keep applying it if it rains it should work. We live in Oregon with lots of deer and it has proved the best treatment so far. Here it is:

In a blender 2 eggs to 1 cup of water, blend well, then add 1 cup skim (it must be skim) milk and any type of a sticker (which is organic, such as soap, or located at your local farm stores). Then you can make as many batches as you'd like; this is over a hundred-year-old recipe. Put this mixture into a sprayer and spray a light mist, there is no odor to humans but the deer may take one bite and adios to them.

The mixture will stay in the sprayer for about a day or two, but need to again to be mixed, the recipe is a small mix and should be used at once since it will be mixed so well. It is not recommended for long storage.

Subject: Re: A good deer repellent [sprays 2]

From: cwb@NetXpress.com (cliff bingham)

Date: Mon, 15 Jul 1996 20:20:12 GMT

No repellent can be absolutely guaranteed to protect all plants, all the time from the ravages of the urban deer population. However, I have developed a formula over the past four years that is effective, cheap and easy to use. I have given this recipe to many people on the WWW and to many of my friends locally. Without exception all reports I have received state full satisfaction with the treatment. I raise roses, hibiscus, pansies, lettuce, tomatoes, peppers, apple trees and all sorts of other deer food and am only bothered when I fail to follow my own schedule or miss treating a plant. **DEER REPELLANT** Get the hottest peppers available, I use dried Habaneros as they are readily available in the local Supermarket. Bottle of a commercial product called Hinder. Palmolive Dish Washing Liquid Two one Gallon Plastic Ice Cream pails with covers or similar containers. Put a couple handfuls of the peppers in each container, fill with water and let stand in the sun for 7 days, just like making sun ice tea. After 7 days or as soon as it really begins to smell bad, strain off about 2-3 quarts of the liquid and put it in your pump up sprayer, refill the bucket with water and after the second or third time you use it add some more peppers, don't bother throwing the old ones out just keep adding to the mixture, the worse it gets the better it works. Add 1/4 - 1/2 cup of Hinder and a couple of tablespoons of Palmolive liquid. Fill the sprayer with water. Spray all the plants you want to protect to the point of run off once a week or after a heavy rain. We haven't had a heavy rain here in Texas since October 95 so that hasn't been a problem for me. I also use this on vegetables with no noticeable taste once they are washed. I usually just give them a light misting but it still works. Things like tomatoes can be sprayed heavily on the foliage with out any concern. As a side benefit, some organic solutions for common garden pests include the same pepper ingredients. I have used this on everything in the yard and garden with no side effects to me or the plants, except when standing down wind and spraying and then it will take your breath away. Switch from one bucket to the other every week and you will always have a supply of spray. If this works for you please let me know.
Good Luck

Resources

Books:

Outwitting Deer by Bill Adler, Jr. **

Deer Proofing your Yard and Garden by Rhonda Massingham Hart **

Gardening in Deer Country by Vincent Drzewucki, Jr.

** In Timberland Library Web Based Catalog: <http://pac.timberland.lib.wa.us/>

The Internet Center for Wildlife Damage Management

<http://wildlifedamage.unl.edu/>

Washington State University Cooperative Extension Deer Management Links

<http://gardening.wsu.edu/library/lpro020/lpro020.htm>

Managing Iowa Wildlife: White Tailed Deer

<http://www.extension.iastate.edu/Publications/PM1302G.pdf>

University of Massachusetts: Preventing Deer Damage

<http://www.umass.edu/umext/programs/agro/vegsmfr/Articles/General/deercontrol.html>

West Virginia University

Deer control in Home Gardens

<http://www.wvu.edu/%7eagexten/wildlife/deercont.PDF>

An Integrated Approach to Deer Damage control

<http://www.wvu.edu/%7eagexten/wildlife/intgdrco.PDF>

Benner's Gardens

"Virtually Invisible Deer Fencing Systems"

<http://www.bennersgardens.com/>

Washington Dept of Fish & Wildlife - Hunting Season Dates

<http://www.wdfw.wa.gov/wlm/game/seasons.htm>