

Controlling Deer Damage to Landscape Plants

Host/Site

Browsing deer can cause damage to a wide variety of plants, including garden plants, crop plants, shrubs, and trees. Landscapes in rural areas are susceptible, and increasing residential development has made deer problems more common in suburban areas.

Identification/appearance

Deer normally graze on grasses, weeds, vegetables, flowers, ornamental and fruiting shrubs, and browse—the leaves, twigs, and small branches of trees and shrubs. Deer damage is easily recognized because, lacking upper front incisors, deer can only grind and chew with their molars. Leaves and twigs are ripped from trees and brush leaving a ragged surface. Annuals may be pulled out of the ground. Damage to larger trees extends only to eight feet, the highest they can reach. Smaller trees can be pushed down and totally destroyed or the bark may be chewed through, causing the tree to die. If deer are hungry enough, they will eat almost any plant. Deer can also be identified by their tracks or their excrement (scat). Deer hooves are cloven into two halves.

Life Cycle

Deer can live 11 or 12 years but often are killed by hunters or predators well before that. Does can reproduce at 7 months but 1 ½ years is more usual. Mature does can breed every year. An isolated deer population can double in a year, though a 50% increase is more common.

Natural Enemies

Natural enemies include coyotes, cougars, wolves, bobcats, lynx, and foxes. Dogs chase and attack deer but are less effective predators.

Monitoring

Monitoring simply consists of looking for the kinds of damage described above.



Deer fencing is the most effective way to prevent damage to plants.



Deer scat (with wristwatch for scale).
Photos by Joanne Jewell.

Action Threshold

The action threshold will vary with the age and kind of plants involved and the size of deer populations. Some browsing damage of larger trees may be acceptable, but if deer are present saplings will need to be protected. If significant deer damage occurs or can be predicted from experience in the area, implement the physical controls described below.

Cultural/Physical Controls

The most effective control against deer damage is exclusion by fencing. Deer can jump up to 12 feet high, but an 8 foot high fence is generally sufficient. Lower fences are possible if the fence is slanted outward (away from the protected zone), electrified, or made of a solid material that prevents deer from seeing through. A 4' tall electric fence is very effective, but needs to be made with strands every 6-9 inches and baited with foil strips smeared with peanut butter at least initially to teach the deer to stay away. A solid board fence need only be about 5 ½ feet high. In small gardens—say less than 15 feet wide—6 foot fences are effective. Deer have trouble judging distances so they won't jump into a narrow area. For this reason, it is reported that two 4 foot high fences (picket, for example) running parallel and 4 feet apart will keep deer out. The space in between could be useful garden space.

Individual plants or trees

can be protected by strong wire cylinders 8 feet high. These are especially useful to protect young trees, even deer-resistant ones, until they branch out of reach of deer. Often, deer will decimate young specimens of tree and shrub varieties that they are not interested in once established (e.g. *Prunus laurocerasus*, *Psuedotsuga menziesii*, and *Thuja plicata*) or will kill a "resistant" tree just by tasting it. Chicken

(continued/over)



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wire is generally not strong enough to use for deer fencing; hog wire or field fencing is recommended. Fencing made of fishing nets loosely strung from tall poles can be effective around gardens. Fencing should be designed to keep deer from crawling underneath. Two interesting tactics suggested by the Washington Department of Fish and Wildlife include 1) setting a playing portable radio in a barrel laid on its side with both ends removed, and 2) stringing low wattage lights plugged into a Christmas tree blinker so that they cast changing shadows. Another method that has been used with success is sprinklers or irrigation heads activated by a motion detector.

Landscaping with deer-resistant plants can have some benefit. Few, if any, plants are totally resistant year round, but some will suffer less damage. The plants listed below are among those found to be generally resistant to browsing by deer according to the Washington Department of Fish and Wildlife.

Trees	Shrubs	Flowers
Ash	Boxwood	Calla lily
Black Locust	Butterfly bush	Clematis
China-berry	Daphne	Columbine
Dogwood	Rhododendron (except	Daffodil
Holly	azalea-leaved types)	Foxglove
Persimmon	Rosemary	Iris
Pine		Larkspur
Spruce		Lupine
Wax Myrtle		Narcissus
Lilac		Peony
		Trillium

Many lists of deer-resistant plants exist, but consistency between lists is often poor. Best bets may include strong-tasting plants, plants with milky sap, and poisonous plants. Examples of such plants include lavender, sage and other salvias, catmint, santolina, rue, and euphorbias. Other plants worth trying, according to Howard Stenn, a horticulturalist with experience gardening with deer on Vashon Island, include fig, barberry species, *Osmarea burkwoodii* and *Osmanthus delavayi*, *Euonymus*, various bamboos, *Prunus lusitanica*, *Rosa eglanteria*, *Lonicera pileata* and *nitida*, *Abelia grandiflora*, *Cistus species*, and *Forsythias*. These suggestions should be used with the understanding that a confined, hungry deer population such as those on islands will gnaw any plants.

Biological Controls

Motivated dogs are very effective at chasing deer away, but the barking can be annoying, especially at night. Even a dog that is fenced in may provide some control, although deer reportedly soon learn that a confined dog poses no threat and may ignore the barking.

Chemical Controls

Repellents are commercially available and home remedies are common. When they do work, the effect results from the temporary fear animals have of the new and strange. As with various lights and sounds mentioned above, repellants can help most until deer become acclimated, and frequent change may be helpful. With any repellent, a spray at the first sign of damage will repel deer from a shrub or tree for months unless rain washes it off. In the Pacific Northwest, sprays in spring need to be applied often, but generally summer sprays last until the first rains of fall.

Repellents may work by odor, taste, or both. Commonly used commercial deterrent sprays may include ammonium fatty acid soaps, putrescent egg solids, capsaicin (hot pepper), and garlic. Products made from the urine of deer predators are also available. Commercial deer repellents are registered by EPA. Follow label directions just as you would for any pesticide.

Odor deterrent sachets can be made from a strong-smelling soap. Irish Spring is quite popular for this purpose and does provide some control, but the sphere of protection is small and many sachets may be required.

In tests of deer repellants, *Consumer Reports* magazine found that those applied weekly were generally most effective. They gave the top rating for effectiveness to Hinder, an odor repellent made from ammonium soaps of fatty acids. A homemade spray of 4 eggs, 2 oz red-pepper sauce, and 2 oz chopped garlic blended with enough water to make a quart of spray was also highly rated though it required considerably more work than the others. (One reviewer of this fact sheet reported that 1 or 2 eggs blended into a gallon of water worked as well as the garlic and pepper version.)

References

- Quarles, W, "Protecting Gardens from Deer Damage", *Common Sense Pest Control X(2)*: 5-14, 1994.
- Washington Department of Fish and Wildlife, "Controlling Nuisance Deer."
- Consumers Union. "When Bambi Eats Your Flowers." *Consumer Reports Magazine*, October 1993: 32-33.