



Many Central Texas residents enjoy watching deer and appreciate the ambiance they bring to a natural setting. However as our urban and suburban areas have sprawled into the surrounding natural areas we are encountering deer more than ever. It has been estimated that deer damage to residential landscapes in the U.S. may exceed \$250 million per year. Suddenly Bambi isn't quite so cute any more to many residents.

Deer are a growing problem in much of the state but in populated areas of Central Texas, and they seem to be especially troublesome for gardeners. When summer brings droughty conditions and the availability of food diminishes in the wild our landscapes appear as luscious, tasty greenery to a hungry deer.

In a single night a few deer can destroy hundreds if not thousands of dollars worth of landscape plants. A deer's primary diet is browse, that is tender shoots, twigs, and leaves of trees and shrubs. They do eat some grass but most of their diet is broadleaf plant foliage and new growth. This means by their very nature they are on a collision course with our landscaping plans.

In addition to eating plant tissues male deer can devastate young trees and bushes by rubbing their antlers on them. This activity strips off the bark, breaks small branches and can entirely girdle and kill a plant.

Managing Deer Problems

Deer living in populated areas grow increasingly accustomed to being around people, pets, strange scents and sounds. The old technique of using human scents such as small bars of perfumed soap on a piece of twine or hair from a barber shop sprinkled around isn't effective at keeping them away.

Deer may be easy to manage or virtually impossible depending on a number of factors. The hungrier deer get, the more difficult it is to prevent their damage. Their natural fear of man and the unfamiliar is overcome by their natural drive to survive. Drought conditions force them into our yards for food. Neighbors feeding them enforce the idea that our neighborhoods are a place to get something to eat. Many areas have an overpopulation of deer which increases their competition for the limited natural food supply.

When it comes to managing deer our options include choosing non-preferred landscape plants, scent-based repellants, scare devices, and fencing.



Deer with someone's mop on his head!

Non-Preferred Plants

Deer tend to avoid plants with strong unpleasant odors, bitter disagreeable taste, prickly or fuzzy foliage, or milky sap that is sticky and/or caustic. But when hungry they will readily eat things that under better conditions they would have totally avoided.

Lantana is a plant on many "deer proof" lists. Yet it will be eaten by deer in some locations during a very dry year. Sometimes a plant may be rather resistant to deer but its more "improved" forms are not. This is true of lantana as the wild lantanas are generally less palatable than most of our well bred garden varieties.

Prickly pear cactus has terrible thorns. But I have seen deer with remnants of thorns around their mouth from trying to survive in a very dry year. If you get hungry enough you'll do what you have to in order to survive!

So plant lists are good guides but come with absolutely no guarantees. Although there are a few plants that are virtually deer proof it is better to speak in terms of plants which deer do not prefer. And there is considerable variation among non-preferred plants.

There are a number of factors that influence whether or not deer will eat a particular



Deer lounging at front door of home.

plant on such a list. Hunger is at the top of the list. Condition of the plant is also a factor. New tender succulent growth may be nipped while the remainder of the plant is left undamaged. Deer often eat a plant during some times of the year and tend to pass it by during other times. Deer in different areas seem to have different preferences. A plant that deer avoid in one area may be readily eaten in another. Some gardeners report that preferences of individual deer in an area may vary.

Deer are curious creatures. Newly planted plants seem especially prone to sampling by deer. I think they must get downright giddy peering out from the woods as we return from a trip to the garden center with new plants for the landscape.

Deer also are creatures of habit and have traffic patterns through our yards and neighborhoods. Plants in their path are especially at risk. If your neighbors are feeding the deer it may increase the likelihood of damage to plants in the area. Feeding attracts increased numbers of deer, in fact more than can be satisfied by the feeding alone.

Chemical Repellants

There are a number of products on the market for repelling deer from damaging your landscape plants and several homemade remedies as well. I mentioned human hair and perfumed soap earlier. These actually are of little to no benefit in repelling deer except in areas where deer are still easily spooked by human scents and where deer pressure is minimal.

Likewise the long list of homemade repellants offer minimal help and only when deer pressure is very low to begin with. These include fabric softener sheets, mothballs, blood meal, Milorganite fertilizer, and various concoctions made with hot pepper oil, Tabasco sauce, citrus rinds, cumin, garlic, dry mustard, and eggs. Recipes vary but one example is a mixture of 6 eggs, one quart of water and one quart of skim milk (soured milk is even better).

Some commercial repellent products work because they have a disagreeable odor and/or taste to deer. They are typically made of putrefied egg solids, hot pepper oil and other such ingredients. Examples include Deer Away, Deer-Off, Deer Busters, Deer No No, Hinder, and Not Tonight Deer.

Repellants may be somewhat effective for a period of time if the population density of deer is low and there is enough alternative foliage for them to consume. To increase your chances of success with repellants, apply them immediately after planting, before deer have a chance to sample the plants, and repeat the applications regularly to maintain the scent/taste.

Other repellants are designed to repel deer by fear. Predator urines are an example of such products. You can purchase mountain lion, bobcat and coyote urine for \$15 - \$20 per 12 oz. bottle and place it outdoors for the fragrance to waft around in the area to give deer cause to be concerned. Research has not always supported the efficacy of these products. While they can provide some protection results vary.

Scare Techniques & Devices

Various techniques and products have been devised to repel deer by startling them or frightening them away. These include sound devices, lights activated by motion sensors, and motion activated sprinklers. Deer get used to most of these devices in time and they will lose any effectiveness they may have originally had.

One device that seems to be fairly effective is a motion activated sprinkler. This device senses movement in an area around it, like the motion sensor lights many people have around their homes. When motion is detected its sprinkler puts out a brief machine gun like blast of water. The suddenness of the water attack alarms the intruders sending them fleeing. Because the sprinklers stay on only for a few seconds and are seemingly unpredictable to the deer a number of gardeners indicate that these devices have worked well for them. Moving the sprinkler periodically may help extend its period of effectiveness.

Two example products include the Havahart® Spray Away (\$55) and the Scarecrow (approximately \$75 retail). These products are available in garden centers and by mail order.

Fencing

There are many fence designs for keeping deer in or out. Some are very effective, but expensive and suitable only for larger rural acreages. Unless you want your place to look like a prison compound such a fence is not an option.

The simplest use of fencing wire for a home landscape is to create a wire cylinder around young trees or small groups of plants. Trees are a prime target of deer and unless you can protect them up to about 6 feet high deer can destroy them. After they establish branches and foliage above that height and develop thick bark they are less prone to damage.

One type of deer fencing is made of plastic (polypropylene) mesh. It is essentially the same as bird netting but may be constructed of thicker plastic. It comes in rolls about 7 1/2' tall and costs about \$1 to \$1.50 per linear foot (excluding posts). Plastic mesh deer fence is UV resistant and lasts 10-15 years. The thin black plastic mesh of 1" to 2" squares is semi invisible, making it a popular option in suburban areas.

Wire, iron and wood fences need to be at least 8' tall to provide a decent deterrent around a large area. Deer are athletic jumpers able to leap a 6' fence with little trouble. The goal is to provide a barrier they don't want to have to jump and they will most likely do their chomping and antler rubbing elsewhere. Deer are even less willing to jump a fence as the interior area gets smaller. If your garden is a small intensive one a 5 foot wire mesh fence may suffice. The



Mesh wire enclosing young tree.

key is not whether or not they can jump it but whether or not they are willing to attempt it. If there is not much room to jump and land they will usually look elsewhere for lunch.

Electric fencing is another option for homeowners. An electric fence need not be an imposing structure of high tensile steel wires reaching 8' or more high. There are several small and simple electric fence designs that work well for protecting a small area such as a garden or landscape from deer entry.

Two designs are a single or double wire baited fence and a 3-wire offset fence. A fence with one wire about 30 inches high or two wires at 15 and 30 inches can work if baited to introduce deer to the idea that this is not an area they want to visit. Fold 3-4" pieces of aluminum foil over the wire every few feet (while the fence is off!) and then smear a spoonful of peanut butter on the foil. The deer approach the fence to sniff and lick the peanut butter and get a clear message. A moist nose is a great conductor of electricity.



Fenced garden area too small for deer to jump into.

Deer prefer to go under rather than over the single wire fence so the addition of a lower wire is helpful. However the idea is for the baited fence to be a psychological barrier rather than a physical one. The single or double wire baited fence is easy and inexpensive to build or move.

For an even more effective option try the 3-wire offset fence. There are several ways to construct this fence. Here are four options:

- 1) Run two wires 3-4 feet apart and 18 inches above the ground. Then place another wire 4-5 feet high between the lower wires. To save on posts you can run the taller middle wire down a row of posts and use short 3/8 inch fiberglass posts or sections of 1/2 inch PVC pipe slipped over rebar driven into the ground to hold the lower two wires. The gray PVC pipe blends in better than white PVC, which is rather unsightly. The PVC could also be painted to help it blend in better. Deer can jump this fence but are very reluctant to try because of its 3-foot depth.
- 2) Place a single wire 50 inches high around the garden perimeter. Then 38 inches outside the original fence place a second set of two wires 15 and 43 inches high. This design adds to the psychological barrier as deer are very reluctant to jump the outside wires with the interior wire a few feet further in toward the garden. West Virginia research has shown this design to be quite effective in areas plagued by deer.
- 3) This next design is a reversed version of the second. A fence of two wires at 12-14 inches and 32-36 inches is set up around the garden. Then 30 inches outside of this fence a wire is placed 30-32 inches off of the ground. This design worked well in farm trials in the south central Texas area.
- 4) The fourth design is another variation on #2 and #3. The inner fence has wires at 8 inches and 20 inches. The outer fence, set 30 inches outside the first fence, has a single wire at 24 inches. This design proved very effective in protecting small field plots near Boerne, Texas, an area of high deer pressure.

For an electric fence to be effective you need to purchase a high voltage, low impedance charger and use a good long (6-8') ground rod. Such a charger will burn back weeds that come in contact with the wire preventing them from shorting out the current. This makes maintenance easier and provides the boost needed to get a deer's attention.

Community Efforts

Sometimes a neighborhood or town will take measures to minimize deer problems. Some neighborhoods have passed regulations disallowing residents from feeding deer. This as you can imagine is quite controversial, but may help reduce landscape damage over time.

Deer are considered property of the state of Texas and as such a town cannot simply shoot them or trap and move them to another location without permission from the Texas Parks and Wildlife Department.

Communities can submit an application to TPWD for a permit to trap and transport deer to a new location or a permit to trap and process the deer as venison.

The cost of trapping and transport a deer can run from \$150-\$500, no small expense when you consider that a large percentage of the animals in an area have to be removed to make a significant impact on the problem of damage to landscape plants.

Closing Thoughts

Your best bet as a home owner is to devise a strategy for your own property based on the foundation of choosing plants that deer do not prefer and arranging them in ways so as to hide the more desirable ones behind scent barriers of less desirable ones. Protect trees with a ring of wire mesh 6 feet tall until they are 10 feet tall and have trunks about 6 inches thick.

New plants are especially tempting to deer and are easily pulled out at the first chomp and tug by a hungry deer. Give them a wire covering or enclosure for a couple of months until they at least have a chance to get some roots down.

You may also want to consider adding motion sprinklers or using repellent products if you wish to protect certain plants or limited areas of the landscape. This is especially effective if applied to new plants immediately after planting, before deer get a taste. Remember that new efforts may work for a while and then become less effective as the deer get used to them. Change your strategies periodically by switching repellants, moving the motion activated sprinkler, adding a new feature from time to time to keep them guessing. Learn the habits of the deer that come through your property. Be ready to take extra precautions during the summer and early fall season when food is in short supply.

Keep in mind that deer preferences vary from one region to another and when hungry even many plants on a non-preferred list will suffer some damage. More important than such a list is the experiences of neighbors and gardeners in your area with particular plants. Visit with them as to what is and is not damaged in their landscapes.



Deer relaxing in an area landscape.

by Skip Richter, Travis County Extension Horticulturist
Texas Cooperative Extension