

## Minimizing Deer Damage to Residential Plantings

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Deer are probably the most widely distributed and best recognized large animal in North America. Two species most common in Montana are the white-tailed and mule deer.



Deer habitat includes wildlands, agricultural areas, and, in some cases, residential areas. Deer favor early vegetation stages that keep brush and sapling browse within reach. Dense cover is used for winter shelter and protection. Because deer are so adaptable and residential areas sometimes provide suitable habitat, deer pose challenges to homeowners.

Damage identification is not difficult. Because both mule deer and white-tailed deer lack upper incisors, deer often leave a jagged or torn surface on twigs or stems that they browse.

Homeowners can be frustrated in keeping these pests away from their trees or garden plants. Scare devices, exclusion and repellents have a place in deer damage control. Initial selection of plantings may provide the best remedy to prevent deer damage.

### Cultural Methods and Habitat Modification

Deer damage to ornamental plants can be minimized by selecting landscape and garden plants that are less preferred (Table 1). MontGuide 9521 AG, "[Deer-resistant Ornamental Plants](#)" also provides suggestions.

In addition to planting tolerant plants, harvesting garden crops as early as possible reduces the period of vulnerability to deer. Planting susceptible crops as far as possible from wooded cover will also reduce deer damage.

### Repellents

Repellents are well suited for use in orchards, gardens and on ornamental plants. High cost, limitations on use, and variable effectiveness make most repellents practical only for certain situations. Repellents are moderately effective for short periods and usually require multiple applications.

"Contact" sprays are applied directly on the plant and repel by taste. These are most effective on trees and shrubs during the dormant season.

"Area" repellents are applied near the plants to be protected and repel by odor. They are usually less effective.

During the winter dormant season, apply contact repellents on a dry day when temperatures are above freezing. Be sure to treat to a height of six feet on trees. The effectiveness of repellents depends on how much it rains and how hungry the deer are. Deer-Away®, Hinder®, Thiram®, Miller's Hot Sauce®, Tankage®, and Ro-pel® are some of the repellents available.  
Tree Protectors

Tree protectors are available to put around tree trunks. Use Vexar®, Tubex®, plastic tree wrap, or woven-wire cylinders to protect young trees. Usually four feet of woven wire cylinders can keep deer from rubbing tree trunks with their antlers.

Exclusion

In some situations exclusion may be the most logical method of preventing deer damage. In backyard gardens, where deer depredation may be a constant challenge, a permanent fence may be cost effective. In orchards and around ornamentals, electric fence may be a solution. Several fencing designs are available to meet specific needs.

### **Permanent Woven-Wire Fencing**

Woven-wire fences are used for year-round protection of areas subject to high deer pressures. These fences are expensive and difficult to construct, but easy to maintain. Woven-wire fences were used most often before the advent of high-tensile electric fencing. Cost, excluding labor, is about \$2 to \$4 per linear foot. The high cost has resulted in reduced use of woven-wire fences.

To build a deer-proof woven-wire fence, follow the steps below.

1. Set rigid corner assemblies where necessary.
2. String a light wire between two corners and apply light tension.
3. Set 16-foot posts along the wire at 40-foot intervals, to a depth of 4 to 6 feet.
4. Roll out an 8-foot roll of high-tensile woven wire along the line posts. Attach one end at ground level to a corner post with steel staples.
5. Apply tension to the wire with a vehicle or fence strainers and attach the wire to line and corner posts with steel staples.
6. Repeat steps 4 and 5 as necessary around the perimeter of the fence.
7. Attach two strands of high-tensile smooth wire to the top of the fence to raise the height of the entire fence to 9 to 10 feet.

## **Electric Fencing**

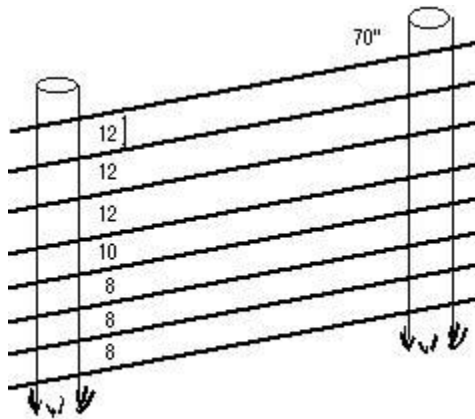
Vertical electric fences are effective at protecting gardens and orchards from moderate to high deer pressures. Because of the prescribed wire spacing, deer either attempt to go through the fence and are effectively shocked or they are physically impeded by the barrier. Vertical fences use less ground space than three-dimensional fences, but are probably less effective at preventing deer from jumping over them. A wide variety of fence materials, wire spacings and specific designs are available. Costs, excluding labor, range from \$0.75 to \$1.50 per linear foot.

To build an 8-wire vertical deer fence (see Figure 1 below), follow the steps below.

1. Install rigid corner assemblies where necessary.
2. String a 12<sup>1</sup>/<sub>2</sub>-gauge high-tensile wire around the corner assemblies and apply light tension.
3. Set 8-foot line posts along the wire at 33-foot intervals.
4. Attach a wire to insulators at 8 inches above ground level and apply tension.
5. Attach the remaining wires to insulators at the spacing indicated in Figure 1 and apply tension.
6. Connect the second, fourth, sixth and eighth wires from the top to the positive (+) post of a well-grounded, low-impedance fence charger.
7. Connect the top, third, fifth and seventh wires directly to ground. The top wire should be negative for lightning protection.
8. Clear and maintain a 6- to 12-foot open area outside the fence so deer can see the fence.

Maintenance includes weekly fence inspection and voltage checks. Applying a molasses-peanut butter mixture to the hot wires using a mop glove will encourage deer to touch the fence with their noses or tongues. This will provide greater repellent effectiveness.

## **Other Methods**



**Figure 1. Multi-wire fence**

Homeowners often come up with ideas that are unique to their situations. Tying a dog near damaged areas or using motion sensing scare devices will sometimes work. The sooner deer are discouraged from damaging your plantings, the more likely they are to stay away.

This information is for educational purposes only. Reference to commercial products or trade names does not imply discrimination or endorsement by the Montana State University Extension Service.

Table 1. Ornamental plants, listed by susceptibility to deer damage.

<b>Plants Rarely Damaged:</b>	
<b>Botanical Name</b>	<b>Common Name</b>
Berberis spp.	Barberry
Berberis vulgaris	Common Barberry
Betula papyrifera	Paper Birch
Burus sempervirens	Common Boxwood
Elaeagnus angustifolia	Russian Olive
Picea pungens	Colorado Blue Spruce
<b>Plants Seldom Severely Damaged:</b>	
<b>Botanical Name</b>	<b>Common Name</b>
Betula pendula	European White Birch
Calastrus scandens	American Bittersweet
Cornus sericea	Red Osier Dogwood
Crataegus laevigata	English Hawthorn
Gleditsia triacanthos	Honey Locust
Juniperus chinensis	Chinese Junipers (green)

Juniperus chinensis	Chinese Junipers (blue)
Picea abies	Norway Spruce
Picea glauca	White Spruce
Pinus nigra	Austrian Pine
Pinus mugo	Mugo Pine
Pinus sylvestris	Scots Pine
Syringa vulgaris	Common Lilac

### Plants Occasionally Severely Damaged:

Botanical Name	Common Name
Abies concolor	White Fir
Acer rubrum	Red Maple
Acer saccharinum	Silver Maple
Acer saccharum	Sugar Maple
Aesculus hippocastanum	Common Horsechestnut
Amelanchier arborea	Downy Serviceberry
Campsis radicans	Trumpet Creeper
Cotoneaster spp.	Cotoneaster
Cottoneaster apiculatus	Cranberry Cotoneaster
Cotoneaster horizontalis	Rockspray Cotoneaster
Hydrangea arborescens	Smooth Hydrangea
Hydrangea paniculata	Panicle Hydrangea
Juniperus virginiana	Eastern Red Cedar
Parthenocissus quinquifolia	Virginia Creeper
Philadelphus coronarius	Sweet Mock Orange
Pinus strobus	Eastern White Pine
Potentilla fruticosa	Bush Cinquefoil
Prunus avium	Sweet Cherry
Pseudotsuga menziesii	Douglas Fir
Pyrus calleryana "Bradford"	Bradford Callery Pear
Pyrus communis	Common Pear
Rhus typhina	Staghorn Sumac
Rosa rugosa	Rugosa Rose
Salix spp.	Willows
Spiraea(x) bumalda	Anthony Waterer Spiraea
Spiraea prunifolia	Bridalwreath Spiraea

<i>Syringa (x) persica</i>	Persian Lilac
<i>Syringa reticulata</i>	Japanese Tree Lilac
<i>Syringa villosa</i>	Late Lilac
<i>Tilia cordata</i> ÔGreenspireÕ	Greenspire Littleleaf Linden
<i>Tilia americana</i>	Basswood
<i>Tsuga canadensis</i>	Eastern Hemlock
<i>Viburnum rhytidophyllum</i>	Leatherleaf Viburnum

### Plants Frequently Severely Damaged:

<b>Botanical Name</b>	<b>Common Name</b>
<i>Abies balsamea</i>	Balsam Fir
<i>Abies fraseri</i>	Fraser Fir
<i>Acer platanoides</i>	Norway Maple
<i>Chamaecyparis thyoides</i>	Atlantic White Cedar
<i>Clematis</i> spp.	Clematis
<i>Euonymus alatus</i>	Winged Euonymus
<i>Euonymus fortunei</i>	Wintercreeper
<i>Hedera helix</i>	English Ivy
<i>Malus</i> spp.	Apples
<i>Prunus</i> spp.	Cherries
<i>Prunus</i> spp.	Plums
<i>Rosa (x) hybrid</i>	Hybrid Tea Rose
<i>Sorbus aucuparia</i>	European Mountain Ash
<i>Taxus</i> spp.	Yews
<i>Taxus baccata</i>	English Yew
<i>Taxus cuspidata</i> is	Japanese Yew
<i>Taxus (x) media</i>	English/Japanese Hybrid Yewborvitae
<i>Thuja occidental</i>	American Arborvitae