

# “DEER-RESISTANT” PLANTS FOR HOMEOWNERS

## AUTHORS:

**Jordan Pusateri Burroughs**

Dept. of Fisheries & Wildlife  
Michigan State University

**Thomas A. Dudek**

MSU Extension, Ottawa County



J. Burroughs, MSU

Damage to ornamental plants by white-tailed deer (*Odocoileus virginianus*) continues to increase. This damage has been associated with:

- Increasing deer abundance.
- Human population shifts to rural and suburban homesites.
- Maturing of abandoned agricultural lands into deer habitat.
- Landowner decisions to prevent deer hunting.
- Restrictions on firearm use in suburban regions.

Deer prefer to feed on certain plant species, including some ornamental plants used for landscaping. Additionally, ornamental plants may be more attractive to deer because they are fertilized and irrigated. Deer avoid feeding on some species of plants because they are less palatable. A technique to reduce deer browsing of landscape plants is to substitute less palatable species of plants for those that deer prefer to eat.

**Though no plants are totally resistant to deer browsing, some are less palatable to deer and are less likely to receive heavy damage.**

Whether deer will eat a particular plant species or variety depends on the deer's previous experience, nutritional needs, plant palatability, seasonal factors, weather

conditions and the availability of alternative foods. Deer are creatures of habit, and prior movement patterns or foraging experience can help predict where damage can occur. New plantings added to an existing landscape already severely damaged by deer will likely suffer extreme browsing pressure.

Deer may sample some less palatable plants until they determine the plants are varieties they do not prefer. Snow cover may prevent deer from finding food, and high deer numbers can create competition for available food, which can cause hungry deer to eat whatever plants are available. Note that unpalatable landscape plants may still incur antler rubbing damage. Only physical protection such as exclusion techniques can reduce or prevent deer antler rub damage to trees and shrubs.

To minimize deer damage, select landscape and garden plants that are less preferred by deer. The following tables provide a guide to the relative likelihood of deer damage to plants used by Michigan landscape contractors and landowners. This information can be useful for both selecting plants that are less likely to be damaged by deer and identifying those ornamentals that frequently require protection. Plants listed as **rarely damaged** are infrequently fed upon by deer and are the best candidates for landscapes prone to deer damage. Deer sometimes feed on ornamentals listed as **seldom severely damaged**, but damage is usually minor and has limited effect on the shape or attractiveness of the plant. The category **occasionally damaged** includes plants that may be severely damaged by deer. Finally, ornamental plants in the **frequently damaged** category appear to be preferred by deer and usually require physical or chemical protection whenever deer are present.

Before planting any of the following plant species, check to make sure that they are adapted to local climate and soil conditions. For additional information, contact your local county Michigan State University Extension office.



Bulletin produced in cooperation with the Michigan State University Department of Fisheries and Wildlife and Department of Horticulture, MSUE Fisheries and Wildlife Area of Expertise Team, Michigan Dept. of Natural Resources and Michigan Natural Features Inventory.

**MICHIGAN STATE  
UNIVERSITY  
EXTENSION**

## PLANTS RARELY DAMAGED

<b>Botanical name</b>	<b>Common name</b>
<b>Perennials</b>	
<i>Achillea</i> spp.	Yarrow
<i>Aconitum</i> spp.	Monkshood
<i>Allium</i> spp.	Onion
<i>Allium christophii</i>	Star of Persia
<i>Allium neapolitanum</i>	Daffodil garlic
<i>Allium ostrowskianum</i>	Lily leek
<i>Anemone x hybrida</i>	Japanese anemone
<i>Anemonella thalictroides</i>	Rue anemone
<i>Aquilegia</i> spp.	Columbine
<i>Arabis</i> spp.	Rockcress
<i>Arisaema thiphylum</i>	Jack-in-the-pulpit
<i>Aubrietia deltoidea</i>	Rock cress
<i>Aurinia saxatilis</i>	Basket-of-gold
<i>Bergenia</i> spp.	Bergenia
<i>Ceratostigma plumbaginoides</i>	Plumbago
<i>Cimicifuga racemosa</i>	Snakeroot
<i>Colchicum autumnale</i>	Colchicum
<i>Colchicum speciosum</i>	Colchicum
<i>Consolida ambigua</i>	Larkspur
<i>Coreopsis verticillata</i>	Threadleaf coreopsis
<i>Cyclamen hederifolium</i>	Neapolitan cyclamen
<i>Dicentra spectabilis</i>	Bleeding heart
<i>Digitalis</i> spp.	Foxglove
<i>Dryopteris marginalis</i>	Wood fern
<i>Echinacea purpurea</i>	Purple coneflower
<i>Epimedium</i> spp.	Barrenwort
<i>Euphorbia</i> spp.	Euphorbia
<i>Fritillaria</i> spp.	Fritillary
<i>Galium odoratum</i>	Sweet woodruff
<i>Gloriosa superba</i>	Glory lily
<i>Hemerocallis 'Stella d'Oro'</i>	'Stella d'Oro' daylily
<i>Lamium maculatum</i>	Deadnettle
<i>Lavandula</i> spp.	Lavender
<i>Linaria vulgaris</i>	Toadflax
<i>Lindera benzoin</i>	Native spicebush
<i>Lychnis coronaria</i>	Rose campion
<i>Matteuccia struthiopteris</i>	Ostrich fern
<i>Narcissus</i> spp.	Daffodil
<i>Osmunda regalis</i> var. <i>spectabilis</i>	Royal fern
<i>Pachysandra procumbens</i>	Allegheny spurge
<i>Pachysandra terminalis</i>	Japanese spurge
<i>Papaver orientale</i>	Oriental poppy
<i>Perovskia atriplicifolia</i>	Russian sage
<i>Rudbeckia</i> spp.	Coneflower
<i>Salvia</i> spp.	Sage
<i>Santolina chamaecyparissus</i>	Lavender cotton
<i>Scilla</i> spp.	Squill
<i>Stachys byzantina</i>	Lamb's ears
<i>Tanacetum vulgare</i>	Common tansy
<i>Thymus</i> spp.	Thyme
<i>Tiarella cordifolia</i>	Foam flower
<i>Yucca</i> spp.	Yucca

### **Botanical name**

#### **Annuals**

<i>Ageratum houstonianum</i>	Ageratum
<i>Anethum graveolens</i>	Common dill
<i>Antirrhinum majus</i>	Snapdragon
<i>Capsicum annuum</i>	Hot peppers
<i>Capsicum frutescens</i>	Sweet peppers
<i>Citrulus lanatus</i>	Watermelon
<i>Cucumis melo cantalupensis</i>	Canteloupe
<i>Cucumis sativus</i>	Cucumber
<i>Hyacinthus orientalis</i>	Hyacinth
<i>Lobularia maritima</i>	Sweet alyssum
<i>Nicotiana</i> spp.	Flowering tobacco
<i>Pelargonium</i> spp.	Scented geranium
<i>Rheum rhabarbarum</i>	Rhubarb
<i>Solanum melongena</i>	Eggplant
<i>Tagetes</i> spp.	Marigold
<i>Tropaeolum majus</i>	Nasturtium

### **Common name**

### **Botanical name**

#### **Ornamental Grasses**

<i>Ravennae</i> grass, hardy pampas grass	
<i>Saccharum ravennae</i>	
Japanese silver grass	
<i>Miscanthus sinensis</i>	'Cabaret'
<i>Miscanthus sinensis</i>	'Cosmopolitan'
<i>Miscanthus sinensis</i>	'Malepartus'
<i>Miscanthus sinensis</i>	'Morning Light'
<i>Miscanthus sinensis</i>	'Strictus'
<i>Miscanthus sinensis</i>	'Variegatus'
<i>Miscanthus sinensis</i>	'Zebrinus'
Switch grass	
<i>Panicum virgatum</i>	'Cloud Nine'
<i>Panicum virgatum</i>	'Dallas Blues'
<i>Panicum virgatum</i>	'Heavy Metal'
<i>Panicum virgatum</i>	'Northwind'
<i>Panicum virgatum</i>	'Shenandoah'
Tall purple moor grass	
<i>Molinia litoralis</i>	'Skyracer'
<i>Molinia litoralis</i>	'Transparent'
Feather-reed grass	
<i>Calamagrostis xacutifolia</i>	'Karl Foerster'
Northern sea oats	
<i>Chasmanthium latifolium</i>	
Fountain grass	
<i>Pennisetum orientale</i>	'Karley Rose'
Japanese grass	
<i>Hakonechloa macra</i>	'Aureola'
Sedges	
<i>Carex morrowii</i>	'Variegata'
<i>Carex oshimensis</i>	'Evergold'
<i>Carex flagellifera</i>	'Toffee Twist'

## PLANTS OCCASIONALLY DAMAGED

<b>Botanical name</b>	<b>Common name</b>
<b>Native grasses</b>	
<i>Andropogon gerardii</i>	Big bluestem
<i>Bouteloua curtipendula</i>	Sideoats grama
<i>Carex muskingumensis</i>	Palm sedge
<i>Carex pennsylvanica</i>	Pennsylvania sedge
<i>Elymus canadensis</i>	Canada wild rye
<i>Koeleria macrantha</i>	Prairie June grass
<i>Luzula multiflora</i>	Woodrush
<i>Panicum virgatum</i>	Switch grass
<i>Schizachrium scoparium</i>	Little bluestem
<i>Sorghastrum nutans</i>	Indian grass
<i>Sporobolus heterolepis</i>	Prairie dropseed
<b>Shrubs</b>	
<i>Buxus sempervirens</i>	Common boxwood
<i>Ilex opaca</i>	American holly
<i>Leucothoe fontanesiana</i>	Drooping leucothoe
<i>Pieris japonica</i>	Japanese pieris
<b>Trees</b>	
<i>Betula papyrifera</i>	Paper birch
<i>Picea pungens</i>	Colorado blue spruce

## PLANTS SELDOM SEVERELY DAMAGED

<b>Botanical name</b>	<b>Common name</b>
<b>Shrubs</b>	
<i>Celastrus scandens</i>	American bittersweet
<i>Cornus florida</i>	Flowering dogwood
<i>Cornus kousa</i>	Kousa dogwood
<i>Cornus sericea</i>	Red osier dogwood
<i>Crataegus laevigata</i>	English hawthorn
<i>Enkianthus campanulatus</i>	Redvein enkianthus
<i>Forsythia</i> spp.	Forsythia
<i>Ilex cornuta</i>	Chinese holly
<i>Ilex glabra</i>	Inkberry
<i>Juniperus chinensis</i>	Chinese junipers
<i>Kolkwitzia amabilis</i>	Beautybush
<i>Pinus mugo</i>	Mugo pine
<i>Salix matsudana tortuosa</i>	Corkscrew willow
<i>Sassafras albidum</i>	Common sassafras
<i>Syringa vulgaris</i>	Common lilac
<i>Wisteria floribunda</i>	Japanese wisteria
<b>Trees</b>	
<i>Betula pendula</i>	European white birch
<i>Fagus sylvatica</i>	European beech
<i>Gleditsia triacanthos</i>	Honey locust
<i>Kalmia latifolia</i>	Mountain laurel
<i>Picea abies</i>	Norway spruce
<i>Picea glauca</i>	White spruce
<i>Pinus nigra</i>	Austrian pine
<i>Pinus resinosa</i>	Red pine
<i>Pinus rigida</i>	Pitchpine
<i>Prunus serrulata</i>	Japanese flowering cherry

<b>Botanical name</b>	<b>Common name</b>
<b>Perennials</b>	
<i>Asparagus officinalis</i>	Asparagus
<i>Campsis radicans</i>	Trumpet creeper
<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Potentilla fruticosa</i>	Bush cinquefoil
<b>Annuals</b>	
<i>Abelmoschus esculentus</i>	Okra
<i>Cucurbita pepo</i>	Squash
<i>Raphanus sativus</i>	Radish
<i>Solanum tuberosum</i>	Potatoes, Irish
<b>Shrubs</b>	
<i>Cornus racemosa</i>	Panicked dogwood
<i>Cotinus coggygria</i>	Smokebush
<i>Cotoneaster</i> spp.	Cotoneaster
<i>Cotoneaster apiculatus</i>	Cranberry cotoneaster
<i>Cotoneaster horizontalis</i>	Rockspray cotoneaster
<i>Cryptomeria japonica</i>	Japanese cedar
<i>Forsythia x intermedia</i>	Border forsythia
<i>Hamamelis virginiana</i>	Common witchhazel
<i>Hibiscus syriacus</i>	Rose of Sharon
<i>Hydrangea anomala petiolaris</i>	Climbing hydrangea
<i>Hydrangea arborescens</i>	Smooth hydrangea
<i>Hydrangea paniculata</i>	Panicle hydrangea
<i>Ilex crenata</i>	Japanese holly
<i>Ilex x meserveae</i>	China Girl/Boy holly
<i>Juniperus virginiana</i>	Eastern red cedar
<i>Ligustrum x vicaryi</i>	Golden privet
<i>Lonicera x heckrottii</i>	Goldflame honeysuckle
<i>Philadelphus coronarius</i>	Sweet mock orange
<i>Pyracantha coccinea</i>	Firethorn
<i>Rhododendron</i> spp.	Deciduous azaleas
<i>Rhododendron carolinianum</i>	Carolina rhododendron
<i>Rhododendron maximum</i>	Rosebay rhododendron
<i>Rhus typhina</i>	Staghorn sumac
<i>Rosa rugosa</i>	Rugosa rose
<i>Salix</i> spp.	Willows
<i>Spiraea x bumalda</i>	Anthony waterer spiraea
<i>Spiraea prunifolia</i>	Bridalwreath spiraea
<i>Syringa x persica</i>	Persian lilac
<i>Syringa villosa</i>	Late lilac
<i>Viburnum x juddii</i>	Judd viburnum
<i>Viburnum carlesii</i>	Koreanspice viburnum
<i>Viburnum plicatum tomentosum</i>	Doublefile viburnum
<i>Viburnum rhytidophyllum</i>	Leatherleaf viburnum
<i>Weigela florida</i>	Old-fashioned weigela
<b>Trees</b>	
<i>Abies concolor</i>	White fir
<i>Acer griseum</i>	Paperbark maple
<i>Acer rubrum</i>	Red maple
<i>Acer saccharinum</i>	Silver maple
<i>Acer saccharum</i>	Sugar maple
<i>Aesculus hippocastanum</i>	Common horsechestnut
<i>Amelanchier arborea</i>	Downy serviceberry
<i>Amelanchier laevis</i>	Allegheny serviceberry

**Botanical name**  
**Trees (continued)**

*Chaenomeles speciosa*  
*Larix decidua*  
*Magnolia x soulangiana*  
*Metasequoia glyptostroboides*  
*Pinus strobus*  
*Prunus avium*  
*Pseudotsuga menziesii*  
*Pyrus communis*  
*Quercus alba*  
*Quercus prinus*  
*Quercus rubra*  
*Syringa reticulata*  
*Tilia cordata* 'Greenspire'  
*Tilia Americana*  
*Tsuga canadensis*  
*Tsuga caroliniana*

**Common name**

Japanese flowering quince  
 European larch  
 Saucer magnolia  
 Dawn redwood  
 Eastern white pine  
 Sweet cherry  
 Douglas fir  
 Common pear  
 White oak  
 Chestnut oak  
 Northern red oak  
 Japanese tree lilac  
 Littleleaf linden  
 Basswood  
 Eastern hemlock  
 Carolina hemlock

**PLANTS FREQUENTLY  
DAMAGED****Botanical name**  
**Perennials**

*Aegopodium podagaria*  
*Aquilegia* spp.  
*Athyrium niponicum* var. *pictum*  
*Syringa reticulata*  
*Clematis* spp.  
*Euonymus fortunei* var. *coloratus*  
*Euonymus fortunei* 'Kewensis'  
*Fragaria* spp.  
*Hedera helix*  
*Hemerocallis* spp.  
*Hosta* spp.  
*Iberis sempervirens*  
*Lilium* spp.  
*Polygonatum biflorum*  
*Trillium* spp.  
*Tulipa* spp.  
*Vinca minor*

**Common name**

Bishop's weed  
 Columbine  
 Japanese painted fern  
 Wallflower  
 Clematis  
 Wintercreeper euonymus  
 Wintercreeper  
 Strawberries  
 English ivy  
 Daylily  
 Hosta  
 Candytuft  
 Lily  
 Solomon's seal  
 Trillium  
 Tulips  
 Periwinkle

**Annuals**

*Beta vulgaris*  
*Brassica oleracea*  
*Brassica oleracea botrytis*  
*Brassica oleracea capitata*  
*Brassica oleracea italica*

Beets  
 Kohlrabi  
 Cauliflower  
 Cabbage  
 Broccoli

**Botanical name****Annuals (continued)**

*Brassica rapa*  
*Daucus carota sativa*  
*Helianthus* spp.  
*Ipomoea batatas*  
*Lactuca sativa*  
*Matthiola incarna*  
*Pelargonium* spp.  
*Phaseolus* spp.  
*Pisum sativum*  
*Ranunculus asiaticus*  
*Spinacia oleracea*  
*Viola* spp.  
*Zea mays*

**Common name**

Turnip  
 Carrot  
 Sunflower  
 Potatoes, sweet  
 Lettuce  
 Stock  
 Geranium  
 Beans  
 Peas  
 Buttercup  
 Spinach  
 Pansies & violas  
 Corn, sweet

**Shrubs**

*Chamaecyparis thyoides*  
*Euonymus alatus*  
*Rhododendron* spp.  
*Rhododendron* spp.  
*Rhododendron catawbiense*  
*Rhododendron periclymenoides*  
*Rosa x hybrid*  
*Taxus* spp.  
*Taxus baccata*  
*Taxus brevifolia*  
*Taxus cuspidate*  
*Thuja occidentalis*

Atlantic white cedar  
 Winged euonymus  
 Rhododendrons  
 Evergreen azaleas  
 Catawba rhododendron  
 Pinxterbloom azalea  
 Hybrid tea rose  
 Yews  
 English yew  
 Western yew  
 Japanese yew  
 American arborvitae

**Trees**

*Abies balsamea*  
*Abies fraseri*  
*Acer platanooides*  
*Cercis canadensis*  
*Cornus mas*  
*Malus* spp.  
*Prunus* spp.  
*Prunus* spp.  
*Sorbus aucuparia*

Balsam fir  
 Fraser fir  
 'Crimson King' maple  
 Eastern redbud  
 Cornelian cherry dogwood  
 Apples  
 Cherries  
 Plums  
 European mountain ash

Tables based on text by M.J. Farglone, P.D. Curtis and M.E. Richmond. 1991. Resistance of woody ornamental plants to deer damage. Ithaca, N.Y.: Cornell Coop. Ext. with information from Dr. Arthur Cameron, MSU Department of Horticulture.

**PLEASE REMEMBER:**

**Under some conditions, deer may eat unpalatable or "deer-resistant" plants — no plant species will be avoided by deer under all conditions.**

