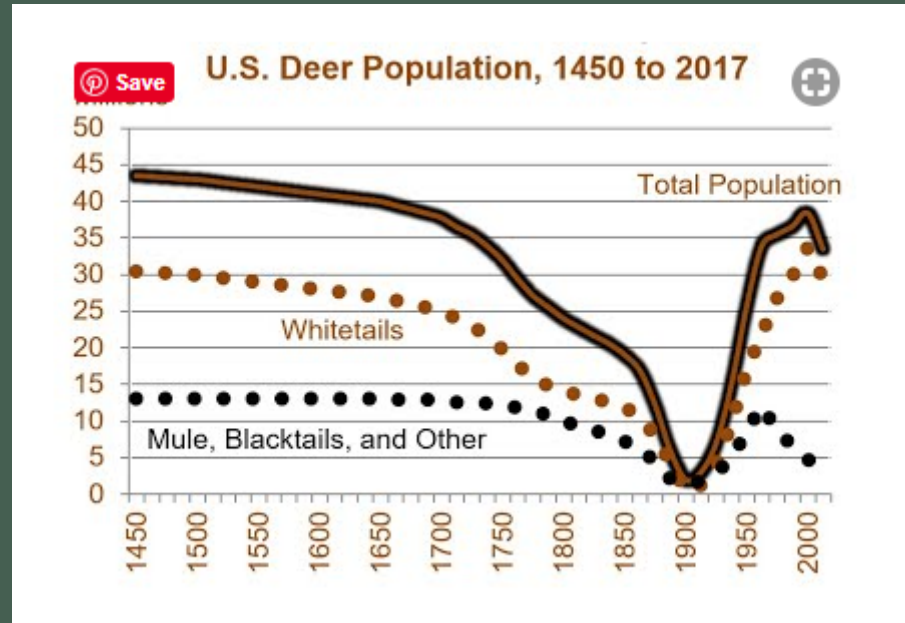




# DEERPROOFING

Your Yard & Garden

# Deer population today: >30 million white-tail



# How much do deer eat?

- Deer eat about 7 lb per day, or 3,000 lb per year
- A healthy deer density is 18 – 30 deer per square mile
- Problem herds are 100 deer per square mile or more
- Lawns, landscaping attract deer when food is not abundant

# Deer Behavior

- Most deer damage happens at night, but they will feed anytime they are hungry on a wide variety of plants.
- No plants are absolutely deer-proof!
- They love to browse on evergreen shrubs, like Arborvitae and yew, rhododendrons, winter creeper, holly and false cypress, Japanese maples, roses, and heucheras.



# Deer Behavior

- In spring and summer, they seek out lush plants like tulips, hosta, and daylilies.
- In late summer, bucks will seek out trunks of woody plants that are 2" wide or less to rub off their antler velvet, often leaving lasting scars.



# Deer diet: January to March

- Coniferous browse
- Deciduous bark & dry leaves
- Acorns and other nuts
- Winter fruits such as rose hips, sumac, & poison ivy (4 to 5 lbs/day)

# Deer diet: April to June

- Herbaceous plants & grasses followed by buds & shoots of shrubs & trees (7 to 10 lbs/day)



# Deer diet: July & August

- Herbaceous vegetation
- Young leaves
- New growth of shrubs and trees
- Gardens





# Deer diet: September to December

- Soft (fruits) & hard (nuts)
- Bramble leaves
- Mushrooms
- Gardens



# Not always typical

- Deer will attempt to eat almost anything if their population is high and they are running out of food. That happens most often in times of drought or near the end of a colder-than-normal winter.”
  - Scott Aker, horticulturist, U.S. National Arboretum.

# Deer behavior

- Creatures of the forest edge
  - They need new lush growth found in open areas
- Whitetail deer with ample forage stay close to the same location
  - May only venture a mile or two distant in their lifetime!
- Mule deer migrate a bit more



# Why do deer prefer tender grasses and herbaceous plants, buds, leaves, and new growth of shrubs and trees?

- *Deer have incisors only on the bottom, so they pull/pinch rather than cut their forage. Their bottom incisors impact on upper pad of cartilage. They also recognize the nutritional value of fertilized vegetation*



# Best Protection: Fencing

- Best to build it before deer realize you have something worth protecting inside!
- Creatures of habit
- No gaps! 12" gap will let a deer pass



A fence with a hole is no fence at all!



# Best Protection: Fencing

- High electric fences are also effective (7' or more)
  - Baiting
- Double fences
- Slanted fencing (Vermont deer fencing)
- Fishing line (invisible)
  - Works until it doesn't!



# Electric fencing



- Relatively inexpensive
- They teach the deer to avoid the area
- Can be permanent or temporary
- Solar powered chargers work well
- You must keep the grass and weeds away from the wire
- Baited electric wire often uses just one strand





# Training your resident deer with electric fencing

- "Scented" electric fence

	<p>Fence Connectors and Accessories</p> <p><b>Scent Caps</b></p> <p>Item #256300 - <i>In Stock</i></p> <p>Use scent caps as a method to attract deer and other wildlife to a fence. To be used as an aid to train animals that the fence is energized.</p>	<p>\$0.69</p> <p>QTY: <input type="text" value="1"/></p> <p><b>ADD TO CART</b></p>
	<p>Fence Connectors and Accessories</p> <p><b>Apple Scent, 4 oz. bottle</b></p> <p>Item #256404 - <i>In Stock</i></p> <p>Apply to scent caps on electric fences to entice deer to test out fences around gardens, sweet corn patches and vineyards.</p>	<p>\$6.90</p> <p>QTY: <input type="text" value="1"/></p> <p><b>ADD TO CART</b></p>

# Why scent caps?

- Scent caps are metal pop bottle caps with cotton inside them and a strand of soft wire for wrapping around rope.
- The apple scent is concentrated liquid inside a squeeze bottle with a lid that enables precise drop-by-drop application of liquid.
- Experience has shown that scent caps are a critical element in providing deer with negative experiences from electric fences.
- The apple scent entices deer to touch the metal caps, and they receive a strong shock through their sensitive noses. Peanut butter also works but it's not as easy to apply.
- Deer are very sensitive to smell. One every 50 ft in heavy traffic areas and every 100 ft with less traffic.

# Training your resident deer with electric fencing

- Electric shock is a strong deterrent. Like cattle, deer can be trained to respect even just one line of electric fence.
- It's best to start with a more formidable barrier, like 3 strands.
- It's best to train them to avoid an area BEFORE you have luscious feed in that area!
- Start with a smaller exclusion and gradually guide them where you want them
- Have an escape path or a dedicated path for them



# Training your resident deer with electric fencing

- Start with a smaller exclusion and gradually guide them where you want them
- Have an escape path or a dedicated path for them
- 3D Scented 3 to 5 strand permanent fencing uses 2 electric fences placed 3 feet apart
- Poor depth perception makes them hesitant to jump without a good landing site



# Electric netting with built-in posts

\$234 for 82' long roll; also needs an energizer. Lasts for many years.

## PermaNet® 12/68/6 Electric Netting

The tallest 68" electric wildlife exclusion nets available.  
Protects gardens/orchards from deer, wildlife and livestock.  
Less costly, less prone to sagging and much easier to install  
and remove than 19/68/3 but it won't stop small animals.

- 12 horizontal strands
- 68 in. tall
- String verticals every 6 in.
- Posts (built-in) every 8 ft., .75" dia.
- Post spikes (DS): .31" dia., 7" long.



# Deer Blocker Deer Fence (Nixalite)

- Durable polyethylene mesh
- 175 lb tensile strength
- Heavy border on all sides
- 2.5" squares
- Nearly invisible in the landscape
- 8' high, 100 – 300 ft rolls
- \$199 for 100 ft roll



# Standard deer fencing

- At least 8 feet tall
- Constructed of woven wire with openings up to 6 inches square
- You will need 12' posts as they should be buried 3' to 4' deep
- Expensive but durable
- \$2 to \$4 per linear foot



# Slanted deer fencing

- A slanted fence does not have to be as high as a standard 8' deer fence
- Usually a 4' high fence with an overhang strung with wires is sufficient
- Deer can't jump both high and wide
- You can use high tensile electric fence for an extra deterrent.





# Fishing line fencing

- 15-lb test weight is best
- Try to make it as invisible as possible,  
as that is what scares the deer
- This example was strung at 1-ft., 2-ft., 3-ft., 4-ft., and 5-ft heights.
- Lasted for 5 years, with minimal repairs, before the deer quit being repelled by it.



# Plastic deer netting, 8' high

- Inexpensive, effective, easy to install
- To keep the mesh from sagging, run a taut wire at the top of the posts, and attach it to the mesh to support it.
- Mesh can also be attached to trees



# Wire or plastic

## Variety of materials:

- metal wire (most durable and most expensive),
- polyethylene-coated metal (expensive, but more attractive)
- polypropylene (least expensive, less durable, but less visible).



# Heavy duty plastic mesh

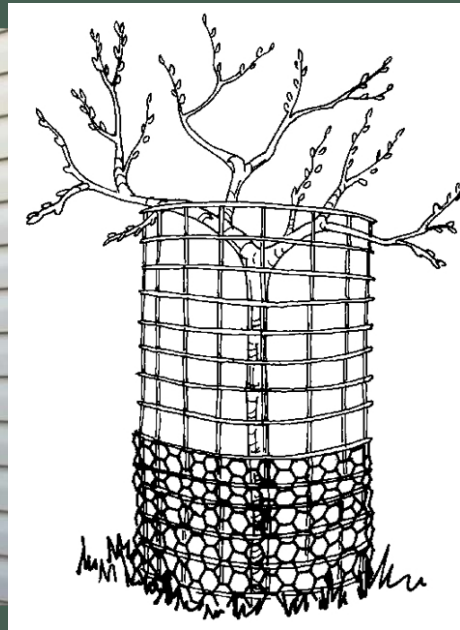
- 15-year life
- 330' by 8'
- Reinforced bottom
- \$335 (about \$1 per foot)



# Partial enclosures for trees & shrubs



Wrap your shrubs with burlap, tarps or plastic for the winter.



Tree enclosures should be at least 5 ft' high.



Cages can be purchased or made from netting.

# Multi-purpose protection from deer, birds, rabbits, etc.


Bird netting

**Gardeners** A.M. Leonard's **EDGE**™

Cart (0 Items \$0.00)

Gardening Landscaping Outdoor Living Brands **New Arrivals** Today's Deals

Home / Easy Net Tunnel, Giant Size



**Easy Net Tunnel, Giant Size**

☆☆☆☆ No Reviews [Be the first to review this product](#)

f t p G+ ✉

<b>Price</b>	Item #	GNT5020
<b>\$29.99</b>	Ship Weight	4.00 lbs
	Stock Status	In Stock (16) ©

- 1 + **Add to Cart**

**Provides shading against strong sunlight, conserves moisture, and protects from insects, birds, and animals.**

Quick and easy to use, Easy Tunnels are manufactured as a 1-piece design that opens like an accordion and folds neatly away after use. They have open and closable drawstring ends for variable ventilation or completely closed protection. Easy to install over existing plants! Simply expand and push hoops into the soil to anchor.



# Blueberry cage with netting



# Deer repellants

- Use them early, before the deer get accustomed to browsing your plants!
- May work to keep deer out of your yard (and in your neighbors) until your neighbor starts to use them also!
- May not work if the deer are hungry enough.
- Most will need to be re-applied, especially if it's rainy.
- Example: Liquid Fence: Ratio: 10:1
  - Main ingredient: rotten eggs! Sulfurous smell makes the deer think there is rotting meat in the area, and hence a predator.



## Liquid Fence® Deer and Rabbit Repellent Concentrate - 2.5 gal

[Be the first to review this product](#)

**\$258.99**

**In stock**

SKU#: 00651124701238



# Deer repellants

- One university study concluded that egg-based repellants worked better than urine or blood-based products
- Bobbex Deep Repellent worked best, with 93% protection
  - fish meal, hot pepper, putrid eggs, dried blood, wintergreen oil and more
- Soap-based Hinder was the runner-up
  - 83 percent protection.
  - Less expensive and easier to use
- Both products were applied every two weeks according to label directions.



# Deer repellants

- Deer Out has a minty smell, all natural ingredients
  - \$200 for 2.5 gallons, which treats 10,000 square feet
  - Resistant to rain
  - Claims a 3-month residual
- Deer (and Rabbit) Scram
  - \$110 for 35 lb; \$16 for 2 lb
  - Protects up to 32,460 ft
  - Granular, not bothered by rain or irrigation
  - Re-apply monthly in summer, 45 – 60 days in fall or spring, 90 days in winter
  - Organic, biodegradable, not harmful to pets
  - Contains blood solids, garlic, cloves, meat meal

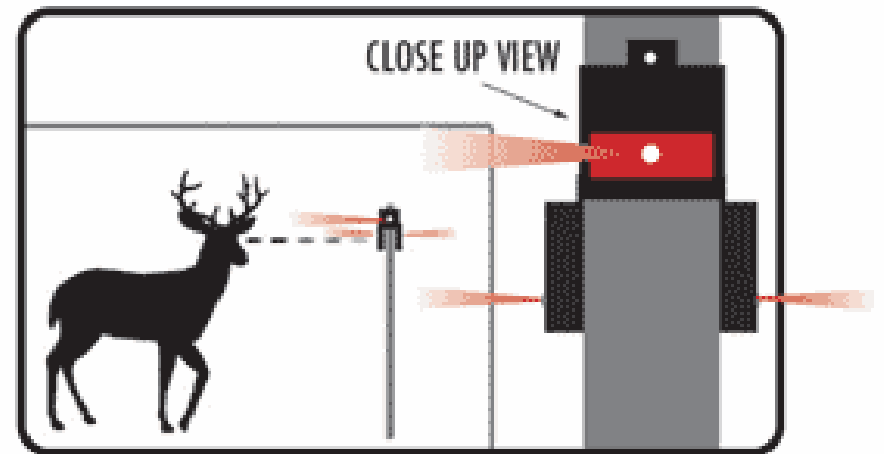


# Deer repellants: home-made

- Not pleasant, no guarantees on effectiveness
- Rotten egg spray
- Pepper spray
- Granular: sprinkle chili powder
- Deodorant soap bar pieces
- Human hair
- Urine soaked jeans

# Deer deterrants: other

- Motion-sensor lights and sprinklers
- Loud sounds, propane canons
- Radios, especially talk radio
- Plastic or holographic tape
  - Nite Guard tape used in conjunction with four solar lights
- Do NOT use mothballs!
  - toxic to children & wildlife



# Flashing red light at night only

## HOW DO NITE GUARD SOLAR LIGHTS WORK?



\$19.95  
3-year life

# Dogs as deer repellants



- Most damage is done at night, so dogs must be out at night!
- Herding dogs might be best!
- Invisible fence could be used to keep dogs within the vulnerable area
- My 4' yard fence with this dog inside did not work
  - Deer can quickly do a lot of damage!

# Strategy: Choose plants deer do not like!

- Annuals: Marigolds, sweet alyssum, salvia
- Garden plants: mint, parsley, sage, fennel, garlic, onions



# Strategy: Choose plants deer do not like!

- Perennials: Daffodils, hyacinths, columbine, ferns, epimedium, yarrow, monkshood, foxglove, lavender, peonies, and iris
- Trees and shrubs: Bottlebrush buckeye, sweetshrub, Virginia sweetspire, Japanese kerria, and rugosa rose





# Plants deer love: avoid these!

- Beans
- Blackberries
- Broccoli & cauliflower
- Lettuce
- Peas
- Raspberries
- Strawberries
- Sweet corn



# Flowers deer love: avoid these!

- Chrysanthemums
- Daylilies
- Geum
- Hosta
- Spring bulbs
- Trillium
- Tulips



# Shrubs deer love:

- Azaleas
- Rhododendrons
- Clematis
- Korean lilac
- English ivy
- Hybrid tea roses
- Burning bush
- Winter creeper



# Trees deer love:

- American arborvitae
- Fruit trees
- Balsam fir
- Yew trees
- Eastern redbud
- Mountain ash
- Fraser fir
- Norway maple
- Dogwood



# Deer-resistant flower 1



Daffodil (*Narcissus*  
*spp.*)

## Deer-resistant flower 2



Bleeding Heart  
(*Dicentra* spp.)

## Deer-resistant flower 3



Peony (*Paeonia  
lactiflora*)

## Deer-resistant flower 4



Lily-of-the-Valley  
(*Convallaria majalis*)



## Deer-resistant flower 5



Moss Phlox, Moss-  
Pink (*Phlox  
subulata*)

“Pull & spit”

Native\*

Native\* = Listed in *Native Plants  
for Wildlife Habitat and  
Conservation Landscaping:  
Chesapeake Bay Watershed*,  
U.S. Fish & Wildlife Service (2005  
ed.)

## Deer-resistant flower 6



Hardy Orchid,  
Chinese Ground  
Orchid (*Bletilla  
striata*)

## Deer-resistant flower 7



Garden Pinks (*Dianthus plumarius*)

## Deer-resistant flower 8



Stella d'Oro Daylily  
(*Hemerocallis 'Stella  
d'Oro'*)

Deer eat most hybrid  
daylilies & all other  
lilies (*Lilium* spp.)

# Deer-resistant flower 9



Siberian Iris (*Iris sibirica*)

# Deer-resistant flower 10



Red Hot Poker, Torch  
Lily, Tritoma (*Kniphofia*  
spp.)

# Deer-resistant flower 11



Lavender  
(*Lavandula* spp.)

## Deer-resistant flower 12



Salvia (*Salvia* spp.)



# Deer-resistant flower 13



Beardtongue,  
Foxglove  
(*Penstemon  
digitalis*)

Native

# Deer-resistant flower 14



Rose Campion  
(*Lychnis coronaria*)

# Deer-resistant flower 15



Daisy (*Chrysanthemum*  
spp.)

# Deer-resistant flower 16



*Allium* (*Allium* spp.)

Many colors and heights; mostly late-spring bloomers

# Deer-resistant flower 17



Butterfly Weed  
(*Asclepias tuberosa*)

Native

# Deer-resistant flower 18



Blazingstar,  
Gayfeather  
(*Liatris spicata*)

Native

# Deer-resistant flower 19



Threadleaf  
Coreopsis  
(*Coreopsis  
verticillata*)  
Native



## Deer-resistant flower 20



Blanket flower  
(*Gaillardia* spp.)



# Deer-resistant flower 21



Lamb's Ear  
(*Stachys  
byzantina*)

# Deer-resistant flower 22



*Achillea millefolium* 'Cerise Queen'

Yarrow (*Achillea* spp.)



# Deer-resistant flower 23



Russian Sage  
(*Perovskia* spp.)

# Deer-resistant flower 24



Spotted Mint,  
Horsemint, Spotted  
Bee-Balm (*Monarda  
punctata*)



## Deer-resistant flower 25



Goldenrod  
(*Solidago* spp.)

Native

Does NOT cause  
hay fever

## Deer-resistant flower 26



Sweet Autumn  
Clematis  
(*Clematis  
terniflora*)

# Deer-resistant flower 27



Fountain Grass (*Pennisetum setaceum*)

## Ornamental grasses



Blue Fescue (*Festuca glauca* 'Elijah Blue')

# Deer-resistant shrub 1



Boxwood (*Buxus sempervirens*)



## Deer-resistant shrub 2



Lilac (*Syringa* spp.)

*Syringa vulgaris* 'Sensation'

## Deer-resistant shrub 3



Heather (*Calluna* spp.)

## Deer-resistant shrub 4



'Pink Delight'

Butterfly Bush  
(*Buddleia davidii*)

Some varieties  
considered  
invasive or  
"noxious weed"

# Deer-resistant trees 1



*Juniperus chinensis* 'Sea Green'

Junipers (*Juniperus*  
spp. )



*Juniperus squamata* 'Blue Star'

# Deer-resistant trees 2

Spruces (*Picea* spp.)



*Picea pungens* aka Colorado Blue Spruce



*Picea pungens* 'Montgomery'

# Protect shrubs & trunks of young trees from fall “rubbing”

Bucks remove dead “velvet” and polish their new antlers in October and November by using trunks of young trees and branches of shrubs

If the buck rubs through the bark all around a trunk, the tree may die



Deer love sumac—cage failure.

# More examples of rubbing



Redosier Dogwood (*Cornus sericea*)



Smooth Sumac (*Rhus glabra*)

Protect trees below "browse line,"  
about 5' from ground to lower limbs







## Black gum (Tupelo) with trunk protector and cage to browse line

Use welded wire (2" x 3"), not plastic mesh or chicken wire, plus two stakes, both preferably iron, to protect to browse line. Hang wire high enough for your mower to clear.

Trunk protector can be hardware cloth, plastic, even plastic stake or rebar.

# Conventional wisdom about food preferences

1. Deer avoid toxic plants – Daffodil
2. Deer avoid fuzzy-leaved plants – Lamb's Ear
3. Deer avoid aromatic herbs – Spotted Mint
4. Deer avoid strong-tasting plants – Allium
5. Deer avoid prickly-leaved plants – Spruce
6. Your local deer may ignore conventional wisdom and may not read lists of deer-resistant plants, so experiment and see what works in your yard

# Deer-o-scaping

- Make the entries to your property uninviting to deer
  - Plants deer hate, like yarrow, marigolds
- Keep edges of property uninviting as well
- Interplant deer repellent plants with other plants
- Provide no view—deer like a clear view of the territory
- Eliminate unnecessary cover like tall grass
- Pick up rotting fruit, other attractants
- Provide no landing site
- Provide feed elsewhere

**No Deer  
Allowed!**



## Summary

1. Install a fence.
2. Plant resistant varieties.
3. Plan your landscaping to deter deer.
4. Use a dog to chase deer out of the yard.
5. Spray repellents persistently.
6. Protect shrubs & young trees up to the “browse line” (about 5' +).

The End

Kate Painter, PhD  
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# Resources/Sources:

- Gardening in Deer Country, by Bob Nixon (powerpoint, U of Maryland Extension)
- Deer Proofing Your Yard and Garden, by Rhonda Massingham Hart, Storey Books
- <https://forestry.usu.edu/news/utah-forest-facts/preventing-deer-damage-to-your-trees-and-shrubs>
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