

# **Deer Repellents and Urban Deer Management**

## **Acknowledgement**

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## **Deer Repellent Strategies**

### **Repellents - odor-producing**

Deer, like most mammals, use their sense of smell to assess situations. There are commercially available repellents that can be used to ward off deer and other animals from a given area. Most contain a variety of odor-producing substances such as:

- putrescent egg solids
- garlic
- ammonium soaps of fatty acids

Odor-producing repellents usually come in liquid or powder form and are sprinkled or sprayed around the perimeter of backyard plantings, vegetable gardens, and so forth. By applying these products you create a virtual fence of scents that discourage deer and other animals from entering the area.

### **Repellents - bad-tasting**

Deer also use their sense of taste to determine whether something is edible. Taste repellents are designed to deter a deer from consuming the most palatable parts of plants. These products are generally liquids designed to be sprayed directly onto plants.

In spring this should include new growth, such as green succulent shoots and the flowers of ornamental plants, as well as buds and outer branches of woody trees and shrubs. In autumn treatment should include the last season or so of growth in woody trees and shrubs. New growth is the most palatable and easiest for the animals to chew and digest.

Active ingredients in these repellents includes:

- Thiram - a bitter substance also used as a fungicide
- Bitrex - another bitter-tasting substance
- Capsaicin - a chemical found in the oils of hot peppers

### **Considerations**

For both odor and taste repellents, follow the label guidelines for mixing, concentration, and the time and frequency of application. Weather conditions, such as sub-freezing temperatures, rain and snow, and general weathering over time will all affect the efficacy of these products. Reapplication is necessary as the chemicals breakdown over time.

These products are deterrents, not wholesale preventatives. They will not completely eliminate "browse" damage caused by deer. Applications should be made before or at the beginning of the season when deer are browsing for plants. This is the time when plants emerge and being spring growth, during summer and fall when fruits are developing, and in fall and winter when the only available food consists of woody branches.

"Taste" repellents should not be sprayed on any part of a plant you intend to eat, such as the plant's fruit, or edible leaves. These repellents are management tools, and in no way guarantee deer won't eat your outside plantings. If hungry enough, deer will tolerate foul smells and bitter tastes to avoid starving!

### **Deer-proof Plantings**

First off, there is no such thing as a "deer-proof" plant! Deer have a varied diet, consisting of fungi, flowering plants, grasses, crops, woody stems, fruits, nuts, and seeds. Some plants have developed chemical responses to animal feeding. These plants create bad tastes or foul odors in their stems and leaves that deter animals from feeding on them. Plants like spruce and pine that produce aromatic compounds tend to be less preferred by deer than other plants, because the aromatics interfere with the animal's digestion.

In general, several groups of plants are less-preferred by deer, including those in the Dogwood family, and the Honeysuckle family. You should avoid planting the non-native Honeysuckle (the bush Honeysuckle group) since it is invasive.

### **Some Final Considerations**

Deer are ecological generalists, meaning they are a lot like us. They are adaptable and can change their behavior depending on their circumstances. No single strategy for managing deer is likely to work well over the long run. A multi-pronged approach is going to be more effective. Fencing around larger plantings is an effective way to exclude deer, but it has a higher upfront cost.

The links below contain more information. Both links will take you away from our web site and open pages on the respective organizations' sites.

#### **Iowa State Extension Services:**

<http://www.extension.iastate.edu/wildlife/CommonQuestions/WildlifeGarden.htm>

#### **Iowa State Extension Publication PM1302G:**

<http://www.extension.iastate.edu/Publications/PM1302G.pdf>