



Reducing Deer Browse Damage Job Sheet

Planning Guidelines

January 2008

Natural Resources Conservation Service (NRCS) - Minnesota

Background

Deer have the potential to destroy a stand of newly planted woody seedlings to the detriment of the practice and conservation efforts. Failed practices not only harm environmental benefits they also waste scarce funding and resources.

Deer depredation creates gaps in windbreaks, slows the growth of plants for erosion control and reduces wildlife habitat quality. For the plants, deer depredation creates multiple leaders and weak branching, increases susceptibility to frost damage, insects and disease infestations, and causes slower growth and mortality.

Before initiating a deer browse control plan, make sure the damage is actually caused by deer depredation or the potential for deer browse damage has been assessed.

Purpose

Developing a deer browse control plan will monitor and measure deer depredation pressure before planting in a known troublesome area to help develop a system of techniques and methods to control deer herd movement and reduce browse pressure. It is important to understand deer feeding behavior to be able to develop an effective browse control plan.

If following a deer browse control plan reduces feeding pressure 30 to 50 percent and the newly planted stand meets practice standard requirements or program requirements, then success has been achieved. No system, method or technique will reduce deer depredation 100 percent.

Deer Feeding Behavior

Behavior that deer exhibit while feeding include tolerating bad taste or smells, colored strobe lights, sirens and loud noises. A motivated deer can jump up to 12 feet vertically or 30 feet horizontally, but not high and far at the same time. Deer are more likely to jump fences in woodland than in grasslands. They learn to pull off bud caps. They can crawl through holes as small as 7.5 inches in diameter.

Feeding behaviors that can be used to control depredation include: following customary paths to known food sources, and spending the least amount of energy looking for food.

Lack of food sources will cause extreme behaviors in looking for sustenance. The hungrier the deer the more vulnerable the plant, even if it is typically an undesirable food source. Drought, flood, deep snows, barriers to migration routes and over population or competition from other browsers are typical environmental stressors that may lead to severe browse damage particularly where newly planted seedlings or young saplings present a smorgasbord for stressed deer.

Where Used

Use this job sheet when designing a deer browse control plan for USDA cost-share programs as appropriate. Practices such as Tree/Shrub Establishment, Code 612 (protecting new stands of seedlings); Upland Wildlife Habitat Establishment, Code 645 (food plots); Hedgerow Planting; Code 422 (food, cover and corridors), Fence, Code 382 (exclusion) or Use Exclusion, Code 472, may be eligible for cost-share.

Deterrent Methods

There are basically 6 deterrent methods for controlling deer depredation: replanting, exclosures, avoidance, undesirability, availability and elimination. Each has its own advantages and disadvantages and most work best within a system. Rarely will one method or technique work well alone over a period of time. The level of protection depends on the value of the planting and the intensity of browse pressure. Contact the local MNDNR office to help measure and monitor deer depredation pressure.

Replanting

If a cost-shared program or practice planting fails, replanting is required. Replanting is most effective if the damaged area is small, there is overall low browse pressure and the plants are inexpensive. However, replanting, *by itself*, without supplementing with another technique, method or practice will again fail if the conditions for the deer browse continue to exist. Use NRCS Conservation Practice Standard Tree/Shrub Planting, Code 612 to replant failed practices.

Bud Caps / Netting

A lot of discussion surrounds the use of bud caps in Minnesota. In some locations they are

effective and in others ineffective because the deer have learned to pull them off or eat them along with the terminal bud. Bud caps are used only in conifer plantings, only on the terminal bud. Use them in small areas where appearance is not a concern and browse pressure is low. They are most effective at the time of spring or fall migration where small herds are spending only a short time in any one location. Use Pest Management Practice Standard, Code 595 to implement this method.

If the value of the planting is high, a large area involved and deer feeding is heavy then the installation of fencing may be worth the expense. Fences can be temporary or permanent and they must be high enough to deter deer from jumping them, in the range of 6 to 12 feet high. Fencing materials include wire mesh, chain link, high-tensile, barbed wire, metal or wood posts with polytape or polyrope, (closed) gates, and electrical supplies such energizers,

Chemical Repellents

An increasingly popular method to repel deer is the use of commercial and non-commercial chemical repellents. These come in the form of sprays, pellets, scent packets or capsules. Chemical repellents are used for temporary

Deer Browse Control Plan

Availability

- Practice: Upland Wildlife Habitat Management, Code 645
Method: Establish food plots for alternative feeding areas
- Practice: Hedgerow Planting, Code 422
Method: Provide alternative food, and cover or corridors

Avoidance/Undesirability

- Practice: Pest Management, Code 595
Method: Repellent
Choose One: Plantskydd
 Deer Away (powder)
 Other (Explain):
- Practice: Tree/Shrub Establishment, Code 612
Method: Plant less desirable woody species

Elimination (Contact DNR)

Explain:

Possible outcomes

For each method used above, explain the possible outcomes or consequences both positive and negative including risk to non-target species.

Attach explanation/consequences on separate paper.

List proposed species:

Considerations

Ecological:

Economic:

Social:

Implementation Strategy

Sequence of application and timing of each practice/method (may substitute conservation/stewardship plan):

List of materials, equipment, amounts, permits (may substitute practice standard or specifications)

Results

Monitor effectiveness

Plant condition Less browse damage No change More browse damage
% reduction: % increase:

Deer population Lower No change Higher

Off-site Effects (Ecological Impacts):

Deer Browse Control Plan

Please attach an aerial view, or, if needed, an aerial photo showing the treated acres or planned treatment areas.

Additional Specifications and Notes or Drawing:

