



MANAGING BRUSH FOR WILDLIFE

FOREST STEWARDSHIP MANAGEMENT NOTE #26

INTRODUCTION

Although the term "brush" often has negative connotations, brush provides important habitat for many kinds of wildlife. Brushpiles provide escape cover from predators, shelter from harsh weather, and nesting and denning sites for birds and mammals, especially rabbits. Where naturally occurring cover is scarce, landowners should consider building brushpiles.

Areas of live brush are also important for many wildlife species in terms of food and cover. Many shrubs produce fruits (e.g., nuts, seeds, berries) that wildlife use, and the many small animals (e.g., insects, rodents) that live in brushy areas are also an important food source for larger wildlife. If wildlife diversity is a goal, management practices that maintain some brushy areas should be included in most land stewardship plans.

This Note summarizes recommendations for building brushpiles and for managing brushy habitat. Sources of further information are listed.

BRUSHPILE CONSTRUCTION

1. DEAD BRUSH PILES - According to the SIP Standards & Specifications Manual (#4), brushpiles for cottontail rabbits should be constructed as follows:

Height: 4-6 feet

Base Width: minimum of 12 feet

Distance Apart: 150-600 feet

Density: minimum of 2-3 piles per 10-20 acres

Locate Adjacent to: field and woodlot edges, marshes, fencerows, food plots, creeks, waterways, and preferably in lowlands and on hillsides with a southern exposure.

Bottom Layers: Long, coarse (4" and larger diameter) branches criss-crossed and spaces 4-6" apart in each layer. Optionally, 6-8" round tile drainpipes or square wooden box tunnels can be included for additional protection from the weather.

Top Layers: Finer branches.

Piles must be dense enough to limit predators and to provide shelter during bad weather and be loose enough around of edges to provide easy access for escaping animals. Other sources (#1-3,5,6) give additional recommendations for rabbits and other species:

- * Do not locate brush piles away from other cover.
- * Brush piles can be constructed any time of year, but those built of freshly cut brush during the dormant season will provide food for rabbits (i.e., bark) as well as cover.
- * Cottontails prefer brush piles built from deciduous trees over those built from conifers.
- * Anchor finer brush in upper layers with occasional larger limbs.
- * Extend smaller brush beyond the base logs to screen out predators.
- * Use rot-resistant woods, such as oak or locust on the bottom.
- * Use stumps, old fenceposts, large stones, scrap metal and machinery, old tires, etc. on the bottom to create cavities and slow down rotting of the upper layers.
- * Rocks can be used to make entire piles on land or in water; place rock islands in ponds away from the shore to create loafing sites for turtles and waterfowl.
- * Maintain established brushpiles by adding new material; well constructed piles can be expected to last about 10 years.
- * Do not eliminate all live brush to create brushpiles.
- * Do not place brush piles at the base of large trees or snags as that would provide hawks and owls with good hunting perches.

- * If rabbits, woodchucks or skunks are pests in the area, keep brush piles away from dwellings, gardens, and areas where browsing is a problem.
 - * Partially submerge brush or rock piles along the edges of ponds to favor reptiles and amphibians.
2. LIVING BRUSH PILES - Living brushpiles may also be constructed by partially cutting trees and/or branches (#2,6). Such piles are usually not as good cover as dead brush piles, but they have the advantage of providing food in the form of buds, twigs, leaves, and insects (for birds). Suggested practices for living brush piles include:
- * Cutting one or more small trees or shrubs 3-4 feet above the ground just deep enough so they can be pushed over without breaking off; a strip of bark must remain intact for the tree to live.
 - * Partially cutting the lower branches of larger trees and bending them to the ground; especially effective with conifers.
 - * Adding dead brush to improve the cover provided by living brushpiles, taking care not to smother living branches.
 - * Fell trees or shrubs with vines (e.g., grapes) growing on them onto the tops of brushpiles, taking care not to sever the vine.

BRUSHY HABITAT MANAGEMENT

1. TYPES OF BRUSHY HABITAT - Naturally occurring brushy areas consist of two distinctly different types as well as various mixtures of the two extremes. One extreme is composed of seedling and small saplings of forest trees that will soon create a closed canopy and shade out low growth. The other extreme, which often occurs on poor or wet soils, consists of relatively stable patches of shrubs that resist invasion by forest trees. Both types are important habitats for game species and many types of songbirds as they provide dense woody growth for cover and browse and they allow enough sunlight to reach the ground to support a layer of herbaceous plants where plant and insect food can be found. Stable shrub patches require little management other than occasionally removing invading trees.
2. MAINTAINING BRUSHY HABITAT VIA TIMBER HARVESTING - When the forest canopy is removed by a timber harvest, the resulting regeneration typically creates a brushy stage for 10-15 years, at which point the new canopy closes and the understory begins to thin out. Thus, if one is to rely on timber harvesting to maintain brushy habitat, a timber harvest that removes the canopy (i.e., some type of even-aged silviculture) must be conducted about every 15 years. Unfortunately, most private landowners do not have enough acreage to support commercially viable even-aged harvests this often.

Selective timber harvests usually do not open the canopy enough to create very much brush. However, selective logging systems can be modified to include some areas of heavier cutting to create the desired amount of brush in the understory. Or, logging roads could be widened enough to create strips of brush along the sides. Selective harvesting normally has a cutting cycle of about 15 years, so properties where this type of silviculture is a viable option (including quite small stands) could maintain brushy habitat as part of a timber harvesting program.

3. OTHER METHODS OF MAINTAINING BRUSHY HABITAT - Other options for maintaining brushy habitat include planting shrubs in wildlife openings (FSMN #25,27) or periodically brush-hogging edges.

REFERENCES

FSMN #'s refer to other Forest Stewardship Management Notes in this series.

- #1 Anonymous. 1965. Building brushpiles for wildlife. USDA Soil Conservation Service, Job Sheet 812.
- #2 Decker, D.J. and J.W. Kelley. Undated. Enhancement of wildlife habitat on private lands. Cornell Cooperative Extension Publication - Information Bulletin 181.
- #3 Henderson, C.L. 1987. Landscaping for wildlife. Minnesota Dept. Natural Resources.
- #4 Michigan Department of Natural Resources, Forest Management Division. 1992. Stewardship Incentive Program (SIP) Practice Standards & Specifications Manual.

#5 Payne, N.F. and F. Copes. 1988. Wildlife and fisheries habitat improvement handbook. USDA Forest Service, Wildlife and Fisheries Admin. Rept. (unnumbered).

#6 Rader, T.D. 1977. Wildlife management III. Pennsylvania State University Cooperative Extension Service. Pennsylvania Forest Resources No. 47.

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