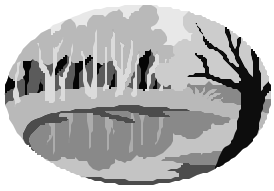
Improving Habitat for White-tailed Deer on Private Woodlands

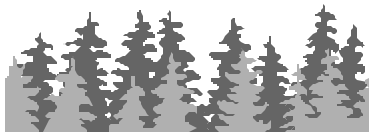
1) **Manage Woodlands for Deer Food Production**

a) **Aspen or Mixed Aspen (aspen-oak-pine):** Harvest all aspen or mixed aspen stands older than 40 years by clearcutting. Cuts should be at least 10 acres in size, irregular in shape, with feathered edges. If the stands contain oak, a few large oaks can be left for acorn production, but no more than 30% of the trees in the stand. If some oaks are left, they should be left standing in clumps if at all possible. Scattered trees are more vulnerable to a variety of hazards. Consult with a professional forester or wildlife biologist.



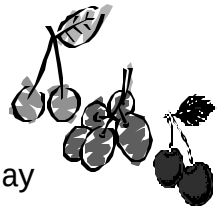
b) **Mixed deciduous trees - lowland (maple-ash-elm-cottonwood), upland (oak-hickory, beech-birch maple-basswood-oak-ash-pine or beech-maple):** Harvest mature mixed stands of deciduous (hardwood) trees by the cutting method most likely to regenerate oak and browse species (maple, white pine, yellow birch, oak, ash). Group selection or small clearcuts may be the best method, but consult a professional forester or wildlife biologist. Leave oaks for acorn production wherever possible when thinning or harvesting stands of mixed hardwoods.

c) **Evergreen (conifers):** Lowland evergreens (cedar-spruce-fir) provide excellent winter cover. Leave them alone unless a professional forester can guarantee that a cutting will produce young evergreen trees, especially white cedar, that will not be completely devoured by deer. Instead, clearcut blocks of deciduous trees on the edge of the evergreens. Upland evergreens (pines), especially jack and white pine, should be cut when mature to insure regeneration of a healthy stand of young trees. Consult with a professional forester or wildlife biologist. Avoid planting or replanting stands of red or Scotch pine unless these pines are planted as winter cover along the edge of deciduous tree stands being managed for deer or grouse.



d) MSU research shows that **non-industrial municipal sewage sludge** applied to young stands of trees on poorer sites in late winter and early spring increases the palatability and nutrition of new growth. No residue is visible after one (1) month and no problems were detected. Liquid manure would be even more beneficial. Consult with the DNR or local sewer authority for further guidance.

2) **Encourage or Plant Woodland Edges With Fruit and Browse Producing Shrubs**



a) The best fruit producing species are those that retain dried fruits through winter and early spring-apples, crabapples and hawthorns. Others - dogwoods, viburnums, wild plums, buffaloberry, autumn olive, etc. - produce fall fruits that deer may consume in fall and early winter.

b) The best browse producing shrubs are those that produce nutritious leaves, twigs and bark, and that vigorously regrow after being browsed - sumac, red-osier, gray and silky dogwoods, elderberry, blueberry, blackberry and raspberry, and meadow or rugose rose.

c) Shrubs will probably need mouse, rabbit and deer guards in order to quickly grow beyond vulnerable size (more than 5 ft. tall and 3 inches in diameter).-

Mouse Guard - 1/4 inch mesh welded wire, sheet metal, or synthetic material 12 inches high encircling trees. -**Deer and Rabbit guards** -1 inch mesh woven wire or synthetic material 4-5 ft. high encircling trees.

d) To encourage plants already growing, cut away competing woody plants, thin and prune if necessary, and fertilize.

3) **Manage Open Areas:** Mow and fertilize open grassy areas to produce nutritious and palatable grasses, clovers and forbs in spring and summer (check with MSU County Extension Office for most appropriate mowing schedules and fertilizer application rates). In general, mow at least once a year, preferably 3 times (late spring, summer, early fall) and fertilize with 200-300 lbs/acres of 6-24-24 or 0-20-20 fertilizer in late spring and late fall. If possible, mow 1/3 of the area at a time. Burning in early spring also helps maintain attractiveness to deer. Get professional help before burning. Sewer sludge or manure may also be applied.

4) **Plant Nutritious Perennial Grasses and Legumes**

a) Frost seed wild white or Dutch white clover and red clover to bare sunny spots (broadcast inoculated seed when the last few frosts leave surface of soil). Check with the MSU County Extension Office to determine if lime is required.

b) Plant openings, dirt roads, and trails with a nutritious grass or grass-legume mixture. Consider native species, where seed is available.

Use shade tolerant grasses (e.g. creeping red fescue) in shady areas (narrow trails, east-west dirt roads).

White clover - perennial rye grass mixtures are best in larger openings because deer are less likely to destroy them before they become established. Other mixtures (alfalfa, birdsfoot trefoil, red clover, brome grass, orchard grasses, fescue) are desirable but may not survive heavy grazing by deer during the first year unless planted on large areas (20 acres or greater). Consider seeding with native plant species. Check with MSU County Extension Office for instructions on planting white clover-rye grass mixtures in your county.

c) Maintain planting with liming, mowing, and fertilizing as necessary (see #3),

5) **Avoid planting annuals** (corn, small grains, annual rye) that may be destroyed quickly by deer or that produce deer food only in fall and winter. Such annuals are

expensive to cultivate and less likely to help attract and produce deer. Root crops that persist through the winter and are available in spring may be helpful (e.g. rutabagas, carrots, beets, turnips, etc.). Check with the MSU County Extension Office for cultivation recommendations. One annual that is inexpensive and easy to cultivate, preferred by deer, and that regrows vigorously after browsed is dwarf Essex rape (a horticultural variety of mustard). To grow rape, spray existing vegetation with glyphosphate (Roundup), wait 2 weeks, and disc lightly. If you do not have a disc, drag a spiked board, old bed spring, etc. over the area with a 4-wheel drive vehicle to break by the soil surface. Fertilize with 300 400 lbs/acre of a 20-10-10 fertilizer (check with the Extension Office for exact application ratio). Seed 3-5 lbs of rape seed per acre and lightly disc or drag again. If you desire, include ¼-1/2 lb of rutabagas or purpletop turnips with the rape seed.

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