



CENTRAL HARDWOOD NOTES

Treating Mature Stands For Wildlife

Stands older than 60 years or that are medium to large sawtimber size generally provide good wildlife habitat. Mature trees usually produce abundant mast and provide den sites (see fig. 1 in Note 9.04 Treating Immature Stands). The undergrowth in these stands produces moderate amounts of browse and herbage. Mature stands also provide opportunities for management because medium-to-large sawtimber-size trees are valuable for timber products.

Even-aged management (EAM) systems are often recommended for the oak-hickory, oak-pine, mixed mesophytic, and elm-ash-cottonwood forest types. EAM can produce quality sawtimber and abundant, diverse wildlife communities as well. Regular thinning through the life of even-aged stands will enhance the yield and value of timber products and in addition, thinning can promote tree species and vegetative structures beneficial for wildlife. Finally, EAM regenerates shade-intolerant trees that are a vital habitat component for many wildlife species inhabiting these forest types.

Thinning

To produce the most benefit for wildlife, thinning should favor mast producing trees and retain den trees. Cutting also increases understory, browse, and herbage production. Follow the prescriptions in the stocking guides for the particular timber type. Modify cutting guides to (1) retain active den trees, (2) leave unsalvageable dead trees standing, and (3) favor mast producers over non-mast producers when other factors are equal.

The best den trees have the following characteristics:

1. A healthy crown and the potential to survive at least through the rotation and preferably longer.
2. A cavity entrance protected from rain.
3. Evidence of use, such as gnawing around the entrance, a smooth worn entrance, and fur or claw marks.
4. Multiple benefits for wildlife, such as mast production, multiple dens, or a combination of dens and woodpecker nest sites on large dead limbs.

Rotten culls in advanced stages of decline often have little value as cavity trees. Many do not contain dens and they usually will not survive long enough for new dens to form. Many of the best den trees are acceptable growing stock. The cavities are in the crowns; there is generally less than 20 percent total board foot cull; and they are expected to live for 10 or more years. Inventory your stands during the dormant season with the aid of binoculars to identify active den trees.

Preparing for the Next Stand

Technically, thinning does not provide for regeneration but in practice thinning late in the rotation may have the same effects as an initial shelterwood cut. So, cutting in mature stands can set the stage for the next stand by establishing advance regeneration and identifying exceptional trees that can be carried into the next rotation to benefit wildlife.

The shelterwood system is attractive for wildlife management because it provides a longer regeneration phase than a single regeneration cut. Until the shelterwood is finally removed, the stands contain both a mature overstory and a rich understory. Mast, browse, and forage are abundant, and undergrowth cover is often adequate for cottontails, ruffed grouse, and other species that usually live in younger stands.

At the time of the final harvest cutting, the shelterwood system can be modified by leaving some selected trees or providing special habitat. These trees are primary sources of dens, mast, and vertical structure during the first half of the rotation of the new stand. Some of them may be potential high quality timber trees, but those left for dens usually become wolf trees. Conflict with timber production can be minimized if den and mast trees are left as border trees in wildlife openings, along streams, or as permanent trail and corner markers.

Trees to be left should show the promise of responding to release. In general, this means good form, reasonably well pruned, and in the 6- to 12-inch d.b.h. class, rather than badly suppressed individuals. For mast production, it is probably best to leave small groups of trees of the same species, rather than isolated individuals. Within a mixed oak stand, leaving a higher number from the red oak group than the white oak group provides the most stable mast supply. A good rule of thumb is a ratio of four red oaks to one white oak. Also, leaving two or more soft mast (fruiting) trees such as black cherry, blackgum, or mulberry can help offset a hard-mast failure.

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