

Wild Turkey Habitat Management

Introduction



Many people throughout the Northeastern United States have in the last several decades come to love the wild turkey. While many are happy just to see or hunt turkeys on other people's land, others want to manage their land to benefit turkeys. Let's take a look at what someone who owns 50-100 acres can expect to be able to do for the wild turkey.

One of the first things you need to consider is how much area a turkey can normally be expected to cover, also known as its home range. A turkey can and does cover a lot of ground in its daily travels. Wild turkeys can cover up to 2 miles per hour while feeding. Their home range varies by season and can range from 400 to 2,000 acres or more. Therefore, unless you own a large tract of land (at least several hundred acres), you do not need to provide for all of a turkey's annual needs on your land. What you should do is look at your land and the surrounding area and determine what habitat component is in the shortest supply, and then try to provide that habitat type on your land. For instance, if your property is forested and surrounded by active agriculture, creating a small field will probably not be an effective method of attracting turkeys. Instead, maintaining it as a woodlot and managing for mature mast producing trees would be a better choice.

When turkey management first began, biologists thought that turkeys required very large stands of mature timber to survive. It is now recognized that turkeys do best in areas with a wide variety of habitat types and plant species. One recent researcher has described the ideal turkey habitat as one-half wooded, one quarter abandoned fields and one-quarter active agriculture. In reality turkeys in the Northeast have three critical habitat needs that may be in short supply: 1) good nesting habitat, 2) good brood rearing habitat and 3) a good winter food source. If those three needs are met, interspersed with mature woodland, you have greatly increased the probability of having wild turkeys in the area. The only other component you might want to add is a late summer/fall food source. The primary benefit of this would be to hold the birds for your enjoyment, as fall food is seldom lacking in the Northeast.

If you do manage your land for turkeys by providing improved habitat, just what can you really hope to accomplish? Before deciding on a method of enhancing the value of your land for wild turkeys, think about your objectives. Do you want to be able to observe the birds year round or are there certain times of the year when you are more interested in having turkeys use your land? Wild turkeys respond well to habitat enhancement techniques such as food plots. Therefore, it is possible to attract the birds to your land. But because of their mobility and tendency to roam don't expect to see them every day! If you do decide to manage your land for

wild turkeys, you will have the enjoyment of knowing you have a few more turkeys on your land. In many cases, they will be visible so you can enjoy watching them. Even if they are not visible from your house, you will have the enjoyment of knowing that they are using your property and you have improved their habitat. In terms of actual impacts on the turkey population, unless you provide a large amount of a critical habitat component that is seriously lacking, the impact on the population will be minimal. You can, however, improve nest success, poult survival or over winter survival in your immediate area. Remember too that you will be benefiting other wildlife species as well, such as deer, rabbits, and numerous songbirds, to name a few.

Finally, most of Pennsylvania is considered excellent turkey habitat because of the diversity of our landscape. Our woodlands, adjacent to agricultural or abandoned fields and hedgerows provide ample nesting habitat. Herbaceous openings, such as log landings in wooded areas, hay fields, orchards and pastures provide high quality brood habitat. Waste grain from silage, corn and small grain production provides late summer and fall food. The abundance of oak, hickory and beech nuts in our forestlands supply nutritious foods for the winter, as well as manure spread on the fields during late winter months. This habitat mosaic is a key to our sizable wild turkey population.

Brood Habitat

After the poults hatch, they require good brood habitat for survival and growth. Brood habitat generally consists of grasses and forbes, areas with abundant insect life, that the poults need as a food supply for growth. The ground cover should be dense enough to encourage insects, but not so dense as to inhibit the poults' movement. Brood habitat must be near or adjacent to brushy and wooded areas for escape cover and trees for roosting. Orchards or groves of trees spaced widely enough to allow sunlight penetration and allow room for mowing provide ideal brood habitat when the grassy areas are mowed once or twice a year. The trees provide overhead cover making the hens feel more secure. Additionally, the fruit trees will provide an excellent fall, early winter food supply.



The following are some suggestions for managing specific habitats for brood habitat. Remember these are suggestions only, there are no hard and fast rules and you can decide what methods you wish to employ on your land. Assistance with soil testing or fertilizer aliming recommendations is available through your local Cooperative Extension Office.

Log landings & roads: Lime and seed to grasses, sedges (nut grasses) and clovers at the end of the logging operation. These areas generally need annual mowing to control weedy invasion and re-application of fertilizer and lime and over-seeding every

few years, depending on your soil type. These treatments are known as "top-dressing". Clover mixes should not be mowed lower than six inches.

Power lines and other right-of-ways: Encourage regular maintenance by the power company to maintain grasses and forbes. Mid to late summer mowing is best. Some companies have vegetation management policies that allow establishment of low-growing shrubs and trees on their right-of-ways. If not, encourage the company to do so for wildlife. Songbirds and other wildlife benefit greatly from these habitats as well.

Hay fields: Delay mowing as long as possible (at least until mid-July). Use taller less dense grasses like timothy, orchard grass, perennial rye and white clover or use warm season grasses like switch grasses and/or blue stem that mature later and can be cut for hay in late July. Alternatively, mow the perimeter of the field, or strips, throughout the growing season, to provide short vegetation for young poults to travel and feed in, adjacent to taller vegetation for escape cover.

Pastures & old fields: Leave some trees (apple, black locust, crab apple, black haw, wild

raisin, ash, oaks, cherry, etc.) to create a savannah type habitat. In pastures, grazing will maintain a short grass cover. In old fields encourage grasses and forbes by periodic mowing or spot herbicide application to discourage woody brush. If dense grasses exist, annual mowing may be necessary.

Perennial food plots and openings: Test soil, lime and fertilize as necessary prior to planting. Plant to clovers, native grasses, and lower lespedeza varieties. When necessary, mow very late fall or early spring. Reseed only as necessary every 5+ years. Alternatively, mow the perimeter or strips, throughout the growing season. Occasional top-dressing with lime and fertilizer will help to maintain grasses and legumes. If you notice invasion by weeds, test the soil and add the amount of lime and fertilizer needed.



Annual food plots: Test soil, lime and fertilize as necessary. Plant either pure or mixed stands of oats, buckwheat, sunflower, sorghum, and/or corn. If deer are overabundant, buckwheat will be very difficult to establish. You may have more success with corn, sorghum, and sunflower. Chufa, *Cyperus esculentus*, var. *sativus*, a nutsedge, can be planted in pure stands (0.5 - 2 acres) in southern and central Pennsylvania. Chufa does not become invasive like, nor does it cross-pollinate with the native, and problematic, yellow nutsedge.

Nesting Habitat



cover is close to brood habitat. Later in the spring when new growth begins, hens will readily renest in areas that are not acceptable earlier.

For optimal reproduction turkeys require good nesting habitat. Wild turkey hens begin to nest before most of the new growth begins in the spring. Therefore, at least for initial nests, hens need some residual cover from the previous year to conceal their nest from predators. Generally, nesting habitat consists of low, horizontal cover such as low brush, standing raspberry canes from last year or anything that obstructs visibility between ground level and about 3 feet. Woodlands that have been over-browsed by deer do not provide safe nesting cover. Mature woodlands with a well-developed understory provides excellent habitat. In wooded areas, turkeys often nest at the base of a tree, fallen log, ea boulder, which provide additional concealment from predators. Be sure there are numerous patches of low cover in the vicinity. If there are only a few patches, predators will learn to search those specific spots and your management can do more harm than good. Patches of brushy cover will be used no matter where they are located, but it is better if nesting



The following are some suggestions for managing some specific habitat types for nesting habitat. Remember these are suggestions only, there are no hard and fast rules and you can decide what methods you wish to employ on your land.

Logged areas: Leave some scattered tops, but clear some of the tops and branches to allow natural regeneration, and create brush piles with the cleared debris. Note, if overbrowsing by deer is a problem, keep most of the tops and branches in place, which will make it difficult for deer to browse the seedlings that grow within the brush. If grassy openings are lacking in the vicinity, convert the log landing, and

possibly some of the logging roads, into permanent openings by seeding to grasses and legumes.

Woodlot edges: Thin (remove some of the trees to let sunlight reach the ground) up to 50 feet adjacent to open areas to encourage shrubs and brushy growth. Keep native fruit and nut producing shrubs such as dogwoods, viburnums, hawthornes, etc. Leave some scattered treetops or branches for horizontal cover.

Utility Rights-of-ways: Such as power-line cuts, pipelines. These habitats provide well-developed vegetation up to 3-5 feet above the ground. Work with the power company to allow shrubs and brushy vegetative growth. Delay cutting or spraying in these areas until nesting is completed (mid July). Contact the utility company as utility companies usually are willing to work with landowners to manage these areas for wildlife.

Hay fields, pastures: Many re-nesting hens will use hayfields. Delay mowing as long as possible (at least mid July). Hay and pasture seed mixes should contain taller less dense grasses like timothy, orchard grass, perennial rye and white clover. Avoid cool season grass mixtures that contain fescue as they can develop thick sod and stems, which young turkeys may have difficulty traveling through. You can consider native warm season grasses like switch grasses and/or blue stem that mature later and can be cut for hay in late July. **Old fields:** Maintain shrubby patches within the old field, cut brush & trees and leave scattered piles of branches, mow periodically to keep much of the field in grasses or other herbaceous cover. Encourage clumps of raspberry, blackberry, goldenrod and aster, (any heavy stem herbaceous cover) by brush-hogging every two to three years.

Late Summer and Fall Habitat



Late summer and fall habitat is generally the least limiting of a wild turkey's needs in the Northeast. It is, however, a time that many wild turkey enthusiasts want to see wild turkeys using their land. At this time of year a turkey needs wooded areas for concealment, roosting trees and a good food supply to ensure they enter the winter months in good physical condition.

The following are suggestions for managing specific habitats for late summer and fall habitat. Remember these are suggestions only, there are no hard and fast rules and you can decide what methods you wish to employ on your land. Assistance with soil testing or fertilizer and liming recommendations is available through your local [Cooperative Extension Office](#).

Log landings & roads: Lime & seed to grasses, sedges (nut grasses) and clovers at the end of the logging operation. Generally these areas need mowing to control weedy invasion and re-application of fertilizer and lime and over-seeding every few years. Plant mast producing shrubs such as crab apples, hazelnut, serviceberry, dogwoods, and viburnums in clumps on the landings, or along the edges.

Hardwood timber: Manage for a variety of different dependable mast producing species (such as oak, beech, cherry, ash, black walnut, hickory). Have a timber management plan developed in consultation with a professional forester to manage for your goals (e.g. an uninterrupted mast production and regeneration of those species). In Pennsylvania, assistance to private landowners is available through the [Penn State University Forest Stewardship Program](#). Don't forget the mid and understory mast producing species such as hop hornbeam, ironwood, hazelnut, serviceberry, dogwoods, and viburnums. Stay away from planting exotic, invasive bushes such as Russian and autumn olive and Japanese barberry.

Perennial food plots and shrubs: Test soil, lime and fertilize as necessary. Plant clovers, grasses and lower lespedeza varieties. Alternatively, mow the perimeter or strips, throughout the growing season. When necessary, mow in very late fall or early spring. Reseed only as necessary (every 5+ years). Plant fruit producing trees and shrubs such as apple, crab apple, hawthorn, dogwoods, viburnums, highbush cranberry (in moist areas), staghorn sumac, and/or grapes. Discourage exotics like Russian olive, autumn olive and multiflora rose. Shrubs may be planted in "hedgerow" type arrangements. Trees planted in perennial food plots may be arranged on the edge of the plot that receives the most sun (preferably adjacent to the forest edge.) Trees may also be planted orchard-style with 15 to 25 foot spacing. Plant in a manner so you can easily mow around them.

Annual food plots: Annual food plots should be small ½ to 2½ acres. Test soil, lime and fertilize as necessary. For corn, plant at normal time and leave standing to provide food into the winter. Plant a mix of sorghum, millet, and sunflower in late spring and leave standing. Buckwheat should be planted later than normal (mid June to early July) for fall food source. Leave standing and over-seed with rye in September. If deer are overabundant in your area, buckwheat will be very difficult to establish. Plant rye and wheat in September for a source of fall and spring food. Pure stands of sunflower should be at least ½ acre in size to protect from deer. Also, in southern to central Pennsylvania, *Cyperus esculentus* var. *sativus*, an African variety of the native nutsedge, is an excellent annual food for turkeys. Native nutsedges can be a problem weed in some areas. [Chufa](#) is not aggressive and will not create problems when other crops are planted after it. The nut like tubers, which grow under the ground, are relished by wild turkeys and other wildlife in the fall and early winter, until the ground freezes.

Crop fields: Plant and harvest grain crops such as corn or oats in the normal manner leaving some at the edges of the fields standing. Try to leave at least ten rows standing whenever possible.

Winter Habitat

In Northern New England, Eastern Canada, northern New York, and to a lesser extent northern Pennsylvania and high elevations of PA, such as the Laurel highlands, winter habitat is crucial for the survival of wild turkeys during extreme winters. In some parts of North America, turkeys exist north of their historic range. This is primarily because of habitat changes, such as farming in the St. Lawrence and Champlain Valleys, and the conversion to northern hardwood forests from pine and hemlock forests in northcentral Pennsylvania. During extreme winters, wild turkeys need a dependable food source that is close to thermal roosting cover and protected travel corridors. In south and central Pennsylvania and at lower elevations, there is less difference between fall and winter habitat.

The following are suggestions for managing specific habitats for winter habitat. Remember these are suggestions only, there are no hard and fast rules and you can decide what methods you wish to employ on your land. Assistance with soil testing or fertilizer and liming recommendations is available through your local [Cooperative Extension Office](#).



Spring Seeps: Spring seeps (spots where ground water comes to the surface) are found in old pastures, fields and in the forest. The warmer ground water keeps snow melted at the seep. The plant and animal life found in and near spring seeps are important winter food sources for turkeys and other wildlife. All seeps can be useful but seeps on south-facing slopes are most valuable. Seeps may be managed or simply left alone.

In [forest seeps management](#) can include stimulating the growth of herbaceous plants within the seep by removing some of the forest canopy. However leave about 70 percent canopy closure to keep water temperature cool and not to create a thicket of understory growth. Remove unproductive trees and leave mast-producing trees near the seep. Seeps in open areas may be improved by keeping them from being invaded by varieties of woody stems that do not produce food items. Planting fruit bearing shrubs near but not in the seeps provide accessible winter food. If necessary, fence the seep to keep cattle out.

Annual food plots: If possible, place food plots for winter use on south facing slopes to take advantage of the sun's radiant energy. Test the soil, lime and fertilize as necessary. For corn, plant at the normal time and leave standing to provide food into the winter. In areas of high deer numbers, plant larger plots of corn (2 - 5 acres). Plant a mix of sorghum, millet, and sunflower in late spring and leave standing. Buckwheat should be planted later than normal (mid June to early July) for fall food source. Leave standing and over-seed with rye in September. If deer are overabundant in your area, buckwheat will be very difficult to establish. Plant rye and wheat in September for a source of fall and spring food. Pure stands of sunflower should be at least ½ acre in size to protect from deer.



Thermal cover: Conifer stands provide a windbreak, roost sites, protection from extreme cold and limit snow depth under the stand allowing turkeys to be mobile. Provide several acres of conifer trees for every hundred acres of habitat. Eastern hemlock and white pine are good but most species of native conifers will help. Plant conifers in clumps or strips to provide the best thermal protection. When planting conifers, plant in open areas to allow them to quickly grow because they are intolerant of shade during their early years.

Hardwood timber and tall shrubs: Manage for a variety of different dependable mast producing species (such as oak, beech, cherry, ash, black walnut, hickory). Develop a timber management plan in consultation with a professional forester to manage for your goals (e.g., uninterrupted mast production and regeneration of those species). In Pennsylvania, assistance to private landowners is available through the [Penn State University, Forest Stewardship Program](#). Don't forget the mid story mast producing species such as hop hornbeam, ironwood, hazelnut, serviceberry, dogwoods, and viburnums. Plant fruit producing trees and shrubs such as apple, crab apple, hawthorn, dogwoods, viburnums, highbush cranberry, staghorn sumac, and grapes. Discourage exotics like Russian olive, autumn olive, and multiflora rose.

Travel Corridors: During deep snow conditions turkeys will use travel corridors created by conifer cover. By providing narrow strips of conifer cover between other habitat types, turkeys will be able to move more freely.