

Wild Turkey Management on Private Lands



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Habitat is the Key

- Habitat sustainability and enhancement
- Habitat quantity and quality
- Habitat restoration
- Habitat management
- Habitat diversity
- Habitat and population management



Habitat Sustainability and Enhancement

- Habitat must be sustained over time to provide the essential requirements for wild turkey.
- Regardless of existing habitat, it is likely that over time, it may become less desirable for turkey without appropriate management.



Habitat Quantity and Quality

- Habitat quantity to sustain wild turkeys yearly is rarely less than 100 acres.
- On 200 acres or more with good quality habitat, it is possible to maintain a turkey population without many leaving your property.



Habitat Quality Cont.

- Assuming you have 200 acres or more what makes it good quality habitat for turkeys?
- A diversity of vegetation types and successional stages.
- Natural foods availability, permanent water, diverse cover and lack of excessive disturbance and harassment.



Habitat Restoration

- If your property does not presently have the essential habitat requirements for sustaining a turkey population can restoration be accomplished?
- In some cases yes, depending on your objectives, and some patience.
- In others it may not be feasible to start from bare ground and expect to meet the needs of turkeys within a reasonable time frame.

Habitat Restoration Cont.

- For example if your property has some of the diversity requirements for turkey, e.g. primarily mature mixed forest land, some openings created and planted to grasses and legumes may soon enhance it for turkey use. On the other hand, if you have the majority of your land in planted pine trees between one and five years of age, restoration will take at the minimum 15-20 years, and even then without more diversity of habitat, it is unlikely to sustain year-round use by turkeys.

Habitat Management

- Assuming your property has a diversity of vegetation types, appropriate quantity, and currently has some turkey use, what can you do to improve its management for turkeys if that is your objective? The array of management options depends on what your habitat presently consists of and what is lacking in meeting their essential needs.

General Habitat Requirements

- Some mature mixed forest land for food production and roosting sites.
- Diverse vegetation and age structure for year-round food production, nesting cover, brood range for rearing poults, some water availability, and some open understory for foraging and escape cover from predators and excessive disturbance or harassment.



Habitat Management Cont.

- Prescribed burning in some forest types is an excellent management tool
- TSI or thinning of mid-rotation pine stands, followed by prescribed burning
- Some type of selective timber harvesting if needed, or small block cuts to improve age structure diversity
- Crop fields access, if available, or food plots with preferred grasses, legumes or small grains.

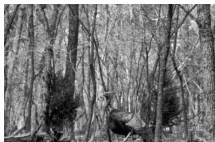
Habitat Management Cont.

- Managing to sustain a diverse, mature forest stand component, 30-50% preferred
- Maintaining diversity of mast producing woody and herbaceous vegetation for both hard and soft mast production
- Avoidance of habitat disturbance, or harassment particularly during nesting and brood rearing season



Habitat Diversity

- Turkeys habitat requirements vary by season, particularly their needs change during winter, spring-summer, and fall.
- In the south, these various habitats need to be adjacent to each other to be most desirable and useful to turkeys.
- Winter habitat is critical to turkeys for a variety of reasons, and is used from late fall until spring.



Habitat Diversity Cont.

- Ideal winter habitat consists of mixed hardwood forests of at least 50% mid rotation aged to mature stands.
- Winter food plots of small grains and grass- legume mixtures can supplement food needs.
- Spring-summer habitat needs include some good nesting cover, and access to brood range with grasses and legumes for insect and other food production.

Habitat Diversity Cont.

- Quality brood range in many unmanaged habitats is often a limiting factor to population increases and stability.
- Open areas with grasses, forbs and legumes are critical for providing insects and seeds essential to poult nourishment and survival.
- Mature open forest stands, old fields, pasture edges, and even regeneration areas can provide some brood range.

Habitat Diversity Cont.

- Late summer, early fall habitat is probably the time of the year when food for turkeys is most plentiful, and surviving poults and adults make use of diverse habitats. They feed on what is available, from seeds, fruits and soft mast, to hard mast, insects, and other foods. This habitat includes open mature woods, crop fields, fallow fields, pastures, road sides, cutovers, and edges.

Habitat Diversity Cont.

- Although sometimes overlooked the availability of permanent open water sources year-around is also important.
- Studies of food usage by wild turkeys has shown a remarkable diversity of foods eaten, and examination of crop/intestine contents of wild turkeys have reported >350 species of plant and animal matter eaten.

Habitat Diversity Cont.

- Space is an important consideration in managing for wild turkeys. Annual home range of a flock of turkeys may be several square miles. Obviously, the availability of food and other requirements determines how large their home range is. It could be met on as little as 200 acres or require as much as several square miles.

Habitat and Population Management

- Once a turkey population is established on your land, given that you have quality habitat, the most critical season to try to avoid disturbance and harassment is the nesting and brood rearing period in spring and early summer. It is not abnormal for 50% or more of nests to be unsuccessful because of predation or abandonment.

Habitat and Population Management

- It is important to preface this discussion with some often considered practices to avoid.
- Absolutely DO NOT consider the release of pen-reared or domestic turkeys on your property if you want to have sustain wild turkey populations.
- DO NOT artificially feed or bait wild turkeys. If you manage your habitat properly food will not be a limiting factor in the southeastern U.S.

Habitat and Population Management Cont.

- Avoid having free-ranging domestic turkeys or other domestic poultry on property you are managing for wild turkeys.
- Avoid having any more disturbance or harassment of turkeys on your property than necessary. Normal agricultural practices and some timber management practices are often tolerated, but consistent harassment will cause turkeys to leave.

Habitat and Population Management Cont.

- Numerous factors influence the stability of turkey populations. Obviously over-harvesting during spring and/or fall seasons can affect population stability, as can weather on nesting success and brood survival. Predation is certainly a factor, particularly on hens and eggs during nesting, and on young poults, however, eliminating predators is costly, and difficult. Rarely are predators the primary limiting factor on population stability.

Habitat and Population Management

- In regard to harvest on private lands, having some idea of how many birds are using your property will help determine how many birds can be harvested without major impact on the population stability.
- Once a turkey population is established, after a couple of seasons given normal reproduction, taking a gobbler or two in the spring is not likely to cause a population decline if more than three or four birds are heard gobbling in the area.

Habitat and Population Management Cont.

- However, significant harvest of hens and young birds in the fall, considering that natural mortality will occur, could impact the population stability as would taking the only mature gobblers in a small population early in the spring season.
- Observation of flocks during the year will provide some idea of how many birds can be harvested without causing a major population decline.

Habitat and Population Management Cont.

- The number of young produced that survive to fall rarely exceed an average 3-4 poults per hen, and is often less. The fall population then is dependent on the number of broods produced and the average brood size that survives until the fall. Poults reaching 12 weeks or more of age are most likely to make it to become adults.

Factors Limiting Turkey Populations

- Habitat Loss or Degradation
- Predation
- Weather
- Illegal Kill
- Diseases and Parasites
- Disturbance

Habitat Loss or Degradation

- Clearly, changing land use and the loss of quality forest habitat through conversion, e.g. to: development; agriculture; timber removal via clear cutting of the entire stand; to improved pasture; or to single species even-aged stand management; is detrimental to maintaining a viable wild turkey population.

Habitat Loss or Degradation

- Changing from mixed aged and composition of forest stands to single species, even-age management and shorter rotations may increase monetary returns, but will degrade the quality of the habitat for wild turkey.
- Some TSI which removes all "cull" hardwoods from mixed stands may be suggested, but is detrimental to turkeys and other wildlife species.

Habitat Loss and Degradation Cont.

- The diversity of habitats needed by wild turkeys for nesting, brood rearing, feeding, roosting, foraging and escape cover clearly illustrates the need for a variety of cover types to provide for both turkeys and other wildlife species. Maintaining these diverse habitats are key to sustaining wild turkeys.

Predation

- Annual mortality of wild turkeys from a variety of causes is substantial. Studies have shown that approximately 50% of all hens and 33% of all gobblers die each year.
- Predators in different regions and different habitat types can have a negative impact on turkeys, however, the creation and maintenance of good habitat lessens the impact of predation.

Predation Cont.

- The variety of species which prey on wild turkeys include: raccoons; free-ranging dogs; skunks; opossums; coyotes; bobcats; foxes; owls; hawks; feral hogs; and snakes; as well as other species which eat eggs, or can catch young poults.
- Legal furbearer trapping is one way to reduce the number of significant nest predators.

Predation Cont.

- Even though intensive predator control in some areas has proven to increase short-term turkey survival, such control efforts are difficult, often cost prohibitive, and certainly controversial from a public opinion standpoint. Removal of some turkey predators such as hawks and owls is illegal since they are protected species.

Weather

- Although obviously there is nothing we can do about the weather, significant deviations from normal weather patterns often cause decreases in turkey populations. Spring-summer flooding along major drainages can significantly impact nesting success as well as poults survival. On the other hand, prolonged drought may dry up needed water sources and reduce essential food availability.

Weather Cont.

- Turkeys in the south are adapted to withstand cold weather and even the occasional deep snow and ice that occurs. Supplemental feeding is not necessary during these periods, but maintaining good quality diverse habitat is certainly beneficial to turkeys having available food and needed cover during such extreme weather.

Illegal Kill

- Illegal kill or poaching can be a serious impediment to sustaining a viable turkey population. Landowners can reduce the potential for illegal kill by limiting access, being vigilant, and not locating food plots or brood range adjacent to public roads.
- Encouraging support from your neighbors and reporting any illegal activity also helps reduce the impact of poaching.

Illegal Kill Cont.

- Illegal killing of young turkeys in a fall season via over-harvest should be a concern since they are naive and vulnerable because of their strong flocking instinct during this hunting season.
- Landowners should also be alert to pre-season baiting of turkeys on their lands by poachers which can clearly impact the population stability, and legal hunting.

Diseases and Parasites

- Wild turkeys are susceptible to many infectious and non infectious diseases and parasites. Those most commonly found in birds located early enough to diagnose include: avian pox; several viruses associated with domestic poultry; mycoplasmosis; salmonellosis; histomoniasis (blackhead); coccidiosis, and numerous other diseases and parasites.

Diseases and Parasites Cont.

- The potential for disease and parasite transmission between domestic turkeys and other poultry can be reduced by not having such domestic poultry free-ranging in areas where wild turkeys frequent.
- The likelihood of diseases and parasites having a significant impact on wild turkeys usually occurs where turkey densities are high. Flocks infected with some of these diseases or parasites usually take a long time to recover to stable numbers.

Diseases and Parasites Cont.

- This is one of the major reasons to avoid the release of pen-reared or domestic turkeys into areas used by wild turkeys.
- A recently discovered retrovirus called Reticuloendotheliosis (lymphoproliferative), has been found in some of the southeastern states linked to wild turkey association with domestic fowl. Concern has been voiced about the practice of spreading litter from commercial poultry operations on habitats used by wild turkeys.

Diseases and Parasites Cont.

- Given that turkeys are susceptible to numerous diseases and parasites, the potential for disease transmission is greater when turkey populations are subjected to stress via abnormal weather conditions, crowding in high populations, and of course, association with domestic turkeys or other fowl species. The provision of good habitat and isolation from domestic fowl are the best ways to avoid disease problems and spread in wild turkeys.

Disturbance

- Although wild turkeys will, and have in some areas become used to persistent disturbance, and in some cases have also habituated to the presence of humans, it is not usually in the long-term best interest of the wild turkey. Some types of disturbance may be tolerated without major problems, however, disturbance and harassment by free ranging dogs and by humans during the nesting and brood rearing season is detrimental.

Disturbance

- Where possible to prevent disturbance and harassment of wild turkeys, it should be done, especially during nesting and brood rearing periods of the year. In fact mowing or bush-hogging of pastures and food plots, particularly around the edges, during this time of the year should be avoided since such areas are used frequently by turkey hens and broods.

Disturbance

- Although turkey hens will frequently stay on a nest when approached by humans as long as possible, disturbance will often cause abandonment, and rarely are subsequent nesting attempts as successful as first nests. Remember that nesting and brood rearing success is critical to population sustainability.

Tips for Habitat Improvement

- A habitat inventory will be useful to anyone managing land for improving turkey and other wildlife habitat. Identify on this inventory what habitat components you have which are already available to turkeys.
- Evaluate the quantity and quality of the habitats. Aerial photo's and topo maps of your land and adjacent lands used by turkeys will be useful in assessing existing quantity and quality of habitat, as well as where improvements are needed.

Tips Cont.

- Examine the distribution of various habitats to determine which are used by turkeys in different seasons and their present status. This will assist you in determining where improvements may be needed. Prioritize what you feel are the most immediate needs, and focus your improvements on these areas first, e.g. do you have sufficient nesting and brood rearing habitat, and is it dispersed appropriately on your land.

Tips Cont.

Your timberland might need thinning or selective harvest to increase the dispersion of nesting and brood rearing cover, or if you have a planted pine stand 15 years or older, it may be beneficial to thin and do some prescribed burning to increase ground vegetation. You may need to consider converting old fields or other odd openings to food plots or good brood range.

Tips Cont.

- If you have mixed stands of mid-rotation or mature pine and hardwood, you may not need to do anything to provide adequate roosting, feeding, and escape cover for turkeys, however, such areas may not afford adequate nesting and brood rearing cover which is critical to increase populations. The inventory will enable you to determine what is needed most.

Tips Cont.

- For turkeys hardwood mast crops are important and particularly species such as the oaks, beech, black gum, dogwood, cherry, hawthorn, persimmon, bitter pecan, hophornbeam, and shrubs and vines such as huckleberry, gallberry, plum, wild grapes and numerous others.
- Grasses, legumes and soft mast such as berries, seeds and fruits of numerous forbs and vines are also important seasonal foods of turkeys.

Tips Cont.

- Therefore the importance of maintaining a diversity of vegetation types.
- Mature longleaf pine and other pine ecosystems also offer good habitat for turkeys if properly managed, however, maintaining hardwood corridors along streams and drains within pine stands are important to nesting and movements of turkeys from one area to another.

Tips Cont.

- Since most oaks and other mast producing hardwoods don't produce significant mast until they are at least 30 years old with the best production usually coming at 50 years or more, maintaining some mature timber habitat on your land (ideally 50% or more), is important. Depending on the size of your timber stands, harvest can be done with small block cuts or selectively by marking.

Tips Cont.

- Since a considerable acreage in many parts of the south are now devoted to pine timber production.
- Turkeys seem to do well in mature (40 yr. or older) pine stands particularly if these stands have been thinned and prescribe burned on a frequent rotation and have openings that are maintained in, or planted to grasses and legumes.
- Short rotation pine plantations are poor habitat.

Tips Cont.

- If you have mature stands of timber, whether mixed pine and hardwood, primarily hardwood, or primarily pine, and you plan to harvest some or all of the mature trees, but you would like to retain habitat for turkeys. You need to consider either finding a wildlife or forestry consultant who understands clearly your objectives to develop a harvest plan, or you need to mark selected trees, or blocks of trees that you want to retain.

Tips Cont.

- Habitat for wild turkeys can be improved in many ways and an active management plan should be considered if your objective is to manage for optimum use by turkeys. It is important to note that although any habitat improvement or manipulation benefits some wildlife species, and may degrade it for others, most habitat improvement for turkeys benefits many other wildlife species as well.

Information Sources

- NWTF is a great source for information about wild turkey management.
- Land Grant Universities with Extension wildlife specialists also provide practical, research-based information about wild turkey and other wildlife species and their management.
- There are numerous publications on wild turkey and other species provided by many State Fish and Wildlife Agencies.

Information Sources Cont.

- The NWTF book, "The Wild Turkey: Biology & Management" is a comprehensive publication with definitive information about wild turkeys and their management. The chapters were written by the most authoritative turkey biologists and researchers in the nation.

Conclusion

- The wild turkey restoration in North America is one of the greatest conservation stories in our history. It is a credit to the turkeys adaptability, to State Fish and Wildlife Agency professionals, to research conducted by wildlife faculty and field professionals, to sportsmen across this nation who supported this remarkable restoration effort in many ways, and to private landowners who have provided wise stewardship for wildlife resources.

Conclusion Cont.

- As a wildlife professional who has worked my entire career for the benefit of wildlife resources and people, I am honored by having the privilege for the past 44 years to manage for, enjoy and hunt this great bird and to appreciate each year what a blessing this restoration effort is, and will be, to those future generations who will be thrilled by the raucous gobble of the wild turkey.
