

# Successful Turkey Management, Part 1 of 3: Pine Woodland Enhancement

*By Ted DeVos*

Through my years as a professional Wildlife Biologist and Forester, I have occasionally found the time to chase a turkey or two each season. It can become an addicting sport, and while chasing a bird dog through golden broom straw in the South's beautiful winter weather ranks pretty high, a crisp spring morning in April with multitudes of songbirds and frogs providing background noise and the woods ringing with mature gobblers is hard to beat! While most avid turkey hunters (and often managers) feel that the favorite habitat type of turkeys is hardwoods, most of my gobbler chasing and managing occurs in pine stands of one form or another.

Most readers of *Wildlife Trends* are quite familiar with the history of turkey populations and restocking, so I won't go into length on this subject. Suffice it to say that earlier this century, when most of the Southeast was devoid of wild turkeys, the only places still harboring many were the vast river swamps in places like the Tombigbee, Black Warrior, Alabama, Mobile and other major river bottoms. Factors such as over-hunting contributed, but habitat loss through extensive clear cutting and land clearing, while great for bobwhites, was the doom of wild turkeys.



This led early turkey biologists to conclude and publish that at least 5,000 acres of bottomland hardwood habitat was needed to sustain a turkey flock. At the time, that was true. Since the 1930's, turkey populations in the Southeast have soared. This amazing wildlife success story was made possible through trapping and transplanting birds around the states into suitable habitat. Organizations and agencies such as the state Wildlife Departments, state Wildlife Federations, and the National Wild Turkey Federation have had a lot to do with the success of these restockings. Significant habitat changes have also occurred during this time and, while causing substantial quail declines, have provided large quantities of habitat for turkeys and deer. Regrowth of mixed pine/hardwood and pine forests on the uplands, and hardwoods in the bottomlands have resulted in a more densely forested Southeast with more forested acres since settlement. We also have more hardwood acres than anytime since the early 1900's.



Turkeys like a little heavier stocking of mature pines, while still maintaining grassy understories, than many other species of game.

Turkeys have responded

to these habitat changes, restocking efforts, and management efforts with a gusto. It appears now that turkeys will not only utilize, but thrive in many habitats (such as residential areas) that were previously thought uninhabitable. Take intensive pine plantations for instance. While not exactly what someone might recommend as a turkey management technique, pine plantations are found to be utilized quite extensively by turkeys and their broods. In this scenario, the main extra ingredient needed is hardwood bottoms for roosting and winter habitat. When the ground is bare after clear-cutting, turkeys utilize the clear-cut as they would any opening. From first growth after planting through the thick/brushy stage, hens use the area for nesting. Once the stand begins to shade out turkeys use it very little (very little food or cover is available in the shade), but will travel through it and use it for cover. Once a stand is thinned, and especially if it is burned, turkeys again use it for finding food, nesting and brood rearing. Where hardwoods are limited, as in the above scenario, they are extremely important to the turkey population and turkeys will travel long distances if necessary to find them during certain times of the year.

The most important concept for turkey management is that for abundant populations, a mix of three primary habitat types is necessary. While turkeys can exist in solid, young, pine plantations; expansive hardwood bottoms; large agricultural environ-

ments; and open, burned, quail plantation pine-woods, none of these habitat types generally yield optimum populations in and of themselves. An approximately even mix of open fields and pastures, pine stands, and hardwood bottomland is the best way to sustain quality turkey populations. This is the brunt of this series, to cover the management of these three habitat components.

A brief life history is in order to illustrate how turkeys utilize these three habitats throughout the seasons. Usually the large winter flocks, often numbering from 15-50 or more, seek out large acreage's of bottomland hardwoods interspersed with grassy openings. These open bottoms are often full of easy to access winter carbohydrate type foods B acorns. While many large populations of turkeys can and do live well with access to few or no acorns (parts of Texas, many places in the plains states, etc.) our southeastern turkeys are somewhat dependent on them. However, most southeastern properties that are not in intensive pine monoculture have a considerable quantity of acorn bearing oaks. Turkeys can fatten up on acorns of various species and scratching the leaf litter in these open bottoms is easy. This is the time of year when these hardwood bottoms are at their most productive. The large winter flocks also like to roost in the bottomland hardwoods in large groups.

As the winter progresses into spring, several things begin to occur at once. Gobblers and hens begin to feel the seasonal changes and begin to prepare for breeding season. The large flocks begin to break up, acorns begin to become scarce, and the woods begin to green up. Hardwood bottoms, when they have their leaves on, are a low productivity habitat. With little sunlight available to grow plants on the ground, no food is available until fall when the oaks begin to drop acorns.



**Young pine stands have little to offer wildlife, but turkeys can use them for protective cover and nesting. Early burning helps keep the stand usable.**

As spring progresses, hens begin to feel the urge to search out nesting cover and begin to use upland habitats more (hence the common malady of lots of turkeys in the winter bottomland habitat but can't find any spring gobblers). Burned, grassy, open, upland pine stands are a choice habitat type at this time of the year. The birds will roost in pine trees in both the uplands and bottoms and often feed all day in openings or pinewoods without being near large bottoms. Hens with poults in the summer use fields and open woods and by fall when regrouping begins to occur and the acorns start falling, they begin to prepare to winter in the nearest large hardwoods.

Generally, if a property is broken up with shady hardwoods in the creek bottoms, 10-30 % of the property in pastures and old-fields, and the uplands are well managed, turkeys do well with 20-60 % of the habitat in bottomland hardwoods. If much more hardwood is present the property develops too little under story vegetation (used for nesting, brood rearing, and spring/summer feeding habitat) and cannot support a large turkey flock. If much less hardwood is present there is too little winter habitat and spring roosting areas. If your property is composed of less than 20 % hardwood creek bottoms, turkeys may also leave in the winter for neighboring properties where the hardwoods compose more of the habitat.

So let's look at pine stand management and how it relates to maintaining quality turkey populations. Turkeys use pine stands throughout the year depending upon pine density, species, age, style of management, and season of the year. As noted before, low density, grassy, burned pine stands are highly important for turkey nesting. This type of "quail woods" pine management entails having a maximum of 100 trees per acre if the trees are 6-8" in diameter and as low as 15-30 trees per acre in a mature saw timber scenario. Burning every few years keeps the woodlands open and grassy while leaving scattered thicket cover. Turkeys actively seek out these "roughs" in grassy pinewoods to hide their nests. Both gobblers and hens heavily utilize freshly burned woodlands. Newly sprouted grasses provide food, burning exposes seeds and nuts, and the clean nature of fresh burns allow turkeys to feed without worrying about being ambushed by predators. Turkeys will often fully move into these woodlands in the spring, roosting in pines and feeding in burned woods. Later in the early summer, low growing grasses provide abundant insects

and excellent cover for hens raising broods. Longleaf pine is especially suited to this type of management, being tolerant of fire throughout their life cycle.

Not all pine stands on the property, however, need to be managed in an open nature. While grassy woodlands are imperative for good nesting habitat, turkeys also utilize more heavily stocked, shady pine or mixed pine/hardwood woodlands with a scattering of weeds and grasses. Transition pine stands from more heavily stocked along drain and hardwood edges to more open, and grassy on ridges is an excellent way to provide both stand types. This is especially productive when trying to maximize timber income by allowing these heavier stands to exist on the more productive soils of the mid and lower slopes of ridges and allowing the thinner stands to exist on the drier, less productive ridge tops.

As noted above, when the ground is freshly clear-cut, turkeys utilize the area as a standard opening. Clean ground is easy to feed in and turkeys in the middle of large openings feel secure from ambush. While thick, young plantation pines are not a great turkey habitat type on a large scale, small clear-cuts growing up with thick briars and brush as well as young pines provides security cover and limited nesting habitat. Unfortunately, most clear-cuts become too thick for turkeys to enter beyond the immediate edges after a few years of growth. Again, Longleaf can be kept open by burning regularly throughout their life without hurting the pine growth. Once the stand begins to shade out the under story and becomes more open, turkeys will travel through it but little food is available within the stand. Thinning as soon as possible helps to remedy this situation.

In the next installment of this series I will discuss hardwood stand composition and management for turkeys. The final part of this series will address pasture and agricultural field management for wild turkey.

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