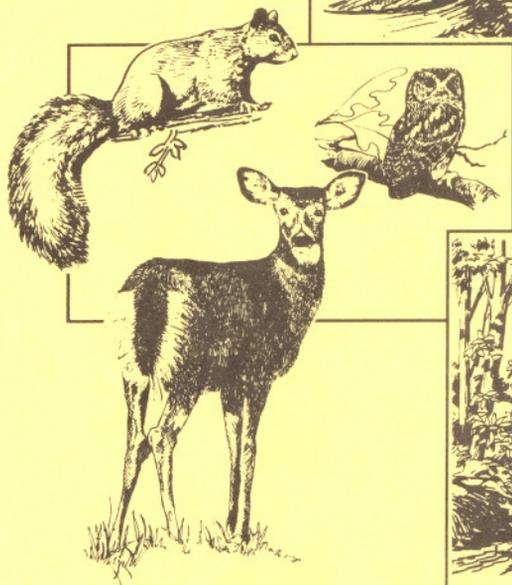


TENNESSEE'S

10

MOST COMMON
MYTHS
and **MISCONCEPTIONS**
ABOUT FORESTRY & WILDLIFE MANAGEMENT





Prepared by the Tennessee Wildlife Resources Agency
and the Tennessee Division of Forestry.

FOREWORD

Many of our present beliefs about forestry and wildlife management are rooted in practices and experiences from our predominantly agricultural past. In previous decades, timber and wildlife were present in abundance and available for the taking. Much timber was wasted or destroyed, and wildlife populations were shamefully exploited.

Only when numbers of certain wildlife species drastically declined were serious efforts made to regulate hunting and improve wildlife habitat. Although organized fire control and public awareness efforts have helped to increase timber supplies in Tennessee, timber **quality** has declined steadily in recent years. Clearly, better management of our forestlands is needed to reverse this troublesome trend.

Both forestry and wildlife officials have come to realize that with an expanding population, shrinking wildland base, and increasing demands by the public for wood products, outdoor recreation, and clean environment, all renewable resources must be managed more intensively than in the past. Fortunately, scientific research has shown that in most areas of the State sound timber management can also provide good wildlife habitat. Indeed, in many areas it is already underway, and the payoffs are obvious.

Joint publication of this booklet by the Tennessee Wildlife Resources Agency and the Tennessee Division of Forestry serves as a good example of the new spirit of cooperation between forestry and wildlife managers in Tennessee and throughout the South.



TEN MOST COMMON FORESTRY/WILDLIFE MYTHS AND MISCONCEPTIONS IN TENNESSEE

Every year with the arrival of autumn thousands of Tennessee sportsmen head for the field in pursuit of their favorite game. Except for a few wildlife species, most hunting is done in the forests of Tennessee. Forests provide the habitat (food and cover) needed by wildlife throughout the year. The better the habitat, the healthier and more plentiful the wildlife.

By **properly** managing their forestlands, forest landowners in Tennessee can make their properties much more productive for native wildlife. All forests are different and probably the most varied of all natural resources. Tennessee is blessed with pine forests, upland hardwood forests, bottomland hardwood forests, and pine-hardwood forests. Some of these are old with large trees; others are young with small saplings. Forests come in all shapes, sizes, and species. And since their composition is not the same, the wildlife habitat they support is not the same.

How good is the wildlife habitat on your forestland or favorite public hunting area? Can this wildlife habitat be improved? What effect do forest management practices have on wildlife habitat and the environment? These are just a few of the many questions being asked today, especially with the rising value of timber.

Forest landowners, with the help of foresters, can improve the wildlife habitat in their forestlands while improving their timber. Landowners and outdoorsmen sometimes fancy themselves knowledgeable about timber management because they own a tract of timberland or hunt often. Others seem to believe that knowledge of timber management is hereditary; because grandad made a timber sale, they think they know how it's done.

Consequently, many forestry/wildlife myths and misconceptions have been passed down through the years by misinformed individuals. Forestry myths and misconceptions can cause forest landowners, both public and private, to be hesitant about managing their forestland; so proper understanding of the management of timber and how it affects wildlife habitat can improve production and yield of both resources.

Some widespread myths and misconceptions about forest management are discussed in this publication. An attempt is made to replace rumor and myth with fact and understanding and to show that management of timber and wildlife are, in most cases, compatible and complementary on the same forest property. The forest resources of Tennessee are too valuable to be managed by hearsay.

MISCONCEPTION #1: CUTTING ONLY BIG TREES LEAVES THE YOUNGER TREES ROOM TO GROW AND BECOME MORE VALUABLE.

You have probably heard it said that the best way to harvest (or sell) timber is to cut the big trees and let the little trees grow. This reflects the common misconception that large trees are old trees and small trees, primarily in the mid-story and understory, are young trees. It is assumed that small trees will grow into large trees to produce logs for lumber and food for wildlife.

In many cases, however, large trees are not older than the small trees. In fact, the bigger trees are usually about the same age as the smaller ones. The larger trees are larger because they grew faster. The rate at which trees grow depends mainly on the species, site fertility and moisture, and competition with neighboring trees. This principle can be observed in any pine plantation. The diameters of trees vary from small to large, even though all were planted at the same time. The same is true in natural stands of mixed species that regenerate following a natural disaster or harvest cutting.

Therefore, there is no wisdom in cutting only the larger trees. Such individuals are producing the greatest value for both timber and wildlife. To do so would be akin to selling the best milk producers in a dairy herd and keeping the inferior cows for breeding and milk production. How long would a dairy business last with that style of management?

Cutting all trees larger than a certain diameter is comparable to liquidating the best milk producers in a dairy herd. This type of timber harvesting is often called "diameter-limit cutting" or "high grading" since, in effect, all the larger, higher grade trees are removed, leaving mainly low-grade and worthless material to restock the stand. The only alternative available to landowners interested in doing what is best for timber and wildlife after such a destructive harvest is to regenerate a new stand from the ground up, either by natural or artificial means. Otherwise don't expect the land to produce much timber and wildlife.

More properly, timber should be evaluated by a forester **before** any harvesting occurs to determine whether enough trees with the potential for continued production of wood products and wildlife benefits would remain should a portion of the timber be cut and sold. If so, the stand may be thinned and still support a productive stand. If stocking potentially productive residual trees is found inadequate, both timber and wildlife habitat would be better served by harvesting and regenerating the entire stand.



MISCONCEPTION #2: PINE FORESTS ARE BIOLOGICAL DESERTS AND OFFER NOTHING FOR WILDLIFE.

Tennessee's forests are composed primarily of hardwoods; however, many forest sites are incapable of producing high grade hardwood timber for which the State is famous. Such sites are often more productive for timber if converted to pine. Although there may be limited diversity within a single pine stand, pine can add diversity to a hardwood-dominated forest.

The debate over hardwood or pine, however, is not the most important issue. How we manage our pine stands is really the main concern. Because some forests and fields are being converted to pine plantations, many sportsmen are afraid that wildlife habitat is being destroyed. Through proper forest management pine plantations can provide good wildlife habitat, and may actually provide more wildlife food for certain game species such as deer, turkey, and quail.

You may remember pine plantations as dense rows of trees with nothing but pine needles on the forest floor. Pine plantations such as these have been called "biological deserts." We have all seen plantations in this condition, and, admittedly, they are not producing much wildlife food.

But pine plantations go through many stages, just as a person goes through many changes from birth to adulthood. Throughout the life span of a pine plantation, which may vary from 30-60 years, wildlife habitat is constantly changing. For the first 5-6 years after seedlings are planted, a wide assortment of grasses, forbs, and browse in the understory provides an abundance of food for wildlife. During this period, young pine plantations can be very productive for quail, rabbits, deer, turkey, and many non-game birds, especially if they are interspersed with other habitat types such as older pine stands, hardwood stands, and pine-hardwood stands.

After this first period of growth, forest management plays a key role. The pine tree crowns soon grow close together, and less and less sunlight reaches the forest floor. Ultimately, grasses, forbs, and browse plants, which need sunlight to grow, begin to disappear. If left unmanaged, the "biological desert" appearance of pine stands will result. This is where management in the form of thinnings can play an important role.

As soon as pine plantations reach pulpwood size, between 15-18 years of age, they should be thinned to allow continued production of forage. Herbaceous plants respond rapidly to the increased sunlight created by thinning and begin producing food needed by wildlife.

Pine stands should be thinned every 5-10 years to maintain production of browse, forage, and seed-producing plants. After 3-4 periodic thinnings, pines are ready for a regeneration harvest cut followed by reforestation. During the life of a pine forest, it may be in the dense, unproductive condition for only 5-8 years.

In summary, pine stands can produce and provide good wildlife habitat, but to do so they must be **managed**, primarily through use of prescribed burning and timely thinnings.

MISCONCEPTION #3: FIRE IS BAD FOR WILDLIFE.

Wildfires can be devastating for wildlife and timber, but **prescribed burning** in pine stands can improve wildlife habitat. Prescribed fire is **not** recommended in hardwoods.

Prescribed burning is the deliberate use of fire under controlled conditions to accomplish certain forest management objectives. It is one of the best and least costly wildlife habitat improvement techniques available to forest managers.

Browse plants (hardwood sprouts) will soon grow beyond the reach of deer in managed pine stands. Prescribed burning at 2-3 year intervals will keep browse within reach of deer and will stimulate the growth of nutritious forage plants. Quail and turkey also benefit because heavy brush is removed and seed-producing plants are encouraged to grow.

Prescribed burning used in conjunction with pine thinnings can dramatically improve wildlife habitat. Research has shown that burning can result in more than a five-fold increase in available wildlife food.



MISCONCEPTION #4: ALL HARDWOODS ARE GOOD FOR WILDLIFE.

Many contend that all hardwoods are good for wildlife. Not necessarily. Many hardwood species are of little value to wildlife, while others offer tremendous benefits.

Early in the century, chestnuts provided a substantial portion of the mast utilized by wildlife, but during the past 50-60 years, oaks have been the most valuable hardwoods in terms of providing food for wildlife in Tennessee forests. Oaks are valuable to deer, turkey, squirrels, and waterfowl because they produce acorns, one of the most accessible and nutritious wildlife foods.

Acorn production depends on two important factors. The first is the age of the tree. Most species of oak in Tennessee begin producing acorns after about 25 years.

The second factor is species group. Two broad oak groups occur in Tennessee: red and white. One important difference in them is acorn production. Red oaks are generally more reliable acorn producers, but take two years to mature. White oaks produce acorns in only one season; and although some may be produced every year, production may vary widely.

Some oak species important to wildlife in Tennessee include:

Red oak group - black oak, cherry bark oak, northern red oak, Nuttall oak, scarlet oak, Shumard oak, southern red oak, pin oak, water oak, willow oak

White oak group - chestnut oak, overcup oak, swamp chestnut oak, white oak

It should also be noted that red oaks often grow faster, are somewhat more sensitive to drought stress, and reach physical maturity at an earlier age than the white oaks. Therefore intensive management by thinning and other stand improvement measures are important in maintaining the vigor and acorn production of red oaks.

Several other hardwoods that produce "hard mast" valuable to wildlife include hickory, beech, pecan, and walnut. Some Tennessee hardwoods valuable for "soft mast" production are blackgum, dogwood, persimmon, maple, ash, and cherry. Both are important food sources for wildlife at different times of the year. Hardwood species of relatively less value as food producers for wildlife include sycamore, cottonwood, and elm.

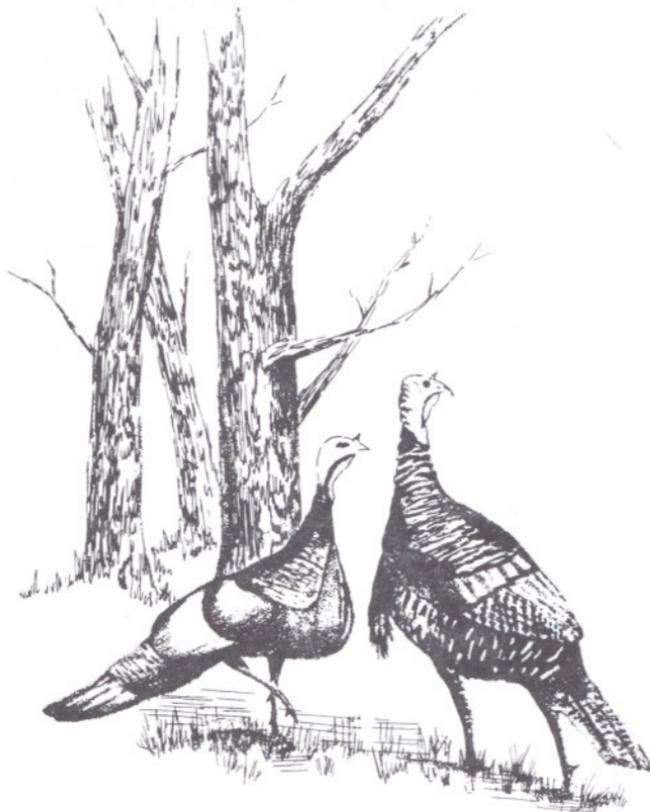
MISCONCEPTION #5: CLEARCUTTING TIMBER IS BAD FOR WILDLIFE.

Contrary to popular sentiment, the practice of clearcutting is an efficient and effective management tool for production of both timber and wildlife.

Clearcutting involves the removal of **all** the trees from a given forested area. The practice is normally applied in mature stands of timber for the specific purpose of regenerating fully stocked stands of valuable native species such as oak, ash, yellow poplar, and walnut, which is not possible to achieve through a partial or selective cutting system.

It is well known that such species will not regenerate and grow under the shade of other trees. Foresters call them "intolerant" species because of their inability to develop in the reduced light of the forest. Only when sunlight is allowed to reach the forest floor does nature permit seeds of some species to germinate and seedlings of intolerant species to grow and develop.

So-called "selective cutting" of timber may give rise to some seedlings where individual trees are harvested, but adjacent uncut trees soon expand their crowns into spaces created by harvesting, and further development of the new seedlings is suppressed by the progressively lower level of light.



“Diameter limit” and “high-grade” cuttings, which are forms of selective cutting, actually result in regeneration and development of fewer oaks and other intolerant tree species so valuable to wildlife and, instead, favor the more shade tolerant species which provide relatively less for wildlife.

The introduction of sunlight created by clearcutting stimulates germination of seed and provides room for growth and development of seedlings and fast-growing stump sprouts, which usually form the fastest growing and highest quality trees in the new stand.

Because clearcutting begins a whole new cycle of plant growth in which forbs, grasses, fungi, and wildflowers are produced in addition to an abundance of tree seedlings, a new habitat component is created that provides browse and forage for deer and nesting areas and food for turkeys, rabbit, and quail which were previously unavailable. As such, clearcutting provides diversity of habitat necessary for healthy wildlife populations.

Most public resistance to clearcutting is related to its visual impact rather than to its effectiveness in achieving regeneration of timber or improving wildlife habitat. Most of the clearcutting familiar to the public has been carried out on forest industry lands where efficient timber production is the primary goal.

It should be noted, however, that clearcuts need not be large to achieve timber regeneration and wildlife habitat goals on non-industrial private and state-owned lands. Although larger areas are easier to manage, research has shown that the **minimum** size area needed for regenerating timber is a space about twice the mature height of the adjacent timber stand in width, about an acre.

The ideal size of clearcut areas for optimum utilization by wildlife is 10-25 acres. Smaller areas serve wildlife equally well, but larger areas are often underutilized by wildlife, because they tend to roam no more than a few hundred feet away from the safety of nearby woods.

Visual impact can be reduced and usefulness to wildlife enhanced by varying the size and shape of clearcuts and distributing them in random fashion across the forest property, which also creates habitat diversity.

Cuttings need to be scheduled every 5-15 years to achieve a balanced distribution of timber age-classes and productive wildlife habitat. A well-regulated forest composed of many even-age stands of timber randomly dispersed across the forest will provide all the habitat components necessary for many species of Tennessee wildlife and will almost guarantee “good hunting” indefinitely.

Most foresters and wildlife biologists recognize clearcutting as a practice that works for both timber and wildlife. It is unfortunate that such a beneficial silvicultural practice has received so much negative criticism, because Tennessee’s hardwood forests have an amazing ability to regenerate naturally under such a system. Better understanding of the need for clearcutting by forest landowners and the public can result in better timber and more wildlife for everyone.

MISCONCEPTION #6: TIMBER HARVESTING CAUSES SOIL EROSION AND POLLUTION OF STREAMS AND LAKES.

Clearcutting and other harvesting practices are often accused of generating soil erosion and contributing to water pollution, but research has shown that cutting trees does not cause soil erosion, regardless of the cutting practice employed.

Erosion occurs in areas where leaves and other organic debris, which cover the forest floor, have been pushed back or incorporated into the soil and where the soil itself has been disturbed or loosened. Areas where the organic litter remains undisturbed are protected from raindrop erosion. The energy of falling rain is absorbed by the litter layer, preventing detachment of soil particles. Precipitation then soaks harmlessly into the forest soil to feed vegetation and recharge underground water supplies.

The greatest potential for erosion in forestry stems from activities related to **removing** timber from the woods, such as construction of haul roads, log landings, and skid trails. Erosion may occur when the protective litter layer is removed or incorporated and when the soil is loosened during construction and use. Soil compaction also may occur on log landings and roads, which will prevent infiltration of water into the soil and lead to erosion caused by water running across the surface.



Soil erosion and water pollution may be prevented or minimized through the use of best management practices (BMPs) developed for use by loggers and other forest operators. Proper location and construction of logging roads, log decks, and skid trails to minimize soil movement and use of streamside management zones to protect stream channels and banks can prevent most soil erosion and ensure that streams and lakes remain free of sediment.

The potential for generating erosion is probably greater when conducting so-called selective cutting than when clearcutting since more roads, landings, and skid trails must be constructed over a larger area in order to cut and remove a given volume of timber. In addition, with selective cutting, the cutting cycle is shorter which requires more frequent reentry and disturbance of skid trails, landings, and roads.

In conclusion, if soil disturbance is minimized and ground cover is maintained during timber harvesting operations, soil movement and water pollution can be prevented through the conscientious use of forestry BMPs.

MISCONCEPTION #7: HERBICIDES ARE HARMFUL TO THE FOREST ENVIRONMENT.

Herbicides are chemical substances used to control unwanted vegetation such as grasses, brush, and undesirable trees. These chemicals have proved to be effective and economical tools for controlling vegetation which would overtop and kill newly planted seedlings or otherwise interfere with the growth of desirable trees.

Herbicides used in forestry and wildlife management are the subject of much controversy in recent years. Much of the concern is associated with control of hardwood trees and brush when planting pines. Application of herbicides, especially over relatively large areas, has raised questions about the effect such chemicals have on fish and wildlife, water quality, non-target plants, and human health.

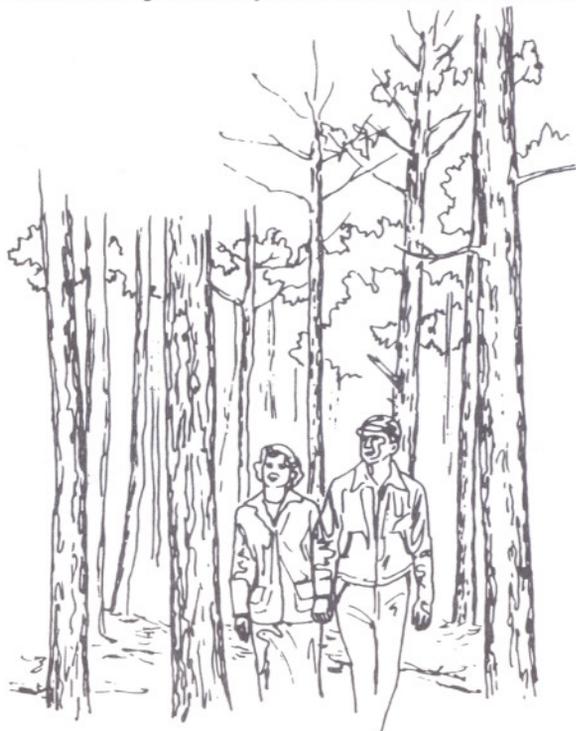
Many people equate herbicides with deadly poisons. While **any** substance administered in sufficient quantities can act as a poison and kill, the toxicity (the degree to which substances are poisonous to humans or other animals) of most of today's forestry herbicides is low and poses little or no threat to man or animals in formulations and volumes commonly applied. Most forestry herbicides in common use today actually have a lower oral toxicity than similar amounts of table salt or aspirin.

Volumes of forestry herbicides' active ingredients are applied in very small doses, usually a few ounces or pounds per acre, and the interval between applications is extremely long (30-60 years) compared to agricultural chemicals which are applied annually.

Research shows that many herbicides bind themselves to soil particles and tend not to move through the soil. And although others are known to move through the soil when excess water is present, they do not persist long in the natural environment of the forest. Sunlight, soil microbes, and other natural processes chemically break down herbicides into other harmless substances relatively quickly after application. Most persist for only a few weeks or months. Thus, rapid decomposition of herbicides helps to reduce the hazards associated with their use.

A number of safeguards which contribute to the safe use of herbicides used in forestry and wildlife habitat management are well established. Before any herbicide can be sold it must be registered for use by federal and state government agencies. Specific precautions, instructions, and limitations regarding selection, mixing, application, and cleanup are also contained on herbicide container labels. Commercial applicators must take written tests and be chartered and licensed to purchase and apply herbicides. Finally, best management practices (BMPs) for herbicide application have been developed by the State for proper and safe application.

If carelessly or improperly applied, herbicides may cause harm in the environment as may any substance, especially if applied directly to water or non-target crops or in other-than-recommended amounts. Conversely, when properly used, herbicides cause few, if any, detrimental effects and are valuable tools for achieving timber and wildlife management objectives in a safe and cost effective manner.



MISCONCEPTION #8: FORESTERS ARE CONVERTING ALL OUR HARDWOOD AREAS TO PINE.

This statement simply isn't true. According to a 1989 forest survey conducted by the U. S. Forest Service, 11.9 million acres or 89 percent of Tennessee's forests were classified as hardwood or hardwood-pine types. A 1952 forest survey of the State shows that the proportion of hardwood and hardwood-pine types was only 75 percent of the forest resource. Thus the amount of pine types has steadily declined and the amount of hardwood has increased. From 1952 until 1989, the amount of Southern pine type dropped from 2.0 million acres to 1.3 million acres, a drop of 34 percent.

Much of the decline in the pine type results from organized fire control and from failure of private landowners to secure natural regeneration or replant after harvesting their pines. Consequently, most such sites reverted to low-grade hardwoods.

Most of the "new" pine has been established by the wood-using industries on company land, which supported mostly low-grade hardwood stands, and by private landowners who planted pines under one or more of the federal cost share programs such as the Soil Bank Program, Agricultural Conservation Program, Forestry Incentives Program, and Conservation Reserve Program. The distinctive pattern of planted pines on the landscape, which make them more noticeable to the average citizen, provides a false impression that much of the State's hardwood forestlands are being converted to pine. Tennessee is still a "hardwood state"!

There has been relatively little change in the **total** amount of forestland in Tennessee during the past 37 years (7 percent increase), but substantial changes have been made in specific areas of the State that affect timber and wildlife production. In West Tennessee, for example, hundreds of thousands of acres of bottomland timber have been cleared during the past 20 years for crop production. Since bottomlands are the most productive sites in the State, conversion to another land use exerts a devastating impact on timber and wildlife in that region.

Concurrently, forestland acreage in other areas of the State has increased as old fields have been allowed to revert to forestland, providing additional habitat for wildlife.

Urban expansion, road and utility rights-of-way, and other land uses are expected to continue gobbling up forestland in the Volunteer State and, as such, pose a grave threat to timber production and wildlife habitat in the future.

MISCONCEPTION #9: IT IS GOOD HARDWOOD LAND IF HARDWOODS ARE GROWING ON IT.

Many believe that forest sites are productive for wildlife if hardwoods are growing on them. Hardwoods are the climax timber type in most areas of Tennessee. The oak-hickory type alone occupies 72 percent of the State's forestlands. Hardwood species composition may vary from the highly desirable oaks and hickories to species less beneficial to wildlife such as maple, ash, and yellow poplar. Therefore, the occurrence of hardwoods doesn't necessarily indicate a good site for either timber growth or wildlife food production.

Hardwood timber quality also varies widely from fast growing, multi-log red and white oaks on north facing slopes or stream bottoms to fire-scarred, flat-topped oaks on ridge tops or south facing slopes. The U. S. Forest Service estimates that 57 percent (7.6 million acres) of Tennessee forestland is incapable of producing at least 85 cubic feet of timber per acre per year. Relatively little high-grade hardwood timber is produced on such sites. The overwhelming majority of high-grade hardwood timber is produced on land capable of producing in excess of 85 cubic feet per acre per year.

The same generalization may be made concerning the quality of wildlife habitat. Poor forest sites, even though they may support several oak and other hardwood species, provide relatively less potential for wildlife food. Conversely, good sites have the potential for producing good crops of food for wildlife, especially hardwood mast, as well as high-grade timber.



Good hardwood sites are not difficult to recognize. The trees growing on them are tall, long-bodied, and relatively free of limbs. Such trees are usually found on river bottoms, stream terraces, and north and east facing slopes where the soil is deep and moist and plenty of organic litter is present. Also, production of acorns, wild grapes, and other foods valuable to wildlife are heavier and more consistent.

Poor sites are characterized by short-bodied, flat-topped, mostly limby timber. Ridge tops, upper slopes, and south and west facing slopes support low-grade hardwood stands in many areas of the Volunteer State. These locations are characterized by shallow, dry soils with little moisture-holding capacity. Production of wildlife food on such sites is much lighter and more sporadic than on the better ones.

Some landowners have been criticized for converting low-grade hardwoods to pine because it "destroys" wildlife habitat. In most instances such sites aren't nearly as productive for wildlife as one might think. If interspersed with native hardwoods in relatively small blocks, pines can provide valuable habitat diversity by breaking up the continuous forest. If managed properly (see Misconception #2) pine stands can provide a food and cover component needed by many species of wildlife which would not otherwise be available on a poor hardwood forest site.

Wherever possible, of course, hardwoods should be retained on good sites and managed intensively if production of high-grade, high-value timber products and wildlife habitat are important landowner objectives.

MISCONCEPTION #10: IF PLENTY OF MAST-PRODUCING OAKS ARE PRESENT, THERE IS NO NEED TO WORRY ABOUT PROVIDING OTHER FOOD FOR WILDLIFE.

Wildlife food is produced in the forest environment by the trees in the overstory and by plants on the forest floor. Hardwood trees produce nuts, berries, and other fruits. Other plants on the forest floor such as shrubs, vines, forbs, fungi, and grasses produce browse, forage, fruits, seeds, and similar nutritious foods needed and used by a variety of game and non-game species.

Mast is a collective term for the fruit of forest plants used for food by wildlife. "Hard mast" consists of nuts such as acorns, walnuts, pecans, beechnuts, and hickory nuts. So-called "soft mast" includes dogwood berries, wild cherries, persimmons, maple seed and the soft fruits of many other species. Mast is high energy food that provides many mammal and bird species the nutrition they need to maintain health for winter survival and reproduction. The size and health of wildlife populations are often directly related to variations in mast supply.

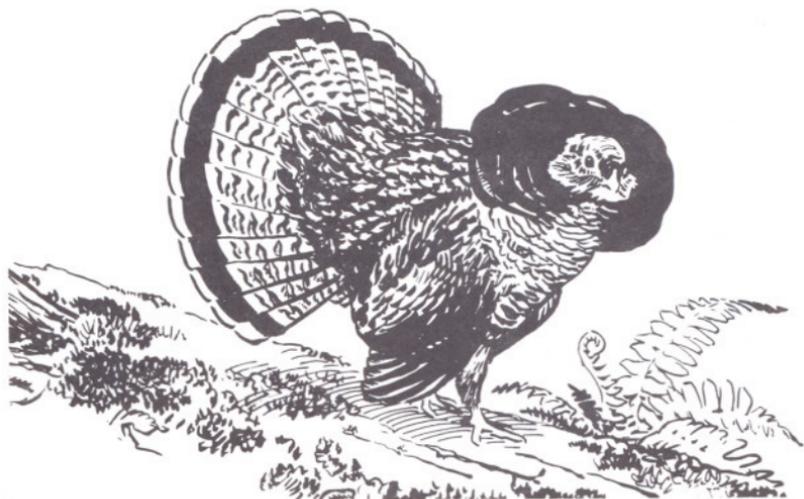
Because hard mast is so valuable, other foods needed by wildlife during each season of the year are sometimes dismissed as unimportant. Although most species of wildlife feed on acorns and other mast, production of such food is

seasonal and sporadic from year to year; so wildlife must seek a variety of foods in order to survive. Deer, for example, depend heavily on year-round forage and browse plants for food in addition to mast. Other species also need browse, forage, seeds, insects, and other foods during the year when mast is not available.

The best way to ensure reliable year-round supplies of food for wildlife is by managing our forests intensively. Every management activity affects wildlife and the food supply. Clearcut areas where timber is regenerated provide excellent year-round deer browse and forage. They also furnish fruit, seed, and insects needed by turkeys, quail, and many other game and non-game birds. When such areas are interspersed among forested areas of varying age and size, they provide access to food and cover needed by practically all species of native wildlife. Areas in which adequate food, cover, and water are provided on a continuous basis will attract and retain wildlife indefinitely.

Additional forest management practices which enhance wildlife habitat include periodic thinnings and prescribed burning, both of which give rise to nutritious browse growth, forbs, grasses, and seed-producing plants. Since all forest environments exist in a constant state of growth and change, harvest cuttings, thinnings, and prescribed burnings must be conducted every few years to maintain habitat of optimum quality for all wildlife species. Therefore, a decision to "do nothing" is, in fact, "doing something," since change is natural and inevitable.

In summary, the forest is capable of producing a wide variety of valuable foods needed by wildlife, but no single food source is sufficient for year-round use. Well planned, intensive forest management practices will provide the conditions necessary to produce adequate supplies of food for both game and non-game species during every season of the year--indefinitely.



CONCLUSION

Timber and wildlife **can** be managed on the same acreage. Sound timber management practices will create a dynamic forest habitat that can be modified to meet many specific wildlife objectives. Instances in which wildlife and timber management are incompatible are rare.

It should be recognized that the management policies and objectives of public agencies, wood-using industries, and non-industrial private landowners are diverse and may not always correspond with one's own management opinion or preference. Although it may be disturbing to see timber cut in an area where one has hunted for years and which appears to be ideal wildlife habitat, changes brought about by cutting will almost always provide new habitat diversity and give rise to plants that will produce food needed by many wildlife species.

Thus, properly planned forest management can enhance wildlife habitat for most game and non-game species in Tennessee. Although it may not be the answer to all wildlife habitat problems, professional foresters and wildlife biologists, working together as a team, are demonstrating that forest and wildlife management are compatible on the same forestland acreage.



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