Wild Turkeys thrive in fire-maintained habitats


Wild turkey photo by Phillip Jones (SCDNR)

Prescribed fire has an essential role in creating and sustaining pine savanna habitat. Many species that live within pine dominated habitats are partially or entirely dependent upon habitat maintained by frequently repeated, low intensity fire. Burn frequency, timing, size, and intensity determine habitat composition and structure, and its suitability for different wildlife species, including wild turkeys. Growing season burns and dormant season burns can be used successfully, as both are necessary tools for different objectives. Dormant season burns help to maintain open canopies and nest cover while growing season burning can help control midstory woody vegetation and promote grasses and forbs which are an important summer food source for many birds, including bobwhite quail and wild turkeys.


Prescribed burns are planned and conducted for effectiveness and safety

Prescribed fires are carefully planned well in advance and carried out by trained and knowledgeable people to achieve specific wildlife and restoration objectives. Prescribed fire also is an important tool for decreasing wildfire risk. Mechanical or chemical treatments can accomplish some of the benefits of prescribed burning but are much less effective at stimulating beneficial herbs and preventing woody plants from dominating.

Prescribed fire is an inexpensive, efficient way to create and maintain habitat. Without fire, the forest becomes dominated by midstory vegetation and shrubs, and the forest canopy closes. Most of the diversity and food for wildlife in a pine forest is found in the understory, not in the canopy overhead. When the canopy closes and sunlight decreases, the forest floor vegetation also decreases. Animals depend on the grasses and forbs in open pine forests for survival and require the habitat that is only produced with the low intensity, frequent fire that has been occurring in the Southeast for many thousands of years. Wild turkeys use a wide variety of habitats. They may not specifically require pine habitat, but they favor open pinelands and reach higher populations when it is available. Open pine habitat offers plentiful food resources in the form of seeds, fruits, new tender vegetation, and insects.

Like all species that utilize pine savannas, wild turkeys evolved with fire, and healthy populations can tolerate the loss of a few nests to fire or other factors. The most important thing to remember is without suitable habitat, population levels will not be as high as they otherwise would be or maintained at a level that sustains the population in the long-term.

Research demonstrates that growing season burns benefit habitat management and have minimal impact on turkey populations. Turkeys' habitat needs change throughout the year. Recent research from the University of Georgia suggests that hens prefer nesting in areas that have been burned within the past two years with adequate cover to conceal nests from predators. After poults hatch, hens use weedy cover open at ground level to hide poults but still spot predators. The studies also showed hens used stands burned in the last two years as brood rearing habitat. UGA researchers conducted a study in southwest Georgia over two seasons and found prescribed fire


Prescribed fire maintains quality wildlife habitats

COOPERATIVE EXTENSION
College of Agriculture, Forestry and Life Sciences

THE LONGLEAF ALLIANCE

USDA NRCS
U.S. Department of Agriculture
Natural Resources Conservation Service

SOUTH CAROLINA FORESTRY COMMISSION

QUAIL forever
The Habitat Organization


Prescribed fire reduces woody growth in stand understory

destroyed only 11.5% of nests. Of these nests, 75% of females that had nests destroyed by fire re-nested. One nest in the study was even exposed to prescribed fire and hatched.

Predators, particularly raccoons, are the main cause of nest failure for wild turkeys. Without fire, hardwood cover increases and groundcover density decreases allowing predators to find nest easier. The benefits of growing-season prescribed fire to wild turkey nesting and brood-rearing habitat outweigh the risks. For the few nests that are lost due to habitat management activity, predation, or even weather-related events, it's important to note that hens may re-nest up to three times.

Recommendations


Prescribed fire promotes food resources for wildlife

- Maintaining various age classes of pine stands with high quality groundcover creates conditions that are beneficial for both nesting and brood rearing.
- Turkeys prefer early successional habitat for nesting, with some shrubby cover nearby. A combination of growing season and dormant season burns may help balance habitat maintenance and retaining nesting cover. Maintain a balance between recent burns that support foraging and denser areas that provide nesting habitat by promoting a patch-mosaic of these habitats. Patchy burns and regular rotational burns will create these conditions.
- Turkeys avoid nesting in areas that have not been burned in more than 3-5 years. Varying fire frequency and seasonality creates a mosaic of habitat conditions that are beneficial for nesting and brooding. Smaller block burning (50 acres or less), in 2–3-year intervals, can enhance use by turkeys, especially of females during nesting. Research has shown that turkeys will utilize only the edges of large acreages that have just been burned. Long narrow burn blocks can be larger.
- Not all nests are laid at the same time because not all female turkey's breed at the same time. This means that burning during the early growing season won't destroy all nests. If nests are burned, re-nesting is common after the loss of a first nest from predators, prescribed fire or other causes.
- Burning during late March and April — when shrubs and saplings start to bud — is much more effective at reducing brush and saplings and stimulating grass and flowering plant growth than winter burning. This timing also allows re-nesting if needed.


Rebekah Burger had a successful hunt in a recently burned stand

Resources:

https://georgiawildlife.blog/2019/03/26/prescribed-burns-turkey-nesting/
https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd499352.pdf
https://www.fs.usda.gov/detail/ouachita/news-events/?cid=FSEPRD621963
https://southernfireexchange.org/wp-content/uploads/2018-8.pdf
https://youtu.be/RueQUgPN-ZM
https://wildlife.org/wild-turkeys-need-a-mosaic-of-fire/
https://www.nwtf.org/conservation/article/wild-turkeys-prescribed-fire-southern-piney-woods
https://www.sciencedirect.com/science/article/pii/S0378112719314689

COOPERATIVE EXTENSION
College of Agriculture, Forestry and Life Sciences

THE LONGLEAF ALLIANCE

USDA NRCS
U.S. Department of Agriculture
Natural Resources Conservation Service

SOUTH CAROLINA FORESTRY COMMISSION

QUAIL forever
The Habitat Organization