

# WILDLIFE

## management guide



Wildlife Management Section  
 South Carolina Department  
 of Natural Resources  
 P.O. Box 167  
 Columbia, SC 29202

### Wild Turkey

Good turkey habitat contains mature stands of mixed-hardwoods, groups of sawtimber-sized conifers, relatively open understories, and scattered clearings with distributed water.

Mixed-hardwoods produce mast which is a primary winter food of turkeys and a combination of hardwood species is necessary as a buffer against the variable nature of mast production. Conifers provide roosting sites and protection during extreme weather. In recent years, wildlife biologists have learned that wild turkeys will continue to use timberlands which are managed by modern forestry techniques. However, there are some attributes of the undisturbed forest which should be retained or managed to keep wild turkeys on large forested tracts.

Frequent and sustained disturbance by free-running dogs, vehicles, or man may make essential habitat elements unavailable or cause turkeys to avoid disturbed areas.

The annual range of many wild turkeys is about 1,000 acres and is generally irregular in shape.

### HABITAT REQUIREMENTS

#### ▲ Food

About 90 percent of a turkey's diet is plant matter and the remaining 10 percent is animal matter. Wildlife openings produce food needed during the warm months (*grass seed, insects, fruit, forage*) and serve as breeding, nesting, and brood-rearing areas. These openings can also provide native or supplemental food year-round when planted.

#### ▲ Food of Wild Turkey by Season

Fall	Winter	Spring	Summer
Hard Mast	Hard Mast	Hard Mast	Forage
Insects	Forage	Forage	Insects
Grass Seeds	Soft Mast	Insects	Soft Mast
Weed Seeds	Seeds	Grass Seeds	Forage
Grain		Hard Mast	



## ▲ *Food of Wild Turkey by Habitat Type*

### **Food and Type Species Habitats**

#### *Grass and Weed Seeds*

Paspalum  
Panicum  
Legume

Openings, and open woodlands, transitions, thinnings, prescribed burns and regeneration areas up to 3 or 4 years of age.

#### *Mast*

Acorn  
Beechnut  
Pecan

Hardwood stands over 25 years age. Highest production in stands 50 to 100 years of age.

#### *Forage*

Clover  
Grasses  
Sedges

Openings, prescribed burns, open woodlands, logging roads, bottomlands and open grown understory vegetation.

#### *Soft Mast*

Dogwood  
Grape  
Cherry  
Blackberry and  
Dewberry  
Huckleberry  
Blackgum  
Blackhaw  
Spice Bush  
Holly

Pine and hardwood sites from openings to fully stocked stands. Greatest fruit production occurs in open areas.

#### *Seeds*

Sweetgum  
Longleaf  
Magnolia

Vigorously growing pine and hardwood stands.

#### *Insects and Snails*

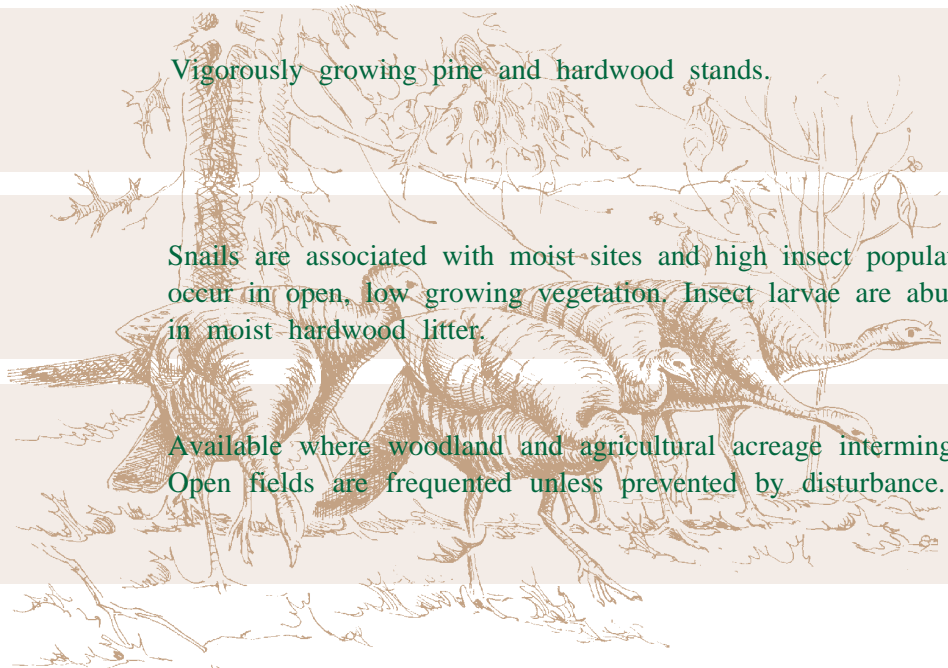
Grasshopper  
Millipede  
Insect Larve

Snails are associated with moist sites and high insect populations occur in open, low growing vegetation. Insect larvae are abundant in moist hardwood litter.

#### *Grain*

Oats  
Corn  
Soybean  
Wheat

Available where woodland and agricultural acreage intermingle. Open fields are frequented unless prevented by disturbance.



## ▲ *Cover*

Brooding and nesting cover consists of the woodland margins of grasslands, sparse brushlands, recent regeneration areas, and open fields. Hens occasionally use open woodlands with low ground cover for nesting.

Escape cover can be dense pole stands, sapling stands or extensive woodlands and swamps where they can avoid harassment.

In the mountains, wintering and roosting cover consist of conifers sheltered by terrain. In the Coastal Plain dense pine stands, large hardwoods, and gum and cypress along water courses meet these needs.

## ▲ *Water*

Turkeys readily use open streams, ponds and prepared water holes. Two or more sources of permanent open water per square mile of range are necessary, and are usually available naturally throughout the Southeast.

# STANDARD MANAGEMENT PRACTICES

Stands from 50 to 100 acres in size are generally suitable for wild turkeys as long as they are part of a forested landscape that supports turkey populations.

Distribute stand ages so that not more than one third of a home range is occupied by 0 to 20 year age classes. This permits use of fruit, forage, insects, grass and weed seeds resulting from regeneration cuts and site preparation. Benefits of regeneration usually last 3 to 5 years (*longer on poorer sites*).

Sustain a well distributed diversity of habitat conditions and maintain streamside management zones. Within an intensively managed forest landscape, turkeys use streamside habitats for travel corridors, feeding areas, and roosting areas. Maintain connecting corridors of hardwoods between streamside management zones in areas managed for pines.

## ▲ *Rotation*

Apply sawtimber rotations to both pine and hardwood management types where managing

for turkeys. In hardwood types, hard mast species should be a substantial part of the stand (20-50 percent of the basal area).

A rotation age of 125 years is best in hardwood stands to maintain mast production. Sites with either pine or hardwood management types, with rotations less than 80 years, produce hard mast in key areas.

On sites with pine management types that are prescribed burned, produce hard mast in unburned key areas.

## ▲ *Regeneration*

Regenerate all pine types by clearcutting and/or seed tree cuts and hardwoods by shelterwood cuts. Regeneration cuts generally provide excellent nesting and brooding habitat for 3 to 5 years.

Site preparation affords opportunities to seed additional food plants as well as prolonging the availability of nesting or brooding habitat. Fire may be used for site preparation in hardwoods.

Retain or develop approximately 20 percent of stands managed for turkeys in hard-mast-producing species. Where pine is growing in medium to high quality mountain or bottomland hardwood sites, emphasize hardwood management. Bottomland hardwoods should not be converted to softwoods. Gum and cypress ponds should be retained.

Avoid working any slash or cutover areas in the nesting and brooding season (*March through June*) and do not burn slash during hunting seasons.

Regeneration should be followed by seeding of access roads and logging decks. Further access to areas managed for turkey should be limited by installing gates, tank traps, roadblocks, etc.

## ▲ *Intermediate Treatments*

Intermediate cuts present an excellent opportunity to control stand density. Precommercial thinning prolongs the benefits of nesting and brooding range in regeneration areas. Wildlife stand improvement is the cultural means to insure a sufficient quantity and variety of foods in key areas. Retain dogwoods, viburnums,

thornapples, crab apples, grapes, and chinquapin. Avoid complete removal of mast-producing species.

### ▲ *Prescribed Burning*

Burning improves palatability and nutrition of understory plants, stimulates some types of fruit production and maintains open understories. Turkeys eat the fresh growth of forbs, grasses and browse resulting from burning in late winter and early spring. Open understories of pine sawtimber stands that are burned regularly also produce rich insect crops for summer and fall food.

Burning cycles of 3 to 5 years reduce large sprouts to new growth and remove much of the “rough” that suppresses desirable herbaceous growth. More frequent burns limit understory and mast production.

Schedule burning to avoid nesting and brooding seasons from March through June. Burns made in December, January, and February are generally best for turkey habitat.

## DIRECT IMPROVEMENTS TO HABITAT

Base the selection of areas to be managed on the wild turkey’s habitat requirements:

- nesting and brooding range
- herbage
- spring seeps
- water
- dewberry or blackberry patches
- crab grass or bull grass fields
- mast-producing areas (such as hardwood stringers or southern red or scrub oak knolls)
- the transitions of ponds, swamps or hardwood bottoms
- dogwoods, chinquapins or beech coves



Thin or regenerate portions of areas managed for hard mast as needed but retain cavity trees for other wildlife species. Also:

- remove stunted, low vigor or poor-producing stems
- do not prescribe burn key areas retained for hard mast
- final commercial thinnings should develop advanced reproduction of suitable young stems.

Brush chop or disc small, open areas adjacent to woodlands to maintain early successional vegetation.

Openings in both pine and hardwood types are necessary for brooding range, and are particularly important where mid-rotation stands predominate. Provide at least one opening from 1-5 acres in size for every 150 acres if openings do not occur as adjacent right-of-ways, regeneration areas, seeded log roads and landings or farmland. Plantings of chufas, ladino clover, orchard grass-clover, crimson clover, wheat, etc. supplement natural food supplies. Site preparation affords an excellent opportunity to seed food plants. Plant mast trees and eliminate fall tillage of crops and/or leave small areas of grain crops unharvested.

## OTHER SPECIES THAT BENEFIT FROM WILD TURKEY MANAGEMENT

Numerous other game and nongame species benefit from wild turkey management. Since wild turkeys require both early and late successional habitats, a wide variety of wildlife species are associated with turkey management:

<u>Open Fields</u>	<u>Early Regeneration</u>	<u>Mature Timber</u>
kestrel	yellow-breasted chat	brown-headed nuthatch
meadowlark	chestnut-sided warbler	pine warbler
indigo bunting	towhee	wood thrush
marsh hawk	rabbit	Acadian flycatcher
bobwhite quail	ruffed grouse	black bear
red fox	gray fox	raccoon
cottontail rabbit	white-tailed deer	gray squirrel
field sparrow		



The South Carolina Department of Natural Resources prohibits discrimination on the basis of race, sex, color, national origin, religion, disability or age. Direct all inquiries to the Office of Human Resources, P.O. Box 167, Columbia, S.C. 29202.