



Management of the Wild Turkey in Oklahoma

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History and Status

Early records indicate that historically the eastern wild turkey (*Meleagris gallopavo silvestris*) was found throughout the eastern two-thirds of Oklahoma and the Rio Grande turkey (*Meleagris gallopavo intermedia*) was found in the western one-third of the state. In addition, the Merriam's turkey (*Meleagris gallopavo merriami*) occurred in the western part of the Oklahoma Panhandle. Habitat losses and uncontrolled hunting resulted in turkey populations being greatly reduced or eliminated throughout the state by the early 1940s. The Oklahoma Department of Wildlife Conservation began to reestablish the Rio Grande turkey in the late 1940s with wild turkeys trapped in Texas. Early attempts to establish the Eastern turkey using pen reared stock met with complete failure because of their inability to survive in the wild. Successful restoration of the Eastern turkey started in the late 1960s and early 70s with birds trapped in Arkansas and Missouri. The successful restoration of both sub-species has led to liberal hunting seasons and increased public awareness of this fine game bird.

Physical Characteristics

North American wild turkeys belong to the single and variable species *Meleagris gallopavo* with six recognized subspecies; two of the six occur in Oklahoma. Turkeys, like other gallinaceous or "chicken-like" birds such as grouse, quail, pheasants, and chickens, belong to the order Galliformes. Adult male turkeys, also called "gobblers" or "toms," stand about 2.5 to 3 feet tall and are 3 to 4 feet long. Females or "hens" are smaller and average from 8 to 10 pounds. Mature Eastern males average about 20 pounds and Rio Grandes about 18 pounds. Males appear darker than females. Eastern turkeys have tan tipped tail feathers while Rio Grandes are lighter.

Behavior

Turkeys have keen eyesight and hearing. They can fly an estimated 40-55 miles per hour, but usually escape by running at speeds of up to 18 miles per hour. Turkeys fly into trees to spend the night and may roost individually or in flocks, depending on the season. In early morning, turkeys glide to the ground to begin feeding. Eastern and Rio Grande birds probably flock differently because of differences in habitat and topography. During winter, Eastern turkeys gather into male flocks of 10 to 20 birds and female flocks as large as 100 birds. There also may be mixed flocks of hens and young of the year. The Rio Grandes usually form flocks of both sexes often numbering over 500 birds.

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During March and April breeding behavior begins with males gobbling and strutting, and flocks breaking up into small groups. Juvenile birds are sexually mature during their first breeding season and hens will usually mate and reproduce the first year. However, young "gobblers" or "jakes" cannot compete with adult gobblers and therefore do not usually breed. The adult male turkey breeds several hens (polygamous) and takes no part in nest site selection, egg incubation, or poult rearing.

In middle to late April the hen turkey selects a nest site and begins egg laying, which lasts about two weeks. Nests are usually close to a tree, stump, or brushpile, and eggs are laid on the ground in plant litter. Incubation takes about 28 days and clutches average 11 eggs. The hen and poults leave the nest within 24 hours of hatching and do not return to the nest site. Poults begin flying at seven days of age, but roost on the ground for about two weeks before roosting in trees. Poults stay with the brood hen into the fall, increasing their independence as they mature. Several brood hens with their poults often flock together in late summer to form winter flocks.

Food Habits

Turkeys may have the most varied diet of any animal known. They eat a variety of foods depending on availability, preference, and nutritional needs. All age classes eat insects when they are available. Nesting hens eat snails to obtain the required levels of calcium for egg shell production. Turkeys require Vitamin A, which is supplied by green plants that account for about 90% of all plant foods eaten throughout the year.

In the summer turkeys eat large quantities of insects, grass seeds, berries, and green leaves. In the fall and early winter, their diet changes to acorns, dogwood fruits, blackgum fruits, chittamwood fruits, hickory and pecan nut leavings from other foraging animals, and green grass. Late winter and early spring are the most critical times for turkey because of food availability. Turkeys eat old seeds, tubers, green leaves, legume seeds, and any remaining mast. During this period turkeys will rely heavily on cultivated crops such as wheat, oats, corn, and milo if they are available and accessible.

Home Range and Habitat Needs

The home range of an individual or flock is the area in which daily or seasonal activities are carried out. Daily move-

ments through home ranges are from one to two miles and cover 200 to 1,000 acres. Annual home range can be as large as 10,000 acres. Spring movements can be as large as 15-20 miles in the west. Movements vary greatly between flocks and individuals depending on season, food availability, and region of the state. Turkeys have the following habitat needs:

Roosts. Trees with open crowns and horizontal limbs are necessary. A lack of suitable roost trees away from disturbances may limit Rio Grande populations where large trees have been removed.

Nesting Cover. Nests are usually located in thick ground cover close to the edge of fields, roads, or some type of edge such as a creek. Alfalfa fields, stream banks, and hillsides with grass and shrubs provide good nesting cover in the western half of the state. Lowbush huckleberry, grape vines, grass clumps, and dead brush tops provide good nesting cover in eastern Oklahoma.

Water. Water is required each day and must be available within the home range.

Food and Escape Cover. Turkeys feed where food is available and where they are not disturbed. Food availability varies with the season, amount of rain, and land use. Eastern turkeys tend to feed in mature hardwoods or hardwood-pine associations with open understories and small openings. They require large continuous expanses of hardwood timber for winter range. Rio Grande birds tend to feed in mixed grass-shrubs associations with small woodlots and forested stream corridors.

Brood Rearing. Broods need pastures or small forest openings, associated edge, and fields dominated by grasses or other herbaceous cover with good insect populations.

Management Recommendations

Seldom will one landowner control enough land to meet all of the turkey's habitat needs. Therefore, it is important to evaluate existing habitat and to identify features that need to be deleted, added, or modified to improve the area. It is more efficient and economical to improve existing habitat than to establish new habitat. New plantings take considerable time and money.

Management for the Eastern Wild Turkey

(Eastern 1/3 to 1/2 of Oklahoma)

Management to improve wild turkey habitat will depend on a number of factors, such as which life need is limiting the population, other land use commitments, soil or climatic conditions that restrict the use of certain practices, and others. The following is a list of management options that may be used, wherever practical, to improve wild turkey habitat.

1. Plant food plots of clover, alfalfa, oats, milo, rye, rye grass, and wheat in openings in mature hardwood or pine hardwood timber. Plots should be 2-4 acres in size, with one per 160 acres. Plots should be oblong and planted on the contour. Exclude livestock on food plots.
2. Plant mast producing trees (nuts and fruits) if none are present.
3. Provide a permanent water source for every 160 acres with close access to mature hardwood timber.

4. Maintain at least 300 feet of mature hardwood timber out from each side of the stream bank to serve as travel lanes and provide for mast production.
5. Develop a planned grazing system in which stream side zones are deferred from grazing until June 1. *Never overgraze.*
6. Use prescribed burning as a tool to increase available green forage in the spring, open the understory, and increase insect availability in small permanent openings for broods. Burn no more than once every three years. Burn before or after nesting season (April - June).
7. If managing for commercial timber, age classes should be well distributed with small stand sizes (20 to 80 acres). No more than 200 acres per section should be regenerated in any 20 year period. Rotations should be about 80-100 years. At least 20% of all mast producing trees (oaks, black gum, dogwood, cherry, etc.) should be maintained and released if possible.
8. In managing cropland within the turkey's home range use minimum or no-till farming techniques to leave crop residue on the soil surface for food availability.
9. Fence farm ponds to exclude livestock from all or part of the area around the pond to create nesting habitat.

Management for the Rio Grande Turkey

(Western 2/3 to 1/2 of Oklahoma)

1. Plant food plots of clover, alfalfa, oats, milo, wheat, and corn along stands of mature timber if cropland is unavailable. Food plots should be about 2 to 5 acres in size with about one per 160 acres. Plots should be oblong and planted on the contour. Exclude livestock.
2. Provide a permanent year-round water source for every 160 acres with travel lanes extending to escape cover such as mature timber or shrub thickets.
3. Maintain large cottonwood and other trees along stream sides for roosting and escape cover.
4. Develop a planned grazing system in which edges of rangeland and timber are deferred from grazing until June 1. *Never overgraze.*
5. All mast producing trees and shrubs such as oaks, chittamwood, and plum should be maintained, as is, and released if needed.
6. Use prescribed burning as a tool to increase available green forage in the spring, open the understory in timber stands, and increase forb production in rangeland. Do all burning before April or after July.
7. Use minimum or no-till farming techniques to leave all crop residue on the soil surface.
8. Fence farm ponds to exclude livestock from all or part of the area around the pond to create turkey nesting habitat.

Wildlife biologists from the OSU Extension Service, the Oklahoma Department of Wildlife Conservation, or the USDA Soil Conservation Service are available to make specific recommendations on your land.

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