

Merriam's Turkey (*Meleagris gallopavo merriami*)
Colorado NRCS March 2001

General Information (Hoffman, et. al. 1993):

Merriam's turkey, *Meleagris gallopavo merriami*, also called mountain wild turkey, is the native turkey found in Colorado. Ponderosa pine-Gambel oak is the primary natural habitat. Turkeys have expanded their range to occupy nearly all suitable habitat in Colorado and with transplants and artificial habitat manipulation, they have expanded to areas that didn't traditionally support turkey.

Many turkey populations in Colorado move to higher elevations in the summer and lower elevations in the winter. The distances migrated can vary from one to 40 miles. Spring movements begin between mid-March to mid-April.

Gobbling begins in February and lasts into June. Merriam's turkeys in Colorado have two gobbling peaks. The first is in late April and coincides with mating peak. The second peak comes in mid-May, at the peak of incubation. Adult toms gather harems in the early spring. The hens lay about 10 eggs, beginning in late April and continuing as late as mid-May. They incubate their eggs 28 days. The peak in hatching comes in late May or early June. A 30-40% nest success rate is average, but within successful nests, 90% or more of the eggs hatch. Poults can fly at 10 days and they begin roosting in trees at 10-14 days. Generally the hen tends her brood about 3-4 weeks.

Life expectancy is about four years. During their first year, mortality is 50% or greater, then declines in the second year.

Food (Hoffman, et. al. 1993):

Turkeys exhibit specific food preferences, however they will consume a variety of foods when preferred foods are unavailable. Commonly consumed foods include grass leaves and seeds, forbs, ponderosa and piñon pine seeds, acorns, invertebrates, small reptiles, and cultivated crops. Other foods consumed as available include, juniper berries, clover, kinnikinnick, hawthorne, snowberry, watercress, and rose hips.

Snow depth can force turkeys to shift from grasses to other food sources. Grasses, forbs, and insects are important in the summer and mast is eaten as it becomes available seasonally. The poults rely on insects as their main food, gradually increasing the amount of plant material as they mature.

Supplemental feeding, where grain or other foods are spread out to attract turkeys, is not considered good turkey management. When turkeys become concentrated in feedlots or yards, they become habituated to humans and disease transmission increases. Rather than initiating supplemental feeding, private landowners wanting to feed turkeys might consider establishing food plots.

Food plots (Byelich and Gasseling 1997, Elkins 2001):

Food plots may be used as seasonal, supplemental food sources for turkeys, but are not intended to provide long-term, year-round food supplies for a population. A food plot may consist of annually planted (grains) or perennial (shrubs, forbs) foods or both and should be used to add to improve existing turkey habitat. For annual food plots, a mixture of three or four small grains that mature at different times will provide adequate food. Corn, proso millet, and sunflowers will withstand periods of heavy snow and should be considered for use with other grains such as wheat, oats, barley, rye, etc. A legume such as sweetclover may be included with the grains, then leave the food plot undisturbed the second year when the sweetclover dominates. Perennial or permanent food plots should consist of grasses and forbs, including legumes. A good goal is two to three grass species and two to three forb species. Berry producing shrubs (buffaloberry, serviceberry, etc.) and mast producing trees/shrubs may be added to the food plot. Planting rates should be at the normal dryland rate (non-irrigated plots) or the irrigated rate (where irrigation is planned) for the location. Colorado Agronomy Technical Note Number 61 contains recommended seeding rates for a number of commonly planted species. For assistance with species selection, consult a local soil survey, the appropriate Ecological Site Index, or an NRCS Biologist.

Keep in mind the other animals that may also use the food plots and size the plots accordingly. Multiple food plots should be placed 1/2 mile apart to avoid concentrating the turkeys (Rutherford and Snyder 1983).

Plantings should be located within 25 yards of cover such as shrubs or trees. Keep food plots away from roads and farmsteads. Suggested distance is 100 yards or more from roads and trails. A water source within one mile will increase food plot usage.

Water (Rutherford and Snyder 1983 and USDA-SCS 1973):

Drinking water is an important component of turkey habitat. Water spots should be available approximately every mile in occupied turkey range. Natural water sources may be supplemented with ponds, guzzlers, and wetlands. Escape cover such as shrub thickets should be planted or maintained within 100 feet of the water source.

If livestock and turkey share a water source, the site should be fenced and the livestock water should be piped to a tank at least 50 yards away.

Habitat Requirements (Rutherford and Snyder 1983, Hoover and Wills 1984, and Hoffman et.al. 1993):

Turkeys need breeding, nesting, brood rearing, and winter habitat in the proper combination and locations to provide year-round turkey habitat.

Breeding:

Males prefer to strut and display in small, open areas or near edges of openings or in forest with an open understory. Breeding habitat is usually not a limiting factor because they use their summer and winter habitats for breeding (Hoffman et. al. 1993).

Nesting and Brood Rearing:

Nesting sites are usually on slopes greater than 30% with 80% canopy cover within 4 feet above the nest. The canopy may be plants, rock, or slash. Nests in forests are usually found where canopy cover is 60% or greater. Dense horizontal cover is found for five to seven feet around the nest.

Brood rearing usually occurs in openings, riparian areas, burned areas, aspen stands, near springs or seeps, or on floodplains. Ideal brooding sites are openings less than 5 acres size with herbaceous vegetation located next to forest cover. Young poultts need thickets or forest with canopy cover within 35 feet of openings to survive raptor attacks.

Small clear cuts or selective cutting to maintain an uneven aged stand are techniques used to improve brood habitat. Any created openings should be 240 feet wide or less.

Loafing and Roosting (Rutherford and Snyder 1983, Hoover and Wills 1984, and Hoffman et. al. 1993):

Loafing and roosting sites are two more components of good turkey habitat. Loafing sites are in the forest within 50-60 feet of an opening. A good overstory canopy combined with an open understory (for visibility) is desirable in these loafing sites. Some snags and slash will add to the quality of the site.

Roost sites generally consist of mature-overmature trees in unevenaged stands. Preferred trees are 16-42 inches dbh (>20" dbh is best), 50-100 feet tall, and 10-50 feet from the ground to the first branch. Additional preferences include sites that are sheltered from wind, are located on ridge tops or in the upper 1/3 of the slope, have an eastern exposure, are located within ½ mile from water, are at least ¼ acre size, have at least 5 mature, open-canopied trees in stands with a multi-storied canopy, and with the roost trees exhibiting layered, horizontal branches at least 24 inches apart. Ponderosa pine is the preferred species although other species meeting these criteria may be used if ponderosa pine doesn't occur. Known roost sites and sheltered sites near food and water should be protected from logging. In riparian areas, cottonwood trees should be retained for roost sites. Winter roost sites may be used by several flocks and may have upwards of 100 birds. Summer roost sites, used by much smaller flocks than the winter flock, average from 5-13 trees.

Management Guidelines (Hoover and Wills 1984, Hoffman et.al. 1993, and CDOW 1997):

Small openings should comprise 10 to 50% of forested areas with 20-25% being preferred. Several small (two to five acre) openings are better than one large opening. Openings should be long and narrow (less than 240 feet wide) with an irregular edge. If an opening is

larger than 10 acres, thickets or clumps should be planted or maintained for cover. Openings should have at least 70% cover of herbaceous plants at 15 inches height. Large-seeded native grasses and forbs should make up any seeding recommendations for an opening. Disturbance tillage may be used on 20% of the opening to encourage annual forbs. Escape cover (shrub thickets and tree stands) should be adjacent to the openings and should extend at least 300 feet from the edge. Retain fallen trees and woody materials for 50 to 60 feet into the cover.

Forest management recommendations should include the following:

Manage for an uneven-aged stand. Even-aged blocks/stands should not exceed 20 acres. Adjacent stands should vary by 30 square feet per acre BA and/or 4 inches dbh. Forest overstory canopy cover should be at 60% or more on 30 % (or greater) slopes. No more than 10% of an area should be harvested at one time. Five to six tons of slash per acre may be left scattered loosely rather than in piles. Ponderosa pine stringers that extend into piñon-juniper stands should be protected. The ponderosa provides roost sites lacking in the piñon-juniper. Piñon-juniper stands should vary from 40 to 70% canopy closure. Any brush control efforts in the piñon-juniper should be limited to strips 200 yards or less in width.

Tree and shrub regeneration and mature, mast producing oaks should be protected.

Maintain 2-6 roost sites per square mile with at least 5 roost trees per site. Roost trees are at least 20 inches dbh, on east facing slopes, and on the upper 1/3 of the slope.

Goals for grazing management should be to maintain 70% herbaceous cover at a minimum height of 10 inches and/or to provide 800 pounds per acre of standing herbaceous biomass. Grazing should be deferred until July 15th. Riparian areas should be fenced and off-stream water developed. If water breaks are preferred to off-stream water, the breaks should be at least 300 feet apart.

Conservation Practices that may be used for improving turkey habitat within the above-described parameters include: Critical Area Planting (342), Tree Planting (612), Wildlife Upland Habitat Management (645), Wildlife Wetland Habitat Management (644) and Woodland Improvement (666). Other practices may be appropriate for specific applications. Contact the NRCS Area or State Biologist for assistance with any questions.

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