



GUIDES FOR WILDLIFE HABITAT MANAGEMENT - HABITAT NEEDS FOR GRAY SQUIRREL

Large tracts of mature hardwoods, especially hickories and oaks with an understory of smaller trees and shrubs, are a must for gray squirrels. These squirrels require stands of trees old enough (25 years) to produce mast and provide dens (40 years). Reproduction is 2 1/2 times more successful in den cavities than leaf nests. Den entrance holes are usually 2½ - 3 inches in diameter and den cavities, 14 inches in depth. Dens should be waterproof and 15 feet or more above ground level. Survival and reproduction of gray squirrels are linked to the availability of food, particularly hard mast like nuts and acorns. A squirrel needs about 1 1/2 lbs. of hard mast per week from September through March. Preferred foods are hickory nuts, beechnuts, white and red oak acorns. Supportive foods are berries, fruits, other soft mast, buds, seeds, and fungi. Red maple is particularly important in early spring and red mulberry, in May and June. Because squirrels can extract water from succulent vegetation, open water sources are desirable, but not essential to their survival.

Habitat loss is the greatest limiting factor to gray squirrels. A squirrel's home range is 2-8 acres. To provide quality squirrel habitat, follow these recommended management guidelines:

- 1) Manage for a strong component of hardwoods on a 60 to 100 year rotation.
- 2) Timber thinnings and selective harvests can help improve crown development and increase mast yields, when conducted correctly.
- 3) Leave food trees standing after cutting operations; favor nut and fruit-bearing trees and shrubs. Encourage plants such as huckleberries, poison ivy, rattan, muscadine, grapes, wild cherry, dogwood, persimmon, and haws.
- 4) Do not cut more than 50% of oaks and hickories 12 or more inches in diameter that could be used for denning cavities. Each acre should have at least four den trees and 10 mast-bearing trees.
- 5) If there are not enough den trees available, use of artificial cavities is recommended.
- 6) Small selection cuts that create openings of 0.5 to one acre are less disruptive than clearcuts. Clearcutting blocks larger than 20 acres is extremely detrimental to squirrels.
- 7) Scatter narrow harvest and regeneration areas throughout a management unit so the young stands are evenly distributed among older stands.
- 8) Protect 100 foot wide or wider hardwood corridors along streams (streamside management zones).
- 9) Connect isolated clusters of hardwoods with hardwood corridors.
- 10) Exclude cattle and fire from woods intended for squirrel management, since these reduce understory growth.
- 11) Other forestry practices that may improve gray squirrel habitat include brush control and release cutting.



Gray Squirrel Foods by Season

August-October	November-January	February-April	May-July
Hickory	Hickory	Acorns (red oak group.)	Buds and Flowers
Beech	Beech	Hickory	Berries
Blackgum	Walnut	Beech	Red Mulberry
Acorns (white and red oak groups.)*	Acorns (white and red oak groups.)*	Buds and flowers of Maple, Elm, Oak, etc.	Fungi
Pecans	Blackgum	Fungi	Blackberry
Sugar Maple seeds	Yellow Poplar	Red Maple seeds	Yellow Poplar
Pine seeds		Magnolia species	
Walnut			
Fungi			
Dogwood			
Hawthorn			
Hornbeam			
Chinquapin			
Yellow Poplar			
Black Cherry			

*Red oaks are characterized by bristles on tips of leaf lobes and fruit maturing at end of second season. White oak fruit matures in one season, and leaf lobes are rounded with no bristles.

Sources and Additional References

Other in-depth information on life history, habitat needs and recommended management of forestlands for squirrels in Mississippi is covered in the following publications: USDA-NRCS Jobsheet No. MS-ECS-645-05(JS), rev. October 2000, "Timber Prescription Guides for Wildlife Habitat Management by Stages of Stand Development - Gray Squirrel"; MSU-ES Information Sheet No. 635, "Tree Squirrels in Mississippi"; MSU-ES Publication 884, Building Homes for Squirrels.

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