

# Wildlife Find Food in Pine Trees, Too



**Loblolly pine.** Photo: John Ruter, University of Georgia, Bugwood.org.

Mast is a term referring to seeds of trees that serve as an important food source for wildlife. Squirrel, deer, and turkey hunters are familiar with some of the mast-producing trees found in Mississippi's forests. These include hard mast-producing trees like oak and hickory, and soft mast-producers like black cherry and dogwood.

Mast is produced by both hardwood and softwood trees. Some are common and well known to hunters and naturalists, while other species are less familiar. Both quality and quantity of mast are important for wildlife food, and mast producers should be well distributed. Forest diversity is important, and wildlife habitat in forests can be managed to improve this.

Acorns and hickory nuts are some of the most important sources of mast for wildlife. There is, however, another important mast-producing tree in Mississippi that few hunters recognize. This tree is not even a hardwood—it is the loblolly pine.

Pine cones contain seeds that many wildlife species eat. Unlike acorns, pine seeds are small and tend not to be noticed by hunters. They have wings that allow them to be dispersed by wind across the forest floor. One bushel of loblolly pine cones can produce up to 18,000 pine seeds! When they land, they may become hidden under leaves and twigs. Although most people overlook pine seeds on the forest floor, wildlife find them.



**Pine seed.** Photo: Steve Hurst, USDA NRCS PLANTS Database, Bugwood.org.

Pines are critical food sources for bird species in North America. Some birds' beaks are ideally suited to extracting seeds from cones. For example, turkeys and quail readily seek and eat pine seeds. During certain periods of the year, squirrels also feed on pine seeds. Squirrel cuttings can often be observed under pine trees, especially during September. In addition to food, pines provide nesting habitat for birds and squirrels.

Deer look for pine seeds as well. One study in Florida found slash pine seed comprised up to 0.6 percent of the contents of white-tailed deer rumen (part of the digestive system). Although not a favored food source, pine seeds provide deer with year-round protein. Loblolly, longleaf, slash, and shortleaf are important seed producers.

Acorns are probably the best-known mast and are produced by oak trees. They are high in fats and carbohydrates, but most native oak species in Mississippi begin producing acorns only after about 20 years. Therefore, young stands will not have as many acorns as older stands.

White oak acorns mature every year but are sometimes irregular seeders. Although red oak acorn production is typically more reliable, seeds take 2 years to mature. Compared to white oak acorns, red oak acorns are high in tannins, resulting in a very bitter or astringent taste. Acorn production is highly dependent on site quality, environmental conditions, and individual tree genetics. In a good year, acorns can be found covering the forest floor

in plentiful supply; with a poor crop, wildlife find the few acorns that fall to the ground and eat them quickly.

Many squirrel hunters seek out hickory trees because they know squirrels have a preference for hickory nuts. The seed usually has a thick husk that splits nearly to the base of the fruit, with trees 40-years-old or older producing the most nuts. Squirrels enjoy the meat of the nut and open the shell while it is still green. Squirrels are the most important factor in hickory reproduction because they scatter and cache nuts across the forest floor. Acorns and hickory nuts

are large enough to be easily found by humans walking or hunting in a forest.

Wildlife have adapted to multiple food sources in their forest environment. Like people, forest fauna prefer some foods over others. Acorns and hickories are obvious choices, but pine trees also provide an important food source, especially for birds and squirrels. When thinking about forest management, consider activities that promote hardwoods as well as pine trees.



White oak acorns.



Red oak acorns (Nuttall oak).

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## Resources

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