

FORESTRY 101

Woodland Terms

by Doug McLaren

Forestry is a specialized field of study and has its own vocabulary. As you become involved with the development and management of your woodland, you will often hear or read terms or phrases that might be unfamiliar. Understanding these terms and phrases will aid in talking with a forester, understanding technical forestry publications, and provide a deeper understanding and appreciation of your woodlands. Look for and understand the bold terms below to improve your forestry knowledge.

Foresters and Forestry Agencies

If you own woodlands, you need a professional forester. **Professional foresters** are graduates of accredited forestry programs who maintain and enhance their training through continuing education. Professional foresters can assist woodland owners in all aspects of the management of their woodlands. In Kentucky, professional foresters work for a wide variety of organizations, and each can provide a wide range of forestry assistance.

The **Kentucky Division of Forestry (KDF)** is the state agency that offers technical assistance to woodland owners, fights forest fires, grows and sells seedlings, inspects logging operations, works with urban forests, and focuses on forest health and a host of other issues associated with forestry. **Service foresters** are KDF foresters who

assist woodland owners with developing management plans and prescribing treatments to improve woods and establish plantings. In most cases, there is no or little cost for the services of these service foresters. However, KDF service foresters cannot advise woodland owners on the value of their woodlands or become directly involved in selling timber. **Consulting foresters** are private professional foresters who work for you. While consulting foresters can perform many of the services of KDF's service foresters, their expertise is generally on the financial aspect of forestry. The fees charged by a consulting forester are based on the time and services provided and are contracted ahead of time. A consulting forester works on your behalf

and will provide the woodland owner with the best possible representation concerning timber sales. One place to find consulting foresters in Kentucky is through the Kentucky Association of Consulting Foresters (www.kacf.org).

The University of Kentucky, through the **Cooperative Extension Service**, employs foresters whose responsibilities are to provide educational opportunities such as workshops and educational materials. The goal of the Extension forester is to provide you the latest information resulting from applied forestry research.

Some forest product companies also employ **industrial foresters** who can assist woodland owners. These foresters are working for the companies they represent and will make decisions concerning your management goals based on the limitations of their employer.

The **U.S. Forest Service** is a very well recognized member of the professional forestry agencies that employs foresters to work on federal public lands such as the Daniel Boone National Forest and Land Between the Lakes.

A **logger** is an individual who is highly trained in the harvesting of your timber; most are not professional foresters. Loggers can be recommended by foresters after a plan has been established and the need for harvesting or improvement work has been recommended. Another location to find loggers is through the Kentucky Master Logger program (www.masterlogger.com).



Selecting the right logger for a timber harvesting operation is an important step that should not be taken likely. Visit www.masterlogger.org or www.ca.uky.edu/cmlp to find a logger near you. Ask for references and avoid selecting a logger placed on the Bad Actor list by checking www.masterlogger.org/master.

Photo courtesy: Kentucky Division of Forestry

When a woodland owner requests assistance in developing a forest **Stewardship Plan**, a written plan to evaluate the potential management in their woodlands for wood production, fish and wildlife habitat, watershed improvement, or recreation and aesthetic enhancement, the forester will most frequently be from the KDF.



"Diameter at Breast Height" (DBH) refers to the measurement of tree diameter at a height of 4.5 ft above the ground. DBH provides a standard place to measure diameter which is important because trees are often tapered.

Photo courtesy: John Lhotka

two rather broad methods to define the development of timber stands. **Even-age** stands are those where the age difference of the trees is less than 20 percent of the total age of the stand. Sometimes these stands are the result of a harvest that removed all the trees at one time. **Uneven-age** stands are common in Kentucky's woodlands, and they contain various ages and sizes of trees. Uneven-age stands occur when individual mature stems are removed from time to time. Other stems in the forest are evaluated also during a stand evaluation. **Advance regeneration** are small trees or seedlings that are small but capable of becoming the "next generation" when the mature trees are harvested. **Snags** are trees that are dead or dying and have few limbs, if any. These stems provide homes and feeding sites for a multitude of wildlife species.

While it may seem there are many forestry terms to learn, most are fairly straightforward. Understanding these terms will help you to get the most from your woodland ownership experience. Be sure to check out the next installment of Forestry 101 when we will cover timber harvesting and wood products.

Management and Silviculture Terms

Silviculture is the practice of growing and culturing or improving forest trees. Practices such as planting trees, marking **timber stand improvement (TSI)**, or marking harvests

to improve or regenerate the woods are all silvicultural practices. **Basal area** describes the amount of surface area taken up by a tree on a per acre basis. If you were to measure the cross-sectional area of a tree (the surface area of the main stem) 14 inches in diameter at 4½ feet above the ground (termed **DBH** for **diameter at breast height**), you would have approximately one square foot of basal area. The sum total of the trees' cross-sectional measurements on an acre determines **stocking** based on basal area. A well-stocked stand will have approximately 80 to 120 square feet of basal area per acre. **Understocked stands** would have basal areas lower than this standard. **Overstocked stands** will have higher values. All management decisions are based on these stocking determinations. **Site index** is a relative measurement of the woodland's site quality which can then be translated into future wood production. The tree's total height is measured but only on those trees that are in a specific crown class. In the case of a site index, foresters use the **dominant crown class**. Trees in the dominant crown class are those that receive sunlight from all sides. **Co-dominant crowns** of trees receive light only from the tops. **Intermediate crowns** receive very little direct sunlight. **Suppressed or overtapped crowns** receive no direct sunlight. Tree crown classes are heavily evaluated when discussing trees that are removed or retained in future management work.

Many landowners are curious about how specific stands of timber have developed in their woodlands. Foresters have

"Advance regeneration" refers to tree seedlings and saplings that are developed enough to occupy the site if the overstory trees are removed. When managing for oak species it is important to have adequate advance oak regeneration to increase the probability that oaks will occupy the site following a harvest—failure to do so can result in a change in species composition.

Woodland Terms:

- **Logger**
- **Stocking**
- **Dominant Crown**
- **Stewardship Plan**



Photo courtesy: Jeff Stringer

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