

# GLOSSARY OF FORESTRY TERMS

- Acre- An English unit of area commonly used measure land, equal to 43,560 square feet (metric equivalent is 0.4047 hectare).
- Basal area (BA)- The cross-sectional area (usually in square feet) of all stems over a standard area of land (usually an acre). The imaginary cross-section is taken at *breast height* (see below). This is a means of expressing forest stocking; medium stocking ranges between 60 and 120 square feet per acre of basal area.
- Board foot (BF)- A unit of measurement of lumber, equivalent to a board 12 inches wide by 12 inches long by one inch thick, or 144 cubic inches.
- Bole- The stem or trunk of a tree, excluding its roots and *top*, or branched crown. The part of the tree from which logs may be cut.
- Breast height- The standard height for determination of tree diameters, defined arbitrarily as 4½ feet above ground level on the upper side of the tree (see DBH).
- Buck- To cut the bole of a tree into log lengths, normally done at the landing area prior to trucking the logs.
- Butt- The base and widest part of a tree's stem, from which the most valuable log is usually cut (the *butt log*)
- Chain- A unit of distance used in land surveying that is equal to 66 feet. One square chain is equal to one tenth of an acre.
- Cull- A tree considered to be both presently unmerchantable and of no potential economic worth. Such trees are unproductive occupants of growing space and are often eliminated unless judged of particular value for wildlife.
- Clearcut- A method of forest regeneration in which an entire stand is removed in a single cut. In Appalachian hardwoods, regeneration following a clearcut is naturally occurring. Perpetuates an even-aged forest. Requires care and planning for obtaining desirable reproduction.
- Commercial operations- Principally thinnings, these are forest management operations which yield salable products such as fuelwood, pulpwood, and sawlogs. They can be contrasted with non- or pre-commercial thinnings and prunings, in which the material that is eliminated is too small or of too low value to warrant extraction and sale.
- Cord- A somewhat crude unit of volume measurement for low-value roundwood, equal to 128 cubic feet of stacked wood and air spaces, used mainly for measuring pulpwood and firewood.
- Crop tree- Desirable tree left to grow in size and value throughout the life of a stand.
- Cruise- A survey of a forest to sample the quantity, size, species, and quality of trees present, as well as to note terrain, soil conditions, drainage, and other data relevant to forest management.
- DBH- Diameter at breast height (4½ feet above the ground). Most often expressed in inches, this measure gives an indication of the size and merchantability of trees (see Sapling, Pole and Sawlog). Average DBH of a stand is defined as the diameter at breast height of a tree of average basal area (rather than as the average of all diameters in a stand).

- Den tree- A tree having one or more cavities suitable as nesting sites for wildlife.
- Even-aged- Descriptor of a stand having trees of approximately the same age, usually within a range of ten or twenty years, and normally a simple vertical structure.
- Exposure- Used topographically, the compass direction to which a hillside faces.
- Girdling- A method of eliminating unwanted trees without felling them. It consists of severing the strip of growing wood around the outside of a tree, usually with an axe or chainsaw. Sometimes poison is also applied. The cut eventually stops the flow of nutrients to the roots, and the tree gradually dies.
- Grade- In reference to logs and lumber, a designation of quality which, together with species and size, determines the value of a given piece in a particular market.
- Hardwood- A term applied to broad-leafed trees, many of whose wood is harder than the wood of a majority of needle-leafed trees. The term is roughly equivalent to *angiosperm* and *deciduous* and is the opposite of *gymnosperm*, *evergreen*, and *coniferous*. Value depends upon species and condition.
- Harvest- A logging operation, normally one in which large trees or many trees are removed. Often applied to regeneration cuttings, which remove mature stands and provide for establishment of new one.
- High-grading- A timber cutting method which removes the trees of highest quality and leaves the specimens of lower quality to continue growing. Generally considered poor forestry, it returns quick profits at the expense of future productivity and gradually degrades the genetic resource of a woodland (see Low-grading).
- Inventory- An accounting of the quantity, quality, and value of timber on a given area of forest, determined by conducting a cruise and then expanding the sampling data by statistical methods to reach an estimate of the total content of the forest.
- Link- A unit of measure used in land surveying equal to 0.01 chain, or 7.92 inches.
- Log- A section of a woody stem bucked to a specific merchantable length for manufacturing into products. Sometimes used more narrowly for a given standard log length, usually of 16 feet, when estimating volume of standing timber.
- Low-grading- The sound forestry practice in which the stems of lower value trees are removed during thinnings to release more promising crop trees (see High-grading).
- Mast- Wild nuts, seeds, and fruits which serve as food for wildlife.
- MBF- Abbreviation for *thousand board feet*, useful because board-foot volumes dealt with in forestry tend to be large.
- Pole- A tree of 4" to 10" DBH, not large enough to be considered sawtimber; also, a stand whose trees average this size (as in polestand or poletimber stand).
- Pruning- In forestry usage, the removal of branches from the lower trunk of a tree to allow the stem to continue growing without producing large or loose knots. This is an expensive practice, but if done judiciously, can be a valuable investment in the crop trees of certain species. Walnut and white pine are the most often pruned trees.
- Regeneration- Also called *reproduction*, refers to seedlings and young growth below pole size, or to the establishment of such growth. Harvests or *regeneration cuttings* have, as a principal objective, the establishment of adequate regeneration of desirable species.
- Rod- A unit of land measurement equal to 16½ feet, 5½ yards, or ¼ chain.

- Rotation- The period of time an even-aged stand is left to grow or a particular one-in-a-sequence of such periods (as in *the current rotation* or *the next rotation*).
- Sapling- A tree of 2" to 4" DBH, below pole size; or, a stand with trees averaging this diameter.
- Sawtimber- Trees normally over 10" DBH that can be sawn into boards; or stands with trees averaging this size. Sometimes further divided into small sawtimber (under 15" DBH) and large sawtimber (over 15" DBH).
- Seed tree harvest- A type of regeneration cut for reproducing even-aged stands in which an area is cleared except for scattered trees intended to provide seed for the following rotation.
- Selective cut- A vague expression referring to thinnings or harvests that are not clearcuts. This has been applied to such a wide range of styles and intensities of cutting that it is best replaced by more specific terms, particularly because the expression occasionally has been applied to high-grading operations to make them appear silviculturally sound. Not to be confused with *selection thinning* or *selection system*, which are more definitive forestry terms.
- Shelterwood- A regeneration method for even-aged stands, in which the mature over story is removed in a sequence of cuts over a period of years. Its objective is to provide enough light for adequate seed production, ground preparation, and seedling germination without exposing the young reproduction to excessive initial sunlight or wind.
- Silviculture- The practice of establishing, tending, and reproducing stands of trees. Involves prescribing such cultural operations as weedings, thinnings, prunings, and measures to protect the trees from insects, disease, and other natural elements.
- Site index (SI)- A numerical indication of the quality of a given site for production of a given species of tree. The number assigned to the site represents the average height in feet of dominant trees of that species after fifty years of growth.
- Skid- To transport logs from the point of felling, limbing, and topping, to a landing for bucking into logs and loading onto a truck for removal from the forest. This is done along narrow, temporary trails by skidders, bulldozers, or draft animals.
- Slash- Waste from logging, including the tops and other unusable parts of trees.
- Slope- As expressed in percent, a measure of the steepness of the ground. Percent slope indicates the number of feet risen vertically along a horizontal distance of 100 feet. On shorter stretches, it can be computed as *vertical distance* divided by *horizontal distance* times 100.
- Snag- A standing dead tree, generally of value for wildlife.
- Softwood- A term applied to trees with needle-like leaves, many of whose wood is softer than the wood of a majority of broad-leafed trees. The term is roughly equivalent to *gymnosperm*, *evergreen*, and *coniferous* and is the opposite of *angiosperm* and *deciduous*. In the Appalachians, softwoods are primarily represented by species of pine, spruce, and hemlock.
- Stand- A section of forest having relatively uniform composition in regard to species, size structure, and density; distinguishable from other stands by attributes such as these. The stand is the basic unit of silviculture, since it is by stands that nearly all cultural treatments are prescribed. A stand type is the designation given one kind of stand within a particular classification system, and it normally consists of symbols referring to principal species, heights, and densities.

- Stocking- Refers to the density of tree growth in a forest, often in relative terms (high, medium, low) or qualitative terms (overstocked, or understocked). See Basal Area.
- Stumpage- Standing trees. Forest owners, lacking the capacity to harvest their own timber, must sell it to stumpage buyers at current stumpage prices, which are lower than the value of the logs at the mill, reflecting the costs of felling, topping, limbing, skidding, bucking, loading, and hauling.
- Thinning- Partial cut made during intermediate stages in the growth of a stand. Its main purpose is to increase the growing space and resources available to the remaining trees. Most thinnings remove merchantable material and provide immediate financial yields, although their greatest benefit is in the faster growth and much increased value incurred by the crop trees.
- Timber marking- Designation of the trees to be removed during a thinning or harvest operation, normally by paint marks made at breast height and at the base of the trees. An important moment in the growth of a stand because of the effect of the choices upon the future of the forest.
- Timber sale administration- The execution, usually by a forester, of the sale of timber that has been marked for cutting. It includes advertising to potential buyers, the drafting of a purchase agreement between the buyer and the seller, and supervision of the progress of harvesting to ensure compliance with all terms of the sale.
- Timber stand improvement- Sometimes shortened to TSI, this refers principally to pre-commercial thinnings to improve the growth and quality of stands in which there is not yet enough merchantable material for a sale. The undesirable trees are girdled, bole-treated with herbicides, or felled.
- Weed tree- A tree of little or no value, usually because of its species.
- Wolf tree- A tree that occupies a relatively great deal of growing space, normally having a large, coarse crown and little or no merchantable stem. Being of little economic value, its greatest benefit is for wildlife or aesthetic purposes.