

MU Guide

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Forestry Terms for the Woodland Owner

John P. Slusher
School of Natural Resources

As a woodland owner, you may hear foresters use unfamiliar terms or see new terms in your forest management plan or timber sale contract. Forestry is a specialized field with its own terms and abbreviations. This guide defines many of the words commonly used in forestry and woodland management.

ACP (Agricultural Conservation Program) — A cost-sharing program for conservation and environmental protection, including forestry practices. Administered by the Agricultural Stabilization and Conservation Service (ASCS).

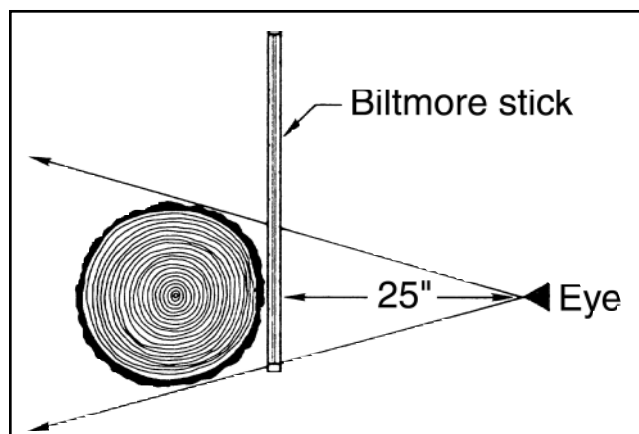
Acre — An area of land containing 43,560 square feet.

Advanced reproduction — Young trees established before a regeneration cutting.

Aspect — The direction that a slope faces (north, south, etc.).

Basal area — The cross-sectional area of a tree, in square feet, at 4.5 feet from the ground (breast height). When the basal area of all the trees in a stand are summed, the result is expressed as square feet of basal area per acre, which is a measure of a stand's density.

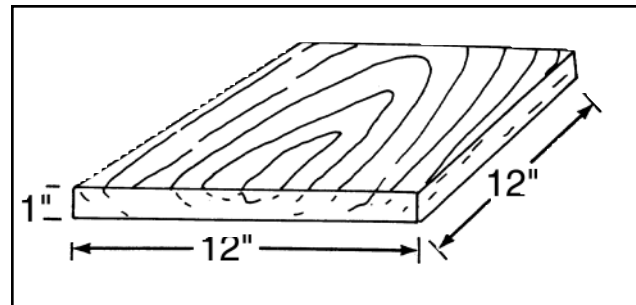
Biltmore stick — A graduated stick used to estimate tree diameters by holding it against the tree at breast height.



Biltmore stick

Board foot — A unit for measuring wood volumes. It is commonly used to express the amount of wood in a tree, sawlog or individual piece of lumber. A

piece of wood one foot long, one foot wide and one inch thick (144 cubic inches).



Board foot

Bolt — A short log or a squared timber cut from a log, usually less than 8 feet long.

Browse — Twigs and buds of small shrubs and trees that are eaten by deer and livestock.

Buck — To saw felled trees into shorter lengths.

Buffer strip — A protective strip of land or timber adjacent to an area requiring attention or protection. For example, a protective strip of unharvested timber along a stream.

Cambium — The growing layer of cells beneath the bark of a tree from which new wood and bark develop.

Canopy — The more or less continuous cover of branches and foliage formed collectively by the tops, or crowns, of adjacent trees.

Cavity tree — See den tree.

Chain — A unit of linear measurement; 66 feet.

Clearcut — A harvest and regeneration technique that removes all trees from an area. Also called a regeneration cut.

Clinometer — An instrument for measuring vertical angles or slopes.

Co-dominant tree — Trees whose crowns form the general level of the forest canopy and receive full sunlight only from above.

Conifer — A cone-bearing tree with needles, such as pines, spruces and firs, that produces wood commonly known as softwood.

Cord — A stack of wood containing 128 cubic feet. A standard cord measures 4 feet by 4 feet by 8 feet

of wood and air.

Crop tree — A tree identified to be grown to maturity for the final harvest cut, usually on the basis of its location with respect to other trees and its timber quality.

Crown — The branches and foliage of a tree.

Cruise — A survey of forest land to locate timber and estimate its quantity by species, products, size, quality or other characteristics; the estimate obtained in such a survey.

Cruiser stick — See Biltmore stick.

Cull — A tree or log of merchantable size that, because of a defect, is useless for its intended purpose.

DBH — See diameter breast height.

Defect — That portion of a tree or log that makes it unusable for the intended product. Defects include rot, crookedness, cavities and cracks.

Den tree — A living tree with a hollow cavity in the top large enough to shelter wildlife. Also called cavity tree.

Dendrology — The study of the identification of trees.

Diameter breast height (DBH) — The diameter of a tree at 4.5 feet above the ground.

Diameter inside bark (DIB) — The diameter inside the bark; used in log scaling.

Diameter tape — A specially graduated tape used to determine tree diameter when stretched around the circumference of the tree stem.

Dibble bar — A flat or round metal tool used to make holes for planting seedlings.

Dominant tree — Tree with its crown above the general level of the canopy that receives full sunlight from above and partial light from the sides.

Edge — In wildlife management, the area where the variety of types of food, cover, water or terrain required by a particular species come together.

Even-aged management — Forest management with periodic harvest of all trees on part of the forest at one time or over a short period to produce stands containing trees all the same or nearly the same age or size.

Face cord — A stack of wood 4 feet high and 8 feet long composed of logs of varying length.

Felling — The process of cutting standing trees.

FIP (Forestry Incentive Program) — A cost-sharing program that encourages landowners to plant trees and to perform timber stand improvement work. Administered by the Agricultural Stabilization and Conservation Service (ASCS).

Firebreak — A natural or constructed barrier used to stop or check fires.

Firsts and seconds (FAS) — The highest standard grade for hardwood lumber.

Forest — A plant community dominated by trees and other wood plants.

Forest inventory — See cruise.

Forest type — A group of tree species that, because of their environmental requirements, commonly grow together. For example, the oak-hickory type.

Forester — A person who has been professionally educated in forestry at a college or university.

Girdling — Completely encircling the trunk of a tree with a cut that severs the bark and cambium of the tree, usually resulting in the death of the tree.

Grading — Evaluating and sorting trees, logs or lumber according to quality.

Habitat — The type of place in which the plant or animal lives, such as forest habitat, grassland habitat and marsh habitat.

Hardwood — A term describing broadleaf trees, usually deciduous, such as oaks, maples and ashes.

Harvest — In general use, the removal of all, or portions of, the trees on an area. It can mean removing trees on an area to (1) obtain income, 2) develop the environment necessary to regenerate the forest, and on occasions, (3) to achieve special objectives such as development of special wildlife habitat needs. Contrast with intermediate cuttings.

Heel-in — To store young trees before planting by placing in trench and covering roots with soil.

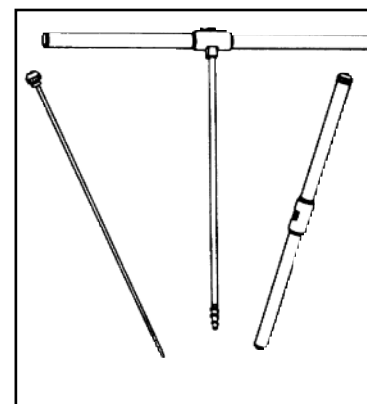
Height, merchantable — Tree height up to which a particular product may be obtained. For example, if 8-inch minimum diameter sawlogs were being cut from a tree, its merchantable height would be its height up to a diameter of 8 inches.

Height, total — Tree height from ground level to top.

High-grading — Cutting only the high value trees from a forest property.

Hypsometer — A graduated stick used to estimate tree height. It is often combined with a Biltmore stick.

Increment borer — An augerlike instrument with a hollow bit that is used to extract cores from trees for growth and age determination.



Increment borer

Intermediate cut — Removing immature trees from the forest sometime between establishment and stand harvest to improve the quality of the remaining forest stand. Contrast with a harvest cut.

Intermediate trees — Trees with crowns below the general level of the canopy that receive some sunlight from above but none from the sides.

Landing — A place where logs are taken to be loaded

- on trucks for transport to the mill.
- Log rules** — A table showing estimated amount of lumber that can be sawed from logs of given lengths and diameters. Two log rules are commonly used in Missouri:
1. Doyle rule is a simple formula rule used in the eastern and southern United States. It underestimates the amount of lumber in small logs and overestimates large logs.
 2. International $\frac{1}{4}$ -inch rule is a formula rule allowing $\frac{1}{2}$ -inch taper for each 4 feet of length and $\frac{1}{6}$ -inch shrinkage for each one-inch board. This measure closely approximates the actual sawmill lumber tally.
- Logger** — An individual whose occupation is harvesting timber.
- Lump sum timber sale** — Standing timber is sold for a fixed amount agreed upon in advance; the sale may cover a given acreage, tracts, certain species or diameter classes of trees. Distinguished from a scale or unit sale in which payment is based on the amount harvested (e.g., so much per thousand board feet).
- Mast** — Nuts of such trees as oak, walnut and hickory that serve as food for many species of wildlife.
- Mature tree** — A tree that has reached the desired size or age for its intended use.
- MBF** — Abbreviation for 1,000 board feet.
- Merchantable** — The part of a tree or stand of trees that can be manufactured into a salable product.
- Multiple use** — Land management for more than one purpose, such as wood production, water, wildlife, recreation, forage and aesthetics.
- Overstocked** — Forest or stand condition where more trees are present than at normal or full stocking.
- Overstory** — That portion of the trees in a stand forming the upper crown cover.
- Overtopped** — See suppressed trees.
- Pallet** — Tray constructed from wood used to store, load and unload various materials.
- Planting bar** — A hand tool used to plant seedlings. See dibble bar.
- Plot sample cruise** — A method of estimating standing timber, stocking or volume whereby all trees above a minimum diameter are tallied on plots with fixed boundaries.
- Point sample cruise** — A method for estimating standing timber stocking or volume without establishing sample plot boundaries. An instrument such as a prism is used to make a 360-degree sweep from a series of sampling points. At each point, the number of stems at which breast-height diameters appear larger than the fixed angle of the instrument are counted. The average stem number multiplied by a factor appropriate to both the fixed angle and the units of measurement chosen gives the basal area per unit area of stand. (Also called variable plot sampling or prism cruising.)
- Pole saw** — A saw attached to a long pole for pruning tree limbs without using a ladder.
- Pole timber** — Trees from 6 inches to 12 inches in diameter at breast height.
- Prescribed burning** — Use of controlled fire to dispose of unwanted material. This method includes following a planned prescription of fuel, weather and other conditions.
- Props** — In mining, a round, squared or split timber that supports the roof.
- Prism, wedge** — An instrument that incorporates a fixed angle and can be used to determine basal area. See point sample cruise.
- Pruning** — Removing live or dead branches from standing trees to improve wood quality.
- Pulpwood** — Wood cut primarily for manufacture of paper, fiberboard or other wood fiber products.
- Regeneration cut** — See clearcut.
- Release** — To free trees from competition by cutting, removing or killing nearby vegetation.
- Reproduction** — Young trees. The process by which a forest is renewed, either artificially by direct seeding or planting, or naturally by self-sown seeds and sprouts.
- Riparian zone** — The area adjacent to, or on the bank of, rivers and streams. Identified by vegetation, wildlife and other characteristics unique to these locations.
- Rotation** — The number of years required to establish and grow trees to a specified size, product or condition of maturity. For example, oaks may have an 80-year rotation for sawlogs and Scotch pine a 10-year rotation for Christmas trees.
- Salvage cut** — Harvesting damaged or defective trees for their economic value.
- Sapling** — Trees from 2 inches to 6 inches in diameter at breast height.
- Sawtimber** — Trees at least 12 inches in diameter at breast height from which a sawed product can be produced.
- Scale stick** — A flat stick calibrated so that log volumes can be read directly when the stick is placed on the small end of a standard length log.
- Scaling** — Estimating usable wood volume in a log.
- Seed tree harvest** — Removing nearly all trees from the harvest area at one time, but leaving a few scattered trees to provide seed for a new forest. Sometimes used in Missouri to regenerate pine.
- Seedlings** — New trees less than 2 inches in diameter at breast height grown from seeds or sprouts. Also, trees grown in a nursery for one or more years.
- Selection harvest** — Harvesting of trees in small groups or as individual trees at periodic intervals to maintain an uneven-aged stand. May be described as single tree or group selection system.

- Shade tolerance** — The capacity of a tree to develop and grow in the shade of and in competition with other trees. An example of a tree with high shade tolerance is sugar maple.
- Shearing** — To trim back and shape tree branches, making foliage dense and giving the tree a conical form. Used to produce Christmas trees.
- Shelterwood harvest** — A harvesting method that entails a series of partial cuttings over a period of years in the mature stand. Early cuttings improve the vigor and seed production of the remaining trees. The trees that are retained produce seed and also shelter the young seedlings. Subsequent cuttings harvest shelterwood trees and allow the regeneration to develop as an even-aged stand.
- Silviculture** — The art and science of producing and tending a forest.
- Site** — (1) A tract of land with reasonably uniform soil and climatic factors. (2) An area evaluated for its ability to produce a particular forest or other vegetation based on the combination of biological, climatic and soil factors.
- Site index** — An expression of forest site quality based on the height of a free-growing dominant tree at age 50 (or age 100 in the western United States).
- Site preparation** — Preparing an area of land for forest establishment. May include clearing, chemical vegetation control or burning.
- Skid trail** — A road or trail over which equipment or horses drag logs from the stump to a landing.
- Skidding** — Pulling logs from where they are cut to a landing or mill.
- Slash** — Debris left after logging, pruning, thinning or brush cutting. May include tree tops, branches or bark or debris left after wind or fire damage.
- Snag** — A standing dead tree from which leaves and most of the branches have fallen. Used for wildlife.
- Softwoods** — See conifer.
- Stand** — A grouping of trees with similar characteristics (such as species, age or condition) that can be distinguished from adjacent groups. A stand is usually treated as a single unit in a management plan.
- Stave bolts** — Material cut from the white oak group and used in the manufacture of wooden barrels.
- Stocking** — An indication of the number of trees in a stand in relation to the desirable number of trees for best growth and management. See overstocked, understocked.
- Stumpage** — The value of timber as it stands uncut in the woods (on the stump).
- Succession** — The replacement of one plant community by another until ecological stability is achieved.
- Suppressed trees** — Trees with small crowns that are entirely below the level of the canopy and receive no direct sunlight. Also called overtopped trees.
- Thinning** — Generally, a cutting or killing of trees in an immature forest stand to reduce the tree density and concentrate the growth potential on fewer, higher quality trees. The result is larger, faster growing trees.
- Timber stand improvement (TSI)** — All thinnings made during the life of a forest stand for the purpose of improving the composition or productivity of the stand. TSI methods may include removing vines, thinning, cull tree removal and pruning.
- Tree farm** — A privately owned forest or woodland in which producing timber crops is a major management goal. It is certified as a “Tree Farm” by the American Tree Farm System, an organization sponsored by the American Forest Council, Washington, D.C. Tree Farm is a registered trademark of the American Forest Council.
- Undesirable growing stock** — Trees of low quality or less valuable species that should be removed in a thinning.
- Understocked** — Insufficiently stocked with trees.
- Understory** — That portion of the trees and shrubs in a forest forming the lower layer of vegetative growth.
- Uneven-aged management or stand** — A stand of trees containing at least three age classes intermingled on the same area.
- Veneer** — A thin sheet of wood sliced or peeled on a veneer machine and often used for plywood or for surfacing furniture.
- Veneer log** — A large (usually more than 18 inches in diameter), knot-free, high-quality log from which veneer is obtained.
- Volume** — The amount of wood in a tree, stand of trees or log according to some unit of measurement (board foot, cubic foot, etc.).
- Volume table** — A table estimating volume of wood in a standing tree based on tree measurements. The measurements most commonly used are DBH and merchantable height.
- Wolf tree** — A very large, overmature tree.

For additional information

Free technical advice is available through the Missouri Department of Conservation and your local University Extension center. See also MU publication G 5999, *Forestry Assistance for Landowners*.



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