[Ontario. Dept. of Lands and Forests]
Glossary of forest terminology

Ontario Department of Lands & Forests

GLOSSARY OF FOREST TERMINOLOGY

This forest terminology largely follows that contained in the British Commonwealth Forest Terminology, or the Forest Terminology of the Society of American Foresters. Where these references have not been in agreement, the definition more suitable to the condition in Ontario has been used. Certain terms in this glossary either are not found in, or are not in agreement with, these texts. Such terms are marked with an asterisk.

ADVANCE GROWTH. Young trees which have become established naturally in openings in the forest, or under the forest-cover, before the cuttings for regeneration are begun. (BCFT)

AGE-CLASS. One of the intervals into which the range of age of trees growing in a forest is divided for classification or use; also the trees falling into such an interval. (BCFT)

AGE, MATURE. The age at which an individual tree or stand attains the size required to fulfil the objects of management. (SAF)

AGE, STAND. The average age of the dominant and co-dominant trees in a stand. (BCFT)

ALLOWABLE CUT. The amount of forest produce, howsoever measured, that can be cut in a given period under sustained yield management. (BCFT)

ALLOWABLE CUT by AREA. A method of controlling the annual or periodic cut from a forest on the basis of area. (SAF)

ALLOWABLE CUT by VOLUME. A method of controlling the annual or periodic cut from a forest on the basis of the volume of growing stock and increment, using formulae and disregarding area (SAF).

ANNUAL CUT. The amount of forest produce cut or prescribed to be cut on a given forest area in a year. (BCFT)

ASPECT. The direction toward which a slope faces (SAF).

BARREN and SCATTERED. Productive forest land which, because of natural or artificial disturbance, contains only scattered trees or no trees at all with either shrub cover or bare soil, but no significant amount of regeneration. Treatment is required to restore such areas to productivity.*

BASAL AREA. The area of the cross-section of a stem, usually of a tree at breast height. (BCFT)

CANOPY. The cover of branches and foliage formed by tree crowns (BCFT)

CANOPY, CLOSED. A canopy in which the individual tree crowns are in general contact with one another. (BCFT)

CANOPY, MAIN. The principal storey of the stand formed by the crowns of the dominant and co-dominant trees.*

CLAY. The finest soil particles, under 0.002 mm. in diameter. Clay exhibits colloidal properties. (BCFT)

CLAY LOAM. A soil intermediate in texture between clay and loam. (BCFT)

CLEANING. An operation in a young stand, not past the sapling stage, to free the best trees from undesirable individuals of similar age or size which overtop them or are likely to do so. Cleaning may be accomplished by hand or by mechanical or chemical methods.* (See Appendix.)

CLIPPING. An operation, usually carried out in conjunction with cleaning, to remove branches or leaders affected by insects or disease for the purpose of controlling the spread of the disease or insect infestation.*

COMPARTMENT. A unit of a forest, permanently defined for the purposes of easy location of forest operations, administration, and record. (BCFT)

CONVERSION. A change from one silvicultural system, or species, to another. (BCFT)

COUPE. A cutting or felling area, usually one of an annual succession unless otherwise stated. (BCFT)

COVER, CROWN. The horizontal projection on the ground of a tree crown. (BCFT)

COVER, GROUND. The carpet of herbaceous plants, shrubs, ferns and mosses, which cover the soil. (BCFT)

CUT, ALLOWABLE. The amount of forest produce, howsoever measured, that can be cut in a given period under sustained yield management. (BCFT)

CUT, CLEAR. The removal of the entire growth in one operation, with or without leaving seed-trees, from an area wider than two chains.* (See Appendix.)

CUT, HARVEST. The cut(s) from which the final yield is derived; it may be either a single (clear-cut) or a series of cuts to produce regeneration (shelterwood). (BCFT—principal felling)

INTERMEDIATE CUT. An opening of the canopy designed to stimulate increment of the individual trees left to form the final crop.* (See Appendix.)

CUT, SELECTION. The removal of mature trees, either as scattered individuals or in small groups, at relatively short intervals and repeated indefinitely. The objective is representation of all age-classes distributed throughout the stand.* (See Appendix.)

CUT, SHELTERWOOD. The removal of mature trees in a series of two or more cuts for the purpose of obtaining natural regeneration under the shelter of the residual stand.* (See Appendix.)

CUTTING, SALVAGE. The removal of trees killed or injured by fire, insects, fungi, or other harmful agencies for the purpose of utilizing merchantable timber before it becomes worthless. (BCFT)

CUTTING, SANITATION. A specific form of improvement treatment where diseased, injured, or insect-infested material is removed or treated for the purpose of reducing the risk of pests or disease in the forest.*

CUTTING SECTION. A subdivision of a management unit comprised of one or more compartments and formed with the object of indicating the progress of the coupes in some special manner.*

CUTTING, SEVERANCE. A cleared strip-cut through a forest for the purpose of developing a wind-firm edge before making cuts, particularly shelterwood strip fellings. (BCFT)

DIAMETER, AVERAGE. The diameter corresponding to the mean basal area of a group of trees or of a stand. (BCFT)

DIAMETER BREAST HEIGHT. The diameter of a tree stem measured at breast height and usually outside bark. Abbr. d.b.h. (BCFT modified)

DUFF. The matted, partly decomposed organic surface layer of forest soils. (See Litter and Humus.)

ECOLOGY. The study of relation of plants and animals to their environment and to the site factors that operate in controlling their distribution and growth. (SAF)

EVEN-AGED. Applies to a stand in which relatively small age differences exist between individual trees. The maximum difference in age is usually 20 years. (SAF)

FOREST MANAGEMENT. The practical application of the scientific, technical, and economic principles of forestry. (BCFT)

GIRDLING. To cut through the bark and outer living layers of wood in a continuous incision all round the bole of a tree. (BCFT)

GIRDLING, FRILL. A single line of axe cuts overlapping downward and leaving a frill into which toxic materials may be poured. (SAF)

GROWING STOCK. The sum, by number or volume, of all the trees growing in the forest or a specified part of it. (BCFT)

HERBICIDE. A phytotoxic chemical used for killing or inhibiting the growth of plants. (SAF)

HUMUS The well decomposed organic matter of the soil which may form a separate layer or be intimately mixed with the mineral particles. (BCFT) (See Duff and Litter.)

IMPROVEMENT TREATMENT. This is a special form of thinning which applies particularly to stands that have been mismanaged or not previously managed and which may be accomplished by cutting, girdling, or chemical methods.*

INCREMENT. The increase in diameter, basal area, height, volume, quality or value of individual trees or crops during a given period. (BCFT)

LIBERATION. An operation to free a young stand, not past the sapling stage, from the competition of older overtopping individuals. Release may be accomplished by cutting, girdling, or chemical methods. (SAF modified) (See Appendix.)

LITTER. The uppermost layer of organic debris on a forest floor, freshly fallen or only slightly decomposed, and consisting chiefly of leaves but also including bark fragments, twigs, etc. (BCFT)

LOAM. A soil composed of sand, silt, and clay in such proportions that the properties of the soil are not dominated by any one of them. Loam is characterized by a friable structure. (BCFT)

MANAGEMENT PERIOD. The period for which detailed prescriptions are laid down in the management plan.*

MANAGEMENT PLAN. The means by which forest policy, aims, and objectives are translated into a continuity of specific treatments for a particular forest area.*

MANAGEMENT SYSTEM. A set of procedures co-ordinated for the attainment of the management objectives.*

MANAGEMENT UNIT. A forest area under one ownership or assigned rights to the timber thereon, organized for efficient administration and control and operated according to one management plan.*

MERCHANTABLE TIMBER. Those portions of a tree or crop which can be marketed under given economic conditions. (BCFT)

MUCK. A soil formed of well decomposed organic material found under conditions of impeded drainage. (BCFT modified) (See Peat.)

NONPRODUCTIVE FOREST LAND. Land of inherent low forest potential, such as open or treed muskeg, periodically flooded lands, and rock barrens.*

OPERATING PERIOD. The period for which the operating plan is prepared.

OPERATING PLAN. A part of the management plan stating the extent of all work of any nature to be carried out during one or more years of the management period. Such plans are based on the prescriptions of the management plan as modified by financial provision. (BCFT modified)

OPERATING UNIT. A temporary subdivision of a management unit, having prominent boundaries, established for the purpose of controlling operations until the forest is divided into compartments.*

PEAT. The residues of natural vegetation which have been affected by processes of anaerobic decomposition, usually under waterlogged conditions. (BCFT) (See Muck.)

PRESCRIBED BURNING. The application of fire to land under such conditions of weather, soil, moisture, time of day, and other factors as presumably will result in the intensity of heat and spread required to accomplish specific silvicultural, wild life, grazing, or fire hazard reduction purposes. (BCFT)

PRODUCTION FOREST. An area of productive forest land dedicated to the growing of merchantable timber or the production of other forest produce.

PRODUCTIVE FOREST LAND. Land bearing, or capable of bearing, timber of merchantable character and not withdrawn from such use. (SAF modified.)

PROTECTION FOREST. An area wholly or partially covered with woody growth, managed primarily to regulate stream-flow, prevent erosion, hold shifting sand, or exert any other beneficial influence. (BCFT)

PRUNING. The removal of live or dead branches from standing trees to increase the quality of the final product.

REGENERATION. The renewal of a forest crop by natural or artificial means; also the new crop obtained. (BCFT)

REGENERATION PERIOD. The number of years between the harvest cut and time the new crop becomes established on a particular forest area.*

REPRODUCTION. All well developed trees below 1 inch diameter class which give an indication of being represented in the future stand.*

ROTATION. The number of years required to establish and grow timber crops to a specific condition of maturity. (SAF)

SAND. Soil particles between 0.02 and 2.0 mm. in diameter. (BCFT)

SCALPING. In tree planting, removal of sod or other vegetation, before or at the time of planting, from any spot or 'scalp' to reduce competition with the tree. (SAF)

SCARIFICATION. The operation of breaking up the forest floor and top soil preparatory to natural regeneration or direct seeding. (SAF)

SCATTERED. The term applied to any productive forest land classification of any age when the stocking is less than 0.3.*

SILT. Soil particles between 0.002 and 0.02 mm. in diameter (BCFT)

SITE-CLASS. A measure of the relative productive capacity of a site for a particular species. The average height at a given age is generally the basis for classification. (BCFT)

SITE PREPARATION. Disturbance of the forest floor and the top soil to create suitable conditions for natural regeneration, seeding, or planting. This treatment may include prescribed burning and the removal of undesirable growth.*

SILVICULTURAL SYSTEM. A method of silvicultural procedure worked out in accordance with the accepted sets of silvicultural principles by which crops constituting forests are tended, harvested, and replaced by new crops of distinctive form. (BCFT) (See Appendix.)

STAND. An aggregation of trees possessing sufficient uniformity in composition, age, arrangement or condition to be distinguishable from adjacent crops. (BCFT)

SUBCOMPARTMENT. A division of a compartment requiring different treatment from that for other portions of the compartment. (SAF)

SUBSOIL. The soil between the top soil and the underlying rock. (BCFT)

SUSTAINED YIELD. A policy, method or plan of management implying continuous production with the aim of achieving, at the earliest practical time and at the highest practical level, an approximate balance between net growth and harvest, either by annual or longer periods. (BCFT)

TENDING. Generally, any operation carried out for the benefit of a forest crop, at any stage of its life—e.g. cleaning, thinning, pruning, girdling, but not regeneration fellings. (BCFT)

THINNING. A cut made in an immature stand, usually past the sapling stage, for the purpose of stimulating the growth and improving the quality of the stand without permanently breaking the canopy. (BCFT modified) (See Appendix.)

UNDERSTOREY. Trees with crowns under the main canopy.*

VOLUME, GROSS TOTAL. The total tree volume, inside bark, including top and stump with no deduction for defect, but excluding all limbwood.*

VOLUME, GROSS MERCHANTABLE. The volume remaining after the volume of tops and stumps is deducted from the gross total volume, with no deduction for defect.

VOLUME, NET MERCHANTABLE. The volume remaining after the deductions for defect are subtracted from the gross merchantable volume.*

WORKING CIRCLE. A division of a management unit for a specific reason which requires a calculation and allocation of the allowable cut separate from the calculation for the remainder of the management unit.*

WORKING GROUP. An aggregate of stands, including potential forest areas assigned to this category, having the same predominant species, and managed under the same rotation and broad silvicultural system.*

APPENDIX I

SILVICULTURAL SYSTEMS

HARVEST CUTTING. The cuts from which the final yield is derived; it may be either a single—i.e. clear-cut—or a series of cuts to produce regeneration.

1. CLEAR-CUTTING SYSTEM. The removal of the entire growth in one operation, from an area wider than two chains. It may be:

   a. Clear-cutting without seed-trees; or
   b. Clear-cutting with seed-trees.

2. SHELTERWOOD SYSTEM. The removal of mature timber in a series of two or more cuts for the purpose of obtaining natural regeneration under the shelter of the residual stand by one of the following methods:

   a. Uniform Shelterwood System. The opening of the canopy is distributed fairly evenly over the stand.

   b. Group Shelterwood System. The opening of the canopy is designed to form fairly regularly distributed gaps, which are enlarged by subsequent cuttings as the group of regeneration develops.

   c. Strip Shelterwood System. The cutting operations are in strips normally progressing against the prevailing wind. The preferred width of the strip is equal to the height of the adjacent stand but not exceeding two chains.

Under the uniform or group shelterwood systems the sequence of cuttings is as follows:

i) Preparatory Cut. The cutting operation to fit the stand and seed-bed for future regeneration (not always necessary).

ii) Seeding Cut. The cutting operations to further open the canopy to provide conditions for securing regeneration. This must coincide with the seed year of those species it is desirable to reproduce (in one or more cuttings).

iii) Removal Cut. The cutting operations to remove the remainder of the mature stand normally after the establishment of the regeneration (in one or more cuttings).

3. SELECTION SYSTEM. The removal of mature trees, either as scattered individuals or in small groups, at relatively short intervals and repeated indefinitely. The objective is representation of all age-classes distributed throughout the stand.

9. APPENDIX II

Silvicultural Treatments

Intermediate Cuttings

The treatments carried out in a stand between the time of its formation and its harvest. They are distinguishable from regeneration cuttings in that the cutting is not conducted with the intention of creating openings in the crown canopy to obtain regeneration.

Synonyms:

- Timber Stand Improvement
- Tending

1. CLEANING. An operation in a young stand, not past the sapling stage, to free the best trees from undesirable individuals of similar age or size which overtop them or are likely to do so. Cleaning may be accomplished by hand or by mechanical or chemical means.

Note:
- A sapling is 0.5" to 3.5" dbh and not exceeding 20 years of age.
- The canopy is not permanently broken.
- The undesirable vegetation may be herbs, woody shrubs or trees.

2. CLIPPING. An operation, usually carried out in conjunction with cleaning, to remove branches or leaders affected by insects or disease for the purpose of controlling the spread of the disease or insect infestation.

3. LIBERATION. An operation to free a young stand, not past the sapling stage, from the competition of older overtopping individuals. Release may be accomplished by cutting, girdling, or chemical methods.

Note: The older trees may be of desirable species but of poor form or less desirable species than the young growth.

4. THINNING. A cutting in an immature stand, usually past the sapling stage, for the purpose of stimulating the growth and improving the quality and composition of the stand without permanently breaking the canopy.

Note: When the felled material cannot be utilized, the operation is called a precommercial thinning.

5. IMPROVEMENT TREATMENT. This is a special form of thinning that applies particularly to stands that have been mismanaged or not previously managed and may be accomplished by cutting, girdling or chemical methods.

6. SALVAGE. The removal of trees killed or injured by fire, insects, fungi or other harmful agencies to utilize merchantable material before it becomes worthless.

7. SANITATION. A specific form of improvement treatment where diseased, injured or insect-infested material is removed or treated for the purpose of reducing the risk of pests or disease in the forest.

8. PRUNING. The removal of live or dead branches from standing trees to increase the quality of the final product.

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