

Characteristics of Common Virginia Trees

Forest management is a complex process. Silviculture—a system in which healthy communities of trees and other vegetation are established and maintained for the benefit of people—uses forest ecology to guide complex management prescriptions that mimic forest disturbances and processes. Silvics—the natural characteristics of trees—play an important role in prescribing effective silviculture.

The tables contained in this publication describe some important silvical characteristics of trees common in Virginia's mountains. Landowners and foresters can use this information to make silvicultural decisions that achieve forest-management objectives.

For instance, it is important to know which trees are shade-intolerant, because they will require adequate sunlight to grow. Regenerating these trees requires silvicultural prescriptions that will open up enough of the forest's canopy to allow sufficient light to penetrate. Another example related to forest regeneration is sprouting potential. Trees that sprout from stumps or sucker from roots (see descriptions below tables) may be regenerated by these means rather than planting seeds and/or seedlings.

References: Burns, Russell M., and Bar-bara H. Honkala, tech. co-ords. 1990. *Silvics of North America: 1. Conifers; 2. Hardwoods*. Agriculture Handbook 654. Washington, D.C.: USDA Forest Service.

Common name		Scientific name	Shade tolerance T: tolerant I: intermediate NT: not tolerant	Years to seed maturity	Other regeneration method(s)	Growth rate S: slow I: intermediate F: fast	Life span ³ S: short I: intermediate L: long VL: very long	Tolerance of poor aeration ⁴ T: tolerant I: intermediate NT: not tolerant
ALTERNATE BRANCHING HARDWOODS								
WHITE OAKS	White oak	<i>Quercus alba</i>	I	1	sprouts ¹	S	VL	NT
	Chestnut oak	<i>Quercus montana</i>	I	1	sprouts	S	L	NT
RED OAKS	Black oak	<i>Quercus velutina</i>	I	2	sprouts	I	I	NT
	Northern red oak	<i>Quercus rubra</i>	I	2	sprouts	Mod.–F	L	NT
	Scarlet oak	<i>Quercus coccinea</i>	NT	2	sprouts	F	I	NT
HICKORIES AND WALNUTS	Shagbark hickory	<i>Carya ovata</i>	I	1	sprouts, suckers ²	S	L	I
	Mockernut hickory	<i>Carya tomentosa</i>	NT	1	sprouts	S	L	NT
	Pignut hickory	<i>Carya glabra</i>	I	1	sprouts	S	VL	NT
	Bitternut hickory	<i>Carya cordiformis</i>	NT	1	sprouts	I	I	T
	Butternut	<i>Juglans cinera</i>	NT	1	sprouts	F	S	NT
	Black walnut	<i>Juglans nigra</i>	NT	1	sprouts	F	I	NT
OPPOSITE BRANCHING HARDWOODS								
Striped maple		<i>Acer pensylvanicum</i>	T	1	sprouts	S	S	I
Red maple		<i>Acer rubum</i>	T	1	sprouts	F, when young	S	T
Sugar maple		<i>Acer saccharum</i>	T	1	sprouts	I	VL	NT
Flowering dogwood		<i>Cornus florida</i>	T	1	sprouts	F, slows down	S	I
Green ash		<i>Fraxinus pennsylvanica</i>	I	1	sprouts	I	I	I
White ash		<i>Fraxinus americana</i>	I	1	sprouts	I	I	NT

Notes: ¹Sprouts: sprouts from stump following disturbance, such as cutting. ²Suckers: sprouts from roots following disturbance, such as cutting. ³Life Span: S (short) = 0–100 yrs; I (intermediate) = 100–200 yrs; L (long) = 200–300 yrs; VL (very long) = 300+ yrs. ⁴'Roots' ability to tolerate a limited supply of oxygen due to saturated soils.

Common name		Scientific name	Shade tolerance T: tolerant I: intermediate NT: not tolerant	Years to seed maturity	Other regeneration method(s)	Growth rate S: slow I: intermediate F: fast	Life span ³ S: short I: intermediate L: long VL: very long	Tolerance of poor aeration ⁴ T: tolerant I: intermediate NT: not tolerant
OTHER ALTERNATE BRANCHING HARDWOODS								
Blackgum		<i>Nyssa sylvatica</i>	T	1	sprouts, ¹ suckers ²	F, slows down	I	I
Yellow-poplar		<i>Liriodendron tulipifera</i>	NT	1	sprouts	F	L	NT
Yellow birch		<i>Betula alleghaniensis</i>	I	1	sprouts	I	I	I
Black birch		<i>Betula lenta</i>	I	1	sprouts	I	I	NT
Cucumbertree		<i>Magnolia acuminata</i>	I	1	sprouts	F	S	NT
American basswood		<i>Tilia americana</i>	T	1	sprouts	F	I	NT
American sycamore		<i>Platanus occidentalis</i>	I	1	sprouts	F	VL	T
Persimmon		<i>Diospyros virginiana</i>	T	1	sprouts, suckers	S	I	I
Sassafras		<i>Sassafras albidum</i>	NT	1	sprouts, suckers	I	I	NT
Black cherry		<i>Prunus serotina</i>	NT	1	sprouts	F	I	NT
American beech		<i>Fagus grandifolia</i>	T	1	sprouts	S	VL	T
Black locust		<i>Robinia pseudoacacia</i>	NT	1	sprouts, suckers	F	S	NT
PINES	Table Mountain pine	<i>Pinus pungens</i>	NT	1	serotinous cones ⁵		I	NT
	Shortleaf pine	<i>Pinus echinata</i>	NT	1	sprouts after fire	F, when young	I	NT
	White pine, eastern	<i>Pinus strobus</i>	I	1			I-L	NT
	Virginia (scrub) pine	<i>Pinus virginiana</i>	NT	1		I	S	NT
	Loblolly pine ⁶	<i>Pinus taeda</i>	NT	1		F, slows down	I	T
	Pitch pine	<i>Pinus rigida</i>	NT	2	sprouts after fire	I	I	T
OTHER SOFTWOODS	Eastern red cedar	<i>Juniperus virginiana</i>	NT	1		S	S-I	I
	Eastern hemlock	<i>Tsuga canadensis</i>	T	1		S	VL	I

Notes: ¹Sprouts: sprouts from stump following disturbance, such as cutting. ²Suckers: sprouts from roots following disturbance, such as cutting. ³Life Span: S (short) = 0–100 yrs; I (intermediate) = 100–200 yrs; L (long) = 200–300 yrs; VL (very long) = 300+ yrs. ⁴Roots' ability to tolerate a limited supply of oxygen due to saturated soils. ⁵Seed cones require extreme heat to release seeds. ⁶Not native to western Virginia.

Visit our website: www.ext.vt.edu
Produced by Virginia Cooperative Extension, Virginia Tech