

Shade Tolerance Indices for Common Trees on FPU Campus

Scale is from 1 to 9; 1 is most tolerant, 9 is least tolerant

Species

Latin Name	Common Name	Tolerance Index
<i>Fagus grandifolia</i>	American Beech	2
<i>Abies balsamea</i>	Balsam Fir	3
<i>Tsuga canadensis</i>	Eastern Hemlock	3
<i>Acer pennsylvanicum</i>	Striped Maple	3
<i>Ostrya virginiana</i>	Hornbeam	4
<i>Picea rubens</i>	Red Spruce	4
<i>Acer saccharum</i>	Sugar Maple	4
<i>Hamamelis virginiana</i>	Witch Hazel	4
<i>Tilia americana</i>	Basswood	5
<i>Betula lenta</i>	Black Birch	5
<i>Acer rubrum</i>	Red Maple	5
<i>Betula alleghaniensis</i>	Yellow Birch	5
<i>Castanea dentata</i>	American Chestnut	6
<i>Frangula alnus</i>	Buckthorn	6*
<i>Fraxinus americana</i>	White Ash	6
<i>Pinus strobus</i>	White Pine	6
<i>Betula papyrifera</i>	Paper Birch	7
<i>Quercus rubra</i>	Northern Red Oak	7
<i>Prunus serotina</i>	Black Cherry	8
<i>Betula populifolia</i>	Gray Birch	8
<i>Pinus resinosa</i>	Red Pine	8
<i>Populus grandidentata</i>	Bigtooth Aspen	9
<i>Populus tremuloides</i>	Quaking Aspen	9

*Based on observations by Singleton.

Compiled from Schwarz et al. 2003, Humbert et al. 2007, Baker 1949, Barnes et al. 1998

Important Note: These tolerance index values should not be considered absolute and fixed for a given species. Developmental stage and growth environment can affect tolerance to low light conditions. In addition, there is some disagreement in the literature as to the relative tolerance for some species. For example, some authors rank sugar maple as more shade tolerant than striped maple.