

Tree Species Tolerance Comparisons

Tree species are compared based on their tolerance to the major environmental factors: low light, frost, heat, water deficit, water surplus, and nitrogen deficiency. The three interpretive classes used are: L – low, M – medium, and H – high.

Source: Klinka, K., J. Worrall, L. Skoda, and P. Varga. 2000. The Distribution and Synopsis of Ecological and Silvical Characteristics of Tree Species of British Columbia's Forests. Canadian Cartographics Ltd., Coquitlam, B.C.

Conifer

tree species	low light	frost	heat	water deficit	water surplus	nitrogen deficiency
Ba - Amabilis fir	H	M	L	L	H	H
Bg - Grand fir	L-M	L-M	M	M	H	M
Bl - Subalpine fir	H	H	M	M	H	H
Fd - Douglas-fir	L-H	L-M	M-H	M	L	M
Lt - Tamarack	L	H	M	M	H	M
La - Alpine larch	L	H	L	M	H	M
Lw - Western larch	L	M	M	M	L	M
Se - Engelmann spruce	M	H	M	M	H	M
Sw - White spruce	M	H	M	M	H	M
Sb - Black spruce	H	H	M	M	H	H
Ss - Sitka spruce	M	L	L	L	H	L
Pa - Whitebark pine	L	H	M	H	L	M
Pj - Jack pine	L	H	H	H	L	H
Pl - Lodgepole pine	L	H	M	H	H	H
Pw - Western white pine	M	M-H	M	L	H	L
Py - Ponderosa pine	L	M	H	H	H	M
Hw - Western hemlock	H	L	L	L	M	H
Hm - Mountain hemlock	M	M	L	L	M	H
Yc - Yellow cedar	H	L	L	M	H	H
Jr - Rocky Mountain juniper	L	H	H	H	L	H
Cw - Western redcedar	H	L-M	M	M	H	H
Tw - Western yew	H	M	M	M	H	H

Broadleaf

tree species	low light	frost	heat	water deficit	water surplus	nitrogen deficiency
Acb - Balsam poplar	L	H	M	L	H	L
At - Trembling aspen	L	H	M	L	H	M
Act - Black cottonwood	L	M	M	L	H	L
Dr - Red alder	L	L	L	L	H	H
Ep - Paper birch	M	H	M	M	H	M
Og - Garry oak	M	L	H	H	H	M
Vb - Bitter cherry	M	M	M	L	H	H
Kc - Cascara sagrada	M	L	L	L	H	L

Mb - Bigleaf maple	L	L	M	L	H	M
Gp - Pacific dogwood	M	L	M	M	M	M
Ra - Arbutus	L	L	H	H	L	H