

# TECHNICAL NOTES

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The following material describing several important characteristics of forest tree species was prepared by David Poe, Woodland Conservationist, SCS, Moscow and Allen Kyle, former SCS Technician, Couer d'Alene. This information can be a valuable aid in presenting alternatives to cooperators to enable them to make final decisions pertaining to the management of their woodlands.

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## THREE IMPORTANT CHARACTERISTICS OF DIFFERENT

### FOREST TREES GROWING IN IDAHO

A knowledge of the characteristics of different species of trees is important in deciding what management practices are needed for different woodlots.

The weight of the seed is one of the most important factors in determining how far the seed will travel from the seed source to the ground. The weight of the seed is a consideration in determining how many seed trees are needed and what the distance between these trees should be.

Shade tolerance is an indication of the amount of sunlight a tree needs to become established and grow. Some species such as western hemlock will become established and grow in shaded conditions. Other species such as ponderose pine require open conditions with direct sunlight to become established and grow. The species derived from natural regeneration after a harvest cut can be largely determined by controlling the amount of sunlight reaching the ground. Shade tolerant species are more likely to become established in a selection system because of a reduced amount of sunlight.

Release potential describes the ability of overcrowded or shaded trees to increase their growth rate when they are given more sunlight. Some species such as western larch and lodgepole pine often grow into overstocked stands with a very slow growth rate. Once the growth rate is stunted by overcrowding, these trees will not usually begin to grow at a normal rate even if they are supplied with abundant sunlight. Release

potential is important because a knowledge of a species ability to respond to increased sunlight is important in deciding if a stand of trees should be thinned.

The following table lists the tree species along with their identified characteristics:

Species	Plant Characteristics		
	Number of Seeds/Pound	Shade Tolerance	Release Potential
Western redcedar - <i>Thuja plicata</i>	303,000	Very Tolerant	Fair
Douglas fir - <i>Pseudotsuga menziesii</i>	41,000	Intolerant	Good
Grand fir - <i>Abies grandies</i>	34,000	Tolerant	Good
Western hemlock - <i>Tsuga heterophylla</i>	299,000	Very Tolerant	Good
Western larch - <i>Lavix occidentalis</i>	155,000	Very Intolerant	Poor
Lodgepole pine - <i>Pinus contorta</i>	82,000	Intolerant	Poor
Ponderosa pine - <i>Pinus ponderosa</i>	16,000	Very Intolerant	Good
Western white pine - <i>Pinus monticola</i>	26,000	Intermediate	Good
Engelmann spruce - <i>Picea engelmannii</i>	160,000	Very Tolerant	Fair