



Trees, Soil Types and Drainage

Soil texture and drainage are two primary site conditions that work together to determine tree species suitability on a site. Soil texture affects the sites drainage pattern and site drainage affects which species will survive and how well they will perform. Once you have determined soil texture and drainage you can begin to make recommendations on the tree species which may perform best on the site. The table below is a basic guide to matching tree species with soil texture/drainage conditions.

Soil Texture	Natural Drainage				
	Well-drained		Moderate		Imperfect
Shallow to Bedrock (<50cm)					Jack Pine Tamarack White Cedar
Sandy	<u>Red Pine</u> <u>White Pine</u>	<u>Red Pine</u> <u>White Pine</u> White Spruce Norway Spruce Larch Red Oak Red Maple	<u>Red Pine</u> <u>White Pine</u> White Spruce <u>Norway Spruce</u> Larch Red Oak Red Maple	<u>Red Pine</u> <u>White Pine</u> White Spruce <u>Norway Spruce</u> Red Oak Red Maple	White Spruce White Cedar <u>Tamarack</u> Silver Maple
Loam	<u>White Pine</u> Norway Spruce Larch Red Oak	<u>White Pine</u> White Spruce <u>Norway Spruce</u> <u>Larch</u> Red Oak Sugar Maple Black Walnut Red Maple	<u>White Pine</u> White Spruce <u>Norway Spruce</u> <u>Larch</u> Black Walnut Red Maple Red Oak <u>Sugar Maple</u>	<u>White Pine</u> White Spruce <u>Norway Spruce</u> Red Oak Sugar Maple <u>Black Walnut</u>	White Spruce White Cedar <u>Tamarack</u> Silver Maple Red Oak
Fine Loam	White Pine White Spruce <u>Norway Spruce</u> <u>Spruce</u>	White Pine White Spruce <u>Norway Spruce</u> Larch Red Maple	<u>White Pine</u> <u>White Spruce</u> <u>Norway Spruce</u> Red Maple <u>Black Walnut</u> Red Oak	<u>White Pine</u> <u>White Spruce</u> <u>Norway Spruce</u> Red Oak Sugar Maple <u>Black Walnut</u>	<u>White Spruce</u> White Cedar Silver Maple
Clay	White Spruce <u>Norway Spruce</u> <u>Spruce</u>	White Pine White Spruce <u>Norway Spruce</u> Sugar Maple Black Walnut	White Pine <u>White Spruce</u> Norway Spruce Sugar Maple Black Walnut	White Spruce	<u>White Spruce</u> White Cedar Silver Maple

Suitability rating

Pw - Most suitable

All others – Very suitable

As a general guide when determining your soil properties, you should check every hectare of land paying attention to hilltops, depressions, and riparian areas. Consulting a county soil map is also a good way of determining site soil characteristics. Observe forests and tree growing on nearby sites with similar soils and topography and take clues from the trees growing there.

