

Introduction to Silviculture

“Silviculture” is the science and practice of perpetuating forests by growing trees on a large scale (that is, not a single tree, but rather growing whole “stands” of trees). Different methods of growing timber stands can be divided into “selection” and “even aged” methods. In selection harvesting, individual trees or small groups (up to 2 ½ acres) of trees are cut. New trees are established by natural seeding into the openings created by this cutting, maintaining a forest that is a mix of trees of different age and size classes. In even aged harvesting, trees are removed in larger areas (typically 15 to 20 acres) so that a new stand of trees that are all about the same age is created. Foresters often plant trees to create these new stands, although seeding by trees left for that purpose is possible.

Other cutting methods, such as commercial thinning of trees to improve spacing and maintain growth, and “sanitation-salvage” harvesting of dead, dying, and diseased trees, are considered “intermediate” or maintenance harvests, not designed to establish a new timber stand.

The following table provides a brief description of the attributes of different silvicultural methods:

Attribute	Single Tree Selection	Group Selection	Seed Tree	Shelterwood	Clearcut
Ease of establishment of new trees	Difficult	Difficult	Varied w/ natural regen; good if planted	Varied w/ natural regen; good if planted	Good
Site Prep Needed?	None	None	Usually	Usually	Usually
\$\$ invested	Little	Little	Moderate	Moderate	High
Short term disturbance	Low	Moderate	Mod to high	Mod to high	High
Long-term disturbance	Moderate	Moderate	Low	Low	Low
Roads needed	High	High	Moderate	Moderate	Moderate
Utilized in CA?	Often	Occasional	Seldom	Seldom	Often
Control of growth factors (spacing)	None	Little	Good if planted	Good if planted	Good