

This method of harvesting leaves 4 to 60 well-spaced, good quality trees (seed trees) per acre to provide natural regeneration of pine stands. There are two harvesting systems typically used in the Southeast.

SEED TREE HARVEST: This method of harvesting leaves approximately 6 – 10 well-spaced, good quality trees per acre to provide for natural regeneration of pine stands. This method works best with light-seeded softwood species such as loblolly and slash pine.



Monitor the stand for germination of seedlings after seedfall. Once advanced regeneration becomes established and trees are at least five feet tall and two years old, harvest the overstory. Consult a professional forester for guidance on when to remove the overstory.

SHELTERWOOD HARVEST: This method uses two or more successive cuttings so residual trees provide protection from sun and wind during the period in which a new crop of trees is established. This system regenerates heavy-seeded species (oak and longleaf pine) intolerant to shade or species with intermediate shade tolerance by allowing sunlight in to promote growth. When removing merchantable timber, leave 20-60 well-spaced, good quality trees per acre. Leave the best trees to grow for another 5-10 years as advanced regeneration is establishing. After thinning, the forest floor should receive enough light for seed from remaining overstory trees to germinate. Consult a professional forester for guidance on when to conduct subsequent harvests.

WIND FIRMNESS: Wind firmness is a primary consideration when selecting a seed tree, because the suddenness with which the protection of the rest of the stand is removed makes trees particularly susceptible to windthrow. The most wind firm trees are grown with relatively little competition on deep soils and have stocky, tapering boles with well-developed root systems. Such trees also have wide, deep crowns and relatively large live crown ratio.

HEIGHT: The force of the wind increases rapidly with distance above ground; short trees are less susceptible to damage than tall trees with the same proportional development of crown. Trees with wide, horizontal openings between branches are more likely to stand against wind than those with compact crowns. The seed tree method should not be used with shallow-rooted species, or species with wood of low strength. It is not applicable to any species growing on moist or thin soils where the rooting stratum is shallow.

AGE: Seed trees must be old enough to produce abundant fertile seed. Seed trees should also be selected from among the dominants and better co-dominants. Such trees are stronger and usually produce more and better seed than trees of the lower crown classes.

SITE PREPARATION: During late summer to early fall, prior to the first seed fall, prescribe burn to expose mineral soil and allow a better seed catch. Pine seed germinates and survives better when in direct soil contact. Control hardwood competition either before the initial cut through controlled burning or after harvest with herbicides.

NUMBER AND DISTRIBUTION: Consider the following when determining the number and distribution of seed trees.

- The amount of viable seed produced per tree.
- The probable proportion of seed trees that will survive.
- The percentage of seed that will finally produce established seedlings.
- The distance to which seed can be dispersed in sufficient quantity to ensure full stocking.

The following table provides the minimum recommended number of seed trees per acre by tree diameter (DBH) and species:

DBH	shortleaf	loblolly	slash	longleaf	Virginia
9					6
10	20	12	12	55	5
12	14	9	9	38	4
14	12	6	6	28	4
16	12	4	4	21	4

SOURCE: USDA Forest Service



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