

Forest Stand Improvement:

Pre-commercial Thinning of Pine Stands

Alabama Job Sheet No. AL666C



PURPOSE: Pre-commercial thinning releases over-crowded pine stands to prevent stagnation and increase growth on remaining trees. Pre-commercial thinning is usually applied to natural stands with trees less than 5 inches in diameter. In some rare instances a pine plantation may qualify if a substantial amount of natural pine has seeded into the planted rows. It produces no immediate income for the landowner, but the cost is justified by the increased value of future growth.

METHODS: Depending of the stand density and tree size, trees are typically removed by mowing, disking, chopping, mulching machine, or bulldozer. Trees to be thinned can be individually selected or complete rows removed. Individual selection can be time consuming and costly. For this reason, most landowners row-thin.

ROW THINNING: Row thinning removes all trees in strips 6 – 8 ft. wide with 6 – 8 ft. wide uncut strips between. Strips can run in one direction, or cross in a checkerboard fashion.

The remaining trees within the uncut strips should be thinned using a chain saw or brushcutter/clearing saw to further reduce the trees per acre. Retain crop trees that are straight, well-formed, well-spaced and disease free. A spacing of 12 ft. by 12 ft. between crop trees is desirable. The goal is to leave 300 – 500 well-spaced trees per acre.

PRESCRIBED BURNING: Careful use of prescribed burning with backfires can successfully thin dense pine stands. However, burning alone is not allowed as a thinning method under this program.

THINNING UNDER THE FOREST HEALTH INITIATIVE: Because of the health benefits associated with thinning crowded stands, this practice is approved under the Forest Health Initiative in the Environmental Quality Incentives Program (EQIP).

A pre-commercial thinning is recommended to remove undesirable trees from non-merchantable pine stands and lower the density to an acceptable level. Prescribed burning is required at the discretion of the inspecting forester or technician once during the next 2 years. Approximately 300 trees per acre should be left after the thinning is completed. No more than 500 trees per acre remaining will be allowed under this practice. It is recommended that stumps be treated with Borax if the stand is on soil types that are rated high hazard for Annosus Root Rot.

*Photo Credit: Alabama Forestry Commission
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