



VIRGINIA DIVISION OF FORESTRY

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT



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Direct Seeding Can Provide a Low Cost Method of Establishing Pine

Introduction

Provided it is successful, direct seeding offers a low cost method of replacing low-grade hardwood with pine. This is a report of the successful conversion from low-grade hardwoods to loblolly pine on seven acres of the A. C. Ferguson tract, a portion of the Buckingham-Appomattox State Forest located in Buckingham County.

The Stand Before Conversion

Prior to being successfully direct seeded to loblolly pine the seven acres supported 60 year-old plus low-grade chestnut oak timber. The chestnut oak was fairly dense and ranged up to 12 inches in diameter at breast height.

Conversion Procedure

The conversion of low-grade hardwood to loblolly pine consisted of and followed this sequence: (1) a single disking approximately one month prior to direct seeding, (2) broadcast seeding the area on April 14, 1961, with stratified loblolly pine seed treated with repellents at the rate of one pound per acre, (3) clear-cutting the area for pulpwood, and (4) follow-up poisoning work to destroy any trees left over from the pulpwood cutting.

Seeding Results

The direct seeding of loblolly pine on the area resulted in a stocking percent of 58.5 ± 6.06 and $1,870 \pm 321$ seedlings per acre at the end of the first growing season (both with a probability of five percent).

Stated differently, the results indicate that using the same survey procedure which involved mil-acres (1/1000 acre or a square 6.6 feet on a side) that 19 times out of 20 the data would indicate that the area supports at least 524 to 646 well distributed loblolly pine seedlings per acre.

Costs

Itemized below are the conversion costs:

1. Bush and bog disking 4 hours (D-4) @ \$12.00	\$48.00
2. Loblolly pine seed, treated and stratified 7 pounds @ \$6.25	43.75
3. Labor, sowing seed 3 man hours @ \$1.00	3.00
4. Poisoning left-over Hardwoods Labor and material	<u>27.95^{1/}</u>
Total	\$122.70

Average cost per acre = $\$122.70/7 = \$17.53^{2/}$

^{1/} This figure is low because of the pulpwood cutting and discing operation which reduced the number of residual hardwoods that had to be destroyed.

^{2/} To offset this figure but not mentioned because of lack of wide-spread markets is twelve cords of hardwood pulpwood cut per acre which sold for \$3.24 per standard cord for which a total return of \$38.88 per acre was obtained.

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