

Red Pine Seed Production Area, Rosen Dam,

Eagle River District, Nicolet National Forest

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The Rosen Dam "seed production area" is one of three such areas on the Nicolet National Forest in northeastern Wisconsin. Two of these areas are being managed for the production of red pine seed and one for white spruce seed.

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A "seed production area" is defined as "a superior (plus) stand which is upgraded by periodic removal of undesirable trees (roguing) and cultivated for early and abundant seed production." It is our Regional goal to establish sufficient "seed production areas" to supply the number of seedlings required for each Forest's annual planting program. Such areas are being selected from the best natural stands available on each National Forest and managed solely for seed production. The seed production areas fill an intermediate step and an immediate need in the production of superior quality seed. The ultimate goal is to establish seed orchards of trees whose genetic qualities have been proven.

The initially established orchards will be intensely managed plantations of selected individual trees. The genetic quality of each parent tree within a seed orchard will be examined through tests of its progeny. The results derived from these tests will determine which individuals are -- actually of sufficient quality to be retained in the orchard, and to what extent the seed from this orchard may be distributed. Initially, the distribution of seed from any particular orchard will have to be limited to a small geographic area, probably to one Forest. After progeny tests indicate the best range, these areas can be adjusted.

The initial step in the establishment of Region Nine's first seed orchard will begin this fall on the Ottawa National Forest near Marenisco, Mich. This area will eventually supply high-quality spruce seedlings for portions of the Ottawa and Nicolet National Forests. National Forest personnel are constantly on the lookout for trees of phenotypic superiority, and, as a sufficient number of these individuals are selected, additional seed orchards will be established.

Stand History

The Forest Service purchased this area from the Thunder Lake Logging Company in 1934. The stand was established naturally after a seed-tree cut sometime during the 1920's. Cultural work was first done in this stand in 193, when a liberation cut was made and many of the trees were pruned. In 1954, a K-V project was carried out in the portion of the stand south of Highway 70. At that time the stand was thinned from below and additional trees were pruned. The present cut is believed to be the first commercial cutting.

Stand Before Cutting

Total area of type---	35 acres	Site index-----	48 feet
Age-----	40 years	D.b.h. range-----	5-8 inches
Height-----	38 feet	Average basal area---	106 Sq. ft. (95
			sq. ft. red pine,
			11 sq. ft. misc.)

Selection of Seed Trees

The marking of this area was done by the Eagle River District Ranger, Assistant Ranger, and the Forester, after training by Hans Nienstaedt and Paul Rudolf of the Lake States Forest Experiment Station. On the 8 acres that have been cut, 347 trees of seed tree quality were selected. Some of these will be in the isolation zone. The portion of the stand that will be used for seed production has about 85 trees per acre remaining.

The total marking job for this portion of the stand took 72 man-days, including 3 man-days for initial training. Cost of marking this area, excluding training, was \$14.94 per acre.

Volume Removed

The estimated cut from this area is 40 cords of pulpwood and 4 MBM of sawlogs. Total value of the material removed was \$130.

Cultural Work

The slash from the logging operation was removed from the seed production area by mechanical chipping. The cost of this work was \$60 per acre. The trees were pruned to the live crown, and one side of the tree pruned to 10-foot sections to allow the climbing ladders to get up to the tree. Part of the pruning was done by summer camp students from the Purdue University Forestry Camp at Lost Lake. The estimated value of this work is \$21 per acre.

The area will be treated with herbicide to reduce future brush and other competition.