
THREE-WAY GRADING OF PINE SEED PRODUCES CONSISTENT IMPROVEMENTS IN QUALITY AND PERFORMANCE

Robert P. Karrfalt
Director
National Tree Seed Laboratory
Dry Branch, Georgia

Seed sizing has been reported in the literature for about 50 years. The results are often conflicting, but in general there appears to be a trend for larger seed to produce larger seedlings. Most nursery managers practice seed sizing because they believe it improves the quality of the seedling crop. A three-way grading procedure tested at the National Tree Seed Laboratory involves separating seed by width, thickness, and weight. Trials have been run on slash and loblolly pine. Nursery data has been taken for 3 years and the laboratory data taken from 5 seed lots. The procedure has consistently produced grades of seed that are significantly different from each other in germination and in the size of seedling grown in the nursery. With 2 of the 5 seed lots, very low germination was increased to above 80 to 90 percent. Analysis of the distribution of individual seed weights has shown that the procedure of making three or four sizes with round hole screens does not effectively reduce the variation in seed weight within a seed size. The three-way procedure on the other hand does this much more effectively and, therefore, can consistently provide better control over seed quality and performance.