SPECIAL PROBLEMS IN GROWING SEED ORCHARD SEEDLINGS

Leonard Bosch

Continental Forest Industries
Hodge, Louisiana

A questionnaire was mailed to most of the attendants of the nursery meeting seeking information on special problems. Fourteen were returned, including ones from six State and one Federal nursery. This information was used to stimulate questions and discussions during the group meetings.

A brief summary of the questionnaire shows some of our mutual problems as well as other interesting facts.

The size of the nurseries range from 21 to 210 acres.

Two species make up 95% of the seedlings grown in our nurseries, 76% loblolly and 19% slash pine.

Growing a proper root-top ratio is a problem in 40% of our nurseries., Several treatments are used to regulate this problem. All nurserymen use water, 70% fertilize, 60% root prune and 20% top prune.

Seed sizing is practiced by 60% of our nurseries, and all say it definitely helps. Earl Belcher told the group that screen sizing, then gravity sizing, making four or more seed lots, would give the best results.

The larger seed, as well as the heavier seed, usually germinate first.

In the questionnaire, 50% said seedlings from orchard seed could be identified in the nursery from seedling of woods-run seed by both size and color.

A great difference is observed in the amount of fertilize applied at different nurseries, but different treatments, soil amendments, sawdust, and soil conditions could warrant this.

Ammonium nitrate was used by all nurseries, except one, as a source of nitrogen. R. P. Plyler, Weyerhaeuser nurseryman,said they got better response with ammonium sulphate.

Only one half of the nurserymen said they could control bed densities to within 10%. Types of planting machines did not seem to be the problem because a variety was used. The Whitefield planter was used by 60% of the nurseries. The age and condition of the machine may be part of the problem. Seed with 90%, plus germination, could also help.

Seedling mortality in the beds was caused by just about anything you could name, hand-weeding, varsol, sand splash and herbicides, but the greatest damage came from heavy rains. They were especially damaging in the month following planting. Diseases such as root rot and damping off were the second greatest cause of seedling loss.

Improved seedlings should be planted on the best sites available to maximize gains. Nurserymen should work close to the foresters that supervise planting because 85% have no control over the seedlings once they leave the nursery. Seedling bales should be labeled to designate improved stock so planters and supervisors will know what they are planting.

Between 60 and 80 per cent of our nurseries have cold storage areas and 30% have refrigerated vans for transportation and storage at the planting site.

Orchard seed are grown on the best nursery beds at 60% of our nurseries. The remaining nurseries, hopefully, have homogeneous soils that do not require selecting the best sites.

Lifting season begins at all our nurseries around the first of December. To insure that the seedlings are ready, all nurserymen have treatments to harden them off, or hasten dormancy. Most reduce the water, some undercut and 50% apply murate of potash at 100 pounds per acre. Dr. May states this was a proven practice in Northwestern nurseries and he would use it in our area.