GROWING THE IMPROVED SEEDLING

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For the next ten minutes let's consider growing the improved seedling.

This group is distinguished as leading in the field of ecology. There are thousands of years experience related and dedicated to the preservation of our natural resources seated here in this room. You have worked for years doing the things the average person only now is beginning to realize has to be done. How many forested acres have their accountability beginning right here? Millions.

How can this effort be improved. Just what is an improved seedling? Is it a seedling that will make a stick of pulpwood in ten years? Does it evolve into a log tree with little or no branches? Can it be used for beautification? Will it grow under a canopy of polluted air? All of these are a definite need and I think we will one day be called upon to fill the bill for them all. So, a superior tree or seedling is one that will meet the needs and requirements of the future.

Techniques required to produce such a seedling will vary as the type seedling varies. At present, it is generally accepted the need is for a vigorous, fast growing seedling to make pulp, poles and logs in as short of period as possible.

Our method of regeneration is with seedlings and to get improved seedlings an improved seed is necessary.

The Louisiana Forestry Commission began their seed improvement practices in 1961 and have spent thousands of dollars in an effort to produce improved seed. We have located several seed production areas around the state and have constructed a 400 acre seed orchard. These efforts are beginning to be productive and we are starting to get a more selective and better quality seed.

All of us know the cost of improved seed and know that it is such that we cannot afford to mis-manage the seedling culture. When you consider the seed cost may be eighty dollars or more per pound and apply that to seedling cost per thousand, the seedling value becomes paramount. Seed cost alone has started the improved seedling price at the level we are now producing seedlings.

The techniques bear directly on these cultural practices and I'll mention a few that are the most important.

SEED BED DENSITY

Past experience has led me to plant for 40 seedlings per square foot after planting and to hope for a divident of 32 plantable seedlings. This must change.

The nurseryman can no longer afford to throw out expensive seed and shoot for a high seed bed density and expect to get a 60 to 80% return. The dens ty must be lowered to produce a nicer, more uniform seedling. He must expect a higher plantable ratio and to shoot for the 100% return.

Southern pine seedlings usually do best at a density of 30. Densities below this do not utilize the soil to full capacity and above this the seedling size decreases and the culls increase.

GROWING MEDIA

All of us are stewards of the soil and this stewardship is what bears results. A nursery soil well cared for and maintained at peak, will allow us to reach these high goals. Specifically we must have land formation for erosion and drainage control. Maintain the needed pH level. Keep up the mineral content. Constantly strive to keep organic matter content at the highest possible level. Protect the soil as much as possible with a seedling crop, cover crop or mulch.

SPECIALIZED PROBLEMS

This is what makes the world go around. It's why you and I are needed. Problems arise that need solving and someone must come up with the solution. Nurseries have their problems and it's the challenge to develop techniques for solution that makes it so interesting. The following are some of these challenges:

Nematodes - That dirty little ole soil worm that eats away on the seedling root.

Insects - Bugs in all stages of development eating away at both ends.

Rust - A knot infecting outlaw that addicts the seedling making it worthless.

Disease organisms - Fungus working on cellular structure besting the young and the vulnerable.

Weed Control - Manual, mechanical and chemically.

There are many different ways of combating these problems. Some of the best are having continuous soil building programs, sterilization of planting media and chemical treatment for a specific incidence. All of us have our own solution to these and we can talk about them during discussion if anyone cares to.

All of these practices are interrelated and will be productive if all are fully controlled and enacted by schedule. Each technique is helpful by itself, but must be dependent upon all to yield the final result, which is a bed of plantable, uniform, vigorous, healthy seedlings.