

THE NURSERYMAN'S AND SEED ORCHARD MANAGER'S ROLE  
IN TREE IMPROVEMENT

Oscar R. Sampson, Florida Division of Forestry

The nurseryman's and seed orchard manager's role in tree improvement is not one that we can easily pin down. I think each of their roles will depend to a great degree on the management structure of their organization, the size of their working units, and the capabilities of the individual. Quite frankly, I would not attempt to sight specific limits of either the nurseryman or orchard manager in tree improvement. I know that each of you already have your own ideas as to what the role of each should be in your respective organization. I will attempt to limit my comments to those areas where I feel sure each will be involved. My comments are not related to any organization. They are only general thoughts concerning the role the nurseryman and orchard manager will have, and have assumed, in tree improvement.

Most nurserymen have been associated with the tree improvement program in one phase or another since it was implemented, Many nurserymen have had the responsibility of both nurseryman and orchard manager. Others have been assigned specific parts of the program. I personally think that the nurseryman's most important role in tree improvement will be in two areas: cone processing and seedling production.

What will be the nurseryman's role with respect to seed storage and cone processing? In many cases the nurseryman will be called upon to develop new methods of cone processing which will allow cones to be picked earlier. There will also be other challenges to develop more efficient equipment for cone and seed harvesting as well as processing. I believe that we can assume that seed storage methods will not change a great deal with seed orchard seed. Our present methods appear to be fully adequate. With seed orchard seed our seed values will increase, and with increased values we will give more attention to our methods of seed handling and the delegation of this responsibility. There will be more lots of seed to handle which will require that our labeling of seed and lot assignments be made in such a manner as to reduce chances for error. Seed testing will be more important than ever before. This will be needed to provide information as to your storage plant's performance in keeping seed viable and also important in determining seedbed planting rates.

In the area of seedling production, there will be increased challenges to produce as many plantable seedlings as possible from a given lot of seed. Most of us already know that our cultural operations may need to be adjusted in the areas of fertilization and bed densities. This, of course, will be determined by each individual nurseryman. There will be increased emphasis on precision planting in the nursery bed and new and better equipment to do the job. This is an area where we need more emphasis. It may be that some of us need to re-evaluate our packaging methods, as well as seedling handling from the bed to the final package. Seedling survival is very important as we are going to wider spacing in our planting. The nurseryman will want to make sure his seedling lifting and packing procedures will, with good planting techniques, produce high seedling survival rates in the field.

Another important part of the nurseryman's role will be that of record keeping. Without good records to evaluate performance, it will be difficult to improve in areas where weak spots show up. The nurseryman's role is a vital role and one of utmost importance to the over-all tree improvement program. Without good nursery stock at a reasonable cost to the public and private landowners which include the industry as a whole, the tree improvement program will not have accomplished its objective.

At this point, I would like to shift to a few comments concerning the orchard manager's role in tree improvement.

The role of the orchard manager has been established for a number of years. I don't believe that I would be qualified to state categorically what the seed orchard manager's role is in tree improvement; however, there are a few points in respect to his role that I would like to mention.

The orchard manager's position was created in the early stages of tree improvement work when the need arose for someone to handle the cultural operations of the program. I am sure the duties and responsibilities have grown beyond what any of us conceived they would be in the early stages of tree improvement. The orchard manager was called upon to establish our seed orchards and his duties were orchard layout, grafting, transplanting, and the many odds and ends that go along with an operation of this nature. I feel confident that as time has passed, everyone in tree improvement has realized the importance of the orchard manager's role in the program. If the orchard manager does the job which is expected of him, he must be a talented individual. To begin with, he must be able to keep adequate records. I am sure everyone realizes the importance of records in this program since many of our approaches have been by trial and error. His records and feedback to the cooperatives are important in determining approaches to some of the problems encountered.

In the area of equipment to carry out his work schedules, the orchard manager has made a number of contributions and he is still confronted with a challenge of developing ideas for better equipment to accomplish his objectives.

There is still much to be done in connection with cone and seed harvesting. The need for more efficient harvesting and handling methods is important. We, in Florida, will attest to this since we have about 800 acres of seed orchard. You can readily see the magnitude of our problem in this area.

The orchard manager has been called upon in the areas of entomology and pathology, I don't know of an orchard manager who has not been concerned with recognizing problems in these areas and working with specialists in these fields to overcome them. There have been contributions to the program made by orchard managers in these areas as well.

I have mentioned a few facets of the orchard manager's duties and responsibilities to stimulate thought concerning his role in tree improvement. Where does his role begin and where does it end? This is a good question. I think that this will be determined by

each organization and the capabilities of the individual orchard manager. The sky is the limit, so to speak.

In passing, I want to mention that as many of the orchards move from the establishment stage to the maintenance stage, there will still be many challenges for the orchard manager. The areas of harvesting as well as second generation work will produce as many new challenges as did the establishment stage. Many organizations are working with hardwoods and here, again, are new challenges for all of us.

In trying to sum up the role of the orchard manager, I compared it to the building construction trades. The orchard manager takes the blueprints, or in our case the instructions of the design engineers who are the geneticists, and establishes his orchard. When he encounters problems, they are referred back to the designer for consultation and help in providing solutions. When he develops new and better methods of accomplishing his duties, they are passed along to the industry as a whole. He may also be asked to evaluate specific areas of the program as well as to aid in development in others.

In conclusion, I think the orchard manager's as well as the nurseryman's contribution to the tree improvement program from the standpoint of research will be adequate records. These records will assist in evaluating the program's approach in second generation work. The greatest contribution will be that of having a key role in the production of commercial wood to meet the predicted future requirements of our nation.