

NURSERY PRODUCTION, COST REDUCTION, AND QUALITY STOCK
PRODUCTION GOALS OF CONTAINER CORPORATION OF AMERICA

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Production goals

I am not too familiar with the size of the various nurseries represented here today; however, I feel certain that Container represents one of the smallest, if not the smallest, private nursery in the South. Container's nursery, which is located at Brooker, Florida, produced its first crop of seedlings in 1957, and now has an annual production capacity of 5,000,000 pine seedlings. Our production capacity is geared to the present, as well as to the future, estimated reforestation needs of our Company's land holdings. The major species grown in our nursery is slash pine, although we do produce some loblolly, longleaf, sand, and spruce pines.

Cost reduction

It is our feeling that our nursery is as close to the minimum size as we could economically operate. We would not want to mislead you into thinking that our nursery can produce seedlings for the same price as they can be purchased from the larger state nurseries. There are certain advantages to be gained by producing our own seedlings, and it is our feeling that these advantages more than offset the slightly added cost of production. When considering the size of our nursery operation, our production costs are in line with those of other nurseries. I do not mean to infer here that we are completely satisfied with our nursery costs, for we feel that there is plenty of room for refinements to be made. One of our major problems today is that of finding temporary labor to work in our nursery. Such labor has become more scarce each year and because of the local economic conditions, it appears that this problem will become more acute in the future. Inasmuch as 45 percent of our total nursery cost is spent for hourly labor payrolls, a reduction in labor requirements at the nursery would help combat the labor shortages as well as reduce our total production costs.

A close examination of our nursery records revealed that the hourly laborers spend 25 percent of their time hand weeding. Our weed control in the past has been a combination of hand weeding and mineral spirits, along with the use of some pre-emergence weed killers. This has given us good results but we are still looking for a chemical method of weed control which will eliminate most of the hand weeding. While we are not blessed with many of the grasses known to some of you, we do have large quantities of water grass, crab grass, dog fennel, crows foot, as well as other weeds. Our recent experience with one of the pre-emergence weed killers has been very encouraging. In fact, it is now our standard practice to treat our nursery.

beds with the pre-emergence weed killer immediately after sowing the seed. We presently have a fumigation study in our nursery using three different soil fumigants. It is still too early to make a complete evaluation of these chemicals; however, the lack of weed control given by these fumigants has been very disappointing.

Mechanization offers another avenue by which we can reduce our labor requirements. Although all phases of our nursery operation are fairly well mechanized, our present plans call for making two small, mechanical innovations which will result in the reduction of our labor needs during certain phases of our nursery operations.

It has been our standard practice to package our seedlings for shipment in a special corrugated box manufactured by Container. The seedlings are stored in the boxes and when needed for planting, they are placed in a special built rack on the planter. This procedure makes it unnecessary to disturb the seedlings in the boxes from the time they are lifted until they are planted in the ground. In the past, these boxes have been used for only one packaging operation. New developments in the box field are very encouraging and this year we will be trying a new wax-treated box which we hope will be more rugged and can be re-used at least one time. While the costs of these treated boxes are slightly higher than those used in the past, the fact that they can be used two or more times will make an overall reduction in our cost of packaging seedlings.

Our nursery labor lift and grade our seedlings by means of a mechanical tree harvester. We are hopeful that through more consistent seed germination predictions and improved cultural practices we can reduce the number of cull seedlings in our seedbeds to the point where grading can be greatly reduced or possibly eliminated entirely. This would enable us to maintain or possibly increase our lifting production with a reduction in the labor force.

Quality stock production

Although great pride is taken in the quality of the seedlings that is produced at our nursery, we feel that there is still much room for improvement, especially along the lines of refining our techniques of undercutting so as to produce a better balanced plant of the desired size with an improved fibrous root system. It is hoped that our fumigation study will give us some indications as to the best method of treating our nursery to obtain the maximum protection against nematodes and root rot. This study is also being followed closely to see the effect that fumigation has upon the seedling quality as well as the total number of plantable seedlings per bed.

Conclusion

In closing, I would like to say, even though I may not have offered anything new here today, an attempt has been made to tell some of the problems and goals of one small private nursery in the South.

DISCUSSION

Q. What were the three fumigants you used?

A. (Draper) Trizone, Nc2 at two rates--1 and 2 pounds per 100 square feet--and Voilex. We put five replications in the nursery; all under tarp. We had a little extra Voilex so we used it 35 pounds covered and 50 pounds uncovered. We couldn't see any difference, but conditions were ideal so this might not happen next time.

Q. Do you water-seal with the Voilex before you put the tarp on it?

A. (Draper) We water-sealed where we didn't use the tarp.

Q. What about your pre-emergence weed killer?

A. (Draper) I don't want to initial any product, but in our nursery we found Vegatex to give us very satisfactory results. In fact, we put in check plots and treated the check plots in the fumigation study in the same manner as regular nursery practices. They are more true checks in a sense but we treated them with a pre-emergence weed killer. We had few weeds for several weeks in the check plots than in the fumigated plots, but after a while we could see where there was a gradual increase in the amount of grass in the check plots, more so than in the treated plots. Although the data has not been analyzed, we have as much as 20+ hours of weeding a Trizone plot against 1 to 2 hours weeding a plot treated with Vegadex. We feel that we are not getting any interaction and if we fumigate again, we are going to use Vegadex in with the fumigation.

Q. Did you use mineral spirits along with Vegadex on these plots?

A. (Draper) Yes, we kept a record whether we sprayed the plots completely or partially and we kept an accurate record on the hours of weeding the plot. We had used Vegadex in place of mineral spirits at a later time when coming back and our results were negative.

Q. Why I asked was that I first saw Vegadex used by the Joseph Campbell Company on tomatoes, pepper plants, and things like that so I tried it and also tried Napthol, but I found out I couldn't control anything with those two chemicals that I couldn't control with mineral spirits so we didn't feel like we got too good results.

A. (Draper) Well, here's the value we find in Vegadex--it kills those seeds that are going to germinate early and gives the seedlings a chance to get up to good size. Until the weeds and grasses do get up, we can go in there with mineral spirits at high pressure and knock them down; but in the plots where we didn't use Vegadex this year, the grass was as big as the seedlings and you had to go over several times because you just couldn't use the high pressure on mineral spirits on that small of a seedling.