

NURSERY COST REDUCTION AT ASHE NURSERY

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At this particular time, as nurseryman, what is one of the most talked about subjects of a nursery operation. I would bet for the majority, it would be, "How and where could I cut expenditures in this mad world of inflation?"

The first logical place to begin cutting costs would be to make a survey on equipment available to perform the tasks needed. Then, "How many people do you need to efficiently do the job?"

Three years ago at the Ashe, an overall review of lifting and packing was made to determine the cause of increasing cost in this particular phase of our operation. At that time we were still using the old method of undercutting and pulling seedlings by hand.

Along about that time the Grayco Seedling Harvester was introduced into our operation on a trial basis. We were employing for lifting an average of 25-30 people.

The Grayco seedling harvester was used one complete lifting season with success but did not lower lifting cost as much as anticipated, because it allowed the seedlings to fall on the ground and they had to be picked up by hand; but it did improve the quality of seedlings by leaving more small roots and most of the mycorrhizae still on the roots.

The nursery modified a trailer to take tubs or canvas slings. Eight people ride on the trailer plus one man on each to handle tubs.

Employees are furnished safety goggles, dust masks when needed and hand gloves.

The lifting crew can lift 600-800 M per 8 hour day, depending on weather, soil conditions, etc.

Longleaf seedlings require two more people to clean up seedlings that fall through the chain because of difference in species.

We used to use a grading table root pruner. This has now been abandoned since the development of the lateral root pruner.

The lateral root pruner is installed underneath a tractor on double acting hydraulic cylinders. Some trouble was incurred by the shaft through the pruning blades which kept breaking. The shaft size will be increased this year.

Using this method of lifting has cut lifting cost approximately \$2.00 per thousand. This packing season we plan on operating two of their lifters and trailer and hope to lift and pack 1,000-1,500 M per day. Our next largest increase in production cost has been nut-grass and weed control. For the past two years, we have been applying methyl-bromide which has been very expensive, costing approximately \$400.00 per acre.

A herbicide test study was put in using two species, slash and loblolly.

Four herbicides were used as follows:

Treflan-----1 and 2 lbs P/A
Caporal-----4 and 8 lbs P/A
MBR-8251 Destun--1.25 and 2.50 lbs P/A
Monsanto-----0139-0.25 and 0.50 lbs P/A

There were pre-emergence and post-emergence plots set up for each treatment Destun at 2.5 lbs and Dyphenamid at 8 lbs P/A were the most effective.

Excellent control was obtained by Destun at 2.5 lbs P/A in slash on bed 1 and bed 4. Good control with Dyphenamid at 8 lbs P/A on bed 5.

Destun at 2.5 lbs P/A in loblolly seem to make the needles in the bud grow together at first but three to four weeks later the damage had disappeared.

The Destun definitely is the most promising of the four chemicals used and if no side effects develops later in the year, it will be considered for herbicide control next year if available.

In addition to producing seedlings, we also have to process cones and seed for sowing and direct seedling purposes.

One phase of the operation was sand pine cone extraction. This species is serotinous and has to be submerged in hot water for 15-20 seconds. This process was previously done by hand.

Last year our equipment engineer, Jerry Edwards, in the Regional Office designed and had built under contract a piece of equipment which we call the automated sand pine cone dipping system.

Production was increased from 400 bushels to 700 bushels P/day with this system.

In summary, every way possible is being used to cut cost of seedling production. Materials have not even been discussed but they also are increasing in price everyday.

Each and everyone of us will have to continually be on our toes to be able to stay in business.