REDUCING NURSERY OPERATION COSTS AT WEYERHAEUSER'S OKLAHOMA – ARKANSAS NURSERIES

Ted S. Chancey

"Reducing Nursery Operating Costs". The first thought we have is "What can I cut out-either material or labor?" I, myself, usually start suggesting labor saving ideas, devices, machines, chemicals, etc. but today I'm going to have a slightly different approach, although I will also speak in regards to the above.

To set the stage, Weyerhaeuser Co.'s method of looking at nursery costs is to look first at the overall regeneration cost. "What did it cost us to get an area satisfactorily regenerated with 90% survival two years after planting and how well are the seedlings growing?" In other words, we may have expensive seedlings in the traditional sense at the nursery, but the cost of a fully stocked fast growing stand of trees at the end of two years may be relatively cheap. We all know that good, healthy seedlings with a good bushy root system are easier to plant, survive better and grow better.

What do we do to achieve this seedling?

We don't hesitate to compost our bed areas at least every two years to keep the organic level up, even though we could skip a few years and still grow fair seedlings and "save" (?) about $400-$500 per acre each year we didn't compost.

Fumigation every other year and use of weed killing chemicals, such as Treflan, Diphenamid and Caporal every year are standard practice.

We do the other traditional things, such as fertilizing, even when fertilizer is high, watering, applying fungicides, etc. but in addition we do some other things that we feel are good practices that may not be so traditional:

We use a Stan-hay Seeder to give us more precise and uniform spacing than other seeders. This not only helps us use only the number of seed we need, but gives better spacing so each seedling will develop a good root system. At the same time it ke ps the seedlings in rows that can be mechanically harvested and to som extent mechanically cultivated.

We mulch with fiber mulch with a binder, Petroset, added. This not only helps retain the moisture and give good germination but it helps hold our sandy soil in place during high winds and rains. It does retard initial germination percent slightly, but our experience with two crops has been that final bed stocking has been higher on beds with fibermulch +Petroset than on beds without.

1/ Panel presentation. Papers of panel participants are included.

We use a weeding machine, a self-propelled, self-guided tractor trailer rig straddling two beds and with four riders, two over each bed, bending over pulling weeds as the machine progresses slowly down the bed.

We undercut, wrench and lateral prune, beginning in August and September. In 1972 this was done on a pilot basis and results were so good that we did it operationally on all beds in 1973. It made our seedlings more uniform in size, made a majority harden off slightly earlier and improved the root system on all. Survival and growth of undercut and wrenched seedlings has been better than check seedlings. This has also eliminated the expensive necessity of hand root pruning the seedlings in the packing building or field, and has made the out planting job much easier, making J-roots a thing of the past.

We use a Love Seedling Harvester, affectionately called a "love machine", not because we can use it to make love, but because of the way it saves labor. We have water tanks on the machine so we can keep seedling roots moist on dry, windy days.

In the final stages of production, packing, storing and shipping we have also been using what might at first seem costly methods, but actually contribute to more surviving seedlings in the outplanted field:

We coat the roots with a clay slurry-Furadan mixture in the packing room. Furadan is a very effective systemic insecticide for control of Reproduction Weevils and Tip Moths.

We pack in Polyethylene lined, water-proof bags that are mechanically strapped shut using plastic strapping.

We store in coolers at 35 degrees Fahrenheit and 95% RH. At Magnolia the cooler has a capacity of about 10 MM seedlings. At Fort Towson we plan on a capacity of about 15-20 MM.

We use "expensive" metal pallets for both storing and shipping and shipping is done in our own refrigerated vans.

The above is some of the places where Weyerhaeuser may be unique and is spending money to save money, not only by saving labor, but by increasing the quality, potential growth and survivability of our seedlings.

But let's don't forget, the little, day by day items that the foremen and workers can and should do to cut costs:

They can cut down on turn around time at the end of beds by crossing roads that separate fields.

They can cut down on fill-up time in spray rigs by having Hydromulch machines full of premixed chemical solutions for transfer to the spray tanks as needed.

They can cut down on travel time to fill the spray rigs by taking the premixed solution to the sprayer in the Hydromulch machine.

They can use pallets on both ends of a tractor to haul seedlings from the field by putting forks on the front and on the 3 point hitch.

They can do any number of little things like this if we will just let them know we want them to, and let them try their ideas, because it's the traditional American worker way to always be trying to think up an easier way of doing his job, whether it's pulling weeds or driving a $26,000 seedling harvester.