

Pulling, Packaging, Shipping

Tom DeLong

Pennsylvania is using a Saxemeyer bundle tyer to tie up paper covered bundles of 500 - 1000 seedlings. This machine, although not designed especially for this job, works very well. It will make a good tight bundle, in fact, the asphalt laminated and reinforced paper Fibreen 890 is too easily cut by the string tie. A plastic laminated paper reinforced with glass fibers seems to be the answer to the problem.

Packaging seedlings in paper wrapped rolls is still the standard in the Northeast. Plastic bag packs found primarily in the South have not been adopted. Tests at Saratoga conducted over several years indicate a high risk of disastrously high temperature conditions inside the bundle.

Most are using sphagnum as a moisture retainer inside the paper wrap. New York is using excelsior waste which although not holding as much water as sphagnum gives very good survival in tests. In fact, tests without any moisture retaining material continue to show high survival. Tests at Saratoga show that temperature is the most important factor rather than moisture.

Clay dips without any other moisture retaining material in package is in common use in the South. Survival tests of the clay dipped plants in these nurseries showed better survival for clay dipped seedlings. There is a saving in shipping weight of about 25% when

using clay. Trials at Saratoga in 1966 showed very poor survival for clay dipped red pine. More trials are planned for 1967.

Avistrap, a rayon tape which uses a buckle fastener, is being used at Saratoga to tie two 500 bundles together for express and 4-H orders of 1000 trees. Others have tried this method, but found the buckle too slow.

Contract pulling is being used at the Mount Sopris Tree Nursery to help overcome the labor shortage so generally troubling nurserymen at shipping time. Their contract was based on linear bed measure but figured out at about \$1.20/M delivered the packing shed in bulk. Undercutting, grading and packaging was done by nursery personnel. Contract pulling not only overcomes the labor shortage, but also avoids the complex personnel processing and time keeping involved when hourly labor is hired. In the Northeast, no one has tried this system. Only Connecticut uses the piece work system.