

Root Pruning

Root pruning of forest tree seedlings is a practice that I have been following for the past 35 years. The equipment used when I first started was somewhat cumbersome. It required six men to do the job. Today, things have changed. The job of root pruning is now being done with one tractor with root pruner attached to a three-point hitch. The tractor operator drives the tractor and controls the root pruner simultaneously.

The purpose of root pruning is to retard top growth and stimulate root growth, thus balancing root and top growth. This results in a more desirable plant for transplanting to the field with a better chance of survival.

The pruner blade should be sharp at all times. It is my opinion that the pruner blade should be set to operate in as level a position as possible. I have found it necessary to place additional weight on the pruner to hold it firmly in the ground at the desired cutting level. In a loose sandy soil, it may be necessary to operate the pruner blade a little deeper than in heavy soil.

I personally feel that there is a great benefit to the lateral root development due to the movement of the top 5 inches of the seedbed soil during root pruning. This has a tendency to break many of the spreading laterals. This in turn results in a more compact root system.

Here are two bundles of seedlings that show the comparison of the root pruned to non-pruned seedlings. The one that averages 5 inches is 2-0 Scotch pine that was root pruned early last spring (around April 10). In my opinion, this is a well balanced seedling. In the other bundle are plants of the same age, 8 inches in height with a long tap root, but a rather poor, stringy root system. This indicates the typical effect of root pruning of Scotch pine seedlings.

The cost of root pruning varies from one-half to three-quarters of a cent per thousand seedlings.

Top Pruning

Top pruning of seedlings at the Maryland Nursery is done to a limited extent. Our stock is usually shipped at 2-0. Only when some seedlings must be held over to 3-0 do we normally cut them back to 10 inches. We use a sickle bar mower mounted on a three-point hitch to a Ford tractor. The knives must be sharp to do a good job