

NEW OR IMPROVED METHODS OR PRACTICES IN FOREST TREE NURSERIES

by

Forest M. Deffenbacher, Chief Nurseryman
U. S. Forest. Service Wind River Nursery, Washington

In past meetings, we have thoroughly covered the standard practices in seedling storage, irrigation, lifting, packing, etc. We thought that with this for a background that it would not be necessary to cover these again but would only cover new or improved practices, methods, or machines that had been put in use since our last meeting. To accomplish this s it was necessary to collect the information from all interested nurseries and condense it into one brief report°

The first item of interest comes from Washington State Nursery managed by Red Ward. They have developed a method of removing the Terra-lite from seed after stratification and or drying seed after soaking.

Seed Dryer

The machine consists of a cylindrical drum, 36" in diameter and 72" in length. It is covered one-half its length with sheet metal and one-half with brass screen. It is powered by a one-half horse power electric motor geared to 29 revolutions per minute.

In recleaning stratified seeds a volume of the wet mix as it comes from the cold room is loaded into the solid end along with an equal volume of Terralite. As the drum revolves, it mixes the wet with dry, the dry will absorb enough of the moisture so that when the material gets down to the screen it is dry enough to sift the Terra-lite from the seed. To get the seed dry enough to machine sows it is necessary to run the seed through again using an equal amount of Terra-lite.

Seed that has been soaked can be dried by this method and procedure advantages of the above practice are

1. Stratified seed does not have to be washed, therefore it can be handled much faster.
2. Weather conditions for drying seed are not a factor.
3. Ninety-five percent of the Terra-lite can be recovered.
4. Not as much moisture is pulled from the seed as in air drying.

Rowmaker for Transplant Machine

The next item As what Karl Lanquist of the Mt. Shasta Nursery calls a rowraker. This machine makes the first impression for the guide shoe

on the transplant machines. As Karl explains it, it is just a chunk of steel shaped like the tongue on the guide shoe of the transplant machines. This piece of steel is fastened to a tiller with the tilling unit which firms and molds the soil so the shoe stays in the groove. It makes a row in about five minutes on a 400 foot bed.

Vern McDaniels of the Oregon State Nursery has two items of interest.

New Cultivator

This cultivator is designed with nine separate units that are powered by a small air cooled motor. The cultivator is attached to a Ford tractor. It has a steering device where by the operator can do very close work. Each individual unit acts as a separate rototiller for the area between each row. To use this machine it is necessary to have the low speed transmission in the tractor. (Detailed drawings of this equipment are on file with Oregon State Board of Forestry, Salem, Oregon).

Sawdust For Soil Building

Sawdust is being applied at the rate of 40 tons per acre which amounts to a 2 inch layer on the surface. This will require 14 (2.25 units per load) loads.

This application of sawdust will require quite a heavy application of nitrogen which will be ammonium sulfate at the rate of 100 pounds per ton of sawdust. One-half the fertilizer should be added the first year and the remainder the next year.

Cone Drying

Wallie Engstrom of the Bend Nursery is going to save fuel and handling cost of drying cones by pouring concrete slabs on -which to spread cones to dry. The utilization of sunshine, to dry cones is not new but the concrete slabs certainly facilitate handling of the cones and seed that, falls from them. This is at least new to some of US.

An Aid To Land Clearing

Wind River has been in the land clearing business for the past two or three years. To clear land in the Douglas-fir region there is quite a problem of removing roots and other debris that gets mixed with the soil during the removal of the heavy material. This was solved by the use of a potato digger. The potato digger mill bring all small pieces of wood and roots to the surface where they can be raked and burred. It is also very effective for removing fern roots and quack grass.

DISCUSSION

QUESTION: How are you going to work the concrete slabs?

MR. DEFFENBACBER: We have no place to store the cones. They were stored outside. Now when the cones come in the cones will be placed on the slabs and the cones will be opened by the sunshine and the seed will be clean on the slabs.