CIRCULAR SORTING TABLE USES A SMALL AREA

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The State Forest Tree Nursery of Montana recently mechanized its conifer grading operation. This was done to increase conifer production and to lessen wasted motion used in grading trees at a stationary table.

The usual belt conveyor table, approximately 30 feet long, was considered first. The operating space required was the limiting factor since no building was available with enough spare space for the conventional-type grading table. The high cost of conveyor belting also had to be considered seriously.

A 16- by 20-foot shed with a cement floor was available and conveniently located near the refrigerated storage building. This shed became the sorting room, and the proposed sorting table would have to conform to it. A circular table slightly over 8 feet in diameter would make available over 26 feet of working area around the outside edge and would fit well into the selected area.

Lloyd Messner, chief mechanic of the State For-

Figure 1.—Three-level sorting wheel: Top level for graded trees; middle level for boxes of trees; lower level for culls.

esters' Equipment Development Section, developed a three-level, Lazy Susan sorting table (fig., 1) to fit the space available. The material used to construct the table consisted mainly of spare parts and scrap. Labor was the major cost. About 2 man-months were necessary for construction. A second table including labor and new parts is estimated to cost about $600.

The table is designed for six people: five graders and one person tying the trees in bundles of 25. The five graders sit in special seats designed with a rack on one side to hold a box of ungraded trees and a chute at the front for excess water and the disposal of cull trees. Each grader lays five trees in a marked area on the top level of the table, with roots to be trimmed hanging over the edge. These roots are cut by a person using a root pruner.

The person tying the 25-tree units stands next to the root pruner and water sprayer. He picks up five groups of five trees each to make a bundle of 25, fastened with a twisted wire.

The top level of the table is made of 3/8-inch mesh screen. This screen prevents the accumulation of mud and water. For safety, this top level is rotated by a frictional drive wheel powered by a hydraulic motor. The middle level is a stout free-wheeling shelf where 20- by 20-inch wooden boxes of ungraded trees from the field are placed. The boxes can be swung into position and slid onto the side of the grader's seat. The lower level has a solid surface and rotates with the top level. The culls from each grader are dropped onto this lower level and are scraped off into a box close to the door.

Production on the sorting table for the first season varied from 30,000 to 50,000 trees per day, depending on size of the trees and number of culls. To increase the production next season, a positive speed control will be developed.

The overall results have been very good. The advantages realized over the conventional conveyor table are as follows:

1. Less expense.
2. Operation possible in a more confined area.
3. Few moving parts (only two main bearings on the main table).

HAVE YOU SEEN THESE?

Proceedings-Northeastern Area Nurserymen's Conference, Orono, Me., August 11, 1970.
Contains a number of papers on nursery management practices. Available from Northeastern Area, State and Private Forestry, USDA Forest Service, 6816 Market St., Upper Darby, Pa. 19082.

Growth of Douglas-fir, Ponderosa Pine, and Western Larch Seedlings Following Seed Treatment With 30-Percent Hydrogen Peroxide.
James W. Edgren and James M. Trappe.
Reports on seed treatment and growth responses of the treated seed. Available from Pacific Northwest Forest and Range Experiment Station, Portland, Oreg. 97208.

Geographic Variation For Seed and Seedling Characters In Black Walnut.
Calvin F. Bey.
Available from the North Central Forest Experiment Station, Folwell Ave., St. Paul, Minn. 55101.

Planting Cottonwood Cuttings For Timber Production in the South.
J. S. McKnight.
The paper summarizes research results from choosing and preparing planting sites through planting, stand management, to harvest. Available from Southern Forest Experiment Station, USDA Forest Service, Room T-10210, Federal Bldg., 701 Loyola Ave., New Orleans, La. 70113.

Proceedings of the Ninth Lake States Forest Tree Improvement Conf., Aug. 22-23, 1969.
Available from North Central Forest Experiment Station, Folwell Ave., St. Paul, Minn. 55101.