

VI. Mr. James W. Betts, Bend Forest Nursery, Bend, Oregon showed slides of packing and shipping methods at his nursery.

TREE LIFTING AND PACKING METHODS AT THE BEND NURSERY

by  
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Nurseries which I have visited throughout the Pacific Northwest have had various ways of handling their stock from the time it is undercut in the beds for lifting until it is packed ready for shipment. Bend, over a period of years, has developed a method which seems to be quite effective for the type of weather we have during the shipping season. Our springs are often quite dry, windy to very windy, and with low humidities (10-20P; so we have to be extremely careful to avoid drying out of the tree roots while they are being lifted.

We use the same crew to pull the trees in the field that does the grading and packing in the shed. They will grade and pack from 5 to 6 hours, and pull 2 or 3 hours. We have found that this system helps to break the monotony of doing the same job all day.

The boxes which we are using have been developed after trying numerous ways of construction. The ends are made of exterior plywood. After the handholds have been placed in the ends, a 3/4"x 1" is nailed 3/4" inside the edge on the bottom and two sides. Four 1" x 4" of the desired length are nailed to the bottom and two to each side. Each of these is nailed two ways. This gives a very substantial box which will last 4 or 5 seasons with little or no repair.

Two burlap sacks, which have been cut down the sides, are placed in each box. Sacks which have not been used or are thoroughly dried out require presoaking over night. However, after some dirt is embedded in the fibers, they will absorb the water by just running it over them from the hose. This is accomplished by pointing the hose through the handhold or through the crack in the side of the box.

We have constructed carts which will hold 16 to 20 boxes, 4 to the tier, 4 or 5 high. The carts are moved around the packing shed, on and off of our 4-wheeled tandem trailer by a revolvator lift. After the cart--load of boxes is placed on the trailer, the sacks are thoroughly wet, and the load is hauled to the field where the boxes are distributed along the bed which is being lifted. As soon as sufficient boxes have been placed on the bed, the women go out to the field.

Usually they work in pairs, one working on each side of the bed. The box is made ready to receive the trees. One sack is placed across the bottom and up the sides, the other is placed lengthwise of the box with one end on the bottom of the box. One layer of trees is pulled and placed in the box and the sack is folded over the roots of the layer; another layer is pulled and placed the opposite way and the sack folded over it. This is carried on until the box is full, which is usually four layers. Trees are not piled higher than the edges of the boxes since this often results in damaged tops. Any of the remaining sack is folded over the last layer. The ends from the sides are folded over the top and tucked in at the sides. This gives at least two layers of burlap between the tree roots and the elements. The boxes are then placed on the carts on the trailer and taken to the packing shed where they are wet down. They are then wheeled inside the packing shed to be sorted.

Once inside, the boxes are set from the carts onto small racks where the trees are graded by the crew. When they have emptied a box, it is placed on an empty cart ready to return to the field. You will notice we have reduced the handling of the boxes to a minimum, there being only four times that we handle individual boxes:

- (1) Distribution of boxes on beds
- (2) Loading filled boxes
- (3) Transferring boxes from carts to grading table
- (4) Transferring empty boxes from grading table to carts

Graded trees are placed on the belt in bunches of 10. The woman on the end takes 5 bunches of 10, or 50 trees, and root prunes them to the desired length. They are then placed on a round table beside her, the top of which will revolve by a slight push of the hand. The packer picks up the bunch of trees and wraps it with pressure sensitive Scotch Tape No. 267 (3/8" x 60 yds. @ 500 per roll). One wrap is taken around the root collar and stuck back on itself. This is sufficient to hold the bunches in 50's, so they can be easily counted out to the planters in the field.

Trees are then packed in polyethylene--coated paper bags with wet peat moss added to each layer. When the bag is full, the top is folded twice and stapled in five or six places. A 2" x 24" wooden strip, prestenciled with

seed source, species, age class, date of packing, and quantity in bag, is placed on top of the bag. Two wraps of baler twine are made around the bag, one near each end. Bags are placed on carts and wheeled to the cold storage room with the revolvator lift. They are then placed on the shelves till they are shipped out. For the shelves which are too high to fill from the floor we use a "Big Joe" lift with an electric motor.