JIGS FOR CRATING LINERS FOR SHIPMENT OF SMALL NURSERY PLANTS

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This paper describes how we rack up our flats of small plants for shipment. We use wooden flats for this. I have yet to see a plastic flat that would work well.

Our first jig was a backless box or rectangle made of 1×12 in. rough planks and stood on end. Cleats were nailed on the interior of the sides on which to set flats. The inside dimensions were the width of the flats, by about 5½ ft tall. The bottom board was 3½ ft long. One side had a clasp fastener at the top and was hinged at the bottom so that it could be opened and laid down. We would set the flats into this rectangle like so many shelves, with the heavy end boards exposed on the front and back sides. Then we would take four narrow boards and nail them two to each end of the shelved up flats. When this was completed the side of the frame was opened and the rack of flats was lifted out. There was then one diagonal strip nailed to one end of the flats and another diagonal strip to one side to hold the rack rigid. We had two of these frames, one with closely spaced cleats and the other with cleats farther apart for different height plants. However, we no longer use these frames.

When these first frames began to wear out we did some major redesigning and had our local blacksmith build two more jigs or frames using angle iron. These are much easier to use than the wood frames and very durable. They are built on an 18 in. square base of 1½ in. angle iron with two 6 in. stabilizing wings at the back so there is no danger of it falling backward. At the back are two uprights of angle from 48 in. tall and 18 in. apart, outside measurements. These are tied together by two 1 in. bars, 3½ and 44½ in. from the ground. There is a third angle iron welded to the forward edge of the left upright to serve as a corner guide to keep all the flats lined up straight when they are set into the jig. Onto the two uprights are fastened 15 in. arms of angle iron projecting straight forward. One frame has 7 spaces for flats 7½ in. apart and the other has 10 spaces 5 in. apart. If the plants are taller yet we use the second frame but use only every other set of arms. After the frames were constructed they were sprayed with Rustoleum paint.

In using the frames we just set the wooden flats of plants on the arms cross ways and slide each flat into the angle-iron corner at the back. The thick board ends of the flats are at the sides. We use 6 regular, old fashioned building laths 4 ft. long for the supports to hold the flats all together. Two laths are stapled onto each of the flats, one diagonal strip across the face, and another diagonal across one end. We have given up using a hammer and nails for securing the racks although they work fine and are currently using a compressed air staple gun. It is so much faster.

A rack of plants thus constructed is surprisingly sturdy and easily handled. We use 40 to 50% soil or sand in most of our rooting or growing media, so a 4 ft. rack of plants is about as much weight as can be conveniently handled. Two or three of these racks fit nicely into the bucket of our tractor for easy loading into a truck.

CUTTING PROPAGATION COSTS FOR FRASER PHOTINIA AND TAM JUNIPER

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Abstract. Cutting propagation costs for *Photinia* × *Fraseri* Dress. and *Juniperus sabina* L. 'Tamariscifolia' were determined to be 20.5 and 13.1 cents per saleable rooted cutting, respectively. Sticking, rooting, and growing cuttings was 71.2 and 73.3 percent of total cost. Securing cuttings was 13.2 and 9.2 percent, overhead 10.7 percent for both, and operating capital interest 4.9 and 6.9 percent of total propagation cost. Labor was the largest single cost in producing cuttings.

INTRODUCTION

Nursery production cost studies have been made in the United States and elsewhere, but few propagation cost studies are reported. Baldwin and Stanley (2) discussed propagation costs, their discussion in part based upon this study. They cover various inputs and provide a suggested propagation cost worksheet.

This study is in response to the request by a group of Willamette Valley, Oregon nursery growers for information on propagation and productions costs. They were concerned that production cost information was inadequate for pricing of their stock.