

PREPARATION OF VENEER CONTAINERS FOR ASSISTED SEEDLINGS

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# PREPARATION OF VENEER CONTAINERS FOR ASSISTED SEEDLINGS

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## INTRODUCTION

Need for a degradable container for assisted seedlings has prompted an investigation into the suitability of aspen veneer for this purpose. This report outlines methods of obtaining aspen veneer for the containers and for their manufacture.

## LOG PREPARATION

Arrangements for peeling the logs should be made with Dr. Hancock, Forest Products Laboratory, Vancouver, so as to allow him at least one month to work the logs into his schedule. The thicknesses of veneer that can be supplied are 0.035" minimum, 0.050", and 0.085". Bending the veneer to obtain a round container of 1" inside diameter limits the maximum thickness to 0.085".

Logs selected for shipment to Vancouver must be from sound trees 12" in diameter or larger. Trees are cut into 54" log-lengths and the log ends are painted immediately to prevent staining. The log ends should also be wrapped in polyethylene to prevent drying.

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## VENEER PREPARATION

The veneer will be shipped from Vancouver green with moisture content exceeding 28% on an oven-dry base. This will require fast drying of the veneer upon arrival to prevent staining and other biological activities. Drying is done by setting the veneer with the grain oriented vertically about a room with low humidity and a temperature of at least 70F. Drying time will vary between 12 to 18 hours depending upon air circulation and room ventilation. If the material is to be stored before further preparation, the moisture content of the veneer should be no more than 12%.

Sawing of the veneer into strips along the grain should be done with a band saw to minimize damage. The strips are cut to a width of 3.25" for the 0.035" veneer, 3 3/8" for the 0.050", and 3 3/8" for the 0.085". This will give containers of 1" inside diameter with an overlap of 1/4 to 3/4" for gluing.

The veneer is cut to length with a plywood blade on the 10" table saw. The height of the plywood blade will affect splintering of the thinner veneers. It is recommended that the blade height be 1 1/2" above the table at center for 0.035" veneer when 5 strips are cut at a time. A push-stick is used to prevent bending of veneer when cutting (see Fig. 1). After the veneers are cut to the required length, the defective pieces are sorted out before conditioning.

It is necessary to condition the veneer to make it pliable to roll after gluing. The recommended conditioning time for dry 0.035" veneer is 2 to 4 hours at 75% relative humidity. Screens should be used with veneer laid end to end to give maximum surface to the atmosphere.

The 0.050" veneer requires 3 to 6 hours at 75% relative humidity to make it pliable enough for bending. The 0.085" veneer needs to be soaked in water after which it must dry at about 50% relative humidity until the glue will hold the container after it is rolled. An alternative method in the latter case is to steam the partially soaked veneer for 10 minutes in an autoclave then exhausting the steam. The above recommendations are only guidelines and the various thicknesses must be checked after conditioning to determine if the veneer will roll satisfactorily.

#### CONTAINER PREPARATION

The container is glued with 3-M 10 bond contact cement. The assembly time for this adhesive is 10 minutes minimum and one hour maximum. The process should not be rushed, for the dry glue adheres best when rolling. The glue is best applied with a small paint brush to the outside edge on opposite sides of the veneer (see Fig. 2).

When the veneer is rolled, the lathe check must be on the outside face of the container, otherwise, if the lathe check is to the inside, the veneer will split.

When the glue has dried sufficiently, the veneer is rolled around the 1" outside diameter pipe (see Fig. 3) and the bond is completed instantly by the application of pressure along the overlap seam.

#### CONTAINER STORAGE

After manufacture (see Fig. 4), the containers must be stored in a room with low relative humidity and a minimum temperature of 70F. This should dry the containers to a moisture content of 12% or less and permit long-term storage.



Figure 1. Cutting the veneer to length

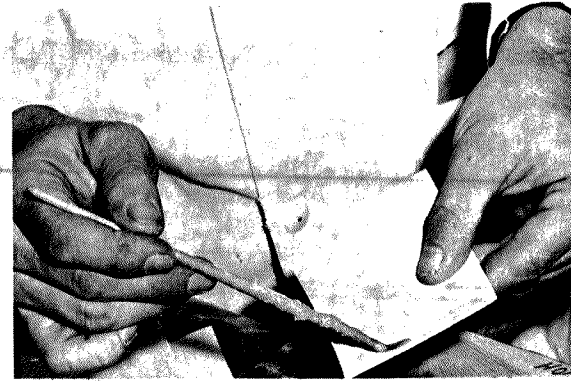


Figure 2. Applying glue to the veneer



Figure 3. Rolling and sealing the container

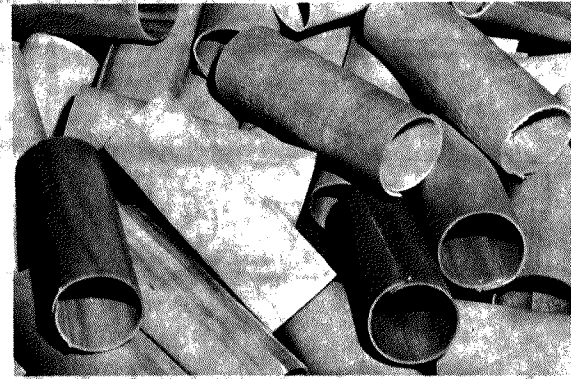


Figure 4. The finished container