

MIST SPRAYER IMPROVES SEEDLING HARVESTER

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A new role has been assigned mist sprayers in California. For years vegetables have been kept crisp and fresh by spraying a fine mist of water over them. Now forest tree seedlings at the Mt. Shasta Nursery are given a similar refreshing treatment immediately after they are lifted from the nursery beds.

A nursery's reputation hinges on the success or failure of its trees to survive when field planted. The delicate roots of young seedlings are irreparably damaged when they lose all their moisture. To us the time interval between lifting and packing may seem short. But to tree roots without soil even this short exposure may be more than can be endured. The mist sprayer has solved the problem of keeping the roots moist.

The development of the "seedling harvester" greatly increased planting success in California. Before its development, lifting crews heeled-in seedlings in bunches of about 50 trees to keep them moist. These bunches were later packed in field crates by another crew. The seedling harvester eliminated the need for heeling-in and reduced the amount of handling. This improved the condition of the trees. However, on the original model³ trees were still exposed to the hot sun as they rode the conveyor. This deficiency was corrected by adding a shade frame over the conveyor.

Weather conditions during the fall lifting season in California are often dry and windy--excellent for drying clothes but extremely hard on young trees. Therefore an efficient method to keep the trees moist and fresh was needed--the answer, a mist sprayer.

The mist sprayer at Mt. Shasta Nursery was made from an old paint sprayer and is simple and easy to operate. Air pressure is supplied by an internal piston-type, gasoline-powered compressor, mounted on the back of the drawbar of the seedling harvester (fig. 1). The water tank, also mounted on the drawbar, holds about 20 gallons



Figure 1: -Front view of seedling harvester showing location of compressor unit and water tank for the mist sprayer.

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³ Lanquist, Karl B. Seedling Harvester. Tree Planters' Notes 16: 5-6. illus. 1954.

of water--enough for a 2- to 3-hour run. The mist system consists of a short piece of 1/2-inch pipe fitted with 6 mist nozzles (Whiteshowers type) (fig. 2). The spray is adjusted to moisten thoroughly the seedling roots without washing off the small soil particles clinging to the fine roots.

The small additional cost of the improved version of the seedling harvester should be returned many fold. Seedlings are kept in top condition and more suited to endure cold storage or shipment to planting sites.

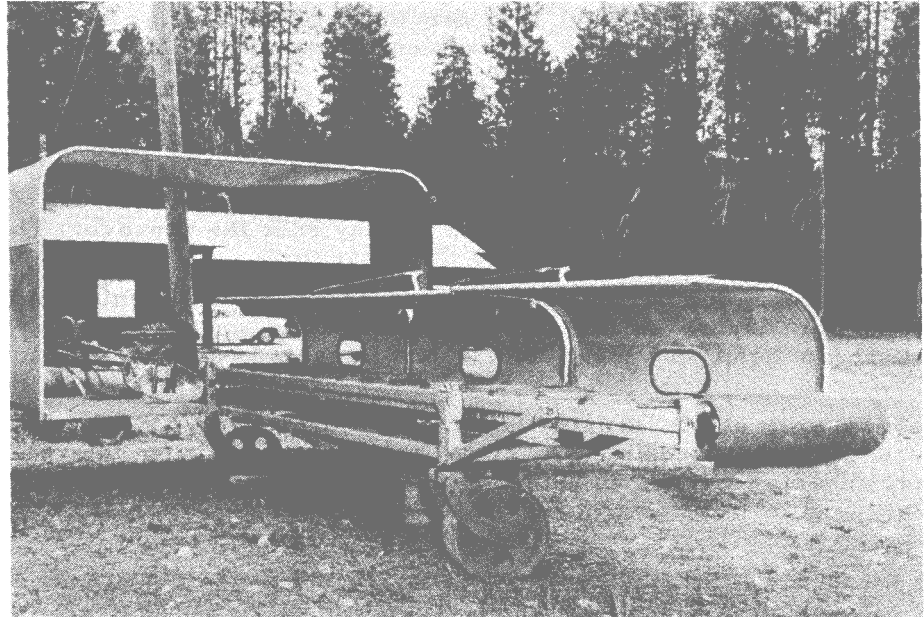


Figure 2.--Rear view of seedling harvester showing location of mist nozzles over the conveyor.