

TREESEEDLING HARVESTER

by

Jim Lott

USFS - Missoula, Montana

Following evaluation of several harvesters, including a test unit designed and built by the Equipment Development Center at Missoula, the Missoula Center started work on a multiple-row seedling harvester. An 8-row, 2-wheel trailer-type seedling harvester with single-point hitch has been designed and is being fabricated. Seedlings will be gripped between the edges of belts, and moved to the rear at a 45-degree angle. A lifting blade, running the width of the bed, will undercut the seedlings. Vibrating rods that support the seedlings during the initial lifting also will remove some of the soil. A beater rod assembly will finish cleaning. A cross conveyor will move seedlings aside for handling.

The machine is designed to operate with an International 656 hydrostatic tractor that delivers hydraulic power at a rate of 22.5 gpm at 1600 psi, eliminating the need for an auxiliary power unit. A flow divider on the harvester regulates the hydraulic flow for powering the functions of the machine. Hydraulic motors drive the grip belt section, vibrating rod system, rod beater attachment and conveyor. The belt section tilt and blade lift function are controlled by hydraulic cylinders.

The harvester is approximately 88 inches wide, 126 inches long, and 96 inches high.