Styroblock™ containers are the system of choice at the nursery for a number of reasons: 1) they are readily available; 2) the blocks work well with automated sowing equipment; 3) blocks are easy to handle; and 4) large quantities of StyroblockTM seedlings are easy to package and transport to outplanting sites in small vehicles. The latter is a big advantage with very limited forestry staffing, because it is necessary to place as many trees in boxes and as many boxes on small trailers or in vehicles as possible.

Sowing

Styroblock™ containers are automatically filled with a flat filler (figure 1). A conveyor belt brings medium from the outside to a holding bin; the medium then drops into the blocks loaded onto the filler. Filled blocks are fed into a drum seeder that automatically drops seeds into cells at a rate of 1, 2, or 3 seeds per cell, depending on germination rates (figure 2). The drum seeder works directly off air pressure and suction and is specifically adjusted for container size, which is an additional reason for using only three container sizes. Following sowing, grit is applied mechanically and seeds receive an initial watering.

Lifting and Packing

Lifting and packing are both manual processes. Blocks are conveyed to a central packaging line where 6 to 12 people pull seedlings from containers by hand and package them into plastic bags. One person packages the bags into boxes, which are then placed in cold storage.

Seedling Production

Plug size is based on customer outplanting needs. The larger containers (20.5 in^3 1336 cm^3]) are recommended for drier sites where larger root masses are required. If cost is an issue, seedlings are often grown in smaller containers (5.5 in^3 [90$cm3^{]}$), with the option of transplanting with another grower. Although container seedlings do not have as much root mass as bareroot seedlings, the 10 and 20.5 in^3 containers yield sizeable plugs that are similar in mass (figure 3).

The nursery grows conifers, native shrubs, and native grasses from seeds, as well as cuttings from both roots and stems (figures 4 and 5), in containers. Currently, the nursery is working with the Department of Fish and Wildlife to grow bitterbrush *(Purshia tridentata) (* figure 6) and grass plugs for rangeland and fire rehabilitation.

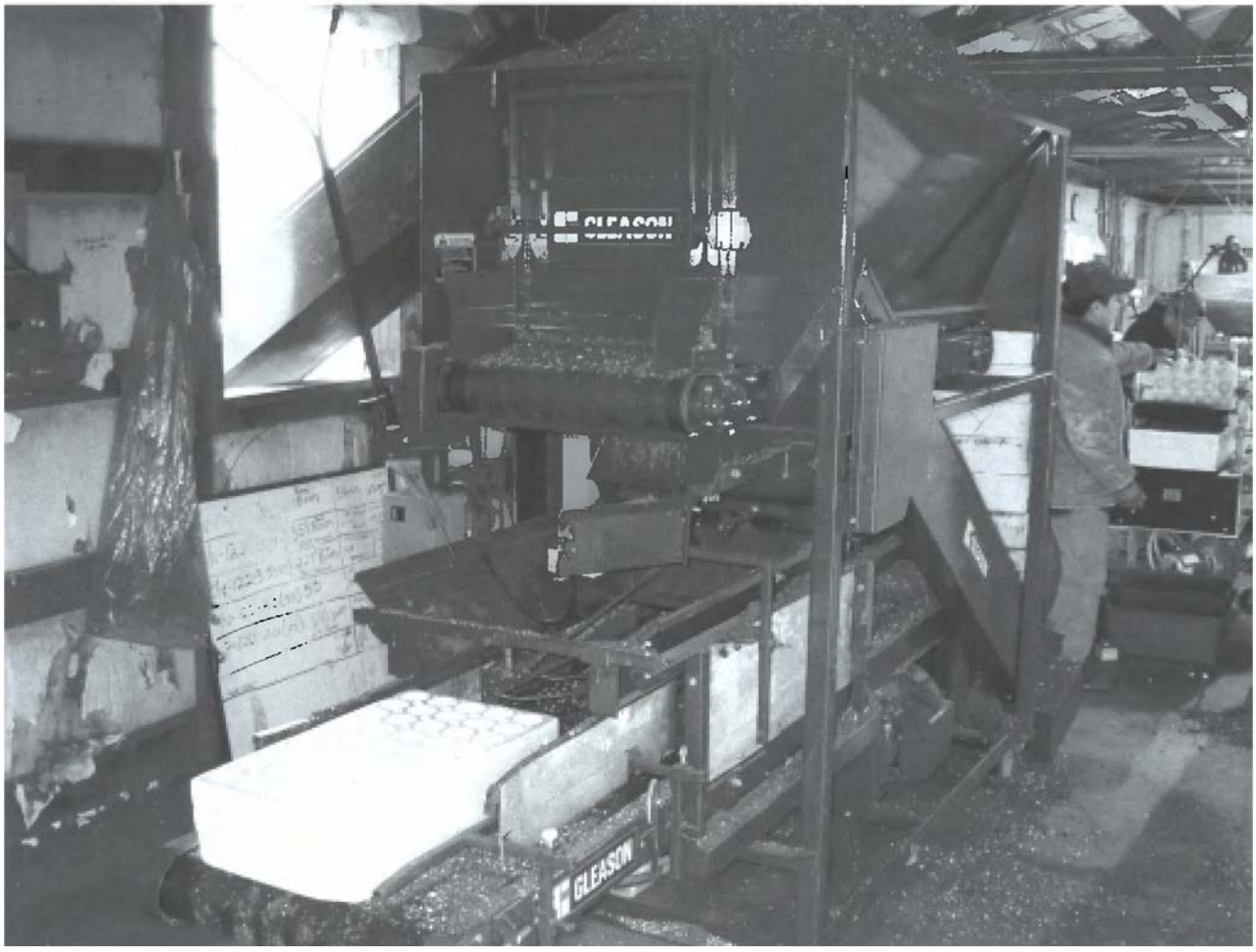

Figure 1—Flat filler automatically fills Styroblock™ containers with medium.

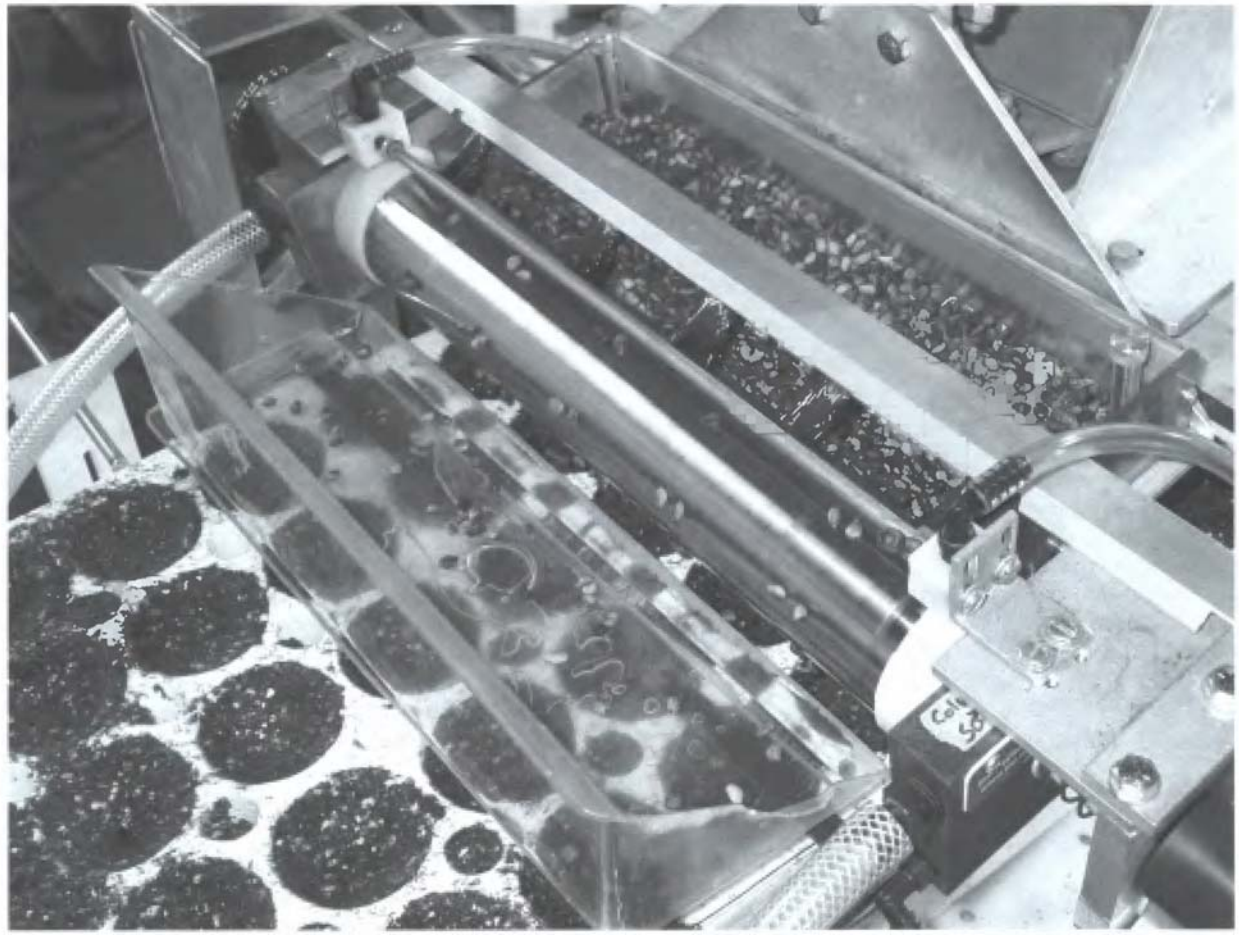

Figure 2—A drum seeder automatically drops seeds into each cell at a rate dependent on germination.

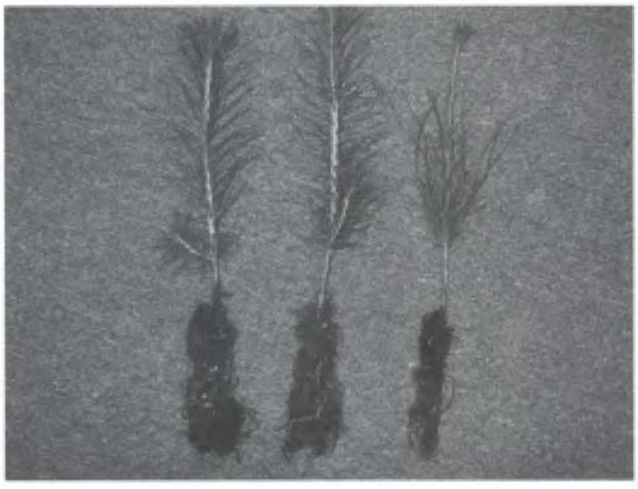

Figure 3—The 10 and 20.5 in^3 (77/170, 45/340) Styroblock™ containers yield a similar root mass at the end of the growing season.

Figure 4—Chokecherry *(Prunus virgniana)* grown from root cuttings.

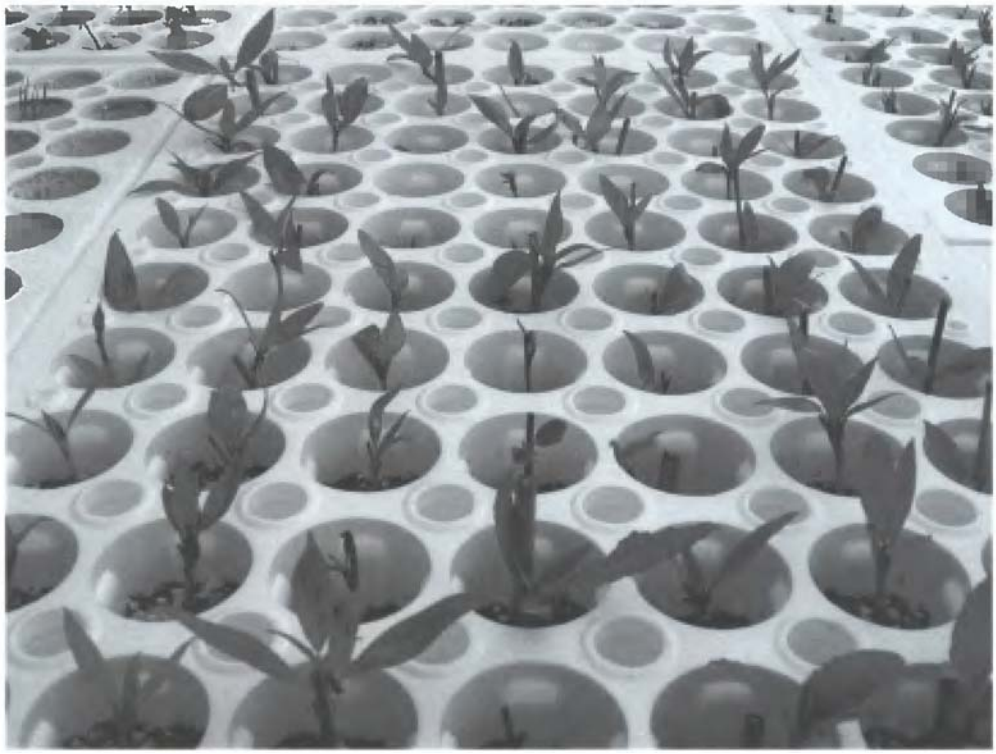

Figure 5—Black cottonwood *(Populus Irichocarpa)* grown from stem cuttings.

Figure 6-Bitterbrush grown from seeds.