PLASTIC BASKETS IN SEEDSPOT PROTECTION

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Successful reforestation utilizing seed spotting is feasible. The advantages of this practice are well documented in the literature. The biggest problem, however, is protecting seed from rodents and various birds.

Various methods of protecting seedspots using inverted plastic baskets similar to those used to market strawberries, were tried.

Cost of the plastic baskets used was $13.50/M (0.0135 each). Conical hardware cloth wire cages currently recommended for protecting seedspots are $0.07 each ($70.00/M). The use of plastic baskets could provide an 81 percent reduction of cost per seedspot.

The trial consisted of 80 seedspots each containing five Douglas-fir seed *(Pseudotsuga menziesii).* Seedspots were spaced in rows at 4 foot invervals along the contour. Forty seed spots were protected with plastic baskets and 40 were left as a control. Twenty of the plastic baskets had soil mounded on all four edges while the remaining had wire pins (one per basket) to hold the inverted baskets in place over the seedspots. Two types of wire pins were tried: a U shaped pin and a straight pin with a small hook.

Each seedspot was in a 1-foot diameter circle scalped free of other vegetation. Mineral soil was used to lightly cover the seed.

No seed predation occurred where basket edges remained in contact with the soil. Where basket edges were *not* in complete contact, all seed was removed and eaten outside and adjacent to the basket.

As expected, in unprotected seedspots, all seed was eaten the first two nights. Mounding soil on all sides of the inverted basket proved to be the most successful protection method, although this method resulted in the most baskets displaced by deer.

The use of wire pins to anchor the inverted baskets also had some drawbacks. After three nights, frost heaving occurred; the U shaped pins then kept the heaved baskets above the soil surface after the ice crystals melted. Rodents then entered and ate the seed.

Other trials using new plastic baskets revealed that they withstood heavy snow with no structural damage. However, after a fall, winter, and summer in the field the baskets become quite brittle and readily fracture into small pieces. This is a favorable characteristic since it eliminates the need to remove the protective device as the seedlings become established. Installation costs are reduced since a man can carry more plastic baskets than wire cages into the field per trip.

Results of this field trial warrant further study although the original trial was disappointing, with an average 7.5 of the seedspots successful. Additional trials are planned to develop satisfactory techniques of using and anchoring inverted plastic baskets. The low per unit installation costs and characteristic deterioration of plastic baskets may help reduce or totally eliminate, the use of poisons in. future direct seeding operations. This is an important consideration in today's mounting concern for environmental quality.

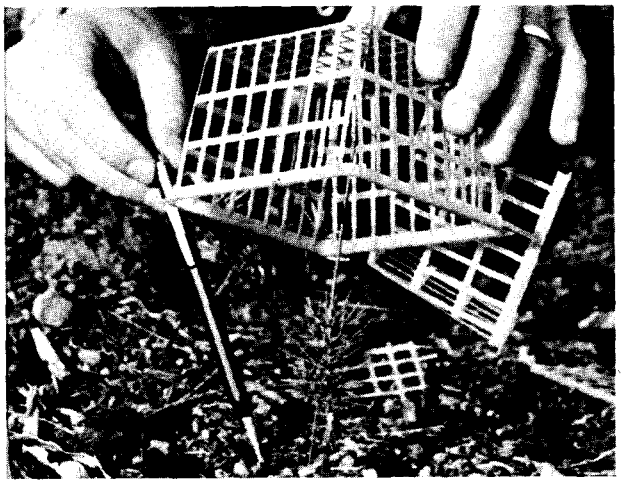

Figure 1.—Pencil points out seedspot protected by inverted plastic basket. Note well established 6-month-old Douglas-fir (*Pseudotsuga menziesii*) seedling.