REDCEDAR, JUNIPERUS VIRGINIANA, SEED EXTRACTION

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Redcedar seed can be extracted from berries readily without specialized equipment. It is sometimes more economical to adapt available equipment than to purchase specialized equipment. The method to be described permits extraction of 1 to 10 pounds of seed from several lots of berries from different sources with available equipment. No cost data is available. Lack of experience or information on other methods prevents comparisons.

Small, portable, electric-powered concrete mixers have been used for seed treatments in nurseries. They are used for seed pelleting, scarification, and extraction, as well as for

mixing concrete. The use of concrete mixers for depulping fleshy fruits is mentioned in The Woody-Plant Seed Manual (1), but no details are provided. The following procedure was an outgrowth " of the use of a concrete mixer for seed scarification.

The cedar berries are placed in the concrete mixer with three-eighths- to one-half-inch abrasive pellets and water. The proportions are not critical. A volume of one part berries, two parts pellets, and three parts water is satisfactory. There should be enough pellets to obtain thorough mixing of the pellets and seed. Enough water is added to produce a fluid mass. The mixer is operated until the berries are macerated. Since redcedar seed is very hard, it is undamaged by the maceration.

Water is added periodically to fill the mixer, and then it is drained to wash out the pulp and resinous material. The washing is repeated several times with intermittent operation of the mixer until all the berries are macerated and the seed is clean. It is not necessary to drain all of the water each time. Several changes of water wash out much of the soluble, resinous, gummy material and suspended pulp. The berry skins are broken into small fragments.

The mixer is emptied in small batches onto a one-fourth-inch screen through which the pellets cannot pass. The pellets are rolled on the top screen until all of the seed has been washed through the screen with water pressure. The seed is washed into a box with a finer screened bottom which will not allow the cedar seed to pass. Ordinary fly screen is suitable for the bottom screen. The pellets are rolled off the tilted upper screen into a suitable container such as a square washtub.

The seed is removed from the collecting box and spread out to dry. After drying, the skin fragments and other foreign particles are separated from the seed by use of a fanning mill. Separation is very good because the adhesive material has been washed out during extraction.

The procedure is a one-man operation. If more men are available, the mixer can be emptied and a new batch started at once. Maceration and washing could then proceed simultaneously. More efficient washing equipment can probably be developed; it would be especially desirable for larger quantities of seed.

Literature Cited

(1) U.S. Forest Service. 1948. The woodyplant seed manual. U.S. Dept. Agr. Misc. Pub. 654, 416 pp.