

Summer sprayings of Plantvax are continued to keep the leaf spot down.

In summary then, I attribute my success in propagating kin-nikinnick to the following factors: 1) timing; 2) proper rooting medium; 3) good air and water draining; 4) use of Truban and Benlate; 5) proper selection of cutting material; 6) use of "Dip and Grow" hormone; 7) not packing the rooting medium down; 8) A short misting interval, but close spaced nozzles; 9) keeping as much rooting medium on the roots as possible during transplanting; 10) not packing or tamping the soil mix during transplanting operations; 11) proper water control; 12) fungus and leaf spot control; 13) continuous feeding with Osmocote after transplanting; and 14) liquid feeding as needed with heavy emphasis on iron.

## **PROPAGATION OF GAULTHERIA SHALLON (SALAL)**

MORRIS VAN METER

18221 S.E. Richey Road  
Portland, Oregon 97236

*Gaultheria shallon* is perhaps the most common shrub in the understory of the Pacific Northwest forests. It reaches its largest size in the fogbelt along the Pacific coast where dense, extensive patches of the species often hinder the establishment of forest reproduction on cut-over and burned-over areas. Related species are found in northeastern Oregon and in the Rocky Mountains. The flowers are pink, about 1/4" long, borne in loose clusters. The fruit is bluish-black, edible, and approximately 5/16 in diameter. Plants are found on dry to moist, well-drained sites in the sun or shade in the western part of the states from British Columbia to southern California (1). It is a handsome broadleaf evergreen shrub, usually growing 1' to 3' but occasionally to 8' to 10' in height.

Because of the habit and range of *Gaultheria shallon*, it became of interest to the Washington State Highway Department as a candidate for roadside planting. In 1971 we contracted to grow 60,000 plants in 4" pots of salal for this use. As there was no information available concerning propagation techniques to insure such quantities, we experimented with three basic methods as follows:

(1) **Collecting clumps and rhizomes.** Small clumps of salal were collected in the dormant season. The stems were pruned back by two-thirds, and the roots trimmed enough to fit the 4" containers. These were drenched with Vitamin B<sub>12</sub> and Benlate. Maintaining the house temperature at 70°F, we observed root initiation in 3 to 4 months. We found this method most cumbersome, along with the inherent disease problems.

(2) **Propagation from seed.** The seed is collected in June to July on the Coast and one month later at higher elevations. It is then cleaned and stored in a cool, dark and dry place until used. This very fine seed is sown in a mixture of ½ peatmoss and ½ fine perlite with a small amount of dolomite lime added. The seed is broadcast on the surface of the flat and covered with a thin layer of fine perlite. A drench of Terraclor and Benlate is applied and the flats placed on bottom heat at 68°F, with overhead shade provided. We found the seed to germinate in approximately 30 to 45 days. The seedlings were very slow growing even under a constant fertilizing program. The seedlings were left in the flat for up to 5 months before transplanting. The seedling at this stage is approximately 2" in height and sensitive to transplant shock. After applying a drench of Benlate a minor loss due to disease was experienced. These newly-planted plants in 4" pots were grown under greenhouse conditions and ready for market in 5-6 months. This method was the most economical and gave us the most control in producing a marketable product.

(3) **Propagation by rooting cuttings.** We chose to use the current season's growth in a semi-hardwood condition; this is determined in large part by the reddish cast of the stem color. The cuttings were made 6" in length. The leaf surface was cut back one-third. Two 1" scars were made, cutting just through the cambium layer on either side of the base of the cutting. The cuttings were then dipped 2" into Hormodin #3. These were laid in flats, covered, and left overnight before sticking. They were stuck in fine perlite and both bottom and top temperatures maintained at 68°F. Root initiation was noted within 30 days. Although we were well satisfied with the rooting percentage, there was a significant problem in that the leaf buds were slow to break dormancy, thereby delaying marketability.

It has been our experience since 1972 that propagation from seedlings is the far superior method. This method afforded us the optimum utilization of labor and greenhouse space and developed a healthy, uniform product for market in the quickest time possible.

#### LITERATURE CITED

1. Randall, Warren R. and Keniston, Robert F., 1968. *Manual of Oregon Trees and Shrubs*. p. 237.