

KORBEL FOREST NURSERY: PURPOSE,  
PRODUCTION, SPECIES & PROGRESS

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This paper is, perhaps, the first to have been prepared a month after its presentation. In fact, this paper should not have been prepared at all, however, as penalty for late arrival for the Redwood Panel, the author was leaned on and in fact was obligated to provide an oral report of the current operations and research status at the Korbel Forest Nursery. The comments that follow were sparked by questions from the audience regarding redwood seedling production and vegetative propagation through rooted cuttings and tissue culture.

Thus in the following few lines, such as they are, is a summary of those remarks:

Simpson's Korbel Forest Nursery was constructed in 1974 and produced its first crop of containerized conifer seedlings in 1975. The nursery was designed to produce 4.5Mrl seedlings annually but modifications and the addition of a shade frame area have doubled that capacity.

The primary purpose of the nursery is to produce redwood and Douglas-fir seedlings for reforestation of Simpson owned timberland along the north coast of California. In addition, however, the nursery has become the source of planting stock for a number of other forest landowners along the coast and in inland California as well. Therefore, species now produced include various pines, true firs, and spruce as well as the mainstays of redwood and Douglas-fir.

To compliment and take full advantage of the Korbel Forest Nursery, Simpson has launched redwood and Douglas-fir tree improvement programs. The basics for these programs have been developed by many people, both within and outside Simpson.

The programs, although relatively new, have already produced results that may have immediate practical application. For example, it has been demonstrated that redwood cuttings can be readily and rapidly rooted if taken from seedlings. Further, it has been demonstrated that additional cuttings can be taken from those rooted cuttings. It is hoped that this technique can be exploited to produce redwood planting stock for areas where seed supplies or viability is inadequate for nursery needs.

It has also been demonstrated, and in fact put to practical use, that redwood branches when taken from the tops of mature trees, rooted (though with difficulty), and planted in orchards can be expected to produce abundant crops of cones. In many cases, small crops are produced the first

year after outplanting and indeed, some cuttings grow cones while in the rooting media. Such cuttings continue to demonstrate maturity by producing cones each year. In addition, such rooted cuttings generally demonstrate little vegetation growth which means their value

is for seed production only and therefore are not at all suitable directly for reforestation purposes. The seeds that they produce on the other hand, perform quite normally and, of course, if the cuttings happen to be from superior trees, they will probably produce seed of genetically better than average quality.

Last, but certainly not least, tissue culture of redwood has been pursued by Simpson with quite remarkable success. Redwood plantlets from selected trees have been produced and are currently growing in test plots where they are undergoing field performance comparisons with normally produced redwood seedlings of the same age. Feasibility studies are underway for the construction of a pilot scale tissue culture laboratory near the Korb Forest Nursery site within which operational plantlet production obstacles will be resolved. While this step is under study, tissue culture research continues to improve on the techniques developed for redwood and has been expanded to include Douglas-fir as well.