

Where Are We Headed, and What Should We Be Planning For?

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INTRODUCTION

Good morning.

I want to thank you for the opportunity to be with you this morning.

As nurserymen, you play a crucial role in the reforestation process, which is essential to the future of forest management in the Northwest. I believe it is very appropriate that we get together periodically to share ideas and discuss mutual problems and opportunities. It is encouraging to see so many interested professionals from both the public and private sector involved in this forum.

THEME

I would like to propose the following theme for my remarks this morning, as well as for the balance of this four-day session. That theme is:

"Where are we headed and what should we be planning for?"

Before discussing where we are going, it is well to recognize where we are now and how we got here.

We have indeed come a long way from the low levels of forestry characteristic of the mid 60's, when direct aerial seeding was the primary means of man-influenced reforestation west of the Cascades. Public and private foresters alike recognized the need for more reliable regeneration methods, and the implications for future growth and yield, if rapid regeneration with controlled spacing could be assured following logging. At the same time, during the 1970's, regeneration requirements resulting from strengthened state forest practices acts and new federal laws increased the demand for planting stock for private, state and federal lands.

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Nursery capacity expanded through the early and mid-70's to meet this increased demand for seedlings. Private industrial landowners increased their efforts to rehabilitate poorly stocked acres and convert hardwood stands on high sites back to conifer production. The U.S. Forest Service received an extra "one-time" mandate to eliminate a sizable reforestation backlog, with the National Forest Management Act of 1976. By 1985, this resulted in more than one million acres actually treated nationwide ... nearly three quarters of which occurred on the western National Forests.

The decade of the '70's was also a period of rapid change in the development of successful stock types and growing regimes. This was, and continues to be, a dynamic process. Some technology was borrowed from other parts of the world, but much local knowledge and experience had to be gained. Research has played an important role in developing that knowledge. Initially most nursery research was sponsored by larger organizations. I think it is significant that an active nursery cooperative research effort has become established here in the Northwest in the early 80's, allowing access to research results by independent nurserymen as well as private non-industrial forest landowners.

Since the early days of nursery management, we have gained a much better understanding of physiological processes as they relate to seedling performance. Research on culture, lifting, and storage has had perhaps the most significant influence on improvement in quality, and we have become much more sophisticated in how we measure seedling quality. Container systems rapidly emerged as an expected solution to bare-root problems, particularly in the higher elevations, in the mid 70's; then declined somewhat as we learned to culture for better root development, as well as manage bareroot dormancy through timing of lifting and duration of storage. Although diminishing somewhat in volume, plug seedlings continue to be a very valuable special purpose stock type and are still regarded by many as a general purpose stock type. Clearly, the demand is still there for both types of seedling production systems.

Although we are consistently growing a higher quality product than ten or fifteen years ago, we still have some important opportunities ahead of us.

**WHAT ARE THOSE OPPORTUNITIES AND
WHAT SHOULD WE BE PLANNING FOR?**

In assessing our future, we need to look at essentially two areas:

One is the changing nature of our **markets**.

The other is the set of **technical issues** we must deal with in order to meet the seedling performance expectations of the forest manager.

If we look at harvest levels in the Douglasfir region for the next decade, private industrial harvest will trend downward to about 80 percent of today's level. Offsetting increases in non-industrial private harvest, are expected to maintain total private harvest near their mid-1980 levels. Although there are some uncertainties regarding the new National Forest Plans, it appears that there will be a reduction in Region Six harvest levels of between 10 and 20 percent from recent levels by 1990. This will have definite implications for regeneration requirements on the National Forests. In addition, the NFMA mandate to eliminate the regeneration backlog on Forest Service lands is now fulfilled. Harvest levels and regeneration requirements on state lands in Washington and Oregon will remain essentially as they are today.

Stocking levels on public and private lands have been reduced considerably over the past five years, as survival has improved and better data on the effects of stocking on long term growth and yield have become available, and we expect this trend to continue. Where we formerly planted 650 or more trees per acre, 350-500 trees per acre has become more common. That represents a very significant reduction in seedling requirements across the number of acres being planted.

In addition to changes in seedling demand, we can predict that such things as species mix and stock type mix will change as geographic distribution of planting changes, as well as customer perceptions of stock type performance.

These trends indicate a static or perhaps reduced demand for seedlings in the west for the next few years. Consequently, we should now view our challenges to be more in the technical area, as opposed to further expansion of seedling production operations.

These would include such things as:

1. Servicing each customer's special needs - "fine tune" his seedlings for more site-specific requirements.
2. Maximizing seedling yield from the increasing amounts of higher value seed becoming available from tree improvement programs.
3. Adapting growing systems to accommodate the emerging technologies of tissue culture and clonal propagation.
4. More fully exploiting existing research knowledge in day-to-day operations - accomplish technology transfer effectively.
5. And, of course, controlling costs and maintaining yields, which are key to the success of any operation, must never be taken for granted. These require continual effort.

R&D NEEDS/OUTLOOK

Research will continue to play an important role in meeting these challenges. I would broadly summarize our research needs as follows:

1. Continued emphasis on identifying cost-effective alternatives in nursery weed control.
2. Continued work in seedling pathology - specifically in dealing with Fusarium, Pythium, Phytophthora and Phoma.
3. Nursery cultural techniques to reduce the need for more expensive transplants on some sites.
4. Quality sowing - to enhance seedling yield and maximize utilization of valuable seed.
5. Increased volumes of genetically improved seed will place some unique demands on our current system in the near future:
 - a. The ability to plant more acres with improved stock earlier to capitalize on gain per unit of time will demand maximum utilization of seed.
 - b. The ability to multiply the **best** of this material through vegetative propagation will provide a strong economic incentive to modify and adapt cultural practices to successfully produce rooted cuttings in Douglas-fir.

There may also be some compelling reasons to propagate clonal material with special characteristics such as:

- rust-resistant white pine
- Christmas tree genotypes with desired traits
- families that have demonstrated superior performance on specific sites (GXE interaction)
- ability to propagate trees with special traits, such as high specific gravity for increased fiber yield

"THE JOB DOESN'T STOP AT THE LOADING DOCK"

I would like to leave you with one additional thought that we at Weyerhaeuser Company consider to be very important: That is, "the **job doesn't stop at the loading dock.**"

The customer has become more **sophisticated** and **demanding**.

Sophisticated: In terms of understanding variables that affect plantation performance.

Demanding: In terms of seedling attributes that meet their needs in a cost-effective manner.

As in any other type of marketing, it is essential that we work closely with and

understand the needs of the end user if we are to fulfill our mission as nurserymen. In my own experience at Weyerhaeuser Company, I regard this close link with the field forester as one of the key factors in continual improvement in seedling quality. The results are evident in terms of significantly improved survival and growth over ten years ago. I'm sure many of you could relate similar experiences.

CLOSING REMARKS/SUMMARY

In closing, I would like to emphasize that your contributions as nurserymen are key to the future of western forest productivity. Through application of your skills and dedication to the task of producing quality seedlings, coupled with the increasingly important contribution of the western tree improvement programs, and the tools of the silviculturist, we can expect the future forest resource in the west to become increasingly productive on those acres that are intensively managed for timber production. In so doing, we can offset the inevitable loss of parts of the commercial forest land base to wilderness, NFMA restrictions, and urbanization, and thereby fulfill society's increasing demand for the full range of forest resources.

Thank you.