The Northwest Scene[1]

Frank A. Ter Bush[2]

Abstract.--This provides a summary of Northwest nursery production and the author's views on this activity. A couple of interesting new developments are mentioned.

THE SITUATION

History

Fifteen years ago there were 10 nurseries in the Northwest, 4 public, 6 private. These produced a total of 62 million seedlings. Today there are at least 62 forest tree seedling nurseries in Oregon and Washington, 12 public and 50 private. These produce a combined total of 254 million seedlings (Ter Bush - 1979). The data are shown in Tables 1 and 2.

Seedling demand is such that an additional 21 million seedlings were imported from California, Idaho and elsewhere.

Twenty-five of these nurseries are greenhouse operations. These produced a total of slightly over 53 million seedlings this past season. The container phenomenon is a fairly recent development. Our friends in Canada initiated greenhouse activity in the sixties. John Walters developed the "bullet" concept. Jim Kinghorn followed up with the plug. Down here we got pretty enthusiastic about it. Greenhouse operations sprang up like mushrooms after a warm rain. The situation is best expressed by the data in Table 3, from our 1979 Nursery Directory. Some of you are, no doubt, on the mailing list for the Forestation Notes we publish in our Portland office.

The Recent Weather

Numbers alone don't tell the whole story. You folks in the Intermountain West are accustomed to severe winters. The species you deal with are accustomed to your rigorous climate. Not so in the Pacific Northwest. Sharp cold spells mean trouble. Many seedlings are lost, others are severely damaged. The winter of 1978-79 was such a winter. Tn Portland, for instance, we had 90 consecutive days where the thermometer touched freezing or below. This was something of a record for the area. Out where our nurseries are located, temperatures were even more extreme. Millions of one year old seedlings were lost, many two year old seedlings suffered damage ranging from mild to severe.

We don't have good data on the extent of the damage or loss. I can assure you, though, that there will be something of a shortage of good sturdy seedlings next planting season. You simply cannot suffer the death of millions of 1-0 and damage of 2-0 seedlings without putting a crimp in well-laid plans. I would expect that there will be a run on greenhouse operators in an attempt to make up for expected bare root short falls.

Accomplishments and Recent Developments

So much for the numbers. For the first part of the decade Northwestern nurserymen were busy building new nurseries and expanding old ones. New developments were coming thick and fast, containers, weeding with herbicides, wrenching, lifting with machines rather than by hand, enlarging storage capacity, etc. Some of this is still going on, but not at the same rate. More recently, nurserymen appear to he consolidating their gains, pondering past practice, preparing

[1]Paper presented at the Intermountain Nurseryman's Association Meeting, Aspen, Colorado, August 13-16, 1979.

[2]Reforestation Specialist, USDA Forest Service, Portland, Oregon.

Table 1.--FY 1979 totals

State	No. Nursery Oper.	1979 Capa. 2+mm/yr	#Container Oper.	No. Pub. Nurs.	No. Pvt. Nurs.	Production BR M Trees	Production Cont. M Trees	Capacity BR M Trees	Capacity Cont. M Trees
OR	36	27	14	6	30	100.8	30.1	168.6	42.9
WA	26	14	11	6	20	100.1	23.0	106.2	26.6
1979 Totals	62	41	25	12	50	200.9	53.1	274.8	69.5
1978 Totals	60	45	27	11	49	166.5	44.4	270.0	68.6
1973 Totals	32	18	15	6	26	137.0	22.0	175.0	33.0

Table 2.--Three-years' comparison

Bare Root MM Seedlings			Container MM Seedlings			Total MM Seedlings		
'77	'78	'79	'77	'78	'79	'77	'78	'79
169.4	166.5	200.9	52.4	44.4	53.1	221.8	210.9	254.0
181.9	197.1	213.5	62.2	58.2	56.1	244.1	255.3	269.6
279.2	270.0	274.8	76.0	68.6	69.5	355.3	388.6	344.3

1/ Production by year
2/ Production planned for next year
3/ Annual estimates of capacity

Table 3.--Container Production by Year

Year	MM Seedlings
1970	0.9
1971	2.9
1972	9.8
1973	22.0
1974	41.8
1975	43.0
1976	54.7
1977	52.4
1978	44.4
1979	53.1

for new improvements that may not be as dramatic as those in the early years in the decade, but that will add additional increments of quantity and contribute, hopefully, to better and better quality seedlings. Resident staff horticulturists are making their appearance. They are assisting the nurseryman in his never-ending quest for better quality control. Under the nurseryman's sharp eye, these fellows write the prescriptions for sowing, growing, crop maintenance, etc. These are written prescriptions; nursery and field feedback is recorded as well. Thus, hopefully, ten years out, these nurserymen or their successors, will have a record of what was done right or wrong.

Field foresters and nurserymen are working more closely together than ever before to tailor seedlings to site. Northwestern nurserymen have not reached the millennium by a long shot, but seedling quality and field survival have both improved markedly since the early '70's. I can't provide figures to prove this point but I have walked over many a plantation during the nine years I've been on this job.

New Developments with Possibilities

So much for the overall Northwest nursery picture as I see it. A few new developments are making their appearance.

The plug-one is gaining acceptance. This is simply a container-grown tree that spends an additional season as a transplant. It frequently develops into a plant as good as or better than a three-year-old seedling. It isn't cheap! For some tough applications, foresters are willing to pay the price. They get a time saving and in many cases excellent survival from these sturdy well balanced plants.

Another development is waiting in the wings. For the past S or 6 years, Dick Holland, DNR, Bellingham, Washington, has been growing bare rooted seedlings on one of his greenhouse benches. Between December and April, he grows 19,000 seedlings on 120 square feet of pumice, a 58 percent gain over the 12,000 seedlings that would normally be grown on that amount of bench space. He lifts these out of the pumice with little, if any, root damage and transplants them in early April. They are 4"-6" tall at that time. By late December he has a large seedling (about the size of a three-year-old) ready for outplanting. Dick and some users have been following field performance of these seedlings for some time now and are well pleased with the results. This represents a way of increasing greenhouse capacity and saving time and money as well, an extremely desirable combination.

Conclusion

I'll conclude by saying that the Northwestern nurserymen are an innovative bunch. They are well organized to meet an ever-growing demand for more and better seedlings.

LITERATURE CITED

Ter Bush, Frank A. 1979. Nursery Directory. Forestation Notes. 14 p.