

A Reference Library for Readers of *Tree Planters' Notes*

Robin Rose

Managing Editor, Tree Planters' Notes, and Professor of Forest Science, Oregon State University, Corvallis, OR

This article is aimed at anyone who might be interested in putting together some books for everyday use as reference tools. Certain books always seem to be of value in answering questions or as a means to refresh one's memory about how to figure something out. Some books are just fun to own because of their historical significance, whereas others help with technical calculations.

Because I have yet to come across a good reference list for reforestation and nursery managers in an article in *Tree Planters' Notes* or elsewhere, I have started the following list. It is a modest list of books you may have heard of or may have never known existed. I have developed this list during my long career, so some books might be hard to find these days. All, however, will have some usefulness. The reference for each is given, along with a short description of what it contains and how it might prove useful. You might just go to the RNGR Team site (pronounced 'ringer') at <http://www.rngr.net/Publications> and have fun looking around at all of the free information. RNGR stands for **R**eforestation, **N**urseries, and **G**enetics **R**esources and is the home of *Tree Planters' Notes*.

The Forest Nursery Manual: Production of Bareroot Seedlings. M.L. Duryea and T.D. Landis (eds). 1984.

The Hague: Martinus Nijhoff/Dr W. Junk. 385 p.

Although this book was written years ago, it is still very useful to bareroot and container growers alike. In terms of concepts and theories, it will probably never go completely out of date. Every chapter was written by a known expert of the time who understood present, as well as future, needs. Believe it or not, you can download this book at the RNGR Team Website (<http://www.rngr.net/Publications/fnm>)! Finding a hard copy can be difficult and expensive.

The Container Tree Nursery Manual. T.D. Landis and others. 1990 onward. **Agriculture Handbook 674.**

Washington, DC: U.S. Department of Agriculture (USDA) Forest Service. Various pages. This manual consists of seven volumes: Volume 1—Nursery Planning, Development, and Management; Volume 2—Containers and Growing Media; Volume 3—Atmospheric Environment; Volume 4—Seedling Nutrition and

Irrigation; Volume 5—The Biological Component: Nursery Pests and Mycorrhizae; and Volume 6—Seedling Propagation. Volume 7 is still in production. Volumes 1 to 6 are free for the downloading from the RNGR Team Web site (<http://www.rngr.net/>).

Planting the Southern Pines. P.C. Wakeley. 1954.

Agriculture Monograph No. 18. Washington, DC:

USDA Forest Service. 233 p. If you can find a copy of this in hardback at an antique book store, buy it! Not only is this book a gem to read, but you learn that, after more than 40 years, we still have a lot to learn about growing and planting seedlings. One secret is physiological condition—not just seedling morphology. A classic comment from Phil Wakeley: “The surest means of attaining success in planting is to keep all phases of the process in balance.” Another to always remember would be “The fact that physiological qualities differentiate *internal* seedling conditions must be emphasized.”

Reforestation Practices in Southwest Oregon and Northern California. S. Hobbs and others, eds. 1992.

Corvallis, OR: College of Forestry, Oregon State University. 465 p. For westerners, this is a great book summarizing the reforestation outcomes of the Forestry Intensive Research program. The title leads readers to believe it is only useful for limited areas in Oregon and California. In truth, the chapters are rich with information on theory, processes, and concepts that work all over the world. It is still available from Forestry Communications, College of Forestry, Oregon State University, Corvallis, OR 97330 (e-mail: ForestryCommunications@oregonstate.edu).

Regenerating Oregon's Forests. B.D. Cleary and others. 1978. **Corvallis, OR: Oregon State University Extension Service. 287 p.**

This is the classic forest regeneration book and one of the first of its kind. Unfortunately, it is out of print. While much of what it spoke to in terms of seedlings is very much out of date, the concepts it teaches are valid. In the West and elsewhere in the United States and Canada, seedlings have gotten much bigger and come in an infinite variety of sizes and costs. If you ever see a copy of this book in a used book store, buy it! Other organizations have

copied this book for other parts of the United States and Canada.

Tropical Tree Seed Manual. J.A. Vozzo, ed. 2002. Washington, DC: USDA Forest Service. 874 p. Dr. Vozzo did an outstanding job with this book. It weighs around 5 lbs! It is an amazing encyclopedia of information and well worth having on the shelf if you grow plants or work in tropical areas. The authors created an information source that will be useful for decades, especially to those wanting to grow and plant the world's dwindling tropical forests. You can download this book for free at <http://www.rngr.net/Publications/ttsm>.

Mineral Nutrition of Higher Plants. H. Marschner. 1989. Orlando, FL: Academic Press. 674 p. If you do fertigation or just want to know how nutrients behave in plants, this is a great reference to keep on the shelf in the office. Ever wonder about ammonium versus nitrate nutrition? This book has some answers, along with lots of references. You will even find lots of facts on other subjects, such as "root elongation rates as a function of soil strength (resistance to root penetration)." Although a college level text, this is a great reference.

Plant Biomechanics. K.J. Niklas. 1992. Chicago, IL: University of Chicago Press. 607 p. For those of you who are more cerebral, this book comes highly recommended. This is a great book for graduate students. It is probably one of the best written books about a difficult subject area. Aspects of it will be over the heads of those without calculus and physics. Most of the book, however, is written with such clarity that a disciplined reader will get much from it. This book has wonderful explanations of how water moves in and is utilized by plants.

Hartmann and Kester's Plant Propagation: Principles and Practices (7th ed.). 2002. Englewood Cliffs, NJ: Pearson-Prentice Hall. 880 p. This book has been around a long time. The 2nd edition has been good enough for some of us that we never bought the next five. Sometimes one just needs a good book on cuttings, general media information, and more. The title says it all.

Seeds of Woody Plants in the United States. C.S. Schopmeyer, tech. coord. 1974. Agricultural Handbook 450. Washington, DC: USDA Forest Service. This book has been around a long, long time. A lot of libraries have it, and occasionally you will find one at a used book store. It has been around so long that there are no copies

available. The Forest Service, however, will be printing a new updated version—The Woody Plant Seed Manual (Agriculture Handbook 727)—in 2008. I even have the original Woody-Plant Seed Manual (1948), which was labeled Miscellaneous Publication No. 654.

The Herbicide Handbook (7th ed.). 1994. Champaign, IL: Weed Science Society of America. 352 p. Everyone in forest regeneration who works with herbicides should have this handbook. This is a very useful reference for all sorts of esoteric information about various herbicides. This book provides information on manufacturers, herbicide use, precautions, behavior in plants, behavior in soil, and toxicological properties. Do you know what a dermal LD₅₀ of 1,122 mg/kg means?

The Dictionary of Forestry. J.A. Helms. ed. 1998. Bethesda, MD: Society of American Foresters. 210 p. If there is one thing that can bring clarity to a conversation, it is the use of words with definitions everyone accepts. How ironic that this book does not have the definition of a seedling in it! It does, however, contain lots of other words and expressions. By the way, the legal definition for seedlings in Oregon is "live trees of acceptable species of good form and vigor less than one inch in DBH" . . . just in case you were wondering. Lawyers have their definition of a seedling, and we have ours.

Media and Mixes for Container Grown Plants. A.C. Bunt. 1976, 1988. London: Unwin Hyman Ltd. 309 p. This book is fabulous! Anyone in the container business in a serious way should attempt to find this book and pay what is asked for it. Bunt created a mini-encyclopedia in 309 pages. If you thought you knew media, this book will show you how much more you have yet to learn. The problem is that the last time I checked the price it was \$220 per copy, and there were only two copies left.

Physiological Plant Ecology. W. Larcher. 2001. Berlin: Springer-Verlag. 513 p. This fourth edition is masterfully done, but why would someone in nurseries or reforestation want a book like this? Physiological plant ecology is a subject that foresters can benefit from regularly. This book covers the gamut from carbon sequestration to soils. So much of the science in forestry these days is being interpreted in terms of carbon and ecological modeling. You are not just growing and planting seedlings any more. They are carbon sinks. Seedlings respond physiologically to light, nutrients, sun flecks, soils, and more. Even if all you did was pick up this book and read two pages a night,

you would learn more than you ever thought possible. This is a great reference book, besides being an outstanding college text book.

Pocket Reference. T.J. Glover. 1996. 2nd Edition. Littleton, CO: Sequoia Publishing, Inc. 542 p. There are many versions of pocket reference books, and this is a superb example of one. Want to know the cement:sand:gravel ratio for high-strength floors? This book will have the answer, especially if you plan an addition to your greenhouse. A pound of water is 27.7 cubic inches. A gallon of water weighs 8.33 pounds. Such a book can really come in handy.

A Forest Journey: The Story of Wood and Civilization. J. Perlin. 1989, 2005. Woodstock, VT: The Countryman Press. 461 p. This is a must reading for all associated with the growing and planting of trees. This book, if you have not read it, should have quite an impact on you. Basically, humans have spent around 5,000 years deforesting this planet. The role that wood has played in the development of ancient and modern day civilizations is remarkable. This book rates as one of the 100 most important books that all humans should read in their lifetime. Here is an interesting quote concerning the use of wood in ancient Rome: “They calculated that the Roman villa’s furnaces needed to burn about 286 pounds of wood per hour, or over two cords a day, to heat the building adequately.” You should read what they burnt to keep a Roman bath hot! The Romans were not big on nurseries or reforestation.

Over the years I have built up quite a nice nursery-reforestation library by just letting people know I would cherish the books they gave me. Someone retires and

wonders why anyone would care about a bunch of books written back in 1923 or 1948 or 1963. I happen to be one of those who care, because a lot of the older books have very good information in them. The problem with the exchange of information today is that the failures are not likely to be printed—we get only the success, without the other information that led to the success in the first place. Older documents often go into what did and did not work. It has long fascinated me how old our “new” ideas are. Probably one of the most useful aspects of our new references is that they grew out of older references. The older references have value because they teach present and future generations that (for instance) the concept of seedling physiological quality was known decades ago—not through some paper written in 1997.

I would be thrilled to have all of our TPN readers send in the citation(s) for their favorite reference books. What I have presented here is a mere tip of the iceberg. Do you have a favorite reference on greenhouse maintenance? What about propagation techniques? How about a fertilizer handbook or disease control manual? If you like a book a lot, then please send along a review of it and we’ll try to print it.

Send your suggestions in, and I will print some of them in the next issue of *Tree Planters’ Notes*. Keep reading and learning. More importantly, pass your knowledge and your books on to the next generation of growers and planters.

Address correspondence to: Robin Rose, Department of Forest Science, College of Forestry, Oregon State University, Corvallis, OR 97331; e-mail: robin.rose@oregonstate.edu; phone: 541-737-6580.