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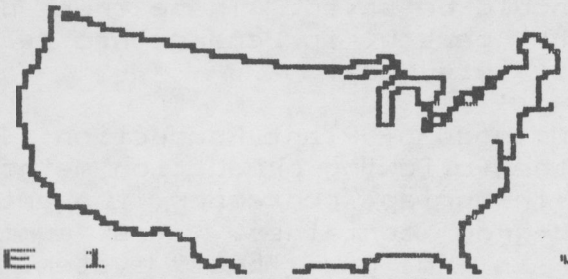

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PURPOSE: To pass on what we learn willingly and happily to others in the profession so as to improve turf conditions around the country.

BOOK REVIEW OF:

LANDSCAPE PLANT PRODUCTION, ESTABLISHMENT, AND MAINTENANCE

BY CARL E. WHITCOMB, Ph D.

Available from Lacebark Publications, Rt. 5, Box 174, Stillwater, OK 74074, this 1986, 680 page book has much information of use to those of us that take care of trees as well as turf. The cost is $29.50. You will find it written in an easy to read style, and printed in a large easy to read type. No colored pictures but plenty of informative black and white photos.

At past Oklahoma Turf Conferences I have enjoyed Dr. Whitcomb's many talks on trees. An earlier book of his, "Know It & Grow It", is a worthwhile addition to your library if you work with trees in the southern U.S.

This review will attempt to be educational, while keeping itself to the four page length of this issue of Turfcomms. The book is divided into three sections: A. Plant Production, B. Transplanting and Establishment, and C. Maintenance of Landscape Plants. The book is reviewed chapter by chapter. Numerous chapters have been skipped to save space.

Introduction: Tree Physiology and the Urban Landscape. "The assumption is often made that a tree is quite large and should be able to tolerate a great deal. Not so!" And he goes on to explain in detail why not. Helping to explain why it is so

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difficult on a new golf course to keep alive the trees that someone decided should be saved. Those trees probably could have been saved if the person in charge had read and followed the guide lines given in this book.

Section A, Ch. 1, Methods of Plant Production. The advantages and disadvantages of the following production methods are discussed: bare root, balled-in-burlap, container, the unique container, and the fabric field-grow container. His summary includes the statement, "There is no one "best" system." There may not be but, there are some good reasons for knowing the advantages and disadvantages of the above systems if you are responsible for the survival and production of useful landscape plants purchased from nurseries.

Ch. 8, Tree-Intercrop Relationships in the Field. This chapter gives data showing the advantage of clovers over clean cultivation for tree nurseries. Both are much better than grass which is very competitive.

Ch. 9, Spacing and Pruning. Emphasis on the value of lower limbs to develop strong trunks. Strong trunks reduce the need for staking in windy open areas.

Ch. 11, Weed Control. He emphasizes that "herbicides should not be the principle emphasis of a weed control program." However, they are the principle emphasis of this chapter. Some very good information on current herbicides. Of interest to me was some material on Roundup. He mentions two cases where Roundup sprayed at the 4 quart per acre rate under young nursery trees appears to have been root absorbed and killed or damaged the trees the year following spraying.

Section B, Ch. 1, Transplanting and Establishment. Most of you will find this chapter of particular interest. We have all been told to dig the hole much bigger than the ball of the tree we are planting. Dr. Whitcomb tells you to dig it as wide as you want but, DO NOT DIG IT DEEPER. Also, "Trees dug with a tree spade should not be planted into a tree spade-dug hole." Plus many more pointers on how to succeed at tree planting.

Ch. 3, Root Pruning: Pros and Cons. The main point made is that if you must root prune before moving a tree do so at the correct time. Also be sure to dig out at least 4 to 6 inches further when digging the tree out.

Ch. 4, Spring vs Fall Planting. It is stressed that fall is the best time to plant container grown plants while spring is the best time for bare rooted plants. Also given are the whys and helpful techniques.

Ch. 6, Soil Amendments. In general he writes they are a waste of time including the new "superabsorbents". You can obtain much

better results from the organic material you might wish to use to amend the soil by using that organic matter for a mulch around the base of the newly transplanted plant.

Ch. 8, Water Relationships of Container-Grown Plants. For those of you that like to put gravel in the bottom of your pots this chapter explains why you shouldn't. For those of you that completely understand the soil physics of why and how the USGA specifications for putting green construction work and can apply that knowledge to containers you do not need to read this chapter.

Ch. 9, The Restricted Planting Hole. Thoughts on the best techniques for median strips, sidewalk plantings and parking lots. Insulating the soil-pavement edge, and mulching are the key suggestions.

Ch. 11, Top Pruning at Planting. "Top-pruning to aid branch development and structure may be a valid consideration." Top-pruning to improve the success of planting is not a proven formula. This applies to big trees as well as small ones. The most important factor in transplant survival is the "internal condition of the plant when it is dug."

Ch. 13, Competition Between Woody Plants and Ground Covers. He points out that research on this subject is very scarce and provides a limited list of trees and ground cover combinations that are compatible and those that are not.

Ch. 14, Mulches. Loose natural organic mulches in moderation are of great benefit. Forget the black plastic.

Ch. 15, Establishing Azaleas and other Sensitive Species. In the acid well drained soils of New England we worried mostly about winter hardiness. Here in the greater Dallas area raising azaleas in raised beds of pure peat is the only way to be successful. Whitcomb explains why.

Ch. 16, Transplanting with Tree Spades. Some interesting information on this widely accepted technique.

Ch. 18, Staking Landscape Trees. Avoid buying those skinny young trees that need staking. Stakes should only be needed in windy country. "A tree stem must be free to move or flex for proper development." Dr. Whitcomb writes, "the most beneficial aspect of staking trees probably lies not in the support of the top of the tree, but rather in the protection the stakes provide against lawn mower blight."

Ch. 19, Plants in Landscape Containers. Again we need to understand the perched water concept used in the USGA putting green. Also, that insulation is needed to protect the root systems against both heat and cold.

Section C, Ch. 1, Plant Stress and Landscape Problems. An introductory chapter with emphasis on the problems created by over watering.

Ch. 2, Protecting Existing Trees. "Unless effective protective measures are taken, it is best to remove the trees to simplify construction." Young trees can adjust to many environmental conditions "if the adjustment occurs gradually as the tree increases in size." Large mature trees do not adjust well. The majority of the tree roots are a few inches under the surface litter in a forest or old pasture site. Therefore any removal of the litter, addition of soil or changes in drainage drastically effect the environment of the tree and thus results in death. Tunnel don't trench if you want to save a nearby tree.

Ch. 3, Cut, Fill and Other Grade Changes. If you must fill use sand. The fall is the best time to apply it. Tree wells are almost always a waste of time and money. The tree will be dead 5 to 10 years later if not sooner. The more elaborate the tree well the more difficult to do something with that spot after the tree dies.

Ch. 4, Landscape Soils and Soil Tests. The value of surface and internal drainage is stressed. He claims almost all trees and shrubs will grow at a pH in the upper 5 range. That some plants grow in high pH soils is a tolerance factor not a need for high pH. Soils in urban areas are often more alkaline than in nearby virgin areas because of residues from construction and from the irrigation water. He quotes Halverson as having "observed that acid rain the pH 3 was raised to pH 7 after running across a concrete driveway."

Ch. 5, Fertilizers in the Landscape. He feels the slow release forms are justified in landscape situations as they provide a gradual release of nutrients and reduce labor costs.

Ch. 6, Fertilizing Landscape Trees. He stresses the need for soil tests and that fall is the best season to fertilize.

Ch. 7, Solving the Iron Chlorosis Problem. Apply sulfur, thus lowering the pH and thus making iron and other minor elements more available is his recommendation.

Ch. 8, Light, Shade and Root Growth. Some comments of interest on the effects of security lighting. Beware of high-pressure sodium lamps. On the nursery end of the business he points out that even shade tolerant plants do not do well if the shade gets above 30%, Aucuba being the one exception.

Ch. 9, The Effects of Drought Stress. A little is good. Gives a good argument for light shallow watering during a dry period.

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