

holly in Hardin County, Texas, which is 5" in circumference.

Sometimes the fact that a tree is a national champion has saved it from threatened destruction. When President Carter was Governor of Georgia he was alerted to the fact that the national champion cherrybark oak was going to be taken down so that a highway could be put in. He had the highway plans altered slightly, and the tree still stands.

In Maryland, long before the days of the snaildarter, a dam project was halted when a national champion was found growing in the area that would be flooded by the lake. Although work had already begun on the dam, it was stopped and the champion swamp white oak was saved. The state horticulturist stopped by the tree to show it to his children. It had finally produced a crop of acorns. They weren't swamp white oak acorns. They

were overcup oak acorns. The tree lost its title as the champion swamp white oak but was the largest overcup oak on record. That is the only tree in the Register that has been a champion for two different species.

Some champion trees grow out in the open, some are alongside roads in state parks or in national forests. Others are growing in someone's backyard. Keep your eyes open, and if you think you've found a champion, write in. Copies of the National Register are available from the American Forestry Association for \$1.00 each. Brochures explaining the program and nomination procedures are available for free, as are lists of the species for which there are no champions.

*American Forestry Association*  
1319 18th Street, NW  
Washington, D.C. 20036

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## REVIEW OF GUIDE FOR ESTABLISHING VALUES OF TREES AND OTHER PLANTS<sup>1</sup>

by Dr. L.C. Chadwick

It has been 33 years since the National Shade Tree Conference, in 1947, first appointed a joint committee with the National Arborist Association to devise a method for establishing the value of shade trees. It required four years of work and lengthy discussion to formulate a basic method which was finally accepted by the Conference in 1951. It took another six years to prepare classified plant lists for the various regions of the country. While 'piece-meal' reports were published in the National Shade Tree Conference Proceedings from 1952 to 1956, it was not until 1957 that a booklet, *Shade Tree Evaluation*, was published.

Since that date, there have been four revisions of the publication, 1965, 1970, 1975, and the current revision, *Guide For Establishing Values of Trees and Other Plants* in 1979.

Throughout the four revisions, the basic method

has, essentially, remained unchanged. I think it is appropriate to note that without the knowledge, perseverance, and dedication to the task involved on the part of Norman Armstrong, now of Fort Myers, Florida, who served as president of this organization in 1949 and chairman of the Shade Tree Evaluation Committee from 1947 to 1960, we might not have a recognized tree evaluation guide today.

As indicated, the basic formula has, essentially, remained unchanged with the one major exception, that of adding the fourth factor of location to the procedural evaluation concept, in the third edition. Tree lists made up most of the 24 pages of the first revision and 36 of 44 pages in the second edition. For reasons that do not need to be discussed here, all classified plant lists were dropped in the third revision and the booklet consisted of 18 pages.

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<sup>1</sup>Presented at the annual conference of the International Society of Arboriculture in San Diego, California in August 1979.

The fourth revision, 1979, *Guide For Establishing Values of Trees and Other Plants*, contains 42 pages without plant lists. The number of pages are mentioned to emphasize the fact that a greatly expanded amount of informational material is contained in the fourth revision. Use of the added information should result in a more accurate appraisal of casualty losses by our members.

While the original, the first and second revisions were prepared by the Shade Tree Evaluation Committee of the NSTC, or ISTC, the third revision was prepared by a committee representing the International Society of Arboriculture, the American Society of Consulting Arborists, the National Arborist Association, and the American Association of Nurserymen, and was approved and adopted by these four organizations. The fourth revision has been prepared by the Council of Tree and Landscape Appraisers, and also adopted and approved by the four organizations mentioned above, plus the Associated Landscape Contractors of America. The expertise and experience embodied in these organizations gives the *Guide For Establishing Values of Trees and Other Plants* its credibility.

Several major changes were made in the preparation of revision three, 1975. The title was changed from *Shade Tree Evaluation* to *A Guide to the Professional Evaluation of Landscape Trees, Specimen Shrubs, and Evergreens*, to extend the scope of the application of the formula and to strengthen its use by professionals. Other major changes in the third edition, which have been carried over into the new Guide, concerns the grouping of trees into two categories, those of transplantable size (1-12 inches) and those exceeding 12 inches in diameter. Also, methods of evaluating shrubs and small evergreens were included.

Before discussing some of the major changes in the fourth revision, it is interesting to point out the increase in monetary value of trees based on the sectional square inches of trunk diameter. When the first shade tree evaluation booklet was issued in 1951, the basic value of trees was figured on the basis of \$5.00 per sectional square inch of trunk diameter. Values calculated at that time cor-

responded closely with the average cost of transplanting trees by commercial arborists. It was not a hypothetical figure as some have indicated. The basic rate was increased to \$6.00 in 1957, \$9.00 in 1970, \$10.00 in 1975, \$12.00 in 1976, \$15.00 in 1977, and \$18.00 in 1979. The basic rate in recent years has been calculated on the increase in the consumer price index and cost of operation by commercial arborists. The basic rate of \$18.00 is not out of line and is probably too low based on the current value of the dollar. Several arborists have indicated that the basic replacement cost of trees ranging from 2 to 12 inches in trunk diameter, as given in Table I of the new Guide, is too low.

Concerning the latest edition (1979), it may be well to preface remarks by indicating that it is not perfect. There are some errors and differences of opinion in methods recommended for calculating values of some factor or condition. Any manual of this nature needs constant study for improvement and up-dating. I recall a remark once made by the chairman of the Department of Horticulture at Ohio State University when I was discussing with him the necessity of further research before publishing the results of a research project. His remark was "Get it published now, you know the information will be out-of-date the next day after it is published." I don't know that this statement applies to the present Guide, but I am sure most of us will agree that there is always room for continued improvement. This will be an objective of the Council of Tree and Landscape Appraisers.

There has been little change in the information dealing with the method of calculating the value of trees in the transplantable size range. The basis for calculating the value or replacement cost of deciduous shrubs and small evergreens is placed on a series of basic factors rather than monetary costs.

The evaluation of trees beyond transplantable size continues to be based on four important factors — size, species, condition, and location. Any knowledgeable person can determine the basic value by calculating the cross-section square-inch area of the trunk and multiplying this figure by the square-inch value of \$18.00. However, placing the correct value on species, condition, and loca-

tion requires the expertise of a qualified professional plantsman. I believe this is particularly true regarding the factors of condition and location. It is a known fact that IRS, for example, will place more emphasis on accurate professional judgment and a well documented report than on a theoretical use of the Guide.

To aid the professional plantsman in placing realistic percentage values on condition and location factors, material in the Guide has been greatly expanded. Tables and other information are given to enable the appraiser to determine the age of the tree, life expectancy, and methods of calculating percentage values for various factors of tree condition. A list of diagnostic factors to consider in appraisals is included in the text.

Information on the location factor has also been greatly expanded, particularly in the area of functional or 'benefit' values of trees. Insurance and IRS casualty claims have been covered more adequately than in prior editions of the Guide.

As mentioned, there are differences of opinion on the best method of procedure in establishing values dependent upon certain factors or conditions. To mention a few:

1) Should the homeowner be reimbursed in full for replacement of a high rated tree if the one destroyed by a casualty is a low rating species?

2) The best method of determining the value of multi-trunked trees. The method advocated in the Guide has led to some confusion.

3) How best to establish values when species and condition factors, condition, and location fac-

tors overlap.

4) Should the functional or benefit factors of a tree be separated from the location factor and specified as a fifth factor?

5) Should some numerical system be designed to calculate values of trees over 40 inches in trunk diameter?

Certain errors occur in the publication. Three typographical errors have been noted to date. In Table 5, page 12, the basic value of a 10-inch diameter tree should be \$1,413 instead of \$1,143 as listed. The same correction should be made in Class I, 100%. On page 18, the reference number for Webster should be 15 and not 12. On page 35, Section 6a, the paragraph should read: "Personal casualty loss. A casualty or theft loss on property used solely for personal purposes is deductible only to the extent that the loss exceeds \$100.00 for each casualty or theft."

In conclusion, the Council would like to thank all persons who have contributed information for revision four of the Guide. It is also hoped that corrections noted, and suggestions for improvement of the Guide, will be forwarded to a member of the Council. It is the desire of all concerned that the Guide, or its subsequent revisions, will continue to be the basic guide for professional, consulting arborists, and horticulturists.

*Emeritus Professor of Horticulture  
Ohio State University  
Columbus, Ohio*

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## ABSTRACT

Bergman, Ernest L. 1978. **Nutrition and its role in plant production.** American Nurseryman 158(7): 8, 63, 66.

Plant nutrition is too often discussed without taking into consideration the limiting factors for plant production provided by nature, such as climate, soil and crop characteristics. Only after these have been properly evaluated can man improve plant production through nutrition. There are 17 elements recognized today as being essential for a plant. Moisture and soil temperature will definitely affect availability. The soil of every new seedbed or transplant plot should be tested before anything is put into it. Compost is excellent as organic matter, but it is extremely poor as a source of nutrients. In sandy soils, there is more movement of applied nutrients than in heavier clay soils. Soil pH, as such, has no direct effect on the plants; however, some of the elements become less available with a higher pH.