

# ASCA RECOMMENDATIONS FOR MODIFICATION OF THE ISTC SHADE TREE EVALUATION FORMULA<sup>1</sup>

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Let me briefly review the development of the I.S.T.C. shade tree evaluation formula as it now exists. In 1947, at the 23rd Convention of this organization, action was taken requesting the Conference, together with the National Arborist Association, to devise a method for establishing the value of shade trees. A joint committee from the two organizations was appointed to work on the project. In the next four years a great deal of thought and effort went into the development of the basic evaluation formula which was accepted by the two organizations in 1951. The study and preparation of the basic method of shade tree evaluation was no haphazard "throwing together" of a hypothetical formula. The basic method was the result of many discussions of opinions expressed by leaders in the arboricultural profession. Much credit is due Norman Armstrong who chaired the committee for many years.

The formula has stood the test of time better than a quarter of a century, without a single change in the basic method. The two revisions of the I.S.T.C. publication, *Shade Tree Evaluation*, have dealt only with changes in the tree lists and the monetary value per square inch of trunk diameter. The formula as it stands today is still considered the most basic and usable of the several methods of shade tree evaluation that have been devised. Why then all the clamor for change?

This question can best be answered by the statement of two facts: 1) the present formula is not without some faults, and 2) it is not generally accepted by the Internal Revenue Service as a method by which values of shade and ornamental trees can be established. It is the latter point that prompted the American Society of Consulting Arborists to appoint a committee to make an in-depth study of the

whole subject of shade tree evaluation.

The ASCA Committee has had the study underway for about a year. First, a questionnaire was formulated and sent to 55 ASCA members representing various areas of the United States and Canada. Not all of the 55 members contacted returned the questionnaires, nor was there total agreement on the questions raised. However, this survey gave ASCA the basis for a full day of discussion of the subject at our meeting in Tampa last February. Since that meeting, a committee consisting of Ray Gustin, Jr., Fred Micha, and myself as chairman, have met on several occasions with other groups and individuals to discuss proposed changes in the formula and to lay the ground work for future contacts with the Internal Revenue Service.

The recommendations the ASCA Committee have to make today are not final decisions. They are recommendations that have come out of our discussions at Tampa and since by committee study. They have not had the formal approval of the ASCA organization.

It is my hope that in time there will be agreement on the changes deemed necessary to improve the formula by the major arborist's organizations—the ISTC, the NAA, and the ASCA. It will also be proposed that we seek the American Association of Nurserymen endorsement of the evaluation formula. If there is endorsement by the major arboricultural and horticultural organizations, there will be the voice of many qualified individuals and organizations behind the formula, which should carry some weight in its acceptance by governmental bodies. The adoption of evaluation formulas by splinter groups can only lead to nonacceptance of the jointly recommended evaluation formula.

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1. Presented at the 50th International Shade Tree Conference in Atlanta, Georgia in August, 1974.

### ASCA Recommendations

These recommendations can be discussed only briefly in the space allotted but much thought has been given to them and some elaboration may be necessary in further discussions.

I. Change the title of the booklet to: *A Guide to the Professional Evaluation of Shade Trees and Other Specimen Ornamental Plants*. It should carry a subtitle or statement: "To be used by qualified professional arborists, horticulturists, and nurserymen."

This recommendation has a three-fold approach: 1) The booklet is a guide which denotes the point of flexibility—the good judgment of the expert tree appraiser; 2) It signifies "Other Specimen Ornamental Plants." Many arborists engaged in consultation are often confronted with evaluation of specimen shrubs and evergreens as well as trees. Consequently, it is recommended that they be covered by the evaluation booklet, not by extensive lists but by general statements. In this connection, the American Association of Nurserymen has agreed to aid us in the preparation of suitable material; and 3) The word *professional* is emphasized. All too frequently in the past the I.S.T.C. shade tree evaluation formula has been used by nonprofessionals who know little about shade trees or their value, or have not properly interpreted the formula.

II. It is recommended that the foreword of the booklet be completely rewritten to emphasize two major facts: 1) to strongly emphasize that trees and other plants have value within themselves, value not directly related to the appraised property value as a whole. Ornamental plants have assets other than their aesthetic value. Plants are living objects, they are engaged in the most profound creativity in the world. Shade trees and other specimen ornamental plants are used in planting designs for architectural, engineering, climatic, and aesthetic purposes. When used in planting designs from a functional and objective viewpoint, they can be evaluated as an entity separate from buildings or the property as a whole. This is a point that we must get across to the Internal Revenue Service. At least, we must insist that an horticultural appraisal accompany the real estate appraisal in

casualty losses.

2) While the use of replacement costs in establishing tree values has been mentioned in the I.S.T.C. booklet, it has not been strongly emphasized and probably not often considered in appraisals by many arborists and horticulturists. The recommended use of replacement costs where applicable is again based on the possibility of greater acceptance of the evaluation formula by the Internal Revenue Service. Replacement costs have been accepted in court cases. To cite one case, *Thatcher vs. Const. Co.* (21 Ohio App. 2d), "The general rule that the measure of damages for injury to real estate shall not exceed the difference in the market value of the entire tract immediately before and immediately after the injury is not an arbitrary or exact formula to be applied in every case without regard to whether its application would compensate the injured party fully for losses which are proximate result of the wrongdoer's conduct." "Where the presence of trees is essential to the planned use of property for a homesite in accordance with the taste and wishes of its owner, where not unreasonable, and where such trees are destroyed by trespassers, the owner may be awarded as damages the fair cost of restoring his land to a reasonable approximation of its former condition, if such restoration is practical, without necessary limitation to diminution in market value of such land."

III. It is recommended that consideration be given to specifying basic values in three general categories: 1) for trees 12" in diameter and under, where kind and size are generally available in the area, the basic value be determined by reference to replacement costs. Basic figures now given in the table would be eliminated and a statement to the above effect be substituted. Replacement costs can be determined by, or consulting with, experienced arborists or horticulturists. This procedure would necessitate the amateur or nonprofessional to consult with a qualified person in determining the value of such sized trees. The only logical approach to establishing values for specimen ornamental shrubs and evergreens would be on a replacement cost basis.

It will be argued that replacement costs will vary from region to region and area to area, which is true, but this variation does not refute

the possibility of determining replacement cost for the area in question. Further, from our discussions in Tampa, apparently there is not as wide a variation in transplanting charges in different areas as might be supposed. It might be pertinent to include in the booklet, or as an insert, a range of transplanting costs for several regions, based on trunk diameter or AAN standards for shrubs and evergreens. An insert would allow for yearly revision if such became necessary. Such a range in costs might be specified in 2- to 3- or 4-inch categories. The cost of transplanting a 10- and 12-inch tree of the same kind and under the same conditions, is not greatly different. When based on replacement costs, such factors as availability, area problems, cost of removing casualty trees, guarantees, and other unusual conditions can be considered.

Standards for establishing transplanting costs for boxed trees, as is common on the West Coast, may need special study. The replacement category in that area may need to be limited to sizes and kinds ordinarily available in boxes. Trees 3 to 4 inches in diameter, in 36-inch boxes, are generally available. Seldom are trees over 5 to 6 inches in diameter available in boxes.

It might be noted here that the present basic values established on \$10.00 per sectional square inch for small trees are low. Replacement costs would be considerably higher.

2) The second category includes trees with diameters ranging from 13 to 40 inches in trunk diameter. It is recommended that in this category, tree values be established according to the present formula, or as it may be modified or adjusted.

3) The third category encompasses large trees, those in excess of 40 inches in trunk diameter. It is recommended that no values be established or listed in the booklet for this group. This recommendation is based on the fact that, overall, the percentage of trees in this category that one would be called upon to evaluate or appraise would be very small. Furthermore, the values now established for such trees by the present I.S.T.C. shade tree evaluation formula often become rather unrealistic. It is the opinion of the ASCA Committee that a more realistic approach to establishing values for exceptionally large or

historic trees would be to leave the evaluation to the good judgment of the experienced arborist or professional horticulturist. This procedure would allow for considerable flexibility in determining the valuation as many factors are involved.

IV. It is recommended that caliper measurement follow the American Standard for Nursery Stock established by the AAN and approved by the American National Standard Institute (ANSI Z60.1 - 1973). According to these standards, caliper (trunk diameter) of the trunk of deciduous shade and flowering trees shall be taken six inches above the ground level up to and including four inch caliper size, and twelve inches above the ground level for larger sizes. Standards have also been determined for coniferous and fruit trees.

The basis for this recommendation is that it conforms to bidding specifications for purchase contracts and, furthermore, it is the common practice for arborists to follow such specifications. While trunk diameter measurements in forestry practice are taken at breast height (4½ feet) above ground level, such a practice does not have much to recommend it for horticultural or arboricultural standards.

V. It was the consensus of opinion of the ASCA members at the Tampa meeting, and of the study committee, that a location factor should be added and become an integral part of the evaluation formula. Subject to further study, it is believed that this factor can be considered on a 100, 80, 60, 40, and 20 per cent basis, the same as the condition class. The location factor will allow the experienced arborist or horticulturist to consider its importance from an architectural, engineering, climatic, and aesthetic viewpoint. It will allow the appraiser to consider the functional values of the tree, its shade value, its screening effect, its value in muffling sound, and its value in climatic control. With the location factor added it extends the usefulness of the formula to evaluate trees in parks, in picnic areas, on golf courses, playgrounds, and other such areas.

VI. In the present I.S.T.C. formula there is no specification for establishing values for multiple-stemmed trees. It is the suggestion of the ASCA committee that a method of establishing values for such trees be proposed. The two most common suggestions presented to the Commit-

tee have been (1) the value of a single-stem tree that would give the same canopy (shade) effect as the multiple-stem tree, and (2) the value based on the diameter of the main stem plus 50 to 70 percent of the value derived from the combined diameters of the remaining stems. It would seem in many cases that the real value of a multiple-stem tree is in the beauty of the stems, not the canopy effect.

### **ASCA Does Not Recommend**

I. There has been little support for the inclusion of land values in the shade tree evaluation formula, even though, at present, the Internal Revenue Service considers trees and ornamental plants, generally, a part of the property as a whole. This point was subjected to much discussion when the I.S.T.C. formula was first proposed. The consensus of opinion at that time was against including land values and this opinion apparently has not changed.

II. In the session at Tampa there was not sufficient evidence supporting the hardiness zone concept to warrant a change. This conclusion also has the support of the ASCA study committee.

I would like to express a few opinions of my own in respect to the hardiness zone concept. Isn't the real purpose of the shade tree evaluation booklet to establish a method of evaluating shade and ornamental trees or for appraising casualty losses? If the evaluation or appraisal concept of the booklet is correct, nonhardy trees in a given area would not be present, or seldom so, to evaluate or appraise.

It is true that the lists of trees in the shade tree evaluation booklet have been used in some circles as a "selection" guide or reference. It would seem to be that if a shade tree selection booklet is necessary, then it should be a separate publication, limited to the best trees with descriptive characteristics and adaptabilities. The shade tree evaluation booklet is, or should be, prepared for use by qualified experts who are familiar with plant adaptabilities.

Any classified list of plants must be flexible, the plants evaluated on the basis of the best judgment of the qualified appraiser. Few qualified plantsmen would exactly agree as to what trees should be classified 100 per cent. Hardiness is only one factor determining adaptability and usefulness. A recent letter from a highly regarded plantsmen in Colorado,

and a former I.S.T.C. member, states: "It is positively silly to extend a zone from coast to coast. You cannot make a workable zone map based *only* on minimum temperatures and length of growing season."

I am not going to belabor this point further except to express the opinion that the I.S.T.C. shade tree evaluation booklet should be kept as simple as possible, allowing flexibility and honoring the judgment of the qualified expert.

There are undoubtedly other factors that should be clarified in the shade tree evaluation booklet and the ASCA study committee hopes eventually to consider them and to pass on recommendations to the organizations concerned for their consideration. The committee would be pleased to have your suggestions for further study.

### **Summary of Recommendations**

1. A change in the title to refer to a *guide* for professional use.

2. Establish the fact that trees and other ornamental plants have value separate from the land and should be evaluated as a separate entity.

3. Determine values of trees up to 12 inches in trunk diameter where feasible, and other specimen shrubs and evergreens, on replacement costs. Trees in the range of 13 to 40 inches in trunk diameter to be evaluated according to the present formula or as modified. Values of trees over 40 inches in trunk diameter be left to the good judgment of qualified arborists or horticulturist.

4. Trunk diameter measurements to be taken according to American Standards for Nursery Stock.

5. A location factor be added to the present formula.

6. That omission of land values as a basic part of the formula be continued.

7. That the regional or subregional system of tree listings be retained.

8. That the final revision be such that it can be approved and adopted by the I.S.T.C., the NAA, and the ASCA.

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