

# GUIDELINES FOR USING HOMEOWNER'S TREES IN URBAN RESEARCH

by John J. Ball and Gary A. Simmons

**Abstract.** Urban tree research is sometimes impeded by the lack of an adequate number of research subjects. One possible source of research trees is the trees owned by the homeowner. Studies on birch dieback were conducted using homeowner's trees. People are willing to allow their trees to serve as research subjects if they are approached in a careful, thoughtful manner. Guidelines for working with the public are discussed.

Tree research in an urban setting calls for a different approach to designing experiments than required for forest tree studies. One major difference is the manner in which trees are selected for experimentation. The forest researcher generally can locate the necessary number of trees within the ownership of a single organization or individual. Requesting permission to use these trees for a study can be a simple procedure. This same task can be very time consuming for the urban researcher since the ownership of urban trees is more fragmented. Each tree used in a study may be owned by a separate individual. Acquiring these trees for research studies can be very trying, but this process can also be very beneficial to the urban tree researcher and the homeowner.

**Why we needed homeowner's trees.** A major tree problem in Michigan urban areas is birch dieback (Ball and Simmons, 1980). Our study of this decline required the procurement of one hundred European white birch (*Betula pendula*). Trees used in this study would represent all stages of decline. Some trees would be felled and examined; others would be simply observed.

We were not able to locate the necessary number of trees in the age class or crown condition required at the university nursery, nearby commercial nurseries or on city property. Our only option was to turn to the trees owned by residents. Recently there has been a push for including citizens in the care of the urban forest (Cole, 1979). Since this involvement has generally been successful, we decided to solicit citizen cooperation in selecting trees for our study. This

paper will explain how we accomplished the task of gaining homeowners' cooperation.

**Soliciting homeowner's cooperation.** The area we chose was the community of Okemos, a small town adjacent to the eastern boundary of East Lansing, close to the campus of Michigan State University. We drove every street in Okemos, starting at the northern boundaries and working southward. During these drives, a notetaker recorded the street address and crown condition of every European white birch. Once this task was completed, decisions were based upon tree crown condition and driving distance. Once the list was compiled, homeowners were personally contacted to enlist their support.

Initially, visits were made during the day, but usually only one of the owners was home and was reluctant to make a commitment until the spouse was present. Thereafter, we limited our visits to evening hours between 6:30 and 8:30 p.m. Once the homeowner came to the door, we would identify ourselves. Our university vehicle was parked in a location visible from the door to further add to our credibility. After establishing who we were, we briefly explained the purpose of our visit and why we needed their cooperation.

In this study, we were asking permission to remove or conduct experiments on homeowner's trees. First we had to ask ourselves what would motivate people to cooperate with this project. Generally motivation for volunteering or cooperating can be placed into one of two categories (Schindler-Rainman and Lippitt, 1971). People may be driven by a desire to enhance personal growth (I can learn about trees) or to serve the community (unless someone helps, this problem will not be solved). The two categories are not mutually exclusive; people may be motivated with incentives representing both categories.

One benefit was for us to provide advice on any of their plant problems. This offer was usually accepted immediately and it was not uncommon to spend 60 to 90 minutes wandering around their

yards identifying problems and plants. We did not attempt to perform pest management operations. If the task was too involved for the homeowner, we suggested that they call a tree care professional. We explained what they should have them do and approximately what it should cost. Another incentive was for us to provide information resulting from the project or associated studies. This would be reported to them so that they could incorporate it into their gardening routine. Homeowner's appreciated this and it also provided us with valuable feedback on how practical our information would be.

When we removed a homeowner's tree, we also removed all brush and the stump. We returned the wood cut to fireplace length. We aided in selecting another tree for planting if one was desired. A major motivating force for this group was the desire to serve the community. Birch dieback was, and continues to be, an extremely common problem in Okemos. Many homeowners donated trees that were in reasonably good health because they believed the tree would become stricken with the disease within several years. By donating the tree to our research project they felt they would be saving their neighbors' trees.

We benefited from this experience in a number of ways. The studies were performed on mature trees growing in an urban environment, a situation precisely where the problem occurs. We also received valuable feedback on how homeowners perceived the problem of birch dieback and its management.

The homeowners benefited by their new awareness that managing tree problems does not begin and end with pesticide usage. They also learned that research can be time-consuming and complex. Homeowners gained an appreciation of birch dieback. They became accomplished at recognizing the symptoms of the decline. By the end of our study, most homeowners understood how to manage the dieback and several even began advising neighbors on the problem.

**Guidelines.** Since other urban researchers may find themselves in a similar situation, we offer the following guidelines in working with the public:

1. Make your request in person and view yourself as a salesperson. After all, you are selling your project. If project personnel do not enjoy

talking with strangers, leave them out of this step.

2. Explain what you propose doing and why you need their cooperation in simple and concise terms. You should be able to explain why you are there in about five minutes.

3. Talk with husband and wife if possible and do not make any assumption about who has the final say; you might be wrong.

4. Leave a written copy of what is going to be done at their home, when it will be done, why and how it relates to the overall project. People like to see how their tree relates to the whole project. This is extremely important when appealing to people's desire to serve.

5. On the same sheet, leave a phone number where someone from the project can be reached if the homeowner has any questions. Someone should be available at this number during evenings and weekends as this is when most questions occur.

6. Crews working at a house should be aware of the homeowners' names and whether or not they have children. Children are naturally drawn to any unusual activity and it is easier to keep them away if they are referred to by name.

7. At the completion of the project, homeowners should be personally thanked for their cooperation. This is also an opportunity to evaluate their role in the project. Their input can provide you with valuable information as to how to better solicit homeowners' cooperation for future projects.

If you enjoy working with people, few problems will occur that cannot be smoothly resolved.

### Literature Cited

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## HOW TO GET BASIC TREE VALUES QUICKLY WITHOUT “PI”

by Francis W. Holmes

**Abstract.** 1. Measure your tree's girth *in inches*. 2. Square that number. 3. Multiply by \$1.75. You now have the Basic Value! Then diminish, as you always do, by site, health, etc.

The Felt-Spicer formula, used by I.S.A., C.T.L.A., and many others, uses the *area*, in square inches, of a trunk cross-section at breast height (4 feet 6 inches, or 1.5 meters). But town tree surveys, often carried out by citizen volunteers, usually report linear measurement, that is to say, *girth* (circumference) instead of area. Also the American Forestry Association's "Social Register of Big Trees" uses girth (in inches, at breast height) as the most important of the three measurements that determine a national champion for each native tree species. Of course, for each tree you measure, you **could**: (A) divide the circumference (girth) by [pi] to get the diameter; then, (B) divide the diameter by 2 to get the radius; then, (C) square the radius; then, (D) multiply the squared radius by [pi] again, to get the cross-sectional area; and then, (E) multiply the area by \$22.00, to get the basic value. Thereafter, each tree's value is diminished according to judgments that are unique to that particular tree and its circumstances.

However, so long as the value remains at \$22 per square inch, you can get the correct Felt-Spicer basic value by the three quick steps in the abstract, above.

For math buffs, here's the proof, based on what you learned in algebra. Let "G" be the girth you measured, in inches.

(A) Diameter is girth divided by pi:

$$\frac{G}{\pi}$$

(B) Radius is half the diameter:

$$\frac{G}{2\pi}$$

(C) Now, square the radius:

$$\frac{G}{2\pi} \quad \frac{G}{2\pi}$$

(D) Area ("A") is pi times this ( $\pi r^2$ ):

$$A = \frac{G}{2\pi} \cdot \frac{G}{2\pi} (\pi)$$

(E) Basic tree value ("V") is \$22 times this:

$$V = \frac{G}{2\pi} \cdot \frac{G}{2\pi} (\$22\pi)$$

(F) Simplify into one fraction:

$$V = \frac{\$11 G^2}{2\pi}$$

(G) Substitute 3 1/7 for pi:

$$V = \frac{\$11 G^2}{(2)(3 \frac{1}{7})}$$

(H) Make the denominator into one fraction:

$$V = \frac{\$11 G^2}{44/7}$$

(I) To divide by 44/7 is to multiply by 7/44:

$$V = (\$11 G^2) (7/44) = \frac{77G^2}{44}$$

(J) Divide both numerator & denominator by 11:

$$V = \frac{\$7 G^2}{4} = \$1.75 G^2$$

So, just **square the girth and multiply by one and three-quarters dollars!** Your computer inventory software should be easily adjusted to do this automatically, yielding a "basic" value in dollars whenever you enter a girth for a tree. *Director, Shade Tree Laboratories, University of Massachusetts, Amherst.*