

AREA AS AN INFORMATION CLEARINGHOUSE¹

by Hyland R. Johns

Abstract

A proposal that the Arboricultural Research and Education Academy of the International Shade Tree Conference establish an information clearinghouse for research in arboriculture. With a central office to serve as resource center, appropriately staffed, much greater benefit can be achieved from past, present and future expenditures for research.

"The future is purchased by the present." These prophetic words of Samuel Johnson penetrate our life as though they were uttered *yesterday* rather than 200 years ago. However obscure the future we are purchasing, we are beset today by ecology and the economy, unemployment and energy problems. Yet we enjoy longer life, a better standard of living, and more leisure time than any other people on this earth. In fact, if you were born before 1919, you shouldn't even be here, because male life expectancy at that time was only 55 years.

As we emerge from the trauma of a harsh recession, we should reassess our goals — as ISTC and as AREA. The need for an information clearinghouse for arboriculture research, has been ricocheting around for many years. I think it's a concept whose time has arrived.

Other interested people seem to confirm this need. Dr. Ernst Schreiner proposed in 1947, "A clearing house for tree research, an educational link between research and practice." As true today as thirty years ago (to continue quoting), "Tree research has been going on for many years in many places, and the published results are widely scattered. Consequently there is a serious need for correlation and integration of widely scattered observations and scientific information on the growth, development and management of trees." (*American Forests*, July, 1947)

In a later article, Dr. Schreiner elaborated on his proposal for a federal shade tree service. With a clever diagram, he attempted to integrate six basic fields:

Entomology	Soil Science
Engineering	Physiology
Pathology	Genetics

The only departure from Schreiner's original concept in our proposal today, is utilizing AREA as the vehicle rather than the federal government. As a rather new vehicle, AREA has not fully been "broken in," but it's a new model with lots of potential horsepower. If it's the right vehicle for this project, and I believe it is, we need only to *fuel it up and get started*.

Because I don't really think it's that simple, I asked a few questions of some of you. It's not my intent to tell you how to conduct research; what follows is a composite of your responses, from my perspective as an officer of ISTC and as a businessman, who is concerned with orderly growth in numbers and development of services to our membership.

After this talk, I hope some of you will add your ideas. By the end of our discussions, I hope we can arrive at a consensus that can be implemented by your organization, with the cooperation and assistance of ISTC.

Do we need an information clearinghouse for arboriculture research?

Almost universally it is agreed that we should monitor research to avoid duplication and to emphasize the gaps in our knowledge. Several of you went further and suggested "coordination" to better determine research needs of arborists. While we may be too dependent on decisions of scientists as to needs, this proposal is for an information clearinghouse, *not* one for arranging research priorities or planning projects, which may be a future consideration.

¹Presented to the International Shade Tree Conference in Detroit, Michigan in August 1975.

The Journal of Arboriculture is doing an excellent job, but cannot possibly fill this specialized gap. For example, one comment was made by a researcher who came from a related field to arboriculture two years ago. He was "puzzled by lack of information in our industry." An old-timer commented candidly, "We in AREA have a keen awareness and deepening frustration about the lack of coordination of national research concerning shade trees."

With current constraints due to budget problems, resource conservation, quality of life, pollution and other concerns, every expenditure today is closely scrutinized and every project must be justified, more so than in the past. Like many other things, research is being put to the cost:benefit equation.

Is AREA the logical organization?

Your members are those in research, teaching, extension, and regulatory programs in universities, institutes, governmental agencies, arboreta, and private industry.

Your stated purpose is "to provide an organization which will encourage communication and coordination in . . . horticulture, forestry, entomology, plant pathology, biology, ecology, agronomy, and related fields essential to a basic scientific understanding of shade trees and their care." Q.E.D.

What problems must be overcome?

Probably many of those same problems of any new organization struggling to achieve its objectives, including continuity of leadership, organizational details, communicating without disclosing proprietary secrets or losing personal and professional identity (as one researcher said, "I could care less what others do in research," yet admitted, "We need to learn from each other.") No doubt other problems will occur during early stages, but the overwhelming need for this resource center can overcome these problems. Financial aspects will be discussed below.

What other groups might be interested in cooperating in this effort?

Many individuals as well as groups outside AREA and ISTC might be interested in our

efforts. Contacts should be initiated soon with some or all of the following, and others probably could be added as well:

- National Arborist Association
- American Society of Consulting Arborists
- American Horticultural Society
- Associated Landscape Contractors of America
- American Association of Botanical Gardens and Arboreta
- Horticultural Research Institute of American Association of Nurserymen
- National Park Service
- Municipalities and Counties
- Forest Service Urban Forestry Program
- Private Industry
- American Phytopathological Society
- Entomological Society
- USDA Shade Tree Laboratory

Where should this clearinghouse be located?

It might be Urbana, Illinois or Washington, D.C. at the National Arboretum; a good case can be made for either of these locations. The important concept is to promote this office as a resource center or focal point for arboricultural research. When someone in any part of the world has a problem, they should think of AREA's information clearinghouse. Project leadership is more critical than geographic area.

What will this cost?

Now that we have established the benefits, the big question is cost. Ultimate expansion of this project could consume unlimited funds, but a modest start must be made. I feel that we should aim for a half-time professional position with part-time clerical assistance, possibly a \$15,000 expenditure for 1976, including miscellaneous expenses. The success of this initial venture should guide future expansion and budgeting.

I hope that the ISTC Executive Committee would budget a portion for 1976. At the same time, contacts should be made with other agencies, professional associations, and industry to support the program — as they will surely benefit from it.

In conclusion, I appreciate the opportunity to appear on your program and present this propo-

sal. I would like especially to thank Dr. Frank Santamour and other AREA officers and members for their cooperation. To paraphrase Samuel Johnson, let us purchase a better arboricultural future through an information clearinghouse today.

Asplundh Tree Expert Company
Willow Grove, Pennsylvania

Suggestions made during discussion period:

1. Organize AREA task force committees to survey needs of ISTC, including commercial, municipal and possibly others—on a continuing basis.
2. Contact other trade and professional associations to determine needs, interests. Where is research money being spent today?
3. Publish arboricultural abstracts.
4. Publish in the *Journal of Arboriculture* names of AREA members and their fields of expertise.
5. Consider a WATS to "Dial an Expert" for instant answers to problems.
6. Try for initial grant of \$5,000 for ISTC for 1976 — and grants from others to initiate this program (i.e. Can EPA, USDA, Forest Service, or others help out?)
7. Obtain service of part-time or retired man in Washington to solicit grants.

ABSTRACT

Brasier, C.M. and J.N. Gibbs. **MBC tolerance in aggressive and non-aggressive isolates of *Ceratocystis ulmi***. Ann. Appl. Biol. 80:231-235.

In view of the interest in the fungicide benomyl and its breakdown product, methyl benzimidazole-2-ylcarbamate (MBC), for the control of Dutch elm disease (*Ceratocystis ulmi*) in Britain and North America, and of increasing reports of tolerance to benzimidazoles in other fungi the following study was made to assess the potential for emergence of tolerant strains in *C. ulmi*. In selection experiments, tolerance to 0.5 ppm MBC occurred at a frequency of approximately 1 in 1.3×10^8 conidia in both aggressive and nonaggressive isolates of *Ceratocystis ulmi*. The tolerant strains were inhibited by 5 ppm MBC, however, and attempts to select strains tolerant to 10 ppm were unsuccessful. In each of three isolates examined, tolerance remained stable after 15 successive transfers on fungicide-free medium. Genetic control was nuclear and probably conditioned by a single gene. It is thought unlikely that the appearance of tolerant strains in nature will jeopardize the use of MBC for the control of Dutch elm disease.

Magasi, Laszlo P., 1975. **Identification of *Ceratocystis ulmi*, based on production of coremia in vials**. Bi-monthly Research Notes 31(2): 13. Canadian Forestry Service.

Culturing large numbers of samples suspected of containing *Ceratocystis ulmi* (Buisman) C. Moreau, the causal fungus of Dutch elm disease, is time-consuming. The surface sterilized twig sections are peeled, then small wood chips are aseptically removed and transferred to petri dishes containing potato dextrose agar. After some experimentation a new method was tested for reliability before being adopted as a routine laboratory technique for determining *C. ulmi* from samples suspected of Dutch elm disease. The advantages of the described technique include: 1) reduction in culturing time, resulting in up to ten-fold increase in the number of samples that can be handled by persons with minimum training in culture techniques; 2) reduction in media preparation, saving both time and culture medium; 3) reduction in the number of contaminated samples because no media other than the natural wood section is involved; 4) reduction in examination time, due to the reduction in the need for microscopic mount preparation; and 5) maintenance of the reliability of the chip-plating technique.