

## Trimming

**The Finite Element Method**, a computer-fed image flashed on a screen, allows engineers to visualize weaknesses in a design. For example, a light pen which the engineer touches to any sub-component of the structure can be computer programmed to exert a given force to that area. The cubes actually deform before his eyes if the design is faulty. Using this visual examination, researcher and development engineers can resolve many problems before the first prototype is made.

**Biological control** methods are here to stay. According to a report in a recent issue of GRIT Magazine, a few researchers are planning for the day when herds of Southeast Asian water buffalo will roam the banks of

ivers and lakes in Florida chomping away on water bonnets, hyacinths and other weeds. Hugh L. Popenoe, director of the tropical agricultural center of the Institute of Food and Agricultural Sciences at the University of Florida at Gainesville, readily admits that water buffalo may be a very economical way of controlling aquatic weeds. The water buffalo is the latest in a long line of attempts to control water weeds clogging inland waterways in Florida. The white amur, an Asian weed-eating fish, was given an audition about three years ago. But Florida officials, according to the article, fear the giant fish, which can reach 80 pounds, might upset the natural balance of the waterways. Sea cows, or giant manatees, were also tested, but these sluggish mammals got in the way of motorboats, and many were killed. Popenoe said

that he has been trying for six years to import water buffalo, which can reach a weight of 2,000 and can eat up to 300 pounds of weeds daily.



*When Stihl American decided to hold a Fight the Recession rally as part of their on-going campaign to boost confidence in the economy, it was only natural that a virtuoso wood-cutting demonstration be included in the day's program. Here Gordon Williams, chairman of Stihl, looks on while Janine Martella, Cliffside, N.J., tries the chair on for size.*

## Symposium Features Shade Tree Evaluation

The Ohio Agricultural Research and Development Center (OARDC) and Ohio Chapter, International Shade Tree Conference (ISTC) recently co-sponsored a Shade Tree Day at the Center's Wooster, Ohio facility.

The Shade Tree Symposium program and ISTC meeting were featured activities during the morning session. The one-day program was concluded by wagon tours to the Shade Tree Evaluation Plot in Secrest Arboretum.

L. C. Chadwick, professor emeritus Ohio State University (OSU) and OARDC, told the morning audience of nearly 200, that since the first planting in 1965, 140 different kinds of trees have been established in the evaluation plot. One of the methods used in selecting the desirability of the trees, Chadwick said, is to relocate and establish them in different areas throughout the state. "Our idea is to plant and observe the trees under different growing conditions than those conditions here at the arboretum," he said.

Frank S. Santamour, supervisory research geneticist, U. S. National Arboretum, Washington, D.C., presented his opinions on the new cultivars and weak points in the testing process. "The first thing to remember is that the new cultivars are not pure from top to bottom. A resistant root stock developed by selective breeding is grafted to a top section, Santamour said, and that doesn't necessarily assure a perfectly formed, disease-free specimen."

Other speakers discussed various municipalities and their street tree programs. Richard Boers, commissioner of forestry, Toledo, Ohio, described his program and some unique methods of recycling and distributing logs and wood chips.

Dutch Elm Disease (DED) and insect control research were updated by Charles L. Wilson, Agricultural Research Service USDA, Department of Plant Pathology, and David G. Nielsen, assistant professor of entomology, OARDC and OSU, respectively. Wilson discussed the extent to which DED has covered the country. "This disease is a lot smarter than we once thought it was, he said. It has spread from localized areas to most of the continental U.S." Control measures he is currently studying include applications of various forms of benomyl.

The Shade Tree Evaluation Project is being conducted in cooperation with various Ohio utility companies, Ohio Chapter, ISTC and the Ohio Nurseryman's Association. Each June and September, a committee representing all cooperating agencies evaluates the trees for their desirability as potential street and roadside trees.



*The Shade Tree Evaluation Plot was featured in the afternoon portion of the meeting. Here people examine a few of the many varieties of new cultivars growing in the plots. Since the first planting in 1965, 140 different kinds of trees have been established in the plot. The area is "wide open" and resembles conditions found in most street tree and homeowner plantings.*