PLAUDITS are due the Chicago group who hosted the 44th International Shade Tree Conference. Chairman Noel B. Wysong, Golconda, Ill., and his co-chairman, Leonard Hammerstone, Rite Landscape Co., Crystal Lake, Ill., with their committees helped make this an efficient and pleasant session for members.

Despite an intense heat wave, the field trip at Morton Arboretum generated more than normal interest among arborists. Luncheon featured a professionally done beef barbecue followed by roast corn and cold drinks during the afternoon field demonstrations. Equipment exhibited by suppliers completely encircled an open field demonstration area. A tent with chairs provided shade for guests but exhibitors braved the heat and kept their equipment working.

ISTC officials were somewhat dismayed that registration was down noticeably this year, with only about 500 persons on hand. Especially noticeable was the lack of wives and children in attendance. Though little discussion was to be had on the subject, the current wave of civil unrest in Chicago and similar cities may have been a prime factor in fewer attending the Conference.

The smaller attendance, however, did not affect what proved to be an excellent educational program. Facilities were excellent for the sessions and the host committees produced a well-organized event.

In fact, as is usual at an ISTC event, the program resembled a 3-ring circus. The National Arborists Association, the municipal and utility arborists, and the consulting arborists, all had their formal and educational sessions as a part of the Conference. Educational programs included management, cultural practices,
technical information, research, and numerous experiences on practices in the industry.

**Mayor Daly On Hand**

Mayor Richard J. Daly, Chicago, welcomed the group with a message direct to the ISTC. He said that trees make every neighborhood a better community. Daly stated that the City of Chicago was making a major effort to plant trees in the city, even to the urging of residents to add trees to their backyards. He said the City has planted trees around the city hall. Further, the City, he said, works to encourage private industry to include trees in plans for new buildings and grounds. Tree filled plaza areas are becoming a vital phase of new construction in the City, according to Daly. The Mayor said he found nothing more relaxing than spending time in the shade of trees with family loved ones.

Stephen Allen, Consulate of Canada, speaking informally to the group following Mayor Daly, spoke of the unique beauty of Chicago and of his personal "wholesome respect and admiration for a group such as the ISTC who helps Mother Nature." His appreciation, he said, stems from his home area near Bath, Canada, where few trees can be grown. Allen congratulated ISTC'ers on their selection of Montreal, Canada, for the 1971 Conference.

**Wood Chips As Compost**

Compost from wood chips and excess topsoil have furnished the city of Los Angeles, Calif., about 80,000 cubic yards of plant propagation and landscaping material. This single program alone has been worth almost a million dollars to the city over the 10-year period.

Basing figures on today's costs, Raleigh E. Dowell, Principal Park Foreman for Los Angeles, said that previously dumped wood chips and topsoil are stockpiled separately. Chips are left undisturbed for two years and then watered for about 12 hours, three times during the summer.
The pile is turned with equipment and 150 cubic yards of cow manure added for each 10,000 cubic yards of chips. Chips are again turned the third year and 300 gallons of liquid fish fertilizer added. At the end of the fourth year, chips are again turned and one ton of ammonia sulphate added. Chips are allowed to compost the fifth year and then used. By this time, Dowell says, an original pile of 10,000 cubic yards will have shrunk to one-third, or 3333 cubic yards. But the value is now $10 per cubic yard of the residue. Total cost to the City has been $611 for fertilizer and $552 for bulldozer use. Net gain to the city has been more than $32,000. When projected over a 10-year period the quarter-million yards of composted material has been worth $800,000, and more than $187,000 in dumping charges have been saved.

**Fertilizer Future**

Looking at the future of the fertilizer industry, Hartl Lucks, Smith-Douglas Div., The Borden Co., Columbus, O., said that basic raw materials are about as purified as possible. Coming trends will be in areas other than increasing the nutrient content. There will be some increase in nutrient content, he said, but users can assume that present plant nutrient levels will be maintained in the immediate future.

Even with massive tank cars and storage facilities, bottlenecks in delivery of fertilizer still occur, Lucks said. He foresees cross-country pipelines which will carry nitrogen solutions directly from the point of production to the communities where they will be used. Lucks also expects more application of fertilizer by air, especially on forested areas. More than 500 million acres, he stated, was treated by air last season. Lucks also said that both new physical and chemical forms of plant nutrient material will
slowly over a long period of time. This, he pointed out, would be invaluable for trees. He also believes the time will come when a plant anti-freeze will be incorporated in fertilizers and will be taken into the plant in early spring to protect against spring freeze. Future fertilizers will also include more selective and more types of secondary and trace elements. Controlled release of nutrients and systemic materials, particularly for shade trees and ornamentals, are a distinct possibility in the thinking of Lucks.

Large Tree Moving

William A. Rae, president of Frost and Higgins, Burlington,

be available for turf and tree work. For example, he named urea-formaldehyde, which can be produced into a foam type material offering urea to plant life with chemically controlled release of the nitrogen. This, Lucks said, will permit higher formulations, utilizing less weight to cover the same area.

Within the realm of possibility, Lucks said, are fertilizers as carriers for pesticide materials which will, in turn, be released...
Mass., discussed large tree moving by using the frozen root ball method. Speaking on an NAA panel his definition of a frozen root ball is one that is not frozen solid, but has 4 to 6 inches of frost around the outer edge. Rae said that he believes that the deeper the frost penetrates, the more harmful the effect on the tree will be. Freezing of the tree roots, he said, can be harmful, especially so since one effect of freezing is drying. In elaborating on the advantages and disadvantages of this method of tree moving, Rae said that selection of the tree is important. Soft rooted trees, he said, do not usually survive frozen root balls. Trees which have a poor survival rate in the experience of Rae are Tulip, oak (especially red oak), dogwood, hemlock, sycamore, sweet gum, birch, and magnolia. Good risks, he stated, are maple, both white and red, scotch pine, honeylocust, elm, linden, and crab. He says his company has also been successful in moving beech by the frozen root ball method, though this tree is known to be a high risk venture.

Rae pointed out that salt used for ice control on highways is harmful to trees. Salt, he said, absorbs moisture and if allowed to get on the tree during the transporting, can absorb the moisture from the tree, especially from buds and smaller branches. This can also happen to established trees, Rae stated.

In one instance of winter planting, Rae related, his company lost nine 5-inch caliper English elms. These had been tagged for the company by a landscape architect and then transported 900 miles. During the trip by open trailer, the driver experienced snow, sleet and slippery roads. Truck and trees alike were white with salt spray on arrival. Planting conditions were also poor at the time because of a November 15 storm in Rae's area. Result was that the trees completely dried out and were dead this spring.

Another factor important in frozen root ball moving is the amount of moisture in the soil when frost sets in. According to Rae, if the soil is dry the tree is more likely to be harmed by frost. Further, if the tree has had plenty of moisture and has heavy new growth, an early frost or cold snap in October or November can be harmful.

Biggest helps for moving trees by the frozen root ball method, according to a summation by Rae, are proper planning, experienced men, good equipment, good after-care and common sense. These are as important with winter tree moving as with trees moving during other seasons.

**Contract Tree Moving**

Also on the NAA panel for large tree moving was H. M. Van Wormer. He reviewed his company's step by step methods and also cautioned against bidding on large tree moving jobs. Negotiated tree moving contracts offer the only sound procedures, he said. He also suggested that the availability of consulting arborists on a fee basis offers a method for a purchaser to guarantee that each phase of the work will be successful.

Reviewing practices of moving and planting, Van Wormer said that he disagreed with some architects' specifications which call for using formulated soil for backfill. If the tree planting site is original soil, Van Wormer crews tap it securely around the base up to four inches from the bottom of the ball. Van Wormer prefers that they use clay for this strata because tree roots at this depth enjoy strong and rigid pressures. These, he said, are not true feeding roots, but are anchor and moisture securing types of root structure. Also, Van Wormer stated, no fertilizer is used in the backfill. No water is applied until the entire ball has been completed and ringed. An
Log handling equipment was demonstrated by Omark Prentice Hydraulics, Inc., Prentice, Wis.

Chain saw exhibition above was sponsored by Pioneer Chain Saws Division, Gale Products, Galesburg, Ill.

Fitchburg chipper was kept in action at Morton Arboretum by Wright Tree Service.

Melroe Bobcat for heavy tree work was operated for ISTCers by B. Haney & Sons, Franklin Park, Ill.

open hose is then used for filling the saucer and refilled again each week throughout the summer. During original planting, rigid tamping of soil is done by experienced men.

Van Wormer continued by emphasizing that since the backfill consists of strata of soil, water does not penetrate too rapidly to the extreme base of the ball roots. At this level the root should callus partially, he said.

Also, according to Van Wormer, all newly planted large trees need to be liquid fed under pressure. This needs to be applied directly to the ball twice, at 30-day intervals. This automatically gives the tree the many trace elements needed for quick root recovery. Within 30 days, he said, the tree should be expanding dormant leaf buds in the nodes above or below the existing leaf structure.

Awards made at the ISTC at the Thursday night annual banquet are as follows: Honorary Membership, Dr. Malcom McAsplundh Equipment Co., Jenkintown, Pa., and Asplundh Chipper Co., Chalfont, Pa., combined forces in exhibiting chipper and boom and truck unit.
Vermeer Manufacturing Co., Pella, la., demonstrated complete line of products designed for tree care companies. Above is Vermeer's new automatic tree spade.

Kenzie, Amherst, Mass.; Honorary Life Membership, Dr. A. C. Hildreth, Denver, Colo., Russell R. Whitten, Worthington, O., Horace Bosworth, Sacramento, Calif., Freeman L. Parr, Hicksville, N. Y.; Award of Merit, Dr. Spencer H. Davis, Jr., New Brunswick, N. J., F. Earle Martin, Toronto, Ont., Can., S. Elmer Lee, Los Angeles, Calif.; Authors Citation, Dr. Paul E. Tilford, Wooster, O., Dr. Ray R. Hirt, Syracuse, N. Y., H. Gleason Mattoon, Yarmouth Port, Mass., Brian O. Mulligan, Seattle, Wash., Dr. L. C. Chadwick, Columbus, O., Noel B. Wysong, Golconda, Ill.; and Special Awards, Dr. and Mrs. L. C. Chadwick, Columbus, O., B. G. Pratt, Jr., Patterson, N. J.

Davey Tree Expert Co., Kent, O., exhibited the new Davey tree digger. Machine trenches circle completely around tree for standard moving process.

Meeting Dates

Western Street Tree Symposium, 11th Annual, University of California, Santa Cruz, Calif., Sept. 11.


Midwest Turf Fall Field Day, Midwest Regional Turf Foundation and Purdue University, Purdue Agronomy Farm and Experimental Green, Lafayette, Ind., Sept. 30.


Southern California Equipment and Materials Educational Exposition, City Park, Lynwood, Calif., Oct. 16-17.


Industrial Weed Control Conference, 3rd Annual, Texas A&M University, Memorial Student Center, College Station, Tex., Oct. 20-22.


40th International Turfgrass Conference and Show, Golf Course Superintendents Association of America, Fountainebleau Hotel, Miami Beach, Fla., Jan. 19-24.

American Sod Producers Association Annual Meeting, Fountainebleau Hotel, Miami Beach, Fla., Jan. 22.