

# Lausche Tells 42nd ISTC Convention: Man's Indifference Is Creating an Ugly America

"Man and man alone is primarily responsible for making a rich and lovely land, once covered with vegetation, into an ugly sight," Ohio Senator Frank J. Lausche, told the keynote luncheon of the 42nd International Shade Tree Conference Convention, held at the Cleveland-Sheraton Hotel, Aug. 28 to Sept. 2. Deploring the defoliation of America, the senator cited the destruction of trees by home construction, road building, and strip mining in particular.

What can be done about this vast waste of natural beauty? Lausche's resounding reply: Plant Trees. Recalling his years as Ohio's governor, the white-haired statesman pointed with pride to Ohio's sesquicentennial year of 1953 and the "Plant a Tree" program he initiated. Twenty-five million trees were reported planted under the program. What has happened to this impetus? he asked. The senator seemed hopeful that an audience of over 800 arborists was prepared to implement its convention theme: "Beautify with Trees."

Following the keynote luncheon, delegates returned with a purpose to the educational sessions that had been in progress since Monday morning. Beautification does not result from digging a hole and throwing in a tree, but from well-planned planting programs, from knowing how to maintain the tree, and from knowing how to save the tree from its own environment if necessary, delegates were told.

Beginning with an investigation of the complex of interacting factors that cause decline of hardwood trees in urban conditions by Dr. Wayne Sinclair, plant pathologist from Cornell University, Ithaca, N. Y., delegates heard and discussed a wealth of techniques for planting and preserving trees. Soil fertilization and aeration, treatment for soil fills, and the use of soil wetting agents for saving trees and promoting growth were described; municipal and industrial planting programs were brought



Shovel wielders for tree planting ceremony on Cleveland's mall are (left to right): John Michalko, Shade Tree Commissioner of Cleveland and general chairman for the convention; Dr. Richard Campana, ISTC's '66-'67 president from Orono, Maine; O. J. Andersen, '65-'66 ISTC president from Houston, Tex.; and Ohio Senator Frank J. Lausche, who delivered the keynote luncheon speech. William P. Lanphear, III (far left) was meet co-chairman.

into focus; special areas, such as tree evaluation, growth retardation, and personnel problems and management were discussed. All with an eye to helping the arbor industry do a better job.

## Wetter Water Slakes Soil

To make water wetter, to make it penetrate soil faster and wet more uniformly, Robert A. Moore, of Aquatrols Corp. of America, Camden, N. J., recommends adding soil wetting agents to water. Explaining that the tension forces of plain water inhibit penetration of small (capillary) pores in soil, he counseled that "only a few thousandths of one percent of wetting agent is needed to reduce tension forces by 60% or more."

"A soil treated with wetting agent also holds water at lower tensions," he continued, "thereby increasing the availability of water and nutrients, and enabling plants to go up to twice as long between waterings." Moore recommended use of soil wetting agents in street tree plantings and in shopping mall plantings where treatment allows water to penetrate dense balls to the plant

root zones. Wetting agents can be added to mulches to help keep them in place, drain more readily and uniformly, and to increase plant response from improved water supply.

When balled nursery stock is treated before shipment, watering is more effective and stock arrives and keeps fresher, Moore stated. He also emphasized the benefits of "puddling-in" with wetter water. "The complete wetting and rapid penetration of soil and tree ball eliminates air pockets and allows the tree to be set at final grade. No settling occurs." How much do wetting agents increase soil penetration? According to the man from Aquatrols, wetter water moves through the soil profile in about 2 hours as opposed to 24 to 48 hours for untreated soils. "Wetter water assures the most desirable type of soil moisture condition: good penetration into dry areas, rapid drainage of excess moisture in wet areas."

## How To Treat Soil Fills

"Roots buried under soil fills by contractors cannot receive the normal supply of oxygen and



The gavel is passed as ISTC officers look to the year ahead. Officers (left to right) are Dr. Lewis C. Chadwick, executive secretary, from Columbus, Ohio; Freeman L. Parr, vice president, Hicksville, L. I., N. Y.; Dr. Richard Campana, '66-'67 president, University of Maine, Orono; C. Elmer Lee, president-elect, of Los Angeles, Calif.; O. J. Andersen, '65-'66 president, from Houston, Tex., and Dr. Paul Tilford, ISTC editor, from Wooster, Ohio.



Tree dedicated to the late veteran treeman Charles Irish is planted at Holden Arboretum, where commercial equipment demonstrations were held. At the shovels (left to right) are Dr. Richard Campana, Dr. L. C. Chadwick, Dr. Paul Tilford, and O. J. Andersen.



National Arborist Assn. officers confer. From left to right, '65-'66 president Edwin E. Irish, of Warren, Mich.; '66-'67 president, Harry A. Morrison, of Wilmette, Ill.; and NAA executive secretary, Clarke W. Davis, of Washington, D. C.

**Candids Snapped**  
at this year's  
**ISTC**  
**Convention**



Delegates sign in for the six-day long Shade Tree Convention.



Municipal arborists Albert Ayling (left) and Brian Fewer (center) get set for their talks as chairman Carl Schiff looks on.



Above: Conventioneers pass through lunch line at Holden Arboretum barbeque. Below: Overall view of commercial exhibit area in convention headquarters hotel.



Monday afternoon speakers, John Z. Duling (right) and Ralph G. Carmichael (center) pause to discuss their talks with session chairman, Dr. Richard Campana.



Opening session speakers, Dr. Wayne Sinclair (right) and Robert A. Moore (left) compare notes with ISTC president Andersen.



## BLUE VERVAIN

(*Verbena hastata*)



Blue vervain, also called wild hyssop and purvain, is a perennial plant that reproduces by seed and short rootstocks (rhizomes).

Native to the United States, blue vervain is found throughout the Mississippi Valley and eastern states. The plant grows in pastures and meadows, along roadsides and fence rows, and in waste places. It is most commonly found on low, moist ground with gravelly or heavy loam soils.

Leaves (1) are opposite, 3 to 6 inches long. They are pointed, saw-toothed, rough textured, and prominently veined. Dark green above, leaves are a grayish-green below.

Blue vervain grows 2 to 4 feet tall. Upright stems are 4-sided and slightly hairy. Branches occur near the top of the plant (2).

Small, blue flowers appear in compact spikes that are 2 to 6 inches long. Flowers begin to bloom and mature from the base of the spike. They are less than  $\frac{1}{4}$  inch across.

Reddish-brown seeds (3) are borne four in a pod. Seeds are about  $\frac{3}{32}$  in. long. They are oblong with an oval side and two flat sides, and have a white scar at the base. Oval seed surface is ridged.

Blue vervain is a shallow-rooted plant that becomes hard and coarse as it matures. Annual mowing will help to control the plant. Application of 2,4-D at 1 pound per acre will usually provide good control.

Prepared in cooperation with Crops Research Division, Agricultural Research Service, United States Department of Agriculture, Beltsville, Maryland

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water to maintain a healthy tree condition," John Z. Duling, Muncie, Ind., tree expert indicated. "When we find a fill or grade exceeding 6 in. over most of the root area of established trees, we recommend that plans be made to allow air and water to reach the roots in the original grade."

Where 6 in. to 18 in. of fill is in place, holes are drilled through the fill, which is then loosened with air pressure before blowing in fertilizer and sand and filling with pea gravel. "In places where the fill will be of greater depth, we recommend that an aeration system be installed," the Indiana arborist said. If the fill is already in place, it must be removed in the tree area to the original grade. "A system of field tile is laid on the grade in the pattern of a wheel with the spokes running into the base of the tree, where a tapered base of stone is laid around the tree trunk." The area is vented to the surface, filled with 6 in. to 12 in. of stones, covered with burlap or straw, and then soil fill installed. After installation, fertilizer can be applied through the vent pipes.

Duling added that there may be a lesson to be learned from trees that have survived soil fills by developing a second root system for the new conditions. Charles Schmaltz of Rochester, N. Y., has successfully induced new root growth "by wounding the trunk or major roots just prior to applying the fill. Exposing the cambium by a notch or cut and then covering the wound with a moist medium, such as sand or moss, results in root growth from the wound." The treeman described this as an interesting new possibility for arborists.

### How To Plant Curbside Trees

"The trend toward planting in curbside excavations in business areas is obviously on the increase," Edward J. Brarmann, Jr., Supervisor of Forestry for the Jersey Central Power & Light Co., Morristown, N. J., commented. "I believe the underlying motive is a desire for added color afforded by fruit, green foliage, and attractive blooms, rather than shade."

Underlying the new concept of street tree planting, he termed creation of the typical old tree-shaded thoroughfare "neither desirable nor practical." Business area conditions are not suitable



Dr. Paul Tilford (left), former NAA executive secretary congratulates commercial arboriculture panelists on their presentations. Others shown (left to right) are Ed Irish, panel moderator; Wayne C. Morgan; Dr. Eugene B. Himelick; and Jack Wikle.

for large trees. "A tree must grow naturally to fit the space available or be contained within the space limitations by frequent pruning."

Recounting his own experience with the business area planting project in Englewood, N. J., Brarmann stressed the importance of advance planning. "The desire for early results shouldn't prompt premature planting activity," he warned. Site locations, intervals (a minimum of 60 ft. to 70 ft. was recommended), and careful tree selection to assure diversified plantings should be determined well in advance for an entire project area. Use a minimum of 4 ft. by 4 ft. for sidewalk cutout size. This increases cutting and repaving costs, but reduces root interference by sidewalks. Brick was found unsatisfactory for surfacing the excavated areas; concrete blocks are relatively satisfactory; the use of Belgian block seems to work well.

"Any business area planting project is, by its very nature, a 'show place' and must be so maintained," Brarmann stressed. "Municipalities unaware or unwilling to accept the maintenance aspects of the business planting project, should not undertake such a program in the first place."

#### Industrial Landscaping Push

Working seven days a week,

through sub-zero winter weather, against an "impossible-to-meet" deadline, Davey Tree of Bettendorf, Iowa, landscaped the better part of 300 acres in nine months, Ralph G. Carmichael, Davey treeman, told an afternoon general session. Mobilizing all its resources, Davey finished on schedule, though sod was laid and a tree planting ceremony held on frozen ground.

Haste did not create a lack of care, Carmichael emphasized. For example, though more than 2,700 trees were removed from the land (new home of the Deere & Co. administrative center), he related that "trees outside the construction area were removed only after a complete review was made of each situation and unanimous agreement was reached." Extensive measures were taken to protect desirable trees. "All construction contracts contained tree-protection clauses and provided for penalties in the event of tree damage," a procedure that Carmichael notes has paid off handsomely.

During construction, trees were pruned, braced, cabled, and sprayed for insects and diseases. Land was treated with equal care, as 75,000 cu. yds. of topsoil were added and 50 acres of damaged land surface recontoured. Of these acres, 35 were machine graded, fertilized, and planted with 22 different seed mixtures, depending on sun, shade, soil,

## Meeting Dates



**Mountain Lake Right-of-Way Maintenance Conference, Annual Meeting**, Tinker Mountain Motor Lodge, Roanoke, Va., Sept. 12-15.

**Mississippi Turfgrass Assn., Annual Fall Meeting**, Jackson Country Club, Jackson, Sept. 13.

**Northern Michigan Turfgrass Conference**, Traverse City Country Club, Traverse City, Sept. 13.

**Northwest Nurserymen's Indian Summer Session**, Salishan Lodge, Gleneden Beach, Ore., Sept. 16-18.

**California Assn. of Nurserymen, 56th Annual Convention**, Yosemite National Park, Calif., Sept. 20-22.

**Rocky Mountain Regional Turfgrass Assn., 12th Annual Equipment Exposition**, City Park, 23rd Ave., Denver, Colo., Sept. 21.

**University of Minnesota Annual Shade Tree Maintenance Short Course**, St. Paul campus, Sept. 21.

**Pacific Northwest Spraymen's Assn. Spray-O-Rama**, Thunderbird Motel, Portland, Oregon, Sept. 23-24.

**Oklahoma Nurserymen's Assn., Annual Convention**, Western Hills Lodge, Wagoner, Sept. 26-27.

**Arizona Nurserymen's Assn., Annual Convention**, Nogales, Sept. 26-27.

**Missouri Lawn and Turf Conference; Missouri Valley Turfgrass Assn. Annual Meeting**, University of Missouri, Columbia, Sept. 28-29.

**Montana-Wyoming Turf and Nursery Assn., Convention**, Montana State University, Bozeman, Oct. 3-4.

**Ohio 25th Short Course on Roadside Development**, Departments of State Bldg., Columbus, Oct. 3-7.

**University of Florida 14th Annual Turfgrass Management Conference**, Ramada Inn, Gainesville, Oct. 4-6.

**National Recreation and Park Assn. Congress**, Washington-Hilton Hotel, Washington, D.C., Oct. 9-13.

**Florida Nurserymen and Growers Assn. Trade Meet and Short Course**, George Washington Hotel, Jacksonville, Oct. 14-16.

**National Conference on State Parks, 46th Annual Meeting**, Kentucky Dam Village State Park, Ky., Oct. 16-21.

and other factors. More than 15 acres of bluegrass sod was laid after hand finishing and fertilizing the land. Carmichael commented wistfully that he didn't think this landscaping achievement would be surpassed in his career.

### Westward Wind Woes

Biggest problem facing tree growers in San Francisco, sometimes known as the "treeless city," are the strong westerly winds up to 25 miles per hour during all seasons of the year. Frisco's supervisor of landscaping and street tree planting, Brian Fewer, came to the Cleveland shade tree meet to report his planting program for the peninsular city.

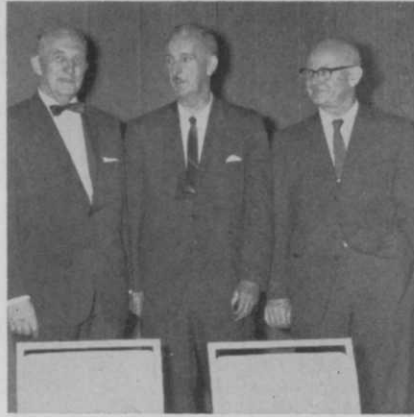
His two-pronged attack to erase the tree-bare reputation includes a municipally run landscaping effort on boulevards, traffic islands, freeway interchanges, hospital grounds, and planting of street trees with city funds. The second phase encourages property owners and merchants to plant and maintain their own street trees.

A pilot tree program during the last 10 years is revealing species which will withstand the rigors of Frisco's shifting fogs, cool weather, and the Pacific's air-conditioning winds, Fewer explained. And, thanks to an active public relations campaign, the initial disinterested public attitude towards a planting program has been reversed. More than 50,000 trees have been planted in the last six years by this "do it yourself" program, Brian Fewer boasted.

### A Tree for Every House

A tree ordinance in Warren, Mich., requires each builder to pay the city to plant a tree in front of each new house he builds. Enactment of this law was one of the first tasks Albert T. Ayling, Warren's city forester, accomplished when he was hired six years ago to set up the town's forestry department. Money a builder pays is extracted when he takes out the building permit and then is deposited in a fund which helps finance an annual planting of over 4,000 trees.

A stumbling block to be surmounted by forester Ayling was where to locate the trees to supply this voluminous demand. "Trees are in great demand and short supply. In order to insure



Tree evaluation was the discussion topic for municipal arborists (left to right): Wilbur Garmhausen, Jr., Harold Groth, and George Creed.

a steady supply of desirable species, something unusual had to be done," Ayling recounted. Answer? City Council was asked to approve the bidding of a five-year contract for 4,000 trees per year. Cottage Gardens Nursery, in Warren, was the original successful bidder in 1962 and another contract has just been let to run for five years more.

Warren's forestry chief sees these advantages of such a long-term arrangement: assured dependable supply of specified species and sizes, scheduled and coordinated delivery, and lower unit cost.

### Panel Airs Tree Needs

"Trees are no different from other plants in their basic nutritional requirements," Dr. Eugene B. Himelick, of the Illinois Natural History Survey, Urbana, instructed. Opening speaker on the fertilization and aeration panel arranged by the National Arborist Assn., the tree expert went on to describe results of fertilization studies in progress for four years at the Morton Arboretum, Lisle, Ill.

In tests conducted with Dr. Dan Neely, five types of fertilizers were applied to pin oak, white ash, and honeylocust by four different methods: surface application, dry in holes, solution injection, and foliar spray. Trees responded equally well to all methods but foliar application, where little benefit resulted. Trees were measured for circumference growth and also rated for deepness of color, found to correlate closely with growth response.

Fertilizers used were ammonium nitrate, urea, P-K combination, N-P-K balanced fertilizer, and N-P-K with minor elements

added. "Where nitrogen was included in the fertilizer," the plant pathologist summarized, "similar benefits in growth were obtained, while phosphorus and potassium alone gave no significant increase over the check."

In other tests conducted at Oregon, Ill., 6 lbs. of urea per 1,000 sq. ft. have been applied to four species. First year results show treatment increased growth 190% in walnut, 95% in sycamore, 51% in green ash, and 5% in red pine. Six pounds of N per 1,000 sq. ft. is about the optimum amount for good growth response, Dr. Himelick said.

The arborist offered these suggestions for fertilizing trees: measure accurately the area in sq. ft. to be covered, using a square or rectangular grid for ease of computation; apply N at 6 lbs. per 1,000 sq. ft. by surface, hole, or injection methods; apply P and K in a balanced mix every three to five years or when tests indicate a need; when applying dry in holes, drill 12 in. to 15 in. deep at 2 ft. intervals, and beware of using too much fertilizer; for soluble injections, apply 18 in. deep at 2½ ft. intervals.

### Vertical Mulching Airs Soil

Wayne C. Morgan, of the Agricultural Extension Service, University of California, second speaker on this symposium, advised that poor irrigation practices, too-rapid water runoff, and grass competition often work to the detriment of trees planted in turfgrass areas. What will help correct this problem? Vertical mulching, the extensioner answered, enthusiastically.

Drill 18 in. deep holes with a 2 in. or 3 in. auger, one per sq. ft. within the drip line, and fill with sawdust, shavings, and fertilizer. Results have been apparent within two weeks, Morgan reported. Vertical mulching provides channels for water and nutrients to enter the soil, allows for a more favorable rooting medium, and adds moisture holding capacity.

The practice benefits not only established trees but also newly planted balled trees. For these, he recommends slanting the hole across existing soil into the ball of the transplanted tree. The Californian added this caution: unless there is a real need for water, air, and nutrients, there is no need for vertical mulching. Not much, if any, improvement



Progress reports on a new growth retardant were presented by members of this utility arborist panel. Panelists (left to right) included moderator Fred A. Ashbaugh, Gill K. Brown, Ralph C. Ratcliff, R. R. Bruns, and B. W. Bergstrom.

will result when trees are normally healthy.

Anchor man on the panel, Jack Wikle, horticulturist with the Davey Tree Co., Kent, Ohio, traced the evolution of Davey practices from complete cultivating of soil around trees, through the trenching technique, to the current widely-employed practice of "perforation feeding" Davey's term for vertical mulching.

#### How Much Is a Tree Worth?

The value of a tree depends upon a number of factors, not the least of which is whether it's a park tree or an individual shade tree. It depends on the tree, on who is evaluating it, on what evaluation system (or combination of systems) is used, and on the feelings of the evaluator. Whatever can be said about tree values, the three Ohioans who addressed the question in a municipal arborist panel, moderated by New Yorker Carl Schiff, agree that tree value guides are much needed and that there is currently considerable difference of opinion on the subject.

Harold Groth, Director of Cleveland Metropolitan Parks, examined the question from the position of the park expert faced with increasing encroachment from highways, utilities, and other public and private agencies. How much is a tree worth? Where parks are concerned, Groth lamented, a tree is too

often considered merely a fixture of the land with no special value at all.

Wilbur Garmhausen, Chief Landscape Architect for the Ohio Department of Highways, directed his talk to the roadside tree program. How much is a tree worth? To Garmhausen, a tree is worth its contribution to roadside beauty, to highway safety, and to maintenance reduction (he cited reduced snow removal costs where woodlands are adjacent to highways.)

George Creed, landscape architect from Cleveland, offered several factors that determine the value of a shade tree, including size, form, ornamental qualities, condition, longevity, adaptability, disease susceptibility, condition, location, and species. How much is a tree worth? A complex question, which depends on numerous factors that Creed feels cannot be reduced to a hard and fast formula. Yet a formula would be a good starting point for appraisers, he adds. If it can be determined, the best basis for valuing a tree is its replacement cost. When he evaluates trees, he has used several different guidelines, and much personal judgment.

#### Municipal Labor Source

"How can we maintain crew strength, and where can we get new men?" This was the perplexing question a panel of four municipal arborists attempted to

answer. Each agreed the market for capable young men is "tight", that salary levels must be raised to compete with those being offered by unions and the federal government; and that there should be a standardized selection method for hiring treemen.

Exchanging opinions on the arid labor pool were James T. Oakes, city arborist for Richmond, Va.; Robert R. Metz, assistant director of the Toledo (Ohio) Metropolitan Park System; Jack A. Kimmel, director of parks for the city of Toronto, Canada; and George S. Stadler, Denver, Colo. city forester. Wrap-up panel opinion was that the industry must do more to improve its public image to attract young men to it. This long-haul objective is not an easy, inexpensive one.

#### Trees and Proximics

B. W. Bergstrom, arborist for the New England Power Service Co., Lynn, Mass., opened his report to the utility arborist panel on tree growth retardants with a definition of proximics: the scientific study of space and how people react to it. He suggested a similarity between the unfavorable reaction of people to close spaces and the reaction of trees to utility lines, which are often uncomfortably close for both line and tree. Among the newest of tools for circumventing the tree-line relationship is the growth retardant B-164, an ethyl ester of Naphthaleneacetic acid developed by the Battelle Memorial Institute. B-164 is applied after pruning in an asphalt wound dressing carrier.

Favorable results in field tests were reported by panelists Bergstrom; Gill K. Brown, Right-of-Way Specialist for the Georgia Power Co.; R. R. Bruns, forester for the Union Electric Co., St. Louis, Mo.; and Ralph Ratcliff, forester for the Consumers Power Co., Jackson, Mich. Capsulizing panel reports, moderator Fred Ashbaugh called the chemical extremely promising, perhaps not the "ultimate" growth retardant, but a good beginning toward a much-needed item.

As for proximics, it was much in evidence in Cleveland, as the more than 800 arborists jostled for post position in the parade of convention activities. Next year's convention has been set for August 27 to 31 at the Marriott Motor Hotel, in Philadelphia, Pa.