ARBORIST'S NEWS

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TWENTY-SEVENTH NATIONAL SHADE TREE CONFERENCE

The 27th National Shade Tree Conference officially opened Tuesday morning, August 28, at Netherland Plaza Hotel, Cincinnati, with Vice-President Noel Wysong presiding. President Edward Higgins was unable to attend the meeting due to illness.

Cincinnati proved to be an excellent host city. Hotel facilities at the Netherland Plaza were of the best; the weather was reasonably pleasant, although on the hot side at the close of the Convention on Friday; arrangements were very satisfactory; and the different events moved along through the week with clock-like precision due to careful planning by the local committee.

Registration

The total registration was 578, being second only to the Cleveland meeting in 1947 which had an attendance of 645.

Thirty-two states, Washington, D. C., Canada, South America and The Netherlands were represented in the registration. Ohio had the largest representation with 182; followed by New York with 48; Illinois and Michigan, each with 44; Massachusetts 29; Pennsylvania 21, Indiana 19; New Jersey 17; Kentucky 16; Connecticut and Missouri, each with 15; Maryland 12; West Virginia 11; Ontario, Canada 9; Iowa 7; Texas and Virginia, each with 6; Tennessee, Nebraska, California, and Quebec, Canada, each with 5; District of Columbia, Flordia and North Carolina, each with 4; Minnesota 3; Maine, New Hampshire, Georgia, South Carolina, and Kansas, each with 2; and Vermont, Arkansas, Colorado, Oregon, Netherlands, and South America, each with 1.

One hundred nineteen women and children were among those registered.

Program

Seventeen outstanding speakers appeared on the educational program discussing a variety of subjects related to shade tree care. All of the papers, discussion and reports of the two business meetings will be published in the annual proceedings as promptly as possible.

Forrest Strong and his committee are to be complimented on the fine display of educational exhibits staged in the hotel opposite the meeting room.

The commercial exhibits showed about everything in the way of equipment and materials for use in shade tree work. The commercial exhibitors are the ones who make our annual convention possible. Of course, they profit from exhibiting, but we also profit.

When we buy equipment or supplies, we should buy from them if they have the items we want.

On Wednesday, luncheon was served at Oak Ridge Lodge at Mt. Airy Forest and the afternoon was given over to a tour of Mt. Airy and Spring Grove Cemetery. Much surprise was expressed at the unusually large amount of plant materials growing at Mt. Airy and Spring Grove.

Tree Climbing Contest

The Conference's first tree-climbing contest was held at Burnet Woods, Tuesday afternoon, along with commercial demonstrations of equipment. Contestants were required to climb to a point about 60 feet above the ground in a large Hackberry tree, crotch their safety rope, move out to three locations in the tree marked by balloons, and descend to the ground by using their rope. Climbers who entered the contest and their time were as follows: Joe Arsenault, Fred Ralston & Co., Boston, representing the Massachusetts Arborist Association—2 min. 32.6 sec; Kenneth Gregory, Rutherford, N. J., representing the New Jersey Federation of Shade Tree Commissions and the New Jersey Arborists' Association—3 min. 23.6 sec.; Wilbur Clark, Bartlett Tree Expert Co., Danbury, Conn., representing the Connecticut Tree Protective Association—4 min. 7.7 sec.; John Koskovich, American Tree Service, Fergus Falls, Minn. —5 min. 29.1 sec.; Dixon Summerling, Covington, Kentucky, employee of Davey Tree Expert Co.—6 min. 51.2 sec.

Joe Arsenault, winner of first place, and Kenneth Gregory, second place winner, were given special recognition and awards at the banquet Thursday evening. It was hard to tell who was the proudest—Joe, the winner; Fred Ralston, the employer; or J. Cooke White, the trainer.

All six boys put on a fine climbing demonstration and are to be highly complimented. One old timer in the crowd made the remark "I'll hire any man who can climb that tree, touch all 3 balloons and come back down in half an hour."

While the climbing contest was of intense interest and no doubt will be a feature of future Conferences, more study needs to be given to the setting up of rules for the contest. Time is of importance in any contest, but in a tree-climbing contest safety is of first importance. A good many observers of this year's contest thought that some rules of safety were violated and that in the future definite safety rules should be formulated for the contest. The violation of any safety rule should automatically disqualify the contestant regardless of time. With more thought and planning, and with this year's experience to work on, undoubtedly climbing contests can be arranged at future meetings which will meet all safety requirements.

Plant Identification Contest

First place in the plant identification contest arranged by the local committee was won by W. H. Lindberg, Columbus, Ohio, with a score of 85 out of a possible 100. Second place was won by D. J. Jannazo, also of Columbus with a score of 84. Chas. F. Irish, Jr., Cleveland, whose score was 83, took third place.

Officers

Our new president is Noel Wysong, Forester, Cook County Forest Preserve District, River Forest, Illinois. Dr. George S. Langford, University of Maryland, College Park, Maryland, was elected Vice-President. L. C. Chadwick, Columbus, Ohio, and Paul E. Tilford, Wooster, Ohio, were reappointed as Secretary-Treasurer and Editor, respectively.

The entire local committee with E. A. Sanford as general chairman did a fine job with arrangements. Putting on a convention of this size requires a tremendous amount of work. The committee never let up once, but carried the load through to a most successful conclusion.

An outstanding first of this year's Convention was the 4-inch pin oak moved into the lobby of the Netherland Plaza hotel by the Wm. A. Natorp Co. The tree held its leaves all during the meeting and served not only to welcome the members as they arrived but as a good publicity agent for the National Shade Tree Conference.

We were extremely sorry that President Ed Higgins could not attend, but we were happy to learn that he is recovering from his illness. Next year when we meet in Boston he expects to be on hand in good condition.

NATIONAL ARBORIST ASSOCIATION

Meetings and Officers

The National Arborist Association assembled in the Pavillon Caprice room of the Netherland Plaza, Monday morning, for a full-day's meeting. The morning session was given over to discussion by the members of problems concerning the care of trees in landscape plantings. The afternoon discussions related to wages, prices charged for work, problems involved in obtaining, training and keeping good help to do tree work.

Stephen Pugh, Southern Telephone and Telegraph Atlanta, Georgia, gave an exc talk on the line clearance pr from the Southern Bell Com standpoint. The Monday afte program ended with free disc by the members of line cle problems.

At the Board of Directors' ing on Tuesday morning i decided that the National Ar Association would hold a meeting apart from any meeting in addition to the a meeting held each year in junction with the National Tree Conference. Plans fo winter meeting will be deve and announced later.

The Association's annual and business meeting were Wednesday evening with 96 ent. Officers elected for the e year are as follows: Presid Oscar F. Warner, Landscap ester, Waterbury, Conn. 1st President — Sidney McNeal, Neal Tree Service, Tiffin, 2nd Vice-President — J. G e Corr, Blume System Tree E Houston, Texas. Secretary— Engledow, Midwestern Tre perts, Indianapolis, Ind. Tre —Hackett C. Wilson, Wilson Co., Shelby, North Carolina mediate Past-President—Wal Morrow, Morrow Tree Co., S ley, Penna. Executive-Secret Paul E. Tilford, Wooster, Directors—George Goodall, all Tree Expert Co., Por Maine (for 1 year to comple expired term of C. C. Har Ray Gustin, Jr., Landscape Tree Service, Silver Spring, (for regular 3-year term). Ros rens, Farrens Tree Surgeons, sonville, Florida, continues o Board for two more years.

TURF MANAGEMENT IN SHADETREE AREAS[1]

WILLIAM H. DANIEL
Purdue University

It is a pleasure to have this opportunity to appear on your program. Shade trees and turf go hand in hand to make a beautiful scene. Either one without the other usually isn't a complete picture. The difficult point is that under shade trees a delicate balance must be maintained that will allow the turf to grow as well as to maintain the beauty and value of the shade trees. Therefore, the physiology of the plant is of great importance. Its nutrition from an organic as well as an inorganic standpoint becomes a problem.

Have you thought what would occur if you tried to grow a putting green under dense shade? It is only in the bright open sunlight that the creeping bent grasses form a dense mat close to the ground which is so necessary for putting green surfaces. Bentgrasses can be grown in dense shade when it is cut high enough to give the necessary leaf surface for the production of the organic nutrients needed by the plant. Recently I saw a lawn under maple trees planted to bentgrass. The owner stated this was the most grass he had ever been able to produce. He was cutting it 1½ inches high. If your shade trees reduce the amount of light reaching the turf below, you can partly make up for that by allowing more leaf surface by a higher cutting level. One of the problems that you are frequently confronted with is how to manage the trees and yet get the necessary light to the turf. Trees offer another problem as to air movement. Where the air movement is restricted, moist, dense grass is more subject to diseases, such as leafspot, dampening-off, and brownpatch. The movement of air may be increased by providing air passageways through trees or shrubs.

Probably early in this discussion there is one fact we should get straight. Although you and I have for years been saying, "Give a higher cut, raise the mower blades, allow the turf more chance to utilize the limited sunlight reaching it," we must consider the mechanical construction of mowers. Recently Consumers' Union examined 36 lawn mowers, and one factor considered was their cutting heights. As I understand this report, many of the lawn mowers actually could be raised to cut no higher than 1½inches but will cut down to ½ inch or less. Even if the mowers did cut higher, we still have to consider the fact that the public want their lawns cut very close so that it will look smooth, or because the neighbors cut it low, or the golf green is cut low and it looks beautiful. So you will have to accept a low cut as one of the necessary factors.

One of the things that is important in the management of turf throughout the year is the survival of a satisfactory turf during the few days in which there is a drought condition. If we let a horizontal line graph represent the moisture components of the soil, we have on one extreme dry soil and on the other extreme wet soil. On the left hand side is a point indicated as the wilting point of the soil,

1. Presented at Midwest Chapter meeting, February, 1951.

which is 0% availability. At that point grass must have additional water applied to it in order for it to regain its turgidity, and if that water is not applied, the turf will go dormant or die. Between the wilting point and the field capacity is represented the water available for the growth of the plant. It is that portion which we are most interested in because of its availability. Water applied in excess of that amount is gravitational water which goes through the soil if it possibly can and is considered surplus. Another way to express available water is by a line graph illustrating the use of available water over a period of time. Between field capacity and 20% available soil moisture the plant can secure water readily. Below 20% the rate of water used decreases as the turf progressively wilts, until the turf goes dormant or dies when zero percent available is reached.

If we avoid letting the grass become dormant, it will have an earlier start in the fall and can resist the invasion of annual weeds as well as provide a much better turf. If water is applied only when the available soil moisture is low, below 20% available, it may require very little supplemental irrigation to maintain it through drought periods. On the other hand, excessive water applications have been the rule in many areas where irrigation facilities are available. This often results in shallow root systems and weed infestations.

In an experiment conducted at Michigan State College, the more water applied to field plots, the more yield obtained. However, high yield on turf means more mowing, more labor, more expense. So as long as a yield which a suitable growth can be obt that is all that is necessary. W much more interested in mai ing good root growth than i top growth that must be cu Grass growth was most satisf in those conditions where th moisture was allowed to flu between 100% and 20% avai Under these conditions the distribution of roots was prod Also in the case of bluegras underground rhizomes, whic duce the fall thickening of grass, were very large. In thos tures where the grass was al to wilt periodically, the rhi were small, brown, inactive the turf did not produce clones. Where excess moistur applied, the roots were prune no rhizomes were produced.

In the turf research progr the Midwest Regional Foundation, which is maint at Purdue University, we ar coming very interested in th trol of moisture by the po Bouyoucos soil moisture mete believe that since it indicate available moisture to the tur warns when supplemental i tion is actually needed, it wi duce the labor and water req for maintaining turf areas.

When considering the pos ties for new turf grasses, we briefly mention the follo Merion bluegrass, Alta fescue Bermuda, Zoysias, and F-74 f In Merion bluegrass we hav the first time a selection of grass which withstands a height of cut and is also lea resistant. Therefore, it does thin out in early June, so new hope for the possibility o proving bluegrass as compone our mixture in lawns. In con

son with commercial bluegrass it has proved superior in almost all tests. The seed is now in commercial production and limited supplies are available.

Another newcomer is U-3 Bermuda. As you know, Bermuda is very common in the southern states and its most desirable characteristic is that it grows vigorously during hot weather. Thus it is able to resist crabgrass infestation and to recover from injury. It grows by stolons along the ground and rhizomes underneath. It must be planted vegetatively and has the disadvantage of turning dormant and brown with the coming of cool weather and the first frost. For that reason, we are interested in combining grasses such as Merion bluegrass with it to provide green turf throughout the year. It does require sunshine so will be of only limited interest to you.

The Zoysias I might mention briefly since there is an expanding breeding program with them. Zoysia turf is the most wear-resistant turf we have. It grows more slowly than U-3 Bermuda but is excellent for mixed stands of Zoysia and Merion bluegrass. Once established it forms a very dense, tight sod.

Alta fescue and Kentucky 31 fescue, germinate rapidly, are tough, and grow in cool weather. For athletic fields, parks, and airports alta fescue can advantageously be a part of the mixture. Although it will withstand reasonably low cutting, it is favored by cutting more than 2 inches high.

From the standpoint of maintenance of turf under shade trees, the fescue breeding program at Penn. State College offers the most promise of all new grasses. Dr. H. B. Musser, in charge of turf breeding, has several new strains of fescue which appear promising but are not yet in commercial seed production. I mention them just to remind you that the standbys of Illahee fescue, hard fescue, creeping red, and Sheeps fescue are possibly going to be supplanted by fescues that are more vigorous, will withstand lower cutting and have a better survival in our standard lawn mixtures. For example, in his plots F-74 fescue has survived cutting at putting green height for 3 years. Its seed production is well started at this time.

When a heavy growth of crabgrass has developed during midsummer, late summer treatments with sodium arsenite or potassium cyanate have been effective. They burn off and kill the top growth and provide openings for improvement of the turf by fall renovation and seeding. When applied during the early growth of the crabgrass, they have been used successfully to kill the young crabgrass growth. At Purdue University in 1950, two applications of potassium cyanate at 8 pounds per acre and applied seven days apart gave complete kill of crabgrass seedlings in early July.

The compounds utilizing Phenyl-Mercuric acetate, as PMAS, Tat-C-Lect, etc., are of value in chemical crabgrass control. Climatic and soil moisture conditions are important in the use of PMAS compounds. When PMAS is used, it is advisable to apply it often and in sufficient doses so as to effect a kill, not just a mere yellowing of the turf for a few days.

When we think of fertilization, our first thought usually goes to nitrogen because in so many instances nitrogen is the most limiting of the fertilizing nutrients. Its uptake is limited by excess soil moisture, cold ground, bacterial in-

activity, and poor root penetration. However, on turf areas which you are most likely interested in, a reasonable application would be near 3 pounds of elemental nitrogen per 1,000 sq. ft. per season. In terms of some of the available fertilizing materials, this would be 15 pounds of ammonium sulfate per season, 50 pounds of milorganite, or 10 pounds of ammonium nitrate, etc.

In 1950 we had an excellent opportunity to observe the effects of sufficient nitrogen applications on the recovery of Purdue football field, Lafayette, Indiana. Up to June 1 this field had received no fertilization, and since it was a new seeding on new soil, a severe nitrogen deficiency had developed. We applied 500 pounds of ammonium nitrate or about 3 pounds of nitrogen per 1,000 sq. ft. to this field during June, July and August. Also we raised the height to cut from ¾ inch to 2½ inches and cut it twice weekly. By September 8 the field was in excellent condition for playing, and it was cut at 1¾ inches for the remainder of the football season. This field has a mixture of Alta fescue, Merion bluegrass, and U-3 Bermuda.

This field was irrigated satisfactorily, but the mere application of water will not make up for the needed fertilizer nutrients. On the other hand, improper water applications can limit the availability of fertilizer nutrients. In the greenhouse we grew three grasses on two soils under good soil moisture conditions. The fertilized grasses produced twice as much top growth as the unfertilized grasses. During the 100 days that the experiment was conducted, the amount of water required by the unfertilized was 85% as much as the fertilized. During the same time the unfertilized produced only 75 many roots as did the fertiliz

Another point to consid aerification. Water penetratio seed germination in most would be more effective foll the loosening of the soil. So the smaller aerification tools profitably have a place in you improvement program.

Look around, when you co improving a turf area. V grasses have survived? Why? which do not survive are expensive fertilizer. Have yo served that a single clump of or bluegrass may cover six or square inches. And did you about its size the next tim planted more than 2 poun mixed seed per 1,000 sq. ft. you realize that at this rate yo 25 viable seed per square in

To sum up turf manag under shade trees:

(1) Fertilize with nitrogen o plete fertilizer as 10-6-4.
(2) Cut as high as practicabl
(3) Water thoroughly, but when definitely needed.
(4) New grass strains shou tried under your condi These include Merion grass, Alta fescue, U-3 muda and the new f when available.
(5) Effective chemical contr crabgrass requires a de schedule of treatments.
(6) Aerification tools are ava to loosen the soil under
(7) Seeding rates may be lo good seedbed is provide adequate fertilizer is ap

CONNECTICUT MEETI

The Connecticut Tree Prot Association meeting, held Ju at Bruce Park, Greenwich, necticut, was a huge success

over 300 present. A clam bake and all the trimmings with free beer furnished by Jim Shafer (Pratt Co.), Jack Robinson (Hardie Mfg. Co.) and Jim McArdle (Greenwich) both filled and mellowed the occasion.

There was lots of talk, but no speeches and a grand time was had by all. The rope-throwing contest was won by Fred Kelly, one of Tim Janosko's boys from Stratford. Wilbur Clark, Danbury Division Bartlett Tree Expert Co., won the tree climbing contest. (Wilbur represented the Association in the climbing contest of the National Shade Tree Conference at Cincinnati.)

Dr. Raymond Kienholz, Professor of Forestry, University of Connecticut, was nominated by the membership for one of the American Forestry Association Conservation Awards for 1951.

Joe Dietrick, Park Superintendent, Greenwich, and his boys surely went all out to make the meeting a success.—John B. Woodruff.

FRANK PIPAL RETIRES

Frank J. Pipal retired from active duty as City Forester for the City of Omaha, Nebraska, on August 1. Frank has been City Forester for Omaha for a long time and has done an outstanding job in a part of the country where fine trees are the exception rather than the rule. His work with the Junior Foresters has been recognized and copied the world round. A natural-born teacher, Frank Pipal has accomplished far more than the average in carrying the message of Shade trees and conservation in all of its aspects.

Mr. Pipal expects to continue his interest in municipal forestry and will do some traveling. He will be available for consultation on municipal tree problems if the occasion arises. His home address is 1515 North Happy Hollow Blvd., Omaha.

OAK WILT SURVEYS

Many federal and state agencies have engaged in oak wilt surveys during the past summer. Much of the surveying has been done from low flying planes. Suspicious trees are spotted on a map and later visited and sampled for culturing by ground crews. Very few areas have been completely surveyed but a large number of new disease locations have been found.

A survey summary issued by the Division of Forest Pathology, U.S.D.A., August 10, reports confirmed oak wilt locations in the following states where the disease was not known to occur previous to this year: Michigan, Maryland, West Virginia, Tennessee and North Carolina. Additional locations have been found in states where the disease was discovered first last year. These states are—Arkansas, Indiana, Kansas, Ohio, Nebraska and Pennsylvania. Oak wilt has been known for several years in Illinois, Iowa, Minnesota, Missouri and Wisconsin.

When the surveys are summarized at the end of the summer, undoubtedly many other disease locations will be reported. The finding of so many new locations leads one to speculate that oak wilt may finally be found over most of the eastern half of the United States.

FORESTER WANTED

Forester with horticultural experience for position with Park Board, City of 27,000. Salary $4,000. Apply Board of Park Commissioners, Grand Forks, North Dakota.