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CENTRAL PLAINS TURFGRASS FOUNDATION

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KANSAS STATE UNIVERSITY
MANHATTAN, KANSAS

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June, 1963

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We were "pleased as Punch" with the Topeka Field Day. Total registration was seventy with at least six wives registered. We never saw a meeting where there were fewer people outside of the meeting room. The facilities of the Shawnee Country Club were excellent with good air conditioning and a good dark room for showing slides and movies. We felt the speakers did an excellent job of getting the information across and were pleased with the audience participation when opportunities for questions and answers were presented. We were, also, happy with the wide distribution of the people who attended. Nebraska, Missouri, Kansas and Oklahoma were all well represented. The committee had provided enough bus seats to take everybody and most of those attending took the tour.

Your Directors labored until near midnight to nearly complete the program for next fall. Our scouts have been skimming the cream from the meetings all over the country and we hope to bring in some new speakers as well as some of the regulars who bring us the latest information in their areas. As we reported to the Field Day, the only criticism of last years Conference was that the room was too big. It is going to be easier to fill the room than it is to move to new quarters, especially if you would try to find parking space in the vicinity of the K-State Union. Accordingly, we are enclosing one of the brochures that Cecil Smith and his membership Committee prepared. He would like for you to invite some professional turf man in your area to our meeting. If everyone who attended last year will bring one more with him, we will have the auditorium nearly full and I am sure we will generate the "give and take" or rapport that will end the one criticism of last years meeting. There will be more audience participation in this years program than there was in last years.

Better get your room reserved early so that you will be sure of a place to stay.

Also enclosed is the second section of the abstract of last years Conference. See you in October!

Yours for better turfgrass,

Ray A. Keen
Ray A. Keen
Secretary - Treasurer

RAK:ejp

Enclosures - 2

"BLUEGRASS FAIRWAYS"

Dr. William Daniels

There are eight qualities of good Bluegrass turf (1) drought tolerance, (2) easiness of establishment, (3) ability to be mowed closely, (4) playing quality, (5) recovery from injury, (6) disease resistance, (7) vigorous growth and (8) density of cover. To keep good turf one must use adapted grasses, mow regularly, fertilize, kill broadleaf weeds, irrigate, and reduce crabgrass competition.

Bluegrass germinates between six and twenty-one days. If one intends to start Bluegrass this fall, he should encourage it to establish a good root system and crown which are necessary for it to survive the winter. This takes from six to eight weeks. Bluegrass germinates best at a one-half inch depth, but one-fourth inch is nearly as good. After planting, mow the thick spots as soon as they need it. Mow it high and leave about two and one-half inches of blade. Rhizome production is a luxury for Bluegrass, and it does not do so unless it has extra nutrition. It is good for Bluegrass to cut off the dead blades at the end of winter. IT SPREADS AND GROWS BEST IF THE MOWING HEIGHT IS THREE INCHES.

One must keep disease under control; for even if the disease does not kill the grass it may weaken it to the point that weeds will take over.

There is merit in anything one does to aerify and to improve water penetration.

"DISEASE IDENTIFICATION"

Stanley Frederickson

A turf disease is the operation of any of a group of factors that continually interferes with the normal structure or the function of a turf plant. The major cause of these diseases is parasitic fungi.

Diseases can be identified by several methods. One of these is by visual perception. This is often difficult because several diseases may have similar visual expression. Other methods involve expert laboratory analysis.

Laboratory analysis may be inaccurate from the standpoint that the disease existing when the sample was mailed may have declined in vigor or disappeared and even may have been replaced by a different disease. For this reason it is very important to include all the facts - weather conditions, etc. Sometimes there is an actual difference of opinion between experts, for some of the complex diseases are very difficult to identify. There is also the possibility that, even if there is a disease and it is identified; that something else, such as drainage, may be causing the actual trouble.

After identification of the turf diseases, the following practices will help in the control and prevention of turf diseases. They are (1) good maintenance practices, (2) knowledge of turf diseases and how to control them, (3) follow a strong preventative fungicide program, (4) use good turf fungicides and (5) consult experts.

Under all circumstances remember that a turf manager does not get paid to solve problems, but rather to prevent them.

"TURF INSECT LAB" †

Dr. Hugh Thompson

Insect attack and cure can be divided into two divisions -- those that attack from the ground line or thatch line up and those that attack below the ground line. Most of the damage is done at the base of the plants and in the soil, so it usually is not noticed until in the advanced stage. If a control spray is applied to control the insect, it may seem that it was ineffective because all the damage may not be perceived until after treatment. In actuality the treatment may have been too late.

Even ants can wear off the grass along their paths by their continued retracing of steps. They will also do some damage by chewing off the roots of the plants.

An insect can attack a plant in two ways depending on its mouth parts. Those being by chewing on the plant (with chewing mouth parts) or by sucking the plant juices, (with sucking mouth parts).

To diagnose the two types of attacks check whether the grass is cut off and lying on the ground. If this is the case, the plants are being attacked by insects with chewing mouth parts. If the grass is brown and erect, in a normal position, the attacks are by insects with sucking mouth parts. If the grass is pulled easily, some insect is chewing off the roots. When applying insecticides be sure to water them in because there are few insects that act on the tops of plants.

"PROPER TURF RENOVATION METHODS" †

Bill Robinson

To renovate is to restore to life and vigor. There are many methods for renovation, and the methods used will depend largely on the cash available and how and when the area will be used. Some methods are: (1) aerification, dragging and matting the cores, and mowing (2) fertilizing and rolling, in addition to the above method, (3) seeding and rolling, (4) application of lime, (5) weed control, (6) rough renovation (plowing it all up), and (6) tearing out thatch with a power rake. An important factor in renovation is whether one can afford a follow-up with good turf management.

When aerifying be sure the grass is growing vigorously so that it will not be too much of a shock, especially do not aerify if it is time for crabgrass germination. Most of the methods, however, are good and depend on the severity of troubles, cost of implementation, speed with which the job needs to be completed and the equipment available. All the methods will be useless unless they are followed by good turf management.

"FOOTBALL FIELDS" †

Tom Shackelford

For football field drainage a parabolic shaped surface with a twenty-inch crown is most desirable. Drainage tile is almost mandatory.

It is desirable to work phosphorous and potash into the soil when establishing a football field because it takes at least eight years for them to work into the soil naturally.

For football fields a Bermuda is needed that produces blades from shorter stems so when the blades are torn off during play there will not be so much discoloration from brown stems.

There is no one grass that meets all the needs of a football field. Zoysia tends to be too slick. Both Zoysia and Bermuda are brown during the season they are used most. Zoysia is also too slow on recovery. Fescue is too coarse textured, and clipping heights best for the grass are too high for play. A disadvantage of cool season grasses is that the field may have to be used in the spring when it is time for their establishment.

Be careful with the application of artificial coloring on warm season grasses because it may not dry if the weather is damp. If the coloring is not dry, it will discolor the uniforms of players.

To help prevent winter kill, send the grass into winter with plenty of moisture.

It is very important to mow often and not remove over one-third of the grass blade. If the grass is cut back too severely, it will go into dormancy and will not develop the anchoring root system needed.

"BLUEGRASS - TODAY AND TOMORROW" †

Dr. Bill Daniels

The steps to produce good bluegrass turf that will withstand extremes of climatic conditions are as follows: (1) mow regularly, (2) kill broadleaf weeds, (3) irrigate, (4) fertilize, (5) reduce crabgrass, (6) prevent insect damage, (7) provide room for the Bluegrass plants, and (8) protect from disease.

Bluegrass normally develops three sets of leaves a year - one just before it attempts to seed, one immediately after, and another set in the fall. It will not do this, however, if one does not fertilize and water.

It is a mistake to plant Bluegrass late in the fall and early winter because it often does not have time to develop the crown and the permanent root system it needs to survive through the winter. When grass is planted it is best to use seed that is predominantly Bluegrass. Even poor grass mixtures will be predominantly Bluegrass in three years or so, but with a good mixture this can be had within months.

Three things can be expected from Bluegrass, (1) you can expect to use blends of Bluegrass for awhile, (2) an increase in private varieties, and (3) really dwarf Bluegrass (this will be a few years yet.)

"ZOYSIA DISSECTED" †

Dr. Fred Grau

Zoysia is a semi-tropical grass that came from Korea, China and the Philippines. It was introduced into the United States in 1900.

The origin of Zoysia was from seed, but it does not produce a true strain in this manner. Quite a lot of seed is being brought into this country; however, there is difficulty with the germination. The hard impervious seed coat must be scarified or removed in some way. This can be accomplished with a hammer mill. The best results from seeding are in June and July with a slight mulch.

Rarely does disease attack Zoysia and when it does it is short-lived. A lot of the imported Zoysia seed is infected with ergot which renders the seed useless.

Zoysia produces a cushion of turf if it is well managed, and it also heals divot scars if it is fertilized. It greens up two to three weeks earlier in the spring and stays green two or three weeks longer in the fall than Bermudagrass.

One problem with Zoysia is winter weeds, especially wild garlic, but they can be controlled simply by mowing or spraying.

PANEL DISCUSSION

"THE SOD NURSERY"

Chester Mendenhall, Bill Daniels, and Harold Henry

It costs just as much to maintain a Bentgrass sod nursery mowed at the proper height as it does to maintain a Bentgrass green. In bent nurseries soil, sand and peat mixtures are needed only a few inches deep. This facilitates the removal of three-fourths inch of sod for several years without having to add a new soil mixture each time. If the sod is removed in the late summer and fall, a sod strip should be left between removed sections of sod so that it may recover.

Nursery Bermudagrass and Zoysia can be grown in peat. Because of the peat's water retention and weight it reduces shipping costs.

Zoysia plugs have a better chance of survival than sprigs because it is so slow to germinate new roots.

Growth starts faster from thinly cut sod (cut at about three-fourths inch thick). Care must be exercised to keep the grass leaves alive by watering so that they can transfer energy to generate new roots.

Planting time for Zoysia is from June to October first. The sod may have to be compacted during the first winter so that it will not heave and let the roots dry out.

"IRRIGATION SYSTEMS"

Herb Clark

The designers of irrigation systems know sprinkler performance, pipe sizes, and sprinkler pressures; but they cannot do an adequate job without help concerning labor problems, local wind conditions and times and hours of the day which the system will be used.

Four points of irrigation system design are: (1) it has to be designed to suit conditions, (2) it has to be installed by experienced personnel with good supervision, (3) it is important to have the correct materials, (nozzles, pipes, pumps, etc.), and (4) owner maintenance may be reduced to a minimum, but it also must be done properly. It requires more experienced maintenance men with the modern, more complex systems.

If distribution proves to be a problem, it may be the result of faulty sprinklers or incorrect pressure -- both of these can be corrected after the system is installed. For golf and park systems, it is best to have forty pounds plus pressure, but there are sprinklers designed to operate at fifteen to twenty-five pounds pressure.

Sufficient coverage is impossible unless there is at least twenty percent overlap of spray patterns and forty percent overlap is permissible.

A good revolving sprinkler gives good distribution from fifty percent to seventy percent of its radius and tapers off to zero at the radial limit. If a sprinkler is ordered that is rated at one hundred feet diameter at fifty pounds pressure, do not expect any irrigation between ninety feet and one hundred feet, (only a few drops), because it is spread over a very long circumference. The larger the nozzle used the more pressure is required, and the gallonage applied is much more than in a direct ratio.

Automatic systems must be more dependable for they are not so closely watched. There is still need, however, for periodic checks to see that the nozzles are functioning properly.

Dirty water produces a maintenance problem. Excessive sand or silt in the supply may wear out or stop up the sprinklers. There are some sprinklers designed to operate under these conditions, but most are not made in such a manner.

A sprinkling system should be designed to apply water to the turf as nearly like rain as possible. It may also be advisable to apply water on smaller areas at a time. This may not only reduce the pump size needed but increase the use of the system. The system under all conditions must be designed for peak use.

The procedure to follow when installing a system is to: (1) secure an adequate water supply. If city water is used, it may be cheaper to have multiple sources! City water may be cheaper in the long run because of the problems created by dirty well or reservoir water although the initial cost may be greater, (2) the system has to be designed completely, including detailed specifications fair to both the contractor and the purchaser, (3) be sure the contract is awarded to an experienced and reliable contractor, (4) see that quality materials are properly installed, and (5) operate and maintain the system as recommended by the designer and the manufacturer.

"NEW LABOR LAWS" ✓

Walter S. Gick

The Fair Labor Standard Act, (wage and hour law), contains the following definition: Employer -- "includes any person acting directly or indirectly in the interest of an employer in relation to an employee, but shall not include the United States or any state or political subdivision of the state or any labor organization other than when acting as an employer or anyone acting in the capacity of an officer or agent of such labor organization."

Since 1938 the Fair Labor Standards Act has established minimum wage, overtime, and child labor requirements for firms engaged in interstate commerce or in the production of goods for interstate commerce. This is restricted to interstate commerce because it is a federal law and the federal government can affect trade only between states.

The minimum wage is now \$1.25 per hour and over-time is time and one-half for any hours worked over forty hours a week.

This Act was amended in 1961 to bring within its jurisdiction five new classifications of enterprises engaged in interstate commerce or engaged in the production of goods for interstate commerce. This now includes employees who do not themselves work in interstate commerce, but who work for enterprises, (defined as businesses engaged in more than one million dollars of business per year), that are engaged in interstate commerce.

The wage and over-time laws do not apply to any business engaged in agriculture including the wholesaling or processing of agricultural products. Nurseries are considered the same as a farm under this Act as long as they sell only what they produce themselves.