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Bossolt Wins N.J. Turfgrass Hall of Fame Plaque

Mr. Roy C. Bossolt received the N.J. Turfgrass Hall of Fame Award at the 1980 Expo.

Roy is a native of Bergen County who became acquainted with hard work on a vegetable farm. After becoming an all-state fullback in high school, he graduated from Rutgers University four years later. He served as a county agent in Bergen County for 10 years. After World War II, he became a salesman for the Terre Company. When the company quarters were destroyed by fire in 1962. Roy became a primary owner and sales manager of the Terre Co. in its Saddle Brook location. The New Jersey Turfgrass Association is especially indebted to Roy for helping to organize our association in 1969-70.

Following this, Mr. Bossolt sat on the association's executive committee, served as president in 1974, and filled two terms as past president. Roy attended turf meetings and Research Field Days faithfully for many years. He diligently listened to all details of turf research reports and watched from the front line when turf research plots were shown.

Hall of Famer Bossolt has been and still is active in many services. This list includes the Atlantic Seedsman Association, Nurseryman's Association, 'charter member and past president of the Paramus Rotary, and trustee of the Paramus Boys' Club. His wife, Doris; two daughters; five grandchildren; and travel have made his life enjoyable since retirement.



Roy Bossolt accepts N.J. Turfgrass Hall of Fame Plaque from Past President Jack Wittpenn.



Winter '80-'81

First The Seed Jennie A. Bloodgood Chief, Seed Analysis and Control New Jersey Department of Agriculture "First the seed" is the motto of the

American Seed Trade Association. No matter what you do to it, or with it, your lawn or turf will never be better than the seed you plant. With innovations in plant breeding, testing for quality and trueness of variety has become more complicated and more significant each year.

The kind and variety of seed desired should be determined by consumers with the guidance of their county Extension service. The Cooperative Extension Service of Cook College, Rutgers, has experts to provide assistance throughout the state.

The purpose of seed control by the New Jersey Department of Agriculture is to assure buyers that they get a properly labeled product. It also promotes the orderly marketing of seed, and it benefits and protects the honest seedsman from unscrupulous competitors.

Inspections of seed dealers' stock are made regularly, since the New Jersey Seed Law requires labeling of all seed sold, offered, or exposed for sale or (continued on pg. 2)

Comments and Opinions

The 1981 Weather — Kind or Cruel?

Nothing has greater influence on our turf from season to season than the weather, yet we can do the least about it. Even worse is the fact that weather predictions do not tell us whether to plan for drought, more drainage, a better irrigation system, pythium, or minimum nitrogen usage.

Winterkill and Drought — Late last fall turfgrowers asked me about the chance of the dry cold weather causing dessication. At that time I suggested such things as early December fertilization and topdressing to reduce the chance of turf loss. In early winter, turfgrass people were still asking about winterkill. By late January, the chances of extensive snow mold or wet-rot damage seemed very small because we did not have the moisture for these diseases. After good rains in February our attention gravitated back to injury from dryness.

What will late spring and early summer weather bring? While it is true that generous rains in the near future can end a lot of water problems on turf, it will take abundant precipitation to clear many turf areas of water bans or limited use restrictions. We must remember that we can have several consecutive dry years as well as consecutive wet years. Thus, where possible, return to the old basics of management to help avoid drought problems. Liming, minimal use of nitrogen, reduced traffic, and high cut will greatly reduce dry-weather failure. Those working with lawns should be prepared with mowing equipment that can be set to 3" to 4" if the drought continues. Of course, if you are doing contract work, the customer must accept this change.

While these suggestions are timely now, before this article goes to print, it is conceivable that many would wish for less rain by June. As always turf managers must anticipate and be prepared to adjust quickly to the fickleness of the weather that Mother Nature gives us.

R.E.E.

Silvex Burial Will Cost Millions

EPA has reportedly contracted for the disposal of 30 million pounds of lawn fertilizer containing silvex. The cost of the "grave?" \$2.1 million.

The EPA release reads, "This contract involves disposal of dry fertilizer-based products which contain no more than 1.5 percent of the active ingredient, silvex, which the Agency estimates to contain about 25 parts per billion or less of the toxic contaminant dioxin (TCDD). Over 95 percent of the material being disposed of consists of inert carriers for the fertilizer and weed-killer (such as corn cob grits or vermiculite)." Registrants of the products are to transport the percentage of germination and hard materials to the disposal site and that could increase the cost considerably.

According to my calculations the whole "kitchen caboodle" contains about 5 grams of dioxin — one teaspoonful. Boy, are we ever a bunch of scaredy-cats, spending over \$2 million to bury a teaspoonful of anything.

The grave, referred to as a "single burial cell," will reportedly hold 240,000 of the kind, the percentage of pure seed cubic yards. According to figures from the local trainmaster, that's about 1,500 is the proportion of the material in the box cars. With 100 cars per train, that's 15 trainloads.

Perhaps what we should do for slow-learners is park them by a railroad named. When the variety name is also crossing to watch a 100-car train pass by - at the speed they usually do for you given, the pure seed represents the - then another, and another, until 15 trainloads have passed by. And in all that proportion that is pure seed of that time, one itsy bitsy teaspoonful would have passed before their eyes - not in one variety only. The other crop seed car, not in one train, but in all 15 trainloads. Just think of the time, effort, energy represents the portion that is not of the and cost - to dispose of such a tremendous trifle - one teaspoonful. What kind or variety considered in the pure should we call it? "Blum's folly."

Seeds

(continued from pg. 1)

transported within the state for sowing purposes.

At each inspection, all available lots are examined for labels which are adequate, legible, and unaltered. The inspector rejects packages which have been pre-dated or have expired test dates, as well as those which carry any statements which are false or may be misleading. Local dealers are responsible for the seed they handle and must be sure that seed is labeled with current test dates. The New Jersey Department of Agriculture enjoys the cooperation of most retail dealers. because this one regulatory measure assists dealers in obtaining better seed for sale and assures consumers that they are purchasing the same.

Seeds are living organisms and it is necessary to sample each lot in order to establish that seeds are labeled correctly and meet minimum specifications. Samples should be drawn by a trained person using good equipment and procedures. No test can be more accurate than the sample. which must be representative of the lot.

Successful testing requires adequate facilities, a trained staff, and uniform methods or procedures. Accurate and reliable information must be obtained by standardized procedures which can be repeated within tolerances by another laboratory.

Seed quality is determined by the percentage of pure seeds, other crop seeds, weed seeds, and inert matter; the seeds (when present); the rate of occurrence of designated seeds of noxious weeds, and varietal purity.

When the label shows only the name container that is seed of the kind seed. Since each kind in the "other crop" is not separately shown, it cannot be determined by the label. The

Ellery L. Knake

germination percentage represents the seed that will grow under optimum laboratory conditions. Actual field conditions are seldom as favorable as laboratory conditions.

Vigor tests can be made by using techniques such as artificial aging, which will indicate the degree of vigor of a series of samples. However, standards for vigor labeling have not been established.

Some tests of trueness to variety can be made on seeds or seedlings in connection with ordinary laboratory tests or by growing seedlings under controlled conditions in a greenhouse or growth chamber. Recently, some chemical tests have been developed electrophoresis and isoelectric focusing. These are useful and can be conducted in advance of the normal planting season.

The New Jersey Seed Law authorizes the seizure or establishment of a "stop sale" order on all seeds found to be in violation. Under a cooperative agreement with the United States Department of Agriculture violations which involve interstate shipments are investigated under the Federal Seed Act.

In addition to the official testing, the New Jersey Department of Agriculture provides every possible seed service to residents of the state, subject to the necessary regulations. A special effort is made to extend service to the purchaser of large-volume seed lots when such a request is made.

For additional information please write to: Seed Control Official, New Jersey Department of Agriculture. Division of Plant Industry, CN-300, Trenton, NJ 08625.

Jennie A. Bloodgood

How to Combat Drought on Golf Courses

A variety of long- and short-range measures can reduce serious drought injury to the golf course. While there is no way of knowing with certainty that a serious drought will occur, some of the long-range measures can scarcely be put to use during the summer. With drought, like other critical factors, be prepared for the worst. Do not take chances with golf turf - especially greens. The following suggestions are no substitute for water, but some can reduce the severity of turf loss.

Use of Lime — Soils that are very acid and low in calcium are made more receptive to moisture with lime application. Lime gives other benefits also. Applications of 1,000 to 2,000 lbs. per acre of ground limestone are appropriate. Fall application is best. While spring is not the best season for application, some of the more acid turf soils should still benefit from liming.

Nitrogen Fertilization — Minimal amounts of nitrogen are best when heat and/or drought stress is expected. Some spring turf areas may have acute need of nitrogen stimulation. In such cases, use a nitrogen stimulation. In such cases, use a nitrogen source that is low in slow-release nitrogen, and make the application as far in advance of hot weather as possible. When fertilizer is applied in the warm months, provide small amounts of slow-release nitrogen. An N-P-K fertilizer that has low phosphorus and moderately high potassium is best unless soil tests indicate otherwise. If potassium is



required in warm weather. use potassium sulfate rather than potassium chloride. Except for earlier treatment, apply less than 1/2 lb. of nitrogen per M ft².

I have always encouraged summer fertilization of bentgrass for this area; however, as long as the watering ban continues and rainfall is scarce, do not apply fertilizer after early May except for special reasons. With the earlier applications, time them with a fortuitous rain that will water the fertilizer in and stimulate the grass as much as possible prior to hot weather.

Disease Control — The importance of disease control increases during a water ban. Drought causes serious loss of turf by itself without allowing disease unhindered activity in those brief periods when rain and wetness occur. Also, there are dry-weather diseases that should be preventable by fungicide.

Cultivation and Topdressing -Growth of new grass plants is encouraged by cultivation and topdressing. Water penetration is improved also. Late-April to early-May is an excellent season for this work. Of course, if watering is banned, this program must be timed with proper rainfall. Cultivation and topdressing in very early spring are questionable. Roughening of the surface at this season when the soil is still cold or when cold weather follows may cause slow healing, which is an ugly and annoying condition for the golfer. While late-spring, early-summer, and even mid-summer can be a desirable season for cultivation and topdressing, it is not worth the risk with inadequate moisture.

Use of Gypsum — According to theory, gypsum should relieve the compaction of sealed soil layers and permit better water penetration. A number of superintendents are of the opinion that it is helpful while others report no apparent results. Research data pro or con scarcely exist. However, an application of 1 ton/A is not an expensive treatment and it may

reduce water runoff on sites where sealed layers hinder penetration. If you use gypsum, establish a treated and untreated comparison to help evaluate the value of future treatments.

Wetting Agents — Use of wetting agents is proposed enthusiastically by some for the purpose of increasing water efficiency. Most agree that they help reduce runoff with hard to wet surface conditions. Other benefits are questioned. It seems reasonable to use wetting agents where dry spots cause runoff and the turf is very slow to accept water. Again, it is suggested that treated and untreated comparisons be used to help determine the amount of benefits.

Mowing Height — Closely mowed bentgrass gives better turf quality for golf. If there is a decision to raise the height of cut as a means of combating drought and turf failure, the question of when this should be done arises.

Raising the height of cut at an early date could prove to be unnecessary if the weather happens to give good rains that are well distributed. Little is gained by raising the mowers in the cool moist weather of spring. Thus, mow the fairways, tees, and greens at the regular height as long as moisture is adequate. When serious drought is imminent, water is not available, and severe hot weather is at hand, the mowers can be raised. At this time, hopefully, the grass would still have some reserves and the weather would not be hot enough to prevent the grass from making more growth. Increasing the height gradually seems best. This allows the day-to-day growth to remain. Avoid increasing the height above 5/16" on greens or 3/4" to 1" on fairways if possible. Do not take off excessive green during warm or dry weather.

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Some Cautions on Raising the Mowing Height — Cutting higher than the optimum height, even with official sanction of the club, will make many players unhappy. Hopefully, the golfers can be educated to accept the emergency policy of an abnormally high cut.

Also, the high cut must be lived with until the height can be lowered gradually—when serious drought ends with improved moisture and cooler temperatures.

Frequency of Mowing — When bentgrass-type is allowed to grow longer with low nitrogen, the frequency of mowing can be decreased slightly, but avoid mowing off large amounts of growth. Possibly, the number of mowings can be reduced from the regular five to seven or one to three.

Restrict Traffic — Losses of turf in dry hot weather are much greater with traffic. While banning use of golf cars is one of the quickest ways you can lose your job, temporary and movable barriers can be utilized to keep traffic off wilt-prone areas. Restricting traffic for brief periods can avoid killing sensitive turf that is drier, hotter, or subject to heavy traffic. Assign one of your better men to manage the traffic control barriers on a frequent and regular basis.

Watering — It is dangerous to have an inflexible watering procedure. Occasional deeper watering is usually required. This applies especially when the soil is dry underneath the surface root zone. Do not be afraid of frequent mist watering if required to prevent wilt of bentgrass or annual bluegrass. Use of a sponge in a dish to show the evaporation rate will help indicate the danger of wilt.

Choice of Grasses — Ask the good fairy for bentgrass to replace annual bluegrass on the greens and tees. Ryegrasses on tees and fairways will require less water than bentgrass and annual bluegrass.

Weed Control — Use minimal amounts of herbicide on bentgrassannual bluegrass turf. The phenoxys such as 2, 4-D and mecoprop are often damaging to the roots of these grasses. With moisture stress, restrict the use of these chemicals as much as possible. If dandelions have become a nuisance in

this type of turf, apply $\frac{1}{2}$ lb. 2, 4-D/acre with the hope of adequate control. If other weeds such as chickweed, clover, and knotweed are present, add 1/8 lb. to 1/4 lb. of dicamba/acre. Avoid late spring treatment.

If clover, knotweed, and/or chickweed are troublesome and such weeds as dandelions and plantain are not present, omit the phenoxy. Apply 1/4 lb. dicamba/acre before late May. This will allow the turfgrass to heal the cover where weeds are removed before summer. Avoid clover and knotweed control in June or July as it often causes the weed patches to remain bare through the summer.



Oldest Fairway Irrigation System

According to Phil De Marco, the oldest fairway irrigation system in the United States was installed in 1936 at the Ridgewood C.C. While there are several clubs of this name, presumably this is Ridgewood in New Jersey. Ed Walsh reports the cast iron mains are still in good repair and use.

Good Roots — Factor in Tall Fescue Survival

Scanning electron micrographs of anatomical features, root uptake of p^{32} , rooting depth, and soil water uptake were studied on tall fescue, Kentucky bluegrass, and perennial ryegrass to ascertain the cause for the observed differential drought

responses. Analysis of soil water content and root mass to a depth of 84 cm indicated the tall fescue roots were deeper than Kentucky bluegrass roots. Other advantages of tall fescue were not discernible. From this study, it appears that root depth and distribution is a primary factor in drought response of these grasses. K.M. Sheffer and J.H. Dunn, University of Missouri, Agronomy Abstracts, 1981, pp. 120.



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FOR FURTHER INFORMATION SEE YOUR LOCAL DISTRIBUTOR OR CONTACT

It Takes All Types to Make a Turf World

For those who seek bentgrass fairways, read the following: "We have a par 3 golf course, the fairways of which are quite populated with bentgrass. What are your recommendations for getting rid of bentgrass? Is there a selective herbicide against bentgrass? Why and how is bentgrass getting onto the fairways?" These comments are from an out-ofstate letter. Maybe they need "Poa" to teach them some bentgrass appreciation.

Winter Becomes Spring

For those of you who have waited for the winter issue of *Green World*, it has become a spring issue. This issue was essentially ready for Judy Chi in January, when I became incapacitated for approximately six weeks and then returned to work on a part-time basis. While it has become easier for me to make excuses, I expect to have a late spring issue, and you will receive the full compliment of three issues with your 1981 membership. Thanks for your patience.

R.E.E.



Times Have Changed

In recent years, practices in golf course maintenance have changed considerably. The putting green mowers formerly did not cut the grasses as close as they do today. We used to cut the putting greens every other day. Now we are compelled to cut them every day. With few exceptions, most putting greens were a mixture of creeping bent, fescue, Poa trivialis, Poa annua, and clover. Yesterday, chemicals on a golf course were in very limited use. Today, with the big array of chemicals being advertised as fertilizers, fungicides, insecticides, or what not, the greenskeeper must have some technical information, or a source from which he can obtain such information, unless he is to become a victim of the salesman with the best line of talk. While we all realize that the best education he may get is from practical experience, yet I am of the opinion that knowledge along theoretical lines is helpful.

John Morley, The Bulletin of the USGA-Green Section, February 1929.

Gene Morehead — Squire of Oldham Co., Ky. **Do Not Steal His Idea**

Morehead of Kentucky who attended some of our turf courses at times in the past. Louis Miller writes in the Kentuckiana Klippings _ "Gene Morehead, being the enterprising individual that he is, doesn't even let a little stay in the hospital keep him from trying to capitalize on his latest brainstorm. He is in the process of forming Morehead's Underground Utility Removal Service, or, as he puts it, 'I'm going into the junk business.' Gene's idea is to start a company that will go around all over the country to golf courses that have installed

SUSTAINING MEMBERS 1981 A-L Services, Inc. **Chevron Chemical Co. Double Eagle Golf Products Fairway Landscaping** Garfield-Williamson, Inc. **Green Hill Turf Supply Heritage Maintenance** International Seeds, Inc.

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It's a Plot

- LAWN: A large, light-absorbing, green panel, which gobbles up water and fertilizer and converts them to chinch bugs, armyworms, large amounts of fungus, and some grass clippings.
 - Editor's Comment: At least these "lawn products" are better than ticks, greenbriar, multiflora rose, and poison ivy.

Some of you will remember Gene irrigation in the past 15 years and, for a nominal fee, it will remove all of the old irrigation system for the rights to scrap pipe. In Gene's words, 'There is a fortune in scrap cast iron and galvinized pipe lying underground and not being used that could be sold for a small fortune.' Gene has not divulged his method for extracting the pipe, mainly because he doesn't want everybody in on his idea before the company is underway. He didn't say whether he intended on patenting the extraction method or not." . . . Gene, we hope your sense of humor keeps you in the best of health.

> Reduction of American dog tick populations can be obtained by elimination of dense, woody underbrush, cutting grass and other vegetation in a 4- to 6-foot band along each side of all paths and walks which pass through infested fields. Lawns or grass areas that are maintained by regular mowing seldom contain tick populations. Insect-Disease Newsletter.

