

Mid-Atlantic Newsletter



Number 4

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Volume XXXI

April 1978

April Meeting

The April 11 meeting will be held at the Talbot Country Club, Easton, Maryland. Your host Ralph MacNeal, was born and raised in Talbot County and was a dairy farmer before going to work at the Country Club

PRESIDENT'S MESSAGE



Fellow Members:

I'm sure all of you are aware that 1978 marks the 50th year of the Mid-Atlantic Association of Golf Course Superintendents. Golden anniversaries are generally celebrated with "Gusto" and it is the feeling of your Board of Directors that

the Mid-Atlantic's be no exception.

Wayne Evans, our illustrious newsletter editor, has been appointed chairman of the 50th Anniversary "Gusto" Committee. I'm sure you have good ideas on how we can best celebrate our anniversary, so let Wayne hear from you. Let's have a celebration we'll long remember, one that our younger members will be able to tell our replacements about when they make plans to celebrate the 100th anniversary of Mid-Atlantic in 2028.

Ralph MacNeal, Superintendent of Talbot Country Club in Easton, Maryland, is hosting our April 11th meeting. Ralph and Talbot Country Club always roll out the green carpet for the Mid-Atlantic. Make plans now for a day of good golf, good fun, good food and a great meeting. See you there.

Yours for finer turf for better golf.

Bill Emerson

in June 1963. Ralph being a farmer and a hard worker, knew how to make things grow. Through self education in the turf field, and the services USGA, he has done an outstanding job.

The golf course was originally a nine-hole course and was opened in 1910. In 1962 the services of Ed Ault were acquired



RALPH MacNEAL

to rearrange the old nine holes and add nine more to complete the layout as it is now. The work began in 1963 and the course was open for play in Spring 1964. All work was done through a local contractor by Ralph MacNeal. The greens run from 9,000 to 10,000 sq. ft. of Pencross and are cut at 3/16 of an inch. The fairways and fees are a mixture of bluegrass and fescue and a little bit of bermuda. The entire golf course has a manual irrigation system.

(continued on page 8)

Ten Years of Research on Winter Injury on Golf Courses; Causes and Prevention by Dr. James B. Beard, Michigan State University

Winter injury of turf is difficult to understand because it results from the interaction of a number of environmental, soil, and cultural factors. Before a golf course superintendent can initiate the appropriate cultural program to prevent winter injury, he must determine the particular type or types of winter injury that occur most frequently at various locations on the golf course. This involves a study of the particular symptoms, including time of occurrence, soil type, topography, drainage characteristics, traffic patterns, and the probability of environmental stress. Such information is assembled over a period of years, and a

Winter Injury—Causes and Prevention

(continued from page 1)

specific program is established on the golf course in order to minimize the probability of winter injury. **CAUSES OF WINTER INJURY**

The four major types of turfgrass winter injury that most commonly occur are presented in Table 1, along with the symptoms and causes of injury. This information has been assembled over a 10-year period of extensive research at Michigan State University. The major types of winter injury are:

Desiccation Low temperature diseases Direct low temperature kill Traffic effects.

Not that ice sheet damage caused by oxygen suffocation or toxic gas accumulations underneath an ice cover are not listed. Detailed investigations at Michigan State University indicate that this type of winter injury rarely occurs. This is in contrast to the many articles by individuals indicating that this is a serious problem. Unfortunately, these earlier writers had essentially no information on which to base their comments other than data from research with alfalfa. The winter injury most commonly associated with extended periods of ice coverage occurs during freezing or thawing periods when standing water increases the crown tissue hydration and subsequent injury of the turfgrass plants when temperatures drop rapidly below 20°F.

PREVENTING WINTER INJURY

Cultural steps can be taken to minimize the potential for injury in the future once the cause or causes of winter injury on specific turfgrass areas on the golf course have been established. The first prerequisite in minimizing all types of winter injury is a healthy turf with adequate carbohydrate reserves and recuperative potential. This phase of winter injury prevention is accomplished during the normal growing season, particularly in the late summer-early fall period. Practices to prevent or at least minimize the potential for turfgrass winter injury can be divided into cultural practices, soil management, and specific winter protectants.

The specific practices utilized in each of these categories are summarized in Table 2. It should be noted

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MID-ATLANTIC NEWSLETTER

WAYNE'S PLACE



Last month I wrote an article, a rather pointed one, about the University of Maryland's problem of keeping good personnel. I focused most of the attention on the agronomy department and the loss of Drs.' Hawes, Hall and Powell. I did not mean to single out the agronomy department over any other department in the University. I only used the agronomy department as an example because of the fact that we deal so closely with them, and we are affected by their problems. I felt that the problem of losses of good professors was in fact a problem experienced all through the University. My thoughts were confirmed by a letter from Dr. James Miller. Dr. Miller's letter is printed in this issue, and it explains very well the situation at the University.

Dr. Miller has explained that we really can only help to change this situation by working with the elected officials in Annapolis. Since Dr. Miller wrote to me I've sent many newsletters to many individuals in the state capitol. I hope that we in the Superintendent's Association and our colleagues in related organizations can work together to show Annapolis the necessity of having qualified college professors.



Bob Shields has suggested that we form a transportation committee. This committee would be made up of people throughout the different areas in the Mid-Atlantic section. They would coordinate car pools for fellows needing rides to the meetings. Bob tells me that this used to be standard procedure. He also told me that not only is it less expensive to travel, but also a great way to increase the camaraderie amongst fellow superintendents.

Anyone interested in hosting the Pro Superintendents tournament? Due to a schedule problem Washington Golf couldn't host the tournament and we need a place to have it "PDQ." The date is May 9, and if you can host it, please contact Sam Kessel.

-

As Bill mentioned in his President's Message, I have been appointed chairman of the "50th Anniversary Celebration." In January 1979 the Mid-Atlantic will celebrate its 50th birthday. Anyone wanting to work on this committee should contact me ASAP. I really need the help from some of the members that have been around awhile. So far all that has been established is that whatever we do should include ladies, not be *too* formal, should be something that all members will like, and will be a memorable occasion. Now you see why I need help. Please contact me at my office if you'd like to help.

Wayne Evans

Winter Injury—Causes and Prevention (continued from page 2)

that a number of them apply to more than one type of winter injury. In some cases, the practice that is effective in preventing one type of winter injury will actually increase the probability of damage from another type. For example, snow covers or winter protection covers used to prevent winter desiccation will also maintain temperatures near 32° F which will enhance the probability of snow mold disease activity. This means that when such a practice is in use, steps should also be taken to apply a preventive snow mold fungicide

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Winter Injury—Causes and Prevention

(continued from page 3)

application to the turfgrass area prior to installing the winter protection cover.

From a cultural standpoint, the proper control of plant and soil water relations is the most critical factor affecting all phases of turfgrass winter injury. Techniques to adjust the soil-water status must be achieved during the summer period. Finally, it is quite obvious that selection and planting of the appropriate turfgrass species and cultivar can be critical in minimizing the degree of turfgrass injury that may occur. Annual bluegrass is very prone to all types of winter injury. The bentgrasses are considerably less susceptible to injury, and also have a greater recuperative potential from existing vegetative plant parts.

IN SUMMARY: This article gives a brief summary of a great deal of research conducted at Michigan State University over the past 10 years. Portions of it were supported by the U.S.G.A. Green Section Research and Education Fund.

THE AUTHOR; Dr. James B. Beard is a Professor of Turfgrass Science in the department of crop and soil sciences at Michigan State University, East Lansing, Mich. 48823. He has conducted pioneering research in all phases of turfgrass winter injury. In 1971 he was the youngest recipient ever selected to receive the highest honor of Fellow in the American Society of Agronomy. He has authored a new textbook entitled "Turfgrass: Science and Culture" published by Prentice-Hall of Englewood Cliffs, N.J.



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TABLE 1. Types, symptoms, and causes of winter injury that most commonly occur on golf course turf

Type of winter injury	Symptoms	Cause of injury External forces Internal plant effects		
A. Desiccation	Based in advantage	(normalia) in the second	In the second second	
(1) Atmospheric	Leaves turn distinctly white but remain erect; occurs most commonly on higher locations that are more exposed to drying winds; can range from small irregular patches to exten- sive kill of large areas.	A drying atmospheric environment including high winds and low relative humidity; in addition, soil water absorption is reduced at low temper- atures or may be inoperative because the soil is frozen.	Desiccation of the plant causes skrinkage and collapse of the protoplasm that results in me- chanical damage and death.	
(2) Soil	Leaves turn distinctly white and are semi-erect; the tissues including the crown are very dry; commonly occurs in a more extensive pattern over the turf than does atmospheric desiccation.	Extended periods of soil drought due to a drying atmospheric environment and lack of precipitation or irrigation.	(Same as above)	
B. Direct low temperature kill	Leaves initially appear water-soaked, turning whitish-brown and progressing to a dark brown; the leaves are limp and tend to lay as a mat over the soil; a distinct, putrid odor is frequently evident; occurs most commonly in poorly drained areas such as soil de- pressions; frequently appear as large, irregular patches.	A rapid decrease in temperature, particularly the adjacent soil temper- ature; kill most commonly occurs at soil temperatures below 20 °F during the late winter—early spring freezing and thawing periods; may be associated with thawing of an ice cover that occurs from underneath.	Large ice crystals form within the plant tissues causing mechan- ical destruction of the frozen, brittle protoplasm; the higher the water content of the tissue, the larger the ice crystals and the more severe the kill.	
C. Low temperature diseases:	riff connected and the second		and a second sec	
(1) <i>Fusarium</i> patch (pink snow mold)	Pink mycelium on leaves; 1 to 2 inch, tan, circular patches; or white myce- lial mass on leaves, white to pink circular patches up to 2 feet in diameter.	Fusarium nivale; favored by turfgrass temperatures of 32 to 40 °F and moist conditions.	Parasitic action.	
(2) Spring dead spot	Appears in the spring as irregular, circular dead sports of up to 3 feet in diameter; shoots, rhizomes, stolons, and roots within the spot will be killed; affected spots commonly re- occur in the same location each year and may gradually enlarge.	Causal organism has not been identi- fied; favored by turfgrass temperatures below 50°F and wet conditions.	Unknown	
(3) <i>Typhula</i> blight (gray snow mold)	Light gray mycelium on leaves, especially at the margins of the ad- vancing ring; whitish-gray, slimy, circular patches of up to 2 feet in diameter; brown sclerotia are embedded in the leaves and crowns, ranging up to 1/8 inch in diameter.	Typhula itoana, T. idahoenis, or T. ishikariensis; favored by turfgrass temperatures of 32 to 40°F, especially under an ice cover or during its thaw.	Parasitic action	
(4) Winter crown rot	Light gray, matted mycelial growth may be evident on the leaves; irregular shaped patches initially appear yellow and gradually deteriorate to a straw color; individual patches up to 1 foot in diameter may coalesce causing damage over a large area.	Unidentified low temperature <i>Basi- diomycte;</i> favored by turfgrass tem- peratures of 28 to 32 °F, especially under a snow cover.	Injury results from hydrogen cyanide gas produced by the sapo phytic fungus; subsequently the fungus invades the host plant.	
D. Traffic			anites street (b)	
(1) On frozen turfgrass leaves	Erect, white to light-tan dead leaves appearing in the shape of the foot- prints or wheels where they have been impressed onto the turf.	Pressure of the traffic (shoes or wheels) on the rigid, frozen tissues; the problem most commonly occurs during the early morning hours.	Disruption of the frozen, brittle protoplasm that has ice crystals surrounding and extending into the plant cell.	
(2) On wet, slush covered turf	Leaves initially appear water-soaked turning whitish-brown and progressing to a dark brown; the leaves are limp and tend to lay as a mat over the soil; appears in irregular shapes associated with previous patterns of concentrated traffic; soil rutting may also be evident.	Snow cover thaws to a slushy condi- tion causing increased hydration of the turfgrass crowns; traffic, including snowmobiles, force the wet slush into intimate contact with the turfgrass crowns; kill most commonly occurs if this event is followed by a decrease in tomestation to below 20%	Not completely understood, but related to the direct low temper- ature kill mechanism.	

in temperature to below 20°F.

TABLE 2. Practices available to minimize winter injury on golf course turf

Types of	Practices that minimize injury			Turfgrass species
winter injury	Turfgrass cultural	Soil management	Specific protectants	most commonly affected
A. Desiccation:	serie sullannings)	en de service de la section de	utay giranitalla rina, es to c	indipenta II
(1) Atmosphere	Moderate nitrogen nutri- tional levels.	Do not core in late fall and leave the holes open.	Conwed Winter Protection Blanket	Annual bluegras
	Elimination of any thatch problem.	el vece se consola - sentitariaria recontra lles solo	Polyethylene (4-6 mil)	
	set part through the	and statements	Saran Shade Cloth (94%)	hos err.
	instant a rated	provide and the second se	Topdressing (0.4 yd ³ / 1,000 sq. ft.)	
	in anno internetion	anothernood	Windbreaks such as snow fence, brush, or ornamental tree and shrub plantings.	wetainen a
	Instantia dag tercela	with ghelles it and the project provide	Natural organic mulches.	sectore sectores
(2) Soil	Moderate nitrogen nutri- tional levels.	(Same as above)	(Same as above)	Annual bluegrass
	Irrigation or hauling of water to critical turfgrass areas.	ning printer of the ning p	Trova fabric strategi produce a	
B. Direct low temperature	Moderate nitrogen nutri- tional levels.	Rapid surface drainage by proper contours, open	Conwed Winter Protection Cover	Bermudagrass Annual bluegrass
kill	High potassium nutritional levels.	catch basins, and ditches. Adequate subsurface drain-	Soil Retention Mát	Red fescue
	Higher cutting heights.	age by drain tile, soil modi- fication with coarse textured	Enhancing a snow cover with a snow fence or brush.	STREET,
	Elimination of any thatch problem.	materials, slit trenches, and dry wells.	Natural organic mulches such as straw.	WIDE ALL
	Avoidance of excessive irrigation.	Cultivation, especially coring and slicing, when compaction	Soil warming by electricity.	
C. Low temperature diseases		is a problem	a second and a constant of the	Service IV.
(1) Fusarium patch	Moderate nitrogen nutri-	Avoiding neutral to alkaline	Cadmiums	Annual bluegrass
	tional levels. High potassium and iron	soil pH's	Benomyl Daconil	Bentgrass
	nutritional levels. Moderate to low cutting	way for	Mercuries	
	heights.	and a second sec	albura and symposical second	(in Pyggadenia
	Elimination of any thatch problem.	al an and a second second	malefiniter see i Smanse	sector espande
(2) Spring dead spot	Avoid excessive winter irrigation.	Provide good surface and subsurface drainage.	Nabam, time the applica- tions to be present when	Bermudagrass
	Elimination of any thatch problem.	Cultivate when compaction is a problem.	soil temperatures are below 50 °F and the soil	
(3) Typhula blight	Moderate nitrogen nutri-	Provide good surface and	is water saturated.	
	tional levels. Moderate to low cutting	subsurface drainage. Cultivate when compaction	Cadmiums Chloroneb	Annual bluegras Bentgrass
	heights. Elimination of any thatch	is a problem.	Mercuries	
(4) Winter crown rot	problem. Elimination of any thatch problem.		Mercuric chloride (2 applications)	Annual bluegrass Bentgrass
D. Traffic:	almental assessed allow	a it is second it.	ner ribil an string (the 3	and the second second
(1) On frozen turfgrass leaves	Apply a light application of water in early morning; this is most effective when		Withhold or divert traffic from turfgrass areas during periods when the leaf and	
	the soil is not frozen and the air temperatures are above freezing	in particular and a second second	stem tissues are frozen.	et charter
(2) On wet, slush covered turf	above freezing.	t trader or to to the stores to the first present the first present	Withhold traffic on turfgrass areas during wet, slushy con- ditions, especially if a drastic freeze is anticipated.	Annual bluegras

THE INAUGURAL PARTY





George and "First Lady" Suzanne

Ted Woerhle hands the president's gavel to President Cleaver.



The Presidential cocktail party



Bill really places George on a pedestal



Bill Emerson congratulates the "First Family" MID-ATLANTIC NEWSLETTER



"Past and Present," Bob Shields and George Cleaver

April Meeting

(continued from page 1) The club prefers that you pay as you go so come prepared.

Golf after 11:00 Lunch at the grill - Cash! Cocktails - 6:00-7:00 Dinner - 7:00

Directions: From the Bay Bridge go south on Rt. 50 to the Easton Airport on your right. One mile further down the road is a by-pass (Rt. 333) to your right. Follow this across the Peach Blossom Bridge, and the third road to your right will be Country Club Drive.

Dates to Remember

MAY 9 Superintendent Pro Tournament

JUNE 13 Indian Springs Country Club

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The Maze Theory

A noted psychologist interviewed and measured 100 successful businessmen and how they "moved up the ladder" to success. Dr. Jennings found seven reasons these people "made it" through the Maze.

1. **TRUST SENSE.** This is the first and most important. This means that the MAZE BRIGHT man takes the trouble to make himself available to his organizational superiors. His boss trusts him, knows that he is working and most important, that the boss can find him if he needs him. The boss feels sure that he can

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LEBANON CHEMICAL CORPORATION P.O. BOX 180, LEBANON, PA 17042 (717) 273-1687 Mr. Wayne Evans Mid-Atlantic Newsletter 1804 Ironton Drive Oxon Hill, Maryland 20021

Dear Wayne:

I have read your recent article in the Mid-Atlantic Newsletter regarding Dr. Hawes who has accepted a position with the U.S.G.A. Green Section.

It is a serious blow to our programs at the University when we lose key faculty members. We have recruited many top-notch faculty members in the Department of Agronomy who have done outstanding work. However, we have been unable to keep a number of our faculty members due to low salaries, lack of technical assistance, and heavy work loads in the College of Agriculture. We have presented a very strong justification for increases in salary and operating funds but have received very little increase in funding. As a result, a number of faculty members are leaving the Departments in the College of Agriculture to accept positions with other universities, the USDA, and industry. Since July 1975, a total of 31 faculty members in agriculture received offers from other institutions and of these 13 accepted positions elsewhere at considerably higher salaries. It is impossible to retain or employ outstanding faculty members when we do not have the funds to remain competitive.

A number of newspaper articles have appeared on faculty losses at the University of Maryland. In an article in the Baltimore Sun Newspaper (page C20 of 1-24-78), it is stated that "the area hit hardest has been in agriculture, where federal jobs have been available."

I am of the opinion that you and your co-workers in the turfgrass industry and other related industries can be very helpful to us in getting increased support for our programs in agriculture at the University of Maryland. Increased salaries, technical assistance and operating funds will make it possible for us to keep outstanding faculty members in the Departments in the College of Agriculture so that we can more effectively serve the people of Maryland. Our elected officials in Annapolis play a major role in determining the future of our programs at the University. It is important that you let your elected officials know that you want outstanding faculty members in the College of Agriculture at the University of Maryland and that we cannot afford to lose them to other organizations.

I sincerely appreciate your interest in our program at the University. I would welcome the opportunity to meet with you and the officers of the Mid-Atlantic Association to review our program at the University. I feel it is important that we work together to develop the strongest possible program to serve the people in our great state.

> Sincerely yours, James R. Miller, Chairman Department of Agronomy

The Maze Theory

(continued from page 8)

depend on the MAZE BRIGHT person should he need to make a tricky decision or just talk.

2. **POWER SENSE.** The MAZE BRIGHT individual knows who are the really key people in any organization. He knows that a man's position on an organizational chart is, not the true indicator of the man's ability to get things done or to make changes in the structure of the organization. He knows that out of a group of executives in a firm, all at the same level on the organizational chart, some will enjoy more power and influence than others. He also knows that if he is to be successful, he must associate himself with the truly powerful people or those that have a direct line to the top decision makers.

3. **PRIORITY SENSE.** Knowing what is important to the important people. Priority sense is the matter of determining on your own, the really important things you should be doing with your time. The MAZE BRIGHT person realizes that he is evaluated on only 10% of his output and exactly when that evaluation is taking place.

4. **RULE SENSE.** Rule sense is the ability to look behind the reason that a given rule exists. A shrewd executive will never write down a rule unless it is absolutely necessary. However, the shrewder employee will look at the rule and examine why it was created. Why the writer wrote it and what he had in mind. The MAZE BRIGHT employee will determine if the rule applies to him, how it applies to him and interpret the rule accordingly.

5. FACE SENSE. This MAZE BRIGHT person will never attack a man's face or ego. This makes enemies and this is the last thing a MAZE BRIGHT individual has in mind. For example: At a meeting, a suggestion is put out. You don't agree with the idea. The MAZE DULL person will come out and say "that's a stupid idea." This is an attack on the man's face and it makes the man look badly. The MAZE BRIGHT individual will say something like "That's a good idea, Fred, however, have you considered this..." then go on to bring out his critique of the man's idea in such a way as not to attack the man's face or ego.

6. SENSE OF PROPER. Everyone has a sense of proper. Some words, actions, or activities offend us. The MAZE BRIGHT individual will not offend someone's sense of proper by swearing or engaging in activities that may be offensive to any individual in the room or given environment.

7. **CUE SENSE.** This is the ability of a MAZE BRIGHT person to interpret visual or verbal cues from a superior that may change his priorities or the project currently in the works. This is done without the boss coming out and saying it directly. In other words, the MAZE BRIGHT employee has the knowledge to watch his superior, interpret what they say and do and determine his own direction without actually being told what to do or how to do it.

From S. Florida Green, October 1976

