



Dr. Jim Love Awarded GCSAA
'Distinguished Service Award'



THE GRASS ROOTS

an official publication of the Wisconsin Golf Course Superintendents Association

Volume XIII, No. 6

November/December 1986 Issue

THE 21ST ANNUAL WISCONSIN GOLF TURF SYMPOSIUM: Starting The Third Decade

Jim Beard said it - the 1986 Symposium marked the beginning of the third decade of one of America's finest golf turf conferences and the only true single subject symposium offered. And on all counts it was a very successful beginning of a new decade. Bob Welch and Jim Spindler put together an outstanding group of speakers that tackled the difficult subject of micronutrients with a sense of serious purpose. The meeting was held on October 29 and 30 at the Pfister Hotel in Milwaukee.

Most of the nearly 200 attending the day and a half meeting left with several fundamental points in mind:

1. A lot of discussion focused on the micronutrient iron. Many speakers were of the opinion that iron approaches the macronutrients in its importance.

2. Sand-based root zones have increased the need to give more consideration to micronutrients.

3. Balance in nutrition is more important than absolute amounts in soil or tissue samples.

4. Other than iron, micronutrient deficiency symptoms are very seldom seen in the field.

5. Much of the information regarding microelements is extrapolated from other crops.

6. In most cases, pH values greater than 7.0 can limit microelement availability in soils.

Jack Butler presented the first lecture following an excellent introduction to the 1986 Symposium by WGCSA



Russ Weisensel was featured as the noon luncheon speaker



Nearly 200 people gathered for Wednesday's luncheon.

President Bill Roberts. Dr. Butler drew from his extensive experience in the western United States where iron deficiencies are a serious and chronic problem, to the point where 1/2 pound of iron can occasionally be substituted for 2 pounds of nitrogen. *Grass in the west dies from iron deficiency.* They frequently see deficiency expression in the spring when the soils are cold and again in August when there is a lot of irrigation that may leach available forms of iron out of the root zone. Butler recommends three approaches for correcting iron deficiencies:

1. Decrease pH. This will increase the availability of iron. In fact, iron and sulfur are frequently applied together.

2. Cultivar selection.

3. Use of iron fertilizers. Contrary to normal midwest foliar applied procedures, western golf courses make granular iron applications.

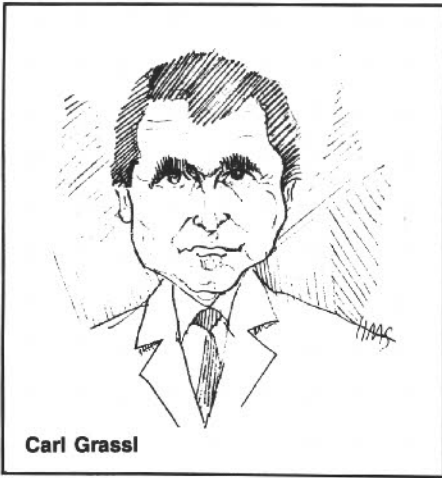
Dr. Butler pointed out that zinc, iron, copper and manganese are part of Colorado's soil test for turfgrass crops and expressed the opinion that tissue testing is important for a reference point.

Bob Shearman travelled to Milwaukee from the University of Nebraska campus in Lincoln. He started his lecture with the observation that although macronutrient recommendations for turf are based on specific studies, micronutrient recommendations are gen-

Continued on page 32.

TABLE OF CONTENTS

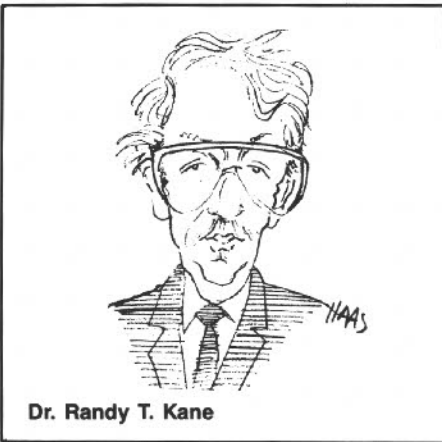
The 21st Annual Golf Turf Symposium.....	1
President's Message.....	2
Caveat Emptor.....	3
Wisconsin Pathology Report.....	5
Jottings.....	6
Love to Receive GCSAA Service Award.....	7
Field Demonstrations-1986.....	8
'SentryWorld South' Hosts Meeting.....	10
Field Demonstration 1986.....	11
From the Director's Desk.....	14
Cherokee Hosts October Meeting.....	15
"The Quiet Company".....	17
The Other Plants.....	19
Ransomes: A Rich History.....	23
Reinders Turf Conference Dates.....	35
Mead Inn and Bulls Eye Outing.....	36
Exciting News - UW Short Course.....	41
1986-The Year of the Weather.....	42
Shop Talk.....	45
Deep Aerating Wayzata & South View.....	48
The Hope and Optimism of Christmas.....	50
Spreading the Breeze.....	52
News Clippings.....	52



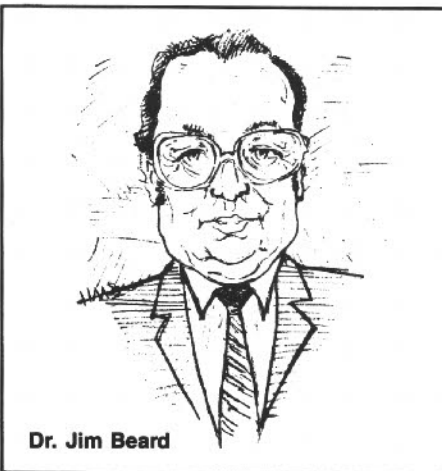
Carl Grassl



Jim Latham



Dr. Randy T. Kane



Dr. Jim Beard

Continued from page 1.

erally drawn from other crops and are, in some cases, open to question. Determination of deficiencies of the micros are, in his judgement, based on either visual symptoms or low stress tolerances. Microelements are usually readily available, but availability can be limited by:

1. Ability of the plant to take up micros.
2. Low element solubility.
3. Low soil buffering.
4. High sand, high leaching and high volatilization conditions.

Dr. Shearman emphasized the point that more harm than good can be done by over-applying micronutrients. He also made several points about balanced nutrition and interactions among nutrients when an imbalance exists.

Dr. Wayne Kussow, Turf Specialist from the University of Wisconsin-Madison, appeared on the Wisconsin Golf Turf Symposium program for the first time and addressed the complicated subject of tissue vs. soil testing for the micronutrients. He pointed out that a tissue analysis was a measure of a plant's nutrient status, whereas a soil test was a nutrient supply measure. Soil test expectations are based on four key factors:

1. Sample quality - this is the responsibility of those of us taking the sample.
2. Test(s) employed - the extractant used can affect the results. Labs generally use either a dilute acid test or a DTPA complexing agent test. These procedures are those that remove micros from the sample for specific element analysis.
3. Interpretation.
4. Recommendation.

Similarly, tissue test expectations are

generally based on:

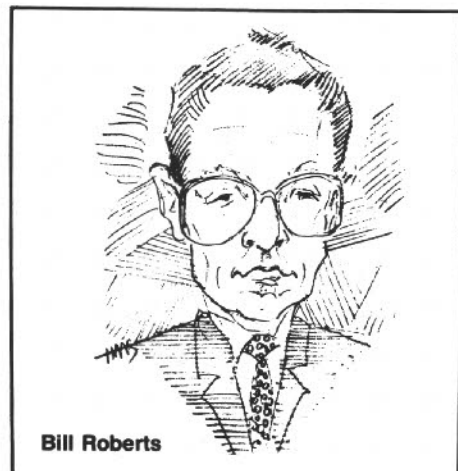
1. Sample quality.
2. Interpretation.

Dr. Kussow also expressed the opinion that nutrient ratios were more important and significant than absolute minimum levels. He also pointed out during a discussion detailing individual micronutrient availability conditions that soil pH was the overriding factor in nearly every case. When a deficiency has been determined he recommends either a corrective application or a corrective plus preventative application from one of the following sources:

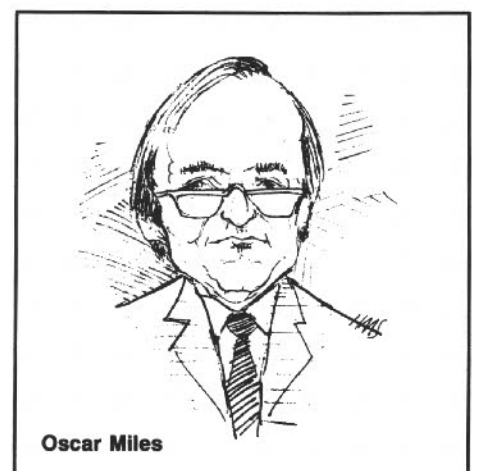
1. Slightly soluble oxides - slow release.
2. Frits - also slow release.
3. Soluble salts - use only during cool seasons.
4. Chelates - use during the growing season.

Session Chairman Carl Grassl introduced the afternoon speakers. The most complex and least studied subject on the program was addressed by Dr. Randy Kane, the Chicago District Golf Association consultant from the University of Illinois. Randy reviewed a mountain of literature from a search at the MSU Noer Turf Library Collection and was able to document a disease/micronutrient relationship in other crops, but little material relating specifically to turf species exists. He did emphasize, again, that nutrient balance was more important than absolute rates. The extensive review conducted by Dr. Kane indicated that there likely is a disease occurrence/micronutrient availability relationship in turfgrasses, but more specific research is needed.

Don Clemens regained his sanity that had been lost after a disastrous late summer and autumn at the Kohler Company's River Run Golf Course and



Bill Roberts



Oscar Miles

attended his first symposium as a speaker. He drew attention to the fact that 1986 was the 60th anniversary of Milorganite and of the GCSAA, a note that had escaped most of us. The proud owner of the Volume 1, Number 1 issue of *The National Greenkeeper*, Don reported that O.J. Noer authored an article in that issue. These notable facts amplify the close relationship MMSD has had with the golf turf industry during the entire history of the GCSAA.

Don made an interesting analogy while discussing his subject of the effects of micronutrients on new green establishment under various growth mediums. He compared micronutrient nutrition to supplemental vitamins. They are especially important in the early growth and development stages on sand greens where little or no nutrition or organic matter are present.

For all Golf Course Superintendents, it is always an honor to be a part of an audience addressed by Dr. Jim Beard. Dr. Beard was a speaker at the very first Wisconsin Golf Turf Symposium held in 1966, and it was most appropriate that he was a part of the program that started the Symposium's third decade. He expressed an interesting thought in his introduction: "The closer to perfection you come, the more obvious your imperfections become." This clearly defines why the topic of micronutrient nutrition is a significant one, given the state of the art of golf turf management. Micronutrients are becoming another refinement in our maintenance programs.

Among Dr. Beard's formidable abilities is his skill in condensing an overwhelming amount of material into a format that summarizes the key points of information. He did that with slides that tabulated roles, constituents, sources and responses of micronutrients. As

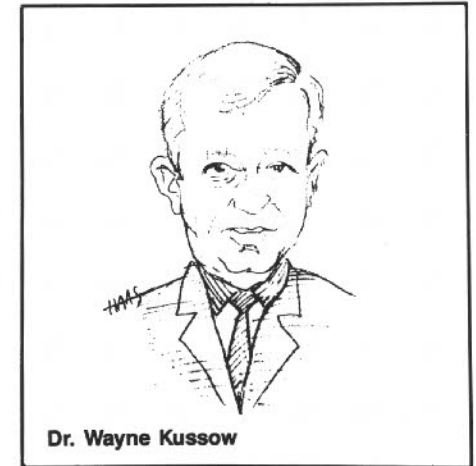
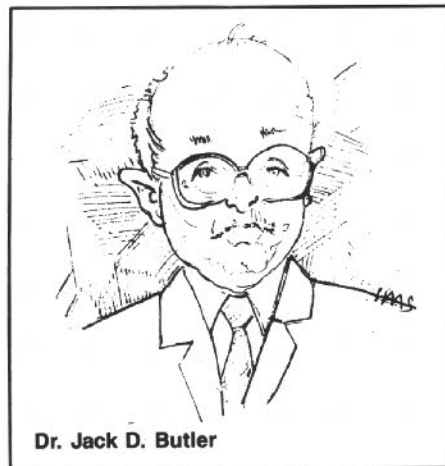
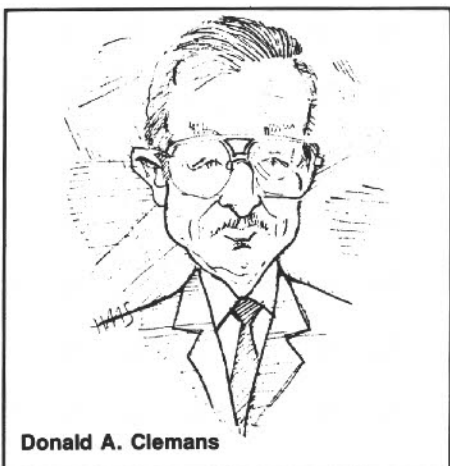
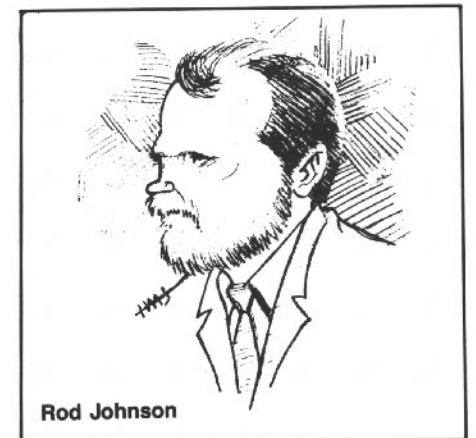
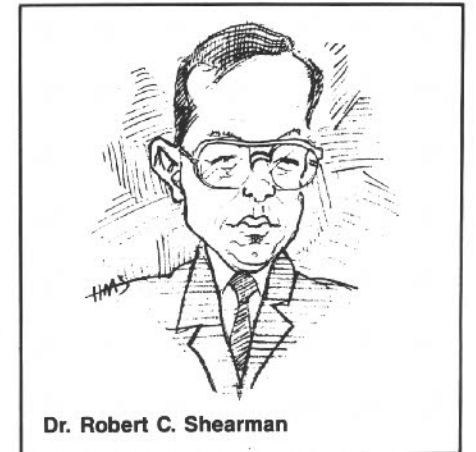
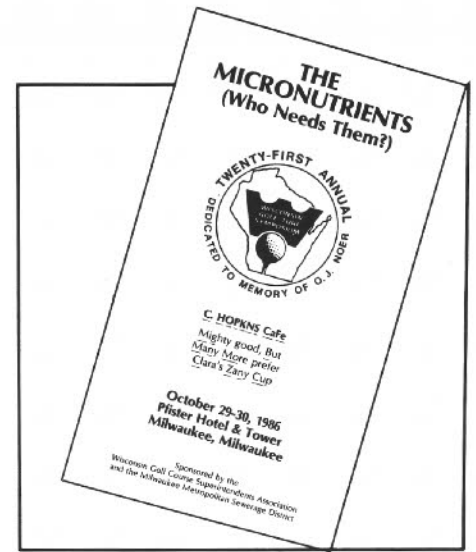
his colleagues preceding him, he emphasized the message of balanced nutrition and interactive effects, and expanded the discussion of the importance of iron in plant health and vigor. In particular, he documented the rooting response in turfgrasses to iron applications, despite the fact that no deficiency symptom is evident. He also made particular emphasis of the potential for toxicities that exist where recycled water is being used for irrigation purposes on golf courses. We must also begin to monitor base levels of micronutrients, especially before arbitrarily making micronutrient additions.

There is always a great appeal to listen to peers, and Oscar Miles did an excellent job of discussing his sand-based tee construction and associated micronutrient nutrition. His tee reconstruction program at Butler National involves a 10" tub over a clay base. He removes the existing root zone, installs 4" fabric covered drainage tile, fills back with 8" of fine sand that is topped with 2" of an 80/20-sand/reed sedge peat mix. The key to his soil fertility program is pH control. Despite frantic note taking, I was unable to capture but a part of the valuable information Oscar presented. Our best hope is that a Proceedings will be published so that we'll be able to make use of his detailed program.

It has become a tradition in recent years to have our Great Lakes Region USGA Green Section Agronomist tie together all of the information presented. Jim Latham did that again this year, and again in his usual fine style. Session Chairman Rod Johnson then led a question and answer period.

Any discussion of the 1986 Wisconsin Golf Turf Symposium would be incomplete if it did not include mention of the message brought to Milwaukee by our luncheon speakers, Russell

Continued on page 35.



Continued from page 33.

Weisensel. An extremely articulate and well informed man, Russ has been the Executive Director of the Wisconsin Agri-Business Council since its beginning in 1971. He is particularly qualified for his role as spokesman and defender of agriculture because of his two terms in the Wisconsin State Assembly and his farming background. Three years ago Russ responded to the peculiar needs of the turf industry, particularly in pesticide matters, by creating the Forestry/Rights-Of-Way/Turf Coalition under the umbrella of the Agri-Business Council. He spent some time discussing the activities of that group and told of some potentially historic litigation the Coalition is involved with in a lawsuit against the Town of Casey in Washburn County. Russ' key message to Golf Course Superintendents was "involvement". We must become involved in the democratic process when issues of vital importance to our profession are being discussed and challenged in the public forum.

Once again, thanks are due to Bob Welch. With the help of Jim Spindler, he put together an educational program to the benefit of all that had the wisdom to attend. Because of these men, the staff at MMSD and the Symposium Committee, the third decade of the Wisconsin Golf Turf Symposium is off to an outstanding beginning.

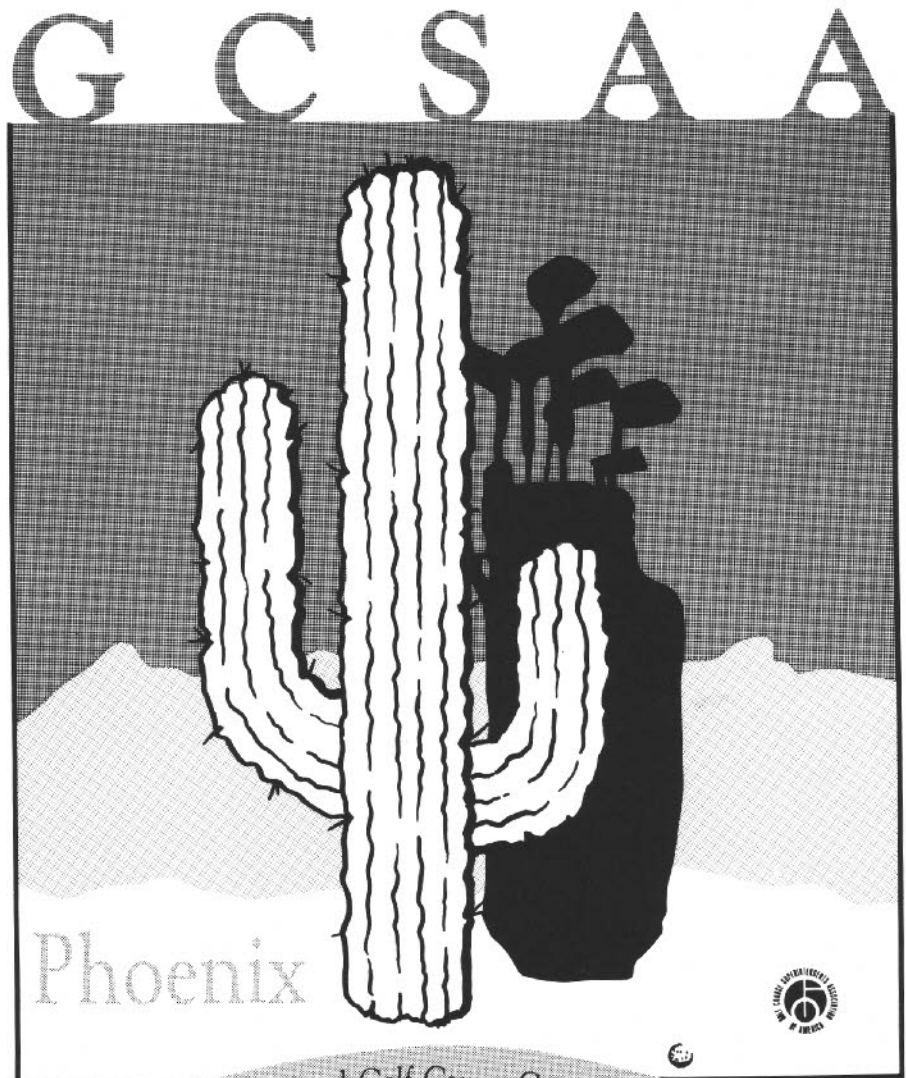


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Dates Set For Reinders Turf Conference

Ed Devinger, Manager of Reinders Brothers Turf Division, has announced the dates of their 8th Turf Conference, Equipment Show and Service Clinic. The meeting is scheduled for March 18 & 19, 1987 and will be held at the Waukesha Expo Center.

Reinders Show, which has been held on an alternating year basis since 1973, is the largest show of this kind in the state. They expect an attendance somewhere between 1300 and 1500. They are finalizing the program and a mailing with details will be forthcoming.



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