THE BULL SHEET, official publication of the MIDWEST ASSOCIATION OF GOLF COURSE SUPERINTENDENTS.

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#### President's Message

by Bruce R. Williams, CGCS President, MAGCS

#### Chicago — Golf Mecca of the World

Nowhere in the world will you find such a concentration of outstanding golf courses as we have right here in the Chicago metropolitan area. Within a 35 mile radius of the city there are over 200 wonderful golf courses. There is a fine mix of public and private golf facilities offering pleasurable playing conditions for Chicagoans and suburbanites. The playing quality and condition of these golf courses is a tribute to the many members of the Midwest Association of Golf Course Superintendents who are charged with responsibility of providing excellent playing conditions.

During the month of June the eyes of the golfing world will be on Chicago as we will host the Western Open and the U.S. Open. It will be a busy month and we wish the best to host superintendents Mike Sauls and Dan Quast. While these two men will have their clubs viewed by millions they will set standards for many of us to follow for our own customers and members. It seems that all golfers want U.S. Open caliber playing conditions. We must communicate that the conditions at Medinah did not come about overnight and are the results of many years of hard work and sizeable expense. The golf market in Chicago is highly competitive. This is what keeps the standards for maintenance so high.

Let's all set our goals and standards high and try to give our golfers the best we can every day. We deserve the reputation of having the finest groomed golf courses in the world. There are not many places that I have traveled that are blessed with an emerald necklace of golf courses surrounding an exciting city like Chicago.

I hope all of our members take the opportunity to visit Butler National during the Western Open. The MAGCS will have a hospitality tent in cooperation with the Tee-2-Green Corporation. Our thanks to Tony Meyer, Dr. Bill Meyer, and Bill Rose for making that possible every year. Please stop by and see the tent. There will be plenty of cold beverages.

While the Western Open has found a home at Butler in recent years, the U.S. Open has evaded Chicago for quite a while. I am sure the famous Medinah #3 will give the best golfers in the world a true challenge. The opportunity to see a U.S. Open in our own backyard does not happen very often. I encourage each and every member of the MAGCS to spend a day at the tournament. Also join your fellow members at a reception held by GCSAA. This should be a highlight of the tournament.

See you at the Open.

#### **Director's Column**



#### What to Write About

by Dennis Wilson, CGCS

I could write a few lines about the Arrangements Committee and all the help I have received from Joel Purpur, Steve Cummings, and Brian Green, or maybe the Fall Dinner Dance and people like Dave Behrman, Carol Goodman and Dave Nadler who, by the way, picked up the cost of cocktails after dinner that night.

In January, we are always welcomed at Arrowhead Golf Club and this year was no exception. The speaker was Michael Crandal and he spoke for an hour to 100 plus members on performance enhancement. Bob Breen, Jr. we thank you and the staff at Arrowhead Golf Club.

Orlando, Florida and it's convention time. Dave and Penny Meyer did a great job, as usual, on the M.A.G.C.S. Hospitality Room, and of course thanks to those who supported the Golden Tee Club.

How about the Nordic Hills Golf Club lunch. We had 84 members enjoy a fine buffet and an insect update with Roscoe Randell. Afterwards, bowling and racquetball, compliments of Nordic Hills. Our thanks to Gene Thomson for setting up a great afternoon.

Lincolnshire Country Club meeting was great, with a mini equipment show, lunch on a great course, hors d'oeuvres during cocktail hour and dinner. We wish to thank Lincolnshire Country Club and our best to Superintendent, Jerry Cooper at his new position.

Our Association is off and running into the 90's and I'm looking forward to being a part of the M.A.G.C.S.

#### "The Fast Lane"

A touch of Summer's on It's way,
And will summersault to Summer Day's.

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Relax — enjoy — You're in the Action.

Kenneth R. Zanzig

#### Michigan Turfgrass Foundation Creates Research Endowment at MSU

East Lansing, MI — The Michigan Turfgrass Foundation (MTF) has pledged \$1 million to Michigan State University's turf program, creating an endowment to fund faculty and graduate student research.

The gift supports MSU's first universitywide Capital Campaign, MSU 2000: Access to Opportunity, a five-year effort launched in May 1988.

"This gift continues a longstanding partnership between the university and the state's turf industry," said MSU President John DiBiaggio. "We are extremely grateful to the Michigan Turfgrass Foundation for this gift and for the support of its members over the past 60 years."

The foundation's gift — its largest ever to MSU — will establish the Michigan Turfgrass Research Endowment Fund. Annual income from the new endowment will enable MSU to attract more graduate students. "Because our research is so labor-intensive, bright, dedicated graduate students are absolutely vital," explained Joseph M. Vargas, professor of botany and plant pathology whose work in turf management is world renown.

Vargas is investigating alternative pest management strategies, using biological methods to control pests and diseases and to minimize pesticide use. Developing environmentally safe methods is both time-consuming and expensive, he said. "The endowment will give us the flexibility to pursue this type of research."

MTF will solicit contributions to the endowment from its 1,000 members and from others interested in turfgrass research. Members include golf course superintendents, landscapers, lawn sprayers, sod growers, parks and recreation directors, schools, and cemeteries throughout Michigan. Gordon LaFontaine, executive secretary of the foundation, reported that 10 percent of the \$1 million goal has been raised so far.

"Our members see this as a sound investment in the state's fast-growing turfgrass industry," he said. Groups such as the Michigan Lawn Sprayers Association and the Michigan Cemetery Association have also joined the effort.

Since its founding nearly 60 years ago, the Michigan Turfgrass Foundation has provided more than a half million dollars to support faculty and students at MSU's College of Agriculture and Natural Resources. Foundation members played a major role in the development of the Hancock Turf Center, a research and educational facility on MSU's campus.

"The foundation offers not just financial support, but expert advise and guidance to our turf studies," said James H. Anderson, vice provost and dean of the College of Agriculture and Natural Resources. "Their involvement is a prime example of a state industry and the university working together to benefit students, faculty and, ultimately, Michigan's economy."

MSU's \$160 million Capital Campaign has raised more than \$130 million to date for student and faculty endowment, building projects and program enhancements.

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#### Mulching — The Natural Thing To Do

by Dr. Rex A. Bastian, Ph.D. The Care of Trees, October 1989

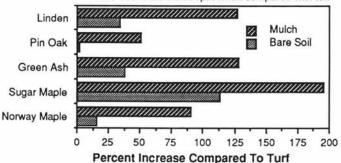
"What is the best single thing I can do to help my trees and shrubs?" In many cases, the correct answer can be stated in one word - MULCH. Why? Because mulching more closely parallels with how trees grow in nature.

Next time you are in the woods, take a close look at the trees. Notice that there is a deep layer of leaves on the surface. Reach down and dig a little bit. You'll observe that beneath the leaves, there is a rich layer of decomposed plant material. Growing through this layer are many fine roots. Now look around you. Try to determine to which plants those roots belong. You'll probably see very little grass, and if the tree canopy is dense, probably very few other plants as well. The roots that are growing very close to the surface are tree roots. The roots are present in this organic layer because the water, nutrients, and oxygen they need to grow are all found in abundance. As this material decomposes, the nutrients it contains are returned to the soil for the tree roots to absorb. Each fall, the trees shed their leaves which fall to the ground and continually replenish this biological-

Now take a look at the trees in your own yard. What do we see here? Instead of a thick layer of decomposing plant material, we find a thick carpet of grass. If we try to dig through the grass, we may find some tree roots, but they are few in number compared with the grass roots. Little trace of the layer of decomposing plant material can be found. When the trees drop their leaves, we are there to rake them up and to haul them away.

#### The Mulch Advantage

Percent increase of fine roots in mulched and bare soil areas above a 6 inch depth when compared with turf



Source: 1988, Dr. Gary Watson, Morton Arboretum, Lisle, Illinois

Perhaps you are beginning to understand the problem. When we plant our trees in a sea of grass, we are forcing them to grow in an unnatural situation. Most of a tree's roots are found in the top 40 inches of the soil. Of those, the majority are found in the top 12 to 18 inches. Grass roots, of course, occupy this same zone and are intense competitors with tree roots for water and nutrients. When root competition is combined with other urban problems such as poor soils, restricted root zones, mechanical injury, and air pollution, it is no wonder that some of our trees perform poorly. By mulching our plant materials in the urban landscape, we attempt to duplicate the conditions in which trees grow in nature. (cont'd. page 6)

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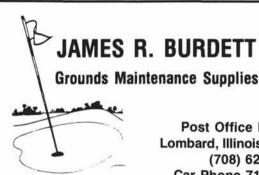
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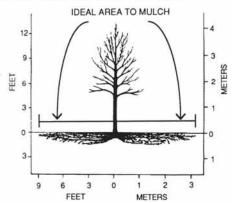
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(Mulching continued)

Just what do we mean by mulching? Mulching is simply the addition of a ring of an organic material around the base of your trees and shrubs. Many suitable materials are available, but one of the most convenient is shredded wood chips. Wood chips are readily available, inexpensive, easy to work with, long lasting, and attractive. By replacing turf with mulch, we can improve the conditions in which our woody plant materials must grow.

Anyway you look at it, mulching is one of the best things you can do for your plant materials. Not only does it help to conserve moisture around the tree's root zone, it helps to keep the soil cooler in the summer and warmer in the winter. Also, mulching helps to prevent "mower blight" around the base of the trunk. Mower blight occurs when attempting to remove the grass that is growing right next to a tree trunk with power lawn mowers. If the lawn mower hits the base of the trunk, portions of the bark can be torn loose, resulting in wounds that can seriously harm the tree. A ring of mulch will eliminate the need to mow close to the base of the tree, reducing the chances of contact between the mower and the tree.



What quantity of mulch is needed? First, the larger the mulched area, the better. The most desirable situation would be to forget about the turf and to mulch the entire yard. Of course, this is seldom practical, so try to mulch as large an area as possible. Simply place the wood chips on the ground, right over the top of the turf. As far as depth is concerned, a 3 to 4 inch layer works best. At less than 3 inches, the grass will not be smothered and will make a valiant comeback. Depths greater than 4 inches can actually harm the tree by reducing the roots' ability to obtain oxygen (remember, roots need oxygen just like we do).

One more thing, make sure you keep the mulch pulled back (4 to 6 inches) from the tree trunk. Moist chips, if kept in continual contact with the bark, can promote attack by certain insects and diseases.

When mulching with fresh wood chips, fertilizer should be broadcast over the top of the mulch layer. This fertilizer provides nutrients to the microorganisms that will decompose the wood chips. Without the added fertilizer, the microorganisms will use nutrients from the soil around the tree roots, reducing the nutrients available to the tree and partially defeating the purpose of the mulch. Use a rate of 1 to 2 pounds of actual nitrogen per thousand square feet of mulched area.

In summary, mulching attempts to duplicate the way trees grow in nature. It reduces competition from turf, conserves moisture, and helps reduce trunk injury. Give mulching a try. It certainly is one of the best things you can do for your plant materials.

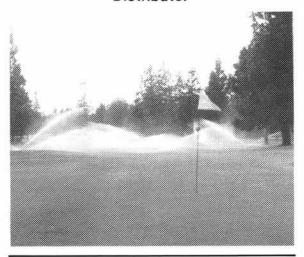
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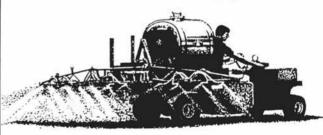
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#### Terminology in government regulations

As an *easy* reference, here are some of the most common abbreviations used in reference to golf course regulations and environmental controls.

BMP (Best Management Practice) — An environmental term comprising stormwater detention ponds, grass-lined ditches, buffer strips of natural vegetation adjacent to water bodies and other measures reducing non-point source pollution.

CAA (Clean Air Act) — Federal law which sets emission standards for motor vehicles and stationary sources.

CFR (<u>Code of Federal Regulations</u>) — The compilation of United States Laws.

CWA (Clean Water Act) — Federal law which regulates the discharge of pollutants into surface waters.

**DER** (<u>Department of Environmental Regulations</u>) — Establishes the broad range of regulations to protect the environment.

EPA (Environmental Protection Agency) — The federal agency responsible for enforcement of federal environmental laws. (DER)

FIFRA (Federal Insecticide, Fungicide and Rodenticide Act) — The federal law which governs the registration, application and use of pesticides - probably the most important law affecting course superintendents.

HazCom (Hazard Communication Standard) — The federal

regulation which requires employers, including superintendents, to provide employees with information and training on hazardous chemicals in their workplace.

LUSTs (<u>Leaking Underground Storage Tanks</u>) — For which courses must take corrective action as required by RCRA.

MSDS (Material Safety Data Sheet) — Manufacturers and distributors are required to provide an MSDS for each hazardous substance. The MSDS contains safety, first aid and emergency information on the product.

OSHA (Occupational Safety and Health Administration) — The federal agency which oversees and regulates workplace health and safety.

RCRA (Resource Conservation and Recovery Act) — The federal law which regulates the management and disposal of hazardous materials and wastes.

SARA (Superfund Amendments and Reauthorization Act of 1986) — Which expands the earlier Superfund Act.

TSCA (<u>Toxic Substances Control Act</u>) — The federal law which authorizes EPA to gather information on chemical risks.

UST (<u>Underground Storage Tank</u>) — A tank with 10 percent or more of its volume underground with piping attached to the tank, regulated by RCRA.

Reprinted in part from GCSSA Government Briefing.

#### Leaching of Lawn Pesticides Little Threat to Groundwater

by Kurt R. Knebusch

Wooster, OH — Scientists at Ohio State University have found there is little or no downward movement of pesticides applied to lawns and golf courses.

Harry D. Niemczyk and Adam A. Krause say their findings could help allay concern that lawn-care chemicals are leaching into soil and contaminating groundwater.

"People have been saying that pesticides applied to turfgrasses are getting into the groundwater," says entomologist Niemczyk. "Our data says that's not true."

Niemczyk says there was little or no pesticide leaching in their field studies.

To determine the downward movement, or vertical mobility, of the pesticides, Niemczyk and Krause applied six herbicides and nine insecticides to turfgrasses in separate, one-year experiments.

They found that almost all the pesticide residues remained in thatch if thatch was present.

If thatch was not present in the turfgrass, most residues stayed in the top 2.5 centimeters of the soil, he says.

The herbicides tested were benefin, trifluralin, pendimethalin, bensulide, oxadiazon and chlorthaldimethyl. Insecticides tested were isofenphos, diazinon, trichlorfon, ethoprop, chlorpyrifos, isazofos, fonofos, carbaryl and bendiocarb.

"We wanted to find out what happens when pesticides are applied to turfgrasses," Niemczyk says. "Very few studies have been conducted on how these materials behave once they are applied.

"I would hope people would have confidence that what they're doing to lawns is not contributing to groundwater contamination."

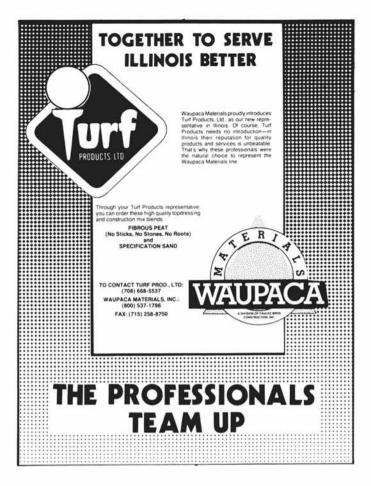
The studies will be conducted again next year.

Southern Turf Management Magazine Vol. 1, No. 1 January 1990, page 18

#### Dr. Waddington Honored

The Pennsylvania Turfgrass Council announced the recipient of its highest award, the Distinguished Service Award, at the Western Pennsylvania Turf Conference held in Monroeville, Pennsylvania, recently. Dr. Donald V. Waddington, Professor of Soil Science, The Pennsylvania State University, Department of Agronomy, received the award in recognition of his outstanding leadership and contributions to the turfgrass industry. Dr. Waddington has been a member of the Penn State faculty for 25 years, and prior to that position he was at the University of Massachusetts for five years. Waddington is widely recognized for his research dealing with turfgrass fertilization, soil modification, and surface characteristics of athletic fields. Courses taught by Dr. Waddington cover soil related problems on turfgrass areas as well as other aspects of turfgrass management. A number of his former graduate students are active in research, teaching, and extension at other universities. He has been active in professional societies, having served as chairman of the Turfgrass Division in the Crop Science Society of America, and currently serving as editor of the American Society of Agronomy monograph on turfgrass science. In 1986, he was elected Fellow in the American Society of Agronomy, an honor based on professional achievements and meritorious service.

Dr. Waddington serves as a member of the Pennsylvania Turfgrass Council Technical Advisory Committee and as a member of the planning committees for the Eastern and Western Pennsylvania Turf Conference which are co-sponsored by the Turfgrass Council and Penn State. He has been a strong supporter of the concept of Penn State and the Turfgrass Council working together to provide the best possible educational opportunities for those in the turfgrass industry.





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#### Top Dressing — A Superintendent's Perception

Peat-humus has frequently been used as a soil amendment in topdresing and soil mixtures. The legislation to protect the wetlands of the United States has made peat-humus more difficult to obtain. As peat-humus becomes increasingly more difficult to obtain and more expensive to purchase, a natural tendency may be to substitute alternative soil amendments such as mushroom soil or sewerage sludge.

Some golf course superintendents believe that the soil amendments in use are of a peat or peat-humus product. This is not always the case. If the soil amendment is in question, superintendents may consider asking a topdressing or soil mixture supplier the source of the soil amendment. The superintendent may also want to send the topdressing to a recognized laboratory to determine the physical and chemical characteristics, but more importantly, to determine factors such as pH and soluble salt quantities.

With the ever-increasing demands of higher quality turf and faster greens, the golf course superintendents have made use of a number of techniques. One of these techniques may be more frequent topdressing of golf course greens. In order to facilitate the application of topdressing to golf course greens, another technique may be to request a topdressing product with a very low moisture content. But, a superintendent also needs to consider the pH, the soluble salts and the growability of seeds and plants in the soil mixture. Remember, plants, including turfgrass grow in a soil media and reach their highest level of quality in the most optimum growing media. Are we putting too much emphasis on spreadability dryness of topdressing products and too little attention on the agronomic qualities of topdressing? Water does not leave a product until the temperature of a product, including topdressing, is heated to 160 degrees or higher. Also, the undesirable bacteria and seeds are destroyed in a soil at 160 to 170 degrees Fahrenheit; whereas, the desirable bacteria and other characteristics needed for seed germination are destroyed when temperatures reach and exceed 200 degrees Fahrenheit. Based on the above, it is obvious that the dryness of the topdressing and growability may not be compatible.

The superintendent's perception may be that the drier the topdressing, the better, but in the final analysis, other parameters may be equally or more important over the long term.

The answers to the above questions will become available with field observations and laboratory testing for physical and chemical characteristics. Will what we perceive as being the best today, really be the best for tomorrow?

The following universities and laboratories state that peat is the preferred soil amendment:

- a) Penn State University
- b) Rutgers University
- c) Cornell University
- d) Texas A & M University
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#### SOIL AMENDMENT TYPES

#### PEAT HUMUS

#### Advantages

a) stated above universities and laboratires recommend and prefer peat humus

(cont'd. page 15)

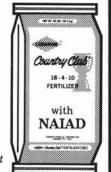
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