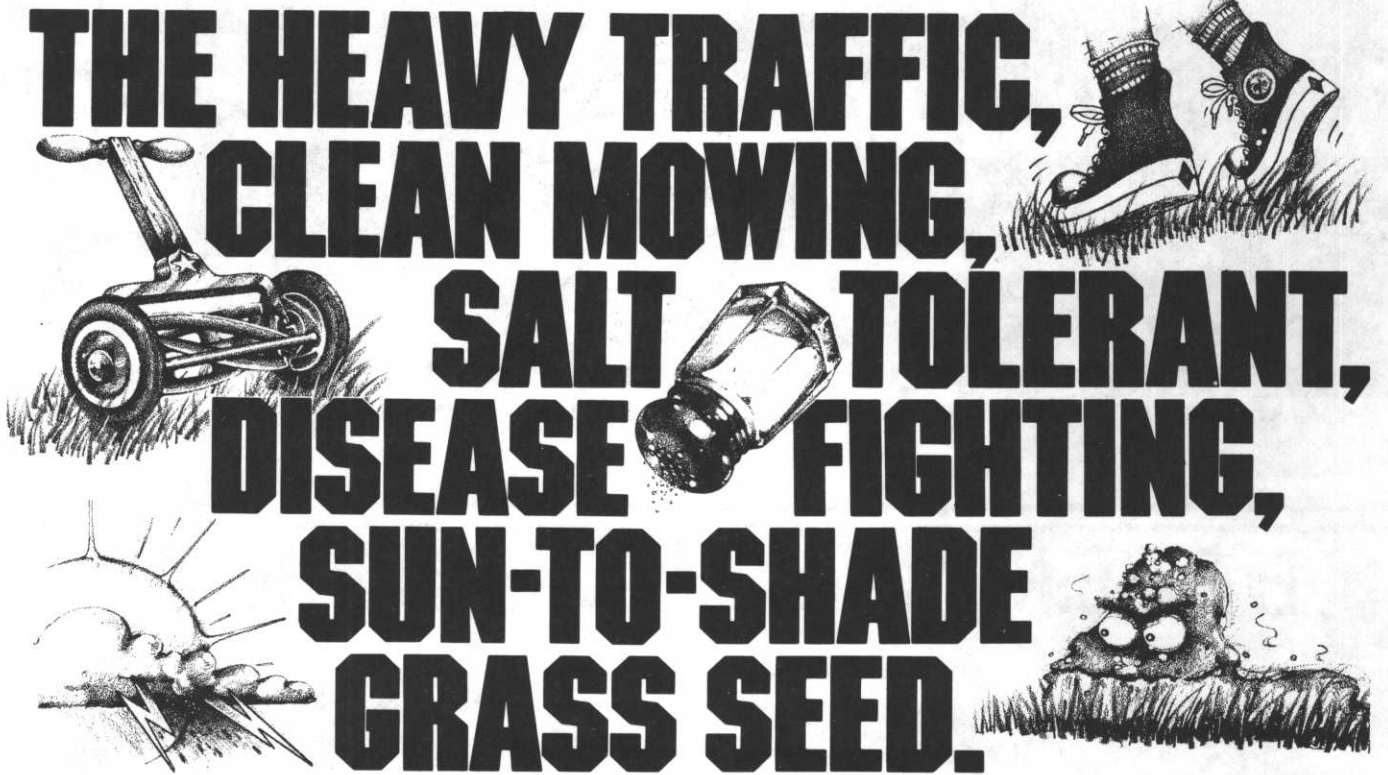


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# HOLE NOTES

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## FROM THE PRESIDENT'S DESK

LARRY MUELLER

August is here once again. How fast the summers seem to go by! If we can hold our courses together for a few more weeks, we will soon be in September and we can take some pressure off ourselves and our courses.

It is a good time to start planning our fall renovation programs and if you have any problem areas due to poor drainage, etc. it's an ideal time to get the backing of your club's officials which will be needed to make the necessary changes.

I would like to thank John Nylund of Braemar for providing his fine facilities for our Annual July Picnic and also the Wiley's - Milt, John and families - for again sponsoring the excellent family picnic. It is a lot of work and expense for them and certainly is appreciated by all of us.

A special thank you to Mrs. Leo J. Feser for her generous contribution to our Research Fund in memory of her husband. Leo was a long time member of M.G.C.S.A.

On behalf of all the members of M.G.C.S.A. I extend sincere sympathy to the family of Eino Maki on his untimely death. Eino had been a member of our association since 1964 and a long time employee of the Northland Country Club in Duluth.

While there is no shortage of educational material in this issue you will notice a notable lack of any original material by one of our members. I know we are all very rushed at this time of the season but surely there are some subjects, ideas or solutions to problems that are worthy of sharing with the membership at large. Take an hour to get it down on paper, mail it to the office and just watch how fast you get published.

# GOLF COURSE DESIGN CHANGES.... YET IT REALLY DOESN'T

AMERICAN SOCIETY OF GOLF COURSE ARCHITECTS

"They don't build them like they used to!"

Today we hear that about everything from cars to houses. What about golf courses?

"The golf course co-exists in a time-and place relationship with the players, their concepts, and their equipment," notes Dick Nugent, immediate past president of the American Society of Golf Course Architects.

"This relationship is in a continuous state of change. If the golf course architect is to be successful, he must design for his time and place, while retaining the values and traditions of the game."

Tradition, of course, is the key word in this statement, since no game relies on tradition more than golf.

One of the significant trends in golf course design is to a more "natural" course, which incorporates native bushes and flowers in its "waste" areas. One of the best examples of this type course is Pete Dye's Tournament Players Club in Ponte Vedra, Florida where Jerry Pate made headlines around the world by taking another of his famous dives.



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These "natural" areas not only reduce maintenance costs, but mandate another "new" concept--target golf. Since today's player has improved clubs and golf balls that enable him to hit the ball further, the golf course architect must counter with measures to protect par.

Is this really a new concept? Of course not! The great courses of Scotland feature natural linksland, as do many of the famous older courses in the United States, such as Shinnecock Hills.

Today's golf course architect, according to A.S.G.C.A. President Jack Snyder, simply is using the traditions of golf to cope with current realities--better playing equipment, higher maintenance costs and less water.

The "new" look in golf courses is not always readily apparent. Some have been built on unsightly landfill sites, while others are using recycled water for irrigation purposes.

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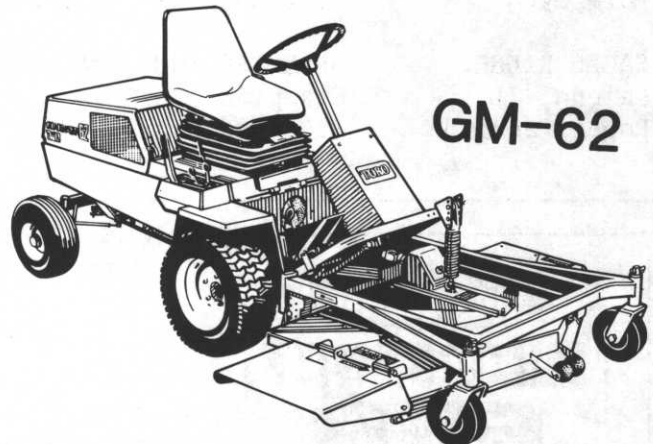
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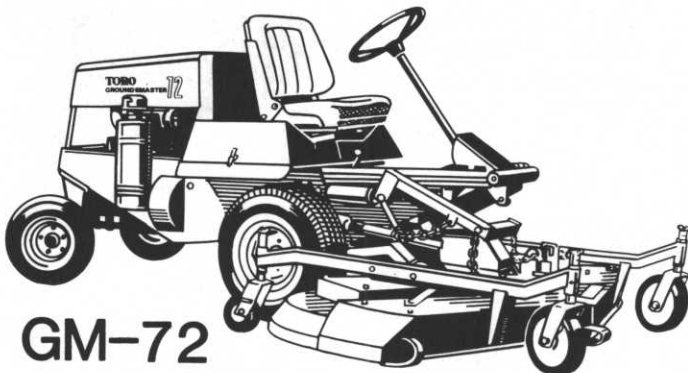
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**MILORGANITE ANALYSIS**

	Percent
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Phosphorus	2.38
Potassium	0.315
Sulfur	1.02
Calcium	0.69
Magnesium	0.32
Iron	6.40
Aluminum	1.20
Chromium	0.60
Lead	0.046
Manganese	0.018
Sodium	0.136
Zinc	0.144
	Parts Per Million
Cadmium	79.0
Cobalt	5.1
Copper	405.0
Mercury	4.8
Molybdenum	13.0

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The American Society of Golf Course Architects has compiled a list of twenty-five new courses--covering a broad range of private, resort and public layouts--that provide an interesting challenge to golfers.

Some, such as the Tournament Players Club and the P.G.A. National in Palm Beach Gardens, Florida will become familiar sites through television exposure.

Others are noteworthy because of their breathtaking sites:

Broadmoor South in Colorado Springs, Colorado; Eagle Ridge in Galena, Illinois; Grandfather Golf and Country Club, Linville, North Carolina; Oyster Reef Golf Course, Hilton Head, South Carolina; Quechee Club, Quechee, Vermont; Port Ludlow Golf Course, Port Ludlow, Washington; Sentry Golf Course, Stevens Point, Wisconsin; and Kananaskis Golf Course, Alberta, Canada.

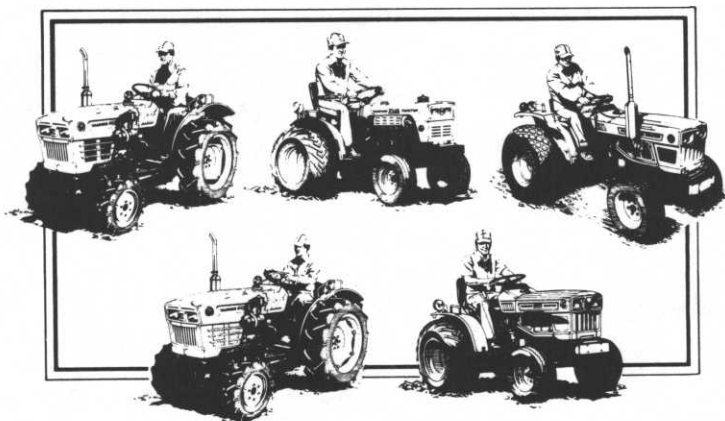
Golfers also will find outstanding new public courses, such as Mangrove Bay, St. Petersburg, Florida; Phalen Park Golf Club, St. Paul, Minnesota; Blue Ash Golf Course, Cincinnati, Ohio; and Garland Municipal Golf Course, Garland, Texas.

Given a few years to mature, some of these new courses may well be challenging such famous names as Oakland Hills, Cypress Point, Pinehurst, Pebble Beach, Augusta National, Oakmount, and Merion for their place in the list of the world's very best golf courses.

continued on Page 6

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# IS YOUR GOLF COURSE MARKED PROPERLY?

A golf course is not complete unless it is marked properly and permanently for day-to-day play. Your members cannot play under the Rules of Golf unless your course has its hazards, boundaries, obstructions, ground-under-repair and ball-drops staked and painted according to the rules.

No golf course would think of omitting tee markers or flagsticks. Why, then, does it ignore OB white stakes and paint, red and yellow water-hazard stakes and paint? According to the Rules of Golf, Definition 9, the "Committee" is the "committee in charge of competition, or, if the matter does not arise in a competition, the committee in charge of the course."

According to Rules 36-6, the Committee shall define accurately:

- a. The course and out-of-bounds.
- b. The margins of water hazards and lateral water hazards.
- c. Ground under repair.
- d. Obstructions.

And, the rules are very specific when they refer to defined areas of a golf course. If you do not define an area, no one will know, for sure, where it is - sure enough to make an official ruling.

Who is responsible for marking your course? It is a joint responsibility of the club's Tournament or Green Committee, the Club Professional and the Green Superintendent. It is imperative that the entire group should have a working knowledge of the Rules of Golf. It is not hard to mark your course if you know the rules.

OUT OF BOUNDS. Any area where you want to eliminate or prohibit play. Mark the exterior boundary of your property when you do not want people to trespass on your neighbors' property. Along this perimeter, if there is no fence, use 4x4 white stakes, 30 inches high. It is vital that these stakes be visible from one to the other and not obscured by shrubbery, trees or high weeds. Remember, the boundary is determined by inside edge of stake, or white line, or fence or other object marking OB. If any part of ball is in-bounds, it is playable.

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OB markings are permitted on "club property." OB is any area where you want play prohibited, like the nearby driving range, holes that run parallel and sometimes encourage "short cuts" that call for playing the hole unfairly or as a possible risk to other players. Nothing in the rules prohibit interior boundaries.

**WATER HAZARDS.** Two types exist. The regular water hazard crosses the line of play and lateral water hazard which runs parallel to line of play. The regular water hazard provides only two options. Either drop the ball, keeping the point where ball last crossed margin of hazard between you and hole, or go back and replay from where stroke was made. This hazard is marked with yellow stakes or paint or both. The lateral water hazard has these two options, plus, you can drop two club lengths from where ball last crossed the marked margin, not nearer the hole. Player also has the option to go to opposite side of hazard, an equal distance from the hole, and drop two club lengths. This hazard is marked with red stakes or paint and obviously should be marked on both sides, where necessary. To determine how to mark a water hazard behind a green, consider this: if it is possible for a player to keep the point where the ball last crossed the margin between player and hole, it should be marked yellow. If not, make it red, which most times is best behind greens.

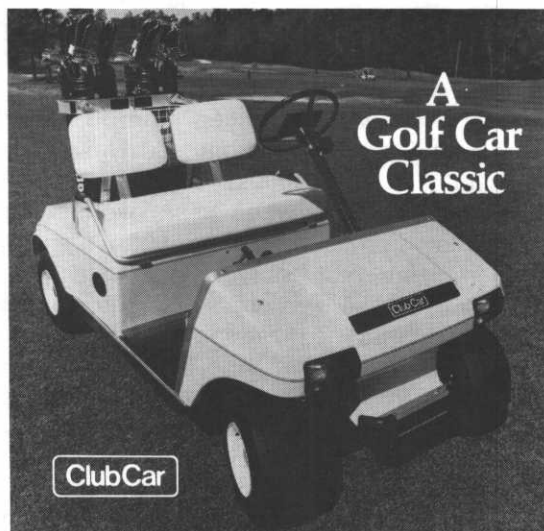
Use 1x2-inch stakes 8 inches above ground with the thin side facing line of play. Be sure stakes are clearly visible and in in-play areas, place stakes closer together. Paint between stakes helps provide a better definition of hazard boundaries and cannot be vandalized as easily as stakes.

**GROUND UNDER REPAIR.** Use white paint except in a larger out-of-play area where orange stakes and signs should be used. Remember, you can have "Ground Under Repair" under Definition 13 which includes "material piled for removal and a hole made by a greenkeeper even if not so marked".

**BALL DROPS.** If the rule does not provide the relief you want to give or there is an inequitable situation that should be rectified, designate a drop area. Sometimes it is not possible for a player to drop out of a hazard without ending up nearer the hole so the ball drop is a solution. Be sure to make it as "ball drop" and explain in Local Rules whether use of it is optional or mandatory. Once you mark you golf course, see to it that it stays that way.

Not only will this speed up play, but it will also eliminate post-round questions in the Pro Shop and Grill Room.

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## WETTING AGENTS AND THEIR ROLE IN WATER CONSERVATION TODAY

By Robert A. Moore

President, Aquatrols Corp. of America  
New Jersey

A few years ago, we were all shocked, and made well aware of our dependency on oil—particularly foreign oil—and we have been talking about “An Energy Crisis” ever since. It is my firm belief that our next national crisis will be “A Water Crisis.” As an example, at the Oklahoma Turf Conference, in December 1978, Dr. Huffine recalled a comment by Marv Ferguson, that if this nation ever has another Civil War, it will be fought over water.

I don't believe we'll run out of water! But I do believe we must stop wasting water. We must learn to use water efficiently. Some areas of our country are now very aware of the necessity to conserve water, and have started various programs. Most of these programs require registering and reporting the quantity of water used, either monthly, quarterly or yearly. Very few areas are actually restricting water use except in cases of extreme drought or water shortages. We have all read about these checks—and in some years, have experienced such regulation.

The present requirements for registration and monitoring of water-use, provide the mechanism for future planning, and future restrictions, if and when they are needed. Take note of how many conferences in recent years are placing an increasing emphasis on water. When our company started twenty-five years ago, very few conference programs considered water at all. Today's increased awareness of potential limited water resources is sharpening our senses on ways to more economically use water—ways to make water more efficient.

One enormously useful tool to make water more efficient, that has gained recognition in the last few years, is the use of soil wetting agents. Before we discuss their place in water conservation and improved plant growth, let's take a quick look at the vital role of water in plant growth and turf maintenance; and at some of the characteristics of water that can lead to problems. Bob Kneebone, has pointed out that water is essential for every function within the plant—for photosynthesis, for cooling, for growth, for turgor and for root development. It is used as a solvent, as a reagent, and as a nutrient—in fact the largest nutrient used by a plant. Water is also involved in every maintenance practice in your operations—fertilizing, pesticide treatments, mowing, aerifying—it even affects the quality of playing conditions—sometimes to the point of eliminating play.

Most properties of water are beneficial, but two in particular, surface tension and the moisture tension in the soil, can be obstacles leading to inefficient water use, and turf losses. If we investigate the relationship between these moisture-tensions, turf losses and water uses, we see a definite pattern. Plain water has a lot of tension and hang-ups that can cause soil-water problems, one obvious example is low infiltration rates and puddling.

Puddling leads to run-off, and evaporative loss of water. One U.S.D.A. survey in the plains states, indicated that less than 20% of the natural rainfall actually

becomes root-zone moisture—the water being lost by run-off and evaporation. Without water in the root-zone plants can't function. Plain water with its high tensions, moves slowly in fine textured soils. Though not always a loss of water, this is another inefficient use, since turf can't utilize water from a saturated soil with poor aeration. Diseases such as root rots, pythium, and other water molds, as well as algaeas increase under these conditions, weaken the turf, add to the inefficient use of water, and many times result in turf losses.

On the other hand, in the coarse texture soils, which have been enjoying great popularity for the past few years, the high tensions of plain water create different problems. Water tends to channel and not wet the soil profile uniformly. These soils can be droughty requiring greater amounts of water. In addition, the sandy type soils have been shown to produce a hard-to-wet condition referred to as localized dry-spots. These areas literally repel water, resulting in wilting and turfgrass losses. Repellent areas require special hand labor and extra waterings to try to save the turf—and that can cost you money! Thatch can also inhibit the movement of plain water, consequently, the movement of nutrients and other chemicals, particularly soil insecticides, are limited, weakening the grass and resulting in turf losses.

As we review these problems that can lead to turf losses, we note that they can be classified as WATER problems—not SOIL problems. In each case there was too much water or too little water. And yet the approach to solving the situation has historically been aerifying and soil renovation. Though the soil condition is involved, the main cause of the turf losses outlined has been the high tensions of plain water.

It is essential for the growth of healthy plants and for the conservation of water that certain compensations be made to promote a more efficient and wise use of water.

As mentioned earlier, the use of soil wetting agents to change water by lowering its tensions is rapidly gaining recognition for the purpose of “Making Water Better.” Under low-tension-water conditions, water percolates faster. Puddling is reduced. Run-off and evaporation losses are reduced or eliminated. University data using tensiometers indicated a reduction of 30 to 50% in water use requirements when using wetting agents. That could mean a 30 to 50% reduction in salts introduced when using high salt content water—an important factor in these western states. Erosion losses were reduced by 65% in these same tests—which were under the severe conditions of 6 inches per hour on a 30% slope. All this, simply using a wetting agent to compensate for water's few negative characteristics.

A statement that has often been heard is that we can't do anything about the problem of water penetration in areas of high traffic—high compaction. The remedies discussed are usually aerification soil renovation or paving. No thought is ever given to the WATER.

continued on Page 11

# **YELLOWING TURF?**

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**TRUE** IRON DEFICIENCY IS A WIDESPREAD PROBLEM IN OUR AREA. **YES**  
SO MUCH SO THAT WE HAVE TAKEN THIS SPACE TO DISCUSS IT.

**FALSE** YELLOWING (CHLOROSIS) IS ALWAYS AN INDICATION OF  
INSUFFICIENT IRON. **NO** -- THERE ARE OTHER CAUSES  
**BUT**

**TRUE** EIGHT OUT OF TEN CASES WHERE IT WAS USED - YELLOWING TURF  
RESPONDED FAVORABLY TO APPLICATIONS OF IRON. **YES**

**FALSE** ALL IRON ADDITIVES WORK EQUALLY WELL. **NO**  
IN TRIALS USING THE MORE COMMON IRON SUPPLEMENTS -  
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