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## MAGCS Seeks 1988 Monthly Meeting Sites

The Midwest Association of Golf Course Superintendents, through its Arrangements Committee, is in the process of establishing a tentative monthly meeting schedule for the next year, 1988. It is, once again, our goal to arrange a geographically balanced schedule with a variety of golf courses for all MAGCS members to enjoy. If you are interested in offering your time and your club or facility for such an event; complete, clip and return the form below to:

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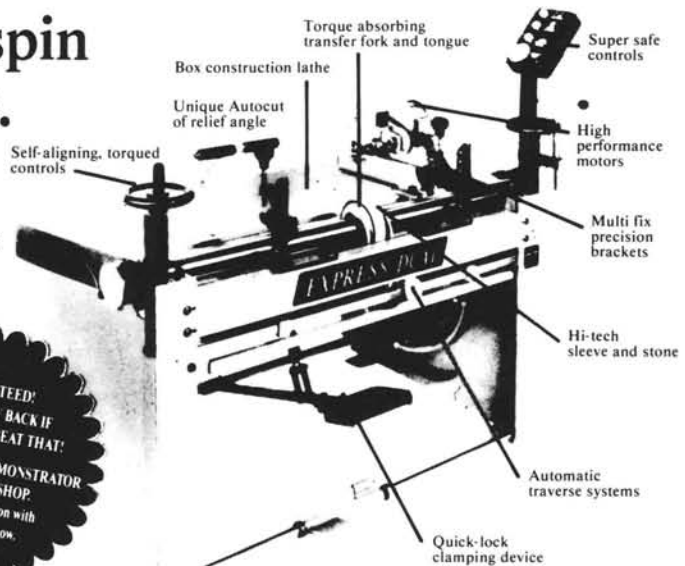
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## Midwest Breezes



## Upcoming Events — Mark Your Calendar

**January 5&6** — GCSAA & MAGCS Seminars at Pheasant Run

**January 11** — Monthly meeting at Wilmette G.C.

**February 1-8** — GCSAA Conference in Houston

**March ?** — Nordic Hills C.C. monthly meeting

**April** — We need a meeting place

**May 23** — Silver Lake C.C. Joint Association meeting

**June ?** — Lake Shore monthly meeting

**June 30 - July 4** — Western Open at Butler National

**July 21** — University of Illinois Field Day

**August** — We need a meeting place

**September** — We need a meeting place

**October 10** — Lake Barrington Shores monthly meeting

-----  
Joe Canale reports that he had surgery on October 8th for the replacement of his left hip. By the time you are reading this he won't even be using a cane to chase the girls in the Illinois river valley. Joe, if you keep up at this pace you will be rebuilt in 10 years!

-----  
Congratulations to Peter Leuzinger on becoming the new President of the Illinois Turfgrass Foundation. The ITF has come a long way in the past couple of years and Peter will take it further along on it's journey of helping to improve turf in Illinois. Just don't ask Pete about the hole in the paper joke — please don't do that.

-----  
The NCTE was a howling success at Pheasant Run in St. Charles this past December. The attendance figures were way up and all of the vendors had happy smiles on their faces for the good crowds that were at their booths. Also a person wasn't held up with the high prices of the former places we have been. The education and workshops were also a success with many speakers to chose from. It was a great show.

## “Winter Anxiety”

As the New Year Greets Us with special charm,

Winter conditions cause great alarm.

Frost heaving, Ice sheets, Desiccation,

And Disease under the snow.

Sometimes beyond Our control,

During Winter's Wonderous Show.

Along with seasonal obligations,

That fill the Winter time slot,

Superintendents find plenty of time,

To worry a lot.

Kenneth R. Zanzig

Julius Albaugh, CGCS  
Ray Gerber Editorial Award Winner



Julius Albaugh, CGCS receiving the award plaque from Fred Opperman, CGCS, editor of **The Bull Sheet**.

The 1987 Ray Gerber Editorial Award was won by Julius Albaugh with his article “Save Mondays — Golf Course Maintenance Day”. Julius has written many articles in the past for **The Bull Sheet** and he is a past winner of the Charles Bartlett Award in 1982 for an article on the stimp meter which was published by the USGA. Congratulations Julie and we hope to be reading more articles from you in the future, even tho you do say that you sometimes stick your foot in your mouth.

-----  
For Sale: 7 gang Jacobsen 10 blade fairway mowers with frames and spare mower; 1975 Larson Model 421 fairway fertilizer spreader; 1977 Jacobsen UV-4 cart with 16HP Kohler engine and hydraulic dump; 150 wood trap rakes. — Contact Kurt Galisdorfer at Exmoor C.C., (312) 433-1177.

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Jeff Warner at Country Lakes needs an assistant. Call (312) 420-0197.

-----  
As a long time fan of the **Bull Sheet** and it's editors, I have collected issues of the **BS** since back in the early 50's. And I have discovered that the total weight of all of the issues of the years '53; '54; '55 is one and one half pounds, compared to four pounds one ounce for all the issues of the years '84; '85!

We are getting a lot more **Bull** than we used to and that's good.

Thought you might be interested in this startling revelation. Thanks again for all your hard faithful work in making our publication the best in the land.

John C. Ebel

## Mechanical Tree Transplanting — Another Perspective

by Greg Oltman

During the 1987 season, Williamson Nursery & Associates, Inc. transplanted slightly more than ten thousand trees, using mechanical tree spades ranging in size from thirty-six inches to ninety inches. We feel qualified, therefore, to comment on Mr. Beebe's article from the November 1987 *Bull Sheet*, "1987 — The Frenzy of Mechanical Tree Moving."

At first reading, Mr. Beebe's article seems to be a rather general indictment of tree-spade transplanting. Perhaps, however, this is merely the defensive reaction of someone who has often been challenged on the effectiveness and advisability of relocating large trees mechanically. Upon re-analysis, we found that Mr. Beebe does, in fact, cite several legitimate concerns and makes some very valid points.

It is the transplanting of the very large trees (10" + caliper) which, historically, has prompted the greatest controversy. In this area, Mr. Beebe and I agree most entirely. It is seldom possible to successfully transplant trees of this size with tree spades, simply because the largest commercially available spade is only ninety inches in diameter. Transplant failure need not be an absolute, however, if proper preparation techniques are employed. We have found that root-pruning very large trees and leaving them in the ground for a full season, helps to moderate transplant shock when the actual move takes place. We perform root-pruning by digging the tree with the spade, but not removing it from the hole. We usually try to dig the tree about six inches smaller than the full "dig" of the ninety-inch spade. Then, when the tree is actually transplanted, we dig a full ninety inches. In theory, and, seemingly, in practice, at time of transplanting, we are able to capture the new roots that the tree has initiated as a result of the earlier root-pruning.

Even when this method can be used, however, we recommend it only for nursery-grown trees. We recommend very strongly that native trees (or "volunteer trees") not be moved in sizes above seven or eight inches of caliper. Without any history of transplanting, a tree larger than seven inches caliper will almost certainly not survive. This is due to the extremely random nature of the root system of a tree which has never been transplanted. It is likely that as little as three percent of the feeder root system will be captured in the transplanting of a nine or ten inch caliper native seedling tree. There is simply no way that this minute percentage of the root system can support the canopy, even after canopy reduction by pruning.

In addition to pre-transplant preparation, post-transplant maintenance is absolutely imperative. This is true not only on extremely large specimens, but on intermediate size material as well. It may take up to five growing seasons for a transplanted tree to become entirely self-sufficient again. In light of the temperature and moisture extremes which are a common part of our weather pattern, this length of time should not be surprising. We sometimes tend to think that after one or two seasons, the transplanted tree is "over the hump." This can be a critical mistake, and one which can lead to that one hundred percent mortality Mr. Beebe mentions in his article.

There are numerous other factors which enter into our decision whether to transplant a tree: species, the tree's current location, the conditions found at the new site, time of year, expected follow-up maintenance by the client, etc. For our own reputation, the good of the client, and the reputation of tree-spades in general, it is often best to say a polite "Thanks, but no thanks."

We share with Mr. Beebe the concern that tree-spades are portrayed as miracle machines. For this image, we lay a large part of the blame at the doors of the manufacturers. Tree-spades can be a very effective and efficient means of transplanting trees, but they are not capable of transmuting the laws of Nature. There will always be people who use tree-spades beyond reasonable limits, and, therefore, there will always be those individuals who condemn all tree-spade transplanting. This is unfortunate, for we see properly performed tree-spade transplanting as an increasingly important part of the landscape industry.

We don't expect that we will convert everyone to our way of thinking. But, given the opportunity, we remain convinced that we will win far more than we will lose.

## NGF Creates Golf Program Guide for Schools, Colleges

JUPITER, Fla. — The National Golf Foundation has created a complete program guide for middle schools, high schools or colleges wishing to include golf as part of their regular physical education curriculum. Packaged in kit form, it is a distillation of teaching methods used by leading golf instructors throughout the United States.

"Many physical education programs today do not include golf," says Dr. Ed Cottrell, the former associate dean for the physical education department at Pennsylvania's West Chester University, who currently serves as chairman of the NGF's Association of Golf Educators, a national service organization for golf coaches and teachers. "And this is often because the teachers are not trained in golf and therefore are uncertain just how to implement such a program.

"This kit gives the schools and their teachers all the tools needed to successfully add golf to their current physical education programs. By the same token, we believe that instructors and coaches who have been teaching golf for years will find it just as useful."

The NGF GOLF CURRICULUM KIT contains 16 lesson plans adaptable to any grade level or teaching time frame. There are also master copies of student hand-outs, drills and sample tests; the two-volume NGF golf instruction video, *How to Play Your Best Golf*, and, four specially developed NGF publications: *Golf Instructor's Guide*, *Golf Coach's Guide*, *Golf Lessons* and *Easy Way to Learn Golf Rules*.

"We feel that by responding to the needs of golf educators we are also helping the game," says NGF President and CEO David B. Hueber. "Golf is the game of a lifetime, and the sooner tomorrow's generation of golfers get started, the better it is for them and the industry."

Available through the NGF for \$149 (\$89 without the video), the kit can be purchased by NGF members at a 10% discount.

The National Golf Foundation is a nonprofit golf industry research organization that also works to promote the game with programs aimed at introducing more people to the game while also encouraging the development of the additional golf facilities that will be needed for those players in the years ahead. Founded in 1936, its 4,000 members include golf companies and golf courses throughout the U.S., as well as national, state and local golf associations, golf course architects and builders, and, golf teachers and coaches.

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# Mulching Trees & Shrubs: Advantages & Disadvantages

by Thomas L. Green,  
The Morton Arboretum

Mulch has been defined as "any material used at the surface of soil primarily to prevent loss of water by evaporation, to keep down weeds, to dampen temperature fluctuations or to promote soil productivity." This definition would include a full range of organic and inorganic materials. Organic mulches include leaves, wood chips, bark, sawdust, perennial groundcovers, peatmoss, moss, lawn clippings, hay, straw, nut shells, grain hulls, corn cobs, mushroom compost, manure, conifer needles, newspaper, sludge, and numerous other organic by-products. Inorganic mulches, include polyethylene, river stone, crushed rock, volcanic rock, crushed bricks, ground tires, aluminum foil, asphalt, synthetic fabrics, and numerous other materials.

When mulches are used correctly they can greatly enhance plant growth and make the landscape more attractive. Incorrectly used, mulches can be harmful to plant health.

## Advantages

Plants grow best when conditions are favorable for root growth. Mulches can enhance root growth by creating a favorable microclimate in the rhizosphere and improving the physical, chemical, and biological properties of the soil.

**Favorable Microclimate.** Few people water established trees and shrubs sufficiently during dry periods. Mulch — over a properly prepared surface — improves water infiltration and retention during the hot dry summer weather and reduces the need for irrigation. Soil moisture vapor can condense on the cooler mulch at night and return moisture to the soil. In the spring or during rainy periods, when the upper soil layers tend to be saturated, some mulches act like sponges and hold water. Unless the mulch texture is too fine, roots can grow through the upper mulch layers and receive adequate amounts of oxygen and moisture.

Soil temperature moderation is important. Mulch can keep summer soil temperatures lower and winter soil temperatures higher. Turf and bare ground temperatures in the summer often exceed the limits past which roots of trees and shrubs can live. Without snow in the winter, turf and bare ground may freeze, and when soil temperatures drop below 10 degrees F roots begin to die. Summer heat and drought can kill tree and shrub roots that grew in late spring. Then they'll regrow them in the fall, only to lose them again to winter cold. This abnormal root loss requires great expenditures of energy for regrowth and winter loss may affect mineral absorption in early spring during foliation. By minimizing temperature fluctuations, mulch helps more roots survive to support top growth.

**Soil Property Improvement Physical Properties.** Most organic mulches are light and porous. When incorporated, they can improve the aeration of heavy (clay) soils and the water-holding capacity of light (sand) soils. Organic mulch can increase the size of soil aggregates in the surface soil and total porosity. Improved aeration favors root growth and other biological activity which, in turn, enhances soil structure. Mulch helps prevent erosion and compaction. It also prevents cracking of clay soil. Cracks increase water loss and break roots.

**Chemical Properties.** As organic mulches decompose they are converted to humus. During this change, much of the

nitrogen, soil phosphate, sulfate, and other inorganic elements become part of the humus fraction of the soil. With the aid of various micro-organisms, the minerals of humus are made available to the roots. Also, by lowering surface soil evaporation, mulches reduce the soluble salt content which can build up to toxic concentrations during periods of low rainfall.

**Biological Properties.** Mulch provides a favorable environment for the growth and development of many types of soil fauna and flora. The stimulation of aerobic organisms will improve soil granulation, stability, and water infiltration. Mulch makes a favorable environment for earthworms. Research has shown that composted hardwood bark mulches can reduce root diseases; the increased biological activity is helpful in favoring decomposing organisms and reducing pathogens. Mulches reduce weed competition by inhibiting germination.

Through the millenia, organic plant material, mostly leaves, has provided the natural mineral recycling for plants. The establishment of a more natural environment for the root system will allow for optimum root growth, which in turn allows for better top growth. A healthy plant is more resistant to disease and insect attack.

## Disadvantages

Organic mulches are generally better than inorganic mulches. But even organic mulches can be detrimental to plant health when used incorrectly.

**Unfavorable Microclimate.** Excess moisture may occur with fine textured mulches, organic and inorganic. Sawdust, fine peatmoss, and grass clippings retain moisture and should not be used as a single mulching material. Also, mulches used over poorly drained soils can result in nitrogen loss (denitrification).

Moisture and oxygen deficiencies are major problems under plastic mulches. Plastic mulch is usually not recommended. If used, it must have holes to allow for water and oxygen infiltration.

(cont'd. on page 19)

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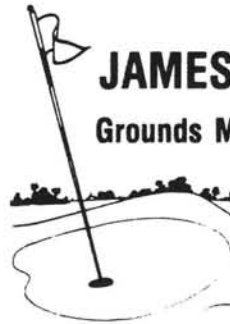
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Unfavorable temperatures can occur with mulch. Mulches that reflect light and heat can radiate enough heat to injure plants. Dark-colored rock can absorb solar radiation during the day and radiate heat in the evening. These mulches can stress plants and increase air conditioning costs.

Mulch insulates the soil from surface temperatures. After becoming frozen in the winter, mulch is slow to warm in the spring, which slows root growth and function. It is better to apply organic mulch after hard frost in the fall or after frost in the spring. The insulating effect of mulch can also delay hardiness development. It should not be placed in contact with trunk surfaces; this will allow the trunk base to acclimate for winter. This may be very important in grafted and budded plants with graft junctions near the ground line. Under certain conditions, as frost occurs, the temperatures just above a mulch may be a few degrees lower than the temperatures above bare soil. This sometimes causes winter injury and bark splitting.

**Nutritional Imbalance.** A nitrogen deficiency may develop when fresh mulch is used. Mulch should be composted and applied to the surface, but not incorporated. If using fresh mulch, add a little nitrogen fertilizer.

Calcareous materials (e.g. marble, limestone, volcanic rock) should not be used where the soil pH above 6.5. Acidic rainfall dissolves this material, causing the soil pH to raise and makes micronutrients (e.g. iron, manganese, zinc, copper) less available to the plant. This may result in deficiency-related diseases.

**Toxicity.** Toxic substances can be produced when fresh organic mulch is improperly composted. Composted mulch has an earthy odor; avoid using any mulch with a sour or foul odor. Fresh mulch, especially wood chips, becomes covered with hydrophobic fungal spores. The water is repelled and the chips do not wet; therefore, they do not decompose. A few drops of dishsoap or wetting agent will correct this problem.

In 1981 an experiment was begun to study the effects of turf and mulch on 40 newly planted, bare root, 2-2½ inch diameter 'Green Mountain' sugar maples. Mulch trees received a basal layer of two inches of composted leaves topped with two inches of wood chips, mostly fresh, applied on eight-foot diameters. Turf trees had turf to the trunk. The mulch has reduced scorch, increased growth, and color, and increased survival compared to the trees surrounded by turf. Two inches of fresh wood chips are being added every 2-3 years.

### Mulching recommendations

1. A multitextured (fine, medium, coarse) organic mulch is preferred to inorganic mulches.
2. Apply composted material to the soil and top with coarser and fresher material. Don't incorporate.
3. Do not exceed 4 inches in thickness, and the larger the mulch diameter around a plant the better.
4. Keep mulch at least 6 inches from the trunk.
5. Apply just after hard frost in the fall or after frost in the spring.
6. Avoid applying insecticides within the mulched areas.
7. If living mulches are desired, plant perennial ground covers and avoid disrupting the mulch or root system. Do not use annuals.

Credit: OGA Notes, Spring '86

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**Golf-Oriented Real Estate Developments Spread Throughout Country**

Golf-oriented real estate developments — previously concentrated in Sun Belt areas — have spread rapidly throughout the country in the past two years as lower interest rates have fueled the building of new courses.

Roger Rulewich, president of the American Society of Golf Course Architects, notes that “we’re in the midst of one of the biggest golf construction booms in the history of American golf, and the majority of the new courses are tied in with real estate developments.”

In the Chicago area, for instance, at least 15 major real estate projects are being developed in conjunction with a golf course. Most are concentrating on higher-priced residential units, with one project offering homes in the million dollar range.

“Golf courses add to the over-all appreciation of the property,” states Amy Zale, vice president of marketing for the Zale Group, one of the prime Chicago developers.

“The units with golf course views are the most valuable property sites, and sales for these units will always be steady,” Zale adds.

Charles Kincaid, a real estate consultant based in Aurora, Ill., agrees that there is a long-term strength in golf-oriented real estate developments.

“Although golf course communities have become increasingly popular, it appears the market for more of them is still strong. Golf courses provide two levels of value. First, merely being in a golf course community, even without a direct fairway view, can add more than 20 percent to the value of a homesite, based on prices of comparable lots in the same community.

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