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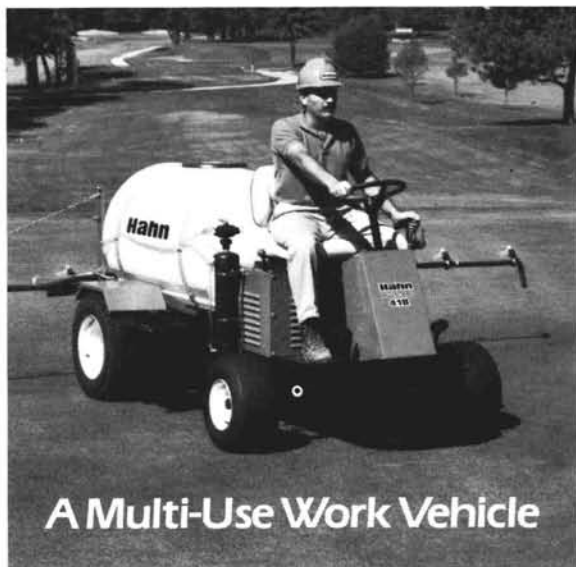
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## Midwest Breezes



### Upcoming Events — Mark Your Calendar

**January 10-11** — MAGCS & GCSAA Seminars at Pheasant Run Resort

**January 16** — MAGCS Monthly Meeting at Arrowhead Golf Club, Wheaton

**January 22-24** — Midwest Regional Turf Conference, Indianapolis, IN

**February 19-26** — GCSAA Conference, Orlando, FL

### A Fork In The Road

by Fred D. Opperman, Editor

Well, fellow members and friends, I have reached my fork in the road, and I will now be traveling down a different path from the one I have been on for the last 29 years. These past 16 months have been frustrating, enlightening, enjoyable, and blessed with friends who cared enough to ask how I was getting along and friends who gave me work to pay the bills. To these friends I am truly indebted and I sincerely thank you.

The 2nd of January, I will begin working with the team of Dick Lamkey and Greg Oltman of Williamson Nursery & Associates. My position will deal with the sale of trees, tree transplanting, and fertilizer. I will be calling on golf courses to introduce our products and services in the very near future.

I am pleased to continue to serve as your Editor of **The Bull Sheet**; and with my calling on the golf courses, I should find that it will be easier to fill the "Midwest Breezes" page.

The deepest sympathy of the members of the Midwest Association of Golf Course Superintendents is extended to Dave Blomquist and his family on the death of Dave's mother on December 17, 1989.

Christine Faulks recently addressed an international meeting of the world's top golf course designers, constructors and architects in Wiesbaden, West German, on October 4. Her presentation was entitled, **State of the Art Blending and Formulations of Rootzone Mixtures**.

Congratulations to Jacoba and Dave Ward on the birth of their daughter Julia Rose on Thanksgiving Day. Also to Beth and Andy Dauksas on the birth of their daughter, Alexandria, on December 12, 1989.

## Performance Booster

You won't want to miss the January 15th MAGCS meeting at Arrowhead Golf Club. This meeting will begin promptly at **10:30 A.M.** The education portion will feature a presentation by Michael Crandal, a performance enhancement specialist. Mr. Crandal's speeches and seminars are in demand throughout the country, with his most requested program being, "Success is an **Attitude**". Mr. Crandal has authored the book, "**The Power Tools of Performance Enhancement**". He will bring to us an interesting, fresh, and lively ninety minute program. He will discuss many of our personnel management, and employee motivation concerns. All **MAGCS** members are sure to find this a most refreshing and enlightening presentation. See you there!

### MAGCS Education Committee

We have some commercial "reps" who are moving around in the area. Jerry Persons will be the new kid on the block for LESCO and Tom Nestor will be moving on to St. Louis to get closer to his main squeeze and his farm. Good Luck to both men.

Howard Baerwald wishes to say "Hello" to all his old friends. He says he is doing fine, but slowing down. Many of us can recall the time that Howard was at every meeting. You never missed him for he was always taking the entry money to every event. Give Howard a call to say hello to him at 354-3222.

### ASSISTANTS NEEDED, APPLY BELOW:

Wilmette Golf Club, Mike Matchen, Supt. (708) 256-9654  
Sunset Ridge C.C., Dennis Wilson, Supt. (708) 466-5222  
Olympia Fields C.C., Tom Rodems, Supt. (708) 748-0495  
Kemper Lakes G.C., Doug Quiram, Supt. (708) 438-5610

### FOREMAN NEEDED:

Bob O'Link G.C., Bruce Williams, Supt. (708) 432-0088  
Sunset Valley G.C., Brian Green, Supt. (708) 433-0850

**Assistant Superintendent & Mechanic** needed at Royal Fox Golf Club. Contact Ernest Corsi, at (708) 377-9491.

## Used Equipment List — For Sale

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**For Sale:** Rugg 28" wide wood bunker rakes. Contact Bruce Burchfield at Thorngate C.C., (708) 945-0568.

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(Turfgrass Nutrition cont'd.)

- Hardiness is related to soil temperature (both hot and cold) and only indirectly to air temperature. Nitrogen to potassium balances are important in the promotion of turf hardiness - 2 to 1 or 3 to 2 (nitrogen to potassium). This balance is needed year around.
- With more potassium, there is less wear damage on turf. Up to 3.6 pounds of potassium per 1,000 square feet per year have been found beneficial.
- Addition of potassium has led to increased resistance of turf to brown patch, dollar spot and fusarium.
- Potassium is subject to luxury consumption by turfgrasses. High levels are not needed but grasses accumulate it anyway. After growth rates no longer increase with added potassium, these other hardiness benefits may continue to be noted. Natural concentrations of potassium in the soil are seldom adequate. These need to be increased for maintenance of healthy turf.
- **Sulfur** was thought for years not to be a limiting factor in the growth of turfgrass.
- Sulfur availability is reduced at pH levels below 6. At that point the foliage looks like there is a nitrogen deficiency.
- **Iron** is the most likely micro-nutrient to become deficient. Zinc and copper are heavy metals that do not move much in the soil. Higher than normal concentrations can lead to toxicity. Iron is required in very small amounts. At pH above 7, there is reduced availability.
- Iron is important for root and shoot growth for drought hardiness and for dark green foliage.
- Intervenal yellowing of the youngest leaves develops as iron becomes deficient.
- A foliar application of iron can produce a response in just

30 minutes.

- In turfgrass nutrition, nitrogen and potassium are the key.
- Nitrogen requirements of the turf are based on need indicators — pounds of nitrogen per growing month per 1000 square feet. Zero nitrogen is the lowest and the highest amount of nitrogen ranges from 0.5 to 1.5 pounds per 1000 square feet.
- The objective of turfgrass management is to grow grass and maintain the existing quality of turf.
- There are timing guidelines for use of nitrogen:
  - not during heat stress;
  - not during drought stress;
  - 30 to 40 days prior to winter where turf is subject to snow mold and winter kill, nitrogen should not be used;
  - watch for disease proneness;
  - watch for weed infestations.
- Use potassium in mid-summer where traffic is a problem.
- Use nitrogen after slicing and aerification.
- Use nitrogen after disease has run its course.
- Use phosphorus based on soil test results. Also, base potassium application on soil test results.
- Sixty five to eighty percent of the nitrogen applied may be matched 1 to 1 with potassium.
- Iron can function as a part of the nitrogen requirement by substituting it for nitrogen. Use iron at 2 ounces per 1000 square feet.
- From day 1 to day 5 following mowing, there is a 40 percent increase in the water use rate as leaves regrow.
- Eighty to ninety percent of the water lost by turf is through stomata. Most stomata close at mid-day and stay closed for a couple of hours. There is not as much foliar absorption of iron during this period.

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## Winter Bird Feeding

As fall fades to winter, most of us start preparing for the cold days ahead. According to Kathleen Gass, Horticulturist for the University of Illinois Extension Service, now is also the time to start thinking about the birds that will be visiting your yard this winter.

If you are interested in feeding birds this winter, give consideration to the type of feeder and type of seed you will be using. The species of birds attracted to your yard will depend on both of these variables.

A variety of birds will be drawn to your yard when a mix of different types of seed is used. Each species of bird at the feeder will be searching for its favorite seed. To obtain these favorite seeds, the bird will methodically drop or kick the other types of seed out of the feeder. This seed often goes uneaten, although doves and juncos will feed on this seed from the ground. The seed not eaten will be contaminated by dampness or droppings.

To avoid this type of loss, Gass recommends separate feeders for different types of seed. In this way, each species of bird will feed on its favorite seed and losses will be kept to a minimum.

Different styles of feeders are also available. Tube feeders are popular and easy to obtain. The feeder is a clear plastic cylinder with perches next to the holes where the birds feed. Small perches will attract smaller birds, larger perches can support more weight therefore attract larger birds.

A house feeder or platform feeder are also popular. These can be supported by a pole in an open area of your yard. This set-up helps to control unwanted squirrel visits to your feeder. House and platform feeders are sturdy supporting a variety of birds.

Following is a list for attracting specific birds:

### **Tube with black oil sunflower**

Finches, woodpeckers, titmice, chickadees, nuthatches, crossbills.

### **Platform feeder with black oil sunflower**

\*the previous list plus — cardinals, jays, purple finches, towhees, thrushes, goldfinches, pine siskins, juncos, housefinches, redpolls, doves, grosbeakes, grackles.

### **Tube feeder with niger thistle**

goldfinches, purple finches, pine siskins, chickadees, dark eyed juncos, house finches, redpolls, doves, song sparrows, white throated sparrows.

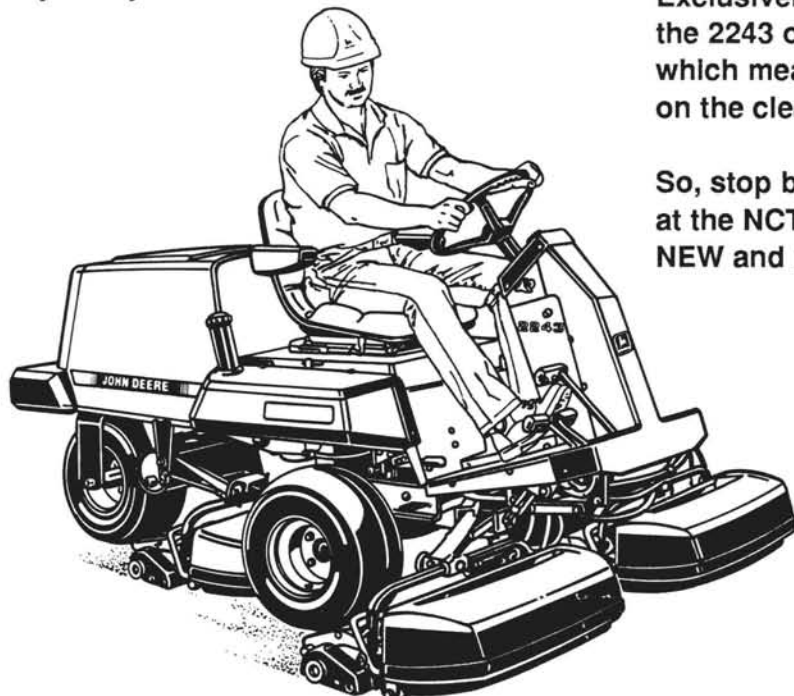
### **Platform with corn**

starlings, grackles, juncos, doves, house sparrows, jays, bob-white quail, ring-necked pheasants.

Bird watching can be fun and educational. Spice up a dull winter with the entertainment Mother Nature provides, and feed the birds!

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## Lawn Care Products Application and Notice Act

As you may already know, the Illinois state legislature has passed the Lawn Care Products Application and Notice Act, which takes effect January 1, 1990. This act is mainly geared toward the lawn care industry, and applicators for hire, and addresses three main concerns: 1) notification of homeowners as to pesticide/fertilizer applications to their lawns, with installed warning makers ("posting"); 2) prior notification of an upcoming application to neighboring dwellers when requested; and, 3) requirement for wash water and rinsate collection systems.

However, there are separate sections of this legislation with specific wording toward **golf courses**. A "blanket posting" procedure has been established for golf courses to satisfy the notification requirement for application of pesticides. A sign with specific size, lettering and wording requirements must be posted in conspicuous places such as the pro shop, locker rooms and 1st tee. The sign explains that plant protectants are periodically used on the golf course, and further information can be obtained by contacting the superintendent.

Golf course superintendents will have to notify adjacent residents of upcoming spray applications, when requested by the neighboring parties. This "prior notification" is to be made at least 24 hours before a scheduled application. If an emergency application must be made, residents requesting notification should be notified immediately. This point is not addressed directly in the bill, but the bill does to preclude emergency applications.

Finally, the bill states that no washing or rinsing of pesticide residues can be made at a facility except in designated wash areas that satisfy specific construction requirements (concrete pad, capture tank, etc.) Again, this applies mainly to applicators for hire, but many golf operations will be subject to this section. **NOTE** that this rinsate collection system must be in place by Jan 1, 1992 — not 1990. Also, as presently interpreted, the rinsate collection requirement may not apply to golf courses where spray tank loading, rinsing, and cleaning can be done out on the golf course away from the shop or other buildings. If you have specific questions, contact the Ill. Dept. of Agriculture at Springfield, preferably in writing.

R. T. Kane, U of I/CDGA Turf Advisor

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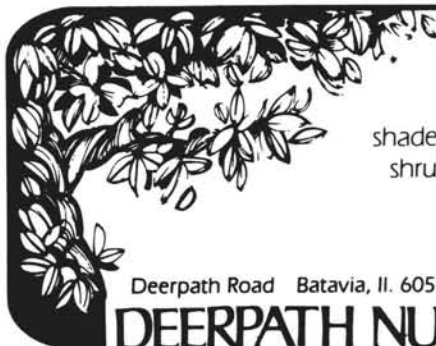


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# Water Quality and Turf Growth

by Dr. A. E. Dudeck  
University of Florida

What is water (H<sub>2</sub>O) that it is so important to all life on earth? Often we only think of the quantity of water needed for lawns and sports turf. But quality of water is often of critical importance. Dr. Al Dudeck has reviewed this topic of water quality and believes that we all should be aware of the following:

- Water is:
  - the most abundant compound on earth;
  - a constituent of life;
  - used in all industrial processes;
  - there is no substitute for water.
- Young people are 90 percent water; old people are 75 percent water. Turf is composed of 75 to 80 percent water.
- Water is used in/as:
  - photosynthesis;
  - a solvent;
  - transport systems;
  - a catalyst;
  - creating turgidity;
  - soil microbial systems.
- Evapotranspiration is loss of moisture from soil and plants.
- One pound of plant dry matter takes 1000 pounds of water to produce.
- One ton of steel takes 30,000 gallons of water to produce.
- Our water consumption is the highest in the world — up to 300 gallons of water a day per person.
- From water use, we are experiencing:
  - salt water intrusion;
  - land settlement;
  - loss of atmosphere.
- A lack of water may be the most critical national problem in the years ahead.
- The amount of water on earth is fixed. But, the demand on its use increases.
- Water uses vary from rural to residential urban to steam generation to agricultural. In the southwest the problem is quantitative. In the rest of the United States, the problem is qualitative.
- Seeding clouds is practiced in an attempt to obtain more rainfall.
- As fossil fuels are used as a source of energy, there is concern that use of oxygen and release of carbon dioxide and other gasses will create a "greenhouse effect" that will result in the world getting warmer.
- Acid rain is also of concern. Normal rain has a pH of about 5.6; acid rain has a lower pH - about 4.0.
- Ninety-seven percent of the earth's water is in the oceans.
- Three percent of the earth's water is fresh. Of that, 75 percent is in the form of ice and snow and 25 percent in rivers and lakes. 1.2 percent is surface water and 98.8 percent is groundwater. Overall, we are overpumping available water, and polluting surface and groundwater.
- The cost is still very high to get salt out of sea water.
- Contaminants in water include:
  - salt;
  - SAR;
  - sediments;
  - nutrients;

pesticides;  
element hazards;  
radionuclides;  
miscellaneous — gasoline.

- Highest quality comes from wells.
- Rivers and streams have lower quality water. Springs and small streams are a very limited source.
- Now consider use of waste water for growing plants. Some of this could be food processing waste water.
- Effluent could be liquid gold for the turf industry. There could be 70 to 100 gallons of waste water a day available per dwelling unit. Turf is a natural for effluent water. It is a perennial. It has a high water requirement. The turf can be used to clean the water and put it back in the subsoil.
- Waste water comes from:
  - toilet — 40 percent;
  - shower — 30 percent;
  - laundry — 15 percent;
  - kitchen — 10 percent;
  - other home areas — 5 percent.

60 percent of this is gray water. The 40 percent from toilet needs to go to the treatment plant.

- Why should drinking water be used to flush the toilet?
- The Clean Water Act could change much in the United States, but politics gets in the way. State and local government involves a complex political system.
- There must be a great appreciation of water resources management.

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## Safe and Sane Use of Pesticides

Dr. Roger Funk

Davey Environmental Services

The safe and sane use of pesticides is of concern to all of us, whether we use pesticides or not. Dr. Roger Funk is involved in issues related to pesticides every day of the week. His experience and understanding make the following comments of great importance.

- Because of the existence of threatened and endangered species, in 1988 a Federal Law placed limits on use of pesticides used county by county.
- On May 23, 1988, the Federal Standard "Right to Know Law" made it mandatory to inform workers and communities of practices and materials that might influence their health and welfare day to day. This was designed to cover all existing state laws that might be less stringent. For example: New York State requires a supervisor who is certified. Some states require that all applicators be certified. This requires some 30 hours of training for those that apply pesticides.
- There are many other regulations:
  - \* Departments of Transportation have regulations on the transport of chemicals, including pesticides.
  - \* Environmental Protection Agency (EPA) has regulations.
  - \* Occupational Safety and Health Administration (OSHA) has regulations.
- Regardless of regulations, there is a lack of competent workers and great difficulty in getting them on the job. Thus, implementation of regulations is difficult.

- The mission of protecting the health and beauty of clients' landscape plants is worthy. In order to obtain better qualified workers, the image of the product and job opportunities must be improved in the schools.
- When it comes to use of pesticides, all people seem to think they are experts. They each have the correct perception of the problem. It is either crisis or opportunity. How do you view it? How do you handle it? As a crisis or as an opportunity? There is perhaps a need for change in perceptions within the industry. Why should there be this controversy?
- There seems to be 3 reasons for the current pesticide crisis:
  - \* The media have and continue to condition the public to expect crisis;
  - \* Pesticide use out-of-doors is highly visible;
  - \* There is an over-emphasis on and over-use of pesticides. The shot-gun approach is common. Put on a lot of stuff whether it's needed or not. If a little bit is good, more should be better.

### "Happy New Season"

The end of one season, start of another,  
What a variation, one to the other.  
Emotional challenge, contenting success,  
How We enjoy this competing mess.  
Quite a whirl We find Ourselves in,  
Great expectations, work to the chin.  
Savor the flavor of what's gone by,  
Aim towards the future, shoot for the Sky.

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