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Official Publication  
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## FROM THE PRESIDENT'S DESK

### Preparations Underway for Annual Conference



**Judging by the limited number of phone calls** to my office, everyone has been extremely busy this summer, maintaining their golf courses or fighting Mother Nature. What used to be a storm of phone calls has now dwindled to a drizzle. Either we're doing some things right as an association or folks are just losing interest. I hope it's not the latter.

**If your interest is waning**, we have just the tonic for what ails you. As preparations for our annual conference continue, I can prescribe an interesting, fact-filled exciting agenda courtesy of our Conference Committee. Our move to Minneapolis is exciting not only for the change, but also because it allows us expanded educational and social opportunities. Concurrent educational sessions, an expanded trade show and an awards luncheon with Timberwolves General Manager Jack McCloskey are the highlights of a terrific program. You don't want to miss this one! I urge you to return your earlybird registration as soon as possible to ensure your participation.

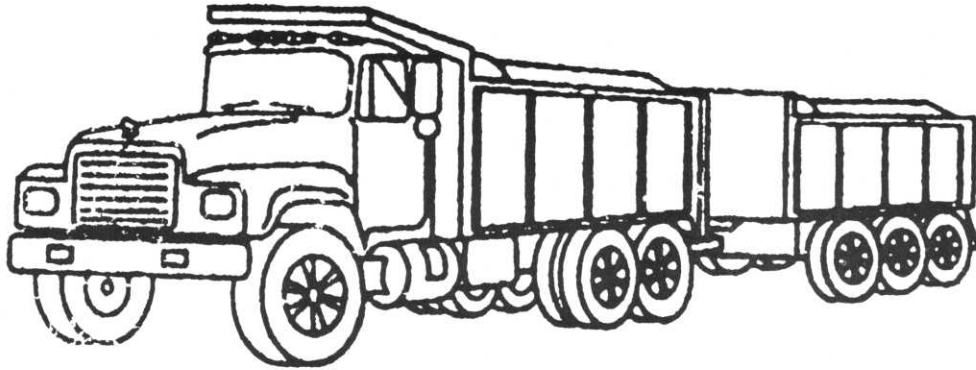
**One of the new conference sessions will feature a GCSAA informational caucus.** In an effort to provide up-to-date information for this program, we are sending a representative to a GCSAA delegates meeting in Lawrence, Kansas to gather information on upcoming national issues. This meeting continues our efforts to have our national votes more truly represent the desires of our membership. As an affiliated association of GCSAA, we must remain at the forefront of the problems of today within our association.

Until conference time, give some thought to attending our next meeting at John Granholt's Eau Claire Golf & Country Club. I'm sure the colorful autumn leaves will offer some relaxation after an intense summer season. Maybe my phone will begin ringing once again.

—Greg Hubbard, CGCS  
President



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# Paul Mayes Captures 1993 MGCSA Golf Title

With his four-over-par 76, Paul Mayes captured the 1993 MGCSA Superintendents' Golf Championship on his home course — The Links at Northfork.

One stroke behind was Blair Hawkins, Majestic Oaks, while Randy Nelson, Willingers G.C., finished third in the Championship Flight with an 80.

## MGCSA CHAMPIONSHIP

The Links at Northfork  
August 9, 1993

### Championship Flight

Paul Mayes, The Links at Northfork .....	76	\$50
Blair Hawkins, Majestic Oaks G.C. ....	77	40
Randy Nelson, Willingers G.C. ....	80	20

### First Flight

Don Phenow, Mpls. Park Board .....	NET 70	\$50
John Betchwars, Hazeltine National G.C. ....	73	30
Rick Grannes, Theo. Wirth G.C. ....	73	30

### Second Flight

Mike Ligday, Manitou Ridge .....	NET 66	\$50
Tom Feriancek, Hastings C.C. ....	67	40
Bob Erlandson, WeatherWatch .....	72	20

### Senior Flight

John Beyer, Brainerd G.C. ....	NET 70	\$50
John Monson, Long Prairie C.C. ....	73	40
Don Belkengren, Turf Supply Co. ....	74	20

### Callaway Flight

Jayme Spence, The Links at Northfork ..	NET 69	\$50
Tim George, Deer Run G.C. ....	73	30
Bob Frank, Polfus Implement .....	73	30

First Flight honors went to Don Phenow, Minneapolis Park Board, with a net 70, three strokes in front of John Betchwars, Hazeltine National, and Rick Grannes, Theodore Wirth G.C.

Champion of the Second Flight with a net 66 was Mike Ligday, Manitou Ridge. Tom Feriancek, Hastings G.C., was one stroke behind for second place while the third spot went to Bob Erlandson, WeatherWatch, who had a 72.

Senior winner this year was John Beyer, Brainerd G.C. with a net 70. Runner-up was John Monson, Long Prairie C.C., 73, while Don Belkengren, Turf Supply Co., finished third with a 74.

Callaway honors went to Jayme Spence, The Links at Northfork, net 69; Tim George, Deer Run, 73, and Bob Frank, Polfus Implement 73.



Tom Kientzle, left, Birch Bay G.C. and John Beyer, right, Brainerd G.C.



*Hey Paul,  
where is  
the shade?*

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# Soil - The Miracle We Take for Granted

Soil is one of America's most vital resources — a foundation of life. Every cubic inch holds a billion beneficial creatures. Yet we bury it under concrete and let it wash away. We poison it and neglect it, and then play politics with it. We treat it like dirt, although we clearly can't survive without it.

Of all the Earth's resources, the one we take most for granted is soil. It is so everywhere around us, brown and prosaic, so easily found and so easily wasted. Perhaps that's why so many of us think of soil only in the abstract - as something farmers use to feed us.

Those of us who live in the cities are aware of soil only when it becomes dirt, smudged onto our clothes after a picnic or carried into the house on our shoes. Then it is considered matter out of place and something to get rid of.

We bulldoze it out of the way to make highways and to erect shopping centers. We ignore its frailty when we cut timber to build houses on hillsides. And then it comes back to haunt us when it clogs our drains, clouds our drinking water, causes floods or simply falls away beneath the footings of our homes.

**The truth is that soil is a resource of astonishing balance, complexity, beauty and frailty.** If we could narrow our vision down to microscopic detail and tunnel into the top few inches of earth, we would be dumbstruck with its mystery and vitality.

There is enormous variety to soil. Experts say that there are some 15,000 different soil types in the U.S., and perhaps hundreds of thousands worldwide. They differ on the basis of the kind of rock that weathered into clay and sand to form the soil, the mix of organic matter inside it, the amount of water, the texture and the age. There are rust red soils of the tropics, from which most of the soluble aluminum and iron has been leached. There are dark brown loams in the U.S. Midwest that are made of materials scoured off the top crust of Canada and pushed southward by ancient glaciers. There are North American soils built largely from ancient silts, blown here from Asia on prehistoric winds. There are places where the soil is 200 feet deep and places where it is but a thin film on top of rock.

**Living soil is full of air passages** that let oxygen, carbon dioxide and nitrogen circulate. A well-aerated soil may be almost half airspace by volume. There are acres of surface area on the particles of sand and clay. Films of moisture cling to those surfaces, forming ponds and atmospheres that nurture a vast array of bacteria, fungi, viruses and protozoans. A cubic inch of soil can contain literally billions of creatures.

We know many of these creatures because they cause or cure disease. The bacterium *Clostridium tetani*, for in-

*(Continued on Page 30)*



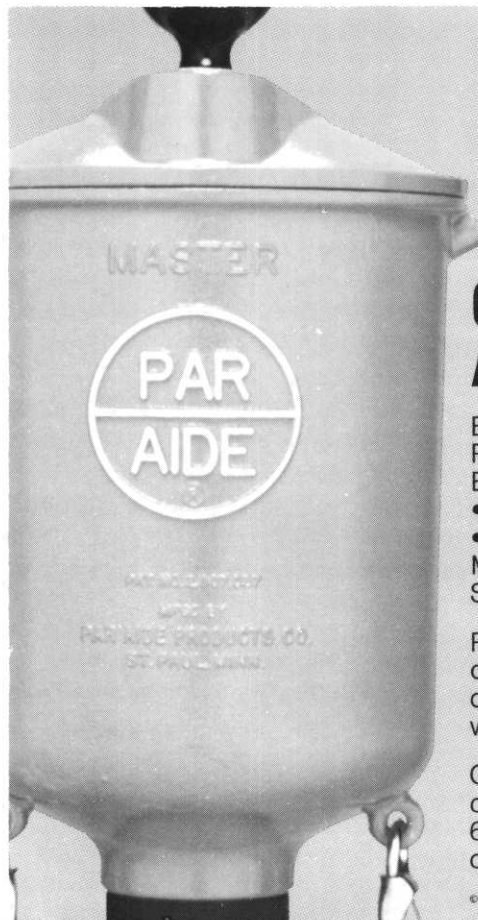
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# Handling Pesticides Responsibly

Pesticides are valuable to any integrated pest management programs. However responsibility goes hand-in-hand with the benefits of pesticide use.

As a golf course superintendent, you need to protect yourself, your workers, your players and your community from possible injury. The way to do this is to know all there is to know about all precautions to take when applying chemicals that require safe application procedures.

Accidents will happen, but many accidents are avoidable. Most accidents result from careless practices or lack of knowledge about safe pesticide handling. Pesticides have four routes of exposure:

**The Mouth.** Pesticides can come in contact with your mouth from your hands, food eaten with unwashed hands, cigarettes or other tobacco products, or splashes of pesticides.

**The Skin.** Your skin can be exposed when you handle and open pesticide packages, adjust sprayer nozzles, contact spray mist, touch pesticide spills or broken hoses, wear pesticide-contaminated clothing or fail to wear adequate protective clothing and equipment.

**The Eyes.** If you are not wearing eye protection, pesticides can get into your eyes from accidental splashes, pesticides blowing in the wind, on your hands if you rub your eyes without washing your hands first.

**The Lungs.** Without protective equipment, pesticides can enter your lungs from inhaling fumes, dust or fine mist, from prolonged exposure to pesticides in poorly ventilated areas, from re-entering a pesticide-treated area too soon, or from using inadequate equipment.

## Protecting Your Body

You can help prevent pesticide exposure by wearing the right clothing and using the correct equipment. Follow all directions and precautions that appear on product labels.

Make sure all your employees understand what they should be wearing. Require them to wear protective equipment whenever they are handling pesticides.

The following are various items of protective clothing and equipment you should consider for yourself and your employees who will be handling pesticides.

- **Body Covering.** Always cover as much skin as possible with long-sleeved coveralls, shirts or pants. They should be clean, dry and free of holes and tears. Collars and cuffs should fit snugly when you fasten them.

- **Gloves.** Liquid-proof neoprene gloves are recommended for handling liquid pesticides. The gloves should be long enough to protect your wrists. However, they should not be lined with fabric because fabric can absorb chemicals. Keep sleeves outside your gloves to help prevent chemicals from seeping down inside your gloves.

- **Hat.** A wide-brimmed hat will protect your neck, eyes, mouth and face. You can also attach a protective hood that attaches to special coveralls. The hat should not have a cloth or leather sweatband. Consider a plastic, liquid-proof hard hat that's cool in hot weather.

- **Boots or Shoes.** Neoprene boots are recommended when you handle large quantities of pesticides because canvas, cloth or leather shoes can absorb pesticides. Sturdy shoes and socks are sufficient for some lighter applications. Wear pant leg outside to keep pesticides from seeping into your boots or shoes.

- **Apron.** It's a good idea to wear a rubber apron when mixing and handling liquid pesticides. It gives you a lot of protection against spills, container leaks and broken hoses.

- **Goggles or Face Shield.** Wear eye protection anytime there is any chance of pesticides getting in your eyes. Eye protection is an absolute if you are mixing pesticides marked *Warning or Danger*. If you wear prescription glasses, use a face shield.

- **Respirator.** A dust mask is no substitute for a proper respirator. There are several types of acceptable respirators, with cartridges and canister types being the most common. Choose the correct respirator for the types of jobs that you are doing. Be sure that the respirator is approved for pesticide use and that it fits the applicator. Keep the respirator clean and change filters regularly. Respirators may feel uncomfortable, but they're good insurance.

(Continued on Page 29)

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## New Design Is Announced For Kawasaki 2520

A new design has been announced for the Kawasaki Mule 2520 utility vehicle.

Fitted with a 617cc V-twin, four-stroke engine, the 2520 is capable of towing a 1,200-pound trailer load or hauling up to 800 pounds in its large capacity tilt bed.

The liquid-cooled engine is rubber-mounted for minimal vibration and maximum comfort.

The 2520 is equipped with a dual-mode differential and 20 x 10-10 smooth-tread, low-pressure tires to avoid injuring delicate grass surfaces.

When added traction is needed, the differential is placed in the lock mode to provide power to both driving wheels. To prevent damage on fragile surface caused by the inside wheel digging in on tight turns, the operator can set the differential in the unlock mode, which allows the rear wheels to turn at a different rate of speed.

The MULE 2520's forward/neutral/reverse shifting is made possible through its belt-driven, continuously-variable automatic transmission. Gear ratios are infinitely and continuously adjusted to compensate for various loads and driving conditions.

It is able to travel up to 15 miles per hour.

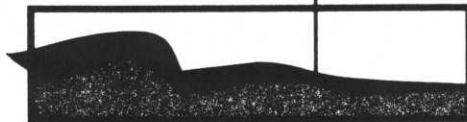
*The word is...*

**Minnesota Superintendents are staying at the Holiday Inn in Dallas for the GCSAA National Conference**

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# Snow Mold Management or What Am I Going to Do in 1994?

By **WARD C. STIENSTRA**, Extension Plant Pathologist

The 1994 Minnesota State mercury ban means you should use up the remaining supplies this fall. A BAN simply means you cannot use this product after the date stated. The supplier cannot sell, and you should not have it in storage. Please use it up this fall. What products and techniques will you use to manage Snow Molds in 1994?

First, you should do a sprayer tune-up. Estimated United States pesticide application error ranged from 25 to 35%. This is due to 1) inadequate sprayer calibration, 2) failure to cover the target area uniformly or 3) improper spray tank preparation. You should give primary attention to calibration and sprayer maintenance now before the spray season and develop accurate spraying procedures. The actual delivery rate of any sprayer is the product of nozzle pressure, nozzle size and speed of the sprayer. The method of calibrating is outlined in the sprayer catalogs. The procedure requires measuring output of nozzles for the length of time a sprayer needs to cover a determined distance. It is work, requires equipment and data and you must work the information through a mathematical formula. It can be done, but it will take time and energy.

During a sprayer tune-up you may find that the pump is inadequate to effectively serve the nozzle flow rate at the pressure desired and provide tank by pass mixing. Another

common problem is mixed nozzle sizes or worn nozzles that deliver more than what is expected. New nozzles may be needed. At a recent sprayer clinic when we could not get a good test result, we finally discovered the delivery pipe was too small. Only the actual on-site testing of equipment will result in accurate sprayer calibration. The products used in the past for snow mold management may have performed well for you, but today you must have a well-calibrated sprayer for product performance to be most effective.

Fungicide dilution rates have not been tested for winter disease management. Test plots have been treated with TeeJet tapered fan nozzles at 30 to 40 PSI on the boom calibrated to deliver 2 gallons per 1,000 sq. ft. The very early work was done at 5 gallons per 1,000 sq. ft. and the plots were sprayed in two directions. After presenting that data, most superintendents said that neither the rate nor the double application was practical for them. Since then all test plots data has been at the above rates and pressure. Summer disease (Sclerotinia Dollar Spot) control with Dyrene or Chipco 26019 was most effective at 30 to 60 PSI with flat fans, and control levels fell when pressure was at 10 PSI. Floodjet nozzles at 20 to 55 PSI were not as effective.

*(Continued on Page 12)*



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