

received. Most of those who went were hopeful this feature will be continued in the future.

On Sunday afternoon, an additional forum was added to discuss the now famous "Black Layer". The "standing room only" crowd demonstrated that there is a lot of concern about this problem. Be sure to read Jerry Kershasky's summary of the forum elsewhere in the *Grass Roots*.

Nights were usually reserved for the ubiquitous hospitality rooms. They were everywhere! The Wisconsin GCSA once again did its thing on Sunday evening by putting on one of the classier rooms in town. It was a lot of hard work and planning by Jerry Kershasky and Randy Smith; they deserve a lot of credit. It was a worthwhile experience and provided a place for old friends to gather and visit.

The USGA Green Section Conference was convened on Monday morning, and they did another outstanding job of education. For Wisconsin, it meant another opportunity to "strut our stuff". On the roster of speakers were two of our own: Jim Latham shared thoughts about his best turf tip of 1986 and Monroe Miller spoke on the subject "Environmentalism - Friend or Foe?". Both talks were very well received by the audience and as far as I am concerned, with my bias up front, they were by far two of the better talks given. The USGA does such an excellent job and serves such a critical role for America's golf courses that you just expect the kind of program they gave us again this year.

Who could forget GCSAA director and WGCSA president Bill Roberts? Even with his hands full of the responsibility of two offices, Bill misses no details of either job. His position on the GCSAA Board is one of the greatest assets we have, and he has brought the goals, philosophy and operation of the GCSAA "home" to us. It is a real privilege.

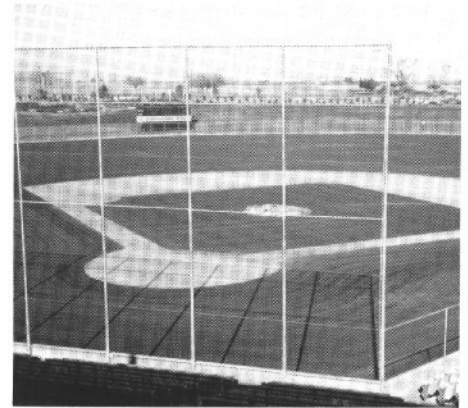
The GCSAA Conference ended on Monday with the gala annual banquet. Along with introductions of guests and dignitaries of the golfing world, new officers and directors are presented to the membership. Highlighting this year's evening was the presentation of the "Old Tom Morris Award". The award went to the most famous golf course architect in the world - Robert Trent Jones. His selection was a worthy one. Entertainment for the evening was provided by the lovely Marie Osmond and the Osmond Brothers. They delighted everyone in the audience and were

followed by an evening of dancing. The banquet gave people one last time to get together, frequently for the last time until next year. Most departed on Tuesday.

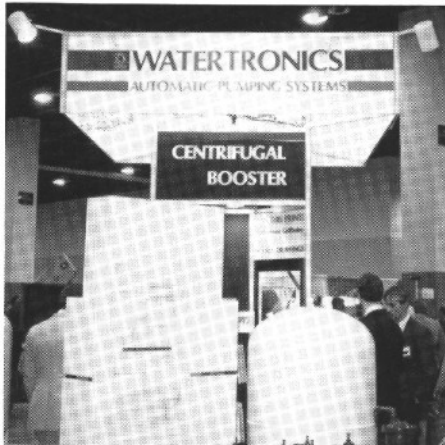
The 1987 GCSAA Conference and Show will most certainly go down in history as a great success. Wisconsin's state motto - "Forward" - could definitely apply to it. The GCSAA is moving for-



GCSAA Director and WGCSA President Bill Roberts (R) in conference with Jerry Faubel, GCSAA Director from Michigan.



Spring training home of the Milwaukee Brewers is located in Chandler, southeast of Phoenix.



Dick Reinders displays his "Watertronics" at the National for the first time.



Bob Ueker's broadcast booth during the Brewer's spring games in Chandler.



Randy Witt and Pat Norton checked out ASU's Sun Devil Stadium in Tempe. Randy likes Lambeau Field much better!

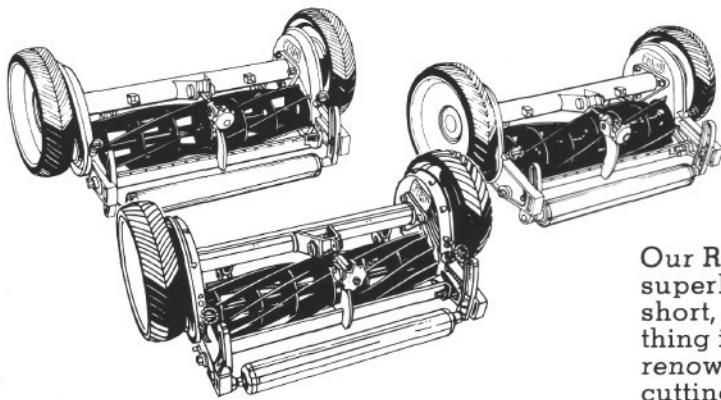


Bill Roberts visits with Bart Starr while Dr. Jim Love congratulates one of the GCSAA scholarship winners.

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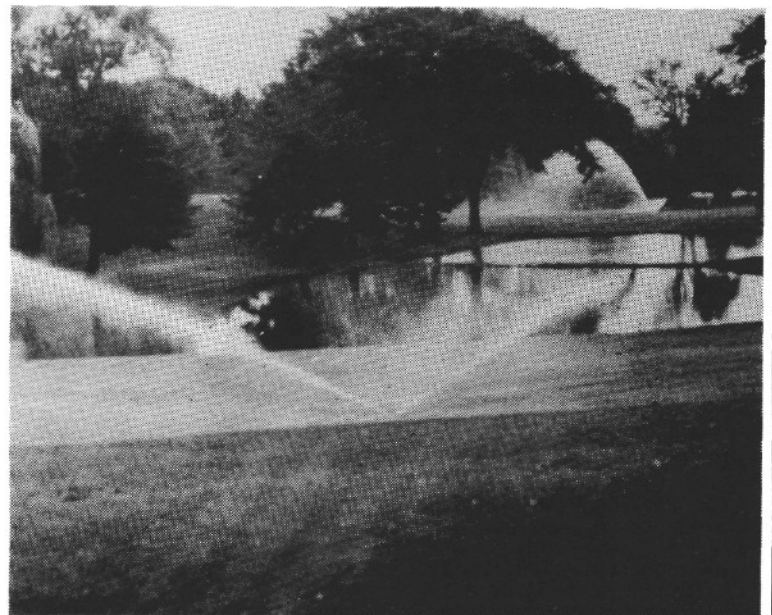
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# The University of Wisconsin-Madison Turfgrass Management Short Course Returns!

by Tom Harrison

The University of Wisconsin-Madison College of Agriculture and Life Sciences introduced its *new* short course on turf management January 5-9, 1987. The new course is the first for turfgrass maintenance in several decades for the College's short course curriculum. Attendance was excellent, to the delight of CALS officials.

Dr. Robert Newman was the primary instructor, with Lloyd Peterson and Wayne Kussow in soils, Gayle Worf from plant pathology, and Dan Mahr and Phil Peleteri from entomology also making presentations. Dr. Newman did an outstanding job of coordinating and presenting a very comprehensive and interesting array of material on turf management.

The class was comprised of half golf course and half lawn care personnel. The material presented blended well with all areas of turf management, thus making the course interesting to everyone regardless of the area of turfgrass maintenance one specialized in.

The College is already planning a course for next year and is expecting a tremendous increase in enrollment because of the favorable responses to the session this year. School officials urge people interested in attending next year to register early as enrollment will probably be limited.



1987 members of the UW-Madison Turf Short Course.



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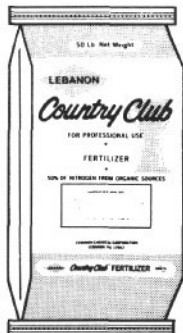
Silica	99.941%
Iron Oxide	.018%
Aluminum Oxide	.012%
Calcium	.004%
Magnesium	.003%
Sodium	.001%
Potassium	.001%
Titanium	.001%

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Mesh	% Retained
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40	11.0
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70	51.8
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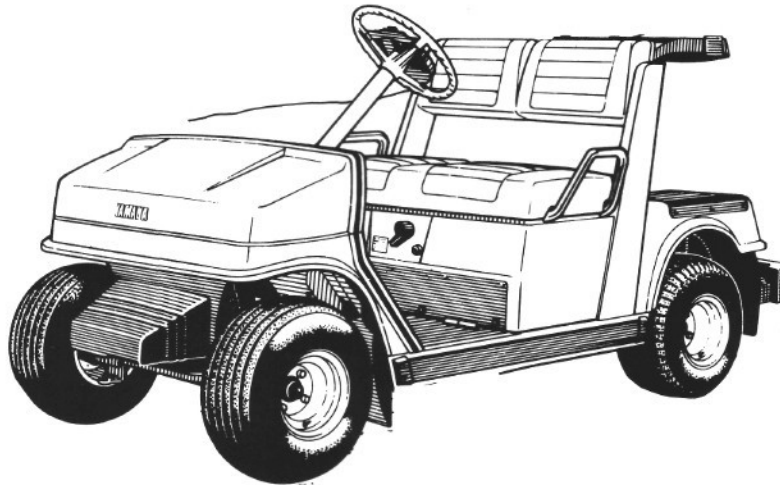
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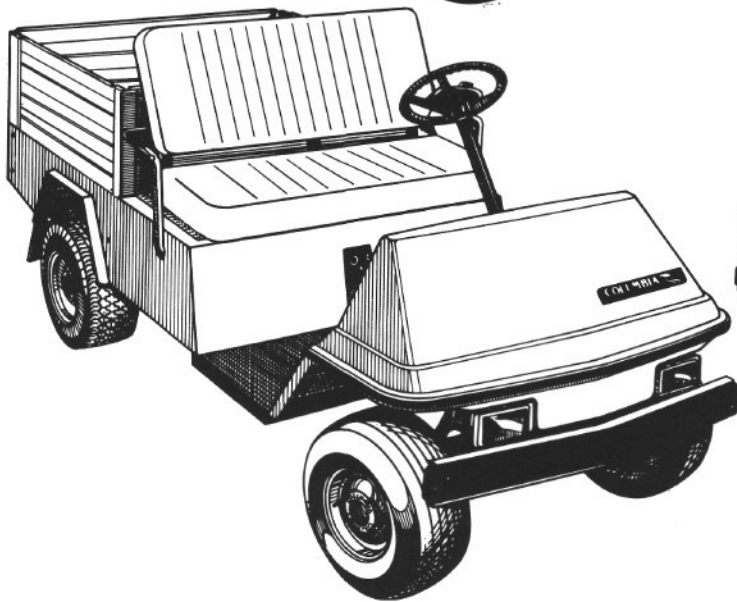
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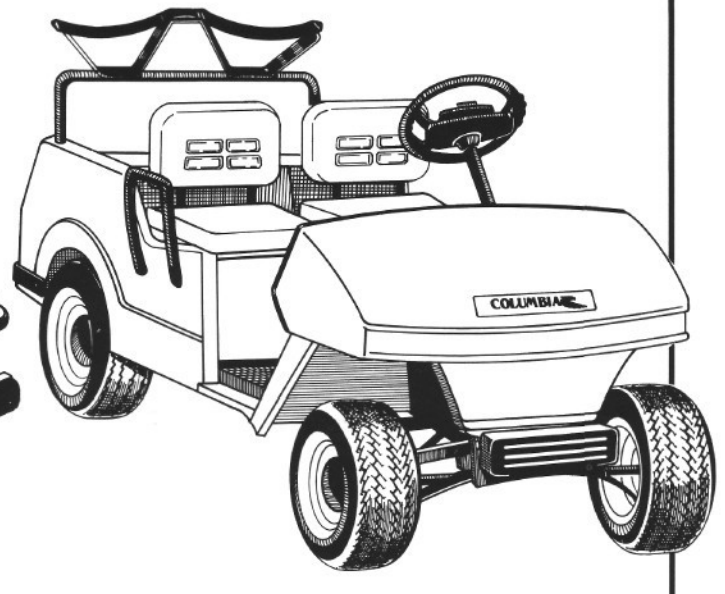
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# Reinders Turf Conference Program Schedule Finalized

Reinders has firmed up speakers and scheduling for their March 18 & 19 Turf Conference. Below is a summary of the program:

## March 18, 1987

### EDUCATIONAL SEMINARS

- 9:15-10:00  
"Late Season Fertilization"  
Dr. John Street
- 10:00-10:45  
"Soil Testing - When, How and Why"  
Mr. Dale Kinney
- 10:45-11:30  
"Grass Seed Update - 1987 Edition"  
Dr. Jerry Pepin
- 11:30-12:00  
"Make Spray Decisions Easier"  
Doug Dekker and Joe Vargas
- 12:00-1:15  
Lunch (Main Hall)
- 1:15-2:00  
"Black Layer, Sand Top Dressing  
and Everything You Wanted to Know  
About Turf"  
Dr. Joe Vargas
- 2:00-2:30  
"Geotextile Fabrics, A Valuable Tool"  
Mr. Joe Barney
- 2:30-3:15  
"Is There A Fungicide In Your  
Future"  
Dr. Gayle Worf

### ENGINE AND EQUIPMENT SERVICE CLINIC

- 9:20-11:15  
"Maintenance and Servicing of Reel  
Moving Equipment"  
Mr. Fred Greening
- 11:15-12:15  
"Small Engine Maintenance"  
Mr. Les Heinemann
- 12:15-1:15  
Lunch (Main Hall)
- 1:20-3:15  
"Reel Management and Adjust-  
ment"  
Mr. Fred Greening  
"Principles of Hydraulic Systems"  
Mr. Fred Greening  
Mr. Dan Salek

### IRRIGATION WORKSHOP NORTH ROOM

- 9:15-10:15  
"New Toro Golf Products"
- 10:15-12:10  
"Toro Golf Sprinkler Heads Update  
and Troubleshooting"
- 12:10-1:15  
Lunch (Main Hall)
- 1:20-3:15  
Pump Station Workshop Update and  
Troubleshooting  
\* Control Valves  
\* Pumps  
\* Electrical Controls  
\* Pressure Devices

### IRRIGATION WORKSHOP SOUTH ROOM

- 9:15-11:15  
"Rainbird Golf Sprinkler Heads Up-  
date and Troubleshooting"
- 11:15-12:10  
"Rainbird MAXI III Control System  
Demonstration"
- 12:10-1:15  
Lunch (Main Hall)
- 1:20-3:15  
"Rainbird Control Systems Update  
and Troubleshooting"

## March 19, 1987

### EDUCATIONAL SEMINARS

- 9:15-10:00  
"Safety on Athletic Fields"  
Heide Aungst
- 10:00-10:30  
"Plans Are Necessary In Your Per-  
sonal Life"  
Mr. Jim Linna
- 10:30-11:15  
"Thatch, Fact or Fiction"  
Dr. John Street
- 11:15-12:00  
"Aerification, What It Really Does"  
Dr. Robert Newman
- 12:00-1:15  
Lunch (Main Hall)

- 1:15-2:00  
"Biological Management of Turf-  
grass Disease and Insects"  
Dr. Joe Vargas

- 2:00-2:45  
"Insects Update and IPM"  
Mr. Phil Pellitteri

- 2:40-3:15  
"Crossroads For The Lawn Care  
Industry"  
Mr. Elliot Maras

### IRRIGATION WORKSHOP NORTH ROOM

- 9:15-10:15  
"Toro Network 8000 System Demon-  
stration"
- 10:15-12:10  
"Toro Golf Sprinklers Update and  
Troubleshooting"
- 12:10-1:15  
Lunch (Main Hall)
- 1:20-3:15  
"Toro Control Systems Update and  
Troubleshooting"

### IRRIGATION SOUTH ROOM

- 9:15-11:15  
"Rainbird Sprinkler Heads Update  
and Troubleshooting"
- 11:15-12:10  
"New Rainbird Golf Products"
- 12:10-1:15  
Lunch (Main Hall)
- 1:20-3:15  
"Pump Station Workshop Update  
and Troubleshooting"  
\* Control Valves  
\* Pumps  
\* Electrical Controls  
\* Pressure Devices

### ENGINE AND EQUIPMENT SERVICE CLINIC

- 9:20-10:20  
"Diesel Engine Maintenance -  
Mitsubishi"  
Mr. Jim Schliev
- 10:20-12:15  
"Service and Maintenance - Toro  
Rotary Equipment"  
Mr. Fred Greening
- 12:15-1:15  
Lunch (Main Hall)
- 1:20-3:15  
"Engine Maintenance - Onan and  
Kawasaki"  
Mr. Dave Barrett  
"Principals of Hydraulic Systems"  
Mr. Fred Greening  
Mr. Dan Salek



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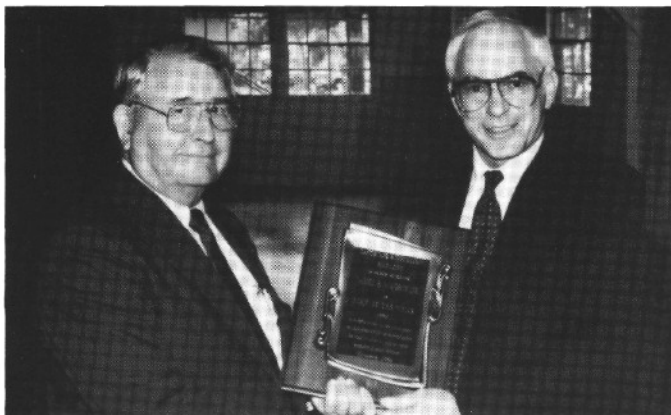
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## Dr. James Watson Receives "Man of the Year" Award



Dr. James Watson, vice president of customer relations and agronomist at The Toro Company, receives the 1986 Man Of The Year Award from Denne Goldstein, publisher of Landscape and Irrigation magazine.

Dr. James Watson, vice president of customer relations and agronomist for The Toro Company and an Honorary WGCSA member has been named 1986 Man Of The Year by both Landscape and Irrigation and Weeds, Trees, and Turf magazines.

Watson, 66, is one of the nation's leading figures in the development of the turfgrass industry. He was the first person in the country to receive a Ph.D. in turfgrass science, which he earned in 1950 at Penn State University. Since then, Watson has been one of the industry's leading proponents of the need to research water conservation and turf management.

Since joining Toro in 1952, Watson has been part of the company's product development team. "He has been a real source of innovation," said Ken Melrose, president of the Toro company. "Having an agronomist advising us on trends has given us a great advantage. He is very much involved in product development, distributor relations and customer service."

Watson is a "fellow" in the American Society of Agronomy and the Crop Science Society, and is currently an Adjunct Professor in the Department of Horticulture and Landscape Architecture for the University of Minnesota.

### JOB OPENING

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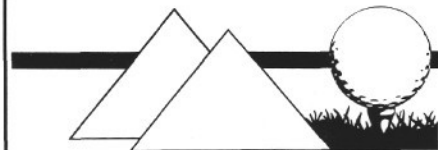
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# Brayton Meeting Held

Brayton Chemicals, with Joe Wollner at the helm, brought their "Greatest Show On Turf" to Madison on a beautiful mid-February day for over 100 turf-grass managers from throughout Wisconsin. The program consisted of about a dozen manufacturer representatives and Dr. Robert Shearman. Shearman, from the University of Nebraska in Lincoln, was the featured speaker. Company reps updated their product lines and almost to a man expressed concern for environmental safety.

Dr. Shearman discussed a topic that is on the minds of a lot of Golf Course Managers these days - the now infamous "Black Layer". He offered no simple solutions to what is more and more shaping up as a complex problem. More specifically, he observed that the following factors appear to be of some note:

1. Light and frequent sand topdressing.
2. The use of very fine sands in topdressing operations.
3. Black or bluegreen algae.
4. High rates of nitrogen fertilizers.
5. Iron and sulfur reacting in anaerobic conditions.
6. Over-application of pesticides.

Shearman reported that the only short term help, at this time, is core aeration and the use of wetting agents.

Dr. Shearman also addressed the topics of potassium fertility and water use in the culture of golf turf. He recommends the increased use of potassium to assist in building a healthy root system, which in turn results in less water use during stress periods during the summer months. He also gave an update on plant breeding efforts in the search for species more efficient in water usage.

"The Greatest Show On Turf" may not match up to P. T. Barnum's standards, but it certainly was very educational. Everyone present seemed to agree that it was an informative and valuable experience.

— George Magnin



Host Joe Wollner



Ric Lange and Dr. Bob Shearman

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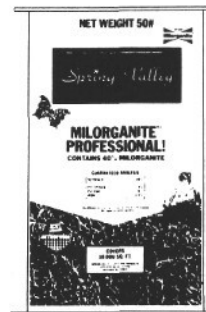
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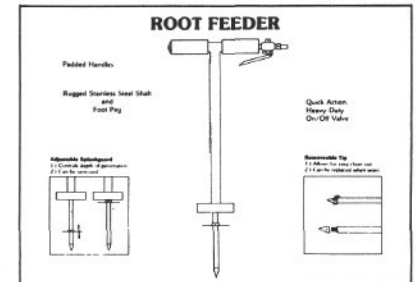
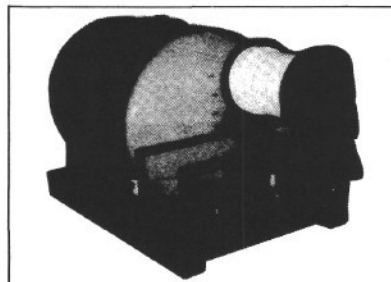
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# MILORGANITE: It Is NOT The Cause Of Lou Gehrig's Disease

By Jim Spindler

Several recent articles by a local Milwaukee newspaper have alleged a link between amyotrophic lateral sclerosis (ALS or Lou Gehrig's Disease) and Milorganite, the organic fertilizer produced by the Milwaukee Metropolitan Sewerage District (MMSD).

These allegations have subsequently been cited by medical experts as unscientific and unproven.

Alan Rubin, Chief of the Wastewater Solids Criteria Branch of the Environment Protection Agency, said on February 12, 1987, "As of now there has been no way to draw an inference that cadmium, chromium or other substances in Milorganite were linked to ALS. In the studies we have, we have *never* (emphasis added) seen any trends or statistics indicating a deterioration of people's health because of the use of sludges."

Doctors do not know what causes ALS. Over the years, a wide assortment of causes have been suggested. These include viruses, poisons, exposure to electrical shock, exposure to house pets or animal carcasses, back and limb trauma (e.g. from athletic injuries), genetic diseases, hormonal abnormalities and many more.

None of these alleged associations has ever been proved. The disease remains a mystery. Milorganite was included in this unproven group of contributors when a San Francisco 49er football player listed it among a wide variety of things that three former teammates who contracted ALS might have come in contact with. The three had played together on the same field for the 1964 season. It is not even certain if Milorganite was actually used in the turf maintenance program. However, on the basis of the comment, one local Milwaukee newspaper chose to run with the story.

The Milwaukee Metropolitan Sewerage District is confident that Milorganite is not a cause of ALS. The workers who make Milorganite have had the level of metals in their blood analyzed over the last four years. These tests proved that the people who manufacture Milorganite had no greater concentrations of heavy metals in their blood than the population in general.

Furthermore, the Wisconsin's registrar of vital statistics has been quoted as saying, "I don't think there is any statistically significant difference between the state of Wisconsin and the nation in the death rate from ALS."

There are many other reasons Milorganite is a safe and effective product. Primary among these is the production process and quality control measures the sewerage district employs to assure a clean and safe product.

Specifically, the MMSD imposes strict heavy metal pretreatment procedures on Milwaukee industry. These precautions reduce the amount of heavy metals discharged into the Milwaukee sewer system. All wastewater is screened to remove debris and any large particles. The treatment process itself purifies the sewage by converting it to living microorganisms. These are subsequently denatured and become an organic bio-mass, ready for further treatment. Acids are added to the bio-mass to assist in drying. This further purifies the material. This "cake" is then dried in ovens that reach 1,200°F. The particles spend up to 80 minutes in this sanitizing environment,

which destroys all viruses affecting human beings. Spore formers are reduced to levels well below that found in normal garden soil. Volatile substances and any acid residue are also driven off. Milorganite is then screened again to insure no unwanted debris has survived and that the final product has the right particle size distribution to assure proper nutrient release.

Milorganite production is routinely checked every day to insure it meets MMSD's specifications for purity, quality and nutrient levels as well as low enough concentrations in heavy metals. Any product that might fail these checks is simply not shipped.

There are some additional facts about ALS and its relationship to heavy metals that everyone should be aware of.

As well as the wide variety of substances and circumstances that have been considered as potential causes of ALS, the disease also occurs in clusters of geographic "hot spots". For example:

A South Dakota outbreak was originally attributed to naturally-occurring selenium in the soil. Investigation eventually showed this was not the cause. The real cause was never identified.

There has been a recent outbreak of ALS in Guam. (No Milorganite has ever been sold in Guam). In this case the cause was attributed to a hormone in the local foodstuffs.

The level of heavy metals in Milorganite is low. Many of the news accounts refer to "high concentrations" of heavy metals, which is simply not true. For example, cadmium, one of the metals about which there is significant concern, occurs in Milorganite at an average rate of about 35 parts per million. Another way to think about this is that the application of a 40-lb. bag of Milorganite to 2,500 square feet of lawn (as recommended on the label)

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