

THE BULL SHEET, official publication of THE  
MIDWEST ASSOCIATION OF GOLF COURSE  
SUPERINTENDENTS.

TED WOehrLE, *Editor*,  
8700 So. Western Avenue  
Chicago 20, Illinois

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PRESIDENT'S MESSAGE

Each day of our work we are confronted with situations involving temperature, humidity, rainfall (or the absence of it), mechanical failures, personnel management, golfers, public relations, etc. We are dutifully bound to accept the conditions caused by these things. Usually we do this without recourse.

However, how many of us become so engrossed in our work that we fail to notice some of the wonderful aspects of nature that are present on a golf course. This thought occurred to me recently. I thought it would be interesting to note some of them.

- at the base of a small sycamore tree a mallard duck nestling on her eggs, oblivious to and undisturbed by mowers or golfers.
- a small, dark colored lizzard crawling across #7 green.
- the fish nibbling at grass clippings floating along the shore line of the lake.
- a hawk circling above unseen prey.
- martins swooping and gliding around the tractor driver.
- a resident woodchuck ambling toward shelter because of the approach of an intruder.
- the birds feasting upon the fruit of a mulberry tree.
- evidence that a skunk on a nocturnal hunt had been rooting in the fescue rough, apparently looking for grubs.

The phenomena of nature are rewarding fringe benefits that most people are unable to enjoy.

Donald Gerber, President

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AUGUST MEETING

Our next monthly meeting will be held at the Midwest Country Club, Hinsdale, Illinois. The date is Tuesday, August the 7th. Marvin Gruening is the Superintendent. You will enjoy playing this beautiful well maintained golf course. Marv has done a great deal of new construction since he took over the job as Superintendent some years ago. It has been more than two years ago since we visited Midwest so be prepared to see some big changes. Many of the greens are new as well as some of the tees and traps. You will remember Marv as our 1st Vice President last year in the Midwest Association of Golf Course Superintendents.

JULY MEETING

July the third was the date of our last meeting. It was held at the beautiful Forest Hills Country Club in Rockford, Illinois. Ira Jury was the Host Superintendent. For those of us that ventured to Rockford it was a pleasant time. It rained most of the time but a few hearty golfers still managed to play 18 holes. They reported that the course was in magnificent condition. One of the points of interest as you enter the parking lot is a small putting green that is shaped like the state of Illinois with a single cup placed in the position of Rockford. A very unique idea. The clubhouse is located on a hill overlooking the Golf Course.

Our guest speaker for our educational program was Dr. Wooley from the University of Illinois. He enlightened us on the subject of water movement in the soil and the plant. It certainly was very interesting. It is a subject that is misunderstood by most of us. His fine talk helped clear up some of the misconceptions that we might have had.

The dinner was excellent and Ira was a most congenial host.

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LOCAL NEWS

Ed Braunsky and his wife are the proud parents of a new son. Ed is the Superintendent of Hickory Hills Country Club. Charlie Martin and his wife also are new parents of a new baby son. Charlie is the Superintendent of Calumet Country Club.

Jack Maurer is the new Superintendent of the Kankakee Elks Country Club. He replaced the late Herman Woehrle. Jack was the assistant Superintendent to Warren Bidwell at Olympia Fields.

We are happy to report that Mrs. Amos Lapp has returned home from the Hospital. We certainly wish her a speedy recovery.

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NEW ROSTER

By now you should have received your new roster of the Midwest Associations membership. Our last roster was printed in 1957 and was no longer of any value. There are changes made constantly therefore this new one will soon become obsolete unless we are made aware of the changes which are being made. Please cooperate with our Secretary Mr. Roy Nelson and keep him informed of job changes as well as changes of address.

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UREA-FORM FOR TURF

*Fred V. Grau, Consulting Agronomist, Hercules Powder Company, College Park, Md.*

Resume of a presentation to the Midwest G. C. S. A. on May 7, 1962. Warren Bidwell, Program Chairman.

UREA-FORM is a generic name, not a product trade name. The word *urea-form* describes a product that has been produced under precisely controlled conditions by combining urea and formaldehyde. Urea-forms carry 38 percent nitrogen (38-0-0). There are two processes by which different products for the market are made. Urea-forms must have an A.I. value equal to or greater than 40. All urea-forms on the market meet this basic requirement.

Urea-forms have high agronomic value as a source of nitrogen. Other plant food elements must be supplied according to need. Urea-forms have low solubility in water. They release nitrogen to plants only after conversion to ammonia and nitrate by bacterial action. As a source of nitrogen for turf, urea-forms display these characteristics:

I. Non-burning: Urea-forms at normal rates never need to be watered in except for powdered forms applied in water suspension, and then only to carry the particles down out of reach of mowers to avoid "pickup".

II. Long-lasting: No other sources release nitrogen over such a long period (24 to 30 weeks and longer) and with the same efficiency. Some products such as scrap resin are so slow that their practical usage is considered insignificant. It has been estimated that it would take 25 to 30 years for some of these products to release their N in 3 to 6 weeks. Urea-form is the source of nitrogen whose release pattern has been tailored to turf.

III. Controlled-release: Nitrogen is released by bacterial activity at a rate roughly equivalent to the needs of the turf. This is possible by virtue of the various sizes of polymers (giant molecules) which are more or less attractive to microbes. It is molecule size, not particle size, that governs rate of release.

IV. Non-leaching: Nitrogen is released as the grass uses it, therefore, there is never an excess of nitrate nitrogen that can be leached. This is extremely important in sandy soils. Some sources lose up to 70 percent by leaching.

V. Clean: Urea-forms are manufactured from chemically-pure materials. No animal or plant residues are involved.

VI. Odorless: Urea-forms give off no odor even when wet.

VII. Non-caking: Urea-forms can be stored under high-humidity conditions for indefinite periods and still remain free-flowing with no deterioration.

VIII. Non-Volatile: Losses into the atmosphere are negligible. Some sources lose large quantities by volatilization.

IX. Foolproof: Well, almost. *Any* material used in foolish excesses can cause damage. Water is a prime example.

Urea-forms can be stored in the soil to provide a continuously adequate supply of nitrogen with no fear of excessive stimulation of growth at any time. Urea-forms stimulate bacterial activity which, in turn, provides many secondary benefits.

1. Improved physical soil conditions. Bacteria produce gums and colloidal residues which glue soil particles together to form aggregates. Well aggregated soils drain better and are better aerated.
2. Intense bacterial activity has a side effect of reducing fungus diseases.
3. Other needed mineral elements are made more available to plants.

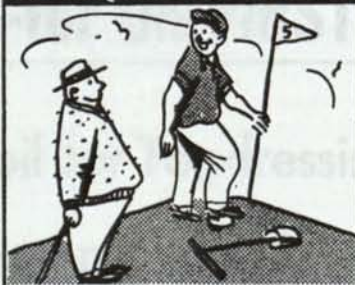
Urea-forms avoid high labor costs attendant upon light frequent applications of quickly-available sources of nitrogen. Fewer applications of urea-forms produce equivalent turf quality at significant savings.

Urea-forms produce optimum results when conditions favor bacterial activity:

1. Soil pH values near neutral (7.0).
2. Good drainage and well-aerated soil.
3. Adequate supplies of all essential mineral elements.
4. Intelligent use of water.

Urea-forms in the soil provide food and energy for microorganisms equivalent to that once found in the rich stores of organic matter known to be present in the highly fertile grassland soils of the world. Additions

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Poa annua does not thrive with a urea-form system of nitrogen feeding. It sets seed less well and is crowded by the stronger growth of perennial grasses.

Turfgrass diseases have been reported to be less virulent when urea-forms are used regularly as the major source of nitrogen. Also, weeds tend to be less troublesome.

Urea-forms are less sensitive to fluctuations in weather conditions than other forms of nitrogen.

Urea-forms made by different manufacturing processes will contain essentially the same percentage of N but tend to differ in A.I. value, performance under field conditions, and other details. High A.I. values (55 to 60) do not denote necessarily higher performance ratings. Usually high A.I. is associated with more rapid release rate.

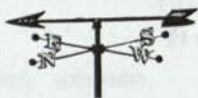
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The first three materials released most of their N in the first 3 weeks, very little thereafter. The yield from the first two were 1/3 and 1/2 of the total N. Ammonium sulfate is very efficient. Urea-form was still releasing after 15 weeks — curve going up — same with 6-6-6. This illustrates the value of using urea-form to supply part of the N in mixed goods.

(Continued Next Month)

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