



# MID-ATLANTIC News Letter



Published by  
Mid-Atlantic Association of Golf Course Superintendents to aid in the Advancement of the Golf Course Superintendent through Education and Merit

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Editor Army Navy Country Club, Arlington, Va.

MAY 1959

On Tuesday, April 7th, 1959, the members of the Mid-Atlantic visited the Bethesda Country Club for the regular monthly meeting. Bethesda is the home course of Mid-Atlantic member T.S. Lumsden. Lum, as most of us know him, is one of the old timers of the district and has been at his present location better than a decade. Under his supervision Bethesda Country Club has grown from a small nine hole layout to a full length course of eighteen holes.

Those of us who have seen this expansion take place fully realize what has been accomplished by this man's untiring efforts. In reviewing the fruits of Lum's work the old adage comes to mind of "Little strokes fell great oaks." This has really come to pass at Bethesda. A pleasing golf course has been created under very trying conditions, such as a small working budget, poor terrain and bad soil conditions.

It has only been a few years back that the greens were heavily infested with crab grass and poa annua. These pests have been overcome and what was once a superintendent's headache is no longer a problem. Under Lum invasion of weeds and unwanted grasses has been reduced to a minimum and is no longer a cause for worry and concern.

Roughs which were once a jungle of undergrowth and an eyesore to the players are now a thing of the past. A general cleanup of all unsightly areas has taken place and their appearance now is most pleasing to the eye. The condition of the fairways has shown a marked improvement under a sound, well managed fertilization program. Side hill erosion has been brought under control and where badly eroded places once existed the spots have been repaired and grassed over.

The greens were well carpeted with a good tight sod, although a few of them were beginning to show signs of grain and too much mat. However, at the time of our visit, Lum had not gotten around to his usual Spring program of verticutting and aerifying. No doubt but that this has been done and is out of the way. The putting swards by now should be in excellent condition ready for the season's onslaught of players and hot weather.

It can truly be said, superintendent T.S. Lumsden has mastered many of the obstacles that have stood in his path. He has used adverse conditions and hard going as a guide and a pattern on how to create and maintain a better kept golf course. He has profited by his mistakes, and used them to an advantage. This is a lesson we all could follow and copy. We know that the membership of the Bethesda Country Club must be very proud of their golf course superintendent.

## FROM THE SECRETARY

Three new members were accepted at the April meeting as Regular Members. They are : Angelo Commorola, Green Hill Yacht and Country Club, Quantico, Maryland; Cliff Olinger, G. Oak Lodge, Chestertown, Maryland; and Fred Sappenfield, Willow Oaks Country Club, Richmond, Virginia. These men are all members of the National Association and bring many years of experience to our fellowship. We welcome them to our association.

As mentioned at the Bethesda meeting - Mid-Atlantic lapel buttons are available thru this office at \$3.00 each. If you do not have one, see me at the next meeting. Those of us who have them wear them with pride.

If you have not mailed in the questionnaire I sent you about a month ago, then please do so at once. This office needs up-to-date information on each member, so send the form to me at Fort Belvoir Golf Course, Fort Belvoir, Virginia.

A change of address notice should be sent to me as soon as a change is made so that your " NEWSLETTER " will continue to come to you.

Applications being held in our files until they are approved by the National:  
Louis F. Knight- Turf Garden Supplies, Norfolk, Va., Fred M. Risil - U.S. Naval Base, Bainbridge, Maryland; William Jett - Turf valley Golf Club, Ellicott City, Maryland; Capt. Paul Harris, Fort Belvoir Golf Club, Fort Belvoir, Va.; Sgt. James W. Wells, Fort Belvoir Golf Club, Fort Belvoir, Virginia.

Tom Doerer, Jr. , Secretary.

#### MID-ATLANTIC MISCELLANY

Mike Burkholder has moved from Fairfax Country Club where he has been superintendent for many years to the superintendent's job at Courthouse Country Club, not far from Fairfax. He has requested the October 6th meeting be held at Courthouse.

Ruben Hines, Jr. is now superintendent at Sunset Country Club, Snell Isle, St. Petersburg, Florida and has joined the West Florida Golf Course Superintendents Association.

Frank Murray has an 18 hole golf course under construction at Fort Lauderdale, Florida.

The dates for the Mid-Atlantic Turfgrass Conference have been set for January 5-6, 1960 at the Lord Baltimore Hotel, Baltimore, Maryland.

Mid-Atlantic superintendents were well-represented at the April 3rd opening of Baltimore's new Pine Ridge Golf Course. Park superintendents, Gus Hook and Ed Myerly and superintendent Howard Mc Carty are to be commended for a big job well done.

Suburban Club at Baltimore has removed the club house and maintenance shop to make way for a new course and club house. Superintendent Jim Reid says there is no place to hang his hat so he is out on the golf course working.

Glenbrook Golf Course, the old Woodmont course in Bethesda, was closed to play recently and is now history. Superintendent Bradley Strouth is giving his full attention to Sligo Park, the other Park and Planning Commission course in Silver Spring. Brad says the revised 9 at Sligo will be opened to play May 15. Careful planning on the part of designers, Ault and Jamison, kept the old nine in play while the new holes were being built.

It is now a fact that Montgomery County will build an 18 hole course for public play on Falls Road in Rockville. Construction to begin this summer with plans drawn by Ault and Jamison.

Frank Haske is no longer with the G.L.Cornell Co. He has taken a position with Thrasher Nursery and will specialize in contract maintenance. Frank says he is very much interested in the affairs of the association and will retain his membership.

Mary Reposkey is back home after an operation at a Pittsburgh hospital.

Jim Shepherd is out of the hospital and on duty at his job at Country Club of Maryland.

Bob Adams is back at National Capitol Tero after a minor operation.

White Flint has opened three replanted greens for play. Bob Harper says good growing weather last fall made possible the early opening. He also states that White Flint will definitely remain in play this year and possibly next year before it goes into housing development.

The Eastern Shore courses were well represented at the last meeting. From Ocean City came George Gum, from Green Hill- Angi Commorola and from Dover AFB, Sgt. Anthony Arch. This is the best representation from that area since Joe Reposky left Talbot Country Club.

#### EMPLOYMENT OPENINGS

Eddie Ault is looking for three superintendents to work with construction contractors on 3 new courses now ready to start building. Only top men who can command top salaries will be employed. Write Mr. Ault at 11607 Grandview Ave., Silver Spring, Maryland for confidential interview.

#### LITERATURE TO SEND FOR

During his talk at Bethesda, Dr. F. v. Grau stated that the following pieces of turfgrass literature are available and can be secured free of charge by addressing requests to him at P.O. Box 177, College Park, Maryland. :

" Penngift Crown vetch " - " Turf Round-Up of 1952 " - vegetative Control of Weeds on Highways "- Nitro Form Turf Grass Manual " - Nitro Form Manufacturers Handbook " - " The Lawn Problem in virginia " - Bulletin #17 - Turfgrass Literature Reference . List separately each phamplet desired.

#### NEXT MEETING

The next meeting will be held at Cedar Point Golf Club at the Naval Air Station, Patuxent River, Maryland on May 5, 1959.

The scheduled meeting at Fort Meade was cancelled, so John Burt- superintendent at Cedar Point - immediately requested that it be held at his course. As you remember, the May meeting last year was at Cedar Point, but there was no golf because of rain. Host John says your rain check is good for this meeting and extends an invitation for all to attend.

Golf - 12 noon  
Social period - 5-6:30  
Dinner - 6:30  
Meeting - Following dinner.

Direction to Cedar Point - : Take U.S. 301 to Waldorf, Md., then turn left on Md. Rt. 5. From 301 it is 40 miles straight ahead to NAS, Patuxent River, Md., by way of Rt. 5 and Rt. 235. About 18 miles before you get to the base, Rt. 5 bears off to the right and you are then on Rt. 235. Stay on Rt. 235 until you come to a stop light and you're there. The gate to the station is to your left at the stop light about 50 yds. Pick up your pass which will be waiting for you at the gate and proceed straight ahead for 6 miles and you're at the course. GO EASY on the throttle about 12 miles from Waldorf, thru the town of Hughesville which has a speed limit of 30 MPH - we recommend you do 29 MPH.



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NEWSLETTER EXTRA

Have you ever listened to one of Dr. Fred v. Grau's talks and said to yourself --  
" I'd sure like to have all that in writing so I could read it and absorb more of it."

The Editors of the Mid-Atlantic "NEWSLETTER" feel that you made such a wish after the Bethesda meeting, so we asked Dr. Grau to put his talk in writing and hereby present it to you in the form of a special "NEWSLETTER" issue.

We express our thanks and appreciation to Dr. Grau for this contribution.

The Editors

HIGHLIGHT FROM LECTURE GIVEN BY DR. FRED V. GRAU on APRIL 7, 1959  
BEFORE THE MID-ATLANTIC GOLF COURSE SUPERINTENDENTS' ASSOCIATION  
MEETING AT BETHESDA COUNTRY CLUB, BETHESDA, MARYLAND

Of all the things that we do to turf, proper nutrition is of the utmost importance. Dr. Couch, of Penn State, has presented lectures showing the very close relationship between grass diseases and nutrition. For years scientists have sought to provide plants with " a steady, uniform supply of nutrients throughout the season". The " feast and famine " routine with quickly available nitrogen materials actually predisposes grasses to disease attacks. This has been minimized somewhat with frequent light applications of materials which, of course, raises labor costs.

Even though I shall stress nitrogen, it must be clearly understood that everything must be in balance. In general, we shall strive for low phosphorus content, high nitrogen and about half as much potash as nitrogen. Potash is extremely important in producing high-quality turf. It acts as a " cleanser " of the " pipes " ( vascular system ) which move water and sugars about in the plant. Much so-called " winter-kill " on grass has been diagnosed as Potash Starvation. An excess of phosphorus tends to precipitate the iron in solution. Then we say that the turf is suffering from iron chlorosis, which actually is a phosphorus- induced chlorosis. Sure enough, the iron helps. The iron phosphate that is precipitated clogs the system and the grass suffers from wilt and desiccation. Plenty of available potash tends to correct the situation and helps to prevent disease by aiding in the translocation of materials in the plant. Many cases of brown and black rotted roots have been traced to potash hunger.

It is well-known that turfgrasses that produce no fruit or seeds need much less phosphorus than plants like wheat and corn, which produce fruit or grain. It has been said time and again that most putting greens that have been established for five years or more probably have enough phosphorus in the soil to last them for several years, even though only nitrogen and potash were fed steadily for that length of time. Certainly,

excesses of phosphate have added to our troubles.

Nitrogen hunger often looks very much like drought. Much turf, therefore, gets irrigated when actually it needed nitrogen. Turf that is well supplied with nitrogen can use water much more efficiently than hungry turf and we know that nitrogen is cheaper than water.

In feeding turf, we actually feed the micro-organisms first. They, in turn, supply the plants with nitrogen, which are feeding at the second table. Micro-organisms that are well supplied with nutrients have a tremendous effect in creating good physical soil conditions. When the " bugs " get hungry ( the " famine " part of feeding with quickly-available material ), they lose their power to granulate ( flocculate ) the soil particles and soil becomes compact again.

Work at the United States Department of Agriculture and at several Experiment Stations has shown that Urea-form nitrogen provides the steady, uniform supply that is needed by bacteria and by plants. We are indebted to Dr. K.G. Clark, of Beltsville, for his brilliant research in producing Urea-form. Urea-form is the generic name for the solid, insoluble product resulting from the chemical combination of urea ( 46%N, all soluble ) with formaldehyde ( a disinfectant ), both of which are produced from the air. To be a Urea-form, the product must have good fertilizer value.

No two Urea-forms are alike, even though they contain the same content of nitrogen (38% ). For instance, NITROFORM is made by the concentrated alkaline method, which forms methyl ureas. Uramite is made by the dilute acid methods, which produces only methylene ureas. Jordan's tends to be intermediate, but somewhat more like NITROFORM. When these materials are applied to turf, or when they are blended into mixed fertilizers, we can expect quite different responses. This means that each must be handled differently.

The carbon in Urea-form acts as a source of energy for bacteria, continuing to stimulate activity until we reach the application rate of 20,000 pounds of Urea-form to the acre. By requiring bacteria for the release of nitrogen, we find that nitrogen is released from a good solid Urea-form according to the needs of the crop. When the plants stop using nitrogen, there is a build-up of carbon dioxide in the soil which slows down the bacteria and, consequently, less nitrogen is released. In periods of high temperatures, we find that a properly built solid Urea-form releases less nitrogen. This is a built-in, self-regulating feature, which is a large safety factor. There is no chance of " fast release " from a good solid Urea-form. It is well-known that many natural organic materials release their nitrogen much more rapidly in periods of high temperature, with adequate moisture.

Here are some figures on nitrification of various nitrogen fertilizers which reveal some interesting facts. The studies ran only 15 weeks and then were terminated. Determinations were made at 3, 9 and 15-week intervals to find out how much of the total nitrogen had been converted to nitrate or " useful " nitrogen. No growing plants were involved.

	<u>3 weeks</u>	<u>9 weeks</u>	<u>15 weeks</u>
Cotton seedmeal	49%	54%	54%

These figures show that only half of the total nitrogen was converted to useful nitrogen and nearly all of that became available in the first 3 weeks. This means that this natural organic nitrogen fertilizer is actually quickly available.

Processed tankage	30%	35%	36%
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These figures show that approximately two-thirds of the total nitrogen in this material never became available for plants. Most of the one-third that was available was used up in 3 weeks, indicating again that this natural organic actually is quickly available.

Sewage sludge

3 weeks  
42%

9 weeks  
49%

15 weeks  
51%

Here again, only half of the nitrogen content was converted to useful nitrogen and most of that was released quickly.

NITROFORM

17%

42%

50%

These figures show the " slow, gradual release " from a good Urea-form. They show that only 17% of the nitrogen was converted to useful nitrogen in 3 weeks, 42% in 9 weeks, and after 15 weeks, only half of the total nitrogen had been converted to nitrate nitrogen. Had the study continued, we would have found that this form of nitrogen is the most efficient of all. Very nearly 100% of the nitrogen eventually is broken down for use by plants. Some of the larger molecules that are broken down with greater difficulty may take a year or longer to break down, but when it is all gone, there is no residue and all of the nitrogen has been made available to the plants.

With two or three applications of Urea-form during the season, it can be seen that there will be a constant supply of nitrogen being released gradually to plants. At no time would the bacteria go hungry. After the second application, there will be a reserve of nitrogen built up in the soil. This is a highly effective device to insure continued, steady feeding. Part of a good Urea-form ( 25- 30% ) is soluble in cold water. You cannot make a good Urea-form unless you do have some soluble material. Some folks think that this cold water soluble portion acts like the soluble nitrogen from ammonium nitrate, urea or ammonium sulfate. Actually, when a Urea-form comes in contact with the soil acids, the soluble portion is converted ( polymerized ) to slowly available nitrogen. This is true particularly of the Urea-forms made by the concentrated alkaline method. This gives assurance that there will be no loss from leaching with a good solid Urea-form. Many soluble nitrogen materials will lose up to 70% of the nitrogen through leaching. Even in a very sandy soil, there are negligible leaching losses from Urea-form.

There is a good evidence that a steady diet of Urea-form nitrogen, balanced properly with other nutrients, produces turf with less disease and with less poa annua. Trials of NITROFORM with mushrooms failed. The fungus refuses to develop. Superintendents report less snow mold and less expense for chemicals. Urea-forms carry a " price per ton tag " that looks exorbitant to many who have not stopped to calculate " cost per pound of nitrogen ". In buying a nitrogen fertilizer, you are buying pounds of nitrogen. For instance :

	<u>Pounds of nitrogen in a ton</u>
Ammonium sulfate, 20%N.	400
Sewage sludge, 5-1/2% N.	110
Urea-form, 38% N.	760

If we were to assign ton values to these materials, we might be off a little one way or the other, but it will serve as an example. For instance:

	<u>Price per ton, estimated</u>	<u>Cost per pound of nitrogen</u>
Ammonium sulfate	\$80.00	\$.20 ( approx. )
Sewage sludge	60.00	.55 ( approx. )
Urea-form	380.00	.50 ( approx. )

Thus we see that, of these three materials, sulfate is the cheapest per pound of nitrogen. Sludge carries some phosphorus and a little potash, which puts it about on a par with Urea-form in cost per pound of total nitrogen. The high efficiency of Urea-form, plus the labor saving feature of fewer applications and less material to handle, make Urea-form, with the highest price per ton, an economical source of nitrogen. Considering that 70% the nitrogen from sulfate may leach away, the cost of the useful nitrogen goes up to about 60¢ per pound. The danger of burning and the need for frequent applications puts this cost much higher. With sludge, only 50% effective, the cost of the useful nitrogen goes up to about \$1.00 a pound. It can readily be seen, also, that the high nitrogen content of Urea-form means that fewer tons of material need to be shipped, handled and stored.

It must be kept firmly in mind that we will get the greatest value from fertilizers when we maintain conditions favorable to bacteria. Good drainage and aeration are tops on the list. Sensible irrigation is a close second. Any nitrogen material can become toxic if soils are saturated and compact so that anaerobic (without air) decomposition converts nitrates to nitrites.

Those who use solid Urea-forms will find that it will be possible to produce excellent density and good color with less topgrowth. This has been observed in many locations,

It must be stated that " there is no bad fertilizer ". Each can be used to produce good results if each is handled properly in accordance with its characteristics. It remains a fact that just as improved grasses have made it easier to produce high quality turf, the newer forms of nitrogen are making it easier to provide steady, uniform feeding with fewer applications, with greater foolproofness, more safety and more economically.

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Excerpts from SPORTS TURF BULLETIN, No. 45, April-May-June-1959. Issued by the Sports Turf Research Institute, Bingley, Yorkshire, England.

Rainfall figures at the Research Station, Bingley, show 34.96 inches for 1957 and 40.26 inches for 1958. For England and Wales in general, the figure of 41.6 inches is quoted. April was the dry month in 1957 with 0.32 inches.

In a discussion " For the Lawn Owner " there appears the statement that " there seems to be a tendency to cut lawns far too short. The article points out that "... a height of cut somewhere between 1/4 and 1/2 inch would seem to be suitable; grass cut at this height is not being exhausted by constant severe defoliation yet it is short enough to present a pleasing and neat appearance." There is a statement also the " many private lawns tend to be too fibrous." Regular light raking and spiking are recommended.

Bag trolleys ( golf carts) are cited as creating many additional headaches. Concentrated wear is a bugaboo. Tees are being worn where the trolleys are parked. Fronts of greens are becoming compacted. Trolleys are parked in front of greens and all foot traffic to and from the cup concentrates in a small area. Some Greenkeepers advocate parking meters at some distance from the greens.

It is of interest to review some of the principal turfgrass seeds that are in use. New Zealand browntop ( certified), American Agrostis tenuis, New Zealand Chewing's fescue, Oregon Chewing's fescue, Danish creeping red fescue, S.59 red fescue ( certified), German hard fescue, Fine leaved shepp's fescue, Danish roughstalked meadowgrass, Dutch smoothstalked meadowgrass, New Zealand crested dogtail, S.23 perennial ryegrass (certified), S.24 perennial ryegrass (certified) Danish late flowering perennial ryegrass, N.Z.certified mother perennial ryegrass, Irish perennial ryegrass, Grade "A", Devon Heaver perennial ryegrass, Kent indigenous perennial ryegrass, S.48 timothy (certified ), S.50 timothy (certified )

In preparing the seed bed for a turf nursery from seed there are detailed instructions including " hand raking and heeling ".

1958 gave almost incessant rain and MUD plagued any and all who dared to venture out on the courses. Remedies include killing the earthworms, using sulfur to increase acidity, spiking, topdressing with coke breeze and sand, and drainage.