

Vol. 5, No. 3  
September 1951



# The Bull Sheet

*Official Bulletin*

*Midwest Association of Golf Course Superintendents*

1926-1951  
OUR  
25th  
ANNIVERSARY



Bill Krafft, Superintendent  
Fox Lake Country Club

THE SEPTEMBER MEETING  
FOX LAKE COUNTRY CLUB,  
FOX LAKE, ILLINOIS  
MONDAY, SEPTEMBER 17, 1951

BILL KRAFFT, OUR HOST  
GOLF TOURNAMENT IN AFTERNOON  
BUFFET DINNER  
GUEST SPEAKER

THIS IS OUR ANNUAL JOINT MEETING  
WITH THE WISCONSIN  
GREENKEEPERS ASSOCIATION  
LET'S MAKE IT A GOOD ONE

MIDWEST REGIONAL TURF FOUNDATION FIELD DAYS AND NATIONAL  
TOURNAMENT AT PURDUE UNIVERSITY SEPTEMBER 10-11.

## THE PRESIDENTS MESSAGE

Now that the summer season is drawing to a close, the Superintendent will have more time to devote to education. On September 10-11 we have the opportunity of attending the Midwest Regional Turf Foundation Field Days at Purdue University. Dr. William H. Daniels is in charge and will have some valuable information available for us. He has planned a very interesting program not only for the Superintendents but for the ladies who wish to accompany them.

The USGA Green Section meeting will be held at Beltsville, Maryland on October 7, 8 and 9. Dr. Grau's program will be well worth your time and money to attend. Those of you who attended the meetings at Arlington, and later at Beltsville, will well remember the practical demonstrations offered you there.

Also in conjunction with the Field Day at Purdue we will have the Golf Course Superintendents of America Tournament.

September 17 is the date set for the traditional joint meeting of the Midwest and Wisconsin Greenkeepers Associations. This affair is one of the highlights of the year and has always been of great interest to the Superintendent and has been well attended. Who will forget the meeting at Big Foot last year, when 105 played golf in the afternoon and 100 sat down to dinner in the evening. Our host for this meeting will be Bill Krafft of Fox Lake Country Club, Fox Lake, Illinois. It is our turn to entertain the Wisconsin men, so let's turn out and show them the true Midwest hospitality.

## THE MEETING AT ROSELLE

The August meeting of the Midwest Association of Golf Course Superintendents was held at Roselle Country Club at Roselle, Illinois, on Monday, August 6. George Roloff was the host Superintendent.

We were again very lucky in having a good day for our meeting after the heavy rains of the night before. George had the course in fine shape and it was a real test of golf. "You could never hit a shot on level ground you were always on a slope" says Warren Roseman, who claimed he shot the best game of his life. Frank Dinelli and Ed Muzik also played their best game of the year. Joe Canale, Bert Rost and Norm Kramer also had good scores.

In the evening we were served a delicious roast beef dinner and following that the meeting was called to order. After the reading of the minutes, financial report and reports of the various committees, there was some discussion on nominations for offices in the National Association. Names tentatively suggested were Frank Dinelli, Don Strand and Ray Davis. Further action was deferred to a later meeting. The meeting was then turned over to Al Johnson, Educational Committee Chairman, who conducted a very interesting question box.

Our thanks go to George Roloff and all others instrumental in making this a very enjoyable and worth while meeting.

Prize winners were as follows:

1st low net, Ed Muzik, 2nd Bert Rost, 3rd Frank Dinelli, 4th Joe Canale, 5th Norm Kramer, 6th Andy Dunn, 7th Bill Saielli, 8th Warren Roseman.

1st Blind Bogey, C. Vann, 2nd Bill Rueck, 3rd Amos Lapp, 4th Pete Stewart, 5th Harold Borgman, 6th Bob Chamberlin.

Putting contest, 1st Bob Williams, 2nd George Roloff, 3rd John MacGregor.

A prize was donated by Bob Marbury of the Alliance Hose and Rubber Co.

## Golf Course Superintendents of America Tournament and

### Midwest Regional Turf Foundation Field Day

The G. C. S. A. Fall Tournament will be held on the Purdue South Golf Course on September 10-11, 1951. Mr. Guy Mackey, Director of Athletics, invited the Superintendents to use the course as a courtesy of Purdue University, in conjunction with the Fall Field Day of the Midwest Regional Turf Foundation.

The schedule is as follows:

Sept. 8, 9 Meetings of the Board of Directors of G. C. S. A., Purdue Union.

Sept. 9, 7:30 p. m. Joint meeting of Directors and Advisors of Midwest Regional Turf Foundation.

Sept. 10, 9:00 to 11:00 a. m. Tour of Campus Turf plots. (Meet on Campus two blocks west and south of Union)

12:00 Golf-South Course, Purdue, No. 1 and 10 tees.

1:30 (For those not golfing) Tour of Agronomy Farm Turf Plots. (7 miles Northwest of W. Lafayette on Hy. 52)

Sept. 11, 9:00 - 11:00 a. m. Tour of Agronomy Farm Turf Plots.

12:00 - Golf. No. 1 and 10 tees.

6:00 p. m. - Banquet and prizes.

West Faculty Lounge, Purdue Union.

This schedule will give a one-day Field trip for those not golfing and two morning trips for those who play golf. No registration charge is made for the Field Day. During the two half-day tours, two plots will be visited each time.

On the campus is the practice putting green where several rates of Nitrogen fertilization, fungicides, and moisture controls are maintained. The dollarspot control studies with 10 fungicides are on the Intramural No. 2 green on the campus. Clover and Crabgrass control studies are on the No. 2 fairway, South Course, Purdue University. Bentgrass propropagation, bermudas and grass mixtures are on the Agronomy Farm.

For the ladies a noon luncheon on September 10 at the Union, and a tour of the campus is planned. Room reservation may be made directly with the Purdue Union Club, Hotel Fowler, Cedar Crest Hotel on Hy. 52 Bypass, or the Morris-Bryant Hotel on Hy. 52 (2 mi. N. W. of W. Lafayette).

The banquet alone will be \$3.00. The cost for those golfing, with the banquet, will be \$10.00.

Here is the answer to those members of the M. R. T. F. who have been asking "What do we get out of it?"

Dr. Daniels has been working hard to make this Field Day a big success, so let's cooperate and be there.

To those members of the Midwest Association of Golf Course Superintendents who are members of the G. C. S. A., lets turn out for the golf tournament and help our Champion, Emil Mashie, bring, not only the individual Championship but the team championship as well back to the Midwest.

Frank Dinelli recently announced the marriage of his third daughter. Frank says that marrying off his girls costs him a lot of dough, but there is some consolation that there is only one unmarried daughter left and after that somebody else is gonna carry the load when his boys start getting married.

Oscar Borgmeier wants to know when the boys are going to throw him another "benefit". For your information, Oscar wants them to donate to him as they did in a recent Hearts game.

# HOW TO PLANT CREEPING BENT STOLONS and PRODUCE PUTTING GREENS

by R. R. Bond

Old Orchard Turf Nurseries, Madison, Wis.

Before planting stolons, check on the greens to see whether they are ready to be planted—a green correctly built will save many headaches in years to come.

**FIRST:** Is the foundation of the green made up of porous material so as to have a quick natural drainage, not only downward but sideways? If not and you have considerable clay in the sub-soil, it will be best to tile the green. Good sub-drainage is very important.

**Second:** Is the green so shaped that there are at least two or three different slopes for quick drainage in case of over-watering or heavy rains? Good surface drainage is very important.

**Third:** Do you have seven to ten inches of good top soil, composed of about 20% rich corn land soil, 60% coarse sand and 20% cultivated peat, all mixed together with a disc or roto-tiller? Good internal drainage is very important.

**Fourth:** Has the green been worked over and over from all angles with roller and rakes so as to smooth out all sharp undulations and hillocks? This does not mean that the green must lie perfectly flat and smooth. You may have undulations, but they must be so graduated that a putting green mower can run over them from any angle without scalping and so that no pockets remain.

**Fifth:** Is the green well settled?

If you have neglected to perform any of these operations your greens are not ready to plant, and your omissions should be corrected before planting.

Assuming that all these operations are taken care of, we are now ready to plant the green. The objective towards which we are striving is to establish perfect bent greens as fast as we can to help nature grow the grass and follow a program in which playable greens can be established in eight weeks or less, and good playable greens in nine to ten weeks. To obtain this goal we must have rapid and continuous growth of grass.

## PLANTING PREPARATION

A week before planting, spread dry ammonium sulphate over the green at the rate of eight pounds per thousand square feet. If there is no rain during the week, gently rake the sulphate in and wet down the night before planting. If the green is well packed, and about five per cent of them are, the men can work on them by wearing rubbers or heavy socks over their shoes, but if the green is soft and apt to show heel prints, it is best to work on wide boards. Run a line of boards the full length of the green from the apron to the back and through the middle of the green. Then lay two rows of boards about a foot apart at right angles to the first row of boards: these should start two feet from the edge of the green. In this way we start planting at the back of the green and work towards the apron where all our materials should be placed.

The materials needed are: a supply of shredded or chopped stolons, a wheelbarrow, four bushel baskets, four tin pails, two rakes, one fairly heavy roller, a hose with an extra-fine nozzle, about ten wide boards ten feet long and a cubic yard of ready-mixed, screened, top dressing. This top dressing has about two hundred pounds of Milorganite or similar organic fertilizer, and a few shovels-full of potash. The correct mixture is composed of 60% coarse, sharp sand, 20% fine cultivated peat and 20% good topsoil. Any good humus fertilizer, such as well rooted, screened

barnyard manure, at least four or five years old, can take the place of some of the peat. This additional fertilizer disintegrates slowly and is a continuous feed for the young roots growing down. You will note that our first top dressing is very friable. The object is to have it so porous that a newly sprouted node can come through the soil wherever it sprouts instead of crawling along under a crust until it finds a crack in the soil for an opening.

## PLANTING THE GREEN

First rake the part of the area between the first row of boards and the end of the green to a depth of about a fourth of an inch. Spread the chopped stolons thru your fingers at the required rate. Roll these stolons down, and top dress to no more than an eighth of an inch and roll again. The object is to have the stolons packed between two layers of soil in the same way a gardener would pack down the soil after planting seeds. About a fourth to a third of these stolons will show above ground.

This is as it should be as the nodes above ground will sprout into leaves and new stolons, while the nodes under ground will sprout into roots as well as new stolons. The top dressing must not be thrown on with a shovel but must be laid on so as not to disturb the stolons. A top dressing spreader would be very satisfactory here but if none is available drop the top dressing as evenly as possible by working the material thru the fingers. Now, move the first row of boards behind the second row of boards about one foot. This will give you a planting area about two feet wide, which is all the average man can reach while doing his planting; then proceed as before. First, rake; second, plant; third, roll; fourth, top dress; fifth, roll again; and sixth, move your boards back again. It is all very simple once you get the rotation.

## WATERING

If the day is warm, windy, or sunshiny, better start spraying even before the green is half planted. This spray is an extremely fine mist, one through which rainbows can be seen. It is not the amount of water put on the green that counts, but the frequency of moisture, because after all, one need not water over a quarter of an inch, and at no time must the top layer of this soil become dry, not even for an hour, and it must be kept moist for a period of at least four days. On the other hand, do not over-water as the top dressing will then be washed off the stolons and rivulets will form in the green. This is so important that the best man on your force should be given the task of spraying. The first four days are the most important. If this top layer of soil becomes dry and tiny roots dry up you lose your green. After the first four days of almost constant and continuous spraying from sunrise to after sunset, slow up the spraying to about every hour or so, depending on the winds and the hot sun. If the weather is cool or the sky overcast it is natural that the ground will not dry out so quickly and will not have to be sprayed so often.

On the fourth day new shoots will show up all over the green. Then there is nothing to do for the next two or three weeks except of course, spray. Watch the green carefully, and whenever the new stolons become an inch or two long, the green is ready for another application of ammonium sulphate at the rate of five pounds per thousand square feet, the sulphate generally dry or mixed with damp sand. And, be sure to wash it off the blades.

## FORMING SOD

Whenever the stolons grow to a length of three or four inches they are ready for the first mowing. This may be three or four weeks after planting, de-

pending upon warm growing days and nights. Before mowing, roll the green so as to force as many of the stolons into the soil as possible, and then mow, first with an ordinary five-blade mower, following this up with a putting green mower set to a height of one-fourth inch. Let the clippings fall where they may, scattering some of them where they are too thick over the places that are too thin. Then roll the clippings down and top dress with the same mixture of top dressing as before, and not over an eighth of an inch thick. Do this once a week for four weeks. This is what is called "Building Sod." After this remove the clippings with a catcher on the mower, and your green is ready to play upon. The last two top dressings are dragged in so as to level and smooth the green. The program outlined is an eight-week schedule, but it may be slowed up a week or two or advanced a week or two depending on growing weather.

#### SUBSEQUENT CARE

From here on in, lower your mower to 3/16 of an inch and keep it there, and change the top dressing mixture to less sand and more dirt. A good average top dressing is composed of about 30% good soil, 50% coarse, sharp sand, and 20% peat. But you must do your own experimenting and when you get the correct mixture of your soil, stay with that mixture to avoid layering. Stolons may be planted any time during the growing season, presumably from April 1st to November 15th, depending on your locality.

#### 1951 NATIONAL FIELD DAYS

The USGA Green Section announced the 1951 National Field Days for October 7, 8 and 9.

Sunday evening will be devoted to progress reports by Turf research workers and graduate students and a discussion of plans for further research to meet current needs.

Monday will be the big day, during which our visitors will see the experimental plots at Beltsville as well as practical demonstrations of new grasses and new practices at a local golf course. Monday evening again will be devoted to a dinner and talks by leading turf authorities. Details of the arrangements will be published in the USGA Journal, in the Golf Course Reporter, in Golfdom, and in the various News Letters published by local associations.

Tuesday, October 9, will be a "free" day for anyone's choice. Some visitors will wish to review the turf plots; others may wish to visit golf courses in the area; still others may wish to go home. We hope the latter will be in the minority.

Reservations for rooms should be made directly. The tourist cabins near the Plant Industry Station include:

Del-Haven White House Cottages, Berwyn, Md.  
Canary Cottages, Beltsville, Md.  
Stewart Cottages, Beltsville, Md.

Downtown hotels, of course, are always available and are anyone's choice.

#### COMING EVENTS

Sept. 10-11, Golf Course Superintendents of America Tournament and Midwest Regional Turf Foundation Field Day at Purdue University.

Sept. 17, Joint meeting of Midwest Association of Golf Course Superintendents and Wisconsin Greenkeepers Association at Fox Lake, Ill.

Oct. 1, Pro-Superintendent Tournament at St. Andrews Country Club.

Oct. 7, 8 and 9, 1951 National Field Days at Beltsville, Maryland.

Oct. 15, Midwest Annual Fall Tournament at Chicago Golf Club, at Wheaton, Illinois

## IS ORGANIC NITROGEN NECESSARY?

by A. H. Bowers, Agronomist

Swift and Company, Plant Food Division, Chicago

Until very recent years, the answer was an unqualified "Yes" from such specialized users of plant food as Florida orange growers, North Carolina tobacco producers and those interested in turf management. It was the long-entrenched belief that such sources of nitrogen as cottonseed meal, tankage, dried blood, and other natural organic materials released their nitrogen slowly in the soil, since they were not water soluble. But some of these materials were found to be useful as animal protein feed supplements and brought a much higher price as such than they did before these values were found. Agronomists began to wonder if the organics were really necessary. It did not take them very long to find out that they were not, though custom prescribed their use in large quantities.

Much less costly substitutes were right under the noses of growers and agronomists alike. In fact, they were nothing more than the usual synthetic sources of nitrogen in the form of various ammonium compounds which provide nearly all of the nitrogen in today's plant foods.

In Florida it was found that if adequate amounts of minor elements were supplied, ammonium sulfate and sodium nitrate produced citrus fruits in quantity and quality equal to or better than that produced where organic nitrogen only or mixtures of organic and inorganic were used. Says Dr. J. W. Sites of the Citrus Experiment Station: "While two decades ago it was wrong to use inorganic mixtures of nitrogen, phosphorus and potassium it does not necessarily follow that they may not be used to advantage today so long as they are supplemented with adequate amounts of the other required nutrients."

Meanwhile in North Carolina, Drs. W. E. Colwell and S. L. Tisdale were investigating the rate at which the nitrogen in mixed fertilizers containing organic materials nitrified, that is, changed into the nitrate form used by plants, in comparison with the rate at which sulfate of ammonia broke down into the nitrate form. They found that with controlled incubation in the laboratory, by the end of three weeks practically all of the nitrogen that was going to become available in usable quantities had done so, whether the nitrogenous material was tankage, cottonseed meal, castor pomace or ammonium sulfate.

A further testimonial to the value of ammonia nitrogen was forthcoming from the Indiana Experiment Station in their bulletin No. 482. The bulletin states that as long as nitrogen is in the ammonium form, it cannot leach out of the soil in periods of excessive rainfall or move to the surface, out of reach of the roots in dry periods. High organic matter helps keep the nitrogen in the ammonium form because it supplies energy for bacteria that use up free oxygen in the soil, thus preventing ammonium nitrogen from too rapidly oxidizing it to nitrate nitrogen.

On turf experiments at State College, Pennsylvania in 1947 and 1948 the rate of availability of the nitrogen as reflected in amounts of clippings did not significantly differ between sewage sludge and sulfate of ammonia. However, the new synthetic "plastic", urea formaldehyde, was most promising as a slowly-available, evenfeeding nitrogen material. Unfortunately the raw materials constituting it are on the national defense critical list and there is no commercial production.

## THE QUESTION BOX AT THE ROSELLE MEETING

Al Johnson, Chairman of the Educational Committee, appointed a panel of members consisting of Bob Williams, Ray Davis, Bert Rost and Paul Burdett.

Q.-What method have you found best to get rid of greens clippings?

A.-Bob Williams-We spread them over the rough in a different place each time. They are difficult to spread, but we do a pretty good job of it.

-Bill Stuppel-At Exmoor we used to spread the clippings in the rough, but found it became rather messy at times. We now collect the grass every day and compost it with leaf mold, hay, and what have you. Last year we produced over 50 yards of compost material, which was spread during the winter in the vegetable and flower gardens. We accumulate about a cubic yard of green material each day.

-Al. Johnson-It is hard to get the wet material spread evenly and the use of this for compost is probably a very good idea.

Q.-To your knowledge has anyone used Endothal for clover control?

A.-Burdett-Some experiments have worked out well but others have caused damage to turf.

Q.-How heavy can you apply 10-8-6 Fertil-Ade without additional water?

A.-Bert Rost-1 gallon to 66 gallons of water.

Q.-I would like to know something about earth worm control with Chlordane.

A.-Bob Williams-We used 1 gallon of emulsion containing 8 pounds of technical chlordane in 75 gallons of water per acre in early June. We went over all the fairways in six hours. We now have no worm casts in the fairways. The material cost was \$10.00 per acre at this rate. It did not have much control of ants but it does have a little effect on clover.

Q.-Bob Chamberlin-If you use chlordane on fairways will you have any effect on the bird life?

A.-Williams-The birds are on the fairways, but they dig up cut worms and do not dig deep.

Q.-What results have you had with 2-4-5T for clover control on fairways and when can it best be used?

A.-Frank Dinelli-We got best results in July and August, using 1 quart per acre in 100 gallons of water.

A.-Stewart-I think that you will find that the clover reestablishes itself quickly with an early application.

A.-Gerber-I used 1 quart per acre late in June and killed the clover in the unwatered rough.

A.-Al Rausch- I sprayed the whole course with 2-4-5T, and where it was rained on it was not too good, but where it was not rained on, it did very well.

A.-John Darrah- I used 1 quart of 2-4-5T and one quart of 2-4D at the time the clover was just starting to bloom, about June 15 and got very good results.

Q.-Does Standard Oil Crabgrass Killer hurt blue grass?

A.-Ed Muzik- I used it and it removed crabgrass completely, but the bluegrass hasn't grown since.

The purple martins have left and are on their long journey to South America. It is estimated that these birds must work 14 hours a day gathering insects to feed their young while they are still in the nest. A most useful bird to have on the golf course.

## THE USE OF CHLORDANE

Many state and experiment station recommendations approve the use of Chlordane for the control of insects in the soil. Chlordane may be applied in separate applications as a dust, wettable powder, or emulsion. For many crops Chlordane may be applied by mixing with fertilizer. Chlordane should not be mixed with fertilizers containing an appreciable amount of lime or other alkaline components. Rates of application range from one to 8 or 10 pounds per acre. On turf it has been found that some of the worst pests, such as Japanese beetle grub, the June beetle grub, ants, earthworms, cut worms and webworms and, probably one of the more recent, the Oriental earthworm are quite easily controlled at the higher rates. Repeated light applications on greens has had excellent results. A little Chlordane, say at the rate of ¼ pound to a 5000 square foot green, applied several times thruout the summer should keep the greens comparatively free of insect pests.

## WEATHER NOTES

The weather in the Chicago district has been, to say the least, "unusual", this summer. People around Chicago, instead of complaining about the heat are talking about the "cold" August weather. The summer has been unusually cool with ample, to excess, precipitation. Cloudy days have been the rule rather than the exception. It certainly has been fine weather for grass. Nobody remembers a summer when the grass had to be cut so often and watered less. In many cases, if it had not been for fear of losing *Poa Annua*, almost no watering would have been done on fairways. Even the greens have needed very little artificial watering. However, it is not all on the bright side. The cool, wet, cloudy weather has caused the grass to grow "soft" and there have been reports of trouble on this account. At the time of this writing, the turf is soaked from the heavy rain of the first part of the week and it looks now as if, with normal weather from now on in, that a whole lot of watering will not be necessary. However, a word to the warning, watch your greens extra carefully on account of soft growth.

Mr. Ben Stevenson, who for many years was Chairman of the Greens of the beautiful Pevely Country Club, has purchased the Southmoor Country Club, 131st and Southwest Highway. Mr. Stevenson has long been a golfer and knows all the course angles that will please the golfer. He plans to make Southmoor the most beautiful and popular course in the Chicago District.

As the first part of the project, Mr. Stevenson is digging a lake on the east side of the course to take care of the overflow water that has plagued Southmoor every time a good rain has fallen.

Mel Warnecke feels that he will really be hot for the Tournament at Purdue and wants a ride down with someone who is going.

PATRONIZE OUR ADVERTISERS

A LETTER FROM FRED GRAU, Director of the U.S. Golf Association Green Section.

Dear Bert. (Rost)

I Was mighty pleased to receive your letter of July 11 and to hear about what you have done in connection with the University of Illinois at the Morton Arboretum at Lisle, Illinois. This sounds like real progress. Much credit is due the Midwest Association of Golf Course Superintendents for bringing this development about. I recall with interest discussing this very subject with Harold Clemens, Frank Dinelli and others when I was at the Green Section Turf Gardens on the Lasker Estate in 1931. This is a sounder proposition because it will be supported by and supervised by your own state experiment station.

Quite naturally we are very much pleased that you have given us an opportunity to work with you and with the University in developing the plans for the turf gardens. It is so extremely important to lay sound plans for years to come and you may be assured of our complete cooperation in developing these plans, in furnishing planting materials and anything else that makes for further progress.

I have every expectation of being called back to the University of Illinois Golf Course at Champaign in the near future. At the same time, I may be called upon to consult with the athletic department concerning their football field. It would be an ideal situation if we could go into the development of plans for the turf garden at the same time. The man who has arranged for me to come out in the past is Mr. Webb, Manager of the golf course. I have two open dates for planning something around this visit. I have some free time starting August 13 and again September 17, which I tied up with the turf field days at Purdue. I shall bend every effort to make it possible to discuss plans with Dean Searles, Dr. Weinert, Dr. Tehon, and Dr. Birkland as soon as possible. I am assuming of course that the Midwest Turf Research Committee would sit in on and pass on all plans in collaboration with the officials of the University and with the USGA Green Section.

I am looking forward with a great deal of pleasure to working with you folks in developing these plans.

Yours for better turf,  
Fred Grau.

## TURF REPORT

Grub damage is very widespread thruout the Chicago district from the farthest north to the far south side and thruout the west. Grubs in all stages are found in fairways and roughs and are serious even in watered fairways. Fairways that have been treated with Sodium Arsenite are apparently grub proofed during this, the worst infestation in recent years. The favorite control is to apply 10 pounds of technical Chlordane to the acre. All formulations seem to be effective.

## CALLS FOR LEGISLATION TO REGULATE RAINMAKING

Rainmakers producing rain artificially in distant states may be responsible for the Missouri and Kansas floods, according to Sen. Case of South Dakota.

He called for a congressional investigation to determine whether the rain makers are to blame, and for legislation to regulate rain making.

Silver iodide was used in "seeding" clouds in New Mexico in 1949 and 1950 and simultaneously serious floods occurred in the Mississippi valley.

Rain makers have been seeding enormous areas this year in Oregon, Wyoming, Nebraska, Colorado, and the Dakotas. The silver iodide mist may have drifted down wind from the northwest, causing the floods.

Sen. Case said that Dr. Irving Langmuir, Nobel prize winning scientist of the General Electric company, has reported that the seeding in New Mexico affected rainfall as far east as Buffalo, N. Y. He said another G. E. scientist Dr. Bernard Vonnegut, has told a Senate committee that silver iodide might affect the weather 2,000 miles away.

Rain makers have been hired this year by farmers' organizations in dry areas.

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Editor's Note: Wonder if golf courses will ever hire rainmakers.

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Brown patch is the main hot weather disease on bent greens. It and the other principal turf diseases are caused by parasitic fungi, otherwise known as mold. A plentiful supply of moisture promotes the growth of fungi. For example, mold never appears on sale bread, but is common on fresh bread stored in a damp atmosphere. The difference in moisture content is the reason. Likewise with grass, brown patch is worse where turf stays wet and soil contains an excess of water than where grass leaves are kept dry and soil moisture is just below the optimum content for growth.

Where overwatering is the rule, time of watering is immaterial. The over-wet soil aggravates disease. But where the correct amount of water is used, early morning watering is best in hot periods of high humidity where heavy dew is a daily occurrence. Watering then destroys the dew droplets and dries the grass. This tends to check disease. Night time watering makes and keeps the soil and grass wetter so by withholding water until early morning the effect is to keep soil and grass drier and make for less disease.

O. J. Noer

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The Chicago Golf Club, located on the Northern edge of Texas and well out on the Western edge of the Chicago Suburban area was the scene of an old time cattle round up early Thursday the 16th of August. 23 cows from a near by dairy got loose on the course, milled around No. 16, 2 and 5 greens, making mud holes of these greens. Nels and his crew of trusty and howling Cow Pokes riding the light course trucks without saddles, rounded up the cattle and rode night herd on them until the owner's representative appeared thru the morning haze, accused Chicago Golf of rustling and drove his herd away. The club manager watched the potential T Bones disappear over the hills with tears in his eyes and Nels went out to supervise the working in to the greens of the vast supply of natural free fertilizer. If the greens seem to be especially verdant during our October meeting we will all know why.

## SPREADING IT THIN

Don Strand passes the word along to all who might be interested that it is possible to take a special course in the College of Agriculture at the University of Illinois that will provide a scientific background work for modern Greenkeeping practices. Under the College of Agriculture Agricultural Science curriculum, it is possible to take a great selection of courses. Certain fundamental courses are required for graduation, all others are elective. To stay in this curriculum, it is necessary to maintain a 3.5 average and to be in the top half of the High School class.

Adolph Bertucci, of Lake Shore Country Club, lost the tip of his thumb on the left hand while sharpening mowers.

Ray Rolfs of the Milwaukee District is now Golf Course Superintendent at Riverside Country Club. Ray has been in the profession since 1919. He is a member of the Wisconsin Greenkeepers Association and a member of the National Association.

Pete Stewart of Butterfield Country Club has an amateur Invitation Tournament scheduled for August 23, 24, 25 and 26. Two hundred of the top amateurs from all over the country will play. Pete believes his C-115 bent is the fastest growing grass he has ever seen.

Jerry Spottswood has sold his auto business in Palatine and is now spending his time representing manufacturers. Jerry has a show room in Palatine.

Stanley Arendt has not heard from his son who was reported missing in Korea November 2.

Ray Davis reported that 103 turned out for the Association picnic on July 23 at Arrowhead Country Club. Much praise is due Ray for his usual fine job of showing everybody a good time and for keeping expenses down below the sum allotted him for the event. Ray seems to have a knack of coming out a few dollars ahead at all his parties. Needless to say this makes him the Treasurer's fair haired boy. Our thanks, also, to Bill Oates, our host and Mrs. Davis and her committee—Mrs. Lapp and Mrs. Burdett, who worked hard to make it an enjoyable day for everyone. Ray says he ran out of hot dogs, but Bill came to his rescue with some hamburgers, so everybody had plenty to eat. Janet Lee Davis and Lois Jean Drake provided accordion music during the Vesper Twilight Hour. The picnic ended with a balloon busting contest. George Roloff, especially, liked this.

Paul Popp, formerly Superintendent at Riverside, is now with a sod nursery at Bloomingdale, Ill. Paul is finding the nursery business quite different from golf course maintenance. We wish Paul all the luck in the world in his new venture.

Andy Dunn, Superintendent of the Catholic Cemeteries of Chicago, reports that the Chlordane dust applied to some 40 acres of cemetery grounds was most effective. The material used was a 5% dust and was applied at the suggestion of Norman Johnson who served for a while as advisor on turf problems.

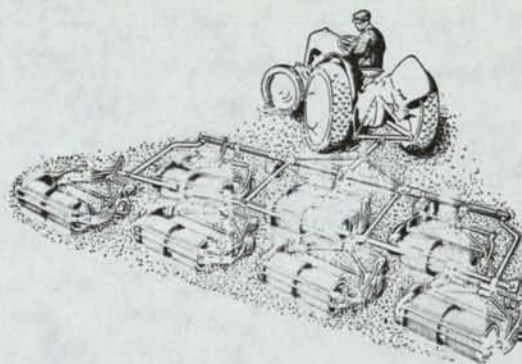
Dr. Daniel is particularly pleased with the chemical studies on clover, crabgrass, and chickweed and the job Ed Oyer is doing on these.

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