How KRILIUM Solves 6 Bad Turf Problems and Saves You Up to $418.28 on Every Green You Build

Experienced greenskeepers agree: soil compaction is their major turf troublemaker. Compaction reduces soil pore size; prevents water, fertilizer and air from reaching the root zone; and results in a long list of turf problems:

**Turf Problems**

1. Shallow grass root systems often only one inch deep.
2. Quick wilting of turf in hot weather because root systems cannot supply adequate water.
3. Greens that dry too hard to hold a well-played shot.
4. Fertilizer remains on greens even after careful watering and causes salt burn.
5. Uneven response to fertilizer.
6. Turf on greens which lacks vigor and hence is highly susceptible to disease.

**How Krilium Cures Them**

1. Excellent water penetration to the root zone spurs deep root growth.
2. Deep, vigorous root system supports excellent turf or top growth.
3. Greens don’t harden after drying because soil treated with Krilium has good drainage and resilience.
5. Uniform turf stems from uniform soil structure maintained by Krilium in the cultivated state indefinitely.
6. Strong, vigorous turf on soil of proper aeration and fertilizer penetration resists disease better.

How one greensupt. figured he saved $418.28 per green* —comparative costs for building a 5400 square foot green:

<table>
<thead>
<tr>
<th>Conventional Method</th>
<th>Krilium Soil Conditioner Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native soil</td>
<td>Native soil</td>
</tr>
<tr>
<td>Top soil (60 yds. at 1.40/yd.)</td>
<td>no cost</td>
</tr>
<tr>
<td>Sand (45 yds. at 2.50/yd.)</td>
<td>$ 84.00</td>
</tr>
<tr>
<td>Peat moss (45 bales at 2.55/bale)</td>
<td>114.75</td>
</tr>
<tr>
<td>Bulldozer (12 hrs. at 10.00/hr.)</td>
<td>120.00</td>
</tr>
<tr>
<td>Scoop tractor (27 hrs. at 4.00/hr.)</td>
<td>108.00</td>
</tr>
<tr>
<td>TOTAL COST Conventional Method</td>
<td>$539.25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Krilium Soil Conditioner Method</th>
<th>Krilium Soil Conditioner Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top soil (none needed)</td>
<td>no cost</td>
</tr>
<tr>
<td>Krilium (108 lbs. at 0.82/lb.)</td>
<td>$ 89.47</td>
</tr>
<tr>
<td>Rotary tiller (10½ hrs. at 1.00/hr.)</td>
<td>10.50</td>
</tr>
<tr>
<td>Hand labor (10½ hrs. at 2.00/hr.)</td>
<td>21.00</td>
</tr>
<tr>
<td>TOTAL COST Krilium Method</td>
<td>$120.97</td>
</tr>
</tbody>
</table>

**YOUR SAVING per Green**

**$418.28**

*NOTE: Since costs and methods vary across the country, substitute local prices to work out accurate comparisons for your course.

**IMPROVING GREENS UNDER PLAY:** Where conditions prohibit rebuilding of greens, Krilium can relieve surface soil compaction for an entire summer for $3.00 or less per green.

Write today for step-by-step pamphlet: “How to Use Krilium to Improve My Golf Course,” MONSANTO CHEMICAL COMPANY, Garden Products Division, 800 N. Twelfth St., St. Louis 1, Mo., or 2710 Lafayette St., Santa Clara, Calif.

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July, 1956
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- Lemon
- Gold
- Red
- Copper
- Wine

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- Get more practice with

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Light, periodic applications of sulfate of ammonia will tend to hold the reaction steady to one of the improved Bermuda grasses. Two that I would suggest for you to try side by side are Tifgreen and Ugandagrass. Both are fine in texture, the latter like bent. Ugandagrass is proven winter hardy in New York and central Pennsylvania. Tifgreen is undergoing hardiness tests.

Q. Can you advise as to one or two good sources of information on Bermuda grasses? We want books giving details on planting, care, fertilizing, disease control, etc. (Maryland)

A. The best reference we know of on the subject is the 1948 U.S.D.A. Yearbook GRASS. There is no book on the subject that we know of. A good source of current information is the U.S.D.A. Plant Industry Station, Beltsville, Md. Another source of current data is Georgia Coastal Plain Exp. Station, Tifton, Ga. This department of Golfdom can help you with specific problems. The current issue of "Southern California Turfgrass Culture" carries an "Evaluation of Bermuda Grasses." This is available from University of California, Dept. of Horticulture, Los Angeles 14, Calif.

Q. The pH on my greens is up around 7.5 to 7.6. I'm afraid it is getting too high. What can I do to lower it? (Ill.)

A. My advice is to do nothing about your pH — just let the grass enjoy it. Bentgrass will thrive over a very wide range of pH values — even up to pH 8.5.

Golfdom
or lower it slightly. I favor an acid-forming fertilizer such as sulfate when soil pH is high, not so much to change the reaction but for beneficial effects from the sulfur in the fertilizer.

Q. Please examine the samples of soil and sand I am sending you and give me your opinion of the best mixture for topdressing my bent greens. (Pa.)

The soil appears to be clay loam with good physical structure. The sand is graded from coarse to fine but most of it is what I would call coarse. This is good. With a good grade of peat or well decomposed sawdust on hand, I would suggest this mixture:

- Sand 7 parts by volume
- Clay loam 2 parts by volume
- Organic Material 1 part by volume

I'm sure that you will be much better satisfied with this mixture if you can make it up a year ahead, treat it for weed seeds (sterilize with cyanamid or methyl bromide), and let it develop a "bond" between particles. This will give the micro-organisms a chance to operate and develop some aggregates before you use it. It will be best if you continue to use the same mixture year after year.

Q. I am considering introducing Certified Meyer (Z-52) Zoysia into my fairways. We have recently installed a complete fairway watering system on 9 old fairways (carpet grass and Bermuda) and 9 new fairways which are seeded with Bermuda. I want your advice regarding Zoysia for fairways. I intend to start a small nursery, then plug and sprig small portions of the fairways from the nursery. (La.)

A. Meyer Zoysia does not appear to me to be one of the better fairway grasses because of a tendency to become a "deep cushion." This quality may be wonderful in a lawn but, if allowed to develop it would give golfers an insecure stance and footing. A heavy cushion of turf makes tiresome walking. Zoysia clippings decay slowly and build up an undesirable mat.

By all means start a small nursery. When you have solid turf, have your members play from it and walk on it. But remember a few steps on a small plot is not the same as walking several miles.

Had you planned to start a similar nursery with improved Bermuda grasses? It should be very worthwhile. Renovation will be less costly and much faster with the right Bermuda.

Q. What are other reasons in addition to disease control in favor of early morning watering over night watering? The only standard I have to go by for swishing greens is when the temp. is above 88-92 degs., there is high humidity, and the green feels hot to touch. Are there more things to look for? How often should a green be swished during hot weather? 10 minutes per time is about standard isn't it? What are other factors to consider in watering beside puddling and runoff? What are the symp-

---

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We pay the postage on all orders of $15.00 and over.

Q. I believe it is generally agreed that it is a poor practice to feed bent greens with nitrogen in warm humid weather, or when we know such weather is approaching. If this is so, then wouldn't a spring application of one of the urea-formaldehyde fertilizers (such as Uramite) in sufficient quantity to last all season be injurious to the extent that you would lose control of nitrogen feeding in hot weather? I realize this form of nitrogen is released gradually all season, but in warm, humid weather there would be no way to stop nitrogen release, thus increasing the chance of more rapid spread of disease. (Wis.)

A. It does not appear that the U-F fertilizers (Uramite, for example) release nitrogen "explosively" when hot weather comes as we have observed at times with natural organics under conditions of high heat and humidity. Release rate appears to be nearly constant and is not dependent upon temperature and humidity. Research data do not indicate any loss of control of nitrogen or any additional disease with the season's supply of N being applied at one time in the spring. It helps, naturally, to have a good sturdy strain of grass to start with. To date, it appears that we can say with assurance that the U-F fertilizers tested thus far are equal to the best organics in performance and N release is more constant.

Q. With winds of 35-45 m.p.h. I have trouble keeping sand in my traps in spite of steeply (Continued on page 82)

NEW ATWATER-STRONG 25 HP MULCH-VAC LEAF SWEEPER

Nothing like it for cleanup of leaves & litter.
Women Golfers Help Business

(Continued From Page 44)

The Dubuque pro also makes an extra bid for the women's support by allotting their accomplishments more space in his monthly “Chatten with Atten” publication, a four-page pamphlet, than those of the men. Besides this, the ladies have their own golf committees made up of weekly schedule, publicity, handicap and telephone departments and all are set up and ready to go by the end of April. Ladies' Days, which are monthly events, are another promotion used to advantage in bringing the women out to the course.

Women's interest being what it is at the Dubuque club, Howie Atten's only worry at the moment is that the golf widows may some day start grumbling.

Gene O'Brien Attracts Big TV Following

(Continued From Page 40)

spent on instruction with O'Brien's woman pupil, Jack Miller, KAKE sportscaster and various local players assisting Gene in demonstrating how the game should, and in some cases, shouldn't be played. The show is wrapped up with O'Brien conducting interviews or discussing news of the golf world.

Plenty of Prizes

O'Brien's sponsors will have given away about $1,000 in golf merchandise before the present series is concluded. Players in the Wichita area who score holes-in-one the previous week are given a dozen balls and a similar award is made to the person who sends in the most unusual golf story for the week. Equipment and apparel also are given away on each program as awards for distinguished golfing.

In previous series, Gene O'Brien kept interest in his show at high pitch by corolling as many big name golfers as possible for interviews and by giving Juniors, Seniors, women, duffers, star local players and miscellaneous golfers attention in a variety of ways. One of his best tricks was to bring in six completely different physical types and demonstrate how each could go about overcoming whatever handicaps he had. Viewers couldn't help but appreciate this since practically all found their prototypes in at least one of the six different specimens who appeared on the show.

Finest Silver Crab Killer Available

NOTT'S® ARTOX “special”

If silver crab is still a problem on your greens, then you haven't heard the latest news. Because Nott, with many years experience in formulating crab grass and broadleaf weed killers, has now successfully combined “Di Sodium Monomethyl Arsonate” (SODAR*) with 2, 4-D... a specific for silver crab and ideal for chickweed, plantain, dandelion, smooth and hairy crab grass.

ARTOX “Special” comes in convenient, professional concentrate powder form. Mixes easily with water and can be applied with regular spray gun.

Try ARTOX “Special” at our expense. You and the Greens Committee will be amazed with the results.

For Free sample attach coupon below to your club letterhead and mail.

ARTOX and other NOTT Products available through your Horticultural Supply House.

*Trade Mark pending, permission granted by applicant

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July, 1956
Get More Late Play!  
End Your Caddy Problem!  
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The Champ is easy to operate! Anyone can use it! Only  
3 simple controls — ball bearing tiller steering — 2 speeds,  
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pansion brakes ... Four-ply tires ... Dual wheel drive  
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Golf Day Reports $70,000  
To PGA — More to Come  
FIRST National Golf Day sponsored solely by the PGA was definitely a success. Pros did a fine job and found clubs were in complete agreement with charging $1 entry fee at tees.  
Collection was a cinch, along with usual dollar each for blind bogey and sweepstakes as Saturday events. Promotion was boosted strongly in some communities by Junior Chamber of Commerce cooperation.  
Tom Crane, PGA Executive sec., said that by June 26 there had been received a total of $69,489.91. Men entries accounted for $62,785; women for $6,281 and caddies for the rest.  
There were 6,326 men and 77 caddies reported as of June 29 as having won medals with net scores better than the 69 Jack Fleck scored at Oak Hill. There were 2,991 women reported as having beaten Fay Crocker’s 80 at Oak Hill.  
Crane believes entire proceeds of 1956 Golf Day may come up to $90,000.  

Beltsville, Wooster Turf Dates  
ON Aug. 14 a Turf Field Day will be staged again at The Beltville, Md., Plant Industry Station of the U. S. Dept. of Agriculture. Charles K. Hallowell, mid-Atlantic Director of the USGA Green Section, Mid-Atlantic Assn. of Golf Course Sup'ts. and Dr. Felix Juska of Dept. of Agriculture are cooperating in reviving the conference and inspection of golf turf experiments at Beltville.  
“Lawn and Turfgrass Day” will be staged at Ohio Agricultural Experiment State, Wooster, Sept. 5. R. R. Davis, associate professor, agronomy, is arranging the program.  

Swinging Around Golf  
(Continued from page 22)  
Sid is 83 now ... He only played in one tournament, the Indiana Open of 1915 ... He won that and after that victory spent the rest of his pro career teaching.  
Mrs. Harry Weetman, wife of British Ryder Cup player, says British PGA arrangements  

SELL PAR TUBES NOW! — WHY WAIT?  
The demand is terrific and the profits are quick. PAR TUBES superior construction proves them tops in the field. A Must for any golfer who wants to protect his grips the full bag length and obtain a friction-proof bag with an individual compartment for each club. PAR TUBES are dropped into oval or round type bags allowing a numerical arrangement of clubs. PAR TUBES fit into and strengthen individual compartment bags, allowing full free use of EVERY compartment.  
PAR TUBES are Strong — Moistureproof — They are endorsed by Pros and Amateurs alike as a great idea for keeping grips in fine condition and protecting clubs against marring by careless handling.  
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The Champ  
is manufactured  
in the shops of specialists — 60  
years of experience engineering  
and building electrically operated equipment.  

66  

Golfdom
in having only about $3,000 complete disablement or death insurance grossly inadequate, particularly as British team has to make six air trips in U. S. . . . Says British team members received about $150 each from British PGA for expenses for five-week tour . . . Also said that British squad members were given about $75 net after costs of gifts were deducted.

Ed Toole, golf writer for the Springfield (Mass.) Newspapers, claims the area around Pittsfield is busiest of all small golf districts in the country with its programs of the Allied Golf Clubs of Berkshire County, the Women's Golf Assn., the Seniors' Golf Assn. and the Intercollegiate organization . . . Jack Redmond to make globe circling trip in October and play one hole in each of 18 countries.

Hampton Auld going from Norwalk, (O.) Elks CC to be pro at Antelope Hills CC, Prescott, Ariz. . . . Auld succeeded at Norwalk by Bob Buchanan . . . Lawrence and Frank Hughes designed and built Antelope Hills, 9 holes of which are completed . . . Alfred E. May formerly at Elmwood CC, Marshalltown, Ia., and more recently with Joe Sanders, supt., Paradise Inn course at Phoenix, assisted Frank Hughes in Antelope Hills construction and stays on as supt . . . Course is city-owned and is in mountains about 10 miles north of Prescott . . . Fine clubhouse, pool and range at club . . . Chestnut Ridge CC in Baltimore dist. opened . . . Alex G. McKay constructed it and Bill Gordon, winner of PGA golf professional of 1955 award, is pro.

Duke university course, designed by Robert Trent Jones, now under construction, having tons of tobacco stems plowed into soil . . . Ed Caldwell now pro at Coonamesset GC, Treadway Inn course at North Falmouth, Mass. . . . Talladega (Ala.) GC and City Recreation Dept., allows youngsters of high school age to play Mondays and Fridays free.

Fire does $30,000 damage to clubhouse of Maxwelton course near Syracuse, Ind. . . . Players help Mr. and Mrs. Tom Merritt, owners of the club, to clear away fire wreckage and renew operation . . . Ralph Lomeli, for years pro at Porterville, Calif., club, to go as pro at new Tulare (Calif.) CC . . . Article about ranges and par-3 courses in "Changing Times" magazine, entitled "Some People Make Money Out of Golf" brought hundreds of inquiries for information about building and operating ranges and short courses to National Golf Foundation.

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The newly introduced time-payment plan which A. G. Spalding & Bros., Inc. is extending to its pro customers is explained to the press by Donald H. Mudd, company treas., at a meeting in New York. At the press conference were (left to right): Mike Turnesa, well known pro; Mudd; Harry Amtmann, Spalding ad mgr., and Charles M. Crawley, vp of Beneficial Finance System which is cooperating with Spalding in the new credit service.

Minnesota PGA
(Continued from Page 26)

the individual’s master eye.

b. One-handed swing with right is good aptitude test.

c. Most beginners have low aptitude for counterclockwise exercise.

XII. You can’t build a swing on top of a poor underlying body movement. Technique is meaningless unless the right arm is swung correctly.

XIII. Points brought up under “wholeness.”

a. Sequence approach to ball. Plan, feel, look, and then get swing off in given order of movement.

b. Factors in the address.

c. Forming swing to “master line.”

d. Outline of swing — General shape, form and alignment.

e. Stress on swing movement.

f. Posture and body movement.

g. Arm swings.

Club Management Course

A short course in Club Management is scheduled to be held at Cornell University, Ithaca, N. Y., Aug. 20-24. J. William Conner, Statler Club, Ithaca, is in charge of arrangements.
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MacGregor Offers Five New Illustrations

The MacGregor Co. has added five new illustrations to the series of full-color reproductions of paintings of members of its advisory staff. The illustrations, done in the same "explosive" art technique as the earlier five, feature Beverly Hanson, Jack Burke, Doug Ford, Mike Souchak and Bob Toski.

This makes a complete set of ten full-color pictures, all the same 8" x 10" size, suitable for framing, which have been mailed to all golf pro shops by MacGregor. The original group, offered for the first time last year, included Toney Penna, Tommy Armour, Byron Nelson, Louise Suggs and Jimmy Demaret. For additional sets, without cost, write The MacGregor Co., Cincinnati 32, O.

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Transcendent Named Wilson's Assistant P R Director

Vic Trauscht, former assistant to Tom Crane, executive secy. of PGA, has been named asst. Public Relations director of Wilson Sporting Goods Co.

In his new executive capacity, Trauscht will head an expanded public contact program under the supervision of Advertising and Public Relations Director, Bob Wren. He will serve as chief liaison man between the Chicago headquarters, all Wilson factories and branches, and the general public. This includes field assignments at major sports events where he will work closely with press-television-radio personnel, and promotional services to distributors of Wilson equipment.

A native of Chicago, Trauscht attended De La Salle high school and graduated from St. Mary’s College, Winona, Minn., in 1943. He played varsity basketball and baseball two years, captaining the baseball team as a junior. During World War II he served in the Navy with the rank of Lieutenant.

Golfdom