

# Divots from Leach's Mail-Bag

## Question

Sir:

We are co-operating with ——— golf course in furnishing creeping bent stolons from our nursery for planting new putting greens next week. What is your latest advice about poisoning before planting?

R. W. C. (New York).

## Answer

Sir:

You are at least a month late\* in planting these bent stolons and at best stolons planted at this date in the latitude of Ithaca. Under the circumstances would not advise that you arsenate the soil of these greens before planting the stolons. Rather I would wait until you give the bent the first top-dressing next season (this first top-dressing is usually a substantial one) and at that time would apply three pounds of arsenate of lead per 1,000 square feet of turf. With each subsequent top-dressing would give from one-half to one pound of lead arsenate per 1,000 square feet of turf, depending on whether the individual top-dressing is light or heavy.

B. R. L.

(\*Mr. Leach answered this query by mail in November.—Ed.)

## Question

Sir:

I have tried arsenate of lead for worms but must admit only sort of half heartedly. Now I wonder as to the effect of arsenate on dandelion and plantains. Can you tell me of any real definite results with these two pests? How often should a 5 pound to the thousand square feet application be made? Also, in order to get a more even distribution, would it be possible to apply with sprinkling-can or spray?

E. A. V.  
(New York).

## Answer

Sir:

Would advise that there is no definite rule for the timing of the 5 pound per thousand square feet applications of arsenate of lead to turf. Greenkeepers as a

rule watch the turf and as long as the worm, weed and grub control appears to be holding its own they sit tight. If earth-worm casts or weed growth begins to creep in they again apply a dose of lead arsenate of anywhere from 2 to 5 pounds per thousand square feet of turf as their own individual judgment dictates.

I do not advocate the application of arsenate of lead mixed with water. The best method is to mix with the top-dressing, or mix with moist sand and broadcast or better still mix with a sufficient quantity of dry milorganite so that the amount of arsenate of lead used clings to the particles of milorganite and none of the former is free to blow about in the wind.

The control of plantain and dandelion by the use of arsenate of lead is not clean cut. The use of iron sulfate as described by John MacGregor in an article in an issue of GOLFDOM last spring would no doubt be of value in controlling these weeds.

B. R. L.

## Question

Sir:

In your October copy of GOLFDOM, there is an article on Selective Control of Weeds.

We are greatly troubled in our fairways with crab grass which in some instances grows three feet in diameter and we are anxious to know the best method to be used in eradicating this weed.

October GOLFDOM stated that by putting on 250 lbs. of arsenate of lead successfully killed this sort of grass.

The grass I refer to is in splotches and does not cover the entire fairway and I have heard that you could inoculate the soil around each splotch with a large pump arrangement similar to a hypodermic.

I would appreciate any information that you might give me which would help me to eradicate this particular kind of grass.

M. S.

## Answer

(Georgia)

The weed you refer to as growing in dense patches or splotches is probably

chickweed or some very closely allied species. As a preliminary test would suggest that you mix a couple of pounds of arsenate of lead in a bucket of soil sand or milorganite and scatter some of this mixture over a dozen patches and note the results over a period of two weeks. This method has proved very efficacious in chickweed control here in the East. I do not think the hypodermic injection of these patches would result in obtaining the results you desire. Treatments of this sort have not proved successful in actual practice.

B. R. L.

### Question

Sir:

I note in October GOLFDOM an article with reference to the elimination of quack grass by the use of arsenate of lead. The author speaks of using 250 pounds per acre on fairways and I would be glad to know if this chemical can be applied in any other way than in top dressing.

F. P. C.  
(Iowa).

### Answer

Sir:

The treatment of fairways with arsenate of lead was discussed in one of my articles appearing in GOLFDOM during the past summer and would suggest that you review the article for specific directions for fairway treatments.

Of late I have been supervising some extensive fairway treatments of golf courses in the vicinity of Philadelphia and in these treatments we have used milorganite as a filler. On one course we mixed 150 pounds of arsenate of lead with 500 pounds of milorganite and applied the mixture to the fairway by means of a lime spreader. This method proved very satisfactory providing the spreading was done on days when the atmosphere was comparatively quiet. If the job has to be done in windy weather it would be better to use 750 pounds milorganite to 150 pounds of arsenate of lead.

Milorganite is a first class filler for arsenate of lead in that it is dry, fine in texture, consequently going through the spreader rapidly and also because the arsenate of lead clings to the particles of milorganite, thereby insuring an even spread and the minimum loss of the chemical due to blowing.

B. R. L.

### Lead Arsenate on Bermuda Grass Sir:

I have been reading Mr. Leach's articles in GOLFDOM on worm and grub eradication with much interest. I saw in September where W. T. B., and in October Mr. Leach, wanted to hear from the south, so I will endeavor to tell you my experience with arsenate of lead on Bermuda greens.

Our number six green has always been a poor green on account of worms and soil conditions. It is very strategically and beautifully located, but on poorly drained alkali soil.

Starting March 15th I cut the grass very close, then top-dressed very heavily (three yards) on 4,000 square feet with one part black soil, one part sand and two parts manure, which practically covered the grass, but in three or four days we had a good putting surface of nice tender grass. April 15th I repeated the process and it began to improve. May 20th I top-dressed with two yards. By July 1st I had a nice turf and about three worm casts per square inch. July 10th I top-dressed lightly (one yard) with one part manure and two parts sand, which is my regular top-dressing and put twenty pounds arsenate of lead and dragged in with the top-dressing and watered. Next morning I had lots of worm casts, the second morning not so many and the third morning still less. August 8th I repeated the July 10th program, which was 40 pounds arsenate of lead or 10 pounds per thousand square feet. I won't say number six is the best green we have, but it is so much better that 80 per cent of the players have commented on it.

I have also retarded the crab grass quite a bit. I am anxious to see what the crab grass does on that green next year as we have lots of it. I have also treated three more greens with five pounds arsenate per thousand square feet with very favorable results.

We also discovered grubs on two of our approaches had been working into the greens, in fact they had damaged the approaches considerably before we noticed them. I gave them a heavy dose of arsenate and stopped them.

I don't think the arsenate hurts the grass one bit but improves it in texture, putting surface and looks, by getting rid of the worms if nothing else, so as you can see I am pretty well sold on arsenate of lead for Bermuda grass. I would like to see more in all the golf magazines on Bermuda grass as I believe it requires somewhat different treatment from bent grass.

G. H. Conger,  
Greenkeeper, Dornick Hills Country Club.

Answer to R. C. (Ill.)

With regard to your letter in which you raise the question of the effect of lead

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arsenate on turf and mention the fact that certain greenkeepers believe that it is shortening and decreasing the root development would advise that these gentlemen have the wrong bull by the tail. As I have said before, lead arsenate is going to be the goat for all the ills and troubles that affect golf greens for some time to come. Whenever an arsenated green goes bad it will be the lead arsenate that caused the trouble. This is of course inevitable and time only will correct the general condition.

I have already had one or two complaints of this nature in this vicinity and have personally looked into one or two of the cases. Not long ago a club which had been using lead arsenate came to me with blood in its eye and claimed that the arsenate had ruined six of their greens. I was fearfully busy at the time but took a day off and went down to look at their grass. It sure looked rotten, I'll admit that much. It was yellow and sickly. I took out my trusty jack-knife and cut into the sod and lo and behold an inch and a half below the surface was as beautiful a layer of hard clay one inch thick as I have ever seen. In other words two or three years ago some jackass had gotten the idea in his bean that the greens were too soft and had top-dressed one whole summer with pure clay. When the organic matter burned out of this clay it formed a sort of hard pan and interfered with the drainage. This past summer we had an exceptionally heavy rainfall, these greens went soggy and these men looked around for a convenient goat and picked lead arsenate. And so it goes.

Not long ago I had luncheon and a very interesting hour's conversation with the golf architect. During the meal he put this question to me: "Why do so many greens go bad two or three years after they are built?" I judge from his question that in his experience, greens are going bad more or less all the time regardless of lead arsenate. I answered his question as follows:

"Let me see and inspect the golf green that has gone bad and in the majority of cases I can tell you what has caused it to go bad. Aside from disease and improper or too heavy fertilization there are two major causes for greens going bad. First, improper drainage, either surface or subterranean. Greens will go bad under these conditions and especially in wet seasons; second, top-dressing with the wrong kind of compost, one containing too much clay or too much sand. Top-dressing is an art, although many people consider it only as a tedious job.

We have turf here that has been arsenated for seven years and plenty of it that has been arsenated for three and four years. It is still going strong.

When lead arsenate loses its toxicity to grubs, worms and weeds it becomes *inert* just like so much sand or cinders and does not affect the grass one way or the other.

B. R. L.

### O. K. on These Bermuda Greens

I think our course right now affords the finest example of the use of arsenic of lead and its non-use that you can imagine. The greens are as near perfect as Bermuda greens can be, while the fairways, where arsenate of lead was not used, are in a sad state. Some of them look like they had been literally plowed up. (By June beetle, I presume.—B. R. L.)

W. G. J.  
(North Carolina.)

### Question

Sir:

Here, at southwest Florida, we have a new 18-hole golf course with carpet grass (seeded) fairways and Bermuda Grass (sprigged) greens. In about ten days we plan to top-dress heavily and sow Italian Rye and Red Top in our greens.

Last year the putting greens of the old nine-hole course were in bad shape. The grass (we kept Bermuda Grass putting surfaces throughout the winter) began to die out—in spots and in strips—we dug up parts of the affected areas, and searched thoroughly for grubs. Quite often we would find as many as three or four white grubs, very often none, in sods one foot square and six inches deep. Samples sent away to State Experimental Station were reported as infected with something "similar to brown patch" and copper lime dust was prescribed. This treatment gave a measure of control, but only for a few days at a time, and finally the copper poisoned the soil and then the winter season, for which the course is pointed, was over.

Now, about ten days ago what was probably the same trouble reoccurred. Some sand was applied without any appreciable effect, and then copper lime dust was applied, and when the writer arrived from his summer job three days ago the affected area looked healthy enough. The affected area was a band about four feet wide, stretching across the green. On this area, as well as on other putting surfaces, there are sandy piles this morning, of about a good tablespoon in quantity. These have the appearance of casts, although the soil is so sandy that there is little form to them. Also digging did not reveal any worms or crickets.

Under the circumstances we have just about made up our mind to apply arsenate of lead when the trouble reoccurs. Of course if we are guessing wrong we are giving the trouble a head start, and that is why we would like your opinion in the matter.

Does arsenate of lead have any virtue as



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a brown patch preventative or control? How will it affect the Italian Rye and Red Top putting greens? Would the lime of the copper lime dust have a harmful affect on Italian Rye and Red Top?

(P. S.—This summer, on the creeping bent greens that I installed in northern New York five years ago, I used arsenate of lead with perfect success in control of worms.) Sincerely,

T. H. P.  
 (Fla.)

**Answer**

Sir:

Your difficulty can probably be narrowed down to one of three things, viz:

1. If your turf dying out is due to white grubs (not June beetle grubs) the grass will be loose in the dead areas for the simple reason that grass injury and death by white grubs is caused by their eating and cutting the roots just below the surface. Pull on the grass in these dead spots. If it comes up readily and examination shows that the roots have been cut then your trouble is white grubs and I suggest you give the turf a treatment with arsenate of lead, five pounds per thousand square feet of surface.

2. From what you say toward the end of your second paragraph it may be June beetle. These grubs throw up casts as you describe, but you would not find the grubs by shallow digging because they spend the daytime in burrows a foot or more below the surface. They do not eat the grass roots but destroy the grass by their burrowing and tunneling. These can also be cleaned up by the use of arsenate of lead.

3. The trouble may be caused by fungus in which event I would apply consistently any of the standard mercury brown patch preventatives. I would not use the copper lime dust. It has, in the long run, a decidedly unsatisfactory action on soil resulting in toxicity to the grass.

Arsenate of lead has no virtue as a brown patch control or preventative. I have successfully grown Italian rye and red top in arsenated soil.

B. R. L.

AS a means of encouraging members to bring their whole families to the club for evening meals, one manager hit on the subtle scheme of offering a special 'surprise' dessert for the children. This dish consisted of a scoop of ice-cream, a small slice of cake, or cookies, and, at one side, wrapped in gayly colored paper, some small toy or favor costing not over a penny or so, but of tremendous appeal to the youngsters.

These favors were mainly purchased from the local dime store and consisted of inch-long china dolls, lead-soldiers, and the like.