

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