

Green Plots Are Questioned

By B. R. LEACH

I MAINTAIN that 94.3% of all research and technical men are *decompos mentis*, same being a profane Latin expression used by the Roman gladiators and meaning that numerous bats are present in the old belfry. If some means could be found so that this huge bulk of gentry could be sewn up in a gunny-sack and dropped overboard in deep water the world would sweeten up considerable and we would all get more sleep on hot nights.

Now please bear in mind that I haven't said that *all* research men are cuckoo. I gave the official figure as 94.3%.

In making the above disparaging remarks with regard to the bulk of research men I am reminded of the time (I was about ten years old) when I stuck a broom stick through the bunghole of my old man's barrel of cider and stirred up the contents with a considerable thoroughness. A few minutes later, when my noble sire drew off a mug full and got a snoot full of mud and dregs, he figured I had something to do with it, whaled the tar out of me and told me to *never rile and stir up things that were resting quiet and peaceful*.

Unfortunately the average research man has apparently never learned this important lesson. In the greenkeeping business there are just enough of these technical investigators stirring up the mud so that everybody in the industry, including greenkeepers, dealers, and manufacturers has at least one cinder in his eye. As soon as he works it out another investigator socks his other eye with a handful of mud. Ultimately everybody has an ingrowing grouch and sweet dispositions are at a premium.

Let us consider for instance the December, 1929, number of the Bulletin of the United States Golf Association Green Section. Therein we find an article entitled, "Summary of Reports from Demonstration Turf Gardens for 1929 Season," on pages 210 to 221 inclusive. This article is mighty interesting reading and has intrigued me to such an extent that I have spent considerable time in analyzing it carefully. Consider the following table for instance, same having been clipped out of the article:

PUTTING GREEN GRASS RATINGS FROM 12 DEMONSTRATION TURF GARDENS DURING 1929

	May and June		July and August		September and October		Entire season (totals)	
	Excellent Good	Fair Poor	Excellent Good	Fair Poor	Excellent Good	Fair Poor	Excellent Good	Fair Poor
Colonial bent:								
Rhode Island grown	9	3	9	3	8	4	26	10
Western grown	8	4	7	5	7	5	22	14
New Zealand grown.....	7	4	7	4	6	5	20	13
Creeping bent:								
Metropolitan (stolons)	11	1	11	1	11	1	33	3
Washington (stolons)	10	2	11	1	10	2	31	5
Seaside (seed)	9	3	11	1	9	3	29	7
Columbia (stolons)	5	7	7	5	7	5	19	17
Virginia (stolons)	6	6	5	7	5	7	16	20
Velvet bent:								
No. 14276 (stolons)	1	10	8	3	8	3	17	16
Highland (stolons)	2	10	4	8	8	4	14	22
Canadian (seed)	5	5	5	5	10	10
Mixed bent (German)	9	3	9	3	9	3	27	9
Fescue:								
Chewings'	9	3	6	6	6	6	21	15
Red	3	9	0	12	1	11	4	32
Annual bluegrass	7	5	4	8	3	9	14	22

This is a composite report of the results obtained in twelve demonstration turf gardens scattered over the country, in treating 10 x 10 ft. plats of turf with various fertilizers as itemized. It will be noticed by a study of the article that the complete fertilizers, that is mixtures containing nitrogen, phosphorus and potash showed up the best while the plat given sulphate of ammonia alone ran a close third. The remaining plots, relatively speaking, were not so hot.

Criticizes Basis of Experiments

Casually examined, this series of experiments and the year's results obtained therefrom would appear to be of great value in shaping the fertilizing program of the greenkeeping business but a closer examination of these experiments would indicate that the results obtained are not fairly comparable, that they are almost as old as Methuselah's nanny goat and that a woeful lack of fundamental planning is evident on the part of those responsible for this experimental work.

Analyzing the series of plots we find that the first two plots received nitrogen, phosphorus and potash.

The next plot received only nitrogen.

The fourth plot received nitrogen and phosphorus.

There is no plot which received nitrogen and potash.

Consequently, if the greenkeeper acts on the basis of this series of experiments he may be throwing some of the club's jack down a rat-hole, for the simple reason that you cannot say, from these tests, whether it is the phosphate or the potash that is supplementing the nitrogen in the complete fertilizer plats. In other words this series of plats should most certainly have included a plot treated with sulphate of ammonia and muriate of potash but no phos-

phate. As it now stands you have neither fish, flesh, fowl or good red herring.

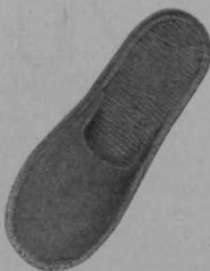
Danger of Wrong Conclusions

The plot receiving sulphate of ammonia alone proved almost as good as the plots receiving the complete fertilizer whereas the plot receiving sulphate of ammonia and lime was not so hot. This is, in all probability, due to the fact that the ammonia is absorbed by the grass while the sulphate changes to sulfuric acid which acts on the insoluble phosphates and potash salts in the soil rendering them available to the grass and thereby indirectly giving the same general reaction as a complete fertilizer. When sulphate of ammonia is added to soil well supplied with lime the latter neutralizes the sulfuric acid and there is little or no liberation of soluble phosphates and potash. These points are certainly not clearly elaborated in the discussion of the experiments and many a greenkeeper may be misled by failure to understand the underlying causes and reactions.

In planning the arrangement and fertilizer applications to be made to the various plots it looks as though the boys got sort of hard up for something to put on the last six or seven plots in the series and sort of filled them up with anything they could find kicking around loose. One can almost visualize the chairman of the demonstration-plot planning committee lighting the dead butt of his cigar for the sixteenth time and delivering the following outburst to the assembled and brain-fagged committee:

"Come on now, you bozos," howls the chairman, "we gotta get these damned plots fixed up before the hot weather breaks. Crash through with a few ideas that are reasonably free from moss. We can't go wrong on a complete fertilizer and sulphate

TREKS
THE WATERPROOF
PAPER SLIPPER



WRITE FOR
SAMPLES
AND PRICES

WEAR TREKS
AND AVOID UN-
PLEASANT FOOT
DISORDERS

CHARLES F. HUBBS & CO.
389 Lafayette St. New York City

High Spots in Profits with RITE-HITE TEES

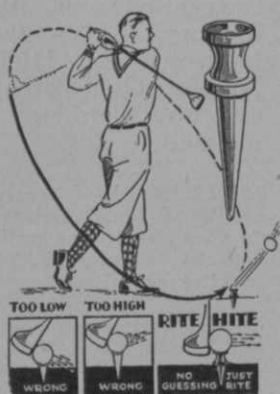
Low in Cost
High in Quality
Right in Principle
and in constant demand by
Golfers everywhere

The Right Combination for
Quick Sales and Sure
Profits

Set that Display Carton
of Rite-Hite Tees Right
up in front and watch
them buy

Get that extra Carton of
Rite-Hite Tees—Write for our
special offer

—
SWING
RITE
WITH
RITE-
HITE
—



THE GENERAL TIMBER
AND LUMBER CO.

7102 Woodland Ave., Cleveland

the same rates and in the same manner just before sowing the seed. In spite of this standard application of chemical there was apparently a difference in control of earthworms. On several gardens the number of earthworms on the poisoned plots was much smaller than in the check plots, but on other gardens the worms were equally numerous in both. This difference is probably due to a difference in soil, as has been indicated in previous tests. However, observations must be continued several more years before the full value of arsenate of lead as a control for earthworms is determined."

I have sat back, gritted my teeth and stomached this sort of information regarding lead arsenate and earthworm control for the past several years but I consider it is about time that the Green Section staff had a few pertinent points anent this chemical publicly drawn to their attention so that they may either test its merits in a scientific and *fair* way or else let it alone.

When to Apply

In the first place I have repeatedly stated that there is no object in applying the lead arsenate to the soil before seeding unless grubs are present. It is much better to apply the chemical as a top-dressing after the new seeding is well established.

Secondly you cannot secure or demonstrate earthworm control in a 10 ft. by 10 ft. plot treated with lead arsenate when this poisoned plot is surrounded by unpoisoned turf in which earthworms are present, for the simple reason that the earthworms in the surrounding unpoisoned area will be constantly creeping into the poisoned 10 by 10 plot and throwing up casts until they get a shot of the arsenate and die. Since the worms are constantly creeping in the casts will always be present thereby giving the apparent result of failure to control the worms. In the same way you cannot keep a green free of casts unless you treat the turf on the outside of the green proper for a distance of at least 15 ft., so that the earthworms in creeping toward the green get a shot of the arsenate and succumb before they ever reach the green proper.

JACK PATTERSON, pro-greenkeeper at Midlothian C. C., recommends the application of arsenate of lead in a soap-water solution for application to bushes. This makes the arsenate stick to the bushes and protect them against beetles and other insects.