

Sulfur.—There are specific micro-organisms in the soil capable of converting sulfur into sulfuric acid. The presence of air to supply oxygen and moisture are essential. Sulfur in limited amounts, mixed with topdressing, should promote soil acidity, and its use may prove valuable in regions where conditions make it difficult to create acidity by the sole use of acid-producing fertilizers.

In the next article the possibilities of introducing lime and other basic substances in sand, and in other materials, in quantities sufficient to overcome the acid-producing powers of the fertilizers, will be discussed, and the lime content of a few typical sands from some localities will be included.

The Service Rendered by the United States Golf Association Green Section to the Golfers of America *

By William C. McKnight, President, Baltusrol Golf Club, Short Hills, N. J.

When I was asked to make a few remarks to you today and was told of the topic it created great surprise in me. I could not conceive why, from my own standpoint, and holding the opinion that I do with respect to the work of the Green Section, there could be the slightest doubt in the mind of anybody with respect to that Section and the splendid work that has been done by it. But it is often well to look back over work in a retrospective attitude and to take stock.

This is an age of experts and an age of very intensive scientific searching for facts. You all have in mind notable instances of that, but I may remind you of the research laboratory of the General Motors Company. It is very extensive. It is doing an enormous work. It is probably more directly responsible for the vast improvements in structure and operation of automotive engines and automobiles than any work that is going on in the country today. The research laboratory of the General Electric Company is vast, and its work is directly responsible for most of the modern improvements in electric devices. (The most notable instance, I suppose, with which you are all familiar is the development of the metal filament lamps which were perfected in the research laboratory of the General Electric Company.) The Bureau of Standards at Washington is doing a most gratifying work, the benefits of which are widespread throughout the entire country. I have no doubt that it was due to knowledge of such facts that Mr. Whitney and his associates in the management of the United States Golf Association in 1921 conceived and organized the Green Section. In his annual address in 1922, I learn from the reports that he stated to the meeting with respect to the Green Section: "Its object is to form a central distributing station in order to gather and send out to the golf clubs in the United States information of value relative to the upkeep and preservation of the finer grasses; also to advise the green committees of the golf clubs in this country on all matters that will be of benefit to them and thereby save a great deal of the money that has hitherto been wasted through lack of proper information."

That was very prophetic of what has happened. It was their idea to establish for golf a great research laboratory and to dissemi-

*Address given at annual meeting of the United States Golf Association Green Section at New York City, January 6, 1928.

nate to all of the golf clubs of the country all the knowledge gained by the workers in the Green Section.

As I look upon the work of the Green Section, it seems to me that there are three notable successes. Of course, the first is the research laboratory, as I may call it, in Washington, where this devoted band of men are working all together, as Mr. Westover has told us, carrying on all these experiments and searching out scientific facts for our benefit.

The second is THE BULLETIN, which disseminates not only the knowledge gained there, but the knowledge and experience which we have gained from our own direct contact with the work.

The third, to my mind, is the exposure of a great many false ideas that we all had in the early days when there was no source of information with respect to greenkeeping. These are really notable successes.

Just a word as to some personal experiences. When I had the work of the green committee wished on me I suppose I had about as much knowledge of greenkeeping as a new-born babe, which is nil. I was somewhat flabbergasted, and I sought for information. The first thing I found was that very good book of Dr. Piper and Dr. Oakley, "Turf for Golf Courses." I purchased two of those books, one of which I gave to our professional, and one of which I studied. From that work I acquired a good deal of information. Then, fortunately, came THE BULLETIN, which was taken in triplicate by our club. It has been and still constitutes our bible. Last year, when I had occasion to advise a golf club with respect to some troubles they were having, I thought I would get hold of the greenkeeper and have a talk with him. I found that he was an excellent man in many ways, but he was one of the old-fashioned fellows without any very great knowledge about grasses or the diseases of grasses. I turned to him and said, "I suppose you read THE BULLETIN." He said, "Ah! that is bunk; that is all theory." Fortunately, that attitude has very largely gone by. I think there is some of it yet, but a man who holds that view today soon passes out; and he passed out.

Another experience: George Low and I were having an accumulation of troubles four or five years ago at Baltusrol. We had brown-patch very badly in our greens, with weeds and grubs in our fairways, and if anything can break the heart of a greenkeeper it is to get all of these things at once. We were both much discouraged and we talked about various things. George said to me, "Mr. McKnight, this greenkeeper's work is a terrible job. You not only have to have knowledge of grasses and all fertilizers, but you have got to be a mechanical engineer and a chemist." That lament, I think, was quite prevalent for a while.

One other experience which we have had at Baltusrol concerns velvet bent, and we look upon it as rather an interesting experiment. Three or four years ago we thought it might be possible to propagate velvet bent vegetatively. So far as we knew it had not been done and we had no facts to go upon, but we tried it. We were fortunate in having a good deal of velvet bent through our fairways. Major Jones gathered up all he could get, which we planted in the nurseries. The next year we had very gratifying success with it. It spread quite prolifically, and we now have two greens in our upper course which have been established with velvet bent from the nurseries and which

are very good at the present time. The grass is very promising, certainly in the northern belt, where velvet bent thrives. I personally like velvet bent very much better than creeping bent. The color is more pleasing and I think the texture is very much better for putting surface.

Here is a practical illustration of the worth of THE BULLETIN to all of us. Major Jones wrote an article, which was published in the August number, giving his experience with the propagation of velvet bent stolons; in the September number a man from Massachusetts wrote that he had tried the same experiment with gratifying success; and in the October number there was another instance of the same thing. There is your value of THE BULLETIN in disseminating knowledge. There were three men, working independently without any knowledge of each other's work, all to the same purpose, and through the dissemination of such knowledge all of us are benefited. The growth of this Section is exceedingly gratifying.

I am informed that in 1921 there were 287 members of the Green Section. Today there are about 1,000. This idea has spread to Canada and England. So, gentlemen, to Mr. Whitney and his associates whose wisdom and vision conceived and organized this section; to Dr. Piper and Dr. Oakley, whose driving force and initiative and work brought this child up to lusty manhood; and to this band of devoted workers, of whom Mr. Westover is one in Washington, who are carrying on this work, every golf club in this country, every golfer in this country, and every green chairman and all greenkeepers owe a profound debt of gratitude.

How the Green Section Can be Helped by Clubs, Green Committee Chairman and Greenkeepers*

By Sherrill Sherman, Yahnundasis Golf Club, Utica, N. Y.

I just want to break in a little on my prepared talk to bear testimony, in addition to Mr. McKnight's, to the success we have had at Utica in the use of velvet bent on our greens from the vegetative method. In 1922 we did as Mr. McKnight did—we went out in the fairgreen and picked the best looking pieces that we could find. Sometimes the men were not as careful as they might have been, with the result that we had some splendid patches of fescue which did not do much spreading. The velvet bent spread and produced beautiful turf, and I quite agree with Mr. McKnight that THE BULLETIN disseminated that knowledge following the article of Mr. Jones. That is why I am taking this opportunity to bear the testimony of Utica that it is possible to produce turf from velvet bent by the vegetative method.

In thinking over the subjects that I might be able to discuss in an intelligible manner, it occurred to me that the picture has shown too much of the help that the Green Section is giving to all of us and that we had lost sight somewhat of the importance of the assistance that we can give the Green Section. After hearing the splendid address showing clearly the completeness of the service rendered by the Green Section, I am more than pleased that my choice of a subject

*Address given at annual meeting of the United States Golf Association Green Section at New York City, January 6, 1928.