Have We Forgotten All That We Have Learned?

James Moore
Director of Construction Education
United States Golf Association
Waco, Texas

Never in the history of greenkeeping has technology played a large role than it does on today's golf courses. Computerized irrigation, complex maintenance equipment, GPS (Global Positioning System) mapping, and instant communications in numerous forms are just a few of the areas in which high technology and science have revolutionized golf course maintenance.

The Golf Course Superintendent has not been left behind. Today's superintendents are far better educated (at least in terms of formal education) than their predecessors.

Perhaps not area has been more strongly influenced by technology than our research community. Today's scientists have at their disposal tools and techniques that would certainly appear magical to the early researchers. Today's scientists use these tools and techniques to develop even newer technologies that are offered to the industry in a continuous stream of data and publications.

With all this scientifically-based information at our disposal, today's golf course should be managed with the ultimate efficiency and expertise. After all, science has improved every aspect of maintenance. We have better irrigation, construction techniques, pesticides, equipment, grasses, fertilizers, and better-educated superintendents. We are also spending far more money on the care of our courses than ever before.

Things should be just about perfect - right? Not so. We continue to deal with many of the same problems our predecessors did. *Poa annua*, brown patch, *Pythium*, and leaf spot are all going strong. Construction mistakes are as common today as in the 20's. The superintendent's ability to deal with golfers has improved somewhat, but there is now so much interaction (as compared with the virtual isolation the greenkeepers enjoyed), the potential for conflict is much greater. All our technology has come at a tremendous price. Golf is less affordable today that at any time in our history - although this lack of affordability is at least temporarily masked by our robust economy. And unfortunately, our scientifically trained, well-educated superintendents are as ready to accept snake oils and miracle cures as their predecessors. Our steps forward has been mixed with periodic steps the opposite direction.

With this in mind it is a good idea to examine some of the wisdom of those who preceded us in our efforts to learn. Consider the following collection of quotations from scientists and intellectuals of the past, as well as some of the writings selected from the very early days of the *Green Section Record,* then known as the *Bulletin.* Some of these speak for themselves, while others have been supplemented with few personal observations regarding their pertinence to our industry.

A wise man may be duped as well as a fool; but the fool publishes the triumph of the deceiver. Charles Caleb Colton, *Lacon* (1825)

> This brings to my mind the pages of many of our trade journals that include a picture of a superintendent giving credit for the success of his course to a product with no scientific basis or true research. Testimonials have replaced science. Marketing has replaced research.

Science is always simple and always profound. It is only the half-truths that are dangerous. George Bernard Shaw, *The Doctor's Dilemma* (1913).

> Half-truths are the tricks of the trade for the salesman promoting a new product. The trick is to mix a few scientific phrases with wholesome, trustworthy phrases to lend credence to the pitch. Terms like bio-diversity, sodium absorption ration, residual carbonates, and capillary porosity should be liberally interspersed with words like organic, natural, pure, activated, environmental, and stewardship. The effective marketing strategy will also include graphs that are skewed in favor of the product, omission of any aspect of the test results that are unfavorable to the product, and a total disregard for statistical significance of the data. These techniques allow the marketer

and salesman to avoid the direct lie by relying instead on the half-truth.

Science is nothing but trained and organized common sense. Thomas Henry Huxley, "The Method of Zadig" (1878).

> Most of today's superintendents are well -educated. Even those that have not enjoyed the treasure of a formal education have tremendous educational resources at their disposal. Unfortunately, many of us have become intellectually lazy when it comes to understanding the scientific basis (or lack of) for the products we use. One of the most disturbing comments made to often by today's superintendents go something like this. "That guy really knows what he is talking about. He lost me in the first five minutes." This comment is made most often in the arenas of soil and water quality management, as well as golf course construction issues. It is worth remembering that someone "who really knows what they are talking about", can explain the subject in terms others can understand as well. As Mr. Huxley says, the keys are "trained and organized common sense".

The whole of science is nothing more than a refinement of everyday thinking. Einstein, *Out of My Later years* (1950)

This speaks for itself - or ought to anyway.

Science is built of facts the way a house is built of bricks; but an accumulation of facts is no more science than a pile of bricks is a house. Henri Poincare, *La Science et l'hypothese* (1902).

> Our technology and science are tools to help us manage the "big picture". Poincare's house of bricks is, in our case, analogous to Integrated Turfgrass Management.

We can also learn from the writings of those who actually worked in our industry years ago. These were collected from the *Bulletin* of the USGA in the 20's and 30's.

Platitudes on Golf Course Architecture
CAPT. C. H. ALISON
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Greens should usually either have a tendency to slope upwards from front to back, or should have a plane base. As regards undulations, (a) It should be possible to cut holes over 60 per cent of the surface of a green: (b) As a rule, it should not be necessary for the player to aim outside the circumference of the hole when trying to hole out at a distance of 2 feet 6 inches; (c) The ball should not gain momentum after leaving the head of the club, unless there is ample space in which to lose the additional momentum before reaching the hole.

When in doubt, make a green flatter rather than more undulating.

Dear Bill Letter I
Dear Bill:
Richland Center, New York,
April 2, 1921

So you're going to build a golf course and are so befuddled by all the experts you want my advice. I'm sorry for you, old man, because I'm afraid you won't have the courage to reason your own way out and you'll be like the vacillating old party who insisted on having but one bath room in his house so his indecision wouldn't trouble him in an emergency - if he had more than one he was afraid he'd be unable to decide which was nearest. You'll be apt to shut your eyes and draw cuts to decide which expert is expert.

Don't you know that a self-styled expert is commonly an ordinary guy away from home?

Your club is just starting and you want to get results with the least amount of time and money. You don't want to wish an assessment on your members before they start playing golf. They'll get an assessment soon enough - just as soon as they build a club house twice as big as there is any need for and fix it up regardless and sell $3.00 worth of food for $2.00. It's coming, but let someone else hand it to the members. It's up to you to give them a dollar's worth of golf course for every dollar you spend.

Now forget the methods, specifications and systems and go to see some of the best courses in the country and find out what system was used. You'll find that plain common sense and good drainage has produced the kind of results you want. If you are short on common sense, add a little more drainage.

William, some smooth chap with a red necktie will sell you a half Interest in the Post Office some day if you fall for this expert system stuff.
I know you'll come back at me with "but how can I do the work?"
There is nothing to it, William. Find some first class green keeper who can supervise the work and interpret your golf architects plans and costs.
Get some contractor with the experience in handling labor and that's all.
When you get through you'll have a regular golf course and at least' $25,000 to $30,000 to hand back to your treasurer to spend on a bigger house than is needed.

Now Bill-listen to me-forget all the stuff you've heard and go at this just as if it was your own business and figure it out for yourself. You've been able so far to support your family and an automobile and keep three jumps ahead of the sheriff and if you don't let yourself get befuddled you can do the job with credit, to yourself and your club.

There isn't a man on a Green Committee anywhere who won't let his customers wait while he gives you the benefit, of his experiences and all you have to do is to use a reasonable amount of horse sense.

It is wonderful what can be done on a golf course with horse sense, horse manure and drainage.

I don't give a whoop whether you take my advice or not. I am selling hardware for a living, and I'm no expert even when I'm away from home, but I do like to see a man stand on his own feet and figure things out for himself.

Affordable Golf
Golf *for* All

Ex-President Taft in a recent newspaper article (copyrighted by the Public Ledger Co.) says : "Golf has been said to be the game of the rich. This is not true in Scotland, where there are many public golf courses and where working men can play in the long twilights of the summer, morning and evening. There is no reason why it should not be a game for the wage earners and those of little means in this country ; and it is most gratifying, to note that in many of the large cities free golf courses are being laid out and offered to the public."

September 16, 1921
Green- Keeping Problems of Course
Planning

There is a phase of golf course planning which is so frequently over-looked that it may not be inappropriate to make it the subject of a brief article. We refer to the imperative necessity of keeping maintenance problems in mind in connection with the layout or plan of a course.

Too frequently we find a course on which a practically impossible problem in green-keeping is presented at some hole or green, which might have been obviated by giving more consideration to the

subject when the course was laid out. What to do when such mistakes are made is another decision; and it is believed, in most cases, that the cheapest and best way out will be to abandon the thing that is impracticable from a green-keeping point and start over, having the architect and green-keeper work out some compromise that will fairly well satisfy both. For instance, in the case of the course first mentioned, it would be clearly cheaper to abandon the course, call in the architect, and turn it around and place it where it can be maintained at a reasonable expense. It takes more courage to correct a mistake than to suffer with it for years; hut nine times out of ten, immediate and courageous correction is the cheapest means.

Quacks
Nov. 15, 1921

Every profession has its quacks. Medical practice was heavily cursed with this species of the genus Homo until they were legislated out of existence. Theological quacks and quack lawyers are kept within reasonable limits by ordination ceremonies in the one case and bar examinations in the other. One should distinguish between quackery and incompetence. A man may be merely foolish but wholly honest. The term quack implies fraud as well as lack of knowledge. Quacks are not wholly responsible for their existence. But for that credulous streak in human nature, that apparent desire to be humbugged, that proneness to be a sucker, quacks would cease to be.

Greenkeeping has developed its crop of quacks. They are flourishing like the proverbial green bay-tree. It would be a waste of breath to say harsh things either to or about quacks. As long as quackery is profitable there will be quacks. In some respects the quacks are more estimable than the gullible green committees who employ them. The term "green" in connection with a golf course committee refers to the color of the grass they are supposed to promote, not to the unsophisticated nature of its members.

This, then, is the remedy: Leave quacks and their methods entirely alone and no harm will come from them. Incidentally some golf courses would be considerably better off financially by leaving quacks alone.

There should be no great difficulty in recognizing a quack, whether he is doctoring humans, other animals, or turf. They all carry practically the same earmarks. Each one claims to have a remedy, which he has discovered himself and about which no one else has any knowledge. No better evidence should be asked that a man is a quack than such a claim. There is much yet to be learned in regard to growing plants, but no one has a secret key which unlocks Nature's treasures. Another distinguishing mark of a quack is the all-embracing character of his remedy. Let the trouble be brown-patch, grubs, weeds, or what-not, they all respond with equal readiness to this secret cure-all. One treatment is usually the quack's whole stock of remedies. Of course the quack decries all other methods of treatment but his own, no matter how they were obtained or how efficacious when applied.

If the quack does not convict himself of quackery (and few will fail to do so if given a fair chance), his past record should be looked into carefully and his accomplishments noted. It seems incredible that a green committee should employ a man at a high fee to give expert advice on the care of greens without knowing something about him more than what he has told about himself and the extravagant claims he has made for his methods; yet such bargains are being made continually. All of which goes to prove that Barnum was right.