

The Art Of Yesterday – The Science Of Today

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It is one of the fascinating paradoxes of our profession. Turfgrass management - for golf - is indeed both an art and a science. It was always meant to be so.

The keeper-of-the-green profession has a heritage going back 400, perhaps 500 years. How much it has changed! Science has changed it. And yet, paradoxically, how little it has changed. It is still basically an art form. The thoughts that follow are mostly concerned with science, but my real message is about art.

Science and the Earthworm

Back in the 1930's, Dr. John Montieth, then Director of the Green Section, recalled golfers of that day continuously complained about earthworm casts on the surface of greens. Invariably, they told him, the casts would deflect their putts away from the hole. Now, from a scientific and statistical point of view, he felt surely a ball would occasionally be deflected into the hole. Over the years, he never recalled hearing one complaint about this occurrence!

Science has long ago solved the earthworm problem - and many more. Weed control, disease devastation, better machinery, better fertilizers - we are all better off because of turfgrass science.

Science and the Stimpmeter

"Science" has even developed a little stick we now roll a ball down to test the speed of the green. The Stimpmeter is designed to establish speed criteria - not to make every green lightning fast, virtually impossible to putt on to maintain a healthy turf. Man did that! Those who condemn the Stimpmeter overlook the fact that there is an art in using it. The speed of any particular set of greens must surely be at that level best suited for the membership and the conditions that prevail.

Science and Soils

Science has given us specifications for putting green construction. The Green Section Specifications, written in the early 1960's, are officially entitled, "A Method of Putting Green Construction." No one in a responsible position with the Green Section ever said or claimed they would produce the perfect foolproof green. Someone else said that. But science produced the data. It is up to us to execute, to use the data, to make it work. An artist does that.

Science and Research

Now a new era of research, to be sponsored by the USGA Green Section, lies just ahead. Conceived by Al Radko, a long-range, multi-million-dollar research project on minimal maintenance turfgrasses will soon be

underway. The objective is to develop turfgrasses that will have greater winter hardiness, wear resistance, drought and temperature tolerance, disease and insect resistance, salt tolerance, require lower fertility levels, and still produce superior playing qualities. Grass plant selections in Asia and South Africa are now underway by U.S. scientists, sponsored by the Green Section. Once the work is complete, an intensive plant breeding program will begin. Genetic selections will be made by advanced computer analysis that cuts years off of previous plant breeding techniques. The full study will take at least 10 years. It will require an estimated outlay of \$5 million. It is an exciting undertaking, the largest of its kind in history! It will need your help and your support.

Science and Computers

Computers have been mentioned and they are indeed a new "science". They are going to affect our professional and private lives immeasurably in the immediate future. Dr. V.B. Youngner, University of California, Riverside, recently said, "Computers are an unbelievably fast and unbelievably accurate machine. They are also incredibly dumb. Man, on the other hand, is an extremely slow and inaccurate machine. However, he is brilliant! Bring these three forces together, i.e., speed, accuracy and brilliance, and there is no limit to what may be accomplished."

Notice, if you will, it is man's brilliance, his art that makes the difference. He makes the computer work.

And so it is in turfgrass management, in cooking, in driving an automobile, in just about any pursuit in life. You can have all the science in the world, but if you don't have that certain ability, that perception, that art, to bring it all together in the right manner:

If you don't have that "touch,"
You don't have very much!

Science and Irrigation

Science has also given us improved methods of irrigation. Now here is a topic we can all relate to as a science and an art. Who among us will disagree that automatic irrigation is not AUTOMATIC? Any type of irrigation is, at best, an inexact science. There are so many variables: wind, cloud cover, temperature, soil types, humidity, cutting height, type of grass, shade factors, etc. The more variables one must deal with, the greater the "art" becomes. Good irrigation is indeed an art.

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has been going on since golf has been played in this country, and it will continue, with or without the Stimp-meter. However, rather than compare putting green speeds, perhaps the comparison should be in dollars budgeted for putting greens, water, pesticides, and labor. Perhaps a mathematician could develop a formula to compare putting green speed and budget and also add in the weather for good measure. It is the grand total of innumerable agronomic practices that equals good putting qualities. Don't be blinded by speed alone.

THE STIMPMETER is a tool, plain and simple. It was invented in the 1930s by Edward S. Stimpson and refined by the USGA Green Section to give the golf course superintendent a way to measure the consistency in putting greens on his course. By using the tool on a regular basis, great inequities in putting green speeds over the course can be detected. If great disparity exists, then maintenance practices can be adjusted to even out the variations.

Many superintendents have found the Stimpmeter to be a valuable tool and have made it work for them to make their courses even better. If you are one of those who consider the Stimpmeter an enemy, I would challenge

you to know your enemy. Learn about the Stimpmeter. Educate your membership about its uses and how it works. Make it a tool you can use. Al Radko, former National Director of the Green Section, has suggested the following four-step program for use of the Stimpmeter:

Step 1. Following the steps recommended in the Stimpmeter Instruction Booklet, measure all greens thoroughly and record the average speed of each green. By thorough measurement it is meant that all areas of each putting green be averaged and recorded to determine the overall average of every green, including the practice green. At minimum, three separate areas of each green should be tested and averaged, except where contours or slopes limit the number of measurements per green.

Step 2. If the average speed of any green varies widely from the average speed desired, determine the cause and correct this deficiency to bring the reading up to the desired average speed. This may be done by additional mowing at first and if this does not correct the deficiency, by altering other management practices on deficient greens.

Step 3. Once the average speed is attained and the average speeds are

consistent (within plus or minus 6 inches among all greens), then it will only be necessary to test three or four greens daily to insure that the greens remain consistent throughout. The number tested daily will depend on the number of mowers used — i.e., if three different mowers are used, then it will be necessary to test one green mowed by each, etc. If triplex mowers are used, then four greens at minimum should be tested daily (two on the front side and two on the back side).

Step 4. Once every month, re-test all greens to determine whether the average speed continues to be uniformly consistent.

Variations in speed can do more to negate a player's skill than perhaps any other factor on the golf course. Consistency is the key word — not speed. Putting greens kept at speeds over 8'6" as a daily average will need extra labor and manpower because of additional maintenance practices required. Under extreme weather conditions, there is also a much greater potential for turf-grass damage when putting green speeds are maintained above the fast range for regular membership play. As with any other tool, I would urge you to use the Stimpmeter to your professional advantage.

Science and Us

Perhaps one of the greatest gospels you and I can preach today in turfgrass management is that "green does not necessarily equal good." This story should be told over and over again, especially to American golfers.

Now, I have heard the quick voices of dissent among us regarding this philosophy. There are always quick voices of dissent. But before we agree to argue about it, let's first be sure we understand what is being said. No one has said, "Green golf courses are bad!" That's foolishness. But the demand by some for a green, green, green golf course, overly watered, overly fertilized, not properly mowed for good playing conditions (but mowed instead for a good green appearance) does NOT make it a good golf course for golf.

Our concern, our job today is much the same as it was for the "keeper of the green" 500 years ago. It is to provide the best possible playing surfaces for the game of golf, not necessarily the greenest ones.

Science will help us immeasurably in our work. But it takes more than science. It takes that special, magical ingredient known as YOU. It is you who make it all come together. You make it happen. You are the artist. Please don't ever forget that!

World's Longest Golf Hole? . . .

Two top Australian golfers, **Billy Dunk** and **Ted Ball**, will tee off next April on a one-hole golf match—the hole is 1,597,550 yards long and par has been set at 7,173. They'll start at the Ceduna Golf Club in South Australia and hope to hole out at the Kalgoorlie Golf Club's 18th green in Western Australia three or four weeks later. They'll play across Australia's harshest terrain on the Nullarbor Plain and down the Eyre Highway, always being careful not to hook into the shark-infested waters of the Great Australian Bight. The two pros will be riding special three-wheel motorcycles. Accompanying them, will be a mechanic, a doctor, an army logistics expert, Ball's wife, **Margaret**, and a Guinness Book of World Records official. The whole thing is an attempt to set a record that will go into the Guinness Book of World Records as the world's longest golf hole.

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