

Sage Advice From A “Young” Pup

All that glitters is not gold, and all that is new is not necessarily better.

by WILLIAM H. BENGUEYFIELD

I’VE BEEN a very fortunate pup! Since 1948, I’ve had the great privilege of being a part of the turfgrass management scene associated with golf. When Larry Gilhuly invited me to participate in the Green Section’s annual education conference, I decided to catch up on some homework. After all, I’ve been in “retirement” since 1990 and not exactly on the cutting edge of research. Surely, I thought, science and technology have passed me by.

Nevertheless, I haven’t exactly been dead these past seven years. Consulting in Spain at Valderrama Golf Club, where the Ryder Cup will be played this September, has been a rewarding challenge. The *Green Section Record* and *Golf Course Management* magazines are still the best in the business. I’ve kept up with the pesticide advisor and applicator exams and attended the GCSAA Conferences.

Overall, the basic precepts of good turfgrass management are the same; they haven’t changed one bit! In fact, I doubt they will ever change. Harry Truman once said, “The only thing new in the world is the history you haven’t learned.” I like that. Another quote I like is from Ogden Nash. He said, “Progress might have been all right once — but it’s gone too far!”

Thus, if I may, I’d like to remind you of some simple “facts” and “truisms” of yesteryears. I like to think of them as Magical Facts that worked then, have largely been forgotten or pushed out of the way by *progress*, but will still work for you today!

Fact No. 1

You have heard it said and it’s true: We live in the high-tech age! But I like what the Green Section’s Jim Moore said about this in his Turf Tip a few years ago. He titled the article “Hi-Tech Can’t Replace Common Sense!” Frankly, I wish we lived in an age having more common sense — but that may be expecting too much. *Good common sense is one of the most*



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important keys to good turfgrass management!

Our schools and universities are turning out a lot of high-tech graduates, but somehow they’ve missed courses in Common Sense, Logic, and Problem Solving. Here is a beautiful example of it for you — automatic irrigation systems.

Mike Huck, another great guy with the Green Section, recently wrote an article on high-tech irrigation systems. You should read it. He truthfully points out that we now have fantastic capabilities: elaborate computerized control panels with dozens of flashing colored lights, hooked up to an automatic weather station, a technicolored video screen, satellites all over the place, digital printouts — the works! The whole thing (sprinklers, wires, computers, pipes, satellites, etc.) costs about a million dollars. Water can be turned on and off with split-second accuracy. You can do anything with it!

Well, almost anything. Unfortunately and too often, you really can’t irrigate very well with it. Why not?

Because someone in *the irrigation loop* didn’t spend enough time thinking about what the system is expected to do. They didn’t think about proper

sprinkler head triangulation and placement, about sprinkler head capabilities to fit different circumstances, about nozzle performances, about adequate pressures throughout the system, etc.

In a word, someone forgot what an irrigation system is really all about: complete coverage, the right precipitation rates for the area in question, proper control, and someone who knows how to irrigate properly. We have a million dollars worth of flashing lights, but we have poor coverage and poor results.

High-tech? *Yes!*

Common sense? *No!*

Fact No. 2

Another problem I see today is an overconcern with *thatch*. Why is thatch so widely condemned? Why does everyone want to get rid of it?

I think I know. Our training, our professors, our textbooks, and just about everything we read and hear tell us — *warn us* — that thatch is bad and we must get rid of it.

To the contrary, I believe thatch plays a very important role. In fact, it is more important today than ever before.

But before discussing *thatch*, let’s first agree what it is. Dr. Marvin Ferguson’s *Dictionary of Turfgrass Terms* says, “Thatch is that tightly intermingled layer of dead and *living* parts (roots, shoots, stems, stolons, leaf tissue, etc.) that develops between the green vegetation and soil surface.”

In this day and age, I believe we need thatch on greens of ½ to 1 inch in thickness. Here are my reasons:

- Thatch reduces soil compaction.
- Thatch moderates soil temperatures.
- Thatch limits evaporation of soil water.

Furthermore, a proper amount of thatch is absolutely necessary in providing a degree of resiliency on the putting surface, i.e., an ability to “hold” a properly played shot. A proper



It doesn't matter how sophisticated the irrigation system is on the course; it still comes down to the fact that the system needs to provide quality coverage and the operator needs to make sound decisions when programming the system.

amount of thatch is essential to good putting qualities — a tight sod and a smooth surface. Why do you think we have far more complaints today over “spike marks” on greens than we had 10 or 15 years ago? Today, spike marks are a major complaint. Why?

A proper amount of thatch is essential for resistance to heavy traffic wear, ball marks, and damage of any kind.

Thatch is an important factor in all of the above. The fact is, thatch (the *proper amount* of thatch) is essential to a good putting green. And yet, time and again, our university people and too many superintendents preach that the thatch layer is bad and must be eliminated!

Why is this bad advice today? Because greens are being mowed much more closely and much more frequently today than ever before. Double cutting is now practiced even for club tournaments, let alone heavy rolling and triple cutting for major championships.

In the past 10 or more years, we have followed a tremendous reduction in fertilization rates on greens. With moderation, I think this is a good practice, but it certainly has reduced turf growth and thus thatch development.

Whether public or private, golf courses have more play, wear, and compaction today than 20 or 30 years ago. High-performance greens are expected by golfers today at all times. Everything we do to meet that expectation reduces thatch: close and frequent mowing, frequent use of groomers, verticutting, frequent topdressings, brushings (we've never had so many different kinds of brushes), and frequent rollings (more compaction and wear).

Ah, you may ask, “What about thatch and disease?” It's true! *Too much* thatch means greater disease susceptibility, and too much thatch can lead to other problems as well — *but not a managed thatch layer* of ½ to 1 inch. Today we have machines and techniques that easily can control thatch. We have great fungicides available for any disease problem. They're expensive, but they work. We have the ability to control diseases and thatch!

Fact No. 3

Another wonderful way to control thatch if need be — and do yourself a lot of other good — is with lime. We have forgotten the magic that can be found in lime. You should know about it. It's one of the first chemicals used on golf courses, and we inherited the idea from the farmer and his pastures. Believe it or not, lime can actually cause grass to grow!

When the U.S. Amateur was played at The Country Club in Brookline, Massachusetts, in 1934, lime was used for lines around the greens to control the gallery of that day. Now, of course, we use yellow ropes. Twenty years later, in 1954, a very dry spring occurred in New England. Strikingly, around every green was a noticeable line of green grass caused, naturally enough, by the lime application 20 years earlier. There are photos to prove it.

A few years ago, a young, college-graduate golf course superintendent asked what he could do to reduce the deep accumulation (6 to 8 inches) of thatch on his greens. His membership was upset. Footprinting was very much in evidence, and this young fellow was under a lot of pressure.

I told him of a lesson I was taught many years ago by O.J. Noer, one of the great pioneers in turfgrass management for golf. O.J. and I were making a golf course visit together in Victorville, California, in 1954. The greens had a lot of thatch on them and O.J. said, “You'd be smart to apply some hydrated lime to these greens two or three times a year for the next couple of years. Use about two pounds per 1,000 square feet in early spring, early summer, and again in fall. In a year or two, you'll have a lot less thatch.”

It worked! Two years later these greens were in great shape, and excess thatch no longer was a problem.

It seems hydrated lime immediately furnishes free calcium, slightly raises the pH level within the naturally acid thatch layer, and causes soil microorganisms to work overtime, feed on the thatch, and, in nature's own way, substantially reduce excess organic matter.

When I told my young friend this story, he showed considerable doubt, furrowed his brow but nodded in agreement and left.

About two weeks later he was back with another question. “You know,” he said, “I've checked your story about using hydrated lime with several other superintendents and university people. They've never heard of it! Who can you name as an authority to substantiate what you have said?” Obviously, he never knew O.J. Noer!

You see, we have forgotten the magic of lime. Even under alkaline soil conditions, as was the case at Victorville, California, thatch layers are just naturally acidic, and hydrated lime will work wonders. Oh yes, an 80-pound bag costs about \$6.00. The original thatch-lime research was done at The University of Rhode Island in the 1930s.

Let me tell you another story about lime. It also works. When I first came to the Green Section in 1953, Tate Taylor was recognized as one of the outstanding superintendents (greenkeepers) of the day. He was one of the first college graduates in our business. Later in his career, he became a member of the Green Section staff. Tate was not only college smart, but field smart as well.

During one of our many bull sessions, Tate said, “You know, whenever you visit a golf course and the superintendent is having trouble with a couple of greens and he has tried everything he knows and nothing



A good root zone mix is the baseline for quality greens, but it is critical that a proper layer of thatch develop to provide resiliency and good putting qualities before opening new greens for play.

works, tell him to try a little lime. Either hydrated lime at two or three pounds or ground limestone at 5 or 10 pounds per 1,000 square feet. Then, stand back. Nine times out of ten, within a few days the situation will improve or be totally solved.”

I’ve told this story at least a dozen times to superintendents who were in trouble and had tried everything else. And in every case, the lime worked! When all else fails, try a little lime and remember Tate Taylor.

There’s another use for lime. Frequently in the fall or even a difficult summer, greens may become a little thin and open. Algae will soon form and then crust over. It may become black and start to flake. If allowed to go unchecked, it will smother the grass and inhibit recovery. Now it’s true you can spend money on algacides and wetting agents and what have you, and they’ll probably work. You can also dust a little hydrated lime, at the rate of about two pounds per 1,000 square feet, over the algae and it will disappear. One or two additional applications may be needed every other day or so, but have no fear, it will work; just give it a few days.

The only word of caution I can give when you use lime is to be sure to separate its use by a week or so from any applications of a readily soluble nitrogen fertilizer. If the two materials are applied too close together, they could cause a leaf burn.

We seem to live in an age of excesses. We go overboard from one fad to the next. We like to follow trends. This isn’t good turf management, and it isn’t good for the turfgrass manager or his future.

Low nitrogen levels for greens have been the rage for years and *moss* became a problem. High nitrogen levels were “in” 20 years ago and disease problems were rampant.

Very high potassium levels have been “in” in the recent past, but we knew potassium was important to cell wall thickness, winter hardiness, and wear resistance in the 1930s. There’s nothing new here!

Because of the Stimpmeter, golfers thought all green speeds should be 12 feet or more just a few years ago. Today, most golfers are happy with 8½ feet, and they enjoy *green* greens all summer.

In the recent past, someone has been promoting and recommending the frequent rolling of greens. I have a problem with this, especially the long-term effects of it. It doesn’t make common sense, no matter who may proclaim its virtues or the research. To prove the point, I can personally tell you of a real horror story of a prominent golf course where it was practiced and met with disastrous failure!

Another update. Synthetic high-analysis, slow-release fertilizers were the rage 20 to 25 years ago on greens. Now they are starting a comeback, supposedly because of environmental concerns. I think they have a place in certain programs and conditions. But bear this in mind: Their rate of nutrient release is determined largely by soil temperatures and/or soil moisture levels. Once applied, you no longer have control over their release rate, and conditions may bring about nutrient release at a time when you do not want additional growth or stimulation. *Make sure you use them properly.*

I’m also concerned with fertilizers having exotic analyses and promising cure for this or that. They *may* have a place but are too often not the panaceas claimed.

Finally, Green Section greens are built with 80% sand, more or less. And

people believe they will drain no matter how much water is applied. Right? *Wrong!* The recommendations developed by Dr. Marvin Ferguson were designed to *reduce soil compaction*, not allow excess irrigation. The idea that anyone may apply as much water as he likes to Green Section greens simply does not know (1) how to irrigate properly, and (2) the truth about the management of such greens!

Where’s The Common Sense?

And so we have come full circle. Moderation *in all things* — that’s the answer. We must properly use the knowledge we have. Lime in excess can cause problems. Thatch in excess is not good management. But this does not mean we can forget their basic importance, uses, and techniques. I plead with all of you not to overlook the wisdom and experience of the past. They are rich and valuable. Let us guard against a headlong rush to invent something new when we already have an effective and inexpensive answer from the past.

Believe me, that *Bridge to the Future* has its foundations in the experience of the past.

Oliver Wendell Holmes once said: “Science is a first-rate piece of furniture for a man’s upper story — if he has common sense on the ground floor. But, if a man hasn’t got plenty of good common sense, the more science he has, the worse for his decisions and those he serves.”

The Noers, the Taylors, the Graus, the Fergusons, Radkos, and Steinigers have already left us a treasure of knowledge. Shouldn’t we use it?

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Proper management of nutrients and environmental conditions is key to controlling moss on putting greens.

