

# Low Input

## *If They're Right... ...Have We Been Doing It Wrong?*

By Tom Parent  
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In an earlier *Hole Notes* I wrote that I had received numerous calls from superintendents around the country after my article was published in *Golf Course Management Magazine*. These superintendents follow a method of maintaining high quality turf that flies in the face of everything we learned in college.

They all subscribe to a method of turf culture known by several names: eco-agriculture, base-saturation method, Carry Reams method. They all get the "Journal of Eco-Agriculture" known as "Acres Magazine." They discuss ideas and products in that magazine that put the snakiest of snake oils we see at our trade shows to shame.

I consider myself a liberal and open-minded thinker, yet the books recommended to me by the chemical free superintendents leave me incredulous. I sometimes need to force myself to read on, because the material I'm reading is beyond bizarre. I read one book entitled "Enlivened Rock Powders." If you want to have your mind put through a space warp, read that one.

I have also read a book written in 1893 entitled "Bread From Stones." This book was fascinating. It was written as a rebuttal to "chemical manures" or salt fertilizers. The thrust of the book was that plants need a lot more than NP&K. In essence, the author advocated a simple, and by the testimonials given in the book, effective strategy for crop production.

**He asked the question:** Where did fertile soil come from originally? The answer, as everyone knows, is rocks. His reasoning then was: If soil came from rocks and your soil was depleted, the logical conclusion was add more rocks or in this case rock powder. After reading this book, I could make more sense of "Enlivened Rock Powders."

The proponents of this type of plant care call our methods "toxic rescue chemistry." They call the use of pesticides "dipping into the devil's pantry." Enlivened rock powders and some of the other ideas purported by the authors I've read leave me gasping for air. However, their logic and theories on maintaining plant health aside from the voodoo aspect is so sensible and realistic that it deserves more investigation by us.

Again, I must remind you I was introduced to these ideas by superintendents who have dared all to save our industry from the stigma of the "Greenkeeper in a Drum" image. These superintendents and the authors of the books whose philosophy these people follow state: If you have weeds, insects or disease, you have a nutritional problem.

They contend that insects and disease are nature's clean-up crew. In other words: If it's not fit to eat, it gets taken out of the system. Reading the chapters on this subject in a dozen books makes you think twice about our food supply. One book in particular, "Life and Energy in Agriculture" by Arden Anderson rang so true to what I had personally experienced that I became so irate that I had to put the book down and go do some more packing. This was a good thing as my wife had taken the children up north for the weekend so I could pack uninterrupted.

**Each one of these books** I have read has had a chapter that stretches what we have learned in school so far out of whack, that it's, as if they are saying "If you are not ready to believe this or at least accept your ignorance of this subject, don't read further."

As I said before, because of the testimonial of our fellow professionals, of which some were quite impassioned, I felt compelled to read on. The more I read, the more I began to distrust the core of knowledge I held dearly.

If you read my *Editor's Corner* last month, you will have read me describing a discussion with an ardent environmentalist. I must admit that after a month's worth of additional reading and further conversations with the true heroes of our business, I will be a loathe to use pesticides as the woman I had the conversation with, although for different reasons.

**Almost all pesticides affect** either the soil microorganisms or the plants or both. In doing so, we disrupt the natural balance in the soil that should provide all the nutrition that the plants need. A healthy soil should have the proper microbes to provide the amount of NP&K, etc. the plants need every day, provided they are present in the proper ratio in the soil.

Again, all the authors stress that plants need more than NP&K. In particular they hammer home again and again, chapter after chapter, that calcium is a plant nutrient. We were taught this in our bio-chemistry and plant physiology course. Yet, when we reach the real world, calcium is just something you use to balance PH.

Only one fertilizer salesperson I've known in my years as a superintendent has recommended lime or gypsum to me as a nutritional factor. All the rest have been NPK, NPK, NPK. Or I should state N&K ad nauseum, P being a dirty letter in our business. Go find your old bio-chemistry book or go to the library if you don't have one. Try to find a

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page that does not have a compound that contains phosphorus. Every once in a while minors are mentioned, but gee, most soils really don't need them, do they?

You can truly have a soil with no calcium and a PH above 7. Magnesium raises PH 1.4 times as much as an equal amount of calcium, and potassium also has a significant effect on soil PH. Potassium can replace many of the functions of calcium in a cell, although poorly. Unfortunately there is not much profit to be made in selling lime rock.

I would recommend that you all read a book by Neil Kennsey called "Hands On Agronomy." This book is published by Acres U.S.A., P.O. Box 8800, Metairie, Louisiana 70011, ISBN: 0-911311-39-4, Library of Congress: 92-076121.

It is the least voodoo/snakeoil/foofoodust/cosmic free energy/radionic/orogne energy/ideas your poor mind just can't handle, of them all, in its approach and, is a very good introduction to a possibly saner approach to plant culture.

I can't prove to you that these methods work. In a totally disrupted soil it could take years to restore it to a functioning ecosystem. The first step is to stop poisoning your soils with chlorine. If you use KCl in any of your fertilizer blends, stop on a portion of your course. One hundred pounds of KCl or murate of potash contains close to 40 pounds of chlorine. This same amount on an acre of soil would be a pound and a half of K per thousand and a pound of chlorine.

If you run the math on this, you have a concentration of chlorine that's many times the parts per million that you would find in a swimming pool. In short, you have just sterilized the top several inches of your soil. This is unfortunately the zone where most of the microbes that could do your plants some good live.

This is the zone where the aerobes (needing oxygen) that fix nitrogen live. This is the zone where the aerobic microbes that digest thatch live. This is the zone that the aerobic microbes that produce antibiotics that keep disease organisms in check live. This is the zone that if it is anaerobic (lacking oxygen) due to compaction or that horrible sand that compresses to leave no pore space will stunt your grass every bit as much as if you had sterilized it with clo-rox. This is the zone where life happens.

We are even taught in school that KCl should be avoided. Yet when we enter our profession, it is almost impossible to avoid it. Even highly respectable fertilizer companies use it in their "Fairway" or "Rough" grades. Almost all the ag. grades we use on our roughs contain it.

This is the saddest situation of all. Our roughs are mostly low maintenance turf and the area that is most likely to achieve a sustainable ecosystem if it was not routinely whacked by KCl in cheap ag grade fertilizer. If you remember what the Romans did to countries that were giving them trouble, they salted their fields! This is exactly what we're taught to do in school.

More and more this does not seem right to me. Perhaps

this is why fertigation is so effective with one-third or less the fertilizer applied. You put down so little "salt" at any one time that the microorganisms are not affected adversely. To sum up, I feel I have been lied to for a long time.

I recently spoke to a trained soil scientist on the East Coast that had come to the conclusion that he had wasted his entire life after reading my article and speaking with me on the phone. He spoke with the people I had been talking to, and he has read the same books I have. Everything that he had seen go wrong in the field and the resulting problems all came in to sharp focus.

For him, a man with thousands of hours of doing soil analysis and making recommendations, the reality of what had to be heinous collusion of fertilizer and chemical companies motivated by profit and not good agronomy, was apparent beyond a shadow of a doubt.

Is he right? I think he is.

## 1996 MGCSA MONTHLY MEETINGS

Monday, July 8  
IZATY'S GOLF & YACHT CLUB  
GARSKE SCHOLARSHIP SCRAMBLE  
*Host Superintendent: Steve Schumacher*

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Wed.-Thurs., August 7-8  
MTGF EXPO '96  
*Resurrection Cemetery*

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Monday, August 12  
ST. CROIX NATIONAL  
MGCSA CHAMPIONSHIP  
*Host Superintendent: Kevin Clunis*

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Sunday, September 15  
MADDEN'S ON GULL LAKE  
STODOLA RESEARCH SCRAMBLE  
*Host Superintendent: Scott Hoffman*

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Monday, October 7  
FOX HOLLOW GOLF CLUB  
*Host Superintendent: Chuck Molinari*

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Wed.-Fri., December 11, 12 & 13  
MTGF ANNUAL CONFERENCE  
*Minneapolis Convention Center*