



## FALLING IN LOVE

By Monroe S. Miller

The kid popped into the shop, on time, dressed like he was headed for a spell at the beach. It was, obviously, his first day at work on a golf course.

I looked at him with disbelief, and quickly asked him “what the hell do you think this is, a health spa?”

He was taken aback. Although I know his older brother, I didn’t know this kid at all. He looked down to see what I was staring at—black high-topped basketball shoes (no socks), skinny white legs, skin-tight bicycle shorts (also black), and a XXXL tee shirt that had the word UMBRO or something like that emblazoned across the front.

“You look terrible,” I said to him in a harsh tone of voice. “Can’t you hear? I told you two weeks ago to wear socks and work boots with a smooth sole, jeans, and a respectable shirt that fits.”

The kid was crestfallen. I added to it when I sent him home to change. “You’ve got 45 minutes,” I told him in my best drill sergeant voice.

Call it clairvoyance or instinct, but there was something about this kid I liked. I couldn’t put my finger on it, but it was present from the time he returned that first day.

He wasn’t anything special. Oh, he was plenty bright. But he didn’t say much. He was loosely built, awkward and kind of clumsy, a typical sixteen year old. Add in the youthful complexion, the naivete and an almost dangerous curiosity, and you have a picture of him.

Maybe what appealed to me was the innocence of a youngster who was being raised like I had been. His parents were devoted to their family and clearly the kid was well nurtured. He had values, pride, a strong work ethic and a clear sense of right and wrong. It didn’t seem to bother him to tell the other guys on the crew that he went to church on those Sundays he didn’t have to work.

At first some of the guys on the crew picked on him. Sometimes they

showed him practically no mercy. There was the time, for example, when they had him convinced he had to stand on a chair in the lunchroom in his BVDs and read the comic pages from the daily paper. I stopped that in short order.

But he would have. The kid not only was innocent, he was deeply good natured.

It was a fun summer, watching him grow and mature.

He started like all rookies before him, with the low prestige, mundane jobs. Funny thing about him—he didn’t mind. There was a bounce to his step and a smile on his face almost always. His work assignment didn’t seem to matter at all.

He listened carefully, after that first day. He did his best to follow instructions without any argument, and he took his medicine when he ignored those orders and had the sin pointed out.

Regardless of the job, from the esoteric to the predictable, he did it the best he could. There was a need in this teenager to do his best and to be the best. And fastest. And straightest. And so on.

He would sit on the end of the picnic table or hang out in a corner during the lunch hour, listening to the college guys talk about sports and cars and their work for the day. He strained to hear every word of braggadocio about their evening conquests, and actually believed the tales of beer drinking they told.

He was in a new world—of work, of young adults, of machines and golf and grass. It was interesting today and he knew it would be more interesting tomorrow. He liked the shop, the outdoors and even the early morning rigor of a golf course operation.

He told me the first morning he was required to be at work at 5:00 a.m. that “this is the earliest I have ever been up in my life.” Most of the others were growling and griping about it.

The kid liked the framework and structure he lived in while on our time,

I could tell. The enthusiasm he felt was also felt by some of the others on the crew, and the kid was bonded to them by it. There was purpose and meaning to what he did.

There was even prestige in his summer work. He told me in a round about way. His buddies were hanging out or scratching about for part-time work, frying for Mickey D or sweeping grocery store aisles on a split shift. The kid had more money, more fun and more stature, and he loved it. At times he strutted about like a young rooster.

Slowly, our shop became his home away from home. He felt needed and even important, which he was. He pined to do and know everything—“save one for me” he’d holler as equipment he’d never driven on the golf course was put away at day’s end. If we needed a volunteer to clean machinery after work or pick up flags and sticks at dusk, he was always first in line to raise his hand. He couldn’t get enough of a place he treasured more each day.

I knew what was happening to him because I’d seen it so many times before. Day by day, week by week, the kid was falling in love.

With a golf course and every thing that went along with it.

I knew what was happening for another reason—the same exact thing had happened to me. The only difference was that I was older when it happened, and I fell faster than he did. I knew at the end of my first day that I was born to manage a golf course.

I was one of the lucky ones who followed through and stayed with it. It has been a wonderful love affair that goes on yet today, and it gets even stronger with each passing year.

Nearly as pleasurable has been seeing so many young people who have worked at my course walk the same path, falling more and more in love with each step. So many have experienced professional and personal happiness as a result of these love affairs with golf courses that it is even more exciting to see new kids start and know full well how some will experience the same emotions.

There will always be those for whom “it’s only a summer job.” But for all time I know there will also be those, like the kid, who come to work and unknowingly have the love affair of a lifetime. ♣



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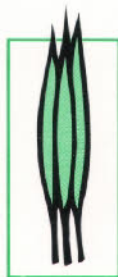


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# (It's about time.)





## A New Chemical De-icer?

By Scott A. Mackintosh

Winter, defined in *Webster's Ninth Collegiate Dictionary* is "the season between autumn and spring; the cold-er half of the year." Snow is defined as the "precipitation in the form of small tabular and columnar white ice crystals formed directly from the water vapor of the air at a temperature of less than 32°F." Surprisingly, there is no mention of road salt in either definition. It seems to me that winter, snow and road salt go hand in hand.

Anyone having at least visited the northern half of our great big country will know what it is like to drive on salt laden roads in the winter. It's not long before our cars need washing and the windshield washer reservoir needs filling. The most common form of road salt is sodium chloride (NaCl). A typical application of NaCl ranges from 250 to 450 lbs/two-lane-mile per storm. Over the course of a typical winter up to 5 tons/lane mile could be applied. It's no wonder our infrastructure is crumbling. Chloride ions accelerate the corrosion process by increasing the conductivity of solutions and increasing the time that metal surfaces are exposed to moisture. Spalling, which is the crumbling and chipping of concrete and limestone, can also occur to bridges, parking decks and buildings.

Let us also not forget the environ-

mental impacts from salt application. Soils with high concentrations of sodium and chloride ions increase soil erosion, compaction and runoff of heavy metals. In turn, roadside plants have to endure desert-like conditions. Normally plants absorb water through a combination of osmotic potential and transpiration. In other words, water is drawn into the plant to replace the water that is lost due to transpiration of water from the plant to the atmosphere. In salt laden soils the osmotic gradient is much stronger than in the plant. Therefore, water can not be readily drawn into the plants even when the soils are wet. In response to this stress, the plant defoliates and will soon die unless the soil solution gradient changes. Without roadside vegetation, significant amounts of erosion could take place.

Is there a de-icer that melts ice, won't rust my car before its paid for, destroy bridges and buildings, and is environmentally safe? Yes. The product is called calcium magnesium acetate (CMA). CMA is a hard spherical pellet that is about as corrosive as drinking water. Once dissolved calcium and magnesium are absorbed by soil which can enhance soil structure by restoring soil porosity and aggregate stability. The chemical name for vinegar is acetic acid. The acetate por-

tion of CMA biodegrades into carbon dioxide and water. Like sodium chloride, CMA becomes less effective at temperatures below 20°F.

What about its effect on roadside vegetation? The acetate ion is the most abundant organic acid metabolite found in nature. Research has shown that grass and trees were not affected by CMA applications. The researchers went so far as to say CMA applications can actually enhance growth by improving soil permeability by providing needed calcium and magnesium.

CMA melts ice by releasing heat once it comes into contact with moisture. Last year we had significant ice damage at the Noer Facility and across most of the state of Wisconsin. As we learned at this past year's Wisconsin Golf Course Symposium, the turf, although off color and apparently not growing, is still respiring. Ice formation on cool season turfgrass for more than 60 days on bentgrass and 120 days on bluegrass can actually create an oxygen deficient environment under the ice layer. Since it has been shown that CMA does not effect plant growth, why not try CMA on ice covered turf to prevent suffocation?

Research will be initiated at the Noer Facility this season to evaluate CMA as a possible ice remover. I will be looking for ice formations preferably on creeping bentgrass once the snow begins to melt and freeze. If ice layers do not form naturally, I will make an ice layer on a stand of Kentucky bluegrass and determine the application rate needed to remove the ice layer. Then I will monitor the turf for any deleterious effects throughout the season. 🌱

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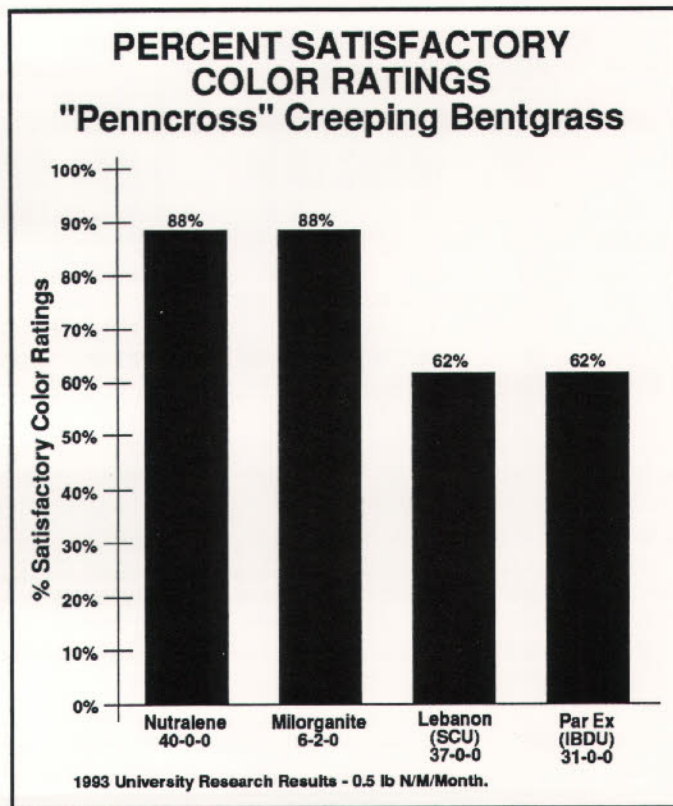
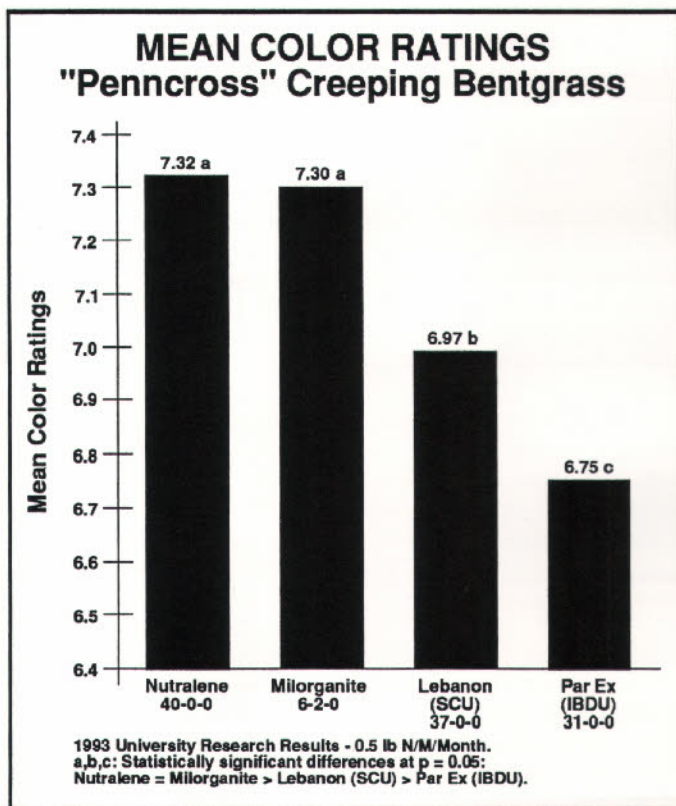
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# EXPO 94 LIVES UP TO ITS BILLING!

By Monroe S. Miller

Following in the footsteps of the Wisconsin Turfgrass Association Summer Field Day, the Association's revamped (and renamed EXPO 94) Winter Turf Conference ran to three days of upbeat and positive reactions.

The changes were many and obvious. No one could miss the change of venue. The EXPO committee moved the meeting back to the Madison area for the first time in a decade, and selected the sparkling new Holiday Inn West in Middleton. The rooms, meals and facilities were all excellent, demonstrating why this hotel has enjoyed immense popularity since its opening.

Another clear change was the move to a three day format, and that seemed to wear well with attendees. It opened up a larger variety of educational opportunities.

The educational format was another upgrade. Breakout sessions were split into three concurrent sessions. The UW research session remained,

and an awards presentation was added. Six excellent (emphasis on "excellent") workshops were offered by highly qualified people.

A really exciting new aspect of EXPO 94 was an expanded speaker roster, including many from out of state. Faculty and speakers came from the University of Maryland, Rutgers University and Texas A & M University. A total of a dozen and a half speakers made for a really excellent educational program.

The decision to offer many registration packages—from one to three days—surely played a role in the increased attendance. Preliminary numbers put attendance over the 500 mark.

A lot of us respected the specific hours set aside for the trade show, a fairly common feature of other state turfgrass conferences. A great deal of the success of this meeting, by the way, was due to the exhibitors.

The intention of Dr. Frank Rossi

and his EXPO 94 committee to broaden the appeal of the meeting met with success. Turfgrass industry people of all stripes were present. The meeting had something for everyone.

EXPO 94 was the first time the alums of the UW-Madison Turfgrass Program got together at a state meeting. About 25 had breakfast together on Tuesday morning.

The WTA annual meeting and election saw David Payne decline to run for reelection. Paul Huggett of the Long Island Farm was elected, along with Monroe S. Miller and Curt Larson. Larson, Wayne Horman, Roger Bell and Miller were reelected by the board to serve as officers for 1994.

Many of the people who made it to the meeting will receive an evaluation questionnaire. Those results will be used in the planning of the EXPO 95 program. Count on it being even better. 🌱



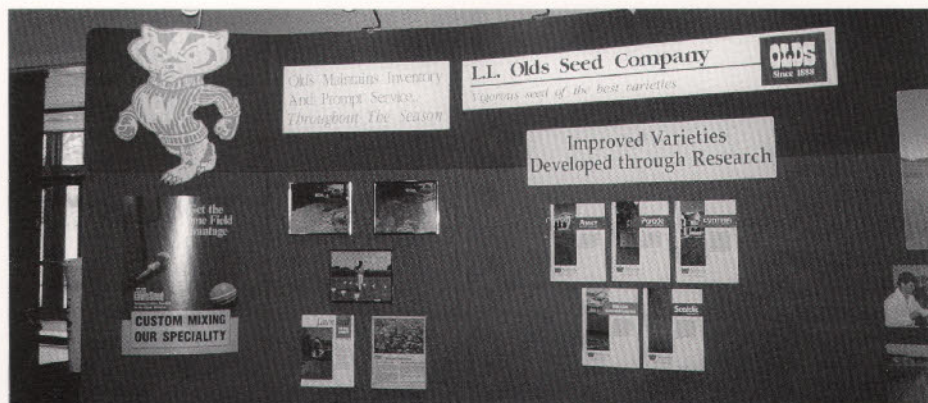
Middleton Holiday Inn—new home of WTA winter meeting.



Hanley Implement is one of several exhibitors who has been on every show floor hosted by the WTA.



Dr. Bruce Clark, plant pathologist from Rutgers, shared his excellent disease research.



Olds Seed was one of many exhibitors who presented a neat, attractive and well designed exhibit.





## ENVIRONMENTAL SENSITIVITY: The Legacy of *Silent Spring*

By Dr. Frank S. Rossi  
Department of Horticulture  
University of Wisconsin-Madison

A little over 31 years ago, on the day I was born, Rachel Carson, a wildlife biologist for the U.S. Fish and Wildlife Service, sensitized us to environmental quality. She removed the innocence and ignorance of the use of synthetic chemicals (biocides, as she refers to them) for pest control. Her book *Silent Spring* was published and served as a wake-up call to many who had utilized these materials and to those who had been exposed to them. Immediately, the dark side of chemical technology was the subject of debate.

The major theme of the book is the impact of widespread chemical usage on the environment, wildlife and humans. She warned, "indiscriminate use of chemical biocides would silence the voices of spring in countless towns in America." Hence, the book title—*Silent Spring*.

Corporations that manufacture chemicals were actively denouncing the book before it was published. One company tried to block publication of *Silent Spring*, describing Rachel Carson as, "as an ignorant and hysterical woman who wanted to turn the earth over to the insects." A leading (male) scientist questioned her right to worry about future generations, pointing out that, "she is a spinster who has no children". Thankfully, that kind of talk is no longer acceptable!

To be fair, I must say Rachel Carson did take her shots at the chemical companies. In the final pages she writes, "this is an era dominated by industry, in which the right to make money, at whatever cost to others, is seldom challenged," and she added, "we shall have no relief from this poisoning of the environment until our officials have the courage and integrity to declare that the public welfare is more important than dollars, and to enforce this point of view in the face of all pressures and all protests, even from the public itself." It was clear Rachel Carson touched a raw nerve. Yet, the question remains; was she a doomsayer, creating unwarranted fear, or a prophet, forewarning us of our destiny?

Reading the book and thinking about the environmental issues facing the turfgrass industry make me wonder if the answer isn't somewhere in between. For instance, much of what has been written about *Silent Spring* over the years relates to the increasing awareness of chemical usage and the exponential growth of environmental legislation. Yet, reading her book closely, and having seen some old interviews with her, it was not so much that she wanted all biocides banned. Rather, she demanded our awareness of the risks when using biocides and environmental responsibility.

Risk assessment and risk/benefit analysis are the modern-day methods for determining the usage (or lack of use) of chemical pesticides. We try as best we can to determine the potential harmfulness of a chemical and balance this data with the potential benefit to society. As you might imagine this is an inexact science at best! And no matter how much we talk about the benefits of turf and the benefits of pesticide use, the availability of pesticides in the future will decrease.

Whether or not you agree with this or if you think it is chasing the phantom risks of pesticides—face it! Public perception continues to respond by saying, "synthetic chemicals are polluting the environment and killing the people." This perception is fueled by increased awareness, poor understanding of scientific principles (e.g. parts per billion), spectacular environmental accidents and our inability to communicate effectively.

Science and industry does not seem able to help. Studies have been conducted at great expense to demonstrate that chemical use on golf courses poses little risk to the environment. Many turfgrass managers are very defensive when questioned about pesticide use. In fact, I've seen several instances where the response was similar to the outcry in 1962 to *Silent Spring*.

Environmental sensitivity is an issue that faces the entire

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golf turf community. I feel sometimes that the superintendents have been singled out as the problem as evidenced by the *Club Manager's Magazine* article (July/August 1993) with the grim-reaper and greenskeeper in a drum. Golf architects, builders, club professionals, golfers, pesticide dealers, and yes even club managers need to be involved. Everyone must understand that high expectations of course conditions currently cannot be met without the use of pesticides.

Still, this is not a license to be a "calendar sprayer" without considering levels of pest pressure. Also, intensive chemical use is often referred to as "job security". I believe this is short-term thinking and as Jim Moore, Mid-Continent Director of the USGA Green Section reminds us, "there are good turf managers and good chemical managers; chemical managers will not survive as less pesticides are available." And he adds, "Don't blame your demise on television golf, the USGA and the Stimpmeter."

I believe the debate about the environment should be robust. Open communication is needed between interested and concerned parties, even the Jay Feldmans (National Coalition Against the Misuse of Pesticides) of the world. We must all face the fact that we may not really know the long-term issues of pesticide use, although many of us posture ourselves as being confident. As a scientist who has access to good information, a turf professional aware of IPM, a citizen concerned about the lakes, and a parent—I'm still not sure. I believe we must be vigilant in our pursuit of knowledge. Be able to honestly discuss golfers' expectations and how our management practices are designed to attain them.

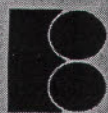
Rachel Carson discussed the dangers of the chemical DDT, a commonly used insecticide. She said, "chemical residues can be even be found in mother's milk." DDT was

banned in 1972 after it was shown to cause cancer in test animals (8 years after Rachel Carson died). Many people felt this was overreacting. Interestingly, under today's risk:benefit analysis, some would say it may not have been banned. It helped stop the spread of insect vectored diseases, such as yellow fever and malaria.

In the Spring of 1993, the National Cancer Institute published a study showing that women with the highest exposure to DDT, have a four times greater risk of developing breast cancer as that of women with the least exposure. Many have attacked the weaknesses of epidemiological studies. Still, health officials have pointed out that these findings may help our understanding of why breast cancer afflicts 1 out of 8 or 9 women in our society.

Our most commonly used materials have been shown to be less environmentally persistent than DDT. Many of our new pesticides are designed differently than DDT and have passed through a more restrictive regulatory system. But, older materials currently up for reregistration may not be available in the next 5 to 10 years. Could you manage your course without chlorothalonil?

I strongly believe that our environmental sensitivity will result in a better golf turf industry. The challenges we face in our jobs mirror the issues we face as a society. The result of increased awareness can be balanced when the community maintains an open dialogue. Often this may result in what we feel is unjust regulation. Yet, we must remain open-minded in our dealings with persons who challenge us. Acknowledge their concerns, discuss your philosophy and concerns. We all want the same thing!! Let's develop long-term solutions to environmental issues and make those solutions the legacy of *Silent Spring*. 🌱



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## Humate and Humic Acid

By Dr. Wayne R. Kussow  
Department of Soil Science  
University of Wisconsin-Madison

Numerous products being sold for turf use as growth enhancers or growth stimulants contain humate or humic acid. Given the number of inquiries I've had about these products, the time seems right to assess their value in turfgrass culture. To begin, we need to understand something about humate and humic acid.

Humic acid can be extracted from any material containing well-decomposed organic matter—soil, coal, composts, etc. Extraction is by way of treatment of these materials with a solution of sodium hydroxide. This dissolves much of the organic matter present. If we then take this solution and add enough acid to drop its pH to about 2, organic material will begin to flocculate and can be separated from the liquid portion. The flocculated material is humic acid. What remains in solution is fulvic acid.

If we take the flocculated humic acid and dry it down to form a black mass that can be crushed and sized by dry sieving, we have humate. In other words, humate is humic acid in its solid state. Therefore, the chemical properties of humate and humic acid are basically the same.

Humic acid defies precise description except in very general terms. Black or very dark brown high molecular weight organic polymer is as good a description as any. The color of the material is effectively used as a sales or advertising attribute. Black organic matter conjures up the image of dark fertile soils covered with lush plant growth.

Chemically, humic acid contains more carbon and less hydrogen and oxygen than does the plant and animal residues from which it has formed through extensive biological decomposition. It also contains about 4 % nitrogen. But don't expect this N to be of any consequence as far as turfgrass growth is concerned. Because humic acid is one of the end products of the

biological decay of organic matter, it has great resistance to further decomposition. Estimates of its microbial decay rate are often in the range of 0.3 % per year under ideal laboratory conditions.

Two properties of humic acid that may have some benefit in turfgrass culture are its cation exchange capacity and its capacity to form chelates with the metallic micronutrients, iron, copper, zinc and manganese. The cation exchange capacity (CEC) of commercially produced humic acid is in the range of 500 to 600 milliequivalents (me) per 100 grams. This is about 5 times greater than the CEC of good quality peat moss and twice as high as the CEC of soil humus.

To gain some perspective on the possibility of effectively making use of the high CEC of humic acid, we can examine the recommendations of one manufacturer that call for addition of 2 lb humate per cubic yard of 80:20 sand-peat rootzone mix or substitution of 3 lb humate for the peat moss. By my calculations, assuming the pH of the rootzone mix and sand are near 7.0, 2 lb of humate would contribute about 0.37 me CEC/100 g of the 80:20 mix. This would be in addition to the approximately 2.9 me of CEC provided by the peat moss. That turns out to be a rather expensive 13% increase in the CEC of the rootzone mix. When substituted for the peat moss, you wind up with a rootzone mix with a CEC of about 0.55 me/100 g. Considering the fact the potassium leaches readily from sand-peat mixes with 5 times more CEC than in the sand-humate combination, this doesn't seem like a wise substitution.

The chelating action of humic acid is sometimes used to produce chelated iron products. Without the addition of a nutrient such as iron, the claim is often made that humic acid has the ability to solubilize micronutrients already in the soil. This is a valid

claim, but one has to realize that turfgrass roots themselves excrete organic compounds that solubilize micronutrients. Regardless, here in Wisconsin, where we've yet to confirm a deficiency of Fe, Cu, Mn, or Zn on turfgrass, the chelating action of humic acid has to be deemed to be of little or no importance.

Now let's go to the research reports on the effects of humic acid additions on turfgrass. I have but one in my files. A search of the 17,000+ entries in the Turfgrass Information Center revealed no reports where "humate" was a key word, four reports with "humic acid" as a key word, and three reports with "growth stimulant" as a key word. Only two of the seven literature citations were of relevance to this article. Both were studies that demonstrate how strongly humic acid can adsorb fungicides and herbicides. Indications are that surface applications of humic acid or humate can significantly reduce the effectiveness of systemic pesticides by reducing their absorption by plant roots and soil-borne pathogens and insects.

The single research report in my files is for a study in which 14 "non-nutritional growth enhancers" were applied to a creeping bentgrass putting green. Several humic acid and humate products were among those tested. The focus of the study was the effects of the products on rooting and root development. Data averaged over all rooting depths for the entire growing season revealed that none of the products significantly affected bentgrass root length or root to numbers.

Because so little research seems have been done with humic acid products on turfgrass, there exists the possibility that there are situations where significant positive responses can occur. My assessment is that we should not expect positive effects over a wide range of conditions. Other than possible reductions in the effectiveness of pesticide applications when the humate or humic acid resides on the soil surface, the products are rather harmless when applied at rates recommended by the manufacturers.

There is, however, no justification at this time for using them on more than a small scale, trial basis. Humic acid will not compensate for poor turfgrass cultural practices. ♣





## A Moral Defense

By Derek Van Damme

**Editor's Note:** Derek Van Damme is a senior at the University of Wisconsin-Madison, and will graduate with a degree in Turf and Grounds Management next December. He has worked at the Nemadji Golf Club in Superior, Golden Valley Country Club in suburban Minneapolis, and Blackhawk Country Club in Madison. Derek is the past president of the Badger Turf and Grounds Club, and Dr. Wayne Kussow has been his undergraduate advisor at the UW-Madison. He has written other pieces for *THE GRASS ROOTS*.

As a college student, I am often asked by fellow students about my major field of study. Since I am not fond of small talk, particularly when it is about me, I usually attempt to sidestep this question. When I do answer it, I subject myself to the inevitable and annoyingly typical follow up questions like, "So you want to be like Carl in Caddyshack?", and "You have to go to college to be a greenskeeper?" and "What do you do in the winter?"

On the occasions an answer is elicited and further explanation of a golf course superintendent's duties is given, the question and topic I dread most is then raised—the environment.

It may disappoint many of you to read that I and most of my peers (turf students) do not relish the thought of discussing environment concerns. But I ask you to keep in mind the campus we are enrolled on is overflowing with supercharged, hyper-liberal students. Rational discourse with such people (rational/liberal—how's that for an oxymoron?!) is nearly impossible. But, as I am learning, such conversations are part of a golf course superintendent's job and responsibility.

The two most common types of responses given by those of us in the turf field to those in ecology are, in my view, inadequate. The first is an apologetic response, an attempt to shift the "blame" of pesticide use to our employers' expectations regarding playing conditions being incompatible with

plant growth requirements. Although accurate in identifying a correlation between cutting heights/plant stress levels/traffic and pesticide requirements, this response fails to recognize the philosophical grounds the "ecologist" is coming from.

A second common response is one filled with facts and figures from the plethora of scientific data we have been inundated with of late. The Penn State and the Cape Cod studies come to mind most often. This attempt to wow the environmentalist with scientific fact alone is futile. For one to be truly "green", he or she must reject the scientific method itself and all that derives from it. Again, this second response fails to address the philosophical angle of the issue.

For this argument to be won, our industry must begin to recognize from where it is we are being attacked. As Michael Gemmell, editor and publisher of *The Free-Market Environmentalist*, explains, "It is crucial to recognize that ecology was, from the very beginning, primarily a philosophical rather than a scientific area of study. By analogy, if philosophy is the soil of the forest, science consists of the trees within it. Scientific study proceeds from a philosophic framework." Without a philosophical soil, the trees of our arguments are blown to the ground by the hot air of environmentalists. I therefore offer this philosophical and moral defense of pesticide use.

The use of pesticides in our industry is man's attempt to create surroundings conducive to both aesthetics and utility. Those two qualities combined on a golf course give rise to objective value in our society, represented in the form of green fees or club membership dues.

It is this pursuit of objective goals and the profits made from the attaining of those goals that environmentalists oppose, NOT the supposed destruction of the planet. Aldo Leopold, author of *A Sand County Almanac*,

freely admitted distorting scientific fact to preserve the environment: "Of the 22,000 higher plants and animals native to Wisconsin, it is doubtful whether more than 5 percent can be sold, fed, eaten or otherwise put to economic use. Yet these creatures are members of the biotic community, and they are entitled to continuance. When one of these non-economic categories is threatened, and if we happen to love it, we invent subterfuges to give it economic importance." Stephen Schneider, climatologist and global warming theorist, says, "To capture the public imagination, we have to offer up some scary scenarios, make simplified dramatic statements and little mention of any doubts one might have."

Those two quotes expose the moral shortcomings of environmentalists—an adherence to the premise that nature holds some intrinsic value. That is value in and of itself, separate from any relationship to man. This is the basis for their arguments against almost anything.

As George G. Reisman, PhD., argues in his essay *The Toxicity Of Environmentalism*, "The doctrine of intrinsic value is itself only a rationalization for a preexisting hatred of man. It is invoked not because one attaches any actual value to what is alleged to have intrinsic value, but simply to serve as the pretext for denying values to man. For example, caribou feed upon vegetation, wolves eat caribou, and microbes attack wolves. Each of these is alleged to possess intrinsic value. Yet absolutely no course of action is indicated for man. Should he act to protect the intrinsic value of the vegetation, caribou, or wolves? Even though each of these alleged intrinsic values is at stake, man is not called upon to do anything. When does the doctrine of intrinsic value serve as a guide to what man should do? Only when man comes to attach value to something. Then it is invoked to deny



him the value he seeks. In other words, *the doctrine of intrinsic value is nothing but a doctrine of the negation of human values*. It is pure nihilism.

It is this nihilism and the rejection of reason and the scientific method (the two are inseparable) that proves the moral bankruptcy of environmentalists.

It is clearly established that environmentalists oppose the pursuit of objective value, achieved in our industry primarily through aesthetics. It should also be clear that their opposition to pesticide use comes not out of concern for mankind or nature, nor from solid scientific fact. Their opposition comes from a denial of reason as man's means of survival and a rejection of the scientific method and objectivity.

To justify pesticide use on a golf course, it is necessary to justify the pursuit of aesthetics and the form of utility—sport—on a golf course. In other words, does the end justify the means?

For golf course superintendents, pursuit of aesthetics represents a sim-

ple yet adequate job description. It is a mode of productivity. Productiveness is necessary for man's survival. All other species survive by consuming existing materials. Man survives by imagining, then producing, materials. In order to produce anything it is necessary to alter the existing surroundings. Since the opposite of productivity is parasitism, the value of productivity should be self evident.

Philosopher/novelist Ayn Rand writes, "Productive work is the process by which man's consciousness controls his existence, a constant process of acquiring knowledge and shaping matter to fit one's purpose, of translating an idea into physical form, of remaking the earth in the image of one's values..."

A golf course's form of utility is sport. It is a place for people to exercise, compete, relax and enjoy. Should such places exist? Is sport a moral activity? George F. Will knows it is. He writes in *Men At Work*, "Greek philosophers considered sport a religious and civic—in a word, moral—

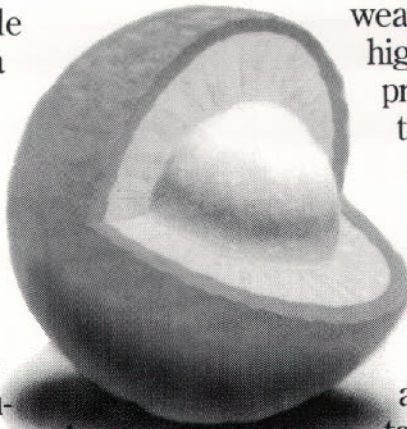
undertaking. Sport, they say, is morally serious because mankind's noblest air is loving contemplation of worthy things, such as beauty and courage. By witnessing physical grace, the soul comes to understand and love beauty. Seeing people compete courageously and fairly helps emancipate the individual by educating his passions."

There can be only one standard of judging ethical behavior in environmental matters—does the activity improve **human** life or not? It should be obvious to all that human life is enhanced by aesthetics and sport.

To the doomsday environmentalists out there I leave this quote from Lord Thomas B. Macaulay, uttered in 1830: "We cannot prove that those are in error who tell us that society has reached a turning point, that we have seen our best days. But so said all before us, and with just as much apparent reason. On what principle is it that, when we see nothing but improvement behind us, we are to expect nothing but deteriorations before us?" ♣

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