

Robbing Peter to Pay Paul

By Bob Vavrek, Senior Agronomist, USGA Green Section

A quiet, snowy day in the office is a good time to consider how you are going to provide the same level of course conditioning in 2009 when maintenance costs have increased, but the operating budget has been slashed by 10% to 20%. If you happen to nod off at your desk for a few minutes after a long afternoon of considering a variety of difficult options, only in your dreams does a bail out check arrive in the mail to supplement the budget.

One option to consider is to trim the fat off excessive fairway acreage this season. Most golf courses I visit have at least a few acres of unnecessary fairway turf that could be converted to rough with relatively little impact on playability. For example, par three holes are notorious for having far too much fairway turf between the tee and green. A modest area of short grass at the approach to the green is appropriate, but 100 yards of fairway on a 140 yard hole will sap limited resources all season.

Some golf courses have had good success widening the fairway landing zones a bit on a par 4 or 5 hole as compensation (or consolation) for converting some fairway turf to rough with the intent of necessitating at least a 50 to 75 yard carry off the tee to the short grass. Now some will argue that a straight 35 yard dribbler off the tee deserves to land on fairway, but most would (or should) argue that those complaining are hitting from the wrong set of tees anyway. The bottom line is that roughs require less water, fertilizer, plant protectants, and mowing versus fairways.

However, converting fairway to rough or vice-versa is not as simple

as it seems. To those without turf degrees or experience, the process of converting fairway to rough appears to require no more than raising the height of cut from 1/2 inch to 2 1/2 inches and simply letting nature take its course. Assuming the course is fortunate enough to have predominantly bentgrass fairways, golfers don't realize what a gnarly, unplayable condition they would encounter from a 2 1/2 inch bentgrass rough.


The more likely scenario at older courses across the north central states is *Poa annua* fairways. Old *Poa* on old fairways is just plain strange when it comes to changing heights of cut. Some patches of *Poa* that have been maintained for many years at a 1/2 inch height of cut will not grow much higher than 1/2 inch regardless of where you set the mower. Raise the height of cut of an old bentgrass/Kentucky bluegrass/*Poa annua*/perennial ryegrass fairway and you usually get a patchwork quilt of turf that looks bad and plays even worse.

You could use commercial sod to expand roughs or widen fairways, but sod is expensive and not very compatible with the cost-cutting theme of this article. In addition, bentgrass or bluegrass sod will stick out like a sore thumb on an old course for years.

Consider robbing Peter to pay Paul, and utilize the turf already present on the course for fairway/rough conversions. There will always be some areas of good to excellent quality rough that are relatively out of play and available to use as a home grown sod. In many ways, this turf will be better than commercial sod. The turf composition and soil type will match the surrounding grass better than any material from

distant sod farms and you won't have to pay for shipping. Strip the sod from an irrigated area, if possible, and the process of re-establishing turf from seed in this site will be much easier. This way the turf most likely to come into play will be able to accommodate golfers first.

Don't waste the short grass you harvest from fairways either. The fairway grass closest to tees is usually dense and healthy since it accommodates little traffic throughout the season; and fairway turf is usually the same or similar height of cut as turf found on tees. Dense fairway sod can be ideal for regrassing some of the heavily divotted par 3 tees on the course.

Deep budget cuts will require sacrifices, and sacrificing a few acres of unnecessary fairways will, unlike our 401 k programs, pay dividends for many years. 

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Nutrient Profile: Calcium

By Dr. Doug Soldat, Department of Soil Science, University of Wisconsin-Madison

Rising fertilizer costs and declining budgets have led many superintendents to take a second look at the efficiency of their fertility program. This article focuses on the function of calcium in soils and plants. The information will be useful to golf course superintendents for making choices about when and how to make the most efficient use of calcium given the plethora of products and management options available today.

Functions of Calcium in Plants

Calcium is found in turfgrass tissue in concentrations ranging from 0.2 to 1% of dry weight, similar to plant levels of sulfur, magnesium, and phosphorus. A large proportion of that amount is found outside the cell wall and provides a structural role by linking pectin chains together like cross bracing in a building frame. When the plant decides to expand a cell, it decreases the calcium concentration outside the cell which loosens the pectin chains allowing the cell to grow. After cell expansion, the plant will transport more calcium to the cell wall to re-solidify the pectin chains. It is easy to distort this information by saying something like: “the more calcium that is available to the cell the stronger the cell walls become.” Obviously, if calcium is *deficient* in the plant, applying calcium would likely improve the integrity of cell walls. However, if a *sufficient* supply in the soil is available, cell walls will not continue to strengthen as more calcium is applied.

Calcium has a much different role inside the cell than on the outside. Inside the cell, calcium concentrations are kept very low. This is because calcium acts as a mes-

senger within the plant and plays a very important role in triggering certain reactions. A recent example of how calcium is used as a signaling molecule in plants was described by Du et al. (2009). These researchers reported that calcium binds to a specific protein (calmodulin) to form a compound which triggers the formation of salicylic acid which is known to increase disease resistance but decrease growth. The popular press reported this story under the headline “In fight against pathogens, calcium helps plants make their own aspirin”. While technically correct, this headline gives the impression that adding calcium to plants increases their disease resistance. The scientific report did not study the effects of adding calcium to plants on disease resistance; rather the researchers used genetic tools to determine that calcium plus a calmodulin protein was the compound that signaled the plant to produce aspirin (salicylic acid).

The question remains: Can applications of calcium to turfgrass increase disease resistance or stress tolerance? There is very little research that attempts to answer this question. The only study on this topic I was able to find was published by Jiang and Huang (2001). These two turfgrass researchers found that Kentucky bluegrass and tall fescue treated with calcium in the greenhouse had increased levels of antioxidants and greater turf quality during a period of prolonged drought stress. They applied 400 mg/L calcium (from CaCl₂) in a liquid solution to the leaves for three days in a row. The plants were not mowed. While this

work is promising, no field research has duplicated these results.

Functions of Calcium in Soils

Another common reason to apply calcium relates to soil physical properties. It is well known that high levels of sodium will cause soil particles to disperse resulting in essentially chemical compaction of the soil. The only solution to alleviating this problem is to apply calcium to displace the sodium ions and return the soil to an improved condition. However, sodium problems are very rare in this part of the US, and usually associated with areas where road salt runoff is a major issue in the spring. However, golf courses irrigated with treated wastewater often have elevated soil sodium levels, and for these courses, using calcium (gypsum) is a vital management technique. It is easy to misrepresent this information by stating that calcium applications will improve soil structure and infiltration. This is only true if there is a high level of sodium in the soil prior to the calcium application. If sodium levels are below 5% of base saturation, adding calcium will not improve soil physical properties.

There is a widespread soil testing philosophy called the Base Cation Saturation Ratio. This philosophy argues that there are ideal ratios of calcium, magnesium, and potassium in the soil; and having the ideal ratio provides benefits to the physical and biological health of the soil. There is no scientific evidence to support this claim in agriculture (Kopittke and Menzies, 2007) or in turfgrass (St. John and Christians, 2007). Often the result of following such a philosophy is the continual application of cal-

cium, magnesium, and potassium in a futile effort to achieve the “ideal” cation balance.

Managing Calcium in Plants and Soils

Often soil testing is the first step for making management decisions about potassium and phosphorus. Calcium is usually reported on a soil test, but really one only needs to look at the pH to determine if calcium will be sufficient in the soil. Some soil test reports call undue attention to calcium levels or calcium saturation in the soil. For example, I viewed a soil test report from a sand green that noted that exchangeable calcium levels were high and that calcium availability is likely low. This is complete nonsense! Exchangeable and available are synonymous; if exchangeable levels are high, availability is high. The same report went on to claim that soluble calcium levels are lower than desirable and this was because calcium reserves in the soil are inadequate. Even more unbelievable! The exchangeable level that was just previously deemed too high is the “calcium reserve” for solution Ca which is now being deemed “inadequate”. The higher the soil exchangeable calcium, the higher the soluble calcium in the soil will be. This is basic soil science but appar-

ently some soil testing outfits have ulterior motives that conflict with science. My advice is to avoid over-interpretation of soil test results. If pH is below 5.5, apply lime. If pH is above 5.5, do not worry about the availability of calcium to the turf.

Let's imagine that the company that provided this soil testing masterpiece went on to recommend the application of a liquid calcium chelate. The chelate contains 8.0% calcium and the label recommends it be applied at 6 oz/M. If we push a pencil for a minute, we find that this rate will apply 0.038 lbs Ca/M. If your irrigation water contains 70 mg/L Ca (a common value for most of southern and eastern WI), then this amount of calcium will be applied with 0.1 inches of irrigation. Continuing to push the pencil around, we also find that there is the same amount of calcium in the water a 150 gallon spray tank as in the product that is added to the water in the tank. To pile it on, rainfall adds 0.8 lbs Ca/M each year in this region. Therefore, it doesn't make sense to spend a lot of money to make calcium applications this small. Future research may find that these small applications can improve stress tolerance in field situations, but right now we don't have the data to justify these applications.

In summary, the best ways to manage calcium are:

1. Keep soil pH >5.5 by applying lime as needed
2. Apply gypsum when sodium levels exceed 5% of the base saturation (this is a conservative level)
3. Foliar applications of calcium may be beneficial during stressful conditions, although field confirmation is lacking.

Other points to remember when considering making a calcium application are:

1. Application of most liquid calcium products result in a very small dose of calcium
2. Most irrigation water in Wisconsin contains a lot of calcium and annual inputs from irrigation and rainfall are about 2-3 lbs Ca/M.

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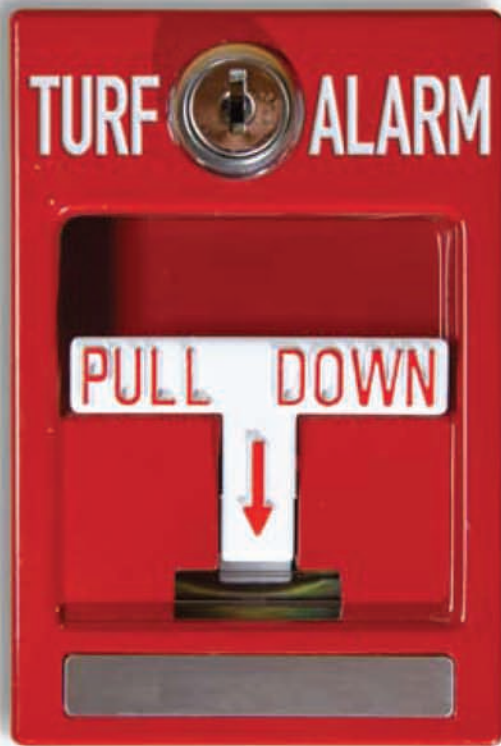
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What Collar to Wear Today?

By **Jacob Schneider**, Assistant Superintendent, Blackhawk Country Club

The longer that I'm in this industry of ours, the more difficult our jobs become to characterize. It seems as if most other careers are fairly easy to classify; there are white-collar workers, such as doctors, lawyers, and businessmen, and there are blue-collar workers, including assembly-line factory workers, construction workers, and garbage men. A couple of years ago, a young, naïve Jake Schneider would have said that golf course superintendents are definitely blue-collar workers. At that time, the job seemed to be filled with endless hours of mowing, fertilizing, and irrigating, which isn't far from the usual response ("So, you cut the grass, or what?") when I tell the uninformed what it is that I do for a living. Needless to say, as I've grown older (and hopefully wiser), it's become very obvious that there's a whole lot more to this job than cutting grass.

At a recent meeting, one of our state's most respected superintendents estimated that he spends 10% of his time worrying about growing grass and the rest of the day talking to members, working on the budget, and managing his staff. From this description, it would be tough to call the modern superintendent a blue-collar worker when he or she is spending 90% their time on white-collar tasks. This makes me feel all the more fortunate to have received such a well-rounded education at the UW, but it still leaves me with no answers about who we actually are.

During the most recent presidential election, I heard a lot about green-collar workers, which seemed like the perfect term for those of us in the GREEN industry. As you know, the term "green" has become the catch-word of the newest environmental movement, but I wonder if Obama or McCain knew that OUR green industry existed long before the current green industry. If you were to look up "green-collar worker" on Wikipedia, you'll find a fairly extensive list of trades that are considered to fit this definition; nowhere does it mention golf course superintendent. So, what's the deal; are we not green-collar workers?

According to one dictionary, green-collar means, "Of or pertaining to both employment and the environment or environmentalism." Well, that certainly sounds official enough, and based on my experiences, this sure does seem to fit the role of the golf course superintendent. Wikipedia may not realize all of the environmentally and socially positive impacts of a healthy stand of turf, but contrary to popular opinion, Wikipedia doesn't know all. Most of us are aware that turf performs nearly

equally to the so-called native species (disclaimer: I have nothing against native species) in just about every head-to-head university research study. However, if you were to ask most members of the general public, "Who should be classified as a green-collar worker, someone who maintains 150 acres of native prairie or a golf course superintendent who maintains 150 acres of turfgrass", I'm guessing that almost ten out of ten would choose the former.

I'm almost 500 words into this article, and so far I've determined that, as an industry insider, we can't just be labeled white or blue-collar and that the general public would probably laugh if we called ourselves green-collar. So, what collar should we wear? Well, if we're doing our jobs correctly, we should be able to wear them all at the same time. That isn't too ambiguous of an answer, is it? 🌱



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Monroe Miller

By David Brandenburg, Golf Course Manager, Rolling Meadows Golf Course

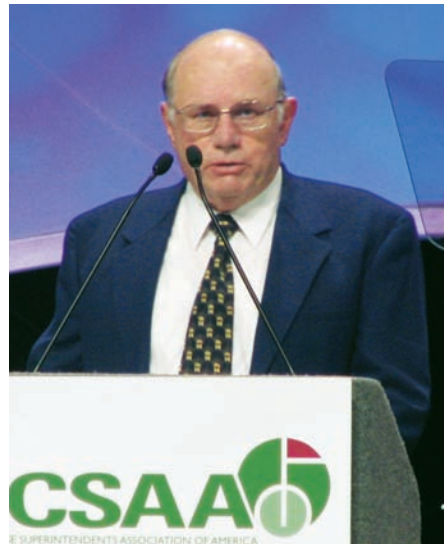
Where do you start when you are covering the career and life of Monroe Miller? The guy is an icon in the industry. Dr. Wayne Kussow said it best at the Symposium when he said Monroe is loyal to Family, God, Country, Industry and Alma Matter. Everything else about Monroe comes from that statement. Monroe and I were talking a few years ago about what made some WGCSA leaders stand out more than others was the fact some “did what needed doing”. Monroe has been doing that for his entire life and in so many ways for so many people.

I spent a couple hours with Monroe this month to gather information for this article and selfishly see his library and tractor collection. It was the fastest two hours imaginable as we covered a wide range of topics and events. He is humble as always and so deserving of the many awards he has achieved. (And yes, the library and tractor collection are better than you can imagine.)

HISTORY -

Born in 1946 to Frank and Virginia Miller, Monroe was raised on a farm in southwest WI near Fennimore. In the March/April 2004 issue of *The Grass Roots* Lori Ward Bocher wrote, In spite of everything beneficial he's done for the golf and turf industries, that's not how Monroe sees himself. “If someone asked me, ‘What single phrase identifies you the best?’ I wouldn't say I'm a golf course superintendent. I wouldn't say I'm a Wisconsin grad or anything else. I'd say the thing that I'm most proud of. *I'm a farm kid.*”

When Monroe graduated from



Monroe gives his speech after receiving the GCSAA Colonel John Morley Distinguished Service Award in New Orleans.

high school in 1964 he was not sure what he wanted to do, but he points out. “I just knew I didn't want to milk cows.” While enrolled at the University of Wisconsin Madison he tried a surveying course in engineering and decided he did not like it but he did like his soils course with Dr. J.R. Love. When Dr. Love made an announcement in class about a job at Nakoma Golf Course, Monroe said he was interested and Dr. Love drove him out to meet the superintendent.

With that act Monroe was in the golf business. Monroe is quoted as saying, “After my first day of working there that summer, I knew that's what I wanted to do. It had machinery. I worked outside. There was a physical aspect to the job. I could see in a short period of time that it was the perfect compromise for me - similar to working on a farm, but I didn't have to deal with Holsteins.”

When Monroe received his Bachelors from UW-Madison in 1968 he planned to attend graduate school, but Uncle Sam drafted him into the Army. That was the middle of the Vietnam Conflict and Miller was shipped to Fort Gordon, Georgia for MP training before leaving for Vietnam in July of 1969. It is clear in my conversations with Monroe, Vietnam was a duty he preformed but he would have skipped it if he could as most would have. The experience of war allowed Miller to appreciate life stateside as he commented that his worst day at work in 36 years at Blackhawk Country Club could not compare to the horrible events going on everyday in Vietnam.

Upon his return home in October of 1970, Dr. Love already had Monroe registered for graduate school. Miller worked on his Masters through 1972 but greater opportunities were offered to him before he could finish his thesis to complete the degree. Blackhawk Country Club was looking for a new superintendent to take over their course and in the club officials conversations with Dr. Love they stated they needed a “educated” superintendent like Jerry O'Donnell at Nakoma. Considering Monroe had worked for Jerry and had 6 years of schooling he quickly became a top candidate for the position. With a growing family, Monroe was happy to take Blackhawk's position when it was offered to him.

Monroe and I discussed how the game has changed in his tenure and how the current economic challenges will effect the private club market. Monroe pointed out how labor intensive golf course



Monroe receives the WGCSA Distinguished Service Award in 1989



The 25 year member class of 1997, John Krutilla, Chuck Frazier, Don Ferger, Monroe Miller.

maintenance has become, often because of our own acts. Superintendents choose to make improvements and spend money because it was available and the boards wanted to improve. Miller talked of the switch from gangs and big tractors on fairways to the triplexes like the Greensking and Ransomes 180s. Looking back a lot of the changes were foolish he expressed and now members need to realize we can cut back and become more efficient.

After 36 years at Blackhawk Country Club, Monroe retired on December 31, 2008 after one of the more successful careers in Wisconsin golf history.

VOLUNTERISM

Monroe gives of himself for the activities and organizations he believes in. He has stayed active at his Alma Mater through committee service to the College of Agriculture and Life Sciences (CALs). Through his persistence and many contacts, Monroe has been a key player in getting vacant turf professor positions filled by qualified candidates and making sure the Dean of CALs and other university leaders know the importance of the Wisconsin Turf Industry. I am not saying Monroe is



1986 WGCSA Directors and Officers, Randy Smith, Bruce Worzella, Monroe Miller, Bill Roberts, Carl Grassel, Roger Bell, Dale Marach, Rodney Johnson.

old, but he grew up with Dr. Love, saw Dr. Kussow's entire career at UW's Soil Department and ensured the industry will continue in good hands as the job transferred to Dr. Doug Soldat.

His active work with the university led to his co-founding the Wisconsin Turfgrass Association (WTA) to promote turf research by the universities professors. Through his involvement and leadership the WTA has accomplished two goals that set the UW Madison apart from other turf programs. Monroe spearheaded a campaign to raise \$250,000 to obtain a \$100,000

match for the University of Wisconsin field turfgrass research facility.

The O.J Noer Research Facility was completed in 1991 with Monroe and his group of leaders overseeing construction the entire way. Building the facility was not enough so Monroe led an effort to raise \$1 million to be matched and invested by the Wisconsin Research Foundation. Those funds will generate enough interest to annually support four graduate research fellowships.

Monroe is continuing his volunteering for the WTA as he recently

began serving as the associations first Ambassador. Miller wants to reach out to the WTA members and non-members to promote the association, build relationships and guarantee the WTA succeeds into the future.

Monroe helped the UW and his golf course by mentoring many students. Dr. Wayne Kussow, Professor Emeritus, UW Wisconsin Department of Soil Science, observed a few years ago that of the 200 graduates of the UW-Madison Turf Program over half have worked for Monroe and benefited from his leadership. Taking on turf students is a two way street. It provides Blackhawk CC employees who have an interest in the turf business but it also takes a lot more time to teach an employee the business than to just teach someone how to mow greens and pickup sticks. Given how many of Monroe's former student employees have been successful in the green industry it is clear he taught them quite well.

Monroe has been a supporter of GCSAA and the changes the national association has seen over the years but never blindly so. He was not afraid to benefit the association by providing criticism of policies and programs that did not benefit the average golf course superintendent.

Monroe was a key figure in getting Wisconsin's Bill Roberts elected to the GCSAA Board of Directors and although he would have been a great candidate himself, Monroe choose to help the association through committee service rather than higher office.

It is not enough to say Miller was a volunteer for the Wisconsin Golf Course Superintendents Association. For many members through his selfless outreach as editor of *The Grass Roots* for 24 years Monroe was the WGCSA. Even today *The Grass Roots* is the only contact many of the

- Nakoma Golf Club - 1967-1969 summer worker
- University of Wisconsin - Madison - B.S. in Soil Science 1968
- United States Army - July 1969 to October 1970
- College of Agriculture and Life Sciences - Teaching Assistant 1972
- Maple Bluff Country Club 1973
- Blackhawk Country Club, Golf Course Superintendent 36 years
- WGCSA President 1984-1985
- WGCSA Editor, *The Grass Roots* - 24 years
- WGCSA Distinguished Service Award - 1989
- WTA - Co-Founder, Past President
- WTA - 1st Executive / Ambassador 2009
- WTA - O.J. Noer Research Center - Fundraiser, Co-Founder
- UW College of Agriculture and Life Sciences - Honorary Recognition Award
- USGA Green Section Award - 2004
- USGA Green Section Committee member
- WSGA Hall of Fame - 2005
- GCSAA - Best content in a chapter publication for unpaid editor - 19 years
- GCSAA - Colonel John Morley - Distinguished Service Award - 2009
- College of Agriculture and Life Sciences Board of Visitors - Emeritus Member
- Wisconsin Agricultural and Life Sciences Alumni Association - Past President
- Club Managers Association - Badger Chapter, Lifetime Achievement Award - 2008

associations 450+ members have with the group.

As the WGCSA President in 1984 and 1985 Monroe took the association to a new level of organization, communication and camaraderie leading him to receive the associations coveted Distinguished Service Award in 1989.

Writing was an enjoyable hobby for Monroe who admitted he used to diagram sentences for fun and loved english class in school. This allowed his transition as editor of *The Grass Roots* to be a natural fit for him. Monroe took the chapter publication to a new level and beyond. He won the best content

award from GCSAA for a publication with a unpaid editor a unprecedented 19 years. They have since stopped giving the chapter publication awards, more than likely because they knew who the winner would be so why bother!

It is because of Monroe's dedication to the WGCSA through his work with *The Grass Roots* the board has created the Monroe Miller Literary Scholarship. This award will be given annually on the basis of student contributions to *The Grass Roots*.

GOLF WITHOUT CLUBS

It is common to wonder how Monroe could be successful in the



Monroe and Cheryl Miller

golf industry when he did not play the game. Monroe admitted he played golf in high school with his friends when he had time off the farm and he enjoyed it. He loves the game but expresses he can go on a golf trip without clubs.

Monroe enjoys the people of the game, the players, the keepers of the green and the personalities of the game such as Arnold Palmer his favorite player whom he had a chance to meet one day when he stopped in at Bay Hill.

Miller also enjoys the history of the game and has a great knowledge of not only Wisconsin's golf history but throughout the country as well. From reading Monroe's articles over the years it is clear with every trip he took he made sure to visit the areas key clubs and learn about their history and people.

As a writer Monroe also enjoys the literature of the game of golf. His library bookshelves contain numerous books from golf's great writers such as Herbert Warren Wind, who Monroe and Cheryl not only met while on a trip out east a few years ago but become friends with. So you may never see Monroe lugging a set of clubs up the fairway, but he enjoys the "game" as much as anyone could.

RETIREMENT

With the commitment Monroe has given the industry and Blackhawk Country Club over his career I wondered how he could retire. Retirement is easy until you are the one doing it. Often the retiree starts to get cold feet when that last day of work gets closer. They wonder, what will work do without me and what will I do without work?

It is clear from our conversation, Monroe has planned for retirement for a long time and looks forward to the rewards it will bring. Rather than a rest period after a career, Miller looks at retirement as an opportunity. An opportunity to do the many things he

could not do while working and serving numerous committees and organizations.

He and Cheryl plan to travel quite a bit and to spend time with his three daughters, Amy, Holly and Christine while perhaps spoiling some grandkids.

He has a goal of visiting the grave site and if available the presidential library of every US President and only has 4 to go. (Minus the one presidential library he will not go to as he disagrees with the man.) If you have read any of Monroe's articles on travel to a conference or family trip you might wonder how he ever gets anywhere with all the historically significant places he stops to see. His passion for history and learning was clear as we talked in his library surrounded by enough books to keep him busy a few decades.

Miller's hobbies include repairing antique radios, his amazing tractor collection, and as expected collecting books on many subjects.

The WGCSA may never have another Monroe Miller, but we will continue to succeed from the hard work and the time he gave to our industry and association.

IN THEIR WORDS -

Stan Zontek, Director, USGA Mid-Atlantic Green Section

As I'm sure everyone is aware, Monroe is a past recipient of the USGA Green Section Award. In this regard, I could detail a long list of Monroe's accomplishments that resulted in his receiving our award. I will leave that to others. Rather, I would like to say a few words about Monroe Miller, the golf course superintendent and Monroe Miller, the person.

I remember well the first time I met Monroe. It was in spring on 1980. I had just been transferred from our New England region to the North Central Green Section region. It was all new to me, turf management in this part of the country. Monroe absolutely made me feel at ease. We talked about many aspects of his golf course and ways to make it better. He accented the positive...a fresh set of to make his golf course better. Following this and subsequent Green Section visits, I began to realize that Monroe was absolutely sincere in his quest to make Black Hawk Country Club the very best it could be. It was gratifying to be part of his team to try and achieve that goal.

Our industry was in transition...the old ways were giving way to such things as lightweight mowing of fairways, the use of plant protectant chemicals on areas of the golf course other than the greens and tees, in an overall goal to make golf courses...look better and also play better. He achieved those goals. I also began to "know" Monroe



Monroe Miller and Randy Smith Receive \$300 GCSAA Scholarships in 1968.



Monroe Miller and Tom Harrison with a \$4,000 donation to the WTA in 1985.

Miller as a person. It has always been said (in areas outside the Mid-West) that the nicest people in the USA are from... the Mid-West. It is a fact. Monroe was genuinely a nice person and I was humbled to be his friend.

Monroe Miller is also another person. He is a gifted writer. To look at Monroe, you would not believe that to be possible!!! He is so quiet and unassuming. However, when he used to get behind that typewriter (remember, those were the good ole days) what flowed was...magic.

I absolutely believe Monroe Miller is the best writer of nay golf course superintendent that I have ever known. I have known many. His talents made, "The Grass Roots" the best monthly superintendent's magazine in the USA if not, the world This is not an idle compliment. I receive dozens of newsletters each month and, and the best one is your magazine.

Also, one of my greatest surprises was giving a speech at the Penn State Turf Conference and...there was Monroe Miller sitting in the front row. His reason...to see how other turf conferences do their work. Also, he wanted to travel through northern Pennsylvania and into New England...to enjoy the color of the fall foliage. Monroe had that ability to balance the professional as well as the personal aspects of our jobs. This was before Penn State joined the Big 10. Thus, he got out of Penn State alive. Just kidding.

In all honesty, I could ramble on for pages. However, Monroe would criticize me for being wordy and not succinct. I can hear it now, "Stanley you could have said this with fewer words." Thus, I need to end this letter. I don't want Monroe to say bad things about my writing talents.

Monroe Miller is one of those special people we all meet in the course of our lives and, we are all better for it.

Dr. Wayne Kussow, Retired Department of Soil Science, University of Wisconsin -Madison

During my nearly 25 year association with Monroe I, like everyone else, came to have tremendous respect for him. He is a person with unsurpassed loyalty and devotion to his family, job, alma mater, and profession. Without his dedication, the sharing of expertise, futuristic vision, encouragement and drive, the turf-grass education and research programs at the University of Wisconsin would be greatly diminished from what they are today. He has literally bettered the lives of hundreds of people - from students to faculty members to everyone in his profession.

On the more personal side, Monroe is a dear friend to the many who have been the recipients of his sage advise, mentoring and thoughtfulness. He has left me with a collection of memories and memorabilia that will be treasured forever.

Dr. Gayle Worf, Retired, Department of Pathology, University of Wisconsin - Madison

I don't recall the first time I met Monroe Miller. That seems surprising, because he has always made an impression on me with his presence. But upon further reflection, maybe it isn't so puzzling. He was typically a thinker and a doer; not a table thumper or a noise maker. That was obvious to all of us who came to know him over the years, but I could really see it in his relationship with the College. While Jim Love and others were making their contribution to the turf industry, Monroe was not satisfied with how much was going on. He was a proud alum, just as his father before him. But he felt it was short changing the big part of agriculture he represented. I never heard him say so - I just sensed it. And rather than just sit back and fuss about it, he began a slow, deliberate process to bring about change. There were others of you who were involved. He was