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During the last 30 years Bruce Williams has answered a lot of superintendent questions.

Bruce responds to the most commonly asked queries about the industry and personal development.

by Bruce R. Williams, CGCS



n the 1980s I decided to take a combination of several skills and develop a series of seminars to share information with my fellow golf course superintendents.

Some experience of teaching at Baldwin-Wallace College in Berea, Ohio, allowed me to develop a few workshops that I presented in two- and fourhour formats. Little did I know that 30-years later I would have grown my repertoire of seminars to a list of more than 30 on a variety of topics.

It has been fun to present at the Golf Industry Show, PGA Show, CMAA Conference, USGA meetings, GCSAA chapter meetings, and numerous regional turfgrass conferences. With the sharing that takes place with everyone in the room, I often believe I get more out of the presentations than the students do.

With all that experience as a presenter, GCI asked me to share the most frequently asked questions that come up during a seminar, afterward in a private discussion and even months afterward in an email exchange.

Here are a few of those questions you ask most often about career development and what it means to be a golf course superintendent.

IS THERE A FUTURE IN THIS INDUSTRY? Golf is reflective of the current economy. As a matter of fact, golf is usually a couple years behind the economic indicators for decline and recovery. In my opinion, this recession has created a sense of rightsizing that is matching the number of interested golfers with the number of available golf facilities.

There is no doubt that there will be fewer courses built than just a few years ago, and expect a negative growth rate for the rest of the decade. Much of the real-estate-driven development will be slow as there are already too many golf/real estate projects with a fair amount of empty units. Second-home sales will be slow until the economy stabilizes and people once again plan for their futures.

At a time when we were seeing 300 to 400 new courses built each year there was a greater demand for golf course superintendents to fill the many new jobs. Today, superintendents are living longer and working longer with many well into their 70s. Early retirement is not an option as it may have been in the past. With courses closing and little

"It may be tougher to work your way up the career ladder today than ever before, but those who apply themselves and work hard can do it."

new development it becomes a supply-and-demand issue. Collectively, many state universities were turning out as many as 1,000 turf graduates into the market per year. Most of these people once went into golf. Now class sizes have been reduced and students have chosen allied fields, such as sports turf management and lawn care.

So my ultimate answer to this question is that there certainly is a future in the industry. There is always room at the top for those who excel in any field. It may be tougher to work your way up the career ladder today than ever before, but those who apply themselves and work hard can do it.

It may take a bit longer to reach career goals, but the strong will survive.

SHOULD I HAVE A SECOND MAJOR? Statistics show a bell-shaped curve for the age of golf course superintendents who are GCSAA members. Wisdom would dictate that not everybody will be a superintendent for their entire career. My best advice is not to wait until you are 55 to begin thinking about the merits of an alternate career path. There are several ways

to prepare yourself for the twilight of your career. Also, these are the same ways to prepare yourself for other opportunities at your career's early and mid points.

The more education you have the better off you are. Employers look for people who can not only grow grass but also have business skills. Those with turf degrees coupled with business, communication, administration or public relations will fare well. This not only

makes you a good superintendent, but it gives you the option to look at director of golf and general manager opportunities. Those skills also allow one to prepare for positions of administration in organizations and potential corporate management or even ownership.



Should someone ever decide to seek an alternate career they would be best positioned to move into positions - such as sales or marketing - with more than just a turf degree.

HOW DO I SEPARATE MYSELF FROM OTHERS IN A JOB SEARCH? This answer could take up a whole book, but I will try to compress it into a few take-home ideas.

Education is the best investment one can make. Some are fortunate to have a four-year degree or greater. Statistics have shown the education level of GCSAA members has steadily increased over the last 80-plus years. It is not uncommon for most superintendents to have a college education. Keep working on what education you have and get any certificates, associate degrees, etc. if you were unable to obtain that baccalaureate degree.

Don't underestimate the value of continuing education and certifica-

tion. Employers do consider this. And when all things are equal among candidates, the amount or level of continuing education can be the deciding factor.

Do your research on any job opportunity. With the Internet, it is so much easier to research job opportunities than ever before. In one sitting I can find out quite a bit about a golf course, including their structure, mission statement, staff, possible finances, architect, grass type and hole layout. Beyond the Internet, you can find out a lot about a job from sales reps, agronomists, current and former employees. Employers are impressed with candidates who have done their homework in researching the job opportunity.



When applying for a job be sure your skills

match the requirements asked for. When composing your cover letter accentuate those matching skills to get the attention required to get an interview. Most jobs I have filled recently have more than 200 applicants so alignment of skills and needs is important.

If your résumé is boiler plate then you really haven't set yourself apart. Take the time and effort to have a career coach evaluate your résumé and make changes that will set you apart. This does not mean embellishing your accomplishments, but rather stating them in a format that will get the reader's attention. I like to use bullet points with a lot of action verbs such as "managed," "directed," "developed," "implemented," "reduced costs" and "designed." Too often résumés contain boring information about staff numbers you worked with and your golf course's budget. If that was 20 years ago, then it is probably irrelevant. Résumés should shout out a number of reasons why the employer should hire you.

When one gets to the point of being offered an interview don't show up empty-handed. Many superintendents who I have worked with develop a thorough packet that they provide to the search committee prior to the interview. These packets include accomplishments at prior positions including before-and-after pictures. I always advise putting together a summary that evaluates the golf course you are applying at and indicating a general plan for improving the course. After all, so many properties ask who can take their course to the next level - so why not spell it out for them?

HOW IMPORTANT IS NETWORKING?

One of my favorite lines is "it's not what you know but who you know." It is also not just who you know but who they know, as well.

People with networks get the jobs. Yes, they need to be able to do the job and have the right amount of experience and education. But inevitably, they are in the loop for what jobs are open and also have a good set of references and contacts who recommend them.

References and knowing the right people cannot be underestimated in your career path. Some say luck got a person the better job. I say through networking and hard work you make your own luck happen.

IF YOU HAD IT TO DO OVER AGAIN, WHAT WOULD YOU DO DIFFER-

ENTLY? I've had a pretty good career and I'm not sure I would do much differently. If I had the time I would have studied for an MBA. I have developed much of my business acumen through trial and error and the many mentors I have worked for and with. That practical application of principles was invaluable.

And for those of you who have played golf with me... I probably could have used a few golf lessons along the way.

As most teachers will tell you, there is no greater reward than having former students tell you how they put your information into practical application and how it helped advance their career. Guess that's why I keep on teaching and helping others to make this an even better profession. GCI

Bruce Williams serves as principal for both Bruce Williams Golf Consulting and Executive Golf Search. He's a frequent GCI

TOP 10 BEST OF THE



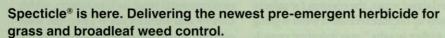
While on the seminar circuit, Bruce Williams gets a lot of great questions from superintendents. But he's also been the recipient of some real doozies, too.

Here are 10 of the best:

- 1. How much does serving on the GCSAA board pay?
- 2. Your job must be easy with unlimited resources and an open checkbook... right?
- 3. What's the most difficult negotiation you have ever had? Answer was: with one of my kids with tears in their eyes.
- 4. Can you find me a job?
- 5. What does it take to get a job like yours?
- 6. I killed a few of my greens but otherwise the course looked good. What are my chances to negotiate a raise?
- 7. I turn over my crew two to three times every summer. Do you think that instills fear in them?
- 8. Why do the chapter leaders get all the good jobs?
- What happens when you tell people what you really think of
- 10. Where do you buy your suits?

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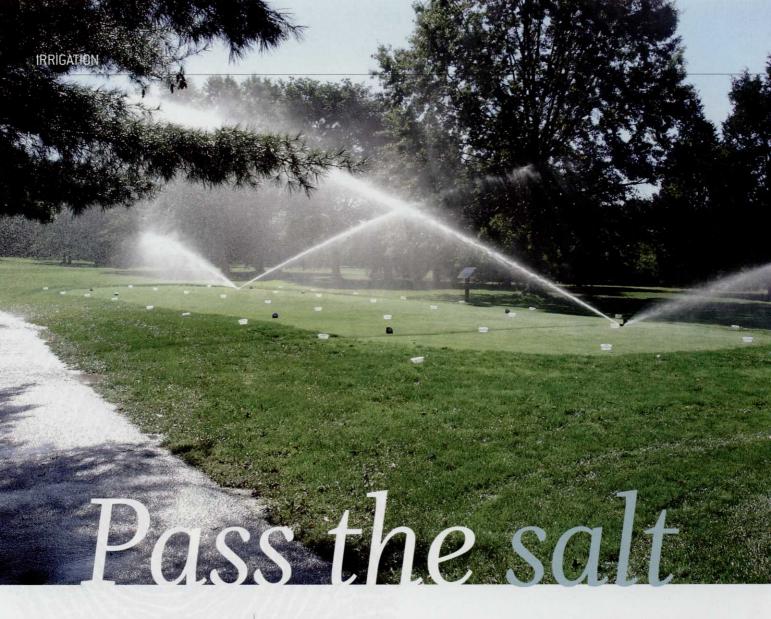


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SPECT(i) CLE

Apply less. Achieve more.



By Jason Stahl

With more and more golf courses using reclaimed water for irrigation, salinity is becoming a bigger issue. Here is how you can effectively manage it.

> Above: To determine the proper steps to take to handle salinity issues on the course, a site assessment must be done first.

alt. We like it around the rim of a margarita glass, but not on our tees, fairways and greens.

The problem is, more and more of it is finding its way onto golf course turfgrass due to the industry's increasing use of reclaimed water, or former wastewater, for irrigation. Sometimes it's in the name of water conservation, while other times it's because it's the only water available.

"As you see more and more golf courses using reclaimed water, the concern for salinity goes way up because reclaimed water is going to be higher in salts," says irrigation consultant Brian Vinchesi. "Your body secretes salt when you urinate, and the treatment plant doesn't remove that salt."

The development of salt-tolerant turfgrasses has also allowed for the use of more saline water, and the increasing number of golf courses built on the coast or wetlands has resulted in salinity problems from a host of sources, such as wind-driven salt spray or saltwater getting into aquifers used for irrigation. According to a study conducted by Dr. Robert Carrow of the Crop and Soil Sciences Department, University of Georgia, and Dr. Ron Duncan, retired professor, University of Georgia and independent consultant, the following problems can be attributed to salt: drought caused by inhibited water uptake, deterioration of soil that limits water movement and aeration, turfgrass nutrient imbalances and plant shoot and root ion toxicities.

The most effective way to tackle any single environmental issue such as salinity, which Carrow and Duncan say is often the most complex environmental challenge, is the Best Management Practice (BMP) approach.

Carrow and Duncan's salinity BMPs plan contains most every strategy a superintendent might use to counter salinity: plant selection, irrigation system design, irrigation scheduling and salt leaching, identification of water and soil amendments, proper amendment application, cultivation, topdressing and soil modification, drainage and sand-capping, nutritional practices, additional cultural

"As you see more and more golf courses using reclaimed water, the concern for salinity goes way up because reclaimed water is going to be higher in salts."

practices such as managing drought and/or traffic stresses, supplemental amendments such as wetting agents and cytokinins, green management considerations and defining the role of products for salt-affected sites.

However, the researchers are careful to note that each course is unique and different and must determine how much salinity they're dealing with. Carrow and Duncan say even sites with small to medium salt levels can fall prey to problems over time if appropriate and timely countermeasures are not taken. The goal, according to Carrow and Duncan, is "an acceptable and sustainable level of saline and sodic site conditions and not total removal, which is impossible when saline irrigation water is routinely used."

To determine the proper steps to take to tackle salinity via a BMP plan, superintendents must first perform a site assessment to gather the following information: soil physical conditions; identifying salt additions; soil chemical aspects; irrigation water quality assessment; and plant analysis.

Part of determining soil physical conditions is figuring out your irrigation system efficiency requirements. The best way to do this, says Vinchesi, is through an irrigation audit called a "cup test." This measures the distribution uniformity of your irrigation system based on actual conditions. Cups are spread out on greens, tees or fairways and the water collected inside them from sprinklers gives you two numbers: how uniform or how evenly you're applying water, and the actual precipitation rate of your sprinklers.

"From a salinity standpoint, in terms of leaching, I would say it's more important that it give you the actual precipitation rate as opposed to the theoretical one, more so than the uniformity," says Vinchesi. "Irrigation efficiency is how much water you're using versus how much you need. And leaching is on top of that. So the more inefficient your system, the more water you'll need to not only irrigate but to leach. When you leach, you really have to put a lot of water down. Plus, you're also irrigating, so every two or three months you're going to totally overwater this thing and basically drown it to push the salts down past the rootzone."

Vinchesi believes such an audit is important for any golf course, but especially for ones with salinity issues.

"Certainly if you have salinity, you need to be testing your water and your soil more frequently," he says.

The golf courses that seem to have the biggest salinity issues, Vinchesi says, are those with housing developments built around them with the water treatment plant on-site and where the disposal field for that plant is the golf course. He counts small golf communities in North Carolina, South Carolina and Arizona with on-site treatment plants as ones that are typically problematic. One such course not only has high salinity from the treatment plant, but also from the well water source they use to leach the soil. Naturally-occurring salinity, he says, is more of a prob-

lem in the Western United States – unless a course is using effluent or reclaimed water.

"If you're pumping out of the Colorado, you'll have more salt than say if you're pumping out of the Potomac," says Vinchesi. "But you could be in Minnesota, and if you're using effluent water, you're going to have an issue."

One of the problems with these treatment plants, says Vinchesi, is that their consistency of treatment can vary. Thus, in order to find out how consistent the salt in your water is, you need to conduct a water quality analysis every month to see if the saline levels vary.

"You will have to deal with it if it's not consistent," he says. "Then, look at what you can do post-irrigation to your water for treatment and look at what you can do to your soil for treatment once the water is already on it."

Vinchesi says there are a number of products coming to the market to deal with salt that can be put in the water before it hits the soil. Manufacturers include Aquatrols, VersaTurf and XMO. Gypsum, he says, has also been an effective in assisting the leaching process.

Products aside, one golf course Vinchesi



Salinity has become a bigger issue on golf courses as the use of reclaimed water rises, as well as a greater number of courses built along coasts or on wetlands.

"Irrigation efficiency is how much water you're using versus how much you need. And leaching is on top of that. So the more inefficient your system, the more water you'll need to not only irrigate but to leach."

knows of has a unique way of pretreating its water. The Governors Club in North Carolina has both an effluent source of water and a saltwater source but the same piping system. When the superintendent is done irrigating his fairways and tees, he flushes the pipe out with freshwater so his greens never get effluent water.

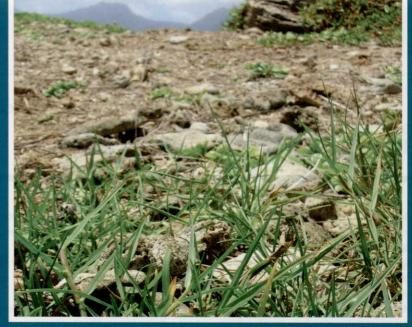
"It's a very ineffective way to do it because you're wasting a couple hundred thousand gallons of water every time you flush out the pipe, but it is a management practice some people use," says Vinchesi.

Vinchesi says if a golf course has both salty soil and salty water, there aren't many options.

"You really have to manage that," he says. "The more salt you have in the water, the more leaching you have to do and the more you have to use to leach because of the concentration of salt. You're trying to push the salt out of the soil, and the more salty the water you're using to push with, the longer it will take and the more water it will take."

Looking at the broad scope of suggestions on managing salinity on golf courses, the task could seem difficult or even impossible. But if superintendents take one step at a time, starting with a site assessment and then proactively monitoring their progress, salinity is a manageable environmental issue. **GCI**

Jason Stahl is a Cleveland, Ohio-based freelance writer and a frequent GCI contributor.



Seashore Paspalum is one of many tools for dealing with very salty soil.

SALINITY SOLUTION?

Some golf courses with highly saline water have resorted to planting Seashore Paspalum, a turfgrass that is highly tolerant of salt conditions. Irrigation consultant Brian Vinchesi cautions that it should only be used by courses with very salty water, and that turf variety is only one of the solutions to salinity.

"I've seen it in places that aren't salty, and boy does it not look good," he says. "It doesn't seem to like freshwater very much.

Interestingly, though, Steve Yarotsky, superintendent of Moody Gardens Municipal Golf Course in Galveston Island, Texas, says that Paspalum has worked out fine on his course despite his salt problems not being as great as some other courses.

"We have very sandy soil conditions, which help us as far as leaching the salts through," Yarotsky says. "Plus, we have the unusual situation of having an RO plant here that treats our effluent water, so there's not a lot of sodium in it. If we treated it one more little time, it would be potable."

Still, Hurricane lke proved to be a challenge as it "put the Gulf of Mexico up on the golf course," as Yarotsky says, so it took some time and effort to flush the salts out from that incident.

This is the fourth year of Moody Gardens using Paspalum, having planted it in 2007, opening in 2008 but then closing for three months in 2008 after Ike hit. Still, Yarotsky says that it has been "so far so good" – except for the contamination of Bermudagrass.

"There just isn't a good chemical to control that," he says. "Also, the Paspalum gets a little off color, a little pukey in winter, more so than Bermudagrass. But in spring, summer and fall it's a pretty grass. It doesn't like the salts but will tolerate it more than Bermudagrass. But I believe it still doesn't like it."

As far as his BMP, Yarotsky applies gypsum to help leach the salts through the soil. However, he said he doesn't have to do that often because his irrigation water isn't highly saline, and when it rains, the rain does a good job of leaching the salts through the very sandy soil. Still, a breeze off the Gulf almost makes up for the low salt level in his water.

"We had a pretty dry year in 2011, so the salt levels went up a little in our soil samples, but it wasn't too bad," adds Yarotsky.

Yarotsky says he wouldwould recommend Paspalum to other courses with salinity issues.

"There is definitely a learning curve with it though, which I'm still going through myself," he says. "It just doesn't need as much nitrogen as much as it does micronutrients – calcium, manganese, magnesium."

As far as irrigation goes, Yarotsky waters less frequently, but a longer cycle and more at night. Still, compared to a golf course with clay-type soil, he has to water more.

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Brian Vinchesi, the 2009 EPA WaterSense Irrigation Partner of the Year, is president of Irrigation Consulting Inc., a golf course irrigation design and consulting firm headquartered in Pepperell, Mass., that designs irrigation systems throughout the world. He can be reached at bvinchesi@irrigationconsulting.com or 978/433-8972.

COLOR CODING

ave you ever had a pipe or fitting break and when you went to isolate it you came across a group of green valve boxes and had to flip three or four lids before you found the isolation valve, because two were wire splices and one was a quick coupler? Have you ever excavated a trench of broken wires and all you see is red or red and white and it takes forever to match up the wires to figure out which wire goes to the sprinkler that is not working?

An easy way to avoid these problems is with color coding. Color coding is easily accomplished in golf course irrigation systems, and the best part is it does not cost anything extra.

Color-coding wire has been around for some time, but there are many different ways it can be done. If you have a hard-wired system to communicate between the central controller and the field controllers or the central controller and the field decoders, there will normally be more than one communication path. Each of these paths should be a different color, breaking the golf course into two, three or four sections. With decoder to sprinkler wires, the wire color should be the same as the

decoder wire. This is especially helpful when using multiple station decoders.

When using field controllers and valve-in-head sprinklers, different colors can and should be used for green/tee control wire, fairway/rough control wire, extra wires, green/tee common wire and fairway/rough common wire. But you do not have to stop there. There are roughly 14 different colors of #10 AWG to #16 AWG wires available. And if that's not enough, you can add a colored stripe to them to give you many more different wire identifiers. One really important place to use colorcoded wires is when replacing an old automatic field controller system with a new one. Don't have any of the new wires be the same colors as the old wires. That way when you damage wires you know immediately if they are the old system or the new system.

Another area to use color coding is with valve boxes. Today's irrigation systems have many different valves: lateral isolation, mainline isolation, drain, electric, air vacuum/release, pond fill and quick couplers. Additionally, valve boxes are used for grounding rods and wire splices. There are

