
QUAD-TINE AERATION

By Mike Handrich

At the urging of my good friend and fellow golf course superintendent Steve Allen, I experimented with quad-tine aeration on my two worst greens in early September. The results were so satisfying that two weeks later I quad-tined all my greens and wrote this article for *The Grass Roots*.

As most of you know, the greens of Racine County Club have a solid two to three Lakeshore sand layer on the top surface. It is of no coincidence that my friend and predecessor Skip Willms has a fetish for sand, and in fact, is rumored to spend all his free time during the summers on various beaches throughout Illinois searching for the perfect sand! When Skip ordered Lakeshore sand for Racine Country Club, he generally ordered it by the barge rather than truck! As you can see, managing fine turfgrass on the shores of Lake Michigan certainly has its advantages.

The good sand base developed by Skip allows the greens to drain well, and it has proven to be a good environment for growing healthy bentgrass. Therefore, I do not have a great need for replacing large quantities of poor growing medium when we aerify greens.

I still feel however that a good aeration is, without doubt, the most beneficial agronomic procedure that can be performed to any turf stand. Aeration immediately improves the exchange of air and water into the soil and the upward movement of carbon dioxide and other toxic gases out of the soil. The obvious results are deeper and more extensive rooting and increased vigor and turf density.



Even a severe critic would find it difficult to criticize this finished product.

As we all know however, aeration is scorned and hated by golfers and golf course superintendents alike. For years I religiously aerified greens the day after Labor Day. It seemed that with each and every year the members' dissatisfaction of the spring aeration grew stronger and stronger. Just when the members were getting back into the groove, and the golf course and greens were getting good, we would go ahead and "tear up the greens". No matter how good the course would look, it was considered to be in bad shape if the greens were aerified! For this and other reasons, I no longer aerify in the spring and instead "tear up the greens" in mid-September. This is where the beauty of quad-tine aeration comes into play.

Quad-tine aeration kits can easily be mounted on the Ryan GA 30, the Greensaire 24, the Jacobsen Aeroking 1224, and the Coremaster. The 1/4-inch coring or solid tines are mounted on "quad-tine holders," creating a diamond-shaped hole pattern with the holes about 1-1/4 inches apart. In comparison with other conventional aeration methods, you get double the holes that are spaced twice as close together. I personally have found no better way to relieve surface compaction. Surface compaction is the most serious problem I have encountered with sand based greens. If left uncorrected, the sand greens have a tendency to become hard and hydrophobic.

A side benefit to quad-tine aeration is the creation of the perfect environment for overseeding bentgrass. The tines can be adjusted to penetrate from 1 to 3 inches in depth. I set them as deep as they would go and overseed Penncross at 1.25 lbs./1000 sq.ft. I opted to pick up the plugs, overseed with a drop spreader, topdress with Lakeshore sand, and then drag the sand with a cocoa mat. The greens were ready for play that day, and the small closely spaced holes hardly interfered with putting. Within three weeks new bentgrass seedlings were crowding out the hardly visible coring



After cores are harvested and before top-dressing, the surface is in good condition.



A golf ball puts the number and hole size in perspective.

holes. The catch was excellent on virtually every green! The holes filled in quickly, and I do not have to worry about possible desiccation this winter due to unfilled holes.

Quad-tines also work great in correcting isolated dry spots that show up during the hot summer months. The plugs should be picked up, and no topdressing is needed because the small holes fill in so quickly. I do not recommend incorporating into the hole a mixture of wetting agent and Milorganite. The area should then be thoroughly watered and promptly forgotten about.

In conclusion, I believe that quad-tine aeration, when used in conjunction with other sound turf management principles, can be a very beneficial tool for the golf course superintendent. I've

had success with using the quad-tine aeration in conjunction with the Toro Hydroject. The quad-tines do a great job in relieving surface compaction,

while the Hydroject fractures the sub-soil allowing root growth deep into the green profile. 🌱



The green surface is very acceptable immediately after topdressing.

Environmental Issues Seminar Held

by Tom Schwab

A GCSAA regional seminar entitled "Environmental Considerations in Golf Course Management" was held on November 9th and 10th in Fond du Lac. The very qualified presenters were Winn Hock, a plant pathologist and Director of Pesticide Education at Penn State University, and Tom Thomas, an environmental attorney.

A theme running through the seminar was for us to become proactive in our communities. Preach the benefits of healthy turf and other advantages a golf course provides. Another theme was to keep educated on current regulations of employee training, emergency contingency planning, community "Right to Know" laws, storage tanks, pesticide handling, and other issues. Keeping educated about environmental issues is not only good management, but may get you recognized as the local environmental expert in your community.

We heard many examples of public relations problems the green industry is suffering from. The nightly news presents blatantly flawed reports on hazards of Daconil and Milorganite. Prominent papers and periodicals like the Wall Street Journal, Family Circle, and Great Outdoors, write headlines like "Poisons in your backyard—The pesticide scandal", "Killer Courses", and

"Lethal Lawns". No wonder the public views any pesticide user as an abuser. Another article they told us about was by the National Audubon Society. In it the Audubon expressed praise for the GCSAA and its members' "care of the land". We can't leave it to that organization and the GCSAA alone to tell about the environmental stewardship superintendents provide. We have to get out and tell the public how golf courses provide greenspace, O₂/CO₂ exchange, wildlife habitat, water purification, erosion control, and temperature, noise, dust, and glare modification not to mention all the economic benefits such as providing jobs, raising the tax base, and raising charity donations.

Tom and Winn showed us many examples of how pesticides can be abused and result in hurting the environment, wildlife and even us. Part of their seminar focused on hazard communication, emergency contingency planning, and proper pesticide handling. Although our association is looked upon favorably by associations like the Audubon Society, the potential for mishandling chemicals within our profession is possible. That's why Winn and Tom reinforced the importance of us staying educated and practicing what we learn.

The seminar gave many good tips

on how to deal with the press if they should happen to call on you someday. One good tip is—not to assume the press is always out to make a negative report. Speaking with them might be a golden opportunity to stress the positive aspects of a golf course mentioned earlier. Also explain to the press how the borders of your course provide excellent wildlife habitat. Show them your native grass restoration, bluebird houses, or even a dead tree you're leaving stand for bird nesting. Just look around on each of your courses. You all have these positive environmental facets. In fact Tom and Winn suggested that if the local paper doesn't call on you, then you should call on them.

A lot of education was had by the thirty-five superintendents that attended this seminar in Fond du Lac. We all know we work hard in doing great things for the environment. The seminar just taught us, among many other things, that we should be getting out and teaching the public about our "care of the land." Tom and Winn told us we have to be persistent in getting this message out. It's much easier to do this than to try to correct the misinformation the public often hears. They said don't underestimate the intelligence of the public. The community will get the message if you tell it. 🌱