Odor Aversion—
(Continued from Page 30)

anxiety and avoidance (Shusterman et al., 1988; Bolla-Wilson et al., 1988) (Tables 1 and 2).

Because of the crucial role that odor perception plays in producing symptoms in these patients, it seems clear that the olfactory system and how it works deserve more than our passing attention (Hirsch, 1990; Gibbons, 1986). The olfactory nerves have a more intimate or direct connection to the brain than any of the other senses, specifically with the hippocampus, amygdalus and other components of the limbic system. It is because of these connections that associations are formed between odor and other events, including their emotional context, and are subsequently retrievable. It is normal for odors to evoke, frighten and arouse us.

TABLE 1
Case 1: Odor Categories and Representative Noxious Smelling Substances Listed in Order of Presentation

<table>
<thead>
<tr>
<th>Odor category</th>
<th>Representative Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexane</td>
<td>Waste Oil, Tar, Methyl ethyl ketone, Ethyl acetate, Carbon disulfide, Pyridine, Diesel fuel, Perfume, Other aversive odors not represented during exposure</td>
</tr>
<tr>
<td>Methyl ethyl ketone</td>
<td>Hot asphalt, Antifreeze, Weed killers, Insect repellent, Cow barn, Cut grass, Dead fish, Industrial Chemicals, Gasoline vapor, Shaving lotion, Hair spray, Leather, Saw dust</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>Cleaning solutions, Fertilizers, Pesticides, Hog barn, Sulfur dioxide, Spoiled food, Industrial Chemicals</td>
</tr>
<tr>
<td>Carbon disulfide</td>
<td></td>
</tr>
<tr>
<td>Pyridine</td>
<td></td>
</tr>
<tr>
<td>Diesel fuel</td>
<td></td>
</tr>
<tr>
<td>Perfume</td>
<td></td>
</tr>
<tr>
<td>Other aversive odors</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 2
Case 2: Hierarchy of Self-Reported Substance Odors and Symptom Descriptions

<table>
<thead>
<tr>
<th>Subject’s rating</th>
<th>Odors</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly offensive</td>
<td>Contact cement, Solvents/petroleum distillates, Methyl ethyl ketones, Alcohols, Oil-based paints</td>
<td>“Confused, difficult to concentrate, stupid, forgetful, head pressure like my head is full of water, almost pressure behind the eyes, cannot read, intense anxiety lingers for days.”</td>
</tr>
<tr>
<td>Modestly offensive</td>
<td>Vehicle exhaust, Nail polish, Latex, Glues, Paints, Silicone caulking, Roofing tar</td>
<td>Generally the same as above but with more facial tension and headaches than other symptoms. Intensity 15-20% less than above.</td>
</tr>
<tr>
<td>Least offensive</td>
<td>Cedar wood, Mink oil, Perfume, Bleach, Odor of floor cleaner in stores</td>
<td>Same symptoms but the intensity approximately 10% less than with moderately offensive odors.</td>
</tr>
</tbody>
</table>
From Azaleas to Zoysia, Golf Course Supers are Experts

There is a person in your community who can help with lawn care troubles, give tips on composting projects, provide information on the safe application of fertilizers and educate youth about environmental stewardship.

If you’re a golfer or live near a golf course, you already know this professional as the golf course superintendent. The superintendent is the person responsible for the physical management of the facility and is equipped with science, business and communication skills. An overwhelming majority of these professionals grew up around the game of golf, and therefore also understand how the game is meant to be played.

“Since the golf course superintendent deals with a variety of issues, you typically find him or her involved in numerous community projects outside of normal job responsibilities,” says Golf Course Superintendents Association of America (GCSAA) President Paul McGinnis.

“Many superintendents serve as consultants to schools and recreation departments in the maintenance of athletic playing fields. Others are regular guests on outdoor-type radio shows or provide a periodic column in a newspaper. Still some host field trips for civic and education groups at their local course. This professional is truly a community asset.”

A recent Golf Digest survey revealed that the superintendent was the most important golf course employee.

“I believe the public looks to the superintendent for expertise and leadership,” McGinnis says. “We are entrusted by golfers to provide optimum playing conditions, while owners of the facilities are quite cognizant that the value of their investment rests in our abilities to maintain and improve conditions.

“But we are morally and ethically responsible for performing our work in the most environmentally sensitive manner possible. The golf course superintendent is an educated professional who is attuned to the environment. Anyone who spends time with a superintendent recognizes that golf courses are valuable sanctuaries for numerous animal and plant species.”

If the superintendent is regarded as the most important person on the golf course, just imagine what he/she can do for your community. — News USA

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One of the largest events of the year is scheduled to be played at your course next Monday. Like most of these events, it was booked a year in advance. You and your crew have been working 15-hour days to prepare the course and then the rain started, just a little to help the rough get back in shape, you hope. Suddenly, just the right amount turns into a little too much. Then the weekend before the event you and your crew have parked the mowers and are scrambling for water pumps and waders. We have all been in this situation but not very many of us were expecting close to 200 of our own peers to show up on that Monday. Such as it went for Marty Terveer and his crew at Hidden Creek in Owatonna the weekend before the Scholarship Scramble on July 14. Marty and his staff deserved and received a great round of applause and thanks for hosting the event under very difficult conditions. Thanks again Marty. You and your staff really did a great job!!! Look for pictures and more about the scramble throughout this issue.

* * * *

A big thanks to John Queensland from Cedar River CC and the Scholarship Committee for their work on the scramble. If you were not able to make it to Owatonna on the 14th, you missed the first opportunity to buy our new MGCSA logo hat. You can order them for $10.00 each from Scott at the MGCSA office. As with all of our merchandise the proceeds go to help fund scholarships.

* * * *

Congratulations to Jeff Anderson from Lester Park Golf Course in Duluth and his wife Jill on the birth of their son on June 20.

* * * *

Thanks go to Dale Wysocki for covering the Dayton’s Challenge and taking the pictures you see in this issue. Also, thanks to Scott Turtinen for the pictures and article related to the Scholarship Scramble.

* * * *

Our deepest sympathies go out to the friends and family of Dan Carpentier, long-time service manager at MTI Distributing Co., and Rick Lucken, assistant at Benson GC. Thanks, Fred, for your kind words in your president’s message this month.

* * * *

In closing this month, with the stresses of the season at 150%, I would like to encourage you to go out to a quiet spot on your course at sunset, by yourself. Put away all business thoughts for 15 minutes and think about what’s really important in your life, ask yourself some hard questions and try to answer them. As my good friend Doug Hausman said in Golf Course Management last month, “It’s only turf.”

* * * *

Thanks so much for taking the time to read Hole Notes. I hope you find it educational as well as enjoyable. See you at Rush Creek on the 18th for the MGCSA Amateur Championship. Until next month.

— Rob Panuska
Editor
WHY SHOULD I USE THE DEEP DRILL AND FILL AERATION?

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Soil compaction can occur in any type of soil. Typically, a "hard pan" forms. Traffic causes soil particles of different sizes to become clustered together, filling up all available air spaces, compacting into a hard layer that can't easily be penetrated by moisture or roots. Some soil types are more susceptible to compaction than others, but once a compaction problem has become established, it can only get worse. As moisture penetrates the compacted layer, and traffic continues, the compaction layer becomes denser and thicker.

Compaction severely restricts the manner in which soil naturally manages water. Both by holding water near the surface of the green — and by limiting the ability of plants to take up water and nutrients from below. Water trapped under the compacted layer reduces plant development, especially during dry periods.

A compacted green means that the fertilizers, pesticides and herbicides you apply cannot be utilized efficiently. If they are not absorbed, they can be washed away easily. Even more serious, they can be trapped near the surface in a concentrated form resulting in turf damage. They can also be captured under the compaction zone, compounding the problem.

Compacted soil results in poor root and plant development. Compacted soil is dense; roots cannot grow in it. That can reduce turf growth by 20, 30, even 50% or more.

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