

Imagine splitting a 5-gallon bucket of sand three ways, sending it to three USGA/A2LA-accredited labs and getting three different sets of results. That's nothing new except that the new laboratory accreditation program wisely implemented by USGA was presumed to pull testing closer together. It's not the entire test process that's giving labs so much trouble. It's the infamous Saturated Hydraulic Conductivity Test, also known as Perc. In the field, we are all starting to wonder about it.

I'm not going to bash USGA or beat on USGA greens. Jim Moore, head of the USGA Construction Education Program, is doing a great job. He wants good greens, good methods and good testing.

The American Association of Laboratory Accreditation (A2LA) is also doing good things. Don Waddington and the A2LA folks care a lot about good lab work. The labs that have gone through the accreditation process have spent time and money to participate in a valuable process.

But the Perc test is an interesting animal. A column of sand is compacted to imitate how it would be in a green, and the sample is saturated to field capacity. The number of inches of water that moves through the column in an hour is the target result. The results, designed to tell us what speed the water moves through the soil profile, are often misunderstood.

In a recent check sample run by all of the A2LA/USGA accredited labs, Saturated Hydraulic Conductivity varied with the labs anywhere between 2 inches to 29 inches per hour. Blind samples showed that the labs had consistent results individually because the same sands were checked within the same lab with virtually the same results.

The problem happens when the comparison is made between the accredited labs. With almost 100 percent standard deviation between laboratories, something is wrong.

I've been saying for a long time that the Perc test can be frivolous. After eyeing thousands of USGA tests, I realize that the test is the last thing we should be placing our pass/fail grade upon. I'm always looking at pore spaces. I've learned that the best USGA greens have ample and balanced air-filled and water-filled pore spaces, re-

Don't Get Perked Up Over Perc Test

BY DAVE WILBER



WITH ALMOST 100
PERCENT STANDARD
DEVIATION BETWEEN
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SOMETHING IS
VERY WRONG

gardless of variability in saturated conductivity.

As the green gets older and the root system develops, the Perc rate will always slow. The problem is when it stops. The thinking was we needed all the water possible, but letting the water run through the root zone at 20 inches to 30 inches an hour only creates a dry, hard green.

When did we ever have an irrigation system that delivered a precipitation rate of 12 inches of water an hour? I hope I never see rain that brings that much water. Common sense seems to be the only thing running out at such a high speed.

The USGA green section guys met with the lab folks earlier this year, and they decided the problems associated with Perc warranted money to conduct a study. Let's hope this analysis goes quickly because we continue to build greens, study or no study.

In the field, we need the laboratory system to work. Nevertheless, something has to change if a test can't be done on a solid, repetitive basis with the results within acceptable lab error.

Some agronomy aces bring up the possibility that we could create a computer model to predict the performance of a mix based on the parts of the test that are easiest to test for. It's a great idea that's already happening with those who know how to read these tests and spot meaningful data.

By the way, no amount of lab testing — good or bad — can overcome poor construction. Every time I see 20 inches of mix in one area and 8 inches in another, I think of all those times somebody got upset at a lab about a 2-inch difference in Perc rate. Talk about common sense, but this happens frequently.

The bottom line: The USGA testing/lab certification is sound, but that doesn't mean it can't be improved — and it all starts with Perc.

Dave Wilber is a Sacramento, Calif.-based independent agronomist who's in the field daily.

Leaders

PEOPLE ON THE MOVE

Environmental Golf named **Terry McGuire** as Western region manager of golf course maintenance; **Vincent Gilmartin** was named superintendent at Glen Annie GC in Santa Barbara, Calif.; **Dan Harper** was promoted to construction operations manager; and **Paula Meeker** joined the business development team.

Chad Scott was named superintendent at Carmel Valley Ranch Resort, a premier golf resort in Monterey, Calif.

Michael Chapman was named as director of golf.



Todd Perkins joined the Professional Products and Services Division of Van Waters & Rogers as a turf and landscape specialist.

Columbia ParCar named **Gary L. Allenbrand** as vice president of sales for the

western U.S. sales territory; **Dave H. O'Connell** was named director of industrial/commercial sales; **Pamela J. Robbins** was named lead finance and leasing specialist.

Profile Products LLC named **Sam Stimmel** as national sales manager. The company also appointed three regional sales managers: **Larry Lennert** in Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Nebraska, Missouri and Wisconsin; **Paul Salmon**, CGCS, in Florida, Georgia, North Carolina and South Carolina; and **Mark Fields**, CGCS, in the company's Gulf region.



Medalist America named **Alan Mark** as a turf specialist in a Ohio, Indiana, Michigan, western Pennsylvania, West Virginia and Kentucky.

Roger V. Tucker was named Western division turfgrass manager for Pennington Seed.



Mike Tentis was named product manager for the Professional Products Division of Simplot Turf & Horticulture. He is responsible for sales of Jacklin



and Medalist America grass seed products throughout the western U.S. and two provinces of western Canada. **Brandie Chapman** was promoted to

public relations and advertising for Simplot Turf & Horticulture.

National Seed Co., a division of Jacklin Seed, appointed **Dan Biddick** as sales representative for Wisconsin and Minnesota.

Jeffery Higgins, Ph.D., was named director of marketing for Pursell Technologies.

Bush Hog expanded its sales force by adding four new managers: **Ron Covel**, Eastern region turf manager; **Kent Howerton**, Central region turf manager; **Jordy Smith**, Western region turf manager; and **Don Cotton**, turf products manager.

Nature Safe Natural & Organic Fertilizers named **Ken Quandt** as regional sales manager for the West, Southwest and northern Midwest regions.

Ward H. Weischet was named superintendent at Oronoque CC in Stratford, Conn.

Let us know about your people on the move. Send information/color photos to Golfdom's Frank Andorka at 7500 Old Oak Blvd., Cleveland, 44130. Fax information to (440) 891-2708 or e-mail to fandorka@advanstar.com.

Events

SEMINARS & CONFERENCES

SEPTEMBER

26-28 Club Managers Association of America Leadership/Legislative Conference
Ritz-Carlton, Pentagon City, Va.
Contact 703-739-9500.

26-29 1999 Crittenden Golf Expo
Convention Center, Chicago.
Contact 800-208-6508.

27-30 Hawaii Mid-Pacific Horticultural Conference & Trade Show
Hilo, Hawaii. Contact Jo Ann Johnston, 808-969-2088.

28-30 PGA International Golf Show
Las Vegas. Contact 561-624-8400.

OCTOBER

8-10 Florida First Coast Golf Show
Tupperware Convention Center,

Orlando, Fla.
Contact 904-223-0498.

20-22 Southwest Turfgrass Annual Conference & Trade Show
Ruidoso, N.M. Contact 505-275-2576.

NOVEMBER

3-5 Eastern Regional Nurserymen's Association Expo '99
Atlantic City, N.J.
Contact 800-376-2463.

4-6 National Arborist Assn.'s Tree Care Industry Expo
Indianapolis. Contact Carol Crossland, 800-733-2622.

7-9 International Irrigation Expo & Technical Conference
Orlando, Fla. Contact Denise Stone, 703-573-3551.

9-11 Penn State Golf Conference
Nittany Lion Inn, State College, Pa. Contact 814-863-3475.

Let us know about your conference. Send information at least four months before the conference date. Information should include event, date, site and contact information (name and phone). Fax information to Frank Andorka at 440-891-2675 or e-mail to fandorka@advanstar.com.

Ad Index

111	Bayer Corp.	24-25
	Dow AgroSciences	46a-46b (reg)
135	Ecosoil	7
137	Epani	16
102	Floratine Products	CV3
	John Deere	9-14
105	Griffin Nature Safe	1
117	Lesco	27
108	Monsanto	18-19
107	Nutramax	29
112	Pacific Sod	17
118	Rohm & Haas	50-51
119	Scotts	5
104	Scotts	43
101	Seed Research	CV2
103	Tee-2-Green	CV4
	Textron	33
114	Textron	35
115	Textron	38
116	Turf Merchants	43
109	United Horticultural Supply ...	31-32 (reg)
110	United Horticultural Supply ...	31-32 (reg)
136	U.S. Chemical Storage	16

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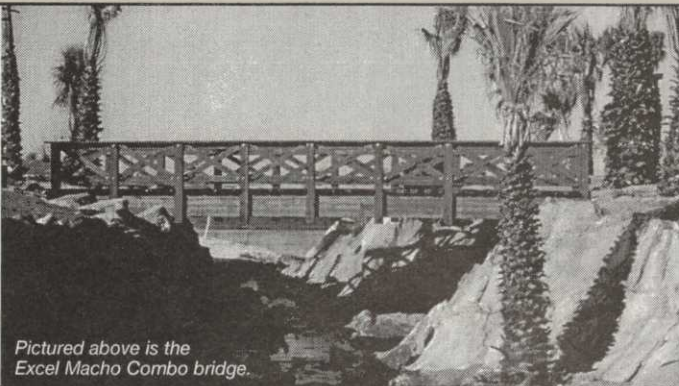
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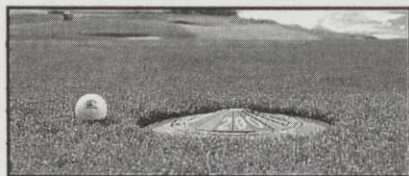
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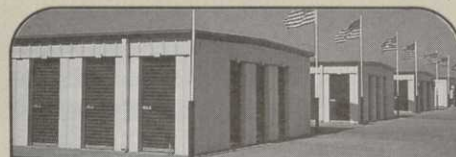


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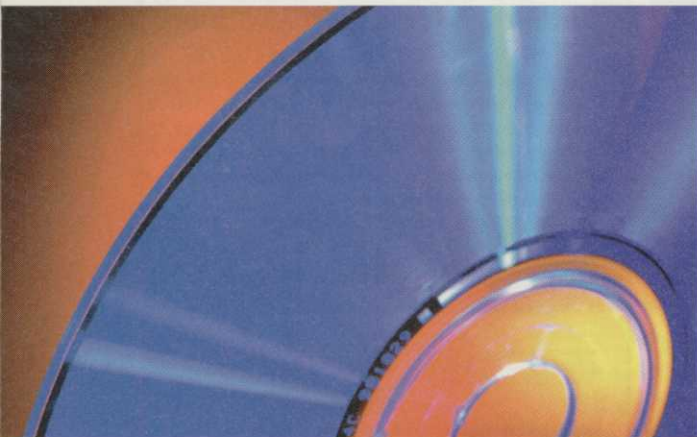
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digital video discs

Critics claimed that most people would not spend their hard-earned money on expensive digital-video discs to transform their living rooms into home theaters. They were wrong.

While DVDs aren't likely to overtake the enormous VHS rental market any time soon, they are here to stay. And if you haven't had the overwhelming experience of the absolute clarity of sound and picture that you get with a DVD, here's a primer that will help.



A DVD looks like any other CD, except that the DVD can hold two hours of high-performance video and audio. The discs can hold up to eight tracks of digital audio, can support up to nine different camera angles (if the filmmaker chooses), allows wide-screen (or letter-boxed) movies on regular televisions, and lets you instantly jump to any part of the movie. Often a DVD will contain some fun features, such as a look behind the scenes of a movie or its original theatrical trailer.

Unlike a VCR, though, you can't record onto a DVD ... yet. But all in all, DVDs hold some serious power.

IT PAYS TO SHOP WHEN HUNTING FOR JUST THE RIGHT DVD SETUP
TO TURN YOUR LIVING ROOM INTO A COMFORTABLE HOME THEATER

BY MARK LUCE

The price of DVD players continues to drop, and it's possible to find reliable units for as low as \$350 (sometimes even cheaper if you shop around or patiently wait for sales). If you want to buy specific titles, they normally cost between \$20 and \$30. However, many video stores now rent DVD movies, usually for \$3 to \$5 a movie. Like most electronics, sticking with name-proven brands like Sony and Panasonic is best for first-time buyers.

Basically, there are a couple of ways to go when choosing a DVD setup. You can buy just the player and hook it up the same way you hook up a VCR, or you can integrate a DVD player with a home-theater receiver and speakers.

Many of the entry-level DVD players, like the popular Panasonic A-120, cost about \$350. However, many of these lower-end players will lack a built-in Dolby Digital Decoder, an audio necessity if you plan to create a fully functioning home theater. For about \$200 more, the JVC XV-D701 or the Pioneer DV414 will provide the necessary decoder.

If you want to boggle your senses with a home-theater setup, it will cost more money. A solid receiver with a Dolby Digital Decoder, such as the Sony STR-DE825, will cost around \$500. Also crucial for cinema-quality sound are home-theater speakers. Sony's SA-VE150 set, including a powerful subwoofer (a loudspeaker de-

signed to reproduce sub-base frequencies), runs around \$400.

As always, shop around. Decide what system will best suit your needs, which has the most flexibility, and, of course, which has the best value. But whatever DVD route you decide upon, please heed this warning: once your friends (and your children's friends) learn that you have a DVD player, it will be difficult to get them out of your house.

Strong Showings

Movies are better on DVD. Here are some titles that will give you a breathtaking home-theater experience.

Terminator 2 — Dazzling sound and visual effects make this one of the best-renting DVD titles.

Le Femme Nikita — This noirish French thriller is a must-see with surround sound.

Priscilla, Queen of the Desert — Lavish colors, an excellent soundtrack and outrageous costumes make this Australian movie a campy DVD classic.

The Three Tenors — Carreras, Domingo and Pavarotti in concert in Terme di Caracalla. Enough said.

The Usual Suspects — This phenomenal DVD contains an audio track of the director and screenwriter talking about what is going on in the movie.

Mark Luce, a freelance writer based in Lawrence, Kan., has turned into a DVD-watching couch potato.

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