

The Great Spec

Don't be afraid to try California greens



BY MICHAEL J. HURDZAN

A common misconception is that any 100-percent sand green is a California green. That's like saying all red automobiles are Ferraris because they all have four wheels.

I agree with my colleague Jim Moore that the green is the most important part of the golf course, and the USGA method is the most highly studied method available. But I don't believe there is any one best way to build a green.

My point of view has been shaped by more than 40 years of seeing greens built out of every imaginable combination of sand, organic matter, inorganic matter and soil — and all of them produce acceptable putting surfaces. Consequently, I believe the preferred method is the one best suited to any given combination of microclimate, irrigation water source, turfgrass, construction budget, maintenance goal and golfer expectations, and it is not always the USGA method. As we learn more about the complex interactions of the physical, biological and chemical aspects of green root zones, more scientifically sound construction methods or modifications will be found successful. One such formula is the California method.

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a California green. That's like saying all red automobiles are Ferraris because they all have four wheels. The difference for greens, as with cars, is in the details.

I also often hear about California greens that have failed. When I hear such claims, I ask the same two questions and I almost always get the same answers.

"Where is this green, for I would like to see it?" I ask innocently. The response is usually, "I'm not sure." By now, I'm fairly sure what's going on, but I ask the second question.

"What certified lab performed the sand analysis and quality-control testing?" I ask. The person usually says either, "I don't know," or "The sand wasn't tested."

From those two answers, I deduce that this failed green may only be a rumor. If it actually exists, it may not have been properly built to California recommendations. On the other hand, I can direct you to thousands of properly built California greens all over North America that grew in fast and that superintendents love because they are easy to care for.

No construction method can guarantee against short-term turfgrass failure, but you can avoid failure by following a few steps before recommending the root-zone architecture. Sources

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The Great Spec Debate



HURDZAN/FRY

There's no magic to the California construction method. It's basic plant and soil science.

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of green failure are more likely to be a poor quality irrigation source, a badly adapted turfgrass cultivar or an improper maintenance practice. My approach is to identify problem sources before beginning and selecting a root zone method that will combat the specific stresses.

I analyze the microclimate of the green for any obvious problems such as shade, air movement or humidity, among others. Then I evaluate the green for a number of possible hole locations, number of shots causing ball pits, traffic patterns and any other foreseeable problem. For some green sites, a USGA green might be best, while others are better served by a California or a modified method. The optimum solution is to try to find a construction method and root-zone architecture that represents the best middle ground for the situation.

Next, I analyze the irrigation water quality, for it will influence selection of turfgrasses and sand for the root zone. The sand should be tested in a lab — and don't hesitate to send a jug of your own water with the sand.

Most labs will test your sand with distilled water, which won't do you any good (unless you're irrigating with pure distilled water). So make sure you send a real-life sample, or you're wasting everyone's time.

After the analysis, it's time to decide on a root-zone architecture that will allow the superintendent to maintain the best balance of chemical, physical and biological factors to maximize turfgrass growth during stress. For some green sites, that "best" root zone is either USGA, California, topsoil or a combination of methods.

A self-fulfilling prophecy is defined as a situation where someone believes so strongly in an idea that it comes to pass because of the believer's subconscious actions. Many superintendents won't have success with California greens if they don't believe in them. I often see superintendents who struggle with California greens because they have biases. Their misconceptions are that California greens don't hold water and nutrients, that pure sand causes root abrasion, and that California greens are vulnerable to isolated dry spot. My advice is to keep an open mind and don't be saddled with prejudices.

Research by Ed McCoy of The Ohio State University, and loosely interpreted by me, bears out what we observe in the field on greens. Some observations are that California greens require less watering than USGA greens. USGA greens drain more quickly to field capacity, but California greens will drain more thoroughly over a long period of time. Flat tile also drains faster than round tile, and root-zone gases can



A modification of the California green combines flat tile and SubAir or Soil Air Technology concepts and equipment.

be exchanged in minutes by applying a vacuum to replace water with air or increase pressure to push up soil gases. Consequently, when we ask our clients to consider the alternatives for green construction, one method is a modified California green.

There is no magic to the California construction method; it's plain old plant and soil science. That California greens are easier to build and cost less are secondary factors to the fact that they perform better than other methods in many situations.

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