SEGREGATION: Is it a Problem?

By Annue Uhring
Southern Golf

The once even-colored and finely cut bentgrass greens seemed to take on a winter fashion statement. Patchy, purple spots appeared on an otherwise healthy middle-aged green.

It this cause for alarm? Can anything be done? Does the average golfer even know the difference, much less care? This strange phenomenon is called segregation.

"I think they should up the busing and make like grasses all go the same place. . . not my golf course!" laughs Lou Nash, a Texan from the Longwood Golf Club in Houston. "Besides, I'm in Bermuda country so I don't see bent greens."

Segregation is not a disease. Instead, it's the blending of different grass seed varieties, which lend to migrate toward each other, therefore "segregating" the varieties into like patches showing the color and texture difference between them. It occurs mostly during colder growing seasons.

Segregation is prominent in older bentgrass greens — usually apparent on the ever-popular Penncross bent greens. Some superintendents live with it, but others are adamant that segregation must go.

Some Say It's Strictly A Question of Cosmetics

"I don't worry about it," declared John Drewderry, from the Winter's Run Golf Club in Maryland."I just rebuilt three greens and seeded into four different types of bentgrass. People say, 'Ah, you're crazy.' We'll see what happens."

"We get segregation," Drewderry continued. "I've got Penncross greens that are twenty-some years old. They've segregated. A neighboring golf course with a C-1, C-19 seed, the old congressionals, separated years ago. I don't find anything wrong with that. I kind of think it's interesting to look at. We certainly have enought segregation from Poa, and we live with that. So why do we worry about segregation from bent? I don't."

According to Joe Henderson at the Golf Club of Tennessee outside Nashville, segregation is just a cosmetic thing. "To me, it's not a big deal," he said. "I am not going to rip up a green because there is segregation on it."

Henderson continued, "Besides, all the segregation I see is in the wintertime. We have Penncross which does segregate. The greens are fairly new. The older they get, the worse you'll see it, but we're closed in the winter so, to us, it doesn't matter."

El Paso Country Club's Kirt Desiderio believes, "My experience is that segregated greens putt the same. So it's more of a cosmetic thing. The golfers say, 'Hey, what's this little patch right here? But, from what I have seen, when it warms up, it goes away. It's more the winter hardiness of certain genetic material that are in those greens that segregate out."

Desiderio continued, "At the time the greens were rebuilt 10 years ago at El Paso Country Club, there was a shortage of Penncross, so they put mostly Penneagle on the greens, and I just haven't had any segregation problems."

Jim Key from Phoenix's Point Resort doesn't worry about segregation either.

"My Penncross greens are six years old. In the winter I have purple spots which you don't notice when the weather is decent. If you're grooming, verticutting, topdressing and brushing, I don 't really see any texture differences and growth habits that cause problems." Key said.

However, Penncross is noted for separation. It just happens. It may or may not be a putting problem or a playability problem.

Is it just visual? Allowing thatch to build up and not keeping the greens firm might cause it to start affecting the roll of the ball.

Others Say Segregation On Greens Has Got To Go

"Segregation is not strictly cosmetic," stated Ken Mangum of the Atlantic Athletic Club in Duluth, Ga. "It is a different plant with different leaf texture and density. You can see a different putting speed and a different grain in some of these older segregated patches. A cold-weather, end-use phosphorus deficiency gives you the purpling."

Chris Ganor, Superintendent at Las Campanas Country Club in Santa Fe, N.M., also has a problem with segregation. "It's worth fixing," he said. "You can see a big, big difference in the quality of the putting surface, when you have one bentgrass as opposed to many different kinds."

Ganor continued, "Some grasses are grainier than others; the leaf blade will lay over. The other grasses are more upright. You'll have a conflict between grass blades alone. That is not only aesthetic, but for putting reasons too."

"If you have a grainless and all of a sudden the grass stands up, then your ball is going to roll a little differently.

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Segregation—

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I've worked at courses where the greens have six different bents and Poa Annua," Ganor said. "It doesn't look too good in the spring and the fall. In the summer, it looks okay."

Mowing Reduces Segregation

"There is a difference in the putting surface, but the difference is really evident when your greens are mowed at a little higher height," said John A. Halms III at the Club Campestre in Monterrey, Mexico.

"When greens are mowed and rolled a little closer, the difference is minimized. But when greens are cut higher, above 5/32nds, there is a difference because some of those patches do tend to stay a little tighter and don't get leafy," Holms said. "I have that problem at the club I am at, and rolling seems to help in the wintertime. I do spray the iron, get the fertilizer on there and do try to help the color a bit."

Ken Mangum explained, "If you've ever seen a Penncross seed field you'd understand why you have segregation. I've got some of the oldest Penncross greens left in Atlanta. This time of year, the segregation shows up in huge distinct patches.

"We've got two research greens where we are looking at all the new bents. We've seeded nine holes with Crenshaw. It will be five to 10 years before we see how much, if any segregation we see from the new bents. But we know they're better. The parents are much more uniform than the old Penncross. I think the segregation will be less, but it will take time to see," Mangum concluded.

DNA Grass Blends May Help Provide Unity

A concern exists with the blends in the new grasses. What happens when two or three different bents are blended together? In some ways, it makes sense to try and utilize the strengths of each grass. The next question is whether or not the new seedling will bring its own segregation problems. Unfortunately, the results may not be known until five or 10 years down the road.

The good news is that, with most of the new bents, such as Tee-2-Green's six new cultivars to be introduced this fall, the leaf texture and density are said to be superior to what has been available in the pat. The new varieties don't seem tot change texture with fertilization as much as Penncross did.

With Penncross, if you fertilize at the wrong time of year, the result is a fat leaf blade that lays over. Newer varieties do not show those tendencies.

"DNA is going to help develop a more pure strand of grass and eliminate the segregation problem," believes Dick Blake (Axis Soil Conditioner 'Rep.'), former President of GCSAA.

"DNA will improve some strains of grass. I don't know of any other way to get rid of segregation without redoing the greens. People plug it out, but it still comes back," he said.

Being Held Hostage By Your Greens?

"Sure, we have bentgrass in Monterrey, Mexico. We are in the mountains," said John Holms, "With segregation, you are held hostage unless you want to change the grass on your greens. Some of the Penncross segregations are excellent. If you could get one segregated variety to cover the entire green surface it would probably be some of the best putting surfaces you would ever find."

He continued, "Because of the segregation in the three parent grasses that come from the Penncross, the big purple spots show up in the wintertime. With the new bent variety from the new one-parent grasses, you will probably never see the segregation in there," Holms concluded.

Mutations & Contaminated Greens Offer Strange Mixes

Mutations occur in other grasses as well. Oftentimes, interesting mutations are not predictable and really don't belong on the golf course, unless they're in the test plot.

Penncross greens contaminate with Poa Annua are another interesting situation which some superintendents take great pains to eliminate. Others, however, are content to accept, groom and maintain their greens to above-average expectations. There are still other varieties, such as Dominant and Penntrio bents, which also are separating.

"We had some of the old 328 grass strains that mutated, so we started taking different mutations and putting it in dishes to cultivate them," explained Lou Nash from Houston. "We had plants that looked like chicken feathers and hanging baskets. It was really bizarre looking. Once it started on the course, you trapped it, killed it all and started over."

According to Robert Sterling, from the Boulders Course in Acworth, Calif., he's seen mutations in Bermuda.

"NuMex Sahara, a new seeded variety, has a tendency to look a lot like common at times, which is where it comes from," he said.

Greens Management Means Dealing With Segregation

From a greens management standpoint, it becomes more difficult when separation occurs. What is done in one spot can be detrimental to another area of the green.

The solution? Start over. . .it's almost impossible to overseed into a creeping bent green, especially if it's Penncross.

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