



Explaining Turf Grain

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Grain on putting greens is mentioned frequently when watching golf on TV and it always creates plenty of discussion within our membership. What should we be doing so it is not a problem at our golf course?

In all likelihood your golf course is already being maintained to control grain on greens. More on this later, but let's first begin by defining turfgrass grain, which is the terminology generally used to describe the undesirable lateral growth orientation of grass leaves, shoots and stolons (aboveground stems).

When problematic, turf grain can deflect a rolling golf ball from its true course of direction and alter its pace. Despite several popular beliefs, turf grain patterns or why turf grows in certain directions is poorly understood and lacks documentation. What we do know is that grain is associated with creeping bentgrass and bermudagrass, the species of choice for putting greens, as they both have a lateral growth habit.

Although turf grain on greens still receives considerable attention today, it is not nearly a factor, if much at all, compared to previous eras in golf. There are several reasons for this. First, grain is largely a function of mowing height, and greens are maintained at lower heights of cut today than ever before.

To illustrate the relationship between mowing height and the influence of turf grain on ball roll, try putting across higher cut turf, such as approaches or fairways. This is often noted whenever temporary greens are used in fairways. The lateral growth patterns in longer cut turf can and almost certainly will impact ball roll. But there is not much opportunity for lateral growing turf to do so when the height of cut is reduced to around an eighth of an inch or less, which is common for many greens today.

Second, turfgrass grain has been greatly reduced thanks to the advent of newer, improved bentgrass and bermudagrass varieties that are finer textured with higher shoot densities, i.e., number of shoots per square inch. Narrower leaves and more of them growing closely together create dense turf with a more upright growth habit that is less likely to develop grain.

Finally, turf managers actively manage against turfgrass grain, and they have more options and better sophisticated tools and techniques at their disposal than ever before. Grain is managed by continuously rotating mowing patterns (this prevents turf from laying over in any given direction as a result of always mowing in one direction), frequently brushing or grooming the turf (to stand it up so as to achieve a better quality of cut), and vertical mowing, or verticutting (to sever laterally growing turf and promote an upright growth habit free of grain).