



Roots in these sodded greens have not yet grown past the interface between the sod and rootzone, and are unstable as a result.

NEW GREENS, NO ROOTS

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New greens construction brings the expectation of a deep, dense root system that extends down to the gravel layer residing 12 inches – or more in some cases – beneath the surface. After all, a new sand-based rootzone offers excellent aeration porosity for roots to thrive. However, depending on the rootzone mixture, the moisture and nutrient retention may be very low. When seeding a cool-season grass or sprigging a warm-season grass into this new rootzone material, roots will proliferate under good management practices. When sodding, however, a layer of soil and thatch that has high moisture retention is placed directly on a new rootzone material with vastly lower moisture retention and roots may remain in the sod layer for weeks or even a few months if the right practices are not employed.

To minimize the impact of the sod/sand interface, it is always best to grow sod on sand with similar physical characteristics to the rootzone material it will eventually call home. While this is important, it does not guarantee that the sod will knit down and root into the new rootzone mixture. There will very likely be a stark difference in moisture and nutrient retention in the shallow sod layer when compared to the new rootzone material and practices must be employed to encourage roots to grow beyond this interface.

The best way to ensure roots remain in the sod layer is to water frequently and lightly and avoid any type of aeration. This is the kind of program that led to the shallow roots shown in the image above. Conversely, deep irrigation on intervals that allow the sod layer to dry between watering and frequent, small-diameter aeration events are the key practices that encourage roots to grow past the sod/sand interface and extend deeper in the new rootzone. Conduct venting operations with solid or hollow tines no larger than 0.25 inch, or by slicing or spiking, on a weekly basis as soon as venting can be completed without heaving the sod. Venting should be employed as often as two to four times monthly during the first growing season. These practices, combined with good growing weather, are critical to producing those deep, dense roots expected on new greens.

If your course is considering a greens renovation project, please reach out to the [USGA agronomists in the West Region](#) for more information on how to deliver healthy, stable new surfaces for your golfers to enjoy.



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