



*Healthy roots, such as these, are critical for growing healthy grass that supports good playing conditions.*

## HEALTHY ROOTS BRING GOOD PLAYING CONDITIONS

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There's no chicken-or-the-egg paradox when it comes to healthy roots and healthy playing surfaces on a golf course. Vigorous turf roots are the foundation of good playability from tee to green. Without a healthy root system, the leaf growth we depend on for good playing conditions simply isn't possible. We may focus entirely on the grass surface while enjoying our round, but golf course superintendents focus first and foremost on building healthy root systems in the soil below.

Roots are responsible for three pillars essential to healthy plants: structural support, absorbing soil moisture and absorbing nutrients. Roots also have other, more-complex responsibilities, but the three pillars are the most important for us golfers to know about. It's easy to forget the impact roots have on golf because the action is all happening underground. Lucky for us, golf course superintendents are experts at promoting the healthy root systems required to support the playing surfaces we love. Here are a few key practices that support healthy roots:

## **Aeration**

Aeration is used to remove or break up undesirable soil and organic matter that is detrimental to healthy grass and good playing conditions. Filling aeration holes with sand provides an ideal growing medium for roots and promotes good drainage. When there is the right proportion of organic matter and sand in the soil, roots receive adequate moisture and nutrients, and are able to “breathe” by exchanging gases.

## **Fertilizer**

Particular fertilizer types encourage rooting. Proper fertilizer rates and timing promote dense, healthy roots that are able to absorb other nutrients critical for plant processes.

## **Irrigation**

Superintendents promote deep roots that require less irrigation by watering deep and infrequently. Applying enough water to moisten deep into the soil and then waiting as long as possible before watering again encourages roots to go looking for water. When done properly, this approach to watering has tremendous turf health benefits, results in less water use and produces firm playing conditions.

While there are numerous other strategies superintendents utilize to promote healthy roots and good playing surfaces, the most important thing for golfers to know is that the foundation for a smooth putting green or high-quality fairway lies within the soil.