

Pruning Tree Roots Improves Playing Conditions

Edgewood Country Club
Stanley Heidinger, superintendent

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Issue

When tree roots compete with turfgrass for water and nutrients, they usually win the battle. Tree root competition can cause turf thinning that creates unfavorable playing conditions and erosion issues. Furthermore, surface roots can interfere with golf shots and damage maintenance equipment.

Many of the oak trees at Edgewood Country Club have grown so large that their roots were causing turf thinning in the primary rough surrounding the fairways. Some roots were even causing issues within the fairways themselves. Supplemental fertility and irrigation in these areas was not enough to keep the turf healthy and playing well.

Action

Superintendent Stanley Heidinger decided that pruning the tree roots along the fairways and primary rough areas was needed to reduce root competition and improve playing conditions. Irrigation and other underground infrastructure was located and marked to avoid damage during the pruning process. A 36-inch trencher, which was rented locally, was used to sever tree roots to a depth of approximately 2-3 feet. Sod was removed prior to root pruning and reused to manage project costs. Plywood was also used to minimize turf damage from the trencher and expedite cleanup.

After a trench was dug to sever the tree roots, a heavy-duty plastic tarp was installed vertically in the trench to minimize future root encroachment. The tarp was only installed in areas where drainage would not be a concern. The trench was then backfilled, compacted and resodded.

Results

Selectively pruning tree roots has dramatically improved playing conditions and golfer satisfaction at Edgewood. Also, less water and fertilizer is needed to keep the turf healthy and dense in areas where root competition was once a problem. However, the project did have some minor challenges.

The project took place in the winter which made transporting the trencher difficult due to snow and poor weather conditions. As-built maps of the golf course were incomplete which led to some accidental damage of irrigation, drainage and other underground infrastructure. In retrospect, Heidinger would have located and marked these underground structures earlier in the fall when snow and ice wasn't present.

Even with these challenges, the project was a success and Heidinger plans to prune tree roots again with a less-invasive machine specifically designed for root pruning. Using this machine won't allow him to install the plastic barrier but it will minimize damage to irrigation and drainage pipes.



Pruning tree roots reduces competition for water and nutrients between trees and turfgrass, leading to healthier turf and better playing conditions.