

Advancing the Turfgrass Industry in New Jersey and the World



Photo comparing two profile samples taken from nine-year old rootzone plots



FUNDING TURF ADVANCEMENTS #6: **Rutgers 9 Year Rootzone Amendment Research**

The data gathered from Dr. James Murphy's monumental, nine-year research project on rootzone amendments for putting green construction is a significant resource for today's superintendents and athletic field managers.

Thanks to funding from the NJTA, as well as the USGA, GCSAA, Tri-State Turf Research Foundation, New Jersey Turfgrass Foundation, Golf Course Superintendents Association of NJ, US Silica, Dawson Corporation, AT Sales, Koonz Sprinkler, and the New Jersey State Golf Association, Dr. Murphy and his team at Rutgers Center for Turfgrass Science built and studied more than 100 seven-by-eight foot plots of various soil mixes.

"Imagine putting one soil here, one soil there, another soil in dozens of other plots in between," said soil expert and NJTA board member Dr. Karen Plumley. "The amount of physical work that was put into building this research area was amazing."

With a seemingly endless amount of greens, soils, and amendments, this enormous investigation aimed to make sense of it all. The study specifically evaluated the effects of:

1. Growing microenvironment (poor vs excellent air circulation)
2. Sand size distribution
3. Rootzone depth
4. Rootzone amendments
5. Options to reduce water and nutrient inputs for managing putting greens
6. Rootzone physical and chemical changes over a nine-year period



After analyzing the data pulled from all of those seven-by-eight foot plots over more than 100 months, there is no doubt concerning the benefits of properly amending sand for construction of putting green rootzones.



“A rootzone of 100% sand does not become 'amended' over time and will continue to have very low (too low) water and nutrient retention,” said Dr. James Murphy. “The end result is putting green turf that requires frequent, intensive management inputs to avoid drought stress and maintain adequate plant nutrition.”

Read more detailed findings and practical information you can use about inorganic amendments, compost, and finer-textured soil in the 2007 Green Section Record article entitled, [“Research You Can use: Rootzone Amendments for](#)

[Putting Green Construction.”](#)

FUNDING TURF ADVANCEMENTS is Brought to You By: **YOU & ALL Members of the NJTA**

The NJTA exists solely to promote the turfgrass industry in the Garden State through education, professionalism, and leadership. Thanks to the support of members like you, the NJTA is able to subsidize some of the research needs of the Rutgers University Center for Turfgrass Science.

If you would like to support these efforts further, you are welcome to [Donate to the NJTA Foundation](#) anytime!



Annual Conference is Next Week!
NJ Green Expo:
December 4-6, 2018
2018 Green Expo: *Growing Turfgrass Together*
The Borgata Hotel, Atlantic City, NJ
Onsite Registration Will Be Available

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