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404 Newcomen Rd., Suite 200 • Exton, PA 19341  
Phone: (610) 594-9950 • Fax: (610) 594-7755



Up  
Bottom  
the  
from  
Turf  
Quality

**SOILLIFE™**





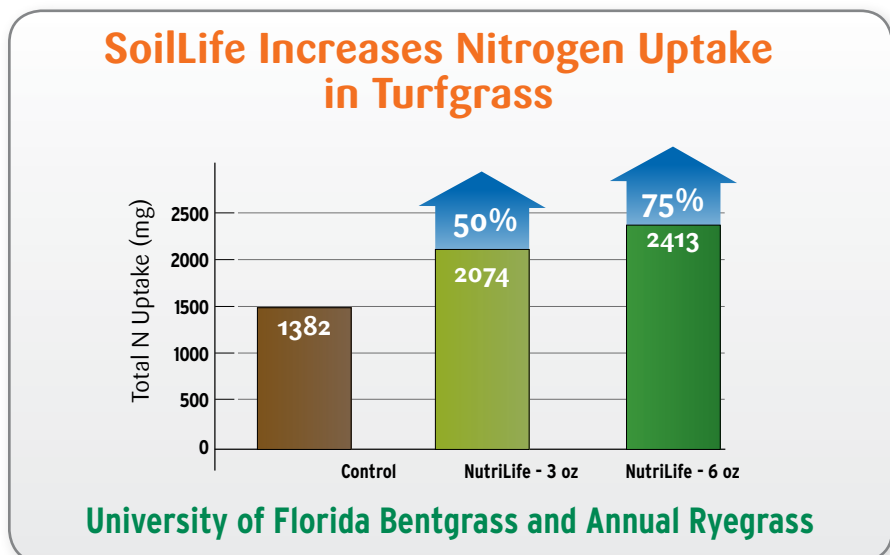
# Consistent High Quality Turf from the Bottom Up

## Healthier Soils with SoilLife™ - The Key to Consistent High Quality Turf

Everybody judges your turf from the top down. Color? Consistency? Fast and Firm? The real truth is that the soil plays a big part in how your turf starts and ends up season after season. That's where SoilLife comes in as the soil amendment that delivers healthier soils for healthier turf. And healthier turf makes your job easier.

### Quality Turf from the Bottom Up

Bound up nutrients in the soil do not benefit your turf. As time goes on your turf's roots are looking for the nutrients they need to grow strong and healthy. When these nutrients are locked up the turf only gets a portion of what it could have, so it does without, and even though it looks healthy it could be much healthier.



SoilLife helps to improve soil structure by increasing aeration, water penetration and soil aggregation. Consistent use can help reduce soil compaction and salinity; and help plants obtain nutrients more efficiently - in turn, helping to reduce nutrient tie-up. An improved soil environment can better promote turf and plant vigor and vitality, and improve coverage.

## SoilLife...Getting to the Root of Success

Poor Roots. They take such a beating - "Root of all evil", "Root of the Problem", and so on. In actuality, roots are the backbone of the plant, giving it structure, security, food, and water. So how can you make it easier on your roots - use SoilLife.



Blue Grass - Auburn University

**SoilLife Healthier Soils  
Improve Root Growth**

- Improved Root Mass
- Improved Shoot Density
- Increased Root Growth



Bent Grass - Canada

## SoilLife...Making Turf Management Easier

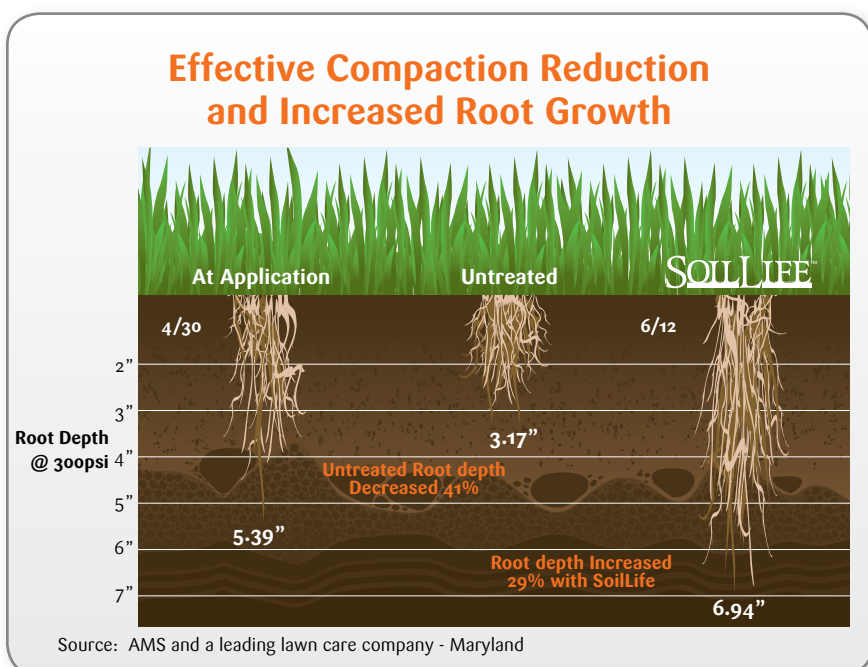
SoilLife is a biochemical soil conditioner that dramatically enhances soil structure, nutrient efficiency, and plant quality. And healthier turf better handles all that Mother Nature throws at it, making your job easier.

# Compaction Reduction and Water Management from the Bottom Up

## SoilLife - Giving Roots a Place to Go and Grow

Getting nutrients to the roots solves only half the problem. If the soil is too compacted for the roots to go anywhere, they will grow shallow, and run horizontally to the surface. Soil compaction is the result of both chemical and physical stresses on the soil. These stresses also have an adverse affect on the soil's microbiological functioning, and the combination of all of these factors can severely restrict plant growth.

Plant growth response is the best indicator of soil improvement, but we can also measure physical changes within the soil itself. A penetrometer will measure the force it takes to penetrate the upper portions of the soil. Roots can't push through the soil if it takes a penetrating force greater than 300 pounds per square inch (psi). In many cases, within 6 weeks of a SoilLife application, the penetrometer is able to be pushed (like plant roots) deeper into the soil before reaching the 300-psi limit. The chart below shows a six-week reading of soils comparing soils treated with SoilLife and untreated soils.

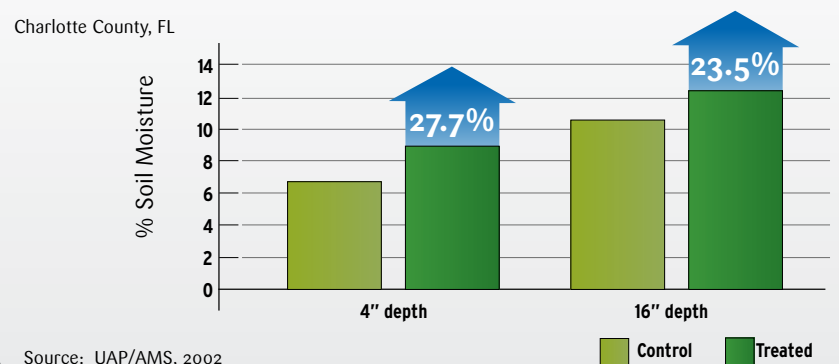


## SoilLife Improves Water Management

Water management is the skill of efficiently applying water to the soil to meet turf growth requirements and stimulate aerobic microbiological functioning. Soil moisture content substantially below or above 50% of the soil's maximum water holding capacity is costly in terms of long-term harm to the soil's productivity and wasted energy costs.

Insufficient moisture promotes the build up of salts, which destroys soil structure and further lessens the ability of roots to take up water. Excessive moisture reduces soil aeration, wastes water and causes extra financial burdens relating to pumping and labor costs. SoilLife works within the soil to reduce salinity and build soil structure. Thus SoilLife addresses those soil factors, which leads directly to improved water management.

### SoilLife - For Healthier Soils Improves Soil Water Efficiency



SoilLife helps to rebuild soil structure by balancing some of the soil's chemistry. Extractable sodium is reduced in the soil by leaching and/or precipitation, which promotes the development of soil aggregation. The combination of small and large soil aggregates creates small and large pore spaces for improved drainage and aeration. Improved root growth increases the plant's access to water, which in turn, stimulates microbial functioning, further expanding the soil building processes. Water management is improved because the soil is better able to hold the plant's available moisture. Superintendents can then better judge irrigation requirements; and avoid over or under watering the crop.



## When They Talk about Soil Health, They Talk about SoilLife

**Dr. J.B. Sartain - University of Florida**  
“... the application of SoilLife will improve the quality, growth and N uptake of overseeded ryegrass within 28-42 days after application...”

**Dr. Frank Rossi - Cornell University**  
“With SoilLife, our trials over three years have shown that we can reduce the nitrogen required to grow quality turf-grass by 25% or more.”

**Dr. Joseph Kloepper - Auburn University**  
“AMS products have resulted in significant enhancement of plant growth at a very high level of consistency...”

## Protocols

### Golf Course Program- Tees & Greens

- 6 Application Program (tees, greens, 1/2 driving range)
- Initial Application - 6 oz/1000 sq. ft.
- 2nd-6th Application - 3 oz/1000 sq. ft. every 4 weeks
- Applied within normal spray programs

- Cost effective at MSRP (\$33/gallon)
- First Application - \$1.50/1000 sq. ft.
- Additional Applications - \$0.75/1000 sq. ft.
- Total Program - 70 gallons

### Golf Course Program- Fairways

- 2 to 3 Application Program (est. 35 acres of fairways)
- Initial Application - 6 oz/1000 sq. ft. (2 gallons per acre)
- Additional Applications every 8 to 10 weeks
- Additional Applications - 3 oz/1000 sq. ft. (1 gal. per acre)

- Applied within normal spray programs
- Cost effective (\$33/gallon)
- First Application - \$1.50/1000 sq. ft. (\$66 per acre)
- Additional Applications - \$0.75/1000 sq. ft. (\$33 per acre)
- Total Program - 105 to 140 gallons

### Golf Course Program- Overseeding

- 2 Application Program (est. 35 acres of fairways)
- Initial Application - 6 oz/1000 sq. ft. (2 gallons per acre) prior to seeding
- Second Application - 3 oz/1000 sq. ft. (1 gal. per acre) 4 to 6 weeks after seeding

- Cost effective (\$33/gallon)
- First Application - \$1.50/1000 sq. ft. (\$66 per acre)
- Additional Applications - \$0.75/1000 sq. ft. (\$33 per acre)
- Total Program - 105 gallons