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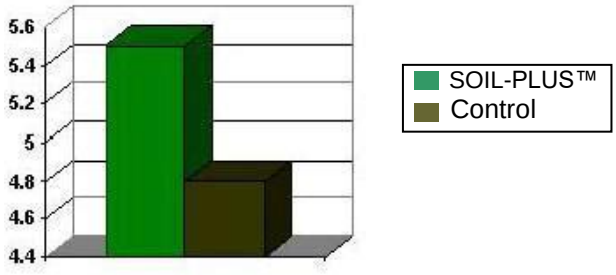
Virginia Polytech University Turf Trials Focus: Determine the Efficacy of Biofeed SOIL-PLUS™

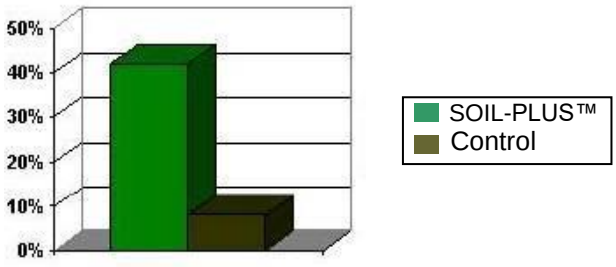
Dr. Richard Schmidt, former Professor of Agronomy at Virginia Poly-Tech University, conducted a series of studies of Biofeed SOIL-PLUS™ a proprietary organic bio-stimulant and soil activator formula produced by Biofeed Solutions, Inc.

Mature Penncross Creeping Bentgrass (Agrostis Palustris) growing at the Virginia Tech Turfgrass Research Center was used for this study. Periodic observations were made to determine the effects of SOIL-PLUS™ on sodium toxicity, root growth, clipping yields, turf color, photosynthetic capacity, drought stress, and SOD antioxidant activity. All areas were fertilized with additional urea nitrogen at a rate of 0.5-Lb of actual nitrogen to imitate actual use conditions. The following bar graphs show the dramatic benefits of SOIL-PLUS™.

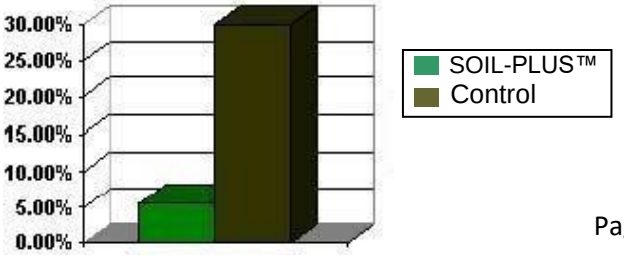
SODIUM TOXICITY: 2-10cm plugs were removed from each treated plot, transplanted in plastic containers, and irrigated 3-times per week for 6 weeks with a 2% saline (salt) solution. This percentage of sodium is ordinarily nearing toxic levels and is usually considered harmful to Bentgrasss. The Bentgrasss irrigated with saline water did not statistically increase root mass. However, the grass irrigated with 2% saline water and treated with SOIL-PLUS™ produced 15% more roots than the control.



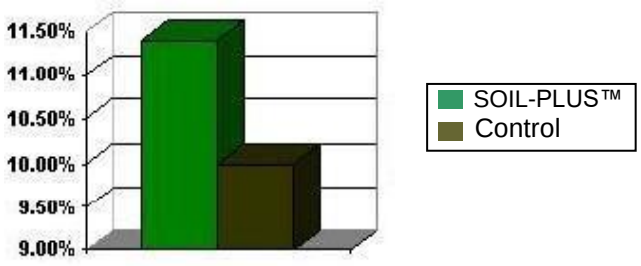
ROOT GROWTH UNDER DROUGHT CONDITIONS: Root mass dry weight increased by up to 42% when the bent grass areas were treated every 2 weeks at a rate of 4-8 ounces per 1000 sq. ft. of SOIL-PLUS™. Control areas exhibited less than 5%-8% increase in root growth during the same test periods.



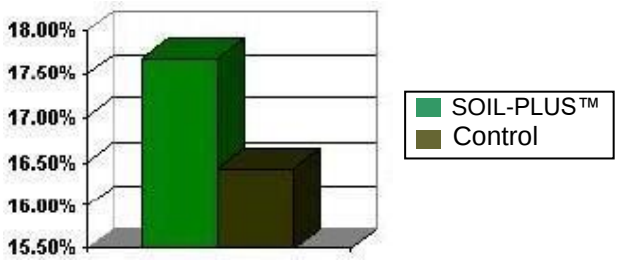
DOLLAR SPOT RATINGS: From 7/22-9/8, ratings were given for resistance to dollar spot in the treated areas as compared to the control. The SOIL-PLUS™ treated areas exhibited a 24.5% reduction in occurrence of dollar spot.



PHOTOSYNTHETIC CAPACITY: During periods of high stress Creeping Bentgrass, like most grasses, tends to become weakened and photosynthesis drops off. However, turf treated with SOIL-PLUS™ showed an average increase of 14% greater photosynthetic capacity than the control plots. This measurement accurately determines the rate of conversion of light into usable energy.



CHLOROPHYLL CAPACITY: During photosynthesis, tiny plant cells combine sunlight, water, and minerals and convert it into chlorophyll. Throughout the tests, the SOIL-PLUS™ treated Bentgrass had 7.0% higher chlorophyll content compared to the side by side control areas. Even minute increases in chlorophyll content resulted in improved stress tolerance.



SUPEROXIDE DISMUTASE (S.O.D.): A plant's ability to manage the products of photosynthesis such as oxygen, are regulated by the anti-oxidant, S.O.D. When present in adequate levels, S.O.D. reduces or eliminates damage to sensitive plant cells that may occur due to the presence of free oxygen produced during photosynthesis. Often this damage occurs while the plant is experiencing stress such as heat, drought or other environmental stress or when nutritional levels prohibit its production.

S.O.D. has also been shown to control free radicals within the human body and our primary source is green leafy plants. Its production is normally relevant to chlorophyll production and the Bentgrass treated in this study measured over 49% higher S.O.D. activity as compared to the control plots.