

Improving The Development of Kentucky Bluegrass Sod & Seed with APEX-10

Kentucky bluegrass seed is a primary grass species used for temperate climate sports fields because of its density and unique rhizome growth qualities that provides wear recovery. Kentucky Bluegrass sod is selected when time constraints become a factor during seasonal play. The biggest challenge when selecting sod for repair is establishing fully rooted sod as soon as possible to achieve functional footing for play and to insure player safety and turf longevity.

At Virginia Tech the organic and humus qualities of APEX-10 an OMRI approved organic peat humic substance were compared with the humic acid qualities of Leonardite. The Studies objective was to examine the establishment rate of Kentucky bluegrass post sod transplant for root mass, root strength, and tiller density (See Table 1).

At Rutgers University APEX-10 was tested with Kentucky bluegrass seed planted in sandy loam soil with adequate and deficient phosphorus levels and measured for turf height and turf density over a 6-week period (See Table 3)

Virginia Tech

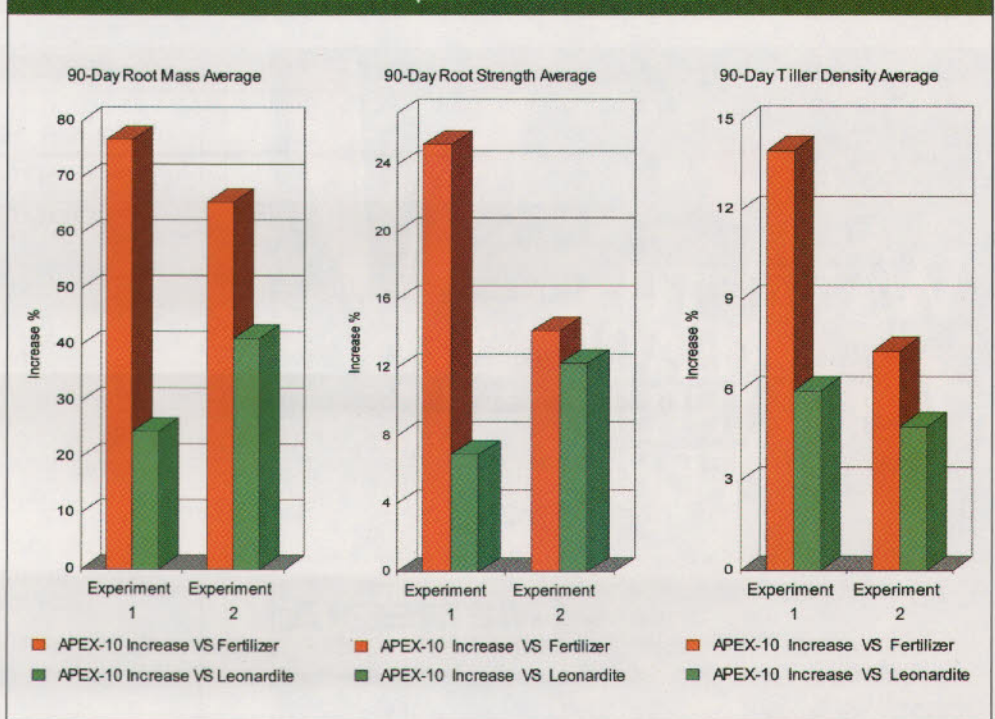
At the Virginia Tech Turfgrass Research Center two studies were conducted (April 26 - July 22 & August 27 - November 23) using APEX-10 and Humic Acid from Leonardite on an adequately fertilized sand based root zone

with an adequately fertilized sand based root zone used as the control. The chemical properties of APEX-10 and the Leonardite were also examined (See Table 2).

Kentucky bluegrass sod was placed of medium-coarse textured sand with expanded metal sheets having uniform openings to

allow root growth into the underlying sand and used for evaluating turf strength. The sod was rolled over the grates and fertilized with 15-30-15 and watered. Treatments were applied the day after sodding, with re-application every two weeks at the recommended rates until a total of six applications were

Table 1. Virginia Tech Kentucky bluegrass sod transplant, APEX-10 compared to Leonardite & Fertilizer



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Table 2. Virginia Tech chemical analysis, APEX-10 compared to Leonardite

Chemical Characteristics of APEX-10 and Leonardite

Parameter	Peat Humic Substance	Leonardite Humic Acid
Solids content	11%	100%
Ash (inorganic) content	12.5%	34%
Volatile (organic) content	87.5%	66%
Total C	49.3%	35%
Total N	0.91%	0.78%
C/N ratio	54:1	45:1
Humic acid in solids	100%	80%
pH	4.6	9.5

Additional substances added to soil (APEX-10 Compared to Leonardite)

	APEX-10	Leonardite
	Additional Solids	809%
	Additional Inorganic Matter	172%
Additional Volatile Organic Content	33%	
Additional Soluble Carbon	41%	
Additional Nitrogen	<.02%	
Increase in C/N Ratio	20%	
Additional Soluble Humic Acid	25%	
	Additional Non-Soluble Humate	25%
	Increase in pH	106%

applied during each experimental cycle.

Mowing was performed twice weekly at the height of 3.8 cm at two weeks after transplanting, until two weeks before the end of each experimental cycle, foliar fertilizer 20-20-20 with micronutrients was applied to all plots uniformly and Irrigation was provided on an as needed basis in order to prevent visual wilting.

Rutgers University

At the Rutgers University Research Farm in New Brunswick four replications were configured and treated with and without APEX-10 and with adequate levels of phosphorus and deficient levels of phosphorus.

phorus and deficient levels of phosphorus. Plots treated with APEX-10 received three applications at the rate of 1.5 ounces per 1000 sq ft to newly seeded Kentucky bluegrass in sandy loam soil and evaluated for 6-weeks.

Results

Turfgrass height and density was generally better in soils with phosphorus applied than those deficient in phosphorus. The combination of APEX-10 further enhanced turfgrass height and density when applied in soil with deficient levels of phosphorus and when applied in soils with adequate levels of phosphorus. ■

Table 3. Rutgers University Kentucky bluegrass seed establishment

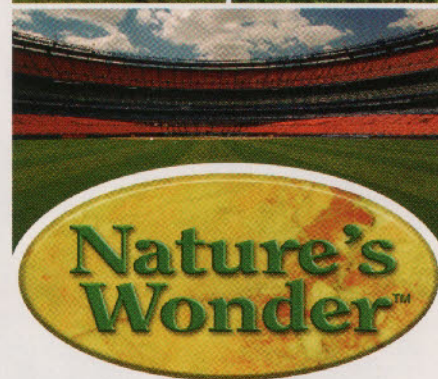
6-Week Height Average			6-Week Density Average		
Plot	Plot	Increase	Plot	Plot	Increase
T1	T2	4.41 %	T1	T2	16.84%
T1	T3	15.25 %	T1	T3	50.64%
T1	T4	18.54 %	T1	T4	61.30%

T1 = Control With Deficient Phosphorus
T3 = APEX-10 & Deficient Phosphorus

T2 = No APEX-10 & Phosphorus
T4 = APEX-10 & Phosphorus

WHY APEX-10?

DEEPER ROOTS | STRONGER TURF | INCREASED BIOMASS



Natures Wonder APEX-10 is an organic Peat Humic Substance made from highly humified North American Peat. APEX-10 organic properties are over 88.5% volatile and 100% of the humic acid is plant available. These Biostimulating qualities of APEX-10 have been proven in university studies and in the field to deliver the highest results with the lowest application rate.

WITH THESE BEING JUST A FEW OF THE PROVEN RESULTS USING APEX-10, THE REAL QUESTION IS...

Why Not APEX-10?

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