

Independent Test Results

- 2186% Increase in Infiltration Rate
- 85% More Air Pores
- Air Water Balance was 1:2.76 now 1:1.31 – almost textbook ideal!



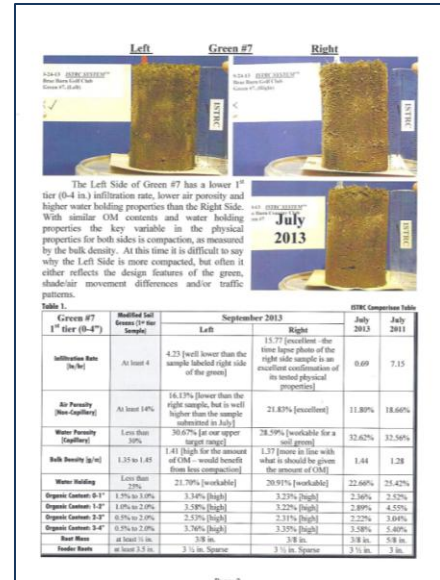
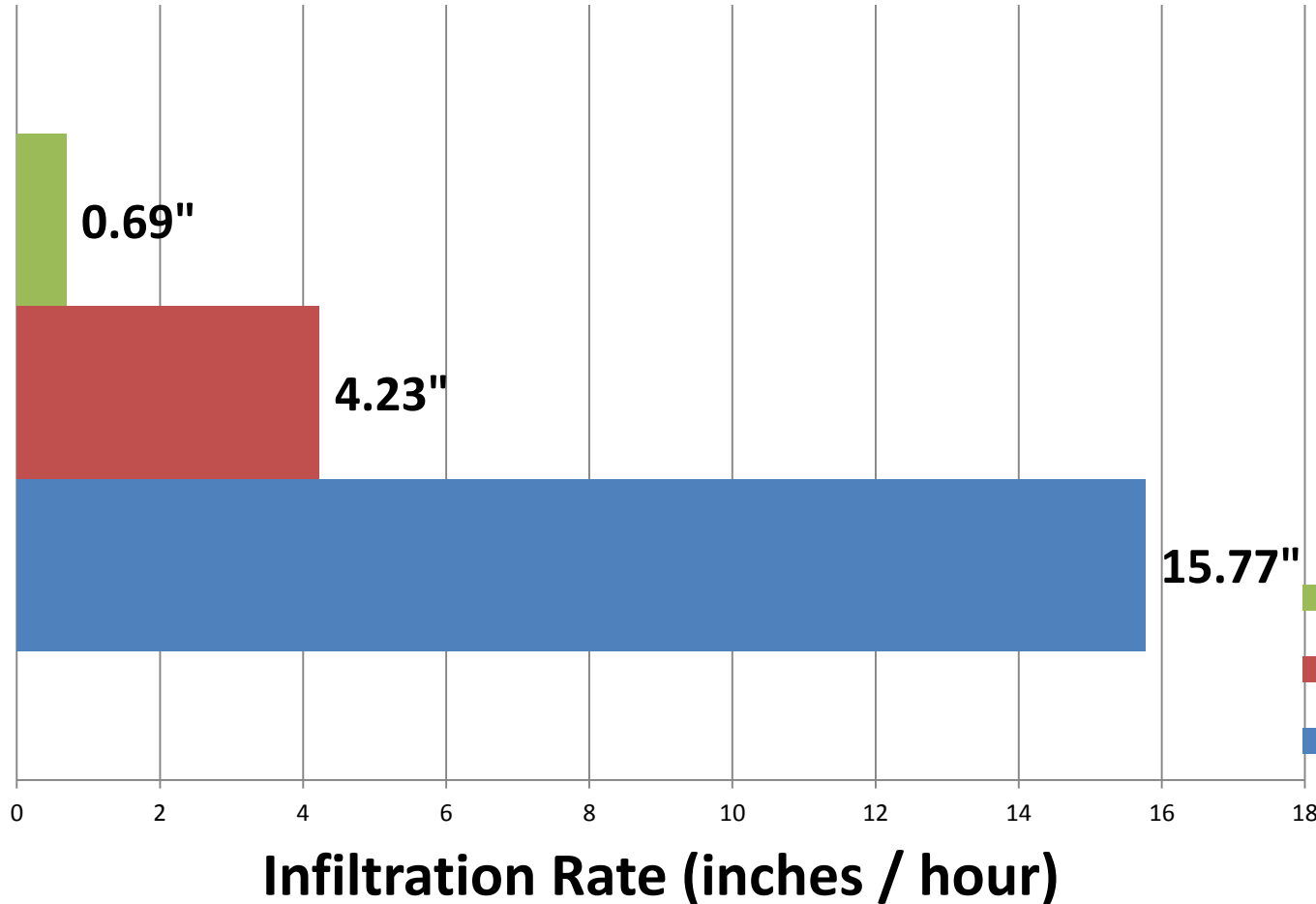
The Left Side of Green #7 has a lower 1st tier (0-4 in.) infiltration rate, lower air porosity and higher water holding properties than the Right Side. With similar OM contents and water holding properties the key variable in the physical properties for both sides is compaction, as measured by the bulk density. At this time it is difficult to say why the Left Side is more compacted, but often it either reflects the design features of the green, shade/air movement differences and/or traffic patterns.



Table 1.

Green #7 1 st tier (0-4")	Modified Soil Greens (1 st tier Sample)	September 2013		ISTRC Comparison Table	
		Left	Right	July 2013	July 2011
Infiltration Rate [In/hr]	At least 4	4.23 [well lower than the sample labeled right side of the green]	15.77 [excellent –the time lapse photo of the right side sample is an excellent confirmation of its tested physical properties]	0.69	7.15
Air Porosity [Non-Capillary]	At least 14%	16.13% [lower than the right sample, but is well higher than the sample submitted in July]	21.83% [excellent]	11.80%	18.66%
Water Porosity [Capillary]	Less than 30%	30.67% [at our upper target range]	28.59% [workable for a soil green]	32.62%	32.56%
Bulk Density [g/cc]	1.35 to 1.45	1.41 [high for the amount of OM – would benefit from less compaction]	1.37 [more in line with what is should be given the amount of OM]	1.44	1.28
Water Holding	Less than 25%	21.70% [workable]	20.91% [workable]	22.66%	25.42%
Organic Content: 0-1"	1.5% to 3.0%	3.34% [high]	3.23% [high]	2.36%	2.52%
Organic Content: 1-2"	1.0% to 2.0%	3.58% [high]	3.22% [high]	2.89%	4.55%
Organic Content: 2-3"	0.5% to 2.0%	2.53% [high]	2.31% [high]	2.22%	3.04%
Organic Content: 3-4"	0.5% to 2.0%	3.76% [high]	3.35% [high]	3.58%	5.40%
Root Mass	at least ½ in.	3/8 in.	3/8 in.	3/8 in.	5/8 in.
Feeder Roots	at least 3.5 in.	3 ½ in. Sparse	3 ½ in. Sparse	3 ½ in.	3 in.

Air₂G₂ Improves Infiltration

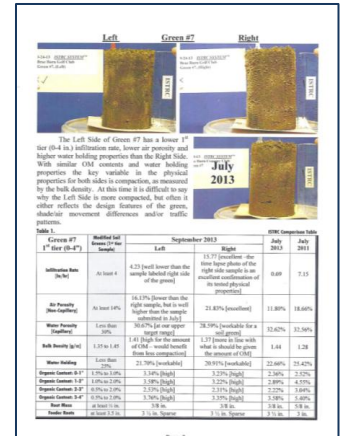
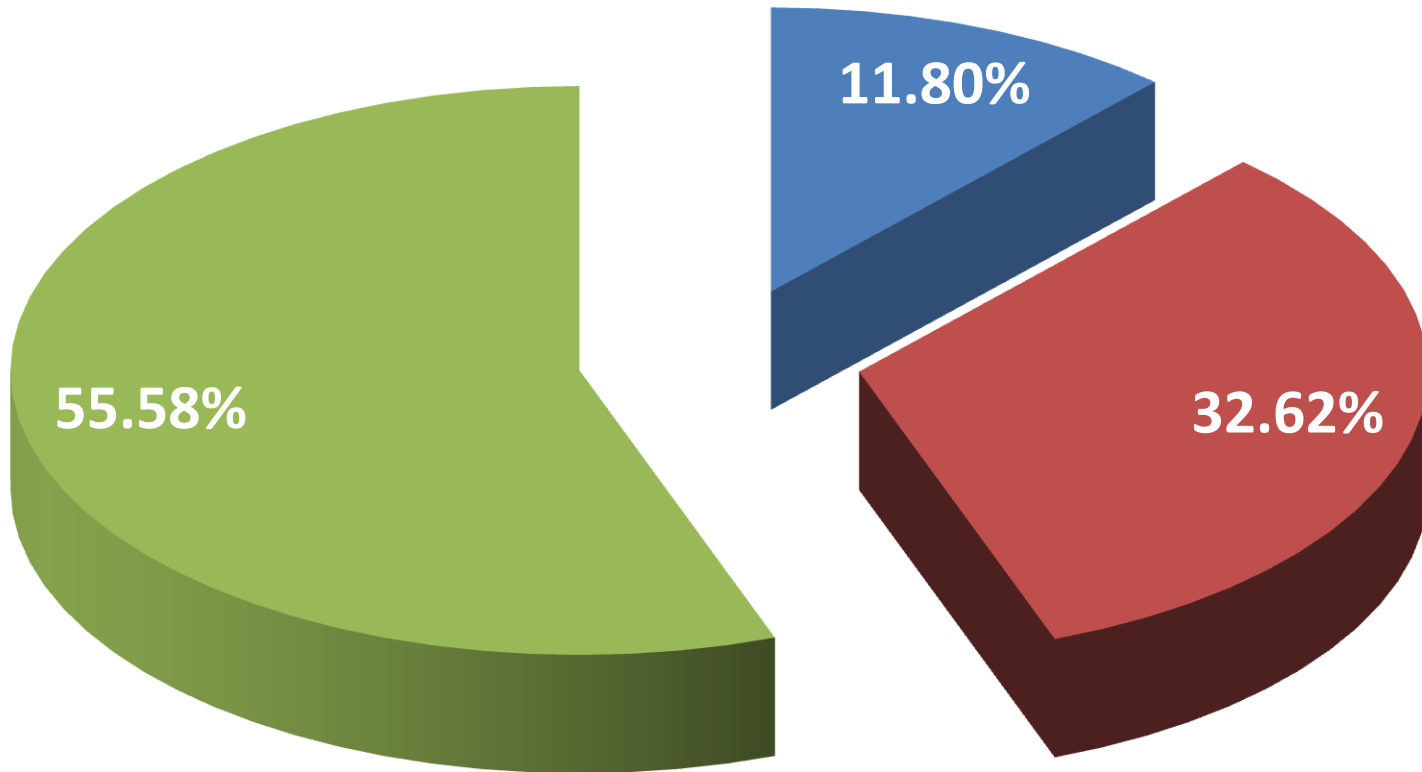


- July 2013
- Sept. 2013 - 1X
- Sept. 2013 - 2X

14.87" Improvement – 2186%

Initial Air-Water Balance = 1.0 : 2.76

July 2013



- Air Porosity
- Water Porosity
- % Solids

Data from 2013 ISTRC Report

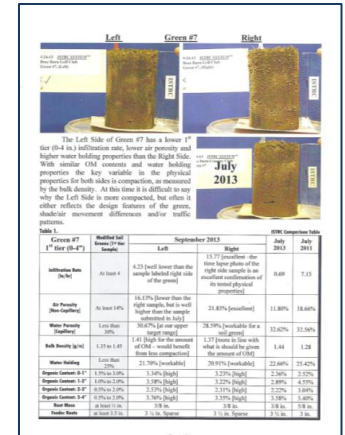
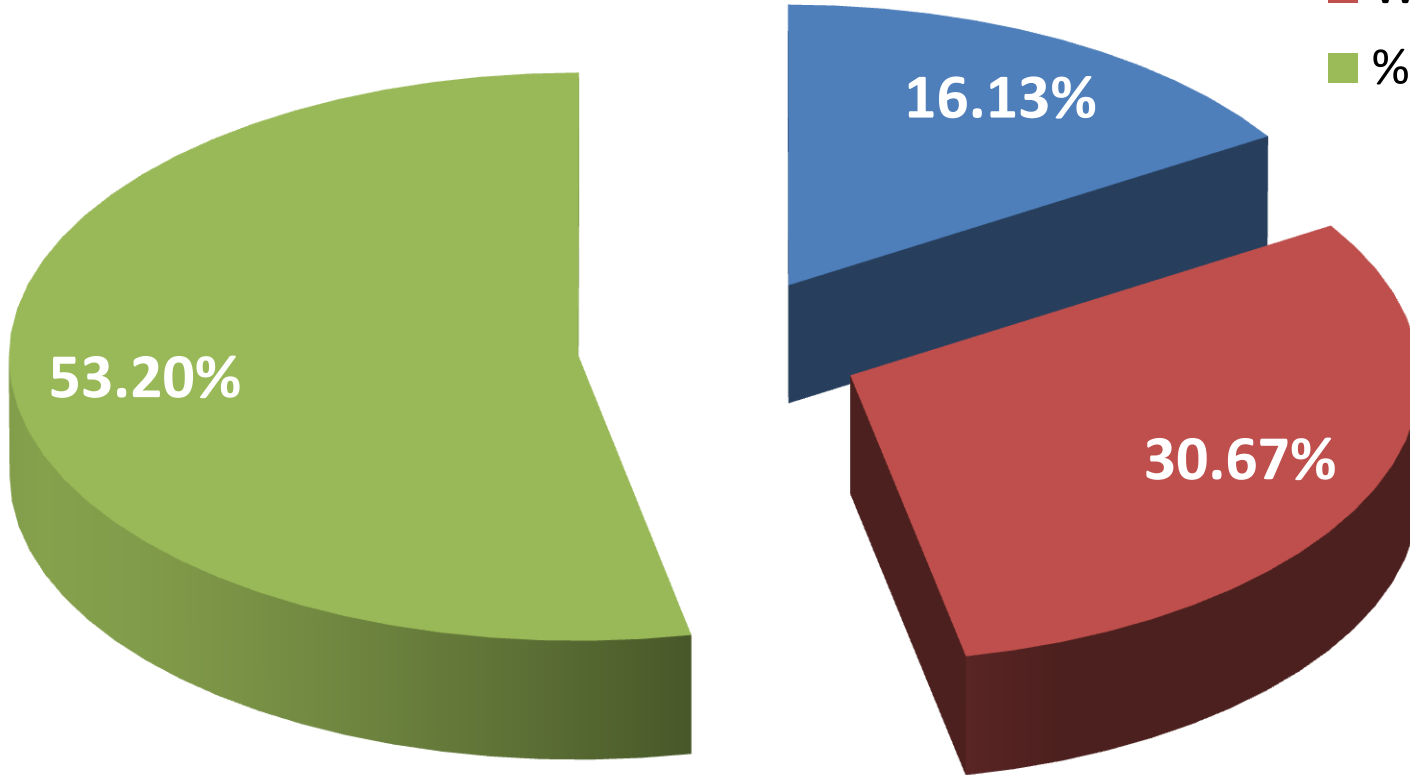
Air:Water After 1X Air₂G₂

Sept. 2013 – After Air_2G_2

■ Air Porosity

■ Water Porosity

■ % Solids

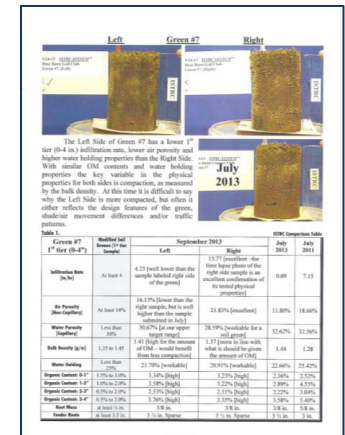
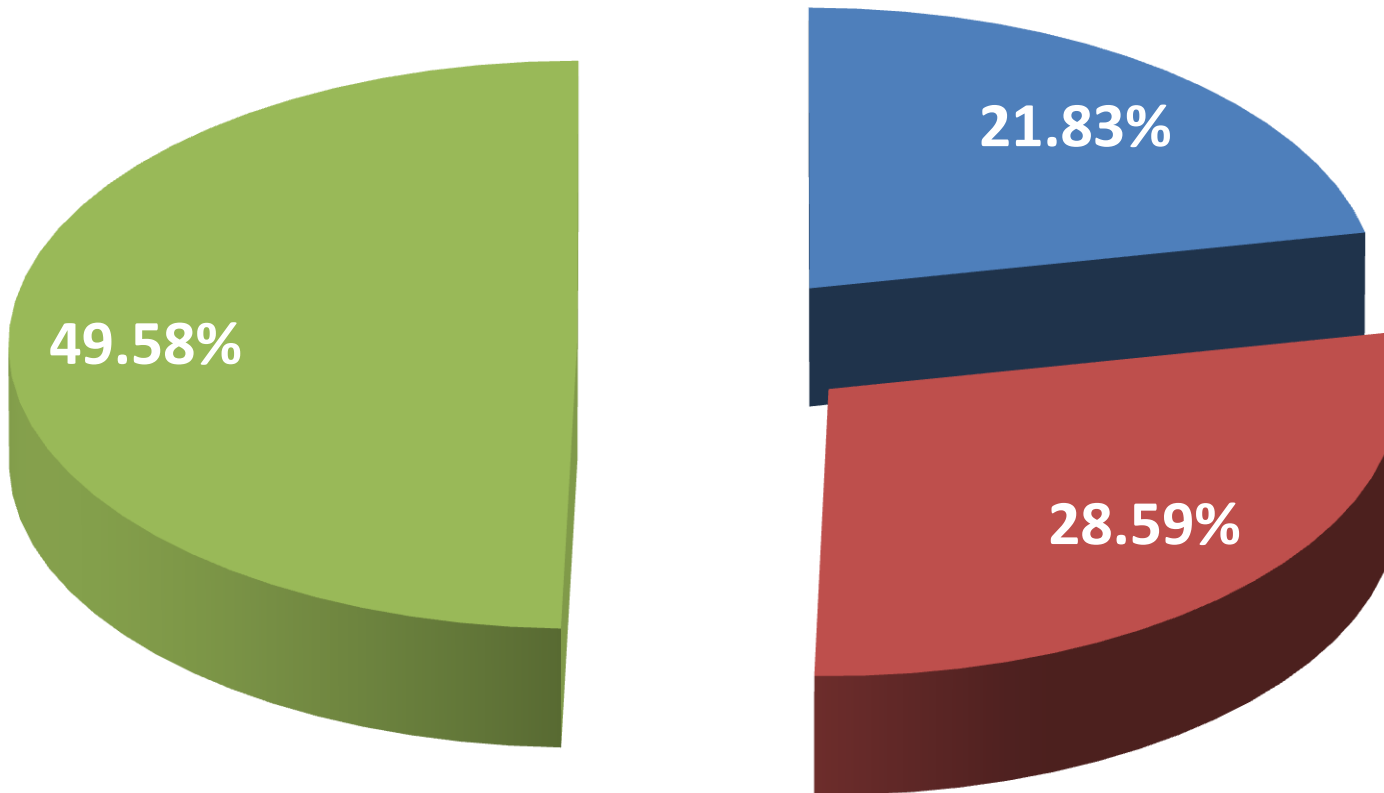


36.7% *More* Air Pores

Air:Water After 2X Air₂G₂

Sept. 2013 – After 2X Air₂G₂

- Air Porosity
- Water Porosity
- % Solids



85.0% *More Air Pores*