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# Ideas about growing grass

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MONDAY, 20 APRIL 2015

## Global Soil Survey Take 3!

I just got my soil tests last week for the [Global Soil Survey!](#) Getting soil test results back is just about as good as Christmas! This is the third time that I have taken part in the GSS. Since my first GSS in 2013 I have followed the guidelines religiously saving a ton of money and seeing no real difference in turfgrass quality. Arguably my greens could actually be in better shape now than before I started using the [MLSN guidelines](#).

Here are the results of my GSS in 2013

Area	pH	K	P M3	P Bray 2	P Olsen	Ca	Mg	S	TOT-N	EC
G9	6.3	72	71	75	18	510	92	20	11.0	0.7
T9	5.9	92	68	77	19	497	58	22	7.3	0.7
G7	6.5	71	81	81	20	479	96	17	7.9	0.6

ppm

In 2014

Area	pH	K	P M3	P Bray 2	P Olsen	Ca	Mg	S	TOT-N	EC
G8	6.2	57	63	70	20	410	69	15	7.4	0.6
G5	6.0	55	79	91	21	343	60	19	7.3	0.7
T ALL	5.3	71	83	94	28	506	60	16	12.0	0.7

ppm

And 2015

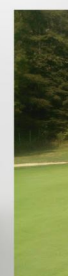
Area	pH	K	P M3	P Bray 2	P Olsen	Ca	Mg	S	TOT-N	EC
G1	5.9	37	64	81	15	367	59	19	5.5	0.7
G689	5.8	33	60	67	16	360	57	12	4.9	0.6
T15689	5.6	43	49	57	14	380	62	13	8.1	0.6

ppm

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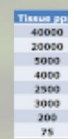
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The GSS requires that you take samples from areas of good performing turfgrass. Each year I have varied the exact locations for my samples. The reason for this is to compare areas of good turf performance but on different microclimates or turf species etc to see if there is some relationship to what I am seeing to nutrient levels in the soil. From what I can the soil nutrient levels have little to do with what I have observed.

They then tell you how your test results are compared to the MLSN guidelines.

Area	K	P M3	P Bray 2	P Olsen	Ca	Mg	S
G1	0	46	56	9	36	12	12
G689	-4	42	42	10	29	10	5
T15689	6	31	32	8	49	15	6

ppm

As you can see all my nutrient levels are in excess of the MLSN guidelines except for Potassium on by 6,8,9th green. I combined the samples of these greens as they were the greens with the most bentgrass. My first green has 0% bentgrass for some reason despite receiving the same amount of seed and having a similar microclimate.

The important thing to remember here is that even though I have a deficiency according the MLSN my 6,8, and 9th greens are not dead. They are, in fact, my best performing greens. The MLSN has a built in safety margin to ensure that you do not go too low!



The greens have never been better or healthier in my opinion

The creators of the MLSN (PACE Turf and Micah Woods) emphasize that the MLSN are not targets to work towards, just nutrient levels you should stay above. I'm a bit insane so I like to use them as targets, I want to see what happens when any nutrient excesses are removed from the soils on my course. It's a work in progress and I do this at my own risk.

After all this they give you the fertilizer requirements based on how much nitrogen you plan to apply each season to ensure that you remain above the MLSN guidelines. This makes your fertilizer program

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planning very easy. So easy, in fact, that I will walk you through just how simple it will be for me this year.

### Nutrient Requirements reported in lb per 1000 sq ft based on the MLSN guidelines

Table 6: Total fertilizer requirement based upon soil nutrient deficit plus nutrient removal as clippings when 2 pounds of nitrogen per 1000 square feet is applied for maintenance and clippings are removed. Reported in lb of element per 1000 sq ft.

Area	K	P M3	P Bray 2	P Olsen	Ca	Mg	S
G1	0.8	0.0	0.0	0.0	0.0	0.0	0.0
G689	1.0	0.0	0.0	0.0	0.0	0.0	0.0
T15689	0.5	0.0	0.0	0.0	0.0	0.0	0.0

Table 7: Total fertilizer requirement based upon soil nutrient deficit plus nutrient removal as clippings when 4 pounds of nitrogen per 1000 square feet is applied for maintenance and clippings are removed. Reported in lb of element per 1000 sq ft.

Area	K	P M3	P Bray 2	P Olsen	Ca	Mg	S
G1	1.6	0.0	0.0	0.0	0.0	0.0	0.0
G689	1.7	0.0	0.0	0.0	0.0	0.0	0.0
T15689	1.3	0.0	0.0	0.0	0.0	0.0	0.0

Look at all that fertilizer I don't have to apply! Going on year 3 of nothing but N and K (s and fe too)



Just because my fertilizer is cheap, doesn't mean that my greens suffer from poor quality.

As you can see the only fertilizer I need to stay above the MLSN guidelines is potassium. Just to play it safe I will use the high rate required based on 4 lbs of N /1000 ss ft per year. 1.7 lbs of potassium on 40,000 sq ft is 68 lbs of potassium or 136 lbs of potassium sulfate. I pay about \$30 for a 50lb bag of potassium sulfate so my K costs for the year will be about \$81. 4lbs of N/1000 sq ft at \$19/ bag of urea will costs me \$132. That's a total cost for fertilizer on my greens at \$213. There is no mystery here, no special products required to "go low". Just simple fertilizers , the GSS, MLSN, and my sprayer.

There it's that simple. For the past 3 years the cost of the GSS (\$250) has been more than the fertilizer that I apply to my greens. Here is to my 3rd season using the GSS and to hopefully a lot more!

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Posted by [Jason Haines](#)



Labels: [fertilizer](#), [MLSN](#)

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