
Bancroft School
Turf Care

Bancroft Turf Care Goals

- Healthier environment for children
- Less pollution on and off site
- Reduce costs
- Reduce water use

What is Good Turf Care?

It is a SYSTEMATIC approach that focuses on creating the most favorable soil conditions by using cultural practices that allow turf grass to thrive and out-compete pests, with limited use of synthetic fertilizers and pesticides.

Cultural Practices

- Soil practices
- Mowing practices
- Pest control practices
- Watering practices

Cultural Practices
Soil

- Test soil
- Use appropriate fertilizers in appropriate quantity
- Aerate frequently
- Over-seed Spring & Fall

It's About the Soil

Soil Minerals are 45-50% of soil volume

Porosity is 45-50% of soil volume

- Air 20-25%
- Water 20-25%

Soil Organic matter 5-10% of soil volume

Soil Testing

- Know what your soil has
- Know what your soil needs
- Give it what it needs

UMass Extension

Soil and Plant Tissue Testing Laboratory
203 Paige Laboratory
161 Holdsworth Way
University of Massachusetts
Amherst, MA 01003
Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Soil Test Report

Prepared For:

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Sample Information:

Sample ID: MSF01

Order Number: 21522
Lab Number: S160412-202
Area Sampled: 71400 sq ft
Received: 4/12/2016
Reported: 4/29/2016

Results

Analysis	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	5.9	
Modified Morgan extractable, ppm		
Macronutrients		
Phosphorus (P)	8.3	4-14
Potassium (K)	55	100-160
Calcium (Ca)	631	1000-1500
Magnesium (Mg)	56	50-120

Analysis	*Value Found*	*Optimum Range*
Cation Exch. Capacity, meq/100g	8.1	
Exch. Acidity, meq/100g	4.3	
Base Saturation, %		
Calcium Base Saturation	39	50-80
Magnesium Base Saturation	6	10-30
Potassium Base Saturation	2	2.0-7.0
Scoop Density, g/cc	1.25	

Soil Testing

Results

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Macronutrients		
Phosphorus (P)	8.3	4-14
Potassium (K)	55	100-160
Calcium (Ca)	631	1000-1500
Magnesium (Mg)	56	50-120
Sulfur (S)	8.0	>10
Micronutrients *		
Boron (B)	0.1	0.1-0.5
Manganese (Mn)	2.7	1.1-6.3
Zinc (Zn)	2.4	1.0-7.6
Copper (Cu)	0.3	0.3-0.6
Iron (Fe)	12.4	2.7-9.4
Aluminum (Al)	60	<75
Lead (Pb)	0.8	<22

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Scoop Density, g/cc	1.25	
Optional tests		
Soil Organic Matter (LOI), %	3.3	

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Testing

Recommendations for Sports Turf/Golf Fairway-Maintenance

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 1000 sq ft		
75	3 - 5	0	4

Comments:

-Do not topdress with more than 50 lb limestone per 1000 sq ft at one time. Split the above application between early spring and mid-autumn.

-Many fertilizer sources and rates may be combined to provide acceptable turfgrass fertilty.

-For best results, split the N, P2O5, and K2O recommendations above into three to four applications over the course of the growing season at six to eight week intervals, beginning in mid- to late-April.

Soil Testing

I23 fx

	A	B	C	D	E	F	G	H	I	J
1	**Bancroft School**									
2	**Lime Application Rates 2017**									
3										
4	**Lbs. per Bag:**	50								
5	**Cost per Bag:**	11.45								
6										
7										
8	**Area ID**	**Area Description**	**Lbs per 1,000 Sq. Ft.**	**Area Sq Ft**	**Total Lbs Needed**	**Lbs 1st Application**	**# Bags 1st Application**	**Lbs 2nd Application**	**# Bags 2nd Application**	**Remaining Limestone not applied this**
9	MSF01	Main Soccer Field	75	71,400	5,355	3,570	71	1,785	35.7	-
10	SSF01	Small Soccer Field	150	56,000	8,400	2,800	56	2,800	56.0	2,800
11	BBF01	Baseball Field	100	78,500	7,850	3,925	79	3,925	78.5	-
12	FHF01	Field Hockey Field	125	54,000	6,750	2,700	54	2,700	54.0	1,350
13	FIW01	Front Island West	100	7,500	750	375	8	375	7.5	-
14	FCIW1	Front Center Island West	75	3,000	225	150	3	75	1.5	-
15	FCIC1	Front Center Island Center	75	5,000	375	250	5	125	2.5	-
16	FCIE1	Front Center Island East	75	3,000	225	150	3	75	1.5	-
17	MDF01	Front of McDonough Parking	125	8,000	1,000	400	8	400	8.0	200
18	10001	Front of 100 Shore	125	12,000	1,500	600	12	600	12.0	300
19	DHF01	Dining Hall Front	75	1,000	75	50	1	25	0.5	-
20	ATF01	Athletic Center Front	100	2,500	250	125	3	125	2.5	-
21		**Totals**		**301,900**	**32,755**	**15,095**	**302**	**13,010**	**260**	**4,650**
22		**Cost per Application**					3,456.76		2,979.29	
23										
24										
25										

Why is Soil Texture Important?

- Drainage
- Infiltration/water holding capacity
- Gas exchange
- Determines specific surface area
  - More surface area=more negative charge
  - More negative charge=higher CEC

Soil pH

- Grass likes 6.3pH - 6.5pH
- > pH affects mineral solubility
- With pH <5, nitrates, potassium, phosphates have greatly reduced solubility
- With pH <5, aluminum is soluble -harms root growth

Cultural Practices
Mowing

- Mow high
- Take no more than 1/3 of the blade
- Keep the mower sharp
- Leave the clippings in the grass

Cultural Practices
Mowing High

- 3 1/2” or 4” high in summer
- High grass creates shade
- Reduces evaporation
- Cools the soil
- Denies sunlight to weeds

Cultural Practices Pest Control

- Check frequently for pests
- Natural pest controls
- Pests help tell you about the condition of your lawn
  - Clover likes low nitrogen levels, compacted soil, and lawns with drought stress

Cultural Practices
Watering Practices

- Water once weekly
- Water deeply -1” preferred
- Water early morning

Bancroft School

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ag.umass.edu/services/soil-plant-nutrient-testing-laboratory