



Predictive Home & Garden

Soil Report

Mehlich-3 Extraction

[Soil Testing Section](#)

Client: James Moyers
6304 Musket Ball Ct
RALEIGH, NC 27616

Advisor:

Sampled County : Wake

Client ID: 408344

Advisor ID:

Sampled: 09/16/2012 Received: 09/20/2012 Completed: 09/27/2012 Farm:

Agronomist's Comments:

This report provides Test Results and Recommendations for each sample submitted for testing. Look for Lime Recommendations and N-P-K Fertilizer Recommendations. If lime is needed, application at the indicated rate will raise soil pH to the optimal level for the plant you specified. Common target pH values are as follows: 5.0 for azalea, camellia, rhododendron and mt. laurel; 5.5 for centipedegrass; 6.0 for other lawn grasses, shrubbery, and; flowering plants; and 6.5 for vegetable gardens. N-P-K Recommendations are based on the nitrogen (N) needs of the plants being grown and the soil test results for phosphorus (P-I) and potassium (K-I); a 50 to 70 index for either is optimum. If the exact fertilizer cannot be found, find the closest match and adjust the rate accordingly. Refer to "Understanding the Soil Report" (last page of this report) for additional explanation and links to helpful information.

Sample ID: 1

Lime History:

James Moyers

Additional Test Results:

Soil Class

Mineral

HM%

1.19

W/V

0.83

g/cm³

CEC

5.4

meq/100 cm³

Mn-I

35

Zn-I

99

Cu-I

86

S-I

42

Lime Recommendations

Crop 1- Lawn (not centip.)

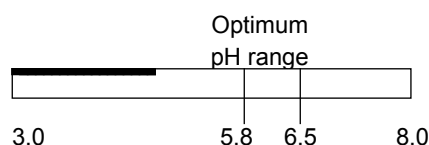
95.0 lb per 1,000 sq ft

Crop 2- Lawn (not centip.)

0.0 lb per 1,000 sq ft

Test Results:

pH = 4.8



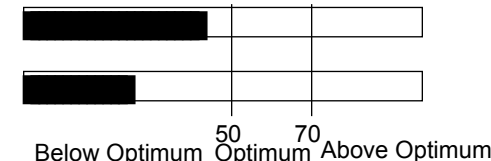
N-P-K Fertilizer Recommendations *

10 lbs per 1,000 sq ft 10-10-10

10 lbs per 1,000 sq ft 10-10-10

Phosphorus Index (P-I) =45

Potassium Index (K-I) =27



**If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C or D) listed on the last page of this report.*

Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.

James Moyers

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Sample ID: 2

Lime History:

James Moyers

Lime Recommendations

Crop 1- Lawn (not centip.)

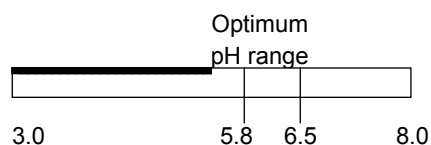
35.0 lb per 1,000 sq ft

Crop 2- Lawn (not centip.)

0.0 lb per 1,000 sq ft

Test Results:

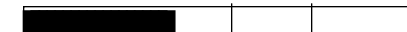
pH = 5.5

N-P-K Fertilizer Recommendations *

10 lbs per 1,000 sq ft 10-10-10

10 lbs per 1,000 sq ft 10-10-10

Phosphorus Index (P-I) =37



Potassium Index (K-I) =33



Below Optimum Optimum Above Optimum

Additional Test Results:

Soil Class

Mineral

HM%

0.56

W/V

0.96

g/cm³**CEC**

3.6

meq/100 cm³**Mn-I**

36

Zn-I

75

Cu-I

61

S-I

39

**If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C or D) listed on the last page of this report.*

Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.

Sample ID: 3

Lime History:

James Moyers

Lime Recommendations

Crop 1- Lawn (not centip.)

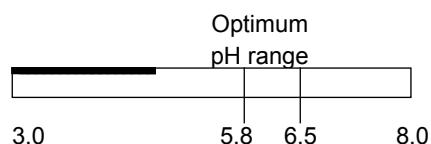
65.0 lb per 1,000 sq ft

Crop 2- Lawn (not centip.)

0.0 lb per 1,000 sq ft

Test Results:

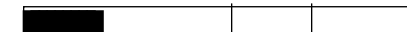
pH = 4.8

N-P-K Fertilizer Recommendations *

20 lbs per 1,000 sq ft 5-10-10

20 lbs per 1,000 sq ft 5-10-10

Phosphorus Index (P-I) =19



Potassium Index (K-I) =35



Below Optimum Optimum Above Optimum

Additional Test Results:

Soil Class

Mineral

HM%

0.66

W/V

1.04

g/cm³**CEC**

5.1

meq/100 cm³**Mn-I**

93

Zn-I

38

Cu-I

55

S-I

50

**If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C or D) listed on the last page of this report.*

Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.

James Moyers

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Sample ID: 4

Lime History:

James Moyers

Lime Recommendations

Crop 1- Lawn (not centip.)

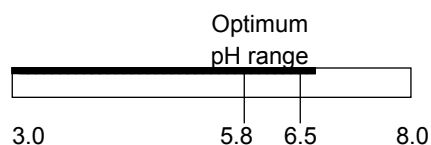
0.0 lb per 1,000 sq ft

Crop 2- Lawn (not centip.)

0.0 lb per 1,000 sq ft

Test Results:

pH = 6.8

N-P-K Fertilizer Recommendations *

5 lbs per 1000 sq ft 21-0-0

5 lbs per 1000 sq ft 21-0-0

Phosphorus Index (P-I) =97



Potassium Index (K-I) =79



Below Optimum Optimum Above Optimum

Additional Test Results:

Soil Class

Mineral

HM%

0.56

W/V

0.95

g/cm³**CEC**

12.1

meq/100 cm³**Mn-I**

475

Zn-I

181

Cu-I

258

S-I

32

**If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C or D) listed on the last page of this report.*

Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.

Sample ID: 5

Lime History:

James Moyers

Lime Recommendations

Crop 1- Lawn (not centip.)

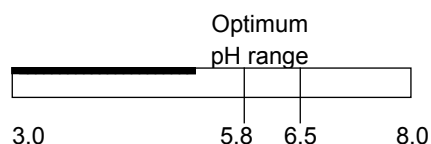
45.0 lb per 1,000 sq ft

Crop 2- Lawn (not centip.)

0.0 lb per 1,000 sq ft

Test Results:

pH = 5.3

N-P-K Fertilizer Recommendations *

7 lbs per 1,000 sq ft 15-0-14

7 lbs per 1,000 sq ft 15-0-14

Phosphorus Index (P-I) =67



Potassium Index (K-I) =31



Below Optimum Optimum Above Optimum

Additional Test Results:

Soil Class

Mineral

HM%

0.46

W/V

1.02

g/cm³**CEC**

5.5

meq/100 cm³**Mn-I**

174

Zn-I

124

Cu-I

59

S-I

34

**If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C or D) listed on the last page of this report.*

Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.

James Moyers

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Sample ID: 6

Lime History:

James Moyers

Lime Recommendations

Crop 1- Lawn (not centip.)

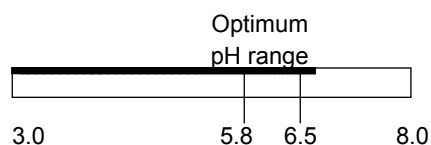
0.0 lb per 1,000 sq ft

Crop 2- Lawn (not centip.)

0.0 lb per 1,000 sq ft

Test Results:

pH = 6.8

N-P-K Fertilizer Recommendations *

12 lb per 1,000 sq ft 8-0-24

12 lb per 1,000 sq ft 8-0-24

Phosphorus Index (P-I) =97



Potassium Index (K-I) =21



Below Optimum Optimum Above Optimum

Additional Test Results:

Soil Class

Mineral

HM%

0.18

W/V

0.96

g/cm³**CEC**

6.5

meq/100 cm³**Mn-I**

161

Zn-I

156

Cu-I

38

S-I

29

**If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C or D) listed on the last page of this report.*

Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.

Sample ID: 7

Lime History:

James Moyers

Lime Recommendations

Crop 1- Lawn (not centip.)

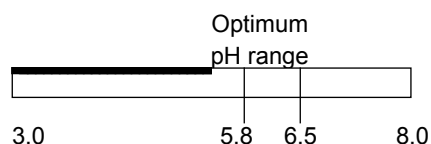
40.0 lb per 1,000 sq ft

Crop 2- Lawn (not centip.)

0.0 lb per 1,000 sq ft

Test Results:

pH = 5.5

N-P-K Fertilizer Recommendations *

7 lbs per 1,000 sq ft 15-0-14

7 lbs per 1,000 sq ft 15-0-14

Phosphorus Index (P-I) =63



Potassium Index (K-I) =31



Below Optimum Optimum Above Optimum

Additional Test Results:

Soil Class

Mineral

HM%

0.32

W/V

1.06

g/cm³**CEC**

5.8

meq/100 cm³**Mn-I**

101

Zn-I

88

Cu-I

42

S-I

36

**If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C or D) listed on the last page of this report.*

Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.

James Moyers

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Sample ID: 8

Lime History:

James Moyers

Lime Recommendations

Crop 1- Lawn (not centip.)

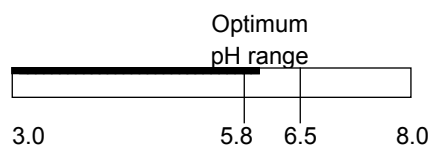
0.0 lb per 1,000 sq ft

Crop 2- Lawn (not centip.)

0.0 lb per 1,000 sq ft

Test Results:

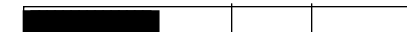
pH = 6.1

N-P-K Fertilizer Recommendations *

17 lb per 1,000 sq ft 6-6-18

17 lb per 1,000 sq ft 6-6-18

Phosphorus Index (P-I) =32



Potassium Index (K-I) =20



Below Optimum Optimum Above Optimum

Additional Test Results:

Soil Class

Mineral

HM%

0.32

W/V

1.00

g/cm³**CEC**

8.3

meq/100 cm³**Mn-I**

161

Zn-I

201

Cu-I

78

S-I

29

**If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C or D) listed on the last page of this report.*

Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.

Sample ID: 9

Lime History:

James Moyers

Lime Recommendations

Crop 1- Lawn (not centip.)

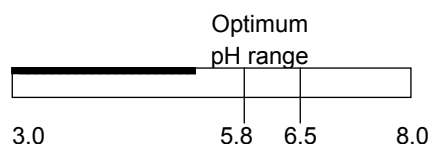
55.0 lb per 1,000 sq ft

Crop 2- Lawn (not centip.)

0.0 lb per 1,000 sq ft

Test Results:

pH = 5.3

N-P-K Fertilizer Recommendations *

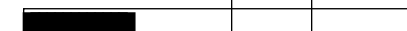
7 lbs per 1,000 sq ft 15-0-14

7 lbs per 1,000 sq ft 15-0-14

Phosphorus Index (P-I) =69



Potassium Index (K-I) =26



Below Optimum Optimum Above Optimum

Additional Test Results:

Soil Class

Mineral

HM%

0.41

W/V

0.98

g/cm³**CEC**

7.8

meq/100 cm³**Mn-I**

105

Zn-I

194

Cu-I

58

S-I

37

**If you cannot find the fertilizer recommended here, choose one from the same Group (A, B, C or D) listed on the last page of this report.*

Note: This soil test does not measure nitrogen (N) levels. N fertilizer recommendations are based only on needs of the designated crop.

Understanding the Soil Report

Lime

Application of lime at the recommended rate will raise soil pH to the optimum range. Do not apply too much lime. When soil pH becomes too high, lowering it is very difficult. Often, the best solution then is to choose plants that can tolerate a high pH.

Choosing dolomitic lime can be advantageous because it contains the nutrients calcium and magnesium. Pelleted lime is easier to spread uniformly than powdered lime.

Lime can be applied at any time of year, but because it reacts slowly, it is best to apply it several months before a new planting. Mixing it into the soil will speed the reaction time. Lime applied to the soil surface takes much longer to correct soil pH.

A surface application should not exceed 60 lb per 1,000 sq ft. If a soil report recommends more than this, apply 60 lb per 1,000 sq ft initially and the rest in similar increments every 6-9 months until the full rate is applied.

Fertilizer

Soil tests do not measure nitrogen (N) since it is very unstable in soils; the N recommendations provided on the soil report are based on plant needs. If soil-test P-I and K-I values are adequate (>50), only nitrogen is recommended- Group D below. A mixed (N-P-K) fertilizer is recommended if P-I and K-I values are less than optimum- Groups A - C below. Although a specific fertilizer grade may be recommended (e.g., 5-10-10), other equivalent options are likely to be available (e.g., any fertilizer in Group A from Table 1).

Tips on Fertilizer Application

- To determine how much fertilizer to buy, estimate (in feet) the length (L) and width (W) of the area to be treated: $L \times W = \text{sq ft}$. Square off curves to make estimates easier. If the recommendation is 20 lb per 1,000 sq ft and your area is 5,000 sq ft, then you need 100 lb (20×5) for your 5,000-sq-ft area.
- Calibrate your spreader according to manufacturer settings. Apply half the total rate in one direction; apply the rest at a 90° angle. This cross-hair pattern provides a more uniform application.
- After application, sweep up any fertilizer on hard surfaces and apply to fertilized areas so rainfall does not carry fertilizer to a storm drain.

Table 1. Groups of equivalent fertilizers that supply 1 lb of N per 1,000 sq ft *

<u>Group A: low P-I + low K-I</u>		<u>Group B: low P-I + high K-I</u>		<u>Group C: high P-I + low K-I</u>		<u>Group D: N only</u>	
5-10-10	@ 20 lb	5-10-5	@ 20 lb	8-0-24	@ 12 lb	15-0-0	@ 7 lb
3-9-9	@ 30 lb	18-46-0	@ 6 lb	10-0-14	@ 10 lb	21-0-0	@ 5 lb
10-10-10	@ 10 lb	18-24-10	@ 6 lb	15-0-14	@ 7 lb	16-0-0	@ 6 lb
11-15-11	@ 10 lb	9-13-7	@ 11 lb	6-6-18	@ 17 lb	28-0-4	@ 4 lb
8-10-8	@ 12 lb	9-17-8	@ 11 lb	5-5-15	@ 15 lb	12-6-6	@ 8 lb

* Since these rates supply 1 lb N per 1,000 sq ft, use half the rate if centipede is the grass type.

Report Abbreviations

CEC	cation exchange capacity
Cu-I	copper index
HM%	percent humic matter
Mn-I	manganese index
pH	soil pH
S-I	sulfur index
SS-I	soluble salt index
W/V	weight per volume
Zn-I	zinc index

Time Fertilizer Application to Coincide with Plant Growth Cycle:

Bermudagrass: May, July, Sept

Centipedegrass: May

St. Augustine grass: May, August

Tall fescue: Sept, Nov, Feb

Zoysia: May, July

Flowers/shrubs: prior to planting or during the growing season

Vegetables: prior to planting

[A Homeowner's Guide to Fertilizer](#)

[Note 4: Fertilization of Lawns, Gardens & Ornamentals](#)

[Caring for Your Lawn & Environment](#)

[Carolina Lawns](#)

[Soil Acidity and Liming: Basic](#)

[Information for Farmers & Gardeners](#)