



Predictive Home & Garden

# Soil Report

Mehlich-3 Extraction

**Client:** Susan Pflum  
524 Bennett Mountain Trace  
Chapel Hill, NC 27516

**Advisor:** Mike Gorman  
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Chapel Hill, NC 27516

Sampled County : Chatham

**Client ID:** 475753

**Advisor ID:** 486392

[Links to Helpful Information](#)

Sampled: 09/11/2021 Received: 09/24/2021 Completed: 10/05/2021 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. The lime recommendation is always listed next to the first crop and will be based on the higher target pH if the pH targets for crop 1 and crop 2 differ. Application at the indicated rate will raise soil pH to the optimal level for the plant you specified and should be sufficient for 2 to 3 years, depending on soil type. 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:** BRI13

**Lime Recommendations**

**N-P-K Fertilizer Recommendations \***

Crop 1- Vegetable garden  
Crop 2-

0.0 lb per 1,000 sq ft  
0.0 lb per 1,000 sq ft

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

**Lime History:**

**Test Results:**

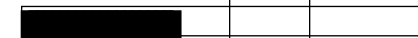
pH = 6.5



Phosphorus Index (P-I) =442



Potassium Index (K-I) =38



Below Optimum Optimum Above Optimum

Susan Pflum

**Additional Test Results:**

Soil Class	HM%	W/V	CEC	Mn-I	Zn-I	Cu-I	S-I
Mineral	0.97	1.00 g/cm <sup>3</sup>	21.6 meq/100 cm <sup>3</sup>	184	1010	310	199

*\*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.*



Reprogramming of the laboratory-information-management system that makes this report possible is being funded through a grant from the North Carolina Tobacco Trust Fund Commission.

Thank you for using agronomic services to manage nutrients and safeguard environmental quality.

- Steve Troxler, Commissioner of Agriculture

Susan Pflum

Page 2 of 4

Sample ID: BRI46

**Lime Recommendations**

**N-P-K Fertilizer Recommendations \***

Crop 1- Vegetable garden  
Crop 2-

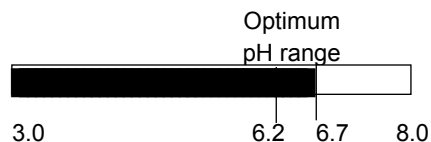
0.0 lb per 1,000 sq ft  
0.0 lb per 1,000 sq ft

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

Lime History:

**Test Results:**

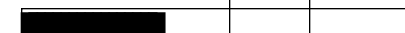
pH = 6.7



Phosphorus Index (P-I) =449



Potassium Index (K-I) =35



Below Optimum Optimum Above Optimum

Susan Pflum

Additional Test Results:

Soil Class	HM%	W/V	CEC	Mn-I	Zn-I	Cu-I	S-I
Mineral	1.08	1.03 g/cm <sup>3</sup>	23.8 meq/100 cm <sup>3</sup>	209	981	279	99

*\*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: BRIAB

**Lime Recommendations**

**N-P-K Fertilizer Recommendations \***

Crop 1- Vegetable garden  
Crop 2-

0.0 lb per 1,000 sq ft  
0.0 lb per 1,000 sq ft

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

Lime History:

**Test Results:**

pH = 6.5



Phosphorus Index (P-I) =687



Potassium Index (K-I) =32



Below Optimum Optimum Above Optimum

Susan Pflum

Additional Test Results:

Soil Class	HM%	W/V	CEC	Mn-I	Zn-I	Cu-I	S-I
Mineral	0.71	1.10 g/cm <sup>3</sup>	17.7 meq/100 cm <sup>3</sup>	139	991	330	240

*\*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.*

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Page 3 of 4

Sample ID: BRIPT

**Lime Recommendations**

**N-P-K Fertilizer Recommendations \***

Crop 1- Vegetable garden  
Crop 2-

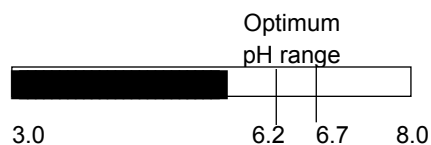
105.0 lb per 1,000 sq ft  
0.0 lb per 1,000 sq ft

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

Lime History:

**Test Results:**

pH = 5.6



Phosphorus Index (P-I) =634



Potassium Index (K-I) =48



Below Optimum Optimum Above Optimum

Susan Pflum

Additional Test Results:

Soil Class	HM%	W/V	CEC	Mn-I	Zn-I	Cu-I	S-I
Mineral	0.76	1.03 g/cm <sup>3</sup>	15.9 meq/100 cm <sup>3</sup>	170	947	319	414

*\*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 \***

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

<b>CEC</b>	cation exchange capacity
<b>Cu-I</b>	copper index
<b>HM%</b>	percent humic matter
<b>Mn-I</b>	manganese index
<b>pH</b>	soil pH
<b>S-I</b>	sulfur index
<b>SS-I</b>	soluble salt index
<b>W/V</b>	weight per volume
<b>Zn-I</b>	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](#)