



SOIL TEST REPORT FOR:				ADDITIONAL COPY TO:		
GEORGE DAVIS 351 CANYON DR N COLUMBUS OH 43214				OSU EXT- FRANKLIN COUNTY 2548 CARMACK RD COLUMBUS OH 43210		
DATE	LAB #	SERIAL #	COUNTY	ACRES	FIELD ID	SOIL
03/15/2024	S24-10540	37227	OH-Franklin		Backyard Garden	

SOIL NUTRIENT LEVELS		Below Optimum	Optimum	Above Optimum
Soil pH		<div></div>		
Phosphate	(P <sub>2</sub> O <sub>5</sub> )	<div></div>		
Potash	(K <sub>2</sub> O)	<div></div>		
Magnesium	(MgO)	<div></div>		
Calcium	(CaO)	<div></div>		

#### RECOMMENDATIONS FOR: *Mixed Vegetables*

##### Limestone, Calcium And Magnesium Recommendations

Apply the following quantities of limestone, epsom salts and/or gypsum to the soil to correct soil pH, calcium and magnesium levels.

**Calcitic Limestone:** NONE  
(0-3 % Mg)

**Magnesium:** NONE

**Gypsum (CaSO<sub>4</sub>):** NONE

##### Nitrogen, Phosphate And Potash Recommendations

Apply 0.5 lbs per 100 square feet of UREA.

#### MESSAGES

The above lime and fertilizer recommendations are for this soil sample and this season only. Nitrogen, phosphate and potash recommendations are for fertilizers containing specific ratios of nitrogen (N), phosphate (P<sub>2</sub>O<sub>5</sub>) and potash (K<sub>2</sub>O). As an example 5-10-10 contains 5 % N, 10 % P<sub>2</sub>O<sub>5</sub>, and 10 % K<sub>2</sub>O. If fertilizers with the ratio(s) shown are not available, contact your local garden center or fertilizer supplier for the appropriate substitution.

The Cation Exchange Capacity (CEC) is the capacity of the soil to hold positively charged cations such as K<sup>+</sup>, Mg<sup>++</sup> and Ca<sup>++</sup>. If the CEC of your soil is less than 15.0 (see laboratory results below) add one inch of organic matter. If soil pH is greater than 7.0, use acid peat moss as the organic matter source.

LABORATORY RESULTS:										Optional Tests:		
<sup>1</sup> pH	<sup>2</sup> P lb/A	Exchangeable Cations (meq/100g)					% Saturation of the CEC			Organic Matter %	Nitrate-N ppm	Soluble salts mmhos/cm
		<sup>3</sup> Acidity	<sup>2</sup> K	<sup>2</sup> Mg	<sup>2</sup> Ca	<sup>4</sup> CEC	K	Mg	Ca			
7.1	920	0.0	1.1	5.3	21.8	21.4	5.3	24.5	70.1			

Test Methods: <sup>1</sup>1:1 soil:water pH, <sup>2</sup>Mehlich 3 (ICP), <sup>3</sup>Mehlich Buffer pH, <sup>4</sup>Summation of Cations

The high calcium level in this sample indicates the probable presence of soluble calcium. Therefore the CEC and the percent saturations were calculated using a maximum exchangeable calcium level of 15 meq/100 g.

## COMMENTS

1. To be most effective, all recommended limestone and/or fertilizer should be incorporated 6 to 8 inches into the soil prior to planting. If plants or crop is established, apply recommended materials to the surface and water area well.

Use a high quality agricultural ground limestone product to meet the limestone recommendation on this report. Manufacturers of agricultural ground limestone products provide a number called the calcium carbonate equivalent, or CCE, on the label. CCEs with high numerical values (close to 100 or above) indicate a pure lime source (greater ability to neutralize soil acidity). The amount of lime recommended on this report is based on an agricultural ground limestone with a CCE of 100. If your lime source is close to or equal to 100, you don't need to adjust the recommended amount. In the event that you use a lime source with a CCE well below 100, use the following formula to adjust the required amount.

$$\text{Actual liming material required} = \frac{(\text{Soil test recommendation in lbs of lime/1000 square feet}) \times 100}{\text{CCE of liming material}}$$

Example Only:

Soil Test Recommendation: 5 lbs limestone /100 square feet

CCE on label: 70 percent

$$\text{Actual liming material required} = \frac{(5 \text{ lb of limestone/100 square feet}) \times 100}{70}$$

$$= 7 \text{ lbs liming material/100 square feet}$$

2. If 11 to 20 pounds of limestone are recommended, divide the amount by two and apply in two applications six months apart. If 21 or more pounds are recommended, divide the amount by three and make three applications at six month intervals.
3. If 3 or more pounds of MgSO<sub>4</sub> (Epsom salts) are recommended, divide the amount by two and make separate applications at four month intervals. If an alternative magnesium source is used, apply an amount equal to the equivalent of 10.5% Mg in MgSO<sub>4</sub>; ONLY ONE APPLICATION should be needed.
4. Lime and fertilizer recommended in pounds of material per each 100 square feet of area to be treated. Use the following conversions to convert from pounds per 100 square feet to other units or area sizes:  
Pounds per 100 sq. ft. x 10 = pounds per 1000 sq. ft.  
Pounds per 100 sq. ft. x 435 = pounds per acre:
5. Amount of sulfur needed to lower soil pH to optimum level.  
(See Laboratory Results on front of report for soil pH)

From Current Soil pH	To Optimum Soil pH	Sulfur (lb/100 sq ft)	From Current Soil pH	To Optimum Soil pH	Sulfur (lb/100 sq ft)
8.0	7.5	0.50	7.0	6.5	0.75
	7.0	1.00		6.0	1.25
	6.5	2.00		5.5	2.50
	6.0	3.00	6.0	5.5	1.50
	5.5	4.00			
7.5	7.0	0.75			
	6.5	1.25			
	6.0	2.50			
	5.5	3.50			

Apply sulfur at the above rates for a loam soil. On heavier soil (silt loams) use one third more than the amount shown. On lighter soils (sandy loams) use one-half of the amounts shown.

If aluminum or ferrous sulfate is used to lower pH, multiply the above amounts by 2.5. Follow the same suggestions as above for soil types. If 4 or more pounds are needed, divide the amount in half and make two applications six months apart.

6. There is no reliable test for evaluating the amount of nitrogen (N) in soils that is available to crops over the growing season. The N recommended is based on the actual N that needs to be supplied annually to ensure optimum plant growth.