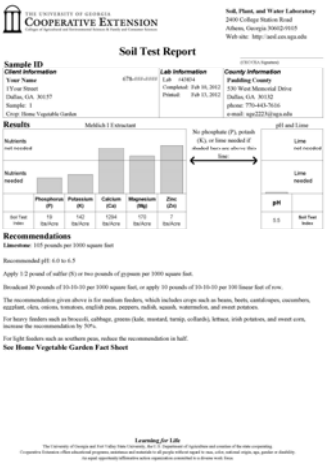
Soil Testing- Breaking the Fertilizer Code



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Paulding County Agriculture and Natural Resources Agent
Paulding County Extension Office
530 W. Memorial Drive
Dallas, GA 30132
http://caes.uga.edu/edu/extension/paulding

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How Much Fertilizer?

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Reasons to Test your Soil

- Measure available nutrients and soil pH (acidity/alkalinity)
- Type and amount of fertilizer and lime to increase soil pH if needed
- Recommendations are customized for lawns, crops, gardens, trees

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The Benefits of Testing include:

- Saves time and money
- Apply lime and fertilizer correctly
- Maximize growth and yield

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Taking a Soil Sample

- Use a trowel to take random samples 6” deep
- Place a scoop from each sample site into a plastic bag
- Bring your sample to **530 W. Memorial Drive in Dallas**
- Along with **$9**

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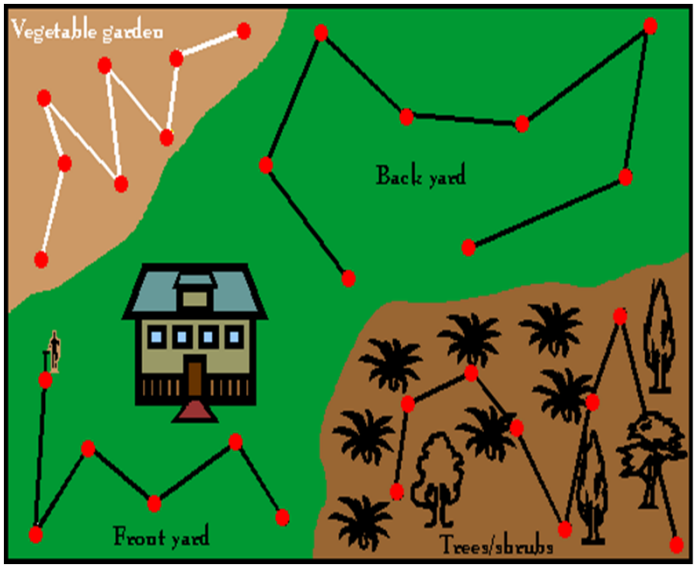

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Soil, Plant And Water Laboratory
2400 College Station Road
Athens, GA

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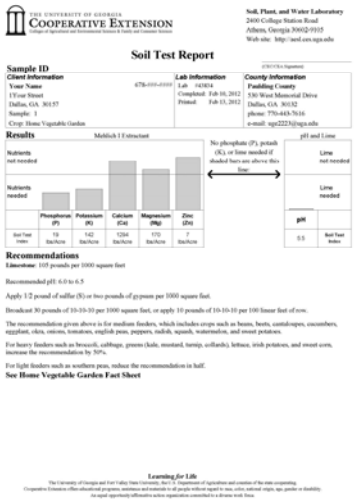
LAWN

Soil Test Report

VEGETABLE



Soil Test Report

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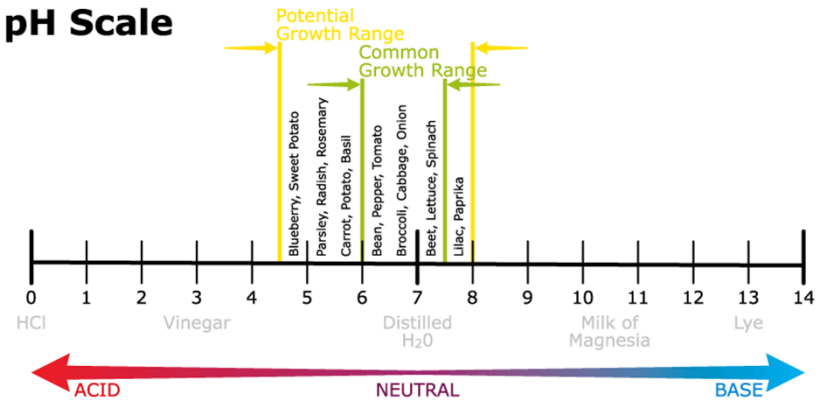
pH Scale



- The sweet spot for vegetables is **6-7.5**
- Notice blue berries like acidic soil **4.5-5**, that's why its important to tell the laboratory what you are growing

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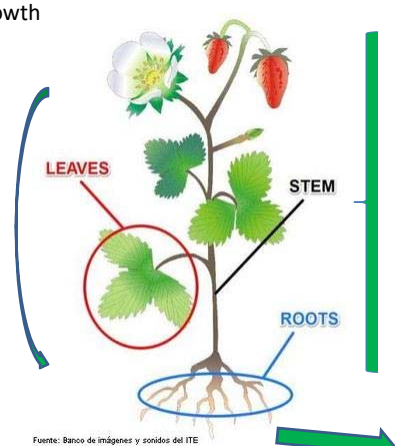
Potassium – supports enzymes and proteins which promote foliage growth



Fuente: Banco de imágenes y sonidos del ITE
Ilustrador: José Alberto Bermúdez

Nitrogen - Promotes upward growth, stems, branches and leaves

Phosphorous – promotes root and root hair growth

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Break the Fertilizer Code

- 10-10-10 is the go to fertilizer of the south
- 50 lb. bag
- is 10% or 5 pounds each of Nitrogen, Phosphorus and Potassium

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Equipment

- Measuring Tape
- Pencil and Paper
- Calculator
- Scale
- Spreader






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Units of Measurements

Square Foot - 12 inch square

1 pound = 16 ounces

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20’

12’

Mr. Jones

Mr. Jones Soil Test recommends broadcasting 20lbs of 16-4-8 per 1000 sq. ft. He wants to install both a summer and fall garden. He also wants to compare conventional and organic fertilizers.

How much conventional or organic fertilizer does he need?

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All Fertilizer Computations Start With The Soil Test Recommendations

Ratio:

$$\frac{A}{B} : \frac{C}{D}$$

So if Mr. Jones’ Soil test recommended 20 lbs of 16-4-8/ 1000 square feet, then how many pounds of fertilizer does he need for his 240 ft^2 garden?

$$\frac{\text{Soil Test poundage}}{\text{Soil test Squ. ft}} = \frac{x}{\text{Squ. Ft in garden}}$$

$$\frac{20\text{ lb}}{1000\text{ ft}^2} = \frac{X}{240}$$

$$4800 = 1000x$$

UGA extension | **X = 4.8** | extension.uga.edu | 1-800-ASK-UGA1

• Organic Equivalent of 4lbs 13ozs . of Conventional Fertilizer

- **N- Blood Meal** **12 1.5 0.6**
- (***M-R***)
- **P - Steam Bone Meal** 0 **10** 0
- (***S-M***)
- K - Potash Magnesia 0 0 **22**
- (R)
- **Cow Manure**
- **(M)** **0.5 0.2 0.4**

16 4 8

How to Convert an Inorganic Fertilizer Recommendation to an Organic One UGA Extension Circular 853 https://tinyurl.com/ych8k38b

- **Rapid- < 1 month**
- **Medium- 1-4 months**
- **Slow- 4 months to 1 year**

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• Organic Equivalent of 4lbs 13ozs . of Conventional Fertilizer

16 4 8

		Summer	Fall
• **N- Blood Meal** (***M-R***)	**12 1.5 0.6**	6lb 6oz	9lb 10oz
• **P - Steam Bone Meal** (***S-M***)	0 **10** 0	1lb 14oz	2lb 13oz
• K - Potash Magnesia (R)	0 0 **22**	1lb 11oz	2lb 9oz
• **Cow Manure** • **(M)**	**0.5 0.2 0.4**	154lb	231lb

- **Rapid- < 1 month**
- **Medium- 1-4 months**
- **Slow- 4 months to 1 year**

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Application

Conventional

- Apply half at planting
- Wait 3 weeks and apply the remaining half
- Plants are not able use all of the recommended nutrients quickly

Application

Organic

- Apply all at initial planting
- Because organics need time to become available to plants

WHY IS ALL OF THIS IMPORTANT?

We tend to think more is better

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Location, Location, Location

- 6 hours of sunshine
- Drainage- perc test
- Water source?
- Heavy lifting?
- Budget?

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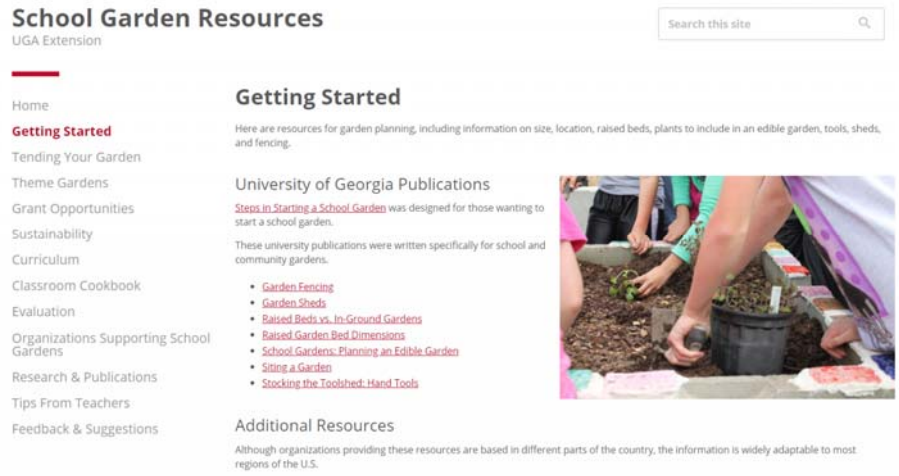
Online Resources for School Gardens



UGA extension | http://extension.uga.edu/programs-services/school-garden-resources/getting-started.html

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