



DO-IT-YOURSELF SOIL TESTING

By Dennis Volz, Black Forest Garden Club President

Presented March 2021

Why Test Soil?

- Plants need optimum soil chemistry to thrive
- Optimum chemistry varies with plant variety
- IE. azaleas, blueberries, hydrangeas like acid soil
- Soil chemistry changes and can be adjusted
- Varies across planting area
- You will want to know the soil chemistry where you plan to plant so it can be adjusted if needed

When To Test

- New planting bed
- Beginning and/or end of season
- Every year and during season if plants aren't thriving
- Soil chemistry changes over time
- Adding amendments and fertilizers
- Environment (acid rain, trees, building foundations)
- Plants deplete nutrients

What Soil Chemistry Is Most Important

- Fertilizer Elements
- N-P-K (nitrogen, phosphorus, potassium)
- All plant fertilizers will list proportions in this order (e.g.

10-10-10)

- pH (acidity/alkalinity)
- Optimize for nutrient uptake
- Most plants like a slightly acidic soil (see handout)
- Other trace elements (Ca, Mg, Zn, etc.) are less important but still factors

A Note On Adding Fertilizers

- Some tests will provide recommendations on what to add and how much.
- Too much can harm plants and impact environment.
- Organic vs. Synthetic

3 Methods To Test Soil Yourself

1. Send sample to CSU



- Get kits from nursery
- Follow directions for sampling soil
- Send it in
- Most comprehensive and accurate
- Report will include recommendations for amending &

fertilizing soil

- Most expensive (\$35)
- Do every 3-5 years or so

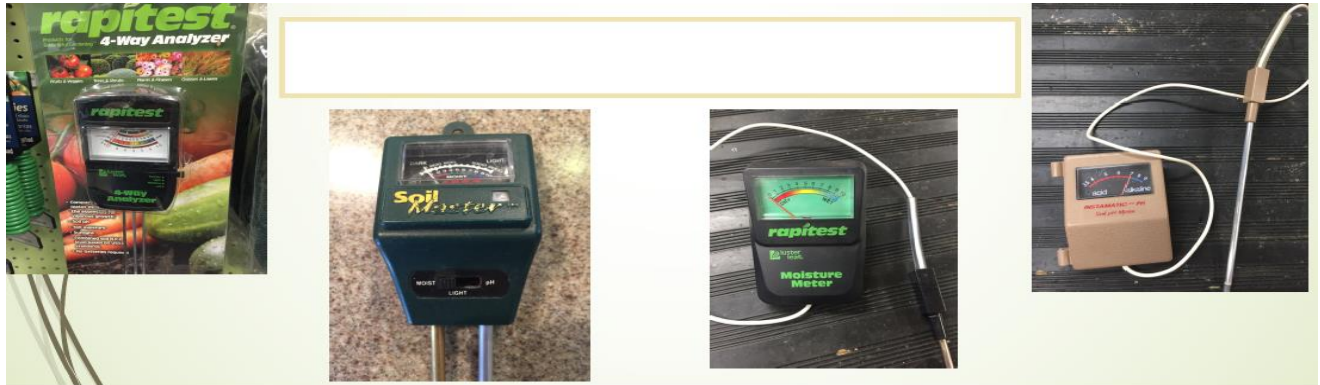
https://www.soiltestinglab.colostate.edu/documents/soilsample_agricultural.pdf

2. Buy a kit



- Uses similar sampling methods
- Buy at some nurseries or Amazon
- Only tests N-P-K and pH
- Not as accurate
- Relies on color comparison for readings
- Cheaper \$(8-27)
- Do once a year

3. Probe



- Very easy, no sampling
- Very localized, just insert probe in soil
- Usually an analog readout, not precise

Summary

- Test soil to ensure optimum soil chemistry
- Various methods have pros and cons
- Test periodically and new beds