

8. Why would you add soil when building a compost pile?
 - a. Soil provides nitrogen for microorganisms to feed on
 - b. Soil raises the pH of the compost, and speeds it up
 - c. Soil aerates the mixture, keeping it "light"
 - d. Soil contains microorganisms, which do the composting

9. How hot should a compost pile get to kill disease organisms?
 - a. 90 degrees Fahrenheit
 - b. 120 degrees Fahrenheit
 - c. 140 degrees Fahrenheit
 - d. 220 degrees Fahrenheit

10. What should you do to a compost pile if it smells like ammonia?
 - a. water it, making sure the entire pile is wetted down
 - b. add small textured plant materials, like grass clippings
 - c. add more minerals, by mixing in garden soil
 - d. turn and mix it, to incorporate more air, and possibly add a bulking agent like straw

11. What are the 6 Key Factors to for managing a compost pile for maximum efficiency?

Answers: Quiz # 2 Soils – Composting

1. "Soil texture" refers to:

- E. The amount of air in a soil
- F. The amount of organic matter (manure, etc.) in a soil
- G. The size of the individual soil particles**
- H. How much the soil particles are clumped together

a. Soil organic matter:

- G. Is important for structure
- H. Can cause nutrient imbalances
- I. Improves drainage
- J. Improves water holding capacity
- K. All of the above**
- L. None of the above

3. Mineral soil clay and silt particles and well decomposed soil organic matter have (positive / **negative**) charges and most plant nutrients are called (**cations** / anions).

4. Rototilling a dry or very wet soil can **destroy** soil structure

5. What are the two fractions of Organic Matter called, and briefly define each one and why they are both important.

Active Fraction – Organic matter that is living or recently dead which soil organisms depend on for food to consume and decompose. Through the process plant available nutrients are released to the soil solution and are available for plants. They are important because these nutrients are held in the OM and slowly released over the course of the garden season.

Passive Fraction – The very well decomposed and relatively stable portion of soil organic matter. It acts like a sponge and can absorb six times its weight in water. It helps a sandy soil to hold water and nutrients for plant growth. In heavy silt or clay soils it helps to open up pore spaces to improve drainage.

Note: If you had trouble with this question, please refer to document in the soil chapter of your manual titled: What is Organic Matter?

6. What is Cation Exchange Capacity and why is an important attribute of soil?

The soil's ability or capacity to hold nutrients. It is very important in because at these negatively charged soil sites, positively charged cation nutrients such as potassium, calcium, and magnesium are held by the soil where they can be released into soil solution and become available for plant growth. In a highly sandy soil with low CEC the soil will not be able to hold nutrients and therefore be relatively infertile.

7. What would you add to a compost pile as a source of nitrogen?
- e. Dried leaves, raked up in the fall
 - f. Egg shells
 - g. Lawn clippings**
 - h. Small twigs and chipped branches
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11. What are the 6 Key Factors to for managing a compost pile for maximum efficiency?
- 1. C/N ratio of materials (30:1 optimum).
 - 2. Moisture
 - 3. Surface area exposed
 - 4. Aeration
 - 5. Temperature
 - 6. Pile Size