Soil organic matter is the fraction of the soil that consists of plant or animal tissue in various stages of breakdown (decomposition). Most of our productive agricultural soils have between 3 and 6% organic matter.

Soil organic matter contributes to soil productivity in many different ways. In this fact sheet, we describe the various components of organic matter and the different roles organic matter plays in soil productivity. We also discuss field management practices that will help preserve or increase soil organic matter levels over time.

What is Soil Organic Matter?

Organic matter is made up of different components that can be grouped into three major types:

1. Plant residues and living microbial biomass.
2. Active soil organic matter also referred to as detritus.
3. Stable soil organic matter, often referred to as humus.

The living microbial biomass includes the microorganisms responsible for decomposition (breakdown) of both plant residues and active soil organic matter or detritus. Humus is the stable fraction of the soil organic matter that is formed from decomposed plant and animal tissue. It is the final product of decomposition.

The first two types of organic matter contribute to soil fertility because the breakdown of these fractions results in the release of plant nutrients such as nitrogen, phosphorus, potassium, etc.

The humus fraction has less influence on soil fertility because it is the final product of decomposition (hence the term "stable organic matter"). However, it is still important for soil fertility management because it contributes to soil structure, soil tilth, and cation exchange capacity (CEC, see Agronomy Fact Sheet #22). This is also the fraction that darkens the soil's color.

1) Find the meaning of these words. Encuentra el significado de estas palabras

a) Organic Matter:
b) Stage:
c) Breakdown
d) Agricultural soils
e) Components
f) Soil productivity
g) Plant residues
h) Living Microbial biomass
i) Tilth
j) Catión Exchange:

2) Choose

a) Soil organic matter consists of

_____

b) Soil organic matter contributes to

_____

c) Organic matter is made up of different components that can be grouped into three major types

_____

3) Complete with the correct words

a) The living microbial mass includes _____ Responsible for decomposition of plant residues and active organic matter.

b) _____ is the stable fraction of the soil organic matter.

c) _____ is formed from decomposed plant and animal tissue

d) Humus is the _____ product of decomposition.

e) The first two types of organic matter contributes to soil _____

f) The breakdown of these two types of organic matter results in the release of plant _____

g) Humus contributes to soil _____, _____ and _____.

FERTILITY -MICROORGANISMS- HUMUS X 2- TILTH- NUTRIENTS- STABLE- STRUCTURE- CAUTION EXCHANGE