

# Area 8

## *Why Soil is Important to Us*

*Mikaela Minor*

Have you ever stopped and thought about what is underneath your feet, or what your house is built upon, or what hills and mountains are made of? Underneath all this is a thing we call soil. Soil is very important to our everyday life. "Essentially, all life depends on soil...There can be no life without soil and no soil without life; they have evolved together" (Charles E. Kellogg, USDA Year Book of Agriculture, 1938). Soil produces grains, fruits, nuts, vegetables, and other sources of foods that we eat. Soil grows trees, flowers, and other plants that produce air for us to breathe. Soil also cleans our world by supporting organisms that decompose waste and clean our water. Soil is overlooked a lot but it is very important and needs to be protected.

Hundreds of thousands of acres of corn, barley, wheat, beans, and other crops are grown every year in the US. These crops cover much of the mid-west, an area called the "bread basket of the nation" because it produces the majority of our food. This area is good for raising crops because of the nature of the soil located there. Soil in this region is very productive which allows a lot of crops to be grown there. Farms also produce cows, sheep, goats, chickens, pigs and other livestock across the country. Soil is important for livestock because it produces the grass, grain, and land they need for growing to provide us with meat. Without soil and the vegetables, fruits, grasses, grains, and other foods it produces, we would not be able to live because we would not have any food to eat.

Soil grows flowers, trees, shrubs, and other natural plants. These plants are needed for producing the air we breathe. The process of creating air is called photosynthesis. Photosynthesis particularly involves trees. Photosynthesis takes place when the water is absorbed by the roots of the trees and then comes in contact with chlorophyll located in the leaves of the tree. During photosynthesis trees produce a gas called oxygen. Oxygen is the air that we breathe into our lungs. A tree takes in carbon dioxide then produces oxygen. We take in oxygen and let out carbon dioxide that is needed by the trees. Without soil we would not have oxygen because the trees would not have a place to spread their roots and grow.

"One square yard of soil can hold one billion living things, including worms, centipedes, mites, fungi, and thousands of bacteria" ([www.factmonster.com](http://www.factmonster.com)). These living things eat dead plants, trees, and other waste. This process allows our waste to be used to fertilize plants and produce more soil which benefits the environment. Another benefit of the living things in soil is their ability to clean or filter our water. As rain falls water travels across the surface then moves into soil. When water moves into the soil, living things feed on nutrients carried by the water and the remaining nutrients are stored in soil. This filters water which provides us with cleaner drinking water and cleaner water in our streams, rivers, and lakes.

Soil is a very important to us but it can also be very bad if it isn't used correctly. Soil can enter our streams, rivers and lakes and cause harm to fish and other wildlife that live there.

Many different land uses can cause this bad impact on our environment. Everyone should take steps with helping to conserve and protect soil. Farmers should use contour farming which allows crops to be planted along the slope instead of in straight lines up and down a hill. When crops are planted up and down hillsides water can more easily enter into nearby streams. Contour farming slows water down and allows it to soak in so nutrients can be absorbed by the soil. Farmers should also fence cattle out of streams which will allow natural vegetation to grow along the banks preventing the soil from washing into the stream. Wind breaks can be planted in areas where soil may be exposed. Wind breaks slow wind so that it cannot erode the soil. Any exposed soil can have a negative impact and should be covered with vegetation as soon as possible so it does not erode. Trees can be planted along stream banks and wetlands can be created. Wetlands are areas where water is stored during wet periods and allowed to slowly enter streams after being filtered. Wetlands also provide habitat for wildlife. It takes several hundred years to create one inch of soil.

As you now realize, soil is one of the most important things in human life. It produces food for us to eat, air for us to breathe, and removes waste while filtering water for us to drink. Life would be impossible if soil didn't exist, so conserving to ensure we have good soil in the future is very important. Soil should be conserved because if it isn't, it would be impossible to live. The next time you walk on the ground, scoop a shovel full of dirt, or plant a tree, you will know how important soil really is to your everyday life.