



## Why An Agricultural Community Should Be Concerned About Soil Health

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I have spent my entire life, up until very recently, surrounded on four sides by fields. My family has deep agricultural roots in La Porte County Indiana, and the role that agriculture has played in my life cannot be overstated. My first job was on a corn detasseling crew for Dupont Pioneer, and as a ten year 4-H member, I grew an even greater appreciation for our communities' agrarian traditions. It should go without saying that I wish for these traditions to be continued for many generations to come.

One essential part of that is to make sure that farming continues to be an economically viable lifestyle, and by further extension that our land continues to be productive as it has been for generations. Without proper soil health, corn and soybeans, the mainstays of agriculture in our region would not be profitable, and pillars of the community would be out of work. Wind erosion, water erosion, and over usage of particular fields pose a particularly pressing issue to the continued production of corn and soybeans.

Economic stability for our community and others like it, environmental reasons, food security and the ability of the United States to produce for its citizens and others across the world must be all considered as reasons to want to protect the soil. By 2050 food production must increase by 60% in order to properly feed the people of the world. What role will our community play in that increase in production, while not using up all the nutrients in the soil and cutting down every stand of trees east of the Mississippi? The increased use of soils to produce cereal crops means that soil is no longer a renewable resource and the poor health of such soil can endanger a community's food supplies across the globe.

Wind erosion can stem mainly from the constant blowing of the winds, which are always present in our region, on soil that is not tied down by plant roots. Tons of soil are eroded off of each acre of cultivated land each year. Without natural windbreaks the wind will only grow stronger,

causing even greater soil degradation. Often times it can seem advantageous to a farmer to remove a stand of trees or tree line, and while occasionally warranted for greater ease or income, this can remove a natural windbreak that will dull the effect of wind on open soil. The use of tree establishment has been particularly effective in parts of Midwestern United States. Alley cropping with the use of forage plants and certain regionally specific trees have shown to improve the production of cereal crops in Iowa, as well providing a steady source for grazing, in the case of cattle. One tree that was used in a study published in Agroforestry Systems was our state tree the yellow poplar also commonly known as the Tulip Tree.

The use of cover crops such as oats, clover, and radishes not only protect the field from soil erosion but also return organic material to the ground. The economic viability of cover crops, an essential issue for a cash-strapped farmer is clear; in Minnesota, fields that used cover crops has an average corn yield of 126 bushels whereas fields without produced an average of 115 bushels. Organic material is important in the health of the soil and makes it less necessary to use fertilizers and nitrogen on fields which not only cost a significant amount but can have negative effects on our environment and those that are downstream of us. Water erosion poses just as great if not even greater threat in some areas (such as near the Kankakee) because of the lack of roots in the soil during particular times of the year. The use of cover crops and trees are just as effective in reducing water erosion as in wind erosion prevention.

While not everything I have proposed to reduce wind and water erosion should be immediately introduced by every farmer in La Porte County, the economic and cultural devastation that would occur in our community from the loss of a prominent agrarian influence should be avoided at all costs. As a concerned citizen, I see and wish to bring awareness on some of the issues that present themselves to our community. Not only will our landscape and culture be secure for future generations, the economic stability associated with regular and productive harvests are a must, not only in our community but in others across the United States.