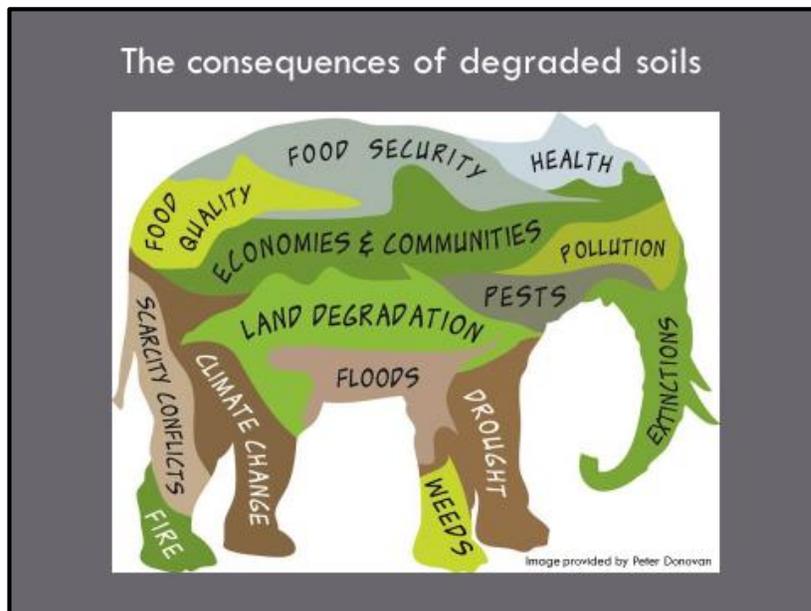
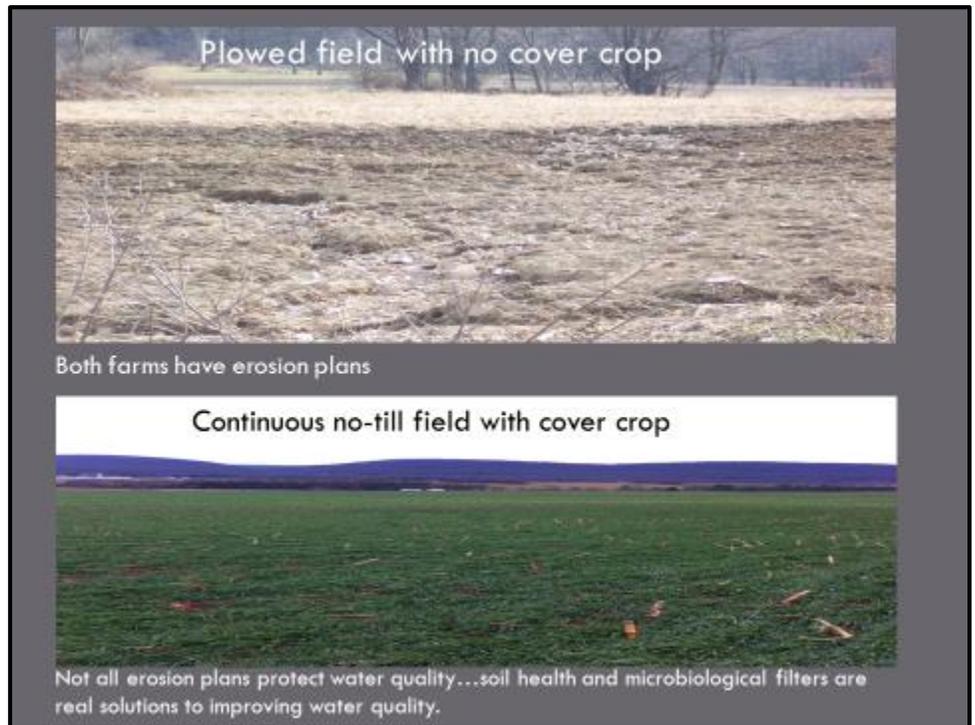


I would like to thank everyone here today for the honor of sharing some of my life experiences and especially congressman GT. for his confidence in me. I am very fortunate to have been part of agriculture for more than 40 years. On our operation, I have witnessed the transition from conventionally plowed ground to no-till. Some of our fields have not been plowed in 40 years. We have seen firsthand the transformation of our soils and the positive results when you farm in nature's image. In the last

decade, with the addition of cover crops and the belief that plants feed the soil instead of the soil feeding the plants, we have seen incredible results. Some examples include, organic matter increases of one percent in three years and infiltration rates that average 4 ½ inches an hour.

I have no fancy degrees, no financial incentives to be here today, and I don't enjoy public speaking, but I have a passion for our soils and the land around the world. I am not an organic farmer, although we no longer use insecticides and fungicides and only a fraction of the herbicides and fertilizer that we once applied. I used to be part of the group of traditional thinking farmers, but by attending national conferences, field days, and visiting open minded farmers around the country, I now have an understanding of the important symbiotic relationships that are achieved when you farm in nature's image. Our farm is part of a like-minded nationwide soil health community which believes that soil health holds the answer to so many problems.

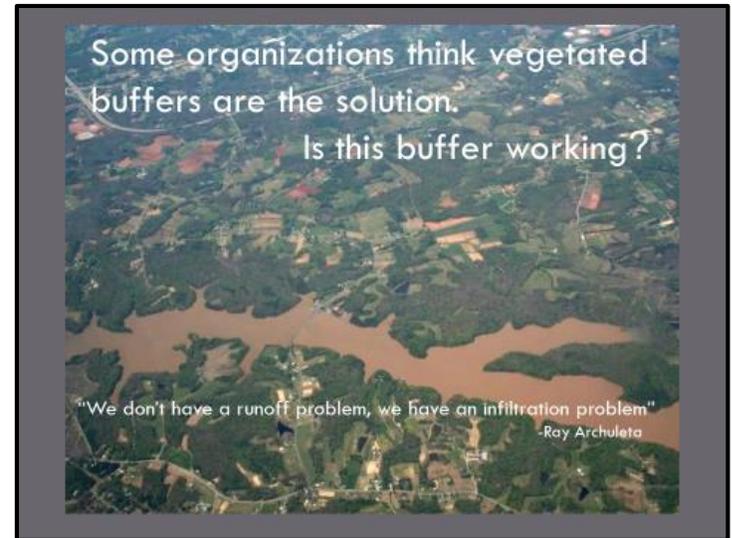


Agriculture today is farming a degraded resource and has accepted this as normal. Despite our best efforts, our soils have lost the ability to effectively absorb rainwater, are void of biological life, and are depleted of nutrients. Our soils are so degraded that we must rely on industrial inputs to keep our farmlands productive.

We now have a broken water cycle as a result of a broken carbon cycle. The loss of soil organic matter has contributed to carbon dioxide levels in the atmosphere because we have robbed the soils of its carbon. Soil organic matter has many, many functions: water infiltration, water holding capacity, ground water recharge, and its ability to cycle and store nitrogen along with other nutrients.

Conservation programs have historically reacted to the resource concerns, instead of being proactive to address the source of the problem. We need to start promoting proactive conservation instead of reactive conservation. NRCS has embraced soil health as one of their core programs. It is a good start but what we need is a mammoth soil health education campaign to teach farmers, federal and state agencies,

regulators, universities, children and the general public. Farmers need to understand how the soil functions before they will value it as a resource. Our government programs need to motivate farmers to adopt soil health principals. Many do the opposite, they enable poor stewardship. As we look to the future direction of government crop insurance programs that guarantee price and yield, we need to have a premium structure



that promotes soil building techniques and conversely provides a disincentive for soil degrading practices. Tax payers should not be on the hook for supporting production agriculture that exports more topsoil, nutrients, and soil carbon than actual crop products.

The benefits of healthy soils need to be acknowledged in the regulatory process. We need regulatory agencies to recognize that well managed farms with healthy soils are the key to reducing agricultural pollution.



## Food for thought

More independent, government funded studies need to be conducted on the effects of fertilizer, herbicides, GMO's and pesticides on the soil community and human health. We cannot rely on industry to fund these studies and produce unbiased results.

Each state needs to have long term, no-till farms that exhibit improvements in soil health. These farms need to be central in soil health research and education programs. Soil health farms need to monitor improvements in profitability, water infiltration and retention, soil organic matter increases and soil generation.

Can agriculture sequester enough soil carbon to make a measureable difference in atmospheric CO<sub>2</sub> concentrations? In the book *Cows Save the Planet and Other Improbably Ways of Restoring Soil to Heal the Earth*, Dr. Christine Jones states that every one tonne increase in soil organic carbon represents 3.67 tonnes of CO<sub>2</sub> sequestered from the atmosphere.

Can healthy soils significantly reduce rain water runoff?

Do healthy soils leak nutrients or does this only occur in poorly structured and poorly managed soils?

Changing weather patterns are linked to soil management. Bare, exposed, dry soils put more heat into air and change flow patterns above the fields. Bare soils do not cycle the water, lowering the ability for the plants to contribute to local moisture.

New soil testing technologies like the Haney Soil Health Tool and Solvita CO<sub>2</sub> Burst that measure biological life and nutrient availability need to be promoted and incorporated into crop nutrient recommendations.

What will motivate farms to achieve good soil health and increase the soil organic matter - regulations or education and gaining a better understanding?

If you promote soil health principles, be prepared for a huge push back from the agriculture industries that sell products to farmers. Once a farm restores healthy soils, few of these products are needed and it will reduce industry sales.

Farmers that contract with NRCS and are given incentive payments for installing practices (EQIP, CREP, CRP, WRP) should be required to attend soil health trainings and education programs.

We need to develop Soil Health Management Plans that take into account the soil infiltration rates, soil organic matter, and soil enhancing practices on the farm.