



Residue Management, Tillage, and True Fertility

9/23/2013

“Organic matter contains more energy than anything else of value to plants.” – Robert Parnes, *Fertile Soil*

“Proper carbon management is the most important function on your farm.” – AgriEnergy Resources

Proper carbon management → More organic matter → Active carbon.

An abundance of active carbon will increase:

- Tilt
- Water holding capacity
- Capillary water movement
- Root penetration
- Sequestration of nitrogen, carbon, phosphorus, sulfur, and trace elements

An abundance of active carbon is **True Fertility!**

So how do we get an abundance of active carbon? By Feeding the Crop, Managing Our Residues, and Choosing Wise Tillage. The result? Mineral dense, nutritious, high yielding crops.



As farmers we want yield. We sell yield. By **Feeding the Crop** we get yield. But along with the yield comes large quantities of residue.

So we must **Manage the Residues**. We must decide on the best use of the residues. Are those corn stalks a hindrance for our next crop or not? Corn on corn they likely are. In a soybean rotation, not so much.

A big part of managing the residues is choosing **Wise Tillage**. And it is the

season to be making that wise tillage decision.

The right tillage depends on climate, soil texture, and topography. Are you in the hot South where soil coverage is important to keep soil temperatures down? Do you experience cold springs and need soils to warm up? Do you farm sand, silt, or clay? Is your farm highly erodible?

All of the following tillage practices can be used to build organic matter.

- No-Till
- Strip-Till
- Mulch till
- Mini-moldboarding

Wise Tillage for your operation may vary from your neighbors. In reality, it may vary from field-to-field on your acreage!

Choosing the right tillage, whether it be no-till or conventional tillage, influences your soil biology. As a biological farmer, your goal is to grow the most microbes per acre. In most cases your previous crop's residue is the abundant carbon/food source to feed those microbes. Your "trash" is a valuable asset if managed well.

Most of us want to accelerate the decomposition of residue. The best tilth, the most productive soils, decay residue quickly. For rapid decomposition we need a "supercharged" microbial biomass. Residue decomposition is accelerated by cover crops, contact with soil (tillage), and inoculation with live microbials like **Residue™**.

Give us a call to talk about tillage, fall calcium amendments and **Residue™**. Your carbon management decisions made this fall set the stage for next year's fertility. Choosing to farm biologically and increasing your farm's organic matter will reduce purchased inputs and increase your farm's productivity and its value.

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