



Residue Management by the Numbers

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Proper residue management is at the heart of Biological Farming. In fact, you've probably heard us state that Biological Farming is managing soil air, water, and residue with biology.

Good residue management is an effective way to improve soil biology, by increasing the total numbers and diversity of beneficial soil organisms necessary for building organic matter and growing vigorous crops.

And speaking of numbers, let's take a look at residue management by the numbers...

- **4** tons of residue per acre are left behind a modest 180-bushel corn crop
- **2.1** tons of corn roots are left in each acre, too
- **80-30-190** - That's the N-P-K contained in those 4 tons of residue
- **16** pounds of Sulfur, **35** pounds of Calcium, and **25** pounds of Magnesium are in those 4 tons, too
- **115** pounds of purchased nitrogen per acre - That's the amount we **SAVED** per year, by farming biologically and managing residues wisely
- **3.9%** organic matter - the soil on an Illinois farm where AgriEnergy Resources' residue management plan had been followed for 25 years
- **2.9%** organic matter - the soil just across the fence line from the AgriEnergy farm

- **1%** organic matter - the biological farming difference! Wise residue management is the cornerstone of biological farming

1% organic matter allows the soil to store another **10,000** gallons of water/acre and contains **1,000#** nitrogen/acre, **650#** phosphate/acre, **115#** potash/acre, and **700#** calcium/acre.

While that 1% organic matter is huge, there are other benefits of a wise residue management program as well. Such as having less residue to till and plant into for the following crop. This means that less tillage is necessary to prepare a seedbed. In many cases it has meant that farmers can use a field cultivator rather than a disc. Having less residue to contend with means better spacing and placement of the seed and better seed-to-soil contact, both of which promote a more uniform stand. Less residue also allows the soil to warm up faster which means quicker emergence.

Another benefit of residue management is improved soil tilth. One of the byproducts of microbial respiration is the production of polysaccharides, a biological glue that forms and holds water stable soil aggregates together. The result is a "coffee grounds" soil tilth that allows better water and air infiltration. This improved soil tilth creates a superior seedbed. The improved tilth also means there is better gas exchange in the soil, allowing oxygen to go into the soil and carbon dioxide, methane and other gases to exit the soil.

AgriEnergy believes an important step in a good residue management program is using **Residue®** - a package of live microbes known to break down crop residues. They are:

- *Residue® Complete
- *Residue® WS
- *Residue® O
- Residue® XT
- Residue® CS

Products with an * are formulated for organic agriculture, however it is up to each certified organic grower to get approval from his/her certifying agency before using this product.

Let's develop a **residue management plan** for you! Contact your rep or call our main office at **815.872.1190**.