



## Welcome to Ground Work

### *Does Your Residue Management Plan “Make the Grade”?*

7/16/2012

Right now – in the middle of summer – is a great time to look at your soils and evaluate your past residue management program.

Field Agronomist Gary Campbell was recently in the pasture of a customer who applied a strong biological program and could not find any thatch or other dead plant material. Even in a dry season, everything left from winter had decomposed, returning valuable nutrients to the living plants and building up organic matter and soil humus.

On the flip side, Gary was in another grower’s hay field last month that still had corn stalks present in the soil from two years ago! That field clearly was in need of faster residue decomposition.

No matter the crop or tillage system, here is a simple **mid-summer grading scale** to help you evaluate how effectively your residues are managed:

**A** Very few crop residues are visible in the soil. Any particles remaining look dark brown, like coffee grounds. Surface residue may be present, but is brittle and a dull brown color. Corn stalks have lost their waxy sheen with no pith or soft tissue left. Soil has a good earthy smell. Turf grass, pastures or hay have very little thatch.

**B** Some residue can be found in the soil, but there are visible signs of microbial activity and degradation. Soil fungi are visible (white, stringy filaments and fuzzy growth) and clearly look like they are hard at work breaking down remaining residues. Primarily only high carbon materials, like woody stalks, are left. Surface residues also show signs of degradation, especially on parts in contact with the soil.

**C** Residue from last year is still present, but nothing is left from prior crops. Some microbial activity can be found, but not easily. Most pieces of residue in the soil still look intact, almost preserved. There is no visible degradation of surface residues, other than that caused by weathering.

**D** Much residue still remains in the soil, even the past two or three crop seasons. Soil has an anaerobic smell (musty or rotten), and very little sign of microbial activity. Soft tissue, like grass, weeds, and wheat, is still present. Corn stalks still have pith inside and skin is still waxy or shiny. Plant materials appear preserved, even “pickled”.

The following picture was taken in early August a few years ago. Digging in a soybean field revealed active soil fungi (white, stringy filaments) busy decomposing corn residue from last season.



Regardless of where you are on the grading scale, plan now to improve your grade this fall by utilizing biological products like **Residue™**, evaluating your tillage practices, and considering inclusion of cover crops.

Ask your AgriEnergy Resources representative for other ideas to help you “make the grade” and watch for the upcoming **Ground Work** series on residue management.