



Roots

11/4/2013

What roots are we talking about? And why are we talking about roots in November?

We're talking about the roots from the 2013 crop you're harvesting now. The ones that have done all they can for the current crop, and now need to be degraded and recycled into nutrients for future crops.

And we're talking about the roots that will support your 2014 crop, because:

- Early root development gets your crop off to a healthy start
- Continuous, normal root growth keeps your crop fed, healthy and productive throughout the season
- Fall is the time to "set the stage" for excellent plant roots in 2014

Recent *Ground Work* articles have taken a close look at residue management principles, practices and products. In a nutshell, we recommend getting the residue in contact with the soil as soon as possible after harvest, inoculating the residue with one or more of our **Residue™** products, and getting the microbes incorporated through wise tillage or rainfall.

With a little help from Mother Nature, the above plan will lead to rapid crop residue decomposition, an abundance of active soil carbon, and increases in:

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

Before we talk about next year's roots, let's review some of the **major functions of roots**:

- Absorption of water and inorganic nutrients
- Storage of food and nutrients
- Anchoring the plant body to the ground and supporting it

Roots are more than just an anchor to hold the plant in contact with the soil; **roots are the main source for plants to receive water and nutrients.**

Further, most nutrients are absorbed by the **newly formed root tissue**. If the root does not get off to a fast start, followed by continuous normal, sustainable growth, it is practically impossible for the plant to absorb enough nutrients from the soil and/or water. Root growth should be sustained as much as possible to the end of the growing season.

A number of factors can affect early root development and alter the normal growth and size of root systems: weather, compaction, fertilization practices, soil tilth, genetics, pests, etc. For now, let's focus on the factor we can most impact yet this fall ... **soil tilth**.

The chain of events is now clear. Speed the decomposition of 2013 roots with **Residue™** and wise tillage ... Improve soil tilth ... Realize easier root penetration and faster root growth in 2014. Faster, easier root growth means better nutrient absorption, higher yields, healthier plants, and happier farmers!

Contact your AgriEnergy Resources representative today. Discuss a fall 2013 **Residue™** application. Your 2014 roots will thank you!