



How Resilient is Your Soil?

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The 2013 growing season has brought very challenging conditions for many growers. Whether you've experienced drought, cold weather, heavy rainfall and saturated soils, or some other weather event, chances are that crop planting and other field operations have been difficult.

Probably the most common scenario we've heard about is excessive moisture and its consequences. In addition to the field work challenges, some fields show the obvious telltale signs of nitrogen leaching – yellow crop color.

Many other nutrients are also subject to leaching, with calcium being one of them. When available calcium leaches out of the soil profile, you have a resulting loss of soil tilth and structure. This is evidenced by surface crusting which greatly inhibits a soil's ability to "breathe" or exchange gases. This leads to more weed pressure and reduced nutrient availability and crop performance.

Now is a great time to get in your fields and evaluate how well your soils have held up in this growing season. Make some observations:

- How easily can you stick a spade in the ground and dig up some soil?
- Does your soil have a crust at the surface or does it have more of a "coffee grounds" soil tilth?
- Are crop roots restricted by soil density or compaction?
- How is the crop growing?
- What color are the roots? (Healthy roots are white.)
- What grade would you give your soils at this time?

Regardless of what you find, here is some good news: **Healthy soils have a built-in resilience** that resists the negative environmental factors that try to destroy soil tilth; and you can **build healthy soils with Biological Farming**.

Here is a partial list of management practices that help make soils more resilient:

- **Provide soluble calcium to your soils and crops.** This can be done with lime, gypsum, soluble liquid calcium such as **AgriBoost CA** and **Practi-Cal**, and foliar applications.
- **Implement good residue management practices.** The rapid breakdown of crop residue creates good soil tilth. Water stable soil aggregates are created by microbes. These aggregates help soils maintain that “coffee grounds” tilth. **Residue™** can help speed up the residue decomposition to help make that happen.
- **Foliar feed to help replace nutrients that have leached.** Foliar feeding also stimulates the plant to put out more root exudates that feed soil microbes. Adding **SP-1™** with its microbial package to the foliar mix adds to the benefits.
- **Implement a cover cropping system** that works for your crop rotation and your farm. Cover crops add bio mass and microbial activity to the soil. This can lead to better soil tilth and an increase in organic matter.

It is never too late to improve your skills for Biological Farming. You have to start with an assessment of where you are and where you want to be and then formulate a plan to get there. Consult with your AgriEnergy representative to help you make a Biological Farming plan for your farm.