

## The Danville Co-op Agronomy Newsletter – Jan. 2010

What I have learned about our crop production in this area in the last 16 months is as intense as I have ever experienced. Coming from far west Kansas, the soils here are as different as night and day. However, I'm glad that my experience level is up and running so that if I may, allow me to create a general synopsis of what's going on in regard to the production in south central Kansas.

### Soil pH

For the most part, our soil pH runs from 4.8 to 6.5 in the top 8 in. of soil. A pH of 7.0 is neutral, so you can see that our soils are naturally a little acidic. Now, if you pull a sample from 8 – 24 in. you will find a more neutral pH than in the top 8 inches. So, we have changed the pH over time from a neutral pH to an acidic pH. Certainly, those soil test pH levels that are below 6.0 should be watched carefully as to the production of aluminum which is toxic to any growing plant.

### Soil organic matter

When our soils were young, they had OM % at 3-4%. Now, they are hitting the scales at a scant .5% to 1.4% depending on whether they are a sandy soil or a clay soil. A wise man once said, "We know more about the stars in the sky than we know about the ground under our feet". There is a complete ecosystem in the soil that we tend to overlook. How long is it going to sustain us?

### Soil Compaction

Soil compaction can be a problem in most Kansas soils. Compaction can reduce plant growth, reduce root penetration, restrict water and air movement in the soil, result in nutrient stresses, and cause slow seedling emergence. Ultimately, compaction can reduce yields. Soil compaction has become more of a problem in recent years due to increased equipment size and lack of crop rotations. In continuous mono-cropping, more tillage passes may be needed to control weeds and bury crop residue that could foster diseases. Working fields when they are too wet causes compaction as well.

### Solutions?

The solutions to the problems identified are complex. It took a lot of years to create the problems and it may take that many years to correct. If you have concerns about how to do some correction, there are many resources available, including a discussion with your co-op agronomist. Thanks for your continued business!

