



## **The Chem Gro Crop Watch, Issue #4, 5/30/13**

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**This year's "Voodoo" planting dates:** Well, for starters, the entire month of April was one gigantic mess of bad. I have never in my experience seen an entire month that was not suitable for planting corn or soybeans until this year. A few bit the bullet and started planting corn the end of April through May 1<sup>st</sup>. Ground conditions were LESS THAN DESIRABLE, but corn went into the soil regardless. Very seldom does a wrong make a right; but that corn emerged fairly well despite the conditions that it went into. Luckily the frequent rains afterwards kept the ground in "mud like structure" which prevented it from turning into concrete. May 2<sup>nd</sup> then arrived. Ground conditions greatly improved and a fair amount of corn went into the ground. However, the 5 day extended forecast after that was horrible; as a severe cold front was expected with upper 30 degree temps and rain. Three plus inches of COLD rain fell over that weekend; that corn did not have a chance.

- **May 22<sup>nd</sup>, 23<sup>rd</sup>, 24<sup>th</sup>**. I hope I am wrong (we all had enough challenges this spring), but I feel these three planting dates could be really bad. Depending on where you are in the Tri-State area, most people received 3-8" of rain over the Memorial Holiday weekend, and another 2-5" is expected by the end of the week. Our soils are beyond the saturation point of water, and newly planted seeds of corn and soybeans are germinating in this swamp like conditions. Warm and water logged soils hold very little oxygen. Even with the best seed treatments, newly germinating seeds can quickly drown and turn to mush under this oxygen deprived environment. I would keep a close eye on these planting dates to determine if these stands will be adequate or not for this growing season.



**Time to think about additional nitrogen.** I believe by now it is safe to assume we have lost a fair amount of nitrogen. When it does dry out, Chem Gro will be pulling some soil samples on a few customers to test for the amount of nitrate nitrogen still present in the soil. It is a time consuming and expensive soil test to perform, but it will get us an idea of what to expect for side dressing additional nitrogen. The following are a few of my general thoughts for those who will side dress their own or have Chem Gro custom side dress for them.

- **50-70# of additional nitrogen/acre.** As of now, this is



my best guess for supplementing more nitrogen. After I receive soil nitrate results back from the lab, I may fine tune this recommendation.

- Corn on Corn is priority one. Corn on corn in a wet year always seems to suffer worse than corn planted on soybean stubble. Soybean stubble takes time to decompose down and release nitrogen which provides the corn crop a mid to late season shot of nitrogen. Corn on corn does not have this benefit. However, I do feel with the amount of rain that we continue to receive that corn planted on soybean stubble will still benefit from side dressing additional nitrogen.
- Choosing the best form of nitrogen? In the end, nitrogen is nitrogen to the corn plant regardless of which fertilizer form that it came from. If the corn plant is deficient in nitrogen, and supplemental nitrogen is applied, it will improve in yield. However, the methods that are used to apply the various forms of nitrogen is where I place concern for efficacy for the plant. The following order is how I place my opinion of importance of which nitrogen form to use for side dressing from first choice to last.
  - **Anhydrous Ammonia (NH<sub>3</sub>).** Despite it's handling precautions for user safety, NH<sub>3</sub> is still my favorite choice for side dressing additional nitrogen. With it containing 82% nitrogen, it requires less bulk weight to be transported across the field compared to other nitrogen fertilizers. Also, NH<sub>3</sub> must be incorporated into the soil by a knife or rolling cutter followed by closing disks. This incorporation process also slightly opens up the ground which exposes it to additional oxygen. In a wet year that we are having, getting more oxygen into the soil can be a huge benefit.
  - **Liquid UAN (32% or 28%).** Liquid UAN ranks second in my choice for several reasons. With it being only 32% or 28% nitrogen content, it takes much more volume of tons of raw material across your fields to get the job done. With wet soils, more tons can create more compaction. Most applicator machines either cut a shallow slot into the soil where the UAN is injected into the ground by a high pressure nozzle, or the UAN is dribbled on top of the soil. Due to UAN's chemical make-up, 25% of the nitrogen is already in the nitrate form (NO<sub>3</sub><sup>-</sup>) which is leachable under heavy rains. There are no nitrogen stabilizers on the market that can prevent this 25% of nitrogen from leaving. However, the humic acid products that are slowly entering the market place do have an anion exchange capacity, which are able to grasp on to negative charge ions such as nitrate.
  - **Urea.** This fertilizer is 46% nitrogen by weight. Urea is either spread by a sprayer equipped with a dry box, or flown on by an airplane for side dressing. This product ranks third in my choice since it will require timely rains to work the nitrogen down into the root zone since the material will be lying on top of the soil surface. If rains are no longer in the forecast, then it would be wise to use a urease inhibitor product (nitrogen stabilizer) if the crop canopy is not closed over the rows. This is a good choice in nitrogen fertilizer if the corn crop gets too tall to apply NH<sub>3</sub> or UAN.
  - **Foliar Nitrogen.** There are countless foliar fertilizers in the market place. They all seem to have their claims of efficiency that a gallon of product is equal to X amount of soil applied nitrogen. Foliar nitrogen does work, I have seen it turn yellow corn into green corn (albeit temporarily). However a corn crop needs big volumes of nitrogen; especially if you are trying to supplement it in years where big losses have occurred. All foliar nitrogen fertilizers are limited to the gallons you can apply before it burns the crop canopy, and the cost can get prohibited very fast compared to cheaper nitrogen sources such as NH<sub>3</sub>. But, as I said in the beginning, if your corn crop needs additional nitrogen, it will respond regardless of the form that you use.

That's my 2 cents worth.....the choice and decision is always yours.

Lonne