



The Chem Gro Crop Watch, Issue #2, 7/16/14

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What a difference from a year ago. Last year about this time we were begging relief from the heat, lack of moisture, and the excessive punishment from millions of Japanese Beetles. Going into this spring I had a pretty good hunch that Japanese Beetles were not going to be a huge problem. For the previous 3 years everyone who dug up soil in the field by hand made comments on how bad the white grubs were. These white grubs (annual grubs) are the offspring of the adult Japanese Beetles. However, those who dug in the soil this spring did not make any negative comments on how bad the white grub populations were. No grubs = no adult Japanese Beetles. Don't get me wrong, there are a few beetles scattered around, but nothing like the excessive populations we had the past several years. It appears that the severe cold and long winter that we had is good for something; killing white grubs. Maybe that is the reason why the corn looks so amazing.....the corn is feeding on all of the decaying white grub corps (revenge is bitter sweet isn't it ☺)

Corn Comments: I am not willing to go out on a limb yet to provide yield estimates (I never like to give hard bushel numbers until the corn black layers; too much can change in the environment to give early yield checks), but I will say that we are set up to have "crazy stupid record high field averages" for the following reasons:

- **Nitrogen, it has to be all here and then some.** With our excessive cold winter and cold spring soil temperatures, the fall applied nitrogen would have remained in the NH_4^+ (ammonium form) which binds to the soil. Slowly as our soils warmed up this spring it would have converted to NO_3^- (nitrate) which is water soluble or leachable. Although we have had more than timely rains, I don't believe our nitrogen was to the point of leaching through the tile lines as the tile lines only ran for a very short period of time after our big rain events (dry subsoil). Also, with our cool weather and constant moist soils is very beneficial in releasing organic nitrogen in the soil to the corn crop (mineralization). This is a "free" source of nitrogen that is hard to put a number on every year since it is controlled by the environment. Too hot and dry soils, this free nitrogen is not released. Too wet of soils, this nitrogen is also not released or just leached out. This year I think the environment is just right for good mineralization. This free nitrogen will be an excellent source of plant food to finish out some big top end yields.
- **Low disease pressure:** Despite the above average humidity, long morning dews, and very timely rains, most corn diseases are generally low in the majority of the fields. Although seed corn prices seem to keep climbing every year, one big benefit I have seen from corn breeders over the last 15 years is dramatically improved plant health to a number of corn fungal diseases (Gray leaf spot, common rust, Northern and Southern Leaf Blight.) When I moved to Illinois in 1998, many seed companies were chasing high yields with corn genetics that had a white or pink cob. Typically these genetics had huge top end yields, but the sacrifice was POOR plant health and POOR roots and stalk strength. When the strobilurin fungicides (Headline, Quadris, and Stratego) entered the market, I personally witnessed many 30-50 bushel increases in these white and pink cob based genetics. It was exciting to see first-hand how a fungicide could dramatically increase the

performance of a corn hybrid. Since then, genetic plant health in corn hybrids continue to improve over the years and the yield improvements from fungicides in corn seems to slowly recede.

However, fungicides in corn under the right environment, right disease, and susceptible genetics still will pay. Active scouting and knowing your genetics will help in this decision making process.

- **No stress grain fill period:** After watching Ag Day in the mornings, their agricultural based meteorologist gave his 30 day extended forecast for the central corn belt = below normal temperatures. Since the majority of the corn has finished pollination in Central Illinois, you could not ask for a better recipe for high corn yields (more than ample soil moisture, generally speaking low disease pressure, and a slow grain fill period due to cool temperatures). The only thing yet to be determined in the next 60 days (it takes roughly 60 days from pollination to black layer) is the amount of sunlight we will have. The sunnier the better when it comes to grain fill for high yields. If mother-nature is kind to meet this perfect recipe for grain fill, corn yields could be crazy stupid. Most generally we use 80,000-90,000 kernels per bushel in our corn yield calculations when we are in the field estimating yield. If that perfect recipe is met, I could easily see 60,000 to 70,000 kernels per bushel in determining yield. Plug those numbers into your yield formulasYeah... CRAZY STUPID !!! Since it seems like we are asking for the world here, you might as well pray for an Indian summer in late September through October. The downside to a slow grain fill could very easily cause a delayed harvest due to wet grain this fall. Otherwise LP fuel might be high in demand. Time will tell this story.

Soybean Comments: Again, it's too early for yield guesses, but I do have some field observations that I would like to share.

- Fungal diseases.

Septoria Brown Spot is a disease that affects all soybean varieties, and is one that soybean breeders have not made huge gains on in genetic resistance; in my opinion. This disease thrives in frequent rainy spells as it splashes inoculum from the soil onto the bottom soybean leaves causing them to become infected and defoliate from the plant. This is an "every year disease" but due to our current weather pattern of cool and moist this disease could take away some valuable yield potential. Fungicides have good protection against this disease.



Sudden Death Syndrome (SDS). Thanks to our hot and dry grain fill periods in soybeans for the last two years, SDS has been all but forgotten about. However it is a root up-taken fungal disease that lives in our soil that is very persistent. The worst years with SDS usually have three common factors. First a susceptible variety. There is no true genetic resistance to SDS, just varying degrees of tolerance. Second, several weeks of poor seedling emergence due to cold weather. Third, above normal rainfall and cool weather during early pod formation. Sound familiar for your soybean fields this year? Unfortunately the vast majority of you are probably nodding your head right now. I hope I am wrong on this one, but time will tell this story too. Foliar fungicides do not control this disease as the soybean plants are internally infected at an early stage.



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

Lonne