



The Chem Gro Crop Watch, Issue #5, 7/16/12

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Too early for accurate yield predictions. The last few weeks, many growers have been asking me what I thought the yield estimates were going to be for corn and soybeans. I think it is way too early yet to give any “hard” numbers for corn and soybeans as of this point. For one, rainfall has been extremely variable in our geography. Over the last 2-3 weeks, many areas had no rain, while others had over 1-1.5” plus of rain. Obviously rain makes grain during the month of July, so if you were one of the lucky ones, consider yourself blessed; especially with the high market prices that we are looking at for new crop delivery.

Corn. The good news is that pollination was extremely good for our area. Even though the majority of the corn pollinated during the extreme high heat period that we had; the mornings were cool enough that pollination was successful. However, the hot and dry grain fill period that we are in is taking a negative toll on our corn crop. Again, not wanting to give hard numbers here at this point, but the yield swings will be extreme. I have seen very good corn (above average yield potential), and I have seen corn that will be for all practical purposes yielding ZERO! Sometimes these conditions exist in the same field depending on soil type water holding capacities. Here are a few of my vague and wishy-washy predictions:

- If we were to receive any amount of rain this week, it will be too late to prevent much kernel abortion, as it is mostly done. Kernel size and depth is being determined now, and large amounts of rain and cool night time temperatures are needed to prevent more yield loss.
- How many kernels per bushel of corn? This is the reason why I am not willing to give any yield estimates as of yet. Normally in a good grain fill year, it takes about 70,000 to 90,000 kernels of corn to equal 1 bushel of corn. With the lack of rain and hot grain fill temperatures, I am afraid that it could take 90,000 to 120,000 kernels of corn to equal 1 bushel of corn. We sell corn in bushel increments, with 1 bushel = 56 pounds of corn. It will take more small and light weight kernels to equal 1 bushel (56 pounds).
- We could see above average to high test weight corn. (Test weight is one of those topics that many people like to argue with me about ☺). If the corn plant does not die prematurely before kernel black layer, and the kernels are small; I believe test weight will be high. Test weight is a volume measurement of how many kernels can be packed inside a test weight measuring bucket. There is not a direct correlation of test weight vs. yield. Small and more compact shaped kernels fit more tightly to each other (less air pockets), thus more test weight. Large and longer kernels (typically produced in good grain fill conditions) will produce average to below average test weights. However, if the corn plant dies before black layer (the ears drop down prematurely), then the grain will be shriveled and light, and both yield and test weight will be sacrificed.
- Stalk quality may not be good. Soon after pollination, I began to notice that the bottom corn leaves began to “fire” up much more quickly during our drought conditions that we continue to experience. This leaf firing is actually the plant cannibalizing itself in order to

feed the ear since there are not adequate amounts of water and starches available. The corn plant has been using a lot of its energy from respiration during warm evening/night time temperatures, and unproductive days of photosynthesis when the leaves are tightly rolled due to high heat and moisture stress. Charcoal rot (a stalk rot usually seen in hot and dry years) can very easily take hold in fields that are drought stressed during the grain fill period. Corn fields that were sprayed with a fungicide after tasseling could have a huge advantage in standability this year.

Soybeans. This crop could be the ultimate wild card this year. We experienced last year how well soybeans can yield during very dry grain fill conditions. I will not even attempt in giving yield estimates this year (I am still eating crow from last year's yield predictions that were way off!!). Time will tell on this crop, but there are a few key points to consider in protecting and maintaining yield:

- Dry weather insects: Grasshoppers, white flies, and spider mites. These are three insect species that we need to be diligent in scouting for. The attached picture is from a field that I looked at last week. The grasshopper feeding was so bad that the leaf feeding looked like hail damage! I have identified a field with spider mites last week, too in Hancock County. Spider mites are in the area, and with the hot and dry extended forecast I fully expect this insect pest to get much worse. **For the next few weeks, if you will be spraying for insects in soybeans, I would be choosing a product that is labeled for spider mites in addition to all of the other insect pests in your fields.** There are very few products available for spider mites, and a non-spider mite product can actually make the mites flare up and get worse. Also something to consider, each insect pest usually has its own specific population threshold for spraying. However, when you get a whole smorgasbord of bugs feeding at the same time in the same field (i.e., Japanese beetles, bean leaf beetles, grasshoppers, white flies, stink bugs, spider mites), there is no exact science to tell you to spray or not to spray. High soybean grain market values and gut instinct/experience is what you have to rely on in these situations if you are debating whether to spray or not.
- April planted soybeans are now in, or soon approaching the R3 growth stage (the first stage of early pod formation). The R3-R4 growth stages are the most critical time period to protect the soybean plants from insects and applying a fungicide. Although fungal foliar diseases are minimal this year, the extended “greening” effect that certain fungicides create may be beneficial under our drought conditions. If you are uncertain about applying a fungicide this year because of the dry weather, split a field or create some check strips to experiment with. With the high market prices, a few timely experiments could be worth a lot this year.



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

Lonne