



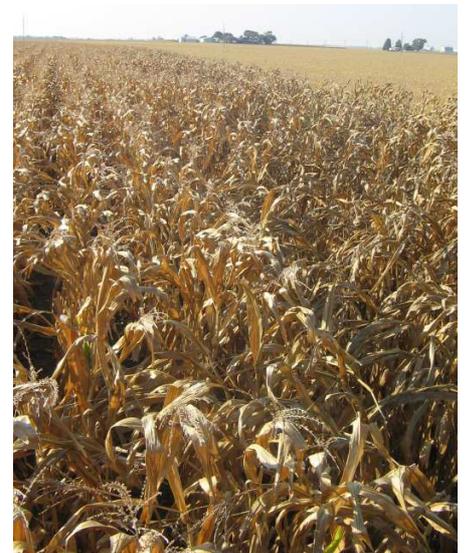
The Chem Gro Crop Watch, Issue #5, 9/27/13

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2013 exceeding expectations! As if experiencing yet another spring of torrential rains wasn't bad enough on our morals' and self-esteem, the 2013 season was then followed by a record driest August in the *history of weather record keeping* according to Rich Cain, Channel 10 news, Quincy IL. Then on top of that, nearly the first half of September was completely barren from rain which was a hard pill to swallow since we ALWAYS get a Labor Day rain. At this point, our poor family dogs didn't even want to come out of the garage to greet us in the mornings. After all, it wasn't his fault that it didn't rain. Why should his rear end bear the burden of the furry of the side our boots!??

Most of our yield expectations were rock bottom low after living through the growing conditions that we suffered through. Combines have slowly been picking up pace in the last two weeks in corn and soybeans. The early yield reports have been well above expectations to darn right fabulous! Even after earning an agronomy education, I cannot explain where the corn and soybean yields are coming from. I was talking about this very topic with one of my growers the other morning and his comment was (with a huge smile on his face) "don't try to figure it out, just take it!" He walked out the door with a spring to his step. Who am I to argue with a happy man!! ☺

The corn/soybean border dilemma. In the past, the boundaries of corn fields that border soybeans fields can have higher yields than that in the middle of the corn field. We usually attributed the extra yield from more sunlight penetration into the corn canopy being next to a short canopy of soybeans. However, this year and last year the opposite is happening in many fields from talking to several growers. The yield monitor is showing 100+ bushel yield losses in the corn along these corn/soybean borders. Corn bordering corn is not showing this. In this picture, the first 12 rows (or so) along the beans is dead and died premature. The ears of the dead plants (bottom picture, left side) only average 2 kernels less in length vs. the alive ears to the right. However the kernels on the dead ears are small, very light in weight, and shallow in depth from dying premature which is creating the yield loss.



What I find very interesting is that this damage did not show up until sometime after tassel emergence. Now the question is why?! To be upfront, I do not have all the answers on this one; but I do want your help to figure this puzzle out. Please call me as I would like to ride in the combine so I can see what you are seeing. I believe there are several different reasons depending on where your field is located that are causing this border yield loss. Here are a few suggestions that might explain some of the possible reasons for the poor corn.

- **Wildlife damage.** Deer and raccoons are a perennial problem in our area. They tend to create walking paths along the corn/soybean borders, especially if there is timber nearby. Their damage is easy to diagnose. The ears of corn will be ripped off the corn plants or half eaten on the plant. The stalks and leaves of the plant will be a reddish-purple color. This is an indication of starch build up within the plant since the missing ears would have used this starch to create yield.
- **Herbicide drift damage from the soybeans.** This tends to be most peoples' first assumption. If there was a drift issue from soybean herbicides, it would have shown up early in the corn. There are several soybean residual herbicides that are tough on corn. However, if these residual soybean herbicides drifted into the neighboring corn, that corn would have shown symptoms early (V3-V7) typically of short and stunted plants with off colors. If the second herbicide pass in soybeans contained a product to control volunteer corn and it drifted into the neighboring corn border, it would have been obvious to see dead and stunted corn plants at that growth stage (V7-V14). Herbicide damage is not the cause for the corn border damage that I have seen this year since this yield loss was caused after pollination.
- **Japanese Beetles.** We all witnessed the sheer volume of Japanese beetles in the early planted soybean fields that bordered corn. The Japanese beetles stripped the leaves in the soybeans and basically "hung out" in the corn borders until the silks came out. During corn pollination a few corn plants along the borders got bombarded by Japanese beetles and caused pollination problems on the ear. *However, I felt the corn yield loss caused by silk clipping was minimal for the severity of the volume of beetles.* As dumb as this may sound; I have to ask the question. Is Japanese beetle manure toxic to corn plants? These very same corn/soybean borders that had Japanese beetles in them are where the yield losses are occurring. But, the yield loss is not caused by silk clipping.
- **Blow torch effect.** We had several weeks of very hot and dry days with winds above 15mph. These hot and dry winds will push across the short canopy of the soybean fields until it hits the borders of corn. There is no doubt in my mind that the borders of corn along soybean fields take more constant punishment from dehydrating winds. The wind's power eventually slows down the further it pushes into the corn canopy. Is this the cause of the yield loss on these corn/soybean borders? Was the constant dehydration during corn grain fill just too much for the corn plant to bear which caused it to die premature? This sounds good in theory, but what I can't explain is why the corn borders along the road ditches look for the most part normal. The corn along the roadside ditches should have taken a fair amount of dehydrating wind too, but yet seem fine.
- **What else am I missing?** If you have any ideas or observations, give me a call. Let's see if we can figure this out together.

Green soybean plants mystery! Here is your chance to test your agronomic skills. This picture shows an area of soybeans that are green which are not maturing normally like the rest of the field. **WHY?** This is a two part answer. What is the physical cause for the green beans? What is the physiological cause for the green beans? The two answers are tied together. The first person who emails me the correct answer will win a "Proud to be an American Farmer" T-shirt. The winner and answers will be in the next issue of Crop Watch. Good luck!



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

Lonne