

CROP UPDATE

Bob Streit
August 3, 2010

2177 200th St.
Boone, Iowa 50036
515-432-0907

Hello Ladies and Gentlemen,

Thus far the first ten days of August, normally a drier month are continuing as wet as ever. That makes any further field work difficult if not impossible. The corn crop is developing rapidly, sometimes too fast with a resulting shallower than desired depth, and a soybean crop that is showing lots of SDS. Attached is my latest column and field scouting notes.

1. The aphid numbers are continuing to climb slightly. So far the heaviest infestation is in the Rochester MN extension district where the specialist for that area is advising them that aphid numbers will be at or above 250/plant by the end of the week. The current hot temps are holding our numbers in check. But the various caterpillars such as the green clover worms and celery leaf tiers are also feeding on the leaves. Thus if you are making any sort of pass through the beans it may be prudent to apply a pyrethroid at the same time.

2. Much of the corn crop is moving into the dent stage. The normal sequence is for the dent stage to take ten days. then from late dent to black layer should take another 10 to 13 days. Thus corn beginning to dent on Aug 1st should be at full dent Aug 10th and black layer on the 23rd. Assuming drydown rates of .75/day in early September the grain may be at 27% by Sept 1st and as low as 17 by Sept 15th. Wet conditions could slow that drydown rate.

Shallow denting is showing up as a major problem. The grain fill period should normally be 55 to 60 days long. This year it may only be 45-55 days long. The warm nights with very little night time drop-off in temps is working to cause day-time formed starch to burn off at night without contributing to grain fill.

3. SDS is showing up as a major yield reducing problem in bean fields. Several factors are at work: 2.5 years worth of soil compaction likely exist in many fields, saturated soils and early planting dates, high populations of fusarium fungi in the fields. Plan to rip any waterholes and compacted areas this fall. Then figure on using the newer Trichoderma and Pseudomonas bacterial inoculants in 2011, either in furrow or as seed treatment or with the inoculants. This would be like Saber X.

4. Several popular genetic lines appear quite susceptible. These will have to be identified and avoided.

5. Many soybean fields are getting weedy with pigweeds poking above the canopy. Having no residual products applied is a problem. Having any residual products leached away is the # 2 problem. There were operators who applied glyphosate late and asked for guidelines. If this were to be done the best rules were to apply the herbicide in a tank mix with either Seed Set or Defender G and one to two Lbs of sugar.

August has arrived and this final month of the summer will be when practical yield determinations are made for our two major crops. Just as it has been tough for all meteorologists to get a good handle on what both tomorrows and next weeks weather will bring, it is hard to find a person or service who thinks they can accurately predict how the U.S. corn and soybean crops are going to do. Most fields outside of northwest Iowa are showing a lot of warts due to waterholes, wind damage, compaction and other cropping problems. Those warts represent each challenge that was placed against the plants in the fields on a regular basis.

Now that the calendar has turned we should be seeing a few new crop size predictions. The one I am hoping to see or sleuthed out is the one from Lanworth. It was that group a year ago that used their surveillance and aerial capabilities to gauge the amount of chlorophyll in the crop and develop their crop size estimate. In that light what is each of your estimates as to whether the corn and bean crop in your respective areas are greener and look better or worse than in 2009?

On the nation scene our former governor made the news with the Sherrod case. It was a strange story to keep events and the story straight. It seemed like several groups overacted in their quest to not appear discriminatory. Now after the dust has cleared it appears that Andrew Breitbart was exposing a \$1.25 billion fraudulent shakedown had occurred back in 1997 with the major participants avoiding exposure. This way their sins related to the Pigford versus Glickman Case are now out in the open.

The Corn Crop

The good crops people who have traveled this summer across the southern part of the Midwest relate how the crop was extremely variable due to huge rains that flooded many acres that never recovered. In the northern part of the Midwest, namely Minnesota, Wisconsin, and North Dakota things have never looked better. Each section of Iowa is somewhere in between depending on whether rainfall has been normal or far above normal for the season.

In a year when many of us were expecting a cooler than normal season we are currently 150 to 200 GDUs ahead of normal and roughly about 600 ahead of where the GDU tally was at in 2009. While that may sound beneficial it may end up being one of the major challenges to yields this summer. In record yield years the fill period of mid July through August are cooler than normal. This allows for more days of grain fill and a deeper kernel depth is created. Thus far crop scouts and farmers in most parts are not seeing a big kernel row number or deep kernels. And on an ominous note beginning last week it has been possible to find medium maturity hybrid beginning to show early denting kernels. No one I have talked to ever remembers finding ears beginning to dent in July in the state. On many of those ears kernel depth was very shallow and an inch or more of the tip kernels has aborted. Those observations were generally made on decently drained fields where N application rates were 180+ lbs/A fall applied following soybeans. Time will tell on how many acres that trend is occurring. As to cause of this early denting the crop physiologists will likely point to the warmer than desired nights. They allow too much starch to be burned off each night. This is what is called inefficient dark period photorespiration. If this is coupled with nitrogen and other nutrient deficiency one to two inches of tip kernels can disappear. A proactive manager with dry fields and a high clearance sprayer can use later foliar to prevent this tip kernel loss.

There were more acres of corn sprayed in the last week with fungicides. It had become apparent over the last few weeks that many of those plants that showed the light green/dark green striping were showing enough different disease lesions that yield potential had to be preserved.

The best and appropriate time to make the application is after pollination had occurred and before the kernels had begun to dent. Maximum grain depth is achieved when there is enough green tissue left to form the photosynthates that will plump the kernels with a minimal dent.

Bugs

So far the aphid numbers have remained lower than expected and must be below levels of the previous three to four years. However as of last Friday night they could be found south of Hwy 30 in central Iowa.

For the last two weeks it was apparent that it was easy to run into a blizzard of small rust colored moths while driving at night. The first thought was that they were green clover worm moths. We didn't know exactly what those were supposed to look like unless one dug out the old ID guides out of Wooster Ohio. After checking with several state IPM sites there was an article authored by Mike Gray from the U of Illinois about the 1996 flush documented by Marlin Rice of what he had ID'ed as the Celery Leafminer. Dr Rice said that previous research stated that economic damage to corn or soybeans is not supposed to occur with the larvae of this moth. Due to the extremely large population keep in eye on the potential leaf feeding.

Soybeans

Most fields planted by mid-May are now in the R3 to early R growth stage. It is now time for the seeds to enlarge and fill the pod.

There are several leaf diseases that should be monitored to make sure they don't cause excessive leaf drop and pod fill to be decreased. Septoria, Downy Mildew and Frogeye leaf spot are the main diseases that need to be scouted for in Iowa.

The one disease that many growers are now beginning to recognize in their and neighboring fields is Sudden Death Syndrome. At the present time it has the potential to be a major problem yield robber in those fields. The infection took place months ago and the toxin that causes the visible leaf scald moves to the leaves primarily after the last set of trifoliate leaves is fully extended. Growers who are seeing a problem should begin to formulate their plan to control the disease in 2011 and the years beyond. The problem has only worsened each of the past years. The best control will be obtained by breaking compaction layers, improving drainage and using new biologicals like the Saber-Ex product from Cornell U., which contains the newly commercialized Trichoderma bacteria. Another very promising tool will be the use of the Pseudomonad bacterial products. The benefit of the biologicals is that the control they offer improves every day from the time they are planted to plant maturity.

What is known by soil microbiologists is that the Trichodermas improve plant and root health and work to make nutrient available to the plant roots. The main roles of the Pseudomonads are to keep fungal pathogens under control and also to make nutrients available.

Keep scouting your fields and your different varieties to see how the plant health is faring. Are the roots sufficient to anchor the stalks and scavenge for nutrients? It is a great time to begin making decisions about next years varieties that you should consider planting again.

Bob Streit