

Iowa State University Extension Information for Southeast Iowa

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CORN

Nitrogen Deficiency Again

The excess rainfall has likely caused nitrogen losses again this year. Much of the corn crop looks good in the area, but it is very evident where there are side hill seeps and waterlogged soils on the bottom ground where corn is yellow and stunted. Some of the stunting is likely just due to poor root growth, but it doesn't take long for there to be a lot of nitrogen lost through de-nitrification on saturated soils. As long as soils are saturated, the nitrate nitrogen is lost at the rate of about 2.5% per day. If there is still good yield potential in the fields that have had saturated soils for a week or more, it may pay to dribble on an additional 30-50 lb./A. of nitrogen.

What About Foliar Fertilization?

Some are considering foliar fertilization on both corn and soybeans. There has not been extensive work on foliar fertilization of corn, but what work has been done has shown that yield decreases are more common than yield increases. There has been extensive work done on foliar fertilization of soybeans recently by Antonio Mallarino. He only found yield increases about 15% of the time, with the overall average yield increase of less than 1 bu./A. John Sawyer has a recent article on foliar fertilization at <http://www.extension.iastate.edu/CropNews/2009/0630sawyer.htm>.

Glyphosate Injury on Corn

One of the most common herbicide injury symptoms I see each year on corn is injury from a low dosage of glyphosate, either from drift or sprayer contamination. With very low doses, the injury appears as bleached (white) areas emerging from the whorl. The leaf area that develops immediately after the spray application is what appears bleached. Based on research I conducted in the early 80s in Wisconsin and experience since then I've found

that as long as the injury is just small white areas on 2-3 leaves, that there often is little affect on the corn yield. If the injury is more severe, with wrapped up corn and malformed leaves, there can be a substantial yield loss. I believe that the most common way the sprayer contamination with glyphosate occurs is when crop oil or surfactant jugs are re-used to put some left-over Roundup in. Roundup, being a clear liquid, looks a lot like crop oil or surfactant.

In one interesting case of sprayer contamination this spring, the grower realized after spraying the corn that he had put a gallon of Roundup in a crop oil jug last year and accidentally put it into his sprayer this spring. Since he knew how much Roundup was in the sprayer, we could calculate the rate of Roundup received as about 1.8 oz. per acre. It looks like the overlap strips will not produce much corn, but most of the field is recovering, so will be interesting to see what the final yield is. See my post on the Iowa Farmer Today Crop Watch Blog for a picture of the injury from this field at <http://www.iowafarmertoday.com/blog/?p=525>. Response to glyphosate can vary tremendously. I have occasionally sprayed 1 oz./A. on corn at the research farm without causing any corn injury, but know that less than 1 oz./A. can cause substantial yield losses in some cases.

SOYBEANS

Japanese Beetles are Back

I saw my first Japanese beetles of the season last Friday on the edge of a corn field near Iowa City. The beetle grubs will feed on corn roots. The soil was very sandy in the field which probably meant the grubs developed more rapidly in the warmer sandy soil, so it may be a few days before the beetles become more common in other areas. The beetles look like a small colorful June bug. They feed on many plants, including soybeans.

In the past few years, many soybean fields have been sprayed for Japanese beetles, especially in the Cedar Rapids area, but in many cases the insecticide was probably not needed. The feeding injury looks much worse than it is. The general threshold for insects that feed on soybean leaves is to treat soybeans in the reproductive stages when there is 20% defoliation. People tend to overestimate defoliation, so usually if you think there is 20% defoliation, it's probably closer to 10%. You can see pictures of various levels of defoliation here <http://www.ipm.iastate.edu/ipm/icm/2002/7-29-2002/soydefoliation.html>.

It's best to fight the temptation to spray in early July because by late July and early August we may have soybean aphids that do need to be sprayed. Spraying too early can actually increase aphid problems by killing off the beneficials that are keeping the aphids in check. Erin Hodgson has a recent article on Japanese beetles at

<http://www.extension.iastate.edu/CropNews/2009/0630hodgson.htm>.

Soybean Aphids

I have not seen any soybean aphids in the area yet, but I wouldn't be surprised if they are present in some fields. Brian Lang reported last week that he was finding an average of 6 aphids per plant in NE Iowa on research plots. The levels he is finding are similar to what showed up in 2007. Recent University news from Wisconsin, Ohio and Ontario Canada have commented on higher infestations of aphids compared to 2007 and for some areas of the state to begin scouting (i.e. southeast and south-central Wisconsin), while the University of Illinois mentioned that aphid occurrence was minimal at this time. The recent cool weather is ideal for aphid reproduction. National aphid activity can be tracked by viewing the following USDA web site:

http://sba.ipmPIPE.org/cgi-bin/sbr/public.cgi?host=All%20Legumes/Kudzu&pest=soybean_aphid

Soybean Rust

Soybean rust has been found in 5 states so far in the SE. There have been good conditions (plentiful rainfall) for rust development there, but, fortunately, the predominate wind patterns for Iowa are not from the SE, so there is not much chance of spores arriving in Iowa anytime soon. X. B. Yang's model predicts that there is some chance for spores arriving in southern Illinois and Indiana, but the risk for an epidemic is still very low.

ALFALFA

Foliar diseases, including lepto leaf spot and common leaf spot, have been showing up in alfalfa due to the excess rainfall. Fields with extensive leaf disease problems may benefit from harvesting early to try to prevent as much leaf drop as possible. Alfalfa has also been stunted in some fields due to waterlogged soils. The rains may have helped to reduce potato leafhopper numbers, but they can re-populate rapidly, so fields need to continue to be scouted.

FOR YOUR CALENDAR

Crop Management and Diagnostic Clinics July-September – Ames

The Field Extension Education Laboratory is a 43-acre teaching and demonstration facility dedicated to providing a hands-on learning experience for crop production professionals. The demonstration plots are used to show a wide range of management problems, solutions, and diagnostic challenges. “We make the mistakes on these plots so you won't in the future!” The clinics and programs are taught by Iowa State University staff and faculty and invited specialists from other institutions and industry. Modern, air-conditioned classroom facilities complement the in-field sessions, all of which are within walking distance. Current open programs for this summer include the following

- July 13-14, [Field Diagnostic Clinic](#)
- July 15-16, [Crop Management Clinic](#)
- Aug 25-27, [Iowa Drainage School](#)
- September 2, [Alfalfa Production Clinic](#)
- September 3, [Corn Disease Diagnostics and Management](#)
- September 15, [Soil Management Clinic](#)

For other Agribusiness Education program information, check out the Homepage at: <http://www.aep.iastate.edu/homepage.html>

Soybean Pest Field Day 6:00 p.m., July 29 - Keota

Erin Hodgson, ISU Extension Entomologist, will discuss soybean aphid management at the field day. The new soybean aphid resistant variety can be viewed and other soybean pest topics will be covered. More details later.

Advances in Precision Ag Field Day ISU SE Iowa Research & Demonstration Farm – Crawfordsville September 17

Come see the latest in precision ag technology, including RTK guidance systems, auto-steer, automatic shut-off planters and sprayers. More details will be available soon.

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