

GROWER BLOG

GERM AND EMERGENCE SCOUTING

In the last seven days, a lot of our customers have been able to get seed in the ground. And while we are way ahead of where we were this time last year, there are still some issues that could compromise emergence and final stand counts, which could lead to a replant situation. Our resident agronomist, Joe Budreau, has a few scouting tips that you can easily implement to help you make important management decisions.

The key things to be scouting for post planting include:

GERMINATION

I want you to check to see if the seed imbibed water and is starting to swell. With cold soil temperatures falling below 50 degrees, if the seed has imbibed water, the cell tissue will not be as elastic. These tissues can rupture, stopping the normal germination process. This occurs 24-48 hours after planting. Swollen seed that is not going forward with the germination process is an indication of imbibitional chilling injury. Insects like seed corn maggot and wireworms can feed on the kernel and destroy the embryo of the seed and in doing so, the seed will not germinate.

EMERGENCE

Several factors can cause poor emergence in corn. Cold soils or wide swings in soil temperatures can cause the mesocotyl to 'corkscrew' and not allow the coleoptile to reach the soil surface. Dry soils may actually have wider temp swings than wetter soils, causing the corkscrewed mesocotyls. Crusted soils can also compromise movement of the coleoptile, preventing it to come through the ground. This may cause the seedling to leaf underground, resulting in seedling death. These issues ultimately lead to an uneven stand and reduced plant population in the field.

Soil borne fungal diseases can also attack seed and seedlings. Some common diseases are Pythium and Fusarium. Seed treatment can protect against these diseases; however, seed treatments lose some of their effectiveness after two to three weeks of being in the soil.

Seedlings growing in cold soil temps are also susceptible to herbicide injury. Cell growth inhibitors found in certain types of herbicide can cause injury to the seedling. Often, a combination of cold or crusted soils work together with the herbicide to cause emergence issues in the field.

THE FINAL STEP

Stand counts are essential when it comes to determining the economic feasibility of replanting. Even if you've detected some germination and emergence issues, a replant may not always be justified. I'd like to see you do several stand counts to arrive at an average population in the field. Don't stick to just an area where the stand is good. Look for areas where the stand looks compromised. That way your average count will be reflective of diverse geographies within the field.

If the coming weeks, if you feel you have a potential replant on your hands, please give me a call. I can walk you through the economics to help you determine if replant is the best solution.

TO REACH JOE BUDREAU, CALL 765-404-3745.