

Some Mid-April Planted Corn in Trouble

R.L. (Bob) Nielsen
Agronomy Department
Purdue Univ., West Lafayette, IN
Email: rnielsen@purdue.edu

- Fields planted mid-April that experienced not only cold temperatures, but also significant rainfall (2 to 4 inches) during the latter part of April may suffer significant stand loss due to seedling disease development.
- Suspect fields should be inspected throughout this coming week; especially lower lying areas where saturated soils were more prevalent in the last couple weeks.

I visited a number of fields in east central Indiana Friday afternoon that had not yet emerged even though the calendar was approaching three weeks after they had been planted. More importantly, apparent seedling disease development in these fields was widespread and eventual stand establishment may be poor enough to merit replanting. The common combination of factors among these fields was mid-April planting (5 to 6 days prior to the recent cold snap) followed by the onset of cold soils (too cool to sustain germination), heavy rainfall, short-term ponding, saturated surface soils, surface soil crusts, and (eventually) seedling diseases.

Plant pathologists often remind us that one of the consequences of cold wet soils, delayed corn emergence, and slow seedling growth is the higher risk of seedling disease development as the seed-applied fungicides slowly deteriorate following the first two to three weeks after planting (Malvick, 2005; Robertson, 2005; Thomison & Lipps, 2005). Indeed, one of the common denominators among most of the pre-emergence seedlings I looked at last Friday was a discoloration and/or outright death of the radicle root, coleoptile, or scutellar node symptomatic of seedling disease development.

Growers should visit fields not yet emerged or recently emerged and carefully inspect seedlings for symptoms of disease; especially lower lying areas where saturated soils were more prevalent. A decision to replant based on inspections of pre-emergence seedlings can be difficult primarily because most of us don't have the patience nor the time to thoroughly sample a field on our hands and knees digging up seedlings. The consequences of seedling disease on the success of emergence and initial stand establishment will become more apparent by the end of this week, if not sooner. Once emergence occurs (or not), growers will be able to more easily assess healthy plant populations and make a replant determination. Remember to use my replant worksheet (Nielsen, 2003) to help estimate the yield and dollar returns to replanting if the economics of the decision are not obvious.

Related References

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