

AGRONOMIC ALERT



Seedling Diseases in Corn

Cool soil conditions (<50 to 55°F) can delay germination and emergence, as well as predispose corn seedlings to disease infection. Seedlings become more susceptible to infection the longer a seed sits in the ground and the more stress germinating corn endures. It is important to scout for seedling diseases so that if stands are weak, replanting can occur as soon as feasible.

Survival of corn seedlings depends on a healthy kernel and mesocotyl. The seedling is dependant upon the mesocotyl to transport energy from the endosperm to the leaves, until around V3. The mesocotyl is also responsible for transporting water and nutrients from the seminal root system until around V6, when the nodal root system becomes the primary root system.

Disease Symptoms

Corn infected with seedling diseases such as Pythium or Fusarium, often appear wilted, stunted, and or purple. These symptoms are similar to other environmental stresses, insect feeding, and herbicide damage, so it is important to factor in the complete history of the field when determining what is causing the symptomology.

Wet soils are particularly favorable for Pythium infection this spring. Rotten mesocotyl tissue can be caused by Pythium (Figure 1). Symptoms are often worse in areas that are wet, compacted, or have heavier soil. Symptoms may be on scattered plants or in small-to-large patches. The stage of the corn plant and the severity of the infection can influence whether that seedling will survive.

Disease Protection

Soil applied fungicides or seed treatments can provide a level of protection against seedling diseases but may not eliminate all threats under severe conditions that promote infection. All seed treatments have a limited period of activity, which is usually 3 to 4 weeks. Acceleron™ corn seed treatment products complement Genuity® SmartStax™ corn and



Figure 1. A rotting mesocotyl infected with a seedling disease such as pythium.

Genuity® VT Triple PRO™ corn and offer an exclusive fungicide combination of *ipconazole*, *metalaxyl*, and *trifloxystrobin*. These chemicals help provide protection against seed- and soil-borne diseases such as Pythium, Fusarium, and several other seed- and soil-born fungi that contribute to early season stand establishment problems.

Management

If reduced stands are observed, evaluate if replanting is the best option. Your replanting decision should be based on stand uniformity, remaining population, target replanting date, and the costs and risks associated with replanting. The publication [“Agronomic ALERT—Corn Replanting Decisions”](#) discusses how to evaluate the stand, yield potential of different populations at different planting dates, as well as herbicide options for controlling the existing stand if soil insecticide and/or tillage options limit the ability to rip it up.

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