

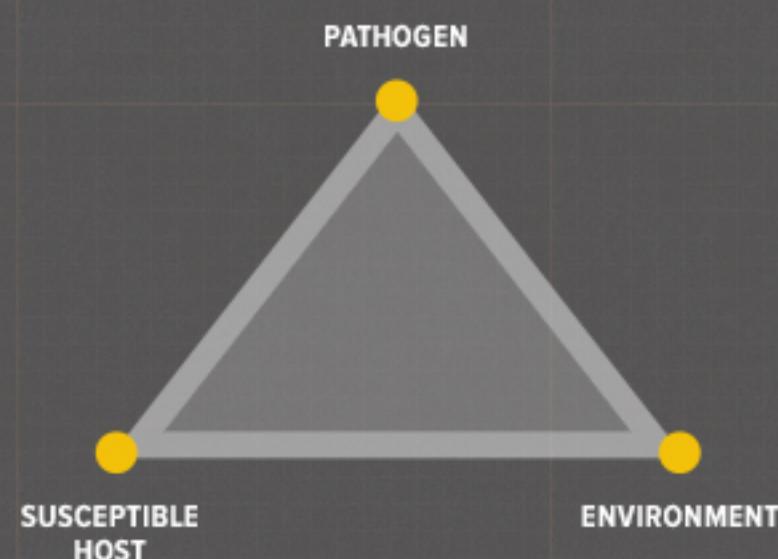


DISEASE MANAGEMENT

PRESEASON

THE DISEASE TRIANGLE

The disease triangle illustrates that the amount of disease that occurs in a particular field depends on the quantity of the pathogen present, the resistance or susceptibility of the host, and the extent to which the environment is favorable for that disease.



SEEDBED PREPARATION & PLANTING

SEEDLING DISEASE TREATMENT

Early season insects that feed on corn seeds or seedlings can cause plant injury, stunting, delayed emergence and/or stand loss. Soil insecticides and/or seed treatments can provide a good level of control for 3 to 4 weeks after planting. Acceleron® Seed Treatment Products utilize clothianidin, a leading insecticide, to reduce damage caused by secondary pests.

SEED TREATMENT OPTIONS FOR CORN

CORN	
Active Ingredients	Major Pests
DISEASES	
ipconazole metalaxyl trifloxystrobin	Fusarium Rhizoctonia Pythium
INSECTS	
clothianidin	black cutworm, grape colaspis, seed corn maggot, white grub, wireworm, sugarcane beetle
NEMATODES	
Bacillus firmus I-1582 (Poncho/Votivo)	dagger, lance, needle, pin, ring, root knot, root lesion, spirai, sting, stubby root, stunt

Seedling diseases can occur in the form of seed rots, seedling blights, and/or root rots.

- If the above-ground symptoms are due to seedling diseases, mesocotyls and/or roots will also be symptomatic

Disease inoculum can build in continuous corn cropping systems; however, some seedling diseases infect both corn and soybeans.



DISEASE MANAGEMENT

EARLY SEASON

EARLY SEASON DISEASE IDENTIFICATION

Identifying fields with seedling blight issues can aid in management decisions to avoid repeat issues in next year's crop.



SEEDLING BLIGHTS

Fungi are widespread, but many of them are more abundant in corn-on-corn or no-till situations.

- Pythium • Penicillium
- Fusarium • Trichoderma
- Rhizoctonia • Aspergillus
- Diplodia



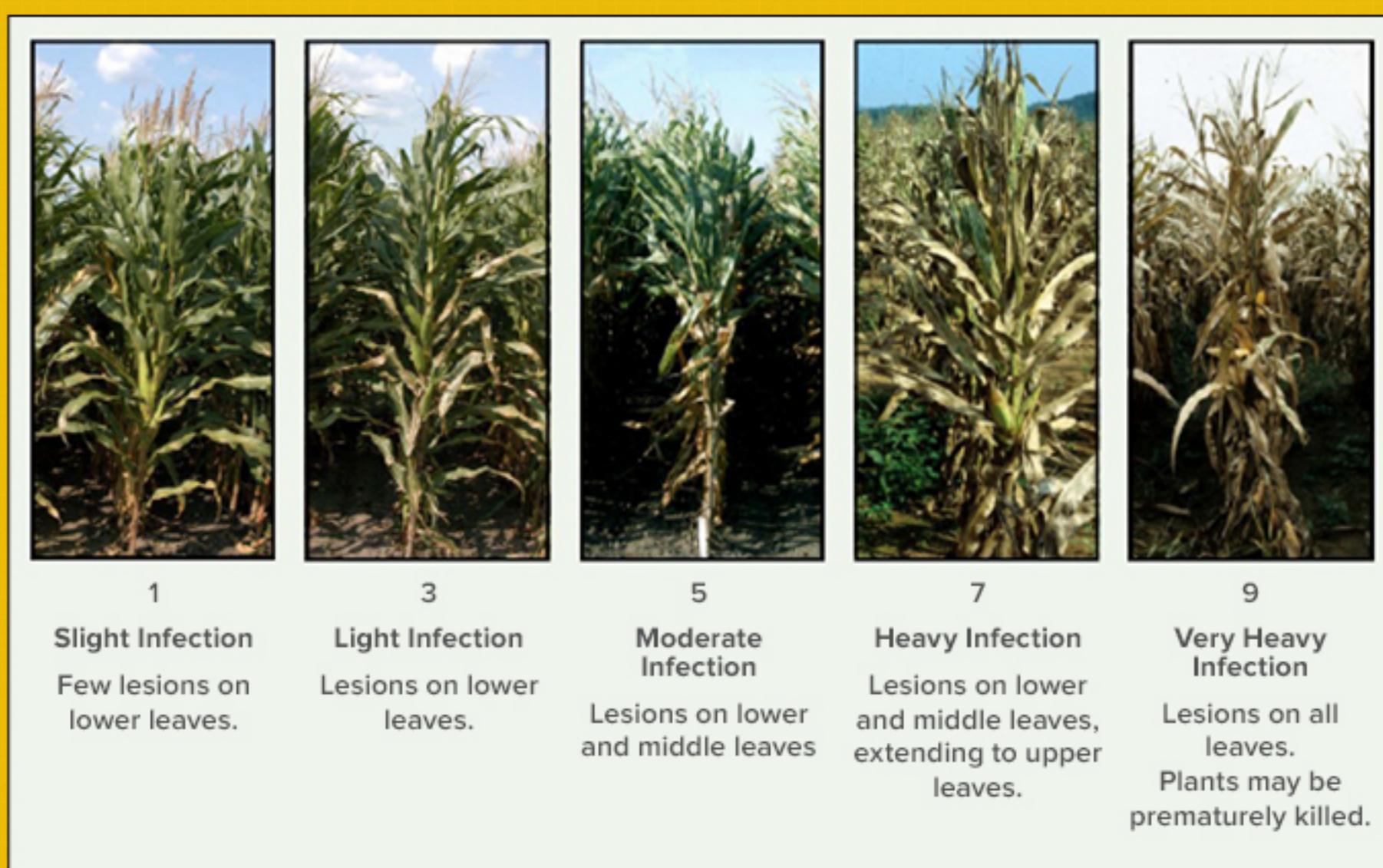
ANTHRACNOSIS LEAF BLIGHT

The leaf blight phase of Anthracnose generally occurs during early vegetative growth. This is a good indicator that the pathogen is present in the field but does not confirm that the stalk rot phase will be an issue.

MID-SEASON

THE IMPORTANCE OF SCOUTING

Scouting near the VT growth stage is important to determine if a fungicide application is needed. Scouting is essential each year, not only to determine management needs for the current year's crop, but also to identify potential disease risks for the following year.





DISEASE MANAGEMENT

LATE SEASON

DISTINGUISHING CORN EAR MOLDS

Pathogens that cause ear rot diseases survive on corn residue and are of greater concern in continuous corn. Though actual disease infection may occur as early as silking, corn ear molds first become visually apparent on developing corn ears during grain fill. Use the slider below to learn about some of the most common ear molds affecting corn.



Aspergillus



Diplodia



Fusarium



Gibberella



Penicillium



Trichoderma



Cladosporium

MOLD NAME	CONDITIONS	COLOR	APPEARANCE	MYCOTOXIN
Aspergillus	Damaged skills or kernels typically from insects or hail; common in dry years	Gray-green; light green	Powdery mold starting at tip of ear	Aflatoxin: toxic to livestock and humans
Diplodia	Most often in reduced tillage and continuous corn	White to Grey; severe infection can cause entire ear to appear brown	Usually begins at base of ear and develops toward the tip; grows between kernels; often pycnidia will form on husks and at the base of the kernels	Not known to produce mycotoxins
Fusarium	Infection points include kernel growth cracks and ear damage from insects; warm and dry weather favors disease development	White to pink	Individual kernels with fungal growth and/or kernels with starburst pattern	Fumonisin: toxic to livestock, particularly horses
Gibberella	Infection favored by cool, wet weather after silking	Often bright pink; varies from red to white	Usually begins at ear tips and progressed to base	Vomitoxin, zearalenone: harmful to livestock
Penicillium	Infects kernels damaged by frost, insects or hail	Blue green	Grows on and between kernels; powdery	Not known to produce mycotoxins
Trichoderma	Favored by insect or mechanical damage to the ear	Green	Grows on and between husks and kernels	Not known to produce mycotoxin
Cladosporium	Infects kernels damaged by frost, insects or hail	Gray to black or very dark green	Streaks scattered over ear; can appear powdery; able to rub color off kernel surface	No feeding toxicity