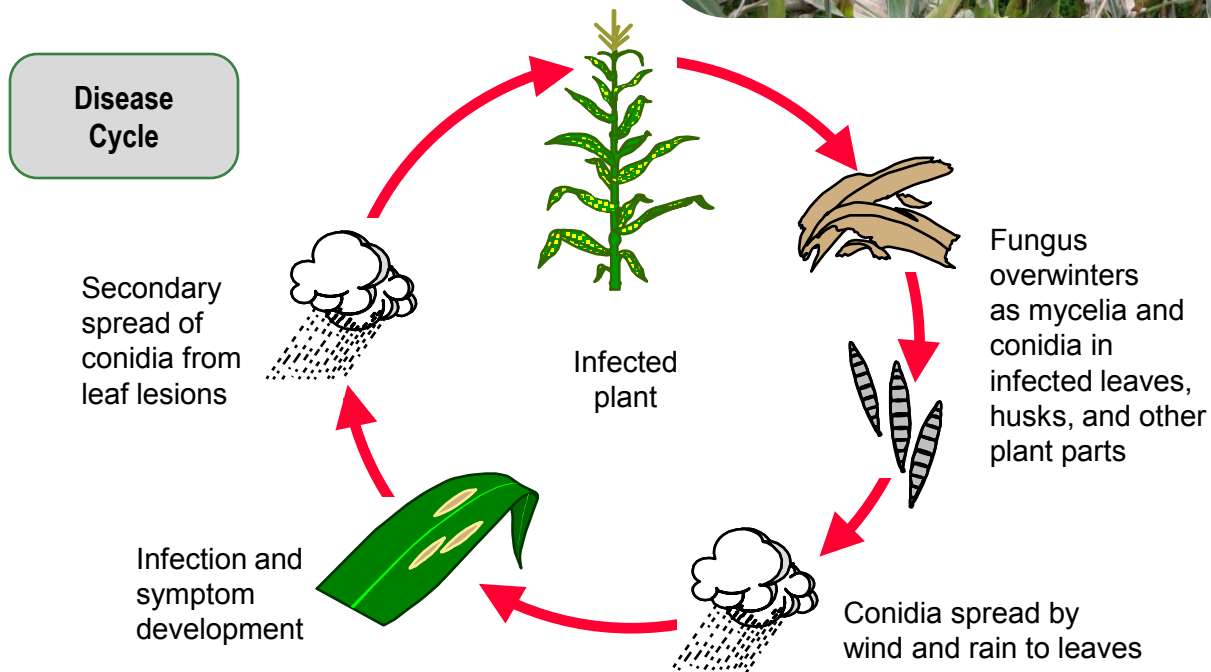


Disease Facts

- Caused by *Exserohilum turcicum* (previously classified as *Helminthosporium turcicum*), a fungus found in humid climates wherever corn is grown.
- Survives in corn debris and builds up over time in high-residue and continuous corn cropping systems.
- Favored by heavy dews, frequent showers, high humidity and moderate temperatures.
- Spores are spread by rain splash and air currents to the leaves of new crop plants in spring and early summer. Spores may be carried long distances by the wind.
- Infection occurs when free water is present on the leaf surface for 6 to 18 hours and temperatures are 65 to 80 F.
- Infections generally begin on lower leaves and progress up the plant, but infections may begin in the upper plant canopy when spore loads are high.
- New NLB lesions can produce spores in as little as one week, allowing NCLB to spread much faster than many other corn leaf diseases.

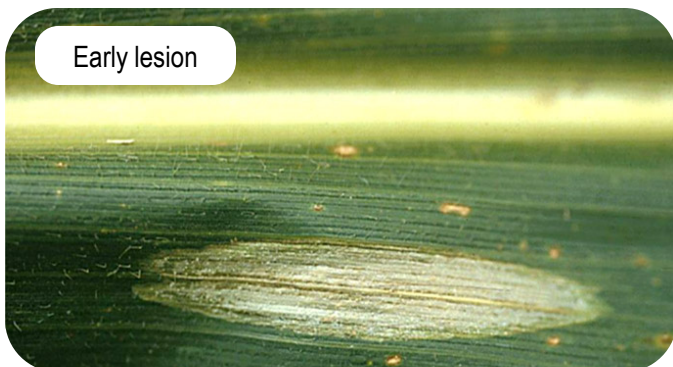
Impact on Crop

- Infections by NCLB can occur at any growth stage, but plants are more susceptible after pollination.
- Yield losses may be caused by:
 - decreased photosynthesis resulting in limited ear fill
 - harvest losses if secondary stalk rot infection and stalk lodging accompany loss of leaf area.
- Yield losses are most severe when NLB infects corn plants early and progresses to the upper plant leaves by pollination or early ear fill.
- If ear development outpaces disease progression, yield losses will be lower.



Symptoms – Early

- Early lesions are gray-green and elliptical, beginning 1 to 2 weeks after infection.
- In a susceptible reaction, fungal sporulation will begin within a few days.



Symptoms – Fully Developed

- Lesions become pale gray to tan as they enlarge to 1 to 6 inches or longer .
- Distinct cigar-shaped lesions unrestricted by leaf veins make NLB one of the easiest diseases to identify.
- Under moist conditions, lesions produce dark gray spores, usually on the lower leaf surface, giving the lesions a "dirty" appearance.
- As many lesions enlarge and coalesce, entire leaves or leaf areas may be covered.
- Heavy blighting and lesion coalescence give leaves a grey/burned appearance.



Management

- Hybrid selection (see more below)
- Crop rotation to reduce previous corn residues and disease inoculum
- Tillage to help break down crop debris and reduce inoculum load
- Fungicide application to reduce yield loss and improve harvestability
- Consider hybrid susceptibility, previous crop, tillage, field history, application cost, corn price
- Commonly used fungicides include Headline, Quadris, Quilt, PropiMax EC, Stratego and Tilt

Management – Hybrid Selection

- Pioneer researchers select for resistant parent lines and hybrids in multiple environments where NLB pressure is consistently high year after year.
- Pioneer hybrids are rated for NCLB resistance and ratings made available to customers.
- Most hybrids are rated from "3" to "6" on Pioneer's 1 to 9 scale, where 9 indicates highly resistant.
- Growers should choose hybrids rated a "5" or "6" for fields at risk of NCLB infection.
- Two types of resistance are available in hybrids:

Multigenic Resistance	Single Gene "Ht" resistance
non-race-specific	race-specific
more stable over time	may be overcome in time
reduces number of lesions on a leaf	delays spore production, limits sporulation



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- ® PropiMax is a registered trademark of Dow AgroSciences.
- ® Quadris, Quilt and Tilt are registered trademarks of a Syngenta Group Co.
- ® Stratego is a registered trademark of Bayer AG.



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