

Northern Corn Leaf Blight

Northern corn leaf blight (NCLB) is a foliar disease of corn caused by the fungus *Exserohilum turcicum*. Infection by the NCLB fungus damages the plant by reducing the amount of healthy leaf area capable of producing the energy needed to grow/maintain the plant and make grain. Leaf damage by NCLB results in both yield loss and increased stalk lodging at harvest. Corn hybrids differ in their susceptibility to NCLB, making hybrid selection an important consideration in NCLB-prone areas.

The NCLB fungus overwinters on infected corn residue, and produces an initial crop of spores as temperatures warm in the spring. These spores are moved to nearby corn plants by wind and/or splashing rain. Extended periods of leaf wetness from fog or heavy dews is required for infection. Disease development is favored by moderate temperatures, and hot, dry weather will significantly slow development and further spread of the disease.

NCLB lesions are long and narrow to oblong in shape, run parallel to the leaf margins, and range from one to seven inches in total length. They are initially tan or grayish in color, and later develop a darker appearance from the olive-green to black spores produced on the lesion surface. As the disease progresses, multiple lesions may coalesce to form large areas of dead tissue.

A specific economic threshold for NCLB has not yet been established. Keeping the ear leaf and upper leaf canopy free of disease is of critical importance to maintaining yield potential in the presence of NCLB. Fungicide treatments should be considered in situations where the disease is approaching the ear leaf area prior to tassel, the hybrid is susceptible or moderately susceptible to NCLB, and predicted weather conditions favor disease development.

Disease is favored by:

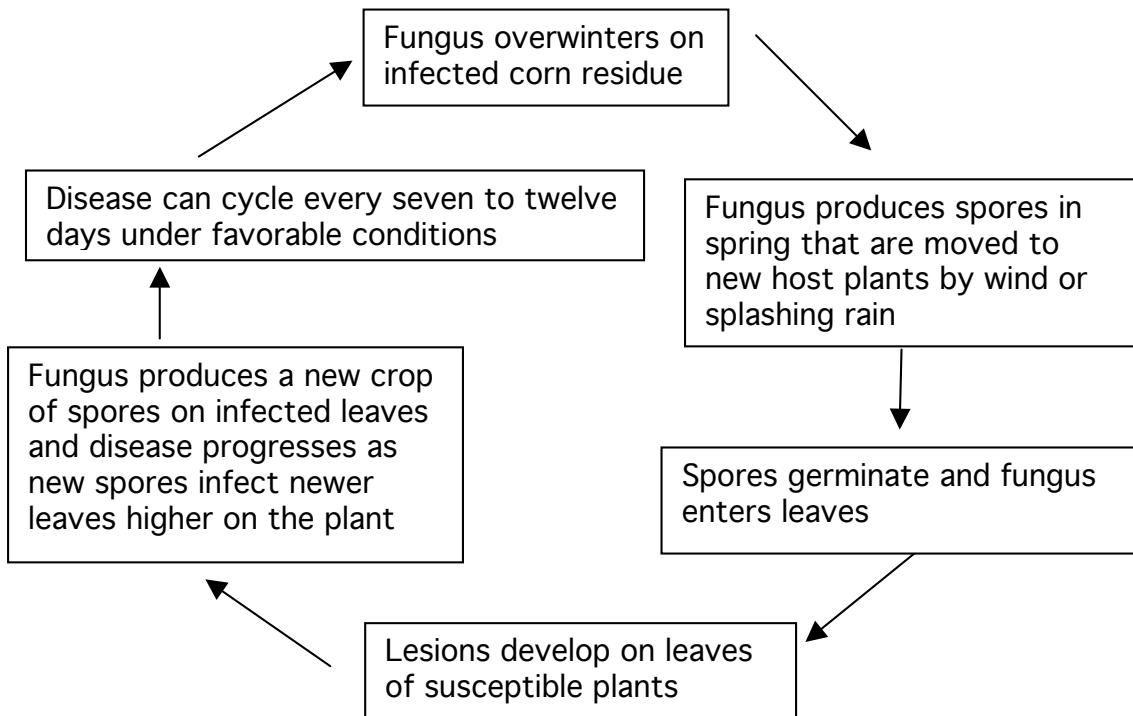
- Prolonged periods of dew, fog, and cloudy weather
- Free moisture on the leaves for 6 to 18 hours (95% humidity or higher)
- Moderate temperatures – 65 to 80° F
- Continuous corn (source of fungus to start infection)

Control methods:

- Crop rotation (most effective when combined with some level of tillage to help speed decomposition of infected residue)
- **Plant Tolerant hybrids**
- Fungicide treatments

Crop rotation and tillage reduce NCLB losses by delaying initial disease infection. NCLB spores from nearby farms can still infect a field, so these practices do not eliminate risk of disease. Use of a tolerant hybrid is the preferred method for NCLB management. Fungicide treatments are also an effective means of controlling the disease provided the crop is scouted regularly and the treatment is applied timely.

NCLB Disease Cycle:



Northern corn leaf blight lesion.

