Identifying Corn Diseases of Indiana

Purdue University Cooperative Extension Service

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1. Northern corn leaf blight
2. Southern corn leaf blight
3. Bacterial wilt
4. Diplodia stalk rot
5. Corn smut
6. Crazy top
7. Gibberella ear rot
8. Fusarium ear rot
9. Diplodia ear rot
INDIANA CORN DISEASES

1. NORTHERN CORN LEAF BLIGHT
   More common in the southern two-thirds of the state, especially in wet seasons. Long, elliptical, grayish-green or tan lesions (spots) first appear on the lower leaves. As the season progresses, the number of spots increases until nearly all the leaves may be involved. Severely-infected plants appear dead and gray as though injured by frost. Lesions may be as large as $1\frac{1}{2}$ x 6 inches.

2. SOUTHERN CORN LEAF BLIGHT
   Also a wet-season disease, but generally confined to the southern one-third of Indiana. Parallel-sided, grayish-tan spots appear on the leaves and vary from $\frac{1}{2}$ to $1\frac{1}{2}$ inches long. Heavily infested fields look dry and fired.

3. BACTERIAL WILT (Stewart's Disease)
   More common in southern Indiana. Primarily a problem of sweet corn but may also attack field corn. Infected sweet corn plants wilt rapidly, appear as if drought damaged, remain stunted, and may not produce ears. On field corn, symptoms first appear as long, irregular, pale-green to yellowish streaks on the leaves. These streaks later become dry and brown, causing the leaves to wilt, turn yellow and die.

4. DIPLODIA STALK ROT
   Is widespread throughout Indiana. Infection of immature plants causes the leaves suddenly to turn grayish-green, appearing as if frost injured. The lower part of the stalk turns tan to brown, becomes weak, and will readily break over in windy weather. Examination of infected stalks reveals that the pith is discolored and disintegrated to the point where only the water-conducting tissues remain intact.

5. CORN SMUT
   Occurs wherever corn is grown. Conspicuous smut galls occur on all the above-ground parts of the plant — leaves, stems, stalks, ears, and tassels. They range from pea-size to very large “eye-catching boils.” At first, the galls are covered with a glistening white membrane which will later rupture to reveal masses of black, powdery smut spores.

6. CRAZY TOP
   Occurs infrequently. Characteristic symptom is an excessively-branched tassel in which the normal flower structures are transformed into small leaves, giving the tassel a “feather duster” appearance. Severe infection causes stunted plants; narrow, leathery, strap-like leaves; and usually no tassel or ear production. Mild attack causes excessive leafiness on only a part of the tassel, while the plant itself will attain normal height. Most plants affected with crazy top are barren.

7. GIBBERELLA EAR ROT (Red Ear Rot)
   Frequently a problem in the cool, humid areas of the state. Infected areas have a reddish mold at the tip of the ear. The husks will usually be hard to remove because of the mold growth between husk and ear. Ears infected early may become completely rotted. Gibberella-infected corn is particularly poisonous to hogs.

8. FUSARIUM EAR ROT (Pink Kernel Rot)
   A common corn disease throughout Indiana. The characteristic symptom is a pink discoloration on the caps of individual kernels or groups of kernels scattered over the ear. An infected kernel may vary in color from faint pink to reddish-brown, and will show a powdery or cottony-pink mold growth as the disease progresses.

9. DIPLODIA EAR ROT
   The most common and widespread corn ear rot disease in Indiana. Husks of infected ears appear bleached in contrast to healthy green ears. By harvest, the entire ear is shrunk, grayish-brown, and very light in weight. In some cases, no external symptoms can be seen, but removing the husk reveals a white mold growing between the kernels. Infection begins at the base of the ear and progresses towards the tip.

FURTHER INFORMATION
   For additional information on the causes, influencing factors, and control of the above corn diseases, refer to the following Cooperative Extension Service publications:

BP-5-6, Stalk Rots of Corn
BP-5-10, Corn Smut
BP-5-11, Bacterial Wilt of Corn
BP-5-12, Leaf Blights of Corn
BP-5-13, Ear Rots of Corn

Single copies of these publications are free to Indiana residents from their local county Extension office or by dropping a postcard to the Agricultural Publications Office, AES Building, Purdue University, Lafayette, Indiana 47907.