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EC02-1883 Corn Disease Profiles

James P. Stack

University of Nebraska - Lincoln

Loren J. Giesler

University of Nebraska - Lincoln, lgiesler1@unl.edu

John E. Watkins

University of Nebraska - Lincoln, jwatkins1@unl.edu

Robert M. Harveson

University of Nebraska - Lincoln, rharveson2@unl.edu

Jennifer L. Chaky

University of Nebraska - Lincoln

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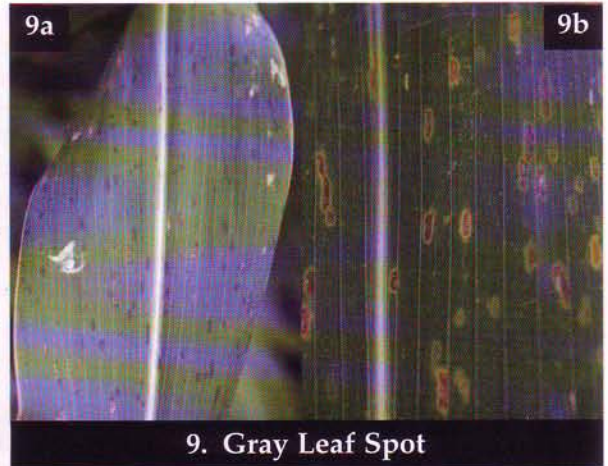
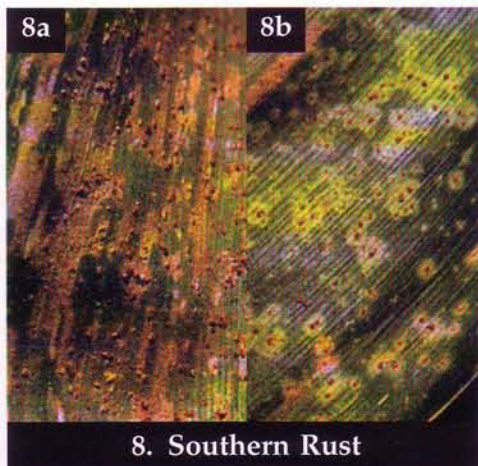
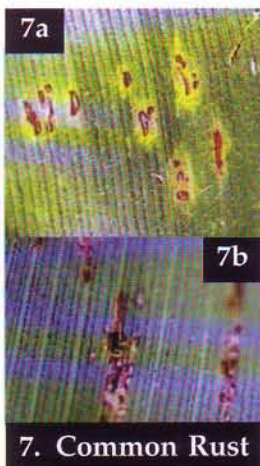
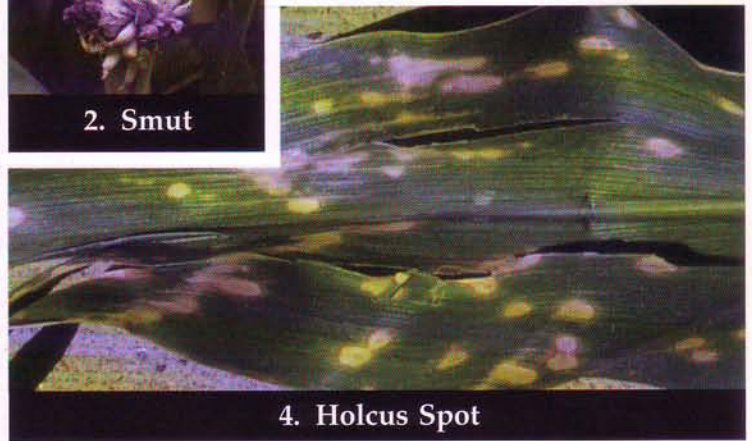
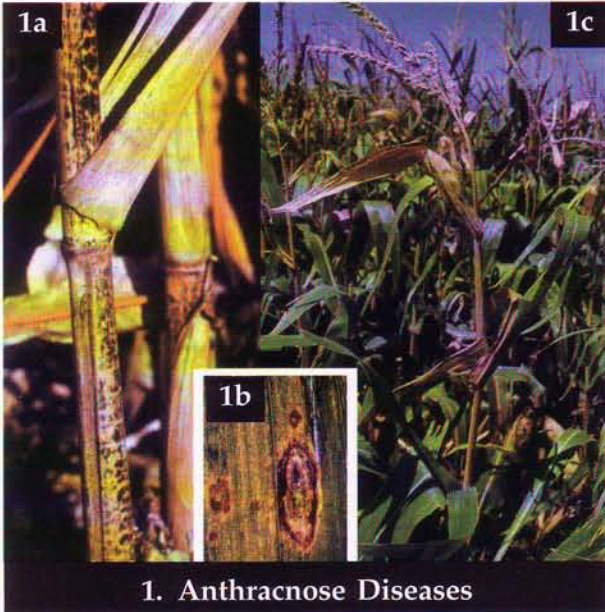
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Corn Disease Profiles

NU Extension Plant Pathology Team
James P. Stack, Loren J. Giesler, John E. Watkins,
Robert M. Harveson and Jennifer L. Chaky



Disease	Symptoms
1. Anthracnose <i>Colletotrichum graminicola</i>	Stalk rot: areas of black discoloration on the surface of the lower stalk (Fig. 1a). Internal tissues turn brown starting at the nodes. Hyphae and sclerotia can often be seen within infected stalks. Leaf blight: Small tan to brown lesions (Fig. 1b) that expand to long irregular shaped lesions with dark, reddish-brown margins. Top die-back: stalk becomes bleached and dies from tassel downward several nodes (Fig. 1c).
2. Common Smut <i>Ustilago maydis</i>	Smut galls can occur on any part of the plant, including leaves, stems, ears, and tassels. Mature galls (Fig. 2) are silver-white on the surface and have masses of black powdery spores inside. Galls on leaves and stems are yellow-green to silver-white and often don't mature to produce spores.
3. Bacterial Stalk Rot and Top Rot <i>Erwinia chrysanthemi</i> <i>Erwinia</i> spp. <i>Pseudomonas</i> spp.	Tan to dark brown, water-soaked lesions develop on the leaves and sheath and rapidly spread up the stalk (Fig. 3a). A foul odor can be detected and the top of the plant can be easily removed from the rest of the plant. The stalk rots completely and the top collapses (Fig. 3b). Bacterial stalk rot can infect the plant at any node resulting in internal discoloration and soft slimy rot.
4. Holcus Spot <i>Pseudomonas syringae</i> pv. <i>syringae</i>	Round to oval spots on lower leaves (Fig. 4); spots dark green at first then becoming light tan and later turning brown with reddish-brown margins.
5. Stewart's Wilt <i>Pantoea stewartii</i>	Striping of leaves, wilting, (Fig. 5a) and a necrotic cavity at the base of the stalk (Fig. 5b) occur with the early phase of this disease. Some seedlings are killed. The late phase occurs after tasseling and is characterized by long irregularly shaped lesions (Fig. 5c) that can extend the length of the leaf.
6. Goss's Bacterial Wilt and Blight <i>Clavibacter michiganensis</i> subsp. <i>nebraskensis</i>	Shiny dark green to grayish tan areas on leaves containing many small dark spots called freckles (Fig. 6a); stalk pith tissue may contain orange streaks; severely infected plants are stunted and may die. Developing lesions often produce an ooze that contains the bacteria (Fig. 6b). Mature lesions are characterized by long irregular shaped lesions (Fig. 6c) that can extend the length of the leaf.
7. Common Rust <i>Puccinia sorghi</i>	Brownish-red elliptical to oblong pustules (Fig. 7a) on both surfaces of leaves; spores of the fungus may rub off on fingers. At the end of the season lesions may appear black (Fig. 7b) due to the production of teliospores.
8. Southern Rust <i>Puccinia polysora</i>	Light cinnamon (Fig. 8a), circular to oval pustules (Fig. 8b) develop primarily on upper leaf surfaces. Lesions also develop on leaf sheaths, husks, and stalks.
9. Gray Leaf Spot <i>Cercospora zeae-maydis</i>	Immature lesions (Fig. 9a) are easily confused with other foliar diseases. Rectangular lesions with yellow halos (Fig. 9b) are observed on most hybrids. Lesions also develop on sheath and husk tissues. Symptoms can vary with different corn hybrids.

Photo credit: Anthracnose stalk rot (Figure 1a), courtesy of G. Munkvoid, Iowa State University.