



# Extension FactSheet

Plant Pathology, 2021 Coffey Road, Columbus, OH 43210-1087

## Common Corn Rust

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Common corn rust rarely causes significant yield losses in Ohio field (dent) corn. However, occasionally field corn has been damaged when environmental conditions favor the development and spread of the disease. Sweet corn is generally more susceptible than field corn. Common rust can usually be found in corn fields sometime during the growing season, but generally does not appear before tasseling. In those years with exceptionally cool summers, and especially on late-planted fields or sweet corn, yield losses may be expected when the leaves above the ears become severely diseased.

### Symptoms

Common rust of corn can be easily recognized by the development of dark, reddish-brown pustules scattered over both the upper and lower surface of the corn leaves. Pustules appear oval to elongate in shape, are generally small, less than 1/4 inch long, and are surrounded by the leaf epidermal layer, which appears as a whitish covering. These pustules may appear on any above ground portion of the plant, but are most abundant on the leaves.

### Causal Fungus

*Puccinia sorghi* is the fungus causing common rust in corn. The reddish-brown color of the pustule is actually the coloration of the repeating spore or uredospores. These spores are produced throughout the summer and infect new leaf tissue and are responsible for the spread of the disease. As the corn plant matures the pustules turn a brownish-black color due to the development of the darker pigmented spores or teliospores. In tropical regions teliospores infect the rust's alternate host, wood sorrel (*Oxalis* species). In temperate areas, including the U.S. cornbelt, the fungus does not infect wood sorrel and the teliospores have no real function.



Common corn rust.

### Disease Cycle

The rust fungus overwinters as uredospores on corn or as other spore forms on wood sorrel in subtropical and tropical regions. Spores capable of infecting corn are blown northward during the growing season and become established on the corn crop. Rust development and spread is favored by prolonged cool temperatures ranging from 60° to 74°F and high relative humidity. When these protracted cool, hu-

mid conditions exist, susceptible corn hybrids and sweet corn varieties can become seriously affected.

### Control

Although rust is frequently seen on corn in Ohio, very rarely has there been need for control on field corn. In field corn, highly resistant hybrids are available and most hybrids possess some degree of resis-

tance. Pop and sweet corn can be quite susceptible. In seasons where considerable rust is present on the lower leaves prior to silking and the weather forecast is for unseasonably cool, wet weather, chemical control may be necessary. Fungicides are available for rust control. Consult label recommendations for rates and application timing. Early application is necessary for effective disease control.

Additional information is available from your local Extension office or The Ohio State University web site Ohioline at: <http://ohioline.ag.ohio-state.edu>

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