



Strawbreaker (Footrot or Eyespot) of Wheat

Bob Hunger^a, Brian Olson^a, Larry Singleton^a & Gene Krenzer^b
Entomology & Plant Pathology^a, Plant and Soil Sciences^b
Oklahoma State University, Stillwater, OK



April 2002

Strawbreaker, which is caused by the fungus *Pseudocercospora herpotrichoides*, primarily over-summeres on wheat residue. The fungus produces spores when humidity is high and temperatures are around 50° F. These spores infect and colonize the base of tillers (stems), and frequently form eyespot lesions that girdle stems and block the transport of water and nutrients resulting in whiteheads. Basal lesions also weaken the stems, which frequently leads to lodging especially after storms with strong winds.

Wheat lodges in many directions



White heads seen as wheat matures



Eyespot-shaped lesions are charcoal to black in color, and occur at stem bases. Lesions typically are sunken and straw is weakened and collapsed.

Strawbreaker Management

Rotate out of wheat for a year - two years is better.

Plant late - this alleviates strawbreaker by reducing stand density.

There are no highly resistant varieties; however, stiffer-strawed varieties tend to resist lodging better than weak-strawed varieties.

Fungicides (e.g., Tilt) are available, but their use in Oklahoma would not appear to be economical considering our yields and the price of wheat.

In contrast to these measures, practices such as **excessive nitrogen and high seeding rates favor strawbreaker** by increasing stand density.

Burning and deep plowing stubble have no or little affect on strawbreaker as indicated by research in the Pacific Northwest and Oklahoma.

Key Point

Strawbreaker can be identified by pulling a handful of tillers from the soil. If roots pull out of the ground, then a true root rot is indicated. If tillers break at the soil surface, then strawbreaker is indicated because strawbreaker weakens the bases of tillers causing them to break at the soil line while roots stay anchored in the soil.

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, sex, age, religion, disability, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Samuel E. Curl, Director of Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Dean of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of \$0.59 per copy.