



Pest e-alerts



Entomology and Plant Pathology, Oklahoma State University
127 Noble Research Center, Stillwater, OK74078
405.744.5527

Vol. 14, No. 30

<http://entopl.okstate.edu/Pddl/>

Jun 8, 2015

Wet Weather and Unusual Canola Diseases

John Damicone, Extension Plant Pathologist



The wet weather of May appears to have subsided but has left behind some unusual disease outbreaks on canola as the crop nears harvest. Black spot (*Alternaria* spp.), powdery mildew (*Erysiphe* spp.), and black rot (*Leptosphaeria maculans*) have been observed on stems and pods of maturing canola at unusually high levels this year. The impact of these foliar diseases may contribute to both pod shattering and possibly seed quality. Their damage to the crop this year is yet to be determined, but their presence is likely to have adverse effects where the rainy weather has made timely harvest a challenge in some areas of the state.

Black spot on pods is widespread this year. Information on this disease is mostly from Canada where it is a problem on spring canola. The disease is caused by at least three species of fungus *Alternaria*. Canola is generally resistant to the black spot on the leaves but as canola approaches maturity, pods and stems become increasingly susceptible to infection. The disease causes black spots on pods (Fig. 1 and 2) and stems, but it is the pod infections that are believed to cause the most damage because they make pods more susceptible to premature shattering. Severe black spot on pods may increase green seed count, cause seed shriveling, and reduce oil content. In examining diseased pods, seeds do not appear to be severely impacted. Josh Bushong, OSU canola extension specialist reports that shattering is being observed in severely affected fields. The fungus survives on old crop stubble and to a lesser extent on infected seed. In Canada, fungicide applied at 95% bloom provides economical disease control. Swathing is recommended to reduce shattering losses from black spot. However, straight cutting is apparently necessary in some areas of the state this year where muddy fields prevented timely swathing.

Fig 1. Alternaria black spot on canola pods.



Fig 2. Alternaria black spot on mature canola pods.



Josh also reported that some fields have black discoloration only on the pod tips (Fig. 3). I found similar symptoms in areas of my research trials and verified that *Alternaria* spp. also caused the pod tip discoloration. It is unknown whether or not this is a different species of *Alternaria*, a differential variety response, or a different time of infection relative to crop maturity.



Fig 3. Black tips on canola pods caused by *Alternaria* spp.

Powdery mildew has been previously observed on canola leaves, stems, and pods after flowering is complete during periods of high humidity. The disease is easy to identify by the white powdery colonies covering affected plant parts (Fig. 4). The disease is not considered economically important and there is little information available on it. However, it has been particularly severe this year probably due to the extended periods of high

humidity and cloud cover, which generally favors powdery mildew disease development. Josh Bushong asked about the cause of white powdery residue on a canola swather (Fig. 5) and I suspect that powdery mildew dust (spores) are the culprit although we did not get a sample to verify that diagnosis.

Black leg lesions on pods have also been confirmed this year although it appears to be less widespread than black spot or powdery mildew. Black leg is characterized by tan or grey colored spots on the pods with tiny, pepper-like dots within the spots (Fig. 6). While the pod infections are less damaging than the basal stem cankers, pod infections result in seedborne black leg which can be important in the introduction of the disease into new areas or the introduction of new races and strains.



Fig 4. Powdery mildew on canola pods.



Fig 5. White residue on canola swather possibly from powdery mildew.



Fig 6. Black leg lesion on canola pod.

Dr. Richard Grantham - Director, Plant Disease and Insect Diagnostic Laboratory

The pesticide information presented in this publication was current with federal and state regulations at the time of printing. The user is responsible for determining that the intended use is consistent with the label of the product being used. Use pesticides safely. Read and follow label directions. The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service is implied.

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, and Title IX of the Education Amendments of 1972 (Higher Education Act), the Americans with Disabilities Act of 1990, and other federal and state laws and regulations, does not discriminate on the basis of race, color, national origin, genetic information, sex, age, sexual orientation, gender identity, religion, disability, or status as a veteran, in any of its policies, practices or procedures. This provision includes, but is not limited to admissions, employment, financial aid, and educational services. The Director of Equal Opportunity, 408 Whitehurst, OSU, Stillwater, OK 74078-1035; Phone 405-744-5371; email: eeo@okstate.edu has been designated to handle inquiries regarding non-discrimination policies; Director of Equal Opportunity. Any person (student, faculty, or staff) who believes that discriminatory practices have been engaged in based on gender may discuss his or her concerns and file informal or formal complaints of possible violations of Title IX with OSU's Title IX Coordinator 405-744-9154.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural Resources.