

## ***Pod and Stem Blight of Soybean***

Travis Faske and Terry Kirkpatrick  
Plant Pathologist

Pod and stem blight is a common disease in all soybean growing regions in the U.S. This disease can cause reduced seed quality and cause yield losses on susceptible cultivars when conditions favor disease development.

Infection may occur early in the season without any definite, visible lesion development on leaf, stem, petiole or pod in the lower canopy. Late in the season (R7), small, black, flask-shaped fungal fruiting bodies called pycnidia occur in linear rows on lower stems, petioles, and pods, confirming early season infection (Fig. 1 & 2). Seeds within pods containing pycnidia are usually infected, thus reducing seed quality. Occasionally, bright red to brown lesions develop on cotyledons or hypocotyl (at or near soil line) of seedlings from infected seed.



Figure 1. Pod and stem blight on soybean stem and pods  
(Photo by A. Greer).

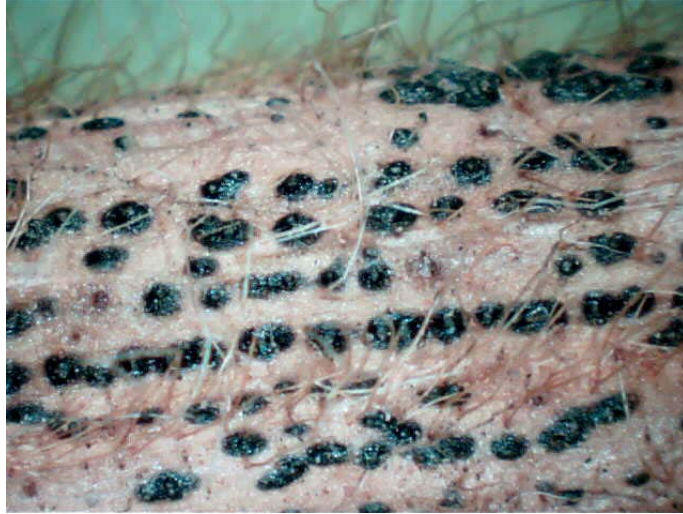


Figure 2. Pod and stem blight fruiting structures on soybean pod (Photo by A. Greer).

Pod and stem blight is caused by a fungal pathogen (*Diaporthe phaseolorum* var. *sojina*) that overwinters in infected seed or on crop residue. Infection occurs when spores are splashed onto plants from crop residue or nearby diseased plants. Systemic, asymptomatic infection occurs throughout the growing season during prolonged warm ( $> 69$  °F), wet weather conditions. Such conditions favor seed infection and pynidia development on maturing plants. Delayed harvest contributes to a higher incidence of infected seeds.

Management of pod and stem blight includes the use of high quality, disease-free seed. Crop rotation with a host other than soybean, and tillage practices that hasten crop residue decomposition are helpful. Genetic resistance is available, and the least susceptible cultivars should be used in fields with a history of pod and stem blight. Timely fungicide applications during pod development (R3) and seed formation (R5) can be effective in suppressing disease development. Fungicide seed treatments can be effective at suppression infection by pod and stem blight.