

Pulse Crops

Ascochyta Blight of Pea

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Identification and Life Cycle

Ascochyta blight of pea is caused by several fungi, including *Phoma medicaginis* var. *pinodella*, *Ascochyta pisi*, and *Mycosphaerella pinodes*. The primary inoculum source that initiates disease epidemics is airborne ascospores released from fungal fruiting bodies (pycnidia and perithecia) on infested crop debris. Ascospores germinate and infect pea over a range of temperatures (40 to 95°F) when free moisture is available. Fungal fruiting bodies (pycnidia) develop on infected leaves, which produce airborne spores (conidia) when moisture is available. Plants become increasingly susceptible as they mature and are most susceptible from flowering to full maturity. The Ascochyta blight pathogens are disseminated in and among pea fields by windborne spores and splashing water, and survive between pea crops on infested seed and crop residue.

Plant Response and Damage

Ascochyta blight symptoms can develop on leaves, pods, and stems. Stem and leaf lesions appear initially as irregularly shaped tan spots with dark brown margins. Stem lesions develop at or near the soil line and are slightly sunken. Pod lesions are circular, sunken and tan colored with dark margins. Infected young plants may die or survive in a weakened condition. Later in the season, leaf, stem, and pod spotting can be severe with slight to severe losses in yield and quality. The disease is most damaging during cool, wet weather.

Management Approaches

Biological Control

No biological control strategies have been developed for Ascochyta blight of pea.

Cultural Control

Plant high quality seed free from the Ascochyta blight pathogens. Practice a long (four years or longer) rotation to nonhosts such as small grains and corn. Promptly and thoroughly incorporate crop residues after harvest to reduce pathogen overwintering and survival. Delaying planting so plants mature during warmer weather can significantly reduce disease severity. Resistant varieties have been developed and should be planted if Ascochyta blight becomes a consistent problem.

Chemical Control

Chemical controls are most effective when integrated with sound cultural practices. If using nitrogen-fixing inoculants, add twice the amount of Rhizobial inoculant and put inoculant in the seed furrow, not on seed; or add inoculum no more than 2 hours before planting.

Common/ Trade Name	Product per Acre	Application Frequency (days)	Remarks
Boscalid			
Endura	6 oz	7-10 days	Maximum of 2 applications or 22 ounces per season; 21 day phi
Strobilurin			
Amistar	2-5 oz	7-14 days	Maximum of 4 applications per season; Rotate with fungicides with a different mode of action; 0 day PHI
Headline	6-9 fl oz	7-14 days	Maximum of 2 applications or 18 oz per season; 21 day PHI
Quadris	6.2 – 9.8 fl.oz	7-14 days	Maximum of 6 applications per

season; Do not apply more than three applications before rotating to a fungicide with a different mode of action; 0 day PHI

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Categories: Pulse Crops, Disease, Ascochyta Blight, Pea

Date: 04/02/2007