



# Ascochyta Leaf and Pod Spot of Faba Bean

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*Ascochyta leaf and pod spot is an important disease of faba beans in Victoria and South Australia. This disease can be managed through an integrated approach including careful paddock selection, the use of resistant varieties and strategic use of foliar fungicides.*

## Symptoms

Symptoms occur on leaves, stems and pods of infected plants and can be confused with the early stages of chocolate spot. On leaves, small, circular, dark-brown spots appear first. As the disease develops, they enlarge and turn light and then change to dark grey in colour. They become irregular in shape, often zonate, and may coalesce to cover most of the leaf surface. Leaf tissue next to the lesions may become black and necrotic. Within the lesions, numerous pinhead-sized black fruiting bodies (pycnidia) of the fungus develop. These appear only under moist conditions and are often concentrically arranged (Figure 1).



*Figure 1. Developing leaf lesions caused by ascochyta on faba bean.*

On the stem, lesions are more elongated, sunken and darker than leaf lesions and are usually covered with scattered pycnidia (Figure 2). Stems may split and break at the point of infection causing plants to lodge. On pods, lesions are sunken and have pale centre and dark margins; they can be covered by numerous pycnidia. Well developed lesions can penetrate the pod and infect developing seeds causing them to be shrunk and discoloured. Badly infected seeds have yellowish brown

stains on the outer seed coat, which considerably reduces its market value (Figure 3).

Ascochyta blight can cause seed staining in pods close to maturity even when disease levels in the crop have been too low to warrant fungicide sprays.

Faba bean seed that has greater than 25% seed coat discolouration can reduce the emergence of seed by 30%. Seed that has less than 5% seed coat discolouration will usually have normal levels of germination.



*Figure 2. Developing stem cankers caused by ascochyta on faba bean.*



*Figure 3. Faba bean seed discoloured by late infection of ascochyta blight.*

## Economic Importance

The disease is widespread in southern Australia. Its severity varies considerably from crop to crop and between seasons. Yield losses of 10-30% can occur in seasons favourable for the disease. Discolouration of seed can seriously reduce its market value.

## Disease Cycle

Ascochyta leaf and pod spot is caused by the fungus *Ascochyta fabae*. The fungus can survive on crop debris, self-sown volunteer plants, and infected seed. The disease usually becomes established when spores of the fungus, produced on old bean stubble, are carried into the new crop. Wet conditions are required for infection. During wet weather the disease can spread from infected to healthy plants by rain splash and wind-borne spores. Providing there has been either rain or heavy dew, infection may occur at any stage of plant. Because of this dependence on wet conditions, the disease is usually most severe early in the season and in wet years.

## Management

An integrated approach is the key to successful management of ascochyta blight in faba bean.

### Before sowing

#### *Paddock Selection*

A break of at least 3 years should be observed between faba bean crops. Aim to separate this year's faba bean crop from last year's faba bean stubble by a distance of 500m. Reduce disease risk by not sowing adjacent to vetch, chickpea or lentil stubble.

#### *Variety selection*

Select the variety with the highest level of resistance to the important disease risk in your district

#### *Seed selection*

Aim to use the 'cleanest' seed possible with 5% to nil levels of levels of ascochyta present. Seed should be sourced from the 'cleanest' crops. Old, frosted or damaged seed may have reduced germination and reduced vigor.

### At sowing

#### *Sowing rate*

Follow the recommended sowing rates for your district, remember that rates may vary between varieties.

#### *Sowing date*

Plant to sow within the optimum sowing window for your district.

### After sowing

#### *Strategic use of foliar fungicides*

A successful fungicide program relies on crop monitoring, correct disease identification and timeliness of spraying with the correct product. Be aware of the critical periods for disease management.

#### *Harvest*

Plan to harvest as early as possible to minimize disease infection on seed.

## Further Information

More information on faba beans and their diseases can be found at [www.dpi.vic.gov.au/notes](http://www.dpi.vic.gov.au/notes) (click on Crops and Pastures, then select Legume Crops)

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