



## Anthracnose of beans

Elizabeth Minchinton, Knoxfield

### Caused by

*Colletotrichum lindemuthianum*

### Introduction

Anthracnose is mainly a seed-borne disease caused by a fungus which has a wide host range on many legume species. This disease can cause serious losses in bean crops in temperate and subtropical zones.

### Symptoms

Leaves, stems and pods of bean plants are susceptible to infection. Small reddish-brown, slightly-sunken spots form on the pods and rapidly develop into large, dark-sunken lesions. In moist weather, masses of pink spores develop on these lesions. Black-sunken spots, similar to those on the pods, are produced on the stems and the leaf stalks. Infection of the leaves causes blackening along the veins, particularly on the undersurface.



Figure 1. Blackening along the veins of french bean caused by anthracnose.

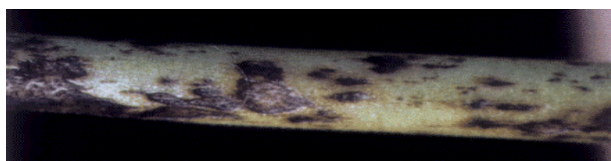


Figure 2. Black-sunken spots on stem caused by anthracnose.

### Biology

#### Survival

The fungus can survive on contaminated seed and on crop debris for at least two years.

#### Dispersal

The fungus can spread by planting infected seed. Rain splash and wind will spread the spores of the fungus within the crop.

#### Environmental conditions

Development of the disease is most rapid in warm, damp conditions. Symptoms appear between 18-25 °C but are delayed or prevented by temperatures outside the range of 7-33 °C.

#### Host range

French, mung, and broad beans. There are several races of the fungus. Varieties such as Tweed Wonder, Wellington Wonder, and Redlands Beauty are resistant to the more commonly occurring race but can be severely affected by the other less frequently occurring races.

### Control

- Use either certified seed, approved seed, or seed known to have a long disease-free history. The use of disease-free seed is the most important control measure.
- Do not plant beans for at least two years in land that has carried an infected crop.
- Remove diseased plants, where practical, to help check the spread of disease.
- Avoid cultivating and harvesting an affected crop when wet to prevent the spread of spores.
- Do not pack lightly diseased pods as anthracnose can develop during transport.

*edited by Kathy Pullman*

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