



Vegetable *-Matter-of-* Fact

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Asparagus



Phomopsis (Stem Blight) Control Options

- Spores survive very well on crop debris.
- There are currently no effective chemical control measures.
- The main control method is removal of debris (and hence spores) by burning or encouraging breakdown.
- Establish good farm hygiene practices and make sure visitors follow your rules.
- If you suspect you have Phomopsis stem blight contact your local VegCheque Officer or DPI Plant Standards.



This stem blight lesion is well advanced and shows the characteristic "black dots" which are filled with spores. This photo was taken in Vic.



Last season's fern is lying dry in the middle of the rows, it has not broken down and can act as a source of infection for new spears.

Symptoms to look out for

Phomopsis also known as Stem Blight is a fungal disease that has recently been found in Victoria. This Matter-of-fact is a follow up edition to Matter-of-fact #21 Phomopsis Stem Blight, and should be read in conjunction with that information.

Infection by Phomopsis occurs during the first 14 days after spear emergence. Spears make contact with spores on crop debris as they move through the soil. The debris can be either above or below ground.

Symptoms first appear as water soaked spots. They may appear as early as one week after emergence of spears and continue to appear for up to six weeks. Symptoms progress to oval discoloured tissue with light brown centres and darker margins. Tissue becomes shrivelled and lesions become ashy white in the centre, surrounded by black pinhead sized dots.

Good debris management is vital in the early stages. Once Phomopsis stem blight is established it is virtually impossible to get rid of and spore levels increase exponentially.



Know-how for Horticulture™



Hygiene is Important

- Establish good farm hygiene practices and rules for entering your property and make sure visitors adhere to your rules.
- Be vigilant of soil and debris movement on farm. Do not let new areas become infected.
- Wash down equipment and machinery and don't forget the underside.
- Ensure the wash water from packing lines is not running onto unaffected areas.
- Clothes, shoes and cutting knives can all transport spores unless cleaned thoroughly.
- If you bundle up your fern for stock feed don't carry infected fern across uninfected areas and beware of fern falling on the road which could later be picked up and transferred into unaffected areas.



Typical symptom of advanced stem blight where fern bends over due to weakening of the stem by a lesion. The top of the fern may be green at first but eventually dies when sap flow is blocked.

Control Measures

Complete eradication of the disease is unlikely and there are currently no effective chemical control measures. The best way to reduce infection is to ensure new spears do not come in contact with *Phomopsis* spores on crop debris. Control measures focus on breaking down the debris to reduce the spores.

- Scout regularly for symptoms of stem blight on spears and developing fern, particularly if conditions are wet and cool. Dispose of infected spears off farm.
- Destroy volunteer seedlings and other unwanted asparagus plantings to control infection sources.
- Remove crop residue by burning if possible.
- The amount of inoculum can be reduced by promoting breakdown of infected debris on the surface before turning into the soil after knockdown. Once incorporated, it is much harder to ensure complete breakdown of infected debris.
- Trials have shown that amendments such as enzymatic and microbial mixes or manure composts (e.g. pig manure or urea) can aid breakdown of surface debris before hilling.



This photo of ashy white *Phomopsis* stem blight lesions was taken in QLD and is typical of how the disease symptoms appear in the south of QLD.

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Also see Matter of Facts #21, *Phomopsis* Stem Blight

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