

## Fact Sheet:

# Esca disease

## *Fomitiporia mediterranea*

*Fomitiporia mediterranea* is a fungi associated with a vine rot disease referred to in Europe as “Esca disease”. This is a disease that has been present for many years in European grape vineyards and has shown a dramatic increase in incidence in the past decade. In 1995 the disease was first reported in kiwifruit in Italy and by 2000 the number of infected orchards in the Emilia Romagna region had risen significantly.

### Distribution and Climate Range

Esca disease is mainly limited to the grape industry of Europe and has only been reported in kiwifruit in Italy.

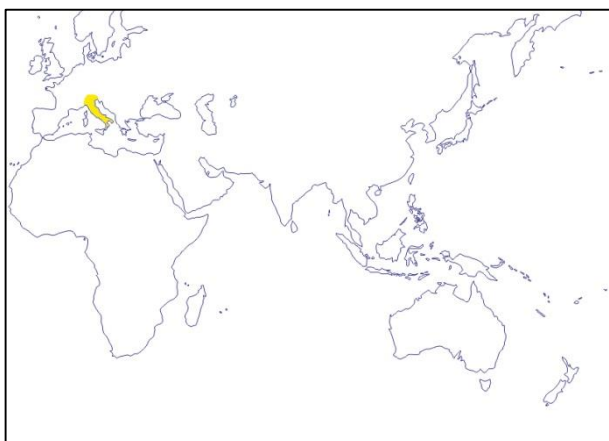


Figure 1. Distribution of *Fomitiporia mediterranea* in kiwifruit.

### Signs and Symptoms

Symptoms of the disease appear on the foliage in late summer as small, pale green spots irregularly distributed on the upper side of the leaf. These develop into irregular chlorotic and then necrotic areas that eventually cover most of the leaf surface. Severe infection will cause leaves to curl, wilt and drop prematurely. Fruits on diseased vines are stunted and do not reach full maturity resulting in reduced productivity.

Trunk and cordons of symptomatic vines show two main types of wood deterioration; a bleached spongy decay of a large area, or a brownish zone of wood necrosis.

Inoculation studies have indicated that young plants may not display symptoms of decay for 15-18 months after inoculation.



Figure 2. Kiwifruit canes inoculated with *Fomitiporia mediterranea* showing internal discolouration (A) and white rot (B). Source: Di Marco *et al* (2004)<sup>1</sup>

### Control

Pruning wounds have been observed to be the entry point of infection in both kiwifruit and grape vines. Therefore, orchard hygiene and appropriate vine management is the most effective measure to prevent infection. Once vines are infected there are few control options available and these have limited effectiveness, emphasising the importance of preventative measures.

<sup>1</sup>Di Marco, S., Calzarano, F., Osti, F., & Mazzullo, A. (2004). Pathogenicity of fungi associated with a decay of kiwifruit. *Australasian Plant Pathology*, 33(3), 337-342

### What should you do if you think you have seen vines displaying these symptoms?

Phone:

**MPI - 0800 80 99 66 or KVH - 0800 665 825**