

Barley mild mosaic virus



Plant Health
AUSTRALIA

EXOTIC PEST – CALL THE EXOTIC PLANT PEST HOTLINE IF SUSPECTED

What is barley mild mosaic virus?

Barley mild mosaic virus is a disease of winter barley in the UK, Europe and East Asia. It was first reported in barley in Germany in 1984.

The virus reduces plant height as well as the number of fertile tillers resulting in losses that vary from 10 to 90 per cent. Since the virus can persist in the soil for up to 25 years even in the absence of cereal crops, the only way to manage it is through resistant varieties and crop rotation.

The virus is transmitted by a soil borne fungus called *Polymyxa graminis*. The virus survives within the spores of the fungus and when they infect crop roots the virus is transmitted to the plant.

What does it look like?

Symptoms vary across a season. They include yellow or pale green streaks on leaves, especially in younger leaves and sometimes in the leaf sheath. Later, new leaves remain green but show distinct pale green streaks.

The height of crops will be reduced in patches and these plants will have fewer fertile tillers. As time progresses brown patches may begin to appear. Lower leaves may roll making the plant look spiky.

What can it be confused with?

This virus can be confused with other viral leaf diseases that can affect cereals such as barley stripe virus and barley yellow mosaic virus. The symptoms can also be confused for nutrient deficiencies. Laboratory testing is needed to confirm a diagnosis of particular cereal viruses.

What should I look for?

Larger grain borer is known to attack maize in the field. Affected plants usually have fewer tillers and produce grain of an irregular size although sometimes symptoms are not obvious. In some cases symptoms appear but then the crop seems to recover, though crop yields can still be low.



Symptoms of barley mild mosaic virus on barley leaves.

H.D. Lapiere, D. Hariri, *Encyclopedia of Virology*, 2008, ScienceDirect.com



Yellow discoloured patches of different sizes are often the first sign of field infection, occurring in early spring.

H.D. Lapiere, D. Hariri, *Encyclopedia of Virology*, 2008, ScienceDirect.com

How does it spread?

The virus spreads through spores of the fungus *Polymyxa graminis* in soil.

Where is it now?

It has been found in Belgium, France, Germany, Italy, Japan, the Netherlands, and the UK.

How can I protect my farm from barley mild mosaic virus?

Since this disease is soil-borne, implement good hygiene practices on your farm to prevent spread. Keep machinery, equipment and tools clean and control people and vehicle movement in production areas to minimise the risk. People returning from overseas can pose a threat, particularly if they have visited crops or farms.

Only bring in seed, feed and fertilizer from reputable suppliers.

Early detection is crucial in stopping or slowing progress of a new pest. Monitor your crops regularly for anything unusual, and call in a specialist without delay to help identify anything unfamiliar.

If you see anything unusual, call the **Exotic Plant Pest Hotline** on **1800 084 881**.

GRAINS FARM BIOSECURITY PROGRAM

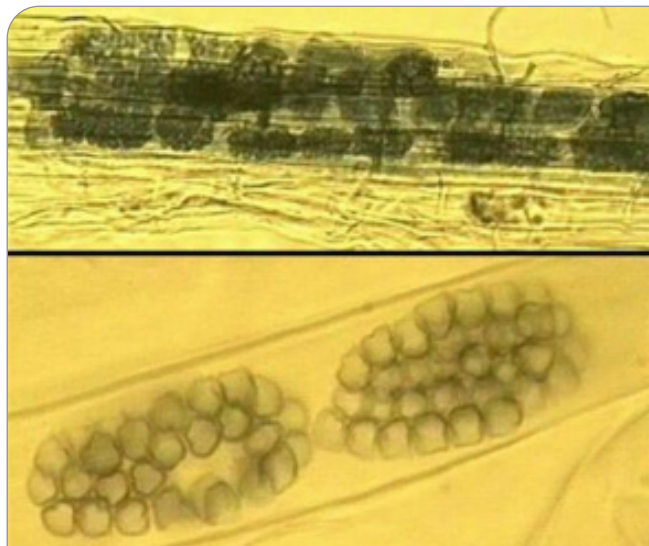
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Viruses transmitted by the soil fungus *Polymyxa graminis* can include BaMMV.

Victorian Dept. of Primary Industries, M Spakman et al



Tillering and crop height can be affected by BaMMV.

Victorian Dept. of Primary Industries, M Spakman et al