CropAlert September 2020 – Significant disease in Victorian Pulse Crops

Key Points

1. Recent rains have resulted in good canopy humidity and followed by warm days have favored disease development. Monitor for disease and consider changing the end use of crops or a timely fungicide application if warranted.
2. The MR (provisional) rated faba bean PBA Amberley is showing high levels of disease than expected which means a fungicide application may be warranted to prevent yield losses.
3. There are significant levels of botrytis grey mould being reported across Victoria in vetch and lentil.
4. There are significant levels of sclerotinia white mould being reported across Victoria in vetch, lentil, chickpea and lupin.
5. Consider the end use of vetch crops if there are high levels of disease.

Chocolate spot in faba bean PBA Amberley

Higher than expected levels of chocolate spot have been observed in the faba bean variety PBA Amberley. Given the level of infection found, growers with this variety will need to monitor their crops with a view to timely fungicide application to minimise yield loss. Even though these observations suggest the provisionally moderately resistant (MR) rating for PBA Amberley will be reviewed for 2021, it is still more resistant than all other varieties (See figure 1 for comparison).

Figure 1: From left to right – least chocolate spot to most chocolate spot in the faba bean varieties: PBA Amberley (rated MR provisionally), PBA Samira (MS) and PBA Bendoc (MS). Disease symptoms observed at Lake Linlithgow in Agriculture Victoria and Southern Farming System trials.

Botrytis Grey Mould in vetch and lentils

Figure 2: Lentil pod with symptoms of BGM. Note the typical dark grey, fuzzy growth of the fungus (Photo courtesy of Kurt Lindbeck – NSW DPI)

Symptoms

Botrytis grey mould (BGM) usually first appears as a soft rot at the base of the stem in the collar region. The affected tissues become covered with a fluffy grey mould initially.
As the disease progresses affected plants wither and die. Small black sclerotia (fruiting bodies) may form on the surface of affected tissue when the plant dies.

With warmer humid conditions this disease will become more aggressive and can spread rapidly across a paddock.

Management

In **multipurpose crops** such as vetch, consider the end use of the crop. If the crop is starting to show disease symptoms consider cutting the crop early to avoid further disease spread. Botrytis grey mould will affect hay quality as well as yield. Grazing may open the canopy and allow better penetration of fungicides thus improving disease control if retaining seed is important. It will always be a trade off with grain yield.

If symptoms are present in **grain-based crops** such as lupins, lentils and chickpeas consider the use of a registered foliar fungicide. The best control is a preventative fungicide prior to canopy closure, as this decreases the risk for the rest of the season. If disease symptoms are present post canopy closure and the disease is progressing, consider increasing the water rate with a fungicide application to allow penetration into the canopy. Monitor for effectiveness as fungicide applications post canopy closure are less effective.

Sclerotinia white mould in vetch, lentil, chickpeas and lupin

Figure 3: Sclerotinia white mould on lupin. Note the sclerotia that have formed just below the crown.

Symptoms

A small number of dead plants scattered throughout a paddock. Affected plants first wilt and rapidly die, often without turning yellow. Later, as the plant dries out the leaves turn a straw colour.

Small black fungal bodies called sclerotia (which are irregular in size and shape), can sometimes be seen mingled with white cottony fungal mycelium on the surface of the root, just below ground level (Figure 3).

Management

Management strategies similar to botrytis grey mould should be followed in season. For sclerotinia white mould fungicide options see the link below as there are limited options in pulses.

Plants that are already affected with the disease at ground level on the stems are unlikely to recover, but disease spread across a paddock can be slowed with fungicides if the crop is for grain.

Further information

Sclerotinia in Victorian Pulses – includes fungicide options

Identification & Management of Field Crop Diseases in Victoria

Chocolate spot in beans

GRDC growing guides:

Vetch

Chickpea

Faba Bean

Lentil

Lupin

Kind regards,

The Horsham Field Crop Pathology and CropSafe team.