

## Focus Session Report: Canola Diseases 2017 GRDC Grains Research Updates, Perth

**Who ran it:** CCDM and DAFWA

**Number of Attendees:** 60-70

### **What was covered in the focus session:**

#### **Part 1: Comparing Canadian sclerotinia management to Australian sclerotinia management**

Dr Lone Buchwaldt, canola pathologist from Canada, discussed how her research team are helping to develop genetic resistance in canola along with other sclerotinia management projects.

In summary, Dr Buchwaldt covered:

- How sclerotinia and wet seasons are well correlated in Canada. The decision to spray needs to be made before lesions appear. To facilitate this decision-making process for growers, Canadians have a checklist based on previous paddock infection, weather, etc.
- How sclerote depots help her research team report sclerote germination. Her team have buried 50 sclerotes/site at 200 canola sites at 2 cm depth in Canada. Relevance of the results limited to 10 km radius from depots.
- How Canadians are developing an app that uses nearest weather station, forecast, canola growth stage etc. to generate an estimation of sclerotinia risk. It will be another approach for getting data for sclerotinia disease incidence at harvest, variety, whether fungicide applied, crop history, soil type as well as the effect of rotation.
- How her team are helping to breed canola with sclerotinia resistance. Her team have developed potential lines with resistance for breeders, who are using these lines and have bred resistance in the hybrids. Dr Buchwaldt believes Canada is about five years away from a resistant variety becoming available.

#### **Part 2. Panel Session on how to manage sclerotinia in the coming season.**

##### **Rick Horbury (Bayer) covered his thoughts on sclerotinia management:**

- A two-spray approach is needed to control the disease. We need to think of reducing the disease (sclerote build up) in the same way we talk of weed seedbanks, so even if second spray gives a minor return, do it to reduce inoculum levels.
- He said the fungicide strategy that was most effective from his 2016 trial was 2 x AviatorXpro or 2 x Prosaro (370 + 450 mL/ha NOT 2 x 370 mL/ha).

##### **Matt Denton-Giles (Curtin CCDM) covered his thoughts on genetic resistance:**

- His team are looking at 100 varieties from around the world to find genetic resistance.
- Also planning on studying direct infection in 2017 and hybrid vs open-pollinator comparisons.

**Ravjit Khangura (DAFWA) discussed sclerotinia management:**

- Ravjit's research in 2016 found no effect on row spacing or plant density on disease incidence, and double application gave best return for growers. Single sprays also profitable and reduce disease incidence.
- Ravjit's rule of thumb: 40 mm of rain in previous 3 weeks + high relative humidity = high disease risk.

**Geoff Fosbery (ConsultAg) covered an agronomist's point of view on sclerotinia management:**

- In 2017, expect canola on canola rotations as a result of price and early rainfall.
- Direct infection by sclerotinia is a big issue in northern areas.
- Inappropriate varieties are being sown early which leads to early flowering in the high risk window.

**From the discussion:**

- Canola plantations will increase in 2017 despite sclerote build up in the soil.
- Conditions in the later months are more important for sclerotinia outbreaks than in the early months.
- There are no fungicides registered for lupins, however trials are being done to test triazoles.
- There is nothing you can spray on soil to stop sclerotes germinating, however biological control agents and burning stubble are options in the pipeline.
- The perceived differences in hybrid vs open-pollinators should be more about the differences in canopies.
- The need for diverse rotations is the key. However profit drives what growers grow, and canola will always be grown extensively while prices are good.
- Disease rated as most important is without a doubt sclerotinia – cost to control it and cost of not controlling it is higher than any other disease.
- Also there's a rising issue with varieties going in too early, and getting infected by blackleg in spring. Could there be dual disease benefit from these two diseases? Something to think about.
- No fungicide resistance has been detected in sclerotinia pathogens. The risk is also quite low.
- The potential for sclerotinia control with cultivation is slim. Mouldboarded paddocks still get sclerotinia, spores can travel 200m.

**Key conclusions**

- 2017 is going to see another tough season for sclerotinia control, as price will increase canola plantings across WA's wheatbelt, tightening rotations. Sclerotes need to be treated like a weed seedbank. Messages on how to manage it need to be communicated clearly with an emphasis on profit. This is the biggest disease problem facing WA growers!
- Fungicide resistance is not such a threat as yet, and two sprays of prosoaro is currently the best economic practice for reducing infection. There are currently no genetic resistant canola varieties available at the moment, but extensive pre-breeding research could see genetic resistant varieties 5 to 10 years away.

**Actions**

- Better messaging needed! More messages around sclerotes building up and the impact of tightening rotations needs to be communicated, as it will have large consequences for future rotations.

- Projects investigating canopy density, dual disease benefit, cultivation and new fungicides need to be considered.
- Could sclerote depots be used here? Worth considering.