Canola Pathology Workshop 2016

Wrap Up
Issues

Survey of diseases

- Variable each year and region
- Diseases: white leaf spot, downy mildew, charcoal rot (WA)
  - Cercosporin toxin virulence factor
- Sclerotinia: widespread in WA; some regions NSW; sporadic
  - sequencing genomes several isolates; mechanisms of interaction; screening germplasm

- **Issues**
- Breeding for resistance traits other than blackleg

Canola Agronomy

- Sowing before late April – yield benefit?
- Collaboration with Canola Agronomy Project
- Effects of changing tillage practice: ascospore released later from standing stubble Vs lying stubble
  - Implications for inoculum from 1 in 3 canola rotation

Disease Control - Novel agents:

- Pterostilbene – kills blackleg in vitro and in cotyledons
- Culture filtrate from actinobacteria active against Sclerotinia
  - Bacteria endophytic
  - Induces systemic resistance
- Preliminary data

- **Issues**
- Costs/ route and time application

Blackleg disease Control: R genes

- Knowledge of avirulence genes informs knowledge of resistance genes
- Major gene resistance not effective in stem
- Rotation of resistance genes (R groupings)
- Modelling by UWA: space and time
- Pilot glasshouse experiment shows some expected rotation patterns but inconsistent pattern behaviour by Group C cultivars; supported by Blackleg ratings & field data

- **Issues**
- Incorporate specific rotation data into management guide?
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Disease Control: Fungicides

- Seed treatment, in furrow & foliar sprays
- All DMIs
- Tolerance in some populations
- Some situations; yield benefit
- DAFWA: decision support model – blackleg then sclerotinia

- **Issues**
- How far to push foliar fungicides?
- Different chemistries
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