
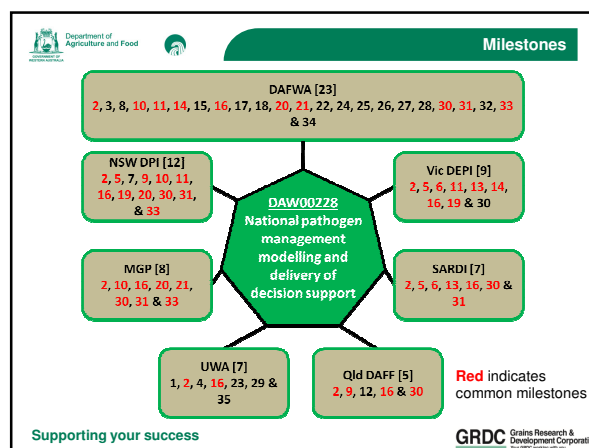


DAW00228
National pathogen management modelling and delivery of decision support

Main U. Salam
 Principal Research Officer
 National Canola Pathology Meeting
 University of Melbourne, 19 January 2014

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National partners

- DAFWA:** Department of Agriculture and Food Western Australia
- MGP:** Marcroft Grains Pathology
- NSW DPI:** New South Wales Department of Primary Industries
- Qld DAFF:** Queensland Department of Agriculture Fisheries and Forestry
- SARDI:** South Australia Research and Development Institute
- UWA:** University of Western Australia
- Vic DEPI:** Victorian Department of Environment and Primary Industries

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Canola blackleg

Milestone 8: (years 1-3) DAFWA – 01/07/2014; 01/07/2015 & 01/07/2016: Blackleg Sporacle model calibrated to evaluate the timing of fungicide sprays for effectiveness of control of blackleg in high yielding canola crops. Criteria: The model functions and has been validated or re validated using all existing data from relevant states supplied in milestone 10.


Milestone 10: (years 1-3) DAFWA, MGP & NSW DPI – 01/07/2014; 01/07/2015 & 01/07/2016: Retrospective analysis of data for at least One (1) blackleg fungicide trial each year conducted to ascertain effectiveness of fungicide application x time of application to test model predictions. Criteria: Data from one trial supplied for analysis and retrospective analysis of data from DAFWA, Marcroft Grains Pathology, NSW DPI carried out.



Canola blackleg

Milestone 20: (years 3-4) DAFWA, MGP & NSW DPI – 01/01/2016 & 01/01/2017: An electronically delivered version of canola blackleg management guide (e-guide for blackleg management) will be produced (2016) and updated (2017) using the best current delivery technology (such as tablets, smart phones or wearable technology, based on a review of existing technology). The decision tool will contain all aspects that determine blackleg severity, including: environmental, farming system practices, cultural cropping practices, fungicide usage, blackleg ratings and resistance groups. Criteria: E-guide for blackleg management has been updated based on all feedback from testers delivered through milestone 21.

Milestone 21: (years 3-4) DAFWA & MGP – 01/01/2016 & 01/01/2017: All available experimental data on each factor leading to disease severity for blackleg of canola will be compiled by DAFWA for testing of the e-guide for blackleg management.




Canola blackleg

Milestone 31: relates Output 5 (years 4-5) DAFWA, MGP, NSW DPI & SARDI – 01/01/2017 & 01/01/2018: The prototype of e-guide for blackleg management will be field tested to determine if it accurately predicts blackleg severity for at least 3 sites in each state. The prototype will then be supplied to at least 1 user group (or growers group) in each state to assess its usability.


Milestone 33: DAFWA, MGP & NSW DPI – 01/01/2018 Finalisation of the e-guide for blackleg management for delivery to industry.

Canola blackleg




Milestone 22: (years 3-5) DAFWA – 01/01/2016, 01/01/2017 & 01/01/2018: Decision support tool made available to industry to assist with tactical spray decisions for one or more diseases of high economic significance each year as determined by engagement with end users. Candidate diseases include: blackleg of canola, sclerotinia of canola, yellow leaf spot of wheat, stripe rust of wheat, powdery mildew of mungbean and fusarium head blight (FHB) of wheat. FHB on sorghum will also be considered based on seasonal conditions (by project variation). Criteria: The decision tool has been updated based on all feedback from testers and released for use.

Canola Sclerotinia



Milestone 7: (years 1-4) NSW DPI – 01/07/2014; 01/07/2015; 01/07/2016 & 01/07/2017: At least 2 sites (in high Sclerotinia risk districts) established to measure timing of spore production and release for Sclerotinia tailored to test model predictions. Sclerotinia epidemiological data will be collected recording the timing of ascospore release, petal infection, development of stem lesions and detailed environmental conditions. Criteria: Two trials conducted and data supplied to DAFWA for model testing.

Milestone 32: DAFWA – 31/12/2017: A simulation model produced of timing and quantity of spore production from soil for Sclerotinia of canola. Criteria: The model functions and has been validated using existing data from relevant states delivered through milestone 7.



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