National Meeting on Diseases of Canola - Wed 4th March 2015

Room G26, School of BioSciences (Building 123)

Seventy people from five states and ACT, GRDC, Industry, researchers from Universities, CSIRO and also two representatives from Commonwealth Department of Agriculture (Nazir Mahmood and colleague) attended the meeting.

Summaries of discussion and issues raised in each session:

Session 1: Incidence/Severity of canola diseases (Chair: Ray Cowley)

- Discussion about canker in branches and the environment factors surrounding this phenotype

Martin Barbetti: Suggested pycnidia spores running down the branch with rain

Rob Wilson: Had issues with agronomists misdiagnosing symptoms. Some agronomists thought the canker in the branches was due to Sclerotinia. Need to make sure this isn't happening

Steve Marcroft: Do we want to release a factsheet to industry about canker in the branches?

Kate Light: What management advice will you give?

Steve Marcroft: Can't give management information but can give information about the symptoms, why we think they occur, and highlight differences between Sclerotinia infection and canker in the branches. Are we happy to do this? Agreed

Action: Steve Marcroft to put together factsheet about canker in the branches for industry

Session 2: Other disease and viruses (Chair: Don McCaffery)

Steve Marcroft: Have concerns regarding screening for virus resistant germplasm in NVT lines as the cultivars turn over so quickly that by the time it is identified the cultivars are no longer available.

Andrew Easton: re. Barbetti presentation: Concerned about screening of other diseases each year. Is there a stop/go process built in the project? Surely if a disease is identified as not important early in the project then no further work on disease management should be investigated.

Martin Barbetti: No there is no stop/go built in to the project. Disease management work will be done for each pathogen each year, if at the end of the project it is determined that the pathogen has no economic impact, management advice will not be released to growers.

Session 3: Sclerotinia (Chair: Trent Potter)

Ravjit Khungara: We now have all information we need on Sclerotinia epidemiology.

David Pike: Ravjit suggests that only 75% humidity is needed for disease however Kurt's data shows that in the Eastern states higher humidity is required.

Andrew Easton: If this Sclerotinia resistance does exist and two more years of funding are needed to get the germplasm from India to Australia then why isn't it being funded?

Session 4: Staying ahead of blackleg (Chair: Susie Sprague)

Richard Oliver: re Peter Thralls talk: In terms of modelling a lot is already known about R genes and evolution of populations of Avr genes in blackleg, why not model fungicide resistance?

Peter Thrall: We can consider that.

Steve Marcroft: We will inform industry that fungicide tolerant isolates have been identified. Will tell them it is preliminary data. Will not announce where they were identified as the survey we did was too small to know whether it is widespread or restricted to specific locations. Is everyone ok with this? Agreed

Richard Oliver: Fungicide tolerance is already also developed towards barley net blotch.

In the past shown that if 1% of the population has fungicide resistance/tolerance then it will quickly become a huge issue for industry. 1% is hard to detect. However, you have already been detected this for blackleg therefore this may become be a huge issue for industry

Richard Oliver: Powdery mildew develops resistance to fungicides quickly. This makes this pathogen a great sentinel pathogen to screen for pathogen resistance. Perhaps we should consider doing this?

David Pike: Powdery mildew develops late in the season so won't be exposed to fungicides therefore probably not a good option.

Susie Sprague: Based on Vicki Elliott's talk showing that major gene (seedling) resistance is expressed in several organs of the plant, then surely 'seedling' resistance terminology needs to be abolished. What terminology do we want to encourage industry to use?

- Suggestions included major and minor gene resistance, quantitative and qualitative resistance, combinations of the two. Barbara Howlett concerned that this group should not make an *ad hoc* decision; also that terminology should be consistent with that in other crops

Don McCaffrey: Don't know about everyone else, but I associate major gene resistance terminology with Surpass breakdown.

- Was concern from a few people about using quantitative and qualitative resistance. No real consensus but major and minor gene were fairly well received

Action: Steve Marcroft and national pathology team to release information to industry regarding fungicide tolerant isolates.

<u>Overall discussion (Chair: Phil Salisbury)</u>

Phil Salisbury: Do we have issues/other comments for discussion?

Phil Salisbury: Do we feel that breeding for virus resistance and other disease resistance is necessary?

Andrew Easton: With respect to viruses, we would not breed for a 1 in 10 year event

Phil Salisbury: What about screening germplasm at least?

Andrew Easton: Not going to be economically viable even to screen germplasm

David: For minor diseases, breeding is a larger cost then using pre-existing insecticides to control for vectors or fungicides for pathogens

Steve Marcroft: Same issue for White leaf spot and other diseases, why spend money on screening germplasm when breeders won't use the material.

Andrew Easton: We would not breed for resistance to viruses or other diseases. Would any of the other companies?

All companies said NO.

Andrew Easton: Why is money being spent on the four other diseases when the Sclerotinia work needs more funding?

Wallace Cowling: Breeders need to be able to access Sclerotinia screening methods

Meeting closed at 5 pm