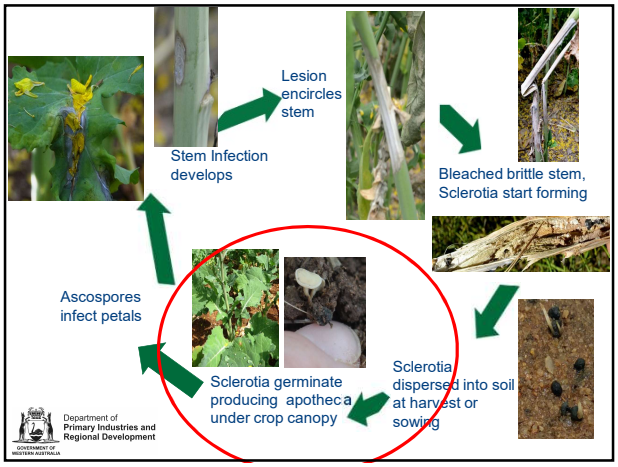
Sclerotinia Update 2017

Ciara Beard, DPIRD

GRDC

Department of Primary Industries and Regional Development



Department of Primary Industries and Regional Development

Sclerote germination

Ciara Beard, DPIRD

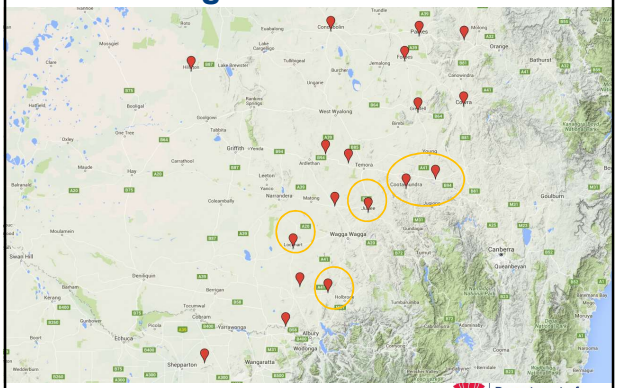
Department of Primary Industries and Regional Development

Kurt Lindbeck/Audrey Leo – NSW DPI, Wagga Wagga

- **New South Wales**
  - Very dry season
  - Below average winter rainfall and frosty conditions
  - Dry winter conditions delayed apothecia germination by 6 weeks (mid August compared to early July)
  - Reduced disease pressure with shorter crops, open canopies, below average rainfall
  - Petal testing still detected low to moderate levels of petal infestation
  - Negligible levels of stem infection across the region
  - Low levels (<10%) of stem infection in traditional disease risk regions

NSW Department of Primary Industries

Petal testing sites



NSW Department of Primary Industries

% Petal infestation – S/W Slopes 2017

No. of week	Date	Griffith	Coolamon	Junee 1	Junee 2	Cootamundra 1	Cootamundra 2	Harden
1	3/7 - 10/7							
2	10/7 - 17/7							
3	17/7 - 24/7							
4	24/7 - 31/7					46		
5	31/7 - 7/8					46		
6	7/8 - 14/8			24		38		
7	14/8 - 21/8	2		20		52		
8	21/8 - 28/8	2		30		64	88	62
9	28/8 - 4/9	0	76	30	20	30	64	64
10	4/9 - 11/9	2	8	4	16	32	74	10
11	11/9 -18/9	4	6	2	18	0	32	8
12	18/9 - 25/9		4	0	2	0	4	0
13	25/9 - 2/10		0			0	0	
14	2/10 - 9/10		0					
15	9/10 - 16/10							
16	16/10 - 23/10							
total rainfall during flowering (mm)		9.6	26.6	46	46	71.9	7.7	13.2
% stem infection		-	-	-	-	-	1%	-

Department of Primary Industries

% Petal infestation – Riverina 2017

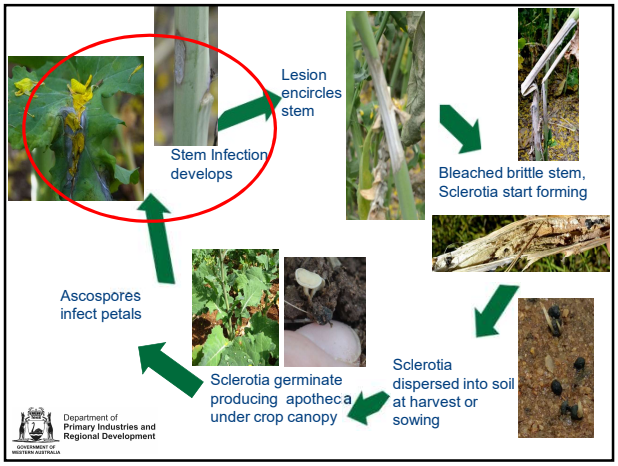
No. of week	Date	Mayrung	Barooga	Rennie	Howlong	Morven	Wagga Wagga	Lockhart 1	Lockhart 2
1	3/7 - 10/7								
2	10/7 - 17/7								
3	17/7 - 24/7							16	
4	24/7 - 31/7	6					30	18	
5	31/7 - 7/8	6					18	40	
6	7/8 - 14/8	6	10	94	12	20	4	6	
7	14/8 - 21/8	8	6	78	8	24	20	14	64
8	21/8 - 28/8	12	22	92	46	60	32	44	96
9	28/8 - 4/9	16	14	46	48	66	36	48	72
10	4/9 - 11/9		20	94	48	66	6	10	16
11	11/9 -18/9		8	30	50	96	10	2	14
12	18/9 - 25/9		2	4	44	90	10	0	34
13	25/9 - 2/10		2	0	0	40	8	0	
14	2/10 - 9/10		0		2	2	40		
15	9/10 - 16/10				0				
16	16/10 - 23/10								
Total rainfall during flowering (mm)		58.8	53.6	53.4	118.6	42	36.6	66	18.8
% stem infection		-	-	-	-	3%	<1%	-	-
Years since canola		3			2	2	2	3	3

Department of Primary Industries

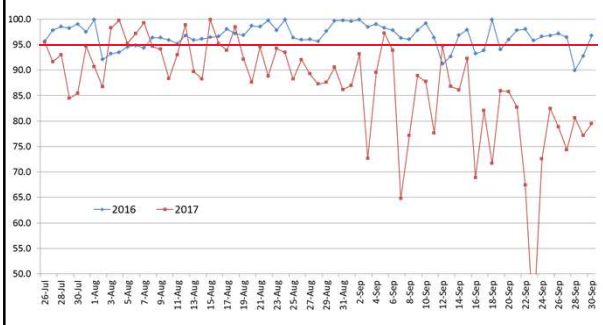
Crop rotation - 2017

Date	Alma Park 1	Alma Park 2	Alma Park 3
3/7 - 10/7		0	0
10/7 - 17/7		0	0
17/7 - 24/7		36	2
24/7 - 31/7		66	6
31/7 - 7/8	84	70	26
7/8 - 14/8	96	48	20
14/8 - 21/8	94	48	20
21/8 - 28/8	100	82	56
28/8 - 4/9	100	94	26
4/9 - 11/9	100	92	26
11/9 -18/9	100	98	56
18/9 - 25/9	4	72	24
25/9 - 2/10	0	4	0
2/10 - 9/10		2	0
9/10 - 16/10			0
% Stem infection	15	3	1
Years since canola	1	2	3

Department of Primary Industries



Comparison of RH at Alma Park



Department of Primary Industries

NSW Summary

- Dry conditions in 2017 kept sclerotinia stem rot levels low in central and southern NSW.
- Despite dry conditions infested petals were still detected in every crop sampled.
- Levels and duration of petal infestation was reduced compared to previous seasons.
- Crop observations in 2017 support the ≥95% RH for 48 – 72 hr trigger for stem rot epidemics.

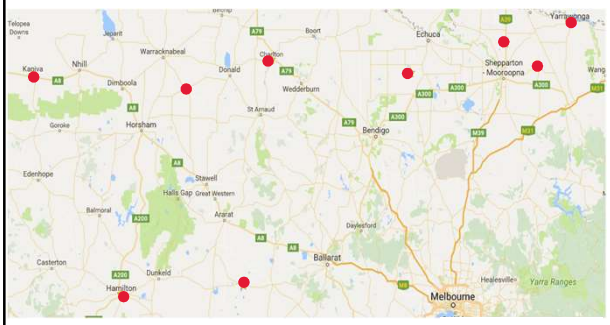
Kurt Lindbeck/Audrey Leo – NSW DPI, Wagga Wagga

Department of Primary Industries

Victoria

Steve Marcroft, Marcroft Grains Pathology, Victoria

Monitored 8 SABLOD sites across VIC- no infection present at any



marcroft GRAINS PATHOLOGY

% Petal infestation – Victoria 2017

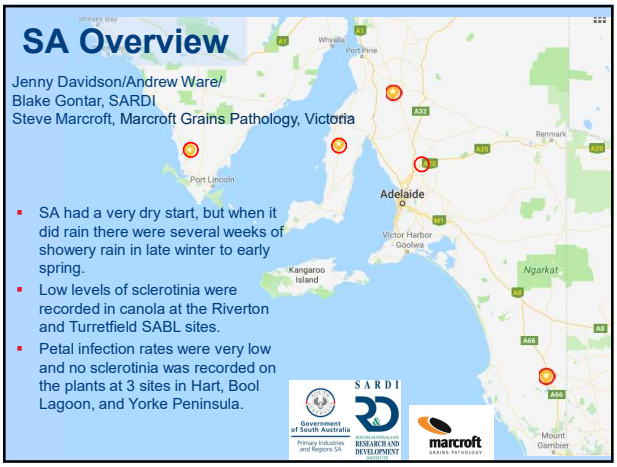
Kurt Lindbeck/Audrey Leo – NSW DPI, Wagga Wagga

No. of week	Date	Rutherglen	Dookie 1	Dookie 2	Ballarat
1	3/7 - 10/7				
2	10/7 - 17/7				
3	17/7 - 24/7				
4	24/7 - 31/7				
5	31/7 - 7/8				
6	7/8 - 14/8			72	4
7	14/8 - 21/8		22	8	20
8	21/8 - 28/8		70	80	8
9	28/8 - 4/9	74	34	78	4
10	4/9 - 11/9	78	100	98	18
11	11/9 -18/9	100	74	22	42
12	18/9 - 25/9	22	22	26	44
13	25/9 - 2/10	84	0	4	96
14	2/10 - 9/10	12	0	0	0
15	9/10 - 16/10	22	0	4	
16	16/10 - 23/10	14			
Total rainfall during flowering (mm)		52.6	70.9	88.9	155.2
% stem infection		21%	-	-	3%

NSW GOVERNMENT Department of Primary Industries

SA Overview

Jenny Davidson/Andrew Ware/
Blake Gontar, SARDI
Steve Marcroft, Marcroft Grains Pathology, Victoria



- SA had a very dry start, but when it did rain there were several weeks of showery rain in late winter to early spring.
- Low levels of sclerotinia were recorded in canola at the Riverton and Turretfield SABL sites.
- Petal infection rates were very low and no sclerotinia was recorded on the plants at 3 sites in Hart, Bool Lagoon, and Yorke Peninsula.

Government of South Australia Primary Industries and Regions SA | SARDI RESEARCH AND DEVELOPMENT | marcroft GRAINS PATHOLOGY

Lower Eyre Peninsula

Blake Gontar, SARDI

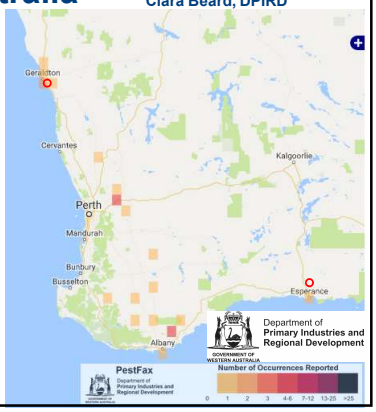
- Dry start, break was early July everywhere except a few 'bands' along the west coast which received thundery showers in late April through May. Good rainfall fell in July (90+mm), August (90+mm) and September (35+mm) → early sown canola crops infected. Sclerotinia incidence ranged from 0-16.8% but some did not significantly reduce yield.
- The majority of the district's canola flowered in late September, under drying conditions, and consequently sclerotinia infection was extremely low i.e. <1% incidence.
- No sclerotinia and no yield response in fungicide trial sown in late June at Mt Hope despite petal infection. Flowered too late, in too dry conditions.

Government of South Australia Primary Industries and Regions SA | SARDI RESEARCH AND DEVELOPMENT

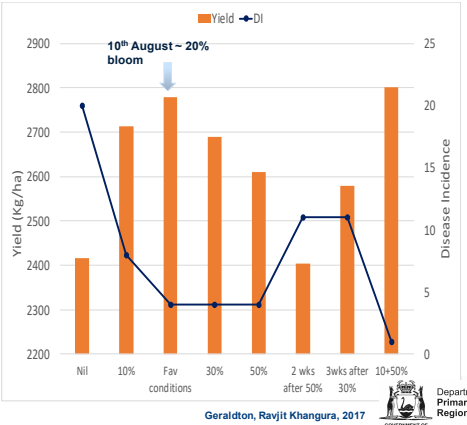
Western Australia

Ravjit Khangura, Andrea Hills, Ciara Beard, DPIRD

- Dry start to the season particularly in the northern and the central east regions but regular rain arrived mid-winter. Southern region average.
- Apothecia were late to appear (early August). Disease was late and levels were average to moderate in the north, and lower levels in southern regions of WA. Some crops still suffered some yield loss.
- Disease levels were lower than 2016.



Department of Primary Industries and Regional Development



Geraldton, Ravjit Khangura, 2017

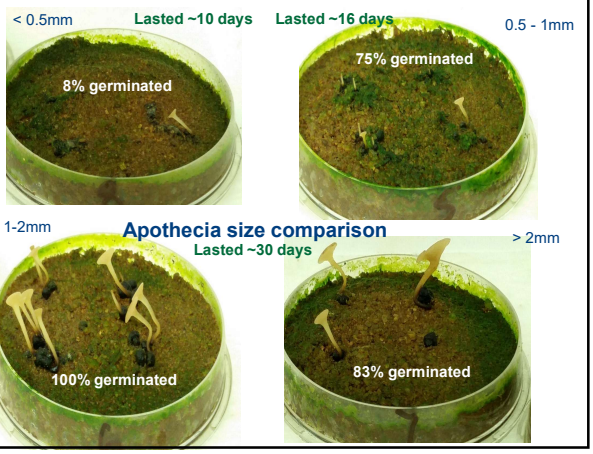
Department of Primary Industries and Regional Development

Summary of all states

- Late break and below average rainfall in a lot of areas in 2017.
- Inoculum was delayed due to late break.
- Sclerotinia stem rot levels negligible - low in most canola growing regions.
- Despite dry conditions infested petals were still detected in every crop sampled in NSW but crop infection was low.
- Some crops in WA and Lower Eyre Peninsula had yield responses to fungicide application.

Acknowledgements

- Kurt Lindbeck, Audrey Leo – NSW DPI
- Steve Marcroft – MGP
- Jenny Davidson, Andrew Ware and Blake Gontar – SARDI
- Ravjit Khangura and Andrea Hills – DPIRD
- GRDC



Site	R group	Percentage of plants infected with Sclerotinia (out of 50) Main stem infection	Branch infection	Basal infection
Riverton, SA	Group A	**1.3**	0.0	0
	Group AB	**1.3**	0.0	0
	Group ABD	0.0	0.0	0
	Group ABDF	**6.0**	2.0	0
	Group AD	**2.0**	0.7	0
	Group AS	**3.3**	0.0	0
	Group B	0.0	0.0	0
	Group BF	**1.3**	0.0	0
	Group C	**2.7**	0.0	0
	Average for site	**2.0**	**0.3**	**0.0**
Turretfield, SA	Group A	0.0	**0.7**	0
	Group AB	0.0	0.0	0
	Group ABD	**0.7**	**0.7**	0
	Group ABDF	0.0	0.0	0
	Group AD	**0.7**	0.0	0
	Group AS	**0.7**	0.0	0
	Group B	**0.7**	**0.7**	0
	Group BF	**2.0**	**0.7**	0
	Group C	**4.7**	0.0	0
	Average for site	**1.0**	**0.3**	**0.0**

Protocol
Counted 50 plants
plants with main stem, branch or basal infection recorded
% of plants in each category presented

Steve Marcroft, Marcroft Grains Pathology, Victoria

Persistence of Apothecia – around 3 weeks

Most apothecia last at least 2 weeks under optimal conditions and at most 5 weeks

Dying after 3 weeks

All gone after 4.5 weeks

Ciara Beard, DPIRD