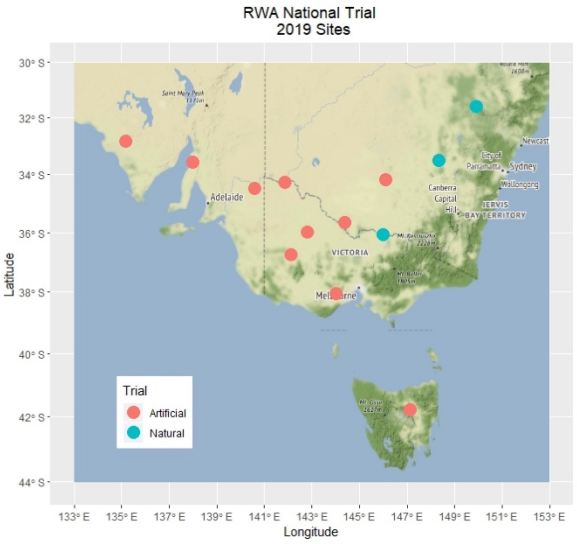
Russian wheat aphid 2019 national trial site summary #1

A GRDC investment, '*Russian wheat aphid risk assessment and regional thresholds*' is investigating regional risk and management tactics for Russian wheat aphid (RWA). The project is being led by the South Australian Research & Development Institute (SARDI).

These fortnightly summaries display RWA numbers per trial site, as well as observations of symptoms caused by RWA feeding. Results from these trials will be used to develop regional economic thresholds for management of RWA.

More information about these trial sites can be viewed on the online RWA portal: cesaraustralia.com/rwa-portal



Trial site structure

Natural infestation: At each trial site (13 in total) 16 plots of wheat and barley have been grown with and without imidacloprid seed treatment. No other insecticides will be applied to these plots. RWA will be allowed to develop until harvest and any impact on quality and yield will be assessed. This will support determination of the regional risk of RWA infestation.

Artificial inoculation: At 10 trial sites (refer to map) 36 plots of wheat, durum wheat and barley have been inoculated with aphids. These plots are located in an area where RWA has been established since at least 2017. One third of these plots were seed treated with imidacloprid, one third are untreated and one third will be treated with Chlorpyrifos at GS35-40. Impact on quality and yield will be assessed. This will support determination of threshold levels for yield loss.

Further information on trial site design can be found in this FAQ sheet.

Natural infestation

Site	State	Last Observation Date	Growth Stage	Non Winged RWA		Winged RWA		Percentage Symptomatic Tillers	RWA/100 Tillers	Percent Tillers with RWA
				Present?	# per symptomatic tiller	Present?	# per symptomatic tiller			
Bundella	NSW	23/07/2019	30	No	0.00	No	0.00	0	0	0
Eugowra	NSW									
Griffith	NSW	30/07/2019	31	No	0.00	Yes	1.00	0	0.25	0.25
Thule	NSW	22/07/2019	23	No	0.00	No	0.00	0	0	0
Loxton	SA	30/07/2019	31	No	0.00	No	0.00	0	0	0
Minnipa	SA	18/07/2019	25	No	0.00	No	0.00	0	0	0
Pt Broughton	SA	24/07/2019	32	Yes	2.00	No	0.00	0.25	0.5	0.25
Cressy	TAS	29/07/2019	27	No	0.00	No	0.00	0	0	0
Birchip	VIC	6/08/2019	32	No	0.00	No	0.00	0	0	0
Horsham	VIC	16/07/2019	14	No	0.00	No	0.00	1	0	0
Inverleigh	VIC	30/07/2019	30	No	0.00	No	0.00	0	0	0
Mildura	VIC									
Yarrawonga	VIC	1/08/2019	31	No	0.00	No	0.00	0	0	0

Artificial inoculation

Site	State	Last Observation Date	Growth Stage	Non Winged RWA		Winged RWA		Percentage Symptomatic Tillers	RWA/100 Tillers	Percent Tillers with RWA
				Present?	# per symptomatic tiller	Present?	# per symptomatic tiller			
Griffith	NSW	30/07/2019	31	Yes	2.90	Yes	0.04	50	147.33	26
Thule	NSW	22/07/2019	23	Yes	0.34	No	0.00	8	2.67	2
Loxton	SA	30/07/2019	31	Yes	1.29	No	0.00	8	9.88	4
Minnipa	SA	18/07/2019	25	Yes	0.41	No	0.00	11	4.33	2
Pt Broughton	SA	24/07/2019	32	Yes	0.37	No	0.00	14	5.3	2
Cressy	TAS	29/07/2019	27	No	0.00	No	0.00	7	0	0
Birchip	VIC	16/07/2019	14	Yes	1.91	Yes	0.02	13	24.22	9
Horsham	VIC	6/08/2019	32	Yes	0.13	No	0.00	18	2.44	2
Inverleigh	VIC	30/07/2019	30	Yes	0.54	Yes	0.01	28	15.11	6
Mildura	VIC									

Take home points

Apart from some RWA infestation in Griffith (NSW) and Port Broughton (SA) there is a very low level of RWA in the natural infestation plots so far. This is probably due to the very dry summer that has reduced the green bridge.

The inoculated plots show 7 – 50% of tillers with symptoms but aphid populations are still under the provisional intervention thresholds (20% of plants with aphids till GS35, 10% of tillers with aphids thereafter), except for Griffith where populations are growing more quickly.

If you see RWA symptoms and aphids please make a report. Send a photo with a date, place (GPS location) and host plant (if known) to the contacts below. These observations will be added to the distribution map on the RWA portal.

Contacts: Maarten VanHelden: 0481 544 429, maarten.vanhelden@sa.gov.au
Rebecca Hamdorf (PestFacts SA): rebecca.hamdorf@sa.gov.au
Julia Severi (Pestfacts South Eastern): jseveri@cesaraustralia.com

This research initiative is a GRDC investment that seeks to deliver information on Russian Wheat Aphid management for grain growers. This project is being undertaken by the South Australian Research & Development Institute (SARDI) and **cesar.**