

06<sup>th</sup> October 2017



### Up-to-date results from the Rothamsted/SASA suction-trap (ST) network.

This week, the bird cherry–oat aphid (*Rhopalosiphum padi*) tables include numbers accumulated from a start date (18/09) to represent the early emergence of cereal seedlings and give an indication of the build-up of virus vector pressure.

During this bulletin week (25 September to 1 October), the total number of aphids caught is more than three times higher than last week. The sustained higher than average air temperatures over Britain this week may have contributed to this increase, despite the cooler temperatures at night. We are now seeing numbers of bird cherry–oat aphids from ST sites further south reach over 1,000 individuals. Although much higher than at this point last year, bird cherry–oat aphid numbers are of a similar order of magnitude to the 10-year mean at many sites, so caution is advised when interpreting this data. Aphids that have located unprotected crops will continue to do well at temperatures above 3°C.

## WINTER CEREALS

The main aphid vectors of **BYDV** are females of the **bird cherry–oat aphid**, *Rhopalosiphum padi* and the **English grain aphid**, *Sitobion avenae*.

‘\*’ indicates where totals have been corrected proportionally to seven days, fewer days’ samples having been processed.

<i>Sitobion avenae</i>				25/09-01/10	<i>Rhopalosiphum padi</i> - females only				
Compared to last week	2017	2016	10-year average 2007-16		Compared to last week	2017	10-year average 2007-16	2017 Acc from 18/09	2007-2016 Acc from 18/09
↓	1	0	0	Dundee	↑	453	374	824	895
↓	1	0	3	Gogarbank (Edinburgh)	↓	1467	843	3342	1569
	*0	0	1	Newcastle	↑	*750	713	993	1275
	0	0	/	York	↑	2066	/	2508	/
	0	0	1	Preston	↑	1444	2747	1830	4514
	0	0	1	Kirton	↑	1335	612	1472	897
↓	0	0	0	Broom’s Barn (Bury St Edmunds)	↑	782	542	944	734
	0	0	1	Wellesbourne	↑	1194	465	1525	692
	0	0	1	Hereford	↑	349	850	501	1262
↑	1	0	1	Rothamsted (Harpenden)	↑	279	324	335	445
↓	0	1	1	Writtle	↑	1371	450	1584	658
	0	0	0	Silwood Park (nr Ascot)	↑	222	236	292	354
	0	1	1	Wye	↑	534	489	662	714
↑	2	0	2	Starcross (nr Exeter)	↑	318	445	409	665

- The numbers of bird cherry–oat aphid (*Rhopalosiphum padi*) increased at all ST sites this week, apart from Gogarbank.

- Grain aphids (*Sitobion avenae*) were caught at four **ST** sites this week, single individuals were caught at all sites except Starcross (which caught two).
- During the period **29/09 – 05/10**, 52 *R. padi* were tested at Rothamsted, 6 of which were of the cereal colonising form.
- **Monitoring is recommended whilst the aphid migration continues.**

Only a small proportion of aphids entering cereals are likely to be carrying BYDV. Problems with spread arise when the second generation offspring of the original winged colonisers are produced. This is usually the generation that begins moving significantly away from the plant originally colonised. Very approximately this begins when **170 day degrees above** a threshold of 3°C (DD>3) have accumulated. DD>3 calculations should begin on the day of emergence for untreated crops, one week after application of pyrethroids or if aphids are found when neonicotinoid-treated seed protection runs out (i.e. approx. six weeks after emergence or eight weeks after sowing).

The day degrees for a given site can be loosely calculated using the [www.degreedays.net](http://www.degreedays.net) website; entering the nearest weather station to the location of interest, giving a base temperature of 3°C and selecting daily data.

### **WINTER OILSEED RAPE and VEGETABLE BRASSICAS**

The main aphid vector of **TuYV** is the **peach–potato aphid** (*Myzus persicae*) but it seldom reaches numbers high enough to cause direct feeding damage. Conversely the **mealy cabbage aphid** (*Brevicoryne brassicae*) is a poor vector of TuYV but can cause direct feeding damage to isolated plants. This species is more of a problem in spring than in autumn.

<i>Brevicoryne brassicae</i>				25/09-01/10	<i>Myzus persicae</i>			
Compared to last week	2017	2016	10-year average 2007-16		Compared to last week	2017	2016	10-year average 2007-16
	0	0	0	Dundee	↓	2	14	3
	0	1	0	Gogarbank (Edinburgh)		0	0	0
	*0	0	0	Newcastle		*0	0	0
	0	0	/	York	↑	2	0	/
	0	0	1	Preston	↑	16	0	1
↑	6	0	6	Kirton	↑	24	3	16
	0	0	0	Broom's Barn (Bury St Edmunds)	↑	10	3	5
	0	0	1	Wellesbourne	↓	11	4	5
↑	1	0	1	Hereford	↑	42	1	3
	0	0	0	Rothamsted (Harpenden)	↑	10	3	2
↓	0	0	1	Writtle	↓	5	0	2
	0	0	0	Silwood Park (nr Ascot)	↑	1	0	1
↑	4	0	0	Wye	↑	10	4	4
	0	1	2	Starcross (nr Exeter)	↑	23	5	3

- Peach–potato aphids (*Myzus persicae*) were caught at twelve **ST** sites. The highest number caught was from the **ST** at Hereford (42).
- Mealy cabbage aphids (*Brevicoryne brassicae*) were caught and increasing in number at Kirton (6), Hereford (1) and Wye (4) **ST** sites.
- **Monitoring crops for aphids maybe useful.**

### **OTHERS**

The willow-carrot aphid (*Cavariella aegopodii*) was caught in four **ST** this week. Numbers have increased most noticeably at Dundee and to a lesser extent at York and Kirton **ST** sites. A further four male individuals were caught from Dundee this week suggesting that the autumn migration back to willows to overwinter is underway.

**As always, we appreciate any intelligence from the field and any comments on the information we provide.**

## Further information

Please send information on crop aphids to: [alex.greenslade@rothamsted.ac.uk](mailto:alex.greenslade@rothamsted.ac.uk)

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AHDB Potatoes: [Click here](#)

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