

20<sup>th</sup> October 2017



This news sheet summarises up-to-date results from the Rothamsted/SASA suction-trap (ST) network. Included on the Bird cherry–oat aphid (*Rhopalosiphum padi*) table this week are numbers accumulated from a start date (18/09) representing the **early emergence** of cereal seedlings and giving an indication of the build-up of virus vector pressure.

During bulletin week 9<sup>th</sup> October – 15<sup>th</sup> October only the ST at York caught more than 1,000 Bird cherry–oat aphids, all other sites caught lower numbers in line or slightly above their 10 year mean apart from Preston which was well below the 10 year mean. Testing at Rothamsted this week has shown that the number of aphids that are of the cereal colonising form has increased to 22% from 4% last week. 100 Bird cherry–oat aphid individuals have been tested from across this year for BYDV and 10% were carrying the virus. Caution is advised when interpreting these 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>				09/10-15/10	<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
	*0	0	0	Dundee	↑	*133	135	999	1271
	0	1	2	Gogarbank (Edinburgh)	↑	262	286	3776	2495
	*0	0	0	Newcastle	↑	*438	259	1446	2104
	*0	0	/	York	↓	*1176	/	5613	/
	*0	0	0	Preston	↑	*616	1630	3002	8294
	*0	0	1	Kirton	↑	*802	582	2936	1907
	*0	0	0	Broom’s Barn (Bury St Edmunds)	↓	*315	303	2599	1447
↑	*7	0	0	Wellesbourne	↓	*511	359	2813	1317
↓	*0	0	2	Hereford	↓	*421	496	1441	2249
	*0	0	1	Rothamsted (Harpenden)	↓	*0	183	461	919
↑	*6	0	0	Writtle	↓	*554	379	3619	1623
	*0	0	0	Silwood Park (nr Ascot)	↓	*165	174	726	772
↑	*4	0	2	Wye	↓	*448	311	1915	1442
↑	*1	1	1	Starcross (nr Exeter)	↓	*272	230	964	1324

- The numbers of bird cherry–oat aphid (*Rhopalosiphum padi*) increased at five sites in the north but decreased in the southern ST sites this week. The highest number caught was from the ST at York (1176).

- Grain aphids (*Sitobion avenae*) were caught from four **ST** sites this week. The highest number caught was from Wellesbourne (7).
- During the period **13/10 – 19/10**: 133 *R. padi* were tested at Rothamsted, 29 (22%) 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, 1 week after application of pyrethroids, or if aphids are found when neonicotinoid-treated seed protection runs out (i.e. approx. 6 weeks after emergence or 8 weeks after sowing).

The day degrees for a given site can be loosely calculated using the <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>				09/10-15/10	<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	4	Dundee		*0	0	1
	0	0	0	Gogarbank (Edinburgh)		0	0	0
	*0	0	0	Newcastle		*0	0	0
	*0	0	/	York		*0	0	/
	*0	0	0	Preston	↑	*28	0	3
	*0	0	6	Kirton	↑	*29	1	23
	*0	0	0	Broom’s Barn (Bury St Edmunds)	↑	*3	4	6
	*0	0	1	Wellesbourne	↑	*17	1	4
	*0	0	6	Hereford		*18	1	4
	*0	0	0	Rothamsted (Harpenden)		*0	0	1
	*0	0	0	Writtle	↑	*6	1	3
	*0	1	0	Silwood Park (nr Ascot)	↓	*0	0	1
↓	*0	0	0	Wye	↓	*19	0	3
	*0	0	0	Starcross (nr Exeter)	↓	*13	2	4

- Peach–potato aphids (*Myzus persicae*) were caught at eight **ST** sites and increasing in number at five. The highest numbers caught were from the **ST** sites at Kirton (29) and Preston (28).
- No Mealy cabbage aphids (*Brevicoryne brassicae*) were caught this week at the **ST** sites.
- **Monitoring crops for aphids maybe useful.**

### **OTHERS**

The willow-carrot aphid (*Cavariella aegopodii*) was caught in six **ST** this week. Eight male individuals were caught from York this week suggesting that autumn migration back to willows is continuing.

**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)

AHDB Cereals and Oilseeds: [Click here](#)

AHDB Potatoes: [Click here](#)

AHDB Horticulture: [Click here](#)

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