AHDB Aphid News

13th 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 hence giving an indication of the build-up of virus vector pressure.

During bulletin week 2nd October – 8th October the total number of bulletin aphids caught has decreased by nearly a third compared to last week. The numbers of Bird cherry–oat aphids at some **ST** sites remain at over 1,000 individuals and are higher than the sites 10 year mean; testing at Rothamsted this week has shown that only 4% of these aphids are of the of the cereal colonising form. 100 Bird cherry–oat aphid individuals have been tested from across this year for BYDV and only 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.

Sitobion avenae					***Rhopalosiphum padi* - females only**					
Compared to last week	**2017**	**2016**	**10-year average 2007-16**	**02/10-08/10**	**Compared to last week**	**2017**	**10-year average 2007-16**		**2017 Acc from 18/09**	**2007-2016 Acc from 18/09**
↓	*0	1	1	Dundee	↓	*42	241		866	1136
↓	0	1	2	Gogarbank (Edinburgh)	↓	172	640		3514	2209
	*0	0	0	Newcastle	↓	*16	570		1009	1845
	0	0	/	York	↓	1929	/		4437	/
	0	0	0	Preston	↓	556	2150		2386	6664
	0	0	0	Kirton	↓	662	429		2134	1326
	0	0	1	Broom's Barn (Bury St Edmunds)	↑	1340	411		2284	1144
	0	0	1	Wellesbourne	↓	777	266		2302	958
↑	8	0	1	Hereford	↑	519	490		1020	1753
↓	*0	0	1	Rothamsted (Harpenden)	↓	*126	291		461	736
	0	1	1	Writtle	↑	1481	586		3065	1244
	0	2	1	Silwood Park (nr Ascot)	↑	269	244		561	598
	0	2	2	Wye	↑	805	418		1467	1132
↓	0	0	3	Starcross (nr Exeter)	↓	283	430		692	1094

- The numbers of bird cherry–oat aphid (*Rhopalosiphum padi*) decreased in the northern **ST** sites this week. The highest numbers caught were from the **ST** at York (1929). Wellesbourne (1481) and Rothamsted (1481) had numbers that are still considerably above the 10 year mean for this time of year.
- Grain aphids (*Sitobion avenae*) were only caught from the **ST** at Hereford (8) this week.
- During the period **06/10 – 12/10:** 146 *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 3ºC (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 3ºC 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.

Brevicoryne brassicae				**02/10-08/10**	***Myzus persicae***			
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	↓	*0	0	1
	0	1	0	Gogarbank (Edinburgh)		0	3	1
	*0	0	0	Newcastle		*0	0	0
	0	0	/	York	↓	0	0	/
	0	0	0	Preston	↓	0	0	2
↓	0	0	3	Kirton	↓	16	9	11
	0	1	1	Broom's Barn (Bury St Edmunds)	↓	0	1	4
	0	0	0	Wellesbourne	↓	7	4	4
↓	0	0	2	Hereford	↓	18	3	6
	*0	0	0	Rothamsted (Harpenden)	↓	*0	2	2
	0	1	1	Writtle	↓	0	11	5
	0	0	0	Silwood Park (nr Ascot)	↑	2	0	1
↓	1	0	0	Wye	↑	47	2	3
	0	0	0	Starcross (nr Exeter)	↑	30	0	4

- Peach–potato aphids (*Myzus persicae*) were caught at six **ST** sites and increasing in number at the southernmost sites. The highest number caught was from the **ST** at Wye (47).
- A single Mealy cabbage aphid (*Brevicoryne brassicae*) was caught at Wye this week at the **ST** sites.
- **Monitoring crops for aphids maybe useful.**

OTHERS

The willow-carrot aphid (*Cavariella aegopodii*) was caught in seven **ST** this week. Being found additionally at Broom's Barn, Wellesbourne and Starcross this week. As well as this; four male individuals were caught from Broom's Barn 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
AHDB Cereals and Oilseeds: Click here
AHDB Potatoes: Click here
AHDB Horticulture: Click here
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