



## APHID ALERT SUMMARY

This alert summarises up-to-date results from the Rothamsted/SASA suction-trap (ST) network and the FERA yellow water-pan trap (YWT) network. Further details of the ST results can be found below and further details of the YWT results can be found at [www.potato.org.uk/online-toolbox/aphid-monitoring](http://www.potato.org.uk/online-toolbox/aphid-monitoring).

### GENERAL

Last week's weather was mainly dry and averaged 1°C above normal. Aphid flight activity fell through most of England, but the overall conditions suggest that any aphids that have found untreated crops will be thriving.

### WINTER CEREALS

Numbers of bird cherry–oat aphid (*Rhopalosiphum padi*) fell at 9/14 suction-trap sites this week. Numbers were highest in the north, particularly Scotland, but below the 10-yr means for this time of year throughout England. The grain aphid (*Sitobion avenae*) was caught at three sites in low numbers. This species always flies in much lower numbers than bird cherry–oat aphid in the autumn. The earliest sown crops have emerged and reached early leaf development (GS11-13), whilst many more are yet to emerge. We have received reports of aphid colonies on cereal volunteers and in some green stubbles left to encourage blackgrass to chit, both situations can help aphids survive until new autumn crops emerge.

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. For example, if the average temperature on a particular day was 13°C, 10DD>3 would have accumulated that day, meaning that it would take 17 days at that temperature to reach the 170DD>3. Once this generation becomes adult (after about 340DD>3) very significant spread can occur. 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).

### WINTER OILSEED RAPE and VEGETABLE BRASSICAS

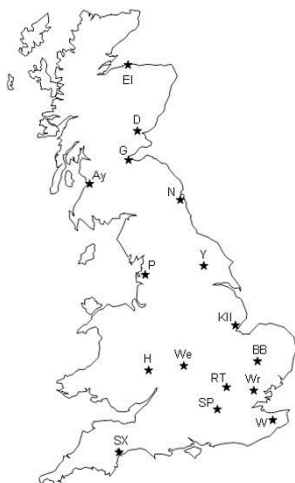
Peach–potato aphids (*Myzus persicae*) were caught at eight suction-trap sites this week, with hotspots at Dundee and Broom's Barn. Numbers of the mealy cabbage aphid (*Brevicoryne brassicae*) were low but normal for the time of year. Winter oilseed rape drilling is largely complete and earliest drilled crops range from GS1,2 – 1,8, whilst later drillings are yet to emerge. We have received no further field reports of aphids on emerging Oilseed rape.

### OTHERS

Aphids are no longer an issue in most other crops. There was a willow-carrot aphid hotspot at the Dundee suction-trap this week, but most carrots have probably passed the period of likely virus transmission and these individuals will likely be returning to willow at this time of year.

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

# SUCTION-TRAPPING RESULTS



## Winter Cereal Aphids

The **bird cherry–oat aphid**, *Rhopalosiphum padi*, flies in autumn as two morphologically identical female forms, one of which colonises bird cherry and is of no consequence to BYDV spread, and one of which colonises winter cereals. A simple test requiring live aphids can distinguish these forms and is routinely done at Rothamsted, but not elsewhere in the suction-trap network. During the **period 26-29 Sept.** seven *R. padi* were tested, five were of the cereal colonising form (30 year mean for the same period = 3). (The number of bird cherry colonising forms is unusually low for the time of year.)

The table below shows total numbers of female bird cherry–oat aphid caught during the week **19/9-25/9** and compares them to last year and a ten year mean for that week.

- Numbers of bird cherry–oat aphid fell at 9/14 sites this week. Numbers were highest in the north, particularly Scotland, but below the 10-yr means for this time of year throughout England.
- The grain aphid was caught at three sites in low numbers. This species always flies in much lower numbers than bird cherry–oat aphid in the autumn.

'\*' indicates where totals have been corrected proportionally to seven days, fewer days' samples having been processed. '/' indicates that identification have not been completed.

<i>Sitobion avenae</i>				19/09-25/09	<i>Rhopalosiphum padi</i> - females only			
Compared to last week	2016	2015	2006-2015		Compared to last week	2016	2015	2006-2015
↓	1	/	1	Dundee	↑	868	0	530
↓	0	3	2	Gogarbank (Edinburgh)	↑	1429	295	678
↓	*0	0	0	Newcastle	↓	*267	718	687
	*0	0	/	York	↑	*348	687	/
	*0	0	0	Preston	↑	*812	3065	2014
↓	*1	1	0	Kirton	↓	*40	157	404
↓	*0	0	1	Broom's Barn (Bury St Edmunds)	↓	*74	52	293
	*0	0	1	Wellesbourne	↓	*71	112	390
↑	*4	1	1	Hereford	↓	*99	276	421
	*0	0	2	Rothamsted (Harpenden)	↓	*37	29	183
↓	*0	0	2	Writtle	↓	*71	274	339
↓	*0	0	1	Silwood Park (nr Ascot)	↓	*49	67	147
	*0	0	1	Wye	↑	*252	141	295
↓	*0	0	3	Starcross (nr Exeter)	↓	*141	132	212

## Winter Oilseed Rape and Vegetable Brassica Aphids

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.

- The peach–potato aphid was caught at eight suction-trap sites, with hotspots at Dundee and Broom’s Barn.
- The mealy cabbage aphid was caught at four sites in low numbers.

<i>Brevicoryne brassicae</i>				19/09-25/09	<i>Myzus persicae</i>			
Compared to last week	2016	2015	2006-2015		Compared to last week	2016	2015	2006-2015
	1	/	2	Dundee	↑	18	/	2
	0	0	0	Gogarbank (Edinburgh)		0	0	0
	*0	0	0	Newcastle		*0	0	0
	*0	0	/	York		*0	0	/
↓	*0	0	0	Preston		*0	0	1
↓	*0	5	3	Kirton	↓	*7	8	11
	*0	0	0	Broom’s Barn (Bury St Edmunds)	↑	*25	0	3
↓	*0	0	1	Wellesbourne	↓	*4	0	10
↓	*0	0	2	Hereford	↓	*0	0	2
	*0	0	0	Rothamsted (Harpenden)	↓	*4	1	1
↑	*1	0	1	Writtle	↓	*4	0	4
	*0	0	0	Silwood Park (nr Ascot)		*0	0	1
↑	*2	0	0	Wye	↑	*9	0	3
↓	*2	0	2	Starcross (nr Exeter)	↓	*1	0	1

## Further information

Please send information on crop aphids to: [mark-s.taylor@rothamsted.ac.uk](mailto:mark-s.taylor@rothamsted.ac.uk)

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