



## 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

Aphid flight activity and the threat of **primary infections** by aphid-borne viruses (BYDV and TuYV) have all but stopped. Today's bulletin reports the last daily suction-trap records for the year. The suction-traps will now be emptied weekly through the rest of the winter.

### WINTER CEREALS

The bird cherry–oat aphid (*Rhopalosiphum padi*) migration has ended with just a little residual flight activity in the west at Preston and Starcross. A single grain aphid (*Sitobion avenae*) was caught at Starcross. Typical crops range from one true leaf (GS11) all the way up to early tillering (GS23). Field reports suggest aphid numbers on unprotected cereal crops are generally low. Seed treatments on early drilled cereal crops could now be running out of persistence and a follow up may be required. Potentially, later drilled crops with seed treatments could still be at risk from cereal volunteers carrying aphids acting as a green bridge.

Use the t-sum of 170 day degrees above a threshold of 3°C to signal the start of secondary spread of aphids and BYDV within a crop. 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

Single peach–potato aphids (*Myzus persicae*) were caught at four suction-trap sites. No mealy cabbage aphids (*Brevicoryne brassicae*) were caught this bulletin week. Typical crops range from backward crops at GS1,4 to the most forward at GS1,15. Field reports of peach–potato aphids in oilseed rape crops are common across central, eastern and southern England, especially where the crops have not had a Biscaya or Plenum treatment.

### Secondary spread - Aphid movement within winter cereals (BYDV) and oilseed rape (TuYV)

Although colder conditions will greatly reduce aphid development and movement within untreated crops, activity on the ground could continue with development and reproduction possible above 3-4°C and walking between plants above 1°C. It's hard to be precise about the level of frost needed to deliver a knock-out blow, but three to five consecutive days with grass minima dropping below -6°C should cause high mortality. A resurgence of secondary spread is possible if milder weather returns and we get a repeat of the exceptionally warm December 2015.

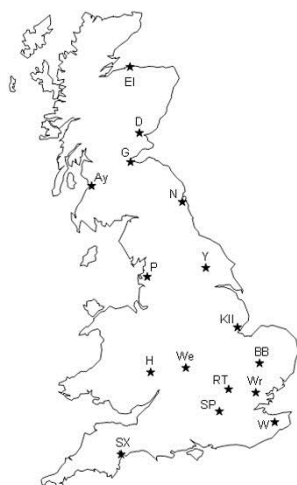
**Monitoring crops for aphid activity is recommended.**

### Future newsletters

**This will be the last aphid alert for 2016 but we will update you immediately if anything relevant occurs later in the winter. Aphid forecasts for 2017 will be issued in early March 2017 and daily trapping will recommence around Easter 2017.**

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

# SUCTION-TRAPPING RESULTS



## Winter Cereal Aphids

Numbers of **female bird cherry–oat aphid**, *Rhopalosiphum padi*, flying this bulletin week have tailed off significantly. The table below shows the combined total of both forms of **female** bird cherry–oat aphids caught during the week **07/11 - 13/11** and compares them to last year and a ten year mean. The table also includes numbers accumulated from a start date (**26/09**) representing **early emergence** and thus gives an indication of the build-up of virus vector pressure. English grain aphids (*Sitobion avenae*) always fly in much lower numbers than bird cherry–oat aphids in the autumn.

- The bird cherry–oat aphid migration has ended with just a little residual flight activity in the west at Preston and Starcross.
- Numbers accumulated from an early emergence date are all well below the 10 yr accumulated means suggesting little build-up of virus vector pressure.
- A single grain aphid was caught at Starcross.

'\*' 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>				07/11-13/11	<i>Rhopalosiphum padi</i> - females only				
Compared to last week	2016	2015	2006-2015		Compared to last week	2016	2006-2015	2016 Acc from 26/09	2006-2015 Acc from 26/09
	/	/	0	Dundee		/	2		767
	0	0	0	Gogarbank (Edinburgh)	↓	0	2	1637	1862
	/	0	0	Newcastle		/	3	511	1799
	0	0	/	York	↓	0	/	332	/
	0	0	0	Preston	↓	14	39	3064	8092
	0	0	0	Kirton	↓	0	15	225	2044
	0	0	0	Broom's Barn (nr Bury St Edmunds)	↓	1	7	214	1727
	0	0	1	Wellesbourne	↓	1	7	158	1439
	0	0	0	Hereford	↓	2	14	173	2264
↓	0	0	0	Rothamsted (Harpenden)	↓	1	12	96	1307
	0	0	0	Writtle	↓	2	13	138	1992
	0	0	0	Silwood Park (nr Ascot)	↓	0	8	74	922
	0	0	0	Wye	↓	2	12	298	1727
	1	1	0	Starcross (nr Exeter)	↓	19	10	533	1398

## 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.

- Single peach-potato aphids (*Myzus persicae*) were caught at four suction-trap sites.
- No mealy cabbage aphids (*Brevicoryne brassicae*) were caught this bulletin week.

<i>Brevicoryne brassicae</i>				07/11-13/11	<i>Myzus persicae</i>			
Compared to last week	2016	2015	2006-2015		Compared to last week	2016	2015	2006-2015
	/	/	0	Dundee		/	/	0
	0	0	0	Gogarbank (Edinburgh)		0	0	0
	/	0	0	Newcastle		/	0	0
	0	0	/	York		0	0	/
	0	0	0	Preston	↓	0	0	0
	0	0	1	Kirton	↓	0	0	4
	0	0	0	Broom's Barn (nr Bury St Edmunds)		1	1	2
	0	0	0	Wellesbourne		0	0	0
	0	0	0	Hereford	↑	1	1	0
	0	0	0	Rothamsted (Harpenden)	↑	1	0	1
	0	0	0	Writtle		0	0	1
	0	0	0	Silwood Park (nr Ascot)		0	0	0
	0	0	0	Wye		0	0	0
↓	0	0	0	Starcross (nr Exeter)	↓	1	1	0

## 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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