

APHID ALERT SUMMARY

GENERAL

The weather for this bulletin week (28th September to 4th October) was dominated by high pressure and conditions were generally conducive to aphid flight. However, aphid numbers in the suction-traps continue to be comparatively low for the time of year. The day time temperatures are such that any aphids that have found untreated crops will be happily reproducing.

WINTER CEREALS

Numbers of bird cherry–oat aphid (*Rhopalosiphum padi*) in suction-traps are increasing, but at present are at or below normal for the time of year everywhere except north-west England. Many of these will be going to bird cherry and will play no part in BYDV spread, but some will be searching for newly emerging cereals. At Rothamsted we operate an additional trap from which we determine the proportion of each life-cycle type. Of 13 aphids tested in the week 28/9 - 4/10, one was of the cereal colonising form, a lower proportion than usual for this time of year. The proportion is likely to be higher towards the south and west and lower towards the north and east.

Numbers of grain aphid (*Sitobion avenae*) are low.

Drilling of winter wheat and winter barley is well advanced, with winter barley just starting to emerge and first wheat's not far behind. We have received no field reports of cereal aphids on winter crops.

Only a small proportion of aphids entering cereals are likely to be carrying BYDV. Problems with spread arise when the offspring of the offspring of the winged colonisers are produced as, if the weather remains clement, 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 6 weeks after emergence for crops from neonicotinoid-treated seed.

WINTER OILSEED RAPE and VEGETABLE BRASSICAS

This week has seen a small but widespread flight of peach–potato aphids (*Myzus persicae*) across six of our thirteen suction-traps. The mealy cabbage aphid (*Brevicoryne brassicae*) has been found in the suction-trap at Kirton, south Lincolnshire. Winter oilseed rape drilling is complete and field reports of small numbers of aphids arriving on newly emerged oilseed rape crops have been received from the south west England. The recent approval of Flonicamid (Teppeki) for aphid control in winter oilseed rape means there is now the option of a second spray to reduce levels of *Turnip yellows virus*.

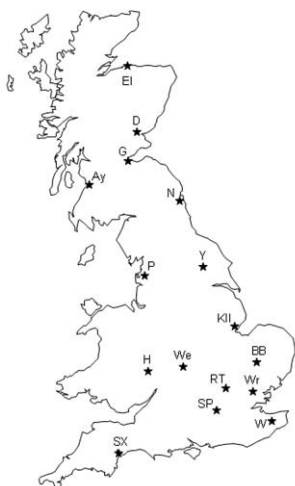
There have been reports of mealy cabbage aphid numbers building up on some vegetable brassicas in central England.

OTHERS

Aphids are no longer an issue in most other crops either because the crop is too mature to be vulnerable or the crop has been harvested.

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 increased across much of the country. The table below shows the combined total of **both forms of female** bird cherry–oat aphids caught during the week **28/9-04/10** and compares them to last year and a ten year mean. English grain aphids always fly in much lower numbers than bird cherry–oat aphids in the autumn.

During the period **28/9 – 4/10 13** *R. padi* were tested at Rothamsted, one was of the cereal colonising form (28 year weekly mean = 5). The cereal colonising/bird cherry colonising data are only available for the Rothamsted site. The proportion of cereal colonisers is likely to be higher towards the south and west, and lower towards the north and east.

- Numbers of bird cherry–oat aphid were rising at 8/13 sites this week, particularly across central and southern England. Numbers generally remain below the ten-year means everywhere, except Preston.
- The grain aphid was caught at three sites in low numbers.

Suction-trap sites

The tables below show current totals with comparisons to previous years. '/' indicates that identifications have not been completed and '*' indicates where totals have been corrected proportionally to seven days, fewer days' samples having been identified.

<i>Sitobion avenae</i>				28/09-04/10	<i>Rhopalosiphum padi</i> - females only			
Compared to last week	2015	2014	05-14		Compared to last week	2015	2014	05-14
↓	0	/	1	Newcastle	↓	477	/	466
	0	/	/	York	↓	451	/	/
	*0	/	1	Preston	↑	*5917	/	1699
↑	1	16	1	Kirton	↓	169	2055	616
↓	*0	0	0	Broom's Barn (Bury St Edmunds)	↑	*322	1245	419
	0	/	2	Wellesbourne	↑	207	/	450
	0	0	1	Hereford	↑	387	2081	464
↓	0	3	1	Rothamsted (Harpenden)	↑	295	1093	292
↑	2	0	1	Writtle	↑	321	402	537
	0	/	1	Silwood Park (nr Ascot)	↑	84	/	221
	0	/	3	Wye	↑	213	/	380
↑	2	/	3	Starcross (nr Exeter)	↓	140	/	277

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.

- Numbers of peach-potato aphid are about normal for the time of year, with a minor hotspot at Broom's Barn this week (11).
- The mealy cabbage aphid was caught at just one suction-trap this week, Kirton in south Lincolnshire.

<i>Brevicoryne brassicae</i>				28/09-04/10	<i>Myzus persicae</i>			
Compared to last week	2015	2014	05-14		Compared to last week	2015	2014	05-14
	0	/	0	Newcastle		0	/	0
	0	/	/	York		0	/	/
	*0	/	1	Preston		*0	/	1
↑	7	47	6	Kirton		2	77	16
	*0	2	1	Broom's Barn (Bury St Edmunds)	↑	*11	3	3
	0	/	1	Wellesbourne		0	/	5
	0	0	2	Hereford		1	9	4
	0	0	0	Rothamsted (Harpenden)		0	9	2
	0	0	1	Writtle	↑	2	3	4
	0	/	0	Silwood Park (nr Ascot)	↑	4	/	1
	0	/	0	Wye	↑	1	/	3
	0	/	2	Starcross (nr Exeter)		0	/	5

Further information

Please send information on crop aphids to: mark-s.taylor@rothamsted.ac.uk

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