

## APHID ALERT SUMMARY

### GENERAL

The weather over the last week has been largely dry with temperatures averaging 12°C. Aphid flight activity continues to be comparatively low for the time of year. However, 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 slowly rising, but at present are well below normal for the time of year everywhere, except northern England and Edinburgh. 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 18 aphids tested in the week (21-27/9), 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 progressing well, but the majority of crops are yet to emerge. We have received no field reports of cereal aphids on winter crops, but a few reports of aphid colonies on cereal volunteers amongst newly emerged oilseed rape.

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

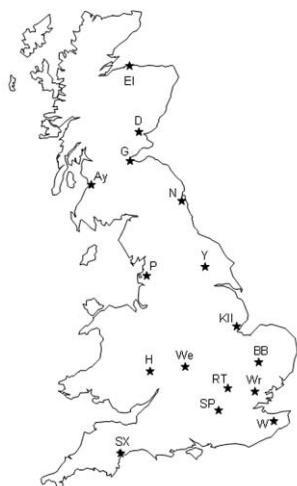
A few peach–potato aphids (*Myzus persicae*) and mealy cabbage aphids (*Brevicoryne brassicae*) have been found in the suction-trap at Kirton, south Lincolnshire and one peach–potato aphid at Hereford, but none elsewhere, hence there is very little aphid impact on crops at present. Winter oilseed rape drilling is largely complete and crops typically have two true leaves. No field reports of aphids on newly emerged oilseed rape crops have been received. There have been reports of low numbers of both species on vegetable brassicas in south east 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. The majority of pulse crops are harvested with around 15% of the spring beans still to come in. In potatoes an estimated 41,000ha of GB crop was cleared to Saturday 26 September. Most potato crops in Scotland have been burned off, but at present cereal harvesting is taking priority over potato lifting. In carrots the period of likely virus transmission is well passed and any willow-carrot aphids flying in the next few weeks will be returning to willow. Mature carrot crops left under straw are not at risk from aphids.

**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 21-27/9** 18 *R. padi* were tested, one was of the cereal colonising form (29 year mean for the same week =4).

The table below shows total numbers of female bird cherry–oat aphid caught during the week **21/9-27/9** and compares them to last year and a ten year mean for that week. English grain aphids always fly in much lower numbers than bird cherry–oat aphids in the autumn.

- Numbers of bird cherry–oat aphid were rising at 10/13 sites this week, but remain below the ten year means everywhere except Edinburgh, Newcastle and Preston.
- The grain aphid was caught at three sites, with a hotspot at Edinburgh (7).

### 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>				21/09-27/09	<i>Rhopalosiphum padi</i> - females only			
Compared to last week	2015	2014	05-14		Compared to last week	2015	2014	05-14
↓	7	0	1	Gogarbank (Edinburgh)	↑	1965	/	695
↓	0	/	0	Newcastle	↑	1049	/	661
↓	0	/	/	York	↑	686	/	/
	0	/	0	Preston	↓	2977	0	2066
↓	1	1	1	Kirton	↑	187	1462	452
	0	2	1	Broom's Barn ( Bury St Edmunds)	↑	75	1585	485
	0	/	2	Wellesbourne	↓	95	0	373
↑	1	4	2	Hereford	↓	191	1736	812
↓	0	4	2	Rothamsted (Harpenden)	↑	65	589	482
	0	0	2	Writtle	↑	259	4	594
	0	/	0	Silwood Park (nr Ascot)	↑	65	/	417
	0	/	1	Wye	↑	147	/	565
	0	/	2	Starcross (nr Exeter)	↑	153	0	690

## 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 and mealy cabbage aphid in the suction-traps are very low this week with just a very minor flight at Kirton for both species and a single peach–potato aphid at Hereford.

<i>Brevicoryne brassicae</i>				21/09-27/09	<i>Myzus persicae</i>			
Compared to last week	2015	2014	05-14		Compared to last week	2015	2014	05-14
	0	1	0	Gogarbank (Edinburgh)		0	0	0
	0	/	0	Newcastle		0	/	0
	0	/	/	York		0	/	/
	0	/	1	Preston		0	/	1
↓	4	7	3	Kirton	↓	2	43	15
	0	1	0	Broom's Barn ( Bury St Edmunds)		0	22	6
	0	/	1	Wellesbourne		0	/	13
	0	0	1	Hereford	↑	1	6	2
	0	1	0	Rothamsted (Harpenden)	↓	0	2	1
	0	0	1	Writtle		0	0	4
	0	/	0	Silwood Park (nr Ascot)		0	/	0
	0	/	0	Wye		0	/	7
	0	/	1	Starcross (nr Exeter)		0	/	3

## 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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