

## APHID ALERT SUMMARY

### GENERAL

The temperatures continue to be just above aphid flight thresholds. The total number of aphids flying has fallen, but somewhat surprisingly the diversity of aphid species has increased in our samples this week. Reproduction and movement between plants will continue at temperatures of 3°C and above on unprotected crops. It is important that vigilance is maintained into November until colder weather causes the autumn migration to finally end.

### WINTER CEREALS

Numbers of bird cherry–oat aphid (*Rhopalosiphum padi*) in suction-traps have decreased everywhere compared to last week, but numbers are noticeably above average for this time of year in the western traps. It is important to remember that many of these will be going to bird cherry and will play no part in BYDV spread, but there will be some searching for newly emerging cereals. At Rothamsted we operate an additional trap from which we determine the proportion of each life-cycle type. During October seventy bird cherry–oat aphids have been caught and tested, none were of the cereal colonising form, a much lower proportion than usual for this time of year (29 year average for the same period = 18). The level may be higher towards the south and west.

Numbers of grain aphid (*Sitobion avenae*) are generally low, with highest numbers at Starcross, nr. Exeter.

The only cereal crops left to drill are going in after sugar beet or maize, most winter wheat and winter barley crops have reached GS13. Field reports suggest aphid numbers on unprotected cereal crops are slowly increasing but still below normal for the time of year.

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 6 weeks after emergence for crops from neonicotinoid-treated seed.

### WINTER OILSEED RAPE and VEGETABLE BRASSICAS

The small widespread autumn flight of peach–potato aphids (*Myzus persicae*) has continued, with a noticeable hotspot in the south west. One mealy cabbage aphid (*Brevicoryne brassicae*) has been found in the Starcross suction-trap this week. Typical winter oilseed rape crops now have reached the five-six true leaves stage (GS 1,5 – 1,6). There have been field reports of aphids in winter oilseed rape crops in southern and eastern England, with an ADAS trial in Cambridgeshire finding about 10% of plants infested. The Emergency Authorisation for Teppeki (flonicamid) for aphid control in oilseed rape means there is now an additional spray option (which the peach–potato aphid has not developed resistance to) to reduce levels of Turnip yellows virus (TuYV). Foliar applied pymetrozine (Plenum) and thiacloprid (Biscaya) are also viable alternatives. Do not use more than one autumn foliar application of any neonicotinoid insecticide on OSR.

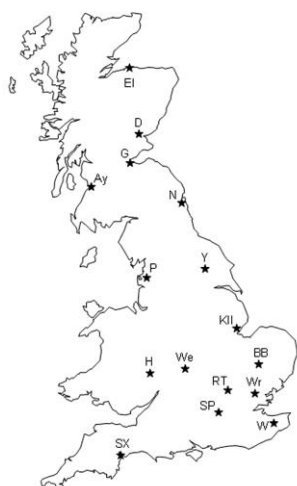
No further reports of mealy cabbage aphids on vegetable brassicas have been received.

### OTHERS

A small but widespread flight of the shallot aphid (*Myzus ascalonicus*) is worthy of mention this week with potential interest to growers of winter onions. 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 willow-carrot aphid is flying across much of the country but the vast majority of these will be returning to willow for the winter.

**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 fallen everywhere. The table below shows the combined total of both forms of **female** bird cherry–oat aphids caught during the week **26/10-01/11** and compares them to last year and a ten year mean. The table also includes numbers accumulated from a start date (**5/10**) representing **earliest emergence** and thus gives an indication of the build-up of virus vector pressure. English grain aphids always fly in much lower numbers than bird cherry–oat aphids in the autumn.

During the period **26/10 – 01/11** just one *R. padi* was caught and tested at Rothamsted, it was not of the cereal colonising form (29 year weekly mean = 2). The cereal colonising/bird cherry colonising data are only available for the Rothamsted site. The level of cereal colonisers is likely to be higher towards the south and west.

- Numbers of bird cherry–oat aphid have decreased at all twelve suction-trap sites. Numbers are above the ten-year means for same time period, particularly at Preston, Hereford and Starcross.
- The grain aphid was caught at four suction-trap sites this week, with numbers highest at Starcross (6).

### 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>				26/10-01/11	<i>Rhopalosiphum padi</i> - females only				
Compared to last week	2015	2014	05-14		Compared to last week	2015	05-14	2015 Acc from 05/10	05-14 Acc from 05/10
↑	1	/	0	Newcastle	↓	49	16	2414	220
↓	0	/	/	York	↓	45	/	1246	
	0	1	1	Preston	↓	490	75	7562	2261
	0	0	0	Kirton	↓	47	21	424	764
	0	0	0	Broom's Barn (Bury St Edmunds)	↓	25	15	420	495
	0	/	0	Wellesbourne	↓	44	18	373	583
↑	1	2	1	Hereford	↓	118	20	749	622
	*0	1	0	Rothamsted (Harpenden)	↓	*19	14	177	379
	0	0	1	Writtle	↓	41	21	535	674
↑	2	/	0	Silwood Park (nr Ascot)	↓	22	20	175	335
	0	/	1	Wye	↓	69	41	522	643
↑	*6	/	0	Starcross (nr Exeter)	↓	*111	28	724	376

## 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 seven sites spread right across the country, with a hotspot at Starcross (13).
- A single mealy cabbage aphid was caught in the suction-trap at Starcross this week.

<i>Brevicoryne brassicae</i>				26/10-01/11	<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	↓	2	/	/
	0	0	0	Preston		4	6	5
	0	1	22	Kirton	↓	2	9	29
	0	0	0	Broom's Barn (Bury St Edmunds)	↓	0	16	5
	0	/	0	Wellesbourne	↑	1	/	0
	0	1	0	Hereford	↑	3	5	1
	*0	0	0	Rothamsted (Harpenden)		*0	9	2
	0	0	0	Writtle	↑	2	15	4
	0	/	0	Silwood Park (nr Ascot)	↓	0	/	1
	0	/	0	Wye	↓	0	/	3
↑	*1	/	0	Starcross (nr Exeter)	↑	*13	/	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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