AHDB Aphid News (30th Oct 2015)

APHID ALERT SUMMARY

GENERAL

The temporary return of milder weather has resulted in some renewed aphid activity. Aphids are still flying and if they have located unprotected crops, reproduction and movement will continue at temperatures of 3°C and above, the rate increasing in proportion to temperature. It is important that vigilance is maintained into early November until colder weather resumes and causes the autumn migration to finally come to an end.

WINTER CEREALS

Numbers of bird cherry–oat aphid (*Rhopalosiphum padi*) in suction-traps have increased compared to last week in seven of the twelve suction-traps and numbers are above average in the western traps and in the far north east and south east. 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 the first three weeks of October up to the 25th some 69 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 = 15). The proportion is likely to be higher towards the south and west.

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

Many winter wheat and winter barley crops have now emerged and typically have reached GS13. Field reports have been received of 'colonies' of aphids being easy to find in newly emerged cereals in Devon and Cornwall, and also easy to find on some stubbles adjacent to winter crops in northern England.

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

The extended small but widespread autumn flight of peach–potato aphids (*Myzus persicae*) has continued this week. No mealy cabbage aphids (*Brevicoryne brassicae*) have been found in the suction-traps this week. Typical winter oilseed rape crops now have reached the five true leaves stage (GS 1,5).There have been several field reports of aphids appearing in winter oilseed rape crops in south eastern England. The Emergency Authorisation for Teppeki (flonicamid) for aphid control in oilseed rape means there is now an additional spray option, to reduce levels of Turnip yellows virus (TuYV), which the peach–potato aphid has not developed resistance to. 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.

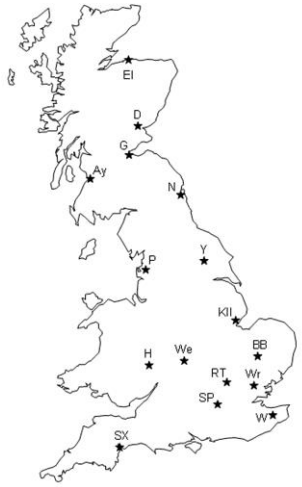
No further reports of mealy cabbage aphids on vegetable brassicas have been received.

OTHERS

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 increased a little, in response to the milder weather. The table below shows the combined total of both forms of **female** bird cherry–oat aphids caught during the week **19/10-25/10** 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 **19/10 – 25/10 11** bird cherry–oat aphids were tested at Rothamsted, none were of the cereal colonising form (29 year weekly mean = 3). 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.

- Numbers of bird cherry–oat aphid were increased at seven of the twelve suction-trap sites. Numbers were above the ten year means for this bulletin week at the three western sites (P, H and SX) and at Newcastle and Wye.
- Two grain aphids were caught at the suction-trap at York.

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.

Grain aphid (*Sitobion avenae*)				**19/10-25/10**	**Bird cherry–oat aphid (*Rhopalosiphum padi* - 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**
	*0	/	0	Newcastle	↑	*1538	23		2365	204
↑	*2	/	/	York	↑	*385	/		1201	
	0	0	0	Preston	↓	1278	270		7072	2186
	0	0	1	Kirton	↑	62	132		377	743
	0	0	1	Broom's Barn (Bury St Edmunds)	↓	93	92		395	480
	0	/	0	Wellesbourne	↑	86	67		329	565
	0	2	1	Hereford	↓	129	71		631	602
	0	0	0	Rothamsted (Harpenden)	↑	31	71		158	365
	0	1	1	Writtle	↑	86	107		494	653
	0	/	0	Silwood Park (nr Ascot)	↑	53	44		153	316
↓	0	/	1	Wye	↓	121	81		453	602
	0	/	1	Starcross (nr Exeter)	↓	158	63		613	348

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 in low numbers.
- No mealy cabbage aphids were caught in the suction-traps this week.

Mealy cabbage aphid (*Brevicoryne brassicae*)				**19/10-25/10**	**Peach–potato aphid (*Myzus persicae*)**			
Compared to last week	**2015**	**2014**	**05-14**		**Compared to last week**	**2015**	**2014**	**05-14**
	*0	/	0	Newcastle		*0	/	0
	*0	/	/	York	↑	*4	/	/
	0	0	0	Preston	↑	4	1	1
	0	2	4	Kirton	↑	5	2	12
	0	0	0	Broom's Barn (Bury St Edmunds)	↑	4	2	3
	0	/	0	Wellesbourne		0	/	1
	0	0	1	Hereford		0	2	1
	0	0	0	Rothamsted (Harpenden)		0	4	1
	0	0	0	Writtle	↑	1	3	1
	0	/	0	Silwood Park (nr Ascot)	↑	1	/	0
	0	/	0	Wye		2	/	1
	0	/	0	Starcross (nr Exeter)	↓	0	/	1

Further information

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

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