AHDB Aphid News (14th Oct. 2016 No.29)

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.

GENERAL

The weather continued mainly dry, with the first autumn frosts of the year in the north. Overall aphid flight activity fell slightly, although daytime temperatures remain above the flight thresholds. If aphids have located unprotected crops reproduction will continue, the rate increasing in proportion to temperatures 3°C and above.

WINTER CEREALS

Numbers of bird cherry–oat aphid (*Rhopalosiphum padi*) flying this bulletin week are low for the time of year. The grain aphid (*Sitobion avenae*) was caught at five suction-trap sites in ones and twos. Typical early sown crops have emerged and reached early leaf development (GS11-14), whilst many more are yet to emerge. With the emergence of many grass weeds the delay in drilling in problem areas is coming to an end. We have received no reports of aphid colonies on newly emerged cereals as yet. Cereal aphids are however widespread on cereal volunteers, green stubbles left to encourage blackgrass to chit and even some oilseed rape plants.

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 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

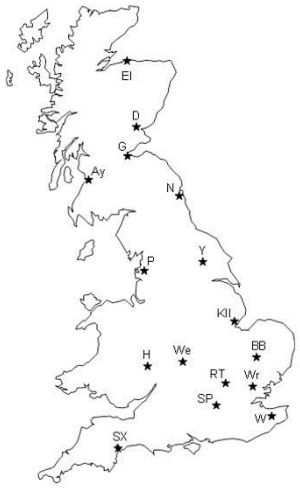
Peach–potato aphids (*Myzus persicae*) were caught at eight suction-trap sites, with small increases at five sites. Single mealy cabbage aphids (*Brevicoryne brassicae*) were caught at Edinburgh, Broom's Barn and Writtle. Typical winter oilseed rape crops range from GS1,3 – 1,10. The number of field reports of peach–potato aphids in oilseed rape crops are increasing, mainly from parts of central and southern England. If these aphids are carrying Turnip Yellows virus (TuYV) there is a further chance of secondary spread until the first frosts set in. It is also worth noting that many weeds act as reservoir hosts of TuYV, in particular Mayweed, Chickweed and Groundsel. **We strongly recommend monitoring crops now.**

OTHERS

The willow-carrot aphid (*Cavariella aegopodii*) was caught in ten suction-traps this week, but most of these will be returning to willow for the winter. We have also received a field report of black bean aphids (*Aphis fabae*) making an autumn appearance on sugar beet in Lincolnshire, but they were quickly controlled by fungal pathogens.

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 are low for the time of year. The table below shows the combined total of both forms of **female** bird cherry–oat aphids caught during the week **03/10 - 09/10** 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.

During the period **07/10 – 13/10** five *R. padi* were tested at Rothamsted, one was of the cereal colonising form (30 year weekly mean = 4). 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 fell at half the sites this week.
- Numbers were highest at Edinburgh and Preston, but are well below the 10-yr means for this time of year throughout England.
- This week the number and proportion of cereal-colonising bird cherry–oat aphids are below the long term average for the time of year at Rothamsted.
- The number of bird cherry colonising female forms remain surprisingly low.
- The grain aphid was caught at five sites in ones and twos.

'*' indicates where totals have been corrected proportionally to seven days, fewer days' samples having been processed. '/' indicates that identification have not been completed.

Sitobion avenae					***Rhopalosiphum padi* - females only**					
Compared to last week	**2016**	**2015**	**2006-2015**	**03/10-09/10**	**Compared to last week**	**2016**	**2006-2015**		**2016 Acc from 26/09**	**2006-2015 Acc from 26/09**
↑	*2	/	1	Dundee	↓	*93	258		901	552
↑	1	0	2	Gogarbank (Edinburgh)	↓	545	496		1123	1441
	*0	0	0	Newcastle	↑	*37	593		72	1358
	*0	0	/	York	↑	*83	/		149	
	*0	0	0	Preston	↑	*831	1931		1489	5054
	0	0	0	Kirton	↑	76	477		92	1077
	0	0	1	Broom's Barn (Bury St Edmunds)	↑	48	416		59	1104
	0	1	2	Wellesbourne	↑	20	365		40	766
	*0	0	1	Hereford	↓	*37	473		91	1457
	*0	0	1	Rothamsted (Harpenden)	↓	*11	313		34	861
↓	1	1	1	Writtle	↓	23	596		50	1175
↑	*2	0	1	Silwood Park (nr Ascot)	↑	*23	224		36	549
↑	*2	0	2	Wye	↓	*58	466		124	1039
	*0	1	2	Starcross (nr Exeter)	↓	*35	380		166	954

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 eight suction-trap sites, with small increases at five sites.
- Single mealy cabbage aphids were caught at Edinburgh, Broom's Barn and Writtle.

Brevicoryne brassicae				**03/10-09/10**	***Myzus persicae***			
Compared to last week	**2016**	**2015**	**2006-2015**		**Compared to last week**	**2016**	**2015**	**2006-2015**
	*0	/	0	Dundee	↓	*0	/	1
	1	0	0	Gogarbank (Edinburgh)	↑	3	0	0
	*0	0	0	Newcastle		*0	0	0
	*0	0	/	York		*0	4	/
	*0	0	0	Preston		*0	0	2
	0	1	3	Kirton	↑	8	12	10
↑	1	0	0	Broom's Barn (Bury St Edmunds)	↓	0	12	5
	0	0	1	Wellesbourne	↑	4	0	4
	*0	0	2	Hereford	↑	*2	0	6
	*0	0	0	Rothamsted (Harpenden)		*2	0	2
↑	1	0	1	Writtle	↑	10	2	5
	*0	0	0	Silwood Park (nr Ascot)		*0	0	1
	*0	2	0	Wye	↓	*2	0	3
	*0	0	0	Starcross (nr Exeter)	↓	*1	2	3

Further information

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

AHDB Cereals and Oilseeds: Click here

AHDB Potatoes: Click here

AHDB Horticulture: Click here

#APHIDMONITORING

Rothamsted Insect Survey: Click here

Science and Advice for Scottish Agriculture (SASA): Click here

In partnership with

. AHDB Aphid News 2016

AHDB publications are free to levy payers
Electronic version can be downloaded at cereals.ahdb.org.uk
To join the mailing lists, contact: cereals.subscriptions@ahdb.org.uk