



Suction-trap network sites

Potato and Brassica Aphid forecasts 2015

The long run of aphid data from our suction-trap network, combined with the long run of weather data available from the Met Office and others, makes it possible to establish relationships between weather and the timing of the start of aphid flights and aphid abundance in spring and early summer. The best predictor is the mean temperature in January and February, and confidence is greatest for those aphid species which pass the winter in the active stages rather than as eggs, including Peach-potato aphid (*Myzus persicae*) and Potato aphid (*Macrosiphum euphorbiae*). This is because active stages are susceptible to low winter temperatures but can take advantage of warm conditions, whereas eggs are very cold hardy and in diapause, so don't respond to warm conditions in mid-winter. Although Cabbage aphid (*Brevicoryne brassicae*) overwinters mainly in the active stages it flies later and is more difficult to predict.

The temperature in January and February was close to average at all sites, the greatest difference from average being at Starcross, where it was 1°C above average. Thus the timing and early-season abundance of aphids is expected to be around average.

	Monthly mean temp °C		Mean
	Jan	Feb	Jan-Feb
Dundee (D)	3.25	4.02	3.63
Gogarbank (G)	3.80	4.38	4.07
Ayr (Ay)	4.46	4.47	4.46
Newcastle (N)	4.83	4.84	4.83
Preston (P)	4.65	4.30	4.48
Kirton II (K)	5.04	4.23	4.63
Broom's Barn (BB)	4.32	3.89	4.10
Hereford (H)	4.40	3.80	4.10
Rothamsted (RT)	4.18	3.73	3.96
Writtle (Wr)	4.71	4.43	4.57
Silwood (SP)	4.08	3.37	3.73
Wye (W)	5.08	4.67	4.88
Starcross (SX)	6.36	5.44	5.90

The tables give the following information:

for *Myzus persicae*, *Macrosiphum euphorbiae* and *Brevicoryne brassicae*, the predicted date of first capture at the listed sites, together with the position of this year's prediction out of all years of trap operation (e.g. 23/47 = 23rd earliest out of 47 years;

for *Myzus persicae* and *Macrosiphum euphorbiae*, the predicted numbers caught by 17th June and for *Brevicoryne brassicae* by 7th October, together with the position of this year's prediction out of all years of trap operation (e.g. 17/47 = 17th largest number out of 47 years).

By no means all the variability in the aphid data is captured by winter temperature and the actual dates should be seen as very approximate. **The general message is that, if spring does not throw any wildly abnormal conditions at us, aphids will be flying at around the average time and in average numbers.**

AHDB Aphid News (6 March 2015)

Peach—potato aphid (*Myzus persicae*)

	<u>1st Capture in suction trap</u>			<u>Numbers to 17th June</u>		
	Predicted	75% Confidence limits	Ranking	Predicted	75% Confidence limits	Ranking
Dundee	13 June	(19 May - 9 July)	23/47	1	(0 - 5)	=17/47
Gogarbank	12 June	(21 May - 5 July)	=21/47	2	(0 - 7)	=15/47
Ayr	26 June	(2 June - 21 July)	16/36	1	(0 - 2)	=5/36
Newcastle	12 June	(16 May - 8 July)	19/47	2	(0 - 9)	=12/47
Preston	17 May	(13 April - 20 June)	22/40	6	(1 - 20)	17/40
Kirton	8 May	(21 April - 26 May)	=14/36	16	(3 - 68)	13/36
Broom's Barn	17 May	(30 April - 3 June)	=21/51	17	(3 - 76)	24/51
Hereford	27 May	(7 May - 16 June)	26/44	7	(1 - 23)	=22/44
Rothamsted	15 May	(29 April - 31 May)	25/51	17	(5 - 55)	27/51
Writtle	30 April	(3 April - 26 May)	18/41	50	(12 - 203)	23/41
Silwood Park	15 May	(25 April - 4 June)	=24/36	9	(2 - 35)	=20/35
Wye	7 May	(3 April - 10 June)	=18/48	21	(6 - 68)	22/46
Starcross	20 April	(19 March - 22 May)	15/46	17	(5 - 50)	13/44

Potato aphid (*Macrosiphum euphorbiae*)

	<u>1st Capture in suction trap</u>			<u>Numbers to 17th June</u>		
	Predicted	75% Confidence limits	Ranking	Predicted	75% Confidence limits	Ranking
Dundee	31 May	(6 May - 24 June)	26/47	4	(1 - 14)	=19/47
Gogarbank	20 May	(28 April - 12 June)	24/47	11	(2 - 38)	23/47
Ayr	30 May	(11 May - 17 June)	17/38	3	(1 - 7)	=18/37
Newcastle	30 May	(11 May - 18 June)	=14/47	5	(1 - 19)	=18/47
Preston	19 May	(3 May - 4 June)	=17/40	10	(4 - 23)	=20/40
Kirton	5 May	(15 April - 24 May)	15/36	16	(4 - 54)	=13/36
Broom's Barn	20 May	(30 April - 9 June)	=28/51	6	(2 - 18)	=27/51
Hereford	15 May	(28 April - 31 May)	28/44	10	(3 - 32)	=24/44
Rothamsted	14 May	(23 April - 3 June)	=26/51	11	(3 - 34)	28/51
Writtle	29 April	(7 April - 22 May)	18/41	24	(8 - 71)	=22/41
Silwood Park	10 May	(23 April - 26 May)	23/36	16	(5 - 51)	18/35
Wye	11 May	(20 April - 2 June)	=21/47	12	(3 - 39)	=18/46
Starcross	24 April	(31 March - 17 May)	18/45	25	(9 - 65)	=16/44

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Cabbage aphid (*Brevicoryne brassicae*)

	1st Capture in suction trap			Numbers to 7th October		
	Predicted	75% Confidence limits	Ranking	Predicted	75% Confidence limits	Ranking
Dundee	28 July	(16 June - 8 September)	=21/46	6	(0 - 40)	22/46
Gogarbank	17 July	(4 June - 29 August)	18/45	5	(1 - 20)	=15/43
Ayr	2 August	(29 June - 4 September)	13/34	2	(0 - 7)	=12/31
Newcastle	17 July	(19 June - 14 August)	=14/46	7	(1 - 29)	13/45
Preston	21 June	(16 May - 28 July)	=18/40	17	(4 - 68)	19/39
Kirton	29 May	(25 April - 2 July)	15/36	134	(26 - 676)	11/36
Broom's Barn	5 June	(19 May - 22 June)	=18/51	174	(33 - 890)	24/51
Hereford	5 June	(15 May - 26 June)	=26/44	164	(31 - 840)	21/42
Rothamsted	6 June	(12 May - 1 July)	=22/51	96	(17 - 515)	=20/51
Writtle	24 May	(4 May - 12 June)	=19/41	342	(62 - 1864)	20/40
Silwood Park	8 June	(12 May - 4 July)	=22/33	47	(8 - 262)	18/32
Wye	7 June	(8 May - 8 July)	23/46	73	(11 - 434)	19/43
Starcross	3 May	(6 April - 30 May)	=12/44	187	(64 - 542)	=15/40



Further information

www.hgca.com/pests

[Rothamsted Insect Survey](#)

www.potato.org.uk/online-toolbox/aphid-monitoring

[HDC pest bulletin](#)

Please send information on crop aphids to

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