



In partnership with



BRASSICA APHIDS – 14 October 2021

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Introduction

Brassica crops may be infested by cabbage aphid (*Brevicoryne brassicae*), peach-potato aphid (*Myzus persicae*) or potato aphid (*Macrosiphum euphorbiae*) and these are all species captured in the network of suction traps run by the Rothamsted Insect Survey which also produces a long range forecast of aphid activity and abundance at the end of February each year.

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Rothamsted Insect Survey and SASA suction trap captures 2021

Brevicoryne brassicae	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	
11-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30-May	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
06-Jun	0	0	0	0	0	0	0	0	1	31	2	0	2	6	1	1	44
13-Jun	0	0	0	0	0	0	0	1	9	8	0	1	4	2	1	0	26
20-Jun	0	0	0	0	0	0	1	3	5	5	4	5	4	0	0	2	29
27-Jun	0	0	0	0	0	0	2	1	3	4	0	2	6	4	0	0	22
04-Jul	0	0	0	0	0	0	2	0	0	6	12	0	3	4	0	2	29
11-Jul	0	0	0	0	0	1	0	0	0	1	5	0	5	0	0	4	16
18-Jul	0	0	0	0	0	8	0	1	0	2	4	0	4	0	0	0	19
25-Jul	0	0	0	0	0	2	0	2	2	4	5	0	4	0	0	0	19
01-Aug	0	0	0	0	4	2	0	2	0	2	0	0	2	0	0	2	14
08-Aug	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
15-Aug	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
22-Aug	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3
29-Aug	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05-Sep	0	0	0	0	0	2	0	1	0	1	0	0	0	0	0	0	4
12-Sep	0	0	0	0	4	4	0	10	0	2	0	0	0	0	0	0	20
19-Sep	0	0	0	0	0	0	0	4	1	2	1	0	0	0	0	1	9
26-Sep	0	0	0	0	0	1	0	15	0	1	2	0	0	0	0	3	22
03-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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Macrosiphum euphorbiae	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	
11-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18-Apr	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-May	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	5
09-May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
16-May	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	3
23-May	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	3
30-May	0	0	1	0	0	1	2	0	0	0	0	3	0	3	6	1	17
06-Jun	0	0	2	0	1	0	1	0	0	6	14	6	3	8	17	11	69
13-Jun	0	0	1	0	0	1	7	6	2	16	12	8	4	16	14	31	118
20-Jun	0	0	8	0	0	5	7	6	4	25	16	12	21	9	7	13	133
27-Jun	0	3	1	0	0	0	1	1	4	10	0	4	5	2	3	12	46
04-Jul	0	3	2	0	1	0	0	1	2	7	8	0	3	4	1	6	38
11-Jul	0	3	5	0	3	2	8	2	1	3	8	0	0	0	0	0	35
18-Jul	0	7	6	0	4	12	8	4	7	0	4	0	0	0	2	2	56
25-Jul	1	22	4	0	1	6	0	2	2	2	0	4	0	0	5	1	50
01-Aug	2	23	8	0	4	6	1	1	0	0	0	0	2	2	0	0	49
08-Aug	8	7	5	0	0	0	0	4	0	0	2	0	0	0	0	0	26
15-Aug	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
22-Aug	3	2	2	0	2	1	0	0	0	0	0	0	0	0	0	0	10
29-Aug	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
05-Sep	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
12-Sep	0	1	2	0	5	0	0	0	0	0	0	0	0	0	0	2	10
19-Sep	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	3
26-Sep	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	3
03-Oct	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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<i>Myzus persicae</i>	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	
11-Apr	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
18-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
25-Apr	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-May	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
09-May	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	3
16-May	0	0	0	0	0	0	0	0	2	1	0	0	1	0	1	0	5
23-May	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	3
30-May	0	1	0	0	0	0	1	0	0	1	0	2	1	0	2	1	9
06-Jun	0	0	0	0	0	1	0	1	8	40	3	29	47	1	16	5	151
13-Jun	0	0	0	0	0	0	1	9	121	33	4	86	116	6	24	8	408
20-Jun	0	0	0	0	0	4	0	11	58	44	26	27	57	4	19	1	251
27-Jun	0	0	2	0	0	2	0	1	23	12	0	5	13	1	13	0	72
04-Jul	0	1	0	0	0	0	0	3	4	5	8	10	5	0	4	5	45
11-Jul	0	5	0	0	0	3	1	0	8	3	4	6	0	0	0	0	30
18-Jul	0	0	0	0	0	4	6	7	6	4	4	1	0	4	0	0	36
25-Jul	0	0	1	0	1	14	8	2	0	7	4	0	0	2	1	0	40
01-Aug	0	9	1	0	2	14	0	2	0	0	2	0	0	0	1	2	33
08-Aug	0	3	3	0	7	0	0	1	0	0	1	0	0	0	0	0	15
15-Aug	0	3	0	0	1	0	0	0	0	1	0	0	0	0	0	0	5
22-Aug	4	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	6
29-Aug	0	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	6
05-Sep	0	2	2	0	0	0	0	1	0	0	0	0	0	0	0	0	5
12-Sep	0	3	5	0	1	1	0	6	0	3	1	0	0	0	0	1	21
19-Sep	0	0	1	0	0	1	0	3	1	1	2	0	0	0	4	2	15
26-Sep	0	0	0	0	0	0	0	7	3	5	11	0	0	2	8	4	40
03-Oct	0	0	0	0	1	0	0	3	0	0	1	0	3	0	6	2	16



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AHDB yellow water trap data

AHDB supports the provision of aphid count data from a network of yellow water traps. The aphids are identified by staff at Fera.

All the individual counts are available at: <https://secure.fera.defra.gov.uk/aphmon/>. You can click on a region on the map to see the counts in more detail.

Although the focus of the commentary on the site is on aphids that transmit potato viruses, there are graphs to show the weekly counts of individual aphid species.

Information on the pest aphids of outdoor vegetable and salad crops has been summarized here for the year <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/aphids/2021/>.

These are the last counts for the year:

Region	No. of samples taken between 01/09/2021 to 09/09/2021	Average Brevicoryne brassicae per sample	Average Macrosiphum euphorbiae per sample	Average Myzus persicae per sample
North Scotland	2	0	2	2
Grampian	4	0	1	0.8
Angus & Perthshire	0	0	0	0
Borders	0	0	0	0
Northern England	0	0	0	0
East Anglia	0	0	0	0
Midlands	0	0	0	0
South-West	0	0	0	0
Total	6	0	0.7	0.5



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Rothamsted Insect Survey long-term forecasts

Long-term (57 years in 2021) aphid data (from the suction-trap network) and weather data (Met Office and others) is used to forecast the date of the first aphid flights, as well as aphid abundance in spring and early summer. The forecasts for 2021 are available here:

[When will aphids fly this year? \(aphid forecasts\) | AHDB](#)

Forecasts are available for peach-potato aphid, potato aphid and cabbage aphid and are made for each suction trap location.

Spring 2021 commentary

Despite milder air temperatures in the second half of February, January–February air temperatures finished around 1–1.5°C colder than average in Scotland and Northern England and to around 0.5°C colder than average elsewhere.

In the absence of abnormal conditions this spring, aphids are forecast to fly around 2–3 weeks later in Scotland and Northern England. Over much of the rest of England, aphids will fly around average to one week later than average.



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Additional information on peach-potato aphid (*Myzus persicae*)

Brief description: The maps on the following page show estimates of the day of year of 5% *Myzus persicae* catch (DOY₅) at 1km² resolution across the UK. They are based on a highly significant large-scale regression relationship between observations (from 1980 to 2018) of mean January-February temperature (T_{JF}) each year and the seasonal timing of DOY₅ in the same year ($DOY_5 = -12.5 T_{JF} + 222.1$, $r^2 = 0.76$, $p < 0.0001$) across 13 Rothamsted Insect Survey (RIS) aphid monitoring sites spanning a large area of the UK. This large-scale relationship is used with 1km² gridded UK T_{JF} data from the HadUK-Grid dataset (<https://www.metoffice.gov.uk/research/climate/maps-and-data/data/haduk-grid/haduk-grid>) to estimate DOY₅ at each gridbox. HadUK-Grid is a new collection of gridded climate variables derived from the network of UK land surface observations. It is important to note that no uncertainties are shown on the maps and local factors, e.g. availability of host plants, will influence *M. persicae* population dynamics and the DOY₅. The maps are useful for understanding broad spatial variations in DOY₅ and likely differences between years. DOY₅ is expected to be later in 2021 than in 2020 because T_{JF} across the UK was warmer in 2020. UK mean T_{JF} for 2020 was joint 4th warmest on record with 1989 (5.35C)...the three warmest on record were 1990 (5.7C), 1998 (5.55C) and 2007 (5.5C), and the provisional T_{JF} for 2021 is 3.15C (~2.2C cooler than in 2020).

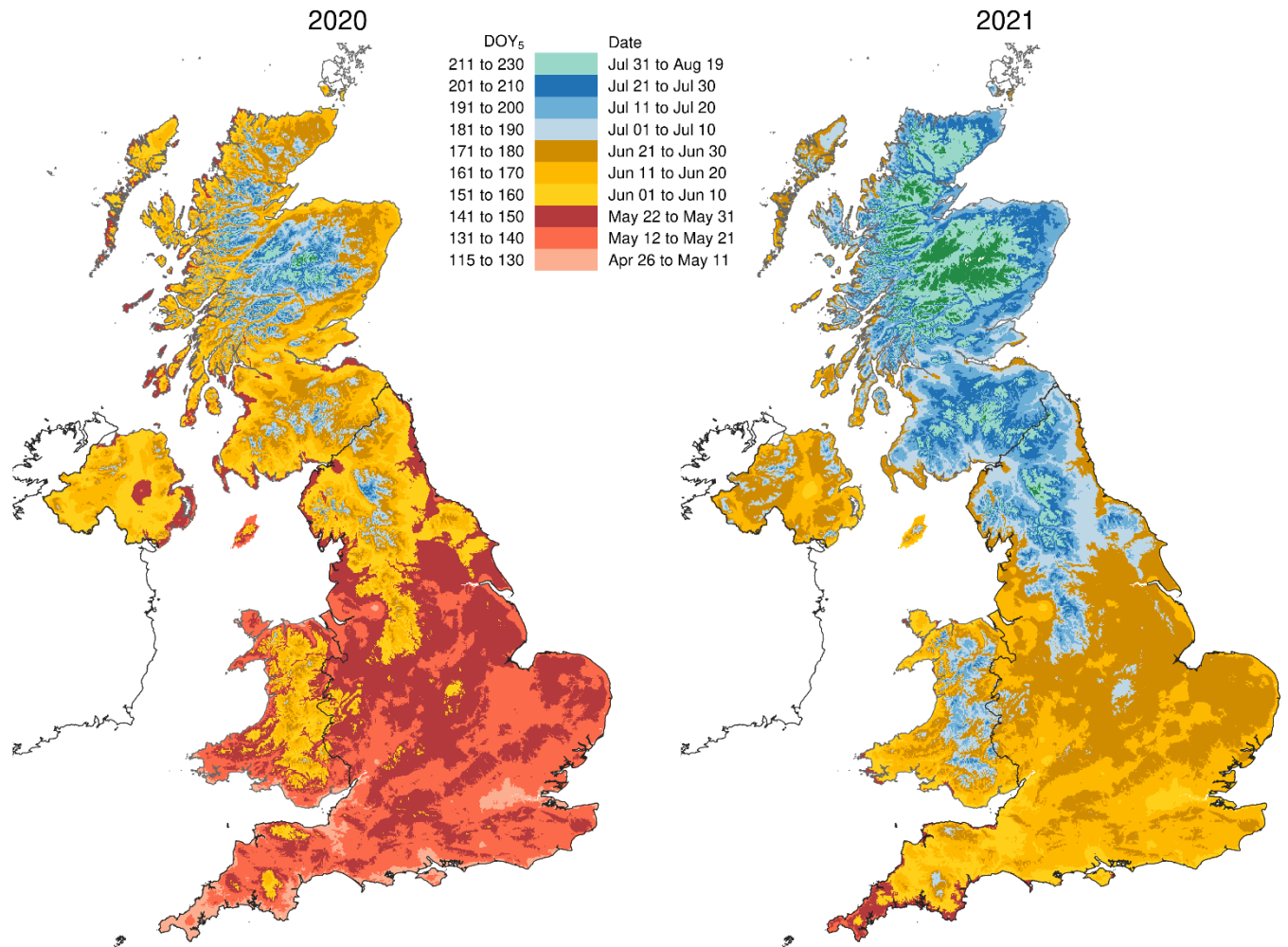
Acknowledgement: This work is the result of collaboration between scientists in the Met Office's Vegetation-Climate Interactions group, the Rothamsted Insect Survey (RIS), University of Warwick, Defra and SASA. It utilises the most up-to-date UK climate data and aphid monitoring results from RIS sites across the UK, and combines expertise in entomology, pest risk management and climate science.



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Estimates of the day of year of 5% *Myzus persicae* catch (DOY₅) at 1km² resolution across the UK.



Historical data 2020

Suction trap captures in 2020 - Rothamsted Insect Survey and SASA

The tables below summarises suction trap captures for 2020. Cells shaded in grey indicate that information is not available yet from these traps due to COVID-19. Some of the trap counts are based on less than 7 days' data.

Brevicoryne brassicae	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	
05-Apr					0	0		0	0	0	0	0	0	0	0	0	0
12-Apr					0	0		0	0	0	0	0	0	0	0	0	0
19-Apr					0	0		0	0	0	0	0	0	0	0	0	0
26-Apr					0	0		0	1			0	0	2	0	0	3
03-May					0	0		0	0			0	1	1	0	2	4
10-May								4	0			4		3	3	0	14
17-May						0	0	1	0	0	0	1		6		5	13
24-May	0		0					25	63			4			5	5	102
31-May	0	0	0			0		57	331	173		119		38	74	3	795
07-Jun	0	0	0			0	0	12	96	15		202	344		74	6	749
14-Jun						1	1	24	376	41		124			60	46	673
21-Jun			0			0	2	42	1271	365		167		21	70	1	1939
28-Jun		0	0			240	11	61	247	1026	190	61		20	61	0	1917
05-Jul	0	0	0		1	21	0	70	24	82	36	22	9	4	3	5	277
12-Jul	0	0	0		0	6	2	80	8	13	72	12	9	9	7	10	228
19-Jul	0	1	0		0	1	1	26	2	16	12	5	10	1	1	14	90
26-Jul	0	0	0		0	4		94	7	1		1	4	0	0	1	112
02-Aug	0	0	0		0	1	0	4	1	1	2	0	1	0	0	1	11
09-Aug	0	1	0		3	2	0	3	0	0		0	1	0	0	0	10
16-Aug	0	0	0		2	1	0	0	0	0	0	0	0	0	0	0	3
23-Aug		0	0		2	1		7	0	0	0	0	0	0	0	0	10
30-Aug	0	0	0		0	0	0	7	0	0	0	0		0	0	0	7
06-Sep		0	0		0	0	0	18	0	1	0	0	0	0	0	0	19
13-Sep		0	0		0	0	0	40	0	0	0	0	0	0	0	0	40
20-Sep			0		0	0	0	16	1	0	0	0	0	0	2	3	22
27-Sep			0		0	0	0	33	0	0	0	0	0	0	0	1	34
04-Oct					0	0	0	10	0	2	0	1	0	0	0	5	18
11-Oct		0	0	0	0	0	0	1	0	0		0	0	0	0	1	2
18-Oct		0	0		0	0	0	1	0	0	0	0	0	0	0	0	1
25-Oct					0	0	0	0	0	0	0	0	0	0	0	0	0

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Macrosiphum euphorbiae	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	
22-Mar					0	0		0	0	0	0	0	0	0	0	1	1
29-Mar					0	0		0	0	0	0	0	0	0	0	0	0
05-Apr					0	0		0	0	0	0	0	1	0	0	1	2
12-Apr					0	0		0	0	0	1	1	13	0	1	1	17
19-Apr					0	0		1	1	0	1	0	0	5	2	1	11
26-Apr					0	0		5	8			3	2	5	9	4	36
03-May					0	0	0	1	1			0	2	0	0	0	4
10-May								4	1			2		2	4	4	17
17-May						0	0	0	0	0	0	0		0		2	2
24-May	0		0					3	5			3			10	5	26
31-May	0	1	2			0		11	4	7		8		15	21	6	75
07-Jun	0	1	11			1	0	9	0	5		6	12		19	10	74
14-Jun						4	9	16	14	6		13			10	19	91
21-Jun			5			4	10	6	30	34		12		7	4	0	112
28-Jun		2	1			19	3	1	5	6	2	4		3	2	0	48
05-Jul	0	2	0		2	2	1	1	5	2	3	0	1	0	0	0	19
12-Jul	0	1	2		4	0	0	0	1	0	3	2	0	0	1	1	15
19-Jul	0	0	0		0	0	0	0	0	2	0	0	2	0	0	0	4
26-Jul	0	4	1		0	0		1	0	0		0	0	0	0	0	6
02-Aug	1	0	1		0	0	0	0	0	0	0	0	0	0	1	0	3
09-Aug	0	0	1		0	0	0	0	0	1		0	0	0	0	0	2
16-Aug	0	0	0		0	0	0	0	0	0	0	1	1	0	0	0	2
23-Aug		0	0		1	0		0	0	0	0	0	0	0	0	0	1
30-Aug	0	0	0		0	0	0	0	0	0	0	0		0	0	0	0
06-Sep		0	0		0	0	0	0	0	0	0	0	0	0	0	0	0
13-Sep		0	0		0	0	0	0	0	0	1	0	0	0	0	0	1
20-Sep			0		0	0	0	0	0	0	0	0	0	0	0	0	0
27-Sep			0		0	0	0	0	0	0	0	0	0	0	0	0	0
04-Oct					0	0	0	0	1	0	0	0	0	0	0	0	1
11-Oct		0	0	0	0	0	0	0	0	0		0	0	0	1	0	1
18-Oct		0	0		0	0	2	0	0	0	0	0	0	0	1	0	3
25-Oct					0	0	0	0	1	0	0	0	0	0	0	0	1

In partnership with



Myzus persicae	Inverness	Dundee	Edinburgh	Ayr	Newcastle	FERA, York	Preston	Kirton	Broom's Barn	Wellesbourne	Hereford	Rothamsted	Writtle	Ascot	East Malling	Starcross	Total
Week ending																	
05-Apr					0	0		0	0	0	0	0	0	0	0	0	0
12-Apr					0	0		0	2	2	0	2	1	0	0	1	8
19-Apr					0	0		2	2	0	0	1	2	0	0	29	36
26-Apr					0	0		0	1			8	1	3	3	6	22
03-May					0	0	1	2	40			6	33	0	0	2	84
10-May								63	9			9		2	5	0	88
17-May					0	0		4	12	53		33		14		4	120
24-May	0		0					103	781			120			66	4	1074
31-May	0	0	7			0		338	1764	75		281		176	144	20	2805
07-Jun	0	0	1			39	43	92	173	251		301	284		296	50	1530
14-Jun					267	93	25	48	149			63			121	15	781
21-Jun			2		46	232	50	209	210			40		7	29	2	827
28-Jun		3	6		376	102	26	39	44	119	10			1	10	0	736
05-Jul	1	1	2		1	30	1	7	5	14	44	8	1	0	2	0	117
12-Jul	0	5	1		0	6	0	31	3	2	21	2	2	0	1	1	75
19-Jul	0	3	0		0	2	2	6	2	0	1	1	2	0	1	2	22
26-Jul	0	22	1		0	0		1	1	0		0	0	0	0	0	25
02-Aug	0	12	1		0	0	0	0	0	0	0	0	0	0	0	0	13
09-Aug	0	3	0		0	0	4	1	0	0		0	0	0	0	0	8
16-Aug	1	0	0		0	0	0	1	0	0	1	0	0	1	1	0	5
23-Aug		2	1		0	0		4	0	0	0	0	0	0	0	0	7
30-Aug	0	0	0		0	0	0	2	0	0	0	0		0	0	0	2
06-Sep		1	0		0	0	0	1	0	1	1	0	0	1	0	0	5
13-Sep		0	0		0	0	0	14	0	0	0	0	2	0	0	1	17
20-Sep			0		0	0	0	8	4	3	1	1	5	6	4	4	36
27-Sep			0		0	0	0	41	1	10	8	5	10	1	1	4	81
04-Oct					1	0	0	22	12	19	6	10	5	0	6	4	85
11-Oct		0	1	0	0	0	0	3	0	3		8	1	0	0	1	17
18-Oct		1	0		0	0	0	1	2	1	0	2	1	2	1	7	18
25-Oct					1	0	1	1	4	0	0	0	4	1	1	9	22



In partnership with



AHDB yellow water trap data

AHDB supports the provision of aphid count data from a network of yellow water traps. The aphids are identified by staff at Fera.

All the individual counts are available at: <https://secure.fera.defra.gov.uk/aphmon/>. You can click on a region on the map to see the counts in more detail.

Although the focus of the commentary on the site is on aphids that transmit potato viruses, there are graphs to show the weekly counts of individual aphid species.

Information on the pest aphids of outdoor vegetable and salad crops has been summarized here for the year <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/aphids/2020/>. Sampling finished on 24 September 2020.