



CABBAGE ROOT FLY – 10th September 2019

Cabbage root fly forecasts

The forecasts in the table below are for ‘early-emerging’ cabbage root flies. There are some areas of the UK where a proportion of the cabbage root flies emerge later in the spring than would be expected. We call these ‘late emerging’ flies and they are genetically different from ‘early-emerging’ flies. Relatively large numbers of late-emerging flies occur in some parts of Devon and south-west Lancashire. **The first generation of late-emerging flies was predicted to start laying eggs at the end of May in Devon (10% eggs 26th May; 50% eggs 16 June) and in mid-June in Lancashire (10% eggs 30th June; 50% eggs 13 July).**

The forecast outputs below are based on weather data collected by Plantsystems Limited and funded by Syngenta. The forecasts predict the timing of fly activity. They do not predict the number of insects present in the crop, as this depends on the size of the local fly population. For control purposes, we consider that the pest has become active when 10% of the insects have emerged/laid eggs and that the peak of activity has occurred when 50% have emerged/laid eggs.

Once they have emerged, female cabbage root flies require some time to feed, mate and mature their eggs. This is equivalent to about 80 day-degrees above 6°C.

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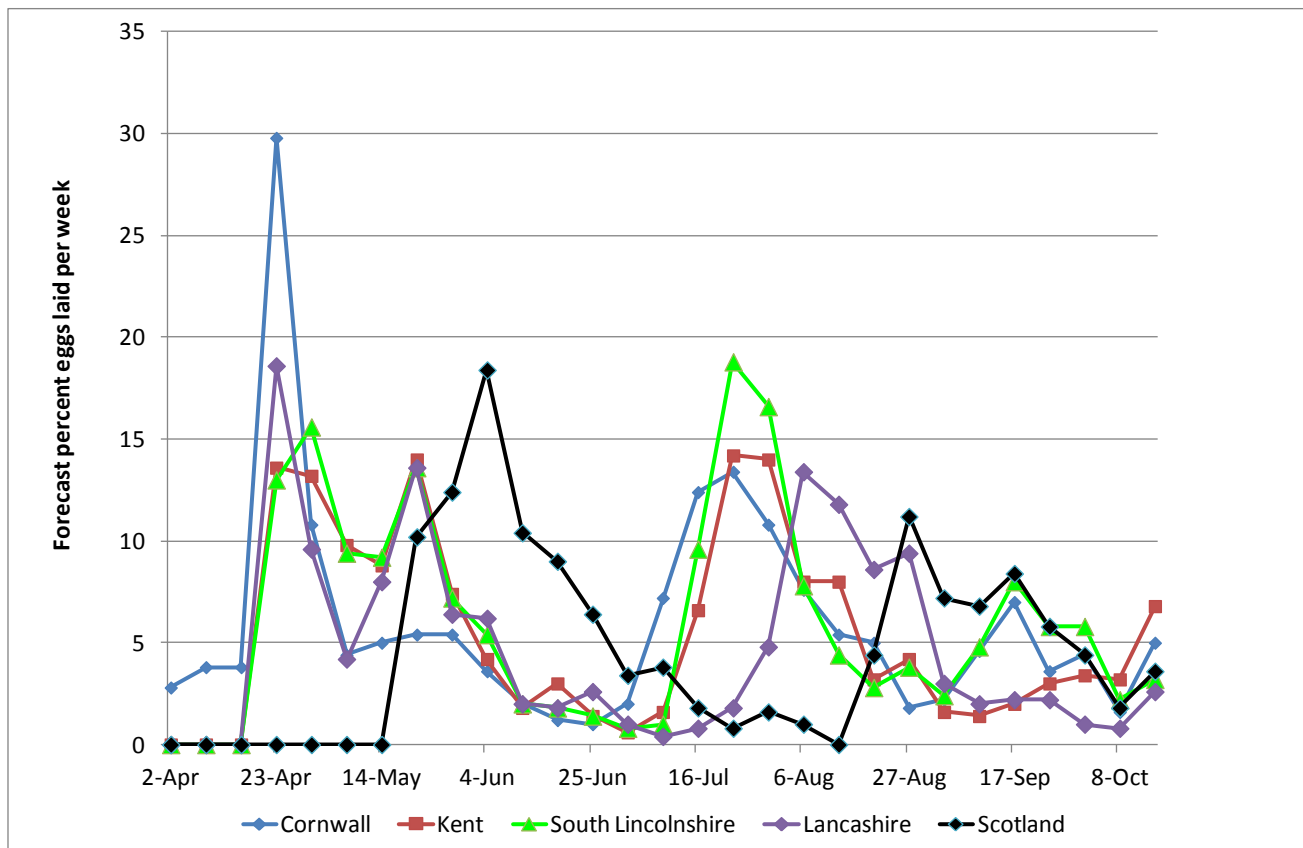
Region	Second generation Forecast 10% egg-laying in 2019	Second generation Forecast 50% egg-laying in 2019	Third generation Forecast 10% egg-laying in 2019
Cornwall (Newquay)	25 June	24 July	8 September
Kent (Sittingbourne)	2 July	28 July	16 September
Suffolk (Woodbridge)	1 July	14 July	14 August
Wellesbourne (Warwick)	1 July	17 July	22 August
Norfolk (Norwich)	4 July	27 July	9 September
South Lincolnshire (Boston)	3 July	27 July	4 September
Nottingham (Bilsthorpe)	6 July	5 August	23 September
Lancashire (Ormskirk)	3 July	11 August	-
York (Market Weighton)	6 July	31 July	-
Scotland (Blairgowrie)	22 August	3 September	-



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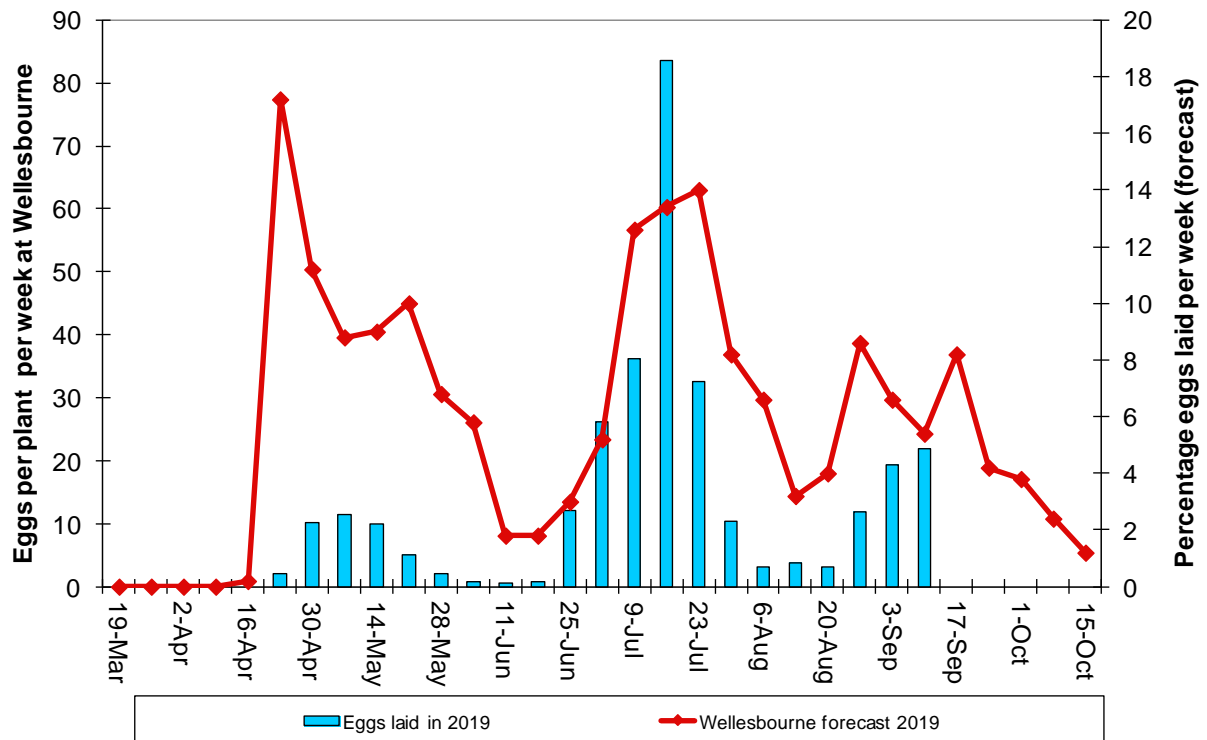
The graph below shows the forecast pattern of egg-laying in 2019 for 5 sites from the table above.



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The graph below shows the forecast pattern of egg-laying in **2019** at Wellesbourne compared with egg-laying in a plot of brassica plants in **2019**.



The table below shows the numbers of cabbage root flies recovered from plots at Wellesbourne 2019. We first set up the traps in some overwintered swedes but the traps are now in a plot sown this spring.

Date	Adult cabbage root flies - total in 3 traps near overwintered swedes. Set up 26 th February		Numbers of eggs laid on 15 cauliflower plants. Set up 9 th April.
	Male	Female	
5 th March	0	0	
12 th March	0	0	
19 th March	0	0	
26 th March	0	0	
2nd April	0	0	
9 th April	20	5	
16 th April	110	11	0
23 rd April	199	15	31
26 th April	88	10	56
30 th April	78	4	97
3 rd May	33/17 (old swedes/new swedes)	12/2	105
7 th May	19/21 (old swedes/new swedes)	12/3	68
10 th May	15/18 (old swedes/new swedes)	9/1	109
14 th May	8/13 (old swedes/new swedes)	4/1	40
17 th May	0/4 (old swedes/new swedes)	2/0	45
21 st May	0/2 (old swedes/new swedes)	0/0	31
24 th May	12 (new swedes only from now onwards)	2	26
28 th May	1	0	5
31 st May	1	0	10
4 th June	1	3	0

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Date	Adult cabbage root flies - total in 3 traps near overwintered swedes. Set up 26 th February		Numbers of eggs laid on 15 cauliflower plants. Set up 9 th April.
	Male	Female	
7 th June	0	0	2
11 th June	1	0	7
14 th June	2	3	0
18 th June	2	1	11
21 st June	4	3	59
25 th June	2	3	121
28 th June	7	10	64
2 nd July	14	8	328
5 th July	30	8	285
9 th July	81	43	258
12 th July	139	50	594
16 th July	124	62	660
19 th July	70	70	371
23 rd July	58	121	117
26 th July	10	54	122
30 th July	8	61	35
2 nd August	13	29	14
6 th August	31	16	34
9 th August	24	11	54
13 th August	44	14	26
16 th August	115	30	8
20 th August	189	48	40
23 rd August	221	28	148
27 th August	83	17	39



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Date	Adult cabbage root flies - total in 3 traps near overwintered swedes. Set up 26 th February		Numbers of eggs laid on 15 cauliflower plants. Set up 9 th April.
	Male	Female	
30 th August	176	33	38
3 rd September	527	115	253
6 th September	528	98	166
10 th September	700	223	163

The table below shows the numbers of cabbage root flies recovered from plots at Wellesbourne 2018.

Date	Adult cabbage root flies - total in 3 traps near overwintered swedes. Set up 20th March		Cabbage root fly eggs (15 plants)
	Male	Female	
27 March	0	0	-
3 April	0	0	-
10 April	0	1	-
17 April	12	2	-
24 April	65	6	0
27 April	51	10	6
1 May	16	5	0
4 May	72	18	9
8 May	60	13	11
11 May	30	10	12
15 May	11	2	20
18 May	1	0	5
22 May	5	1	28
25 May	7	3	9
29 May	1	1	12
1 June	3	6	22
5 June	1	4	27
8 June	0	1	17
12 June	2	5	17
15 June	3	0	17
19 June	16	5	0
22 June	7	6	7
26 June	3	9	1
29 June	14	8	0
3 July	19	8	28
6 July	14	13	15
10 July	18	20	34

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Date	Adult cabbage root flies - total in 3 traps near overwintered swedes. Set up 20 March		Cabbage root fly eggs (15 plants)
	Male	Female	
13 July	6	6	22
17 July	9	8	20
19 July	3	5	19
24 July	2	10	47
27 July	0	4	48
31 July	3	2	48
3 August	2	8	36
7 August	0	6	21
10 August	2	5	7
14 August	12	2	3
17 August	32	23	15
21 August	32	13	11
24 August	16	4	5
28 August	134	31	0
31 August	113	103	1
4 September	98	58	8
7 September	45	52	7
11 September	113	34	68 (new plants)
14 September	88	40	13
18 September	79	20	41
21 September	60	13	42
25 September	54	23	4
28 September	27	13	3
2 October	7	0	0
9 October	4	2	1
16 October	1	1	2
23 October	0	0	Sampling stopped
30 October	0	0	