

## **BRASSICA FLEA BEETLES**

Eight species of the genus *Phyllotreta* (flea beetles) feed on cruciferous/brassicaceous crops and weeds in the UK and they tend to be considered together. However they may have slightly different life-cycles and biology. Most of the information on their basic biology and ecology in the UK was collected many years ago and there do not appear to have been many recent studies, apart from those on methods of control, mainly with insecticides. The basic life-cycle of these species is described as follows:

- Adult beetles hibernate from October to March in hedgerows, under trees and in other sheltered locations.
- When temperatures rise in the spring the beetles come out of hibernation.
- They first stay close to hedgerows and feed on weeds, but they gradually disperse more widely and then when temperatures get to about 20°C more widespread dispersal occurs and they can fly with the prevailing wind.
- The older literature says that the period of greatest activity is from 10<sup>th</sup> April – 20<sup>th</sup> May – but more recently damage appears to have occurred over a much more extended period than this.
- The beetles mate and lay eggs towards the end of May.
- The larvae hatch and feed on plant roots and form pupae after about 4 weeks.
- The pupal stage lasts for about 4 weeks and then adults emerge in late July – early August when they again feed on crops.
- In autumn the beetles move into shelter, away from crops, and hibernate. The older literature suggests that the flea beetle population in any field is a drifting one and that different species dominate in different parts of the country.

### Pest beetles of brassica crops – 9th July 2019

No forecasts for flea beetles have been developed. However, they are recorded (all species together) from water trap captures at Wellesbourne and these will be summarized during the year in the table below. Numbers of cabbage stem weevil, cabbage seed weevil and cabbage stem flea beetle are also shown. We first set up the traps in some overwintered swedes but the traps are now in a plot sown this spring.

Date	Total in 3 traps near overwintered swedes. Set up 26th February 2019			
	No. flea beetles	No. cabbage stem weevils	No. cabbage seed weevils	Cabbage stem flea beetles
5 <sup>th</sup> March	6	14	0	2
12 <sup>th</sup> March	1	0	0	0
19 <sup>th</sup> March	1	0	0	1
26 <sup>th</sup> March	8	10	0	1
2 <sup>nd</sup> April	32	110	0	2
9 <sup>th</sup> April	9	2	0	2
16 <sup>th</sup> April	12	5	0	2
23 <sup>rd</sup> April	16	37	56	12
26 <sup>th</sup> April	0	3	1	3
30 <sup>th</sup> April	8	18	4	2
3 <sup>rd</sup> May	15/29	16/9 (old swedes/new swedes)	3/2	3/4
7 <sup>th</sup> May	2/24	5/1 (old swedes/new swedes)	0/0	0/5
10 <sup>th</sup> May	11/31	7/0 (old swedes/new swedes)	0/0	4/9
14 <sup>th</sup> May	23/311	23/59	7/0	5/15
17 <sup>th</sup> May	12/357	9/14	9/3	8/14
21 <sup>st</sup> May	19/512	8/34	4/2	15/17
24 <sup>th</sup> May	258	23 (new swedes only from now onwards)	7	15
28 <sup>th</sup> May	148	24	2	24
31 <sup>st</sup> May	51	8	1	4
4 <sup>th</sup> June	86	12	4	9



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Total in 3 traps near overwintered swedes. Set up 26th February 2019				
Date	No. flea beetles	No. cabbage stem weevils	No. cabbage seed weevils	Cabbage stem flea beetles
7 <sup>th</sup> June	68	15	0	0
11 <sup>th</sup> June	40	6	1	0
14 <sup>th</sup> June	1	2	0	0
18 <sup>th</sup> June	18	39	2	2
21 <sup>st</sup> June	0	25	0	0
25 <sup>th</sup> June	14	19	0	4
8 <sup>th</sup> June	0	1	0	2
2 <sup>nd</sup> July	0	0	0	3
5 <sup>th</sup> July	0	13	1	8
9 <sup>th</sup> July	0	26	1	2

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Number of pest beetles captured at Wellesbourne in 2018

Date	Total in 3 traps near overwintered swedes. Set up 20th March.			
	No. flea beetles	No. cabbage stem weevils	No. cabbage seed weevils	Cabbage stem flea beetles
27 <sup>th</sup> March	2	19	0	0
3 <sup>rd</sup> April	0	19	0	0
10 <sup>th</sup> April	1	9	0	0
17 <sup>th</sup> April	3	35	0	1
24 <sup>th</sup> April	28	31	28	0
27 <sup>th</sup> April	2	0	0	0
1 <sup>st</sup> May	1	0	0	0
4 <sup>th</sup> May	4	1	2	0
8 <sup>th</sup> May	23	25	45	13
11 <sup>th</sup> May	2	0	1	3
15 <sup>th</sup> May	21	10	0	4
18 <sup>th</sup> May	8	8	1	0
22 <sup>nd</sup> May	18	23	0	9
25 <sup>th</sup> May	2	1	0	0
29 <sup>th</sup> May	30	11	0	1
1 <sup>st</sup> June	6	3	1	2
5 <sup>th</sup> June	35	16	18	7
8 <sup>th</sup> June	9	0	1	2
12 <sup>th</sup> June	30	2	8	1
15 <sup>th</sup> June	5	2	0	1
19 <sup>th</sup> June	13	3	0	0
22 <sup>nd</sup> June	0	0	0	0

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Date	Total in 3 traps near overwintered swedes. Set up 20th March.			
	No. flea beetles	No. cabbage stem weevils	No. cabbage seed weevils	Cabbage stem flea beetles
26 <sup>th</sup> June	0	3	0	0
29 <sup>th</sup> June	6	7	0	1
3 <sup>rd</sup> July	10	5	0	4
6 <sup>th</sup> July	64	10	3	46
10 <sup>th</sup> July	217	44	0	60
13 <sup>th</sup> July	213	22	1	58
17 <sup>th</sup> July	235	14	0	37
19 <sup>th</sup> July	170	6	0	12
24 <sup>th</sup> July	586	8	0	23
27 <sup>th</sup> July	875	6	0	12
31 <sup>st</sup> July	555	3	0	7
3 <sup>rd</sup> August	640	4	0	2
7 <sup>th</sup> August	670	6	0	1
10 August	438	2	0	2
14 August	248	2	0	4
17 August	202	1	0	1
21 August	265	1	0	1
24 August	192	0	0	3
28 August	87	0	0	2
31 August	109	0	0	2
4 September	102	0	0	11
7 September	53	0	0	0
11 September	73	0	0	1
14 September	38	0	0	4
18 September	50	0	0	1
21 September	30	0	0	2
25 September	35	1	0	1
28 September	85	2	0	10
2 October	30	1	0	4
9 October	34	6	0	9
16 October	30	0	0	6
23 October	13	1	0	1
30 October	5	0	0	3