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CATERPILLAR PESTS OF LETTUCE CROPS

10 September 2020

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Introduction

The caterpillars of two of species of moth and butterfly can be pests of lettuce crops:

Species	Activity periods	Importance
Silver Y moth (<i>Autographa gamma</i>)	Migrant and can arrive at any time	Sporadic pest – caterpillars hard to detect. Pheromone traps available to monitor adults.
Turnip moth (cutworm) (<i>Agrotis segetum</i>)	Late May-early July, sometimes a second generation in later summer – forecast available	Sporadic pest – caterpillars hard to detect. Pheromone traps available to monitor adults.

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Information that will be available in 2020

This year, information will be available from two sources:

- Information from citizen science web sites is summarized on this web page: <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/silvery/sysightings2020/>
- Pheromone trap captures in Warwickshire.
- Information from the Syngenta Brassica Alert <https://www.syngenta.co.uk/brassica-alert>.
- There is information about **TURNIP MOTH** in the Pest Bulletin sheet on cutworms.



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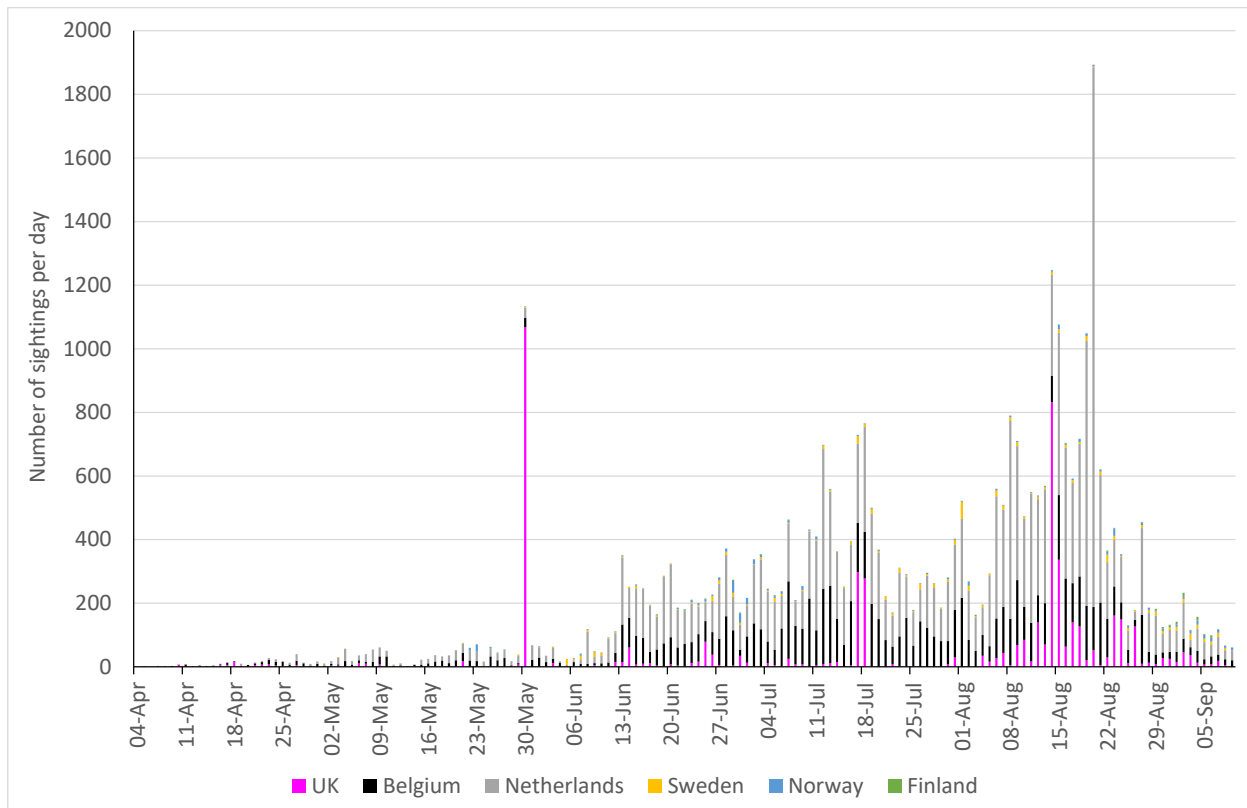
Monitoring information 2020

Silver Y moth

You can see the daily counts by citizen scientists here:

<https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/silvery/sysightings2020>

The graph below shows sightings by citizen scientists so far this year. There was a large influx of silver Y moths to Ireland/Outer Hebrides around 30th May and a significant influx recently.



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Pheromone trap captures of silver Y moth at Wellesbourne – traps set up 19th May

Date	Number of moths	Number of traps	Moths per trap
22 May	0	2	0
26 May	0	2	0
29 May	0	2	0
2 June	0	2	0
5 June	0	2	0
9 June	1	2	0.5
12 June	0	2	0
16 June	0	2	0
19 June	1	2	0.5
23 June	0	2	0
26 June	0	2	0
30 June	0	2	0
3 July	0	2	0
7 July	0	2	0

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Pheromone trap captures of silver Y moth at Wellesbourne – traps set up 19th May

Date	Number of moths	Number of traps	Moths per trap
10 July	0	2	0
14 July	1	2	0.5
17 July	2	2	1
21 July	0	2	0
24 July	0	2	0
28 July	0	2	0
31 July	0	2	0
4 August	0	2	0
7 August	0	2	0
11 August	0	2	0
14 August	1	2	0.5
18 August	0 (6 in 3 yellow water traps)	2	0
21 August	5	2	2.5
25 August	3 (2 in 3 yellow water traps)	2	1.5



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Pheromone trap captures of silver Y moth at Wellesbourne – traps set up 19th May

Date	Number of moths	Number of traps	Moths per trap
28 August	4 (4 in 3 water traps)	2	2
1 September	7 (4 in 3 water traps)	2	3.5
4 September	2	2	1
8 September	0	2	0

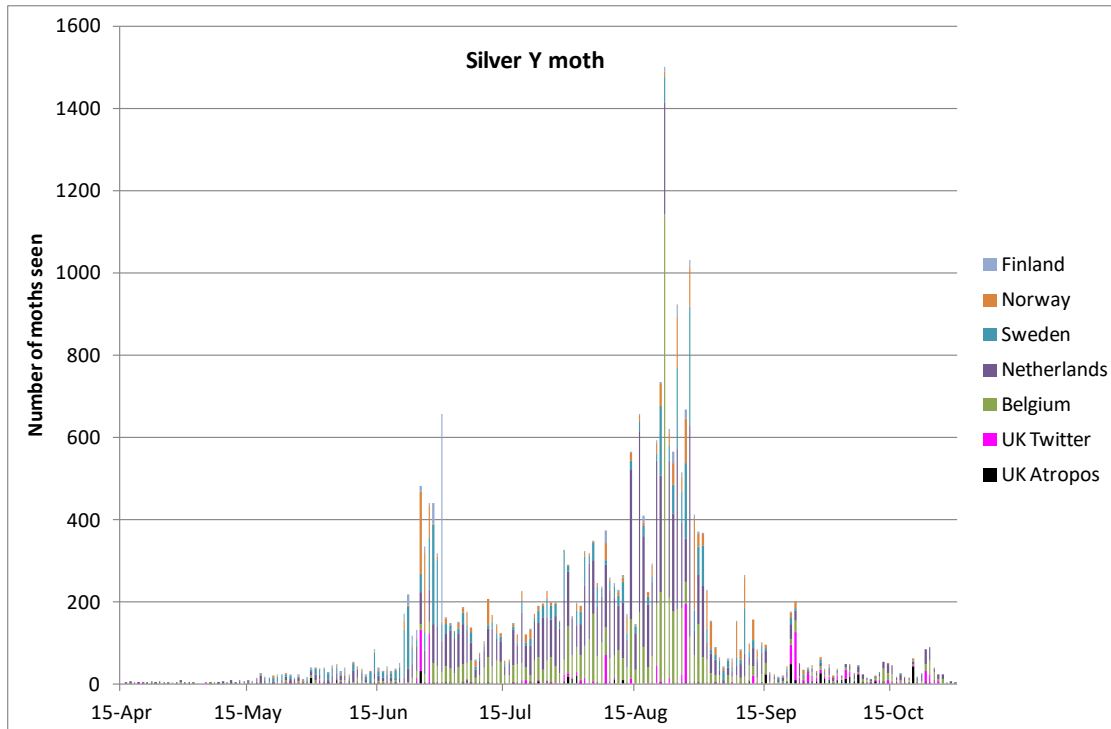


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Historical information from 2019

The graph below summarises sightings of silver Y moths from those websites since mid-April 2019.





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Historical information from 2019

Numbers of moths captured at Wellesbourne in 2019. The forecasts for cutworms (turnip moth caterpillars) are on a separate sheet.

Date	Silver Y moth (2 pheromone traps)	Turnip moth (2 pheromone traps)
14 May	0	4
17 May	0	1
20 May	0	0
24 May	0	0
28 May	0	9
31 May	0	5
4 June	0	2
7 June	0	0
11 June	0	2
14 June	0	0
18 June	0	1
21 June	0	1
25 June	0	1
28 June	0	3
2 July	0	1

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Numbers of moths captured at Wellesbourne in 2019. The forecasts for cutworms (turnip moth caterpillars) are on a separate sheet.

Date	Silver Y moth (2 pheromone traps)	Turnip moth (2 pheromone traps)
5 July	0	1
9 July	0	8
12 July	0	1
15 July	0	1
19 July	0	0
23 July	1	1
26 July	0	0
30 July	1	1
2 nd August	0	3
6 th August	2	2
9 th August	3	2
13 th August	7	2
16 th August	1	0
20 th August	0	0
23 rd August	0	0
27 th August	0	0

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Numbers of moths captured at Wellesbourne in 2019. The forecasts for cutworms (turnip moth caterpillars) are on a separate sheet.

Date	Silver Y moth (2 pheromone traps)	Turnip moth (2 pheromone traps)
30 th August	0	2
3 rd September	0	2
6 th September	0	2
10 th September	1	3
13 th September	2	0
17 th September	0	2
20 th September	0	0
24 th September	0	1
27 th September	0	0
1 st October	0	0
4 th October	1	0
7 th October	0	1
11 th October	0	0
15 th October	1	4
18 th October	1	0
22 nd October	3	1



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Numbers of moths captured at Wellesbourne in 2019. The forecasts for cutworms (turnip moth caterpillars) are on a separate sheet.

Date	Silver Y moth (2 pheromone traps)	Turnip moth (2 pheromone traps)
25 th October	0	0
29 th October	1	1

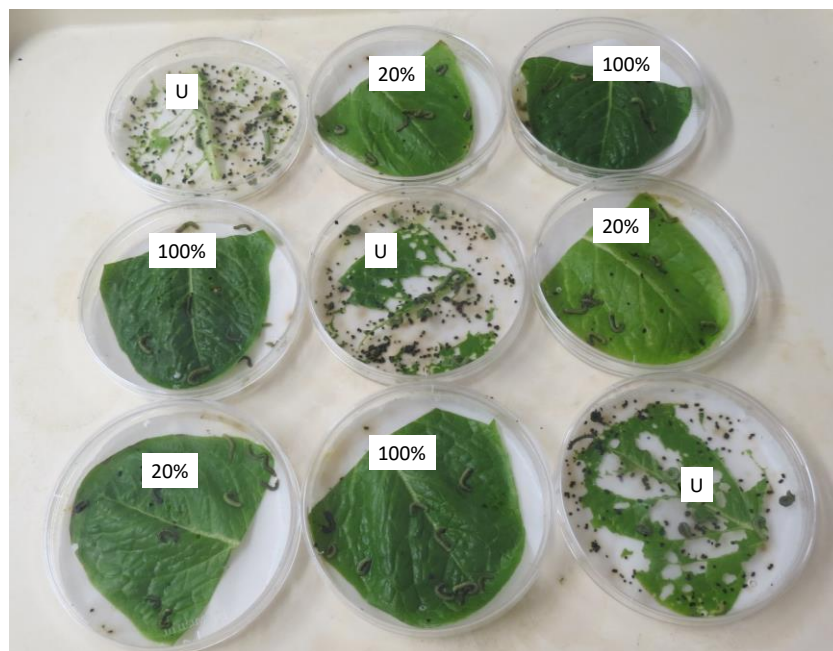
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Tests on insecticide resistance status of silver Y moths in 2018

Silver Y moths were very abundant in 2018 and their caterpillars caused significant damage in some lettuce crops. There is more information here: <https://horticulture.ahdb.org.uk/news-item/pest-bulletin-update-lettuce-caterpillars>.

Growers asked whether the caterpillars might be resistant to insecticides – particularly pyrethroids. Using a protocol provided by Steve Foster from Rothamsted Research we tested some caterpillars we reared from eggs laid by a field-caught silver Y moth. The results are shown below and there is no evidence that these caterpillars are resistant to Hallmark (Lambda-cyhalothrin). All the caterpillars placed on treated foliage died rapidly. We undertook a similar test with another batch of larvae and the results were similar. We obtained similar results with Tracer (spinosad) and indoxacarb.



100% = field rate (25 ppm Lambda-cyhalothrin – Hallmark 75 ml/ha in 300 l/ha)

20% = 20% field rate (5 ppm Lambda-cyhalothrin - Hallmark 15 ml/ha in 300 l/ha)

U = untreated control