



In partnership with



CATERPILLAR PESTS OF LETTUCE CROPS

30 July 2020

Page	Contents
1	Introduction
2	Information that will be available in 2020
3	Monitoring information in 2020
6	Historical information from 2019
11	Tests on insecticide resistance status of silver Y moths in 2018

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.

In partnership with



THE UNIVERSITY OF
WARWICK



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.
- There is information about **TURNIP MOTH** in the Pest Bulletin sheet on cutworms.



In partnership with



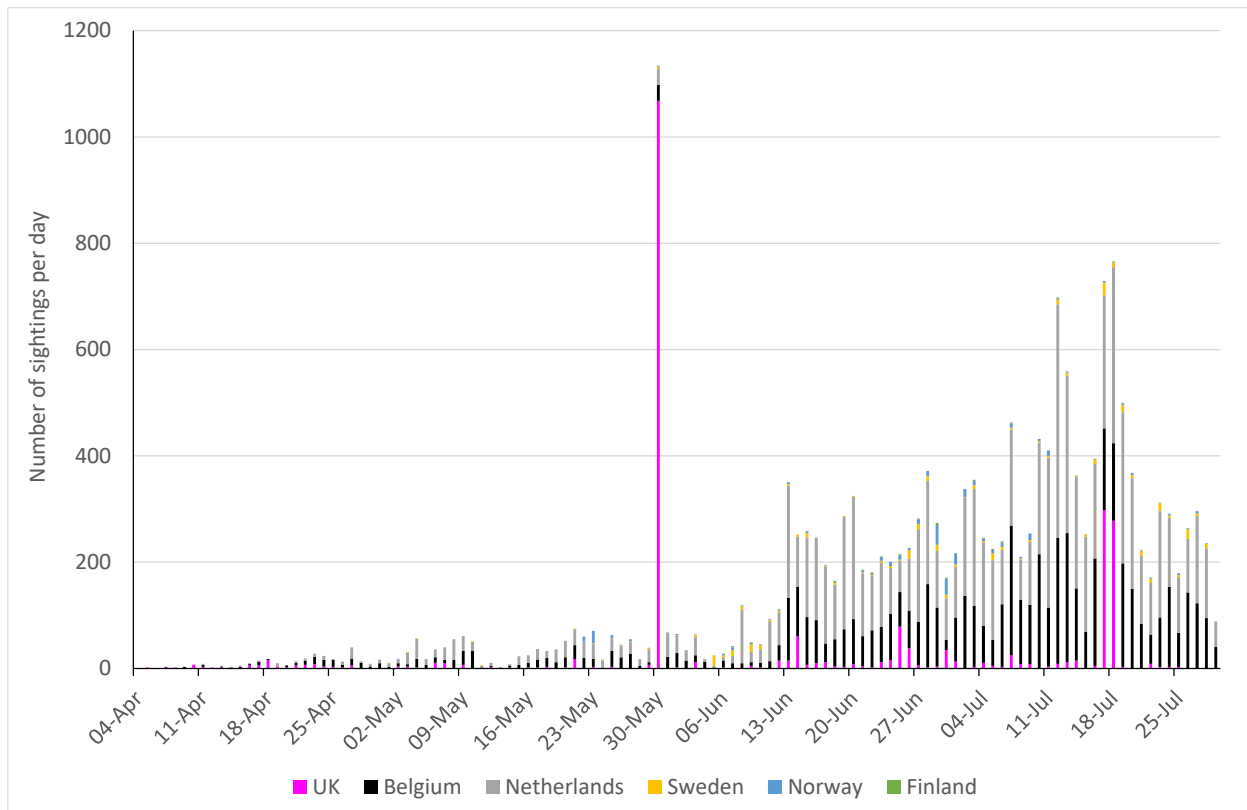
Monitoring information 2020

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.



In partnership with



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



In partnership with



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
17 July	2	2	1
21 July	0	2	0
24 July	0	2	0
28 July	0	2	0

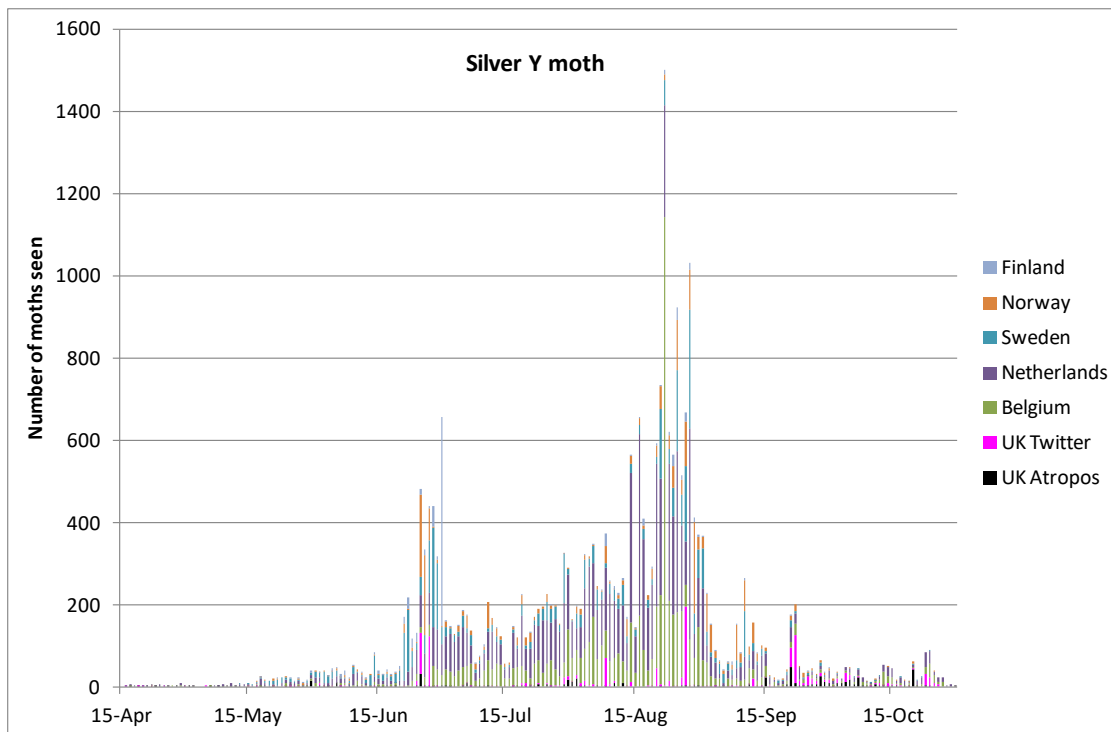


In partnership with



Historical information from 2019

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



In partnership with



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

In partnership with



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

In partnership with



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



In partnership with



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

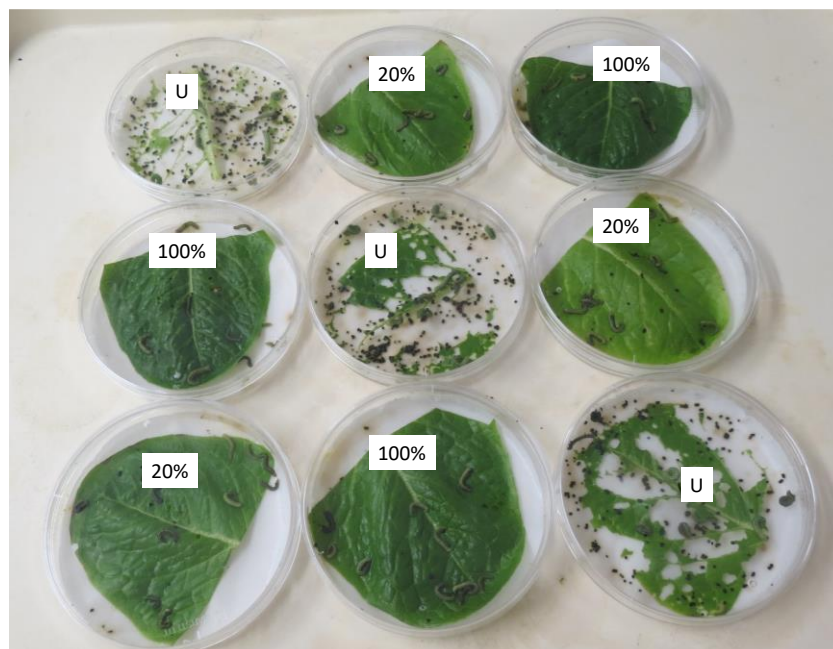
In partnership with



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