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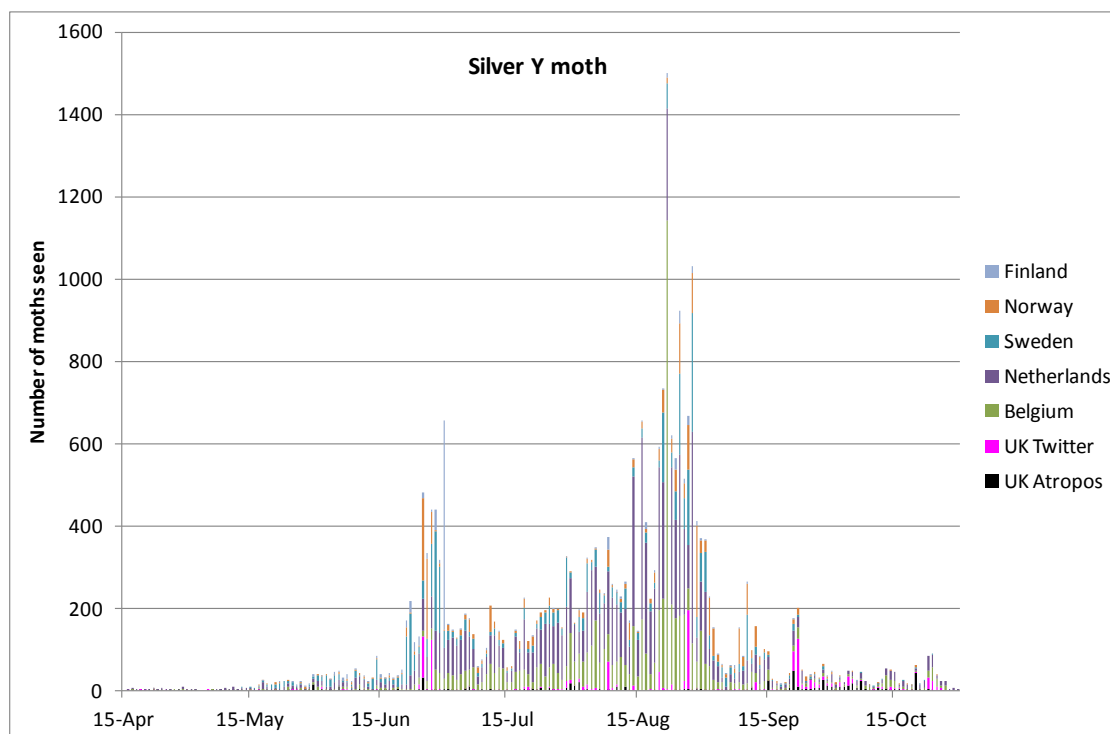


CATERPILLAR PESTS OF LETTUCE CROPS

29th October 2019

There was a small influx of silver Y moths on the night of 23rd October <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/plutella/sightings2019/>. In the autumn, silver Y moths that have bred in the UK attempt to return to their winter breeding grounds in the Mediterranean Basin so that they can continue their life-cycle under more favourable conditions <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/silvery/>. Silver Y moth captures in pheromone traps in brassica crops are recorded here <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/silvery/pheromonetraps/>.

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



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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)
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.

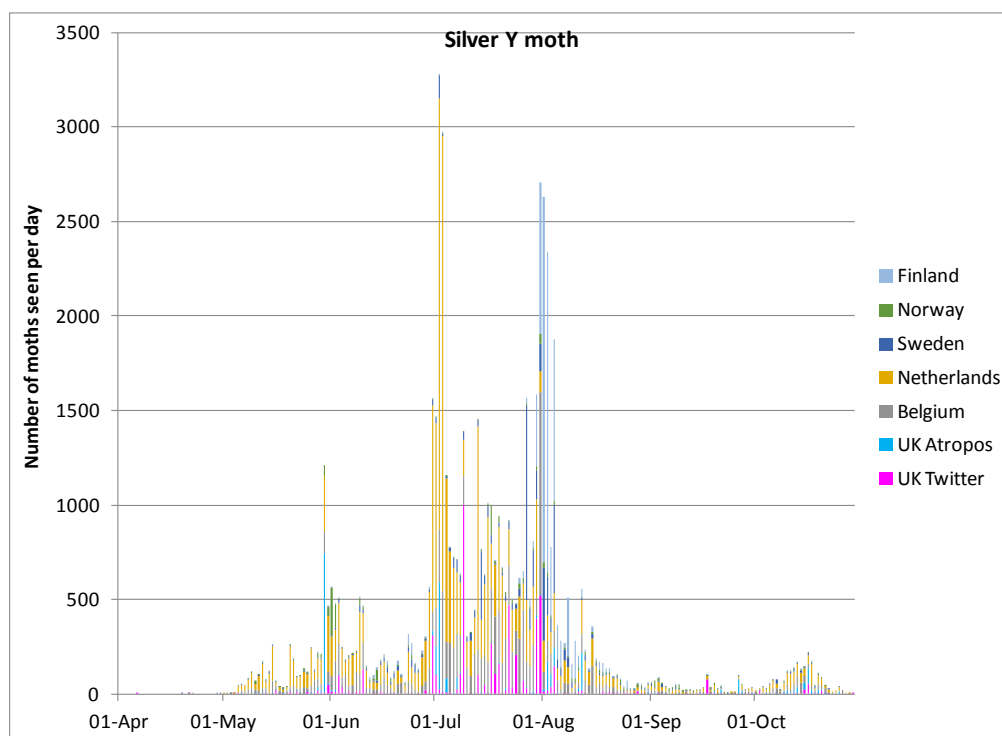
Date	Silver Y moth (2 pheromone traps)	Turnip moth (2 pheromone traps)
25 th October	0	0
29 th October	1	1

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2018

Summaries of sightings of silver Y moth in several northern European countries in 2018 can be found here: <https://warwick.ac.uk/fac/sci/lifesci/wcc/research/pests/plutella/sightings2018/>. These are moths captured or seen and reported on 'biodiversity monitoring' websites. The graph below summarises sightings of silver Y moths from those websites.

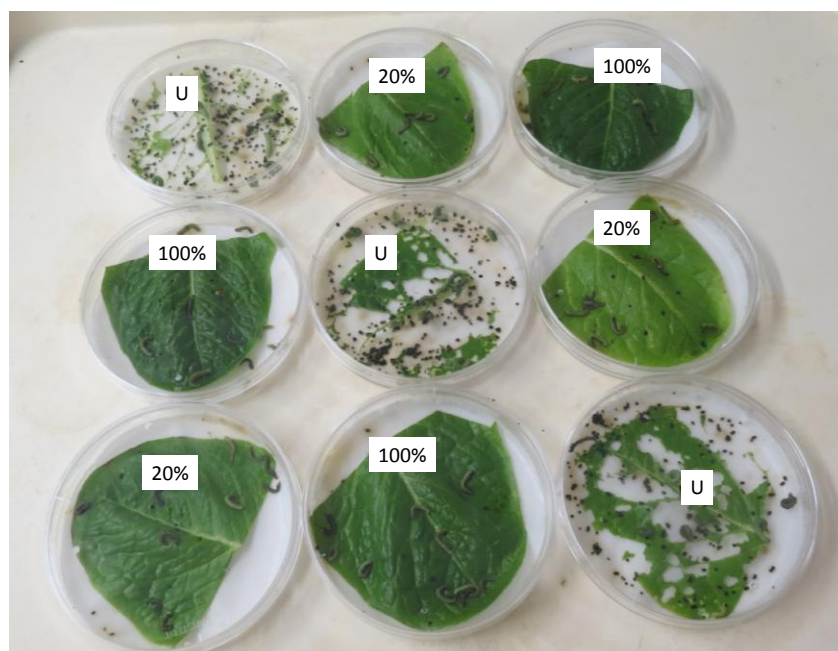


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Silver Y moths were very abundant in 2018 and their caterpillars caused significant damage in some lettuce crops. There is more information here: <https://horticulture.ahdb.org.uk/news-item/pest-bulletin-update-lettuce-caterpillars>.

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

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Silver Y moth captures in pheromone traps at Wellesbourne in 2018

Date	Number (2 traps)	Date	Number (2 traps)	Date	Number (2 traps)
8 th June	1	31 st July	2	21 st September	0
12 th June	0	3 rd August	0	25 th September	0
15 th June	0	7 th August	0	28 th September	0
19 th June	0	10 th August	0	2 nd October	0
22 nd June	0	14 th August	0	9 th October	0
26 th June	1	17 th August	2	16 th October	1
29 th June	0	21 st August	0	23 rd October	2
3 rd July	0	24 th August	0	30 th October	0
6 th July	1	28 th August	1		
10 th July	2	31 st August	0		
13 th July	5	4 th September	2		
17 th July	15	7 th September	0		
19 th July	4	11 th September	4		
24 th July	5	14 th September	1		
27 th July	4	18 th September	0		

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Background

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.

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