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## POLLEN BEETLES – 17 September 2020

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### Introduction

Adult pollen beetles (*Brassicogethes* spp.) are occasional pests of cauliflower and broccoli. The adult beetles feed on the curds or florets causing physical damage. This type of damage usually occurs in mid-summer when new adults emerge from oil seed rape crops and move into other areas to feed. They are also often found in flowers at this time. These new adults feed for a period of time and then seek hibernation sites, for example in leaf litter at the base of hedges. They overwinter as adults and emerge from hibernation in spring, when they can again be seen feeding on flowers such as dandelions. They then move to suitable host plants such as oil seed rape to lay eggs. Once hatched, the larvae feed on flower buds and then drop to the soil to pupate, from which the new generation of adults emerges. The image shows adult pollen beetles and feeding damage on a cauliflower curd.



Predicted dates of the start of the migration of newly-emerged pollen beetle adults from oil seed rape fields to feeding sites – such as broccoli and cauliflower crops – will be provided from late May onwards. The risk of infestation is obviously higher if horticultural crops are close to fields of oil seed rape. Pollen beetles are particularly active when the weather is warm and humid. Adult pollen beetles will continue to feed for a period of time and then seek hibernation sites, for example in leaf litter at the base of hedges.



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**Pollen beetle forecast**

The pollen beetle forecast below indicates the predicted dates of the migration of newly-emerged pollen beetle adults from oil seed rape fields to feeding sites – such as broccoli and cauliflower crops.

The risk of infestation is obviously higher if horticultural crops are close to fields of oil seed rape. Pollen beetles are particularly active when the weather is warm and humid.

| Region                      | Estimated start of pollen beetle migration from oil seed rape crops | Estimated mid-point of pollen beetle migration from oil seed rape crops |
|-----------------------------|---|---|
| Cornwall (Newquay)          | 27 June   | 9 July  |
| Kent (Sittingbourne)        | 1 July  | 11 July   |
| Suffolk (Woodbridge)        | 26 June   | 7 July  |
| Wellesbourne (Warwick)      | 18 June   | 29 June   |
| Norfolk (Norwich)           | 3 July  | 12 July   |
| South Lincolnshire (Boston) | 24 June   | 3 July  |
| Nottingham (Bilsthorpe)     | 5 July  | 15 July   |
| Lancashire (Ormskirk)       | 7 July  | 21 July   |
| York (Market Weighton)      | 7 July  | 18 July   |
| Scotland (Blairgowrie)      | 26 July   | 2 August  |



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**Monitoring data 2020**

We first set up the traps in some overwintered swedes at Wellesbourne but because of COVID-19 the traps were moved to the village allotments and in a garden at Tysoe in south Warwickshire. They are now back at Wellesbourne (from 19<sup>th</sup> May).

| Date                                  | Total in 3 traps near overwintered swedes at Wellesbourne | Total in 3 traps in Tysoe Allotments, Warwickshire set up 25 <sup>th</sup> March | Total in traps in garden in Tysoe, Warwickshire set up 28 <sup>th</sup> March |
|---------------------------------------|---|--|---|
| 7 <sup>th</sup> -14 <sup>th</sup> Jan | 0   |  |   |
| 21 <sup>st</sup> Jan                  | 0   |  |   |
| 28 <sup>th</sup> Jan                  | 0   |  |   |
| 4 <sup>th</sup> Feb                   | 0   |  |   |
| 11 <sup>th</sup> Feb                  | 0   |  |   |
| 18 <sup>th</sup> Feb                  | 0   |  |   |
| 25 <sup>th</sup> Feb                  | 0   |  |   |
| 3 <sup>rd</sup> Mar                   | 0   |  |   |
| 10 <sup>th</sup> Mar                  | 10  |  |   |
| 17 <sup>th</sup> Mar                  | 74  |  |   |
| 26 <sup>th</sup> Mar                  | -   | 4  |   |
| 27 <sup>th</sup> Mar                  | -   | 2  |   |
| 28 <sup>th</sup> Mar                  | -   | 0  |   |
| 29 <sup>th</sup> Mar                  | -   | 0  | 1 (5 traps)   |
| 30 <sup>th</sup> Mar                  | -   | 0  | 1 (6 traps)   |
| 31 <sup>st</sup> Mar                  | -   | 0  | 0 (6 traps)   |
| 1 <sup>st</sup> Apr                   | -   | 0  | 0 (6 traps)   |
| 2 <sup>nd</sup> Apr                   | -   | 0  | 0 (6 traps)   |



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| Date   | Total in 3 traps near overwintered swedes at Wellesbourne | Total in 3 traps in Tysoe Allotments, Warwickshire set up 25 <sup>th</sup> March | Total in traps in garden in Tysoe, Warwickshire set up 28 <sup>th</sup> March (6 traps) |
|--------|---|--|---|
| 03-Apr | -   | 7  | 27  |
| 04-Apr | -   | 15   | 86  |
| 05-Apr | -   | 33   | 204   |
| 06-Apr | -   | 30   | 122   |
| 07-Apr | -   | 79   | 532   |
| 08-Apr | -   | 118  | 19  |
| 9-Apr  | -   | 43   | 18  |
| 10-Apr | -   | 21   | 96  |
| 11-Apr | -   | 12   | 18  |
| 12-Apr | -   | 1  | 3   |
| 13-Apr | -   | 1  | 0   |
| 14-Apr | -   | 2  | 0   |
| 15-Apr | -   | 9  | 1   |
| 16-Apr | -   | 4  | 9   |
| 17-Apr | -   | 0  | 0   |
| 18-Apr | -   | 0  | 0   |
| 19-Apr | -   | 1  | 1   |
| 20-Apr | -   | 1  | 1   |
| 21-Apr | -   | 1  | 5   |
| 22-Apr | -   | 2  | 0   |
| 23-Apr | -   | 35   | 0   |



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| Date      | Total in 3 traps near overwintered swedes at Wellesbourne | Total in 3 traps in Tysoe Allotments, Warwickshire set up 25 <sup>th</sup> March | Total in traps in garden in Tysoe, Warwickshire set up 28 <sup>th</sup> March (6 traps) |
|-----------|---|--|---|
| 24-Apr    | -   | 39   | 0   |
| 25-Apr    | -   | 21   | 6   |
| 26-Apr    | -   | 3  | 0   |
| 27-Apr    | -   | 1  | 0   |
| 28-Apr    | -   | 0  | 0   |
| 29-Apr    | -   | 0  | 0   |
| 30-Apr    | -   | 0  | 0   |
| 1-May     | -   | 0  | 0   |
| 2-May     | -   | 0  | 0   |
| 3-May     | -   | 1  | 0   |
| 4-May     | -   | 2  | 0   |
| 5-May     | -   | 0  | 0   |
| 6-May     | -   | 0  | 0   |
| 7-May     | -   | 0  | 0   |
| 8-9 May   | -   | 0  | 0   |
| 10-11 May | -   | 0  | 0   |
| 12 May    | -   | 0  | 0   |
| 13 May    | -   | 0  | 0   |

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| Date    | Total in 3 traps in swede plot at Wellesbourne | Total in 3 traps in Tysoe Allotments, Warwickshire set up 25 <sup>th</sup> March | Total in traps in garden in Tysoe, Warwickshire set up 28 <sup>th</sup> March (6 traps) |
|---------|--|--|---|
| 14 May  | -  | 0  | 0   |
| 15 May  | -  | 0  | 0   |
| 16 May  | -  | 0  | 0   |
| 17 May  | -  | 0  | 0   |
| 18 May  | -  | 0  | 0   |
| 19 May  | Traps set up at Wellesbourne                   | 0  | 0   |
| 20 May  | -  | 0  | 0   |
| 21 May  | -  | 0  | 0   |
| 22 May  | 1346   | -  | -   |
| 26 May  | 1845   | -  | -   |
| 29 May  | 1273   | -  | -   |
| 2 June  | 624  | -  | -   |
| 5 June  | 257  | -  | -   |
| 9 June  | 900  | -  | -   |
| 12 June | 1370   | -  | -   |
| 16 June | 1119   | -  | -   |
| 19 June | 405  | -  | -   |
| 23 June | 601  | -  | -   |
| 26 June | 536  | -  | -   |
| 30 June | 265  | -  | -   |
| 3 July  | 614  | -  | -   |
| 7 July  | 564  | -  | -   |



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| Date         | Total in 3 traps in swede plot at Wellesbourne |
|--------------|--|
| 10 July      | 274  |
| 14 July      | 612  |
| 17 July      | 226  |
| 21 July      | 212  |
| 24 July      | 152  |
| 28 July      | 100  |
| 31 July      | 168  |
| 4 August     | 166  |
| 7 August     | 64   |
| 11 August    | 78   |
| 14 August    | 47   |
| 18 August    | 67   |
| 21 August    | 13   |
| 25 August    | 27   |
| 28 August    | 10   |
| 1 September  | 13   |
| 4 September  | 5  |
| 8 September  | 2  |
| 11 September | 10   |
| 15 September | 3  |





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**Historical information from 2019**

Counts of beetles captured in 3 yellow water traps at Wellesbourne in 2019 are shown below.

| Date     | Total in 3 traps near overwintered swedes. Set up 26th February. |
|----------|--|
| 5 March  | 43   |
| 12 March | 0  |
| 19 March | 6  |
| 26 March | 862  |
| 2 April  | 894  |
| 9 April  | 88   |
| 16 April | 104  |
| 23 April | 149  |
| 26 April | 18   |
| 30 April | 136  |
| 3 May    | 247/89 (old swedes/new swedes)                                   |
| 7 May    | 189/24 (old swedes/new swedes)                                   |
| 10 May   | 133/27 (old swedes/new swedes)                                   |
| 14 May   | 183/348 (old swedes/new swedes)                                  |
| 17 May   | 88/357 (old swedes/new swedes)                                   |
| 21 May   | 41/101 (old swedes/new swedes)                                   |
| 24 May   | 209 (new swedes only from now onwards)                           |
| 28 May   | 88   |
| 31 May   | 74   |
| 4 June   | 339  |



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**Captures of pollen beetle in yellow water traps at Wellesbourne 2019.**

| Date                    | Total in 3 traps near overwintered swedes. Set up 26th February. |
|-------------------------|--|
| 7 <sup>th</sup> June    | 242  |
| 11 <sup>th</sup> June   | 254  |
| 14 <sup>th</sup> June   | 136  |
| 18 <sup>th</sup> June   | 418  |
| 21 <sup>st</sup> June   | 3,650  |
| 25 <sup>th</sup> June   | 10,500   |
| 28 <sup>th</sup> June   | 4,300  |
| 2 <sup>nd</sup> July    | 5,200  |
| 5 <sup>th</sup> July    | 2,550  |
| 9 <sup>th</sup> July    | 3,900  |
| 12 <sup>th</sup> July   | 713  |
| 16 <sup>th</sup> July   | 618  |
| 19 <sup>th</sup> July   | 293  |
| 23 <sup>rd</sup> July   | 444  |
| 26 <sup>th</sup> July   | 453  |
| 30 <sup>th</sup> July   | 320  |
| 2 <sup>nd</sup> August  | 267  |
| 6 <sup>th</sup> August  | 165  |
| 9 <sup>th</sup> August  | 99   |
| 13 <sup>th</sup> August | 84   |
| 16 <sup>th</sup> August | 44   |
| 20 <sup>th</sup> August | 33   |
| 23 <sup>rd</sup> August | 26   |
| 27 <sup>th</sup> August | 9  |



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**Captures of pollen beetle in yellow water traps at Wellesbourne 2019.**

| Date                       | Total in 3 traps near overwintered swedes. Set up 26th February. |
|----------------------------|--|
| 30 <sup>th</sup> August    | 3  |
| 3 <sup>rd</sup> September  | 6  |
| 6 <sup>th</sup> September  | 6  |
| 10 <sup>th</sup> September | 7  |
| 13 <sup>th</sup> September | 3  |
| 17 <sup>th</sup> September | 6  |
| 20 <sup>th</sup> September | 0  |
| 24 <sup>th</sup> September | 2  |
| 27 <sup>th</sup> September | 0  |
| 1 <sup>st</sup> October    | 5  |
| 4 <sup>th</sup> October    | 1  |
| 8 <sup>th</sup> October    | 1  |
| 11 <sup>th</sup> October   | 0  |
| 15 <sup>th</sup> October   | 1  |
| 18 <sup>th</sup> October   | 3  |
| 22 <sup>nd</sup> October   | 1  |
| 25 <sup>th</sup> October   | 6  |
| 29 <sup>th</sup> October   | 2  |