

# **ARC-Small Grain False Armyworm moth numbers**

Caledon and Swellendam  
Week 45

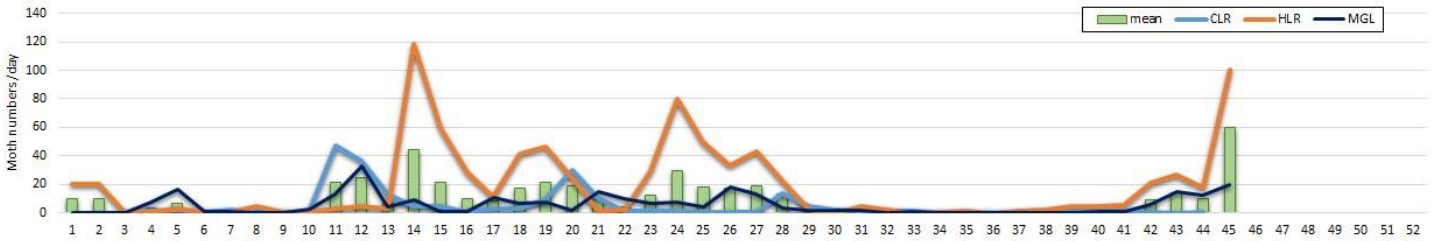


### Caledon moth traps

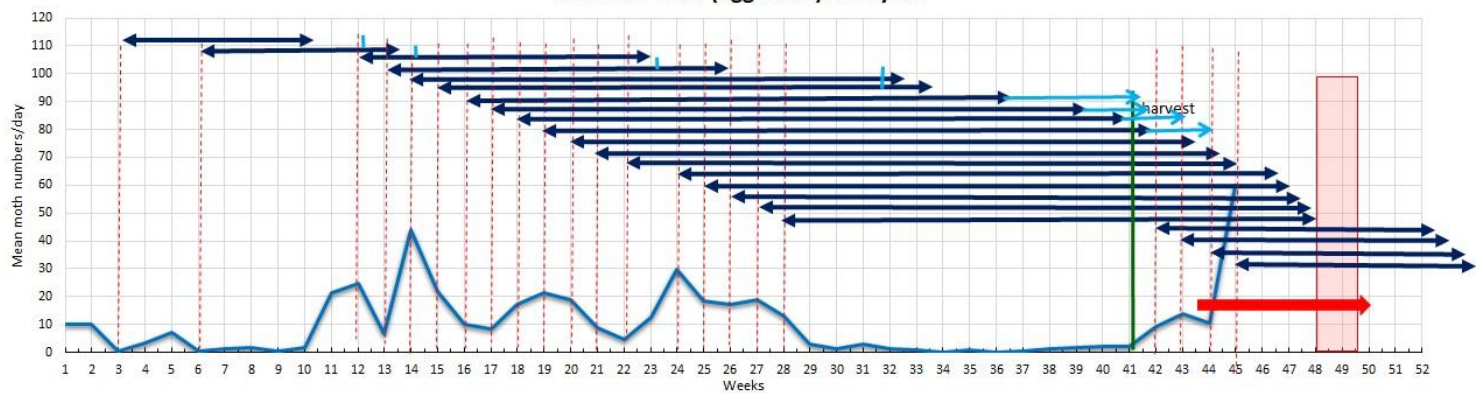
First graph indicates the original data recieved from the farmers.

- The second graph indicates the mean number of moths, while the dark blue arrows indicate the life cycles as forecasted by the average mean daily temperatures. Light blue arrows indicate the extension or reduction of the forecasted life cycle as calculated according to current temperatures.
- The new peak appearing now could release larvae under favourable conditions (red arrow). From mid-November could be critical time for the larva - within a few days from raining female moths may lay eggs on rotten grass
- Table indicate the dates when larvae will be present (left) and when the new moth flights could be happen.

### Caledon moth numbers 2020



### Caledon: Total (egg-moth) life cycle



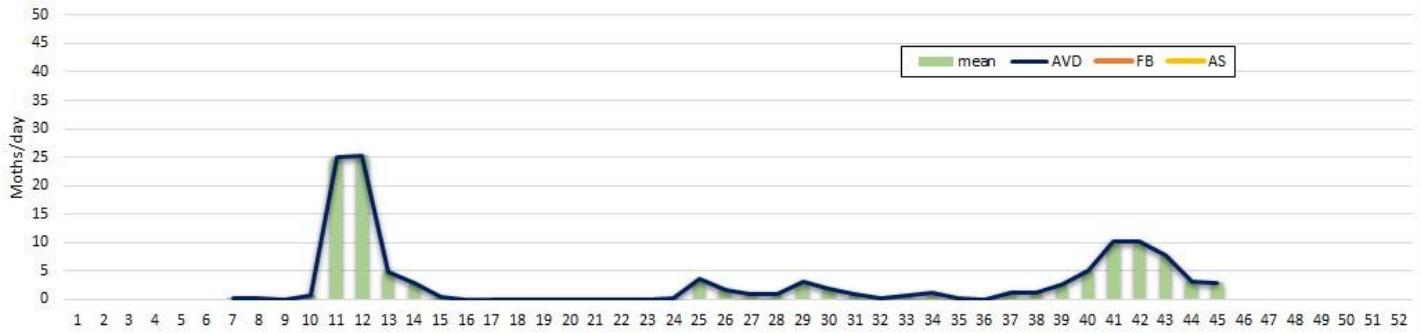
| Caledon 2020 Larvae |        |      |           |      |                  |        |      |           |      | Caledon 2020 New moth peaks |                  |        |      |          |      |                  |        |      |          |      |            |
|---------------------|--------|------|-----------|------|------------------|--------|------|-----------|------|-----------------------------|------------------|--------|------|----------|------|------------------|--------|------|----------|------|------------|
| Mean temperature    |        |      |           |      | Real temperature |        |      |           |      | Difference                  | Mean temperature |        |      |          |      | Real temperature |        |      |          |      | Difference |
| Week                | Start  | Week | Larvae er | Days | Week             | Start  | Week | Larvae er | Days |                             | Week             | Start  | Week | New moth | Days | Week             | Start  | Week | New moth | Days |            |
| 2                   | 07-Jan | 6    | 04-Feb    | 29   | 2                | 07-Jan | 6    | 04-Feb    | 29   | 0                           | 2                | 07-Jan | 9    | 26-Feb   | 51   | 2                | 07-Jan | 9    | 27-Feb   | 52   | 1          |
| 5                   | 28-Jan | 9    | 23-Feb    | 27   | 5                | 28-Jan | 9    | 23-Feb    | 27   | 0                           | 5                | 28-Jan | 12   | 19-Mar   | 52   | 5                | 28-Jan | 12   | 19-Mar   | 52   | 0          |
| 11                  | 10-Mar | 15   | 11-Apr    | 33   | 11               | 10-Mar | 16   | 15-Apr    | 37   | 4                           | 11               | 10-Mar | 22   | 25-May   | 77   | 11               | 10-Mar | 22   | 28-May   | 81   | 4          |
| 12                  | 17-Mar | 17   | 21-Apr    | 36   | 12               | 17-Mar | 17   | 24-Apr    | 39   | 3                           | 12               | 17-Mar | 24   | 12-Jun   | 88   | 12               | 17-Mar |      |          |      |            |
| 14                  | 30-Mar | 19   | 09-May    | 41   | 14               | 30-Mar | 19   | 09-May    | 41   | 0                           | 14               | 30-Mar | 32   | 05-Aug   | 129  | 14               | 30-Mar | 31   | 31-Jul   | 123  | -6         |
| 15                  | 06-Apr | 21   | 18-May    | 43   | 15               | 06-Apr | 21   | 20-May    | 45   | 2                           | 15               | 06-Apr | 35   | 26-Aug   | 143  | 15               | 06-Apr | 37   | 08-Sep   | 156  | 13         |
| 16                  | 14-Apr | 23   | 31-May    | 48   | 16               | 14-Apr | 22   | 29-May    | 46   | -2                          | 16               | 14-Apr | 38   | 15-Sep   | 156  | 16               | 14-Apr | 39   | 22-Sep   | 162  | 6          |
| 17                  | 20-Apr | 24   | 11-Jun    | 53   | 17               | 20-Apr | 23   | 06-Jun    | 48   | -5                          | 17               | 20-Apr | 39   | 24-Sep   | 159  | 17               | 20-Apr | 41   | 06-Oct   | 170  | 11         |
| 18                  | 27-Apr | 26   | 26-Jun    | 61   | 18               | 27-Apr | 25   | 20-Jun    | 55   | -6                          | 18               | 27-Apr | 41   | 04-Oct   | 161  | 18               | 27-Apr | 43   | 18-Oct   | 175  | 14         |
| 19                  | 04-May | 28   | 11-Jul    | 69   | 19               | 04-May | 27   | 03-Jul    | 61   | -8                          | 19               | 04-May | 42   | 13-Oct   | 163  | 19               | 04-May | 44   | 25-Oct   | 175  | 12         |
| 20                  | 12-May | 31   | 31-Jul    | 81   | 20               | 12-May | 31   | 30-Jul    | 80   | -1                          | 20               | 12-May | 43   | 19-Oct   | 161  | 20               | 12-May |      |          |      | -161       |
| 21                  | 18-May | 33   | 14-Aug    | 89   | 21               | 18-May | 33   | 14-Aug    | 95   | 6                           | 21               | 18-May | 44   | 25-Oct   | 161  | 21               | 18-May |      |          |      | -161       |
| 23                  | 01-Jun | 36   | 05-Sep    | 97   | 23               | 01-Jun | 37   | 11-Sep    | 102  | 5                           | 23               | 01-Jun | 45   | 05-Nov   | 157  | 23               | 01-Jun |      |          |      | -157       |
| 24                  | 08-Jun | 37   | 10-Sep    | 95   | 24               | 08-Jun | 39   | 23-Sep    | 108  | 13                          | 24               | 08-Jun | 45   | 07-Nov   | 153  | 24               | 08-Jun |      |          |      | -153       |
| 25                  | 15-Jun | 38   | 16-Sep    | 94   | 25               | 15-Jun | 40   | 29-Sep    | 107  | 13                          | 25               | 15-Jun | 46   | 10-Nov   | 149  | 25               | 15-Jun |      |          |      | -149       |
| 26                  | 22-Jun | 39   | 20-Sep    | 91   | 26               | 22-Jun | 41   | 06-Oct    | 107  | 16                          | 26               | 22-Jun | 46   | 12-Nov   | 144  | 26               | 22-Jun |      |          |      | -144       |
| 27                  | 29-Jun | 39   | 25-Sep    | 89   | 27               | 29-Jun | 42   | 13-Oct    | 106  | 17                          | 27               | 29-Jun | 47   | 15-Nov   | 140  | 27               | 29-Jun |      |          |      | -140       |
| 28                  | 06-Jul | 40   | 29-Sep    | 86   | 28               | 06-Jul | 42   | 17-Oct    | 104  | 18                          | 28               | 06-Jul | 47   | 17-Nov   | 135  | 28               | 06-Jul |      |          |      | -135       |
| 42                  | 12-Oct | 45   | 01-Nov    | 21   | 42               | 12-Oct |      |           |      | -21                         | 42               | 12-Oct | 52   | 22-Dec   | 72   | 42               | 12-Oct |      |          |      | -72        |
| 43                  | 19-Oct | 48   | 28-Nov    | 41   | 43               | 19-Oct |      |           |      | -41                         | 43               | 19-Oct | 53   | 27-Dec   | 75   | 43               | 19-Oct |      |          |      | -75        |
| 44                  | 26-Oct | 49   | 03-Dec    | 39   | 44               | 26-Oct |      |           |      | -39                         | 44               | 26-Oct | 53   | 01-Jan   | 68   | 44               | 26-Oct |      |          |      | -68        |
| 45                  | 02-Nov | 50   | 12-Dec    | 37   | 45               | 02-Nov |      |           |      | -37                         | 45               | 02-Nov | 1    | 07-Jan   | 67   | 45               | 02-Nov |      |          |      | -67        |

### Swellendam moth traps

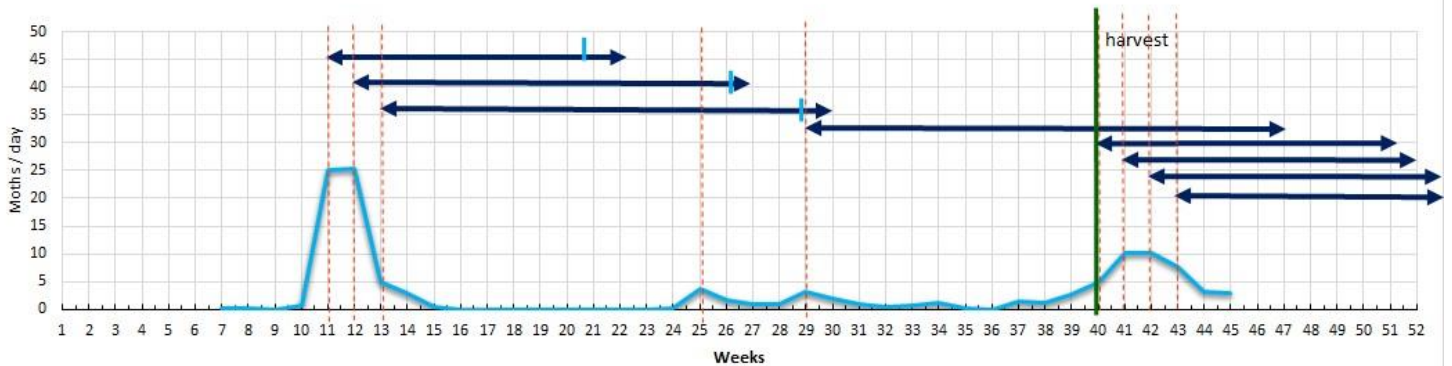
First graph indicates the original data recieved from the farmers.

- The second graph indicates the mean number of moths, while the dark blue arrows indicate the life cycles as forecasted by the average mean daily temperatures. Light blue lines/arrows indicate the extension or reduction of the forecasted life cycle as calculated according to current temperatures.
- According to the model there was no threat for an outbreak in the area, and new moth cycles are predicted for the beginning of the 2021
- Table indicate the dates when larvae will be present (left) and when the new moth flights could be happen.

### Swellendam moth number 2020



### Swellendam : Total (egg -adult) Life cycle



| Swellendam 2020 Larvae |                  |      |            |      |                  |        |      |            |            |      |
|------------------------|------------------|------|------------|------|------------------|--------|------|------------|------------|------|
| Week                   | Mean temperature |      |            |      | Real temperature |        |      |            | Difference |      |
|                        | Start            | Week | Larvae end | Days | Week             | Start  | Week | Larvae end |            | Days |
| 11                     | 10-Mar           | 16   | 12-Apr     | 34   | 11               | 10-Mar | 16   | 16-Apr     | 38         | 4    |
| 12                     | 19-Mar           | 18   | 26-Apr     | 39   | 12               | 19-Mar | 18   | 26-Apr     | 39         | 0    |
| 13                     | 25-Mar           | 19   | 04-May     | 41   | 13               | 25-Mar | 19   | 04-May     | 41         | 0    |
| 25                     | 16-Jun           | 37   | 12-Sep     | 89   | 25               | 16-Jun | 39   | 17-Oct     | 99         | 10   |
| 29                     | 14-Jul           | 40   | 28-Sep     | 77   | 29               | 14-Jul | 42   | 17-Oct     | 96         | 19   |
| 40                     | 29-Sep           | 46   | 12-Nov     | 45   | 40               | 29-Sep |      |            |            | -45  |
| 41                     | 06-Oct           | 47   | 17-Nov     | 43   | 41               | 06-Oct |      |            |            | -43  |
| 42                     | 13-Oct           | 48   | 23-Nov     | 42   | 42               | 13-Oct |      |            |            | -42  |
| 43                     | 20-Oct           | 49   | 29-Nov     | 41   | 43               | 20-Oct |      |            |            | -41  |

| Swellendam 2020 New moth peaks |                  |      |           |      |                  |        |      |           |            |      |
|--------------------------------|------------------|------|-----------|------|------------------|--------|------|-----------|------------|------|
| Week                           | Mean temperature |      |           |      | Real temperature |        |      |           | Difference |      |
|                                | Start            | Week | New moths | Days | Week             | Start  | Week | New moths |            | Days |
| 11                             | 10-Mar           | 22   | 28-May    | 80   | 11               | 10-Mar | 22   | 30-May    | 82         | 2    |
| 12                             | 19-Mar           | 27   | 28-Jun    | 102  | 12               | 19-Mar | 26   | 23-Jun    | 97         | -5   |
| 13                             | 25-Mar           | 30   | 25-Jul    | 123  | 13               | 25-Mar | 28   | 09-Jul    | 107        | -16  |
| 25                             | 16-Jun           | 45   | 05-Nov    | 143  | 25               | 16-Jun |      |           |            | -143 |
| 29                             | 14-Jul           | 46   | 14-Nov    | 124  | 29               | 14-Jul |      |           |            | -124 |
| 40                             | 29-Sep           | 51   | 14-Dec    | 77   | 40               | 29-Sep |      |           |            | -77  |
| 41                             | 06-Oct           | 51   | 18-Dec    | 74   | 41               | 06-Oct |      |           |            | -74  |
| 42                             | 13-Oct           | 52   | 23-Dec    | 72   | 42               | 13-Oct |      |           |            | -72  |
| 43                             | 20-Oct           | 53   | 28-Dec    | 70   | 43               | 20-Oct |      |           |            | -70  |

