# Supplementary Materials

Table S1, List of the different measurements conducted in the different experiments. The number represents the number of sampling occasions per experiment.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Measurements** | **Experiment 1**Rothamsted, Harpenden Herts. | **Experiment 2**Commercial farm, Harpenden, Herts. | **Experiment 3**Commercial farm, Caxton, Cambs. | **Experiment 4**Rothamsted Harpenden, Herts., & Broom’s Barn, Suffolk | **Experiment 5**Rothamsted, Harpenden Herts. |
| Number of scars | 3 | 1 |  | 1 | 2 |
| % of leaves with scars | 2 | 1 |  |  | 1 |
| Dissection on the day of collection (t0) | 3 | 1 |  | 1 | 2 |
| Desiccation 3 days | 3 | 2 | 1 |  |  |
| Desiccation 7 days | 3 | 2 | 1 | 1 |  |
| Desiccation 14 days | 2 | 2 | 1 | 1 |  |

Table S2, Mean (± SE) number of cabbage stem flea beetle (*Psylliodes chrysocephala*) larvae and leaves per oilseed rape plant found during dissection for each experiment and sampling date.

|  |  |  |  |
| --- | --- | --- | --- |
| **Experiment** | **Sampling date** | **Mean (± SE) larvae / plant at t0** | **Mean (± SE) number of leaves** |
| Experiment 1Rothamsted, Harpenden Herts. | 08/12/20 | 1.6 ± 0.3 | 2 ± 0.1 |
| 29/01/21 | 2.9 ± 0.3 | 4.3 ± 0.1 |
| 22/02/21 | 1.9 ± 0.2 | 3.2 ± 0.2 |
| Experiment 2Commercial farm, Harpenden, Herts. | 04/12/20 | 12.3 ± 1.1 | NA |
| 15/03/21 | 13.3 ± 1 | 10.7 ± 0.5 |
| Experiment 3Commercial farm, Caxton, Cambs. | 07/12/20 | 12.3 ± 0.8 | 6.1 ± 0.2 |
| Experiment 4Rothamsted Harpenden, Herts., & Broom’s Barn, Suffolk  | 06/03/21 (Harpenden) | 3.9 ± 0.6 | 6.2 ± 0.3 |
| 08/03/21 (Broom’s Barn) | 33.2 ± 2.1 | 7.9 ± 0.3 |
| Experiment 5Rothamsted, Harpenden Herts. | 23/11/20 | 11.1 ± 0.6 | 3.9 ± 0.1 |
| 17/02/21 | 9.7 ± 0.6 | 6.6 ± 0.1 |



Figure S1, mean (±SE) proportion of the total number of cabbage stem flea beetle (*Psylliodes chrysocephala*) larvae dropped from oilseed rape plants per day for four different experiments and sampling dates. Horizontal dashed line represents the 90% threshold. Red lines = 1st instar larvae, green lines = 2nd instar larvae, blue lines = 3rd instar larvae.



Figure S2, EMM (± SE) proportion of the total number of cabbage stem flea beetle (*Psylliodes chrysocephala*) larvae extracted per oilseed rape plant according to the duration of the desiccation period and the larval instars. Red bars = 1st instar larvae, green bars = 2nd instar larvae, blue bars = 3rd instar larvae.



Figure S3, Relationship between the number of cabbage stem flea beetle (*Psylliodes chrysocephala*) larvae observed per oilseed rape plant and the number of larvae predicted based on the model built using the data collected from the desiccation method after 7 (a) and 14 days (b) desiccation periods. The solid line represents the 1:1 relationship between the two axes.



Figure S4, Mean (± SE) proportion of dead larvae per plant per instar for different duration of desiccation: L1 (red), L2 (green) and L3 (blue). Different letters indicate significant differences between the means for each desiccation duration.



Figure S5, Relationship between the number of cabbage stem flea beetle (CSFB; *Psylliodes chrysocephala*) larvae observed per oilseed rape plant and the number of larvae predicted based on the model built using the data collected from counts of the number of scars indicative of CSFB per plant. The solid line represents the 1:1 relationship between the two axes.