**Table S1:** Paired sample T-test for analyzing the relationship between food consumption and pupal weight.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|     | Paired Differences | t | df | Sig. (2-tailed) |
| Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference |
| Lower | Upper |
| Food consumption – pupal weight | 14.25250 | 5.32107 | 2.66054 | 5.78548 | 22.71952 | 5.357 | 3 | .013\* |

\*significant results

**Table S2:** Pearson Chi-Square analysis for the comparison between food type and adult emergence.

|  |  |  |  |
| --- | --- | --- | --- |
|   | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 308.244 | 6 | .000 |
| Likelihood Ratio | 326.451 | 6 | .000 |
| N of Valid Cases | 400 |   |  |

**Table S3:** Mixed-effect model to analyze the relation between Food consumption and Pupal weight.

|  |
| --- |
| **Type III Tests of Fixed Effectsa** |
| Source | Numerator df | Denominator df | F | Sig. |
| Intercept | 1 | 2.001 | 8163.177 | .000 |
| a. Dependent Variable: pualweight. |

**Table S4:** Abundance of *P. brassicae* and *C. vestalis* collected in sampling duration and used for regression analysis.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Months | June | July  | August | Sep | Oct | Nov | Dec | Jan | Feb | March | April | May |
| *P. brassicae* | 2 | 0 | 1 | 3 | 1 | 8 | 2 | 13 | 171 | 309 | 268 | 30 |
| *C. vestalis* | 2 | 2 | 5 | 16 | 7 | 33 | 4 | 24 | 137 | 285 | 168 | 54 |

**Supplementary methodology**

**T**he larvae of *P. brassicae* that were fed on cauliflower exhibit a larval life of 15 days, while the larvae that were provided with Brassica leaves consisted of a larval life span of 18 days. On Cabbage and turnip, the larval life span was 14 and 13 days. The cages in which *P. brassicae* larvae were kept have the dimensions of 32cm length, 30cm width, and 30cm height. And for ventilation cages were equipped with nets on 2 sides.