**Table S2**. Linear and quadratic coefficients of the fixed factors (temperature, T, mean relative humidity, RH, rainfall, P, spider, beetle, ant, and earwig activity density) estimated by the GLMs adjusted to adult emergence of *C. capitata* and their corresponding statistics (*z*- and *P*-values) in the different treatments (bare soil-BS, mulch of straw-M and *F. arundinacea* cover-FA) (AIC = 805.6, 680.59, and 810.31, respectively). Null deviance values are 1157.71, 1155.9 and 1075.83 for BS, M and FA, respectively, with 59 df in all cases. Those of the residual deviance are 578.68, 470.4 and 604.96, respectively, with 50, 50 and 51 df, respectively). Because the models were refined by removing non-significant effects, these are not part of the final model and are reported as nr in the table. No earwigs were found in BS.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Linear and quadratic coefficients ± SE | *z*-value | *P*-value |
|  | BS | M | FA | BS | M | FA | BS | M | FA |
| T | 0.35 ± 0.12 | -1.55 ± 0.12 | 0.29 ± 0.01 | 7.19 | 9.81 | 2.80 | <0.001 | <0.001 | 0.005 |
| T2 | -0.48 ± 0.01 | -1.55 ± 0.14 | -0.29 ± 0.01 | -6.54 | -10.1 | -4.04 | <0.001 | <0.001 | <0.001 |
| RH | 2.12 ± 0.23 | 0.20 ± 0.01 | -0.32 ± 0.01 | 9.75 | 2.06 | -3.83 | <0.001 | 0.039 | <0.001 |
| RH2 | 0.33 ± 0.04 | nr | nr | 7.90 | --- | --- | <0.001 | --- | --- |
| P | -0.06 ± 0.01 | nr | -0.02 ± 0.01 | -10.64 | --- | -2.09 | <0.001 | --- | 0.036 |
| P2 | < 0.01 | < -0.01  | < 0.01 | 5.92 | -2.06 | -3.87 | <0.001 | 0.022 | <0.001 |
| Spiders | 4.96 ± 0.43 | 0.16 ± 0.06 | nr | 5.42 | 2.59 | --- | <0.001 | 0.007 | --- |
| Beetles | -4.43 ± 0.46 | -0.26 ± 0.11 | -0.22 ± 0.06 | -9.69 | -1.69 | -3.47 | <0.001 | 0.016 | <0.001 |
| Ants | 0.65 ± 0.07 | 2.06 ± 0.21 | -0.46 ± 0.09 | 9.28 | 9.32 | -4.92 | <0.001 | <0.001 | <0.001 |
| Earwigs | --- | -0.41 ± 0.01 | -0.55 ± 0.15 | --- | -4.39 | -3.56 | --- | <0.001 | <0.001 |