SUPPLEMENTS

*Weather variables*

Fig. 1S. Seasonal changes in the weather variables (mean ± S.E.) available from The James Hutton Institute (Invergowrie, Scotland), about 12 miles from the field site where a rabbit population has been sampled monthly for 3 years. Temperature (ºC), rainfall (mm), sun radiation (h).



*G. strigosum additional results*

Table 1S. Linear mixed model (LME) between *G. strigosum* larvae in tissue (residual variable, details in the main text “Statistical analysis” section) and host antibodies, parasite intensity in lumen and weather variables as fixed explanatory effects in adult and young (from 2 to 5 months old) rabbits. The minimum parsimonious models are reported.

|  |  |  |  |
| --- | --- | --- | --- |
| **Adults, N=388** | **Coeff.±S.E.**  | **d.f.** | **P** |
| Intercept | -0.66 **±** 0.29 | 351 | 0.025 |
| IgA antibody | 0.60 **±** 0.22 | 351 | 0.006 |
| *G. strigosum* intensity in lumen | 0.21 **±** 0.05 | 351 | <0.0001 |
| Mean Temperature | -0.09 **±** 0.02 | 351 | <0.0001 |
| Total Rainfall | 0.05 **±** 0.02 | 351 | 0.025 |
| Random factor, intercept S.D. | month: 0.0002month/age: 0.07 |  |  |
| AIC | 1293.79 |  |  |
| **Young, N=176** | **Coeff.±S.E.**  | **d.f.** | **P** |
| Intercept | 1.18 ± 0.36 | 151 | 0.001 |
| IgA antibody | 0.75 ± 0.30 | 151 | 0.013 |
| Mean Temperature | -0.10 ± 0.03 | 151 | 0.0004 |
| Random factor, intercept S.D. | month: 0.10month/age: 0.17 |  |  |
| AIC | 489.40 |  |  |

*T. retortaeformis additional results*

Table 2S. Linear mixed model (LME) between *T. retortaeformis* larvae in tissue (residual variable, details in the main text “Statistical analysis” section) and parasite intensity in lumen and weather variables as fixed explanatory effects in adult and young (2-5 months old) individuals for female and male rabbits. The minimum parsimonious models are reported.

|  |  |  |
| --- | --- | --- |
| **Adults** | **Females** | **Males** |
|  | **Coeff.±S.E. N=149** | **d.f.** | **P** | **Coeff.±S.E. N=184** | **d.f.** | **P** |
| Intercept | 2.18 **±** 1.17 | 119 | 0.065 | -0.33 **±** 0.48 | 155 | 0.498 |
| *T. retortaeformis* intensity^2 in lumen | 0.10 **±** 0.04 | 119 | 0.010 |  |  |  |
| *T. retortaeformis* intensity in lumen | -0.83 **±** 0.41 | 119 | 0.044 | 0.19 **±** 0.05 | 155 | 0.001 |
| Mean Temperature | -0.13 **±** 0.04 | 119 | 0.001 | -0.10 **±** 0.03 | 155 | 0.005 |
| Random factor, intercept S.D. | month: 0.00007month/age: 0.15 |  |  | month: 0.45month/age: 0.0001 |  |  |
| AIC | 573.22 |  |  | 619.69 |  |  |
| **Young** | **Females** | **Males** |
|  | **Coeff.±S.E. N=174** | **d.f.** | **P** | **Coeff.±S.E. N=185** | **d.f.** | **P** |
| Intercept | No |  |  | 2.91 **±** 0.56 | 160 | <0.001 |
| *T. retortaeformis* intensity^2 in lumen | Minimum |  |  | 0.07 **±** 0.02 | 160 | <0.001 |
| *T. retortaeformis* intensity lumen | Significant |  |  | -0.54 **±** 0.19 | 160 | 0.005 |
| Mean Temperature | Model |  |  | -0.19 **±** 0.03 | 160 | <0.001 |
| Random factor, intercept S.D. |  |  |  | month: 8.3\*10-6month/age: 0.00006 |  |  |
| AIC |  |  |  | 574.04 |  |  |