

Supplementary material

Table S1. Effect of ethanol on survival, distance and speed in control groups at 2 °C, and CPF= 0 ng L⁻¹ (ANOVA and Tukey HSD test).

| | Effect | Degree of Freedom | MS | F | p |
|-------------|-----------|-------------------|--------------|--------------|-------|
| ET_Survival | 0.017 | 2 | 0.009 | 0.187 | 0.831 |
| ET_distance | 3.08 | 2 | 1.54 | 0.259 | 0.774 |
| ET_speed | 0.145 | 2 | 0.073 | 1.465 | 0.253 |
| Survival | % ethanol | {1} (1.3758) | {2} (1.3861) | {3} (1.3279) | |
| 1 | 1.10E-06 | | 0.995 | 0.885 | |
| 2 | 1.10E-05 | 0.995 | | 0.836 | |
| 3 | 1.10E-04 | 0.885 | 0.836 | | |
| Distance | % ethanol | {1} (5.2953) | {2} (6.0375) | {3} (5.9842) | |
| 1 | 1.10E-06 | | 0.797 | 0.823 | |
| 2 | 1.10E-05 | 0.797 | | 0.999 | |
| 3 | 1.10E-04 | 0.823 | 0.999 | | |
| Speed | % ethanol | {1} (.65097) | {2} (.72617) | {3} (.82990) | |
| 1 | 1.10E-06 | | 0.757 | 0.226 | |
| 2 | 1.10E-05 | 0.757 | | 0.592 | |
| 3 | 1.10E-04 | 0.226 | 0.592 | | |

Table S2. Mean (M) and Standard Error (SE) of survival (Surv, in %), distance (Dist, in mm) and speed (Speed, in mm s⁻¹) of *Diamesa zernyi* larvae exposed at 2 °C to three ethanol concentrations (ET1=1.1E-06%, ET2= 1.1E-05%, ET3= 1.1E-04%), for 24, 48 and 72 h.

| Ethanol | Time (h) | M_Surv% | SE_Surv% | M_Dist | SE_Dist | M_Speed | SE_Speed |
|---------|----------|---------|----------|--------|---------|---------|----------|
| ET1 | 24 | 100 | 0.0 | 8.3 | 0.4 | 0.8 | 0.1 |
| ET1 | 48 | 100 | 0.0 | 9.3 | 1.8 | 0.9 | 0.2 |
| ET1 | 72 | 89 | 11.1 | 8.1 | 2.5 | 0.8 | 0.2 |
| ET2 | 24 | 100 | 0.0 | 8.3 | 2.5 | 0.7 | 0.2 |
| ET2 | 48 | 100 | 0.0 | 4.8 | 0.8 | 0.6 | 0.0 |
| ET2 | 72 | 100 | 0.0 | 5.1 | 0.7 | 0.5 | 0.1 |
| ET3 | 24 | 100 | 0.0 | 6.5 | 0.9 | 0.6 | 0.1 |
| ET3 | 48 | 100 | 0.0 | 3.7 | 0.4 | 0.8 | 0.2 |
| ET3 | 72 | 78 | 11.1 | 3.8 | 2.3 | 0.4 | 0.1 |

Table S3. Mean (M) and Standard Error (SE) of survival (Surv, in %), distance (Dist, in mm) and speed (Speed, in mm s⁻¹) of *Diamesa zernyi* larvae exposed to 2, 8 and 11 °C in solution with four different chlorpyrifos concentrations (Conc= 0, 1.1, 11, 110 ng L⁻¹), after 24, 48 and 72 h. Control with ET3 (= 1.1E-04% of ethanol) were included.

| Temp (°C) | Conc (ng L ⁻¹) | Time (h) | M_Surv% | SE_Surv% | M_Dist | SE_Dist | M_Speed | SE_Speed |
|-----------|----------------------------|----------|---------|----------|--------|---------|---------|----------|
| 2 | 0 | 24 | 100.0 | 0.0 | 6.5 | 0.9 | 0.6 | 0.1 |
| 2 | 0 | 48 | 100.0 | 0.0 | 3.7 | 0.4 | 0.8 | 0.2 |
| 2 | 0 | 72 | 77.8 | 11.1 | 3.8 | 2.3 | 0.4 | 0.1 |
| 8 | 0 | 24 | 100.0 | 0.0 | 8.8 | 3.7 | 0.8 | 0.2 |
| 8 | 0 | 48 | 88.9 | 11.1 | 3.3 | 0.7 | 0.8 | 0.0 |
| 8 | 0 | 72 | 88.9 | 11.1 | 4.9 | 1.8 | 0.6 | 0.1 |
| 11 | 0 | 24 | 100.0 | 0.0 | 10.1 | 1.3 | 1.2 | 0.2 |
| 11 | 0 | 48 | 66.7 | 19.2 | 6.1 | 3.2 | 1.2 | 0.1 |
| 11 | 0 | 72 | 55.6 | 22.2 | 6.7 | 2.0 | 1.1 | 0.1 |
| 2 | 1.1 | 24 | 100.0 | 0.0 | 12.8 | 0.5 | 0.8 | 0.0 |
| 2 | 1.1 | 48 | 100.0 | 0.0 | 7.3 | 0.5 | 0.6 | 0.0 |
| 2 | 1.1 | 72 | 100.0 | 0.0 | 5.7 | 1.5 | 0.6 | 0.1 |
| 8 | 1.1 | 24 | 100.0 | 0.0 | 6.8 | 1.5 | 1.3 | 0.2 |
| 8 | 1.1 | 48 | 100.0 | 0.0 | 5.4 | 0.5 | 0.6 | 0.0 |
| 8 | 1.1 | 72 | 88.9 | 11.1 | 5.4 | 0.4 | 0.8 | 0.1 |
| 11 | 1.1 | 24 | 100.0 | 0.0 | 8.9 | 3.5 | 0.7 | 0.2 |
| 11 | 1.1 | 48 | 100.0 | 0.0 | 4.2 | 1.8 | 0.5 | 0.1 |
| 11 | 1.1 | 72 | 100.0 | 0.0 | 2.1 | 1.3 | 0.4 | 0.1 |
| 2 | 11 | 24 | 100.0 | 0.0 | 8.1 | 2.1 | 0.6 | 0.0 |
| 2 | 11 | 48 | 88.9 | 11.1 | 5.7 | 1.7 | 0.6 | 0.1 |
| 2 | 11 | 72 | 44.4 | 29.4 | 4.8 | 2.7 | 0.5 | 0.2 |
| 8 | 11 | 24 | 100.0 | 0.0 | 6.5 | 0.4 | 1.0 | 0.1 |
| 8 | 11 | 48 | 88.9 | 11.1 | 5.7 | 1.2 | 0.8 | 0.1 |
| 8 | 11 | 72 | 77.8 | 11.1 | 6.5 | 0.9 | 0.7 | 0.1 |
| 11 | 11 | 24 | 100.0 | 0.0 | 11.9 | 0.9 | 1.0 | 0.1 |
| 11 | 11 | 48 | 77.8 | 11.1 | 9.1 | 4.5 | 0.8 | 0.2 |
| 11 | 11 | 72 | 66.7 | 0.0 | 3.2 | 1.1 | 1.0 | 0.3 |
| 2 | 110 | 24 | 100.0 | 0.0 | 7.7 | 2.7 | 0.6 | 0.1 |
| 2 | 110 | 48 | 88.9 | 11.1 | 5.6 | 3.0 | 0.8 | 0.2 |
| 2 | 110 | 72 | 55.6 | 11.1 | 1.1 | 0.6 | 0.2 | 0.0 |
| 8 | 110 | 24 | 100.0 | 0.0 | 7.6 | 0.9 | 1.0 | 0.1 |
| 8 | 110 | 48 | 100.0 | 0.0 | 8.9 | 2.1 | 1.2 | 0.1 |
| 8 | 110 | 72 | 100.0 | 0.0 | 6.7 | 3.1 | 0.7 | 0.1 |
| 11 | 110 | 24 | 100.0 | 0.0 | 9.4 | 3.6 | 0.8 | 0.0 |
| 11 | 110 | 48 | 66.7 | 19.2 | 1.1 | 0.3 | 0.4 | 0.2 |
| 11 | 110 | 72 | 44.4 | 11.1 | 0.1 | 0.1 | 0.1 | 0.0 |