

Supplementary Materials: The following supporting information can be downloaded at: www.mdpi.com/xxx/s1, Figure S1. Concentration-response-curves for the occurrence (%) of mortality in earthworm *E. andrei* after 48 h exposures to a) Sumialfa, b) Calypso, c) Filon and d) Frontier. Figure S2. Biomarker responses after 48 h exposures to insecticides Calypso and Sumialfa in soil. Figure S3. Biomarker responses after 48 h exposures to herbicides Frontier and Filon in soil. Figure S4. Relative fluorescence for general reactive oxygen species (ROS) measurements in *E. andrei* exposed to the four commercial pesticide preparations a) Calypso (active ingredient thiacloprid), b) Sumialfa (active ingredient fenvalerate), c) Frontier (active ingredient dimethenamid-p) and d) Filon (active ingredient prosulfocarb) for 48 h in LUFA 2.2 soil (data presented using Tukey's boxplot; n=20).

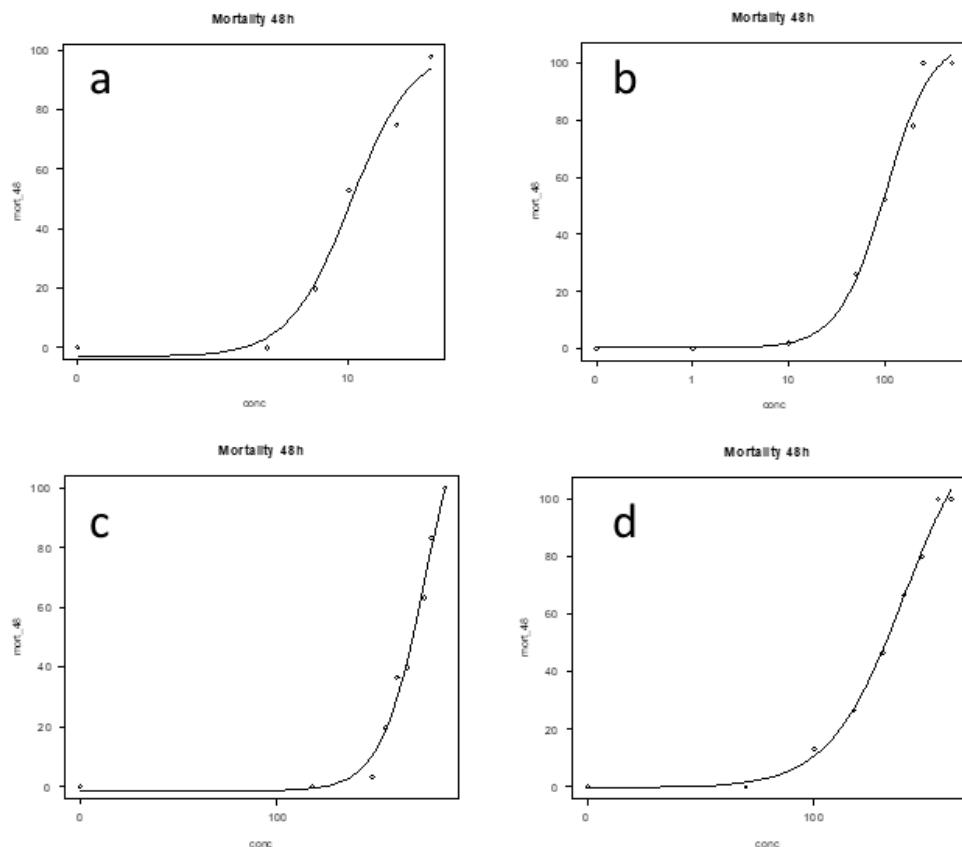


Figure S1. Concentration-response-curves for the occurrence (%) of mortality in earthworm *E. andrei* after 48 h exposures to a) Sumialfa, b) Calypso, c) Filon and d) Frontier.

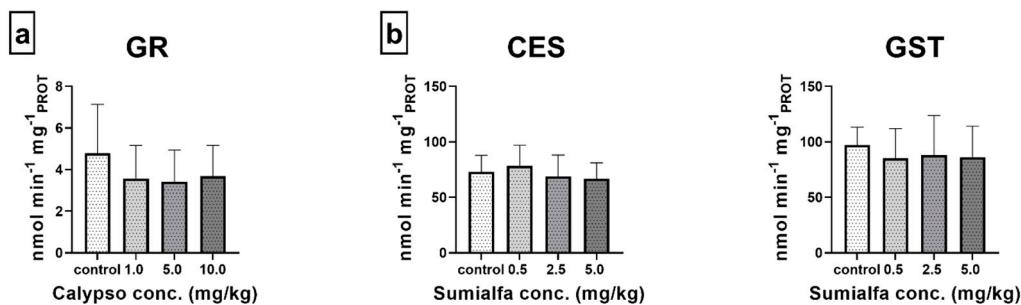


Figure S2. Biomarker responses after 48 h exposures to insecticides Calypso and Sumialfa in soil. Specific activity of glutathione reductase (GR), carboxylesterase (CES) and glutathione S-transferase (GST) measured in *E. andrei* earthworms exposed to the commercial pesticide preparations Calypso (active ingredient thiacloprid) and Sumialfa (active ingredient esfenvalerate) for 48 h in LUFA 2.2 soil (mean \pm standard deviation; n=20). Only non-significant differences between control and pesticide treatments shown (ANOVA followed by Dunnett's multiple comparison test) and labeled with * (p<0.05), ** (p<0.01) and *** (p<0.001).

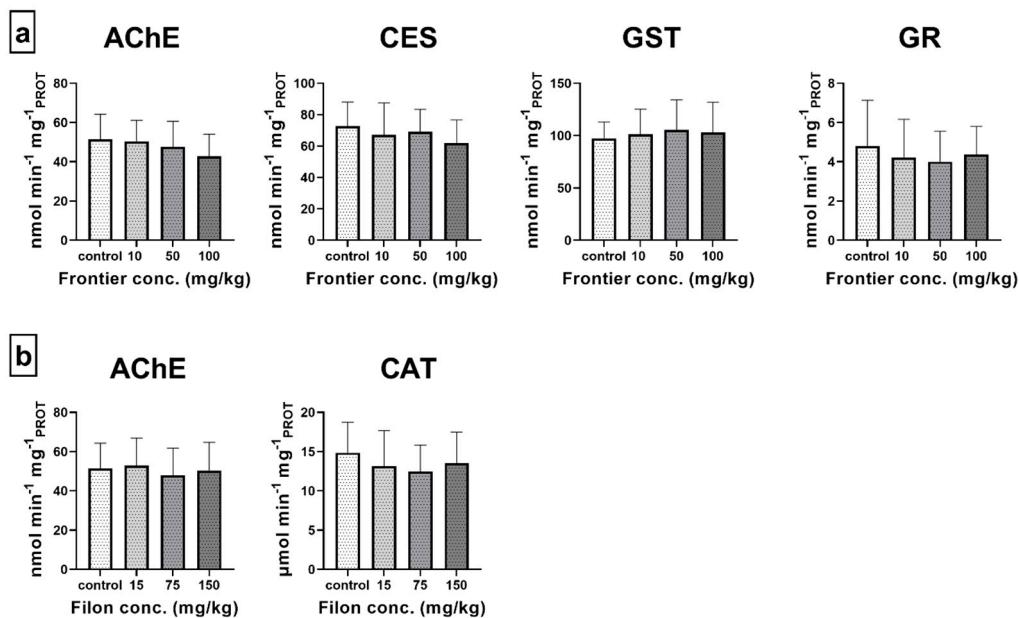


Figure S3. Biomarker responses after 48 h exposures to herbicides Frontier and Filon in soil. Specific activity of acetylcholinesterase (AChE), carboxylesterase (CES), glutathione S-transferase (GST), glutathione reductase (GR) and catalase (CAT) measured in *E. andrei* earthworms exposed to the commercial pesticide preparations a) Frontier (active ingredient dimethenamid-p) and b) Filon (active ingredient prosulfocarb) for 48 h in LUFA 2.2 soil (mean \pm standard deviation; n=20). Only non-significant differences between control and pesticide treatments shown (ANOVA followed by Dunnett's multiple comparison test) and labeled with ** (p<0.01) and *** (p<0.001).

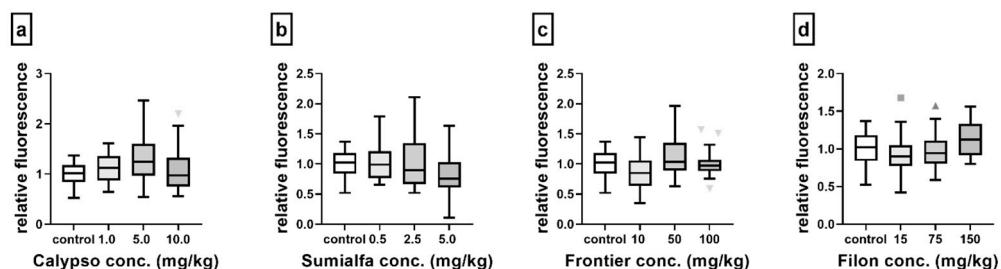


Figure S4. Relative fluorescence for general reactive oxygen species (ROS) measurements in *E. andrei* exposed to the four commercial pesticide preparations a) Calypso (active ingredient thiacloprid), b) Sumialfa (active ingredient fenvalerate), c) Frontier (active ingredient dimethenamid-p) and d) Filon (active ingredient prosulfocarb) for 48 h in LUFA 2.2 soil (data presented using Tukey's boxplot; n=20). Significant differences between control and pesticide treatments (ANOVA followed by Dunnett's multiple comparison test) are labeled with * (p<0.05), ** (p<0.01) and *** (p<0.001).