**Methods**

*Statistical analyses*

To examine the effects of seed treatment on the oviposition performance of female flies in the no-choice assay, we fit a generalized linear mixed effects model (GLMM) with the number of eggs in each oviposition cup as the response, seed treatment and treatment order as the fixed effects, and cage as the random effect. We used a negative binomial distribution with a logit link function to account for overdispersion. The model was fitted via the glmmtmb() function in the R “glmmTMB” package (Brooks et al. 2017). We checked the model assumptions using quantile residuals generated from the function “simulateResiduals()” in the R “DHARMa” package (Hartig 2022). We used the likelihood ratio test to assess predictor significance using the “Anova()” function in the R “car” package (Fox and Weisberg 2019). All analyses were performed in R version 4.3.1 (R Core Team 2023).

**Results**

Eight out of 10 paired trials had more eggs in the water treatment than in the MeJA treatment (Fig. XXX). The average number of eggs in each oviposition cup was significantly higher in the water treatment than in the MeJA treatment (χ2 = 90.5, *df* = 1, *P* < 0.001; Fig. XXX).

Nochoice_Boxplot

Figure XXX. Oviposition performance of female flies in the no-choice assay. The paired trials are connected with the gray lines.

**References**

Brooks, M. E., K. Kristensen, K. J. van Benthem, A. Magnusson, C. W. Berg, A. Nielsen, H. J. Skaug, M. Maechler, and B. M. Bolker. 2017. glmmTMB Balances Speed and Flexibility Among Packages for Zero-inflated Generalized Linear Mixed Modeling. The R Journal **9**:378-400.

Fox, J., and S. Weisberg. 2019. An R Companion to Applied Regression. Sage, Thousand Oaks CA.

Hartig, F. 2022. DHARMa: Residual Diagnostics for Hierarchical (Multi-Level / Mixed) Regression Models.

R Core Team. 2023. R: A Language and Environment for Statistical Computing. Vienna, Austria.