Supplementary Information (SI) for Environmental Science: Advances. This journal is © The Royal Society of Chemistry 2024

## Supplementary Material

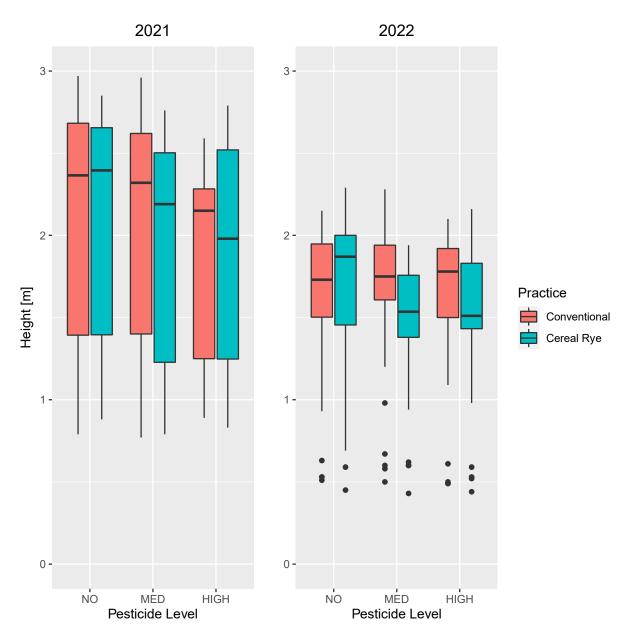


Figure 1. Corn height [m] in 2021 (left) and 2022 (right) for conventional plots (red); and for cereal rye cover crop plots (green).

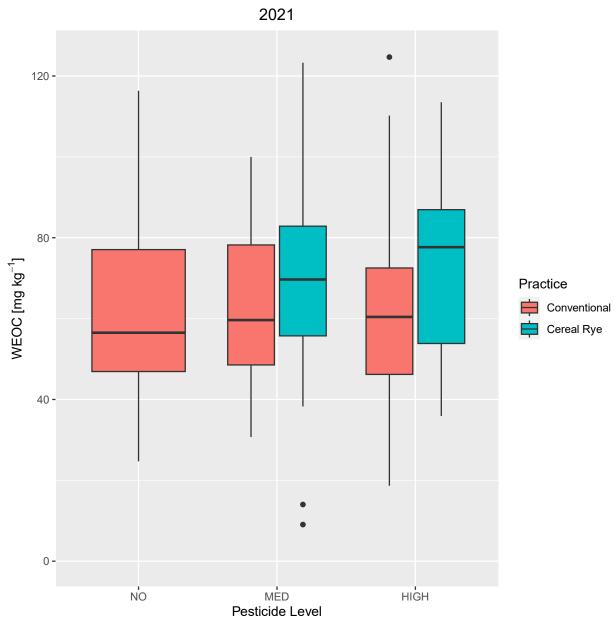


Figure 2. WEOC in non-directly fertilized plots for each type of agricultural practices (conventional in red and cereal rye in green) and pesticide input levels (no, med, and high) in 2021

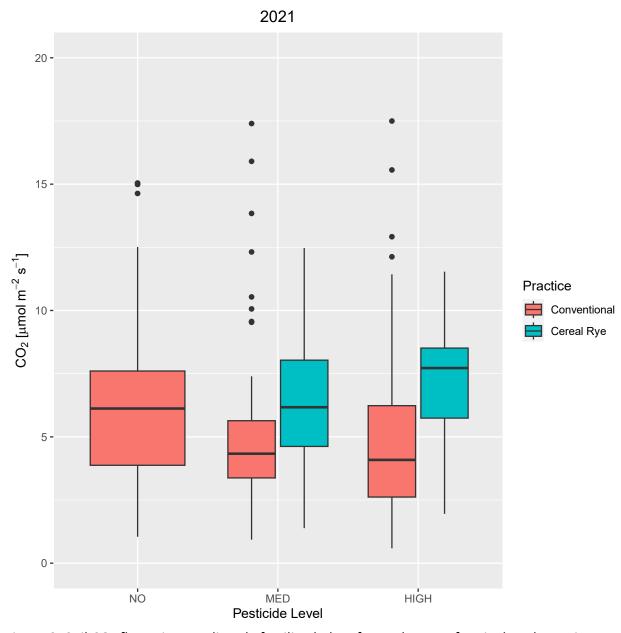


Figure 3. Soil CO<sub>2</sub> fluxes in non-directly fertilized plots for each type of agricultural practices (conventional in red and cereal rye in green) and pesticide input levels (no, med, and high) in 2021

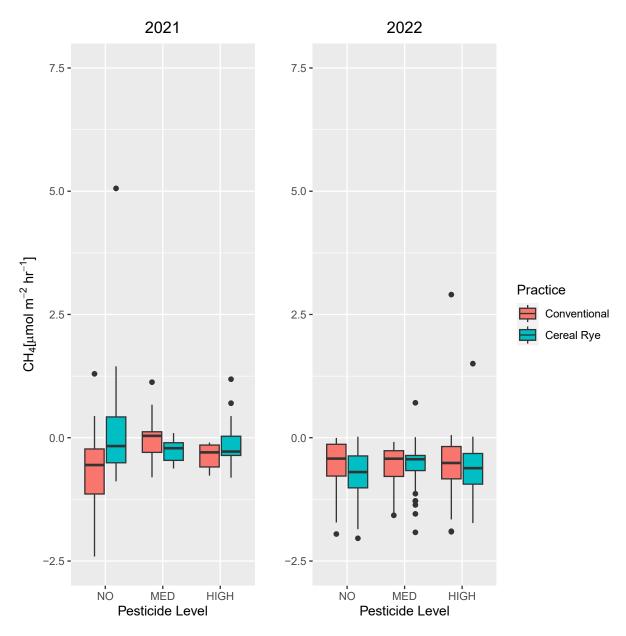


Figure 4. Soil  $CH_4$  fluxes in directly fertilized plots excluding Plot 202 for each type of agricultural practices (conventional in red and cereal rye in green) and pesticide input levels (no, med, and high) in 2021