

**Supplement 7: Beta dispersion analysis of whole food and synthetic diets, with and without xylan-fed samples.** The dispersion of (A,C) weighted and (B,D) unweighted Bray-Curtis dissimilarities was assessed for both diet group and individual diets, both (A,B) with and (C,D) without xylan-fed samples included in analysis. All samples were rarefied to 7924 ASVs for beta dispersion analysis, and ANOVA statistical testing was used to evaluate if dispersion differed between groups/diets. \*\*\*
=p<0.001, ns =no significance