



**Supplementary Figure 2: Relationships between the trait composition of the mixtures and their above and belowground RYT.**

Standardized effects of traits on mixture RYT measured on above- (a and b) and below- (c and d) ground biomass in the R+ treatment (a and c) and R- treatment (b and d). Backward model selection was performed on a full model with RYT as the response variable and all trait means and differences as explanatory variables. Based on AIC<sub>C</sub>, the top-ten models were retained to compute model-averaged estimates reported on the left side of the panels with their 95% unconditional confidence intervals (Supplementary Table 6). Empty symbols represent trait differences and filled symbols represent trait means. The relative importance of the variables are reported on the right side of the panels and can be interpreted as the probability that the variable appears in the best model. Hatched bars represent trait differences and filled bars represent trait means. Colours refer to the type of traits, with aboveground traits and belowground traits represented in green and brown, respectively. Adjusted R-squared averaged across the top-ten models ( $\overline{R^2_{adj}}$ ) are also reported.