



**Supplemental Figure 49: Network analysis reveals a relationship between leaf complexity and shape with sugars, Brix, and biomass.** A) Hive plot axis with significant correlations (after multiple test adjustment) between DEV traits and traits from other classes arranged by  $-\log_{10}(\text{p-value})$ . Each edge represents such a correlation, and is colored by  $-\log_{10}(\text{p-value})$ :  $\geq 3.0$  black,  $\geq 2.0$  blue,  $< 2.0$  yellow. B) The other hive plot axis, in which nodes correspond to traits from the MET, ENZ, MOR, and SEED trait classes, arranged by the overall connectivity of the trait. Additionally, the size of the terminal end of each edge is proportional to the trait connectivity. Note that the most significant correlations tend to involve traits with high connectivity. C) Traits with the highest connectivities along the axis in (B) are shown. Adjacent to each trait is a dot representing the trait class (MOR magenta, MET blue, ENZ yellow, and SEED orange). The traits with the highest connectivity include traits associated with either vegetative biomass or fruit mono- and disaccharide levels. D) Traits representing the most significant correlations are shown. There is an abundance of correlations between leaf complexity traits ("Comp" traits) and PC4 with biomass and mono- and disaccharide level traits. The correlations of interest are denoted by an asterisk.