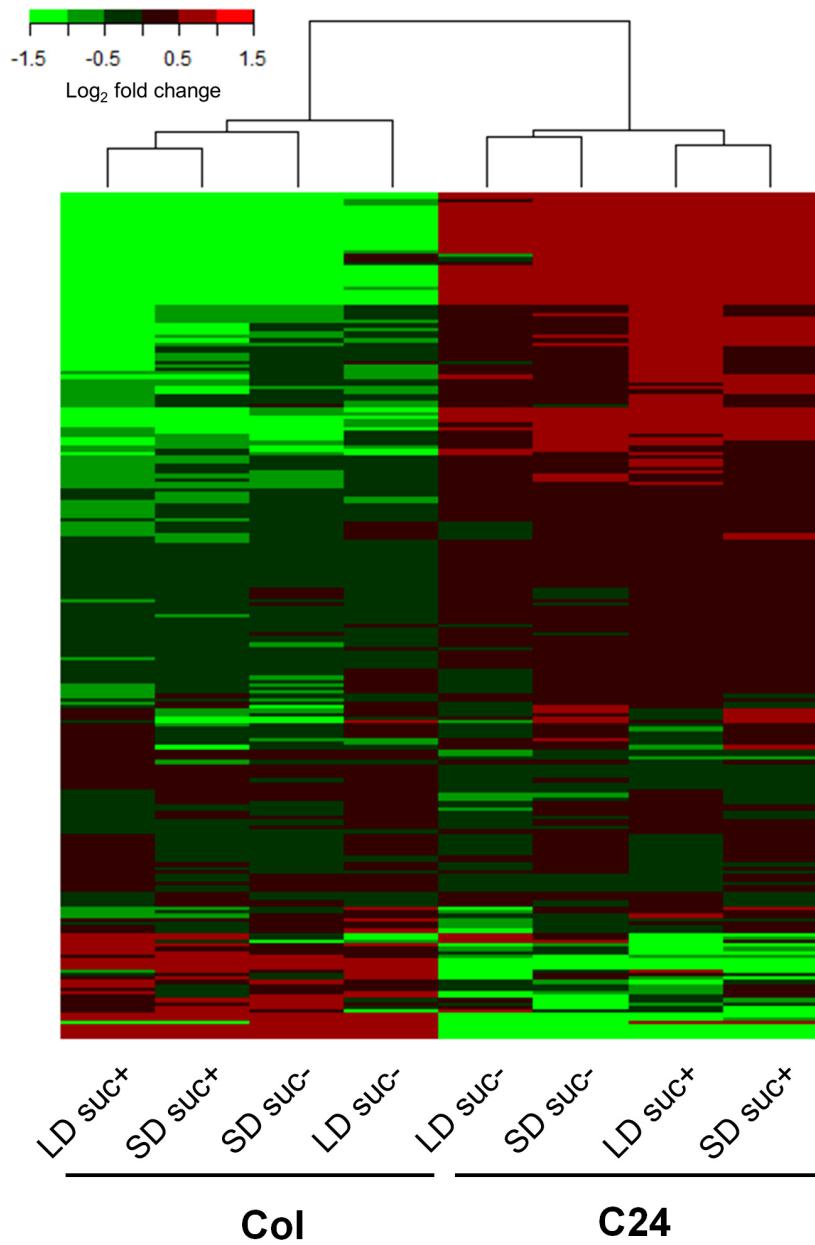
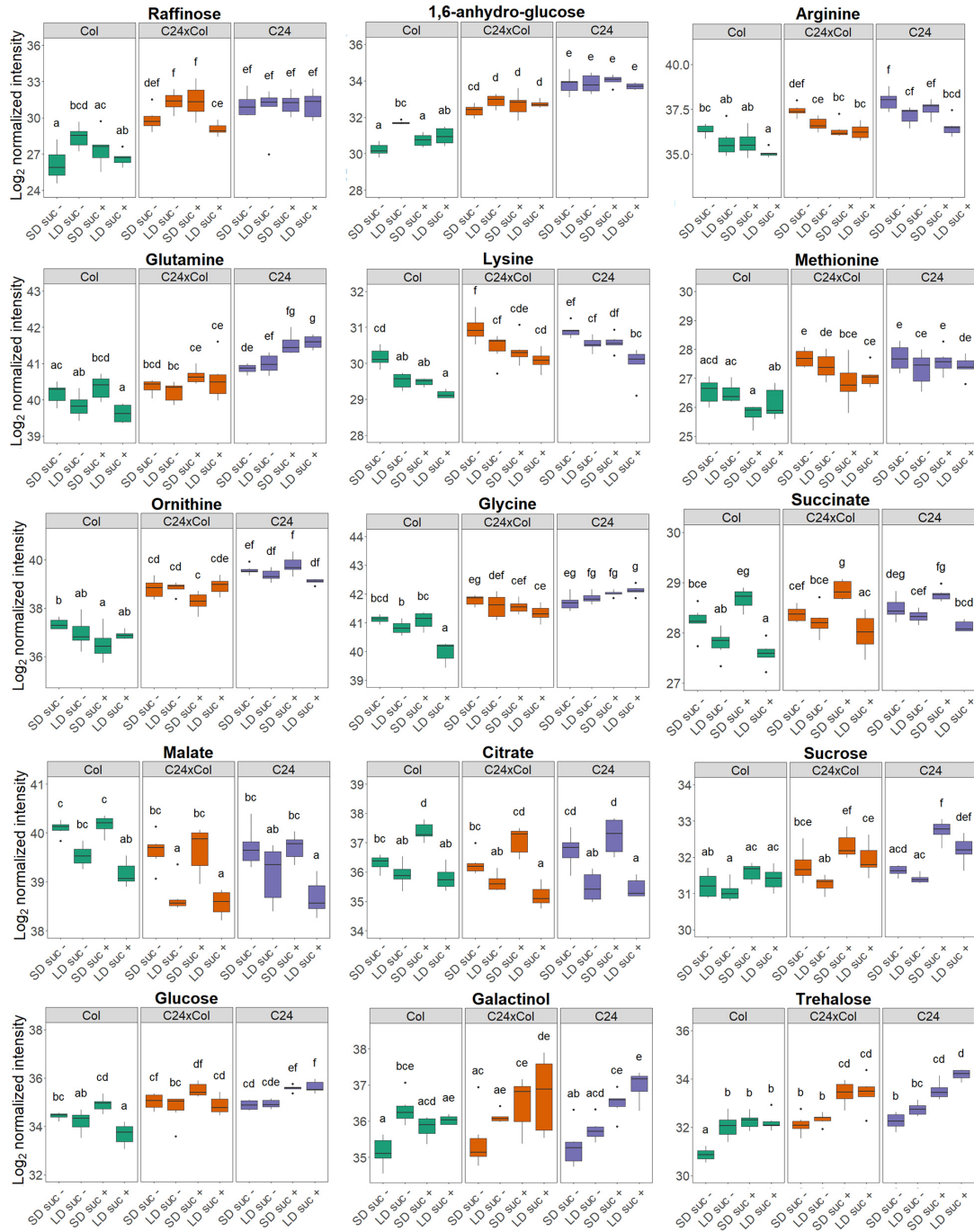


## SUPPLEMENTARY FIGURES



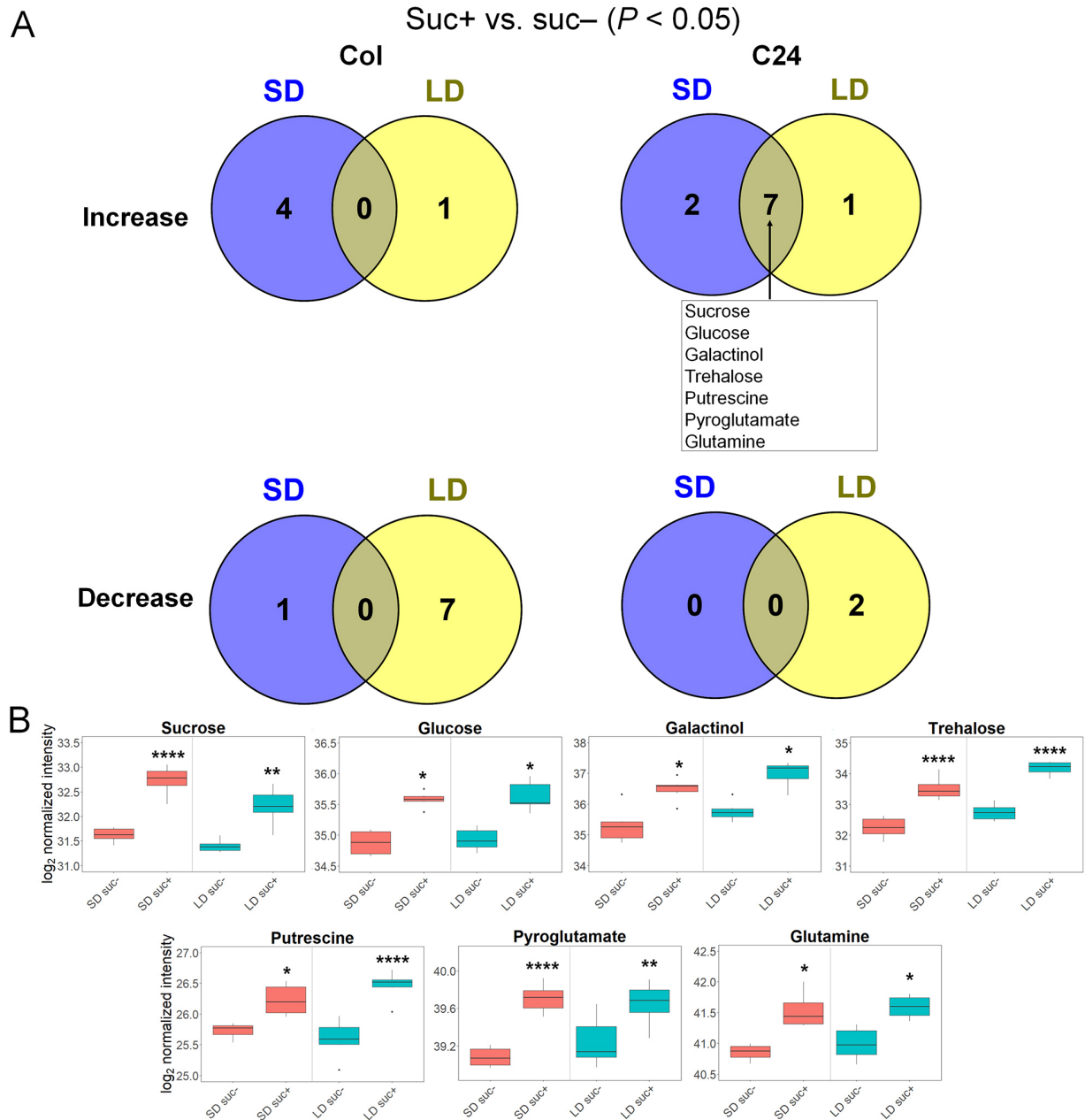
**Supplementary. Figure S1. Hierarchical clustering analysis of metabolome data from Col and C24 at 10-leaf number stage.**

The heat map values represent a  $\log_2$  ratio of Col and C24 under different growth conditions relative to their mid values. The red color indicates increased values, green indicates decreased values and black indicates zero; see the color scale.



**Supplementary. Figure S2. Fifteen annotated metabolites in Col, C24 and their F<sub>1</sub> hybrid under different growth conditions.**

Data was visualized using the log<sub>2</sub> normalized intensity. Different letters indicate statistical differences by one-way ANOVA following Tukey's test ( $p < 0.05$ ).



**Supplementary. Figure S3.** Metabolic changes in Col and C24 in response to exogenous Suc supply. (A) Venn diagram of significant metabolites with suc+ compared to suc- between SD and LD. The significant metabolites were identified from Table 1. (B) Seven metabolic profiles presented significant differences in C24 only under SD and LD with exogenous Suc supply. Asterisks indicate statistical difference (\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ , \*\*\*\*  $p < 0.0001$  by one-way ANOVA following Tukey's test).