

Supplementary material

Supplementary Table 1: Mapping Statistics

Sample	Total Reads	Trimmed Reads	Uniquely Mapped	Percent Uniquely Mapped
Kale 1	24535591	24516812	20190451	82.4%
Kale 2	20833408	20821507	16800807	80.7%
Kale 3	15736362	15700360	12410505	79.0%
Cabbage 1	9968261	9954978	8107108	81.4%
Cabbage 2	16648670	16624223	14775990	88.9%
TO1000 1	17083824	17002521	14426962	84.9%
TO1000 2	22918390	22886968	19362988	84.6%
TO10003	25192908	25120337	19637321	78.2%

Find Supplementary tables at : <https://doi.org/10.6084/m9.figshare.13224383>

Supplementary Table 2. Kale vs. TO1000 differentially expressed genes.

Supplementary Table 3. Kale vs. Cabbage differentially expressed genes.

Supplementary Table 4. Cabbage vs. TO1000 differentially expressed genes.

Supplementary Table 5. Kale vs TO1000 Higher Expressed Genes Enriched GO terms.

Supplementary Table 6. Kale vs TO1000 Lower Expressed Genes Enriched GO terms.

Supplementary Table 7. Kale vs Cabbage Higher Expressed Genes Enriched GO terms.

Supplementary Table 8. Kale vs Cabbage Lower Expressed Genes Enriched GO terms.

Supplementary Table 9. Cabbage vs TO1000 Higher Expressed Genes Enriched GO terms.

Supplementary Table 10. Cabbage vs TO1000 Lower Expressed Genes Enriched GO terms.

Supplementary Table 11. Kale Shared (Kale vs TO1000 & Kale vs Cabbage) Higher Expressed Genes Enriched GO terms.

Supplementary Table 12. Kale Shared (Kale vs TO1000 & Kale vs Cabbage) Lower Expressed Genes Enriched GO terms.

Supplementary Table 13. Kale vs TO1000 Higher Expressed Genes Enriched KEGG Terms.

Supplementary Table 14. Kale vs TO1000 Lower Expressed Genes Enriched KEGG Terms.

Supplementary Table 15. Kale vs Cabbage Higher Expressed Genes Enriched KEGG Terms.

Supplementary Table 16. Kale vs Cabbage Lower Expressed Genes Enriched KEGG Terms.

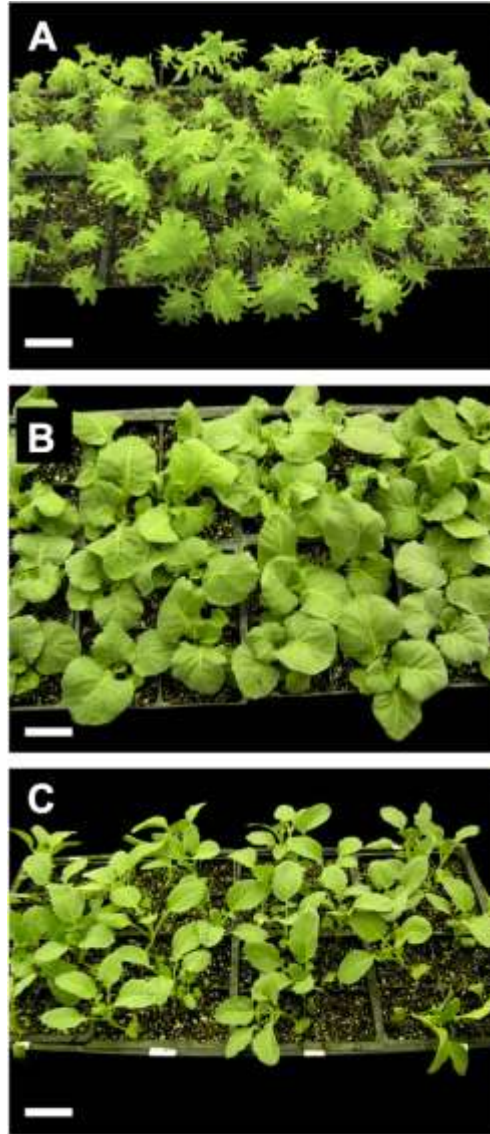
Supplementary Table 17. Cabbage vs TO1000 Higher Expressed Genes Enriched KEGG Terms.

Supplementary Table 18. Cabbage vs TO1000 Lower Expressed Genes Enriched KEGG Terms.

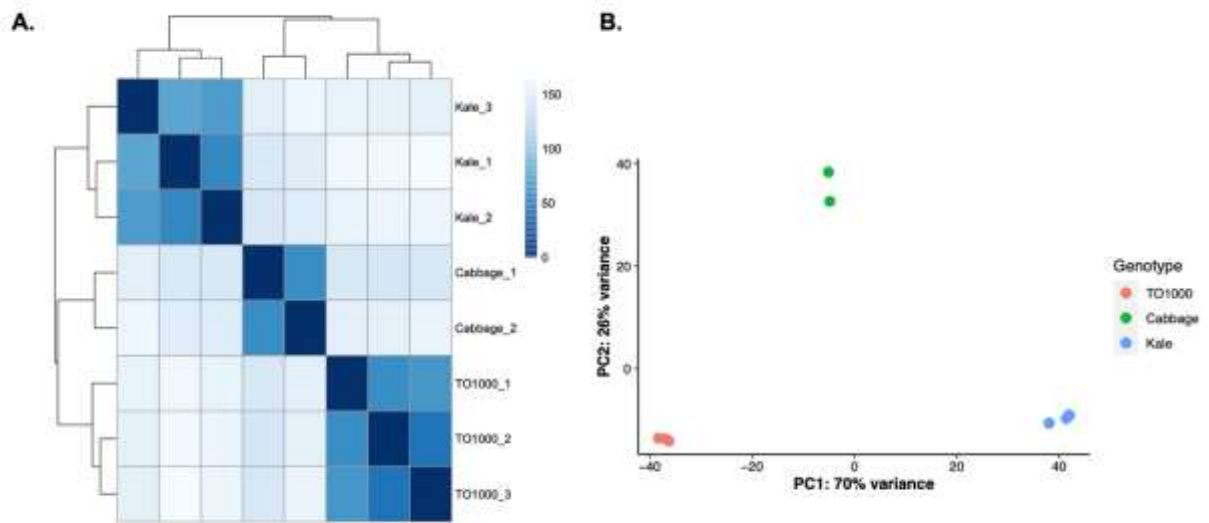
Supplementary Table 19. Kale Shared (Kale vs TO1000 & Kale vs Cabbage) Higher Expressed Genes Enriched KEGG Terms.

Supplementary Table 20. Kale Shared (Kale vs TO1000 & Kale vs Cabbage) Lower Expressed Genes Enriched KEGG Terms.

Supplementary Table 21. Enriched Transcription Factor list for transcription factors that were exclusively expressed in kale or shared among the three morphotypes



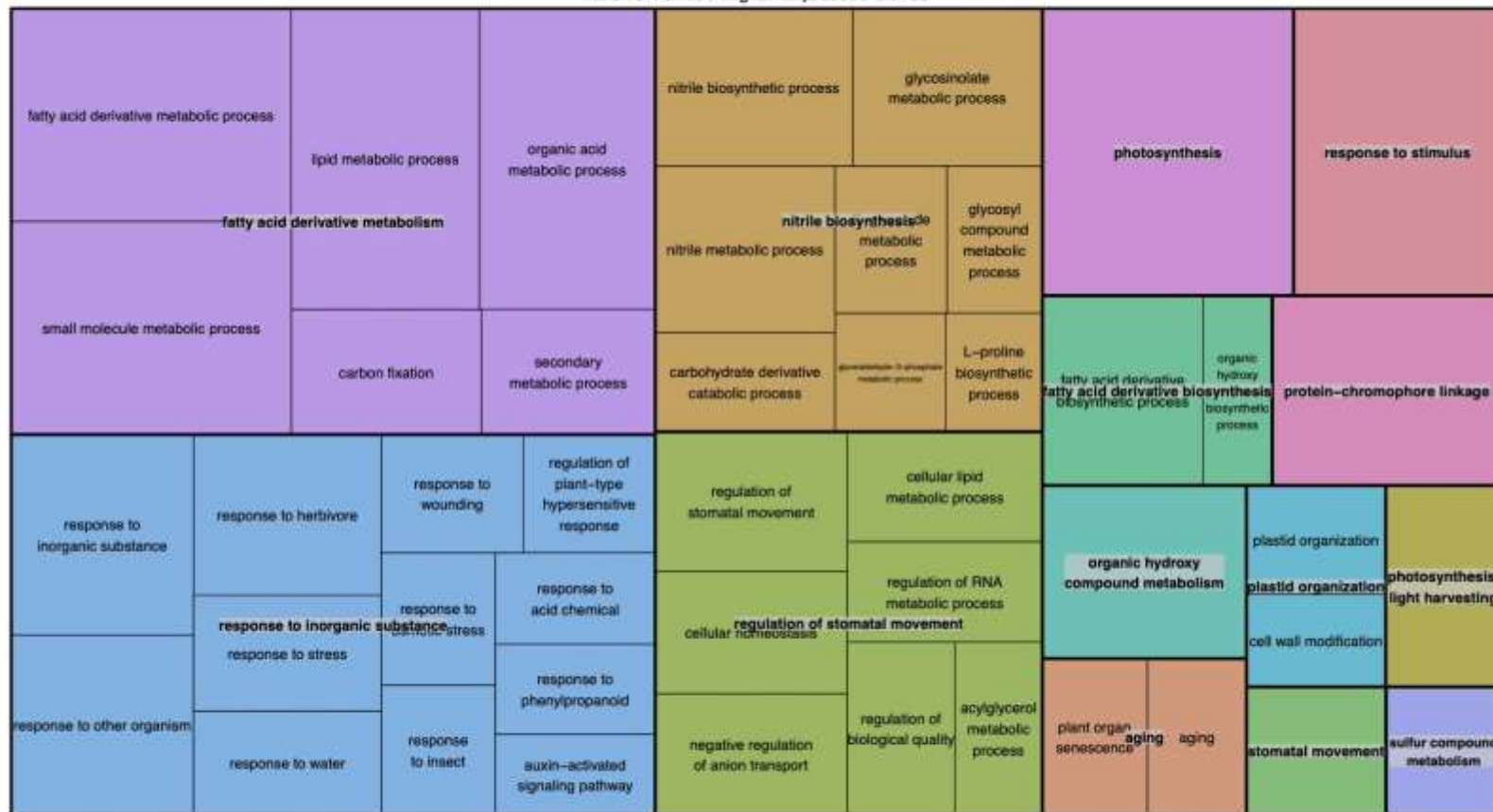
Supplementary Figure 1. Time point (24 days after planted)at which is morphotype was collecting during the RNAseq experiments. (A) red winter kale (*Brassica oleraceae* var. acephala *Red Winter*) with three to four fully expanded leaves. (B) cabbage PI 303629 South Africa (*B. oleracea* var. *capitata* with two to three fully expanded leaves. (C) TO1000 (*B. oleracea* var. *alboglabra*) three to five fully expanded leaves picture provided by Zachary Stansell. Scale bar = 10 cm



Supplementary Figure 2. Comparative summary statistics of the reference based assembly and data quality for each sample. A: Heat plot showing data quality and stronger correlations among samples belonging to the same morphotype. B: Percentage of variance among each condition and replicates.

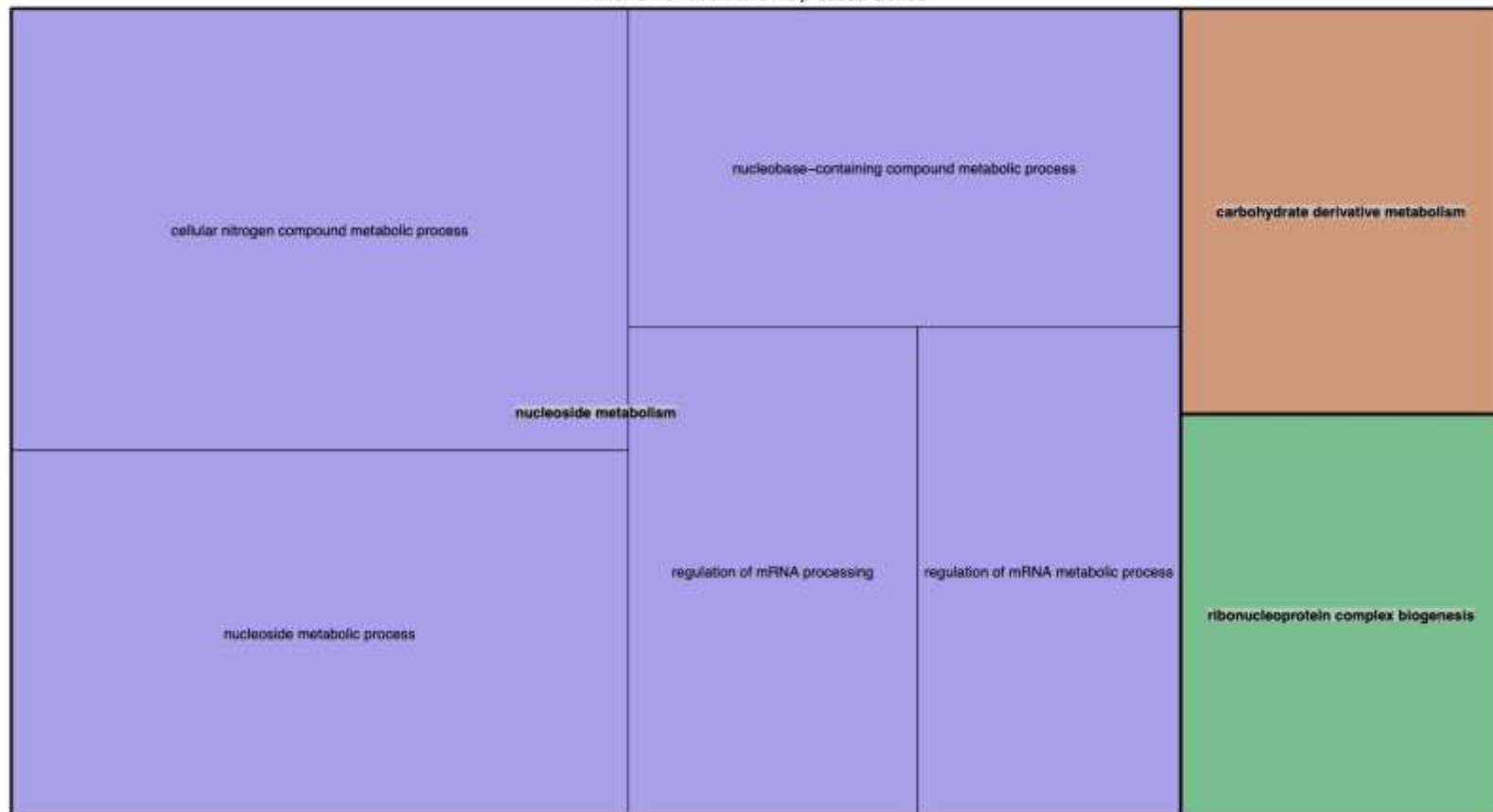
A.

Kale vs TO1000 Higher Expressed Genes



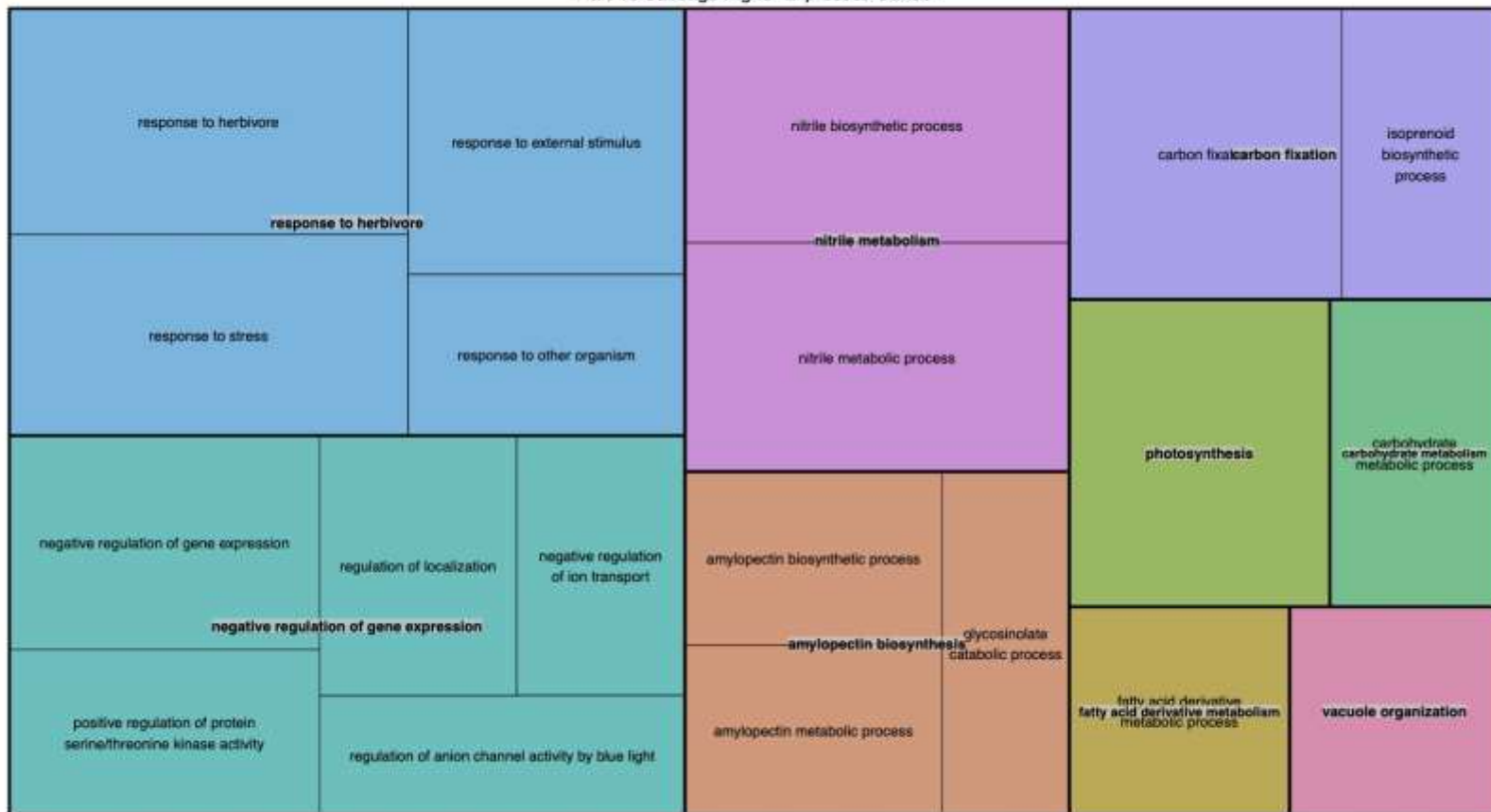
B.

Kale vs TO1000 Lower Expressed Genes



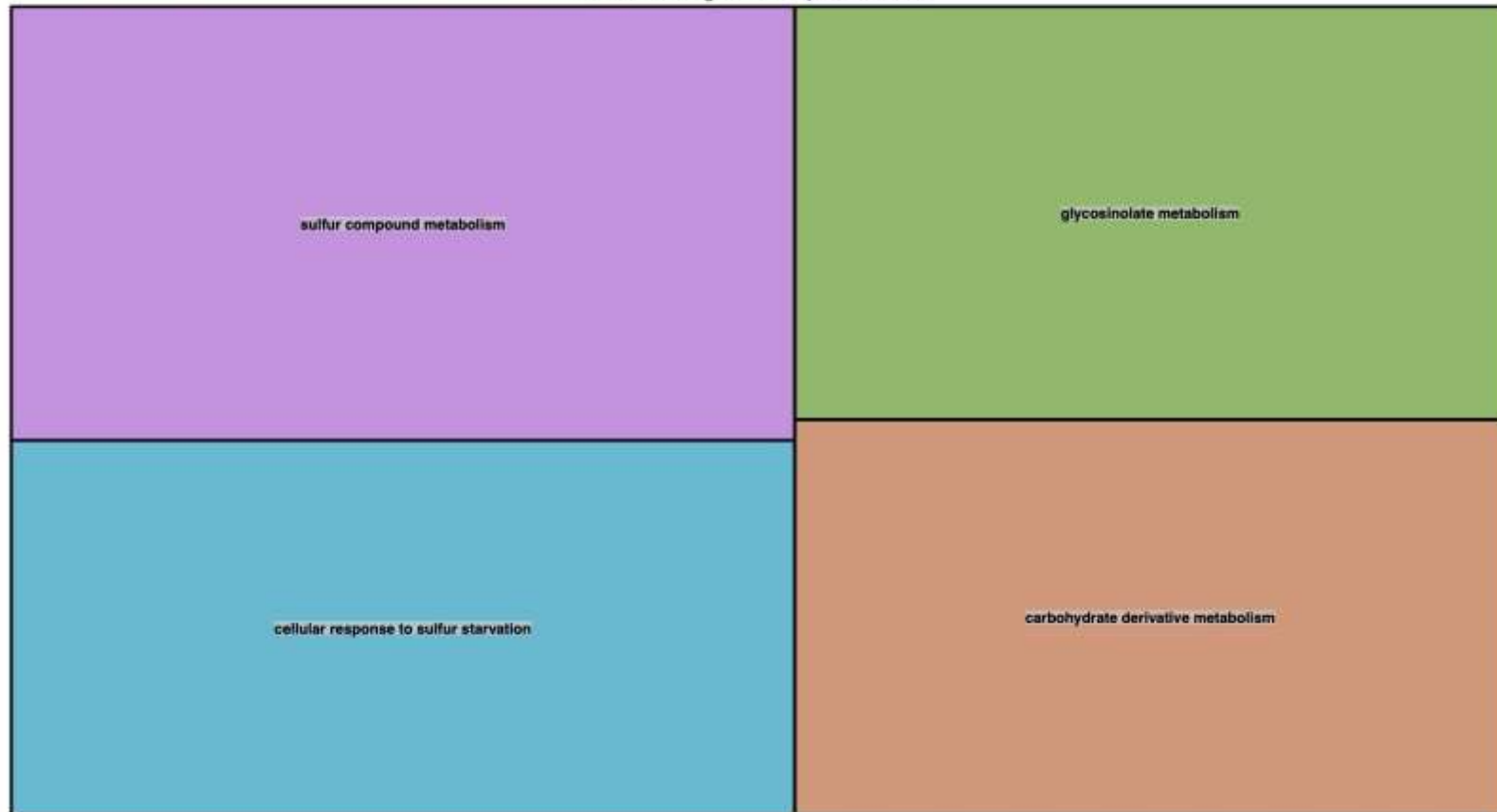
C.

Kale vs Cabbage Higher Expressed Genes



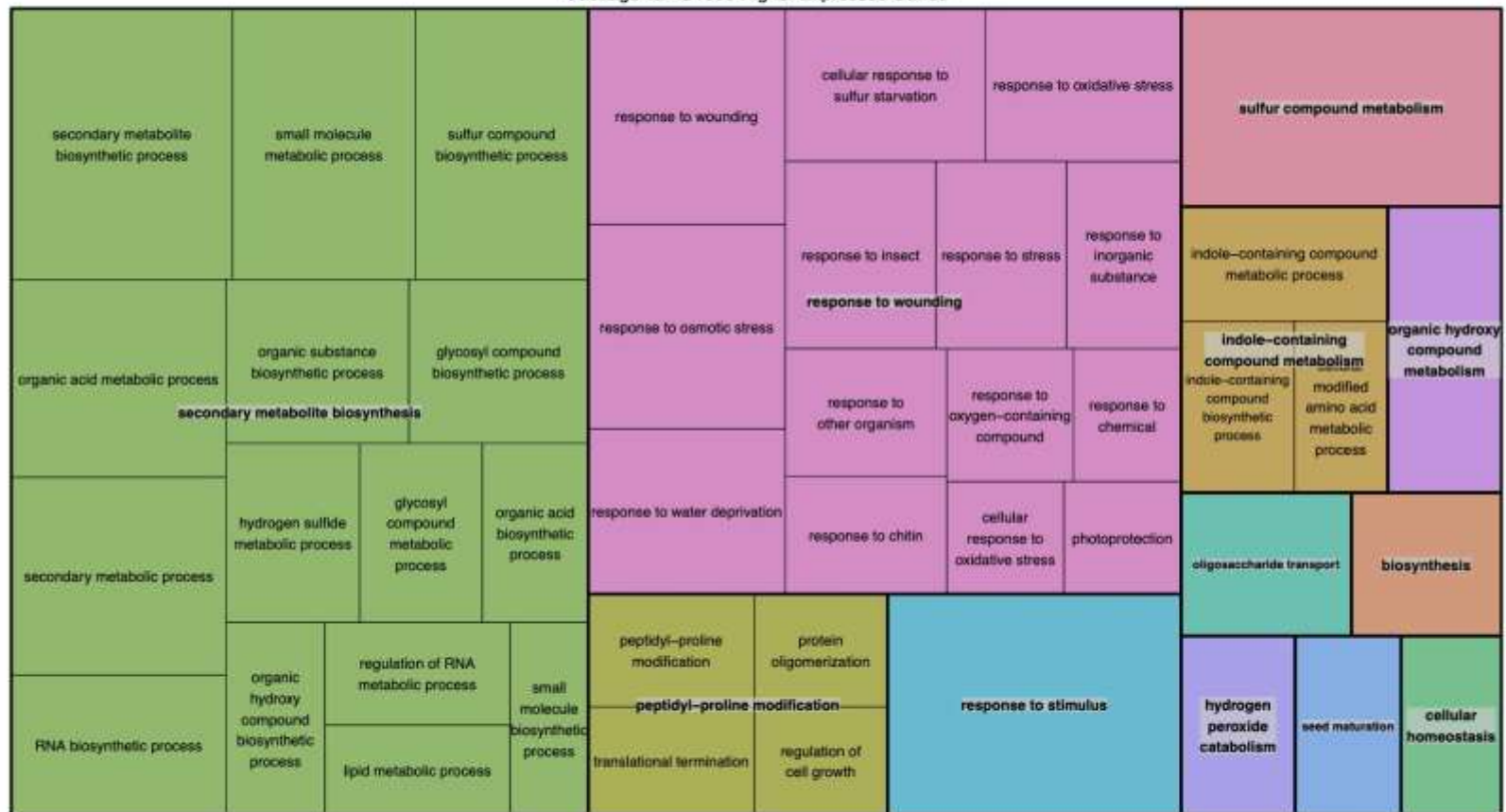
D.

Kale vs Cabbage Lower Expressed Genes



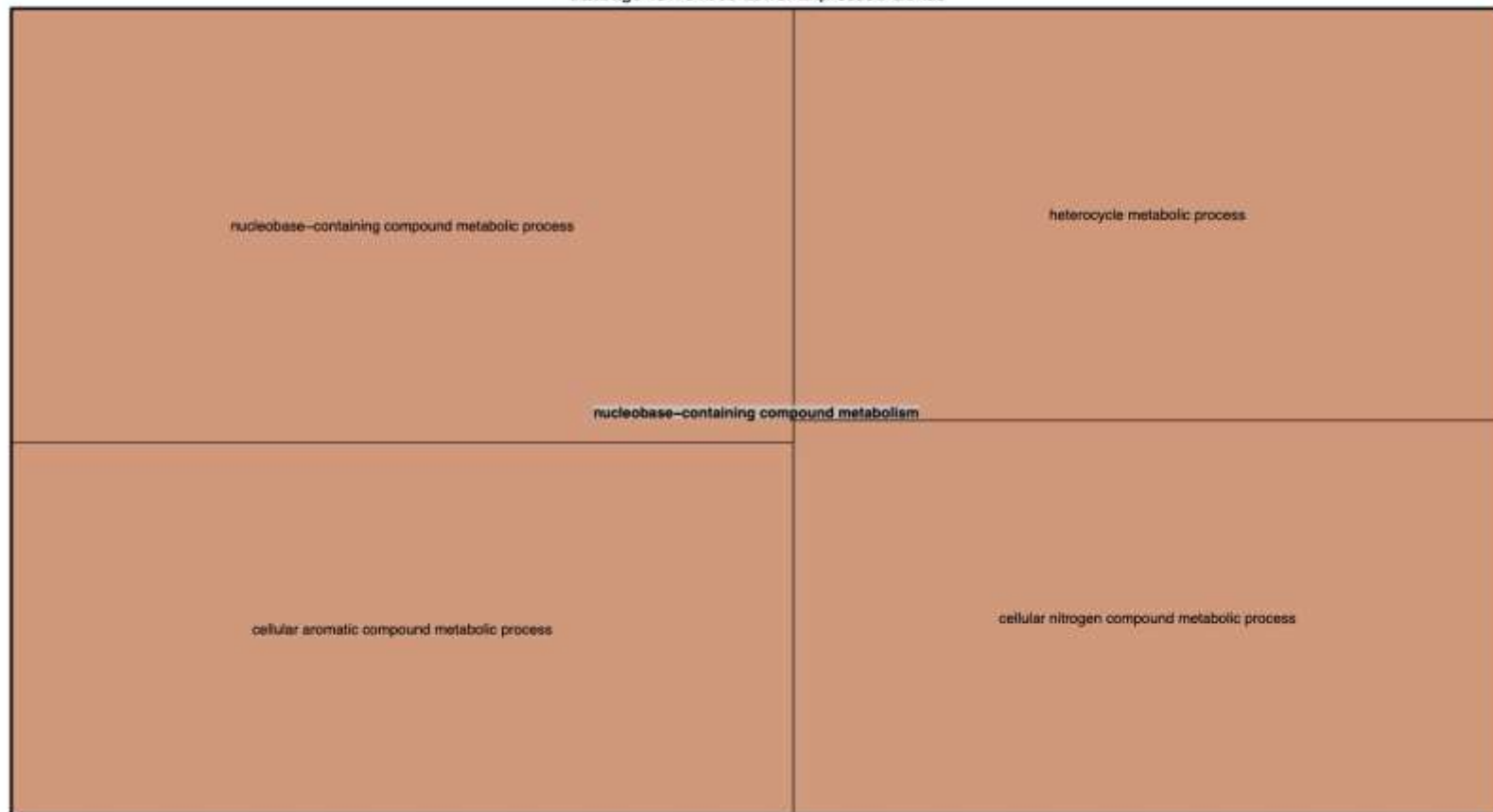
E.

Cabbage vs TO1000 Higher Expressed Genes



F.

Cabbage vs TO1000 Lower Expressed Genes



G.

Kale Shared Higher Expressed Genes



Supplementary figure 3. REVIGO treemaps summarizing gene ontology categories over-represented in kale leaves and meristems tissues. For comparisons between TO1000, cabbage and kale and separating lower and higher expressed genes. A. Kale vs TO100 higher expressed genes; B. Kale vs TO1000 lower expressed genes; C. Kale vs cabbage higher expressed genes; D. Kale vs cabbage lower expressed genes E. Cabbage vs TO1000 higher expressed genes F. Cabbage vs TO1000 lower expressed genes G. Kale shared higher expressed genes

