

temperatures, significantly shortening the ornamental period (Xie et al., 2023; Zhou, 2025). Soil conditions are equally important; alkaline soils may hinder iron absorption, causing leaf yellowing and affecting the landscape effect. Therefore, multi-site, multi-year regional trials are needed before promotion to evaluate leaf color stability, pest and disease resistance, and growth adaptability, clarifying the optimal planting areas and cultivation conditions for each variety.

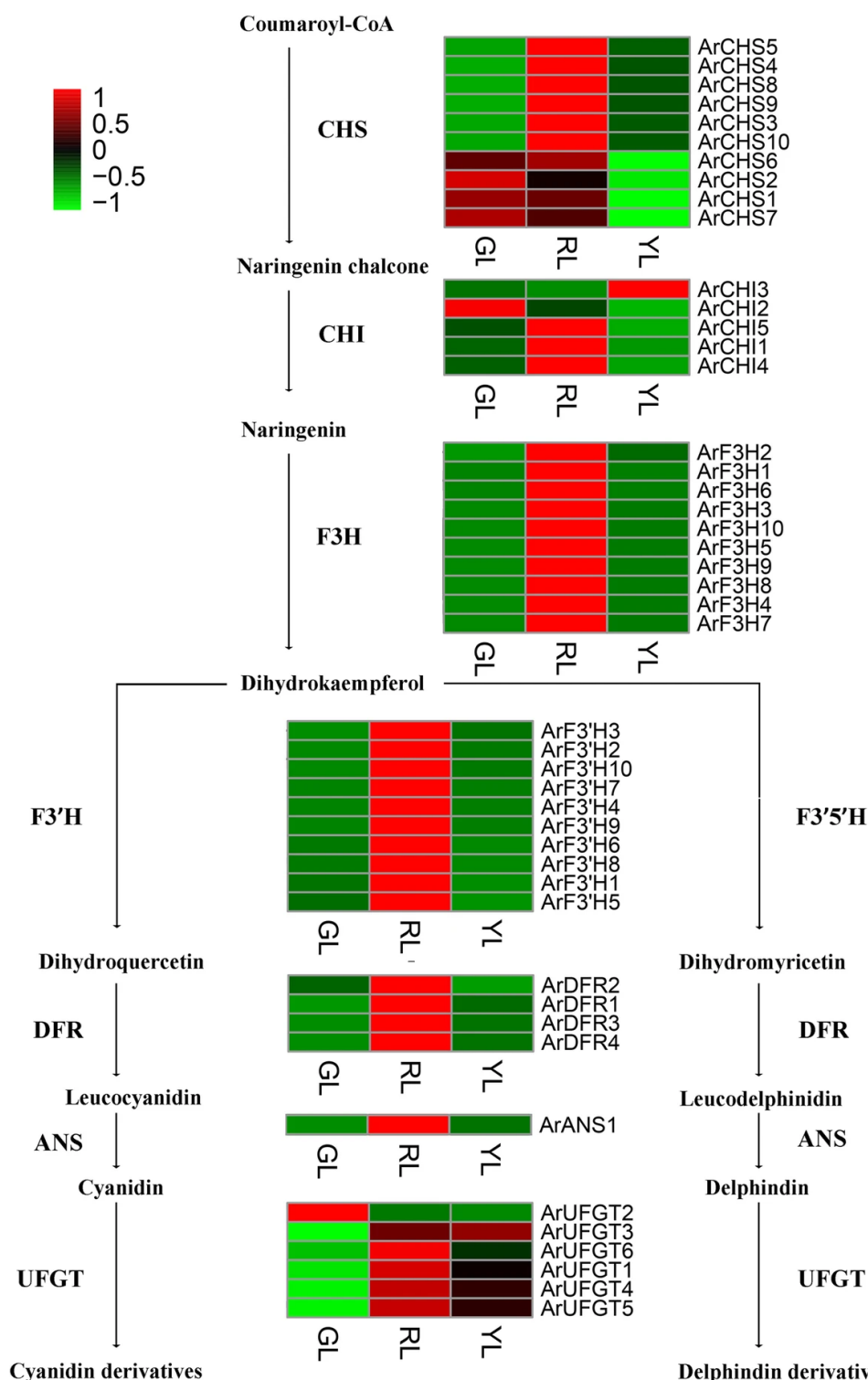


Figure 8 Heatmap of differentially expressed genes (DEGs) related to anthocyanin biosynthesis (Adopted from Chen et al., 2019)
Image caption: GL, green leaves; RL, red leaves; YL, yellow leaves; CHS, chalcone synthase; CHI, chalcone isomerase; F3H, flavanone 3-hydroxylase; F3'H, flavanone 3'-hydroxylase; F3'5'H, flavanone 3'5'-hydroxylase; DFR, dihydroflavonol 4-reductase; ANS, anthocyanin synthase; UFGT, anthocyanidin 3-O-glucosyltransferase (Adopted from Chen et al., 2019)