

Impact of herbicides on the primary and secondary metabolism of industrial tomatoes

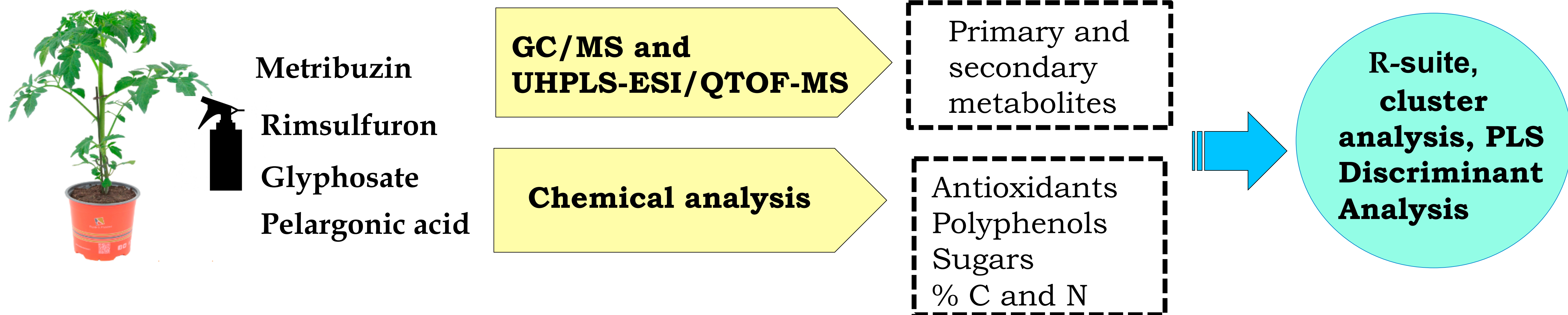


INTRODUCTION and AIM

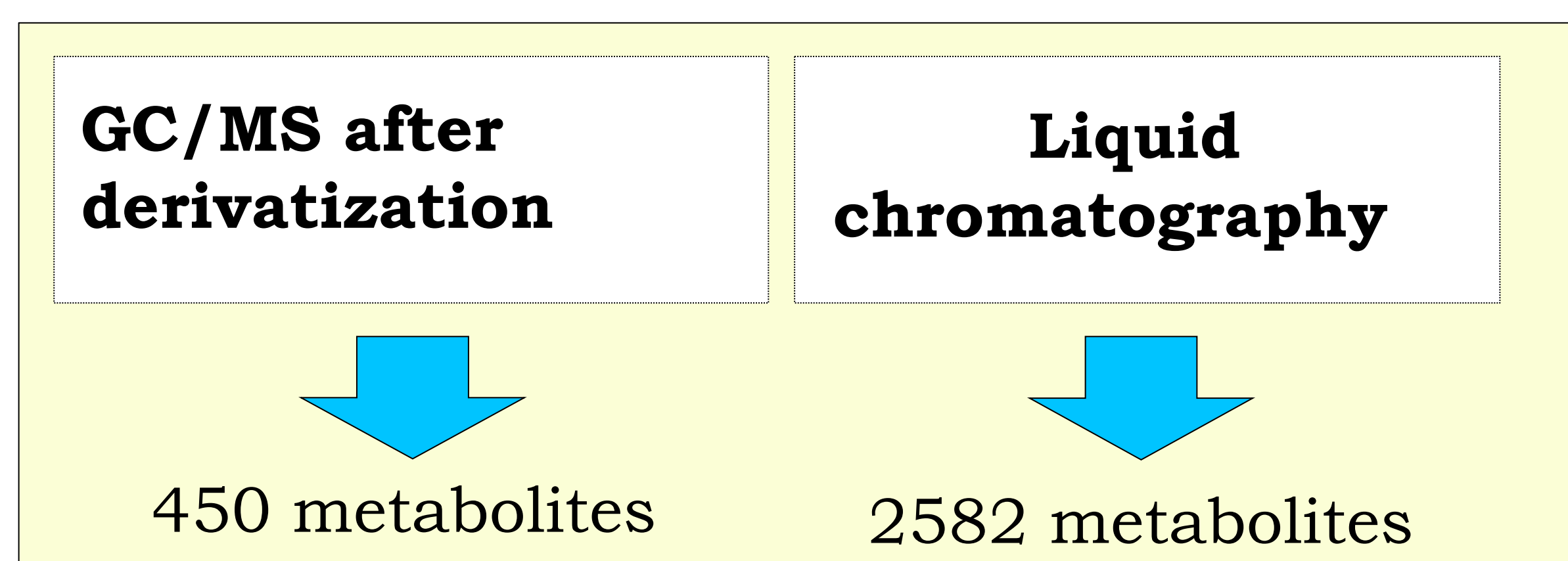
The goal of our research was to test the impact of four different herbicides on the primary and secondary metabolism of industrial tomatoes, beyond the effects that chemicals have on pathogens, and to focus on the metabolic changes induced by treatments.

MATERIALS and METHODS

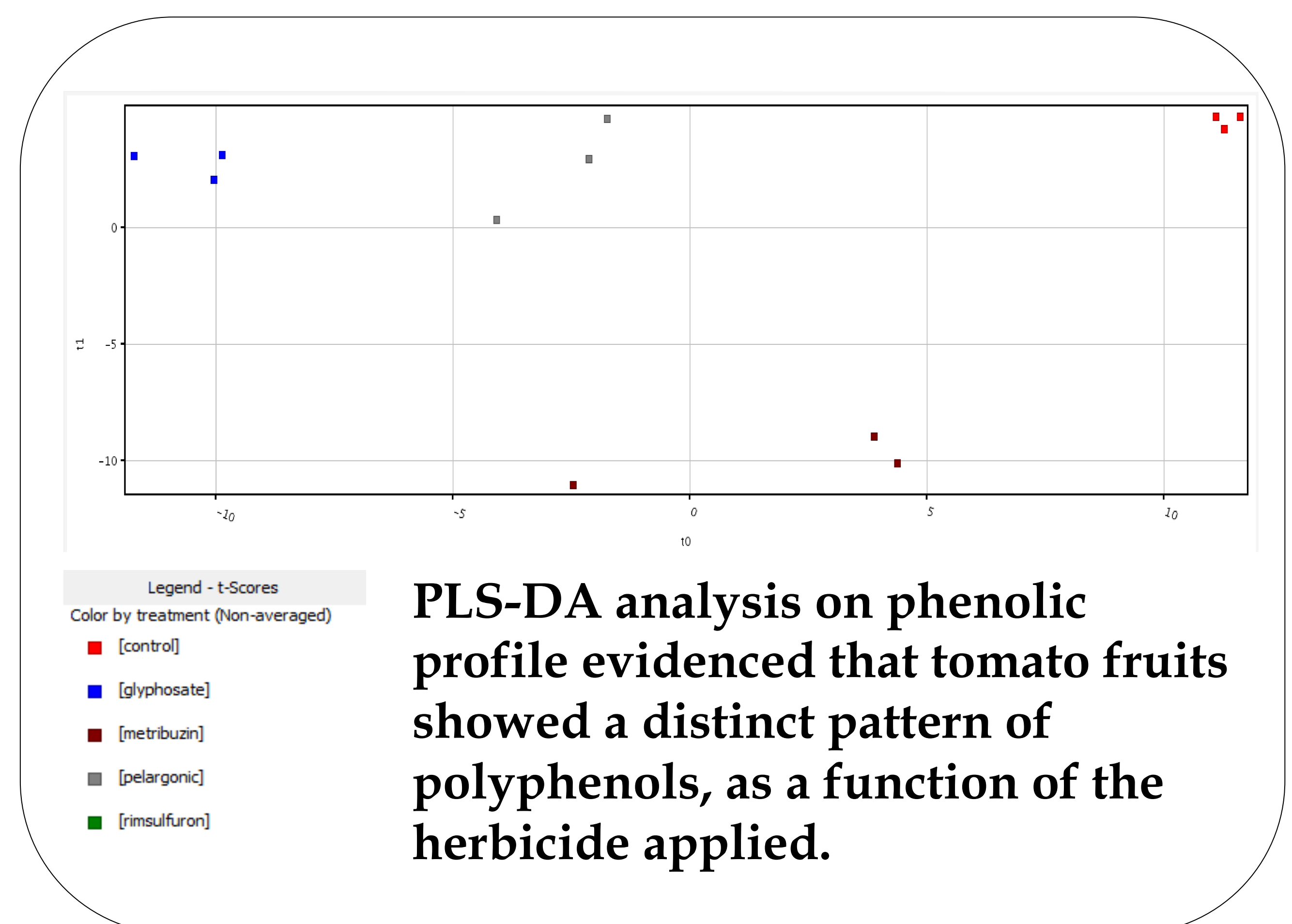
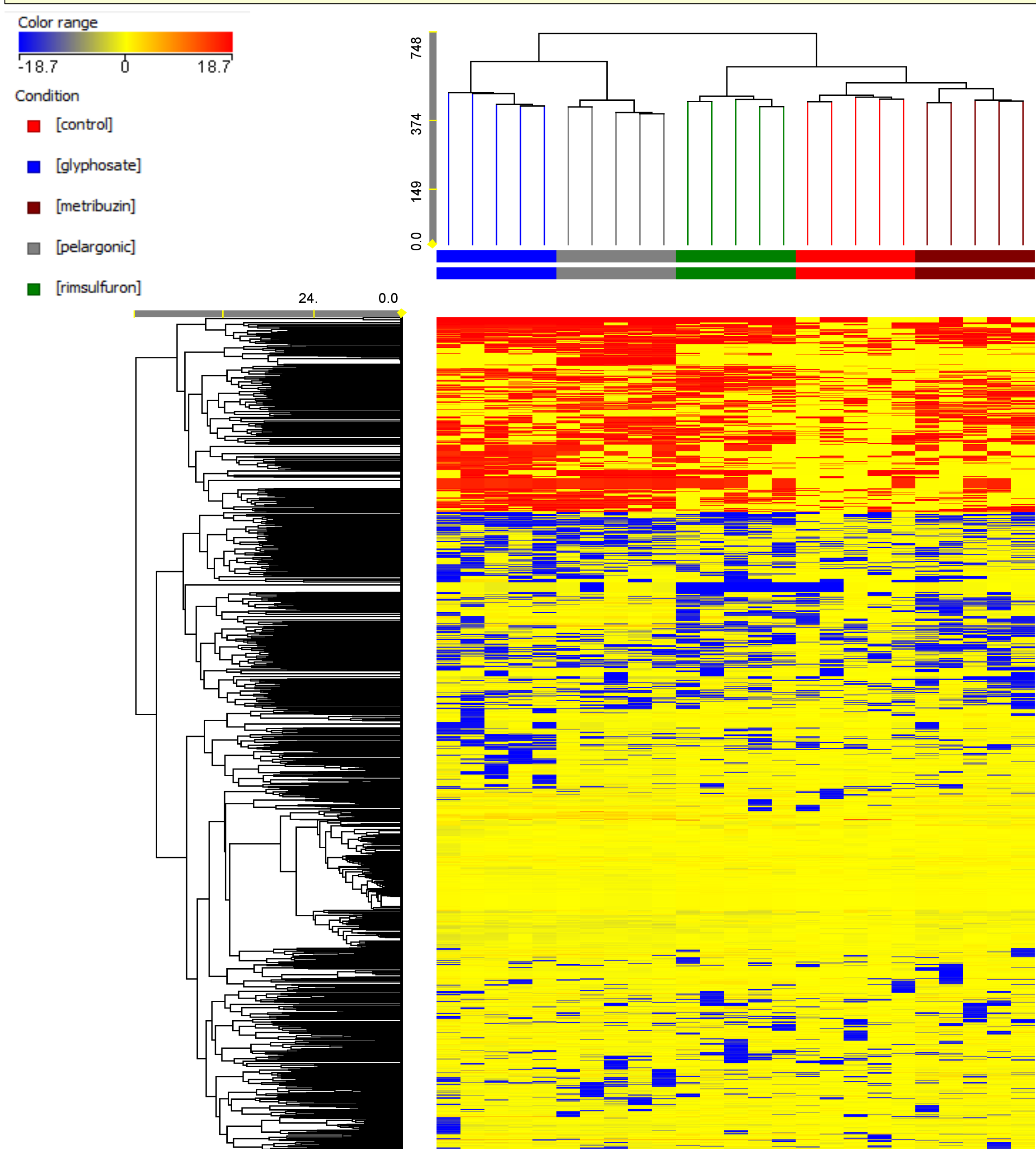
Tomato plants (cultivar Heinz 3402) were grown and subsequently treated, separately, with a single herbicide.



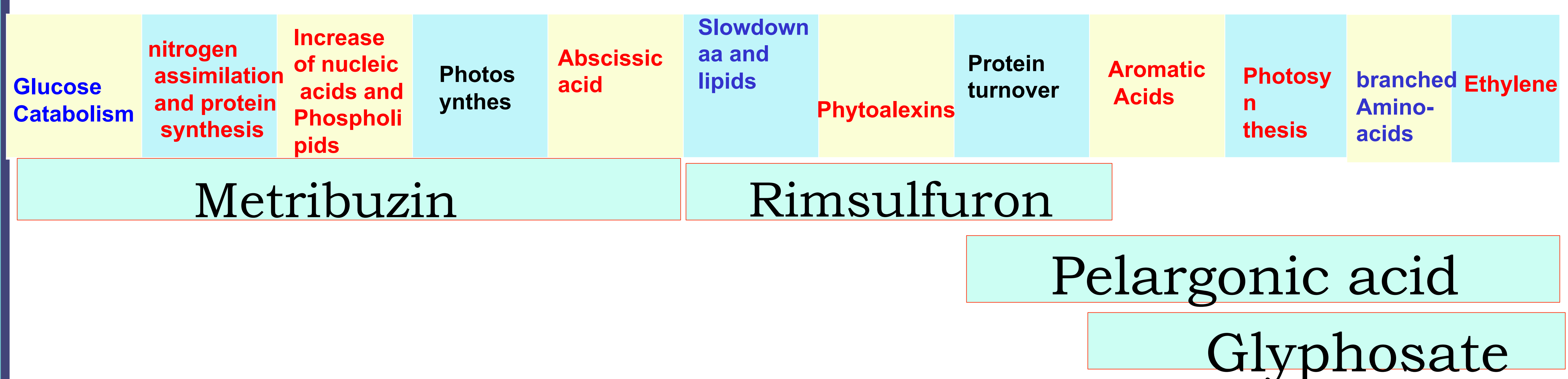
RESULTS and CONCLUSIONS



Both unsupervised hierarchical clustering and PLS-DA multivariate analyses highlighted that both primary and secondary metabolisms were altered in response to herbicide application, even no changes at phenotype level could be observed. The following one-way ANOVA, difference on means and contrasts allowed to point out those metabolites altered by the treatments.



METABOLIC PATHWAYS INVOLVED



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