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Thrips resistance in gladiolus: An eco-metabolomic approach

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STELLINGEN

Behorende bij het proefschrift

Thrips resistance in *Gladiolus*: an eco-metabolomic approach

1. The density of epicuticular papillae is an important morphological trait correlating with thrips resistance and thus, provides a promising marker for fast phenotypical resistance screening in *Gladiolus* (this thesis, Chapter 2)
2. *Gladiolus* host resistance to thrips correlates with physical papillae leaf structures but is strongly intertwined with chemical defensive metabolites (this thesis, Chapter 3).
3. Ontogenic development is an important determinant of leaf-based thrips resistance in *Gladiolus* (this thesis, Chapter 4).
4. Host resistance in *Gladiolus* is mainly genetically determined without a strong genotype-environment interaction (This thesis, chapter 5).
5. NMR-based metabolomics holds a great potential for identifying early stage putative biomarkers related to thrips resistance but the importance of secondary metabolites related to plant susceptibility is underestimated.
6. The combination of QTL mapping for resistance and for signals from metabolomic analyses such as NMR is a promising strategy to identify metabolites involved in resistance (Bac-Molenaar *et al.*, 2019).
7. Constitutive and inducible host plant resistance are not mutually exclusive and thus, both are relevant within the breeding process.
8. The increasing insecticides resistance due to the overuse of chemicals teaches us to shift non-insecticidal tactics (Wu *et al.*, 2018).
9. ‘All the pests that out of earth arise, the earth itself the antidote supplies’ – Lithica (400 BC).
10. An erudite scientist is no longer sufficient for scientific progress, in this era interdisciplinary cooperation brings science forward.