Disentangling drought-responsive traits with focus on Arabidopsis

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Stellingen
Behorende bij het proefschrift
Disentangling drought-responsive traits with focus on Arabidopsis

1) The thickness of the intervessel pit membrane is the key feature explaining drought-induced embolism resistance in *Arabidopsis thaliana*. (*This thesis*)

2) P_{50} outperforms Stomatal Safety Margin (SSM) in explaining the responses to drought among the *Arabidopsis thaliana* genotypes studied. (*This thesis*)

3) Substantially different drought-responsive strategies can be employed to acquire a certain level of drought tolerance even in species with a short life cycle, such as *Arabidopsis thaliana*. (*This thesis*)

4) The key factor for enhancing drought tolerance in *JUB1OX* plants is not related to their drought-responsive anatomical and hydraulic traits, but to the preservation of a high leaf water potential due to incompletely known mechanisms. (*This thesis*)

5) Wider vessels are not necessarily more vulnerable to drought-induced embolism than narrower ones.

6) Under both well-watered and water-withheld conditions, *JUB1OX* Arabidopsis plants consistently exhibit higher levels of proline compared to both wildtype and *jub1kd* plants. (*Adapted from Welsch 2022*)

7) Technological and methodological advancements in plant hydraulics will be crucial to elucidate a number of long-standing controversies related to the impact of drought stress on the long-distance water transport in plants.

8) Understanding root hydraulic conductance and embolism resistance is of utmost importance for a comprehensive assessment of plant drought tolerance and resistance at the whole-plant level.

9) The only place where success comes before work is in the dictionary. (*Adapted from Vince Lombardi*).

10) Science is made up of mistakes, but they are mistakes that are useful to make because they lead little by little to the truth. (*Adapted from Jules Verne, A Journey to the Center of the Earth*)

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