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Monitoring drought and salinity stress in agriculture by remote sensing for a sustainable future

Wen, W.

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Propositions

Accompanying the thesis

“Monitoring Drought and Salinity Stress in Agriculture by Remote Sensing for a Sustainable Future” by Wen Wen

1. Remotely sensed plant traits are promising indicators of crop responses to stress (this thesis)
2. Crops are more susceptible to combined drought and salinity than to individual stresses. (this thesis)
3. Stress impacts vary between species during the growing season, unrelated to their stress tolerance. (this thesis)
4. Salt-tolerant potato may enhance food production and allows accomplishing SDG targets both now and in scenarios of the future. (this thesis)
5. Remote sensing offers spatially explicit and continuous trait information for characterizing key processes throughout the growing season (Homolova et al. 2013).
6. Timely trait monitoring is imperative in identifying climate-induced environmental pressures and addressing these stresses on crop growth (Karthikeyan et al. 2020; Weiss et al. 2020)
7. A sustainable large-scale food system necessitates the integration of concurrent, near-real-time, and reliable crop information, as can be obtained from remote sensing (Wu et al. 2023).
8. Integrating plant trait estimates from distinct spectral domains into crop growth models is a promising approach to efficiently identify environmental stresses (Berger et al. 2022).
9. In the inn of life I sojourn, along with a myriad of travelers.