PROJECT: HyperRootLab4Hort

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PROJECT TITLE

Hyperspectral Phenotyping of Substrate-Root-Shoot Dynamics for Sustainable Horticulture

CONSORTIUM

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SUMMARY OF THE REPORT

During this project preliminary experiments with the novel instrument HiDER (add webpage link) were conducted. The aim of this project was to analyze the spectrally resolved reflectance of roots and different substrate to gain insights in the impact of different growth substrates on the spatio-temporal dynamics of root growth. In this preliminary study we could extract reflectance signatures from various substrates and describe the intrinsic variability within the substrates. Reflectance of most substrates was substantially different from root reflectance and thus we could conclude that roots and substrates can be separated using the hyperspectral information from HiDER. Additionally, we could demonstrate the stability of HiDER data across different measurements and could suggest an operational way forward for analysing the information rich HiDER data.