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GROWSCREEN RHIZO

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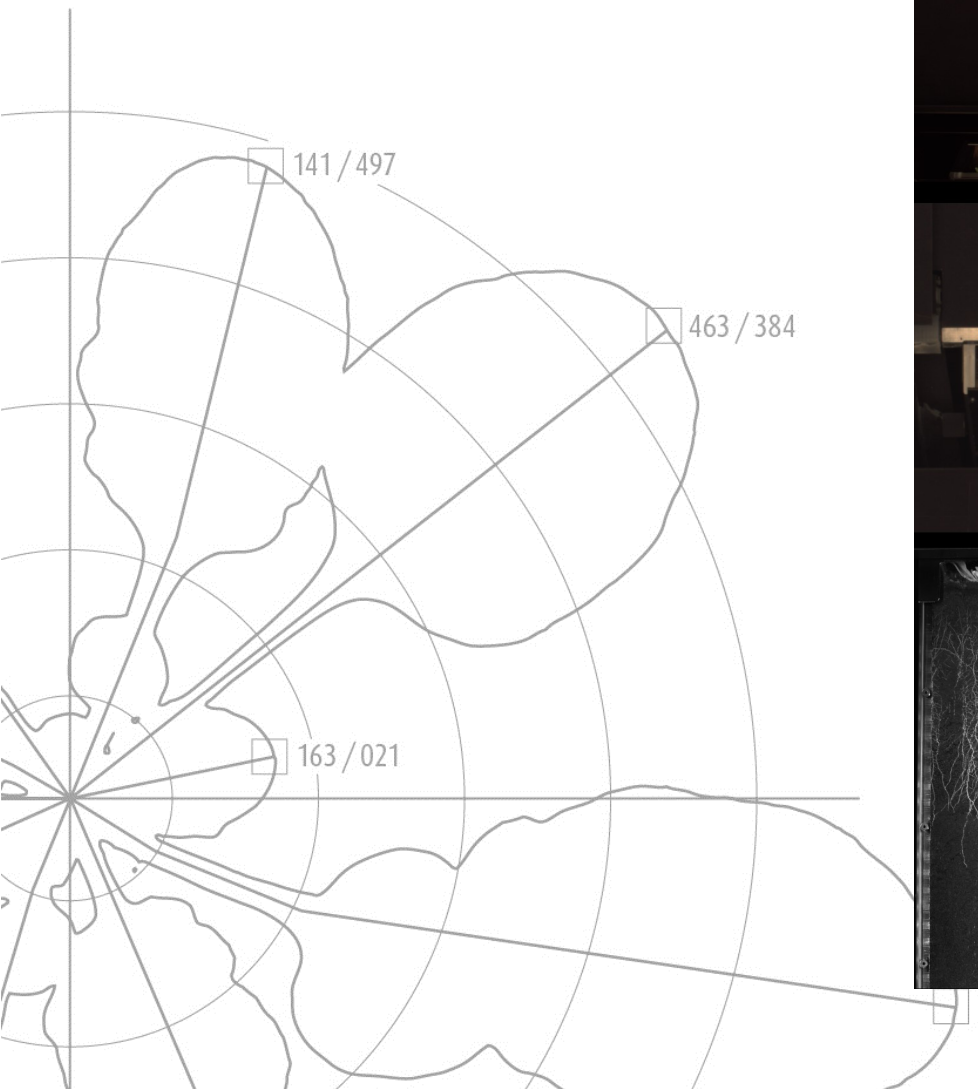

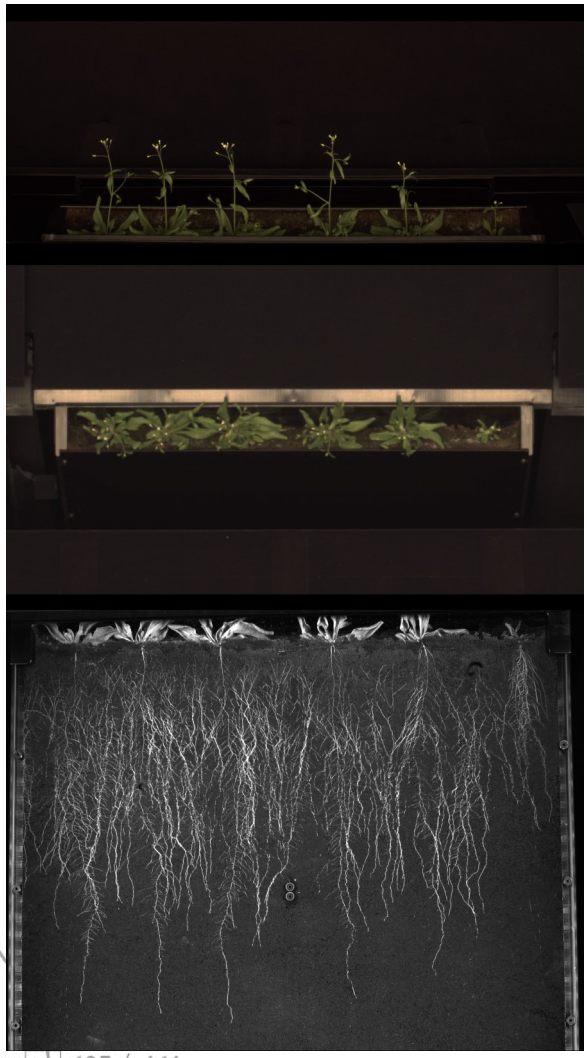

GROWSCREEN RHIZO

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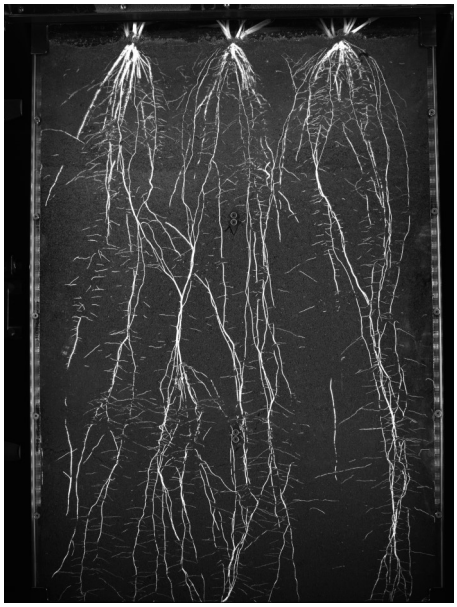
- Unique system for combined root– and shoot- phenotyping in soil-system
- Imaging and analyses of soil-grown root systems through transparent plates
- Imaging and analyses of above-ground plant parts from side and top

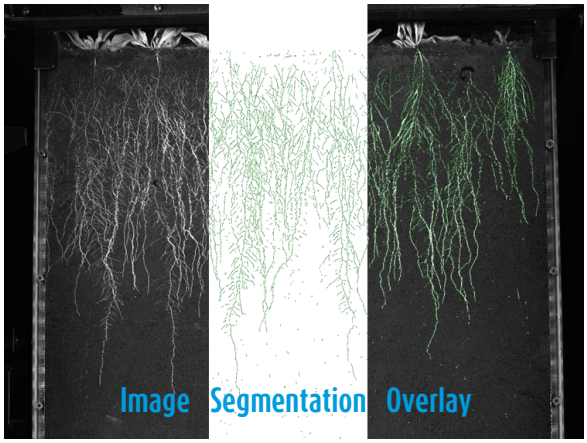


Phenotypic parameters

- Projected object area of roots and shoots
- Length, width, height
- Surface color properties, compactness, convex hull, texture
- Root system architecture
- Root length density

Soil-filled Rhizotrons

- Roots in soil environment
- Storing at 45° angle
- Root inspection through transparent plate
- Shoots above the soil space



Applications

- High-resolution plant phenotyping of shoots and roots
- Crop performance and resource use studies
- Stress and pathogen responses
- Genotype-phenotype linking

Product Lines:

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Conveyor-based series

- Rhizotrons on carriers
- Movement toward imaging cabinets
- Root and shoot imaging
- Weighing and watering
- Nutrient supply

Magazine series

- Rhizotrons in magazine
- Imaging cabinet passes by and pulls rhizotrons in for imaging
- Root and shoot imaging
- Weighing and watering
- Nutrient supply

Manual series

- Imaging cabinet with rhizotron holder
- Root and shoot imaging
- Handling by operator

Features

- High-resolution plant phenotyping of shoots and roots
- Experiment scheduling
- Data and metadata storing in database
- Analytical software for image feature extraction
- Machine learning for advanced image processing

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